

DSF-1G-SX

1Gbps 550M SFP Transceiver



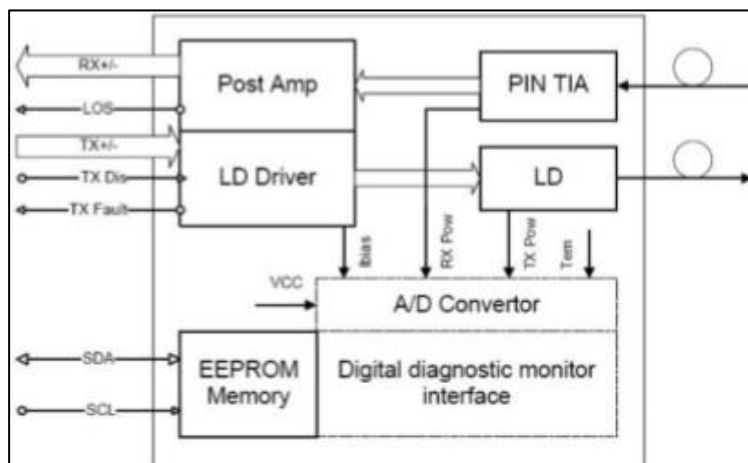
Product Features

- Support 1.25Gbps
- Duplex LC connector
- Hot pluggable SFP footprint
- 850nm VSCSEL laser transmitter and PIN photo-detector
- Applicable for 550M on 50/125μm, 300M on 62.5/125μm MMF connection
- Low power consumption, <0.5W
- Digital Diagnostic Monitor Interface
- Compliant with SFP MSA and SFF-8472
- Very low EMI and excellent ESD protection
- Operating case temperature : 0 to 70°C

Applications

- Gigabit Ethernet
- Fiber Channel
- Switch to Switch interface
- Switched backplane applications
- Router / Server interface
- Other optical transmission systems

Functional Diagram



General Operating Characteristics

Parameter	Symbol	Min.	Type	Max.	Unit
Data Rate	DR	1.0625	1.25		Gb/s
Supply Voltage	V _{CC}	3.13	3.3	3.47	V
Supply Current	I _{CCS}			144	mA
Operating Case Temp.	T _C	0		70	°C

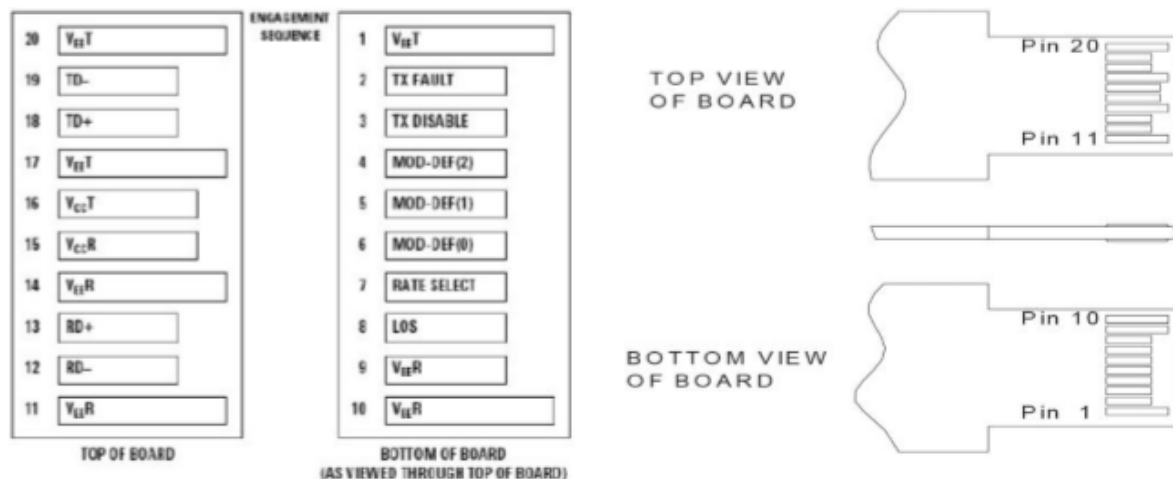
Optical Characteristics(Transmitter)

Parameter	Symbol	Min.	Typ	Max.	Unit
Operating Wavelength	λ	840	850	860	nm
Ave. output Power (Enabled)	P _{AVE}	-10		-3	dBm
Extinction Ratio	ER	9			dB
Output Optical Eye	Compliant with IEEE 802.3z & ITU G.957 Compliant (class 1 aser safety)				

Optical Characteristics(Receiver)

Parameter	Symbol	Min.	Typ	Max.	Unit
Operating Wavelength	λ	840	850	860	nm
Receiver Sensitivity	P _{SENI}			-18	dBm
Overload	P _{AVE}	-3			dBm

Pin Definition And Functions



Pin	Symbol	Name / Description
1	V _{ee} T	Tx ground
2	Tx Fault	Tx fault indication, Open Collector Output, active "H"
3	Tx Disable	LVTTL Input, internal pull-up, Tx disabled on "H"
4	MOD-DEF2	2 wire serial interface data input / output(SDA)
5	MOD-DEF1	2 wire serial interface clock input (SCL)
6	MOD-DEF0	Model present indication
7	Rate select	No connection
8	LOS	Rx loss of signal, Open Collector Output, active "H"
9 / 10 / 11	V _{ee} R	Rx ground
12	RD-	Inverse received data out
13	RD+	Received data out
14	V _{ee} R	Rx ground
15	V _{cc} R	Rx power supply
16	V _{cc} T	Tx power supply
17	V _{ee} T	Tx ground
18	TD+	Transmit data in
19	TD-	Inverse transmit data in
20	V _{ee} T	Tx ground

Digital Diagnostic Specifications

Parameter	Symbol	Unit	Min.	Max.	Accuracy
Transceiver temperature	DTemp-E	°C	0	70	±5°C
Transceiver supply voltage	Dvoltage	V	2.8	4.0	±3%
Transmitter bias current	DBias	mA	2	15	±10%
Transmitter output power	DTx-Power	dBm	-13	0	±3dB
Receiver average input power	DRx-Power	dBm	-21	0	±3dB

Package Dimensions

