

RFS Series

1 – 8000MHz 4W SPDT RF Switch

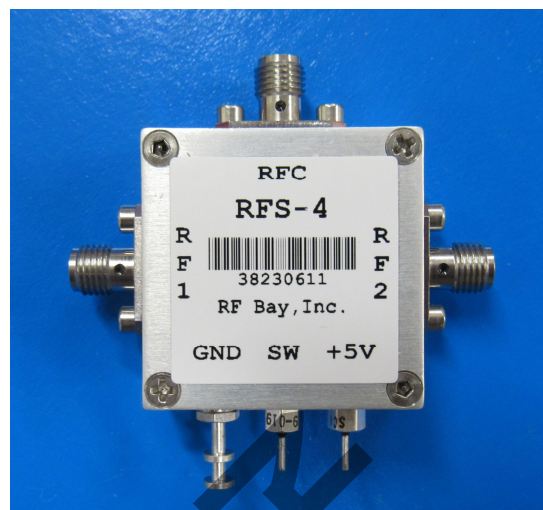
Features

- Frequency Range: 1 - 8000MHz
- Insertion Loss: 2.5dB
- Isolation: 72dB
- Maximum Input P_{in} : +36dBm
- Switching Time: 1 μ s
- DC Power: 5V/<1mA
- SMA Connector

Description

RFS-4 is a 4W Single Pole Double Throw (SPDT) RF Switch operates in frequency range from 1 to 8000MHz.

Picture



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

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	MHz	1		8000
Insertion Loss (RFC to RF1, RF2)	1MHz		1.5	1.8
	4000MHz		2.5	2.8
	8000MHz		3.0	3.5
Isolation (RFC to RF1, RF2)	1MHz	105	110	
	4000MHz	67	72	
	8000MHz	52	57	
Isolation (RF1 to RF2)	1MHz	105	110	
	4000MHz	67	72	
	8000MHz	57	62	
VSWR (1 – 8000MHz)			1.5:1	2.2:1
Maximum Input P_{in}^* (50-8000MHz)	dBm	+36		
Switching Time	μ s		1	2
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 1-50MHz.

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Low Loss Path RFC-RF1, SW=0



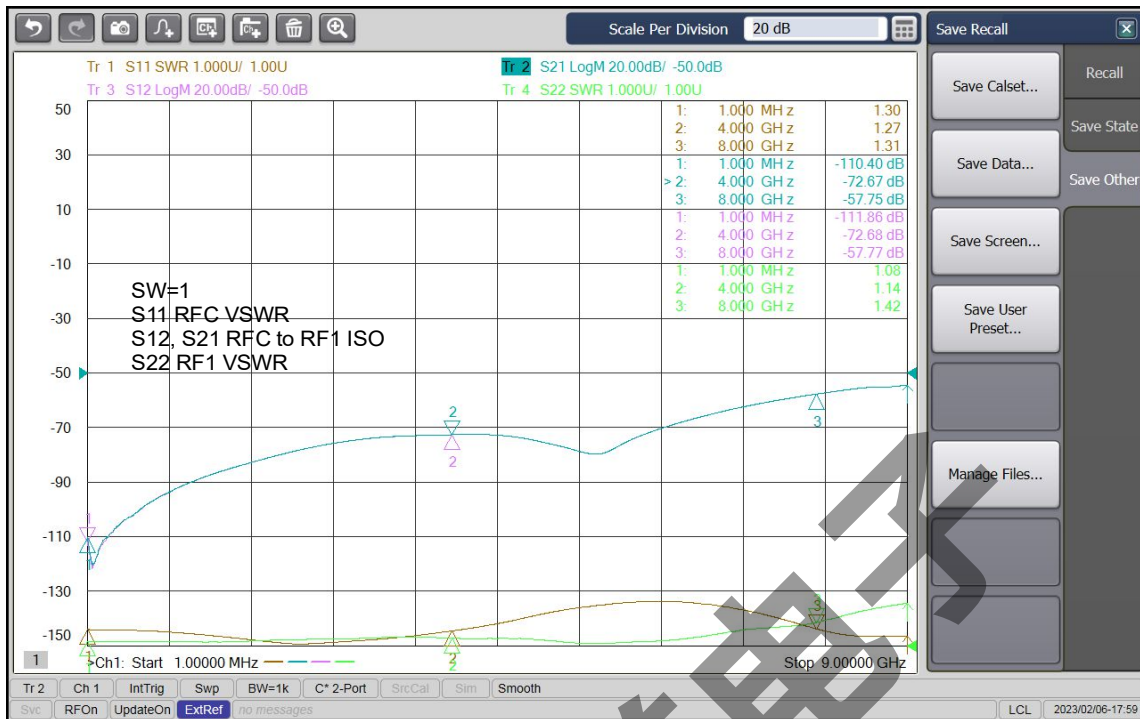
Low Loss Path RFC-RF2, SW=1



RFS Series

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Isolation Path RFC-RF1, SW=1



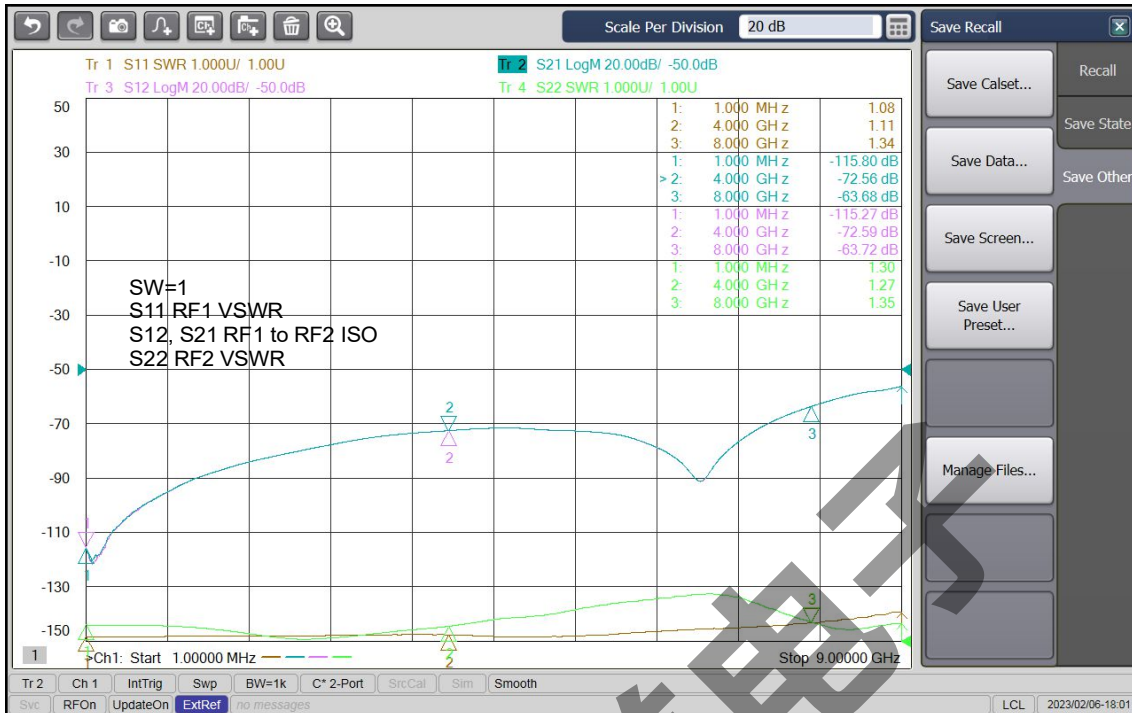
Isolation Path RFC-RF2, SW=0



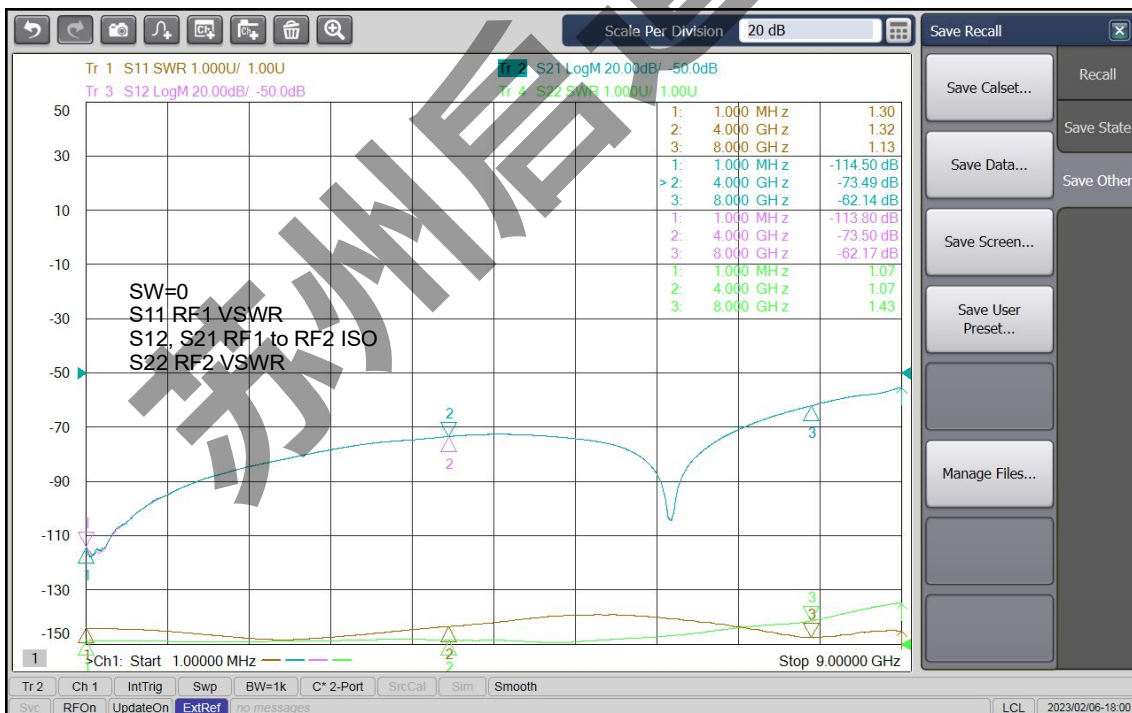
RFS Series

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Isolation Path RF1-RF2, SW=1



Isolation Path RF1-RF2, SW=0

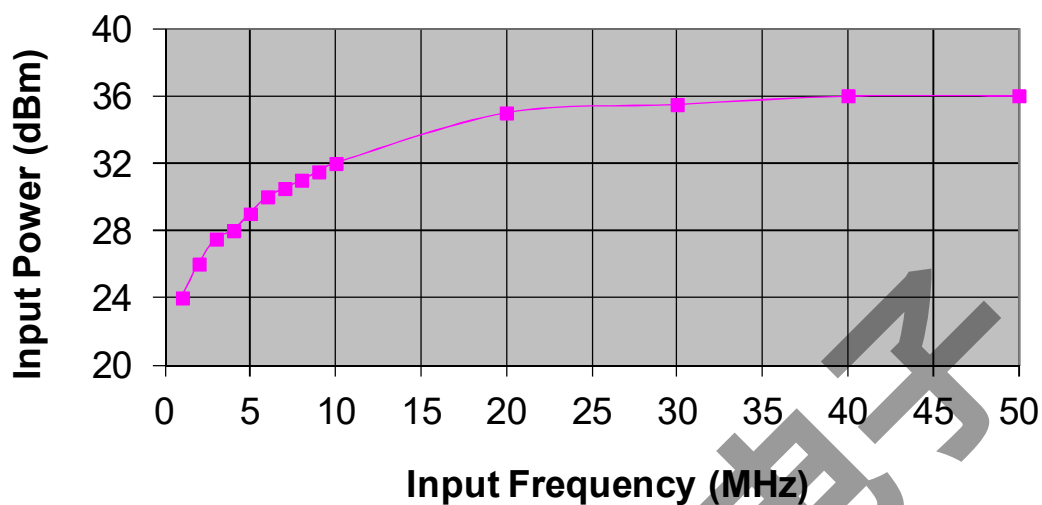


RFS Series

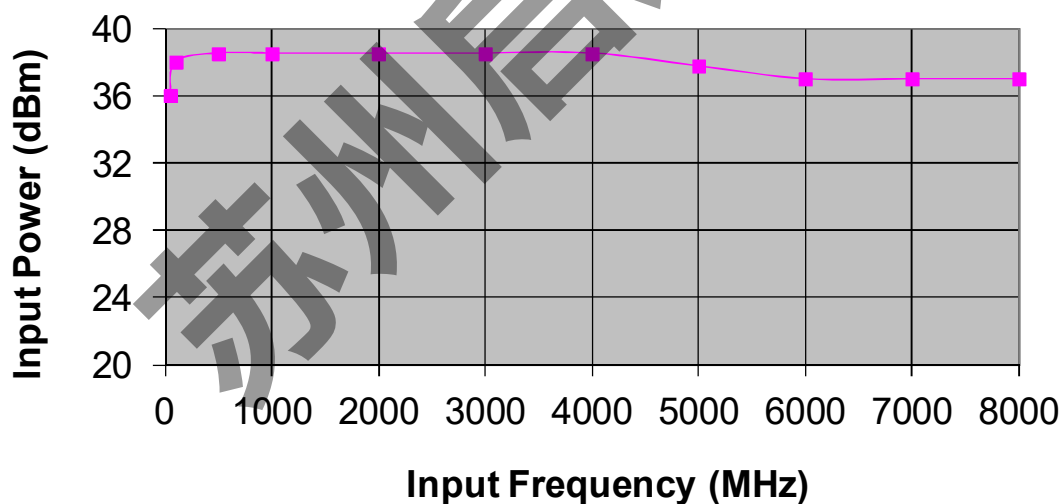
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Typical Performance at 25°C

Power De-rating Curve for 1-50MHz



Power De-rating Curve for 50-8000MHz



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Absolute Maximum Ratings

Parameter	Absolute Maximum
Supply Voltage	+16V
RF Input Power	+38dBm
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +125 °C

Truth Table

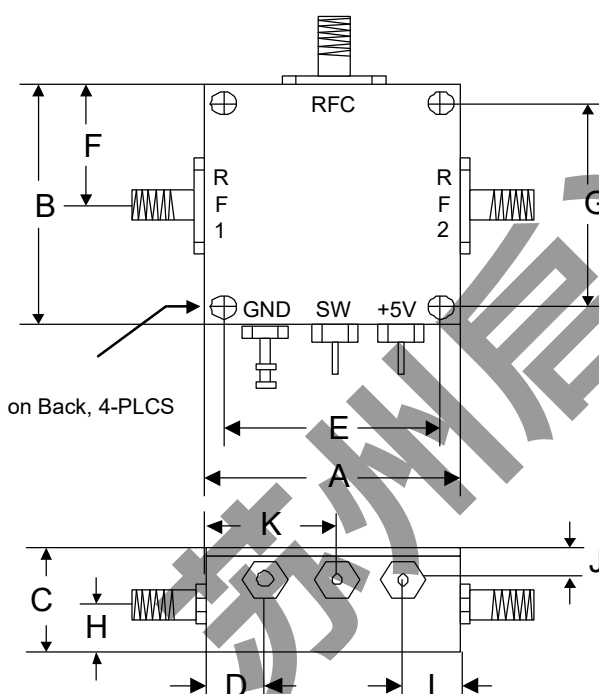
Control Input V_{sw}	Signal Path State
SW=0, Logic Low	RFC to RF1
SW=1, Logic High	RFC to RF2

SW Port Internal Pull-Down Resistor 10K Ω

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