

### KB-6165 LEAD FREE FR-4

#### 覆銅箔環氧玻纖布層壓板

##### 特點

- 熱裂解溫度(Td)高
- 低 CTE
- 優良的耐熱性，能滿足無鉛制程要求
- 樹脂體系為非雙氰胺固化體系，不含填料
- Anti-CAF

##### Features

- High thermal decomposition temperature(Td)
- Low CTE
- Excellent heat resistance and appropriate for lead-free assembly
- The resin system is Dicy free and no filler
- Anti-CAF

##### General Properties 一般特性

Test Item 測試項目	Unit 單位	Test Method (IPC-TM-650) 測試方法	Test Condition 處理條件	Spec (IPC-4101B) 規格值	Typical Value 典型值
Peel Strength (10Z) 銅箔剝離強度	kgf/cm	2.4.8	A	≥1.3	1.4
			Float 288°C/ 10Sec	≥1.2	1.3
Thermal stress 熱應力	Sec	2.4.13.1	Float 288°C unetched	≥60	180
Flammability 燃燒性	Rating	UL94	UL-94	UL94 V-0	V-0
Glass Transition (Tg) 玻璃化转变温度	°C	2.4.25	E-2/105 DSC	≥150	153
Surface Resistance 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>
T-260 260°C 分層時間	min	2.4.24.1	TMA	≥30	50
T-288 280°C 分層時間	min	2.4.24.1	TMA	≥10	30
Moisture Absorption 吸水率	%	2.6.2.1	D-24/23	≤0.35(≥0.51)	0.10
				≤0.80(<0.51)	0.20
Dielectric Constant 介電常數	—	2.5.5.2	Etched/@1 MHZ	≤5.4	4.5
Loss Tangent 介質損耗	—	2.5.5.2	Etched/@1 MHZ	≤0.035	0.018
Arc Resistance 耐電弧性	Sec	2.5.1	D-48/50+D0.5/23	≥60	125
Z-Axis Expansion Z-轴热膨胀系数	ppm/°C %	2.4.24	E-2/105 TMA	≤60/300	55/275
			E-2/105 TMA	≤3.5	3.0
CAF 耐金屬離子遷移時間	hour	—	85%,85°C,50V	≥1000	1000
TD 熱分解溫度	°C	ASTM D3850 (5%wt loss)	TGA	≥325	335

Remarks: 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 在恒溫恒濕的空气中處理

E=Temperature conditioning 在恒溫的空气中處理

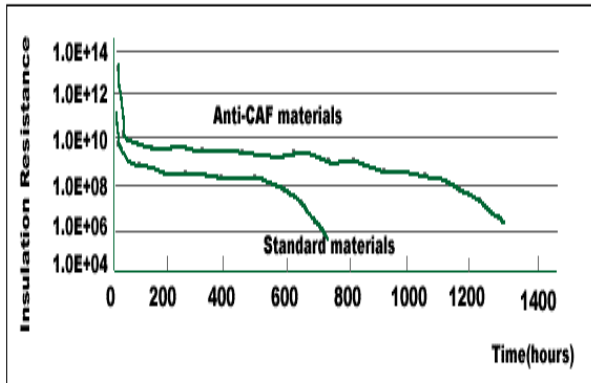
D= Temperature conditioning immersion in distilled water. 浸在恒溫的水中處理

### KB-6165 (ANSI: FR-4)

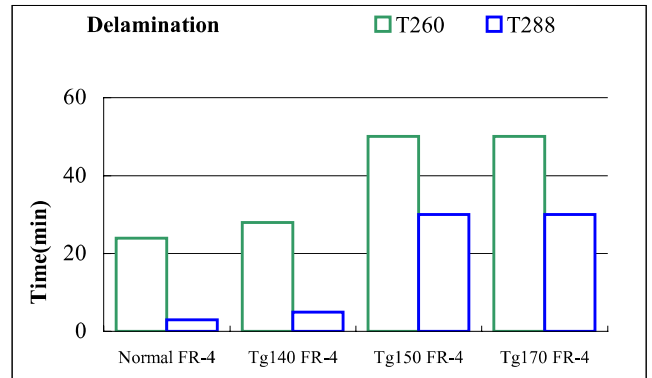
### 環氧玻纖布半固化片

#### Speciality Chart 板材特性圖

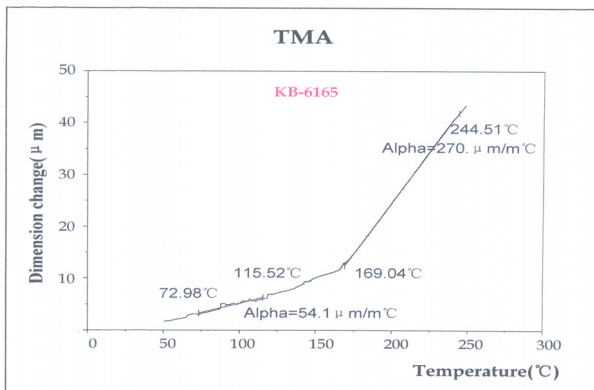
CAF resistance comparison 耐離子遷移



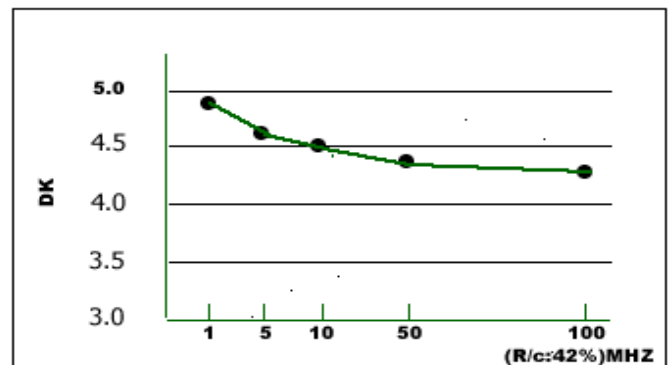
Delamination 分層時間 (test by TMA)



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 基板顏色	Thickness 厚度	Copper Cladding 銅箔厚度	Regular Size (mm) 常規尺寸
黃色 (UV blocking)	0.05mm ~ 3.5mm	18μm 35μm 70μm.	1020*1220mm (40"*48") 1067*1220mm (42"*48") 915*1220mm (36"*48") 1041*1245mm (41"*49")

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.