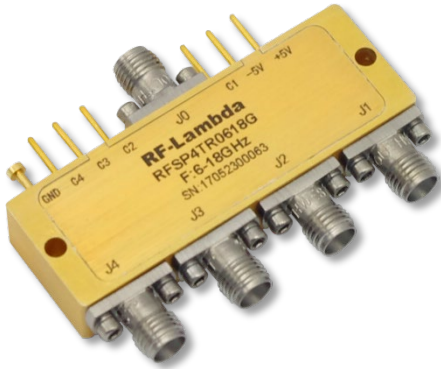


Reflective Coaxial SP4T Switch 6 - 18GHz



Features

- Wide Band Operation 6-18GHz
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- Customization available upon request

Typical Applications

- Wireless Infrastructure
- Military and Aerospace
- Test and Measurement

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

Description	PN: RFSP4TR0618G						
	SP4T Reflective Switch						
	Low Power Cold Switching						
Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	6		12	12		18	GHz
Insertion Loss		2.0	2.5		2.5	2.8	dB
Insertion Loss Temperature Coefficient		0.003			0.003		dB/ $^\circ\text{C}$
Isolation	70	80		70	75		dB
Input VSWR		1.8	2.0		1.8	2.0	:1
Output VSWR		1.8	2.0		1.8	2.0	:1
RF Input Power			30			30	dBm
DC Power Dissipation		0.8			0.8		W
0.1dB Compression Point ($P_{0.1\text{dB}}$)		30			30		dBm
IIP ₃		38			38		dBm
Switching Speed	100 Max.						ns
Weight	1.5 Max.						Ounces
Impedance	50						Ω
Bias Current (+5V / -5V)	160/50 Max.						mA
Input / Output Connectors	SMA-Female						
Finish	Gold Plated						
Material	Aluminum						
Sealing	Hermetically Sealed (Optional)						

Absolute Maximum Ratings

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

Ordering Information

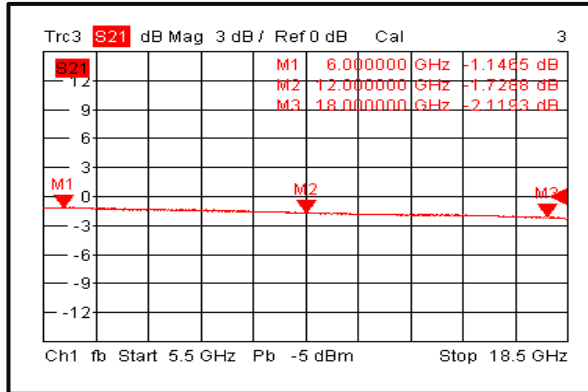
Part No.	Description
RFSP4TR0618G	SP4T 6-18GHz PIN Diode Switch

Environmental Specifications and Test Standards

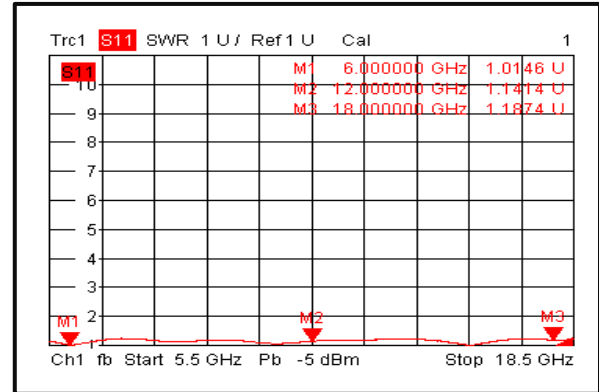
Parameter	Description
Operational Temperature	-40°C~+85°C (Case Temperature)
Storage Temperature	-50°C~+105°C
Thermal Shock	-40°C $\rightarrow$ +85°C (5 Cycles / 10 hours)
Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
High Temperature Burn In	Temperature +85°C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

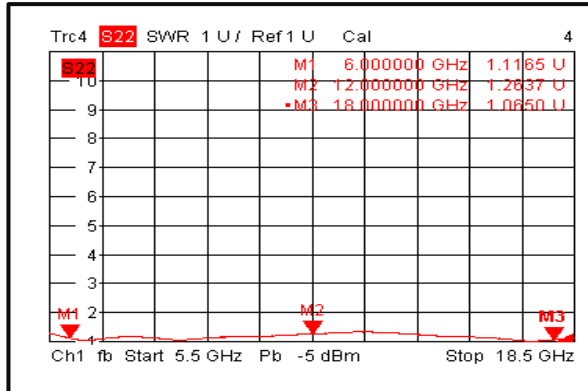
Insertion Loss @+25°C



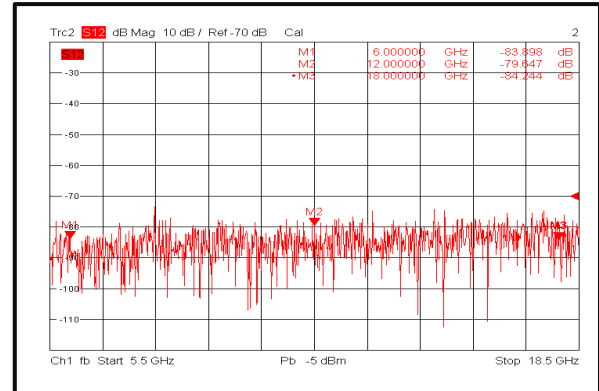
Input VSWR @+25°C



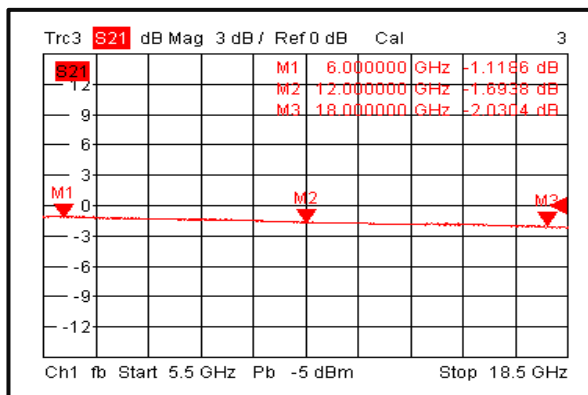
Output VSWR @+25°C



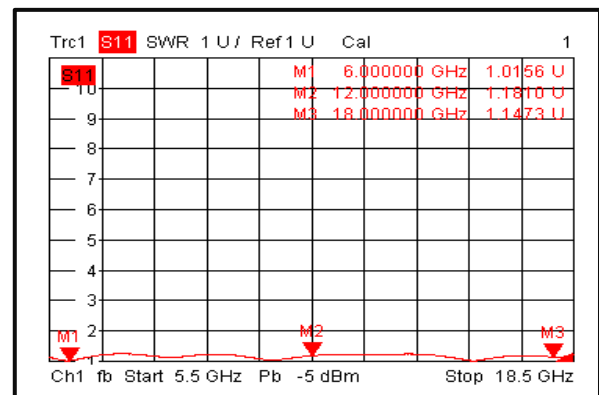
Isolation @+25°C



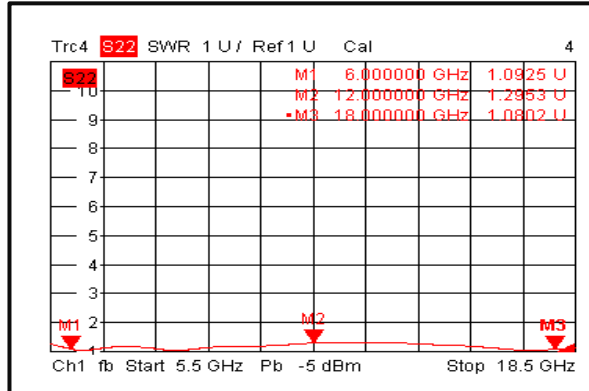
Insertion Loss @-40°C



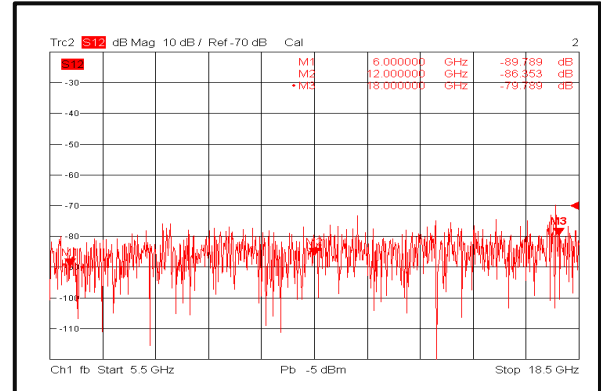
Input VSWR @-40°C



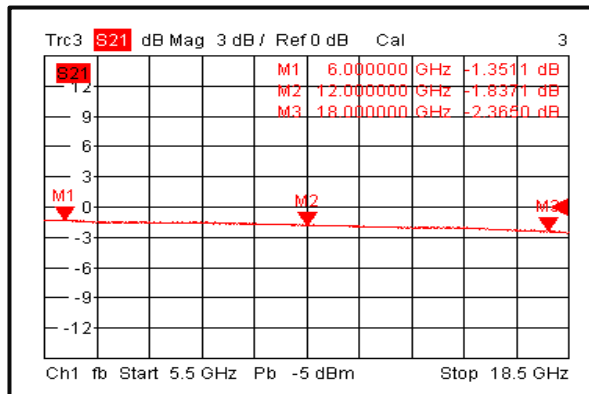
Output VSWR @-40°C



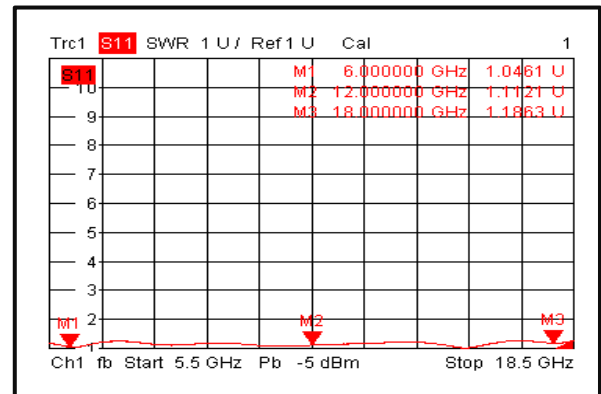
Isolation @-40°C



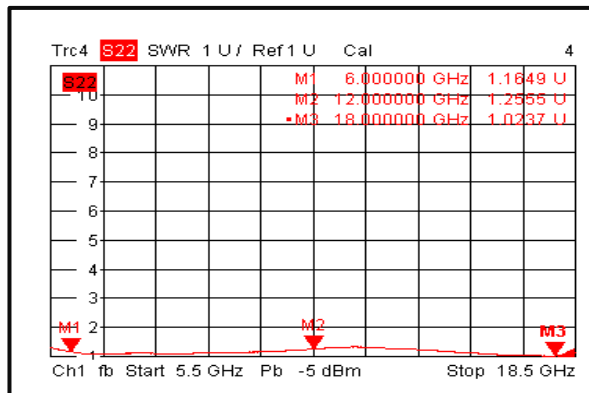
Insertion Loss @+85°C



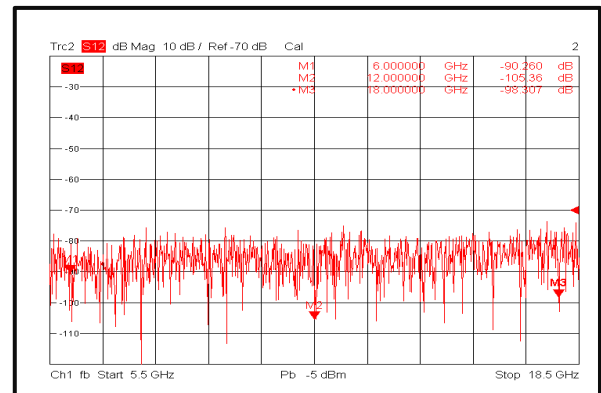
Input VSWR @+85°C



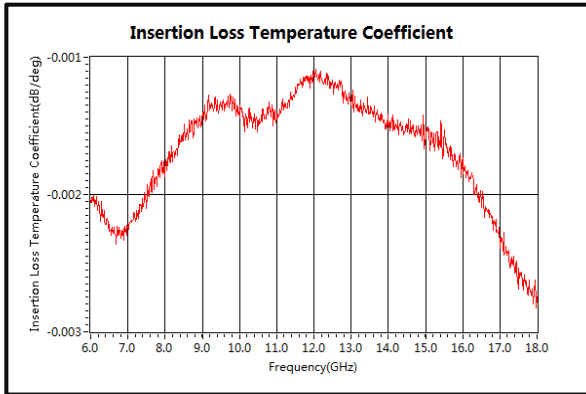
Output VSWR @+85°C



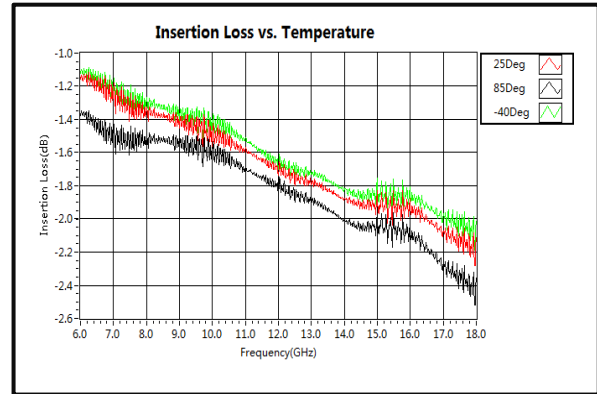
Isolation @+85°C



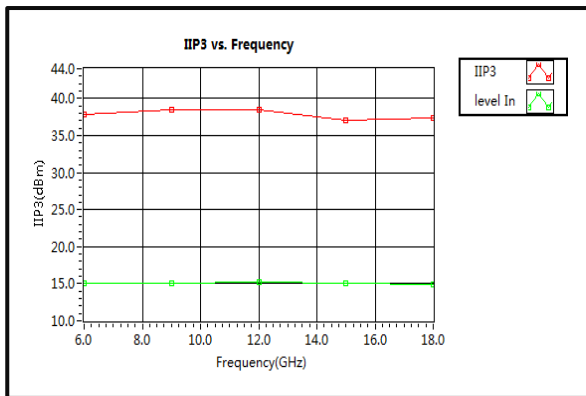
Insertion Loss Temperature Coefficient



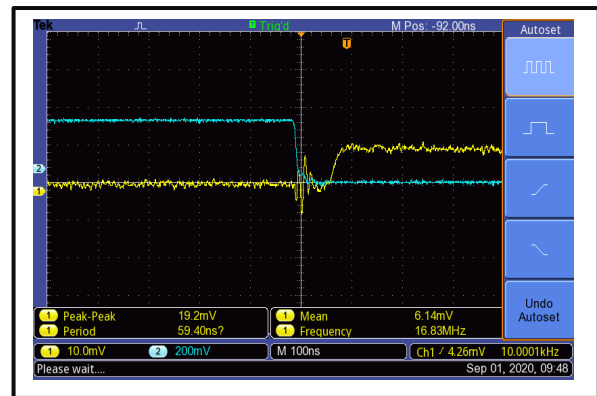
Insertion Loss vs. Temperature



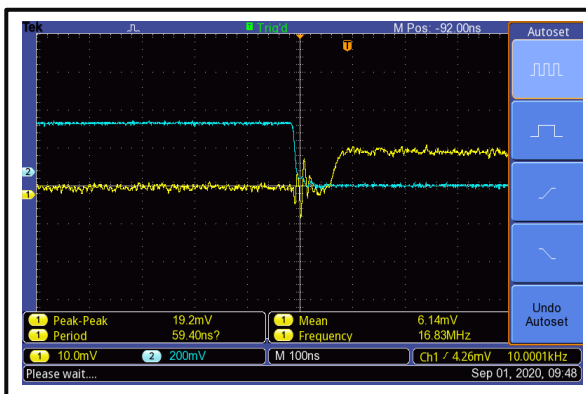
IIP3



Switching Speed



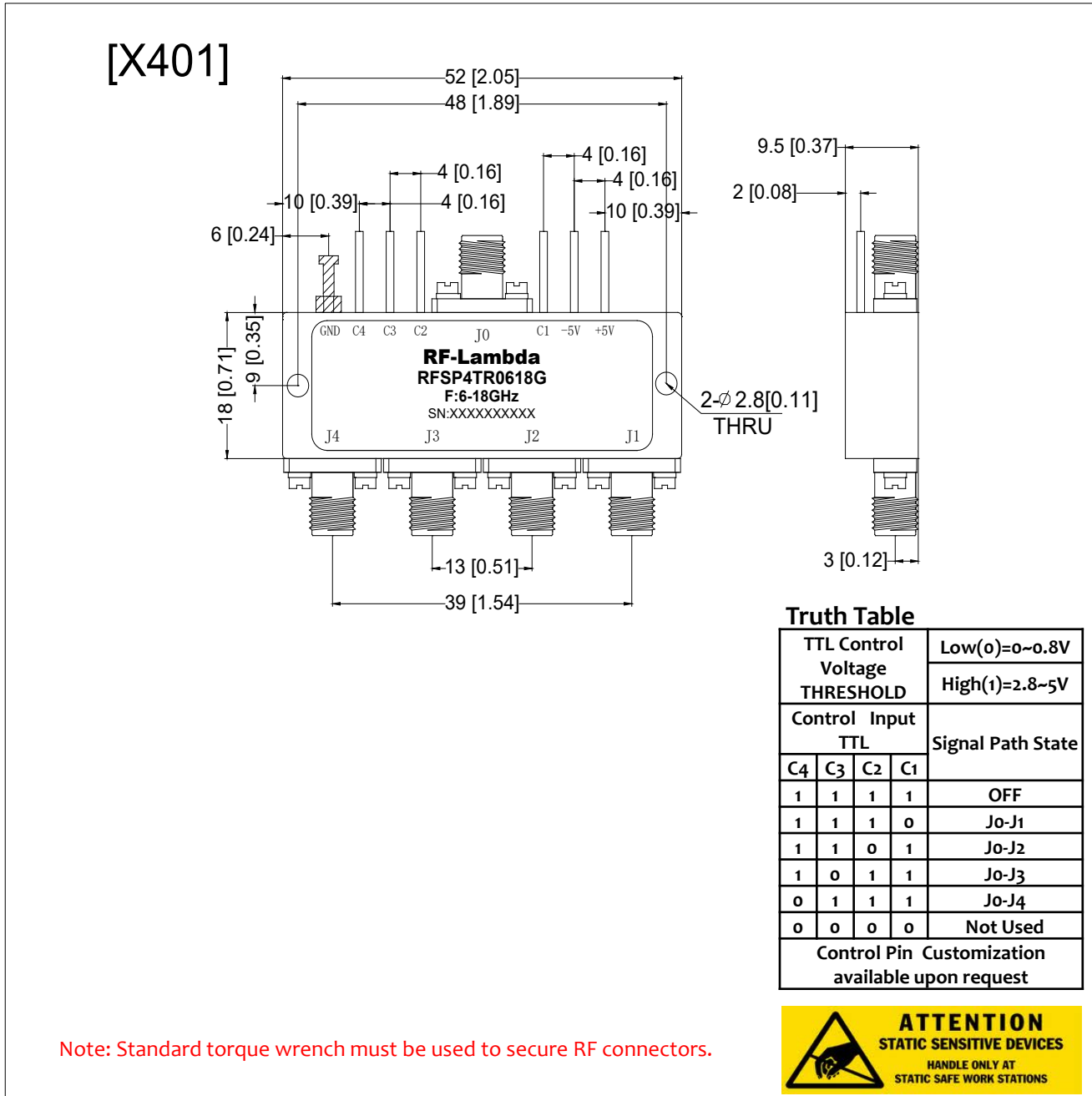
Switching Speed



Outline Drawing:

All Dimensions in mm [inches]

Housing Tolerances ± 0.1 [0.004]



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