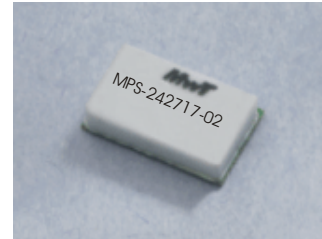


Features:

- 45 dBm IP3
- 13 dB Gain
- +28.0 dBm P1dB
- Single Positive Bias
- Leadless Surface Mount Package
- EVM < 1.0% at 20 dBm



Description:

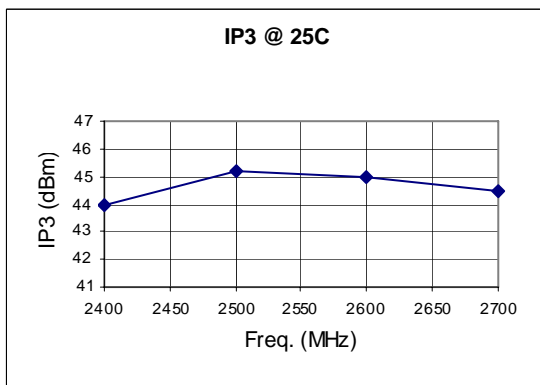
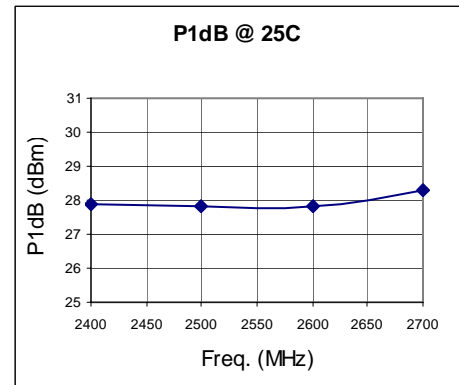
The WPS-242717-02 is a low cost high linearity modular amplifier designed to meet the ultra-linear transmitter driver requirements for 802.16 WiMax linear driver applications and commercial 2G, 2.5G, 3G, GSM, TDMA, EDGE, UMTS, WCDMA, CDMA2000, and TD-SCDMA applications. Key advantages are low EVM performance for 802.16 WiMax applications and low intermodulation performance for multi-carrier and CDMA systems together with exceptionally low input/output return loss for ease of integration.

Electrical Specifications:

- @ 25°C, Vdd = 6.0 to 7.0 V, Zo = 50 ohm

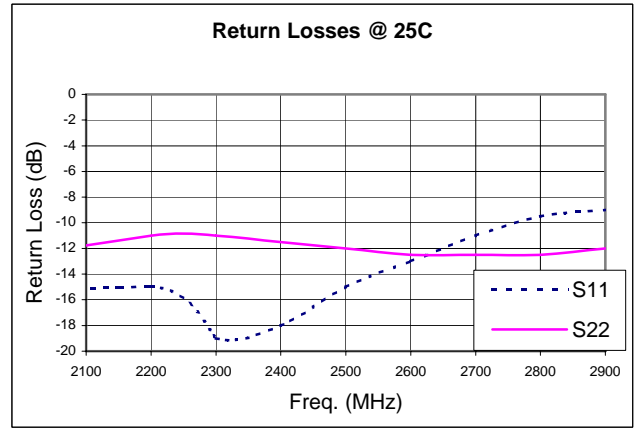
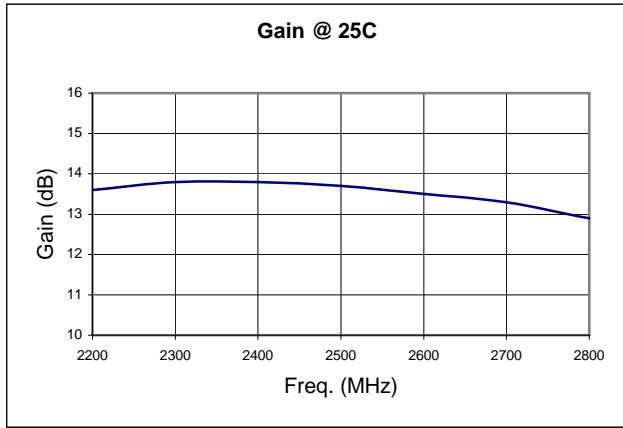
| SYMBOL | PARAMETERS | Min | Typ | Max | Unit |
|---------|--------------------------|------|--------|--------|-------|
| Freq. | Frequency Range | 2400 | | 2700 | MHz |
| SSG | Small Signal Gain | 12.0 | 13.0 | | dB |
| P1 dB | Pout at 1 dB Comp Point | | +28.0 | | dBm |
| IP3 (1) | Third-Order Intercept | 42.0 | 45.0 | | dBm |
| VSWR | VSWR (Input/Output) | | 2.0:1 | | |
| GOF | Gain Var. over Frequency | | ± 0.25 | ± 0.50 | dB |
| GOT | Gain Var. over Temp | | -0.015 | | dB/°C |
| Idd | DC Current | | 300 | 350 | mA |

(1) Two tone test @ 13 dBm/tone, centered at 2,400 MHz with 20 MHz separation.

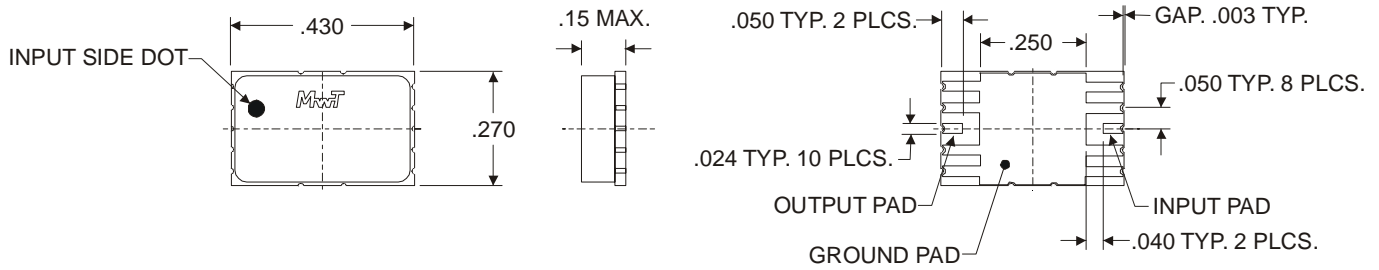


Absolute Maximum Ratings

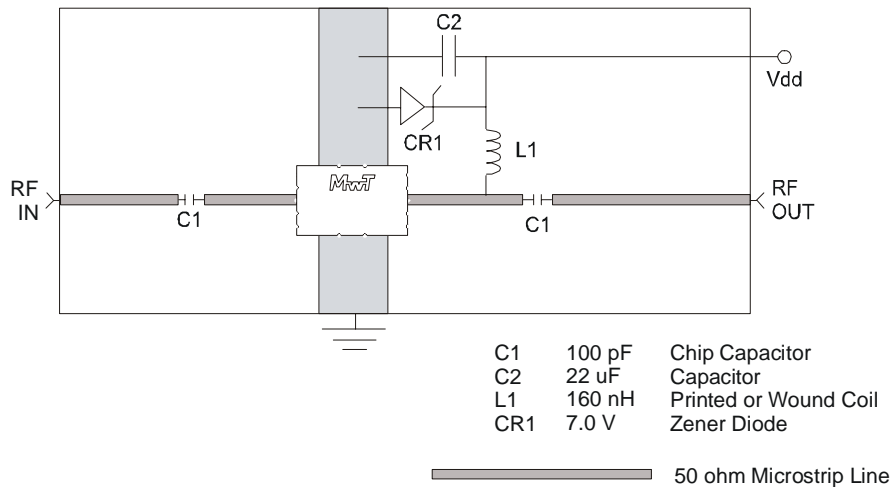
| | |
|------------------------------------|---------------------|
| Maximum Bias Voltage | 8.0 V |
| Maximum continuous RF Input Power | 950 mW |
| Maximum Peak Input Power | 1400 mW |
| Maximum Case Operating Temperature | + 85 °C |
| Maximum Storage Temperature | - 65 °C to + 150 °C |



Outline Diagram

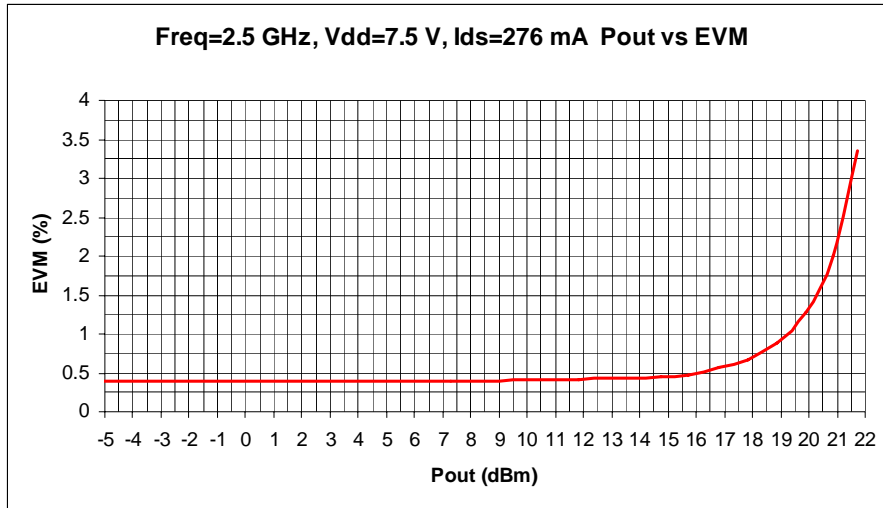


Application Circuit



Typical Performance at 25°C (measurements taken in production test fixture)

The test signal is downlink WiMAX 802.16d and includes the preamble, FCH and QPSK, 16 QAM and 64 QAM. The demodulator is programmed to measure the output power and EVM for 64 QAM. The EVM error is the accumulated error from the modulator and WPS amplifier. The EVM floor for the modulator is 0.4%. At 19 dBm the WPS amplifier contributes less than 1% EVM.



| IEEE 802.16 - 2004 | | | |
|--------------------|---------------|---------------------|-------------|
| Frequency: | 2.5 GHz | Signal Level: | 17.9 dBm |
| Sweep Mode: | Continuous | Trigger Mode: | Power |
| Burst Type: | OFDM DL Burst | Modulation: | 64QAM3/4 |
| | | External Att: | 0 dB |
| | | Trigger Offset: | -10 μ s |
| | | No Of Data Symbols: | 1/2425 |

