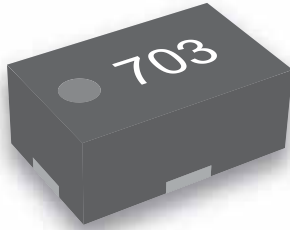


MMA703

DC to 6 GHz Amplifier



2012 PACKAGE



Description:

The MMA703 is a fully matched amplifier fabricated in Aeroflex / Metelics reliable InGaP HBT technology. The economical, low parasitic molded package provides state-of-the-art wideband performance.

Features:

- DC - 6 GHz Broadband Gain Block
- ± 0.5 dB Typical Gain Flatness
- 50 Ohms Input/Output Impedances

RF Specifications:

Parameter	Term	Minimum	Typical	Maximum	Units
3dB Bandwidth	BW	DC	- - -	9	GHz
Frequency Range	f_0	DC	- - -	6	GHz
Gain	G_p	17	18	- - -	dB
Output Power	P_{1dB}	+16	+17	- - -	dBm
Standing Wave Ratio	VSWR	1.5:1	2.0:1	- - -	- - -
3 rd Order Intercept Point	IP3	+23	+25	- - -	dBm
Noise Figure	NF	- - -	3.8	4.2	dB
Device current	I_c	42	48	55	mA

- NOTES:
1. $T_A = +25$ °C.
 2. $V_S = 6.0$ Vdc, $R_{BIAS} = 22$ Ω
 3. IP3 measured with two tones offset 10 MHz at 0 dBm per tone.

Absolute Maximum Ratings:

Parameters	Rating
Device Current (I_c)	80 mA
RF Input Power, continuous	+10 dBm
Operating Temperature	-40 to +85 °C
Storage Temperature	-55 to +125 °C
Thermal Resistance (θ_{JC})	125 °C/W



MMA703

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Typical RF Performance:

Figure 1.

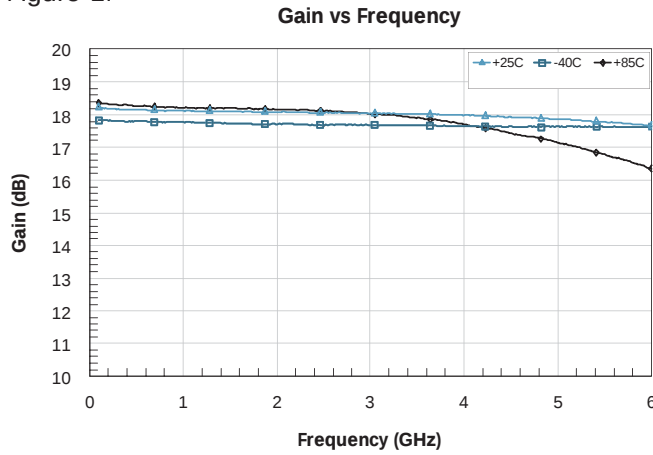


Figure 2.

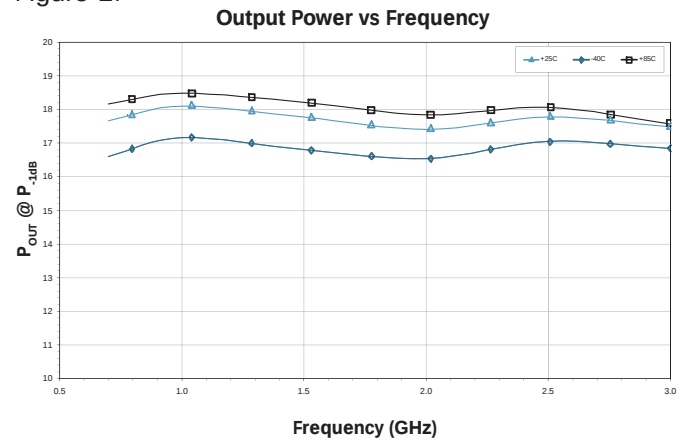


Figure 3.

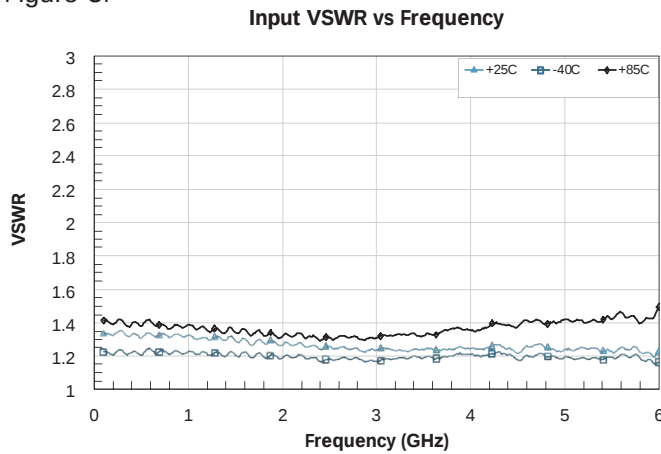


Figure 4.

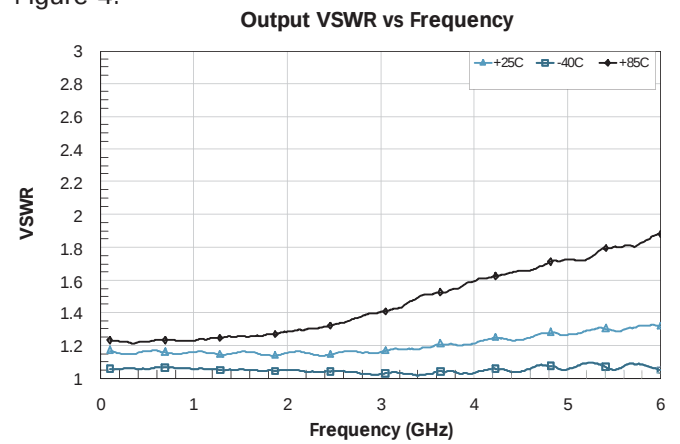


Figure 5.

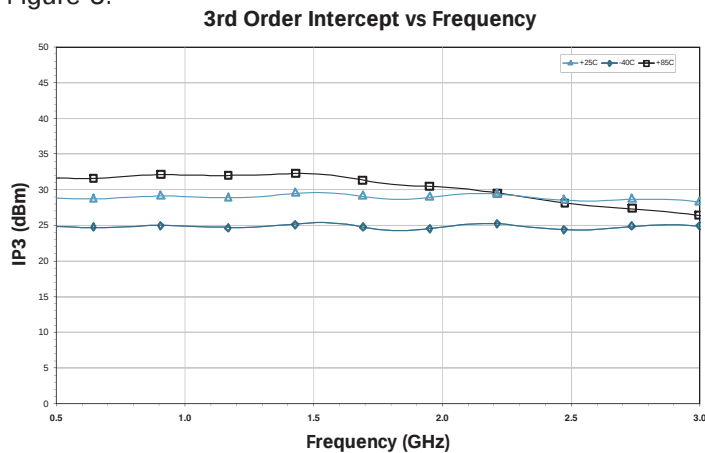
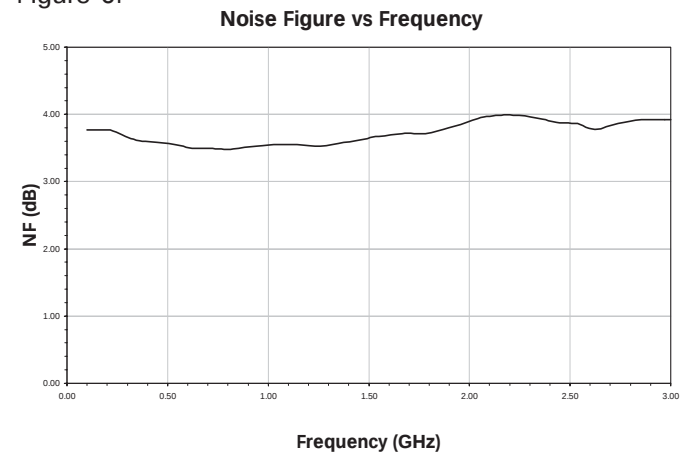


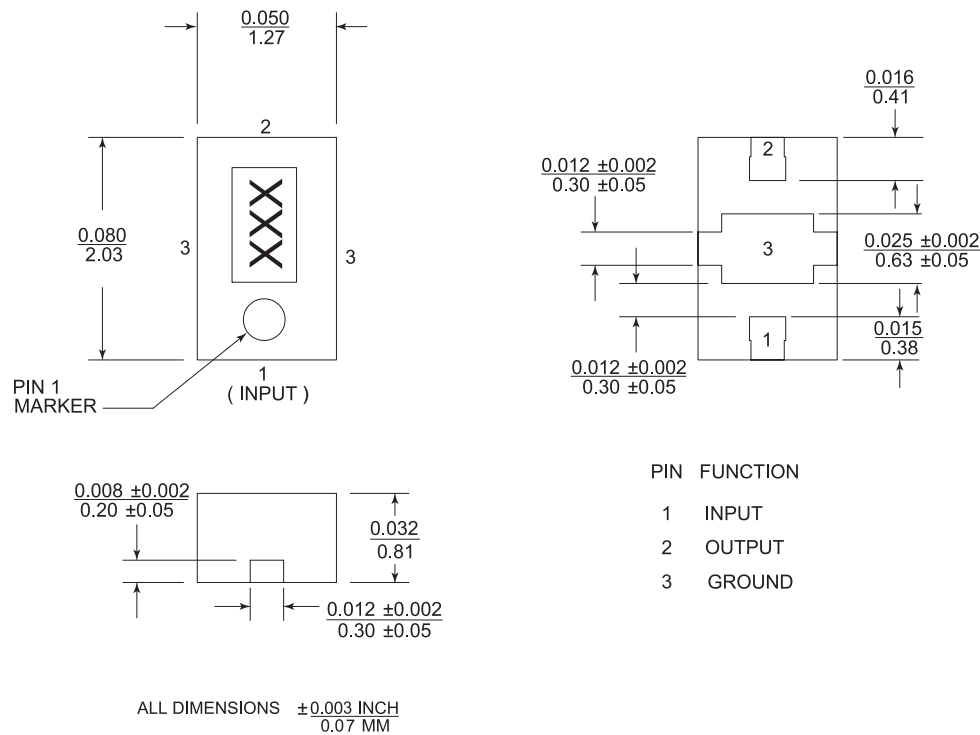
Figure 6.



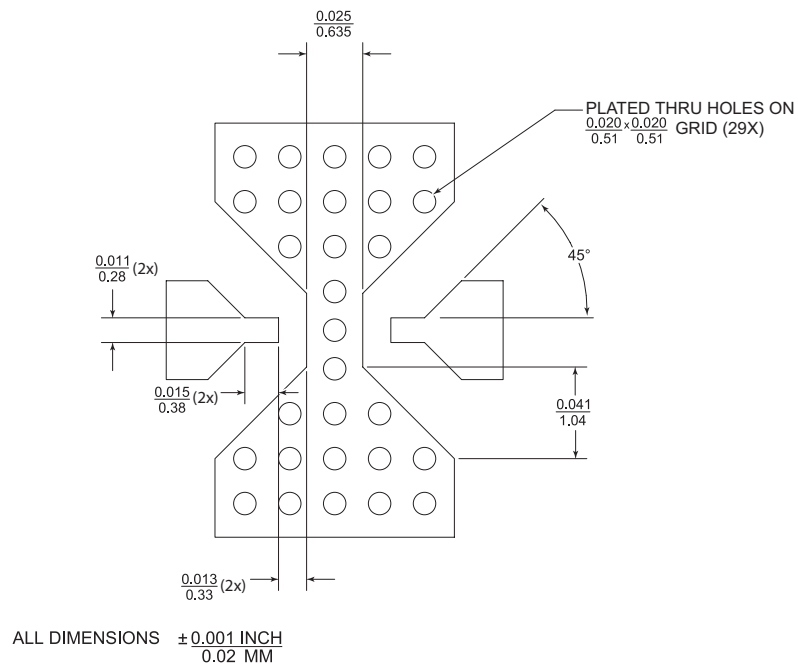
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2012 Package Dimensions:



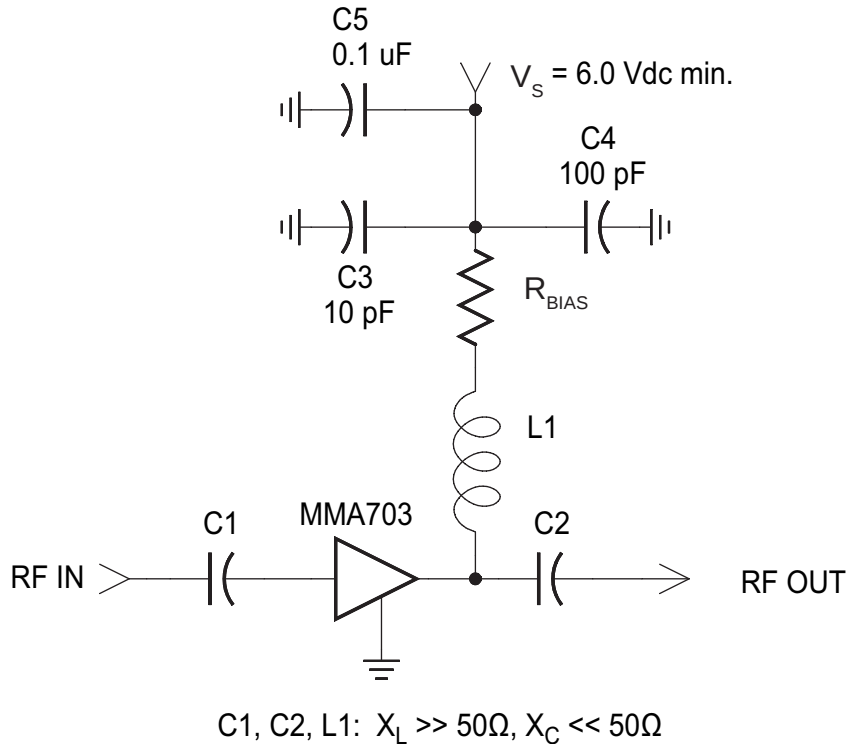
Recommended PCB Layout:



MMA703

DC to 6 GHz Amplifier

Application Circuit:



R_{BIAS} vs. V_S

V_S (V)	6.0	8.0	10.0	12.0	15.0
R_{BIAS} (Ω)	22	43	86	130	200
Power Dissipation (W)	0.10	0.2	0.5	1	2

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Our passion for performance is defined by three attributes represented by these three icons: solution-minded, performance-driven and customer-focused.