

Features

- Up to 24.33Gb/s bi-directional data links
- Hot-pluggable SFP+ footprint
- Built-in digital diagnostic functions
- 850nm Oxide VCSEL laser transmitter
- Duplex LC connector
- RoHS compliant
- 35m on 50/125 um OM2 MMF
- 100m over M5F MMF (50/125 um OM4)
- 70m over M5E MMF (50/125um OM3)
- Metal enclosure, for lower EMI
- 1.2W maximum power consumption



- Single 3.3V power supply
- Operating temperature range: -40°C to 85°C

Applications

- CPRI option 10

1. Absolute Maximum Ratings

Parameter	Symbol	Min	Typ	Max	Unit	Ref.
Maximum Supply Voltage	Vcc	-0.5		4.0	V	
Storage Temperature	TS	-40		85	°C	
Case Operating Temperature	TC	-40		85	°C	
Relative Humidity (Non-condensing)	RH	0		85	%	1

2. Electrical Characteristics

(TA, VCC = 3.15 to 3.46 Volts)

Parameter	Symbol	Min	Typ	Max	Unit	Ref.
Supply Voltage	Vcc	3.15		3.46	V	
Supply Current	Icc			310	mA	1

Transmitter						
Input differential impedance	Rin		100		Ω	2
Single-ended data input swing	Vin,pp	125		450	mV	3
Inner Eye Height	EH6	95			mV	
Transmit Disable Voltage	VD	2		Vcc	V	4
Transmit Enable Voltage	VEN	Vee		Vee+0.8	V	
Receiver						
Single ended data output swing	Vout,pp	185		425	mV	5
LOS Fault	VLOS fault	2		VccHOST	V	6
LOS Normal	VLOS norm	Vee		Vee+0.8	V	6
Power Supply Rejection	PSR	100			mVpp	7

Notes:

1. With established link. The total power dissipation could exceed 1W when the module is trying to establish link at operating case temperature below 25°C
2. Connected directly to TX data input pins. AC coupling from pins into laser driver IC.
3. The minimum value represents the minimum outer eye amplitude.
4. Or open circuit.
5. Into 100 ohms differential termination.
6. LOS is an open collector output. Should be pulled up with 4.7k – 10kohms on the host board. Normal operation is logic 0; loss of signal is logic 1. Maximum pull-up voltage is 5.5V.
7. Receiver sensitivity is compliant with power supply sinusoidal modulation of 20 Hz to 1.5 MHz up to specified value applied through the recommended power supply filtering network.

3. Optical Characteristics

(TA, VCC = 3.15 to 3.46 Volts)

Parameter	Symbol	Min	Typ	Max	Unit	Ref.
Transmitter						
Average Output Power: 50 μ MMF	POUT	-8.4		2.4	dBm	1
Optical Wavelength	λ	840		860	nm	
Spectral Width (RMS)	rms			0.60	nm	
Optical Modulation Amplitude	OMA	-6.4		3	dBm	

Transmitter and Dispersion Eye Closure (TDEC)	TDP			4.3	dB	
Average Launch Power of OFF Transmitter				-30	dBm	
Extinction Ratio	ER	2			dB	
Receiver						
Stressed Receiver OMA Sensitivity	RxSENS			-5.2	dBm	
Average Receiver Power	RxMAX	-10.3		3	dBm	2
Optical Center Wavelength	λ_C	840		860	nm	
Optical Return Loss		12			dB	
LOS De-Assert	LOSD			-13	dBm	
LOS Assert	LOSA	-30			dBm	
LOS Hysteresis		0.5			dB	

Notes:

1. Class 1 Laser Safety limit per FDA/CDRH, and EN (IEC) 60825 laser safety standards.
2. Informative Only

4. General Specifications

Parameter	Symbol	Min	Typ	Max	Units	Ref.
Data Rate	BR		24.33		Gb/sec	
Bit Error Rate	BER	5E(-5)				
Fiber Length on 50/125 μ m high-bandwidth (OM3/M5E) MMF	L			70	m	1
Fiber Length on 50/125 μ m high-bandwidth (OM4/M5F) MMF	L			100	m	

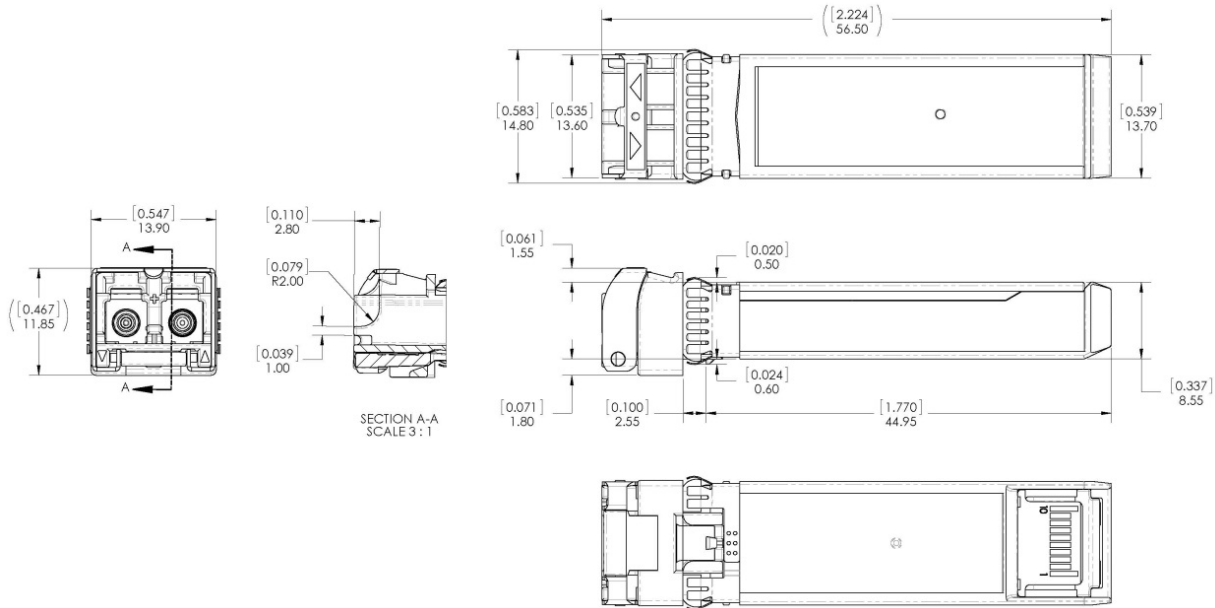
Notes:

1. At 25.78Gb/s Ethernet data rate

5. Environmental Specifications

Parameter	Symbol	Min	Typ	Max	Units	Ref.
Case Operating Temperature	Top	-40		85	°C	
Storage Temperature	Tsto	-40		85	°C	

6. 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.

7. Ordering Information

OEM	Part Number	OEM	Part Number
Cisco	SFP-25G-SR-S-A	HP	845398-B21-A
Juniper	JNP-SFP-25G-SR-A		

8. Contact Information

Tel: 800.590.9535

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