XTS55A-80LY – 80 km 1550 nm SFP+ Optical Transceiver



FEATURES

- Compliant with SFF-8431, SFF-8432 and IEE802.3ae
- 10GBASE-ZR, and 1G/2G/4G/ 8G/10G Fiber Channel applications
- Cooled EML transmitter and APD receiver
- Link length up to 80 km Maximum
- Low Power Dissipation 1.5 W Typical (Maximum: 3 W)
- -5°C to 70°C Operating Case Temperature
- Single 3.3 V power supply
- Diagnostic Performance Monitoring of module temperature, supply Voltages, laser bias current, transmit optical power, receive optical power
- RoHS6 compliant and lead free

APPLICATIONS

- 10G Ethernet (with/without FEC)
- 10G Fiber Channel

DESCRIPTION

XenOpt SFP+ZR 1550 nm Transceiver is a "Limiting module", designed for 10G Ethernet, and 2G/4G/8G/10G Fiber-Channel applications.

The transceiver consists of two sections: The transmitter section incorporates a colded EML laser and the receiver section consists of a APD photodiode integrated with a TIA. All modules satisfy class I laser safety requirements. Digital diagnostics functions are available via a 2-wire serial interface, as specified in SFF-8472, which allows real-time access to device operating parameters such as transceiver temperature, laser bias current, transmitted optical power, received optical power and transceiver supply voltage.



BLOCK DIAGRAM

ABSOLUTE MAXIMUM RATING

Parameters	Symbol	Min.	Max.	Unit
Power Supply Voltage	Vcc	-0.5	3.8	V
Storage Temperature	Tst	-40	85	°C
Relative Humidity	RH	0	85	%

RECOMMENDED OPERATING ENVIRONMENT

Parameters	Symbol	Min.	Typical	Max.	Unit
Supply Voltage	Vcc	3.13	3.3	3.47	V
Supply current	lcc	-	420	900	mA
Operating Case temperature	Тса	-5	-	70	°C
Module Power Dissipation	Pm	-	1.5	3	W

TRANSMITTER SSPECIFICATIONS – OPTICAL

Parameters	Symbol	Min.	Typical	Max.	Unit
Center Wavelength	λc	1530		1565	nm
Spectral Width (-20 dB)	Δλ20	-	-	0.3	nm
Average Optical Power [2]	Po	0	-	+3	dBm
Side Mode Suppression Ratio	SMSR	30	-	-	dB
Optical Transmit Power (disabled)	PTX_DISABLE	-	-	-30	dBm
Extinction Ratio	ER	8.2	-	-	dB
Relative Intensity Noise	RIN	-	-	-128	dB/Hz

RECEIVER SPECIFICATIONS – OPTICAL

Parameters	Symbol	Min.	Typical	Max.	Unit
Input Operating Wavelength	λ	1260	-	1620	nm
Receiver sensitivity(Average) [1] @9.95G~10.3125G	Rsen1	-	-	-24	dBm
Receiver sensitivity(Average) [1] @10.5G~11.095G	Rsen2	-	-	-23	dBm
Maximum Input Power	RX-overload	-	-	-7	dBm
Loss of Signal Asserted	Lsa	-34	-	-	dBm
LOS De-Asserted	Lda	-	-	-24	dBm
LOS Hysteresis	Lh	0.5	-	-	dB

Notes

[1] Measured with conformance test signal for BER = 10–12. The stressed sensitivity values in the table are for system level BER measurements which include the effects of CDR circuits. It is recommended that at least 0.4 dB additional margin be allocated if component level measurements are made without the effects of CDR circuits.

TRASMITTER SPECIFICATIONS – ELECTRICAL

Parameters	Symbol	Min.	Typical	Max.	Unit
Data Rate	Mra	-	10.3125	11.095	Gbps
Input differential impedance	Rim	-	100	-	Ω
Differential data Input	VtxDIFF	120	-	850	mV
Transmit Disable Voltage	VD	2.0	-	Vcc3+0.3	V
Transmit Enable Voltage	Ven	0	-	+0.8	V
Transmit Disable Assert Time	Vn	-	-	100	us

RECEIVER SPECIFICATIONS – ELECTRICAL

Parameters	Symbol	Min.	Typical	Max.	Unit
Data Rate	Mra	-	10.3125	11.095	Gbps
Differential Output Swing	Vout P-P	350	-	850	mV
Rise/Fall Time	Tr/Tf	24	-	-	ps
Loss of Signal –Asserted	VOH	2	-	Vcc3+0.3-	V
Loss of Signal –Negated	VOL	0	-	+0.4	V

ORDERING INFORMATION¹

Part number	Product Description
XTS55A-80LY	10 Gbps, 1550 nm SFP+ 80 km, -5 °C ~ +70 °C

Note

1. For accurate order specification please contact XenOpt reseller before placing an order.

COMPANY INFORMATION

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PARTNER INFORMATION

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