

The **SM04548-47L** is a 450 to 480 MHz solid state GaAs FET amplifier designed for Broadband Wireless Access or any system utilizing spectrum in the 450 MHz band. The amplifier provides 55 dB of linear gain and +47 dBm of output power at P1dB. Our proprietary linearization technique improves the OIP3 by 7 dB. The design provides ultra-linear performance for rigorous system requirements.

### Features

- Mis-Match Protected
- Single Power Supply
- Over Voltage Protection
- Thermal Protection with Auto Reset
- Temperature Compensation
- Integral Output Isolator

### Options

- Reverse Power Detection
- RF Sampling
- Pulse Control up to 1 $\mu$ s for TDD with RF Isolation
- Logic On/Off Control
- Integral Heatsink

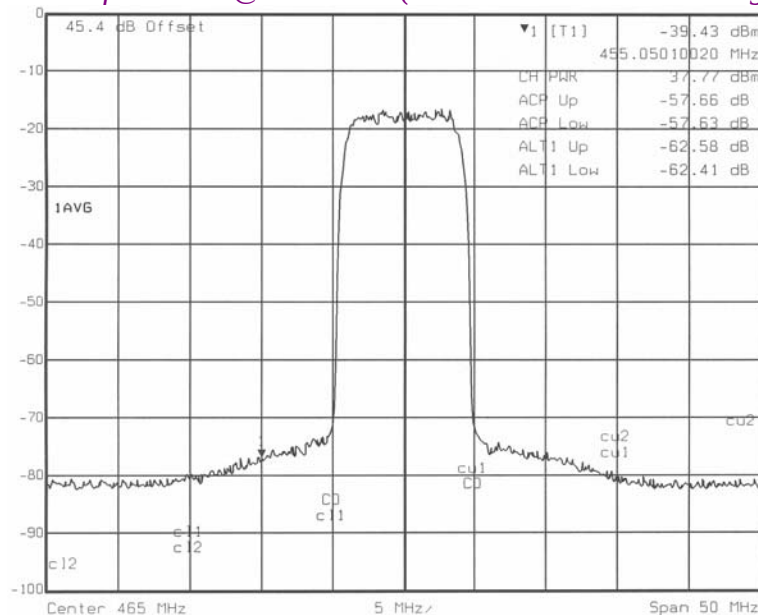
### Configurations

- Module
- 19" Rack

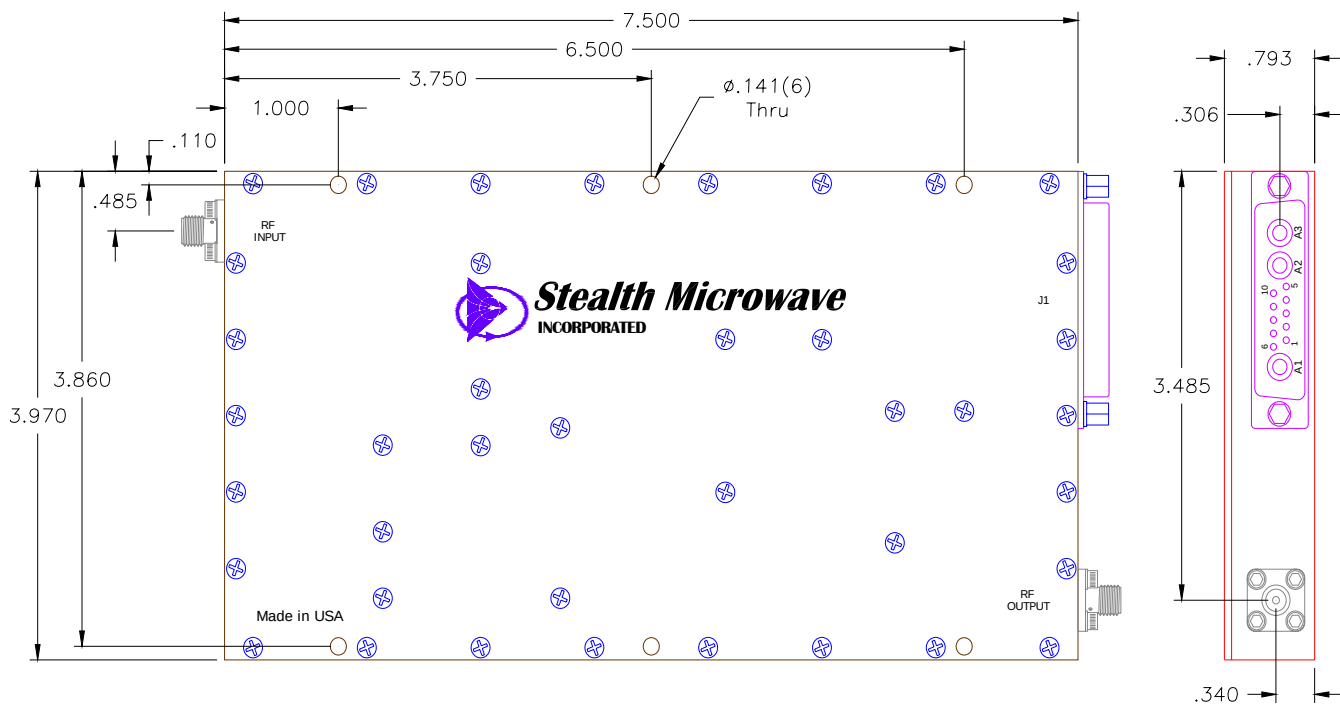


| Parameter                                                      | Specification                                    |
|----------------------------------------------------------------|--------------------------------------------------|
| Frequency Range                                                | 450 – 480 MHz                                    |
| Pout (P1dB)                                                    | + 47 dBm (typ.)<br>See p.2 for OFDM output       |
| Third Order Intercept Point                                    | + 66 dBm                                         |
| Linear Gain                                                    | 55 dB $\pm$ 1 dB                                 |
| Gain Flatness over Full Band                                   | $\pm$ .5 dB                                      |
| Gain Change over Temperature                                   | $\pm$ .5 dB                                      |
| Input/Output Return Loss                                       | -16/-18 dB                                       |
| Power Supply                                                   | + 12 Volts @ 14 A<br>6.7A when switched @85KHz   |
| Mechanical Dimensions<br>(Without Heatsink)<br>(With Heatsink) | 7.5 x 4.0 x .79 inches<br>7.5 x 5.0 x 3.3 inches |
| RF Connectors                                                  | SMA Female                                       |
| Operating Temperature                                          | 0°C to +55°C                                     |
| Operating Humidity                                             | 95% Non-condensing                               |
| Operating Altitude                                             | Up to 10,000 feet above Sea Level                |

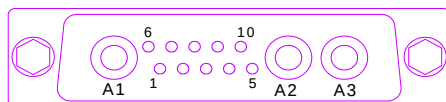
*OFDM Performance @ 37.5 dBm (7 MHz BW UMTS-TDD Signal)*



**DIMENSIONS IN INCHES**



**J1: 13W3 D-SUB**



| Pin       | Description                   | Values                                                 |
|-----------|-------------------------------|--------------------------------------------------------|
| RF IN     | Input Connector (SMA Female)  | - 8 dBm, typical                                       |
| RF OUT    | Output Connector (SMA Female) | +47 dBm @P1dB                                          |
| 1         | GND                           | --                                                     |
| 2         | Reverse Power Detector        | $\infty$ VSWR @ + 38 dBm $\approx$ + 3.0 Volts         |
| 3         | TTL Logic On/Off              | 0 Volts = Off, + 5 Volts = On                          |
| 4         | TDD Switching Control         | Up to 1 $\mu$ s switching speed, RF isolation when off |
| 5 thru 10 | GND                           | --                                                     |
| A1        | RF Sample Port                | -30dBr sampling output                                 |
| A2        | +12 VDC Supply                | + 12 Volts @ 14 Amperes (typ.)                         |
| A3        | GND                           | --                                                     |

Specifications subject to change without notice.