

**SFP+ SONET/SDH 10 km transceiver | Cisco Compatible 10G LR SONET OC-192 / STM-64 w/ CDR
Designed for OEM networks such as Cisco, HP, Juniper, Brocade, Alcatel etc.**

Datasheet

SONET/SDH SFP+ Optical Transceiver Product Features

- Exclusive Japanese OSAs for Ultimate Reliability
- SONET OC-192 / STM-64 w/ CDR 8.4dB SONET/SDH SFP+
- 10 km LR SONET/SDH SFP+ for SMF @ 10Gbps
- 1310nm DFB+PIN Laser 10 km SONET/SDH SFP+
- 0°C - 70°C Temperature - Extended/Industrial Available
- 2-Wire Interface Digital Diagnostic Monitoring (SFF-8724)
- Hot-swappable for SONET/SDH SFP+ LC ports
- Extended 2 Years Warranty
- Tested and Certified in Brand Specific Networks and Target Applications
- Assembled Using Highest Quality Raw Components
- Compliant with SFF-8431, SFF-8432 & ROHS

PSPS-81DT31K010



Applications

- SONET OC-192 / SDH STM-64
- OTN ITU-T G.709
- 10GBASE-LR @ 10.31Gbps
- 10GbE & 10Gb/s FC w/FEC

Description

Platinum OEM Series PSPS-81DT31K010 is a Cisco Compatible Duplex SONET OC-192 / STM-64 w/ CDR SONET/SDH SFP+ with CDR, FEC & OTN G.709 transceiver designed for long distance optical communications up to 10 km with signaling rates up to 10Gbps.

OptoSpan Platinum OEM Series 10Gbps 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 SONET/SDH 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 10 km Platinum OEM SONET/SDH SFP+ Optical Transceiver

| PSPS-81DT31K010 | Distance: 10 km | | | | Fiber: 1310nm SMF | |
|------------------------------------|-----------------|------------|------------|------------|---------------------|-----------------|
| | Tx Min dBm | Tx Max dBm | Rx Min dBm | Rx Max dBm | Link Attenuation dB | Power Budget dB |
| Product Specifications | -6 | 0 | -14.4 | 0.5 | | |
| Optical Calculation Results | | | -11.5 | -5.5 | 5.5 | 8.4 |

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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 | -5 | | +70 |
| Recommended Operating Condition | | | | |
| Supply Voltage | V | 3.15 | 3.3 | 3.45 |
| Supply Current | mA | | | 300 |
| Data Rate | Gbps | 0.6 | | 11.1 |

Electrical Characteristics

| Parameter | Unit | Min. | Typ. | Max |
|-----------------------------------|------|------|------|---------|
| Transmitter | | | | |
| Differential Input Voltage Swing | mVpp | 150 | | 1200 |
| Input Differential Impedance | ohm | 85 | 100 | 115 |
| Transmit Disable Voltage - High | V | 2 | | 3.45 |
| 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 | 350 | | 700 |
| Differential Output Impedance | ohms | 90 | 100 | 110 |
| LOS Output Voltage - High | V | 2 | | Vcc+0.3 |
| LOS Output Voltage - Low | V | 0 | | 0.8 |

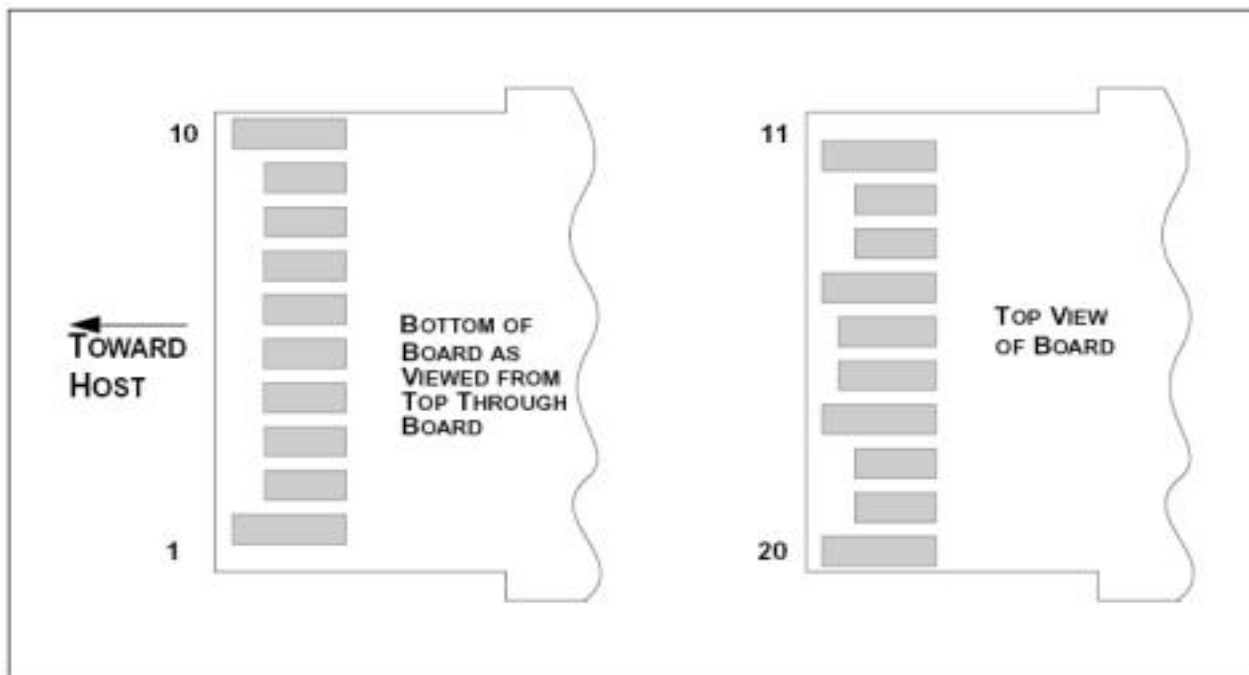
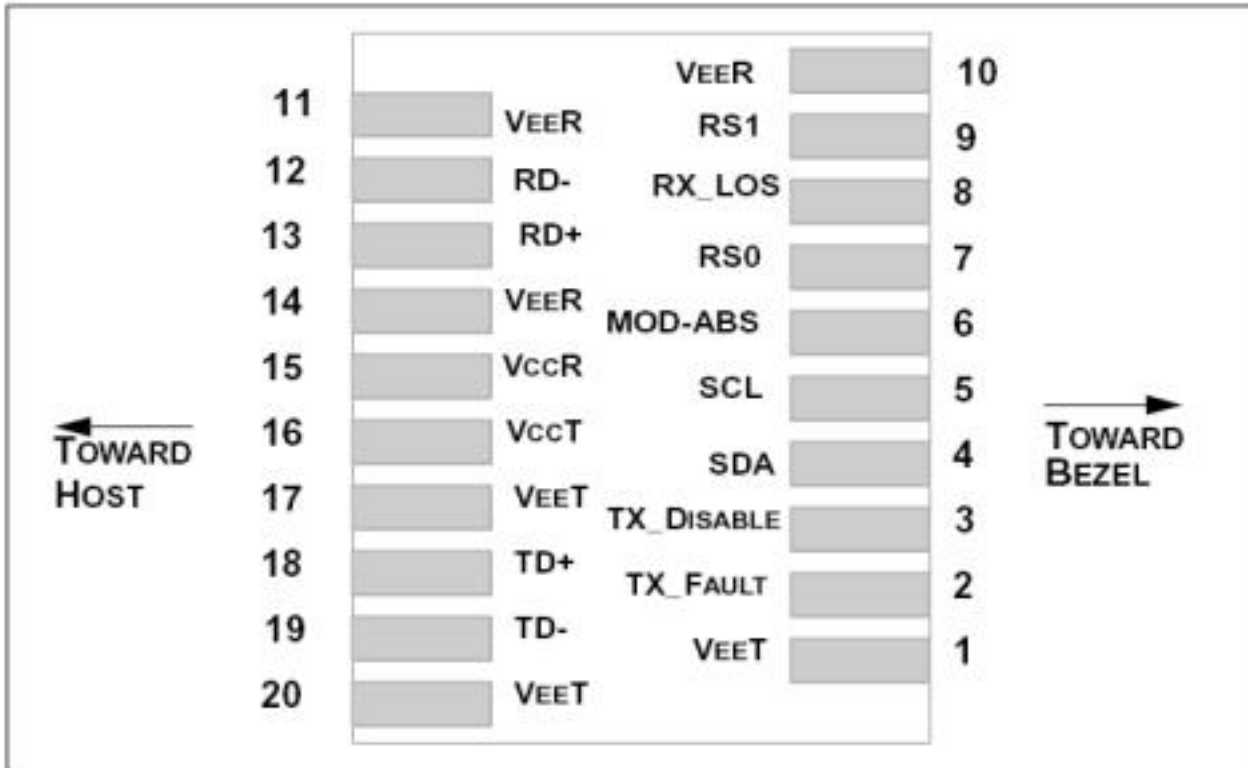
Optical Characteristics

| Parameter | Unit | Min. | Typ. | Max |
|-----------------------------|------|-------|------|------|
| Transmitter | | | | |
| Output Optical Power | dBm | -6 | | 0 |
| Optical Extinction Ratio | dB | 3.5 | | |
| Optical Wavelength | nm | 1270 | 1310 | 1355 |
| Spectral Width | nm | | | 1 |
| Side Mode Suppression Ratio | dB | 30 | | |
| Receiver | | | | |
| Optical Center Wavelength | nm | 1260 | | 1565 |
| Receiver Sensitivity @ | dBm | -14.4 | | 0.5 |
| LOS DE-Assert | dBm | | | -16 |
| LOS Assert | dBm | -28 | | |

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

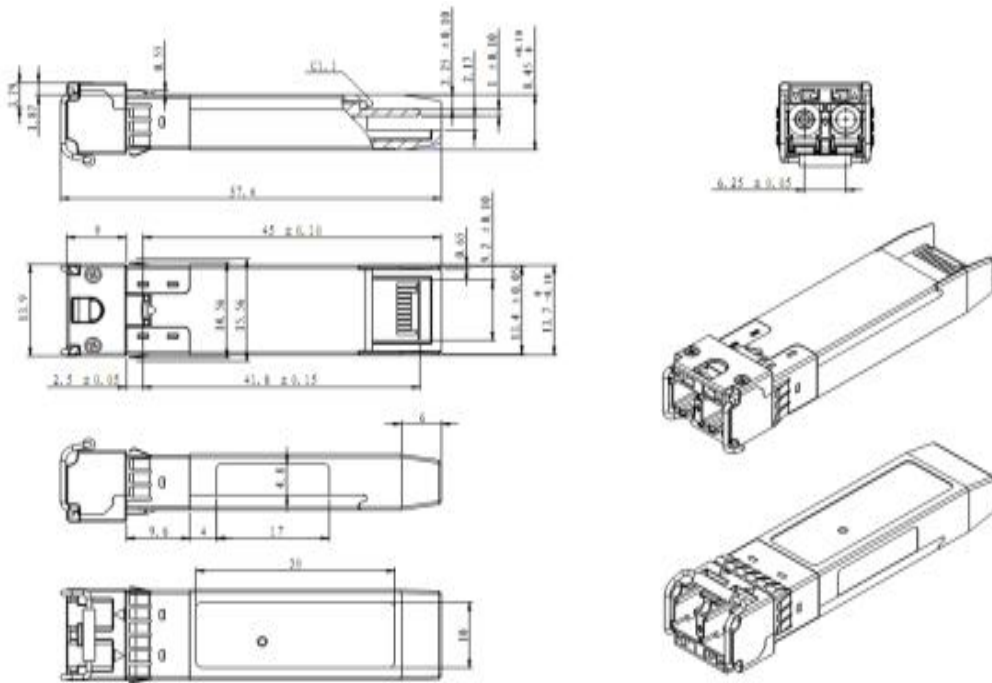
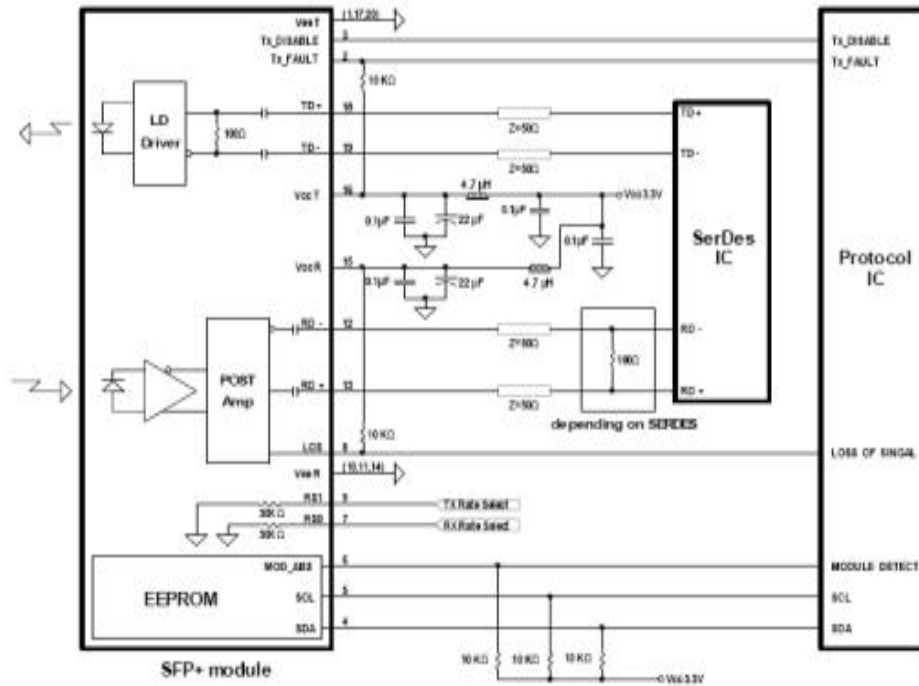


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PIN Functions

| 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 | RX Rate Select (LVTTL) |
| 8 | Loss of Signal |
| 9 | TX Rate Select (LVTTL) |
| 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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