

Absorptive 0.1-50GHz Coaxial SP8T Switch

Features

- Ultra Wide Band Operation 0.1-50GHz
- TTL compatible driver include
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- Customization available upon request



Typical Applications

- Wireless Infrastructure
 - Military & Aerospace
 - Fiber Optics
- RF Microwave & VSAT
Test Instrument

Parameters	Min	Typ.	Max	Min	Typ.	Max	Min	Typ.	Max	Units
Frequency Range	0.1-18			18-43.5			43.5-50			GHz
Insertion Loss		5.5	6.5		7.5	8.5		9.5	10	dB
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/ °C
Isolation	50	65		45	55		45	53		dB
Input VSWR		2	3		2.5	3		2	2.5	: 1
Output VSWR		2	3		2.5	3		2	2.5	: 1
RF Input power			23			23			23	dBm
DC Power Dissipation		1.5			1.5			1.5		W
0.1dB Compression Point (P0.1dB)		23			23			23		dBm
IIP3		55			50			48		dBm
Switching Speed	100									ns
Weight	1.76									Ounces
Impedance	50									Ω
Bias Current(+5V/-15V)	280/50									mA
Input /Output Connector	2.4mm-Female									
Finishing	Gold Plating									
Material	Aluminum									
Sealing	Hermetically Sealed (optional)									

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Absolute Maximum Ratings

Biasing	+5V $\pm$ 10%/-15V $\pm$ 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

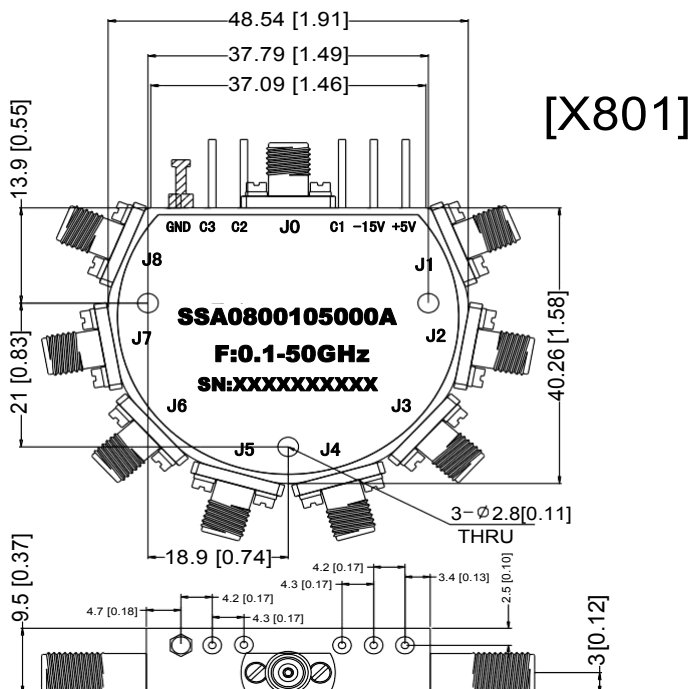
Part No.	ECCN	Description
SSA0800105000A	EAR99	SP8T 0.1-50GHz PIN Diode Switch

Environmental Specifications

Operational Temperature	-45°C to +85°C
Storage Temperature	-55°C to +125°C
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed 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

Outline Drawing:

All Dimensions in mm (inches)

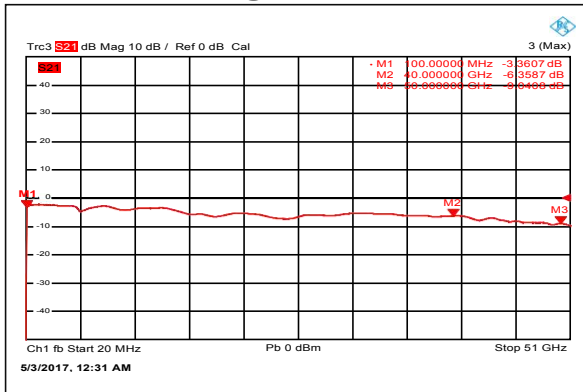


TruthTable

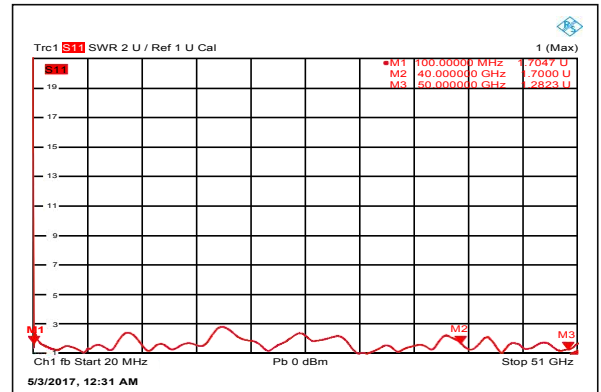
Control Input TTL			Signal Path State
C3	C2	C1	
0	0	0	J0-J1
0	0	1	J0-J2
0	1	0	J0-J3
0	1	1	J0-J4
1	0	0	J0-J5
1	0	1	J0-J6
1	1	0	J0-J7
1	1	1	J0-J8
Control Pin Customization available upon request			

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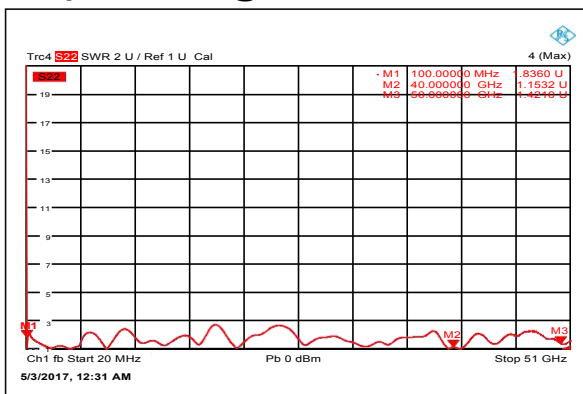
Insertion Loss @+25°C



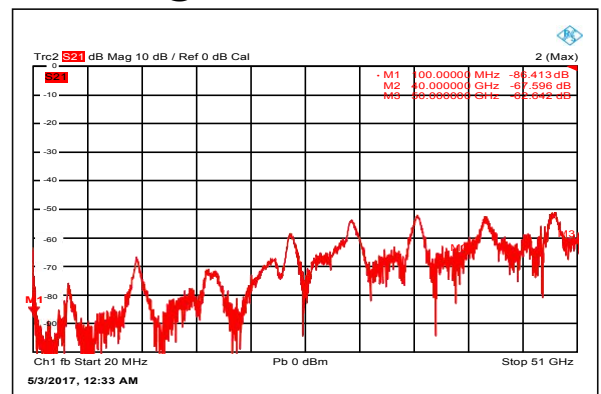
Input VSWR @+25°C



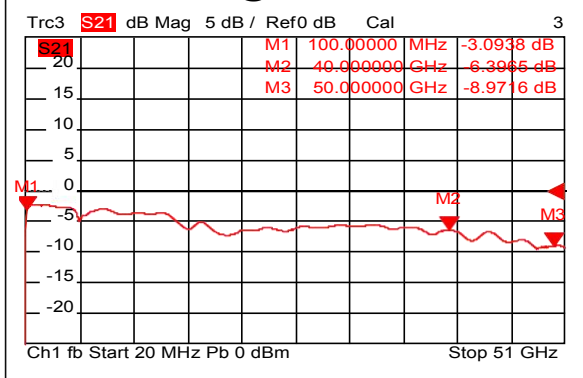
Output VSWR @+25°C



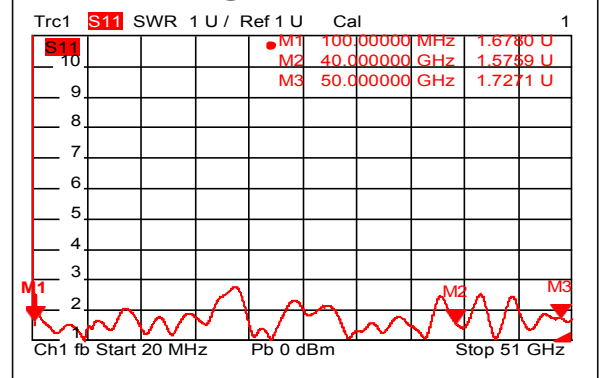
Isolation @+25°C



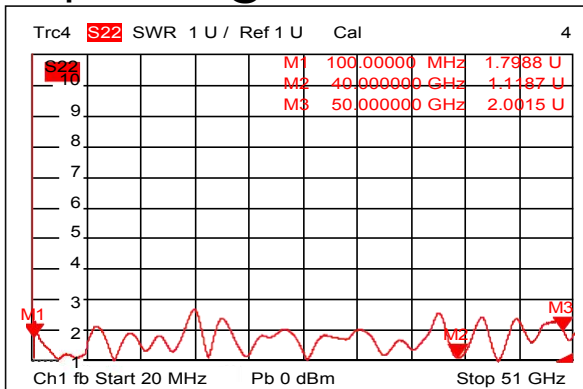
Insertion Loss @-45°C



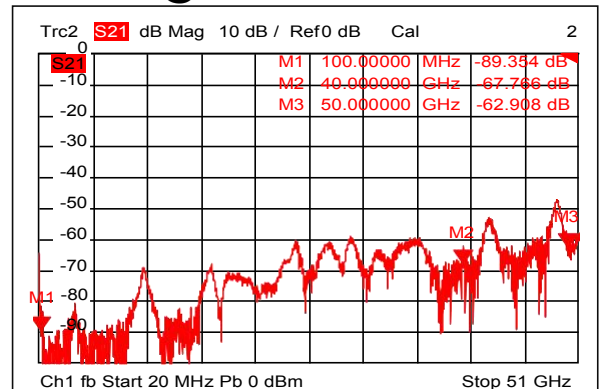
Input VSWR @-45°C



Output VSWR @-45°C

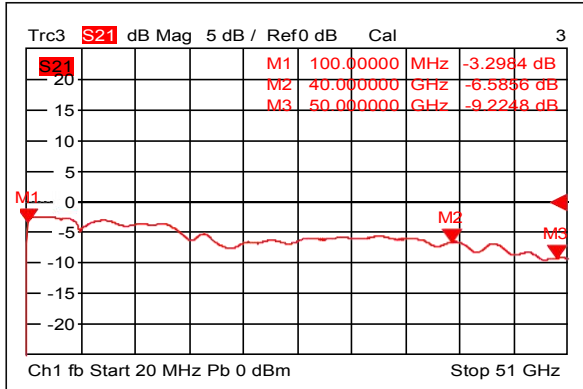


Isolation @-45°C

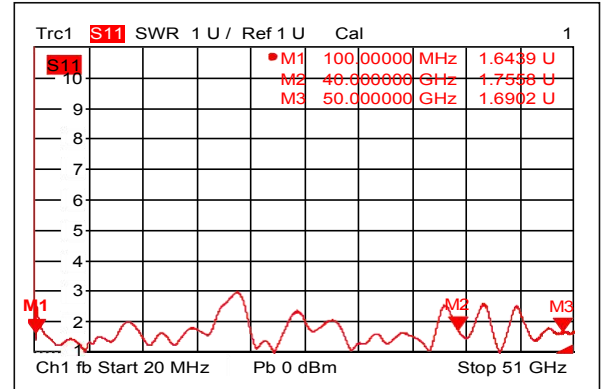


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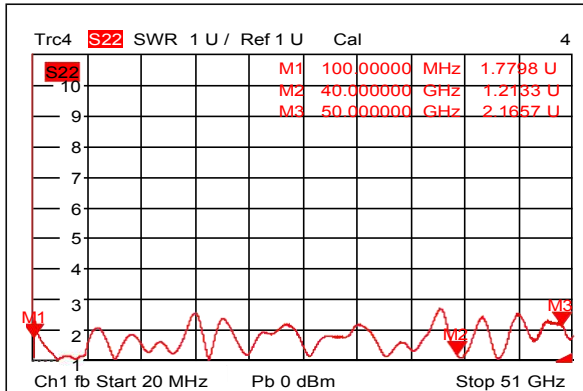
Insertion Loss @+85°C



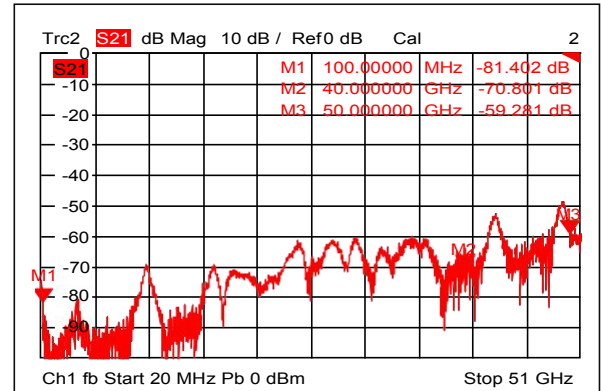
Input VSWR @+85°C



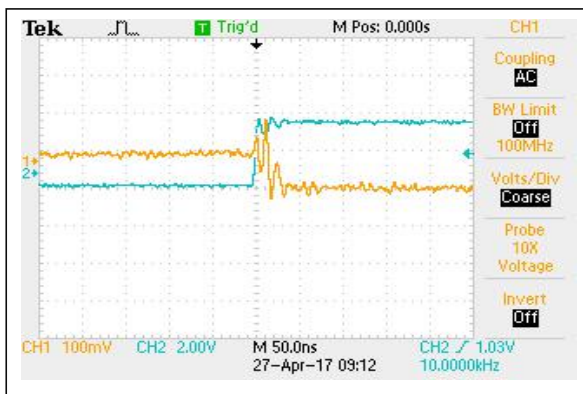
Output VSWR @+85°C



Isolation @+85°C



Switching Speed



Switching Speed

