

# **IBISCHK6**

**IBISCHK6 (IBIS Golden Parser) User Guide**

**Version 6.1.2**

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## 1 INTRODUCTION

This document describes the usage, functionality, and message codes of the IBISCHK6 Version 6.1.2 source code and its associated executable programs. IBISCHK6 is used to test files for conformance with IBIS (I/O Buffer Information Specification) Version 6.1.

- The IBIS Version 6.1 Specification is available at [www.ibis.org/ibis/ver6.1](http://www.ibis.org/ibis/ver6.1).
- IBISCHK6 executable program is freely available at [www.ibis.org/ibis/ibischk6](http://www.ibis.org/ibis/ibischk6).
- Checks performed by IBISCHK6 are documented here.
- A high-level description of the source code package is provided, but actual documentation and utilities exist in the source code package. The license to be filled out is located with the executables, and the source code package is available from the IBIS Open Forum.

IBIS Version 6.1 describes formats named IBS, PKG (Define Package Model), EBD (Electrical Board Description), and AMI (Algorithmic Model Interface). IBISCHK6 parses files with .ibs, .pkg, .ebd, and .ami extensions. The first three file formats are keyword based with keywords enclosed by square brackets. The .ami format is tree-structure based where a parameter hierarchy is documented with parentheses.

Note that this specification was first written for IBISCHK6 Version 6.0.0. Prior versions of this document do not exist. As the IBIS specification evolves, the IBISCHK executable program and this IBISCHK specification will evolve and be numbered in parallel with IBISCHK version numbers.

The source code and consists of C language modules (.c and .h files) and makefile scripts to create the executable code for the operating system being used. Windows and Linux makefiles are supplied along with compiled executables.

In addition, multiple suites of QA (quality assurance) tests are provided for major and minor version levels starting with IBISCHK3. The test cases consist of IBIS files, their outputs, also their golden results. These test cases often relate to the feature set evolution (through the BIRD buffer issue resolution document revision process) and through code corrections (documented with BUG reports). The links below are:

- BIRDS: <http://www.ibis/birds>
- BUGS: <http://www.ibis/ibis-bugs>

## 2 IBISCHK6 USAGE

When “ibischk6” is run with no arguments, IBISCHK6 prints this help message:

IBISfile validation:

This program has been provided free to the electrical engineering community by the IBIS Open Forum. The purpose of this program is to validate that the contents of ASCII device data in a file specified conform to the IBIS specification.

```
Usage: IBISCHK6      <IBS filename>
       : IBISCHK6  -ebd <EBD filename>
       : IBISCHK6  -pkg <PKG filename>
       : IBISCHK6  -ami <AMI filename>
```

```
Usage: IBISCHK6  -caution -numbered      <IBS filename>
       : IBISCHK6  -caution -numbered -ebd <EBD filename>
       : IBISCHK6  -caution -numbered -pkg <PKG filename>
       : IBISCHK6  -caution -numbered -ami <AMI filename>
```

The flags prior to the file name can be in any order, and the -caution and/or -numbered flags are optional.

One (and only one) file name argument must be provided to perform checking, and the file name extension must be consistent with the file type flag.

### 2.1 INPUT FILE FLAGS

The following option flags are required for files other than those in the **.ibs** format.

- pkg**            Use this option if the file is in Define Package Model format, described in section 7 of the IBIS 6.1 Specification.
- ebd**            Use this option if the file is in Electrical Board Description format, described in section 8 of the IBIS 6.1 Specification.
- ami**            Use this option if the file is in Algorithmic Model Interface format, described in section 10.3 of the IBIS 6.1 Specification.

Note: if a top-level file calls other IBIS (IBS, PKG, EBD, and AMI) files, then all referenced files are checked with one call. For example, an EBD file can contain other EBD references and also IBS file references that reference both PKG files and also AMI files. The top-level EBD file check will initiate checking for that EBD file plus checking for all referenced files. These referenced files could also be checked individually by using the appropriate input file flags.

## 2.2 OUTPUT FLAGS

Printed output messages can be modified using the following flags:

- caution** Additional Cautions level messages will be printed only when the -caution flag is used. Their meaning is described further below and in section 3.
  
- numbered** The -numbered flag gives alphanumeric message codes rather than generic codes. The generic codes messages begin with ERROR, WARNING, NOTE, INTERNAL ERROR, or CAUTION (when using the -caution flag). With the -numbered flag, the message format is <single-letter-category><four-digit-number>, discussed later. For example, one generic message begins with WARNING (without the -numbered flag) or W1113 (with the -numbered flag).

### 3 OUTPUT MESSAGE CATEGORIES

Message categories with their single-letter-categories in parentheses are described below by descending severity. ERROR messages and some INTERNAL ERROR messages indicate a model file that should not be used. Most EDA tools will reject models that produce these messages. Models with WARNING, CAUTION, and NOTE messages should be reviewed manually or graphically to understand if the noted issues are important.

As IBISCHK has evolved, some messages have been promoted to a stronger level and some have been demoted. While the category code has changed, the message number remains the same. The Messages with their single-letter-category in parentheses are described below:

#### **(E) ERROR MESSAGES**

Error messages are issued if there is a documented specification violation based on a syntax rule, a syntax argument violation, or some required combination of keywords, or subparameters and arguments. In some cases an unstated major violation (such as I-V to V-T table mismatch beyond 10%) is deemed an Error, because better matching is expected by proper extraction rules based on IBIS Version 6.1 Section 9 “Notes on Data Derivation Method”.

#### **(B) INTERNAL ERROR (BUG) MESSAGES**

Internal Error messages flag system errors that are not necessarily related to the model data (for example, memory allocation errors), and functional errors that are expected to be rare but are not easily documented by any means other than giving code file name and line number. In some cases the Internal Error messages reveal IBISCHK6 program bugs where the message should have been documented as an Error. We request that suspected program bugs be reported to [ibis-bug@eda.org](mailto:ibis-bug@eda.org).

#### **(W) WARNING MESSAGES**

Warning messages are issued based on expected common practice and expected range of data values. They alert the user that something is likely to be wrong with the IBIS file. Usually no rule stated for these Warnings in the IBIS specification, but the model may contain suspicious data or may have missing subparameters that make it unusable for high-speed signal integrity application in common EDA tools. For example, limits on C\_comp values are checked to warn the model developer about excessively high values (such that might have occurred if the modeler incorrectly entered 1F instead of 1nF).

#### **(C) CAUTION MESSAGES**

Caution messages require the –caution flag and are issued where even a Warning message can be incorrect for some cases or where a problem has no impact on simulation and a Warning message would cause many Warnings to appear in older models. For example, the [Ramp] dV values can now be checked for validity, but a flawed dV entry should have no impact on simulation. Older models developed without a dV check (prior to IBISCHK5) could exhibit many failures. Also, in some rare I/O models, Vmeas can fall outside of the Vinh and Vinl. For this case, a Caution message is issued to alert the modeler of a possible data entry mistake.

#### **(N) NOTE MESSAGES**

Note messages are also cautionary, but no option flag is required to produce them. So far, Note messages are used only for cases where I-V data contains non-monotonic data points. Monotonic data for I-V tables is not required in the IBIS Specification. However, it is very useful to know if any of the I-V data is non-monotonic, or if combined I-V tables (where all clamp tables are included) are monotonic. Combined tables with non-monotonic points might cause simulation

problems in some EDA tools. Sometimes there is no impact, especially if some of the detected non-monotonic points are very small (numerical noise) and in regions that are outside the normal simulation region. Inspecting or graphically viewing the tables is advised. In earlier versions of IBISCHK, the non-monotonic I-V reports were issued as Warnings. This was objectionable because some model vendors and users require having zero Errors and Warnings.

### **UNUSED MESSAGES**

Unused messages are old messages that still exist in “dead” code and should never be encountered due to subsequent code changes. The messages are retained for historical source code documentation and also for the cases where they might show up when using earlier versions of IBISCHK.

## 4 MESSAGE LISTING BY CODES

Message Codes along with their Symbols and Messages issued by IBISCHK6 are shown in the next sub-sections below. Each message has a shaded and unshaded row and the following columns:

1. **Code** – In the shaded row the alphanumeric Code consisting of a <single-letter-category><four-digit-number> (for example “E0102”) is given. Alphanumeric Codes are issued by IBISCHK6 when the **–numbered** option is used and the documented problem is encountered.
2. **Symbol** – In the shaded row the message symbol found in the IBISCHK6 source code is given. The Symbol name identifies the source code module in which the message is encoded. For example, MDL\_ERR\_0 can be located in mdl.c. Each distinct Symbol name within a module has a distinct trailing integer (for example MDL\_ERR\_1, MDL\_ERR\_2, etc.). The symbol always has ERR regardless of its actual category.
3. **Message/Comments** – The shaded row shows the printed message with variable portions denoted by labels (where actual names or numerical information is substituted) enclosed in {curly brackets}. The unshaded row of each message contains a comment with further details or clarifications. Some comments still need to be refined and others still need to be filled in. If the message is not used in IBISCHK6, “Unused” is shown in the Comment field.

The Message Codes are organized and indexed in groups of 500 for easier location. Usually a contiguous set of Codes will correspond to a contiguous set of Symbols. Numerical gaps exist in the message Codes to allow room for new messages. So while the actual Code numbers range from 0100 through 5411, this document contains only 1310 messages codes.

An example of a message without and with the **–numbered** flag, respectively, is shown below:

```
WARNING - Model BUFFER: GND Clamp : Typical value never becomes zero
W1113 - Model BUFFER: GND Clamp : Typical value never becomes zero
```

The table entry located by its four-digit-number is:

<b>W1113</b>	CRV_ERR_13	{label} {name}: {curveName} : Typical value never becomes zero
--------------	------------	--

*A general message indicating that the section with name has a curve whose typical current never becomes zero*

This message exists in crv.c. The {label} is “Model”, the {name} is “BUFFER”, the {curveName} is “Gnd Clamp”, and the message is printed as shown above. An expanded comment is given in the unshaded row.

The message listing follows in the sections below.



## 4.1 MESSAGE CODES 0 TO 499

Code	Symbol	Message/Comments
<b>B0100</b>	MDL_ERR_0	Unable to Allocate Memory: {sourceFile} {sourceLinenum}  <i>[UNUSED]</i>
<b>B0101</b>	MDL_ERR_1	Unable to get IBIS structure {sourceFile} {sourceLinenum}  <i>Program data structures are corrupt</i>
<b>E0102</b>	MDL_ERR_2	( line {lineNum} ) - Orphan Model keyword.  <i>Model keyword found but not within a Model declaration</i>
<b>E0103</b>	MDL_ERR_3	( line {lineNum} ) - Illegal Digital Port (not allowed in SPICE/IBIS-ISS Ports section)  <i>Improper use of Digital port</i>
<b>E0104</b>	MDL_ERR_4	( line {lineNum} ) - D_switch not allowed with (D_drive,D_receive,or D_enable) in Ports/A2D/D2A Section  <i>Improper use of D_switch</i>
<b>E0105</b>	MDL_ERR_5	( line {lineNum} ) - {portName} not allowed with D_switch in Ports/A2D/D2A Section  <i>(D_receive; D_enable; D_drive) are not allowed with D_switch</i>
<b>E0106</b>	MDL_ERR_6	( line {lineNum} ) - Reserved Digital Port used as analog port  <i>Improper use of Reserved Digital port</i>
<b>E0107</b>	MDL_ERR_7	( line {lineNum} ) - Orphan data line keyword.  <i>A Model related data line was found where none was expected</i>
<b>E0108</b>	MDL_ERR_8	( line {lineNum} ) - TTgnd Typical value should be > 0  <i>Improper TTgnd typical value</i>
<b>E0109</b>	MDL_ERR_9	( line {lineNum} ) - TTgnd Min value should be > 0  <i>Improper TTgnd minimum value</i>
<b>E0110</b>	MDL_ERR_10	( line {lineNum} ) - TTgnd Max value should be > 0

Code	Symbol	Message/Comments
<i>Improper TTgnd maximum value</i>		
<b>W0111</b>	MDL_ERR_11	TTgnd typ value is not in between Min and Max
<i>Improper range for TTgnd</i>		
<b>E0112</b>	MDL_ERR_12	( line {lineNum} ) - TTpower Typical value should be > 0
<i>Improper TTpower typical value</i>		
<b>E0113</b>	MDL_ERR_13	( line {lineNum} ) - TTpower Min value should be > 0
<i>Improper TTpower minimum value</i>		
<b>E0114</b>	MDL_ERR_14	( line {lineNum} ) - TTpower Max value should be > 0
<i>Improper TTPower maximum value</i>		
<b>W0115</b>	MDL_ERR_15	TTPower typ value is not in between Min and Max
<i>Improper range for TTPower</i>		
<b>E0116</b>	MDL_ERR_16	( line {lineNum} ) - [Model Spec] should be specified immediately after all the subparameters of a model and before the other keywords of a model
<i>Improper positioning of [Model Spec]</i>		
<b>W0117</b>	MDL_ERR_17	( line {lineNum} ) - [Receiver Thresholds] should not be specified for model type {modelType}
<i>Receiver thresholds are not allowed for a which is not an Input or I/O model type</i>		
<b>E0118</b>	MDL_ERR_18	( line {lineNum} ) - [Add Submodel] should be specified before other keywords for a model
<i>[UNUSED]</i>		
<b>E0119</b>	MDL_ERR_19	( line {lineNum} ) - {subparam/keyword} Already Defined For Model '{modelName}'
<i>A model was already defined for</i>		
<b>E0120</b>	MDL_ERR_20	( line {lineNum} ) - [Receiver Thresholds] should be specified immediately after all the subparameters of a model and before the other keywords of a model except [Model Spec]
<i>Improper positioning of [Receiver Thresholds] keyword</i>		

Code	Symbol	Message/Comments
E0121	MDL_ERR_21	( line {lineNum} ) - Expecting Keyword. Invalid Line  <i>An invalid line was found where a keyword was expected</i>
B0122	MDL_ERR_22	Should Not Be Here: {sourceFile}, {sourceLinenum}  <i>The code has a bug</i>
E0123	MDL_ERR_23	( line {lineNum} ) - Expecting [End External Model]. Invalid Line,FATAL ERROR  <i>Some data other than [End External Model] found</i>
E0124	MDL_ERR_24	( line {lineNum} ) - Expecting [End External Model]. Invalid Line  <i>[UNUSED]</i>
B0125	MDL_ERR_25	( line {lineNum} ) - Unable to eat keyword : {sourceFile} {sourceLinenum}  <i>Error in parsing keyword</i>
E0126	MDL_ERR_26	Unable to Save Model Name  <i>[UNUSED]</i>
E0127	MDL_ERR_27	'Model' Keyword Missing name  <i>The name of the model was not specified with the [Mode] keyword</i>
E0128	MDL_ERR_28	( line {lineNum} ) - Incorrect Number of Line Items ({numberOfItemsFound}) For Keyword {keyword}: Expecting {numberOfItemsExpected}  <i>The keyword should have had items on the keyword line but only number of data items were found</i>
E0129	MDL_ERR_29	( line {lineNum} ) - Model Name Over {maxModelNameChars} Characters Long  <i>[UNUSED]</i>
E0130	MDL_ERR_30	"( line {lineNum} ) - Invalid Model Name (\\"{reservedWord}\\"", Reserved Word."  <i>A reserved word was used as a model name</i>
E0131	MDL_ERR_31	"( line {lineNum} ) - Model Name Previously Defined (\\"{modelName}\")"

Code	Symbol	Message/Comments
		<i>A new model is being defined with the same name as a previously defined model.</i>
<b>E0132</b>	MDL_ERR_32	( line {lineNum} ) - Redundant a_port for A2D, \n
		<i>[UNUSED]</i>
<b>E0133</b>	MDL_ERR_33	( line {lineNum} ) - Digital Port already used in previous A2D for this corner
		<i>The digital port has already been used in a previous A2D section</i>
<b>B0134</b>	MDL_ERR_34	Unable to Parse {errorString}: {sourceFile} {sourceLinenum}
		<i>A generic error message which indicates that a parsing error related to</i>
<b>E0135</b>	MDL_ERR_35	( line {lineNum} ) - Duplicate External Language Line
		<i>The Language subparameter is already defined for an [External Model] section</i>
<b>E0136</b>	MDL_ERR_36	"( line {lineNum} ) - Invalid {subparam/keyword} (\\"{badValue}\") (try \\"{options}\")"
		<i>A generic error message which indicates that a wrong value was specified for a particular . The user must specify from one of the</i>
<b>E0137</b>	MDL_ERR_37	Incorrect Number of Line Items ({lineNum}) For {numberOfItemsFound}; Expecting {numberOfItemsExpected}
		<i>The sub parameter should have had items on the keyword line but only number of data items were found</i>
<b>E0138</b>	MDL_ERR_38	( line {lineNum} ) - Missing Language sub-parameter. Language must be defined
		<i>The Language subparameter was not defined in an [External Model] section</i>
<b>E0139</b>	MDL_ERR_39	( line {lineNum} ) - Duplicate Typ Corner
		<i>The Typ corner was specified multiple times in [External Model] Corner sub parameter</i>
<b>E0140</b>	MDL_ERR_40	( line {lineNum} ) - Duplicate Max Corner
		<i>The Max corner was specified multiple times in [External Model] Corner sub parameter</i>
<b>E0141</b>	MDL_ERR_41	( line {lineNum} ) - Duplicate Min Corner
		<i>The Min corner was specified multiple times in [External Model] Corner sub parameter</i>

Code	Symbol	Message/Comments
E0142	MDL_ERR_42	( line {lineNum} ) - Wrong number of args in PORT_TYPE  <i>Non spec check</i>
E0143	MDL_ERR_43	( line {lineNum} ) - Port_type not allowed  <i>Non spec check</i>
E0144	MDL_ERR_44	( line {lineNum} ) - Language must be defined before D2A  <i>The Language subparam should be specified before the D_to_A subparam</i>
E0145	MDL_ERR_45	( line {lineNum} ) - D2A only allowed for language = SPICE or language = IBIS-ISS  <i>The subparam D2A can only be specified if the Language suparam is SPICE</i>
E0146	MDL_ERR_46	( line {lineNum} ) - No Typ Corner Defined... required  <i>The Typ corner was not specified in [External Model] Corner sub parameter</i>
W0147	MDL_ERR_47	( line {lineNum} ) - No Min Corner Defined for D2A. using Typ  <i>[UNUSED]</i>
W0148	MDL_ERR_48	( line {lineNum} ) - No Max Corner Defined for D2A. Using Typ  <i>[UNUSED]</i>
E0149	MDL_ERR_49	"Invalid {lineNum} Value (\"{badValue}\")"  <i>An invalid Corner was specified in the [External Model] section</i>
E0150	MDL_ERR_50	( line {lineNum} ) - trise < 0, [{tRiseval}]  <i>The tRise specified on the D_to_A subparam is less than 0</i>
E0151	MDL_ERR_51	( line {lineNum} ) - tfall < 0, [{tFallval}]  <i>The tFall specified on the D_to_A subparam is less than 0</i>
E0152	MDL_ERR_52	( line {lineNum} ) - Vlow >= Vhigh [{lowValue} >= {highValue}]  <i>The Vlow is greater Vhigh for the D_to_A subparam in an [External Model] section</i>

Code	Symbol	Message/Comments
E0153	MDL_ERR_53	( line {lineNum} ) - Illegal Analog Port {portName},not in port list
E0154	MDL_ERR_54	( line {lineNum} ) - Language must be defined before A2D  <i>The Language subparam should be specified before the A_to_D subparam</i>
E0155	MDL_ERR_55	( line {lineNum} ) - NO Typ Corner defined for A2D
W0156	MDL_ERR_56	( line {lineNum} ) - NO Min Corner defined for A2D. Using Typ  <i>[UNUSED]</i>
W0157	MDL_ERR_57	( line {lineNum} ) - NO Max Corner defined for A2D. Using Typ  <i>[UNUSED]</i>
E0158	MDL_ERR_58	"( line {lineNum} ) - Invalid {subparam} (\\"{value}\")"  <i>A Generic error to display that the [Model] subparameter (Enable; IOType; Polarity) has an invalid value . Also used for [Add SubModel] Mode subparameter. This error message is also used incorrectly for invalid [External Model] subparameters.</i>
W0159	MDL_ERR_59	( line {lineNum} ) - Vinl should not be specified for model type {modelType}  <i>is not an Input and IO modeltype and hence Vinl cannot be specified</i>
W0160	MDL_ERR_60	( line {lineNum} ) - {subType} should not be specified for model type {modelType}  <i>[UNUSED]</i>
W0161	MDL_ERR_61	( line {lineNum} ) - Vinh should not be specified for model type {modelType}  <i>is not an Input and IO modeltype and hence Vinl cannot be specified</i>
E0162	MDL_ERR_62	( line {lineNum} ) - Sub Parameter Cref_diff is valid only for IBIS version >= 4.1  <i>Cref_diff is not valid for IBIS file versions less than 4.1</i>
W0163	MDL_ERR_63	( line {lineNum} ) - Creff_diff should not be specified for model type {modelType}

Code	Symbol	Message/Comments
		<i>is not an output model type hence Cref_diff is not valid</i>
<b>E0164</b>	MDL_ERR_64	( line {lineNum} ) - Sub Parameter Rref_diff is valid only for IBIS version >= 4.1  <i>Rref_diff is not valid for IBIS file versions less than 4.1</i>
<b>W0165</b>	MDL_ERR_65	( line {lineNum} ) - Rreff_diff should not be specified for model type {modelType}  <i>is not an output model type hence Rref_diff is not valid</i>
<b>W0166</b>	MDL_ERR_66	( line {lineNum} ) - Vmeas should not be specified for model type {modelType}  <i>is one of Input; Input_Diff; Input_Ecl; Terminator; Series; Series_switch hence Vmes is not valid</i>
<b>W0167</b>	MDL_ERR_67	( line {lineNum} ) - Cref should not be specified for model type {modelType}  <i>is one of Input; Input_Diff; Input_Ecl; Terminator; Series; Series_switch hence Cref is not valid</i>
<b>W0168</b>	MDL_ERR_68	( line {lineNum} ) - Rref should not be specified for model type {modelType}  <i>is one of Input; Input_Diff; Input_Ecl; Terminator; Series; Series_switch hence Rref is not valid</i>
<b>W0169</b>	MDL_ERR_69	( line {lineNum} ) - Vref should not be specified for model type {modelType}  <i>is one of Input; Input_Diff; Input_Ecl; Terminator; Series; Series_switch hence Vref is not valid</i>
<b>E0170</b>	MDL_ERR_70	( line {lineNum} ) - Sub Parameter C_comp_pullup is valid only for IBIS version >= 4.0  <i>C_comp_pullup is not valid for IBIS file versions less than 4.0</i>
<b>E0171</b>	MDL_ERR_71	( line {lineNum} ) - Sub Parameter C_comp_pulldown is valid only for IBIS version >= 4.0  <i>C_comp_pulldown is not valid for IBIS file versions less than 4.1</i>
<b>E0172</b>	MDL_ERR_72	( line {lineNum} ) - Sub Parameter C_comp_power_clamp is valid only for IBIS version >= 4.0  <i>C_comp_power_clamp is not valid for IBIS file versions less than 4.2</i>
<b>E0173</b>	MDL_ERR_73	( line {lineNum} ) - Sub Parameter C_comp_gnd_clamp is valid only for IBIS version >= 4.0  <i>C_comp_gnd_clamp is not valid for IBIS file versions less than 4.2</i>

Code	Symbol	Message/Comments
E0174	MDL_ERR_74	( line {lineNum} ) - Unknown Line Among Model Data  <i>A line was found in the [Model] section wich was not a valid line</i>
E0175	MDL_ERR_75	( line {lineNum} ) - '{subparam}' Subparameter Missing Setting  <i>There was no value specified for model subparameter</i>
E0176	MDL_ERR_76	( line {lineNum} ) - Invalid {subparam} Line  <i>The line corresponding to mdeol subparameter has an invalid syntax</i>
W0177	MDL_ERR_77	( line {lineNum} ) - Model {model}: {subparam} min value is not the smallest value listed  <i>Unused</i>
E0178	MDL_ERR_78	( line {lineNum} ) - 'NA' Not Allowed For Typical Value  <i>Unused</i>
W0179	MDL_ERR_79	Model {modelName}: {subparam} max value is not the largest value listed  <i>Unused</i>
E0180	MDL_ERR_80	Model '{modelName}': {Model_type} Not Defined  <i>The Model Type is not defined for Model</i>
E0181	MDL_ERR_81	Model {modelName}: One of C_comp,C_comp_pullup,C_comp_pulldown,C_comp_power_clamp,C_comp_gnd_clamp must be defined  <i>A mandatory sub-parameter is missing for</i>
C0182	MDL_ERR_82	Vmeas is <= Vinl for model {modelName}  <i>Vmeas must be greater than Vinl but is not so for</i>
C0183	MDL_ERR_83	Vmeas is >= Vinh for model {modelName}  <i>Vmeas must be less than Vinh but is not so for</i>
W0184	MDL_ERR_84	Model '{modelName}': Model_type '{modelType}' must have {subparam} set



Code	Symbol	Message/Comments
		<i>A generic message indicating that for Model which is of type the Vinl or Vinh parameter should be set</i>
E0185	MDL_ERR_85	Model '{modelName}': {subparam} is set when Model_type is not Terminator  <i>Model is not Terminator type; but corresponding to Rgnd; Rpower; Rac; or Cac has been defined</i>
E0186	MDL_ERR_86	Model '{modelName}': Rac must be defined when Cac is  <i>For Model which is of type Terminator; Cac is defined but Rac is not</i>
E0187	MDL_ERR_87	Model '{modelName}': Cac must be defined when Rac is  <i>For Model which is of type Terminator; Rac is defined but Cac is not</i>
E0188	MDL_ERR_88	Model '{modelName}': {clampReference} Required when No Voltage Range is Specified  <i>For model ; the [Voltage Range] is not specified; so the Reference must be specified (Pullup_reference; Pulldown_reference; Power_clamp_reference; Gnd_clamp_reference are all required if [Voltage Range] is not specified)</i>
E0189	MDL_ERR_89	Model '{modelName}': Ramp Not Allowed for Series and Series_switch  <i>Model is of type Series or Series_switch and hence the [Ramp] keyword is not allowed</i>
E0190	MDL_ERR_90	Model '{modelName}': Ramp Not Defined  <i>[Ramp] needs to be defined for all model types except Input types; Series; Series_switch and Terminator and was not defined for Model</i>
W0191	MDL_ERR_91	Model '{modelName}': {keyword} is not allowed when Model_type is Series  <i>Any of Pullup; Pulldown; POWER_Clamp; GND_Clamp; Rising Waveform; Falling Waveform; TTgnd; TTpower; Driver Schedule; Model Spec should not be defined for model type Series but it it was defined for</i>
W0192	MDL_ERR_92	Model '{modelName}': {keyword} is not allowed when Model_type is Series_switch  <i>Any of Pullup; Pulldown; POWER_Clamp; GND_Clamp; Rising Waveform; Falling Waveform; TTgnd; TTpower; Driver Schedule; Model Spec should not be defined for model type Series_switch ; but it was defined for</i>
E0193	MDL_ERR_93	Model {modelName} is of type Series_switch. [On] keyword is required

Code	Symbol	Message/Comments
		<i>An [Off] section was not defined for Model which is of type Series_switch</i>
<b>E0194</b>	MDL_ERR_94	Model {modelName} is of type Series_switch. [Off] keyword is required
		<i>An [On] section was not defined for Model which is of type Series_switch</i>
<b>E0195</b>	MDL_ERR_95	Model {modelName}: Receiver Thresholds use POWER Clamp Reference which is not defined in this Model
		<i>The reference_supply subparameter of Receiver Threshold was set to POWER_Clamp_Ref but there is no [POWER Clamp Reference] section specified for Model</i>
<b>E0196</b>	MDL_ERR_96	Model {modelName}: Receiver Thresholds use GND Clamp Reference which is not defined in this Model
		<i>The reference_supply subparameter of Receiver Threshold was set to GND_Clamp_Ref but there is no [GND Clamp Reference] section specified for Model</i>
<b>E0197</b>	MDL_ERR_97	Model {modelName}: Receiver Thresholds use Pullup Reference which is not defined in this Model
		<i>The reference_supply subparameter of Receiver Threshold was set to Pullup_Ref but there is no [Pullup Reference] section specified for Model</i>
<b>E0198</b>	MDL_ERR_98	Model {modelName}: Receiver Thresholds use Pulldown Reference which is not defined in this Model
		<i>The reference_supply subparameter of Receiver Threshold was set to Pulldown_Ref but there is no [Pulldown Reference] section specified for Model</i>
<b>E0199</b>	MDL_ERR_99	Model {modelName}: Receiver Thresholds use External Reference which is not defined in this Model
		<i>The reference_supply subparameter of Receiver Threshold was set to Ext_Ref but there is no [External Reference] section specified for Model</i>
<b>W0200</b>	MDL_ERR_100	Model '{modelName}': Vmeas,Vref and Rref timing test load parameters should be specified
		<i>Since is Open_drain or Open_sink or ECL type; one of Vmeas or Vref or Rref is mandatory</i>
<b>W0201</b>	MDL_ERR_101	Model '{modelName}': Vmeas timing test load parameter should be specified
		<i>Since is an I/O type or Output type or Tri-state type; Vmeas is mandatory</i>
<b>W0202</b>	MDL_ERR_102	Model '{modelName}': Rref_diff or Cref_diff timing test load parameters should be specified

Code	Symbol	Message/Comments
		<i>Since is of type IO_Diff; Output_Diff or Tri-state_Diff; Rref_diff or Cref_diff are mandatory</i>
E0203	MDL_ERR_103	( line {lineNum} ) - External Model language wrong or not specified  <i>[UNUSED]</i>
E0204	MDL_ERR_104	( line {lineNum} ) - Model '{modelName}' is of type Series_switch. {subparam} should be defined before the [On] and [Off] sections  <i>Model is of type Series_switch so corresponding to one of the keywords Voltage Range; Temperature Change; Pullup Reference; Pulldown Reference; GND Clamp Reference; POWER Clamp Reference should be defined before the [On] or [Off] keywords</i>
E0205	MDL_ERR_105	( line {lineNum} ) - Keyword is valid only for Series_switch models  <i>[On] and [Off] keywords are only valid for Series_switch models</i>
E0206	MDL_ERR_106	( line {lineNum} ) - Keyword is valid only for Series and Series_switch models  <i>[On] keyword is only valid for Series and Series_switch models</i>
E0207	MDL_ERR_107	( line {lineNum} ) - No preceding [On] or [Off] keyword found. Assuming [On]  <i>A keyword associated with Series_switch models should be preceded with an [On] or [Off] keyword.</i>
E0208	MDL_ERR_108	( line {lineNum} ) - Add sub model: Already Defined for this model  <i>Only a single [Add Submodel] section is allowed in a model</i>
E0209	MDL_ERR_109	( line {lineNum} ) - Add Submodel is not allowed for Series or Series_switch models  <i>[Add Submodel] section is not allowed for models which have type Series or Series_switch</i>
E0210	MDL_ERR_110	( line {lineNum} ) - Invalid Add Submodel Line. Expecting two items only  <i>More than 2 items were defined on the [Add Submodel] keyword line</i>
E0211	MDL_ERR_111	( line {lineNum} ) - Add Submodel Name not found  <i>The Add Submodel line did not have a submodel name specified</i>
E0212	MDL_ERR_112	( line {lineNum} ) - Add Submodel Name Over {maxSubModelChars} Characters Long

Code	Symbol	Message/Comments
		<i>A submodel name cannot be more than ; ie; 40</i>
E0213	MDL_ERR_113	"( line {lineNum} ) - Invalid Submodel Name (\\"{submodelName}\"), Reserved Word."
		<i>A reserved word was used as a sub model name</i>
E0214	MDL_ERR_114	( line {lineNum} ) - Duplicate Add Submodel Name {submodelName}
		<i>[UNUSED]</i>
E0215	MDL_ERR_115	( line {lineNum} ) - Add Submodel Mode not found
		<i>"The mode ""Driving"" or ""Non-Driving"" was not specified for an [Add SubModel]"</i>
E0216	MDL_ERR_116	( line {lineNum} ) - Driving mode is not valid for input model types
		<i>If a Model is of type Input; then the added Submodel cannot be in Driving mode</i>
E0217	MDL_ERR_117	( line {lineNum} ) - Non-Driving mode is not valid for output model types
		<i>If a Model is of type Output; the the added Submodel cannot be in Non-driving mode</i>
E0218	MDL_ERR_118	Could not find definition for Submodel {submodelName} of Model {modelName}
		<i>The model has an added submodel but the submodel definition was not found</i>
W0219	MDL_ERR_119	Model {modelName} not referenced in any [Pin],[Model Selector],
		<i>The Model has not been referenced anywhere in a [Pin] or [Model Selector] section</i>
W0220	MDL_ERR_120	Submodel {submodelName} is not referenced by any model [Add Submodel] keyword
		<i>The SubModel has not been referenced by any [Add Submodel] section in any model</i>
E0221	MDL_ERR_121	( line {lineNum} ) - No Paramter list for model {modelName}\n
		<i>(Though this error message is referenced in code; that code is never invoked)</i>
E0222	MDL_ERR_122	[External Model] corner type does not contain reserved port REQUIRED
E0223	MDL_ERR_123	[External Model] corner type contains reserved port ILLEGAL

Code	Symbol	Message/Comments
E0224	MDL_ERR_124	Illegal type or program bug\n
E0225	MDL_ERR_125	[EXTERNAL CIRCUIT] : corner Port : used as digital and analog
E0226	MDL_ERR_126	MODEL Corner line: {lineNum} has A2D not matching TYP A2D:
E0227	MDL_ERR_127	MODEL Corner line: {lineNum} has D2A not matching TYP D2A:
W0228	MDL_ERR_128	MODEL Corner has no A2d matching TYP: .. adding by default  <i>[UNUSED]</i>
W0229	MDL_ERR_129	MODEL Corner has no D2A matching TYP: .. adding by default  <i>[UNUSED]</i>
E0230	MDL_ERR_130	( line {lineNum} ) - [End_External_Model] with no [External Model]
E0231	MDL_ERR_131	( line {lineNum} ) - No Typ Corner Defined for [External Model](required)  <i>The Typ corner was not specified in [External Model] Corner sub parameter</i>
W0232	MDL_ERR_132	External Model for has suspiciously few PORTS ({numPorts})
E0233	MDL_ERR_133	( line {lineNum} ) - No A2D or D2A for Typ corner in model {modelName}  <i>[UNUSED]</i>
W0234	MDL_ERR_134	( line {lineNum} ) - No A2D or D2A for Min corner in model {modelName},will use Typ

Code	Symbol	Message/Comments
		corner  <i>[UNUSED]</i>
<b>W0235</b>	MDL_ERR_135	( line {lineNum} ) - No A2D or D2A for Max corner in model {modelName},will use Typ Corner  <i>[UNUSED]</i>
<b>E0236</b>	MDL_ERR_136	( line {lineNum} ) - Illegal (not specified and not reserved) port name in  <i>Port name can't be used for [External Model] or [External Circuit] type.</i>
<b>E0237</b>	MDL_ERR_137	( line {lineNum} ) - Reserved Analog Port used as digital port
<b>E0238</b>	MDL_ERR_138	( line {lineNum} ) - Redundant port1 in D2A  <i>[UNUSED]</i>
<b>E0239</b>	MDL_ERR_139	( line {lineNum} ) - Illegal Digital Port in D2A
<b>E0240</b>	MDL_ERR_140	( line {lineNum} ) - Illegal Digital Port in A2D (must use D_receive)
<b>E0241</b>	MDL_ERR_141	( line {lineNum} ) - Illegal Digital Port in A2D (use D_receive or a User Defined)
<b>E0242</b>	MDL_ERR_142	( line {lineNum} ) - Vlow > Vhigh [{Vlow} >= {Vhigh}]
<b>E0243</b>	MDL_ERR_143	( line {lineNum} ) - PORT2 must be reserved word analog port  <i>[UNUSED]</i>
<b>E0244</b>	MDL_ERR_144	( line {lineNum} ) - [End_External_Circuit] with no [External Circuit]  <i>An [End External Circuit] keyword was found with no associated [External Circuit] keyword</i>

Code	Symbol	Message/Comments
W0245	MDL_ERR_145	[External Circuit] has suspiciously few PORTS ({portCount})
W0246	MDL_ERR_146	( line {lineNum} ) - No A2D or D2A for Typ corner in Circuit {cktName}  <i>[UNUSED]</i>
W0247	MDL_ERR_147	( line {lineNum} ) - No A2D or D2A for Min corner in Circuit {cktName},will use Typ corner  <i>[UNUSED]</i>
W0248	MDL_ERR_148	( line {lineNum} ) - No A2D or D2A for Max corner in circuit {cktName},will use Typ Corner  <i>[UNUSED]</i>
E0249	MDL_ERR_149	( line {lineNum} ) - Orphan External Cucuit keyword.
E0250	MDL_ERR_150	Unable to Save External Circuit Name  <i>The code failed to allocate the required memory</i>
E0251	MDL_ERR_151	( line {lineNum} ) - 'External Circuit' Keyword Missing name  <i>There was no name specified on the [External Circuit] keyword line</i>
E0252	MDL_ERR_152	( line {lineNum} ) - External Circuit Name Over {maxLength} Characters Long  <i>[UNUSED]</i>
E0253	MDL_ERR_153	"( line {lineNum} ) - Invalid External Circuit Name (\\"{cktName}\\"), Reserved Word."  <i>The name specified for an external circuit is invalid as it is a reserved word</i>
E0254	MDL_ERR_154	"( line {lineNum} ) - External Circuit Name Previously Defined (\\"{cktName}\")"  <i>An external circuit with name is already defined</i>
E0255	MDL_ERR_155	External Model D2A Line Illegal connection,2 analog reference/driver ports

Code	Symbol	Message/Comments
E0256	MDL_ERR_156	( line {lineNum} ) - A2D only allowed for language = SPICE or language = IBIS-ISS
E0257	MDL_ERR_157	( line {lineNum} ) - [Composite Current] should be preceded by a [Rising Waveform] or [Falling Waveform] section  <i>A [Composite Current] section in a model should be immediately be preceded by a [Rising Waveform] or [Falling Waveform] section</i>
E0258	MDL_ERR_158	( line {lineNum} ) - No previous Rising or Falling Waveform found with which to associate the Composite Current  <i>A [Composite Current] section in a model was preceded by a [Rising Waveform] or [Falling Waveform] section but due to some error the [Rising Waveform] or [Falling Waveform] section was not parsed so the parser is unable to associate a Rising or Falling waveform with the Composite current</i>
E0259	MDL_ERR_159	( line {lineNum} ) - Missing [End Algorithmic Model] keyword  <i>An [Algorithmic Model] section was not terminate with an [End Algorithmic Model] keyword</i>
E0260	MDL_ERR_160	( line {lineNum} ) - [End Emi Model] keyword expected  <i>The [End Emi Model] keyword was expected to finish off a previously started [Begin Emi Model] section</i>
E0261	MDL_ERR_161	( line {lineNum} ) - Orphan [End Algorithmic Model] keyword found  <i>An [End Algorithmic Model] keyword was found without an associated [Algorithmic Model] keyword</i>
E0262	MDL_ERR_162	( line {lineNum} ) - Orphan [End EMI Model] keyword found  <i>An [End EMI Model] keyword was found without an associated [Begin EMI Model] keyword</i>
B0263	MDL_ERR_163	( line {lineNum} ) - Composite Current is already associated with the last Waveform  <i>More than one [Composite Current] section has been defined for Rising or Falling waveform</i>
E0264	MDL_ERR_164	( line {lineNum} ) - Invalid {subparam} assignment. Too many tokens found  <i>[UNUSED]</i>
E0265	MDL_ERR_165	( line {lineNum} ) - Invalid {subparam} assignment. Each assignment should be defined on a



Code	Symbol	Message/Comments
		separate line
		<i>[UNUSED]</i>
E0266	MDL_ERR_166	( line {lineNum} ) - Converter Parameter {paramname} is not Numeric
		<i>[UNUSED]</i>
E0267	MDL_ERR_167	( line {lineNum} ) - The parameter {paramname} reference '{paramreference}' has mismatched parenthesis
		<i>[UNUSED]</i>
E0268	MDL_ERR_168	( line {lineNum} ) - Invalid D2A polarity '{polarity}': Can only be 'Inverting' or 'Non-Inverting'
		<i>[UNUSED]</i>
E0269	MDL_ERR_169	( line {lineNum} ) - The D2A d_port should be 'D_drive' when polarity is specified
		<i>[UNUSED]</i>
E0270	MDL_ERR_170	Mdl '{modename}' D2A corner '{corner}': When polarity is specified, there should two D2A defined with opposite polarities
		<i>[UNUSED]</i>
E0271	MDL_ERR_171	( line {lineNum} ) - Invalid Converter Parameter line. Should contain a single parameter assignment
		<i>[UNUSED]</i>
E0272	MDL_ERR_172	( line {lineNum} ) - Parameters are not allowed for language=SPICE
		<i>[UNUSED]</i>
E0273	MDL_ERR_173	Model {modelname} has [Initial Delay] sub parameter {subparam} specified but it has no {section}
		<i>Model has [Initial Delay] sub-parametr (V-T; I-T) specified but the corressponding [Rising/Falling Waveform] or [Composite Current] is missing</i>
W0274	MDL_ERR_174	Vinl > Vinh for model {modelname}
		<i>Vinl is greater than Vinh in</i>

Code	Symbol	Message/Comments
5306	MPINS_ERR_6	Invalid [Merged Pins] Pin Name {pinName}. Reserved word.  <i>[UNUSED]</i>
5309	MPINS_ERR_9	Pin {pinName} cannot be connected to the Merging Pin {mergePinName} as it is defined in the [Pin Numbers] section  <i>[UNUSED]</i>
5408	IDLY_ERR_8	{V-T I-T}: Min value is not the smallest value listed  <i>[UNUSED]</i>
5409	IDLY_ERR_9	{V-T I-T}: Max value is not the largest value listed  <i>[UNUSED]</i>

## 4.2 MESSAGE CODES 500 TO 999

Code	Symbol	Message/Comments
B0500	CMPNT_ERR_0	{sourceFile}:{sourceLinenum}:Unable to get IBIS.  <i>[UNUSED]</i>
E0501	CMPNT_ERR_1	( line {lineNum} ) - Orphan Component keyword.  <i>Component keyword found but not within a Component declaration</i>
B0502	CMPNT_ERR_2	( line {lineNum} ) - Orphan data line keyword.  <i>A non keyword line was found when no Component keyword section was active</i>
E0503	CMPNT_ERR_3	( line {lineNum} ) - Unexpected End Alternate Package Models keyword  <i>Found [End Alternate Package Modes] where it was not expected</i>
E0504	CMPNT_ERR_4	( line {lineNum} ) - Expecting End Alternate Package Models keyword  <i>Did not find [End Alternate Package Models] keyword where it was expected</i>
B0505	CMPNT_ERR_5	{fileName}:{lineNum}:Illegal keyword passed to cmpnt.

*Program data structures are corrupt in program file*

<b>E0506</b>	CMPNT_ERR_6	( line {lineNum} ) - Data on this line appears to be for the Component keyword,which does not allow data on subsequent lines.
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*There should be no additional lines associated with the [Component] keyword*

<b>E0507</b>	CMPNT_ERR_7	( line {lineNum} ) - Data on this line appears to be for the Manufacturer keyword,which does not allow data on subsequent lines.
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*There should be no additional lines associated with the [Manufacturer] keyword*

<b>E0508</b>	CMPNT_ERR_8	( line {lineNum} ) - Data on this line appears to be for the Package Model keyword,which does not allow data on subsequent lines.
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*There should be no additional lines associated with the [Package Model] keyword*

<b>B0509</b>	CMPNT_ERR_9	{fileName}:{lineNum}:Unknown keyword received data.
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*Program data structures are corrupt in program file*

<b>B0510</b>	CMPNT_ERR_10	{fileName}:{lineNum}:Illegal line type passed to cmpnt.
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*Program data structures are corrupt in program file*

<b>E0511</b>	CMPNT_ERR_11	Component '{compName}' is duplicated within the .ibs file.
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*[UNUSED]*

<b>E0512</b>	CMPNT_ERR_12	( line {lineNum} ) - Unable to create new CMPNT.
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*Memory allocation for a new Component failed*

<b>W0513</b>	CMPNT_ERR_13	( line {lineNum} ) - Component '{compName}' contains a blank character.
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*Blank characters are illegal in a ( ; ; ; ; and )*

<b>E0514</b>	CMPNT_ERR_14	Required keyword 'Manufacturer' not defined for Component '{compName}'.
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*[UNUSED]*

<b>B0515</b>	CMPNT_ERR_15	{sourceFile}:{sourceLinenum}:Unable to get IBIS?
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*Program data structures are corrupt in program file*

<b>E0516</b>	CMPNT_ERR_16	Unable to find Package Model '{pkgName}' for Component '{compName}'
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*[UNUSED]*

<b>E0517</b>	CMPNT_ERR_17	( line {lineNum} ) - Duplicate Package keyword.
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*The [Package] section should be defined only once within a component*

<b>E0518</b>	CMPNT_ERR_18	( line {lineNum} ) - Unknown data after Package keyword.
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*The [Package] keyword line should have no data following the keyword.*

<b>E0519</b>	CMPNT_ERR_19	Keyword 'Package' not defined for Component '{compName}'.
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*[UNUSED]*

<b>E0520</b>	CMPNT_ERR_20	( line {lineNum} ) - Duplicate [Alternate Package Models] keyword.
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*The [Alternate Package Models] section should be defined only once within a component*

<b>E0521</b>	CMPNT_ERR_21	( line {lineNum} ) - Unknown data after [Alternate Package Models] keyword.
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*The [Alternate Package Models] keyword line should have no data following the keyword.*

<b>E0522</b>	CMPNT_ERR_22	( line {lineNum} ) - Unknown data after [End Alternate Package Models] keyword.
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*The [End Alternate Package Models] keyword line should have no data following the keyword.*

<b>E0523</b>	CMPNT_ERR_23	( line {lineNum} ) - Duplicate Pin keyword found.
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*The [Pin] section should be defined at most once within a component*

<b>E0524</b>	CMPNT_ERR_24	Unable to find Pin keyword data for Component '{compName}'.
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*[UNUSED]*

<b>E0525</b>	CMPNT_ERR_25	( line {lineNum} ) - Duplicate Pin_Mapping keyword found.
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*The [Pin Mapping] section should be defined at most once within a component*

<b>E0526</b>	CMPNT_ERR_26	( line {lineNum} ) - [Diff Pin] keyword column count must be 3,5 or 6 found {numColumns} columns.
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*[UNUSED]*

<b>E0527</b>	CMPNT_ERR_27	( line {lineNum} ) - Duplicate Diff_Pin keyword found.
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*A [Diff Pin] section should be defined at most once within a component*

<b>E0528</b>	CMPNT_ERR_28	( line {lineNum} ) - Unable to find column headers after {keyword} keyword.  <i>If is one of Pin; Pin Mapping; Diff Pin or Series Pin Mapping then a set of column headers is expected but were not found</i>
<b>E0529</b>	CMPNT_ERR_29	( line {lineNum} ) - '{columnName}' column header not found or out of order.  <i>A associated with a Pin; Pin Mapping; Diff Pin or Series Pin Mapping keyword was not found or found in the incorrect position</i>
<b>E0530</b>	CMPNT_ERR_30	( line {lineNum} ) - Unknown column header '{columnName}' or out of order.  <i>A associated with a Pin; Pin Mapping; Diff Pin or Series Pin Mapping keyword was not recognized or found in an incorrect position</i>
<b>E0531</b>	CMPNT_ERR_31	( line {lineNum} ) - Duplicate column header '{columnName}' .  <i>A associated with a Pin; Pin Mapping; Diff Pin or Series Pin Mapping keyword was specified more than once</i>
<b>E0532</b>	CMPNT_ERR_32	( line {lineNum} ) - {keyword} keyword column count must be {minHeaders} or {maxHeaders},found {actualHeaders} columns.  <i>[UNUSED]</i>
<b>E0533</b>	CMPNT_ERR_33	( line {lineNum} ) - Unable to add data for {keyword} keyword.  <i>There was an error trying to create the data structures associated with keyword</i>
<b>B0534</b>	CMPNT_ERR_34	Unable to Parse {text}: {sourceFile} {sourceLinenum}  <i>A generic error message which indicates that a parsing error related to</i>
<b>E0535</b>	CMPNT_ERR_35	( line {lineNum} ) - Unknown Line after Component Description  <i>A Timing_location or SI_location line was expected</i>
<b>B0536</b>	CMPNT_ERR_36	Should Not Be Here: {sourceFile},{sourceLinenum}  <i>The code has a bug</i>
<b>E0537</b>	CMPNT_ERR_37	( line {lineNum} ) - {subparam} Already Defined For Component '{compName}'  <i>The subparameter (SI_location or Timing_location) was already defined for component</i>

<b>E0538</b>	CMPNT_ERR_38	( line {lineNum} ) - '{subparam}' Subparameter Missing Setting  <i>The subparameter (SI_location or Timing_location) did not have a value associated with it</i>
<b>E0539</b>	CMPNT_ERR_39	( line {lineNum} ) - Incorrect Number of Line Items ({numberOfItemsFound}) For {paramName}: Expecting {numberOfItemsExpected}  <i>The sub parameter should have had items on the keyword line but only number of data items were found</i>
<b>E0540</b>	CMPNT_ERR_40	"( line {lineNum} ) - Invalid {subparam/keyword} (\\"{badValue}\") (try \\"{options}\")"  <i>A generic error message which indicates that a wrong value was specified for a particular . The user must specify from one of the</i>
<b>E0541</b>	CMPNT_ERR_41	"( line {lineNum} ) - Invalid {subparam} (\\"{badValue}\")"  <i>"The subparameter (Si_location or Timing_location) has an invalid value specified. Should be ""Die"" or ""Pin""."</i>
<b>E0542</b>	CMPNT_ERR_42	( line {lineNum} ) - Duplicate Series_Pin_Mapping keyword found.  <i>A [Series Pin Mapping] section should be defined at most once in a component</i>
<b>E0543</b>	CMPNT_ERR_43	( line {lineNum} ) - Unknown column header after 'function_table_group'  <i>An unknown columnHeader was found after the 'function_table_group' header on the [Series Pin Mapping] keyword line</i>
<b>E0544</b>	CMPNT_ERR_44	TBD: Put this in model check,*_DIFF without external model  <i>A Diff model type should have an External Model defined</i>
<b>E0545</b>	CMPNT_ERR_45	Component pin model type using [External Model] without corresponding [Diff_Pin]
<b>E0546</b>	CMPNT_ERR_46	( line {lineNum} ) - Duplicate [Series_Switch_Groups] keyword found.  <i>A [Series Switch Groups] section should be defined at most once in a component</i>
<b>B0547</b>	CMPNT_ERR_47	{sourceFile}:{sourceLinenum}:Unable to get Components.  <i>Program data structures are corrupt in program file</i>
<b>E0548</b>	CMPNT_ERR_48	( line {lineNum} ) - Duplicate Node Declaration keyword found.

*A [Node Declaration] section is already defined for the component*

<b>E0549</b>	CMPNT_ERR_49	( line {lineNum} ) - Unable to create new NODE LIST.
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*The code failed to allocate the required memory*

<b>E0550</b>	CMPNT_ERR_50	( line {lineNum} ) - Unable to create new Circuit Call (malloc).
--------------	--------------	--

*Memory allocation for a new Circuit Call failed*

<b>U0551</b>	CMPNT_ERR_51	[End Emi Component] Keyword expected
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*[UNUSED]*

<b>U0552</b>	CMPNT_ERR_52	Unexpected [End Emi Component] Keyword
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*[UNUSED]*

<b>E0553</b>	CMPNT_ERR_53	( line {lineNum} ) - Unexpected Keyword in a [Component EMI] block
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*The only keywords allowed within a [Begin EMI Component] block are [Pin EMI] and [Pin Domain EMI] but an unexpected keyword was found*

<b>E0554</b>	CMPNT_ERR_54	( line {lineNum} ) - Duplicate Repeater_Pin keyword found.
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*Only a single [Repeater\_Pin] section is allowed in a component*

<b>E0600</b>	PIN_ERR_0	( line {lineNum} ) - Unable to add the line of Pin data.
--------------	-----------	--

*Memory allocation failed when trying to create the data structures for a Pin*

<b>E0601</b>	PIN_ERR_1	( line {lineNum} ) - Pin not found.
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*A Pin was not specified in a data line in the [Pin] Section*

<b>E0602</b>	PIN_ERR_2	( line {lineNum} ) - Signal name not found.
--------------	-----------	---

*The signal\_name was not specified in a data line in the [Pin] section*

<b>E0603</b>	PIN_ERR_3	( line {lineNum} ) - Model name not found.
--------------	-----------	--

*The model\_name was not specified in a data line in the [Pin] section*

<b>E0604</b>	PIN_ERR_4	( line {lineNum} ) - Each line of Pin data must contain either 3 or 6 columns.
--------------	-----------	--

*A data line in the [Pin] section should have either 3 (if the package parameters are not*

*specified) or 6 (if the package parameters are specified) values*

<b>E0605</b>	PIN_ERR_5	( line {lineNum} ) - When using 6 columns, the headers R_pin,L_pin,and C_pin must be listed.  <i>If package parameters are specified for a pin in the [Pin] section; then the headers R_pin; L_pin and C_pin must be specified on the [Pin] keyword line</i>
<b>E0606</b>	PIN_ERR_6	( line {lineNum} ) - Duplicate Pin '{pinName}'.  <i>The same was defined more than once in the [Pin] section</i>
<b>B0607</b>	PIN_ERR_7	{sourceFile}:{sourceLinenum}:Unable to get IBIS?  <i>Program data structures are corrupt in program file</i>
<b>E0608</b>	PIN_ERR_8	Component '{compName}': Model '{modelName}' for Pin '{pinName}' not defined.  <i>The model associated with pin for component was not defined elsewhere in the file</i>
<b>C0609</b>	PIN_ERR_9	Pin {pinName} is not defined as a Diff Pin though the associated Model Selector {modelSelectorName} was determined to be Differential  <i>The pin is associated with a model selector which was found to be associated with a differential model but the pin is not defined as a differential pin</i>
<b>E0610</b>	PIN_ERR_10	Component '{compName}': Pin '{pinName}': Model '{modelName}': model type for a Pin cannot be Series or Series_switch.  <i>[UNUSED]</i>
<b>C0611</b>	PIN_ERR_11	Pin {pinName} is not defined as a Diff Pin though the associated Model {modelName} was determined to be Differential  <i>The pin is associated with a model which was found to be differential but the pin is not defined as a differential pin</i>
<b>E0612</b>	PIN_ERR_12	Component '{compName}': Pin '{pinName}' not referenced in Pin Mappings.  <i>The Pin of Component is not referenced in the component's [Pin Mapping] section</i>
<b>E0613</b>	PIN_ERR_13	Pin '{pinName}' found in Package_Model '{pkgName}' Pin_Numbers list not found in Component '{compName}' Pin list.  <i>The Pin was referenced in the [Pin Numbers] section of the package model but is not defined in the [Pin] section of the associated component</i>
<b>E0614</b>	PIN_ERR_14	( line {lineNum} ) - Unable to allocate new PIN.



*Memory allocation for a new pin failed while trying to parse the [Pin] section*

<b>E0615</b>	PIN_ERR_15	Pin {pinName} referenced in the [Merged Pins] section of Package {pkgName} is not defined as POWER or GND in Component {compName} Pin list
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*The Pin is referenced in the [Merged Pins] section of Package pkgName of Component but is not defined as a POWER or GND pin in the [Pins] section of the component*

<b>E0616</b>	PIN_ERR_16	Pin {pinName} referenced in the [Merged Pins] section of Package {pkgName} is not defined in Component {compName} Pin list
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*The Pin is referenced in the [Merged Pins] section of Package pkgName of Component but is not defined as a Pin in the [Pins] section of the component*

<b>E0617</b>	PIN_ERR_17	Component {compName}: {type} Pin {pinName} referenced in the [Merged Pins] section of Package {pkgName} is merged with a {type} Pin {pinNameMerged}
--------------	------------	---

*In Component and Package ; a Pin of POWER is merged with a Pin of GND or a Pin of GND is merged with a Pin of POWER*

<b>E0618</b>	PIN_ERR_18	[Component] {compName} with [Package Model] {pkgName} has pin and pad mismatch because [Merged Pins] pins ({mergingPin}, {mergedPin}) point to different buses ({mergingPinBus},{mergedPinBus}) in [Pin Mapping]
--------------	------------	--

*In Component and Package ; a Pin is merged with a Pin but they are connected to different busses ; in the [Pin Mapping] section*

<b>E0619</b>	PIN_ERR_19	[Package Model] {pkgName} with [Merged Pins] requires [Pin Mapping] in [Component] {compName}
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*The Package in Component has a [Merged Pins] section but no [Pin Mapping] section*

<b>E0700</b>	PINMPG_ERR_0	( line {lineNum} ) - Extra data columns on this line.
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*There was some extraneous data specified at the end of the data line in the [Pin Mapping] section*

<b>E0701</b>	PINMPG_ERR_1	( line {lineNum} ) - No Pin number.
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*A pin number was not specified on a data line in the [Pin Mapping] section*

<b>E0702</b>	PINMPG_ERR_2	( line {lineNum} ) - No pulldown_ref data.
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*The pulldown reference was not specified on a data line in the [Pin Mapping] section*

<b>E0703</b>	PINMPG_ERR_3	( line {lineNum} ) - No pullup_ref data.
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*The pullup reference was not specified on a data line in the [Pin Mapping] section*

<b>E0704</b>	PINMPG_ERR_4	( line {lineNum} ) - Pin Mapping data lines must contain either 3,5 or 6 columns.  <i>A data line in the [Pin Mapping] section should contain 3 entries (when the pin number; pullup reference and pulldown reference are specified) or 5 entries ( when the external reference is not specified) and 6 entries when the pin number; pulldown reference; pullup reference; gnd clamp reference; power clamp reference and external reference are all specified)</i>
<b>E0705</b>	PINMPG_ERR_5	( line {lineNum} ) - Pin Mapping data lines must contain either 3 or 5 columns.  <i>In IBIS versions earlier than 4.1; a data line in the [Pin Mapping] section should contain 3 entries (when the pin number; pullup reference and pulldown reference are only specified) or 5 entries ( when the pin number; pullup reference; pulldown reference; power clamp reference and gnd clamp reference are specified)</i>
<b>E0706</b>	PINMPG_ERR_6	( line {lineNum} ) - When 5 columns are specified,the headings gnd_clamp_ref and power_clamp_ref must be used.  <i>The column headings gnd_clamp_ref and power_clamp_ref must be specified on the [Pin Mapping] keyword line when a data line contains 5 entries</i>
<b>E0707</b>	PINMPG_ERR_7	( line {lineNum} ) - When 6 columns are specified,the headings gnd_clamp_ref, power_clamp_ref and ext_ref must be used.  <i>The column headings gnd_clamp_ref and power_clamp_ref and ext_ref must be specified on the [Pin Mapping] keyword line when a data line contains 6 entries</i>
<b>E0708</b>	PINMPG_ERR_8	( line {lineNum} ) - Duplicate Pin Mapping Pin.  <i>A pin must be referenced at most once within a [Pin Mapping] section</i>
<b>W0709</b>	PINMPG_ERR_9	( line {lineNum} ) - Component {compName} Pin {pinName} is a POWER pin. Usually only has Pullup_ref in Pin Mapping  <i>Pin of Component has a model type of POWER and hence should only have a Pullup_ref associated with it in the [Pin Mapping] section</i>
<b>W0710</b>	PINMPG_ERR_10	( line {lineNum} ) - Pin {pinName} is a POWER pin. Usually only has Pullup_ref in Pin Mapping  <i>Pin has a model type of POWER and hence should only have a Pullup_ref associated with it in the [Pin Mapping] section</i>
<b>W0711</b>	PINMPG_ERR_11	( line {lineNum} ) - Component {compName} Pin {pinName} is a GND pin. Usually only has Pulldown_ref in Pin Mapping  <i>Pin of Component has a model type of GND and hence should only have a Pulldown_ref associated with it in the [Pin Mapping] section</i>
<b>W0712</b>	PINMPG_ERR_12	( line {lineNum} ) - Pin {pinName} is a GND pin. Usually only has Pulldown_ref in Pin

		Mapping
		<i>Pin has a model type of GND and hence should only have a Pulldown_ref associated with it in the [Pin Mapping] section</i>
<b>W0713</b>	PINMPG_ERR_13	( line {lineNum} ) - Component {compName} Pin {pinName} is NC. Should not have any references in Pin Mapping
		<i>The pin in Component is of model type NC and hence should not be associated with any references in the [Pin Mapping] section</i>
<b>W0714</b>	PINMPG_ERR_14	( line {lineNum} ) - Pin {pinName} is NC. Should not have any references in Pin Mapping
		<i>The pin is of model type NC and hence should not be associated with any references in the [Pin Mapping] section</i>
<b>E0715</b>	PINMPG_ERR_15	Component '{compName}': Pin Mapping Pin '{pinName}' not previously declared in Pin section.
		<i>The pin has been referenced in the [Pin Mapping] section of component but the pin has no definition in the [Pin] section of the component</i>
<b>E0716</b>	PINMPG_ERR_16	Component '{compName}': Pin Mapping pulldown_ref entry '{pdRef}' is not connected to at least one pin whose model_name is POWER or GND.
		<i>In component ; the pull down reference in the [Pin Mapping] section is not associated with a pin whose model is POWER or GND</i>
<b>C0717</b>	PINMPG_ERR_17	Component '{compName}': Pin Mapping '{pdRef}': pulldown_ref entry is usually connected to GND.
		<i>In component ; the pull down reference in the [Pin Mapping] section is associated with a pin whose model is POWER; but the expectation is that it would be associated with a pin whose model is GND</i>
<b>C0718</b>	PINMPG_ERR_18	Component {compName}: Pulldown Reference {pdRef} is also used as a Pullup Reference
		<i>In component ; in the [Pin Mapping] section; the pulldown reference is also used as a pullup reference. This message is only generated for IBIS versions &gt;= 4.</i>
<b>C0719</b>	PINMPG_ERR_19	Pulldown Reference {pdRef} is also used as a Pullup Reference
		<i>In the [Pin Mapping] section; the pulldown reference is also used as a pullup reference. This message is only generated for IBIS versions &lt; 4.</i>
<b>E0720</b>	PINMPG_ERR_20	Component '{compName}': Pin Mapping pullup_ref entry '{puRef}' is not connected to at least one pin whose model_name is POWER or GND.
		<i>In component ; the pull up reference in the [Pin Mapping] section is not associated with a pin whose model is POWER or GND</i>

C0721	PINMPG_ERR_21	<p>Component '{compName}': Pin Mapping '{puRef}': pullup_ref entry is usually connected to POWER.</p> <p><i>In component ; the pull up reference in the [Pin Mapping] section is associated with a pin whose model is GND; but the expectation is that it would be associated with a pin whose model is POWER</i></p>
E0722	PINMPG_ERR_22	<p>Component '{compName}': Pin Mapping gnd_clamp_ref entry '{gcRef}' is not connected to at least one pin whose model_name is POWER or GND.</p> <p><i>In component ; the gnd clamp reference in the [Pin Mapping] section is not associated with a pin whose model is POWER or GND</i></p>
C0723	PINMPG_ERR_23	<p>Component '{compName}': Pin Mapping '{gcRef}': gnd_clamp_ref entry is usually connected to GND.</p> <p><i>In component ; the gnd clamp reference in the [Pin Mapping] section is associated with a pin whose model is POWER; but the expectation is that it would be associated with a pin whose model is GND</i></p>
E0724	PINMPG_ERR_24	<p>Component '{compName}': Pin Mapping power_clamp_ref entry '{pcRef}' is not connected to at least one pin whose model_name is POWER or GND.</p> <p><i>In component ; the power clamp reference in the [Pin Mapping] section is not associated with a pin whose model is POWER or GND</i></p>
C0725	PINMPG_ERR_25	<p>Component '{compName}': Pin Mapping '{pcRef}': power_clamp_ref entry is usually connected to POWER.</p> <p><i>In component ; the power clamp reference in the [Pin Mapping] section is associated with a pin whose model is GND but the expectation is that it would be associated with a pin whose model is POWER</i></p>
E0726	PINMPG_ERR_26	<p>Component '{compName}': Pin Mapping ext_ref entry '{extRefName}' is not connected to at least one pin whose model_name is POWER or GND.</p> <p><i>In component ; the external reference in the [Pin Mapping] section is not associated with a pin whose model is POWER or GND</i></p>
C0727	PINMPG_ERR_27	<p>Component '{compName}': Pin Mapping '{extRefName}': ext_ref entry is usually connected to POWER.</p> <p><i>In component ; the external reference in the [Pin Mapping] section is associated with a pin whose model is GND but the expectation is that it would be associated with a pin whose model is POWER</i></p>
E0728	PINMPG_ERR_28	<p>( line {lineNum} ) - Unable to alloc new PINMPG.</p> <p><i>Memory allocation failed when trying to create the data structures for a [Pin Mapping]</i></p>

<b>E0729</b>	PINMPG_ERR_29	( line {lineNum} ) - {badValue} is an invalid Pin_Mapping column entry.  <i>"A ""NA"" has been specified on a row in the [Pin Mapping] section"</i>
<b>E0800</b>	DIFPIN_ERR_0	( line {lineNum} ) - Unable to alloc DIFPIN.  <i>Memory allocation failed when trying to create the data structures for a [Diff Pin]</i>
<b>E0801</b>	DIFPIN_ERR_1	( line {lineNum} ) - Too many Diff Pin data columns.  <i>There are two many tokens on a data line in the [Diff Pin] section</i>
<b>E0802</b>	DIFPIN_ERR_2	( line {lineNum} ) - No Diff_Pin column entry.  <i>Diff_pin was not specified on a data line in the [Diff Pin] section</i>
<b>E0803</b>	DIFPIN_ERR_3	( line {lineNum} ) - No inv_pin column entry.  <i>inv_pin was not specified on a data line in the [Diff Pin] section</i>
<b>E0804</b>	DIFPIN_ERR_4	( line {lineNum} ) - Diff_Pin column pin same as inv_pin column pin.  <i>The diff pin and the inv pin on a data line in the [Diff Pin] section should not be the same</i>
<b>E0805</b>	DIFPIN_ERR_5	( line {lineNum} ) - No vdiff column entry.  <i>Vdiff was not specified on a data line in the [Diff Pin] section</i>
<b>E0806</b>	DIFPIN_ERR_6	( line {lineNum} ) - No tdelay_typ column entry.  <i>tdelay_typ was not specified on a data line in the [Diff Pin] section</i>
<b>W0807</b>	DIFPIN_ERR_7	( line {lineNum} ) - Typ value is not in between Min and Max  <i>The tdelay_typ value does not lie between the min and max values in a [Diff Pin] section</i>
<b>E0808</b>	DIFPIN_ERR_8	( line {lineNum} ) - Diff_Pin data line column count must be 4 or 6.  <i>A data line in the [Diff Pin] section should contain 6 columns; ie; Diff_pin; inv_pin; vdiff; tdelay_typ; tdelay_min; tdelay_max or 4 columns; ie; Diff_pin; inv_pin; vdiff; tdelay_typ</i>
<b>E0809</b>	DIFPIN_ERR_9	( line {lineNum} ) - When using 6 columns,the tdelay_min and tdelay_max headers must be used.  <i>A data line in the [Diff Pin] section contains 6 values but only 4 headers were specified on the keyword line</i>

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<b>E0810</b>	DIFPIN_ERR_10	Component '{compName}': Diff_Pin '{pinName}' not previously declared in Pin section.  <i>The pin was referred to in the [Diff Pin] section of component but not defined in the [Pin] section of the component</i>
<b>E0811</b>	DIFPIN_ERR_11	Component '{compName}': inv_pin '{pinName}' not previously declared in Pin section.  <i>The pin was referred to in the [Inv Pin] section of component but not defined in the [Pin] section of the component</i>
<b>W0812</b>	DIFPIN_ERR_12	Component '{compName}': Diff_Pin '{pinName}' is not unique.  <i>The Diff_pin has been referenced more than once in the [Diff Pin] section of component</i>
<b>E0813</b>	DIFPIN_ERR_13	Component '{compName}': Inv_pin '{pinName}' already in use as a Diff_pin.  <i>The inv_pin has been referenced as a Diff_pin in the [Diff Pin] section of component</i>
<b>E0814</b>	DIFPIN_ERR_14	Component '{compName}': Diff_pin '{pinName}' already in use as an inv_pin.  <i>The Diff_pin has been referenced as an inv_pin in the [Diff Pin] section of component</i>
<b>W0815</b>	DIFPIN_ERR_15	Component '{compName}': inv_pin '{pinName}' is not unique.  <i>The inv_pin has been referenced more than once in the [Diff Pin] section of component</i>
<b>E0816</b>	DIFPIN_ERR_16	( line {lineNum} ) - Bad value for {columnName} column.  <i>One fo the numeric values of tdelay column has invalid syntax</i>
<b>W0817</b>	DIFPIN_ERR_17	( line {lineNum} ) - Suspicious value for {columnName} column.  <i>One fo the numeric values of tdelay column has a bad scale factor perhaps</i>
<b>B0818</b>	DIFPIN_ERR_18	Unknown value returned by CMN_GetValueOrNA(). {sourceFile} {sourceLinenum}  <i>The code has a bug</i>
<b>E0900</b>	PARSE_ERR_0	Could not determine Version for file {fileName}  <i>There was an error parsing the IBIS File Version for the IBIS file</i>
<b>W0901</b>	PARSE_ERR_1	Filename '{fileName}' should be lowercase  <i>The input file name should only used lower case letters</i>

<b>E0902</b>	PARSE_ERR_2	( line {lineNum} ) - Non-comment line exists after 'End' keyword.  <i>There should be no more no comment lines after the [End] keyword</i>
<b>E0903</b>	PARSE_ERR_3	Required keyword 'End' not found.  <i>The [End] keyword should be the last keyword in the IBIS file</i>
<b>B0904</b>	PARSE_ERR_4	( line {lineNum} ) - Unknown enumerated keyword code.  <i>Internal data structures were found to be corrupt</i>
<b>E0905</b>	PARSE_ERR_5	( line {lineNum} ) - Exceeds {maxLineLength} characters.  <i>[UNUSED]</i>
<b>E0906</b>	PARSE_ERR_6	( line {lineNum} ) - Keywords Must Begin In Column 1.  <i>A keyword was found which did not start from the first column in a line</i>
<b>E0907</b>	PARSE_ERR_7	( line {lineNum} ) - Data for unknown keyword.\n{text}  <i>The code has a bug trying to parse</i>
<b>B0908</b>	PARSE_ERR_8	{sourceFile}:{sourceLinenum}:Unknown current keyword.  <i>The code has a bug</i>
<b>E0909</b>	PARSE_ERR_9	"( line {lineNum} ) - Previous keyword not terminated properly. Possibly missing a \"\"^\"\"n"  <i>A new keyword exists on a continuation line from a previous section</i>
<b>E0910</b>	PARSE_ERR_10	( line {lineNum} ) - Duplicate IBIS_Ver keyword.  <i>The [IBIS_Ver] keyword was found more than once in the IBIS file</i>
<b>E0911</b>	PARSE_ERR_11	( line {lineNum} ) - Illegal keyword for a '.pkg' file.  <i>A keyword found in a '.pkg' file ws not a valid keyword</i>
<b>E0912</b>	PARSE_ERR_12	( line {lineNum} ) - Illegal keyword for a '.ebd' file.  <i>A keyword found in a '.ebd' file ws not a valid keyword</i>
<b>E0913</b>	PARSE_ERR_13	( line {lineNum} ) - Illegal keyword for a '.ibs' file.

*A keyword found in a '.ibs' file ws not a valid keyword*

<b>E0914</b>	PARSE_ERR_14	( line {lineNum} ) - Keyword Missing Ending Bracket (']').
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*A keyword should be terminated with a ']' character*

<b>E0915</b>	PARSE_ERR_15	( line {lineNum} ) - Invalid Keyword.
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*A keyword is found which is too long or an empty string*

<b>E0916</b>	PARSE_ERR_16	( line {lineNum} ) - Invalid Keyword: {keyword}
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*An unrecognized keyword was found*

<b>E0917</b>	PARSE_ERR_17	( line {lineNum} ) - Invalid Comment Character Definition.
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*The comment character was not defined properly ( possible missing the suffix \_char )*

<b>E0918</b>	PARSE_ERR_18	( line {lineNum} ) - Invalid Comment Character '{badChar}'.
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*"is not allowed as a valid comment character (cannot be any of these  
 ""0123456789abcdefghijklmnopqrstuvwxyABCDEFGHIJKLMNOPQRSTUVWXYZ[\_./=+-  
 """)"*

<b>E0919</b>	PARSE_ERR_19	( line {lineNum} ) - Too Many Line Items For Keyword COMMENT_CHAR.
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*There is extraneous data on the [Comment Char] keyword line*

<b>E0920</b>	PARSE_ERR_20	( line {lineNum} ) - Extraneous data on End keyword line.
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*The [End] keyword should not have any other data after it*

<b>W0921</b>	PARSE_ERR_21	( line {lineNum} ) - IBIS files should not contain tab characters.
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*Tab characters should be avoided in an IBIS file*

<b>E0922</b>	PARSE_ERR_22	Unable to Allocate Memory: {fileName} {lineNum}
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*The code failed to allocate memory*

<b>E0923</b>	PARSE_ERR_23	Description line in file (at line no {lineNum}) is greater than {maxChars} characters
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*[UNUSED]*

<b>E0924</b>	PARSE_ERR_24	Unterminated string detected. Possibly started at line {lineNum}
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*A string literal was not terminated in an AMI file ( it possibly originated at line )*

### 4.3 MESSAGE CODES 1000 TO 1499

Code	Symbol	Message/Comments
<b>B1000</b>	HDR_ERR_0	Unable to get ptr to IBIS struct?  <i>Internal data structures were found to be corrupt</i>
<b>E1001</b>	HDR_ERR_1	( line {lineNum} ) - Orphan File Header keyword.  <i>A header keyword [IBIS Ver]; [File Name]; [File Rev]; [Date]; [Source]; [Notes]; [Disclaimer]; [Copyright] was specified where it was not expected</i>
<b>E1002</b>	HDR_ERR_2	( line {lineNum} ) - Orphan Data Line.  <i>A line was identified as a data line for a header keyword but the header definition is not in progress</i>
<b>B1003</b>	HDR_ERR_3	( line {lineNum} ) - Bad keyword type passed to hdr.  <i>The code has a bug while parsing the header keywords</i>
<b>B1004</b>	HDR_ERR_4	( line {lineNum} ) - Bad line type passed to hdr.  <i>The code has a bug while parsing the header keywords</i>
<b>E1005</b>	HDR_ERR_5	( line {lineNum} ) - Duplicate IBIS_Ver keyword  <i>The [IBIS_Ver] keyword was found more than once in the input file</i>
<b>E1006</b>	HDR_ERR_6	Unable to create new File Header structure.  <i>The code failed to allocate the required memory</i>
<b>E1007</b>	HDR_ERR_7	( line {lineNum} ) - IBIS_Version must be first keyword.\n  <i>The first keyword in an IBIS file should be [IBIS Ver]</i>
<b>E1008</b>	HDR_ERR_8	( line {lineNum} ) - Illegal IBIS_Version '{badVersion}'.  <i>An invalid version was specified as the IBIS version</i>
<b>E1009</b>	HDR_ERR_9	( line {lineNum} ) - Duplicate File_name keyword.

*The [File Name] keyword was found more than once in the input file*

<b>E1010</b>	HDR_ERR_10	File_name '{fileName}' contains an upper case character '{character}'.
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*Input file name should only used lower case characters but an upper case character was found*

<b>E1011</b>	HDR_ERR_11	File_name '{fileName}' contains a character '{character}' that is illegal for DOS.
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*Input file name contains a character that is not allowed in DOS/Windows*

<b>E1012</b>	HDR_ERR_12	File_name '{fileName}' contains more than one period.
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*Input file name contains more than one period '.' character*

<b>E1013</b>	HDR_ERR_13	File_name '{fileName}' must contain one period.
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*Input file name contains no period '.' characters*

<b>E1014</b>	HDR_ERR_14	( line {lineNum} ) - File name opened '{actualFileName}' not the same as File_name '{keywordFileName}'.
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*The file name that was providing on the command line to the parser; is not the same as the file name specified with the [File Name] keyword*

<b>E1015</b>	HDR_ERR_15	( line {lineNum} ) - Duplicate File_Rev keyword.
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*The [File Rev] keyword was found more than once in the input file*

<b>E1016</b>	HDR_ERR_16	( line {lineNum} ) - Duplicate Date keyword.
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*The [Date] keyword was found more than once in the input file*

<b>E1017</b>	HDR_ERR_17	( line {lineNum} ) - Duplicate Source keyword.
--------------	------------	--

*The [Source] keyword was found more than once in the input file*

<b>E1018</b>	HDR_ERR_18	( line {lineNum} ) - Duplicate Notes keyword.
--------------	------------	---

*The [Notes] keyword was found more than once in the input file*

<b>E1019</b>	HDR_ERR_19	( line {lineNum} ) - Duplicate Copyright keyword.
--------------	------------	---

*The [Copyright] keyword was found more than once in the input file*

<b>E1020</b>	HDR_ERR_20	( line {lineNum} ) - Unable to add text.
--------------	------------	--

*The code failed to allocate the required memory*

<b>E1100</b>	CRV_ERR_0	( line {lineNum} ) - {curveName} Already Defined
--------------	-----------	--

*The curve has already been defined*

<b>B1101</b>	CRV_ERR_1	Unable to Allocate Memory: {sourceFile} {sourceLinenum}
--------------	-----------	---

*The code failed to allocate memory*

<b>B1102</b>	CRV_ERR_2	Should Not Be Here: {sourceFile},{sourceLinenum}
--------------	-----------	--

*The code has a bug*

<b>B1103</b>	CRV_ERR_3	Unable to Parse {text}: {sourceFile} {sourceLinenum}
--------------	-----------	--

*A generic error message which indicates that a parsing error related to*

<b>E1104</b>	CRV_ERR_4	( line {lineNum} ) - Incorrect Number of Line Items ({numberOfItemsFound}) For {paramName}: Expecting {numberOfItemsExpected}
--------------	-----------	---

*The sub parameter should have had items on the keyword line but only number of data items were found*

<b>B1105</b>	CRV_ERR_5	Out of Memory
--------------	-----------	---------------

*The code failed to allocate the required memory*

<b>E1106</b>	CRV_ERR_6	( line {lineNum} ) - Voltage Value Cannot Be 'NA'
--------------	-----------	---

*The Voltage value has to be specified as a numeric value in a data line for a curve*

<b>E1107</b>	CRV_ERR_7	( line {lineNum} ) - More Than {maxPoints} Voltage Points Provided For {curveName}
--------------	-----------	--

*More than data points (ie; 100) were sepcified for curve*

<b>E1108</b>	CRV_ERR_8	Require at least 2 Voltage Points for {lineNum} Beginning at Line {curveName}
--------------	-----------	---

*The curve defined on line has less than 2 data points*

<b>E1109</b>	CRV_ERR_9	{First Last} {Typ Min Max} Value Cannot Be 'NA' for {curveName} Beginning at Line {lineNum}
--------------	-----------	---

*A general message indicating that the (the first or the last) (typValue; min or max) value for the curve defined on line cannot be NA*

<b>N1110</b>	CRV_ERR_10	( line {lineNum} ) - {curveName} {Typ Min Max} data is non-monotonic
--------------	------------	--

*The is non monotonic*

<b>W1111</b>	CRV_ERR_11	{label} {name}: {curveName} has Decreasing Current
		<i>A general message indicating that the section with name has a curve which has decreasing current</i>
<b>W1112</b>	CRV_ERR_12	{label} {name}: {curveName} has Increasing Current
		<i>A general message indicating that the section with name has a curve which has increasing current</i>
<b>W1113</b>	CRV_ERR_13	{label} {name}: {curveName} : Typical value never becomes zero
		<i>A general message indicating that the section with name has a curve whose typical current never becomes zero</i>
<b>W1114</b>	CRV_ERR_14	{label} {name}: {curveName} : Minimum value never becomes zero
		<i>A general message indicating that the section with name has a curve whose minimum current never becomes zero</i>
<b>W1115</b>	CRV_ERR_15	{label} {name}: {curveName} : Maximum value never becomes zero
		<i>A general message indicating that the section with name has a curve whose maximum current never becomes zero</i>
<b>E1200</b>	PKG_ERR_0	( line {lineNum} ) - Unable to allocate a Package
		<i>Memory allocation for a Package while parsing the [Package] section</i>
<b>E1201</b>	PKG_ERR_1	( line {lineNum} ) - Package sub-parameters must start in column 1.
		<i>The package sub parameters R_pkg; L_pkg; C_pkg should be defined starting at column 1</i>
<b>E1202</b>	PKG_ERR_2	( line {lineNum} ) - Expected {expected} columns in Package sub-parameter line,found {actualColumns} columns.
		<i>Each data line in a [Package] section should have (ie; 4) number of values but number were specified</i>
<b>E1203</b>	PKG_ERR_3	( line {lineNum} ) - Duplicate R_pkg sub-parameter.
		<i>The R_pkg subparameter was multiply defined</i>
<b>E1204</b>	PKG_ERR_4	( line {lineNum} ) - Duplicate L_pkg sub-parameter.

*The L\_pkg subparameter was multiply defined*

<b>E1205</b>	PKG_ERR_5	( line {lineNum} ) - Duplicate C_pkg sub-parameter.
--------------	-----------	---

*The C\_pkg subparameter was multiply defined*

<b>E1206</b>	PKG_ERR_6	( line {lineNum} ) - Unknown Package subparameter.
--------------	-----------	--

*An unknown subparameter was specified in the [Package] section*

<b>E1207</b>	PKG_ERR_7	( line {lineNum} ) - Unable to parse data for Package subparameter '{subparam}'.
--------------	-----------	--

*A generic error message which indicates that a parsing error related to*

<b>B1208</b>	PKG_ERR_8	( line {lineNum} ) - Unknown Package subparameter
--------------	-----------	---

*The code which handles Package sub parameters has a bug*

<b>E1209</b>	PKG_ERR_9	( line {lineNum} ) - The typical column must be specified.
--------------	-----------	--

*The typical column for a Package subparameter should be specified as a numeric value*

<b>E1210</b>	PKG_ERR_10	( line {lineNum} ) - The minimum column must be specified or NA.
--------------	------------	--

*The minimum column for a Package subparameter should be specified as a numeric value or as NA*

<b>E1211</b>	PKG_ERR_11	( line {lineNum} ) - The maximum column must be specified or NA.
--------------	------------	--

*The maximum column for a Package subparameter should be specified as a numeric value or as NA*

<b>E1212</b>	PKG_ERR_12	( line {lineNum} ) - Required sub-parameter R_pkg not found.
--------------	------------	--

*[UNUSED]*

<b>E1213</b>	PKG_ERR_13	Component '{compName}': Required sub-parameter R_pkg not found.
--------------	------------	---

*The R\_pkg subparameter was not defined in the [Pacakge] section for component*

<b>E1214</b>	PKG_ERR_14	( line {lineNum} ) - Required sub-parameter L_pkg not found.
--------------	------------	--

*[UNUSED]*

<b>E1215</b>	PKG_ERR_15	Component '{compName}': Required sub-parameter L_pkg not found.
--------------	------------	---

*The L\_pkg subparameter was not defined in the [Pacakge] section for component*

<b>E1216</b>	PKG_ERR_16	( line {lineNum} ) - Required sub-parameter C_pkg not found.
--------------	------------	--

*[UNUSED]*

<b>E1217</b>	PKG_ERR_17	Component '{ compName }': Required sub-parameter C_pkg not found.
--------------	------------	---

*The C\_pkg subparameter was not defined in the [Pacakge] section for component*

<b>E1300</b>	RAMP_ERR_0	( line {lineNum} ) - Ramp Already Defined
--------------	------------	---

*A [Ramp] section can only be defined once in a model*

<b>B1301</b>	RAMP_ERR_1	Unable to Allocate Memory: {sourceFile} {sourceLinenum}
--------------	------------	---

*The code failed to allocate memory*

<b>B1302</b>	RAMP_ERR_2	Should Not Be Here: {sourceFile},{sourceLinenum}
--------------	------------	--

*The code has a bug*

<b>B1303</b>	RAMP_ERR_3	Unable to Parse {errorString}: {sourceFile} {sourceLinenum}
--------------	------------	---

*A generic error message which indicates that a parsing error related to*

<b>E1304</b>	RAMP_ERR_4	( line {lineNum} ) - Incorrect Number of Line Items ({numberOfItemsFound}) For {paramName}: Expecting {numberOfItemsExpected}
--------------	------------	---

*The sub parameter should have had items on the keyword line but only number of data items were found*

<b>E1305</b>	RAMP_ERR_5	( line {lineNum} ) - Unknown Line Among Ramp Data
--------------	------------	---

*An unrecognized line was found in the [Ramp] section*

<b>E1306</b>	RAMP_ERR_6	{lineNum} Not Defined For Ramp Beginning on Line {paramName}
--------------	------------	--

*The parameter was not specified for the [Ramp] section defined on line*

<b>E1307</b>	RAMP_ERR_7	( line {lineNum} ) - {paramName} Already Defined For Model '{modelName}'
--------------	------------	--

*The [Ramp] section parameter is already defined in model*

<b>E1308</b>	RAMP_ERR_8	( line {lineNum} ) - No {Typ Min Max} Value Was Provided for {paramName}
--------------	------------	--

<b>E1309</b>	RAMP_ERR_9	( line {lineNum} ) - 'NA' not allowed for {paramName} Typical value  <i>The typical value in a Range cannot be NA; but for [Ramp] parameter it is not so</i>
<b>E1310</b>	RAMP_ERR_10	( line {lineNum} ) - {dv_dt} must be greater than 0 in a Ramp specification  <i>The value for dv or dt in [Ramp] spec should be greater than 0 but it is not so for</i>
<b>W1311</b>	RAMP_ERR_11	"( line {lineNum} ) - Suspicious {paramName} {columnName} Value (\\"{actualValue}\"), Numeric in Scale"  <i>The numeric value for a column of parameter was somewhat incorrect ( possibly in the scale factor) in a [Ramp] section</i>
<b>E1312</b>	RAMP_ERR_12	"( line {lineNum} ) - Invalid {paramName} {rampColumn} Value (\\"{actualValue}\")"  <i>The numeric value for a column of parameter was invalid in a [Ramp] section</i>
<b>E1313</b>	RAMP_ERR_13	( line {lineNum} ) - Invalid Ramp {Rload} Line  <i>The syntax of the line in a [Ramp] section is invalid</i>
<b>E1314</b>	RAMP_ERR_14	"( line {lineNum} ) - Invalid {Rload} Value (\\"{value}\")"  <i>An invalid numeric value was found for in a [Ramp] section</i>
<b>B1400</b>	RNGP_ERR_0	Unable to parse {subparam} arguments
<b>E1401</b>	RNGP_ERR_1	( line {lineNum} ) - No {Typ Min Max} Value Was Provided for {subparam}
<b>E1402</b>	RNGP_ERR_2	( line {lineNum} ) - Incorrect Number of Line Items ( {numberOfItemsFound} ) For {paramName}: Expecting {numberOfItemsExpected}  <i>The sub parameter should have had items on the keyword line but only number of data items were found</i>
<b>W1403</b>	RNGP_ERR_3	( line {lineNum} ) - Value {tableValue} repeated in the First Column
<b>B1404</b>	RNGP_ERR_4	Unable to Allocate Memory: {sourceFile} {sourceLinenum}

*The code failed to allocate memory*

#### 4.4 MESSAGE CODES 1500 TO 1999

Code	Symbol	Message/Comments
W1500	ACDC_ERR_0	Model '{model}': {Typ Min Max} VI curves cannot drive through Vmeas={Vmeas}V\n given load Rref={Rref} Ohms to Vref={Vref}V
W1501	ACDC_ERR_1	INFO: v_dc L/H = {VdcLow} {VdcHigh}\n <i>[UNUSED]</i>
W1502	ACDC_ERR_2	Model '{model}': {Typ Min Max} AC {Rise Fall} Endpoints ({VacLow}V,{VacHigh}V) not within \n,{Vtol}V ({percTol}%) of ({VdcLow}V,{VdcHigh}V) on VI curves for {Rfixture} Ohms to {Vfixture}V <i>[UNUSED]</i>
W1503	ACDC_ERR_3	Model {model}: The [{Rise Fall} Waveform] \nwith [R_fixture]={Rfixture} Ohms and [{Vfixture}]= {Typ Min Max}V\nhas {VacLow} column DC endpoints of {VacHigh}V and \na difference of {percTol}% and {VdcLow}%% {VdcHigh}v,but\nan equivalent load applied to the model's I-V tables yields\ndifferent voltages ({diffLow}V and {diffHigh}V),respectively.
W1504	ACDC_ERR_4	Model '{modelName}': {Typ Min Max} AC {Rise Fall} Endpoints ({VacLow}V,{VacHigh}V) *ARE* WITHIN \n,{Vtol}V ({percTol}%) of ({VdcLow}V,{VdcHigh}V) on VI curves for {Rfixture} Ohms to {Vfixture}V <i>[UNUSED]</i>
W1505	ACDC_ERR_5	INFO low t/vac/vdc {TacLow} {VacLow} {VdcLow} high {TacHigh} {VacHigh} {VdcHigh} rfix vfix {Rfixture} {Vfixture}\n <i>[UNUSED]</i>
W1506	ACDC_ERR_6	Model '{model}': Extreme currents present in {corner} {curveName} VI Curve ({current}A @ {voltage}V)
E1507	ACDC_ERR_7	Model '{model}': Currents < 0.0mA in 'Pullup' for Open_drain/Open_sink device



<b>E1508</b>	ACDC_ERR_8	Model '{model}': Currents $\lt 0.0\text{mA}$ in 'Pulldown' for Open_source device
<b>N1509</b>	ACDC_ERR_9	{process} {model} {curveName} data is non-monotonic
<b>E1510</b>	ACDC_ERR_10	Model '{modelName}': Currents $\lt 0.0\text{mA}$ in 'ISSO PU' for Open_drain/Open_sink device
<b>E1511</b>	ACDC_ERR_11	Model '{modelName}': Currents $\lt 0.0\text{mA}$ in 'ISSO PD' for Open_source device
<b>W1512</b>	ACDC_ERR_12	<p>""Model {modelName}: {Typ Min Max} {ISSO_PD PU} current ({current}A) at 0V is not within {percTol}% of {Pullup Pulldown} current ({current}A) at reference ({PuPdRefV}V)""</p> <p><i>percTol = 5%</i></p>
<b>W1513</b>	ACDC_ERR_13	<p>""Model {modelName}: {Typ Min Max} {ISSO_PD PU} current ({current}A) at {Pullup Pulldown} reference ({PuPdRefV}V) - table value ({voltage}V) is non-zero (<math>\gt</math> {maxCurrent}A)""</p>
<b>C1514</b>	ACDC_ERR_14	<p>""[Ramp] dV ({RisedV FalldV}V) not within {percentLimit}% of I-V table dV ({calcdV}V) calculation: Model {modelName}: Process: {Typ Min Max}: ({Rise Fall})""</p> <p><i>[UNUSED]</i></p>
<b>W1515</b>	ACDC_ERR_15	Model '{modelName}': {Typ Min Max} {Rising Falling} VI curves cannot drive through $V_{\text{meas}}=\{V_{\text{meas}}\}V$ given load $R_{\text{ref}}=\{R_{\text{ref}}\}$ Ohms to $V_{\text{ref}}=\{V_{\text{ref}}\}V$
<b>E1600</b>	APKG_ERR_0	( line {lineNum} ) - Invalid Package Model name: '{modelName}' is too long.
<b>E1601</b>	APKG_ERR_1	( line {lineNum} ) - Missing Package Model name
<b>E1602</b>	APKG_ERR_2	( line {lineNum} ) - Unable to create new APKG.

<b>E1603</b>	APKG_ERR_3	( line {lineNum} ) - Alternate Package Model has no package models defined
<b>W1604</b>	APKG_ERR_4	( line {lineNum} ) - Alternate Package Model has only one package model defined
<b>E1605</b>	APKG_ERR_5	"( line {lineNum} ) - Package Model Name Previously Defined (\"{pkgModelName}\")"  <i>APKG_ERR_5</i>
<b>W1700</b>	CHK_ERR_0	CMPT '{compName}',Pin '{pinName}': Pin Resistance {resistance} Ohms greater than {maxR} Ohms  <i>The resistance of pin of component is greater than (5.0E+01)</i>
<b>W1701</b>	CHK_ERR_1	CMPT '{compName}',Pin '{pinName}': Pin Inductance {inductance}nH greater than {maxL}nH  <i>The inductance of pin of component is greater than (1.0E-03)</i>
<b>W1702</b>	CHK_ERR_2	CMPT '{compName}',Pin '{pinName}': Pin Capacitance {capacitance}pF greater than {maxC}pF  <i>The capacitance of pin of component is greater than (1.0E+06)</i>
<b>W1703</b>	CHK_ERR_3	{modelSubmodel} '{modelName}': {Typ Min Max} {Rise Fall} Ramptime {rampDt}nsec unusually large ( > {maxT}nsec )
<b>W1704</b>	CHK_ERR_4	[Model] {modelName} has no description of the buffer's high state\nDC drive characteristics (no [Pullup] table). This warning\ncan be silenced by using an open drain Model_type or by\nadding a [Pullup] table.  <i>The [Pullup] table for model is missing</i>
<b>W1705</b>	CHK_ERR_5	[Model] {modelName} has no description of the buffer's low state DC\ndrive characteristics (no [Pulldown] table). This warning\ncan be silenced by using an open source Model_type or by\nadding a [Pulldown] table.  <i>The [Pulldown] table for model is missing</i>
<b>W1706</b>	CHK_ERR_6	[Model] {modelName} has no description of the buffer's low state DC\ndrive characteristics (no [Pulldown] table). This warning\ncan be silenced by changing the Model_type or by

		adding a\n[Pullup] table.
		<i>The [Pullup] table for model is missing</i>
<b>W1707</b>	CHK_ERR_7	[Model] {modelName} has no description of the buffer's high state\nDC drive characteristics (no [Pullup] table). This warning\ncan be silenced by changing the Model_type or by adding a\n[Pullup] table.
		<i>The [Pullup] table for model is missing</i>
<b>E1708</b>	CHK_ERR_8	Component : Duplicate Node Name
<b>E1709</b>	CHK_ERR_9	Component : Illegal Node: same as pin
<b>W1710</b>	CHK_ERR_10	CMPT '{compName}': Rpkg {Typ Min Max} value {Rpkg} Ohms not within expected range ({minR} Ohms, {maxR} Ohms)
		<i>[UNUSED]</i>
<b>W1711</b>	CHK_ERR_11	CMPT '{compName}': Rpkg Max value < Min value
		<i>[UNUSED]</i>
<b>W1712</b>	CHK_ERR_12	CMPT '{compName}': Lpkg {Typ Min Max} value {Lpkg}nH not within expected range ({minL}nH, {maxL}nH)
		<i>[UNUSED]</i>
<b>W1713</b>	CHK_ERR_13	CMPT '{compName}': Lpkg Max value < Min value
		<i>[UNUSED]</i>
<b>W1714</b>	CHK_ERR_14	CMPT '{compName}': Cpkg {Typ Min Max} value {Cpkg}pF not within expected range ({minC}pF, {maxC}pF)
		<i>[UNUSED]</i>
<b>W1715</b>	CHK_ERR_15	CMPT '{compName}': Cpkg Max value < Min value
		<i>[UNUSED]</i>
<b>W1716</b>	CHK_ERR_16	Model '{modelName}': C_comp {Typ Min Max} value {Ccomp}pF out of expected range ({minC}pF, {maxC}pF)

*[UNUSED]*

<b>W1717</b>	CHK_ERR_17	Model '{modelName}': C_comp_pullup {Typ Min Max} value {Ccomp}pF out of expected range ({minC}pF, {maxC}pF)
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*[UNUSED]*

<b>W1718</b>	CHK_ERR_18	Model '{modelName}': C_comp_pulldown {Typ Min Max} value {Ccomp}pF out of expected range ({minC}pF, {maxC}pF)
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*[UNUSED]*

<b>W1719</b>	CHK_ERR_19	Model '{modelName}': C_comp_power_clamp {Typ Min Max} value {Ccomp}pF out of expected range ({minC}pF, {maxC}pF)
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*[UNUSED]*

<b>W1720</b>	CHK_ERR_20	Model '{modelName}': C_comp_gnd_clamp {Typ Min Max} value {Ccomp}pF out of expected range ({minC}pF, {maxC}pF)
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*[UNUSED]*

<b>E1800</b>	CIRCUIT_ERR_0	( line {lineNum} ) - Too Many Signal Pins (only one instance of Signal_pin, Diff_signal_pins, or Series_pins is allowed)
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<b>E1801</b>	CIRCUIT_ERR_1	( line {lineNum} ) - Redundant use of port
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<b>E1802</b>	CIRCUIT_ERR_2	( line {lineNum} ) - Use of reserved port in Port Map
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<b>B1803</b>	CIRCUIT_ERR_3	Unable to Allocate Memory: {sourceFile} {sourceLinenum}
--------------	---------------	---

*The code failed to allocate memory*

<b>E1804</b>	CIRCUIT_ERR_4	( line {lineNum} ) - Illegal parameter
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<b>E1805</b>	CIRCUIT_ERR_5	( line {lineNum} ) - Not Enough arguments to {paramName}
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<b>E1806</b>	CIRCUIT_ERR_6	( line {lineNum} ) - Extra Charaters on PIN line
<b>E1807</b>	CIRCUIT_ERR_7	( line {lineNum} ) - Missing port or pad name in Port_map
<b>E1808</b>	CIRCUIT_ERR_8	(Line {lineNum}) No [External Circuit] {cktName} for [Circuit Call]
<b>B1809</b>	CIRCUIT_ERR_9	Node not found {nodeName} {sourceFile} {sourceLinenum}\n  <i>[UNUSED]</i>
<b>B1810</b>	CIRCUIT_ERR_10	should not be here {sourceFile} {sourceLinenum}  <i>The code has a bug</i>
<b>B1811</b>	CIRCUIT_ERR_11	should not be here  <i>The code has a bug</i>
<b>B1812</b>	CIRCUIT_ERR_12	should not get here  <i>The code has a bug</i>
<b>B1813</b>	CIRCUIT_ERR_13	should not be here {fileName} {lineNum} {sourceFile} {sourceLinenum}\n  <i>The code has a bug</i>
<b>B1814</b>	CIRCUIT_ERR_14	should not get here {sourceFile} {sourceLinenum}  <i>The code has a bug</i>
<b>E1815</b>	CIRCUIT_ERR_15	[CIRCUIT CALL] Line: Redundant use of port
<b>E1816</b>	CIRCUIT_ERR_16	CCALL Line A2D Line Illegal connection,2 analog reference/driver ports = =
<b>E1817</b>	CIRCUIT_ERR_17	Circuit Call Line {cktLinenum} instantiates External Circuit at {cktdefLinenum} with Floating Internal Node type {nodeType}

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<b>E1818</b>	CIRCUIT_ERR_18	Internal Node ,External Circuit at {lineNum}: is analog and digital
<b>E1819</b>	CIRCUIT_ERR_19	CCALL Line A2D Line Illegal connection,\n2 analog reference/driver ports = ={temp1}{temp2}
<b>B1820</b>	CIRCUIT_ERR_20	should not get here {sourceFile} {sourceLinenum}\n
<b>E1821</b>	CIRCUIT_ERR_21	Component Floating Node (1 connection){cktCall}
<b>W1822</b>	CIRCUIT_ERR_22	Component Unused Node (0 connection){cktCall}
<b>E1823</b>	CIRCUIT_ERR_23	Component Floating Pin (no connections but used in CIRCIUT CALL)
<b>E1824</b>	CIRCUIT_ERR_24	Component {compName} Node : is analog and digital{digitalOrAnalog}
<b>E1825</b>	CIRCUIT_ERR_25	Component Node: has a digital receiver but no digital driver{portName}
<b>W1826</b>	CIRCUIT_ERR_26	Component Node: has a digital receiver but no obvious digital driver\nThis indicates connection to a AMS port that 'may' be digital {portName}
<b>E1827</b>	CIRCUIT_ERR_27	Component Node: has a digital driver but no digital receiver{portName}
<b>W1828</b>	CIRCUIT_ERR_28	Component Node: has a digital driver but no obvious digital receiver\nThis indicates connection to a AMS port that 'may' be digital {portName}

<b>E1829</b>	CIRCUIT_ERR_29	Component Node: has no defined drivers {portName}
<b>E1830</b>	CIRCUIT_ERR_30	Component Node: has a analog receiver but no analog driver {portName}
<b>W1831</b>	CIRCUIT_ERR_31	Component Node: has a analog receiver but no obvious analog driver This indicates connection to a AMS port that 'may' be analog {portName}
<b>E1832</b>	CIRCUIT_ERR_32	Component Node: has a analog driver but no analog receiver {portName}
<b>W1833</b>	CIRCUIT_ERR_33	Component Node: has a analog driver but no obvious analog receiver This indicates connection to a AMS port that 'may' be analog {portName}
<b>E1834</b>	CIRCUIT_ERR_34	Component Pin Used as Digital in CIRCUIT CALL(s)(pins are analog){portName}
<b>E1835</b>	CIRCUIT_ERR_35	is connect to a reserved port  <i>[UNUSED]</i>
<b>E1836</b>	CIRCUIT_ERR_36	Component Pin Used as Digital in CIRCUIT CALL(s)(pins are analog)  <i>[UNUSED]</i>
<b>E1837</b>	CIRCUIT_ERR_37	Component Node Used as Analog and Digital in CIRCUIT CALL(s)  <i>[UNUSED]</i>
<b>E1838</b>	CIRCUIT_ERR_38	(line {lineNum}) No [External Circuit] for [Circuit Call] {cktCall} in Component {compName}
<b>E1839</b>	CIRCUIT_ERR_39	CMPT ,[Circuit Call] at (line {cktLinenum})) refererences illegal pin:

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<b>E1840</b>	CIRCUIT_ERR_40	[Circuit Call] at (line {lineNum}) first reference pin is not declared CIRCUITCALL in [Pin] section
<b>E1841</b>	CIRCUIT_ERR_41	[Circuit Call] at (line {lineNum}) second reference pin is not declared CIRCUITCALL in [Pin] section
<b>E1842</b>	CIRCUIT_ERR_42	CMPT ,[CIRCUIT CALL] at (line {lineNum}) references same pin twice:
<b>E1843</b>	CIRCUIT_ERR_43	CMPT ,[CIRCUIT CALL] at (line {lineNum}) no reference pin (need Signal_pin, Diff_signal_pins, Series_pins)  <i>[UNUSED]</i>
<b>E1844</b>	CIRCUIT_ERR_44	Circuit : Floating User Defined Digital Port  <i>[UNUSED]</i>
<b>E1845</b>	CIRCUIT_ERR_45	[Circuit Call] at (line {lineNum}),no port in [External Circuit] {cktCall}
<b>E1846</b>	CIRCUIT_ERR_46	[Circuit Call] at (line {lineNum}),no node/pin in Component {compName}
<b>E1900</b>	CMN_ERR_0	File Name Requires '.ibs' Extension.  <i>The input file name was specified with an extension other than then the expected '.ibs'</i>
<b>E1901</b>	CMN_ERR_1	Unable to append filename extension.  <i>The input file name was specified without an extension but the base filename length and the '.ibs' extension length together become greater than the allowed filename length (ie; 1024 characters)</i>
<b>E1902</b>	CMN_ERR_2	File Name Requires '.ebd' Extension.  <i>The input file name was specified with an extension other than then the expected '.ebd'</i>



<b>E1903</b>	CMN_ERR_3	File Name Requires '.pkg' Extension.
		<i>The input file name was specified with an extension other than then the expected '.pkg'</i>
<b>E1904</b>	CMN_ERR_4	Unable to assemble filename.
		<i>The input file directory path length and the input filename length together become greater than the allowed filename length (ie; 1024 characters)</i>
<b>E1905</b>	CMN_ERR_5	Unable To Open File '{filePath}{fileName}'
		<i>There was an error trying to open the file</i>
<b>E1906</b>	CMN_ERR_6	Memory allocation failed. This request {size}.\n
		<i>The code failed to allocate bytes of memory</i>
<b>E1907</b>	CMN_ERR_7	Memory reallocation failed. This request {size}.\n
		<i>The code failed to reallocate bytes of memory</i>
<b>B1908</b>	CMN_ERR_8	Unable to Allocate Memory: {sourceFile} {sourceLinenum}
		<i>The code failed to allocate memory</i>
<b>E1909</b>	CMN_ERR_9	"( line {lineNum} ) - Invalid {columnName} Value (\\"{actualValue}\")"
		<i>"A numeric value or ""NA"" was expected for column but the value specified was invalid"</i>
<b>W1910</b>	CMN_ERR_10	"( line {lineNum} ) - Suspicious {columnName} {paramName} Value (\\"{actualValue}\\"), Numeric in Scale"
		<i>The numeric value for parameter was somewhat incorrect ( possibly in the scale factor)</i>
<b>E1911</b>	CMN_ERR_11	( line {lineNum} ) - Duplicate '{keyword}' keyword.
		<i>A keyword has been defined more than once</i>
<b>E1912</b>	CMN_ERR_12	( line {lineNum} ) - {keyword} string '{value}' is too long,truncating to {maxChars} characters.
		<i>The value specified for keyword was too long and was truncated to characters</i>
<b>E1913</b>	CMN_ERR_13	( line {lineNum} ) - Zero length value for keyword '{keyword}'.
		<i>The value specified for keyword was an empty string</i>

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<b>E1914</b>	CMN_ERR_14	( line {lineNum} ) - {keyword} string '{value}' is too long,maximum length {maxChars} allowed.
		<i>The value specified for keyword was too long (more than characters)</i>
<b>E1915</b>	CMN_ERR_15	Required keyword '{keyword}' not found in file '{fileName}'.
		<i>The mandatory keyword was not specified in input file</i>
<b>E1916</b>	CMN_ERR_16	( line {lineNum} ) - Illegal use of Reserved Word '{reservedWord}'.
		<i>A reserved word was used inappropriately</i>
<b>E1917</b>	CMN_ERR_17	( line {lineNum} ) - Found illegal {type} character (code {hexCode}).{message}
		<i>An invalid character of type of hex code was found in the input which could be converted to a space character as per the message</i>
<b>E1918</b>	CMN_ERR_18	( line {lineNum} ) - Unexpected '=' found
		<i>A character '=' was found where not expected</i>
<b>E1919</b>	CMN_ERR_19	( line {lineNum} ) - Unexpected token '{text}' found in R/L/C section
		<i>A token other than Len; R; L or C was found</i>
<b>E1920</b>	CMN_ERR_20	( line {lineNum} ) - Premature end of R/L/C section
		<i>A complete line was not specified</i>
<b>E1921</b>	CMN_ERR_21	( line {lineNum} ) - Error parsing R/L/C section. Missing '='
		<i>The character '=' was expected but not found</i>
<b>E1922</b>	CMN_ERR_22	( line {lineNum} ) - Illegal number found '{text}'
		<i>An invalid numeric value was found</i>
<b>E1923</b>	CMN_ERR_23	( line {lineNum} ) - Numerical value expected
		<i>A number was expected but not found</i>
<b>E1924</b>	CMN_ERR_24	File Name Requires '.ami' Extension.
		<i>"An AMI file name requires a ".ami" extension"</i>

## 4.5 MESSAGE CODES 2000 TO 2499

Code	Symbol	Message/Comments
E2000	WVFRM_ERR_0	( line {lineNum} ) - More than 100 {rowType}s are defined
B2001	WVFRM_ERR_1	Should Not Be Here: {sourceFile},{sourceLinenum}  <i>The code has a bug</i>
B2002	WVFRM_ERR_2	Unable to Parse {errorString}: {sourceFile} {sourceLinenum}  <i>A generic error message which indicates that a parsing error related to</i>
E2003	WVFRM_ERR_3	( line {lineNum} ) - Incorrect Number of Line Items ( {numberOfItemsFound} ) For {paramName}: Expecting {numberOfItemsExpected}  <i>The sub parameter should have had items on the keyword line but only number of data items were found</i>
E2004	WVFRM_ERR_4	{fixtureName} Not Defined For {waveName} Waveform Beginning on Line {lineNum}  <i>Fixture (R_fixture; V_fixture) was not defined for waveform defined on line</i>
E2005	WVFRM_ERR_5	Require at least 2 Data Points for {waveName} Waveform Beginning at Line {lineNum}  <i>The waveform defined on line contains less than 2 points</i>
E2006	WVFRM_ERR_6	{First Last} {Typ Min Max} Value Cannot Be 'NA' for {waveName} Waveform Beginning at Line {lineNum}  <i>A general message indicating that the (the first or the last) (typValue; min or max) value for the waveform defined on line cannot be NA</i>
E2007	WVFRM_ERR_7	First {Typ Min Max} Value should be the same as the Last for {waveName} Waveform Beginning at Line {lineNum}  <i>The first (typValue; minValue; max) value should be the same as the last value for the waveform (GND_Pulse or POWER_Pulse) defined on line</i>
W2008	WVFRM_ERR_8	Found some {waveName} ( {Typ Min Max} ) offsets less than 0 for Table Beginning at Line {lineNum}  <i>The waveform (GND Pulse Table) defined on line has some offsets less than 0</i>
W2009	WVFRM_ERR_9	Found some {waveName} ( {Typ Min Max} ) offsets greater than 0 for Table Beginning at

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		Line {lineNum}
		<i>The waveform (POWER Pulse Table) defined on line has some offsets greater than 0</i>
<b>E2010</b>	WVFRM_ERR_10	( line {lineNum} ) - SubParameters are not allowed in Golden Waveforms
		<i>No fixture or dut subparams can be specified for Golden Waveforms</i>
<b>E2011</b>	WVFRM_ERR_11	( line {lineNum} ) - Unknown Line Among {waveName} Data
		<i>A line was found in the Waveform which does not seem to be a valid line</i>
<b>B2012</b>	WVFRM_ERR_12	Unable to Allocate Memory: {sourceFile} {sourceLinenum}
		<i>The code failed to allocate memory</i>
<b>E2013</b>	WVFRM_ERR_13	( line {lineNum} ) - {subparam} specified after beginning of timing data
		<i>A sub param was found after timing data was already specified</i>
<b>E2014</b>	WVFRM_ERR_14	( line {lineNum} ) - Duplicate definition for {keyword} {subparam}
		<i>The sub parameter was multiply defined in waveform</i>
<b>E2015</b>	WVFRM_ERR_15	( line {lineNum} ) - Invalid {keyword} line
		<i>A data line has a syntax error in waveform</i>
<b>W2016</b>	WVFRM_ERR_16	"( line {lineNum} ) - Suspicious {waveName} {paramName} Value (\\"{actualValue}\\"), Numeric in Scale"
		<i>The numeric value for parameter of waveform was somewhat incorrect ( possibly in the scale factor)</i>
<b>E2017</b>	WVFRM_ERR_17	"( line {lineNum} ) - Invalid {waveName} Value (\\"{badValue}\\")"
		<i>A bad numeric value was found in waveform</i>
<b>E2018</b>	WVFRM_ERR_18	( line {lineNum} ) - More than {maxPoints} data points provided for {waveName} table
		<i>More than data points were sepcified for waveform</i>
<b>E2019</b>	WVFRM_ERR_19	'NA' not allowed for {lineNum} value
		<i>The Time value in a waveform cannot have a value which is NA</i>

<b>E2020</b>	WVFRM_ERR_20	( line {lineNum} ) - Time value did not increase  <i>The Time values should always increase in a waveform</i>
<b>C2021</b>	WVFRM_ERR_21	Model {modelName}: {Rise Fall} Waveform [{waveNumber}] and its Composite Current don't have identical time points  <i>"The ""Rising"" or ""Falling"" waveform occurrence for model does not have identical timepoints with its [Composite Current] waveform"</i>
<b>B2100</b>	STRING_ERR_0	Unable to Allocate Memory: {sourceFile} {sourceLinenum}  <i>The code failed to allocate memory</i>
<b>B2101</b>	STRING_ERR_1	Should not be here {sourceFile} {sourceLinenum}  <i>The code has a bug</i>
<b>B2200</b>	TESTLOAD_ERR_0	Unable to Allocate Memory: {sourceFile} {sourceLinenum}  <i>The code failed to allocate memory</i>
<b>B2201</b>	TESTLOAD_ERR_1	Unable to get IBIS structure  <i>Program data structures are corrupt</i>
<b>E2202</b>	TESTLOAD_ERR_2	( line {lineNum} ) - Orphan Test Load keyword.  <i>A [Test Load] keyword was found where not expected</i>
<b>E2203</b>	TESTLOAD_ERR_3	( line {lineNum} ) - Orphan data line keyword.  <i>A data line for a [Test Load] keyword was found when no [Test Load] section was active</i>
<b>B2204</b>	TESTLOAD_ERR_4	{sourceFile}:{sourceLinenum}:Illegal keyword.  <i>Program data structures are corrupt in program file</i>
<b>E2205</b>	TESTLOAD_ERR_5	( line {lineNum} ) - Orphan Data line.  <i>A data line for a [Test Load] keyword was found when no [Test Load] section was active</i>
<b>B2206</b>	TESTLOAD_ERR_6	Unable to eat keyword : {sourceFile} {sourceLinenum}  <i>The code has a bugwhen trying to parse Testload</i>

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<b>E2207</b>	TESTLOAD_ERR_7	Unable to Save Test Load Name  <i>The code could not allocate the required memory</i>
<b>E2208</b>	TESTLOAD_ERR_8	( line {lineNum} ) - 'Test Load' Keyword Missing name  <i>The name was not specified on the [Test Load] keyword line</i>
<b>E2209</b>	TESTLOAD_ERR_9	( line {lineNum} ) - Incorrect Number of Line Items ({numberOfItemsFound}) For Keyword {keyword}: Expecting {numberOfItemsExpected}  <i>The keyword should have had items on the keyword line but only number of data items were found</i>
<b>E2210</b>	TESTLOAD_ERR_10	( line {lineNum} ) - Test Load Name Over {maxLength} Characters Long  <i>The name specified on the [Test Load] line is greater than (109) characters</i>
<b>E2211</b>	TESTLOAD_ERR_11	"( line {lineNum} ) - Invalid Test Load Name (\\"{name}\\"), Reserved Word."  <i>A reserved word was used as the name for a [Test Load] section name</i>
<b>E2212</b>	TESTLOAD_ERR_12	"( line {lineNum} ) - TestLoad Name Previously Defined (\\"{name}\\")"  <i>A [Test Load] section with name is already defined</i>
<b>B2213</b>	TESTLOAD_ERR_13	Unable to Parse {text}: {sourceFile} {sourceLinenum}  <i>A generic error message which indicates that a parsing error related to</i>
<b>E2214</b>	TESTLOAD_ERR_14	( line {lineNum} ) - Unknown Line Among Test Load  <i>A line was found in the [Test Load] section wich was not a valid line</i>
<b>B2215</b>	TESTLOAD_ERR_15	Should Not Be Here: {sourceFile},{sourceLinenum}  <i>The code has a bug</i>
<b>E2216</b>	TESTLOAD_ERR_16	( line {lineNum} ) - {Test_load_type} Already Defined For Test Load '{testloadName}'  <i>The Test_load_type is already defined for [Test Load]</i>
<b>E2217</b>	TESTLOAD_ERR_17	( line {lineNum} ) - '{Test_load_type}' Subparameter Missing Setting  <i>"The value for the ""Test_load_type"" subparam is missing"</i>

E2218	TESTLOAD_ERR_18	( line {lineNum} ) - Invalid {Test_load_type} Line  <i>"There is a syntax error on the ""Test_load_type"" data line"</i>
E2219	TESTLOAD_ERR_19	( line {lineNum} ) - Incorrect Number of Line Items ({numberOfItemsFound}) For {paramName}: Expecting {numberOfItemsExpected}  <i>The sub parameter should have had items on the keyword line but only number of data items were found</i>
E2220	TESTLOAD_ERR_20	"( line {lineNum} ) - Invalid {subparam/keyword} (\\"{badValue}\") (try \\"{optionslist}\")"  <i>A generic error message which indicates that a wrong value was specified for a particular . The user must specify from one of the</i>
E2221	TESTLOAD_ERR_21	"( line {lineNum} ) - Invalid {Test_load_type} (\\"{badValue}\")"  <i>The Test_load_type has an illegal value</i>
E2222	TESTLOAD_ERR_22	( line {lineNum} ) - {name} Name Over {maxLength} Characters Long  <i>[UNUSED]</i>
E2223	TESTLOAD_ERR_23	"( line {lineNum} ) - Invalid {name} (\\"{badValue}\"), Reserved Word."  <i>The Test Load subparam has an illegal value</i>
E2224	TESTLOAD_ERR_24	Test Load '{testloadName}': {Test_load_type} Not Defined  <i>In the [Test Load] ; the Test_load_type is not defined</i>
E2225	TESTLOAD_ERR_25	Test Load '{testloadName}': If Td is specified then Zo must be specified also  <i>In the [Test Load] since Td is specified; then Zo must also be specified</i>
E2226	TESTLOAD_ERR_26	Test Load '{testloadName}': V_term1 must be specified when Rp1_near or Rp1_far is specified  <i>In the [Test Load] since Rp1_near or Rp1_far are specified; V_term1 should be specified also</i>
E2227	TESTLOAD_ERR_27	Test Load '{testloadName}': V_term2 must be specified when Rp2_near or Rp2_far is specified  <i>In the [Test Load] since Rp2_near or Rp2_far are specified; V_term2 should be specified also</i>

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<b>W2228</b>	TESTLOAD_ERR_28	Test Load '{testloadName}' : R_diff_near specified for Test_load_type which is not Differential
		<i>In the [Test Load] which is not of type Differential; R_diff_near should not be specified</i>
<b>W2229</b>	TESTLOAD_ERR_29	Test Load '{testloadName}' : R_diff_far specified for Test_load_type which is not Differential
		<i>In the [Test Load] which is not of type Differential; R_diff_far should not be specified</i>
<b>W2230</b>	TESTLOAD_ERR_30	Test Load '{testloadName}' : Receiver_model_inv specified for Test_load_type which is not Differential
		<i>In the [Test Load] which is not of type Differential; Receiver_model_inv should not be specified</i>
<b>B2231</b>	TESTLOAD_ERR_31	{sourceFile}:{sourceLinenum}:Unable to get IBIS?
		<i>Program data structures are corrupt in program file</i>
<b>E2232</b>	TESTLOAD_ERR_32	Test Load '{name}' references undefined models
		<i>The Test Load references undefined models</i>
<b>E2233</b>	TESTLOAD_ERR_33	Receiver_model '{rcvrModel}' in Test Load '{testloadName}' is not defined in the file
<b>W2234</b>	TESTLOAD_ERR_34	Driver_model '{rcvrModel}' in Test Load '{testloadName}' is not an input type.
		<i>NOTE: Driver_model actually needs to be a Receiver_model</i>
<b>E2235</b>	TESTLOAD_ERR_35	Receiver_model_inv '{rcvrModel}' in Test Load '{testloadName}' is not defined in the file
<b>W2236</b>	TESTLOAD_ERR_36	Receiver_model_inv '{rcvrModel}' in Test Load '{testloadName}' is not associated with a Differential Pin.
<b>E2237</b>	TESTLOAD_ERR_37	( line {lineNum} ) - {subparam} Already Defined For Test Load
<b>E2238</b>	TESTLOAD_ERR_38	"( line {lineNum} ) - Invalid {subparam} Value (\\"{value}\")"



<b>E2239</b>	TESTLOAD_ERR_39	( line {lineNum} ) - 'NA' Not Allowed For Typical Value  <i>The typical value in a Range cannot be NA</i>
<b>B2300</b>	TESTDATA_ERR_0	Unable to Allocate Memory: {sourceFile} {sourceLinenum}  <i>The code failed to allocate memory</i>
<b>B2301</b>	TESTDATA_ERR_1	Unable to get IBIS structure  <i>Program data structures are corrupt</i>
<b>E2302</b>	TESTDATA_ERR_2	( line {lineNum} ) - Orphan Test Data keyword.
<b>E2303</b>	TESTDATA_ERR_3	( line {lineNum} ) - Orphan data line keyword.
<b>E2304</b>	TESTDATA_ERR_4	( line {lineNum} ) - [Rising Waveform Near] Already Defined
<b>E2305</b>	TESTDATA_ERR_5	( line {lineNum} ) - [Falling Waveform Near] Already Defined
<b>E2306</b>	TESTDATA_ERR_6	( line {lineNum} ) - [Rising Waveform Far] Already Defined
<b>E2307</b>	TESTDATA_ERR_7	( line {lineNum} ) - [Falling Waveform Far] Already Defined
<b>E2308</b>	TESTDATA_ERR_8	( line {lineNum} ) - [Diff Rising Waveform Near] Already Defined
<b>E2309</b>	TESTDATA_ERR_9	( line {lineNum} ) - [Diff Falling Waveform Near] Already Defined

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<b>E2310</b>	TESTDATA_ERR_10	( line {lineNum} ) - [Diff Rising Waveform Far] Already Defined
<b>E2311</b>	TESTDATA_ERR_11	( line {lineNum} ) - [Diff Falling Waveform Far] Already Defined
<b>B2312</b>	TESTDATA_ERR_12	{sourceFile}:{sourceLinenum}:Illegal keyword.  <i>Program data structures are corrupt in program file</i>
<b>E2313</b>	TESTDATA_ERR_13	( line {lineNum} ) - Orphan Data line.
<b>B2314</b>	TESTDATA_ERR_14	Unable to eat keyword : {sourceFile} {sourceLinenum}
<b>E2315</b>	TESTDATA_ERR_15	Unable to Save Test Data Name
<b>E2316</b>	TESTDATA_ERR_16	( line {lineNum} ) - 'Test Data' Keyword Missing name
<b>E2317</b>	TESTDATA_ERR_17	( line {lineNum} ) - Incorrect Number of Line Items ({numberOfItemsFound}) For Keyword {keyword}: Expecting {numberOfItemsExpected}  <i>The keyword should have had items on the keyword line but only number of data items were found</i>
<b>E2318</b>	TESTDATA_ERR_18	( line {lineNum} ) - Test Data Name Over {maxChars} Characters Long
<b>E2319</b>	TESTDATA_ERR_19	"( line {lineNum} ) - Invalid Test Data Name (\"{name}\"), Reserved Word."
<b>E2320</b>	TESTDATA_ERR_20	"( line {lineNum} ) - TestData Name Previously Defined (\"{name}\")"

<b>B2321</b>	TESTDATA_ERR_21	Unable to Parse {text}: {sourceFile} {sourceLinenum}
		<i>A generic error message which indicates that a parsing error related to</i>
<b>E2322</b>	TESTDATA_ERR_22	( line {lineNum} ) - Unknown Line Among Test Data
		<i>A line was found in the [Test Data] section wich was not a valid line</i>
<b>B2323</b>	TESTDATA_ERR_23	Should Not Be Here: {sourceFile},{sourceLinenum}
		<i>The code has a bug</i>
<b>E2324</b>	TESTDATA_ERR_24	{lineNum} Already Defined For Test Data '{keyword}'
<b>E2325</b>	TESTDATA_ERR_25	( line {lineNum} ) - '{subparam}' Subparameter Missing Setting
<b>E2326</b>	TESTDATA_ERR_26	( line {lineNum} ) - Invalid {subparam} Line
<b>E2327</b>	TESTDATA_ERR_27	( line {lineNum} ) - Incorrect Number of Line Items ({numberOfItemsFound}) For {paramName}: Expecting {numberOfItemsExpected}
		<i>The sub parameter should have had items on the keyword line but only number of data items were found</i>
<b>E2328</b>	TESTDATA_ERR_28	"( line {lineNum} ) - Invalid {subparam/keyword} (\\"{badValue}\") (try \\"{optionList}\")"
		<i>A generic error message which indicates that a wrong value was specified for a particular . The user must specify from one of the</i>
<b>E2329</b>	TESTDATA_ERR_29	"( line {lineNum} ) - Invalid {subparam} (\\"{value}\")"
<b>E2330</b>	TESTDATA_ERR_30	( line {lineNum} ) - {subparam} Name Over {maxChars} Characters Long
<b>B2331</b>	TESTDATA_ERR_31	"Invalid {sourceFile} (\\"{sourceLinenum}\"), Reserved Word."

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<b>E2332</b>	TESTDATA_ERR_32	Test Data '{testdataName}': {testdataType} Not Defined
<b>E2333</b>	TESTDATA_ERR_33	Test Data '{testdataName}': Driver_model_inv can only be specified with Differential Test_data_type
<b>E2334</b>	TESTDATA_ERR_34	Test Data '{testdataName}': At least one Rising/Falling Waveform must be specified
<b>E2335</b>	TESTDATA_ERR_35	Test Data '{testdataName}': Differential Rising/Falling Waveform can be specified only with Differential Test_data_type
<b>B2336</b>	TESTDATA_ERR_36	{sourceFile}:{sourceLinenum}:Unable to get IBIS?  <i>Program data structures are corrupt in program file</i>
<b>E2337</b>	TESTDATA_ERR_37	Test Data '{testdataName}' references undefined models
<b>E2338</b>	TESTDATA_ERR_38	Driver_model '{modelName}' in Test Data '{testdataName}' is not defined in the file
<b>W2339</b>	TESTDATA_ERR_39	Driver_model '{modelName}' in Test Data '{testdataName}' is not an output type.
<b>E2340</b>	TESTDATA_ERR_40	Driver_model_inv '{modelName}' in Test Data '{testdataName}' is not defined in the file
<b>W2341</b>	TESTDATA_ERR_41	Driver_model_inv '{modelName}' in Test Data '{testdataName}' is not associated with a Differential Pin.
<b>E2342</b>	TESTDATA_ERR_42	Test Data '{testdataName}' references undefined Test Loads

<b>E2343</b>	TESTDATA_ERR_43	Test Load '{testloadName}' referenced in Test Data '{testdataName}' is not defined in the file
<b>E2344</b>	TESTDATA_ERR_44	Test_data_type in Test Data '{testdataName}' is not the same as Test_load_type in referenced Test Load '{testloadName}'
<b>B2400</b>	SUBMDL_ERR_0	Unable to Allocate Memory: {sourceFile} {sourceLinenum}  <i>The code failed to allocate memory</i>
<b>B2401</b>	SUBMDL_ERR_1	Unable to get IBIS structure {sourceFile} {sourceLinenum}  <i>Program data structures are corrupt</i>
<b>E2402</b>	SUBMDL_ERR_2	( line {lineNum} ) - Orphan Sub Model keyword.
<b>E2403</b>	SUBMDL_ERR_3	( line {lineNum} ) - Orphan data line keyword.
<b>E2404</b>	SUBMDL_ERR_4	( line {lineNum} ) - [GND Pulse Table] Already Defined
<b>E2405</b>	SUBMDL_ERR_5	( line {lineNum} ) - [POWER Pulse Table] Already Defined
<b>E2406</b>	SUBMDL_ERR_6	( line {lineNum} ) - [Submodel Spec] should be specified before other keywords for a model
<b>B2407</b>	SUBMDL_ERR_7	Should Not Be Here: {sourceFile}, {sourceLinenum}  <i>The code has a bug</i>
<b>B2408</b>	SUBMDL_ERR_8	Unable to eat keyword : {sourceFile} {sourceLinenum}

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<b>E2409</b>	SUBMDL_ERR_9	Unable to Save Sub Model Name
<b>E2410</b>	SUBMDL_ERR_10	( line {lineNum} ) - 'Sub Model' Keyword Missing name
<b>E2411</b>	SUBMDL_ERR_11	( line {lineNum} ) - Incorrect Number of Line Items ({numberOfItemsFound}) For Keyword {keyword}: Expecting {numberOfItemsExpected}  <i>The keyword should have had items on the keyword line but only number of data items were found</i>
<b>E2412</b>	SUBMDL_ERR_12	( line {lineNum} ) - Sub Model Name Over {maxChars} Characters Long
<b>E2413</b>	SUBMDL_ERR_13	"( line {lineNum} ) - Invalid Sub Model Name (\\"{submodelName}\\"), Reserved Word."
<b>E2414</b>	SUBMDL_ERR_14	"( line {lineNum} ) - SubModel Name Previously Defined (\\"{submodelName}\")"
<b>B2415</b>	SUBMDL_ERR_15	Unable to Parse {text}: {sourceFile} {sourceLinenum}  <i>A generic error message which indicates that a parsing error related to</i>
<b>E2416</b>	SUBMDL_ERR_16	( line {lineNum} ) - Unknown Line Among Sub Model Data  <i>A line was found in the [Sub Model] section wich was not a valid line</i>
<b>E2417</b>	SUBMDL_ERR_17	{lineNum} Already Defined For Submodel '{submodelName}'
<b>E2418</b>	SUBMDL_ERR_18	'{lineNum}' Subparameter Missing Setting
<b>E2419</b>	SUBMDL_ERR_19	Invalid {lineNum} Line

<b>E2420</b>	SUBMDL_ERR_20	( line {lineNum} ) - Incorrect Number of Line Items ({numberOfItemsFound}) For {paramName}: Expecting {numberOfItemsExpected}
		<i>The sub parameter should have had items on the keyword line but only number of data items were found</i>
<b>E2421</b>	SUBMDL_ERR_21	"Invalid {lineNum} (\\"{type}\") (try \\"{optionList}\")"
		<i>A generic error message which indicates that a wrong value was specified for a particular . The user must specify from one of the</i>
<b>E2422</b>	SUBMDL_ERR_22	"Invalid {lineNum} (\\"{type}\")"
<b>E2423</b>	SUBMDL_ERR_23	Submodel '{"submodelName}': '{"Submodel_type"}' Not Defined
<b>E2424</b>	SUBMDL_ERR_24	Submodel {submodelName}: [Submodel Spec] is required when Submodel_type is Bus_hold
<b>E2425</b>	SUBMDL_ERR_25	Submodel {submodelName}: [Submodel Spec] V_trigger_r is required when Submodel_type is Bus_hold
<b>E2426</b>	SUBMDL_ERR_26	Submodel {submodelName}: [Submodel Spec] V_trigger_f is required when Submodel_type is Bus_hold
<b>E2427</b>	SUBMDL_ERR_27	SubModel {submodelName}: Both Pullup and Pulldown cannot be specified when Off_delay is specified.
<b>E2428</b>	SUBMDL_ERR_28	Submodel {submodelName}: [Ramp] is required when Submodel_type is Bus_hold
<b>E2429</b>	SUBMDL_ERR_29	Submodel {submodelName}: Either [Pullup] or [Pulldown] is required when Submodel_type is Bus_hold

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<b>E2430</b>	SUBMDL_ERR_30	Submodel {submodelName}: [Submodel Spec] V_trigger_f is required when GND_Pulse is specified
<b>E2431</b>	SUBMDL_ERR_31	Submodel {submodelName}: [Submodel Spec] V_trigger_r is required when POWER_Pulse is specified
<b>E2432</b>	SUBMDL_ERR_32	Submodel {submodelName}: GND Pulse Table or POWER Pulse Table or GND Clamp or POWER Clamp is required when Submodel_type is Dynamic_clamp
<b>E2433</b>	SUBMDL_ERR_33	Submodel {submodelName}: [Submodel Spec] Off_delay cannot be specified with Dynamic_clamp submodels
<b>E2434</b>	SUBMDL_ERR_34	Submodel {submodelName}: [Submodel Spec] is required when Submodel_type is Fall_back
<b>E2435</b>	SUBMDL_ERR_35	Submodel {submodelName}: [Submodel Spec] V_trigger_r is required when Submodel_type is Fall_back
<b>E2436</b>	SUBMDL_ERR_36	Submodel {submodelName}: [Submodel Spec] V_trigger_f is required when Submodel_type is Fall_back
<b>E2437</b>	SUBMDL_ERR_37	Submodel {submodelName}: Either [Pullup] or [Pulldown] is required when Submodel_type is Fall_back
<b>E2438</b>	SUBMDL_ERR_38	Submodel {submodelName}: Pullup and Pulldown cannot both be specified with Fall_back submodels
<b>E2439</b>	SUBMDL_ERR_39	Submodel {submodelName}: [Ramp] is required when Submodel_type is Fall_back



<b>E2440</b>	SUBMDL_ERR_40	Submodel {submodelName}: [Submodel Spec] Off_delay cannot be specified with Fall_back submodels
<b>W2441</b>	SUBMDL_ERR_41	Submodel {submodelName}: V_trigger_r({Typ Min Max}) is less than the start of Rising Waveform
<b>W2442</b>	SUBMDL_ERR_42	Submodel {submodelName}: V_trigger_r({Typ Min Max}) is greater than the end of Rising Waveform
<b>W2443</b>	SUBMDL_ERR_43	Submodel {submodelName}: V_trigger_f({Typ Min Max}) is greater than the start of Falling Waveform
<b>W2444</b>	SUBMDL_ERR_44	Submodel {submodelName}: V_trigger_f({Typ Min Max}) is less than the end of Falling Waveform
<b>E2445</b>	SUBMDL_ERR_45	SubModel {submodelName} has [Initial Delay] sub parameter {subparam} specified but it has no {section}

*SubModel has [Initial Delay] sub-parametr (V-T; I-T) specified but the corresponding [Rising/Falling Waveform] or [Composite Current] is missing*

#### 4.6 MESSAGE CODES 2500 TO 2999

<b>Code</b>	<b>Symbol</b>	<b>Message/Comments</b>
<b>E2500</b>	SSWCH_ERR_0	( line {lineNum} ) - Unknown sub parameter '{subparam}'
<b>E2501</b>	SSWCH_ERR_1	( line {lineNum} ) - Unable to add Series_Switch_Groups.  <i>Internal memory allocation error</i>
<b>E2502</b>	SSWCH_ERR_2	( line {lineNum} ) - No Group names specified on this line

<b>E2503</b>	SSWCH_ERR_3	( line {lineNum} ) - Unable to allocate new Series Switch Group name.  <i>Memory allocation for a Series Switch Group name failed while trying to parse a [Series Switch] section</i>
<b>E2504</b>	SSWCH_ERR_4	( line {lineNum} ) - Series switch Group name '{groupName}' over {maxChars} characters long
<b>E2505</b>	SSWCH_ERR_5	( line {lineNum} ) - Series switch Group name cannot be 'On' or 'Off'
<b>E2506</b>	SSWCH_ERR_6	( line {lineNum} ) - Duplicate Series switch Group name '{groupName}'
<b>W2507</b>	SSWCH_ERR_7	Component: {compName} Series Switch Function '{function}' is used but not defined
<b>E2600</b>	SSWCH_ERR_8	( line {lineNum} ) - Unable to allocate new SSWCH.  <i>Memory allocation for a Series Switch failed while trying to parse a [Series Switch] section</i>
<b>E2601</b>	SPINMPG_ERR_0	( line {lineNum} ) - Extra data columns on this line.
<b>E2602</b>	SPINMPG_ERR_1	( line {lineNum} ) - No Pin1 specified.  <i>The data line in a [Series Pin Mapping] section has no Pin1 specified</i>
<b>E2603</b>	SPINMPG_ERR_2	( line {lineNum} ) - No Pin2 specified.  <i>The data line in a [Series Pin Mapping] section has no Pin2 specified</i>
<b>E2604</b>	SPINMPG_ERR_3	( line {lineNum} ) - No Model specified.  <i>The data line in a [Series Pin Mapping] section has no Model specified</i>
<b>E2605</b>	SPINMPG_ERR_4	( line {lineNum} ) - [Series Pin Mapping] Data lines must contain either 3 or 4 columns.  <i>The data line in a [Series Pin Mapping] section should have 3 values ( if no function group is specified ) or 4 values (if a function group is specified)</i>

<b>E2606</b>	SPINMPG_ERR_5	( line {lineNum} ) - [Series Pin Mapping] When 4 columns are specified, the heading 'function_table_group' must be used.  <i>If a data line in a [Series Pin Mapping] section has 4 values then the keyword line should also have the heading function_table_group defined</i>
<b>B2607</b>	SPINMPG_ERR_6	{sourceFile}:{sourceLinenum}:Unable to get IBIS?  <i>Program data structures are corrupt in program file</i>
<b>E2608</b>	SPINMPG_ERR_7	Component '{compName}': [Series Pin Mapping] Pin1 '{pinName}' not previously declared in Pin section.  <i>The Pin1 referred to in the [Series Pin Mapping] section of Component was not defiend in the [Pin] section of the component</i>
<b>E2609</b>	SPINMPG_ERR_8	Component '{compName}': [Series Pin Mapping] Pin1 '{pinName}' has an unknown model.  <i>[UNUSED]</i>
<b>E2610</b>	SPINMPG_ERR_9	Component '{compName}': [Series Pin Mapping] Pin1 '{pinName}' has model '{model}' which neither TERMINATOR nor NC.  <i>[UNUSED]</i>
<b>E2611</b>	SPINMPG_ERR_10	Component '{compName}': [Series Pin Mapping] Pin1 '{pinName}' has Model '{model}' with unknown type.  <i>[UNUSED]</i>
<b>E2612</b>	SPINMPG_ERR_11	Component '{compName}': [Series Pin Mapping] Pin2 '{pinName}' not previously declared in Pin section.  <i>The Pin2 referred to in the [Series Pin Mapping] section of Component was not defiend in the [Pin] section of the component</i>
<b>E2613</b>	SPINMPG_ERR_12	Component '{compName}': [Series Pin Mapping] Pin2 '{pinName}' has an unknown model.  <i>[UNUSED]</i>
<b>E2614</b>	SPINMPG_ERR_13	Component '{compName}': [Series Pin Mapping] Pin2 '{pinName}' has model '{model}' which neither TERMINATOR nor NC.  <i>[UNUSED]</i>
<b>E2615</b>	SPINMPG_ERR_14	Component '{compName}': [Series Pin Mapping] Pin2 '{pinName}' has Model '{modelName}' with unknown type.

*[UNUSED]*

<b>E2616</b>	SPINMPG_ERR_15	Component '{compName}': [Series Pin Mapping] Pin1 '{pinName}': model type cannot be Series or Series_switch.
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*[UNUSED]*

<b>E2617</b>	SPINMPG_ERR_16	Component '{compName}': [Series Pin Mapping] Pin2 '{pinName}': model type cannot be Series or Series_switch.
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*[UNUSED]*

<b>E2618</b>	SPINMPG_ERR_17	Component '{compName}': [Series Pin Mapping] Model '{modelName}' is not defined.
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*The model referenced in the [Series Pin Mapping] of component is not defined*

<b>E2619</b>	SPINMPG_ERR_18	Component '{compName}': [Series Pin Mapping] defined but [Pins] not defined.
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*The component has a [Series Pin Mapping] section but no associated [Pin] section*

<b>E2620</b>	SPINMPG_ERR_19	( line {lineNum} ) - Unable to alloc new Series_Pin_Mapping.
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*Internal memory allocation error*

<b>E2621</b>	SPINMPG_ERR_20	Component '{compName}': [Series Pin Mapping] Model Selector '{modelSelectorName}' Model '{modelName}' is not of type Series_Switch.
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*The model selector name referenced in the [Series Pin Mapping] section of component refers to a model which is not of type Series\_switch*

<b>E2622</b>	SPINMPG_ERR_21	Component '{compName}': [Series Pin Mapping] Model '{modelName}' is not of type Series_Switch.
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*The model referenced in the [Series Pin Mapping] section of component is not of type Series\_switch*

<b>E2623</b>	SPINMPG_ERR_22	Component '{compName}': [Series Pin Mapping] Model Selector '{modelSelectorName}' Model '{modelName}' is not of type Series.
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*The model selector name referenced in the [Series Pin Mapping] section of component refers to a model which is not of type Series\_switch*

<b>E2624</b>	SPINMPG_ERR_23	Component '{compName}': [Series Pin Mapping] Model '{modelName}' is not of type Series.
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*The model referenced in the [Series Pin Mapping] section of component is not of type Series*

<b>W2625</b>	SPINMPG_ERR_24	Component '{compName}': [Series Pin Mapping] Model Selector '{modelSelectorName}'
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		Model '{modelName}' is of type Series so function_table_group '{groupName}' is ignored.
<b>W2626</b>	SPINMPG_ERR_25	Component '{compName}': [Series Pin Mapping] Model '{modelName}' is of type Series so function_table_group '{groupName}' is ignored.
<b>E2627</b>	SPINMPG_ERR_26	Component '{compName}': [Series Pin Mapping] Model Selector '{modelSelectorName}' Model '{modelName}' is of type Series_Switch so function_table_group is required.
<b>E2628</b>	SPINMPG_ERR_27	Component '{compName}': [Series Pin Mapping] Model '{modelName}' is of type Series_Switch so function_table_group is required.
<b>E2629</b>	SPINMPG_ERR_28	Component '{compName}': [Series Pin Mapping] Model Selector '{modelSelectorName}' Model '{modelName}' uses function {function} which is not defined.
<b>E2630</b>	SPINMPG_ERR_29	Component '{compName}': [Series Pin Mapping] Model '{modelName}' uses function {function} which is not defined.
<b>E2631</b>	SPINMPG_ERR_30	Component '{compName}': [Series Pin Mapping] Model Selector '{modelSelectorName}' Model '{modelName}' is of unknown type.  <i>The model selector name referenced in the [Series Pin Mapping] section of component refers to a model whose model type is not known</i>
<b>E2632</b>	SPINMPG_ERR_31	Component '{compName}': [Series Pin Mapping] Model '{modelName}' is of unknown type.  <i>The model referenced in the [Series Pin Mapping] section of component is of unknown model type</i>
<b>E2700</b>	SMSPEC_ERR_0	( line {lineNum} ) - Sub Model Specification: Already Defined for this sub model
<b>B2701</b>	SMSPEC_ERR_1	Unable to Allocate Memory: {sourceFile} {sourceLinenum}

*The code failed to allocate memory*

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<b>B2702</b>	SMSPEC_ERR_2	Should Not Be Here: {sourceFile},{sourceLinenum}
		<i>The code has a bug</i>
<b>B2703</b>	SMSPEC_ERR_3	Unable to Parse {text}: {sourceFile} {sourceLinenum}
		<i>A generic error message which indicates that a parsing error related to</i>
<b>E2704</b>	SMSPEC_ERR_4	( line {lineNum} ) - Incorrect Number of Line Items ({numberOfItemsFound}) For {paramName}: Expecting {numberOfItemsExpected}
		<i>The sub parameter should have had items on the keyword line but only number of data items were found</i>
<b>E2705</b>	SMSPEC_ERR_5	Submodel {submodelName}: Empty Submodel Spec
		<i>The [Submodel Spec] of submodel has no data defined</i>
<b>E2706</b>	SMSPEC_ERR_6	( line {lineNum} ) - Unknown Line Among Sub Model Spec Data
		<i>A line was found in the [Sub Model Spec] section wich was not a valid line</i>
<b>E2707</b>	SMSPEC_ERR_7	( line {lineNum} ) - {range} Already Defined For Submodel '{submodelName}'
		<i>The range (V_trigger_r; V_trigger_f or Off_delay) was multiply defined for submodel</i>
<b>E2708</b>	SMSPEC_ERR_8	( line {lineNum} ) - 'NA' not allowed for Typical value
		<i>The typical value in a Range cannot be NA</i>
<b>W2709</b>	SMSPEC_ERR_9	{value1}({corner1}) is not less than {value2}({corner2}) for Model Spec defined on line {lineNum}
		<i>[UNUSED]</i>
<b>E2800</b>	SMOS_ERR_0	( line {lineNum} ) - More than 100 [Series_MOSFET]s are defined
<b>B2801</b>	SMOS_ERR_1	Should Not Be Here: {sourceFile},{sourceLinenum}
		<i>The code has a bug</i>
<b>B2802</b>	SMOS_ERR_2	Unable to Parse {text}: {sourceFile} {sourceLinenum}
		<i>A generic error message which indicates that a parsing error related to</i>

<b>E2803</b>	SMOS_ERR_3	( line {lineNum} ) - Incorrect Number of Line Items ( {numberOfItemsFound} ) For {paramName}: Expecting {numberOfItemsExpected}
		<i>The sub parameter should have had items on the keyword line but only number of data items were found</i>
<b>E2804</b>	SMOS_ERR_4	Model {modelName}: Vds not specified for [Series MOSFET] defined on line {lineNum}
		<i>Vds was not specified in the [Series MOSFET] section defined on line for model</i>
<b>E2805</b>	SMOS_ERR_5	Model {modelName}: Vds should be $\geq 0$ for [Series MOSFET] defined on line {lineNum}
		<i>The Vds specified in the [Series MOSFET] section defined on line for model has a value which is less than 0</i>
<b>E2806</b>	SMOS_ERR_6	Model {modelName} {keyword}: Found two Series_MOSFETs with identical Vds value {Vds}
<b>E2807</b>	SMOS_ERR_7	( line {lineNum} ) - Unknown data line in Series_MOSFET
<b>E2808</b>	SMOS_ERR_8	( line {lineNum} ) - Vds is already defined
		<i>Vds was specified more than once in a [Series MOSFET] section</i>
<b>B2809</b>	SMOS_ERR_9	Unable to Allocate Memory: {sourceFile} {sourceLinenum}
		<i>The code failed to allocate memory</i>
<b>E2810</b>	SMOS_ERR_10	( line {lineNum} ) - Invalid {Vds} Line
<b>E2811</b>	SMOS_ERR_11	"Invalid {lineNum} Value (\\"{value}\")"
<b>E2900</b>	SINFO_ERR_0	( line {lineNum} ) - {On Off} Series Info: Already Defined for this model
<b>B2901</b>	SINFO_ERR_1	Unable to Allocate Memory: {sourceFile} {sourceLinenum}
		<i>The code failed to allocate memory</i>

<b>B2902</b>	SINFO_ERR_2	Should Not Be Here: {sourceFile},{sourceLinenum}
		<i>The code has a bug</i>
<b>B2903</b>	SINFO_ERR_3	Unable to Parse {text}: {sourceFile} {sourceLinenum}
		<i>A generic error message which indicates that a parsing error related to</i>
<b>E2904</b>	SINFO_ERR_4	( line {lineNum} ) - Incorrect Number of Line Items ( {numberOfItemsFound} ) For {paramName}: Expecting {numberOfItemsExpected}
		<i>The sub parameter should have had items on the keyword line but only number of data items were found</i>
<b>E2905</b>	SINFO_ERR_5	Model {modelName} {On Off}: No series data found
<b>E2906</b>	SINFO_ERR_6	Model {modelName}: [Series_MOSFET] is not allowed in conjunction with the [Off] keyword
<b>E2907</b>	SINFO_ERR_7	Model {modelName} {On Off}: Rl_series cannot be specified if L_series is not specified
<b>E2908</b>	SINFO_ERR_8	Model {modelName} {On Off}: Rc_series cannot be specified if C_series is not specified
<b>E2909</b>	SINFO_ERR_9	Model {modelName} {On Off}: Lc_series cannot be specified if C_series is not specified

#### 4.7 MESSAGE CODES 3000 TO 3499

<b>Code</b>	<b>Symbol</b>	<b>Message/Comments</b>
<b>E3000</b>	SECT_ERR_0	( line {lineNum} ) - Duplicate Len sub param in R/L/C section
		<i>There should be a single Len sub param in R/L/C section</i>
<b>E3001</b>	SECT_ERR_1	( line {lineNum} ) - Len should not be less than zero
		<i>The value of the Len subparam cannot be less than 0</i>



<b>E3002</b>	SECT_ERR_2	( line {lineNum} ) - Len should be specified before R  <i>The Len subaparam should be defined before the R subparam</i>
<b>E3003</b>	SECT_ERR_3	( line {lineNum} ) - Duplicate R sub param in R/L/C section  <i>There should be a single R subparam in an R/L/C section</i>
<b>E3004</b>	SECT_ERR_4	( line {lineNum} ) - R should not be less than zero  <i>The value of the R subparam cannot be less than 0</i>
<b>E3005</b>	SECT_ERR_5	( line {lineNum} ) - Len should be specified before L  <i>The Len subaparam should be defined before the L subparam</i>
<b>E3006</b>	SECT_ERR_6	( line {lineNum} ) - Duplicate L sub param in R/L/C section  <i>There should be a single L subparam in an R/L/C section</i>
<b>E3007</b>	SECT_ERR_7	( line {lineNum} ) - L should not be less than zero  <i>The value of the L subparam cannot be less than 0</i>
<b>E3008</b>	SECT_ERR_8	( line {lineNum} ) - Len should be specified before C  <i>The Len subaparam should be defined before the C subparam</i>
<b>E3009</b>	SECT_ERR_9	( line {lineNum} ) - Duplicate C sub param in R/L/C section  <i>There should be a single C subparam in an R/L/C section</i>
<b>E3010</b>	SECT_ERR_10	( line {lineNum} ) - C should not be less than zero  <i>The value of the C subparam cannot be less than 0</i>
<b>E3011</b>	SECT_ERR_11	( line {lineNum} ) - Empty R/L/C section found
<b>E3012</b>	SECT_ERR_12	( line {lineNum} ) - L and C must be specified when Len != 0  <i>The L and C subparam are mandatory if the value of the Len subparam is non zero</i>
<b>E3013</b>	SECT_ERR_13	( line {lineNum} ) - Premature end of R/L/C section. Trailing '/' missing

*An R/L?C section should be terminated with a trailing '/'*

<b>B3014</b>	SECT_ERR_14	Unable to Allocate Memory: {sourceFile} {sourceLinenum}
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*The code failed to allocate memory*

<b>E3100</b>	ROW_ERR_0	( line {lineNum} ) - Unable to find Pin in Package Model Pin_Number list.
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<b>E3101</b>	ROW_ERR_1	( line {lineNum} ) - Repeated ROW .
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<b>E3102</b>	ROW_ERR_2	( line {lineNum} ) - Expected Pin at matrix row index {row},found at matrix row index {row}.
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<b>E3103</b>	ROW_ERR_3	( line {lineNum} ) - Unable to convert row data.
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<b>W3104</b>	ROW_ERR_4	( line {lineNum} ) - Suspicious row data.
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<b>E3105</b>	ROW_ERR_5	( line {lineNum} ) - More row data than allowed for this row.
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<b>E3106</b>	ROW_ERR_6	( line {lineNum} ) - Unable to add row data.
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*The code failed to allocate the required memory*

<b>E3107</b>	ROW_ERR_7	( line {lineNum} ) - Only {maxCols} columns of data allowed for this Row .
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<b>B3108</b>	ROW_ERR_8	{sourceFile}:{sourceLinenum):(uiNewColCount <= pLastRow->uiColumnCount
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<b>B3109</b>	ROW_ERR_9	{sourceFile}:{sourceLinenum}:pRow->uiColumnCount > uiNewColumnCount
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<b>E3110</b>	ROW_ERR_10	( line {lineNum} ) - No Column Index.
<b>E3111</b>	ROW_ERR_11	( line {lineNum} ) - This Row Column Index defines an entry in the lower matrix triangle.
<b>B3112</b>	ROW_ERR_12	{sourceFile};{sourceLinenum};(uiColIndex > pLastRow->uiColumnCount)
<b>E3113</b>	ROW_ERR_13	( line {lineNum} ) - Duplicate Row column index {columnIndex}.
<b>E3114</b>	ROW_ERR_14	( line {lineNum} ) - No row data.
<b>E3115</b>	ROW_ERR_15	( line {lineNum} ) - Excessive data ,only Index and Value should be specified for a Sparse_matrix.
<b>E3116</b>	ROW_ERR_16	Expected {lineNum} columns of Row data for [Row] {declaredColumns} in Matrix ending previous to this line,found {row} column{actualColumns}.
<b>E3117</b>	ROW_ERR_17	( line {lineNum} ) - Expected at least one column of Row data for [Row] {pinName} in Matrix ending previous to this line.
<b>E3118</b>	ROW_ERR_18	( line {lineNum} ) - [Row] {pinName} must contain a self-coupled index and entry.
<b>E3119</b>	ROW_ERR_19	( line {lineNum} ) - Unable to add new matrix row.
<b>E3120</b>	ROW_ERR_20	( line {lineNum} ) - Unknown PIN NUMBER.

<b>E3121</b>	ROW_ERR_21	( line {lineNum} ) - PIN NUMBER string too long.
<b>E3122</b>	ROW_ERR_22	( line {lineNum} ) - Unable to add new matrix row,expected column count = 0.
<b>E3123</b>	ROW_ERR_23	( line {lineNum} ) - Unable to create pin entry array.
<b>E3200</b>	RCVTH_ERR_0	( line {lineNum} ) - Receiver Threshold: Already Defined for this model  <i>There should be at most one [Receiver Thresholds] section in a model</i>
<b>B3201</b>	RCVTH_ERR_1	Unable to Allocate Memory: {sourceFile} {sourceLinenum}  <i>The code failed to allocate memory</i>
<b>B3202</b>	RCVTH_ERR_2	Should Not Be Here: {sourceFile}, {sourceLinenum}  <i>The code has a bug</i>
<b>B3203</b>	RCVTH_ERR_3	Unable to Parse {text}: {sourceFile} {sourceLinenum}  <i>A generic error message which indicates that a parsing error related to</i>
<b>E3204</b>	RCVTH_ERR_4	( line {lineNum} ) - Incorrect Number of Line Items ( {numberOfItemsFound} ) For {paramName}: Expecting {numberOfItemsExpected}  <i>The sub parameter should have had items on the keyword line but only number of data items were found</i>
<b>E3205</b>	RCVTH_ERR_5	Model {modelName} Receiver Thresholds: Reference Supply must be specified when Threshold Sensitivity is specified  <i>The Reference_supply parameter is mandatory when the Threshold_sensitivity parameter is specified in the [Receiver Thresholds] section but it is not so for Model</i>
<b>W3206</b>	RCVTH_ERR_6	Model {modelName} Receiver Thresholds: Vcross_low must be specified for differential receivers (Pin {pinName})  <i>The [Receiver Thresholds] section for Model does not have Vcross_low specified which is required for Pin which is a differential pin and associated with this model</i>
<b>W3207</b>	RCVTH_ERR_7	Model {modelName} Receiver Thresholds: Vcross_high must be specified for differential

		receivers (Pin {pinName})
		<i>The [Receiver Thresholds] section for Model does not have Vcross_high specified which is required for Pin which is a differential pin and associated with this model</i>
<b>W3208</b>	RCVTH_ERR_8	Model {modelName} Receiver Thresholds: Vdiff_ac must be specified for differential receivers (Pin {pinName})
		<i>The [Receiver Thresholds] section for Model does not have Vdiff_ac specified which is required for Pin which is a differential pin and associated with this model</i>
<b>W3209</b>	RCVTH_ERR_9	Model {modelName} Receiver Thresholds: Vdiff_dc must be specified for differential receivers (Pin {pinName})
		<i>The [Receiver Thresholds] section for Model does not have Vdiff_dc specified which is required for Pin which is a differential pin and associated with this model</i>
<b>W3210</b>	RCVTH_ERR_10	Model {modelName} Receiver Thresholds: Tdiffslew_ac must be specified for differential receivers (Pin {pinName})
		<i>The [Receiver Thresholds] section for Model does not have Tdiffslew_ac specified which is required for Pin which is a differential pin and associated with this model</i>
<b>W3211</b>	RCVTH_ERR_11	Model {modelName} Receiver Thresholds: Vth must not be specified for differential receivers
		[UNUSED]
<b>W3212</b>	RCVTH_ERR_12	Model {modelName} Receiver Thresholds: Vth_min must not be specified for differential receivers
		[UNUSED]
<b>W3213</b>	RCVTH_ERR_13	Model {modelName} Receiver Thresholds: Vth_max must not be specified for differential receivers
		[UNUSED]
<b>W3214</b>	RCVTH_ERR_14	Model {modelName} Receiver Thresholds: Vinh_ac must not be specified for differential receivers
		[UNUSED]
<b>W3215</b>	RCVTH_ERR_15	Model {modelName} Receiver Thresholds: Vinl_ac must not be specified for differential receivers
		[UNUSED]
<b>W3216</b>	RCVTH_ERR_16	Model {modelName} Receiver Thresholds: Vinh_dc must not be specified for differential

		receivers  <i>[UNUSED]</i>
<b>W3217</b>	RCVTH_ERR_17	Model {modelName} Receiver Thresholds: Vinl_dc must not be specified for differential receivers  <i>[UNUSED]</i>
<b>W3218</b>	RCVTH_ERR_18	Model {modelName} Receiver Thresholds: Tslew_ac must not be specified for differential receivers  <i>[UNUSED]</i>
<b>W3219</b>	RCVTH_ERR_19	Model {modelName} Receiver Thresholds: Vth must be specified for single ended receivers  <i>Model is associated with single ended pins and hence Vth is mandatory</i>
<b>W3220</b>	RCVTH_ERR_20	Model {modelName} Receiver Thresholds: Vinh_ac must be specified for single ended receivers  <i>Model is associated with single ended pins and hence Vinh_ac is mandatory</i>
<b>W3221</b>	RCVTH_ERR_21	Model {modelName} Receiver Thresholds: Vinl_ac must be specified for single ended receivers  <i>Model is associated with single ended pins and hence Vinl_ac is mandatory</i>
<b>W3222</b>	RCVTH_ERR_22	Model {modelName} Receiver Thresholds: Vinh_dc must be specified for single ended receivers  <i>Model is associated with single ended pins and hence Vinh_dc is mandatory</i>
<b>W3223</b>	RCVTH_ERR_23	Model {modelName} Receiver Thresholds: Vinl_dc must be specified for single ended receivers  <i>Model is associated with single ended pins and hence Vinl_dc is mandatory</i>
<b>W3224</b>	RCVTH_ERR_24	Model {modelName} Receiver Thresholds: Tslew_ac must be specified for single ended receivers  <i>Model is associated with single ended pins and hence Tslew_ac is mandatory</i>
<b>W3225</b>	RCVTH_ERR_25	Model {modelName} Receiver Thresholds: Vcross_low must not be specified for single ended receivers  <i>[UNUSED]</i>

<b>W3226</b>	RCVTH_ERR_26	Model {modelName} Receiver Thresholds: Vcross_high must not be specified for single ended receivers  <i>[UNUSED]</i>
<b>W3227</b>	RCVTH_ERR_27	Model {modelName} Receiver Thresholds: Vdiff_ac must not be specified for single ended receivers  <i>[UNUSED]</i>
<b>W3228</b>	RCVTH_ERR_28	Model {modelName} Receiver Thresholds: Vdiff_dc must not be specified for single ended receivers  <i>[UNUSED]</i>
<b>W3229</b>	RCVTH_ERR_29	Model {modelName} Receiver Thresholds: Tdiffslew_ac must not be specified for single ended receivers  <i>[UNUSED]</i>
<b>E3230</b>	RCVTH_ERR_30	( line {lineNum} ) - Unknown Line Among Receiver Threshold Data  <i>A line was found in the [Receiver Threshold] section wich was not a valid line</i>
<b>E3231</b>	RCVTH_ERR_31	( line {lineNum} ) - {paramName} Already Defined For Receiver Threshold  <i>The parameter has been defined more than once in a [Receiver Thresholds] section</i>
<b>E3232</b>	RCVTH_ERR_32	( line {lineNum} ) - Invalid {paramName} Line  <i>The data line for of [Receiver Thresholds] has an incorrect syntax</i>
<b>E3233</b>	RCVTH_ERR_33	"( line {lineNum} ) - Invalid {paramName} Value (\\"{paramValue}\")"  <i>An invalid value was specified for parameter in a [Receiver Thresholds] section</i>
<b>E3234</b>	RCVTH_ERR_34	( line {lineNum} ) - Unknown Reference_supply {paramValue} specified  <i>"The only allowed values for Reference_supply parameter are ""Pullup_reference""; ""Pulldown_reference""; ""Power_clamp_reference""; ""Gnd_clamp_reference""; ""Ext_reference"" but an invalid value was found"</i>
<b>B3300</b>	QUERY_ERR_0	Out of Memory  <i>Internal memory allocation error</i>
<b>B3400</b>	PKGMDL_ERR_0	{sourceFile}:{sourceLinenum}:PKGMDL_Init unable to get IBIS?

*Program data structures are corrupt in program file*

<b>E3401</b>	PKGMDL_ERR_1	( line {lineNum} ) - Orphan Package Model keyword.
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<b>E3402</b>	PKGMDL_ERR_2	( line {lineNum} ) - Orphan Data Line.
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<b>B3403</b>	PKGMDL_ERR_3	{sourceFile}:{sourceLinenum}:Illegal keyword.
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*Program data structures are corrupt in program file*

<b>E3404</b>	PKGMDL_ERR_4	( line {lineNum} ) - Orphan Data line.
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<b>B3405</b>	PKGMDL_ERR_5	{sourceFile}:{sourceLinenum}:Illegal line type received.
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*Program data structures are corrupt in program file*

<b>B3406</b>	PKGMDL_ERR_6	COMMAND.COM not available?
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*Could not fire the command interpreter for the underlying OS*

<b>B3407</b>	PKGMDL_ERR_7	/bin/sh not available?
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*Could not fire the command interpreter for the underlying OS*

<b>B3408</b>	PKGMDL_ERR_8	tmpnam() failed.
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*There is a bug in the code*

<b>B3409</b>	PKGMDL_ERR_9	fopen({fileName}) failed.
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*Open of a temp file failed*

<b>E3410</b>	PKGMDL_ERR_10	Define_Package_Model '{defPkgModel}' is duplicated within the .ibs file.
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<b>E3411</b>	PKGMDL_ERR_11	Resistance_Matrix cannot be specified when Number_Of_Sections is specified for Package Model {defPkgModel}.
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<b>E3412</b>	PKGMDL_ERR_12	Inductance_Matrix cannot be specified when Number_Of_Sections is specified for Package Model {defPkgModel}.
<b>E3413</b>	PKGMDL_ERR_13	Inductance matrix not found for Package Model '{defPkgModel}'.
<b>E3414</b>	PKGMDL_ERR_14	Capacitance_Matrix cannot be specified when Number_Of_Sections is specified for Package Model {defPkgModel}.
<b>E3415</b>	PKGMDL_ERR_15	Capacitance matrix not found for Package Model '{defPkgModel}'.
<b>E3416</b>	PKGMDL_ERR_16	( line {lineNum} ) - Unable to create new PKGMDL.
<b>E3417</b>	PKGMDL_ERR_17	Package Model keyword 'Define_Package_Model' not found or blank.
<b>E3418</b>	PKGMDL_ERR_18	OEM keyword not found for Package Model '{pkgModelName}'.
<b>E3419</b>	PKGMDL_ERR_19	Description keyword not found for Package Model '{pkgModelName}'.
<b>E3420</b>	PKGMDL_ERR_20	( line {lineNum} ) - Blank Number_of_Pins value.
<b>E3421</b>	PKGMDL_ERR_21	( line {lineNum} ) - Duplicate Number_of_Pins keyword.
<b>W3422</b>	PKGMDL_ERR_22	( line {lineNum} ) - Suspicious Number_of_Pins value.

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<b>E3423</b>	PKGMDL_ERR_23	( line {lineNum} ) - Bad Number_of_Pins value.
<b>E3424</b>	PKGMDL_ERR_24	( line {lineNum} ) - Number_of_Pins = 0.
<b>E3425</b>	PKGMDL_ERR_25	( line {lineNum} ) - Blank Number_of_Sections value.
<b>E3426</b>	PKGMDL_ERR_26	( line {lineNum} ) - Duplicate Number_of_Sections keyword.
<b>E3427</b>	PKGMDL_ERR_27	( line {lineNum} ) - Number of Sections should be specified before Pin Numbers
<b>W3428</b>	PKGMDL_ERR_28	( line {lineNum} ) - Suspicious Number_of_Sections value.
<b>E3429</b>	PKGMDL_ERR_29	( line {lineNum} ) - Bad Number_of_Sections value.
<b>E3430</b>	PKGMDL_ERR_30	( line {lineNum} ) - Number_of_Sections = 0.
<b>E3431</b>	PKGMDL_ERR_31	Number_of_Pins keyword not found or value bad for Package Model '{pkgModelName}'.
<b>E3432</b>	PKGMDL_ERR_32	( line {lineNum} ) - Pin Numbers name string too long. will be truncated.
<b>E3433</b>	PKGMDL_ERR_33	( line {lineNum} ) - Number of Pins is zero,unable to add Pin Number.
<b>E3434</b>	PKGMDL_ERR_34	( line {lineNum} ) - Unable to allocate Pin_Numbers array.

<b>E3435</b>	PKGMDL_ERR_35	( line {lineNum} ) - More Pin Numbers names than Number of pins.
<b>E3436</b>	PKGMDL_ERR_36	( line {lineNum} ) - Unable to allocate PIN.  <i>Memory allocation for a new pin failed in the [Package Model] section</i>
<b>E3437</b>	PKGMDL_ERR_37	( line {lineNum} ) - Duplicate Pin .
<b>E3438</b>	PKGMDL_ERR_38	( line {lineNum} ) - Detected the start of an orphan R/L/C section
<b>E3439</b>	PKGMDL_ERR_39	( line {lineNum} ) - Cannot Nest Forks
<b>E3440</b>	PKGMDL_ERR_40	( line {lineNum} ) - Detected the start of an orphan 'Fork'
<b>E3441</b>	PKGMDL_ERR_41	( line {lineNum} ) - Detected the start of an orphan 'Endfork'
<b>E3442</b>	PKGMDL_ERR_42	( line {lineNum} ) - Empty Fork/Endfork found
<b>E3443</b>	PKGMDL_ERR_43	( line {lineNum} ) - Endfork found without enclosing Fork
<b>E3444</b>	PKGMDL_ERR_44	( line {lineNum} ) - A new Pin {pinName} has been defined before terminating a previous Fork with the corresponding Endfork
<b>W3445</b>	PKGMDL_ERR_45	( line {lineNum} ) - Found a Pin Name '{pinName}' containing '='. Possible syntax error

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<b>W3446</b>	PKGMDL_ERR_46	( line {lineNum} ) - Found a Pin Name '{pinName}' containing '/'. Possible syntax error
<b>W3447</b>	PKGMDL_ERR_47	( line {lineNum} ) - Found a Pin Name '{pinName}'. Possible syntax error
<b>E3448</b>	PKGMDL_ERR_48	( line {lineNum} ) - Unable to allocate Pin_Sections array.
<b>E3449</b>	PKGMDL_ERR_49	( line {lineNum} ) - No Sections were defined for this pin even though [Number of Sections] was defined.
<b>E3450</b>	PKGMDL_ERR_50	Some Fork sub parameters were not terminated with Endfork
<b>E3451</b>	PKGMDL_ERR_51	Pin '{pin}' has {actualSections} sections. This is greater than the Number of Sections {specSections} specified
<b>E3452</b>	PKGMDL_ERR_52	Required keyword Pin_Numbers not found for Package Model '{pkgModelName}'.
<b>E3453</b>	PKGMDL_ERR_53	No Pin Numbers names found for Package Model '{pkgModelName}'.
<b>E3454</b>	PKGMDL_ERR_54	Number of Pins not the same as count of Pin Numbers names found for Package Model '{pkgModelName}'.
<b>E3455</b>	PKGMDL_ERR_55	Required Model_Data keyword not found for package {defPkgModel}.
<b>E3456</b>	PKGMDL_ERR_56	Model_Data cannot be specified when Number_Of_Sections is specified for package {defPkgModel}.

<b>E3457</b>	PKGMDL_ERR_57	Required End_Model_Data keyword not found for package {defPkgModel}.
<b>E3458</b>	PKGMDL_ERR_58	End_Model_Data cannot be specified when Number_Of_Sections is specified for package {defPkgModel}.
<b>E3459</b>	PKGMDL_ERR_59	Required End_Package_Model keyword not found.
<b>E3460</b>	PKGMDL_ERR_60	( line {lineNum} ) - Duplicate Resistance Matrix.
<b>E3461</b>	PKGMDL_ERR_61	( line {lineNum} ) - Duplicate Inductance Matrix.
<b>E3462</b>	PKGMDL_ERR_62	( line {lineNum} ) - Duplicate Capacitance Matrix.
<b>B3463</b>	PKGMDL_ERR_63	{sourceFile}:{sourceLinenum}:Illegal current matrix.
<b>E3464</b>	PKGMDL_ERR_64	( line {lineNum} ) - Multiple Bandwidth keywords.
<b>E3465</b>	PKGMDL_ERR_65	( line {lineNum} ) - Bandwidth keyword in wrong location.
<b>E3466</b>	PKGMDL_ERR_66	( line {lineNum} ) - Row keyword in wrong location.
<b>E3467</b>	PKGMDL_ERR_67	Keyword '{keyword}' not found or blank for Package Model '{pkgModelName}'.
<b>E3468</b>	PKGMDL_ERR_68	( line {lineNum} ) - Duplicate '{keyword}' keyword found.

<b>E3469</b>	PKGMDL_ERR_69	( line {lineNum} ) - Extraneous data on '{keyword}' line.
<b>B3470</b>	PKGMDL_ERR_70	Unable to remove({ fileName}).  <i>Temporary file could not be removed.</i>
<b>E3471</b>	PKGMDL_ERR_71	[Merged Pins] should be defined after [Pin Numbers] and before [Model Data]  <i>[Merged Pins] should be defined after [Pin Numbers] and before [Model Data]</i>
<b>E3472</b>	PKGMDL_ERR_72	Package Model {pkgModelName}: [Merged Pins] can only be specified if [Model Data] is also specified  <i>Package has a [Merged Pins] section but no [Model Data] section</i>
<b>E3473</b>	PKGMDL_ERR_73	[Merged Pins] Pin {pinName} not found in the [Pin Numbers] section  <i>The Merged Pin is not defined in the [Pin Numbers] section of the Package</i>
<b>E3474</b>	PKGMDL_ERR_74	[Merged Pins] connecting Pin {pinName} must not be defined in [Pin Numbers] section  <i>The Pin connected to a Merging Pin was found in the [Pin Numbers] section of the Package</i>
<b>E3475</b>	PKGMDL_ERR_75	No connecting pins found for [Merged Pins] defined on line {lineNum}  <i>No Pins were connected to the Merging Pin defined in the [Merged Pins] section on line</i>

#### 4.8 MESSAGE CODES 3500 TO 3999

<b>Code</b>	<b>Symbol</b>	<b>Message/Comments</b>
<b>B3600</b>	NODE_ERR_0	Unable to Allocate Memory: {sourceFile} {sourceLinenum}  <i>The code failed to allocate memory</i>
<b>E3700</b>	MTX_ERR_0	( line {lineNum} ) - Unable to allocate MTX.  <i>The code failed to allocate the required memory</i>
<b>E3701</b>	MTX_ERR_1	( line {lineNum} ) - Matrix type not specified.

<b>E3702</b>	MTX_ERR_2	( line {lineNum} ) - Unknown matrix type '{type}'.
<b>E3703</b>	MTX_ERR_3	( line {lineNum} ) - Bandwidth only allowed for Banded Matrices
<b>E3704</b>	MTX_ERR_4	( line {lineNum} ) - Bad Bandwidth value.  <i>An invalid numberc value was specified</i>
<b>E3705</b>	MTX_ERR_5	( line {lineNum} ) - Suspicious Bandwidth value.
<b>E3706</b>	MTX_ERR_6	( line {lineNum} ) - Bandwidth must be less than Number_of_Pins .
<b>B3707</b>	MTX_ERR_7	( line {lineNum} ) - gpMtx is NULL,cannot reset banded wrap type.
<b>E3708</b>	MTX_ERR_8	( line {lineNum} ) - Bandwidth for this Banded, circle-back matrix exceeds the limit of {maxBandwidth}.
<b>B3709</b>	MTX_ERR_9	( line {lineNum} ) - gpMtx->eMatrixType is already banded wrap
<b>B3710</b>	MTX_ERR_10	( line {lineNum} ) - gpMtx->eMatrixType is not a banded type,cannot reset banded wrap type.
<b>B3711</b>	MTX_ERR_11	( line {lineNum} ) - gpMtx is NULL,cannot determine banded wrap type.
<b>B3712</b>	MTX_ERR_12	( line {lineNum} ) - gpMtx->eMatrixType is not a banded type, cannot determine banded wrap type.

<b>B3713</b>	MTX_ERR_13	( line {lineNum} ) - gpMtx is NULL,cannot determine row count.
<b>B3714</b>	MTX_ERR_14	( line {lineNum} ) - gpMtx is NULL,cannot determine bandwidth.
<b>B3715</b>	MTX_ERR_15	( line {lineNum} ) - gpMtx is not banded type, cannot determine bandwidth.
<b>E3716</b>	MTX_ERR_16	The {matrixType} Matrix is Banded and requires the 'Bandwidth' keyword.
<b>E3717</b>	MTX_ERR_17	( line {lineNum} ) - Expected {declaredRows} Rows,found {actualRows} for Matrix ending previous to this line.
<b>B3718</b>	MTX_ERR_18	( line {lineNum} ) - gpMtx->eMatrixType is unknown,cannot determine CheckColumnCount.
<b>E3719</b>	MTX_ERR_19	Package {pkgModelName}: The {Resistance Inductance Capacitance} Matrix has diagonal element {value} at row {rowNum} which is negative
<b>W3720</b>	MTX_ERR_20	Package {pkgModelName}: The {Resistance Inductance} Matrix has diagonal element {diagVal} at row {rowNum} whose magnitude is less than off diagonal element {offDiagVal} at col {colNum}
<b>E3721</b>	MTX_ERR_21	Package {pkgModelName}: The {Capacitance} Matrix has diagonal element {diagVal} at row {rowNum} whose magnitude is less than the sum of off diagonal elements {offDiagVal}
<b>E3722</b>	MTX_ERR_22	Package {pkgModelName}: The {Capacitance} Matrix has off-diagonal element {offDiagVal} at row {rowNum} col {colNum} which is positive



<b>E3800</b>	MSPEC_ERR_0	( line {lineNum} ) - Model Specification: Already Defined for this model
<b>B3801</b>	MSPEC_ERR_1	Unable to Allocate Memory: {sourceFile} {sourceLinenum}  <i>The code failed to allocate memory</i>
<b>B3802</b>	MSPEC_ERR_2	Should Not Be Here: {sourceFile},{sourceLinenum}  <i>The code has a bug</i>
<b>B3803</b>	MSPEC_ERR_3	Unable to Parse {subparam}: {sourceFile} {sourceLinenum}  <i>A generic error message which indicates that a parsing error related to</i>
<b>E3804</b>	MSPEC_ERR_4	( line {lineNum} ) - Incorrect Number of Line Items ( {numberOfItemsFound} ) For {paramName}: Expecting {numberOfItemsExpected}  <i>The sub parameter should have had items on the keyword line but only number of data items were found</i>
<b>W3805</b>	MSPEC_ERR_5	( line {lineNum} ) - {subparam} should not be specified for model type {modelType}  <i>Indicates an illegal combination of Model Spec and the of the associated model. Vinl; Vinh; Vinl+; Vinl-; Vinh+ and Vinh- should be specified with model types which are input or I/O; S_overshoot_high; S_overshoot_low; D_overshoot_high; D_overshoot_low and D_overshoot_time should not be specified for Series and Series_switch; Pulse_high; Pulse_low and Pulse_time should be specified ith model types which are input or I/O; Vref; Rref; Cref; Vmeas; Vref_rising; Rref_rising; Cref_rising; Vmeas_rising; Vref_falling; Rref_falling; Cref_falling and Vmeas_falling should not be specified with Input; Input_ECL; Terminator; Series and Series_switch model types; Rref_diff and Cref_diff should be specified with Input_diff; I/O_diff; Output_diff and 3-state_diff.</i>
<b>E3806</b>	MSPEC_ERR_6	( line {lineNum} ) - Unknown Line Among Model Spec Data  <i>A line was found in the [Model Spec] section wich was not a valid line</i>
<b>E3807</b>	MSPEC_ERR_7	( line {lineNum} ) - {subparam} Already Defined For Model '{modelName}'  <i>The sub parameter is defined more than once in the [Model Spec] section of model</i>
<b>E3808</b>	MSPEC_ERR_8	( line {lineNum} ) - 'NA' not allowed for Typical value  <i>The typical value in a Range cannot be NA</i>
<b>W3809</b>	MSPEC_ERR_9	All {lineNum} Hystereis Thresholds should be specified for Model Spec defined on line {modelSpecLinenum}

*Not all hysteresis thresholds (Vinl+; Vinl-; Vinh+; Vinh-) were defined in the [Model Spec] section which was defined on line*

<b>W3810</b>	MSPEC_ERR_10	{subparam} is greater than zero for Model Spec defined on line {modelSpecLinenum}  <i>[UNUSED]</i>
<b>W3811</b>	MSPEC_ERR_11	{subparam} is less than zero for Model Spec defined on line {modelSpecLinenum}  <i>[UNUSED]</i>
<b>E3812</b>	MSPEC_ERR_12	{subparam1} requires {subparam2} to be specified for Model Spec defined on line {lineNum}  <i>A generic error message which indicates that must be specified when is sepcified for [Model Spec] defined on . D_overshoot_low requires S_overshoot_low and D_overshoot_time; D_overshoot_high requires S_overshoot_high and D_overshoot_time; Pulse_low requires Pulse_time and Thresholds or Hysteresis Thresholds; Pulse_high requires Pulse_time and Thresholds or Hysteresis Thresholds.</i>
<b>E3813</b>	MSPEC_ERR_13	{subparam1} must be specified when {subparam2} is specified for [Model Spec] defined on line {modelSpecLinenum}  <i>A generic error message which indicates that must be specified when is specified for [Model Spec] defined on . D_overshoot_area_h requires D_overshoot_ampl_h and D_overshoot_area_l requires D_overshoot_ampl_l.</i>
<b>W3814</b>	MSPEC_ERR_14	orphan {subparam} found for Model Spec defined on line {modelSpecLinenum}  <i>A lone was specified for [Model Spec] defined on without other associated subparameters. Pulse_time was specified without Pulse_high or Pulse_low; or D_overshoot_time was specified without D_overshoot_high or D_overshoot_low</i>
<b>E3815</b>	MSPEC_ERR_15	{subparam1} must be specified when {subparam2} is specified  <i>A generic error which indicates that must also be specified when is specified in a [Model Spec] section. Vmeas_rising requires Vmeas_falling and vice versa; Vref_rising requires Vref_falling and vice versa; Rref_rising requires Rref_falling and vice versa; Cref_rising requires Cref_falling and vice versa</i>
<b>E3816</b>	MSPEC_ERR_16	{subparam1} must not be specified when {subparam2} is specified  <i>A generic error which indicates that must not be specified when is specified in a [Model Spec] section. Vmeas should not be specified when Vmeas_rising/falling are specified; Rref should not be specified when Rref_rising/falling are specified; Vref should not be specified when Vref_rising/falling are specified; Cref should not be specified when Cref_rising/falling are specified.</i>
<b>W3817</b>	MSPEC_ERR_17	{subparam1}({rangeType1}) is not less than {subparam2}({rangeType2}) for Model Spec defined on line {lineNum}

*The should be less than for the [Model Spec] section defined on . D\_overshoot\_low should be less than S\_overshoot\_low; Pulse\_low should be less than Vinl+; Pulse\_low should be less than Vinh;*

<b>W3818</b>	MSPEC_ERR_18	{subparam1}({rangeType1}) is not greater than {subparam2}({rangeType2}) for Model Spec defined on line {lineNum}
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*The should be greater than for the [Model Spec] section defined on . D\_overshoot\_high should be greater than S\_overshoot\_high; Pulse\_high should be greater than Vinl-; Pulse\_high should be greater than Vinl*

<b>W3819</b>	MSPEC_ERR_19	{subparam1}({rangeType1}) is not less than or equal to {subparam2}({rangeType2}) for Model Spec defined on line {lineNum}
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*Unused*

<b>W3820</b>	MSPEC_ERR_20	{subparam1}({rangeType1}) is not greater than or equal to {subparam2}({rangeType2}) for Model Spec defined on line {lineNum}
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*The should not be less than for the [Model Spec] section defined on . Vinh+ should not be less than Vinh-; Vinl+ should not be less than Vinl-;*

<b>E3821</b>	MSPEC_ERR_21	Weak_R and Weak_I cannot be specified together in Model Spec
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*Both Weak\_R and Weak\_I values cannot be specified in a Model Spec*

<b>E3822</b>	MSPEC_ERR_22	(Weak_R and Weak_V) or (Weak_I and Weak_V) must be specified in Model Spec
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*Either the combination Weak\_R; Weak\_V or the combination Weak\_I; Weak\_V must be specified in a Model Spec*

<b>B3900</b>	RNG_ERR_0	Unable to Parse {text}: {sourceFile} {sourceLinenum}
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*A generic error message which indicates that a parsing error related to*

<b>E3901</b>	RNG_ERR_1	( line {lineNum} ) - No {minimum maximum} Value Was Provided for {subparam}
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<b>E3902</b>	RNG_ERR_2	( line {lineNum} ) - Incorrect Number of Line Items ({numberOfItemsFound}) For {paramName}: Expecting {numberOfItemsExpected}
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*The sub parameter should have had items on the keyword line but only number of data items were found*

<b>W3903</b>	RNG_ERR_3	( line {lineNum} ) - Typ value is not in between Min and Max
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<b>B3904</b>	RNG_ERR_4	Unable to Allocate Memory: {sourceFile} {sourceLinenum}
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*The code failed to allocate memory*

#### 4.9 MESSAGE CODES 4000 TO 4499

<b>Code</b>	<b>Symbol</b>	<b>Message/Comments</b>
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<b>B4000</b>	MSEL_ERR_0	{sourceFile}:{sourceLinenum}:MSEL_Init unable to get IBIS?
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*Program data structures are corrupt in program file*

<b>E4001</b>	MSEL_ERR_1	( line {lineNum} ) - Orphan Model Selector keyword.
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*An unexpected [Model Selector] section was found*

<b>E4002</b>	MSEL_ERR_2	( line {lineNum} ) - Orphan Data Line.
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*A [Model Selector] related data line was found outside of a [Model Selector] section*

<b>B4003</b>	MSEL_ERR_3	{sourceFile}:{sourceLinenum}:Illegal keyword.
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*Program data structures are corrupt in program file*

<b>B4004</b>	MSEL_ERR_4	{sourceFile}:{sourceLinenum}:Illegal line type received.
--------------	------------	--

*Program data structures are corrupt in program file*

<b>E4005</b>	MSEL_ERR_5	Model Selector: '{modelSelectorName}' has no models defined
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*The [Model Selector] section did not have any models defined in it*

<b>W4006</b>	MSEL_ERR_6	Model Selector: '{modelSelectorName}' has only one model defined
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*The [Model Selector] section has only one model defined in it*

<b>E4007</b>	MSEL_ERR_7	( line {lineNum} ) - Unable to create new MSEL.
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*The code failed to allocate the required memory*

<b>E4008</b>	MSEL_ERR_8	( line {lineNum} ) - Unable to create new MSEL Model.
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*The code failed to allocate the required memory*

<b>E4009</b>	MSEL_ERR_9	Unable to Save Model Selector Name
--------------	------------	------------------------------------

*The code failed to allocate the required memory*

<b>E4010</b>	MSEL_ERR_10	( line {lineNum} ) - 'Model Selector' Keyword Missing name
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*A [Model Selector] section should have a name defined on the keyword line*

<b>E4011</b>	MSEL_ERR_11	( line {lineNum} ) - Incorrect Number of Line Items ( {numberOfItemsFound} ) For Keyword {keyword}: Expecting {numberOfItemsExpected}
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*The keyword should have had items on the keyword line but only number of data items were found*

<b>E4012</b>	MSEL_ERR_12	( line {lineNum} ) - Model Selector Name Over {maxChars} Characters Long
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<b>E4013</b>	MSEL_ERR_13	"( line {lineNum} ) - Invalid Model SelectorName ( \"{modelSelectorName}\" ), Reserved Word."
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<b>E4014</b>	MSEL_ERR_14	"( line {lineNum} ) - Model Selector Name Previously Defined ( \"{modelSelectorName}\" )"
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*A [Model Selector] section with name should be defined at most once*

<b>B4015</b>	MSEL_ERR_15	Unable to Parse {text}: {sourceFile} {sourceLinenum}
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*A generic error message which indicates that a parsing error related to*

<b>E4016</b>	MSEL_ERR_16	( line {lineNum} ) - 'Model Selector' Keyword: Missing model name
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<b>E4017</b>	MSEL_ERR_17	( line {lineNum} ) - Model Name Over {maxChars} Characters Long
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*[UNUSED]*

<b>E4018</b>	MSEL_ERR_18	"( line {lineNum} ) - Invalid Model Name ( \"{NA}\" )"
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<b>E4019</b>	MSEL_ERR_19	( line {lineNum} ) - Model Descriptor string '{descriptor}' is too long, truncating to {length} characters.
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<b>B4020</b>	MSEL_ERR_20	{sourceFile}:{sourceLinenum}:Unable to get IBIS?  <i>Program data structures are corrupt in program file</i>
<b>E4021</b>	MSEL_ERR_21	'{modelSelectorName}' is the name of a Model and a Model Selector  <i>The Model Selector name is also the name of a Model in the file</i>
<b>W4022</b>	MSEL_ERR_22	Model {modelName} in Model Selector {modelSelectorName} is Differential, but this Model Selector contains Single Ended models too
<b>W4023</b>	MSEL_ERR_23	Model {modelName} in Model Selector {modelSelectorName} is Single Ended, but this Model Selector contains Differential models too
<b>E4024</b>	MSEL_ERR_24	Model '{modelName}' in Model Selector '{modelSelectorName}' is not defined in the file  <i>The model referred to in the [Model Selector] section is not defined in the ibis file</i>
<b>E4025</b>	MSEL_ERR_25	( line {lineNum} ) - Model '{modelName}'. already used in this Model Selector  <i>A model name can be referred to at most once in a [Model Selector] section</i>
<b>W4026</b>	MSEL_ERR_26	Model Selector '{modelSelectorName}' is not associated with any Pin or Series Pin Mapping  <i>The [Model Selector] has not been associated with any Pin or Series Pin Mapping ( ie; it is unreferenced in the ibis file)</i>
<b>E4100</b>	IBIS_ERR_0	Unable to create IBIS.  <i>Internal memory allocation error</i>
<b>E4101</b>	IBIS_ERR_1	Required keyword 'Component' not found.  <i>The [Component] keyword is mandatory in an IBIS file</i>
<b>E4200</b>	DRVSH_ERR_0	( line {lineNum} ) - Driver Schedule: Already Defined for this model  <i>More than one [Driver Schedule] section should not be defined for a model</i>
<b>B4201</b>	DRVSH_ERR_1	Unable to Allocate Memory: {sourceFile} {sourceLinenum}  <i>The code failed to allocate memory</i>

<b>B4202</b>	DRVSH_ERR_2	Should Not Be Here: {sourceFile},{sourceLinenum}
		<i>The code has a bug</i>
<b>B4203</b>	DRVSH_ERR_3	Unable to Parse {text}: {sourceFile} {sourceLinenum}
		<i>A generic error message which indicates that a parsing error related to</i>
<b>E4204</b>	DRVSH_ERR_4	( line {lineNum} ) - Incorrect Number of Line Items ( {numberOfItemsFound} ) For {paramName}: Expecting {numberOfItemsExpected}
		<i>The sub parameter should have had items on the keyword line but only number of data items were found</i>
<b>E4205</b>	DRVSH_ERR_5	Model '{modelName}': The [Driver_Schedule] has no models defined
		<i>The [Driver Schedule] section for model is empty</i>
<b>W4206</b>	DRVSH_ERR_6	Model '{model}': The [Driver_Schedule] has only one model defined
		<i>The [Driver Schedule] section for model refers to only one model</i>
<b>E4207</b>	DRVSH_ERR_7	Model {refModel} used in the Driver Schedule of Model {modelName} is not defined
		<i>The model referred to in the [Driver Schdule] section of model is not defined</i>
<b>E4208</b>	DRVSH_ERR_8	Model {refModel} used in the Driver Schedule of Model {modelName} cannot itself have a Driver Schedule
		<i>The model referred to in the [Driver Schdule] section of model cannot itself have an associated driver schedule</i>
<b>E4209</b>	DRVSH_ERR_9	Model {refModel} used in the Driver Schedule of Model {modelName} should be an output model
		<i>The model referred to in the [Driver Schdule] section of model should be an output model type</i>
<b>E4210</b>	DRVSH_ERR_10	Unable to Set Model Name in Driver Schedule
		<i>Internal memory allocation error</i>
<b>E4211</b>	DRVSH_ERR_11	( line {lineNum} ) - 'Driver Schedule' Missing model Name
<b>E4212</b>	DRVSH_ERR_12	( line {lineNum} ) - Model Name Over {maxChars} Characters Long

<b>E4213</b>	DRVSH_ERR_13	"( line {lineNum} ) - Model Name in Driver Schedule is the same as enclosing Model ({modelName})"
<b>E4214</b>	DRVSH_ERR_14	"( line {lineNum} ) - Invalid Model Name in Driver Schedule ({modelName}), Reserved Word."  <i>A reserved word was used as a model name in a [Driver Schedule] section</i>
<b>E4215</b>	DRVSH_ERR_15	"( line {lineNum} ) - Model Name ({modelName}) previously used in this Driver Schedule"  <i>The model has been referred to more than once in a [Driver Schedue] section</i>
<b>E4216</b>	DRVSH_ERR_16	( line {lineNum} ) - Unable to create new Driver Schedule Model.  <i>Internal memory allocation error</i>
<b>B4300</b>	EBDMDL_ERR_0	{sourceFile}:{sourceLinenum}:EBDMDL_Init unable to get IBIS?  <i>Program data structures are corrupt in program file</i>
<b>E4301</b>	EBDMDL_ERR_1	( line {lineNum} ) - Orphan Electrical Board Description keyword.
<b>E4302</b>	EBDMDL_ERR_2	( line {lineNum} ) - Orphan Data Line.
<b>E4303</b>	EBDMDL_ERR_3	( line {lineNum} ) - Detected previous unterminated Forks
<b>B4304</b>	EBDMDL_ERR_4	{sourceFile}:{sourceLinenum}:Illegal keyword.  <i>Program data structures are corrupt in program file</i>
<b>B4305</b>	EBDMDL_ERR_5	{sourceFile}:{sourceLinenum}:Illegal line type received.  <i>Program data structures are corrupt in program file</i>
<b>E4306</b>	EBDMDL_ERR_6	Board Description '{ebdModel}' is duplicated within the .ebd file.



<b>E4307</b>	EBDMDL_ERR_7	( line {lineNum} ) - Unable to create new EBDMDL.  <i>Memory allocation for a new EBD model failed</i>
<b>E4308</b>	EBDMDL_ERR_8	Ebd Model keyword 'Begin_Board_Description' not found or blank.
<b>E4309</b>	EBDMDL_ERR_9	( line {lineNum} ) - Duplicate [Number of Pins] keyword  <i>There should only be a single [Number of Pins] section in an EBD model</i>
<b>E4310</b>	EBDMDL_ERR_10	( line {lineNum} ) - Blank Number_of_Pins value.  <i>The number of pins was not specified with the [Number of Pins] keyword</i>
<b>E4311</b>	EBDMDL_ERR_11	( line {lineNum} ) - Duplicate Number_of_Pins keyword.  <i>More than one [Number of Pins] keyword was found</i>
<b>W4312</b>	EBDMDL_ERR_12	( line {lineNum} ) - Suspicious Number_of_Pins value.  <i>The number of pins value has a partially incorrect format</i>
<b>E4313</b>	EBDMDL_ERR_13	( line {lineNum} ) - Bad Number_of_Pins value.  <i>The number of pins value could not be parsed</i>
<b>E4314</b>	EBDMDL_ERR_14	( line {lineNum} ) - Number_of_Pins = 0.  <i>The number of pins was specified as 0</i>
<b>E4315</b>	EBDMDL_ERR_15	Number_of_Pins keyword not found or value bad for Ebd Model '{ebdModel}'.
<b>E4316</b>	EBDMDL_ERR_16	( line {lineNum} ) - No Pin_name found .
<b>E4317</b>	EBDMDL_ERR_17	( line {lineNum} ) - Pin name string too long. will be truncated.

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<b>E4318</b>	EBDMDL_ERR_18	( line {lineNum} ) - Number of Pins is zero,unable to add Pin Number.
<b>E4319</b>	EBDMDL_ERR_19	( line {lineNum} ) - Unable to allocate Pin_Name array.  <i>The code failed to allocate the required memory</i>
<b>E4320</b>	EBDMDL_ERR_20	( line {lineNum} ) - More Pin Numbers names than Number of pins.
<b>E4321</b>	EBDMDL_ERR_21	( line {lineNum} ) - Unable to allocate PIN.  <i>The code failed to allocate the required memory</i>
<b>E4322</b>	EBDMDL_ERR_22	( line {lineNum} ) - Duplicate Pin .
<b>E4323</b>	EBDMDL_ERR_23	( line {lineNum} ) - No signal_name found
<b>E4324</b>	EBDMDL_ERR_24	( line {lineNum} ) - signal_name too long. will be truncated.
<b>E4325</b>	EBDMDL_ERR_25	( line {lineNum} ) - Unexpected data after signal_name.
<b>E4326</b>	EBDMDL_ERR_26	Required keyword Pin_List not found.
<b>E4327</b>	EBDMDL_ERR_27	No Pin Numbers names found.
<b>E4328</b>	EBDMDL_ERR_28	Pin '{pinName}' was not referenced on any Electrical Path
<b>W4329</b>	EBDMDL_ERR_29	Pin '{pinName}' was referenced on Electrical Paths but is implicitly connected to a power or a gnd plane

<b>E4330</b>	EBDMDL_ERR_30	Pin '{pin}' was referenced {count} times on Electrical Paths
<b>E4331</b>	EBDMDL_ERR_31	Number of Pins not the same as count of Pin Numbers names found .
<b>E4332</b>	EBDMDL_ERR_32	Required End_Board_Description keyword not found.
<b>E4333</b>	EBDMDL_ERR_33	Keyword '{keyword}' not found or blank for Ebd Model '{ebdModel}'.
<b>E4334</b>	EBDMDL_ERR_34	( line {lineNum} ) - Duplicate '{keyword}' keyword found.
<b>E4335</b>	EBDMDL_ERR_35	( line {lineNum} ) - Extraneous data on '{keyword}' line.
<b>E4336</b>	EBDMDL_ERR_36	( line {lineNum} ) - Duplicate [Pin List] keyword found.
<b>E4337</b>	EBDMDL_ERR_37	( line {lineNum} ) - Unable to find 'signal_name' after [Pin List] keyword.
<b>E4338</b>	EBDMDL_ERR_38	( line {lineNum} ) - 'signal_name' column header not found.
<b>E4339</b>	EBDMDL_ERR_39	( line {lineNum} ) - Unrecognized data after 'signal_name'
<b>E4340</b>	EBDMDL_ERR_40	( line {lineNum} ) - Unexpected '=' found

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<b>E4341</b>	EBDMDL_ERR_41	( line {lineNum} ) - Unexpected '/' found
<b>E4342</b>	EBDMDL_ERR_42	( line {lineNum} ) - Detected the start of an orphan R/L/C section
<b>B4343</b>	EBDMDL_ERR_43	Internal program bug in {sourceFile} at {sourceLinenum}  <i>[UNUSED]</i>
<b>E4344</b>	EBDMDL_ERR_44	( line {lineNum} ) - Detected the start of an orphan 'NC'
<b>E4345</b>	EBDMDL_ERR_45	( line {lineNum} ) - Detected the start of an orphan 'Fork'
<b>E4346</b>	EBDMDL_ERR_46	( line {lineNum} ) - Detected the start of an orphan 'Endfork'
<b>E4347</b>	EBDMDL_ERR_47	( line {lineNum} ) - Empty Fork/Endfork found
<b>E4348</b>	EBDMDL_ERR_48	( line {lineNum} ) - Endfork found without enclosing Fork
<b>E4349</b>	EBDMDL_ERR_49	( line {lineNum} ) - No Pin Name found after Pin sub param
<b>E4350</b>	EBDMDL_ERR_50	( line {lineNum} ) - No ref_designator.pin found after Node sub param
<b>E4351</b>	EBDMDL_ERR_51	( line {lineNum} ) - Detected an orphan 'Node' sub param
<b>E4352</b>	EBDMDL_ERR_52	( line {lineNum} ) - Unknown token found: '{text}'

<b>E4353</b>	EBDMDL_ERR_53	( line {lineNum} ) - Unable to create new EBDPATH.  <i>The code failed to allocate the required memory</i>
<b>E4354</b>	EBDMDL_ERR_54	( line {lineNum} ) - Duplicate Path_Description '{path}'
<b>E4355</b>	EBDMDL_ERR_55	EBD Model '{ebdModel}' has no paths defined
<b>E4356</b>	EBDMDL_ERR_56	Path Descriptor '{path}' has no segments
<b>E4357</b>	EBDMDL_ERR_57	Path {path} or a branch does not terminate after NC
<b>E4358</b>	EBDMDL_ERR_58	Pin '{pin}' used in Path '{path}' not defined
<b>E4359</b>	EBDMDL_ERR_59	Reference Designator '{refdes}' used in Path '{path}' not defined
<b>E4360</b>	EBDMDL_ERR_60	( line {lineNum} ) - Could not allocate path element  <i>The code failed to allocate the required memory</i>
<b>E4361</b>	EBDMDL_ERR_61	( line {lineNum} ) - Pin_name string too long. will be truncated.
<b>W4362</b>	EBDMDL_ERR_62	( line {lineNum} ) - Found a Pin Name '{pinName}' containing '/'. Possible syntax error
<b>W4363</b>	EBDMDL_ERR_63	( line {lineNum} ) - Found a Pin Name '{pinName}' containing '='. Possible syntax error

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<b>W4364</b>	EBDMDL_ERR_64	( line {lineNum} ) - Found a Pin Name '{pinName}'. Possible syntax error
<b>E4365</b>	EBDMDL_ERR_65	( line {lineNum} ) - Cannot allocate path element  <i>The code failed to allocate the required memory</i>
<b>E4366</b>	EBDMDL_ERR_66	( line {lineNum} ) - Cannot allocate path element pin  <i>The code failed to allocate the required memory</i>
<b>E4367</b>	EBDMDL_ERR_67	( line {lineNum} ) - Cannot allocate path element node  <i>The code failed to allocate the required memory</i>
<b>E4368</b>	EBDMDL_ERR_68	( line {lineNum} ) - Invalid Node specified. Missing ' '
<b>E4369</b>	EBDMDL_ERR_69	( line {lineNum} ) - Node Reference designator string too long. will be truncated.
<b>E4370</b>	EBDMDL_ERR_70	( line {lineNum} ) - Node Pin name string too long. will be truncated.
<b>W4371</b>	EBDMDL_ERR_71	( line {lineNum} ) - Found a Node '{nodeName}' containing '='. Possible syntax error
<b>W4372</b>	EBDMDL_ERR_72	( line {lineNum} ) - Found a Node '{nodeName}' containing '/'. Possible syntax error
<b>W4373</b>	EBDMDL_ERR_73	( line {lineNum} ) - Found a Node '{nodeName}'. Possible syntax error
<b>E4374</b>	EBDMDL_ERR_74	( line {lineNum} ) - Cannot allocate reference designator  <i>The code failed to allocate the required memory</i>
<b>E4375</b>	EBDMDL_ERR_75	( line {lineNum} ) - Reference Designator name '{refdes}' too long. Will be truncated

<b>E4376</b>	EBDMDL_ERR_76	( line {lineNum} ) - Duplicate Reference Designator '{refdes}'
<b>E4377</b>	EBDMDL_ERR_77	( line {lineNum} ) - No Reference Designator name found
<b>E4378</b>	EBDMDL_ERR_78	( line {lineNum} ) - File name '{fileName}' too long. Will be truncated
<b>E4379</b>	EBDMDL_ERR_79	( line {lineNum} ) - No file name found
<b>E4380</b>	EBDMDL_ERR_80	( line {lineNum} ) - Component name '{compName}' too long. Will be truncated
<b>E4381</b>	EBDMDL_ERR_81	Reference Designator '{refdes}' refers to the Component '{compName}' itself being defined
<b>E4382</b>	EBDMDL_ERR_82	( line {lineNum} ) - Unknown data after component name
<b>E4383</b>	EBDMDL_ERR_83	( line {lineNum} ) - No Component name found
<b>E4384</b>	EBDMDL_ERR_84	( line {lineNum} ) - Invalid file name '{fileName}'. It has no extension
<b>E4385</b>	EBDMDL_ERR_85	( line {lineNum} ) - Unknown file extension '{extension}'. Should be '.ibs' or '.ebd'
<b>E4386</b>	EBDMDL_ERR_86	( line {lineNum} ) - File_name '{fileName}' contains an upper case character '{character}'.

<b>E4387</b>	EBDMDL_ERR_87	File_name '{fileName}' contains a character '{character}' that is illegal for DOS.
<b>E4388</b>	EBDMDL_ERR_88	( line {lineNum} ) - File_name '{fileName}' contains more than one period.
<b>E4389</b>	EBDMDL_ERR_89	Pin '{pin}' not found on Component '{compName}' in file '{fileName}'
<b>E4390</b>	EBDMDL_ERR_90	Component '{component}' not found in file '{fileName}'
<b>E4391</b>	EBDMDL_ERR_91	Unable to allocate PINREF.  <i>The code failed to allocate the required memory</i>
<b>E4392</b>	EBDMDL_ERR_92	Unable to allocate FILEREF.  <i>The code failed to allocate the required memory</i>
<b>E4393</b>	EBDMDL_ERR_93	Length of Pin '{pin}' referenced for Component '{compName}' is too long
<b>E4394</b>	EBDMDL_ERR_94	Ebd file '{ebdFilename}' recursively references the component {compName} in the calling Ebd file '{calledFilename}'

#### 4.10 MESSAGE CODES 4500 TO 4999

<b>Code</b>	<b>Symbol</b>	<b>Message/Comments</b>
<b>B4500</b>	DLY_ERR_0	Unable to Parse {text}: {sourceFile} {sourceLinenum}  <i>A generic error message which indicates that a parsing error related to missing values</i>
<b>E4501</b>	DLY_ERR_1	( line {lineNum} ) - No {Rise Fall_on off_dly} Value Was Provided for {subparam}



<b>E4502</b>	DLY_ERR_2	( line {lineNum} ) - Incorrect Number of Line Items ( {numberOfItemsFound} ) For {paramName}: Expecting {numberOfItemsExpected}
		<i>The sub parameter should have had items on the keyword line but only number of data items were found</i>
<b>B4503</b>	DLY_ERR_3	Unable to Allocate Memory: {sourceFile} {sourceLinenum}
		<i>The code failed to allocate memory</i>
<b>E4504</b>	DLY_ERR_4	( line {lineNum} ) - At least two delays must be specified
		<i>At least two numeric delays should be specified in a data line in a [Driver Schedule] section</i>
<b>E4505</b>	DLY_ERR_5	( line {lineNum} ) - {delayname1} and {delayname2} cannot be specified together
		<i>delay and delay cannot be specified together in a data line in a [Driver Schedule] section (Rise_on_dly with Fall_off_dly and Rise_off_dly with Fall_on_dly)</i>
<b>E4506</b>	DLY_ERR_6	( line {lineNum} ) - {delayname} is less than zero
		<i>The delay is less than 0 in a [Driver Schedule] section</i>
<b>E4507</b>	DLY_ERR_7	( line {lineNum} ) - [Driver Schedule] requires {delayname1} < or > {delayname2}
		<i>Delay (Rise_on_dly) should not be equal to Delay (Rise_off_dly)</i>
<b>E4508</b>	DLY_ERR_8	( line {lineNum} ) - [Driver Schedule] requires {delayname1} < or > {delayname2}
		<i>Delay (Fall_on_dly) should not be equal to Delay (Fall_off_dly)</i>
<b>E4509</b>	DLY_ERR_9	( line {lineNum} ) - [Driver Schedule] requires ( {""Rise_on_dly""} < {""Rise_off_dly""} ) AND ( {""Fall_on_dly""} > {""Fall_off_dly""} ) OR ( {""Rise_on_dly""} > {""Rise_off_dly""} ) and ( {""Fall_on_dly""} < {""Fall_off_dly""} )
		<i>(Rise_on_dly should be less than Rise_off_dly and Fall_on_dly should be greater than Fall_off_dly) OR (Rise_on_dly should be greater than Rise_off_dly and Fall_on_dly should be less than Fall_off_dly)</i>
<b>E4600</b>	ALGMOD_ERR_0	Expected a branch but found '{child}' as a leaf of '{parent}'
		<i>[UNUSED]</i>
<b>E4601</b>	ALGMOD_ERR_1	( line {lineNum} ) - Algorithmic Model: Already Defined for this model
		<i>An [Algorithmic Model] section should be defined at most once for a model</i>

<b>B4602</b>	ALGMOD_ERR_2	Unable to Allocate Memory: {sourceFile} {sourceLinenum}
		<i>The code failed to allocate memory</i>
<b>B4603</b>	ALGMOD_ERR_3	Should Not Be Here: {sourceFile},{sourceLinenum}
		<i>The code has a bug</i>
<b>B4604</b>	ALGMOD_ERR_4	Unable to Parse {text}: {sourceFile} {sourceLinenum}
		<i>A generic error message which indicates that a parsing error related to</i>
<b>E4605</b>	ALGMOD_ERR_5	( line {lineNum} ) - Incorrect Number of Line Items ( {numberOfItemsFound} ) For {paramName}: Expecting {numberOfItemsExpected}
		<i>The sub parameter should have had items on the keyword line but only number of data items were found</i>
<b>E4606</b>	ALGMOD_ERR_6	The Number of Bits should be 32 or 64 for Platform {platform} and Compiler {compiler} for Algorithmic Model defined on line {lineNum}
		<i>On the __bits line for the [Algorithmic Model] section defined on the bits should be 32 or 64</i>
<b>E4607</b>	ALGMOD_ERR_7	Duplicate Sub-Parameter: Platform {platform} Compiler {compiler} Bits {bits} for Algorithmic Model defined on line {lineNum}
		<i>A duplicate __ line for the [Algorithmic Model] defined on line has been found</i>
<b>B4608</b>	ALGMOD_ERR_8	Unable to Parse {subparam}: {sourceFile} {sourceLinenum}
		<i>A generic error message which indicates that a parsing error related to</i>
<b>E4609</b>	ALGMOD_ERR_9	( line {lineNum} ) - Unknown Line in Algorithmic Model
		<i>A line was found in the [Algorithmic Model] section wich was not a valid line</i>
<b>E4610</b>	ALGMOD_ERR_10	( line {lineNum} ) - Could not parse Platform,Compiler,Bits for [Algorithmic Model] Executable Sub-parameter
		<i>There was an error parsing the Platform_Compiler_Bits line</i>
<b>E4611</b>	ALGMOD_ERR_11	"( line {lineNum} ) - ""Platform name too long {platform}"""
		<i>The string is longer than 44 characters</i>
<b>E4612</b>	ALGMOD_ERR_12	"( line {lineNum} ) - ""Compiler name too long {compiler}"""

*The string is longer than 44 characters*

<b>E4613</b>	ALGMOD_ERR_13	"( line {lineNum} ) - ""Could not parse the Bits in {platform_bits_compiler} for [Algorithmic Model] Executable Sub-parameter"""
		<i>Expected an integer for the number of bits in string</i>
<b>E4614</b>	ALGMOD_ERR_14	Filename too long {fileName}
		<i>The File_name subparameter string is longer than 44 characters</i>
<b>E4615</b>	ALGMOD_ERR_15	Empty [Algorithmic Model] defined for Model {modelName}
		<i>There was no data defined in an [Algorithmic Model] section for model</i>
<b>E4616</b>	ALGMOD_ERR_16	Code file {fileName} not found. It was defined in [Algorithmic Model] for Model {modelName}
		<i>The code file associated with the[Algorithmic Model] section of model was not found</i>
<b>E4617</b>	ALGMOD_ERR_17	AMI Parameter file {fileName} should have '.ami' extension.
		<i>The Parameter file for the [Algorithmic Model] section defined for model should have an '.ami' extension</i>
<b>E4618</b>	ALGMOD_ERR_18	AMI parameter file {fileName} not found. It was defined in [Algorithmic Model] for Model {modelName}
		<i>The parameter file associated with the[Algorithmic Model] section of model was not found</i>
<b>E4619</b>	ALGMOD_ERR_19	The Parameter file has mismatched parenthesis
		<i>The number of open parenthesis '(' should be equal to the number of close parenthesis ')'</i>
<b>E4620</b>	ALGMOD_ERR_20	The AMI parameter file should start with a parenthesis
		<i>The first character in a parameter file should be an open parenthesis '('</i>
<b>B4621</b>	ALGMOD_ERR_21	Internal error while parsing Parameter file
		<i>There is a bug in the code which parses AMI parameter file</i>
<b>E4622</b>	ALGMOD_ERR_22	No Reserved_Parameters found
		<i>No (Reserved_Parameters) section was found</i>
<b>E4623</b>	ALGMOD_ERR_23	Unknown branch {badSection} found

*An unknown section was found*

<b>E4624</b>	ALGMOD_ERR_24	Unknown parameter {paramName} found as a child of {section}
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*An unknown parameter was found in section*

<b>E4625</b>	ALGMOD_ERR_25	{paramName} parameter is mandatory
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*Parameter is mandatory*

<b>E4626</b>	ALGMOD_ERR_26	{subparam}: Illegal format for {paramName}
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*The format of (Usage; Default; Type) of parameter is incorrect*

<b>E4627</b>	ALGMOD_ERR_27	Illegal {subparam} value {badValue} specified for {paramName}
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*The value of (Usage; Default;Type) of parameter is illegal*

<b>E4628</b>	ALGMOD_ERR_28	Found a branch {branchName} expecting a leaf for {paramName}
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*A list was expected for param but a branch was found instead*

<b>E4629</b>	ALGMOD_ERR_29	Unexpected parameter {subparam} specified for {paramName}
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*[UNUSED]*

<b>E4630</b>	ALGMOD_ERR_30	{subparam} is mandatory for {paramName}
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*(Usage; Type or Default) is mandatory for parameter*

<b>U4631</b>	ALGMOD_ERR_31	{subparam1} or {subparam2} should be specified for Parameter {keyword}
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*[UNUSED]*

<b>E4632</b>	ALGMOD_ERR_32	{subparam}: Illegal Format for {paramName}. Expected {expected} number(s)
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*The values for of parameter are incorrect. number of numeric values were expected*

<b>E4633</b>	ALGMOD_ERR_33	{subparam}: Illegal Format for {paramName}. Expected {expected} integer(s)
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*[UNUSED]*

<b>E4634</b>	ALGMOD_ERR_34	Invalid syntax of branch or leaf. At least 2 elements expected in a list
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*Any list should have at least 2 elements*

<b>E4635</b>	ALGMOD_ERR_35	Too few nodes in branches or leaves
		<i>There was a syntax error during parsing</i>
<b>E4636</b>	ALGMOD_ERR_36	Algorithmic Model is not allowed for model {modelName} which is of type {modelType}
		<i>Model is of type which is either Terminator; Series or Series_switch for which Algorithmic Model cannot be defined</i>
<b>E4637</b>	ALGMOD_ERR_37	AMI_Version should be the first parameter under Reserved_Parameters
		<i>If AMI_Version is specified; it should be the first parameter defined under the Reserved_Parameters section</i>
<b>E4638</b>	ALGMOD_ERR_38	AMI_Version {amiVersion} is not valid
		<i>An invalid AMI Version was specified</i>
<b>E4639</b>	ALGMOD_ERR_39	{paramName}: Both Format/Value and Default cannot be specified
		<i>For AMI parameter a Format of type Value and a Default were specified</i>
<b>E4640</b>	ALGMOD_ERR_40	{paramName}: {subparam} defined multiple times
		<i>For AMI parameter the sub parameter was defined multiple times</i>
<b>E4641</b>	ALGMOD_ERR_41	{paramName}: Either Format/Value or Default should be specified
		<i>For AMI Parameter either a Format of type Value or a Default value must be specified</i>
<b>E4642</b>	ALGMOD_ERR_42	{paramName}: defined multiple times
		<i>The AMI parameter was defined multiple times</i>
<b>E4643</b>	ALGMOD_ERR_43	Reserved_Parameters should precede Model_Specific
		<i>The Reserved_Parameters section should be defined before the Model_Specific section in an AMI file</i>
<b>E4644</b>	ALGMOD_ERR_44	{paramName}: Unexpected leaf {leafName} found
		<i>An unexpected leaf was found under AMI parameter</i>
<b>E4645</b>	ALGMOD_ERR_45	Illegal format for {format} for param {paramName}. Expected {count} {type}
		<i>The Format specified for parameter was found to be invalid. A total of tokens of type were expected.</i>

<b>E4646</b>	ALGMOD_ERR_46	Use_Init_Output is only allowed for AMI version 5.0
		<i>The Use_Init_Output section is not allowed for AMI Versions greater than 5.0</i>
<b>E4647</b>	ALGMOD_ERR_47	{paramName} defined multiple times in Reserved_Parameters
		<i>The parameter was defined multiple times under Reserved_Parameters section</i>
<b>E4648</b>	ALGMOD_ERR_48	{paramName}: The {format} value {value} for Type {type} is invalid
		<i>A generic message which indicates that for AMI Parameter for Format subparam the value specified for Type is invalid</i>
<b>E4649</b>	ALGMOD_ERR_49	{subparam} is not allowed for {paramName}
		<i>A generic message which indicates that the subparameter cannot be specified for AMI Parameter</i>
<b>E4650</b>	ALGMOD_ERR_50	{paramName}: {subparam1} cannot be specified when {subparam2} is specified
		<i>A generic message which indicates that for AMI Parameter ; the subparameter cannot be used in conjunction with subparameter</i>
<b>E4651</b>	ALGMOD_ERR_51	{paramName}: The number of {tableFeature1} {count1} does not match the number of {tableFeature2} {count2} in Table
		<i>A generic message which indicates that for AMI Parameter of Format Table; table feature has a count which does not match the count of table feature ; ie; number of lables; number of columns; number of types are mismatched</i>
<b>E4652</b>	ALGMOD_ERR_52	Illegal format for Labels in Format Table for param {paramName}. Expected a string
		<i>The Labels in Table definition for parameter were not found to be strings</i>
<b>E4653</b>	ALGMOD_ERR_53	Labels should be defined before data rows in Format Table for param {paramName}.
		<i>The Lables in Table definition for parameter were not defined before the rows of the table</i>
<b>E4654</b>	ALGMOD_ERR_54	{paramName}: Format Table should contain at least one row
		<i>The Table definition for parameter did not have any rows defined</i>
<b>E4655</b>	ALGMOD_ERR_55	{paramName}: Format Table does not have same number of entries in all rows
		<i>The Table definition for parameter contains rows with different number of columns</i>
<b>E4656</b>	ALGMOD_ERR_56	{paramName}: Format Table cannot contain a branch

*The Table definition for parameter was found to contain a non leaf*

<b>E4657</b>	ALGMOD_ERR_57	{paramName}: Format {format} typ value ({typValue}) is not in between min value ({minValue}) and max value ({maxValue})
		<i>[UNUSED]</i>
<b>E4658</b>	ALGMOD_ERR_58	{paramName}: Format {format} min value ({minValue}) should be less than or equal to max value ({maxValue})
		<i>[UNUSED]</i>
<b>E4659</b>	ALGMOD_ERR_59	{paramName}: Format {format} {formatPart} ({value}) cannot be negative
		<i>[UNUSED]</i>
<b>E4660</b>	ALGMOD_ERR_60	{paramName}: Default value ({default}) is not in between Format {format} min value ({minValue}) and max value ({maxValue})
		<i>[UNUSED]</i>
<b>E4661</b>	ALGMOD_ERR_61	{paramName}: Default value ({default}) does not match Format Corner typ value ({typValue}) or min value ({minValue}) or max value ({maxValue})
		<i>[UNUSED]</i>
<b>E4662</b>	ALGMOD_ERR_62	{paramName}: Default value ({default}) is not in Format List
		<i>For Format List for parameter ; the Default value must match one of the values defined in the list</i>
<b>E4663</b>	ALGMOD_ERR_63	{paramName}: Table Format requires (Type Float) or (Type UI) or (Type Integer Float Float) or (Type Integer UI Float)
		<i>For parameter ; for Format Table; the Type sub parameter can only be (Type Float) or (Type UI) or (Type Integer Float Float) or (Type Integer UI Float)</i>
<b>E4664</b>	ALGMOD_ERR_64	Error Parsing ami file. An invalid token was found when a Leaf Node was expected
		<i>A token was found when a Leaf node was expected during parsing</i>
<b>E4665</b>	ALGMOD_ERR_65	{paramName}: Invalid parameter name. Type Tap requires Parameter name to be a signed integer
		<i>The Parameter Name associated with type Tap should be a signed integer string</i>
<b>E4666</b>	ALGMOD_ERR_66	{paramName}: Duplicate sub-branch {branchName} found

*ALGMOD\_ERR\_66*

<b>W4667</b>	ALGMOD_ERR_67	{paramName}: A branch name cannot be the same as a sub-branch name
		<i>[UNUSED]</i>
<b>E4668</b>	ALGMOD_ERR_68	An unexpected token found around: {text}
		<i>There was a syntax error during parsing near string</i>
<b>E4669</b>	ALGMOD_ERR_69	Parameter '{paramname}' is not supported in AMI_Version {version}
		<i>The Parameter is not specified in AMI files with version</i>
<b>E4670</b>	ALGMOD_ERR_70	Parameter '{paramname}': The number of values in ListTip ({listtipnum}) does not match the number of values in List ({listnum})
		<i>The Parameter is of Format List but the number of entries in the List does not match the number of entries in the associated ListTip</i>
<b>E4671</b>	ALGMOD_ERR_71	Parameter '{paramname}': Duplicate value '{listipval}' found in ListTip but the corresponding values in List ('{listval1}', '{listval2}') are not the same
		<i>The Parameter is of Format List but there are two entries and which have the same associated ListTip value</i>
<b>E4672</b>	ALGMOD_ERR_72	Parameter Repeater_Type {formatordefault} can only have values 'Redriver' or 'Retimer'
		<i>The (Format or Default) value associated with AMI Parameter Repeater_Type can only be 'Redriver' or 'Retimer'</i>
<b>E4673</b>	ALGMOD_ERR_73	Parameter GetWaveExists should be true when a Repeater_Type Retimer is specified
		<i>If an AMI parameter Repeater_Type with value Retimer is specified in a parameter file; then the GetWaveExists parameter in the same file should have a value of True</i>
<b>E4674</b>	ALGMOD_ERR_74	Parameter '{paramname}' value '{paramvalue}' contains back slashes '\\'
		<i>The parameter (DLL_Path or Supporting_Files) has a value which contains a backslash '\' character</i>
<b>E4675</b>	ALGMOD_ERR_75	Parameter '{paramname}' value '{paramvalue}' ends with a slash '/'
		<i>The parameter (DLL_Path or Supporting_Files) has a value which ends with a slash '/' character</i>
<b>E4676</b>	ALGMOD_ERR_76	Parameter '{paramname}' value '{paramvalue}' is invalid



*The parameter has an invalid value*

<b>E4677</b>	ALGMOD_ERR_77	Parameter '{paramname}' row has more than 1 value: '{noofvalues}'
		<i>The number of values in the table associated with parameter (Supporting Files) is more than 1 on some row (there should be one value on each row)</i>
<b>E4678</b>	ALGMOD_ERR_78	"Parameter '{paramname}' value cannot be dot "".""
		<i>"The parameter (Supporting_Files) cannot have a value which is just a string containing a dot ("".")"</i>
<b>E4679</b>	ALGMOD_ERR_79	Parameter '{paramname}' path '{paramvalue}' not found
		<i>The parameter (Supporting_Files) specifies a path to a file which does not exist</i>
<b>E4680</b>	ALGMOD_ERR_80	Parameter '{paramname}' ListTip value is not string '{listipval}'
		<i>The parameter has an associated ListTip which has a non string value</i>
<b>E4681</b>	ALGMOD_ERR_81	"Parameter '{paramname}' ListTip value is invalid """""""
		<i>The parameter has ListTip specified in which one of the values is the empty (null) string</i>
<b>E4682</b>	ALGMOD_ERR_82	Missing Root Name
		<i>[UNUSED]</i>
<b>E4683</b>	ALGMOD_ERR_83	Referenced parameter '{parmname}' not found in file '{fileName}'. {subparam} '{subparamname}' Ignored.
		<i>[UNUSED]</i>
<b>E4684</b>	ALGMOD_ERR_84	No Reserved_Parameters or Model_Specific branches found
		<i>[UNUSED]</i>
<b>E4685</b>	ALGMOD_ERR_85	Reserved_Parameters branch is not allowed for non AMI parameter files
		<i>[UNUSED]</i>
<b>E4686</b>	ALGMOD_ERR_86	{paramname}: Usage should be Info or In for parameters in AMI files. ({subparam} '{subparamname}')
		<i>[UNUSED]</i>
<b>E4687</b>	ALGMOD_ERR_87	{paramname}: Usage should be Info for parameters in non-AMI files. ({subparam}

		'{subparamname}')  <i>[UNUSED]</i>
<b>E4688</b>	ALGMOD_ERR_88	{paramname}: cannot be of Format Table, Guassian, Dual-Dirac, DjRj. ({subparam} '{subparamname}')  <i>[UNUSED]</i>
<b>E4689</b>	ALGMOD_ERR_89	[Algorithmic Model] Sub parameter {subparam} is not allowed for model {modelname} which is of type {modeltype}  <i>Modle of type cannot use the subparam (Executable; Executable_Rx; Executable_Tx)</i>
<b>E4690</b>	ALGMOD_ERR_90	Reserved Parameter {paramname} is '{input output} only' and may not be used since another '{output input} only' Reserved Parameter has already been used earlier in this file  <i>The Parameter is of type (Rx; Tx) but the parameter file has already been found to have an oppsite input out type</i>
<b>E4691</b>	ALGMOD_ERR_91	Sub parameter {subparam} is associated with a parameter file {paramfile} which was found to have a direction '{input output}-only'  <i>The (Executable_Rx) has to be associated with a parameter file of type and the (Executable_Tx) has to be associated with a parameter file of type</i>
<b>E4692</b>	ALGMOD_ERR_92	{paramname}: Illegal {type} value {value} specified in {subparam}  <i>The value of type specified for subparam of parameter is invalid</i>
<b>E4693</b>	ALGMOD_ERR_93	(({paramtype} '{paramname}'): Usage cannot be Dep for referenced parameter '{filename}' in AMI file when the file is not referenced in the [Algorithmic Model] section of the containing Model  <i>The referenced parameter (Parameter; Converter Parameter) has a Usage Dep in Parameter file but is not referenced from within an [Algorithmic Model] section of a model</i>
<b>E4694</b>	ALGMOD_ERR_94	(({paramtype} '{paramname}'): Usage cannot be Dep for referenced parameter '{filename}' in AMI file when the file does not have a Resolve_Exists parameter with value True  <i>The referenced parameter (Parameter; Converter Parameter) has a Usage Dep in Parameter file but the file does not have Resolve Exists parameter with a value True</i>
<b>E4695</b>	ALGMOD_ERR_95	A branch name cannot be empty  <i>Every branchname in a parameter file should be a non empty string</i>
<b>E4696</b>	ALGMOD_ERR_96	{paramname} is only allowed in IBIS Version 6.1 or greater

*Parameter is only allowed for IBIS versions greater than equal to 6.1*

<b>E4697</b>	ALGMOD_ERR_97	PAM4_UpperThreshold and PAM4_LowerThreshold must be specified when Modulation is PAM4
		<i>PAM4_UpperThreshold and PAM4_LowerThreshold must be specified when Modulation is PAM4 and the parameter file is of type Rx_only</i>
<b>W4698</b>	ALGMOD_ERR_98	{value1} should be less than {value2}
		<i>value1 (PAM4_CenterThreshold) should be less than value2(PAM4_UpperThreshold) and value1(PAM4_LowerThreshold) should be less than value2(PAM4_CenterThreshold)</i>
<b>E4699</b>	ALGMOD_ERR_99	Model {modelName} of type {modeltype} is associated with a parameter file {filename} which was found to have a direction '{direction}-only'
		<i>Model is of type but is associated with a Parameter file which was found to have direction (Rx; Tx)</i>
<b>E4700</b>	ALGMOD_ERR_100	Model {modelName} of type {modeltype} is a receiver associated with parameter file {filename} which has Modulation PAM4 defined but PAM4_UpperThreshold and PAM4_LowerThreshold are not specified
		<i>Model of type is a Receiver and is associated with a Parameter file which defines a PAM4 Modulation but does not define PAM4_UpperThreshold and PAM4_LowerThreshold</i>
<b>E4750</b>	CMPNTEMI_ERR_0	" "
		<i>[UNUSED]</i>
<b>E4751</b>	CMPNTEMI_ERR_1	( line {lineNum} ) - {name} Already Defined For EMI Component
		<i>CMPNTEMI_ERR_1</i>
<b>B4752</b>	CMPNTEMI_ERR_2	Unable to Parse {text}: {sourceFile} {sourceLinenum}
		<i>A generic error message which indicates that a parsing error related to</i>
<b>E4753</b>	CMPNTEMI_ERR_3	( line {lineNum} ) - [Emi Component] is already defined for this Component
		<i>A [Begin EMI Component] section can be defined at most once in a component</i>
<b>E4754</b>	CMPNTEMI_ERR_4	( line {lineNum} ) - Unexpected data '{text}' found after the Keyword
		<i>Some extraneous data was specified after the [Begin EMI Component] keyword where none was expected.</i>
<b>E4755</b>	CMPNTEMI_ERR_5	( line {lineNum} ) - Orphan keyword line.

*A [Begin EMI Component] keyword was found where it was not expected*

<b>E4756</b>	CMPNTEMI_ERR_6	( line {lineNum} ) - Orphan data line
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*A data line identified as belonging to a [Begin EMI Component] section was found outside of such a section*

<b>B4757</b>	CMPNTEMI_ERR_7	{sourceFile}:{sourceLinenum}:Illegal keyword passed to EMI Component.
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*Program data structures are corrupt in program file*

<b>B4758</b>	CMPNTEMI_ERR_8	{sourceFile}:{sourceLinenum}:Data for End EMI Component.
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*Program data structures are corrupt in program file*

<b>B4759</b>	CMPNTEMI_ERR_9	{sourceFile}:{sourceLinenum}:Unknown keyword received data.
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*Program data structures are corrupt in program file*

<b>B4760</b>	CMPNTEMI_ERR_10	{sourceFile}:{sourceLinenum}:Illegal line type passed to EMI Component.
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*Program data structures are corrupt in program file*

<b>E4761</b>	CMPNTEMI_ERR_11	( line {lineNum} ) - [End EMI Component] expected
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*A [Begin EMI Component] section should be terminated by a n [End EMI Component] keyword*

<b>W4762</b>	CMPNTEMI_ERR_12	( line {lineNum} ) - Empty Emi Component block found
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*A [Begin EMI Component] was terminated with an [End EMI Component] keyword with no intervening data*

<b>E4763</b>	CMPNTEMI_ERR_13	( line {lineNum} ) - Unable to create new EMI Component.
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*Memory allocation failed when trying to parse a [Begin EMI Component]*

<b>E4764</b>	CMPNTEMI_ERR_14	( line {lineNum} ) - C_Heatsink_gnd cannot be specified since C_Heatsink_float is already specified
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*A heat sink can be either floating or grounded*

<b>E4765</b>	CMPNTEMI_ERR_15	( line {lineNum} ) - C_Heatsink_float cannot be specified since C_Heatsink_gnd is already specified
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*A heat sink can be either floating or grounded*

<b>E4766</b>	CMPNTEMI_ERR_16	( line {lineNum} ) - Unknown Line after [Begin EMI Component]
		<i>A line was found in the [Begin EMI Component] section wich was not a valid line</i>
<b>B4767</b>	CMPNTEMI_ERR_17	Should Not Be Here: {sourceFile},{sourceLinenum}
		<i>The code has a bug</i>
<b>E4768</b>	CMPNTEMI_ERR_18	( line {lineNum} ) - '{paramName}' Subparameter Missing Setting
		<i>The sub parameter has no associated value specified</i>
<b>E4769</b>	CMPNTEMI_ERR_19	( line {lineNum} ) - Incorrect Number of Line Items ( {numberOfItemsFound} ) For {paramName}: Expecting {numberOfItemsExpected}
		<i>The sub parameter should have had items on the keyword line but only number of data items were found</i>
<b>E4770</b>	CMPNTEMI_ERR_20	"( line {lineNum} ) - Invalid {subparam/keyword} ( \{badValue\} )" (try \{options\} )" ""
		<i>A generic error message which indicates that a wrong value was specified for a particular . The user must specify from one of the</i>
<b>E4771</b>	CMPNTEMI_ERR_21	"( line {lineNum} ) - Invalid {paramName} ( \{paramValue\} )" ""
		<i>The sub parameter has an invalid value specified</i>
<b>B4772</b>	CMPNTEMI_ERR_22	Could not allocate memory in file {sourceFile} at line {sourceLinenum}
		<i>Memory allocation failed</i>
<b>E4773</b>	CMPNTEMI_ERR_23	( line {lineNum} ) - Invalid {paramName} Line
		<i>The sub parameter line has an invalid syntax</i>
<b>E4774</b>	CMPNTEMI_ERR_24	( line {lineNum} ) - [Pin Domain EMI]: Already Defined for this EMI Component
		<i>The [Pin Domain EMI] section should be defined at most one in a [Begin EMI Component] section</i>
<b>E4775</b>	CMPNTEMI_ERR_25	( line {lineNum} ) - Expected 'percentage' parameter after keyword
		<i>A [Pin Domain EMI] keyword should be followed by the the column header 'percentage'</i>
<b>E4776</b>	CMPNTEMI_ERR_26	( line {lineNum} ) - Unknown parameter '{badValue}': Expected 'percentage'

*A [Pin Domin EMI] keyword should be followed by the column header 'percentage' but an unexpected column header was found*

<b>E4777</b>	CMPNTEMI_ERR_27	( line {lineNum} ) - domain_name '{domainName}' is redefined
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*The domain name was defined multiple times in a [Pin Domain EMI] section*

<b>E4778</b>	CMPNTEMI_ERR_28	( line {lineNum} ) - Invalid percentage '{badValue}'. {maxLength}
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*The percentage for a domain\_name was specified using more than characters( where maxLength is 5)*

<b>E4779</b>	CMPNTEMI_ERR_29	( line {lineNum} ) - [Pin EMI]: Already defined for this EMI Component.
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*A [Pin EMI] section should be defined at most once in a [Begin EMI Component] section*

<b>E4780</b>	CMPNTEMI_ERR_30	( line {lineNum} ) - Unable to find column headers after [Pin EMI] keyword.
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*The [Pin EMI] keyword should be followed by the column headers domain\_name and clock\_div*

<b>E4781</b>	CMPNTEMI_ERR_31	( line {lineNum} ) - '{columnHeader}' column header not found or out of order.
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*The column header was expected on the [Pin EMI] keyword definition line but was not found or found out of order*

<b>E4782</b>	CMPNTEMI_ERR_32	( line {lineNum} ) - Unable to add data for [Pin EMI] keyword.
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*There was an error parsing the data line specified in a [Pin EMI] section*

<b>E4800</b>	MDLEMI_ERR_0	( line {lineNum} ) - EMI Model: Already Defined for this model
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*There can be at most one [Begin EMI Model] section in a model*

<b>E4801</b>	MDLEMI_ERR_1	( line {lineNum} ) - Incorrect Number of Line Items ( {numberOfItemsFound} ) For {paramName}; Expecting {numberOfItemsExpected}
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*The sub parameter should have had items on the keyword line but only number of data items were found*

<b>B4802</b>	MDLEMI_ERR_2	Unable to Parse {text}: {sourceFile} {sourceLinenum}
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*A generic error message which indicates that a parsing error related to*

<b>B4803</b>	MDLEMI_ERR_3	Should Not Be Here: {sourceFile},{sourceLinenum}
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*The code has a bug*

<b>B4804</b>	MDLEMI_ERR_4	Unable to Allocate Memory: {sourceFile} {sourceLinenum}
		<i>The code failed to allocate memory</i>
<b>E4805</b>	MDLEMI_ERR_5	( line {lineNum} ) - {paramName} is already specified for the EMI Model
		<i>The subparameter has already been defined in a [Begin EMI Model] section</i>
<b>E4806</b>	MDLEMI_ERR_6	( line {lineNum} ) - '{paramName}' Subparameter Missing Setting
		<i>The subparameter does not have a value specified</i>
<b>E4807</b>	MDLEMI_ERR_7	"( line {lineNum} ) - Invalid {subparam/keyword} (\\"{badValue}\") (try \\"{options}\")"
		<i>A generic error message which indicates that a wrong value was specified for a particular . The user must specify from one of the</i>
<b>E4808</b>	MDLEMI_ERR_8	"( line {lineNum} ) - Invalid {paramName} (\\"{badparamValue}\")"
		<i>The subparameter has an invalid value</i>
<b>E4900</b>	PINEMI_ERR_0	( line {lineNum} ) - Unable to add the line of Pin EMI data
		<i>Memory allocation for a Pin EMI data structure failed</i>
<b>E4901</b>	PINEMI_ERR_1	( line {lineNum} ) - pin_name not found
		<i>A data line in the [Pin EMI] section did not have the pin name specified</i>
<b>E4902</b>	PINEMI_ERR_2	( line {lineNum} ) - domain_name not found
		<i>A data line in the [Pin EMI] section did not have the domain name specified</i>
<b>E4903</b>	PINEMI_ERR_3	( line {lineNum} ) - clock_div not found
		<i>A data line in the [Pin EMI] section did not have clock div specified</i>
<b>E4904</b>	PINEMI_ERR_4	( line {lineNum} ) - clock_div should be at most {maxChars} characters long
		<i>The value of clock_div can be at most 5 characters long</i>
<b>E4905</b>	PINEMI_ERR_5	( line {lineNum} ) - Unexpected data '{text}' after clock_div
		<i>There was some extraneous data found at the end of a data line in the [Pin EMI] section</i>

<b>E4906</b>	PINEMI_ERR_6	( line {lineNum} ) - Duplicate Pin '{pinName}'  <i>The pin is referred to multiple times in a [Pin EMI] section</i>
<b>B4907</b>	PINEMI_ERR_7	{sourceFile}:{sourceLinenum}:Unable to get IBIS?  <i>Program data structures are corrupt in program file</i>
<b>E4908</b>	PINEMI_ERR_8	Component '{compName}': domain_name '{domainName}' found in [Pin Domain EMI] section was not associated with any pin_name in the [Pin EMI] section  <i>In component ; a domain name was defined in the [Pin Domain EMI] section but was not found to be associated with any pin in the [Pin EMI] section</i>
<b>E4909</b>	PINEMI_ERR_9	Component '{compName}': pin_name '{pinName}' found in [Pin EMI] section was not found in the [Pin] section  <i>The pin referred to in the [Pin EMI] section of Component was not defined in the [Pin] section of the component</i>
<b>E4910</b>	PINEMI_ERR_10	( line {lineNum} ) - Unable to allocate new Pin EMI.  <i>Memory allocation error for a Pin EMI failed while trying to parse the [Pin EMI] section</i>
<b>E4911</b>	PINEMI_ERR_11	( line {lineNum} ) - Component '{compName}': Pin '{pinName}' is of model '{modelName}' and cannot be referened in a [Pin EMI] section  <i>"The pin referred to in the [Pin EMI] section of component has a model type of ""GND""; ""NC""; ""POWER""; ""CIRCUITCALL"" or ""NA"" and hence cannot be referenced in a [Pin EMI] section"</i>

#### 4.11 MESSAGE CODES 5000 TO 5499

<b>Code</b>	<b>Symbol</b>	<b>Message/Comments</b>
<b>E5000</b>	CCORNER_ERR_0	( line {lineNum} ) - [C Comp Corner] Already defined for this model  <i>A [C Comp Corner] section can only be defined once in a Model</i>
<b>B5001</b>	CCORNER_ERR_1	Unable to Allocate Memory: {sourceFile} {sourceLinenum}  <i>The code failed to allocate memory</i>
<b>B5002</b>	CCORNER_ERR_2	Should Not Be Here: {sourceFile}, {sourceLinenum}  <i>The code has a bug</i>



<b>B5003</b>	CCORNER_ERR_3	Unable to Parse {text}: {sourceFile} {sourceLinenum}
		<i>A generic error message which indicates that a parsing error related to</i>
<b>E5004</b>	CCORNER_ERR_4	( line {lineNum} ) - Incorrect Number of Line Items ({numberOfItemsFound}) For {keyword}: Expecting {numberOfItemsExpected}
		<i>The keyword should have had items on the keyword line but only number of data items were found</i>
<b>E5005</b>	CCORNER_ERR_5	( line {lineNum} ) - Unknown line found among [C Comp Corner] data
		<i>A line was found in the [C Comp Corner] section wich was not a valid line</i>
<b>E5006</b>	CCORNER_ERR_6	( line {lineNum} ) - [C Comp Corner] parameter {paramName} is already defined
		<i>The subparameter occurs more than once in a [C Comp Corner] section</i>
<b>E5007</b>	CCORNER_ERR_7	( line {lineNum} ) - Typ value cannot be NA
		<i>The typical value in a Range cannot be NA</i>
<b>W5008</b>	CCORNER_ERR_8	( line {lineNum} ) - {paramName}: Min value is not the smallest value listed
		<i>[UNUSED]</i>
<b>W5009</b>	CCORNER_ERR_9	( line {lineNum} ) - {paramName}: Max value is not the largest value listed
		<i>[UNUSED]</i>
<b>E5010</b>	CCORNER_ERR_10	Model {modelName}: Empty [C Comp Corner] section
		<i>There were no data lines in a [C Comp Corner] section for model</i>
<b>W5011</b>	CCORNER_ERR_11	Model {modelName}: [C Comp Corner] C_comp should not be specified when C_comp_pullup, C_comp_pulldown, C_comp_power_clamp or C_comp_gnd_clamp is specified
		<i>In model C_comp subparameter was sepcified in a [C Comp Corner] section even though the other sub parameters were also specified</i>
<b>E5012</b>	CCORNER_ERR_12	( line {lineNum} ) - [C Comp Corner] parameter {paramName}: {Typ Min Max} value cannot be negative
		<i>The Corner value for sub parameter in a [C Comp Corner] section was less than 0</i>
<b>E5100</b>	REPPIN_ERR_0	( line {lineNum} ) - Unable to alloc REPPIN.

*The code failed to allocate memory*

<b>E5101</b>	REPPIN_ERR_1	( line {lineNum} ) - Too many Repeater Pin data columns.  <i>Extraneous data was found while parsing a [Repeater_Pin] data line</i>
<b>E5102</b>	REPPIN_ERR_2	( line {lineNum} ) - No Repeater_Pin column entry.  <i>The pin column was missing while parsing a [Repeater_Pin] data line</i>
<b>E5103</b>	REPPIN_ERR_3	( line {lineNum} ) - No Repeater tx_non_inv_pin column entry.  <i>The tx_non_inv_pin column was missing while parsing a [Repeater_Pin] data line</i>
<b>E5104</b>	REPPIN_ERR_4	( line {lineNum} ) - Repeater_Pin column pin same as tx_non_inv_pin column pin.  <i>The pin specified cannot be the same as the tx_non_inv_pin specified on a [Repeater_Pin] data line</i>
<b>E5105</b>	REPPIN_ERR_5	Component '{componentname}': Repeater_Pin '{pinname}' not previously declared in Pin section.  <i>The pin specified in a [Repeater Pin] section was not defined in the [Pin] section of Component</i>
<b>E5106</b>	REPPIN_ERR_6;	Component '{componentname}': Repeater tx_non_inv_pin '{noninvpinname}' not previously declared in Pin section.  <i>The tx_non_inv_pin specified in a [Repeater Pin] section was not defined in the [Pin] section of Component</i>
<b>W5107</b>	REPPIN_ERR_7	Component '{componentname}': Repeater_Pin '{pinname}' is not unique.  <i>The same pin is referenced more than once in the [Repeater Pin] section of Component</i>
<b>E5108</b>	REPPIN_ERR_8	Component '{componentname}': Repeater tx_non_inv_pin '{noninvpinname}' already in use as a Repeater_pin.  <i>The tx_non_inv_pin was previously defined as a pin in the [Repeater Pin] section of Component</i>
<b>E5109</b>	REPPIN_ERR_9	Component '{componentname}': Repeater_pin '{pinname}' already in use as an tx_non_inv_pin.  <i>The pin was previously defined as a tx_non_inv_pin in the [Repeater Pin] section of Component</i>
<b>E5110</b>	REPPIN_ERR_10	Component '{componentname}': Repeater tx_non_inv_pin '{noninvpinname}' is not

		unique.
		<i>The same tx_non_inv_pin is referenced more than once in the [Repeater Pin] section of Component</i>
<b>E5111</b>	REPPIN_ERR_11	Component '{componentname}': Repeater_Pin '{pinname}' is not previously declared in Diff Pin section.
		<i>The pin specified in a [Repeater Pin] section of component is not defined in the [Diff Pin] section of the component.</i>
<b>E5112</b>	REPPIN_ERR_12	Component '{componentname}': Repeater tx_non_inv_pin '{noninvpinname}' is not previously declared in Diff Pin section.
		<i>The tx_non_inv_pin specified in a [Repeater Pin] section of component is not defined in the [Diff Pin] section of the component.</i>
<b>E5113</b>	REPPIN_ERR_13	Component '{componentname}': Repeater_Pin '{pinname}' is not associated with a model which is of type Input or Input_Diff
		<i>The pin specified in a [Repeater Pin] section of component is associated with a model which is not of type Input or Input_Diff</i>
<b>E5114</b>	REPPIN_ERR_14	Component '{componentname}': Repeater tx_non_inv_pin '{noninvpinname}' is not associated with a model which is of type Output or Ouptut_Diff
		<i>The tx_non_inv_pin specified in a [Repeater Pin] section of component is associated with a model which is not of type Output or Output_Diff</i>
<b>B5115</b>	REPPIN_ERR_15	{fileName}:{linenumber}:Unable to get IBIS?
		<i>Program data structures are corrupt in program file at</i>
<b>E5116</b>	REPPIN_ERR_16	Component '{componentname}': Repeater_Pin '{pinname}' is associated with a model '{modelname}' which has no Algorithmic Model
		<i>The pin specified in the [Repeater Pin] section of component is associated with a model which has no [Algorithmic Model] defined</i>
<b>E5117</b>	REPPIN_ERR_17	Component '{componentname}': Repeater tx_non_inv_pin '{noninvpinname}' is associated with a model '{modelname}' which has no Algorithmic Model
		<i>The tx_non_inv_pin specified in the [Repeater Pin] section of component is associated with a model which has no [Algorithmic Model] defined</i>
<b>E5118</b>	REPPIN_ERR_18	Component '{componentname}': Repeater_Pin '{pinname}' is associated with a model '{modelname}' whose AMI Parameter file '{fileName}' does not have a Repeater_Type defined
		<i>The pin specified in the [Repeater Pin] section of component is associated with a model</i>

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whose [Algorithmic Model] refers to an AMI Parameter file which does not have the parameter Repeater\_Type defined in it

<b>B5200</b>	PARAMFILE_ERR_0	{fileName}:{linenumber}:Unable to get IBIS.  <i>[UNUSED]</i>
<b>B5201</b>	PARAMFILE_ERR_1	Unable to alloc PFILE.  <i>[UNUSED]</i>
<b>W5202</b>	PARAMFILE_ERR_2	Parameter file name {fileName} does not seem to have an extension  <i>[UNUSED]</i>
<b>E5203</b>	PARAMFILE_ERR_3	( line {lineNum} ) - Parameter file name {fileName} invalid. '.ibs', '.ebd' or '.pkg' extensions are not allowed  <i>[UNUSED]</i>
<b>E5204</b>	PARAMFILE_ERR_4	( line {lineNum} ) - Parameter file {fileName} not found.  <i>[UNUSED]</i>
<b>B5300</b>	MPINS_ERR_0	Unable to Allocate Memory: {filename} {linenum}  <i>Memory allocation failed in program file at</i>
<b>E5301</b>	MPINS_ERR_1	Unable to alloc MPIN  <i>Memory allocation failed</i>
<b>E5302</b>	MPINS_ERR_2	Unable to save [Merged Pins] Pin  <i>Parsing of [Merged Pins] failed</i>
<b>E5303</b>	MPINS_ERR_3	Unable to parse [Merged Pins] Pin not found  <i>The MergingPin was not defined on the [Merged Pins] line</i>
<b>E5304</b>	MPINS_ERR_4	Incorrect Number of Line Items ({numberOfItemsFound}) For {keyName}: Expecting {numberOfItemsExpected}  <i>The should have had items on the keyword line but only were found</i>
<b>E5305</b>	MPINS_ERR_5	[Merged Pins] Pin Name {pinName} over {maxLength} characters long

*The Pin defined in [Merged Pins] is too long. Should be at most long*

**E5307** MPINS\_ERR\_7 [Merged Pins] section already defined for Pin {pinName}

*A [Merged Pins] section already exists for Pin*

**E5308** MPINS\_ERR\_8 Pin {mergedPinName} has already been connected to a Merging Pin {mergingPinName}

*The merged Pin is already connected to merging Pin*

**E5400** IDLY\_ERR\_0 [Initial\_Delay] Already defined for this model

**E5401** IDLY\_ERR\_1 Unable to Allocate Memory: {filename} {linenum}

*Memory allocation failed in program file at*

**B5402** IDLY\_ERR\_2 Should Not Be Here: {filename}, {linenum}

*The code has a bug in file at line*

**B5403** IDLY\_ERR\_3 Unable to Parse {keyword}: {filename} {linenum}

*Could not parse keyword at file at line*

**E5404** IDLY\_ERR\_4 Incorrect Number of Line Items ({numberOfItemsFound}) For {keyName}: Expecting {numberOfItemsExpected}

*The should have had items on the keyword line but only were found*

**E5405** IDLY\_ERR\_5 Unknown line found among [Initial\_Delay] data

*An unrecognized line was found in the [Initial Delay] section*

**E5406** IDLY\_ERR\_6 [Initial\_Delay] parameter {paramname} is already defined

*The [Initial Delay] parameter (V\_T; I\_T) has already been defined*

**E5407** IDLY\_ERR\_7 Typ value cannot be NA

*The typical value in a Range cannot be NA*

**E5410** IDLY\_ERR\_10 {""Model""} {modelName}: Empty [Initial\_Delay] section defined on line {linenum"}

*An empty [Initial Delay] section was defined for Model on line*

**E5411**

IDLY\_ERR\_11

[Initial\_Delay] parameter {paramname}: {subparam} value cannot be negative

*The [Initial Delay] parameter (V\_T; I\_T) has a (Typ; Min; Max) which is negative*