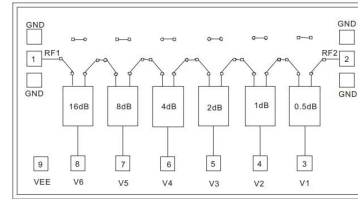


Performance

- Frequency: 0.1-8GHz
- Insertion loss: 2.5dB
- Attenuation range: 0.5~31.5dB
- Handling Power: +24dBm
- Chip size: 2.40*1.40*0.10mm

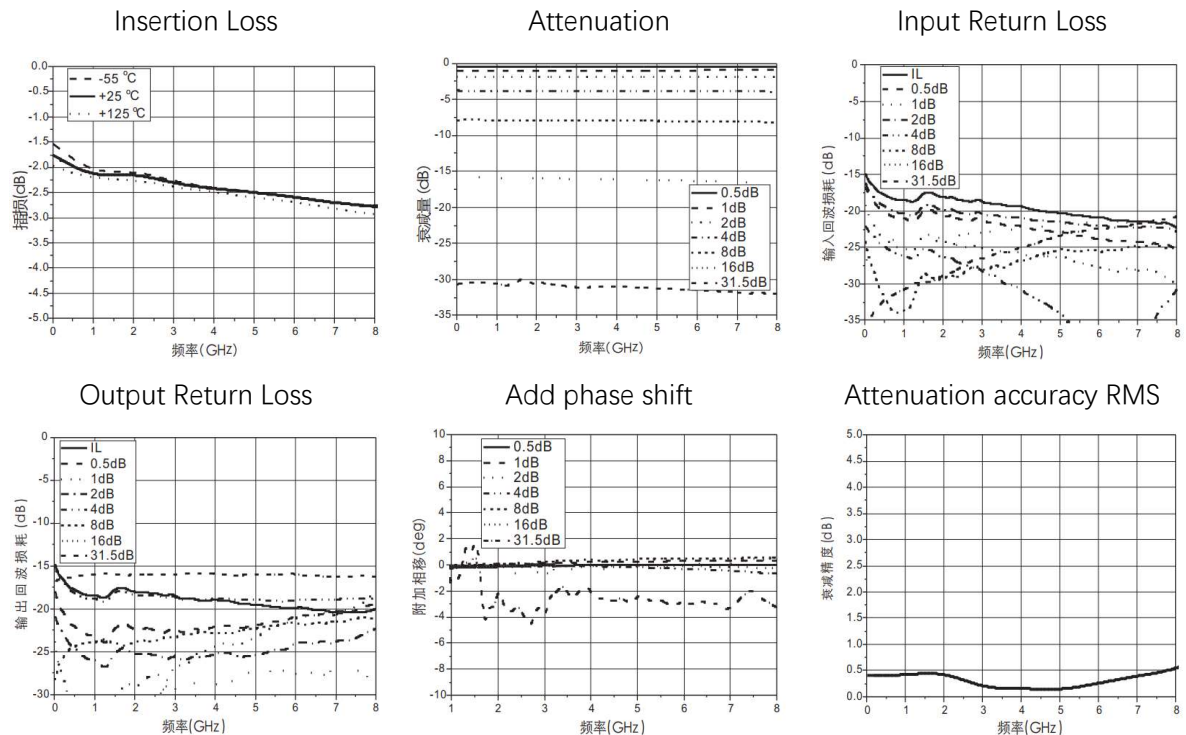
Functional Diagram



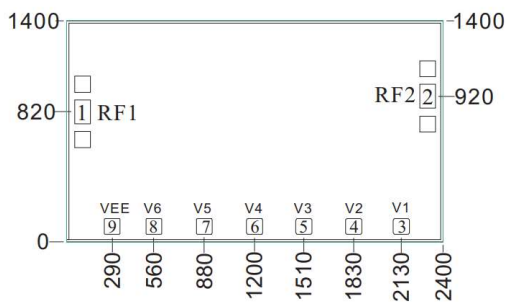
Electrical Specifications (Ta=+25°C, 0/-5V control, 50Ω system)

Parameter	Test Frequency	Min	Typical	Max	Unit
Insertion Loss	0.1GHz-8GHz	-	2.5	3.5	dB
Attenuation Range	0.1GHz-8GHz	0.5	-	31.5	dB
Return Loss (RF1, RF2)	0.1GHz-8GHz	-	15	-	dB
Attenuation Accuracy RMS	0.1GHz-8GHz	-	0.5	1.0	dB
Add phase shift	0.1GHz-8GHz	-	±5	-	Deg
Input P1dB	0.1GHz-8GHz	-	20	-	dBm
Input IP3	0.1GHz-8GHz	-	35	-	dBm
Switch time	0.1GHz-8GHz	-	30	-	ns

Test Curves (Two bonding lines which are Ø25um, 400um length applied to the RF ports)



Outline Size



Note:

1. Unit: μm
2. Bottom side is gold plated
3. Bottom side is GND
4. Bonding pads is gold plated:
1,2 size: $150 \times 100 \mu\text{m}$, 3~9 size: $100 \times 100 \mu\text{m}$
5. Don't bonding on thru holds
6. Tolerance: $\pm 50 \mu\text{m}$

Truth Table

0.5dB	1dB	2dB	4dB	8dB	16dB	Attenuation
V1	V2	V3	V4	V5	V6	Status
0	0	0	0	0	0	Reference
1	0	0	0	0	0	0.5dB
0	1	0	0	0	0	1dB
0	0	1	0	0	0	2dB
0	0	0	1	0	0	4dB
0	0	0	0	1	0	8dB
0	0	0	0	0	1	16dB
1	1	1	1	1	1	31.5dB

Control Voltage

Status	Bias
Low	0~0.2V
High	3~5V

Bias Voltage and Current

VEE Range=-5Vdc \pm 10%		
VEE(Vdc)	IEE(Typ)mA	IEE(Max)mA
-5	10	14

Bonding Pads Description

Number	Symbol	Description
1,2	RF1, RF2	RF ports, 50 Ohm
9	VEE	Bias Voltage -5V \pm 5%
3,4,5,6,7,8	Vctl	Control port
-	GND	Bottom must be grounded

Absolute Max Ratings

RF Input Power	+24dBm
Control Voltage Range (V1~V6)	-0.5V ~ +5.5V
Junction Temperature	175°C
Storage Temperature	-65 ~ +150°C
Operating Temperature	-55 ~ +125°C
Static Protection Grade (HBM)	Class 1A

Assembly Diagram

