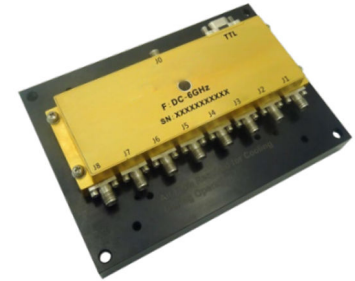




Reflective Coaxial SP8T Switch DC- 6GHz



Features

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

Typical Applications

- Wireless Infrastructure
- Test and measurement Instrument
- Fiber Optics

RF Microwave & VSAT

5G communication

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	DC-3		3-6				GHz
Insertion Loss		2.8	3.8		3.8	4.5	dB
Insertion Loss Temperature Coefficient		0.003			0.003		dB/ ° C
Isolation	40	45		35	40		dB
Input VSWR		1.5	2.0		1.5	1.8	: 1
Output VSWR		1.5	2.0		1.5	1.8	: 1
RF Input Power (pulsed, 10% Duty Cycle, 20us pulse width)			100			100	W
DC Power Dissipation		8.5			8.5		W
0.1dB Compression Point (P0.1dB)		50			50		dBm
IIP3		55			55		dBm
Switching Speed	250 Typ.						ns
Weight	24 Max. (Including Heat sink)						Ounces
Impedance	50						Ω
Bias Current (+12V)	130 Typ. 200 Max.						mA
Input / Output Connectors	SMA-Female						
Finish	Gold Plated						
Material	Aluminum						
Sealing	Hermetically Sealed (Optional)						



Absolute Maximum Ratings

Biasing	+12V±10%
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Ordering Information

Part No.	Description
DBSR0800000600B	SP8T DC-6GHz GaN Diode Switch

Environmental Specifications

Operational Temperature	-40°C~+85°C
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

Outline Drawing:

All Dimensions in mm (inches) Housing Tolerances ±0.2 (0.008)

The drawing includes the following views and dimensions:

- Top View:** Shows the device with dimensions: 116 [4.57], 58 [2.28], 111.17 [4.38], 25 [0.98], 40 [1.57], 27.7 [1.09], 7.4 [0.29], 7 [0.28], 18.5 [0.73], 10 [0.39], 7 [0.28], 1.25 [0.17], 14 [0.55], 42 [1.65], 70 [2.76], 98 [3.86].
- Side View (Including Heat sink):** Shows dimensions: 130 [5.12], 120 [4.72], 4-φ4.5 [0.18] THRU, 92 [3.62], 82 [3.23], 33.5 [1.32], 7 [0.28], 33.5 [1.32].
- Detail View (MICRO-D9(Female)):** Shows dimensions: 1 [0.04], 1.27 [0.05], 7.35 [0.29], 0.1 [0.004]. Labels include NC, GND, C1, C2, C3, and 12V.

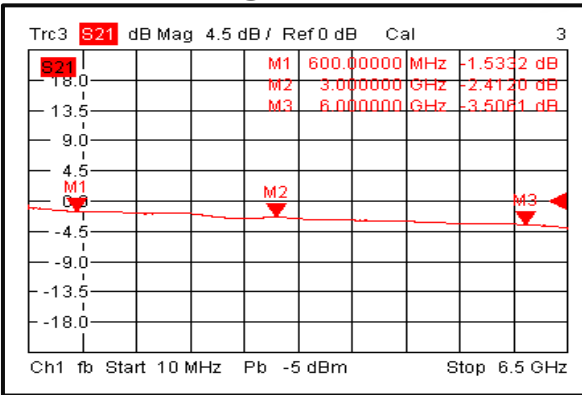
Additional labels on the drawing include: RFECHO, F.DC-6GHz, SN:XXXXXXXXXX, J0, J1, J2, J3, J4, J5, J6, J7, J8, TL, and a note: "Air Flow Required for Cooling During Operation!".

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	

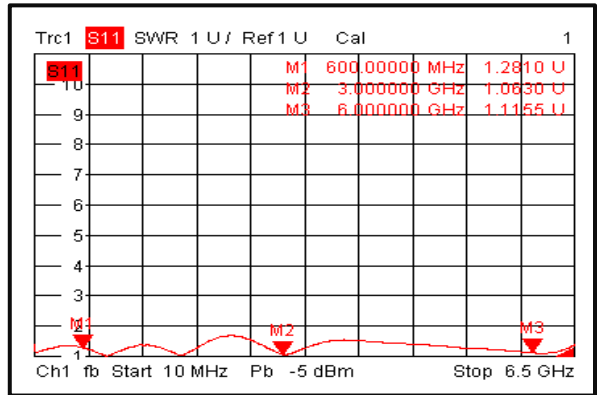
Control Pin Customization available upon request



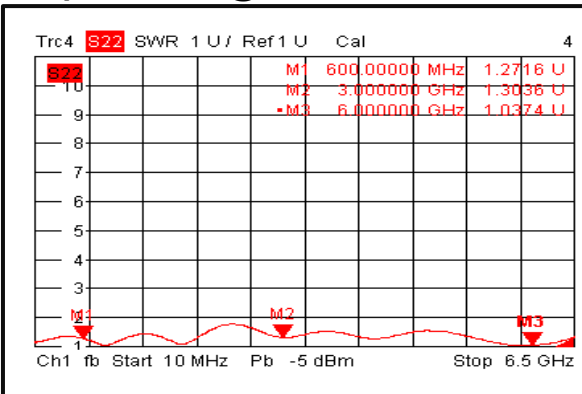
Insertion Loss @+25°C



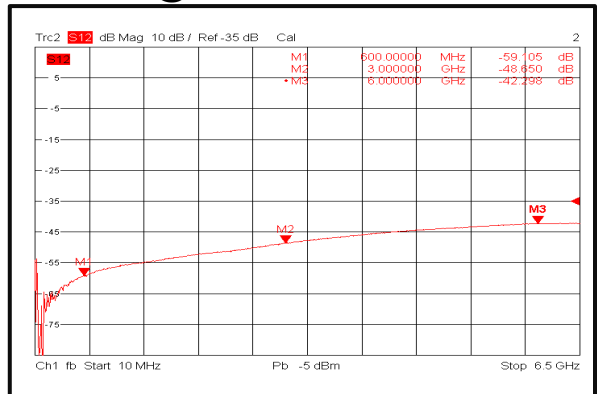
Input VSWR @+25°C



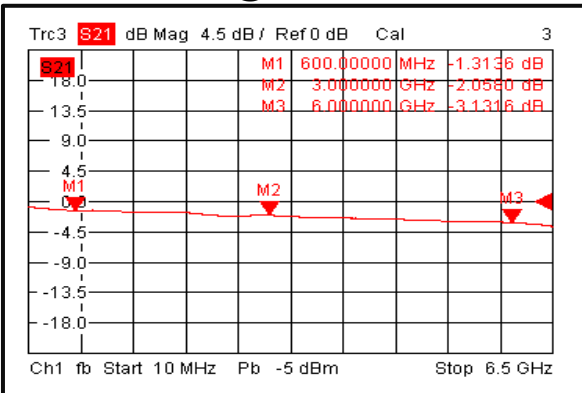
Output VSWR @+25°C



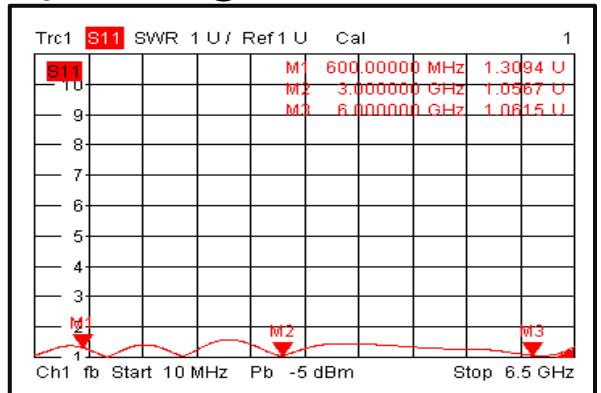
Isolation @+25°C



Insertion Loss @-40°C

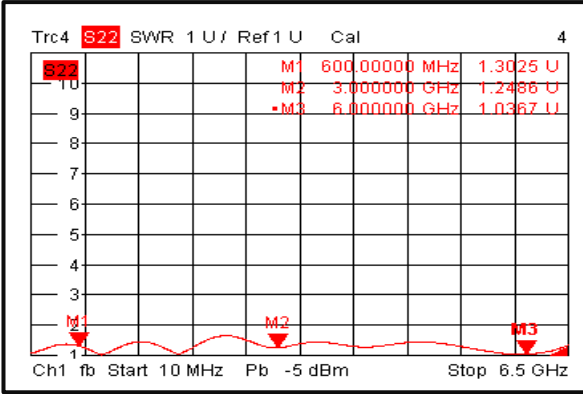


Input VSWR @-40°C

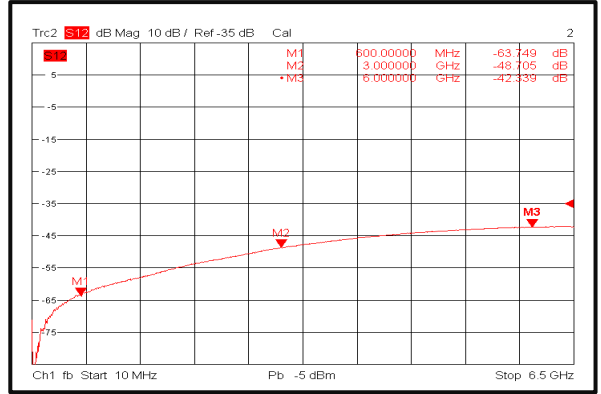




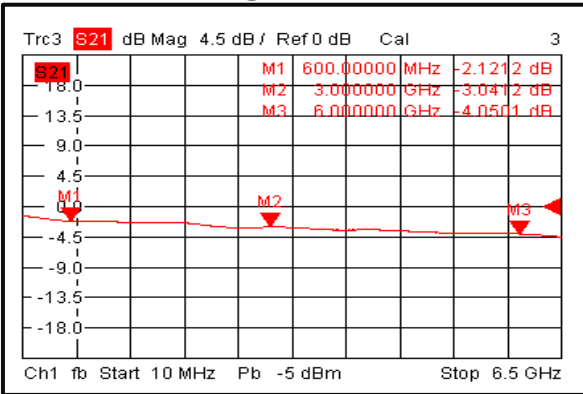
Output VSWR @-40°C



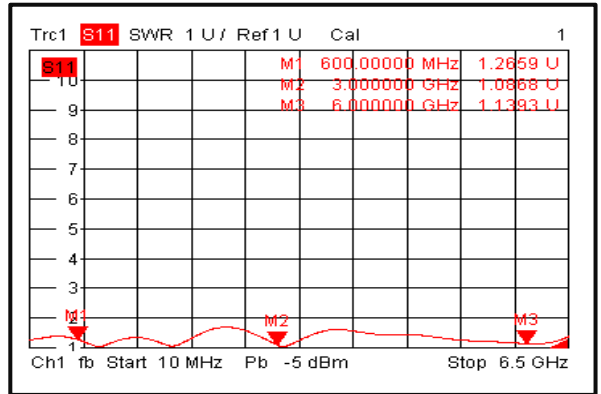
Isolation @-40°C



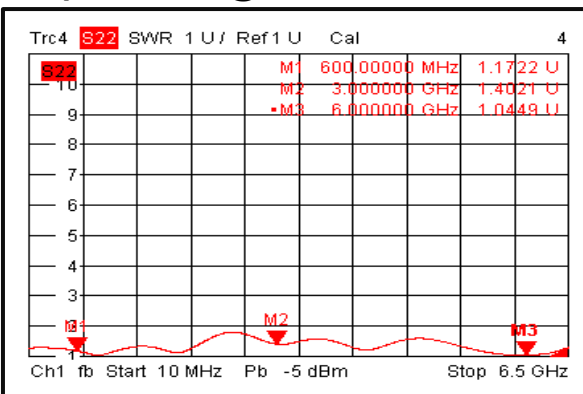
Insertion Loss @+85°C



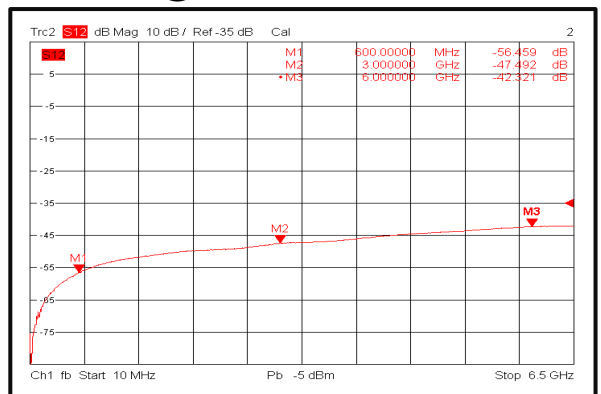
Input VSWR @+85°C



Output VSWR @+85°C

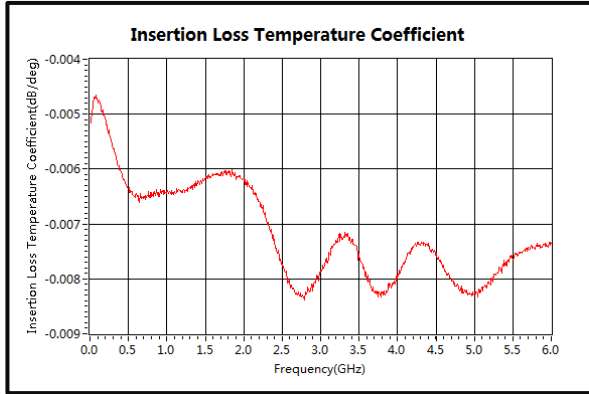


Isolation @+85°C

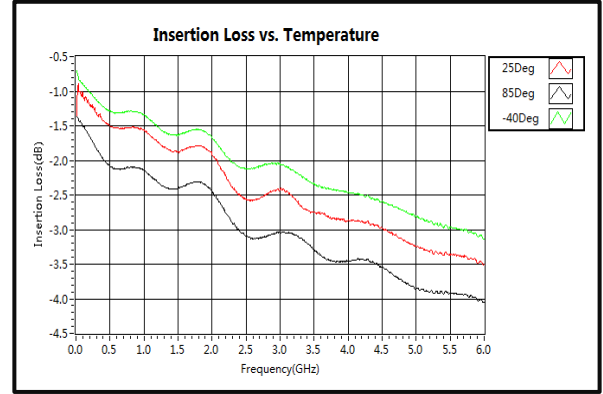




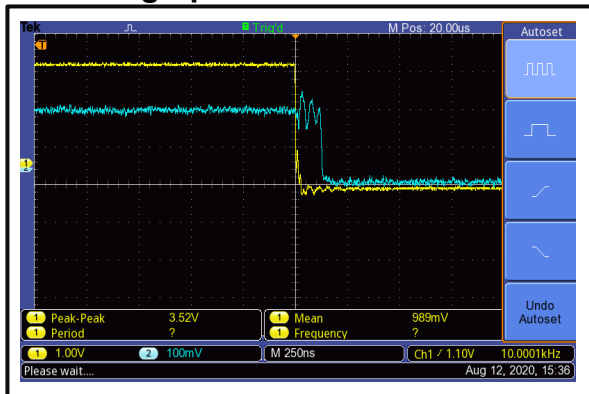
Insertion Loss Temperature Coefficient



Insertion Loss vs. Temperature



Switching Speed



Switching Speed

