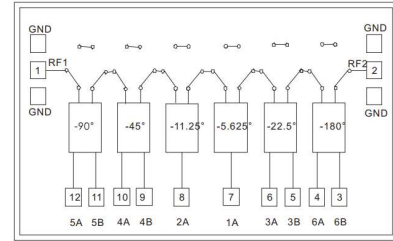


Performance

- Frequency: 0.8-2GHz
- Insertion loss: 11dB
- Phase shift accuracy (RMS): 2.5°
- Amplitude Ripple: ± 0.5 dB
- Chip size: 5.6*3.6*0.1mm

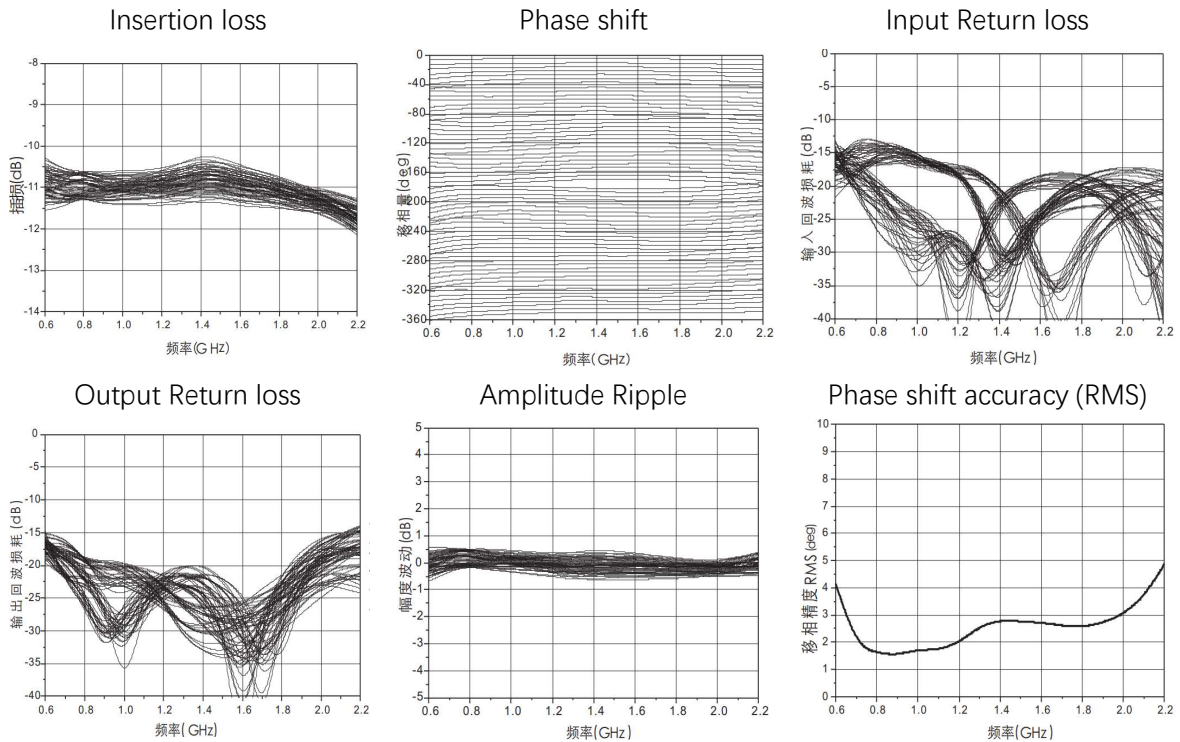
Function Diagram



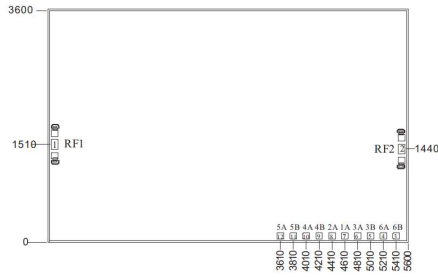
Electrical Specifications (Ta=+25°C, 0/-5V control, 50Ω system)

Parameter	Test Frequency	Min	Typical	Max	Unit
Insertion Loss	0.8-2GHz	-	11	12	dB
Amplitude Ripple	0.8-2GHz	-	± 0.5	± 1	dB
Phase shift accuracy (RMS)	0.8-2GHz	-	2.5	3	deg
Return loss (RF1, RF2)	0.8-2GHz	-	15	12	dB
Input P1dB	0.8-2GHz	-	21	-	dBm
Input IP3	0.8-2GHz	-	35	-	dBm
Switch time	-	-	10	-	ns

Test Curves



Outline Size



Note:

1. Unit: μm
2. Bottom side is gold plated
3. Bottom side is GND
4. Bonding pads is gold plated, size:
1,2: $150 \times 100(\mu\text{m})$; 3-12: $100 \times 100(\mu\text{m})$
5. Don't bonding on thru holds
6. Tolerance: $\pm 50\mu\text{m}$

Truth Table

-5.625°	-11.25°	-22.5°		-45°		-90°		-180°		Phase shift Status
1A	2A	3A	3B	4A	4B	5A	5B	6A	6B	
1	1	1	0	1	1	1	0	1	0	Reference
0	1	1	0	1	1	1	0	1	0	-5.625°
1	0	1	0	1	1	1	0	1	0	-11.25°
1	1	0	1	1	1	1	0	1	0	-22.5°
1	1	1	0	0	1	1	0	1	0	-45°
1	1	1	0	1	0	0	1	1	0	-90°
1	1	1	0	1	0	1	0	0	1	-180°

Bonding Pads Definition

Number	Symbol	Description
1,2	RF1, RF2	RF port, 50ohm, RF pass is not 0V, external capacitor is needed
4,6,7,8,10,12	CTRL A	Control Port
3,5,9,11,13	CTRL B	Control Port
-	GND	Bottom must be GND

Control Voltage

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



ELECTROSTATIC SENSITIVE DEVICE
OBSERVE HANDLING PRECAUTIONS

Absolute Max Ratings

Input Power	+24dBm
CTRL Range (V1 to V6)	+0.5V~-7V
Junction Temperature	175°C
Storage Temperature	-65 ~ +150°C
Operating Temperature	-55 ~ +125°C
Static Protection (HBM)	Class 1A

Application

