MPS-343717-02

3400 to 3700 MHz Linear Amplifier
Data Sheet

Features:

- **45 dBm IP3**
- **12.5 dB Gain**
- **+28.5 dBm P1dB**
- **Single Positive Bias**
- **Leadless Surface Mount Package**

Description:

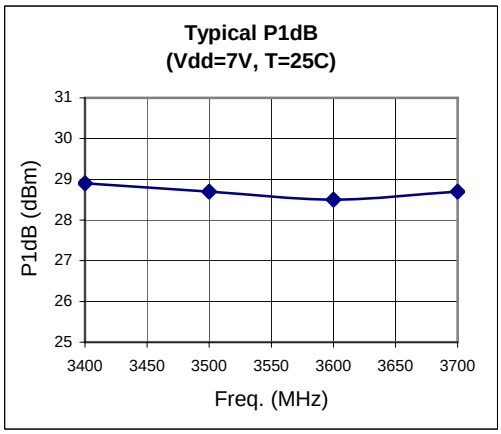
The MPS-343717-02 is a low cost high linearity modular amplifier designed to meet the ultra-linear transmitter driver requirements for commercial 2G, 2.5G, 3G, GSM, TDMA, EDGE, UMTS, WCDMA, CDMA2000, and TD-SCDMA applications. Key advantages are low intermodulation performance for multi-carrier and CDMA systems and exceptionally low input/output return loss for ease of integration.

Electrical Specifications:

- *@ 25°C, Vdd = 6.0 to 7.0 V*, Zo = 50 ohms*

SYMBOL	PARAMETERS	Min	Typical	Max	Unit
Freq.	Frequency Range	3400		3700	MHz
SSG	Small Signal Gain	11.7	12.5		dB
P1 dB	Pout at 1 dB Comp Point		+28.5		dBm
IP3 (1)	Third-Order Intercept	42.0	45.0		dBm
VSWR	VSWR (Input/Output)		1.5:1/2.5:1		
GOF	Gain Var. over Frequency		± 0.3	± 0.6	dB
GOT	Gain Var. over Temp		-0.015		dB/°C
Idd	DC Current		380	450	mA
Rth	Thermal Resistance		28		°C/W

(1) Two tone test @ 13 dBm/tone, centered at 3,500 MHz with 20 MHz separation.
(2) Use Vds = 6V for calculation of DC dissipation.
* Bias range for best operation.



Absolute Maximum Ratings:

Maximum Bias Voltage	8.0 V
Maximum continuous RF Input Power	950 mW
Maximum Peak Input Power	1400 mW
Maximum Case Operating Temperature	+ 85 °C
Maximum Storage Temperature	- 65 °C to + 150 °C

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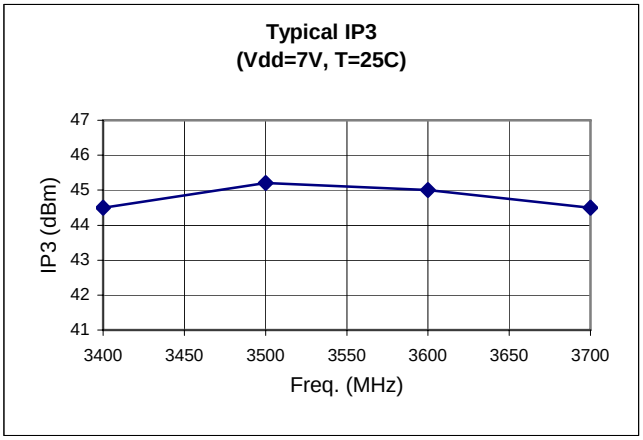
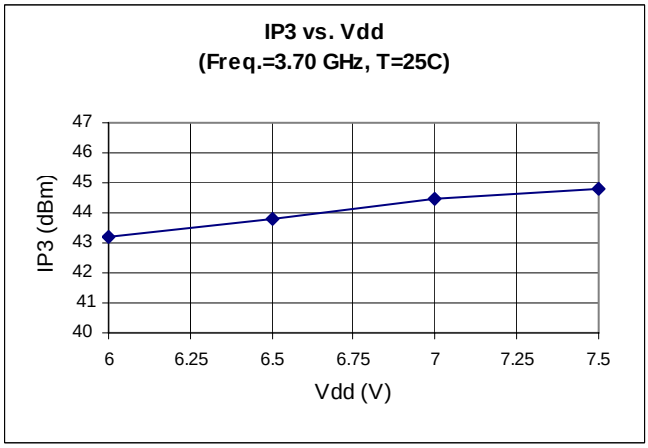
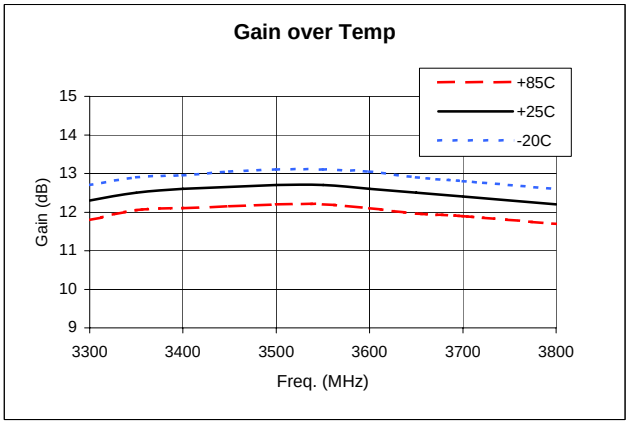
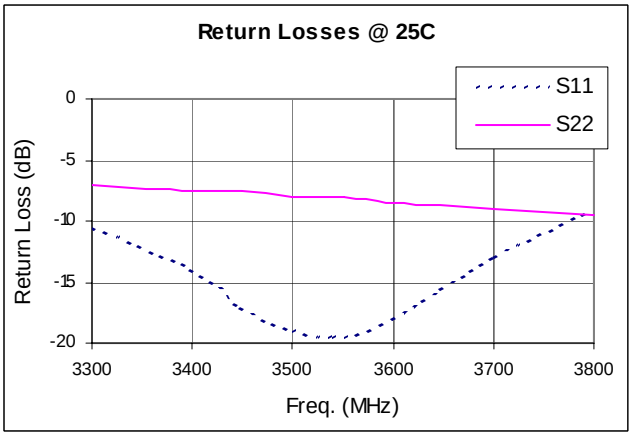
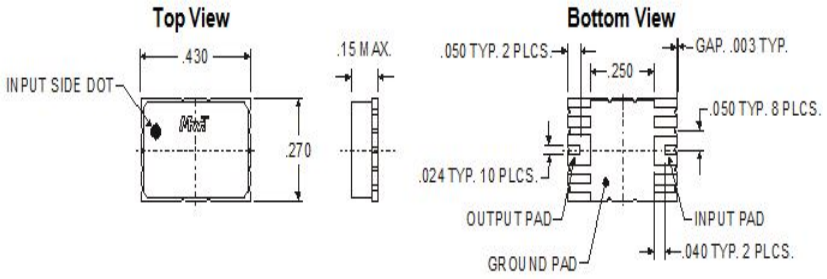








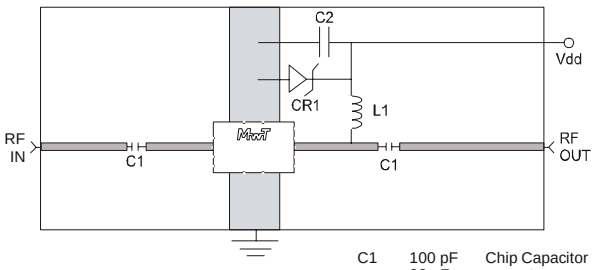
Outline Diagram



All dimensions are in inches

Pin Designation (Top View)			
Pin 1 (DOT Top Left)	GND	Pin 10	GND
Pin 2	GND	Pin 9	GND
Pin 3	RF In/Vg	Pin 8	RF Out/Vdd
Pin 4	GND	Pin 7	GND
Pin 5	GND	Pin 6	GND

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

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