



SONET OC-3 / SDH STM-1 / Fast Ethernet Small Form Pluggable (SFP) – 155.52MBaud

Product Overview

The Emerson Network Power Connectivity Solutions SPLC-20-2-2M-Bx-R6 pluggable transceiver module is a high performance integrated duplex data link for bi-directional communication over single mode optical fiber. It is compliant with the MSA Small Form Factor Pluggable (SFP) specification. The SPLC-20-2-2M-Bx-R6 is specifically designed to be used in SONET OC-3/SDH STM-1 or Fast Ethernet applications. The Stratos Lightwave SFP transceiver is hot pluggable which allows a suitably designed enclosure to be changed from one type of external interface to another simply by plugging in a SFP having the alternative external interface. The SPLC-20-2-2M-Bx-R6 operates at 3.3V. This optoelectronic transceiver module is a Class 1 Laser product compliant with FDA Radiation Performance Standards, 21 CFR Subchapter J. This component is also Class 1 Laser compliant according to the International Safety Standard IEC-825-1.

Ordering Information

SPLC - 20 - 2 - 2M - B X - R6

Bail Actuator

BLANK=Commercial Temp Range
H=Extended Temp Range

Key Features & Benefits

- 155.52Mbps SONET OC-3/SDH STM-1 Performance
- Fast Ethernet Compliant
- Compliant with Bellcore GR-253 Specification
- Compliant with ITU-T G.957 Specification
- Compliant with MSA SFP Specification
- Die Cast Metal Housing
- Hot Pluggable
- Single +3.3V Power Supply
- Serial ID Functionality
- RoHS Compliant

Module Specifications – Electrical: +3.0V<Vcc<+3.6V

Parameter	Sym	MIN	Typ	MAX	Unit	Notes
Supply Current	Icc		180	250	mA	Tc = 25°C, Vcc = +3.3V
Surge Current	Isurge			300 30	mA	+3.0V<Vcc<+3.6V Surge above steady value
Transmitter						
PECL Inputs (Differential)		400		2400	mVpp	AC Coupled Inputs
Input Impedance (Differential)	Zin	95	100	105	Ω	Rin > 100KΩ @ DC
TX_DISABLE Input Voltage – High	ViH	2		3.45	V	
TX_DISABLE Input Voltage – Low	ViL	0		0.8	V	
TX_FAULT Output Voltage – High	VtoH	2		3.45	V	Io = 400μA
TX_FAULT Output Voltage – Low	VtoL	0		0.5	V	Io = -4.0mA
Receiver						
PECL Outputs (Differential)		600	1200	1860	mVpp	AC Coupled Outputs
RX_LOS Output Voltage – High	VroH	Vcc-0.5		Vcc+0.3	V	Io = 400μA; Host Vcc
RX_LOS Output Voltage – Low	VroL	0		0.8	V	Io = -4.0mA
MOD_DEF (0:2)	VoH VoL	2.5 0		Vcc+0.3 0.5	V	

Stratos

SPLC-20-2-2M-Bx-R6 Optical Transceiver

Connectivity for
Business-Critical Continuity™

Module Specifications – Optical:

Compliant to GR 253 (IR-1) and ITU-T G.957 (S-1.1) Specifications

+3.0V<V_{CC}<+3.6V

Parameter	Sym	MIN	Typ	MAX	Unit	Notes
Transmitter						
Optical Center Wavelength	λ	1266	1310	1360	nm	
RMS Spectral Width	$\Delta\lambda$			4	nm	
Optical Output Power	P _{out}	-15		-8	dBm	Average power @ 1310nm
Extinction Ratio	ER	8.2			dB	P1/P0
Jitter Generation				70 7	mUI	pk-pk; Measured with 2 ²³ -1 PRBS RMS; Measured with 2 ²³ -1 PRBS
Receiver						
Optical Input Wavelength	λ	1260		1610	nm	
Optical Input Power	P _r	-28		-8	dBm	Average power for BER<1.0E-10
RX_LOS – Asserted	P _a	-38			dBm	Measured on transition – Low to High
RX_LOS – Deasserted	P _d			-28	dBm	Measured on transition – High to Low
RX_LOS – Hysteresis	P _a -P _d		1.5	5.0	dB	

Module Specifications – Optical:

Fast Ethernet

+3.0V<V_{CC}<+3.6V

Parameter	Sym	MIN	Typ	MAX	Unit	Notes
9.0μm Core Diameter SMF		15			Km	BER<1.0E-12 @ 125MBaud
Transmitter						
Optical Center Wavelength	λ	1285	1310	1355	nm	T _{case} = +25°C
Spectral Width	$\Delta\lambda$			3	dBm	RMS
Optical Transmit Power	P _{opt}	-15		-8	dBm	Average @ 1310nm
Extinction Ratio	ER	9			dBm	P1/P0
Total Jitter [pk-pk]	T _j			1.8	ns	Measured with 2 ⁷ -1 PRBS
Optical Rise/Fall Time	t _r , t _f			2	ns	20-80%; Measured unfiltered
Receiver						
Optical Input Wavelength	λ	1270		1355	nm	
Optical Input Power	P _r	-28		-8	dBm	BER<1.0E-12 @ 1.25/1.0625GBaud
Optical Return Loss	ORL	12			dB	
RX_LOS – Asserted	P _a	-38			dBm	Measured on transition – Low to High
RX_LOS – Deasserted	P _d			-28	dBm	Measured on transition – High to Low
RX_LOS – Hysteresis	P _a -P _d		1.5	5.0	dB	

For more information on this product consult the SPLC-20-2-2M-Bx-R6 product data sheet.

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