

## 25Gb/s PIN Linear TIA TO-CAN

WPPTB250SNNCNJ

### Features

- Standard TO-46 package with hermetic sealing
- InGaAs-InP photodiode / Manual gain mode TIA

### Applications

- 40G/100G/400G PAM4 Transceivers

### Absolute Maximum Ratings

Parameters	Symbol	Rating	Unit
TIA Supply Voltage	$V_{CC}$	-0.5 to 4.5	V
VPD Supply Voltage	$V_{PD}$	-0.5 to 4.5	V
Gain Control Voltage	GC	0 to $V_{CC}$	V
Maximum Optical Input Power	$P_{max}$	5	dBm
Operating Temperature Range	$T_C$	-5 to +85	°C
Storage Temperature Range	$T_{STG}$	-40 to +85	°C
Soldering Temperature	$T_{SO}$	350	°C

### Performance Specifications

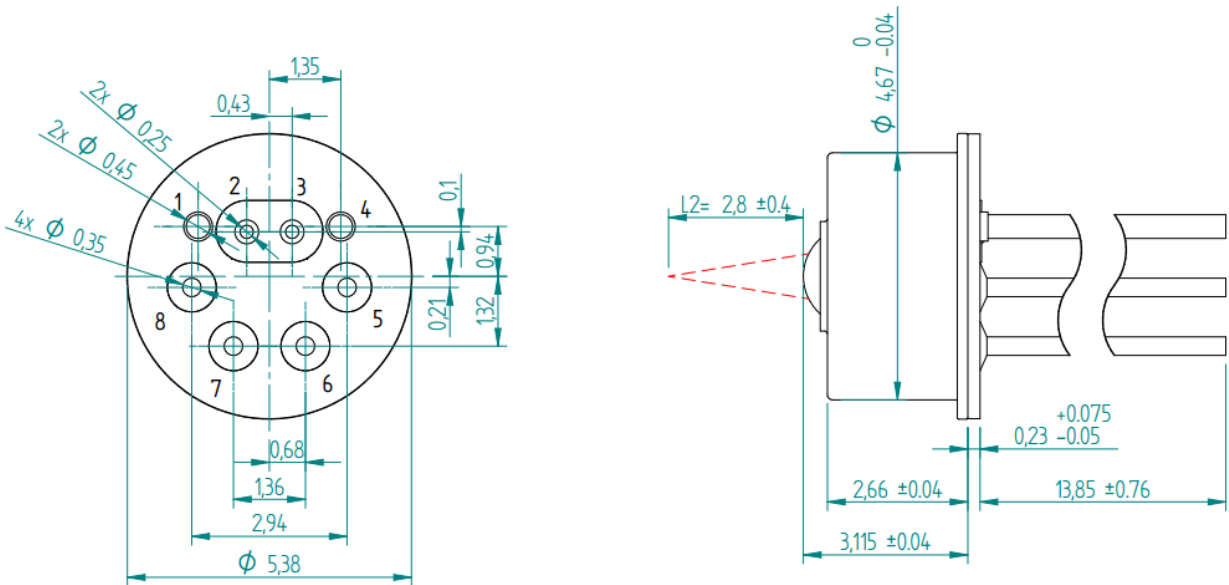
Parameters	Symbol	Test Condition	Min.	Typ.	Max.	Unit
TIA Supply Voltage	$V_{CC}$	-	3.1	3.3	3.465	V
PD Supply Voltage	$V_{PD}$	-			3.465	V
Power Consumption	$P_C$	$V_{CC}=3.3V$		0.28		W
Wavelength	$\lambda$	-	1260		1640	nm
OE Bandwidth	BW	$P_{IN}=100\mu W$ , 1310nm, $V_{PD}/V_{CC}=3.3V$ , GC=0V		25		GHz
NRZ Sensitivity	$P_S$	25.781Gb/s, PRBS2 <sup>31</sup> -1,		-13.5		dBm
NRZ Overload	$P_{MAX}$	BER=10 <sup>-12</sup> , ER=4.2dB	3			dBm
RSSI Monitor Current	RSSI <sub>MON</sub>	$P_{IN}=100\mu W$ , 1310nm, $V_{PD}/V_{CC}=3.3V$		90		μA
Total Harmonic Distortion	THD	1GHz to 13GHz, $P_{IN}<1.5dBm$		2	3	%
Low Frequency Cut-Off	$f_{LOW}$	-			500	kHz
TIA Gain Control Voltage	$V_{GC}$	Analog control	0		$V_{CC}$	V

**Precaution to use**

The WPPTB250SNNCNJ is sensitive to electrostatic discharge (ESD) and should be handled with appropriate caution. Please use standard ESD protective equipment when handling this product.

**Mechanical Specifications**

Dimensions (unit: mm)



Bottom View

No.	Pin name	Type	Description
1	GND	Case Ground	Ground
2	DATA	RF+ output	TIA positive output
3	$\overline{\text{DATA}}$	RF- output	TIA negative output
4	GND	Case Ground	Ground
5	GC	Gain Control bias input	Variable gain control supply voltage (0 to Vcc)
6	OA	Output Adjust bias input	Output amplitude control supply voltage (0 to Vcc)
7	V <sub>PD</sub>	PD bias input	PD supply voltage
8	Vcc	TIA bias input	TIA supply voltage

**Ordering information**

WPPTB250SNNCNJ

Specifications described here are subject to change without notice



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