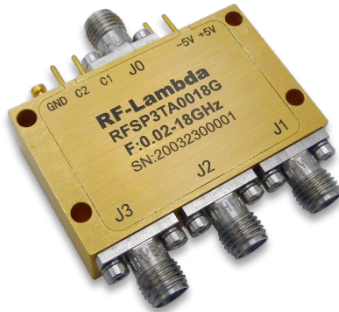


Absorptive Coaxial SP3T Switch 0.02 - 18GHz



Features

- Ultra Wide Band Operation 0.02-18GHz
- 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, Vdd = +5V/-5V, TTL = 0/+5V

Description	PN: RFSP3TA0018G										
	SP3T Absorptive Switch										
	Low Power Cold Switching										
Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units	
Frequency Range	0.02~6			6~12			12~18			GHz	
Insertion Loss		1.8	2.2		4.2	4.5		4.4	4.8	dB	
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/°C	
Isolation	60	80		60	75		60	65		dB	
Input VSWR		1.8	2.0		1.5	1.8		1.5	1.8	: 1	
Output VSWR		1.6	1.8		1.5	1.8		1.5	1.8	: 1	
RF Input Power			30			30			30	dBm	
Power Dissipation		0.6			0.6			0.6		W	
0.1dB Compression Point (Po.1dB)		30			30			30		dBm	
IIP3		48			45			43		dBm	
Switching Speed	250 Max.									ns	
Weight	1.2 Max.									ounces	
Impedance	50									Ω	
Bias Current (+5V/-5V)	120/50 Max.									mA	
Input / Output Connectors	SMA-Female										
Finish	Gold Plated										
Material	Aluminum										
Sealing	Hermetically Sealed (Optional)										

Absolute Maximum Ratings

Biassing	+5V±10%/-5V±10% @25°C
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Note: TTL pins cannot be connected to the negative voltage otherwise the internal driver will be damaged.

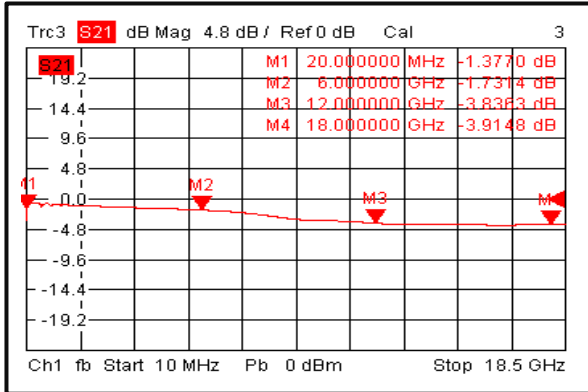
Ordering Information

Part No.	Description
RFSP3TA0018G	SP3T 0.02-18GHz PIN Diode Switch

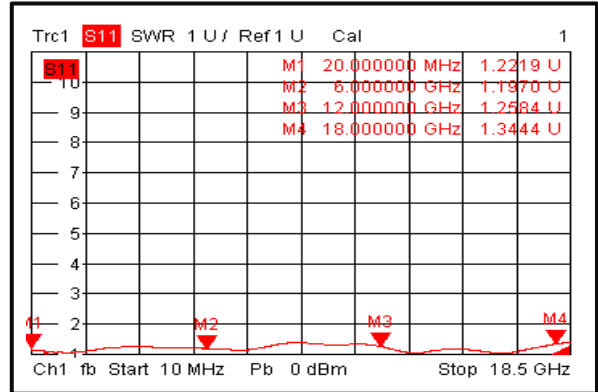
Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-40°C~+85°C (Case Temperature)
Storage Temperature	-50°C~+105°C
Thermal Shock	-40°C → +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)

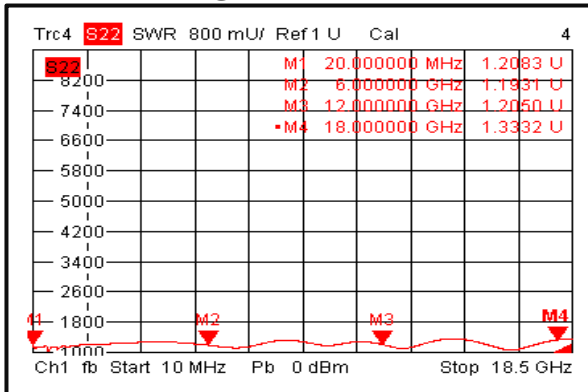
Typical Performance Plots
Insertion Loss @+25°C



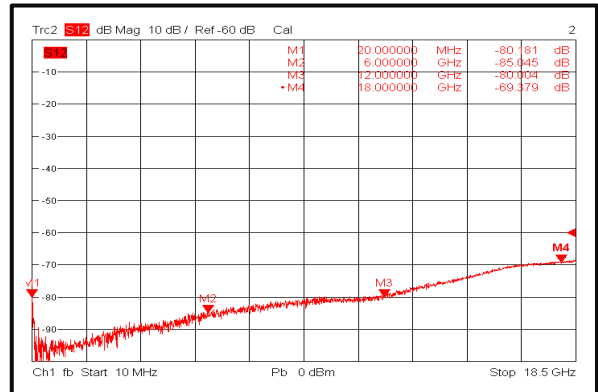
Input VSWR @+25°C



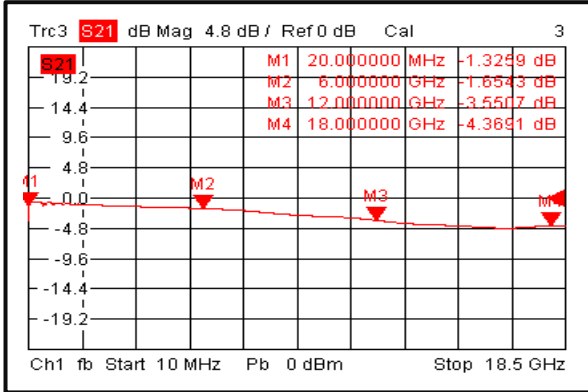
Output VSWR @+25°C



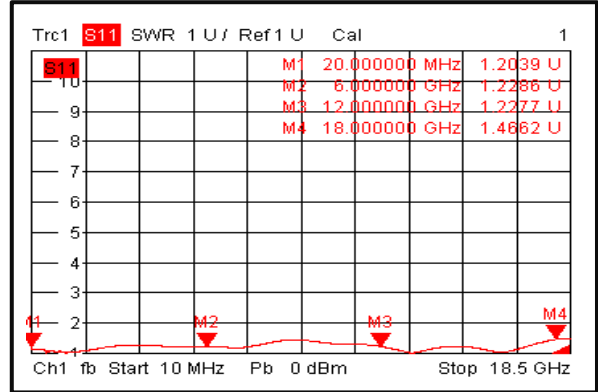
Isolation @+25°C



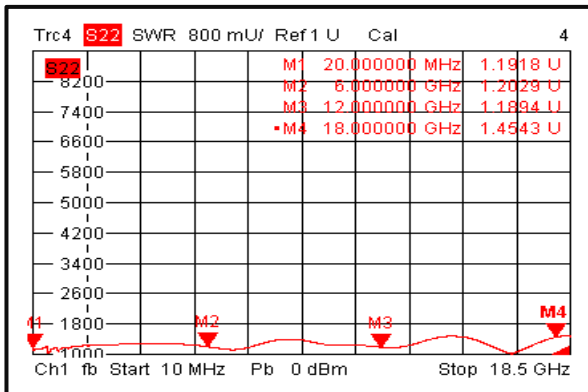
Insertion Loss @-40°C



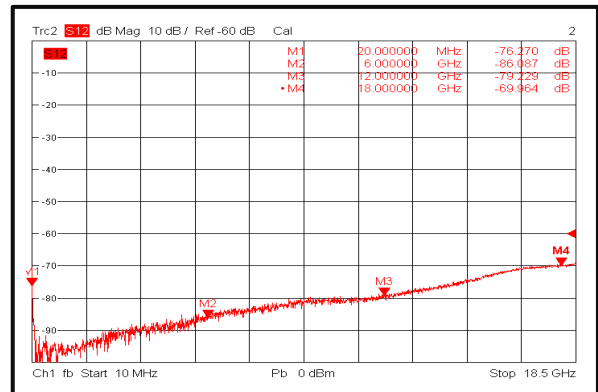
Input VSWR @-40°C



Output VSWR @-40°C

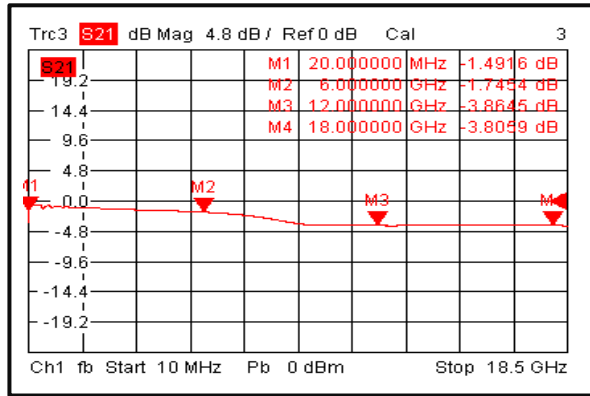


Isolation @-40°C

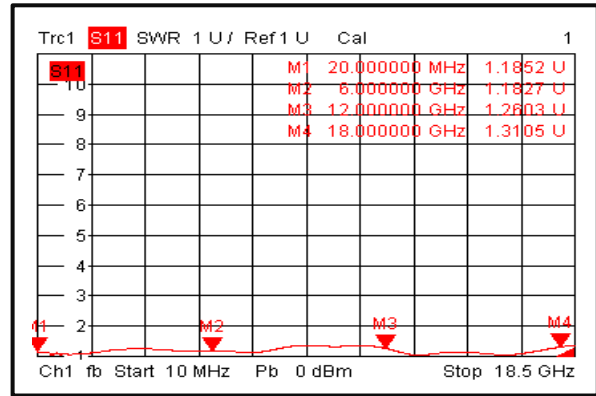


Absorptive Coaxial Single Pole Three Throw Switch 0.02 - 18GHz

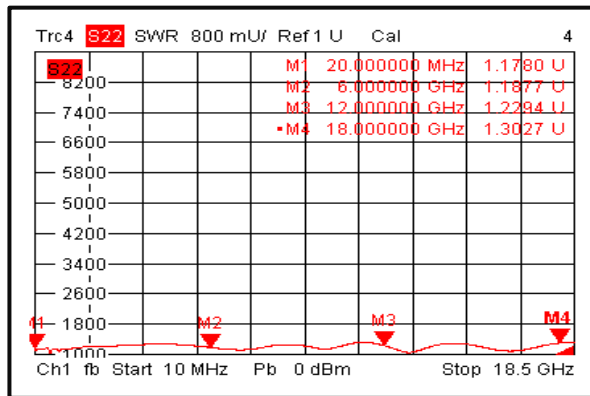
Insertion Loss @+85°C



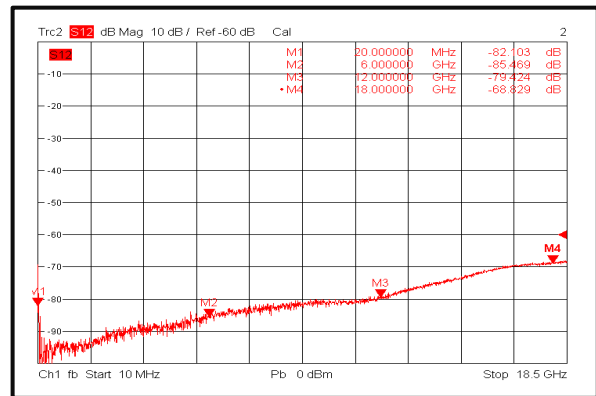
Input VSWR @+85°C



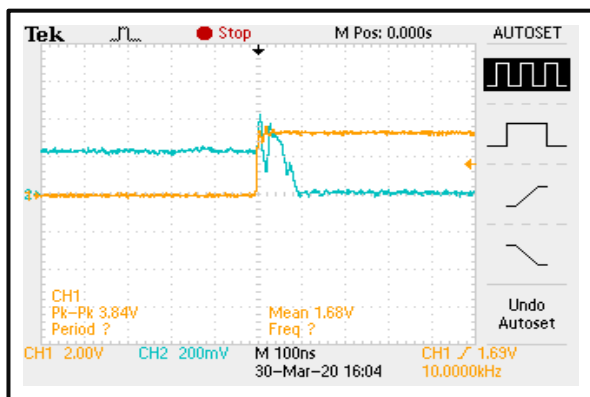
Output VSWR @+85°C



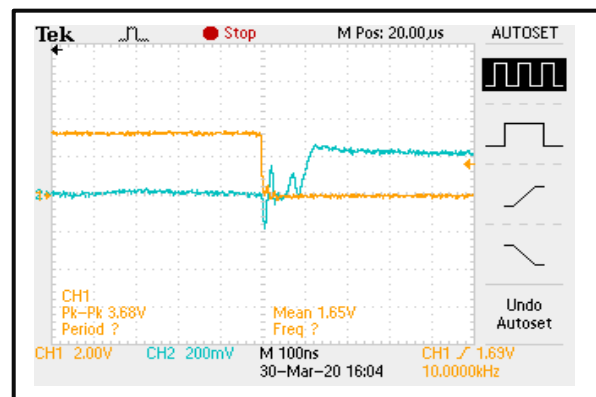
Isolation @+85°C



Switching Speed



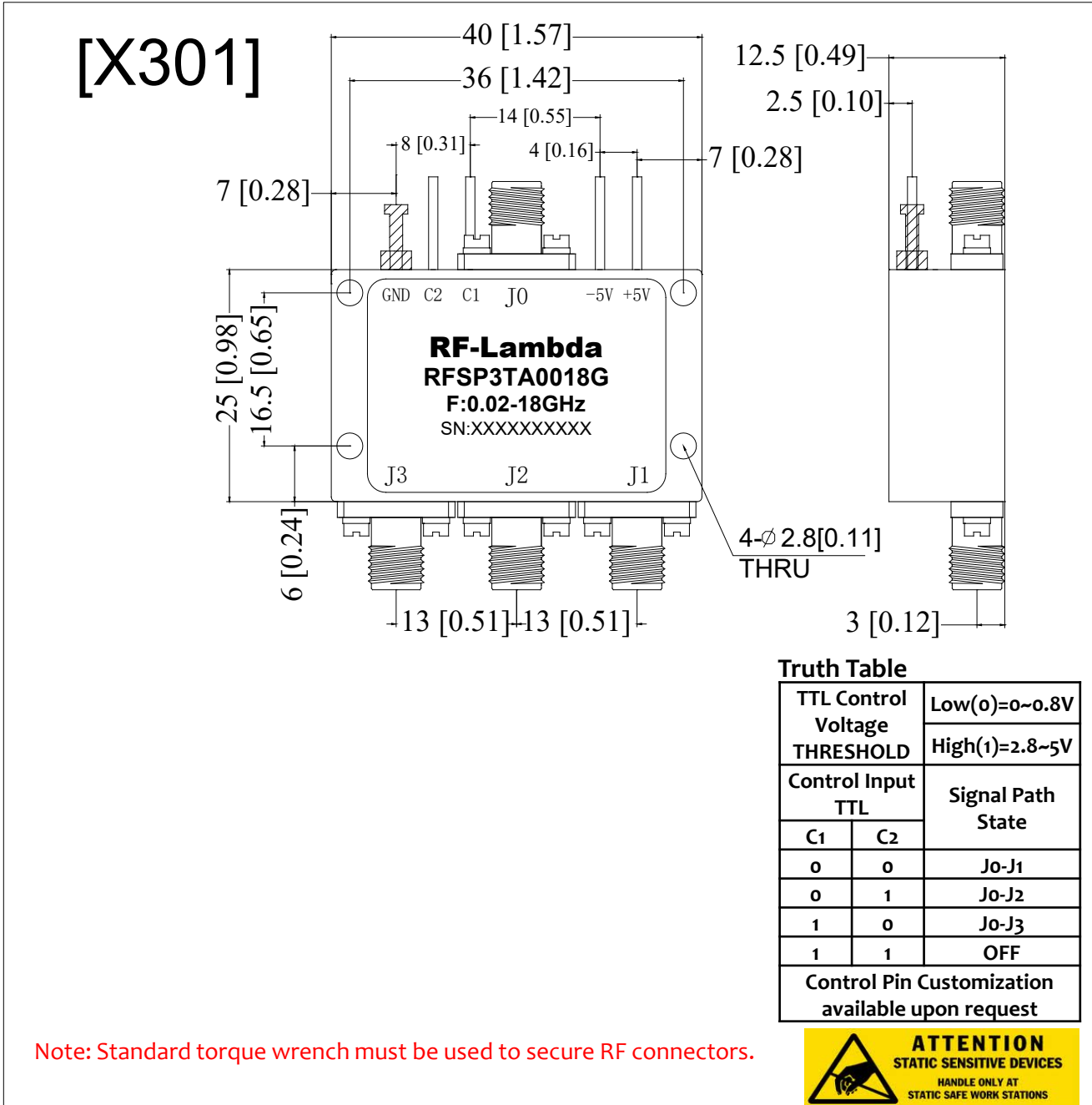
Switching Speed



Outline Drawing:

All Dimensions in mm [inches]

Tolerance ± 0.1 [0.004]



Absorptive Coaxial Single Pole Three Throw Switch 0.02 - 18GHz

Important Notice

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