

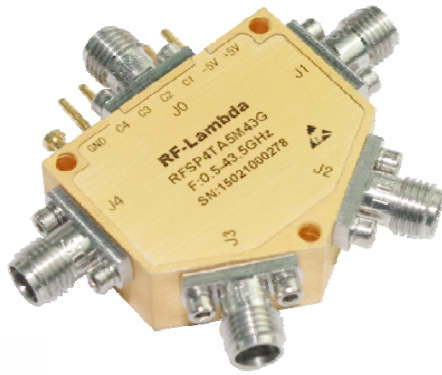


RF-LAMBDA

The power beyond expectations

RFSP4TA5M43G

Absorptive 0.5-43.5GHz Coaxial SP4T Switch



Features

- Ultra Wide Band Operation 0.5-43.5GHz
- TTL compatible driver include
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- 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: RFSP4TA5M43G									
	SP4T Absorptive Switch									
	Low Power Cold Switching									
	Min	Type	Max	Min	Type	Max	Min	Type	Max	Units
Parameters										
Frequency Range	0.5-18			18-30			30-43.5			GHz
Insertion Loss		3.5	4		4.5	5		5.5	6	dB
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/°C
Isolation	65			50			50			dB
Input VSWR		2	2.5		2.5	3		2.5	3	ratio
Output VSWR		2	2.5		2.5	3		2.5	3	ratio
Power Dissipation (CW)		0.15			0.15			0.15		W
IM3		30			30			30		dBc
1dB Compression P1dB		23			23			23		dBm
Switching Speed			50			50			50	ns
Weight	50									g
Impedance	50									Ω
Biasing(+5V/-5V)	80/50									mA
Input /Output Connector	2.92mm-Female (Standard)									
Finishing	Gold Plating									
Material	Aluminum									
Seal	Hermetically Sealed (optional)									

Absorptive Coaxial Single Pole Four Throw Switch 0.5-43.5GHz



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Absolute Maximum Ratings

Biasing	+5V/-5V
TTL Control Voltage	+5V/0V
RF Input power	+23dBm
Operating Temperature(°C)	-45 ~ +85
Storage Temperature(°C)	-50 ~ +125

Ordering Information

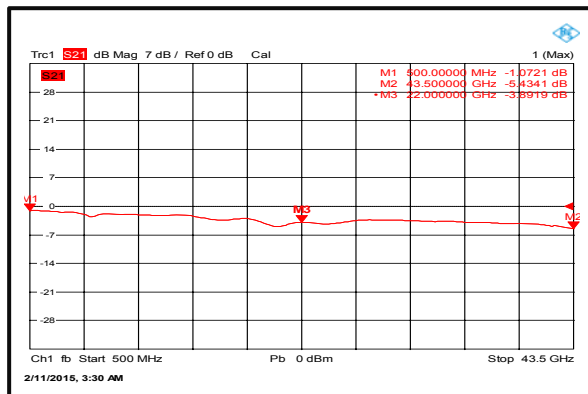
Part No	ECCN	Description
RFSP4TA5M43G	EAR99	SP4T 0.5-43.5GHz PIN Diode Switch

Environment specifications

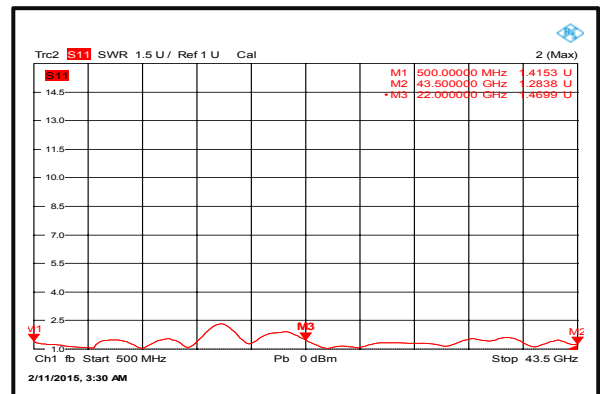
Operational Temperature (°C)	-45 ~ +85
Storage Temperature (°C)	-50 ~ +125
Altitude	30,000 ft. (Epoxy Seal Controlled environment) 60,000 ft 1.0psi min (Hermetically Seal Un-controlled environment) (Optional)
Vibration	25g rms (15 degree 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35c, 95%RH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

performance plots

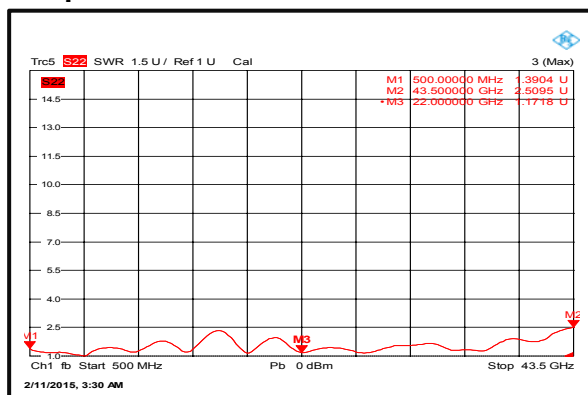
Insertion Loss



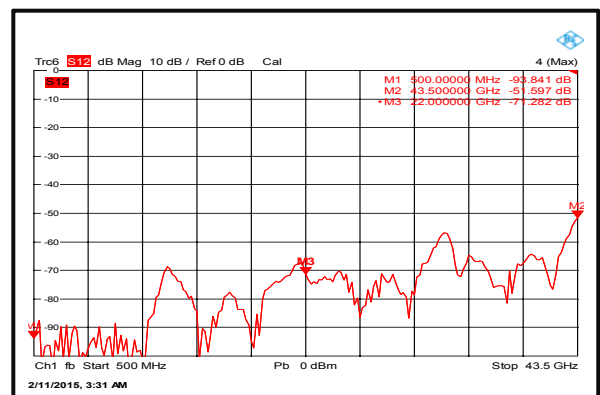
Input VSWR



Output VSWR



Isolation



Absorptive Coaxial Single Pole Four Throw Switch 0.5-43.5GHz

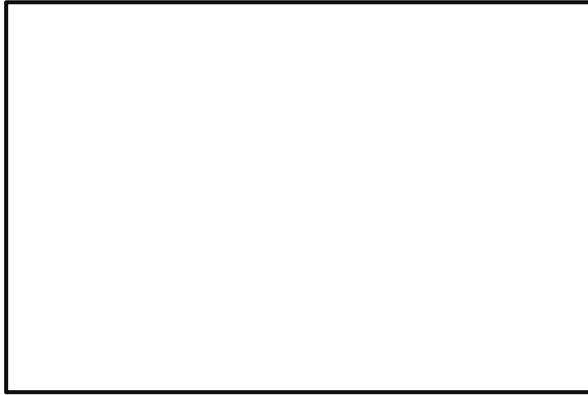


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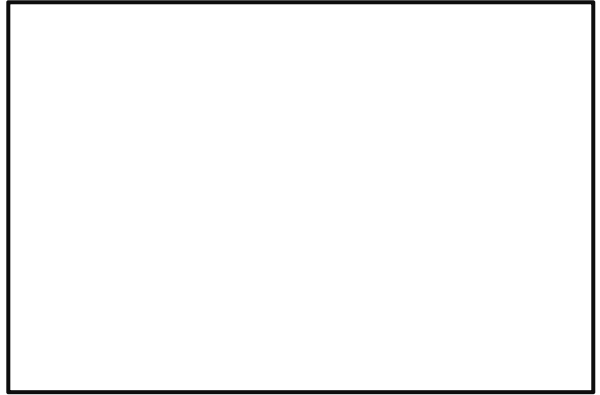
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Output Third Order Intercept (IP₃)



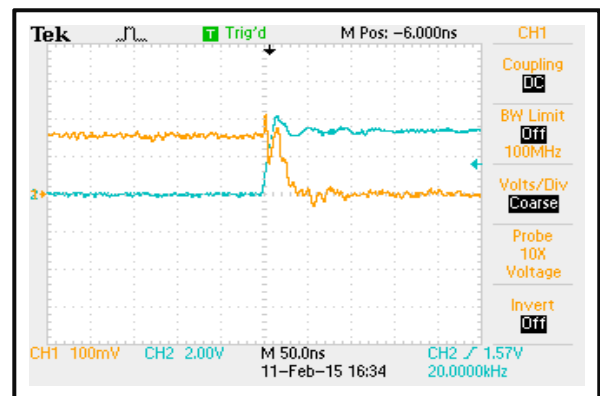
P₁dB vs. Frequency



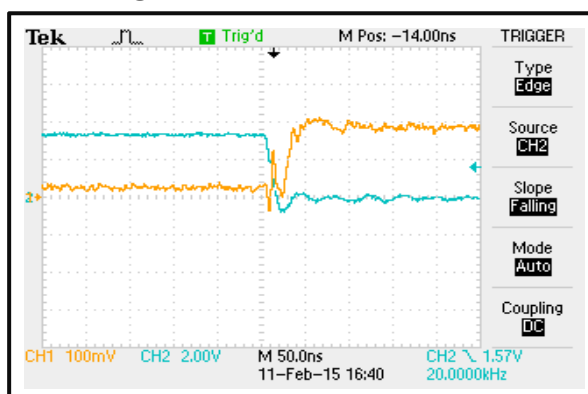
The datasheet for test 1dB



Switching Speed



Switching Speed

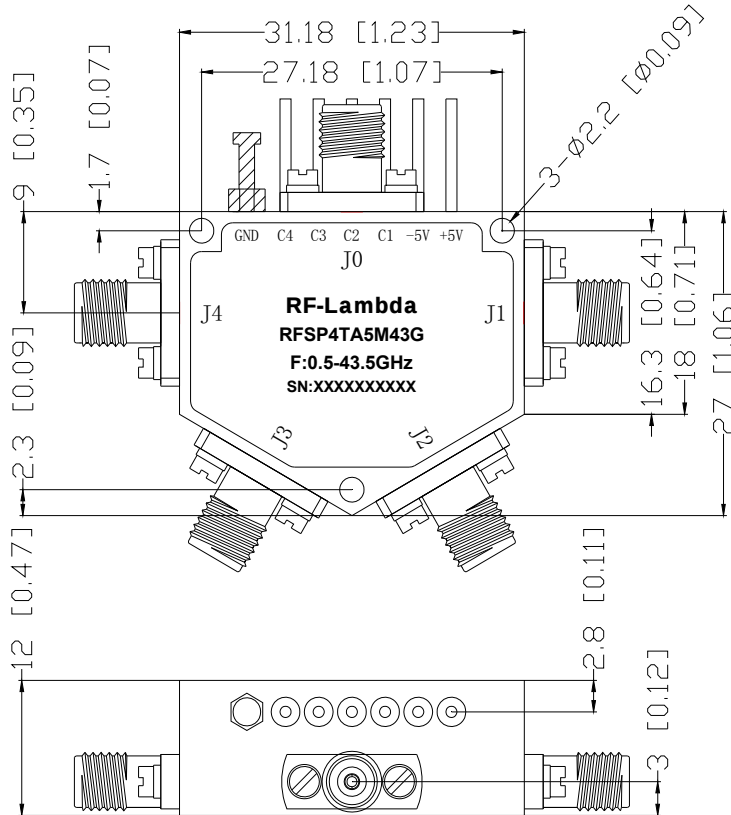


Absorptive Coaxial Single Pole Four Throw Switch 0.5-43.5GHz



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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