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Abstract:We report on the broadband terahertz response of InGaAs/GaAs high electron mobility transistors operating at 1.63 THz and room temperature deep in the saturation regime. We demonstrate that responses show linear increase with drain-to-source voltage (or drain-bias current) and might reach very high values up to 170 V/W. We also develop a phenomenological theory valid both in the Ohmic and in the saturation regimes.
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