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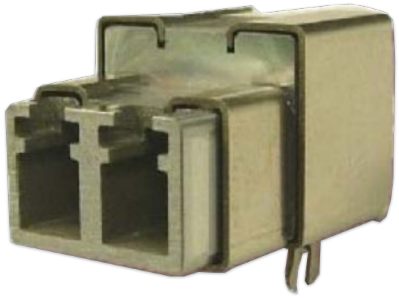
RJS-ST31
Optical Transceiver

4x / 2x / 1x Fiber Channel Applications,
850nm Micro Module 4.25 /2.125 / 1.0625 GBaud



Applications

The Cinch Connectivity Solutions RJS-ST31 transceiver module is a high performance integrated full duplex data link for bi-directional communication over multimode optical fiber. It has been designed for use in space constrained applications, and offers the mandatory FC compliance commonly provided by SFF and SFP transceivers. 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 International Safety Standard IEC-825-1/ EN 60825.

Features

- 4.25 GBaud Fiber Channel Compliant
- 2.125 GBaud Fiber Channel Compliant
- 1.0625 GBaud Fiber Channel Compliant
- 100 differential DC coupled inputs/outputs
- Industry Standard LC Connector Interface
- Metal housing
- Single +3.3V Power Supply
- RoHS Compliant

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Please read our datasheet & drawing disclaimer here.

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Ordering Information

R S - ST3 1

Communications Protocol
S – 4XFC / 2XFC / 1XFC
4.25 / 2.125 / 1.0625 GBaud

Wavelength
1=850nm (multimode)

Module Specifications – Electrical: 0ºC<Tc<+70ºC, +3.135<Vcc<+3.465V

Parameter	Symbol	MIN	Typical	MAX	Unit	Notes
Supply Current			125	195	mA	0ºC<Tc<+70ºC; +3.135V<Vcc<+3.465V
Transmitter						
Input Swing (Differential)	Vin	500		2200	mVpp	
Input Impedance (Differential)[1]	Rin		100		Ω	Internally terminated
TX_DISABLE Input Voltage – High	V_{IH}	2		3.465	V	
TX_DISABLE Input Voltage – Low	V_{IL}	0		0.8	V	
Receiver						
Output Swing (Differential)		300		1200	mVpp	
Output Impedance (Differential)	Rout		100		Ω	
Single Detect Output Voltage – High[2]	VroH	Vcc-0.5		Vcc+0.3	V	Io = 400µA; Host Vcc
Single Detect Output Voltage – Low[3]	VroL	0		0.8	V	Io = -4.0mA

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Module Specifications – Optical: 0ºC<Tc<+70ºC, +3.135<Vcc<+3.465V

Parameter	Symbol	MIN	Typical	MAX	Unit	Notes
Transmission Distance						
		150	250			BER<1.0E-12 @ 4.25GBaud
50µm Core Diameter MMF		300	500		M	BER<1.0E-12 @ 2.125GBaud
		550	1000			BER<1.0E-12 @ 1.25/1.0625GBaud
		70	150			BER<1.0E-12 @ 4.25GBaud
62.5µm Core Diameter SMF		150	300		M	BER<1.0E-12 @ 2.125GBaud
		300	500			BER<1.0E-12 @ 1.25/1.0625GBaud
Transmitter						
Optical Center Wavelength	λ	830	850	860	nm	
Spectral Width	Δλ			0.85	nm	RMS
Optical Transmit Power	Popt	-9		-3	dBm	Average @ 850nm
		247			µW	Pk-pk @ 4.25GBaud
Optical Modulation Amplitude	OMA	196			µW	Pk-pk @ 2.125GBaud
		156			µW	Pk-pk @ 1.0625GBaud
Relative Intensity Noise	RIN			-118	dB/Hz	Measured with -12dB optical return loss
Output Eye	Complies with ANSI FC-PI Specification and Class 1 Laser Eye Safety					
Receiver						
Optical Input Wavelength	λ	830		860	nm	
		-15		0		BER<1.0E-12 @ 4.25GBaud
Optical Input Power	Pr	-18		0	dBm	BER<1.0E-12 @ 2.125GBaud
		-20		0		BER<1.0E-12 @ 1.25/1.0625GBaud
		61				Pk-pk @ 4.25GBaud
Optical Modulation Input	OMA	49			µW	Pk-pk @ 2.125GBaud
		31				Pk-pk @ 1.0625GBaud
Optical Return Loss	ORL	12			dB	
SD – Deasserted	Pd	-29			dBm	
				-15		4.25GBaud
SD – Asserted	Pa			-18	dBm	2.125GBaud
				-20		1.25/1.0625GBaud
SD – Hysteresis	Pa-Pd		2.25	3.5	dB	

For more information on this product consult the RJS-ST31 product data sheet.

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