AMP-1200HPBX
1240 MHz TV LINEAR AMPLIFIER 22 W IN A CLASS

This is a Military Grade tested high quality professional 22 W RF amplifier that requires minimum driving input of 250 mW for the maximum of 22 W RF power output. It is broadband in 1240 MHz- 1300 MHz and doesn't require any tuning or adjusting. Power supply is 12.6 V/ 8 A max. Gain is 26 dB. Input / Output 50 ohms impedance. Class of operation is AB. This amplifier is excellent for TV transmitters in 1240 MHz range. An extra cooling is required.

Board size: 6.0 " X 4.0" X 2.0 "

Technical Specifications	
BATTERY POWER	12 V- 14 V
RF POWER	22 W
CURRENT CONSUMPTION	7 A
RF IN/OUT	50 ohms
INPUT POWER	250 mW Max
FREQ. RANGE:	1240 MHz- 1300 MHz
HIGH GAIN	26 dB / 1200 MHz
SIZE:	6.0" X 4.0" X 2.0"
WIDEBAND OPERATION	
LINEAR AB CLASS	

RF-links San Diego labs

MODEL
AMP-1200HPBX

- DRIVING INPUT FIXED 180 mW (22.6 dBm) +-5% *
- TEMPERATURE SETUP +24*C
- POWER SUPPLY 12VDC max 7A CONSUMPTION (MEASURED AT 11.798VDC)
- FREQUENCIES MEASURED: 1.25 GHz, 1.268 MHz, 1.299 GHz, 1.32 GHz (not shown)
- POWER OUTPUTS AS FOLLOWS: 21.93W, 21.03W, 21.52W, 17.9W
- STANDBY CURRENT (NO DRIVING) 3.75A

*NOT INCLUDING CABLE AND ADAPTER RF LOSS

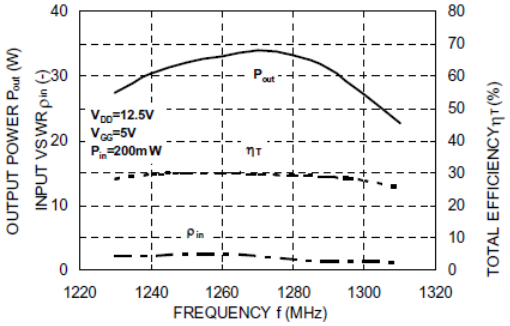
RF MOSFET Amplifier Module for
12.5-volt mobile radios that operate in the 1.24- to 1.30-GHz range
• Enhancement-Mode MOSFET Transistors
(IDD□0 @ VDD=12.5V, VGG=0V)
• Pout>18W, □T>20% @ VDD=12.5V, VGG=5V, Pin=200mW
• Broadband Frequency Range: 1.24-1.30GHz
• Low-Power Control Current IGG=1mA (typ) at VGG=5V (tuned internally to 4.25V)

ELECTRICAL CHARACTERISTICS (T_{case}=+25°C, Z_G=Z_L=50Ω, unless otherwise specified)

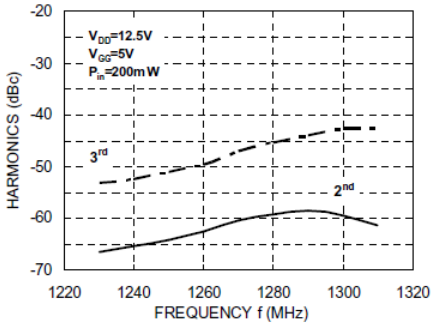
SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
f	Frequency Range		1.24	-	1.30	GHz
P_{out}	Output Power	V_{DD}=12.5V, V_{GG}=5V, P_{in}=200mW	18	-	-	W
η_T	Total Efficiency		20	-	-	%
$2f_o$	2nd Harmonic		-	-	-35	dBc
ρ_{in}	Input VSWR		-	-	3:1	—
I_{GG}	Gate Current		-	1	-	mA
Gp	Linear power gain	V_{DD}=12.5V, V_{GG}=5V, P_{in}=10dBm	23	-	-	dB
IMD3	3rd Inter Modulation Distortion	V_{DD}=12.5V, V_{GG}=5V Delta f=f1-f2=10KHz P_{out}=14W P.E.P. (P_{in} control)	-	-	-20	dBc
IMD5	5th Inter Modulation Distortion		-	-	-25	dBc
—	Stability	V_{DD}=10.0-15.2V, P_{in}=100/200/300mW, P_{out}<25W (V_{GG} control), Load VSWR=3:1	No parasitic oscillation			—
—	Load VSWR Tolerance	V_{DD}=15.2V, P_{in}=200mW, P_{out}=18W (V_{GG} control), Load VSWR=20:1	No degradation or destroy			—

TYPICAL PERFORMANCE (T_{case}=+25°C, Z_G=Z_L=50Ω, unless otherwise specified)

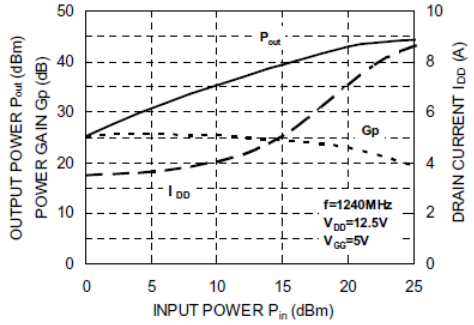
OUTPUT POWER, TOTAL EFFICIENCY, and INPUT VSWR versus FREQUENCY



2nd, 3rd HARMONICS versus FREQUENCY



OUTPUT POWER, POWER GAIN and DRAIN CURRENT versus INPUT POWER



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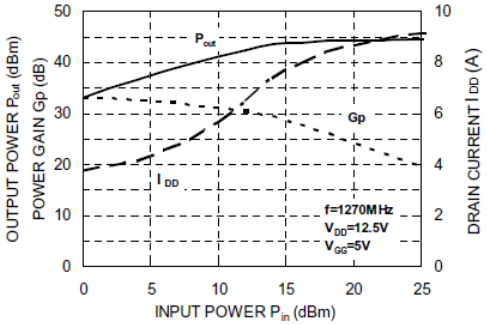

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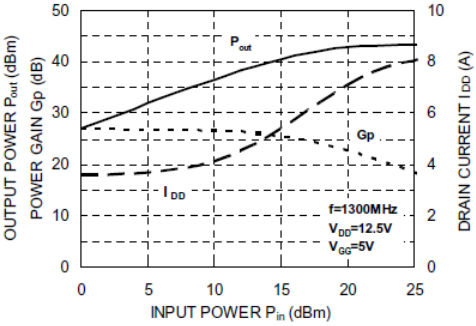
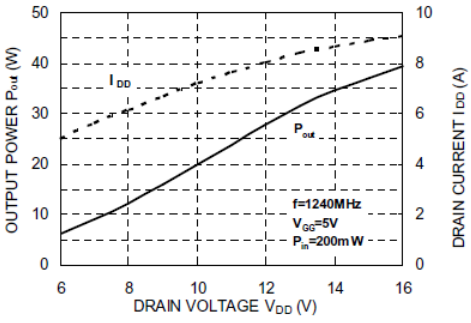
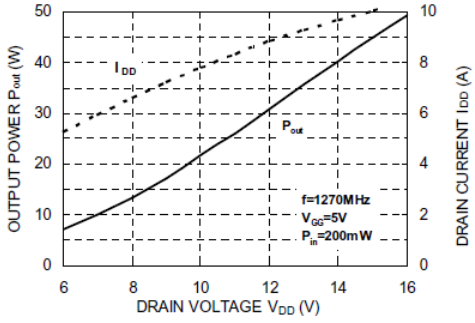


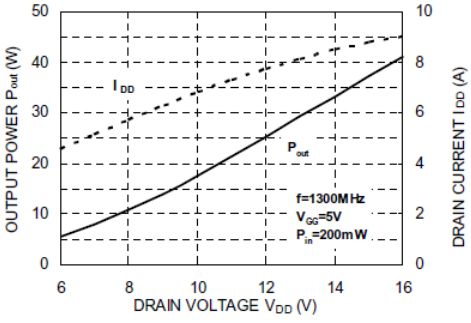
OUTPUT POWER and DRAIN CURRENT versus DRAIN VOLTAGE



OUTPUT POWER and DRAIN CURRENT versus DRAIN VOLTAGE

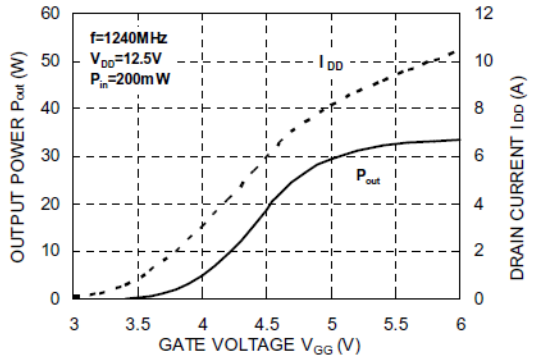


OUTPUT POWER and DRAIN CURRENT versus DRAIN VOLTAGE

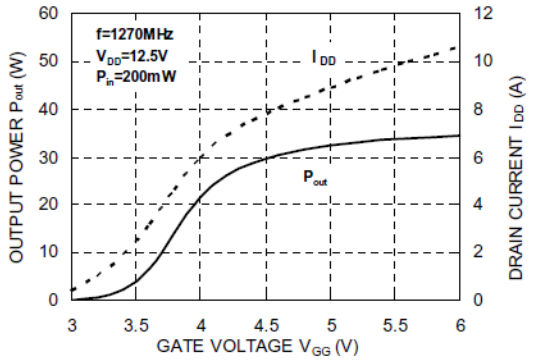


TYPICAL PERFORMANCE (T_{case}=+25°C, Z_G=Z_L=50Ω, unless otherwise specified)

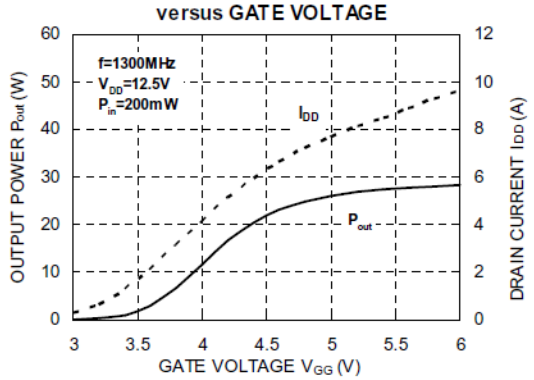
OUTPUT POWER and DRAIN CURRENT versus GATE VOLTAGE



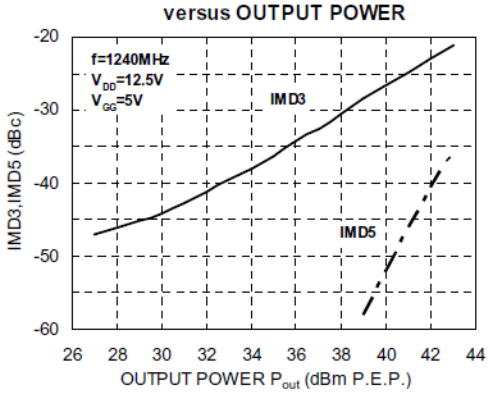
OUTPUT POWER and DRAIN CURRENT versus GATE VOLTAGE



OUTPUT POWER and DRAIN CURRENT versus GATE VOLTAGE



3rd,5th.INTERMODULATION DISTORTION versus OUTPUT POWER



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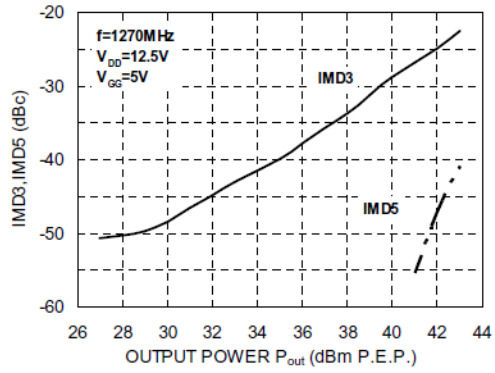

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