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标题: Measurement of the intrinsic linewidth of terahertz quantum cascade lasers using a near-infrared frequency comb
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摘要: We report the measurement of the frequency noise power spectral density of a quantum cascade laser emitting at 2.5THz. The technique is based on heterodyning the laser emission frequency with a harmonic of the repetition rate of a near-infrared laser comb. This generates a beatnote in the radio frequency range that is demodulated using a tracking oscillator allowing measurement of the frequency noise. We find that the latter is strongly affected by the level of optical feedback, and obtain an intrinsic linewidth of similar to 230Hz, for an output power of 2mW. (C) 2012 Optical Society of America
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