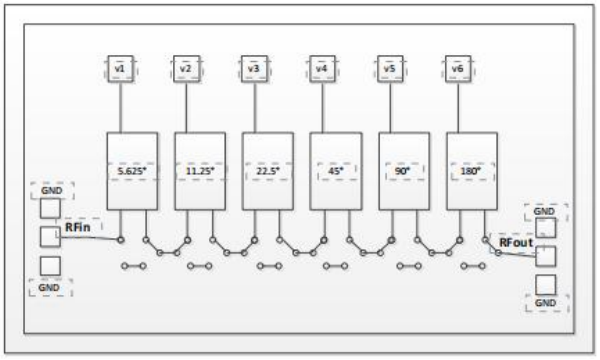
Performance

- Frequency: 410~640MHz
- Phase Error (RMS): 1.5°
- Insertion loss: 4.5dB
- VSWR in/out: 1.2:1
- Phase Bit: 6 Bits, 5.625° step
- Amplitude Equalization: ±0.4dB
- Operating Voltage: -5V
- Power: 5mA
- Control: 0/5V
- Chip Size: 5.5mm*2mm*0.1mm

Function Diagram

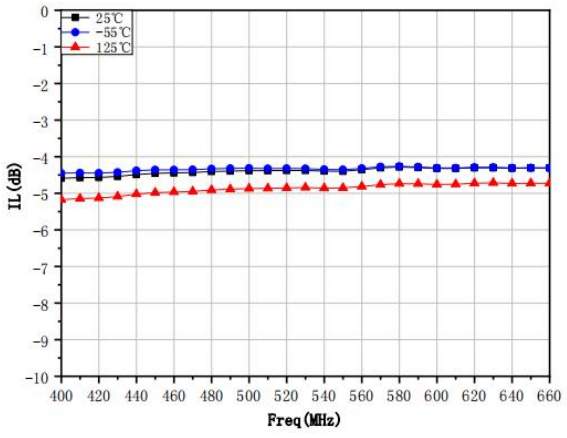


Electrical Specifications (T_A=25℃, Vs=-5V,F: 410~640MHz)

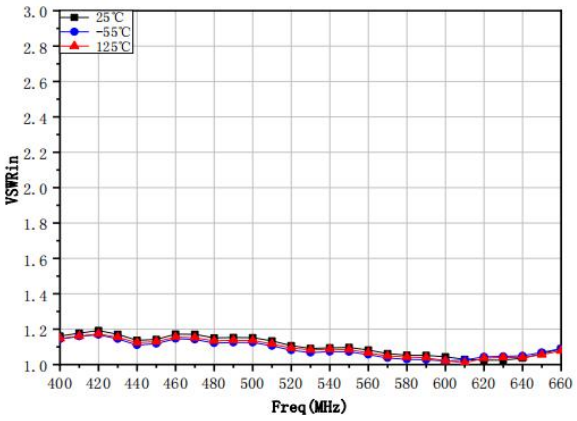
Symbol	Parameter	Min	Typical	Max	Unit
IL	Insertion Loss	-	4.5	5.2	dB
VSWRin	VSWR Input		1.1	1.6	
VSWRout	VSWR Output		1.2	1.6	
RMS	RMS Phase Error	-	1.5	3.5	°
Li	Amplitude Equalization	-	±0.4	±0.7	dB
Is	-5V Operating Current	-	5	10	mA

Test Curves

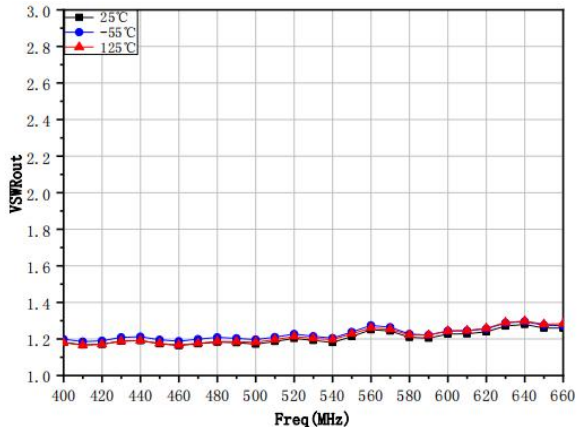
Ground State Insertion Loss@ Different Temp.



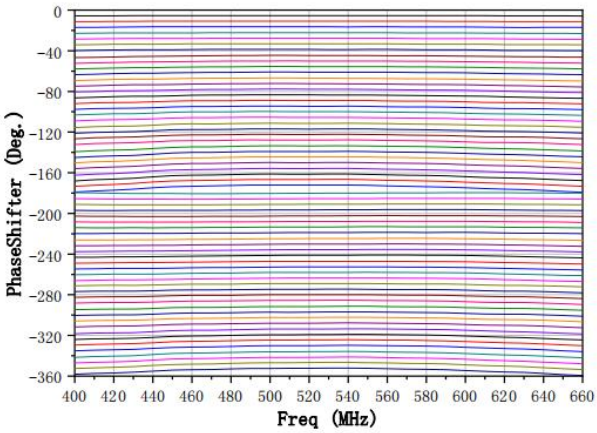
Ground State VSWRin@ Different Temp.



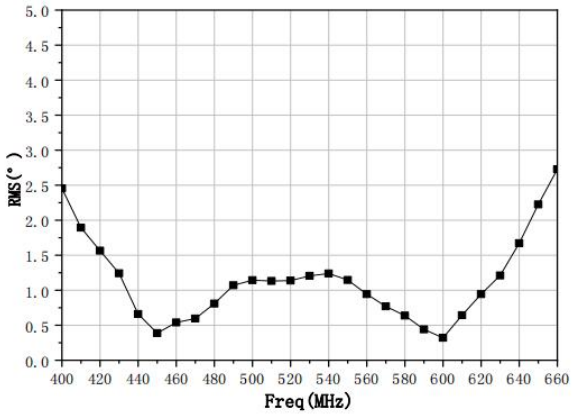
Ground State VSWRout@ Different Temp.



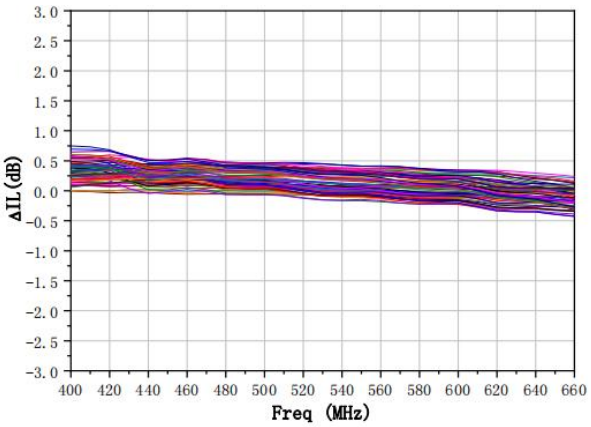
Phase Shifter



RMS Phase Error



Amplitude Equalization



Absolute Max Ratings (T_A=25℃)

Symbol	Parameter	Value	Remark
Vs	Operating Voltage	-6V	
V1~V6	Control Voltage	0.5V/6V	
Pcw	Input Power	25dBm	
Tch	Channel Temperature	175℃	
Tm	Mounting Temperature	310℃	30s, N2 protecting
Tstg	Storage Temperature	-65~150℃	

【1】Exceeding any one or combination of these limits may cause permanent damage.

Truth Table

Control Bit / Phase Shift	5.625°	11.25°	22.5°	45°	90°	180°
	V1	V2	V3	V4	V5	V6
Ground State	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
354.375°	1	1	1	1	1	1

Pads Definition

No	Port	Size（um）	Description
1	RFin	100*100	RF signal input port
2	RFout	100*100	RF signal output port
3	Vs	100*100	Power Supply（-5V）
4	V1	100*100	5.625° Phase shift control bit
5	V2	100*100	11.25° Phase shift control bit
6	V3	100*100	22.5° Phase shift control bit
7	V4	100*100	45° Phase shift control bit
8	V5	100*100	90° Phase shift control bit
9	V6	100*100	180° Phase shift control bit

Outline Drawing（mm）	Assembly Drawing