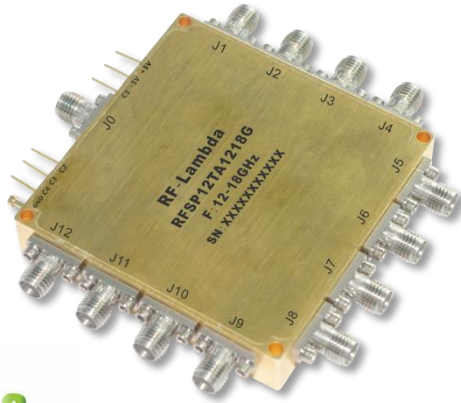




Absorptive 12-18GHz Coaxial SP12T Switch



Features

- Wide Band Operation 12-18GHz
- TTL compatible driver include
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- Customization available upon request
- Hermetically sealed package up to 60,000ft available upon request.

Absorptive Coaxial Single Pole twelve Throw Switch 12-18GHz

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

Description	PN: RFSP12TA1218G			
	SP12T Absorptive Switch			
	Low Power Cold Switching			
Parameters	Min	Typ.	Max	Units
Frequency Range	12-18			GHz
Insertion Loss		4.5	5	dB
Insertion Loss Temperature Coefficient		0.003		dB/°C
Isolation	60	65		dB
Input VSWR		1.6	2	ratio
Output VSWR		1.6	2	ratio
Power Dissipation (CW)		0.3		W
IM3		40		dBc
1dB Compression P1dB		30		dBm
Switching Speed			100	ns
Weight	150			g
Impedance	50			Ω
Biasing(+5V/-5V)	500/50			mA
Input /Output Connector	SMA-Female/SMA-Female (Standard)			
Finishing	Gold Plating			
Material	Aluminum			
Seal	Hermetically Sealed (optional)			



Absolute Maximum Ratings

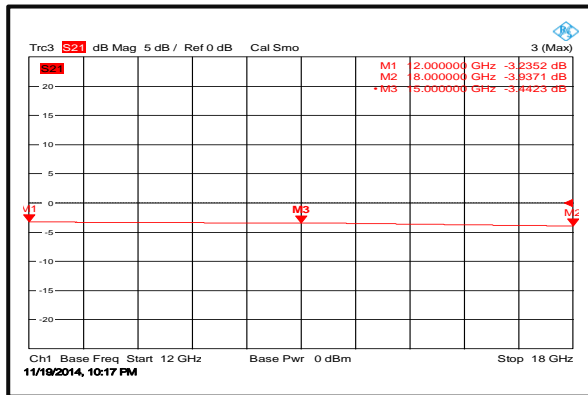
Biassing	+5V/-5V
TTL Control Voltage	+5V/0V
RF Input power	+30dBm
Operating Temperature(°C)	-45 ~ +85
Storage Temperature(°C)	-50 ~ +125

Ordering Information

Part No	ECCN	Description
RFSP12TA1218G	EAR99	SP12T 12-18GHz PIN Diode Switch

Typical performance plots

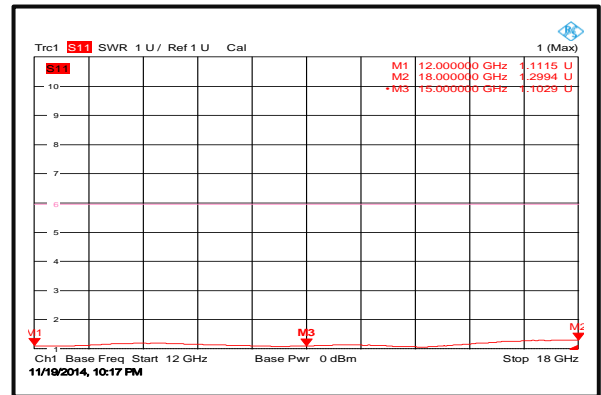
Insertion Loss



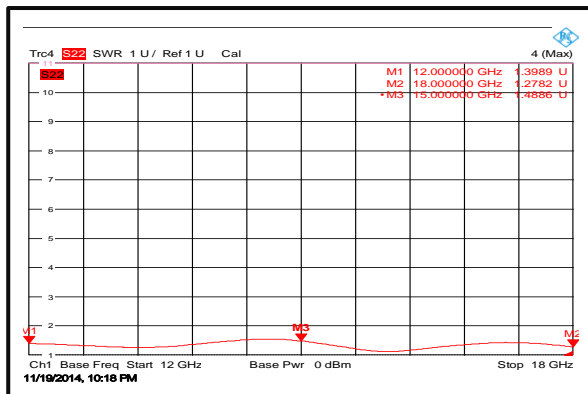
Environment specifications

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

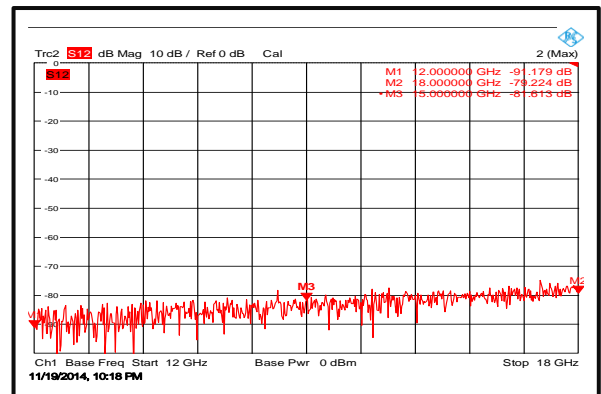
Input VSWR



Output VSWR



Isolation





RF-LAMBDA

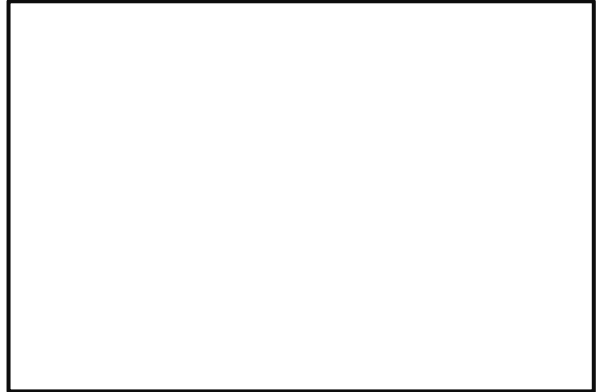
The power beyond expectations

RFSP12TA1218G

Output Third Order Intercept (IP₃)



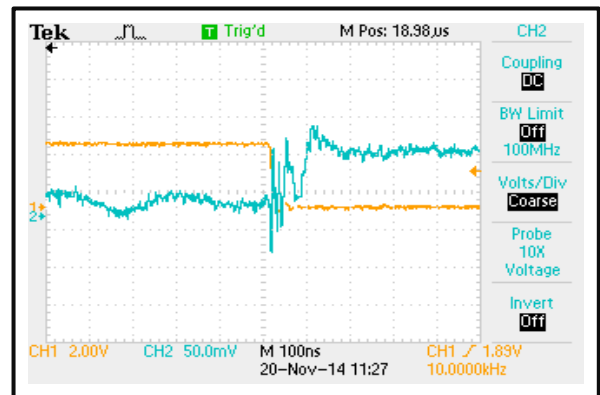
P1dB vs. Frequency



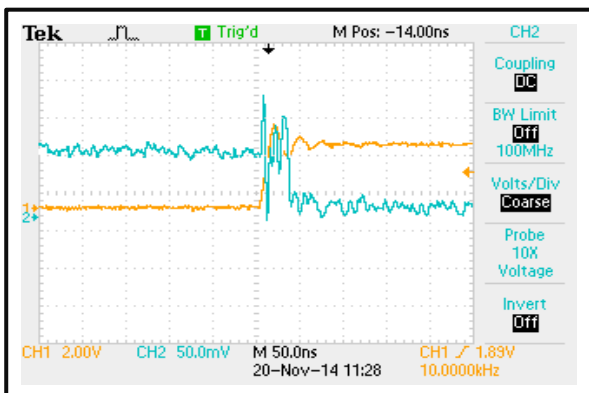
The datasheet for test 1dB



Switching Speed



Switching Speed



Absorptive Coaxial Single Pole twelve Throw Switch 12-18GHz



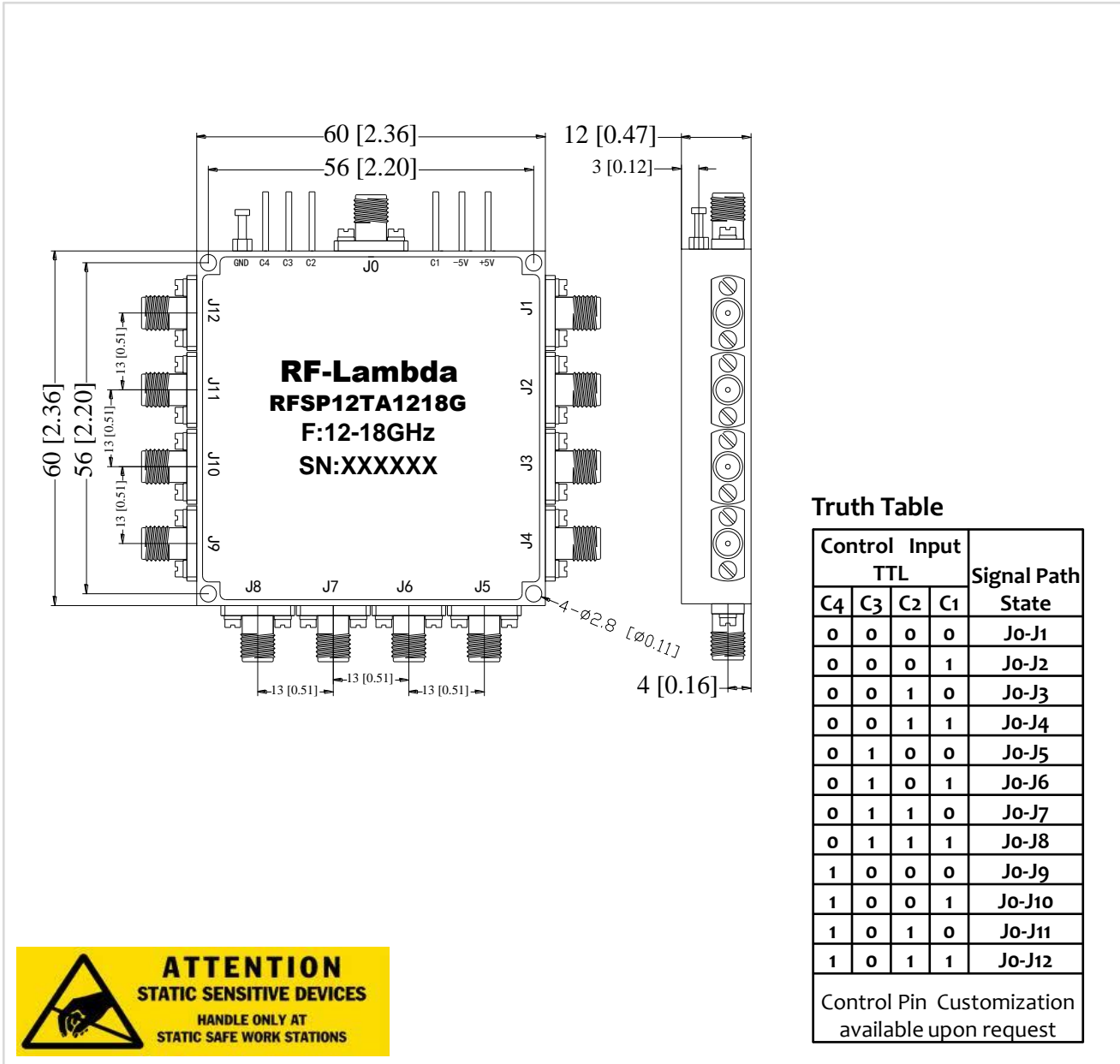
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The power beyond expectations

RFSP12TA1218G

Outline Drawing:

All Dimensions in mm (inches)



Truth Table

Control Input TTL				Signal Path
C4	C3	C2	C1	State
0	0	0	0	Jo-J1
0	0	0	1	Jo-J2
0	0	1	0	Jo-J3
0	0	1	1	Jo-J4
0	1	0	0	Jo-J5
0	1	0	1	Jo-J6
0	1	1	0	Jo-J7
0	1	1	1	Jo-J8
1	0	0	0	Jo-J9
1	0	0	1	Jo-J10
1	0	1	0	Jo-J11
1	0	1	1	Jo-J12

Control Pin Customization available upon request

Absorptive Coaxial Single Pole twelve Throw Switch 12-18GHz

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