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标题: Coaxial waveguide mode reconstruction and analysis with THz digital holography
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摘要: Terahertz (THz) digital holography is employed to investigate the properties of waveguides. By using a THz digital holographic imaging system, the propagation modes of a metallic coaxial waveguide are measured and the mode patterns are restored with the inverse Fresnel diffraction algorithm. The experimental results show that the THz propagation mode inside the waveguide is a combination of four modes TE11, TE12, TM11, and TM12, which are in good agreement with the simulation results. In this work, THz digital holography presents its strong potential as a platform for waveguide mode charactering. The experimental findings provide a valuable reference for the design of THz waveguides. (C)2012 Optical Society of America
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