

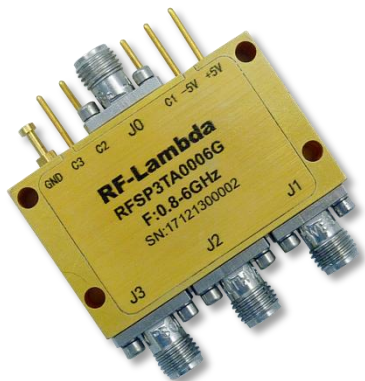


RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

RFSP3TA0006G

Absorptive Coaxial SP3T Switch 0.8 - 6GHz



Features

- Wide Band Operation 0.8-6GHz
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- Customization available upon request

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

Description	PN: RFSP3TA0006G			
	SP3T Absorptive Switch			
	Low Power Cold Switching			
Parameter	Min	Typ.	Max	Units
Frequency Range	0.8~6			GHz
Insertion Loss		1.3	1.6	dB
Insertion Loss Temperature Coefficient		0.003		dB/°C
Isolation	60	75		dB
Input VSWR		1.4	1.5	:1
Output VSWR		1.4	1.5	:1
RF Input Power (CW)			30	dBm
DC Power Dissipation		0.85		W
0.1dB Compression Point ($P_{0.1dB}$)		30		dBm
IIP3		55		dBm
Switching Speed	100			ns
Weight	1.06			Ounces
Impedance	50			Ω
Bias Current (+5V/-5V)	120/50			mA
Input / Output Connectors	SMA-Female			
Finish	Gold Plated			
Material	Aluminum			
Sealing	Hermetically Sealed (Optional)			

Absorptive Coaxial Single Pole Three Throw Switch 0.8 - 6GHz



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Absolute Maximum Ratings

Biasing	+5V±10%/-5V±10%
TTL Control Voltage	0~0.8V/2.8~5V

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

Ordering Information

Part No.	ECCN	Description
RFSP3TA0006G	EAR99	SP3T0.8-6GHz PIN Diode Switch

Environmental Specifications and Test Standards

Parameter	Standard	Description
Operational Temperature	MIL-STD-39016	-45°C~+85°C (Case Temperature)
Storage Temperature		-50°C~+125°C
Thermal Shock		1 Hour@ -45°C → 1 Hour @ +85°C (5 Cycles)
Random Vibration		Acceleration Spectral Density 6 (m/s) Total 92.6 RMS
Electrical & 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	MIL-STD-883	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)

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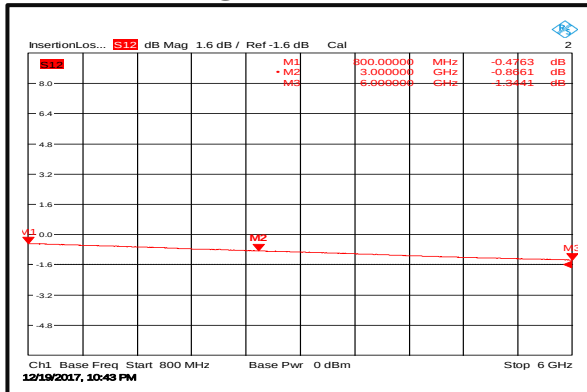
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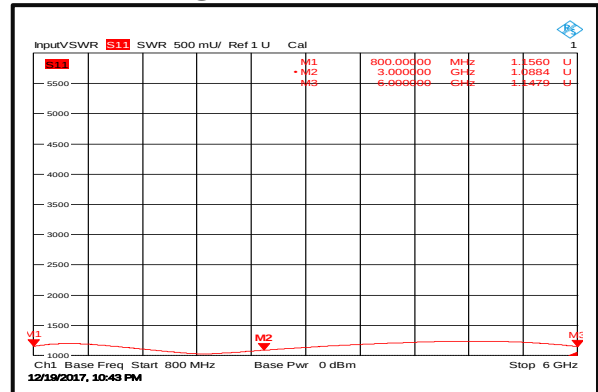
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Typical Performance Plots

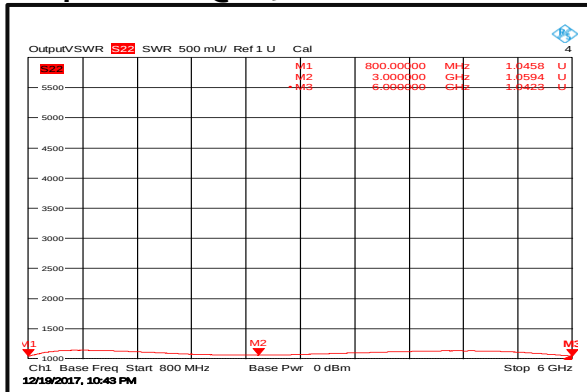
Insertion Loss @+25°C



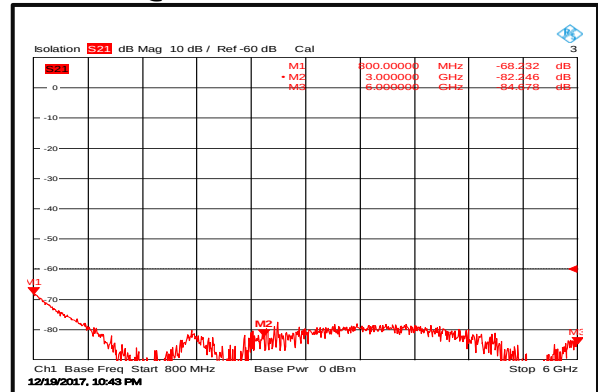
Input VSWR @+25°C



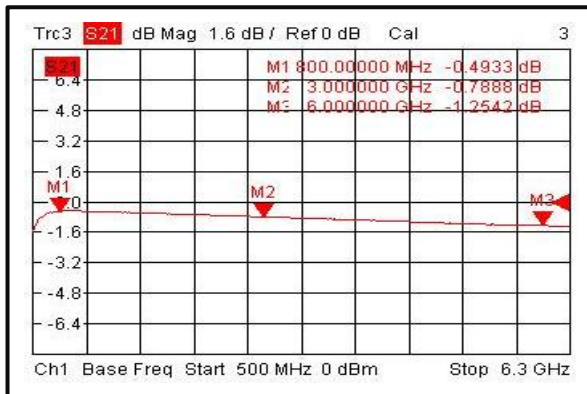
Output VSWR @+25°C



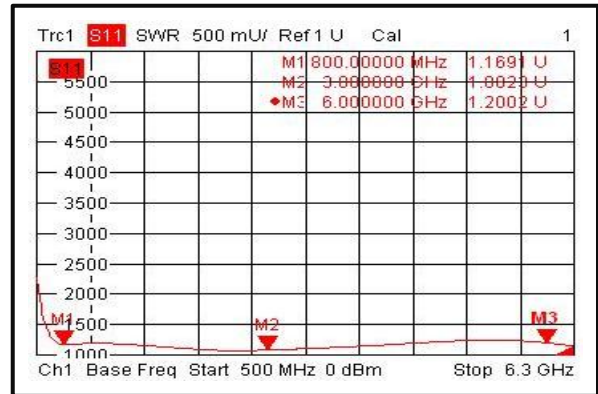
Isolation @+25°C



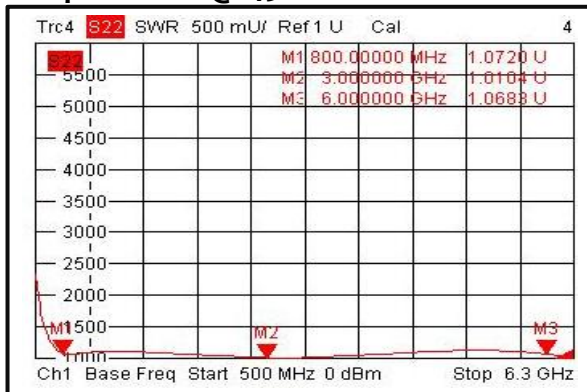
Insertion Loss @-45°C



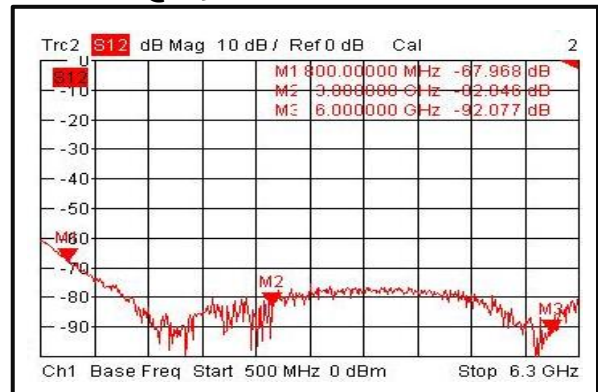
Input VSWR @-45°C



Output VSWR @-45°C



Isolation @-45°C



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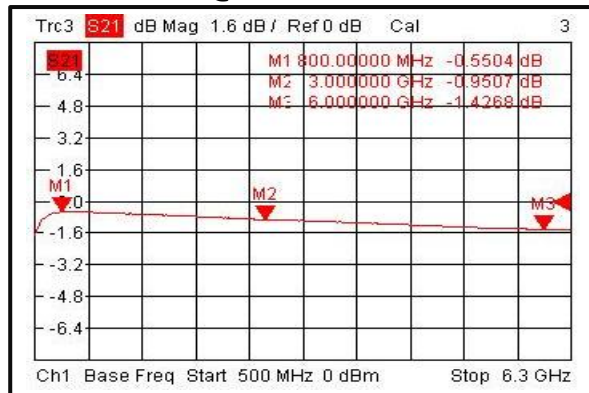
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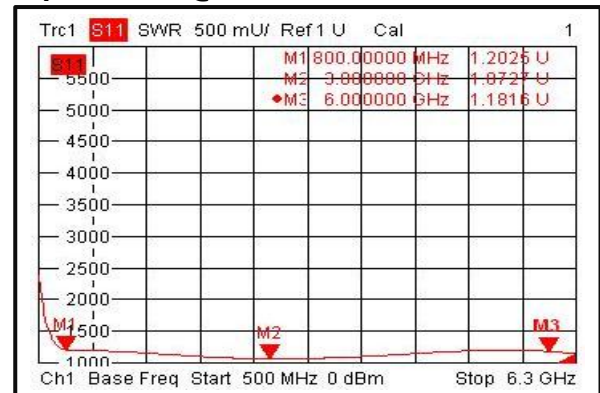
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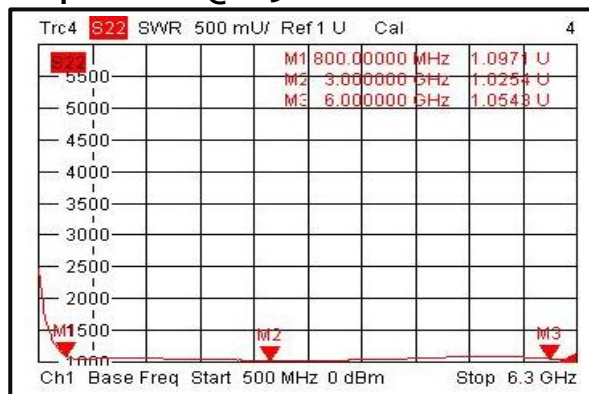
Insertion Loss @+85°C



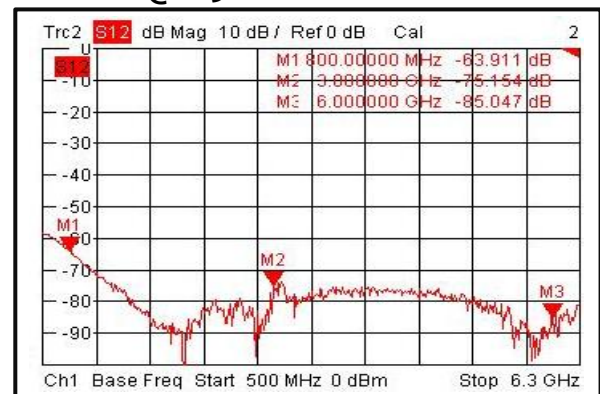
Input VSWR @+85°C



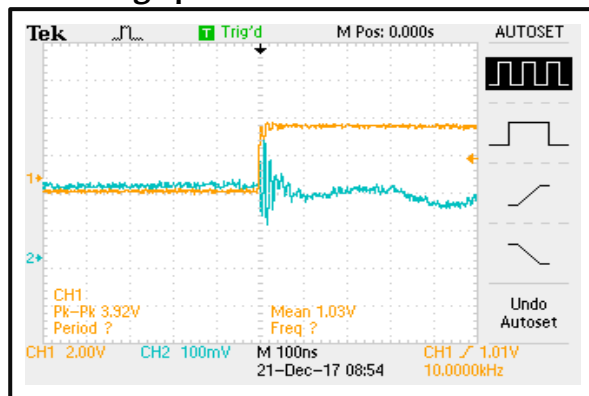
Output VSWR @+85°C



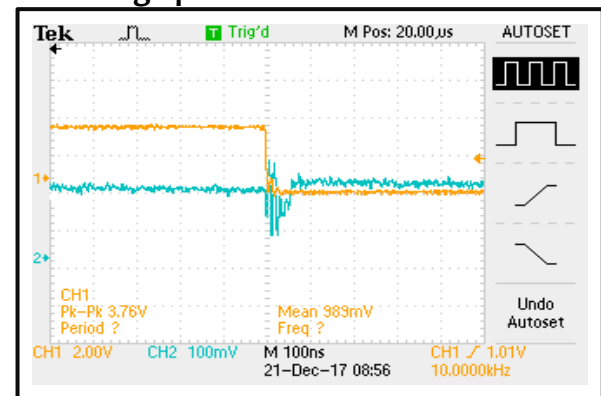
Isolation @+85°C



Switching Speed



Switching Speed





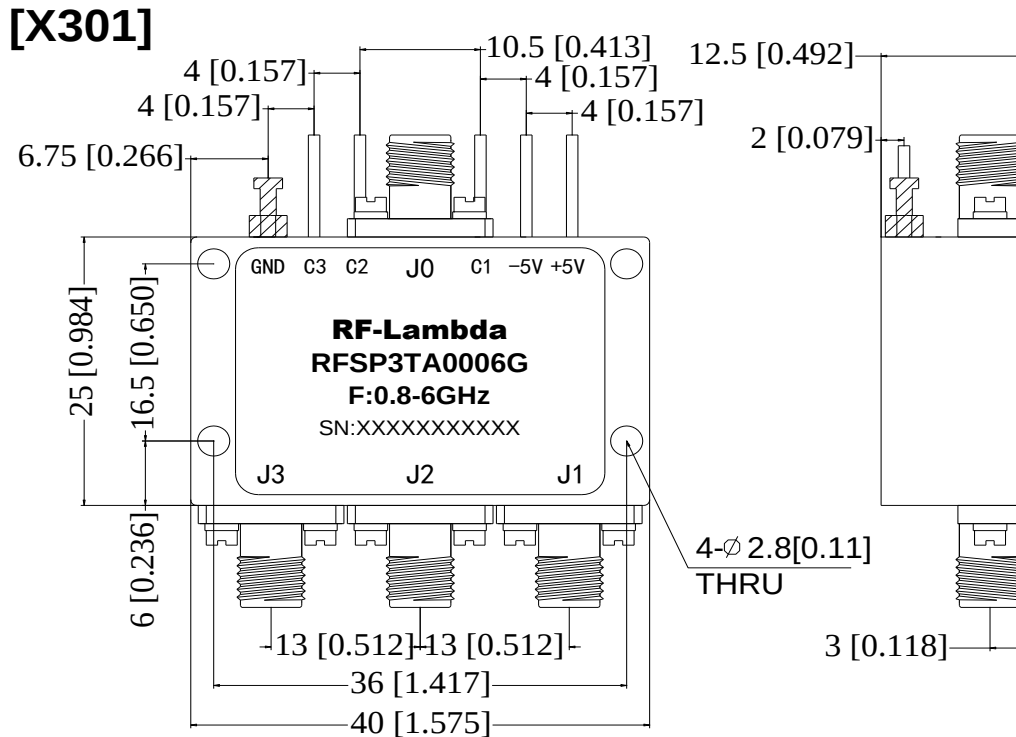
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Outline Drawing:

All Dimensions in mm [inches]



Truth Table

Control Input TTL			Signal Path State
C3	C2	C1	
1	1	1	Not Used
0	0	1	J0-J1
0	1	0	J0-J2
1	0	0	J0-J3
0	0	0	OFF

Control Pin Customization Available Upon Request



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