A Network Systems Solution

Fiber Optic SFP Transceivers

Duplex SFP+ 10G

Features:

- SFP+ Package with LC connector
- VCSEL Laser and PIN Photo Detector
- Power Dissipation < 1W
- LVPECL Compatible Data Input
- Output Interface Low EMI
- Excellent ESD Protection
- Laser Safety Standard IEC-60825
- Compliant Compatible with RoHS
- Compatible with SFF8472

Absolute Maximum Ratings:

Parameter	Symbol	Minimum	Maximum	Units
Storage Temperature	Tst	-40	+85	°C
Supply Voltage	Vcc	0	+3.6	V
Operating Relative Humidity	RH	0	85	%

Operation Environment:

Parameter		Symbol	Min	Typical	Max	Units
Supply Voltage		Vcc	3.15		3.45	V
Operating Case Temperature	Commercial	Tc	0		+70	°C
Power Dissipation					1	W
Data Rate				10.3125		Gbps

Optical Characteristics:

(Ambient Operating Temperature 0°C to +70°C, Vcc =3.3 V)

Parameter	Symbol	Min.	Typ.	Max.	Units
Transmitter Section					
Center Wavelength	λo	840	850	860	nm
RMS Spectral Width	Δλ	-	-	0.45	dB
Average Output Power	Po	-5	-	-1	dBm
Extinction Ratio	Er	3.0	-	-	dB
Dispersion Penalty				3.9	dB
Relative Intensity Noise	$RIN_{12}OMA$			-128	dB/Hz
Total jitter	Tj	IEEE 802.3ae			
Receiver Section					
Center Wavelength	λo		850		nm
Receiver Sensitivity	Rsen			-11.5	dBm

Stressed Sensitivity	Rsen			7.5	dBm
Receiver Overload	Rov	-3			dBm
Return Loss		12			dB
LOS Assert	LOS_A	-17			dBm
LOS Dessert	LOS_D			-15	dBm
LOS Hysteresis		0.5		4	

Electrical Characteristics：

(Ambient Operating Temperature 0°C to +70°C, Vcc =3.3 V)

Parameter		Symbol	Min.	Typ.	Max.	unit
Transmitter Section						
Input Differential Impendence		Zin	90	100	110	Ohm
Data Input Swing Differential		Vin	180		700	mV
TX Disable	Disable		2.0		Vcc	V
	Enable		0		0.8	V
TX Fault	Assert		2.0		Vcc	V
	Deassert		0		0.8	V
Receiver Section						
Output differential impendence		Zout		100		Ohm
Data output Swing Differential		Vout	300		800	mV
Rx_LOS	Assert		2.0		Vcc	V
	Deassert		0		0.8	V

Pin Description:

Pins	Name	Discription	NOTE
1	VeeT	Transmitter Ground	
2	Tx Fault	Transmitter Fault Indication	1
3	Tx Disable	Transmitter Disable	2
4	MOD DEF2	Module Definition 2	3
5	MOD DEF1	Module Definition 1	3
6	MOD DEF0	Module Definition 0	3
7	RS0	Not Connected	
8	LOS	Loss of Signal	4
9	RS1	Not Connected	
10	VeeR	Receiver Ground	
11	VeeR	Receiver Ground	
12	RD-	Inv. Received Data Output	5
13	RD+	IReceived Data Output	5
14	VeeR	Receiver Ground	
15	VccR	Receiver Power	

16	VccT	Transmitter Power	
17	VeeT	Transmitter Ground	
18	TD+	Transmit Data Input	6
19	TD-	Inv. Transmit Data Input	6
20	VeeT	Transmitter Ground	

Outline drawing (mm):