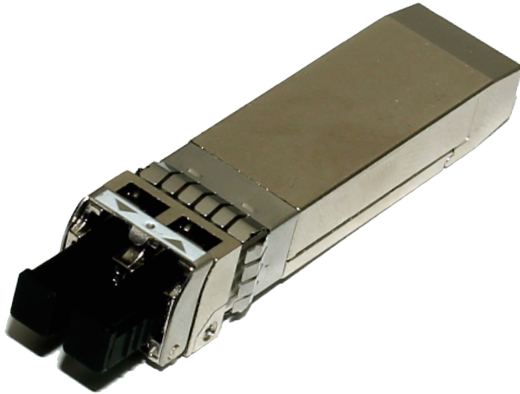


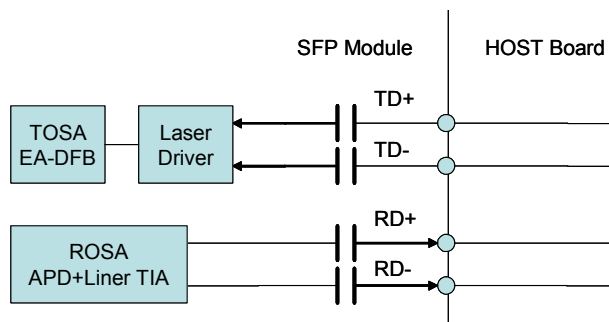


10GBASE-ZR/OC-192 LR-2 SFP+ Transceiver 10Gb/s 80km, 1550nm P/N 5ZR0A0x-1550



Description

Menara Networks' DWDM 5ZR0A0x-1550 SFP+ transceivers are designed for use in 10Gb/s to 11.1Gb/s links up to 80km of G.652 fiber. The SFP+ module supports IEEE 802.3ae 10GBASE-ZR and – ZW applications along with SONET OC-192 LR-2 and SDH STM-64 ITU-T G.959.1 P1L1-2D2 applications for Ethernet Switches, IP Routers or SONET/SDH optical interfaces. Digital Optical Monitoring interfaces are provided via the SFP+ standards compliant I²C interface.



Applications

- 10GBASE-ZR/ZW 10G Ethernet
- 8GB/10GB Fibre Channel
- SONET OC-192 LR-2
- SDH STM-64 ITU-T G.959.1 P1L1-2D2
- Ethernet Switch or IP Router Interconnect

Features

- Hot-pluggable SFP+ footprint
- Support 9.95Gb/s to 11.3Gb/s bit rates
- 1550nm EML Laser transmitter
- 80km APD photodiode receiver
- Single 3.3V power supply
- Power dissipation < 1.5W
- -5°C to +70°C and -40°C to +85°C
- Duplex LC fiber connectors
- IEEE 802.3ae 10GBASE-ZR/ZW
- SDH STM-64 ITU-T G.959.1 P1L1-2D2
- Full Digital Optical Monitoring
- Metal enclosure for lower EMI
- Complies with RoHS directive (2002/95/EC)
- Compliant with SFP+ Electrical MSA SFF-8431
- Compliant with SFP+ Mechanical MSA SFF-8432
- Laser Class 1 IEC/CDRH compliant

Transmitter E-O Characteristics

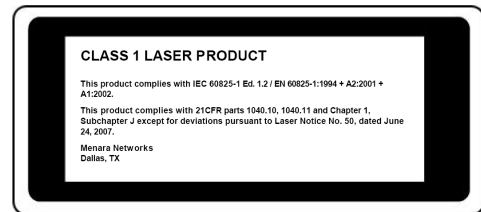
Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Support data rate	-	9.95	10.3125	11.1	Gb/s	-
Center Wavelength (DWDM)	λ	1530	1550	1565	nm	-
Side Mode Suppression Ratio	SMSR	30	-	-	dB	-
Average Optical Output Power	P _o	0	-	+4	dBm	-
Optical Power of Off Transmitter	P _{off}	-	-	-30	dBm	-
Extinction Ratio	Er	9.0	-	-	dB	-
Differential Data Input Swing	V _{INPP}	190	-	700	mV	
Output Eye Diagram	Compliant with IEEE MSA					

Receiver O-E Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Support data rate	-	9.95	10.3125	11.1	Gb/s	-
Operate Wavelength	-	1260	-	1620	nm	-
Receiver sensitivity 0 ps/nm dispersion (Back to Back)	S _{en1}	-24.0	-	-7.0	dBm	1, EOL
Receiver sensitivity +1600 ps/nm dispersion (80km)	S _{en2}	-22.0	-	-7.0	dBm	1, EOL
Maximum Input Power	P _{max}	-	-	-7.0	dBm	1,EOL
Receiver reflectance	R _{RX}	-	-	-27	dB	
LOS Asserted (EOL)	T _{loss_on}	-40.0	-	-27.5	dBm	High level: Alarm
LOS De-Asserted	T _{loss_off}	-	-	-27	dBm	
LOS Hysteresis (EOL)	T _{loss_Hs}	0.5	-	-	dB	
Differential Data Output Swing	V _{OUTPP}	-	-	600	mV	-

Notes:

- 10.3Gbps PRBS 2³¹-1 at 10⁻¹² BER



Ordering Information

Part Number	ROHS Compliant	Operating Case Temperature
5ZR0A0x-1550 5ZR0A2x-1550	ROHS-6	-5 ~ +70°C -40 ~ +85°C

x = J for Juniper
x = C for Cisco
x = A for Alcatel
x = O for Cisco ONS

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