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摘要: We present theoretical analysis and experimental results for an optimized Traveling Wave Uni-Traveling Carrier Photodiode for continuous wave millimeter-wave and Terahertz generation. The devices employed a mode-converting waveguide for efficient coupling from a lensed fiber. A DC responsivity of 0.53 A/W at a wavelength of 1.55 mu m and 3-dB electrical bandwidth of 108 GHz were obtained from temperature-controlled coplanar waveguide-integrated devices together with record levels of power from a photomixer in the millimeter-wave range with 1 mW at 200 GHz. High levels of Terahertz output power from broadband, heat sink-mounted antenna-integrated devices were measured with 5 mu W at 1.02 THz.
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