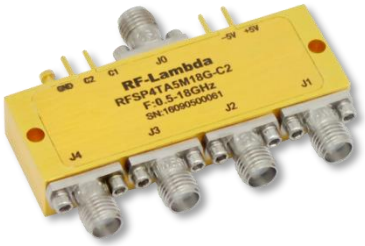
Absorptive Coaxial SP4T Switch
0.016 - 6GHz



Note: The photo is for illustration purposes only.
Please refer to the outline drawing.

RoHS Compliant

Features

- Ultra Wide Band Operation
- 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: RFSP4TA0006G-C2 SP4T Absorptive Switch Low Power Cold Switching						
Parameters	Min	Typ	Max	Min	Typ	Max	Units
Frequency Range	0.016		3	3		6	GHz
Insertion Loss		1.4	1.8		2.6	3.0	dB
Insertion Loss Temperature Coefficient		0.003			0.003		dB/ °C
Isolation	60	70		60	75		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 (CW)			30			30	dBm
Power Dissipation (CW)		0.8			0.8		W
0.1dB Compression Point(P0.1dB)		30			30		dBm
IIP3		55			55		dBm
Switching Speed			1			1	us
Weight	1.06						ounces
Impedance	50						Ω
Bias Current (+5V/-5V)	160/50						mA
Input / Output Connectors	SMA-Female						
Finish	Gold Plating						
Material	Aluminum						
Sealing	Hermetically Sealed (Optional)						

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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

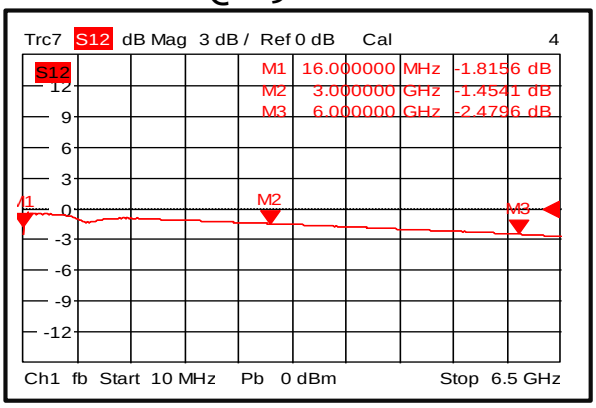
Part No.	ECCN	Description
RFSP4TA0006G-C2	EAR99	SP4T 0.016-6GHz PIN Diode Switch

Environmental Specifications and Test Standards

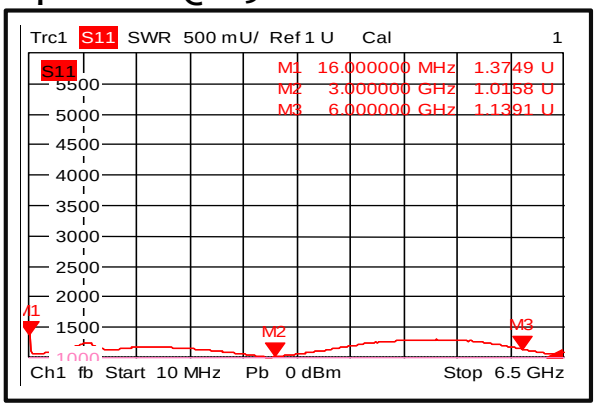
Parameter	Standard	Description
Operational Temperature	MIL-STD-39016	-45℃~+85℃ (Case Temperature)
Storage Temperature		-50℃~+125℃
Thermal Shock		1 Hour@ -45℃ → 1 Hour @ +85℃ (5 Cycles)
Random Vibration		Acceleration Spectral Density 6 (m/s) Total 92.6 RMS
Electrical & Temperature Burn In		Temperature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

Typical Performance Plots

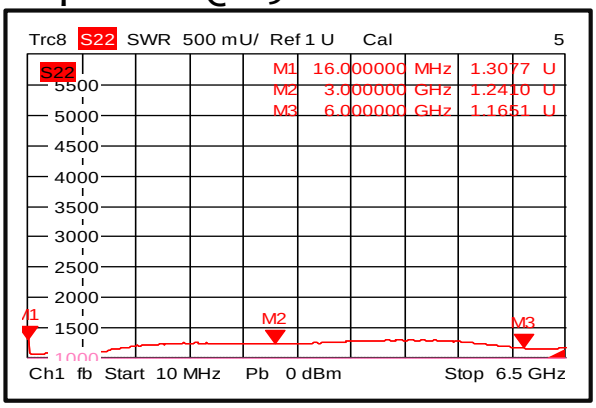
Insertion Loss @+25℃



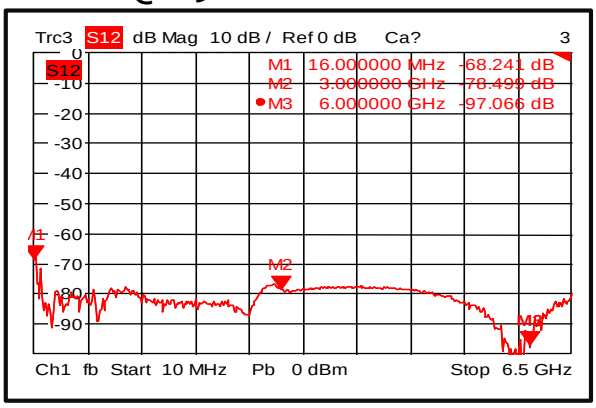
Input VSWR @+25℃



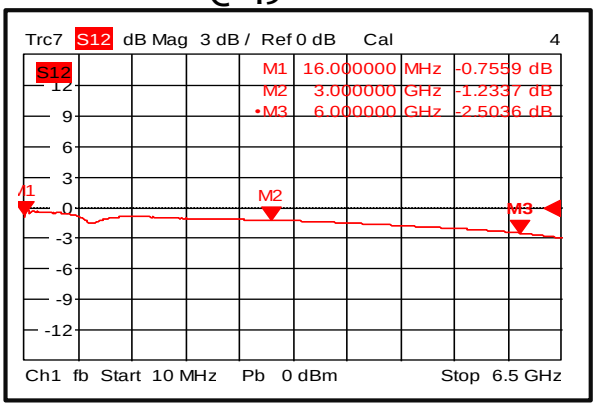
Output VSWR @+25℃



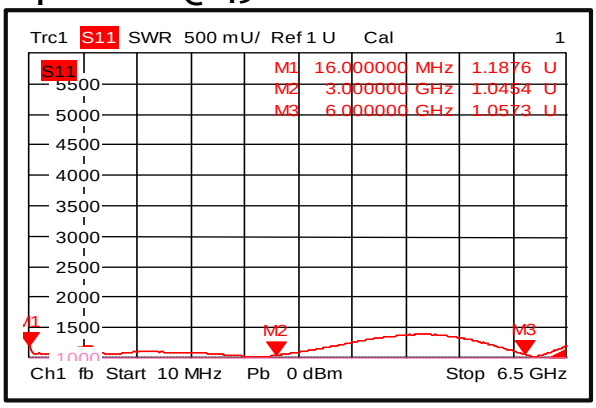
Isolation @+25℃



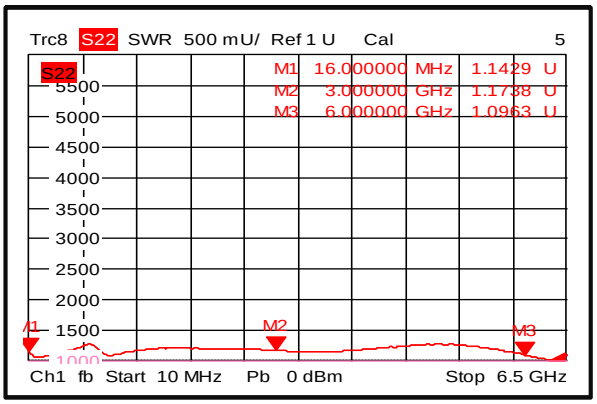
Insertion Loss @-45℃



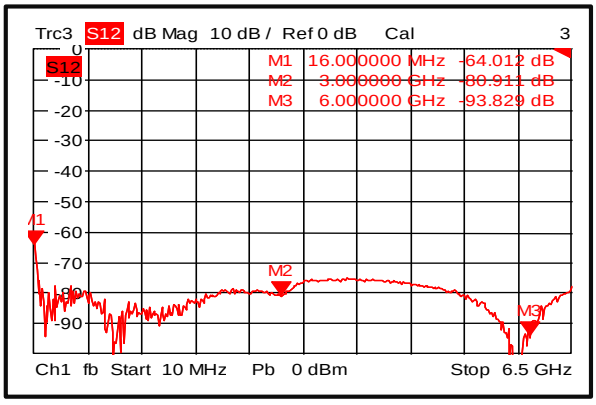
Input VSWR @-45℃



Output VSWR @-45℃



Isolation @-45℃



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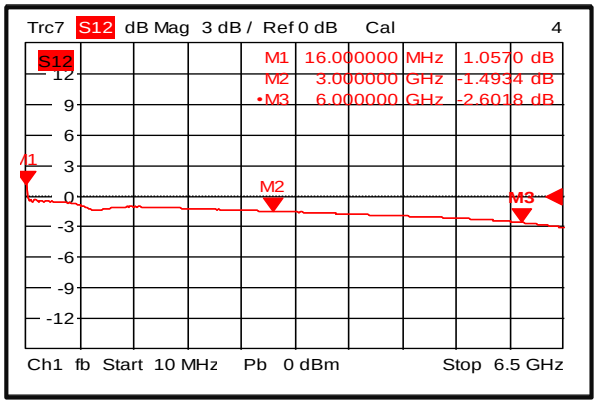
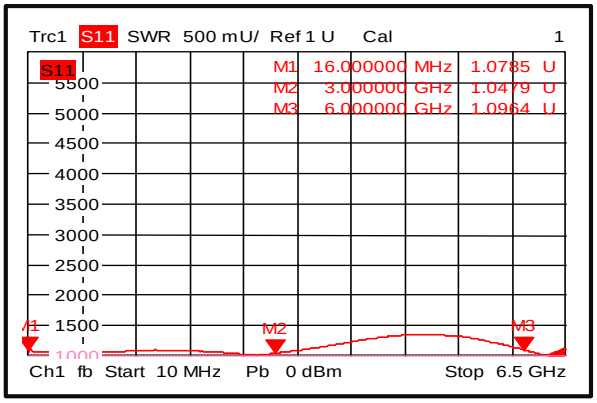
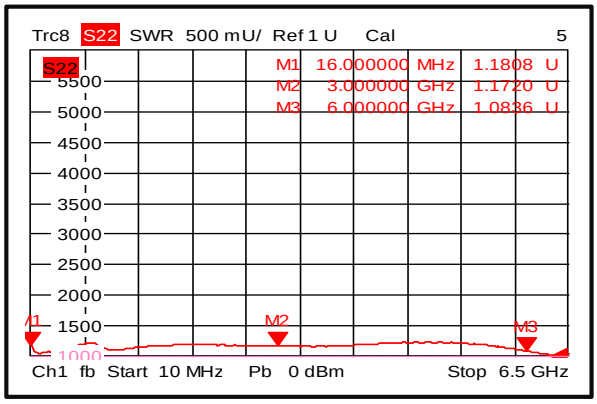
Insertion Loss @+85℃



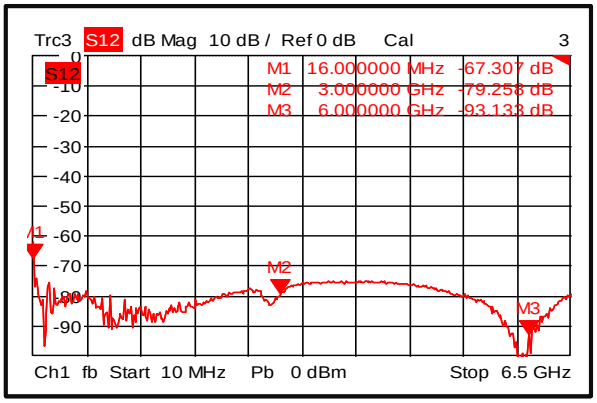
Input VSWR @+85℃



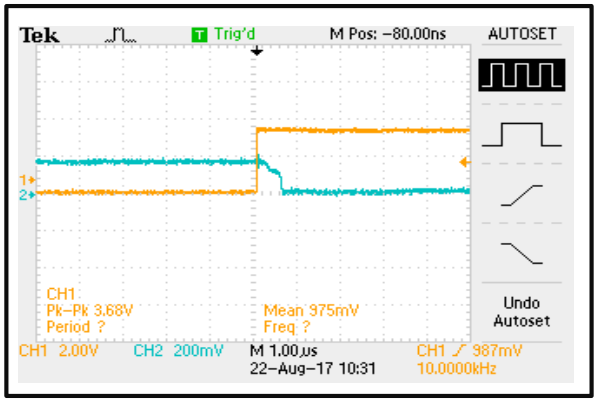
Output VSWR @+85℃



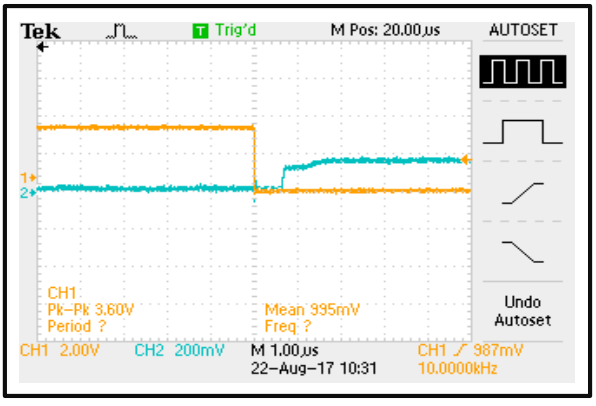
Isolation @+85℃



Switching Speed



Switching Speed



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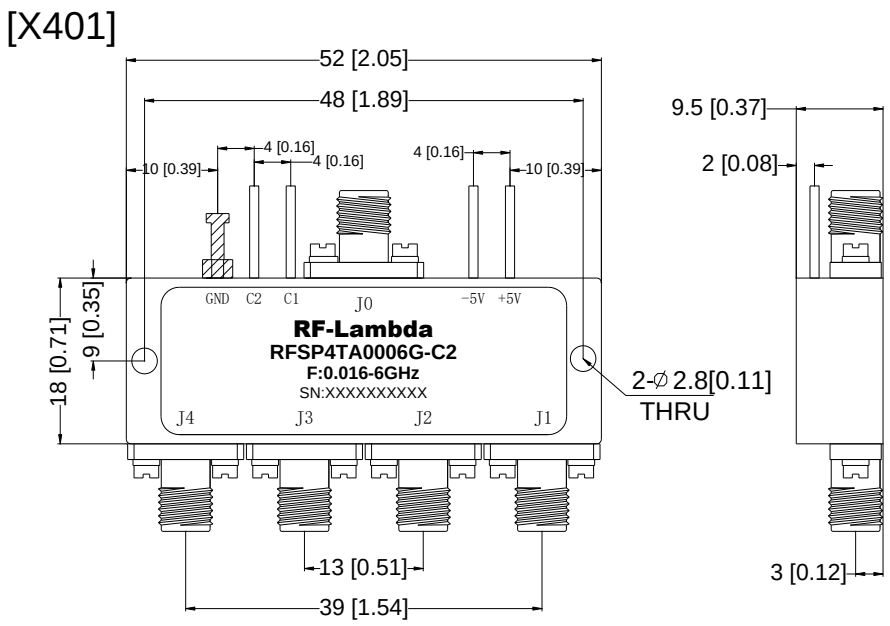
Outline Drawing:

All Dimensions in mm [inches]



Truth Table

Control Input TTL		Signal Path State
C2	C1	
0	0	J0-J1
0	1	J0-J2
1	0	J0-J3
1	1	J0-J4
Control Pin Customization available upon request		

Important Notice

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