Abstracts

A MMIC-based 75-110 GHz signal source

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This paper describes the design, construction, and testing of a compact W-Band signal source module. The MMIC-based module is an active /spl times/6 frequency multiplier, requiring a 12.5 to 18.5 GHz, 2 mW input signal, which can be provided by any microwave synthesizer or other readily available oscillators. The design Includes directional couplers with integrated millimeter-wave detectors on the output for power and reflection monitoring. Output power Is voltage-controllable over a 10 dB dynamic range. Test results show 10 dB conversion gain at the maximum output power of about 20 mW across the band.

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