

Maipu 100G QSFP28 LR4 10KM Transceiver

QSFP28-S1-L1920C3D

Overview

Maipu QSFP28-S1-L1920C3D is compliant with QSFP28 MSA, IEEE 802.3bm. It is cost-effective, low power consumption with a single 3.3V power supply. The module has an aggregate bit rate up to 103.125Gbps by multiplexing of 4 independent LAN-WDM optical lanes, each lane capable of transmitting 25Gb/s over 10km SMF with FEC. It is fabricated with all-metal and compact size housing for superior EMI performance.



Key Features

- Compliant with 100G Ethernet IEEE 802.3bm 100GBASE
- Duplex LC optical connector
- 4*25Gb/s 1310nm DFB laser transmitter
- RoHS compliant and Lead Free
- Distance up to 10km on single mode fiber
- Metal enclosure for lower EMI
- Low Power Consumption <4.5W
- Operating case temperature: 0°C to 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	
Supply Current	Icc			1.36	A	
Case Operating Temperature	Tc	0		70	°C	
Data Rate, each lane			25.78		Gbps	
9/125um G.652 SMF				10	km	

Electrical Characteristics

Parameter	Symbol	Min	Typ	Max	Unit	Notes
Transmitter						
Input differential impedance	Rin	90	100	110	Ω	1
Differential data input swing	Vin, pp	95	-	900	mV	
TX Disable-High		Vcc-0.8	-	Vcc	V	
TX Disable-Low		Vee	-	Vee+0.8	V	
TX Fault-High		Vcc-0.8	-	Vcc	V	
TX Fault-Low		Vee	-	Vee+0.8	V	
Receiver						
Output differential impedance	Rin	90	100	110	Ω	1
Differential data output swing	Vin, pp	-	-	900	mV	2
LOS-High		Vcc-0.8		Vcc	V	
LOS-Low		Vee		Vee+0.8	V	

Optical Characteristics

Parameter	Symbol	Min	Typ	Max	Unit	Notes
Transmitter (DML)						
Total Average Launch Power	PT			10.5	dBm	
Optical wavelengths	L0	1294.53	1295.56	1296.59	nm	
	L1	1299.02	1300.05	1301.09	nm	
	L2	1303.54	1304.58	1305.63	nm	
	L3	1308.09	1309.14	1310.19	nm	
Side-mode Suppression Ratio	SMSR	30			dB	
Average Launch Power, each Lane		-4.3		4.5	dBm	
Optical Modulation Amplitude, each Lane	OMA	-1.3		+4.5	dBm	
Extinction Ratio	ER	4			dB	
Receiver(APD)						
RX Sensitivity @25.78 Gb/s, each lane	SENS			-10.6	dBm	1
RX Sensitivity(OMA) @25.78 Gb/s, each lane	SENS			-8.6	dBm	2
Receiver Overload		4.5			dBm	
Los De-Assert	LosD			-12	dBm	
Los Assert	LosA	-25			dBm	
Los Hysteresis	LosH	0.5			dB	

Order Information

Model	Description
QSFP28-S1-L1920C3D	100G QSFP28, 1310nm, 10km, LC, DDM, Single-mode

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