

AMT1101
0.8 – 6.5GHz Power Amplifier Chip



Key Features :

- Frequency range : 0.8 – 6.5GHz
- Typical gain : 22dB
- Input/output standing wave : 1.5/1.6
- Noise figure : 3.5dB
- P-1 : 18dBm@+5V/72mA
- Po (Sat) : 19dBm@+5V/72mA
- Chip dimensions : 1.86mm x 1.0mm x 0.1mm
- Applications : wireless communication, transceiver module, radio telecommunication etc..

Description :

AMT1101 chip is a Gallium Arsenide (GaAs) designed power amplifier chip, its superior performances of typical 22dB high gain, 3.5dB Noise figure, and high efficiency in a wide bandwidth of 0.8 – 6.5GHz frequency range, make it ideal for many microwave communication applications. This chip is designed with ground through metal vias on the back technology. All chip products p are 100% RF tested.

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	

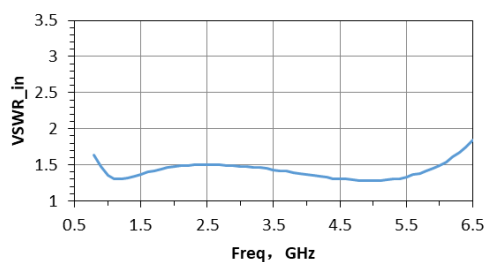
[1] Operation outside any of the Absolute Maximum Ratings may cause permanent device damage.

Electrical Characteristics (Ta = 25°C)

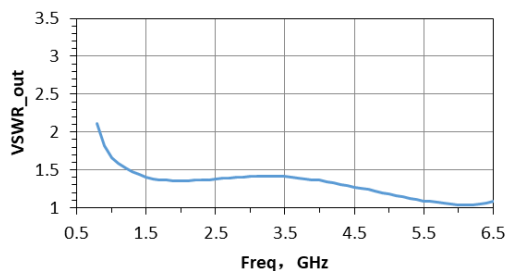
Symbol	Parameter	Test Condition	Value			Unit
			Min	Typical	Max	
G	Gain	Vd = +5V F : 0.8 ~ 6.5GHz	20	22	-	dB
NF	Noise figure		-	3.5	4	dB
Id	Drain current		-	75	85	mA
VSWR	Input SW		-	1.5	2.3	-
VSWR	Output SW		-	1.6	2.0	-
P-1	1dB compression point		15	18	-	dBm
Po (sat)	Saturated Output Power		17	19	-	dBm

Typical Performance

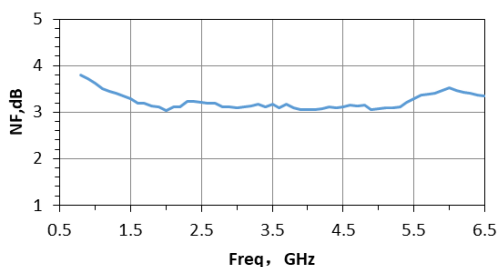
Input Standing Wave Curve



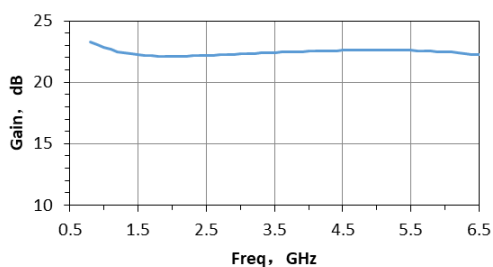
Output Standing Wave Curve



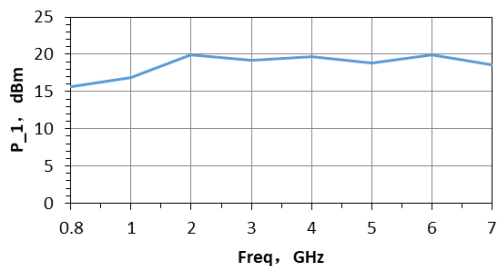
Noise Curve



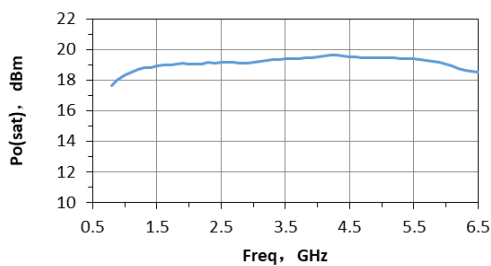
Gain Curve



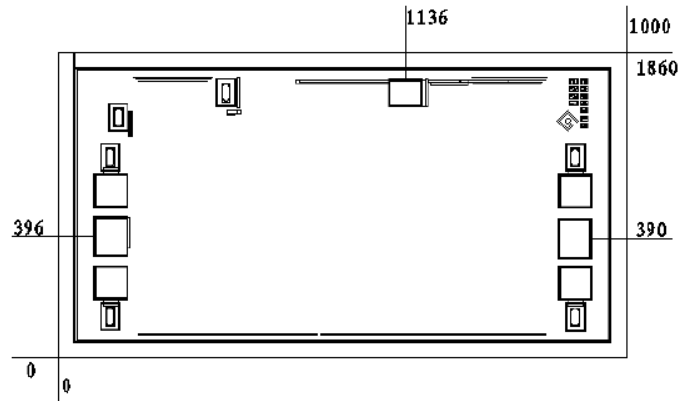
P-1 Curve



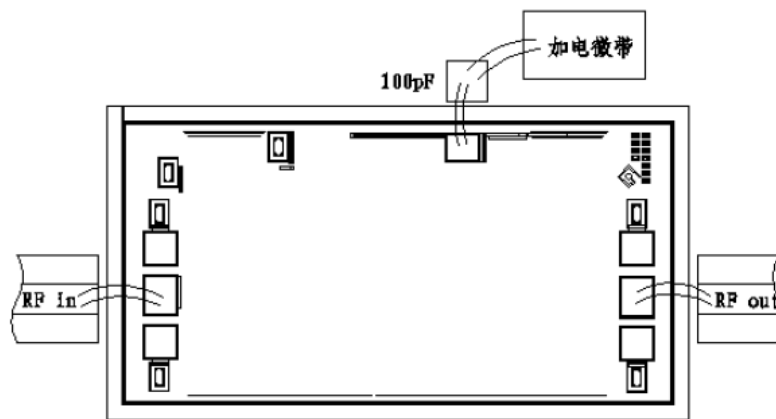
Po(sat) Curve



Chip Dimensions (Unit : μm)



Chip Layout Diagram



Please see Appendix A for details.