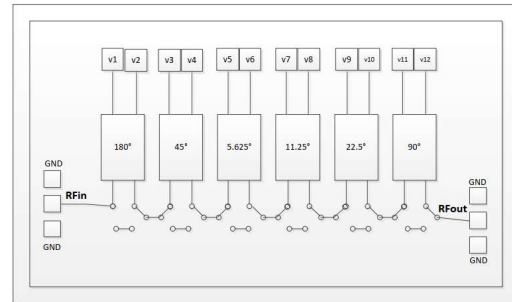


**Performance**

- Frequency: 25~31GHz
- Phase Bit: 6 Bits, 5.625° step
- Insertion loss: 7dB
- Phase Error (RMS): 3°
- Amplitude Equalization: ±0.5dB
- VSWR: 1.5
- Voltage: 0/-5V
- Chip size: 2.9\*1.35\*0.08mm

**Function Diagram**



**Electrical Specifications (Ta=+25°C, V1~V12: 0V/-5V, F=25~31GHz)**

Symbol	Parameter	Min	Typical	Max	Unit
Li	Insertion Loss (Ground State)	-	7	-	dB
∠Li	Amplitude Equalization	-	±0.4	-	dB
RMS	RMS Phase Error	-	3	-	°
VSWR	Input/Output VSWR	-	1.5	-	

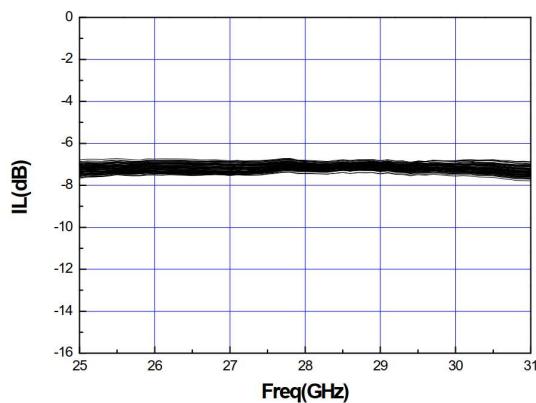
**Absolute Maximum Ratings**

Symbol	Parameter	Value	Remark
V1, V2.....	Control Voltage	0.5V/-7V	
Pin	Input Power (CW)	25dBm	
Tch	Channel Temperature	150°C	
Tm	Mounting Temperature	300°C	1min, N2 protecting
Tstg	Storage Temperature	-55~150°C	

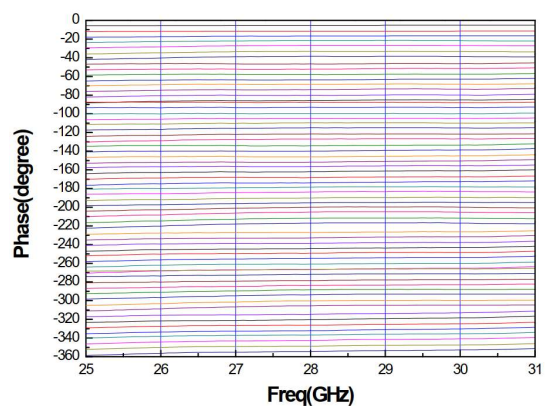
Exceed any of above ratings may cause permanent damage.

**Test Curves**

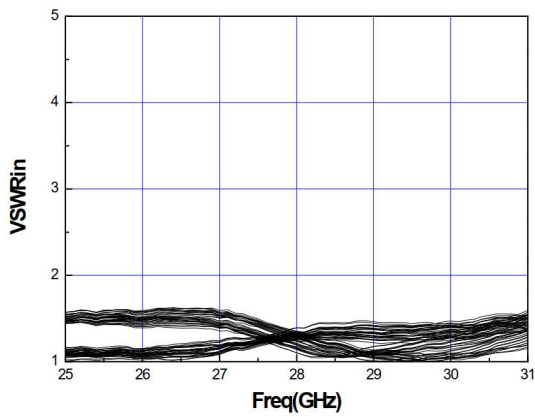
Insertion Loss vs. Freq



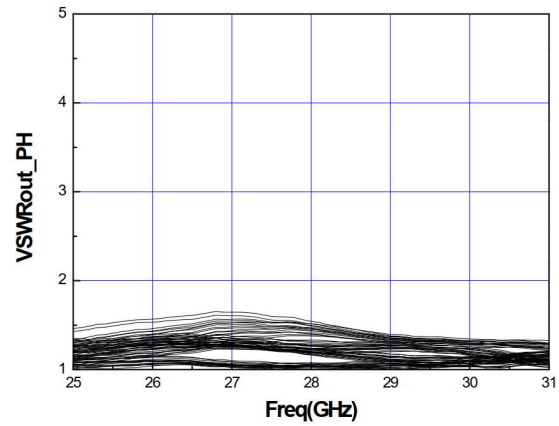
64 States Phase Shifting vs. Freq



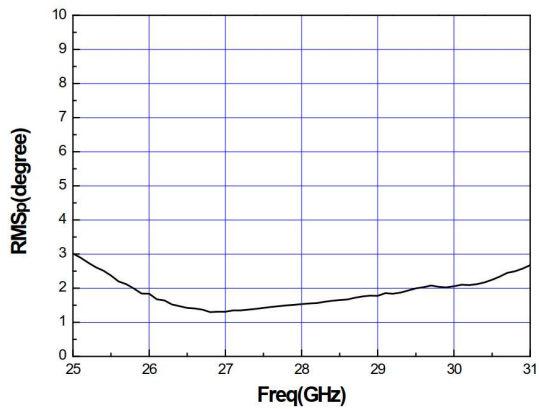
Input VSWR vs. Freq



Output VSWR vs. Freq.



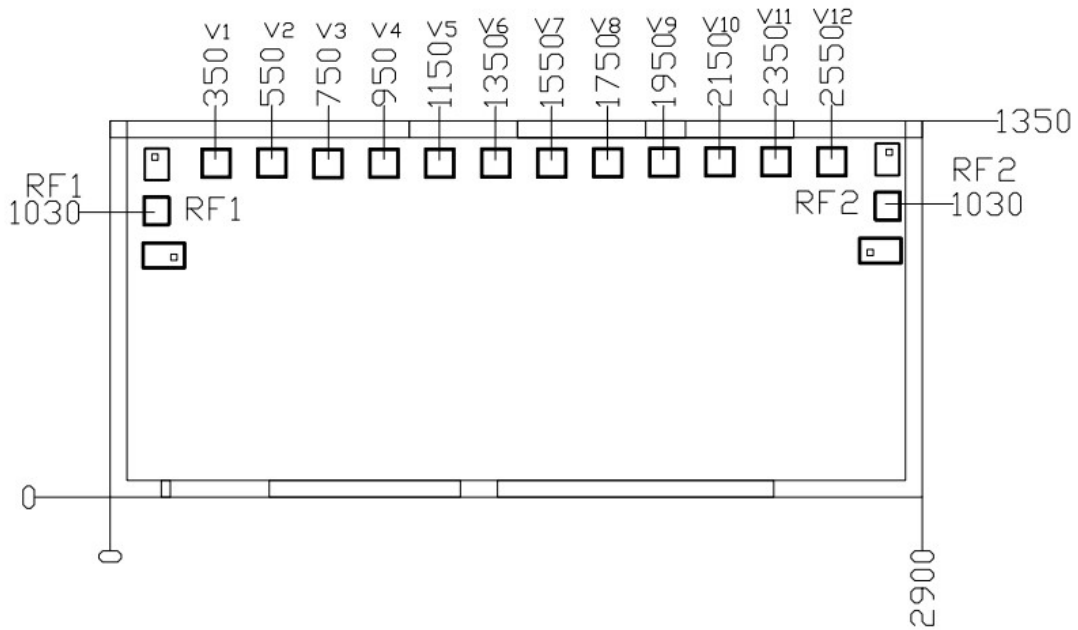
RMS vs. Freq.



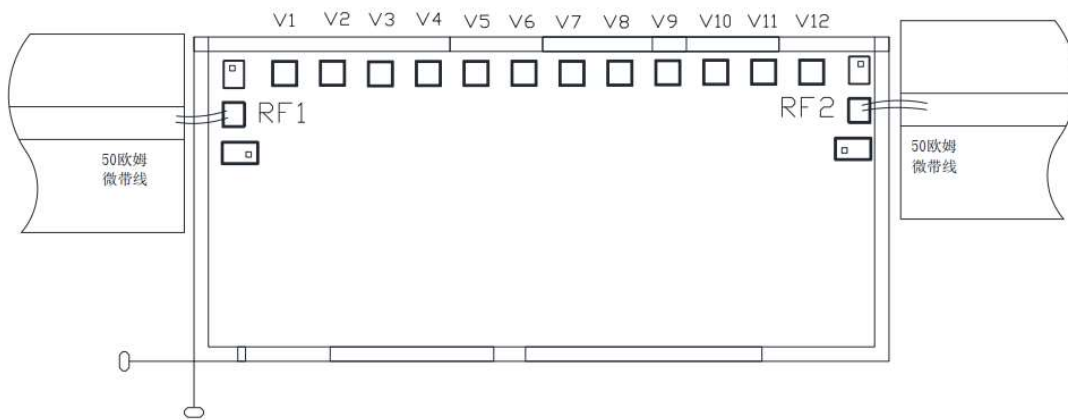
**Truth Table**

Function	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12
Ground State	-5V	0V	-5V	0V	-5V	0V	-5V	0V	-5V	0V	-5V	0V
5.625°	-5V	0V	-5V	0V	0V	-5V	-5V	0V	-5V	0V	-5V	0V
11.25°	-5V	0V	-5V	0V	-5V	0V	0V	-5V	-5V	0V	-5V	0V
22.5°	-5V	0V	-5V	0V	-5V	0V	-5V	0V	0V	-5V	-5V	0V
45°	-5V	0V	0V	-5V	-5V	0V	-5V	0V	-5V	0V	-5V	0V
90°	-5V	0V	-5V	0V	-5V	0V	-5V	0V	-5V	0V	0V	-5V
180°	0V	-5V	-5V	0V	-5V	0V	-5V	0V	-5V	0V	-5V	0V

Outline Drawing (mm)



Assembly Drawing



Pads Definition

Pad	Description
RFin, RFout	RF signal input port and output port, connect to 50 ohm system, no block capacitor needed.
V1~V12	Control ports