

# NuWaves

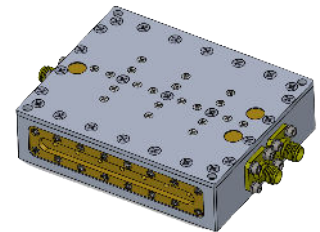
RF Solutions

## NuFilter™ 2CHCV-S-SFSF-M01 Diplexer

CH1 Bandpass 2065 to 2115 MHz

CH2 Bandpass 2247.5 to 2292.5 MHz

P/N: NW-MP-2CHCV-S-SFSF-M01



**NuWaves' NuFilter™ 2CHCV-S-SFSF-M01 is design for use with its companion reject filters. The NW-FL-04BPCV-2090-SFSF-M01 and the NW-FL-04BPCV-2270-SFSF-M01 are a perfect match for additional rejection through a TX and RX system needing that extra rejection and isolation.**

The NuFilter 2CHCV-S-SFSF-M01 provides superior harmonic filtering, noise rejection, and channel isolation.

With standard SMA connectors, the NuFilter can be quickly and easily added to any RF system. NuWaves' NuFilter™ removes the time and cost burden of creating a design, laying out a PCB, buying parts, assembling, and testing. Allow NuWaves to save you time and money by outsourcing your filtering needs.

### Features

- Minimal Passband Insertion Loss
- 50W CW RF Power Handling
- Diplexer Bandpass Filtering
- Small Form Factor
- Lightweight
- Rugged Chassis

### Applications

- Amplifier Harmonic Filtering
- Military Communications
- Avionics
- Point-to-Point Communications
- Software Defined Radios (SDRs)
- RF Filtering
- Test and Measurement

# NuFilter™ 2CHCV-S-SFSF-M01

## Specifications

### Absolute Maximums

Parameter	Rating	Unit
Max RF Input Power, CW, $Z_L = 50 \Omega$	50	W
Max Operating Temperature	70	°C
Max Storage Temperature	85	°C

Export Classification
EAR99

### Electrical Specifications @ 25 °C, $Z_S=Z_L=50 \Omega$

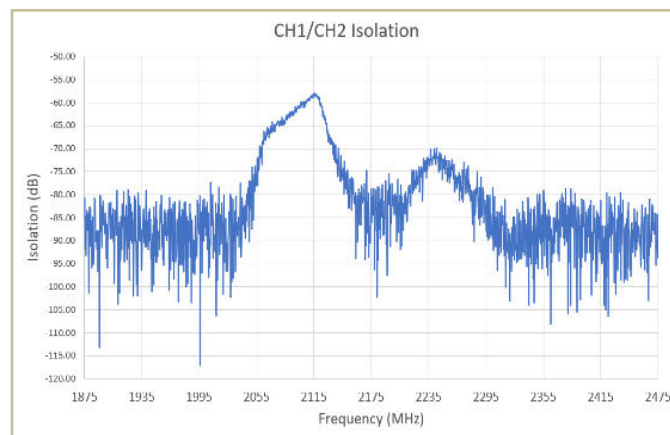
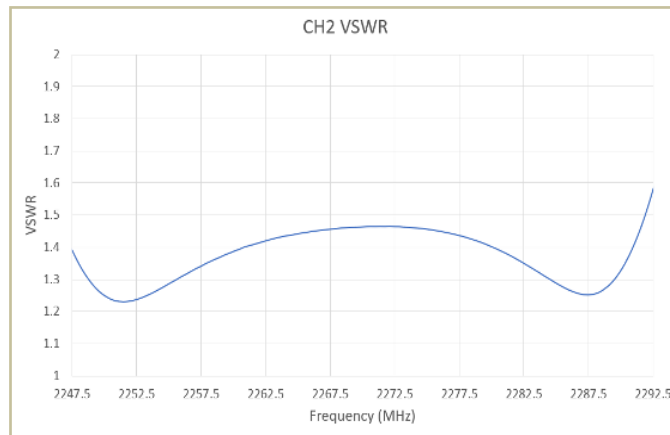
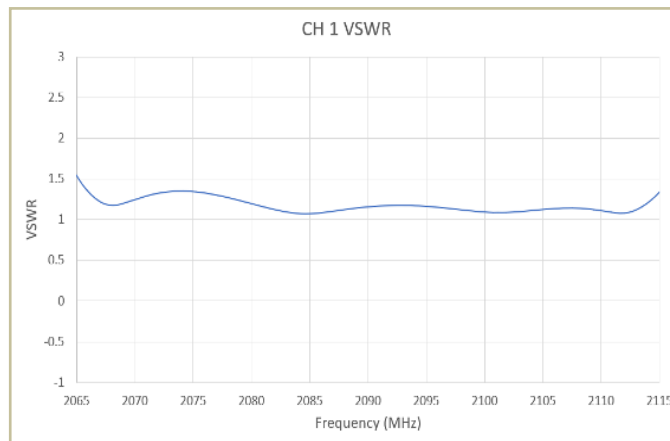
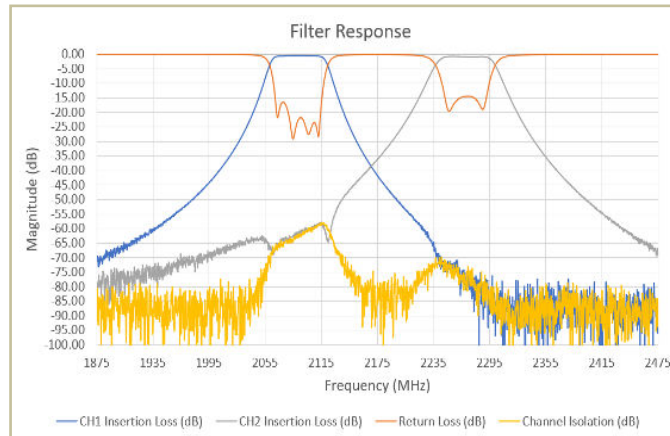
Channel 1 (CH1 to COM)						
Parameter	Symbol	Min	Typ	Max	Unit	Condition
Operating Frequency	BW	2065		2115	MHz	
Passband Insertion Loss	IL			1.3	dB	2056 MHz
				0.8		2090 MHz
				1.3		2115 MHz
Rejection			-40		dB	1990 MHz
			-40			2190 MHz
Passband Flatness				0.5	dB	
VSWR (within passband)	VSWR		1.25			

Channel 2 (CH2 to COM)						
Parameter	Symbol	Min	Typ	Max	Unit	Condition
Operating Frequency	BW	2247.5		2292.5	MHz	
Passband Insertion Loss	IL			1.3	dB	2247.5 MHz
				0.8		2270 MHz
				1.3		2292.5 MHz
Rejection			-40		dB	1970 MHz
			-45			2370 MHz
Passband Flatness				0.5	dB	
VSWR (within passband)	VSWR		1.4			

Isolation				
Parameter	Condition	Typ	Min	Frequency (MHz)
Isolation (dB)	CH 1 to CH2	60	55	2065 - 2115
Isolation (dB)		65	60	2247.5 - 2292.5
Isolation (dB)		75	50	2065 - 2292.5

# NuFilter™ 2CHCV-S-SFSF-M01

## Performance Plots

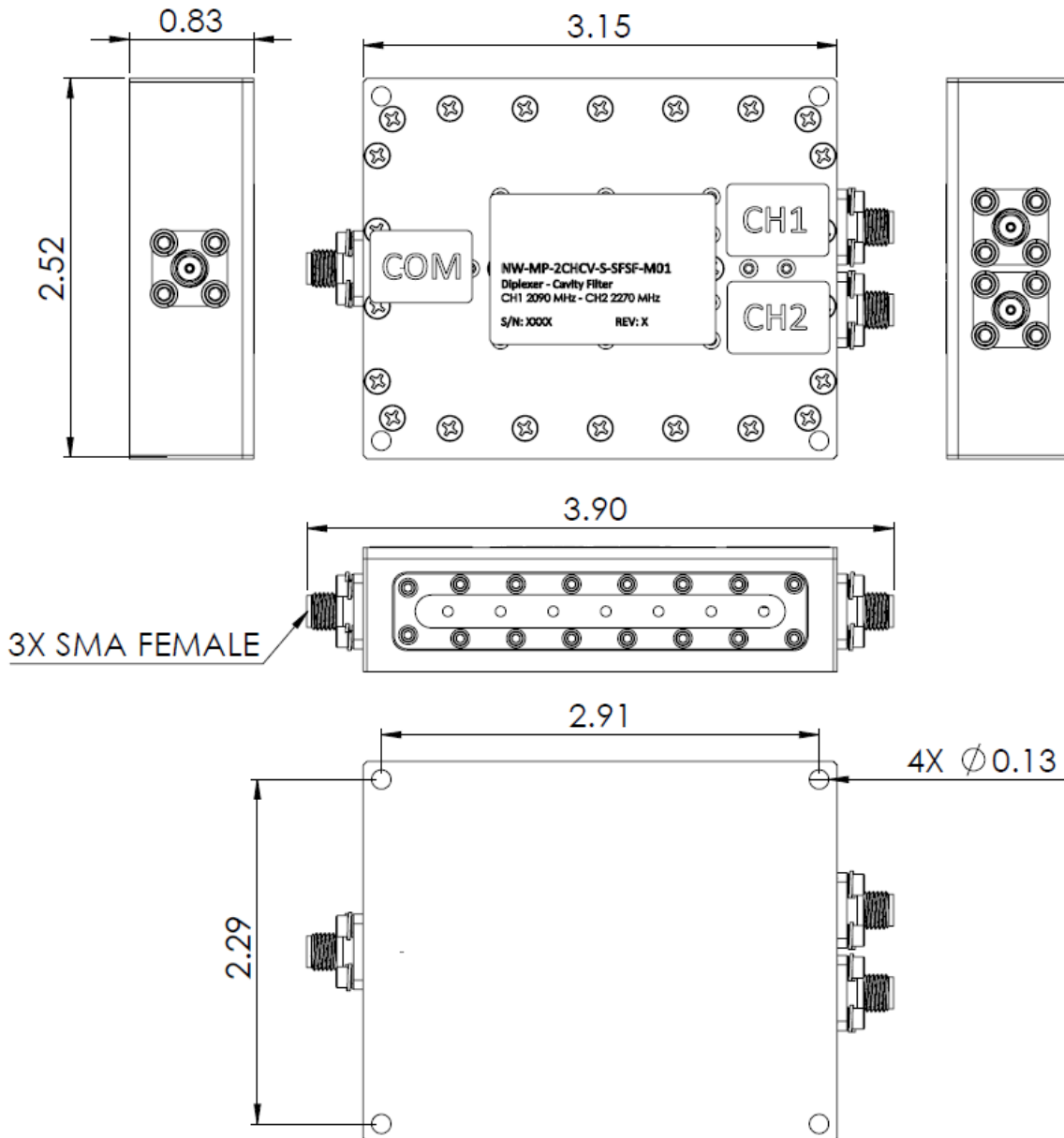


# NuFilter™ 2CHCV-S-SFSF-M01

## Mechanical Specifications

Parameter	Value	Unit	Limits
Dimensions	3.15 x 2.52 x 0.83	in	Max
Weight	TBD	oz	Max
RF Connectors, Input/Output	SMA Female		
Finish	Silver Plating		

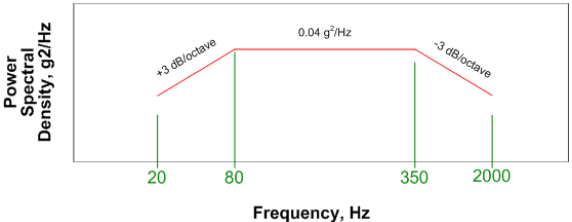
## Mechanical Outline



# NuFilter™ 2CHCV-S-SFSF-M01

## Environmental Specifications

Parameter	Symbol	Min	Typ	Max	Unit
Operating Temperature	T <sub>C</sub>	-40		+70	°C
Storage Temperature	T <sub>STG</sub>	-40		+85	°C
Relative Humidity (non-condensing)	RH			95	%
Altitude MIL-STD-810F - Method 500.4	ALT			30,000	ft
Vibration / Shock Profile (Random profile in x,y, z axis, as per Figure for 15 minute duration in each axis)					



Power Spectral Density, g<sup>2</sup>/Hz

Frequency, Hz

0.04 g<sup>2</sup>/Hz

+3 dB/octave

-3 dB/octave

20 80 350 2000

For information on product disposal (end-of-life), please refer to this document:  
<https://nuwaves.com/wp-content/uploads/Product-Disposal-End-of-Life.pdf>

## Contact NuWaves



NuWaves RF Solutions  
132 Edison Drive  
Middletown, OH 45044

[www.nuwaves.com](http://www.nuwaves.com)  
[sales@nuwaves.com](mailto:sales@nuwaves.com)  
513.360.0800

