

NuWaves

RF Solutions

NuFilter™ 03BPCV-2113-SFSF-M01 Bandpass Filter

2108 MHz to 2118 MHz

P/N: NW-FL-03BPCV-2113-SFSF-M01



NuWaves' NuFilter™ 03BPCV-2113-SFSF-M01 is a small form bandpass RF filter designed to reduce harmonics at the output of transmitters operating in S-Band.

The NuFilter 03BPCV-2113-SFSF-M01 provides superior harmonic filtering and out of band rejection, as demonstrated by the rejection levels of greater than 55 dB at 1932 and 2294 MHz. This high-performance module accepts input power levels up to 50 W, with a max insertion loss of 1.25dB in the passband frequency range of 2108 to 2118 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 or designing a mechanical cavity housing, buying parts, assembling, tuning, and testing. Allow NuWaves to save you time and money by outsourcing your filtering needs.

Features

- Minimal Passband Insertion Loss
- 10 MHz BW
- 50 W CW RF Power Handling
- Bandpass Filtering
- S-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™ 03BPCV-2113-SFSF-M01

Specifications

Absolute Maximums

Parameter	Rating	Unit
Max RF Input Power, CW, $Z_s=Z_L = 50 \Omega$	50	W
Max Operating Temperature	60	°C
Max Storage Temperature	85	°C

Export Classification
EAR99

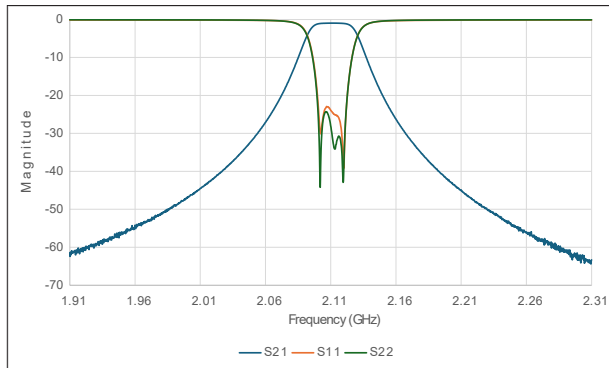
Electrical Specifications @ 25 °C, $Z_s=Z_L=50 \Omega$ CW

Parameter	Symbol	Min	Typ	Max	Unit	Condition
Operating Frequency	BW	2108		2118	MHz	
Passband Insertion Loss	IL		1.06	1.238	dB	2108 MHz
			0.98	1		2113 MHz
			1.06	1.238		2118 MHz
Rejection		-41	-57		dB	1932 MHz
		-41	-57			2294 MHz
Passband Flatness			0.1		dB	2108-2118 MHz
VSWR (within passband)	VSWR		1.15	1.5:1		

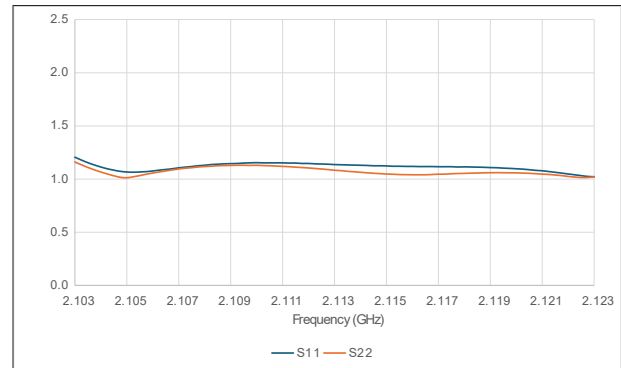
NuFilter™ 03BPCV-2113-SFSF-M01

Performance Plots

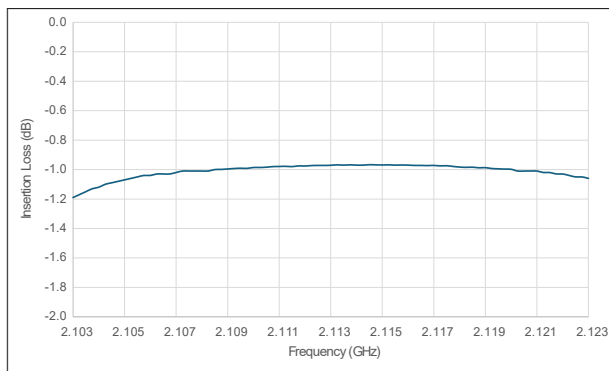
Filter Response



VSWR



Insertion Loss

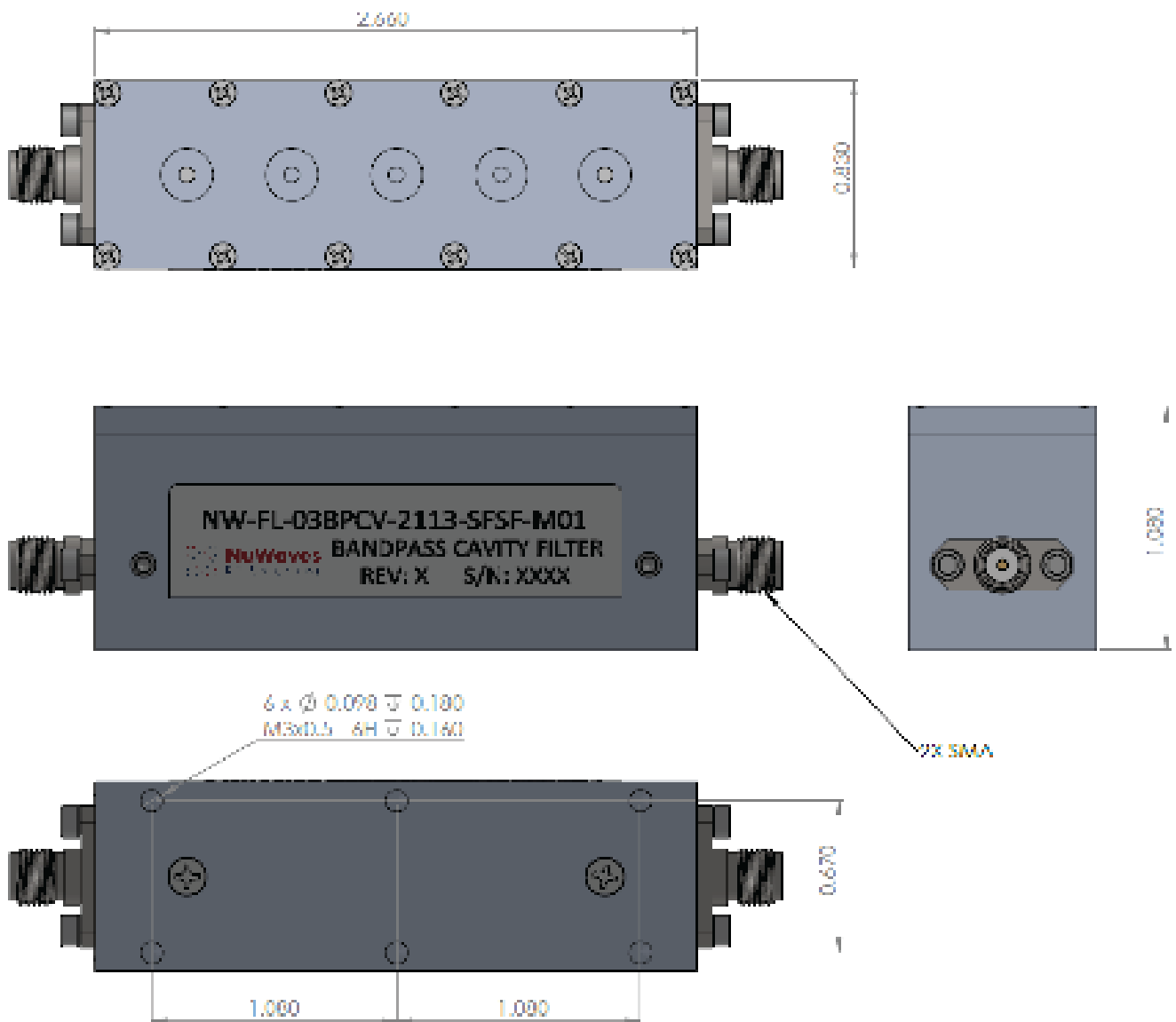


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Mechanical Specifications

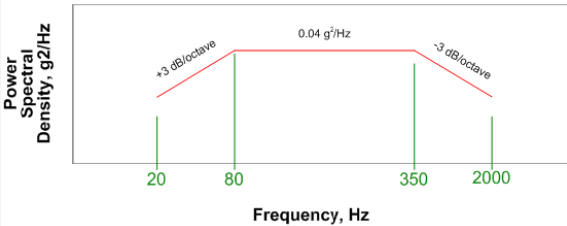
Parameter	Value	Unit	Limits
Dimensions	2.66 x 1.08 x 0.83	in	Max
Weight	TBD	oz	Max
RF Connectors, Input/Output	SMA Female		
Finish	Silver Plating		

Mechanical Outline



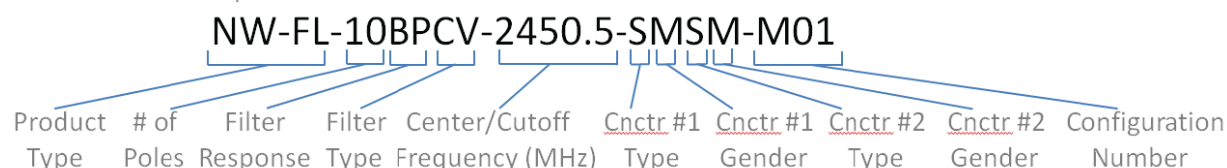
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Environmental Specifications

Parameter	Symbol	Min	Typ	Max	Unit
Operating Temperature	T _c	-40		+60	°C
Storage Temperature	T _{STG}	-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)					

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)	Connector Gender:	M (Male) F (Female)
Filter Type:	BR (Band reject-Notch) CV (Cavity) LE (Lumped element SL (Stripline))	Configuration #:	Mxx (defines additional mechanical & 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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