

Voltage Control Phase Shifter 22- 33GHz



Features

- Wide Band Operation 22-33GHz
- 360° Phase Shift
- Low Insertion Loss and Low Phase Error
- Single Voltage Control Operation

Typical Applications

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

Electrical Specifications, TA = +25 °C

Description	PN: RVPT2231GBC						
	Voltage Control Phase Shifter						
Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	24.5		31	22		33	GHz
Phase Range	360			360			deg
Insertion Loss		13	15		15	23	dB
Insertion Loss Temperature Coefficient		0.003			0.003		dB/°C
Phase Flatness		±20			±40		deg
Control Voltage	0	14		0	14		V
Input VSWR		3			3.5		:1
Output VSWR		3.5			4.0		:1
0.1dB Compression Point (Po.1dB)		15			15		dBm
Current	1 Max.						mA
Impedance	50						Ω
Weight	0.4 Max.						Ounces
Input / Output Connectors	2.92mm-Female						
Finish	Gold Plated						
Material	Aluminum						
Package Sealing	Hermetically Sealed (Optional)						

Absolute Maximum Ratings

Control Voltage	0~ 18V
RF Input power	+15dBm

Ordering Information

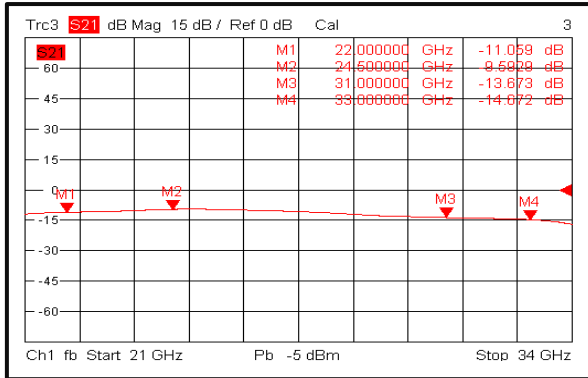
Part No.	Description
RVPT2231GBC	22-33GHz Voltage Control Phase Shifter

Environmental Specifications and Test Standards

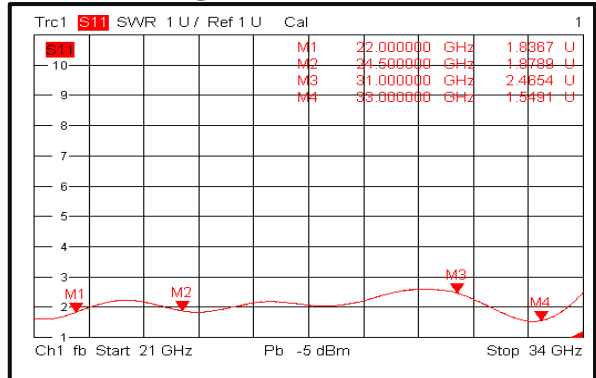
Parameter	Description
Operational Temperature	-40°C~+85°C (Case Temperature)
Storage Temperature	-50°C~+105°C
Thermal Shock	-40°C → +85°C (5 Cycles / 10 hours)
Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
High Temperature Burn In	Temperature +85°C for 72 Hours
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)

Typical Performance Plots

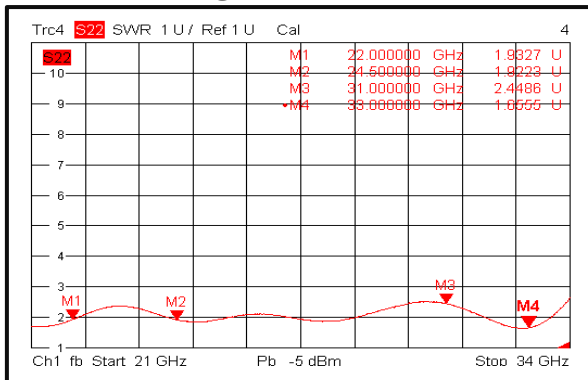
Insertion Loss @ +25°C



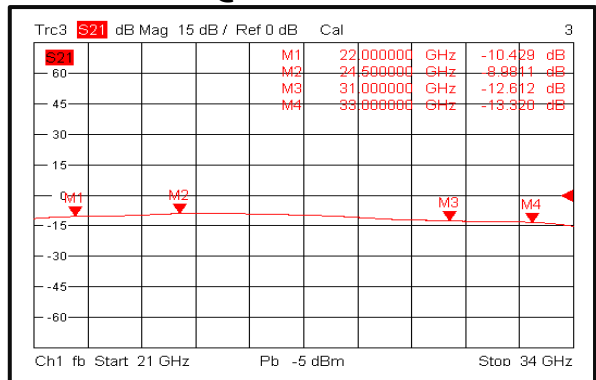
Input VSWR @ +25°C



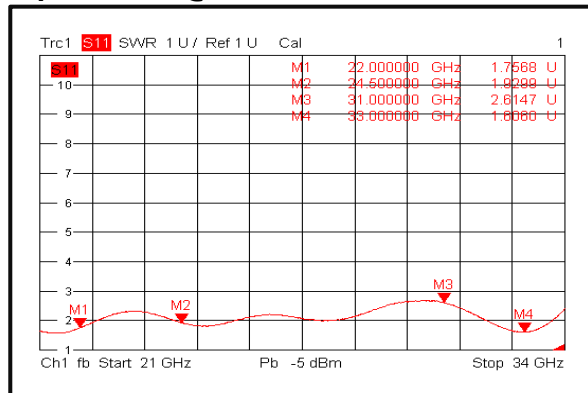
Output VSWR @ +25°C



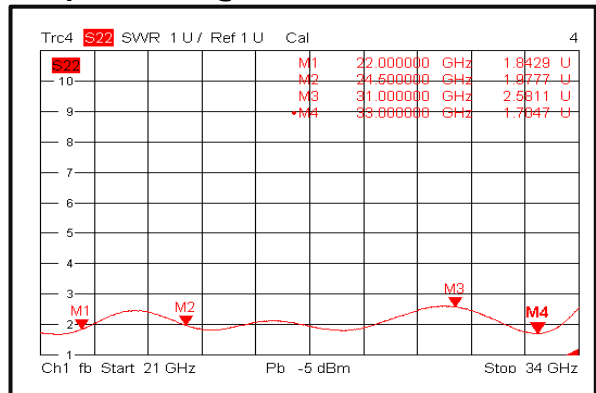
Insertion Loss @ -40°C



Input VSWR @ -40°C

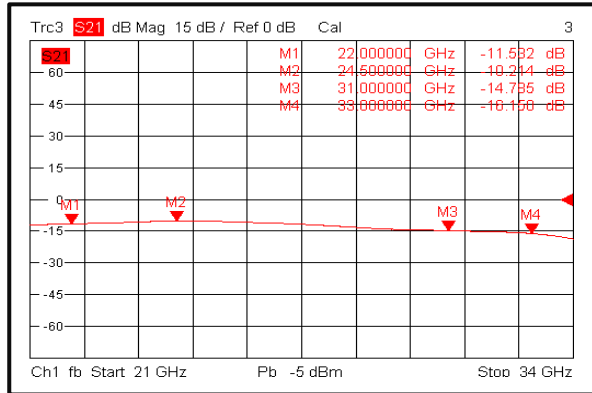


Output VSWR @ -40°C

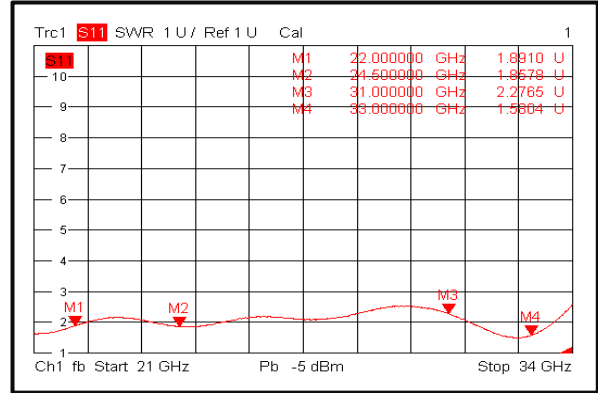


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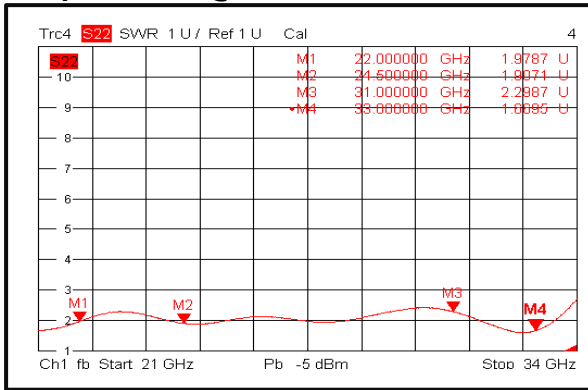
Insertion Loss @ +85°C



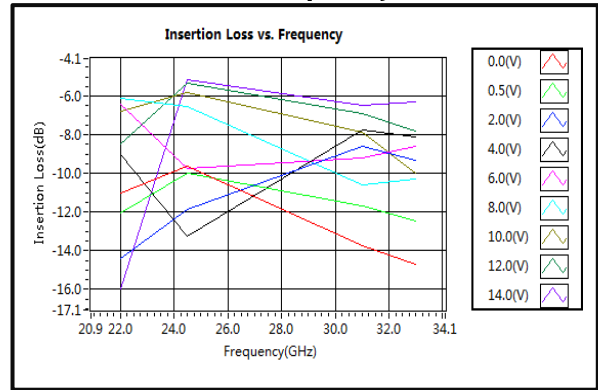
Input VSWR @ +85°C



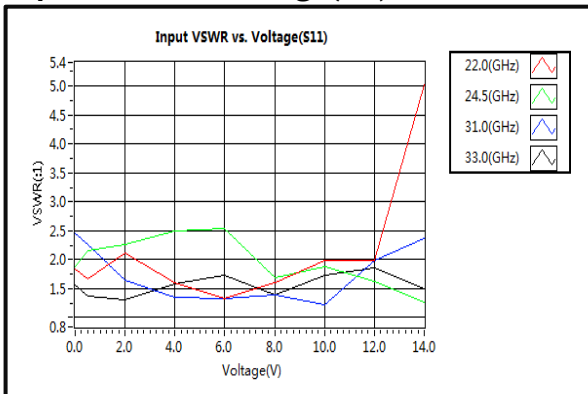
Output VSWR @ +85°C



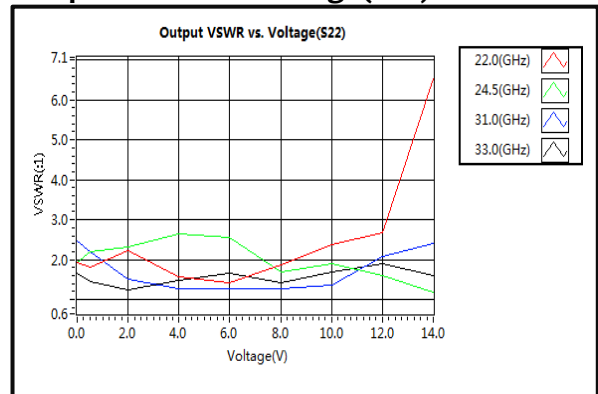
Insertion Loss vs. Frequency



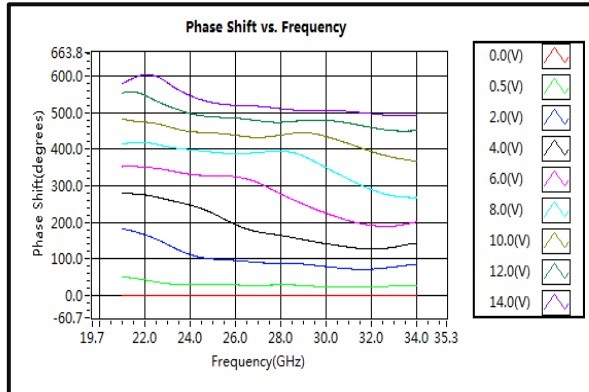
Input VSWR vs. Voltage(S11)



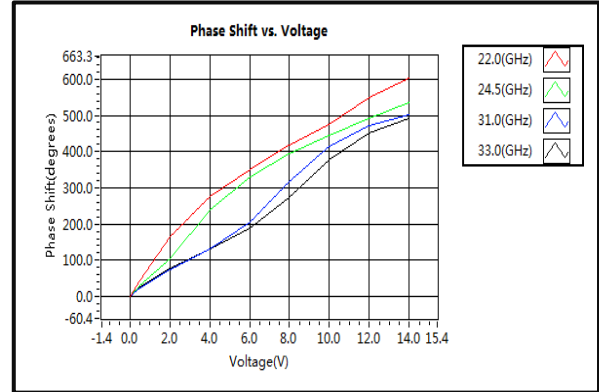
Output VSWR vs. Voltage(S22)



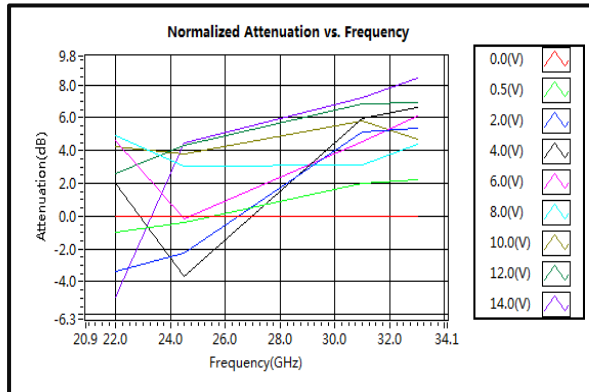
Phase Shift vs. Frequency



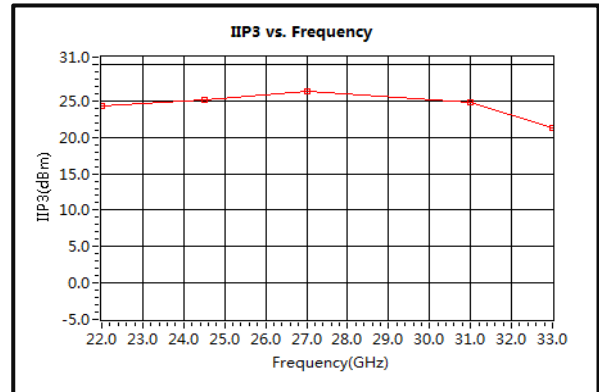
Phase Shift vs. Voltage



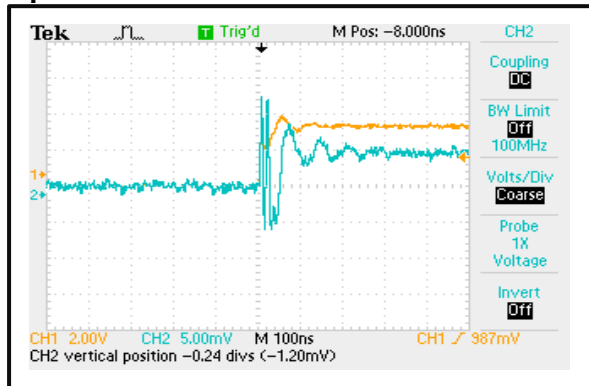
Normalized Attenuation vs. Frequency



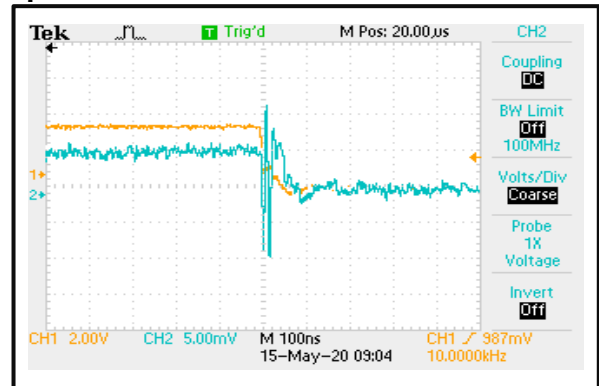
IIP3



Speed



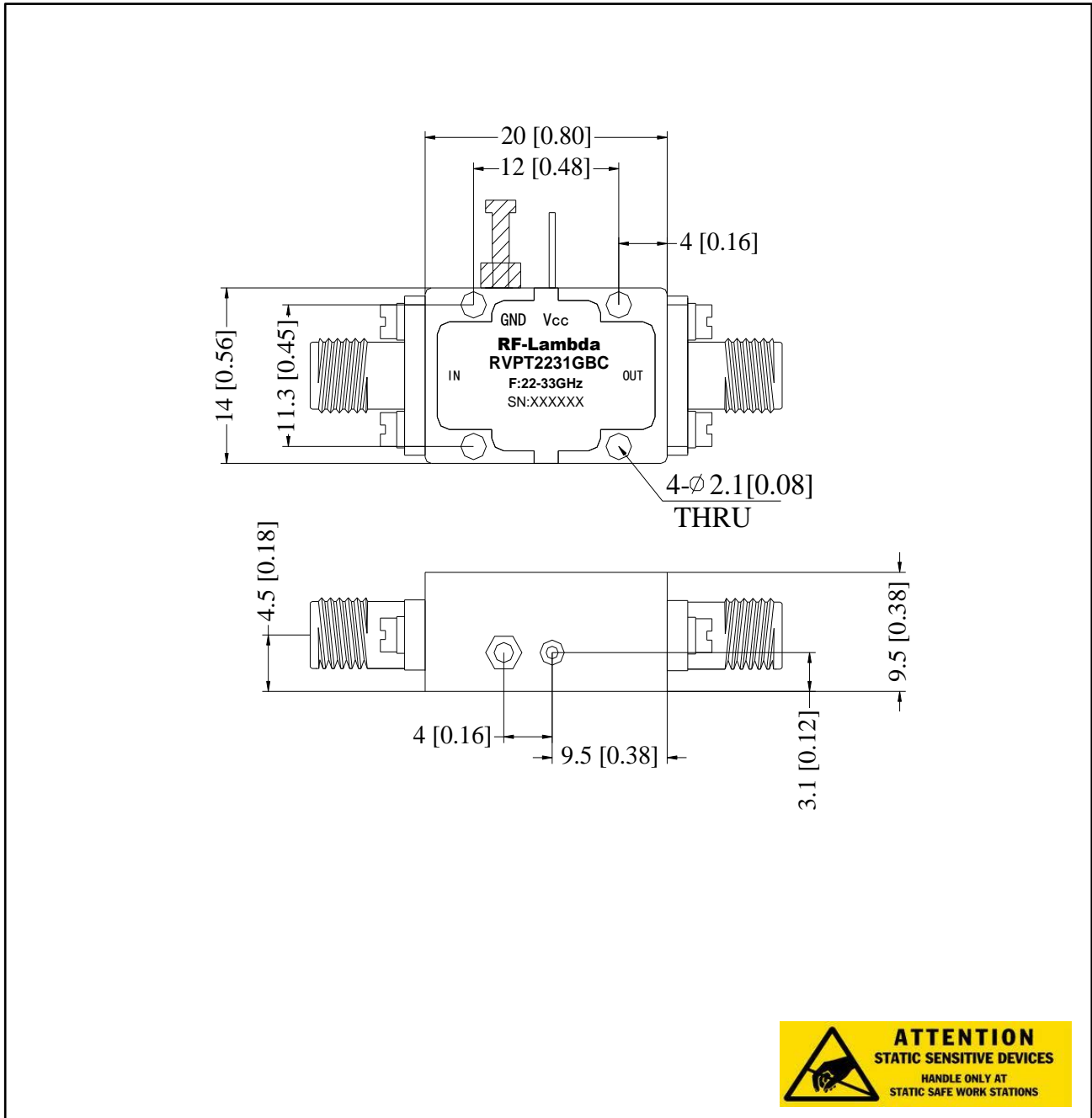
Speed



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Outline Drawing:

All Dimensions in mm [inches]



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