



Power RF Amplifiers

Power = 15.0 Watts

Bandwidth = 30 to 512 Mhz

Gain = 25.0 dB Vdd =28.0 Volts

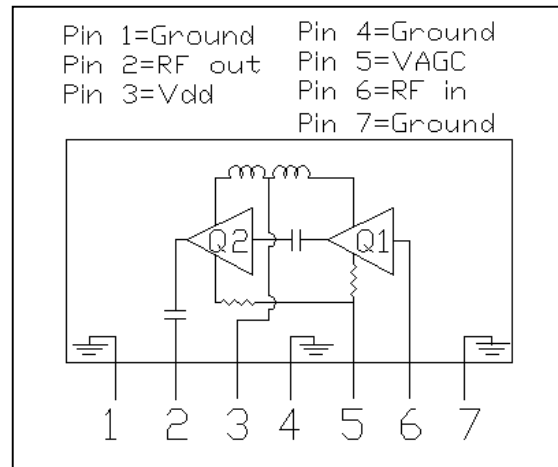
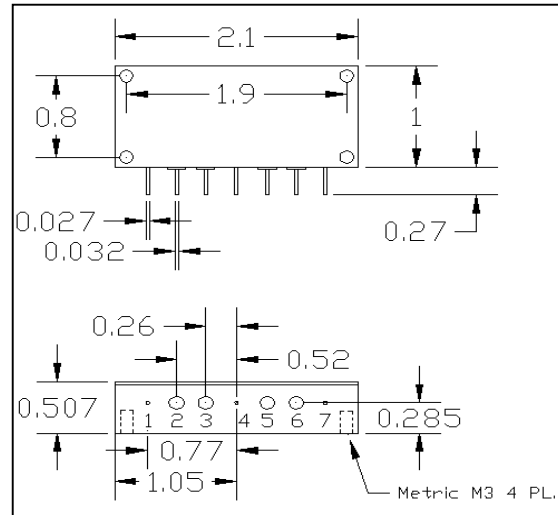
50 ohms Input/Output Impedance

Description

The MADQ02 is a 15 Watt, 2 stage high gain amplifier module covering a bandwidth of 30-512 Mhz. This compact module design is suitable for military applications in a rugged environment. An ALC pin is provided to control the output power of the module. The MADQ02 may be used as the driver stage for the MBDQ01 module.

Absolute Maximum Ratings (T=25 °C)

| Parameter | Symbol | Value | Unit |
|----------------------|--------|-------------|------|
| DC supply Voltage 1 | VDD1 | 32.0 | V |
| DC supply Voltage 2 | VDD2 | | V |
| AGC Voltage | VAGC | 9.0 | V |
| AGC Current | VAGCI | 5.00 | mA |
| Input Power | Pin | 0.05 | W |
| Output Power | Pout | 20.0 | W |
| Operating Case Temp. | Tc | -40 to +85 | °C |
| Storage Temperature | Tstg | -45 to +100 | °C |



Electrical Characteristics: (T=25 °C Zs=Zl=50 ohms, Vdd = 28.0 Volts, Idq = 2.0 Amps)

| Parameter | Symbol | Min | Typical | Max | Unit | Test Conditions |
|-------------------------|--------|------|---------|-----|----------|--------------------------------|
| Frequency Range | BW | 30 | | 512 | Mhz | 50 ohm load |
| Output Power | Po | 15.0 | | | Watts | Pin = 13.0 dbm Vagc = 8.0 V |
| Power Gain | PG | 25.0 | | | dB | Pout = 15.0 Watts Vagc = 8.0 V |
| Total Efficiency | η | 15 | | | % | Pout = 15.0 Watts |
| 2nd Harmonics | dso | | -20.00 | | dBc | Pout = 15.0 Watts |
| Intermod - 2 tone | Im3 | | | | dBc | AvePwr= Watts |
| Load Mismatch Tolerance | VSWR | 10:1 | | | Relative | All Phase Angles |
| Vagc Voltage | VAGC | | | 8.0 | V | Pin = 13.0 dBm, Pout =15.0 W |
| Pulse Response Time | Pr | | | | uS | DC Blank on Vagc pin |

MADQ02

