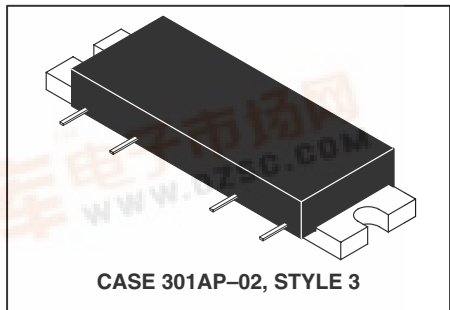
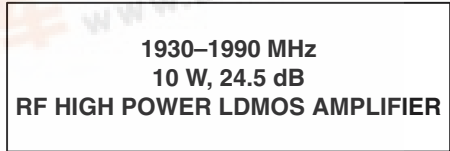


The RF Line PCS Band RF Linear LDMOS Amplifier



Designed for Class AB amplifier applications in 50 ohm systems operating in the PCS frequency band. A silicon FET design provides outstanding linearity and gain. In addition, the excellent group delay and phase linearity characteristics are ideal for digital modulation systems, such as TDMA and CDMA.

- Typical CDMA Performance: 1960 MHz, 28 Volts
 IS-95 CDMA Pilot, Sync, Paging, Traffic Codes 8 Through 13
- Adjacent Channel Power: -51 dBc @ 30 dBm, 885 kHz Channel Spacing
- Power Gain: 24.5 dB Min (@ f = 1960 MHz)
- Excellent Phase Linearity and Group Delay Characteristics
- 0.2 dB Typical Gain Flatness
- Ideal for Feedforward Base Station Applications

MAXIMUM RATINGS (T_C = 25°C unless otherwise noted)

Rating	Symbol	Value	Unit
DC Supply Voltage	V _{DD}	30	Vdc
RF Input Power (Single Carrier CW)	P _{in}	+20	dBm
Storage Temperature Range	T _{stg}	-40 to +100	°C
Operating Case Temperature Range	T _C	-20 to +100	°C
Quiescent Bias Current	I _{DQ}	750	mA

ELECTRICAL CHARACTERISTICS (V_{DD} = 28 Vdc, V_{BIAS} ≅ 8 V Set for Supply Current of 600 mA, T_C = 25°C, 50 Ω System)

Characteristic	Symbol	Min	Typ	Max	Unit
Supply Current	I _{DD}	—	600	—	mA
Power Gain (f = 1960 MHz)	G _p	24.5	25	—	dB
Gain Flatness (f = 1930–1990 MHz)	G _F	—	0.2	0.5	dB
Power Output @ 1 dB Comp. (f = 1960 MHz)	P _{1dB}	—	41.5	—	dBm
Input VSWR (f = 1930–1990 MHz)	VSWR _{in}	—	1.5:1	2:1	
Noise Figure (f = 1960 MHz)	NF	—	8	10	dB
Adjacent Channel Power Rejection @ 30 dBm, 1.23 MHz BW, 885 kHz Channel Spacing	ACPR	—	-58	-51	dBc

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TYPICAL CHARACTERISTICS

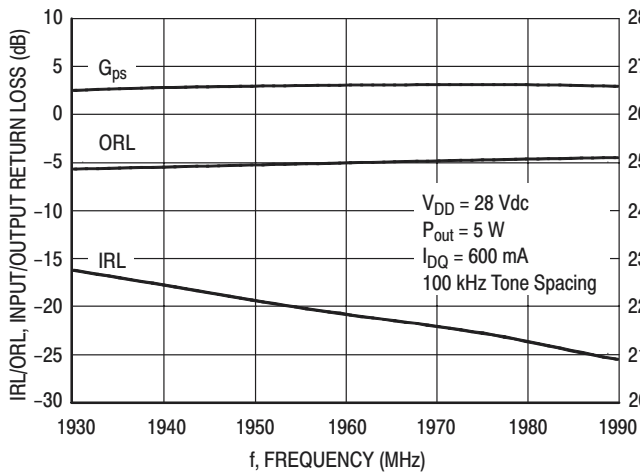


Figure 1. Two-Tone Power Gain, Input Return Loss and Output Return Loss versus Frequency

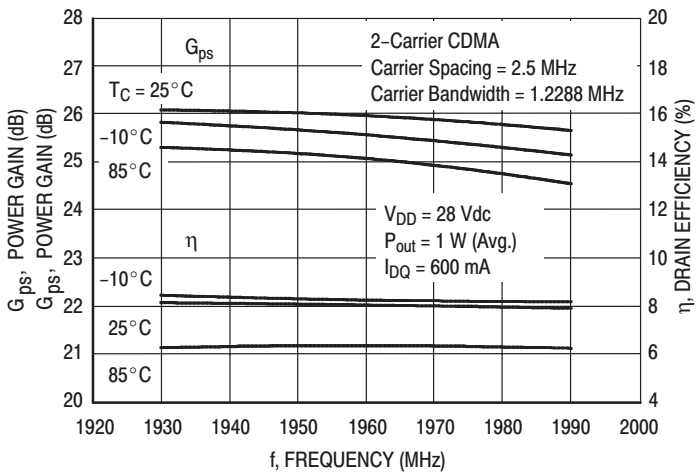


Figure 2. 2-Carrier CDMA Power Gain and Efficiency versus Frequency

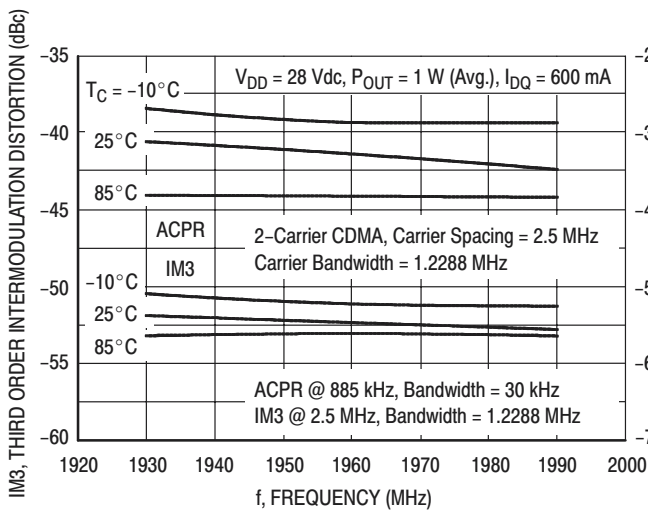


Figure 3. 2-Carrier CDMA IM3 and ACPR versus Frequency

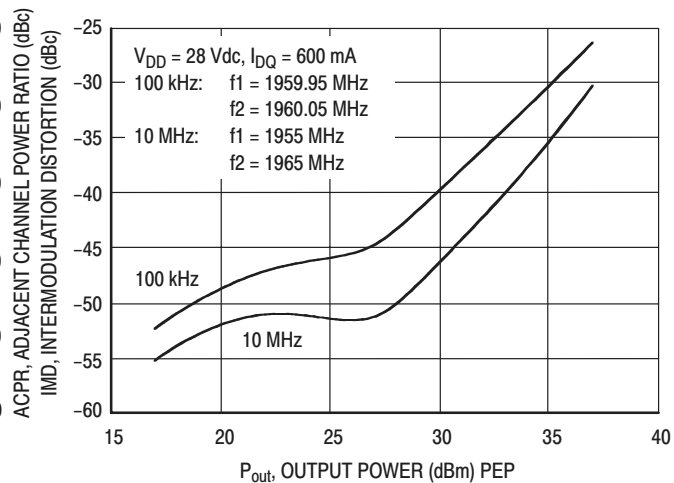


Figure 4. Two-Tone CDMA IMD versus Output Power

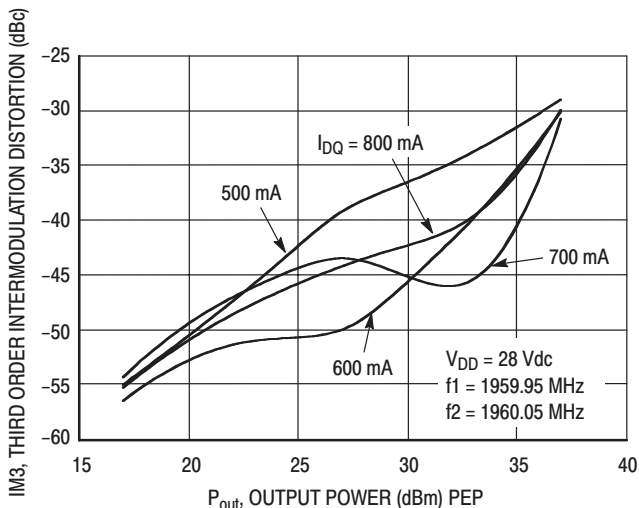


Figure 5. Third Order Intermodulation Distortion versus Output Power

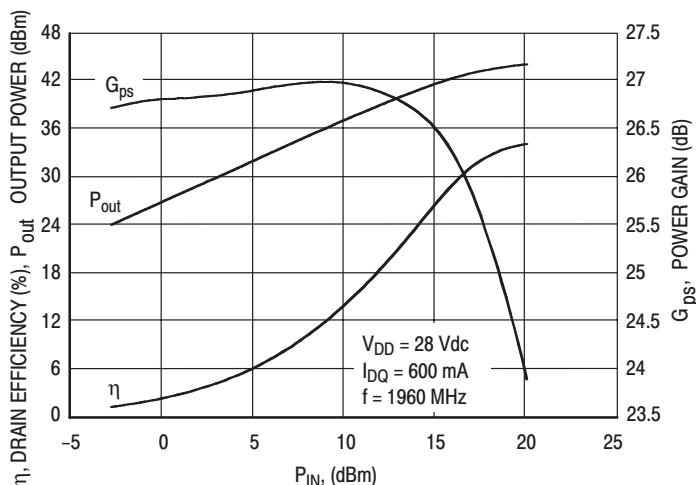


Figure 6. CW Output Power, Efficiency and Gain versus Input Power

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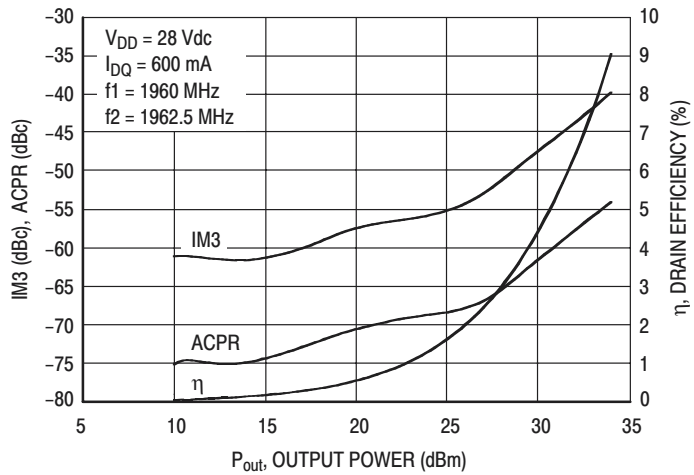
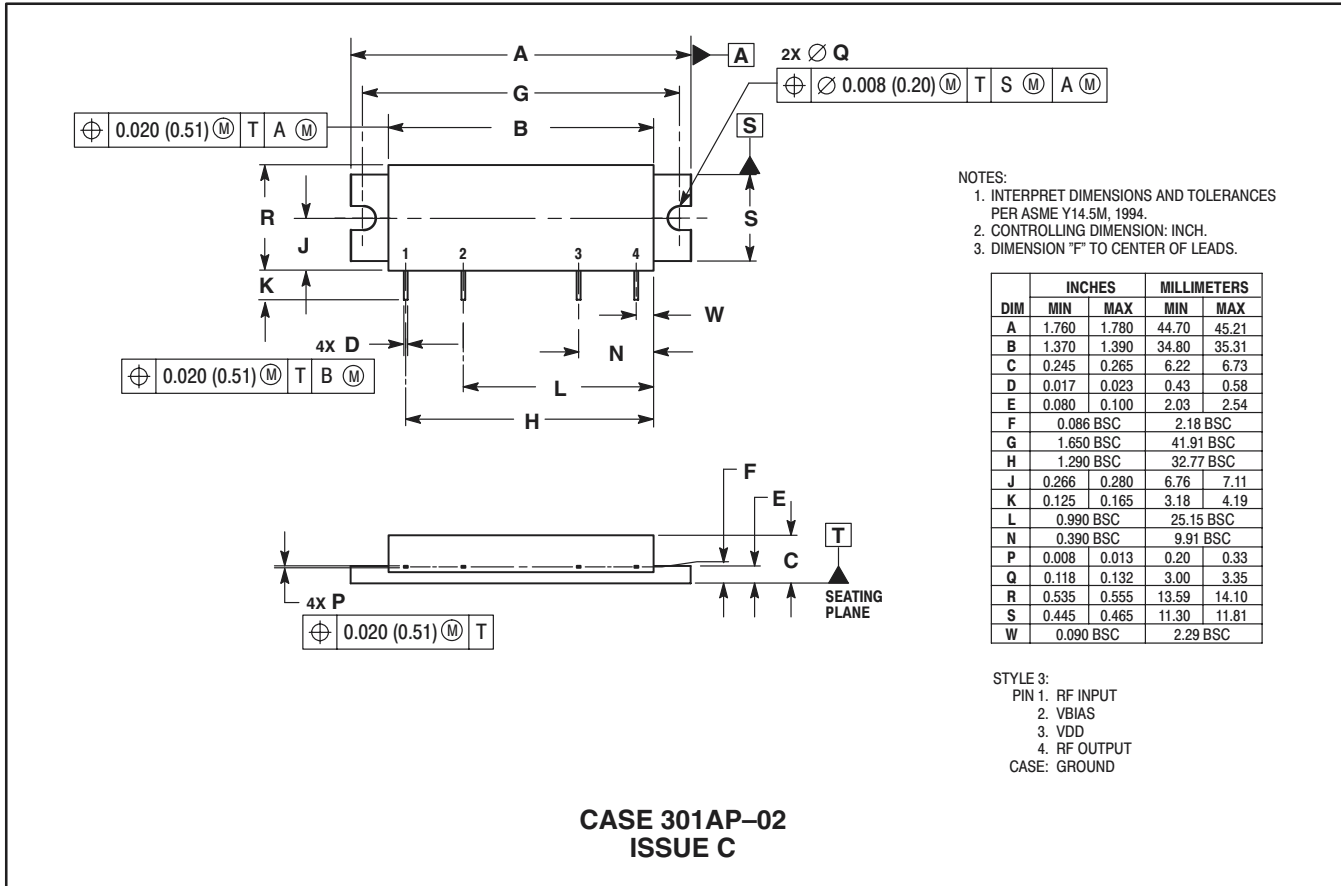


Figure 7. 2–Carrier CDMA ACPR, IM3 and Efficiency versus Output Power

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PACKAGE DIMENSIONS



NOTE: V_{DD} (Pin 3) should always be applied before V_{BIAS} (Pin 2).

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