

2.5G PIN-TIA Receiver Modules

HEPTR-91XXX

Features:

- ◆ High sensitivity
- ◆ Differential ended output
- ◆ Single +3V、+5V、3.3/5V operation
- ◆ Trans-impedance amplifier with AGC
- ◆ RoHS Compliant products available



Applications:

- ◆ 2.5G Bit Rate application
- ◆ Fast Ethernet receiver/transceiver application

General:

HEPTR-91XXXX Series is a TO-based 2.5G, 4 pin or 5 pin PIN-TIA. It provides high sensitivity with AGC and 100ohm differential outputs. A photodiode is mounted into a low capacitance coaxial package integrated with a receptacle.

Ordering Information: (Standard version ^{*Note1})

| Part No. | Wavelength (nm) | Voltage (V) | Package | Pin Type | Insulation |
|--------------|-----------------|-------------|---------|----------|------------|
| HEPTR-9130AJ | 1270~1620 | 3.3 | A | A | Y |
| HEPTR-915DB | 1270~1620 | 5 | B | D | N |
| HEPTR-9150E | 1270~1620 | 5 | E | A | N |
| HEPTR-9130FJ | 1270~1620 | 3.3 | F | A | Y |

Note1: For more ordering information, please refer the nomenclature and contact HighEasy sales.

Absolute Maximum Ratings:

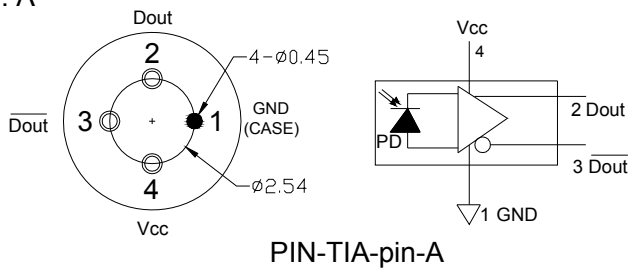
| Parameter | Min. | Typ. | Max. | Unit |
|------------------------------|------|------|--------|------|
| Storage Temperature | -40 | 25 | 85 | °C |
| Operating Temperature | -40 | 25 | 85 | °C |
| TIA Supply Voltage | 3.1 | 3.3 | 3.5 | V |
| | 4.5 | 5 | 5.5 | |
| PD Reverse Voltage | - | | 15 | V |
| Operation Relative Humidity | - | | 85 | % |
| Soldering Temperature / Time | - | | 260/10 | °C/s |

Electrical and Optical Characteristics:

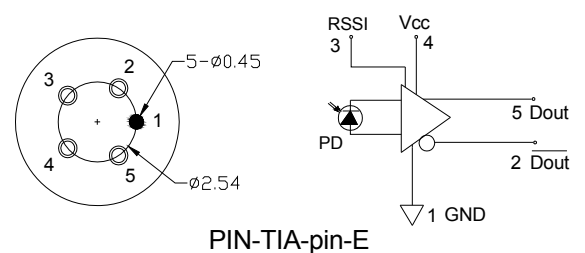
| Parameter | Symbol | Min. | Typ. | Max. | Unit | Test Condition |
|------------------------|------------------|------|------|------|------|--|
| Operating Wavelength | λ | 1270 | | 1620 | nm | |
| Supply Current | I _{cc} | | | 40 | mA | No Loads |
| Saturation Power | P _{sat} | -3 | 0 | - | dBm | VR=5V, 25°C |
| Small-Signal Bandwidth | BW | 1.65 | | | MHz | at -3dBm |
| Sensitivity | | | -23 | -21 | dBm | =1310nm, 2.5G, BER=10 ⁻¹⁰ @ PRBS= 2 ²³ -1 |
| Output Resistance | R _o | | 50 | | Ω | |
| Rise /Fall Time | T | | | 4.5 | | 10~90% |

Pin Assignment: *Note2

TYPE: A

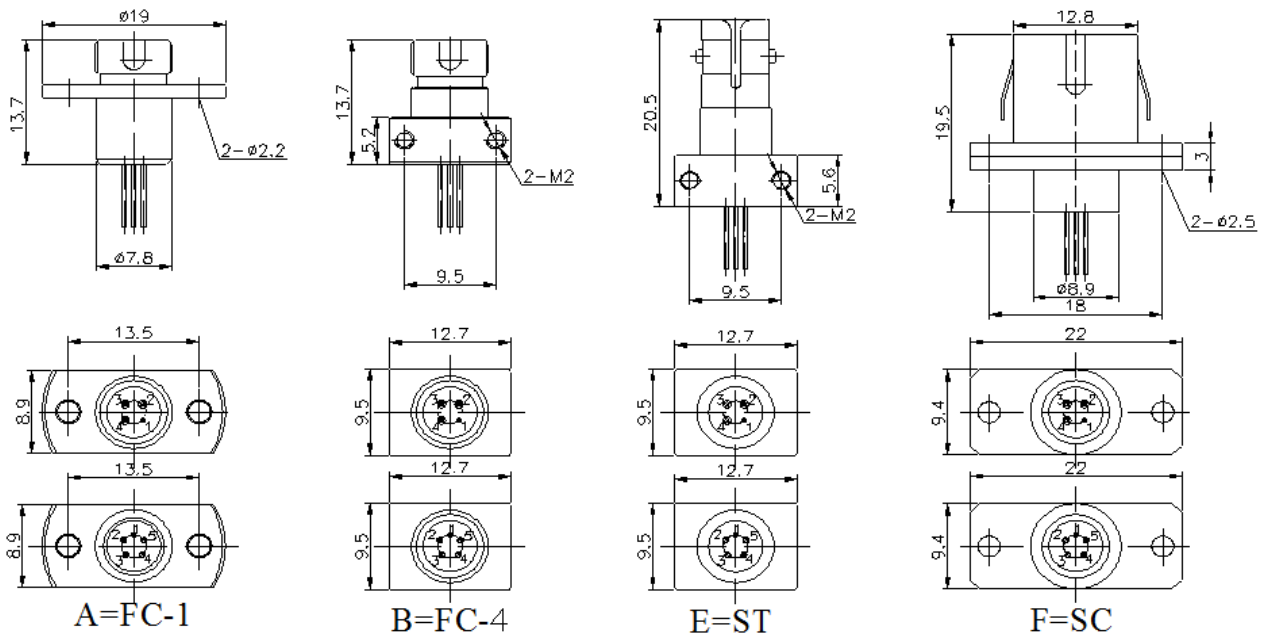


TYPE: E

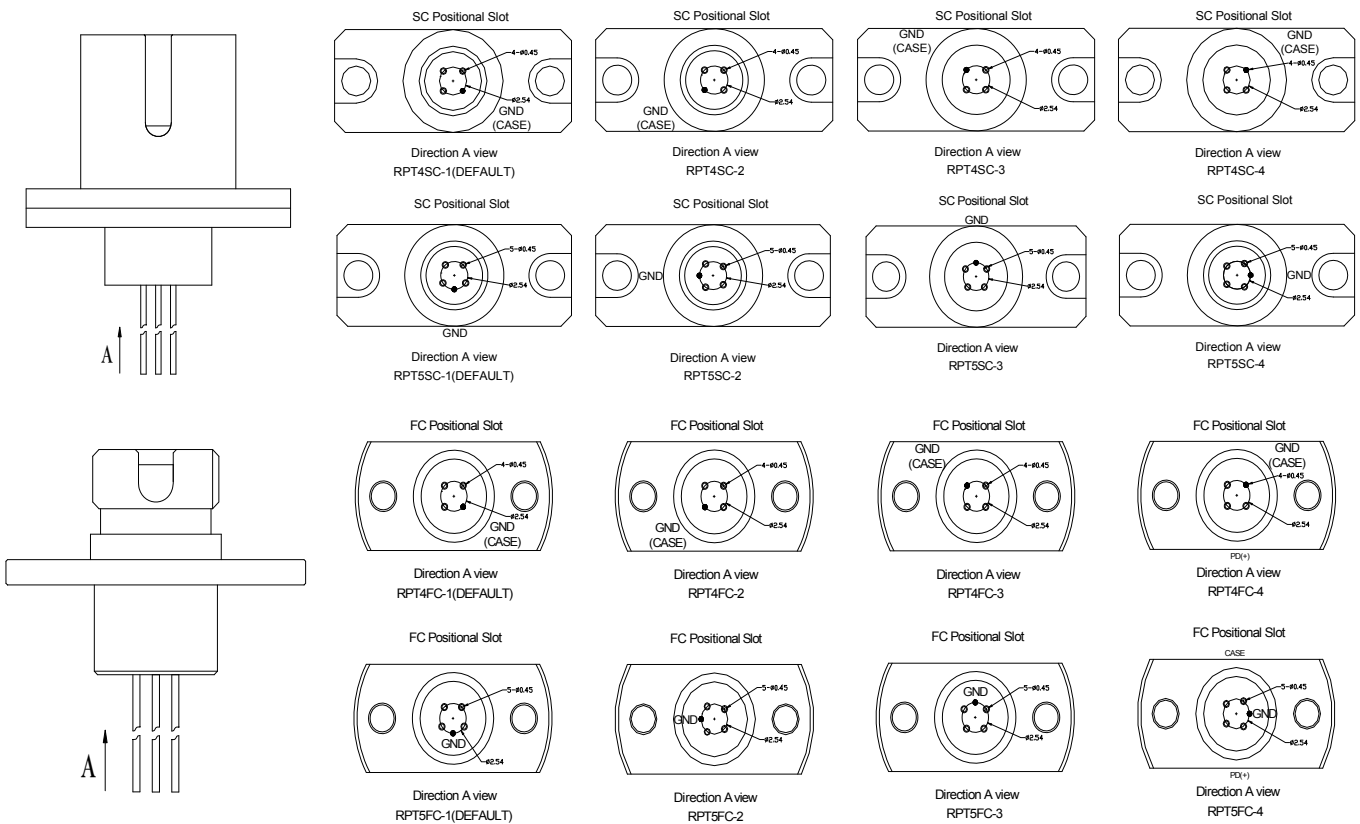


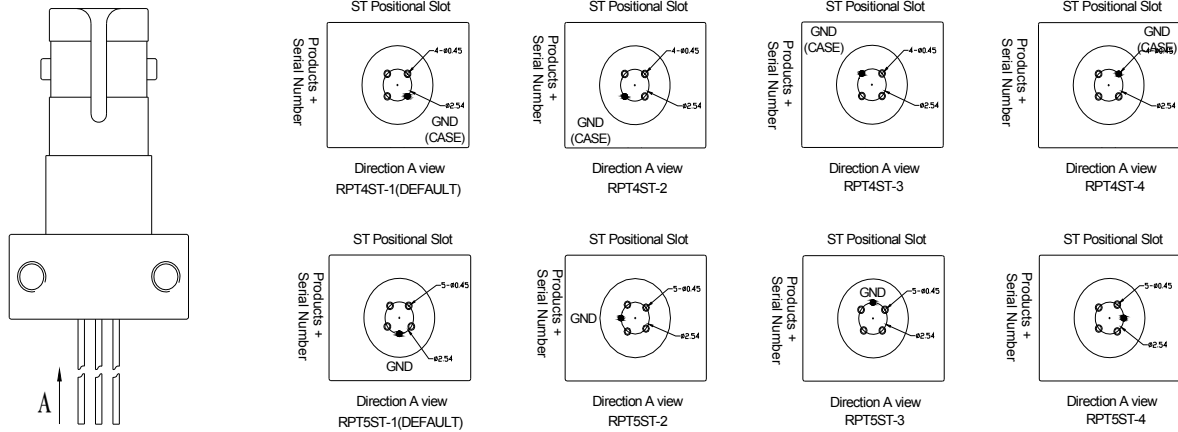
Note2: Other Pin type can be customized.

Receptacle Package Series:



The Direction of Fix Card:





Nomenclature:

HEPTR—

A B C D E F

| | | | | | |
|----------|-----------------------|---------------------|--------|---------------|------|
| A | Data Rate | 9=2.5G | | | |
| B | Wavelength | 1=1270~1620nm | | | |
| C | Voltage | 3=3.3V | 5=5V | 0=3.3/5V | |
| D | Pin Type | 0= pin-A | | E= pin-E | |
| E | Package Series | A=FC-1 | B=FC-4 | E=ST | F=SC |
| F | Insulation | Blank=NO Insulation | | J= Insulation | |

Precaution:

- (1) The modules should be handled in the same manner as ordinary semiconductor devices to prevent the electro-static damages. For safe keeping and carrying, the modules should be packaged with ESD proof material. To assemble the modules on PCB, the workbench, the soldering iron and the human body should be grounded.
- (2) Please pay special attention to the atmosphere condition because the dew on the module may cause some electrical damages.
- (3) Under such a strong vibration environment as in automobile, the performance and reliability are not guaranteed.

Notice:

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