

Features

- +38 dBm Typical IP3
- +27 dBm Typical P1dB
- 13 dB Typical Gain
- 12 Volt Bias
- Surface Mount Package or Half Flange Package

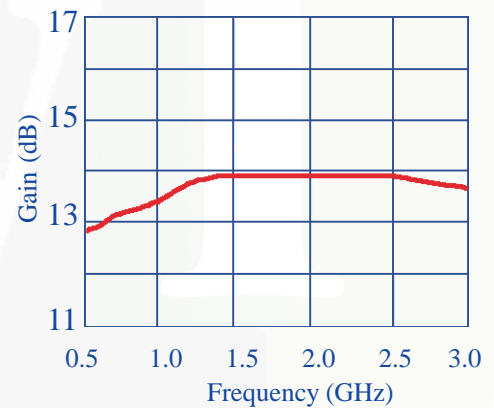
The MPS082508-85 is a broadband, self-biased GaAs FET amplifier. It is ideal for digital communications applications where excellent linearity is required. The device may be directly connected to a 50 ohm microstrip circuit without additional matching elements. This part is not recommended for new designs.

Specifications

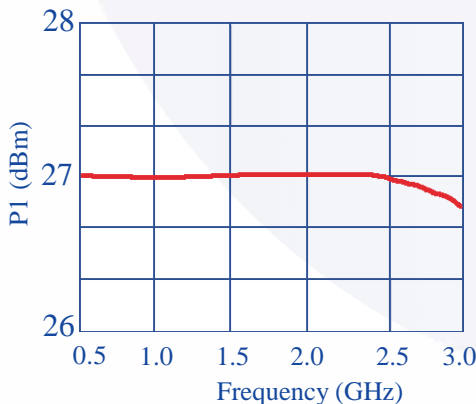
- Electrical at 25°C, V_{dd}=12.0 V, Z_o= 50Ω

Symbol	Parameter	Min.	Typical	Max	Unit
Freq	Frequency Range	800		2500	MHz
SSG	Small Signal Gain	11	13	16	dB
P1dB	P out at 1 dB Compression	+26.0	+27.0		dBm
IP3	Third-order Intercept	+36.0	+38.0		dBm
VSWR	Input VSWR		2.0:1	2.5:1	
ΔGOF	Gain Variation over Freq.		+/- .5	+/- 1.0	dB
ΔGOT	Gain Variation over Temp.		-.01		dB/°C
I _{dd}	DC Current		200	300	mA
NF	Noise Figure		5.0		dB
PAE	Power Added Efficiency		25		%

Gain vs. Frequency



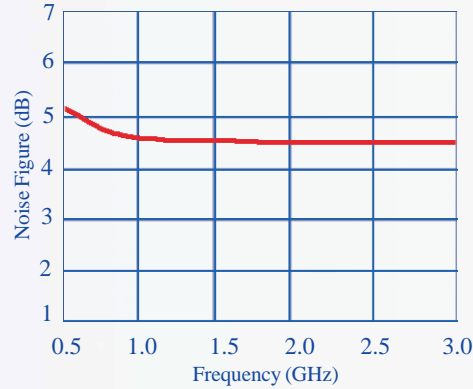
Output Power at P1dB



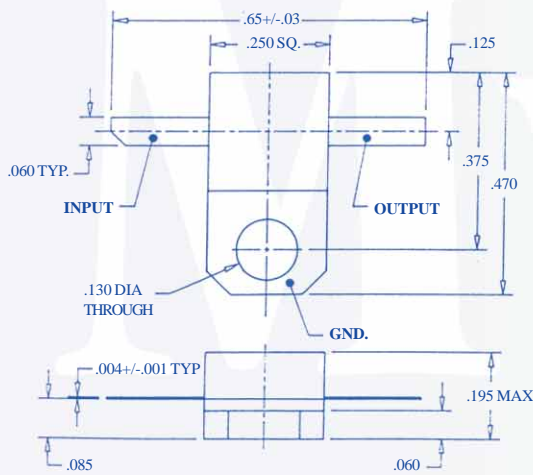
• Absolute Maximum Ratings

Maximum Bias Voltage	13.0 V
Maximum Continuous RF Input Power	480 mW
Maximum Peak Input Power	720mW
Maximum Case Operating Temperature	+85°C
Maximum Storage Temperature	-65°C to +150°C

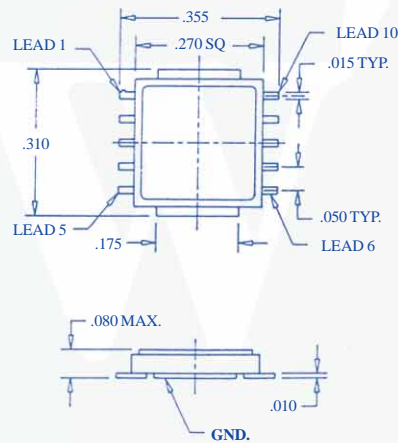
Noise Figure vs. Frequency



Outline Diagrams



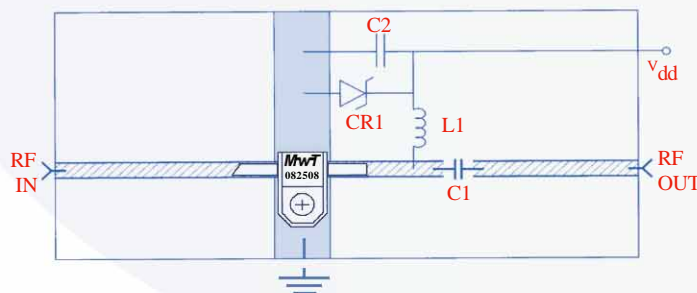
Package 85



Package 86 (HERMETIC)

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, V _{dd}
9	N/C
10	N/C
Case	Ground

Application Circuit



- C1 100 pF Chip Capacitor
- C2 .22 pF Capacitor
- L1 160 nH Printer or Wound Coil
- CR1 13.0 V Zener Diode
- 50 Ω Microstrip Line