SV-SFPP-10GLRD8x

10Gbps,1550nmTX/1490nmRX(1490nmTX/1550 nmRX)80km,with DDM

Features

- Up to 11.1Gbps Data Links
- Up to 80km transmission on SMF
- Power dissipation<1.5W
  1550nm EML laser and APD receiver
  for SV-SFPP-10GLRD85
  1490nm EML laser and APD receiver
  for SV-SFPP-10GLRD86
- 2-wire interface with integrated Digital Diagnostic monitoring
- EEPROM with Serial ID Functionality
- Hot-pluggable SFP+ footprint
- Compliant with SFP+ MSA with LC connector
- Single + 3.3V Power Supply
- Case operating temperature: -10°C~+70°C

Applications

- 10GBASE-BX
- Compliant with SFF-8472
- Compliant to SFF-8431
- RoHS Compliant.

Ordering Information

Part number	Description	TX Power (dBm)	RX Sens. (dBm)	Fiber Budget (dB)	Distance (km)	DDM
SV-SFPP-10GLRD85	Starview Single Fiber Bi-Directional SFP+ module 1G/10G LAN, 1/2/4/8/10G FC, OC-192/STM-64, 1550nm EML laser TX/ 1490nm APD RX single fiber SM (LC) with Digital Diagnostic Monitoring (DDM), distance up to 80km	0 to 5	-23 to -6	23	80	YES
SV-SFPP-10GLRD86	Starview Single Fiber Bi-Directional SFP+ module 1G/10G LAN, 1/2/4/8/10G FC, OC-192/STM-64, 1490nm EML laser TX/ 1550nm APD RX single fiber SM (LC) with Digital Diagnostic Monitoring (DDM), distance up to 80km	0 to 5	-23 to -6	23	80	YES

Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit
Storage Temperature	Ts	-40	-	85	°C
Relative Humidity	RH	5	-	95	%
Power Supply Voltage	VCC	-0.3	-	4	V
Signal Input Voltage		Vcc-0.3	-	Vcc+0.3	V
Storage Temperature	Ts	-40	-	85	°C

Recommended Operating Conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Case Operating Temperature	Tcase	-5	-	70	°C	Without air flow
Power Supply Voltage	VCC	3.14	3.3	3.47	V	
Power Supply Current	ICC	-		450	mA	
Data Rate	BR		10.3125		Gbps	
Transmission Distance	TD		-	80	km	
Coupled fiber			Single mode fiber			9/125um SMF

Optical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Transmitter						
Average Launched Power	PO	0	-	5	dBm	
Average Launched Power(Laser Off)	Poff	-	-	-30	dBm	Note (1)
Center Wavelength Range	λC	λ-6.5	λ	λ+6.5	nm	Note (2)
Side mode suppression ratio	SMSR	30	-	-	dB	
Spectrum Bandwidth(-20dB)	σ	-	-	0.3	nm	
Extinction Ratio	ER	8.2		-	dB	Note (3)
Output Eye Mask			Compliant with IEEE 802.3ae			Note (3)
Receiver						
Input Optical Wavelength	λIN	1480	1490	1500	nm	
		1540	1550	1560	nm	
Receiver Sensitivity	Psen	-	-	-23	dBm	Note (4)
Input Saturation Power (Overload)	PSAT	-6	-	-	dBm	Note (4)
LOS Assert	LOSA	-35	-	-	dBm	
LOS De-assert	LOSD	-	-	-24	dBm	
LOS -Hysteresis	PHys	0.5	-	5	dB	

Note(1): The optical power is launched into SMF
Note(2): λ is wavelength of room temperature
Note(3): Measured with RPBS 2^31-1 test pattern @10.3125Gbs
Note(4): Measured with RPBS 2^31-1 test pattern @10.3125Gbs BER=<10^-12

Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Total power supply current	Icc	-		450	mA	
Transmitter						
Differential Data Input Voltage	VDT	180	-	700	mVp-p	
Differential line input Impedance	RIN	85	100	115	Ohm	
Transmitter Fault Output-High	VFaultH	2.4	-	Vcc	V	
Transmitter Fault Output-Low	VFaultL	-0.3	-	0.8	V	
Transmitter Disable Voltage- High	VDisH	2	-	Vcc+0.3	V	
Transmitter Disable Voltage- low	VDisL	-0.3	-	0.8	V	
Receiver						
Differential Data Output Voltage	VDR	300	-	850	mVp-p	
Differential line Output Impedance	ROUT	80	100	120	Ohm	
Receiver LOS Pull up Resistor	RLOS	4.7	-	10	KOhm	
Data Output Rise/Fall time	tr/tf		-	38	ps	
LOS Fault	VLOS fault	Vcc–1.3		VccHOST	V	
LOS Normal	VLOS norm	Vee		Vee+0.8	V	