

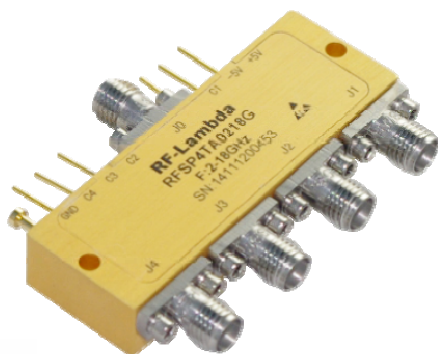


RF-LAMBDA

The power beyond expectations

RFSP4TA0218G

Absorptive 2-18GHz Coaxial SP4T Switch



Features

- Ultra Wide Band Operation 2-18GHz
- TTL compatible driver include
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- Temperature Range -45°C~+85°C
- Customization available upon request
- Hermetically sealed package up to 60,000ft available upon request.

Electrical Specifications, TA = +25° C, With Vdd = +5V, Vss = -5V & VCTL = 0/ +5V

Description	PN: RFSP4TA0218G									
	SP4T Absorptive Switch									
	Low Power Cold Switching									
Parameters	Min	Type	Max	Min	Type	Max	Min	Type	Max	Units
Frequency Range	2-8			8-12			12-18			GHz
Insertion Loss		1.5	1.8		2	2.2		2.6	3	dB
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/°C
Isolation	70			65			60			dB
Input VSWR		1.6	2		1.6	2		1.6	2	ratio
Output VSWR		1.6	2		1.6	2		1.6	2	ratio
Power Dissipation (CW)		0.3			0.3			0.3		W
IM3		40			40			40		dBc
1dB Compression P1dB		30			30			30		dBm
Switching Speed			100			100			100	ns
Weight	50									g
Impedance	50									Ω
Biasing(+5V/-5V)	160/50									mA
Input /Output Connector	SMA-Female/SMA-Female (Standard)									
Finishing	Gold Plating									
Material	Aluminum									
Seal	Hermetically Sealed (optional)									

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Absolute Maximum Ratings

Biasing	+5V/-5V
TTL Control Voltage	+5V/0V
RF Input power	+30dBm
Operating Temperature(°C)	-45 ~ +85
Storage Temperature(°C)	-50 ~ +125

Ordering Information

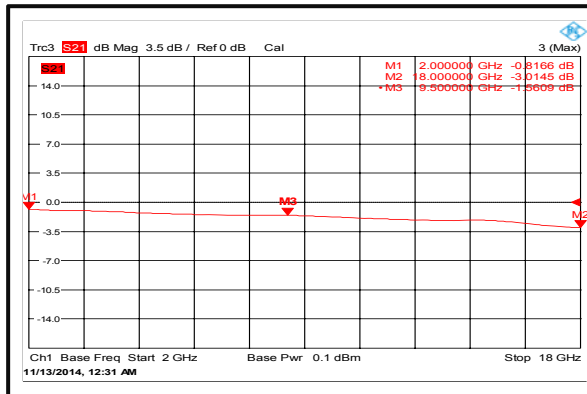
Part No	ECCN	Description
RFSP4TA0218G	EAR99	SP4T 2-18GHz PIN Diode Switch

Environment specifications

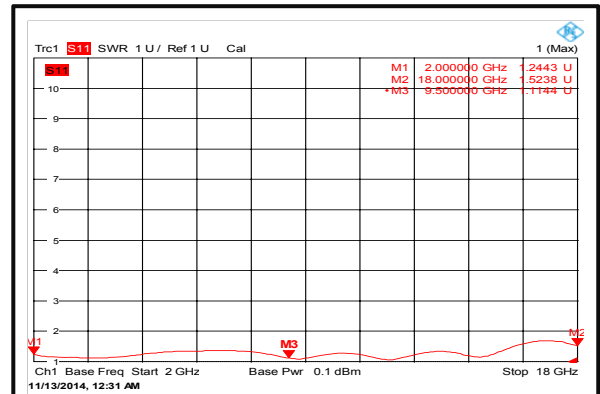
Operational Temperature (°C)	-45 ~ +85
Storage Temperature (°C)	-50 ~ +125
Altitude	30,000 ft. (Epoxy Seal Controlled environment) 60,000 ft 1.0psi min (Hermetically Seal Un-controlled environment) (Optional)
Vibration	25g rms (15 degree 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35°C, 95%RH at 40°C
Shock	20G for 11msc half sin wave, 3 axis both directions

performance plots

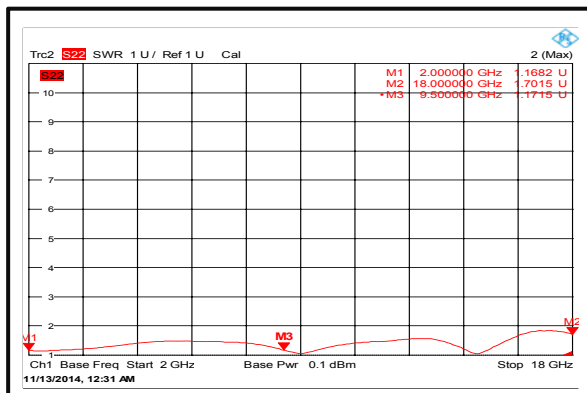
Insertion Loss



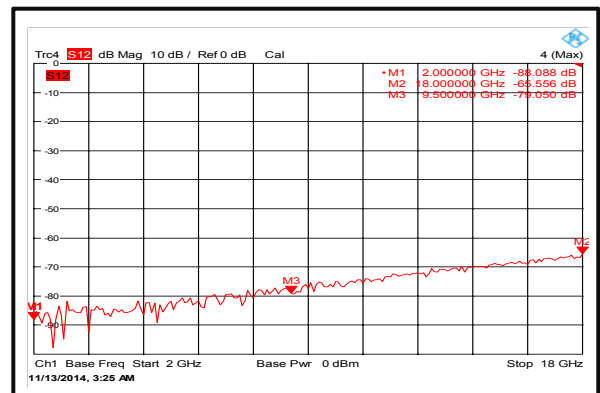
Input VSWR



Output VSWR



Isolation



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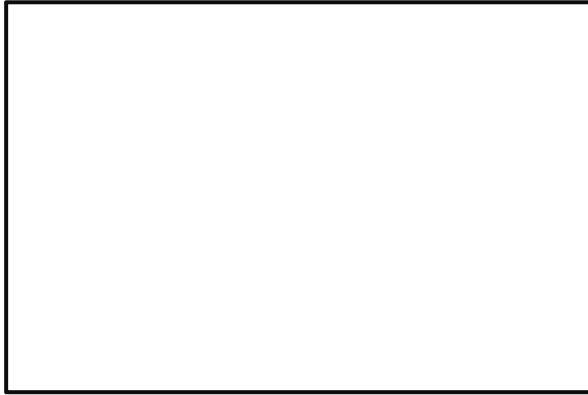


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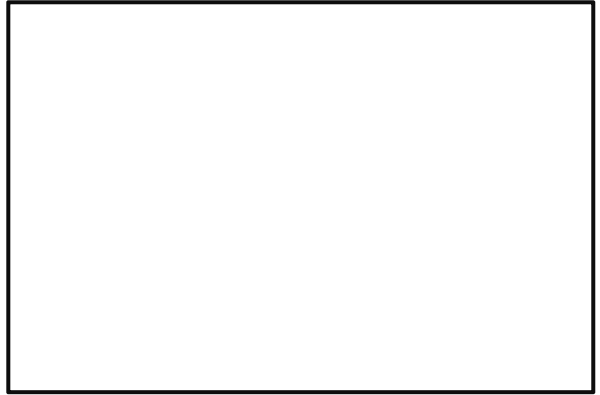
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Output Third Order Intercept (IP₃)



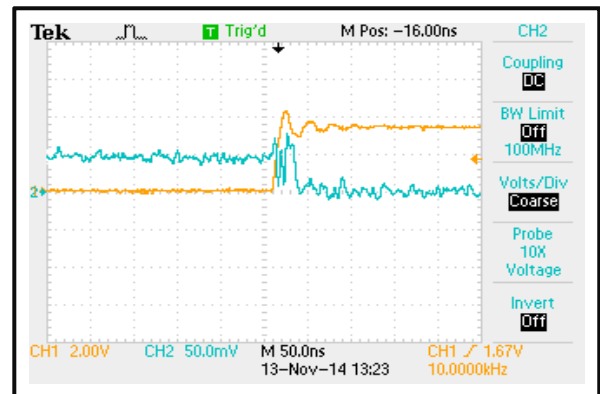
P_{1dB} vs. Frequency



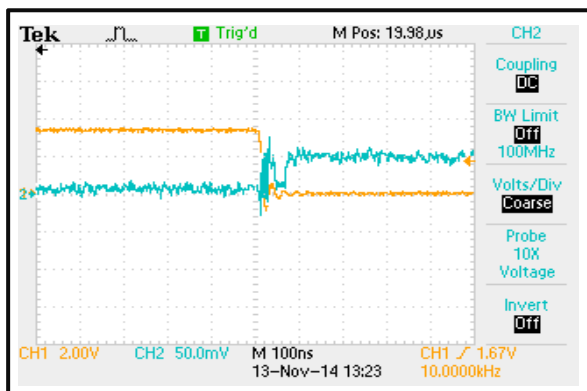
The datasheet for test 1dB



Switching Speed



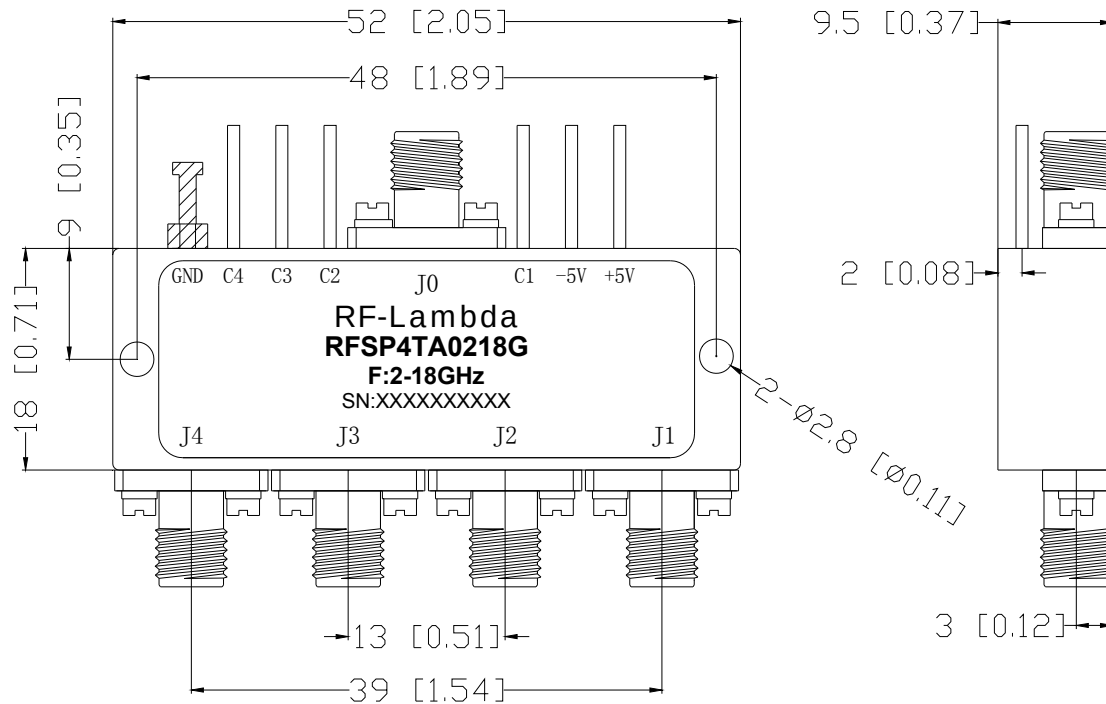
Switching Speed



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Outline Drawing:

All Dimensions in mm (inches)



Truth Table

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

Control Pin Customization available upon request



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