

SFP 2 km transceiver | Cisco Compatible 155Mb Ethernet

Designed for OEM networks such as Cisco, HP, Juniper, Brocade, Alcatel etc.

Datasheet

SFP Optical Transceiver Product Features

- Exclusive Japanese OSAs for Ultimate Reliability
- 100BASE-FX Ethernet 8dB SFP
- 2 km Duplex SFP for SMF @ .155Gbps
- 1310nm FP Laser 2 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-155T31K002



Applications

- Optical Fast Ethernet
- SONET/SDH
- SONET OC-3
- 100Base FX

Description

Platinum OEM Series PSFP-155T31K002 is a Cisco Compatible Duplex 100BASE-FX Ethernet SFP transceiver designed for long distance optical communications up to 2 km with signaling rates up to .155Gbps.

OptoSpan Platinum OEM Series .155Gbps 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 2 km Platinum OEM SFP Optical Transceiver

| PSFP- 155T31K002 | Distance: 2 km | | | | Fiber: 1310nm SMF | |
|-----------------------------|----------------|---------------|---------------|---------------|------------------------|-----------------------|
| | Tx Min dBm | Tx Max dBm | Rx Min dBm | Rx Max dBm | Link Attenuation dB | Power Budget dB |
| Product Specifications | -15 | -8 | -23 | -8 | | |
| Optical Calculation Results | | | -16.9 | -9.9 | 1.9 | 8 |

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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 | | .155 | |

Electrical Characteristics

| Parameter | Unit | Min. | Typ. | Max |
|-----------------------------------|------|------|------|---------|
| Transmitter | | | | |
| Differential Input Voltage Swing | mVpp | 400 | | 2000 |
| Input Differential Impedance | ohm | 85 | 100 | 115 |
| Transmit Disable Voltage - High | V | 2 | | Vcc+0.3 |
| 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 | | 2000 |
| Differential Output Impedance | ohms | 85 | 100 | 115 |
| LOS Output Voltage - High | V | 2 | | Vcc+0.3 |
| LOS Output Voltage - Low | V | 0 | | 0.8 |

Optical Characteristics

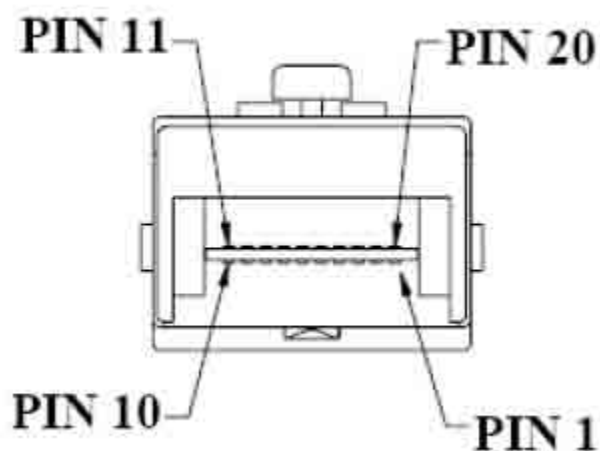
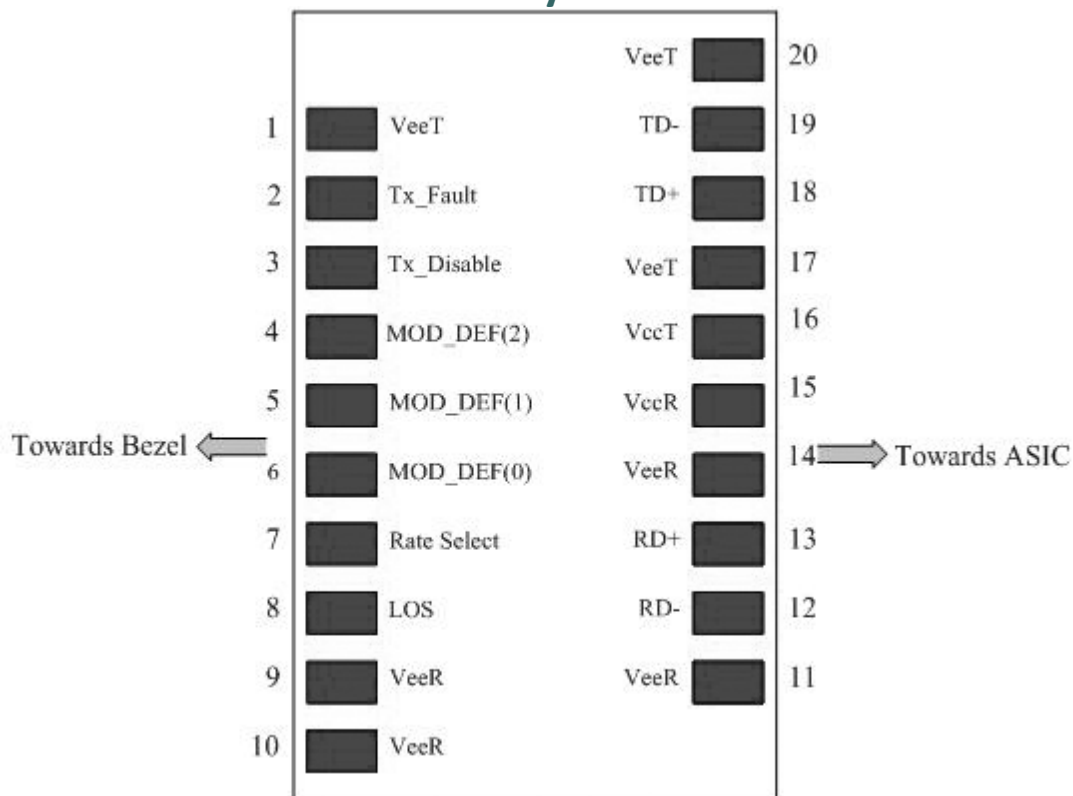
| Parameter | Unit | Min. | Typ. | Max |
|-----------------------------|------|------|------|------|
| Transmitter | | | | |
| Output Optical Power | dBm | -15 | | -8 |
| Optical Extinction Ratio | dB | 8.2 | | |
| Optical Wavelength | nm | 1260 | 1310 | 1360 |
| Spectral Width | nm | | | 10 |
| Side Mode Suppression Ratio | dB | | | |
| Receiver | | | | |
| Optical Center Wavelength | nm | 1260 | | 1600 |
| Receiver Sensitivity @ | dBm | -23 | | -8 |
| LOS DE-Assert | dBm | | | -24 |
| 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



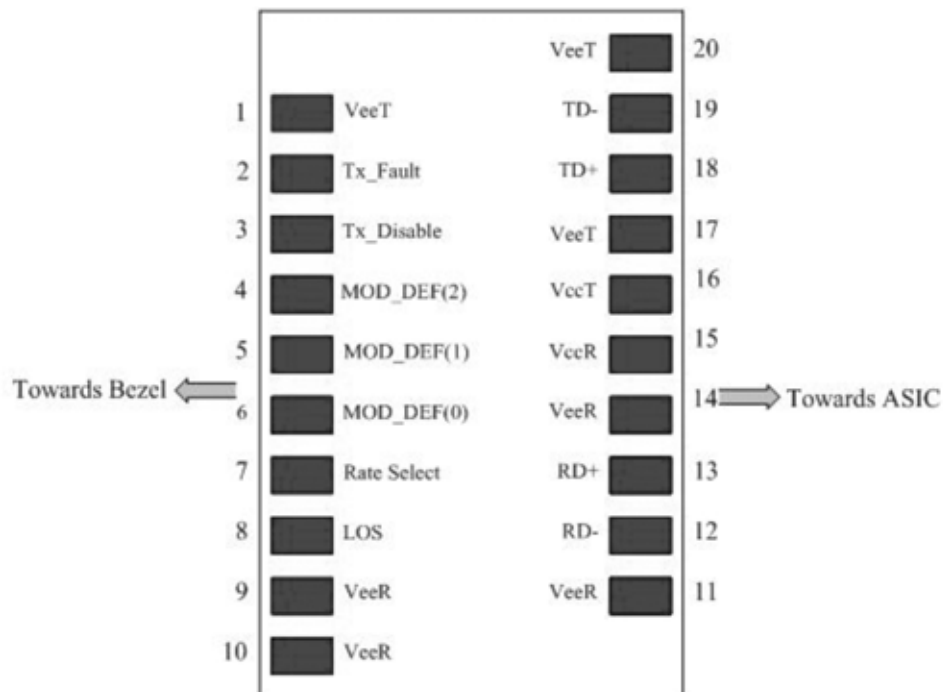
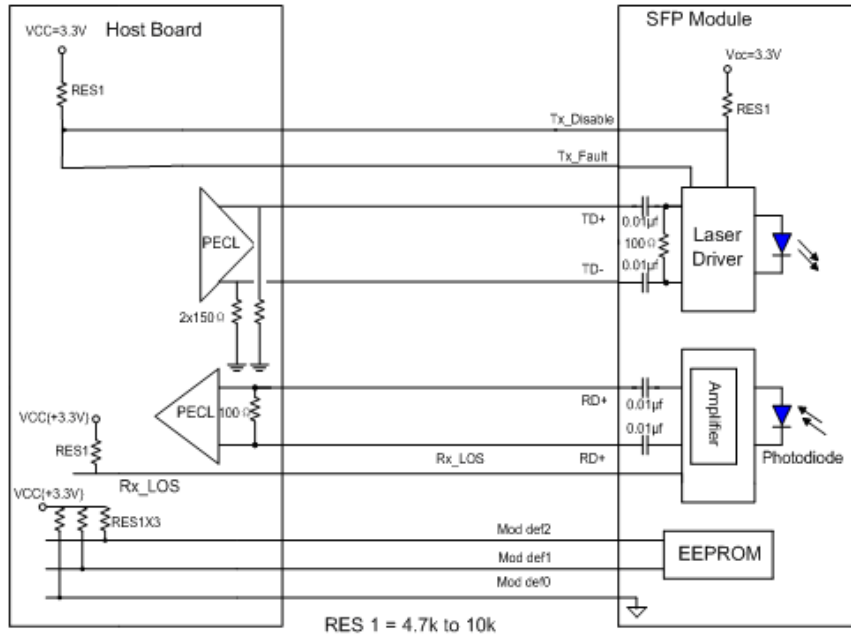
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PIN Functions

| 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 Connected |
| 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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