June 20, 2018

Akoustis Introduces the Industry's First Mobile 5.2 GHz BAW RF Co-Existence Filter

- The Company's Third Commercial Product Offers Lower Insertion Loss with Significantly Reduced Footprint for 4G LTE and 5G Mobile Devices -

Charlotte, N.C., June 20, 2018 (GLOBE NEWSWIRE) -- Akoustis Technologies, Inc. (NASDAQ: AKTS) ("Akoustis" or the "Company"), a manufacturer of patented single-crystal bulk acoustic wave (BAW) high-band RF filters for mobile and other wireless applications, today introduced the AKF-1652, a new 5.2 GHz BAW RF filter aimed at the billion dollar BAW filter market for future 4G LTE and 5G mobile devices.

The AKF-1652 is the first 5 GHz BAW RF co-existence WiFi filter available for mobile devices. The filter offers lower insertion loss and a significantly smaller footprint than existing non-BAW co-existence filter technologies that operate at 5.2 GHz.

Companies that are interested in evaluating the AKF-1938 should contact Akoustis at sales@akoustis.com.

Dave Aichele, VP of Business Development at Akoustis, said, "We believe the AKF-1652 addresses an enormous potential market for BAW RF filter solutions for mobile device WiFi applications." Mr. Aichele continued, "Unlike tri-band CPE (customer premise equipment) WiFi routers, currently all mobile devices are limited to either single or dual-band WiFi as no 5 GHz co-existence filters exist. As more access points, set-top boxes and other WiFi CPE upgrade to tri-band technology, mobile OEM's are beginning to look for ways to incorporate the higher speeds available into mobile devices. The AKF-1652 offers the first BAW RF filter solution for 5 GHz co-existence in a mobile device today."

Advanced WiFi CPE architectures including 802.11ac 2X2, 4X4 and 8X8 Multi-user Multiple In/Multiple Out (MU-MIMO) are experiencing faster uptake, driving the demand for smaller components as the complexity within WiFi infrastructure devices is increasing exponentially, as experienced in 4G mobile over the past several years. This trend is expected to continue, especially as 802.11ax is finalized and implemented in next generation tri-band CPE.

The AKF-1652 is a high performance, ultra-small passband 5.2 GHz BAW RF filter designed for use in tri-band WiFi mobile applications. The filters are produced using Akoustis' new proprietary XB1 single-crystal BAW manufacturing process, which delivers high-performance RF filter solutions for frequencies in the sub 6 GHz range. The AKF-1652 provides low insertion loss covering U-NII-1 and U-NII-2A bands and meets the stringent rejection requirements enabling coexistence with U-NII-2C and U-NII-3 bands. The high-power rating satisfies the demanding requirements of the latest WiFi standards including 802.11ac. The

filter solution incorporates standard commercial module packaging and is compatible with high-volume, lead-free SMT soldering processes.

Filter Features:

- High frequency operation at 5.2 GHz
- Wide bandwidth covering both U-NII-1 and U-NII-2A
- Low insertion loss (~1.5dB) in both U-NII-1 and U-NII-2A passband
- High power rating with +30dBm maximum
- High rejection with >45dB enabling coexistence with adjacent U-NII-2C + U-NII-3 bands
- Single-ended Ant, Tx/Rx ports
- Ultra-small form factor packaged module at 2mm x 2.5mm x 0.9mm
- Operating temperature ranges from -40C to +85C

“We are excited to announce our first commercial product that targets the large and growing billion-dollar mobile RF filter market,” stated Jeff Shealy, CEO of Akoustis. “The AKF-1652 delivers low insertion loss required for mobile devices along with high-rejection with a significantly smaller footprint compared to existing non-BAW co-existence filter technologies that operate above 5 GHz. This further demonstrates the capability of our patented single crystal materials technology and unique MEMs resonator process to produce high performance BAW RF filters covering sub 6 GHz spectrum for 4G LTE and emerging 5G applications.”

This is the third commercial product announced by Akoustis sincefreezing its first generation single crystal BAW manufacturing process in early March. Later that month, Akoustis announced the industry’s first commercial 5.2 GHz BAW RF filter for tri-band WiFi router applications. In April, Akoustis announced its second commercial product, a 3.8 GHz BAW RF filter, a high frequency solution targeting radar applications that aligns with emerging 5G frequency spectrum.

The Company’s XB1 process supports a wide range of spectrum targeting sub 6 GHz bands, covering the entire unlicensed WiFi spectrum, 4G LTE and emerging 5G cellular and C-V2X applications. 5 GHz WiFi is one of the first target markets for Akoustis given the significant size and performance advantages compared to incumbent dielectric filters.

About Akoustis Technologies, Inc.

Akoustis® (http://www.akoustis.com) is a high-tech BAW RF filter solutions company that is pioneering next-generation materials science to address the market requirements for improved RF filters - targeting higher bandwidth, higher operating frequencies and higher output power compared to incumbent polycrystalline BAW technology deployed today. The Company utilizes its proprietary XBAW single-crystal BAW manufacturing process to produce bulk acoustic wave RF filters for mobile and other wireless markets, which facilitate signal acquisition and accelerate band performance between the antenna and digital back end. Superior performance is driven by the significant advances of high-purity, single crystal piezoelectric materials and the resonator-filter process technology which drives electro-mechanical coupling and translates to wide filter bandwidth.

The Company plans to service the fast growing multi-billion-dollar market of device OEMs,

network providers, and consumers to diminish front end phone heat, battery drain and signal loss -- all considered to be directly related to current RF polycrystalline filter technologies' limitations. The Company owns and operates a 120,000 sq. ft. ISO-9001 certified commercial wafer-manufacturing facility located in Canandaigua, NY, which includes a class 100 / class 1000 cleanroom facility - tooled for 150-mm diameter wafers - for the design, development, fabrication and packaging of RF filters, MEMS and other semiconductor devices. Akoustis Technologies, Inc. is headquartered in the Piedmont technology corridor near Charlotte, North Carolina.

Forward-Looking Statements

This press release includes “forward-looking statements” within the meaning of Section 27A of the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, that are intended to be covered by the “safe harbor” created by those sections. These forward-looking statements include, but are not limited to, statements about our estimates, expectations, beliefs, intentions, plans or strategies for the future (including our possible future results of operations, business strategies, competitive position, potential growth opportunities, potential market opportunities and the effects of competition), and the assumptions underlying such statements. Forward-looking statements include all statements that are not historical facts and typically are identified by use of terms such as "may," "will," "should," "could," "expect," "plan," "anticipate," "believe," "estimate," "predict," “intend,” “forecast,” “seek,” "potential," "continue" and similar words, although some forward-looking statements are expressed differently. Forward-looking statements are neither historical facts nor assurances of future performance. Instead, these forward-looking statements are based on management’s current beliefs, expectations and assumptions and are subject to risks and uncertainties. Factors that could cause actual results to differ materially from those currently anticipated include, without limitation, risks relating to the results of our research and development activities, including uncertainties relating to semiconductor process manufacturing; the development of our XBAW™ technology and products presently under development and the anticipated timing of such development; our ability to protect our intellectual property rights that are valuable to our business, including patent and other intellectual property rights; our ability to successfully market and sell products based on our technologies; the ability to achieve qualification of our products for commercial manufacturing in a timely manner and the size and growth of the potential markets for any products so qualified; the rate and degree of market acceptance of any of our products; and our ability to raise funding to support operations and the continued development and qualification of our products and the technologies underlying them. These and other risks and uncertainties are described in more detail in the Part I, Item 1A - Risk Factors of the Company’s most recent Annual Report on Form 10-K and in subsequently filed Quarterly Reports on Form 10-Q. In light of these risks, uncertainties and assumptions, the forward-looking statements regarding future events and circumstances discussed in this press release may not occur, and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements. You should not rely upon forward-looking statements as predictions of future events. The forward-looking statements included in this press release speak only as of the date hereof and, except as required by law, we undertake no obligation to update publicly or privately any forward-looking statements, whether written or oral, for any reason after the date of this press release to conform these statements to new information, actual results or to changes in our expectations.

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Source: Akoustis, Inc.