1.25Gbps BiDi LC 160KM SFP Transceiver

CLSFPGEBD1514160D

Product Features:

- Up to 1.25Gbps data links
- 160Km with 9/125μm SMF
- 1550nm /1490nm DFB laser
- Simplex LC Connector
- Hot-pluggable SFP footprint
- Single 3.3V power supply
- Operating temperature: Refer to Ordering Information
- RoHS
- Pull ring color yellow

Applications:

- 1.25Gbps 1000Base-ZX
- 1G/2G Fiber Channel

Functional Characteristics

The following tables list the performance specifications for the various functional blocks of the module.

Table 1 - Optical Characteristics

Parameter	Symbol	Min.	Typical	Max.	Unit	Notes
Transmitter						
Centre Wavelength	λc	1540	1550	1560	nm	
Spectral Width (-20dB)	σ			1	nm	
Average Output Power	Pout	2		5	dBm	
Extinction Ratio	ER	9			dB	
Optical Rise/Fall Time	tr/tf			2	ns	
Receiver						
Centre Wavelength	λc	1480	1490	1500	nm	
Receiver Sensitivity	PIN			-34	dBm	
Receiver Overload	PMAX	-7			dBm	
LOS De-Assert	LOSD			-39	dBm	
LOS Assert	LOSA	-40			dBm	
LOS Hysteresis		0.5		4.5	dB	

Table 2 - Electrical Characteristics

Parameter	Symbol	Min.	Typical	Max.	Unit	Notes
Recommended Operating Conditions						
Operating Case Temperature (CLSFPGEBD1514160D-L)	TC	0		70	℃	
Operating Case Temperature (CLSFPGEBD1514160D-LI)	TC	-40		85	℃	
Power Supply Voltage	VCC	3.15	3.3	3.45	V	
Power Supply Current	ICC			300	mA	
Data Rate			1.25		GBps	
Max Link Length on 9/125μm SMF	Lmax			160	km	
Transmitter						
Input Differential Impedance	Zin	90	100	110	Ω	
Data Input Swing Differential	Vin	500		2400	mV	
Tx-Dis Disable	Vd	2.0		Vcc	V	
Tx-Dis Enable	Ven	0		0.8	V	
TX-Fault (Fault)		2.0		Vcc+0.3	V	
TX-Fault (Normal)		0		0.8	V	
Receiver						
Data Output Swing Differential	Vout	370		2000	mV	
Rx-Los Fault	Vlf	2.0		Vcc+0.3	V	
Rx-Los Normal	Vln	0		0.8	V	

Ordering Information

Table 3 - Ordering Information

Part No.	Data Rate	DDM	TX/RX	Fiber Type	Dist.	Temp.	Optical Interface
CLSFPGEBD1514160D-L	1.25Gbps	yes	1550nm/1490nm	SMF	160Km	0~70℃	BiDi LC
CLSFPGEBD1514160D-LI	1.25Gbps	yes	1550nm/1490nm	SMF	160Km	-40~85℃	BiDi LC

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