

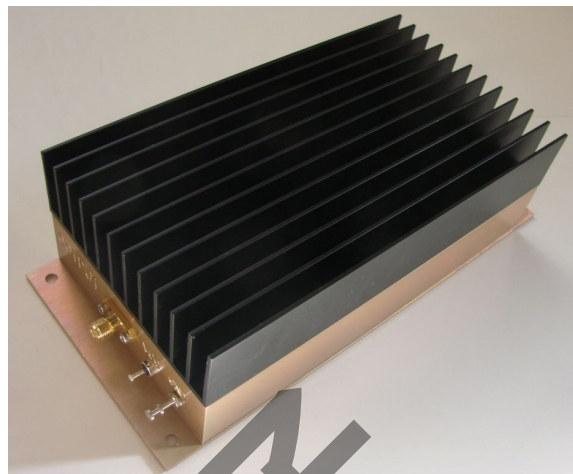
HPA Series

30 - 600MHz 10W RF Power Amplifier

Features

- Frequency Range: 30 - 600MHz
- Gain: 30dB @ P_{out}= 10W
- P_{out}: +40dBm
- Reverse Voltage Protection
- DC Power: +12V to +15V
- Class AB
- SMA Connector

Picture



Description

HPA-300 is a 10Watt (+40dBm) output RF Power Amplifier designed and operated for FM application. It operates in Class AB mode from single 12 to 15V DC power supply with frequency range in 30 - 600MHz.

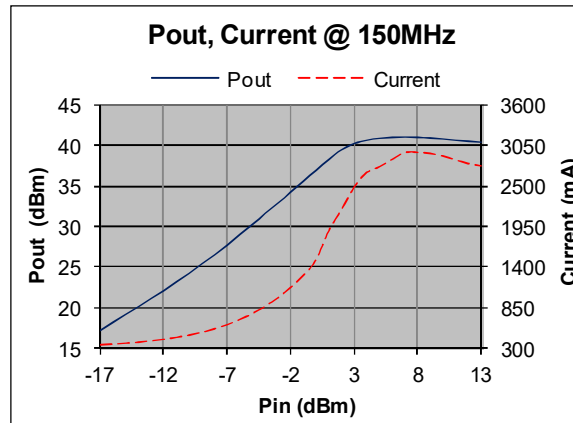
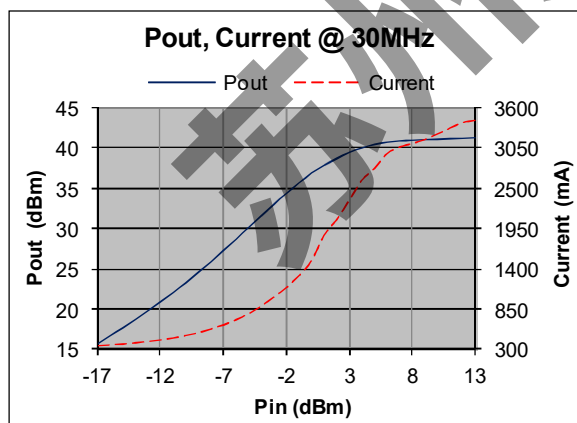
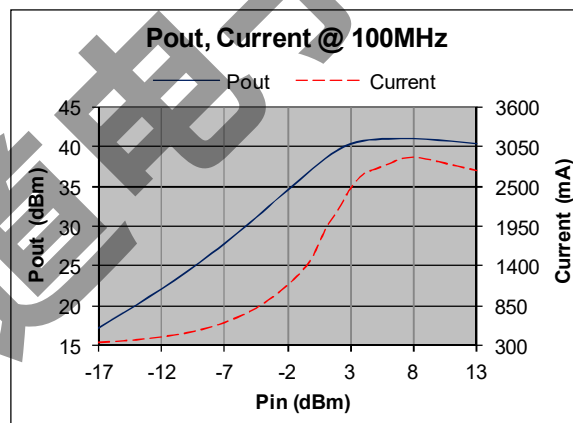
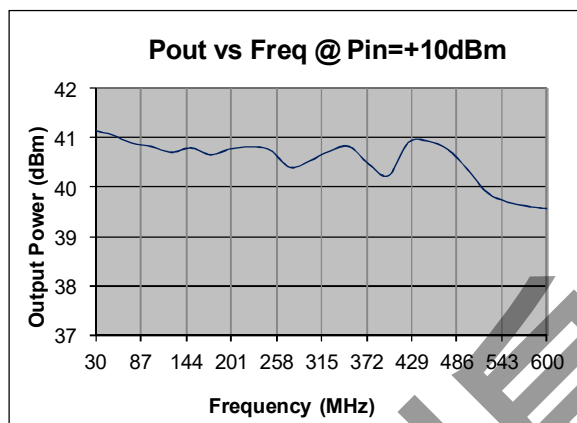
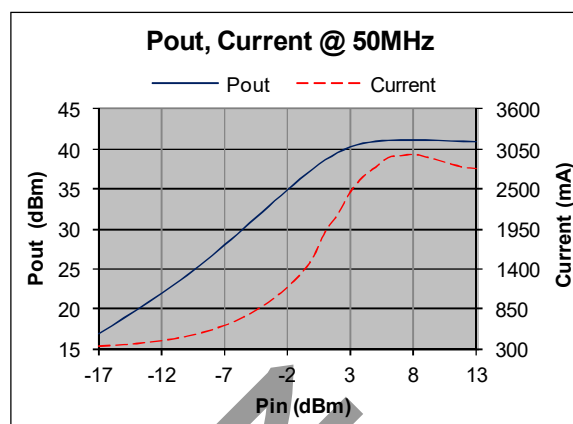
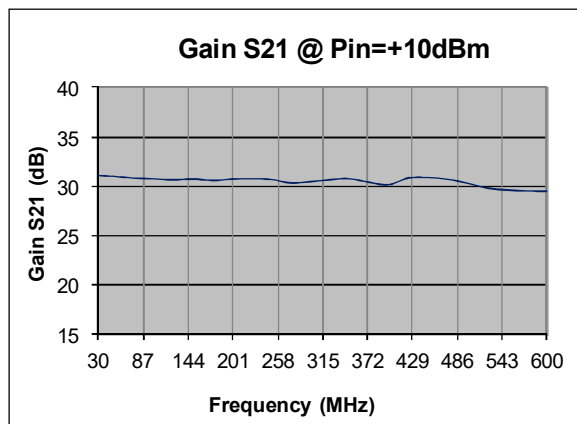
Electrical Specifications @ +25 °C, Z_{in} = Z_{out} = 50 Ω, DC Supply = +12V

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	MHz	30		600
Gain S ₂₁ @ P _{in} = +10dBm	dB		30	
Output Power P _{out} @ P _{in} = +10dBm	dBm		+40	
Reverse Isolation S ₁₂ f = 300MHz	dB	-40	-48	
Noise Figure f = 300MHz	dB		5.0	6.0
Efficiency at P _{out} = +40dBm f = 300MHz	%		32	
Input VSWR S ₁₁ f = 300MHz			1.1:1	1.5:1
DC Power Supply	V	+11	+12	+15
Supply Current Quiescent (no RF)	mA		340	400
@ P _{out} = +40dBm	mA		2900	3700
Size (Excluding SMA Connector)	inch	7.000" x 3.250" x 2.000"		
Weight	Oz.	24 (680g)		

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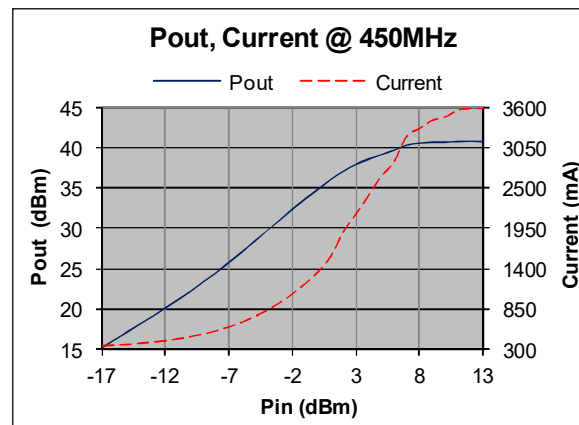
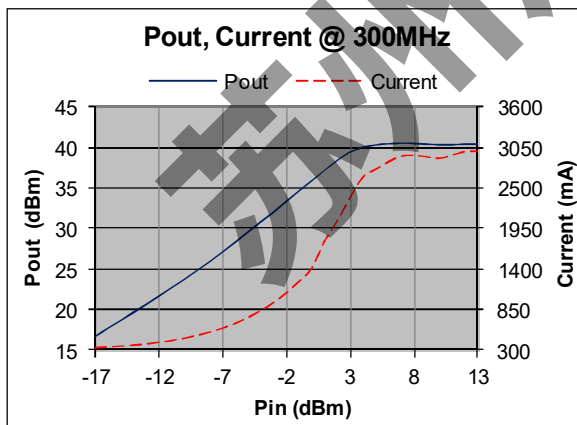
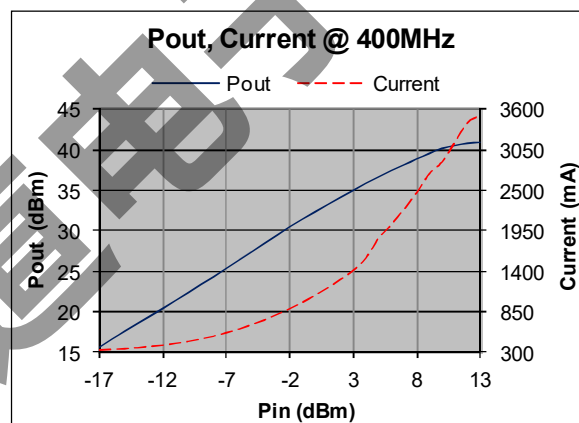
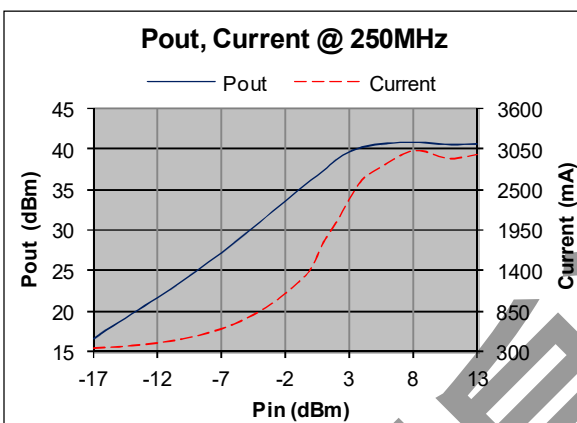
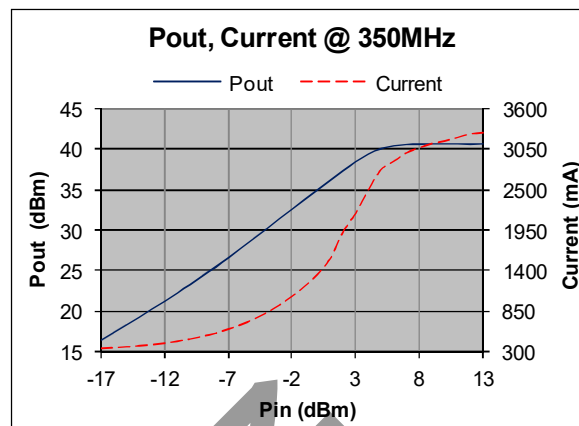
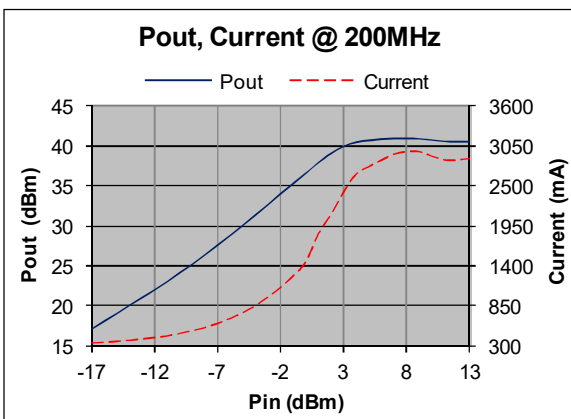
Typical Performance @ +25 °C



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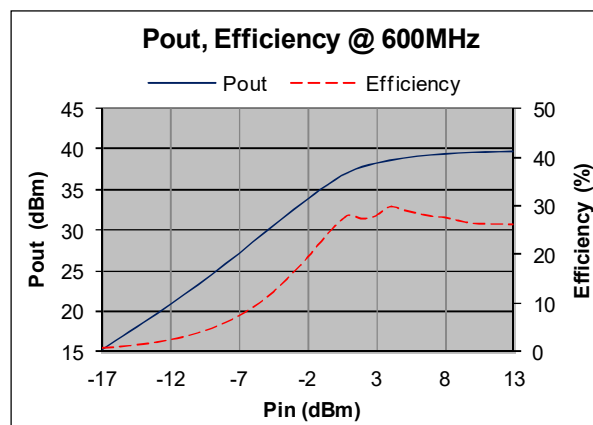
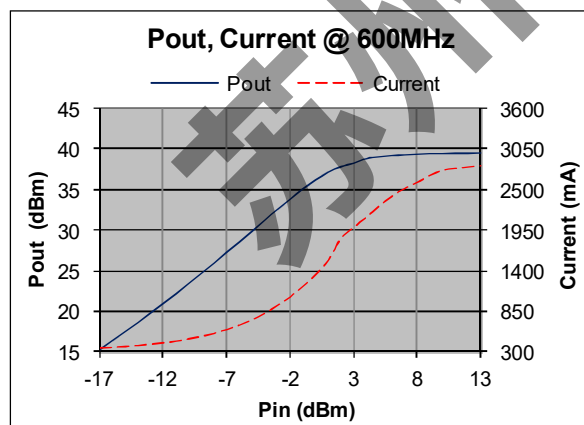
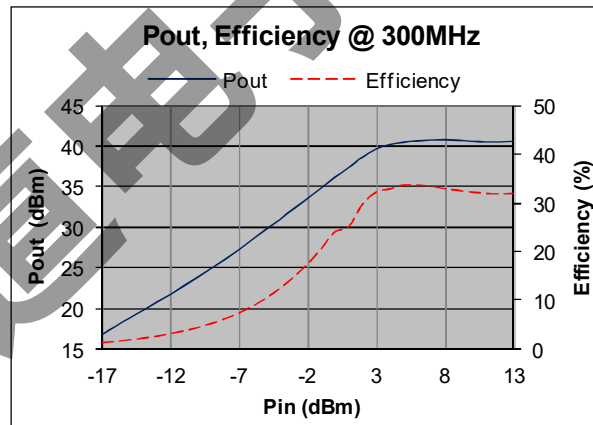
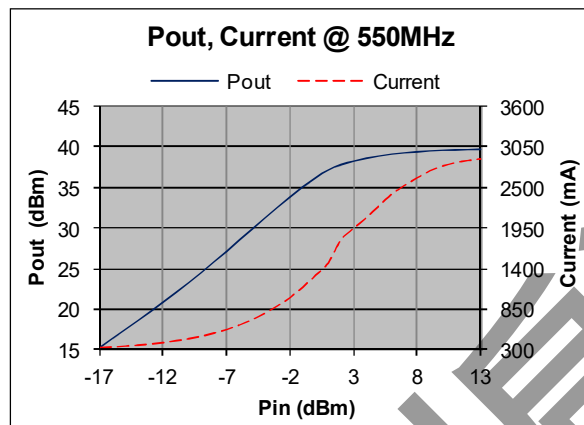
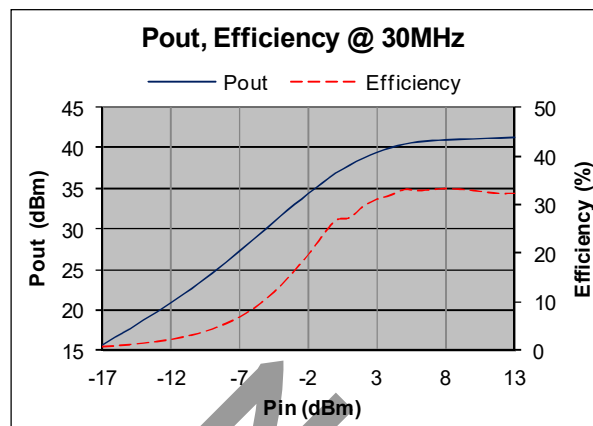
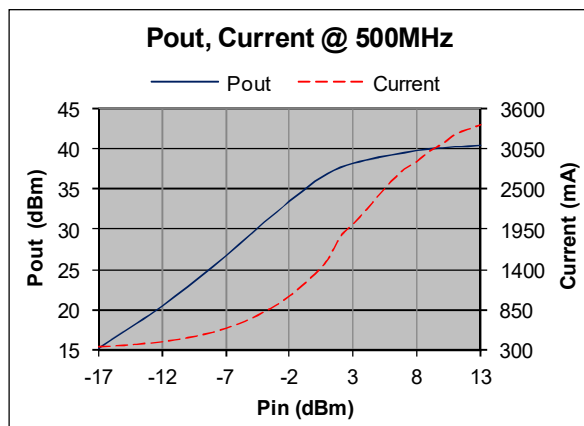
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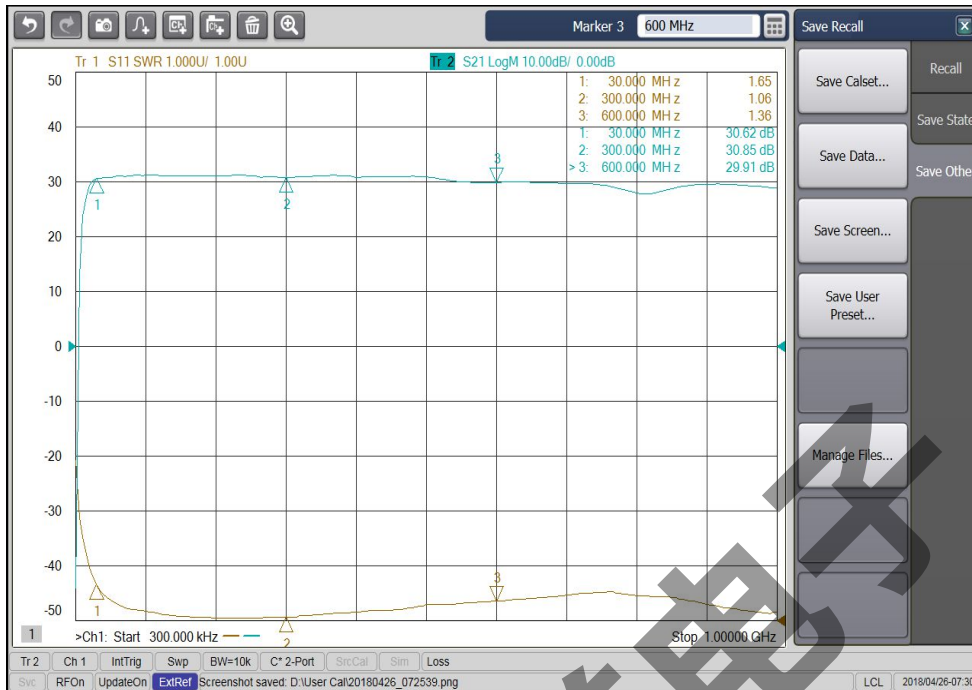
Typical Performance @ +25 °C



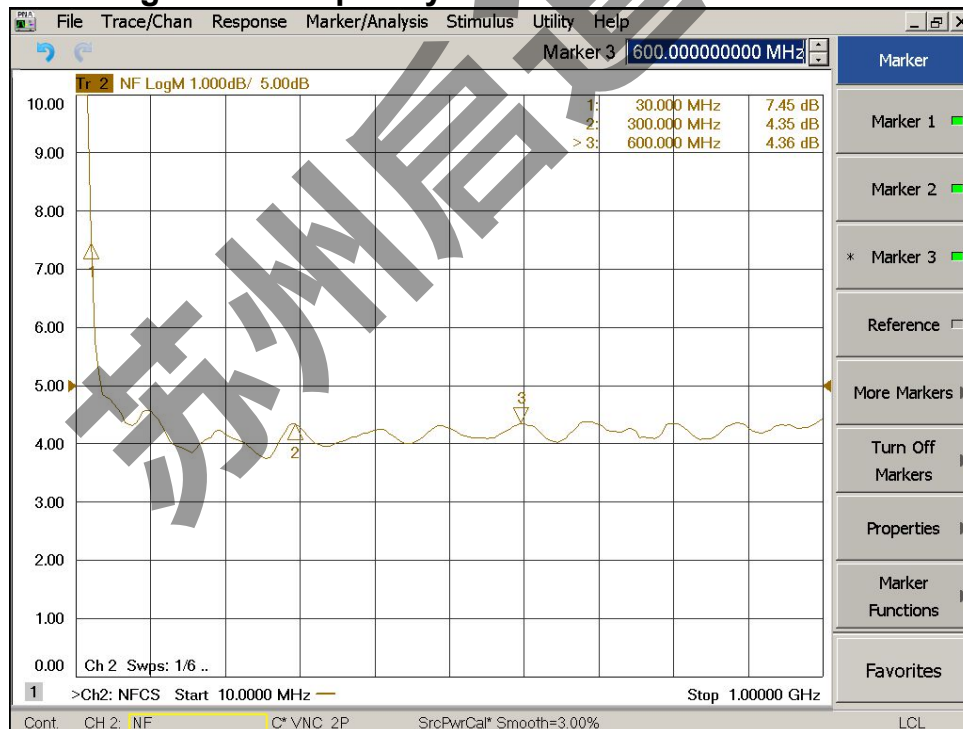
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Gain S21, Input VSWR S11 vs Frequency



Noise Figure vs Frequency



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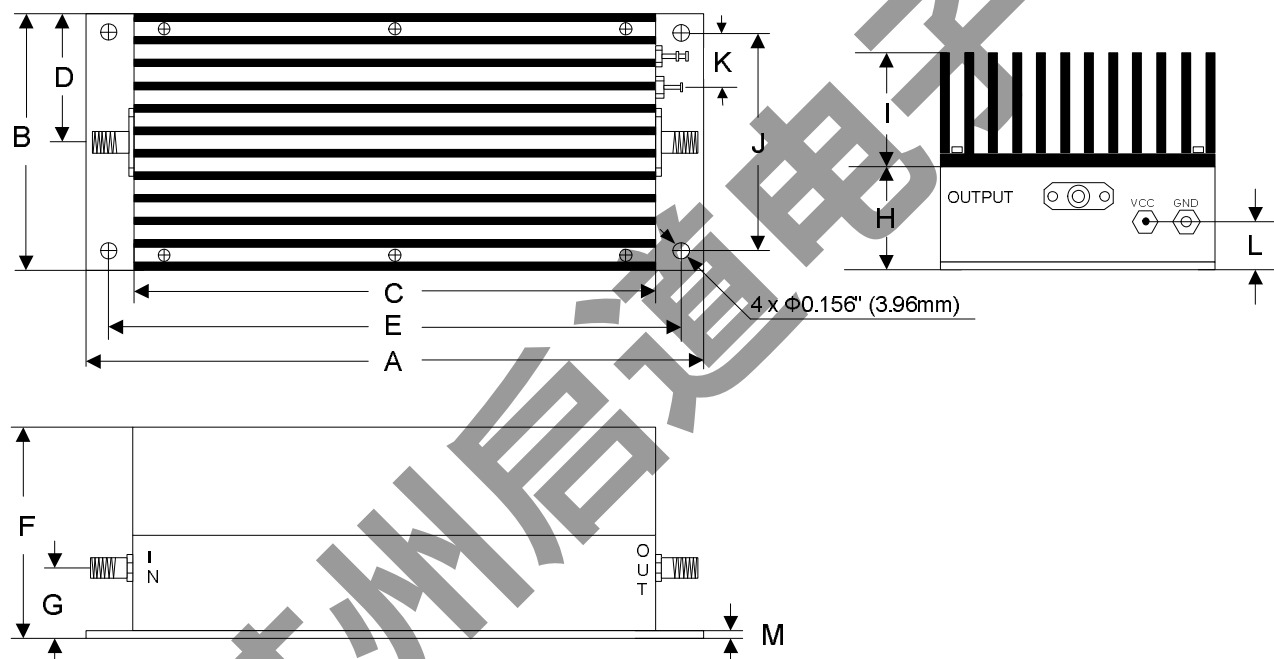
Absolute Maximum Ratings

Parameter	Absolute Maximum
Supply Voltage	+18V
RF Input Power	+15dBm
Operating Temperature	-30 °C to +65 °C
Storage Temperature	-55 °C to +125 °C

ESD Sensitive Material



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					