

Benchmark Lark Technology offers customizable SIW bandpass filters ranging from 5 GHz to 40 GHz. This series uses a mix of high-performance soft thermoplastic substrates and rigid thermoset materials to offer a balance of desired electrical and mechanical performance. The filters are designed with temperature varying environments in mind. These SWaP-enabling filters are ideal for applications where size-reduction is critical, such as Ka/Ku band aerospace/satcom/defense and mmWave infrastructure.



### Features:

- Millimeter wave performance for narrowband applications in a miniature package
- Designed combining planar transmission lines and cavity technologies
- Easily interconnected with other printed circuit boards such as Microstrip, CPW, Stripline, etc
- Ideal for 5G next generation wireless networks
- Robust design with stable performance in varying temperature environments

### Specifications

- Type of connectors: SMT
- Frequency range: 5 to 40 GHz
- % Bandwidth: 2% to 10%
- Return loss: 10 dB (min)
- Operating temperature: -40 °C to 85 °C
- Insertion loss: Will depend on the number of sections and configuration

Above plot shows an example of our capabilities. This is a mmW-FH filter centered at 30.9 GHz, BW(-3 dB) 2824 MHz and return loss greater than 10 dB. Size (L x W x H): 0.360" x 0.120" x 0.070". IL at the center frequency is 1.8 dB.

Bottom plot shows filter performance over +25 °C to +90 °C temperature range.

