DATA SHEET

Transceivers
50G QSFP28 Bidi LR1
CQB-700A07

Properties

- Protocol 50G Ethernet
- Single Lambda
- PAM4 Modulation
- Data rate 53.125 Gbps
- Reach up to 10km
- Wavelength 1270/1330 or 1330/1270nm
- LC/PC simplex connector
- Singlemode fiber
- Temp. range 0 ... 70°C
- Link budget at least 7 dB



General data	
Form factor	QSFP28
Product image	Actual product may differ from the images shown. Colours, design, and details can vary.
Protocol	100G Ethernet
Media type	Singlemode
Connector	LC/PC simplex
Modulation Format	PAM4
Built-in FEC	No
CDR	Double
Operation temperature	0 °C ... 70 °C
Supply voltage typical	3.135 V ... 3.465 V
Supply Current	< 1010 mA
Power consumption	< 3.5 W
Digital Diagnostic Management (DDM)	Yes
Laser hazard level	1

Absolute Maximum Ratings	
Max. supply voltage range	0 V ... 3.6 V
Max. Storage Temperature Range	-40 °C ... 85 °C
Max. relative humidity range	5 % ... 85 %

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Transmitter Specifications	
Laser Type	DML
Operating channels	1271.00nm (1264.5 to 1277.5nm) 1331.00nm (1324.5 to 1337.5nm)
Grid	None
Average launch power per lane	-4.5 dBm ... 4.2 dBm
Outer Optical Modulation Amplitude (OMA)	-1.5 dBm ... 4 dBm
Extinction Ratio	> 3.5 dB
Side Mode Suppression	> 30 dB
Supported Data rate	53.125 Gbps
OMA - TDECQ	>-2.9 dbm

Receiver Specifications	
Receiver Type	PIN
Operating channels	1331.00nm (1324.5 to 1337.5nm) 1271.00nm (1264.5 to 1277.5nm)
Receiver Sensitivity (OMA)	< -8.4 dBm
Stressed receiver sensitivity (OMA)	< -6.6 dBm
Bit Error Rate at Receiver	2.4E-4
Maximum Optical Input Power per Lane (Overload)	4.2 dBm
Receiver LOS De-Assert	< -11 dBm
Receiver LOS Assert	> -30 dBm
Receiver LOS Hysteresis	> 0.5 dB
Supported Data rate	53.125 Gbps
Average receive power per lane	-10.8 dBm ... 4.2 dBm
Maximum Receiver Power (Damage Threshold)	> 5.2 dBm

Ordering Information Table		
Order Code	Compatibility code explanation	Wavelength code explanation
CQB-700A07xxxx-ww	"xxxx" is an alphanumerical string, describing the compatibility. "0000" means no special coding to ensure compatibility with a special switch type.	-23: 1270nm Laser / 1330nm Receiver -32: 1330nm Laser / 1270nm Receiver

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