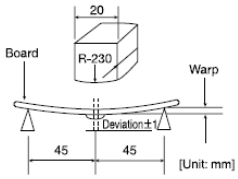
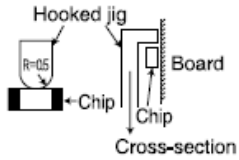
■RELIABILITY DATA

1. Operating Temperature Range	
Specified Value	−40～+85℃

2. Storage Temperature Range	
Specified Value	−40～+85℃
Test Methods and Remarks	※Note : −20 to +40℃ in taped packaging

3. Resistance to Flexure of Substrate	
Specified Value	No mechanical damage.
Test Methods and Remarks	Warp : 2mm Testing board : Glass epoxy-resin substrate Thickness : 0.8mm 

4. Adhesion of Electrode	
Specified Value	Characteristics : shall satisfy the electrical characteristics. Appearance : No significant abnormality.
Test Methods and Remarks	Applied force : 5N Duration : 10 sec. 

5. Solderability	
Specified Value	75% or more of immersed surface of terminal electrode shall be covered with fresh solder.
Test Methods and Remarks	Solder temperature : 240±5℃ Duration : 3±1 sec Preconditioning : Immersion into flux. Immersion and Removal speed : 25mm/sec.

6. Resistance to Solder Heat	
Specified Value	Characteristics : shall satisfy the electrical characteristics. Appearance : No significant abnormality.
Test Methods and Remarks	Preheating : 150℃ for 2 min. Solder temperature : 260±5℃ Duration : 5±0.5 sec. Preconditioning : Immersion into flux. Immersion and Removal speed : 25mm/sec. Recovery : 2 to 3hrs of recovery under the standard condition after the removal from test chamber.

7. Thermal Shock

Specified Value	Characteristics : shall satisfy the electrical characteristics. Appearance : No significant abnormality.
Test Methods and Remarks	According to JIS C60068-2-14. Conditions for 1 cycle

Step	Temperature (℃)	Duration (min)
1	−40±3	30±3
2	Room Temperature	Within 3
3	85±2	30±3
4	Room Temperature	Within 3

Number of cycles : 100
Mounting method : Soldering onto PC board.
Recovery : 2 to 3hrs of recovery under the standard condition after the removal from test chamber.

8. Humidity (steady state)	
Specified Value	Characteristics : shall satisfy the electrical characteristics. Appearance : No significant abnormality.
Test Methods and Remarks	Temperature : +85±2℃ Humidity : 85±5%RH Duration : 1000 hrs Recovery : 2 to 3hrs of recovery under the standard condition after the removal from test chamber.

9. High temperature life test	
Specified Value	Characteristics : shall satisfy the electrical characteristics. Appearance : No significant abnormality.
Test Methods and Remarks	Temperature : +85±2℃ Duration : 1000 hrs Recovery : 2 to 3hrs of recovery under the standard condition after the removal from test chamber.

10. Low temperature life test	
Specified Value	Characteristics : shall satisfy the electrical characteristics. Appearance : No significant abnormality.
Test Methods and Remarks	Temperature : −40±2℃ Duration : 1000 hrs Recovery : 2 to 3hrs of recovery under the standard condition after the removal from test chamber.

Note on standard condition:

"standard condition" referred to herein is defined as follows :
5 to 35℃ of temperature, 45 to 85% relative humidity and 86 to 106kPa of air pressure.

When there are questions concerning measurement result :
In order to provide correlation data, the test shall be conducted under condition of 20±2℃ of temperature, 60 to 70% relative humidity and 86 to 106kPa of air pressure.
Unless otherwise specified, all the tests are conducted under the "standard condition".