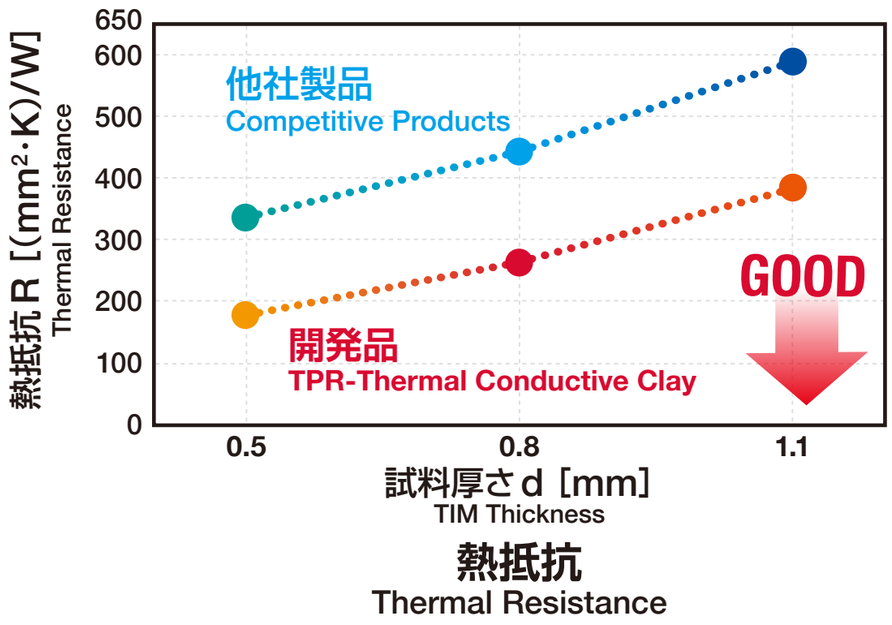
開発フェーズ Development phase | 基礎開発 Basic development | 仕様開発 Specification development | 開発完了 Development completion

熱伝導クレイ
Thermal conductive clay

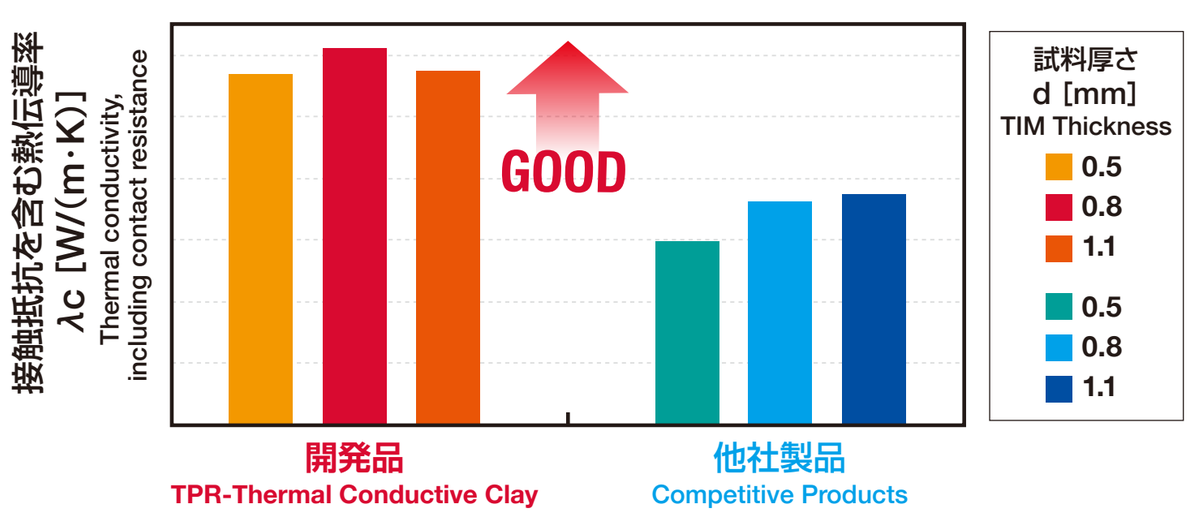
凹凸形状への追従性が高く高熱伝導な粘土状TIM
Clay-like TIM with high tracking and high thermal conductivity

特徴 | Characteristics

- **熱伝導性の高いCNTをフィラーに使用し、高い熱伝導を実現**
  CNTs with high thermal conductivity are used as fillers to achieve high thermal conductivity
- **自己接着とリワーク性を両立**
  Both self-adhesive and reworkable
- **柔軟で凹凸への追従性があり、接触熱抵抗が低い**
  Flexible and can follow fine irregularities. Has low contact thermal resistance



熱抵抗
Thermal Resistance



接触抵抗を含む熱伝導率
Thermal conductivity,including contact resistance

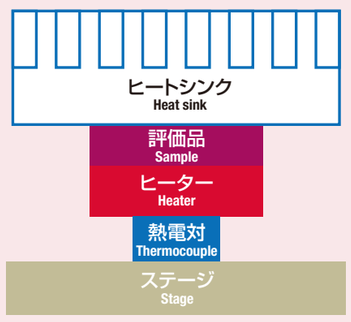
実験データ | Experimental data

- **セラミック粒状フィラーに微量のCNTを添加 ➡ 熱輸送性能が向上**
  Trace amount of CNT added to ceramic granular filler improves heat transport performance

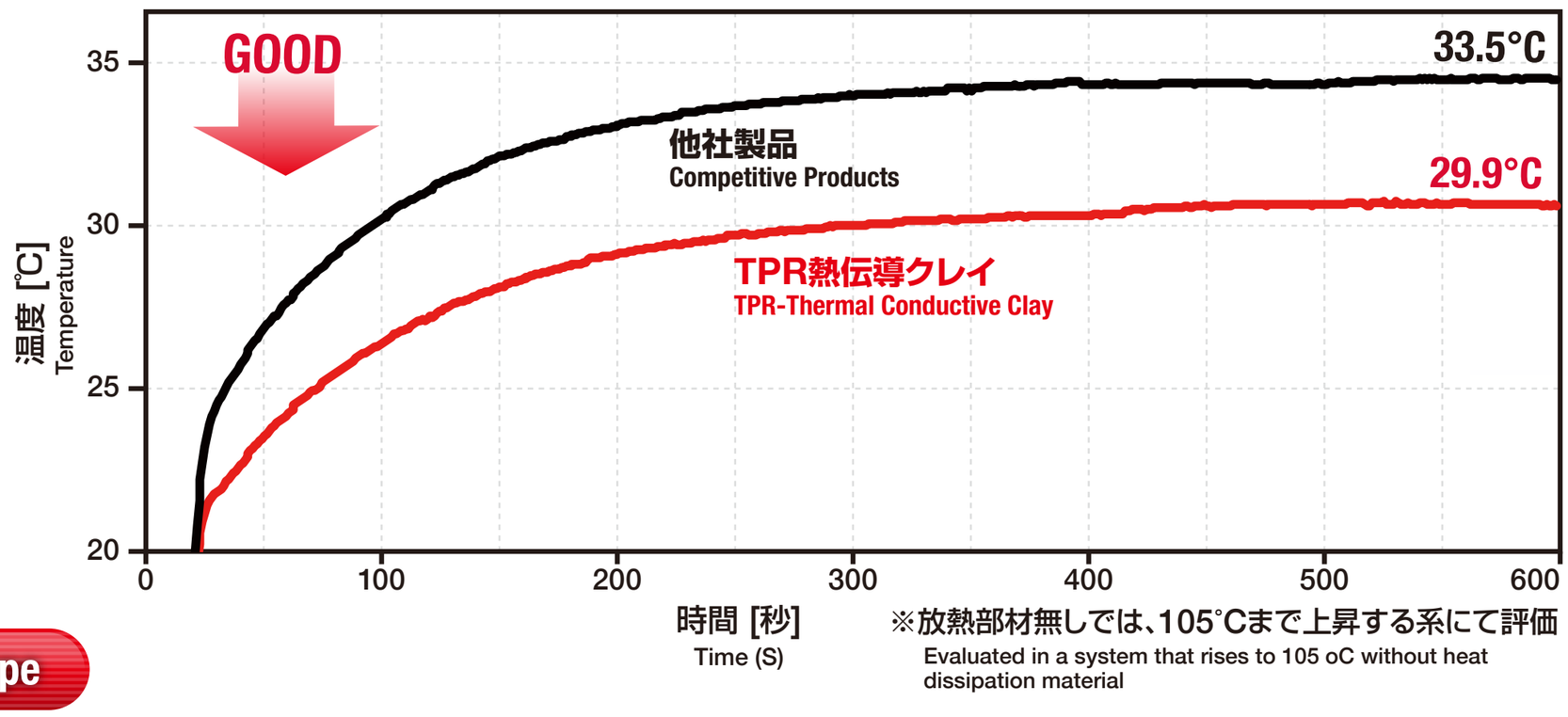
➡ **低コストでの性能向上を実現**
Improved performance at a lower cost

評価方法 Evaluation method

- ヒータとヒートシンク間に熱伝導クレイを設置
  Heat transfer clay installed between the heater and the heat sink
- ヒーターの昇温抑制効果を比較
  Comparison of the effect of heaters on suppressing temperature rise

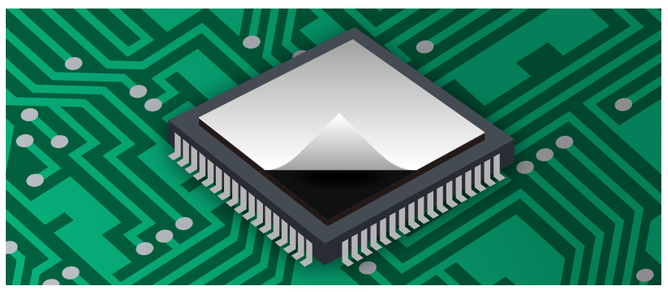


評価結果 Result



※放熱部材無しでは、105°Cまで上昇する系にて評価
Evaluated in a system that rises to 105 oC without heat dissipation material

シートタイプ | Seat Type



- **母材変更と熱伝導フィラーの配合割合変更によりゴムシート形状での作製も可能**
  It is also possible to fabricate in the form of a rubber sheet by changing the matrix and changing the blending ratio of the heat conductive filler.
- **クレイ同様CNT微量添加で性能向上を確認**
  As with clay, performance improvement was confirmed by adding a small amount of CNT.

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