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Akoustis Announces BAW RF Filter Design Win and Commercial Production Order

- *First Customer for Company's 3.8 GHz Filter is a Military OEM -*
- *High frequency, sub-6 GHz solution aligns with emerging 5G frequency spectrum -*
- *Company expects product qualification and production shipments in calendar Q4 2018 -*

Charlotte, NC, July 16, 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 announced it has received its first production order for initial quantities of the [AKF-1938](#), a 3.8 GHz filter that is designed for general purpose transceiver, commercial radio, military radio and phased-array radar markets. The AKF-1938 is closely aligned with the emerging 5G mobile frequency spectrum and gives Akoustis its first BAW RF filter design win above 3 GHz.

The first customer of the AKF-1938 is a well-established military OEM specializing in non-mobile communication systems with annual revenue of more than \$1 billion. Akoustis received a pre-production order for the AKF-1938 from this customer last quarter and expects to complete shipment of pre-production packaged products later this quarter. The product qualification of the AKF-1938 has started and the Company expects to be fully qualified and begin shipping production filters in calendar Q4 2018.

The AKF-1938 is a compact 3.8 GHz BAW RF filter, which is manufactured using Akoustis' [new proprietary XB1 single-crystal BAW manufacturing process](#) and delivers high-performance RF filter solutions for frequencies up to 7 GHz. The AKF-1938 provides low insertion loss covering 100 MHz of bandwidth and meets the stringent rejection requirements for microwave radar applications. The filter solution incorporates standard commercial module packaging and is compatible with high-volume, lead-free SMT soldering processes.

The AKF-1938 filter features:

- High frequency operation at 3.8 GHz
- Wide bandwidth covering 100 MHz
- Low insertion loss in filter passband
- High rejection with >40 dB over wide spectrum up to 10 GHz
- Single-ended input/output ports
- Ultra-small form factor packaged module at 2mm x 2.5mm x 0.9mm
- High operating temperature range from -40 C to +105 C

Jeff Shealy, Founder & CEO of Akoustis, said, "This design win and production order represent key milestones as we transition into a product company shipping customer

qualified product. The AKF-1938 is scheduled to be one of the first products shipped from our recently qualified XB1 BAW RF filter process.” Mr. Shealy continued, “Operating at 3.8 GHz, this filter further demonstrates the capability of our patented single crystal BAW technology to reach frequencies currently lacking high performance BAW filter solutions.”

The Company’s XBAW single-crystal BAW manufacturing process supports a wide range of frequency spectrum up to 7 GHz, covering 2 GHz and 5 GHz WiFi, 4G LTE and emerging 5G cellular and C-V2X applications. [In March, the Company announced its first commercial filter product](#) using its proprietary XB1 process, creating the industry’s first commercial 5.2 GHz BAW filter designed for use in tri-band WiFi router applications.

Dave Aichele, VP of Business Development, stated, “The AKF-1938 achieves a significant reduction in size critical for multi-element phased array radar applications while delivering high performance selectivity up to 10 GHz.” Mr. Aichele continued, “Key performance features include low loss at 3.8 GHz, high temperature operation up to +105 C and high rejection across a broad spectrum.”

The AKF-1938 will support demanding temperature operation and high rejection performance requirements. The product offers low insertion loss in a small form factor enabling compact commercial, non-commercial radio and phased-array radar systems. Companies that are interested in evaluating the AKF-1938 should contact Akoustis at sales@akoustis.com.

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. Considering 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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