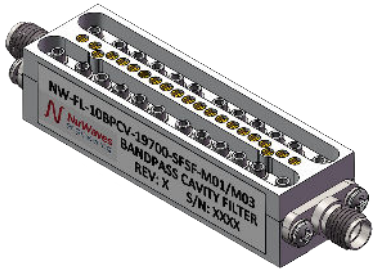
NuWaves
RF Solutions

NuFilter™ 10BPCV-19700-SFSF-M01 K-Band Bandpass Filter

18100 MHz to 21300 MHz



P/N: NW-FL-10BPCV-19700-SFSF-M01

NuWaves' NuFilter™ 10BPCV-19700-SFSF-M01 is a small form bandpass RF filter designed to reduce harmonics at the output of transmitters operating in K-Band.

The NuFilter 10BPCV-19700-SFSF-M01 provides superior harmonic and noise filtering, as demonstrated by the rejection levels of greater than 15 dB at 17860 MHz and 20dB at 21700 MHz. This high-performance module accepts input power levels up to 1 W, with only a minimal 0.7 dB of insertion loss in the passband frequency range of 18100 to 21300 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
- 3200 MHz BW
- 1 Watt CW RF Power Handling
- Bandpass Filtering
- K-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

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NuFilter™ 10BPCV-19700-SFSF-M01

Specifications

Absolute Maximums

Parameter	Rating	Unit
Max RF Input Power, CW, $Z_L = 50\ \Omega$	1	W
Max Operating Temperature	60	℃
Max Storage Temperature	85	℃

Export Classification
EAR99

Electrical Specifications @ 25 ℃, Z_S=Z_L=50 Ω

Parameter	Symbol	Min	Typ	Max	Unit	Condition
Operating Frequency	BW	18100		21300	MHz	
Passband Insertion Loss	IL		1.2	3	dB	18100 MHz
			0.7	1.5		19700 MHz
			1.2	3		21300 MHz
Rejection			-15		dB	17860 MHz
			-20			21700 MHz
Passband Flatness			0.5	1.5	dB	
VSWR (within passband)	VSWR		1.25:1	1.4:1		

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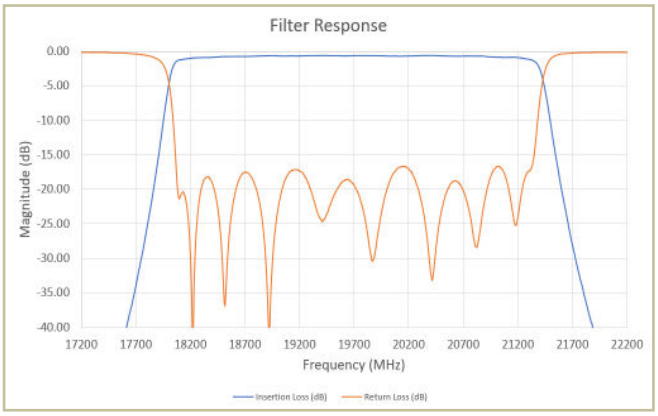
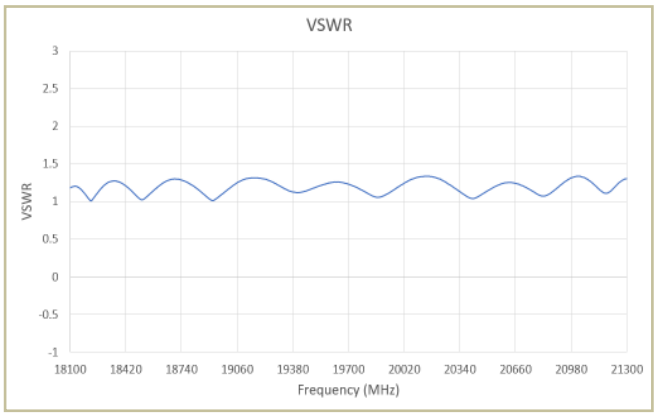
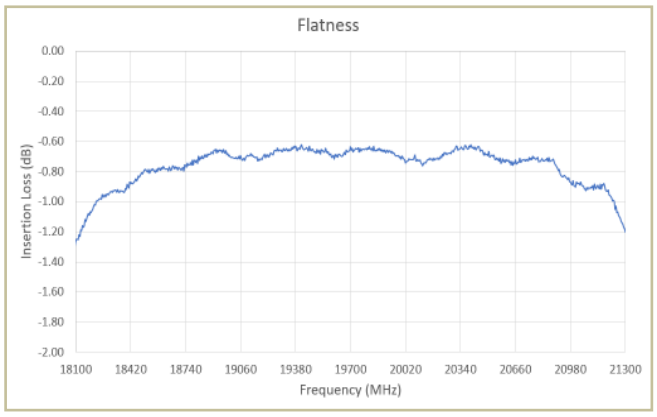
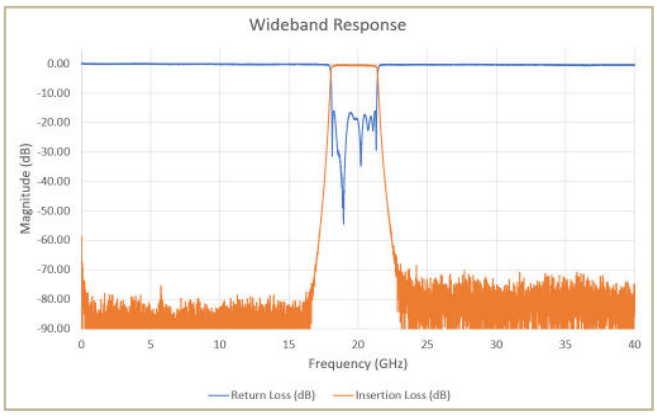
Performance Plots







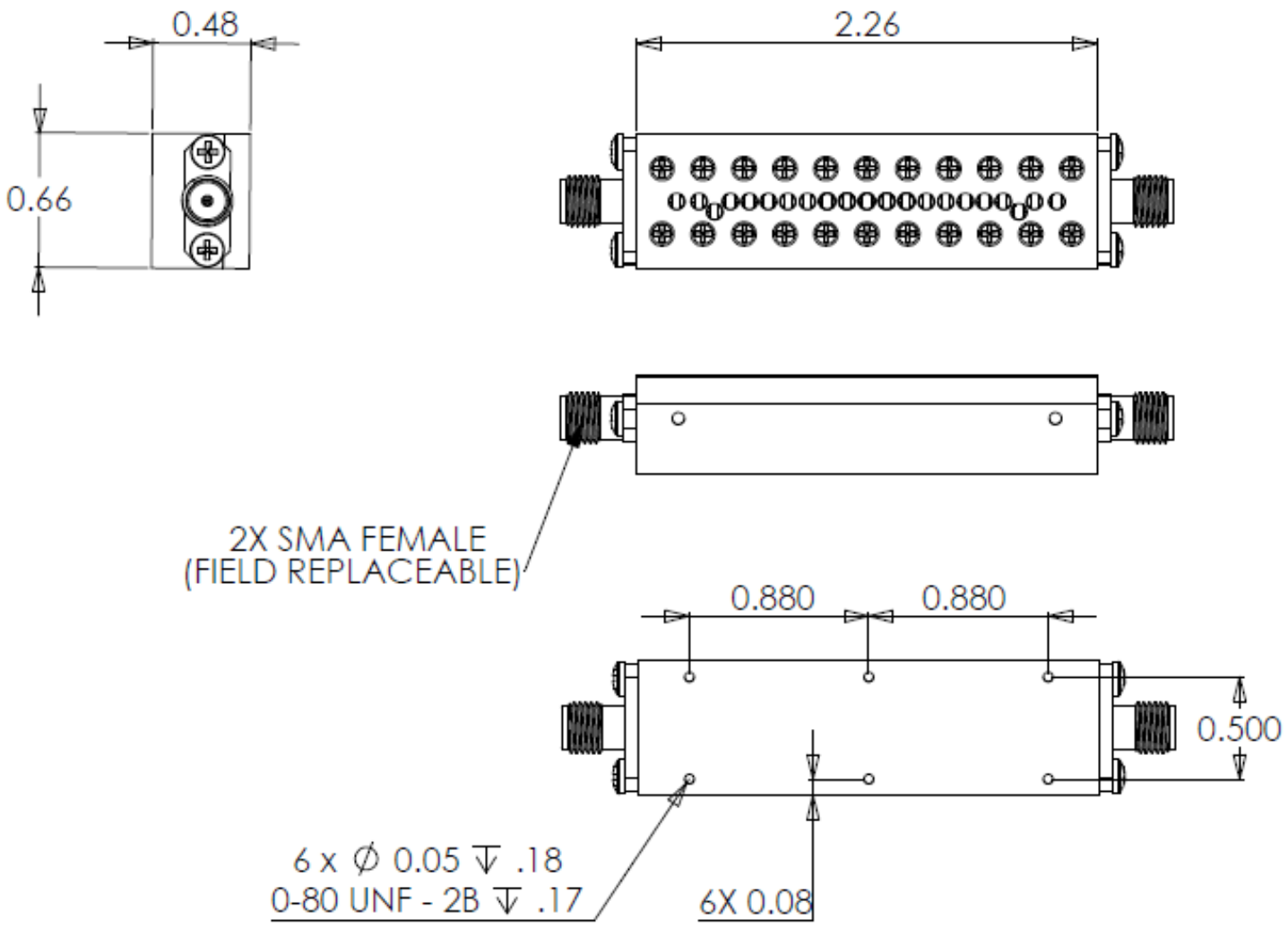


NuFilter™ 10BPCV-19700-SFSF-M01

Mechanical Specifications

Parameter	Value	Unit	Limits
Dimensions	2.26 x 0.66 x 0.48	in	Max
Weight	TBD	oz	Max
RF Connectors, Input/Output	SMA Female		
Finish	Silver Plating		

Mechanical Outline



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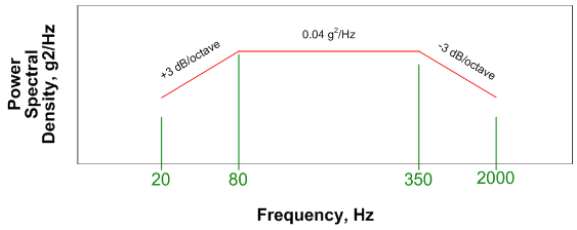
Environmental Specifications

Parameter	Symbol	Min	Typ	Max	Unit
Operating Temperature	T_C	-40		+60	℃
Storage Temperature	T_{STG}	-40		+85	℃
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:

NW-FL-10BPCV-2450.5-SMSM-M01

Product Type	# of Poles	Filter Response	Filter Type	Center/Cutoff Frequency (MHz)	Cnctr #1 Type	Cnctr #1 Gender	Cnctr #2 Type	Cnctr #2 Gender	Configuration Number
NW-FL-	10	B	PCV	2450.5	S	M	S	M	M01

Number of Poles: 01 to 12 (2 digits)

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

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

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

Connector Gender:
- M (Male)
- F (Female)

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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