



**Power RF Amplifiers**

Power = 100.0 Watts

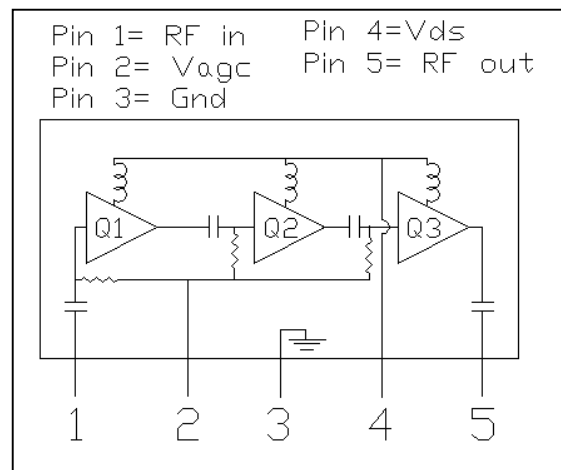
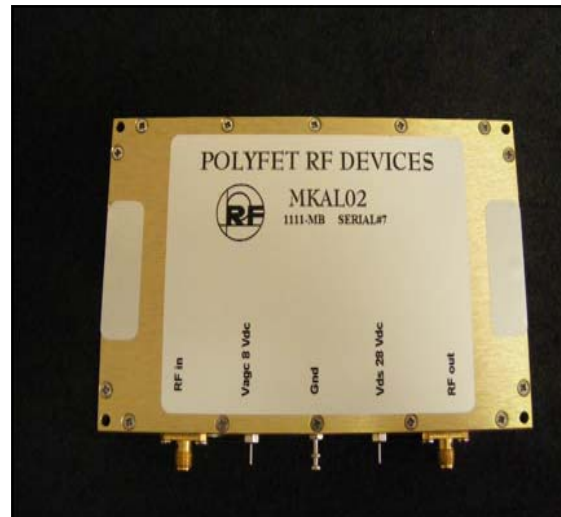
Bandwidth = 2 to 100 Mhz

Gain = 50.0 dB Vdd = 28.0 Volts

50 ohms Input/Output Impedance

**Description**

The MKAL02 is a 100 Watt, high gain amplifier module covering a bandwidth of 2-100 Mhz. This compact module design is suitable for military applications in a rugged environment. An ALC pin is provided to control the output power, gain and blanking of the module.



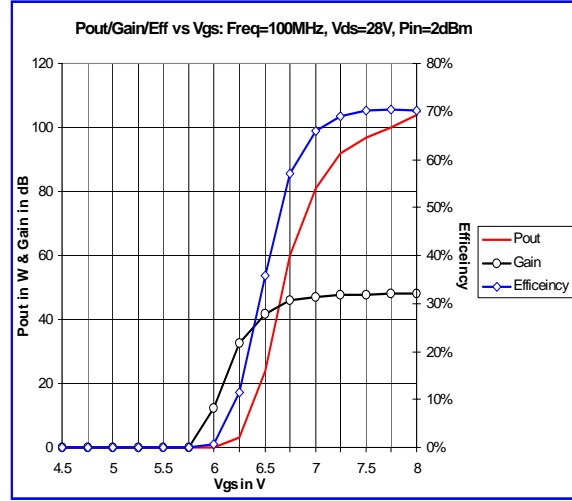
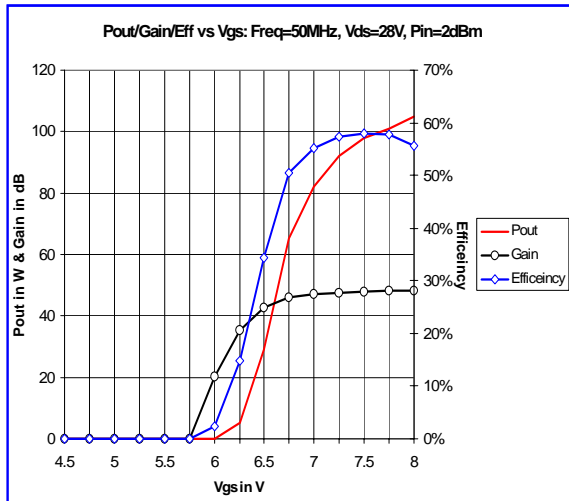
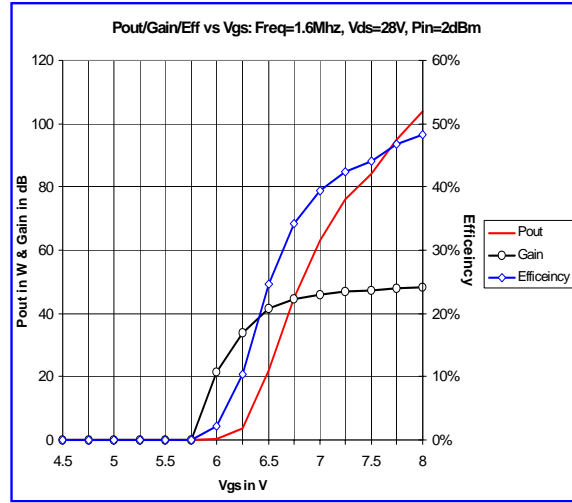
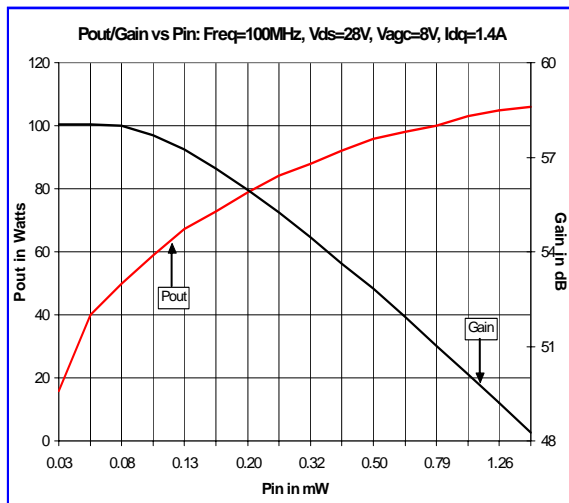
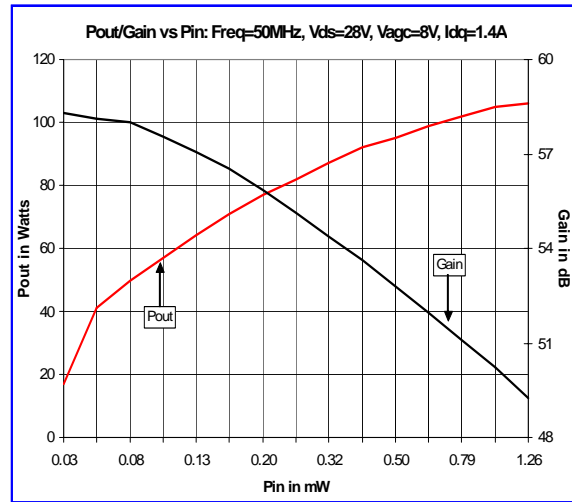
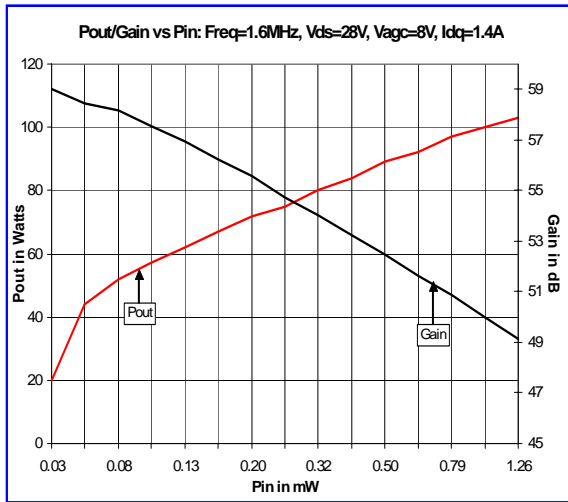
**Absolute Maximum Ratings (T=25 °C)**

| 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  | 1.00        | mA   |
| Input Power          | Pin    | 0.002       | W    |
| Output Power         | Pout   | 120.0       | W    |
| Operating Case Temp. | Tc     | -40 to +85  | °C   |
| Storage Temperature  | Tstg   | -55 to +100 | °C   |

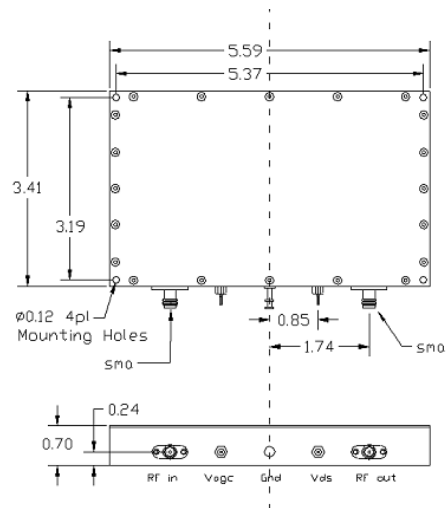
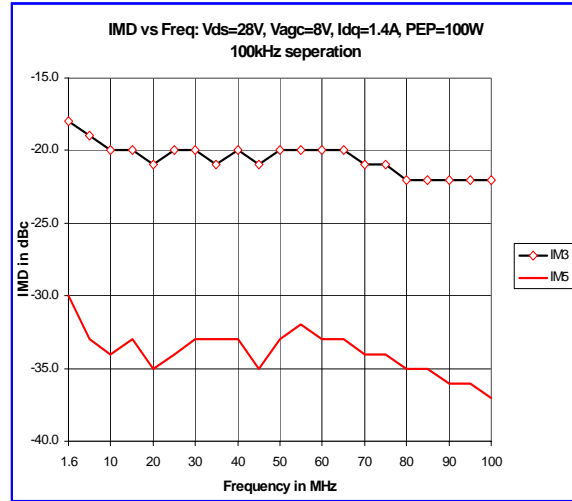
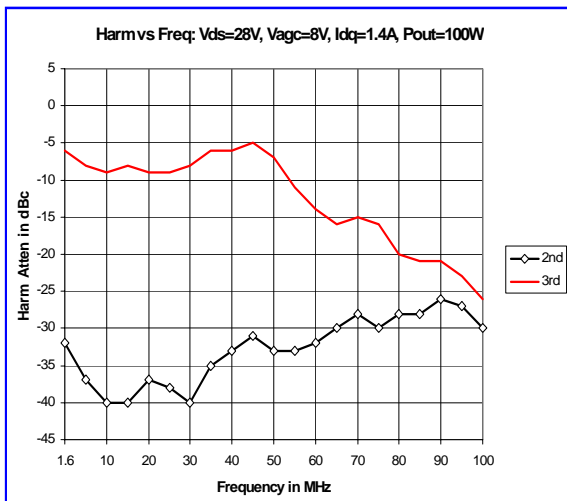
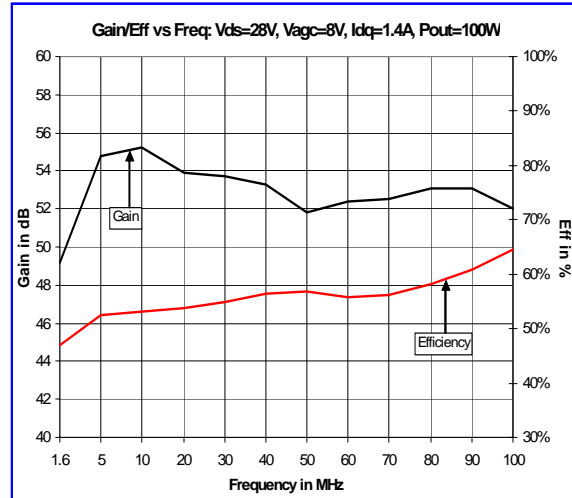
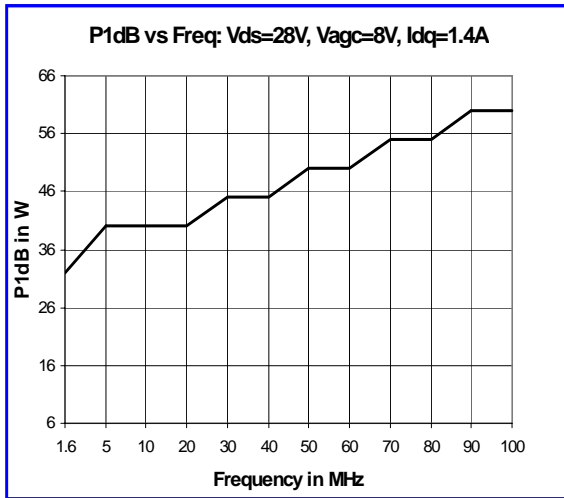
**Electrical Characteristics: ( T=25 °C Zs=Zl=50 ohms, Vdd = 28.0 Volts, Idq = 1.4 Amps )**

| Parameter               | Symbol | Min    | Typical | Max   | Unit     | Test Conditions                    |
|-------------------------|--------|--------|---------|-------|----------|------------------------------------|
| Frequency Range         | BW     | 2      |         | 100   | Mhz      | 50 ohm load                        |
| Output Power            | Po     | 100.0  |         |       | Watts    | Pin = 0.0 dbm Vagc = 8.0 V         |
| Power Gain              | PG     | 50.0   |         |       | dB       | Pout =100.0 Watts Vagc = 8.0 V     |
| Total Efficiency        | $\eta$ |        | 50      |       | %        | Pout =100.0 Watts                  |
| 2nd Harmonics           | dso    |        | -30.00  |       | dBc      | Pout =100.0 Watts @ Mhz            |
| Intermod - 2 tone       | Im3    | -15.00 |         |       | dBc      | AvePwr= 50.0 Watts                 |
| Load Mismatch Tolerance | VSWR   | 10:1   |         |       | Relative | All Phase Angles Pout =100.0 Watts |
| Vagc Voltage            | VAGC   |        |         | 8.0   | V        | Pin = 0.0 dBm, Pout = 100.0 W      |
| Pulse Response Time     | Pr     |        |         | 100.0 | uS       | Pulse source: Vagc                 |

# MKAL02



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POLYFET RF DEVICES

REVISION 04/05/2011

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