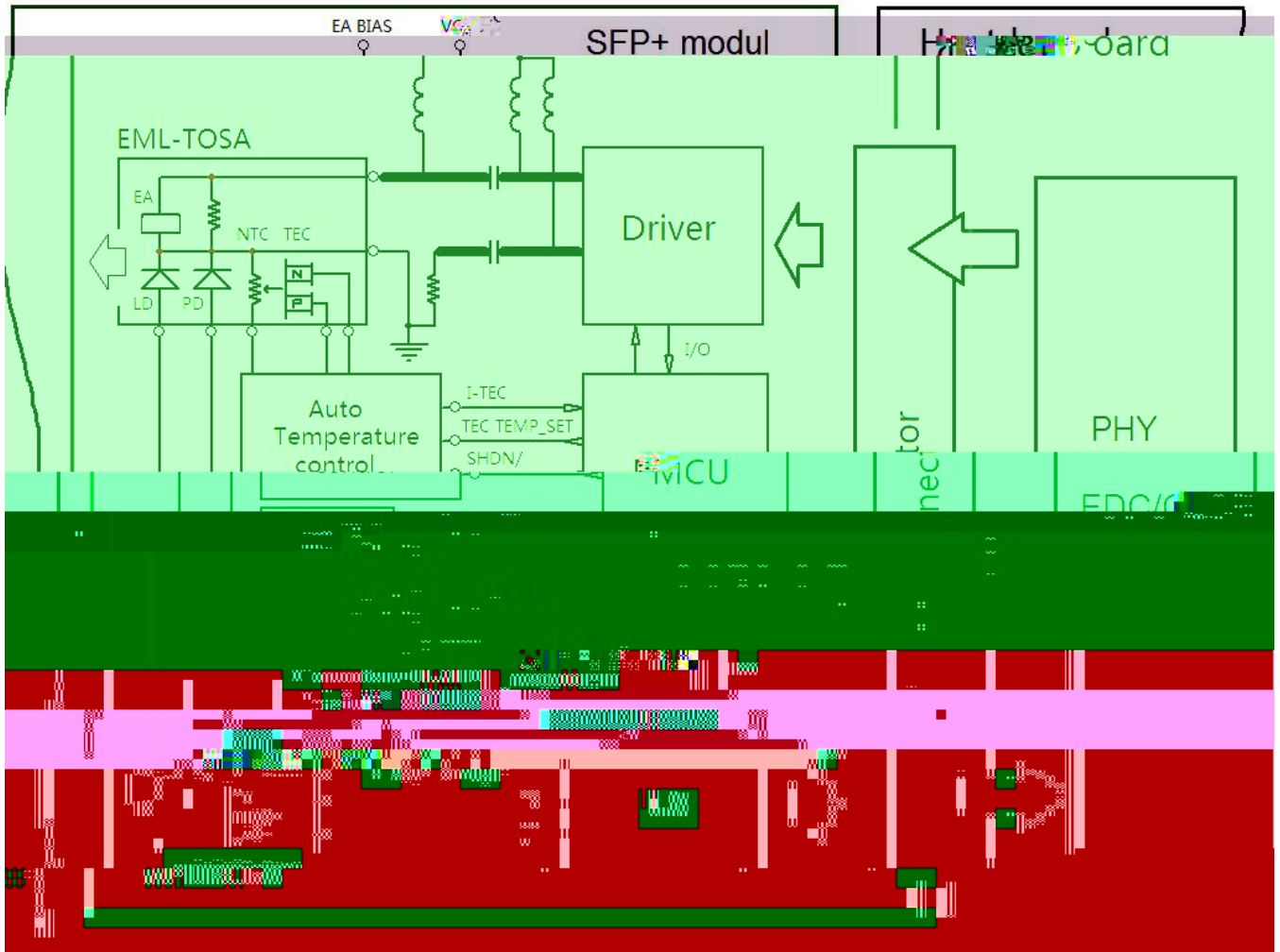


- ◆ Compliant with SFF-8431, SFF-8432 and IEEE802.3ae
  - ◆ Supports rate up to 10.3 Gb/s bit rates
  - ◆ 1G/2G/4G/ 8G/10G Fiber Channel applications.
  - ◆ Cooled EML transmitter and APD receiver
  - ◆ link length up to
-

supply voltage.



|                     |     |      |     |    |
|---------------------|-----|------|-----|----|
| Supply Voltage      | Vcc | -0.5 | 3.8 | V  |
| Storage Temperature | Tst | -40  | 85  | °C |
| Relative Humidity   | Rh  | 0    | 85  | %  |

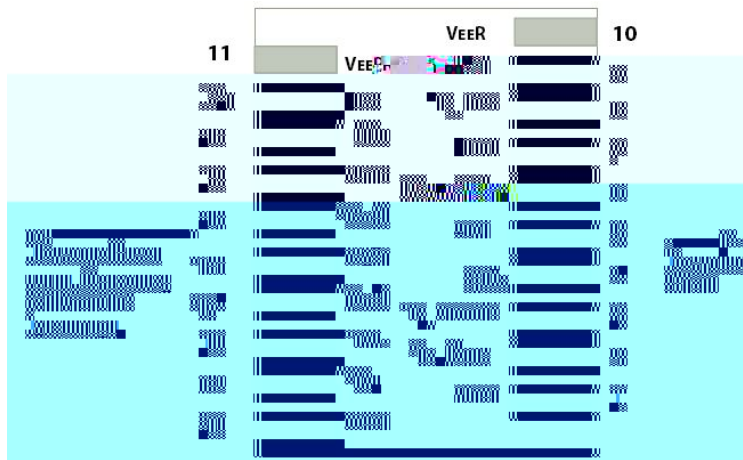
|                |     |      |     |      |    |
|----------------|-----|------|-----|------|----|
| Supply Voltage | Vcc | 3.13 | 3.3 | 3.47 | V  |
| Supply current | Icc | -    | 420 | 610  | mA |





|                           |          |     |      |           |      |
|---------------------------|----------|-----|------|-----------|------|
| Data Rate                 | Mra      | -   | 10.3 | 11.3      | Gbps |
| Differential Output Swing | Vout P-P | 350 | -    | 850       | mV   |
| Rise/Fall Time            | Tr / Tf  | 24  | -    | -         | ps   |
| Loss of Signal –Asserted  | VOH      | 2   | -    | Vcc3+0.3- | V    |
| Loss of Signal –Negated   | VOL      | 0   | -    | +0.4      | V    |

|                            |           |       |       |      |                       |
|----------------------------|-----------|-------|-------|------|-----------------------|
| Transceiver Temperature    | DMI_Temp  | -3    | +3    | degC | Over operating temp   |
| TX Output optical power    | DMI_TX    | -3    | +3    | dB   |                       |
| RX Input optical power     | DMI_RX    | -3    | +3    | dB   | -3dBm to -12dBm range |
| Transceiver Supply voltage | DMI_VCC   | -0.08 | +0.08 | V    | Full operating range  |
| Bias current monitor       | DMI_Ibias | -10%  | 10%   | mA   |                       |
| Transceiver Temperature    | DMI_Temp  | -5    | 70    | degC |                       |
| TX Output optical power    | DMI_TX    | -1    | +2    | dBm  |                       |
| RX Input optical power     | DMI_RX    | -26   | -7    | dBm  |                       |
| Transceiver Supply voltage | DMI_VCC   | 3.0   | 3.6   | V    |                       |
| Bias current monitor       | DMI_Ibias | 0     | 100   | mA   |                       |

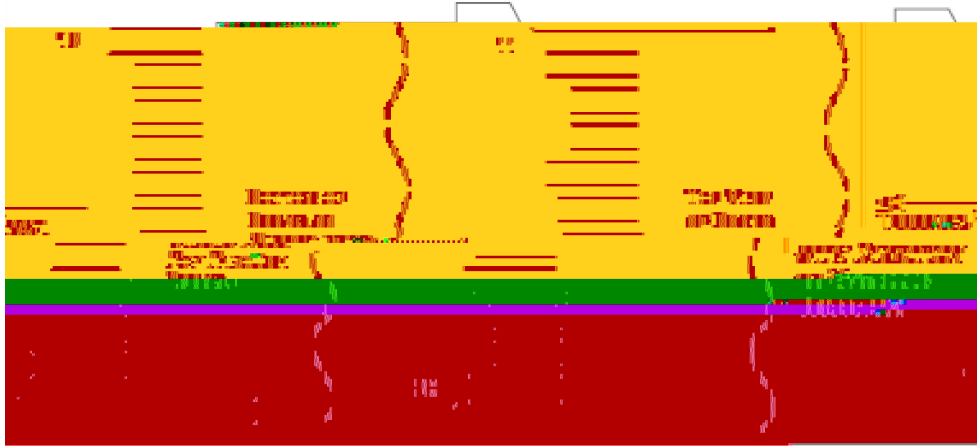




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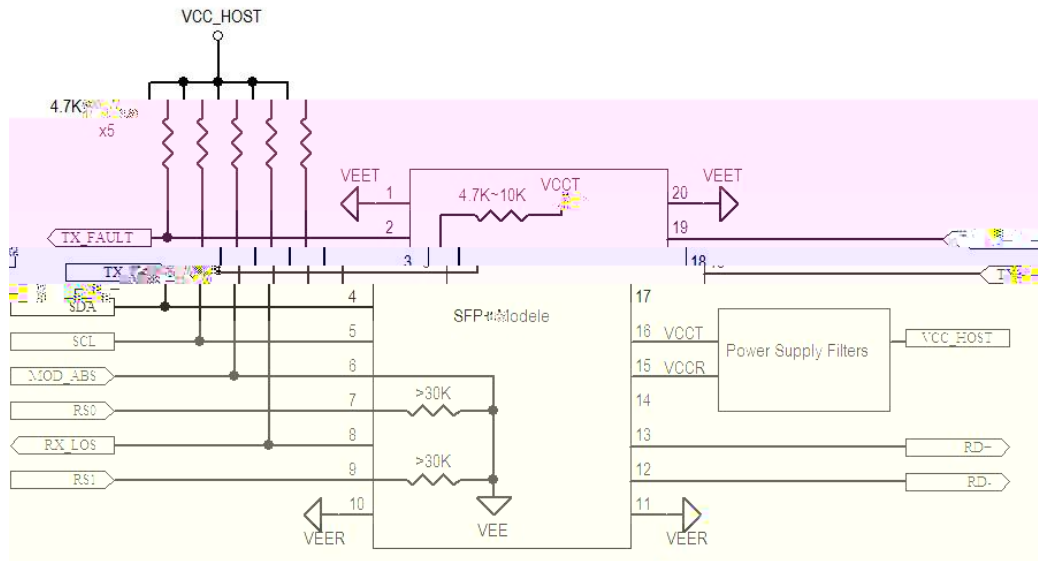
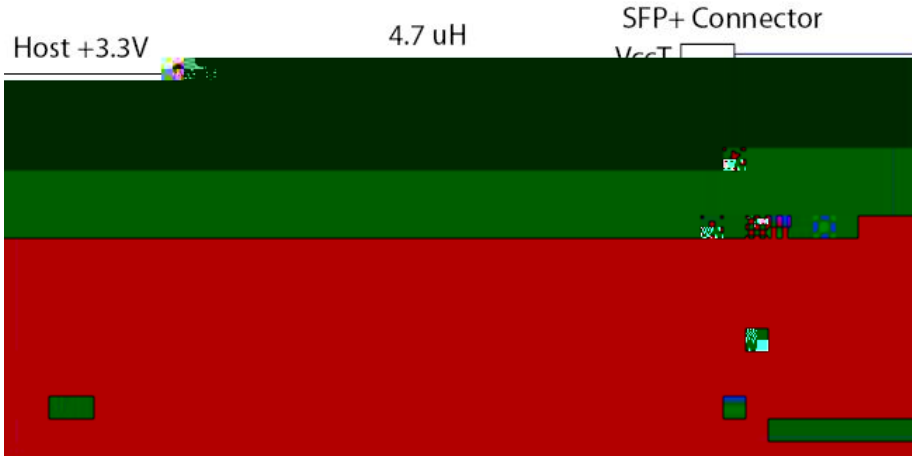
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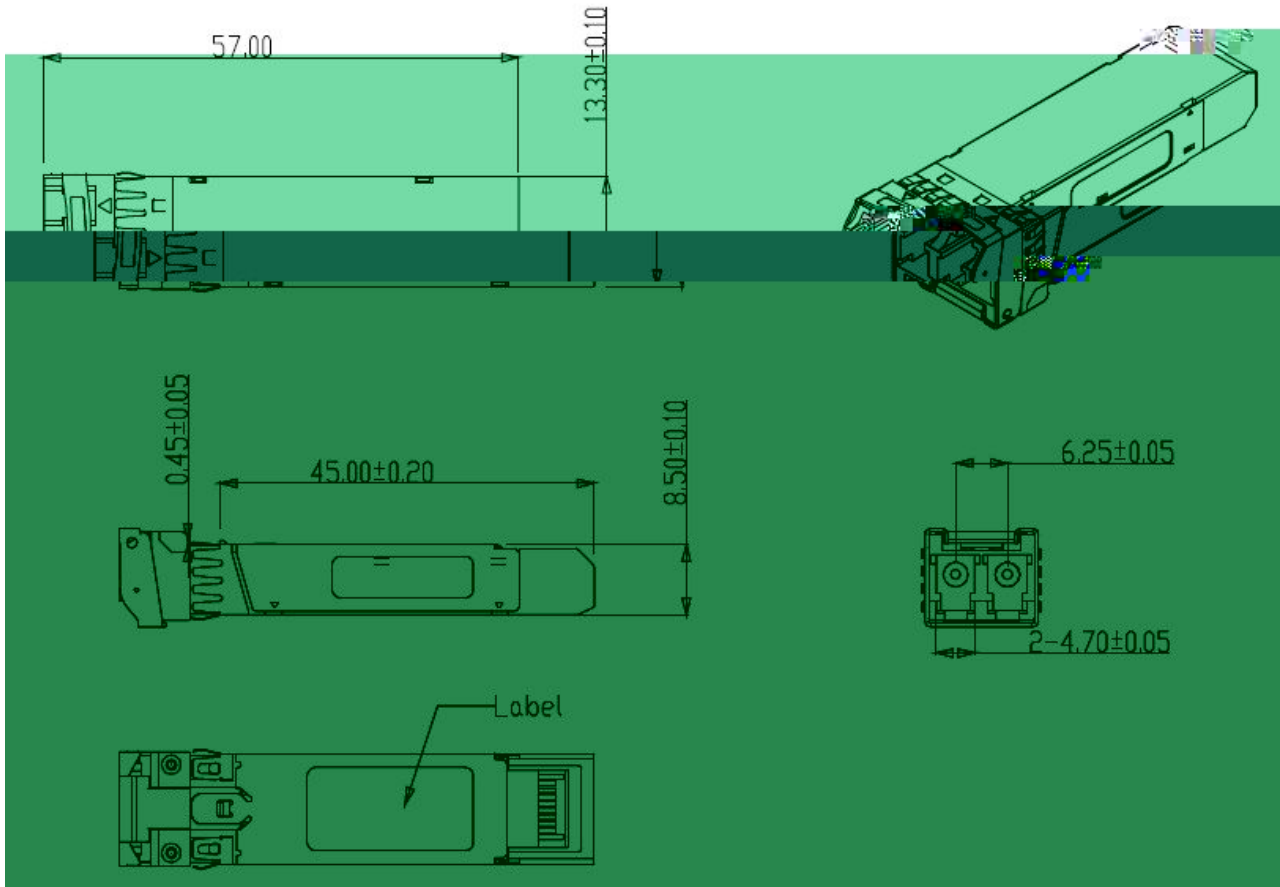
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- [1] Module circuit ground is isolated from module chassis ground within the module.
- [2].should be pulled up with 4.7k – 10k ohms on host board to a voltage between 3.15V and 3.6V.
- [3]Tx\_Disable is an input contact with a 4.7 k to 10 k pullup to VccT inside the module.
- [4]Mod\_ABS is connected to VeeT or VeeR in the SFP+ module. The host may pull this contact up to Vcc\_Host with a resistor in the range 4.7 k to 10 k .Mod\_ABS is asserted "High" when the SFP+ module is physically absent from a host slot.
- [5] RS0 and RS1 are module inputs and are pulled low to VeeT with > 30 k resistors in the module.





F-tone Networks SFP+ transceiver is designed to be Class I Laser safety compliant and is certified per the following standards:

| Laser Safety             | FDA    | CDRH 21 CFR 1040 and Laser Notice No. 50          |
|--------------------------|--------|---|
| Product Safety           | UL     | UL and CUL EN60950-2:2007                         |
| Environmental protection | SGS    | RoHS Directive 2002/95/EC                         |
| EMC                      | WALTEK | EN 55022:2006+A1:2007<br>EN 55024:1998+A1+A2:2003 |

| FTCS-151X-80D  | 10Gbps, 1550nm SFP+, from 70km to 80km, 0 to +70°C   |
|----------------|--|
| FTCS-151X-80DI | 10Gbps, 1550nm SFP+, from 70km to 80km, -40 to +85°C |

1. "Specifications for Enhanced Small Form Factor Pluggable Module SFP+", SFF-8431, Rev 4.1, July 6, 2009.
2. "Improved Pluggable Formfactor", SFF-8432, Rev 4.2, Apr 18, 2007
3. IEEE802.3ae – 2002
4. "Diagnostic Monitoring Interface for Optical Transceivers" SFF-8472, Rev 10.3, Dec 1, 2007

Performance figures, data and any illustrative material provided in this data sheet are typical and must be specifically confirmed in writing by F-tone Networks before they become applicable to any particular order or contract. In accordance with the F-tone Networks policy of continuous improvement specifications may change without notice.

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