

SAW Duplexers Offered in Semiconductor-Style Plastic Packages

NDK has developed new packaging technology for these SAW duplexers, with the same materials used in plastic semiconductor packages

Crystal manufacturer NDK (Nihon Dempa Kogyo Co., Ltd.) announces the availability of a series of SAW duplexers, which are key components in US-CDMA and UMTS

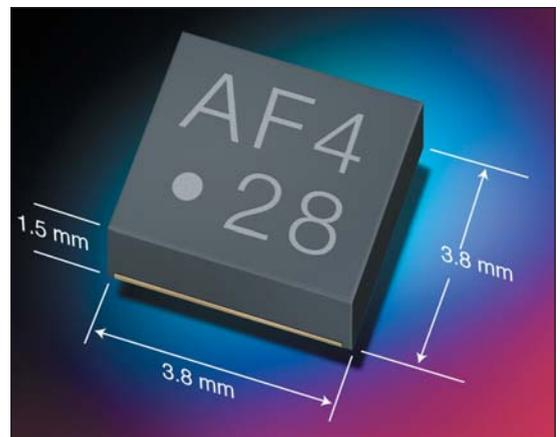
phones. They are used to separate the data that is simultaneously sent and received by the phone into two different frequencies. Model WX807C is for US-CDMA applications with a nominal frequency of 881.5 MHz in the RX-band (receive) and 836.5 MHz in the TX-band (transmit). Model WX910A is for MTS applications with a nominal frequency of 2140 MHz in the RX-band (receive) and 1950 MHz in the TX-band (transmit).

The duplexers deliver a low insertion loss of 2.0 dB maximum in the TX-band and 2.8 dB maximum in the RX-band. They also exhibit high attenuation: 43 dB maximum in the TX-band and 55 dB maximum in the RX-band.

New Plastic Package

NDK's NRS division has developed a new plastic package utilizing the same material found in plastic packaged semiconductors. This packaging technology offers many advantages over the conventional ceramic packages. These duplexers are 40 to 50% lighter than ceramic, are easier to handle and assemble, and the packaging material is less expensive.

These SMD devices are in a miniature 3.8 × 3.8 mm package and are only 1.5 mm high. They operate over a temperature range of -25 to +85°C and their input/output impedance is nominally 50 ohms. Both of these SAW duplexers are lead-free, RoHS compliant, and



designed to withstand the requirements of re-flow soldering using lead-free solder. NDK is also TSO 16949 certified.

“The NDK SAW duplexers allow for very high data rate operation while saving size and weight, which is critical for the multi-band, multi-mode, high function handsets of today,” said Mike Walczak, President of NDK America, Inc.

Delivery for the WX807C (US-CDMA) and WX910A (UMTS) series are 12 weeks.

NDK is the world's largest frequency device manufacturer in both volume and sales. They offer a broad range of frequency control products that can be found in communication and automotive applications around the world. Their manufacturing process is vertically integrated from the growing of synthetic quartz to end product.

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