


10Gb/s 300-pin MSA Transponder Wideband Tunable SFF Zero Chirp, Long Reach Tx, PiN Rx

TL9000ZPCAH-J57

Features:

- 300-pin MSA compliant 10Gbps wideband tunable SFF transponder suitable for zero chirp applications (negative chirp variant also available)
- Rate selectable applications including SONET/10GbE with or without FEC encoding (9.9Gbps up to 11.3Gbps)
- OIF-SFI4-01.0 compliant low speed electrical interface
- Co-packaged full band tunable laser source and integrated InP MZ optical transmitter
- Up to +4.2dBm nom output power with ± 1 dB power stability over operating range
- ± 2.5 GHz wavelength stability on 50GHz ITU-T channel spacing (C band)
- PiN receiver with support for decision threshold control adjust and optical damage protection to +12dBm typical
- FM and AM tone insertion supported
- Source/line timing modes and loopback diagnostics
- MSA Edition 4.2 I²C compliant interface for control/alarm and monitor diagnostics
- Low profile SFF mechanical outline 76 x 56 x 11.4 mm
- Low power dissipation 7W typical
- Wide operating case temp range -5°C to +70°C
- RoHS 5/6 compliant 

Applications:

- Long Reach applications based on Telcordia GR-253-CORE, ITU-T G.691 and IEEE 802.3ae system architectures
- Regional Metro



The Oclaro TL9000 module is a 300-pin MSA compatible, 10Gbps, long reach, wideband tunable transponder module suitable for 50GHz channel spaced C-band applications requiring a zero chirp transmitter. The module supports data rates from 9.9Gbps to 11.3Gbps and is provided in a low profile (11.4mm high) Small Form Factor (SFF) industry standard mechanical outline.

The module supports bi-directional conversion of high speed optical signals to / from low speed electrical signals. The electrical interface provides a 16-bit parallel LVDS interface as defined in OIF-SFI4-01.0.

The transmit path comprises a 16-bit multiplexer, high speed modulator driver and optical transmitter. The optical transmitter utilizes Oclaro's LambdaFLEX™ Tunable InP MZ to provide a co-packaged, high performance, low cost solution. Channel tuning is supported on the ITU-T 50GHz grid across full C-band with ± 20 pm stability.

The receive path comprises a PIN receiver with linear amplifier, CDR and 16-bit demultiplexer. For optimum system performance in noise loaded applications support is provided for external control of the receiver decision threshold.

An external 2-wire serial interface is provided to support extensive control, monitor and diagnostic functions in accordance with I²C MSA Ed 4.2.

Power Supply Requirements

The TL9000 transponder module operates from the supply rails detailed below. The use of an APS supply is not supported by this product.

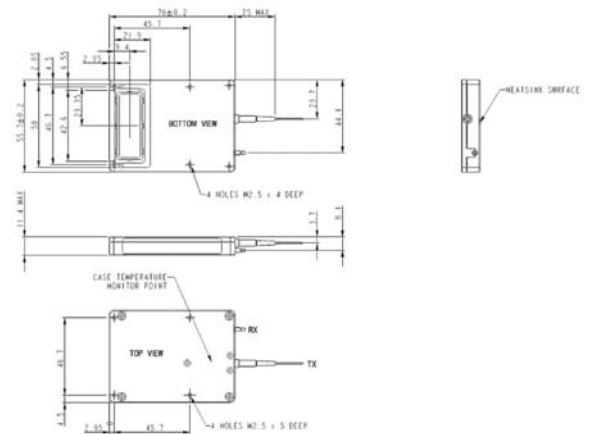
| Supply rail | Rail | Nom | Max | Unit |
|----------------------------|-----------|------|------|------|
| +1.8V Current (note 1) | P1V8 | 850 | 1000 | mA |
| +3.3V Current | P3V3 | 1000 | 1800 | mA |
| +5.0V Current | P5V0 | 80 | 120 | mA |
| -5.2V Current | M5V2 | 300 | 375 | mA |
| Supply Noise (6kHz – 2MHz) | All Rails | | 50 | mVpp |
| Total Power Consumption | | 7 | 9 | W |

Note 1: APS not supported

Configuration Information

| Option | Configurations | Notes |
|-------------------|----------------|--|
| Transmitter Type | Zero Chirp | 0 to +4dBm mean modulated NRZ. Negative chirp variant also available |
| Channel Spacing | 50GHz | |
| Receiver Type | PIN | APD and VOA variants are also available |
| Mechanical Height | 11.4 mm | |
| Optical Connector | LC (J57) | Others available on request |

Mechanical Details



Patents

This product is protected by US patent numbers 6,658,035, 6,654,400, 6,687,278, 6,345,135, 7,145,923, 7,394,838 and other patents and applications pending worldwide.

Contact Information

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