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标题: Dual-band bandpass terahertz wave filter based on microstrip resonant structure
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摘要: The terahertz (THz) band, which refers to the spectral region between 0.1 and 10THz, covers the fingerprints of many chemical and biological materials. Within the past few years, there are increasing demands for experiments in terahertz frequencies, in different areas such as biotechnology, nanotechnology, space science, security, chemical and biological sensing, terahertz wave communications, and medical diagnostics. For potential applications, the functional devices, such as beam polarizers, switchs and filters, are crucial components for a terahertz system. Terahertz wave filter based on two kinds of microstrip resonant structures, has been characterized by terahertz time-domain spectroscopy in the region from 0.1 to 3THz. The experimental results for the frequency dependence of the transmittance of the terahertz wave filter show that the terahertz wave transmittance peak is of 79.5% at 0.5THz and 82.5% at 0.81THz.
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