

Reflective Coaxial SP8T Switch DC- 18GHz



Note: Photo is for illustration only. Please refer to the outline drawing..

Features

- Ultra wide Band Operation DC-18GHz
- 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: RFSP8TRDC18G						
	SP8T Reflective Switch						
	High Power Cold Switching						
Parameters	Min	Typ.	Max	Min	Typ.	Max	Units
Frequency Range	DC-6			6-18			GHz
Insertion Loss		4.0	4.5		5.5		dB
Insertion Loss Temperature Coefficient		0.003			0.003		dB/°C
Isolation	30	40			24		dB
Input VSWR		1.5	2.0		1.5	2.0	:1
Output VSWR		1.5	2.0		1.5	2.0	:1
RF Input Power (CW, 50Ω, T = 25°C)			10			10	W
DC Power Dissipation		8.4			8.4		W
0.1dB Compression Point (Po.1dB)		40			40		dBm
IIP3		55			55		dBm
Switching Speed	500 Typ.						ns
Weight	/						Ounces
Impedance	50						Ω
Bias Current (+12V)	700						mA
Input / Output Connectors	SMA-Female						
Finish	Gold Plated						
Material	Aluminum						
Sealing	Hermetically Sealed (Optional)						

Absolute Maximum Ratings

Biassing	+12V±10%
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Ordering Information

Part No.	Description
RFSP8TRDC18G	SP8T DC-18GHz GaN Switch

Notes:

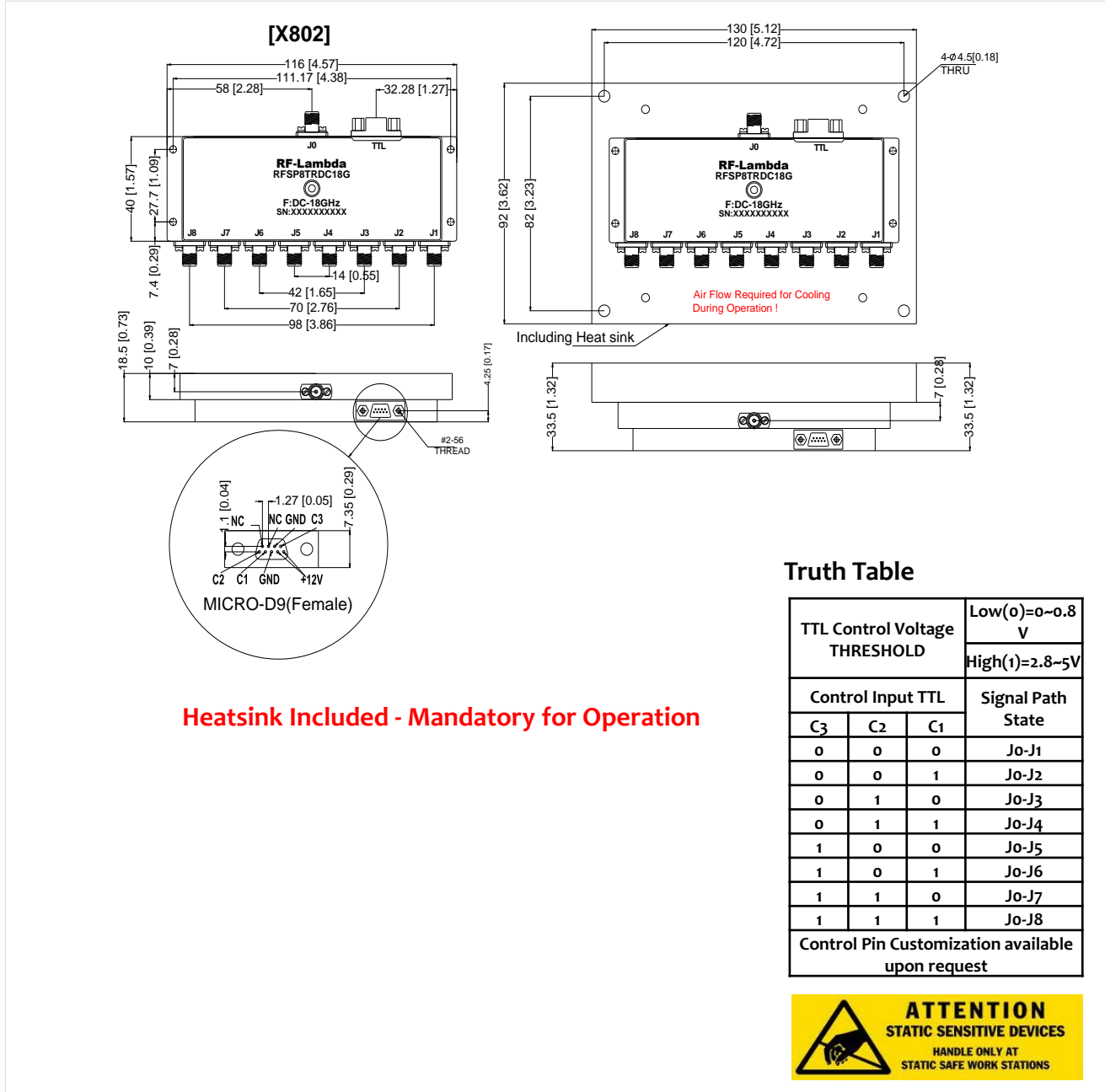
1. If the device operates in high power state, case temperature must be lower than 50°C.
2. Cold Switching: Before changing any TTL signal(s), the RF input power must be blanked or the switch could be damaged.

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)

Outline Drawing:

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



Heatsink Included - Mandatory for Operation

Truth Table

TTL Control Voltage THRESHOLD	Low(0)=0~0.8 V		
	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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