

**5V Unbalance TX 350Mbps(PECL) /RX 84M(TTL)
SM BIDI Transceiver
ATR-B60XX(C)**



■ **Features**

- a. Super High Isolation Between Two Wavelengths
- b. Single +5V Power Supply
- c. Up to 350Mbps with PECL signal for video
Up to 84Mbps with TTL signal for control



■ **Applications**

Video monitor system

■ **Absolute Maximum Ratings**

Parameter	Symbol	Min.	Max.	Unit
Storage Temperature	T _S	-40	+85	°C
Operating Temperature	T _{OP}	-20	+70	°C
Supply Voltage	V _{CC}	0	+6	V
Voltage on Any Pin	V _{IN}	0	V _{CC}	V
Soldering Temperature ,Time	-	-	260°C, 10 S	°C,S

■ **Recommended Operating Conditions**

Parameter	Symbol	Min.	Typ	Max.	Unit
Ambient Temperature	T _{AMB}	-20	-	70	°C
Power Supply Voltage	V _{CC} -V _{EE}	4.75	5	5.25	V
Transmitter					
Differential Data Input Voltage	V _{IH} -V _{IL}	300	-	1600	mV

■ **Operating Conditions**

350Mbps(PECL) Transmitter (T=25°C, V_{cc}=4.75~5.25V (+5V))

Parameter	Symbol	Min.	Typ.	Max	Unit	
Center Wavelength	λ_c	1280	1310	1340	nm	
		1520	1550	1580		
Spectral width	$\Delta\lambda$	FP@RMS	-	2	4	nm
		DFB@-20dB	-	-	1	
		FWHM	-	-	-	
Output Power	20km	Po(TX1310nmFP)	-12	-	-5	dBm
	40km	Po(TX1310nmFP)	-8	-	-3	
	60km	Po(TX1550nmDFB)	-5	-	0	
Extinction Ratio	ER	10	-	-	dB	
Rise / Fall Time	t _r /t _f	-	-	500	ps	

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(20%-80%)					
Jitter (p-p)	JTXp-p	-	300	600	ps
Supply Current	I _{CC} T	-	95	120	mA
Data Input Voltage – Low	V _{IL} -V _{CC}	-1.81	-	-1.48	V
Data Input Voltage – High	V _{IH} -V _{CC}	-1.16	-	-0.85	V

84M(TTL) Receiver (T=25°C, Vcc=4.75~5.25V (+5V))

Parameter		Symbol	Min.	Typ.	Max.	Unit
Wavelength Range		λ_c	1480	1550	1580	nm
			1260	1310	1360	
MIN. Input Power (Sensitivity)	20km	P _{MIN}	-	-	-32	dBm
	40km/60km		-	-	-34	
MAX. Input Power (Saturation)		P _{MAX}	-3	-	-	dBm
Signal Detect Assert		P _A	-	-	-32	dBm
Signal Detect De-assert		P _D	-50	-	-	dBm
Signal Detect Hysteresis		P _{HYS}	1	-	4	dB
Supply Current		I _{CCR}	-	-	120	mA
Data output Voltage - High		V _{OH}	2.4	-	-	V
Data output Voltage - Low		V _{OL}	0	-	0.8	V
Signal Detect Voltage - High		V _{SDHC}	2.4	-	-	V
Signal Detect Voltage - Low		V _{SDL}	0	-	0.8	V
Cross talk		CRT	-	-	-45	dB

Notes:

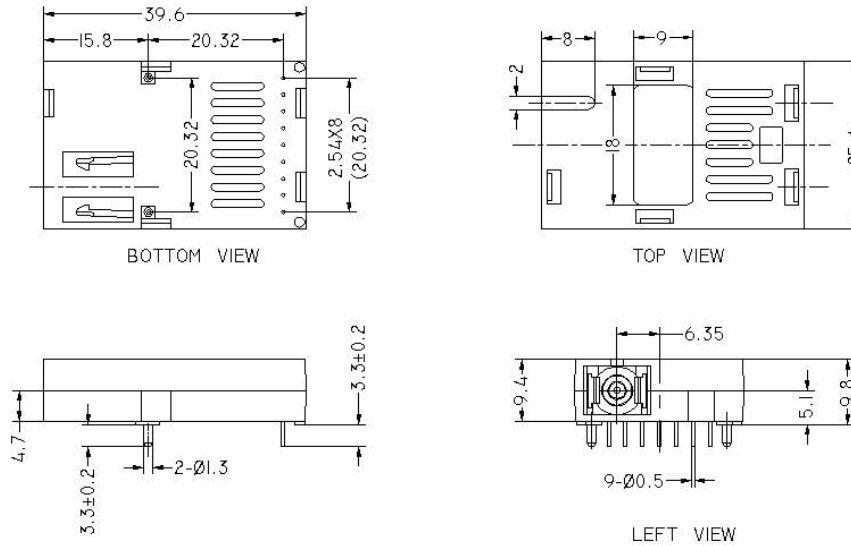
- 1) Value of output power and sensitivity can be customized according to the demand
- 2) An increase in optical power of data signal above the specified level will cause the Signal Detect to switch from a low state to a high state.
- 3) A decrease in optical power of data signal below the specified level will cause the Signal Detect to switch from a high state to a low state.

■ **Pin Assignment**

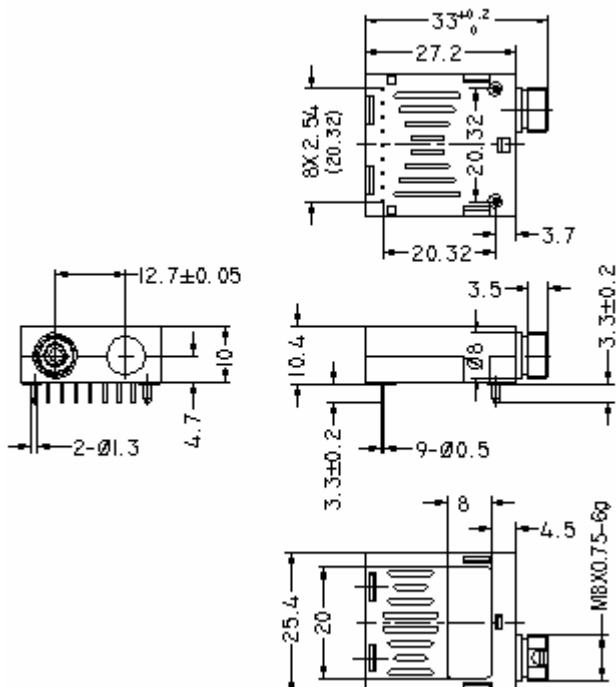
Pin	Descriptions	Pin	Descriptions
1	Rx VEER :Receiver GND	6	Tx VCCT : Transmitter V _{CC}
2	Rx Data Out+ : Receiver Data Out(TTL)	7	Tx Data In- :Transmitter Data Input-(PECL)
3	N.C.	8	Tx Data In+ :Transmitter Data Input+(PECL)
4	SD :Signal Detect Status Flag(TTL)	9	Tx VEET : Transmitter GND
5	Rx VCCR: Receiver V _{CC}		

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■ **Mechanical Dimension (mm)**
SC Connector

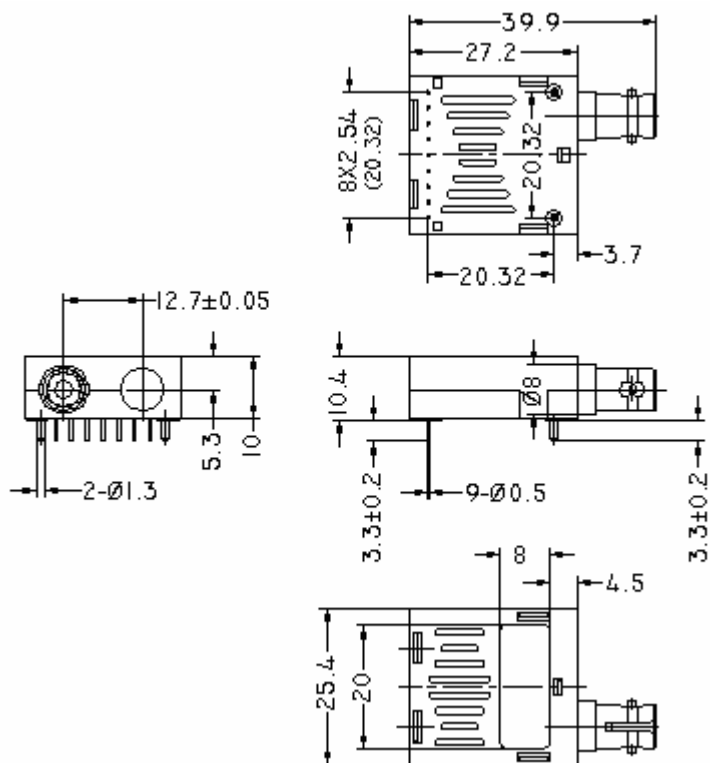


FC Connector

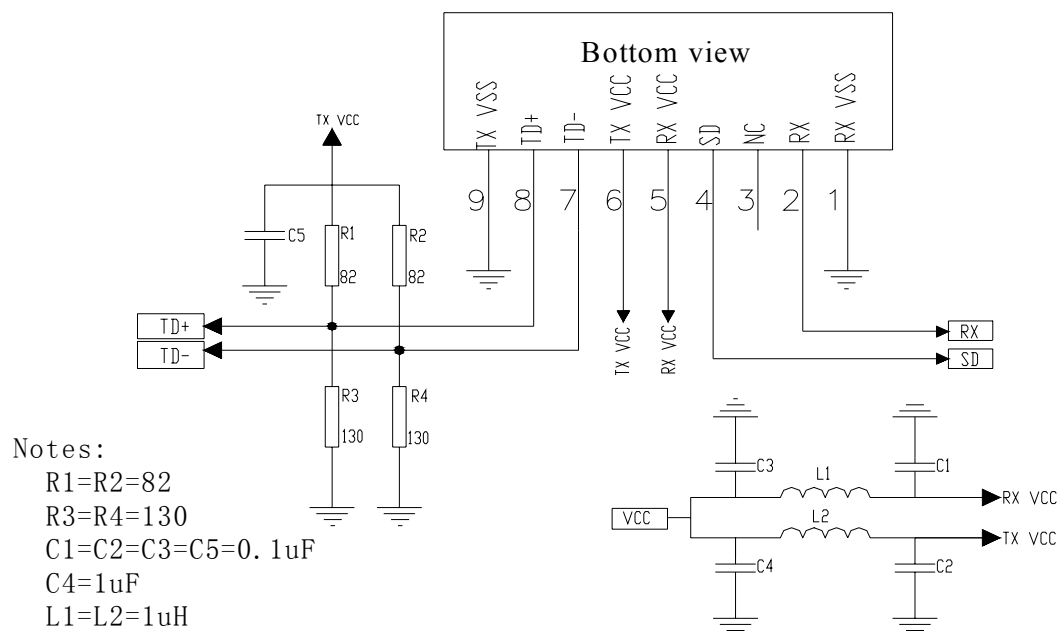


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ST Connector



■ **Recommend Circuit**



Notes:

- R1=R2=82
- R3=R4=130
- C1=C2=C3=C5=0.1uF
- C4=1uF
- L1=L2=1uH

RX、SD为TTL电平，TD+、TD-为PECL电平

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■ **Ordering Information**

Part No.	Wavelength	Connector	Temp.	TX Power (dBm)	RX Sens (Max.) (dBm)	Distance
ATR-B6023C	Tx1310FP/Rx1550	SC/FC/ST	-20 to 70	-12 to -5	-32	20km
ATR-B6043C	Tx1310FP/Rx1550	SC/FC/ST	-20 to 70	-8 to -3	-34	40km
ATR-B6063	Tx1550DFB/Rx1310	SC/FC/ST	-20 to 70	-5 to 0	-34	60km

Revision History:	December 20, 2007	Rev. B
Previous Version:	November 22, 2006	
Page	Subjects (major changes since last revision)	
	Operating Temperature has been changed	