

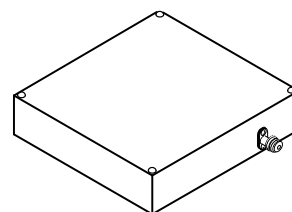
The RF Line Broadband Linear Power Amplifier

The ATV6060 is a solid state class A amplifier and is specifically designed for TV transposers and transmitters. This amplifier incorporates microstrip technology and reliable MOTOROLA push-pull transistors.

- Specified 25.5 Volts, 470–860 MHz Characteristics
Output Power = 40 Watts @ –50 dB IMD (3 tones)
Output Power = 60 Watts @ 1 dB Comp. (CW)
Gain = 9 dB Min (Small Signal)
- Will Withstand Infinite Load VSWR
- High Performance, Gold Metallized Die for Ultra Reliable Performance

ATV6060

**60 W, 470–860 MHz
CLASS A
RF POWER AMPLIFIER**



CASE 389U-01, STYLE 1

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Supply Voltage	V_{CC}	26.5	Vdc
Storage Temperature Range	T_{stg}	–40 to +100	°C
Maximum Operating Temperature (1)	T_{op}	–20 to +70	°C

NOMINAL OPERATION CONDITION ($T_C = 60^\circ\text{C}$)

Supply Current ($V_{CC} = 25.5\text{ V}$)	I_{sup}	9.2	A
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ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$ unless otherwise noted, $Z_{in}, Z_{out} = 50\ \Omega$)

Characteristic	Symbol	Min	Typ	Max	Unit
Power Gain (Small Signal)	G_p	9	—	—	dB
Gain Ripple (Small Signal)	G_{rple}	—	—	+1.0	dB
Output Power @ 1.0 dB Compression	P_{1dB}	60	—	—	W
Load Mismatch ($P_{out} = 60\text{ W}$, $V_{CC} = 25.5\text{ V}$, $f = 860\text{ MHz}$, Load VSWR = $\infty:1$, all phase angles at frequency of test)	ψ	No degradation in output power before or after test			
Intermodulation (–8 dB/–7 dB/–16 dB, $P_{ref} = 40\text{ W}$)	IMD_1	—	—	–50	dB
Intermodulation (–8 dB/–10 dB/–16 dB, $P_{ref} = 40\text{ W}$)	IMD_2	—	—	–53	dB
Input Return Loss	IRL	—	—	–15	dB
Output Return Loss	ORL	—	—	–15	dB

NOTE: 1. Temperature is measured at temperature test point (on the flange of the transistor).

TYPICAL CHARACTERISTICS

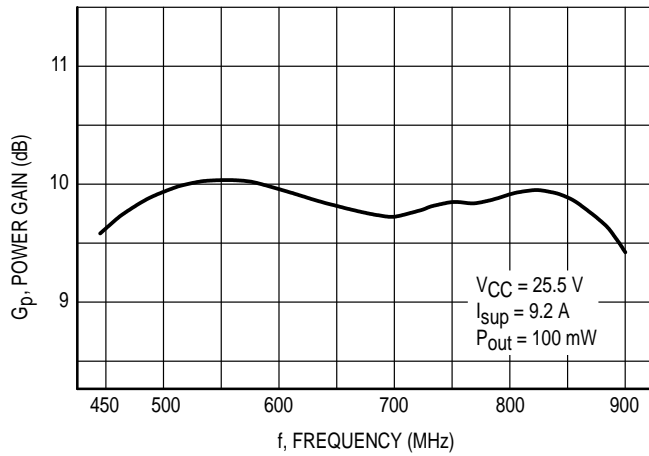


Figure 1. Power Gain versus Frequency

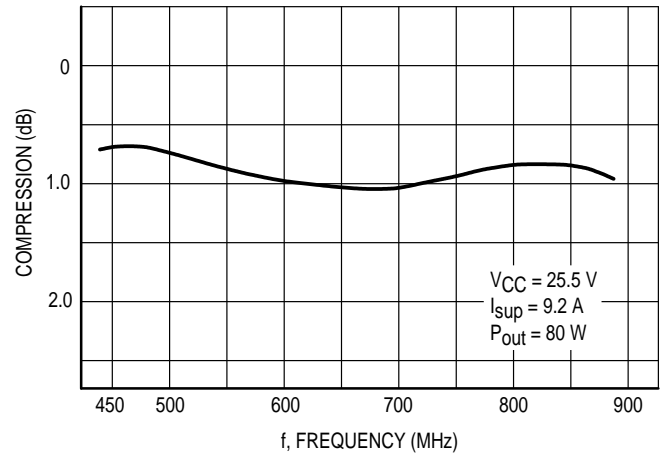


Figure 2. Gain Compression versus Frequency

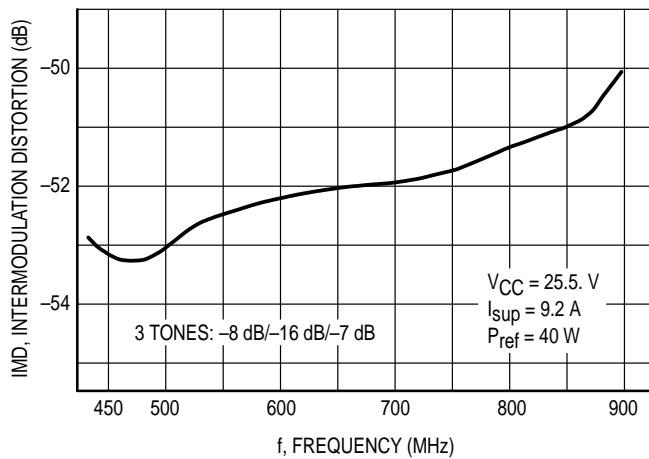


Figure 3. Intermodulation versus Frequency

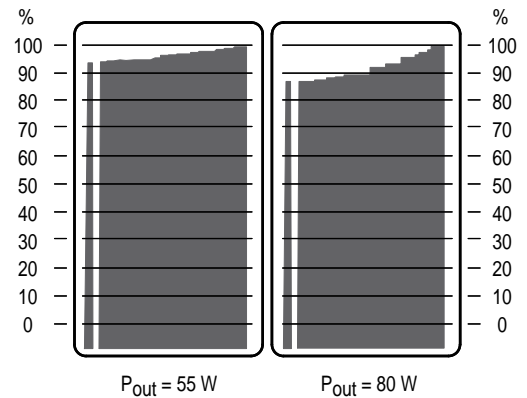
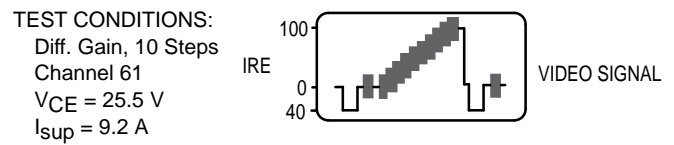
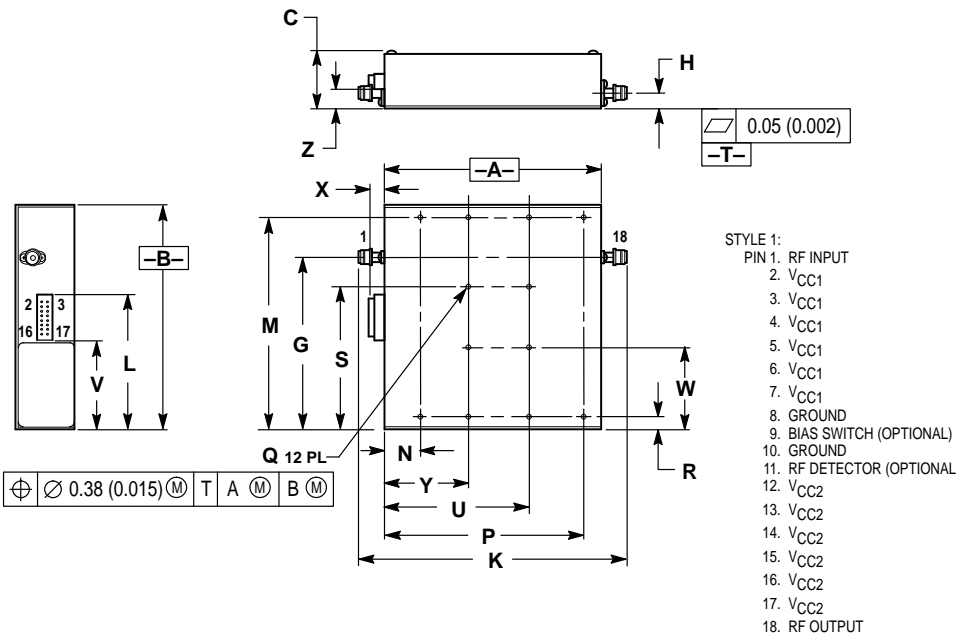


Figure 4. Gain versus Output Power

PACKAGE DIMENSIONS




NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETER.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	133.7	134.2	5.26	5.28
B	—	139.5	—	5.49
C	—	36.20	—	1.42
G	107.1	107.7	4.22	4.24
H	9.20	9.60	0.36	0.38
K	—	155.0	—	6.10
L	83.8	84.2	3.30	3.31
M	132.0 BSC	—	5.20 BSC	—
N	13.40 BSC	—	0.53 BSC	—
P	120.6 BSC	—	4.75 BSC	—
Q	4.40	4.60	0.17	0.18
R	7.0 BSC	—	0.28 BSC	—
S	89.1 BSC	—	3.51 BSC	—
U	78.6 BSC	—	3.09 BSC	—
V	54.9	55.4	2.15	2.18
W	49.9 BSC	—	1.96 BSC	—
X	—	6.0	—	0.24
Y	52.2 BSC	—	2.06 BSC	—
Z	8.0	9.5	0.31	0.37

CASE 389U-01 ISSUE O

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MOTOROLA



ATV6060/D

