

# ENABLING THE 5G GENERATION

## 28 GHz BANDPASS FILTERS

### Customize Your Needs

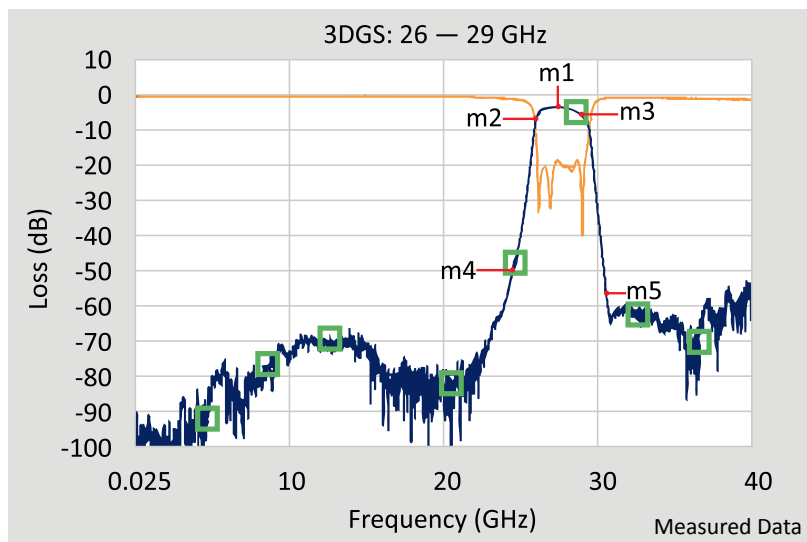
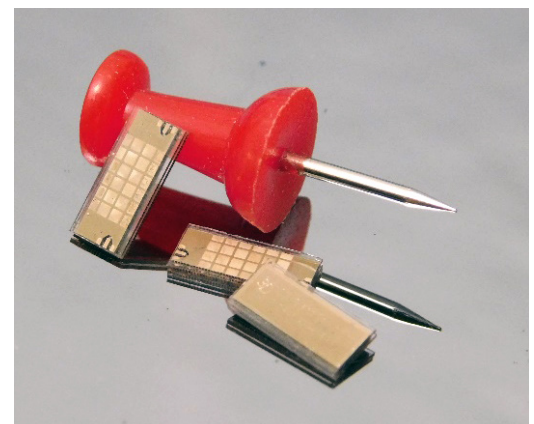
3DGS offers custom design and fabrication of mmWave filters to meet the most stringent performance needs. Let us build a filter that meets your exact requirements!

### mmWave Filter PDK

Design custom mmWave filters from schematic to full 3D FEM EM in a rapid and efficient workflow using AWR Microwave Office.

### 5G and Beyond

SPECIFICATION HIGHLIGHTS	KEY FEATURES
<ul style="list-style-type: none"> <li>• Frequency range 20 to 40+ GHz</li> <li>• SMT design</li> <li>• 3 to 7 poles</li> <li>• Low insertion loss</li> <li>• Size less than 8.0 x 4.0 mm</li> <li>• 50 Ω impedance</li> <li>• Bandwidths up to 40%</li> </ul>	<ul style="list-style-type: none"> <li>• Patented air cavity design</li> <li>• High-Q with low insertion loss</li> <li>• Unwanted RF parasitics are minimized</li> <li>• Highly scalable lithographic process</li> <li>• Fully shielded</li> <li>• Frequency stable over temperature</li> </ul>

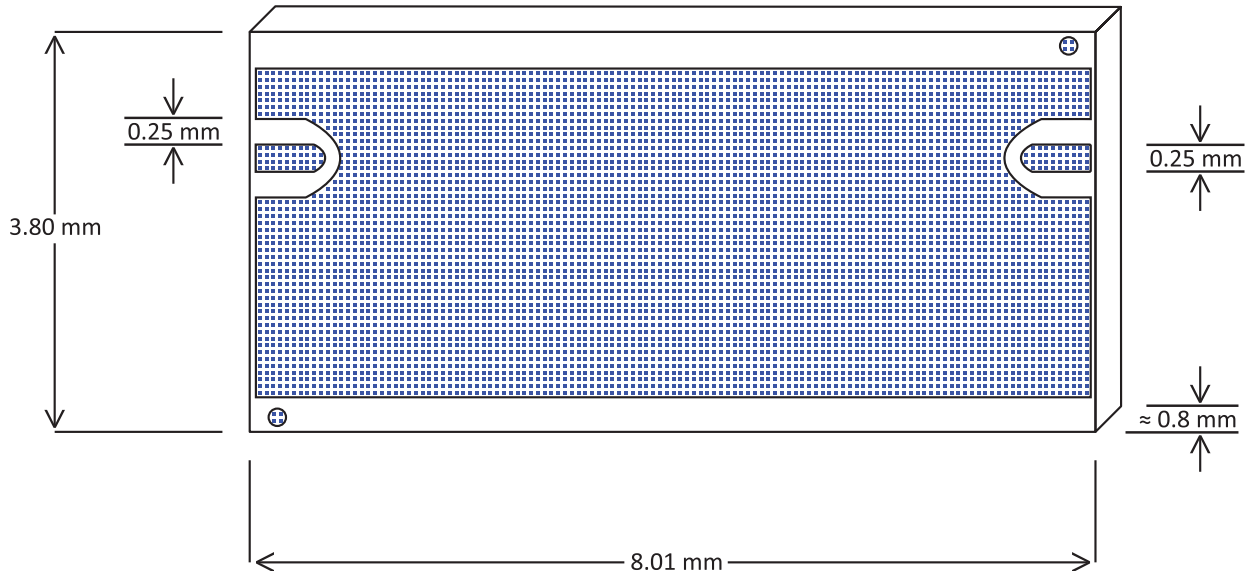


m1:	27.50 GHz	-3.07 dB
m2:	26.00 GHz	-5.98 dB
m3:	29.00 GHz	-4.83 dB
m4:	24.50 GHz	-49.10 dB
m5:	30.50 GHz	-55.82 dB
	Insertion Loss	FL3
	Return Loss	FL3

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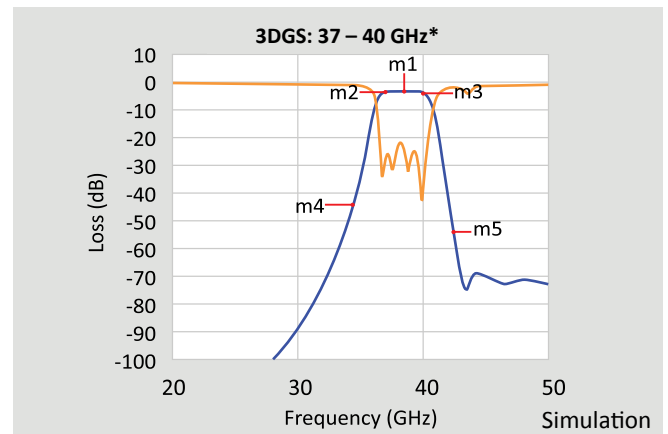
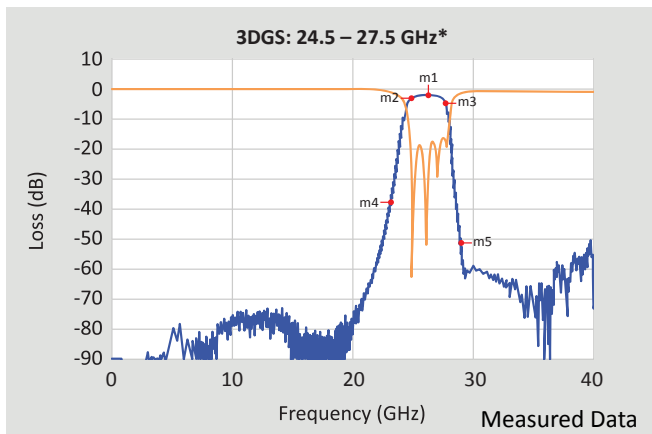
## 28 GHz BANDPASS FILTERS

### 28 GHz SMD Dimensions



### 26 GHz and 39 GHz

3DGS will also be releasing 26 GHz and 39 GHz bandpass filters. \*Performance shown below is representative.



m1:	m2:	m3:	m4:	m5:
26.00 GHz	24.50 GHz	27.50 GHz	23.00 GHz	29.00 GHz
-2.6 dB	-3.5 dB	-4.2 dB	-38.5 dB	-51.4 dB

m1:	m2:	m3:	m4:	m5:
38.50 GHz	37.00 GHz	40.00 GHz	34.50 GHz	42.50 GHz
-2.83 dB	-3.09 dB	-3.77 dB	-44.06 dB	-53.69 dB

— Insertion Loss 26 GHz    
 — Return Loss 26 GHz

— Insertion Loss 38 GHz    
 — Return Loss 38 GHz