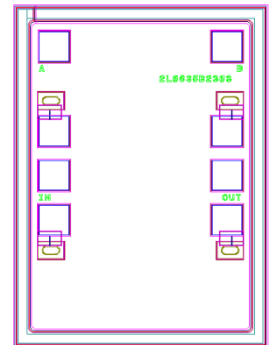


AMT1222
0.02 – 6GHz Low Noise Amplifier Chip

Key Features :

- Frequency range : 0.02 – 6GHz
- Typical gain : 21dB
- Input standing wave : 1.4
- Output standing wave : 1.8
- Noise figure : 1.8dB
- P-1 : 20.2dBm @ +5V/86mA
- Chip dimensions : 0.8mm x 1.1mm x 0.1mm
- Applications : wireless communication, transceiver module, radio telecommunication etc.



Description :

AMT1222 chip is a Gallium Arsenide (GaAs) high performance Low Noise Amplifier, it covers 0.02 – 6GHz frequency range. It uses +5V single voltage operation, noise figure is 1.5dB, and 22dB typical gain. This chip is designed with ground through metal vias on the back technology.

Absolute Maximum Ratings (Ta = 25°C)

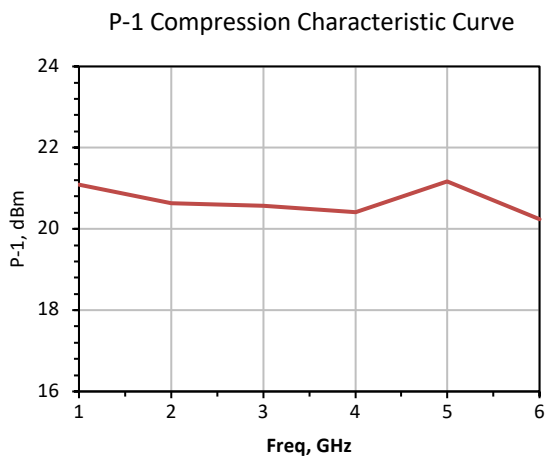
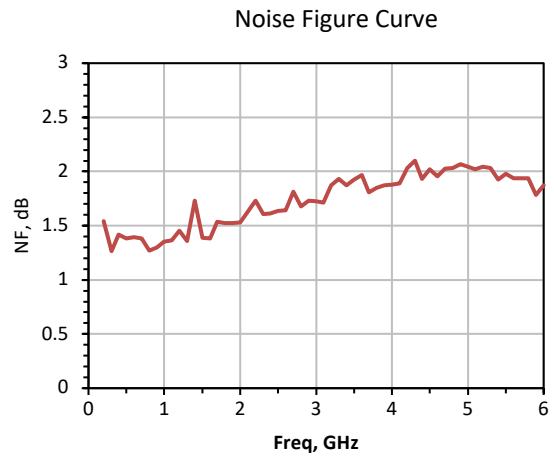
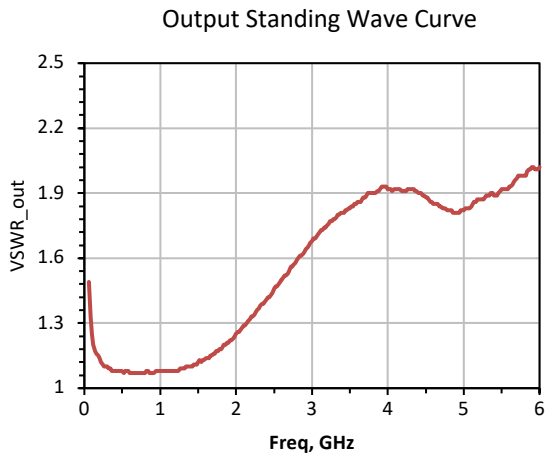
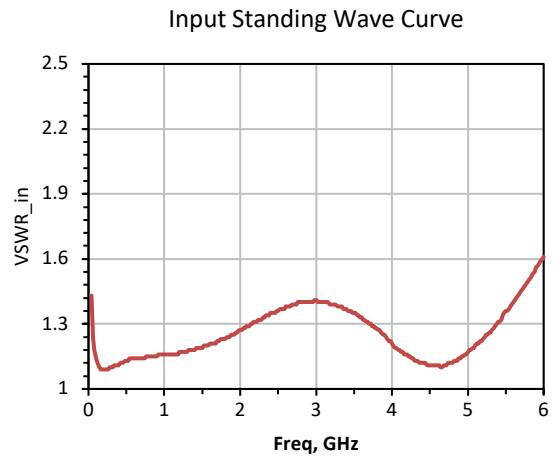
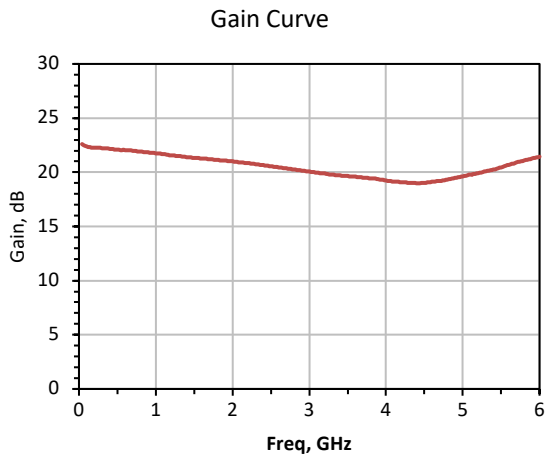
Symbol	Parameter	Value	Remark
Vd	Drain Voltage	+7V	
Pin	Input Signal Power	17dBm	
Tch	Operating Temperature	150°C	
Tm	Sintering Temperature	310°C	30s, N ₂ protection
Tstg	Storage Temperature	-65 ~ +150°C	

[1] Operation outside any of the Absolute Maximum Ratings may cause permanent device damage.

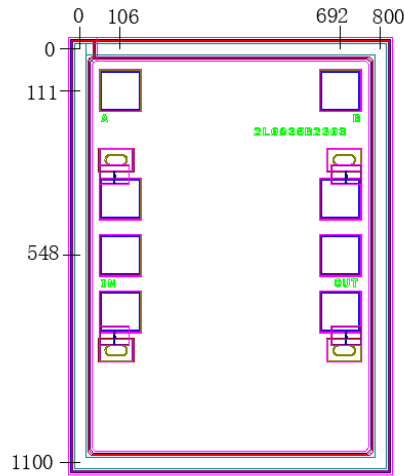
Electrical Characteristics (Ta = 25°C)

Symbol	Parameter	Test Conditions	Value			Unit
			Min	Typical	Max	
G	Gain	Vd = +5V F : 0.02 ~ 6GHz	-	21	-	dB
NF	Noise Figure		-	1.8	-	dB
Id	Static Current		-	86	-	mA
VSWR_in	Input Standing Wave		-	1.4	1.6	-
VSWR_out	Output Standing Wave		-	1.8	2	-
P-1	Output Power at 1dB point		20.2	20.5	-	dBm

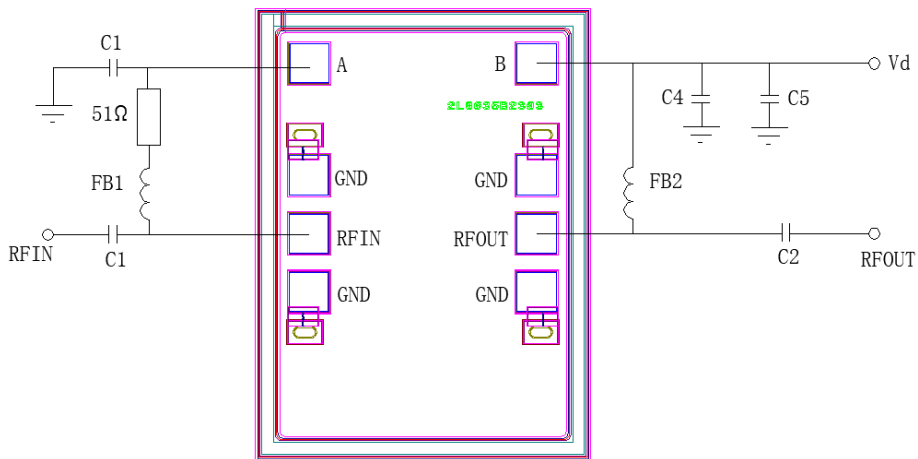
Typical Performance



Chip Dimensions (Unit : μm)



Chip Layout Diagram



Device List

Device Name	Device Model	Value	Manufacturer	Package Type
C1, C2, C3	GRM188R61H102KA01	1000pF	Murata	0603
C4	GRM1885C1H101JA01	100pF	Murata	0603
C5	GRM1857U1A103JA44	10nF	Murata	0603
FB1, FB2	MMZ1005A222ET000	-	TDK	-

Please see Appendix A for details.