



Features

- +45 dBm Typical IP3
- +29 dBm Typical Output Pwr
- 14 dB Typical Gain
- Single Positive Bias
- Surface Mount Package

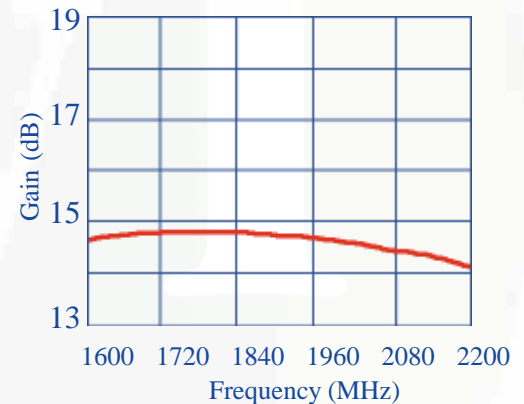
The MPS-213011-82 is a modular amplifier designed to meet the ultralinear transmitter output requirements of worldwide PDC systems. The amplifier exhibits an extremely high IP3 (+45 dBm) relative to the DC power consumed (3 W). The device is self contained with all matching and bias circuitry included. Typical applications for this device include driver stages for single channel and multicarrier feed forward linear amplifiers used in North America PCS and DCS-1800 (GSM) systems. It is also useful for a lower power micro-cell amplifier output stage where excellent multitone intermodulation performance is needed.

Specifications

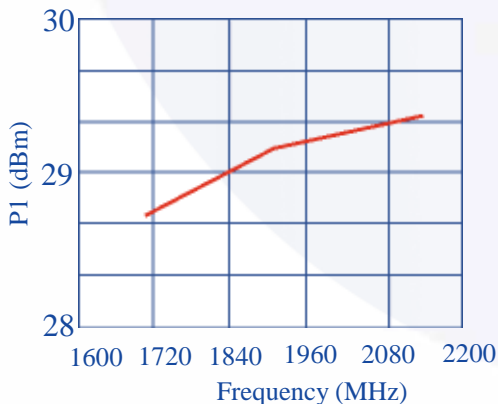
- Electrical at 25°C, V_{dd}= 7.5 V, Z_o= 50 Ω

Symbol	Parameter	Min.	Typical	Max	Unit
Freq	Frequency Range	1700		2100	MHz
SSG	Small Signal Gain	13	14		dB
P1dB	P out at 1 dB Compression		+29.0		dBm
IP3	Third-order Intercept	+42.0	+45.0		dBm
VSWR	Input VSWR		1.5:1/2.2:1		
ΔGOF	Gain Variation over Freq.		+/- 0.25	+/- 0.5	dB
ΔGOT	Gain Variation over Temp.		- 0.01		dB/°C
I _{dd}	DC Current		350	420	mA

Gain vs. Frequency



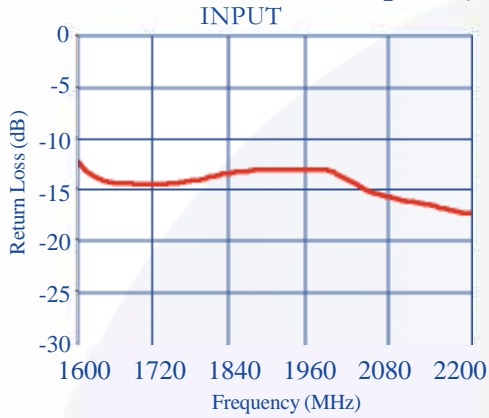
Output Power at P1dB



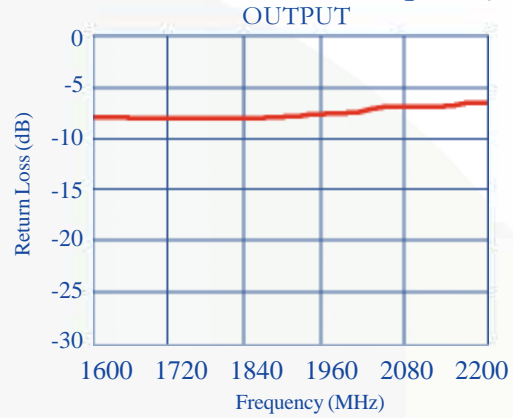
● Absolute Maximum Ratings

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

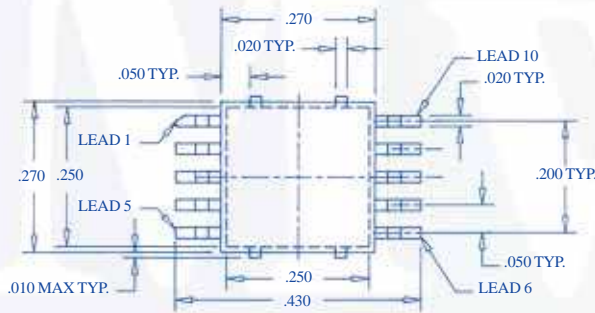
Return Loss vs. Frequency



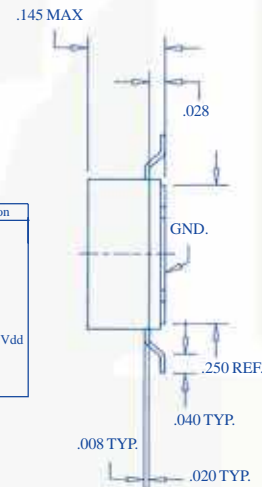
Return Loss vs. Frequency



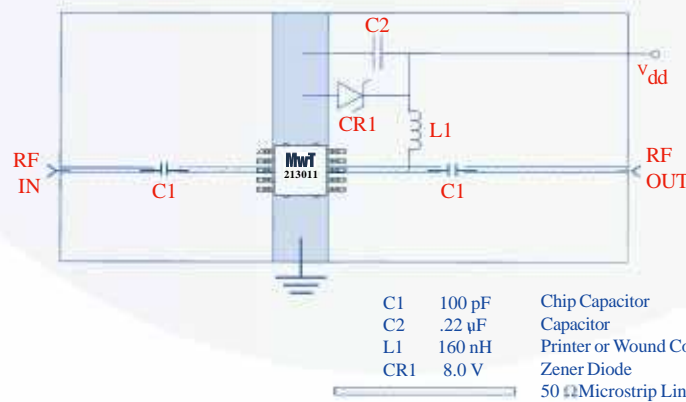
Outline Diagrams



Pin	Connection
1	N/C
2	N/C
3	RF Input
4	NC
5	N/C
6	N/C
7	N/C
8	RF Output, Vdd
9	N/C
10	N/C
Case	Ground



Application Circuit



- C1 100 pF Chip Capacitor
 - C2 .22 μ F Capacitor
 - L1 160 nH Printer or Wound Coil
 - CR1 8.0 V Zener Diode
- 50 Ω Microstrip Line