



TiTAN-J

RF power and LNA amplifier

433/868/915 MHz

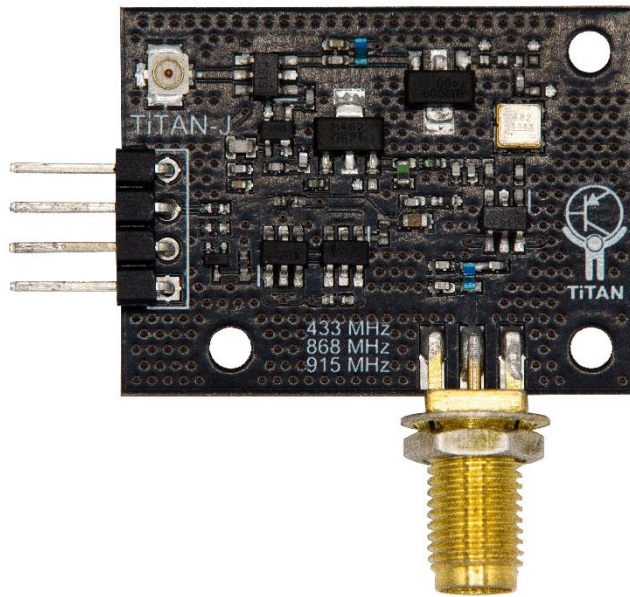
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Typical Operating Characteristics

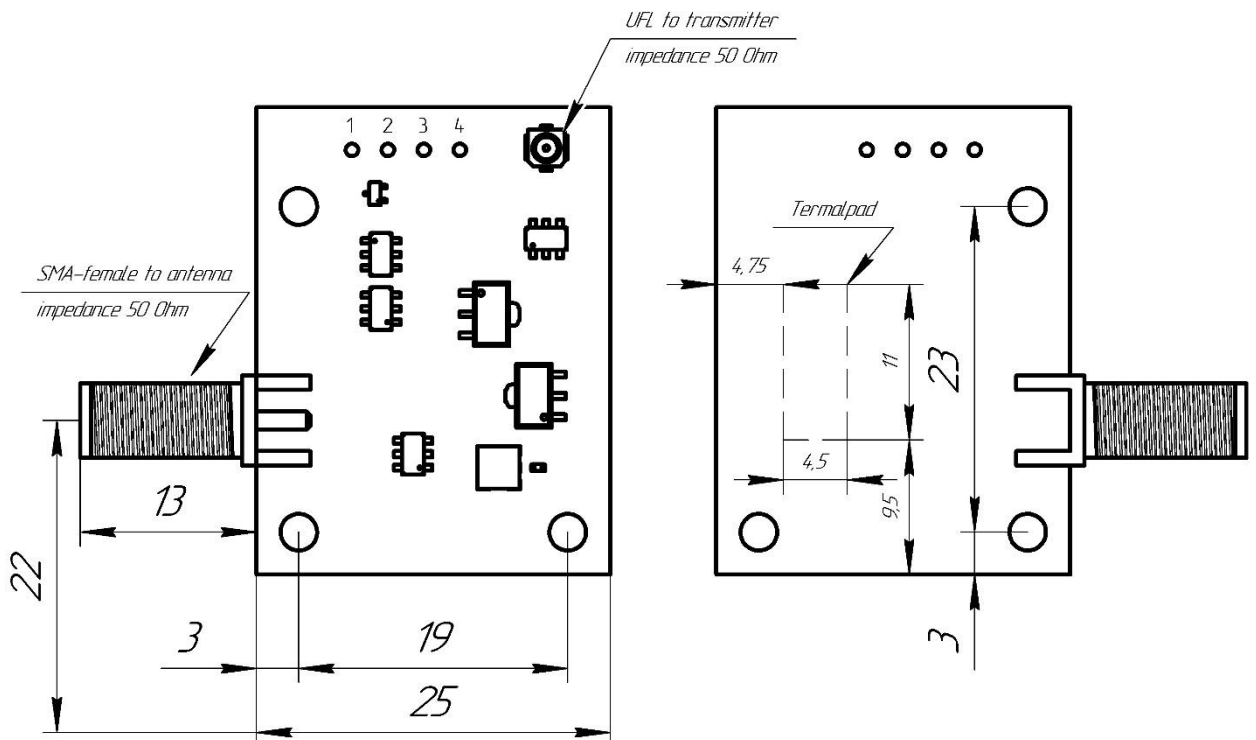
| Parameter | Min | Typ | Max | |
|----------------------------|------|-----|------|-----|
| Supply Voltage | 4.5 | 5.0 | 5.25 | V |
| RX/TX input switch voltage | | | | |
| RX mode | Open | 0 | 1 | V |
| TX mode | 3.0 | 3.3 | 10 | |
| RF Input/Output impedance | | 50 | | Ohm |
| Supply Current | | | | |
| Transmit mode | | | | |
| 433 MHz | 450 | 490 | 510 | mA |
| 868 MHz | 320 | 360 | 400 | |
| 915 MHz | 320 | 360 | 400 | |
| Receive mode | | | | |
| 433 MHz | | 125 | 150 | mA |
| 868 MHz | | 125 | 150 | |
| 915 MHz | | 125 | 150 | |

| Input RF level @ Transmit mode | | | | | |
|---|------|------|------|-----|--|
| 433 MHz | -35 | 0 | 5 | dBm | |
| 868 MHz | -15 | 10 | 12 | | |
| 915 MHz | -15 | 10 | 12 | | |
| Output RF level @ Transmit mode (5V Power supply) | | | | | |
| 433 MHz @ 0 dBm (Input) | 28.5 | 29 | 29.5 | dBm | |
| 868 MHz @ 10 dBm (Input) | 27.0 | 27.8 | 28.0 | | |
| 915 MHz @ 10 dBm (Input) | 26.5 | 27.0 | 27.2 | | |
| Output RF level @ Receive mode (5V Power supply) | | | | | |
| 433 MHz @ -100 dBm (Input) | 21.8 | 22.0 | 22.2 | dBm | |
| 433 MHz @ -110 dBm (Input) | 23.5 | 23.8 | 24.0 | | |
| 868 MHz @ -100 dBm (Input) | 21.8 | 22.0 | 22.2 | | |
| 868 MHz @ -110 dBm (Input) | 23.5 | 23.8 | 24.0 | | |
| 915 MHz @ -100 dBm (Input) | 19.8 | 20.0 | 20.2 | | |
| 915 MHz @ -110 dBm (Input) | 23.2 | 23.4 | 23.6 | | |

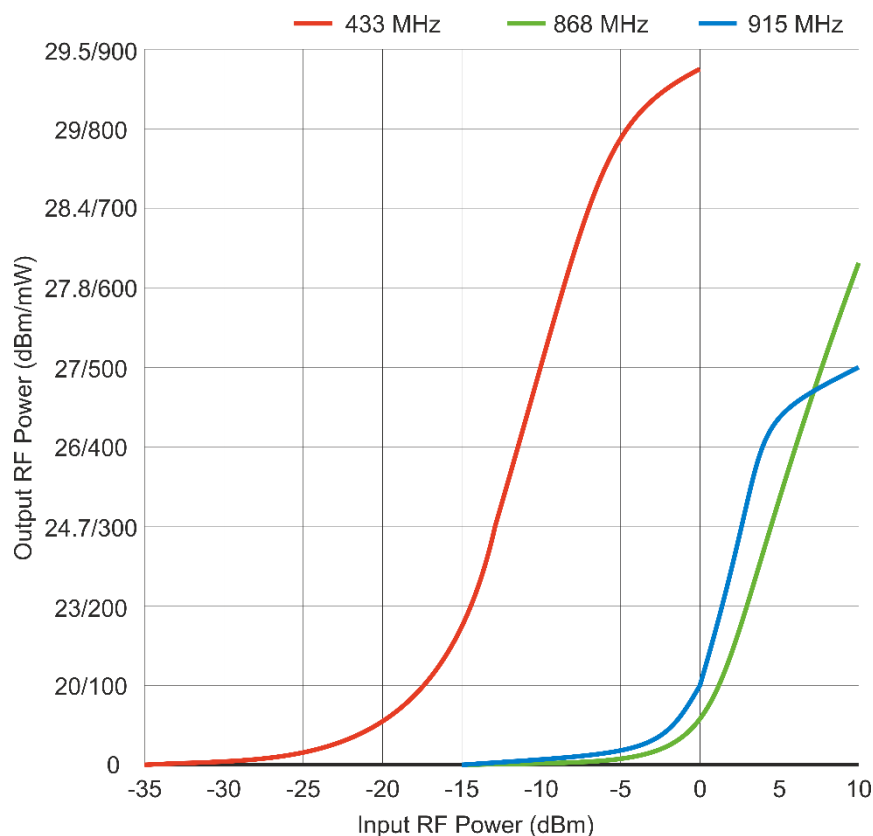
Pinout

| Pin # | Function |
|-------|-------------------|
| 1 | GND |
| 2 | Supply voltage |
| 3 | RX/TX mode switch |
| 4 | GND |

Geometric dimensions



RF output power diagram



Attention

1. We ask you to familiarize yourself with the laws of your country on the use of radio frequencies and the power of transmitters. You can change the output power of the amplifier by changing the power at its input. You can convert dBm to Watts using the on-line calculator at https://www.rapidtables.com/convert/power/dBm_to_Watt.html
2. A heat sink must be used for the amplifier to work.
3. As a transceiver, you can use TiTAN/TiTAN-I development board or whatever you like.
4. To achieve the best result, the power supply of the amplifier must be supplied with a wire with a cross section of at least 0.5 mm² and a length of no more than 100 mm.

You can get more detailed information on our website

<https://titan-project.com/> in «Blog» and «Software» sections.

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