

Halogen-Free/Normal Tg/Low CTE

特性 (Feature)

- 无卤，无锑，无红磷  
Halogen, antimony and red phosphorous free
- 优良的耐热性  
Excellent thermal reliability
- 低的Z轴热膨胀系数  
Low Z-CTE
- 良好的耐CAF性能  
Anti-CAF capability

应用 (Application)

- 电脑及笔记本电脑  
Computer and NB
- 仪器仪表  
Instruments
- 消费电子  
Consumer electronics
- 汽车电子  
Automotive electronics

板材性能 (Laminate Properties)

| Test Item<br>测试项目                         |                                    | Test Method<br>(IPC-TM- 650)<br>测试方法 | Test Condition<br>处理条件         |              | Unit<br>单位        | Typical Value<br>典型值 |
|-------------------------------------------|------------------------------------|--------------------------------------|--------------------------------|--------------|-------------------|----------------------|
| Thermal<br>热性能                            | Thermal Stress<br>热应力              | 2.4.13.1                             | Float 288 °C / Unetched        |              | Sec               | ≥240                 |
|                                           | Glass Transition (Tg)<br>玻璃化转变温度   | 2.4.25                               | DSC                            |              | °C                | 141                  |
|                                           | CTE / Z-Axis Expansion<br>Z-轴热膨胀系数 | 2.4.24                               | Alpha 1                        |              | ppm/°C            | 45                   |
|                                           |                                    |                                      | Alpha 2                        |              |                   | 254                  |
|                                           |                                    |                                      | 50 - 260 °C                    |              | %                 | 3.3                  |
|                                           | X/Y CTE<br>X/Y-轴热膨胀系数              | 2.4.24                               | 40 °C - 125 °C                 |              | ppm/°C            | 12/15                |
|                                           | T-260                              | 2.4.24.1                             | TMA                            |              | min               | >60                  |
|                                           | T-288                              | 2.4.24.1                             | TMA                            |              | min               | >5                   |
| TD(5% weight loss)<br>Flammability<br>燃烧性 | 2.4.24.6<br>UL94                   | TGA<br>E-24/125                      |                                | °C<br>Rating | 350<br>V-0        |                      |
| Electrical<br>电性能                         | Surface Resistivity<br>表面电阻率       | 2.5.17.1                             | C-96/35/90                     |              | MΩ                | 2.7×10 <sup>8</sup>  |
|                                           | Volume Resistivity<br>体积电阻率        | 2.5.17.1                             | C-96/35/90                     |              | MΩ-cm             | 5.3×10 <sup>9</sup>  |
|                                           | Dielectric Breakdown<br>击穿电压       | 2.5.6                                | D-48/50+D0.5/23                |              | kV                | ≥45                  |
|                                           | Dielectric Constant<br>介电常数        | IEC61189-2-721                       | Etched<br>(RC50%)              | @ 1 GHz      | —                 | 4.6                  |
|                                           |                                    |                                      |                                | @ 10 GHz     |                   | 4.4                  |
|                                           | Loss Tangent<br>介质损耗               | IEC61189-2-721                       | Etched<br>(RC50%)              | @ 1 GHz      | —                 | 0.011                |
|                                           |                                    |                                      |                                | @ 10 GHz     |                   | 0.013                |
|                                           | CTI<br>相对漏电起痕指数                    | IEC60112                             | Etched/0.1% NH <sub>4</sub> CL |              | V                 | ≥175                 |
| Arc Resistance<br>耐电弧性                    | 2.5.1                              | D-48/50+D-0.5/23                     |                                | Sec          | 120               |                      |
| Mechanical<br>机械性能                        | Peel Strength (1 oz.)<br>铜箔剥离强度    | 2.4.8                                | A                              |              | N/mm              | --                   |
|                                           |                                    |                                      | Float 288 °C / 10 Sec          |              |                   | 1.40                 |
|                                           | Flexural Strength<br>弯曲强度          | 2.4.4                                | Lengthwise                     |              | N/mm <sup>2</sup> | 550                  |
|                                           |                                    |                                      | Crosswise                      |              |                   | 490                  |
|                                           | Water Absorption<br>吸水率            | 2.6.2.1                              | D-24/23                        |              | %                 | 0.11                 |

Remarks:  
- Typical Values for reference only.  
- Standard Values according to IPC-4101E/127  
- Typical Value of Specimen thickness is 1.6mm (#7628\*8)

注:  
- 典型值只供参考  
- 规格值参照 IPC-4101E/127  
- 样品的厚度为 1.6mm (#7628\*8)