

1.25Gbps SFP Optical Transceiver, 20km Reach RMP-SFP-LX2

Features

- ◆ Dual data-rate of 1.25Gbps/1.063Gbps operation
- ◆ Single Mode 1310nm FP-LD
- ◆ Compliant with SFP MSA and SFF-8472 with duplex LC receptacle
- ◆ Digital Diagnostic Monitoring:
Internal Calibration or External Calibration
- ◆ Compatible with SONET OC-24-LR-1
- ◆ Compatible with RoHS
- ◆ +3.3V single power supply
- ◆ Operating case temperature:
Standard : 0°C ~ +70°C

Applications

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

Description

- ◆ The SFP transceivers are high performance, cost effective modules supporting dual data-rate of 1.25Gbps/1.0625Gbps and 20km transmission distance with SMF.

Specification:

Electrical and Optical Characteristics: (Condition: $T_a=T_{OP}$)

Parameter	Symbol	Min.	Typical	Max.	Unit
Transmitter Differential Input Volt	+/-TX_DAT	200		2400	mV p-p
Supply Current	I _{CC}		130	180	mA
Tx_Disable Input Voltage - Low	V _{IL}	0		0.8	V
Tx_Disable Input Voltage - High	V _{IH}	2.0		V _{CC}	V
Tx_Fault Output Voltage - Low	V _{OL}	0		0.8	V
Tx_Fault Output Voltage - High	V _{OH}	2.0		V _{CC}	V
Receiver Differential Output Volt	+/-RX_DAT	600		1400	mV p-p
Rx_LOS Output Voltage- Low	V _{OL}	0		0.8	V
Rx_LOS Output Voltage- High	V _{OH}	2.0		V _{CC}	V

Transmitter Section:

Parameter	Symbol	Min.	Typical	Max.	Unit
Data Rate	B	-	1250	-	Mb/s
Centre Wavelength	λ_c	1296	1310	1330	nm
Output Spectral Width	$\Delta\lambda$	-	-	4	nm
Average Output Power	P _o	-9.5	-	-3	dBm
Extinction Ratio	EXT	9	-	-	dB
Data Input Voltage-High	V _{IHS}	V _{CC} -1.16	-	V _{CC} -0.89	V
Data Input Voltage -Low	V _{ILS}	V _{CC} -1.82	-	V _{CC} -1.48	V
Supply Current	I _{CC}	-	90	150	mA
Output Optical Eye	Compliant with IEEE802.3Z				

Receiver Section:

Parameter	Symbol	Min.	Typical	Max.	Unit
Receive Sensitivity	P _{min}	-	-	-22	dBm
Maximum Input Power	P _{MAX}	-3	-	-	dBm
Signal Detect Threshold-Assertion:	SD _{HIGH}	-	-	-23	dBm
Signal Detect Threshold-Deassertion:	SD _{LOW}	-33	-	-	dBm
Hysteresis	-	-	2.0	-	dBm
Output High Voltage	V _{OH}	V _{CC} -1.03	-	V _{CC} -0.89	V
Output Low Voltage	V _{OL}	V _{CC} -1.82	-	V _{CC} -1.63	V

Operating Wavelength	λ_c	1100	-	1600	nm
Supply Current	I_{CC}	-	80	110	mA

Absolute Maximum Ratings: ($T_c=25^\circ\text{C}$)

Parameter	Symbol	Min.	Max.	Unit
Storage Temperature	T_{ST}	-40	+85	$^\circ\text{C}$
Operating Temperature	T_{IP}	0	+70	$^\circ\text{C}$
Input Voltage	T_{CC}	0	+5	V

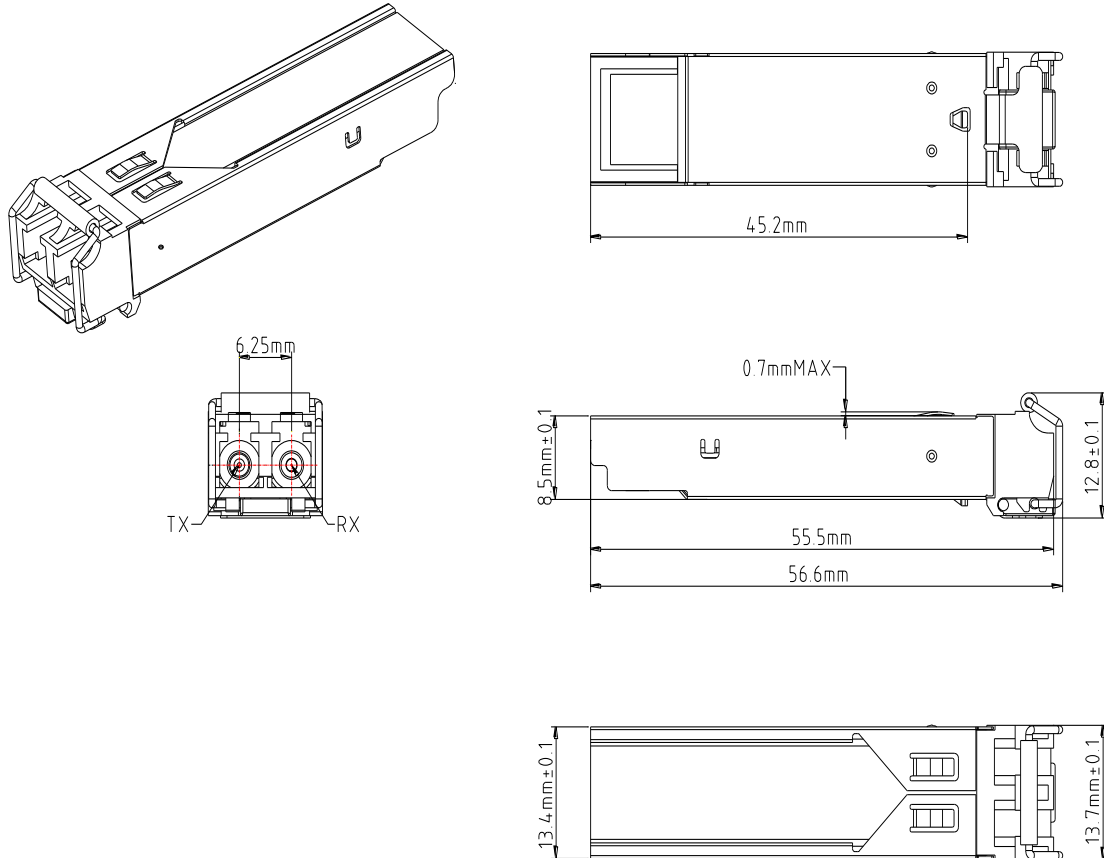
Recommended Operating Environment:

Parameter	Symbol	Min.	Typical	Max.	Unit
Supply Voltage	V_{CC}	+3.0	+3.3	+3.6	V
Operating Temperature	T_{OP}	0	-	+70	$^\circ\text{C}$

Digital Diagnostic Monitor Characteristics:

Parameter	Min.	Unit
Tx Output Power Accuracy	± 3.0	dBm
Rx Input Power Accuracy	± 3.0	dBm
Laser Bias Current Accuracy	± 1.0	%
Transceiver Internal Temperature Accuracy	± 3.0	$^\circ\text{C}$
Transceiver Internal Supply Voltage Accuracy	± 0.1	V

Mechanical Dimensions:



Ordering information

Part Number	Product Description
RMP-SFP-LX2	1310nm, 1.25Gbps, 20km, 0°C ~ +70°C, With Digital Diagnostic