

## Voltage Control Phase Shifter 0.5 - 1GHz



### Features

- Wide Band Operation 0.5-1GHz
- 360° Phase Shift
- Low Insertion Loss and Low Phase Error
- Single Control Operation

### Typical Applications

- Test and Measurement
- Military and Aerospace
- Research and Development

Electrical Specifications, TA = +25°C

Description	PN:RVPT0501GBC			
	Voltage Control Phase Shifter			
Parameters	Min	Typ.	Max	Units
Frequency Range	0.5		1.0	GHz
Phase Range		360		deg
Phase Error		±20		deg
Insertion Loss		3.5	4.0	dB
Insertion Loss Temperature Coefficient		0.01		dB/°C
Input VSWR		1.5	2.0	:1
Output VSWR		1.5	2.0	:1
0.1dB Compression Point (Po.1dB)		23		dBm
Control Voltage	0	20		V
current	15 Max.			mA
Impedance	50			Ω
Weight	2.0 Max.			ounces
Input / Output Connectors	SMA-Female			
Finish	Nickel Plated			
Material	Aluminum			
Sealing	Hermetically Sealed (Optional)			

**Absolute Maximum Ratings**

Control Voltage	0~ +22V
RF Input Power	+30dBm

**Ordering Information**

Part No.	Description
RVPT0501GBC	0.5-1GHz Voltage Control Phase Shifter

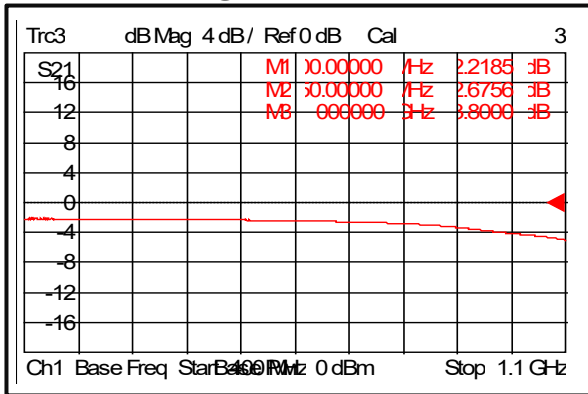
**Environmental Specifications and Test Standards**

Parameter	Description
Operational Temperature	-40°C~+85°C (Case Temperature)
Storage Temperature	-50°C~+105°C
Thermal Shock	-40°C → +85°C (5 Cycles / 10 hours)
Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
High 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	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)

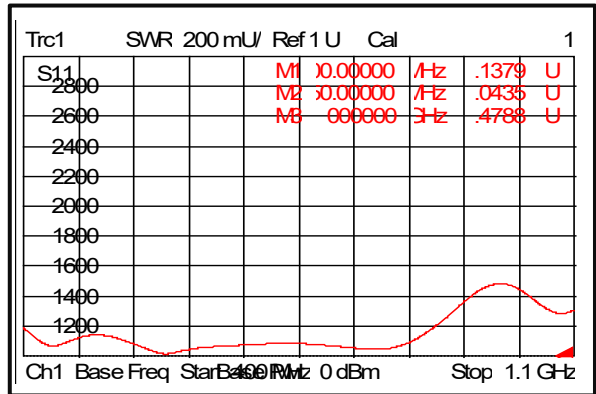
**Voltage Control Phase Shifter 0.5 - 1GHz**

**Typical Performance Plots**

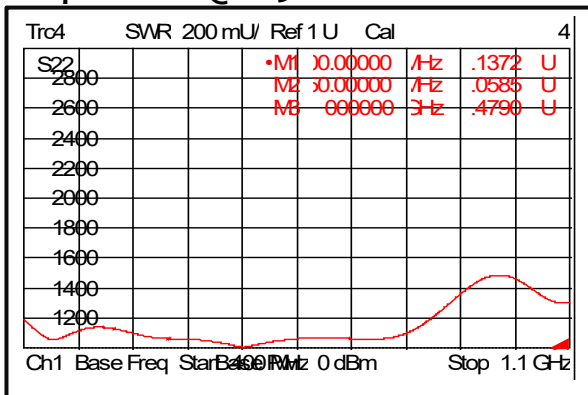
**Insertion Loss @ +25°C**



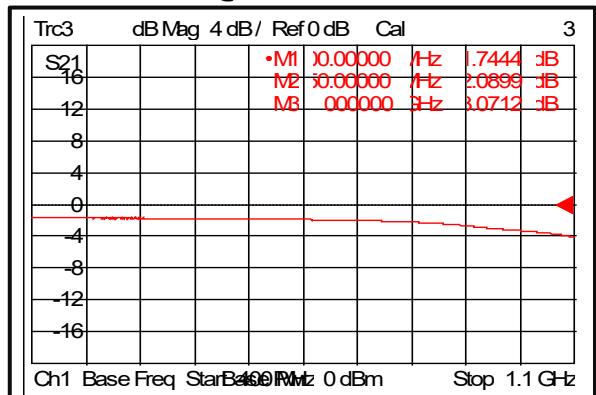
**Input VSWR @ +25°C**



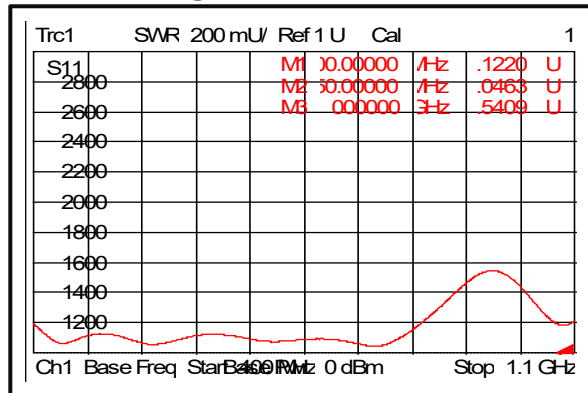
**Output VSWR @ +25°C**



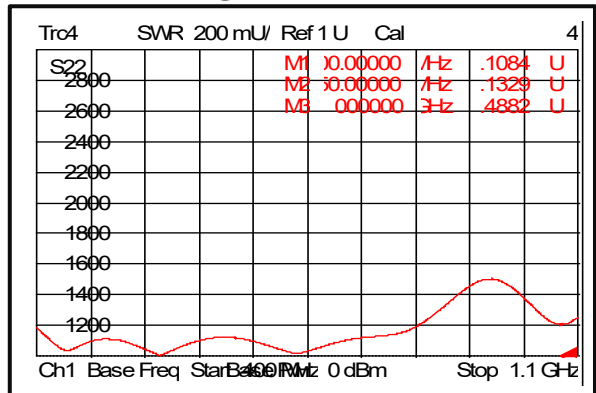
**Insertion Loss @ -40°C**



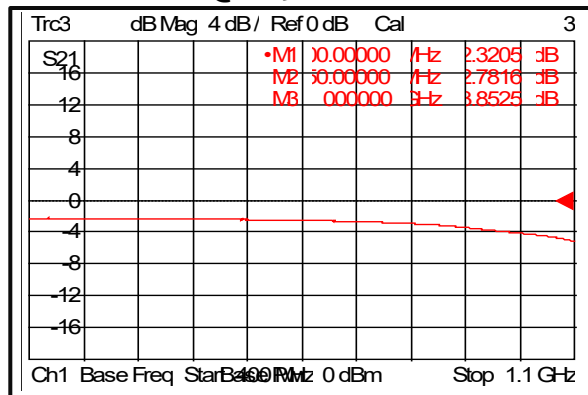
**Input VSWR @ -40°C**



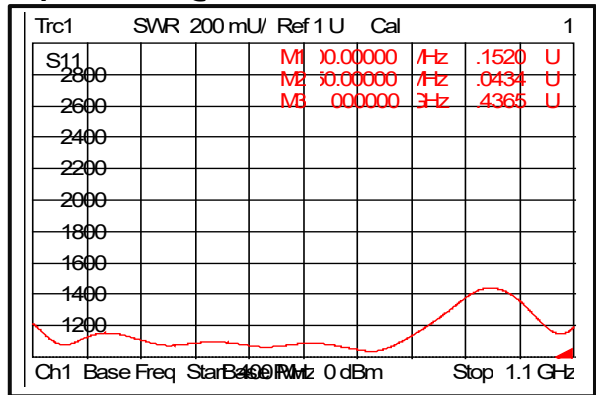
**Output VSWR @ -40°C**



**Insertion Loss @ +85°C**

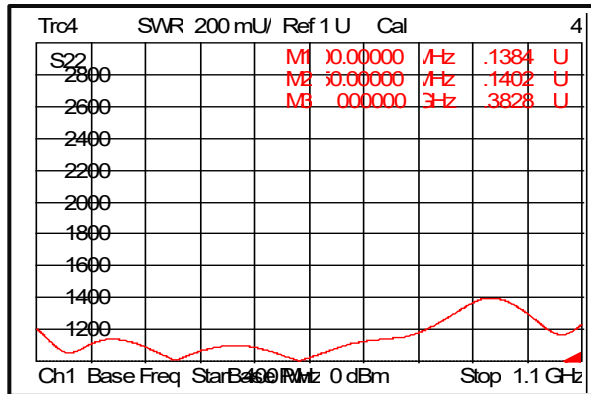


**Input VSWR @ +85°C**

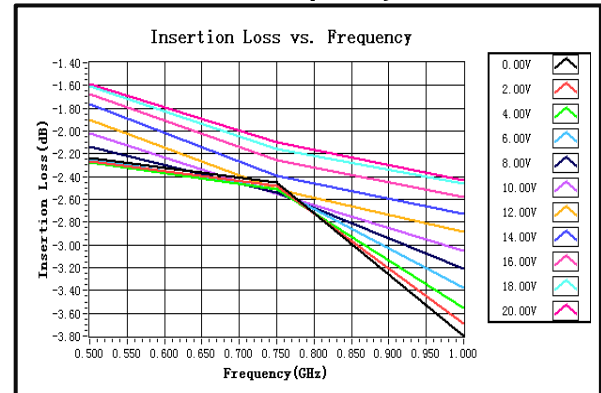


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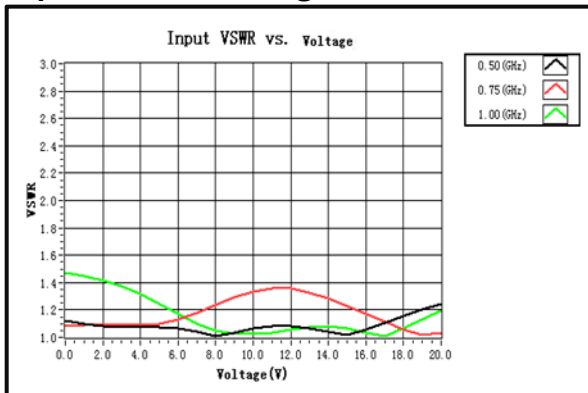
**Output VSWR @ +85°C**



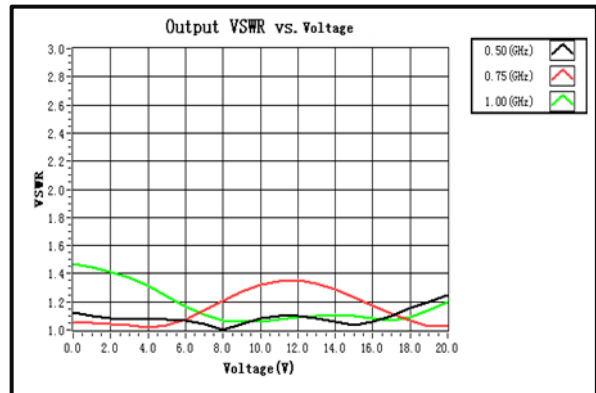
**Insertion Loss vs. Frequency**



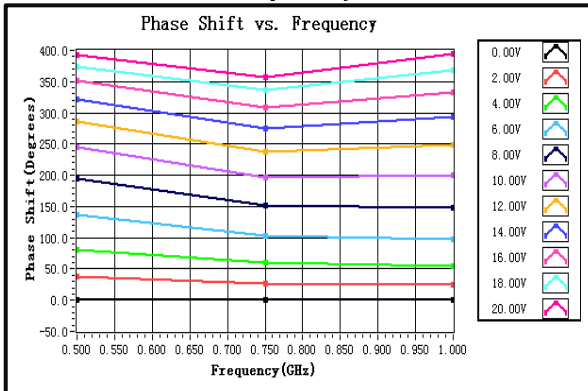
**Input VSWR vs. Voltage**



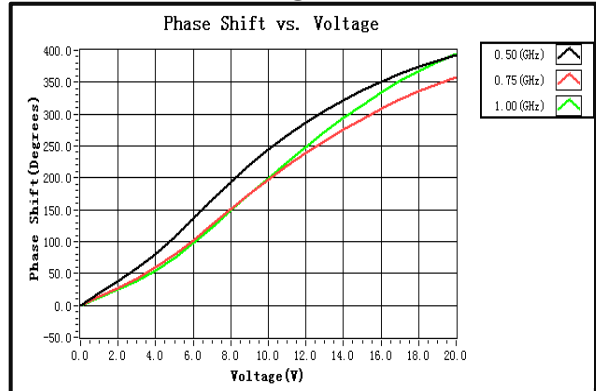
**Output VSWR vs. Voltage**



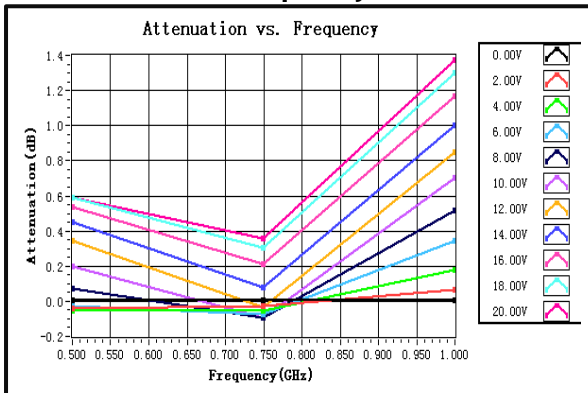
**Phase Shift vs. Frequency**



**Phase Shift vs. Voltage**



**Attenuation vs. Frequency**

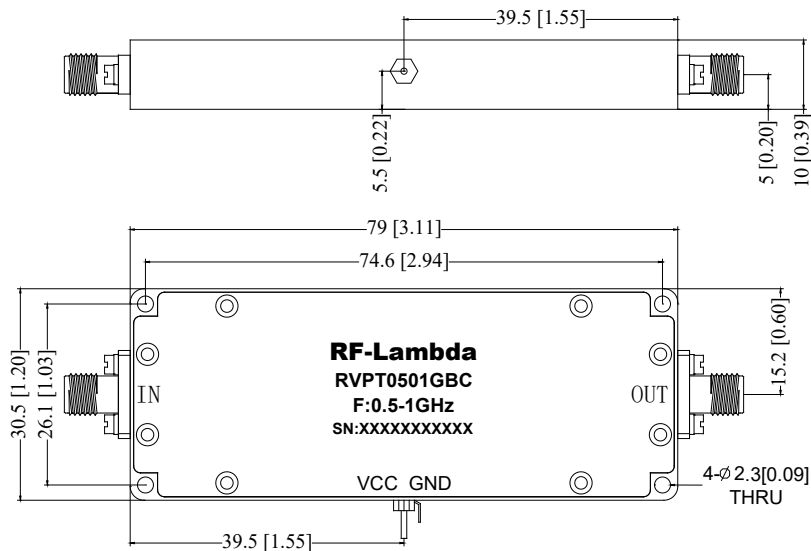


**Voltage Control Phase Shifter 0.5 - 1GHz**

**Outline Drawing:**

All Dimensions in mm [inches]

Tolerance  $\pm 0.1$  [0.004]



Note: Standard torque wrench must be used to secure RF connectors.



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