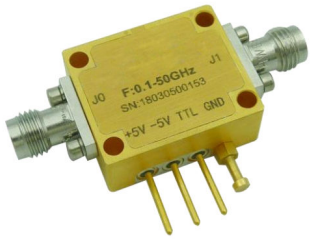
Absorptive Coaxial SPST Switch 0.1-50GHz

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
- 5G communication
- Test and measurement Instrument

RF Microwave & VSAT
Fiber Optics

Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	0.1		18	18		50	GHz
Insertion Loss		2.5	3.2		5.5	6.0	dB
Insertion Loss Temperature Coefficient		0.003			0.003		dB/ ° C
Isolation (J0→J1)	60	80		60	70		dB
Input VSWR		1.5	2.2		2.1	2.5	: 1
Output VSWR		1.5	2.2		2.1	2.5	: 1
RF Input Power (CW)			23			23	dBm
DC Power Dissipation		0.4			0.4		W
0.1dB Compression Point (P0.1dB)		23			23		dBm
IIP3		43			38		dBm
Switching Speed	100 Max.						ns
Weight	0.55 Max.						ounces
Impedance	50						Ω
Bias Current (+5V/-5V)	55/50 Max.						mA
Input /Output Connectors	2.4mm-Female						
Finish	Gold Plated						
Material	Aluminum						
Sealing	Hermetically Sealed (Optional)						

Absolute Maximum Ratings

Biasing	+5V±10%/-5V±10%

Environmental Specifications

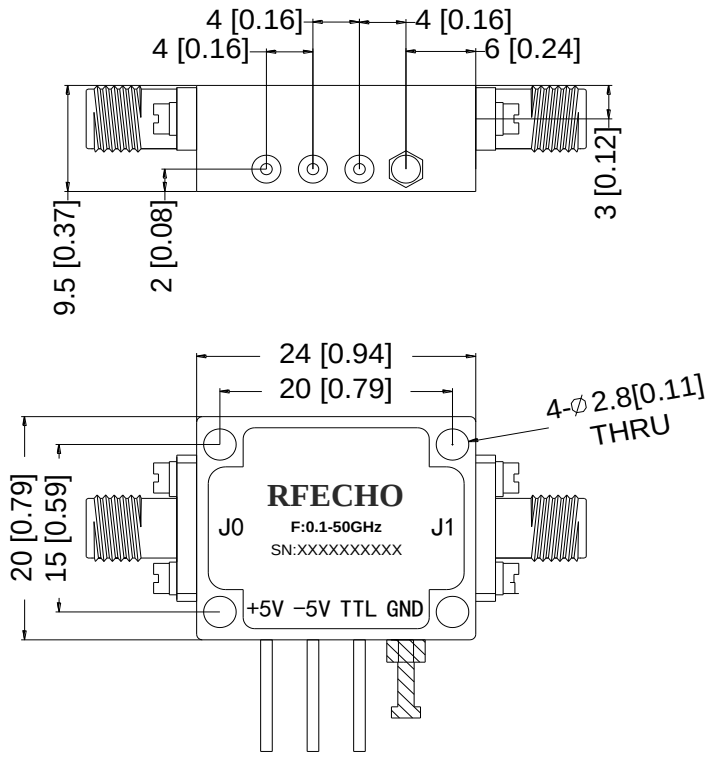
Operational Temperature	-40℃~+85℃ (Case Temperature)
Storage Temperature	-50℃~+105℃
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100%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

Ordering Information

Part No.	Description
DBSA0100105000A	SPST 0.1-50GHz PIN Diode Switch

Outline Drawing:

All Dimensions in mm (inches)

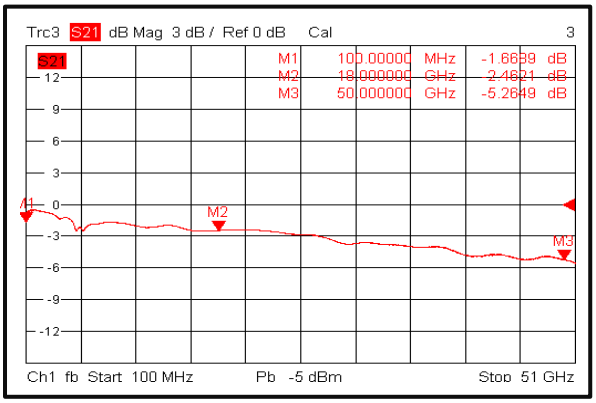


Notes:
J0: Reflective Port
J1: Absorptive Port

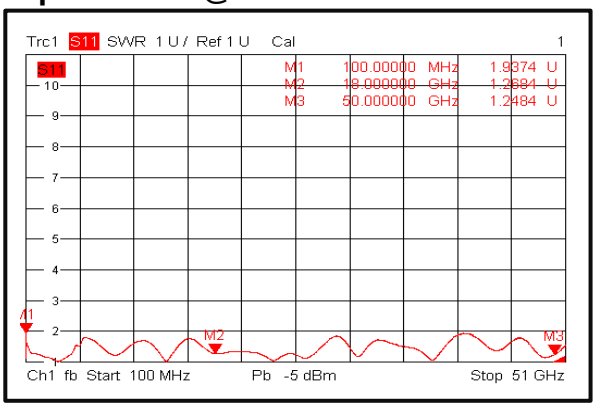
Truth Table

TTL Control Voltage	Low(0)=0~0.8V
	High(1)=2.8~5V
Control Input TTL	State
0	OFF
1	ON
Control Pin Customization available upon request	

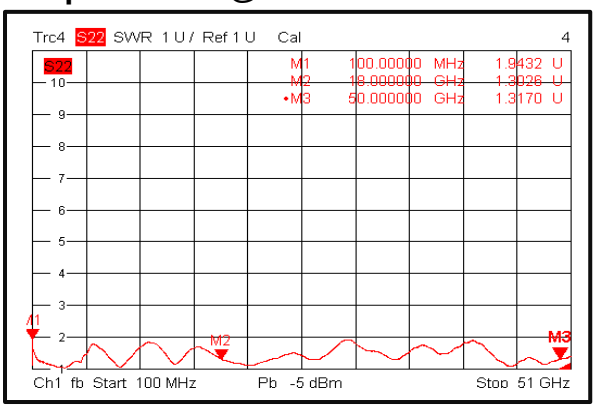
Insertion Loss @+25℃



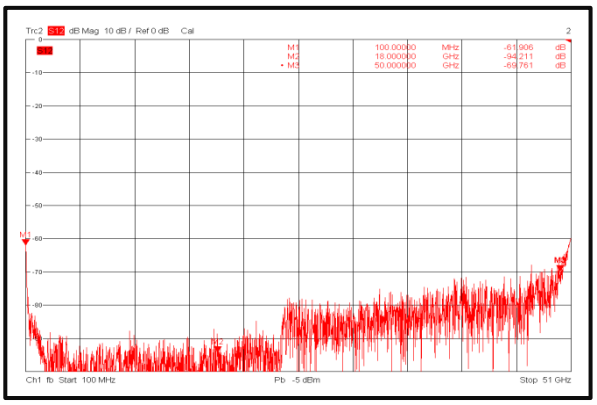
Input VSWR @+25℃



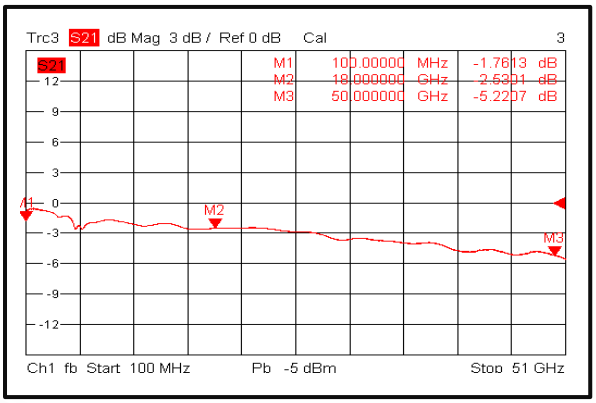
Output VSWR @+25℃



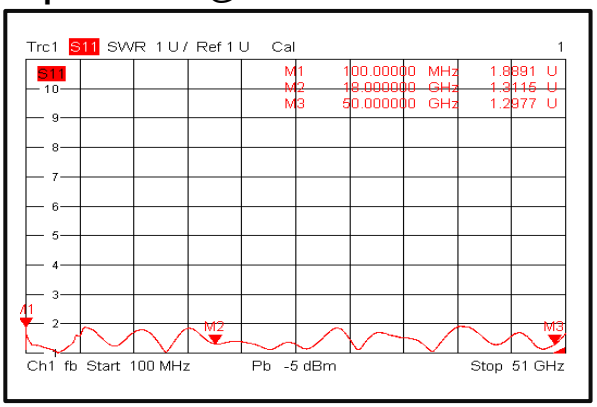
Isolation @+25℃



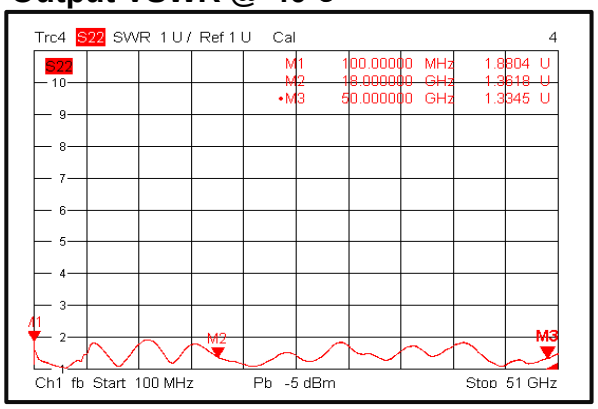
Insertion Loss @-40℃



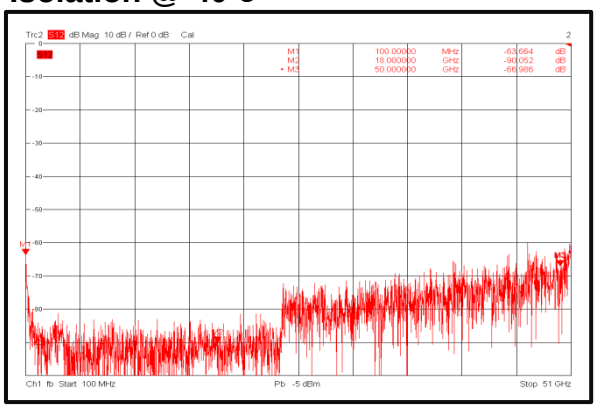
Input VSWR @-40℃



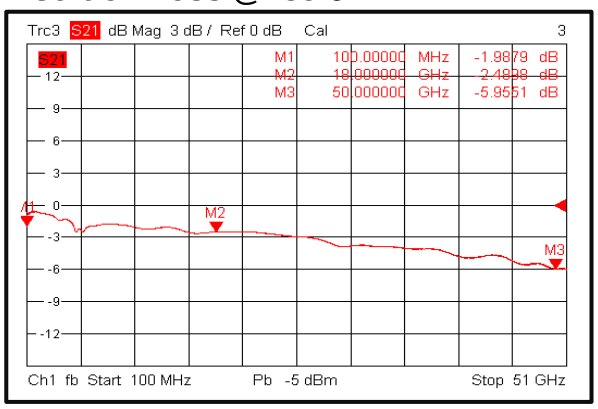
Output VSWR @-40℃



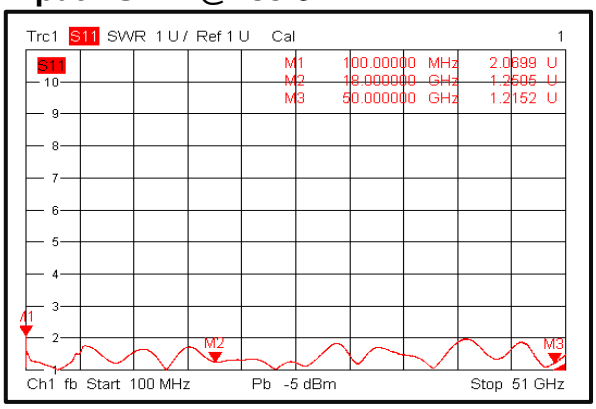
Isolation @-40℃



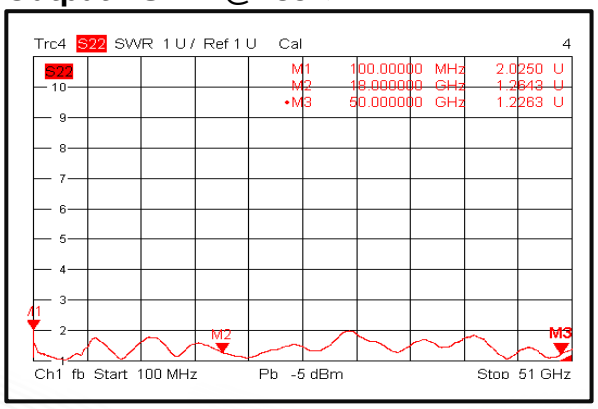
Insertion Loss @+85℃



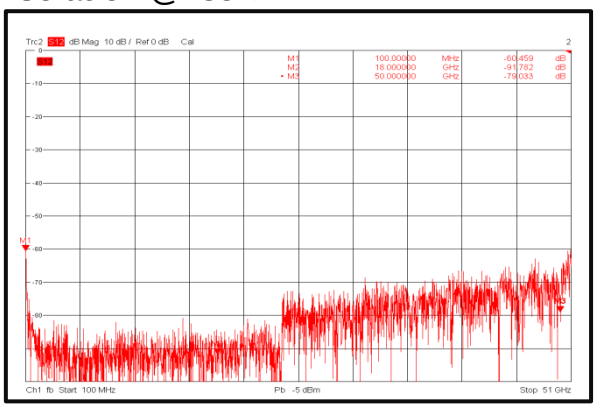
Input VSWR @+85℃



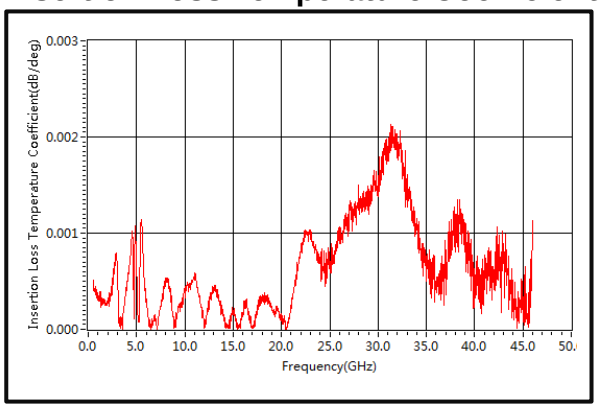
Output VSWR @+85℃



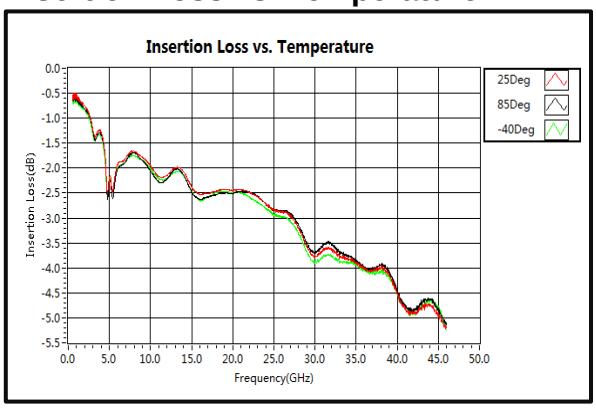
Isolation @+85℃



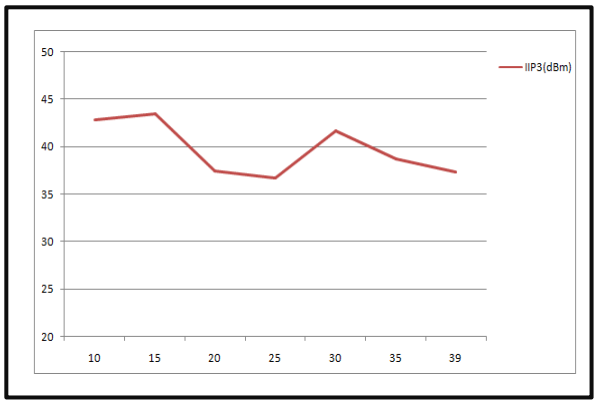
Insertion Loss Temperature Coefficient



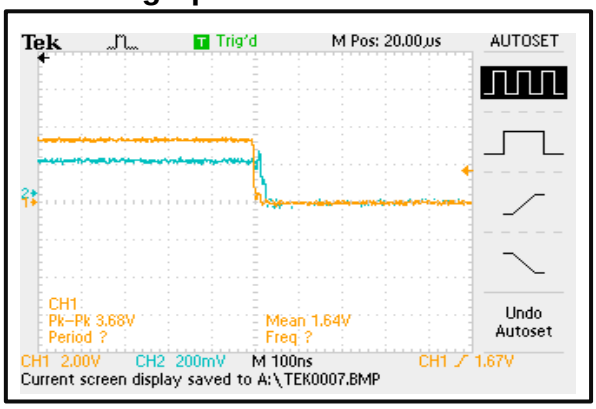
Insertion Loss vs. Temperature



IIP3



Switching Speed



Switching Speed