

## KB-2151 (ANSI : FR-2/JIS PP3F)

## 覆铜箔酚醛树脂纸基层压板

## 特点

- 耐漏电起痕指数 175 伏(600 伏以上, 需提出特殊要求)
- 成本低而使用范围广
- 优异的耐湿、热性
- 适合之冲孔温度为 40~70°C
- 弓曲率、扭曲率小且稳定
- 尺寸稳定性优越

## Features

- CTI value 175V (over 600V, must specify when require)
- Low cost but with wide range of application.
- Superior heat and humidity resistance
- Suitable for punching at 40~70°C
- Warp and twist are small and stable.
- Excellent dimensional stability

## General Properties 一般特性

Test Item 测试项目	Unit 单位	Test Condition 处理条件	Testing Method 测试方法	Specification 规格值	Typical Value 典型值
Solder Resistance 耐浸焊性 (260°C)	Sec	A	JIS C 6481	≥10	20 ~ 30
Heat Resistance 耐热性	—	130°C 30min	JIS C 6481	No Change 无异常	No Change 无异常
Peel Strength (Copper Foil 35 μ m) 铜箔剥离强度 (35 μ m 铜箔)	Kgf/cm	A 260°C/10Sec	JIS C 6481	≥1.2	1.8~2.0 1.8~2.0
Flexural Strength 层间强度	Lengthwise 纵向	A	JIS C 6481	≥8	13~15
	Crosswise 横向			≥8	12~13
Volume Resistivity 体积阻抗系数	Ω-cm	C-96/20/65 C-96/20/65+C-96/40/90	JIS C 6481	5×10 <sup>10</sup> 5×10 <sup>9</sup>	1.0×10 <sup>12</sup> ~10 <sup>13</sup> 1.0×10 <sup>12</sup> ~10 <sup>13</sup>
Surface Resistivity 表面抗阻	Adhesive Side 粘接剂面	C-96/20/65 C-96/20/65+C-96/40/90	JIS C 6481	1×10 <sup>12</sup> 1×10 <sup>11</sup>	1.0×10 <sup>12</sup> ~10 <sup>13</sup> 1.0×10 <sup>11</sup> ~10 <sup>12</sup>
	Laminate Side 积层板面	C-96/20/65 C-96/20/65+C-96/40/90		1×10 <sup>11</sup> 5×10 <sup>8</sup>	1.0×10 <sup>11</sup> ~10 <sup>12</sup> 1.0×10 <sup>10</sup> ~10 <sup>11</sup>
Insulation Resistance 绝缘抗阻	Ω	C-96/20/65 C-96/20/65+D-2/100	JIS C 6481	1×10 <sup>11</sup> 1×10 <sup>8</sup>	1.0×10 <sup>11</sup> ~10 <sup>12</sup> 1.0×10 <sup>9</sup> ~10 <sup>10</sup>
Chemical Resistance 耐化学性	—	3% NaOH 40°C 3min 3%氢氧化钠 40°C 3 分钟	JIS C 6481	No change 无异常	No Change 无异常
		Boiled in trichloroethylene for 3 min 三氯乙烯中煮沸 3 分钟	JIS C 6481	No change 无异常	No Change 无异常
Moisture Absorption 吸水性	%	E-24/50+D-24/23	JIS C 6481	≤0.75	0.5~0.7
Flammability 阻燃性	Rating	A	UL94	UL94 V-0	V-0
Dielectric Constant (1 MHz) 介电常数 (1 MHz)	—	C-96/20/65 C-96/20/65+D-24/23	JIS C 6481	≤5.0 ≤5.3	4.0~5.0 4.5~5.5
Dissipation Factor 介质损耗因子	—	C-96/20/65 C-96/20/65+D-24/23	JIS C 6481	≤0.04 ≤0.05	0.025~0.035 0.035~0.045
CTI Value CTI 值	V	0.1% NH <sub>4</sub> CL	IEC 112	≥175	≥175 / 600
Punching Temperature 冲孔温度	°C	A	GB/T4722	No Crack 无爆裂	Good

Remarks: Typical values for reference only 注: 典型值只作参考 Stand values according to JIS-C-6485 规格值参照 JIS-C-6485

A = Keep the specimen originally without any process 保持原样, 不作处理

C = Temperature and humidity conditioning 在恒温恒湿的空气中处理

D = Immersing in distilled water with temperature control. 浸在恒温的水中处理

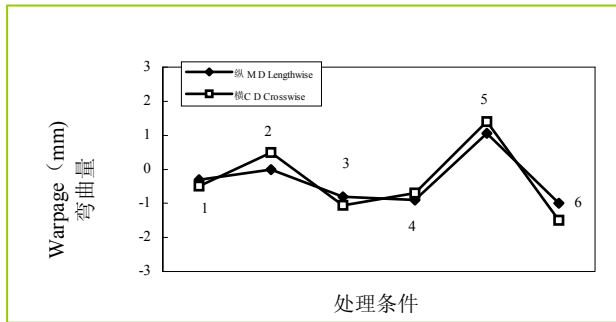
E = Temperature conditioning 在恒温的空气中处理

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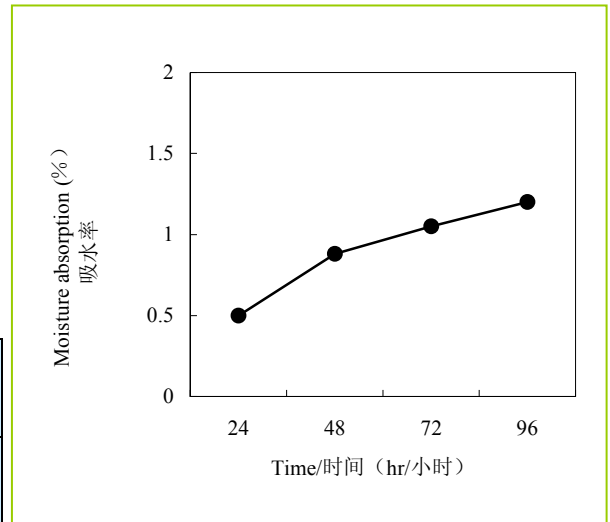
#### Speciality Chart 板材特性图

Warpage of PCB during processing/印制电路板  
加工时弯曲度(Thickness 1.6mm single side)

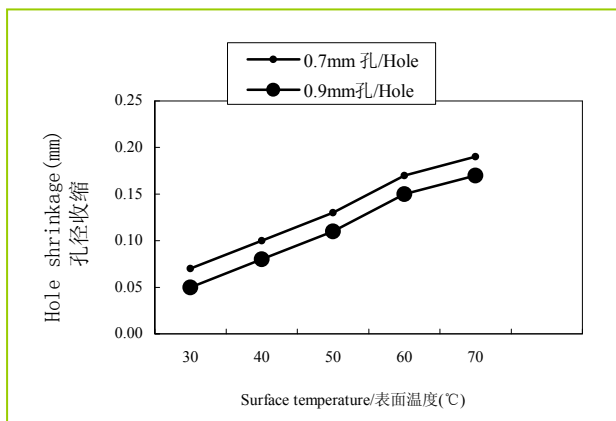


1. Feeding 投料	2. Heating at 130°C for 90 sec 130°C下加热 90 秒	3. Etching. Rinsing. Drying 蚀刻, 清洗, 烘干
4. Heating at 200°C for 30 sec 200°C下加热 30 秒	5. Punching at 50°C 50°C下冲孔	6. Soldering at 260 °C for 5sec 260°C 焊锡 5 秒

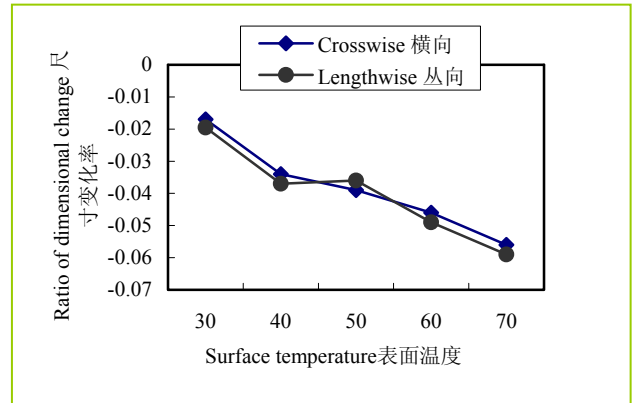
Moisture absorption 吸水率



Punched hole shrinkage  
冲孔后孔径收缩



Dimensional change of punched PCB  
冲孔后之尺寸变化



#### Purchasing Information 采购信息

Type 类型	Thickness 厚度	Copper Cladding 铜箔厚度	Regular Size (mm) 常规尺寸	CTI Value CTI 值
KB-2151 FR-2	0.8mm ~ 1.6mm	18μm 35μm 70μm	1020*1220mm (40" * 48") 1020*1020mm (40" * 40")	600V

Note: Other sheet size and thickness could be available upon request.

可根据客户要求提供其它尺寸和厚度.