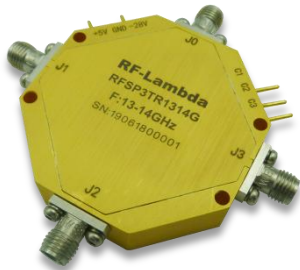


Reflective Coaxial SP3T Switch 13 – 14GHz



Features

- Wide Band Operation 13-14GHz
- 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/-28V, TTL = 0 / +5V

Description	PN: RFSP3TR1314G			
	SP3T Reflective Switch			
	High Power Cold Switching			
Parameters	Min.	Typ.	Max.	Units
Frequency Range	13 - 14			GHz
Insertion Loss		1.8	2.2	dB
Insertion Loss Temperature Coefficient		0.003		dB/°C
Isolation	45	50		dB
Input VSWR		1.35	1.5	: 1
Output VSWR		1.35	1.5	: 1
RF Input Power (CW)			40	dBm
DC Power Dissipation		1.5		W
0.1dB Compression Point(Po.1dB)		40		dBm
IIP3		55		dBm
Switching Speed		250	500	ns
Weight	1.76			ounces
Impedance	50			Ω
Bias Current (+5V/-28V)	250/100			mA
Input / Output Connectors	SMA - Female			
Finish	Gold Plated			
Material	Aluminum			
Sealing	Hermetically Sealed (Optional)			

Absolute Maximum Ratings

Biassing	+5V±10%/-28V±10%
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Ordering Information

Part No.	Description
RFSP3TR1314G	SP3T 13-14 GHz PIN Diode Switch

Notes:

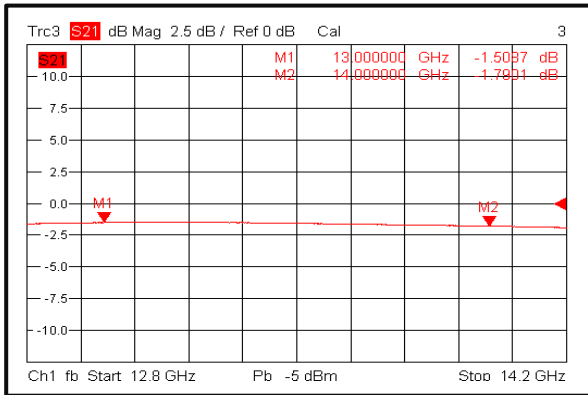
- TTL pins cannot be connected to the negative voltage otherwise the internal driver will be damaged.
- Cold Switching: Before changing any TTL signal(s), the RF input power must be blanked or the switch could be damaged.

Environmental Specifications and Test Standards

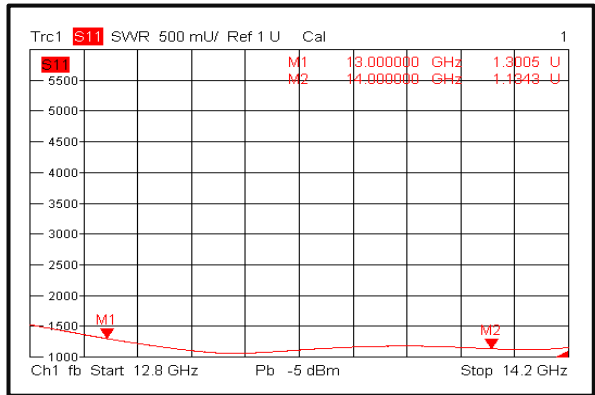
Parameter	Description
Operational Temperature	-40°C~+85°C (Case Temperature)
Storage Temperature	-50°C~+105°C
Thermal Shock	-40°C → +85°C (5 Cycles / 10 hours)
Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
High Temperature Burn In	Temperature +85°C for 72 Hours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

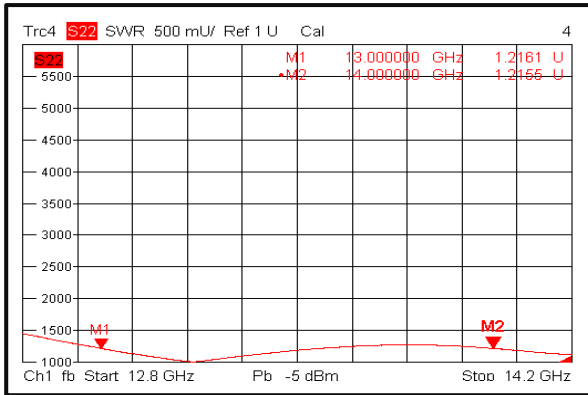
Insertion Loss @+25°C



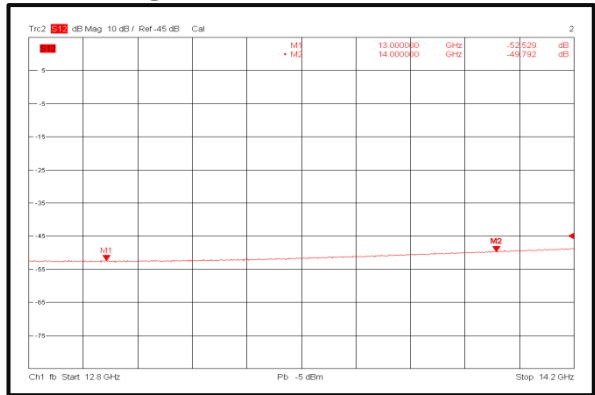
Input VSWR @+25°C



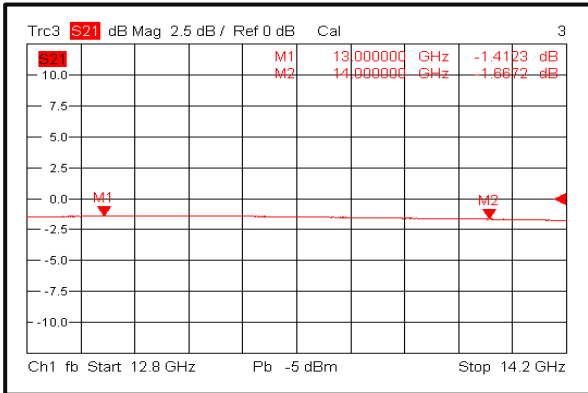
Output VSWR @+25°C



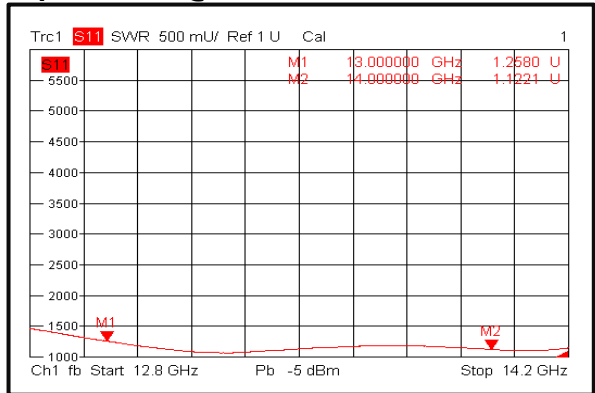
Isolation @+25°C



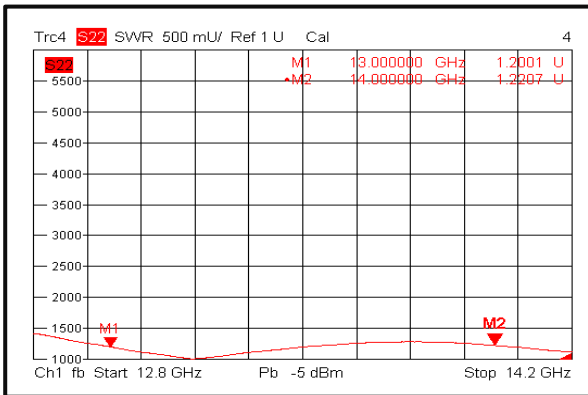
Insertion Loss @-40°C



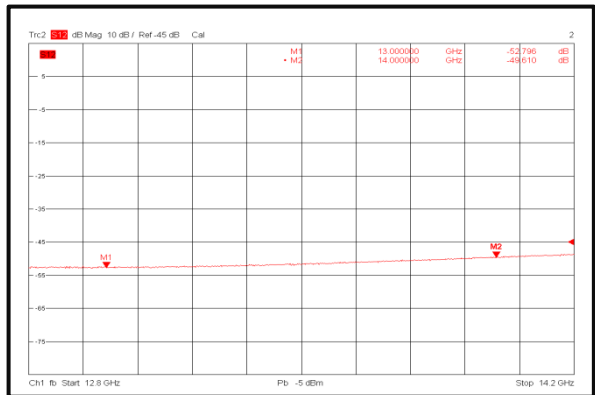
Input VSWR @-40°C



Output VSWR @-40°C

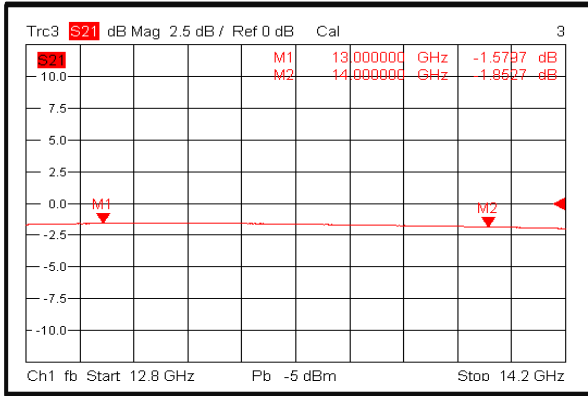


Isolation @-40°C

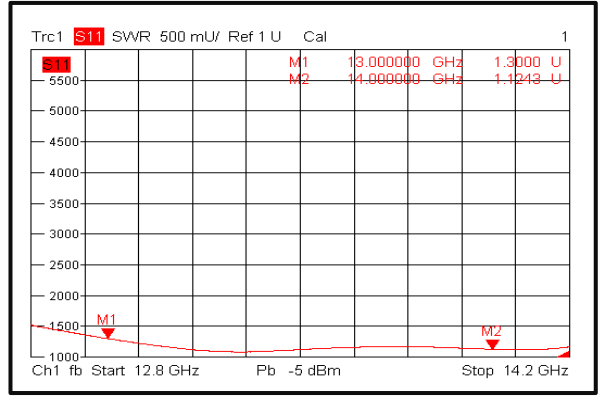


Reflective Coaxial Single Pole Three Throw Switch 13 – 14GHz

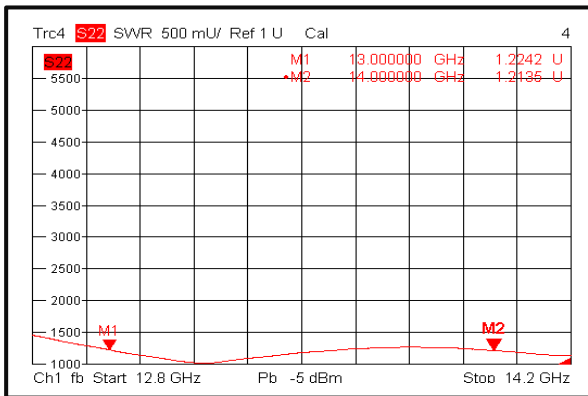
Insertion Loss @+85°C



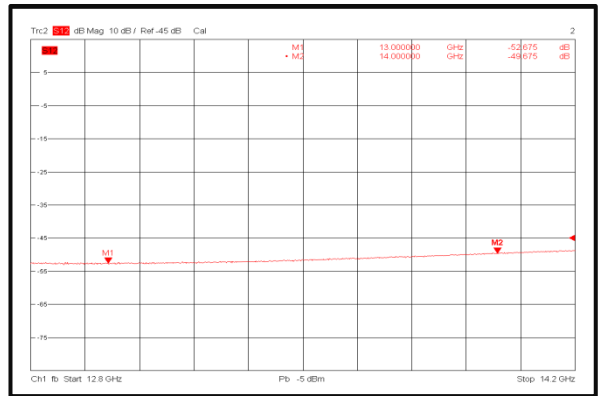
Input VSWR @+85°C



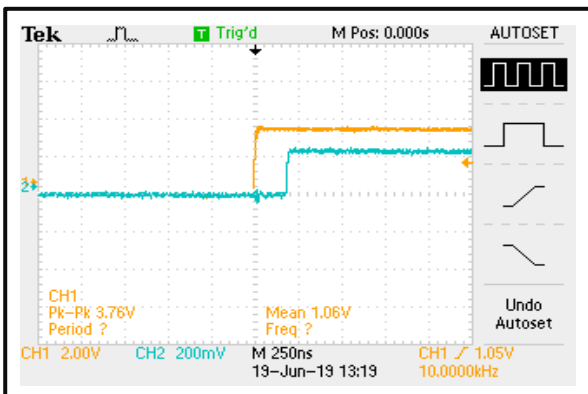
Output VSWR @+85°C



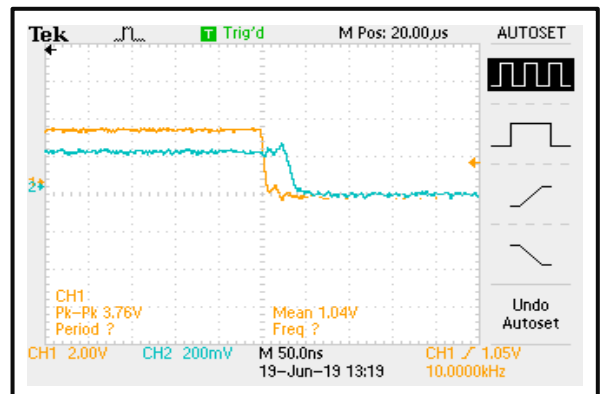
Isolation @+85°C



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
C3	C2	C1	
0	0	0	OFF
0	0	1	J0-J1
0	1	0	J0-J2
1	0	0	J0-J3
1	1	1	Not Used

Control Pin Customization available upon request

ATTENTION
STATIC SENSITIVE DEVICES
HANDLE ONLY AT
STATIC SAFE WORK STATIONS

Reflective Coaxial Single Pole Three Throw Switch 13 – 14GHz

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