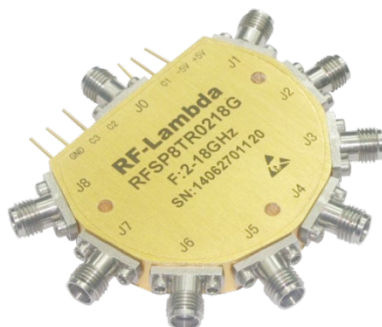


Reflective Coaxial SP8T Switch 2-18GHz



Features

- Wide Band Operation 2-18GHz
- 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, TA = +25°C

Description	PN: RFSP8TR0218G									
	SP2T Reflective Switch									
	High Power Cold Switching									
Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	2-8			8-12			12-18			GHz
Insertion Loss		2	2.5		2.5	3.0		3	3.5	dB
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/°C
Isolation	80	85		70	75		70	75		dB
Input VSWR		1.6	2.0		1.6	2.0		1.6	2.0	: 1
Output VSWR		1.6	2.0		1.6	2.0		1.6	2.0	: 1
RF Input Power			30			30			30	dBm
Power Dissipation		1.5			1.5			1.5		W
0.1dB Compression Point (Po.1dB)		30			30			30		dBm
IIP3		45			43			40		dBm
Switching Speed	100 Max.									ns
Weight	1.9 Max.									ounces
Impedance	50									Ω
Bias Current (+5V/-5V)	350 / 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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Ordering Information

Part No.	Description
RFSP8TR0218G	SP8T 2-18GHz PIN Diode RF Switch

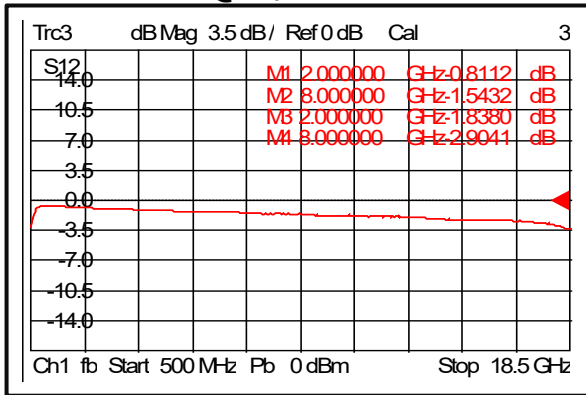
Note: TTL pins cannot be connected to the negative voltage otherwise the internal driver will be damaged.

Environmental Specifications and Test Standards

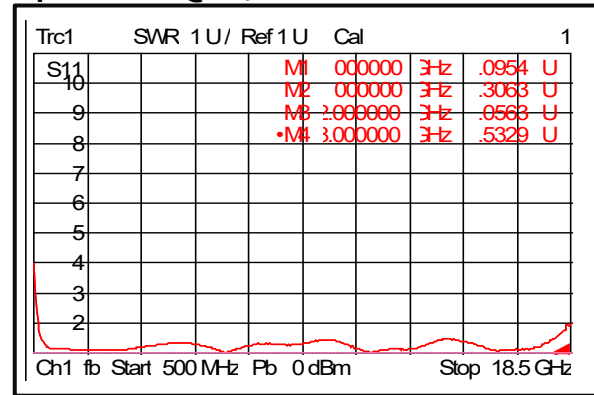
Parameter	Description
Operational Temperature	-40°C~+85°C (Case Temperature)
Storage Temperature	-50°C~+105°C
Thermal Shock	-40°C → +85°C (5 Cycles / 10 hours)
Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
High Temperature Burn In	Temperature +85°C for 72 Hours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

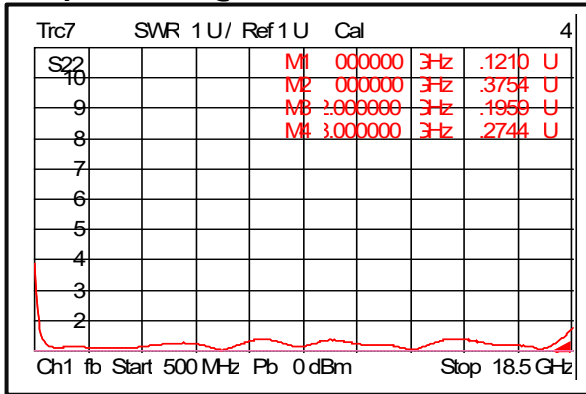
Insertion Loss @+25°C



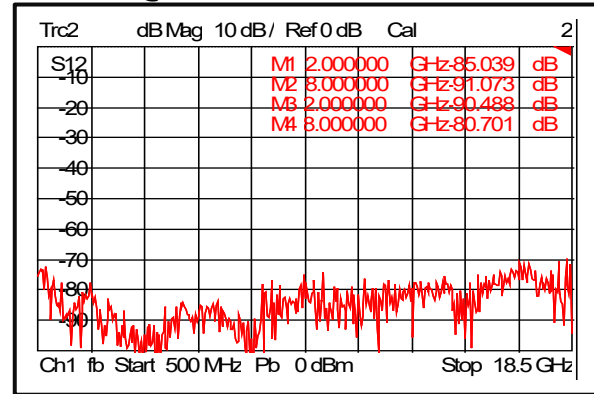
Input VSWR @+25°C



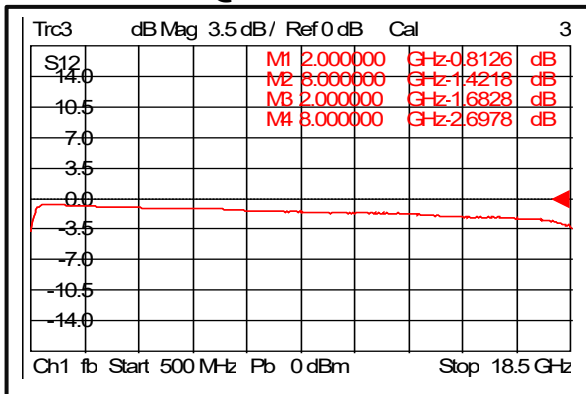
Output VSWR @+25°C



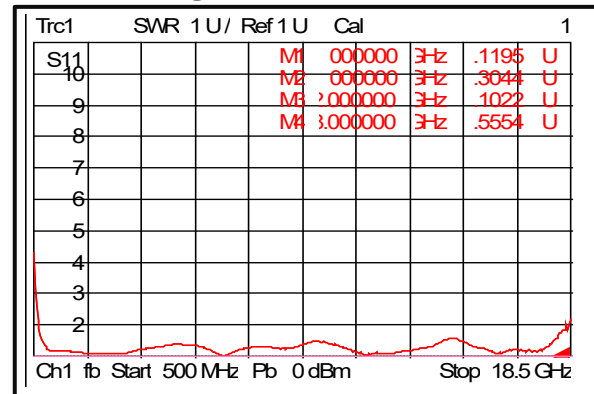
Isolation @+25°C



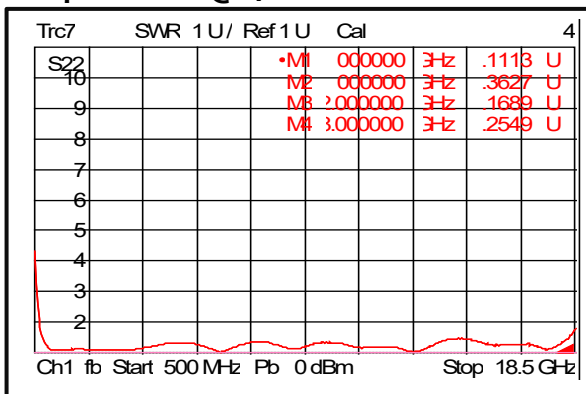
Insertion Loss @-40°C



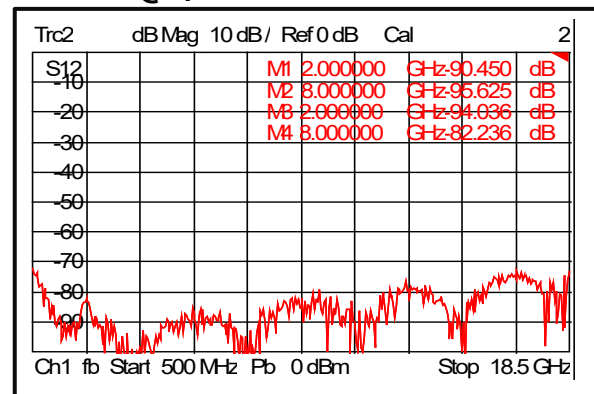
Input VSWR @-40°C



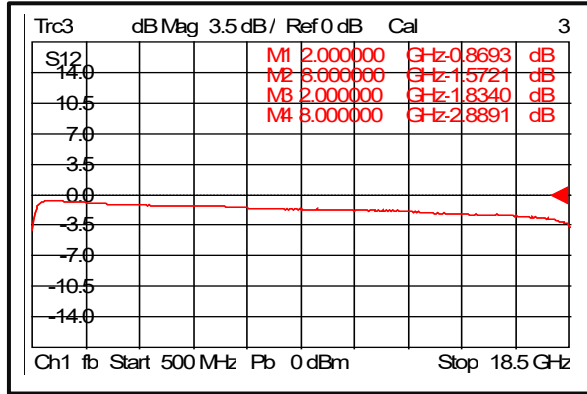
Output VSWR @-40°C



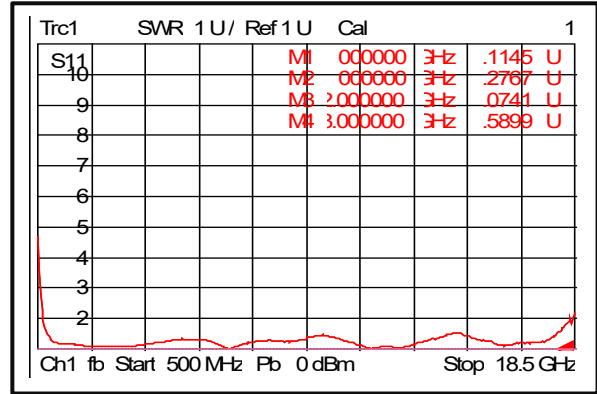
Isolation @-40°C



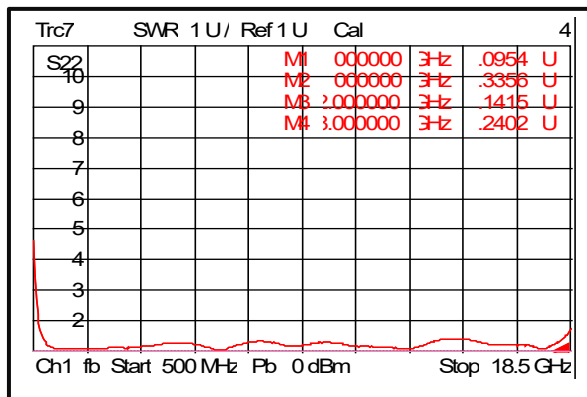
Insertion Loss @+85°C



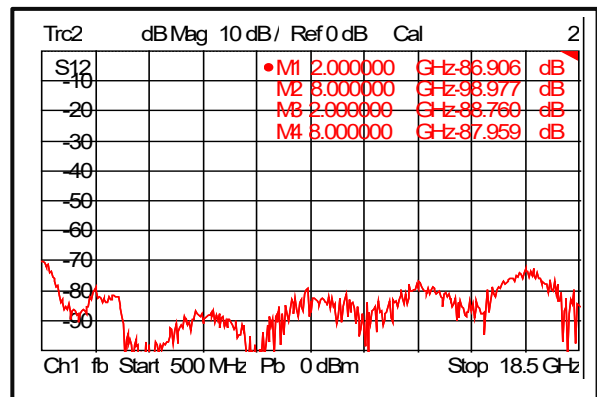
Input VSWR @+85°C



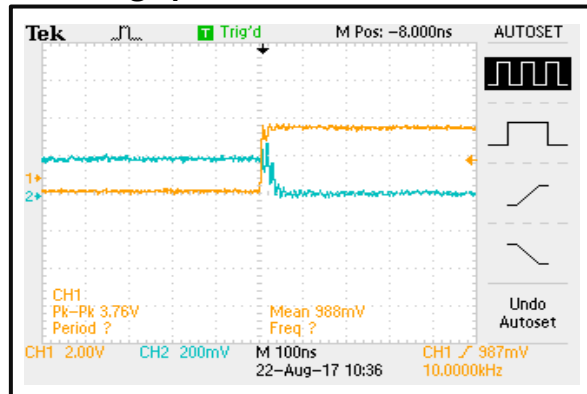
Output VSWR @+85°C



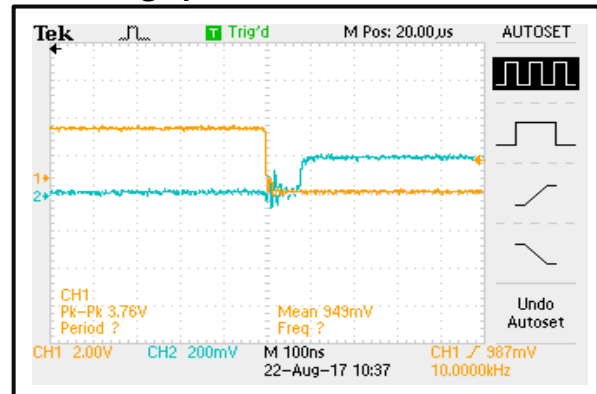
Isolation @+85°C



Switching Speed



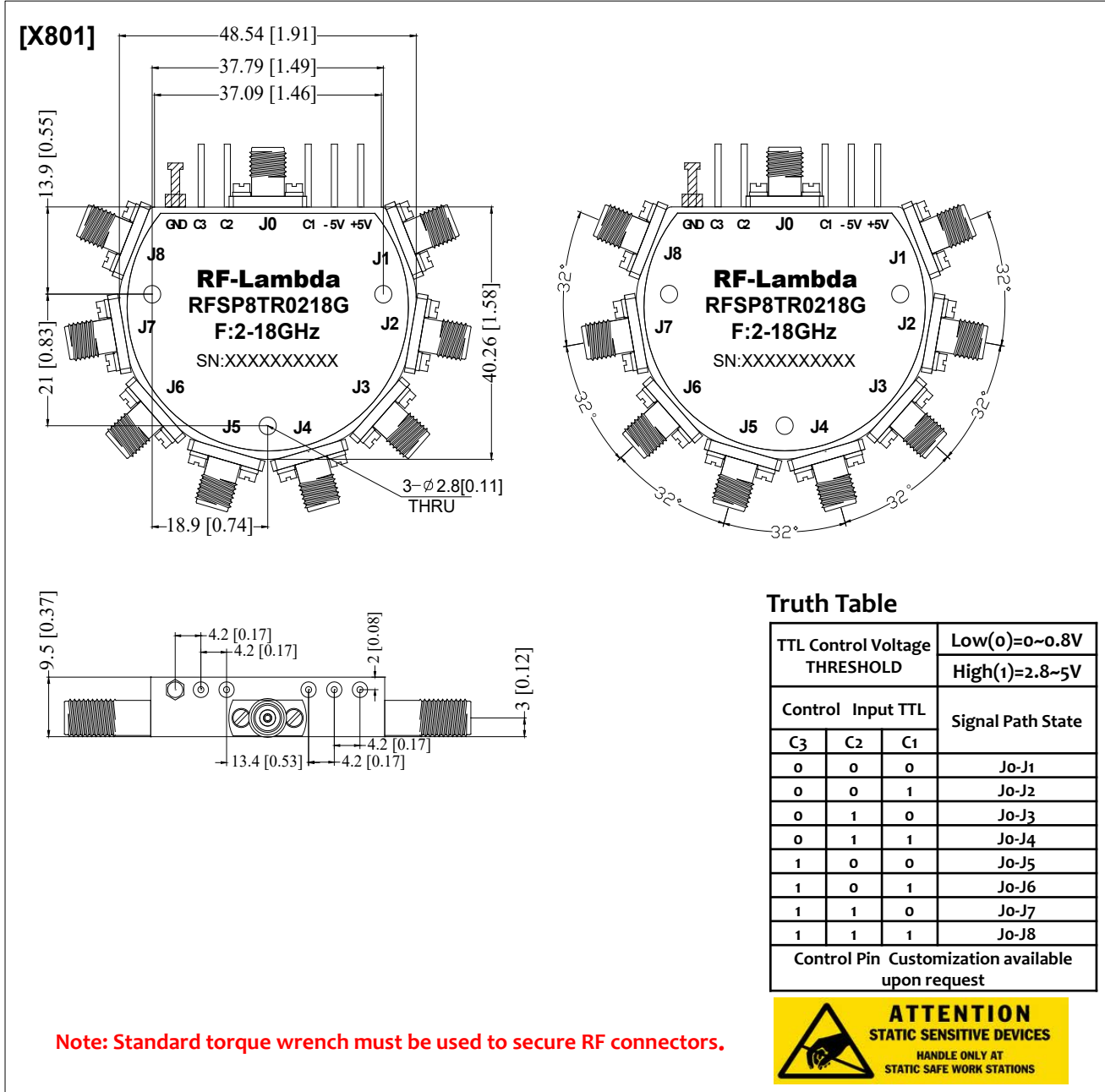
Switching Speed



Reflective Coaxial Single Pole Eight Throw Switch 2-18GHz

Outline Drawing:

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



Reflective Coaxial Single Pole Eight Throw Switch 2-18GHz

Important Notice

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