Abstracts

A flexible multiband frontend for software radios using high IF and active interference cancellation

W. Schacherbauer, A. Springer, T. Ostertag, C.C.W. Ruppel and R. Weigel. "A flexible multiband frontend for software radios using high IF and active interference cancellation." 2001 MTT-S International Microwave Symposium Digest 01.2 (2001 Vol. II [MWSYM]): 1085-1088 vol.2.

A flexible analog frontend for multiband mobile communications equipment is presented. The circumvention of tight RF band filtering as applied in current single-band designs is fundamental to attain this goal. A successful application of wideband RF filtering, covering all frequency bands of interest, combined with a high intermediate frequency stage and active interferer cancellation is demonstrated. The high intermediate frequency following the RF stage allows for respectively image and sideband rejection. Direct feedthrough of the TX signal into the RX path is suppressed by active cancellation. A demonstrator capable of operating within an RF range from 800 to 2200 MHz with variable channel bandwidths up to 5 MHz has been realized and measurement results are presented and discussed.

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