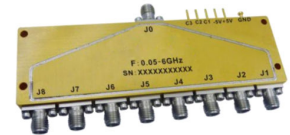




Hermetically Sealed Absorptive Coaxial SP8T Switch 0.05 - 6GHz

Features

- Ultra Wide Band Operation 0.05-6GHz
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- Customization available upon request



Typical Applications

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

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	0.05		2	2		6	GHz
Insertion Loss		1.6	2.0		2.8	3.2	dB
Insertion Loss Temperature Coefficient		0.003			0.003		dB/° C
Isolation	65	70		60	70		dB
Input VSWR		1.4	1.7		1.4	1.7	: 1
Output VSWR		1.4	1.7		1.4	1.7	: 1
RF Input Power			30			30	dBm
DC Power Dissipation		1.5			1.5		W
0.1dB Compression Point (P0.1dB)		30			30		dBm
IIP3		55			55		dBm
Switching Speed	500 Typ. 800Max.						ns
Weight	3.5 (Max.)						ounces
Impedance	50						Ω
Bias Current (+5V/-5V)	350/50						mA
Input / Output Connectors	SMA - Female						
Finish	Gold Plated						
Material	Aluminum						
Sealing	Hermetically Sealed (Laser Welded)						



Absolute Maximum Ratings

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

Part No.	ECCN	Description
DBSA0800050600D	EAR99	SP8T0.05-6GHz PIN Diode Switch

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 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)

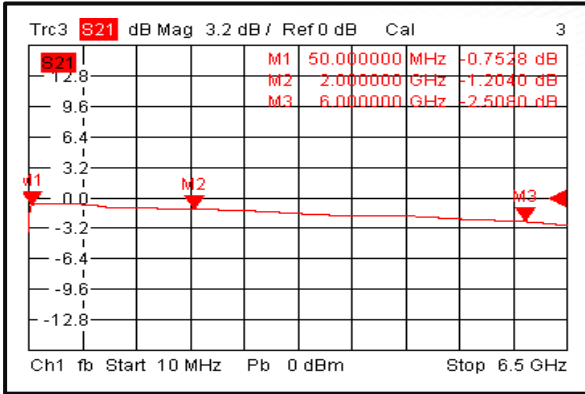
The drawing shows a rectangular component with dimensions: 106 [4.17] mm width, 31.5 [1.24] mm height, and 7 [0.28] mm thickness. It features 8 signal pins (J1-J8) along the bottom edge and 5 control pins (C3, C2, C1, -5V, +5V, GND) along the top edge. A 4-Ø2.8 [0.11] THRU hole is located on the left side. The component is labeled with 'RFECHO', 'F:0.05-6GHz', and 'SN:XXXXXXXXXX'. A side view shows a height of 4.1 [0.16] mm and a top width of 11.5 [0.45] mm.

TTL Control Voltage THRESHOLD			Low(0)=0~0.8V
			High(1)=2.8~5V
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

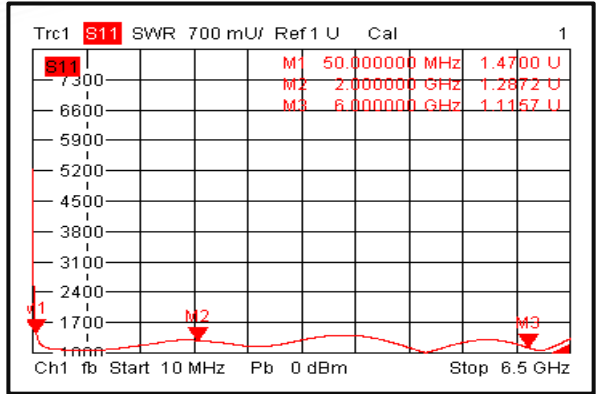
Control Pin Customization available upon request



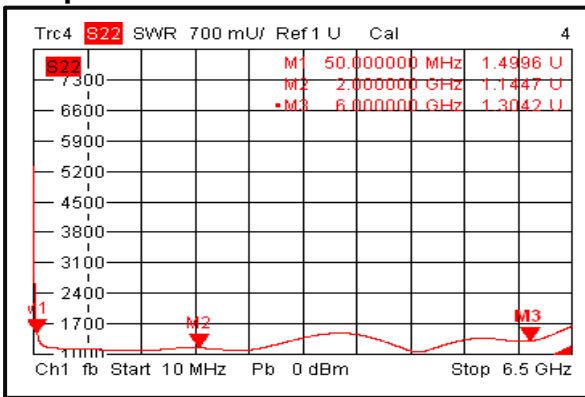
Insertion Loss @+25°C



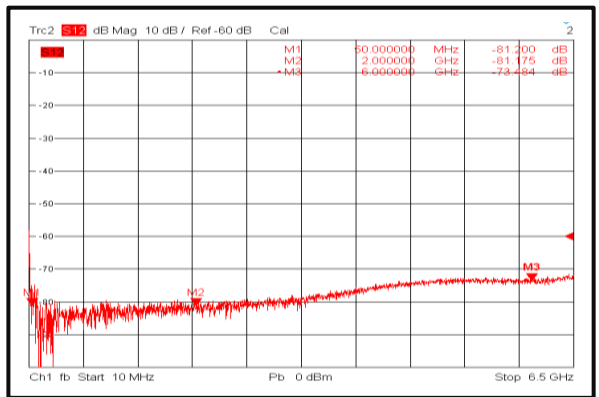
Input VSWR @+25°C



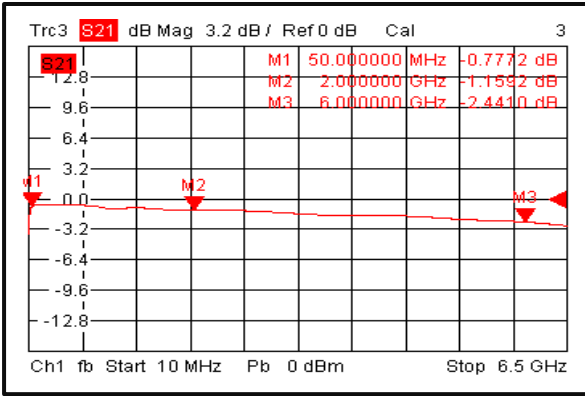
Output VSWR @+25°C



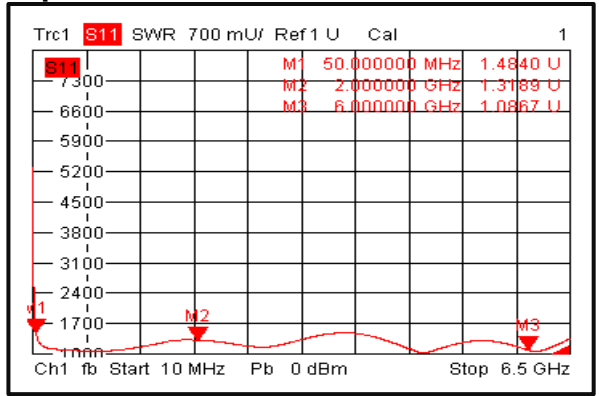
Isolation @+25°C



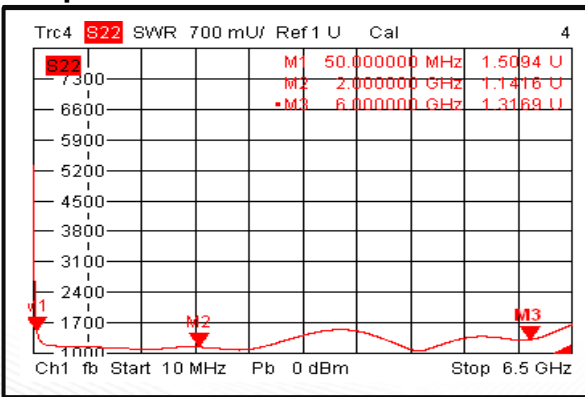
Insertion Loss @-45°C



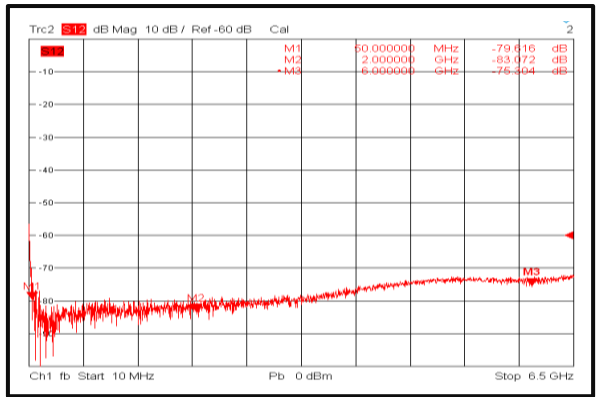
Input VSWR @-45°C



Output VSWR @-45°C

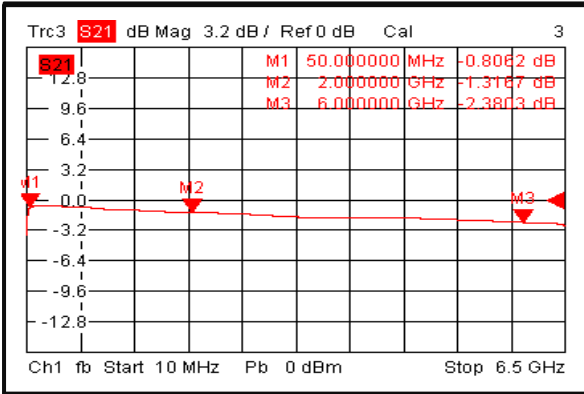


Isolation @-45°C

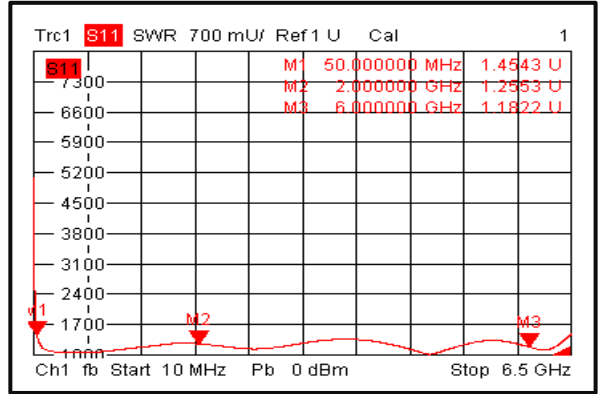




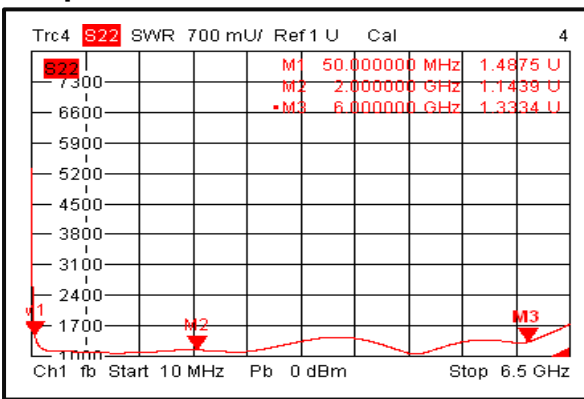
Insertion Loss @+85°C



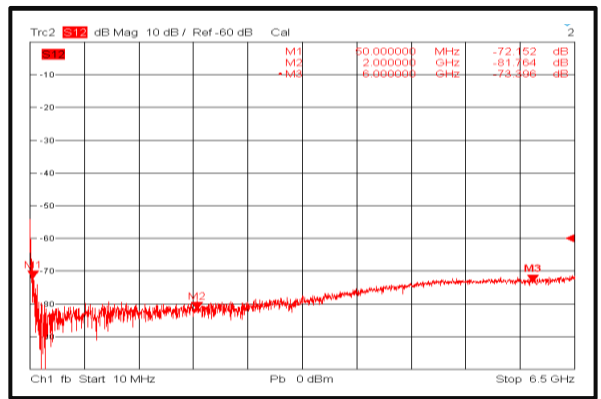
Input VSWR @+85°C



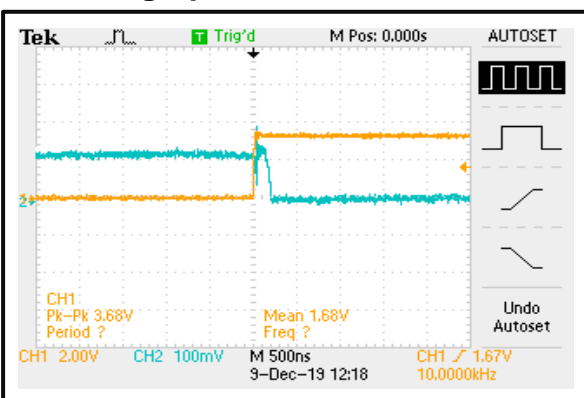
Output VSWR @+85°C



Isolation @+85°C



Switching Speed



Switching Speed

