Abstracts

A 1.6 W power amplifier module at 24 GHz using new waveguide-based power combining structures

Jinho Jeong, Youngwoo Kwon, Sunyoung Lee, Changyul Cheon and E.A. Sovero. "A 1.6 W power amplifier module at 24 GHz using new waveguide-based power combining structures." 2000 MTT-S International Microwave Symposium Digest 00.2 (2000 Vol. II [MWSYM]): 817-820.

A 1.6 W power amplifier module was developed at 24 GHz using a waveguide-based power combiner. The combiner is based on a double antipodal finline-to-microstrip transition structure which also serves as a two-way power combiner. Back-to-back connected combiner showed insertion losses less than 0.6 dB and return losses better than 17 dB over most of the Ka-band. The power combiner was employed to combine the output powers of two 1 W MMIC PAs. The power module showed 32.2 dBm output power including the loss of transition and a combining efficiency of 83%.

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