



RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

RFPST0701D6

Digital 360° Phase Shifter 0.7 - 1GHz



Features

- Wide Band Operation 0.7-1GHz
- 6-Bit Phase Shift
- Temperature Range -45°C~+85°C
- Customization available upon request
- Hermetically sealed package up to 60,000ft available upon request.

Electrical Specifications, TA = +25°C, Vdd = +12V, VCTL = 0 / +5V

Description	PN:RFPST0701D6			
	Digital Phase Shifter			
Parameters	Min	Typ.	Max	Units
Frequency Range	0.7		1	GHz
Phase Range		360		°
Control Bits		6		Bits
Control Step size		5.625		°
Insertion Loss		4.8	6.0	dB
Insertion Loss Temperature Coefficient		0.008		dB/°C
Phase Flatness		±2	±25	°
Input VSWR		1.5	2.0	:1
Output VSWR		1.5	2.0	:1
Input 1 dB Compression Point (P1dB)			23	dBm
Weight	1.76			Ounces
Impedance	50			Ω
Bias Current (+12V)	20			mA
Input / Output Connectors	SMA-Female			
Interface and Control Connector	MICRO-D15 (Female)			
Finish	Nickel Plated			
Material	Aluminum			
Sealing	Hermetically Sealed (Optional)			

Digital Control Phase Shifter 0.7 - 1GHz



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RFPSHT0701D6

Absolute Maximum Ratings

Biasing	+5V±10%/-5V±10%
TTL Control Voltage	0~0.8V/3~5V

Ordering Information

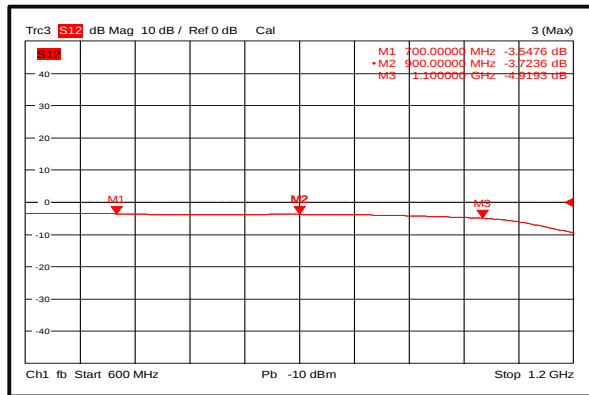
Part No.	ECCN	Description
RFPSHT0701D6	EAR99	0.7-1GHz Digital Phase Shifter

Environmental Specifications

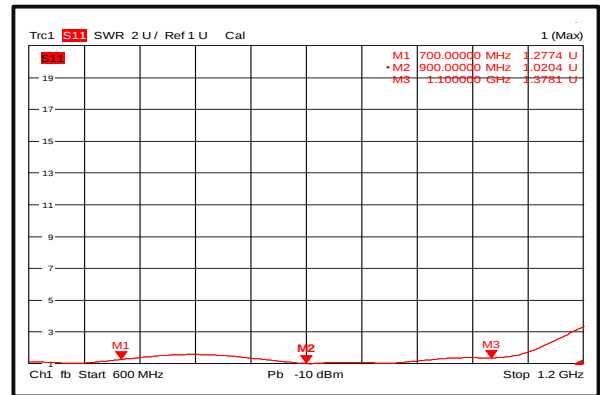
Operational Temperature(°C)	-40 ~ +85
Storage Temperature(°C)	-55 ~ +100
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35c, 95%RH at 40°C
Shock	20G for 11msec half sine wave, 3 axis both directions

Typical Performance Plots

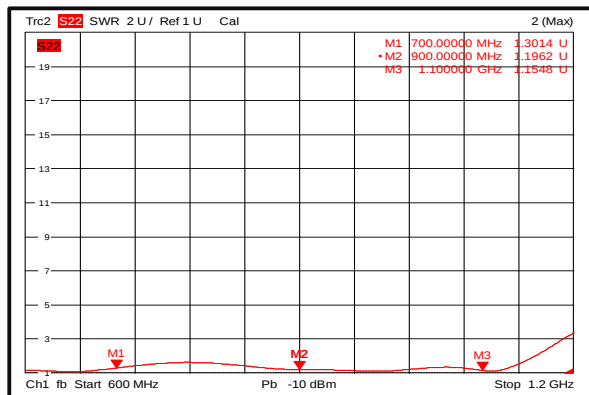
Insertion Loss



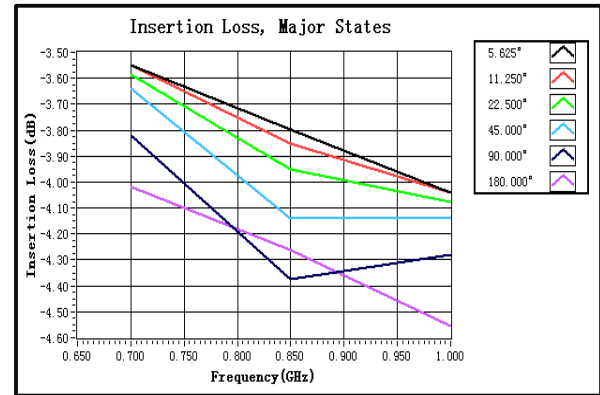
Input VSWR



Output VSWR



Insertion Loss vs. Frequency



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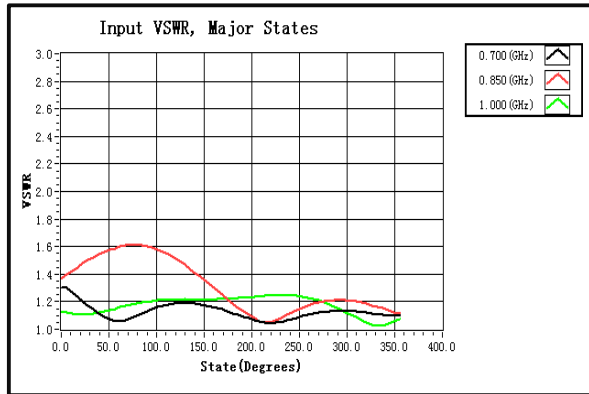


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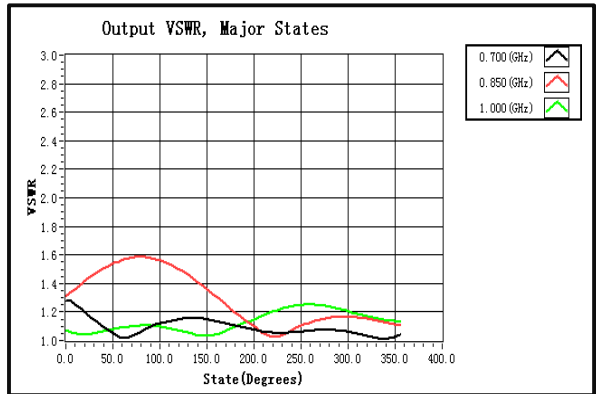
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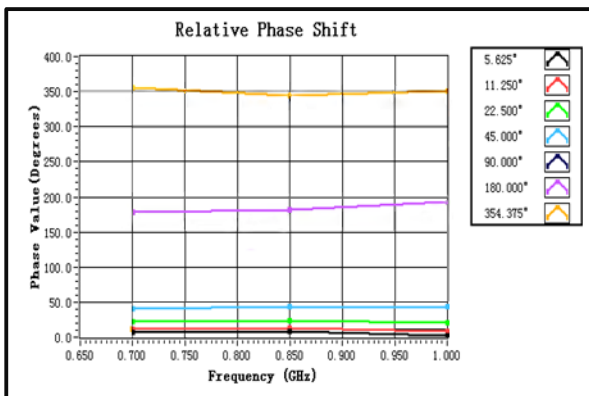
Input VSWR vs. Frequency



Output VSWR vs. Frequency



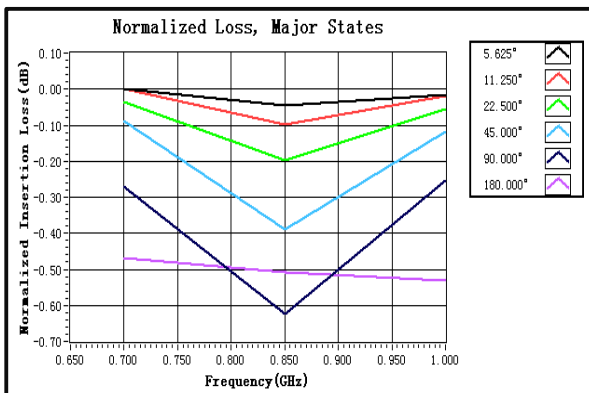
Relative Phase Shift vs. Frequency



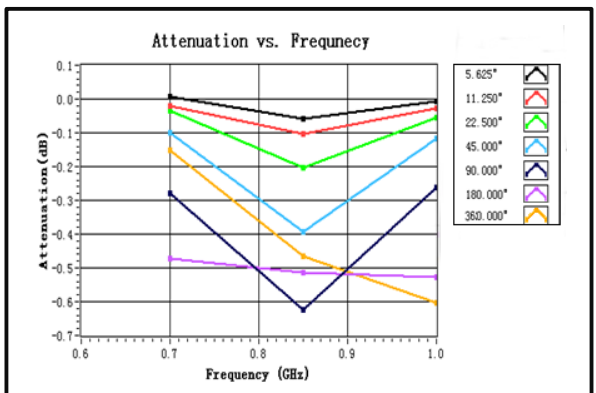
Phase Error vs. State



Normalized Loss . All States



Attenuation vs. Frequency



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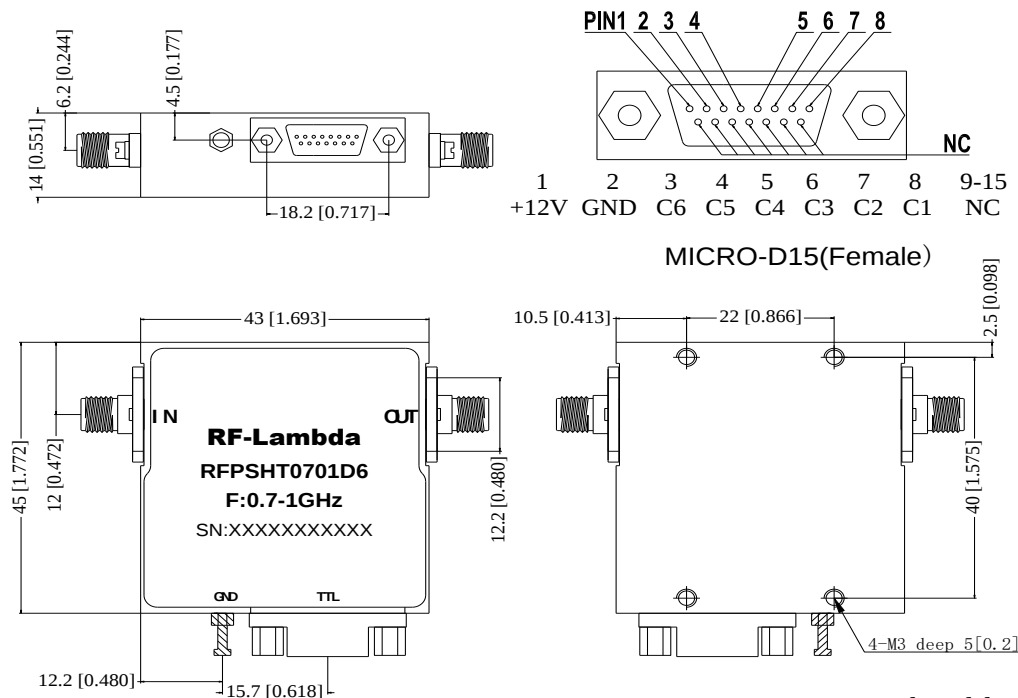
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Outline Drawing:

All Dimensions in mm [inches]



Truth Table

Control Voltage Input						Phase Shift (Degree)
C6	C5	C4	C3	C2	C1	
1	1	1	1	1	1	Reference
1	1	1	1	1	0	5.625
1	1	1	1	0	1	11.25
1	1	1	0	1	1	22.5
1	1	0	1	1	1	45
1	0	1	1	1	1	90
0	1	1	1	1	1	180
0	0	0	0	0	0	354-375



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