















16	1	Length(50um)	Link length supported for 50/125um fiber, units of 10m
17	1	Length(62.5um)	Link length supported for 62.5/125um fiber, units of 10m
18	1	Length(Copper)	Link length supported for copper, units of meters
19	1	Reserved	
20-35	16	Vendor Name	SFP vendor name: SOPTO
36	1	Reserved	
37-39	3	Vendor OUI	SFP transceiver vendor OUI ID
40-55	16	Vendor PN	Part Number: (ASCII)
56-59	4	Vendor rev	Revision level for part number
60-62	3	Reserved	
63	1	CCID	Least significant byte of sum of data in address 0-62
<b>Extended ID Fields</b>			
64-65	2	Option	Indicates which optical SFP signals are implemented (001Ah = LOS, TX_FAULT, TX_DISABLE all supported)
66	1	BR, max	Upper bit rate margin, units of %
67	1	BR, min	Lower bit rate margin, units of %
68-83	16	Vendor SN	Serial number (ASCII)
84-91	8	Date code	SOPTO's Manufacturing date code
92-94	3	Reserved	
95	1	CCEX	Check code for the extended ID Fields (addresses 64 to 94)
<b>Vendor Specific ID Fields</b>			
96-127	32	Readable	SOPTO specific date, read only
128-255	128	Reserved	Reserved for SFF-8079

## Digital Diagnostic Monitor Characteristics

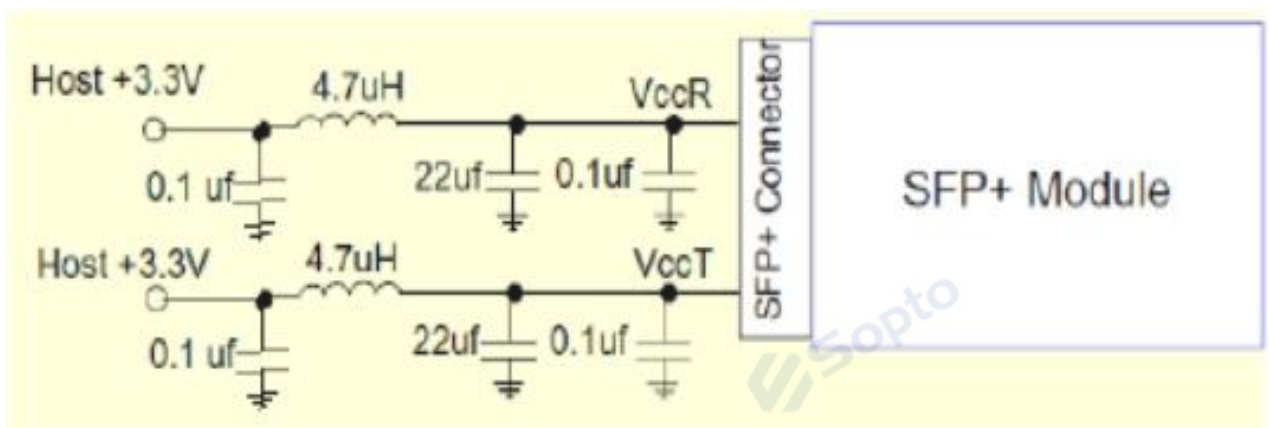
Data Address	Parameter	Accuracy	Unit
96-97	Transceiver Internal Temperature	±3.0	°C
100-101	Laser Bias Current	±10	%
100-101	Tx Output Power	±3.0	dBm
100-101	Rx Input Power	±3.0	dBm
100-101	VCC3 Internal Supply Voltage	±3.0	%

## Regulatory Compliance

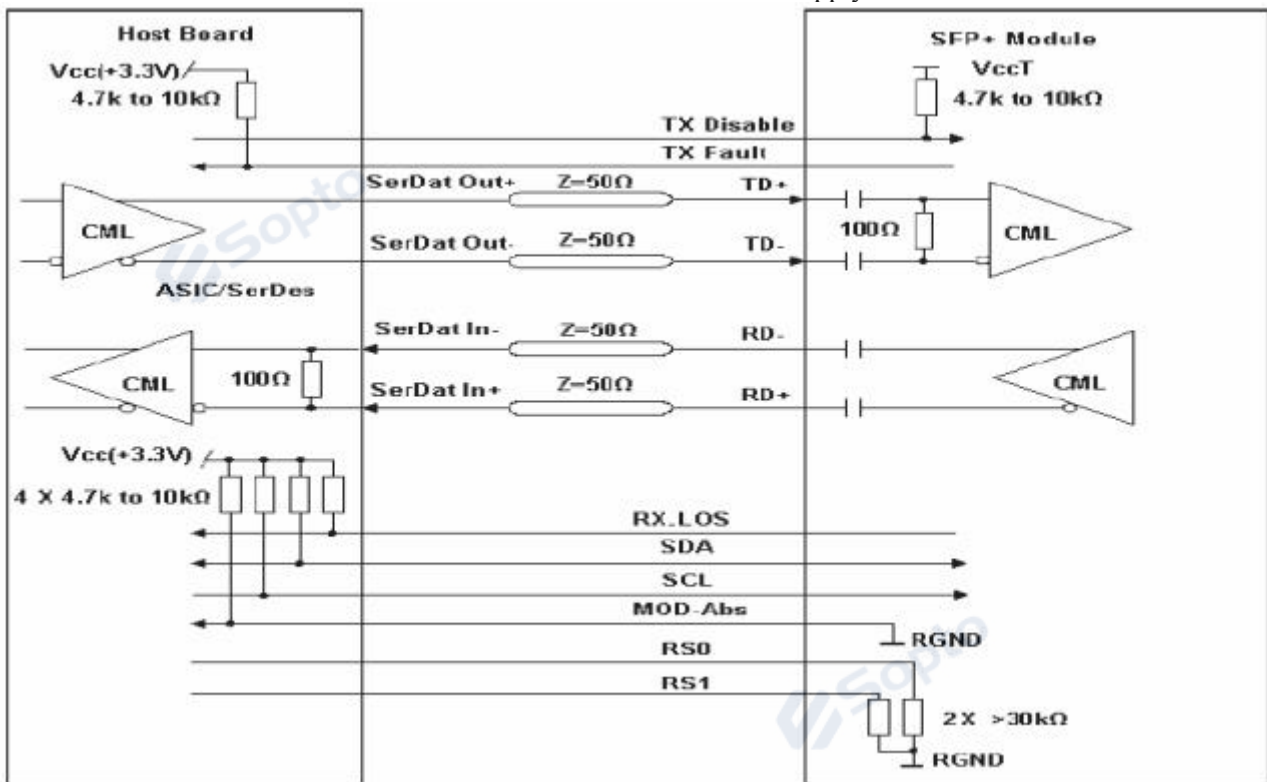
The SFP+ complies with international Electromagnetic Compatibility (EMC) and international safety requirements and standards (see details in Table following).

Electrostatic Discharge (ESD) to the Electrical Pins	MIL-STD-883E Method 3015.7	Class 1(>1000 V)
Electrostatic Discharge (ESD) to the Duplex LC Receptacle	IEC 61000-4-2 GR-1089-CORE	Compatible with standards
Electromagnetic Interference (EMI)	FCC Part 15 Class B EN55022 Class B (CISPR 22B) VCCI Class B	Compatible with standards
Laser Eye Safety	FDA 21CFR 1040.10 and 1040.11 EN60950, EN (IEC) 60825-1,2	Compatible with Class 1 laser product.

### Recommended Circuit



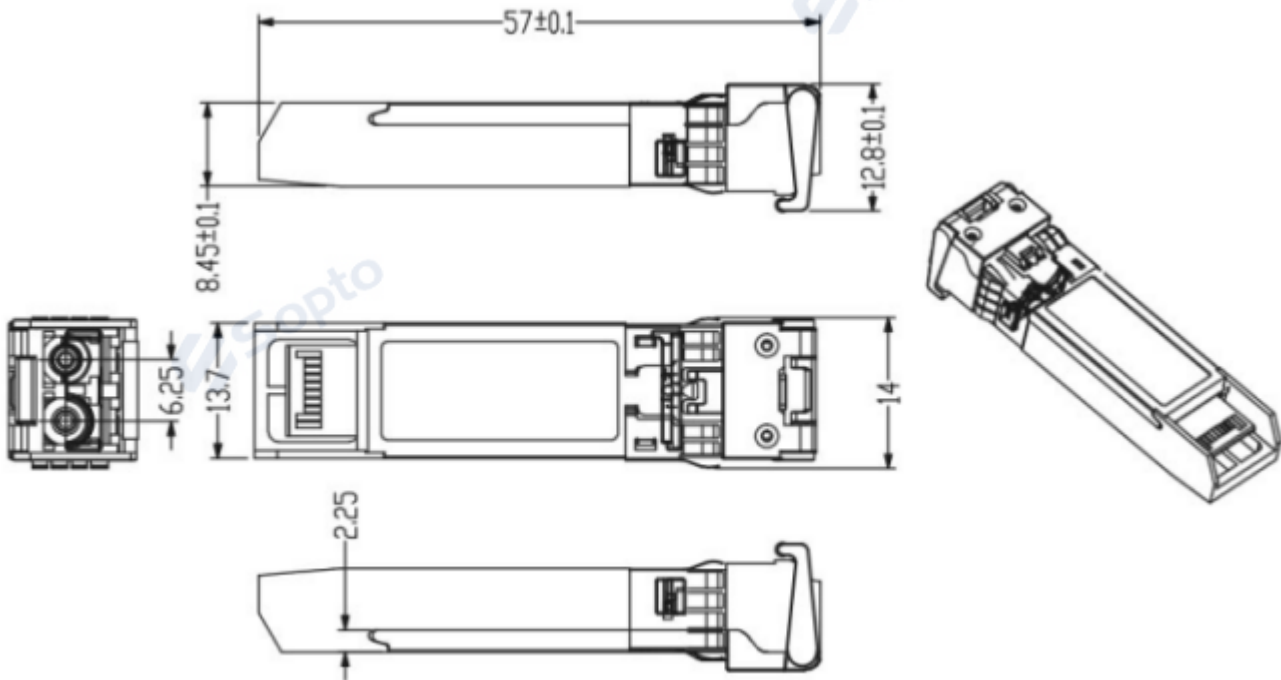
Recommended Host Board Power Supply Circuit



Recommended High-speed Interface Circuit



## Mechanical Dimensions



Unit:mm

## ESD

This transceiver is specified as ESD threshold 1kV for high speed pins and 2kV for all other electrical input pins, tested per MIL-STD-883, Method 3015.4 /JESD22-A114-A (HBM). However, normal ESD precautions are still required during the handling of this module. This transceiver is shipped in ESD protective packaging. It should be removed from the packaging and handled only in an ESD protected environment.

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**Ordering information**

Part Number	Product Description
SPT-P13TG-LR	10Gbps SFP+ Optical Transceiver, 10km Reach, 0°C ~ +70°C, DDM
SPT-P13TG-LRS	10Gbps SFP+ Optical Transceiver, 20km Reach, 0°C ~ +70°C, DDM
SPT-P13TG-LRT	10Gbps SFP+ Optical Transceiver, 10km Reach, -40°C ~ +85°C, DDM
SPT-P13TG-LRST	10Gbps SFP+ Optical Transceiver, 20km Reach, -40°C ~ +85°C, DDM

Note: If you need more customized services, please contact us.

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