167
Accession number:20115014594293
Title:Power linearity measurement in terahertz time-domain spectroscopy using metalized film attenuators
Authors:Iida, Hitoshi (1); Shimada, Yozo (1); Kinoshita, Moto (1); Kuroda, Hideki (2); Kitagishi, Keiko (2); Izutani, Yusuke (2)
Author affiliation:(1) National Metrology Institute of Japan, National Institute of Advanced Industrial Science and Technology, Tsukuba, Ibaraki 305-8563, Japan; (2) Otsuka Electronics, Hirakata, Osaka 573-1132, Japan
Corresponding author:Iida, H.
Source title:Japanese Journal of Applied Physics
Abbreviated source title:Jpn. J. Appl. Phys.
Volume:50
Issue:12
Issue date:December 2011
Publication year:2011
Article number:128004
Language:English
ISSN:00214922
E-ISSN:13474065
Document type:Journal article (JA)
Publisher:Japan Society of Applied Physics, 1-12-3 Kudan-Kita,k Chiyoda-ku, Tokyo, 102, Japan
Abstract:We describe a method for evaluating the power linearity over a wide dynamic range of a terahertz time-domain spectroscopy (THz-TDS) system. The dynamic range is achieved by means of metalized film attenuators (MFAs). The evaluation was based on repeated measurements of transmittance in a particular sample at different incident power levels. We apply the method to both focused-and collimated-beam systems and show that the method can be applied to reflectance measurements as well.
Number of references:9