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Title:A 1.485-Gbit/s video signal transmission system at carrier frequencies of 240 GHz and 300 GHz
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Abstract:A 1.485-Gbit/s video signal transmission system at carrier frequencies of 240 GHz and 300 GHz was implemented and demonstrated. The radio frequency front-ends are composed of Schottky barrier diode subharmonic mixers (SHMs), frequency triplers, and diagonal horn antennas for the transmitter and receiver. Amplitude shift keying with an intermediate frequency of 5.94 GHz was utilized as the modulation scheme. A 1.485-Gbit/s video signal with a high-definition serial digital interface format was successfully transmitted over a wireless link distance of 4.2 m and displayed on an HDTV with a transmitted average output power of 20 uW at a 300-GHz system.
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