



# Reflective 0.5-6GHz Coaxial SP2T Switch

## Features

- Wide Band Operation 0.5-6GHz
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- High Power Cold Switching
- 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	0.5~3		3~6				GHz
Insertion Loss		1.0	1.3		1.3	1.5	dB
Insertion Loss Temperature Coefficient		0.003			0.003		dB/ ° C
Isolation	40	45		35	38		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 (Pulsed, 10% Duty Cycle, 20us pulse width)			50			50	dBm
DC Power Dissipation		0.5			0.5		W
0.1dB Compression Point ( P0.1dB ) (Pulsed)		50			50		dBm
IIP3		55			55		dBm
Switching Speed	150 Max.						ns
Weight	3.5 Max.						Ounces
Impedance	50						Ω
Bias Current ( +5V )	100 Max.						mA
Input / Output Connectors	SMA-Female						
Finish	Gold Plated						
Material	Copper						
Sealing	Hermetically Sealed (Optional)						



### Absolute Maximum Ratings

Biassing	+5V ± 10%
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### 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

### Ordering Information

Part No.	Description
DBSR0200500600B	SP2T 0.5-6GHz GaN Switch

### Outline Drawing:

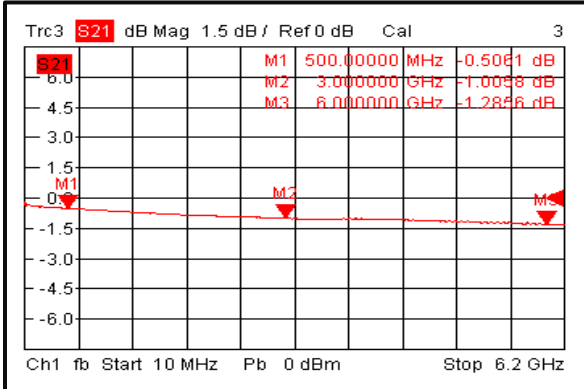
All Dimensions in mm (inches)  
Housing Tolerances ± 0.1 (0.004)

Including Heat sink

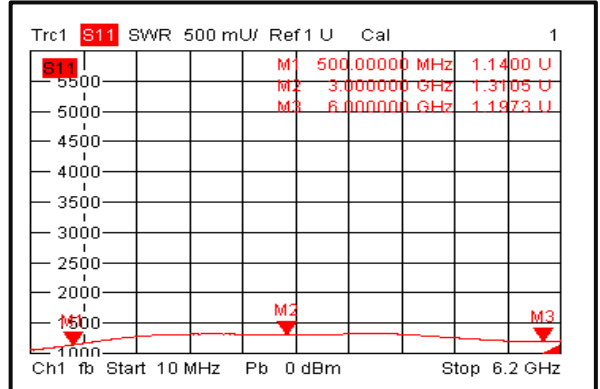
TTL Control Voltage THRESHOLD	Signal Path State
Low(0)=0~0.8V	J0-J1
High(1)=2.8~5V	J0-J2
Control Pin Customization Available Upon Request	



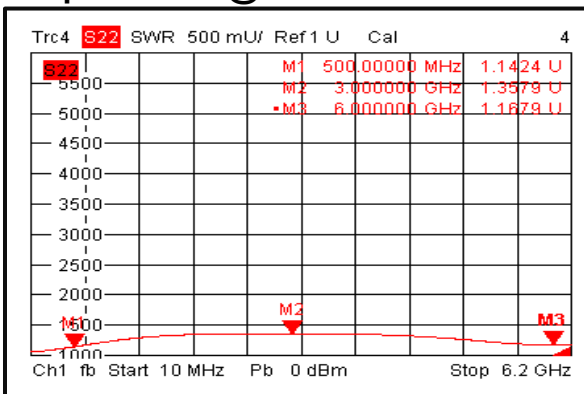
### Insertion Loss @+25°C



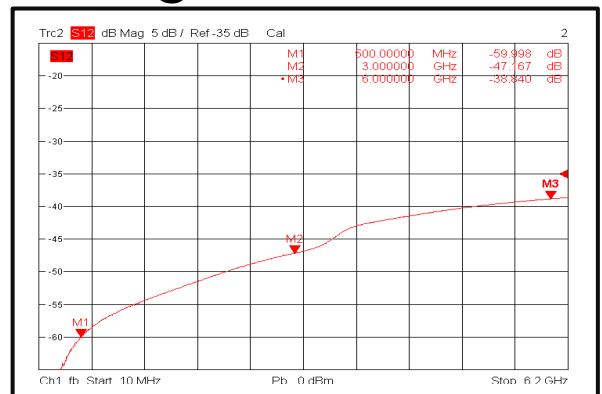
### Input VSWR @+25°C



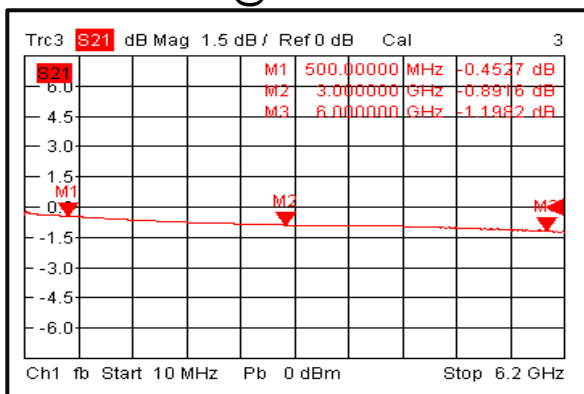
### Output VSWR @+25°C



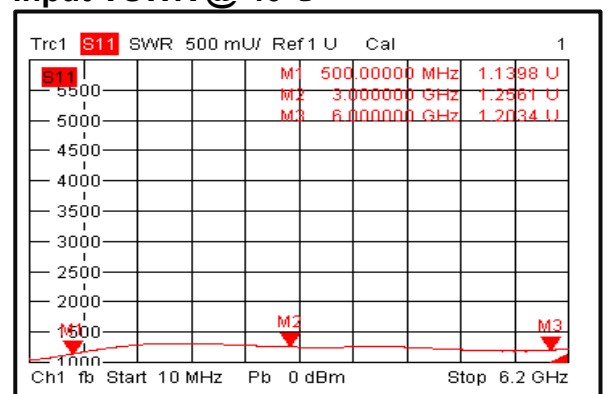
### Isolation @+25°C



### Insertion Loss @-40°C

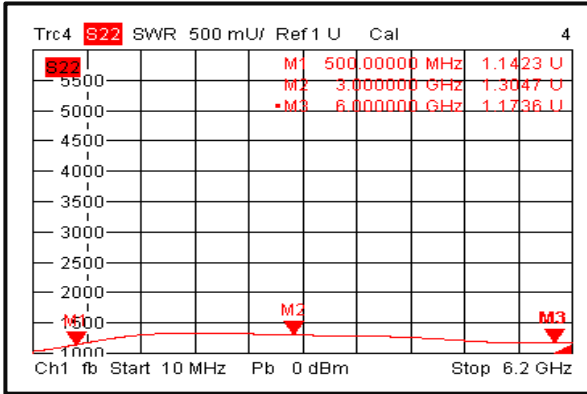


### Input VSWR @-40°C

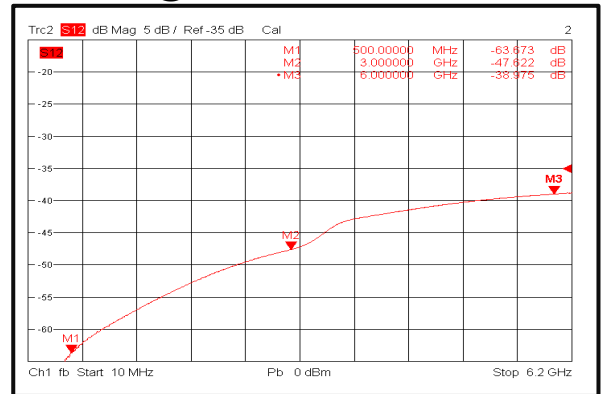




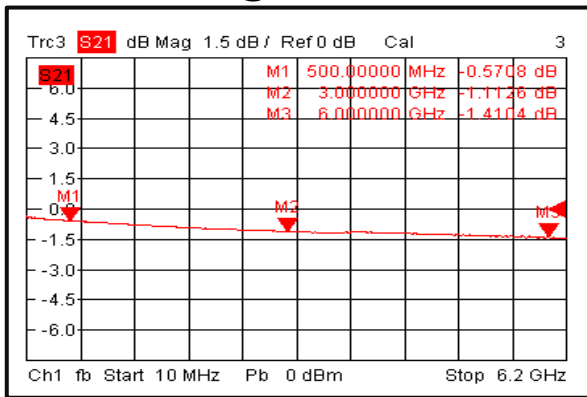
### Output VSWR @-40°C



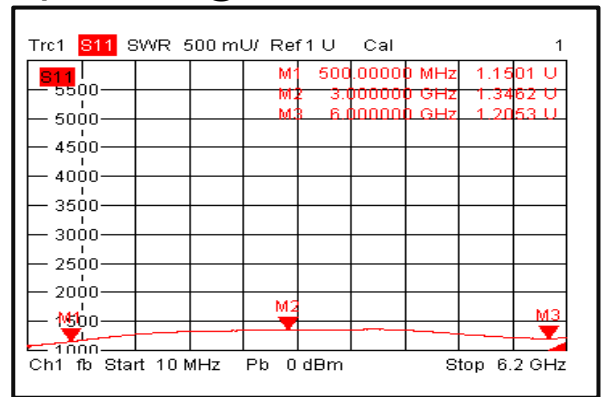
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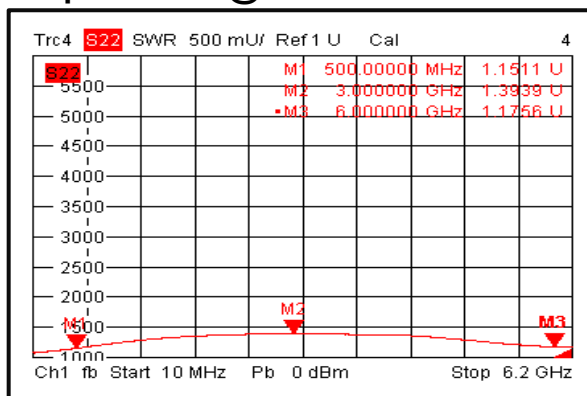
### Insertion Loss @+85°C



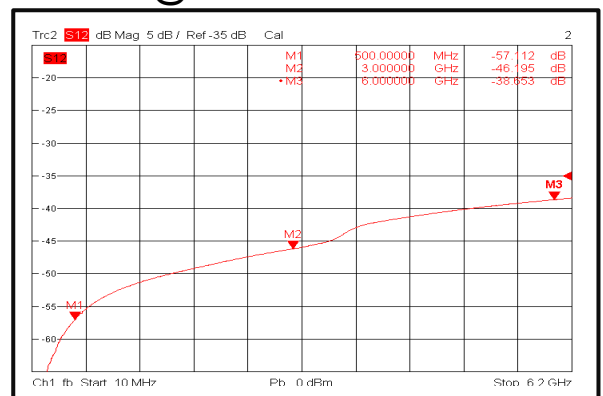
### Input VSWR @+85°C



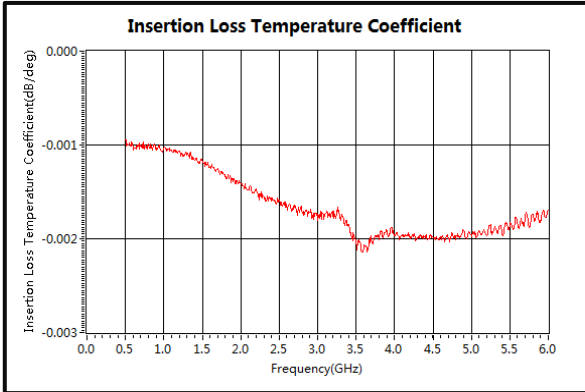
### Output VSWR @+85°C



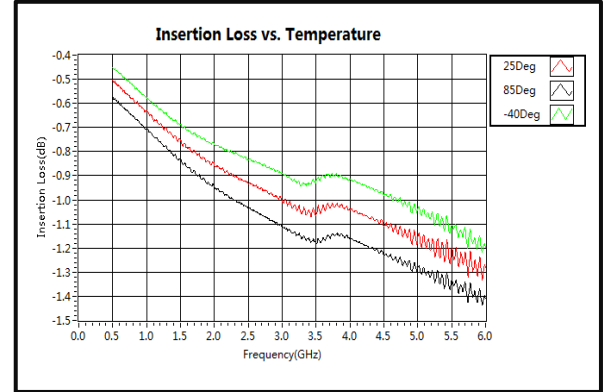
### Isolation @+85°C



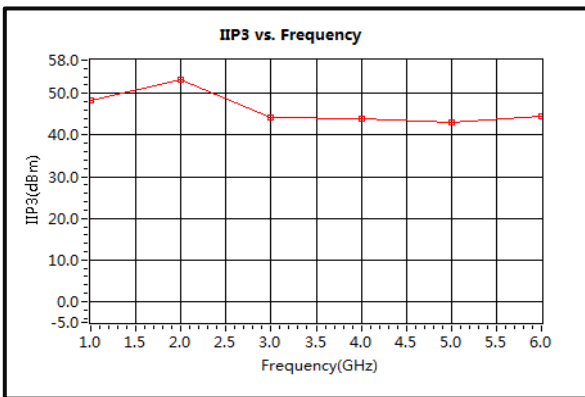
### Insertion Loss Temperature Coefficient



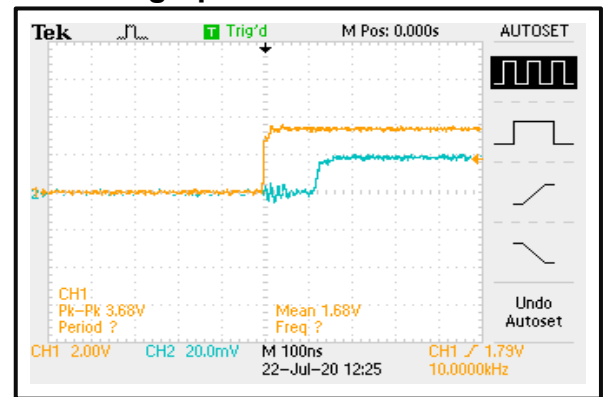
### Insertion Loss vs. Temperature



### IIP3



### Switching Speed



### Switching Speed

