Abstracts

Direct conversion receiver for digital beamforming at 8.45 GHz

K. Mori, H. Arai, Y. Qian and T. Itoh. "Direct conversion receiver for digital beamforming at 8.45 GHz." 2001 MTT-S International Microwave Symposium Digest 01.2 (2001 Vol. II [MWSYM]): 1375-1378 vol.2.

Direct conversion receiver for digital beamforming (DBF) at 8.45 GHz for next generation wireless telecommunication is presented. In this proposed system, the quadrature hybrid and tuning circuit are partially constructed by digital techniques for the simplification of hardware. We demonstrate the direct conversion FET second harmonic mixers without DC bias at RF part. We also examine this proposed receiver's ability to function as a digital beam former. In this result, the digital beam forming can be realize that side lobe level is below -10 dB and the half power beam width is about 60/spl deg/, in case of scanning range is limited /spl plusmn/20/spl deg/ by using this proposed receiver.

❑ Return to main document.