# KB-6160（ANSI：FR-4）

## Thin Core Laminate for Multilayer 多层电路板用薄内层板材

### Features 特 点

- 优异的尺寸稳定性和介电性能
  Excellent dimensional stability and electric strength
- 优良的耐热性能和机械性能
  Excellent heat resistance and mechanical properties
- 高速钻孔时产生的树脂污垢少
  Less resin smear in high speed drilling
- 优异的 UV 阻挡功能和 AOI 荧光特性
  UV Blocking and AOI compatible

### 应用领域

- 移动电话，计算机，检测设备，
  录像机，军用装备，导向系统等

### Applications

- Mobile phone, Computer, Instrumentation,
  Video recorder, Military equipment, Guidance systems

### Construction 迭配工艺

| Thickness | | Construction | Thickness | | Construction |
|---|---|---|---|---|---|
| mm | mil | | mm | mil | |
| 0.05 | 2 | 1 × (#106) | 0.356 | 14 | 2 × (#7628) |
| 0.064 | 2.5 | 1 × (#106) | 0.381 | 15 | 2 × (#7628) |
| 0.076 | 3 | 1 × (#1080) | 0.406 | 16 | 2 × (#7628) |
| 0.089 | 3.5 | 1 × (#3313) | 0.431 | 17 | 2×(#7630) |
| 0.102 | 4 | 1 × (#3313) | 0.457 | 18 | 2×(#7628) + 1×(#1080) |
| 0.125 | 5 | 1× (#2116) | 0.483 | 19 | 2×(#7628) + 1×(#2116) |
| 0.152 | 6 | 1 × (#1506) | 0.508 | 20 | 2×(#7628) + 1×(#2116) |
| 0.178 | 7 | 1 × (#7628) | 0.533 | 21 | 3 × (#7628) |
| 0.203 | 8 | 1 × (#7628) | 0.559 | 22 | 3 × (#7628) |
| 0.229 | 9 | 2 × (#2116) | 0.609 | 24 | 2×(#7628) + 2×(#2116) |
| 0.254 | 10 | 2 × (#2116) | 0.635 | 25 | 2×(#7628) + 2×(#2116) |
| 0.279 | 11 | 2 × (#2116) | 0.66 | 26 | 2×(#7628) + 2×(#2116) |
| 0.305 | 12 | 2 × (#1506) | 0.71 | 28 | 4 × (#7628) |
| 0.33 | 13 | 2 × (#1506) | 0.787 | 31 | 4 × (#7628) |

The thickness listed above is not including copper's thickness. 以上厚度不含铜厚

KB

# 产 品 技 术 资 料

# TECHNICAL INFORMATION

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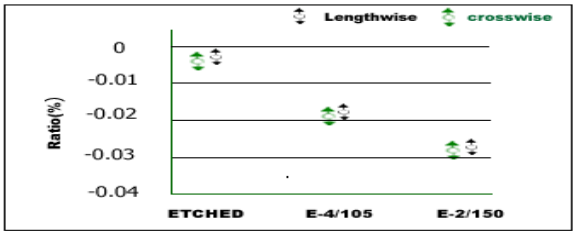
### General Properties 一般特性

| Test Item<br>测试项目 | Unit<br>单位 | Test Method<br>(IPC-TM-650)<br>测试方法 | Test Condition<br>处理条件 | Specification<br>（IPC-4101B）<br>规格值 | Typical Value<br>典型值 |
|---|---|---|---|---|---|
| Peel Strength (1 oz.)<br>铜箔剥离强度 | N/mm | 2.4.8 | 125℃ | ≥0.70 | 1.62 |
| | | | Float 288℃/ 10 Sec | ≥1.05 | 1.65 |
| Thermal stress<br>热应力 | Sec | 2.4.13.1 | Float 288℃/ unetched | ≥10 | 180 |
| Bow / Twist<br>弯弓度/翘曲度 | % | 2.4.22.1 | A | ≤ 1.0 | 0.17 / 0.18 |
| Flammability<br>燃烧性 | Rating | UL94 | UL94 | UL94V-0 | V-0 |
| Glass Transition (Tg)<br>玻璃化转变温度 | ℃ | 2.4.25 | E-2/150 （DSC） | ≥130 | 136 |
| Surface Resistivity<br>表面电阻 | MΩ | 2.5.17.1 | C-96/35/90 | $\geq 1.0\times10^4$ | $1.0\times10^6$ |
| Volume Resistivity<br>体积电阻 | MΩ-cm | 2.5.17.1 | C-96/35/90 | $\geq 1.0\times10^6$ | $1.0\times10^8$ |
| Dielectric Constant<br>介电常数 | — | 2.5.5.2 | Etched/@1 MHZ | ≤5.4 | 4.4 |
| Loss Tangent<br>介质损耗 | — | 2.5.5.2 | Etched/@1 MHZ | ≤0.035 | 0.022 |
| Arc Resistance<br>耐电弧性 | Sec | 2.5.1 | D-48/50+D-0.5/23 | ≥60 | 125 |
| Moisture Absorption<br>吸水率 | % | 2.6.2.1 | D-24/23 | ≤0.80 | 0.23 |
| Comparative Tracking Index<br>相比漏电起痕指数 | V | IEC 60112 | Etched/0.1% $NH_4Cl$ | AABUS | 175 |
| TD | ℃ | 2.4.24.6 | TGA | —— | 305 |
| Dimensional Stability<br>尺寸稳定性 | ppm | 3.9.1.2 | Warp | ±300 | -210 |
| | | | Fill | | -180 |

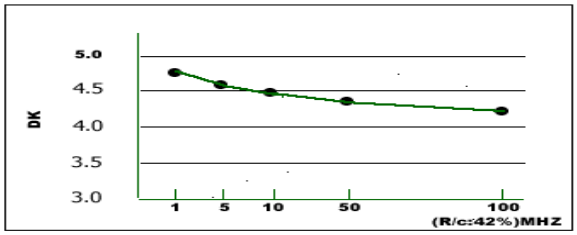
Remarks: Specimen Thickness:0.51mm 1/1 样品厚度：0.51mm 1/1 (不含铜厚)
A = Keep the specimen originally without any process 保持原样,不作处理
C = Temperature and humidity conditioning 恒温恒湿空气中处理
D = Immersing in distilled water with temperature control. 恒温水中处理
E = Temperature conditioning 恒温空气中处理;

### Speciality Chart 板材特性图

Dimensional stability 尺寸稳定性




Dielectric constant 介电常数




### Purchasing Information 采购信息

| Base Color 基板颜色 | Thickness 厚度 | Copper Cladding 铜箔厚度 | Regular Size（mm）常规尺寸 |
|---|---|---|---|
| 黄色<br>Yellow | 0.05mm ~<br>1.2mm | 12μm, 18μm,<br>35μm, 70μm<br>105μm | 940*1245mm （37" * 49"）<br>1042*1245mm （41" * 49"）<br>1093*1245mm （43" * 49"） |

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