



RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

RFPSHT0210N6K

Digital 360° Phase Shifter 170- 250MHz



Features

- Wide Band Operation 170-250MHz
- 6-Bit Phase Shift
- Temperature Range -45°C~+85°C
- Customization available upon request

Typical Applications

- Wireless Infrastructure
- RF Microwave & VSAT
- Military & Aerospace

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

Description	PN:RFPSHT0210N6K			
	Digital Phase Shifter			
Parameters	Min	Typ.	Max	Units
Frequency Range	170		250	MHz
Phase Range		360		°
Control Bits			6	Bit
Control Step size		5.625		°
Insertion Loss		4	5.5	dB
Insertion Loss Temperature Coefficient		0.008		dB/°C
Phase Flatness		±10	±25	°
Input VSWR		1.5	1.7	:1
Output VSWR		1.7	1.8	:1
Input 1 dB Compression Point(P1dB)		27		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 170 - 250MHz



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Absolute Maximum Ratings

Vdd	+15V
TTL Control Voltage	0~0.5V/3~5V
RF Input power	+27dBm

Ordering Information

Part No.	ECCN	Description
RFPSHT0210N6K	EAR99	170-250MHz Digital Phase Shifter

Environmental Specifications and Test Standards

Parameter	Standard	Description
Operational Temperature	MIL-STD-39016	-45°C~+85°C
Storage Temperature		-55°C~+125°C
Thermal Shock		1 Hour@ -45°C → 1 Hour @ +85°C (5 Cycles)
Random Vibration		Acceleration Spectral Density 6 (m/s) Total 92.6 RMS
Electrical & Temperature Burn In		Temperature +85°C for 72 Hours
Shock		1. Weight >20g, 50g half sine wave for 11ms, Speed variation 3.44m/s 2. Weight <=20g, 100g Half sine wave for 6ms, Speed variation 3.75m/s 3. Total 18 times (6 directions, 3 repetitions per direction).
Altitude	MIL-STD-883	Standard: 30,000 Ft (Epoxy Sealed Controlled Environment) Optional: Hermetically Sealed (60,000 ft. 1.0 PSI min)
Hermetically Sealed (Optional)		MIL-STD-883 (For Hermetically Sealed Units)

Digital Control Phase Shifter 170 - 250MHz



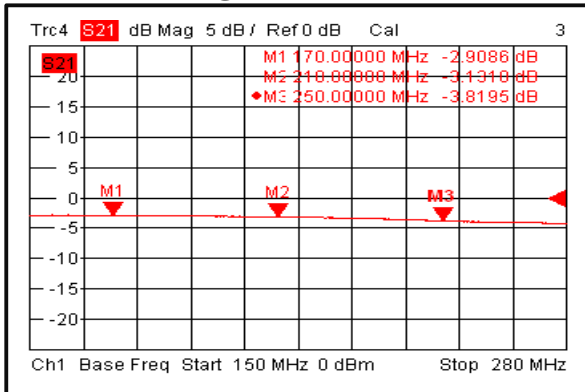
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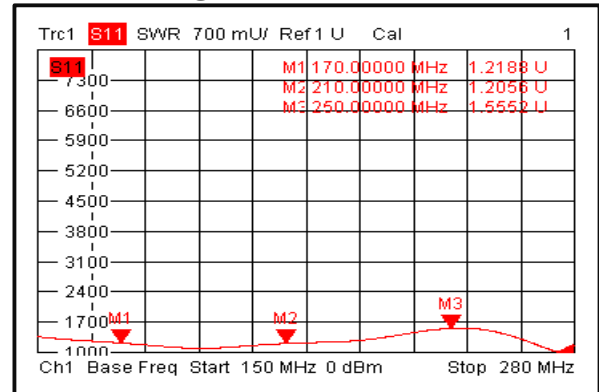
RFPSHT0210N6K

Typical Performance Plots

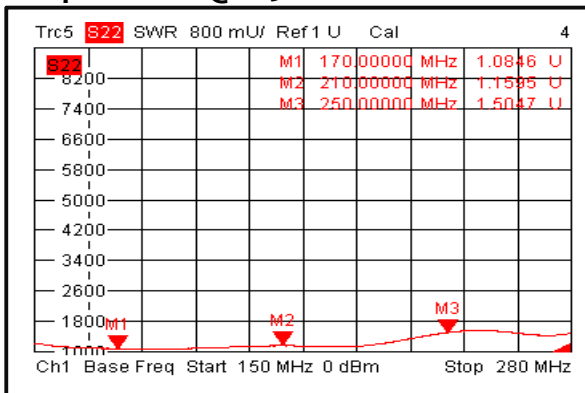
Insertion Loss @+25°C



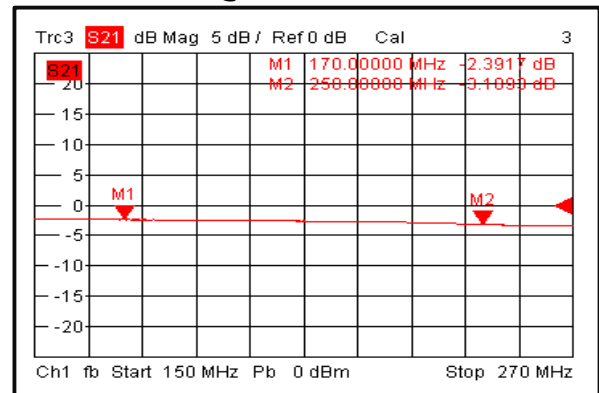
Input VSWR @+25°C



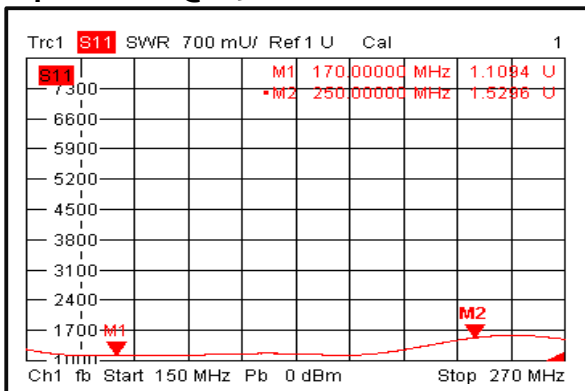
Output VSWR @+25°C



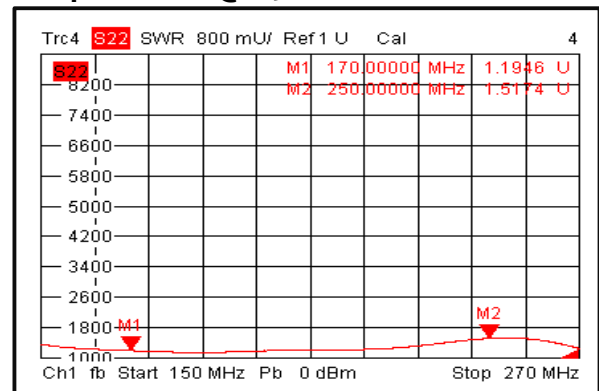
Insertion Loss @-45°C



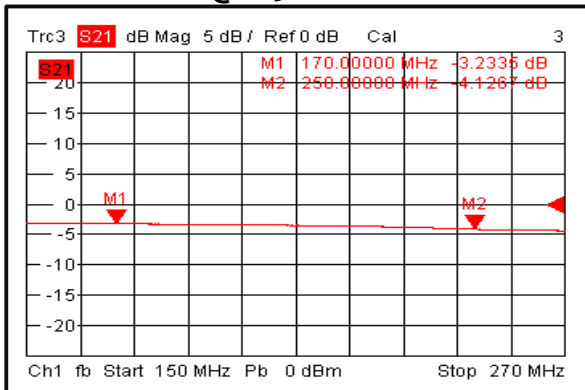
Input VSWR @-45°C



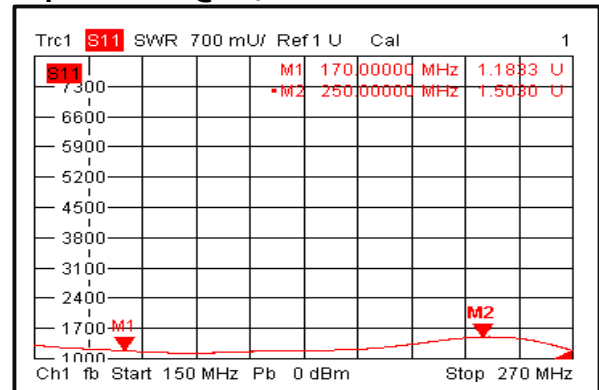
Output VSWR @-45°C



Insertion Loss @+85°C



Input VSWR @+85°C



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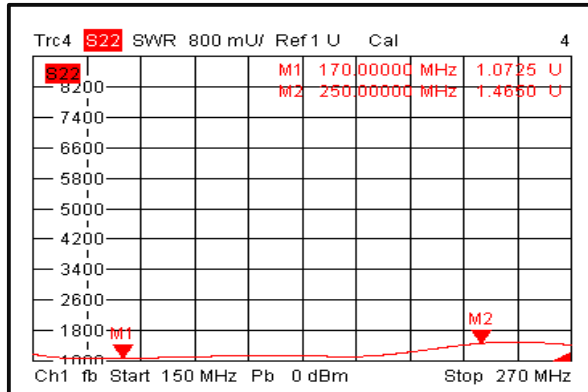


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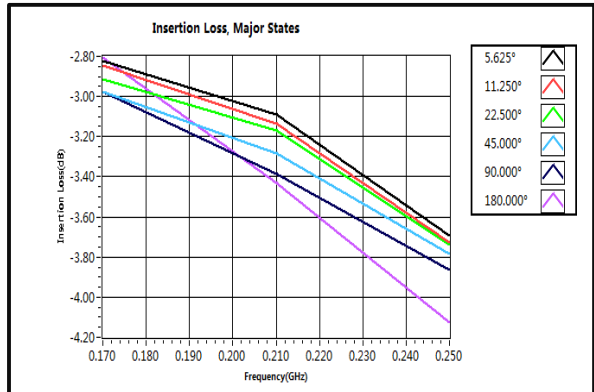
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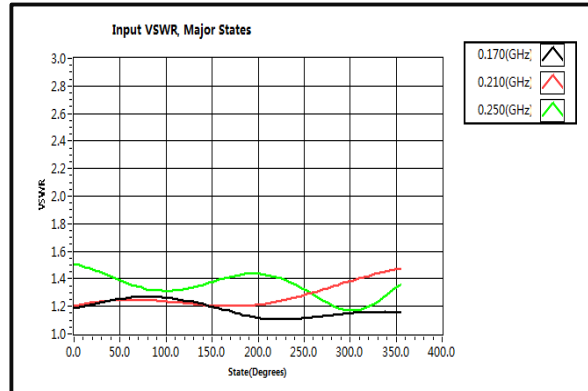
Output VSWR @+85°C



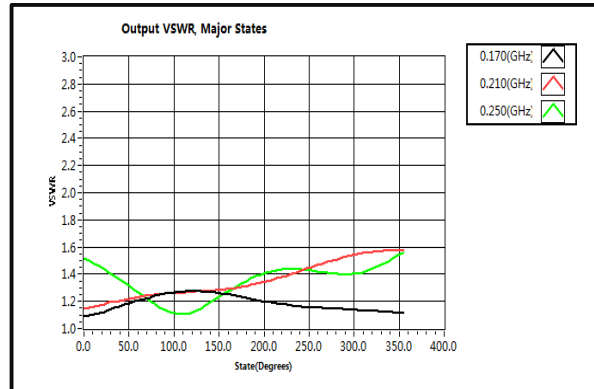
Insertion Loss vs. Frequency



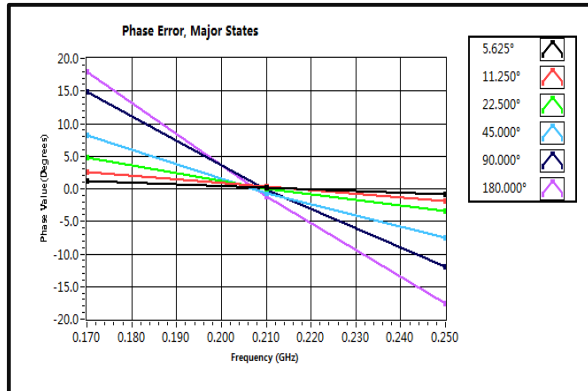
Input VSWR. Frequency



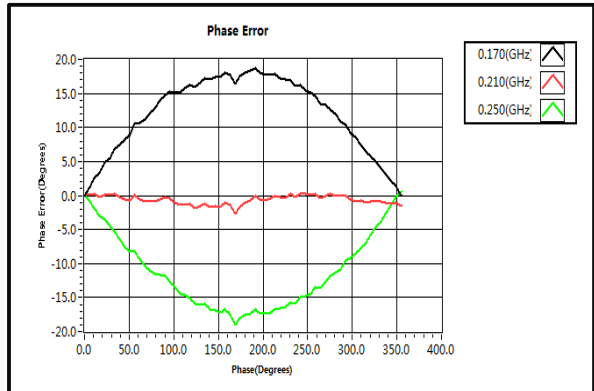
Output VSWR. Frequency



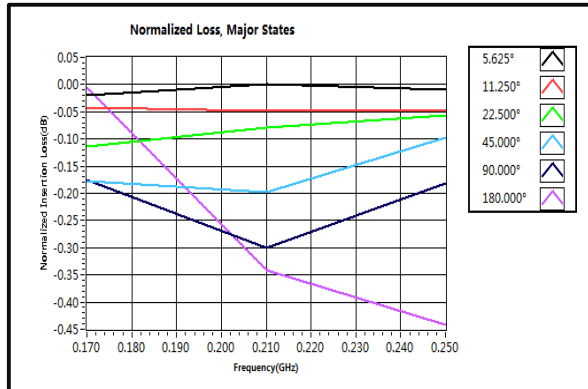
Phase Error vs. Frequency



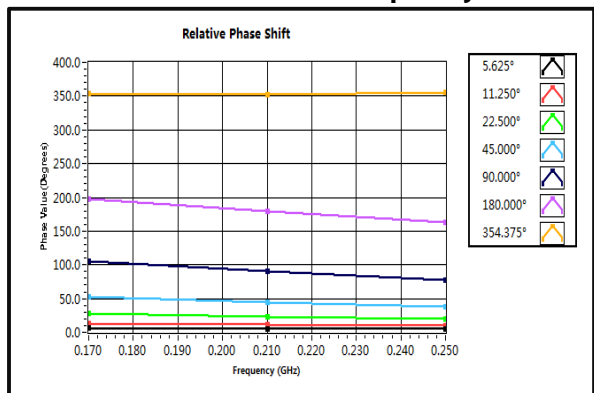
Phase Error vs. State



Normalized Loss . All States



Relative Phase Shift vs. Frequency



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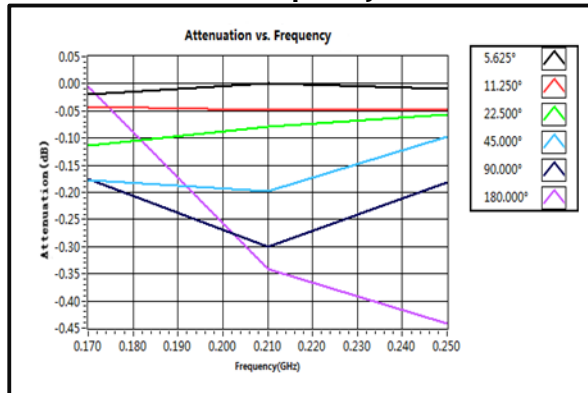


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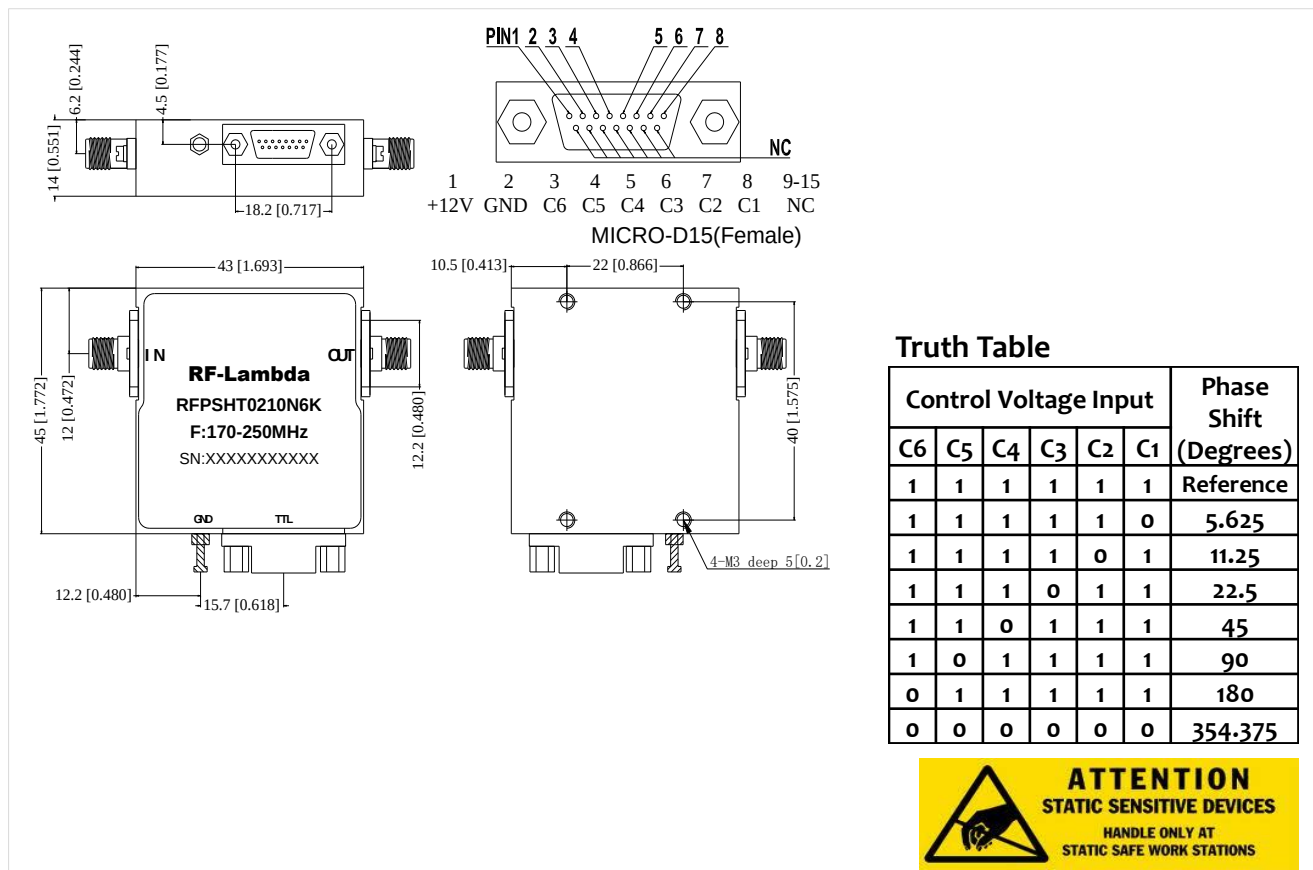
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Attenuation vs. Frequency



Outline Drawing:

All Dimensions in mm [inches]



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