

## PLASTIC DIODE RELIABILITY TEST PROGRAM

### 塑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	$T_a = T_{stg \text{ Max.}} \pm 5^\circ\text{C}$ 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	$T_a = T_{stg \text{ Min.}} \pm 5^\circ\text{C}$ 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, Rectifier Diode, Schottky Diode, AFC Diode)</b> 交流測試	$V_R = V_{R\text{Max.}}$ $f = 50\text{Hz}$ , $R_L = 510\Omega$ 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	$P_{\text{tot}} = UI$ $R_L = 5\Omega$ 168+16/-10 hrs, $T_a = 25 \pm 5^\circ\text{C}$	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/-10 hrs	Sample size : 40 pcs Ac/Re: 0/1	Once / Month
<b>Temperature Cycling Test</b> 溫度循環測試	$T_{stg \text{ Min.}}$ , 30+2/-0 min ; $25 \pm 5^\circ\text{C}$ , 10+2/-0 min ; $T_{stg \text{ Max.}}$ , 30+2/-0 min ; $25 \pm 5^\circ\text{C}$ , 10+2/-0 min ; (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: $260 \pm 5^\circ\text{C}$ immersion time: 10 +2/-0 sec	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= $1.05\text{kg/cm}^2$ $RH = 100\%$ , $T_a = 121^\circ\text{C}$ 24+2/-0 hrs	Sample size : 40 pcs Ac/Re: 0/1	Once / Month
<b>Solderability Test</b> 可焊性測試	$245 \pm 5^\circ\text{C}$ for $5 \pm 1$ sec Sn100%	Sample size : 10 pcs Ac/Re: 0/1	Once / Month
<b>Marking Permanence Test (DO-213AA Package Products)</b> 唛字固化測試	Put the products into the ultrasonic cleaning machine filled with ethanol 20sec	Sample size : 10 pcs Ac/Re: 0/1	Once / Month