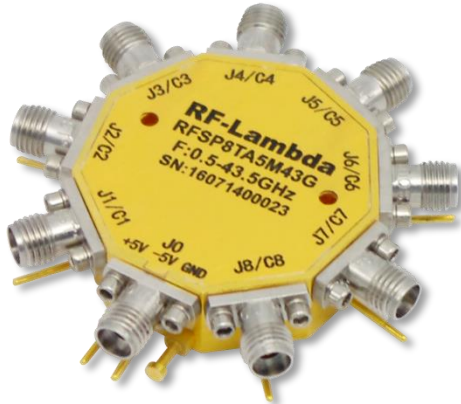




## Absorptive Coaxial SP8T Switch 0.5 - 43.5GHz



### Features

- Ultra Wide Band Operation 0.5-43.5GHz
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- Customization available upon request
- Hermetically sealed package up to 60,000ft available upon request.

Absorptive Coaxial Single Pole Eight Throw Switch 0.5-43.5GHz

Electrical Specifications, TA = +25° C, Vdd = +5V, Vss = -5V, Control TTL = 0 / +5V

Description	PN: RFSP8TA5M43G									
	SP8T Absorptive Switch									
	Low Power Cold Switching									
Parameters	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	Units
Frequency Range	0.5		8	8		26.5	26.5		43.5	GHz
Insertion Loss		4.2	4.5		6.5	7		7.5	8.5	dB
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/°C
Isolation	60	70		50	58		48	55		dB
Input VSWR		2	3		1.9	3		1.8	2.5	:1
Output VSWR		2	3		1.9	3		1.8	2.5	:1
RF Input power			23			23			23	dBm
DC Power Dissipation (CW)		0.3			0.4			0.5		W
0.1dB Compression Point (Po.1dB)		23			23			23		dBm
IIP3		55			55			50		dBm
Switching Speed		50	100		50	100		50	100	ns
Weight	1.41									ounces
Impedance	50									Ω
Bias Current (+5V/-5V)	150/40									mA
Input / Output Connectors	2.92mm - Female									
Finishing	Gold Plating									
Material	Aluminum									
Sealing	Hermetically Sealed (optional)									



**Absolute Maximum Ratings**

Biasing Voltage	+5V±10%/-5V±10%
TTL Control Voltage	-0.5~ 0.8V / 2 ~ 5.5V

**Ordering Information**

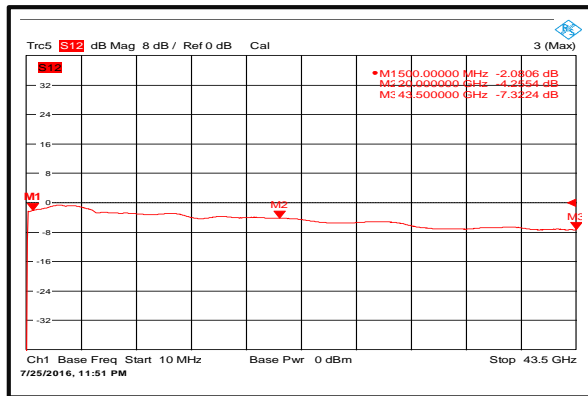
Part No.	ECCN	Description
RFSP8TA5M43G	EAR99	SP8T 0.5-43.5PIN Diode Switch

**Environmental Specifications**

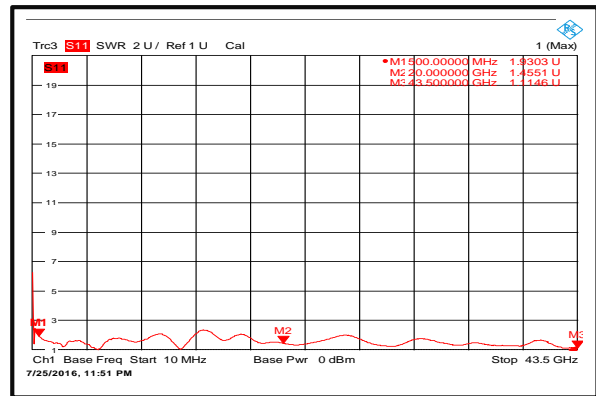
Operational Temperature (°C)	-45 ~ +85
Storage Temperature (°C)	-50 ~ +125
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.opsi min (Hermetically Seal Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35c,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

**Typical Performance Plots**

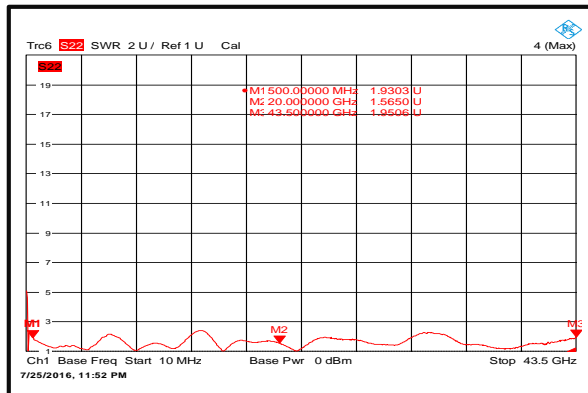
**Insertion Loss**



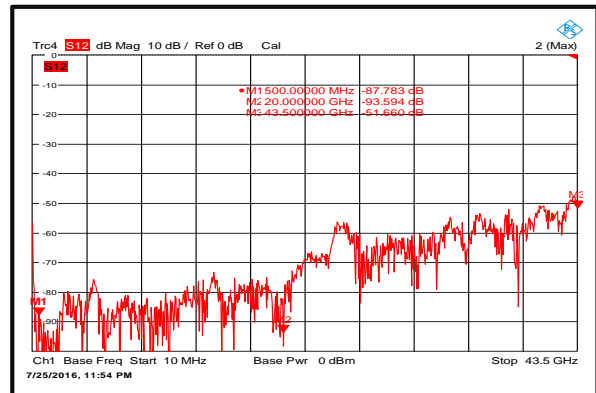
**Input VSWR**



**Output VSWR**



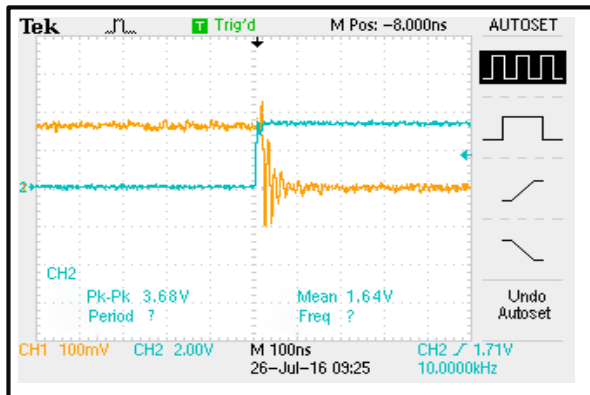
**Isolation**



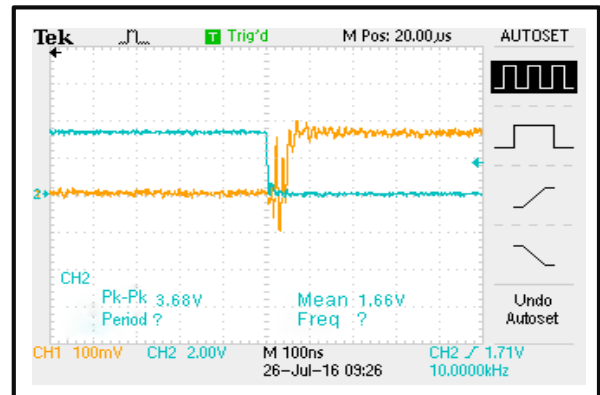
**Absorptive Coaxial Single Pole Eight Throw Switch 0.5-43.5GHz**



**Switching Speed**

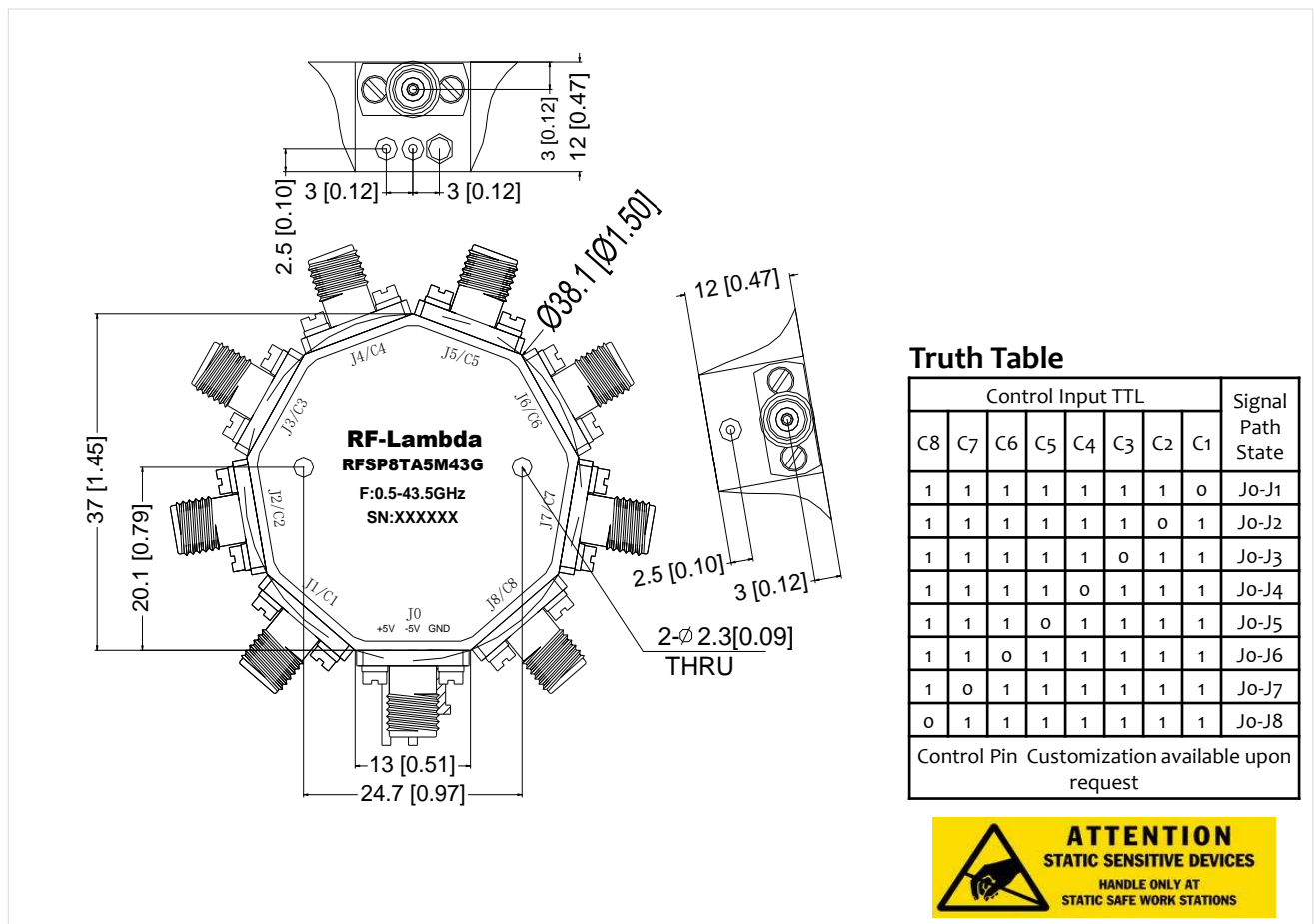


**Switching Speed**



**Outline Drawing:**

All Dimensions in mm [inches]



**Truth Table**

Control Input TTL								Signal Path State
C8	C7	C6	C5	C4	C3	C2	C1	
1	1	1	1	1	1	1	0	Jo-J1
1	1	1	1	1	1	0	1	Jo-J2
1	1	1	1	1	0	1	1	Jo-J3
1	1	1	1	0	1	1	1	Jo-J4
1	1	1	0	1	1	1	1	Jo-J5
1	1	0	1	1	1	1	1	Jo-J6
1	0	1	1	1	1	1	1	Jo-J7
0	1	1	1	1	1	1	1	Jo-J8

Control Pin Customization available upon request



**Important Notice**

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**Absorptive Coaxial Single Pole Eight Throw Switch 0.5-43.5GHz**