Optospan

Platinum OEM Series

SFP 160 km transceiver | Cisco Compatible 2G LX SONET OC-48 / STM-16
Designed for OEM networks such as Cisco, HP, Juniper, Brocade, Alcatel etc.

Datasheet

SFP Optical Transceiver Product Features

PSFP-MR2T55K160

- Exclusive Japanese OSAs for Ultimate Reliability
- SONET OC-48 / STM-16 35dB SFP
- 160 km LX SFP for SMF @ 2.67Gbps Multirate
- 1550nm DFB+APD Laser 160 km SFP
- 0°C - 70°C Temperature - Extended/Industrial Available
- 2-Wire Interface Digital Diagnostic Monitoring (SFF-8724)
- Hot-swappable for SFP LC ports
- Extended 2 Years Warranty
- Tested and Certified in Brand Specific Networks and Target Applications
- Assembled Using Highest Quality Raw Components
- SFP MSA / IEEE Std 802.3 & ROHS

Applications

- 1.25Gbps Gigabit Ethernet
- Fibre Channel 2x
- SONET/SDH
- SONET OC-48
- Other Optical Links

Description

Platinum OEM Series PSFP-MR2T55K160 is a Cisco Compatible Duplex SONET OC-48 / STM-16 SFP transceiver designed for long distance optical communications up to 160 km with signaling rates up to 2.67Gbps.

OptoSpan Platinum OEM Series 2.67Gbps Multirate Duplex optical transceivers have undergone rigorous qualification and certification testing to provide End-to-End Compatibility using switching equipment from CISCO, BROCADE, JUNIPER, ALCATEL, HP (select models), NORTEL, EMC, QLOGIC and other OEMs.

All OptoSpan Platinum OEM Series long-reach SFP s are ROHS compliant, allow for real-time diagnostic monitoring as per SFF-8472 and designed to meet Multi-Source Agreement (MSA) standards for Duplex transceivers with LC interface.

Optical Budget Calculation for 160 km Platinum OEM SFP Optical Transceiver

PSFP-MR2T55K160	Distance: 160 km				Fiber: 1550nm SMF	
	Tx Min dBm	Tx Max dBm	Rx Min dBm	Rx Max dBm	Link Attenuation dB	Power Budget dB
Product Specifications	5	8	-30	-10		
Optical Calculation Results			-29.6	-26.6	34.6	35

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General Specifications

Parameter	Unit	Min.	Typ.	Max
Absolute Maximum Ratings				
Maximum Supply Voltage	V	-0.5		3.6
Storage Temperature	°C	-40		+85
Case Operating Temperature	°C	0		+70
Recommended Operating Condition				
Supply Voltage	V	3.15	3.3	3.45
Supply Current	mA			300
Data Rate	Gbps		2.488	

Electrical Characteristics

Parameter	Unit	Min.	Typ.	Max
Transmitter				
Differential Input Voltage Swing	mVpp	400		1600
Input Differential Impedance	ohm	85	100	115
Transmit Disable Voltage - High	V	2		Vcc
Transmit Disable Voltage - Low	V	0		0.8
Transmit Fault Voltage - High	V	2		Vcc+0.3
Transmit Fault Voltage - Low	V	0		0.5
Receiver				
Differential Output Voltage Swing	mVpp	400	800	1200
Differential Output Impedance	ohms	85	100	115
LOS Output Voltage - High	V	2		Vcc+0.3
LOS Output Voltage - Low	V	0		0.8

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Optical Characteristics

Parameter	Unit	Min.	Typ.	Max
Transmitter				
Output Optical Power	dBm	5		8
Optical Extinction Ratio	dB	8.2		
Optical Wavelength	nm	1500	1550	1600
Spectral Width	nm			1
Side Mode Suppression Ratio	dB	30		
Receiver				
Optical Center Wavelength	nm	1260		1600
Receiver Sensitivity @ 2.67Gbps	dBm	**-30**		**-10**
LOS DE-Assert	dBm			-31
LOS Assert	dBm	-42		

Laser Safety

This is a class 1 Laser Product according to IEC 60825-1:1993:+A1:1997+A2:2001. This product complies with 21 CFR 1040.10 and 1040 except for deviations pursuant to Laser Notice No. 50, dated July 26, 2001.

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PIN Layout

PIN	Signal		Signal	PIN
			VeeT	20
1	VeeT		TD-	19
2	Tx_Fault		TD+	18
3	Tx_Disable		VeeT	17
4	MOD_DEF(2)		VccT	16
5	MOD_DEF(1)		VccR	15
6	MOD_DEF(0)		VeeR	14
7	Rate Select		RD+	13
8	LOS		RD-	12
9	VeeR		VeeR	11
10	VeeR			

Towards Bezel ⬅

Towards ASIC ➡

PIN 11 — PIN 20

PIN 10 — PIN 1
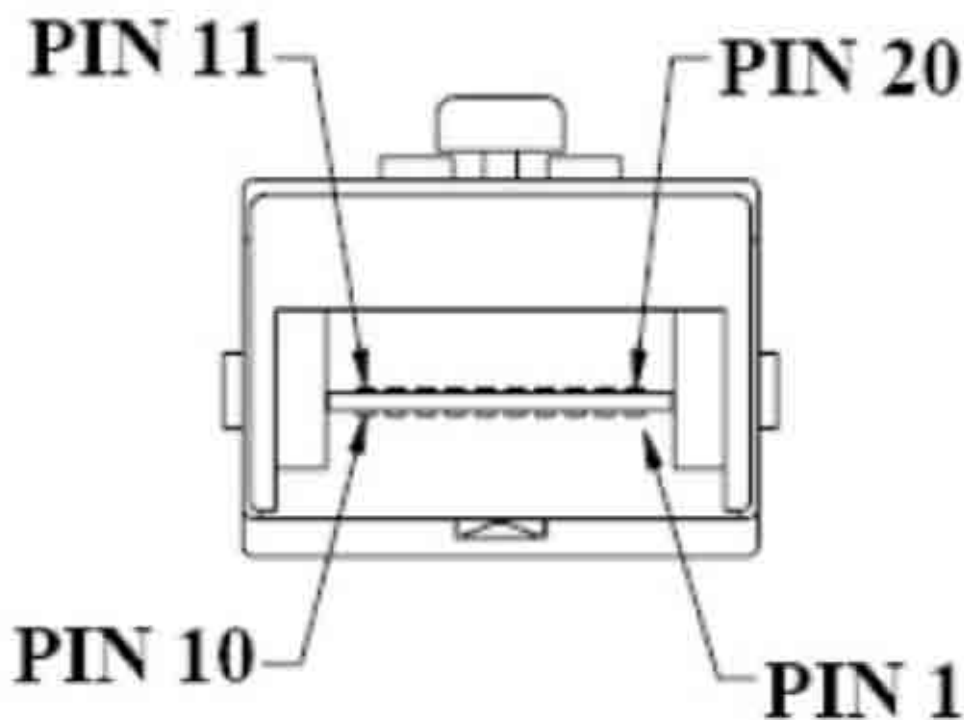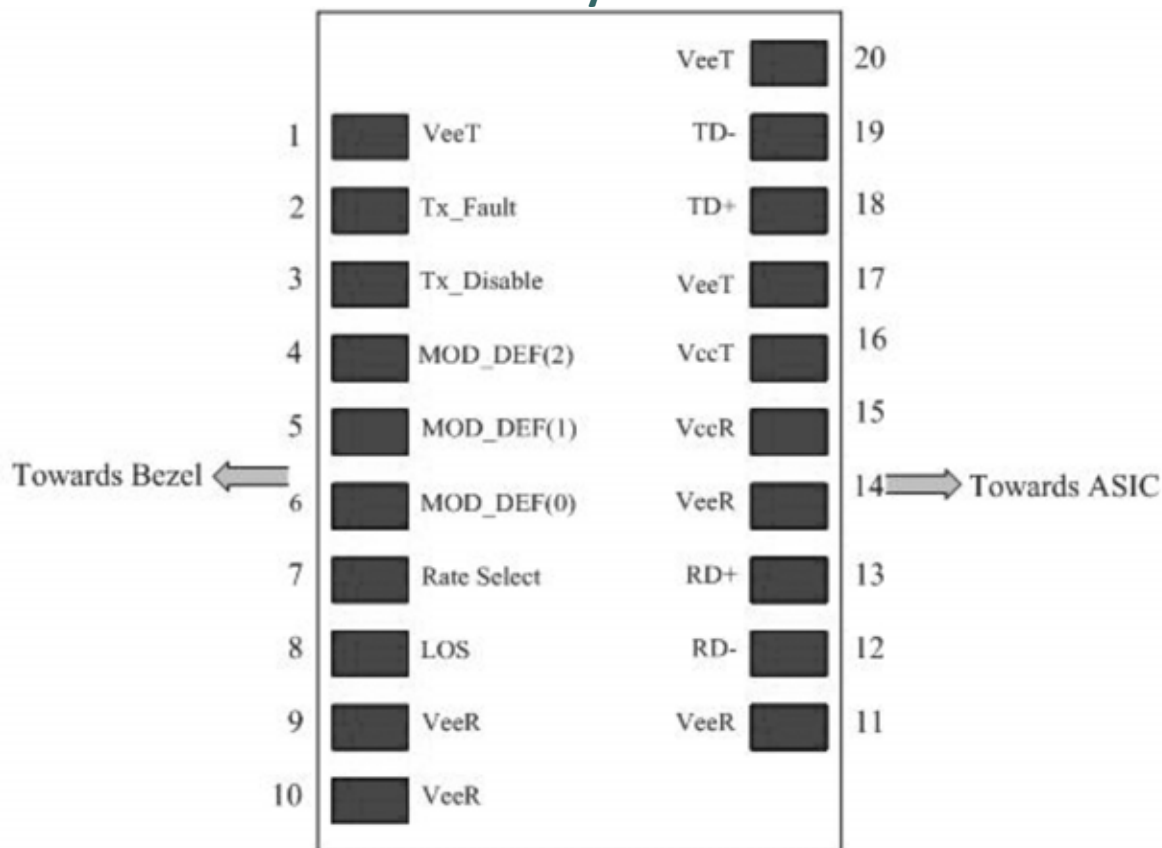
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PIN Functions

Pin #	Name - Description
1	Transmitter Ground
2	Transmitter Fault Indication
3	Transmitter Disable
4	Module Definition 2
5	Module Definition 1
6	Module Definition 0
7	Not Connect
8	Loss of Signal
9	Receiver Ground
10	Receiver Ground
11	Receiver Ground
12	Inv. Received Data Out
13	Received Data Out
14	Receiver Ground
15	Receiver Power
16	Transmitter Power
17	Transmitter Ground
18	Transmit Data In
19	Inv. Transmit Data In
20	Transmitter Ground
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	

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Mechanical Layouts
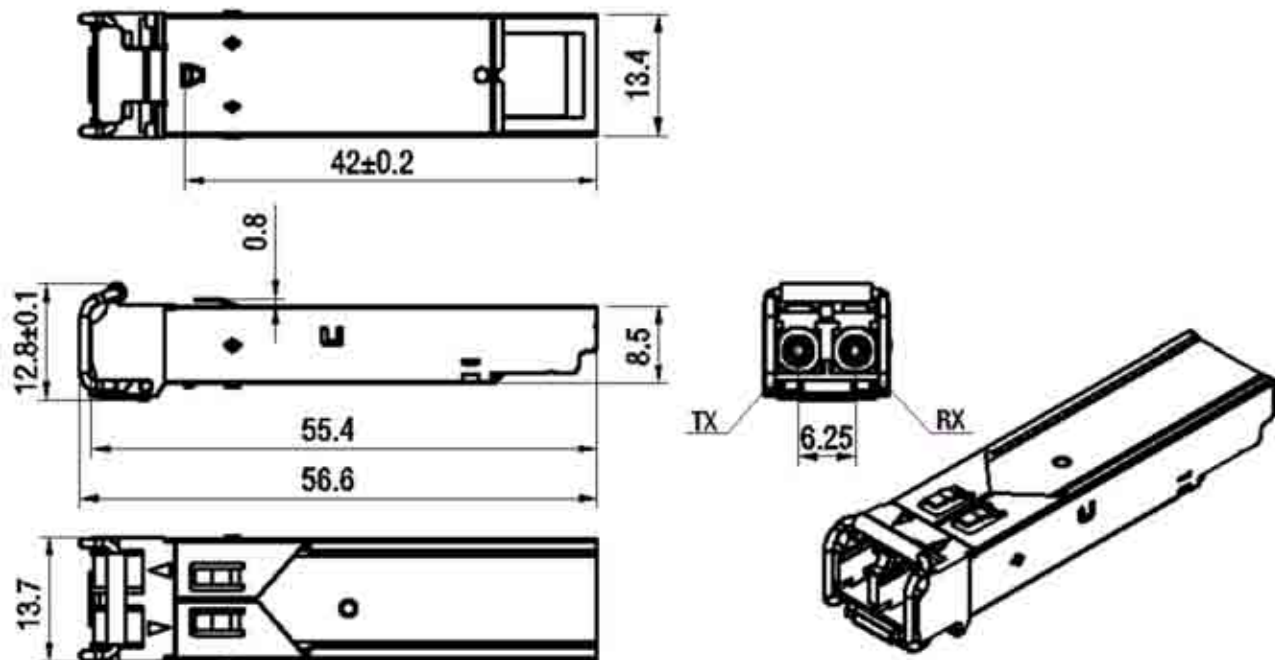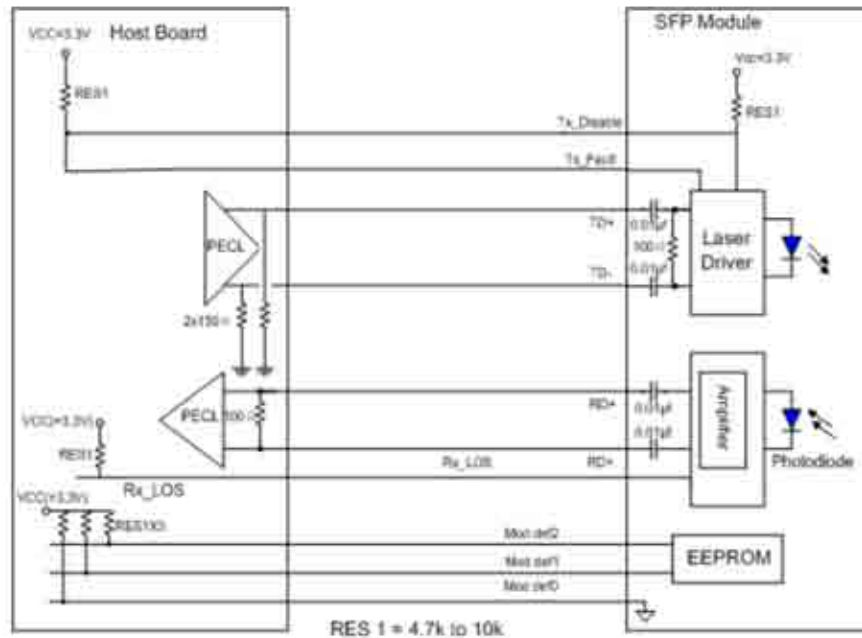
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