



RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

RFSP2TR0060G

Reflective Coaxial SP2T Switch 0.001 - 60GHz



Features

- Ultra Wide Band Operation 0.001-60GHz
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- Customization available upon request

Typical Applications

- Wireless Infrastructure
- RF Microwave & VSAT
- Military & Aerospace

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

Description	PN: RFSP2TR0060G									
	SP2T Reflective Switch									
	Low Power Cold Switching									
	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Parameters										
Frequency Range	0.001-20			20-40			40-60			GHz
Insertion Loss		3.5	4.0		4.5	5.5		8.5	10.0	dB
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/°C
Isolation		35			30			25		dB
Input VSWR			2.5			3.0			3.0	: 1
Output VSWR			2.5			3.0			3.0	: 1
RF Input Power			23			23			23	dBm
DC Power Dissipation		0.6			0.6			0.6		W
0.1dB Compression Point (Po.1dB)		23			23			23		dBm
IIP3		55			50			50		dBm
Switching Speed		80			80			80		ns
Weight	/									ounce s
Impedance	50									Ω
Bias Current (+5V)	110 / 50									mA
Input / Output Connectors	1.85mm - Female									
Finish	Gold Plated									
Material	Aluminum									
Sealing	Hermetically Sealed (Optional)									

Reflective Coaxial Single Pole Double Throw Switch 0.001 - 60GHz



Absolute Maximum Ratings

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

Ordering Information

Part No.	ECCN	Description
RFSP2TR0060G	EAR99	SP2T 0.001-60PIN Diode Switch

Notes:

- TTL pins cannot be connected to the negative voltage otherwise the internal driver will be damaged.
- Cold Switching: Before changing any TTL signal(s), the RF input power must be blanked or the switch could be damaged.

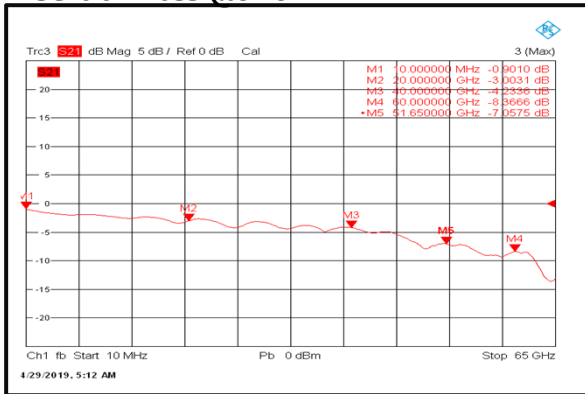
Environmental Specifications and Test Standards

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

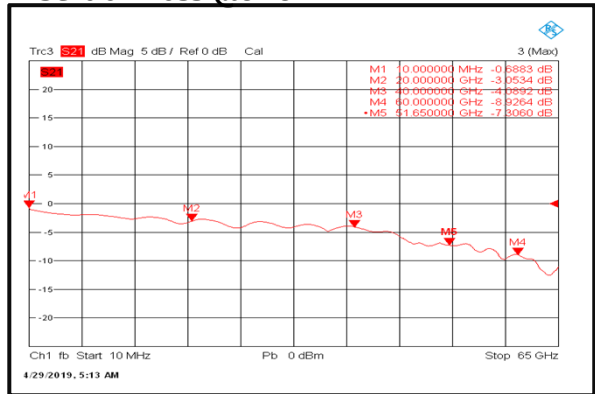


Typical Performance Plots

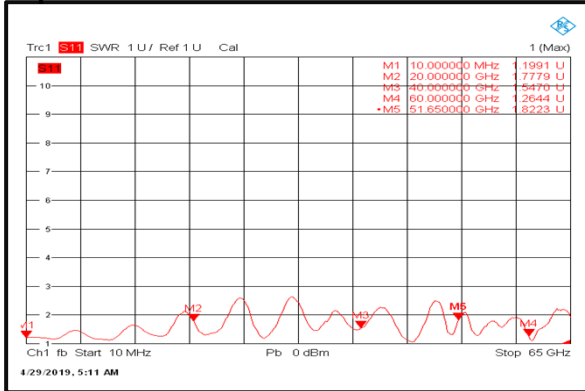
Insertion Loss @J0-J1



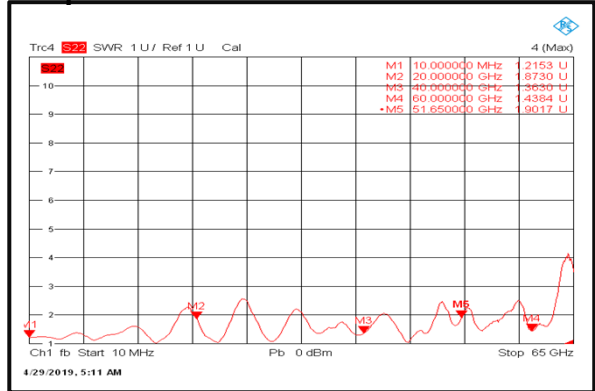
Insertion Loss @J0-J2



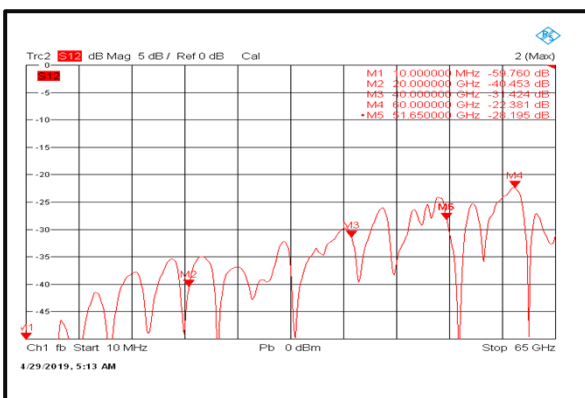
Input VSWR



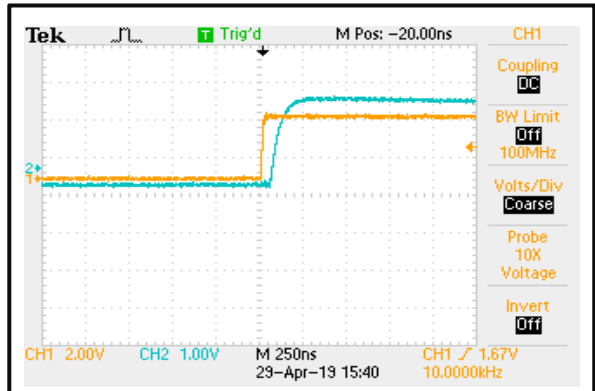
Output VSWR



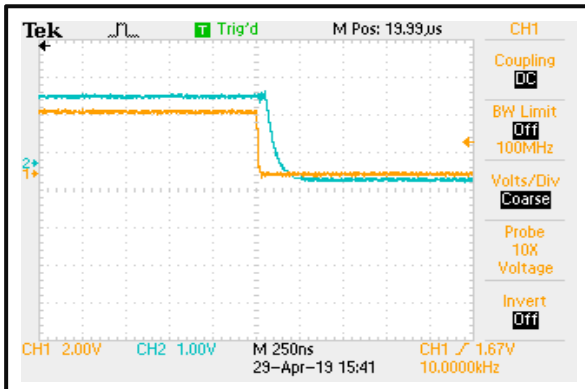
Isolation



Switching Speed



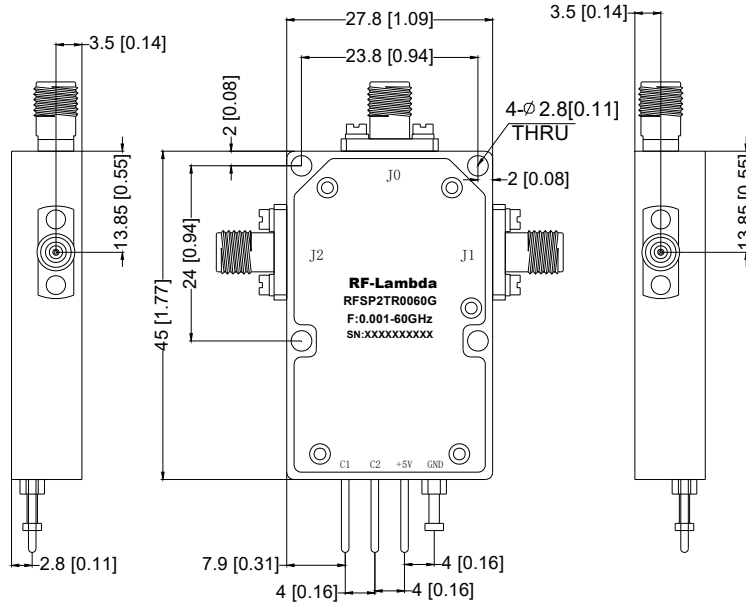
Switching Speed





Outline Drawing:

All Dimensions in mm [inches]



Truth Table

Control Input TTL		Signal Path State
C1	C2	
1	1	Not Used
1	0	J0-J1
0	1	J0-J2
0	0	OFF
Control Pin Customization available upon request		



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