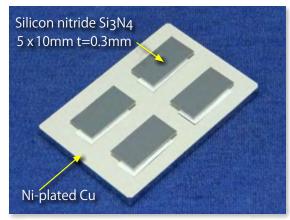


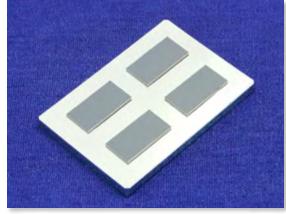
## SoundBonding application **ECB**



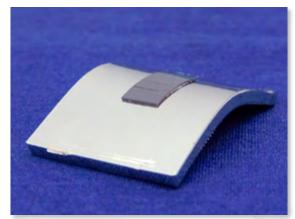
## **DMBonding of Ceramics substrate & Heat sink at a time with no damage**







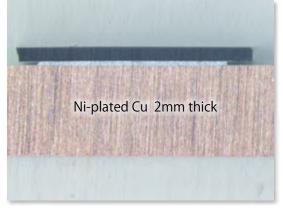
After bonding



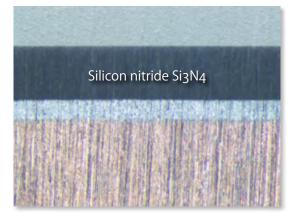
Bonding check for strength



- ★ Bonding of different materials, Silicon nitride substrate and Ni-plated Cu heat sink
- ★ 4 Ceramics substrates bonding by one shot
- ★ Cleared heat shock test  $(-50 \sim 600^{\circ}\text{C})$
- ★ Bonding by sound energy only
- ★ Bonding at room temperature in atmosphere
- ★ Supplied energy is electricity and air
- ★ Bonding on desktop



Observation bonding cross section



Enlarged bonding part



