

## GLASS DIODE RELIABILITY TEST PROGRAM

### 玻封二極管可靠性測試目錄

Test Items 測試項目	Test Conditions 測試條件	Sampling Plan 抽樣計劃	Frequency 頻率
<b>High Temperature Storage Test</b> 高溫貯存測試	$T_a = T_{\text{stg Max.}} \pm 5^\circ\text{C}$ 168+16/-10hrs	Sample size : 40 pcs Ac/Re: 0/1	Once / Month
<b>Low Temperature Storage Test</b> 低溫貯存測試	$T_a = T_{\text{stg Min.}} \pm 5^\circ\text{C}$ 168+16/-10hrs	Sample size : 40 pcs Ac/Re: 0/1	Once / Month
<b>High Temperature Reverse Bias Test(HTRB)</b> 高溫直流反向偏壓測試	$V_R(V_Z) = V_{R\text{Max.}}$ , $T_a = T_j \pm 5^\circ\text{C}$ $R_L = 5\Omega$ , 168+16/-10hrs	Sample size : 40 pcs Ac/Re: 0/1	Once / Month
<b>Alternating Current/Voltage Test (Switching Diode)</b> 交流工作測試	$V_R = V_{R\text{Max.}}$ , $f = 50\text{Hz}$ , $R_L = 510\Omega$ 168+16/-10hrs, $T_a = 25 \pm 5^\circ\text{C}$	Sample size : 40 pcs Ac/Re: 0/1	Once / Month
<b>Continuous Operation Test (Zener Diode)</b> 工作壽命測試	$P_{\text{tot}} = UI$ 168+16/-10hrs $R_L = 5\Omega$ , $T_a = 25 \pm 5^\circ\text{C}$	Sample size : 40 pcs Ac/Re: 0/1	Once / Month
<b>Constant Temperature/Humidity Storage Test</b> 恆溫恆濕儲存測試	$T_a = 85 \pm 5^\circ\text{C}$ , $RH = 85 \pm 5\%$ 168+16/-10hrs	Sample size : 40 pcs Ac/Re: 0/1	Once / Month
<b>Temperature Cycling Test</b> 溫度循環測試	$T_{\text{stg Min.}}$ , 30+2/-0min ; 25±5°C, 10+2/-0min ; $T_{\text{stg Max.}}$ , 30+2/-0min ; 25±5°C, 10+2/-0min; (10 Cycles)	Sample size : 40 pcs Ac/Re: 0/1	Once / Month
<b>Thermal Shock Test</b> 熱循環測試	100±5°C, 3~4mins; 0±5°C, 3~4 mins (10 Cycles)	Sample size : 40 pcs Ac/Re: 0/1	Once / Month
<b>Solder Heat Resistance Test</b> 耐焊接測試	Solder temperature: 260±5°C immersion time: 10+2/-0sec	Sample size : 40 pcs Ac/Re: 0/1	Once / Month
<b>High Pressure / High Humidity / High Temperature Test (PCT)</b> 高壓 / 高濕 / 高溫測試	Vapor Pressure=1.05kg/cm <sup>2</sup> RH=100%, $T_a = 121^\circ\text{C}$ 24+2/-0 hrs	Sample size : 40 pcs Ac/Re: 0/1	Once / Month
<b>Axial Pull Test</b> 軸向拉力測試	$I_f = 200\text{mA}$ and Pull strength $T_a = 25 \pm 5^\circ\text{C}$	Sample size : 10 pcs Ac/Re: 0/1	Once / Month
<b>Snap Test</b> 壓力測試	Tested by manometer	Sample size : 10 pcs Ac/Re: 0/1	Once / Month
<b>Marking Permanence Test</b> 噴字固化測試	Put the products into the ultrasonic cleaning machine filled with ethanol 20sec	Sample size : 10 pcs Ac/Re: 0/1	Once / Month
<b>Solderability Test</b> 可焊性測試	245±5°C for 5±1sec(MELF) 245±3°C for 5±1sec(DIP) Sn100%	Sample size : 10 pcs Ac/Re: 0/1	Once / Month