Abstracts

Compact integrated coplanar T/R-modules for automotive applications (1997 Vol. I [MWSYM])

L. Verweyen, A. Bangert, H. Massler, T. Fink, M. Neumann, R. Osorio, T. Krems, T. Jakobus, W.H. Haydl and M. Schlechtweg. "Compact integrated coplanar T/R-modules for automotive applications (1997 Vol. I [MWSYM])." 1997 MTT-S International Microwave Symposium Digest 1. (1997 Vol. I [MWSYM]): 243-246.

Integrated transmit and receive MMICs for automotive applications have been realized in coplanar waveguide technology, using a 0.15 /spl mu/m PHEMT process. The transmitter chip delivers an output power of 10 dBm at the antenna and the LO-ports. The receiver has an overall conversion gain of 10 dB for an LO-power of -10 dBm. Both chips only require an area of 3/spl times/2 mm/sup 2/. For an improved higher power version of the transmitter, a new nonlinear HEMT-model has been used for the design of a power amplifier, resulting in excellent agreement between predicted and measured output performance at 76 GHz.

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