AMT1502
0.1 - 4GHz Clipper Chip

Key Features :

- Frequency range : 0.1 – 4GHz
- Input/Output standing wave : 1.2
- Insertion loss : 0.2dB
- Endurance power : 25W
- Chip dimensions : 1.8mm x 1.1mm x 0.1mm
- Applications : wireless communication, transceiver module, radio telecommunication etc.

Description :

AMT1502 is a high performance clipper chip, it is designed by Gallium Arsenide (GaAs) process. This chip is designed with ground through metal vias on the back technology. It covers frequency range of 0.1 ~ 4GHz, typical insertion loss at 0.2dB, and input/output standing wave 1.2.

Absolute Maximum Ratings (Ta = 25°C)

Symbol	Parameter	Value	Remark
Pin	Input Power	45dBm	
Tch	Channel Operating Temperature	150°c	
Tm	Sintering Temperature	310°c	30s, N_2 protection
Tstg	Storage Temperature	-65 ~ +150°c	

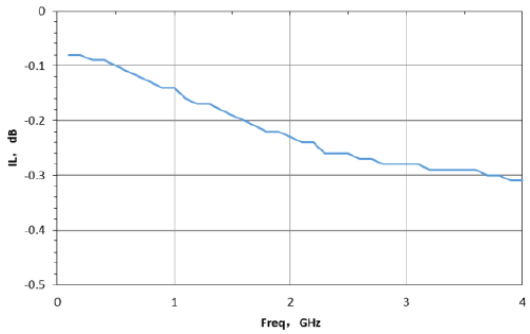
[1] Operation outside any of the Absolute Maximum Ratings may cause permanent device damage.

Electrical Characteristics (Ta = 25°C)

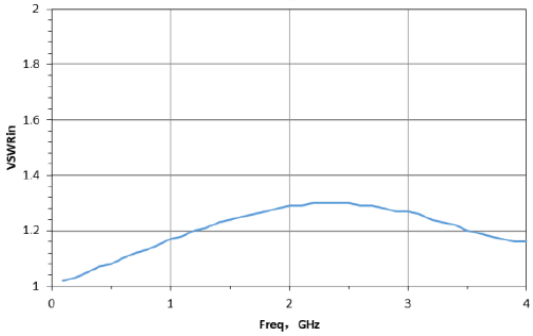
Symbol	Parameter	Test Conditions	Value			Unit
			Min	Typical	Max	
VSWRin	Input Standing Wave	F : 0.1 – 4GHz	-	1.2	-	
VSWRout	Output Standing Wave		-	1.2	-	
IL	Insertion Loss		-	0.2	0.3	dB
P_{LIM}	Clipper output level		-	15	-	dBm

Typical Performance

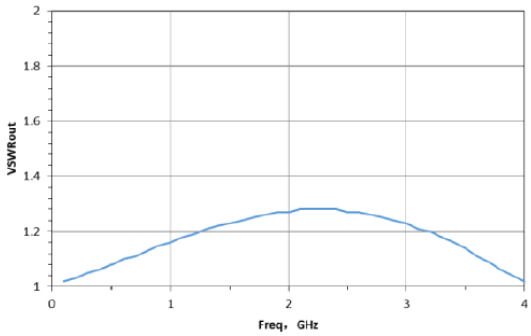
Insertion Loss Curve



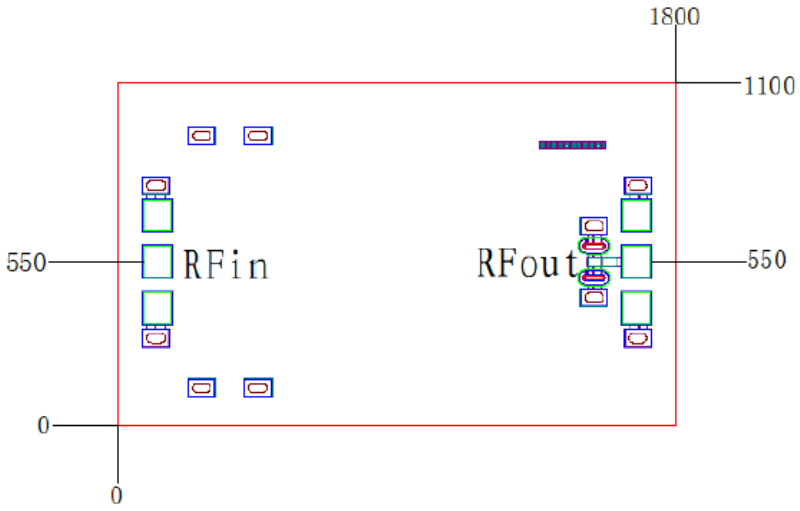
Input Standing Wave Curve



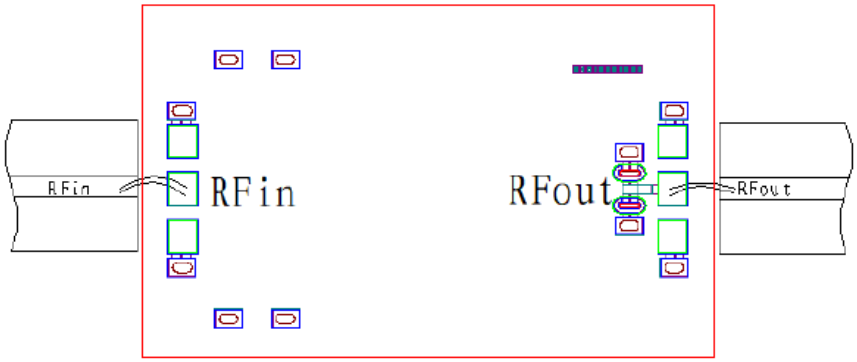
Output Standing Wave Curve



Chip Dimensions (Unit : μm)



Chip Layout Diagram



Pad Definition

No.	Symbol	Function Description	Dimensions
1	RFin	RF signal input port, external connect to 50Ω system, no DC blocking capacitor.	100μm*100μm
2	RFout	RF signal output port, external connect to 50Ω system, no DC blocking capacitor	100μm*100μm

Please see Appendix A for details.