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Title:Coupling into tapered metal parallel plate waveguides using a focused terahertz beam
Authors:Gerhard, M. (1); Theuer, M. (2); Beigang, R. (2)
Author affiliation:(1) Department of Electrical and Computer Engineering, University of Kaiserslautern, 67663 Kaiserslautern, Rhineland-Palatinate, Germany; (2) Department of Physics and Research Center Optimas, University of Kaiserslautern, 67663 Kaiserslautern, Rhineland-Palatinate, Germany
Corresponding author:Gerhard, M.(gerhard@eit.uni-kl.de)
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Abstract:Coupling of focused terahertz radiation into tapered metal parallel plate waveguides with sub-wavelength gap widths is presented. A line-focus terahertz time-domain spectroscopy setup with flexible foci is used to investigate coupling of broadband terahertz radiation from free-space into waveguides for different gap widths. Various waveguide lengths are compared in experiment and calculation in terms of occurring loss and divergence phenomena. Amplitude coupling ratios of 80 from free-space into the waveguides are obtained. © 2012 American Institute of Physics.
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