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Title:Design and measurement of a polarization convertor based on a truncated circular waveguide
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Abstract:A polarization convertor based on a truncated circular waveguide is studied. It is simple to make and suitable for operating in the low terahertz frequency range. The bandwidth, machining tolerance and the nonlinear taper, used to reduce microwave reflection, are discussed. A W-band truncated polarization convertor was fabricated and its microwave properties were measured. An averaged transmission loss of 0.3dB and a reflection of 30dB were measured, which are in good agreement with the analytical calculation and numerical simulation presented in this paper. © 2012 IOP Publishing Ltd.
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