

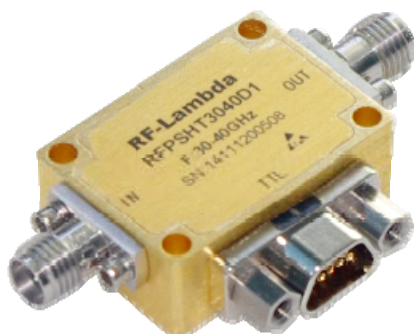


RF-LAMBDA

The power beyond expectations

RFPSHT3040D1

Digital 180° Phase Shifter 30-40GHz



Features

- Wide Band Operation 30-40GHz
- 1-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:RFPSHT3040D1						
	Digital Phase Shifter						
Parameters	Min	Typ.	Max	Min	Typ.	Max	Units
Frequency Range	30		40				GHz
Phase Range		180					°
Insertion Loss		4.5	5.5				dB
Insertion Loss Temperature Coefficient		0.008					dB/°C
Phase Flatness		±4					°
Input VSWR		1.5	2.0				
Output VSWR		1.5	2.0				
Input Power for 1 dB Compression		-					dBm
IP3		-					dBc
Switching Speed		-					ns
Weight	40						g
Impedance	50						Ω
Biasing (+5V)	1						mA
Input /Output Connector	2.92mm-F (Standard)						
Control PIN	-						
Finishing	Gold Plating						
Material	Brass						
Seal	Hermetically Sealed (optional)						

Digital Control Phase Shifter 30-40GHz



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Absolute Maximum Ratings

Biasing	+5V/1mA
TTL Control Voltage	+5V/0V
RF Input power	+20dBm
Operating Temperature(C°)	-45 ~ +85
Storage Temperature(C°)	-50 ~ +125

Ordering Information

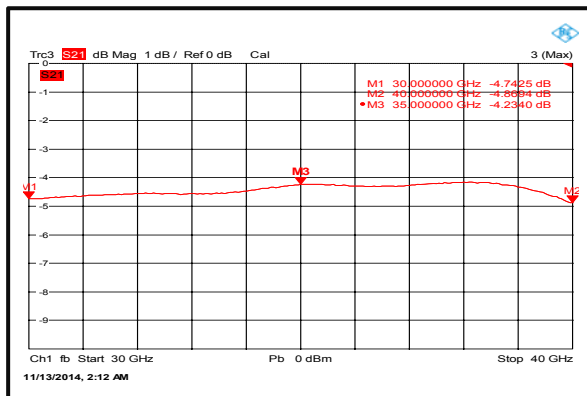
Part No	ECCN	Description
RFPSHT3040D1	EAR99	30-40GHz Digital Phase Shifter

Environment specifications

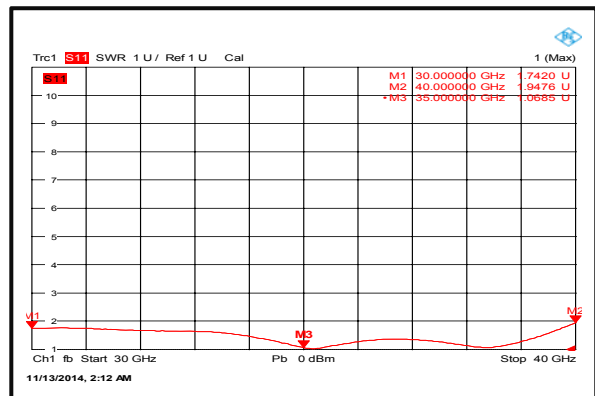
Operational Temperature (C°)	-45 ~ +85
Storage Temperature (C°)	-50 ~ +125
Altitude	30,000 ft. (Epoxy Seal Controlled environment) 60,000 ft 1.0psi min (Hermetically Seal Un-controlled environment) (Optional)
Vibration	25g rms (15 degree 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35c, 95%RH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

performance plots

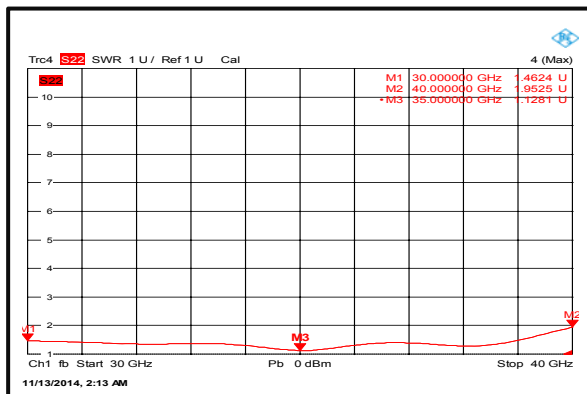
Insertion Loss



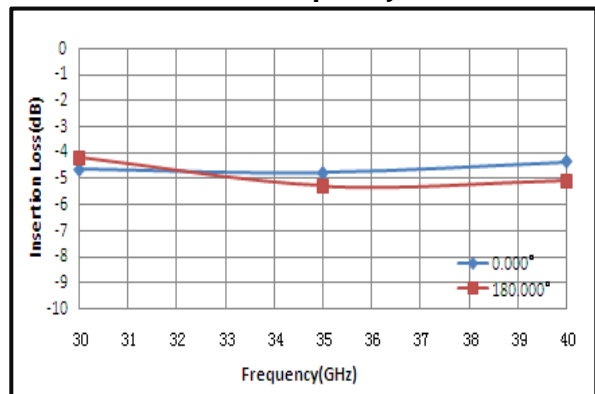
Input VSWR



Output VSWR



Insertion Loss vs. Frequency



Digital Control Phase Shifter 30-40GHz

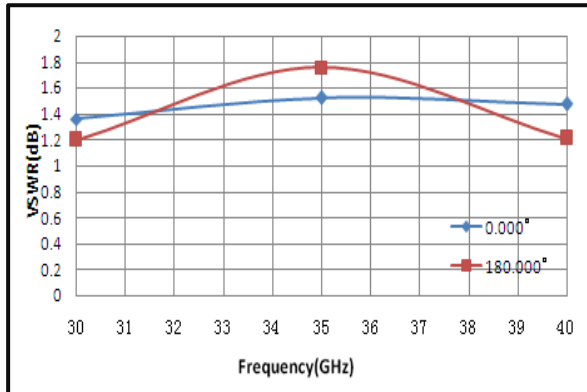


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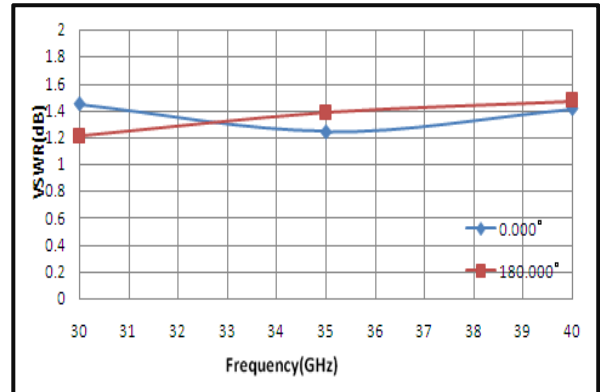
The power beyond expectations

RFPSHT3040D1

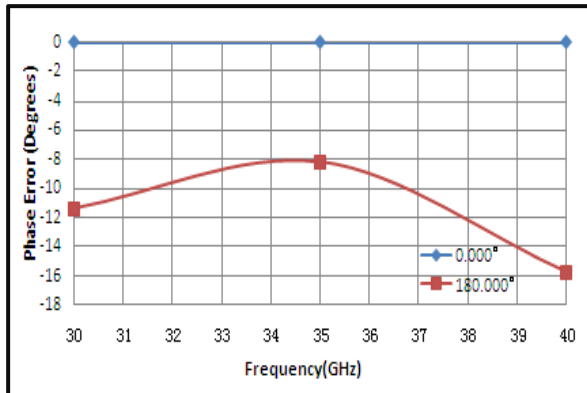
Input VSWR vs. Frequency



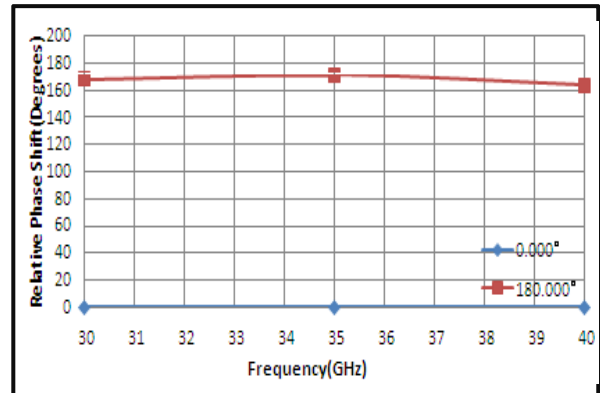
Output VSWR vs. Frequency



Phase Error vs. Frequency



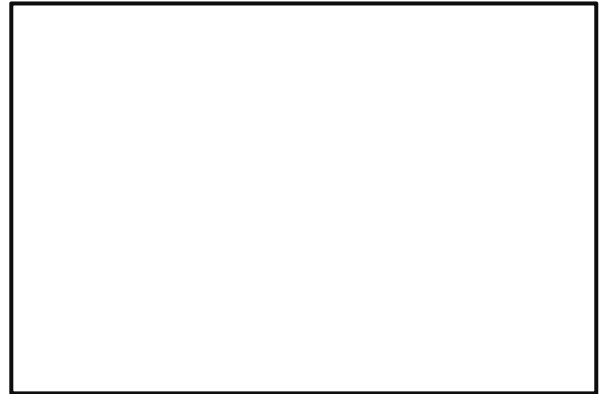
Relative Phase Shift vs. Frequency



Normalized Loss . All States



Phase Error vs. State



P1dB vs. Frequency



Output Third Order Intercept (IP3)



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The datasheet for test 1dB

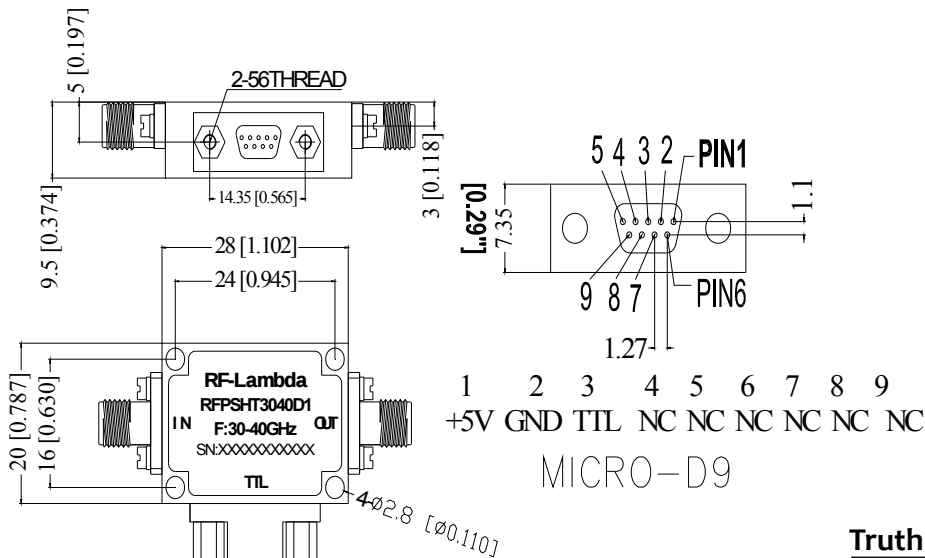


speed



Outline Drawing:

All Dimensions in mm (inches)



Truth Table

Control Voltage Input	Phase Shift (Degree)
TTL	
0	Reference
1	180

Important Notice

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Digital Control Phase Shifter 30-40GHz