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## H140H Halogen-free

### 特性/ Features

无卤产品, Halogen-free product, Tg: 135±5°C

阻燃性达到UL94V-0 / Flammability UL 94V-0 .

可依需求提供高CTI的无卤板材/ High CTI Halogen-free product available upon request (CTI 600)

### 应用领域/ Applications

手机、电脑、通讯设备、仪器仪表、摄像机、电视机、电子游戏机等。

Mobile phone, Computer, Communication equipment, Instrumentation, VCR, Television, Electronic game machine, etc.

### 主要特性 / General properties

检测项目 Item	单位 Unit	检测条件 Test Condition	规范值 Spec	典型值 Typical Value	
玻璃化转变温度 Tg	°C	DSC	135±5	133	
剥离强度 1oz Peel Strength	N/mm	288°C, 10S	≥ 1.05	1.42	
热应力 Thermal stress	S	288°C, solder dip	> 10	180 s No delamination	
弯曲强度 Flexural Strength	N/mm <sup>2</sup>	经向LW	≥ 415	580	
		纬向CW	≥ 345	475	
燃烧性 Flammability	—	E 24/125	UL94V-0	V-0	
表面电阻 Surface Resistivity	MΩ	After moisture	≥ 1.0×10 <sup>4</sup>	5.21×10 <sup>7</sup>	
体积电阻 Volume Resistivity	MΩ · cm	After moisture	≥ 1.0×10 <sup>6</sup>	5.10×10 <sup>8</sup>	
介电常数 Dielectric Constant	—	1 MHz C 24/23/50	≤ 5.4	4.6	
介质损耗角正切 Loss Tangent	—	1 MHz C 24/23/50	≤ 0.035	0.015	
耐电弧 Arc Resistance	S	D48/50+D0.5/23	≥ 60	120	
击穿电压 Dielectric Breakdown	KV	D48/50+D0.5/23	≥ 40	57	
吸水率 Moisture Absorption	%	D24/23	≤ 0.8	0.16	
热分解温度 Td	°C	Weight Loss 5%	≥ 325	358	
T288 (不覆铜)	min	TMA	≥ 5	12	
Z-CTE /50 - 260°C	%	TMA	≤ 4.0	3.9	
相比漏电起痕指数 CTI	V	IEC-60112	175~250	200	
卤素含量 Halogen content	CL	ppm	EDX-GP	≤ 900	310
	Br	ppm		≤ 900	30
	CL+Br	ppm		≤ 1500	350

Specimen Thickness : 1.6mm ;

Explanation: C: Humidity conditioning;

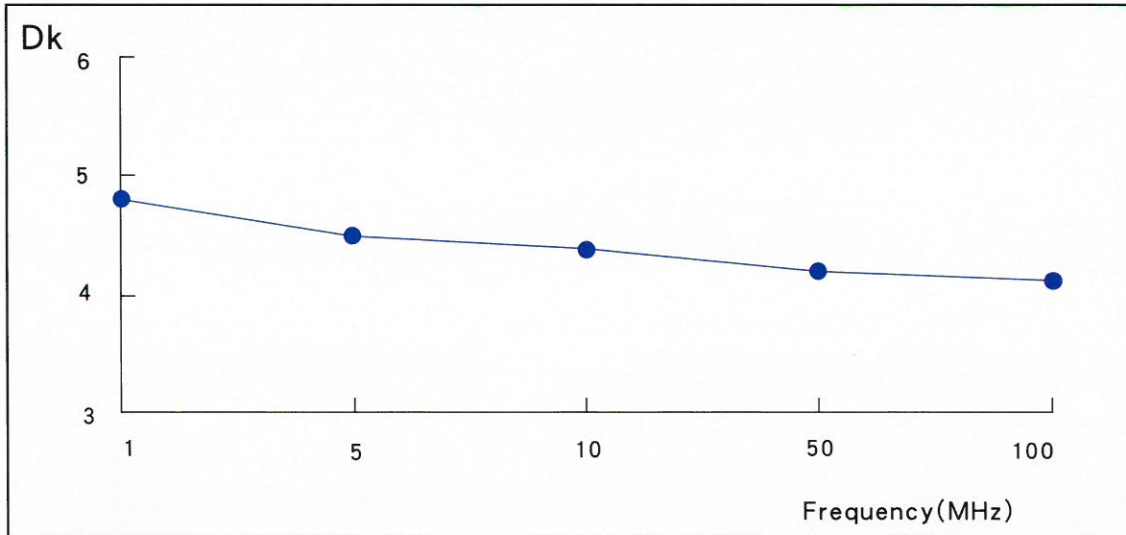
D: Immersion conditioning in distilled water ;

E: Temperature conditioning ;

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◆ 介电常数 / Dielectric constant



◆ 使用建议 / Suggestion for use

1、使用前请进行烘板处理：150 °C、2h。

Please baking the Laminate at 150 °C、2 hours before using .

2、由于层间结合力较常规 FR-4 差，钻孔加工时请注意。

钻孔参数主要取决于孔的大小、内层厚度、层数、铜箔厚度和叠层厚度。

以典型的 0.4~1.0mm 钻嘴孔径为例，其建议钻孔参数如下：

钻头转速：45~105 KRPM，进刀速度：50~150 IPM

缩刀速度：500~1000 IPM，建议使用次数：1500 HITS

叠层高度：≤2pnls(2~6layers), 1pnl(≥8layers)

覆层材料：0.2mm Aluminum

Please pay attention to the machining for the interbedded energy is lower than the normal FR-4 .

Drilling parameters are mainly dependent on hole size, layer thickness, layer number, copper thickness and stack height. The following drilling parameters are for reference only. Typical drilling parameters for 0.4~1.0 mm drills are as follows:

Spindle speed: 45~105 KRPM

Feed rate: 50~150 IPM

Retract rate: 500~1000 IPM

Sug. hit count: 1500 HITS

Stack height: ≤2pnls(2~6layers), 1pnl(≥8layers)

Entry Material: 0.2mm Aluminum

◆ 产品系列 / Purchasing information

厚度 Thickness	铜箔 Copper foil	标准尺寸 Standard size
0.10-3.2mm	12um-105um	37"×49"、41"×49"、43"×49"

※ Other sheet size and thickness could be available upon request