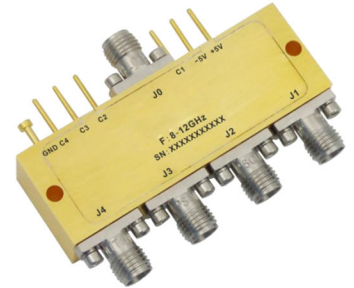




# Absorptive Coaxial SP12T Switch 12-18 GHz

## Features

- Wide Band Operation 12-18GHz
- TTL compatible driver include
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- Temperature Range -45°C~+85°C
- Customization available upon request
- Hermetically sealed package up to 60,000 ft available upon request.



## Typical Applications

- Wireless Infrastructure
  - Military & Aerospace
  - Fiber Optics
- RF Microwave & VSAT  
Test Instrument

Parameters	Min	Typ.	Max	Units
Frequency Range	12-18			GHz
Insertion Loss		4.5	5	dB
Insertion Loss Temperature Coefficient		0.003		dB/ °C
Isolation	60	65		dB
Input VSWR		1.6	2	
Output VSWR		1.6	2	
Power Dissipation (CW)		0.3		W
0.1dB Compression P1dB		30		dBm
Switching Speed			100	ns
Weight	150			ounces
Impedance	50			Ω
Biasing(+5V/-5V)	500/50			mA
Input /Output Connectors	SMA-Female			
Finish	Gold Plated			
Material	Aluminum			
Seal	Hermetically Sealed ( optional )			



### Absolute Maximum Ratings

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

### Environmental Specifications

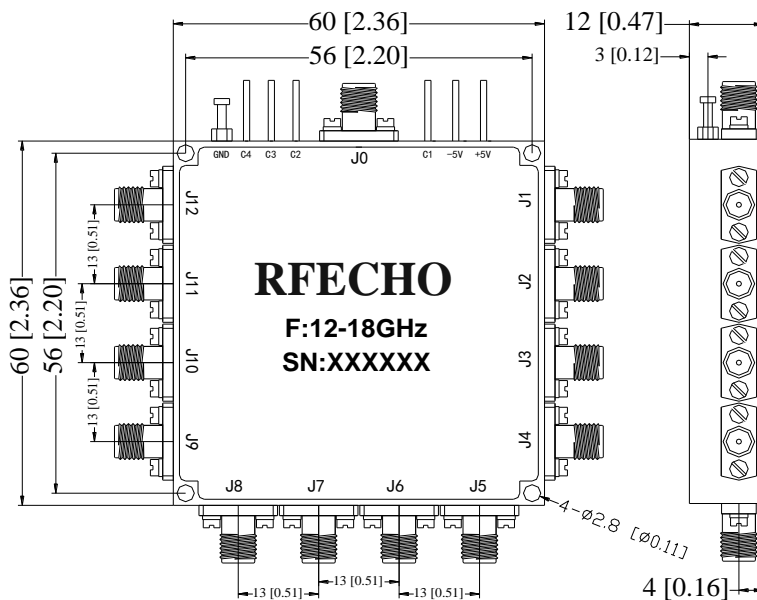
Operational Temperature	-45°C~+85°C
Storage Temperature	-55°C~+125°C
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35c, 95%RH at 40°c
Shock	20G for 11msec half sine wave, 3 axis both directions

### Ordering Information

Part No	ECCN	Description
DBSA1212001800A	EAR99	SP12T 12-18GHz PIN Diode Switch

### Outline Drawing:

All Dimensions in mm (inches)



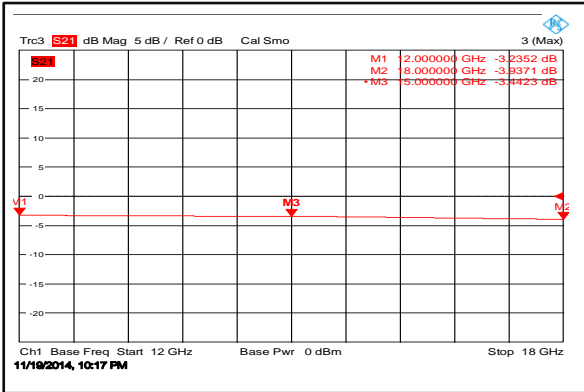
### True Table

Control Input TTL				Signal Path State
C4	C3	C2	C1	
0	0	0	0	Jo-J1
0	0	0	1	Jo-J2
0	0	1	0	Jo-J3
0	0	1	1	Jo-J4
0	1	0	0	Jo-J5
0	1	0	1	Jo-J6
0	1	1	0	Jo-J7
0	1	1	1	Jo-J8
1	0	0	0	Jo-J9
1	0	0	1	Jo-J10
1	0	1	0	Jo-J11
1	0	1	1	Jo-J12

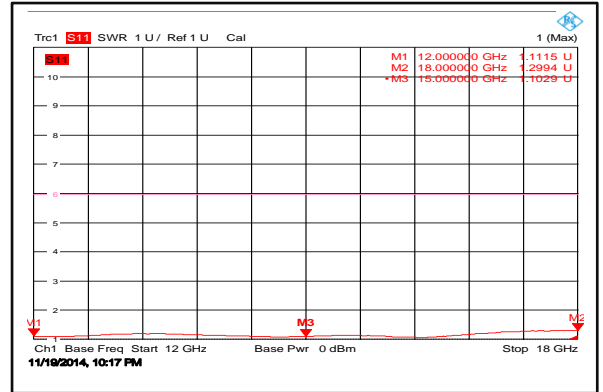
Control Pin Customization available upon request



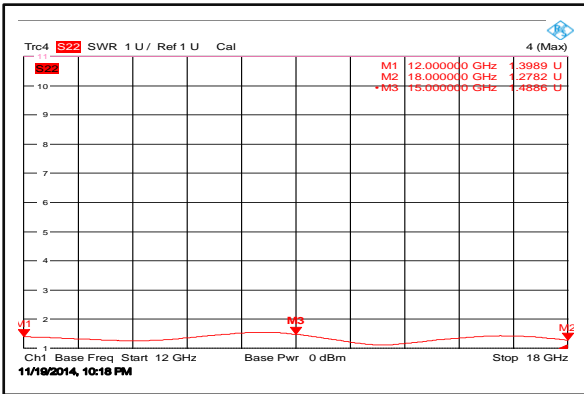
### Insertion Loss



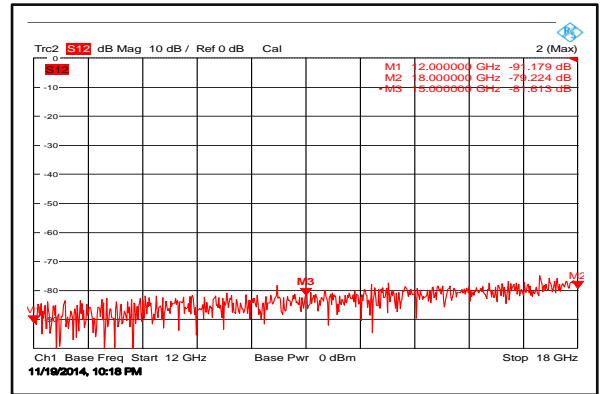
### Input VSWR



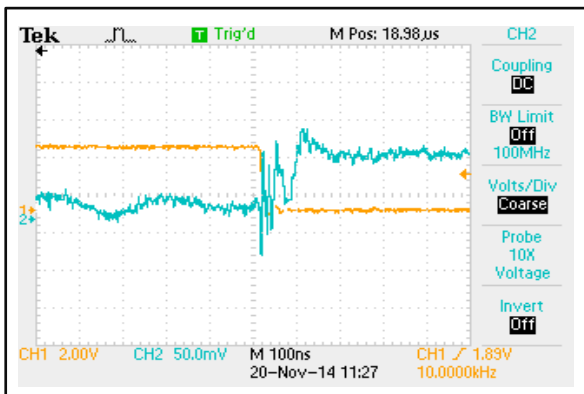
### Output VSWR



### Isolation



### Turn on Switching Speed



### Turn off Switching Speed

