



RF-LAMBDA

LEADER OF BROADBAND SOLUTIONS

RFSP3TA0018G

Absorptive 0.02-18GHz Coaxial SP3T Switch



Features

- Ultra Wide Band Operation 0.02-18GHz
- 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.

Absorptive Coaxial Single Pole Three Throw Switch 0.02-18GHz

Electrical Specifications, TA = +25° C, With Vdd = +5V, Vss = -5V & VCTL = 0/ +5V

Description	PN: RFSP3TA0018G									
	SP3T Absorptive Switch									
	Low Power Cold Switching									
Parameters	Min	Typ.	Max	Min	Typ.	Max	Min	Typ.	Max	Units
Frequency Range	0.02~6			6~12			12~18			GHz
Insertion Loss		1.8	2.2		4.2	4.5		4.5	4.8	dB
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/°C
Isolation	60	80		60	75		60	65		dB
Input VSWR		1.8	2		1.6	2		1.6	2	
Output VSWR		1.8	2		1.6	2		1.6	2	
RF Input power	30			30			30			dBm
Power Dissipation (CW)		0.3			0.4			0.5		W
0.1dB Compression Po.1dB		30			30			30		dB
IM3		40			40			40		dBc
IIP3		50			50			50		dBm
Switching Speed	250									ns
Weight	1.8									ounces
Impedance	50									Ω
Biasing(+5V/-5V)	120/50									mA
Input /Output Connector	SMA-Female/SMA-Female (Standard)									
Finishing	Gold Plating									
Material	Aluminum									
Seal	Hermetically Sealed (optional)									



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Absolute Maximum Ratings

Biasing	+5V±10%/-5V±10%
TTL Control Voltage	0~0.8V/2~5V
Operating Temperature(°C)	-45 ~ +85
Storage Temperature(°C)	-50 ~ +125

Ordering Information

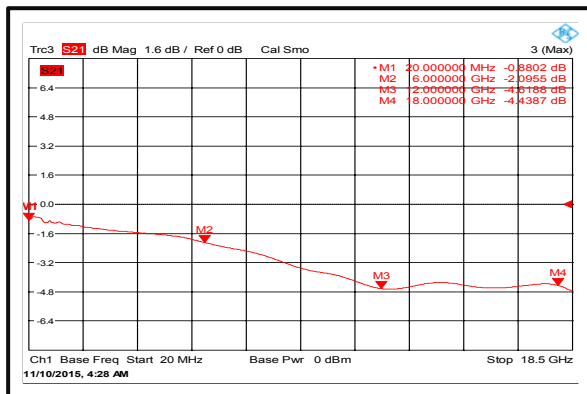
Part No	ECCN	Description
RFSP3TA0018G	EAR99	SP3T 0.02-18GHz PIN Diode Switch

Environment specifications

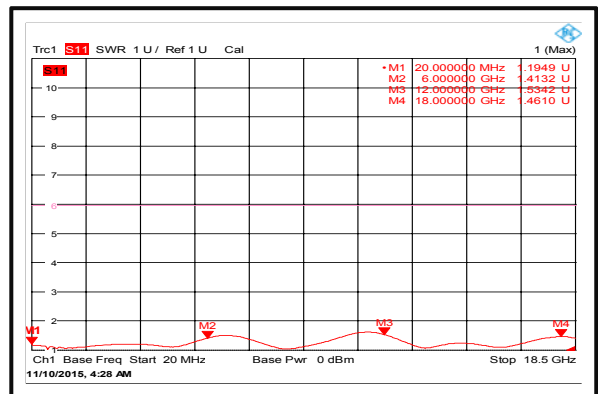
Operational Temperature (°C)	-45 ~ +85
Storage Temperature (°C)	-50 ~ +125
Altitude	30,000 ft. (Epoxy Seal Controlled environment) 60,000 ft 1.0psi min (Hermetically Seal Un-controlled environment) (Optional)
Vibration	25g rms (15 degree 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35c, 95%RH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

Typical performance plots

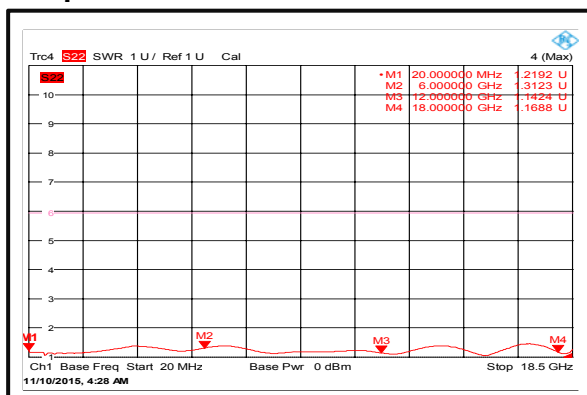
Insertion Loss



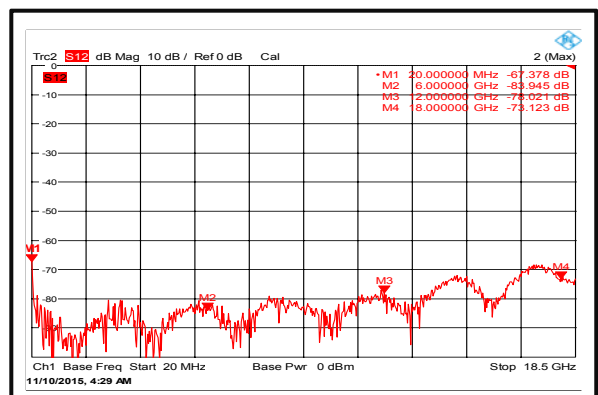
Input VSWR



Output VSWR



Isolation



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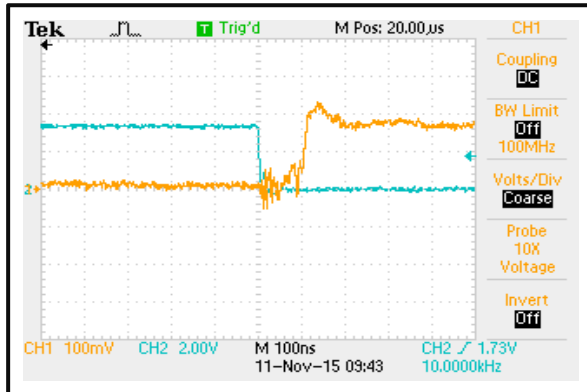


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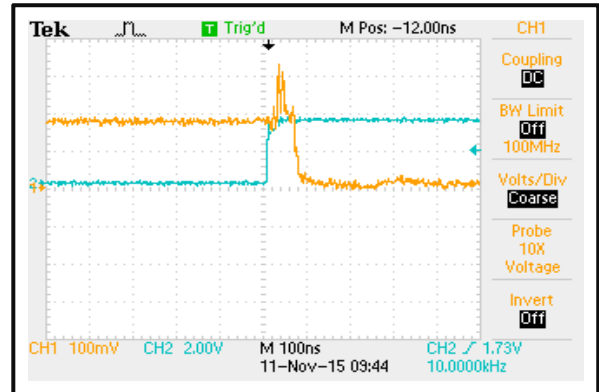
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RFSP3TA0018G

Switching Speed

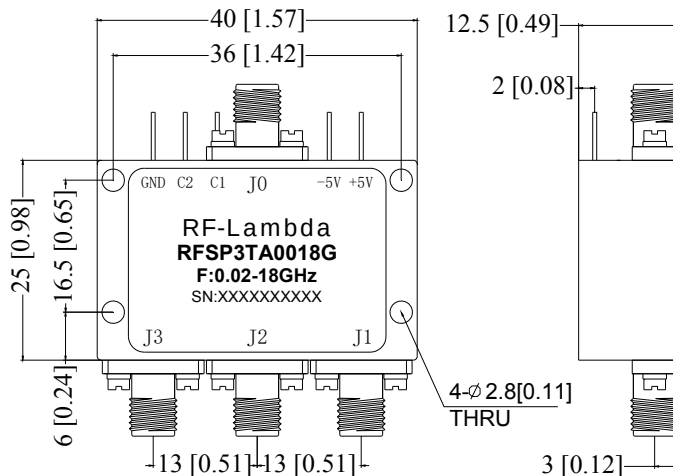


Switching Speed



Outline Drawing:

All Dimensions in mm (inches)



Truth Table

Control Input		Signal Path
TTL	State	
C1	C2	State
0	0	J0-J1
0	1	J0-J2
1	0	J0-J3
1	1	OFF

Control Pin Customization available upon request



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