

**AMT1508
8 - 14GHz Clipper Chip**



Key Features :

- Frequency range : 8 – 14GHz
- Input/output standing wave : 1.2
- Insertion loss : 0.4dB
- Clipping level : 16dBm
- Endurance power : 25W (CW)
- Chip dimensions : 1.92mm x 1.04mm x 0.1mm
- Applications : wireless communication, transceiver module, radio telecommunication etc.

Description :

AMT1508 is a passive 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 8 ~ 14GHz, typical insertion loss is 0.4dB, and input/output standing wave is 1.2.

Absolute Maximum Ratings (Ta = 25°C)

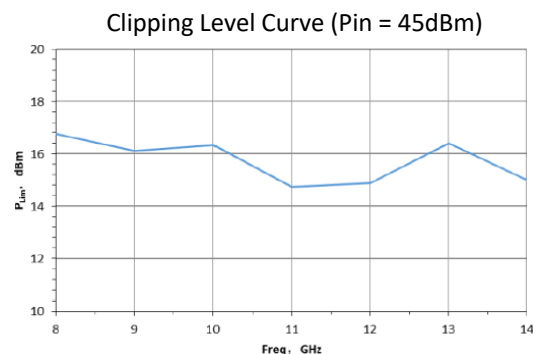
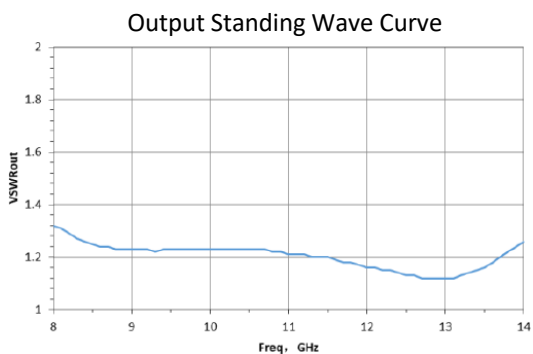
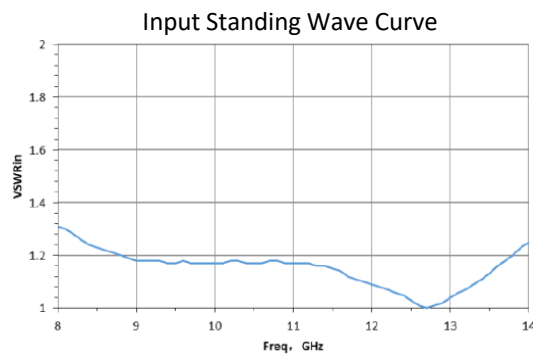
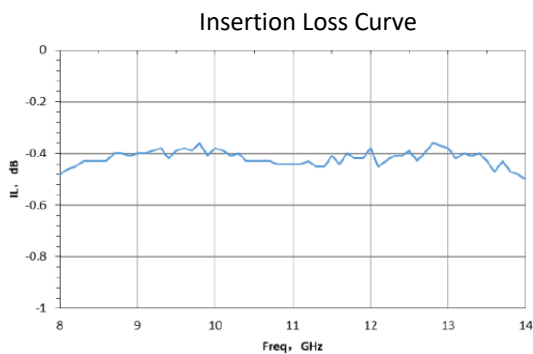
Symbol	Parameter	Value	Remark
Pin	Input Power	45dBm	
Tch	Channel Operating Temperature	150°C	
Tm	Sintering Temperature	310°C	30s, N ₂ protection
Tstg	Storage Temperature	-65 ~ +150°C	

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

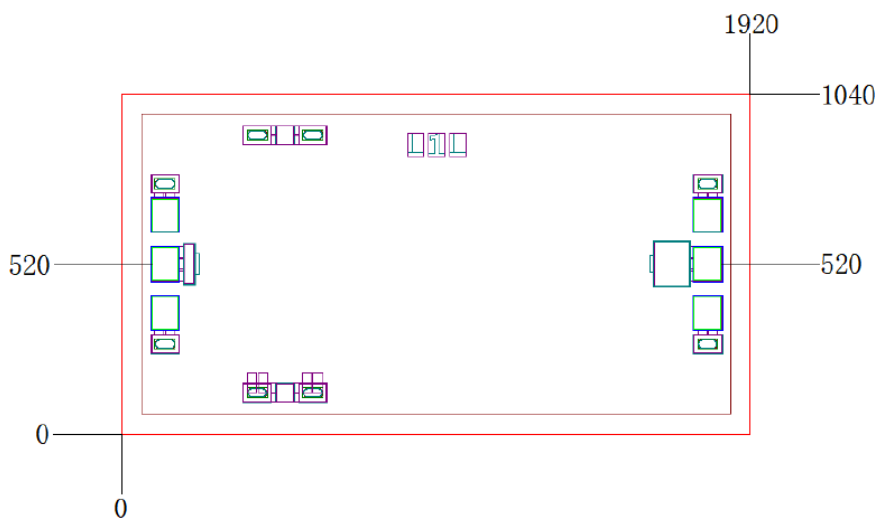
Electrical Characteristics (Ta = 25°C)

Symbol	Parameter	Test Conditions	Value			Unit
			Min	Typical	Max	
VSWRin	Input Standing Wave	F : 8 – 14GHz	-	1.2	1.3	
VSWRout	Output Standing Wave		-	1.2	1.3	
IL	Insertion Loss		-	0.4	0.5	dB
P _{LIM}	Clipper output level		-	16	17	dBm

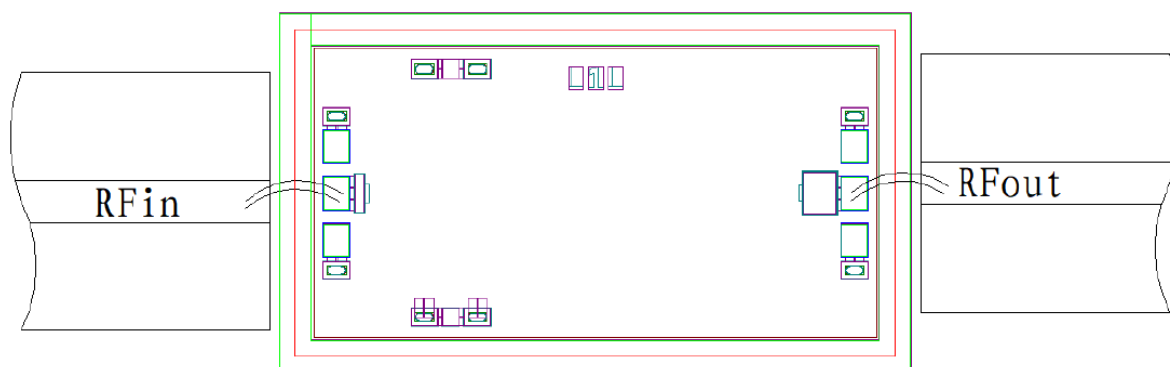
Typical Performance



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, internal built in DC blocking capacitor	$80\mu\text{m} \times 100\mu\text{m}$
2	RFout1	RF signal output port, external connect to 50Ω system, internal built in DC blocking capacitor	$80\mu\text{m} \times 100\mu\text{m}$

Please see Appendix A for details.