

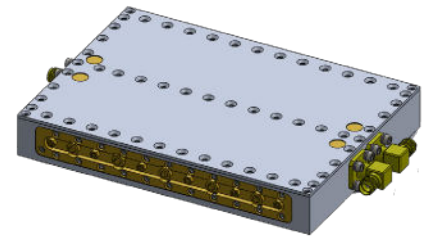
NuWaves
RF Solutions

NuFilter™ 2CHCV-L-SFSF-M01 Diplexer

CH1 Bandpass 1518 to 1559 MHz

CH2 Bandpass 1626.5 to 1675 MHz

P/N: NW-MP-2CHCV-L-SFSF-M01



NuWaves' NuFilter™ 2CHCV-L-SFSF-M01 is designed for compatibility with Inmarsat communications systems, allowing for the separation of both Uplink and Downlink signals through one antenna port.

The NuFilter 2CHCV-L-SFSF-M01 provides superior harmonic filtering, noise rejection, and channel isolation.

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
- 50W CW RF Power Handling
- Diplexer Bandpass Filtering
- Inmarsat Uplink and Downlink Compatibility
- Full Duplex 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

NuFilter™ 2CHCV-L-SFSF-M01

Specifications

Absolute Maximums

Parameter	Rating	Unit
Max RF Input Power, CW, $Z_L = 50 \Omega$	50	W
Max Operating Temperature	70	°C
Max Storage Temperature	85	°C

Export Classification
EAR99

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

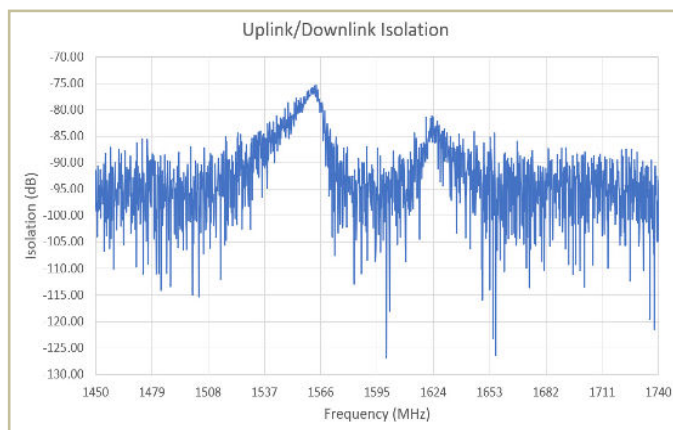
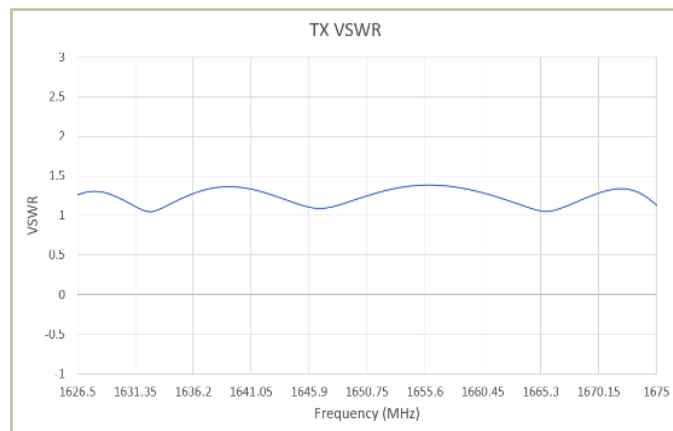
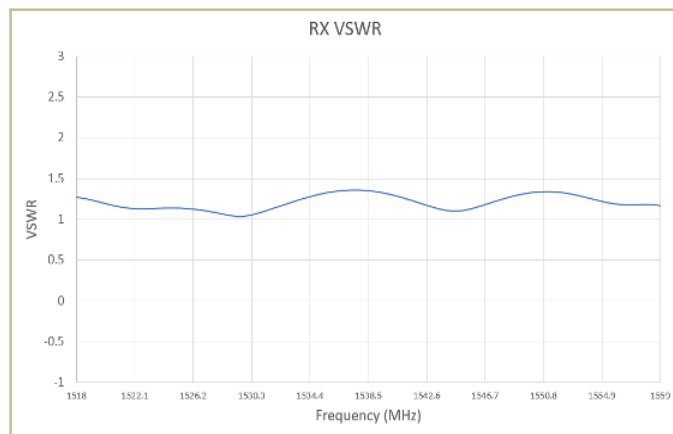
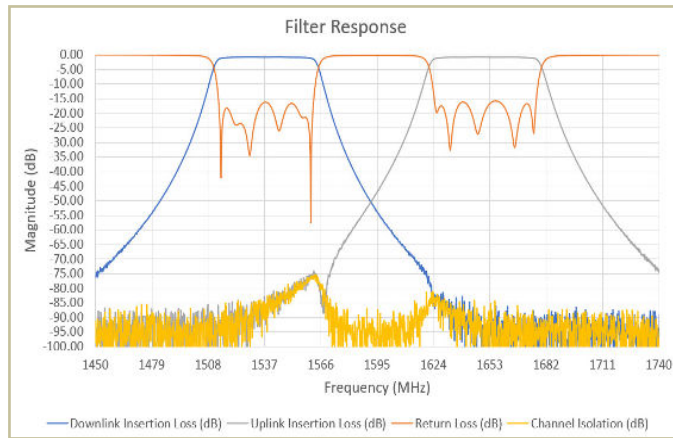
Channel 1 (CH1 to COM)						
Parameter	Symbol	Min	Typ	Max	Unit	Condition
Operating Frequency	BW	1518		1559	MHz	
Passband Insertion Loss	IL		0.9	1.5	dB	1518 MHz
			0.7	1.2		1538.5 MHz
			0.9	1.5		1559 MHz
Rejection			-40		dB	1490 MHz
			-40			1584 MHz
Passband Flatness			0.2	1.5	dB	
VSWR (within passband)	VSWR		1.2			

Channel 2 (CH2 to COM)						
Parameter	Symbol	Min	Typ	Max	Unit	Condition
Operating Frequency	BW	1626.5		1675	MHz	
Passband Insertion Loss	IL		0.9	1.5	dB	1630 MHz
			0.7	1.2		1650 MHz
			0.9	1.5		1675 MHz
Rejection			-40		dB	1600 MHz
			-45			1705 MHz
Passband Flatness			0.2	1	dB	
VSWR (within passband)	VSWR		1.3			

Isolation				
Parameter	Condition	Typ	Min	Frequency (MHz)
Isolation (dB)	CH 1 to CH2	76	65	1518 - 1559
Isolation (dB)		82	76	1626.5 - 1675
Isolation (dB)		86	69	1575

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Performance Plots

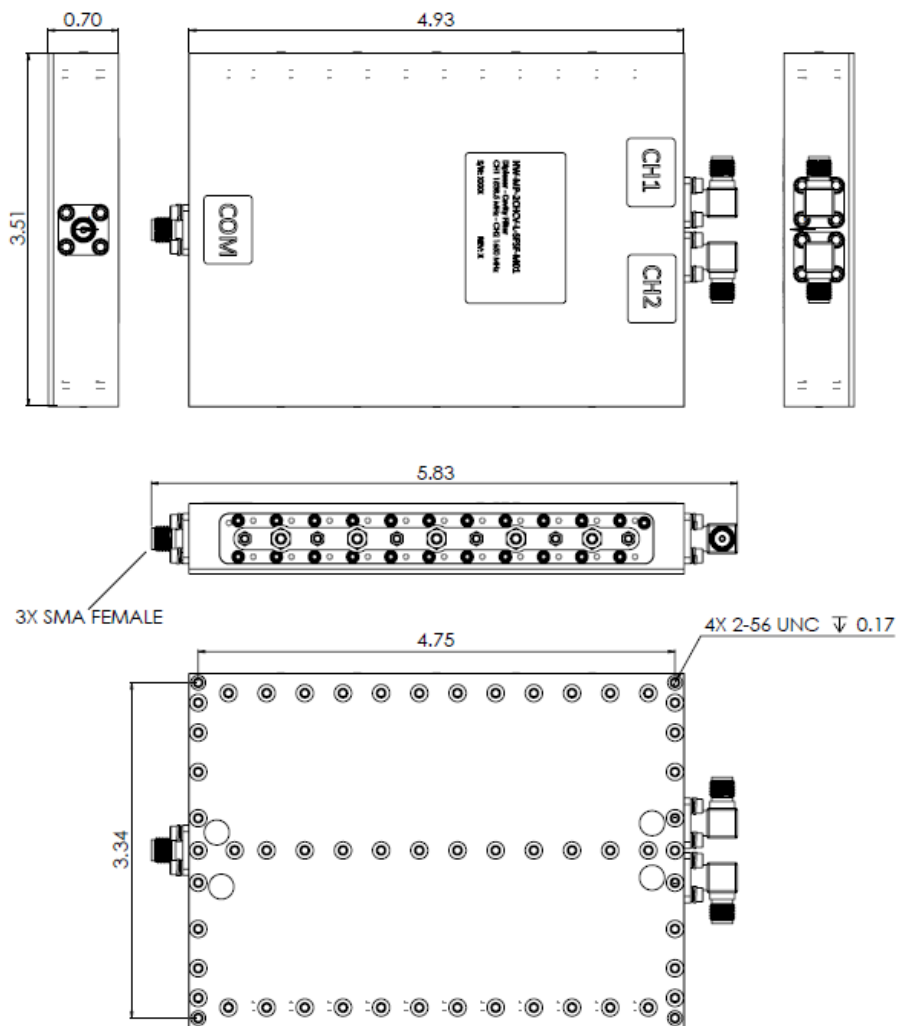


NuFilter™ 2CHCV-L-SFSF-M01

Mechanical Outline

Parameter	Value	Unit	Limits
Dimensions	4.93 x 3.51 x 0.70	in	Max
Weight	TBD	oz	Max
RF Connectors, Input/Output	SMA Female		
Finish	Silver Plating		

Mechanical Outline



NuFilter™ 2CHCV-L-SFSF-M01

Environmental Specifications

Parameter	Symbol	Min	Typ	Max	Unit
Operating Temperature	T_C	-40		+70	°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)					

Power Spectral Density, g²/Hz

Frequency, Hz

0.04 g²/Hz

+3 dB/octave

-3 dB/octave

20 80 350 2000

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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