155Mb/s Multi-Mode Transceiver (OP-MA185S1M3-2)

1X9, Duplex SC, +3.3V
850nmVCSEL, Multi-Mode

Features:

* High Quality 850nm VCSEL
* 1X9 Pin Package Multi-Mode Transceiver
* Driving up to 2km for Multi-Mode Optical Fiber
* Single +3.3V Power Supply
* LVPECL Logic Interface
* Fully Compliant with ITU-T G957, G958 Specification
* Class 1 Laser Product, Compliant with IEC 60825-1
* Compliant with Telcordia (Bellcore) GR-468-CORE
* Cost Effective
* RoHS Compliant Products Available

Applications:

* Fast Ethernet
* SONET/SDH System
* ATM

Description:

Optostar's OP-MA185S1M3-2 Transceiver is a high performance, cost effective module for optical data communication applications. All versions are compliant with SONET/SDH recommendations from OC-01 to OC-03. This module is designed for Multi-Mode fiber and operates at the wavelength of 850nm. The transmitter section incorporates VCSEL and driver IC with temperature compensation and automatic power control circuit. The receiver section incorporates an efficient PIN photodiode and transimpedance with AGC for wide dynamic range. The transceiver has excellent immunity and reliability.

Specification:

Electrical and Optical Characteristics: (Condition: T_a=T_{OP})

Transmitter Section:

Parameter	Symbol	Min.	Typical	Max.	Unit
Data Rate	B	-	155	-	Mb/s
Center Wavelength	$_C$	830	850	860	nm
Output Spectral Width		-	-	0.85	nm
Output Optical Power	P_0	-10	-	-3	dBm
Extinction Ratio	E.R.	10			dB
Operating Current	I_{CC}	-	60	80	mA
Operating Voltage	V_{CC}	+3.0		+3.6	V
Input Voltage-Low	V_{IL}	-1.810		-1.475	V
Input Voltage-High	V_{IH}	-1.165		-0.880	V
Rising Time	T_r		1	3.0	ns

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Falling Time	T_f		1	3.0	ns

***Measure the average power coupled into 62.5/125um, 0.275NA graded index Multi-Mode fiber.**

Receiver Section:

Parameter	Symbol	Min.	Typical	Max.	Unit
Data Rate	B	-	155	-	Mb/s
Operating Wavelength		-	850	-	nm
Receiver Sensitivity	P_{min}	-	-	-24	dBm
Maximum Optical Power	P_{max}	-3	-	-	dBm
Operating Current	I_{CC}	-	80	100	mA
Supply Voltage	V_{CC}	+3.0	-	+3.6	V
LOS Output-Low	V_{IL}	-1.810	-	-1.475	V
LOS Output -High	V_{IH}	-1.165	-	-0.880	V
LOS AssertedH-L	P_D		-	-33	dBm
LOS DeassertedL-H	P_A	-48	-		dBm

* **Absolute Maximum Ratings: (T_C=25C)**

Parameter	Symbol	Min.	Max.	Unit
Storage Temperature	T_{ST}	-40	+85	°C
Operating Temperature	T_{IP}	0	+70	°C
Supply Voltage	V_{CC}	0	+3.6	V
Input Voltage	V_{IN}	0	V_{CC}	V
Soldering Temperature &Time	-		240/10	°C /S

* **Recommended Operating Environment:**

Parameter	Symbol	Min.	Typical	Max.	Unit
Supply Voltage	V_{CC}	+3.1	+3.3	+3.5	V
Operating Temperature	T_{OP}	0	-	+70	°C

Pin Assignment: (Top View)

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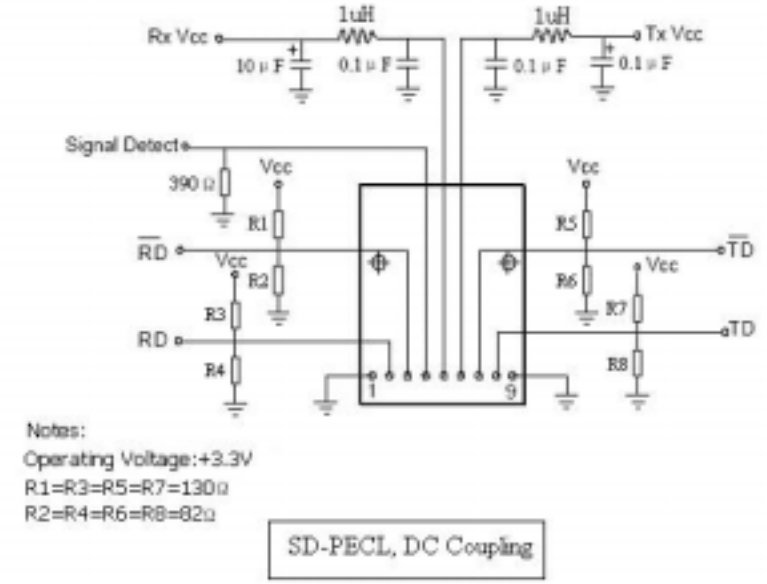
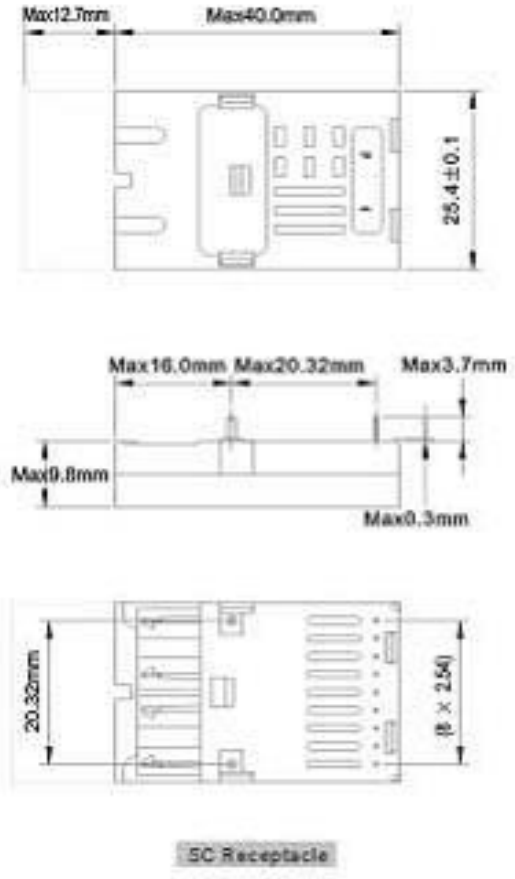
Recommended Circuit:



Mechanical Dimensions:



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