

AMT1603P
4.5 – 6.5GHz Phase Shifter Package Chip

Key Features :

- Frequency range : 4.5 – 6.5GHz
- High phase shift resolution
- Low insertion loss
- Low cost QFN package
- Applications : wireless communication, transceiver module, radio telecommunication etc.

Description :

AMT1603P is a high performance GaAs phase shifter package. It covers frequency range of 4.5 ~ 6.5GHz, -5V single supply, parallel TTL control, typical phase shift RMA is 2°, insertion loss is 5dB.

Absolute Maximum Ratings (Ta = 25°C)

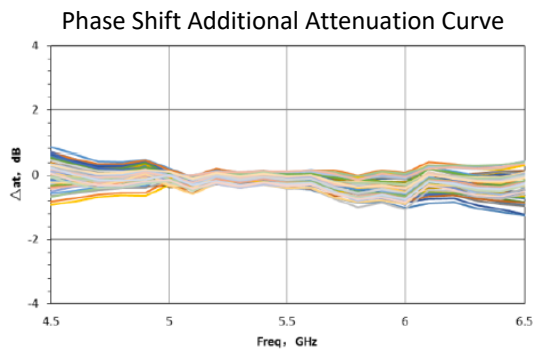
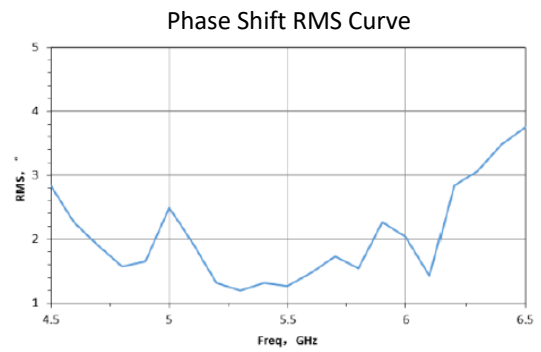
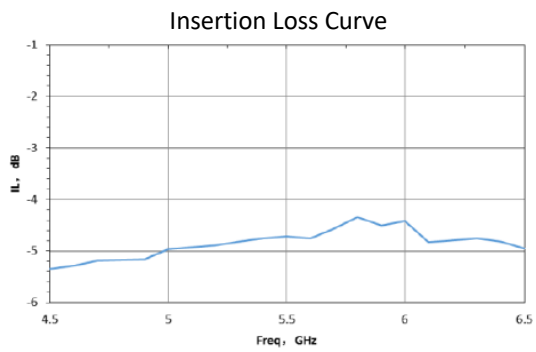
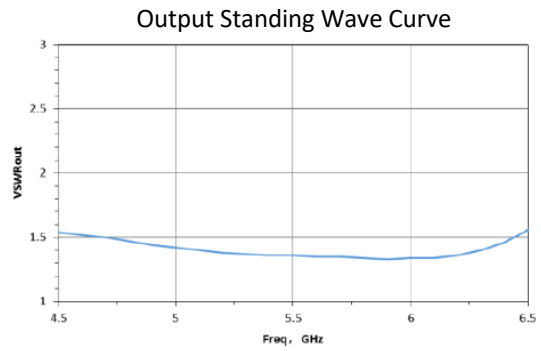
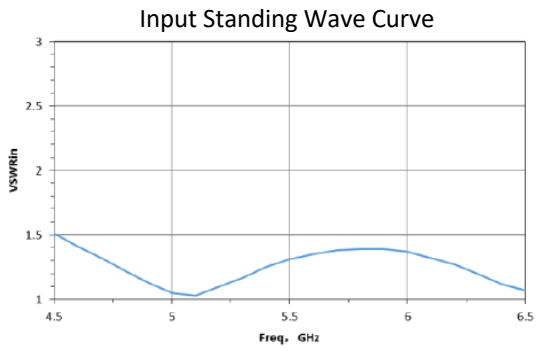
Symbol	Parameter	Value	Remark
VEE	Operation voltage	-6V	
Pin	Input Power	25dBm	
Tch	Operating Temperature	150°C	
Tm	Sintering Temperature	310°C	30s, N ₂ protection
Tstg	Storage Temperature	-65 ~ +125°C	

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

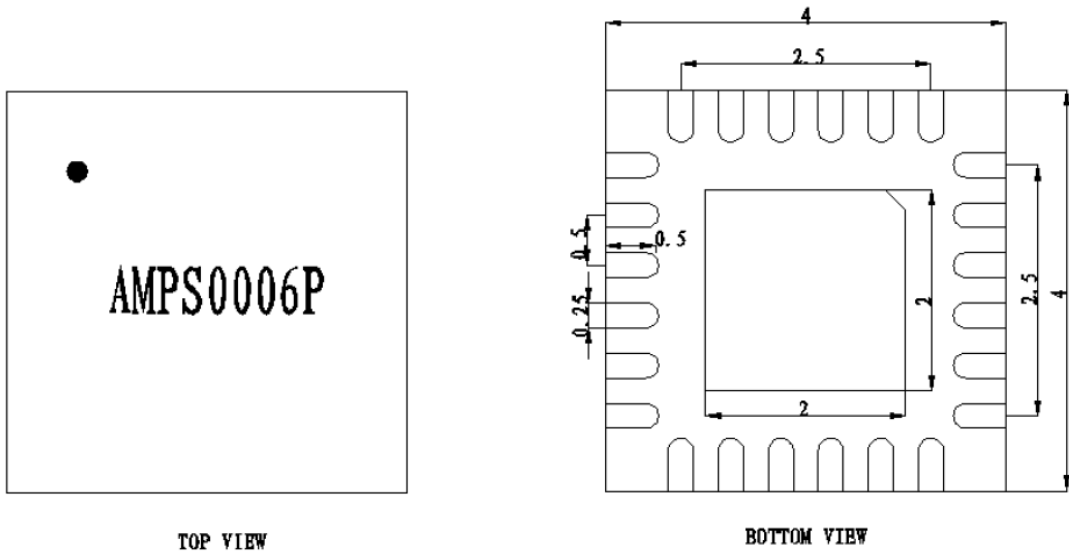
Electrical Characteristics (Ta = 25°C)

Symbol	Parameter	Value			Unit
		Min	Typical	Max	
F	Frequency range	-	4.5 – 6.5	-	GHz
IL	Insertion loss	-	5	5.5	dB
PS	Phase shift range	5.625 – 354.375			°
Δ_{at}	Phase shift additional attenuation	-1.2	± 1	1	dB
RMS	64 states phase shift RMS error	-	2	3.5	°
VSWR _{in}	Input standing wave	-	1.3	1.5	-
VSWR _{out}	Output standing wave	-	1.4	1.6	-

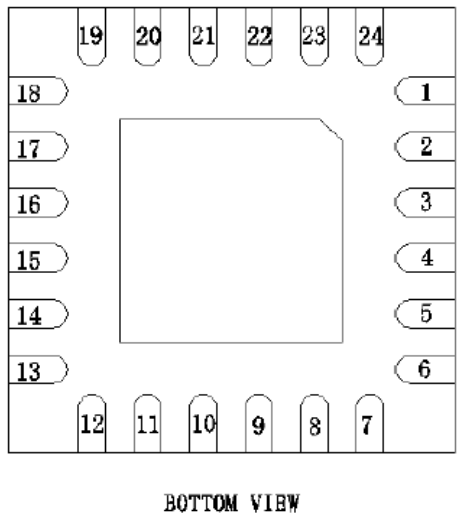
Typical Performance



Dimensions (Unit : mm)



Lead Diagram



Lead	Usage	Lead	Usage
24	5.625° bit control	1	-5V supply
23	11.25° bit control	2, 4, 15, 17, 28	Ground
22	22.5° bit control	3	RF input
21	45° bit control	16	RF output
20	90° bit control	Other	Suggest to connect to GND, or floating
19	180° bit control		

Truth Table

相移	引脚 24	引脚 23	引脚 22	引脚 21	引脚 20	引脚 19
初态	0	0	0	0	0	0
5.625°	1	0	0	0	0	0
11.25°	0	1	0	0	0	0
22.5°	0	0	1	0	0	0
45°	0	0	0	1	0	0
90°	0	0	0	0	1	0
180°	0	0	0	0	0	1

Note, "0", "1" represent low level and high level of TTL signal.