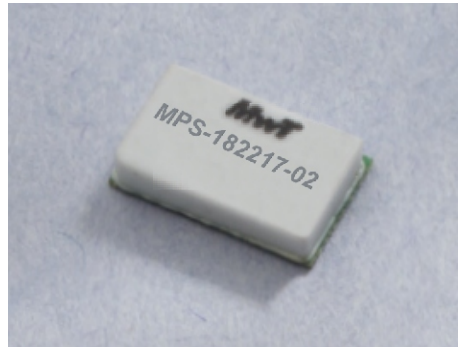




# Linear Amplifier 1800 to 2200 MHz

- $IP_3$ : 45 dBm
- $P_{1dB}$ : 28.5 dBm



Model #: **MPS-182217-02**

## Features

- Leadless Chip Carrier
- +45 dBm  $IP_3$
- +28.5 dBm  $P_{1dB}$
- 14 dB Gain
- Single Positive Bias
- Systems applications for this device are: CDMA, TDMA, GSM, GPRS, EDGE, UMTS (WCDMA, cdma2000, TD-SCDMA)

## Description

The **MPS-182217-02** is a modular amplifier designed to meet the ultralinear transmitter output requirements of worldwide wireless base station systems. The amplifier exhibits an extremely high  $IP_3$  (+45 dBm). The device is self contained with all matching and bias circuitry included. Typical applications for this device include driver stages for single channel and multicarrier feed forward linear amplifiers. It is also useful for a lower power micro-cell amplifier output stage where excellent multitone Intermodulation performance is required.

## Absolute Maximum Ratings

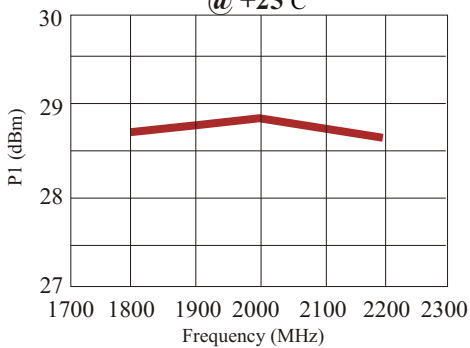
Bias Voltage	8.0V
Continuous RF Input Power	950 mW
Peak Input Power	1400 mW
Case Operating Temperature	+85°C
Storage Temperature	-65°C to +125°C

Electrical at 25°C, V<sub>dd</sub>= 7.5 V, Z<sub>o</sub>= 50 Ω

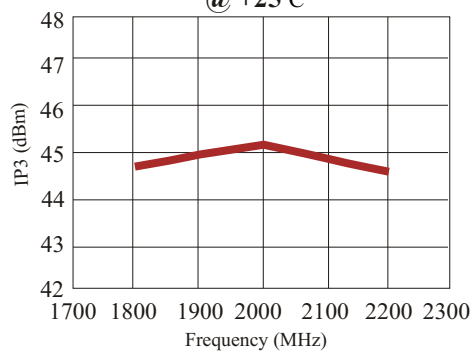
Symbol	Parameter	Min.	Typ.	Max.	Unit
Freq	Frequency Range	1800		2200	MHz
SSG	Small Signal Gain	13.0	14.0		dB
P <sub>1dB</sub>	P out at 1 dB Compression		+28.5		dBm
IP3	Third-order Intercept*	+42.0	+45.0		dBm
VSWR	Input / Output		1.5:1 / 3.0:1		
ΔGOF	Gain Variation over Freq.		±0.25	±0.5	dB
ΔGOT	Gain Variation over Temp.		-0.012		dB/°C
I <sub>dd</sub>	DC Current		380	450	mA

\*Two tone tests at P out = +13 dBm/tone, centered at 2000 MHz with 20 MHz separation

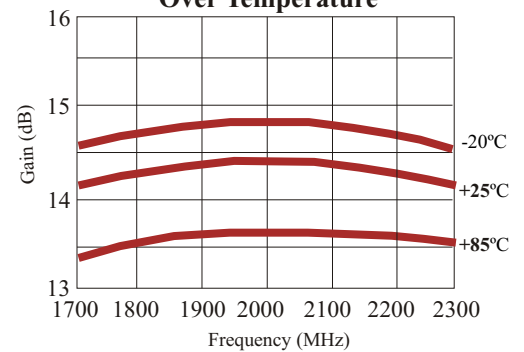
**Output Power at P<sub>1dB</sub>**  
@ +25°C



**IP3\*\* vs. Frequency**  
@ +25°C

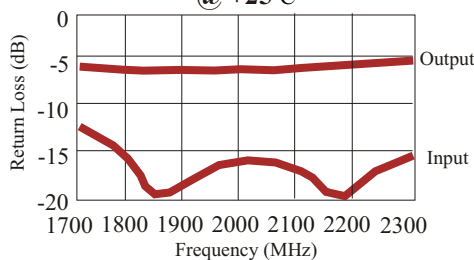


**Gain vs. Frequency Over Temperature**

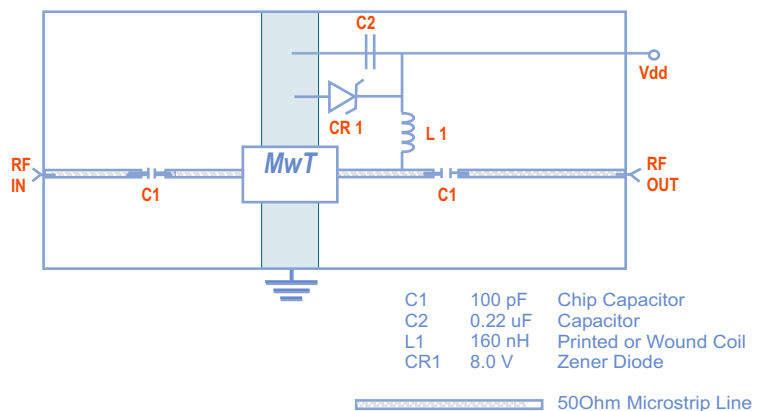


\*\*Two tone tests at P out = +13 dBm/tone, with 20 MHz separation

**Return Loss vs. Frequency**  
@ +25°C



**Application Circuit**



**Outline Drawing**

