

# PRE-QSFP28-50G-B23(32)-ER

QSFP28, PAM4, BIDI, 50G, 40km, 1294nm/1308nm, SMF/LC



## Product Features:

- Single Wavelength PAM4
- 1294 or 1308 Tx Waves
- SMF Transmission Medium
- LC/UPC Connector
- Digital Diagnostic Monitoring (DDM)
- C-Temp Rated
- 50Gbps Maximum Data Rate
- <4.5W Power Consumption



## Product Applications:

- 50GBASE-ER Ethernet
- Metro Ethernet
- Switch/Router Interconnections

## Standards:

- SFF-8636/8665
- IEEE 802.3 50GAUI-2
- RoHS

## General Specifications:

Parameter	Min	Typical	Max	Unit
Case Operating Temperature	0	-	70	°C
Power Consumption	-	-	4.5	W
Power Supply Voltage	3.14	3.3	3.47	V
Storage Humidity	5	-	85	%
Storage Temperature	-40	-	85	°C
Transmission Distance <sup>1</sup>	-	-	40	km
Data Rate (Per Lane)	-	26.5625	-	GBaud/s

Note 1: With KP4 FEC on Host

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## Optical Characteristics: Transmitter

Parameter	Min	Typical	Max	Unit
Center Wavelength (B23)	1292.21	-	1296.59	nm
Center Wavelength (B32)	1306.29	-	1310.19	nm
Average Launch Power	0.4	-	6.63	dBm
Outer Optical Modulation Amplitude	3.4	-	7.4	dBm
Side Mode Suppression Ratio	30	-	-	dB
Extinction Ratio	6	-	-	dB
Transmitter and Dispersion Penalty Eye Closure for PAM4 (TDECQ) <sup>1</sup>	-	-	3.2	dB
Launch Power in OMA <sub>outer</sub> minus TDECQ	2	-	-	dBm
Average Transmitter OFF Power	-	-	-15	dBm

Note 1: Measured with a PRBS2<sup>15</sup>-1 test pattern @53.125Gbps, 40km fiber

## Optical Characteristics: Receiver

Parameter	Min	Typical	Max	Unit
Receiver Wavelength (B23)	1306.29	-	1310.19	nm
Receiver Wavelength (B32)	1292.21	-	1296.59	nm
Average Receive Power	-17.6	-	-3.37	dBm
Receive Power (OMA <sub>outer</sub> )	-	-	-2.6	dBm
Receiver Sensitivity (OMA <sub>outer</sub> ) <sup>1</sup>	-	-	Max (-15.1; SECQ – 16.5)	dBm
Receiver Reflectance	-	-	-26	dB
Damage Threshold	-2.37	-	-	dBm
LOS Assert	-30	-	-	dBm
LOS De-Assert	-	-	-20	dBm
LOS Hysteresis	0.5	-	-	dB

Note 1: Measured with a PRBS2<sup>31</sup>-1 test pattern @53.125Gbps, BER≤2.4E-4. IEEE 802.3cd clause 139 equation 139-2

## Product Ordering Information

Part Number	Description
PRE-QSFP28-50G-B23-ER	QSFP28, PAM4, BIDI, 50G, 40km, 1294nm/1308nm, SMF/LC, C-Temp, DDM
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