

# Supplemental information

Applications of thermodynamic calculations to practical TEG design:

$\text{Mg}_2(\text{Si}_{0.3}\text{Sn}_{0.7})/\text{Cu}$  interconnections

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## Mg-Si-Sn calculated isothermal section at 700 °C

The equilibrium calculation at 700 °C is of interest for the sintering step of the alloyed powders of  $\text{Mg}_{2.06}\text{Si}_{0.3}\text{Sn}_{0.665}\text{Bi}_{0.035}$  for n-type and  $\text{Mg}_{1.97}\text{Li}_{0.03}\text{Si}_{0.3}\text{Sn}_{0.7}$  for p-type. Consolidation was done for 20 min and 10 min for n- and p-type, respectively, under vacuum with a pressure of 66 MPa, 1 K/s heating rate using a graphite die.

