# Abstracts

## A bipolar upconversion modulation loop transmitter for dual-band mobile communications (1998 [RFIC])

*Shen Feng, B. Kolb, H. Herrmann, W. Veit, V. Thomas, S. Herzinger, F. Volpe, G. Lipperer and J. Fenk. "A bipolar upconversion modulation loop transmitter for dual-band mobile communications (1998 [RFIC])." 1998 Radio Frequency Integrated Circuits (RFIC) Symposium 98. (1998 [RFIC]): 253-256.*

This paper presents design considerations and measurement results of an upconversion modulation loop transmitter IC (PMB 2255) implemented in Siemens 26 GHz Si bipolar technology B6HF. The device consists of a vector modulator, a downconversion mixer, a modulation phase-locked loop (PLL) and a three-wire programming bus. Besides power-down and standby modes, added values of switchable filter cutoff frequency and precharge function are also realized for dual- and multi-band digital mobile communication systems such as GSM900, GSM1800 and GSM1900. Based on measurements the device provides an excellent performance in designed intermediate frequency range from 300 to 550 MHz with supply voltage from 2.7 to 4.5 V, ambient temperature from -30 to 85/spl deg/C, and local and RF frequencies up to 2.0 GHz.

❑ Return to main document.