# 225Mbps Multimode Optical Receiver

## Features

- 2X8 pins plastic case with ST Receptacle
- Wavelength 1310nm multimode fiber application
- Wide operating temperature range -40°C ~85°C
- Single 5V power supply
- Receiver signal detect function

## Specifications

| Parameter | Symbol | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|
| Data Rate (NRZ) | B | 10 | 225 | 270 | Mb/s |
| Optical Input Sensitivity (avg.) (1) (2) | | - | - | -32 | dBm |
| Saturation (avg. power) | | -3 | - | - | dBm |
| Optical Wavelength | λ | 1100 | 1310 | 1600 | nm |
| Output Rise Time (10-90%) | $t_r$ | - | 1.5 | 2.5 | ns |
| Output Fall Time (10-90%) | $t_f$ | - | 1.5 | 2.5 | ns |
| Data Output | $V_{OL}$<br>$V_{OH}$ | $V_{cc}$-1.83<br>$V_{cc}$ -1.035 | -<br>- | $V_{cc}$ -1.62<br>$V_{cc}$ -0.88 | V<br>V |
| SD Deasserted Power Level (avg.) | $P_A$ | - | - | -32 | dBm |
| SD Asserted Power Level (avg.) | $P_D$ | -45 | - | - | dBm |
| SD Hysteresis | - | 1.5 | - | - | dB |
| SD Timing (Increasing light input) | $T_{SD+}$ | - | - | 100 | μs |
| SD Timing (Decreasing light input) | $T_{SD-}$ | - | - | 350 | μs |
| Supply Voltage | Vcc | 4.75 | 5 | 5.25 | V |
| Supply Current | Icc | - | - | 180 | mA |
| Power Dissipation | | - | - | 1000 | mW |

Notes：

(1) With 0.29 NA, 62.5/125μm multimode fiber.
(2) $2^{23}$ -1 PRBS, BER= $2.5x10^{-10}$.

## Absolute Maximum Ratings

| Parameter | Min. | Max. | Unit |
|---|---|---|---|
| Operating Temperature | -40 | 85 | °C |
| Storage Temperature | -40 | 100 | °C |
| Lead Soldering Limits | - | 260/10 | °C /sec |
| Supply Voltage | -0.2 | 6 | V |

## Ordering Information

R013MM0-XSST5PR1G1

or

R013MM0-XSST5PR1G1B ———— Type B pinout

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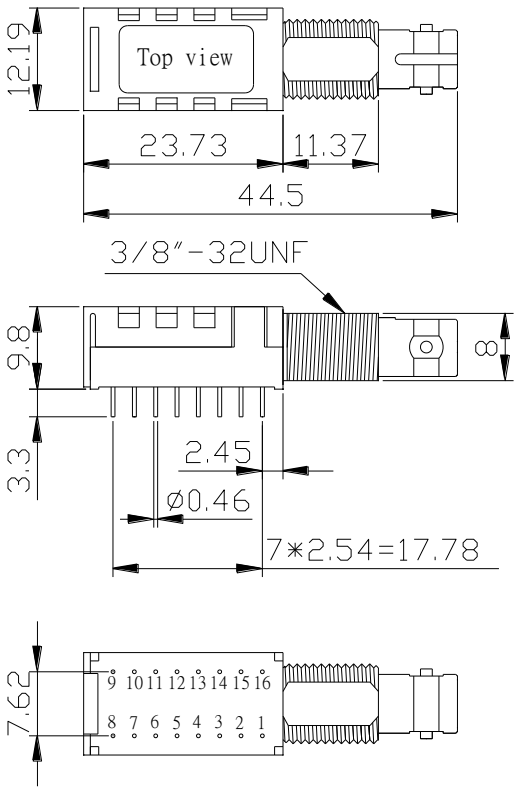
## Outline Drawing & Connections

2x8 Pins Plastic Case：




Bottom View

Unit:mm

## Regular pinout

| Pin No. | Description |
|---|---|
| 1 | No Connection |
| 2 | DATA - |
| 3 | DATA + |
| 4 | $V_{CC}$ |
| 5 | $V_{CC}$ |
| 6 | $V_{CC}$ |
| 7 | GND |
| 8 | No Connection |

| Pin No. | Description |
|---|---|
| 16 | No Connection |
| 15 | SD - |
| 14 | SD + |
| 13 | GND |
| 12 | GND |
| 11 | GND |
| 10 | No Connection |
| 9 | No Connection |

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## Type B pinout

| Pin No. | Description |
|---|---|
| 1 | No Connection |
| 2 | No Connection |
| 3 | GND |
| 4 | GND |
| 5 | GND |
| 6 | SD + |
| 7 | SD - |
| 8 | No Connection |

| Pin No. | Description |
|---|---|
| 16 | No Connection |
| 15 | GND |
| 14 | $V_{CC}$ |
| 13 | $V_{CC}$ |
| 12 | $V_{CC}$ |
| 11 | DATA + |
| 10 | DATA - |
| 9 | No Connection |