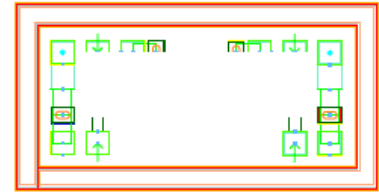


AMT1810-03
24 - 40GHz Lange Coupler Chip



Key Features :

- Frequency range : 24 – 40GHz
- Input/Output standing wave : 1.3
- Insertion loss : 0.5dB
- Isolation : 20dB
- Chip dimensions : 1.45mm x 0.7mm x 0.1mm
- Applications : wireless communication, transceiver module, radio telecommunication etc.

Description :

AMT1810-03 is a Lange coupler chip, it is designed by Gallium Arsenide (GaAs) process. This chip is designed with ground through metal vias on the back technology. All chip products are 100% RF tested. It covers frequency range of 24 - 40GHz, port standing wave is smaller than 1.3, insertion loss less than 0.5dB.

Absolute Maximum Ratings (Ta = 25°C)

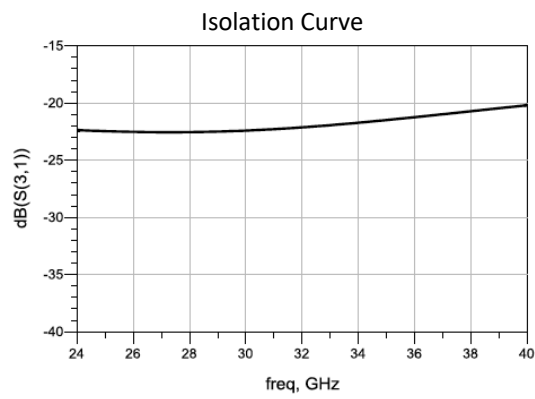
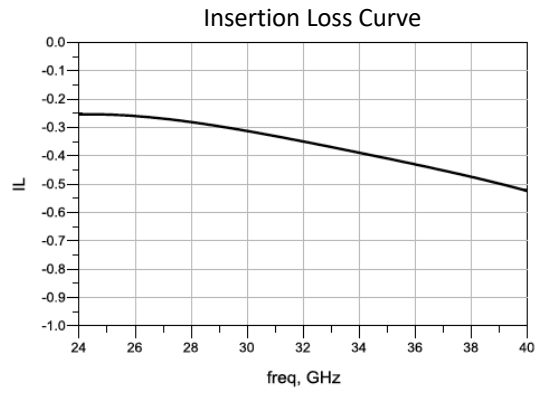
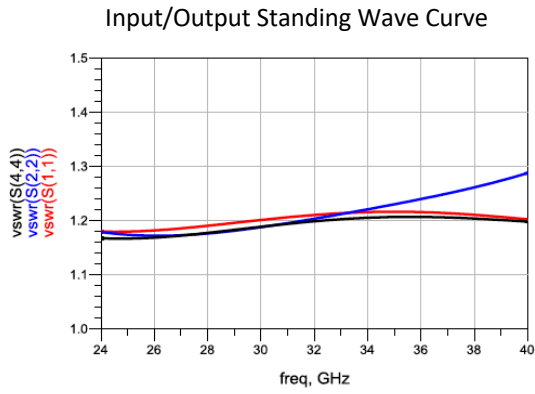
Symbol	Parameter	Value	Remark
Pin	Input Power	30dBm	
Tch	Operation Temperature	150°C	
Tm	Sintering Temperature	310°C	30s, N ₂ protection
Tstg	Storage Temperature	-65 ~ +150°C	

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

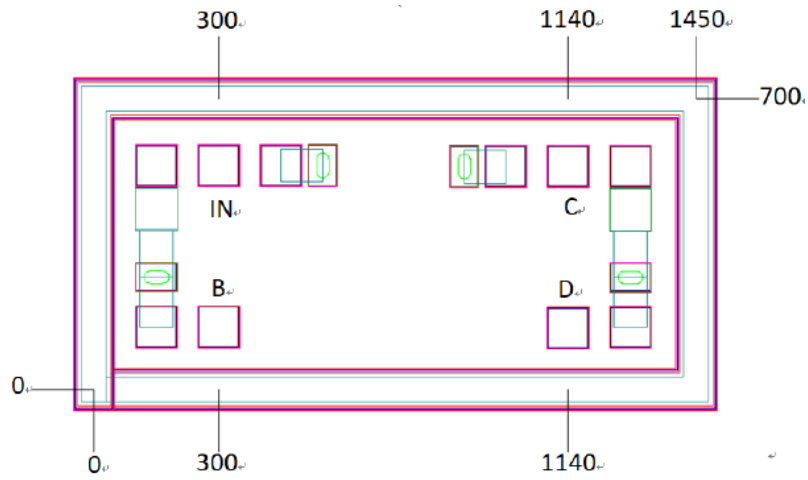
Electrical Characteristics (Ta = 25°C)

Symbol	Parameter	Test Condition	Value			Unit
			Min	Typical	Max	
VSWRin	Input standing wave	F : 24 ~ 40GHz	-	1.3	-	-
VSWRout	Output standing wave		-	1.3	-	-
IL	Insertion Loss		-	0.5	-	dB
ISO	Isolation		-	20	-	dB

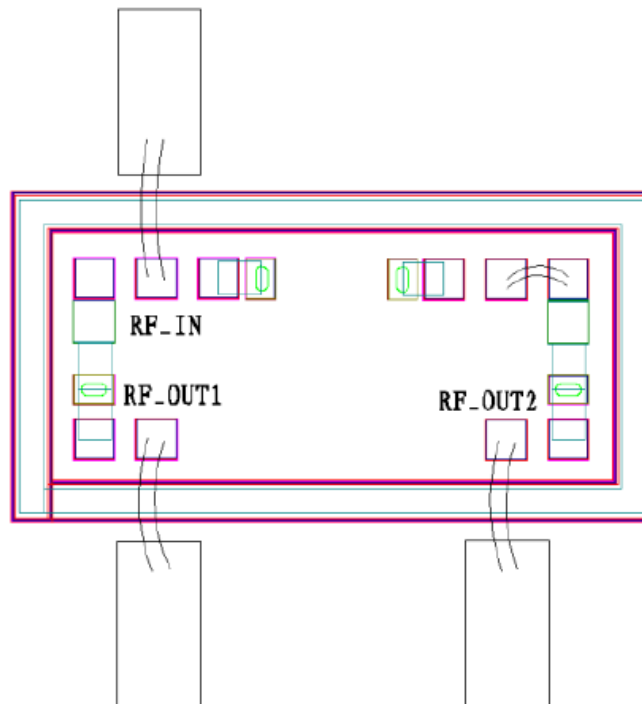
Typical Performance



Chip Dimensions (Unit : μm)



Chip Layout Diagram



Note, customer can choose different coupling port, depending on different input and output direction, each coupling port has a $50\ \Omega$ load.

Please see Appendix A for details.