



10Gbps InGaAs APD with Pre-Amplifier APD-A13P5-10GC3

Data Sheet



Features

- Industry standard TO-46 package with short cap lens
- Design for long wavelength 10.3125Gbps applications
- Single power supply +3.3V

Specifications

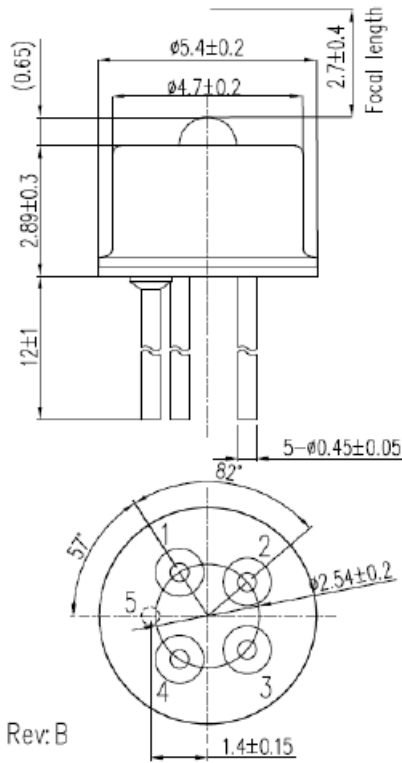
| Absolute Maximum Ratings | | | | |
|--------------------------|------|------|------|--|
| Parameters | Min. | Max. | Unit | Conditions |
| Storage temperature | -40 | 100 | °C | |
| Operating temperature | -40 | 85 | °C | |
| Reverse current | | 3.6 | mA | V _{op} =(V _{BR} -3.5V) |
| Lead solder temperature | | 260 | °C | 10 seconds |

| Electro-Optical Characteristics (T _A =25°C) | | | | | | |
|--|------------------|------|----------------------|-------|-------|---|
| Parameters | Symbol | Min. | Typ. | Max. | Unit | Conditions |
| Power supply | V _{CC} | 3.0 | 3.3 | 3.6 | V | |
| Supply current | I _{CC} | 20 | 27 | 38 | mA | No loads |
| APDTIA breakdown voltage | V _{BR} | 32 | | 43 | V | I _d = 10uA |
| Operating voltage | V _{OP} | | V _{BR} -3.5 | | V | V _{CC} =3.3V |
| V _{BR} temperature coefficient | γ | 0.02 | 0.03 | 0.04 | V/°C | |
| Differential responsivity | R _d | | 13.0 | | mV/uW | λ=1550nm, R _{load} =100ohm, P=-20dBm |
| Single ended responsivity | R _s | | 6.5 | | mV/uW | λ=1550nm, R _{load} =50ohm, P=-20dBm |
| Small-signal bandwidth | BW | | 6.2 | | GHz | P=-20dBm ⁽¹⁾ |
| Low frequency cut off | LF | | | 30 | kHz | |
| Saturation power | P _{sat} | -7 | | | dBm | V _{op} =(V _{BR} -3.5V) |
| Single ended output impedance | R _O | | 50 | | ohm | |
| Wavelength | λ | 1260 | | 1600 | nm | |
| Sensitivity | | | | -25.0 | dBm | λ=1550nm, @10.3125Gbps ⁽¹⁾ , PRBS31, ER=7dB, BER=1E-12, V _{op} =(V _{BR} -3.5V) |
| | | | | -30.5 | | λ=1550nm, @10.3125Gbps ⁽¹⁾ , PRBS31, ER=7dB, BER=1E-3, V _{op} =(V _{BR} -3.5V) |

Notes:

- (1) The spec and test data are subjected to ROSM level (flexible circuit attached) measurement.

Outline Dimensions (unit: mm)



Pin Configuration

| Pin Number | Function |
|------------|----------|
| 1 | Dout(+) |
| 2 | Vcc |
| 3 | Vapd |
| 4 | Dout(-) |
| 5 | Gnd |

Note: Specifications are subject to change without notice.