Abstracts

A 900 MHz SAW Microstrip Antenna-Duplexer for Mobile Radio

K. Anemogiannis, C. Beck, A. Roth, P. Russer and R. Weigel. "A 900 MHz SAW Microstrip Antenna-Duplexer for Mobile Radio." 1990 MTT-S International Microwave Symposium Digest 90.2 (1990 Vol. II [MWSYM]): 729-732.

A novel SAW microstrip antenna-duplexer at 900 MHz which has been designed for the use in European mobile radio systems is presented. The duplexer consists of a transmitter SAW filter, two receiver SAW filters, a low noise receiver amplifier, and a duplexing microstrip circuit. A dual-track filter design using interdigital transducers for track coupling provides low insertion loss (5 dB), small passband ripple (± 0.5 dB), high stopband rejection (50 dB), and small chip-size (TO-39 package). The filters were fabricated on 36/sup 0/ rotated YX-LiTaO/sub 3/ substrates with a photolithographic technique. Due to the new design of the microstrip duplexer, the selectivity of the front-end is enhanced by 15 dB.

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