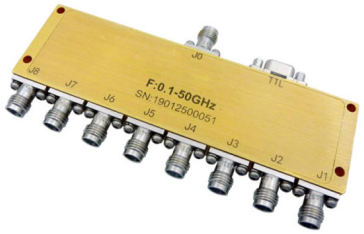
Absorptive 0.1-50GHz Coaxial SP8T Switch



Features

- Ultra Wide Band Operation 0.1-50GHz
- TTL compatible driver included
- 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		7.0	9.0		8	11.0		10	13.0	dB
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/ °C
Isolation	70	75		65	70		60	65		dB
Input VSWR		2.5	3		2.5	3		2.5	3	: 1
Output VSWR		2.5	3		2.5	3		2.5	3	: 1
RF Input power (CW)			23			23			23	dBm
DC Power Dissipation		0.8			0.8			0.8		W
0.1dB Compression Point(P0.1dB)		23			23			23		dBm
IIP3		55			50			50		dBm
Switching Speed		50	100		50	100		50	100	ns
Weight	2.82									ounces
Impedance	50									Ω
Bias Current (+5V/-5V)	350/40									mA
Input / Output Connectors	2.4 mm - Female									
Finishing	Gold Plating									
Material	Aluminum									
Sealing	Hermetically Sealed (optional)									

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Absolute Maximum Ratings

Biasing	+5V±10%/-5V±10%
TTL Control Voltage	0~0.8V/2.8~5V

Environmental Specifications

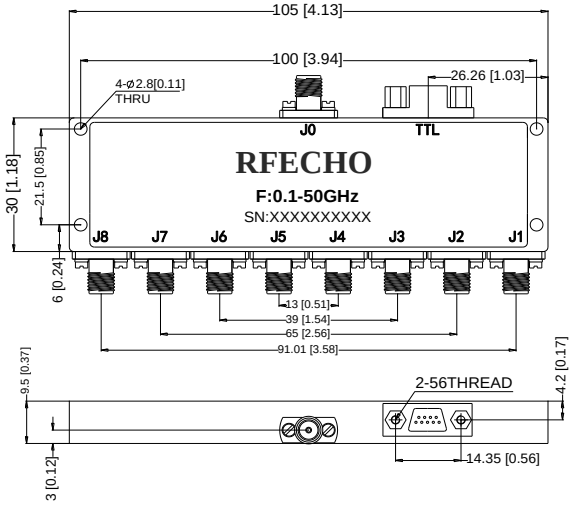
Operational Temperature	-45ºC~+85ºC
Storage Temperature	-55ºC~+125ºC
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35c, 95%RH at 40ºc
Shock	20G for 11msec half sine wave,3 axis both directions

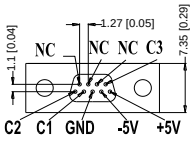
Ordering Information

Part No.	ECCN	Description
DBSA0800105000C	EAR99	SP8T 0.1-50GHz PIN Diode Switch

Outline Drawing:

All Dimensions in mm (inches)





MICRO-D9(Female)

Truth Table

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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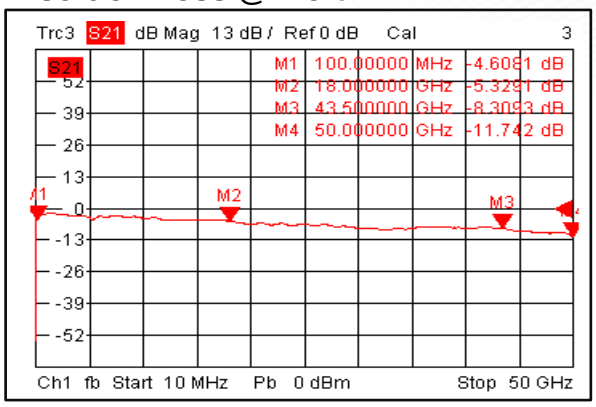
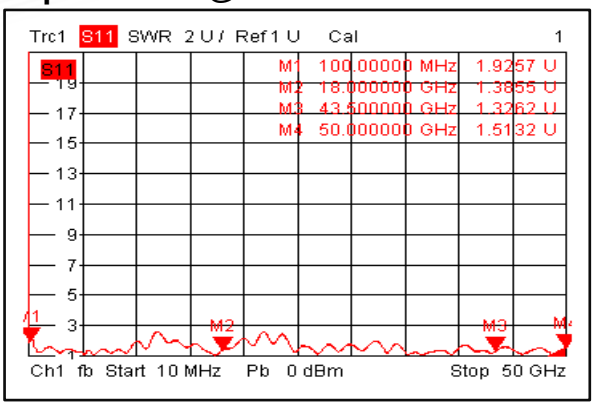
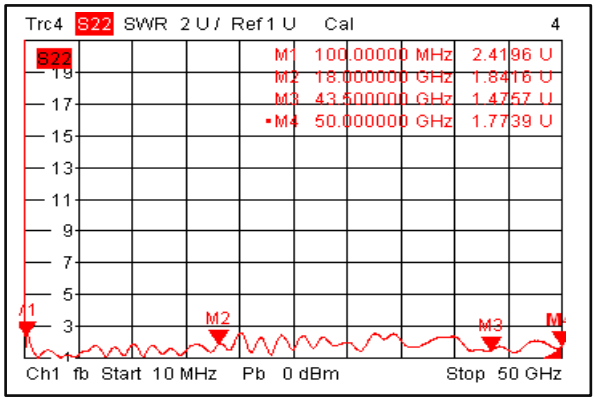
Insertion Loss @+25℃



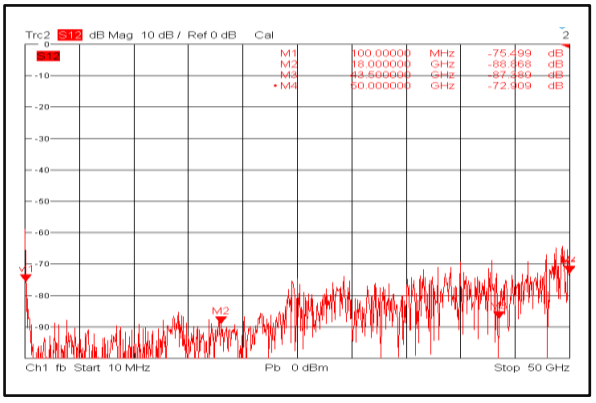
Input VSWR @+25℃



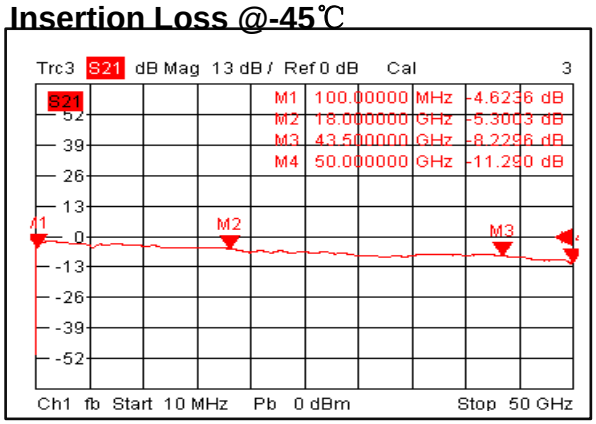
Output VSWR @+25℃



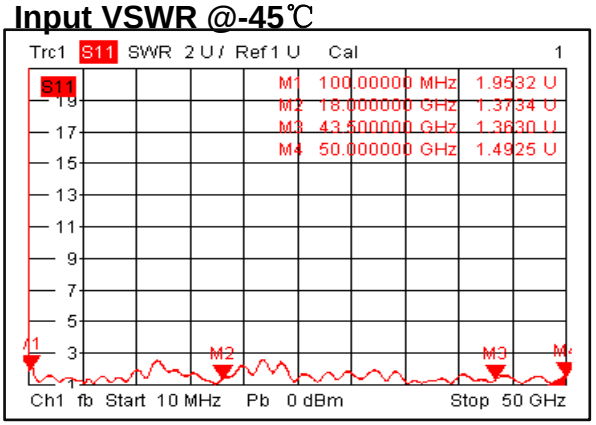
Isolation @+25℃



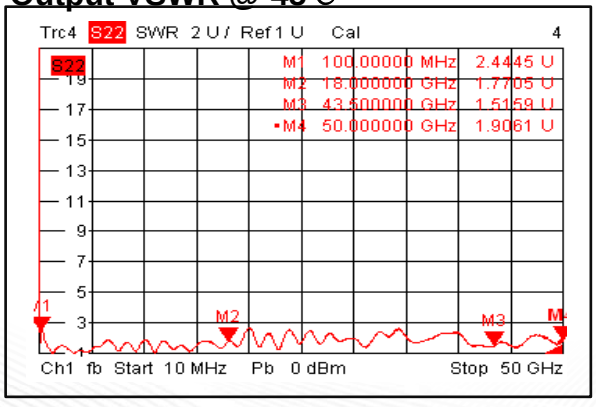
Insertion Loss @-45℃



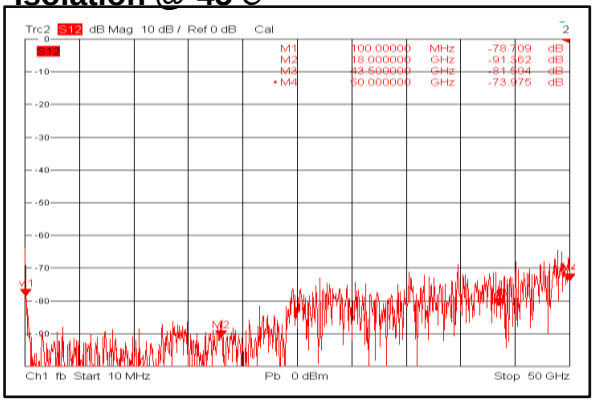
Input VSWR @-45℃



Output VSWR @-45℃



Isolation @-45℃



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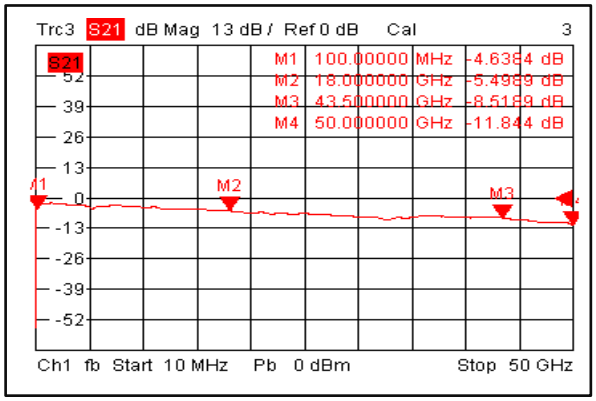
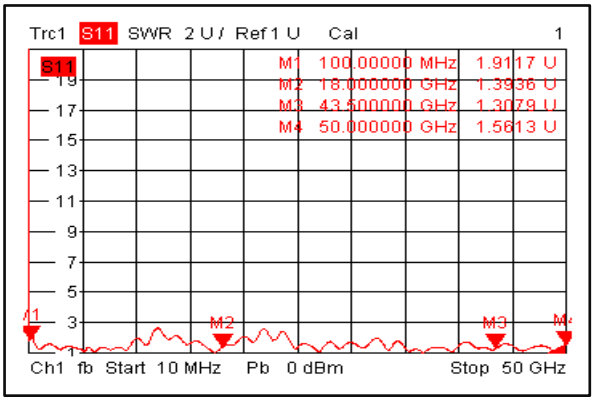
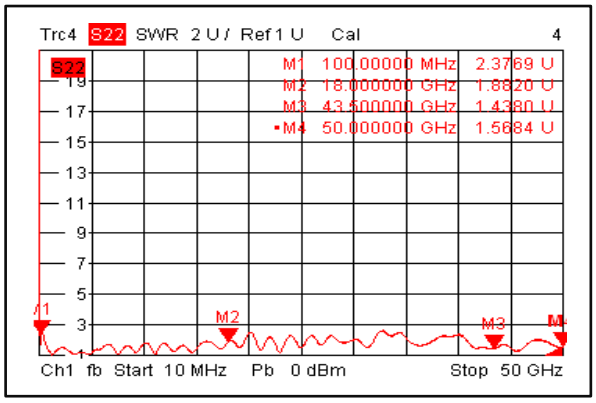
Insertion Loss @+85℃



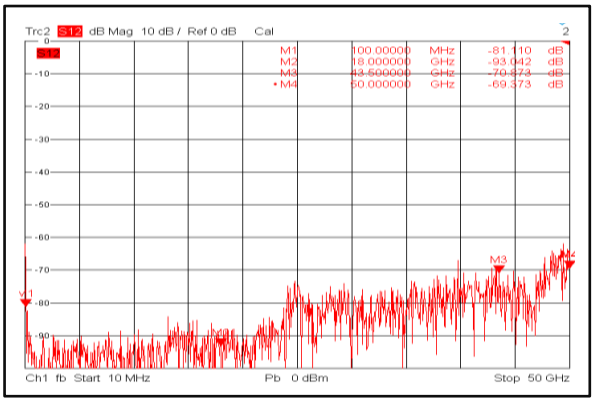
Input VSWR @+85℃



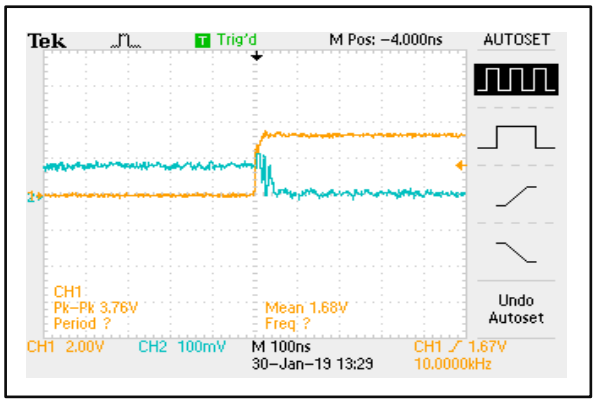
Output VSWR @+85℃



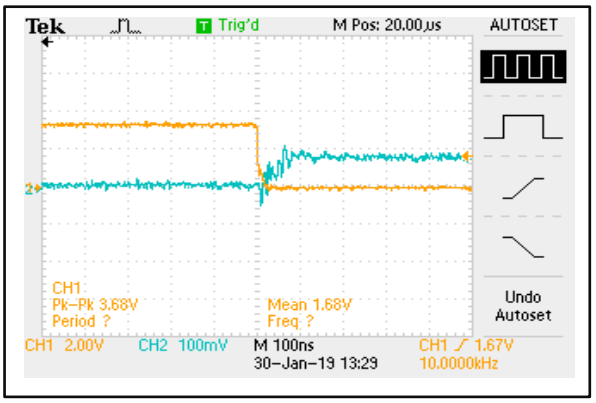
Isolation @+85℃



Switching Speed



Switching Speed



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