SO-SFP-MR40D
SFP, 100Mbps-2.7Gbps, Multirate, 1310nm, SM, DDM, 25dB, 40km

OVERVIEW

SO-SFP-MR40D 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 40km.

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

TECHNICAL DATA

<table>
<thead>
<tr>
<th>Technology</th>
<th>Grey SFP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmission media</td>
<td>SM (2x LC)</td>
</tr>
<tr>
<td>Typical reach</td>
<td>40 km</td>
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<tr>
<td>Nominal wavelength</td>
<td>1310 nm</td>
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<tr>
<td>Bit rate range</td>
<td>100 – 2.67 Mbps</td>
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<tr>
<td>Protocols</td>
<td>Eth: FE</td>
</tr>
<tr>
<td></td>
<td>SDH/SONET: STM-1/OC-3, STM-4/OC-12, STM-16/OC-48</td>
</tr>
<tr>
<td></td>
<td>OTN: OTU1</td>
</tr>
<tr>
<td></td>
<td>FC: 1G FC, 2G FC</td>
</tr>
<tr>
<td>CPRI:</td>
<td>Opt 1 (0.6144 Gbps), Opt 2 (1.2288 Gbps), Opt 3 (2.4576 Gbps)</td>
</tr>
<tr>
<td>OBSAI:</td>
<td>0.768 Gbps, 1.536 Gbps</td>
</tr>
</tbody>
</table>

Transmitter data

- Output power: Min: -2.0 dBm, Max: +3.0 dBm
- Tx wavelength: Min: 1260 nm, Max: 1360 nm

Receiver data

- Minimum input power: -27.0 dBm
- Overload (max power): -9.0 dBm
- Wavelength range: 1260 - 1600 nm

DDM

Yes

MSA compliance

SFP MSA, SFF-8472

Regulatory compliance

<table>
<thead>
<tr>
<th>EMC CE</th>
<th>EN 55022:2010</th>
</tr>
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<tbody>
<tr>
<td>UL/Safety</td>
<td>UL 60950-1</td>
</tr>
<tr>
<td>FCC</td>
<td>47 CFR PART 15 OCT, 2013</td>
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<tr>
<td>RoHS</td>
<td>RoHS 6</td>
</tr>
<tr>
<td>Storage temp.</td>
<td>-40°C to +85°C</td>
</tr>
</tbody>
</table>

Note! See “Definitions” below.

ORDERING INFORMATION

<table>
<thead>
<tr>
<th>Part number</th>
<th>Description</th>
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<tbody>
<tr>
<td>SO-SFP-MR40D</td>
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Subject to change without notice.
For more information visit smartoptics.com.
## 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/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 maximum input power:**
- Maximum average input power at specified BER, normally 1E^-12.

**DDM:**
- Digital Diagnostic Monitoring functionality as defined in SFF-8472 MSA.