

Datasheet | Lantek SFP+ Transceiver

Description: 40km 10GBASE-BX BIDI LC transceiver

Brand: LANTEK | RoHS, CE mark commercial

General Specifications

Parameter	Symbol	Min	Typ.	Max	Unit
Bit Rate	BR		10.3125	11.3168	Gb/s
Max. Supported Link Length			40 km		

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Storage Temperature	TS	-40	+85	°C

Electrical Characteristics

Parameter	Symbol	Min	Typ.	Max	Unit	Ref.
Power Supply Voltage	Vcc	2.5	10.3	11.3	V	
Power Supply Current	Icc			430	mA	
Surge Current						+30 mA
Transmitter						
CML Inputs (Differential)		150		1200	mVpp	AC coupled inputs
Input Impedance (Differential)	Zin	85	100	115	ohms	Rin > 100 kohms @ DC
Tx_DISABLE Input Voltage - High		2		Vcc+0.3	V	
Tx_DISABLE Input Voltage - Low		0		0.8	V	
Tx_FAULT Output Voltage - High		2		Vcc+0.3	V	Io = 400µA; Host Vcc
Tx_FAULT Output Voltage - Low		0		0.5	C	Io = -4.0Ma
Receiver						
CML Outputs (Differential)	Vout	350		700	mVpp	AC coupled outputs
Output Impedance (Differential)	Zout	85	100	115	ohms	
Rx_LOS Output Voltage - High		2		Vcc+0.3	V	Io =400µA; Host Vcc
Rx_LOS Output Voltage - Low		0		0.8		Io = -4.0Ma
MOD_DEF (2:0)	VoH	2.5			V	With Serial ID
	VoL	0		0.5	V	

Optical Characteristics

(1270nm DFB & PIN/TIA)

Parameter	Symbol	Min	Typ.	Max	Unit
Power Budget		16			dB
Data Rate		0.6	10.3125	11.3	Gbps
Transmitter					
Centre Wavelength	λ_c	1260	1270	1280	Nm
Spectral Width (-20Db)	$\Delta\lambda$			1	Nm
Side Mode Suppression Ratio	SMSR	30			dB
Average Output Power*note1	Pout, AVG	1		5	dBm
Extinction Ratio	ER	3.5			dB
Average Power of OFF Transmitter				-30	dB
Average Power of OFF Transmitter	RIN			-128	dB/Hz
TX Disable Assert Time	t_off			10 us	10 us
Receiver					
Centre Wavelength	λ_c	1320	1330	1340	nm
Sensitivity*note2	PIN			-15	dBm
Receiver Overload	PMAX	0.5			dBm
LOS De-Assert	LOSD			-18	dBm
LOS Assert	LOSA	-30			dBm

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(1330nm DFB & PIN/TIA)

Parameter	Symbol	Min	Typ.	Max	Unit
Power Budget	16				Db
Data Rate		0.6	10.3125	11.3	Gbps
Transmitter (Tx)					
Centre Wavelength	λ_C	1320	1330	1340	nm
Spectral Width (-20Db)	$\Delta\lambda$			1	Nm
Side Mode Suppression Ratio	SMSR	30			dB
Average Output Power*note1	Pout, AVG	1		5	dBm
Extinction Ratio	ER	3.5			dB
Average Power of OFF Transmitter				-30	dB
Average Power of OFF Transmitter	RIN			-128	dB/Hz
TX Disable Assert Time	t_off			10	Us
Receiver (Rx)					
Centre Wavelength	λ_C	1260	1270	1280	Nm
Sensitivity*note2	PIN			-15	dBm
Receiver Overload	PMAX	0.5		0.5	dBm
LOS De-Assert	LOSD			-18	dBm
LOS Assert	LOSA	-30			dBm

Notes:

1. Output is coupled into a 9/125um SMF.

Mechanical Specifications

