

### Features

- Operating Data Rate up to 1.25Gbps
- 1490nm DFB Tx/1590nm Rx
- APD-TIA Receiver
- Single 3.3V Power Supply
- Hot-Pluggable SFP Footprint single LC Connector Interface
- Power Dissipation < 1.0W
- Operating Temperature:  
Industrial: -40°C ~ 85°C

### Applications

- Fiber Channel Links
- Switch to Switch interface
- Switched backplane application

### 1. Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit
Storage Temperature	TS	-40	+85	°C
Maximum Supply Voltage	VCC	-0.5	3.6	V
Operating Relative Humidity	RH	5	85	%

**Note:** Exceeding any one of these values may destroy the device immediately.

### 2. Recommended Operating Conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit
Operating Case Temperature	TC	-40		+85	°C
Power Supply Voltage	VCC	3.15	3.3	3.47	V



- Other Optical Links

### Standard

- Compliant with SFF-8472
- Compliant with MSA SFP Specification
- Class 1 FDA and IEC60825-1 Laser Safety Compliant

Power Supply Current	ICC			300	mA
Data Rate	GBE		1.25		Gbps
	FC		1.063		

### 3. Optical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit
<b>Transmitter</b>					
Center Wavelength	$\lambda_C$	1470	1490	1510	nm
Spectral Width (-20dB)	$\Delta\lambda$		1	nm	
Side Mode Suppression Ratio	SMSR	30		dB	
Average Output Power*(Note1)	Pout	0	5	dBm	
Extinction Ratio	ER	9		dB	
Rise/Fall Time (20% ~ 80%)	tr/tf		0.26	ns	
Output Optical Eye*(Note2)		Compliant with IEEE 802.3			
Pout@TX Disable Asserted	Pout		-45	dBm	
<b>Receiver</b>					
Center Wavelength	$\lambda_C$	1570	1590	1610	nm
Receiver Sensitivity*(Note3)	Pmin		-32	dBm	
Receiver Overload	Pmax	-9		dBm	
LOS De-Assert	LOSD		-33	dBm	
LOS Assert	LOSA	-40		dBm	
LOS Hysteresis		1		dB	

**Note:**

1. Output power is power coupled into a 9/125 $\mu$ m single-mode fiber.
2. Filtered, measured with a PRBS 27-1 test pattern @1250Mbps.
3. Minimum average optical power, measured at BER less than 1E-12, with 27-1 PRBS and ER=9dB.

### 4. Electrical Characteristics

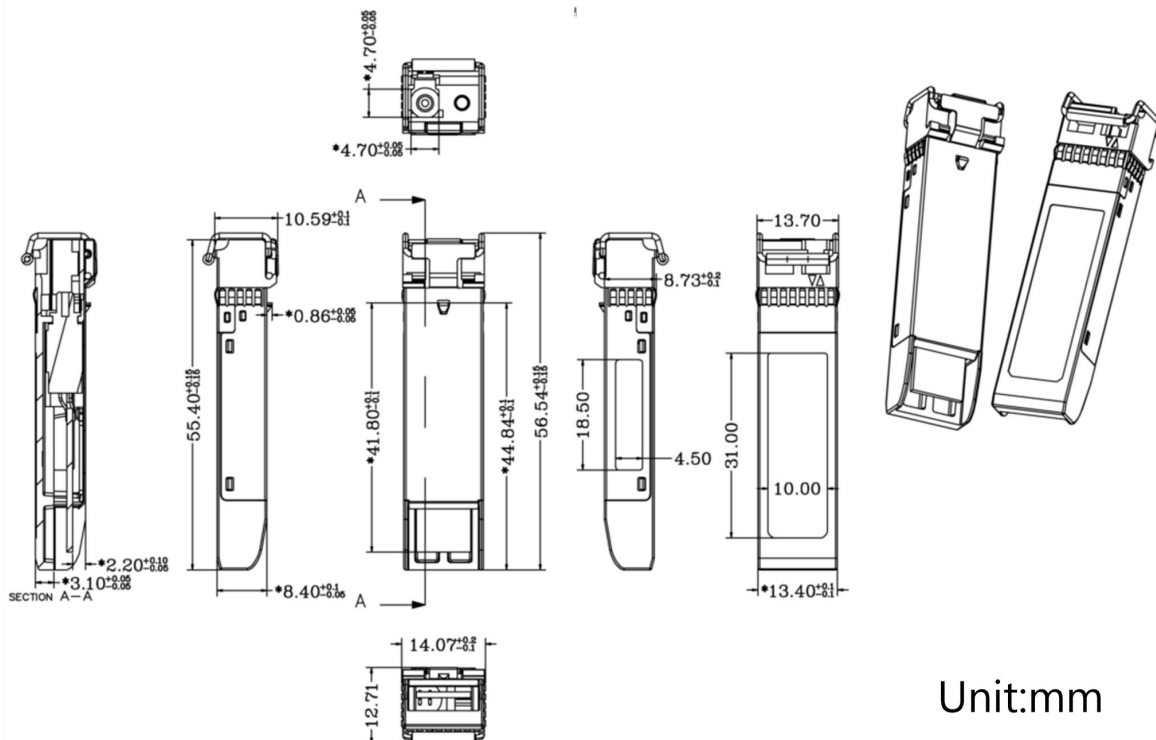
Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
<b>Transmitter Section:</b>						
LVPECL Inputs (Differential)	Vin	400		1800	mVpp	AC Coupled Inputs*(Note4)
Input Impedance (Differential)	Zin	90	100	110	ohms	Rin > 100 kohms @ DC

TX_Dis	Disable	2		Vcc+0.3	V	
	Enable	0		0.8		
TX_FAULT	Fault	2		Vcc+0.3	V	
	Normal	0		0.8		
<b>Receiver Section:</b>						
LVPECL Outputs (Differential)	Vout	400		2000	mVpp	AC Coupled Outputs*(Note4)
Output Impedance (Differential)	Zout	90	100	110	ohms	
TX_Disable Assert Time	t_off			10	us	
RX_LOS	LOS	2		Vcc+0.3	V	
	Normal	0		0.8		
MOD_DEF (0:2)	VoH	2.5		Vcc+0.3	V	With Serial ID
	VoL	0		0.5		

**Note:**

4. LVPECL logic, internally AC coupled.

### 5. Mechanical Diagram



Unit:mm

**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
Extreme	MGBIC-BX120-U-A	MSA	AN-SFP-BX495-120-I

## 7. Contact Information

Tel: 800.590.9535

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