800G QSFP-DD 2FR4 2km

CL800GQDD2FR4

Product Features:

- Compliant with IEEE 802.3cu-2021:
- - 2x400GBASE-FR4 optical interface
- Compliant with IEEE P802.3ck D3.0
- - 2x400GAUI-4 C2M electrical interface
- Compliant with QSFP-DD800 MSA HW Rev 6.01 type 2A with dual LC connector
- Compliant with CMIS Rev 5.0
- Case operating temperature 0°C to 70°C
- Two wire serial Interface with digital diagnostic monitoring
- Complies with EU Directive 2011/65/EU (RoHS compliant)
- Class 1 Laser

Functional Characteristics (Optical)

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

Table 1 – Transmitter Optical Specifications

Parameter	Symbol	Min.	Typical	Max.	Unit	Notes
Wavelength L0, L4	λC0 , λC4	1264.5	1271	1277.5	nm	
Wavelength L1, L5	λC1 , λC5	1284.5	1291	1297.5	nm	
Wavelength L2, L6	λC2 , λC6	1304.5	1311	1317.5	nm	
Wavelength L3, L7	λC3 , λC7	1324.5	1331	1337.5	nm	
Side Mode Suppression Ratio	SMSR	30	-	-	dB	
Total average launch power	AOPT	-	-	10.4	dBm	
Average Launch Power, each lane	AOPL	-3.2	-	4.4	dBm	1
Outer Optical Modulation Amplitude (OMAouter), each Lane for TDECQ <1.4 dB for 1.4 dB ≤TDECQ ≤3.4 dB	TOMA	-0.2 –1.6 + TDECQ	-	3.7	dBm	
Difference in launch power between any two lanes (OMAouter)	AOPd	-	-	3.9	dB	
Transmitter and Dispersion Eye Closure for PAM4 (TDECQ), each lane	TDECQ	-	-	3.4	dB	
Transmitter eye closure for PAM4 (TECQ), each lane	TECQ	-	-	3.4	dB	
| TDECQ – TECQ |	-	-	-	2.5	dB	
Over/under-shoot	-	-	-	22	%	
Transmitter power excursion	-	-	-	1.8	dBm	
Average Launch Power of OFF Transmitter, each lane	TOFF	-	-	-16	dBm	
Extinction Ratio	ER	3.5	-	-	dB	
Transmitter transition time (max)	Tr	-	-	17	ps	
RIN17.1OMA (max)	RIN	-	-	-136	dB/Hz	
Optical Return Loss Tolerance	ORL	-	-	17.1	dB	
Transmitter Reflectance	TR	-	-	-26	dB	2

Note 1: Average launch power, each lane (min) is informative and not the principal indicator of signal strength

Note 2: Transmitter reflectance is defined looking into the transmittr

Table 2 – Receiver Optical Specifications

Parameter	Symbol	Min.	Typical	Max.	Unit	Notes
Wavelength L0, L4	λC0 , λC4	1264.5	1271	1277.5	nm	
Wavelength L1, L5	λC1 , λC5	1284.5	1291	1297.5	nm	
Wavelength L2, L6	λC2 , λC6	1304.5	1311	1317.5	nm	
Wavelength L3, L7	λC3 , λC7	1324.5	1331	1337.5	nm	
Damage Threshold, each Lane	AOPD	5.4	-	-	dBm	
Average Receive Power, each Lane	AOPR	-7.2	-	4.4	dBm	
Receive Power (OMAouter), each Lane	OMAR	-	-	3.7	dBm	
Difference in receive power between any two lanes (OMAouter) (max)	AOPg	-	-	4.1	dB	
Receiver Reflectance	RR	-	-	-26	dB	
Receiver sensitivity (OMAouter), each lane for TECQ < 1.4 dB for 1.4 dB≤ TECQ ≤3.4 dB	SOMA	-	-	-4.6 -6 + TECQ	dBm	
Stressed Receiver Sensitivity (OMAouter), each Lane	SRS	-	-	-2.6	dBm	1
Conditions of stressed receiver sensitivity test						
Stressed eye closure for PAM4 (SECQ), lane under test	-	-	3.4	-	dB	
OMAouter of each aggressor lane	-	-	1.4	-	dBm	

Note 1: Measured with conformance test signal at TP3for the BER= 2.4x10-4.

Ordering Information

Table 3 - Ordering Information

Part No.	Application	Data Rate	Laser Source	Fiber Type
CL800GQDD2FR4	2x400GBASE-FR4 8x100GBASE-FR1	850Gb/s	EML	Single Mode Fiber

CONTACT:

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