

Maipu 25G SFP28 10KM Transceiver

SFP28-S1-L480C3D

Overview

Maipu's SFP28-S1-L480C3D single-mode transceiver is SFP28 module for duplex optical data communications support up to 25.78Gb/s. It is with the SFP+ 20-pin connector to allow hot plug capability. Digital diagnostic functions are available via an I2C. It has built-in clock and data recovery (CDR). This module is designed for single-mode fiber and operates at a nominal wavelength of 1310nm.

Key Features

- Operating data rate up to 25.78Gbps
- Duplex LC optical connector
- 1310nm DFB laser transmitter
- RoHS compliant and Lead Free
- Distance up to 10km on 9/125um SMF on single-mode fiber
- Metal enclosure for lower EMI
- Power dissipation <1.2W
- Operating case temperature Standard: -20°C~+70°C

Absolute Maximum Ratings

Parameter	Symbol	Min	Typ	Max	Unit	Notes
Maximum Supply Voltage	Vc	-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			360	mA	
Case Operating Temperature	Tc	-20		+70	°C	
Data Rate	BR		25.78		Gbps	
9/125um G.652 SMF	Lmax			10	km	

Electrical Characteristics

Parameter	Symbol	Min	Typ	Max	Unit	Ref.
Transmitter						
Input Differential Impedance	Rin	90	100	110	Ω	1
Differential Data Input Swing	Vin, pp	120		850	mV	
TX Disable-High		Vcc-1.3		Vcc+0.3	V	
TX Disable-Low		Vee		Vee+0.8	V	
TX Fault-High		Vcc-1.3		Vcc+0.3	V	
TX Fault-Low		Vee		Vee+0.8	V	
Receiver						
Differential Data Output Swing	Vout, pp	300		850	mV	2
LOS-High		Vcc-1.3		Vcc+0.3	V	
LOS-Low		Vee		Vee+0.4	V	

Optical Characteristics

Parameter	Symbol	Min	Typ	Max	Unit	Notes
Transmitter						
Output Opt. Power	PO	-7		+2	dBm	
Optical Wavelength	λ	1295	1310	1325	nm	
Side-Mode Suppression Ratio	SMSR	30			dB	
Spectral Width(-20dB)	$\Delta\lambda$			1	nm	
Optical Extinction Ratio	ER	3.5			dB	
Receiver						
RX Sensitivity @25.78Gb/s	SEN			-13.5	dBm	1
RX Sensitivity OMA@25.78Gb/s	SEN			-12.0	dBm	2
Receiver Overload		2			dBm	
Optical Center Wavelength	λ_C	1260		1610	nm	
LOS De-Assert	LOSD			-15	dBm	
LOS Assert	LOSA	-30			dBm	
LOS Hysteresis		0.5		6	dB	

Order Information

Model	Description
SFP28-S1-L480C3D	25G SFP28, 1310nm, 10km, LC, DDM, Single-mode

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