

**SFP Single Fiber 120 km transceiver | Cisco Compatible 2G ZX SONET OC-48 / STM-16**  
**Designed for OEM networks such as Cisco, HP, Juniper, Brocade, Alcatel etc.**

### Datasheet

#### SFP Optical Transceiver Product Features

- Exclusive Japanese OSAs for Ultimate Reliability
- SONET OC-48 / STM-16 29dB SFP
- 120 km ZX SFP for SMF @ 2.67Gbps
- 1590Tx-1510Rx DFB+APD Laser 120 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

#### PSFP-MR2B59K120



#### Applications

- 1.25Gbps Gigabit Ethernet
- Fibre Channel 2x
- SONET/SDH
- Fibre Channel 1x

#### Description

Platinum OEM Series PSFP-MR2B59K120 is a Cisco Compatible Single Fiber BiDirectional SONET OC-48 / STM-16 SFP transceiver designed for long distance optical communications up to 120 km with signaling rates up to 2.67Gbps.

OptoSpan Platinum OEM Series 2.67Gbps Single Fiber BiDirectional (BiDi) 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 Single Fiber BiDirectional (BiDi) transceivers with LC interface.

#### Optical Budget Calculation for 120 km Platinum OEM SFP Optical Transceiver

PSFP-MR2B59K120	Distance: 120 km				Fiber: 1590Tx-1510Rx	
	Tx Min dBm	Tx Max dBm	Rx Min dBm	Rx Max dBm	Link Attenuation dB	Power Budget dB
Product Specifications	0	5	-29	-8		
Optical Calculation Results			-29.8	-25.8	29.8	29

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## General Specifications

Parameter	Unit	Min.	Typ.	Max
<b>Absolute Maximum Ratings</b>				
Maximum Supply Voltage	V	-0.5		3.6
Storage Temperature	°C	-40		+85
Case Operating Temperature	°C	0		+70
<b>Recommended Operating Condition</b>				
Supply Voltage	V	3.15	3.3	3.45
Supply Current	mA			300
Data Rate	Gbps		2.5	

## Electrical Characteristics

Parameter	Unit	Min.	Typ.	Max
<b>Transmitter</b>				
Differential Input Voltage Swing	mVpp	400		2000
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
<b>Receiver</b>				
Differential Output Voltage Swing	mVpp	370		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

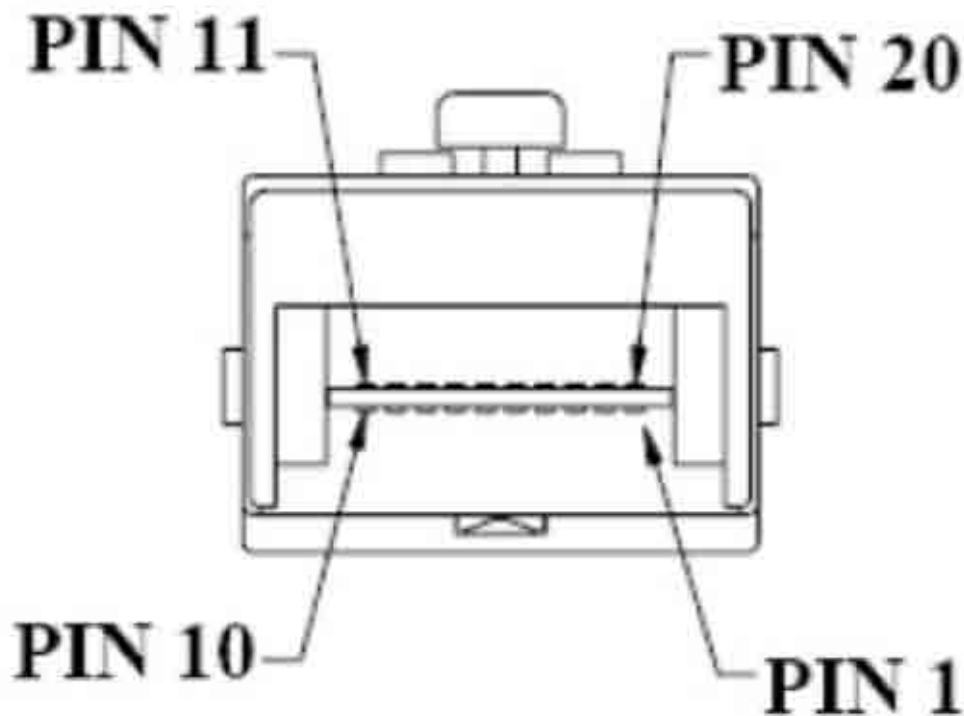
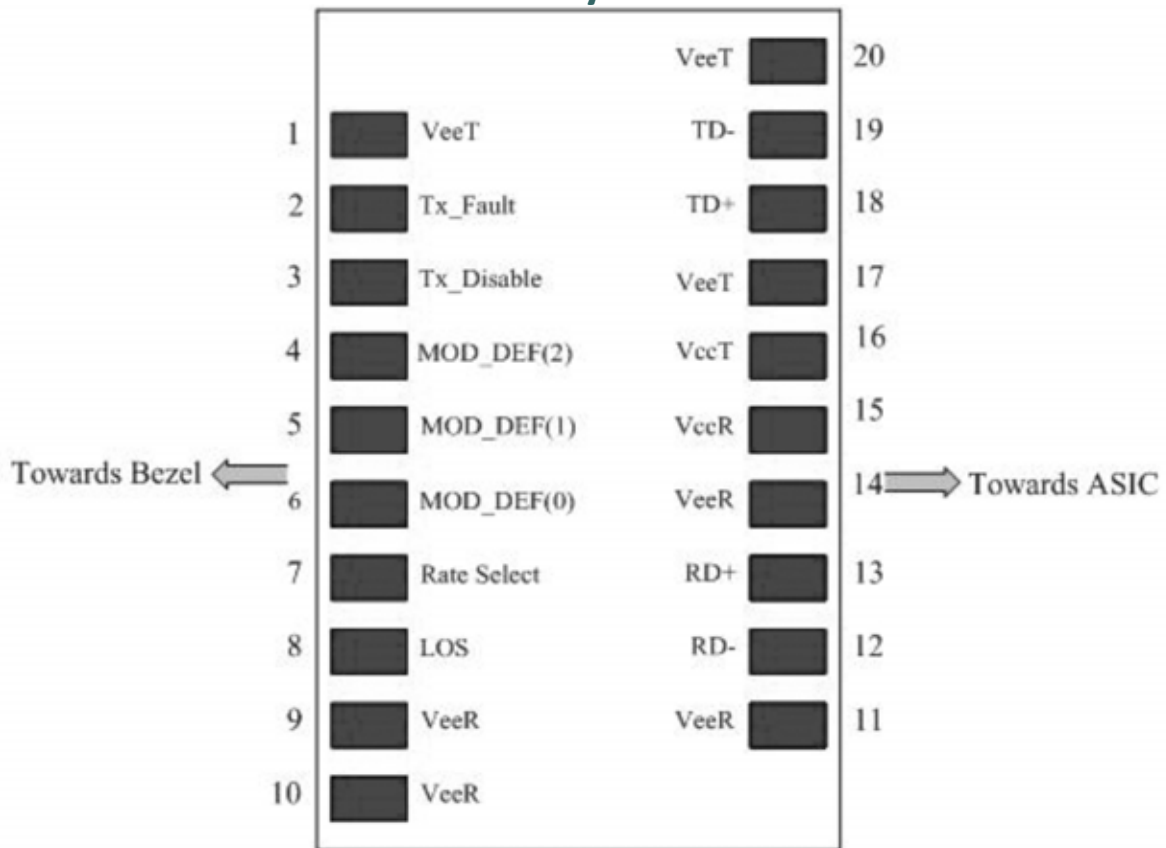
Parameter	Unit	Min.	Typ.	Max
<b>Transmitter</b>				
Output Optical Power	dBm	0		5
Optical Extinction Ratio	dB	9		
Optical Wavelength	nm	$\lambda_c-6.5$	$\lambda_c$	$\lambda_c+7$
Spectral Width	nm			1
Side Mode Suppression Ratio	dB	30		
<b>Receiver</b>				
Optical Center Wavelength	nm	$\lambda-20$	$\lambda$	$\lambda+20$
Receiver Sensitivity @ 2.5Gbps	dBm	-29		-8
LOS DE-Assert	dBm			-30
LOS Assert	dBm	-45		

## 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

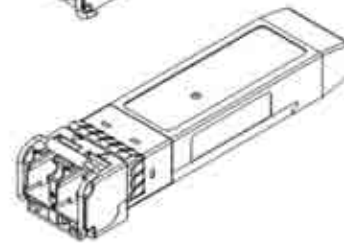
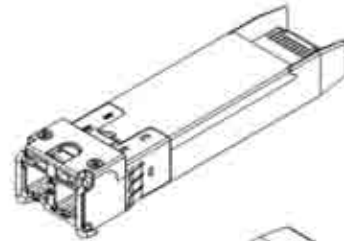
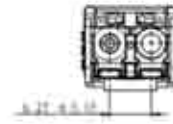
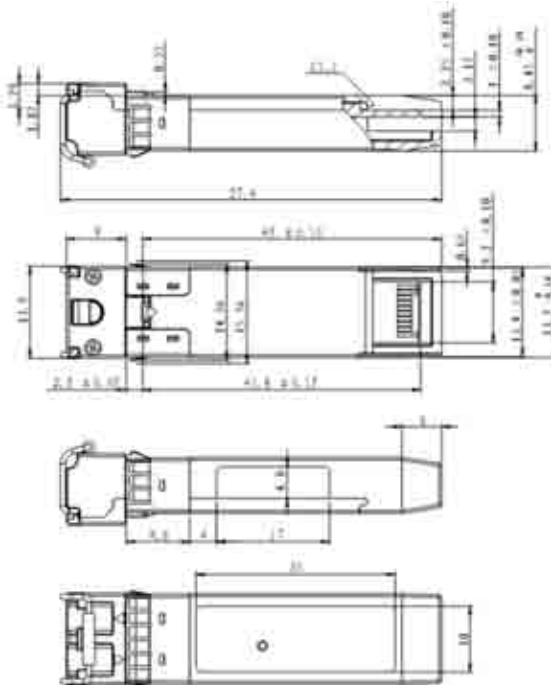
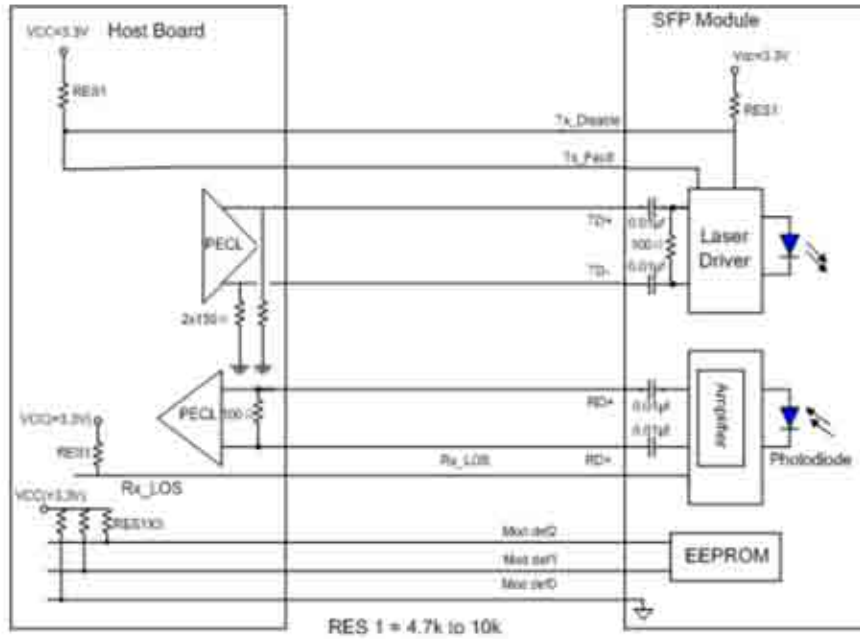


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**PIN Functions**

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	
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#### Mechanical Layouts



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