

PACIFIC MONOLITHICS

DATA SHEET

GaAs MMIC AMPLIFIERS

FEATURES

- o SMALL SIZE
- o HIGH GAIN
- o LOW CURRENT
- o SINGLE SUPPLY VOLTAGE
- o CASCADABLE
- o LOW NOISE AND MEDIUM POWER OPTIONS
- o 10 TO 30 dB GAIN BLOCKS

Pacific Monolithics offers a variety of GaAs FET MMIC amplifiers in surface-mount packages for microstrip applications. These amplifier options include low noise small signal, and medium power for cascadable 10 dB to 30 dB gain blocks in the 0.02 GHz to 6 GHz frequency range.

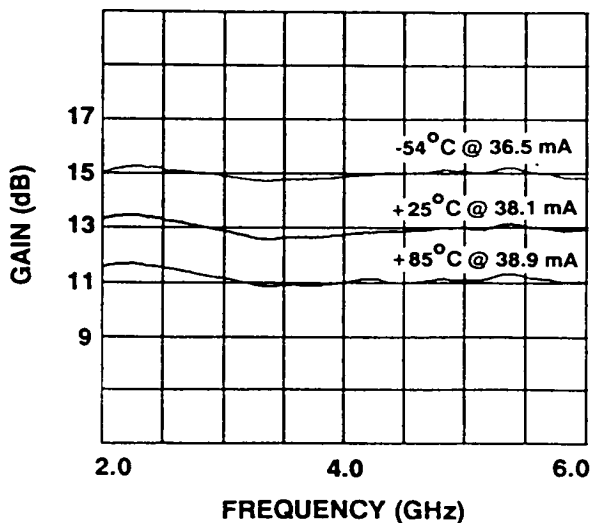
These devices use fully/partially matched and biased monolithic GaAs amplifier chips that significantly reduce the number of bond wires and MIC components required. The use of MMICs allows for fairly complex amplifiers to be built into small, surface-mount packages. Additionally, MMIC amplifiers provide higher reliability and lower life-cycle costs than comparable fully hybrid designs.

Potential applications include communication receivers, GPS satellite receivers, radar systems, IF signal processing systems and data reception.

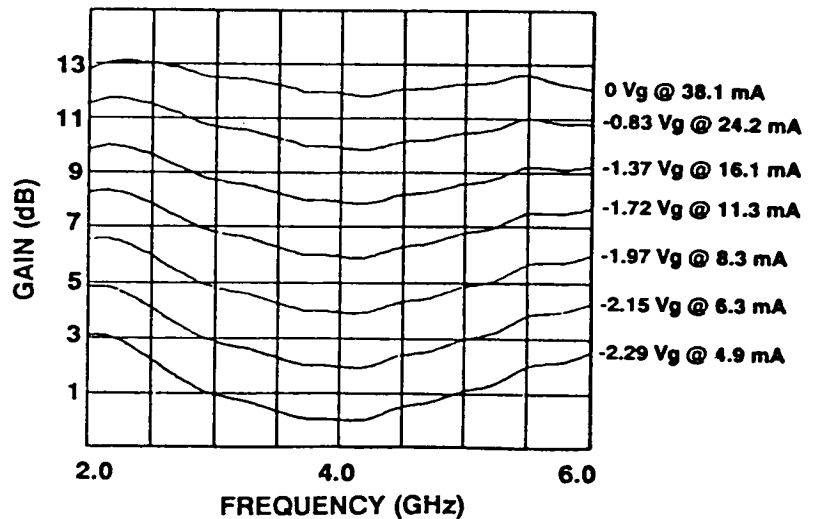
MIL-STD 883 Screening Available

MODEL AM0608--10 dB GAIN BLOCK WITH GAIN CONTROL

SMALL-SIGNAL GAIN



GAIN vs. CONTROL VOLTAGE



Solutions for Wireless Communications.

SPECIFICATIONS (MEASURED AT 25°C)

MODEL	FREQUENCY (GHz)	GAIN (dB)		GAIN FLATNESS	NOISE FIGURE (dB)	POWER OUT @1dB COMP (dBm)		THIRD-ORDER INTERCEPT (dBm)		VSWR IN/OUT	DC VOLTAGE (V)		DC CURRENT (mA)	PACKAGE TYPE
		MIN	MAX			MIN	TYP	TYP	TYP		TYP	TYP		
BELOW 2 GHz														
AG0101	0.05-1	25	±20		10	-3.0	7	2:1			+5	23	A	
AM0201	0.5-2*	17	±0.5		2.0	-2.0	8	2:1			8	20	B	
AM0202	0.5-2	14	±1.2		6.5	+17.0	27	2:1			7-8	90	B	
AM0203	0.5-3**	14	±0.5		2.0	+14.0	24	2:1			6-8	28	A,*** B	
AM0204	0.5-2**	30	±1.2		2.4	+10.0	20	2:1			8	80	B	
AM0210	0.5-3**	12	±0.5		2.2	+12.0	22	2:1			5	22	A,B	
2-6 GHz														
AM0401	3.7-4.2	14	±0.5		2.8	+5.0	14	2:1			8	20	D,E	
AM0501	5.4-5.9	14	±0.5		2.8	+5.0	14	2:1			8	20	D,E	
AM0601	5.9-6.4	14	±0.5		2.8	+5.0	14	2:1			8	20	D,E	
AM0607	2.0-6.0	9	±0.75		7.5	+5.0	14	2:1			8-10	20	D,E	
AM0627	2.0-6.0	18	±1.50		8.0	+5.0	26	2:2.1			8-10	60	D,E	
AM0637	2.0-6.0	27	±1.50		8.0	+5.0	14	2:1			8-10	70	D,E	
AM0608	2.0-6.0	10	±0.75		8.5	+10.0	20	2:1			8-10	35	D,E	
AM0628	2.0-6.0	19	±1.25		8.0	+10.0	20	2:1			8-10	70	D,E	
AM0638	2.0-6.0	30	±1.50		9.5	+10.0	20	2:1			8-10	105	D,E	
AM0610	2.0-6.0	12	±0.75		6.0	+17.0	25	2:1			8-10	55	D,E	
AM0620	2.0-6.0	24	±1.25		6.5	+17.0	25	2:1			8-10	110	D,E	
AM0630	2.0-6.0	34	±1.75		6.5	+17.0	25	2:2.1			8-10	165	D,E	
AP0612	2.0-6.0	8	±1.50		10.0	+23.0	33	2:1			8	260	D,E	
AP0622	2.0-6.0	20	±1.75		6.0	+23.0	33	2:1			8	320	D,E	
AP0632	2.0-6.0	29	±2.00		6.0	+23.0	33	2:2.1			8	380	E	

Specifications are measured at 25°C. The amplifiers operate over the full -54°C to +85°C temperature range, but with degraded performance. This is a summary. For detailed specifications on a particular model, consult the factory. Voltage regulation option available, consult the factory.

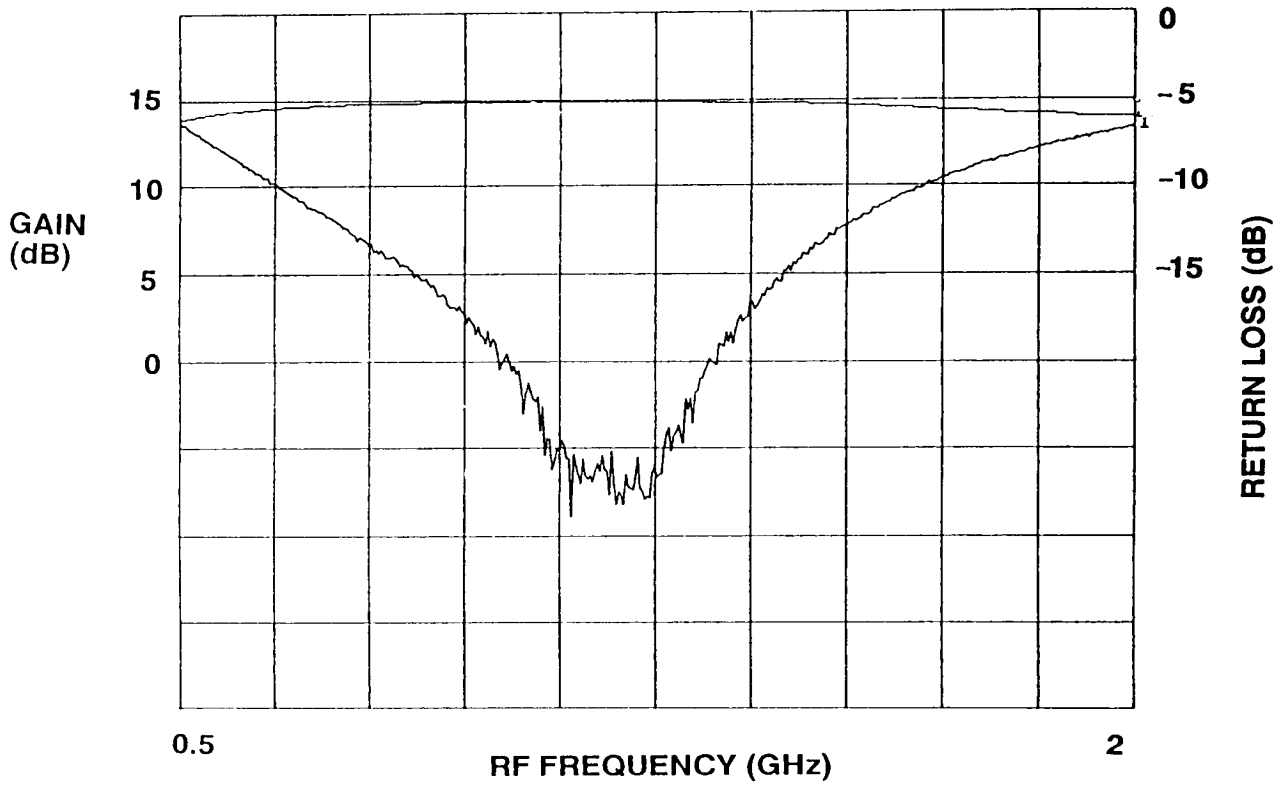
*20% Bandwidth (Typical)

**50% Bandwidth (Typical) above 1 GHz.

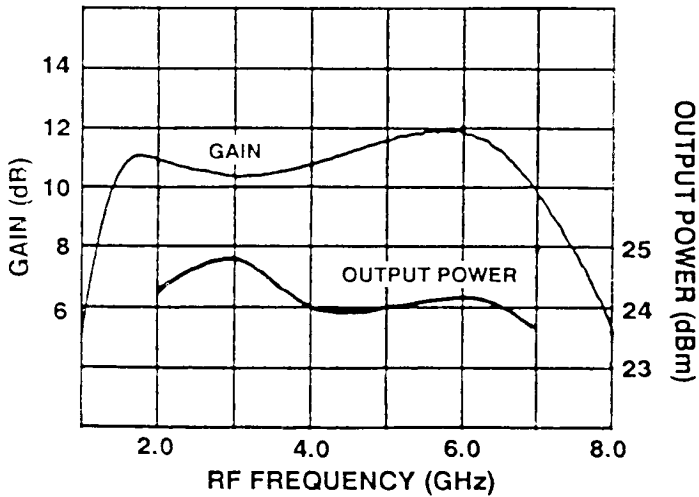
***Above 900 MHz

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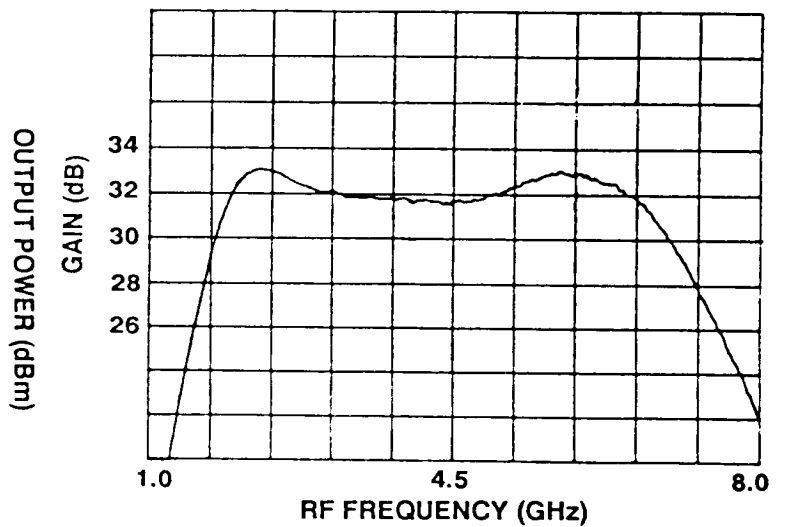
MODEL AM0203 - LOW FREQUENCY HIGH DYNAMIC RANGE LNA



**MODEL AP0612-1/4 WATT 10-dB GAIN BLOCK
GAIN AND OUTPUT POWER (P_{1dB})**

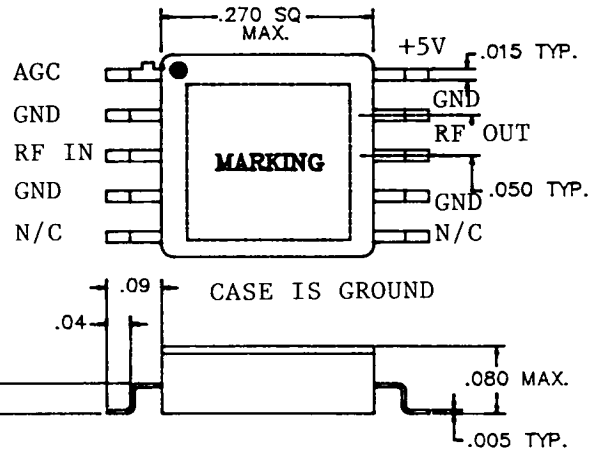
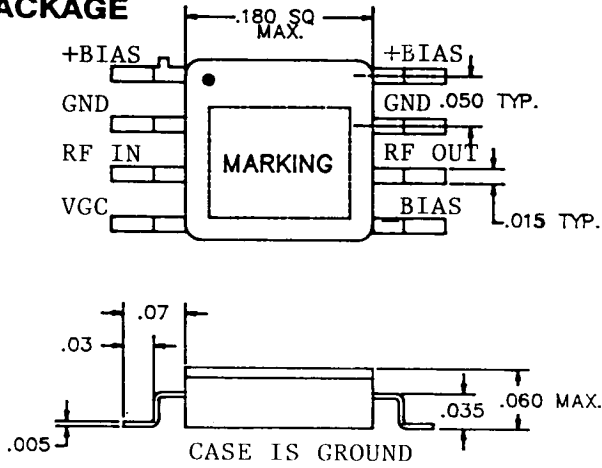


**MODEL AM0637-LOW CURRENT 30dB GAIN BLOCK
GAIN**

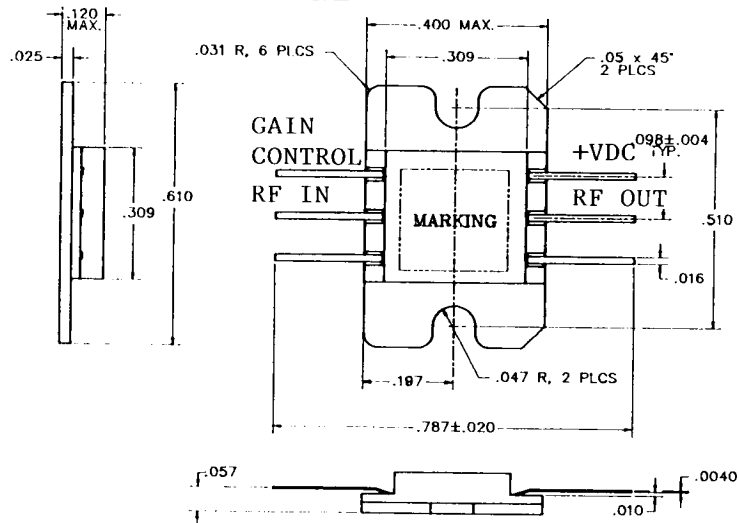


"B" PACKAGE

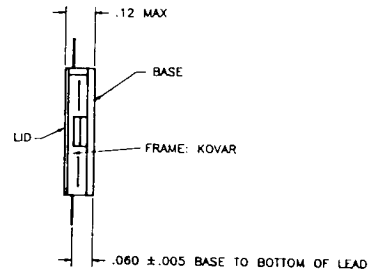
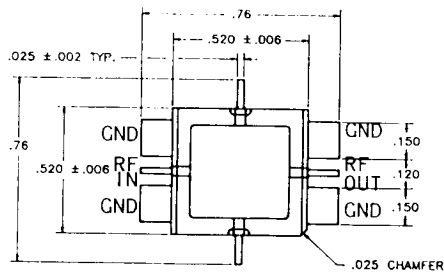
"A" PACKAGE



"D" PACKAGE



"E" PACKAGE



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