

DATASHEET 5.0

SO-SFP-MR15D

SFP, 100Mbps-2.7Gbps, Multirate, 1310nm, SM, DDM, 13dB, 15km

OVERVIEW

SO-SFP-MR15D is a 1310nm SFP transceiver for SingleMode fiber, covering a wide range of services up to 2.67Gbps, such as the SDH/SONET range STM-1/OC-3 to STM-16/OC-48 as well as 1Gbps Ethernet (GbE) services etc.

The optical performance provides a bridgeable distance of up to 15km.

This transceiver provides digital diagnostic functions via a 2-wire serial interface as defined by the SFF-8472 specification.

TECHNICAL DATA

| | |
|---------------------------|---|
| Technology | Grey SFP |
| Transmission media | SM (2x LC) |
| Typical reach | 15 km |
| Nominal wavelength | 1310 nm |
| Bit rate range | 100 - 2.67 Mbps |
| Protocols | Eth: Fe GbE |
| | SDH/SONET: STM-1/OC-3 STM-4/OC-12 STM-16/OC-48 |
| | OTN: OTU1 |
| | FC: 1G FC 2G FC |
| | CPRI: Opt 1 (0.6144 Gbps) Opt 2 (1.2288 Gbps) Opt 3 (2.4576 Gbps) |
| Power budget | 3.0 – 13.0 dB ¹⁾ |
| Temperature range | 0° C to +70° C |
| Power consumption | < 1.0W |

| | | |
|-------------------------|-----------------------|-------------------------------|
| Transmitter data | Output power: | Min: -5.0 dBm Max: 0.0 dBm |
| | Tx wavelength: | Min: 1260 nm Max: 1360 nm |
| Receiver data | Minimum input power: | -18.0 dBm ¹⁾ |
| | Overload (max power): | -3.0 dBm |
| | Wavelength range: | 1260 - 1600 nm |
| DDM | | Yes |
| MSA compliance | | SFP MSA SFF-8472 |

¹⁾ @ 2.488 Gbps & BER 1E-12

Regulator compliance

| | |
|----------------------|---|
| EMC CE | EN 55022:2010 EN 55024:2010 |
| UL/Safety | UL 60950-1 |
| FCC | 47 CFR PART 15 OCT, 2013 |
| RoHS | RoHS 6 |
| TUV | EN 60950-1:2006+A11+A1+A12+A2 EN 60825-1:2014 EN 60825-2:2004+A1+A2 |
| Storage temp. | -40°C to +85°C |

Note! See "Definitions" below

DEFINITIONS

| | |
|-------------------------------|---|
| Technology | Grey; Transceiver type for non-WDM applications. Electrical or optical. CWDM; Transceiver type for CWDM applications using G.694.2 channel grid. DWDM; Transceiver type for DWDM applications using G.694.1 channel grid. BiDi; Transceiver pair using two different wavelength channels operating on a single-fiber. DAC: Direct Attach Cable. Electrical or optical cable with attached connectors. |
| Transmission media | Type of fiber, e.g. Multimode (MM) or Singlemode (SM). Number of and connector type within brackets (e.g. 2x LC, 1x MPO). |
| Typical reach | Nominal distance performance based on dispersion and power budget properties, i.e. w/o dispersion compensation and optical amplification. |
| Bit rate range | Supported bit rate range in Gigabit or Megabit per second (Gbps or Mbps). |
| Protocols | Protocols within supported bit rate range. |
| Nominal wavelength: | Typical wavelength from transmitter. |
| Interface standards: | Referenced interface standards e.g. IEEE 802.3 standard for 10GbE services. |
| Power budget: | Min and max power budget between Transmitter and Receiver. Excluding any dispersion penalty. |
| Dispersion tolerance/penalty: | Maximum amount of tolerated dispersion and required reduction of power budget to maintain BER better than $1E^{-12}$. Defined at a specific bit rate. |
| Temperature range: | Max operating case temperature range. Standard temperature range: Typically 0°C to +70°C (32°F to +158°F) Extended temperature range (E-temp): Typically -20°C to +75°C (-4°F to +167°F) Industrial temperature range (I-temp): -40°C to +85°C (-40°F to +185°F) |
| Power consumption: | Worst case power consumption. |
| Transmitter Output power: | Average output power. Provided in min and max values. |
| Receiver minimum input power: | Minimum average input power at specified BER, normally $1E^{-12}$. |
| Receiver max input power: | Maximum average input power at specified BER, normally $1E^{-12}$. |
| DDM: | Digital Diagnostic Monitoring functionality as defined in SFF-8472 MSA. |

ORDERING INFORMATION

| Part number | Description |
|--------------|--|
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