

MPA Series

300-600MHz 6W RF Power Amplifier

Features

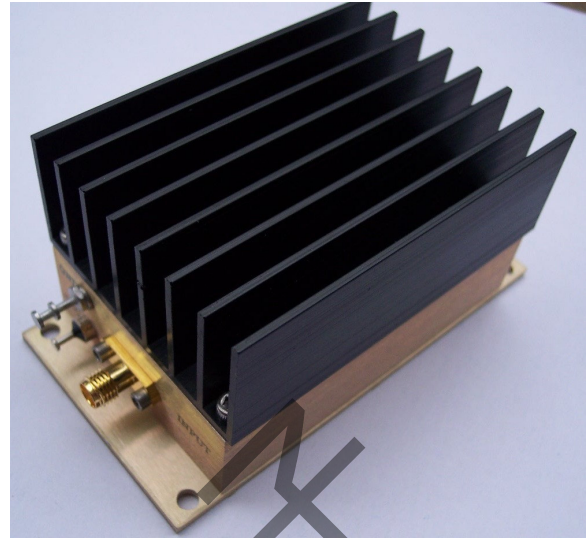
- Frequency Range: 300-600MHz
- Gain: 40dB
- P_{out} : +38dBm
- IP3: +46dBm
- Noise Figure: 6dB
- DC Power: 24V
- SMA Connector

Performance measured @ 450MHz

Description

MPA-450 is a 6Watt (+38dBm) output RF Power Amplifier operating from single 24V DC power supply with frequency from 30MHz to 600MHz.

Picture



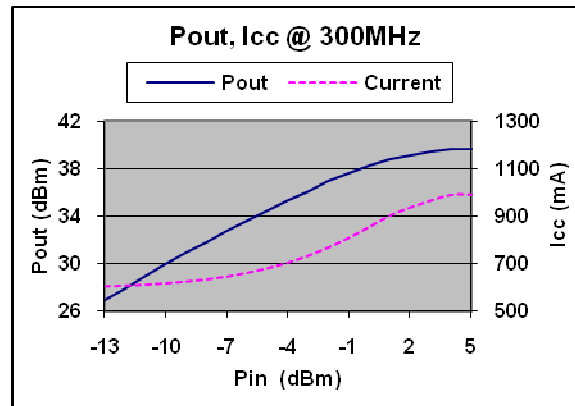
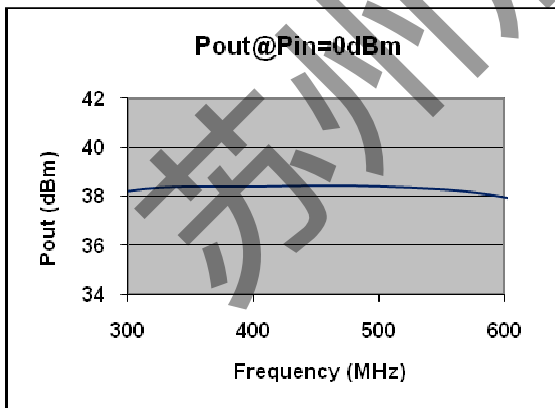
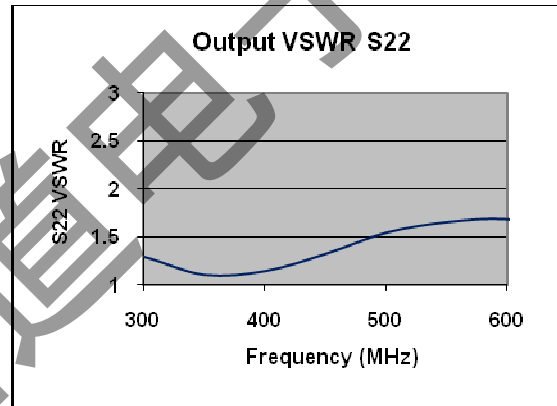
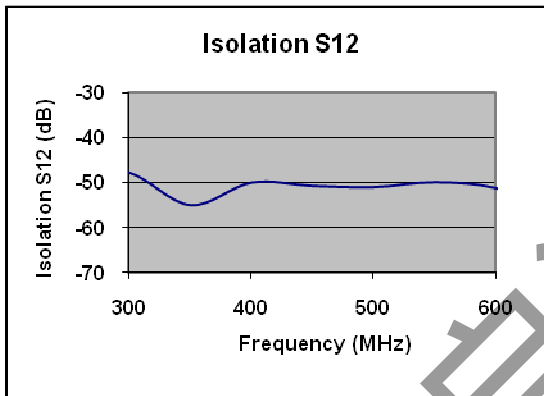
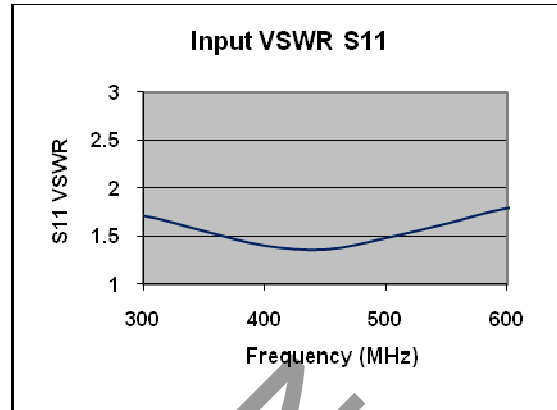
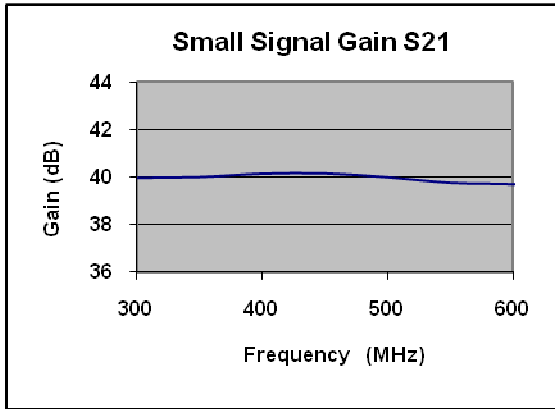
Electrical Specifications @ +25 °C, $Z_S = Z_L = 50 \Omega$, $V_{cc} = 24V$

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	MHz	300		600
Small Signal Gain	dB		40	
Gain Flatness	dB		± 0.5	
Output Power P_{out} @ $P_{in} = 0dBm$	dBm		+38	
IP3	dBm		+46	
IMD3 (Two Tone +20.5dBm Output)	dBc		51	
Reverse Isolation	dB		-50	
Noise Figure	dB		6.0	
Efficiency	%		33	
$P_{out} = +38dBm$ @ 450MHz				
VSWR				
Input			1.4:1	
Output			1.4:1	
DC Power Supply	V	18	24	
Supply Current	mA		880	
Size (Excluding SMA Connector)	inch	3.750" x 2.000" x 1.913"		
Weight	Oz.	9		

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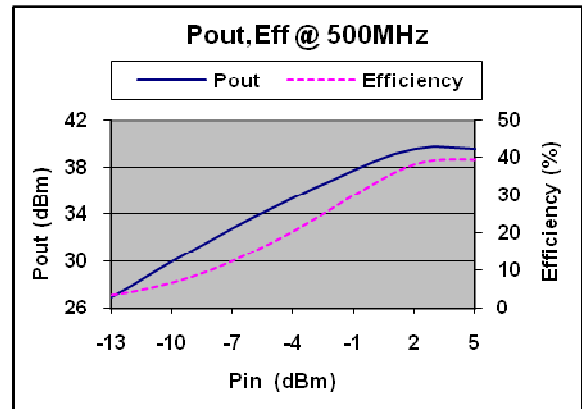
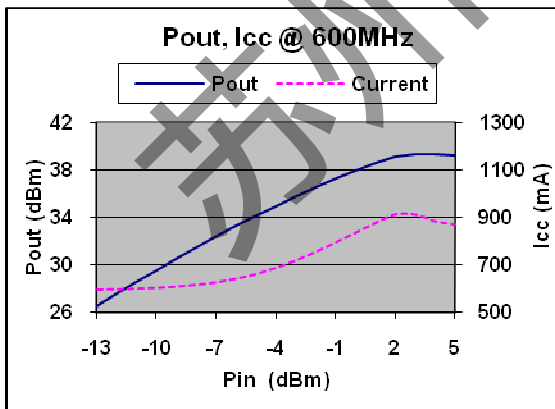
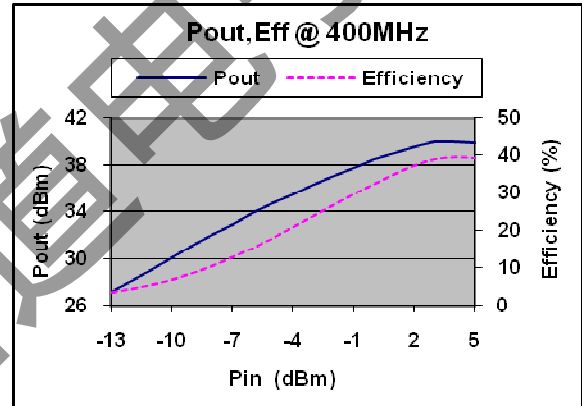
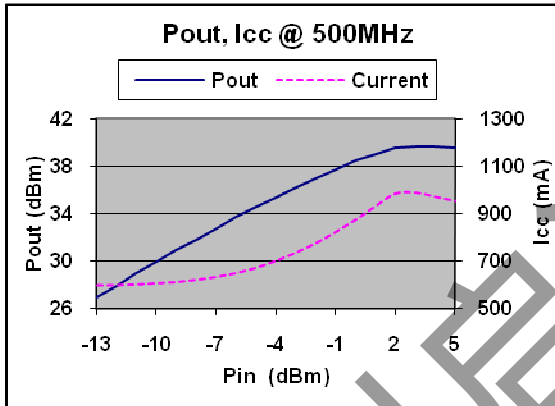
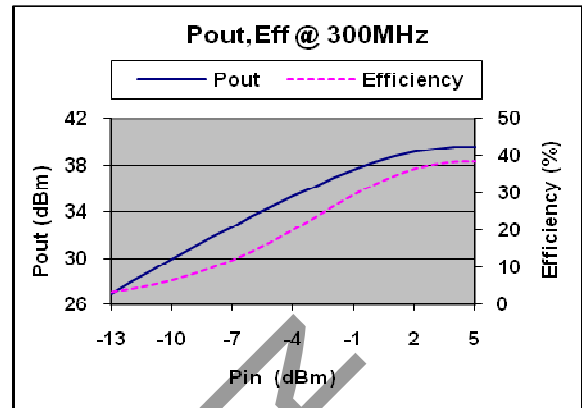
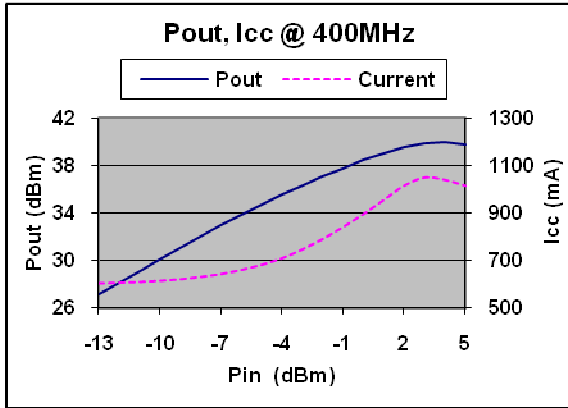
Typical Performance @ +25 °C



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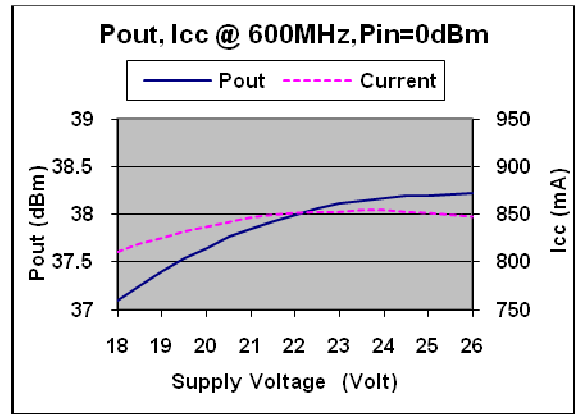
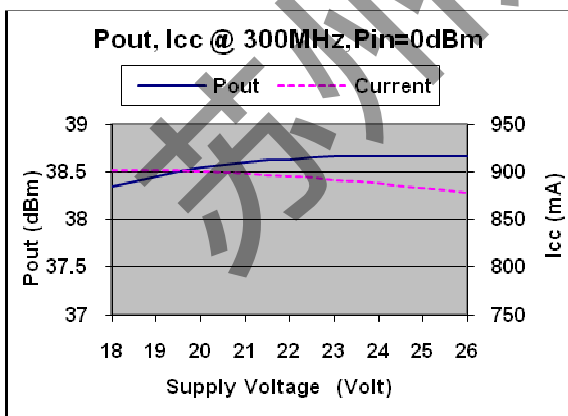
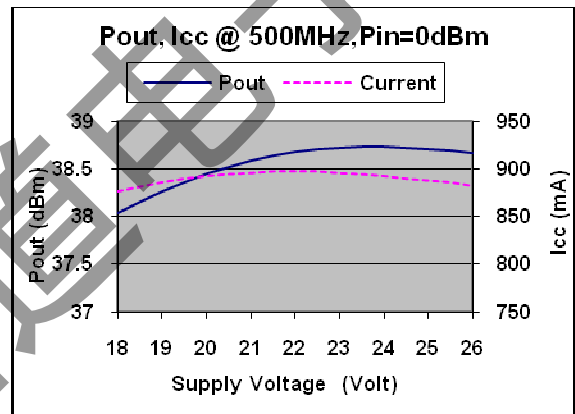
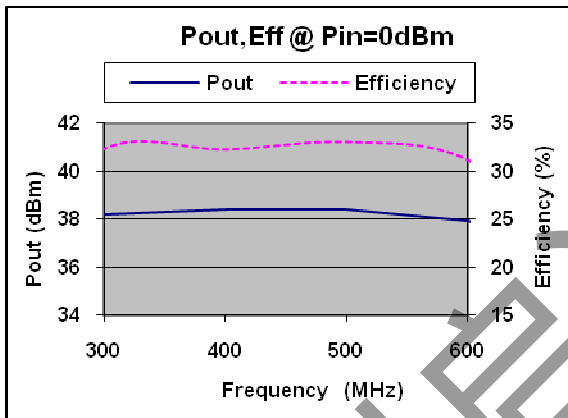
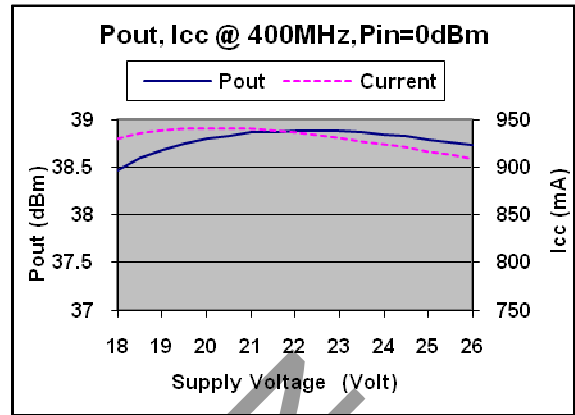
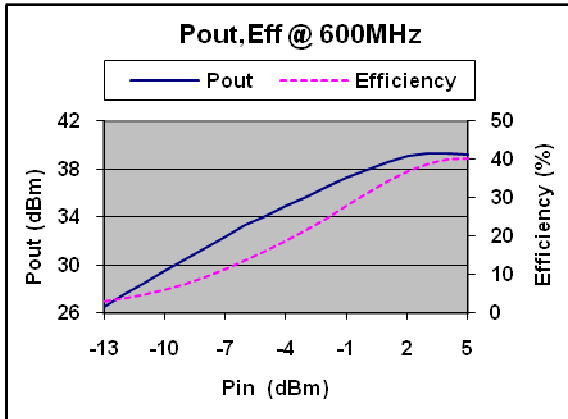
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Typical Performance @ +25 °C



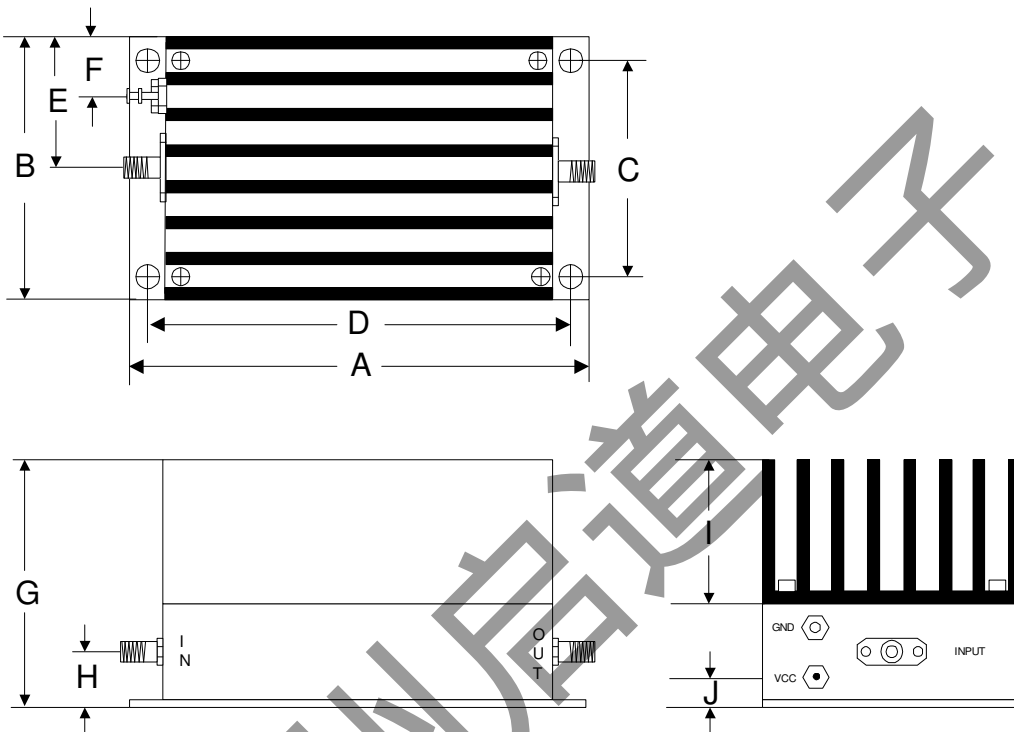
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Absolute Maximum Ratings

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

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.