

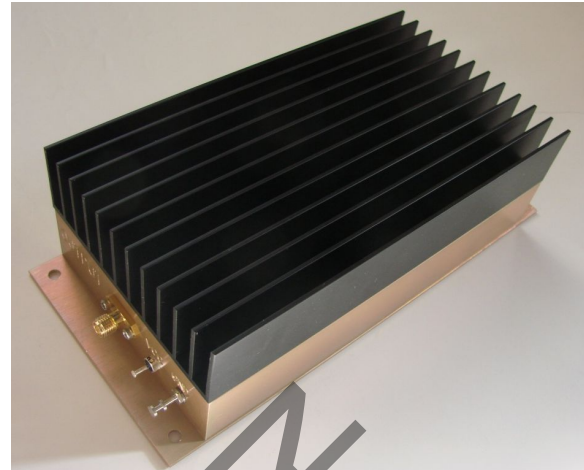
HPA Series

500 - 3000MHz 10W RF Power Amplifier

Features

- Frequency Range: 500 - 3000MHz
- Gain: 46dB
- P_{out}: +40dBm
- IP3: +51dBm
- Reverse Voltage Protection
- Internal Voltage Regulated
- DC Power: +12V
- SMA Connector

Picture



Description

HPA-3000 is a 10Watt (+40dBm) output RF Power Amplifier operating from single 12V DC power supply with frequency range in 500MHz - 3000MHz.

Electrical Specifications @ +25 °C, Z_{in} = Z_{out} = 50 Ω, DC Supply = +12V

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	MHz	500		3000
Small Signal Gain S ₂₁ f = 1750MHz	dB	44	46	
Gain Flatness	dB		± 2.5	± 3.0
Output Power P _{out} @ P _{in} = -5dBm	dBm	+38	+40	
Output IP3 f = 1750MHz	dBm	+49	+51	
Reverse Isolation S ₁₂ f = 1750MHz	dB	-65	-70	
Noise Figure f = 1750MHz	dB		5.0	6.0
Efficiency at P _{out} = +40dBm f = 1750MHz	%	18	20	
Input VSWR S ₁₁ f = 1750MHz			1.7:1	2.0:1
Output VSWR S ₂₂ f = 1750MHz			1.7:1	2.0:1
DC Power Supply	V	+11	+12	+15
Supply Current Quiescent (no RF)	mA		3800	4000
@ P _{out} = +40dBm	mA		5800	6800
Size (Excluding SMA Connector)	inch	7.000" x 3.250" x 2.000"		
Weight	Oz.	24 (680g)		

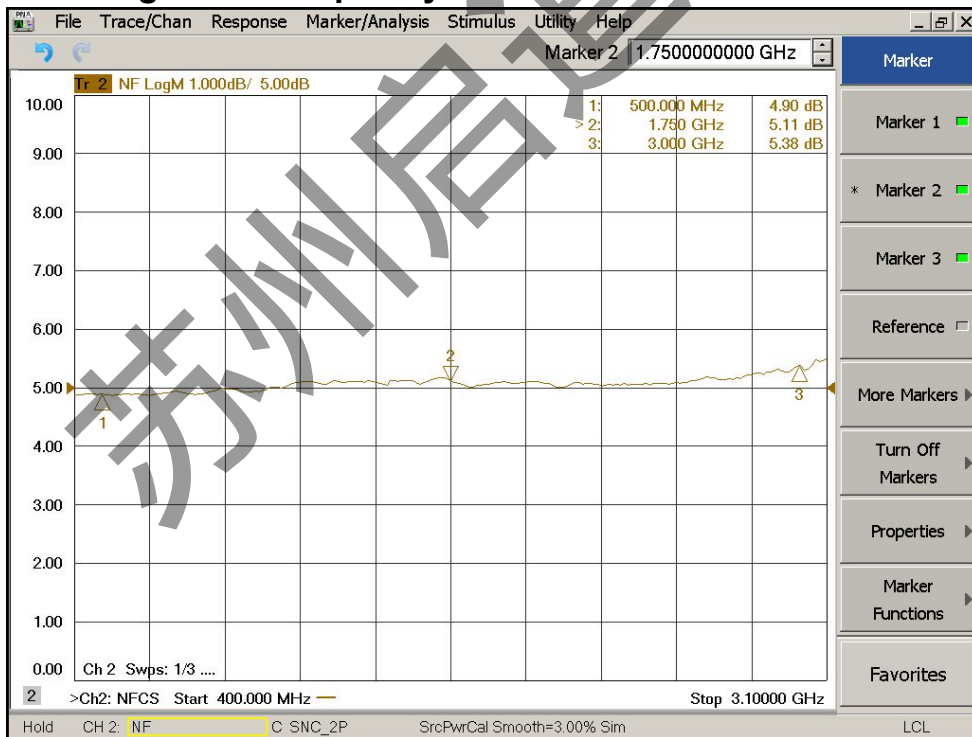
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Gain S21, Isolation S12, Return Loss S11, S22 vs Frequency



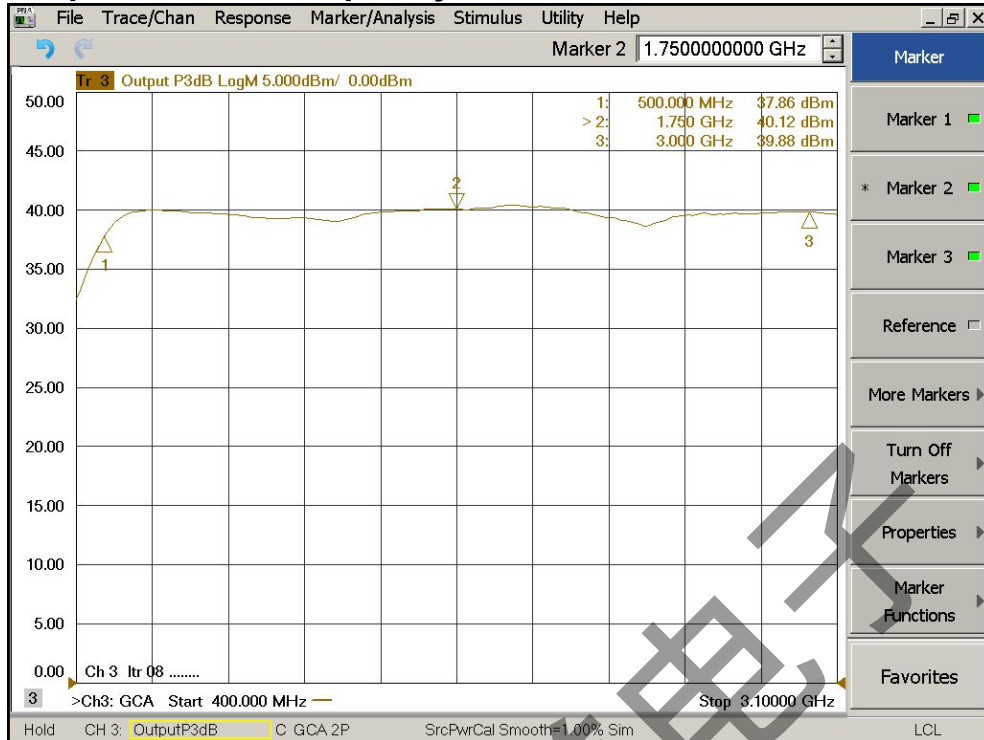
Noise Figure vs Frequency



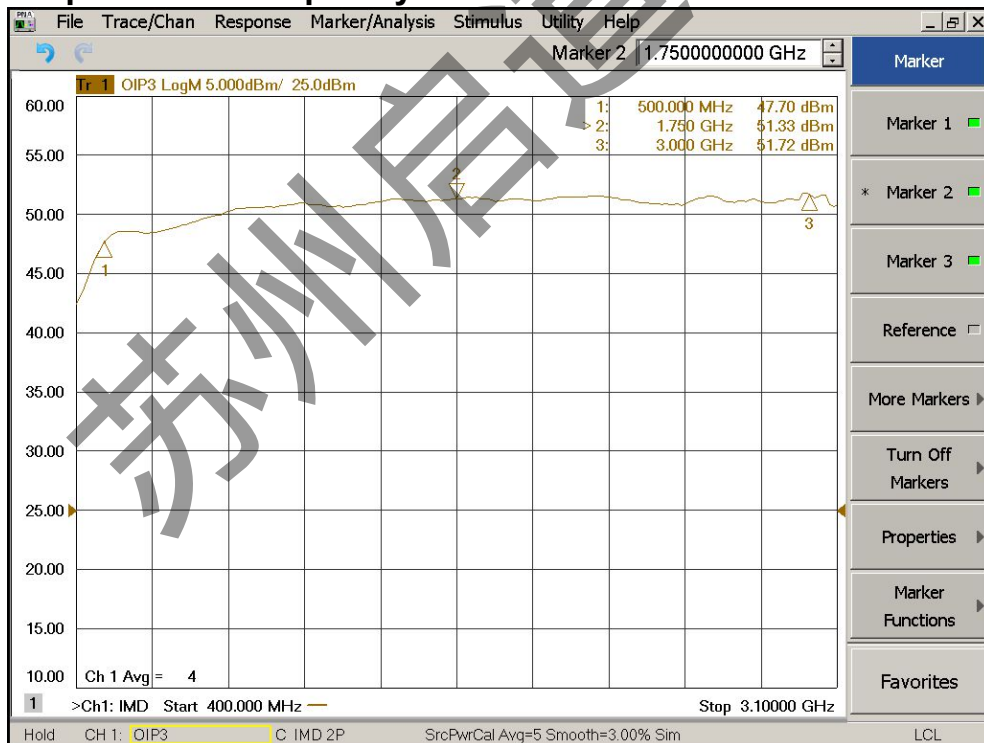
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Output P3dB vs Frequency



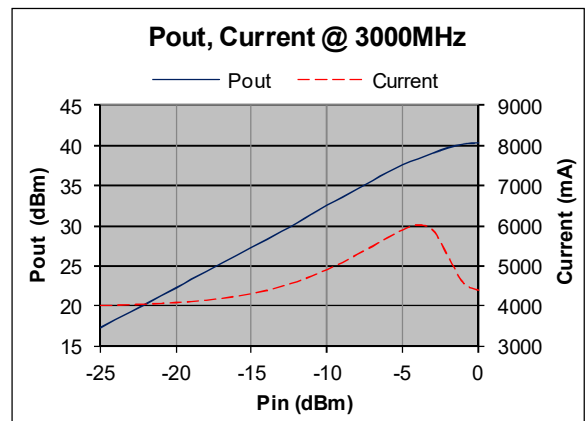
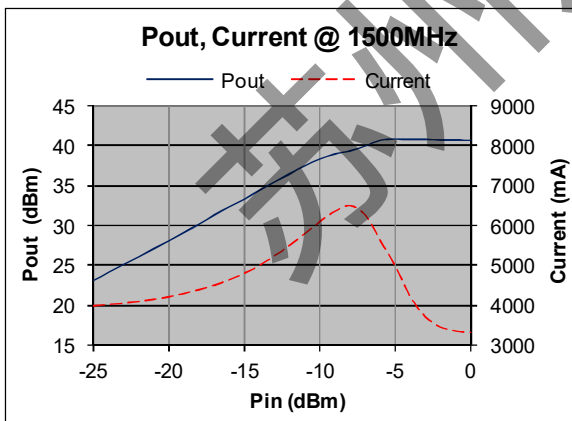
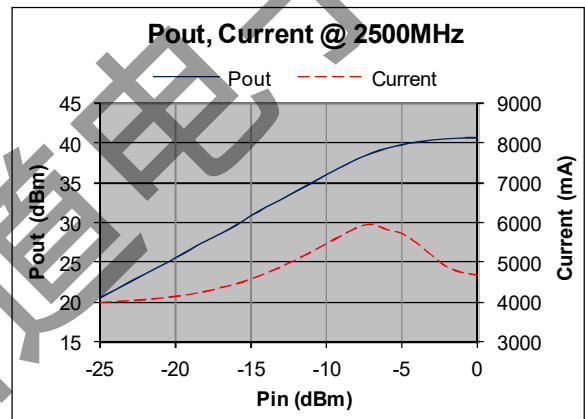
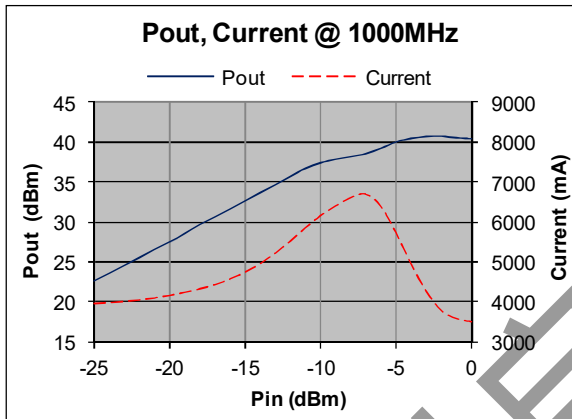
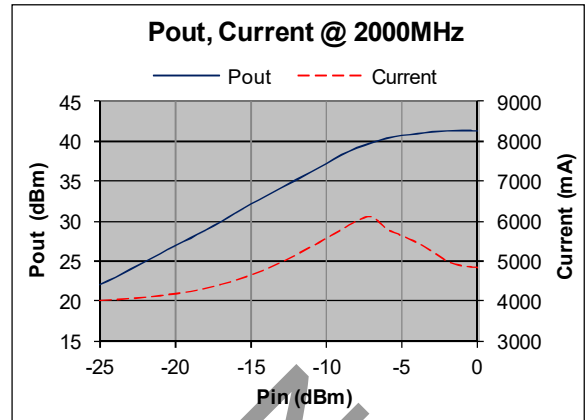
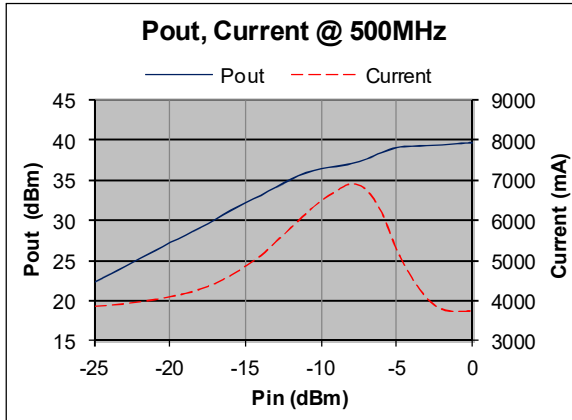
Output IP3 vs Frequency



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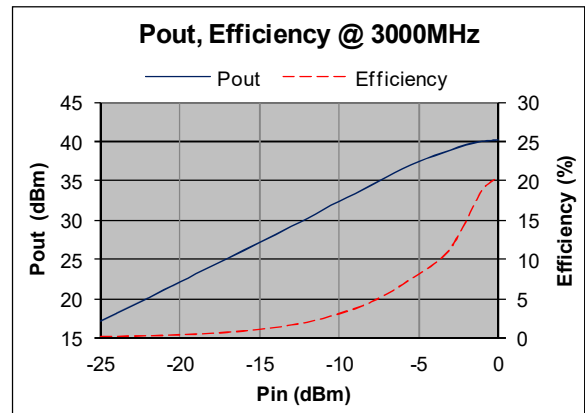
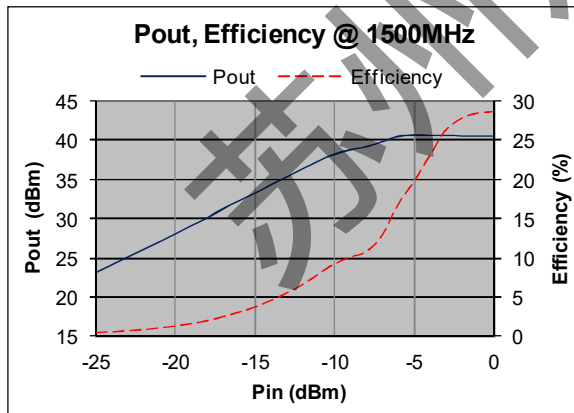
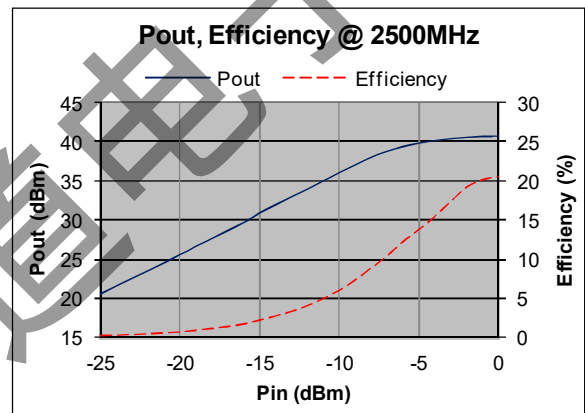
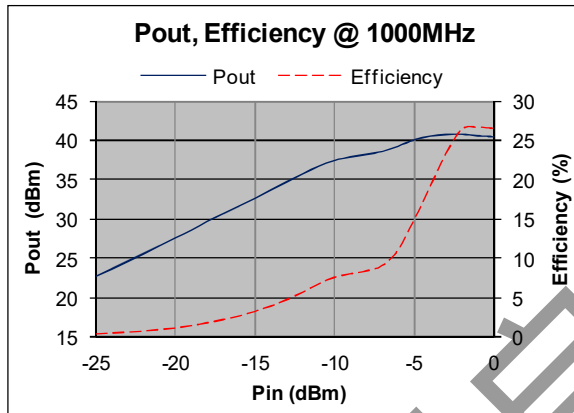
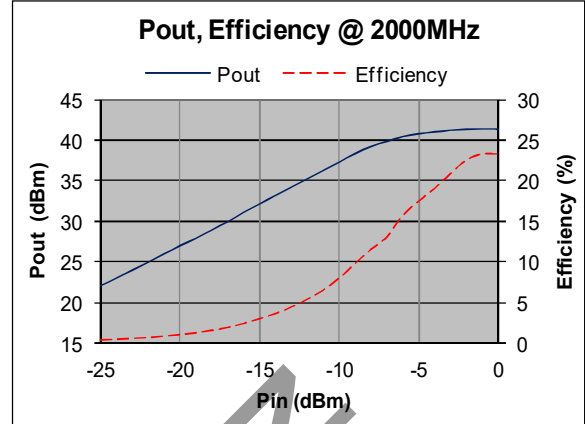
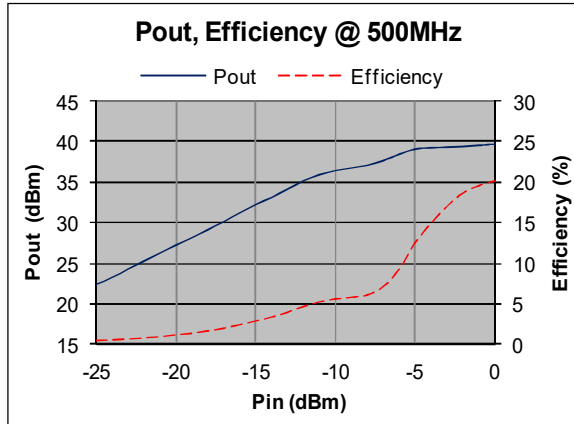
Typical Performance @ +25 °C



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Absolute Maximum Ratings

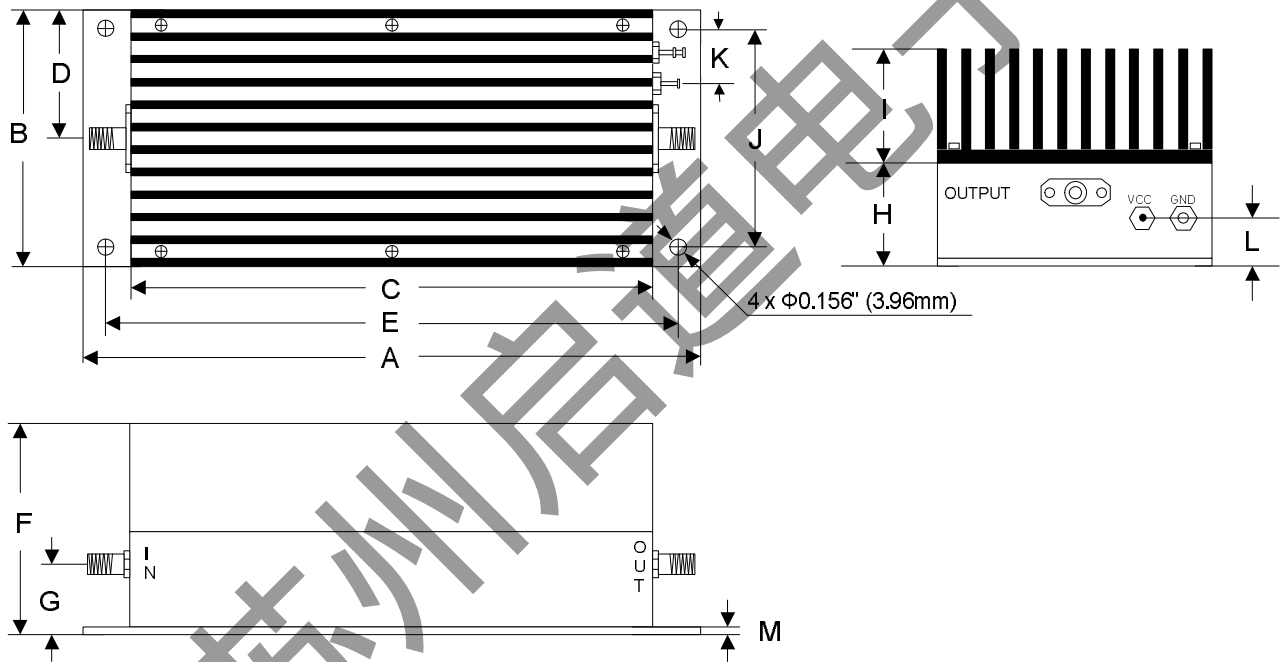
Parameter	Absolute Maximum
Supply Voltage	+16V
RF Input Power	+5dBm
Operating Temperature	-30 °C to +65 °C
Storage Temperature	-55 °C to +125 °C

ESD Sensitive Material



**WARNING: MUST KEEP CASE TEMPERATURE NOT EXCEED 65 °C
 USING FAN TO COOL DOWN HEATSINK IS REQUIRED**

Outline



	A	B	C	D	E	F	G	H	I
Inch	7.000	3.250	6.000	1.625	6.500	2.000	0.650	1.000	1.000
mm	177.80	82.55	152.40	41.28	165.10	50.80	16.51	25.40	25.40
	J	K	L	M					
Inch	2.750	0.625	0.450	0.090					
mm	69.85	15.88	11.43	2.29					