

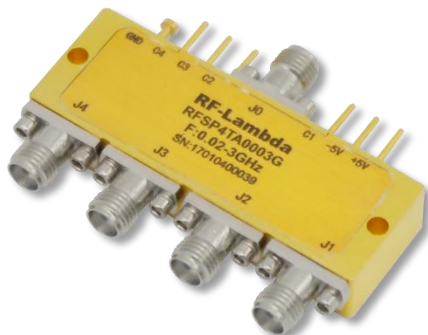


RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

RFSP4TA0003G

Absorptive Coaxial SP4T Switch 0.02 - 3GHz



Features

- Ultra Wide Band Operation 0.02-3GHz
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- Customization available upon request

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

Description	PN: RFSP4TA0003G						
	SP4T Absorptive Switch						
	Low Power Cold Switching						
	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Parameters							
Frequency Range	0.02-0.2			0.2-3			GHz
Insertion Loss		0.5	0.8		1.5	1.8	dB
Insertion Loss Temperature Coefficient		0.003			0.003		dB/°C
Isolation	60	70		70	85		dB
Input VSWR		1.3	1.5		1.3	1.5	:1
Output VSWR		1.3	1.5		1.3	1.5	:1
RF Input power			30			30	dBm
DC Power Dissipation(CW)		1			1		W
0.1dB Compression Point ($P_{0.1\text{dB}}$)			30		30		dBm
Switching Speed			1.0			1.0	us
Weight	1.06						Ounces
Impedance	50						Ω
Bias Current (+5V / -5V)	160/50						mA
Input / Output Connectors	SMA-Female						
Finishing	Gold Plating						
Material	Aluminum						
Sealing	Hermetically Sealed (Optional)						

Absorptive Coaxial Single Pole Four Throw Switch 0.02 - 3GHz



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
RFSP4TA0003G	EAR99	SP4T 0.02-3GHz 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)



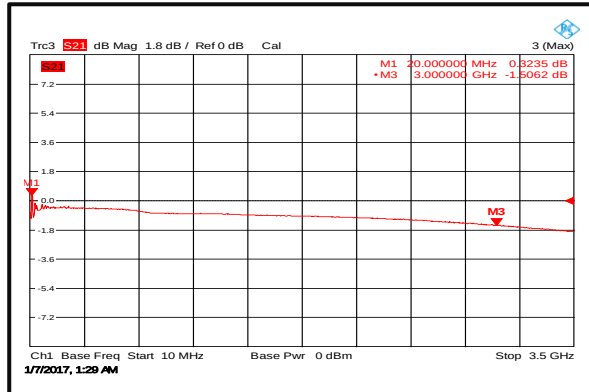
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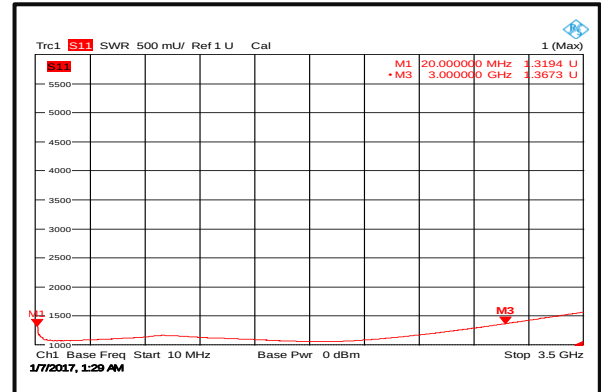
RFSP4TA0003G

Typical Performance Plots

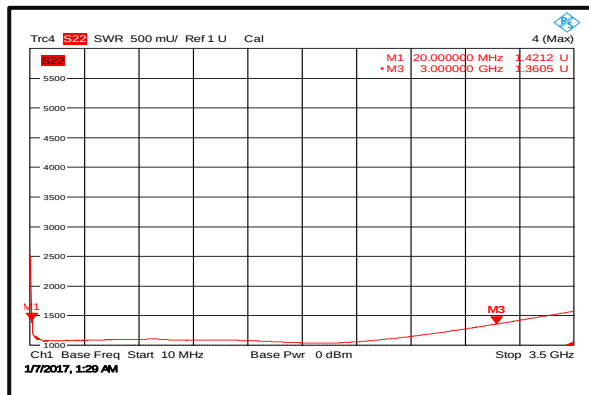
Insertion Loss



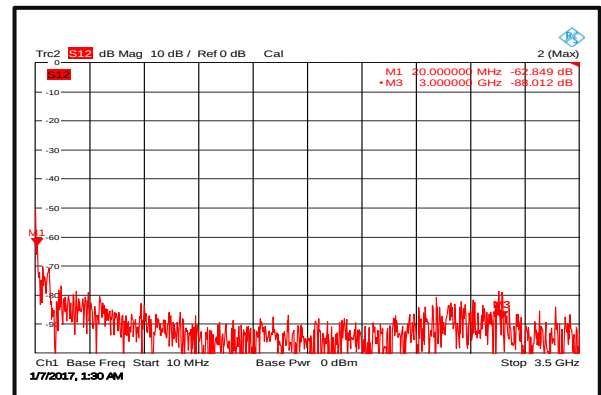
Input VSWR



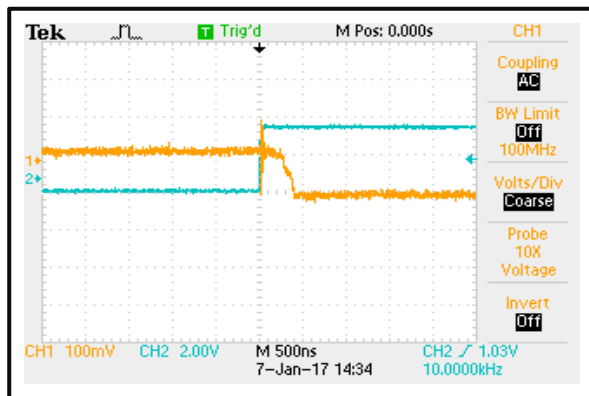
Output VSWR



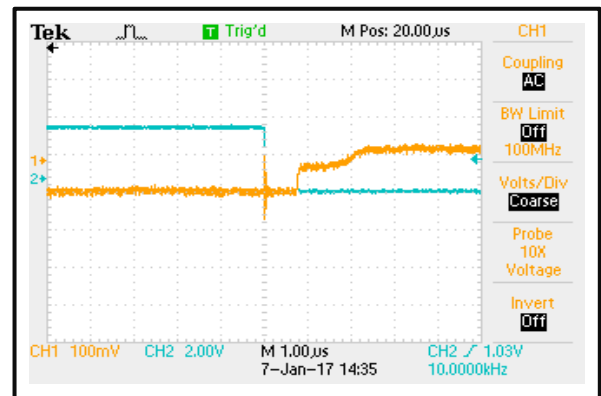
Isolation



Switching Speed



Switching Speed



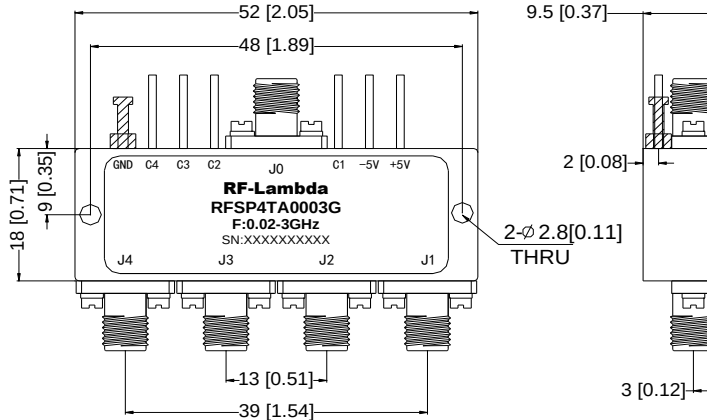
Absorptive Coaxial Single Pole Four Throw Switch 0.02 - 3GHz



Outline Drawing:

All Dimensions in mm [inches]

[X401]



Truth Table

Control Input TTL				Signal Path State
C4	C3	C2	C1	
1	1	1	1	OFF
1	1	1	0	J0-J1
1	1	0	1	J0-J2
1	0	1	1	J0-J3
0	1	1	1	J0-J4
0	0	0	0	NC

Control Pin Customization
available upon request



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HANDLE ONLY AT
STATIC SAFE WORK STATIONS

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