

**TekExpress™ Serial ATA
Automated Compliance Solutions
Quick Start User Manual**



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Quick Start User Manual**

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- Worldwide, visit www.tektronix.com to find contacts in your area.

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Table of Contents

General Safety Summary	iii
Preface	iv
Key Features	iv
Documentation	v
Install the Application	1
Before Installation	1
Installation	1
Starting the Application	1
Closing the Application	1
Using TekExpress Application	3
Process Flow	3
Select a Test	3
Configure the Test(s)	4
View and Select Connected Instruments	6
Run the Test	7
View the Progress of Acquisition	7
View the Progress of Analysis	8
View the Report	9
Application Examples	11
RSG-RMT Suite	11
Testing RSG-01 - Gen1 (1.5 Gb/s) Receiver Signalling Group on a Drive	11
Testing RSG-02 - Gen2 (3.0Gb/s) Receiver Signalling Group on a Host	16
PHY-TSG-OOB Suite	20
Testing PHY01 - Unit Interval Test-Gen1 on a Drive	21
Testing TSG03 - Differential Skew-Gen 2 on a Host	25
Testing OOB01 - OOB Signal Detection Threshold-Gen1 on a Drive	29
Rx-Tx Suite	33
Testing TX02 - Single-Ended Impedance on a Drive	33
SI Suite	37
Testing SI-02 - Cable Absolute Differential Impedance on a SATA Cable	37
Index	

General Safety Summary

Review the following safety precautions to avoid injury and prevent damage to this product or any products connected to it.

To avoid potential hazards, use this product only as specified.

Only qualified personnel should perform service procedures.

While using this product, you may need to access other parts of a larger system. Read the safety sections of the other component manuals for warnings and cautions related to operating the system.

To Avoid Fire or Personal Injury

Connect and Disconnect Properly. Connect the probe output to the measurement instrument before connecting the probe to the circuit under test. Connect the probe reference lead to the circuit under test before connecting the probe input. Disconnect the probe input and the probe reference lead from the circuit under test before disconnecting the probe from the measurement instrument.

Observe All Terminal Ratings. To avoid fire or shock hazard, observe all ratings and markings on the product. Consult the product manual for further ratings information before making connections to the product.

Do Not Operate Without Covers. Do not operate this product with covers or panels removed.

Do Not Operate With Suspected Failures. If you suspect that there is damage to this product, have it inspected by qualified service personnel.

Avoid Exposed Circuitry. Do not touch exposed connections and components when power is present.

Terms in this Manual

These terms may appear in this manual:



WARNING. Warning statements identify conditions or practices that could result in injury or loss of life.



CAUTION. Caution statements identify conditions or practices that could result in damage to this product or other property.

Preface

TekExpress is the Tektronix Compliance Test Automation Framework, developed to support current and future test automation needs of customers. Developed using National Instruments' TestStand, TekExpress leverages on the capabilities of Microsoft .NET framework. It uses a highly modular architecture that enables deploying automated test solutions for various serial standards in a relatively short time. This release of TekExpress provides compliance test automation solutions for the Serial ATA Gen 1 and Gen 2 standard.

Options that are available with TekExpress Serial ATA are:

- PHY-TSG-OOB Test Suite
- RSG-RMT Test Suite
- Rx-Tx Test Suite
- TekExpress SATA Bundle for Host and Drive Test Suite
- SI Cable Tests for TekExpress SATA

Key Features








The application provides the following features:

- Complete SATA Gen1 and Gen2 Test Coverage for Hosts, Drives and Cables.
- Completely automated single button solution.
- Significant reduction in testing time through automation.
- All 150+ measurements, (UTD 1.2 and UTD 1.3 conformant) SATA II Gen1/Gen2 MOIs.
- Single and simple Microsoft Windows XP user interface for multi-instrument testing.
- Repeatable and accurate results.
- Automatic HTML report and SATA-IO (MS Excel) scorecard generation.
- Receiver Margin Testing.
- Direct Synthesis and Device State control eliminates the need for multiple sources.
- Powered by NI TestStand™
- Seamlessly integrate with high-level TestStand Automation Layer.

Documentation

This manual describes the basic installation and operation of the TekExpress application. For more detailed information, see the online help and installation manuals. The following information is available for this product:

Table i: Related documents

TekExpress Serial ATA Online Help, English	076-0096-xx		Start > Programs > Tektronix > TekExpress > TekExpress SATA > Help
TekExpress Serial ATA User Manual, English (PDF)	077-0044-xx		 (Documents folder)
TekExpress Serial ATA Quick Start User Manual, English (PDF)	071-2298-xx		
		C:\Program Files > Tektronix > TekExpress > Documents	
TekExpress Serial ATA Installation Manual, English (PDF)	071-2268-xx		 (Documents folder)

Install the Application

The TekExpress application must be installed on a computer or on a Tektronix oscilloscope.

Before Installation


- Refer to the *TekExpress Serial ATA Automated Compliance Solutions Installation Manual* to find out about the prerequisites.
- Read the `Readme.txt` file on the product software DVD.

Installation

1. Close all applications.
2. Insert the product software DVD into the DVD-ROM drive of the computer or oscilloscope.
3. The installation wizard will guide you through the installation. For information on installation, refer to *TekExpress Serial ATA Automated Compliance Solutions Installation Manual*.
4. The software files will be installed in `C:\Program Files\Tektronix\TekExpress`.

Starting the Application

To start the software do one of the following:

- From the Start menu, select **Start > Programs > Tektronix > TekExpress > TekExpress SATA**.
- Double-click  on the desktop.

Closing the Application

To close the application, do either of the following:

- Select **File > Exit**.
- Click .

Using other methods to exit the application will result in abnormal termination.

Using TekExpress Application

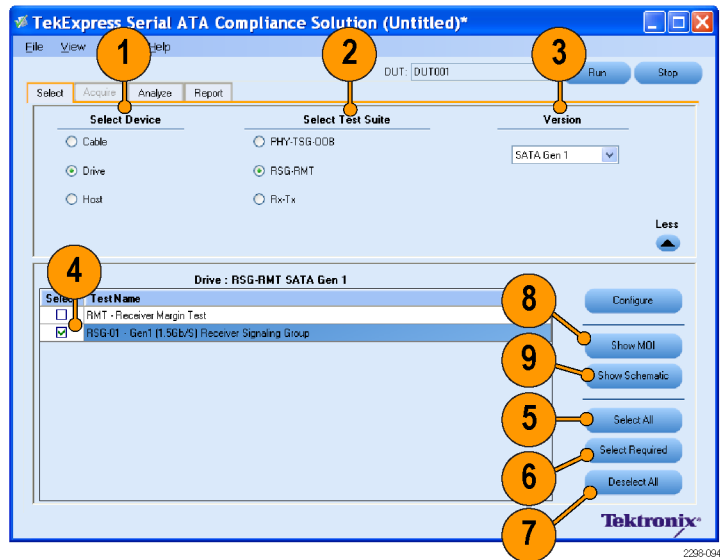
Process Flow

Follow steps 1 to 6 to select and run a test to check for compliance. Details for each of these actions are given on the following pages.

1. Select a device.
2. Select the test suite, choose the version.
3. Select the test.
4. Configure the test parameters.
5. View and select connected instruments.
6. Run the test.
7. View the progress of acquisition.
8. View the progress of analysis.
9. View and print the generated report.

Select a Test

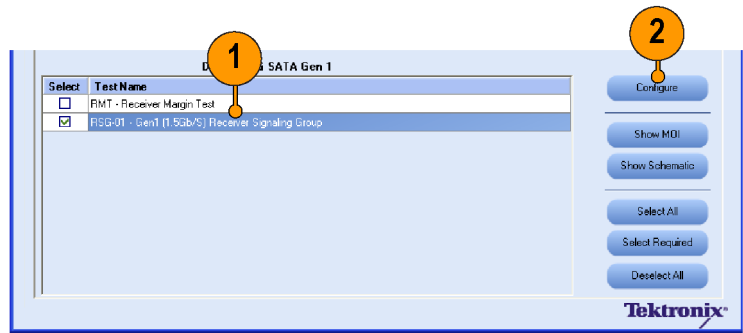
1. Select a Device type.
2. Select the Test Suite.
3. Choose the version of the selected test suite from the **Version** drop-down list.
4. Select the test you want to run.
You can select multiple tests from the list.
5. To select all the tests in the list, click **Select All**.
6. To select only the mandatory tests, click **Select Required**.
7. Click **Deselect All**, to disable the tests.
8. To see the Method Of Implementation of the selected test, click **Show MOI**.
9. To see the schematic diagram of the test setup, click **Show Schematic**.



Configure the Test(s)

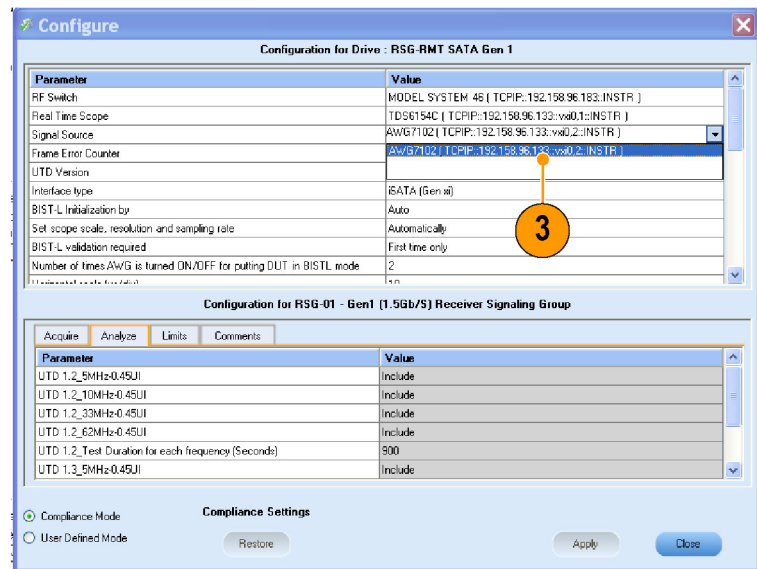
1. Highlight the test you want to configure by clicking the test name.

2. Click **Configure**.



2298-021

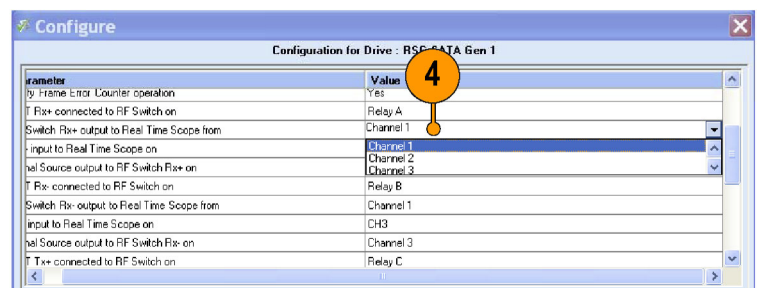
3. If multiple instruments are connected, choose the correct instrument from the drop-down list in the general parameters tab.



0142-002

4. Verify schematic related parameters such as "Channel of the Oscilloscope" and so on.

NOTE. The default setup is according to the schematic provided with the test suite.



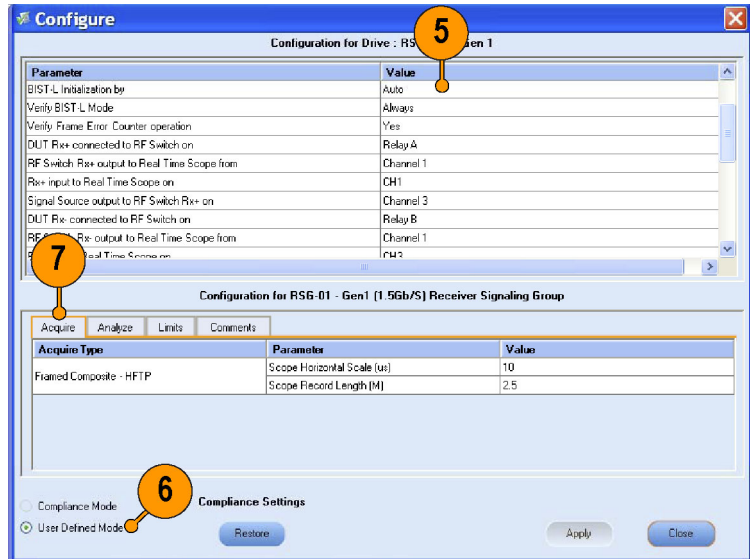
2298-016

- You can also change miscellaneous parameters such as "BIST-L Initialization by".

NOTE. General parameters are common to all tests, and can be edited even in the Compliance Mode. However, cells that are grayed cannot be modified in the Compliance Mode.

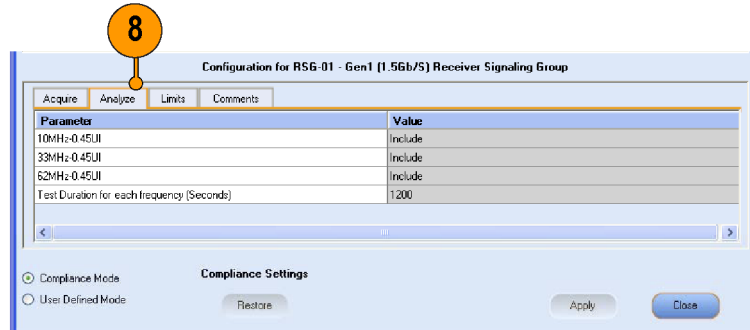
You can generally use the default settings in Compliance Mode.

- To configure the test parameters, select **User Defined Mode**.
- Click the **Acquire** tab to edit parameters related to acquisition.



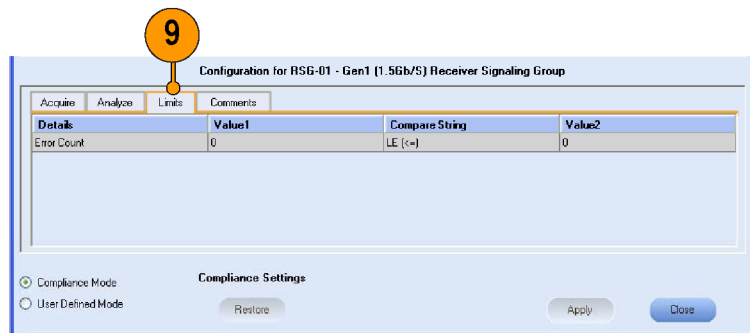
2298-015

- Click the **Analyze** tab to edit Analysis parameters.



2298-011

- View the measurement limits in the **Limits** tab.
Refer to the Online Help for various test limit comparisons.

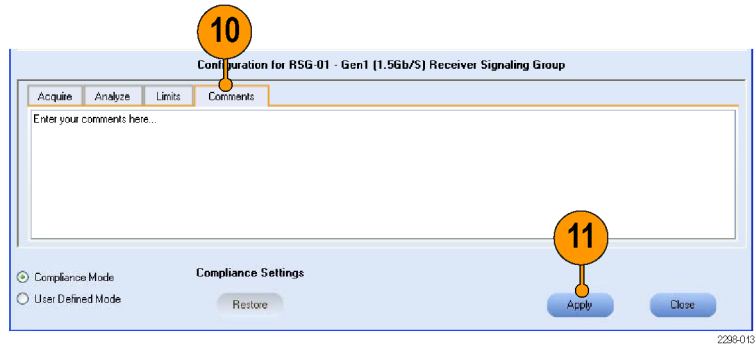


2298-019

10. You can enter test related comments in the **Comments** tab.

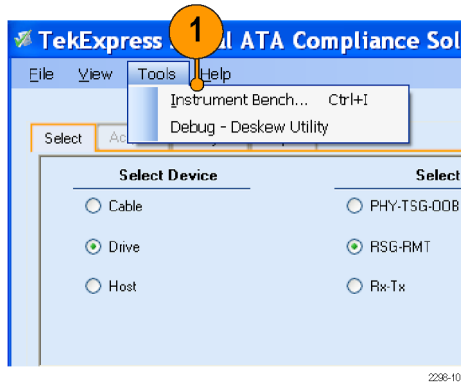
NOTE. If you want to change the settings to default, click **Restore**. This option will restore the settings to Compliance Mode.

11. Click **Apply**.
Use the File Menu to Save the session.

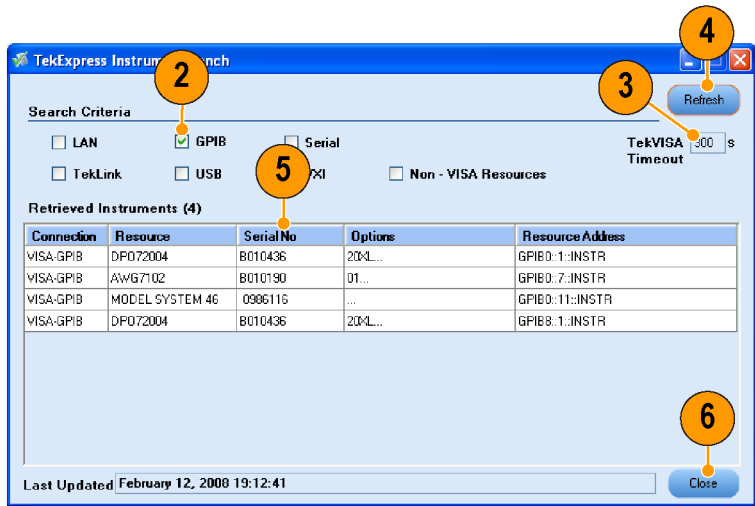


View and Select Connected Instruments

1. Click **Tools > Instrument Bench**.

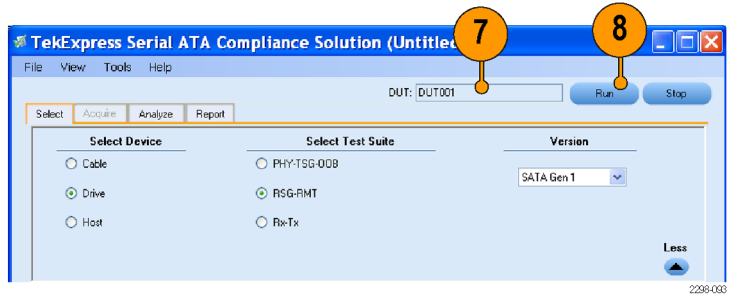


2. Select any of the **Search Criteria**.
3. Enter the time in seconds in the **TekVISA Timeout** field.
4. Click **Refresh**.
5. The results of the instrument search are displayed in the **Retrieved Instruments** table.
6. Click **Close**.



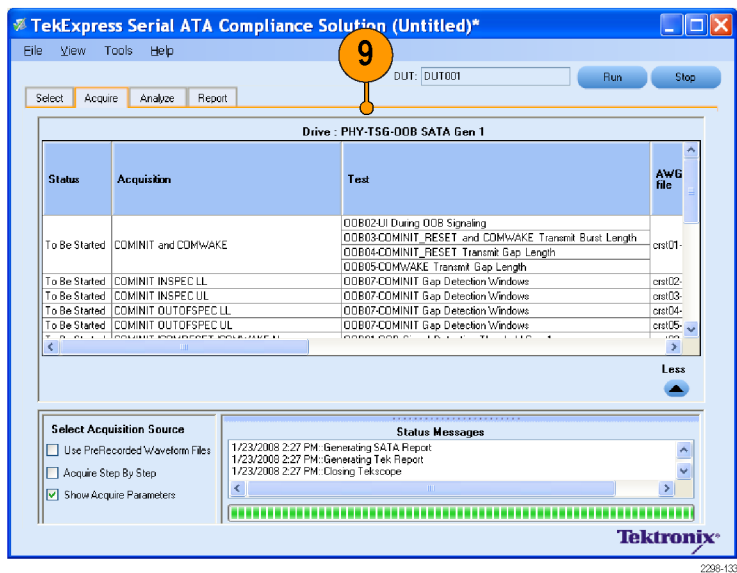
Run the Test

7. Enter the ID of the Device to be tested in the **DUT** field.
8. Click **Run** to run the test.



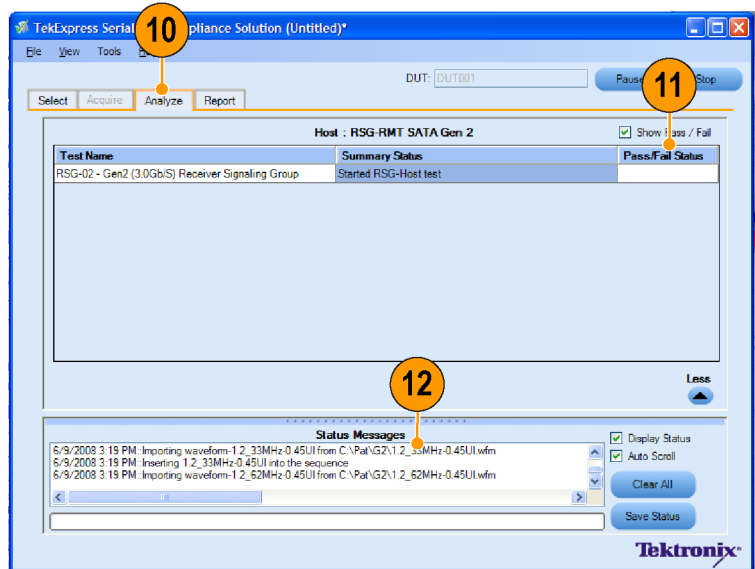
View the Progress of Acquisition

9. The Acquire panel shows the waveform acquisition details for the tests in the currently selected test suite.



View the Progress of Analysis

10. When the tests are running, the status and progress of the tests are displayed in the **Analyze** tab. The application checks to see if the device has passed the test.
11. You can select **Show Pass/Fail** option to know whether the test has passed or failed.
12. The Status Messages window time stamps all runtime messages and displays them.



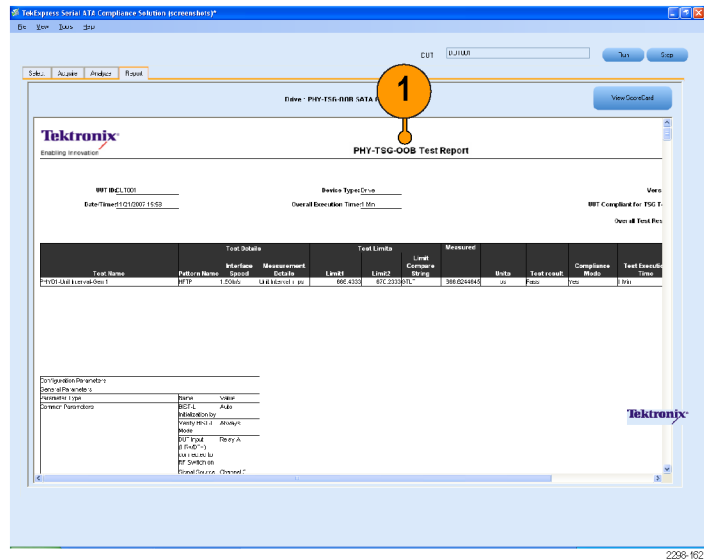
0142-004

View the Report

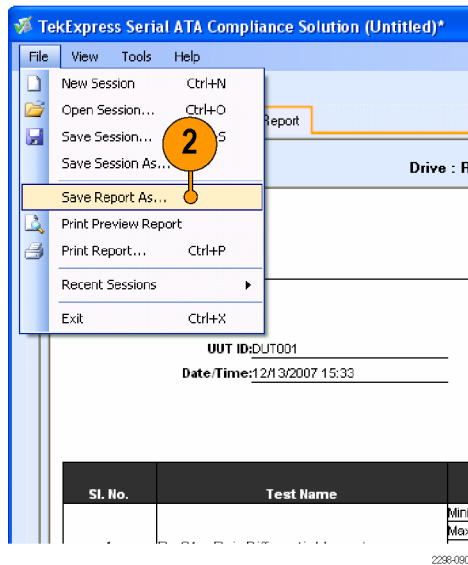
You can generate and print a detailed report as described here.

1. After you have successfully run one or more test(s), a report summary is generated in HTML format.

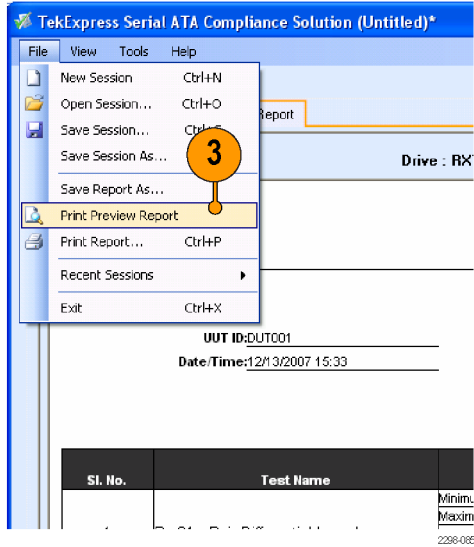
NOTE. Select “View Scorecard” to view the test result in standard specific format.



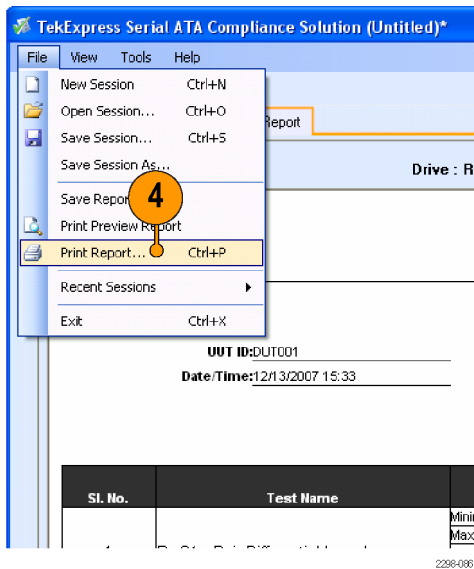
2. To save the report summary in the desired location, select **File > Save Report As**.



3. To preview the report before printing, select **File > Print Preview Report**.



4. Select **File > Print Report**.



Application Examples

RSG-RMT Suite

Testing RSG-01 - Gen1 (1.5 Gb/s) Receiver Signalling Group on a Drive

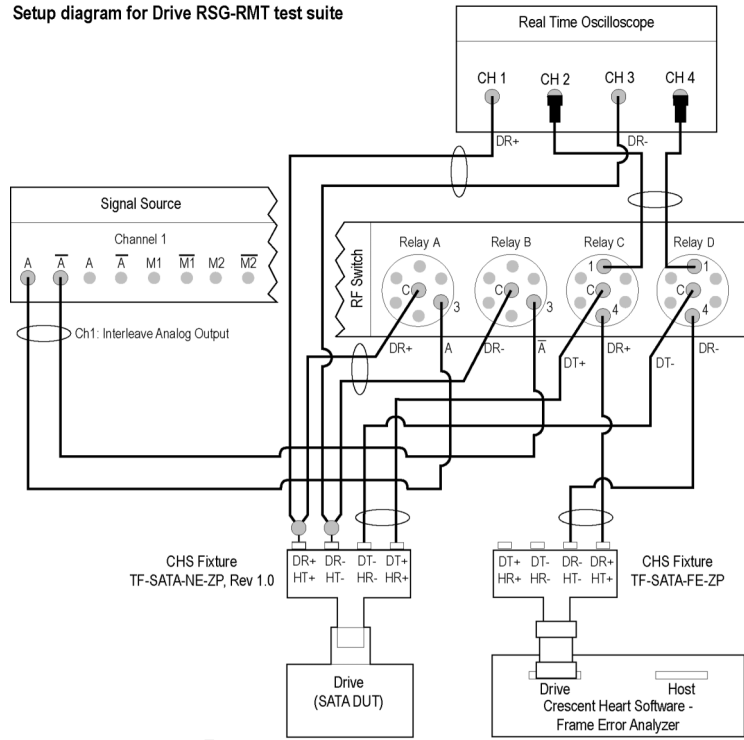
The following equipment is required to set up the application:

Resource	Model supported
Signal Source	Tektronix AWG7102 (Option 6)
Real Time Oscilloscope	<ul style="list-style-type: none"> ■ Tektronix DPO/DSA 72004, DPO/DSA 71604, DPO/DSA 71254, TDS6154C, and TDS6124C ■ For Gen1– only testing, the following oscilloscopes are also acceptable: DPO/DSA 70804 or TDS6804B
RF Switch	Keithley S46-6666A
Frame Error Analyzer	Crescent Heart Software SATA II probe adapter
Test Fixture	Crescent Heart Software Fixture TF-SATA-NE-ZP, TF-SATA-FE-ZP
DUT	A SATA Drive to test

This test verifies that the SATA Gen1 Drive device will receive a 1.5 Gbps stressed data pattern without receive errors.

1. Connect the DUT to the equipment as shown in the connection diagram.

Setup diagram for Drive RSG-RMT test suite



Matched pair of SMA cables

6 dB attenuators

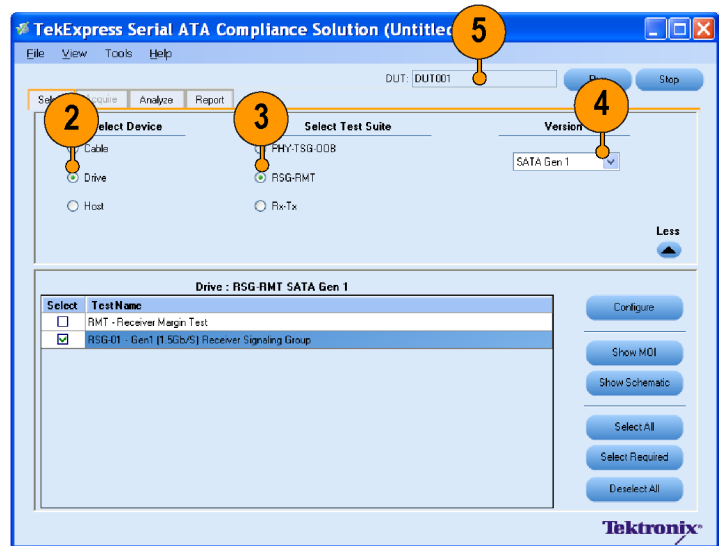
NOTE: Terminate all unused outputs on the RF Switch with 50 ohms.
 Terminate all unused ports on the CHS test fixtures with 50 ohms.

CAUTION: Do not connect the output of the signal source directly to the CHS fixture. The signal must go through the RF Switch.

The CHS fixture notations in the schematic are with reference to Rev 1.0 of the fixture. If you are using fixtures before Rev 1.0, the fixture notations are in reverse order. For example, DT+/HR+ should be read as DR+/HT+.

If DUT Power Cycle sequence is automated using DC output of Signal Source, then do the following:
 -Connect Channel-1 of DC output to pin #14 (and pin #15 to GND) in case of 20 pin Molex connector of AT/ATX power supply.
 -Connect Channel-1 of DC output to pin #16 (and pin #17 to GND) in case of 24 pin Molex connector of AT/ATX power supply.

2. Select **Drive** as the device type.
3. Select **RSG-RMT** as the Test Suite.
4. Select **SATA Gen 1** as the test suite version.
5. Enter the DUT ID in the DUT field.

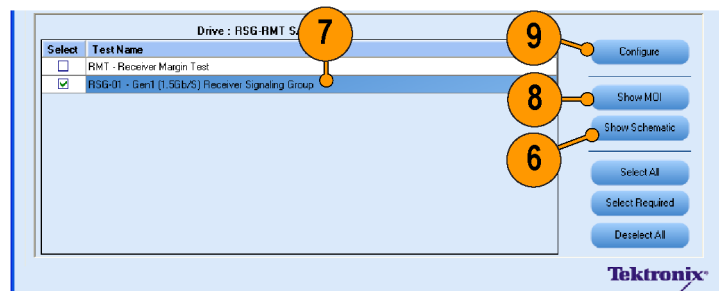


2298-147

6. If you want to verify the test setup before running the tests, click **Show Schematic**.
7. Select **RSG-01 – Gen 1 (1.5 Gb/S) Receiver Signalling Group**.

NOTE. RSG-01 - Gen 1 (1.5 Gb/Sec) Receiver Signalling Group will be a compliance test which is a mandatory test.

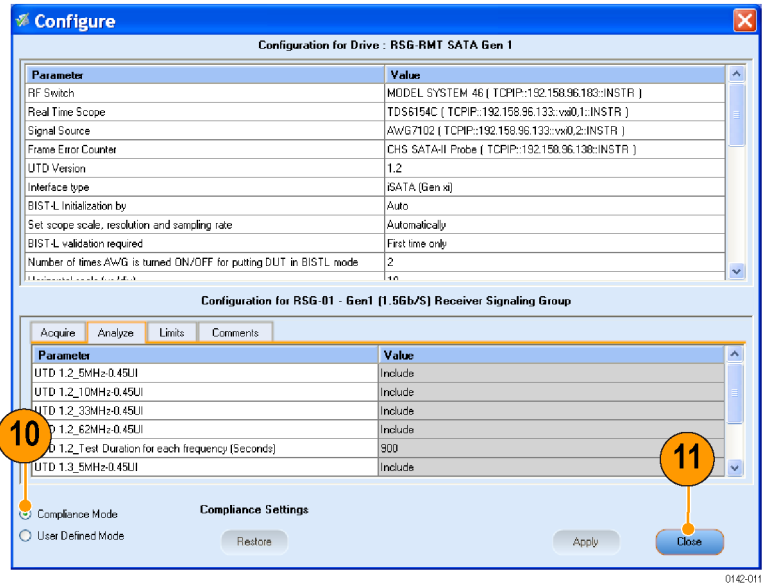
8. To view the Method of Implementation for the RSG-RMT test, click **Show MOI** in the application.
9. Click **Configure** to open the Configuration panel.



2298-148

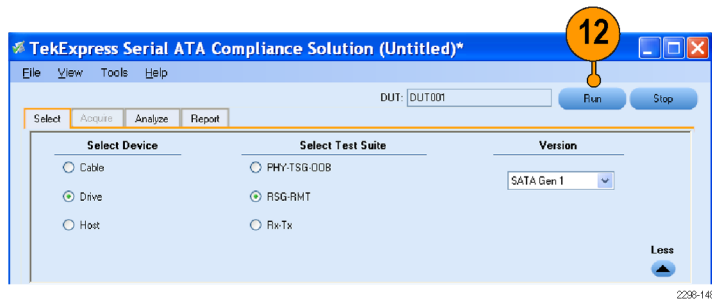
10. You can generally use the default values in the **Compliance Mode**.

11. Click **Close**.



0142-011

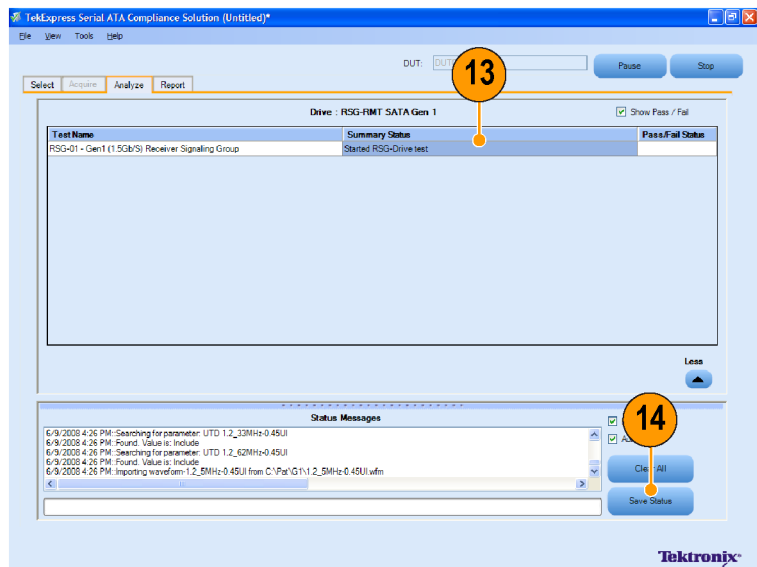
12. Click **Run** to run the test.



2298-148

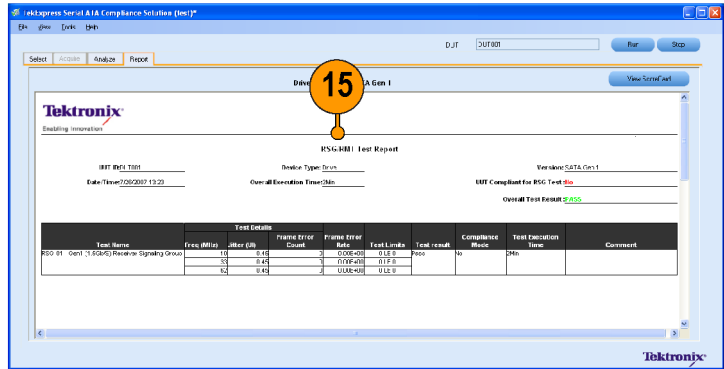
13. Observe that only the **RSG-01 – Gen 1 (1.5 Gb/S) Receiver Signalling Group** is checked for compliance. Other tests are skipped. The status of the tests is displayed in the **Status Messages** window.

14. Click **Save Status** to save the status messages.



0142-012

- When the tests complete, a report appears in the **Report** panel.



2398-144

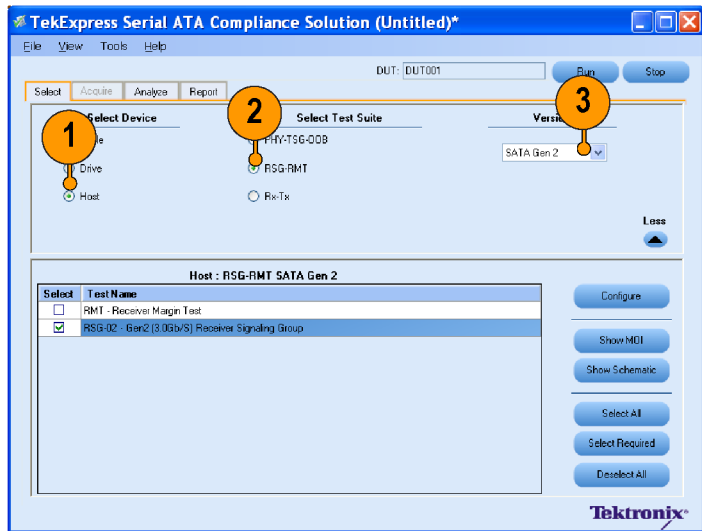
Testing RSG-02 - Gen2 (3.0Gb/s) Receiver Signalling Group on a Host

This test verifies that the SATA Host device will receive a 3.0 Gbps stressed data pattern without receive errors.

The following equipment is required to set up the application:

Resource	Model supported
Signal Source	Tektronix AWG7102 (Option 6)
Real Time Oscilloscope	<ul style="list-style-type: none"> ■ Tektronix DPO/DSA 72004, DPO/DSA 71604, DPO/DSA 71254, TDS6154C, and TDS6124C ■ For Gen1- only testing, the following oscilloscopes are also acceptable: DPO/DSA 70804 or TDS6804B
RF Switch	Keithley S46-6666A
Frame Error Analyzer	Crescent Heart Software SATA II probe adaptor
Test Fixture	Crescent Heart Software Fixture TF-SATA-NE-ZP, TF-SATA-FE-ZP
DUT	A SATA Host to test

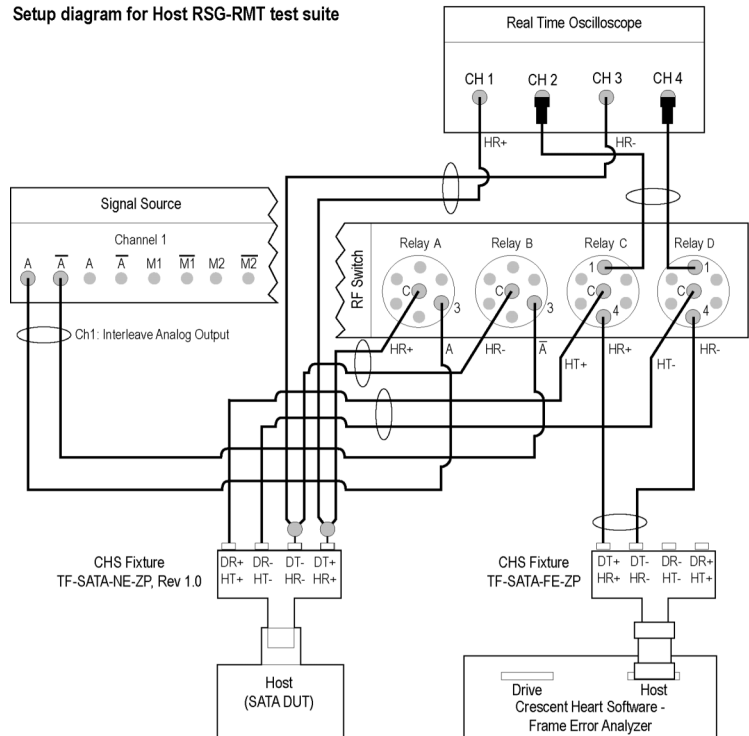
1. Select **Host** as the device type.
2. Select **RSG-RMT** as the test suite.
3. Select **SATA Gen 2** as the test suite version.



2298-153

4. Connect the DUT to the equipment as shown in the setup diagram.

Setup diagram for Host RSG-RMT test suite



Matched pair of SMA cables

6 dB attenuators

NOTE: Terminate all unused outputs on the RF Switch with 50 ohms.
 Terminate all unused ports on the CHS test fixtures with 50 ohms.

CAUTION: Do not connect the output of the signal source directly to the CHS fixture. The signal must go through the RF Switch.

The CHS fixture notations in the schematic are with reference to Rev 1.0 of the fixture. If you are using fixtures before Rev 1.0, the fixture notations are in reverse order. For example, DT+/HR+ should be read as DR+/HT+.

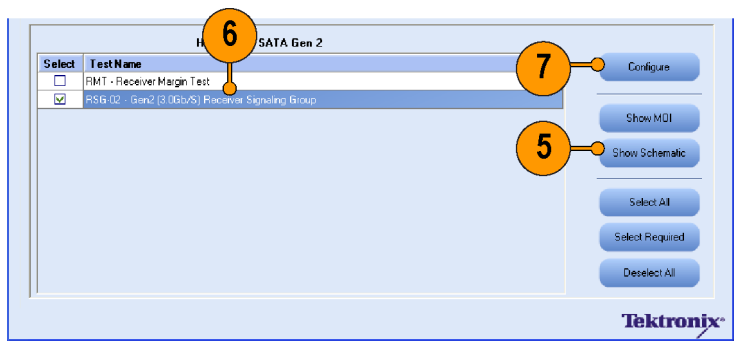
If DUT Power Cycle sequence is automated using DC output of Signal Source, then do the following:
 -Connect Channel-1 of DC output to pin #14 (and pin #15 to GND) in case of 20 pin Molex connector of AT/ATX power supply.
 -Connect Channel-1 of DC output to pin #16 (and pin #17 to GND) in case of 24 pin Molex connector of AT/ATX power supply.

5. To verify the test setup before running the tests, click **Show Schematic**.

6. Select **RSG-02 - Gen2 (3.0 Gb/s) Receiver Signalling Group**.

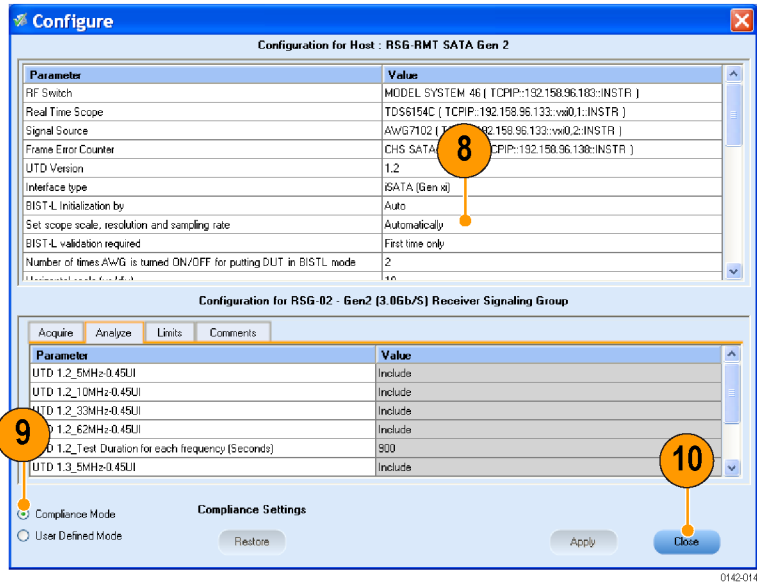
NOTE. RSG-02 - Gen2 (3.0 Gb/s) Receiver Signalling Group is a compliance test.

7. Click **Configure** if you want to configure the test parameters in the Configure panel.

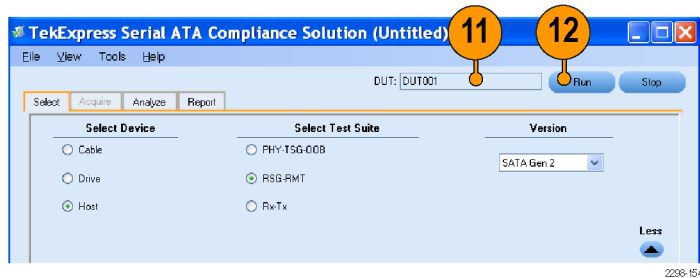


2298-031

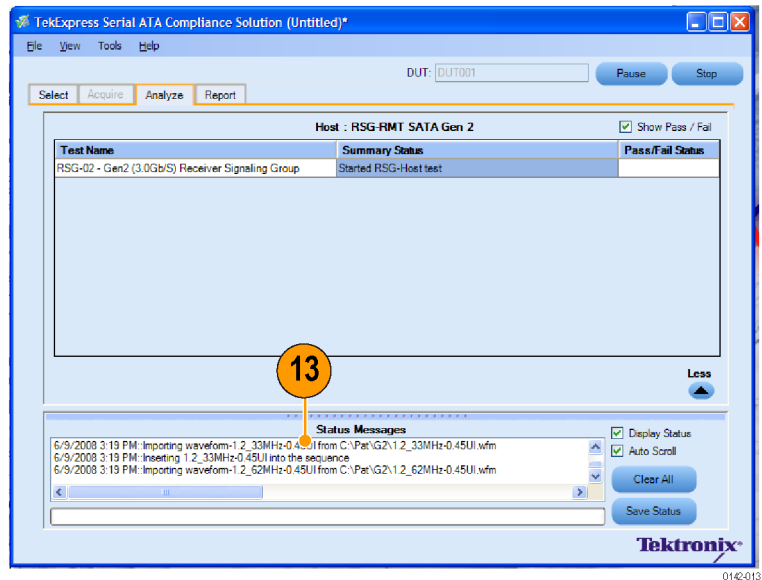
8. The parameters that are not grayed are editable. To change the instrument related values, select from the drop-down list for each of the parameters.
9. You can use the default values in the Compliance mode.
10. Click **Close**.



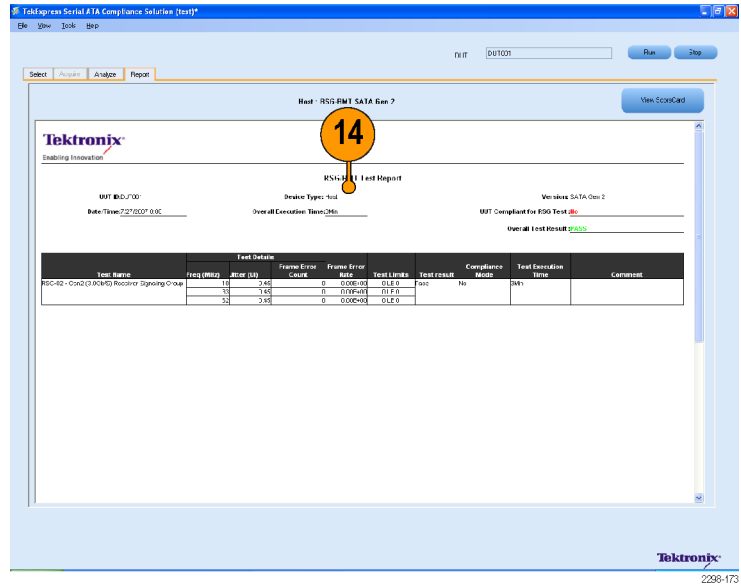
11. Enter the DUT ID in the DUT field.
12. Click **Run** to run the tests.



13. Observe that only **RSG-02 – Gen 2 (3.0 Gb/S) Receiver Signaling Group** is checked for compliance. Other tests are skipped. The status of the tests is displayed under **Status Messages** window.



14. After the test complete, a report appears in the **Report** panel.



PHY-TSG-OOB Suite

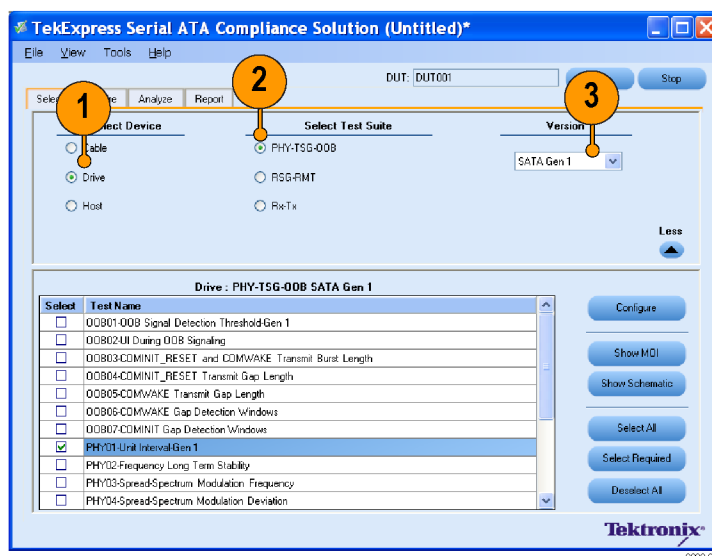
The following equipment is required to set up the application:

Resource	Model supported
Signal Source	Tektronix AWG7102 (Option 6)
Real Time Oscilloscope	<ul style="list-style-type: none">■ Tektronix DPO/DSA 72004, DPO/DSA 71604, DPO/DSA 71254, TDS6154C, and TDS6124C■ For Gen1-only testing, the following oscilloscopes are also acceptable: DPO/DSA 70804 or TDS6804B
RF Switch	Keithley S46-6666A
Test Fixture	Crescent Heart Software Test Fixture TF-SATA-NE-ZP
DUT	A SATA Drive to test

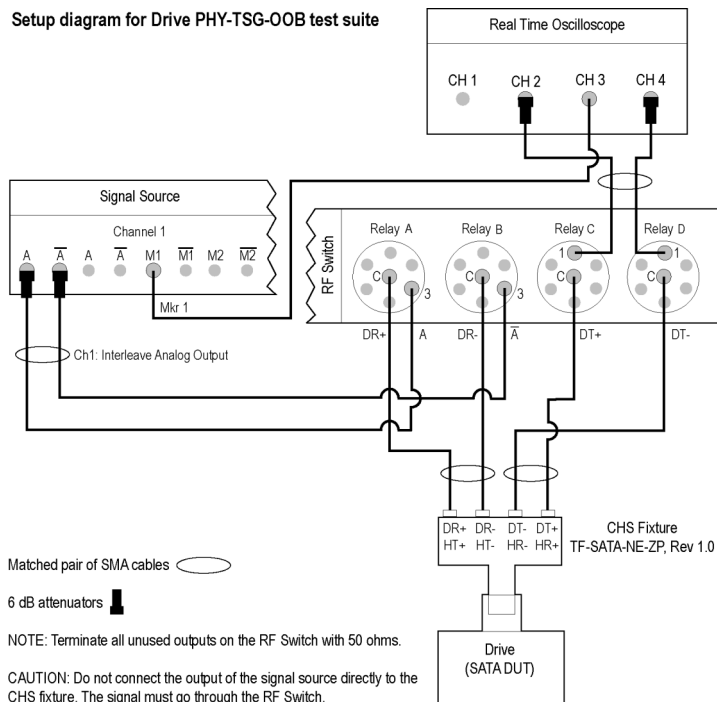
Testing PHY01 - Unit Interval Test-Gen1 on a Drive

This test verifies that the Unit Interval of the SATA Drive transmitter is within the conformance limits.

1. Select **Drive** as the device type.
2. Select **PHY-TSG-OOB** as the test suite.
3. Select **SATA Gen 1** as the test suite version.



4. Connect the DUT to the equipment as shown in the setup diagram.



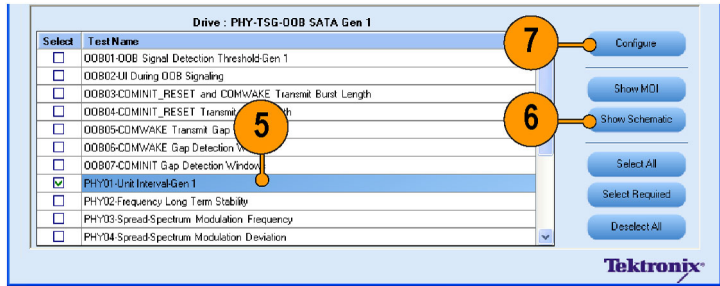
The CHS fixture notations in the schematic are with reference to Rev 1.0 of the fixture. If you are using fixtures before Rev 1.0, the fixture notations are in reverse order. For example, DT+/HR+ should be read as DR+/HT+.

If DUT Power Cycle sequence is automated using DC output of Signal Source, then do the following:
 -Connect Channel-1 of DC output to pin #14 (and pin #15 to GND) in case of 20 pin Molex connector of AT/ATX power supply.
 -Connect Channel-1 of DC output to pin #16 (and pin #17 to GND) in case of 24 pin Molex connector of AT/ATX power supply.

5. Select **PHY01 - Unit Interval Test - Gen 1**.

6. To verify the test setup before running the tests, click **Show Schematic**.

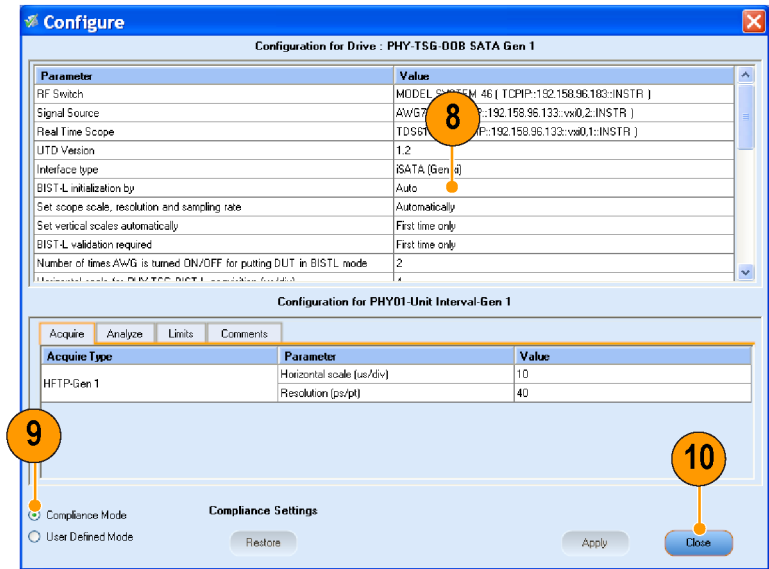
7. Click **Configure** if you want to configure the test parameters in the Configure panel.



8. The parameters that are not grayed are editable. To change the instrument related values, select from the drop-down list for each of the parameters.

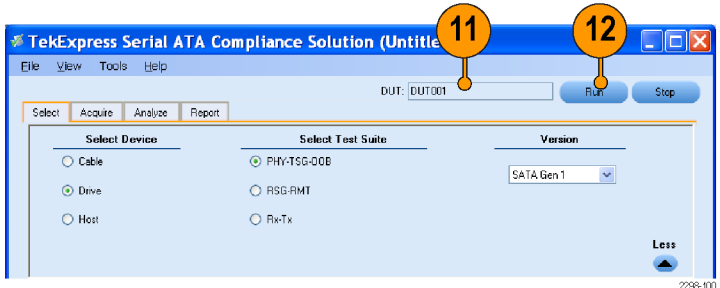
9. You can use the default values in the Compliance mode.

10. Click **Close**.

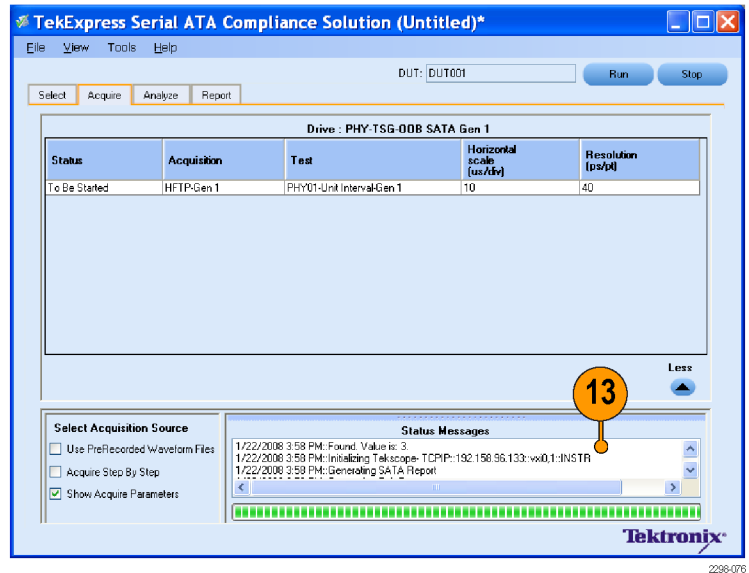


11. Enter the DUT ID in the DUT field.

12. Click **Run** to run the tests.

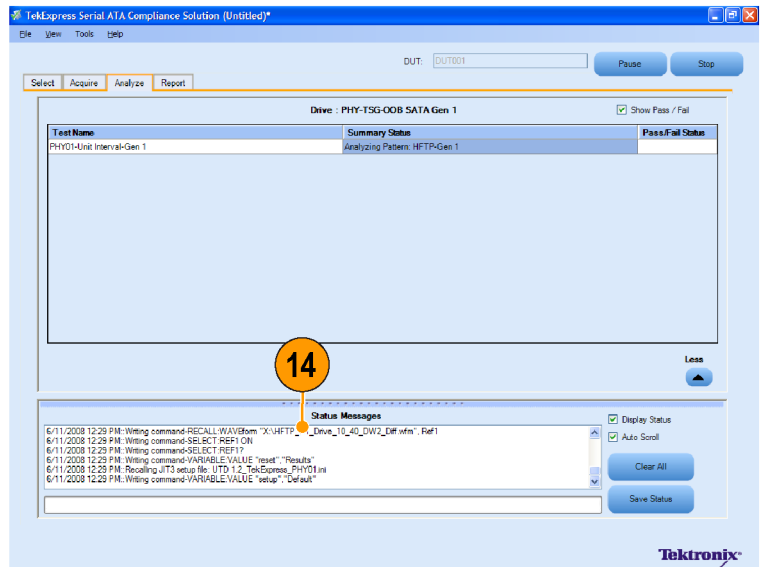


- The application automatically switches to the acquire panel. The status of the waveform acquisition is displayed in this panel.



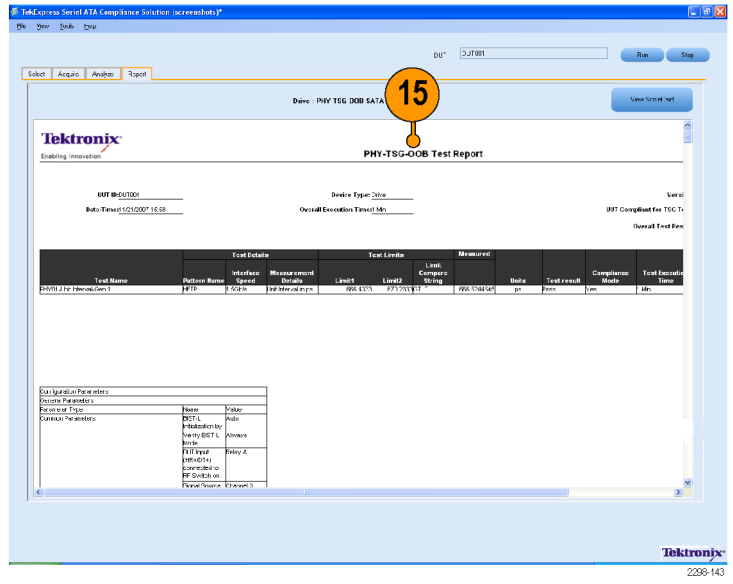
2298-076

- Observe that only **PHY01 - Unit Interval Test-Gen1** is checked for compliance. Other tests are skipped. The status of the tests is displayed under **Status Messages** window.



0142-005

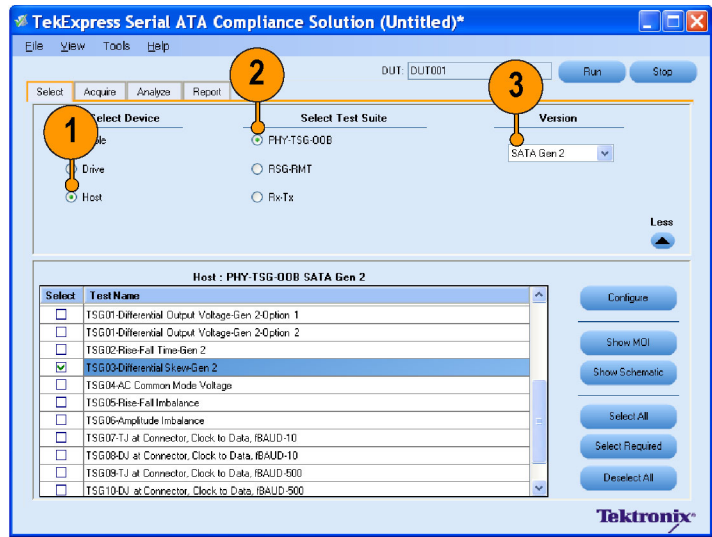
- When the tests run successfully, a report appears in the **Report** panel.



Testing TSG03 - Differential Skew-Gen 2 on a Host

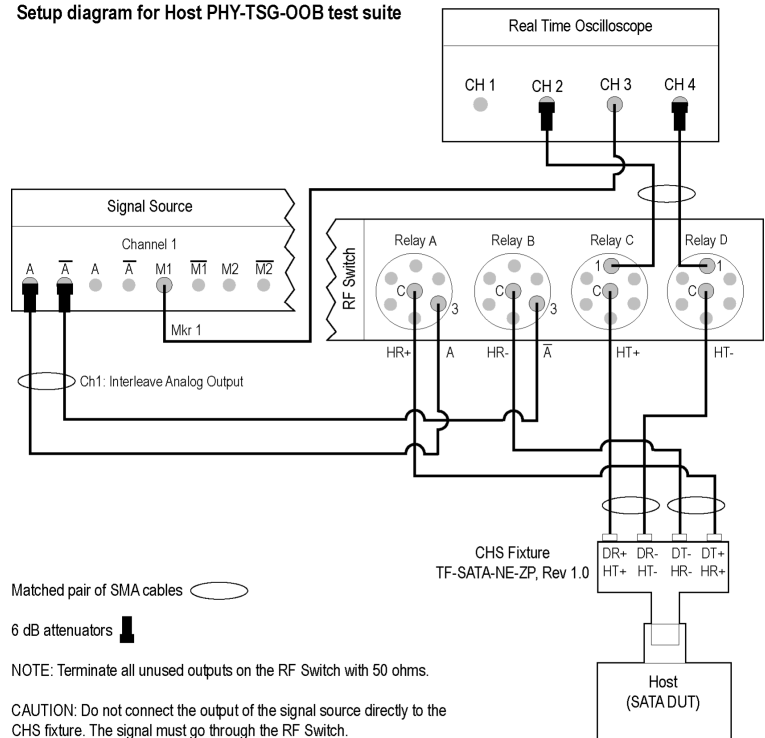
This test verifies that the differential skew of the SATA Host transmitter is within the conformance limits.

1. Select **Host** as the device type.
2. Select **PHY-TSG-OOB** as the test suite.
3. Select **SATA Gen 2** as the test suite version.



4. Connect the DUT to the equipment as shown in the setup diagram.

Setup diagram for Host PHY-TSG-OOB test suite



Matched pair of SMA cables

6 dB attenuators

NOTE: Terminate all unused outputs on the RF Switch with 50 ohms.

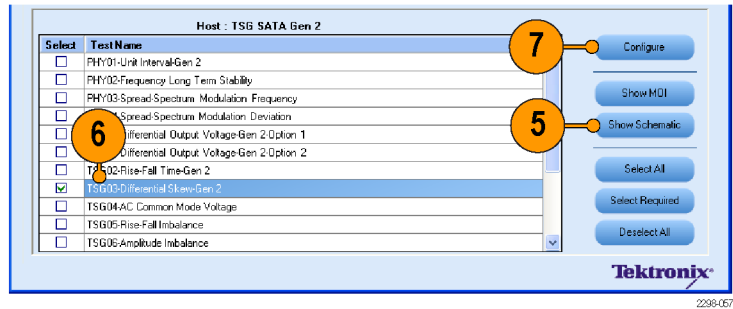
CAUTION: Do not connect the output of the signal source directly to the CHS fixture. The signal must go through the RF Switch.

The CHS fixture notations in the schematic are with reference to Rev 1.0 of the fixture. If you are using fixtures before Rev 1.0, the fixture notations are in reverse order. For example, DT+/HR+ should be read as DR+/HT+.

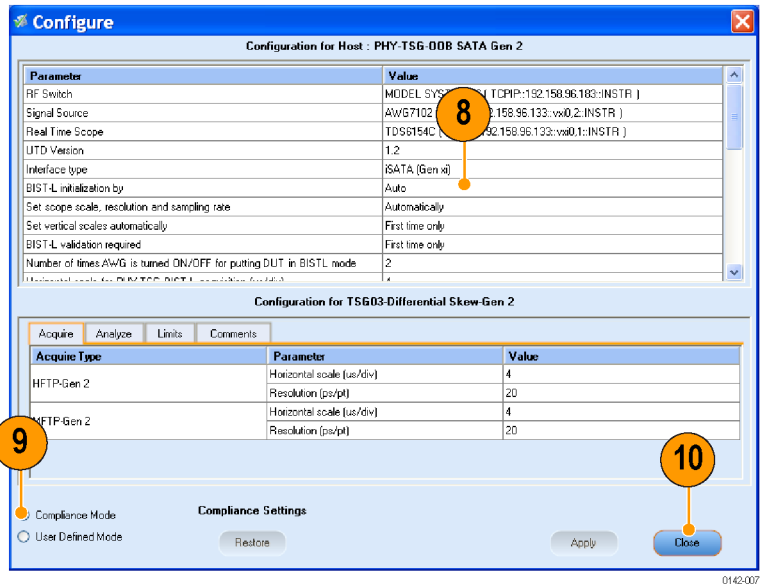
If DUT Power Cycle sequence is automated using DC output of Signal Source, then do the following:

- Connect Channel-1 of DC output to pin #14 (and pin #15 to GND) in case of 20 pin Molex connector of AT/ATX power supply.
- Connect Channel-1 of DC output to pin #16 (and pin #17 to GND) in case of 24 pin Molex connector of AT/ATX power supply.

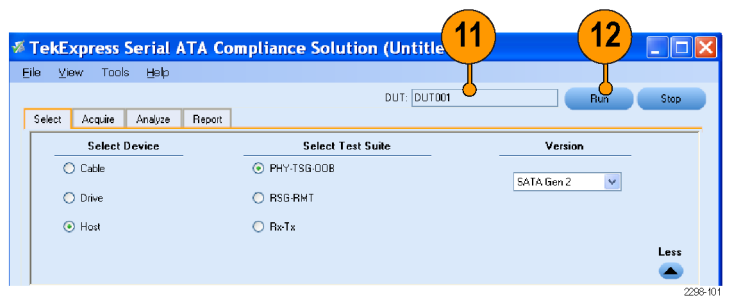
5. To verify the test setup before running the tests, click **Show Schematic**.
6. Select **TSG03 - Differential Skew-Gen 2**.
7. Click **Configure** if you want to configure the test parameters in the Configure panel.



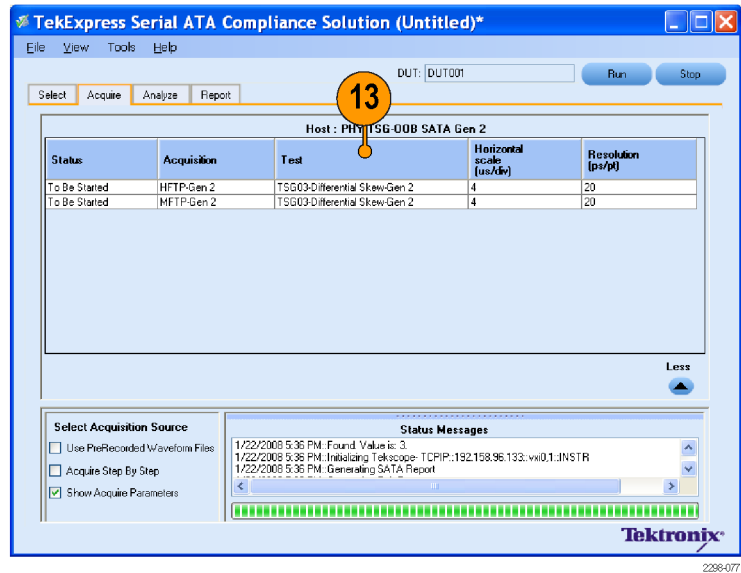
8. The general parameters that are not grayed are editable. To change the instrument related values, select from the drop-down list for each of the parameters.
9. You can use the default values in the Compliance mode.
10. Click **Close**.



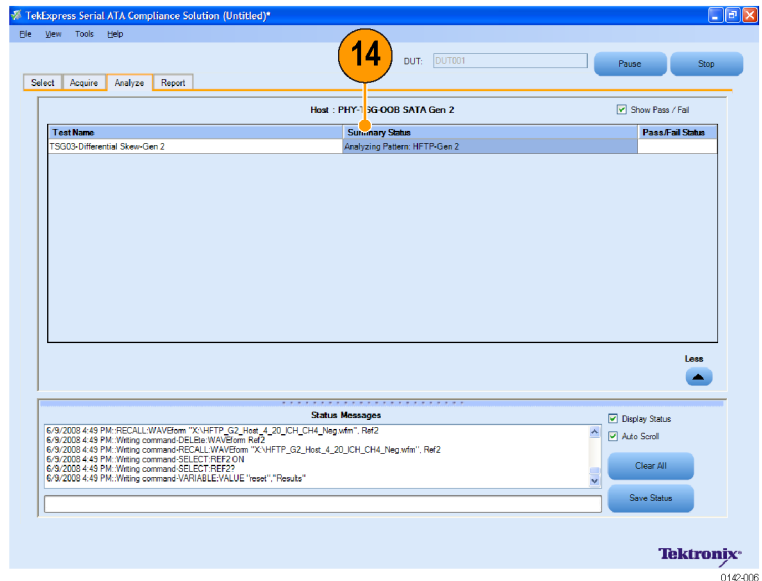
11. Enter the DUT ID in the DUT field.
12. Click **Run** to run the tests.



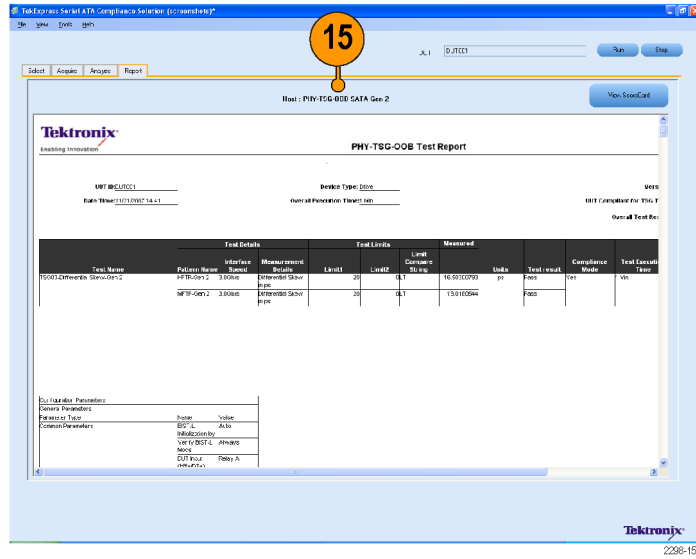
- Acquire panel showing the status of waveform acquisition.



- Observe that only **TSG03 - Differential Skew-Gen 2** is checked for compliance. Other tests are skipped. The status of the tests is displayed under **Status Messages** window.



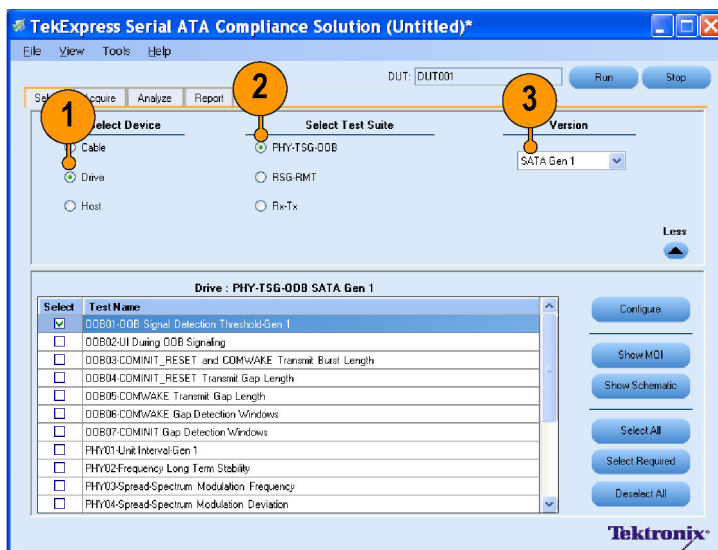
- When the tests run successfully, a report appears in the **Report** panel.



Testing OOB01 - OOB Signal Detection Threshold-Gen1 on a Drive

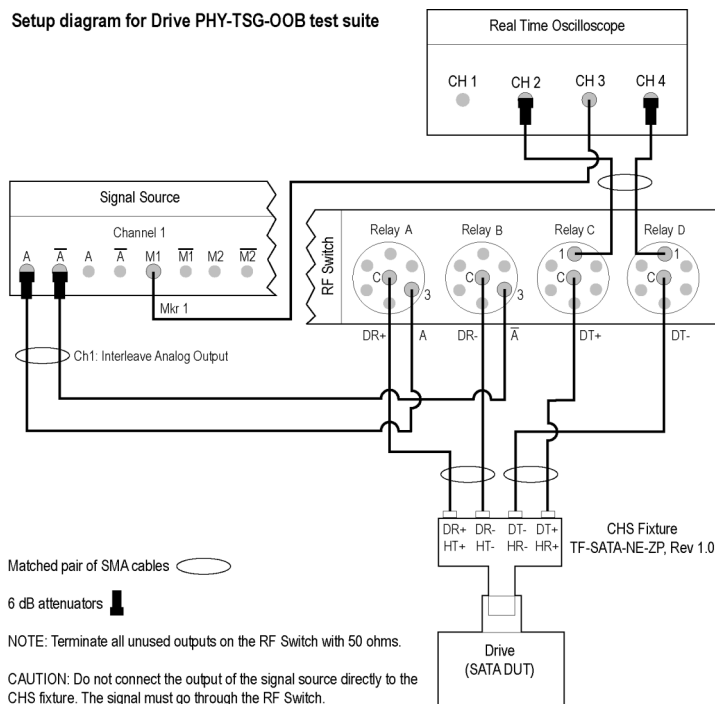
This test verifies that the OOB Signal Detection Threshold of the SATA Drive receiver is within the conformance limits.

1. Select **Drive** as the device type.
2. Select **PHY-TSG-OOB** as the test suite.
3. Select **SATA Gen 1** as the test suite version.

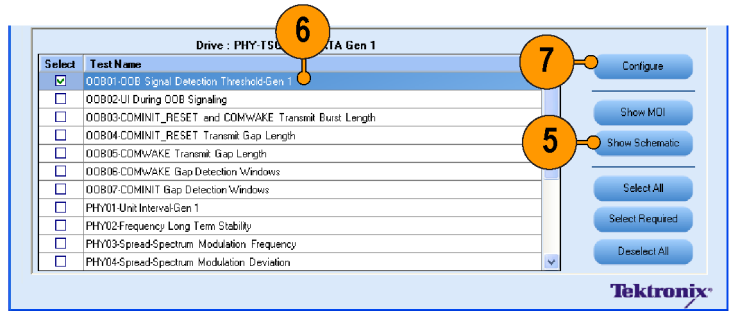


4. Connect the DUT to the equipment as shown in the setup diagram.

Setup diagram for Drive PHY-TSG-OOB test suite

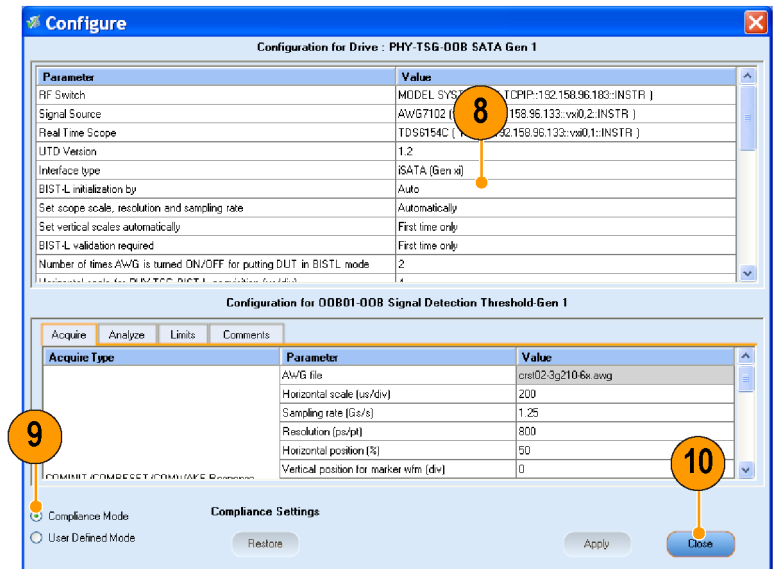


5. To verify the test setup before running the tests, click **Show Schematic**.
6. Select **OOB01 - OOB Signal Detection Threshold-Gen1**.
7. Click **Configure** if you want to configure the test parameters in the Configure panel.



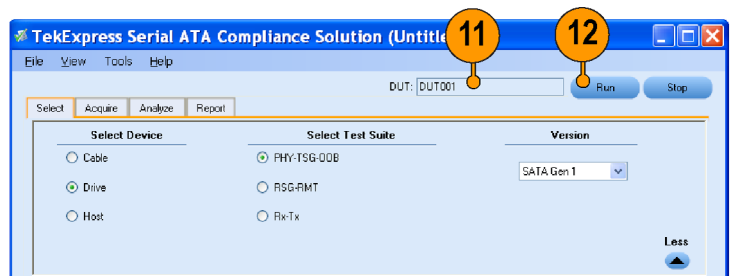
2298-142

8. The general parameters that are not grayed are editable. To change the instrument related values, select from the drop-down list for each of the parameters.
9. You can use the default values in the Compliance mode.
10. Click **Close**.



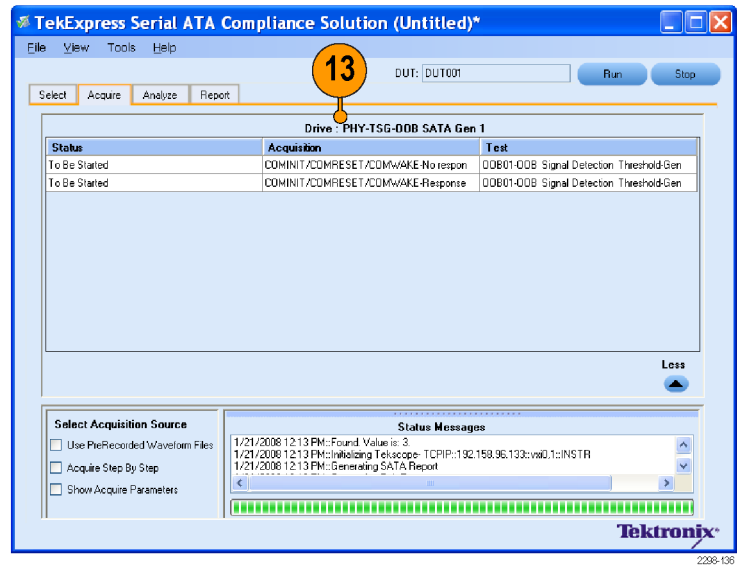
0142-008

11. Enter the DUT ID in the DUT field.
12. Click **Run** to run the tests.

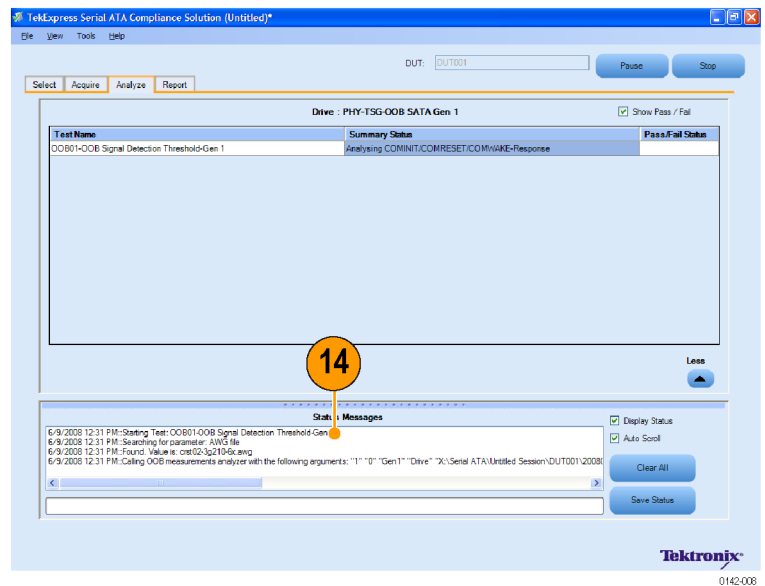


2298-141

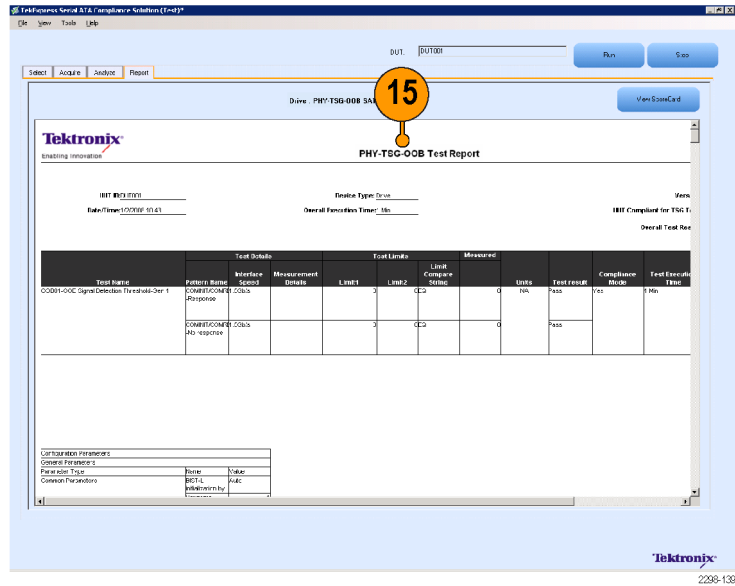
- Acquire panel showing the status of waveform acquisition.



- Observe that only **OOB01 - OOB Signal Detection Threshold-Gen1** is checked for compliance. Other tests are skipped. The status of the tests is displayed under **Status Messages** window.



- When the tests run successfully, a report appears in the **Report** panel.



Rx-Tx Suite

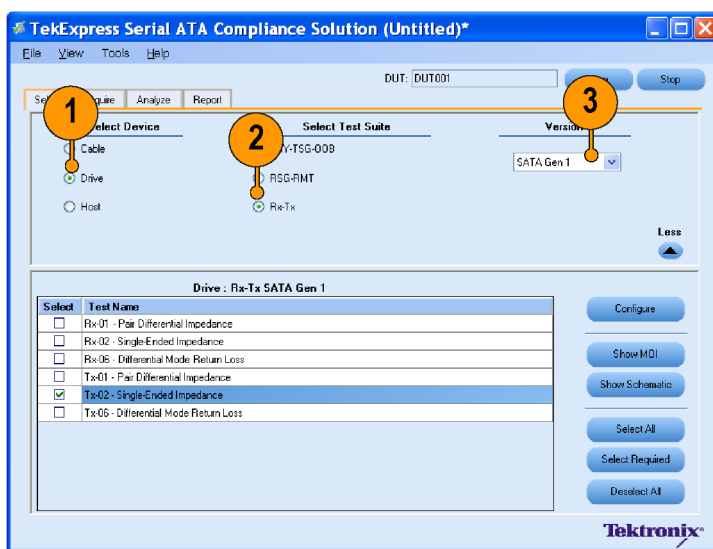
The following equipment is required to set up the application:

Resource	Model supported
Signal Source	Tektronix AWG7102 (Option 6)
Sampling Oscilloscope	Tektronix CSA/TDS/DSA 8200 with two 80E04 modules
RF Switch	Keithley S46-6666A
Test Fixture	Crescent Heart Software Fixture TF-SATA-NE-ZP
SMA Cables	<ul style="list-style-type: none"> ■ Five pairs of matched SMA Cables – 179-4944-00 or equivalent ■ One SMA cable to connect to trigger input ■ One SMA barrel adapter
DUT	A SATA Drive to test

Testing TX02 - Single-Ended Impedance on a Drive

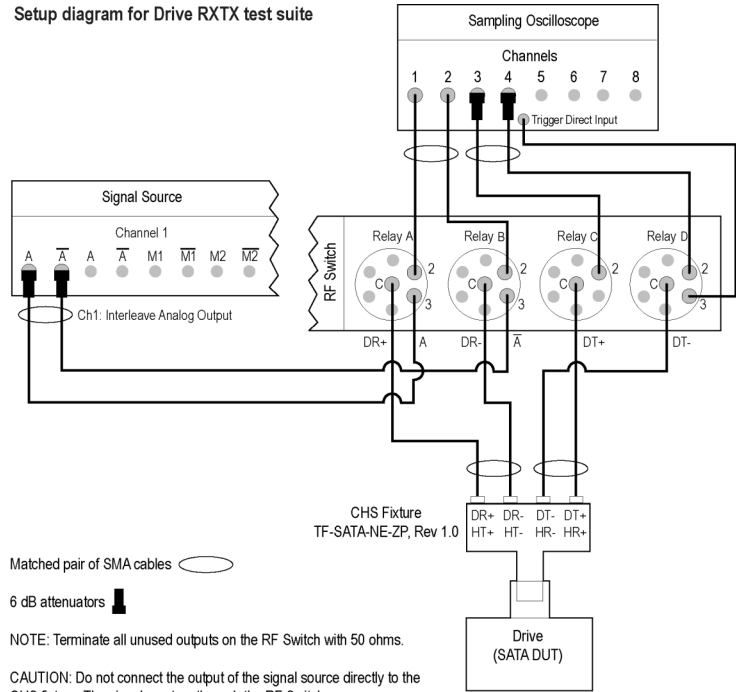
This test verifies that the Single-Ended impedance of a SATA drive transmitter is within the conformance limits.

1. Select **Drive** as the device type.
2. Select **RX-TX** as the test suite.
3. Select **SATA Gen 1** as the test suite version.



- Connect the DUT to the equipment as shown in the setup diagram.

Setup diagram for Drive RXTX test suite



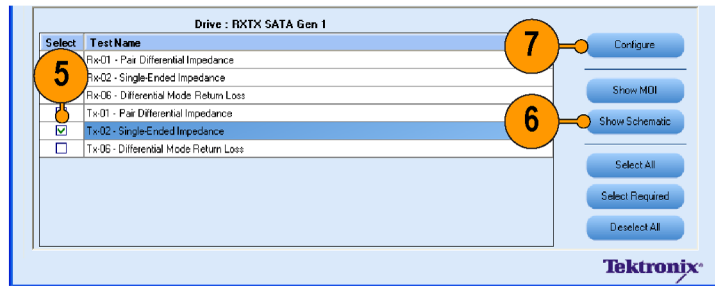
NOTE: Terminate all unused outputs on the RF Switch with 50 ohms.

CAUTION: Do not connect the output of the signal source directly to the CHS fixture. The signal must go through the RF Switch.

The CHS fixture notations in the schematic are with reference to Rev 1.0 of the fixture. If you are using fixtures before Rev 1.0, the fixture notations are in reverse order. For example, DT+/HR+ should be read as DR+/HT+.

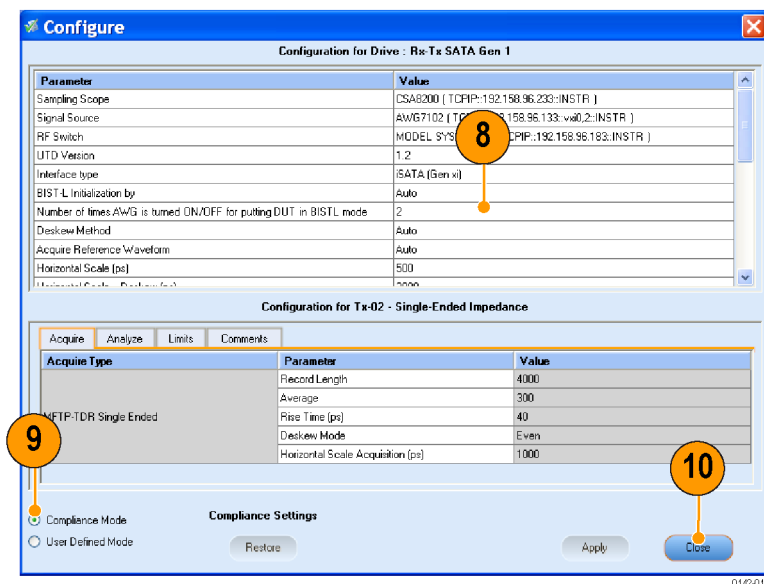
If DUT Power Cycle sequence is automated using DC output of Signal Source, then do the following:
 -Connect Channel-1 of DC output to pin #14 (and pin #15 to GND) in case of 20 pin Molex connector of AT/ATX power supply.
 -Connect Channel-1 of DC output to pin #16 (and pin #17 to GND) in case of 24 pin Molex connector of AT/ATX power supply.

- Select TX02 - Single-Ended Impedance
- To verify the test setup before running the tests, click **Show Schematic**.
- Click **Configure** if you want to configure the test parameters in the Configure panel.

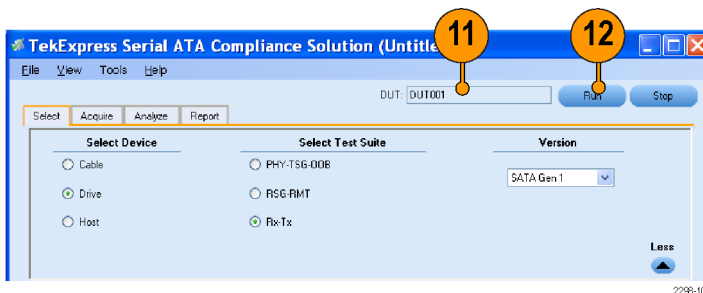


2298-004

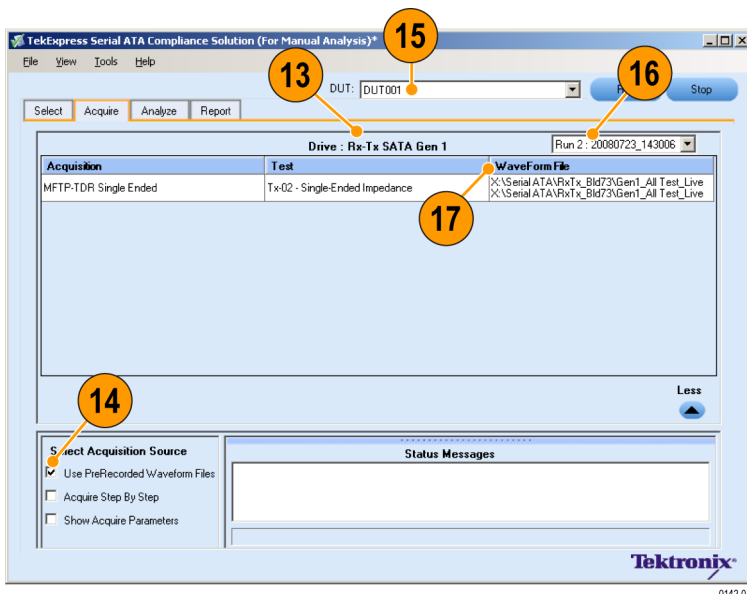
8. The parameters that are not grayed are editable. To change the instrument related values, select from the drop-down list for each of the parameters.
9. You can use the default values in the Compliance mode.
10. Click **Close**.



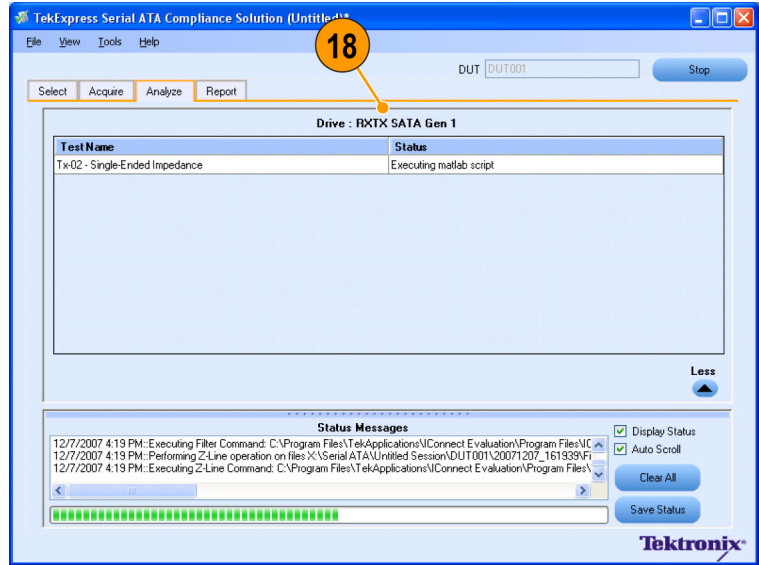
11. Enter the DUT ID in the DUT field.
12. Click **Run** to run the tests.



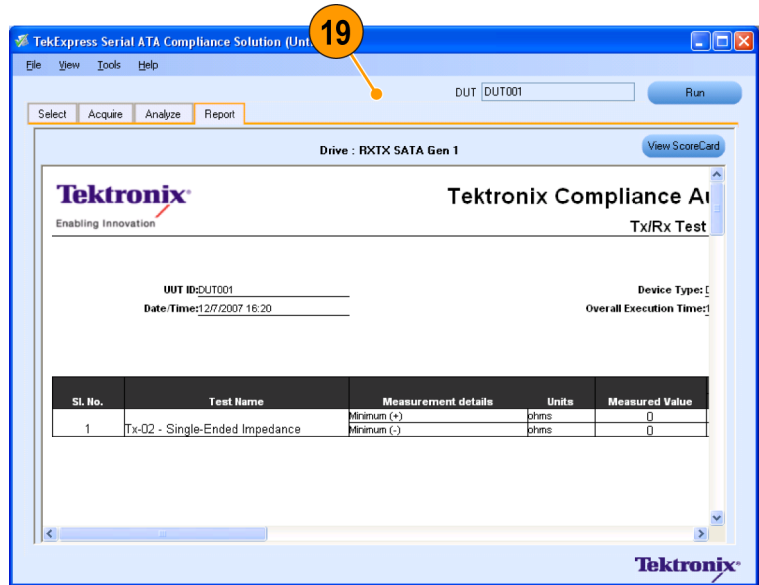
13. Acquire panel showing the status of waveform acquisition.
14. If you have selected the option **Use PreRecorded Waveform Files** before clicking Run, you need to browse the desired waveform file from the location where it exists.
15. If you had saved a session previously, you can select the DUT ID from the drop-down list.
16. You can select the require Run and the corresponding data in that Run will get populated. For example, the test selected in that run, the test configuration settings, the test summary status and so on.
17. The path showing the location of the sample waveform.



- Observe that only **TX02 - Single-Ended Impedance** is checked for compliance. Other tests are skipped. The status of the tests is displayed under **Status Messages** window.



- When the tests run successfully, a report appears in the **Report** panel.



SI Suite

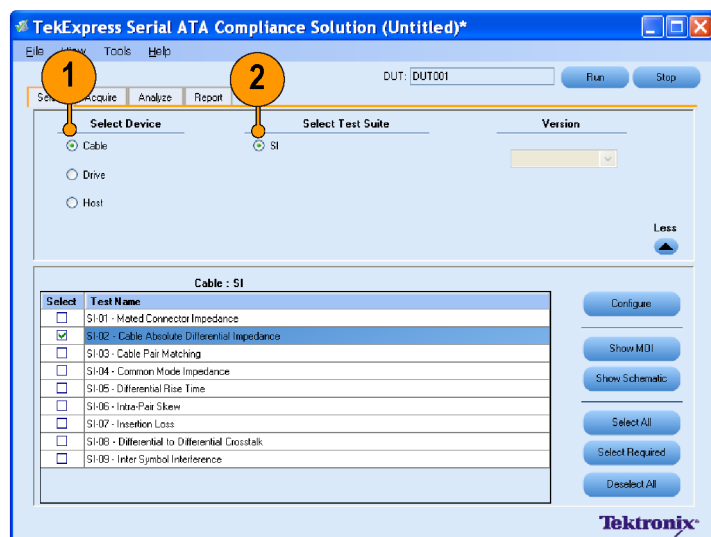
Testing SI-02 - Cable Absolute Differential Impedance on a SATA Cable

The following equipment is required to set up the application:

Resource	Model supported
Sampling Oscilloscope	Tektronix CSA/DSA/TDS 8200 with four 80E04 modules
Test Fixture	Two Crescent Heart Software Fixture TF-SATA-FE-ZP
SMA Cables	<ul style="list-style-type: none"> ■ Four pairs of matched SMA Cables 179-4944-01 or equivalent ■ Two SMA barrel adapters
DUT	A SATA Cable to test

This test verifies that the cable absolute differential impedance is within the conformance limits.

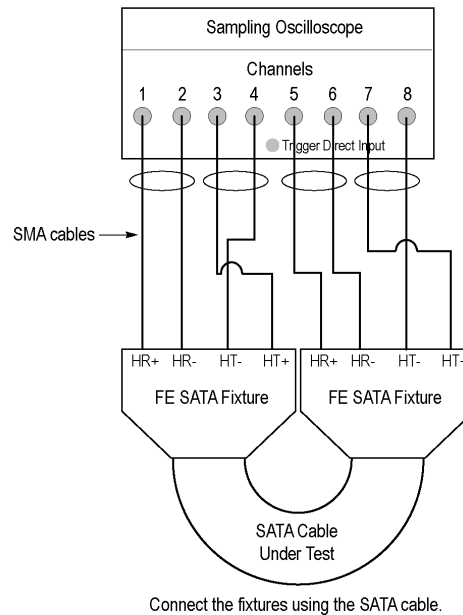
1. Select **Cable** as the device type.
2. Select **SI** as the test suite.




2298-103

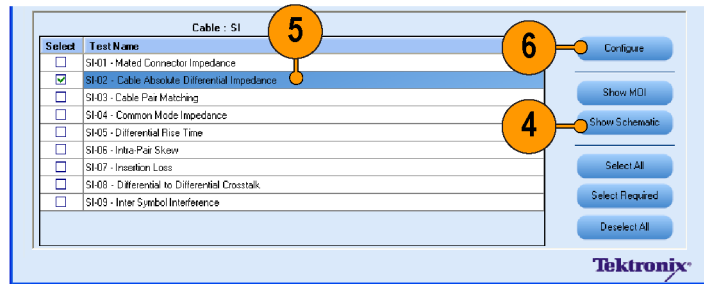
3. Connect the DUT to the equipment as shown in the setup diagram.

Setup diagram for Cable SI test suite

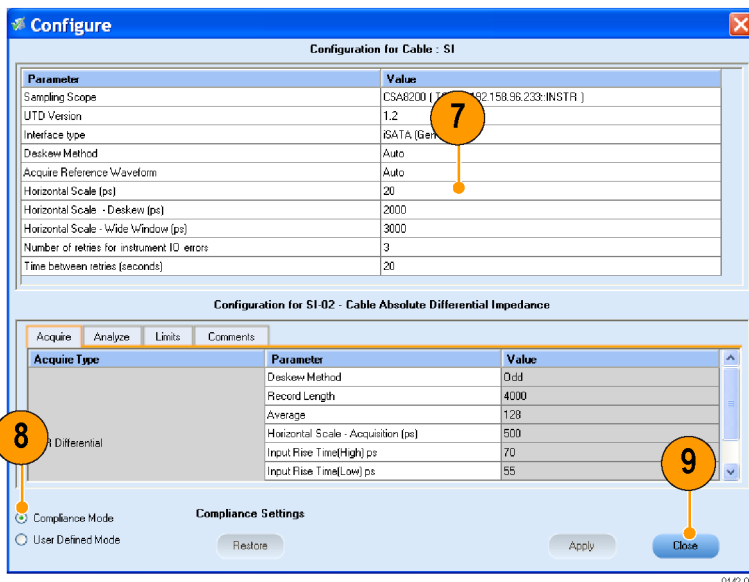


Matched pair of SMA cables 

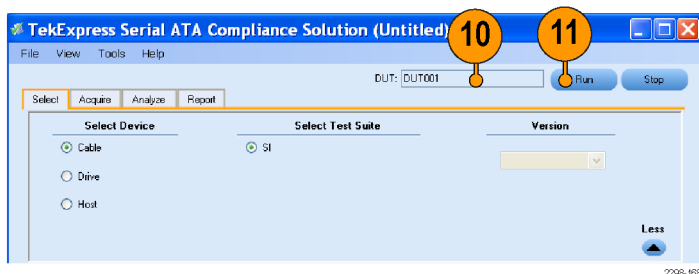
4. To verify the test setup before running the tests, click **Show Schematic**.
5. Select **SI-02 - Cable Absolute Differential Impedance**.
6. Click **Configure** if you want to configure the test parameters in the Configure panel.



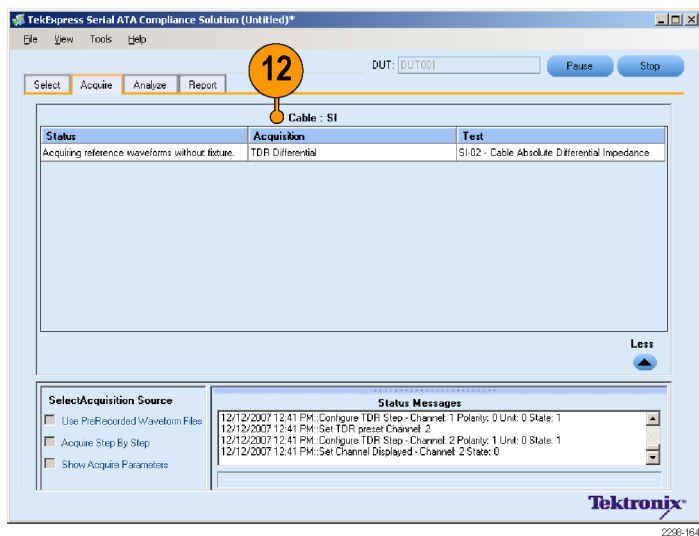
7. The parameters that are not grayed are editable. To change the instrument related values, select from the drop-down list for each of the parameters.
8. You can use the default values in the Compliance mode.
9. Click **Close**.



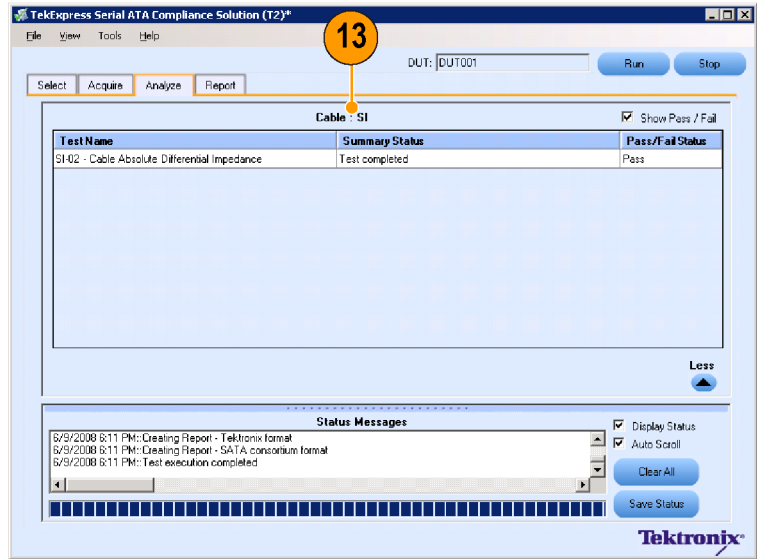
10. Enter the DUT ID in the DUT field.
11. Click **Run** to run the tests.



12. Acquire panel showing the status of waveform acquisition.

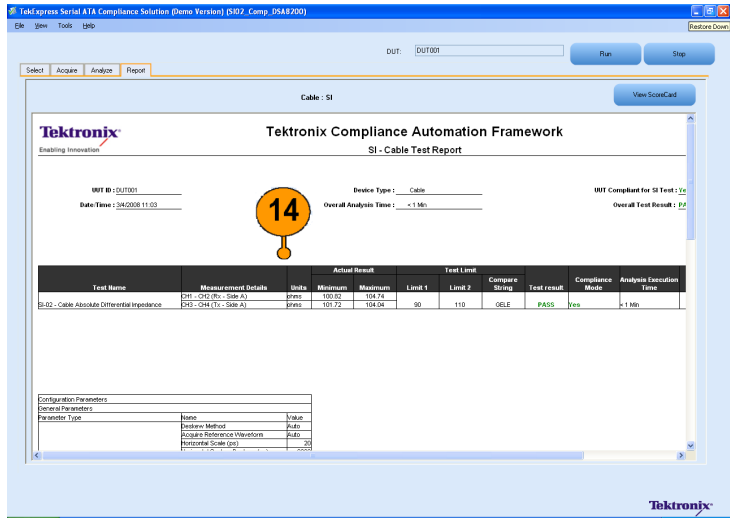


- Observe that only **SI-02 - Cable Absolute Differential Impedance** is checked for compliance. Other tests are skipped. The status of the tests is displayed in **Status Messages** window.



0142-017

- After the tests complete, a report appears in the **Report** panel.



2238-107

Index

A

About TekExpress, iv
 Acquire panel, 7
 Analyze tab, 5
 Application overview, iv

B

Before Installation, 1

C

Cable
 SI02 test, 37
 Closing the Application, 1
 Comments tab, 6
 Compliance mode, 5

D

Documentation, v
 Drive
 OOB01 test, 29
 PHY01 test, 21
 RSG01 test, 11
 TX02 test, 33
 DUT id, 7
 DUT ID drop-down, 35

G

General Parameters, 4

H

Host
 RSG02 test, 16
 TSG03 test, 25

How To

Configure, 4
 Select a Test, 3
 View the Acquisition, 7
 View the Analysis, 8
 View the Report, 9

I

Installation, 1
 Instrument discovery, iv, 6

K

Key Features, iv

L

Limits tab, 5

M

measurement limits, 5

P

Print Report, 10
 Process Flow, 3

R

Report panel, 9
 Retrieved Instruments, 6
 Run drop-down, 35

S

Safety Summary, iii

Schematic

OOB, 29
 PHY, 21
 RSG-RMT, 17
 RxTx, 34
 SI, 38
 TSG, 25
 Search Criteria, 6
 Select Required button, 3
 Setup diagram
 RSG-RMT Drive, 12
 RSG-RMT Host, 17
 Show MOI button, 3, 13
 Show schematic button, 3
 Starting the Application, 1
 Status messages window, 8

T

TekExpress Options, iv
 test configuration settings, 35
 Test suite version, 3
 test summary status, 35

U

Using TekExpress, 3

V

View Scorecard, 9
 Viewing Connected Instruments, 6

W

waveform acquisition details, 7