



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

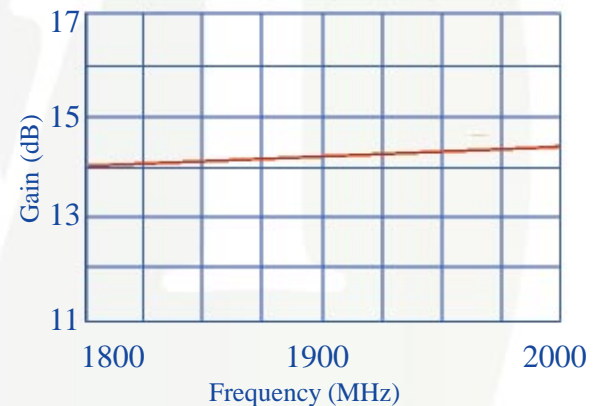
The MPS 1820A9D-82 is a high quality linearity modular amplifier designed to meet the ultralinear transmitter driver requirements for commercial PCS 1800 and PCS 1900 base stations. Key advantages are low intermodulation performance for multi-carrier or wideband CDMA systems (IMD3 -70 dBc typical) and exceptionally low input/output return loss for ease of intergration.

Specifications

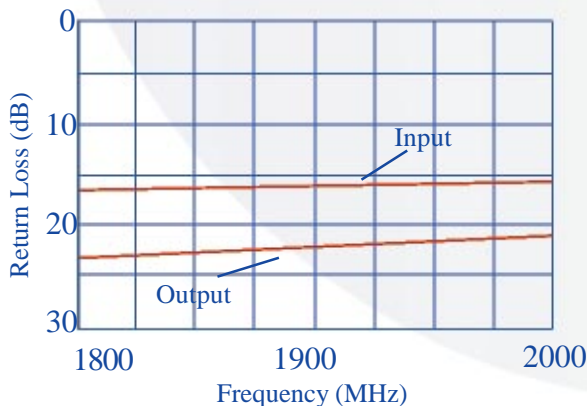
- Electrical at 25°C, V_{dd}= 7.5 V, Z_o= 50 Ω

Symbol	Parameter	Min.	Typical	Max	Unit
Freq	Frequency Range	1800		2000	MHz
SSG	Small Signal Gain	13	14		dB
P1dB	P out at 1 dB Compression	+25.0	+26.0		dBm
IP3	Third-order Intercept	+41.0	+42.0		dBm
VSWR	VSWR, In/Out		1.4:1/1.2:1	1.5:1	
ΔGOF	Gain Variation over Freq.		+/- 0.20	+/- 0.30	dB
ΔGOT	Gain Variation over Temp.		- 0.015		dB/°C
I _{dd}	DC Current		230	320	mA

Gain vs. Frequency



Return Loss vs. Frequency



● 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°C to +150°C



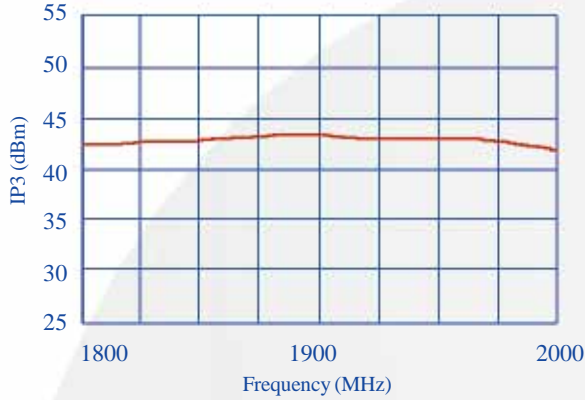
MPS-1820A9D-82

1800 to 2000 MHz Linear Amplifier

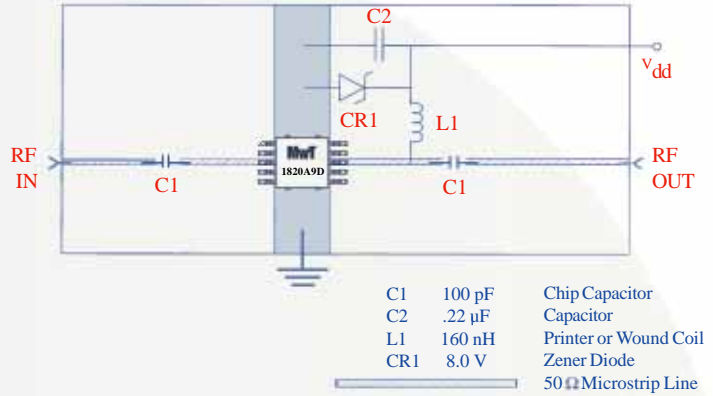
www.mwtinc.com

Email: info@mwtinc.com

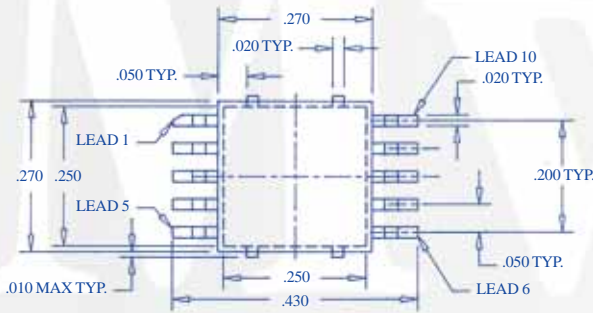
IP3 at 13 dBm/Tone



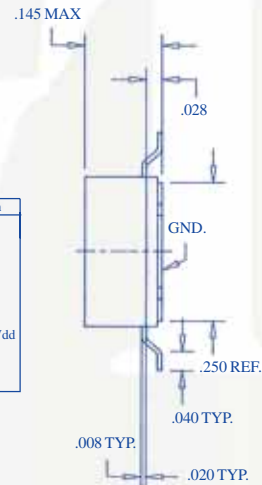
Application Circuit



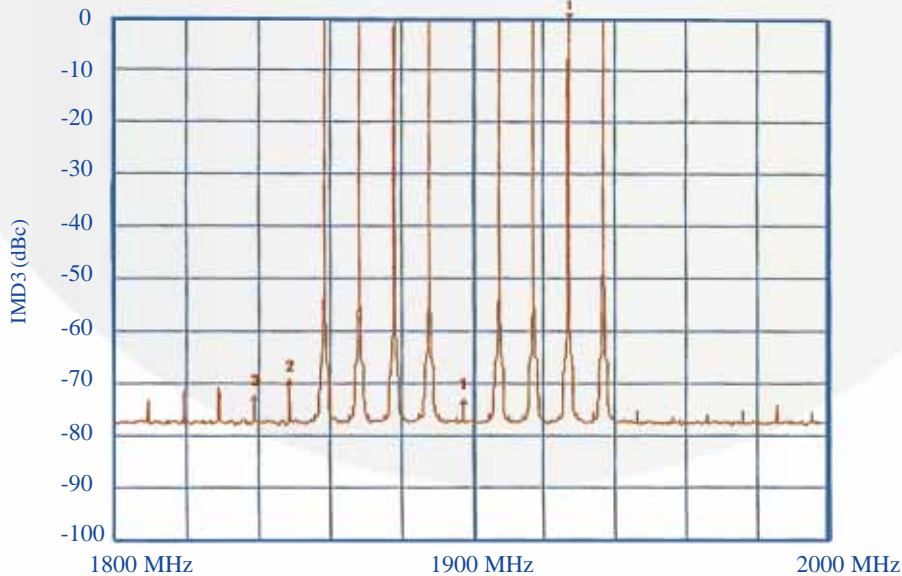
Outline Diagrams



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



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



4268 Solar Way • Fremont • California 94538 • Phone: (510) 651-6700 • Fax: (510) 651-2208

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