

Maipu 1G SFP 40KM Transceiver

SFP-S4-L24P3

Overview

Maipu SFP-S4-L24P3 Small Form Factor Pluggable (SFP) transceivers are compatible with the Small Form Factor Pluggable Multi-Sourcing Agreement (MSA). The SFP transceivers are high-performance, cost-effective modules supporting dual data-rate of 1.25Gbps/1.063Gbps and 40km transmission distance with SMF. They are RoHS compliant and lead-free.



Key Features

- Up to 1.25Gb/s data links
- Duplex LC optical connector
- 1310nm DFP laser transmitter
- RoHS compliant and Lead Free
- Distance up to 40km on single-mode fiber
- Metal enclosure for lower EMI
- Low power dissipation <800mW
- Operating case temperature: -20°C~+70°C

Absolute Maximum Ratings

Parameter	Symbol	Min	Typ	Max	Unit	Notes
Maximum Supply Voltage	Vcc	-0.5		+4.0	V	
Storage Temperature	TS	-40		+85	°C	
Operating Humidity	RH	0		85	%	

Recommended Operating Conditions

Parameter	Symbol	Min	Typ	Max	Unit	Notes
Power Supply Voltage	Vcc	3.13	3.30	+3.47	V	
Power Supply Current	Icc			250	mA	
Power dissipation				0.8	W	
Case Operating Temperature	Tc	-20		+70	°C	
9/125um G.652 SMF	Lmax			40	km	
Data Rate (Gigabit Ethernet)			1.25		Gbps	
Data Rate (Fiber Channel)			1.063			

Electrical Characteristics

Parameter	Symbol	Min	Typ	Max	Unit	Ref.
Transmitter						
Input differential impedance	Rin	100			Ω	1
Differential data input swing	Vin, pp	250		1200	mV	
TX Disable-High		Vcc-1.3		Vcc	V	
TX Disable-Low		Vee		Vee+0.8	V	
TX Fault-High		Vcc-0.5		Vcc	V	
TX Fault-Low		Vee		Vee+0.5	V	
Receiver						
Differential data output swing	Vout, pp	300	400	800	mV	2
Data output rise time	Tr			260	ps	3
Data output fall time	Tf			260	ps	3
LOS-High		Vcc-0.5		Vcc	V	
LOS-Low		Vee		Vee+0.5	V	

Optical Characteristics

Parameter	Symbol	Min	Typ	Max	Unit	Notes
Transmitter						
Output Opt. Power	PO	-5		0	dBm	1
Optical Wavelength	λ	1260	1310	1360	nm	
Spectral Width				1	nm	
Side-Mode Suppression Ratio	SMSR	30			dB	
Optical Rise/Fall Time	tr/tf			260	ps	2
Total Jitter	TJ			0.35	UI	
Optical Extinction Ratio	ER	9			dB	
Receiver						
RX Sensitivity @1.25Gb/s	SENS			-25	dBm	3,4
Receiver Overload		0			dBm	
Optical Center Wavelength	λ_C	1270		1600	nm	
LOS De-Assert	LOSD			-26	dBm	
LOS Assert	LOSA	-40			dBm	
LOS Hysteresis		0.5		5	dB	

Order Information

Model	Description
SFP-S4-L24P3	1G SFP, 1310nm, 40Km, LC, DDM, Single-mode

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