

SV-SFP-2GZXD12ADxx

Multi-rate 1.062Gbps to 2.667Gbps, DWDM 120km with DDM



Features

- DWDM DFB Laser diode transmitter,
- APD photodiode receiver
- Compliant with DWDM SFP MSA
- SFF-8472 with duplex LC receptacle
- Up to 2.7Gbp/s data links
- Metal enclosure for lower EMI
- 3.3V Single power supply
- 50GHz ITU Grid, C Band
- Digital diagnostic monitoring
- 120 km with 9/125 μm single mode fiber (SMF)
- of maximum interconnect distances
- ROHS-6 compliant
- Case operating temperature: 0° C to +70° C

Applications

- C Band DWDM networks
- SONET/SDH networks
- Fiber channel

Ordering Information

Part number	Description	TX Power (dBm)	RX Sens. (dBm)	Fiber Budget (dB)	Distance (km)	DDM
SV-SFP-2GZXD12AD##	Starview SFP module Multi-rate 1.062Gbps to 2.667Gbps DWDM ####nm SM (LC) 50GHz spacing with Digital Diagnostic Monitoring (DDM), distance up to 120km	2 to 5	-31 to -9	33	120	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	-0.5		3.6	V

Recommended Operating Conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Case Operating Temperature	Tcase	0		70	°C	
Power Supply Voltage	VCC	3.13	3.3	3.45	V	
Power Supply Current	ICC			450	mA	
Power Supply Noise Rejection				100	mVp-p	100Hz to 1MHz
Data Rate			2500/2500	2700	Mbps	TX Rate/RX Rate
Transmission Distance				120	KM	
Coupled Fiber	Single mode fiber					9/125um SMF

Specification of Transmitter

Parameter	Symbol	Min.	Typ.	Max.	Unit
Centre Wavelength	λ_c	1528		1564	nm
Spectral Width (RMS)	$\Delta\lambda$			0.3	nm
Side Mode Suppression Ratio	SMSR	30			dB
Channel Spacing	Δf		50		GHz
Deviation From Central Frequency@EOL		-6		6	GHz
Average Output Power	Pout	2		5	dBm
Average Launch Power (Tx: OFF)	Poff			-45	dBm
Extinction Ratio	ER	8.2			dB
Rise/Fall Time(20%~80%)	tr/tf			150	ps
Output Optical Eye	Compatible with IEEE 802.3				
TX Disable Assert Time	t_off			10	us
Pout@TX Disable Asserted	Pout			-45	dBm
Relative Intensity Noise	RIN			-135	dB/Hz

Specification of Receiver

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Centre Wavelength	λ_c	1528		1620	nm	
Receiver Sensitivity	Pmin			-31	dBm	
Receiver Overload	Pmax	-9			dBm	
LOS De-Assert	LOSD			-32	dBm	
LOS Assert	LOSA	-45			dBm	
LOS Hysteresis		0.5			dB	

Electrical Interface Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Transmitter						
Total Supply Current	ICC			A	mA	Note 1
Transmitter Disable Input-High	VDISH	2		V _{CC} +0.3	V	
Transmitter Disable Input-Low	VDISL	0		0.8	V	
Transmitter Fault Input-High	VTxFH	2		V _{CC} +0.3	V	
Transmitter Fault Input-Low	VTxFL	0		0.8	V	
Receiver						
Total Supply Current	ICC			B	mA	Note 1
LOSS Output Voltage-High	VLOSH	2		V _{CC} +0.3	V	LVTTL
LOSS Output Voltage-Low	VLOSL	0		0.8	V	

Note 1: A (TX) + B (RX) = 500mA (Not include termination circuit)

DWDM Wavelength Guide

Channel	Wavelength(nm)	Frequency(THZ)	Channel	Wavelength(nm)	Frequency(THZ)
17	1563.86	191.70	39	1546.12	193.90
17.5	1563.45	191.75	39.5	1545.72	193.95
18	1563.05	191.80	40	1545.32	194.00
18.5	1562.64	191.85	40.5	1544.92	194.05
19	1562.23	191.90	41	1544.53	194.10
19.5	1561.83	191.95	41.5	1544.13	194.15
20	1561.42	192.00	42	1543.73	194.20
20.5	1561.01	192.05	42.5	1543.33	194.25
21	1560.61	192.10	43	1542.94	194.30
21.5	1560.20	192.15	43.5	1542.54	194.35
22	1559.79	192.20	44	1542.14	194.40
22.5	1559.39	192.25	44.5	1541.75	194.45
23	1558.98	192.30	45	1541.35	194.50
23.5	1558.58	192.35	45.5	1540.95	194.55
24	1558.17	192.40	46	1540.56	194.60
24.5	1557.77	192.45	46.5	1540.16	194.65
25	1557.36	192.50	47	1539.77	194.70

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25.5	1556.96	192.55	47.5	1539.37	194.75
26	1556.55	192.60	48	1538.98	194.80
26.5	1556.15	192.65	48.5	1538.58	194.85
27	1555.75	192.70	49	1538.19	194.90
27.5	1555.34	192.75	49.5	1537.79	194.95
28	1554.94	192.80	50	1537.40	195.00
28.5	1554.54	192.85	50.5	1537.00	195.05
29	1554.13	192.90	51	1536.61	195.10
29.5	1553.73	192.95	51.5	1536.22	195.15
30	1553.33	193.00	52	1535.82	195.20
30.5	1552.93	193.05	52.5	1535.43	195.25
31	1552.52	193.10	53	1535.04	195.30
31.5	1552.12	193.15	53.5	1534.64	195.35
32	1551.72	193.20	54	1534.25	195.40
32.5	1551.32	193.25	54.5	1533.86	195.45
33	1550.92	193.30	55	1533.47	195.50
33.5	1550.52	193.35	55.5	1533.07	195.55
34	1550.12	193.40	56	1532.68	195.60
34.5	1549.72	193.45	56.5	1532.29	195.65
35	1549.32	193.50	57	1531.90	195.70
35.5	1548.91	193.55	57.5	1531.51	195.75
36	1548.51	193.60	58	1531.12	195.80
36.5	1548.11	193.65	58.5	1530.72	195.85
37	1547.72	193.70	59	1530.33	195.90
37.5	1547.32	193.75	59.5	1529.94	195.95
38	1546.92	193.80	60	1529.55	196.00
38.5	1546.52	193.85	60.5	1529.16	196.05
Non-ITU	Peak wavelength between 1528.77nm-1563.86		61	1528.77	196.10