

Humidity

The specimen shall be subjected to $40\pm2^{\circ}\text{C}$, 90 to 95% R.H. For 1000 hours without load and then stored at room temperature and normal humidity for 1 to 2 hours . Thereafter , the change of V_b shall be measured and meet the requirement of $\Delta V_b/V_b \leq \pm 5\%$.

Impulse life

The impulse current listed on catalog is applied 1000 times continuously with the interval of 30 seconds at room temperature.The change of V_b shall be measured $\Delta V_b/V_b \leq \pm 10\%$.

Low temperature storage

The specimen shall be subjected to $-40\pm2^{\circ}\text{C}$ without load for 1000 hours and then stored at room temperature and normal humidity for 1 to 2 hours . Thereafter , the change of V_b shall be measured and meet the requirement of $\Delta V_b/V_b \leq \pm 5\%$.

High temperature load

After being continuously applied the maximum allowable voltage at $85\pm2^{\circ}\text{C}$ for 1000 hours, the specimen shall be stored at room temperature and humidity for 1 to 2 hours. The change of V_b shall be measured and meet the requirement of $\Delta V_b/V_b \leq \pm 10\%$.

High temperature storage

The specimen shall be subjected to $125\pm2^{\circ}\text{C}$ for 1000 hours in a drying oven without load and then stored at room temperature and humidity for 1 to 2 hours. The change of V_b shall be measured and meet the requirement of $\Delta V_b/V_b \leq \pm 5\%$.

Withstanding Voltage

| | | |
|---|--|-------------------|
| Withstanding Voltage (Body Insulation) | The specified voltage shall be applied between both terminals of the specimen connected together for 1 minute, with no remarkable mechanical damage. | |
| | Classification (Nominal varistor voltage) | Test Voltage (AC) |
| | $V_{0.1\text{mA}} , V_{1\text{mA}} \leq 330\text{V}$ | 1000 Vrms |
| | $V_{0.1\text{mA}} , V_{1\text{mA}} > 330\text{V}$ | 1500 Vrms |

耐濕性測試

樣品在 $40\pm2^{\circ}\text{C}$ ，相對濕度90~95%，置於無負載環境1000小時後，取出置於室溫和正常濕度下1~2小時，測試其電壓(V_b)的變化， $\Delta V_b/V_b$ 必須小於等於 $\pm 5\%$ 。

脈衝壽命試驗

樣品在室溫條件下，依突波壽命之脈衝電流 $8\times 20\mu\text{s}$ 脈衝電流以間隔30秒之頻率連續衝擊1000次，測試其電壓(V_b)的變化， $\Delta V_b/V_b$ 必須小於等於 $\pm 10\%$ 。

低溫儲存測試

樣品在 $-40^{\circ}\text{C}\pm 2^{\circ}\text{C}$ ，置於無負載環境1000小時後，取出置於室溫和正常濕度下1~2小時，測試其電壓(V_b)的變化。 $\Delta V_b/V_b$ 必須小於等於 $\pm 5\%$ 。

高溫負載測試

樣品持續加以最大工作電壓之負載，於 $85\pm 2^{\circ}\text{C}$ 的環境下工作1000小時後，取出置於室溫和正常濕度下1~2小時，測試其電壓(V_b)的變化。 $\Delta V_b/V_b$ 必須小於等於 $\pm 10\%$ 。

高溫儲存測試

樣品先在 $125\pm 2^{\circ}\text{C}$ 的烤箱中，無負載的儲放1000小時，然後取出置於室溫和正常濕度下1~2小時，在測試其電壓(V_b)的變化。 $\Delta V_b/V_b$ 必須小於等於 $\pm 5\%$ 。

耐電壓測試

在室溫條件下於包封材料與導線間通入如表列的電壓1分鐘後，同時目視檢查有無顯著的損壞。

**Terminal pull strength**

After gradually applying the load specified below and keeping the unit fixed for 10 ± 1 seconds, with no remarkable mechanical damage.

| Terminal diameter | Loading weight in pull strength |
|-------------------|---------------------------------|
| 0.6 mm (0.024") | 10N (1.02 Kg) |
| 0.8 mm (0.031") | 10N (1.02 Kg) |
| 1.0 mm (0.039") | 20N (2.04 Kg) |

Terminal bending strength

The unit shall be secured with its terminal kept vertical and the weight specified above shall be applied in the axial direction. The terminal shall gradually be bent by 90° in one direction, then 90° in the opposite direction, and again back to the original position. A bend of lead wire shall be repeated 2 times. With no remarkable mechanical damage.

| Loading weight in bending strength |
|------------------------------------|
| 5N (0.51 Kg) |
| 5N (0.51 Kg) |
| 10N (1.02 Kg) |

Vibration

Subjected to simple harmonic motion of 0.75mm amplitude 1.5mm maximum total excursion between limits of 10~55Hz. Frequency scan shall be traversed in one minute. This motion shall then be applied for period of 2 hours in each of three mutually perpendicular directions. With no remarkable mechanical damage.

Solderability

After dipping the terminal to a depth of approximately 3mm from the body in a soldering bath of $235 \pm 5^\circ\text{C}$ for 2 ± 0.5 seconds, the terminal shall be visually examined. Approximately 95% of the terminals shall be covered with new solder uniformly.

Resistance to soldering heat

The terminal shall be dipped into a soldering bath with temperature of $260 \pm 5^\circ\text{C}$ to a point of 2~2.5mm from the body of the unit, be held there for 10 ± 1 sec (5N series: 5 ± 1 sec.) and then be stored at room temperature and humidity for 1 to 2 hours. The change of V_b shall be measured and meet the requirement of $\Delta V_b/V_b \leq \pm 5\%$ with no remarkable mechanical damage.

Damp heat load

The specimen shall be subjected to $40 \pm 2^\circ\text{C}$, 90 to 95% R.H. and the maximum allowable voltage for 1000 hours and then stored at room temperature and normal humidity for 1 to 2 hours. The change of V_b shall be measured and meet the requirement of $\Delta V_b/V_b \leq \pm 10\%$.

Temperature cycle

The temperature cycle is repeated five cycles with (1) $-40 \pm 3^\circ\text{C}$ keeping 30 ± 3 minutes then (2) room temperature keeping 15 ± 3 minutes then (3) $125 \pm 2^\circ\text{C}$ keeping 30 ± 3 minutes then (4) room temperature keeping 15 ± 3 minutes and then stored at room temperature and humidity for 1 to 2 hours. The change of V_b shall be measured and meet the requirement of $\Delta V_b/V_b \leq \pm 5\%$ with no remarkable mechanical damage.

端子拉力強度測試

以漸進的方式逐漸增加壓敏電阻二條引線端點之負荷，直至下表所指定的重量為止，然後使其穩定地維持 10 ± 1 秒鐘即可，同時目視檢查有無顯著的傷害。

| 引線直徑 | 引線直接下拉重量 |
|-----------------|---------------|
| 0.6 mm (0.024") | 10N (1.02 Kg) |
| 0.8 mm (0.031") | 10N (1.02 Kg) |
| 1.0 mm (0.039") | 20N (2.04 Kg) |

端子彎曲強度測試

當前項拉力試驗完成後，引線須保持 90° 垂直狀態，二條引線則成一軸線方向。然後將其中一條引線逐漸朝原方向彎折 90° ，之後朝反方向彎折 90° ，最後再朝原方向彎折 90° 回到原位，重覆測試2次，同時目視檢查有無顯著的傷害。

| 引線彎曲橫拉重量 |
|---------------|
| 5N (0.51 Kg) |
| 5N (0.51 Kg) |
| 10N (1.02 Kg) |

振動測試

振動機之設定條件為：簡單的諧振運動，振幅0.75mm，頻率10~55Hz，其總游移幅度最大為1.5mm，1分鐘之內應做頻率掃描確認。依此條件之振動試驗，必須就三個軸向各做2個小時，同時目視檢查有無顯著的傷害。

焊錫性測試

將引線浸入錫槽，深度為距產品本體底部約3mm，錫溫 $235 \pm 5^\circ\text{C}$ 浸 2 ± 0.5 秒鐘後，以目視檢查沾錫必須大於95%。

焊錫耐熱性測試

同焊錫性試驗方法將引線浸 $260 \pm 5^\circ\text{C}$ 之錫槽內 10 ± 1 秒鐘 (5N系列 5 ± 1 秒) 後，置於室溫和正常濕度下1~2小時，測試其電壓(V_b)的變化， $\Delta V_b/V_b$ 必須小於等於 $\pm 5\%$ ，同時目視檢查有無顯著的傷害。

耐濕負荷測試

樣品在 $40 \pm 2^\circ\text{C}$ ，相對濕度90~95% R.H. 置於最大工作電壓的環境下儲放1000小時後，取出置於室溫和正常濕度下1~2小時，測試其電壓(V_b)的變化。 $\Delta V_b/V_b$ 必須小於等於 $\pm 10\%$ 。

溫度變化測試

每一週期之衝擊溫度包括(1) $-40 \pm 3^\circ\text{C}$ 停留 30 ± 3 分鐘(2) 室溫停留 15 ± 3 分鐘(3) $125 \pm 2^\circ\text{C}$ 停留 30 ± 3 分鐘(4) 室溫停留 15 ± 3 分鐘，反覆衝擊五個週期之後，取出置於室溫和正常濕度下1~2小時，測試其電壓(V_b)的變化， $\Delta V_b/V_b$ 須小於等於 $\pm 5\%$ ，同時目視檢查有無顯著傷害。