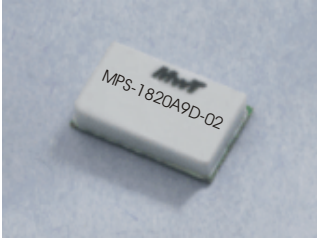


## Features:

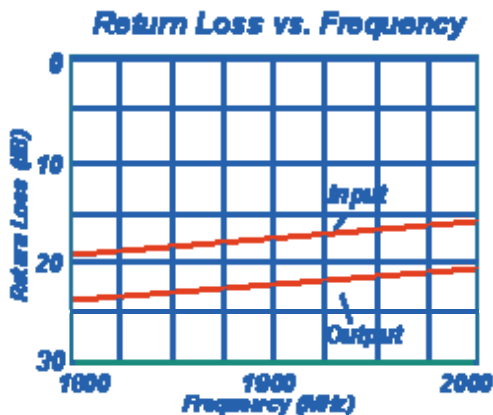
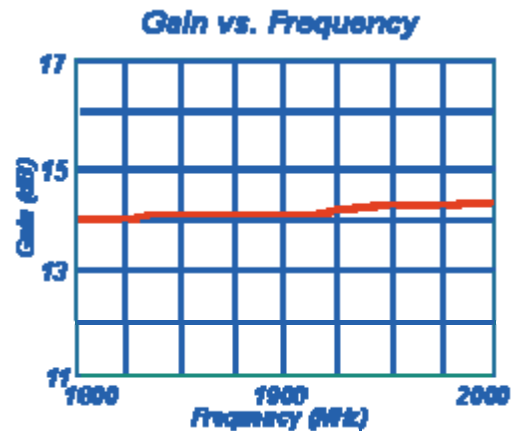


- 1.2:1 Typical Output VSWR
- 14 dB Typical Gain
- +42 dBm Typical IP3
- Single Positive Bias
- +26 dBm Typical P1dB
- Surface Mount Package

The MPS 1820A9D-02 is a high quality linearity modular amplifier designed to meet the ultra-linear transmitter driver requirements for commercial PCS 1800 and PCS 1900 base stations. Key advantages are low inter-modulation performance for multi-carrier or wideband CDMA systems (IMD3 -70 dBc typical) and exceptionally low input/output return loss for ease of integration.

## Electrical Specifications @ 25°C, Vdd = 7.5 V, Zo = 50 ohms

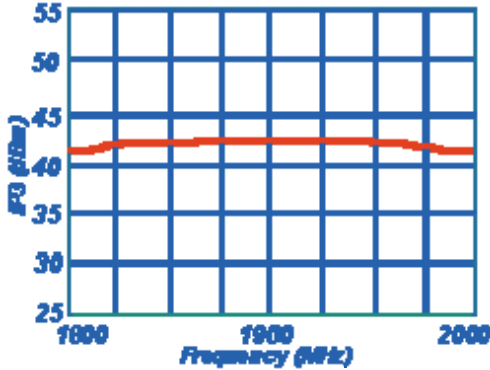
SYMBOL	PARAMETERS	Min	Typical	Max	Unit
Freq.	Frequency Range	1800		2000	MHz
SSG	Small Signal Gain	13	14		dB
P1 dB	Pout at 1 dB Comp Point	+25.0	+26.0		dBm
IP3	Third-Order Intercept	+41.0	+42.0		dBm
VSWR	VSWR (Input/Output)		1.4:1/1.2:1	1.5:1	
GOF	Gain Var. over Frequency		± 0.20	± 0.30	dB
GOT	Gain Var. over Temp		-0.015		dB/°C
Idd	DC Current		230	320	mA



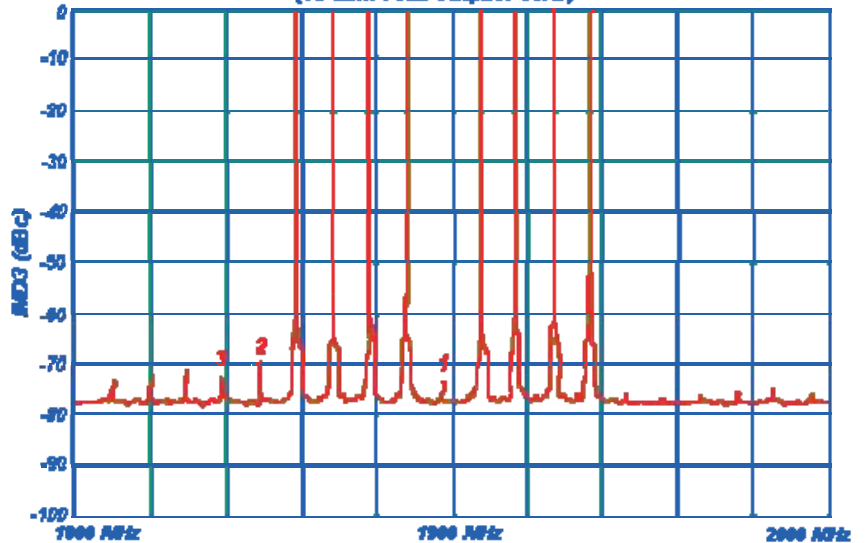
## Absolute Maximum Ratings

Maximum Bias Voltage	8.0 V
Maximum Continuous RF Input Power	+25 dBm
Maximum Peak Input Power	+27 dBm
Maximum Case Operating Temperature	+85 °C
Maximum Storage Temperature	- 65 to + 150 °C

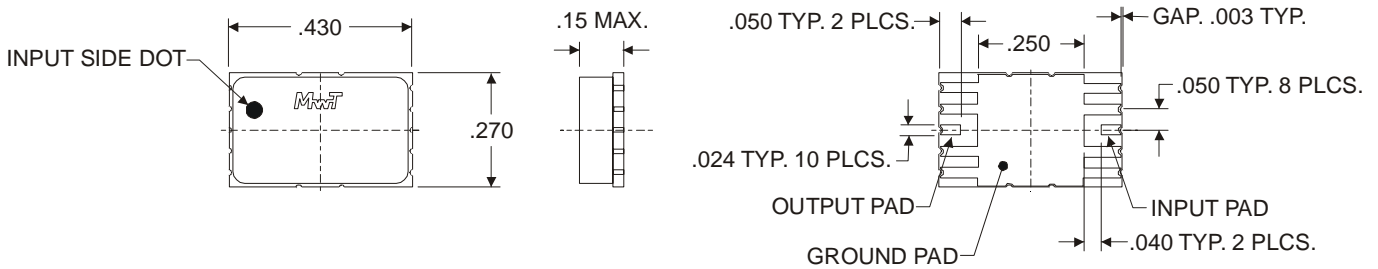
### IP3 at 13 dBm/Tone



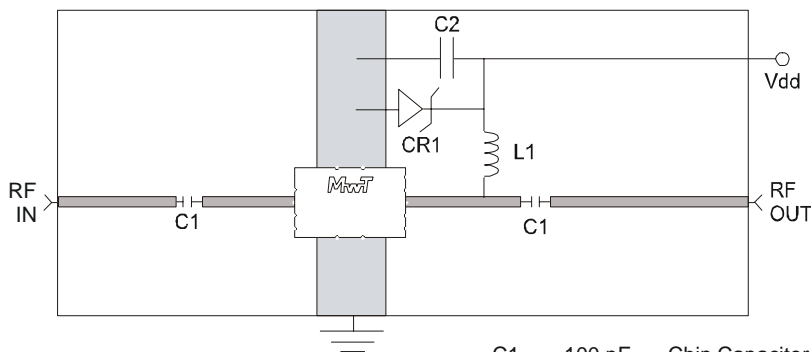
### 8-Tone IMD Testing (10 dBm Total Output Power)



### Outline Diagram



### Application Circuit



- |     |        |                       |
|-----|--------|-----------------------|
| C1  | 100 pF | Chip Capacitor        |
| C2  | 22 uF  | Capacitor             |
| L1  | 160 nH | Printed or Wound Coil |
| CR1 | 7.0 V  | Zener Diode           |

— 50 ohm Microstrip Line