

NuWaves

RF Solutions

Preliminary

NuFilter™ 04BPCV-4695-SFSF-M01

C-Band Bandpass Filter

4400 MHz to 4990 MHz

P/N: NW-FL-04BPCV-4695-SFSF-M01



NuWaves' NuFilter™ 04BPCV-4695-SFSF-M01 is the perfect companion to the NuPower Xtender™ SCISR-20 Tri-Band Bidirectional Amplifier's C-Band channel.

The NuFilter 04BPCV-4695-SFSF-M01 provides superior harmonic and noise filtering of SCISR Radio (C-Band), as demonstrated by the rejection levels of greater than 40 dB at 2500 and 6890 MHz. This high-performance module accepts input power levels up to 35W CW, with only a minimal 0.2 dB of insertion loss in the passband frequency range of 4400 to 4990 MHz.

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
- 35W CW RF Power Handling
- Bandpass Filtering
- C-Band Operation
- Small Form Factor
- Lightweight
- Rugged Chassis

Applications

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

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Specifications

Absolute Maximums

Parameter	Rating	Unit
Max RF Input Power, CW, $Z_L = 50 \Omega$	35	W
Max Operating Temperature	60	°C
Max Storage Temperature	85	°C

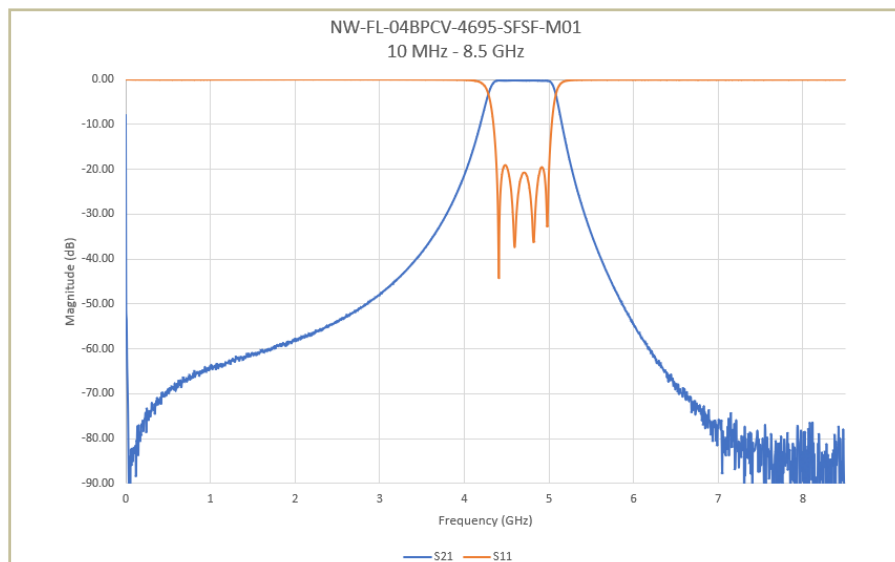
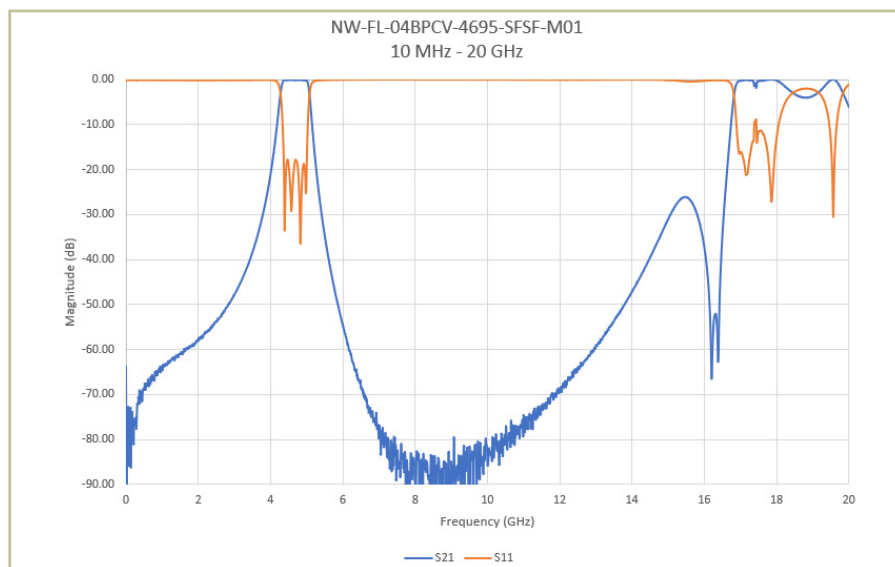
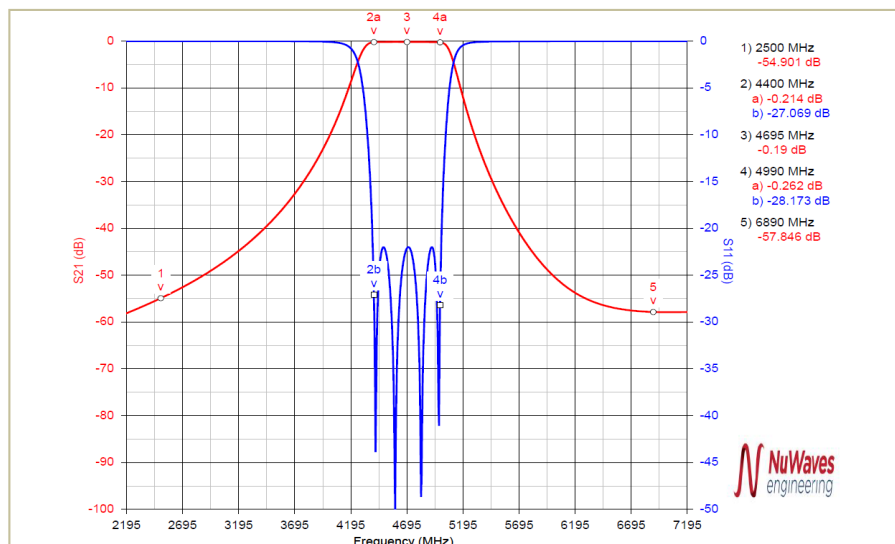
Export Classification
EAR99

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

Parameter	Symbol	Min	Typ	Max	Unit	Condition
Operating Frequency	BW	4400		4990	MHz	
Passband Insertion Loss	IL		0.25	0.8	dB	4400 MHz
			0.2	0.5		4695 MHz
			0.25	0.8		4990 MHz
Rejection			-40		dB	2500 MHz
			-40			6890 MHz
Passband Flatness			0.1	0.3	dB	
VSWR	VSWR			1.5		Within Passband

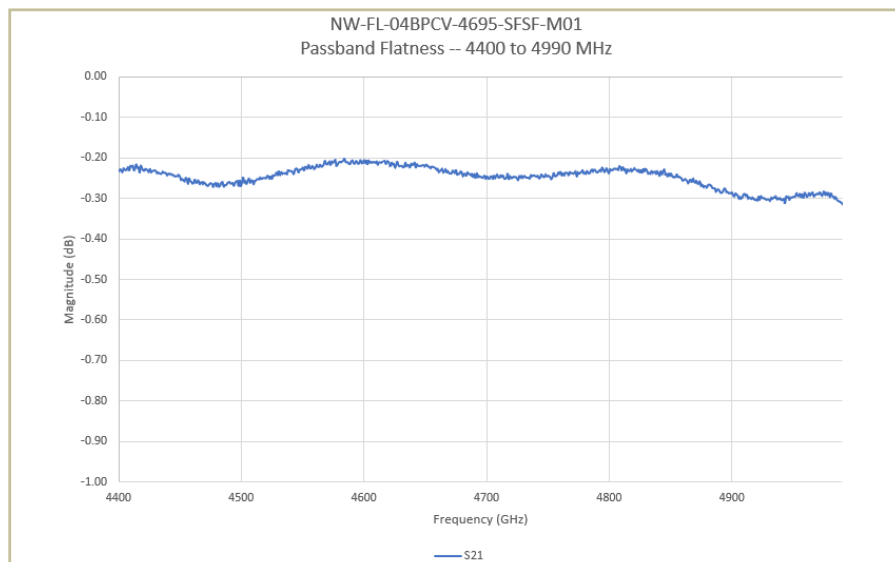
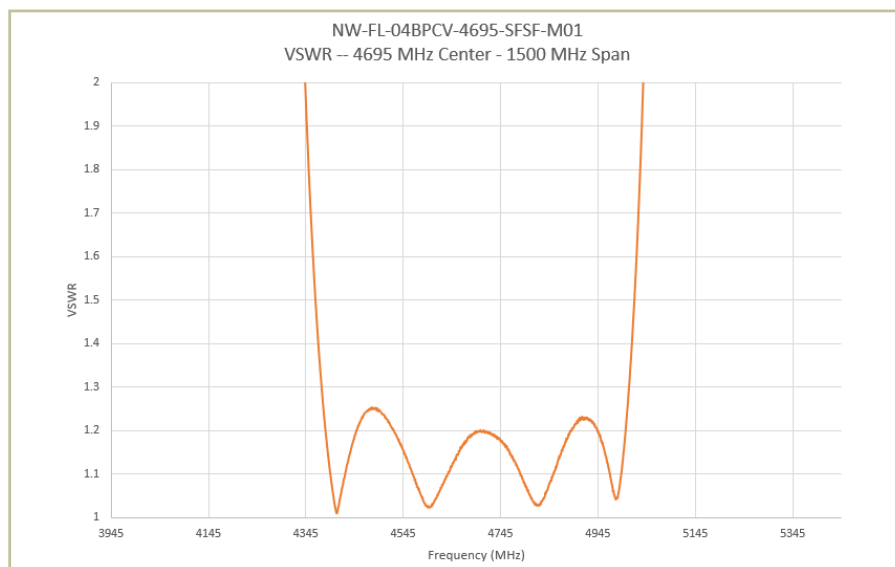
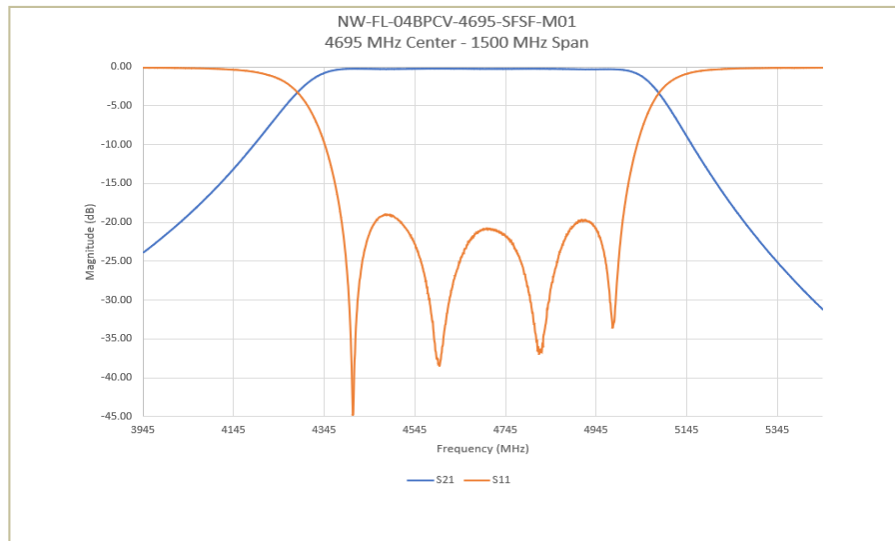
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Performance Plots



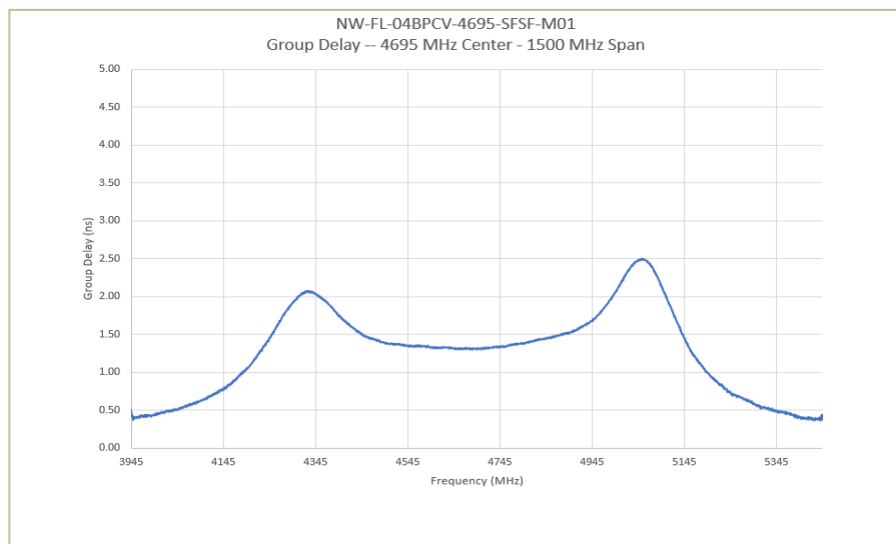
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Performance Plots (cont.)



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Performance Plots (cont.)

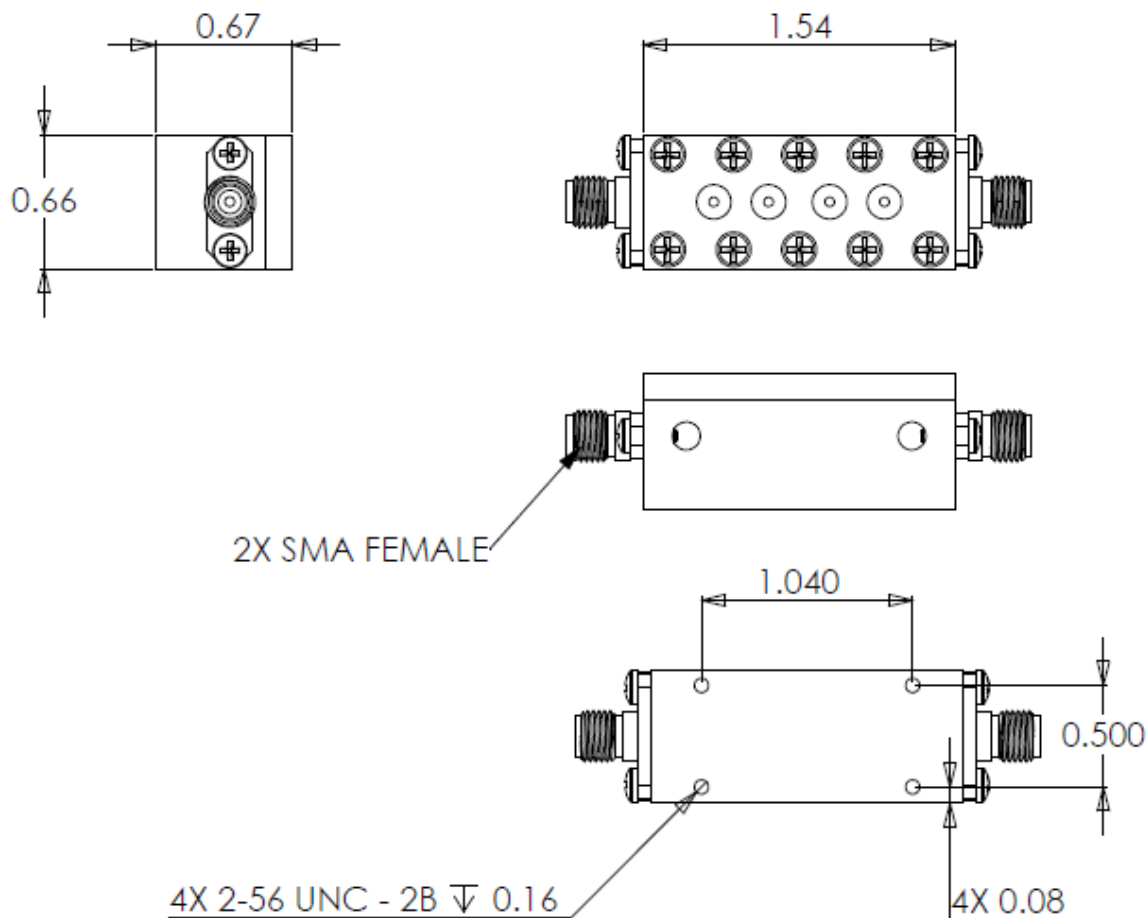


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Mechanical Specifications

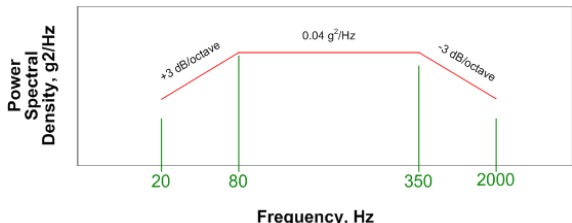
Parameter	Value	Unit	Limits
Dimensions	1.54x0.67x0.66	in	Max
Weight	TBD	oz	Max
RF Connectors, Input/Output	SMA Female		
Finish	Silver Plating		

Mechanical Outline



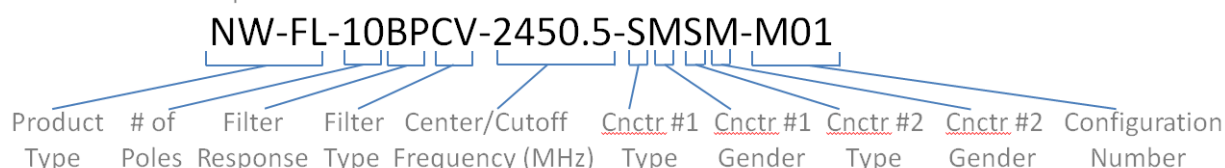
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Environmental Specifications

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)	 <p>Power Spectral Density, g²/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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