



NVMSX550U

(1-P 1000Base - SX GBIC Module (MM, GBIC))

More information:

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Product Specification

Features

- Multi Mode 1G Fiber Module
- Compliant with Fiber Channel 100-M5-SN-I and 100-M6-SN-I standard
- Compliant with IEEE802.3z Gigabit Ethernet standard
- Industry standard small form pluggable (SFP) package
- Duplex LC connector
- Differential LVPECL inputs and outputs
- TTL signal detect indicator
- Hot Pluggable
- Class 1 laser product complies with EN 60825-1

Application

- Distributed multi-processing
- Switch to switch interface
- High speed I/O for file server
- Bus extension application
- Channel extender, data storage

Specifications

Absolute Maximum Ratings

| PARAMETER | SYMBOL | MIN | MAX | UNITS | NOTE |
|---------------------|----------|-----|----------|-------|------|
| Storage Temperature | T_S | 40 | 85 | C | |
| Supply Voltage | V_{CC} | 0.5 | 4.0 | V | |
| Input Voltage | V_{IN} | 0.5 | V_{CC} | V | |
| Output Current | I_o | --- | 50 | mA | |
| Operating Current | I_{OP} | --- | 400 | mA | |

Recommended Operating Conditions

| PARAMETER | SYMBOL | MIN | MAX | UNITS | NOTE |
|----------------------------|-------------------|-----|-----|-------|------|
| Case Operating Temperature | T_C | 0 | 70 | C | |
| | | -20 | 85 | C | |
| | | -40 | 85 | C | |
| Supply Voltage | V_{CC} | 3.1 | 3.5 | V | |
| Supply Current | $I_{TX} + I_{RX}$ | --- | 250 | mA | |

Transmitter Electro-optical Characteristics

V_{CC} = 3.1 V to 3.5 V, T_C = 0 °C to 70 °C (-20 °C to 85 °C) (-40 °C to 85 °C)

| PARAMETER | SYMBOL | MIN | TYP. | MAX | UNITS | NOTE |
|---|-------------------|---------------------------|------|------|-------|------|
| Output Optical Power (50/125 μm fiber, NA=0.20) (62.5/125 μm fiber, NA=0.275) | P _{out} | 9.5 | --- | -4 | dBm | |
| Extinction Ratio | ER | 9 | --- | --- | dB | |
| Coupled Power Ratio | CPR | 9 | --- | --- | dB | |
| Center Wavelength | c | 830 | 850 | 860 | nm | |
| Spectral Width (RMS) | | --- | --- | 0.85 | nm | |
| Rise/Fall Time, (20-80%) | T _{r,f} | --- | --- | 260 | ps | |
| Relative Intensity Noise | RIN | --- | --- | 117 | dB/Hz | |
| Total Jitter | TJ | --- | --- | 227 | ps | |
| Output Eye | | Compliant with IEEE802.3z | | | | |
| Max. P _{out} TX-DISABLE Asserted | P _{OFF} | --- | --- | 45 | dBm | |
| Differential Input Voltage | V _{DIFF} | 0.4 | --- | 2.0 | V | |

Receiver Electro-optical Characteristics

V_{CC} = 3.1 V to 3.5 V, T_C = 0 °C to 70 °C (-40 °C to 85 °C)

| PARAMETER | SYMBOL | MIN | TYP. | MAX | UNITS | NOTE |
|--|---------------------|-----|------|-----------------|-------|-------------------------|
| Optical Input Power-maximum | P _{IN} | 0 | --- | --- | dBm | BER < 10 ⁻¹² |
| Optical Input Power-minimum (Sensitivity) | P _{IN} | --- | --- | 18 | dBm | BER < 10 ⁻¹² |
| Operating Center Wavelength | c | 770 | --- | 860 | nm | |
| Optical Return Loss | ORL | 12 | --- | --- | dB | |
| Loss of Signal-Asserted | P _A | --- | --- | 18 | dBm | |
| Loss of Signal-Deasserted | P _D | 35 | --- | --- | dBm | |
| Differential Output Voltage | V _{DIFF} | 0.5 | --- | 1.2 | V | |
| Data Output Rise, Fall Time (20-80%) | T _{r,f} | --- | --- | 0.35 | ns | |
| Receiver Loss of Signal Output Voltage-Low | RX_LOS _L | 0 | --- | 0.5 | V | |
| Receiver Loss of Signal Output Voltage-High | RX_LOS _H | 2.4 | --- | V _{CC} | V | |

Eye Safety Mark

The series multimode transceiver is a class 1 laser product. It complies with EN 60825-1 and FDA 21 CFR 1040.10 and 1040.11. In order to meet laser safety requirements the transceiver shall be operated within the Absolute Maximum Ratings.

Caution

All adjustments have been done at the factory before the shipment of the devices. No maintenance and user serviceable part is required. Tampering with and modifying the performance of the device will result in voided product warranty.

Required Mark

**Class 1 Laser Product
Complies with
21 CFR 1040.10 and 1040.11**

Note : All information contained in this document is subject to change without notice.