

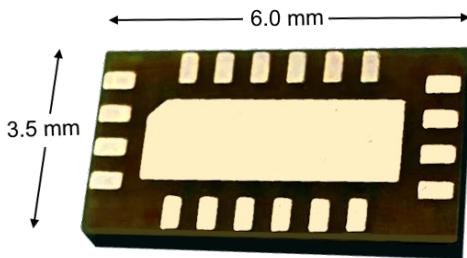


**SPECTRUM  
CONTROL**

DATASHEET

## High Q SMT RF Filters MMG Series

**Spectrum Control has developed a new family of ultraminiature, high-Q RF filters in surface-mount QFN packages. Available in frequencies from 0.5 to 10 GHz, these filters are ideal for use in low-pass, high-pass, band-pass, band-reject, and multiplexer applications.**



Achieves dramatic size reduction while maintaining high performance.  
The new high-Q RF filter family from Spectrum Control.

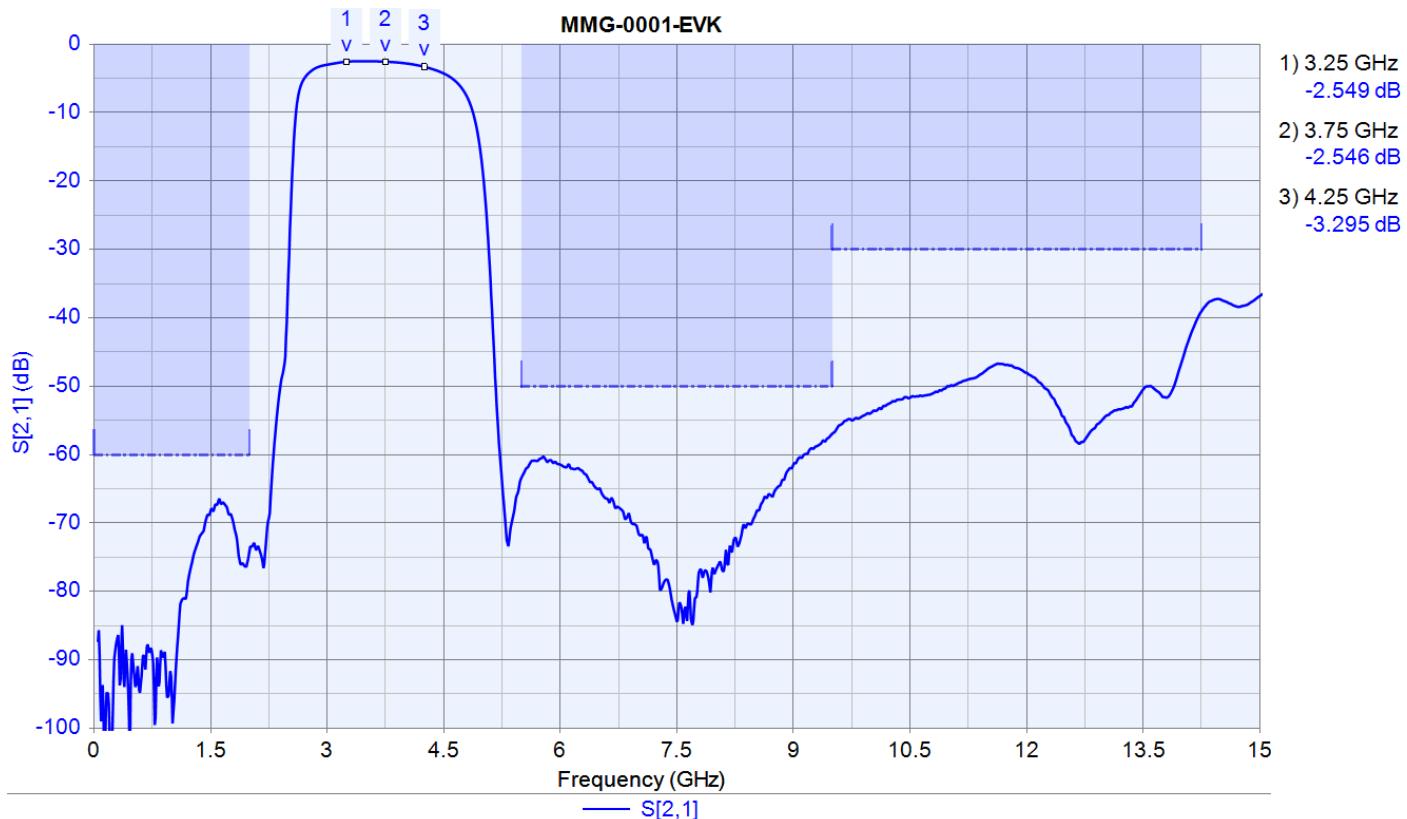
Applications such as aerospace and defense are driving demand for high-quality surface-mount RF components to reduce the size and cost of RF systems. Spectrum Control has been a leading provider of high-quality RF filters for A&D applications for more than 40 years. We have applied our RF filtering expertise to deliver a dramatic reduction in filter size while maintaining exceptional performance.

The new MMG series filters deliver high selectivity, low insertion loss, and temperature stability in a small form factor with QFN mounting.

To achieve this size and performance breakthrough, we have employed a novel manufacturing approach using integrated passive devices in glass. This 3D process allows us to build unique solenoid inductor structures that offer superior Q performance from 0.5 to 10 GHz compared to other filter technologies of similar size. The wafer-scale process also provides extremely high correlation between filter simulations and the manufactured product, resulting in high predictability for custom filters. Performance and quality are also highly consistent from run to run.

## MMG-0001

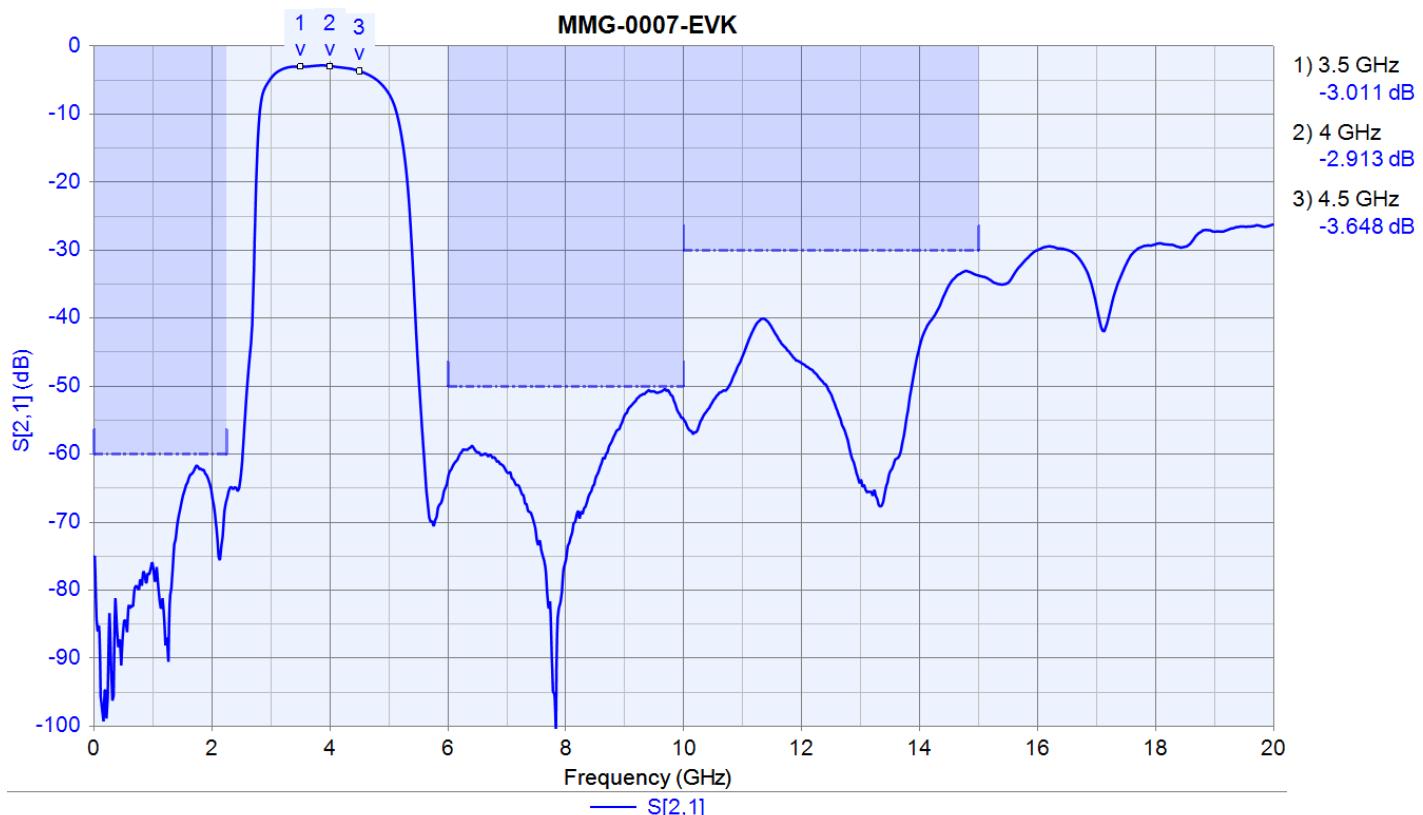
Parameter	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typical	Max	Unit
Passband Insertion Loss	3.25	4.25	2.0	2.5	4.0	dB
Passband Return Loss	3.25	4.25	12	15		dB
Stopband Attenuation	0	2.0	60	65		dB
Stopband Attenuation	5.5	9.5	50	60		dB
Stopband Attenuation	9.5	14.25	30	40		dB
Group Delay				1		nS
Power Handling					30	dBm
Impedance				50		Ω
Temperature			-55	25	100	°C



\*Available on evaluation fixture by adding -EVK to Part Number. Outline drawing and additional mounting information and S-parameters available upon request.

## MMG-0007

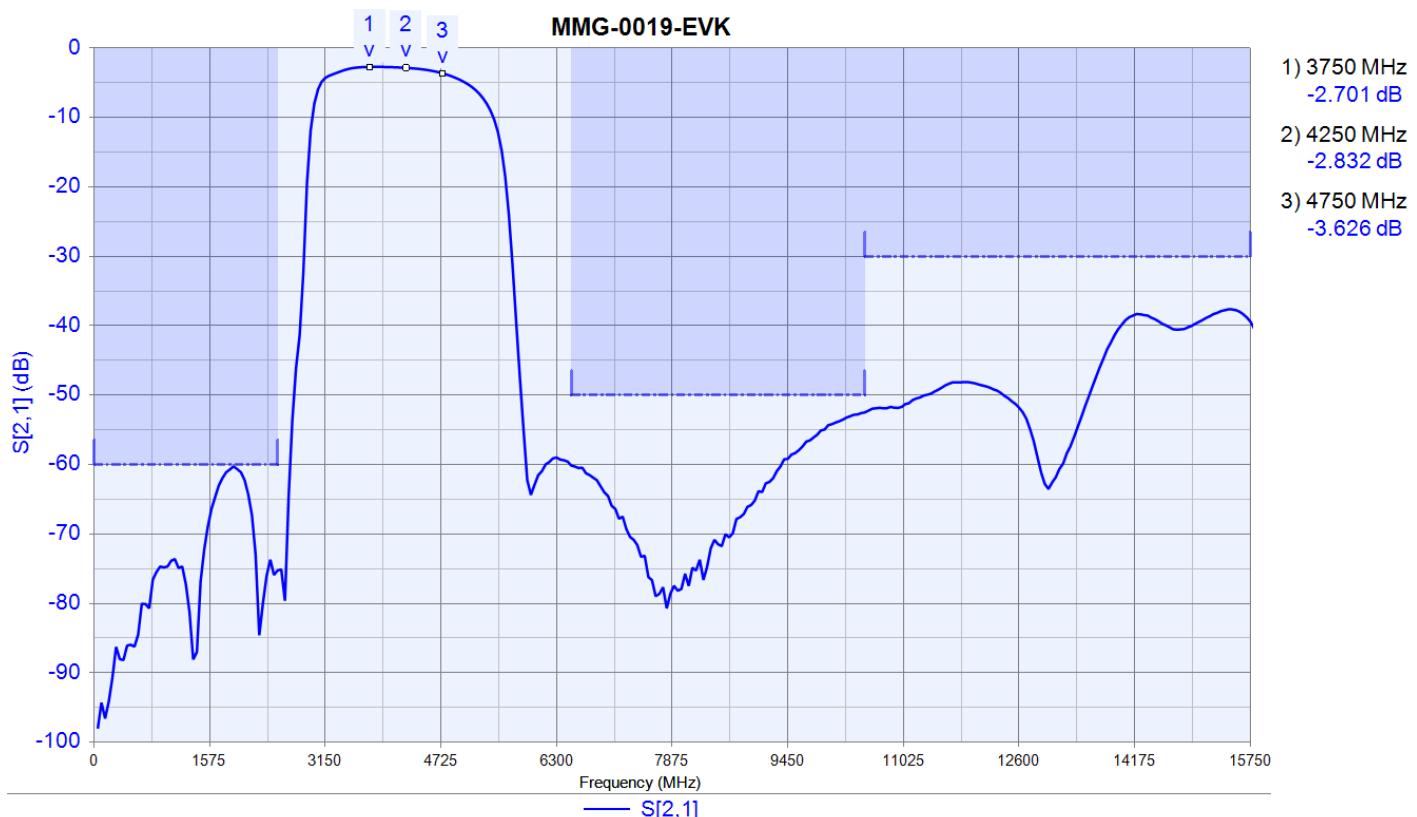
Parameter	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typical	Max	Unit
Passband Insertion Loss	3.5	4.5	2.0	2.5	4.0	dB
Passband Return Loss	3.5	4.5	12	15		dB
Stopband Attenuation	0	2.25	60	65		dB
Stopband Attenuation	6	10	50	60		dB
Stopband Attenuation	10	15	30	40		dB
Group Delay				1		nS
Power Handling					30	dBm
Impedance				50		Ω
Temperature			-55	25	100	°C



\*Available on evaluation fixture by adding -EVK to Part Number. Outline drawing and additional mounting information and S-parameters available upon request.

## MMG-0019

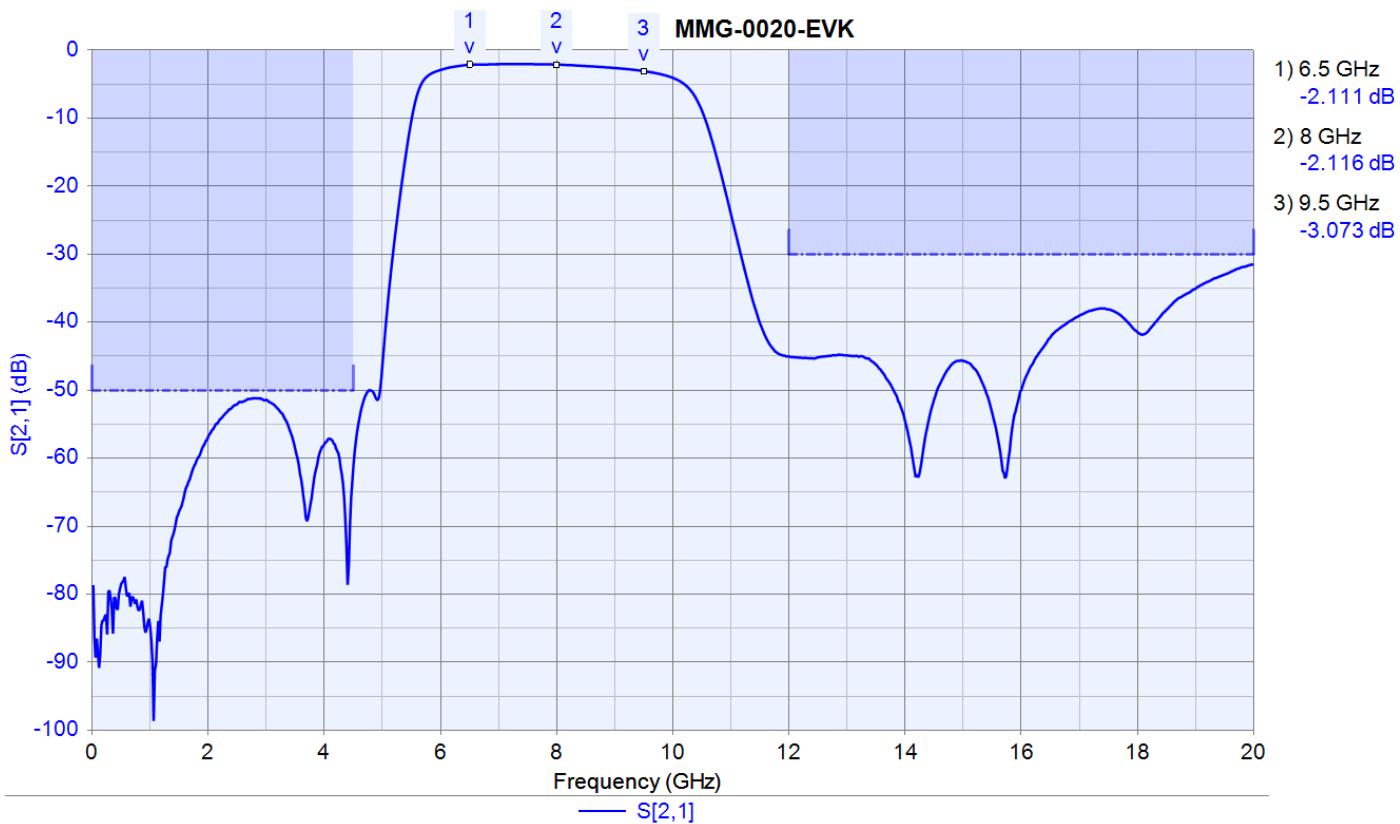
Parameter	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typical	Max	Unit
Passband Insertion Loss	3.75	4.75	2.0	2.5	4.0	dB
Passband Return Loss	3.75	4.75	12	15		dB
Stopband Attenuation	0	2.5	60			dB
Stopband Attenuation	6.5	10.5	50	55		dB
Stopband Attenuation	10.5	15.75	30	40		dB
Group Delay			0.8	1	2	nS
Power Handling					30	dBm
Impedance				50		Ω
Temperature			-55	25	100	°C



\*Available on evaluation fixture by adding -EVK to Part Number. Outline drawing and additional mounting information and S-parameters available upon request.

## MMG-0020

Parameter	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typical	Max	Unit
Passband Insertion Loss	6.5	9.5	1.5	2.0	3.5	dB
Passband Return Loss	6.5	9.5	12	15		dB
Stopband Attenuation	0	4.5	46	55		dB
Stopband Attenuation	12	20	30	35		dB
Group Delay			0.8	1	2	nS
Power Handling					30	dBm
Impedance				50		Ω
Temperature			-55	25	100	°C



\*Available on evaluation fixture by adding -EVK to Part Number. Outline drawing and additional mounting information and S-parameters available upon request.