Reflective Coaxial SP2T Switch
230 – 300MHz

Features

- Wide Band Operation 230-300MHz
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation

Typical Applications

- Wireless Infrastructure
- Test and Measurement
- Military and Aerospace

Electrical Specifications, TA = +25 ℃, Vdd = +5V/-28V, TTL = 0 / +5V

Description	PN: RFSP2TR230M300M SP2T Reflective Switch High Power Cold Switching			
Parameters	Min.	Typ.	Max.	Units
Frequency Range		230 - 300		MHz
Insertion Loss		0.4	0.6	dB
Insertion Loss Temperature Coefficient		0.003		dB/°C
Isolation	50	65		dB
Input VSWR		1.2	1.3	: 1
Output VSWR		1.2	1.3	: 1
Input Peak Power (50% duty cycle,125us pulse width)			125	W
DC Power Dissipation		2		W
0.1dB Compression Point (P0.1dB)		51		dBm
IIP3		50		dBm
Switching Speed			1.2	us
Weight		5.29		ounces
Impedance		50		Ω
Bias Current(+5V / -28V)		250/50		mA
Input / Output Connectors		N - Female		
Finish		Nickel Plated		
Material		Aluminum		
Sealing		Hermetically Sealed (Optional)		

Reflective Coaxial Single Pole Double Throw Switch 230 – 300MHz

Absolute Maximum Ratings

Biasing	+5V±10%/-28V±10%

Ordering Information

Part No.	Description
RFSP2TR230M300M	SP2T 230-300MHz PIN Diode Switch

Notes:

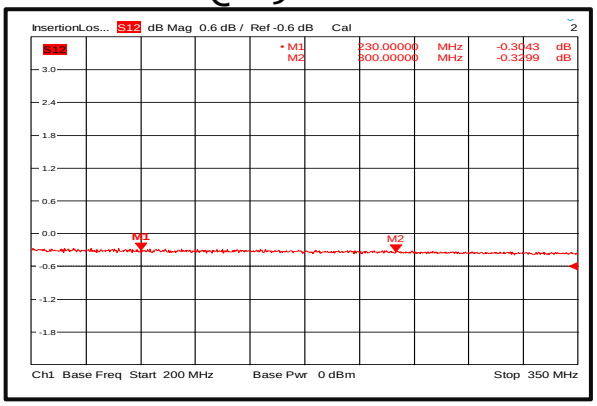
1. TTL pins cannot be connected to the negative voltage otherwise the internal driver will be damaged.
2. If the device operates in high power state, case temperature must be lower than 60℃.
3. Cold Switching: Before changing any TTL signal(s), the RF input power must be blanked or the switch could be damaged.

Environmental Specifications and Test Standards

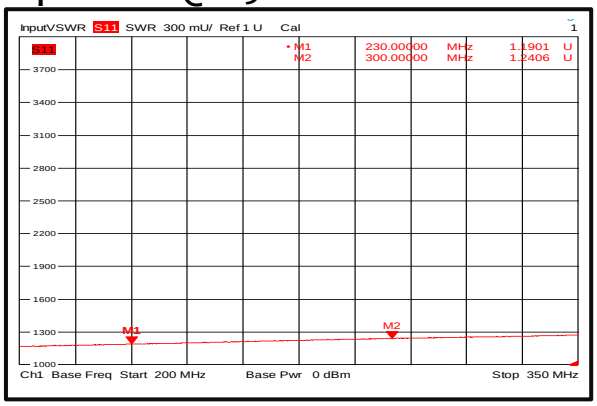
Parameter	Description
Operational Temperature	-40℃~+85℃ (Case Temperature)
Storage Temperature	-50℃~+105℃
Thermal Shock	-40℃ → +85℃ (5 Cycles / 10 hours)
Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
High Temperature Burn In	Temperature +85℃ for 72 Hours
Shock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

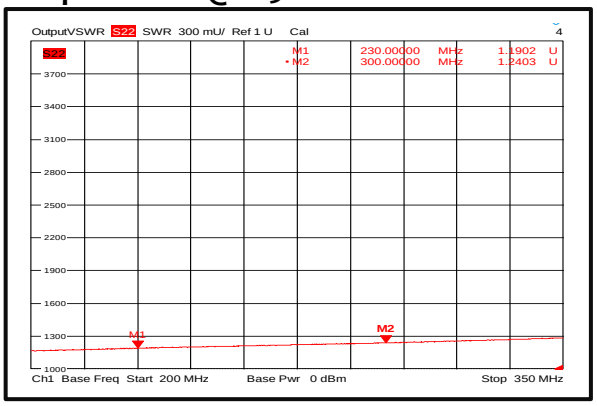
Insertion Loss @+25℃



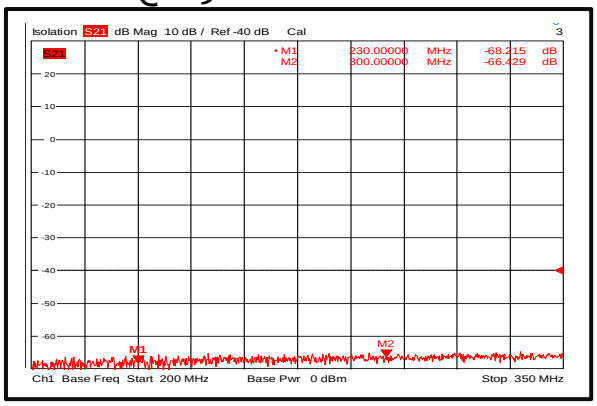
Input VSWR @+25℃



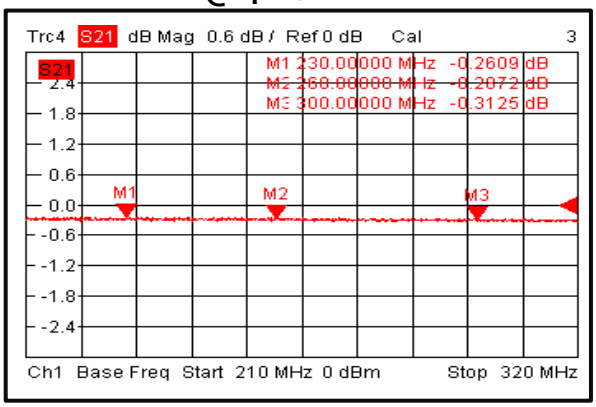
Output VSWR @+25℃



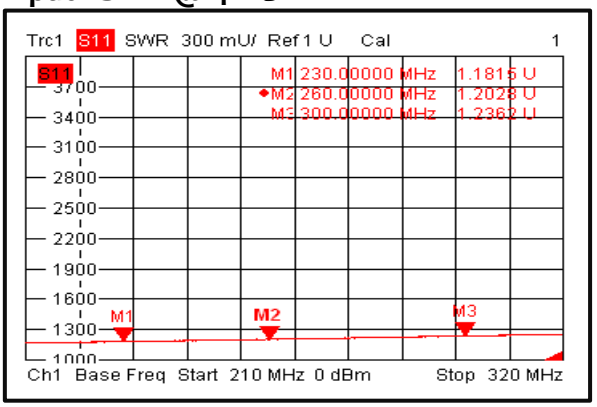
Isolation @+25℃



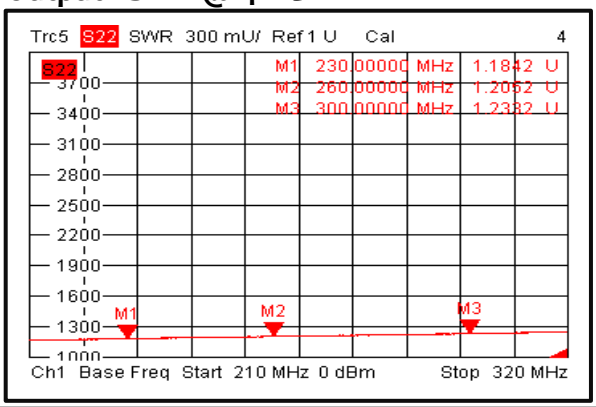
Insertion Loss @-40℃



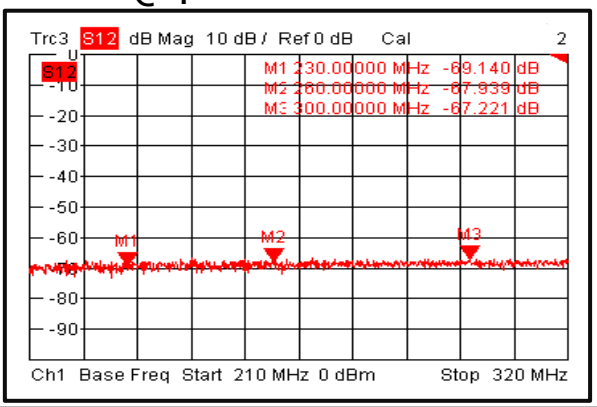
Input VSWR @-40℃



Output VSWR @-40℃



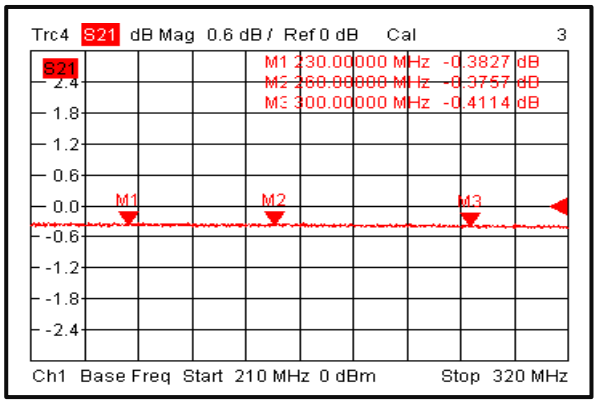
Isolation @-40℃



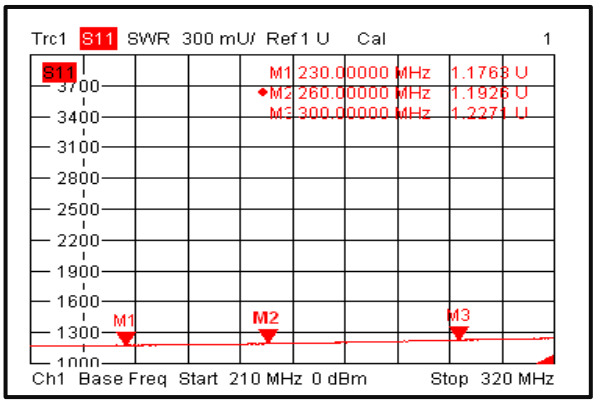
Reflective Coaxial Single Pole Double Throw Switch 230 – 300MHz

Reflective Coaxial Single Pole Double Throw Switch 230 – 300MHz

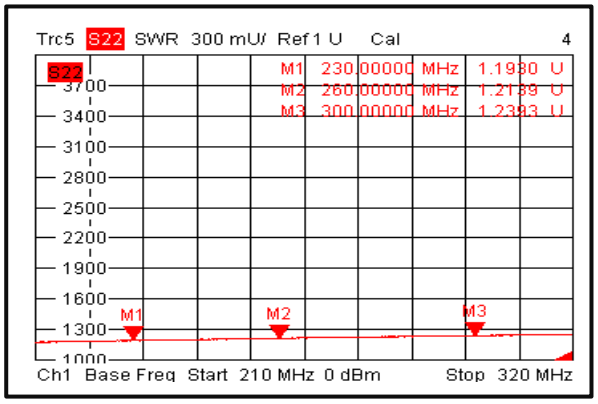
Insertion Loss @+85℃



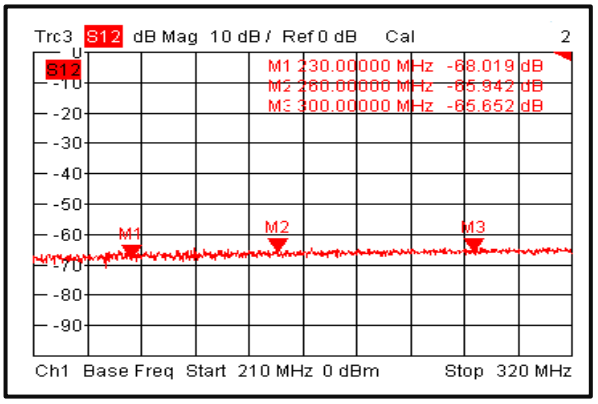
Input VSWR @+85℃



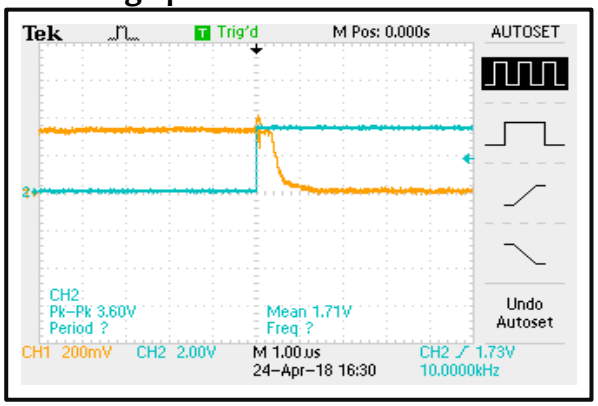
Output VSWR @+85℃



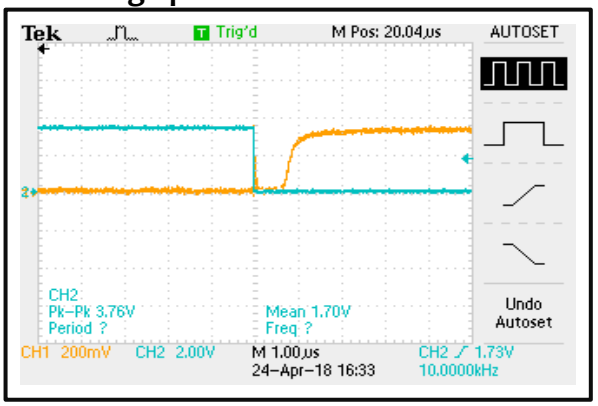
Isolation @+85℃



Switching Speed



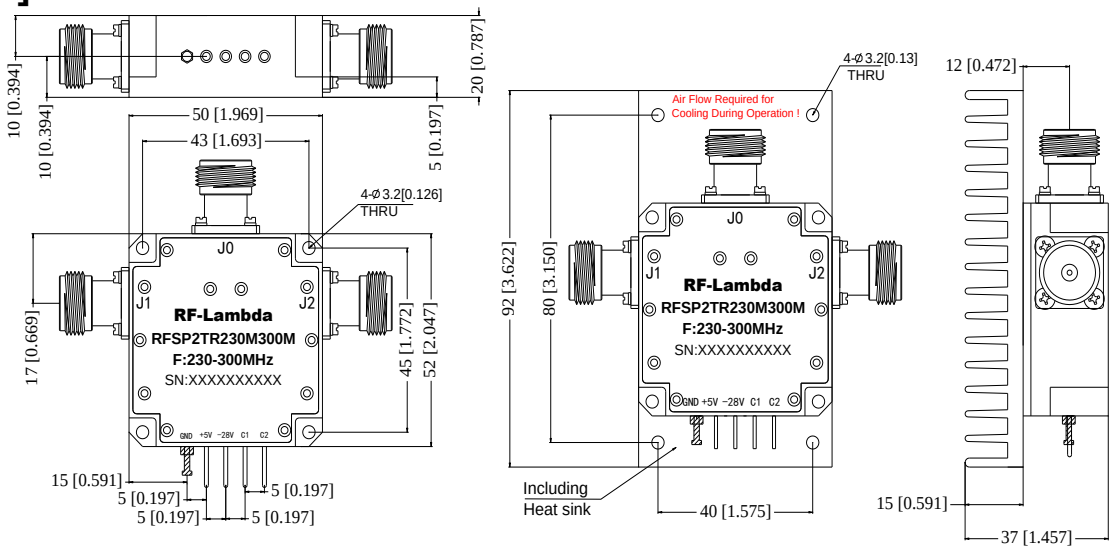
Switching Speed



Outline Drawing:

All Dimensions in mm [inches]
Housing Tolerances ±0.2 [0.008]

[X207]



Truth Table

TTL Control Voltage THRESHOLD		Low(0)=0~0.8V
		High(1)=2.8~5V
Control Input TTL		Signal Path State
C2	C1	
0	0	OFF
0	1	J0-J1
1	0	J0-J2
1	1	Not Used
Control Pin Customization available upon request		

Notes:

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

Important Notice

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