Abstracts

Fully integrated automotive radar sensor with versatile resolution (2001 Vol. II [MWSYM])

C. Metz, J. Grubert, J. Heyen, A.F. Jacob, S. Janot, E. Lissel, G. Oberschmidt and L.C. Stange. "Fully integrated automotive radar sensor with versatile resolution (2001 Vol. II [MWSYM])." 2001 MTT-S International Microwave Symposium Digest 01.2 (2001 Vol. II [MWSYM]): 1115-1118 vol.2.

A planar radar sensor for automotive application is presented. The design comprises a fully integrated transceiver multi-chip module (MCM) and an electronically steerable microstrip patch array. The antenna feed network is based on a modified Rotman-lens. An extended angular coverage together with an adapted resolution allows for the integration of automatic cruise control (ACC), precrash sensing and cut-in detection within a single 77 GHz frontend. For ease of manufacturing the interconnects between antenna and MCM rely on a mixed wire bond and flip-chip approach. The concept is validated by laboratory radar measurements.

❑ Return to main document.