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Abstract:We present the results of our studies of the semiconducting superlattice (SSL) frequency multiplier and its application as part of the solid state local oscillator (LO) in the terahertz heterodyne receiver based on a NbN hot-electron bolometer (HEB) mixer. We show that the SSL output power level increases as the ambient temperature is lowered to 4.2 K, the standard HEB operation temperature.
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