

## Features:

- Supports up to 28.05Gbps bit rates
- Hot-pluggable SFP+ footprint
- 850nm VCSEL laser and PIN photodiode
- Up to 70m for OM3-MMF and 100m for OM4-MMF transmission
- Compliant with SFP+ MSA and SFF-8472 with duplex LC receptacle
- Compatible with RoHS
- Single +3.3V power supply
- Real Time Digital Diagnostic Monitoring
- Operating case temperature: Standard: 0 to +70°C



## Applications:

- 16GFC/32GFC Fibre channel

## 1. Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Supply Voltage	Vcc	-0.5	4.5	V
Storage Temperature	Ts	-40	+85	°C
Operating Humidity	-	5	85	%

## 2. Recommended Operating Conditions

Parameter	Symbol	Min	Typical	Max	Unit
Operating Case Temperature	Tc	0		+70	°C
Power Supply Voltage	Vcc	3.135	3.30	3.465	V
Power Supply Current	Icc			300	mA
Data Rate			28.05		Gbps

## 3. Optical and Electrical Characteristics

Parameter	Symbol	Min	Typical	Max	Unit	Notes
<b>Transmitter</b>						
Centre Wavelength	$\lambda_c$	840	850	860	nm	
Spectral Width (RMS)	$\Delta\lambda$			0.6	nm	
Side-Mode Suppression Ratio	SMSR	-	-	-	dB	
Average Output Power	P <sub>out</sub>	-8.4		2.4	dBm	1
Extinction Ratio	ER	2.0			dB	
Data Input Swing Differential	V <sub>IN</sub>	180		950	mV	2
Input Differential Impedance	Z <sub>IN</sub>	90	100	110	$\Omega$	
TX Disable	Disable	2.0		V <sub>cc</sub>	V	
	Enable	0		0.8	V	
TX Fault	Fault	2.0		V <sub>cc</sub>	V	
	Normal	0		0.8	V	
<b>Receiver</b>						
Centre Wavelength	$\lambda_c$	840	850	860	nm	
Receiver Sensitivity				-10	dBm	3
Receiver Overload		2.4			dBm	3
LOS De-Assert	LOSD			-13	dBm	
LOS Assert	LOSA	-30			dBm	
LOS Hysteresis		0.5		4	dB	
Data Output Swing Differential	V <sub>out</sub>	500	700	900	mV	4
LOS	High	2.0		V <sub>cc</sub>	V	
	Low			0.8	V	

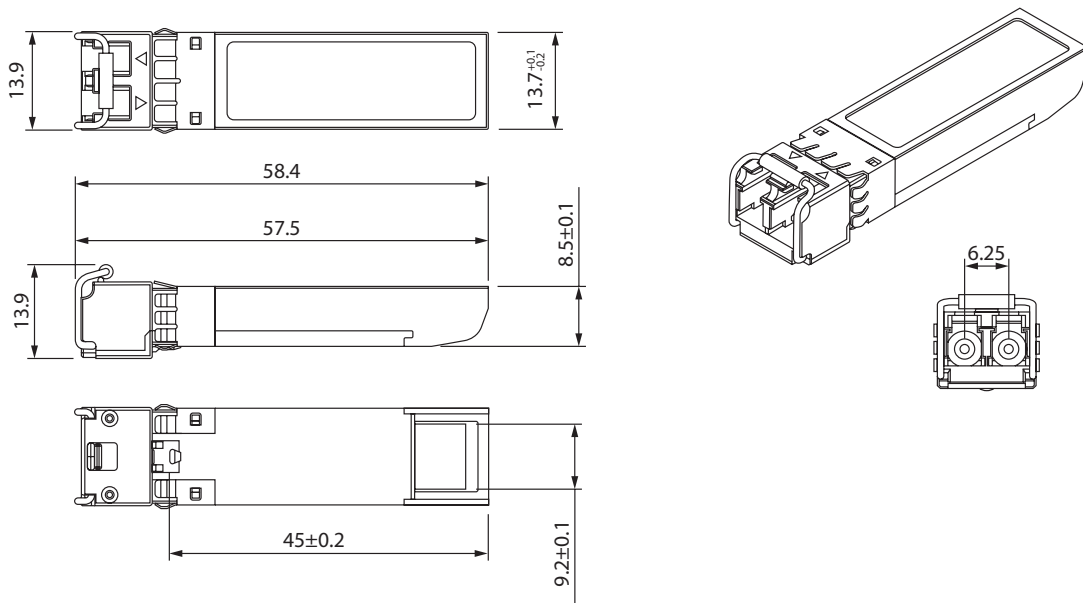
Notes:

1. The optical power is launched into MMF.
2. PECL input, internally AC-coupled and terminated.
3. Measured with a PRBS 231-1 test pattern @28.05Gbps, BER  $\leq 1E-6$ .
4. Internally AC-coupled.

## 4. Timing and Electrical

Parameter	Symbol	Min	Typical	Max	Unit
Tx Disable Negate Time	t_on			2	ms
Tx Disable Assert Time	t_off			100	µs
Time To Initialize, including Reset of Tx Fault	t_init			300	ms
Tx Fault Assert Time	t_fault			100	µs
Tx Disable To Reset	t_reset	10			µs
LOS Assert Time	t_loss_on			100	µs
LOS De-assert Time	t_loss_off			100	µs
Serial ID Clock Rate	f_serial_clock		100	400	KHz
MOD_DEF (0:2)-High	VH	2		Vcc	V
MOD_DEF (0:2)-Low	VL			0.8	V

## 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
Avago	AFBR-57G5MZ-A	Avago	AFBR-57G5AMZ-A
Cisco	DS-SFP-FC32G-SW-A	Brocade-Foundry	XBR-000212-A
Cisco	DS-SFP-FC32G-SW-C1	OnePort	OP-SFP32G-SW
MSA	AN-SFP32G-SW		

## 7. Contact Information

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