

GENERAL DESCRIPTION

The MPA 202 is a HYBRID AMPLIFIER MODULE designed for broadband performance up to 200 MHz in a format suitable for stripline assembly and high reliability applications. Its wide dynamic range and flexibility make it ideal for a broad spectrum of instrumentation, receiver and transmitter applications.

FEATURES

- Usable for broadband or narrow band applications
- Usable DC to 200 MHz
- Uniform gain with frequency
- Internally matched to 50 ohms
- Cascadable
- Gold metallization system

WIDE DYNAMIC RANGE

- Low Distortion - 3rd order intercept point +50dBm typical at 30 MHz
- Low Noise Figure - 5.0dB typical at 70 MHz

HIGH OUTPUT POWER

1dB Compression Power

2.0 Watt Typical

1.5 Watt Typical

1.0 Watt Minimum

Maximum Temperatures

Storage Temperature

Operating Junction Temperature

50 MHz

100 MHz

200 MHz

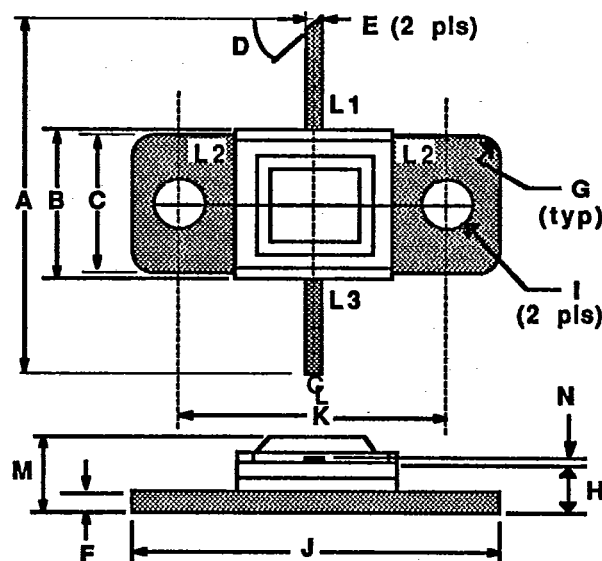
-65 to +200 °C

+200 °C

MPA 202

1.0 WATTS - 15 VOLTS
200 MHz

50Ω HYBRID AMPLIFIER



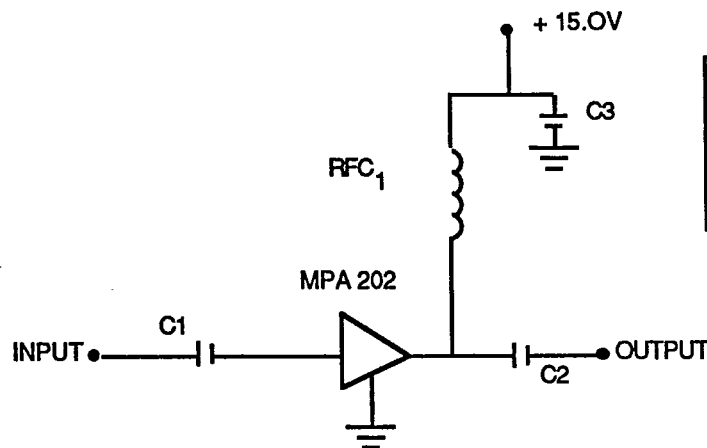
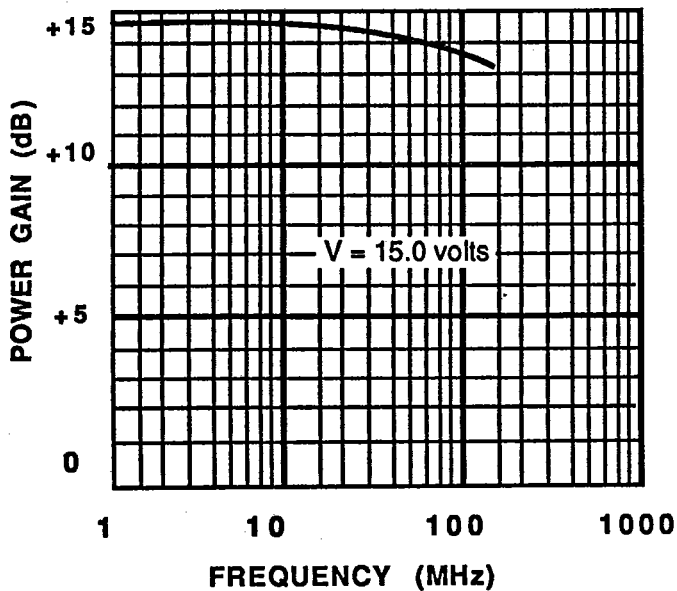
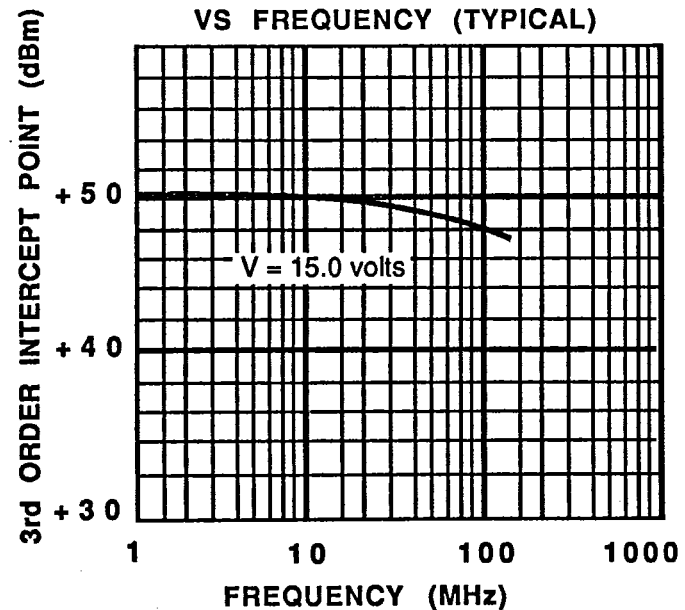
DIM	Millimeter	TOL	Inches	TOL
L1 : C				
L2 : B				
L3 : E				
A	20.32	.76	.800	.030
B	10.16	.13	.400	.005
C	9.78	.13	.385	.005
D	45°	5°	45°	5°
E	1.27	.13	.050	.005
F	1.52	.13	.060	.005
G	1.52 R	.13	.060 R	.005
H	3.05	.13	.120	.005
I	3.30 DIA	.13	.130 DIA	.005
J	22.86	.13	.900	.005
K	16.51	.13	.650	.005
M	4.70	REF	.185	REF
N	0.13	.02	.005	.001

ELECTRICAL CHARACTERISTICS¹

MPA 202-2

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
VSWR	Input VSWR	f = 1-200 MHz Vdc = 15.0V		1.5:1	2.0:1	
Ga	Small Signal Gain		12.0	13.0		dB
ΔG_a	Gain Flatness			± 0.5	± 1.0	dB
P1dB	Power Out @ 1dB Gain Compression		+30	+32		dBm
Δt_{jf}	Temperature Rise Junction to Flange			+70		°C
I _{dc}	DC Current			350		mA
I _p	3rd Order Intercept Point	f = 30 MHz, Vdc = 15.0V		+50		dBm
Nf	Noise Figure	f = 70 MHz, Vdc = 15.0V		5.0		dB

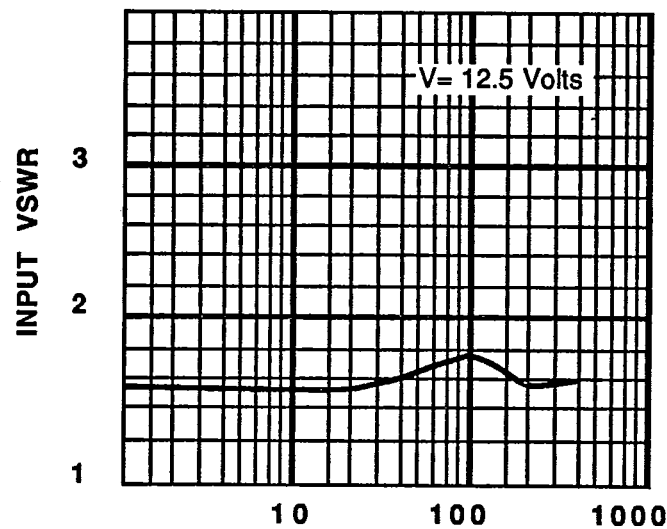
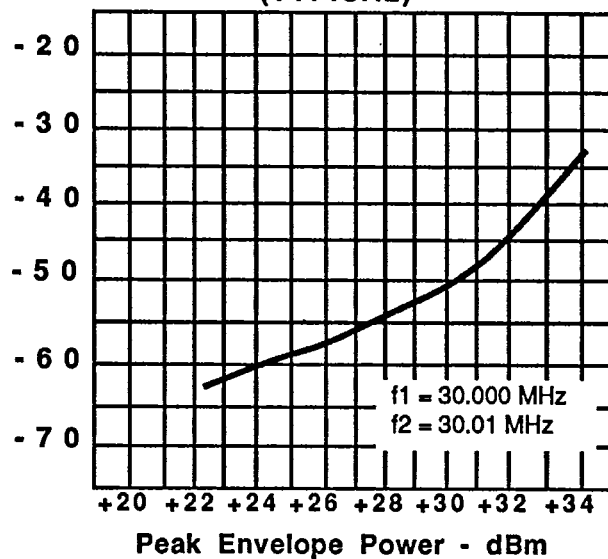
Note 1: Tc = +25°C unless otherwise specified

POWER GAIN VS FREQUENCY
(TYPICAL)3rd ORDER INTERCEPT POINT
VS FREQUENCY (TYPICAL)

SPECIFICATIONS MAY BE SUBJECT TO CHANGE WITHOUT NOTICE

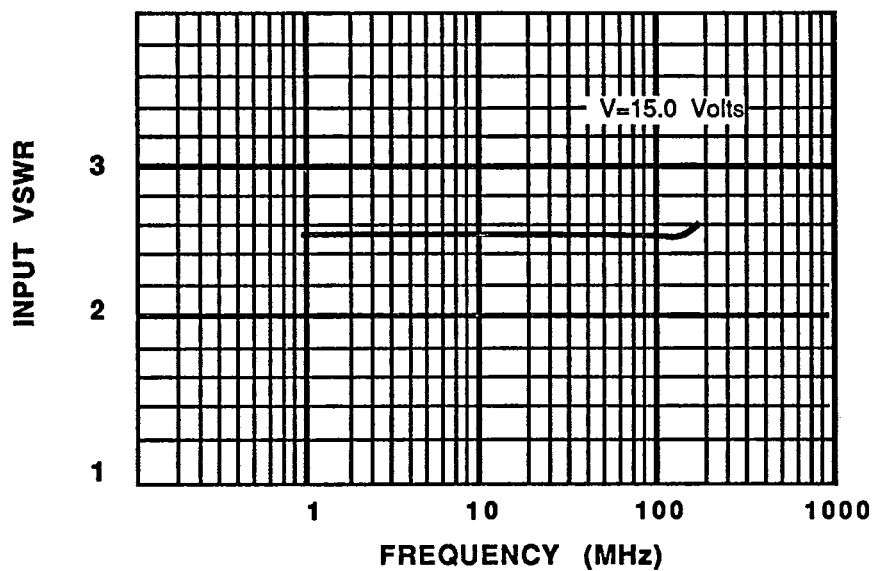
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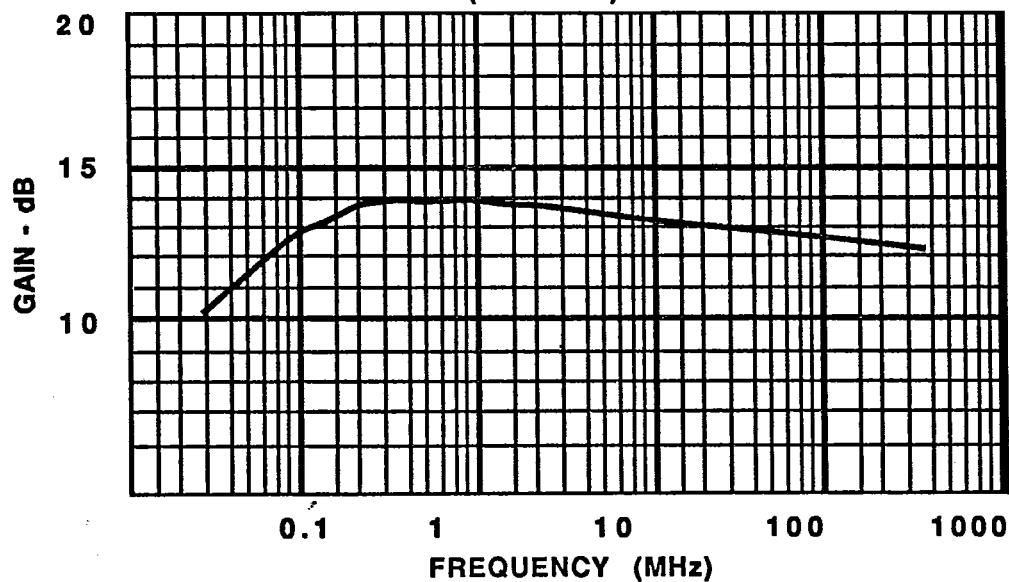
INPUT VSWR vs FREQUENCY
(TYPICAL)2-TONE 3rd ORDER
IMD vs PEP OUTPUT
(TYPICAL)2-Tone 3rd Order IMD
(dB Below Each of 2 Equal Tones)

MPA 202-4

1 dB GAIN COMPRESSION vs FREQUENCY
ULTRA WIDEBAND SINGLE ENDED AMPLIFIER
(TYPICAL)



POWER GAIN vs FREQUENCY
(TYPICAL)



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