

155M SC Duplex Single mode 1x9 Transceiver

Product Features

- Duplex SC receptacle
Standard 1x9 package
- Single +3.3V power supply(Single +5V power supply optional)
- -20 to +70 °C operating temperature
- 2km to 80km link distance
--2km on MM fiber , 20-80km on SM fiber
- LVPECL compatible data input/output interface
- LVPECL receiver signal-detected indication
- RoHS compliant



Application

- SDH STM-1S1.1 and L1,1
- 100M Fast Ethernet

Recommended Operating Conditions

Parameter	Symbol	Minimum	Maximum	Unit
Power Supply Voltage	V _{cc}	3.14	3.47	V
Operating Temperature Range	T _{op}	-20	+70	°C
Operation Data Rate	-	-	155	Mbps

Absolute Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Unit
Storage Temperature Range	T _s	-40	+85	°C
Relative Humidity	RH	%	0	95
Power Supply Voltage	V _{cc}	-0.5	+4.5	V
Lead Solder Temperature	-	-	260	°C
Lead Solder Duration	-	-	10	S
Voltage on any input/output pin	V _I	0	V _{cc}	V

Specifications

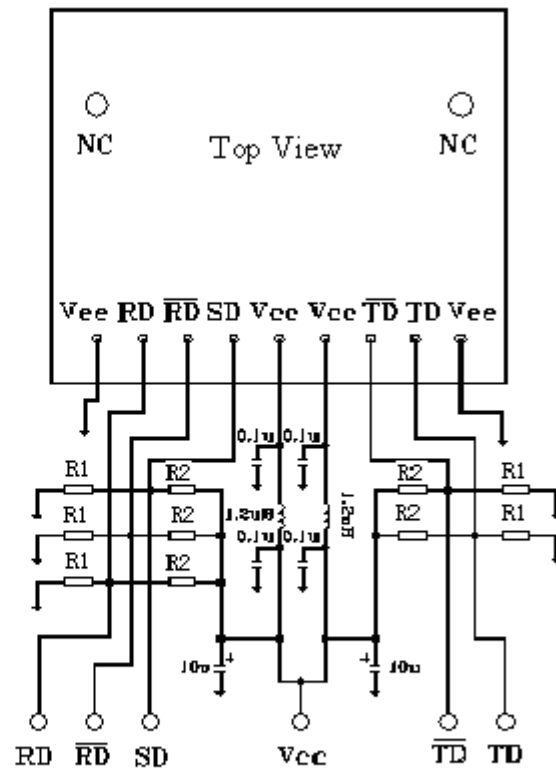
(Ambient Operating Temperature -20°C to +70°C, Vcc =3.13to 3.47V)

Parameter		Symbol	Min.	Typ.	Max.	Units
Supply Current		I cc	-	-	250	mA
Transmitter Differential Input Voltage		V	300	-	1860	mV
Common-mode Input Voltage		Vcom-Vcc	-1.38	-	-0.47	V
LVPECL Output Voltage-Low		VOL-Vcc	-1.810		-1.620	V
LVPECL Output Voltage-High		VOH-Vcc	-1.025		-0.880	V
Optical Transmitter Characteristics						
Center Wavelength Range	1310nm LD	λ c	1260	1310	1360	nm
	1550nm LD		1480	1550	1580	
Launch Optical Power	2km	P o	-16	-	-10	dBm
	20km		- 15	-	- 8	
	40km		-8	-	-4	
	60km		-5	-	0	
	80km		-5	-	0	
Extinction Ratio		EX	10	-	-	dB
Spectral Width	1310nm FP	$\Delta\lambda$	-	-	6	nm
	1550nm DFB		-	-	1	
Optical Rise Time		tR	-	-	2.0	ns
Optical Fall Time		tF	-	-	2.0	ns
Eye Diagram		ITU recommendation G.957 STM-1/OC3				
Optical Receiver Characteristics						
Sensitivity		Sen	-	-	-34	S
Overload Input Power		Pin	-3	-	-	dBm
Signal Detect-Deasserted		P D	-43	-	-	dBm
Signal Detect-Asserted		P A	-	-	-36	dBm
Signal Detect-Hysteresis		P A – P D	0.5	-	6	dB

Pin Description:

Pin	Name	Level	Description
1	Vee		Negative power of receiver section normally grounded
2	RD+	LVPECL	Data output of receiver section
3	RD-	LVPECL	Reverse data output of receiver section
4	SD	LVPECL	Optical alarm of receiver section High level when normal , low level when no light
5	V cc		Positive power of receiver section , normally +3.3V
6	V cc		Positive power of transmitter section , normally +3.3V
7	TD-	LVPECL	Reverse data input of transmitter section
8	TD+	LVPECL	Data input of transmitter section
9	Vee		Negative power of transmitter section , normally grounded

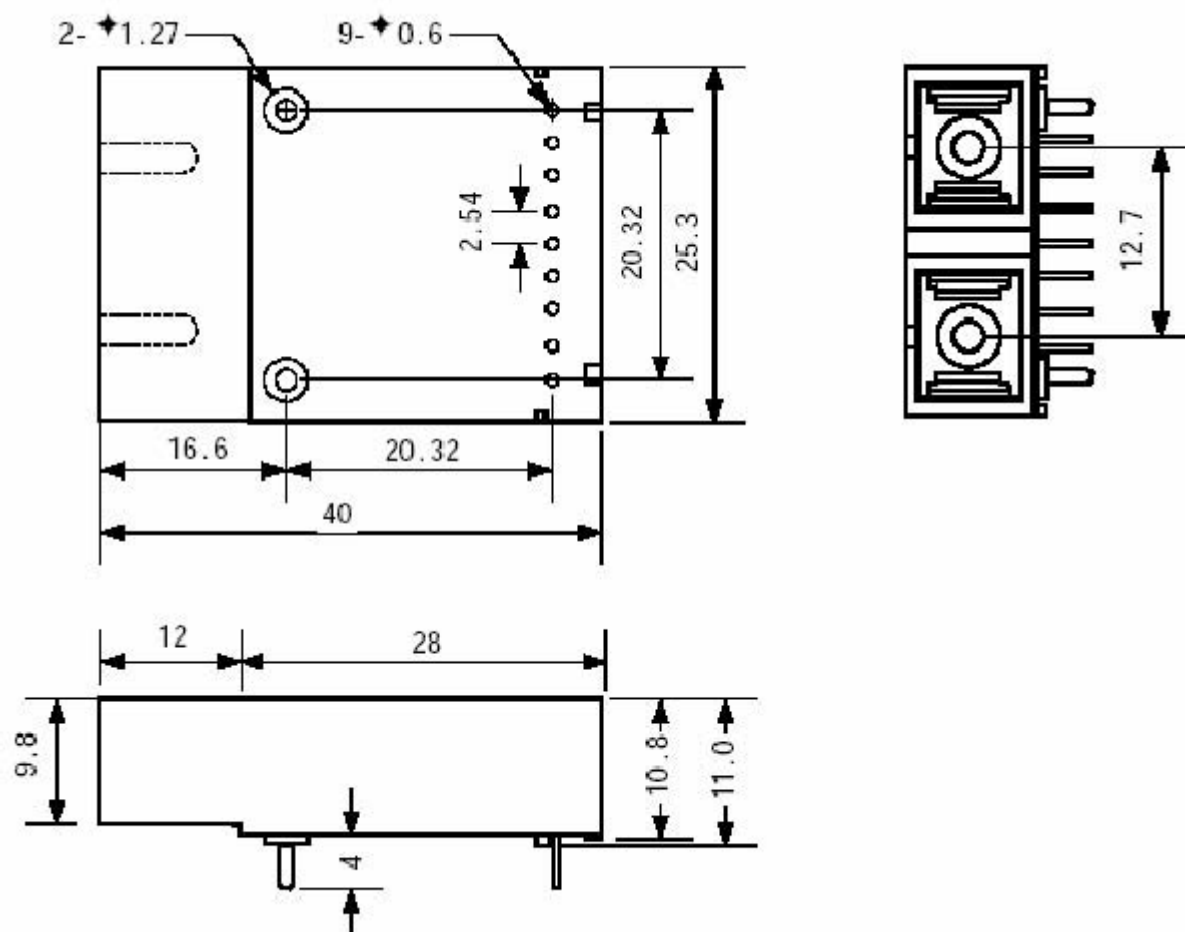
Typical Application Circuit



Note: R1=130 Ω , R2=82 Ω .(+3.3)

R1=82 Ω , R2=130 Ω .(+5)

Package Outline (unit : mm)



Order Information

Part No.	Description
AP-TR31011-3CSM	155M dual fiber MM 2km
AP-TR31011-3CS20	155M dual fiber SM 20km
AP-TR31011-3CS40	155M dual fiber SM 40km
AP-TR55012-3CS60	155M dual fiber SM 60km
AP-TR55012-3CS80	155M dual fiber SM 80km

For More Information

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