**Operations Logging Document 2.0.0**

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# Change record

|  |  |  |  |
| --- | --- | --- | --- |
| Rev # | * Changes | Owner | Date |
| 1.0.0 | * Started with 1.7.3 * Changed the name of document * Accepted all changes * Table 4.1 Deleted varchar for String * 5. Fixed formatting (9.a should be 10) * 5. Added 18. and 19. * 5.5 Removed reference to A2 and A3 and made reference to respective test requirements documents * 5.10.1. Added xD identifiers * 5.17 Fixed text formatting * Addenda – removed since not referenced anywhere else in the doc * Table 5.18 removed Record\_ID, Record\_Time, Mode, changed Operations Logging Document Data Type to String (nvarchar) * Table 6.7 changes per Steve | Ed Green | 04/08/15 |
| 1.0.0 | * Remove white spaces in CHAR field name examples | FW | 7/17/15 |
| 1.0.1 | * Remove white spaces in Power Supply Control * Remove white spaces in Power Supply Read * Fixed RfSwitchSelect Text Example * Added ElapseTime to Manufacturing Data data structure | EG | 9/24/15 |
| 1.0.1 | * Updates to reflect actual implementation * No rev change to ensure compatibility between IT and database storage | EG | 11/19/15 |
| 2.0.0 | * Updated to include additional CHAR procedures * Removed Binary Array requirement from MFG dataset | EG | 01/10/16 |

# Equipment list

|  |  |  |  |
| --- | --- | --- | --- |
| Item | Description | Quantity | Part number or model |
| 1 | Initial Test Rack Hardware System | 1 | TBD |

# Abbreviations

|  |  |
| --- | --- |
| BIN | Numbering System for report analysis |
| DUT | Device Under Test |
| GOLD | Glenwood Board used exclusively for PER testing |
| GUID | Globally Unique Identifier |
| ISO | International Standard for Organization |
| MAC | Media Access Control Address |
| NA | Not Applicable |
| PER | Packet Error Rate |
| DB | Database |
| Char | Characterization Test Profiling |
| OQA | Outgoing Quality Assurance |

# Objective

The goal of this document is to describe in full the report content of the format for use to either import test data into a database or decode test data from the database.

The end of test report content will have a Test Info dataset that will describe test results, dates, times, and specific details that correspond to the test specifics. One item of the Test Info section is the Globally Unique Identifier. This set of values will be unique to the test and can be used to separate the test items from other tests specific to the individual device under test.

The Individual Test Format section of this document describes the test items that occur during testing.

If a database connection failure occurs when attempting to log data, then a text file version of the log will be written to hard drive of the user machine at the following location.

* C:\MFGTEST\MFGLOGS\’device under test name’

The ‘device under test name’ will correspond to the DUT type, i.e., Athena, Glenwood, etc.

All of the items reported will be distinguished by separation with the Vertical Bar character (|).

All white spaces are removed from any string data in order to aid decoding, excluding the user input data and the comments field. All Double-precision floating-point format values have no more than two significant digits, excluding the test times in seconds, which have four significant digits. The date and time references in this document use the ISO 8601 convention, with the fraction of a second omitted. All references in this document related to a data type will use the Microsoft SQL Server Database format.

Table 4.1 highlights the database entry types for coding/decoding.

|  |  |  |
| --- | --- | --- |
| **Data Type** | **Microsoft SQL Server Database Reference** | **Labview DB Toolkit Reference** |
| String | nvarchar | nvarchar |
| Long Integer | Exact Numeric (int) | Long ( I32 ) |
| Double-precision floating-point format | Approximate Numeric (float) | Double ( DBL ) |
| Date | Date | Date |
| Time | Time | Time |
| Binary | varbinary | Binary |

Table 4.1

# Test Information

The Test Information Section will contain the following items.

1. Test\_Information
2. Soft\_ Bin
3. Hard\_Bin
4. Operator
5. Machine
6. Test\_Type
7. Model
8. Test\_Software\_Version
9. MAC \_Address
10. GUID
11. Start\_Date\_Time
12. End\_Date\_Time
13. Work\_Order
14. Comments
15. Operations\_Logging \_Document \_Revision\_Number
16. Fixture ID
17. Test Info Data Type Reference Example
18. Test Info Text Example

## 5.1 Test\_Information

## 5.2 Soft Bin

The BIN numbering system is used to correlate specific test names with a variety of possible failures that could occur during test.

Soft BIN provides detailed failure information which can be used for troubleshooting. Soft BIN alone does not provide sufficient information for failure pareto or troubleshooting, it almost always requires a Hard BIN to be useful.

## 5.3 Hard Bin

The BIN number is displayed on the tester dashboard for a quick look of the test result. The Hard Bin is a grouping of failure modes that has sufficient detail for test system troubleshooting, DUT debug and pareto analysis. Binning is defined in the respective product’s test requirements document.

## 5.4 Operator

The name, initials, or employee number of the test operator. Summit employees may use initials, KYE must use name or employee number.

## 5.5 Machine

A string consisting of location and test station ID.

Examples are 4X3Summit, KYE1.

## 5.6 Test Type

The Test Type is a description of the specific test. Currently, the three allowable Test Types are:

1. InitialTest
2. Characterization
3. PM

The Characterization Test Type is used to characterize a specific DUT or allow the operator to make modifications to the test profile that are restricted under Initial Test.

## 5.7 Model

The Model is specific to the device under test. The following lists the models currently in production:

1. Athena UFL
2. Athena 4x
3. Athena 4xC
4. Athena 4xD
5. Glenwood
6. Sherwood
7. SherwoodxD

## 5.8 Test Software Version

The test software version is separated into four parts, each descriptive of the device under test, the current firmware used for test, and the software iteration number.

The following describes the individual sections of the version numbering system.

### 5.8.1 Board Type Identification

Each device under test has a board type identifier embedded within the MAC Address. Table 5.4.1 describes the allowable Board Type Identifier values.

|  |  |
| --- | --- |
| **Device under Test** | **Board Type Identification (Decimal Format, Hex Format)** |
| Athena UFL | 13, 0xDx (x can be hex) |
| Athena 4x | 12, 0xCy (y can be hex except ‘D’) |
| Athena 4xC | 1, 0x1x (x can be hex) |
| Glenwood | 6, 0x6x (x can be hex) |
| Sherwood | 15, 0xFy (y can be hex except ‘D’) |
| Athena 4xD | 205, 0xCD |
| SherwoodxD | 253, 0xFD |

Table 5.4.1

### 5.8.2 Firmware Version Number

The firmware is released into production through a process and is loaded into flash as a binary file if the firmware had not been previously loaded. The firmware numbering system is divided into two parts, a major and a minor number. The second and the third part of the Test Software Version consist of the firmware major and minor number, respectively.

### 5.8.3 Test Software Iteration Value

The software iteration value will begin with one upon initial release and is incremented by one each time the software is released.

### 5.8.4 Test Software Version Example

For an Athena 4x board running firmware version 192.07, and having been iterated 5 times for debug, the following Test Software Version Number would apply.

* 12.192.7.5

## 5.9 MAC Address

The Media Access Control Address is a six byte number associated with each device under test. It is a controlled numbering system starting with hexadecimal bytes “02EA”. The third byte is separated into two parts, the first nibble identifying the manufacturer of the device under test, and the second nibble being the Board Type Identifier discussed in Section 5.4.1. The remaining three bytes are unique to the device under test.

## 5.10 GUID

The Globally Unique Identifier is generated by the software upon test start. Each individual test will have a unique GUID for back reference during the reporting process.

## 5.11 Start\_Date\_Time

The start\_date\_time is the date and time that the test starts. The format follows the International Organization for Standardization (ISO). Table 5.1 identifies the Date and Time format.

## 5.12 End\_Date\_Time

The end\_date\_time is the date and time that the test ends. The format follows the International Organization for Standardization (ISO). Table 5.1 identifies the Date and Time format.

|  |  |
| --- | --- |
| **Date\_Time** | **Example** |
| YYYY/MM/DD HH:MM:SS | 2015/12/18 17:05:22 |

Table 5.1

## 5.13 Work Order

The Work Order is entered by the user before the test starts. It must be entered for data to be recorded.

## 5.14 Comments

Upon test completion comments are entered if necessary in order to clarify the test results. Comments will include any errors associated with a test failure.

## 5.15 Operations Logging Document Revision Number

The Operations Logging Document Rev is the revision number of this document.

## 5.16 Fixture ID

Unique test fixture ID.

Examples are GW2, UFL1, etc..

## 5.17 Test Info Data Type Reference Example

|  |  |  |
| --- | --- | --- |
| **Section Name** | **Data Type** | **Example** |
| Test Information | String (varchar) | Test Info |
| Soft BIN | Exact Numeric (int) | 100 |
| Hard BIN | Exact Numeric (int) | 1 |
| Operator | String (nvarchar) | Diane |
| Machine | String (nvarchar) | Summit4 |
| Test Type | String (nvarchar) | InitialTest |
| Model | String (nvarchar) | Glenwood |
| Test Software Version | String (nvarchar) | 6.198.3.15 |
| MAC Address | String (nvarchar) | 02ea3c0009ba |
| GUID | String (nvarchar) | {4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5} |
| Start Date\_Time | DateTime | 2014/02/03 17:52:26 |
| End Date\_Time | DateTime | 2014/02/03 17:53:13 |
| Work Order | String (nvarchar) | Control |
| Comments | String (nvarchar) | Test PASSED. |
| Operations Logging Document Revision Number | String (nvarchar) | 1.0.1 |
| Fixture ID | String (nvarchar) | GW2 |

Table 5.18

## 5.18 Test Info Text Example

|TestInfo|100|1|Diane|Summit4|InitialTest|Glenwood|6.198.3.15|02ea3c0009ba|{4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5}|2014/02/03 11:51:26|2014/02/03 11:52:26|1434889680-L8|Test PASSED.|1.0.1|GW2|

# Individual Test Format Section

The Dataset varies in length depending on the number of variables involved but the format of each section generally contain the following.

1. Type of Dataset
2. Dataset Name
3. Number of Dataset Columns
4. Dataset

The Type of Dataset describes the information presented. Table 6.1 describes the allowable dataset types.

|  |  |
| --- | --- |
| **Type of Dataset** | **Description** |
| Info | Specific Information with no Pass or Fail criteria |
| Test | Test with Pass or Fail criteria |
| CHAR | Test with Pass or Fail criteria |
| PM | TXPO Test ONLY, See Section 6.9 |

Table 6.1

## 6.1 Offset

|  |  |
| --- | --- |
| Type of Dataset | Info |
| Dataset Name | Offset |
| Number of Dataset Columns | 6 |
| **Dataset** | |
| GUID | String |
| Duty Cycle | Double-precision floating-point format |
| Antenna | Long Integer (1-4) |
| Channel | Long Integer (0-34) |
| Offset | Double-precision floating-point format |
| Elapsed\_Time | Double-precision float in milliseconds elapsed from test start |

Table 6.1.1

### 6.1.1 Offset Data Type Reference Table

|  |  |
| --- | --- |
| **Data Type** | **Example** |
| String (nvarchar) | Info |
| String (nvarchar) | Offset |
| Exact Numeric (int) | 6 |
| String(nvarchar) | {4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5} |
| Approximate Numeric (float) | 55.49 |
| Exact Numeric (int) | 2 |
| Exact Numeric (int) | 8 |
| Approximate Numeric (float) | 34.12 |
| Approximate Numeric (float) | 112.0 |

Table 6.1.2

### 6.1.2 Offset Text Example

|Info|Offset|6|{4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5}|55.49|2|8|34.12|112.0|

## 6.2 Power Supply

### 6.2.1 Power Supply Control

|  |  |
| --- | --- |
| Type of Dataset | Test |
| Dataset Name | PowerSupplyControl |
| Number of Dataset Columns | 15 |
| **Dataset** | |
| GUID | String |
| Hardware Type | String (GOLD or DUT) |
| Voltage Level 1 | Double-precision floating-point format (volts) |
| Current Limit 1 | Double-precision floating-point format (amps) |
| Over Voltage Protect Limit 1 | Double-precision floating-point format (volts) |
| Over Voltage Protect 1 | String (ON or OFF) |
| Output Enable 1 | String (ON or OFF) |
| Voltage Level 2 | Double-precision floating-point format (volts) |
| Current Limit 2 | Double-precision floating-point format (amps) |
| Over Voltage Protect Limit 2 | Double-precision floating-point format (volts) |
| Over Voltage Protect 2 | String (ON or OFF) |
| Output Enable 2 | String (ON or OFF) |
| Test Time | Double-precision floating-point format (seconds) |
| Result | String (PASS, FAIL or NA) |
| Elapsed\_Time | Double-precision float in milliseconds elapsed from test start |

Table 6.2.1

### 6.2.2 Power Supply Control Data Type Reference Table

|  |  |
| --- | --- |
| **Data Type** | **Example** |
| String (nvarchar) | Test |
| String (nvarchar) | PowerSupplyControl |
| Exact Numeric (int) | 15 |
| String (nvarchar) | {4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5} |
| String (nvarchar) | DUT |
| Approximate Numeric (float) | 1.20 |
| Approximate Numeric (float) | 0.80 |
| Approximate Numeric (float) | 1.50 |
| String (nvarchar) | ON |
| String (nvarchar) | ON |
| Approximate Numeric (float) | 3.30 |
| Approximate Numeric (float) | 1.50 |
| Approximate Numeric (float) | 4.00 |
| String (nvarchar) | ON |
| String (nvarchar) | ON |
| Approximate Numeric (float) | 1.85 |
| String (nvarchar) | PASS |
| Approximate Numeric (float) | 112.0 |

Table 6.2.2

### 6.2.3 Power Supply Control Text Example

|Test|PowerSupplyControl|15|{4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5}|DUT|1.20|0.80|1.50|ON|ON|3.30|1.50|4.00|ON|ON|1.8510|PASS|112.0|

### 6.3.1 Power Supply Read

|  |  |
| --- | --- |
| Type of Dataset | Test |
| Dataset Name | PowerSupplyRead |
| Number of Dataset Columns | 17 |
| **Dataset** | |
| GUID | String |
| Hardware Type | String (GOLD or DUT) |
| PS1 High Voltage Limit | Double-precision floating-point format (volts) |
| PS1 Low Voltage Limit | Double-precision floating-point format (volts) |
| PS1 High Current Limit | Double-precision floating-point format (amps) |
| PS1 Low Current Limit | Double-precision floating-point format (amps) |
| PS2 High Voltage Limit | Double-precision floating-point format (volts) |
| PS2 Low Voltage Limit | Double-precision floating-point format (volts) |
| PS2 High Current Limit | Double-precision floating-point format (amps) |
| PS2 Low Current Limit | Double-precision floating-point format (amps) |
| PS1 Voltage | Double-precision floating-point format (volts) |
| PS1 Current | Double-precision floating-point format (amps) |
| PS2 Voltage | Double-precision floating-point format (volts) |
| PS2 Current | Double-precision floating-point format (amps) |
| Test Time | Double-precision floating-point format (seconds) |
| Result | String (PASS, FAIL or NA) |
| Elapsed\_Time | Double-precision float in milliseconds elapsed from test start |

Table 6.2.3

### 6.3.2 Power Supply Read Data Type Reference Table

|  |  |
| --- | --- |
| **Data Type** | **Example** |
| String (nvarchar) | Test |
| String (nvarchar) | PowerSupplyRead |
| Exact Numeric (int) | 17 |
| String (nvarchar) | {B990EC48-ED6E-430B-A28D-15371AA4D3B4} |
| String (nvarchar) | DUT |
| Approximate Numeric (float) | 1.284 |
| Approximate Numeric (float) | 1.116 |
| Approximate Numeric (float) | 1.000 |
| Approximate Numeric (float) | 0.080 |
| Approximate Numeric (float) | 3.531 |
| Approximate Numeric (float) | 3.069 |
| Approximate Numeric (float) | 0.800 |
| Approximate Numeric (float) | 0.000 |
| Approximate Numeric (float) | 1.200 |
| Approximate Numeric (float) | 0.161 |
| Approximate Numeric (float) | 3.299 |
| Approximate Numeric (float) | 0.559 |
| Approximate Numeric (float) | 0.719 |
| String (nvarchar) | PASS |
| Approximate Numeric (float) | 6.415 |

Table 6.2.4

### 6.3.3 Power Supply Read Text Example

|Test|PowerSupplyRead|17|{B990EC48-ED6E-430B-A28D-15371AA4D3B4}|DUT|1.284000|1.116000|1.000000|0.080000|3.531000|3.069000|0.800000|0.000000|1.200443|0.160524|3.299343|0.558934|0.719072|PASS|6.4146|

## 6.3 Communication

|  |  |
| --- | --- |
| Type of Dataset | Test |
| Dataset Name | Communication |
| Number of Dataset Columns | 9 |
| **Dataset** | |
| GUID | String |
| Hardware Type | String (GOLD or DUT) |
| BUS | String (PORT or FILE) |
| Correct Firmware Version Detected | String (YES or NO) |
| Firmware Version | Double-precision floating-point format |
| Error Detected | String (YES or NO) |
| Test Time | Double-precision floating-point format (seconds) |
| Result | String (PASS, FAIL or NA) |
| Elapsed\_Time | Double-precision float in milliseconds elapsed from test start |

Table 6.3.1

### 6.3.1 Communication Data Type Reference Table

|  |  |
| --- | --- |
| **Data Type** | **Example** |
| String (nvarchar) | Test |
| String (nvarchar) | Communication |
| Exact Numeric (int) | 9 |
| String (nvarchar) | {4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5} |
| String (nvarchar) | DUT |
| String (nvarchar) | PORT |
| String (nvarchar) | YES |
| Approximate Numeric (float) | 192.4 |
| String (nvarchar) | NO |
| Approximate Numeric (float) | 0.05 |
| String (nvarchar) | PASS |
| Approximate Numeric (float) | 112.0 |

Table 6.3.2

### 6.3.2 Communication Text Example

|Test|Communication|9|{4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5}|DUT|PORT|YES|192.4|NO|0.0510|PASS|112.0|

## 6.4 Flash

|  |  |
| --- | --- |
| Type of Dataset | Test |
| Dataset Name | Flash |
| Number of Dataset Columns | 7 |
| **Dataset** | |
| GUID | String |
| Firmware | String (YES or NO) |
| Manufacturing Data | String (YES or NO) |
| DFS or Coefficient | String (YES or NO) |
| Test Time | Double-precision floating-point format (seconds) |
| Result | String (PASS, FAIL or NA) |
| Elapsed\_Time | Double-precision float in milliseconds elapsed from test start |

Table 6.4.1

### 6.4.1 Flash Data Type Reference Table

|  |  |
| --- | --- |
| **Data Type** | **Example** |
| String (nvarchar) | Test |
| String (nvarchar) | Flash |
| Exact Numeric (int) | 7 |
| String (nvarchar) | {4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5} |
| String (nvarchar) | YES |
| String (nvarchar) | NO |
| String (nvarchar) | NO |
| Approximate Numeric (float) | 16.05 |
| String (nvarchar) | PASS |
| Approximate Numeric (float) | 112.0 |

Table 6.4.2

### 6.4.1 Flash Text Example

|Test|Flash|7|{4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5}|YES|NO|NO|16.17|PASS|112.0|

## 6.5 Connector

|  |  |
| --- | --- |
| Type of Dataset | Test |
| Dataset Name | Connector |
| Number of Dataset Columns | 5 |
| **Dataset** | |
| GUID | String |
| Name | String (see Addenda A3) |
| Test Time | Double-precision floating-point format (seconds) |
| Result | String (PASS, FAIL or NA) |
| Elapsed\_Time | Double-precision float in milliseconds elapsed from test start |

Table 6.5.1

### 6.5.1 Connector Data Type Reference Table

|  |  |
| --- | --- |
| **Data Type** | **Example** |
| String (nvarchar) | Test |
| String (nvarchar) | Connector |
| Exact Numeric (int) | 5 |
| String (nvarchar) | {4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5} |
| String (nvarchar) | GPIO2 |
| Approximate Numeric (float) | 1.17 |
| String (nvarchar) | PASS |
| Approximate Numeric (float) | 112.0 |

Table 6.5.2

### 6.5.2 Connector Text Example

|Test|Connector|5|{4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5}GPIO2|1.17|PASS|112.0|

## 6.6 Clock

|  |  |
| --- | --- |
| Type of Dataset | Test |
| Dataset Name | Clock |
| Number of Dataset Columns | 6 |
| **Dataset** | |
| GUID | String |
| Name | String (SCLK, MCLK, or LRCLK) |
| Clock Frequency | Double-precision floating-point format (Hz) |
| Test Time | Double-precision floating-point format (seconds) |
| Result | String (PASS, FAIL or NA) |
| Elapsed\_Time | Double-precision float in milliseconds elapsed from test start |

Table 6.6.1

### 6.6.1 Clock Data Type Reference Table

|  |  |
| --- | --- |
| **Data Type** | **Example** |
| String (nvarchar) | Test |
| String (nvarchar) | Clock |
| Exact Numeric (int) | 6 |
| String (nvarchar) | {4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5} |
| String (nvarchar) | MCLK |
| Approximate Numeric (float) | 12288024 |
| Approximate Numeric (float) | 0.55 |
| String (nvarchar) | PASS |
| Approximate Numeric (float) | 112.0 |

Table 6.6.2

### 6.6.2 Clock Text Example

|Test|Clock|6|{4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5}|MCLK| 12288024|1.17|PASS|112.0|

## 6.7 Calibration

|  |  |
| --- | --- |
| Type of Dataset | Test |
| Dataset Name | Calibration |
| Number of Dataset Columns | 28 |
| **Dataset** | |
| GUID | String |
| Target Power | Long Integer |
| Step | Long Integer |
| Transmit Antenna | Long Integer (1-4) |
| Channel | Long Integer (0-34) |
| Transmit Packet Count | Long Integer |
| Duty Cycle | Double-precision floating-point format (%) |
| Power Meter Averaging Count | Long Integer |
| Offset | Double-precision floating-point format (dBm) |
| RF Data Rate | Long Integer (Mbit) |
| TXGC | Long Integer (0-63) |
| Power | Double-precision floating-point format (dBm) |
| Temperature | Long Integer (Celsius) |
| M | Calculated Slope in Long Integer (hex converted to integer) |
| B | Calculated Intercept in Long Integer (hex converted to integer) |
| First TXGC used to calculate M and B | Long Integer (0-63) |
| Second TXGC used to calculate M and B | Long Integer (0-63) |
| First TXPO used to calculate M and B | Double-precision floating-point format (dBm) |
| Second TXPO used to calculate M and B | Double-precision floating-point format (dBm) |
| Minimum Temperature Limit | Long Integer (Celsius) |
| Maximum Temperature Limit | Long Integer (Celsius) |
| Calculated Minimum Temperature Limit | Long Integer (Celsius) |
| Calculated Maximum Temperature Limit | Long Integer (Celsius) |
| Target Discovery Accuracy | Double-precision floating-point format (%) |
| Warning Message | String Set |
| Test Time | Double-precision floating-point format (seconds) |
| Result | String (PASS, FAIL or NA) |
| Elapsed\_Time | Double-precision float in milliseconds elapsed from test start |

Table 6.7.1

### 6.7.1 Calibration Data Type Reference Table

|  |  |
| --- | --- |
| **Data Type** | **Example** |
| String (nvarchar) | Test |
| String (nvarchar) | Calibration |
| Exact Numeric (int) | 28 |
| String (nvarchar) | {B990EC48-ED6E-430B-A28D-15371AA4D3B4} |
| Exact Numeric (int) | 13 |
| Exact Numeric (int) | 20 |
| Exact Numeric (int) | 1 |
| Exact Numeric (int) | 25 |
| Exact Numeric (int) | 350 |
| Approximate Numeric (float) | 34.62 |
| Exact Numeric (int) | 1 |
| Approximate Numeric (float) | 30.60 |
| Exact Numeric (int) | 18 |
| Exact Numeric (int) | 27 |
| Approximate Numeric (float) | 12.32 |
| Exact Numeric (int) | 29 |
| Exact Numeric (int) | 681 |
| Exact Numeric (int) | -1477 |
| Exact Numeric (int) | 27 |
| Exact Numeric (int) | 31 |
| Approximate Numeric (float) | 12.32 |
| Approximate Numeric (float) | 13.82 |
| Exact Numeric (int) | 20 |
| Exact Numeric (int) | 70 |
| Exact Numeric (int) | -106 |
| Exact Numeric (int) | 209 |
| Approximate Numeric (float) | 8.00 |
| String (nvarchar) | NA |
| Approximate Numeric (float) | 0.3250 |
| String (nvarchar) | PASS |
| Approximate Numeric (float) | 29.6040 |

Table 6.7.2

### 6.7.2 Calibration Text Example

|Test|Calibration|28|{B990EC48-ED6E-430B-A28D-15371AA4D3B4}|13|20|1|25|350|34.62|1|30.60|18|27|12.32|29|681|-1477|27|31|12.32|13.82|20|70|-106|209|8.00|NA|0.3250|PASS|29.6040|

## 6.8 Switch

|  |  |
| --- | --- |
| Type of Dataset | Test |
| Dataset Name | Switch |
| Number of Dataset Columns | 14 |
| **Dataset** | |
| GUID | String |
| Transmit Antenna | Long Integer (1-4) |
| Antenna Switch Location | Long Integer (1-4) |
| Channel | Long Integer (0-34) |
| Transmit Packet Count | Long Integer |
| Duty Cycle | Double-precision floating-point format (%) |
| Power Meter Average Count | Long Integer |
| Offset | Double-precision floating-point format (dBm) |
| Upper Limit | Double-precision floating-point format (dBm) |
| Lower Limit | Double-precision floating-point format (dBm) |
| Power | Double-precision floating-point format (dBm) |
| Test Time | Double-precision floating-point format (seconds) |
| Result | String (PASS, FAIL or NA) |
| Elapsed\_Time | Double-precision float in milliseconds elapsed from test start |

Table 6.8.1

### 6.8.1 Switch Data Type Reference Table

|  |  |
| --- | --- |
| **Data Type** | **Example** |
| String (nvarchar) | Test |
| String (nvarchar) | Switch |
| Exact Numeric (int) | 14 |
| String (nvarchar) | {4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5} |
| Exact Numeric (int) | 1 |
| Exact Numeric (int) | 2 |
| Exact Numeric (int) | 8 |
| Exact Numeric (int) | 350 |
| Approximate Numeric (float) | 70.60 |
| Exact Numeric (int) | 1 |
| Approximate Numeric (float) | 25.70 |
| Approximate Numeric (float) | 1.00 |
| Approximate Numeric (float) | -50.0 |
| Approximate Numeric (float) | -22.43 |
| Approximate Numeric (float) | 0.4370 |
| String (nvarchar) | PASS |
| Approximate Numeric (float) | 78.6700 |

Table 6.8.2

### 6.8.2 Switch Data Type Reference Table

|Test|Switch|14|{4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5}|1|2|19|350|70.60|1|25.70|0.00|-50.0|-22.43|0.4370|PASS|78.6700|

## 6.9 TXPO

|  |  |
| --- | --- |
| Type of Dataset | Test |
| Dataset Name | TXPO |
| Number of Dataset Columns | 16 |
| **Dataset** | |
| GUID | **String** |
| Transmit Antenna | Long Integer (1-4) |
| Channel | Long Integer (0-34) |
| Transmit Packet Count | Long Integer |
| Duty Cycle | Double-precision floating-point format (%) |
| Power Meter Average Count | Long Integer |
| Offset | Double-precision floating-point format (dBm) |
| RF Data Rate | Long Integer (Mbit) |
| TXGC | Long Integer (0-63) |
| Temperature | Long Integer (Celsius) |
| Upper Limit | Double-precision floating-point format (dBm) |
| Lower Limit | Double-precision floating-point format (dBm) |
| Power | Double-precision floating-point format (dBm) |
| Test Time | Double-precision floating-point format (seconds) |
| Result | String (PASS, FAIL or NA) |
| Elapsed\_Time | Double-precision float in milliseconds elapsed from test start |

Table 6.9.1

### 6.9.1 TXPO Data Type Reference Table

|  |  |
| --- | --- |
| **Data Type** | **Example** |
| String (nvarchar) | Test |
| String (nvarchar) | TXPO |
| Exact Numeric (int) | 16 |
| String (nvarchar) | {4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5} |
| Exact Numeric (int) | 2 |
| Exact Numeric (int) | 8 |
| Exact Numeric (int) | 350 |
| Approximate Numeric (float) | 55.49 |
| Exact Numeric (int) | 1 |
| Approximate Numeric (float) | 20.04 |
| Exact Numeric (int) | 6 |
| Exact Numeric (int) | 37 |
| Exact Numeric (int) | 32 |
| Approximate Numeric (float) | 7.00 |
| Approximate Numeric (float) | 11.00 |
| Approximate Numeric (float) | 9.34 |
| Approximate Numeric (float) | 0.4810 |
| String (nvarchar) | PASS |
| Approximate Numeric (float) | 112.0 |

Table 6.9.2

### 6.9.2 TXPO Text Example

|Test|TXPO|16|{4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5}|2|8|350|55.49|1|20.04|6|37|32|7.00|11.00|9.34|0.4810|PASS|112.0|

## 6.10 PER

|  |  |
| --- | --- |
| Type of Dataset | Test |
| Dataset Name | PER |
| Number of Dataset Columns | 12 |
| **Dataset** | |
| GUID | String |
| Direction | String (TRANSMIT, RECEIVE, ECHO) |
| Transmit Antenna | Long Integer (1-4) |
| Channel | Long Integer (0-34) |
| Transmit Packet Count | Long Integer |
| RF Data Rate | Long Integer (Mbit) |
| RF Power | Long Integer |
| Receive Accuracy | Double-precision floating-point format (%) |
| Number of Packets Received | Long Integer |
| Test Time | Double-precision floating-point format (seconds) |
| Result | String (PASS, FAIL or NA) |
| Elapsed\_Time | Double-precision float in milliseconds elapsed from test start |

Table 6.10.1

### 6.10.1 PER Data Type Reference Table

|  |  |
| --- | --- |
| **Data Type** | **Example** |
| String (nvarchar) | Test |
| String (nvarchar) | PER |
| Exact Numeric (int) | 12 |
| String (nvarchar) | {4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5} |
| String (nvarchar) | TRANSMIT |
| Exact Numeric (int) | 2 |
| Exact Numeric (int) | 8 |
| Exact Numeric (int) | 100 |
| Exact Numeric (int) | 6 |
| Exact Numeric (int) | 0 |
| Approximate Numeric (float) | 7.50 |
| Exact Numeric (int) | 100 |
| Approximate Numeric (float) | 0.4810 |
| String (nvarchar) | PASS |
| Approximate Numeric (float) | 112.0 |

Table 6.10.2

### 6.10.2 PER Data Type Reference Table

|Test|PER|12|{4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5}|TRANSMIT|2|8|100|6|0|7.50|100|0.4810|PASS|112.0|

## 6.11 Gain

|  |  |
| --- | --- |
| Type of Dataset | Test |
| Dataset Name | GAIN |
| Number of Dataset Columns | 14 |
| **Dataset** | |
| GUID | string |
| Transmit Antenna | Long Integer (1) |
| Channel | Long Integer (0-34) |
| Transmit Packet Count | Long Integer |
| Duty Cycle | Double-precision floating-point format (%) |
| Power Meter Average Count | Long Integer |
| Offset | Double-precision floating-point format (dBm) |
| TXGC | Long Integer (0-63) |
| RF Data Rate | Long Integer (Mbit) |
| Gain | Long Integer (hex converted to integer) |
| Power | Double-precision floating-point format (dBm) |
| Test Time | Double-precision floating-point format (seconds) |
| Result | String (PASS, FAIL or NA) |
| Elapsed\_Time | Double-precision float in milliseconds elapsed from test start |

Table 6.11.1

### 6.11.1 Calibration Gain Data Type Reference Table

|  |  |
| --- | --- |
| **Data Type** | **Example** |
| String (nvarchar) | Test |
| String (nvarchar) | GAIN |
| Exact Numeric (int) | 14 |
| String (nvarchar) | {4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5} |
| Exact Numeric (int) | 1 |
| Exact Numeric (int) | 8 |
| Exact Numeric (int) | 350 |
| Approximate Numeric (float) | 55.49 |
| Exact Numeric (int) | 1 |
| Approximate Numeric (float) | 20.04 |
| Exact Numeric (int) | 20 |
| Exact Numeric (int) | 18 |
| Exact Numeric (int) | 14135 |
| Approximate Numeric (float) | 13.34 |
| Approximate Numeric (float) | 0.4810 |
| String (nvarchar) | PASS |
| Approximate Numeric (float) | 112.0 |

Table 6.11.2

### 6.11.2 Calibration Gain Text Example

|Test|GAIN|14|{4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5}|1|8|350|55.49|1|20.04|20|18|14135|13.34|0.4810|PASS|112.0|

## 6.12 Monitor

|  |  |
| --- | --- |
| Type of Dataset | Test |
| Dataset Name | Monitor |
| Number of Dataset Columns | 9 |
| **Dataset** | |
| GUID | String |
| Transmit Antenna | Long Integer (2) |
| Channel | Long Integer (0-34) |
| Transmit Packet Count | Long Integer |
| RF Data Rate | Long Integer (Mbit) |
| RF Power | Long Integer |
| Test Time | Double-precision floating-point format (seconds) |
| Result | String (PASS, FAIL or NA) |
| Elapsed\_Time | Double-precision float in milliseconds elapsed from test start |

Table 6.12.1

### 6.12.1 Monitor Data Type Reference Table

|  |  |
| --- | --- |
| **Data Type** | **Example** |
| String (nvarchar) | Test |
| String (nvarchar) | Monitor |
| Exact Numeric (int) | 9 |
| String (nvarchar) | {4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5} |
| Exact Numeric (int) | 1 |
| Exact Numeric (int) | 8 |
| Exact Numeric (int) | 200 |
| Exact Numeric (int) | 18 |
| Exact Numeric (int) | 4 |
| Approximate Numeric (float) | 0.4810 |
| String (nvarchar) | PASS |
| Approximate Numeric (float) | 112.0 |

Table 6.12.2

### 6.12.2 Monitor Radio Text Example

|Test|Monitor|9|{4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5}|1|8|200|18|4|0.4810|PASS|112.0|

## 6.13 Temperature Query

|  |  |
| --- | --- |
| Type of Dataset | Test |
| Dataset Name | TEMP |
| Number of Dataset Columns | 5 |
| **Dataset** | |
| GUID | String |
| Temperature | Long Integer (Celsius) |
| Test Time | Double-precision floating-point format (seconds) |
| Result | String (PASS, FAIL or NA) |
| Elapsed\_Time | Double-precision float in milliseconds elapsed from test start |

Table 6.13.1

### 6.13.1 Temperature Query Data Type Reference Table

|  |  |
| --- | --- |
| **Data Type** | **Example** |
| String (nvarchar) | Test |
| String (nvarchar) | TEMP |
| Exact Numeric (int) | 5 |
| String (nvarchar) | {4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5} |
| Exact Numeric (int) | 22 |
| Approximate Numeric (float) | 0.4810 |
| String (nvarchar) | PASS |
| Approximate Numeric (float) | 112.0 |

Table 6.13.2

### 6.13.2 Temperature Query Text Example

|Test|TEMP|5|{4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5}|22|0.4810|PASS|112.0|

## 6.14 Manufacturing Data

The Manufacturing data checksum is calculated by summing all of the bits in the manufacturing data sector (65536 bytes) into a 16 bit register, then inverting each bit.

Example calculation:

public UInt16 SWM\_Checksum(byte[] file)

{

UInt16 sum;

int i;

for (i = 0, sum = 0; i < file.Length; i++)

{

      sum += file[i];

}

    return (UInt16)(~sum);

}

|  |  |
| --- | --- |
| Type of Dataset | Info |
| Dataset Name | MFG |
| Number of Dataset Columns | 4 |
| **Dataset** | |
| GUID | String |
| Number of Bytes | Long Integer |
| Checksum | Long Integer |
| Elapsed\_Time | Double-precision float in milliseconds elapsed from test start |

Table 6.14.1

### 6.14.1 Manufacturing Data Type Reference Table

|  |  |
| --- | --- |
| **Data Type** | **Example** |
| String (nvarchar) | Info |
| String (nvarchar) | MFG |
| Exact Numeric (int) | 4 |
| String (nvarchar) | {4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5} |
| Exact Numeric (int) | 15 |
| Exact Numeric (int) | 7 |
| Approximate Numeric (float) | 112.0 |

Table 6.14.2

### 6.14.2 Manufacturing Data Text Example

|Info|MFG|4|{4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5}|15|7|112.0|

# Characterization Test Format Section

## 7.1 Rf Switch Select

|  |  |
| --- | --- |
| Type of Dataset | CHAR |
| Dataset Name | RfSwitchSelect |
| Number of Dataset Columns | 6 |
| **Dataset** | |
| GUID | String |
| Bank A switch position | Long Integer |
| Bank B switch position | Long Integer |
| Test Time | Double-precision floating-point format (seconds) |
| Results | String (PASS, FAIL or NA) |
| Elapsed\_Time | Double-precision float in milliseconds elapsed from test start |

Table 7.1.1

### 7.1.1 RF Switch Select Data Type Reference Table

|  |  |
| --- | --- |
| **Data Type** | **Example** |
| String (nvarchar) | CHAR |
| String (nvarchar) | RfSwitchSelect |
| Exact Numeric (int) | 6 |
| String(nvarchar) | {4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5} |
| Exact Numeric (int) | 2 |
| Exact Numeric (int) | 6 |
| Approximate Numeric (float) | 0.051 |
| String (nvarchar) | PASS |
| Approximate Numeric (float) | 112.0 |

Table 7.1.2

### 7.1.2 RF Switch Select Text Example

|CHAR|RfSwitchSelect|6|{4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5}|2|6|0.0510|PASS|112.0|

## 7.2 Delay

|  |  |
| --- | --- |
| Type of Dataset | CHAR |
| Dataset Name | Delay |
| Number of Dataset Columns | 5 |
| **Dataset** | |
| GUID | String |
| Delay (milliseconds) | Long Integer |
| Test Time | Double-precision floating-point format (seconds) |
| Results | String (PASS, FAIL or NA) |
| Elapsed\_Time | Double-precision float in milliseconds elapsed from test start |

Table 7.2.1

### 7.2.1 Delay Data Type Reference Table

|  |  |
| --- | --- |
| **Data Type** | **Example** |
| String (nvarchar) | CHAR |
| String (nvarchar) | Delay |
| Exact Numeric (int) | 5 |
| String(nvarchar) | {4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5} |
| Exact Numeric (int) | 5000 |
| Approximate Numeric (float) | 5.051 |
| String (nvarchar) | PASS |
| Approximate Numeric (float) | 112.0 |

Table 7.2.2

### 7.2.2 Delay Text Example

|CHAR|Delay|5|{4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5}|5000|5.0510|PASS|112.0|

## 7.3 Temperature Compensation

|  |  |
| --- | --- |
| Type of Dataset | CHAR |
| Dataset Name | TemperatureCompensation |
| Number of Dataset Columns | 5 |
| **Dataset** | |
| GUID | String |
| Temperature Compensation | String (ON/OFF) |
| Test Time | Double-precision floating-point format (seconds) |
| Results | String (PASS, FAIL or NA) |
| Elapsed\_Time | Double-precision float in milliseconds elapsed from test start |

Table 7.3.1

### 7.3.1 Temperature Compensation Data Type Reference Table

|  |  |
| --- | --- |
| **Data Type** | **Example** |
| String (nvarchar) | CHAR |
| String (nvarchar) | TemperatureCompensation |
| Exact Numeric (int) | 5 |
| String(nvarchar) | {4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5} |
| String (nvarchar) | OFF |
| Approximate Numeric (float) | 5.051 |
| String (nvarchar) | PASS |
| Approximate Numeric (float) | 112.0 |

Table 7.3.2

### 7.3.2 Temperature Compensation Text Example

|CHAR|TemperatureCompensation|5|{4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5}|OFF|5.0510|PASS|112.0|

## 7.4 PDout Query

|  |  |
| --- | --- |
| Type of Dataset | CHAR |
| Dataset Name | PDoutQuery |
| Number of Dataset Columns | 5 |
| **Dataset** | |
| GUID | String |
| PDout Value | Long Integer |
| Test Time | Double-precision floating-point format (seconds) |
| Results | String (PASS, FAIL or NA) |
| Elapsed\_Time | Double-precision float in milliseconds elapsed from test start |

Table 7.4.1

### 7.4.1 PDout Query Data Type Reference Table

|  |  |
| --- | --- |
| **Data Type** | **Example** |
| String (nvarchar) | CHAR |
| String (nvarchar) | PDoutQuery |
| Exact Numeric (int) | 5 |
| String(nvarchar) | {4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5} |
| Exact Numeric (int) | 476 |
| Approximate Numeric (float) | 5.051 |
| String (nvarchar) | PASS |
| Approximate Numeric (float) | 112.0 |

Table 7.4.2

### 7.4.2 PDout Query Text Example

|CHAR|PDoutQuery|5|{4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5}|476|5.0510|PASS|112.0|

## 7.5 Get Channel

|  |  |
| --- | --- |
| Type of Dataset | CHAR |
| Dataset Name | GetChannel |
| Number of Dataset Columns | 6 |
| **Dataset** | |
| GUID | String |
| Antenna | Long Integer |
| Channel Query | Long Integer |
| Test Time | Double-precision floating-point format (seconds) |
| Results | String (PASS, FAIL or NA) |
| Elapsed\_Time | Double-precision float in milliseconds elapsed from test start |

Table 7.5.1

### 7.5.1 Get Channel Data Type Reference Table

|  |  |
| --- | --- |
| **Data Type** | **Example** |
| String (nvarchar) | CHAR |
| String (nvarchar) | GetChannel |
| Exact Numeric (int) | 6 |
| String(nvarchar) | {4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5} |
| Exact Numeric (int) | 2 |
| Exact Numeric (int) | 8 |
| Approximate Numeric (float) | 5.051 |
| String (nvarchar) | PASS |
| Approximate Numeric (float) | 112.0 |

Table 7.5.2

### 7.5.2 Get Channel Text Example

|CHAR|GetChannel|6|{4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5}|2|8|5.0510|PASS|112.0|

## 7.6 Set Channel

|  |  |
| --- | --- |
| Type of Dataset | CHAR |
| Dataset Name | SetChannel |
| Number of Dataset Columns | 6 |
| **Dataset** | |
| GUID | String |
| Antenna | Long Integer |
| Channel Query | Long Integer |
| Test Time | Double-precision floating-point format (seconds) |
| Results | String (PASS, FAIL or NA) |
| Elapsed\_Time | Double-precision float in milliseconds elapsed from test start |

Table 7.6.1

### 7.6.1 Set Channel Data Type Reference Table

|  |  |
| --- | --- |
| **Data Type** | **Example** |
| String (nvarchar) | CHAR |
| String (nvarchar) | SetChannel |
| Exact Numeric (int) | 6 |
| String(nvarchar) | {4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5} |
| Exact Numeric (int) | 2 |
| Exact Numeric (int) | 8 |
| Approximate Numeric (float) | 5.051 |
| String (nvarchar) | PASS |
| Approximate Numeric (float) | 112.0 |

Table 7.6.2

### 7.6.2 Set Channel Text Example

|CHAR|SetChannel|6|{4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5}|2|8|5.0510|PASS|112.0|

## 7.7 Register Read

|  |  |
| --- | --- |
| Type of Dataset | CHAR |
| Dataset Name | RegisterRead |
| Number of Dataset Columns | 6 |
| **Dataset** | |
| GUID | String |
| Address | Long Integer |
| Register | Long Integer |
| Test Time | Double-precision floating-point format (seconds) |
| Results | String (PASS, FAIL or NA) |
| Elapsed\_Time | Double-precision float in milliseconds elapsed from test start |

Table 7.7.1

### 7.7.1 Register Read Type Reference Table

|  |  |
| --- | --- |
| **Data Type** | **Example** |
| String (nvarchar) | CHAR |
| String (nvarchar) | RegisterRead |
| Exact Numeric (int) | 6 |
| String(nvarchar) | {4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5} |
| Exact Numeric (int) | 4198424 |
| Exact Numeric (int) | 12 |
| Approximate Numeric (float) | 5.051 |
| String (nvarchar) | PASS |
| Approximate Numeric (float) | 112.0 |

Table 7.7.2

### 7.7.2 Register Read Text Example

|CHAR|RegisterRead|6|{4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5}|4198424|12|5.0510|PASS|112.0|

## 7.8 Register Write

|  |  |
| --- | --- |
| Type of Dataset | CHAR |
| Dataset Name | RegisterWrite |
| Number of Dataset Columns | 6 |
| **Dataset** | |
| GUID | String |
| Address | Long Integer |
| Data | Long Integer |
| Test Time | Double-precision floating-point format (seconds) |
| Results | String (PASS, FAIL or NA) |
| Elapsed\_Time | Double-precision float in milliseconds elapsed from test start |

Table 7.8.1

### 7.8.1 Register Write Type Reference Table

|  |  |
| --- | --- |
| **Data Type** | **Example** |
| String (nvarchar) | CHAR |
| String (nvarchar) | RegisterWrite |
| Exact Numeric (int) | 6 |
| String(nvarchar) | {4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5} |
| Exact Numeric (int) | 4198425 |
| Exact Numeric (int) | 12 |
| Approximate Numeric (float) | 5.051 |
| String (nvarchar) | PASS |
| Approximate Numeric (float) | 112.0 |

Table 7.8.2

### 7.8.2 Register Write Text Example

|CHAR|RegisterWrite|6|{4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5}|4198425|12|5.0510|PASS|112.0|

## 7.9 Timeout Override

|  |  |
| --- | --- |
| Type of Dataset | CHAR |
| Dataset Name | TimeoutOverride |
| Number of Dataset Columns | 5 |
| **Dataset** | |
| GUID | String |
| Timeout Override Value | Long Integer |
| Test Time | Double-precision floating-point format (seconds) |
| Results | String (PASS, FAIL or NA) |
| Elapsed\_Time | Double-precision float in milliseconds elapsed from test start |

Table 7.9.1

### 7.9.1 Timeout Override Type Reference Table

|  |  |
| --- | --- |
| **Data Type** | **Example** |
| String (nvarchar) | CHAR |
| String (nvarchar) | TimeoutOverride |
| Exact Numeric (int) | 5 |
| String(nvarchar) | {4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5} |
| Exact Numeric (int) | 5 |
| Approximate Numeric (float) | 5.051 |
| String (nvarchar) | PASS |
| Approximate Numeric (float) | 112.0 |

Table 7.9.2

### 7.9.2 Timeout Override Text Example

|CHAR|TimeoutOverride|5|{4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5}|5|5.0510|PASS|112.0|

## 7.10 Transmit Power Write

|  |  |
| --- | --- |
| Type of Dataset | CHAR |
| Dataset Name | TransmitPowerWrite |
| Number of Dataset Columns | 5 |
| **Dataset** | |
| GUID | String |
| Transmit Power Write Value | Long Integer |
| Test Time | Double-precision floating-point format (seconds) |
| Results | String (PASS, FAIL or NA) |
| Elapsed\_Time | Double-precision float in milliseconds elapsed from test start |

Table 7.10.1

### 7.10.1 Timeout Override Type Reference Table

|  |  |
| --- | --- |
| **Data Type** | **Example** |
| String (nvarchar) | CHAR |
| String (nvarchar) | TransmitPowerWrite |
| Exact Numeric (int) | 5 |
| String(nvarchar) | {4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5} |
| Exact Numeric (int) | 18 |
| Approximate Numeric (float) | 5.051 |
| String (nvarchar) | PASS |
| Approximate Numeric (float) | 112.0 |

Table 7.10.2

### 7.10.2 Timeout Override Text Example

|CHAR|TransmitPowerWrite|5|{4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5}|18|5.0510|PASS|112.0|

## 7.11 Transmit Power Read

|  |  |
| --- | --- |
| Type of Dataset | CHAR |
| Dataset Name | TransmitPowerRead |
| Number of Dataset Columns | 5 |
| **Dataset** | |
| GUID | String |
| Transmit Power Read Value | Long Integer |
| Test Time | Double-precision floating-point format (seconds) |
| Results | String (PASS, FAIL or NA) |
| Elapsed\_Time | Double-precision float in milliseconds elapsed from test start |

Table 7.11.1

### 7.11.1 Timeout Override Type Reference Table

|  |  |
| --- | --- |
| **Data Type** | **Example** |
| String (nvarchar) | CHAR |
| String (nvarchar) | TransmitPowerRead |
| Exact Numeric (int) | 5 |
| String(nvarchar) | {4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5} |
| Exact Numeric (int) | 18 |
| Approximate Numeric (float) | 5.051 |
| String (nvarchar) | PASS |
| Approximate Numeric (float) | 112.0 |

Table 7.11.2

### 7.11.2 Timeout Override Text Example

|CHAR|TransmitPowerWrite|5|{4CECDD9D-B2BD-4E0E-BBF3-FD9E93467CE5}|18|5.0510|PASS|112.0|