



# 40 Kapton Peltier Module The Result of Operating Reliability Test



## 1 : Method of Testing

Sample : 40 type Thermoelectric module with insulating cover by kapton film.  
(Kapton™ is polyimide film manufactured by)

Test Equipment : Endurance Test Equipment

Method of Testing : Divert an electric current to an order direction, a reverse direction to an element in turn, and cooling side temperature and radiation of heat side temperature go to a state of 25 °C, 80 °C and return.  
A drive electric current is a rating electric current.

## 2 : Test Criterion

Internal Resistance  $\pm$  max.10%

## 3 : Reliability Test Result

At **478,000**, cycles there is no resistance abnormality.  
Testing cycle frequency and resistance change are shown in the figure 3.  
For comparing, the Endurance test result of the other companies item of the same module size is shown in the figure 4.  
This item was broken in **2,900** cycles.

Figure-1. A Figure Of Principle For Testing

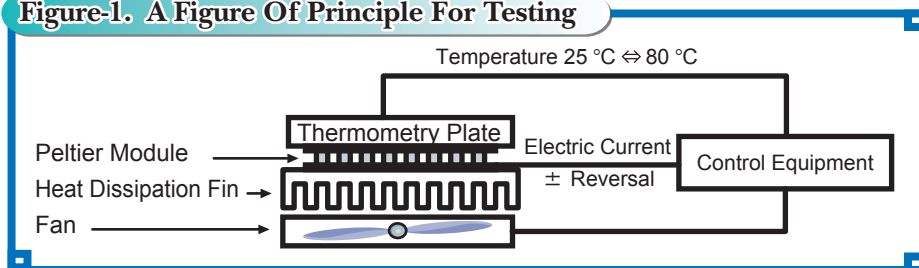


Figure-2 A Temperature Profile Of Thermometry Plate

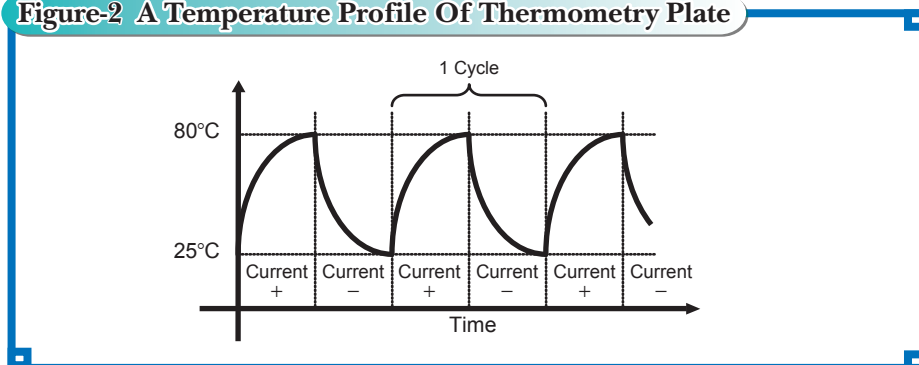


Figure-3. TAISEI 40 Kapton Item Endurance Test Result

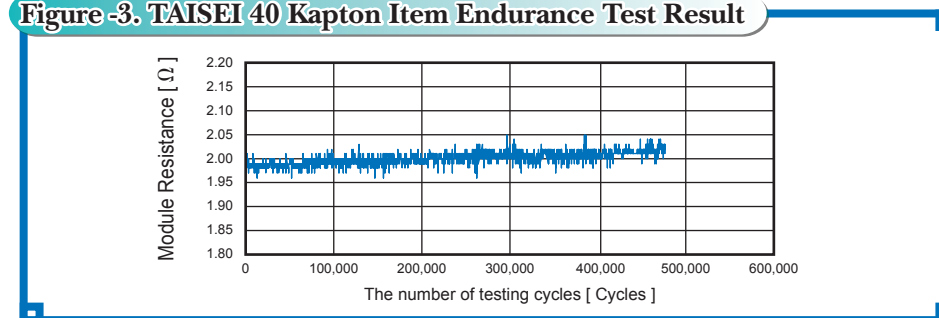


Figure-4. Other Companies Item 40 Endurance Test Result

