

# Abstracts

## Miniature SAW Antenna Duplexer for 800-MHz Portable Telephone Used in Cellular Radio Systems

*M. Hikita, Y. Ishida, T. Tabuchi and K. Kurosawa. "Miniature SAW Antenna Duplexer for 800-MHz Portable Telephone Used in Cellular Radio Systems." 1988 Transactions on Microwave Theory and Techniques 36.6 (Jun. 1988 [T-MTT]): 1047-1056.*

A new low-loss, high-power SAW filter has been developed for an antenna duplexer used in an 800-MHz portable telephone transceiver. The new ladder-type configuration uses SAW resonators and capacitors between electrode fingers and the earth. It is fabricated on a 2-mm-square LiTaO<sub>3</sub>/sub 3/ chip. This configuration provides insertion loss as low as 1.0~1.2 dB and output power up to 2 W at 800 MHz. Experimental results of a miniature antenna duplexer module using this filter as a transmitter filter and the previously published high-performance SAW filters as receiver filters are also presented. This module also includes a receiver low-noise amplifier, yet its size is under 8 ml.

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