EXPERIMENTAL STUDY OF THERMAL CONDUCTIVITY OF THERMALLY CONDUCTIVE STRIPS FOR ELECTRONIC EQUIPMENT

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The object of research - CONDUCTIVITY OF THERMALLY CONDUCTIVE STRIPS - domestic analogues of the materials of the series SilPad , GapPad and Bond-Play of foreign production, widely represented in the market of electronic equipment. To perform this task, a unit for measuring the thermal conductivity by the method of a flat layer with a stationary heat flux was developed and manufactured. The range of work from the level of nitrogen temperature to +150 Â° C, in addition, the installation is designed in such a way that it can be measuring during loading of the specimen pressurized to 1200 kPa. In order to eliminate heat leaks from the sample due to natural convection, it is provided that the measuring cell is vacuumed, which also ensures that there is no condensation and freezing of water vapor from the ambient air inside the cell when working in the low-temperature range. The geometric configuration of the samples: discs with a diameter of 15 mm and a thickness of 0.5 to 5 mm. Certification experiments were carried out on a sample of optical colorless glass brand TF1 (GOST 13659-96) with a certified characteristic of the dependence of thermal conductivity on temperature in the range of 50-500 K.

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