



Absorptive Coaxial SP8T Switch 0.1 - 50GHz

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

Parameter	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		48	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 (CW)			23			23			23	dBm
Power Dissipation		1.5			1.5			1.5		W
0.1dB Compression Point (P0.1dB)		23			23			23		dBm
IIP3		43			38			33		dBm
Switching Speed	100 Max.									ns
Weight	1.9 Max.									ounces
Impedance	50									Ω
Bias Current (+5V/-15V)	300/50 Max.									mA
Input / Output Connectors	2.4mm-Female									
Finish	Gold Plated									
Material	Aluminum									
Sealing	Hermetically Sealed (Optional)									



Absolute Maximum Ratings

Biasing	+5V±10%/-15V±10% @25°C
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Ordering Information

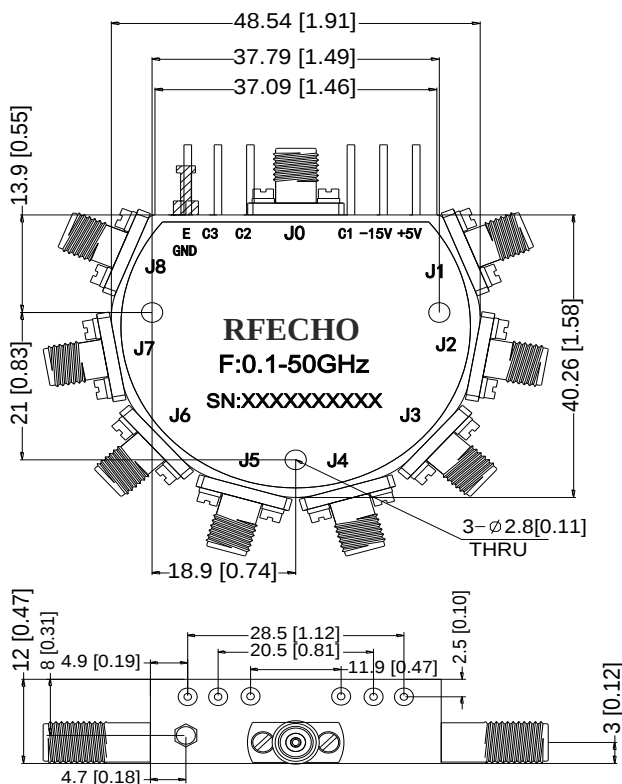
Part No.	ECCN	Description
DBSA0800105000B	EAR99	SP8T 0.1-50GHz PIN Diode Switch

Environmental Specifications

Operational Temperature	-40°C~+85°C (Case Temperature)
Storage Temperature	-50°C~+105°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 35°C, 95%RH at 40°C
Shock	20G for 11msec half sine wave, 3 axis both directions

Outline Drawing:

All Dimensions in mm (inches)

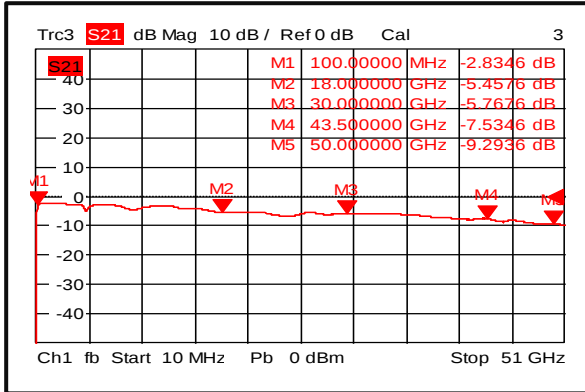


Truth Table

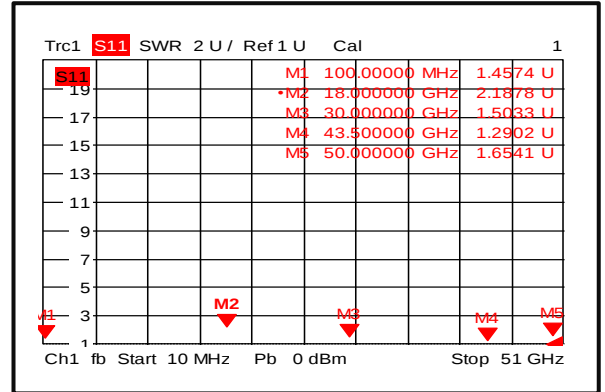
TTL Control Voltage THRESHOLD				Low(0)=0~0.8V
Control Input TTL				High(1)=2.8~5V
				Signal Path State
E	C3	C2	C1	
1	X	X	X	ALL port off(50Ω)
0	0	0	0	J0-J1
0	0	0	1	J0-J2
0	0	1	0	J0-J3
0	0	1	1	J0-J4
0	1	0	0	J0-J5
0	1	0	1	J0-J6
0	1	1	0	J0-J7
0	1	1	1	J0-J8
Control Pin Customization available upon request				



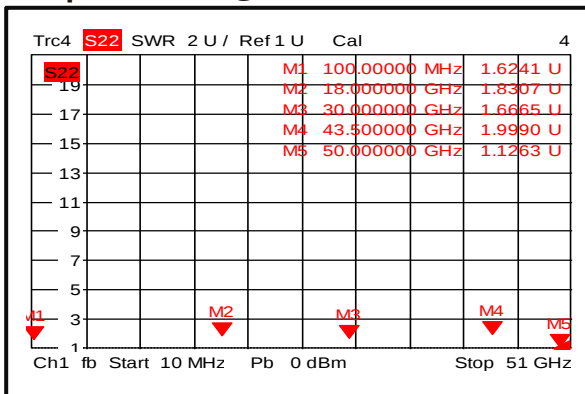
Insertion Loss @+25°C



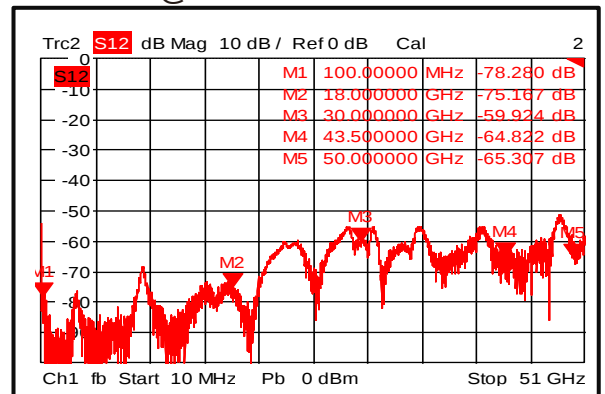
Input VSWR @+25°C



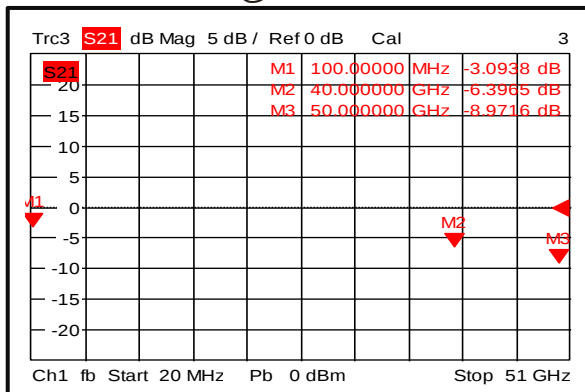
Output VSWR @+25°C



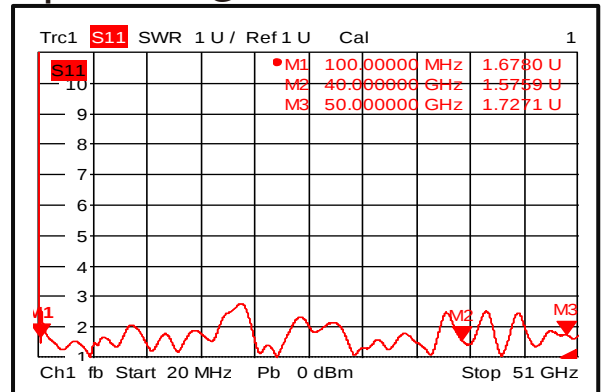
Isolation @+25°C



Insertion Loss @-40°C

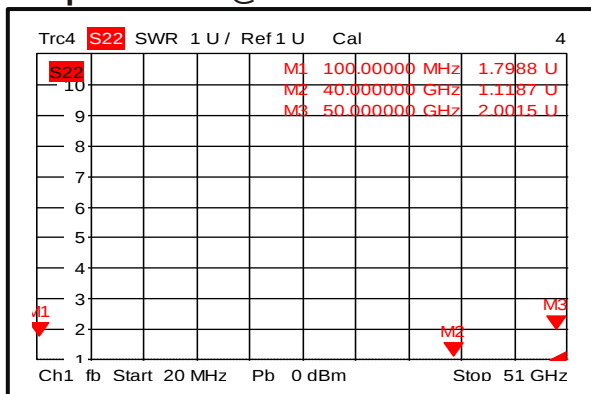


Input VSWR @-40°C

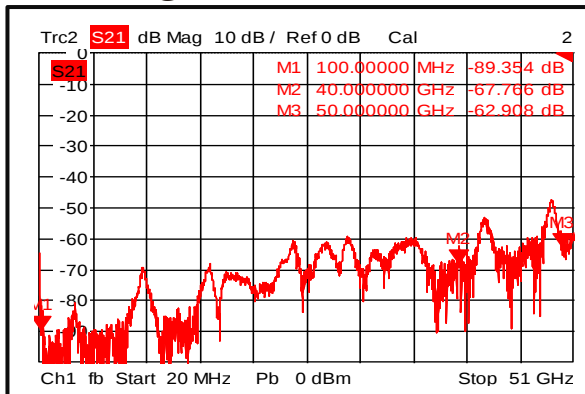




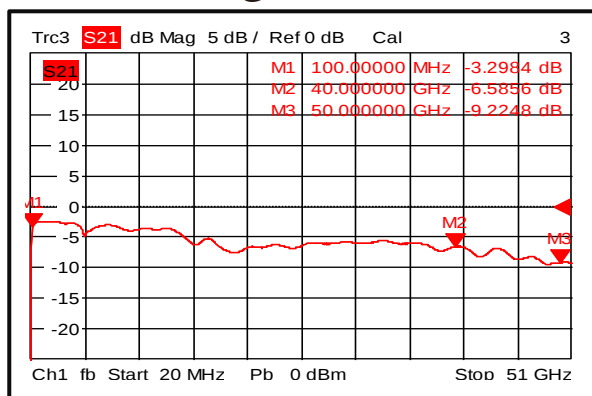
Output VSWR @-40°C



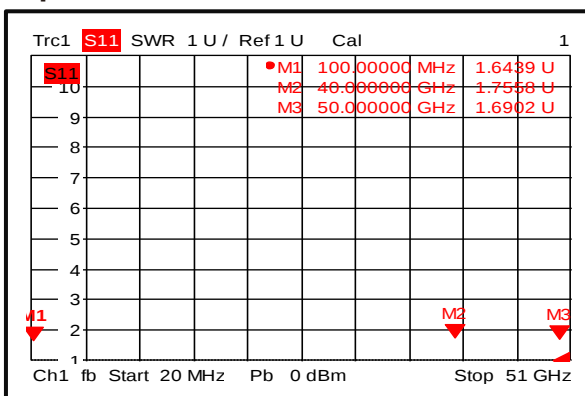
Isolation @-40°C



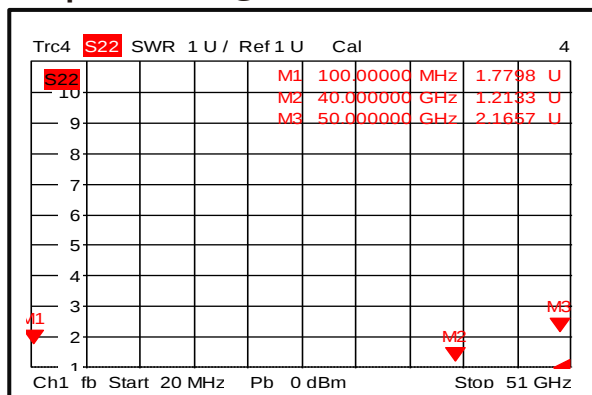
Insertion Loss @+85°C



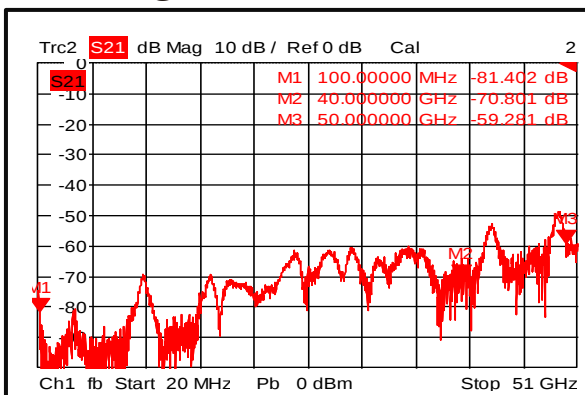
Input VSWR @+85°C



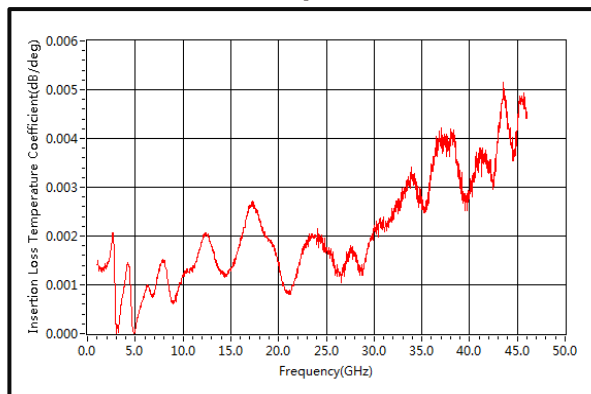
Output VSWR @+85°C



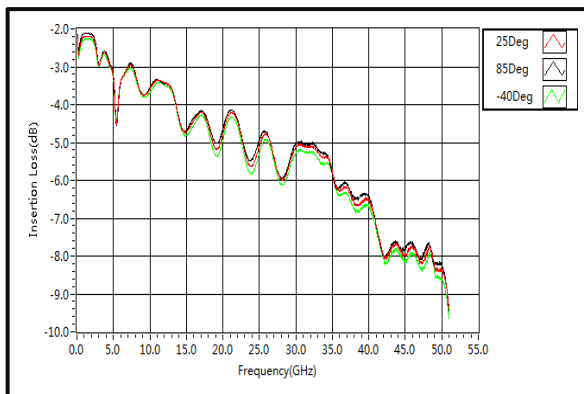
Isolation @+85°C



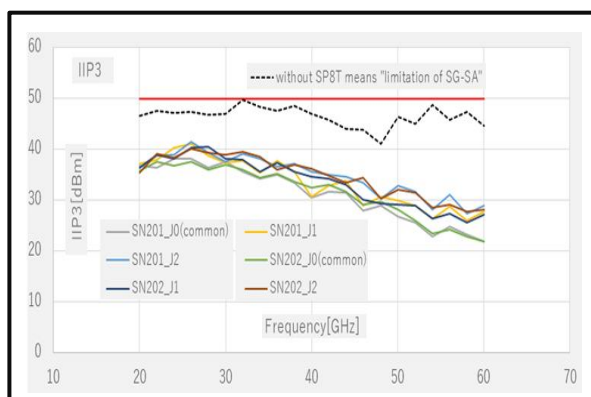
Insertion Loss Temperature Coefficient



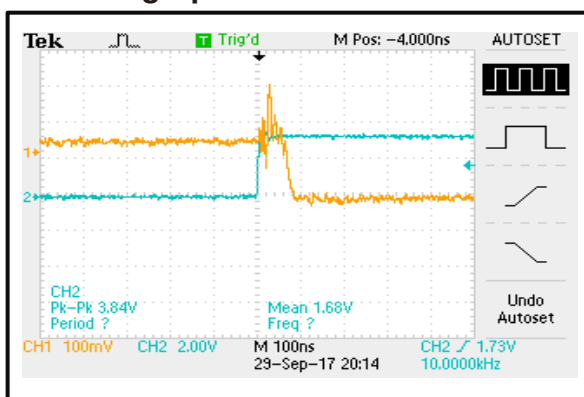
Insertion Loss vs. Temperature



IIP3



Switching Speed



Switching Speed

