

Oki Semiconductor

OD9602N Photo Diode Preamp Module

622 Mbps InGaAs Technology (+ 3.3 V)

introduction

Oki Semiconductor's OD9602N PD Preamp Module is a surface-mount 1.3- μ m, InGaAs PIN photo diode combined with a transimpedance amplifier. This OD9602N is designed to operate at 622 Mbps in STM4/OC12 environments. This photo diode uses a single + 3.3-V power supply and provides a differential output signal. It is available in an 8-pin Mini-Dil package and is coupled to a single-mode fiber with a pigtail.

FEATURES

- Surface-mount Mini-Dil package
- Low cost
- 622 Mbps operation
- Peak-sensitivity wavelength: 1300 nm

APPLICATION

- Optical transmission modules (receiver section)
- Optical receivers
- Inter-office interconnect
- Ethernet

ELECTICAL CHARACTERISTICS

Absolute Maximum Ratings (ambient temperature Ta=25°C unless otherwise noted)

Parameter	Symbol	Ratings	Units
Supply Voltage	Vs	5.5	V
Incident Optical Power	P _{IOP}	4	dBm
Operating Case Temperature	Topr	- 40 to + 85	°C
Storage Temperature	Tstg	- 40 to + 85	°C
Soldering Profile	Tsol	230 (30)	°C (sec)

Exceeding these maximum ratings could cause immediate damage or lead to permanent deterioration of the device

Optical and Electrical Characteristics (Ta=25°C, V_{CC}=3.3 V, λ=1310 nm unless otherwise noted)

Parameter	Test Conditions	Min.	Typ.	Max.	Units
Supply Voltage	-	+3.0	+3.3	+3.6	V
Supply Current	-	12	25	35	mA
Low Frequency Cutoff	-3 dBm Pin= -23 dBm, fr = 50 MHz	-	-	150	kHz
Sensitivity	BER < 10 ⁻¹⁰ (See note 1)	-	-33.2	-	dBm
Differential Output Voltage	Pin= -3 dBm	-	-	950	mV
Optical Modulation Bandwidth	-3 dBm Pin= - 22 dBm, fr = 50 MHz	450	590	-	MHz
Differential Responsivity	Differential, measured with -22 dBm input signal	3.7	-	6.8	kV / W

Notes:

Data rate: 1.25 Gbps. Data sequence: PRBS 2²³ -1.

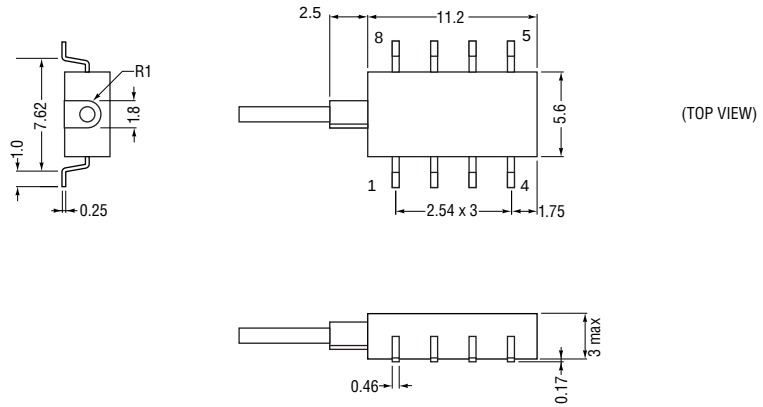
Contact Oki Semiconductor sales office for reliability report.

Connector and Fiber Specifications

Connector	FC-PC, SC-PC, MUJ-PC etc
Fiber	1.31-μm single-mode fiber Diameter: 0.9 mm Color: Dark blue Bending Radius: 20 mm (minimum) Heat resistant Length: Options (contact Oki Semiconductor)

PACKAGE DIMENSIONS

(Units: mm)



Pin Configuration

Pin No.	Description	Pin No.	Description
01	V _{CC}	05	Output (+)
02	GND	06	NC
03	GND	07	GND
04	Output (-)	08	GND