Abstracts

A film bulk acoustic resonator (FBAR) duplexer for USPCS handset applications

P. Bradley, R. Ruby, J.D. Larson, III, Y. Oshmyansky and D. Figueredo. "A film bulk acoustic resonator (FBAR) duplexer for USPCS handset applications." 2001 MTT-S International Microwave Symposium Digest 01.1 (2001 Vol. I [MWSYM]): 367-370 vol.1.

We will describe the design and measured performance of a duplexer based on film bulk acoustic resonators (FBARs) for the 1900 MHz PCS cellular phone market. Typical specifications for the duplexer require the Tx filter to attenuate frequencies in the Rx band by >40 dB while maintaining a worst-case insertion loss of 3.5 dB over the Tx band. VSWR must be better than 2.2 in the pass-band (8.5 dB return loss). The Rx filter must attenuate the Tx frequencies by >50 dB while maintaining a worst-case insertion loss of 4.2 dB in the Rx band. Again, VSWR must be better than 2.2.

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