FOR IMMEDIATE RELEASE

Benchmark Lark Technology Highlights New Millimeter-Wave Filters at 2024 IMS

As 5G, Satcom, and Other Applications Move Higher in Frequency, Benchmark Lark Technology Provides Compact Customizable High-Pass and Low-Pass Filter Solutions up to 40 GHz

TEMPE, AZ, June 10, 2024 - Benchmark Electronics, Inc. (NYSE: BHE) will introduce new families of compact Benchmark Lark Technology filters for millimeter-wave frequency bands at the 2024 IEEE International Microwave Symposium (IMS2024) Exhibition.

These new filter families serve applications below 10 MHz to above 40 GHz, addressing critical requirements of satellite communications, 5G wireless infrastructure, and defense Ka/Ku-band radar applications. The custom filters are designed and fabricated using a variety of approaches, including printed circuit board (PCB), and substrate-integrated-waveguide (SIW) technologies, allowing system engineers to select optimal size, weight, power and cost (SWaP-C) and performance for their application. Many of these filters are small enough to fit compact surface mount technology (SMT) packages.

Among the latest developments, surface-mount XFH Series bandpass filters are available with 5% to 10% passbands at center frequencies from five to 40 GHz. For example, the model XFH28000-2000-4CC custom bandpass filter was developed for the 28-GHz 5G millimeter wave band. It is housed in an SMT package measuring just 0.360 × 0.120 × 0.070 in. and is compatible with many high-frequency circuit technologies. Designed as a four-pole filter, the SiW filter provides a 2000-MHz passband (7.1%) centered at 28 GHz, with a typical insertion loss of 1.5 dB and return loss of 12 dB across the passband. Out-of-band rejection of unwanted signals is high, typically 30 dB or more at the lower and upper stopband edges of 25 and 32 GHz, respectively.

At higher frequencies, stripline bandpass SMT filters in the STL series are even smaller, with package dimensions of 0.250 × 0.250 × 0.033 in. or less depending upon center frequency. These small sizes help meet the most demanding challenges for reduced SWaP-C, even for filters with five to 11 sections. They can be customized for passbands from 10% to 25% at center frequencies from five to 40 GHz. For example, the model STL37000-3000-9CC filter is a nine-pole bandpass filter with a 3000-MHz bandwidth centered at 37 GHz (8.1% passband). With typical passband insertion loss of 5.5 dB and return loss of nine dB, the filter provides more than 40-dB rejection at the lower and upper band edges of 32 and 42 GHz, respectively, all from a package measuring just 0.275 × 0.080 × 0.025 in.

Benchmark Lark Technology representatives will be on hand to provide examples of the company's latest developments in miniature, high-frequency filters at IMS. Appointments are available at https://www.bench.com/ims-2024.

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 communications, 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.

For More Information, Please Contact:
Jaime Leger
Leger Communications on behalf of Benchmark
Email: jaime@jlegercommunications.com
Mobile: 401-487-8566

###