

Large Current, High Heat dissipation PCBs

PCB Solutions for Power Electronics Equipment
such as Automotive ECU/PCUs and Industrial Robots

Heat-Resistant Material

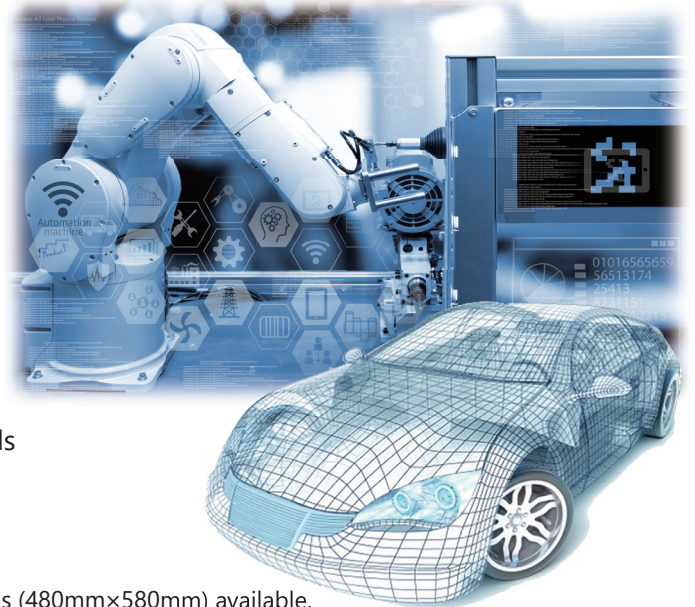
High heat resistance requirements increasing with the product miniaturization.

- Improvement of material heat resistance:
PCBs with materials supporting over $T_g=200\text{C}^\circ$.
(T_g : Glass transition temperature)
- Selection of materials according to the PCB requirements:
Wide selection of reliable materials.

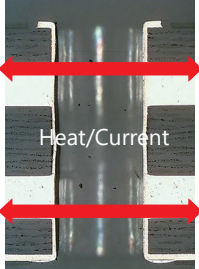
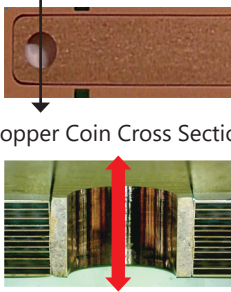
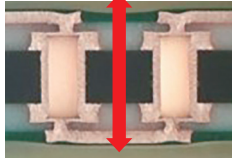
Large Current, High Heat dissipation

Optimal technologies to meet our customers various needs
such as Large Current and High thermal conductivity.

- No conductor exposure at the edge of the PCB.
- PCB manufactured with conventional materials.
- Product size: Small Semiconductor Packages up to large size PCBs (480mm×580mm) available.
- High thermal conductivity material for high heat dissipation to spread the heat from the hot spots of the PCB.



Solutions for Automotive and Industrial Power Electronic

PCB Technology (General Spec.)	① Thick Cu PCB (Inner layer Cu thickness[μm]: 175, 300, 500, 1000)	② Cu Coin PCB (Cu Coin Shape[mm]: $\phi 3.0 \sim \phi 8.0$, Rectangle)	③ High Thermal Conductivity Material	① + ③ Case Study
Heat Dissipation Path	Horizontal	Vertical	Vertical	Horizontal and Vertical
Current Path	Horizontal	(Vertical)	—	Horizontal
X-section	Thick Cu: $500\mu\text{m} \times 2$ 	Copper Coin: Rectangular  Copper Coin Cross Section	High thermal conductive resin  Thermal Conductivity 2.0 to 3.2W/mK	Thick Cu + High thermal conductive resin 