MPA-40-40

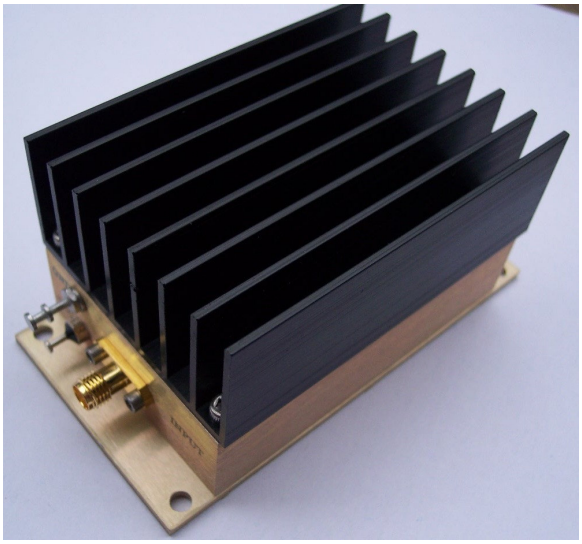
MPA Series — 20-1000MHz 4W RF Power Amplifier

Features

- Frequency Range: 20-1000MHz
- Gain: 40dB
- P_{out}: +36dBm
- IP3: +44dBm
- Noise Figure: 6dB
- DC Power: 24V
- SMA Connector

Performance measured @ 500MHz

Picture



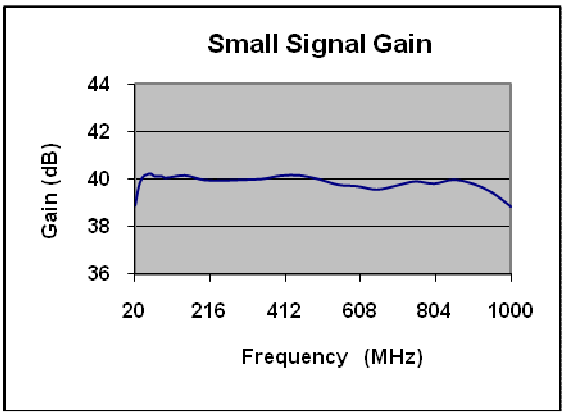
Description

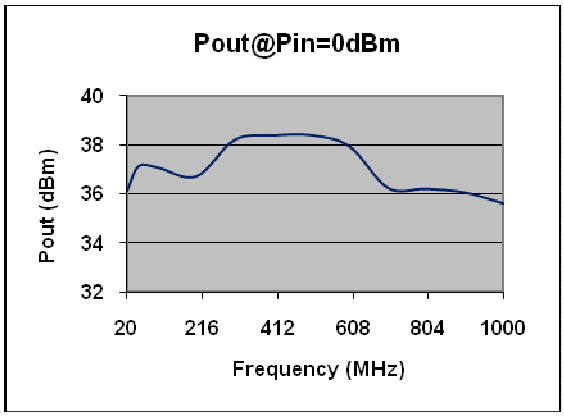
MPA-40-40 is a 4Watt (+36dBm) output RF Power Amplifier operating from single 24V DC power supply with frequency from 20MHz to 1000MHz.

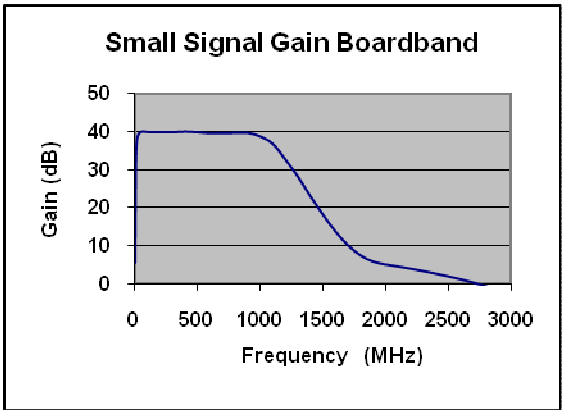
Electrical Specifications @ +25 ℃, $Z_S = Z_L = 50\ \Omega$, Vcc = 24V

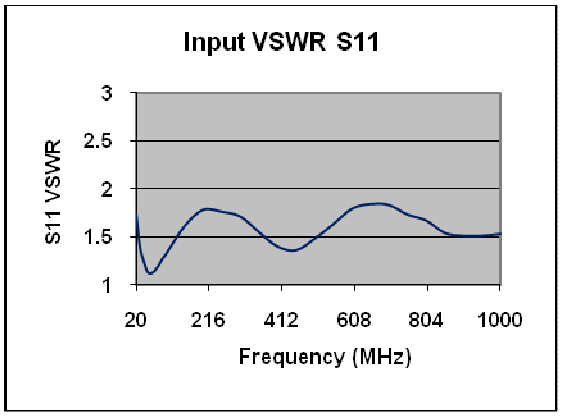
Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	MHz	20		1000
Small Signal Gain	dB		40	
Gain Flatness	dB		±0.5	
Output Power P_{out} @ P_{in} = 0dBm	dBm		+36	
IP3	dBm		+44	
IMD3 (Two Tone +20dBm Output)	dBc		48	
Reverse Isolation	dB		-50	
Noise Figure	dB		6.0	
Efficiency Pout =+36dBm @500MHz	%		32	
VSWR Input Output			1.5:1 1.5:1	
DC Power Supply	V	18	24	
Supply Current (Quiescent)	mA		630	
Size (Excluding SMA Connector)	inch	3.750” x 2.000” x 1.913”		
Weight	Oz.	9		

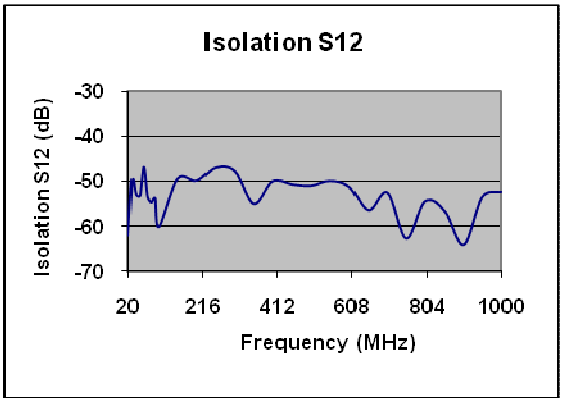
Typical Performance @ +25 ℃

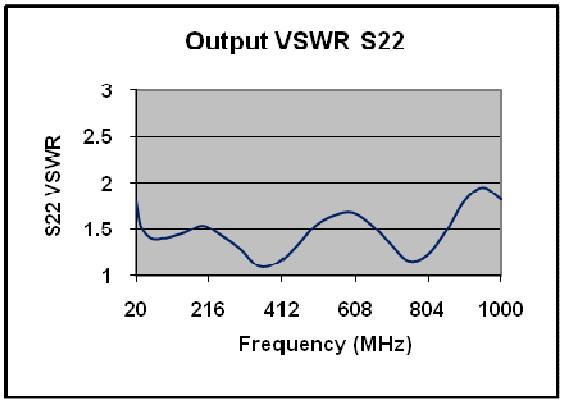












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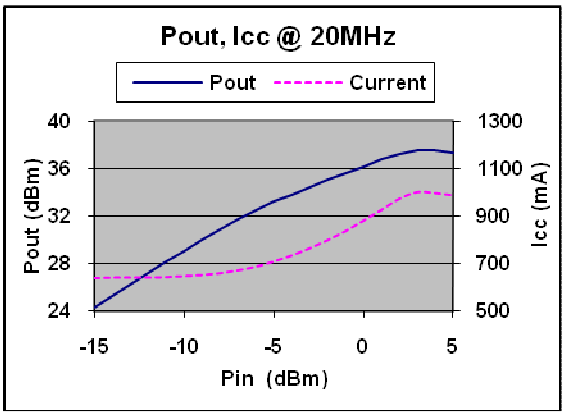

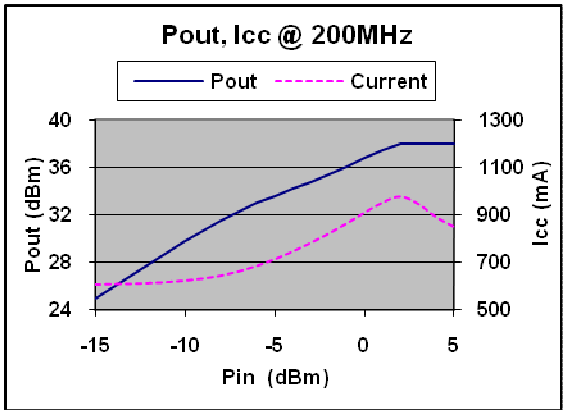

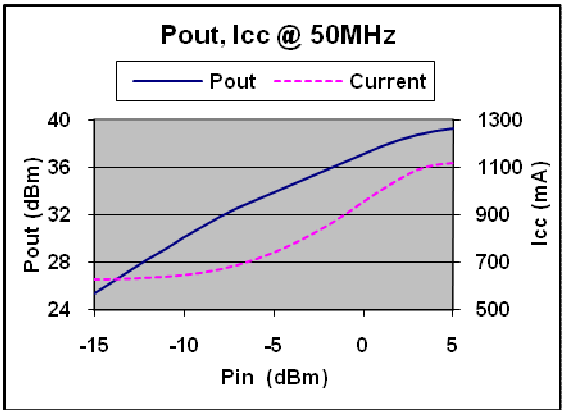

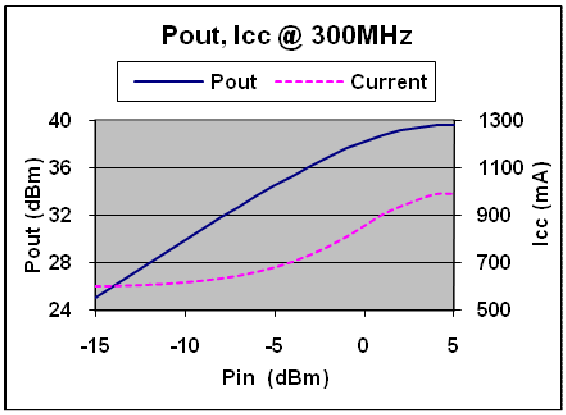

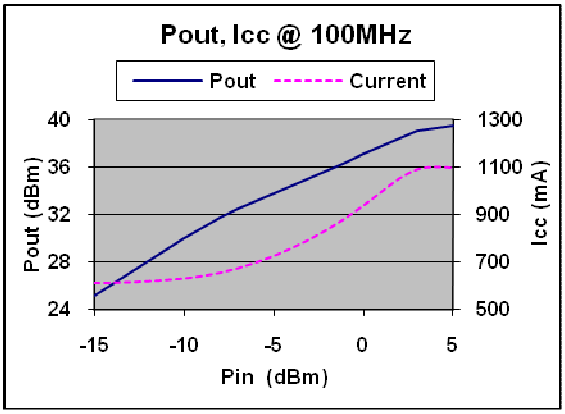

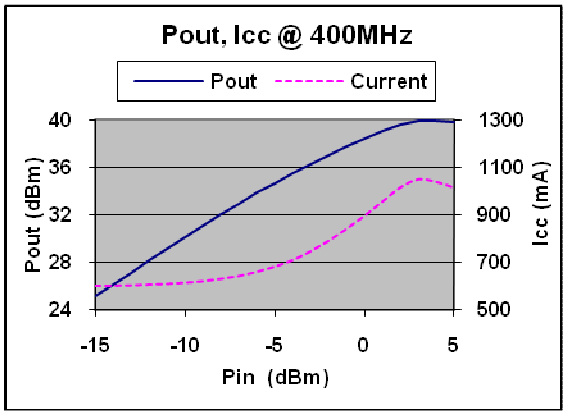

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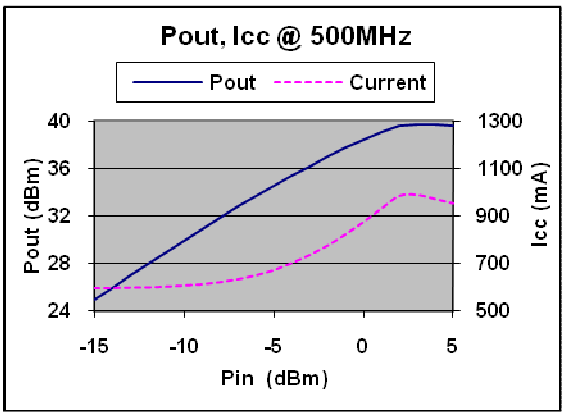

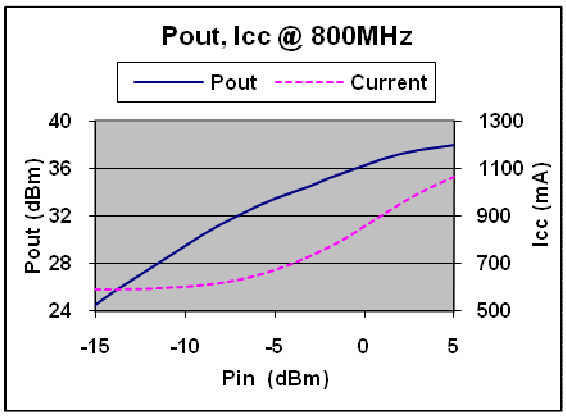

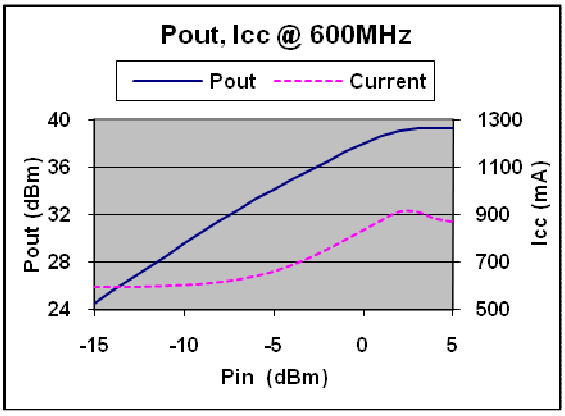

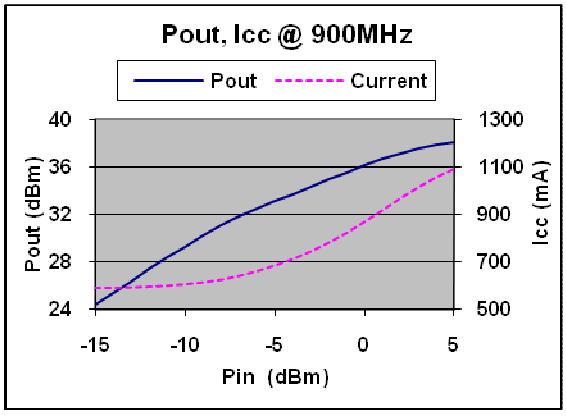

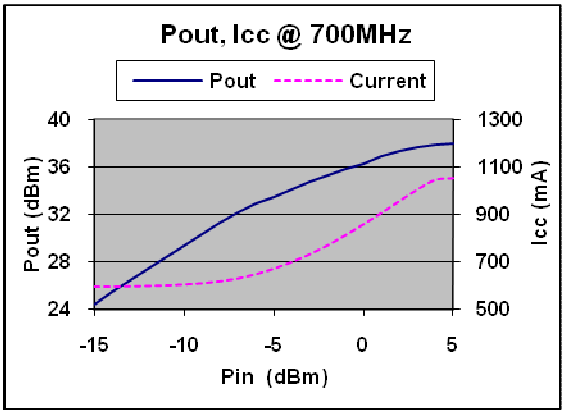

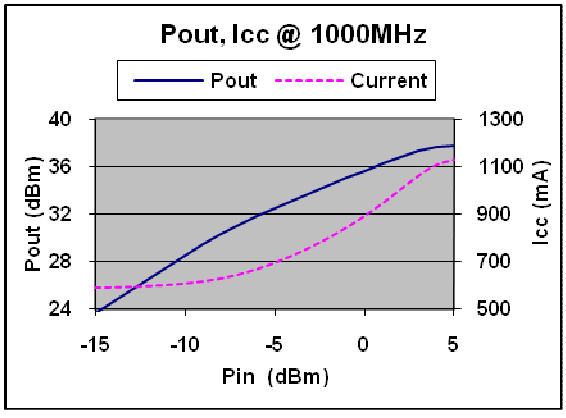

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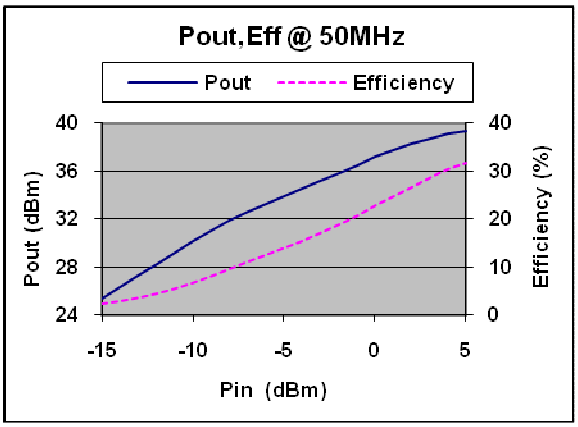
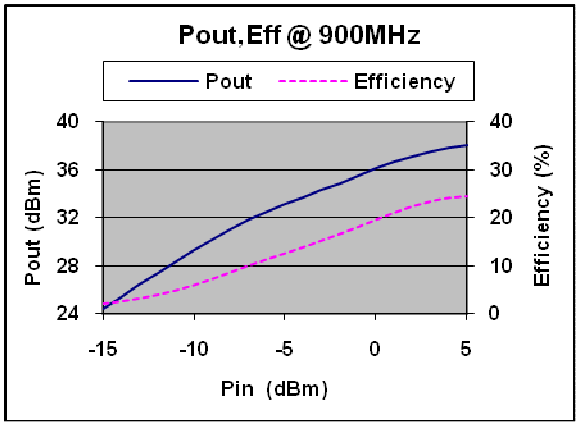
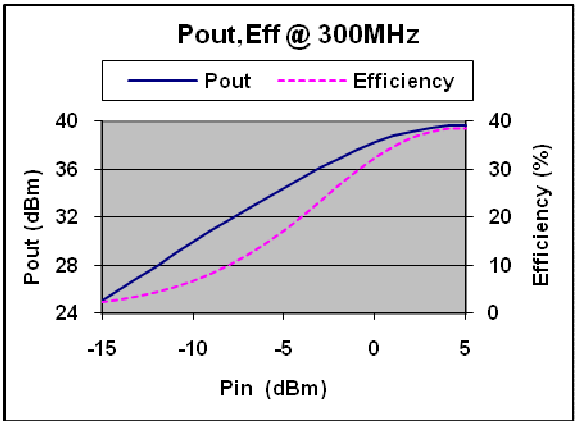
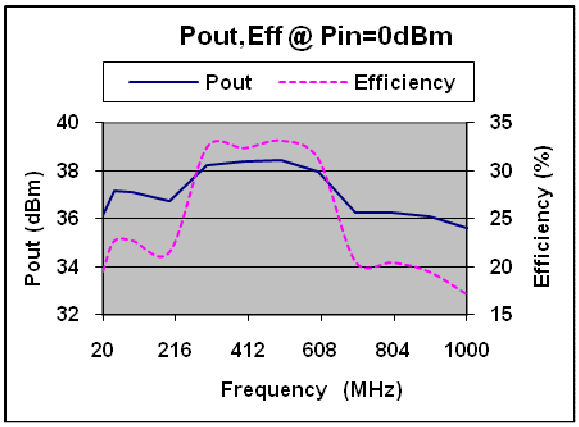
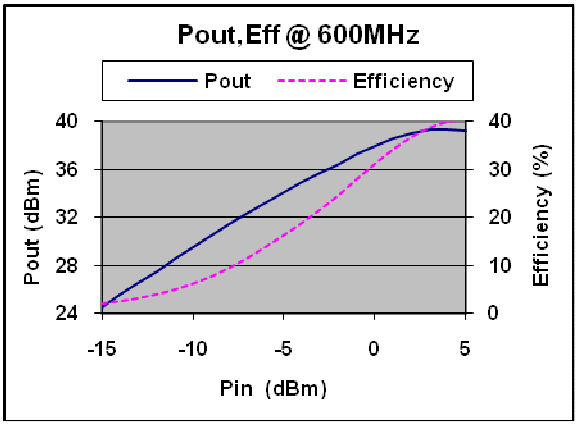
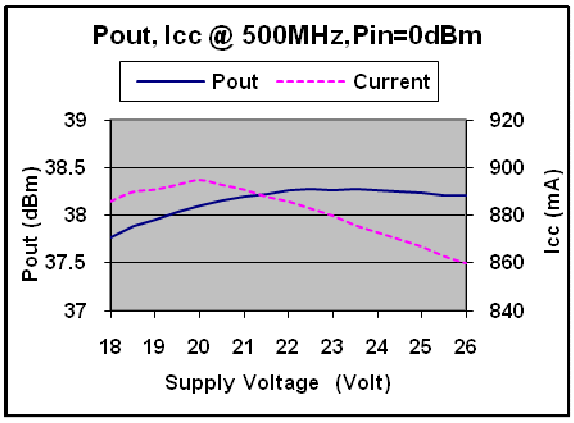








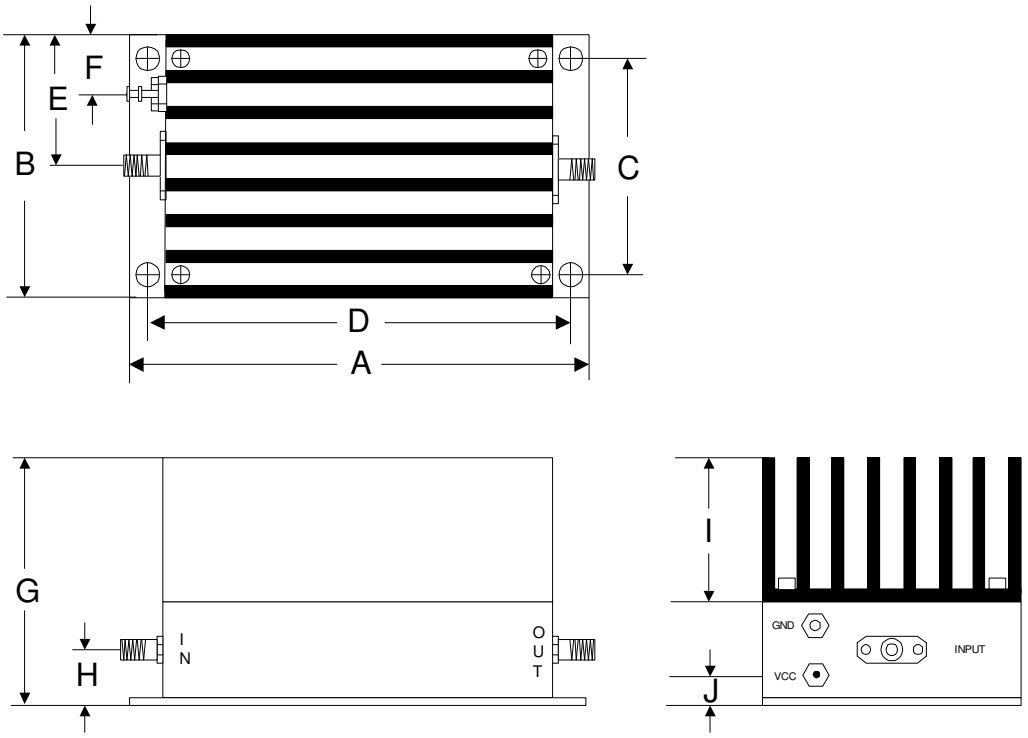




Absolute Maximum Ratings

Parameter	Absolute Maximum
RF Input Power	+10dBm
Supply Voltage	+28V
Operating Temperature	-30 ℃ to +65 ℃
Storage Temperature	-55 ℃ to +100 ℃

Outline



	A	B	C	D	E	F	G	H	I	J
Inch	3.750	2.000	1.750	3.400	1.000	0.400	1.913	0.375	1.000	0.238
mm	92.25	50.80	44.45	86.36	25.40	10.16	48.59	9.53	25.40	6.03

Note:
Pout and Gain are not sensitive to DC power supply voltage, reduce Vcc from +24V to +18V will reduce 25% amplifier heat, but only drop about 1dB in Pout and Gain performance.