

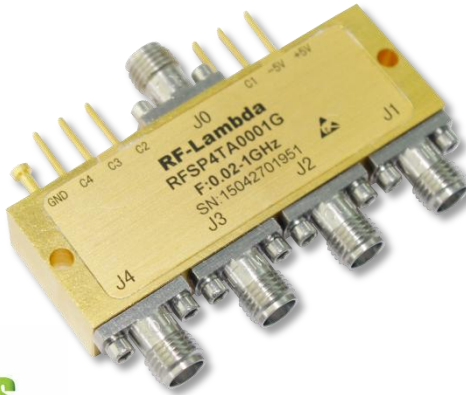


RF-LAMBDA

LEADER OF BROADBAND SOLUTIONS

RFSP4TA0001G

Absorptive 0.02-1GHz Coaxial SP4T Switch



Features

- Wide Band Operation 0.02-1GHz
- 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: RFSP4TA0001G			
	SP4T Absorptive Switch			
	Low Power Cold Switching			
Parameters	Min	Typ.	Max	Units
Frequency Range	0.02-1			GHz
Insertion Loss		1.4	1.7	dB
Insertion Loss Temperature Coefficient		0.003		dB/ °C
Isolation	80	85		dB
Input VSWR		1.4	1.5	ratio
Output VSWR		1.4	1.5	ratio
Power Dissipation (CW)		0.25		W
IM3		40		dBc
1dB Compression P1dB		30		dBm
Switching Speed	500(Standard)			ns
	100(Option with extra cost)			
Weight	1.7			ounces
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)			

Absorptive Coaxial Single Pole Four Throw Switch 0.02-1GHz



RF-LAMBDA

LEADER OF BROADBAND SOLUTIONS

RFSP4TA0001G

Absolute Maximum Ratings

Biasing	+5V±10%/-5V±10%
TTL Control Voltage	0~0.8V/2~5V
RF Input power	+30dBm
Operating Temperature(°C)	-45 ~ +85
Storage Temperature(°C)	-50 ~ +125

Ordering Information

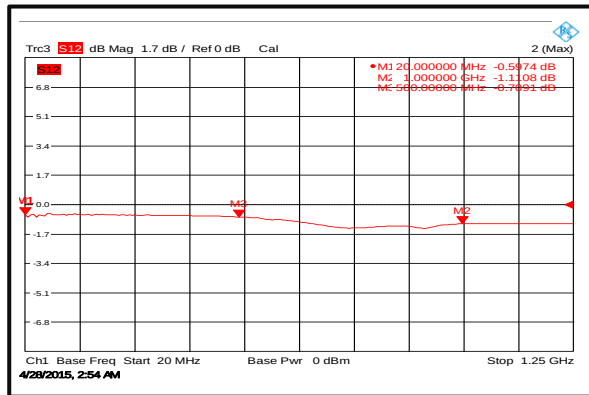
Part No	ECCN	Description
RFSP4TA0001G	EAR99	SP4T 0.02-1GHz PIN Diode Switch

Environment specifications

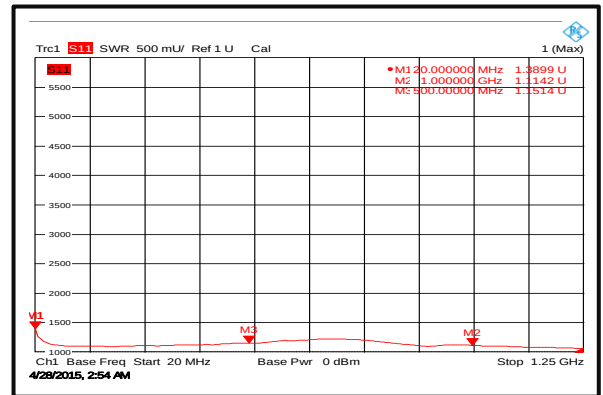
Operational Temperature (°C)	-45 ~ +85
Storage Temperature (°C)	-50 ~ +125
Altitude	30,000 ft. (Epoxy Seal Controlled environment) 60,000 ft 1.0psi min (Hermetically Seal Un-controlled environment) (Optional)
Vibration	25g rms (15 degree 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35°C, 95%RH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

Typical performance plots

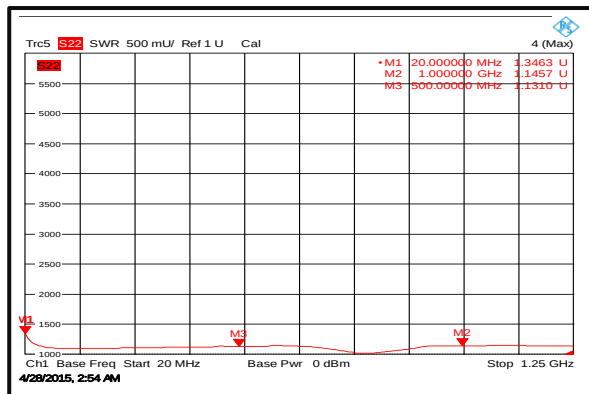
Insertion Loss



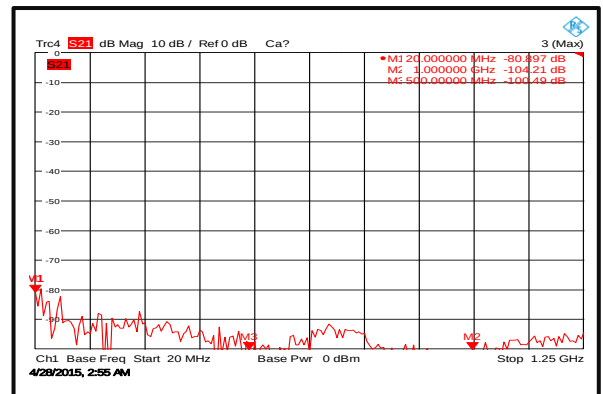
Input VSWR



Output VSWR



Isolation



Absorptive Coaxial Single Pole Four Throw Switch 0.02-1GHz

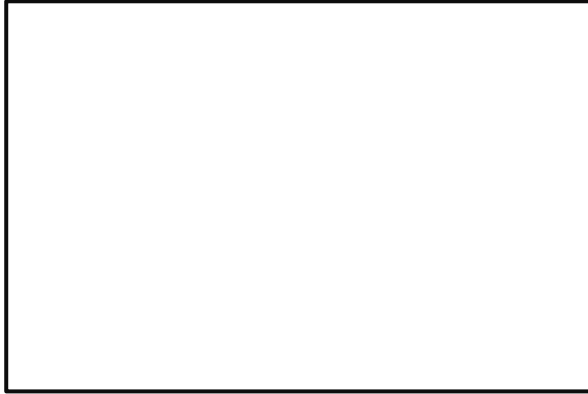


RF-LAMBDA

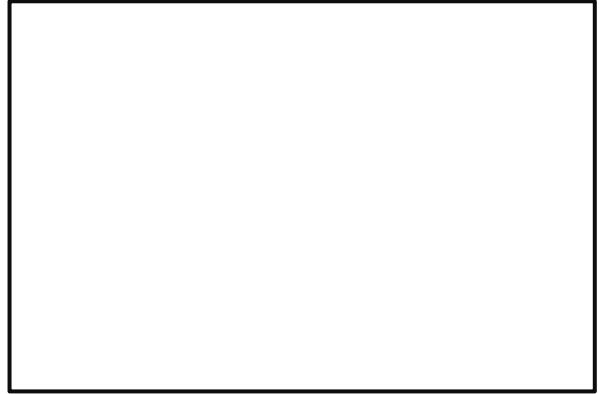
LEADER OF BROADBAND SOLUTIONS

RFSP4TA0001G

Output Third Order Intercept (IP₃)



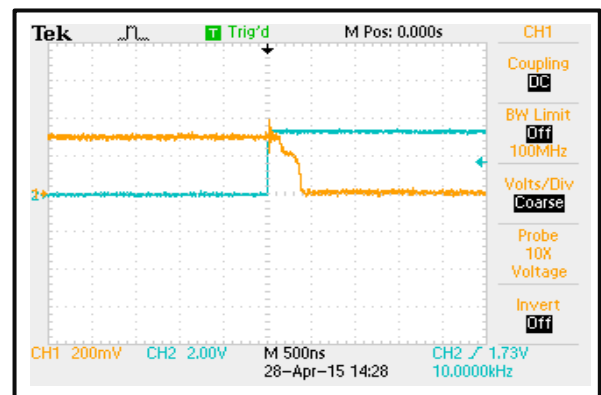
P1dB vs. Frequency



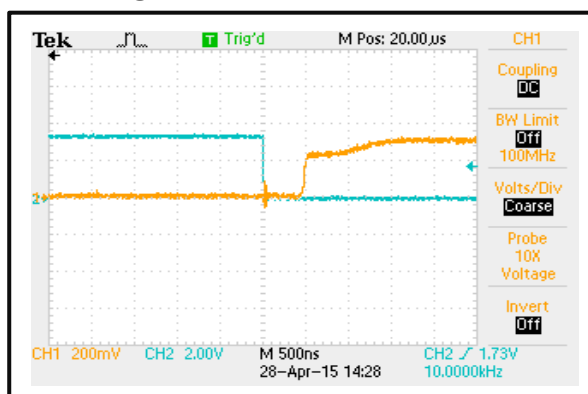
The datasheet for test 1dB



Switching Speed



Switching Speed



Absorptive Coaxial Single Pole Four Throw Switch 0.02-1GHz



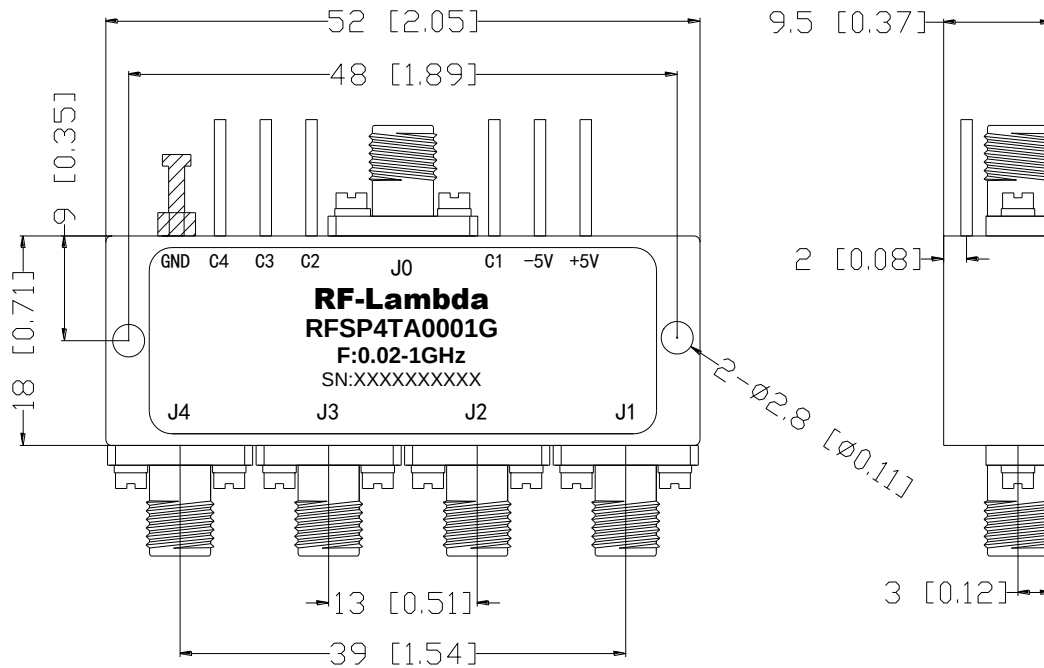
RF-LAMBDA

LEADER OF BROADBAND SOLUTIONS

RFSP4TA0001G

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				

Important Notice

The information contained herein is believed to be reliable. RF-Lambda makes no warranties regarding the information contained herein. RF-Lambda assumes no responsibility or liability whatsoever for any of the information contained herein. RF-Lambda assumes no responsibility or liability whatsoever for the use of the information contained herein. The information contained herein is provided "AS IS, WHERE IS" and with all faults, and the entire risk associated with such information is entirely with the user. All information contained herein is subject to change without notice. Customers should obtain and verify the latest relevant information before placing orders for RF-Lambda products. The information contained herein or any use of such information does not grant, explicitly or implicitly, to any party any patent rights, licenses, or any other intellectual property rights, whether with regard to such information itself or anything described by such information. RF-Lambda products are not warranted or authorized for use as critical components in medical, life-saving, or life sustaining applications, or other applications where a failure would reasonably be expected to cause severe personal injury or death.

Absorptive Coaxial Single Pole Four Throw Switch 0.02-1GHz