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Title:Terahertz encoding approach for secured chipless radio frequency identification
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Abstract:In this article, we present a new family of chipless tags, which permit encoding of digital data in the terahertz domain. These devices consist of stacked dielectric media whose thicknesses are of the same order as terahertz wavelengths. Since the information is encoded in the volume of these multilayer terahertz tags, they can easily be associated with classical identification techniques (e.g., barcode, radio frequency identification), where information is encoded at the surface of the tag, to provide higher data security. The principle of this encoding approach is studied and experimentally demonstrated in this paper. A 2 bit tag prototype has been realized and measured for validation purposes.
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