Abstracts

SAW FEMs for GSM-based multi-band cellular phones with direct-conversion demodulation

M. Hikita, N. Matsuura, K. Yokoyama, N. Shibagaki and K. Sakiyama. "SAW FEMs for GSM-based multi-band cellular phones with direct-conversion demodulation." 2002 MTT-S International Microwave Symposium Digest 02.3 (2002 Vol. III [MWSYM]): 1483-1486 vol.3.

Assuming DC demodulation, the required characteristics and new configurations for SAW front-end modules (FEMs) were investigated. Parallel connections between SAW filters and the pin diode reduce the number of circuit elements drastically. The developed module for EGSM/DCS dual-band achieved Tx insertion losses as small as 1.0 dB and 1.2 dB, and Rx insertion losses of 3.0 dB and 3.3 dB for EGSM and DCS, respectively. 30-40 dB attenuation particularly required for DC demodulation up to several GHz was achieved. Multi-band FEMs such as triple-band FEMs and so on were also investigated.

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