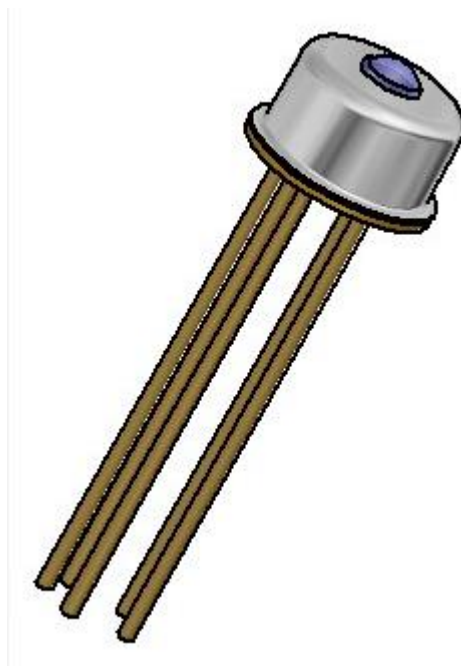


Wooriro PIN PD TO CAN

WPPRS025-CNNCN
(High-Sensitive 2.5Gbps PIN-PD TIA TO)
SPECIFICATIONS



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General Description

The WPPRS25-CNNCN is a TO-46 packaged InGaAs PIN PD device with a high-sensitive TIA for use in fiber optics communication networks applications up to 2.5Gbps. The PIN PD/TIA is mounted on a TO-46 header and hermetic sealed with a lens cap.

The WPPRS25-CNNCN has wide input dynamic range that supports different transmission distance requirements. With a typical input overload of 3dBm, it supports short-haul fiber optic systems. Additionally, a typical input sensitivity of -31.5 dBm allows the detection of very small signals in a noisy environment making it ideal for high split ratio PON networks. With ultra-high sensitivity, the WPPRS25-CNNCN can accurately detect the optical data without requiring the use of Avalanche Photodiodes.

In order to satisfy such high sensitivity and optical overload requirements, the WPPRS25-CNNCN includes automatic gain control (AGC), maintaining the output at a constant amplitude level for input signals exceeding the AGC threshold.

An accurate average photodiode current across the entire dynamic range of the WPPRS25-CNNCN is available at the RSSI PIN for photo-alignment and average power monitoring.

Features

- Typical -31.5dBm Sensitivity
- Data rates from 1.25Gbps to 2.5Gbps
- RSSI(I_{MON}) function
- AGC provides dynamic range of 34dB
- 2dBm Overload input optical power
- Single +3.3V supply
- TO46 CAN 5pin package

Applications

- GPON
- 2.5Gbps BOSA Modules
- ATM/SONET
- Digital fiber optic receiver in short, medium and long haul optical telecommunications transmission systems and in high speed optical data networks
- Wide-band RF gain block
- Fiber in the loop(FTTO, FTTC, FTTH...)

Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
TIA supply voltage	V_{CC}	-0.4 to +4	V
Operating Case Temperature Range	T_C	-40 to +85	°C
Storage Temperature Range	T_{STG}	-40 to +100	°C
Maximum input voltage at MON	V_{MON}	-0.4 to $V_{CC} + 0.4V$	V
Input Optical Power	P_{IN}	2	mW

Table 1. Absolute Maximum Ratings

Electro-Optical Characteristics (Tc=23°C)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Optical wavelength range	λ	-	1100		1650	nm
Sensitivity	P_S	2.5Gbps NRZ, PRBS=2 ²³ -1, BER=1×10 ⁻¹⁰ , ER=12.25dB, λ =1550nm		-31.5	-30	dBm
Maximum overload	P_{MAX}	2.5Gbps NRZ, PRBS=2 ²³ -1, BER=1×10 ⁻¹⁰ , ER=12.25dB, λ =1550nm			3	dBm
Photo current monitor	R	1550nm / 1uW~1mW	0.9			A/W
Power supply	V_{CC}	-	3.0	3.3	3.6	V
Supply current	I_{CC}	-		43	50	mA
Low cut-off frequency	f_{LC}	-	-	20	-	kHz

Table 2. Electro-Optical Characteristics

Mechanical Dimension & Pin Layout

Mechanical Dimension

(unit : mm)

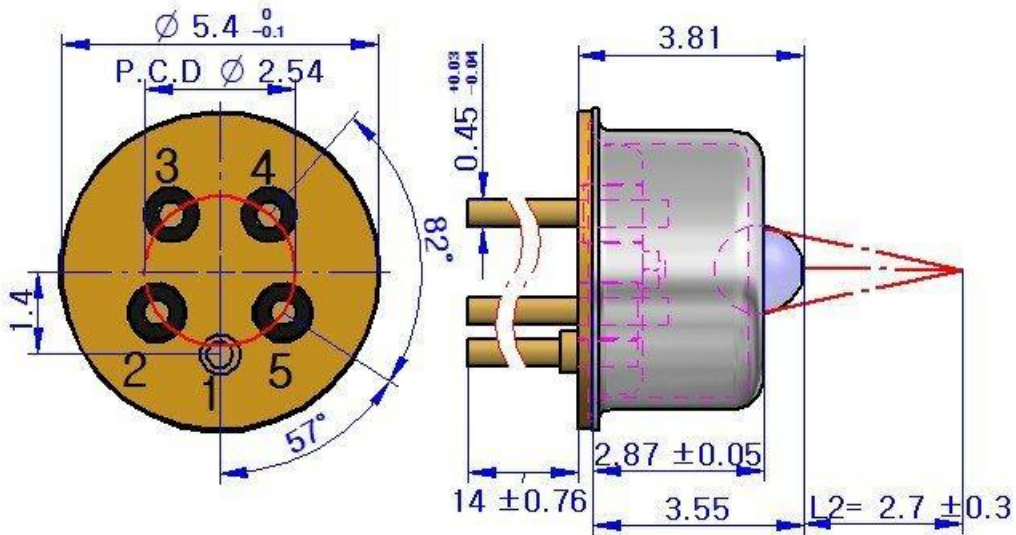


Figure 1. Mechanical Dimension

Pin Configuration

No.	Symbol	I/O	Description
1	GND	I/O	Signal ground
2	Data P	O	Positive data output
3	Vcc	I	Supply voltage
4	RSSI	O	Analog current source output
5	Data N	O	Negative data output

Other Requirements

Precautions for use

This device is susceptible to damage as a result of ESD(electrostatic discharge). Use of ground straps, antistatic mats, and other standard ESD protective equipment is recommended when handling or testing an InGaAs PIN/APD or any other junction photodiode. Soldering temperature of the leads should not exceed 350°C for more than 3 seconds.

Packaging

Products shall be packed into a suitable case in order to prevent damage during transportation and storage as long as A`s company with not demand other requirement.

Others

When the problem is caused concerning this specification sheet, both companies will confer in sincerity for the solution.

Ordering Information

