

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

## 覆铜箔酚醛树脂纸基层压板

#### 特点

- 在高温下弓曲率、扭曲率小于 1.0%。
- 潮湿环境下电气性能优良。
- 适合之冲孔温度为 50~70℃。

#### Features

- In high temperature warpage and twist both less than 1.0%.
- Superior electric properties under moisture condition
- Suitable for punching at  $50\sim70^{\circ}$ C.

### 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 耐焊性 (float 260℃)		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 float 260°C/10Sec	JIS C 6481	≥1.2	1.8~2.1 1.8~2.1
Flexural Strength 屈曲强度	Lengthwise 纵向 Crosswise 横向	kgf/mm <sup>2</sup>	A	JIS C 6481	<u>≥8</u> ≥8	14-16 13-14
Volume Resistivity 体积阻抗系数		Ωcm	C-96/20/65 C-96/20/65+C-96/40/90	JIS C 6481	$\geq 1 \times 10^{11}$ $\geq 1 \times 10^{10}$	$1.0 \times 10^{12} \sim 10^{13} 1.0 \times 10^{10} \sim 10^{11}$
Surface Resistivity 表面抗阻	Adhesive Side 粘接剂面 Laminate Side 积层板面	Ω	C-96/20/65 C-96/20/65+C-96/40/90 C-96/20/65 C-96/20/65+C-96/40/90	JIS C 6481	$\begin{array}{c} \geqslant 1 \times 10^{11} \\ \geqslant 1 \times 10^{10} \\ \geqslant 1 \times 10^{11} \\ \geqslant 5 \times 10^{9} \end{array}$	$\begin{array}{c} 1.0 \times 10^{11} \sim 10^{12} \\ 1.0 \times 10^{10} \sim 10^{11} \\ 1.0 \times 10^{10} \sim 10^{11} \\ 5.0 \times 10^{9} \sim 10^{10} \end{array}$
Insulation Resistance 绝缘抗阻		Ω	C-96/20/65 C-96/20/65+D-2/100	JIS C 6481	$ \geqslant 1 \times 10^{11} $ $ \geqslant 1 \times 10^{8} $	$1.0 \times 10^{11} \sim 10^{12} 1.0 \times 10^{8} \sim 10^{9}$
Chemical Resistance 耐化学性			3% NaOH 40℃ 3min 3%氢氧化钠 40℃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 吸水率		%	E-24/50+D-24/23	JIS C 6481	≤1.3	0.8~1.0
Flammability 阻燃性		Rating	A	UL94	94 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	≤5.5 ≤6.0	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	≤0.05 ≤0.1	$0.025 \sim 0.035$ $0.045 \sim 0.055$
CTI Value CTI 值		V	0.1% NH <sub>4</sub> CL	IEC 60112	≥600	600
Punching Temperature 冲孔温度		$^{\circ}$	A	GB/T4722	50-70	常温-70

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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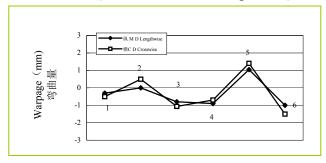


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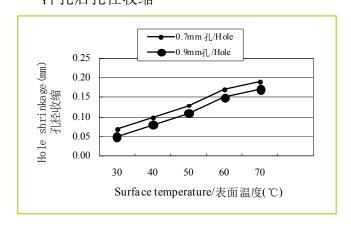
### Speciality Chart 板材特性图

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

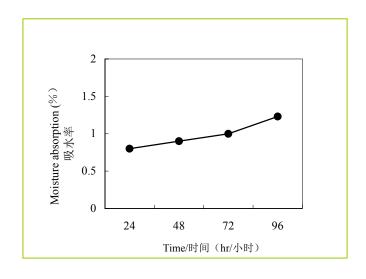


1.Feeding	2.Heating at 130°C	3.Etching.Rinsing.
投料	for 90 sec	Drying
	130℃下加热90秒	蚀刻, 清洗, 烘干
4.Heating at 200°C	5.Punching at 50°C	6.Soldering at 260°C
for 30 sec	50℃下冲孔	for 5sec
200℃下加热 30 秒		260℃ 焊锡 5 秒

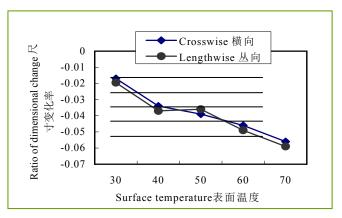
#### Punched hole shrinkage 冲孔后孔径收缩



#### Moisture absorption 吸水率



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



## Purchasing Information 采购信息

Type	Thickness	Copper Cladding	Regular Size(mm)	CTI Value
类型	厚度	铜箔厚度	常规尺寸	CTI 值
KB-3151HS	0.8mm ~	35μm	1020*1020mm (40"* 40")	600V
FR-1	1.6mm	70μm	1020*1220mm (40"* 48")	

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

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