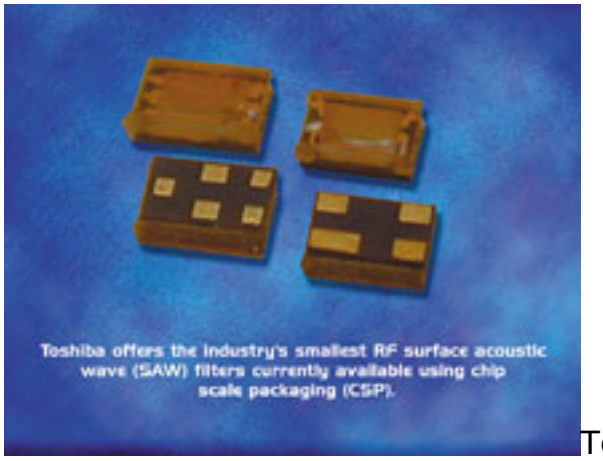
RF SAW Filters



Toshiba America Electronic Components (TAEC) introduced a small RF surface acoustic wave (SAW) filters. By employing chip scale packaging (CSP), Toshiba Corp. achieved a 40 percent size reduction and 60 percent weight reduction as compared to conventional RF SAW filters. In addition, the devices offer the same electrical performance as SAW Filters offered in larger packaging, giving designers a well-rounded solution for smaller form factor mobile devices.

Targeted for the U.S. and European mobile communication markets, the SRF942NLC61 family supports the Extended Global System for Mobile Communication (EGSM) 900 MHz frequency range while the SRF1842NFC61 family supports the Digital Cellular System (DCS) 1.8 GHz range. The new devices also offer designers a choice of interface options including 4 pins (part numbers SRF942NLC61 and SRF1842NFC61) for single-ended output types as well as 5 pins (part numbers SRF942NLC61A and SRF1842NFC61A) or 6 pins (part numbers SRF942NLC61B and SRF1842NFC61B) for balanced output types.

Toshiba created the new CSP SAW filters utilizing the same &quotFlip Chip Bonding&quot technology the company currently uses for its RF filters measuring 2.5 mm &#215 2.0 mm. Toshiba realized a smaller package size of 2.0 mm &#215 1.5 mm for the CSP SAW filter by applying advanced approaches to the package base and sealing technology. In lieu of the ceramic cap used in RF filters, a new thin package base was developed in order to achieve a low package height of 0.6mm maximum as compared to 1.0 mm. To maintain strong sealing reliability and improve production efficiency, Toshiba incorporated a specific new adhesive material. The new 2.0 mm &#215 1.5 mm &#215 0.6 mm package weighs 7 mg.

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