

Reflective Coaxial SPST Switch 0.8 - 1.5GHz



Features

- Wide Band Operation 0.8-1.5GHz
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation

Typical Applications

- Wireless Infrastructure
- Test and Measurement
- Military and Aerospace

Electrical Specifications, TA = +25 °C, Vdd = +5V, TTL = 0 / +5V

Description	PN: RFSPSTR0815W50			
	SPST Reflective Switch J0 :Reflective J1 :Reflective			
	High Power Cold Switching			
Parameters	Min.	Typ.	Max.	Units
Frequency Range	0.8		1.5	GHz
Insertion Loss		1.0	1.5	dB
Insertion Loss Temperature Coefficient		0.003		dB/ ° C
Isolation (J0→J1)	60	75		dB
Input VSWR		1.3	1.5	: 1
Output VSWR		1.3	1.5	: 1
RF Input power (CW)			50	W
DC Power Dissipation		5		W
0.1dB Compression Point (Po.1dB)		47		dBm
IIP3		55		dBm
Switching Speed		1	1.5	us
Weight		1.76		ounces
Impedance		50		Ω
Bias Current (+5V)		100		mA
Input / Output Connectors	SMA-Female			
Finish	Gold Plated			
Material	Aluminum			
Sealing	Hermetically Sealed (Optional)			

Absolute Maximum Ratings

Biassing	+5V±10%
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Ordering Information

Part No.	Description
RFSPSTR0815W50	SPST 0.8-1.5GHz PIN Diode Switch

Notes:

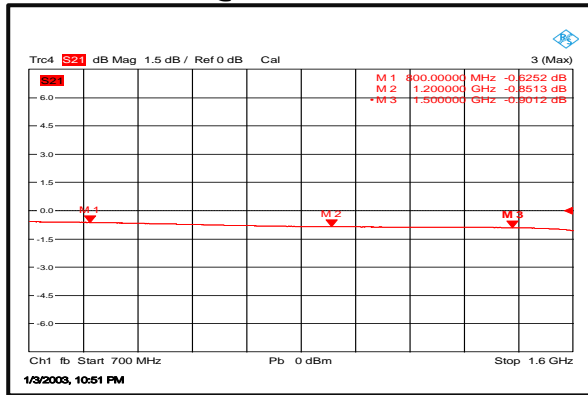
1. If the device operates in high power state, case temperature must be lower than 60°C.
2. Cold Switching: Before changing any TTL signal(s), the RF input power must be blanked or the switch could be damaged.

Environmental Specifications and Test Standards

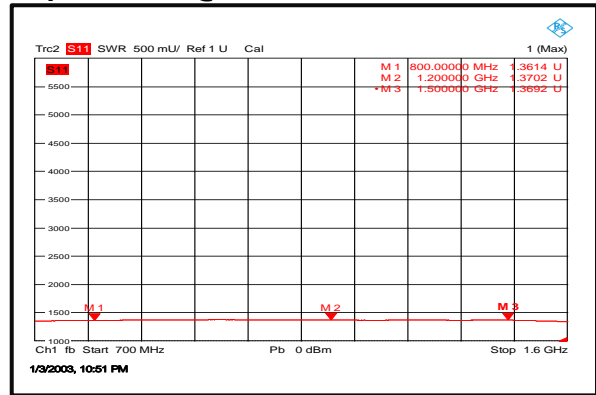
Parameter	Description
Operational Temperature	-40°C~+85°C (Case Temperature)
Storage Temperature	-50°C~+105°C
Thermal Shock	-40°C → +85°C (5 Cycles / 10 hours)
Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
High Temperature Burn In	Temperature +85°C for 72 Hours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

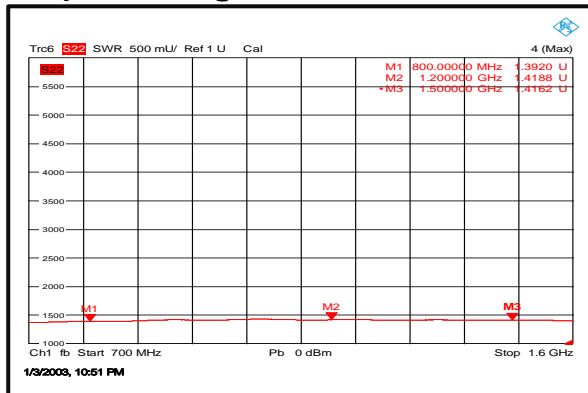
Insertion Loss @+25°C



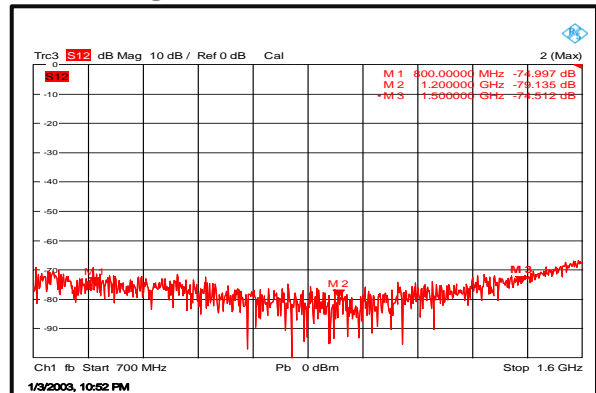
Input VSWR @+25°C



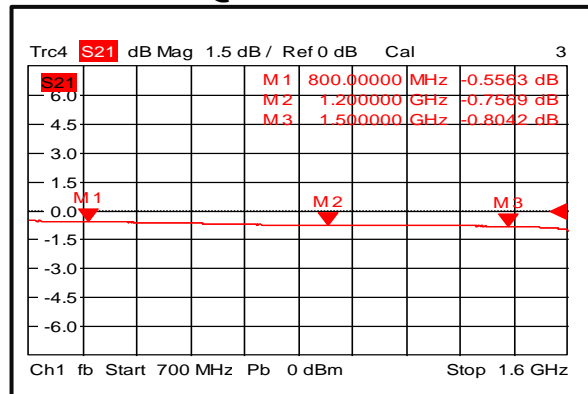
Output VSWR @+25°C



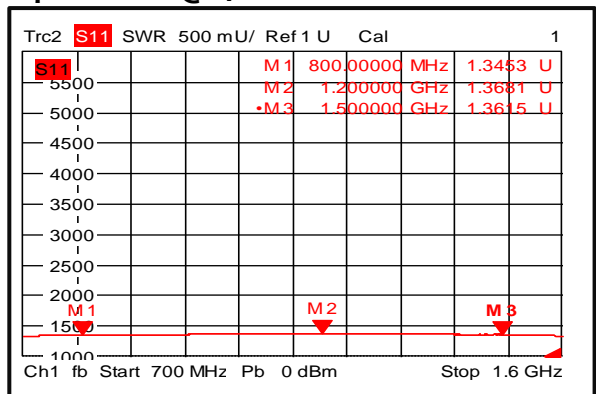
Isolation @+25°C



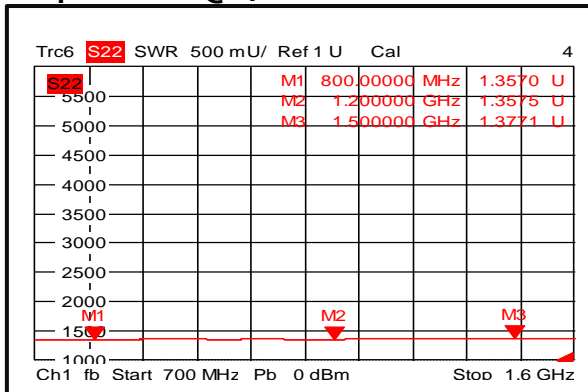
Insertion Loss @-40°C



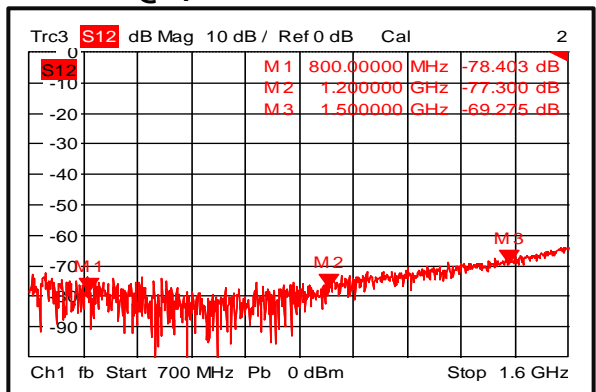
Input VSWR @-40°C



Output VSWR @-40°C

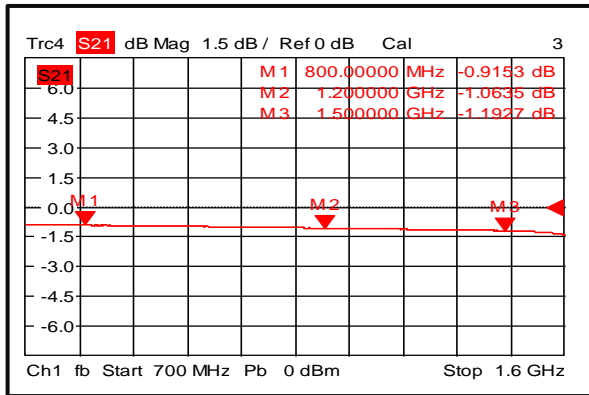


Isolation @-40°C

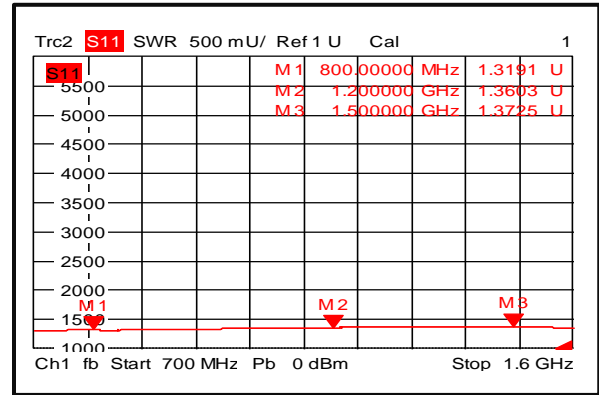


Reflective Coaxial Single Pole Single Throw Switch 0.8 - 1.5GHz

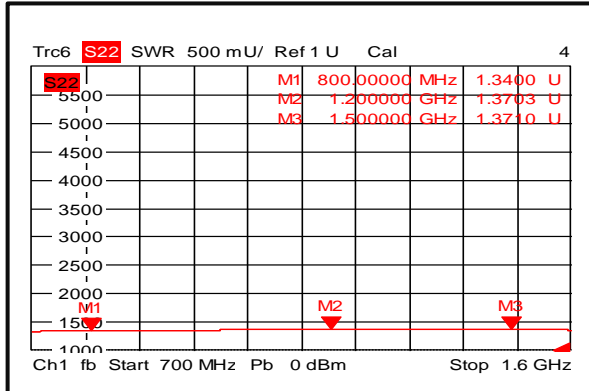
Insertion Loss @+85°C



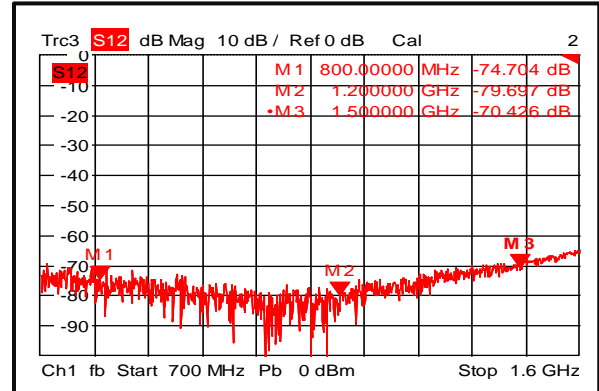
Input VSWR @+85°C



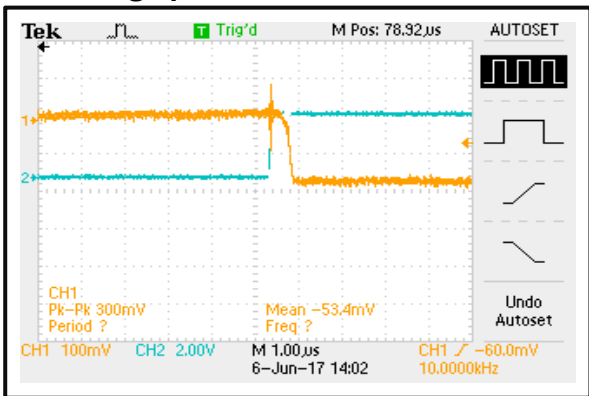
Output VSWR @+85°C



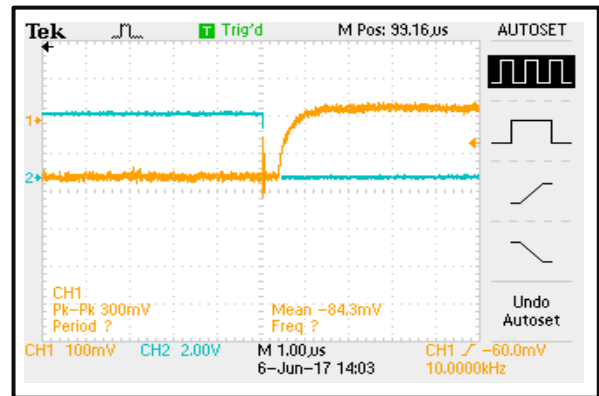
Isolation @+85°C



Switching Speed

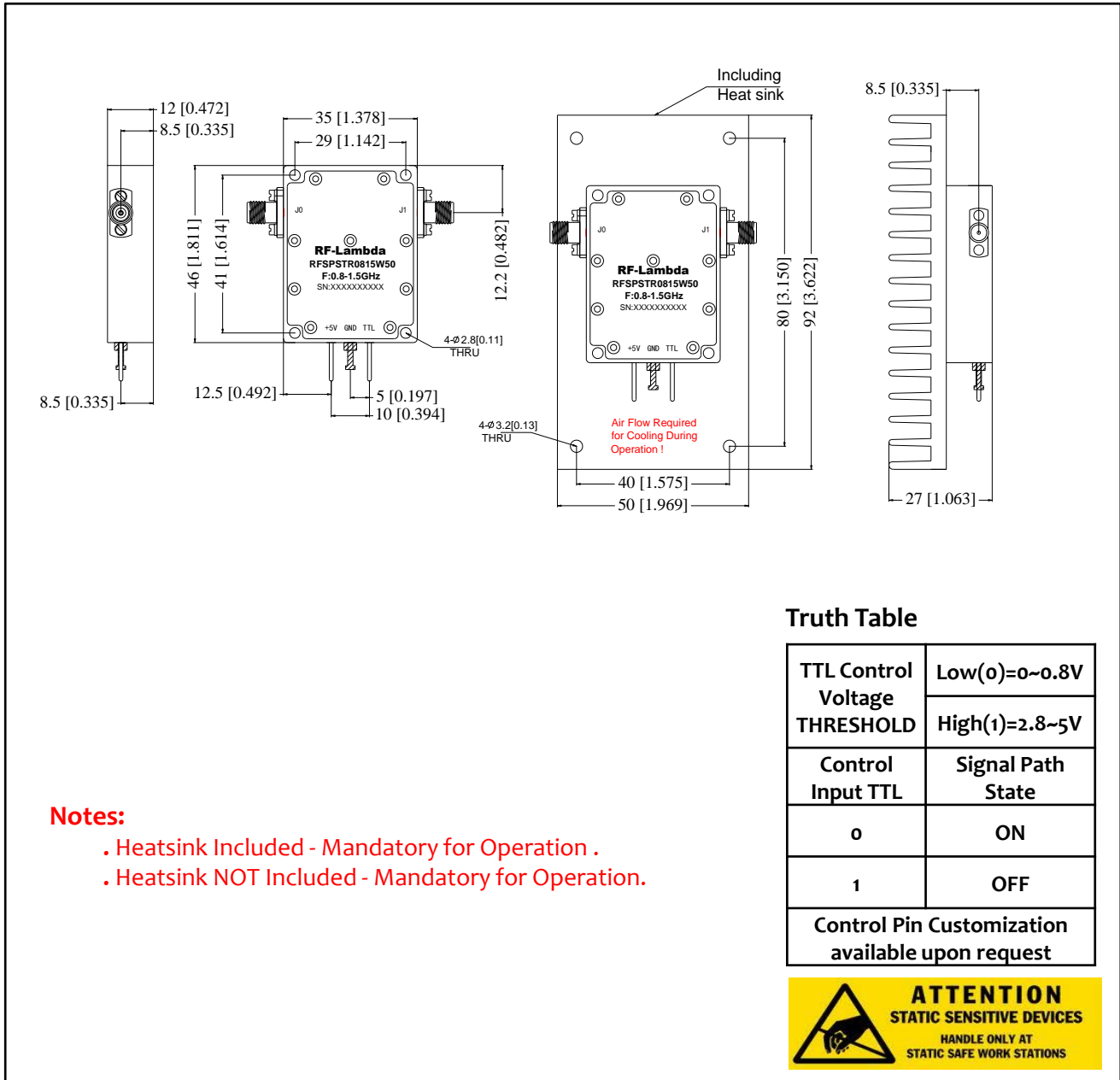


Switching Speed



Outline Drawing:

All Dimensions in mm [inches]
Housing Tolerances ± 0.1 [0.004]



Notes:

- . Heatsink Included - Mandatory for Operation .
- . Heatsink NOT Included - Mandatory for Operation.

Truth Table

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



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