

**5V Unbalance TX 84Mbps(TTL) /RX 350M(PECL)
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

■ **Operating Conditions**

84Mbps Transmitter (T=25°C, V_{CC}=4.75~5.25V (+5V))

Parameter	Symbol	Min.	Typ.	Max	Unit	
Center Wavelength	λ_c	1520	1550	1580	nm	
		1280	1310	1340		
Spectral width (RMS)	$\Delta\lambda$ (FP)	-	2	4	nm	
Output Power	20km	Po(TX1550nmFP)	-14	-	-7	dBm
	40km	Po(TX1550nmFP)	-9	-	-4	
	60km	Po(TX1310nmFP)	-5	-	0	
Extinction Ratio	ER	10	-	-	dB	
Supply Current	I _{CCT}	-	-	100	mA	
Data Input Voltage – Low	V _{IL}	0	-	0.8	V	
Data Input Voltage – High	V _{IH} -V _{CC}	2	-	-	V	

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



350Mbps Receiver (T=25°C, Vcc=4.75~5.25V (+5V))

Parameter		Symbol	Min.	Typ.	Max.	Unit
Wavelength Range		λ_c	1260	1310	1360	nm
			1480	1550	1580	
MIN. Input Power (Sensitivity)	20km	P_{MIN}	-	-	-32	dBm
	40km		-	-	-32	
	60km		-	-	-34	
MAX. Input Power (Saturation)		P_{MAX}	-3	-	-	dBm
Signal Detect Assert		P_A	-	-	-32	dBm
Signal Detect De-assert		P_D	-45	-	-	dBm
Signal Detect Hysteresis		P_{HYS}	1	-	4	dB
Supply Current		I_{CCR}	-	-	120	mA
Data Output Voltage - High		$V_{OH}-V_{CC}$	-1.1	-	-0.9	V
Data Output Voltage - Low		$V_{OL}-V_{CC}$	-1.8	-	-1.6	V
Signal Detect Voltage - High		$V_{SDH}-V_{CC}$	-1.1	-	-0.9	V
Signal Detect Voltage - Low		$V_{SDL}-V_{CC}$	-1.8	-	-1.6	V
Cross talk		CRT	-	-	-45	dB

Notes:

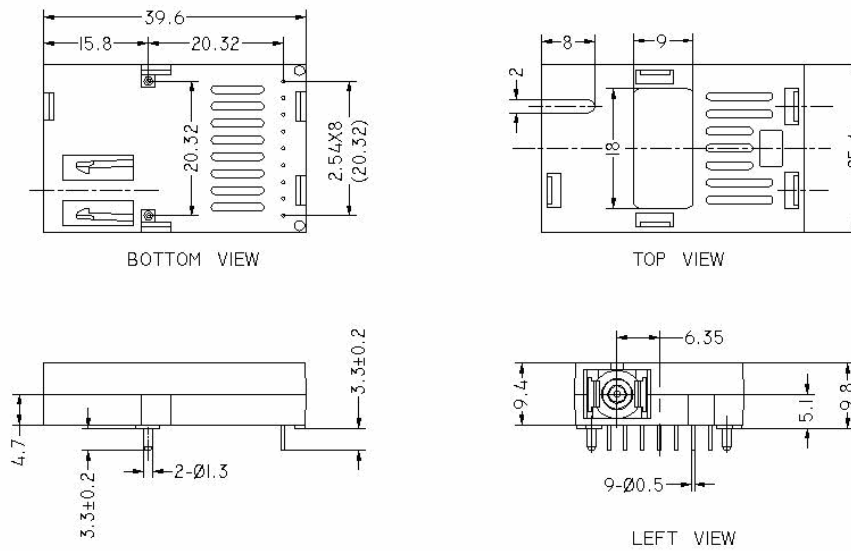
- 1) Value of output power and sensitivity can be customized according to the demand
- 2) An increase in optical power of data signal above the specified level will cause the Signal Detect to switch from a low state to a high state.
- 3) A decrease in optical power of data signal below the specified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

Pin Assignment

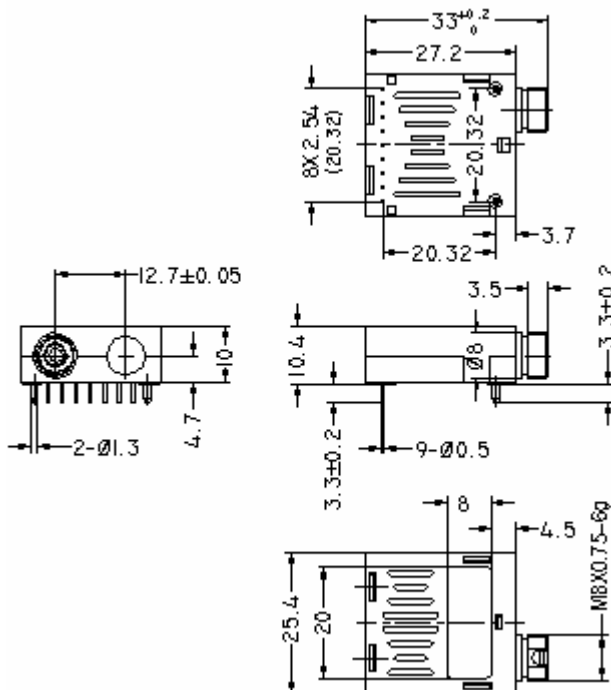
Pin	Descriptions	Pin	Descriptions
1	Rx VEER :Receiver GND	6	Tx VCCT : Transmitter V_{CC}
2	Rx Data Out+ : Receiver Data Out+(PECL)	7	N.C.
3	Rx Data Out+ : Receiver Data Out-(PECL)	8	Tx Data In+ :Transmitter Data Input(TTL)
4	SD :Signal Detect Status Flag(PECL)	9	Tx VEET : Transmitter GND
5	Rx VCCR: Receiver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

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

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

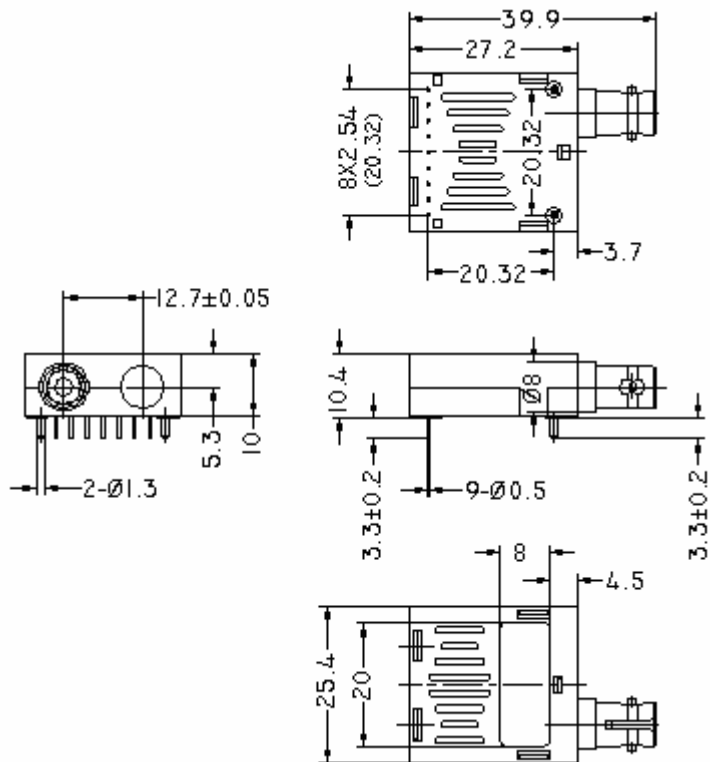


FC Connector

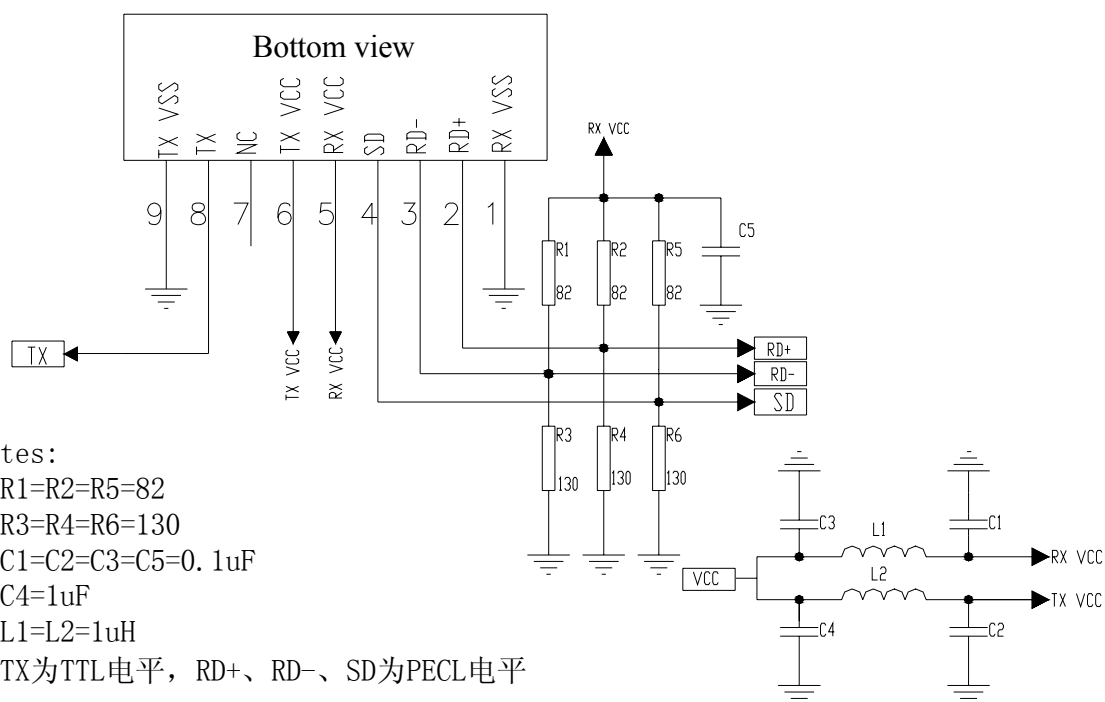


**5V Unbalance TX 84Mbps(TTL) /RX 350M(PECL)
SM BIDI Transceiver
ATR-B60XX(C)**

ST Connector



■ **Recommend Circuit**



Notes:

- R1=R2=R5=82
- R3=R4=R6=130
- C1=C2=C3=C5=0.1uF
- C4=1uF
- L1=L2=1uH

TX为TTL电平, RD+、RD-、SD为PECL电平

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



■ **Ordering Information**

Part No.	Wavelength	Connector	Temp.	TX Power (dBm)	RX Sens (Max.) (dBm)	Distance
ATR-B6024C	Tx1550FP/Rx1310	SC/FC/ST	-20 to 70	-14 to -7	-32	20km
ATR-B6044C	Tx1550FP/Rx1310	SC/FC/ST	-20 to 70	-9 to -4	-32	40km
ATR-B6064	Tx1310FP/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	