

NuWaves

RF Solutions

Preliminary

NuFilter™ 08BPCV-2262.5-SFSF-M01 S-Band Bandpass Filter

2025 MHz to 2500 MHz

P/N: NW-FL-08BPCV-2262.5-SFSF-M01



NuWaves' NuFilter™ 08BPCV-2262.5-SFSF-M01 is the perfect companion to the NuPower Xtender™ SCISR-20 Tri-Band Bidirectional Amplifier operating in S-Band.

The NuFilter 08BPCV-2262.5-SFSF-M01 provides superior harmonic and noise filtering of SCISR Radio (S-Band), as demonstrated by the rejection levels of greater than 40 dB at 1850 and 2830 MHz. This high-performance module accepts input power levels up to 35W, with only a minimal 0.4 dB of insertion loss in the passband frequency range of 2025 to 2500 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
- S-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 |

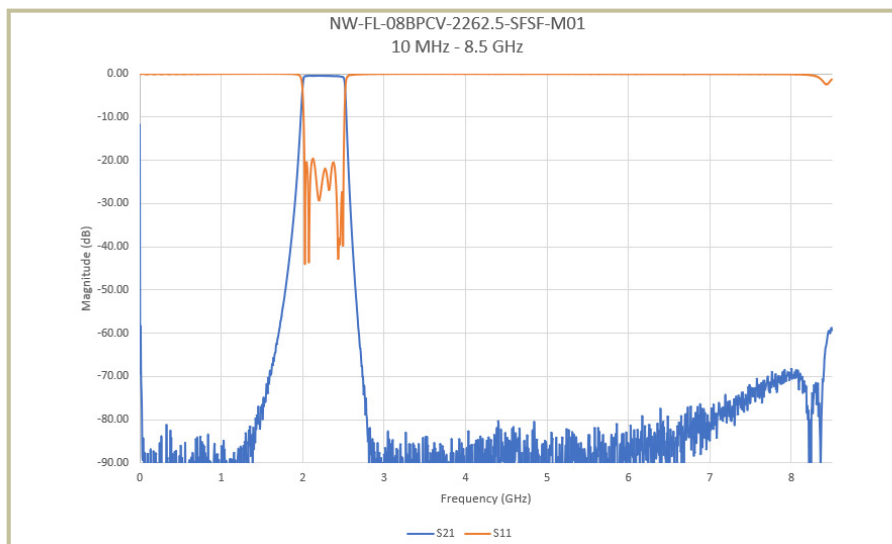
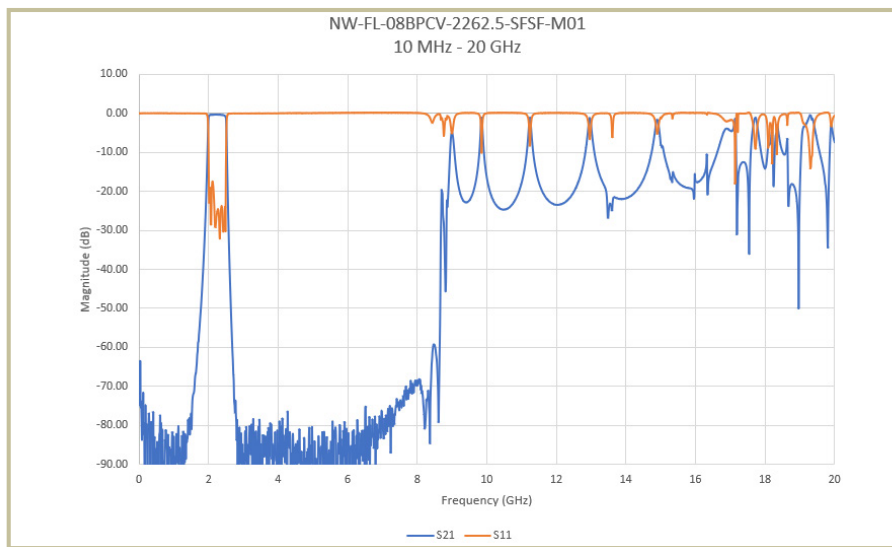
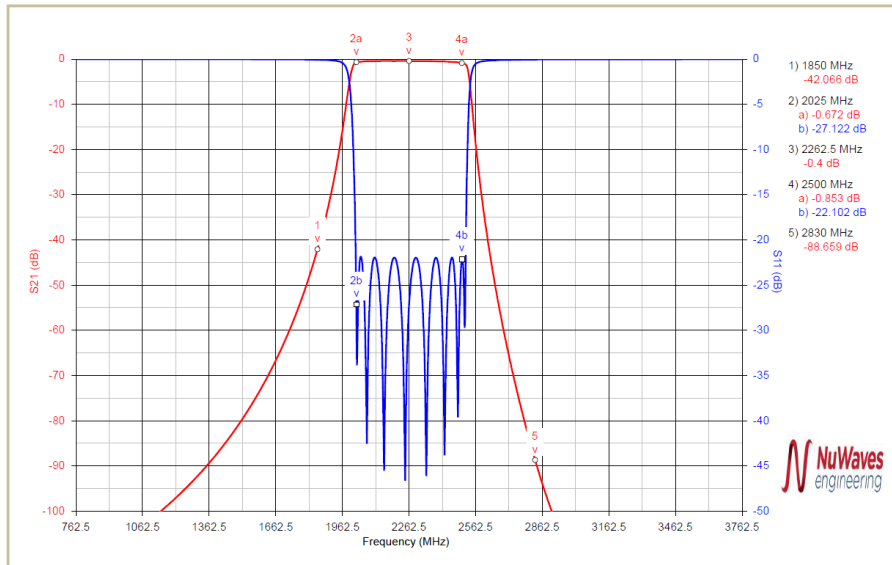
| Export Classification |
|-----------------------|
| EAR99 |

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

| Parameter | Symbol | Min | Typ | Max | Unit | Condition |
|-------------------------|--------|------|-----|------|------|------------|
| Operating Frequency | BW | 2025 | | 2500 | MHz | |
| Passband Insertion Loss | IL | | 0.7 | 1.1 | dB | 2025 MHz |
| | | | 0.4 | 0.6 | | 2262.5 MHz |
| | | | 0.7 | 1.1 | | 2500 MHz |
| Rejection | | | -40 | | dB | 1850 MHz |
| | | | -40 | | | 2830 MHz |
| Passband Flatness | | | 0.3 | 0.5 | dB | |
| VSWR (within passband) | VSWR | | 1.5 | | | |

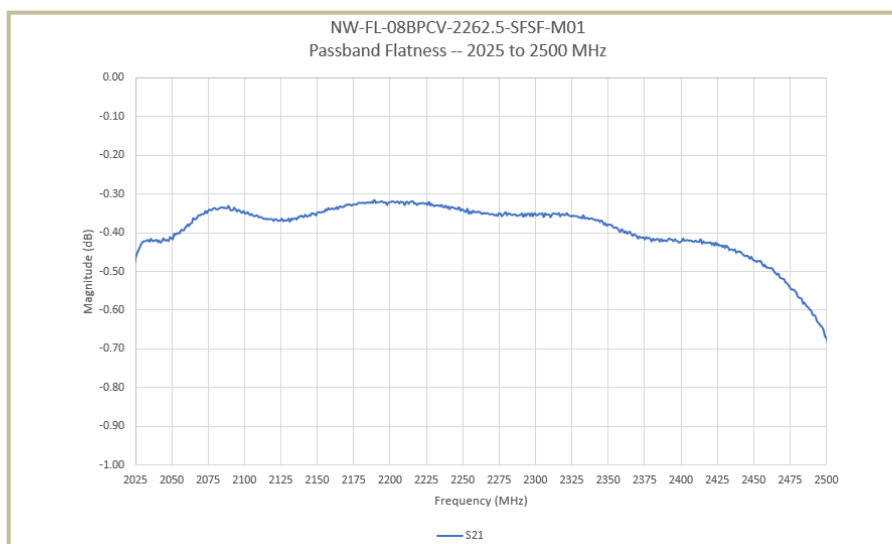
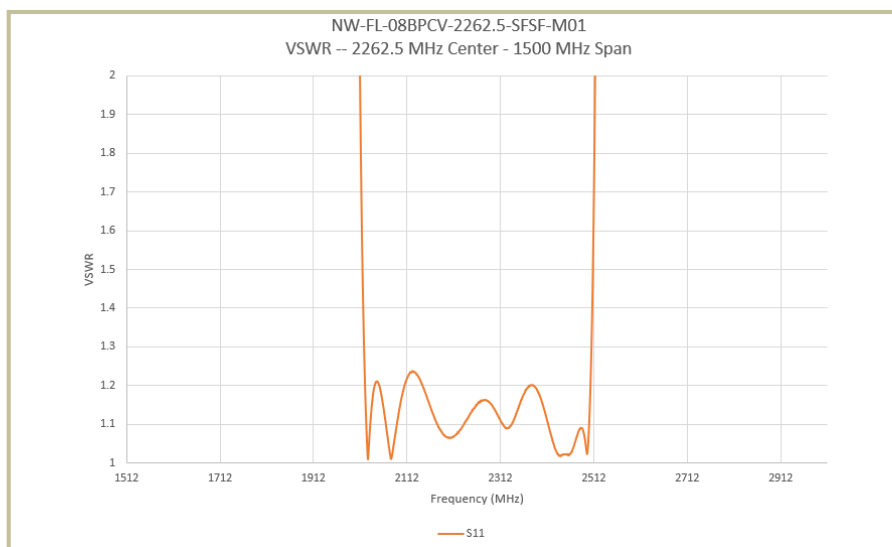
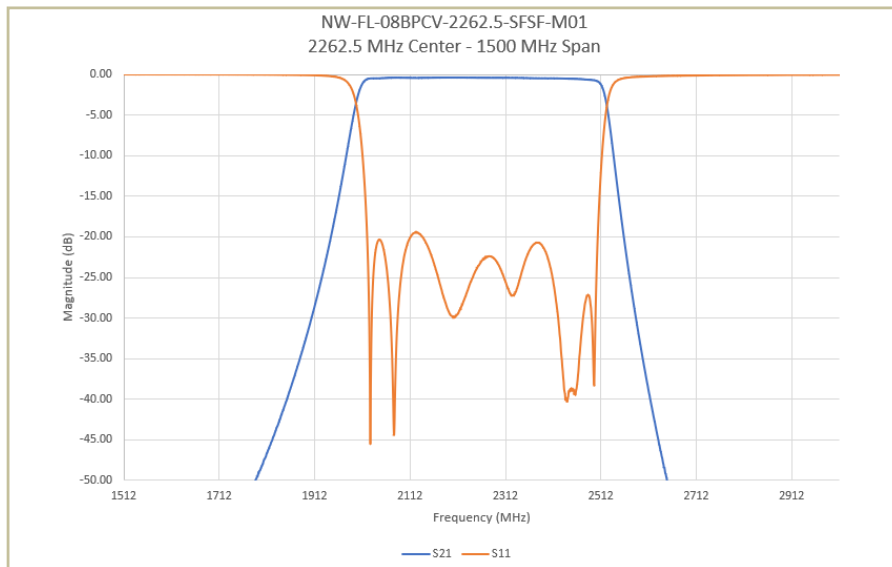
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Performance Plots



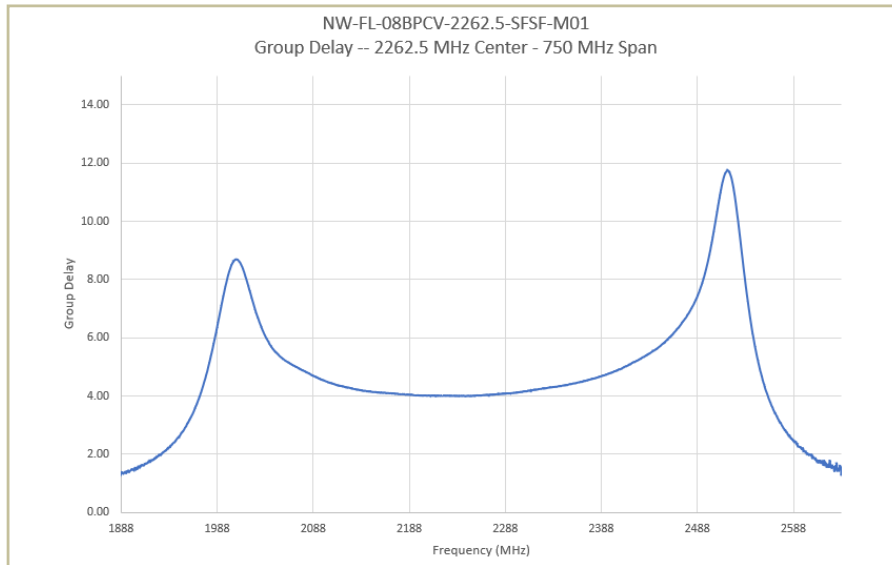
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Performance Plots (cont.)



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Performance Plots (cont.)

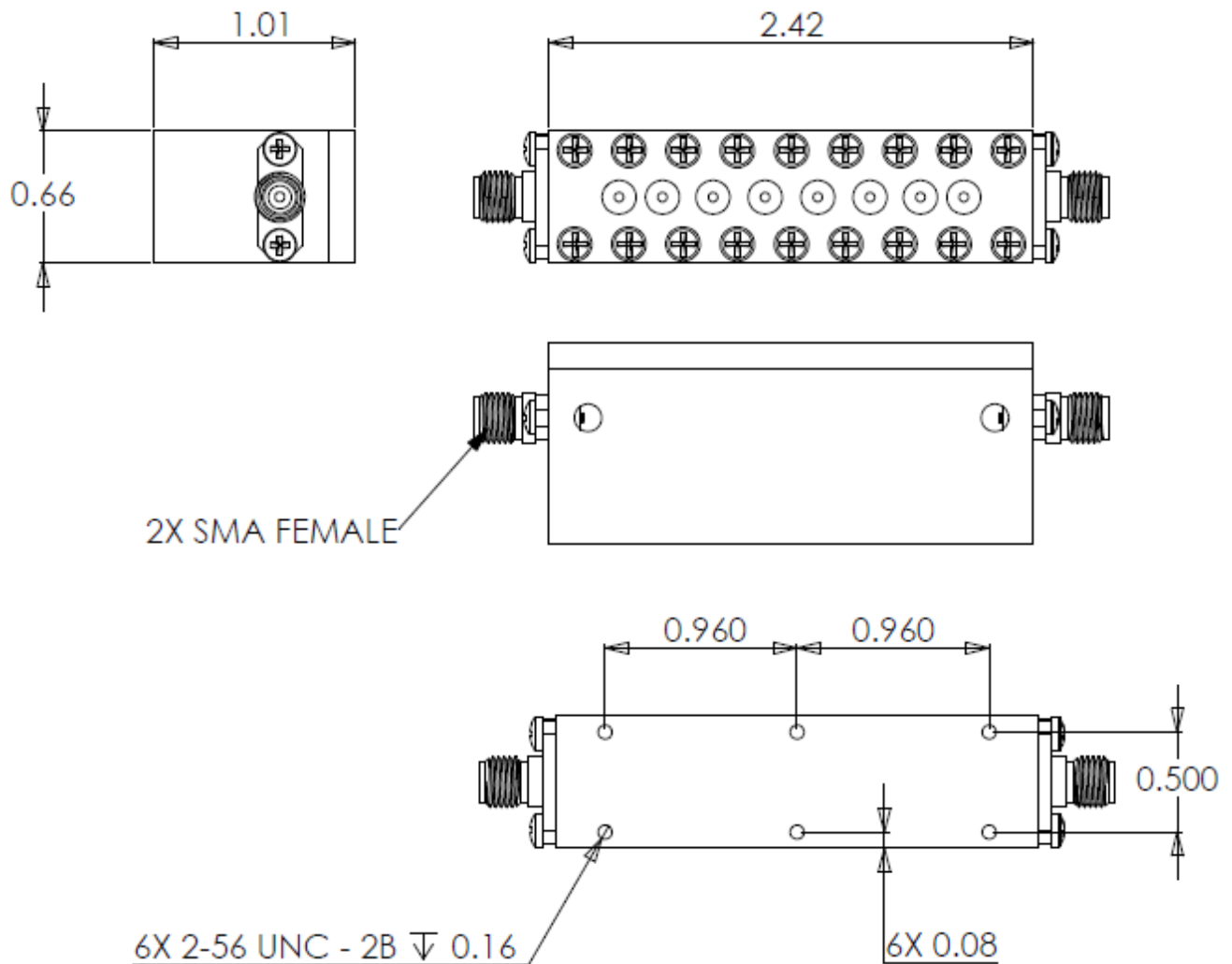


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Mechanical Specification

| Parameter | Value | Unit | Limits |
|-----------------------------|--------------------|------|--------|
| Dimensions | 2.42 x 1.01 x 0.66 | in | Max |
| Weight | TBD | oz | Max |
| RF Connectors, Input/Output | SMA Female | | |
| Finish | Silver Plating | | |

Mechanical Outline



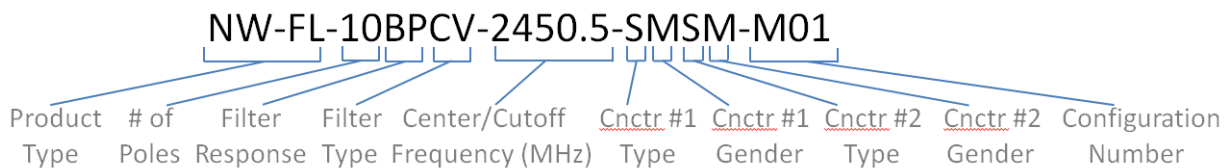
Preliminary NuFilter™ 08BPCV-2262.5-SFSF-M01

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)
 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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