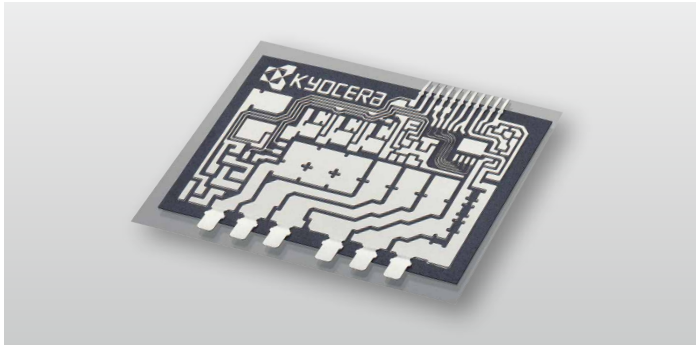


## ACTIVE METAL BONDING SUBSTRATES FOR EV/HEV INVERTERS



### APPLICATIONS

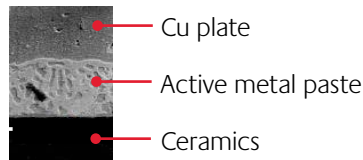
- ▶ Power module devices

### FEATURES

- ▶ High reliability (AMB Technology)
- ▶ Variety of platings (Ni, Ni/Au, NiPdAu, Ni/Pd/Ag, Ag)
- ▶ High thermal conductivity
- ▶ Multilayer structure feasible
- ▶ Different Cu thickness plates on same substrate
- ▶ Various connector possibilities

### RELIABILITY AMB PROCESS

- ▶ Active Metal Bonding
- ▶ Ti Compound - alloy (Ag-Cu)
- ▶ High adhesion strength to ceramics



### PLATING OPTIONS

- ▶ Partial silver plating
- ▶ Direct silver plating
- ▶ Nickel-palladium-gold or silver plating
- ▶ Nickel-gold plating
- ▶ Nickel plating

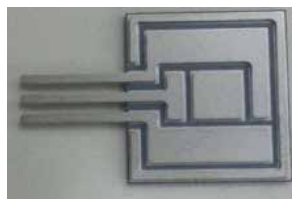
### MULTILAYER STRUCTURE

- ▶ Inner CU plane
- ▶ Multilayer AMB structure
- ▶ Low inductance
- ▶ 3 dimensional routing

### CONNECTOR TECHNOLOGIES



Lead type



Long lead type



Cu PIN type



Screwable (SiN) type

### MATERIALS AVAILABILITY

- ▶  $\text{Si}_3\text{N}_4$ : High flexural strength (850 MPa)