

XFP Transceiver 850nm – 10GBASE-SR / SW TXFP-0850-300M-LC-A

The **TXFP-0850-300M-LC-A** Transceiver is a multi rate, single channel (TDM) optical interface designed for 10Gb/s data transmission at 850nm over 62.5 μm and 50.0 μm core MMF according to the following standards:

- 10GBASE-Sx; IEEE802.3ae - 2002 (9.953 - 10.312 Gb/s);
- 10G Fiber Channel (10.518 Gb/s)

The **TXFP-0850-300M-LC-A** operates in a wide temperature range from -5 to +70 °C with very low DC power consumption, and extremely good features both for heat dissipation and electromagnetic shielding. The excellent jitter performances are fully compliant with Datacom standards showing:

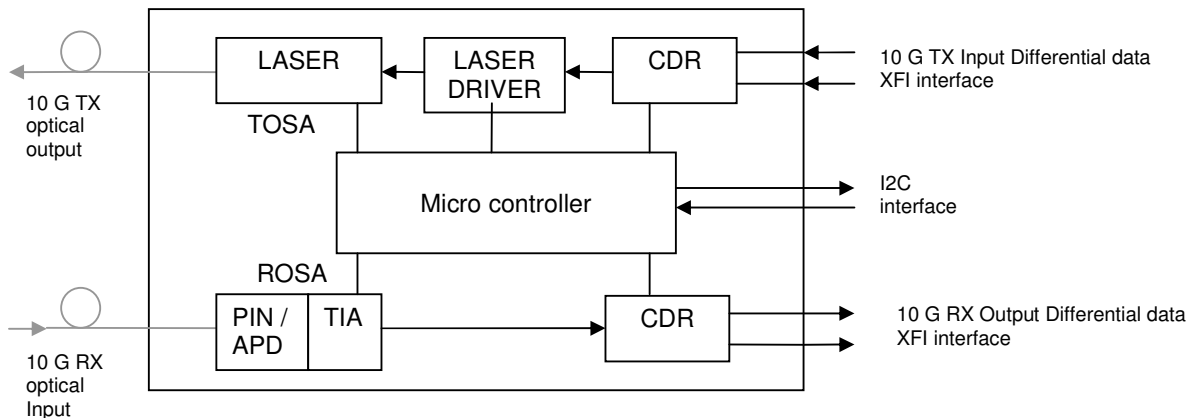
- jitter transfer function with less than 1 dB peaking and transfer bandwidth well below 8 MHz;
- jitter tolerance compliant to IEEE requirements.



TXFP Series transceiver

As well as all Teleoptix product lines, The **TXFP** Series has been designed, engineered and is currently manufactured according to the highest quality levels requested by the major Telecom and Datacom networks equipment manufacturers.

The **TXFP** Transceiver Series is qualified according to TELCORDIA 468 requirements.



TXFP Series Block Diagram

STORAGE CONDITIONS

Parameter	Symbol	Unit	Condition	Min	Typ	Max
Storage ambient temperature	Ts	°C		-40		+85

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Unit	Condition	Min	Typ	Max
+5V Supply Voltage	VCC5	V				TBD
+3.3V Supply Voltage	VCC3	V				TBD
Static Discharge Voltage		V	HBM Human Body Model: JESD22-A114-B			500

OPERATING CONDITIONS (*)

Parameter	Symbol	Unit	Condition	Min	Typ	Max
Operating Case Temperature	Tc	°C		-5		70
+5V Supply Voltage	VCC5	V		4.8	5	5.2
+3.3V Supply Voltage	VCC3	V		3.1	3.3	3.5
+5V Supply Current	ICC5	mA			15	40
+3.3V Supply Current	ICC3	mA			250	620
Power Consumption	P	W	operating		1	2.5
Power Consumption	Pd	W	power down mode			1.5

HIGH SPEED ELECTRICAL INTERFACE CHARACTERISTICS (*)

Parameter	Symbol	Unit	Condition	Min	Typ	Max
Bit Rate	B	Gb/s		9.953		10.710
Differential Input data Amplitude	InDD	mVpp	CML - XFI interface according with XFP MSA rev 4.5	120		1000
Differential Output data Amplitude	OutDD	mVpp	CML - XFI interface according with XFP MSA rev 4.5	340		850

JITTER PERFORMANCE CHARACTERISTICS (*)

Parameter	Symbol	Unit	Condition	Min	Typ	Max
Jitter Transfer Bandwidth	JBW	MHz		2		8
Jitter Transfer Peaking	JP	dB	F > 120 KHz			1
Jitter Tolerance	JT		IEEE 802.3ae-2002		Compliant	

OPTICAL CHARACTERISTICS (*)

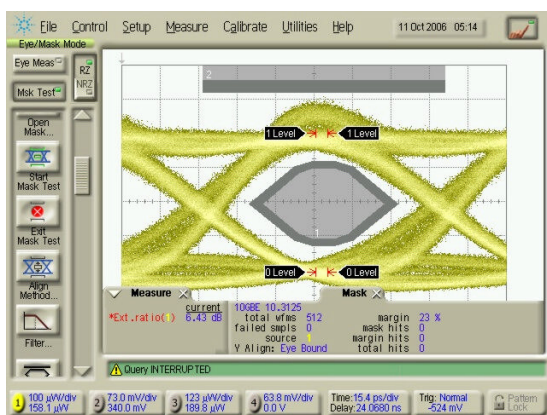
Parameter	Symbol	Unit	Condition	Min	Typ	Max
Emitted Wavelength	L	nm		840		860
Optical Output Power	OP	dBm		-7.3	-2	-1
Spectral Width	DL	nm	@ -20 dB			0.45
Extinction Ratio	ER	dB		3	6	
Optical Output Eye Mask Margin		%	10GE		15	
Optical Power Shutdown	PDown	dBm				-30
B-B Sensitivity		dBm	BER=10 ⁻¹² ; PRBS 2 ³¹ -1		-13	-11
Sensitivity with fiber		dBm	BER=10 ⁻¹² ; PRBS 2 ³¹ -1; 50.0um core MMF (6667MHz); 62.5um core MMF (6100MHz)			-10
Overload	OV	dBm		1		
Loss Of Signal Assert Level	LOS_A	dBm	BER > 1E-3		-22	
Loss Of Signal Deassert Level	LOS_D	dBm	BER > 1E-4		-20	
LOS Hysteresys	LOS_H	dB		0.5		

(*): Unless otherwise stated, the parameters values are valid in the full operating conditions range.

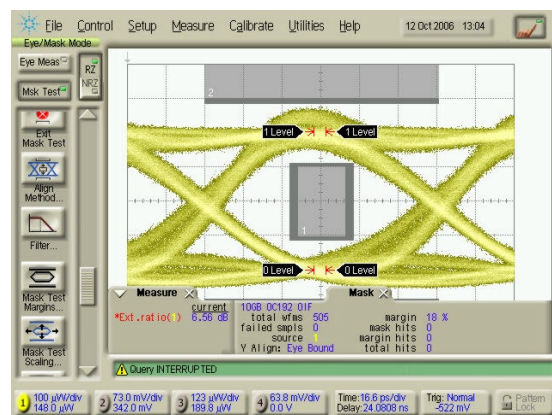
SAFETY

Parameter	Symbol	Unit	Condition	Min	Typ	Max
Laser Safety Class			Class 1 according to IEC 60825		Compliant	

EYE DIAGRAMS

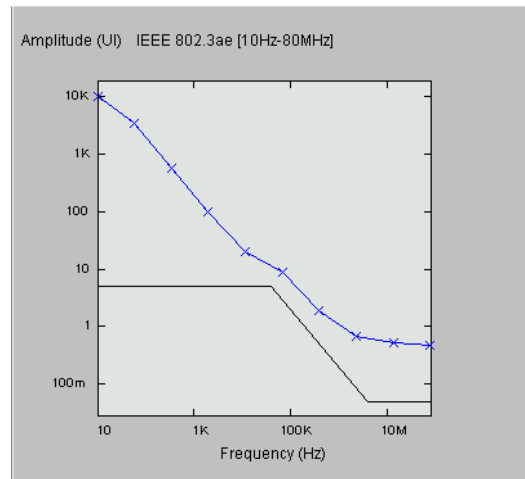


Optical Eye Diagram
Mask IEEE802.3ae-2002



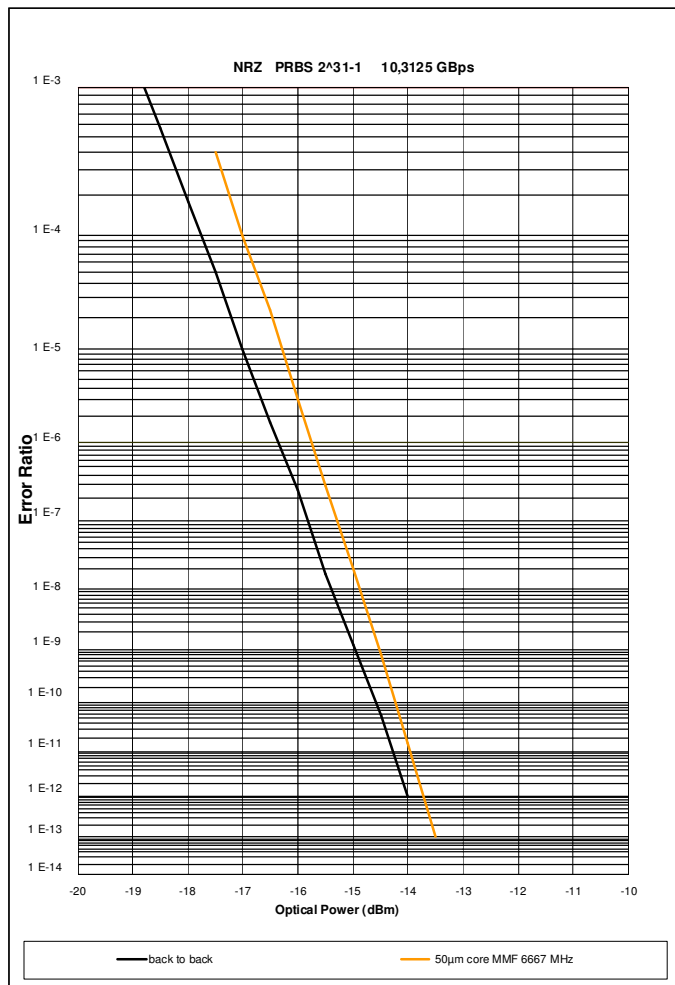
Optical Eye Diagram
Mask OIF VSR4

JITTER TOLERANCE



IEEE802.3ae-2002 Jitter Tolerance

BER CURVE



B-B & 300m 50um core MMF at 10.312 Gb/s

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