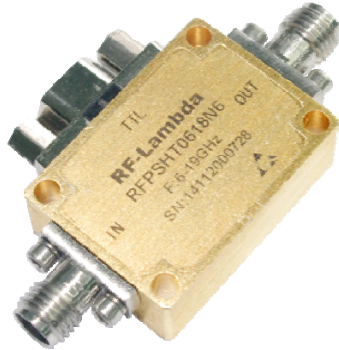




Digital 360° Phase Shifter 6-19GHz



Features

- Wide Band Operation 6-19GHz
- 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, With Vdd = +5V, VCTL = 0/ +5V

Description	PN:RFPSHT0618N6						
	Digital Phase Shifter						
Parameters	Min	Typ.	Max	Min	Typ.	Max	Units
Frequency Range	6		12	12		19	GHz
Phase Range		360			360		°
Insertion Loss		9	10		10	12	dB
Insertion Loss Temperature Coefficient		0.008			0.008		dB/°C
Phase Flatness		±5	±10		±5	±15	°
Input VSWR		1.5	2.5		1.5	2.1	
Output VSWR		2.0	3.0		1.7	2.5	
Input Power for 1 dB Compression		25			25		dBm
Input IP3		40			40		dBm
Switching Speed		-			-		ns
Weight	40						g
Impedance	50						Ω
Biasing (+5V)	2						mA
Input /Output Connector	2.92mm-F (Standard)						
Control PIN	-						
Finishing	Gold Plating						
Material	Brass						
Seal	Hermetically Sealed (optional)						



Absolute Maximum Ratings

Biasing	+5V/2mA
TTL Control Voltage	+5V/0V
RF Input power	+30dBm
Operating Temperature(C°)	-45 ~ +85
Storage Temperature(C°)	-50 ~ +125

Ordering Information

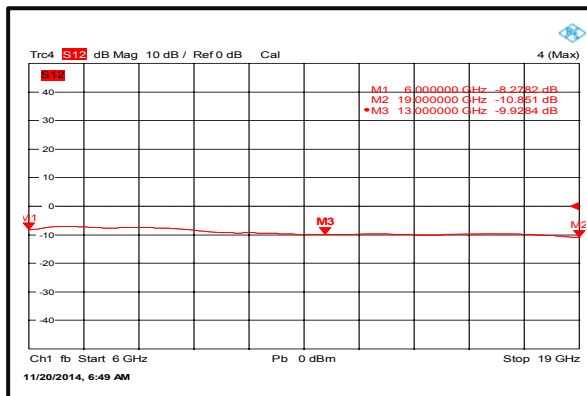
Part No	ECCN	Description
RFPSHT0618N6	EAR99	6-19GHz Digital Phase Shifter

Environment specifications

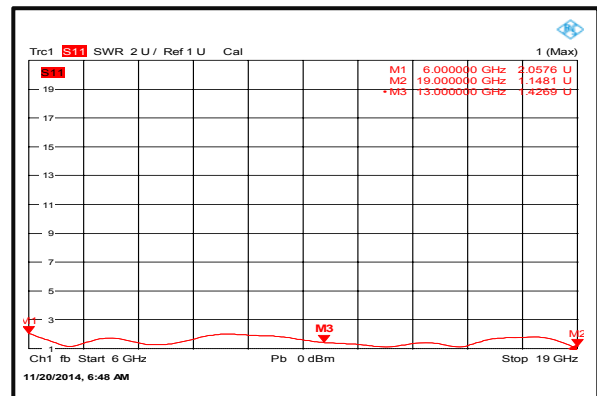
Operational Temperature (C°)	-45 ~ +85
Storage Temperature (C°)	-50 ~ +125
Altitude	30,000 ft. (Epoxy Seal Controlled environment) 60,000 ft 1.0psi min (Hermetically Seal Un-controlled environment) (Optional)
Vibration	25g rms (15 degree 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35c, 95%RH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

performance plots

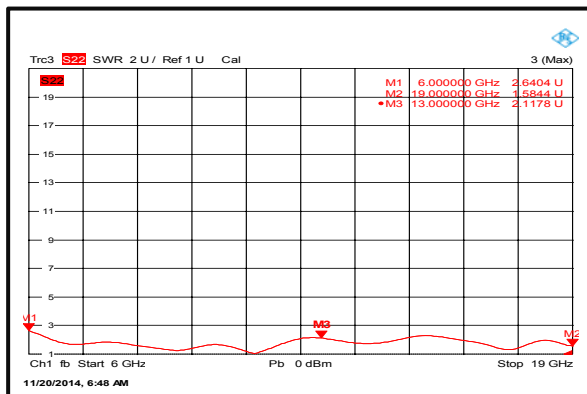
Insertion Loss



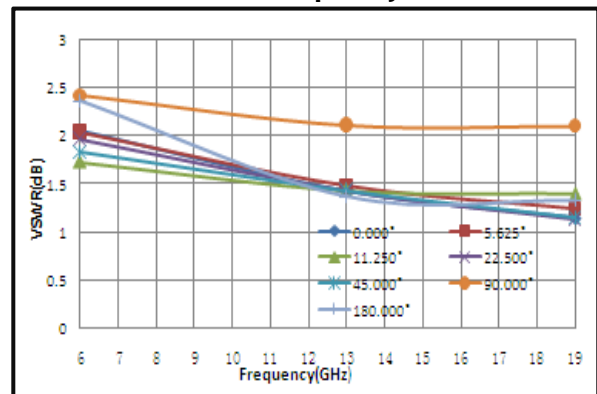
Input VSWR



Output VSWR



Insertion Loss vs. Frequency



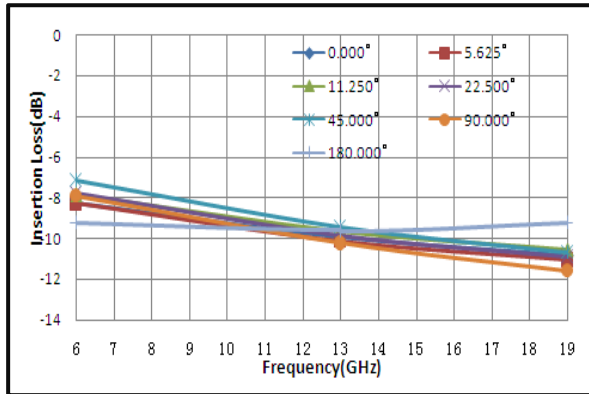


RF-LAMBDA

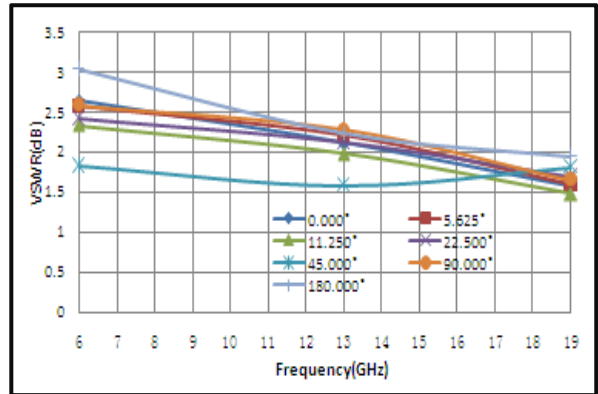
The power beyond expectations

RFPSHT0618N6

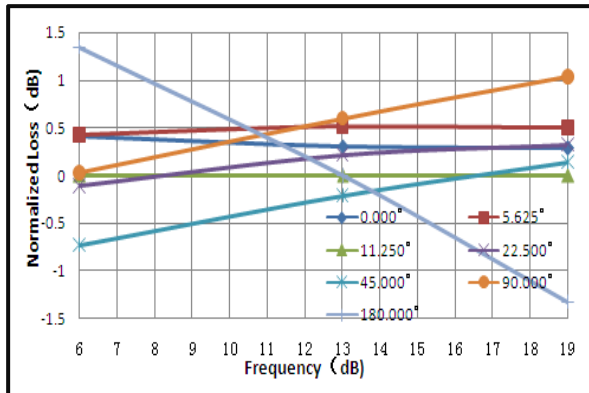
Input VSWR vs. Frequency



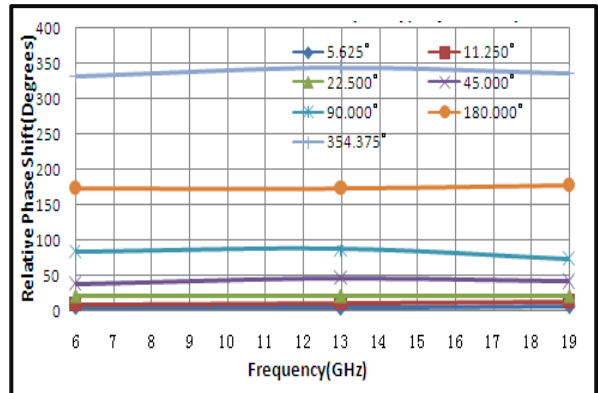
Output VSWR vs. Frequency



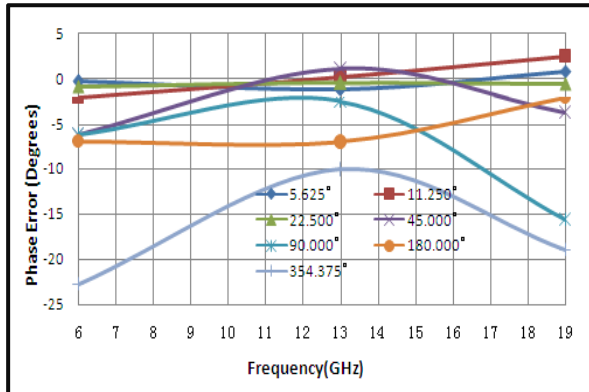
Normalized Loss . All States



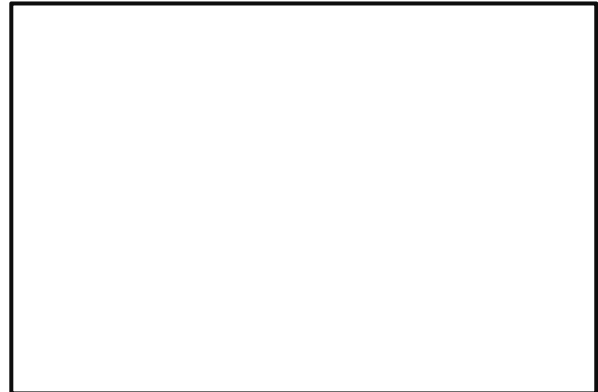
Relative Phase Shift vs. Frequency



Phase Error vs. Frequency



Phase Error vs. State



P1dB vs. Frequency



Output Third Order Intercept (IP3)



Digital Control Phase Shifter 6-19GHz



RF-LAMBDA

The power beyond expectations

RFPSHT0618N6

The datasheet for test 1dB

speed



Outline Drawing:

All Dimensions in mm (inches)

RF-Lambda
RFPST0618N6
F: 6-19GHz
SN:XXXXXXXXXX

28 [1.102]
24 [0.945]
20 [0.787]
16 [0.630]
4- ϕ 2.8 [ϕ 0.110]
5 [0.197]
9.5 [0.374]
14.35 [0.565]
2-56THREAD
3 [0.118]

5 4 3 2 PIN1
9 8 7 PIN6
1.27
1.1
7.35 [0.29"]

1 2 3 4 5 6 7 8 9
+5V GND C1 C2 C3 C4 C5 C6 NC
MICRO-D9

Truth Table

Control Voltage Input						Phase Shift (Degree)
C6	C5	C4	C3	C2	C1	
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	355

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