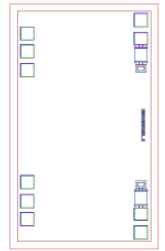


AMT1506
7 - 13GHz Clipper Chip



Key Features :

- Frequency range : 7 – 13GHz
- Input/Output standing wave : 1.3
- Insertion loss : 0.8dB
- Endurance power : 20W (CW)
- Clipping level : single output 17dBm
- Chip dimensions : 1.2mm x 2.0mm x 0.1mm
- Applications : wireless communication, transceiver module, radio telecommunication etc.

Description :

AMT1506 is a high performance balanced clipper chip, used together with AMLA0010S balanced LNA. 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 7 ~ 13GHz, typical insertion loss is 0.8dB, and input/output standing wave is 1.3.

Absolute Maximum Ratings (Ta = 25°C)

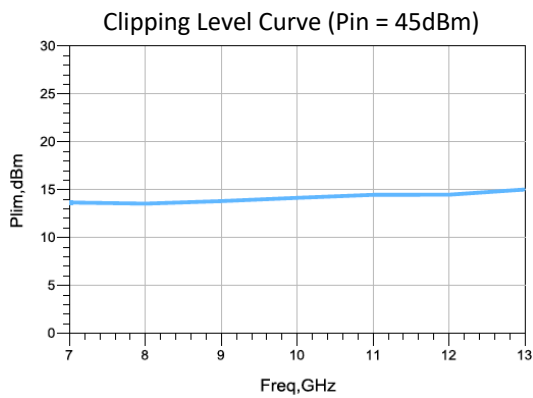
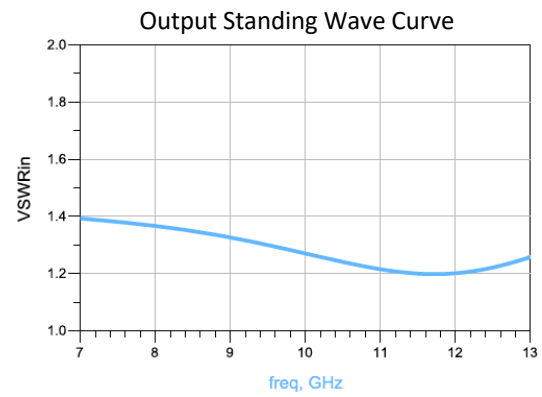
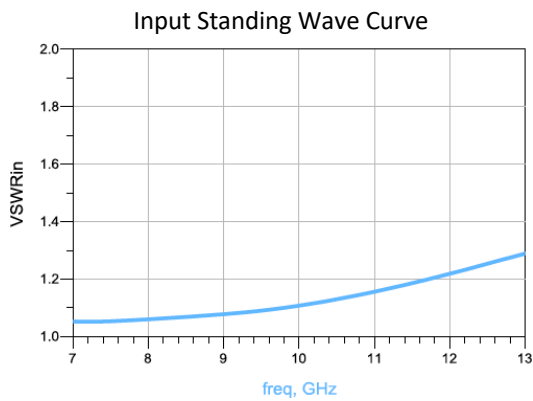
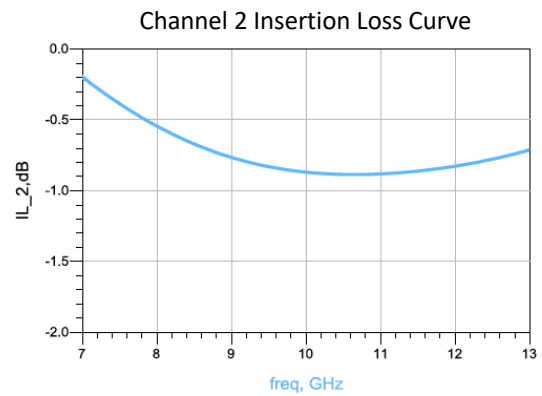
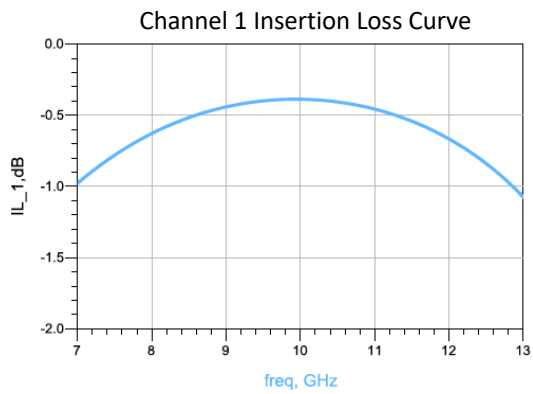
Symbol	Parameter	Value	Remark
Pin	Input Power	43dBm	
Tch	Channel Operating Temperature	150°C	
Tm	Sintering Temperature	310°C	30s, N ₂ protection
Tstg	Storage Temperature	-65 ~ +150°C	

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

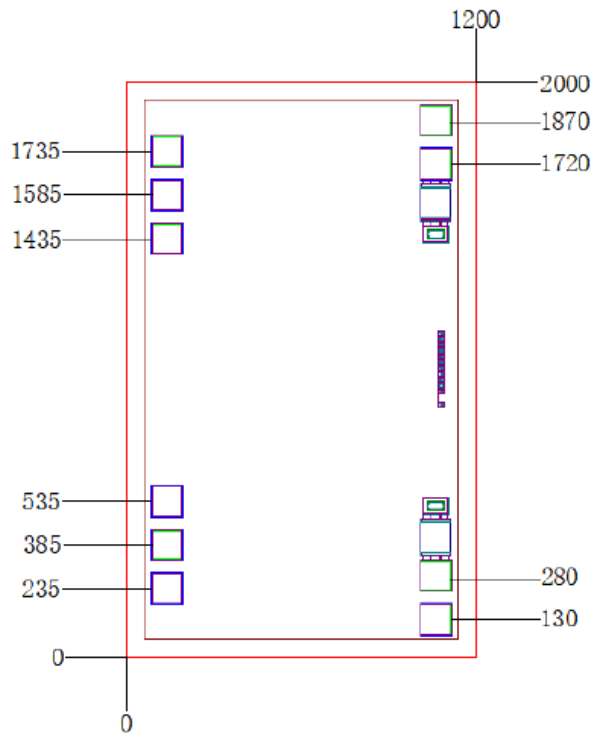
Electrical Characteristics (Ta = 25°C)

Symbol	Parameter	Test Conditions	Value			Unit
			Min	Typical	Max	
VSWRin	Input Standing Wave	F : 7 – 13GHz	-	1.3	1.4	
VSWRout	Output Standing Wave		-	1.3	1.4	
IL	Insertion Loss		-	0.8	1	dB
P _{LIM}	Clipper output level		-	17	-	dBm

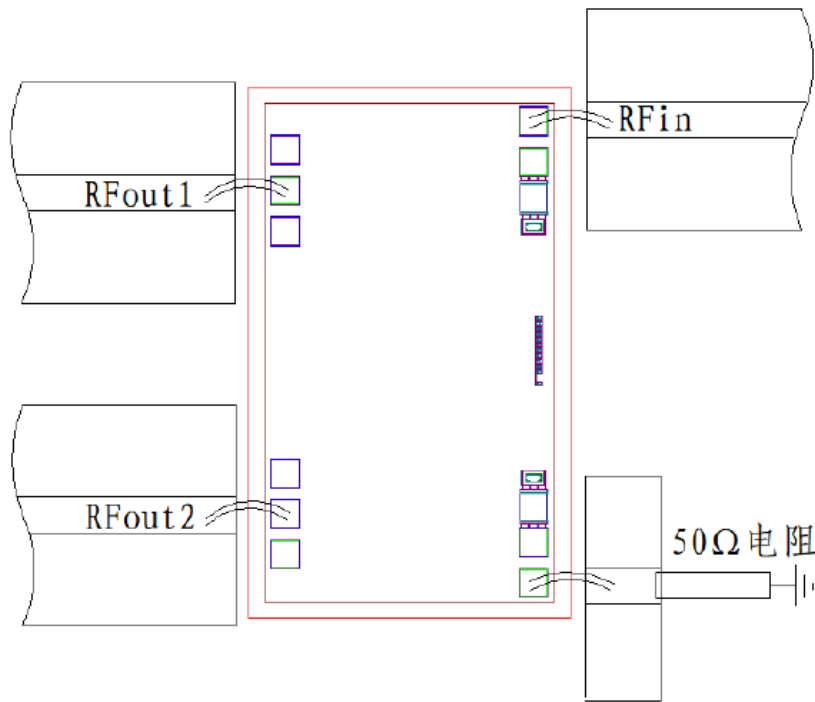
Typical Performance



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	100 μm *100 μm
2	RFout1	RF signal output port 1, external connecting to balanced LNA input port 1	100 μm *100 μm
3	RFout2	RF signal output port 2, external connecting to balanced LNA input port 2	100 μm *100 μm

Please see Appendix A for details.