SFF/SFB Transceiver Eval Board

TESTBD-SFB

Features:

- 4 SMA electrical interfaces
- Designed to work with COTSWORKS SFF and SFB transceivers
- Connector pin receptacles for fast and easy transceiver mounting
- Convenient test points for DDMI interface
- Easy to read LED indicators for visual function verification
- Easy access signal detect test points

This high performance evaluation board allows for fast and reliable testing without the need for a final board design.

General Description

This electrical interface board is ideal for testing all features of the COTSWORKS SFF/SFB transceivers.

SFF/SFB transceiver test board is designed to simplify early level testing without having to integrate the transceiver into a host board from pattern generation through electrical connectors.

Absolute Maximum Ratings

PARAMETER	SYMBOL	MIN.	MAX.	UNIT	NOTES
Maximum Supply Voltage	V_{CC}	-	3.47	V	
Storage Temperature	T_{sto}	-55	105	ºC	
Operating Temperature	T_{OP}	-55	105	ºC	

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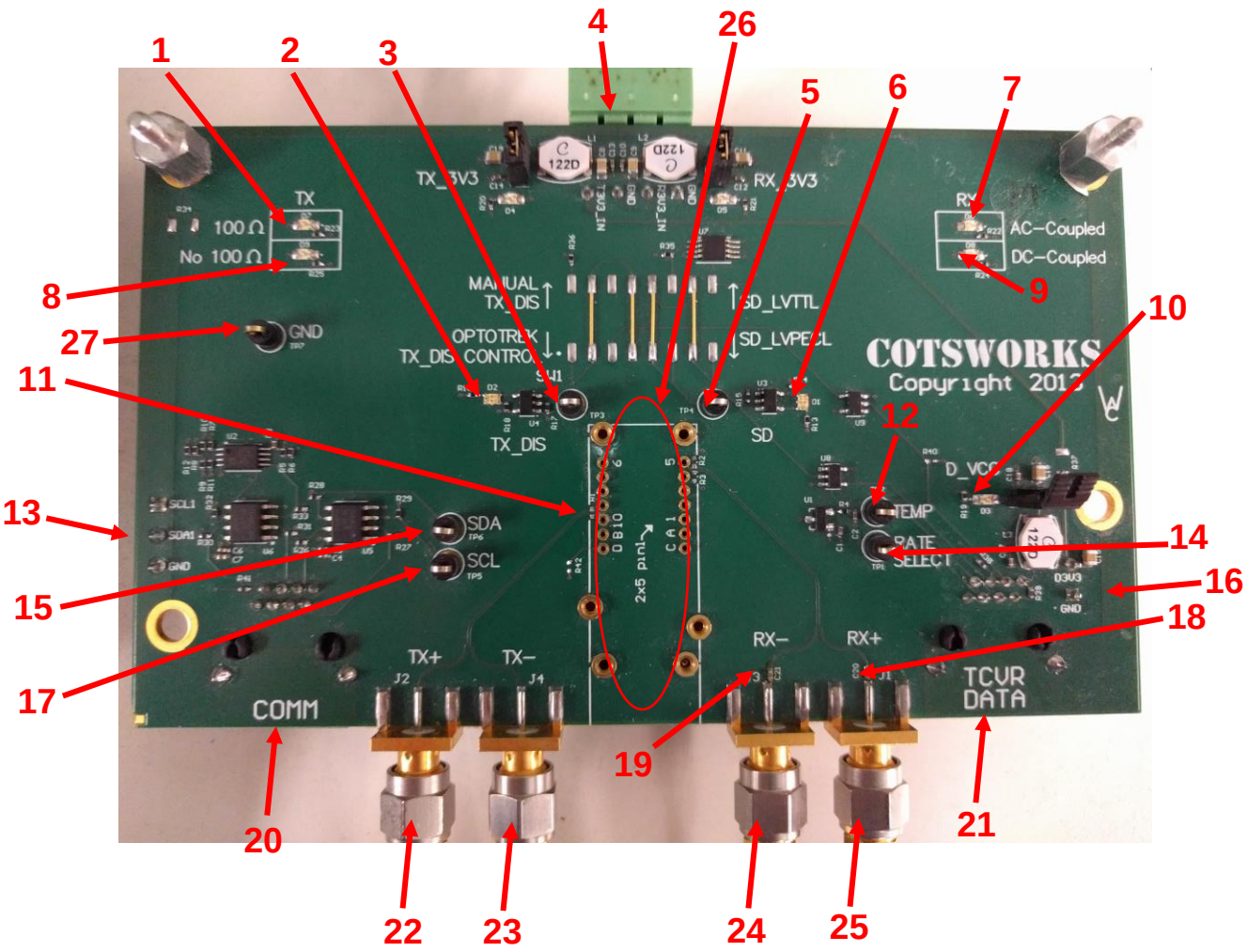

1	**100Ω Termination Resistor Indicator**	The blue LED indicates the presence of a 100Ω termination resistor on the test board in location 11
2	**TX Disable Indicator**	The LED will turn red if the transmitter is disabled. This means the TX_DIS pin on the DUT is driven to Vcc. The LED will turn green if the transmitter is enabled. This means the TX_DIS pin on the DUT is driven to GND.
3	**TX Disable Test Point**	This test point can be used to measure the voltage on the TX_DIS pin on the DUT. It can also be used to drive the TX_DIS pin on the DUT. If the test point is connected to GND, the Transmitter will be enabled. If the test point is connected to Vcc, the Transmitter will be disabled.
4	**Transceiver Power**	Connect the supplied 4-pin power cable to 3.3V. Transceiver power is used to power the DUT and does not power the components on the eval board.
5	**Signal Detect Test Point**	This test point can be used to measure the voltage on the SD pin on the DUT. If the voltage is measured high, the receiver of the DUT is receiving a signal. If the voltage is measured low, the receiver of the DUT is not receiving a signal.
6	**Signal Detect Indicator**	The LED will turn red if the receiver of the DUT is not receiving a signal. The LED will turn green if the receiver of the DUT is receiving a signal.

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7	**AC-Coupled Indicator**	The blue LED represents AC-Coupled RX output channels. The indicator represents the eval board configuration, NOT the DUT configuration.
8	**No 100Ω Termination Resistor indicator**	The blue LED indicates that no 100Ω termination resistor is present on the test board in location 11.
9	**DC-Coupled Indicator**	The blue LED represents DC-Coupled RX output channels . The indicator represents the eval board configuration, NOT the DUT configuration.
10	**Digital Power Indicator**	The blue LED will turn on if there is 3.3V on the digital power plane supplied from location 16. Digital power is used to power the components on the eval board and does not power the DUT.
11	**100Ω Termination Resistor**	There is an option for a 100Ω termination resistor in this location.
12	**Temperature Test Point**	This test point can be used to measure the voltage from the temperature sensor on the eval board.
13	**I2C Interface**	If supported by the DUT, communication through the I2C bus can be established through a 3-pin connector in this location.
14	**Rate Select Test Point**	This feature is not used.
15	**SDA Test Point**	If supported by the DUT, communication through the I2C bus can be established through this test point.
16	**Digital Power**	Connect the supplied 2-pin power cable to 3.3V. Digital power is used to power the components on the eval board and does not power the DUT.
17	**SCL Test Point**	If supported by the DUT, communication through the I2C bus can be established through this test point.
18	**RX+ Coupling Component**	If the eval board is configured as AC-Coupled, this component is a 0.1uF capacitor. If the eval board is configured as DC-Coupled, this component is a 0Ω resistor.
19	**RX– Coupling Component**	If the eval board is configured as AC-Coupled, this component is a 0.1uF capacitor. If the eval board is configured as DC-Coupled, this component is a 0Ω resistor.
20	**Communication I/O**	A standard OTS Ethernet communication cable with an RJ-45 can be used for communication with the DUT and eval board EEPROM through I2C. Contact COTSWORKS for the pinout details.
21	**Transceiver I/O**	A standard OTS Ethernet communication cable with an RJ-45 can be used for communication with features of the DUT. Contact COTSWORKS for the pinout details.
22	**TX+ Input**	Provide non-inverted input signal for the optical transmitter through a 50Ω SMA cable. Check DUT datasheet for input signal specifications.
23	**TX– Input**	Provide inverted input signal for the optical transmitter through a 50Ω SMA cable. Check DUT datasheet for input signal specifications.
24	**RX– Output**	Inverted output signal from the optical receiver. Connect 50Ω SMA cable.
25	**RX+ Output**	Non-inverted output signal from the optical receiver. Connect 50Ω SMA cable.

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26	**DUT Connection Point**	Connection point for SFF DUT. Place all pins from DUT inside the through holes on footprint for connection.
27	**Ground Test Point**	This test point is connected to circuit ground.

Ordering Information

TESTBD-SFB	-X	-XX
	Board Configuration	**Plate Option**
SFF/SFB Transceiver Eval Board	A: Duplex A Configuration (Recommended for use with COTSWORKS' SFF-SX. SFF-LX, SFB-M-AT and SFB-G transceivers) B: Duplex B Configuration (Recommended for use with COTSWORKS' SFF-DX. and SFB-M-DP transceivers)	P(): Plate Included NP: Plate Not Included

Example part number: TESTBD-SFB-A-P [SFB Transceiver Eval Board configured for duplex "A" with plate stand.]
Contact COTSWORKS for mechanical dimensional information and other configuration options.

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