SV-SFPP-10GLRD6x

10Gbps,1270nmTX/1330nmRX(1330nmTX/1270 nmRX)60km,with DDM

Features

- Up to 11.1Gbps Data Links
- Up to 60km transmission on SMF
- Power dissipation<1.5W
  1270nm DFB laser and APD receiver
  for SV-SFPP-10GLRD61
  1330nm DFB laser and APD receiver
  for SV-SFPP-10GLRD62
- 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: 0°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-10GLRD61	Starview Single Fiber Bi-Directional SFP+ module with Digital Diagnostic Monitoring (DDM), 1G/10G LAN, 1/2/4/8/10G FC, OC-192/STM-64, 1270nm DFB TX/ 1330nm APD RX single fiber SM (LC), distance up to 60km	0 to 5	-20 to -6	20	60	YES
SV-SFPP-10GLRD62	Starview Single Fiber Bi-Directional SFP+ module with Digital Diagnostic Monitoring (DDM), 1G/10G LAN, 1/2/4/8/10G FC, OC-192/STM-64, 1330nm DFB TX/ 1270nm APD RX single fiber SM (LC), distance up to 60km	0 to 5	-20 to -6	20	60	YES

Absolute Maximum Ratings

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

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		-	60	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	1260	1270	1280	nm	SV-SFPP-10GLRD61
		1320	1330	1340	nm	SV-SFPP-10GLRD62
Side mode suppression ratio	SMSR	30	-	-	dB	
Spectrum Bandwidth(-20dB)	σ	-	-	1	nm	
Extinction Ratio	ER	3.5		-	dB	Note (2)
Output Eye Mask			Compliant with IEEE 802.3ae			Note (2)
Receiver						
Input Optical Wavelength	λIN	1320	1330	1340	nm	SV-SFPP-10GLRD61
		1260	1270	1280	nm	SV-SFPP-10GLRD62
Receiver Sensitivity	Psen	-	-	-20	dBm	Note (3)
Input Saturation Power (Overload)	PSAT	-6	-	-	dBm	Note (3)
LOS -Assert Power	PA	-35	-	-	dBm	
LOS -Deassert Power	PD	-	-	-21	dBm	
LOS -Hysteresis	PHys	0.5	-	5	dB	

Note(1): The optical power is launched into SMF

Note(2): Measured with RPBS 2^31-1 test pattern @10.3125Gbs

Note(3): 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 Output Voltage-High	VLOSH	2	-	Vcc	V	
LOS Output Voltage-Low	VLOSL	-0.3	-	0.4	V	