The Measurement of Thermal Conductivity of Refractory Materials: Quarterly Progress Report for the Period Ending October 1, 1955; W. D. Kingery, F. H. Norton; Massachusetts Institute of Technology, 1955; 1955

The Measurement of Thermal Conductivity by the Comparative Method. Pages 77-97. Tye, Ronald P. Preview Buy Chapter 24,95 â,¬. Reference Guarded Hot Plate Apparatus for the Determination of Steady-State Thermal Transmission Properties. Pages 99-131. Ponte, Francesco (et al.) Preview Buy Chapter 24,95 â,¬. Apparatus for Testing High-TemperatureThermal-Conductivity Standard Reference Materials with Conductivities Above 1 W m-1K-1 in the Temperature Range 400 to 2500 K. Pages 133-159. Peletsky, V. E. Preview Buy Chapter 24,95 â,¬. The Probe Method for Measurement of Thermal Conductivity. Pages 161-185. It has been almost thirty years since the publication of a book that is entirely dedicated to the theory, description, characterization and measurement of the thermal conductivity of solids. The recent discovery of new materials which possess more complex crystal structures and thus more complicated phonon scattering mechanisms have brought innovative challenges to the theory and experimental understanding of these new materials. With the development of new and novel solid materials and new measurement techniques, this book will serve as a current and extensive resource to the next generation The conventional thermal conductivity measurement techniques for bulk materials are usually too large in size to measure the temperature drop and the heat flux across a length scale ranging from a few nanometers to tens of microns. For example, the smallest beads of commercial. Page 5 of 64.Â Significant progresses have also been made for the characterization of thermal conductivity and thermal boundary resistance of thin films over the past 30 years due to the vibrant research in micro- and nanoscale heat transfer [13â€“19].