Abstracts

Phonon Generation at 70 kMcps

J.B. Thaxter and P.E. Tannenwald. "Phonon Generation at 70 kMcps." 1964 PTGMTT International Symposium Program and Digest 64.1 (1964 [MWSYM]): 69-72.

Phonons have been generated and detected at 70 kMcps using piezoelectric surface excitation in single-crystal quartz. Echoes are observed from multiple reflections of acoustic waves in a quartz rod excited by a microwave pulse. The temperature dependence of the relative attenuation of several acoustic modes has been measured from 4.2° to 25°K. Previously, experiments using the surface excitation of acoustic waves in solids have been carried out up to 24 kMcps.

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