



# 建滔積層板有限公司 KINGBOARD LAMINATES LTD

香港新界沙田火炭坳背灣街 2-12 號威力工業中心五字樓K座  
5/F., Block K, Valiant Industrial Centre, 2-12 Au Pui Wan St., Fe Tan, Shatin, NT, Hong Kong.  
TEL : (852) 2605 6493 FAX : (852) 2691 5245 / 2691 0445

Thin Core Laminate for Multilayer/多層電路板用薄內層板材

## KB-6150/6160 FR-4 纖維板

### ■ Features

- ◆ Excellent adhesive strength between layer
- ◆ Good dimensional stability
- ◆ Less resin smear in high speed drilling
- ◆ Good electrical and mechanical properties
- ◆ Excellent heat resistance

### ■ 特點

- ◆ 層之間的黏接性強
- ◆ 尺寸變化小
- ◆ 高速鑽孔時產生的樹脂污垢少
- ◆ 具有卓越的電氣及機械性能
- ◆ 優越的耐熱性

### ■ Applications / 用途

Mobile phone, Computer, Instrumentation, Military hard-ware, Guidance systems etc.

移動電話、計算機、檢測設備、錄像機、電視機、軍用裝備、導向系統等。

STANDARD PANEL SIZE 標準尺寸(mm)	COPPER FOIL THICKNESS 銅箔厚度	MANUFACTURING THICKNESS 制造厚度 (the copper foil thickness is excluded 不包括銅箔厚度)	THICKNESS TOLERANCE 厚度公差
914x1220	18 μ m	3mils (0.076mm)	±0.7mils (±0.018mm)
		4mils (0.10mm)	±0.7mils (±0.018mm)
		5mils (0.13mm)	±1.0mils (±0.025mm)
		6mils (0.15mm)	±1.0mils (±0.025mm)
1020x1220	35 μ m	7mils (0.18mm)	±1.5mils (±0.038mm)
8mils (0.20mm)		±1.5mils (±0.038mm)	
1041x1245	70 μ m	10mils (0.25mm)	±1.5mils (±0.038mm)
1067x1220		12mils (0.30mm)	±1.5mils (±0.038mm)
		14mils (0.36mm)	±2.0mils (±0.05mm)
		15mils (0.38mm)	±2.0mils (±0.05mm)
	16mils (0.40mm)	±2.0mils (±0.05mm)	

※ Other sheet size and thickness could be available upon request

※ 其它尺寸和厚度產品由用戶要求供應。

### ■ Packing of thin core laminate for multilayer/多層電路板用薄內層板材的包裝

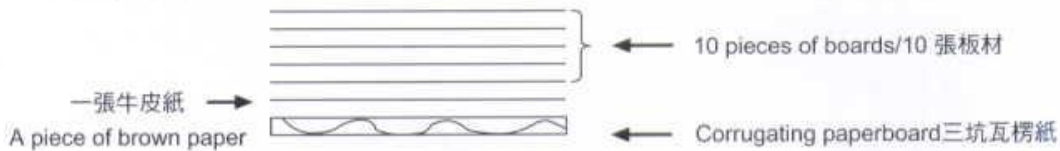
#### 一、 Scope/範圍：

The thickness of boards under 0.4mm (including 0.4mm) /0.4mm 及以下厚度板材

#### 二、 Packing Method/包裝方式：

Adopting mobile packing method, one package contains ten pieces of boards, under three pieces of boards having a piece of corrugating paperboard, the packing way is as follow:/採用自動包裝，每包10張板材，下墊一張三坑瓦楞紙，

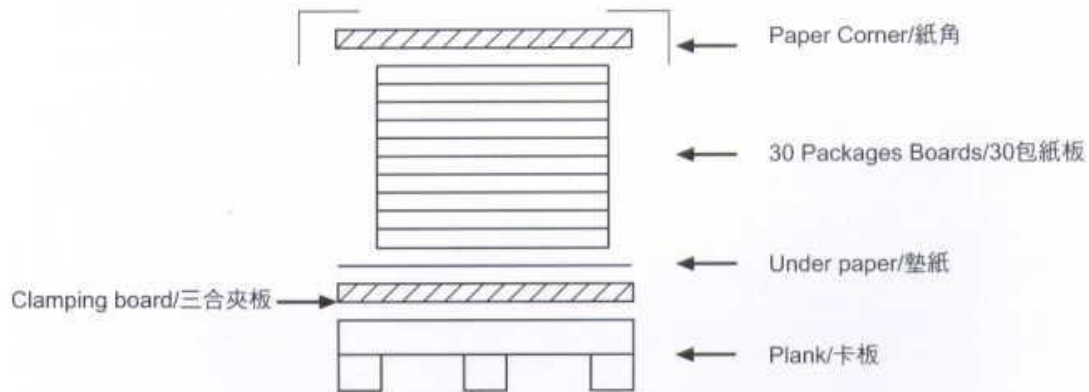
如下圖所示：



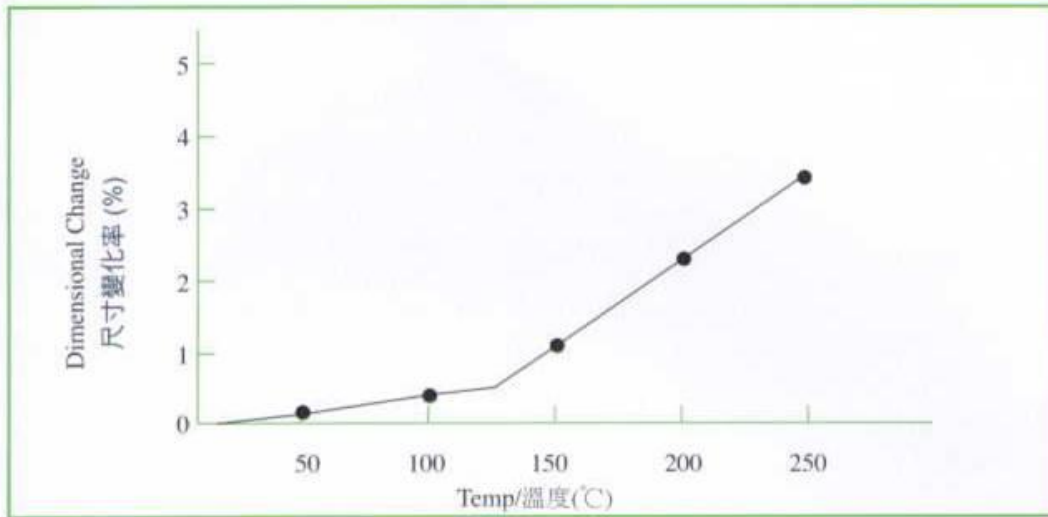
#### Requirements/要求：

The brown paper, corrugating paperboard and the board have the same size. Each package must be pasted labels. / 牛皮紙及瓦楞紙的尺寸與板材一致，每包需貼標籤。

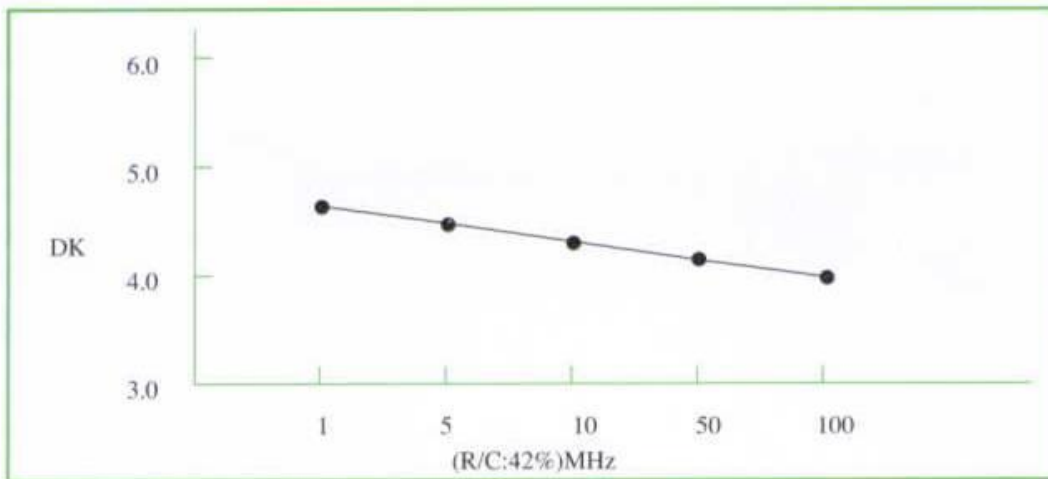
#### 三、 Stacking is as follow/打碼，如下圖所示：



### ■ 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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## TECHNICAL INFORMATION 技術資料

### KB-6150/6160 FR-4 纖維板

#### General Properties 一般特性

TEST ITEM 測試項目	IPC-4101 TEST METHOD 測試方法	UNIT 單位	TREATMENT CONDITION 處理條件	STANDARD VALUE 標準值	TYPICAL VALUE 典型值
Surface Resistivity 表面電阻	2.5.17.1	MΩ	C-96/35/90	$\geq 1.0 \times 10^4$	$1.0 \times 10^7$
Volume Resistivity 體積電阻	2.5.17.1	MΩ-cm	C-96/35/90	$\geq 1.0 \times 10^6$	$1.0 \times 10^9$
Permittivity/@1mhz 介電常數	2.5.5.3	--	Etched/@1MHZ	$\leq 5.4$	4.6
Flammability 燃燒性	2.3.10	Sec	E24/23	Average Burn $\leq 5$ Max Burn $\leq 10$	1 4
Solder Float (288°C) 耐焊性 (288°C)	2.4.13.1	Sec	A	$> 20$	180
Peel Strength Copper Foil 1 oz (0.035mm) 拉力強度	2.4.8	Kgf/cm	A	$\geq 1.43$	2.0
Moisture Absorption 吸水率	2.6.2.1	%	D-24/23	$\leq 0.5$	0.13
Loss Tangent 介質損耗	2.5.5.3	--	Etched/@1MHZ	$\leq 0.035$	0.014
Arc Resistance 耐電弧性	2.5.1	Sec	D48/50+Do.5/2 3	$\geq 60$	110
Glass Transition 玻璃化轉變溫度	2.4.25	°C	E2/105DAC	$\geq 130$	138
Test Piece Standard 測試厚度：0.6mm					