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Akoustis Announces Major Milestone by Freezing Its First Generation Single Crystal BAW Manufacturing Process

- Company Focused on Delivery of Product Samples, Initial Design Wins & Revenue Ramp -

Charlotte, NC, March 06, 2018 (GLOBE NEWSWIRE) -- Akoustis Technologies, Inc. (NASDAQ: [AKTS](#)) ("Akoustis" or the "Company"), a manufacturer of patented single-crystal BulkONE® bulk acoustic wave (BAW) high-band RF filters for mobile and other wireless applications, announced today that the Company has frozen its first generation, single crystal BAW wafer manufacturing process and has begun technology qualification to manufacture RF filters targeting licensed and unlicensed spectrum up to 7GHz for mobile phones, WiFi wireless routers, military radar and other devices.

The Company's first generation single crystal BAW wafer process, called XB1, establishes the industry's first single crystal BAW technology for the expanding RF filter requirements for 4G/LTE, emerging 5G and WiFi applications. Akoustis' XB1 process features:

- Patented single crystal piezoelectric materials
- Large diameter silicon-based wafer platform
- Novel MEMS wafer manufacturing
- High precision acoustic wave device engineering
- High frequency RF performance demonstrated above 5GHz
- High linearity and wide bandwidth performance
- Compatible with conventional and flip-chip packaging

Jeff Shealy, Founder and CEO of Akoustis Technologies said, "With today's announcement, we have cleared significant hurdles toward commercialization of our patented single crystal BAW technology." Shealy continued, "We are now positioned to concentrate on the delivery of high performance RF filters for current customer engagements to support WiFi, mobile and radar applications."

Akoustis is increasingly focused on developing its RF filter product portfolio based upon the XB1 process. Since XB1 supports a wide range of spectrum covering 4G/LTE, 5G, 5GHz WiFi and C-V2X applications, the manufacturing process can be used to develop RF filters for multiple end market segments. The Company is focused on two initial packaged product solutions including a 3.8GHz radar single-band RF filter (AKF-1938) and a 5.2GHz WiFi router RF filter (AKF-1252). The Company targets its first design win by the end of June 2018, with shipments to commence in the second half of the calendar year.

The process freeze is the foundational qualification used to manufacture Akoustis' BulkONE® RF filters. Each new RF filter product will be separately qualified to specifications

defined by end market requirements.

Mary Winters, VP of Akoustis NY Wafer Fab, said, "Since Akoustis acquired its fab in June 2017, we have transitioned the silicon MEMS operation to deliver a frozen manufacturing process for cutting-edge, single crystal BAW RF filters." Winters added, "Completing this transformation in just nine months was the result of an enormous effort by our entire R&D and operations teams."

According to a 2017 Mobile Experts report, the BAW RF filter market was approximately \$2.6 billion in 2017 and is expected to grow to \$4.8 billion by 2021.

Akoustis is pioneering next-generation materials science to address the market need for improved RF filters - targeting higher bandwidth, operating frequencies and output power compared to incumbent polycrystalline BAW technology deployed today. Superior performance is driven by the significant advances of high-purity, single-crystal piezoelectric materials and the resonator-filter process technology. The advanced material properties drive electro-mechanical coupling, which translates to wide filter bandwidth. High-band RF filters are achieved by leveraging the Company's superior sound velocity in single-crystal piezoelectric materials. These single-crystal piezoelectric materials offer high-thermal conductivity along the path of heat flow, enabling high-power handling capability of the RF filter. The Company has announced four customer engagements for its premium high band BAW RF filters in frequencies ranging from 1.5 GHz to 5.2 GHz and remains focused on time to revenue.

About Akoustis Technologies, Inc.

Akoustis® (<http://www.akoustis.com>) is a high-tech RF filter solutions company that designs and manufactures its unique, patented BulkONE® technology to produce single-crystal bulk acoustic wave (BAW) RF filters for mobile and other wireless markets, which facilitate signal acquisition and accelerate band performance between the antenna and digital back end.

Its BulkONE® technology will 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 semiconductor devices. Akoustis is headquartered in the Piedmont technology corridor near Charlotte North Carolina.

Forward-Looking Statements

Statements in this press release that are not descriptions of historical facts are forward-looking statements within the meaning of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These forward-looking statements include, but are not limited to, statements about our plans, objectives, representations and contentions and are not historical facts and typically are identified by use of terms such as "may," "will," "should," "could," "expect," "plan," "anticipate," "believe," "estimate," "predict," "potential," "continue"

and similar words, although some forward-looking statements are expressed differently. These forward-looking statements are based on management's current 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 early stage of our BulkONE® technology and products presently under 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, which are described in more detail in the Company's most recent Annual Report on Form 10-K and in other reports and statements filed with the Securities and Exchange Commission. 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 presentation speak only as of the date hereof, and we undertake no obligation to update publicly or privately any forward-looking statements for any reason after the date of this presentation to conform these statements to actual results or to changes in our expectations.

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