

October 9, 2018



## **Resonant Inc. to Introduce New 5G RF Filter Breakthrough at the 2018 IEEE International Ultrasonics Symposium in Kobe, Japan, on October 24th**

GOLETA, Calif., Oct. 09, 2018 (GLOBE NEWSWIRE) -- Resonant Inc. (NASDAQ: RESN), a leader in transforming the way radio frequency, or RF, front-ends are being designed and delivered for wireless devices, today announced its breakthrough 5G filter technology – XBAR – will be introduced for the first time at the 2018 IEEE International Ultrasonics Symposium (IUS), to be held October 22-25, 2018, in Kobe, Japan.

The new breakthrough is a fundamentally novel resonator, the building block of an RF filter. The technology is important because it is designed to offer a cost-effective filter operating at frequencies of 3GHz and higher, making it the first filter technology designed from the beginning for 5G.

“The high bandwidth 5G data services will operate at frequencies of 3.5GHz – 6GHz and higher, but today’s best filter technologies have limitations operating at these frequencies,” said George B. Holmes, CEO of Resonant. “The early results from our XBAR initiative are very promising and we are working hard to provide a cost-effective, high-performance option for 5G services.”

Using its ISN technology, Resonant has developed this new structure, which in simulations outperforms best-in-class FBAR resonators. The company filed patent applications on the technology earlier this year.

More details of the technology will be made available at IUS and in a press release that will be issued on October 23, 2018.

In addition, Dr. Victor Plessky, Resonant Director of Engineering at GVR, a wholly owned subsidiary of Resonant, and Dr. Julius Koskela, an acoustics tools consultant, have been invited to present at the IUS a paper titled “Hierarchical Cascading in FEM Simulations of SAW Devices,” which describes some of the fundamental technology used in ISN. The presentation will take place on October 24, 2018, at 11:00 a.m. Japan Standard Time.

### **About Resonant Inc.**

Resonant (NASDAQ: RESN) is transforming the market for RF front-ends (RFFE) by disrupting the RFFE supply chain through the delivery of solutions that leverage our Infinite Synthesized Network (ISN) software tools platform, capitalize on the breadth of our IP portfolio, and are delivered through our services offerings. In a market that is critically constrained by limited designers, tools and capacity, Resonant addresses these critical problems by providing customers with ever increasing design efficiency, reduced time to

market and lower unit costs. Customers leverage Resonant's disruptive capabilities to design cutting edge filters and modules, while capitalizing on the added stability of a diverse supply chain through Resonant's fabless ecosystem-the first of its kind. Working with Resonant, customers enhance the connectivity of current mobile devices, while preparing for the demands of emerging 5G applications.

To learn more about Resonant, view the series of videos published on its website that explain Resonant's technologies and market positioning:

- [Infinite Synthesized Networks, ISN Explained](#)
- [What is an RF Filter?](#)
- [RF Filter Innovation](#)
- [Transforming the Mobile Filter Supply Chain](#)

For more information, please visit [www.resonant.com](http://www.resonant.com).

### **About Resonant's ISN® Technology**

Resonant can create designs for difficult bands, modules and other complex RF Front End requirements that we believe have the potential to be manufactured for half the cost and developed in half the time of traditional approaches. ISN is a suite of proprietary mathematical methods, software design tools and network synthesis techniques that enable us to explore a much larger set of possible design solutions that regularly incorporate our proprietary technology. We then quickly deliver design simulations to our customers, which they manufacture or have manufactured by one of our foundry partners. These improved solutions still use Surface Acoustic Wave (SAW) or Temperature Compensated Surface Acoustic Wave (TC-SAW) manufacturing methods and perform as well as those using higher cost manufacturing methods such as Bulk Acoustic Wave (BAW). Resonant's method delivers excellent predictability, enabling achievement of the desired product performance in roughly half as many turns through the fab. In addition, because Resonant's models are fundamental, integration with its foundry and fab customers is seamless because its models speak the "fab language" of basic material properties and dimensions.

### **Safe Harbor / Forward-Looking Statements**

This press release contains forward-looking statements, which include the following subjects, among others: the capabilities of our filter designs and software tools, including the use of XBAR for 5G service. Forward-looking statements are made as of the date of this document and are inherently subject to risks and uncertainties which could cause actual results to differ materially from those in the forward-looking statements, including, without limitation, the following: our limited operating history; our ability to complete designs that meet customer specifications; the ability of our customers (or their manufacturers) to fabricate our designs in commercial quantities; our customers' ability to sell products incorporating our designs to their OEM customers; changes in our expenditures and other uses of cash; the ability of our designs to significantly lower costs compared to other designs and solutions; the risk that the intense competition and rapid technological change in our industry renders our designs less useful or obsolete; our ability to find, recruit and retain the highly skilled personnel required for our design process in sufficient numbers to support our growth; our ability to manage growth; and general market, economic and

business conditions. Additional factors that could cause actual results to differ materially from those anticipated by our forward-looking statements are under the captions “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in our most recent Annual Report (Form 10-K) or Quarterly Report (Form 10-Q) filed with the Securities and Exchange Commission. Forward-looking statements are made as of the date of this release, and we expressly disclaim any obligation or undertaking to update forward-looking statements.

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Source: Resonant Inc.