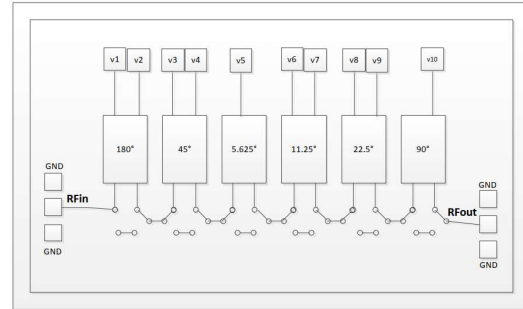


**Performance**

- Frequency: 25~28.5GHz
- Phase Bit: 6 Bits, 5.625° step
- Insertion loss: 8dB
- Phase Error (RMS): 2°
- Amplitude Equalization: ±0.5dB
- VSWR: 1.5
- Voltage: 0/-5V
- Chip size: 3.21\*1.31\*0.1mm

**Function Diagram**



**Electrical Specifications (Ta=+25°C, V1~V12: 0V/-5V, F=25~28.5GHz)**

Symbol	Parameter	Min	Typical	Max	Unit
Li	Insertion Loss (Ground State)	-	8	-	dB
∠Li	Amplitude Equalization	-	±0.4	-	dB
RMS	RMS Phase Error	-	2	-	°
VSWR	Input/Output VSWR	-	1.5	-	

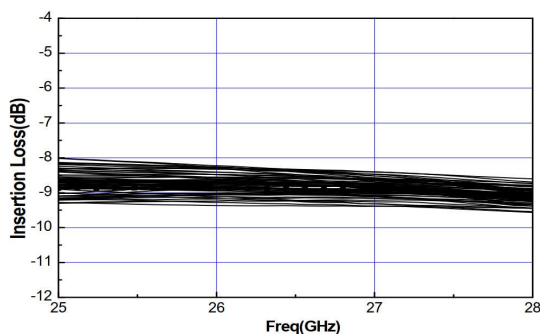
**Absolute Maximum Ratings**

Symbol	Parameter	Value	Remark
V1~V12	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	

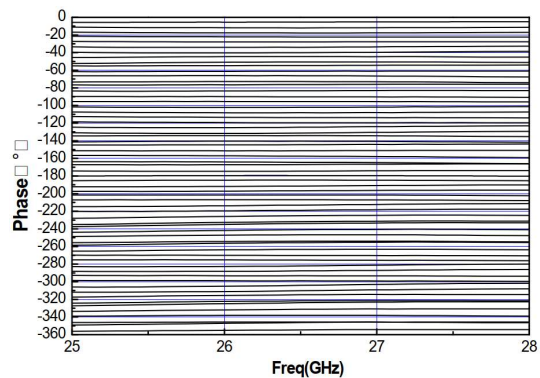
Exceed any of above ratings may cause permanent damage.

**Test Curves**

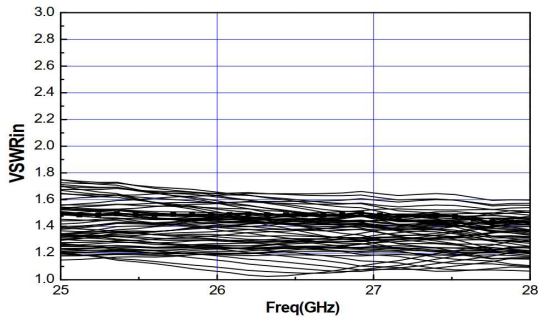
Insertion Loss vs. Freq



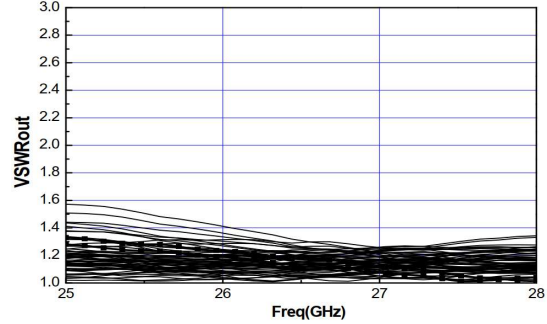
64 States Phase Shifting vs. Freq



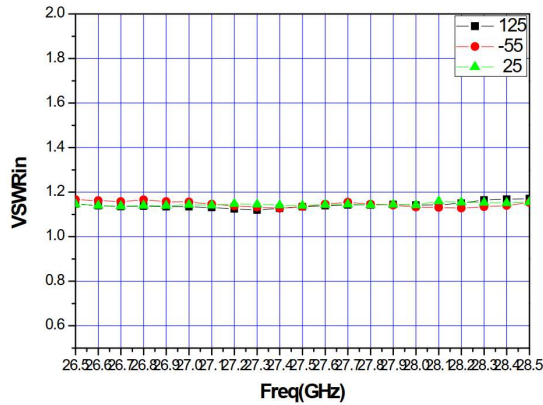
Input VSWR vs. Freq



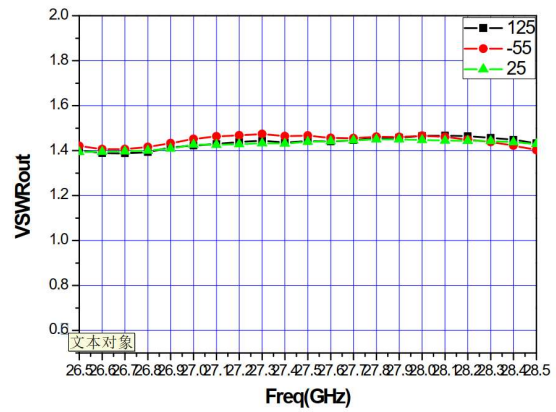
Output VSWR vs. Freq.



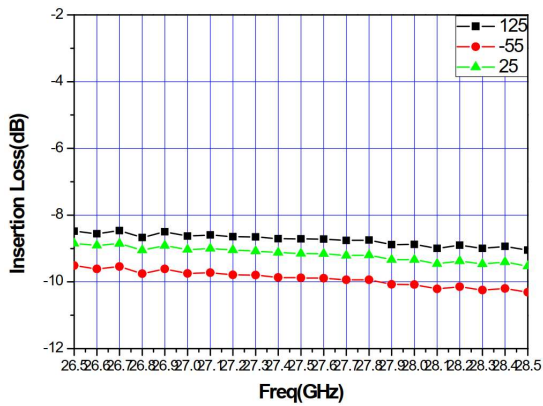
Input VSWR @ Different Temp.



Output VSWR @ Different Temp.



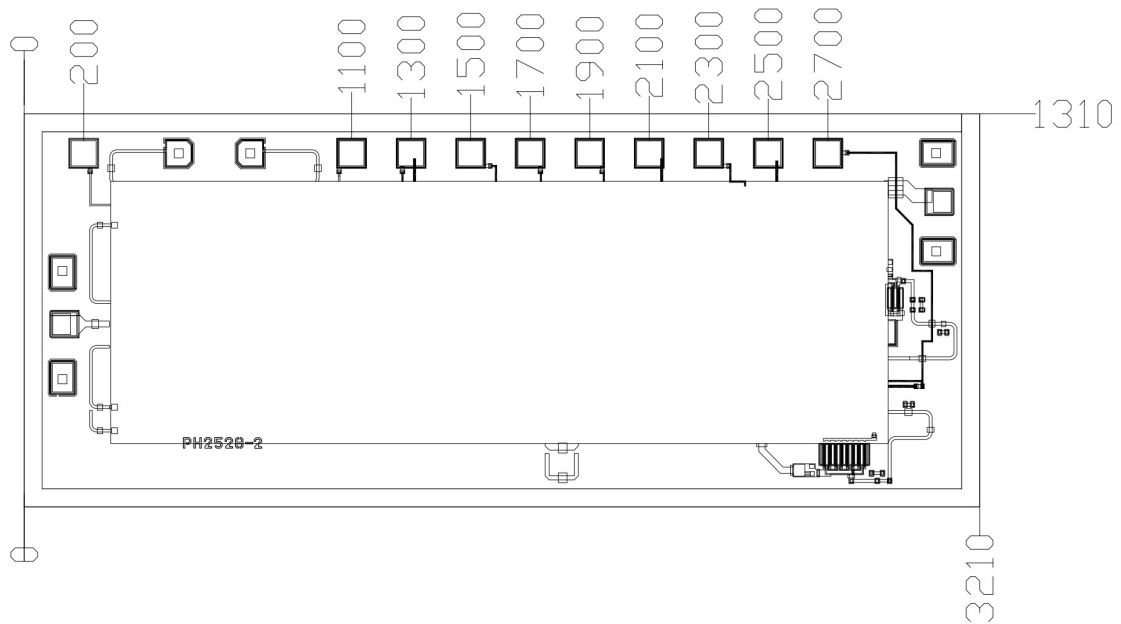
Insertion Loss @ Different Temp.



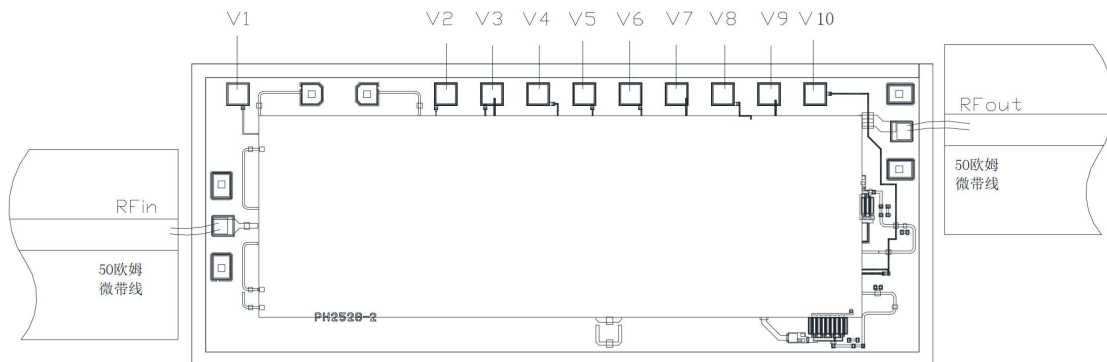
Truth Table

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

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~V10	Control ports