

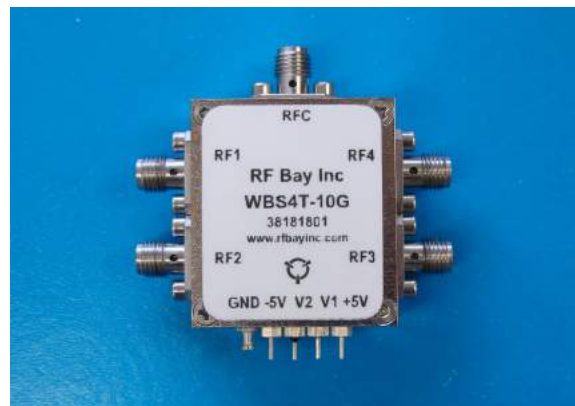
WBS Series

10MHz – 10GHz 2W SP4T RF Switch

Features

- Frequency Range: 10 - 10000MHz
- Insertion Loss: 1.5dB @ 5GHz
- Isolation: 40dB @ 5GHz
- Maximum Input P_{in}: +33dBm
- Switching Time: 1.3μs
- DC Power: ±5V/<±1mA
- SMA Connector

Picture



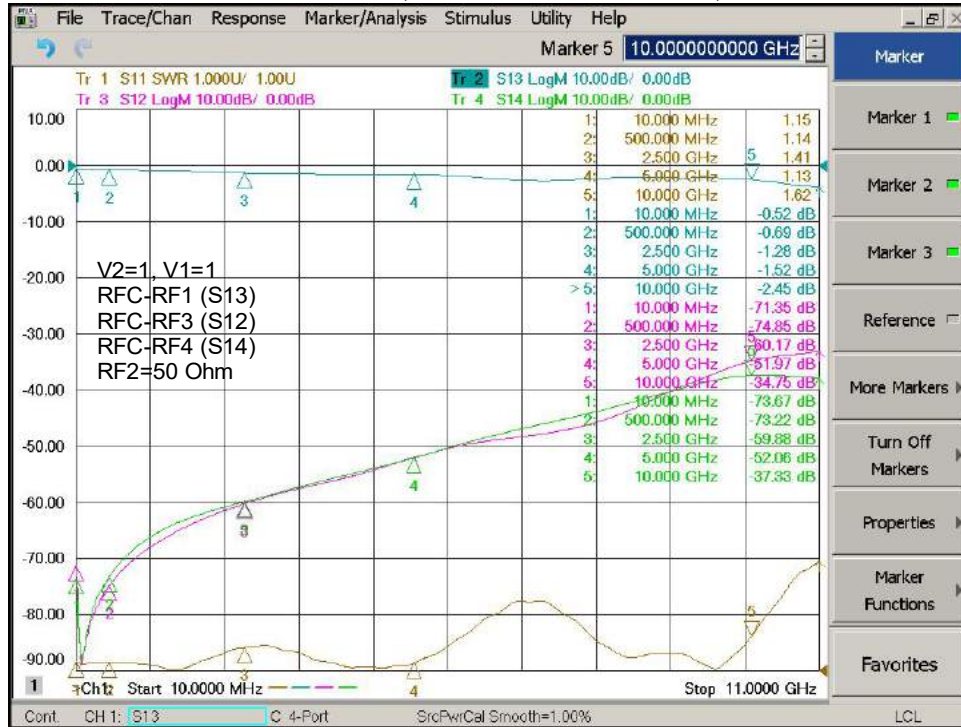
Description

WBS4T-10G is a 2W Single Pole 4 Throw (SP4T) RF Switch operates in frequency range from 10MHz to 10GHz.

Electrical Specifications @ +25 °C, 50 Ω System, DC Supply = ±5V

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	MHz	10		10,000
Insertion Loss (RFC to RFX) (X=1,2,3,4)	f = 10MHz	dB	0.5	1.0
	f = 5GHz	dB	1.5	2.0
	f = 10GHz	dB	2.5	3.0
Isolation (RFC to RFX) (X=1,2,3,4)	f = 10MHz	dB	65	70
	f = 5GHz	dB	40	45
	f = 10GHz	dB	28	33
Isolation (RFX to RFY) (X,Y=1,2,3,4, X≠Y)	f = 10MHz	dB	65	70
	f = 5GHz	dB	40	45
	f = 10GHz	dB	28	33
VSWR (10MHz – 10GHz)			1.2:1	2.5:1
Maximum Input P _{in}	dBm	+33		
Switching Speed	μs		1.3	1.5
Control Voltage V1 & V2 (TTL/HCMOS)	V	0		5
DC Power Supply	V	±4.5	±5.0	±5.5
Supply Current	mA			<±1

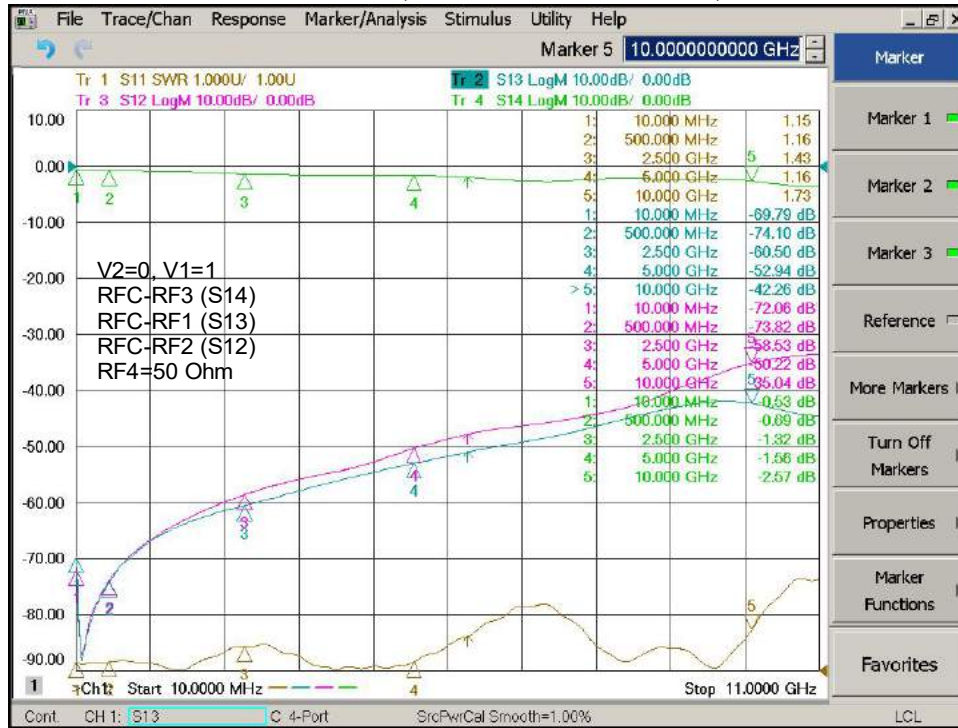
Low Loss Path RFC-RF1, Isolation RFC-RF3, RFC-RF4



Low Loss Path RFC-RF2, Isolation RFC-RF3, RFC-RF4



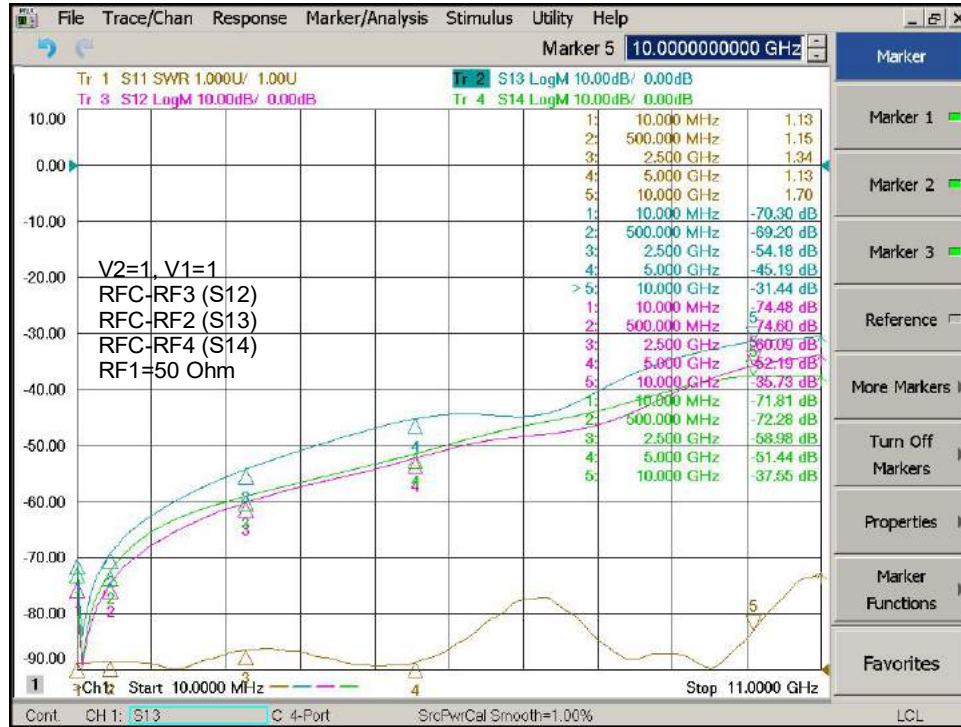
Low Loss Path RFC-RF3, Isolation RFC-RF1, RFC-RF2



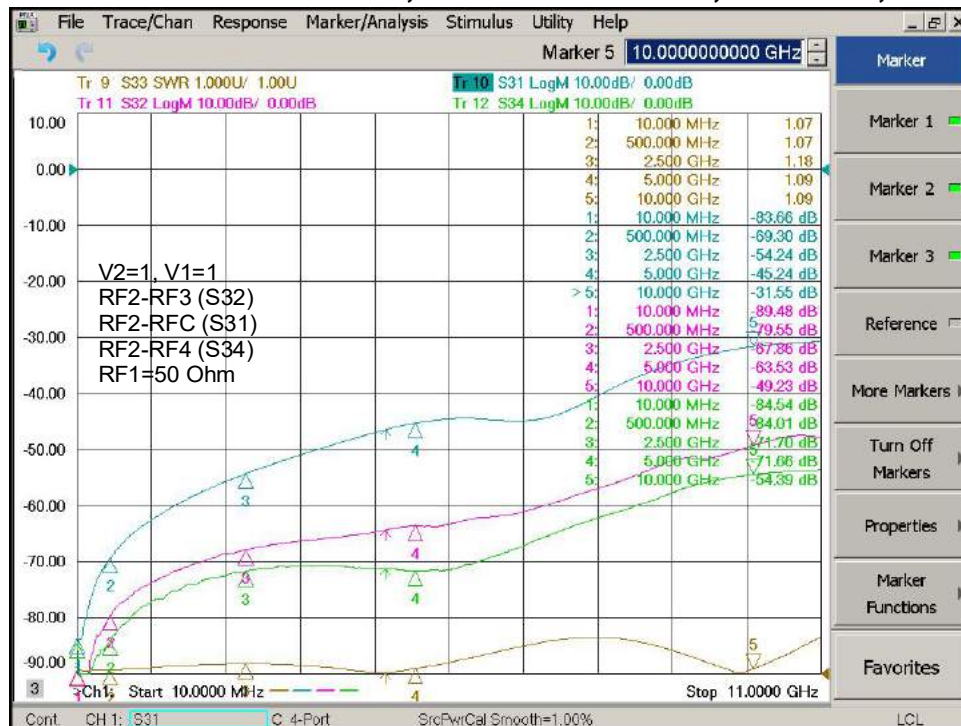
Low Loss Path RFC-RF4, Isolation RFC-RF1, RFC-RF2



Low Loss Path RFC-RF1, Isolation RFC-RF2, RFC-RF3, RFC-RF4



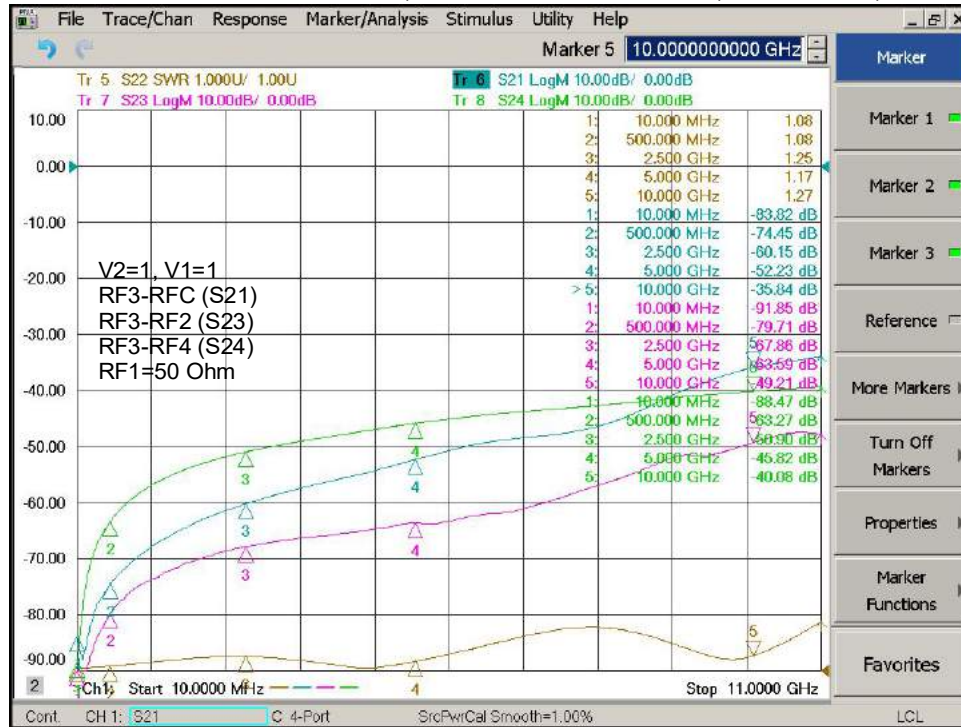
Low Loss Path RFC-RF1, Isolation RF2-RF3, RF2-RFC, RF2-RF4



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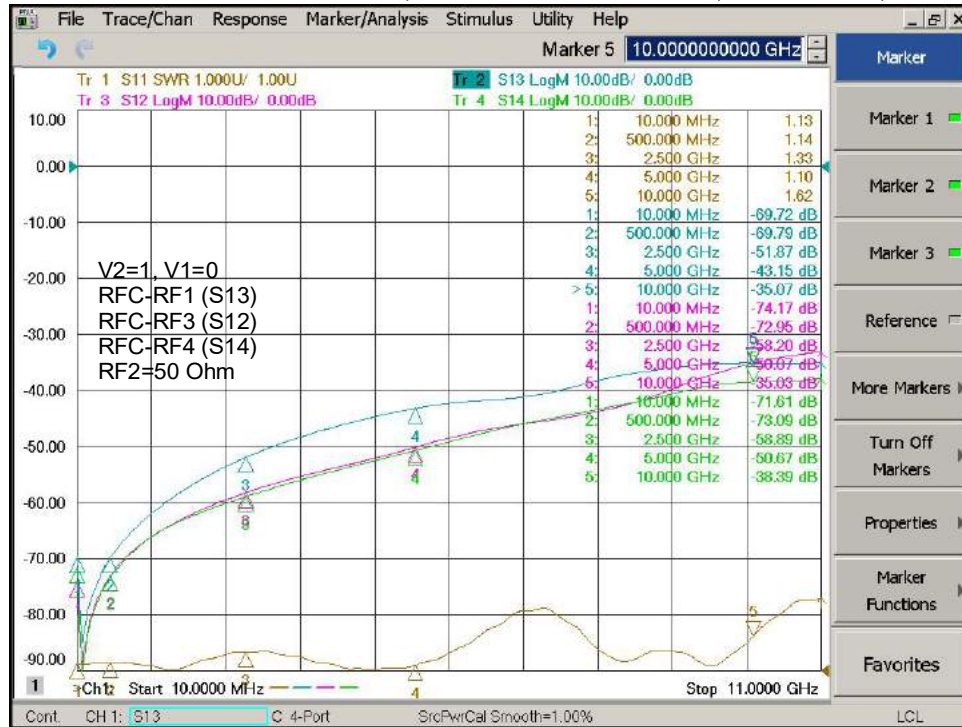
Low Loss Path RFC-RF1, Isolation RF3-RFC, RF3-RF2, RF3-RF4



Low Loss Path RFC-RF1, Isolation RF4-RFC, RF4-RF2, RF4-RF3



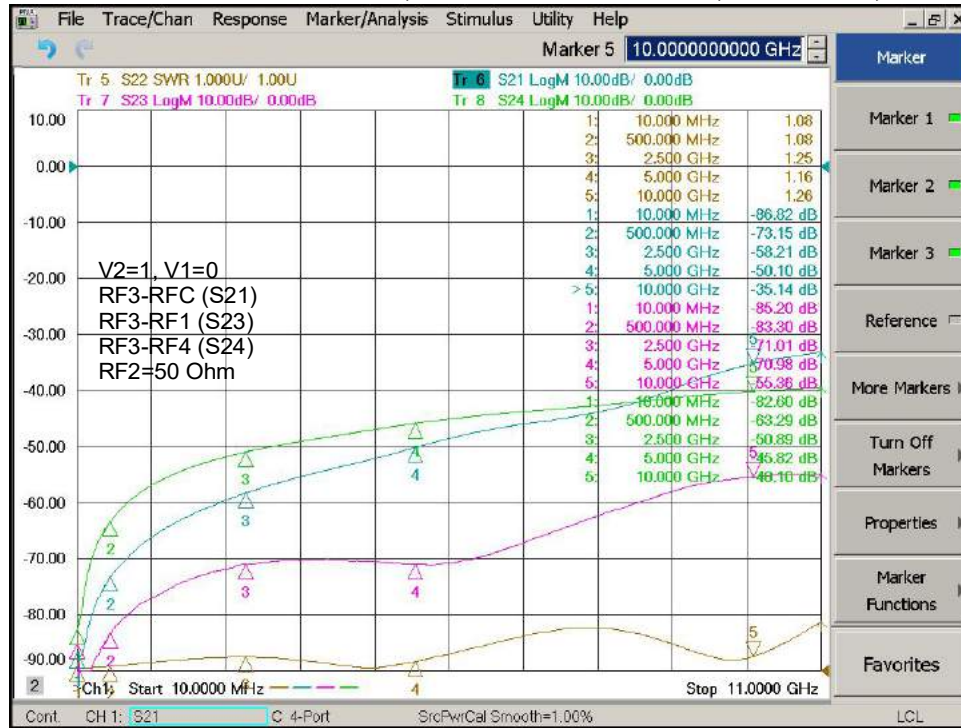
Low Loss Path RFC-RF2, Isolation RFC-RF1, RFC-RF3, RFC-RF4



Low Loss Path RFC-RF2, Isolation RF1-RFC, RF1-RF3, RF1-RF4



Low Loss Path RFC-RF2, Isolation RF3-RFC, RF3-RF1, RF3-RF4



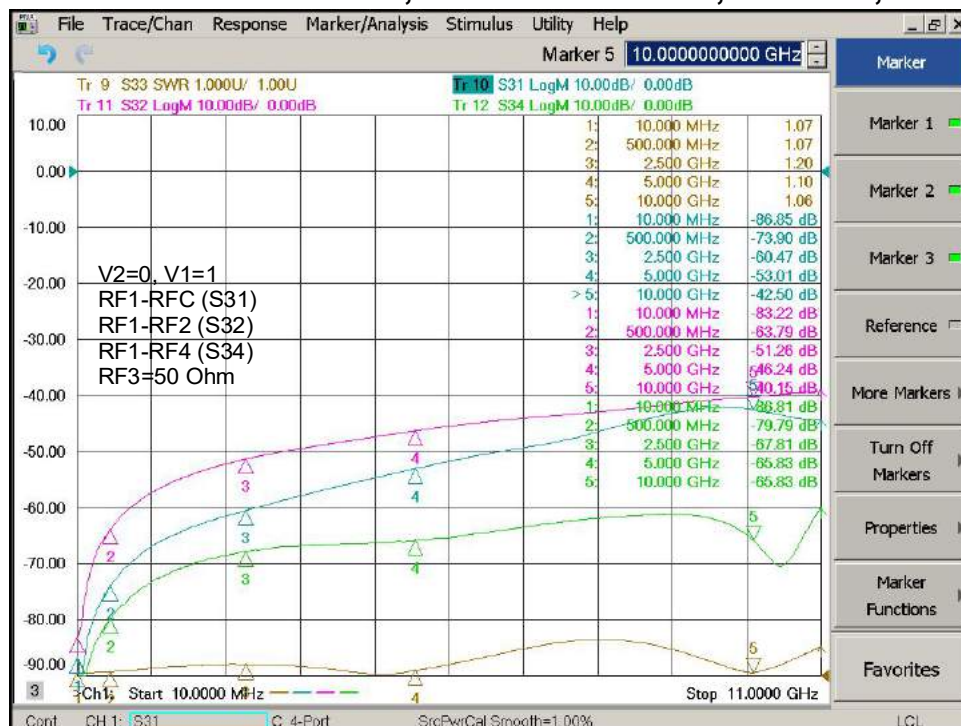
Low Loss Path RFC-RF2, Isolation RF4-RFC, RF4-RF1, RF4-RF3



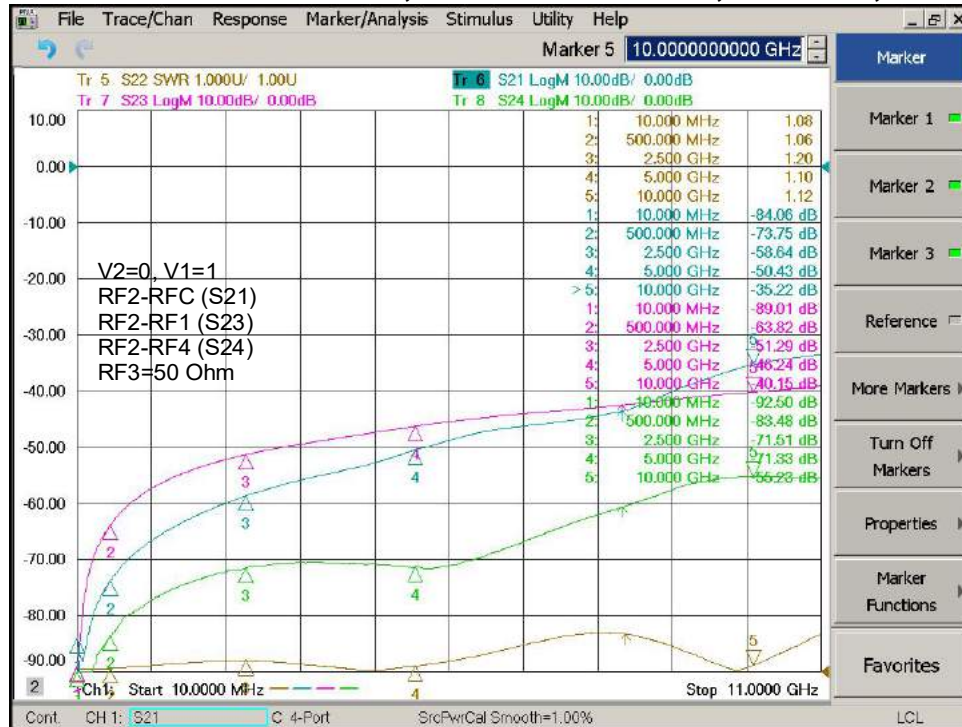
Low Loss Path RFC-RF3, Isolation RFC-RF1, RFC-RF2, RFC-RF4



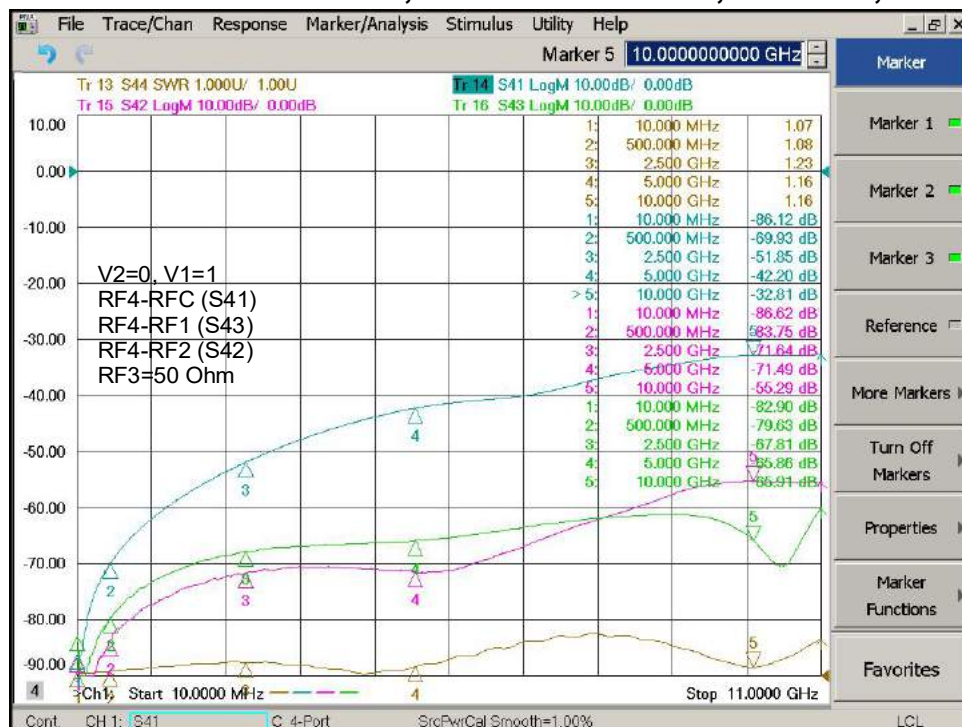
Low Loss Path RFC-RF3, Isolation RF1-RFC, RF1-RF2, RF1-RF4



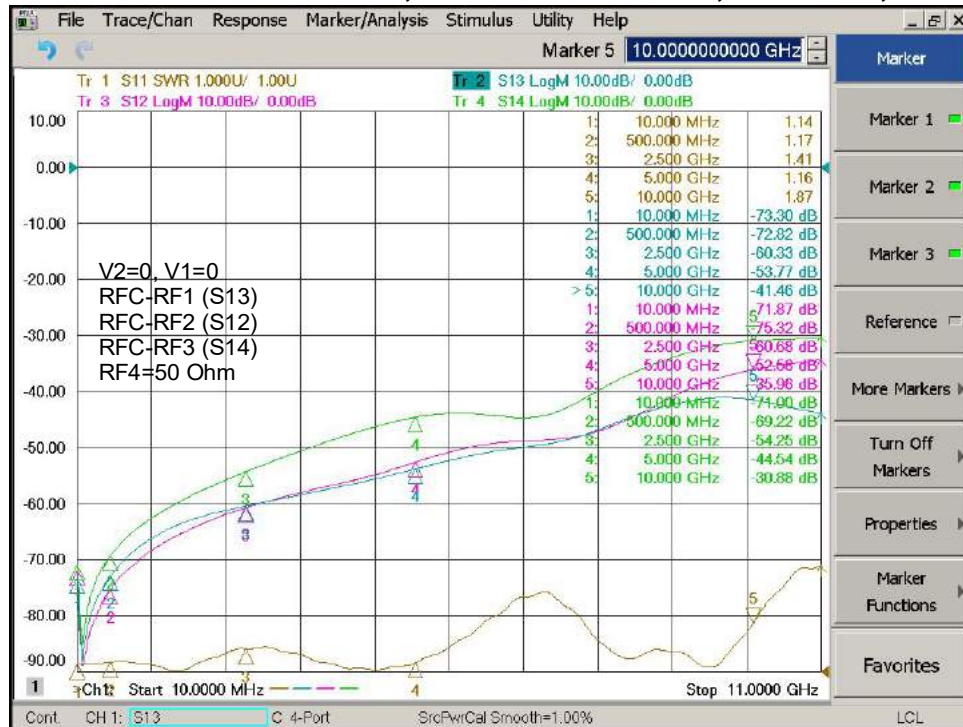
Low Loss Path RFC-RF3, Isolation RF2-RFC, RF2-RF1, RF2-RF4



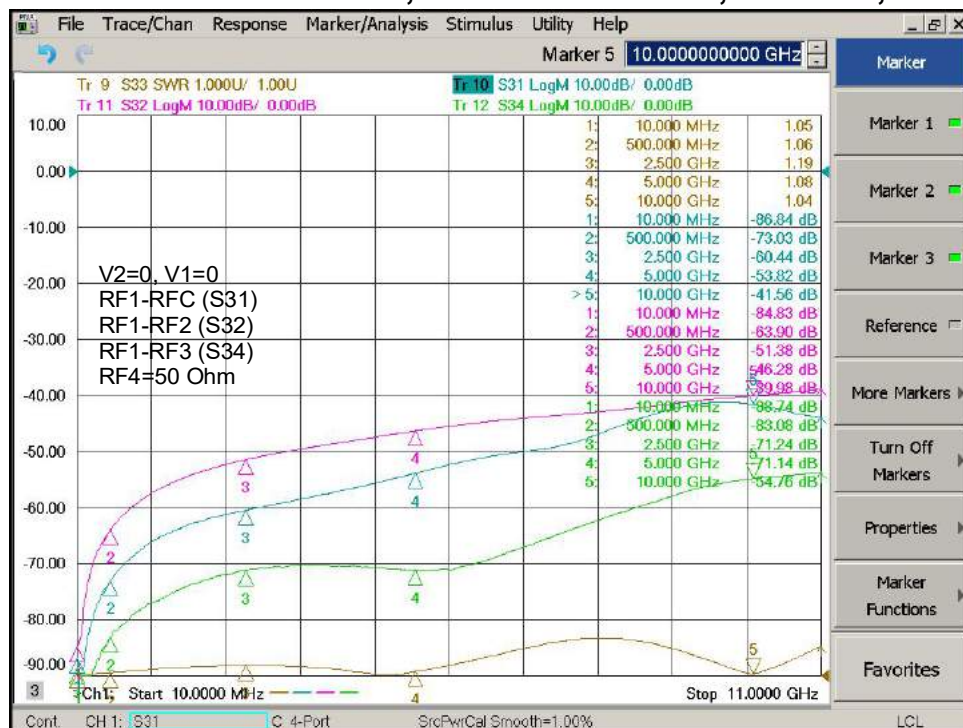
Low Loss Path RFC-RF3, Isolation RF4-RFC, RF4-RF1, RF4-RF2



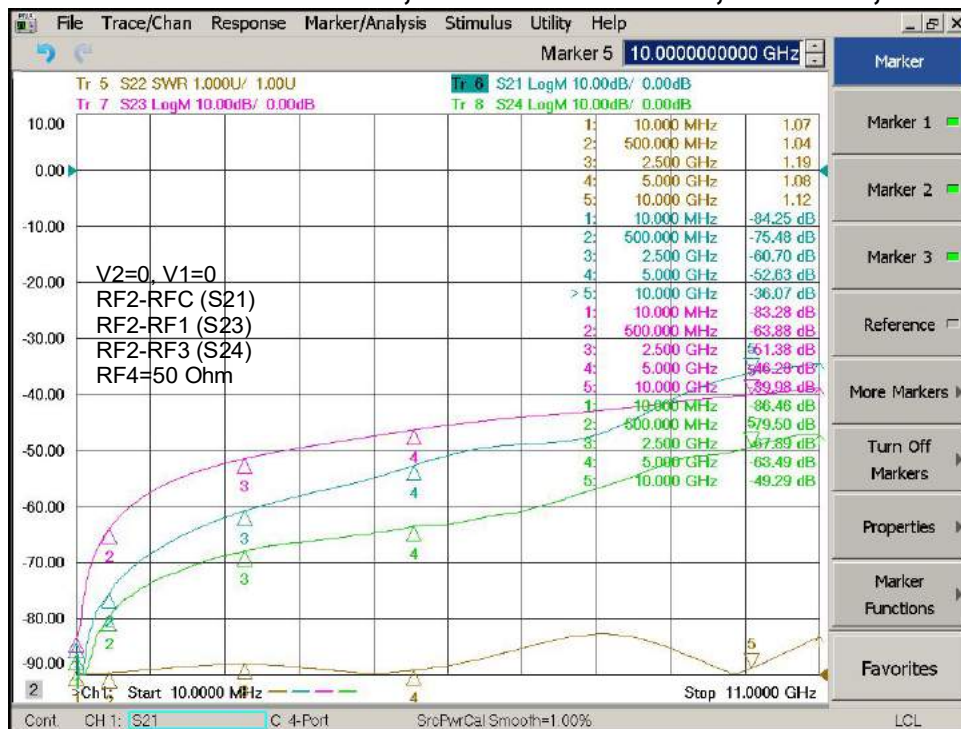
Low Loss Path RFC-RF4, Isolation RFC-RF1, RFC-RF2, RFC-RF3



Low Loss Path RFC-RF4, Isolation RF1-RFC, RF1-RF2, RF1-RF3



Low Loss Path RFC-RF4, Isolation RF2-RFC, RF2-RF1, RF2-RF3



Low Loss Path RFC-RF4, Isolation RF3-RFC, RF3-RF2, RF3-RF1



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Truth table (Logic 1 = +5V, Logic 0 = GND)

Control Input V2	Control Input V1	Signal Path State
1	1	RFC to RF1
1	0	RFC to RF2
0	1	RFC to RF3
0	0	RFC to RF4

Absolute Maximum Ratings

Parameter	Absolute Maximum
Supply Voltage	±6V
RF Input Power	+37dBm
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +125 °C

ESD Sensitive Material



Outline

