

RFS Series

0.3 – 4000MHz 4W SPDT RF Switch

Features

- Frequency Range: 0.3 - 4000MHz
- Insertion Loss: 1.8dB
- Isolation: 80dB
- Maximum Input P_{in}: +36dBm
- Switching Time: 6μs
- DC Power: 5V/<1mA
- SMA Connector

Description

RFS-3 is a 4W Single Pole Double Throw (SPDT) RF Switch operates in frequency range from 0.3 to 4000MHz.

Picture



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

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	MHz	0.3		4000
Insertion Loss (RFC to RF1, RF2)	0.3MHz	dB	1.3	1.5
	2000MHz	dB	1.8	2.0
	4000MHz	dB	2.5	2.8
Isolation (RFC to RF1, RF2)	0.3MHz	dB	100	105
	2000MHz	dB	75	80
	4000MHz	dB	67	72
Isolation (RF1 to RF2)	0.3MHz	dB	100	105
	2000MHz	dB	75	80
	4000MHz	dB	67	72
VSWR (0.3 – 4000MHz)			1.5:1	2.0:1
Maximum Input P _{in} * (10-4000MHz)	dBm	+36		
Switching Time	μs		6	10
Control Voltage V _{sw} (TTL/HCMOS)	V	SW=Low (0-0.6V), SW=High (1.2-5V)		
DC Power Supply	V	4.5	5	15
Supply Current	mA			1

* P_{in} Power De-rating from 0.3-10MHz.

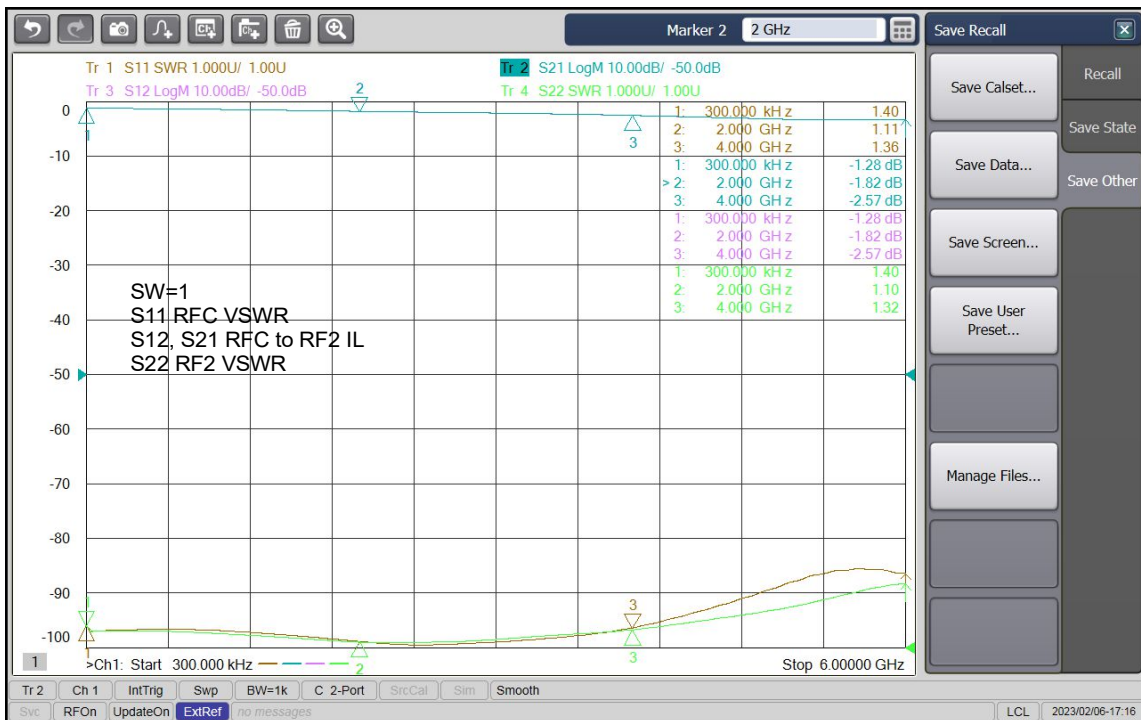
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Low Loss Path RFC-RF1, SW=0



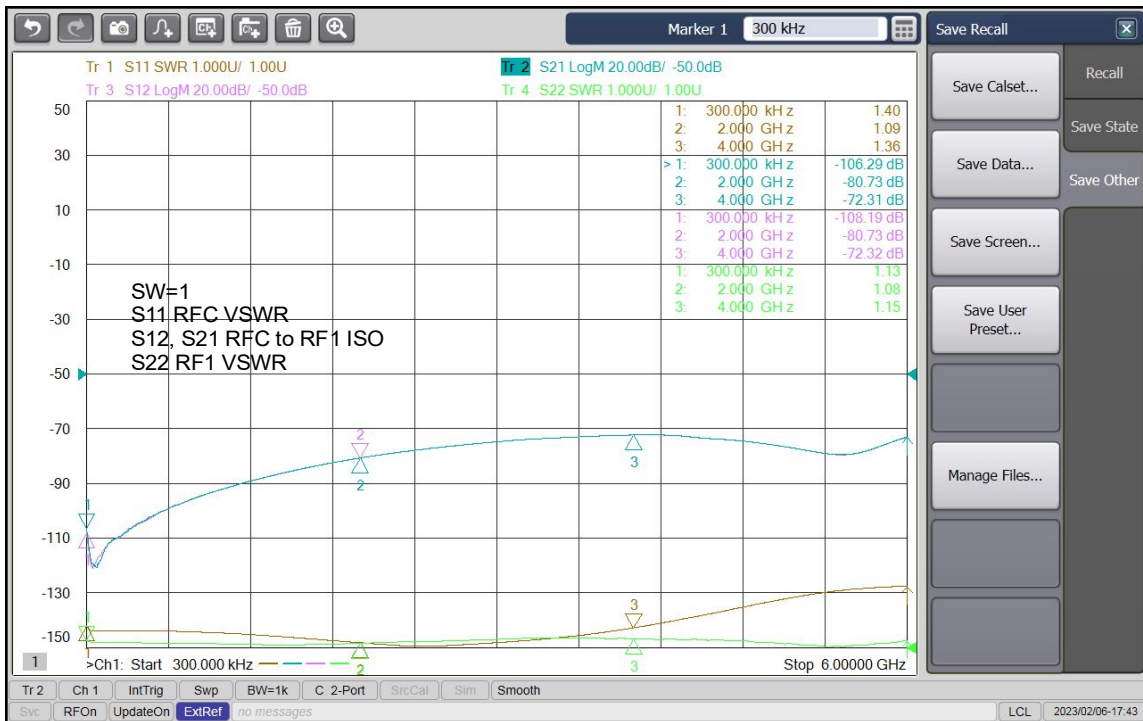
Low Loss Path RFC-RF2, SW=1



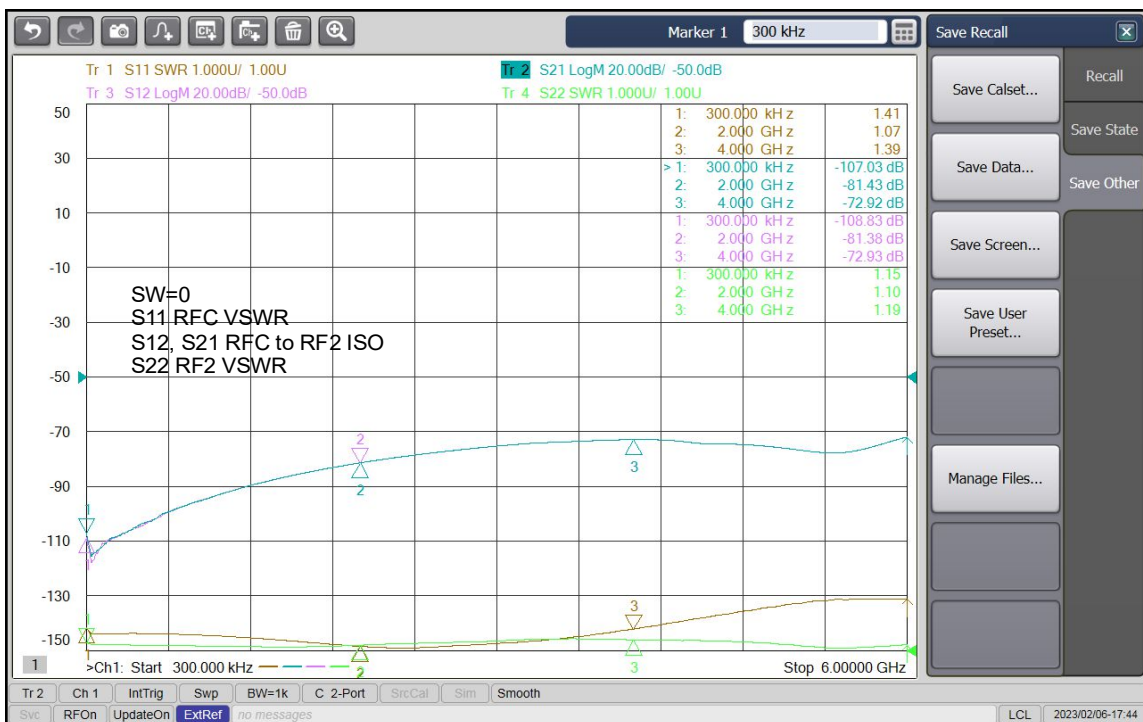
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Isolation Path RFC-RF1, SW=1



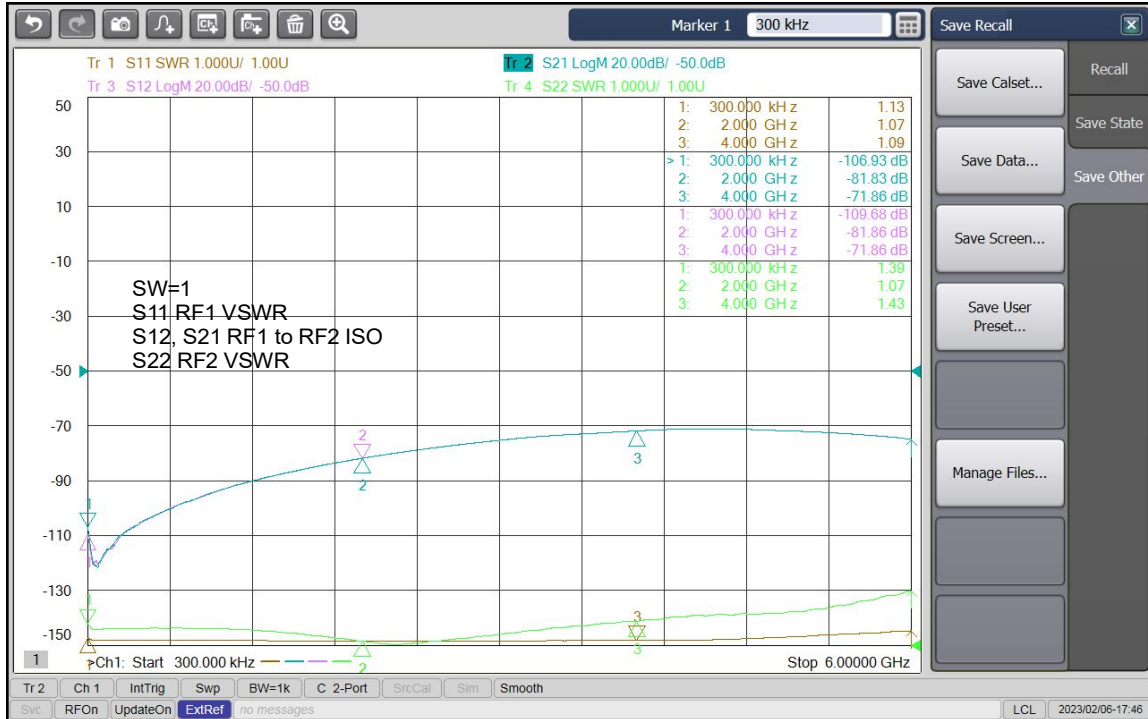
Isolation Path RFC-RF2, SW=0



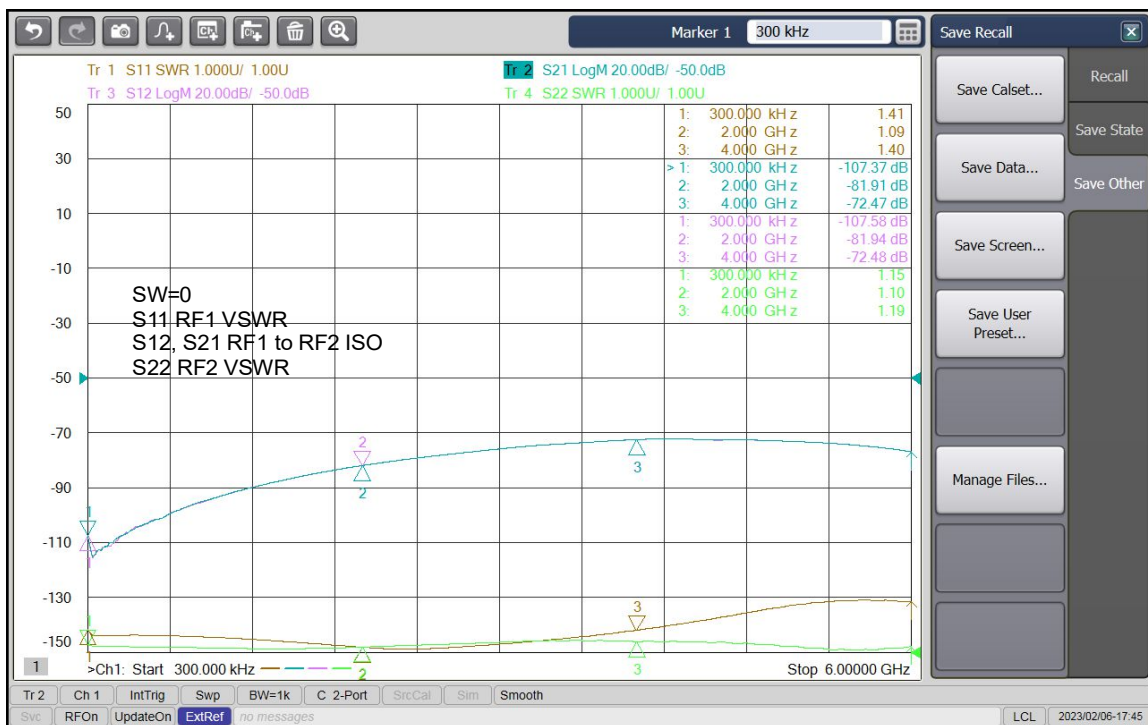
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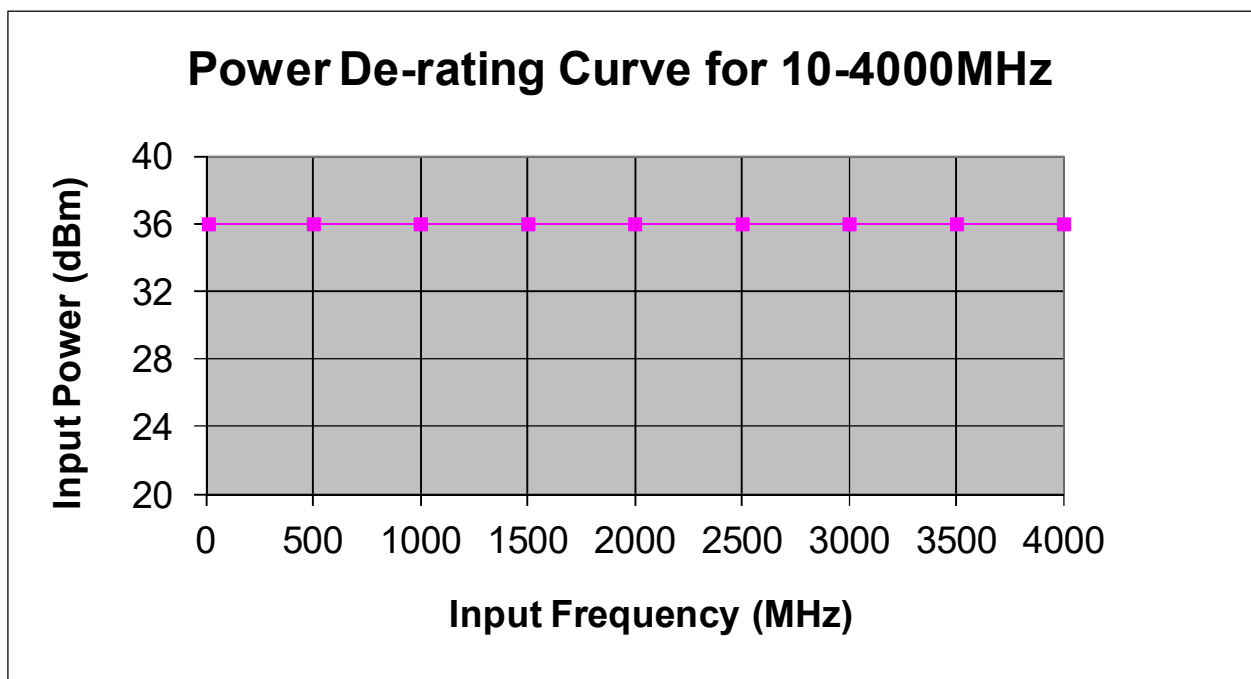
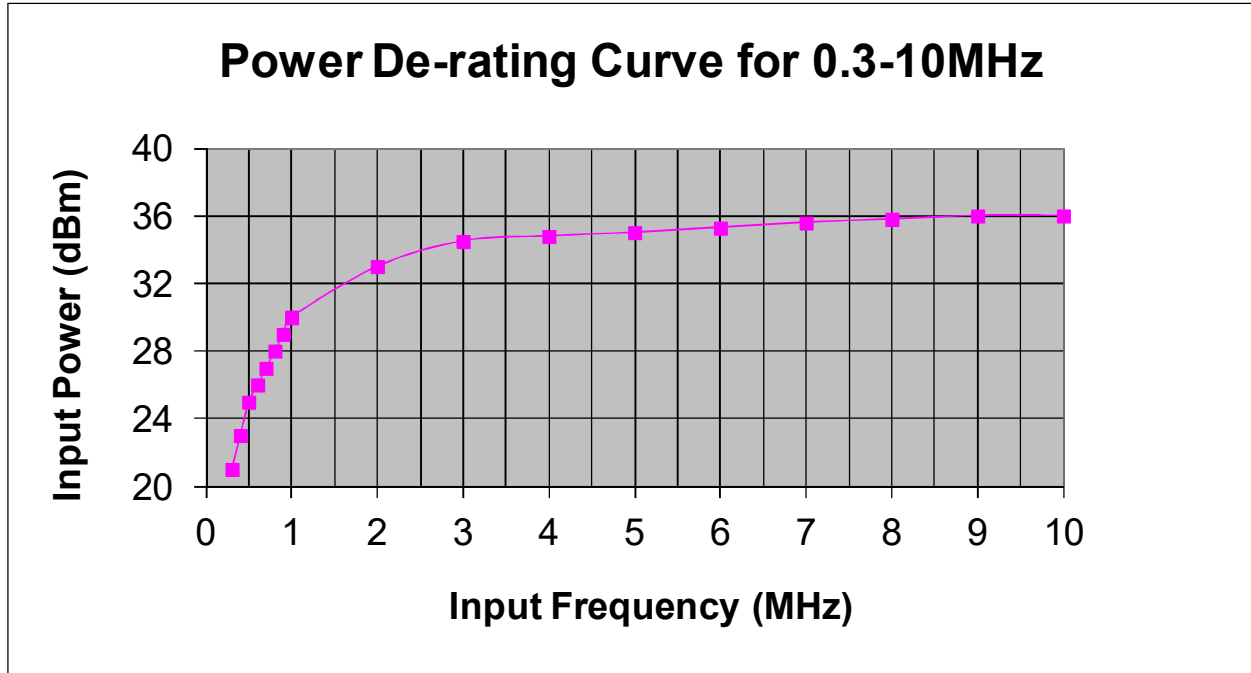
Isolation Path RF1-RF2, SW=1



Isolation Path RF1-RF2, SW=0



Typical Performance at 25°C



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Absolute Maximum Ratings

Parameter	Absolute Maximum
Supply Voltage	+16V
RF Input Power	+37dBm
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +125 °C

Truth Table

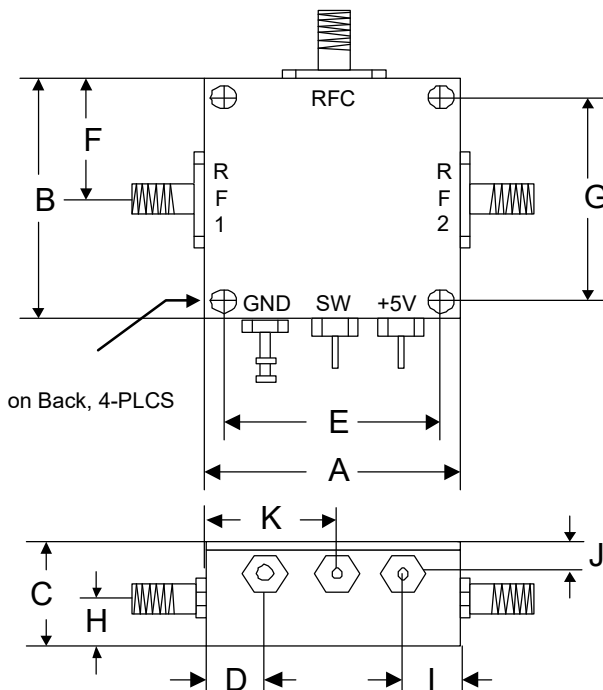
Control Input V _{sw}	Signal Path State
SW=0, Logic Low	RFC to RF1
SW=1, Logic High	RFC to RF2

SW Port Internal Pull-Down Resistor 10KΩ

ESD Sensitive Material



Outline



	A	B	C	D	E	F	G	H	I	J	K
Inch	1.250	1.250	0.563	0.325	1.000	0.625	1.000	0.250	0.325	0.187	0.625
mm	31.75	31.75	14.29	8.26	25.40	15.88	25.40	6.35	8.26	4.75	15.88