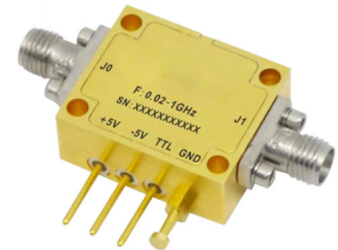


Absorptive 0.02-1GHz Coaxial SPST Switch

Features

- Wide Band Operation 0.02-1GHz
- 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	Units
Frequency Range		0.02-1		GHz
Insertion Loss		0.7	1.0	dB
Insertion Loss Temperature Coefficient		0.003		dB/ °C
Isolation (J0→J1)	80	90		dB
Input VSWR		1.3	1.5	: 1
Output VSWR		1.3	1.5	: 1
RF Input Power (CW)			30	dBm
DC Power Dissipation		0.3		W
0.1dB Compression Point (P0.1dB)		30		dBm
IIP3		55		dBm
Switching Speed			550	ns
Weight		1.2		ounces
Impedance		50		Ω
Bias Current(+5V/-5V)		50/50		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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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
DBSA0100020100A	SPST 0.02-1GHz PIN Diode Switch

Outline Drawing:

All Dimensions in mm (inches)

The drawing shows a top view of the component with the following dimensions and labels:

- Top left connector: 9.5 [0.37] mm height, 2 [0.08] mm width.
- Internal spacing: 4 [0.16] mm between two sets of pins, 6 [0.24] mm between the two sets.
- Bottom right connector: 3 [0.12] mm height.
- Bottom pins: 24 [0.94] mm total width, 20 [0.79] mm between the two sets of pins.
- Through holes: 4-Ø 2.8 [0.11] THRU.
- Labels: RFECHO, J0, F:0.02-1GHz, J1, SN:XXXXXXXXXX, +5V, -5V, TTL, GND.

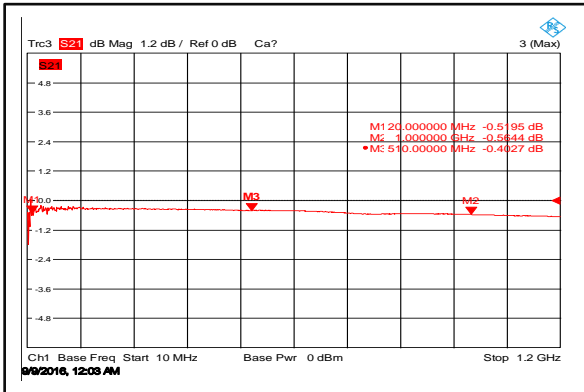
Notes:
J0: Absorptive Port
J1: Reflective port

Truth Table

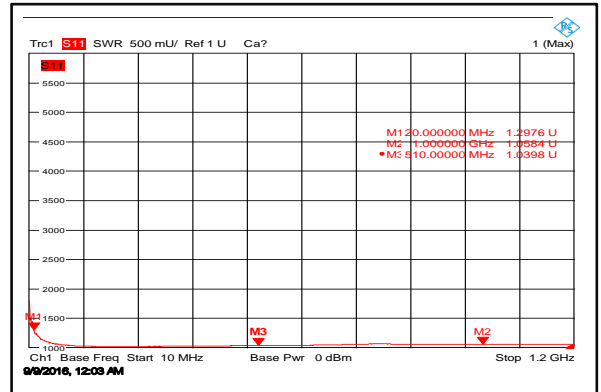
TTL Control Voltage THRESHOLD	Low(0)=0~0.8V
	High(1)=2.8~5V
Control Input TTL	State
0	ON
1	OFF
Control Pin Customization available upon request	



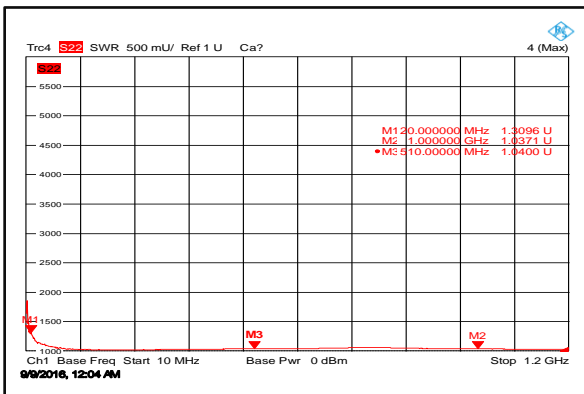
Insertion Loss



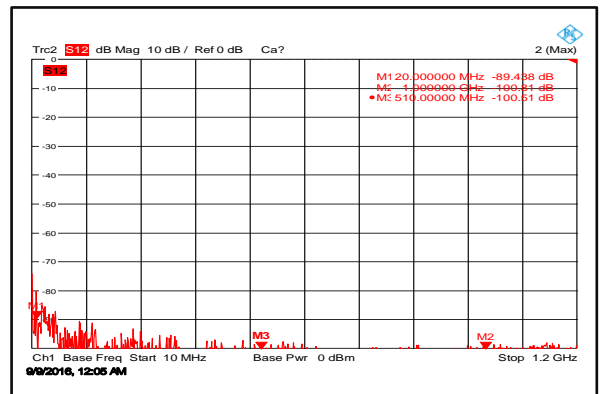
Input VSWR



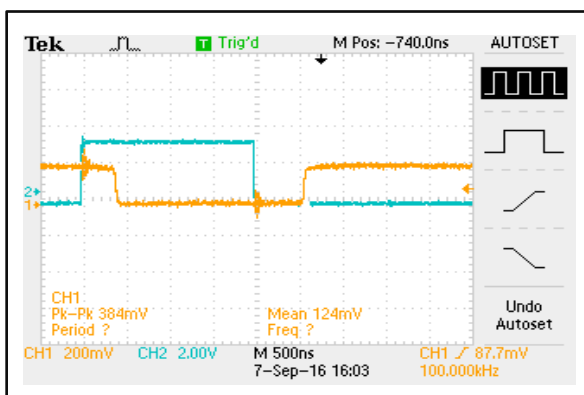
Output VSWR



Isolation



Switching Speed



Switching Speed

