

### Lead-Free/Tg 150/Low CTE

#### 特性 (Feature)

- 无铅 Tg>150°C  
Lead-free DSC Tg>150°C
- 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                   | 157                 |       |
|                         | CTE / Z-Axis Expansion<br>Z-轴热膨胀系数  | 2.4.24                         | Alpha 1                 | ppm/°C               | 37                  |       |
|                         |                                     |                                | Alpha 2                 | ppm/°C               | 230                 |       |
|                         | X/Y CTE<br>X/Y-轴热膨胀系数               | 2.4.24                         | 50 - 260 °C             | %                    | 2.8                 |       |
|                         | T-260                               | 2.4.24.1                       | 40 °C - 125 °C          | ppm/°C               | 12/15               |       |
|                         | T-288                               | 2.4.24.1                       | TMA                     | min                  | > 60                |       |
|                         | TD(5% weight loss)                  | 2.4.24.6                       | TMA                     | min                  | > 30                |       |
| Flammability<br>燃烧性     | UL94                                | TGA                            | °C                      | 352                  |                     |       |
| Electrical<br>电性能       | Surface Resistivity<br>表面电阻率        | 2.5.17.1                       | E-24/125                | Rating               | V-0                 |       |
|                         | Volume Resistivity<br>体积电阻率         | 2.5.17.1                       | C-96/35/90              | MΩ                   | 4.6×10 <sup>8</sup> |       |
|                         | Dielectric Breakdown<br>击穿电压        | 2.5.6                          | C-96/35/90              | MΩ-cm                | 5.4×10 <sup>9</sup> |       |
|                         | Dielectric Constant<br>介电常数         | 2.5.5.9                        | Etched<br>(RC50%)       | @ 1 MHz              | —                   | 4.8   |
|                         |                                     |                                |                         | @ 1 GHz              | —                   | 4.6   |
|                         | Loss Tangent<br>介质损耗                | 2.5.5.9                        | Etched<br>(RC50%)       | @ 1 MHz              | —                   | 0.015 |
|                         |                                     |                                |                         | @ 1 GHz              | —                   | 0.016 |
| 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                     | 127                  |                     |       |
| 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   | N/mm                 | 1.45                |       |
|                         | Flexural Strength<br>弯曲强度           | 2.4.4                          | Lengthwise              | N/mm <sup>2</sup>    | 540                 |       |
|                         |                                     |                                | Crosswise               | N/mm <sup>2</sup>    | 480                 |       |
| Water Absorption<br>吸水率 | 2.6.2.1                             | D-24/23                        | %                       | 0.09                 |                     |       |

Remarks:

- Typical Values for reference only.
- Standard Values according to IPC-4101E /99/101
- Typical Value of Specimen thickness is 1.6mm (8\*7628)

注:

- 典型值只供参考
- 规格值参照 IPC-4101E//99/101
- 样品的厚度为 1.6mm (#7628\*8)

