276
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Title:Multiband patch antennas compatible with CMOS array detector for real-time multi-frequency terahertz imaging system
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Abstract:This letter reports a miniaturized, multiband patch antenna capable of detecting thee frequencies in conjunction with CMOS array detector element for real-time multi-frequency imaging in terahertz (THz)-band.Multi-frequency operation is desirable for THz CMOS camera design, which is achieved by using stubs and slot-type split ring resonator on the patch antenna connected to the on-chip CMOS detector. The proposed antenna is designed at three-bands of 218, 338, and 400 GHz corresponding to the atmospheric transmission windows. And the performance of the multiband THz antenna is successfully demonstrated using the finite-difference time-domain method.
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