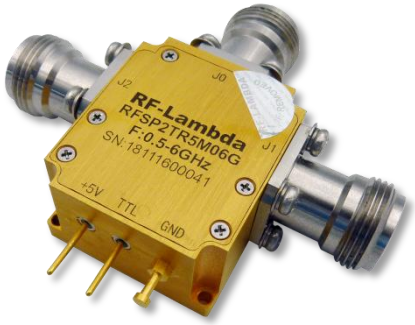
Reflective Coaxial SP2T Switch
0.5 - 6GHz



Features

- Ultra Wide Band Operation 0.5-6GHz
- 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, T_A = +25 ℃, Vdd = +5V, TTL = 0 / +5V

Description	PN: RFSP2TR5M06G SP2T Reflective Switch High Power Cold Switching						
Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	0.5-3			3-6			GHz
Insertion Loss		1.1	1.3		1.3	1.5	dB
Insertion Loss Temperature Coefficient		0.003			0.003		dB/°C
Isolation	40	48		35	38		dB
Input VSWR		1.4	1.6		1.4	1.6	: 1
Output VSWR		1.4	1.6		1.4	1.6	: 1
RF Input Power			50			50	dBm
DC Power Dissipation		0.5			0.5		W
0.1dB Compression Point (P0.1dB) (Pulsed)			50			50	dBm
IIP3		55			55		dBm
Switching Speed	150Max.						ns
Weight	3.53						Ounces
Impedance	50						Ω
Bias Current (+5V)	100						mA
Input / Output Connectors	N - Female						
Finish	Gold Plated						
Material	Aluminum						
Sealing	Hermetically Sealed (Optional)						

Reflective Coaxial Single Pole Double Throw Switch 0.5 - 6GHz

Absolute Maximum Ratings

Biasing	+5.5V

Ordering Information

Part No.	Description
RFSP2TR5M06G	SP2T 0.5-6GHz GaN Switch

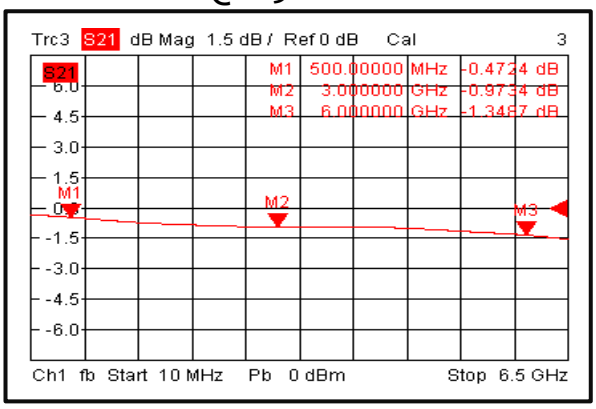
Notes:
1. If the device operates in high power state, case temperature must be lower than 60℃.
2. Cold Switching: Before changing any TTL signal(s), the RF input power must be blanked or the switch could be damaged.

Environmental Specifications and Test Standards

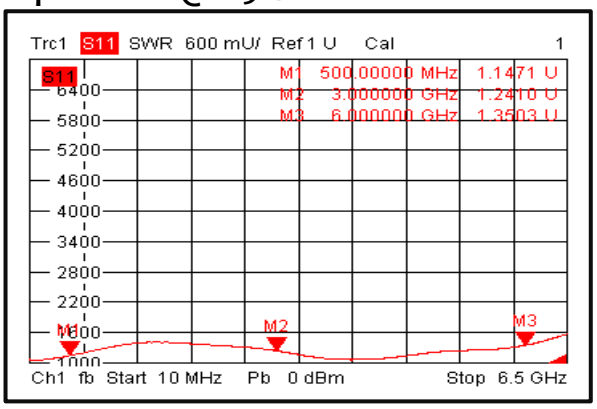
Parameter	Description
Operational Temperature	-40℃~+85℃ (Case Temperature)
Storage Temperature	-50℃~+105℃
Thermal Shock	-40℃ → +85℃ (5 Cycles / 10 hours)
Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
High Temperature Burn In	Temperature +85℃ for 72 Hours
Shock	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 (For Hermetically Sealed Units)

Typical Performance Plots

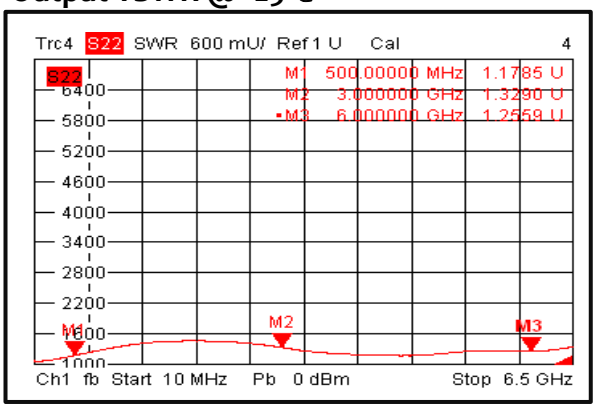
Insertion Loss @+25℃



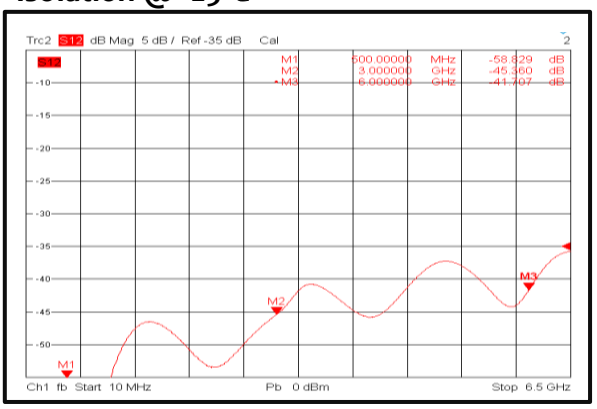
Input VSWR @+25℃



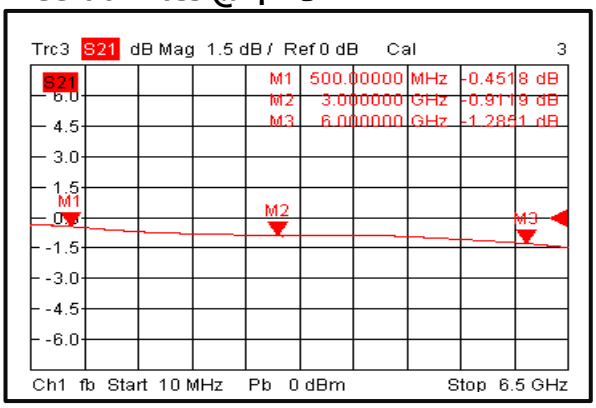
Output VSWR @+25℃



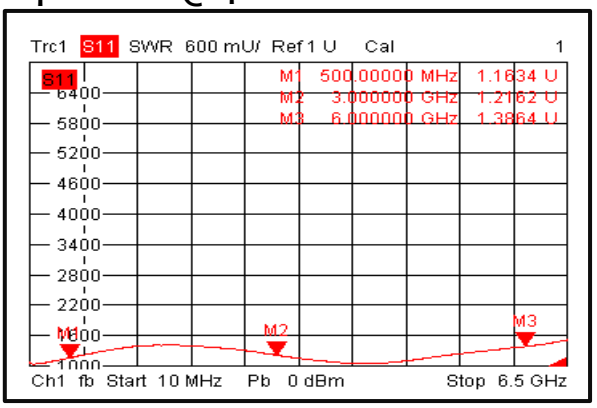
Isolation @+25℃



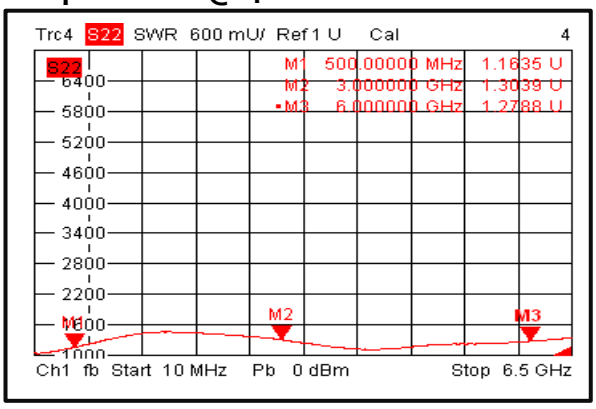
Insertion Loss @-40℃



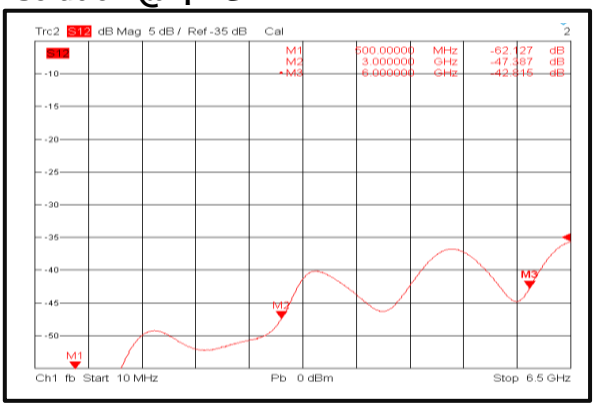
Input VSWR @-40℃



Output VSWR @-40℃



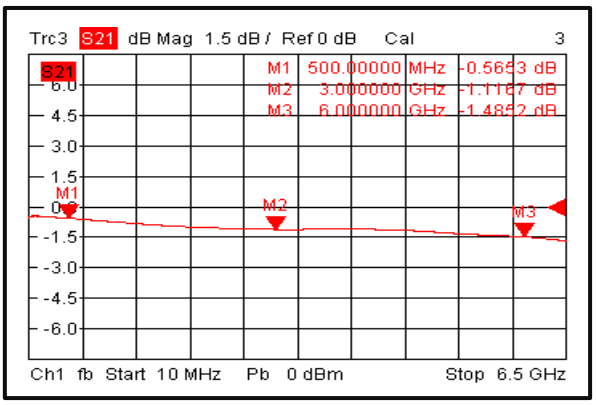
Isolation @-40℃



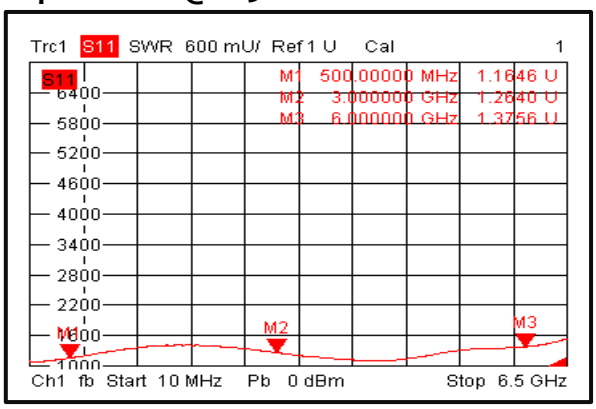
Reflective Coaxial Single Pole Double Throw Switch 0.5 - 6GHz

Reflective Coaxial Single Pole Double Throw Switch 0.5 - 6GHz

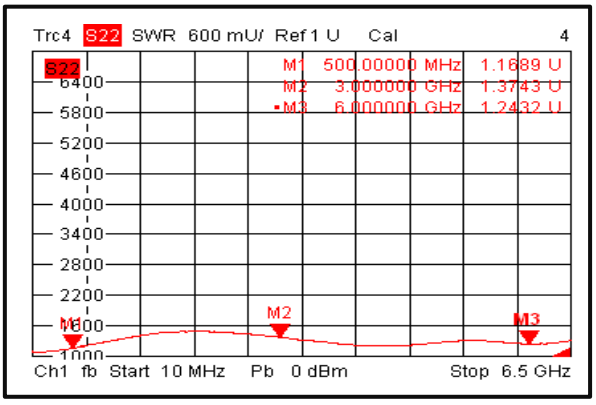
Insertion Loss @+85°C



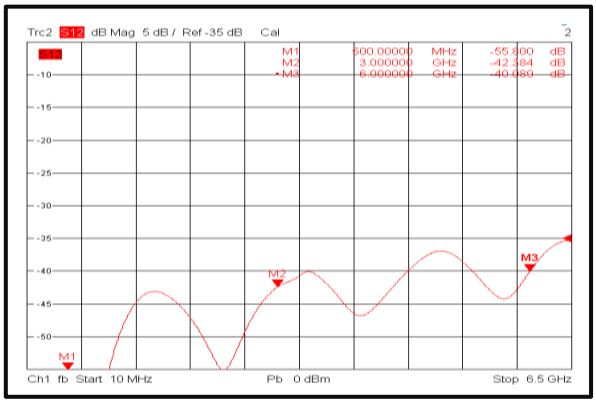
Input VSWR @+85°C



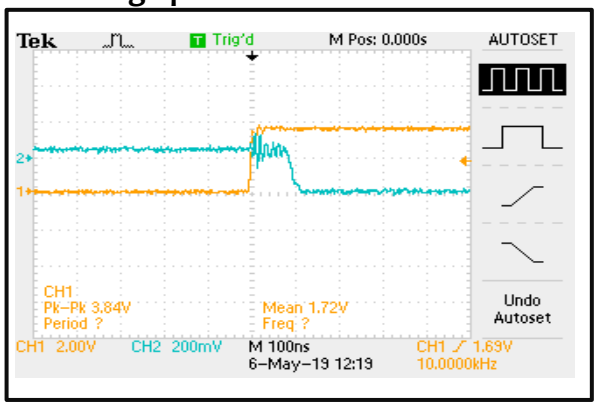
Output VSWR @+85°C



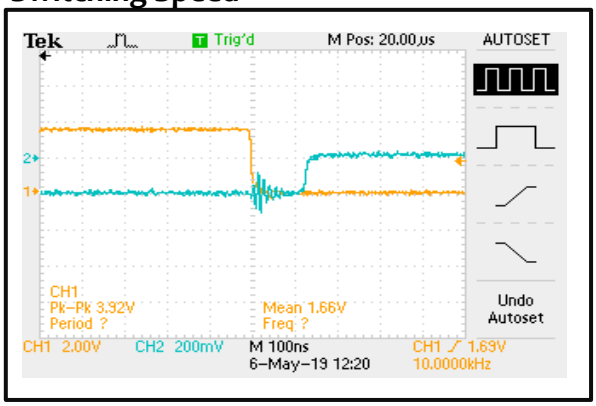
Isolation @+85°C



Switching Speed

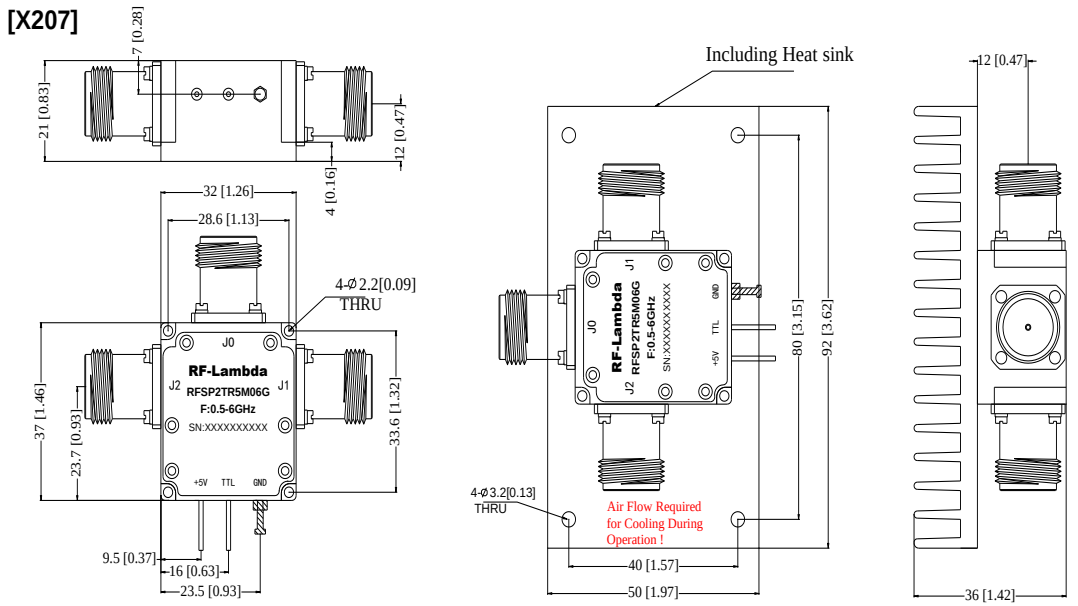


Switching Speed



Outline Drawing:

All Dimensions in mm [inches]
Housing Tolerances ±0.1 (0.004)



Notes:

. Heatsink Included - Mandatory for Operation .
. Heatsink NOT Included - Mandatory for Operation.

Truth Table

TTL Control Voltage THRESHOLD	Low(0)=0~0.8V
	High(1)=2.8~5V
Control Input TTL	Signal Path State
1	J0-J1
0	J0-J2
Control Pin Customization Available Upon Request	

Important Notice

RF-LAMBDA USA www.rflambda.com
Sales: sales@rflambda.com Technical : support@rflambda.com