

**DESCRIPTION**

This class A GaAs module is designed for both military and commercial applications. It is capable of supporting any signal type and modulation format, including but not limited to 3-4G telecom, WLAN, OFDM, DVB, and CW/AM/FM. The latest device technologies and design methods are employed to offer high power density, efficiency, and linearity in a small, lightweight package.

**FEATURES**

- Over / Under / Reverse Voltage Protection
- Forward Power Measurement
- Reflected Power Measurement
- High Speed T/R Switching Control
- Temperature Output

**APPLICATIONS**

- Military / Commercial Data links
- Telecommunications
- BTS / Repeaters / DAS
- Test and Measurement
- General Purpose Lab Use

**TX SPECIFICATIONS**

| PARAMETER                   | MIN                                    | TYP  | MAX  | UNIT |
|-----------------------------|----------------------------------------|------|------|------|
| Operating Frequency         | 1900                                   |      | 2000 | MHz  |
| P1dB Power Output           | 47.0                                   | 47.5 |      | dBm  |
| PSat Power Output           | 47.5                                   | 47.5 |      | dBm  |
| Gain                        | 46.0                                   | 47.0 |      | dB   |
| Gain Flatness               |                                        | 0.8  | 1.2  | dB   |
| OIP3                        |                                        | 61.0 |      | dBm  |
| OIP3 Measurement Conditions | 2 Tone @ 34 dBm / Tone, 10 MHz Spacing |      |      | --   |
| Input Return Loss           | 16                                     | 18   |      | dB   |
| Operating Voltage           | 12                                     |      | 14   | VDC  |
| Current Draw                |                                        | 14.0 | 15.0 | A    |
| Quiescent Current Draw      |                                        | 15.0 |      | A    |
| Switching Time              |                                        |      | 1.0  | uS   |

**RX SPECIFICATIONS**

| PARAMETER         | MIN  | TYP   | MAX | UNIT |
|-------------------|------|-------|-----|------|
| P1dB Power Output | 19.0 | 20.0  |     | dBm  |
| Gain              | 19.0 | 20.0  |     | dB   |
| Gain Flatness     |      | 0.5   | 1.0 | dB   |
| Noise Figure      |      | 2.5   | 3.0 |      |
| OIP3              |      | 35.0  |     | dBm  |
| Input Return Loss | 8    | 10    |     | dB   |
| Current Draw      |      | 200.0 |     | mA   |

| PARAMETER                      | VALUE                                     | UNIT |
|--------------------------------|-------------------------------------------|------|
| Dimensions (L x W x H)         | 8.5x5.54x2.175                            | in.  |
| RF Connectors (Input / Output) | N-F / N-F                                 | --   |
| DC / Control Connector         | Waterproof Circular Locking               | --   |
| Cooling                        | Integral Heatsink – Fan options available | --   |
| Mounting                       | #6 Thru-Holes                             | --   |

| PARAMETER                        | MIN                            | MAX  | UNIT |
|----------------------------------|--------------------------------|------|------|
| Operating Temp. (Housing Temp.)  | -40                            | +85  | °C   |
| Storage Temp Range               | -60                            | +100 | °C   |
| Weatherproofing                  | IP67 Equivalent                |      | --   |
| Altitude                         | 0-30,000                       |      | ft.  |
| Shock / Vibration                | MIL-STD-810 and equivalents    |      | --   |
| Max RF Input                     | 3.5                            |      | dBm  |
| Load VSWR @ P1dB                 | Open / Short Output Protection |      | --   |
| PA Baseplate Shutoff Temperature | 85                             |      | °C   |

Technical drawing of a 100-pin D-sub connector, showing dimensions in inches. The drawing includes four views: a side view (top left), a front view (top right), a rear view (bottom left), and a top view (bottom right).

**Dimensions (inches):**

- Side View (Top Left):**
  - Pin pitch: .000, .125
  - Overall width: 2.175
  - Mounting flange thickness: .000, .125
  - Flange height: .000, .180
  - Pin height: .000, .180
- Front View (Top Right):**
  - Pin pitch: .000, .125
  - Overall width: 2.175
  - Mounting flange thickness: .000, .125
  - Flange height: .000, .180
  - Pin height: .000, .180
- Rear View (Bottom Left):**
  - Pin pitch: .000, .125
  - Overall width: 2.175
  - Mounting flange thickness: .000, .125
  - Flange height: .000, .180
  - Pin height: .000, .180
- Top View (Bottom Right):**
  - Pin pitch: .000, .125
  - Overall width: 2.175
  - Mounting flange thickness: .000, .125
  - Flange height: .000, .180
  - Pin height: .000, .180

**DC / CONTROL PINS**

| PIN LABEL | NAME  | DESCRIPTION                                     |
|-----------|-------|-------------------------------------------------|
| A1        | GND   | Ground                                          |
| A2        | +VDC  | Supply Voltage - Range Specified in Datasheet   |
| 1         | TEMP  | Temp Monitor: Temp in DegC = (Vout - 0.5V) / 10 |
| 2         | Tx/Rx | TTL T/R Control (+5V = Tx / 0V = Rx)            |
| 3         | REV   | Reflected Power Measurement -                   |
| 4         | GND   | Detector Ground                                 |
| 5         | FWD   | Forward Power Measurement -                     |