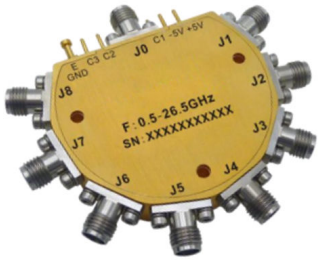
RFecho
A Gateway to RFWorld

Absorptive Coaxial SP8T Switch 0.5 – 26.5GHz

Features

- Ultra Wide Band Operation 0.5-26.5GHz
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- Customization available upon request



Typical Applications

- Wireless Infrastructure
- Test and measurement Instrument
- Fiber Optics

RF Microwave & VSAT

5G communication

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range		0.5-6			6-12			12-26.5		GHz
Insertion Loss		2.8	3.5		3.5	4.5		5.0	5.5	dB
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/ °C
Isolation	60	65		50	55		45	50		dB
Input VSWR		2	2.8		2.5	2.8		2	2.8	: 1
Output VSWR		2	2.8		2.5	2.8		2	2.8	: 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			41			38		dBm
Switching Speed	100 Max.									ns
Weight	1.8 Max.									ounces
Impedance	50									Ω
Bias Current (+5V/-5V)	200/50 Max.									mA
Input / Output Connectors	SMA-Female									
Finish	Gold Plated									
Material	Aluminum									
Sealing	Hermetically Sealed (Optional)									

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Absolute Maximum Ratings

Biasing	+5V±10%/-5V±10%

Environmental Specifications

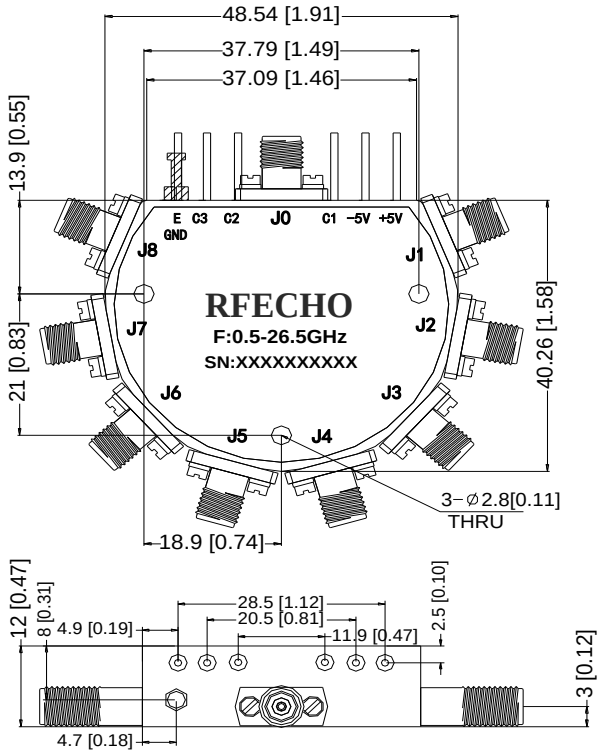
Operational Temperature	-40ºC~+85ºC
Storage Temperature	-50ºC~+105ºC
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35ºc, 95%RH at 40ºc
Shock	20G for 11msec half sine wave,3 axis both directions

Ordering Information

Part No.	Description
DBSA0800502600A	SP8T 0.5-26.5GHz PIN Diode Switch

Outline Drawing:

All Dimensions in mm (inches) Housing Tolerances ±0.1 (0.004)



Truth Table

TTL Control Voltage THRESHOLD				Low(0)=0~0.8V High(1)=2.8~5V
Control Input TTL				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				

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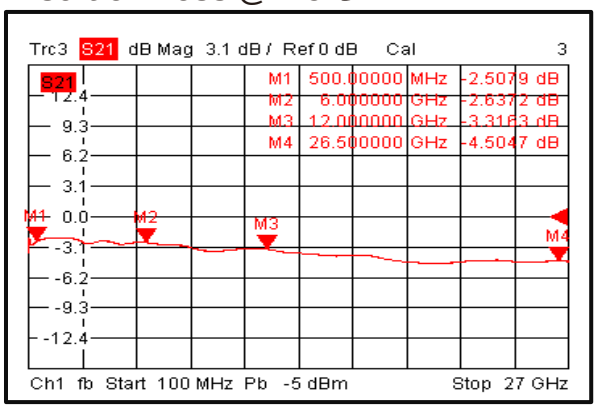
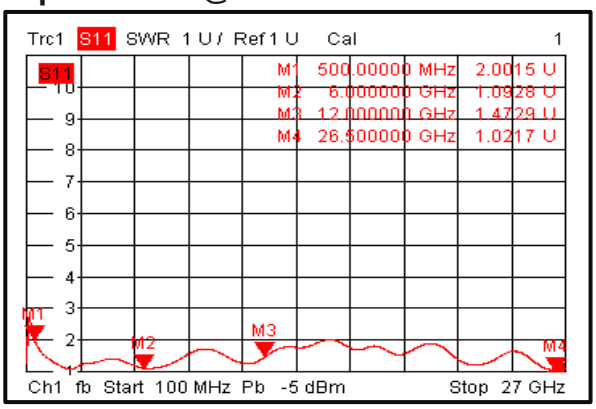
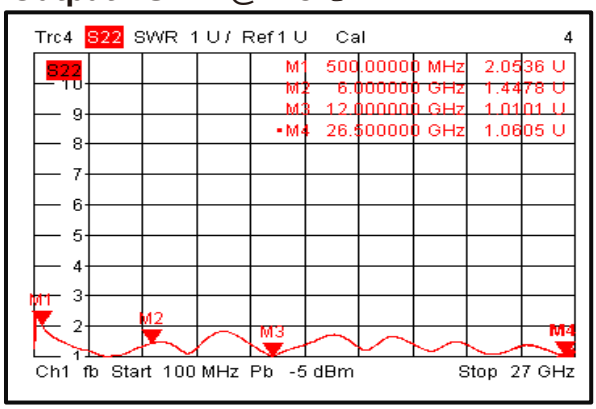
Insertion Loss @+25℃



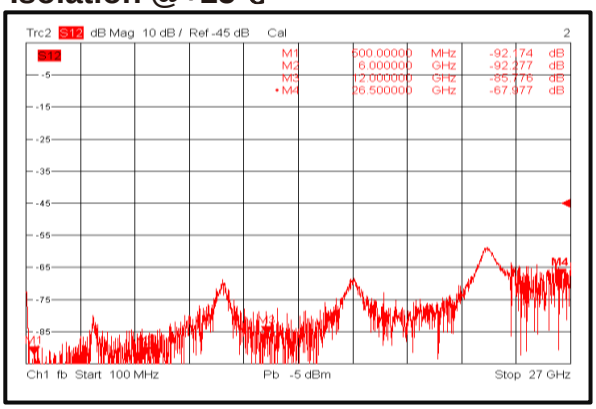
Input VSWR @+25℃



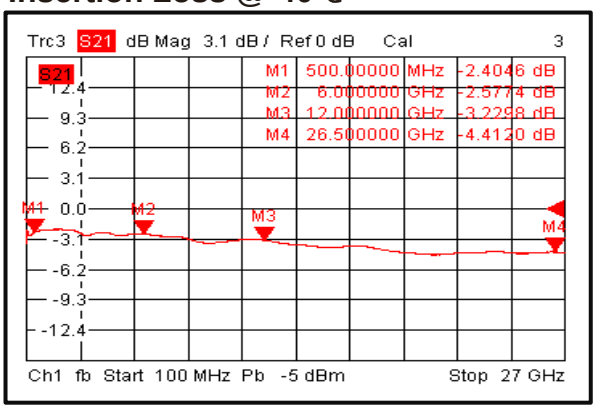
Output VSWR @+25℃



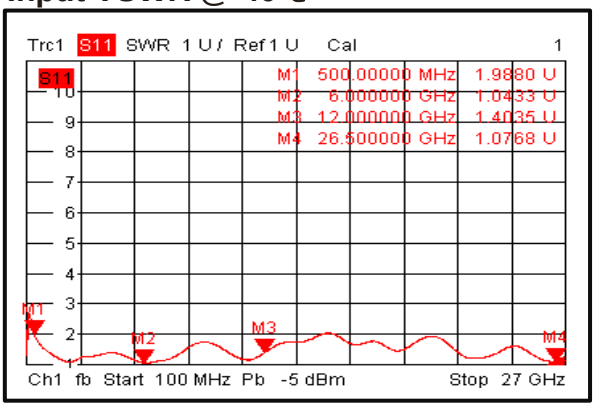
Isolation @+25℃



Insertion Loss @-40℃



Input VSWR @-40℃



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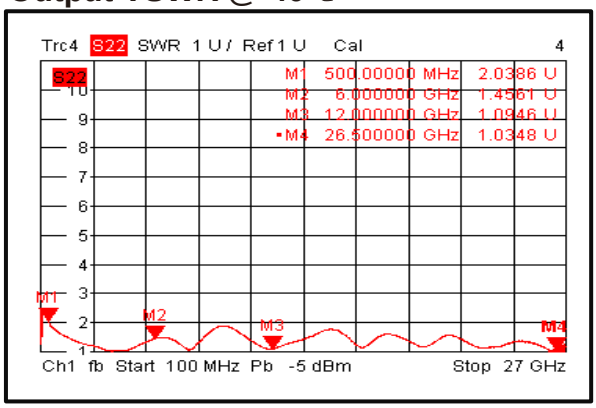
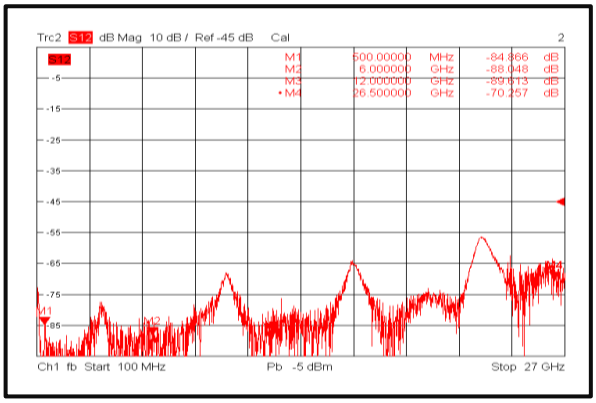
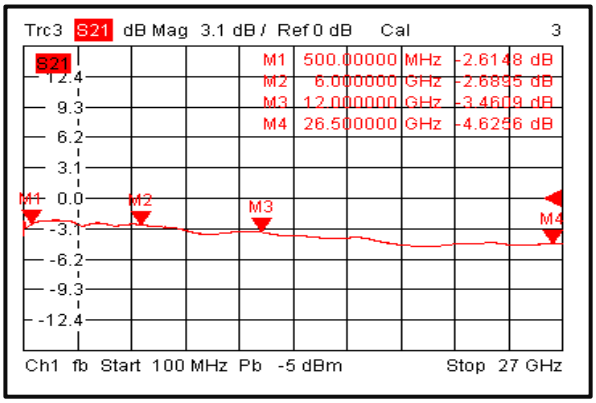
Output VSWR @-40℃



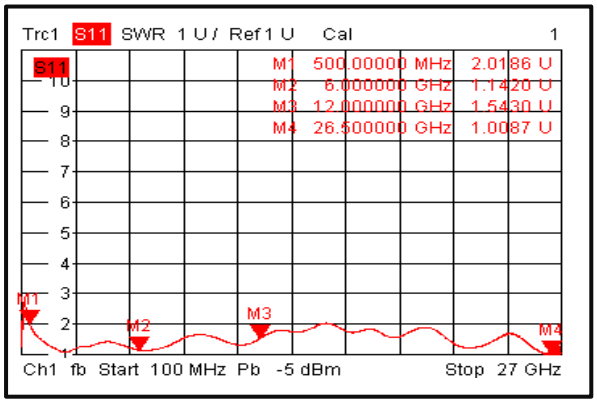
Isolation @-40℃



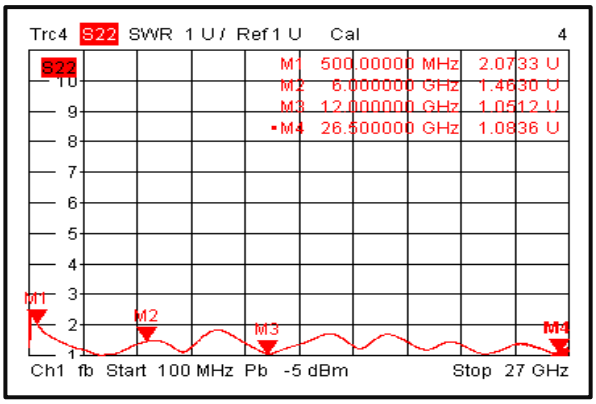
Insertion Loss @+85℃



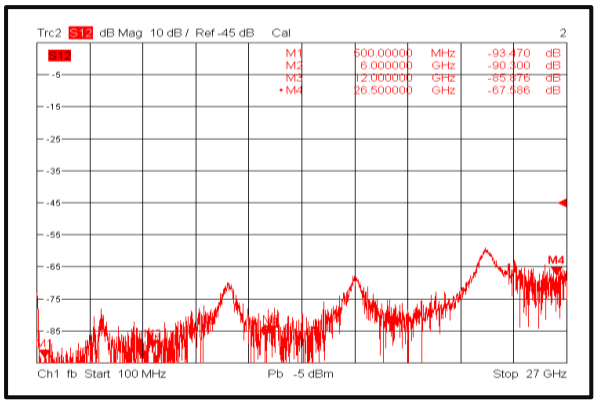
Input VSWR @+85℃



Output VSWR @+85℃



Isolation @+85℃



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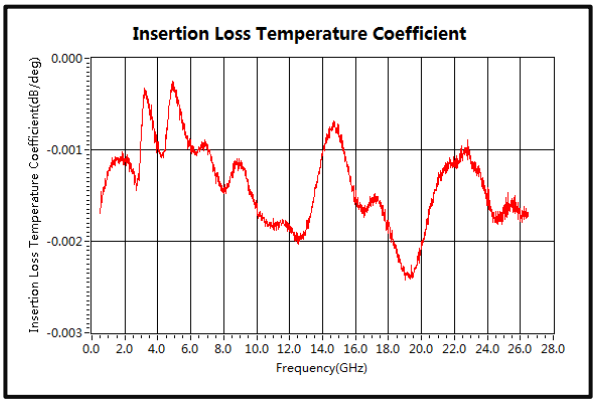
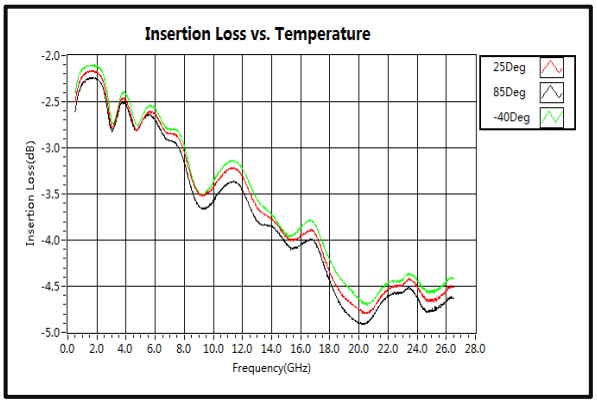
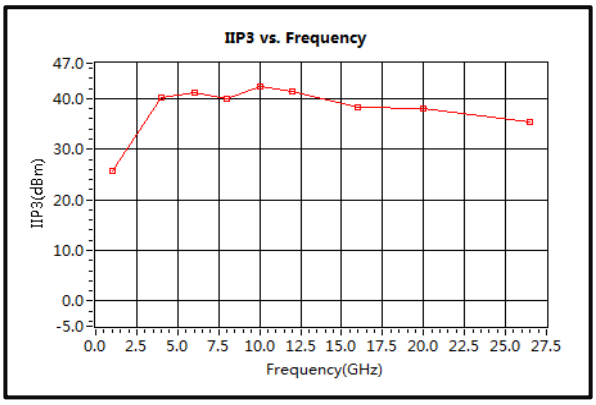
Insertion Loss Temperature Coefficient



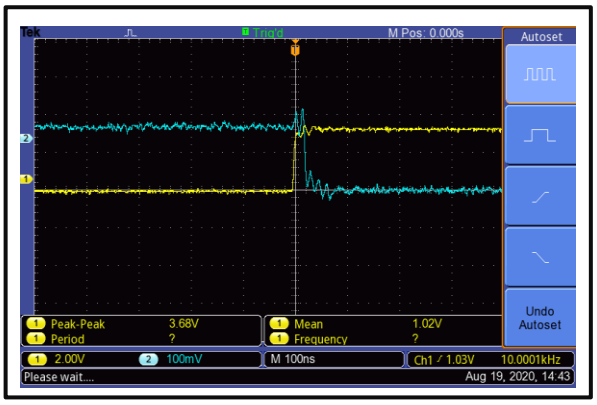
Insertion Loss vs. Temperature



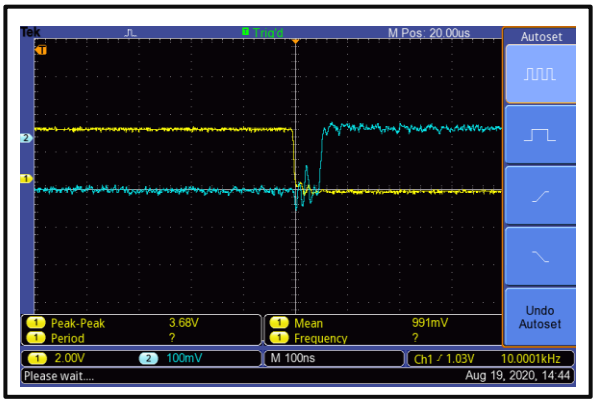
IIP3



Switching Speed



Switching Speed



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