

## KB-3151S (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%
- 潮濕環境下電氣性能優良
- 適合銀漿灌孔雙面線路板

## Features

- In high temperature warpage and twist both less than 1.0%
- Superior electric properties under moisture condition
- Suitable for double side application by silver through hole

## 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	1.8~2.1 1.7~2.0
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	Ω-cm	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> 1.0×10 <sup>12</sup> ~10 <sup>13</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>12</sup> ~10 <sup>13</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	1×10 <sup>9</sup> 1×10 <sup>7</sup>
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>12</sup> ~10 <sup>13</sup> 1.0×10 <sup>10</sup> ~10 <sup>11</sup>
Chemical Resistance 耐化學性	---	3% NaOH 40℃ 3min 3%氫氧化鈉 40℃ 3分鐘	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	0.6~0.8
Flammability 阻燃性	Sec	A	UL94	94V-0	V-0
Dielectric Constant (1 MHz) 介電常數	---	C-96/20/65	JIS C 6481	≤5.5	4.0~5.0
		C-96/20/65+D-24/23		≤6.0	4.5~5.5
Dissipation Factor 介質損耗因數	---	C-96/20/65	JIS C 6481	≤0.05	0.025~0.035
		C-96/20/65+D-24/23		≤0.1	0.025~0.045
CTI Value CIT 值	V	0.1% NH <sub>4</sub> Cl	IEC 112	---	>250
Punching Temperature 沖孔溫度	℃	A	WI-QA-002	50~70	室溫~70

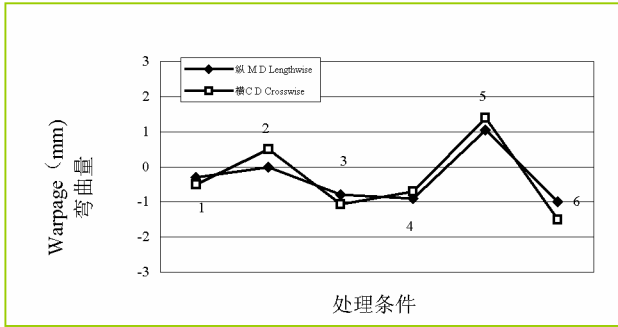
Remarks : Typical values for reference only 注：典型值只作參考 Stand values according to JIS-C-6485 規格值參照 JIS-C-6485

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#### 覆銅箔酚醛樹脂紙基層壓板

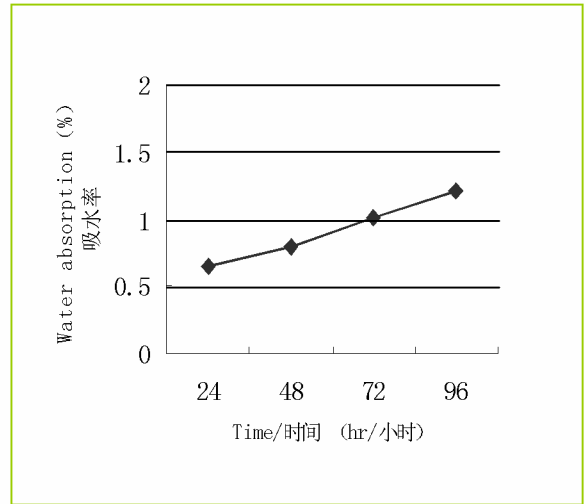
#### Speciality Chart 板材特性圖

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

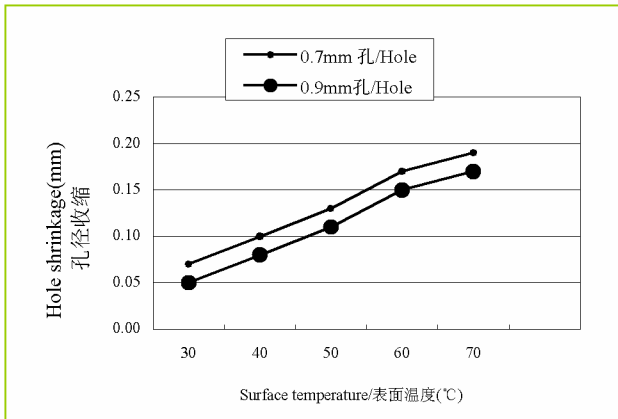


1. Feeding 投料	2. Heating at 130°C for 90 sec 130°C 下加熱 90 秒	3. Etching. Rinsing. Drying 蝕刻, 清洗, 烘乾
4. Heating at 200°C for 30 sec 200°C 下加熱 30 秒	5. Punching at 50°C 50°C 下沖孔	6. Soldering at 260 °C for 5sec 260°C 焊錫 5 秒

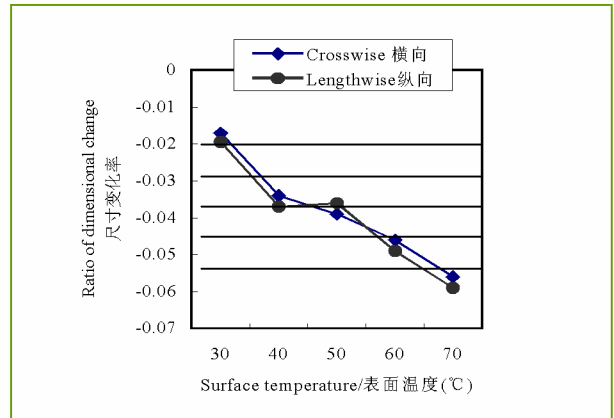
Water absorption 吸水率



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-3151S	1.0mm ~	18μm	1020*1020mm (40" * 40")	250V
FR-1	1.6mm	35μm 70μm	1020*1220mm (40" * 48")	

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。