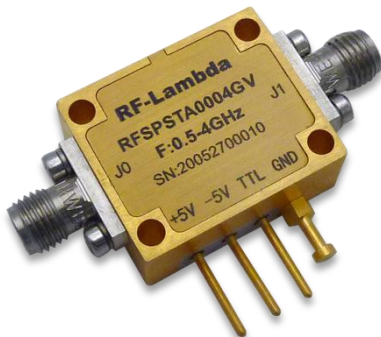


Absorptive Coaxial SPST Switch 0.5-4GHz



Features

- Wide Band Operation 0.5-4GHz
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation

Typical Applications

- Wireless Infrastructure
- Military and Aerospace
- Test and Measurement

Electrical Specifications, $T_A = +25\text{ }^\circ\text{C}$, $V_{dd} = +5\text{V}/-5\text{V}$, $TTL = 0 / +5\text{V}$

Description	PN: RFSPSTA5M43G						
	SPST Absorptive Switch J0: Absorptive Port J1: Reflective port						
	Low Power Cold Switching						
Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	0.5		2	2		4	GHz
Insertion Loss		0.7	1		1.0	1.5	dB
Insertion Loss Temperature Coefficient		0.003			0.003		dB/°C
Isolation	80	85		80	85		dB
Input VSWR		1.3	1.5		1.3	1.5	:1
Output VSWR		1.3	1.5		1.3	1.5	:1
Input Power			30			30	dBm
DC Power Dissipation (CW)		0.25			0.3		W
0.1dB Compression P 0.1dB		30			30		dBm
IIP3		50			48		dBm
Switching Speed	100Max.						ns
Weight	0.5 Max.						ounces
Impedance	50						Ω
Biasing(+5V/-5V)	80/50 Max.						mA
Input /Output Connectors	SMA-Female						
Finish	Gold Plated						
Material	Aluminum						
Sealing	Hermetically Sealed (Optional)						

Absolute Maximum Ratings

Biasing	+5V±10%/-5V±10%
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Note: TTL pins cannot be connected to the negative voltage otherwise the internal driver will be damaged.

Ordering Information

Part No.	Description
RFSPSTA0004GV	SPST 0.5-4GHz PIN Diode Switch

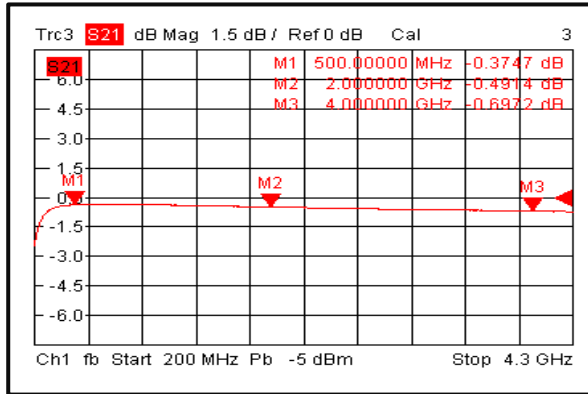
Environmental Specifications and Test Standards

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)

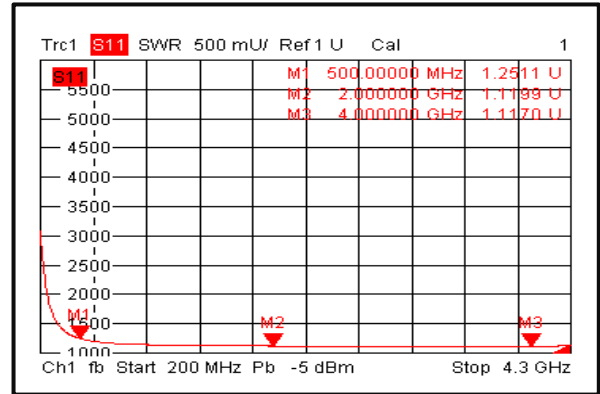
Absorptive Coaxial Single Pole Single Throw Switch 0.5-4GHz

Typical Performance Plots

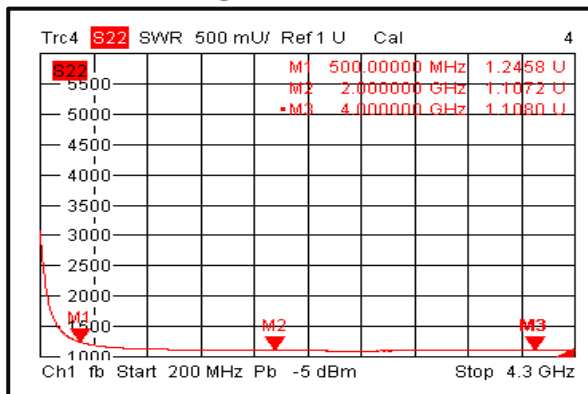
Insertion Loss @+25°C



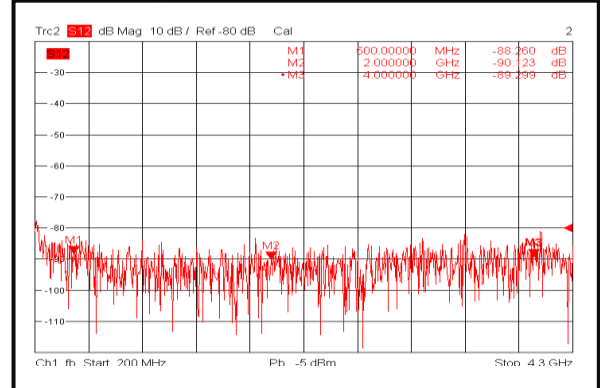
Input VSWR @+25°C



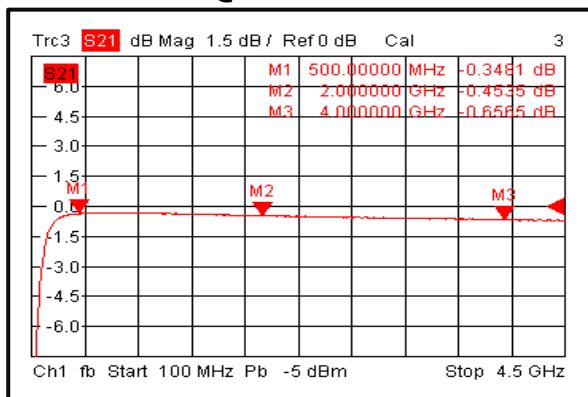
Output VSWR @+25°C



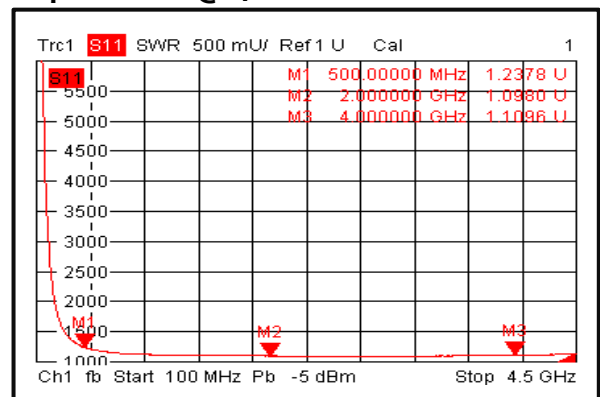
Isolation @+25°C



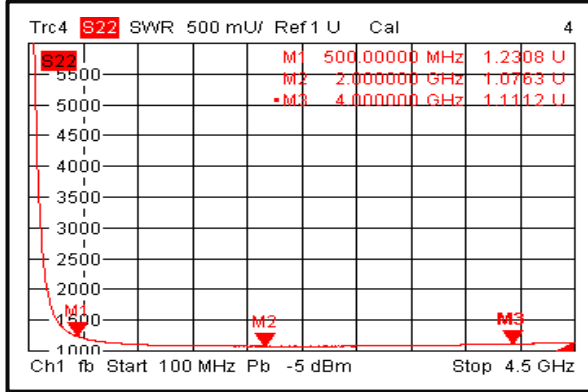
Insertion Loss @-40°C



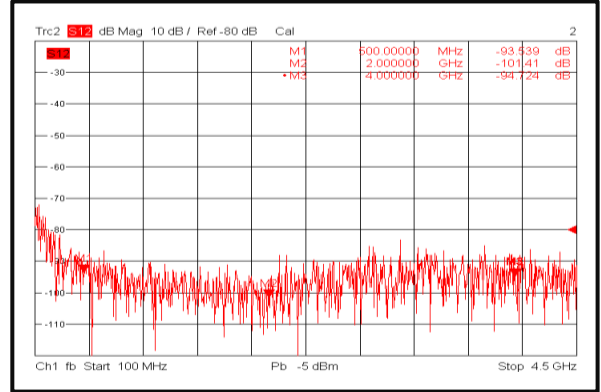
Input VSWR @-40°C



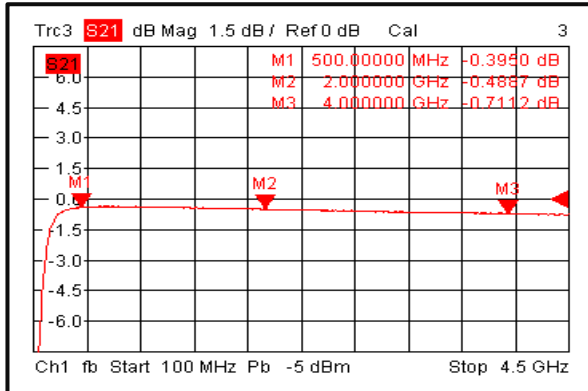
Output VSWR @-40°C



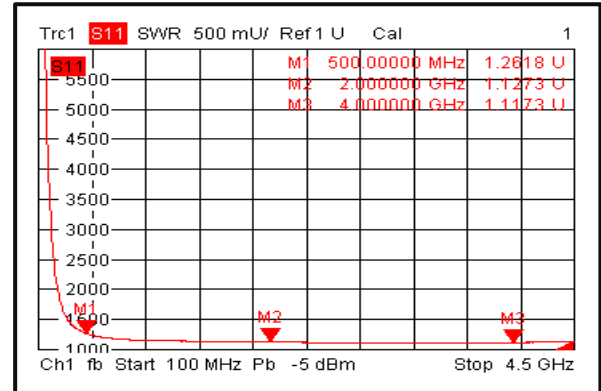
Isolation @-40°C



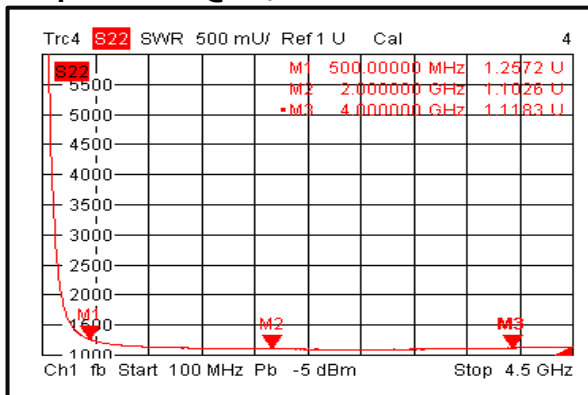
Insertion Loss @+85°C



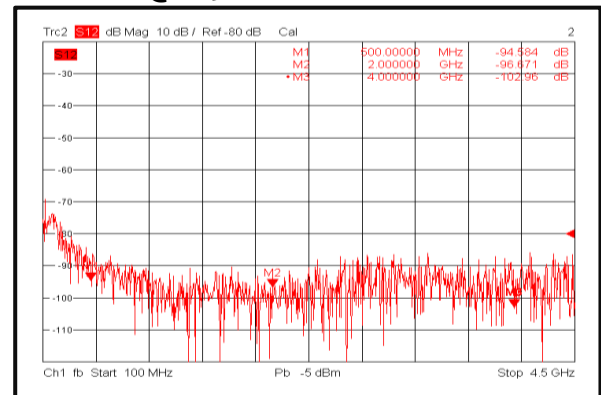
Input VSWR @+85°C



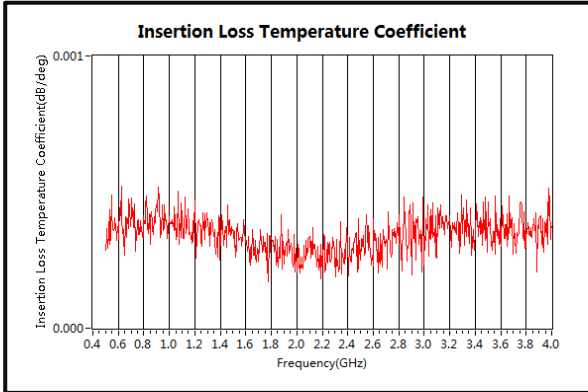
Output VSWR @+85°C



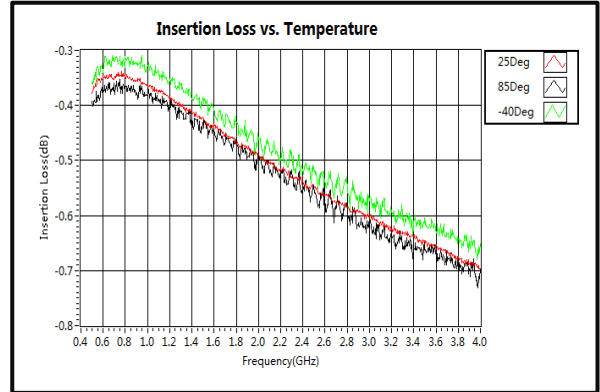
Isolation @+85°C



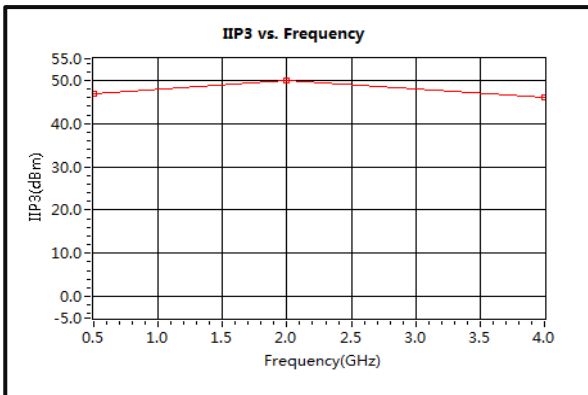
Insertion Loss Temperature Coefficient



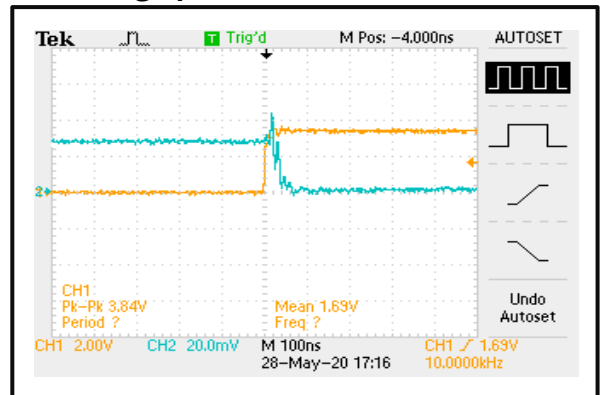
Insertion Loss vs. Temperature



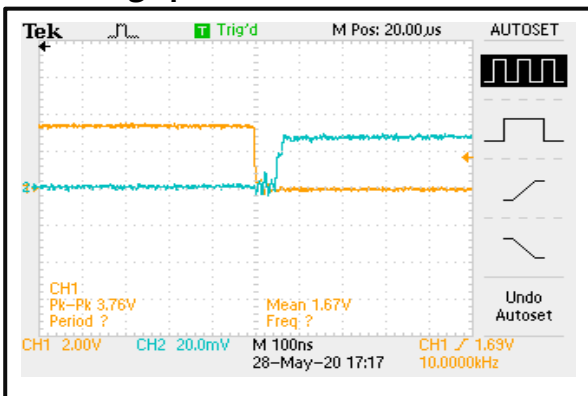
IIP3



Switching Speed



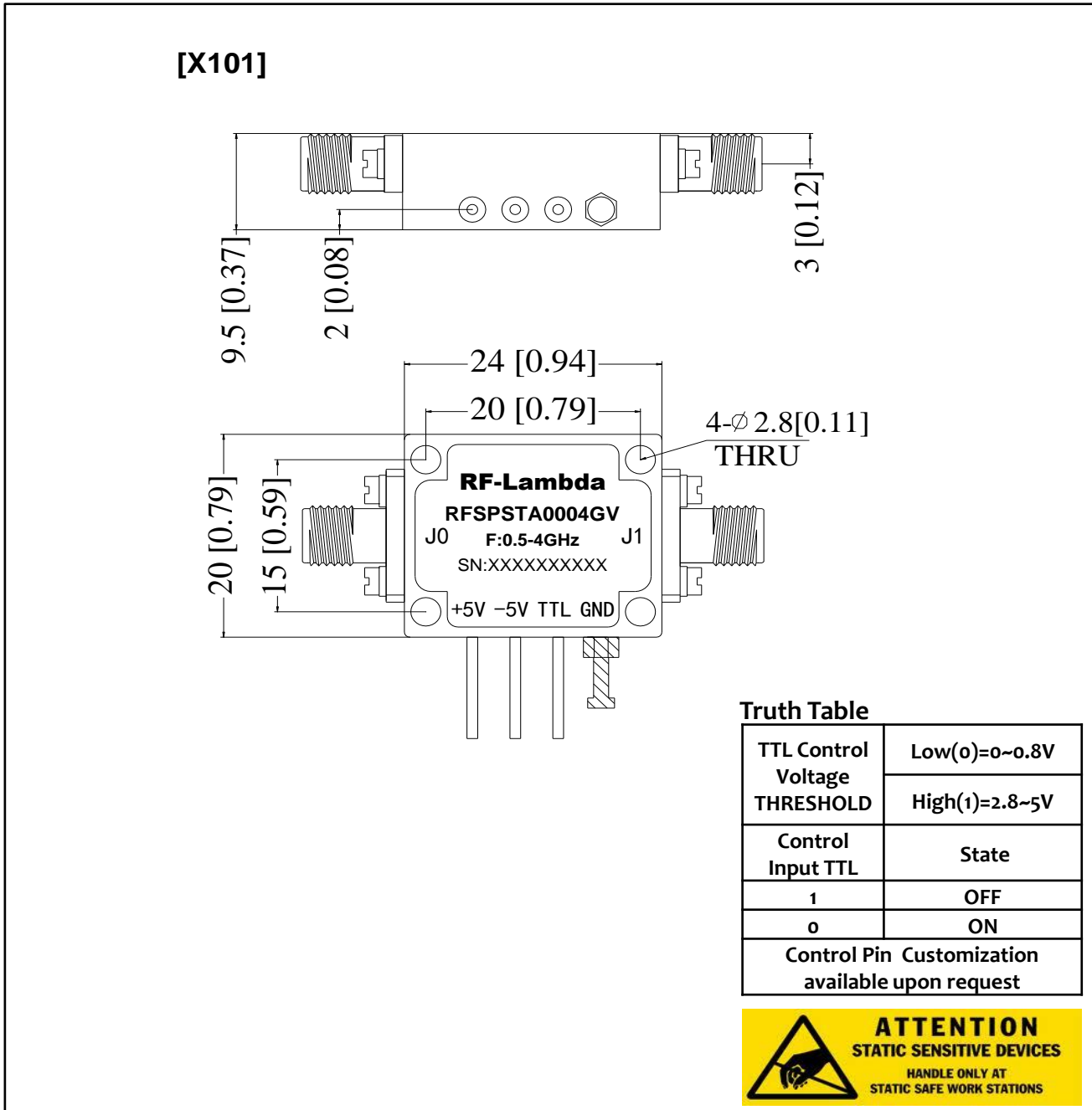
Switching Speed



Absorptive Coaxial Single Pole Single Throw Switch 0.5-4GHz

Outline Drawing:

All Dimensions in mm [inches]



Absorptive Coaxial Single Pole Single Throw Switch 0.5-4GHz

Important Notice

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