OPT622-55803XXR

622Mb/s Single Mode 1X9 Optical Transceiver Module, 1550nm, 3.3V, 80km Reach

FEATURES

- Duplex SC/ST/FC Connector
- Differential LVPECL Inputs & Outputs
- Single 3.3V Power Supply
- LVPECL Signal Detection Output
- 1550nm DFB Laser
- Up to 80km
- Industry Standard 1×9 Package
- Operating Temperature: Standard: 0~70ºC Industrial: -40~85ºC

APPLICATIONS

- ATM / SONET OC-12 / SDH STM-4 Equipment
- Optical-Electrical Interface Conversion

Description

The OPT622-55803XXR is a high performance and cost-effective fibre optical transceiver modules, it is specified for use in SONET OC-12 / SDH STM-4 / ATM 622Mbps applications. The 622M 1x9 optical transceiver module is intended for single mode fiber, operates at a nominal wavelength of 1550nm and complies with the industry standard 1x9 footprint. The 1X9 optical transceiver module consists of a transmitter optical subassembly, a receiver optical subassembly and an electrical subassembly.

Related Products

- OPT622-31203XXR: 622Mps / SONET OC-12 /SDH STM-4 1310nm 20km duplex SC/ST/FC 1x9 optical transceiver.
- OPT622-314003XXR: 622Mps / SONET OC-12 /SDH STM-4 1310nm 40km duplex SC/ST/FC 1x9 optical transceiver.

Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Units	Note
Storage Temperature	Ts	-40	85	℃	-
Power Supply Voltage	Vcc	0.5	4	V	-
Soldering Temperature	-	-	260	℃	10 seconds on leads only
Input Voltage	Vin	GND	Vcc	V	-

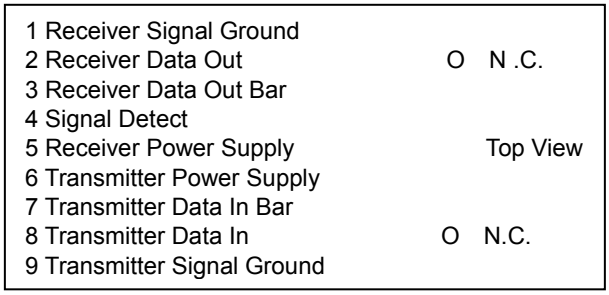
Recommended Operating Conditions					
Parameter	**Symbol**	**Min.**	**Typ.**	**Max.**	**Units**
Power Supply Voltage	Vcc	3.1	3.3	3.5	V
Operating Temperature	Top	0	-	70	ºC
		-40	-	85	ºC
Data Rate	-	-	622	-	Mbps
Power Supply Current	Icc	-	150	250	mA

Transmitter Specifications ($0^{O}C$ < Top < $70^{O}C$, 3.1V < Vcc < 3.5V)					
Parameter	**Symbol**	**Min.**	**Typ.**	**Max.**	**Units**
Optical					
Optical Transmit Power	Po	-2	-	3	dBm
Optical Center Wavelength	λ_C	1480	1550	1580	nm
Output Spectrum Width	$\Delta\lambda$	-	-	1	nm（-20dB Width)
Side Mode Suppression Ratio	SMSR	30	-	-	dB
Extinction Ratio	E_R	10	-	-	dB
Output Eye	ITU recommendation G.957				
Optical Rise Time	t_r	-	-	0.5	ns
Optical Fall Time	t_f	-	-	0.5	ns
Electrical					
Differential Input Voltage	V_{IH}-V_{IL}	0.3	-	2.2	V
Common-mode Input Voltage	V_{COM}-V_{CC}	-1.38	-	-0.47	V
PECL Output Voltage-Low	V_{OL}-V_{CC}	-1.810	-	-1.620	V
PECL Output Voltage-High	V_{OH}-V_{CC}	-1.025	-	-0.880	V

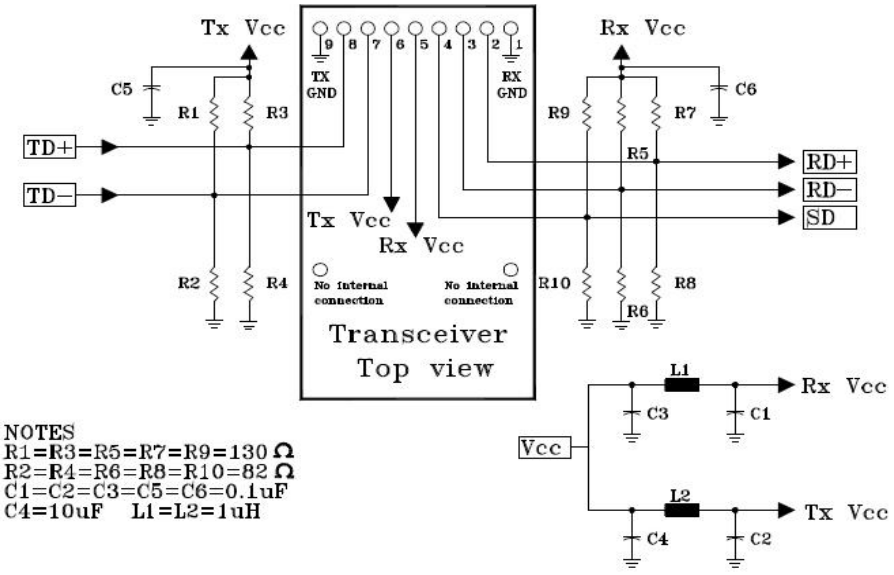
Receiver Specifications ($0^{O}C$ < Top < $70^{O}C$, 3.1 V < Vcc < 3.5V)					
Parameter	**Symbol**	**Min.**	**Typ.**	**Max.**	**Units**
Optical					
Sensitivity	Sen	-	-	-28	dBm

Maximum Input Power(Saturation)	P_{MAX}	-3	-	-	dBm
Signal Detect – Asserted	P_a	-	-	-28	dBm
Signal Detect – Deasserted	P_d	-45	-	-	dBm
Signal Detect -- Hysteresis	P_{hys}	1	-	4	dB
Wavelength of Operation	λ	1100	-	1600	nm
Electrical					
Data Output Voltage – Low	V_{IL}–V_{CC}	-1.83	-	-1.555	V
Data Output Voltage – High	V_{IH}–V_{CC}	-1.085	-	-0.88	V
Signal Detect Output Voltage -- Low	V_{SIL}–V_{CC}	-2.0	-	-1.58	V
Signal Detect Output Voltage -- High	V_{SIH}–V_{CC}	-1.1	-	-0.74	V

Pin Assignment

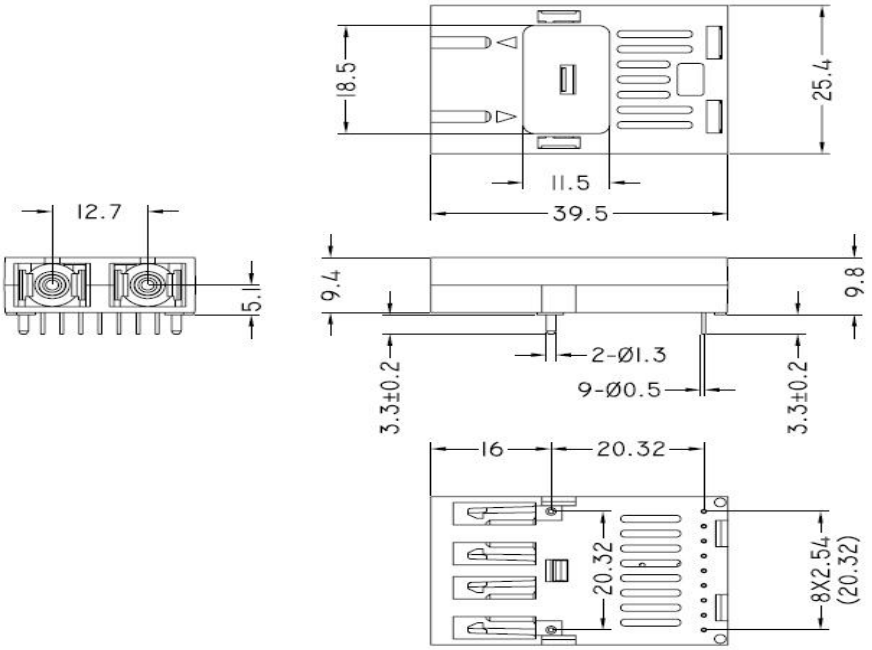


Recommended Circuit

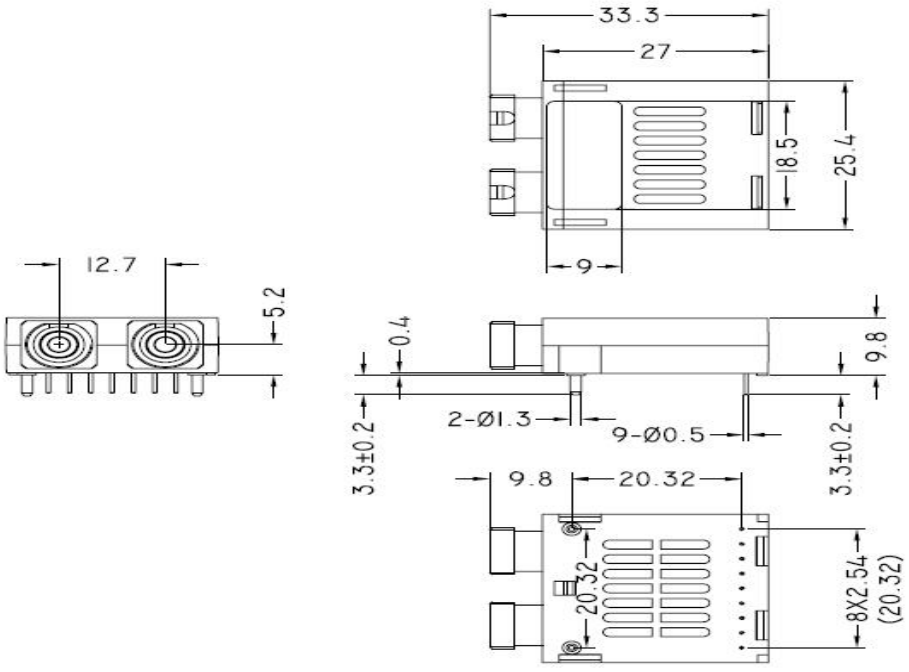


Mechanical Dimensions

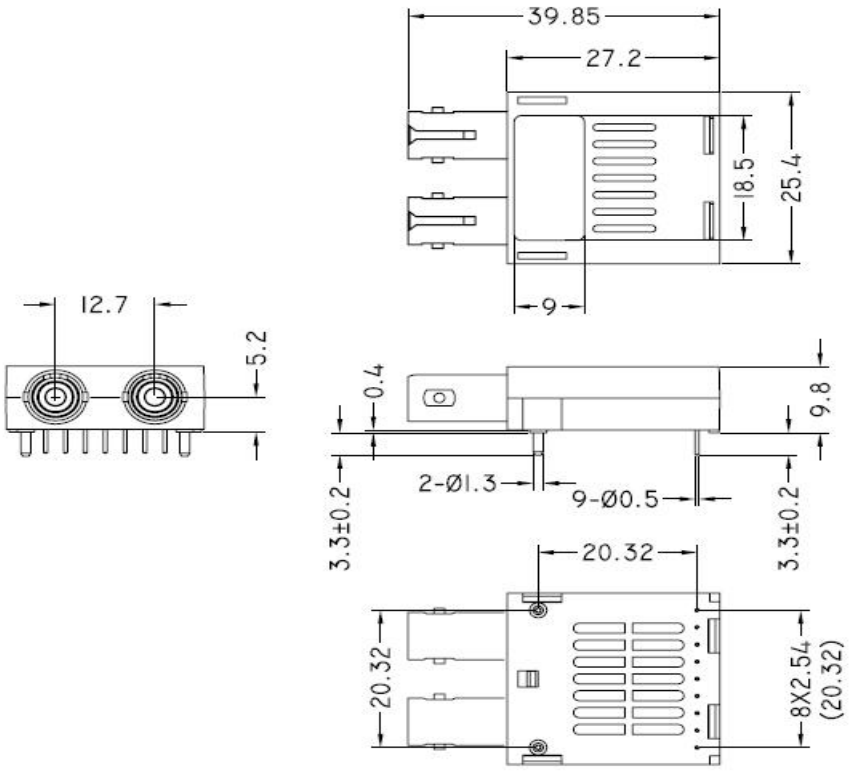
SC



FC



ST



Ordering information

Part number	Description
OPT622-55803SCR	1X9 Fiber Optic Transceiver (622Mbps,1550nm, 80km, SC, 0ºC~+70ºC)
OPT622-55803TCR	1X9 Fiber Optic Transceiver (622Mbps,1550nm, 80km, ST, 0ºC ~ +70ºC)
OPT622-55803FCR	1X9 Fiber Optic Transceiver (622Mbps,1550nm, 80km, FC, 0ºC ~ +70ºC)
OPT622-55803STR	1X9 Fiber Optic Transceiver (622Mbps,1550nm, 80km, SC, -40ºC ~ 85ºC)
OPT622-55803TTR	1X9 Fiber Optic Transceiver (622Mbps,1550nm, 80km, ST, -40ºC ~ 85ºC)
OPT622-55803FTR	1X9 Fiber Optic Transceiver (622Mbps,1550nm, 80km, FC, -40ºC ~ 85ºC)

Warnings

Handling Precautions: This device is susceptible to damage as a result of electrostatic discharge (ESD). A static free environment is highly recommended. Follow guidelines according to proper ESD procedures.
Laser Safety: Radiation emitted by laser devices can be dangerous to human eyes. Avoid eye exposure to direct or indirect radiation.

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