

SO-SFP-MR120D-Cxx

SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 33dB, 1270nm-1610nm (18ch)

OVERVIEW

The SO-SFP-MR120D-Cxx is a CWDM transceiver 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 of 33dB power budget provides a bridgeable distance of beyond 120 km at 2.5Gbps in the high CWDM band. The higher attenuation in the lower CWDM band must be considered, particularly for fibers with water peak attenuation.

The transceiver is available in 18 CWDM wavelengths, spanning from 1270nm to 1610nm in accordance with the G.694.2 standard. This transceiver provides digital diagnostic functions via a 2-wire serial interface as defined by the SFF-8472 specification.

TECHNICAL DATA

Parameter	Value
Technology	CWDM SFP
Transmission media	SM (2x LC)
Typical reach	120km ¹⁾
Nominal wavelengths	1271 – 1610 nm (18ch)
Bit rate range	100 Mbps – 2.67 Gbps
Protocol support	FE GbE STM-1 / OC3 STM-4 / OC12 STM-16/OC48 OTU1 1G FC 2G FC CPRI Opt 1 (0.6144 Gbps) CPRI Opt 2 (1.2288 Gbps) CPRI Opt 3 (2.4576 Gbps) OBSAI 0.768 Gbps OBSAI 1.536 Gbps
Power budget	16 – 33 dB
Optical path penalty	1 dB
Power consumption	< 1 W
Operating temperature	0°C to +70°C
Storage temperature	-40°C to +85°C

Parameter	Value
Transmitter data:	
Output power	Min: +4 dBm ³⁾ Max: +7 dBm ³⁾
Transmit wavelength	1271 to 1611nm (G.694.2)
Receiver data:	
Minimum input power	-29 dBm ^{2) 3)}
Overload (max power)	-9 dBm ^{2) 3)}
Wavelength range	1260 – 1600 nm
DDM	Yes
MSA compliance	SFP MSA SFF-8472

¹⁾ Dependent on actual optical path attenuation.

²⁾ Measured at 2.5 Gbps using PRBS31 @ BER 1x10⁻¹²

³⁾ Average power



ORDERING INFORMATION

Ordering number	Description
SO-SFP-MR120D-C27	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 33dB, 1270nm
SO-SFP-MR120D-C29	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 33dB, 1290nm
SO-SFP-MR120D-C31	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 33dB, 1310nm
SO-SFP-MR120D-C33	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 33dB, 1330nm
SO-SFP-MR120D-C35	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 33dB, 1350nm
SO-SFP-MR120D-C37	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 33dB, 1370nm
SO-SFP-MR120D-C39	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 33dB, 1390nm
SO-SFP-MR120D-C41	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 33dB, 1410nm
SO-SFP-MR120D-C43	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 33dB, 1430nm
SO-SFP-MR120D-C45	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 33dB, 1450nm
SO-SFP-MR120D-C47	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 33dB, 1470nm
SO-SFP-MR120D-C49	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 33dB, 1490nm
SO-SFP-MR120D-C51	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 33dB, 1510nm
SO-SFP-MR120D-C53	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 33dB, 1530nm
SO-SFP-MR120D-C55	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 33dB, 1550nm
SO-SFP-MR120D-C57	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 33dB, 1570nm
SO-SFP-MR120D-C59	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 33dB, 1590nm
SO-SFP-MR120D-C61	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 33dB, 1610nm

GENERAL 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 (DAC). 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.
Dispersion tolerance/penalty:	Maximum amount of tolerated dispersion and required reduction of power budget to maintain stipulated Bit Error Rate (BER) and at a given bit rate.
Temperature range:	Max operating case temperature range. Commercial temperature range (C-temp): 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. Will vary over temperature.
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 giving a BER, normally $1E^{-12}$.
DDM:	Digital Diagnostic Monitoring functionality as defined in SFF-8472 MSA.

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