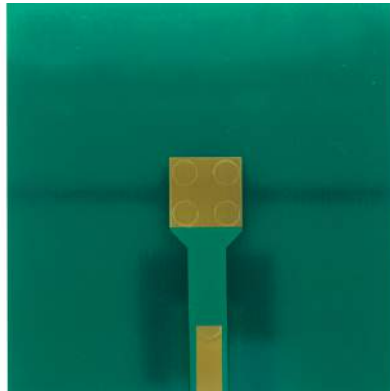
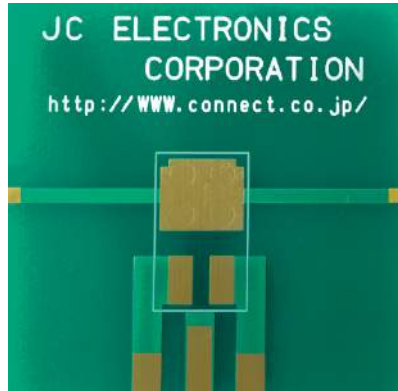


## Heat Dissipation Substrate

Light weight, high efficiency in heat exhaustion  
Applicable to a variety of purposes including Power Supply Board, In-vehicle equipments, and so on.  
High performance heat dissipation



### Performance

#### Temperature Cycle

:  $-65 \pm 3^\circ\text{C}$  30min  
:  $125 \pm 3^\circ\text{C}$  30min after 500 cycle

#### Pin Flatness

: Components side  $+0.03 \sim 0.05\text{mm}$  with  
: Soldering side  $+0.1 \sim 0.05\text{mm}$  with

#### Pin Retention Force

: No falling out

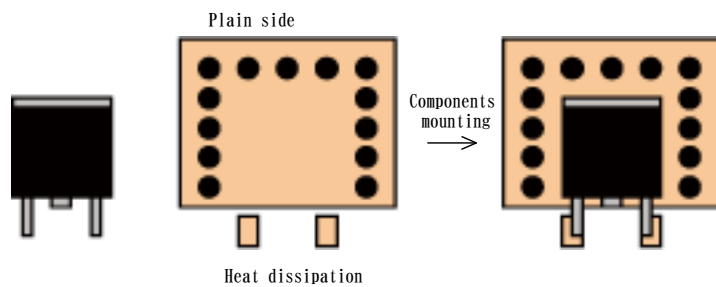
#### Pre Processing

: Temperature  $40^\circ\text{C}$  Humidity 90% Co  
:  $\times$ Reflow two times

#### Reflow Resistance

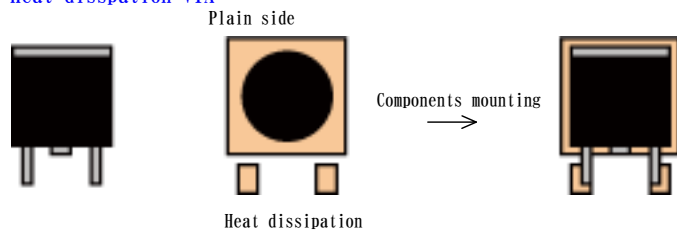
: Conductor float, Delamination, No

### Conventional Substrate



Heat is dissipated on the plain side and through Via hole.

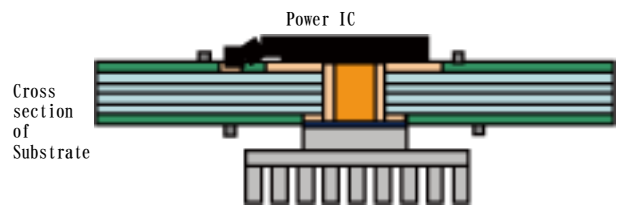
### Heat dissipation VIA



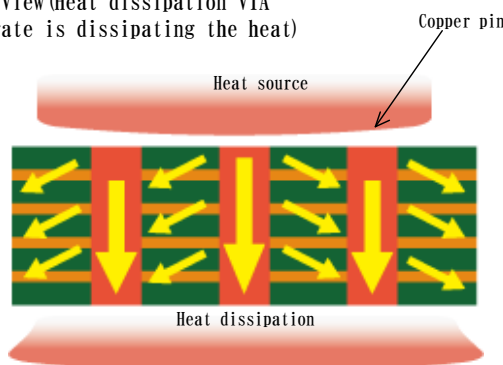
Efficiency in heat dissipation with small footprint, electrical current can be applied.  
Ordinary Via  $\phi 1.5\text{mm} \dots 1.5\text{A}$   
Filling in with Copper Pin  $\phi 1.5\text{mm}$   
 $\dots 10\text{A}$  can be applied.



In combination with a heat sink more heat dissipation effect can be obtained.



### Image View (Heat dissipation VIA Substrate is dissipating the heat)



Heat diffusion sheet and copper are laminated.  
Thermal Conductivity  $1700\text{w/m}\cdot\text{k}$   
Proportion  $2.1\text{g/cm}^3$   
(8 times higher than aluminum, 4 times higher than copper in thermal conductivity)