



Digital Non-Dispersive 360° Phase Shifter 170-250MHz



Features

- Wide Band Operation 170-250MHz
- 360° 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, With Vdd = +12V, VCTL = 0/ +5V

Description	PN:RFPSHT0210N6			
	Digital Non-Dispersive Phase Shifter			
Parameters	Min	Typ.	Max	Units
Frequency Range	170~250			GHz
Phase Range		360		°
Insertion Loss		5.0	9.0	dB
Insertion Loss Temperature Coefficient		0.03		dB/°C
Phase Flatness		±12	±15	°
Input VSWR		1.7	2	ratio
Output VSWR		1.7	2	ratio
RF Input power (CW)			27	dBm
Power Dissipation (CW)		0.1		W
Input Power for 1 dB Compression		10		dBm
IM3		40		dBc
Weight	3.5			ounces
Impedance	50			Ω
Biasing (+12V)	20			mA
Input /Output Connector	SMA-Female (Standard)			
Control PIN	MICRO-D9 Female			
Finishing	Nickel Plating			
Material	Aluminum			
Seal	Hermetically Sealed (optional)			



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Absolute Maximum Ratings

Biasing	+15V
TTL Control Voltage	0~0.8V/2~5V
Operating Temperature(°C)	-45 ~ +85
Storage Temperature(°C)	-50 ~ +125

Ordering Information

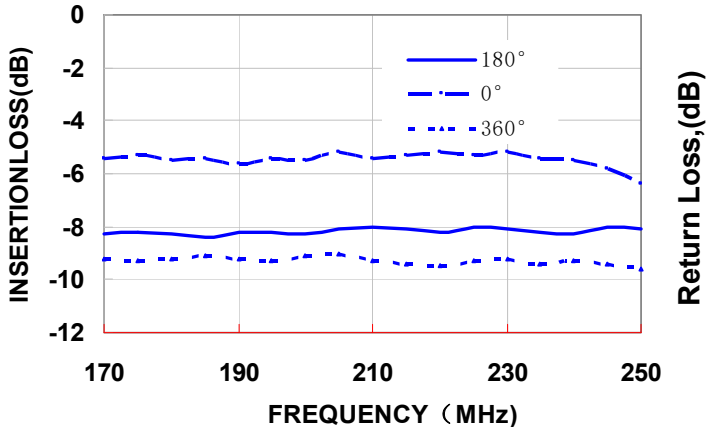
Part No	ECCN	Description
RFPSHT0210N6K	EAR99	170-250MHz Digital Control Phase Shifter

Environment specifications

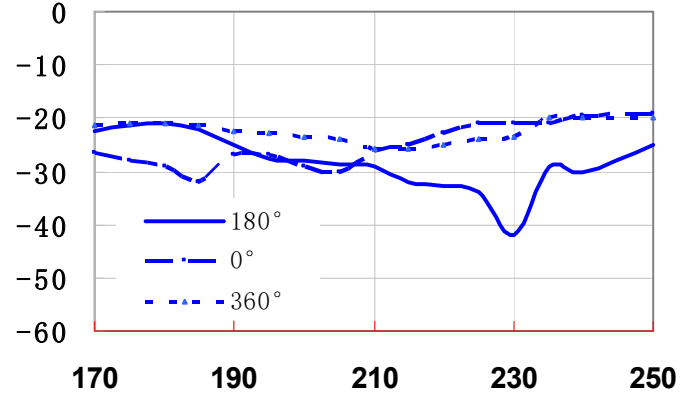
Operational Temperature (°C)	-45 ~ +85
Storage Temperature (°C)	-50 ~ +125
Altitude	30,000 ft. (Epoxy Seal Controlled environment) 60,000 ft 1.0psi min (Hermetically Seal Un-controlled environment) (Optional)
Vibration	25g rms (15 degree 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35c, 95%RH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

performance plots

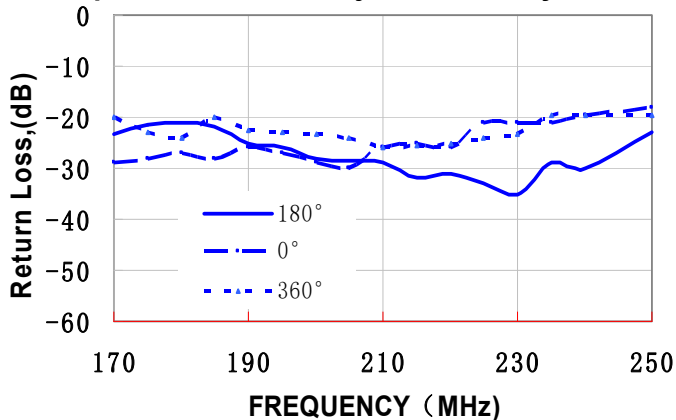
Insertion Loss, Major States Only



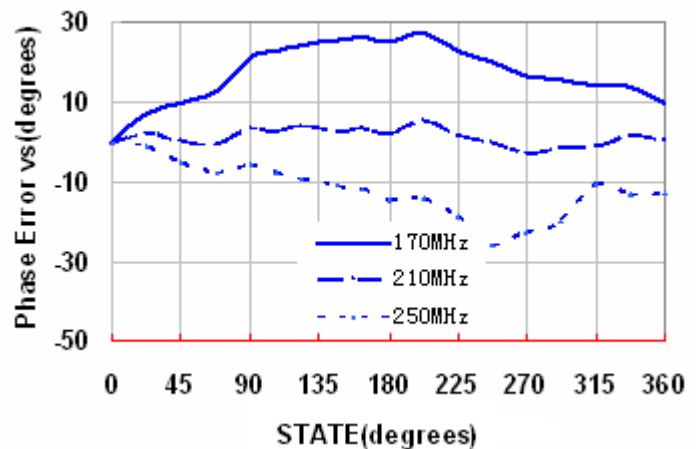
Input Return Loss, Major States Only



Output Return Loss, Major States Only



Phase Error vs. State



Digital Control Phase Shifter 170-250MHz

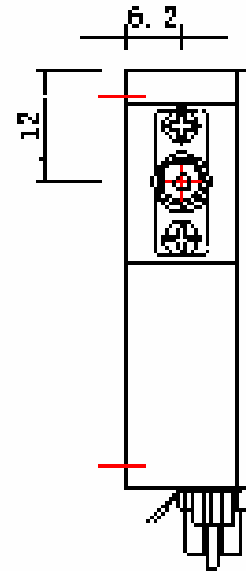
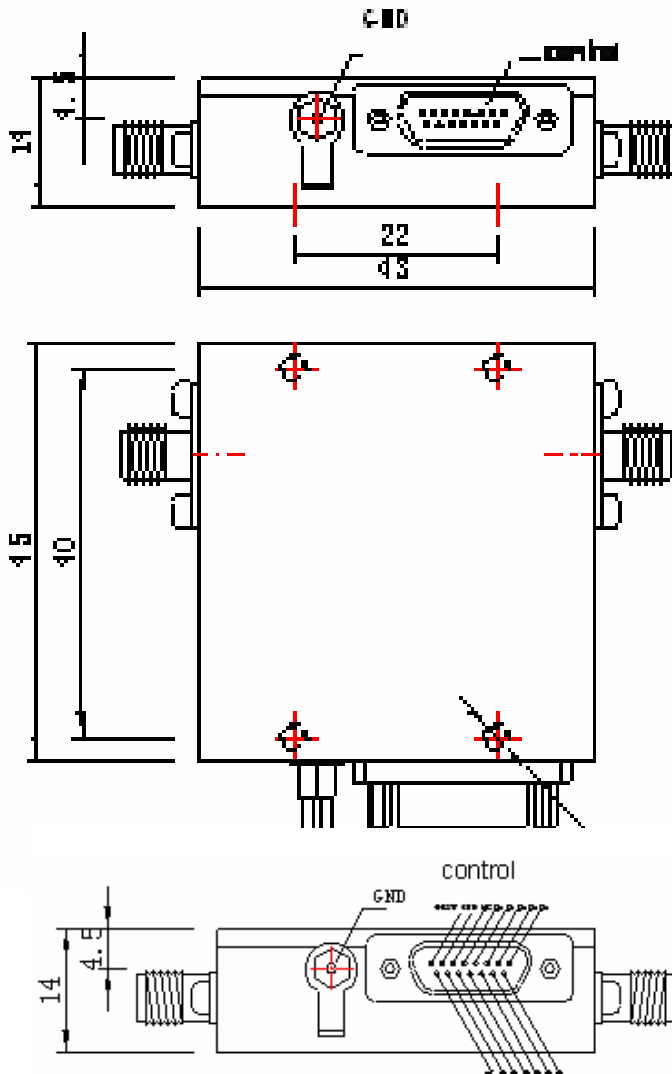


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max depth is 5

Control Voltage Input						Phase Shift (Degrees) RFIN – RFout
D5	D4	D3	D2	D1	D0	
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	45.0
1	0	1	1	1	1	90.0
0	1	1	1	1	1	180.0
0	0	0	0	0	0	354.375

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