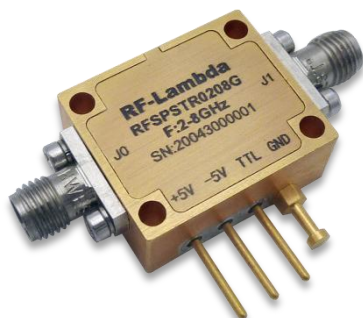


Reflective Coaxial SPST Switch 2 - 8GHz



Features

- Wide Band Operation 2-8GHz
- 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, $T_A = +25\text{ }^{\circ}\text{C}$, $V_{dd} = +5\text{V}$, $V_{ss} = -5\text{V}$, $TTL = 0 / +5\text{V}$

Description	PN: RFSPSTR0208G			
	SPST Reflective Switch			
	Low Power Cold Switching			
Parameters	Min.	Typ.	Max.	Units
Frequency Range	2-8			GHz
Insertion Loss		0.9	1.2	dB
Insertion Loss Temperature Coefficient		0.003		dB/ $^{\circ}\text{C}$
Isolation ($J_0 \rightarrow J_1$)	80	90		dB
Input VSWR		1.3	1.5	: 1
Output VSWR		1.3	1.5	: 1
RF Input Power (CW)			30	dBm
DC Power Dissipation		0.3		W
0.1dB Compression Point ($P_{0.1\text{dB}}$)		30		dBm
IIP3		46		dBm
Switching Speed	100 Max.			ns
Weight	0.5 Max.			ounces
Impedance	50			Ω
Bias Current (+5V/-5V)	80/50Max.			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

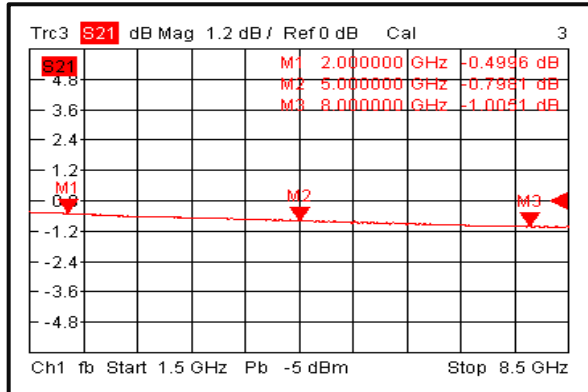
Part No.	Description
RFSPSTR0208G	SPST 2-8GHz PIN Diode Switch

Environmental Specifications and Test Standards

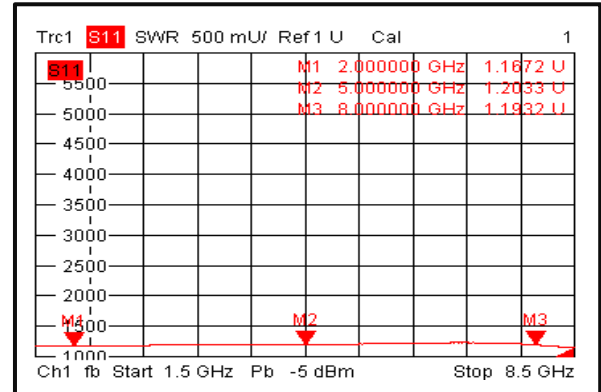
Parameter	Description
Operational Temperature	-40°C~+85°C (Case Temperature)
Storage Temperature	-50°C~+105°C
Thermal Shock	-40°C → +85°C (5 Cycles / 10 hours)
Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
High Temperature Burn In	Temperature +85°C for 72 Hours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

Typical Performance Plots

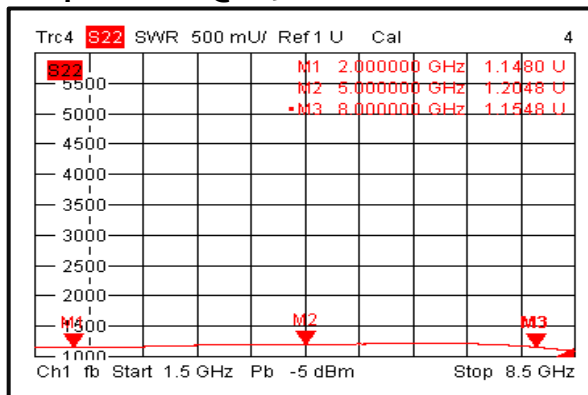
Insertion Loss @+25°C



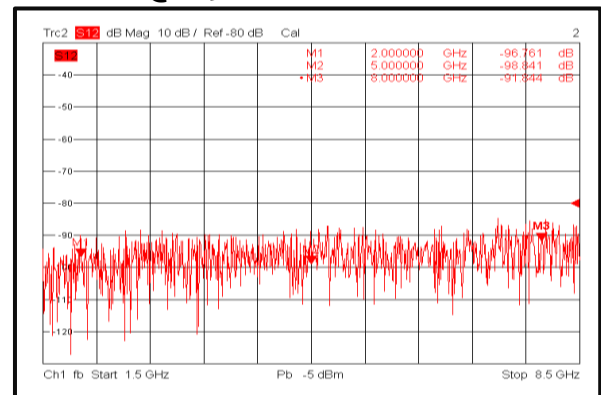
Input VSWR @+25°C



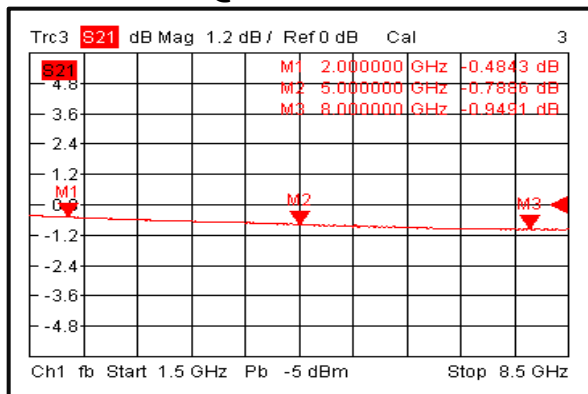
Output VSWR @+25°C



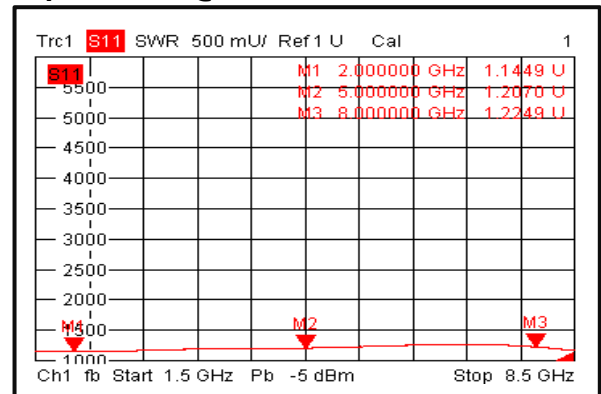
Isolation @+25°C



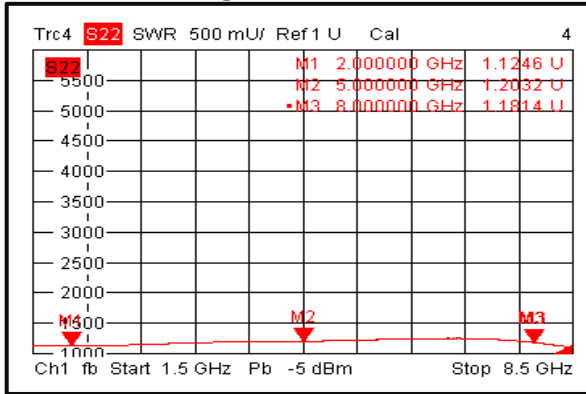
Insertion Loss @-40°C



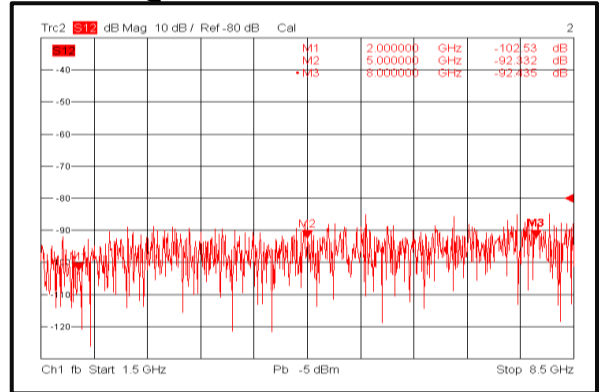
Input VSWR @-40°C



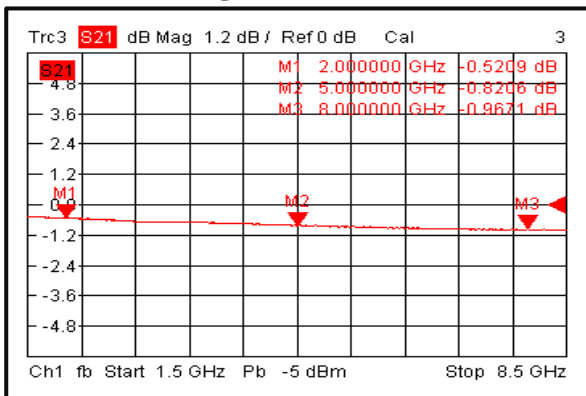
Output VSWR @-40°C



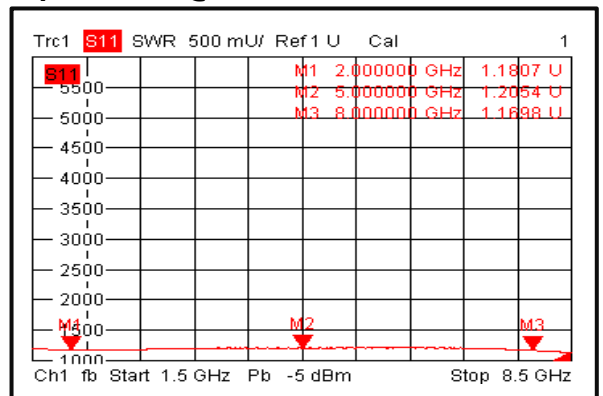
Isolation @-40°C



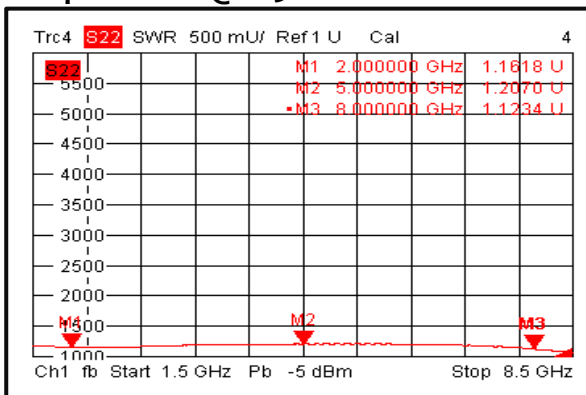
Insertion Loss @+85°C



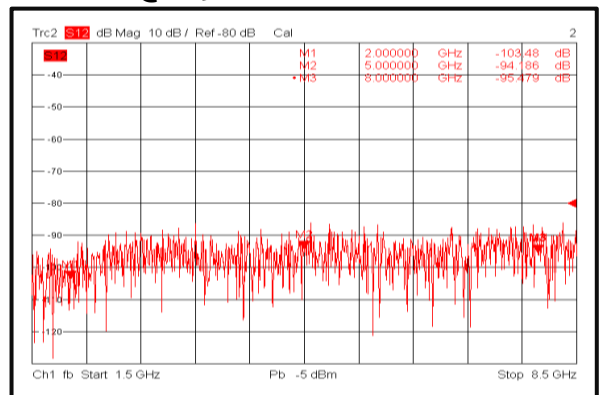
Input VSWR @+85°C



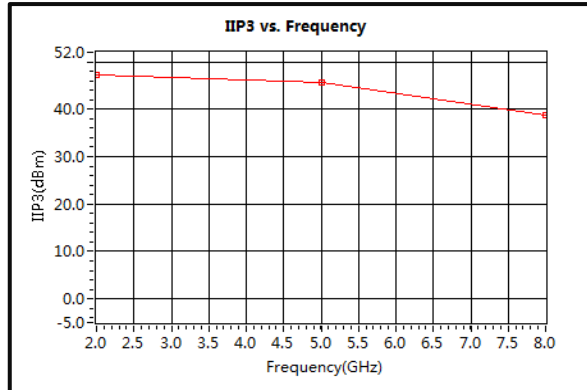
Output VSWR @+85°C



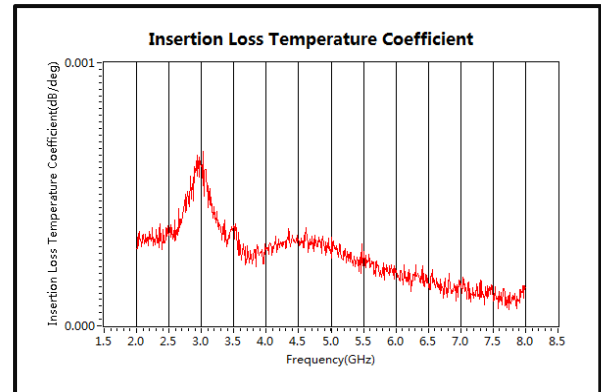
Isolation @+85°C



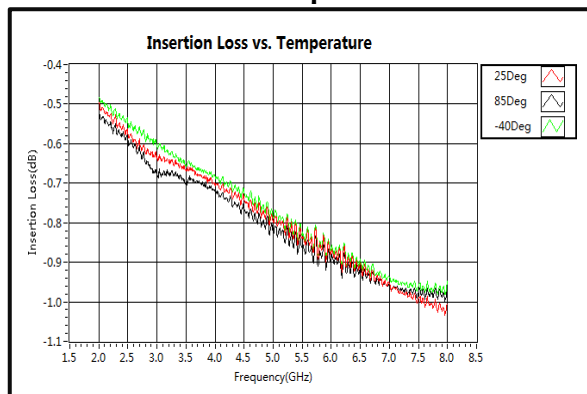
IIP3



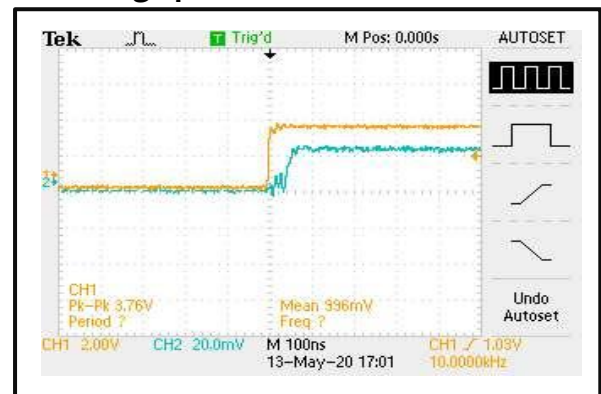
Insertion Loss Temperature Coefficient



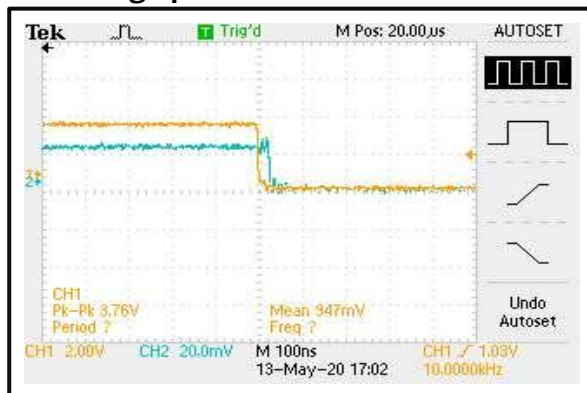
Insertion Loss vs. Temperature



Switching Speed



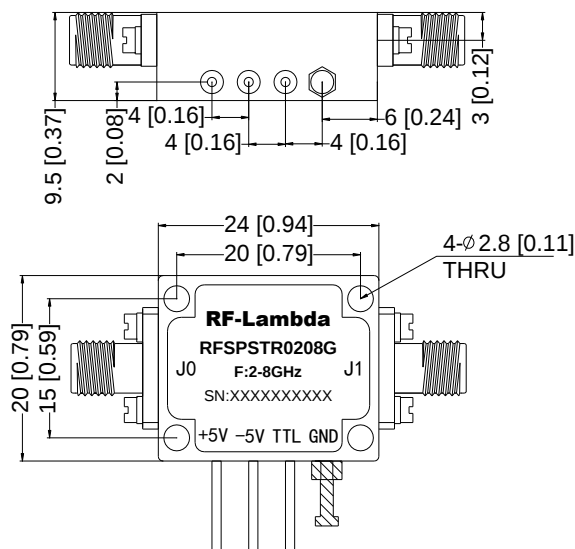
Switching Speed



Outline Drawing:

All Dimensions in mm [inches]

[X101]



Truth Table

TTL Control Voltage	Low(0)=0~0.8V
	High(1)=2.8~5V
Control Input TTL	Signal Path State
1	ON
0	OFF
Control Pin Customization available upon request	



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