

# Absorptive Coaxial SP8T Switch

## 0.1-40GHz

- Low Insertion Loss
- High Isolation
- Fast Switching Speed
- 2.92mm Connectors
- TTL Compatible Driver Included



### RF Parameters

	Min.	Typ.	Max.	Min.	Typ.	Max.	Unit
Frequency Range	0.1		18	18		40	GHz
Insertion Loss		7.0	9.0		8.5	11.0	dB
Insertion Loss Temperature Coefficient		0.003			0.003		dB / °C
Isolation	70	75		65	70		dB
Input VSWR		2.5	3		2.5	3	:1
Output VSWR		2.5	3		2.5	3	:1
RF Input Power (CW)			23			23	dBm
DC Power Dissipation		0.8			0.8		W
0.1dB Compression Point (P0.1dB)		23			23		dBm
IIP3		55			55		dBm
Switching Speed		50	100		50	100	ns
Bias Current (+5V / -5V)			350/40				mA

### Physical Specifications

Weight	2.82oz (80g)	Impedance	50 ohms
Input / Output Connectors	2.92mm Female	Material	Aluminium
Finish	Gold Plating	Package Sealing	Hermetically Sealed

Note 1: The specification provided is at nominal bias voltage and at 25°C unless otherwise specified.

Note 2: The specification is subject to regular reviews and will be updated from time to time as part of our continuing product development and improved spec accuracy.

Note 3: Operation beyond the quoted limits stated above may cause instantaneous and permanent damage.



### Environmental

Operating Temperature	-45°C to +85°C	Vibration	25g rms (15 degree 2KHz) endurance, 1 hour per axis
Storage Temperature	-55°C to +125°C	Humidity	100% RH at 35°C, 95% RH at 40°C max.
Altitude	30,000 ft. max	Shock	20g for 11msc half sine wave, 3 axis both directions

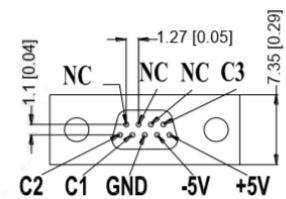
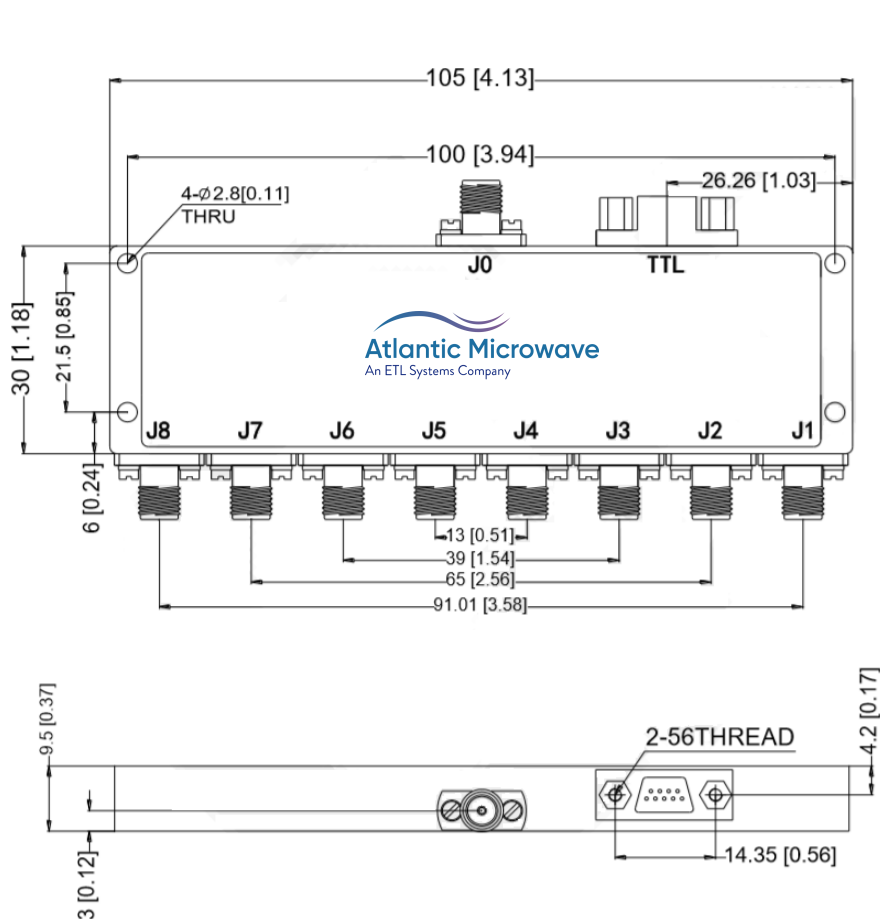
### Absolute Maximum Ratings

Biasing	+5V±10%/-5V±10%
TTL Control Voltage	0~0.8V/2.8~5V

### NOTE:

TTL pins cannot be connected to the negative voltage otherwise the internal driver will be damaged.

### Outline Drawing: All Dimensions in mm [inches]



### MICRO-D9(Female)

### Truth Table

Control Input TTL			Signal Path State
C3	C2	C1	
0	0	0	J0-J1
0	0	1	J0-J2
0	1	0	J0-J3
0	1	1	J0-J4
1	0	0	J0-J5
1	0	1	J0-J6
1	1	0	J0-J7
1	1	1	J0-J8

Control Pin Customization available upon request

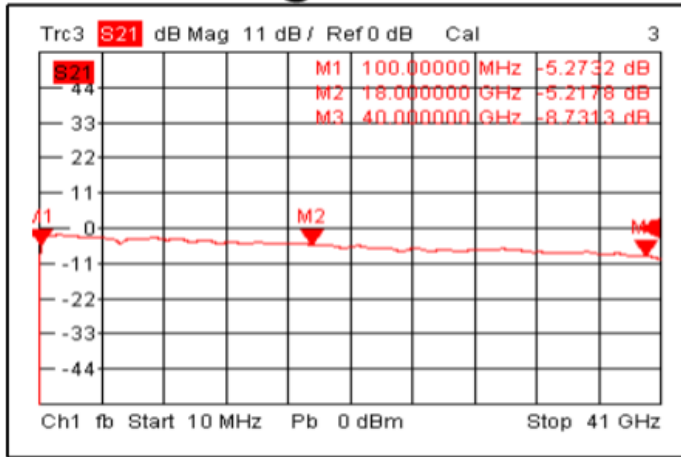
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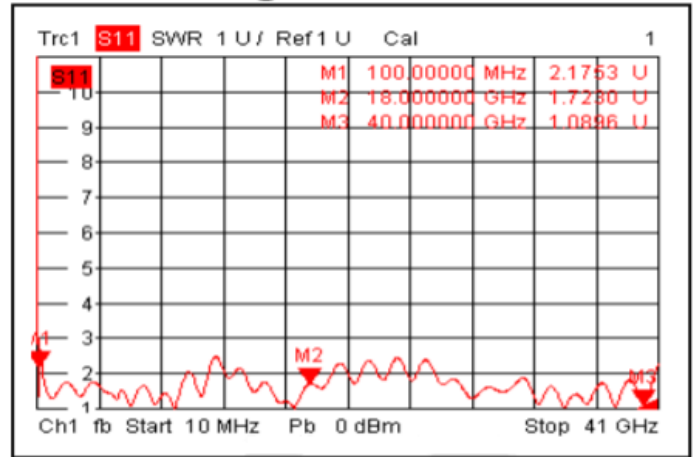
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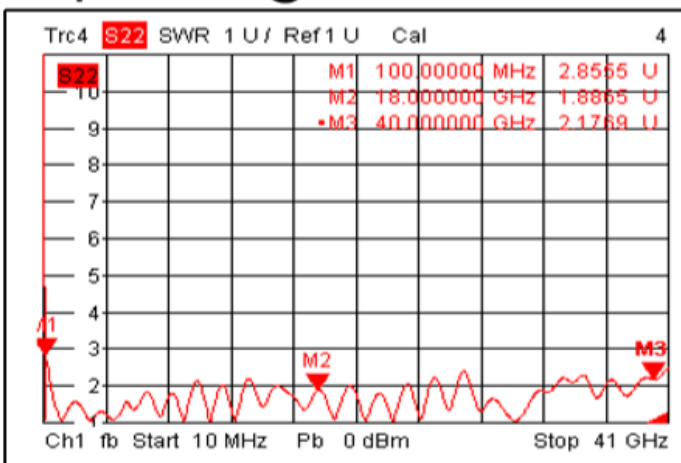
## Insertion Loss @+25°C



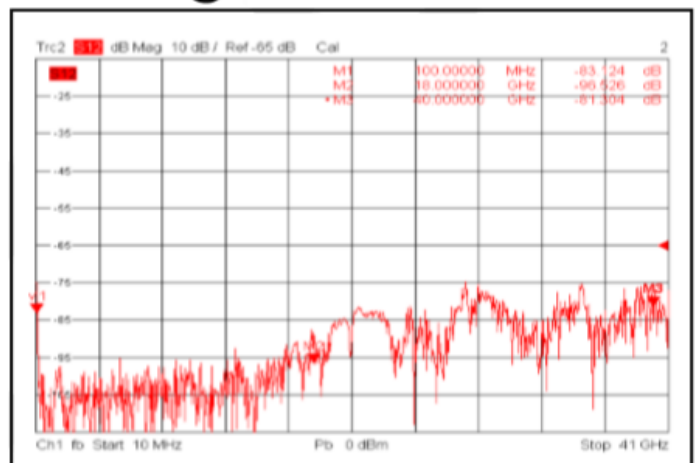
## Input VSWR @+25°C



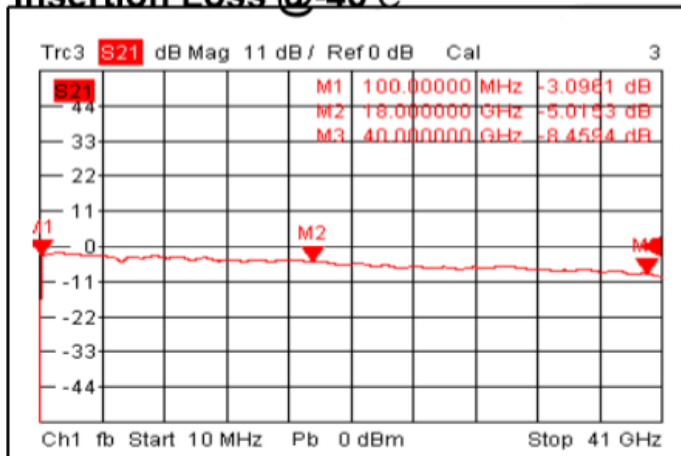
## Output VSWR @+25°C



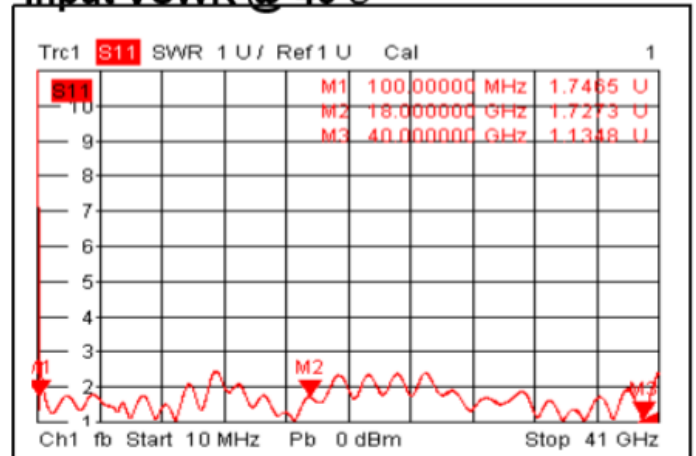
## Isolation @+25°C



## Insertion Loss @-45°C



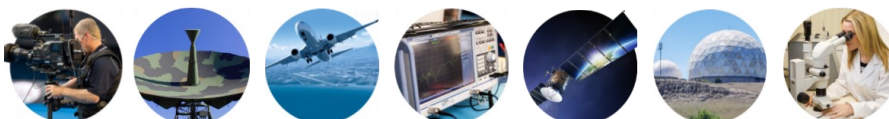
## Input VSWR @-45°C



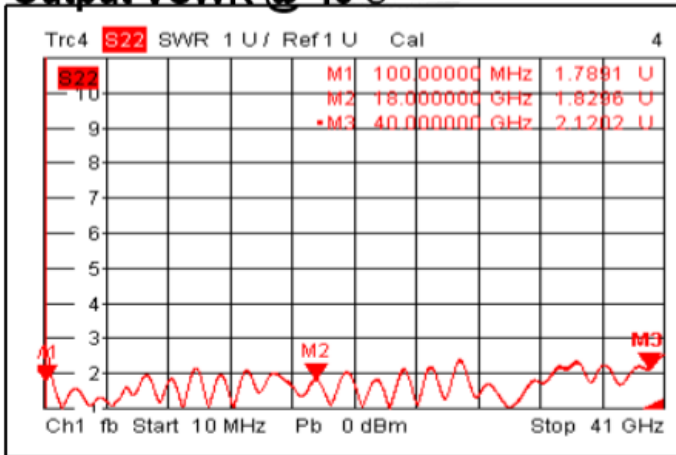
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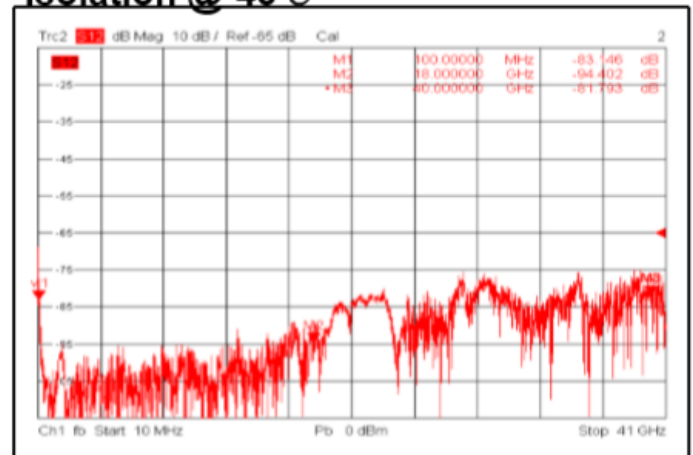
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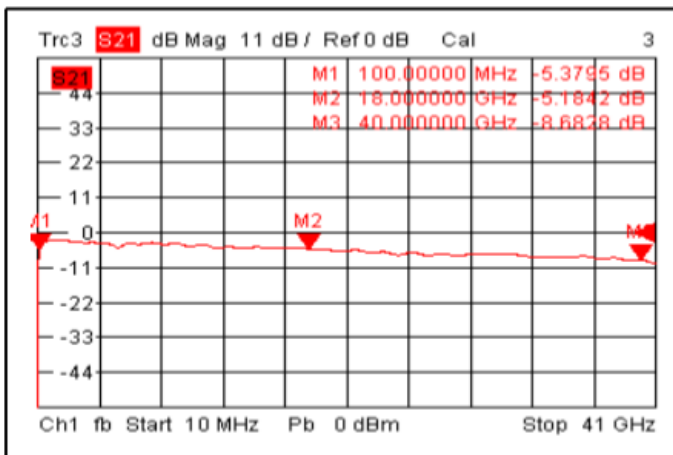
## Output VSWR @-45°C



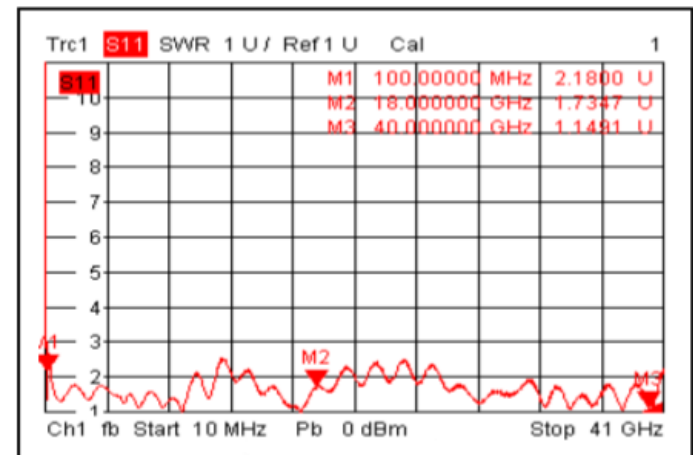
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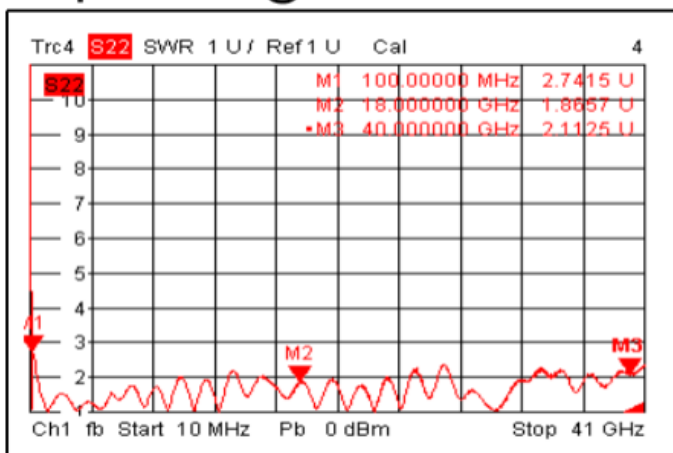
## Insertion Loss @+85°C



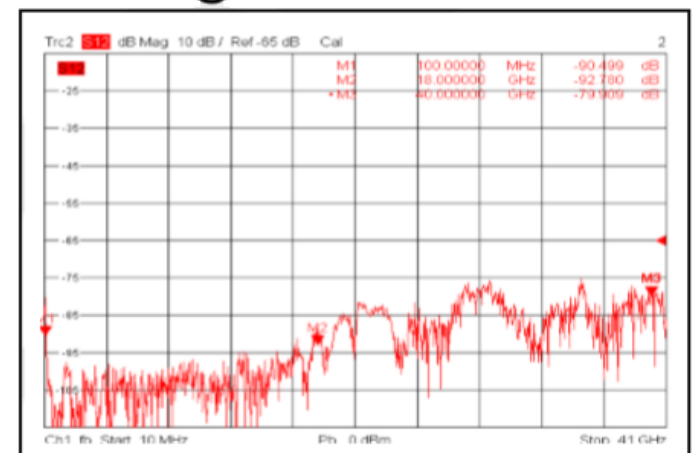
## Input VSWR @+85°C



## Output VSWR @+85°C



## Isolation @+85°C



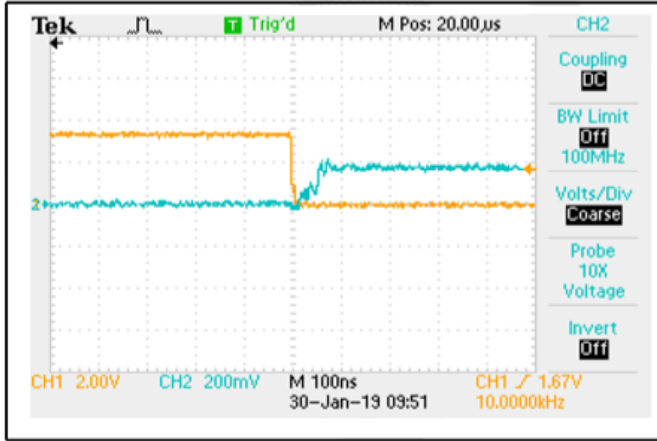
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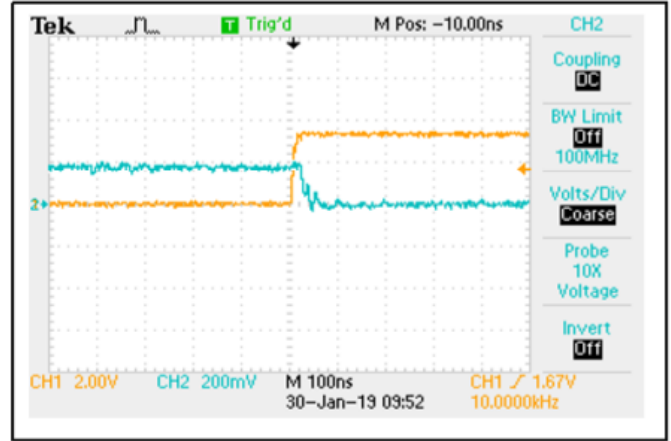
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## Switching Speed



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