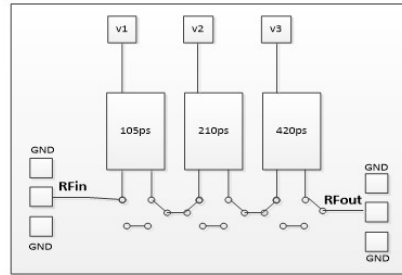


Performance

- Process: 0.25um PHEMT
- Frequency: 8~12 GHz
- Time delay error: 10 ps
- Insertion Loss: 12 dB
- VSWR_{IN}/VSWR_{OUT}: 1.4/1.4
- Supply voltage: 0/5V, -5V
- Size: 3.4mm×3.2mm×0.1mm

Function Diagram



Absolute Max. Ratings ($T_A = 25^\circ\text{C}$)

Symbol	Description	Value	
V1~V3	Control voltage	-0.5V/6V	
Vs	Supply Voltage	-6V	
Pin	Input power (cw)	25dBm	
Tch	Channel Temperature	150°C	
Tm	Mounting Temperature	300°C	1min, N ₂ protection
Tstg	Storage temperature	-55~150°C	

Note: Exceed any or combination of above conditions may cause permanent damage.

Electrical Specifications ($T_A = 25^\circ\text{C}$)

Symbol	Parameter	Test condition	Min	Typ.	Max	Unit
Li	Insertion loss	V1,2,3:0/5V F: 8~12GHz Center Freq: 9.5GHz	-	14	-	mA
Time delay error	105ps (1λ)		-	5	-	ps
	210ps (2λ)		-	10	-	ps
	420ps (3λ)		-	15	-	ps
ΔLi	Insertion Loss Variation		-	0.5	-	dB
VSWR	Input/output VSWR		-	1.4	-	-

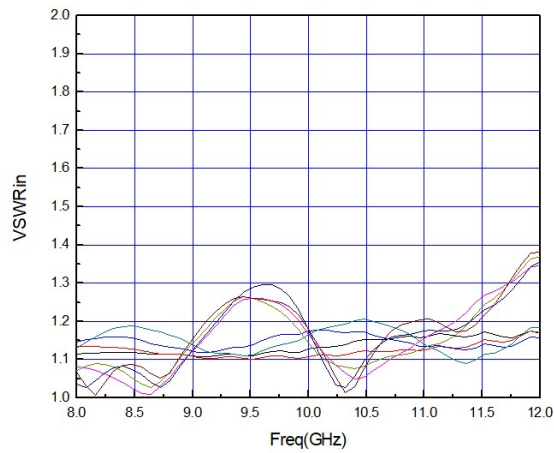
Truth table

Control port Major delay state	VS	V1	V2	V3
Basic state	-5V	0	0	0
105ps	-5V	1	0	0
210ps	-5V	0	1	0
420ps	-5V	0	0	1

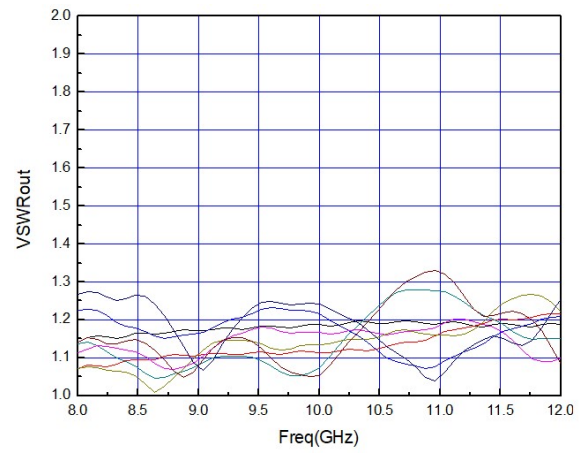
Note: "0" is low level -0.5V~0.5V, "1" is high level 4.5V~5.5V

Typical test curve

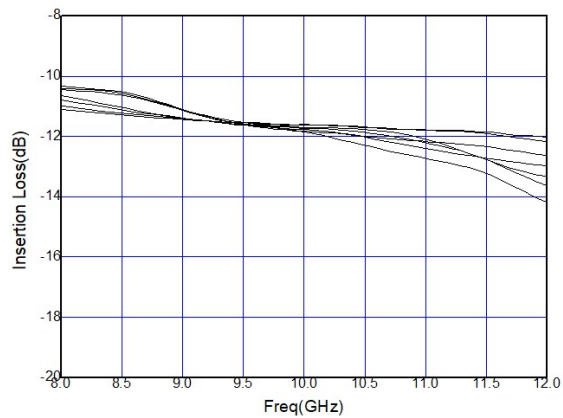
Input VSWR vs. Freq



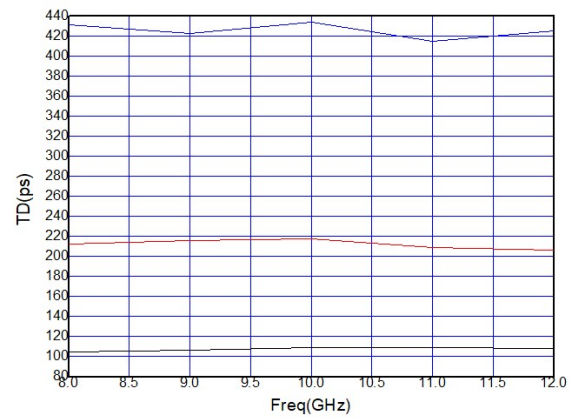
Output VSWR vs. Freq



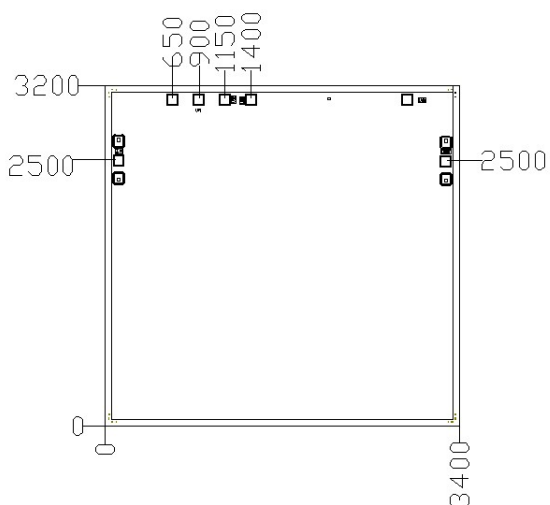
Main state Insertion Loss vs. Freq



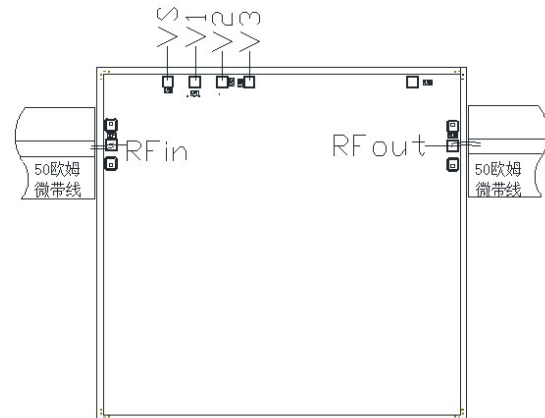
Main state time delay vs. Freq



Outline Size



Assembly



Pin Definition

No.	Description
RFin, RFout	RF signal Input and output port, connect to 50 ohm system, no block capacitor is needed
V1, V2, V3	Control ports
VS	Supply voltage
GND	Bottom must be well grounded