

## The effect of graphene on thermal interface material in term of thermal conductivity

### Abstract

Thermal interface material (TIM) had been well conducted and developed by using several material as based material. A lot of combination and mixed material were used to increase thermal properties of TIM. Graphene prove to be one of the best material that have highest thermal conductivity in the world. In this studied, the effect of graphene as based material was used to increase thermal conductivity in thermal interface material. The sample that contain varies weight ratio of graphene were used in this studied. The thermal conductivity of thermal interface material is both measured and it was found that the higher wt. % of graphene can increase higher thermal conductivity. The highest thermal conductivity is 21.6 W/ (mK) with 50 wt. % graphene meanwhile at 10 wt. % of graphene can only produce 5.4 W/ (mK thermal conductivity).

### Keywords

Graphene; Thermal conductivity; Thermal interface material (TIM)