SF-MM85055D-GP

- Multi-Mode SFP Transceiver
- RoHS Compliant

Features

- Compliant with IEEE Std 802.3-2005, Gigabit Ethernet 1000Base-SX
- Compliant with SFF-8074i andSFF-8472, revision 9.5
- Compliant with SFP MSA Specification
- Digital Diagnostic Monitoring available
- 850nm VCSEL Laser
- Up to 1.25Gb/s bi-directional data links
- Up to 550m on 50/125μm MMF, 300m on 62.5/125μm MMF
- Duplex LC connector compliant
- Single +3.3V DC power supply
- Hot-pluggable SFP footprint
- Class 1 laser safety certified
- Operating temperature Options: (Commercial) -10oC to +70oC
  (Industrial) -40oC to +85oC
- RoHS6 Compliant

Applications

- Gigabit Ethernet 1000Base-SX
- 1.0625Gb/s Fiber Channel
- Enterprise Router
- Switch to Switch Interface
- Other Optical Links

Ordering information

Part No.	Description
SF-MM85055D-GP	SFP 1.25Gbps SX 850nm LC DDM MMF 550m
SF-MM85055DI-GP	SFP 1.25Gbps SX 850nm LC DDM MMF 550m, industrial ver (-40+85)

Absolute Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Unit
Storage Temperature	T_S	-40	85	°C
Relative Humidity	RH	-	95	%
Supply Voltage	V_{CC}	-0.5	4.0	V

Recommended Operating Conditions

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating Case Temperature	T_C	-10	25	70	°C
Operating Case Temperature Industrial ver.	T_C	-40	25	85	°C
Supply Voltage	V_{CC}	3.135	3.3	3.465	V
Data Rate	-	0.1	-	1.25	Mb/s

Electrical Characteristics

Parameter	Symbol	Minimum	Typical	Maximum	Unit	Notes
Module Supply Current	Icc	-	-	220	mA	-
Power dissipation	P_D	-	-	800	mW	-
Transmitter Differential Input Voltage (TD +/-)	-	300	-	2200	mVP-P	1
Receiver Differential Output Voltage (RD +/-)	-	600	-	1200	mVP-P	2
Low speed output: Transmitter Fault(TX_FAULT) / Loss of Signal (LOS)	V_{OH}	2.0	-	Vcc	V	3
	V_{OL}	0	-	0.8	V	-
Low speed input: Transmitter Disable (TX_DISABLE), MOD_DEF 1, MOD_DEF 2	V_{IH}	2.0	-	Vcc	V	4
	V_{IN}	0	-	0.8	V	-

Notes:

1. Internally AC coupled and terminated to 100Ω differential load.
2. Internally AC coupled, but requires a 100Ω differential termination or internal to Serializer/Deserializer.
3. Pulled up externally with a 4.7KΩ-10KΩ resistor on the host board to VCCT,R.
4. Mod_Def1 and Mod_Def2 must be pulled up externally with a 4.7KΩ-10KΩ resistor on the host board to VCCT,R.

Optical Characteristics

Parameter	Symbol	Minimum	Typical	Maximum	Unit	Notes
Transmitter						
Launch Optical Power	Po	-9	-6	-3	dBm	1
Center Wavelength Range	λc	830	850	860	nm	-
Extinction Ratio	EX	9	-	-	dB	-
Spectral Width(RMS)	Δλ	-	-	0.85	nm	-
Total Jitter	TJ	-	-	266	ps	-
Dispersion Penalty	-	-	-	1	dB	-
Optical Rise/Fall Time	Trise/Tfall	-	-	260	ps	-
Pout @TX-Disable Asserted	Poff	-	-	-45	dBm	-
Eye Diagram	IEEE Std 802.3-2005 Gigabit Ethernet 1000BASE-SX compatible					-
Receiver						
Receiver Sensitivity	S	-	-	-18	dBm	1
Receiver Overload	P_{OL}	-3	-	-	dBm	1
Optical Return Loss	ORL	12	-	-	dB	-
LOS De-Assert	LOS_D	-	-	-19	dBm	-
LOS Assert	LOS_A	-35	-	-	dBm	-
LOS Hysteresis	-	0.5	3	5	dB	-

Notes:

1. 50/125μm fiber with NA = 0.2, 62.5/125μm fiber with NA = 0.275.

Mechanical specifications