

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
High Temperature Storage Test 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
Low Temperature Storage Test 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
High Temperature Reverse Bias Test (HTRB) 高溫直流反向偏壓測試	$V_R(V_Z) = V_{R\text{Max.}}$, $T_a = T_j \pm 5^\circ\text{C}$ $R_L = 1\text{M}\Omega$ (>400V) /500K Ω 168+16/-10 hrs	Sample size : 40 pcs Ac/Re: 0/1	Once / Month
Alternating Current/Voltage Test (Switching Diode, Rectifier Diode, Schottky Diode, AFC Diode) 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
Continuous Operation Test (Zener Diode) 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
Constant Temperature/Humidity Storage Test 恆溫恆濕儲存測試	$T_a = 85 \pm 2$, $RH = 85 \pm 5\%$ 168+16/-10 hrs	Sample size : 40 pcs Ac/Re: 0/1	Once / Month
Temperature Cycling Test 溫度循環測試	$T_{stg \text{ Min.}}$, 30+2/-0 min ; 25±5°C, 10+2/-0 min ; $T_{stg \text{ Max.}}$, 30+2/-0 min ; 25±5°C, 10+2/-0 min ; (10 Cycles)	Sample size : 40 pcs Ac/Re: 0/1	Once / Month
Solder Heat Resistance Test 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
High Pressure / High Humidity / High Temperature Test (PCT) 高壓 / 高濕 / 高溫測試	Vapor Pressure= $1.05\text{kg}/\text{cm}^2$ $RH = 100\%$, $T_a = 121^\circ\text{C}$ 24+2/-0 hrs	Sample size : 40 pcs Ac/Re: 0/1	Once / Month
Solderability Test 可焊性測試	$245 \pm 5^\circ\text{C}$ for 5 ± 1 sec 99.97 Sn/0.03 Others	Sample size : 10 pcs Ac/Re: 0/1	Once / Month
Marking Permanence Test (DO-213 Package Products) 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