

NuWaves

RF Solutions

NuFilter™ 05LPLE-2500-SFSF-M01 Miniature Harmonic Filter

Low Pass Filter
DC to 2500 MHz



P/N: NW-FL-05LPLE-2500-SFSF-M01

NuWaves' NuFilter™ 05LPLE-2500-SFSF-M01 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-M01 provides superior harmonic filtering, as demonstrated by the rejections levels of greater than 25 dB from 3.25 GHz to 5 GHz. This high-performance module accepts input power levels up to 50 W, with only a minimal 0.5 dB 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-M01

Specifications

Absolute Maximums

Parameter	Rating	Unit
Max RF Input Power, $Z_L = 50 \Omega$	100	W
Max RF Input Power, $Z_L = 10:1$ VSWR	50	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	1000 MHz
			0.3			2000 MHz
			0.6			2500 MHz
Cutoff Frequency			2500		MHz	
Rejection			-27		dB	3250 MHz
			-25			5000 MHz
			-21			6000 MHz
RF Power Handling (passband)			50		W	
VSWR (within passband)	VSWR		1.5			

Mechanical Specifications

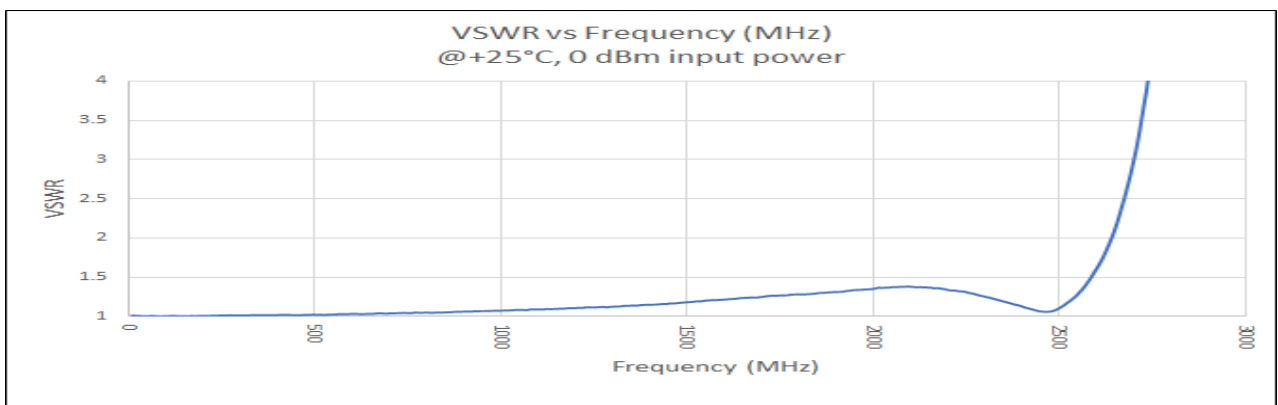
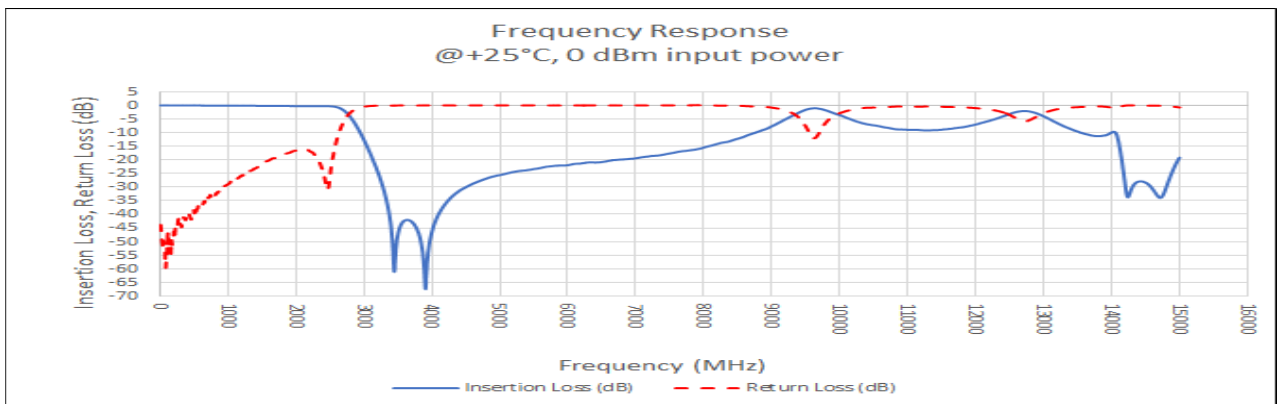
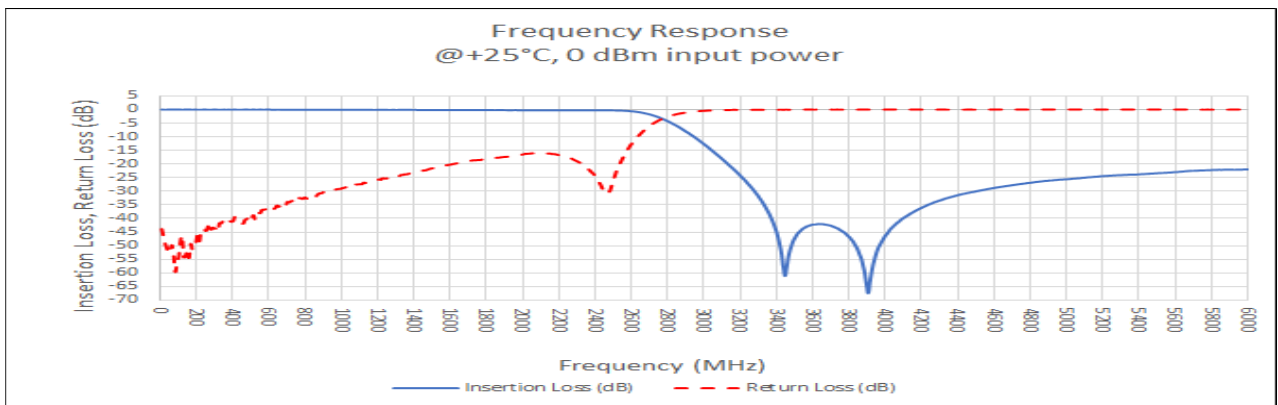
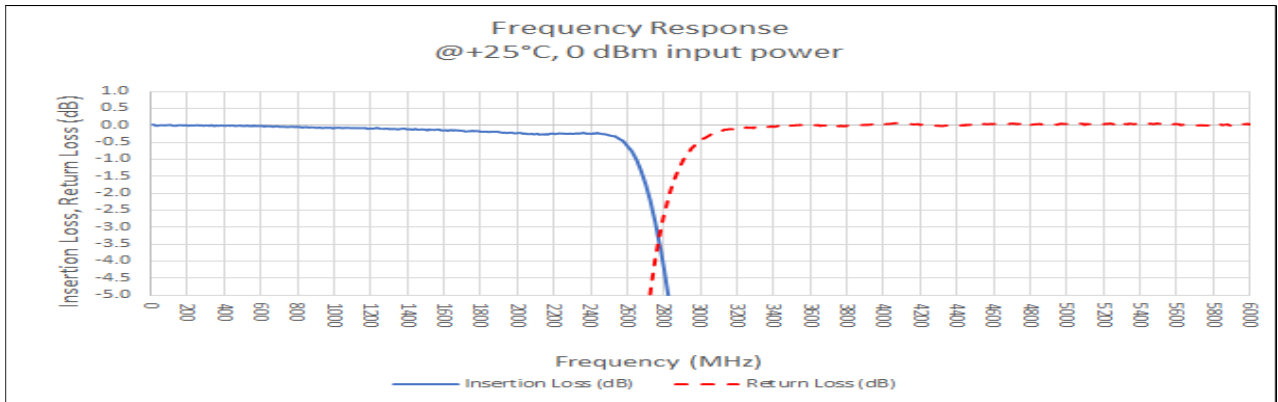
Parameter	Value	Unit	Limits
Dimensions	0.75 x 0.68 x 0.40	in	Max
Weight	1	oz	Max
RF Connectors, Input/Output	SMA Female		

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 Power Spectral Density (g²/Hz) on the y-axis and Frequency (Hz) on the x-axis. The profile is a trapezoidal shape with a flat top at 0.04 g²/Hz between 80 Hz and 350 Hz. The slope is +3 dB/octave from 20 Hz to 80 Hz and -3 dB/octave from 350 Hz to 2000 Hz. Vertical lines are drawn at 20, 80, 350, and 2000 Hz.</p>				

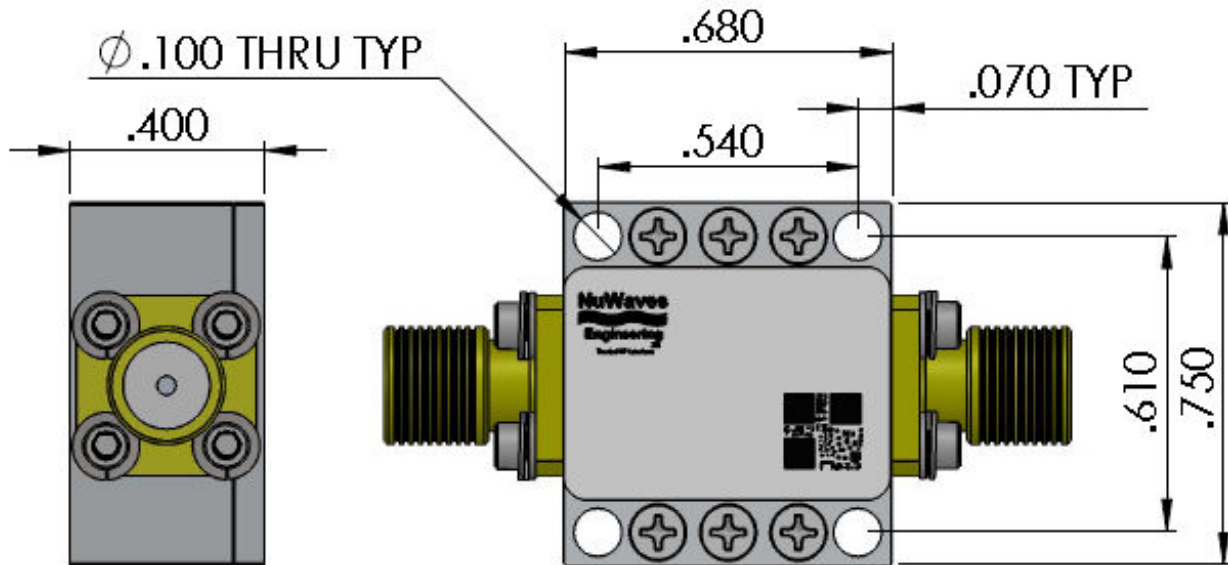
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Performance Plots



NuFilter™ 05LPLE-2500-SFSF-M01

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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