

## KB-6160/6160C (ANSI: FR-4)

## 覆銅箔環氧玻纖布層壓板

## 特點

- 相容紫外光阻擋及光學自動檢查功能,可提高 PCB 生產效率與準確性
- 耐漏電起痕指數 (CTI150V/175V/300V/600V)
- 優良的耐熱性能和機械性能
- 符合 IPC-4101A 的規範要求

## Features

- UV Blocking and AOI (automatic optical inspection) compatible, so as to increase productivity and accuracy.
- CTI value 150V/175V/300V/600V
- Excellent heat resistance and mechanical properties
- IPC-4101A specification is applicable.

## General Properties 一般特性

| Test Item<br>測試項目                      | Unit<br>單位        | Test Method<br>(IPC-TM-650)<br>測試方法 | Test Condition<br>處理條件         | Spec (IPC-4101A)<br>規格值 | Typical Value<br>典型值 |
|--|-------------------|-------------------------------------|--------------------------------|-------------------------|----------------------|
| Peel Strength (IOZ)<br>銅箔剝離強度          | kgf/cm            | 2.4.8                               | A                              | ≥1.43                   | 1.75                 |
|  |                   |                                     | Float 288°C / 10Sec            | ≥1.40                   | 1.70                 |
| Thermal stress<br>熱應力                  | Sec               | 2.4.13.1                            | Float 288°C/unetched           | ≥60                     | 180                  |
| Bow / Twist<br>彎弓度/翹曲度                 | %                 | 2.4.22.1                            | A                              | ≤1.0                    | 0.17 / 0.19          |
| Flexural Strength<br>抗彎強度              | N/mm <sup>2</sup> | 2.4.4                               | Warp                           | ≥415                    | 565                  |
|  |                   |                                     | Fill                           | ≥345                    | 416                  |
| Flammability<br>燃燒性                    | Rating            | UL94                                | UL94                           | UL94 V-0                | V-0                  |
| Glass Transition (Tg)<br>玻璃化转变温度       | °C                | 2.4.25                              | E-2/105 DSC                    | ≥130                    | 135                  |
| Surface Resistance<br>表面電阻             | MΩ                | 2.5.17.1                            | C-96/35/90                     | ≥1.0×10 <sup>4</sup>    | 1.0×10 <sup>7</sup>  |
| Volume Resistance<br>體積電阻              | MΩ-cm             | 2.5.17.1                            | C-96/35/90                     | ≥1.0×10 <sup>6</sup>    | 1.0×10 <sup>9</sup>  |
| Dielectric Constant<br>介電常數            | —                 | 2.5.5.2                             | Etched/@1 MHZ                  | ≤5.4                    | 4.5                  |
| Loss Tangent<br>介質損耗                   | —                 | 2.5.5.2                             | Etched/@1 MHZ                  | ≤0.035                  | 0.022                |
| Arc Resistance<br>耐電弧性                 | Sec               | 2.5.1                               | D-48/50+D-0.5/23               | ≥60                     | 125                  |
| Moisture Absorption<br>吸水率             | %                 | 2.6.2.1                             | D-24/23                        | ≤0.35(≥0.51)            | 0.10                 |
|  |                   |                                     |                                | ≤0.80(<0.51)            | 0.20                 |
| Z-Axis Expansion<br>Z-轴热膨胀系数           | ppm/<br>°C        | 2.4.24                              | E-2/105 TMA                    | —                       | 55/285               |
| Comparative Tracking Index<br>相比漏電起痕指數 | V                 | IEC 112                             | Etched/0.1% NH <sub>4</sub> Cl | AABUS                   | 150/175<br>300/600   |

Remarks: 可提供不同 CTI 等級的板材 The CCL may offer different CTI grade.

Specimen Thickness: 1.6 mm 樣品厚度: 1.6 mm

A=Maintain original shape, do not make handling 保持原樣, 不作處理

C= Temperature and humidity conditioning 在恒溫恒濕的空氣中處理; E=Temperature conditioning 在恒溫的空氣中處理;

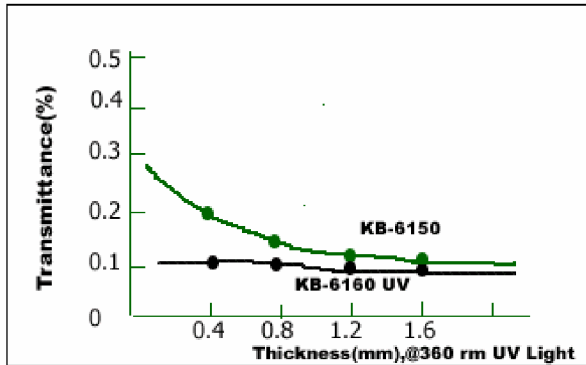
D= Temperature conditioning immersion in distilled water. 浸在恒溫的水中處理

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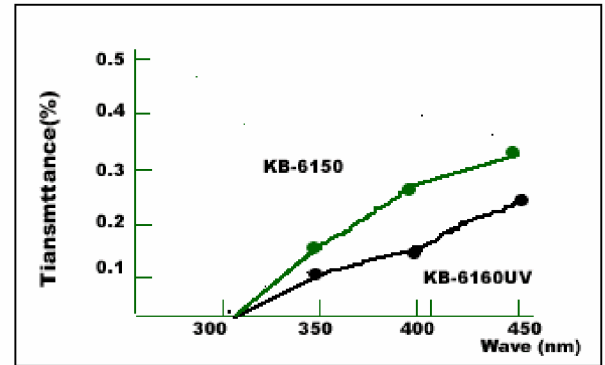
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#### Speciality Chart 板材特性圖

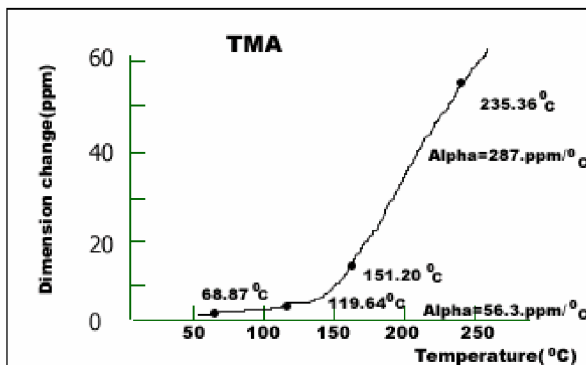
UV blocking (thickness) UV 阻擋



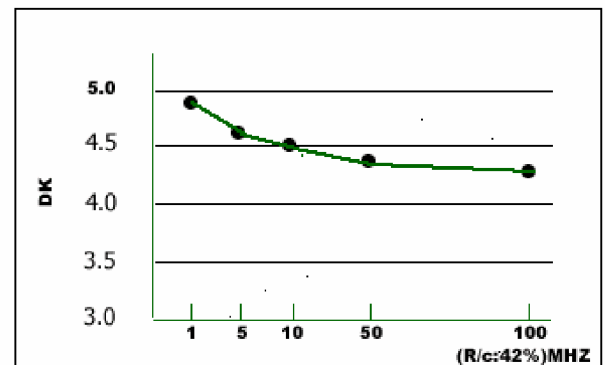
UV blocking (wave / UV-3100)



Thermal expansion of Z-direction (test by TMA)



Dielectric constant 介電常數



#### 應用領域/Applications

- 電腦及週邊設備、通訊設備、儀器儀錶、辦公自動設備等
- Computer, communication equipment instrumentation, OA equipment, etc.

#### Purchasing Information / 採購資訊

| Base colour<br>基板顏色 | Thickness<br>厚度 | Copper Cladding<br>銅箔厚度 | Regular Size (mm)<br>常規尺寸   | CTI Value<br>CTI 值     |
|---------------------|-----------------|-------------------------|---|------------------------|
| 黃色<br>(UV blocking) | 0.05mm ~ 3.5mm  | 18µm<br>35µm<br>70µm.   | 1020*1220mm (40"*48")<br>1067*1220mm (42"*48")<br>915*1220mm (36"*48")<br>1041*1245mm (41"*49") | 150V/175V<br>300V/600V |

Note: Other sheet size and thickness could be available upon request.

可根據客戶要求提供其他尺寸和厚度。