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Title:A 175 GHz HBV frequency quintupler with 60 mW output power
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Abstract:In this letter, we present a fixed tuned 175 GHz frequency quintupler with 60 mW output power. The peak efficiency is 6.3% and the 3 dB bandwidth is 8 GHz. The multiplier is based on a single Heterostructure Barrier Varactor (HBV) diode that is flip-chip soldered into a microtsrip matching circuit. All the matching is done "on-chip" and there is no need for dc bias. The multiplier block is very compact (25 × 9 × 8 mm³). © 2006 IEEE.
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