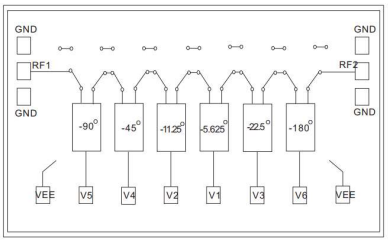
Performance

- Frequency: 2-6GHz
- Driver integrated
- Insertion loss: 14dB
- Phase shift accuracy (RMS): 2.5°
- Amplitude Ripple: ±0.7dB
- Chip size: 4.9*2.9*0.1mm

Function Diagram

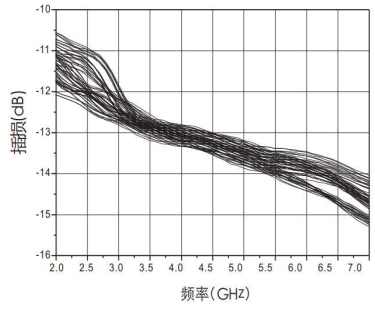


Electrical Specifications (Ta=+25℃, 0/+5V control, 50Ω system, VEE=-5V)

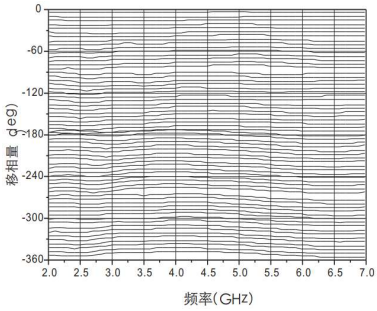
Parameter	Test Frequency	Min	Typical	Max	Unit
Insertion Loss	2-6GHz	-	14	14.5	dB
Amplitude Ripple	2-6GHz	-	±0.7	±1	dB
Phase shift accuracy (RMS)	2-6GHz	-	2.5	3.2	deg
Return loss (RF1, RF2)	2-6GHz	-	12	-	dB
Input P1dB	2-6GHz	-	20	-	dBm
Input IP3	2-6GHz	-	35	-	dBm
Switch time	-	-	35	-	ns

Test Curves

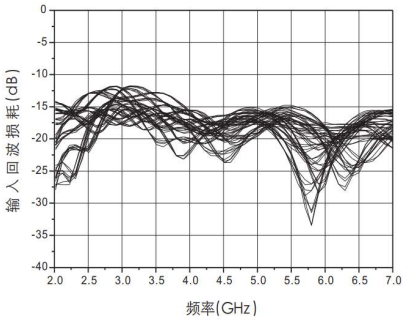
Insertion loss



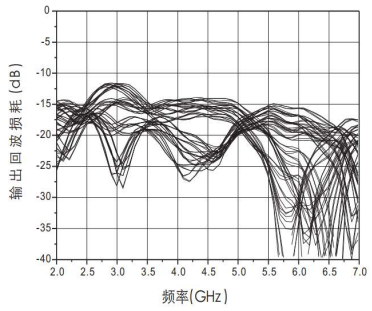
Phase shift



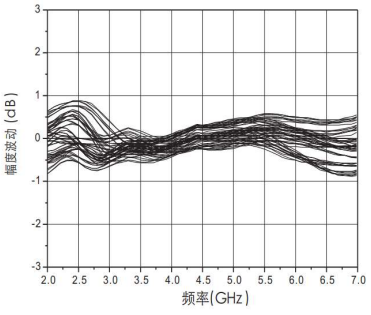
Input Return loss



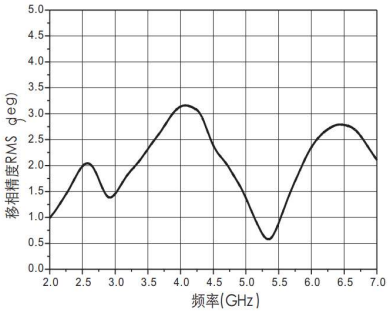
Output Return loss



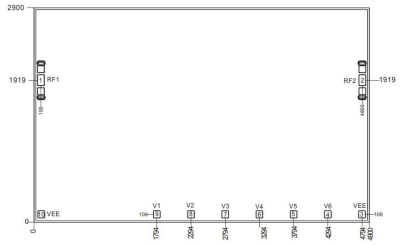
Amplitude Ripple



Phase shift accuracy (RMS)



Outline Size



Note:

1. Unit: um
2. Bottom side is gold plated
3. Bottom side is GND
4. Bonding pads is gold plated, size:
   1,2: 100*150(um); 3-10: 100*100(um)
5. Don't bonding on thru holds
6. Tolerance: ±50um

Truth Table

-5.625°	-11.25°	-22.5°	-45°	-90°	-180°	Phase shift
V1	V2	V3	V4	V5	V6	Status
0	0	0	0	0	0	Reference
1	0	0	0	0	0	-5.625°
0	1	0	0	0	0	-11.25°
0	0	1	0	0	0	-22.5°
0	0	0	1	0	0	-45°
0	0	0	0	1	0	-90°
0	0	0	0	0	1	-180°

Bonding Pads Definition

Number	Symbol	Description
1,2	RF1, RF2	RF port, 50ohm
3,10	VEE	Bias -5V±5% (choose either of them)
4,5,6,7,8,9	CTRL	Control Port
-	GND	Bottom must be GND

ELECTROSTATIC SENSITIVE DEVICE
OBSERVE HANDLING PRECAUTIONS

Control Voltage

Status	Bias
Low (0)	0~0.2V
High (1)	3~5V

Bias Voltage and Current

VEE Range = -5Vdc±10%		
VEE(Vdc)	IEE(Typ)(mA)	IEE(Max)(mA)
-5	9	15

Absolute Max Ratings

Input Power	+24dBm
CTRL Range (V1 to V6)	-0.5V~+5.5V
Bias Voltage VEE	-6V DC
Junction Temperature	175℃
Storage Temperature	-65 ~ +150℃
Operating Temperature	-55 ~ +125℃
Static Protection (HBM)	Class 1A

Application