PRE-QSFP28-20L(H)-4WBD

QSFP28, 4WDM BIDI, 100G, 20km, E-Temp, DDM

Product Features:

- DFB Laser Drivers
- PIN Receivers
- SMF Transmission Medium
- LC Simplex Connector
- Digital Optical Monitoring
- E-Temp Rated
- 100Gbps Maximum Data Rate
- <4.5W Power Consumption
- 20km Transmission (FEC Required)

Product Applications:

- Enterprise Networks
- 100GBASE Ethernet

Standards:

- 4WDM-20 MSA
- SFF-8636/8665
- RoHS

Description:

The PRE-QSFP28-4WBD is a 4WDM Compliant QSFP28 transceiver that operates bidirectionally on a single fiber. When using RS-FEC (required) a reach of up to 20km is achievable. The device transmits on 8 different 4WDM (LWDM) wavelengths (4 per side). Internally, the QSFP28 contains Mux/Demux hardware that splits the Tx and Rx signals on each end. As a result, hardware is installed in pairs with each end operating at opposing Tx and Rx wavelengths. Each pair operates using four low wavelengths and four high wavelengths (4x25Gbps).

General Specifications

Parameter	Min	Typical	Max	Unit
Case Operating Temperature	-20	-	85	°C
Power Consumption	-	-	4.5	W
Power Supply Voltage	3.14	3.3	3.46	V
Storage Humidity (Commercial)	5	-	95	%
Storage Temperature	-40	-	85	°C
Transmission Distance (no FEC)	-	NA	-	km
Transmission Distance (RS-FEC)	-	-	20	km
Data Rate (Total)	-	-	103.125	Gbps
Data Rate (Per Lane)	-	-	25.78125	Gbps

Optical Characteristics: Transmitter

Parameter	Min	Typical	Max	Unit
Center Wavelength 1 Low	1272.55	1273.55	1274.54	nm
Center Wavelength 2 Low	1276.89	1277.89	1278.89	nm
Center Wavelength 3 Low	1281.25	1282.26	1283.27	nm
Center Wavelength 4 Low	1285.65	1286.66	1287.68	nm
Center Wavelength 1 High	1294.53	1295.56	1296.59	nm
Center Wavelength 2 High	1299.02	1300.05	1301.09	nm
Center Wavelength 3 High	1303.54	1304.58	1305.58	nm
Center Wavelength 4 High	1308.09	1309.14	1310.19	nm
Transmit Power (Per Lane, Avg)	-4.3	-	4.5	dBm
Transmit Power (Per Lane, OMA)	-1.3	-	4.5	dBm
Side Mode Suppression Ratio	30	-	-	
TDP (Per Lane)	-		2.8	dB
Extinction Ratio	4	-	-	dB
Optical Return Loss Tolerance	-	-	20	dB
Transmitter Reflectance	-	-	-26	dB
Transmitter OFF Output Power	-	-	-30	dBm

Optical Characteristics: Receiver

Parameter	Min	Typical	Max	Unit
Receiver Wavelength 1 Low	1272.55	1273.55	1274.54	nm
Receiver Wavelength 2 Low	1276.89	1277.89	1278.89	nm
Receiver Wavelength 3 Low	1281.25	1282.26	1283.27	nm
Receiver Wavelength 4 Low	1285.65	1286.66	1287.68	nm
Receiver Wavelength 1 High	1294.53	1295.56	1296.59	nm
Receiver Wavelength 2 High	1299.02	1300.05	1301.09	nm
Receiver Wavelength 3 High	1303.54	1304.58	1305.58	nm
Receiver Wavelength 4 High	1308.09	1309.14	1310.19	nm
Optical Overload (Per Lane)	4.5	-	-	dBm
Average Receive Power (Per Lane)	-14.5	-	4.5	dBm
Receive Power (Per Lane, OMA)	-	-	4.5	dBm
Receiver Sensitivity (OMA @ BER=5x10^{-5})	-	-	-12.5	dBm
Stressed Receiver Sensitivity (Per Lane, OMA)	-	-	-10	dBm
Receiver Reflectance	-	-	-26	dB
LOS Assert	-24	-	-	dBm
LOS Hysteresis	0.5	-	-	dB

Product Ordering Information

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Part Number	Description
PRE-QSFP28-20L-4WBD	QSFP28, 4WDM BIDI, Low Waves, 100G, 20km, SMF/LC Simplex, E-Temp, DDM, 4.5W
PRE-QSFP28-20H-4WBD	QSFP28, 4WDM BIDI, High Waves, 100G, 20km, SMF/LC Simplex, E-Temp, DDM, 4.5W