

KB-6165 (ANSI: FR-4)

覆铜箔环氧玻纤布层压板

特点

- Tg 150°C (DSC 测试), 低 Z-轴 CTE 值
- 热裂解温度高
- 优良的耐热性, 能满足无铅制程要求
- 符合 IPC-4101B/124 的规范要求
- 非双氰胺固化体系, 不含填料
- 良好的耐金属离子迁移性

Features

- 150°C (By DSC), low Z-axis expansion
- High Temperature of Decomposition (Td)
- Excellent heat resistance and appropriate for Lead Free Assembly.
- IPC-4101B/124 specification is applicable .
- Dicy –free and no filler
- ANTI-CAF

General Properties 一般特性

| Test Item 测试项目 | Unit 单位 | Test Method (IPC-TM-650) 测试方法 | Test Condition 处理条件 | Specification (IPC-4101B) 规格值 | Typical Value 典型值 |
|-------------------------------------|------------------------|-------------------------------------|------------------------|-------------------------------------|----------------------|
| Peel Strength (1 oz.) 铜箔剥离强度 | N/mm | 2.4.8 | 125°C | ≥0.70 | 1.35 |
| | | | Float 288°C/ 10 Sec | ≥1.05 | 1.42 |
| Flammability 燃烧性 | Rating | UL94 | E-24/23 | UL94 V-0 | V-0 |
| Thermal stress 热应力 | Sec | 2.4.13.1 | Float288°C/unetched | ≥10 | 60 |
| Glass Transition (Tg) 玻璃转化温度 | °C | 2.4.25 | E-2/105 DSC | ≥150 | 153 |
| Surface Resistivity 表面电阻 | MΩ | 2.5.17.1 | C-96/35/90 | ≥1.0×10 ⁴ | 1.0×10 ⁷ |
| Volume Resistivity 体积电阻 | MΩ-cm | 2.5.17.1 | C-96/35/90 | ≥1.0×10 ⁶ | 1.0×10 ⁹ |
| Moisture Absorption 吸水性 | % | 2.6.2.1 | D-24/23 | ≤0.35(min0.51) | 0.16 |
| | | | | ≤0.80(max0.51) | 0.30 |
| Dielectric breakdown 介质击穿 | KV | 2.5.6 | D-48/50+D0.5/23 | ≥40 | 48 |
| Dielectric strength 介质强度 | KV/mm | 2.5.6.2 | D-48/50+D0.5/23 | ≥29 | 40 |
| Flexural Strength 抗弯强度 | N/mm ² | 2.4.4 | Warp | ≥415 | 560 |
| | | | Fill | ≥345 | 430 |
| Dielectric Constant 介电常数 | — | 2.5.5.2 | Etched/@1 MHZ | ≤5.4 | 4.5 |
| Loss Tangent 介质损耗 | — | 2.5.5.2 | Etched/@1 MHZ | ≤0.035 | 0.018 |
| Arc Resistance 耐电弧性 | Sec | 2.5.1 | D-48/50+D0.5/23 | ≥60 | 125 |
| CTE Z-Axis Expansion Z 轴热膨胀系数 | ppm/°C % (50-260°C) | 2.4.24 | E-2/105 TMA | ≤60/300 | 55/287 |
| | | | | ≤3.5 | 3.1 |
| TD | °C | 2.4.24.6 | TGA | ≥325 | 335 |
| CAF | H | - | 85%,85°C,50V DC | ≥1000 | 1000 |
| T-260 | min | 2.4.24.1 | TMA | ≥30 | 50 |
| T-288 | min | 2.4.24.1 | TMA | ≥5 | 23 |

Remarks: Specimen Thickness: 1.6 mm 样品厚度: 1.6 mm

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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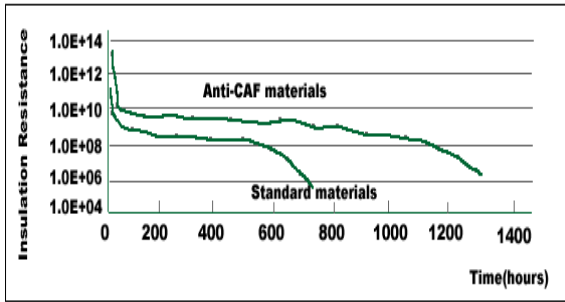
覆铜箔环氧玻纤布层压板

Other data for references 其它数据(仅供参考)

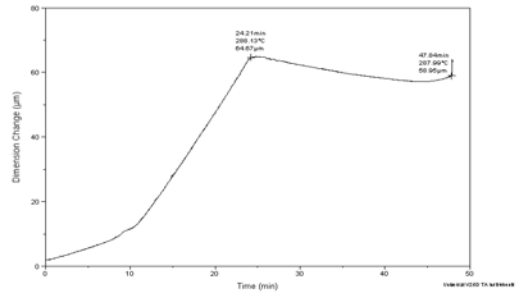
| Item | | Unit | Typical Value | Item | | Unit | Typical Value |
|-----------------|------|---------|---------------|------------------|------|-------------------|---------------|
| Young's modulus | Warp | Million | 3.5 | Poisson's ratio | Warp | -- | 0.14 |
| | Fill | psi | 3.2 | | Fill | -- | 0.13 |
| Tailors modulus | Warp | Million | 3.3 | Tensile strength | Warp | N/mm ² | 385 |
| | Fill | psi | 2.9 | | Fill | | 265 |

Speciality Chart 板材特性图

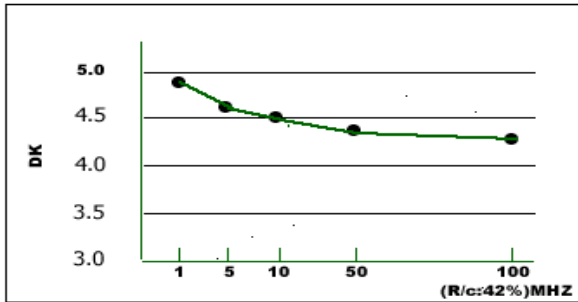
CAF 耐离子迁移



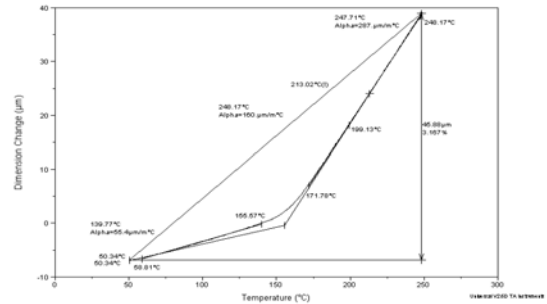
Delamination 分层时间(T-288 test by TMA)



Dielectric constant 介电常数



CTE Z 轴热膨胀系数 (test by TMA)



Applications 应用领域

- Computer, communication equipment, instrument, OA equipment, etc.
计算机及外围设备、通讯设备、仪器仪表、办公自动设备等

Purchasing Information 采购信息

| Base Color 基板颜色 | Thicknesses 厚度 | Copper Cladding 铜箔厚度 | Regular Sizes 常规尺寸 |
|--------------------|-------------------|---------------------------|--|
| 黄色 Yellow | 0.05mm ~ 3.2mm | 18µm /35µm 70µm /105µm | 940*1245mm (37" * 49") 1042*1245mm (41" * 49") 1093*1245mm (43" * 49") |

Note: Other sheet sizes and thicknesses could be available upon request.

可根据客户要求提供其它尺寸和厚度。