

5V 155Mbps 1310nm Single Mode Transceiver ATR-010XXB



■ Features

- a. Single +5V Power Supply
- b. PECL Signal Detection Output
- c. Standard 1x9 Package
- d. SC/ST/FC Connector

■ Applications

- a. Ethernet/PDH/SDH



■ Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit
Storage Temperature	T _S	-40	+85	°C
Operating Temperature	T _{OP}	0	+70	°C
Supply Voltage	V _{CC}	0	+6	V
Voltage at any Input Pin	V _{IN}	0	V _{CC}	V
Soldering Temperature, Time	-	-	260°C, 10S	°C, S

■ Operating Conditions

Transmitter (T=25°C, V_{cc} = 4.85~5.15V (+5V))

Parameter	Symbol	Min.	Typ.	Max.	Unit
Center Wavelength	λ _C	1280	1310	1340	nm
Spectral Width (RMS)	Δλ	-	-	3	nm
Output Power	P _O	20km	-15	-7	dBm
		40km	-5	0	dBm
		60km	-5	2	dBm
Extinction Ratio	E _R	10	-	-	dB
Rise / Fall Time (10%-90%)	t _r /t _f	-	0.7	3	ns
Output Eye	Compliance with ITU-T G.957				
Supply Current	I _{CCT}	-	75	90	mA
Data Input Current – Low	I _{IL}	-350	-	-	mA
Data Input Current – High	I _{IH}	-	-	350	mA
Single Input Voltage	V _{IH} -V _{IL}	400	-	1600	mV
Data Input Voltage – Low	V _{IL} -V _{CC}	-2.145	-	-1.52	V
Data Input Voltage – High	V _{IH} -V _{CC}	-1.12	-	-0.545	V

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Receiver (T=25°C, Vcc = 4.85~5.15V (+5V))

Parameter	Symbol	Min.	Typ.	Max.	Unit
Wavelength Range	λ	1100	-	1600	nm
MIN. Input Power (Sensitivity)	P_{MIN}	20km	-	-34	dBm
		40km	-	-36	dBm
		60km	-	-36	dBm
MAX. Input Power (Saturation)	P_{MAX}	-3	-	-	dBm
Signal Detect-Asserted	P_A	-	-	-36	dBm
Signal Detect-Deasserted	P_D	-46	-	-	dBm
Signal Detect-Hysteresis	P_{HYS}	1	-	4	dB
Supply Current	I_{CCR}	-	60	80	mA
Data Output Voltage-High	$V_{OH}-V_{CC}$	-1.17	-	-0.73	V
Data Output Voltage-Low	$V_{OL}-V_{CC}$	-1.95	-	-1.62	V
Signal Detect Voltage-High	$V_{SDH}-V_{CC}$	-1.17	-	-0.73	V
Signal Detect Voltage-Low	$V_{SDL}-V_{CC}$	-1.95	-	-1.62	V

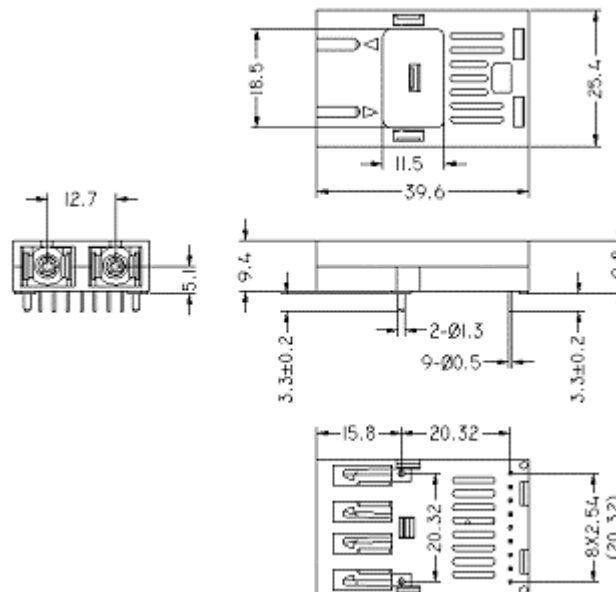
Notes: Value of output power and sensitivity can be customized according to the demand

Pin Assignment

① Receiver Signal Ground	
② Receiver Data Out	ON/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	ON/C
⑨ Transmitter Signal Ground	

Mechanical Dimension (mm)

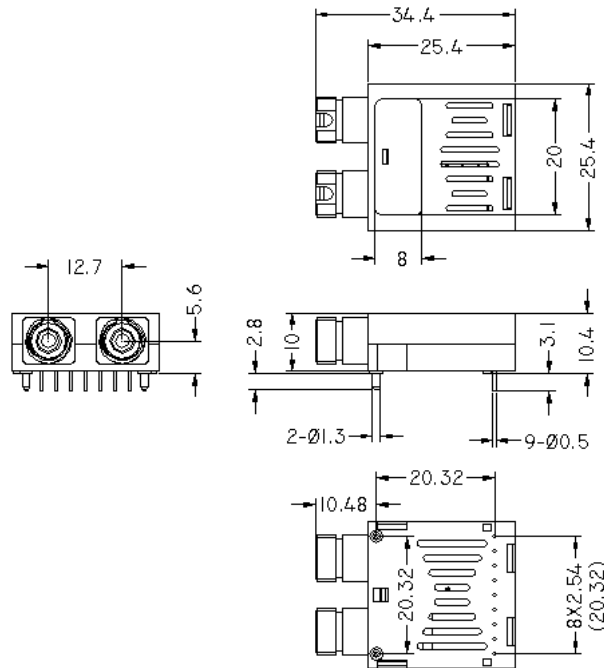
SC Connector



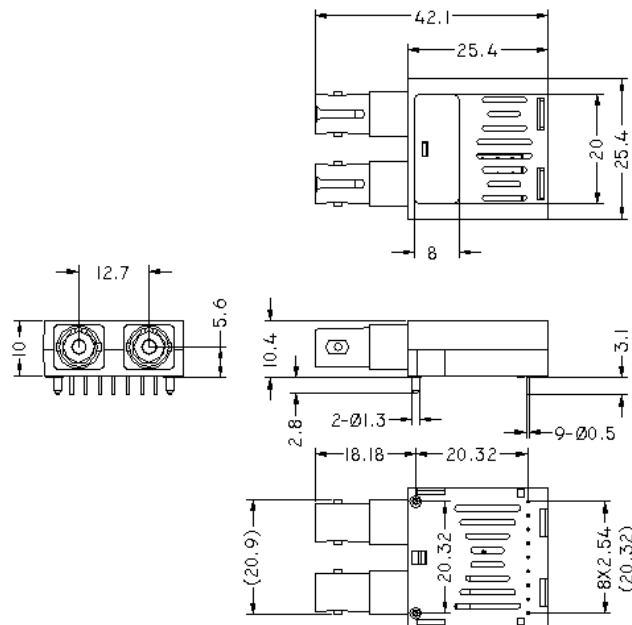
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FC Connector



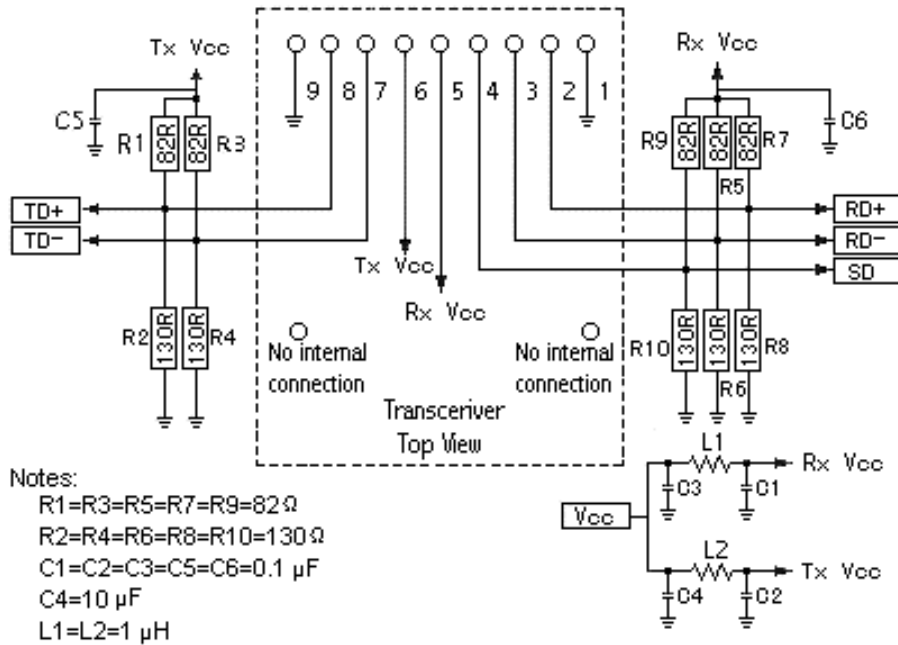
ST Connector



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■ Recommend Circuit



■ Ordering Information

Part No.	Connector	TX Power (dBm)	RX Sens. (Max.) (dBm)	Distance
ATR-01001B	SC/FC/ST	-15 to -7	-34	20km
ATR-01002B	SC/FC/ST	-5 to 0	-36	40km
ATR-01003B	SC/FC/ST	-5 to 2	-36	60km
ATR-01005B	SC/FC/ST	-9 to -5	-36	40km