

Pb-FREE PRODUCTS 無鉛產品

No	Item [項目]	Test Method & Conditions [試驗方法、條件]	Standard Source [標準規範]																																		
A . Mechanical Characteristics 機械特性																																					
1	Operating Temperature 工作溫度	- 40 °C ~ + 125 °C (Including self - temperature rise) 含自身發熱溫度																																			
2	Storage temperature and Humidity range 儲存溫度濕度	-10°C ~ +40°C ; 60 to 70% RH	<ul style="list-style-type: none"> · on Tape & Reel · 在捲帶包裝 																																		
3	Solder Heat Resistance 抗焊錫熱特性	<ul style="list-style-type: none"> · Solder : M705-GRN360-K2-V · Peak-temp.hold time : 4 sec · DIP : Soak in 260°C solder pot, stay 10 Sec · Reflow soldering time as follow : · MIL-STD-202G · Method 108A · Test Condition B(DIP) · Test Condition (Reflow) 	<ul style="list-style-type: none"> · No Damage and No Abnormal on Surface · More than 75% of the terminal electrode should be covered and uniformity with solder · 產品表面不能被破壞及不正常的情形 · 端子吃錫需均勻，吃錫面積75%以上 																																		
<table border="1"> <thead> <tr> <th rowspan="2">Item</th> <th rowspan="2">mark</th> <th colspan="2">products</th> </tr> <tr> <th>size ≥ 350mm³ or thickness ≥ 2.5mm</th> <th>size < 350mm³ or thickness < 2.5mm</th> </tr> </thead> <tbody> <tr> <td>Temperature rise gradient</td> <td></td> <td colspan="2">3°C/sec (max)</td> </tr> <tr> <td>Heating time</td> <td>Tsoak</td> <td colspan="2">50s ~ 150s</td> </tr> <tr> <td>Heating temperature</td> <td></td> <td colspan="2">120°C ~ 180°C</td> </tr> <tr> <td>Time over 217°C</td> <td>t1</td> <td>60 sec</td> <td>90 sec</td> </tr> <tr> <td>Time within 5°C of actual peak temperature</td> <td>t3</td> <td>10~30 sec</td> <td>10~30 sec</td> </tr> <tr> <td>Peak temperature</td> <td>Tpeak</td> <td>250 (+0 / -5 °C)</td> <td>260 (+0 / -5 °C)</td> </tr> <tr> <td>Time 25°C to peak Temperature</td> <td></td> <td colspan="2">6 minutes max.</td> </tr> </tbody> </table> <p>*The determination, first primarily determines by the size, then determines the altitude.</p> <p style="text-align: center;">Reflow soldering temperature profile</p>				Item	mark	products		size ≥ 350mm ³ or thickness ≥ 2.5mm	size < 350mm ³ or thickness < 2.5mm	Temperature rise gradient		3°C/sec (max)		Heating time	Tsoak	50s ~ 150s		Heating temperature		120°C ~ 180°C		Time over 217°C	t1	60 sec	90 sec	Time within 5°C of actual peak temperature	t3	10~30 sec	10~30 sec	Peak temperature	Tpeak	250 (+0 / -5 °C)	260 (+0 / -5 °C)	Time 25°C to peak Temperature		6 minutes max.	
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A . Mechanical Characteristics 機械特性			
4	Solderability 焊錫性	<ul style="list-style-type: none"> · Solder : M705E · Solder Temp : 245°C ± 5°C · Dip time : 5 sec · PAD must have 95% above coverage. · 錫 : M705E · 錫爐溫度 : 245°C ± 5°C · 時間 : 5秒 · PAD必須具有覆蓋率超過95%。 	· J-STD-003B
5	Terminal Push Strength Test 端子推力測試	<ul style="list-style-type: none"> · No special requirements 5N thrust to maintain 10 Sec · 無特殊要求5N推力保持10秒 	· JIS C5321 : 1997
B . Environmental Characteristics 環境試驗			
6	Salt Spray Test 鹽霧試驗	<ul style="list-style-type: none"> · Chamber temperature 35°C ,the of salt spray 5% (Total 24 hours) · 箱內溫度35°C , 鹽霧濃度5%(共24小時) 	<ul style="list-style-type: none"> · MIL-STD-202G · Method 101E · Test Condition C
7	Humidity Test 濕度測試	<ul style="list-style-type: none"> · Temperature : +40°C±2°C humidity of 90%±5% (Total 96 hours) · 溫度 : + 40°C±2°C 濕度90%±5% (共96小時) 	<ul style="list-style-type: none"> · MIL-STD-202G · Method 103B · Test Condition B
8	High Temperature Storage 高溫儲存	<ul style="list-style-type: none"> · Temperature : +125°C±2°C · Test time : 48±2 hrs · 溫度 : + 125°C±2°C · 測試時間 : 48±2小時 	<ul style="list-style-type: none"> · IEC 68-2 · Test Condition B

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B . Environmental Characteristics 環境試驗			
9	Low Temperature Storage 低溫儲存	<ul style="list-style-type: none"> · Temperature : $-40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ · Test time : 48 ± 2 hrs · 溫度 : $-40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ · 測試時間 : 48 ± 2 小時 	<ul style="list-style-type: none"> · IEC 68-2 · Test Condition A
10	Thermal Shock 熱衝擊	<ul style="list-style-type: none"> · Temperature : $+125^{\circ}\text{C} \pm 5^{\circ}\text{C}$ (30 minutes) ~ $-40 \pm 5^{\circ}\text{C}$ (30 minutes) · Temperature switch time : 5 minutes (Total 50 cycles) · 溫度 : $+125^{\circ}\text{C} \pm 5^{\circ}\text{C}$ (30分鐘) ~ $-40 \pm 5^{\circ}\text{C}$ (30分鐘) · 溫度切換時間 : 5分鐘(共50個循環) 	<ul style="list-style-type: none"> · MIL-STD-202G · Method 107G · Test Condition B-2
11	Life Test 壽命測試	<ul style="list-style-type: none"> · Temperature : $+75^{\circ}\text{C} \pm 2^{\circ}\text{C}$ (300 Hours) · 溫度 : $+75^{\circ}\text{C} \pm 2^{\circ}\text{C}$ (300小時) 	<ul style="list-style-type: none"> · MIL-STD-202G · Method 108A · Test Condition D
12	Vibration Test 振動測試	<ul style="list-style-type: none"> · Frequency : 10-55-10 HZ, Amplitude : 1.5mm · Direction : X, Y, Z axes, each axis 2 hours (Total 6 hours) · 頻率 : 10-55-10 HZ, 振幅 : 1.5mm · 方向 : X, Y, Z軸, 每個軸2小時 (共6小時) 	<ul style="list-style-type: none"> · MIL-STD-202G · Method 201A

