



Power RF Amplifiers

Power = 5.0 Watts

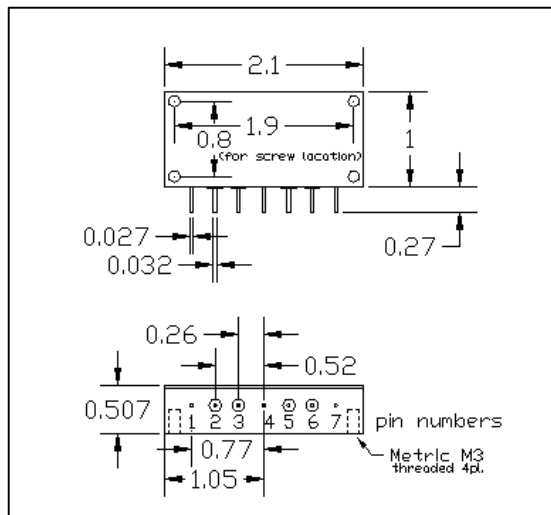
Bandwidth = 30 to 88 Mhz

Gain = 25.0 dB Vdd = 12.5 Volts

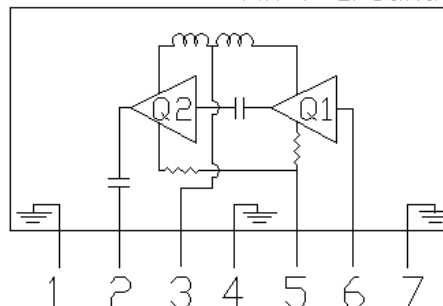
50 ohms Input/Output Impedance

Description

The MADK21 is a 5 Watt, 2 stage high gain amplifier module covering a bandwidth of 30-88 Mhz. This compact module design is suitable for military applications in a rugged environment. A VAGC pin is provided to control the output power of the module.



Pin 1=Ground Pin 4=Ground
Pin 2=RF out Pin 5=VAGC
Pin 3=Vdd Pin 6=RF in
Pin 7=Ground



Absolute Maximum Ratings (T=25 °C)

| Parameter | Symbol | Value | Unit |
|----------------------|--------|-------------|------|
| DC supply Voltage 1 | VDD1 | 17.0 | V |
| DC supply Voltage 2 | VDD2 | | V |
| AGC Voltage | VAGC | 7.00 | V |
| Input Power | Pin | 0.02 | W |
| Output Power | Pout | 10.0 | W |
| Operating Case Temp. | Tc | -20 to +85 | °C |
| Storage Temperature | Tstg | -30 to +100 | °C |

Electrical Characteristics: (T=25 °C Zs=Zl=50 ohms. Vdd= 12.5 Volts)

| Parameter | Symbol | Min | Typical | Max | Unit | Test Conditions |
|-------------------------|--------|------|---------|-----|----------|-------------------------------|
| Frequency Range | BW | 30 | | 88 | Mhz | 50 ohm load |
| Output Power | Po | 5.0 | | | Watts | Idq = 0.65 Amps |
| Power Gain | PG | 25.0 | | | dB | @ Pout = 5.0 Watts |
| Total Efficiency | η | 35 | | | % | @ Pout = 5.0 Watts |
| 2nd Harmonics | dso | | -29.00 | | dBc | @ Pout = 5.0 W, Freq = 59 Mhz |
| Intermod - 2 tone | Ip3 | | | | dBm | Freq = 59 Mhz; AvePwr= W |
| Load Mismatch Tolerance | VSWR | 10:1 | | | Relative | All Phase Angles |

MADK21

