

# NuWaves

## RF Solutions

## NuFilter™ 05LPLE-2500-SFSF-M02 Miniature Harmonic Filter

Low Pass Filter  
DC to 2500 MHz Passband



P/N: NW-FL-05LPLE-2500-SFSF-M02

**NuWaves' NuFilter™ 05LPLE-2500-SFSF-M02 is a low-cost, miniature, low-pass RF filter designed to reduce harmonics at the output of transmitters operating at up through S-Band.**

The NuFilter 05LPLE-2500-SFSF-M02 provides superior harmonic filtering, as demonstrated by the rejections levels of greater than 25 dB from 4 GHz to 10 GHz. This high-performance module accepts input power levels up to 50 W, with only a 0.5 dB (typical) of insertion loss in the passband frequency range of DC to 2500 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
- 50 W RF Power Handling
- Low Pass Filtering
- Broadband Operation
- Miniature 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™ 05LPLE-2500-SFSF-M02

## Specifications

### Absolute Maximums

Parameter	Rating	Unit
Max RF Input Power, $Z_L = 50 \Omega$	50	W
Max RF Input Power, $Z_L = 10:1$ VSWR	20	W
Max Operating Temperature	85	°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	DC		2500	MHz	
Passband Insertion Loss	IL		0.3		dB	1 GHz
			0.3			2 GHz
			0.8			2.5 GHz
Cutoff Frequency			2500		MHz	
Rejection		-16	-20		dB	3.25 GHz
		-20	-25			4 - 10 GHz
		-15	-20			10 - 15 GHz
RF Power Handling (passband)			50		W	
VSWR (within passband)	VSWR		1.5			

### Mechanical Specifications

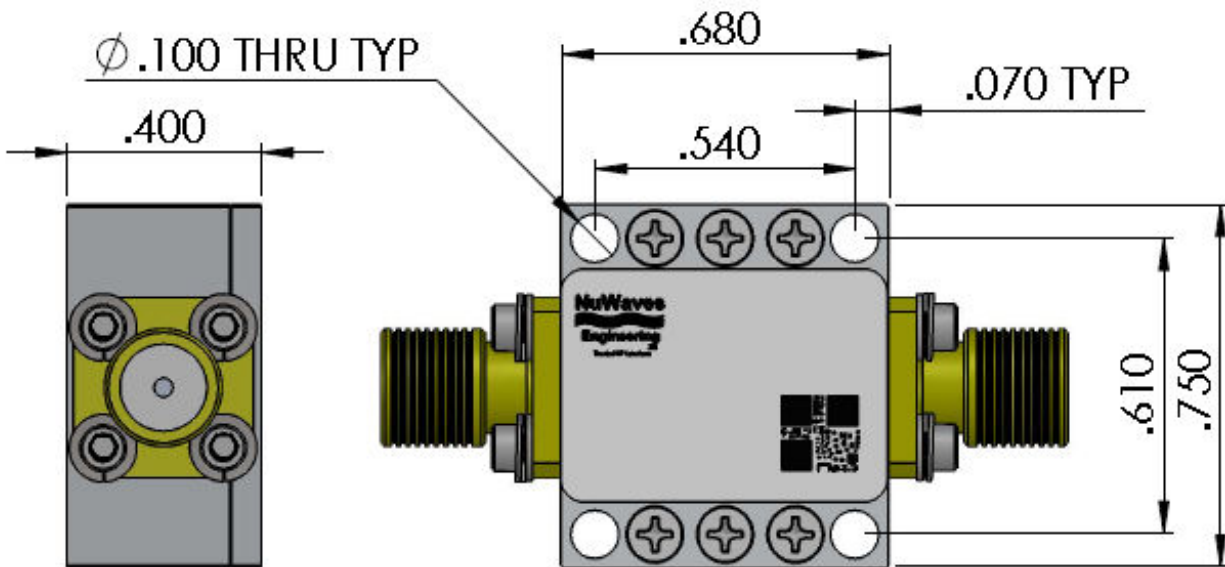
Parameter	Value	Unit	Limits
Dimensions	0.75 x 0.68 x 0.40	in	Max
Weight	1	oz	Max
RF Connectors, Input/Output	SMA Female		

### Environmental Specifications

Parameter	Symbol	Min	Typ	Max	Unit
Operating Temperature	$T_C$	-40		+85	°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>The graph shows a trapezoidal vibration profile. The y-axis is Power Spectral Density in g²/Hz, and the x-axis is Frequency in Hz. The profile starts at 20 Hz, rises with a slope of +3 dB/octave to 80 Hz, remains constant at 0.04 g²/Hz until 350 Hz, and then falls with a slope of -3 dB/octave to 2000 Hz.</p>				

# NuFilter™ 05LPLE-2500-SFSF-M02

## Mechanical Outline



## Part Numbering Format

Part Number Example:

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

Product # of Filter Filter Center/Cutoff Cnctr #1 Cnctr #1 Cnctr #2 Cnctr #2 Configuration  
 Type Poles Response Type Frequency (MHz) Type Gender Type Gender Number

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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