

2.5Gb/s APD TIA ROSA

WPARR025KNNCNH

Features

- Standard TO-46 package with hermetic sealing
- High sensitivity TIA with automatic gain control
- Application: APD long reach receiver module for 2.5Gb/s

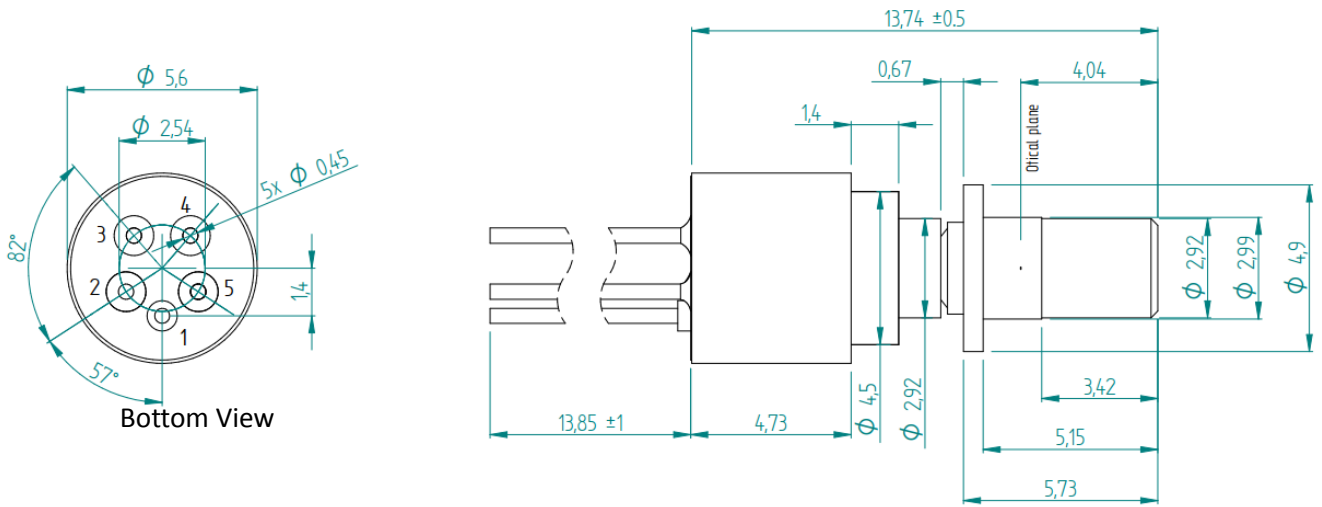
Absolute Maximum Ratings ($T_C=25^\circ\text{C}$, unless otherwise specified)

Parameters	Symbol	Rating	Unit
TIA supply voltage	V_{CC}	-0.5 to 4.5	V
APD supply voltage	V_{APD}	0 to V_{BR}	V
APD reverse current	I_{APD}	2	mA
Operating case temperature range	T_C	-40 to +85	$^\circ\text{C}$
Storage temperature range	T_{STG}	-40 to +85	$^\circ\text{C}$

Electro-Optical Characteristics ($T_C=25^\circ\text{C}$, unless otherwise specified)

Parameters	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Responsivity	R	@ M=1, 1310nm	0.8	0.9		A/W
		@ M=1, 1550nm	0.9	1.0		
Dark current	I_d	$0.9V_{BR}$		10	50	nA
Optical Wavelength Range	λ	-	1260		1640	nm
Sensitivity	P_S	2.5Gbps NRZ, PRBS=2 ²³ -1, BER=1×10 ⁻¹⁰ , ER=10dB, $\lambda=1550\text{nm}$		-35	-33.5	dBm
Overload	P_{MAX}	2.5Gbps NRZ, PRBS=2 ²³ -1, BER=1×10 ⁻¹⁰ , ER=10dB, $\lambda=1550\text{nm}$	2			dBm
TIA Supply Voltage	V_{CC}	-	3.0	3.3	3.6	V
TIA Supply Current	I_{CC}	-	15	20	24	mA
Transimpedance	Z_T	Differential(50 Ω on each output), f=100MHz	5.7	7.7	9.0	k Ω
Breakdown Voltage	V_{BR}	Dark current, $I_d=10\mu\text{A}$	35	46	56	V
Low Frequency Cut-off	f_{CL}	-		30		kHz
Output Voltage	V_{OUT}	Differential		140		mV _{p-p}
Output Impedance	Z_O	Single-ended		50		Ω
Temperature Coefficient of V_{BR}	γ	Operating case temperature	0.08	0.1	0.12	V/ $^\circ\text{C}$

Mechanical Dimension (unit: mm)



Pin Configuration

No.	Pin name	Type	Description
1	GND	Ground	Ground
2	DATA	RF+ output	TIA positive output
3	V _{CC}	Power	TIA supply voltage
4	V _{APD}	Power	APD supply voltage
5	$\overline{\text{DATA}}$	RF- output	TIA negative output

Ordering information

WPARR025KNNCNH

Contact

Vitex LLC
 210 Sylvan Ave, Suite 25
 Englewood Cliffs, NJ 07632
 201-296-0145 / info@vitextech.com / www.vitextech.com

Specifications described here are subject to change without notice