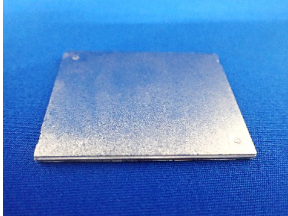
KYOCERA

UNDER DEVELOPMENT

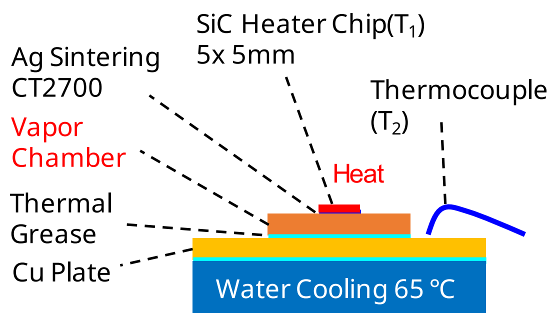
VAPOR CHAMBER
FOR HIGH HEAT FLUX APPLICATION



FEATURES

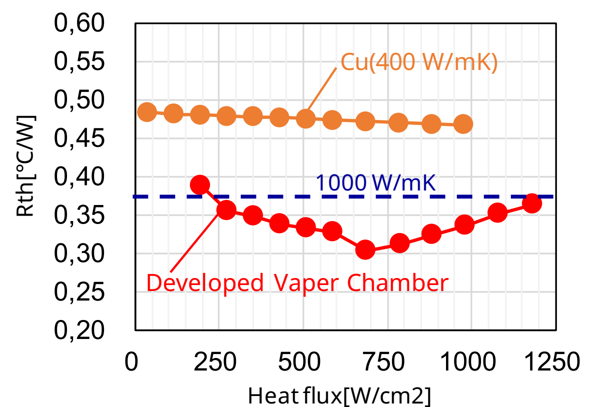
- Higher thermal conductivity (>1000 W/mK)
- Applicable for high heat flux (1000 W/cm²
  @ chip size 5 x 5 mm)
- Heat tolerance for chip assembly (250 °C)

MEASUREMENT METHOD

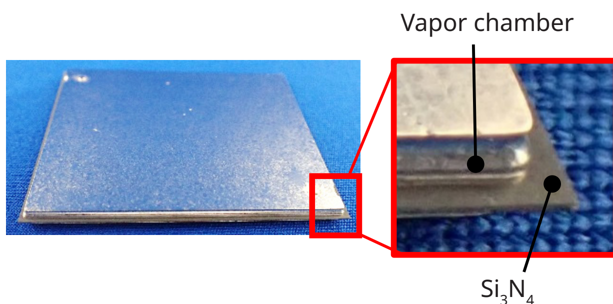


Thermal Resistance R_{th} [°C/W] : $\frac{T_1 - T_2}{Q}$

THERMAL RESISTANCE MEASUREMENT



# VAPOR CHAMBER EMBEDDED AMB* SUBSTRATE
# FOR POWER MODULE
AMB=Active Metal Bonding



FEATURES

- Higher thermal conductivity to dissipate of SiC chip
- Heat tolerance for chip assembly by Ag-sintering (250 °C)
- Vapor chamber brazed directly to cermaic substrate or package

	AMB Substrate	Vapor-chamber embedded AMB substrate
Cross-sectional view	Circuit Insulation — Cu, Si_3N_4, Cu	Si_3N_4, Cu, Vapor chamber

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