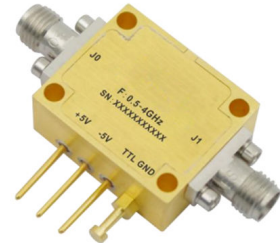




# Absorptive 0.5-4GHz Coaxial SPST Switch

## Features

- Wide Band Operation 0.5-4GHz
- 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	0.5		2	2		4	GHz
Insertion Loss		0.7	1.0		1.0	1.5	dB
Insertion Loss Temperature Coefficient		0.003			0.003		dB/ ° C
Isolation (J0→J1)	80	85		80	85		dB
Input VSWR		1.3	1.5		1.3	1.5	: 1
Output VSWR		1.3	1.5		1.3	1.5	: 1
RF Input Power			30			30	dBm
DC Power Dissipation (CW)		0.3			0.3		W
0.1dB Compression Point (P0.1dB)		30			30		dBm
IIP3		45			45		dBm
Switching Speed	100 Max.						ns
Weight	0.5 Max.						ounces
Impedance	50						Ω
Bias Current (+5V / -5V)	80/50 Max.						mA
Input / Output Connectors	SMA-Female						
Finish	Gold Plated						
Material	Aluminum						
Sealing	Hermetically Sealed (Optional)						



### Absolute Maximum Ratings

Biasing	+5V ± 10%/-5V ± 10%
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### Ordering Information

Part No.	Description
DBSA0100500400A	SPST 0.5-4GHz 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 Uncontrolled 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) Tolerances ±0.1 (0.004)

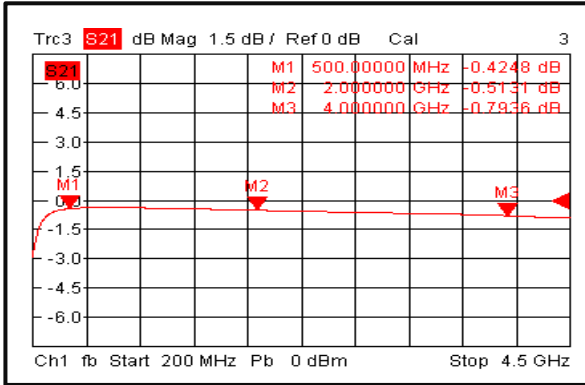
**Notes:**  
**J0: Absorptive Port**  
**J1: Reflective port**

**Truth Table**

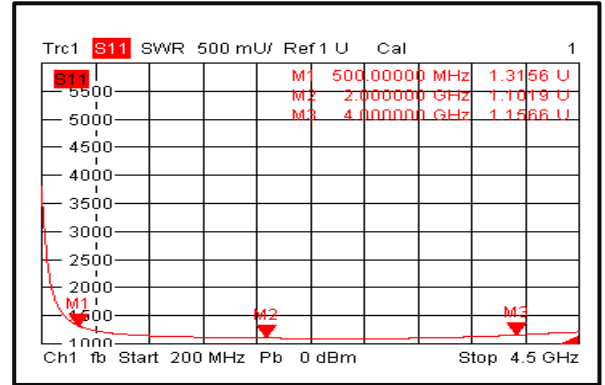
TTL Control Voltage THRESHOLD	Low(0)=0~0.8V
	High(1)=2.8~5V
Control Input TTL	Signal Path State
0	OFF
1	ON
Control Pin Customization available upon request	



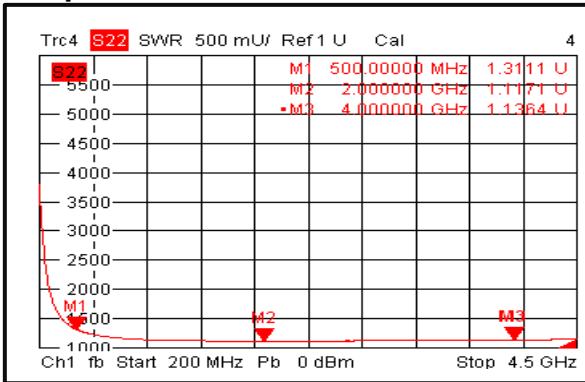
### Insertion Loss @+25°C



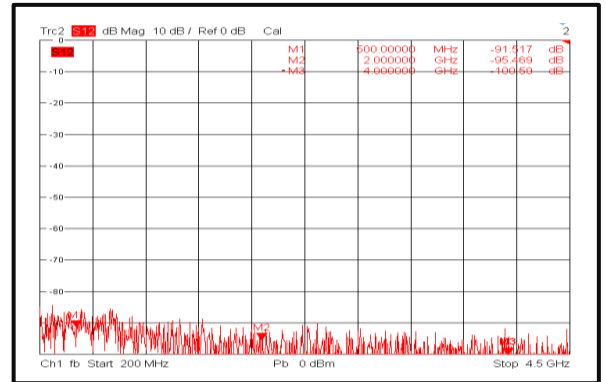
### Input VSWR @+25°C



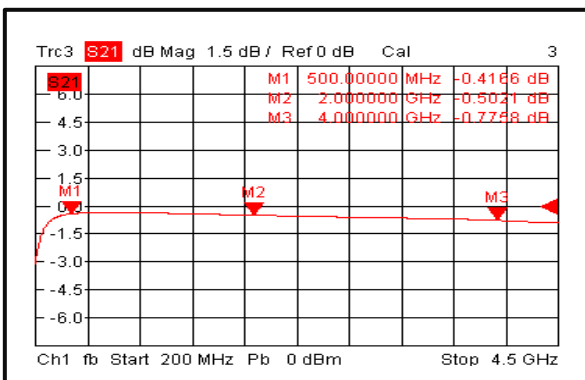
### Output VSWR @+25°C



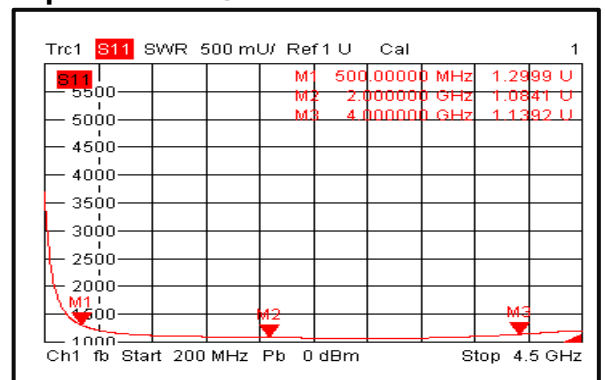
### Isolation @+25°C



### Insertion Loss @-40°C

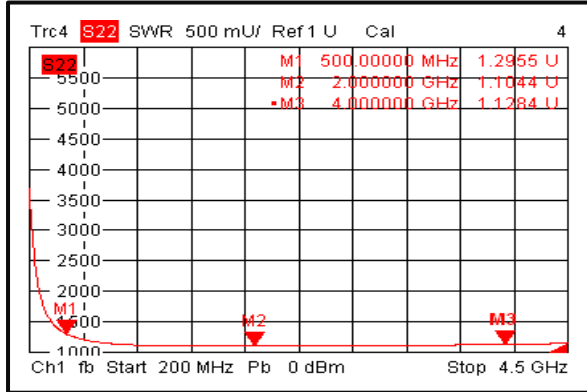


### Input VSWR @-40°C

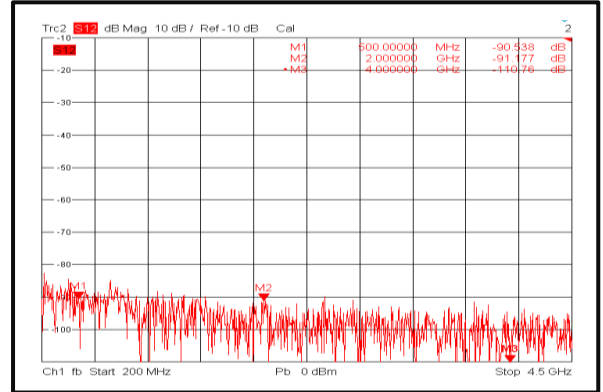




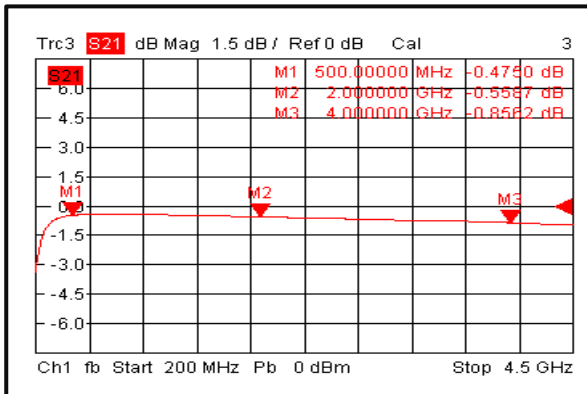
### Output VSWR @-40°C



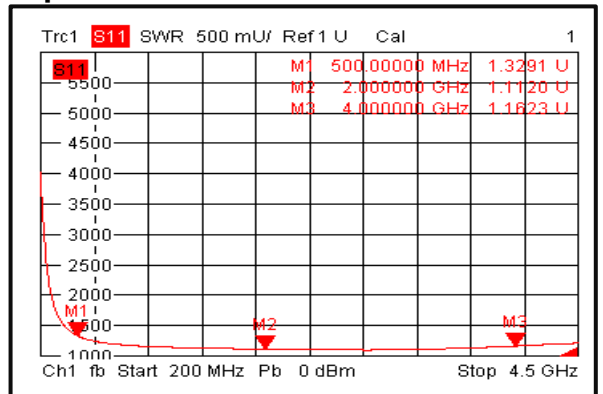
### Isolation @-40°C



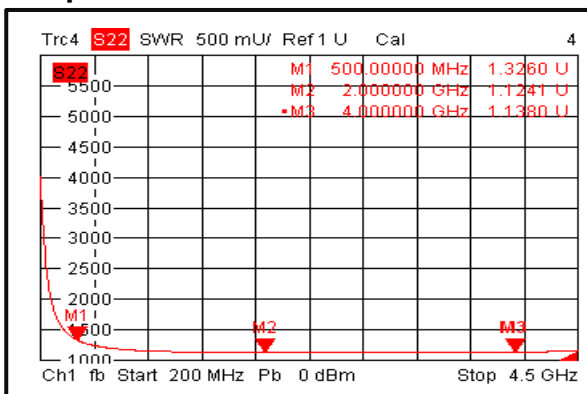
### Insertion Loss @+85°C



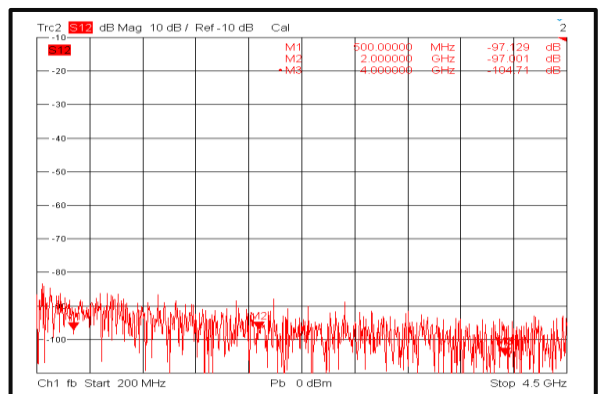
### Input VSWR @+85°C



### Output VSWR @+85°C

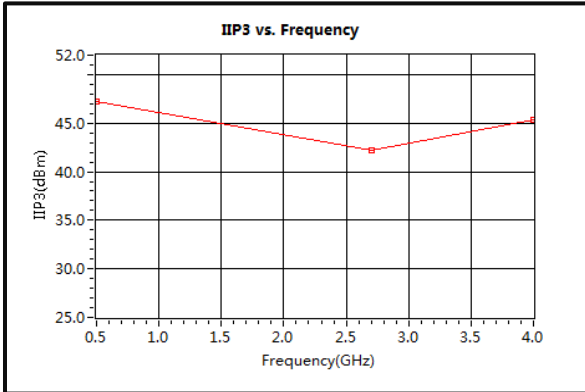


### Isolation @+85°C

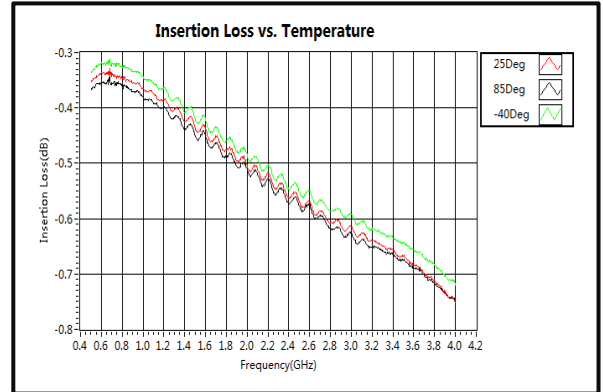




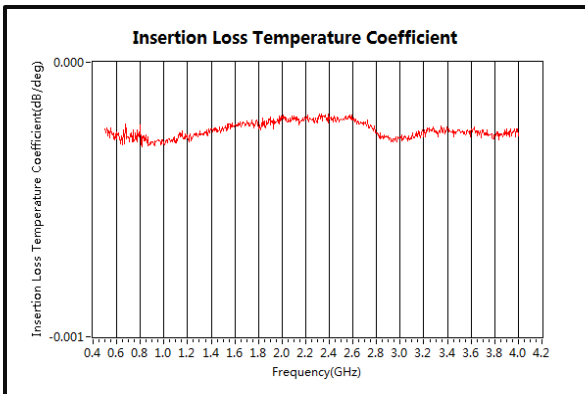
### IIP3



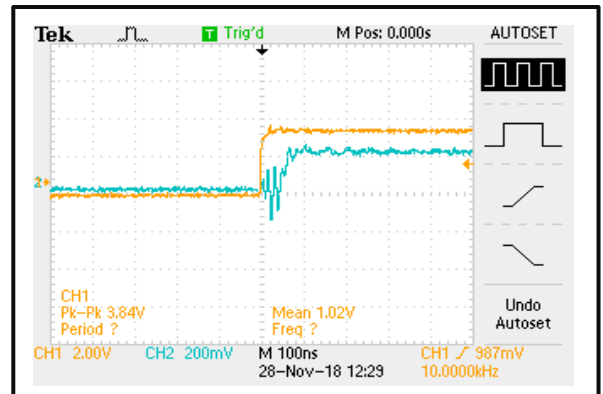
### Insertion Loss vs. Temperature



### Insertion Loss Temperature Coefficient



### Switching Speed



### Switching Speed

