News Release

BENCHMARK LARK TECHNOLOGY PREVIEWS MMWAVE FILTERS AT 2022 IMS

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Company Will Host Expo Booth #11040 and Focus on How its Diverse Filter Designs Can Serve Applications from 10 Mhz to 40 Ghz and Above

TEMPE, Ariz., June 14, 2022 /**PRNewswire**/ -- **Benchmark Electronics, Inc.** (NYSE: BHE), will be providing visitors with the latest word on high-performance RF/microwave filters and components from Benchmark Lark Technology at the 2022 IEEE International Microwave Symposium (IMS2022) Exhibition. For over 30 years, Benchmark Lark Technology has served aerospace & defense, telecommunications, industrial, and space customers with custom RF/microwave filters and other high-frequency components. With growing demand for all kinds of RF filter responses well into the mmWave range, the company will discuss how its diverse filter designs, including cavity, discrete LC, ceramic resonator, SIW, and PCB technologies, can serve applications from 10 MHz to 40 GHz and above. The IMS2022 Exhibition is scheduled for June 21-23, 2022, in the Denver Convention Center. Benchmark will be at expo booth #11040.

Benchmark Lark Technology representatives will be available to discuss and advise visitors on effective custom filtering solutions, especially to meet requirements for reduced size, weight, power, and cost (SWaP-C) driving the miniaturization of many applications. Representatives will share experience in the design and production of waveguide, coaxial, and surface-mount-technology (SMT) filters, including at mmWave frequencies for applications such as 5G, automotive radar, and satellite communications (SATCOM).

Visitors can learn about Lark's mmW-FH Series bandpass filters, built into SMT packages less than 0.04 inches high. Optimal for mmWave communications infrastructure applications, they can be designed to occupy very little space on a PCB and are compatible with microstrip and stripline transmission lines, among other high-frequency PCB technologies. These filters can be designed and manufactured with custom center frequencies from 5 to 30 GHz, 3 to 5 sections, and passbands from 2% to 5%. For example, a custom mmW-FH Series bandpass filter for the 5G 28-

GHz band provides a 610-MHz passband centered at 27.95 GHz (2.2%) with less than 5-dB insertion loss across the passband. The 50-Ω substrate-integrated-waveguide (SIW) filter features more than 35-dB rejection in the upper and lower stopbands. It measures just 1.00 × 0.25 × 0.03 inches.

Lark's mmW-STL Series bandpass filters are ideal for aerospace, SATCOM, defense, and mmWave communications infrastructure applications. Leveraging Liquid Crystal Polymer, PTFE, or rigid thermoset materials, these stripline filters fit 5 to 11 sections into SMT housings measuring just 0.25 × 0.25 × 0.033 inches. The miniature 50-Ω filters can be customized at center frequencies from 5 to 40 GHz and passbands from 10% to 25% to meet the most difficult SWaP-C challenges. As an example, a 9-pole, 50-Ω bandpass filter with a 2.12-GHz passband centered at 8.7 GHz (24% bandwidth) delivers more than 35-dB spurious out-of-band rejection from a tiny SMT package.

The latest news from Benchmark Lark Technology includes details on customizable ceramic monoblock bandpass filters for major telecommunications frequency bands from 400 MHz to 6 GHz. They feature lower passband loss and higher quality factor (Q) than traditional lumped-element LC bandpass filters but in a fraction of the size. Well suited for mass production and cost-sensitive applications, the monoblock bandpass filters can be built with power-handling capabilities to 10 W, making them a good fit for 5G small cells and repeaters.

About Benchmark Electronics, Inc.
Benchmark provides comprehensive solutions across the entire product life cycle; leading through its innovative technology and engineering design services; leveraging its optimized global supply chain; and delivering world-class manufacturing services in the following industries: commercial aerospace, defense, advanced computing, next-generation telecommunications, medical, complex industrials, and semiconductor capital equipment. Benchmark's global operations include facilities in seven countries and its common shares trade on the New York Stock Exchange under the symbol BHE.

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