Approved Networks
A brand of legrand

SFP-BX495-80-I

1GBASE, SFP, ZX, BiDi, SMF TRANSCEIVER
Tx: 1490nm / Rx: 1590nm 80km REACH, SIMPLEX LC CONNECTOR

Features

- Up to 1.25Gb/s Data Links
- Hot-Pluggable
- Single LC connector
- Up to 80 km on 9/125µm SMF
- 1590nm DFB laser transmitter
- 1490nm PIN photo-detector
- Single +3.3V Power Supply
- Monitoring Interface Compliant with SFF-8472
- Maximum power dissipation <1W
- Industrial operating temperature range: -40°C to 85°C
- RoHS compliant and Lead Free

Applications

- 1000Base-ZX Ethernet
- Metro/Access Networks
- 1×Fibre Channel
- Other Optical Links

1. Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit
Storage Temperature	TS	-40		+85	°C
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	Industrial	TC	-40		85	°C
	Extended		-5		85	°C
	Commercial		0		+70	°C
Supply Voltage		VCC	3.135		3.465	V
Supply Current		Icc			300	mA

Inrush Current	Isurge			Icc+30	mA
Maximum Power	Pmax			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 Section:						
Input differential impedance	Rin	90	100	110	Ω	1
Single ended data input swing	Vin PP	250		1200	mVp-p	
Transmit Disable Voltage	VD	Vcc – 1.3		Vcc	V	2
Transmit Enable Voltage	VEN	Vee		Vee+ 0.8	V	
Transmit Disable Assert Time	Tdessert			10	us	
Receiver Section:						
Single ended data output swing	Vout,pp	300		800	mv	3
LOS Fault	Vlosfault	Vcc – 0.5		VCC_ host	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 LVTTL. 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)

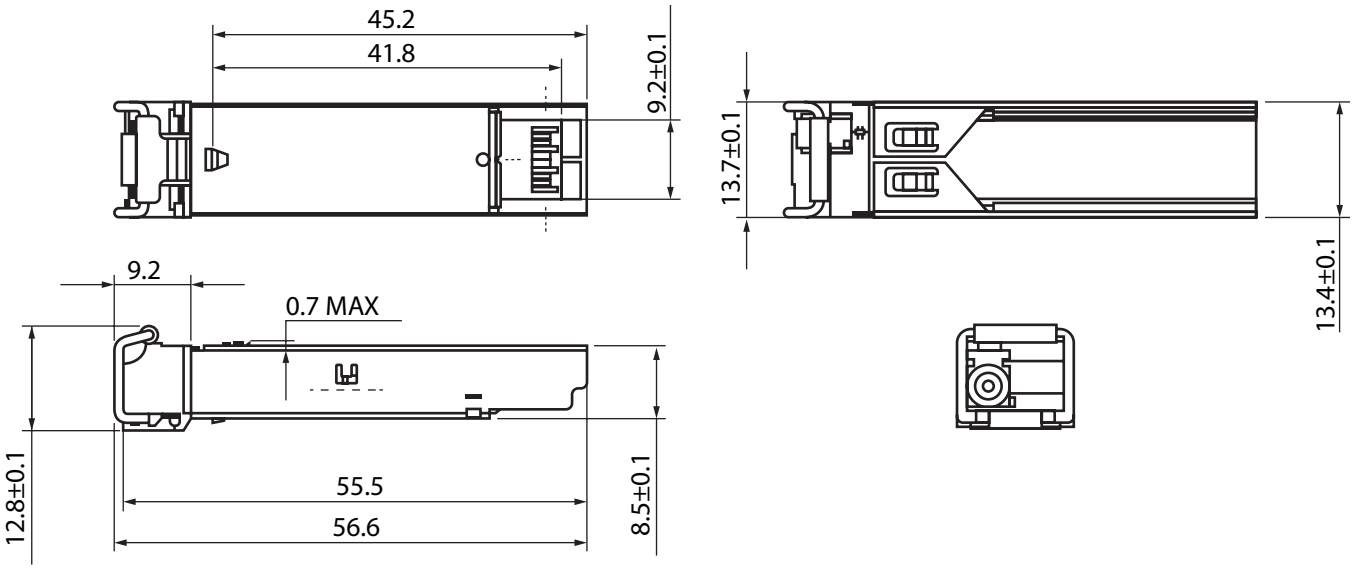
Parameter	Symbol	Min.	Typical	Max.	Unit	Note
Transmitter Section:						
Center Wavelength	λc	1570	1590	1610	nm	
Spectral Width	σ			1	nm	

Sidemode Supression ratio	SSRmin	30			dB	
Optical Output Power	Pout	-2		3	dBm	1
Extinction Ratio	ER	9			dB	
Optical Rise/Fall Time	tr / tf			260	ps	2
Relative Intensity Noise	RIN			-120	dB/Hz	
Total Jitter Contribution	TX Δ TJ			0.284	UI	3
Eye Mask for Optical Output	Compliant with IEEE802.3 z (class 1 laser safety)					
Receiver Section:						
Optical Input Wavelength	λc	1470	1490	1510	nm	
Receiver Overload	Pol	-3			dBm	4
RX Sensitivity	Sen			-25	dBm	4
RX_LOS Assert	LOS A	-40			dBm	
RX_LOS De-assert	LOS D			-24	dBm	
RX_LOS Hysteresis	LOS H	0.5			dB	
General Specifications:						
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		40		km	
Total System Budget	LB	21			dB	

Notes:

1. The optical power is launched into SMF.
2. 20-80%.
3. Contributed total jitter is calculated from DJ and RJ measurements using TJ = RJ + DJ. Contributed RJ is calculated for 1x10-12 BER bymultiplying the RMS jitter (measured on a single rise or fall edge) from the oscilloscope by 14. Per FC-PI (Table 9 - SM jitter output, note 1), the actual contributed RJ is allowed to increase above its limit if the actual contributed DJ decreases below its limits, as long as the component output DJ and TJ remain within their specified FC-PI maximum limits with the worst case specified component jitter input.
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
Calix	100-02608-A	MSA	SFP-BX495-80-I-A
Cisco	GESFP-B45-80-CSC	MSA Champion ONE	1000SFP49B80L-H
MSA	AN-SFP-BX495-80-I		

7. Contact Information

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