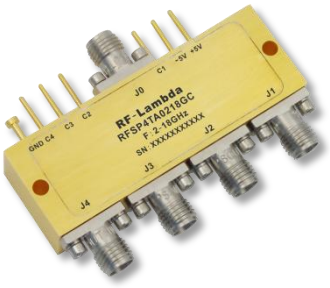
Absorptive Coaxial SP4T Switch
2 - 18GHz



RoHS Compliant

Features

- Ultra 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, T_A = +25 ℃, Vdd = +5V/-5V, TTL = 0 / +5V

Description	PN: RFSP4TA0218GC									
	SP4T Absorptive Switch									
	Low Power Cold Switching									
Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	2~6			6~12			12~18			GHz
Insertion Loss		1.8	2.0		2.7	3.0		3	3.5	dB
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/ °C
Isolation	70	75		70	75		60	65		dB
Input VSWR		1.5	2		1.5	2		1.6	2	: 1
Output VSWR		1.5	2		1.5	2		1.5	2	: 1
RF Input power			30			30			30	dBm
DC Power Dissipation		0.5			0.5			0.5		W
0.1dB Compression Point (P0.1dB)		30			30			30		dBm
IIP3		55			55			55		dBm
Switching Speed	100									ns
Weight	/									Ounces
Impedance	50									Ω
Bias Current (+5V / -5V)	160/50									mA
Input / Output Connectors	SMA-Female									
Finish	Gold Plated									
Material	Aluminum									
Sealing	Hermetically Sealed (Optional)									

Absorptive Coaxial Single Pole Four Throw Switch 2 - 18GHz

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

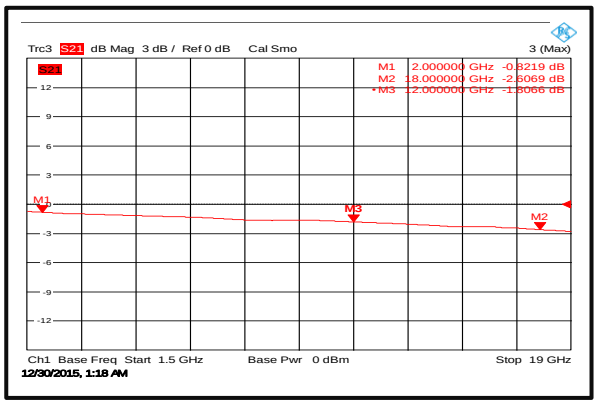
Part No.	ECCN	Description
RFSP4TA0218GC	EAR99	SP4T 2-18GHz PIN Diode Switch

Environmental Specifications and Test Standards

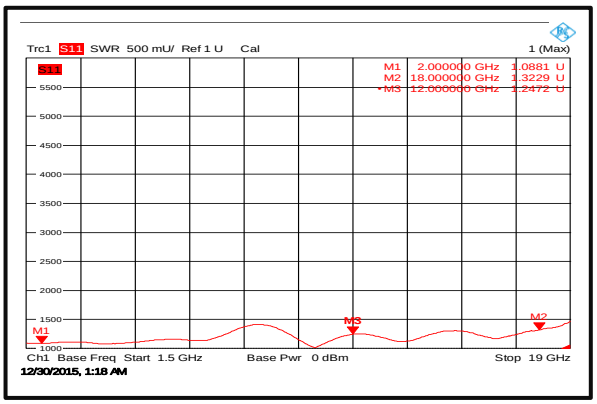
Parameter	Standard	Description
Operational Temperature	MIL-STD-39016	-45℃~+85℃ (Case Temperature)
Storage Temperature		-50℃~+125℃
Thermal Shock		1 Hour@ -45℃ → 1 Hour @ +85℃ (5 Cycles)
Random Vibration		Acceleration Spectral Density 6 (m/s) Total 92.6 RMS
Electrical & Temperature Burn In		Temperature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

Typical Performance Plots

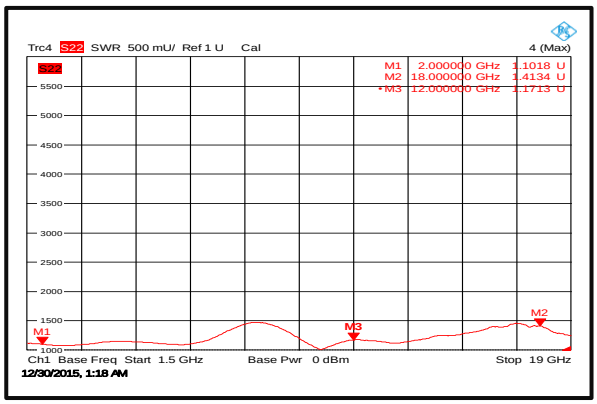
Insertion Loss



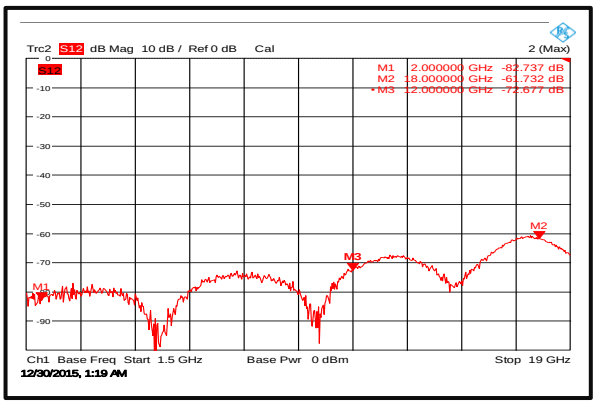
Input VSWR



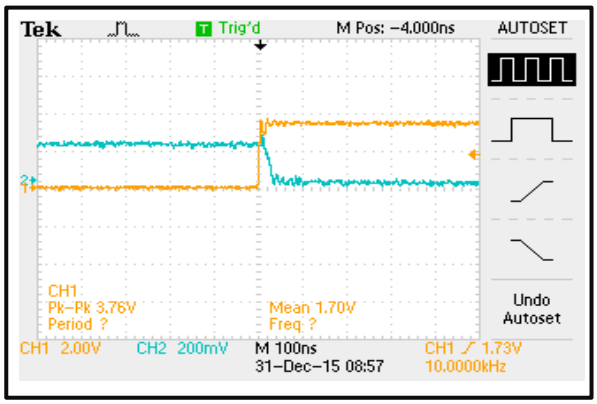
Output VSWR



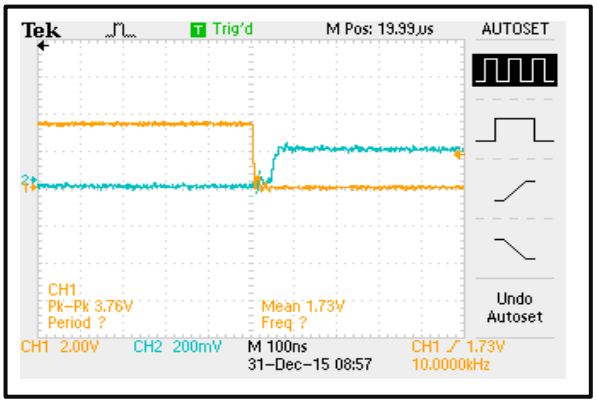
Isolation



Turn on Switching Speed



Turn off Switching Speed



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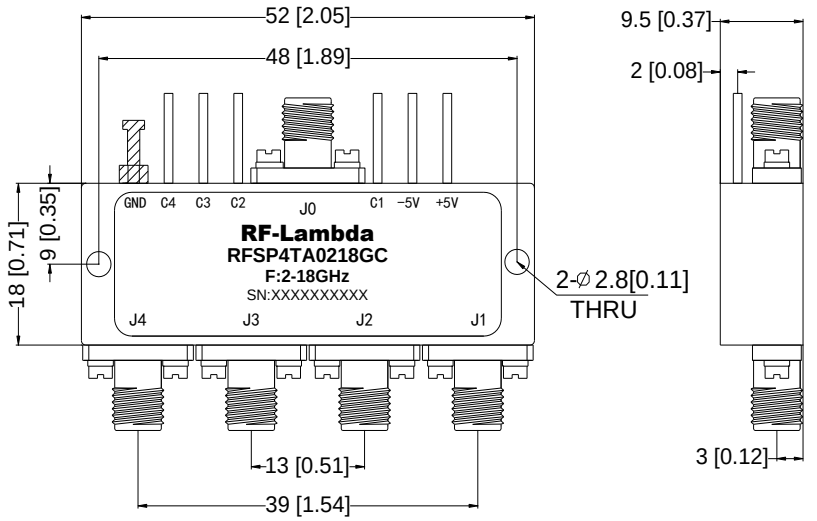
Outline Drawing:

All Dimensions in mm [inches]

[X401]



Truth Table

Control Input TTL				Signal Path State
C4	C3	C2	C1	
0	0	0	0	Not Used
1	1	1	0	Jo-J1
1	1	0	1	Jo-J2
1	0	1	1	Jo-J3
0	1	1	1	Jo-J4
1	1	1	1	OFF
Control Pin Customization available upon request				

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