MPS-0425A9D-82

400 to 2500 MHz Linear Amplifier

Features:

- 1.2:1 Typical Output VSWR
- 14 dB Typical Gain
- +42 dBm Typical IP3
- Single Positive Bias
- High P1dB +25 dBm Typ (.4-2.1GHz)
- Surface Mount Package

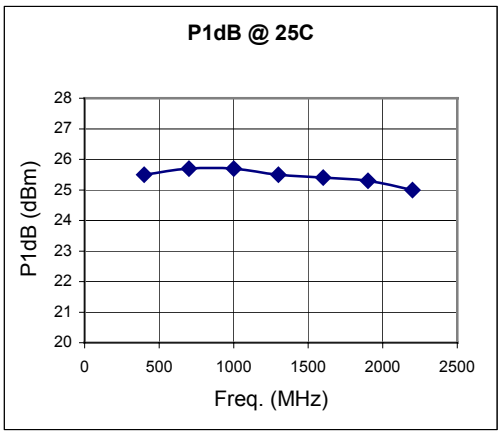
The MPS-0425A9D-82 is a high linearity modular amplifier designed to meet the ultra-linear transmitter driver requirements for commercial AMPS, IS-54 and GSM base stations. Key advantages are low intermodulation performance for multi-carrier or wideband CDMA systems and exceptionally low input/output return loss for ease of integration.

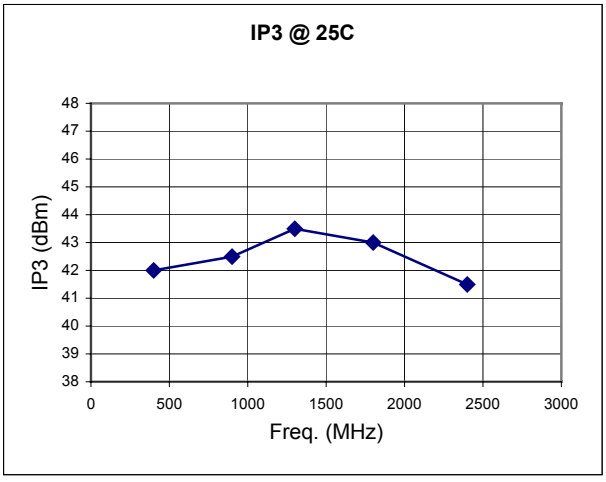
Specifications

Electrical at 25°C, Vdd = 7.5 V, Zo = 50 ohms

SYMBOL	PARAMETERS	Min	Typical	Max	Unit
Freq.	Frequency Range	400		2500	MHz
SSG	Small Signal Gain	13.0	14.0		dB
P1 dB	Pout at 1 dB Comp Point 0.4 – 2.1 GHz 2.1 – 2.5 GHz	+24.0	 +25.0 +23.0		dBm
IP3 (1)	Third-Order Intercept	+40.0	+42.0		dBm
VSWR	Input VSWR Output VSWR		1.4:1 1.2:1	1.7:1 1.7:1	
GOF	Gain Var. over Frequency *(over 200MHz BW)*		± 0.5 ± 0.2	±0.8 ±0.5	dB
GOT	Gain Var. over Temp		-0.015		dB/°C
Idd	DC Current		300	330	mA

(1) Two tone test @ 13 dBm/tone, centered at 1.5 GHz with separation of 10 MHz.





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

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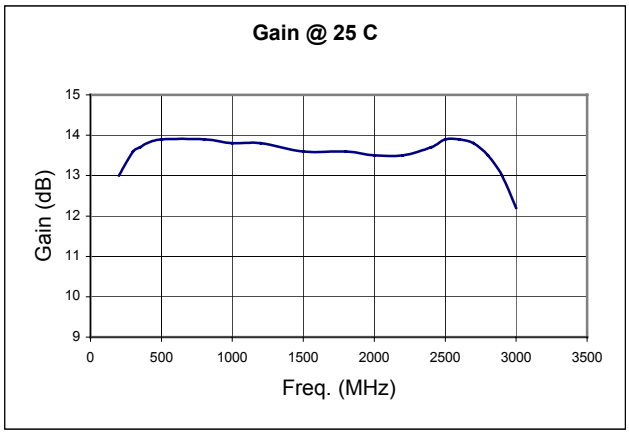
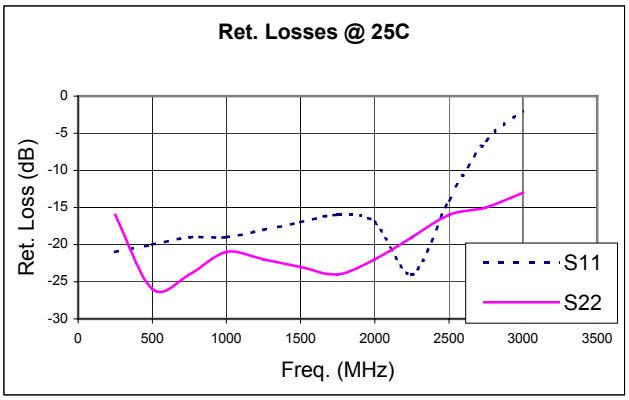
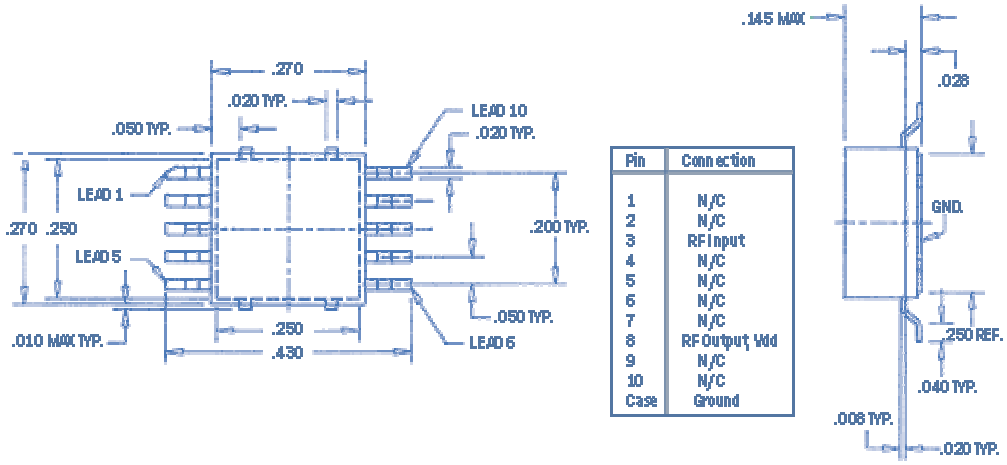


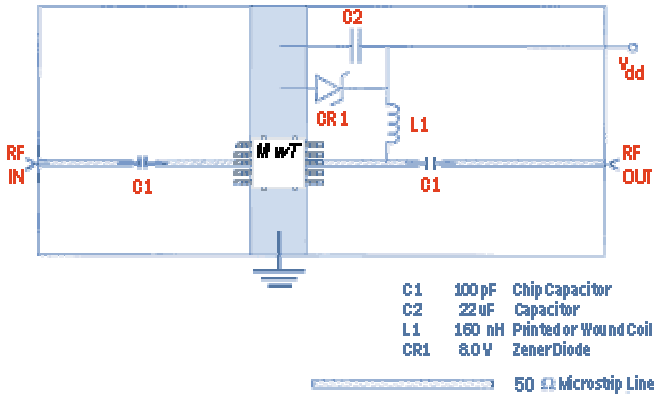


Outline Diagram



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

Application Circuit



C1	100 pF	Chip Capacitor
C2	22 uF	Capacitor
L1	160 nH	Printed or Wound Coil
CR1	8.0 V	Zener Diode
	50 Ω	Microstrip Line

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