Digital Non-Dispersive 360° Phase Shifter
4 - 8GHz

RoHS Compliant

Features

- Wide Band Operation 4-8GHz
- 360° Phase Shift
- Fast Switching Speed
- Temperature Range -45°C~+85°C
- Customization available upon request
- Hermetically sealed package up to 60,000 ft available upon request.

Electrical Specifications, TA = +25° C, Vss = -5V & VCTL = 0/ +5V

Description	PN:RFPSHT0408N6			
	Digital Phase Shifter			
Parameters	Min	Typ.	Max	Units
Frequency Range	4		8	GHz
Phase Range		360		°
Control Bits		6		Bit
Control Step size		5.625		°
Insertion Loss		6	8.5	dB
Insertion Loss Temperature Coefficient		0.008		dB/°C
Phase Flatness		±5	±10	°
Input VSWR		1.5	2	: 1
Output VSWR		1.5	2	: 1
Input 1 dB Compression Point(P1dB)		27		dBm
Input Ip3		45		dBm
Weight	1.41			ounces
Impedance	50			Ω
Bias Current (-5V)	10			mA
Input / Output Connectors	SMA-Female			
Interface and Control Connector	MICRO-D9(Female)			
Finish	Gold Plated			
Material	Aluminum			
Sealing	Hermetically Sealed (Optional)			

Absolute Maximum Ratings

Biasing	-5V±10%
TTL Control Voltage	0~0.8V/3~5V
RF Input power	+30dBm

Environmental Specifications

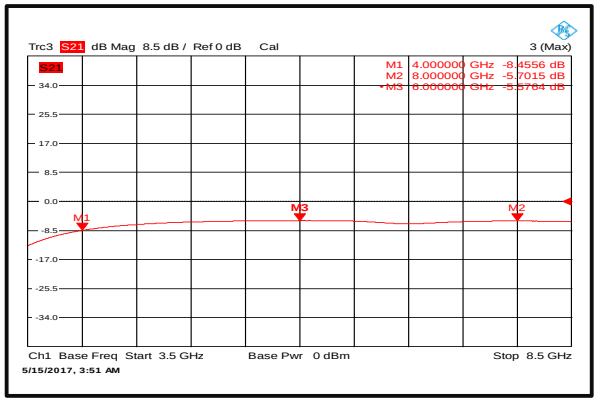
Operational Temperature (°C)	-45 ~ +85
Storage Temperature (°C)	-50 ~ +125
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35c, 95%RH at 40°C
Shock	20G for 11msec half sine wave, 3 axis both directions

Ordering Information

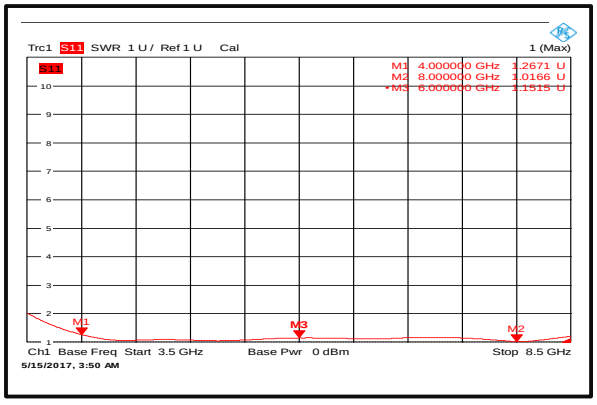
Part No.	ECCN	Description
RFPSHT0408N6	EAR99	4-8GHz Digital Control Phase Shifter

Typical Performance Plots

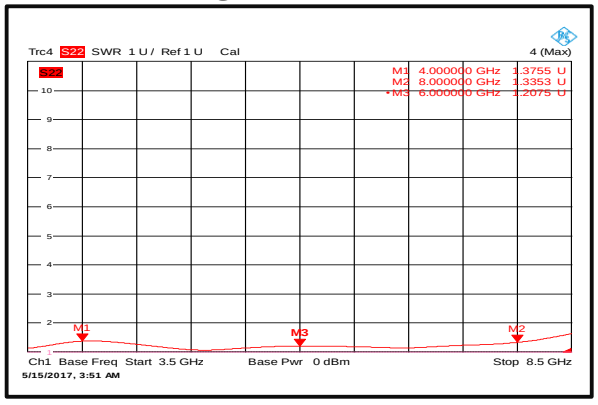
Insertion Loss @+25°C



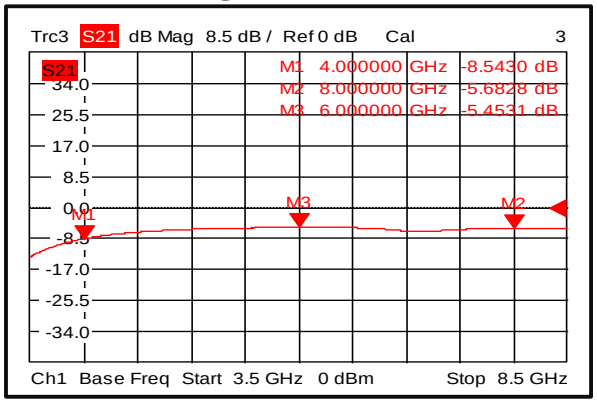
Input VSWR @+25°C



Output VSWR @+25°C



Insertion Loss @-45°C



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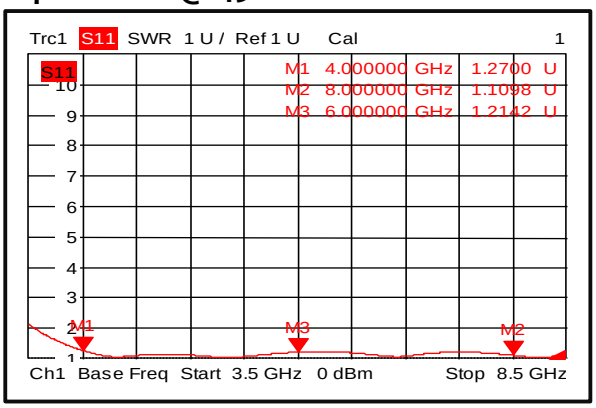
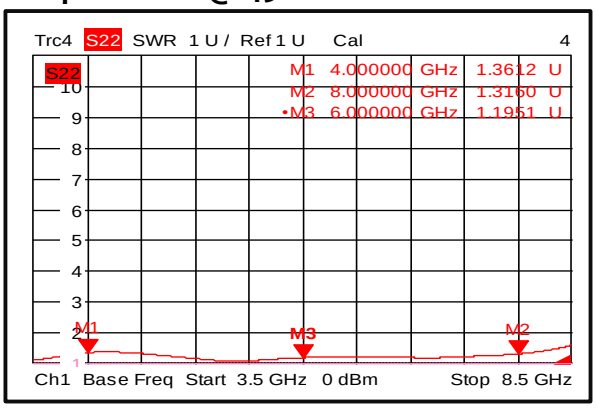
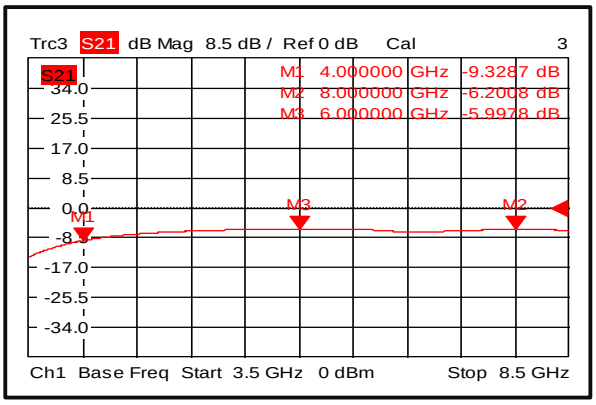
Input VSWR @-45℃



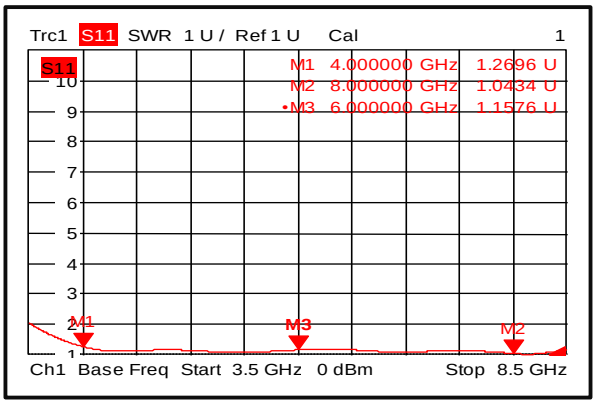
Output VSWR @-45℃



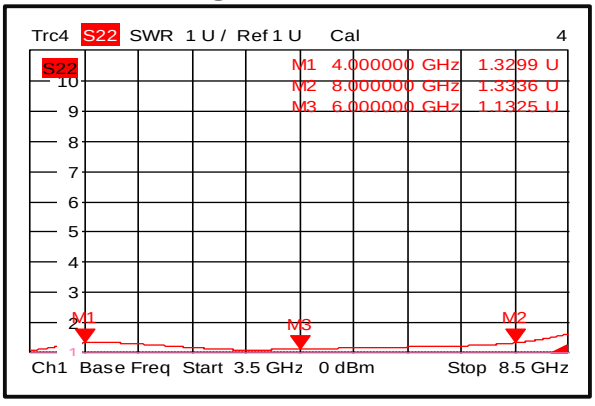
Insertion Loss @+85℃



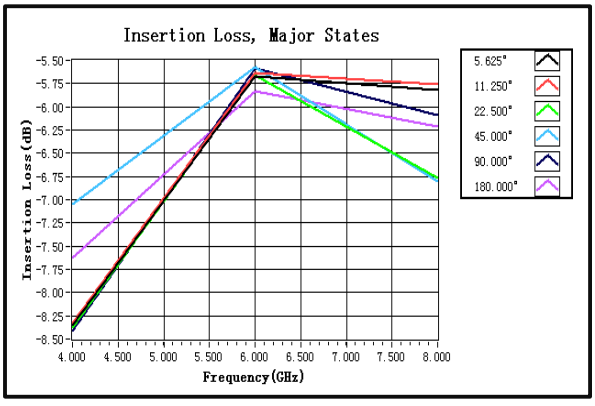
Input VSWR @+85℃



Output VSWR @+85℃



Insertion Loss vs. Frequency



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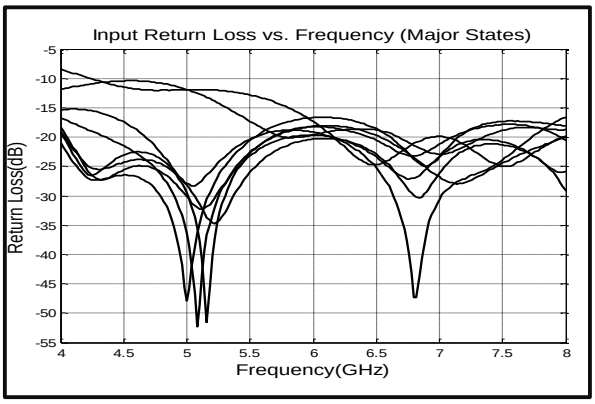
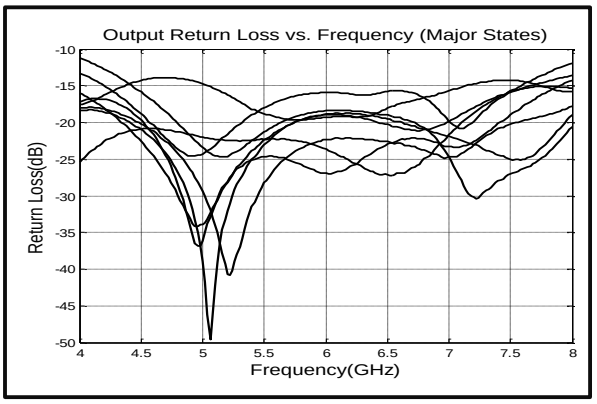
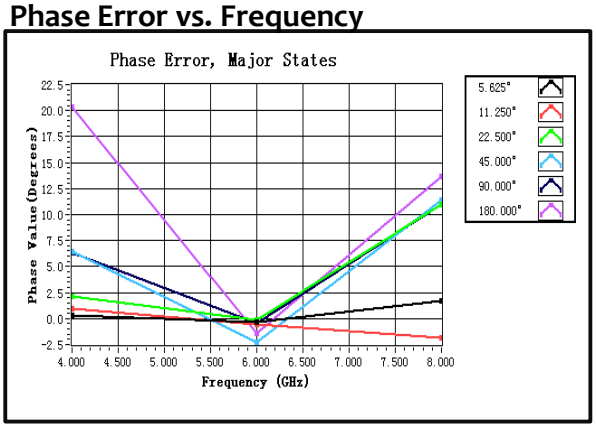
Input Return Loss vs. Frequency



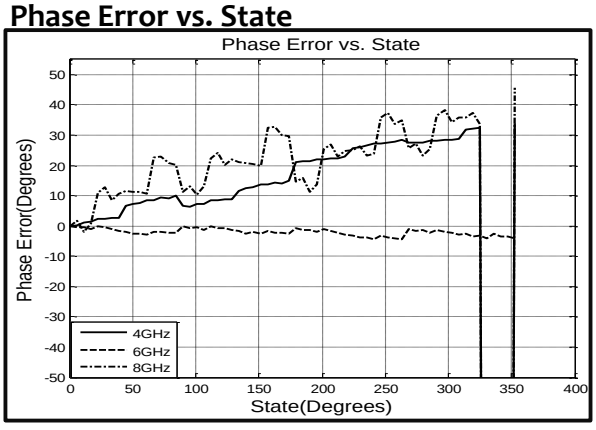
Output Return Loss vs. Frequency



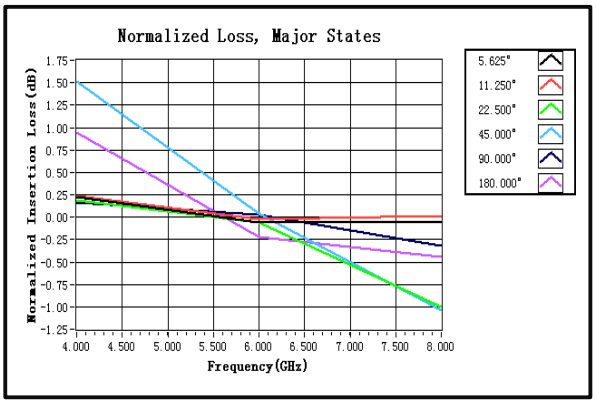
Phase Error vs. Frequency



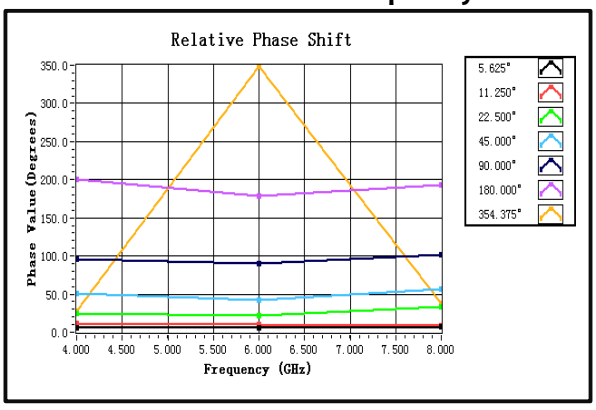
Phase Error vs. State



Normalized Loss . All States



Relative Phase Shift vs. Frequency



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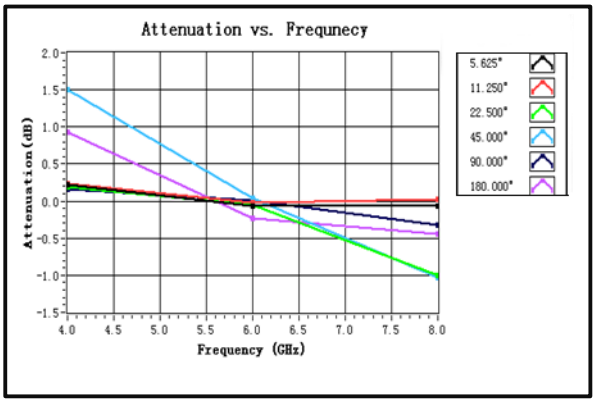
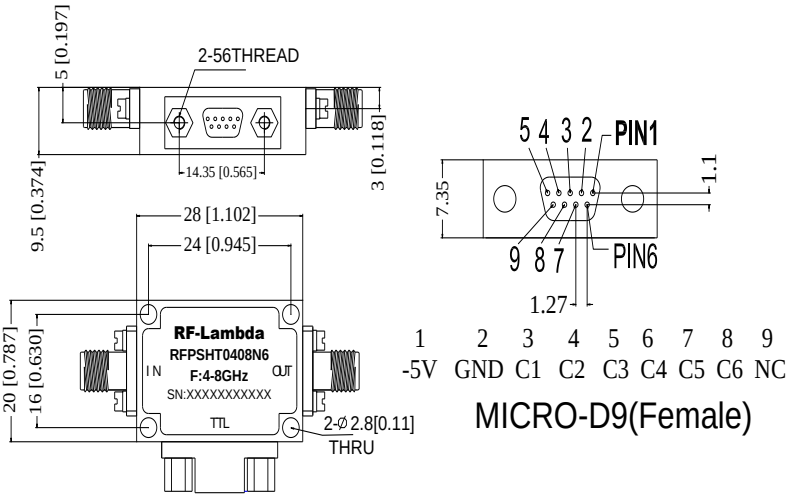
Attenuation vs. Frequency



Outline Drawing:

All Dimensions in mm [inches]



Truth Table

Control Voltage Input						Phase Shift
C6	C5	C4	C3	C2	C1	(Degree)
0	0	0	0	0	0	Reference
0	0	0	0	0	1	5.6
0	0	0	0	1	0	11.25
0	0	0	1	0	0	22.5
0	0	1	0	0	0	45
0	1	0	0	0	0	90
1	0	0	0	0	0	180
1	1	1	1	1	1	354

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Important Notice