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Akoustis Announces Design Lock and Pre-Production of 5.6 GHz WiFi BAW Filter Product

- Company Now Offers Industry's First Tandem 5.2 GHz/5.6 GHz BAW WiFi Coexistence Filter Solution -

- Company Expects to Deliver Against Two Open Orders For 5.6 GHz Filters in Current Quarter -

- Company Expects Multiple New Orders for Tandem WiFi Filters in the Second Half of CY2019 -

Charlotte, N.C., July 30, 2019 (GLOBE NEWSWIRE) -- Akoustis Technologies, Inc. (NASDAQ: [AKTS](#)) ("Akoustis" or the "Company"), an integrated device manufacturer (IDM) of patented bulk acoustic wave (BAW) high-band RF filters for mobile and other wireless applications, announced today it has locked the design for its new 5.6 GHz WiFi BAW filter and is currently manufacturing pre-production units. [The AKF-1256](#) is a high performance, high frequency coexistence filter that operates at 5.6 GHz in the unlicensed spectrum for high-speed WiFi.

When paired with the Company's existing [5.2 GHz WiFi filter](#) product, Akoustis now offers the first commercially available tandem BAW coexistence micro-filter solution covering both the 5.2 GHz and 5.6 GHz frequency bands for tri-band WiFi routers and other devices. The 5.6 GHz filter shares the same XBAW wafer process, backend package and supply chain as the 5.2 GHz WiFi filter.

Potential customers have been sampling the 5.6 GHz WiFi filter over the past few months, providing Akoustis feedback regarding performance relative to desired specifications. The feedback has led to fine adjustments resulting in a locked design for 5.6 GHz filters.

Akoustis expects to ship pre-production 5.6 GHz filters to its two announced customers in the current quarter including a global RF partner that has ordered over 50k units as well as a multi-billion dollar leading WiFi SoC vendor that is evaluating the 5.2 GHz and 5.6 GHz tandem solution for possible inclusion in MU-MIMO tri-mode reference designs.

In addition to the two announced customers, Akoustis expects additional pre-production orders over the next several months as over fifteen potential customers, including OEMs, ODMs, SoC and RF module manufacturers, have tested the performance of the 5.2 GHz filter and have been waiting for availability of the tandem 5.2 GHz/5.6 GHz solution to displace the incumbent dielectric resonator filters, which are over 20x larger.

Jeff Shealy, Founder and CEO of Akoustis, stated, "With the completion of our 5.6 GHz WiFi XBAW filter, we have now entered pre-production in our first high-volume commercial

market with a tandem BAW coexistence micro-filter solution for tri-band WiFi routers.”

Mr. Shealy continued, “Our WiFi opportunity is significant both in terms of potential units and revenue, especially with the expected growth in MU-MIMO architectures. While we are pursuing multiple markets including defense, WiFi, mobile infrastructure and handsets, we believe we can achieve profitability from the WiFi router market alone given the growing need for high-performance micro-filters above 5 GHz.”

The 5.6 GHz XBAW WiFi filter features:

- Low insertion loss passband filter
- Wide bandwidth covering entire 345 MHz UNII 2C+3 passband
- High rejection enables co-existence with adjacent WiFi UNII bands
- Single ended Tx/Rx ports
- High power rating, maximum +30dBm
- Ultra small form factor 2.5mm x 2.0mm x 0.9mm
- Performance over -40C to +85C
- RoHS compliant, Pb-free package

The 5.6 GHz filter is designed and manufactured using the Company’s patented XBAW process and manufactured in the Company’s [Si-MEMS Wafer Fab](#) located in Canandaigua, NY.

Akoustis has introduced several new filters over the past twelve months including a [5.6 GHz WiFi filter](#), a [5.2 GHz WiFi filter](#), a [3.8 GHz filter](#) for defense phased-array radar applications, a 3.6 GHz filter for the [CBRS infrastructure](#) market and [Band 25 downlink and uplink filters](#) for LTE infrastructure. The Company is also developing several new filters for the sub 7 GHz bands targeting [5G mobile device](#), network infrastructure, WiFi CPE and defense markets.

About Akoustis Technologies, Inc.

Akoustis® (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 device manufacturer (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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