

**AMT1507  
8 - 12GHz Clipper Chip**



**Key Features :**

- Frequency range : 8 – 12GHz
- Input/output standing wave : 1.4
- Insertion loss : 0.6dB
- Clipping level : 16dBm
- Endurance power : 10W (CW)
- Chip dimensions : 1.5mm x 0.7mm x 0.1mm
- Applications : wireless communication, transceiver module, radio telecommunication etc.

**Description :**

AMT1507 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 8 ~ 12GHz, typical insertion loss is 0.6dB, and input/output standing wave is 1.4.

**Absolute Maximum Ratings (Ta = 25°C)**

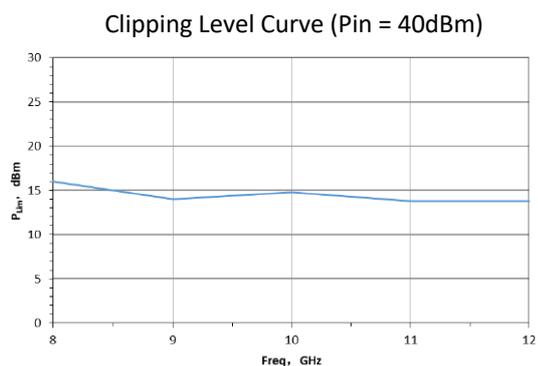
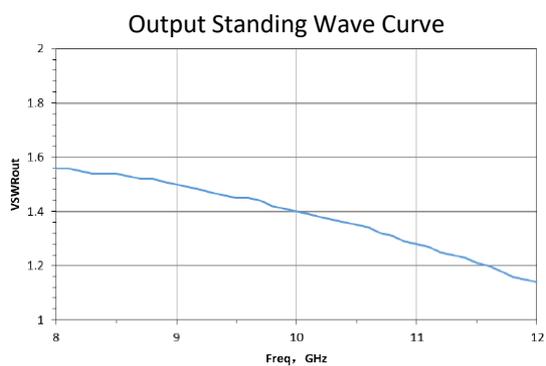
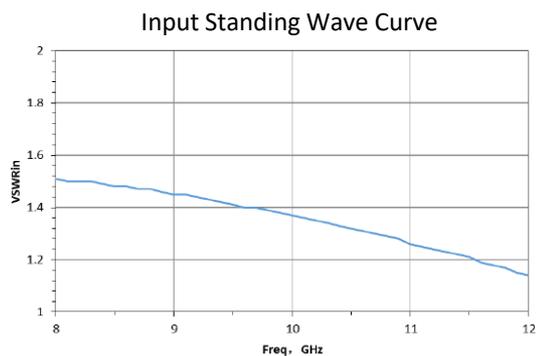
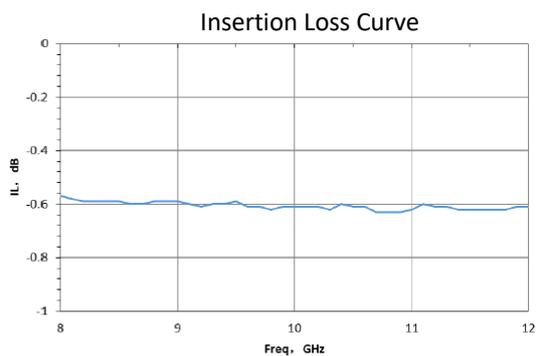
Symbol	Parameter	Value	Remark
Pin	Input Power	43dBm	
Tch	Channel Operating Temperature	150°C	
Tm	Sintering Temperature	310°C	30s, N <sub>2</sub> protection
Tstg	Storage Temperature	-65 ~ +150°C	

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

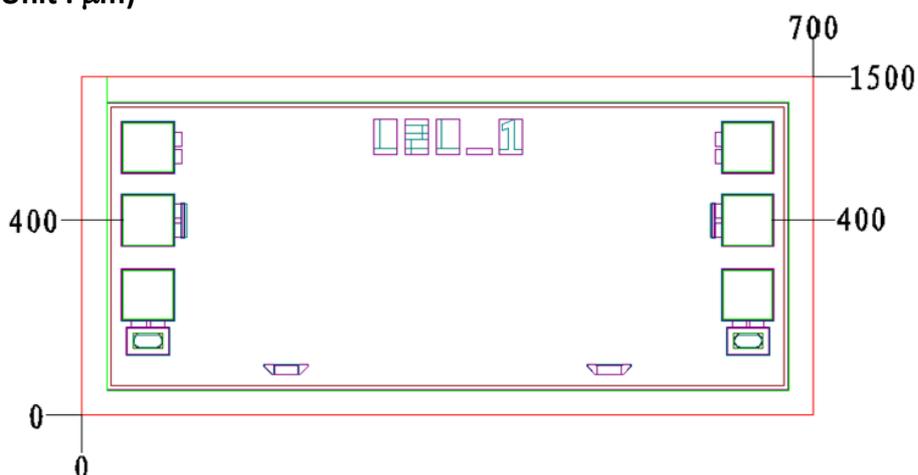
**Electrical Characteristics (Ta = 25°C)**

Symbol	Parameter	Test Conditions	Value			Unit
			Min	Typical	Max	
VSWRin	Input Standing Wave	F : 7 – 13GHz	-	1.4	-	
VSWRout	Output Standing Wave		-	1.4	-	
IL	Insertion Loss		-	0.6	-	dB
P <sub>LIM</sub>	Clipper output level		-	16	-	dBm

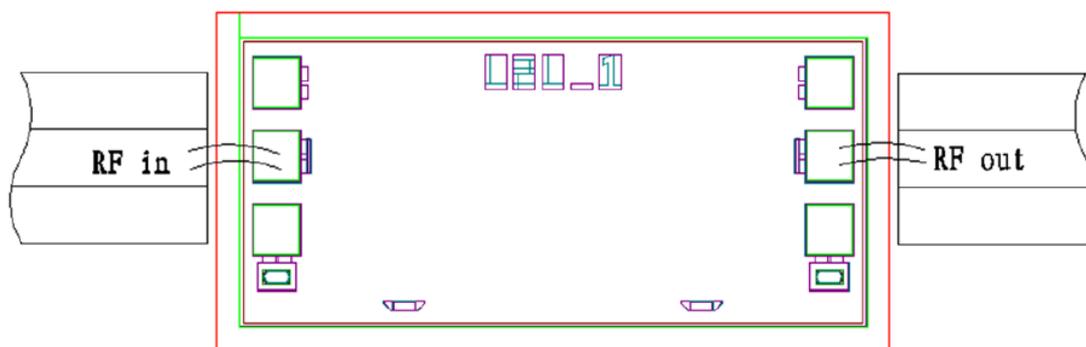
## Typical Performance



### Chip Dimensions (Unit : $\mu\text{m}$ )



### Chip Layout Diagram



### Pad Definition

No.	Symbol	Function Description	Dimensions
1	RFin	RF signal input port, external connect to $50\Omega$ system, internal built in DC blocking capacitor	$100\mu\text{m} \times 100\mu\text{m}$
2	RFout1	RF signal output port, external connect to $50\Omega$ system, internal built in DC blocking capacitor	$100\mu\text{m} \times 100\mu\text{m}$

Please see Appendix A for details.