



Trusted RF Solutions™

NuFilter™ 05LPLE-6000-SFSF-M01 Miniature Harmonic Filter

Low Pass Filter
2500 to 6000 MHz



P/N: NW-FL-05LPLE-6000-SFSF-M01

NuWaves' NuFilter™ 05LPLE-6000-SFSF-M01 is a low-cost, miniature, low-pass RF filter designed to reduce harmonics at the output of transmitters operating at up through C-Band.

The NuFilter 05LPLE-6000-SFSF-M01 provides superior harmonic filtering, as demonstrated by the rejections levels of greater than 20 dB from 8 GHz to 10 GHz. This high-performance module accepts input power levels up to 50 W, with only a minimal 0.75 dB of insertion loss in the passband frequency range of 2500 to 6000 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-6000-SFSF-M01

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	50	W
Max Operating Temperature	65	°C
Max Storage Temperature	65	°C

Export Classification
EAR99

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

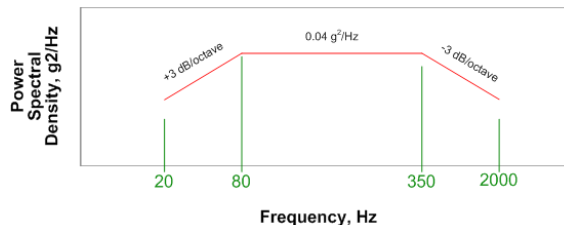
Parameter	Symbol	Min	Typ	Max	Unit	Condition
Operating Frequency	BW	2500		6000	MHz	
Passband Insertion Loss	IL		0.3		dB	3500 MHz
			0.3			5000 MHz
			0.75			6000 MHz
Cutoff Frequency			6000		MHz	
Rejection			20		dB	8000 MHz
			25			10000 MHz
			40			16000 MHz
RF Power Handling (passband)			50		W	
VSWR (within passband)	VSWR		1.5			

Mechanical Specifications

Parameter	Value	Unit	Limits
Dimensions	2.56 x 0.650 x 0.650	in	Max
Weight	2	oz	Max
RF Connectors, Input/Output	SMA Female		

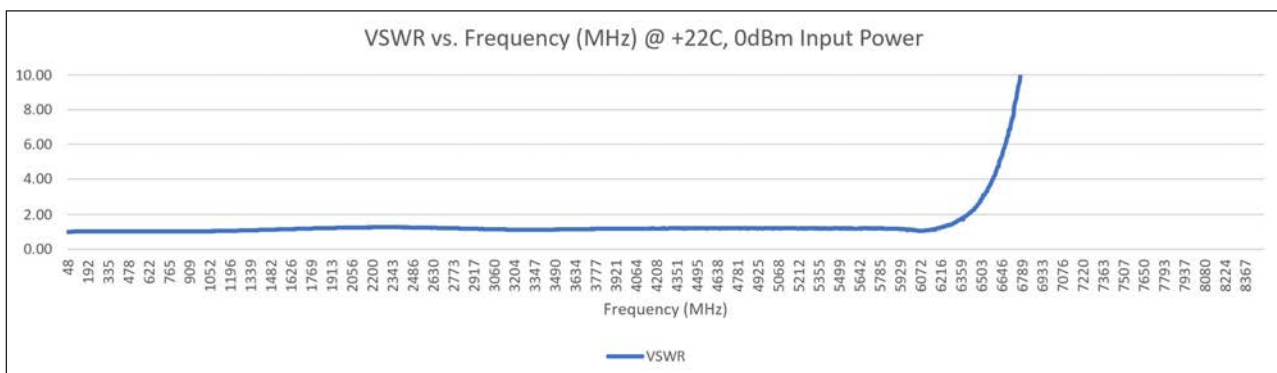
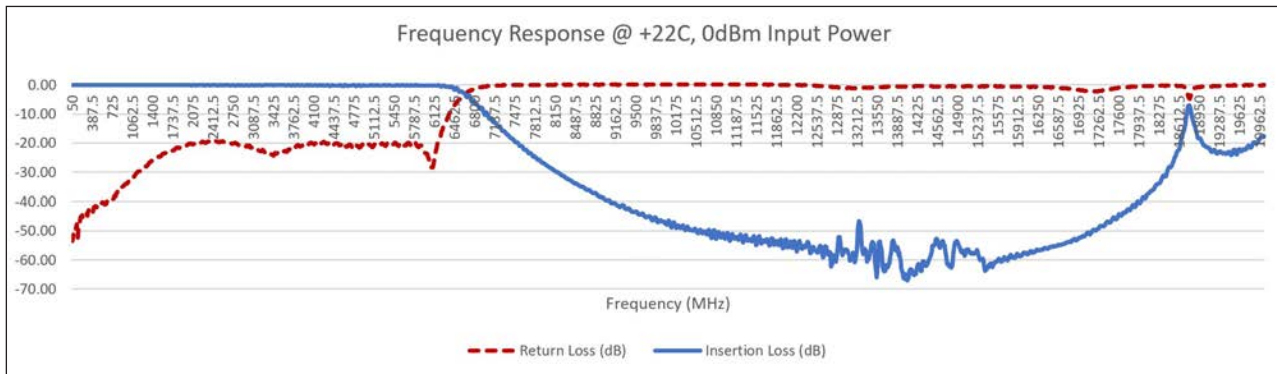
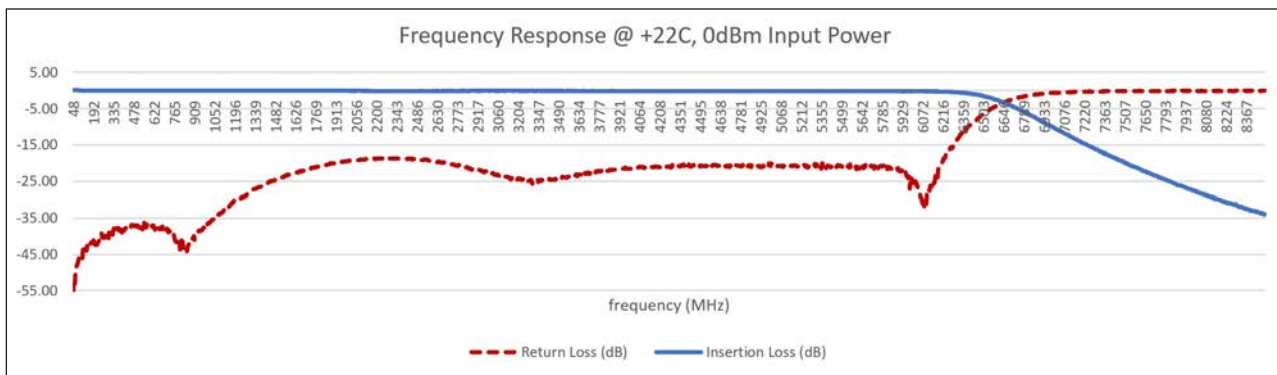
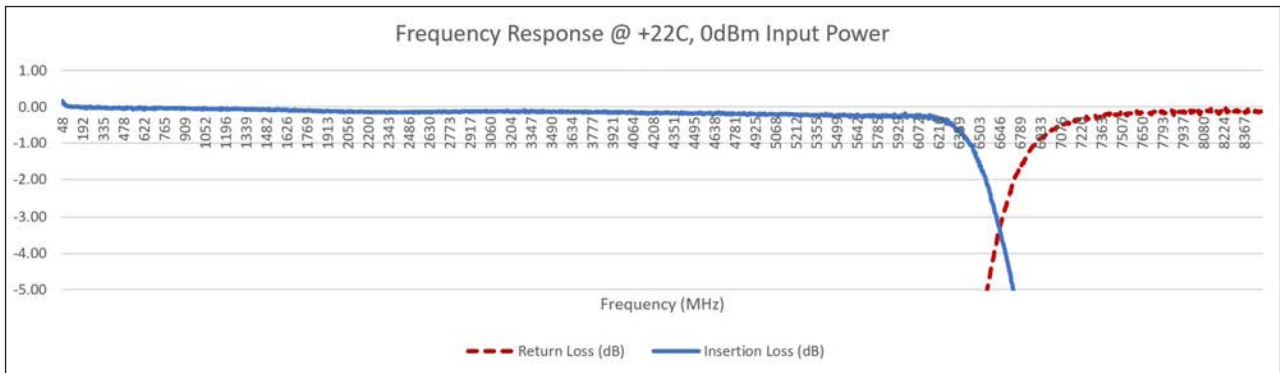
Environmental Specifications

Parameter	Symbol	Min	Typ	Max	Unit
Operating Temperature	T_C	-40		+65	°C
Storage Temperature	T_{STG}	-40		+85	°C
Relative Humidity (non-condensing)	RH			95	%
Altitude MIL-STD-810F - Method 500.4	ALT			15,000	ft
Vibration / Shock Profile (Random profile in x,y, z axis, as per Figure for 15 minute duration in each axis)					



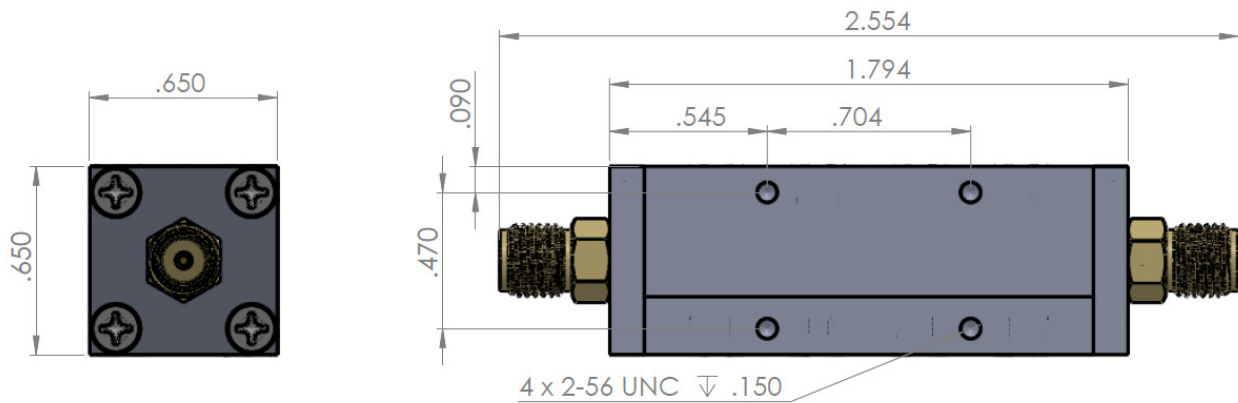
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Performance Plots



NuFilter™ 05LPLE-6000-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>

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