

Features

- Up to 1.25Gb/s Data Links
- Hot-Pluggable
- Duplex LC connector
- Up to 2km on 50/125um MMF
- 1310nm FP laser transmitter
- Single +3.3V Power Supply
- Monitoring Interface Compliant with SFF-8472
- Maximum Power <1W
- Commercial operating temperature range: 0°C to 70°C
- RoHS compliant and Lead Free



Applications

- Metro/Access Networks
- 1.25 Gb/s 1000Base-MX Ethernet
- 1×Fibre Channel
- Other Optical Links

1. Absolute Maximum Ratings

Parameter	Symbol	Min	Typ	Max	Units
Storage Temperature	TS	-40		+85	°C
Power Supply Voltage	VCC	-0.5		4	V
Relative Humidity	RH	0		85	%

2. Recommended Operating Environment

Parameter	Symbol	Min	Typ	Max	Unit
Case Operating Temperature	TC	0		70	°C
		-40		85	°C
		-10		85	°C
Supply Voltage	VCC	3.135		3.465	V
Supply Current	Icc			300	mA

Inrush Current	I _{surge}			I _{cc+30}	mA
Maximum Power	P _{max}			1	W

3. Electrical Characteristics

(TOP = -40 to 85°C, VCC = 3.135 to 3.465 Volts)

Parameter	Symbol	Min	Typ	Max	Unit	Note
Transmitter						
Input differential impedance	R _{in}	90	100	110		1
Single ended data input swing	V _{in PP}	250		1200	mVpp	
Transmit Disable Voltage	VD	V _{cc} -1.3		V _{cc}	V	2
Transmit Enable Voltage	VEN	V _{ee}		V _{ee} +0.8	V	
Transmit Disable Assert Time	T _{dessert}			10	us	
Receiver						
Single ended data output swing	V _{out,pp}	250		800	mv	3
LOS Fault	V _{losfault}	V _{cc} -0.5		V _{CC_host}	V	5
LOS Normal	V _{losnorm}	V _{ee}		V _{ee} +0.5	V	5
Power Supply Rejection	PSR	100			mVpp	6

Notes:

1. AC coupled.
2. Or open circuit.
3. Into 100 ohm differential termination.
4. 20 – 80 %
5. LOS is LVTTTL. Logic 0 indicates normal operation; logic 1 indicates no signal detected.
6. All transceiver specifications are compliant with a power supply sinusoidal modulation of 20 Hz to 1.5MHz up to specified value applied through the power supply filtering network shown on page 23 of the Small Form-factor Pluggable (SFP) Transceiver Multi-Source Agreement (MSA), September 14, 2000.

4. Optical Parameters

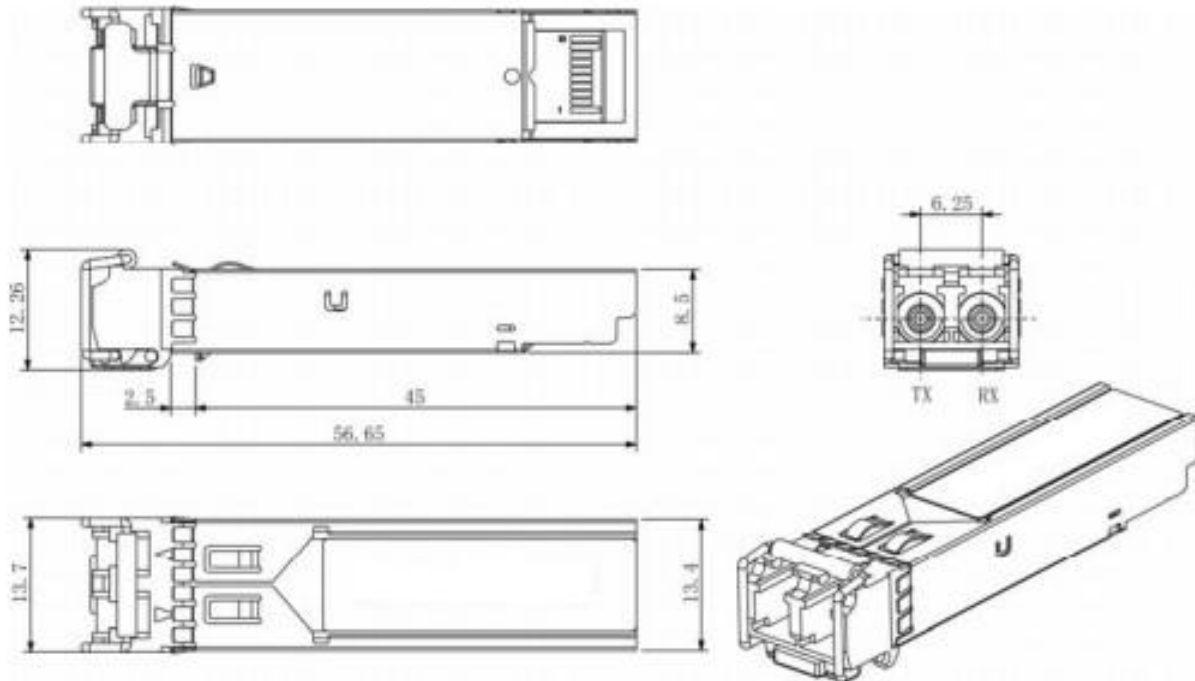
(TOP = -40 to 85°C, VCC = 3.135 to 3.465 Volts)

Parameter	Symbol	Min	Typ	Max	Unit	Notes
Transmitter						
Center Wavelength	λ_c	1270	1310	1360	nm	
Spectral Width	σ			3	nm	
Optical Output Power	P _{out}	-9		-3	dBm	1
Extinction Ratio	ER	8.2			dB	
Optical Rise/Fall Time	tr / tf			260	ps	2
Relative Intensity Noise	RIN			-120	dB/Hz	
Output Eye Mask	Compliant with IEEE802.3 z (class 1 laser safety)					
Receiver						
Optical Input Wavelength	λ_c	1260		1360	nm	
Receiver Overload	P _{ol}	0			dBm	4
RX Sensitivity	Sen			-18	dBm	4
RX_LOS Assert	LOS A	-29			dBm	
RX_LOS De-assert	LOS D			-19	dBm	
RX_LOS Hysteresis	LOS H	0.5			dB	
General						
Data Rate	BR		1.25		Gb/s	
Bit Error Rate	BER			10 ⁻¹²		
Max. Supported Link Length on 9/125µm SMF@1.25Gb/s	LMAX		2		km	
Total System Budget	LB	8			dB	

Notes:

1. The optical power is launched into SMF.
2. 20-80%.
3. Jitter measurements taken using Agilent OMNIBERT 718 in accordance with GR-253.
4. Measured with PRBS 2⁷⁻¹ at 10⁻¹² BER

5. Mechanical Diagram



Note: External physical characteristics are subject to variation. This may include, but is not limited to, external case designs, pull tab colors and/or shapes, removal latch styles or colors, and label sizes and placement. These variations do not affect the function or characteristics of the transceivers.

6. Ordering Information

OEM	Part Number	OEM	Part Number
Allied Telesis	AT-SPEX-A	Moxa	SFP-1GLSXLC-T-A
Allied Telesis	SPEX-A	Moxa	SFP-1GLSXLC-A
Champion ONE MSA	1000SFPMMX-A	MSA	AN-SFP-MX-A
Cisco	SFP-MX-A	Transition Networks	TN-GLC-SX-MM-2K-A
Cisco	GESFP-MMX-CSC-A	Transition Networks	TN-SFP-ESX6-A
Juniper	EX-SFP-1GE-MX-A	Transition Networks	GLC-2K-MM-1310-A

7. Contact Information

Tel: 800.590.9535

Web: <http://www.approvednetworks.com>