

FEATURES

- SC/FC/ST TX Transceiver
- Industry Standard 1x9 Footprint
- Laser wavelength 1310FP
- Single 3.3/5V Power Supply
- LVPECL/PECL Signal Detection Output
- Wave Solderable and Aqueous Washable
- Uncooled Laser Diode with MQW structure
- Complies with IEEE802.3z Gigabit Ethernet
- ROHS Compliant



APPLICATIONS

- Switch to Switch Interface
- High Speed Interface for File Servers
- Gigabit Ethernet

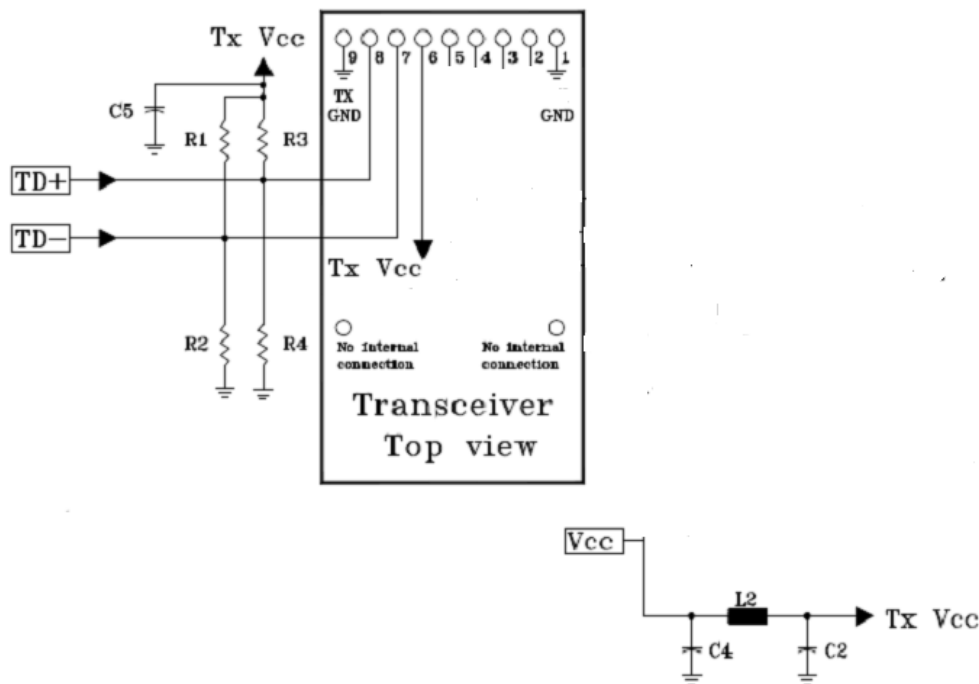
Absolute Maximum Ratings					
Parameter	Symbol	Min.	Max.	Units	Note
Storage Temperature	Ts	-40	85	°C	
Power Supply Voltage	Vcc	0	4.5	V	F1x-40x30-3xP
		0	6	V	F1x-40x30-5xP
Soldering Temperature			260	°C	10 seconds on leads only
Input Voltage	Vin	GND	Vcc	V	
Output Current	Iout	0	30	mA	

Recommended Operating Conditions						
Parameter	Symbol	Min.	Typ.	Max.	Units	Note
Power Supply Voltage	Vcc	3.15	3.3	3.45	V	F1x-40x30-3xP
		4.75	5	5.25	V	F1x-40x30-5xP
Operating Temperature	Top	0		70	°C	F1x-40x30-xCP
		-40		85	°C	F1x-40x30-xTP
Data Rate			1250		Mbps	
Power Supply Current	Icc		150	250	mA	

Transmitter Specifications						
Parameter	Symbol	Min.	Typ.	Max.	Units	Notes
Optical						
Optical Transmit Power (10Km)	Po	-9		-3	dBm	F1x-40130-xxP
Optical Transmit Power (20Km)		-6		-1	dBm	F1x-40230-xxP
Optical Transmit Power (30Km)		-5		0	dBm	F1x-40330-xxP
Optical Center Wavelength	λ_C	1260	1310	1360	nm	
Output Spectrum Width	$\Delta\lambda$		2	4	nm	
Extinction Ratio	ER	9	-	-	dB	
Output Eye	Compliance with IEEE802.3z					
Optical Rise Time	tr			0.26	ns	
Optical Fall Time	tf			0.26	ns	
Relative Intensity Noise	RIN			-120	dB/Hz	
Electrical						
Data Input Current – Low		-350			uA	
Data Input Current – High				350	uA	
Differential Input Voltage	$V_{IH} - V_{IL}$	300		2400	mV	

PIN ASSIGNMENT

1 Receiver Signal Ground	
2 Receiver Data Out	O N.C.
3 Receiver Data Out Bar	
4 Signal Detect	
5 Receiver Power Supply	Top View
6 Transmitter Power Supply	
7 Transmitter Data In Bar	
8 Transmitter Data In	O N.C.
9 Transmitter Signal Ground	

RECOMMENDED CIRCUIT

Notes(3.3V)

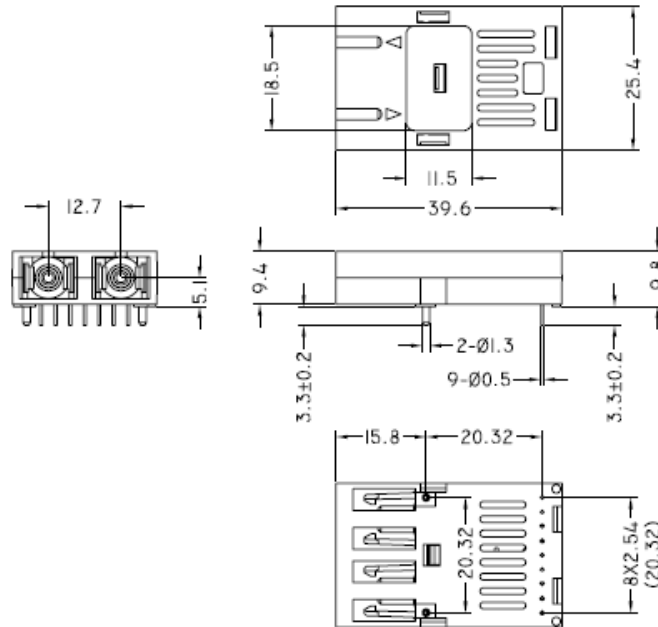
- R1=R3=130 Ω**
- R2=R4=82 Ω**
- C2=C5=0.1uF**
- C4=10uF L2=1uH**

Notes(5V)

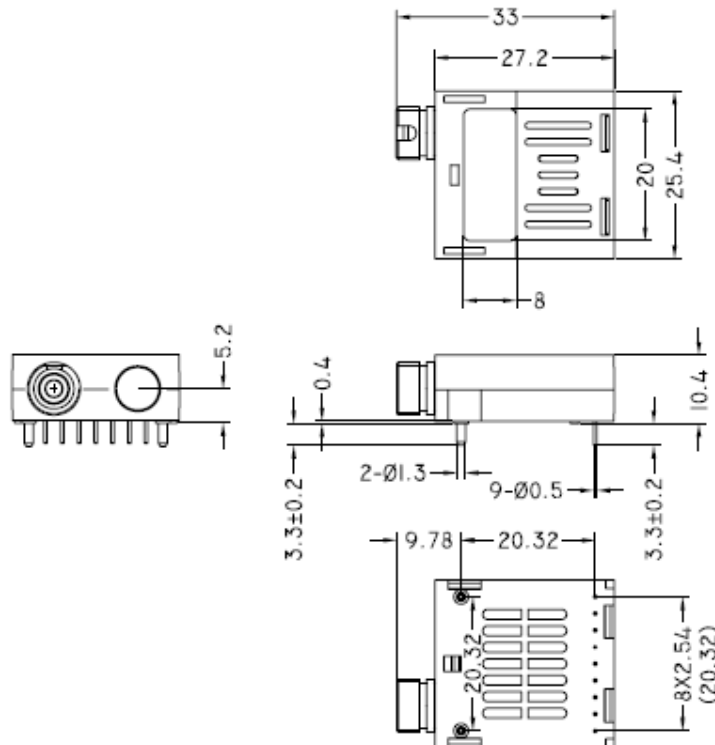
- R1=R3=82 Ω**
- R2=R4=130 Ω**
- C2=C5=0.1uF**
- C4=10uF L2=1uH**

PACKAGE DIAGRAM (Units in mm)

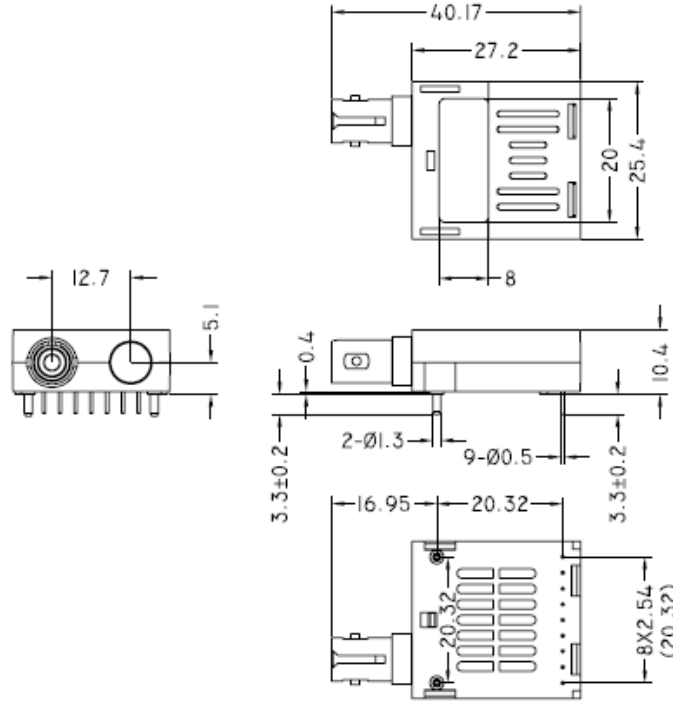
1) SC Type (F1S-xxxxx-xxx)



2) FC Type (F1F-xxxxx-xxx)



3) ST Type (F1T-xxxxx-xxx)



ORDER INFORMATION

F1x-40x30-xxP

- Operating Temperature: C=0~70°C, T=-40~85°C
- Power Supply Voltage: 3=3.3V, 5=5V
- Distance: 1=10Km, 2=20Km, 3=30Km
- Connector: S=SC, F=FC, T=ST