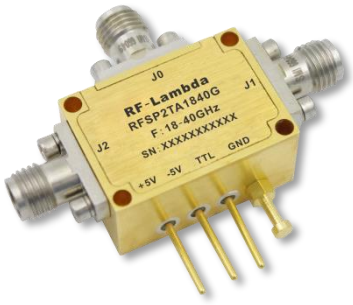
Absorptive Coaxial SP2T Switch
18 - 40GHz



RoHS Compliant

Features

- Wide Band Operation 18-40GHz
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation

Typical Applications

- Wireless Infrastructure
- Military and Aerospace
- Test and Measurement

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

Description	PN: RFSP2TA1840G						
	SP2T Absorptive Switch						
	Low Power Cold Switching						
Parameters	Min	Typ.	Max	Min	Typ.	Max	Units
Frequency Range	18-30			30-40			GHz
Insertion Loss		3.0	4		3.5	4.5	dB
Insertion Loss Temperature Coefficient		0.003			0.003		dB/ °C
Isolation	50	60		45	50		dB
Input VSWR		1.8	2		2	2.5	: 1
Output VSWR		2.5	3		2.5	3	: 1
RF Input Power			+23			+23	dBm
DC Power Dissipation		0.5			0.5		W
0.1dB Compression Point (P0.1dB)		23			23		dBm
IIP3		50			48		dBm
Switching Speed	50						ns
Weight	0.71						ounces
Impedance	50						Ω
Bias Current (+5V / -5V)	100/50						mA
Input / Output Connectors	2.92mm-Female						
Finish	Gold Plated						
Material	Aluminum						
Sealing	Hermetically Sealed (Optional)						

Absorptive Coaxial Single Pole Double Throw Switch 18 - 40GHz

Absolute Maximum Ratings

Biasing	+5V±10%/-5V±10%
TTL Control Voltage	0~0.8V / 2.8~5V

Ordering Information

Part No.	ECCN	Description
RFSP2TA1840G	EAR99	SP2T 18-40GHz PIN Diode Switch

Notes:

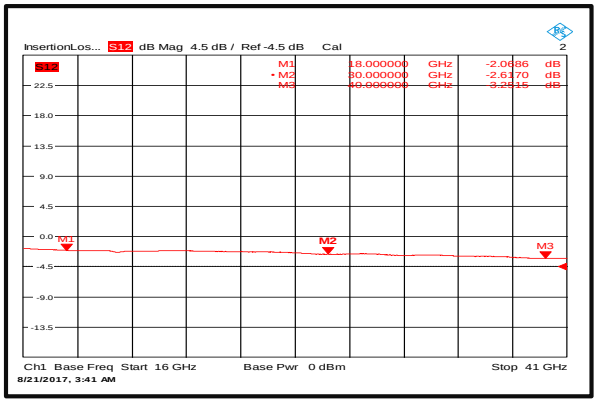
- TTL pins cannot be connected to the negative voltage otherwise the internal driver will be damaged.

Environmental Specifications and Test Standards

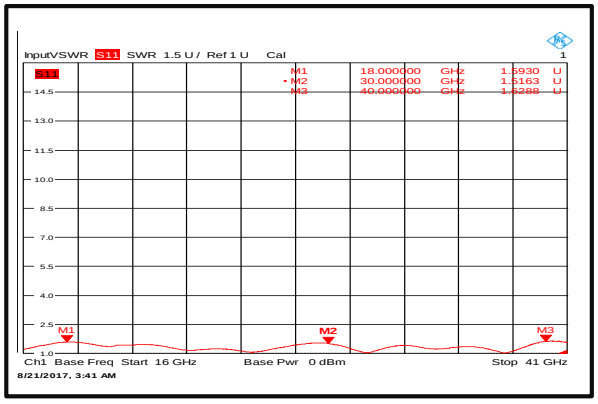
Parameter	Standard	Description
Operational Temperature	MIL-STD-39016	-45℃~+85℃ (Case Temperature)
Storage Temperature		-50℃~+125℃
Thermal Shock		1 Hour@ -45℃ → 1 Hour @ +85℃ (5 Cycles)
Random Vibration		Acceleration Spectral Density 6 (m/s) Total 92.6 RMS
Electrical & Temperature Burn In		Temperature +85℃ 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	MIL-STD-883 (For Hermetically Sealed Units)

Typical Performance Plots

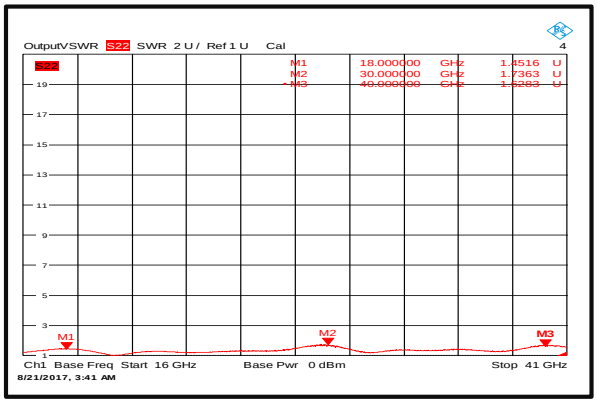
Insertion Loss



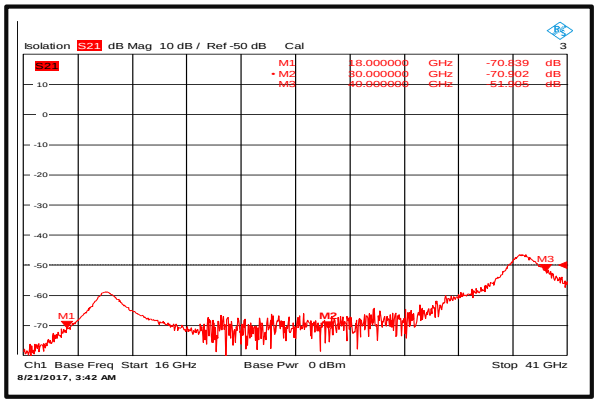
Input VSWR



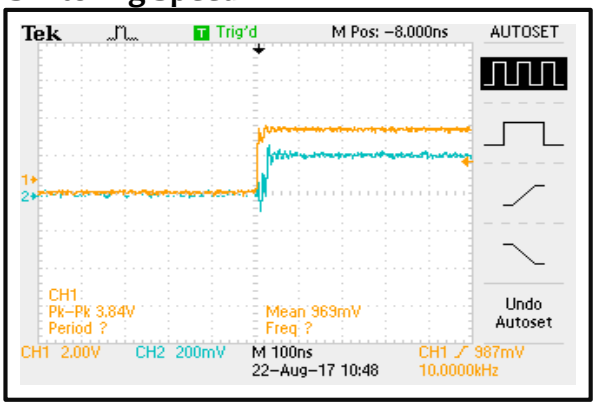
Output VSWR



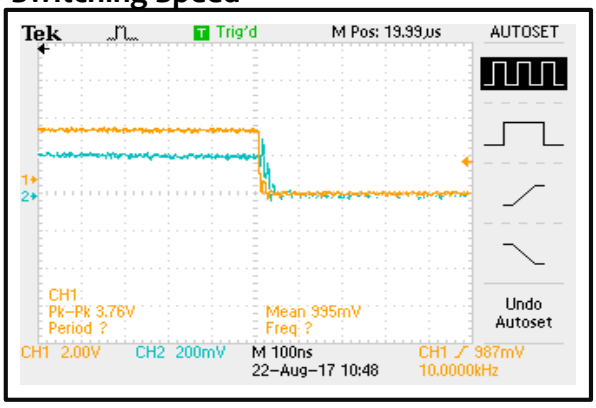
Isolation



Switching Speed



Switching Speed



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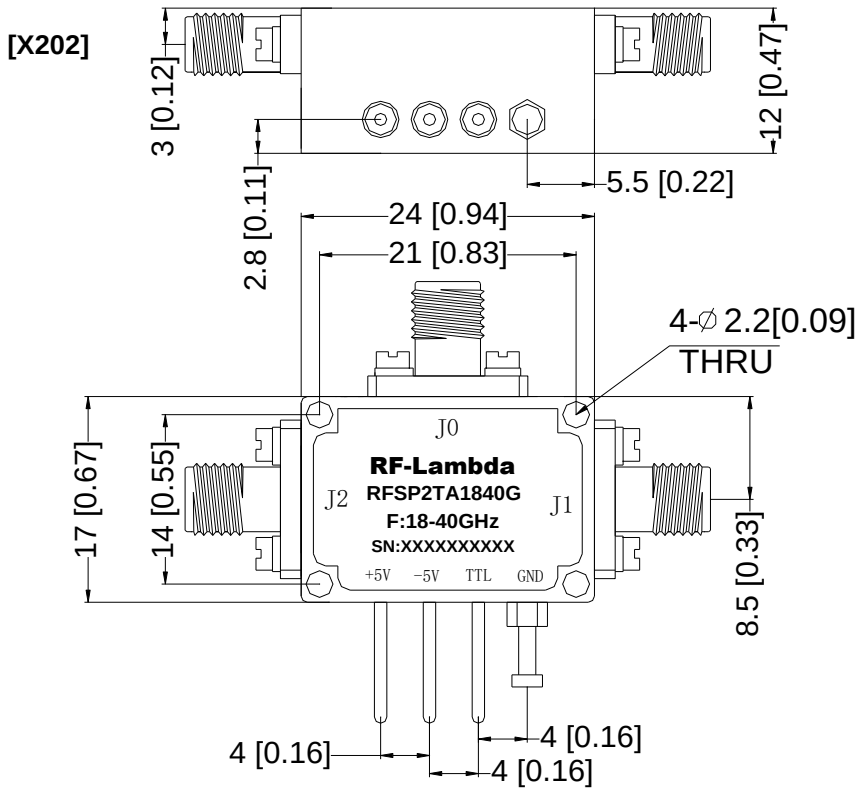
Outline Drawing:

All Dimensions in mm [inches]



Truth Table

Control Input TTL	Signal Path State
0	J0-J2
1	J0-J1
Control Pin Customization available upon request	

Important Notice

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