

## KB-3150/3151 (ANSI: FR-1/JIS: PP7F)

## 覆銅箔酚醛樹脂紙基層壓板

## 特點

- 在高溫下彎曲率、扭曲率小於 1.0%
- 高耐漏電起痕指數（600 伏以上，需提出特殊要求）
- 適合之沖孔溫度為室溫~70℃

## Features

- In high temperature warpage and twist both less than 1.0%
- High CTI value (over 600V, must specify when require)
- Suitable for punching at ambient~70℃

## General Properties 一般特性

Test Item 測試項目	Unit 單位	Test Condition 處理條件	Testing Method 測試方法	Specification 規格值	Typical Value 典型值
Solder Resistance 耐浸焊性(260℃)	Sec	A	JIS C 6481	≥10	20~30
Heat Resistance 耐熱性	---	130℃ 30min	JIS C 6481	No Change 無異常	No Change 無異常
Peel Strength(Copper Foil 35 μm) 銅箔剝離強度(35 μm 銅箔)	kgf/cm	A 260℃/5Sec	JIS C 6481	≥1.2	1.7~2.0 1.6~1.9
Flexural Strength 屈曲強度	Lengthwise 縱向	A	JIS C 6481	≥8	15~17
	Crosswise 橫向			≥8	14~15
Volume Resistivity 體積阻抗係數	Ωcm	C-96/20/65 C-96/20/65+C-96/40/90	JIS C 6481	5×10 <sup>9</sup> 5×10 <sup>8</sup>	1.0×10 <sup>12</sup> ~10 <sup>13</sup> 1×10 <sup>10</sup> ~10 <sup>11</sup>
Surface Resistance 表面抗阻	Adhesive Side 粘接劑面	C-96/20/65 C-96/20/65+C-96/40/90	JIS C 6481	1×10 <sup>10</sup> 1×10 <sup>9</sup>	1.0×10 <sup>11</sup> ~10 <sup>12</sup> 1.0×10 <sup>10</sup> ~10 <sup>11</sup>
	Laminate Side 積層板面	C-96/20/65 C-96/20/65+C-96/40/90		---	---
Insulation Resistance 絕緣抗阻	Ω	C-96/20/65 C-96/20/65+D-2/100	JIS C 6481	1×10 <sup>9</sup> 1×10 <sup>6</sup>	1.0×10 <sup>11</sup> ~10 <sup>12</sup> 1.0×10 <sup>9</sup> ~10 <sup>10</sup>
Chemical Resistance 耐化學性	---	3% NaOH 40℃ 3min 3%氢氧化钠 40℃ 3 分钟	JIS C 6481	No Change 無異常	No Change 無異常
		Boild in trichloroethylene for 3 min 三氯乙炔中煮沸 3 分鐘	JIS C 6481	No Change 無異常	No Change 無異常
Water Absorption 吸水性	%	E-24/50+D-24/23	JIS C 6481	≤2	0.8~1.0
Flammability 阻燃性	Sec	A	UL94	94V-0	94V-0
Dielectric Constant (1 MHz) 介電常數 (1 MHz)	---	C-96/20/65 C-96/20/65+D-24/23	JIS C 6481	≤5.5	4.0~5.0
				≤6.0	4.5~5.5
Dissipation Factor 介質損耗因數	---	C-96/20/65 C-96/20/65+D-24/23	JIS C 6481	≤0.05	0.025~0.035
				≤0.1	0.035~0.045
CTI Value CIT 值	V	0.1% NH <sub>4</sub> Cl	IEC 112	---	200/600
Punching Temperature 沖孔溫度	℃	A	WI-QA-002	50~70	Ambient~70

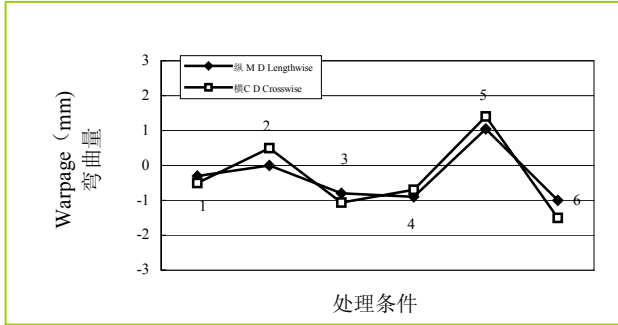
Remarks: Typical values for reference only 注: 典型值只作參考 Stand values according to JIS-C-6485 規格值參照 JIS-C-6485

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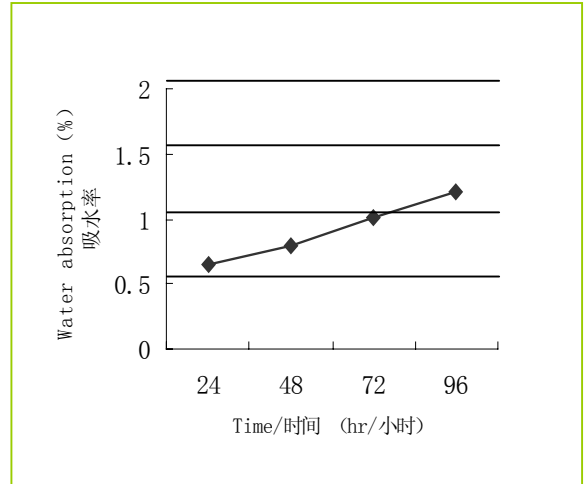
#### Speciality Chart 板材特性圖

Warpage of PCB during processing/印製電路板  
加工時彎曲度(Thickness 1.6mm single side)

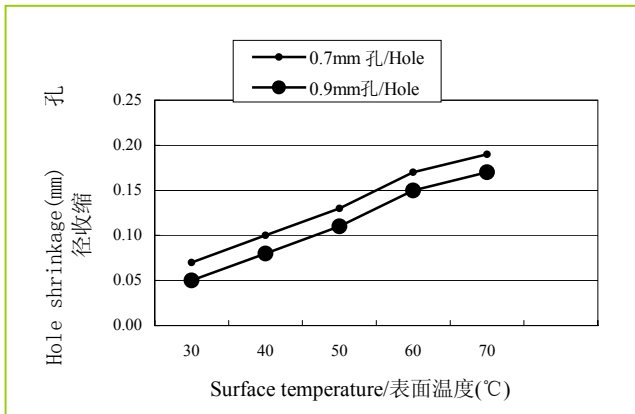


1. Feeding 投料	2. Heating at 130°C for 90 sec 130°C下加熱 90 秒	3. Etching. Rinsing. Drying 蝕刻, 清洗, 烘乾
4. Heating at 200°C for 30 sec 200°C下加熱 30 秒	5. Punching at 50°C 50°C下沖孔	6. Soldering at 260°C for 5sec 260°C 焊錫 5 秒

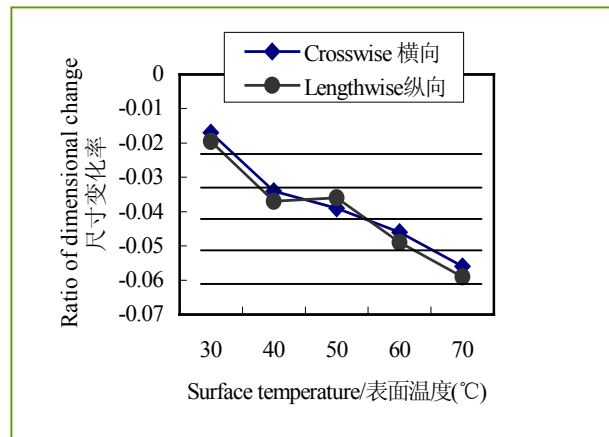
Water absorption 吸水率



Punched hole shrinkage  
沖孔後孔徑收縮



Dimensional change of punched PCB  
沖孔後之尺寸變化



#### Purchasing Information / 採購資訊

Type 類型	Thickness 厚度	Copper Cladding 銅箔厚度	Regular Size (mm) 常規尺寸	CTI Value CTI 值
KB-3150/3151 FR-1	0.8mm ~ 1.6mm	18μm 35μm 70μm	1020*1020mm (40" *40") 1020*1220mm (40" *48")	200V / 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。