Abstracts

Dielectric Measurements in the Submillimeter Region and a Suggested Interpretation of the Poley Absorption

G.W. Chantry. "Dielectric Measurements in the Submillimeter Region and a Suggested Interpretation of the Poley Absorption." 1977 Transactions on Microwave Theory and Techniques 25.6 (Jun. 1977 [T-MTT] (Special Issue on the Proceedings of the Second International Conference on Submillimeter Waves and Their Applications)): 496-500.

Modern activity in the field of extra-high-frequency dielectric measurements on polar Iiquids is briefly reviewed and the means for carrying them out briefly described. It is now possible to deterinine the complex permittivity (and hence the complex refractive index) over the range 10/sup 8/-10/sup 13/ Hz to an absolute precision of 1 percent and it is therefore worthwhile to reexamine the "liquid-lattice" theory which was put forward some time ago as an explanation for the additional Poley absorption. This theory is found to give a good account of the absorption spectrum of liquid chlorobenzene in the microwave, millimeter, and submillimeter regions.

❑ Return to main document.