

L9-SC315501-20PPI5

1×9 155Mbps Bi-Directional Transceiver

Features:

- Integrated single fiber bi-directional optical subassembly
- Operating data rate up to 155Mbps
- Simplex SC optical interface
- Single +5V Power Supply
- Multi-sourced 1×9 package
- Very low EMI and certified ESD protection
- Compliant with ROHS
- (LV)PECL Differential Input/Output and (LV)PECL signal detect

Applications:

- WDM Application
- SDH STM-1/ SONET OC-3
- Fast Ethernet

Standard:

- Compliant with ITU-T G.957

Ordering Information

Part. No	Specifications								
	Pack	Rate	Tx	P(dBm)	Rx	S(dBm)	WorkingTem	Reach	Fiber Interface
L9-SC315501-20PPC5	1x9 Bi-Di	155Mb/s	1310nm FP	-15~-8	PIN	<-32	0~70℃	20km	Simplex SC
L9-SC553101-20PPC5	1x9 Bi-Di	155Mb/s	1550nm FP	-15~-8	PIN	<-32	0~70℃	20km	Simplex SC
L9-SC315501-20PPI5	1x9 Bi-Di	155Mb/s	1310nm FP	-15~-8	PIN	<-32	-40~85℃	20km	Simplex SC
L9-SC553101-20PPI5	1x9 Bi-Di	155Mb/s	1550nm FP	-15~-8	PIN	<-32	-40~85℃	20km	Simplex SC

Absolute Maximum Ratings

Parameter	Symbol	Unit.	Min	Max
Storage Temperature Range	Ts	°C	-40	85
Operating Temperature	TC	°C	0	70
	TI	°C	-40	85
Power Supply Voltage (+3.3V)	Vcc	V	-0.5	+4
Lead Solder Temperature	-	°C	-	260
Lead Solder Duration	-	S	-	10
Voltage on any input/output pin	VI	V	0	Vcc

Recommended Operating Conditions

Parameter	Symbol	Unit.	Min	Typ	Max
Operating Temperature Rang	TC	°C	0		70
	TI	°C	-40		85
Power Supply Voltage	Vcc	V	4.75	5	5.25
Operating Data Rate	-	Mbps		155.52	

Transmitter Optical ,Electrical characteristics

Parameter	Symbol	Unit.	Min	Typ	Max	Note
Electrical Characteristics						
Supply Current	Icc	mA			250	
TransmitterDifferential InputVoltage	VD	mV	550		1750	
Input Differential Impedance	Rin	Ω		100		
Optical rise time	tr	ns			2.0	20%-80%
Optical fall time	tf	ns			2.0	
Launch Optical Power	Po	dBm	-15		-8	20km
Extinction Ratio	ER	dB	8.2			
Central Wavelength	λ	nm	1270	1310	1350	1310FP
			1510	1550	1590	1550FP
Output Spectrum Width	Δλ	nm			4	FP -LD
Eye diagram	ITU - T Recommendation G.957 STM-1/OC-3					

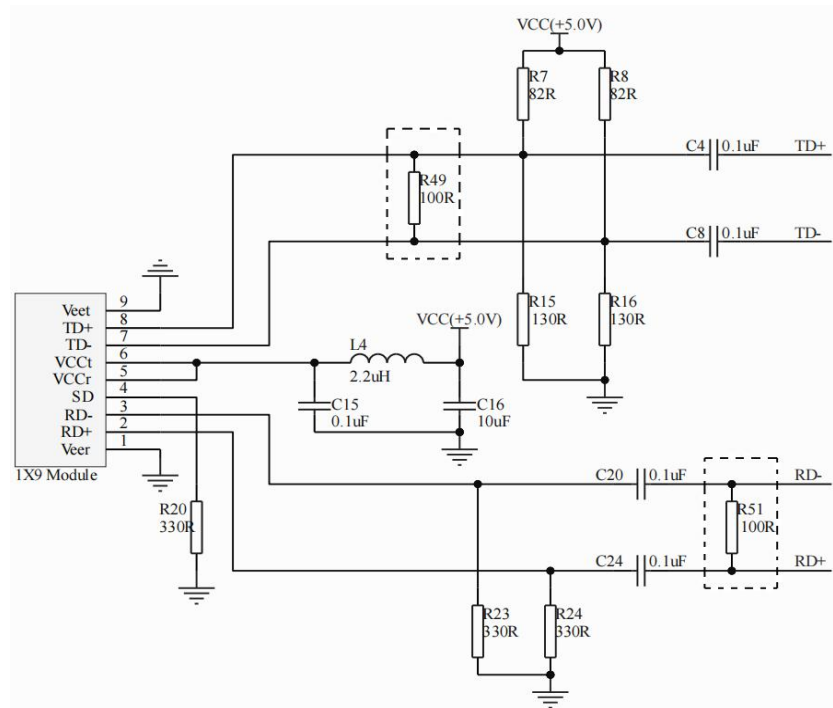
Receiver Optical Electrical Characteristics

Parameter	Symbol	Unit.	Min	Typ	Max	Note
Sensitivity	S	dBm		-32		20km
Maximum Input Power	P	dBm	-3			20km
Operating wavelength range	λ	nm	1260		1610	
Signal Detect Range		dBm	-45		-38	
Signal Detect-Hysteresis		dB	0.5			

Pin Connections

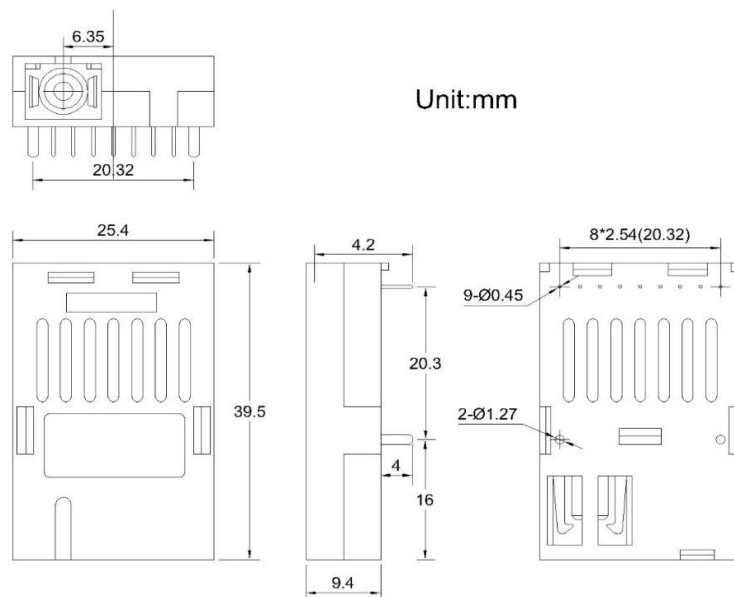
Pin	Name	Level	Description
1	Vee		Negative power of receiver section, normally grounded
2	RD+	PECL	Data output of receiver section
3	RD-	PECL	Reverse Data output of receiver section
4	SD	PECL	Optical alarm of receiver section, low level when no light
5	VccR		Positive power of receiver section, normally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

Typical Application Circuit



Recommended Circuit Schematic 5V SD PECL

Dimensions: Simplex SC receptacle optical interface



Regulatory Compliance

Feature	Test Method	Performance
ElectrostaticDischarge (ESD) to the ElectricalPins	MIL-STD-883E Method 3015.7	Class 1 (>1.5kV) – Human Body Model
ElectrostaticDischarge (ESD) Immunity	IEC61000-4-2	Class 2 (>4.0kV)
Electromagnetic Interence (EMI)	CISPR22 Class B EN55022 Class B	Compliant with standards
Immunity	IEC61000-4-3 Class 2 EN55024	Typically show no measurable effect from a 3V/mfield swept from 80 to 1000MHz applied to thetransceiver without a chassis enclosure.
Eye Safety	FDA CDRH 21-CFR 1040 Class 1	
	UL	