

## 56Gbaud PIN LINEAR TIA ROSA

WQSFJ42-P3

### Features

- InGaAs/InP PIN photodiode
- TIA auto gain control for an optimization.
- VGC function to control TIA output amplitude
- Industrial TO-46 package and LC receptacle

### Applications

- 100G PAM4 optical systems
- Linear receiver modules

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

Parameters	Symbol	Rating	Unit
TIA Supply Voltage	$V_{CC}$	-0.5 to 4.0	V
VPD Supply Voltage	$V_{PD}$	-0.5 to 5.5	V
Operating Temperature Range	$T_C$	-20 to +85	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-40 to +85	$^\circ\text{C}$
Lead Soldering Temperature	$T_{Sld}$	350 (3sec.)	$^\circ\text{C}$

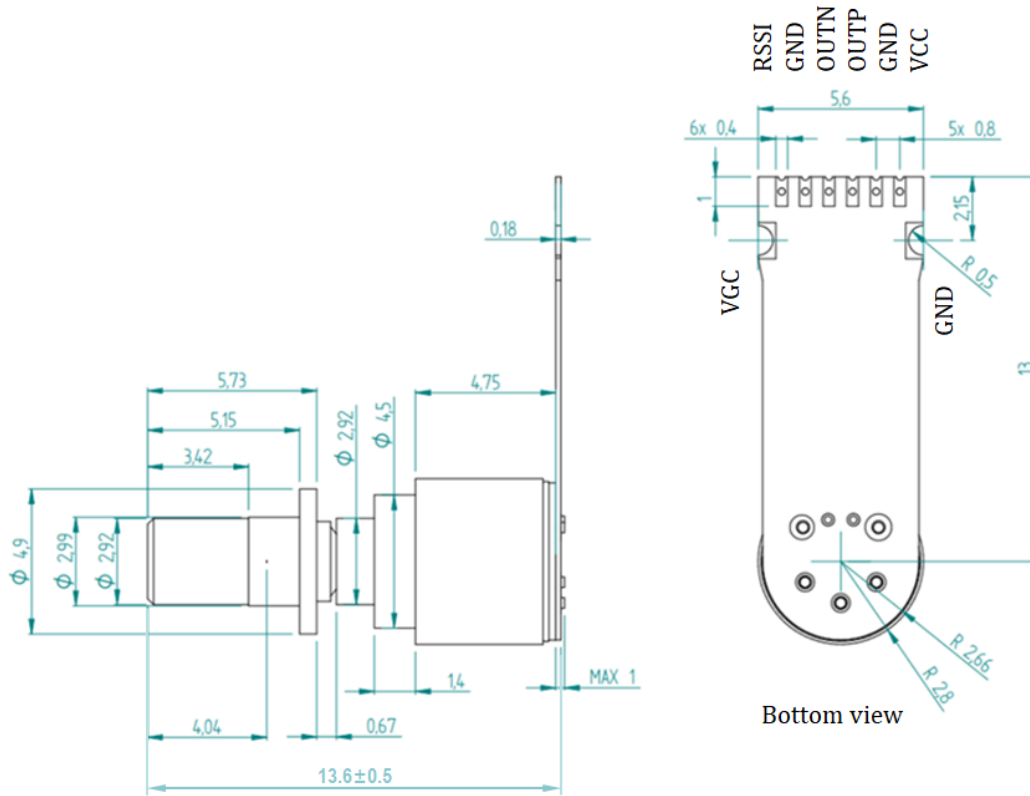
### Performance Specifications ( $T_C=25^\circ\text{C}$ , unless otherwise specified)

Parameters	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Supply Voltage	$V_{CC}$	-	2.9	3.3	3.5	V
TIA supply current	$I_{CC}$	$V_{CC}=3.3\text{V}$		58	72	mA
Wavelength	$\lambda$	-	1260		1640	nm
OE Bandwidth	BW	$P_{IN}=100\mu\text{W}$ , 1310nm, $V_{CC}=3.3\text{V}$ , VGC=0.3V		37		GHz
PAM4 Sensitivity <sup>1)</sup>	$P_S$	53.165Gbaud, PRBS= $2^7-1$ , BER= $2 \times 10^{-4}$ , ER=9dB, 1311nm		-11		dBm
RSSI Monitor Current	$I_{RSSI}$	$P_{IN}=100\mu\text{W}$ , 1310nm, $V_{CC}=3.3\text{V}$		20		$\mu\text{A}$
Low Frequency Cut-Off	$f_{LOW}$	-		45		kHz
TIA Gain Control(VGC) Voltage	VGC	Analog control	0.1		0.7	V

1) The result of off-line processing measurement. It can differ from the result of the real-time measurement.

### Mechanical Specifications

Dimensions and Pin configuration (unit: mm)



### Precaution to use

The WQSFJ42-P3 is sensitive to electrostatic discharge (ESD) and should be handled with appropriate caution. Please use standard ESD protective equipment when handling this product.

Specifications described here are subject to change without notice

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