

September 19, 2019



# Akoustis Announces New 5G Network Infrastructure BAW Filter Solution and Ships First Samples to a New Global Tier-1 Customer

- **Band n79 Filter Targets Emerging 5G Small Cell Network for China Market -**
- **New XBAW™ Filter Operates in the Ultra-High Band (UHB), Sub-6 GHz Spectrum -**
- **Product Samples Now Available; Production Ramp expected in 1H CY2020 -**

**Charlotte, N.C., Sept. 19, 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 its first 5G small cell base station XBAW filter solution as well as the shipment to China of first samples to be delivered for evaluation by a new tier-1 customer - a multi-billion-dollar global leader in telecommunications and information technology.

The Company’s new XBAW filter is designed specifically for the challenging filtering needs for band n79 in the emerging 5G small cell network infrastructure deploying across China.

Akoustis’ new 5G network infrastructure filter leverages [its patented and proprietary XBAW technology](#) to deliver high frequency, high power and high performance operating in band n79 spectrum currently being deployed in 5G networks. With smaller size, low insertion loss and high out-of-band rejection, BAW filters are expected to compete favorably against existing network infrastructure filter technologies including mono-block dielectric resonator (DR), ceramic and cavity filters.

Jeff Shealy, Founder and CEO of Akoustis stated, “This is the first of several ultra-high band filters that we expect to supply to the 5G base station market over the next several quarters. Our ability to provide filter solutions that offer superior power handling and performance at high frequencies puts the rapidly expanding 5G network infrastructure market right in our sweet spot.”

Mr. Shealy continued, “Along with high frequency WiFi BAW filter solutions, wireless network infrastructure represents the second volume market where we see near term revenue opportunity for our XBAW™ RF filter technology. With this shipment, we have expanded our product and customer base in 5G infrastructure to include both small cell and massive MIMO base stations.”

Small cells are low power, short range wireless base stations that help provide service to both indoor and outdoor settings in densely populated urban areas. Small cells are expected to play an important role in the 5G network in highly populated areas by delivering high-speed mobile broadband, low latency and a better user experience.

[In a recent report](#), Zion Market Research estimated the global small cell 5G network market was valued at around \$381 million in 2018 and is expected to reach approximately \$3.5 billion by 2025, at a CAGR of approximately 37% between 2019 and 2025.

**The Band n79 5G XBAW network infrastructure filter (named A10149) features:**

- Low insertion loss passband filter
- High rejection enables co-existence with adjacent 5G and WiFi UNII bands
- High return loss
- 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

For data sheet and sales inquiries, please contact [sales@akoustis.com](mailto:sales@akoustis.com).

The new 5G network infrastructure filter solution is designed and manufactured using the Company's patented and proprietary 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 the industry's first tandem [5.2 GHz](#) and [5.6 GHz WiFi filters](#), 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](#), 5G network infrastructure, WiFi CPE and defense markets.

**About Akoustis Technologies, Inc.**

Akoustis® ([www.akoustis.com](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 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<sup>TM</sup> 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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Source: Akoustis, Inc.