

Data Sheet

10Gb/s Hot Pluggable Ethernet X2 Transceiver, 1550nm, DFB-LD, SC Duplex Optical Receptacle PX2-1541SF

Issue: January 2009



Features:

- XAUI Electrical Interface: 4 Lanes @ 3.125Gbit/s
- Hot Z-Pluggable
- SC-Duplex Optical Receptacle
- MDIO, DOM Support
- Uncooled 1550nm DFB-LD
- PIN Photo-detector
- Operating Case Temperature: 0 to 70 °C
- Compliant to IEEE 802.3ae 10GBASE-ER Application
- Compliant to X2 MSA
- Mechanical Footprint: 91mm L x 36mm W x 13.46* H [*Other heights available]
- RoHS Compliant Part



Applications:

- 10 Gigabit Ethernet

Description

PeakOptical®'s 10GbE X2 transceiver module PX2-1541SF is a hot pluggable in the Z-direction module that is usable in typical router line card applications, Storage, IP network and LAN and compliant to X2 MSA. The PX2-LR is a fully integrated 10.3Gbit/s optical transceiver module that consists of a 10.3Gbit/s optical transmitter and receiver, XAUI interface, Mux and Demux with clock and data recovery(CDR). This transceiver uses an cooled direct modulation (DM) 1550nm DFB Laser Diode to achieve 40km over standard single mode fiber as 10GBASE-LR of the IEEE 802.3ae.

Specifications:

Optical Characteristics: (Condition: $T_a = T_{OP}$)

Parameters	Symbols	Min.	Typ.	Max.	Unit
Center Wavelength	λ_C	1540	1310	1560	nm
Signaling speed		-	10.3125	-	Gbit/s
Signaling speed variation from nominal		-100	-	+100	ppm
Optical modulation amplitude	OMA	-5.2	-	-	dBm
Optical Output Power	Pf	-1	-	+3	dBm
Side Mode Suppression Ratio	Sr	30	-	-	dB
Extinction Ratio	Er	3.5	-	-	dB
Off Transmit Power	Poff	-	-	-30	dBm
Optical Output turn-off Time	TTX-OFF	-	-	100	μ s
Receiver Sensitivity in OMA	OMArmin	-	-	-10.3	dBm
Receiver Overload	Rro	+0.5	-	-	dBm
Receiver Return Loss	RL	12	-	-	dB

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Absolute Maximum Ratings:

Parameter	Symbol	Min.	Max.	Unit
Supply Voltage	VCC1	0	+5.5	V
Supply Voltage	VCC2	0	+3.6	V
Supply Voltage	VCC3	0	+1.5	V
Optical Receiver Input	PIMAX	-	+1.5	dBm
Case Temperature (Figure 1)	Tc	0	+70	°C
Storage Temperature	TSTR	-40	+85	°C

Recommended Operating Environment:

Parameter	Symbol	Min.	Typical	Max.	Unit
Supply Voltage	VCC1	4.75	5	5.25	V
Supply Voltage	VCC2	3.135	3.3	3.465	V
Supply Voltage	VCC3	1.152	1.2	1.248	V
Case Temperature (Figure 1)	TC	0	25	70	°C

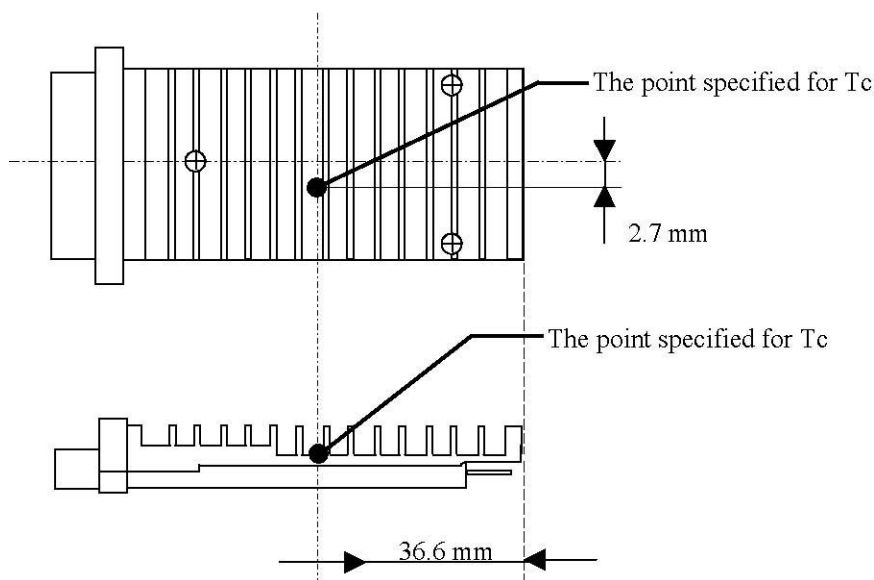


Figure 1 The Point Specified for Case Temperature (Tc)

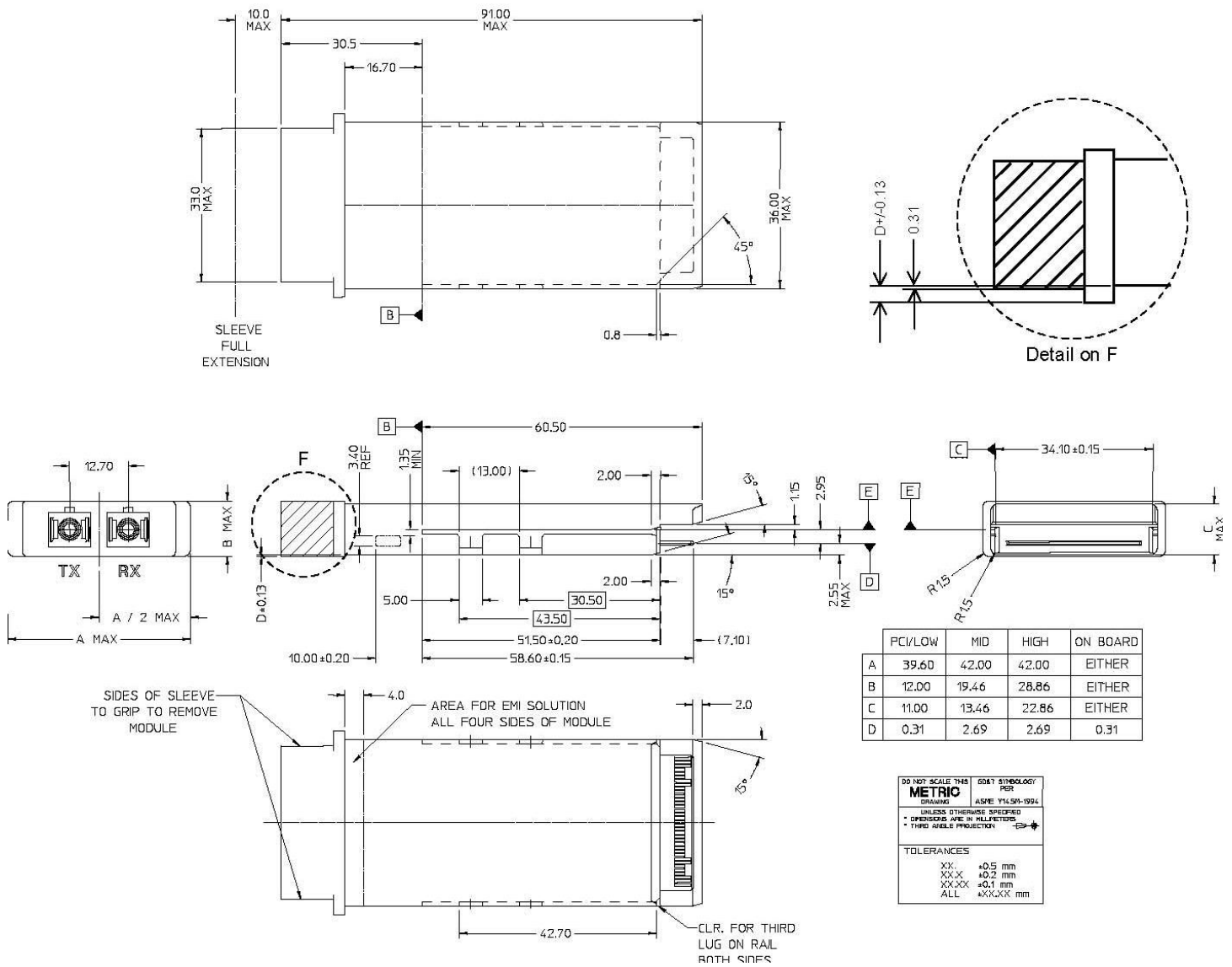
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Mechanical Dimensions:



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