MPS-172208-85

1900 to 2000 MHz Self Biased GaAs FET Amplifier

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Features

- +38 dBm Typical IP3
- +26 dBm Typical P1dB
- 13 dB Typical Gain
- 7.5 Volt Bias
- 25% Power Added Effeciency

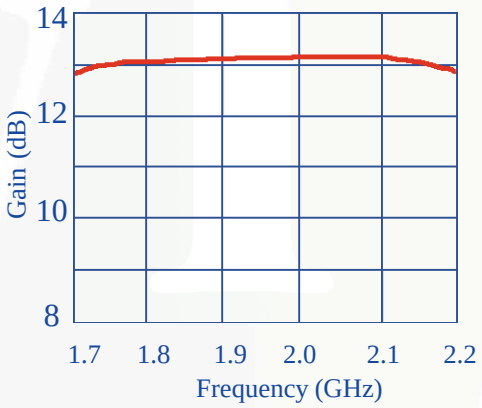
The MPS-172208-82 is a narrowband, self-biased GaAs FET amplifier designed for digital communications applications where excellent linearity is required. Typical applications include driver stages for DCS-1800, PCS-1900, PHS and DECT systems. The amplifier is directly connected to a 50 ohm microstrip circuit without additional matching elements.

Specifications

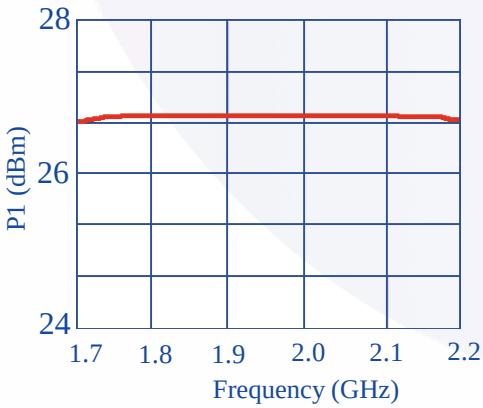
- Electrical at 25°C, Vdd= 7.5 V, Zo= 50 Ω

Symbol	Parameter	Min.	Typical	Max	Unit
Freq	Frequency Range	1900		1000	MHz
SSG	Small Signal Gain	12	13		dB
P1dB	P out at 1 dB Compression	+25.0	+26.0		dBm
IP3	Third-order Intercept		+38.0		dBm
NF	Noise Figure		5.0		dB
VSWR	Input VSWR		2.0:1	2.5:1	
ΔGOF	Gain Variation over Freq.		+/-0.2	+/-0.5	dB
ΔGOT	Gain Variation over Temp.			-.016	dB/°C
Idd	DC Current		380	450	mA
PAE	Power Added Efficiency		25		%

Gain vs. Frequency



Output Power at P1dB



- Absolute Maximum Ratings

Maximum Bias Voltage	8.0 V
Maximum Continuous RF Input Power	480 mW
Maximum Peak Input Power	720 mW
Maximum Case Operating Temperature	+85°C
Maximum Storage Temperature	-65°C to +150°C

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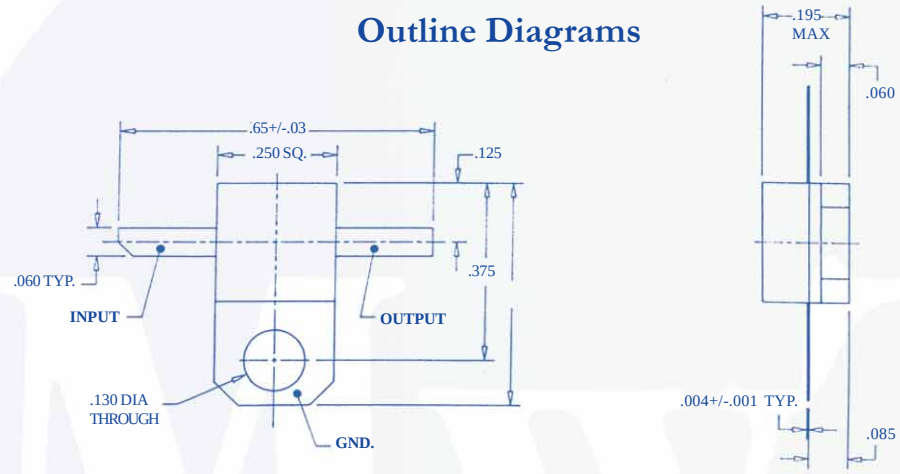
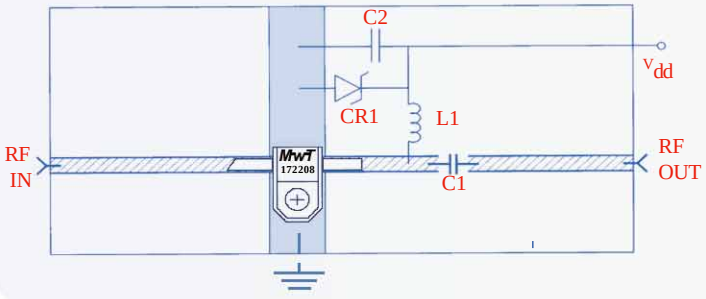
Outline Diagrams



Application Circuit



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