



1X9 1.25G ST 1310nm 10Km 3.3v

6313-421-1-ST

1.Feature

- 1×9 package with ST connector
- 1310nm FP Laser and PIN photodetector
- 10Km transmission with SMF
- +3.3V single power supply
- LVPECL compatible data input/output interface
- Low EMI and excellent ESD protection
- laser safety standard IEC-60825 compliant
- Compatible with RoHS



2.Application

- Ethernet
- Telecom

3.Description

The 1×9 transceiver supports 1250Mbps and 10Km transmission distance with SMF.

The transceiver consists of two sections: The transmitter section incorporates a FP laser. the receiver section consists of a PIN photodiode integrated with a trans-impedance preamplifier (TIA).

4.Performance specifications





4.1 Absolute Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Units
Storage Temperature	Tst	-40	+85	°C
Operating Temperature	Top	0	+70	°C
Supply Voltage	Vcc	0	+3.3	V
Input voltage	Vin	GND	Vcc	
Lead Soldering Temperature & Time		240/10		°C/s

4.2 Operation Environment

Parameter	Symbol	Minimum	Maximum	Units
Supply Voltage	Vcc	3.15	3.45	V
Ambient operating Temperature	Top	0	+70	°C
Operating Relative Humidity	-	5	95	%

4.3 Transmitter Section

(Ambient Operating Temperature 0°C to +70°C, Vcc =3.3 V)

Parameter	Symbol	Min.	Typ.	Max.	Units
Data rate	-	-	1250	-	Mb/s
Center Wavelength	λ_o	1260	1310	1360	nm
Output Spectral width	$\Delta\lambda$	-	-	4	nm
Average Optical Output Power	Po	-8	-	-3	dBm
Extinction Ratio	Er	9	-	15	dB
Rise/Fall Time(20%~80%)	Tr/Tf			0.26	ns
Total jitter	Tj			0.1	UI
Optical Eye Diagram	IEEE 802.3z and ANSI Fibre Channel Compatible				



Input differential impedance	Zdiff		100		Ohm
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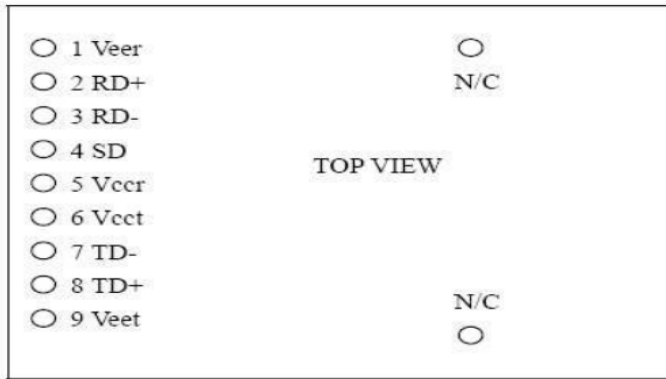
4.4 Receiver Section

(Ambient Operating Temperature 0°C to +70°C, Vcc =3.3V)

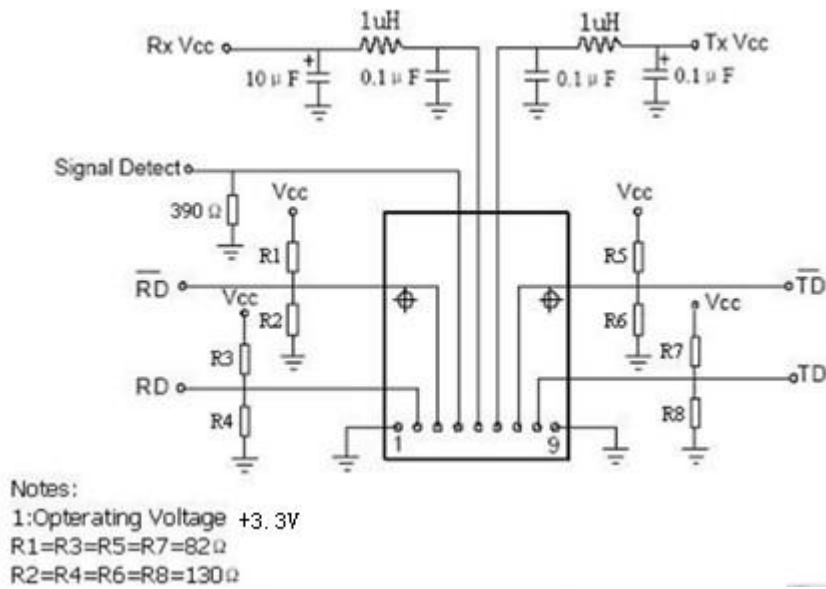
Parameter	Symbol	Min.	Typ.	Max.	unit
Data rate			1250		Mb/s
Wavelength	λ	1260		1620	nm
Receiver Sensitivity	Rsen	-		-22	dBm
Receiver Overload	Rov	-3			
Output differential impedance	Zdiff		100		Ohm
LOSS Thresholds	LOSS _D	-	-	-22	dBm
	LOSS _A	-36			

5.Pin Description

Pins	Name	Discription	NOTE
1	VeeR	Receiver Ground	
2	RD+	IReceived Data Output (PECL)	
3	RD-	Inv.ReceivedData Output (PECL)	
4	SD	Signal Detected (PECL)	
5	VccR	Receiver Power	
6	VccT	Transmitter Power	
7	TD-	Inv. Transmit Data Input (PECL)	
8	TD+	Transmit Data Input (PECL)	
9	VeeT	Transmitter Ground	



6.Recommended Circuit





7.Mechanical Dimensions

