

High gain PHEMT frequency doubler for 76 GHz automotive radar

A. Werthof, H. Tischer and T. Grave. "High gain PHEMT frequency doubler for 76 GHz automotive radar." 2001 MTT-S International Microwave Symposium Digest 01.1 (2001 Vol. 1 [MWSYM]): 107-109 vol. 1.

A one-stage 38.25/76.5 GHz frequency doubler has been developed with a maximum conversion gain of 1 dB. The doubler achieves a saturated output power of 9 dBm for 12 dBm input power. Two complex transmit MMICs consisting of a 38 GHz amplifier, the frequency doubler and 76 GHz amplifiers with increased output power of 14 dBm and 10 dB conversion gain have been developed for automotive applications.

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