



### Reflective Coaxial SP2T Switch DC - 18GHz



#### Features

- Ultra Wide Band Operation DC-18GHz
- TTL compatible driver include
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- Temperature Range -45°C~+85°C
- Customization available upon request
- Hermetically sealed package up to 60,000ft available upon request.

Electrical Specifications,  $T_A = +25^\circ \text{C}$ ,  $V_{dd} = +5\text{V}$ ,  $TTL = 0 / +5\text{V}$

Description	PN: RFSP2TRDC18G									
	SP2T Reflective Switch									
	High Power Cold Switching									
	Parameters	Min	Typ.	Max	Min	Typ.	Max	Min	Typ.	Max
Frequency Range (Note 1)	DC-6			6-12			12-18			GHz
Insertion Loss		0.8	1.0		1.2	1.5		1.7	2.3	dB
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/°C
Isolation	40	45		30	35		23	25		dB
Input VSWR		1.15	1.3		1.6	1.8		1.6	2	: 1
Output VSWR		1.15	1.3		1.7	1.8		1.6	2	: 1
Max RF Input power (CW) (Note 2)			40			40			40	dBm
DC Power Dissipation (CW)		0.5			0.5			0.5		W
0.1dB Compression Point (Po.1dB)		40			40			40		dBm
IIP3		50			50			50		dBm
Switching Speed		50	100		50	100		50	100	ns
Weight	1.06									ounces
Impedance	50									Ω
Bias Current ( +5V )	100									mA
Input / Output Connectors	SMA-Female									
Finishing	Gold Plating									
Material	Aluminum									
Seal	Hermetically Sealed (optional)									

Notes:

1. The part does not have DC blocks however it does not require blocking capacitors. The input and output connections do not have any DC voltage and can be connected to DC ground through a short or resistive load.
2. Please note that below 100MHz the power handling capability is reduced by 6dB and the NF will increase above IL.

Reflective Coaxial Single Pole Double Throw Switch DC - 18GHz



**Absolute Maximum Ratings**

Biasing	+5V±10%
TTL Control Voltage	0~0.8V/2~5V

**Ordering Information**

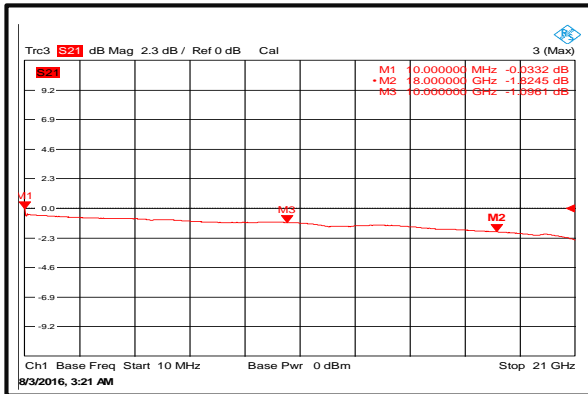
Part No.	ECCN	Description
RFSP2TRDC18G	EAR99	SP2T DC-18GHz GaN Switch

**Environmental Specifications**

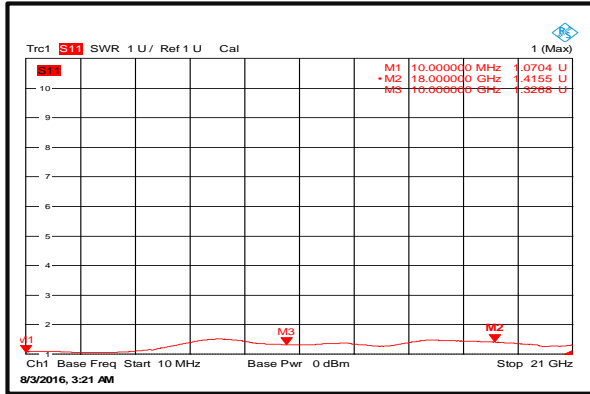
Operational Temperature (°C)	-45 ~ +85
Storage Temperature (°C)	-50 ~ +125
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35c, 95%RH at 40°C
Shock	20G for 11msec half sine wave, 3 axis both directions

**Typical Performance Plots**

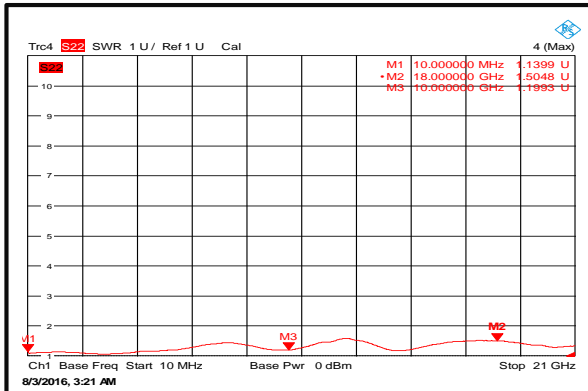
**Insertion Loss**



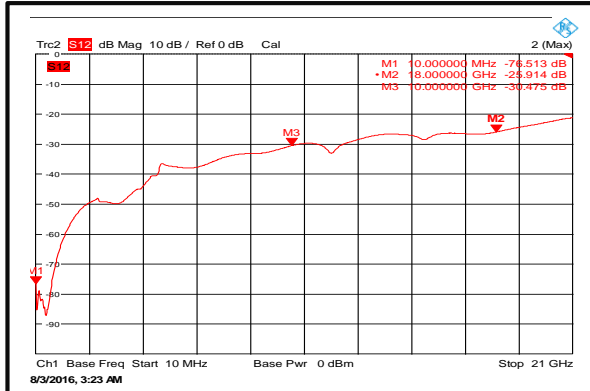
**Input VSWR**



**Output VSWR**



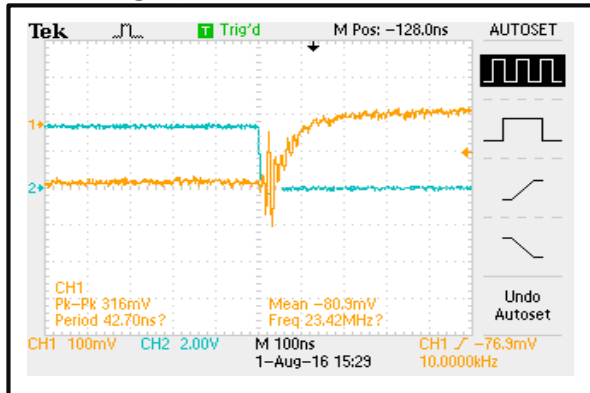
**Isolation**



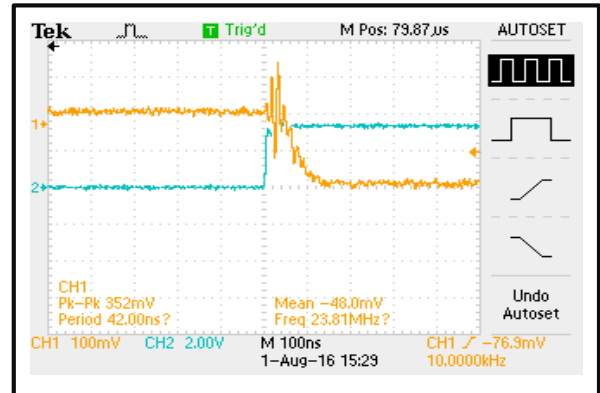
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**Switching Speed**

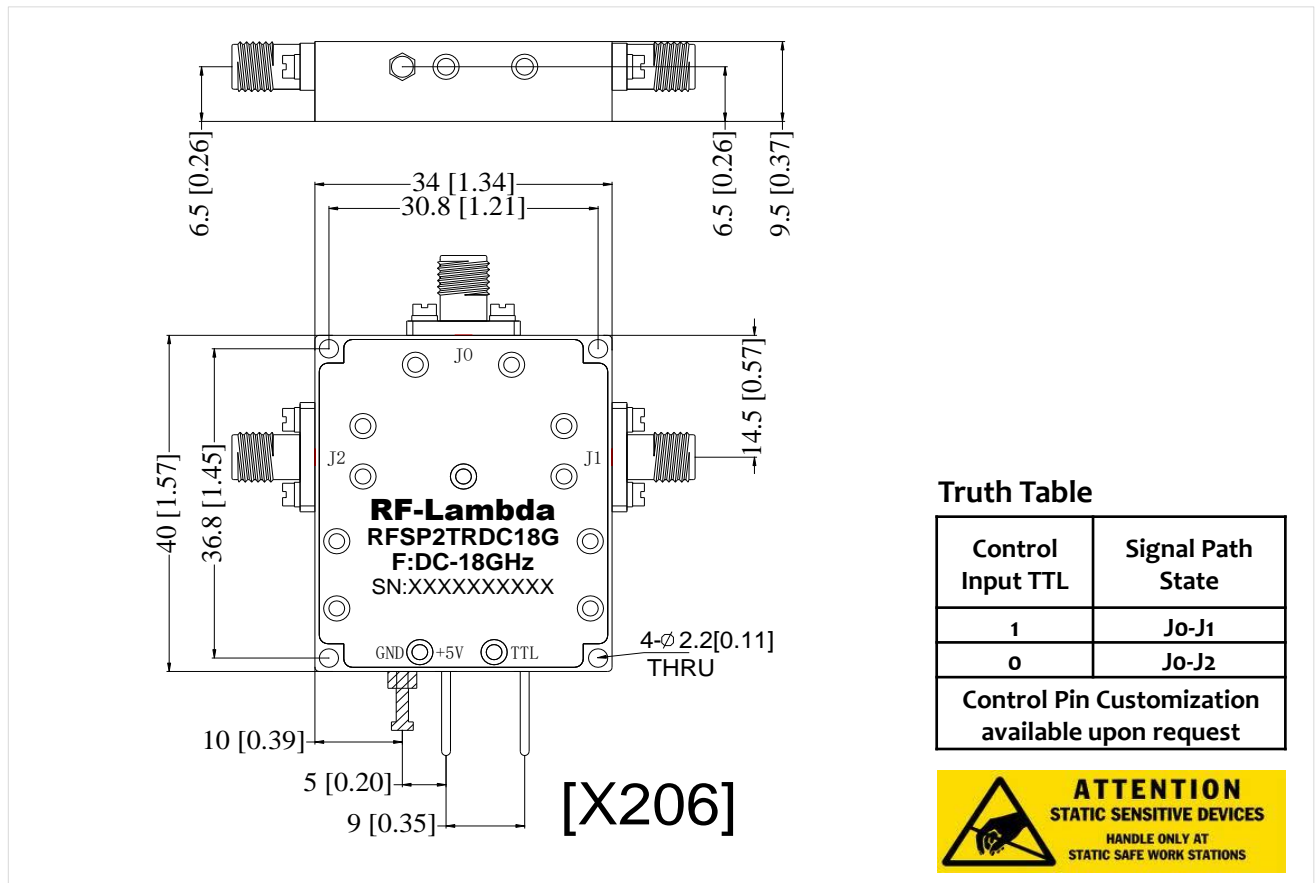


**Switching Speed**



**Outline Drawing:**

All Dimensions in mm [inches]



**Truth Table**

Control Input TTL	Signal Path State
1	Jo-J1
0	Jo-J2

Control Pin Customization available upon request



**Important Notice**

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