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Akoustis Presents Its High-Power, Wideband XBAW RF Filter Technology at the 2018 IEEE International Ultrasonics Symposium in Kobe, Japan

- *XBAW Single Crystal Filter Delivers up to 2.3x Higher Power Handling Versus Polycrystalline Filters -*
- *XBAW Filters Offer Significantly Reduced Size Relative to Incumbent Dielectric Resonator Filters -*
- *Disruptive Technology Targets Next Generation 5G Network Infrastructure -*

Charlotte, N.C., Oct. 23, 2018 (GLOBE NEWSWIRE) -- Akoustis Technologies, Inc. (NASDAQ: [AKTS](#)) (“Akoustis” or the “Company”), a manufacturer of patented bulk acoustic wave (BAW) high-band RF filters for mobile and other wireless applications, announced that Dr. Ramakrishna Vetury presented new power and reliability data on Akoustis’ proprietary XBAW technology at the 2018 IEEE International Ultrasonics Symposium (IUS 2018) earlier today. The conference is being held in Kobe, Japan this week from October 22-25.

As part of the Symposium, Dr. Vetury authored a [paper](#) including power and reliability data on the Company’s patented XBAW RF filter technology including a direct performance comparison between single crystal and polycrystalline piezoelectric materials fabricated using the Company’s XB1 process. In the published study, single crystal BAW filters exhibited up to 2.3x higher power handling performance compared to polycrystalline BAW filters. Titled, “High Power, Wideband Single Crystal XBAW Technology for sub-6 GHz Micro RF Filter Applications”, the paper presented metrics demonstrating resonator technology capable of highly reliable, high power, ultra-small form factor high performance RF filter solutions in the sub-6 GHz spectrum. The report was co-authored by Dr. Vetury, Dr. Michael Hodge and Akoustis CEO, Dr. Jeffrey Shealy.

“A unique combination of high thermal conductivity and excellent piezoelectric properties allows us to create a new class of high-power BAW RF filters in the sub-6 GHz spectrum” stated Dr. Jeff Shealy, Founder and CEO of Akoustis. Dr. Shealy continued, “Our XBAW filters demonstrate a unique combination of low loss, high power handling and high frequency performance and offer a 23x size reduction over incumbent RF dielectric resonator filters. We believe our new RF filters are well-positioned for multiple disparate markets, including the emerging 5G infrastructure market, where we have already disclosed two industry engagements.”

In July 2018, Akoustis announced that it [completed the qualification of its first generation XBAW wafer technology](#) and the underlying single crystal materials process at its Canandaigua, NY fabrication facility.

Akoustis now has two high-frequency XBAW RF filters in the Company's catalogue of commercial products: the [AKF-1252](#), the industry's first commercial, ultra-small passband BAW RF filter for use in 5.2 GHz WiFi applications; and the [AKF-1938](#), a 3.8 GHz high performance, ultra-small passband RF filter with low insertion loss covering 100 MHz of bandwidth, meeting the stringent rejection requirements for radar and RF transceiver applications. Both filters are closely aligned with the emerging 5G mobile frequency spectrum. Recently, the Company announced two RF filter development orders for [5G Infrastructure](#) and a [CBRS last mile application](#). Both programs have upcoming customer deliverables in Q1 CY2019.

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 and MEMS wafer manufacturing 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 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 and associated piezoelectric materials and the resonator-filter process technology which drives electro-mechanical coupling and translates to wide filter bandwidth.

Akoustis plans to service the fast growing multi-billion-dollar RF filter market using its integrated design and manufacturing (IDM) business model. The Company owns and operates a 120,000 sq. ft. ISO-9001:2015 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 document 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 manufacture, 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; our ability to raise funding to support operations and the continued development and qualification of our products and the technologies underlying them; and our ability to service our outstanding indebtedness. These and other risks and uncertainties are described in more detail in the Risk Factors and Management's Discussion and Analysis of Financial Condition and Results of Operations sections 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 document 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 document 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 document to conform these statements to new information, actual results or to changes in our expectations.

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