XGSPON&GPON Combo OLT D+ SFP+ Optical Transceiver

CLXGSP-G-CBOLT-D-E2

Product Features:

- Combination of XGS-PON OLT and GPON OLT optical module
- Comply with ITU-T G.984.5 (2014)/Amd.2 (10/2020) GPON & XGS-PON OPL Class D+
- Single fiber bi-directional data links: Tx1 9.953Gbps 1577nm, Rx1 9.953G/2.488Gbps 1270nm
- Tx2 2.488Gbps 1490nm, Rx2 1.244Gbps 1310nm
- 1577nm continuous-mode transmitter with SOA+EML laser
- 1490nm continuous-mode transmitter with DFB laser
- 1270nm burst-mode receiver with APD-TIA
- 1310nm burst-mode receiver with APD-TIA
- 2-wire interface for integrated digital diagnostic monitoring
- RoHS with exemptions 7C(I)
- SFP+ package with SC/UPC
- +3.3V power supply
- 40km reach
- Operating case temperature: 0~70°C or -40~85°C

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 (9.953G)						
Centre Wavelength	λc	1575	1577	1580	nm	
Side Mode Suppression Ratio	SMSR	30			dB	
Average Launch Power	Aop	8		10	dBm	
Average Launch Power-OFF	POFF			-39	dBm	
Extinction Ratio	ER	8.2			dB	
Tx Tolerance to Reflected Power		-15			dB	
Eye Diagram	ITU-T G.9807.1 Compliant					
Transmitter (2.488G)						
Centre Wavelength	λc	1480	1490	1500	nm	
Side Mode Suppression Ratio	SMSR	30			dB	
Average Launch Power	Aop	7		10	dBm	
Average Launch Power-OFF	POFF			-40	dBm	
Extinction Ratio	ER	8.2			dB	
Tx Tolerance to Reflected Power		-15			dB	
Eye Diagram	ITU-T G.984.2 Compliant					
Receiver (9.953G)						
Centre Wavelength	λc	1260	1270	1280	nm	

Sensitivity	PSEN			-32	dBm	PRBS 2^31-1 @9.953Gbps, ER=6dB, BER<10^-3
Saturation	PSAT	-10			dBm	
Signal Detected De-assert Level	Psdd	-45			dBm	
Signal Detected Assert Level	Psda			-30	dBm	
Max Optical Input	Pdamage			0	dBm	
Receiver (2.488G)						
Centre Wavelength	λc	1260	1270	1280	nm	
Sensitivity	PSEN			-35	dBm	PRBS 2^23-1 @2.488Gbps, ER=8.2dB, BER<10^-4
Saturation	PSAT	-10			dBm	
Signal Detected De-assert Level	Psdd	-45			dBm	
Signal Detected Assert Level	Psda			-31	dBm	
Max Optical Input	Pdamage			0	dBm	
Receiver (1.244G)						
Centre Wavelength	λc	1290	1310	1330	nm	
Sensitivity	PSEN			-35	dBm	PRBS 2^23-1 @1.244Gbps, ER=8.2dB, BER<10^-4
Saturation	PSAT	-12			dBm	
Signal Detected De-assert Level	Psdd	-45			dBm	
Signal Detected Assert Level	Psda			-33	dBm	
Max Optical Input	Pdamage			0	dBm	

Table 2 – Electrical and RSSI Timing Characteristics

Parameter	Symbol	Min.	Typical	Max.	Unit	Notes
Transmitter (9.953G & 2.488G)						
Data Input Differential Swing	VIN	100		850	mVp-p	
Input Differential Impedance	ZIN		100		Ω	
Tx_Disable Voltage - Low	VIL	0		0.8	V	
Tx_Disable Voltage - High	VIH	2.4		3.3	V	
Transmitter Fault Voltage - Low	VTF,L	0		0.4	V	
Transmitter Fault Voltage - High	VTF,H	2.4		3.3	V	
Receiver (9.953G & 2.488G & 1.244G)						
Data Output Differential Swing	VOUT	300		800	mVp-p	
Signal Detected Voltage - Low	VSD,L	0		0.8	V	
Signal Detected Voltage - High	VSD,H	2.4		3.3	V	
RSSI Timing						
Packet Length		575			ns	
RSSI Trigger Delay	Td	100			ns	
RSSI Trigger Width	Tw	500			ns	
RSSI Sampling Time	TSAMPLE	500			ns	
Delay before Read	Ts	500			us	

Ordering Information

Table 3 - Ordering Information

Part No.	Description
CLXGSP-G-CBOLT-D/E2	XGSPON&GPON Combo OLT D+, SFP+, 20 Pins, 0~70℃, 40km, Tx1: 9.95328G Tx2: 2.488G, Rx1: 9.95328G/2.488G Rx2: 1.244G, Tx1: 1577nm SOA+EML laser Tx2: 1490nm DFB

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