

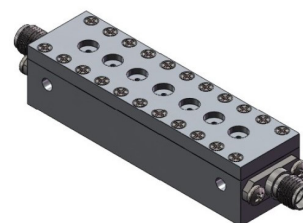
# NuWaves

## RF Solutions

### NuFilter™ 04BPCV-8038-SFSF-M01 X-Band Bandpass Filter

7988 MHz to 8088 MHz

P/N: NW-FL-04BPCV-8038-SFSF-M01



**NuWaves' NuFilter™ 04BPCV-8038-SFSF-M01 is a small form bandpass RF filter designed to reduce harmonics at the output of transmitters operating in X-Band.**

The NuFilter 04BPCV-8038-SFSF-M01 provides superior harmonic filtering and noise, as demonstrated by the rejection levels of greater than 30 dB at 7903 and 8173 MHz. This high-performance module accepts input power levels up to 50 W, with only a minimal 1.2 dB of insertion loss in the passband frequency range of 7988 to 8088 MHz.

With standard SMA connectors, the NuFilter can quickly and easily be 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
- 100MHz BW
- 50 W CW RF Power Handling
- Bandpass Filtering
- X-Band Operation
- 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™ 04BPCV-8038-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

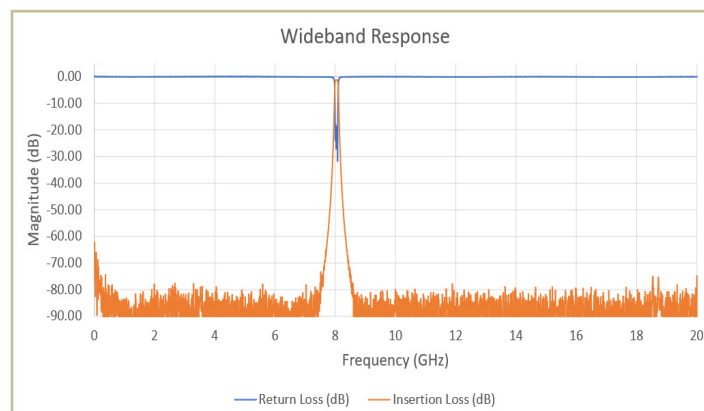
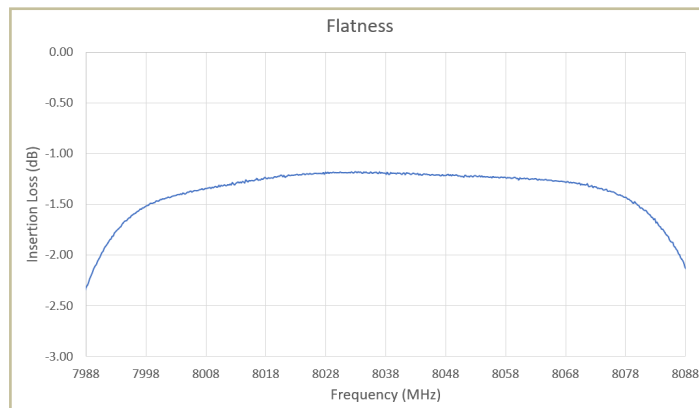
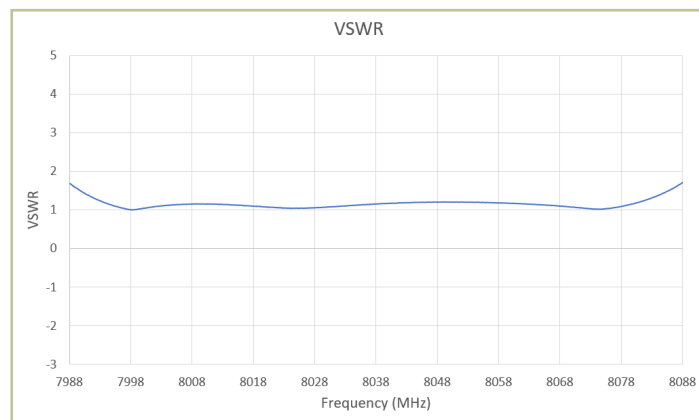
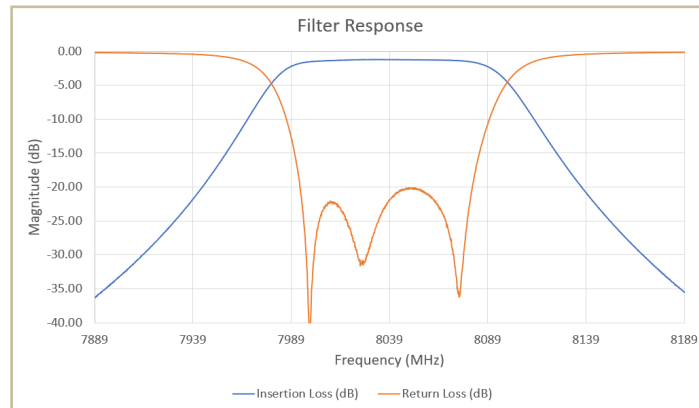
Export Classification
EAR99

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

Parameter	Symbol	Min	Typ	Max	Unit	Condition
Operating Frequency	BW	7988		8088	MHz	
Passband Insertion Loss	IL		2.2	4.9	dB	7988 MHz
			1.2	1.9		8038 MHz
			2.2	4.9		8088 MHz
Rejection			-30		dB	7903 MHz
			-30			8173 MHz
Passband Flatness			1	3	dB	
VSWR (within passband)	VSWR		≤1.5 MAX across 85% BW			

# NuFilter™ 04BPCV-8038-SFSF-M01

## Performance Plots

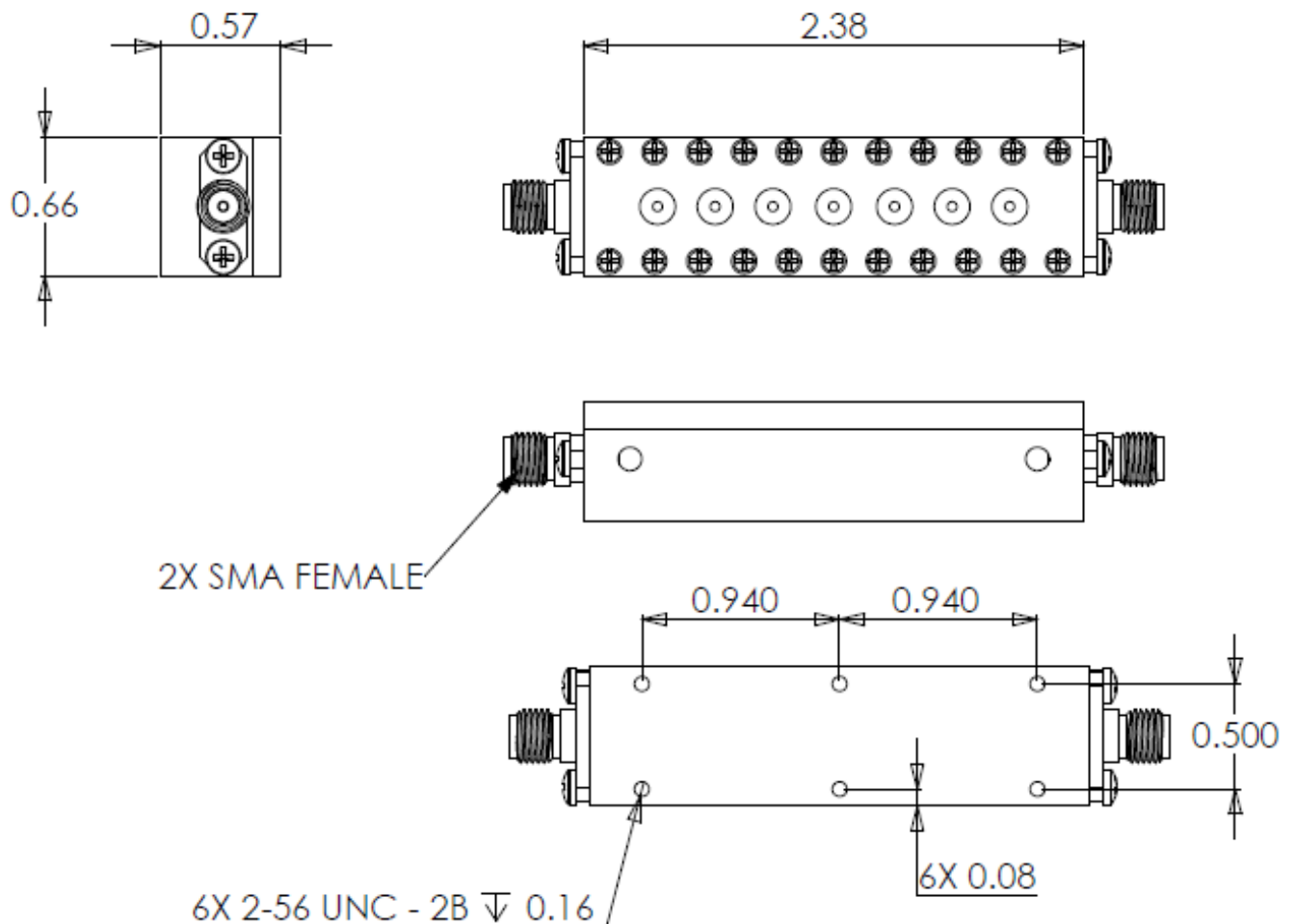


# NuFilter™ 04BPCV-8038-SFSF-M01

## Mechanical Specifications

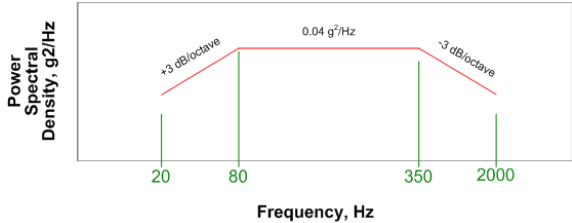
Parameter	Value	Unit	Limits
Dimensions	2.38 x 0.66 x 0.57	in	Max
Weight	TBD	oz	Max
RF Connectors, Input/Output	SMA Female		
Finish	Silver Plating		

## Mechanical Outline



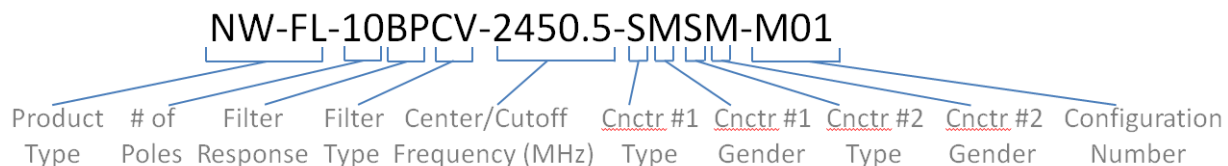
# NuFilter™ 04BPCV-8038-SFSF-M01

## 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)	 <p>Power Spectral Density, g<sup>2</sup>/Hz</p> <p>Frequency, Hz</p>				

## Part Numbering Format

Part Number Example:



Number of Poles: 01 to 12 (2 digits)

Connector Type: S (SMA)  
B (BNC)  
T (TNC)

Filter Response: BP (Bandpass)  
LP (Lowpass)  
HP (Highpass)  
BR (Band Reject-Notch)

Connector Gender: M (Male)  
F (Female)

Filter Type: CV (Cavity)  
LE Lumped Element  
SL (Stripline)

Configuration #: Mxx (defines additional mechanical & spec elements)

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



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