D-TECH SFP 10G BIDI Tx1270/Rx 1330nm DDM

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Variants

80KM LC 40km LC 10km LC 20km LC 60km LC 20km SC

Details

10G Optical Transceiver

Absolute Maximum Ratings

Parameter	Min	Max	Unit
Power Supply Voltage	0	3.6	V
Storage Temperature	-40	85	°C
Operating Case Temperature (Standard)	0	70	°C
Operating Case Temperature (Industrial)	-40	85	°C
Relative Humidity	5	95	%
RX Input Average Power	-	0	dBm

Recommended Operating Conditions

Parameter	Min	Typ	Max	Unit
Power Supply Voltage	3.135	3.3	3.465	V
Power Supply Current	-	-	350	mA

Operating Case Temperature (Standard)	0	25	70	°C
Operating Case Temperature (Industrial)	-40	25	85	°C

Optical Characteristics

Parameter	Value	Unit
Operating Reach	60 km	m

Transmitter

Parameter	Value	Unit
Center Wavelength (Range)	1270 / 1330	nm
Side Mode Suppression Ratio (Min)	30	dB
Launched Power (Max Average)	6	dBm
Launched Power (Min Average)	2	dBm
Transmitter and Dispersion Penalty (Max)	3.2	dB
Average Launch Power of OFF Transmitter (Max)	-30	dBm
Extinction Ratio (Min)	3.5	dB
RIN12 OMA (Max)	-128	dB/Hz
Optical Return Loss Tolerance (Min)	12	dB

Receiver

Parameter	Value	Unit
Center Wavelength (Range)	1270 / 1330	nm

Receive Overload (Max Average Power)	-8	dBm
Receive Sensitivity (Min Average Power)	-20	dBm
Receiver Reflectance (Max)	-12	dB
Vertical Eye Closure Penalty (Min)	2.2	dB
LOS Deassert (Max)	-27	dBm
LOS Hysteresis (Min)	0.5	dB
Stressed Eye Jitter (Min)	0.3	UIp-p
Receive Electrical 3dB Upper Cutoff Frequency (Max)	12.3	GHz
Receiver Power Damage (Max)	6	dBm

Digital Diagnostic Functions

Parameter	Min	Max	Unit	Notes
Temperature Monitor Absolute Error	-3	3	°C	Over operating temp
Laser Power Monitor Absolute Error	-3	3	dB	-
RX Power Monitor Absolute Error	-3	3	dB	-1dBm to -15dBm range
Supply Voltage Monitor Absolute Error	-0.08	0.08	V	Full operating range
Bias Current Monitor	-10%	10%	mA	-

Electrical Characteristics

Parameter	Min	Typ	Max	Unit
Data Rate	-	10.3125	-	Gbps
Power Consumption	800	-	1000	mW

TX Input Diff Voltage	180	-	700	mV
RX Output Diff Voltage	300	-	850	mV
RX Output Rise/Fall Time	30	-	-	ps