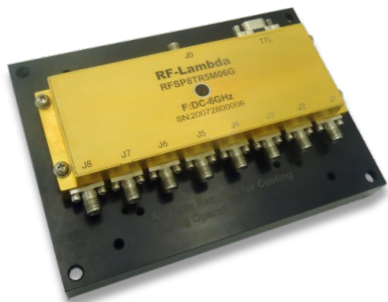


Reflective Coaxial SP8T Switch DC- 6GHz



Features

- 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
- Military and Aerospace
- Test and Measurement

Electrical Specifications, TA = +25°C, Vdd= +12V, TTL= 0/ +5V

Description	PN: RFSP8TR5M06G						
	SP8T Reflective Switch						
	High Power Cold Switching						
Parameters	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 (Po.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
RFSP8TR5M06G	SP8T DC-6GHz GaN Switch

Notes:

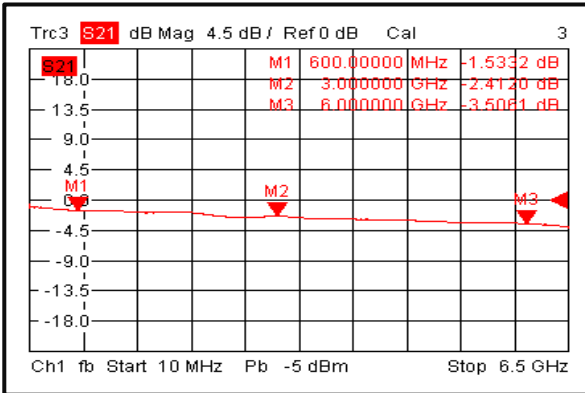
1. If the device operates in high power state, case temperature must be lower than 50°C.
2. Cold Switching: Before changing any TTL signal(s), the RF input power must be blanked or the switch could be damaged.

Environmental Specifications and Test Standards

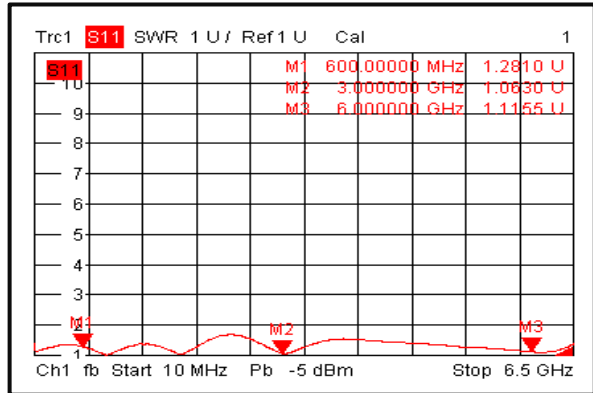
Parameter	Description
Operational Temperature	-40°C~+85°C (Case Temperature)
Storage Temperature	-50°C~+105°C
Thermal Shock	-40°C → +85°C (5 Cycles / 10 hours)
Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
High Temperature Burn In	Temperature +85°C for 72 Hours
Shock	1. Weight >20g, 50g half sine wave for 11ms, Speed variation 3.44m/s 2. Weight <=20g, 100g Half sine wave for 6ms, Speed variation 3.75m/s 3. Total 18 times (6 directions, 3 repetitions per direction).
Altitude	Standard: 30,000 Ft (Epoxy Sealed Controlled Environment) Optional: Hermetically Sealed (60,000 ft. 1.0 PSI min)
Hermetically Sealed (Optional)	MIL-STD-883 (For Hermetically Sealed Units)

Typical Performance Plots

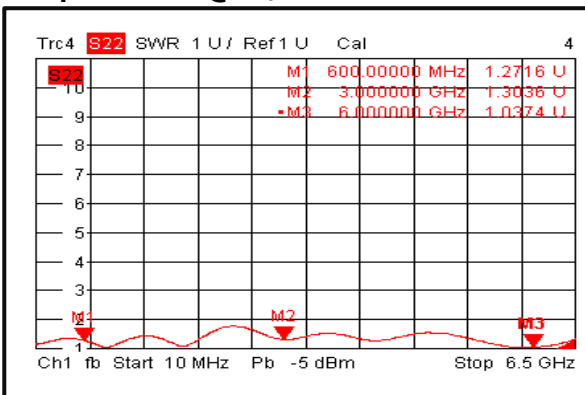
Insertion Loss @+25°C



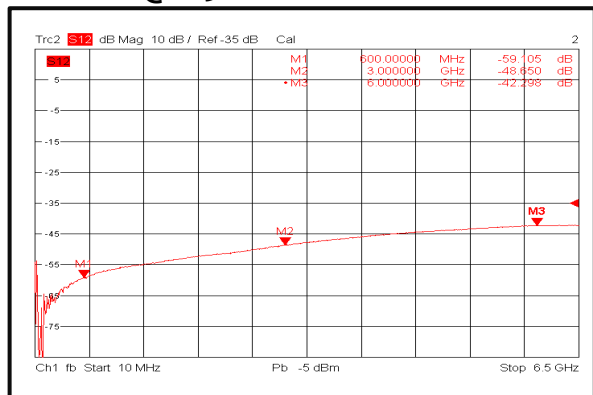
Input VSWR @+25°C



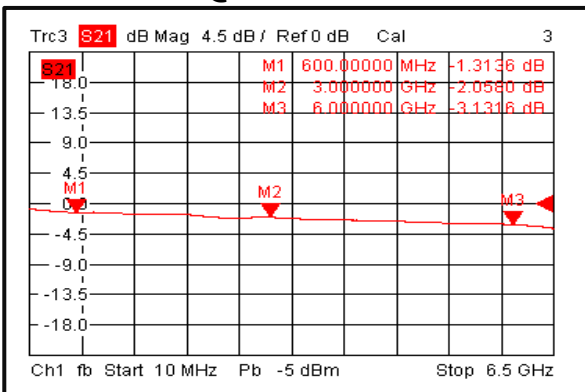
Output VSWR @+25°C



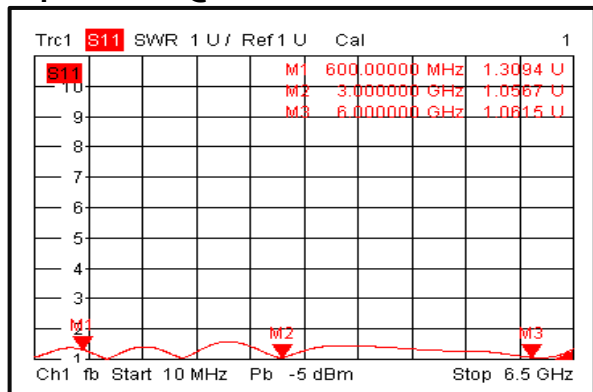
Isolation @+25°C



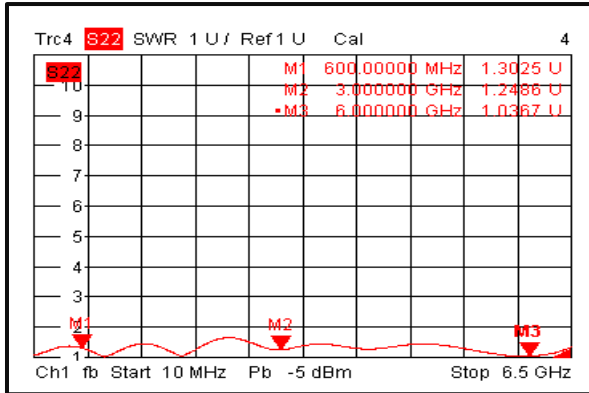
Insertion Loss @-40°C



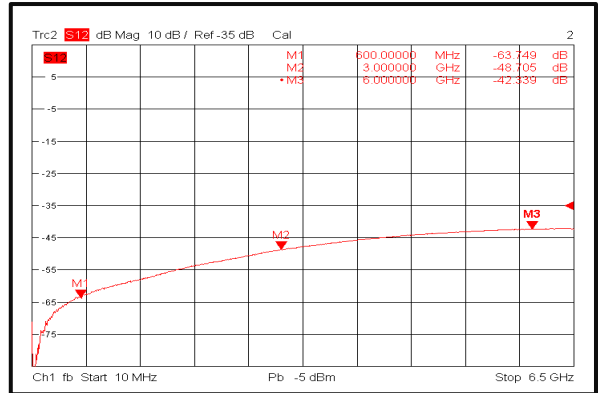
Input VSWR @-40°C



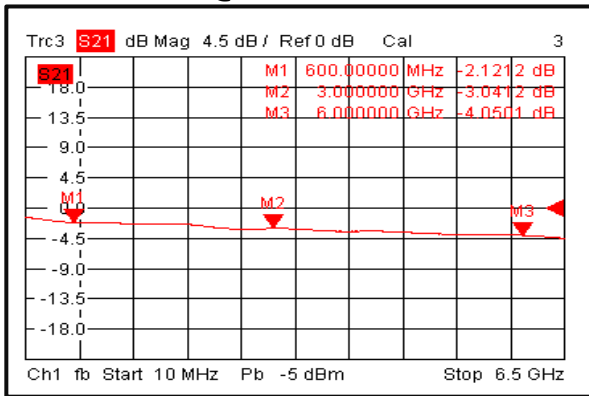
Output VSWR @-40°C



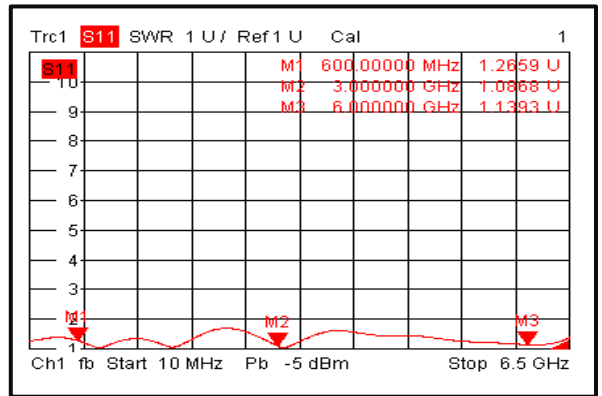
Isolation @-40°C



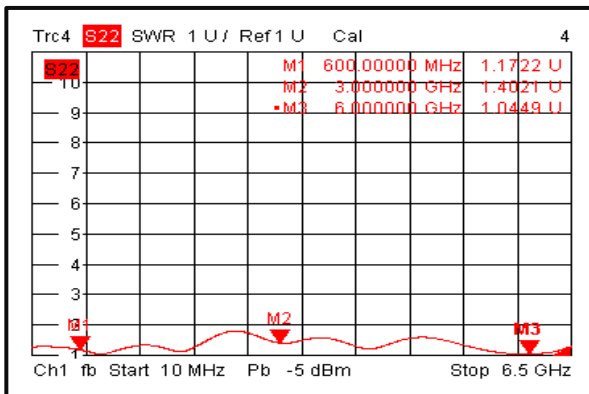
Insertion Loss @+85°C



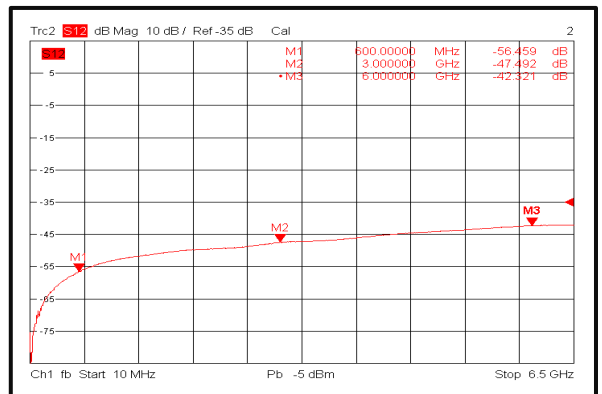
Input VSWR @+85°C



Output VSWR @+85°C

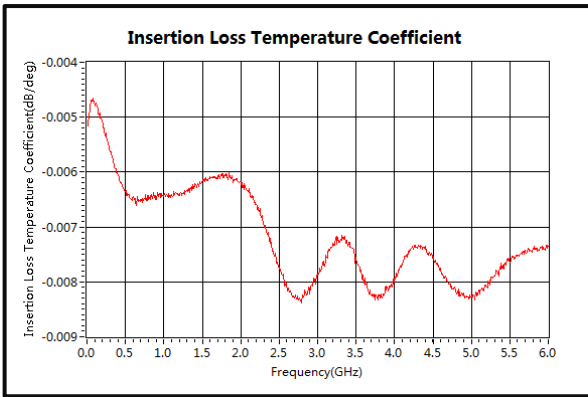


Isolation @+85°C

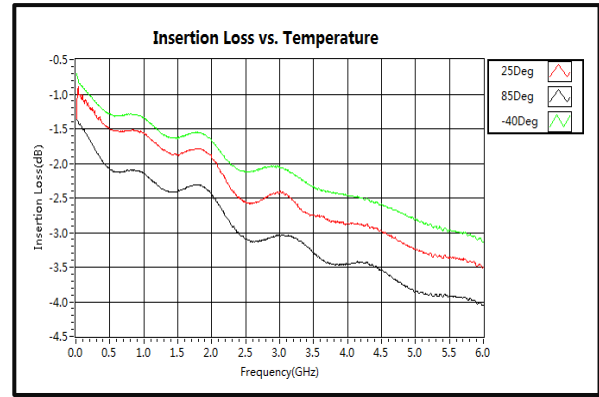


Reflective Coaxial Single Pole Eight Throw Switch DC - 6GHz

Insertion Loss Temperature Coefficient



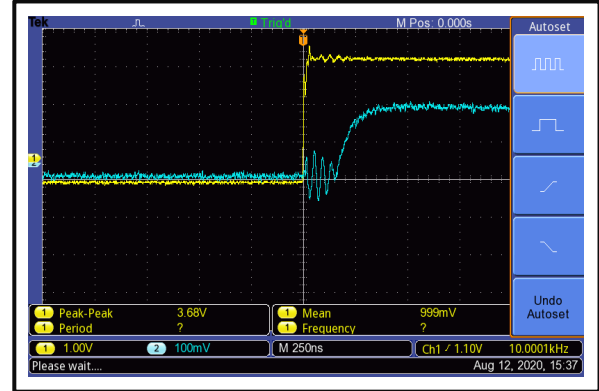
Insertion Loss vs. Temperature



Switching Speed



Switching Speed

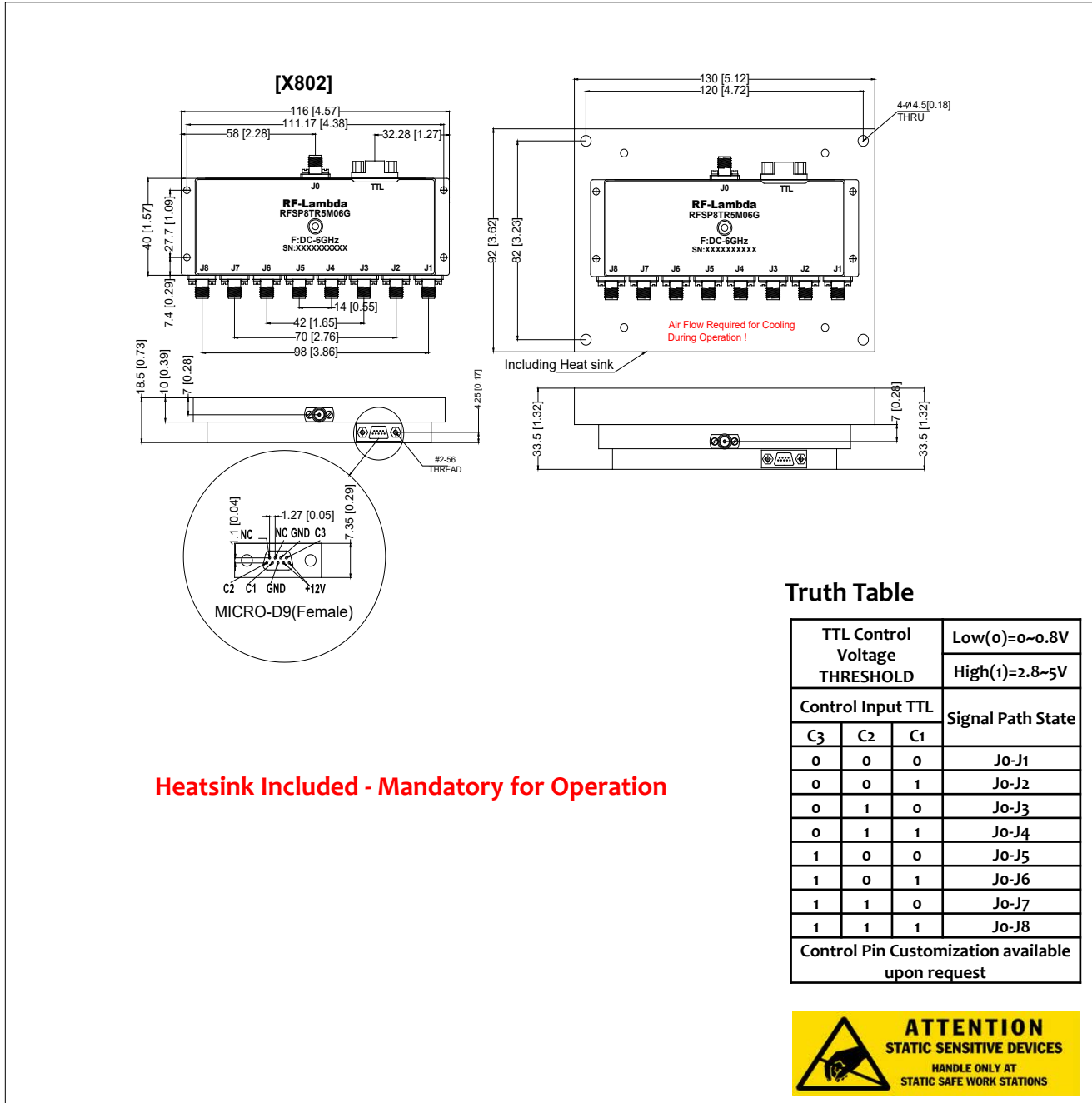


Reflective Coaxial Single Pole Eight Throw Switch DC - 6GHz

Outline Drawing:

All Dimensions in mm [inches]

Housing Tolerances ± 0.2 [0.008]



Truth Table

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	Jo-J1
0	0	1	Jo-J2
0	1	0	Jo-J3
0	1	1	Jo-J4
1	0	0	Jo-J5
1	0	1	Jo-J6
1	1	0	Jo-J7
1	1	1	Jo-J8
Control Pin Customization available upon request			

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