

# Abstracts

## Up- and down-converter chip set for LMDS using three-dimensional masterslice MMIC technology

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*I. Toyoda, F. Sugihara, Y. Maki and Y. Imai. "Up- and down-converter chip set for LMDS using three-dimensional masterslice MMIC technology." 1999 Radio Frequency Integrated Circuits (RFIC) Symposium 99. (1999 [RFIC]): 145-148.*

Three-dimensional masterslice MMIC technology enables quick development of MMICs. This paper discusses miniature mixers and amplifiers for LMDS up- and down-converters. An even-harmonic mixer, a resistive mixer, a balanced-resistive mixer, and amplifiers were developed using newly designed master arrays. These circuits cover the LMDS band and can be easily integrated into a single chip to build a highly integrated multifunctional MMIC in a very short turn-around-time.

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