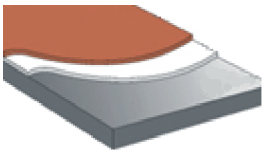
APPLICATION**SHEET**

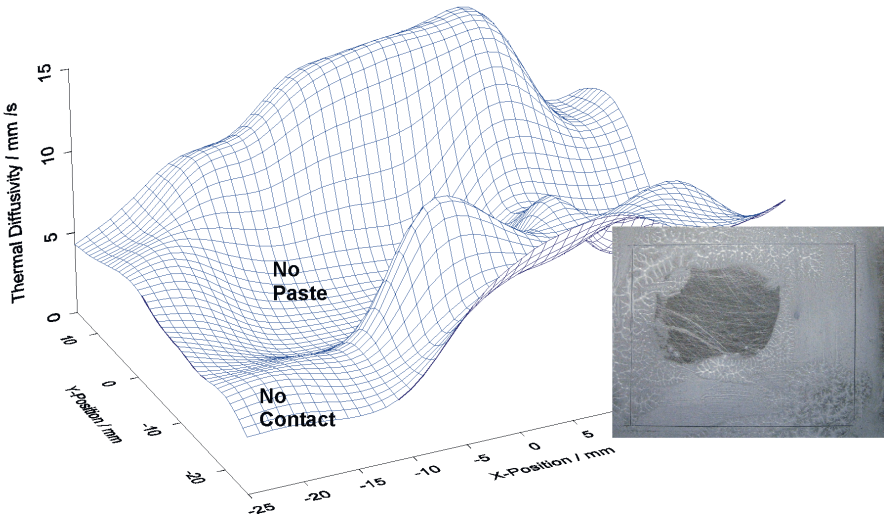
Chemical Industry · Electronics
LFA 447 *NanoFlash*™ MTX



Heat Transfer Between 2 Al Plates (MTX Test)

Introduction

In high-performance electronics, packaging is the limiting factor in electrical circuit efficiency. Specifically, thermal management, along with the reliability and the trend toward miniaturization, are key factors in successful electronic design. Microscaled packaging is a technology that enables electronics to achieve higher speeds, smaller sizes and a higher reliability. A high thermal conductivity of the layers employed and a good thermal contact between the layers are required properties. Structural defects within or between the layers can lead to overheating and destruction of electronic components. A basic task for quality control is it to find such defects. This application sheet shows a fast and reliable solution for this purpose: the LFA 447 MTX. The test plate was measured with the step scanning system in the horizontal directions.



Test Conditions

Temperature range:	RT
Sample holder:	MTX system
Sample thickness:	2.50 mm
Sample surface preparation:	Graphite

Test Results

The results show the distribution of the thermal diffusivity over the length and depth of an Al/Paste/Al thermal management system. As can clearly be seen, the thermal diffusivity shows significantly lower values in the areas of the missing paste and bad mechanical and therefore, thermal contact. The example clearly demonstrates that the LFA 447 MTX can analyze structural defects of large sample plates with a high resolution without any problems.

NGB · Application Sheet 045 · E · 0621 · Technical specifications are subject to change.

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