

TECHNICAL INFORMATION 技術資料**KB-6164 FR4 纖維板**

KB-6164 is glass fabric based epoxy resin copper clad laminate, which has UV blocking function and has equal performance as KB-6160. It is suitable for the production of printed circuit boards that required UV blocking and AOI (automatic optical inspection) function.

KB-6164是一種環氧玻璃布基覆銅板，具有KB-6160相同的性能及UV光阻擋功能，適合於制作具有UV阻擋及AOI功能的印刷線路板。

Type 型號	Grade 級別	Construction 組成
KB-6164	ANSI (NEMA) FR-4	Glass fabric, Copper foil, Epoxy resin 玻璃纖維布，銅箔，環氧樹脂

Features

- ◆ UV Blocking
Board with a thickness of 0.8mm could effectively block UV radiation with less than 0.5% UV penetration.
- ◆ Excellent mechanical performance
Good performance in dimension thickness.
- ◆ Excellent heat and moisture resistance
Resistance of ion-migration is effective in hot and humid environment.
“Measling” would not occur in stringent condition of hot and moisture.
- ◆ Tg up to 140°C (DSC).
- ◆ Good chemical resistance and heat resistance.

特點

- ◆ UV光屏蔽：0.8mm厚的板材，UV光透過率為小於0.5%。
- ◆ 卓越的機械性能：良好的尺寸性能。
- ◆ 優良的耐濕熱性：在濕熱條件下具有很好的耐金屬離子遷移性，在惡劣的濕熱條件下不起泡分層。
- ◆ 玻璃化轉變溫度高於140°C (DSC)。
- ◆ 具有優良的耐化學性與耐熱性。

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■ Heat resistance of PTH/金屬化孔耐熱沖擊性

Test Condition: dip in oil (260°C) for 10 seconds → wash in flowing water (20°C) for 10 seconds → dip in solution (20°C) for 10 seconds, recycle the process until PTH break off.

實驗條件：260°C 油中浸10秒 → 20°C 流水中沖10秒 → 20°C 溶劑中浸10秒，循環至短線為止。

Thickness of PTH plating 鍍層厚度	25 μm	40 μm
Number of cycle 循環次數	40	73

■ Applications/用途

Computer and peripheral device, Telecommunications, Instrumentation etc.
計算機及其周邊設備、通訊設備、檢測設備等。

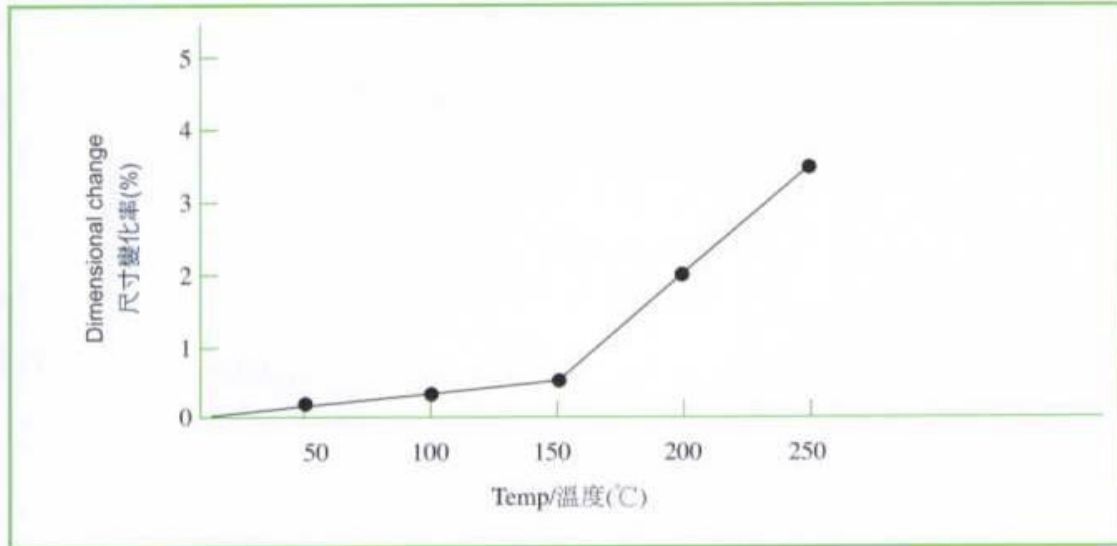
■ Standard Configuration/標準數據

- Thickness/厚度：0.1mm-0.32mm(IPC-4101 Class B/L).
- Copper Cladding/銅箔厚度：18 μm, 35 μm, 70 μm.
- Regular Size(mm)/常規尺寸：914x1220, 1020x1220, 1041x1245, 1067x1220.
- Other Size/ 其他尺寸：As Specified By Customers/根據客戶要求特定。

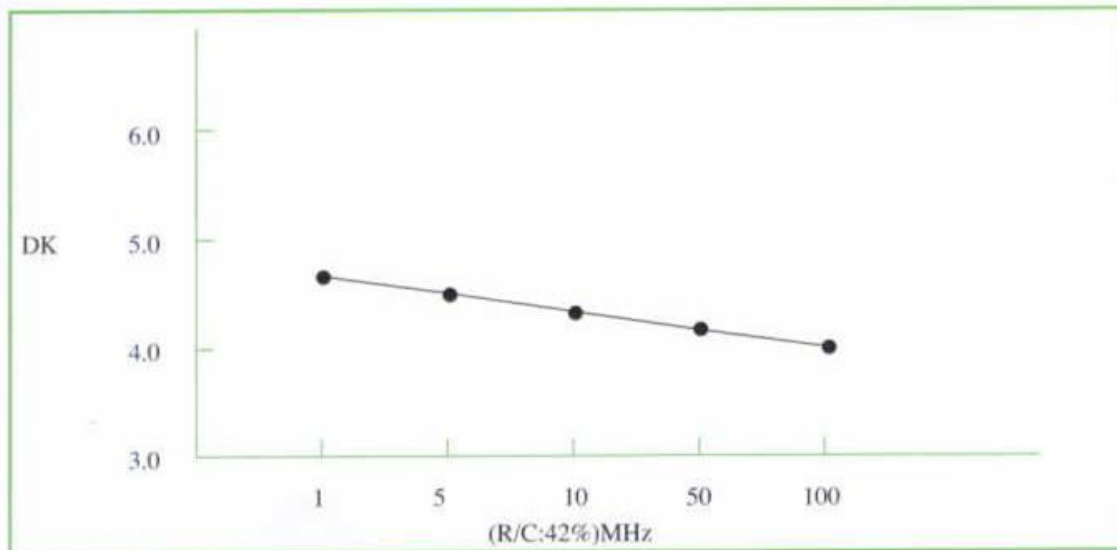
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■ Thermal expansion of Z-direction/Z-方向的加熱膨脹率(Test by TMA)



■ Dielectric constant/介電常數





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General Properties 一般特性

Test Item 特性	Unit 單位	Test Condition 檢測條件	IPC-4101 Testing Method 檢測方法	IPC-4101 Requirement 標準值	Typical Value 典型值
Flexural Strength 屈曲強度	Kgf/m ²	Lengthwise / 縱向 Crosswise / 橫向	2.4.4	> 4.23x10 ⁷ > 3.52x10 ⁷	5.95x10 ⁷ 5.03x10 ⁷
Peel Strength(1 oz) 抗剝強度	Kg/cm	A	2.4.8	> 1.43	2.0
Glass Transition(Tg) 玻璃化轉變溫度	°C	E2/105 DSC	2.4.25	> 140	141
Flammability 燃燒性	Sec	E24/23	2.3.10	Average Burn-5 Max Burn-10	2 6
Thermal Stress 耐焊性	Sec	Float 288°C	2.4.13.1	> 20	150
Surface Resistance 表面電阻	MΩ	C96/35/90	2.5.17.1	> 1.0x10 ⁴	1.0x10 ⁷
Volume Resistance 體積電阻	MΩ-cm	C96/35/90	2.5.17.1	> 1.0x10 ⁶	1.0x10 ⁹
Permittivity 介電常數	—	Etched/@1MHZ	2.5.5.3	< 5.4	4.7
Loss Tangent 介質損耗	—	Etched/@1MHZ	2.5.5.3	< 0.035	0.021
Moisture Absorption 吸水性	%	D24/23	2.6.2.1	< 0.5	0.09