

# VT-42C

UL Approval: E214381 Version: Rev. B2

## 技术资料表

VT-42C 基板 / 半固化片

### 概述

- 相对耐漏电起痕指数：大于600V
- 双氰胺固化体系
- 标准FR-4
- UV 遮蔽

### 应用

电源板、电视机、  
电冰箱、空调、  
洗衣机等

### 产品规格

- Core Thickness: .004" (0.1mm) to .200" (5mm), available in sheet or panel form
- Copper Foil: 1/4oz to 12oz
- E-Glass styles: 7628, etc
- Prepregs are available in roll or panel form

注：由于CTI值与表面粗糙度密切相关，当客户要求2 oz以上的铜厚时，我们建议使用反转铜箔。

### 存储条件&保存期限

|                   |                   | Prepreg           |                  | Laminate             |
|-------------------|-------------------|-------------------|------------------|----------------------|
| Storage Condition | Temperature       | Below 23°C (73°F) | Below 5°C (41°F) | Room                 |
|                   | Relative Humidity | Below 55% RH      | /                | /                    |
| Shelf Life        |                   | 3 Months          | 6 Months         | 24 Months (airproof) |

过期的半固化片在使用前需要复测以确认特性。

# VT-42C

## DATASHEETS

### 特性表 IPC-4101C Specification Sheet(s)/21

| Properties                       | Test Method         | Units            | Specification           | Typical Value     |
|----------------------------------|---------------------|------------------|-------------------------|-------------------|
| <b>Thermal Properties</b>        |                     |                  |                         |                   |
| Glass Transition Temp. (Tg)      |                     |                  |                         |                   |
| DSC                              | IPC-TM-650 2.4.25   | °C               | 110 minimum             | 125~130           |
| TMA                              | IPC-TM-650 2.4.24   | °C               | -                       | -                 |
| Td                               | ASTM D3850          | °C               | -                       | 310               |
| T260                             | IPC-TM-650 2.4.24.1 | Minute           | -                       | 25                |
| T288                             | IPC-TM-650 2.4.24.1 | Minute           | -                       | 2                 |
| Thermal Stress @ 288°C           | IPC-TM-650 2.4.13.1 | Second           | Pass 10s                | 300               |
| Z-axis CTE                       |                     |                  |                         |                   |
| Before Tg                        | IPC-TM-650 2.4.24   | ppm/°C           | -                       | 40                |
| After Tg                         | IPC-TM-650 2.4.24   | ppm/°C           | -                       | 220               |
| Total Expansion (50~260°C)       | IPC-TM-650 2.4.24   | %                | -                       | 3.5               |
| MOT                              | UL 94               | °C               | -                       | 130               |
| <b>Electrical Properties</b>     |                     |                  |                         |                   |
| Dielectric Constant @ 1GHz       | IPC-TM-650 2.5.5.9  | -                | 5.4 maximum             | 4.8               |
| Dissipation Factor @ 1GHz        | IPC-TM-650 2.5.5.9  | -                | 0.035 minimum           | 0.018             |
| Volume Resistivity               |                     |                  |                         |                   |
| After Moisture Resistance        | IPC-TM-650 2.5.17.1 | MΩ-cm            | 10 <sup>6</sup> minimum | 5*10 <sup>8</sup> |
| E-24/125                         | IPC-TM-650 2.5.17.1 | MΩ-cm            | 10 <sup>3</sup> minimum | 5*10 <sup>6</sup> |
| Surface Resistivity              |                     |                  |                         |                   |
| After Moisture Resistance        | IPC-TM-650 2.5.17.1 | MΩ               | 10 <sup>4</sup> minimum | 5*10 <sup>7</sup> |
| E24/125                          | IPC-TM-650 2.5.17.1 | MΩ               | 10 <sup>3</sup> minimum | 5*10 <sup>6</sup> |
| Electrical Strength              | IPC-TM-650 2.5.6.2  | Volt/mil (KV/mm) | 762 (30) minimum        | 1200~1400 [54]    |
| Dielectric Breakdown             | IPC-TM-650 2.5.6    | KV               | 40 minimum              | 60                |
| Comparative Tracking Index (CTI) | ASTM D3638          | Rating (Volt)    | -                       | Grade 0 (≥600)    |
| Arc Resistance                   | ASTM D495           | Second           | -                       | 111               |
| <b>Mechanical Properties</b>     |                     |                  |                         |                   |
| Peel Strength (1oz)              |                     |                  |                         |                   |
| As received                      | IPC-TM-650 2.4.8    | lb/in (N/mm)     | -                       | 10~12 (1.7~2.0)   |
| After thermal stress             | IPC-TM-650 2.4.8    | lb/in (N/mm)     | 6 (1.05) minimum        | 9~12 (1.5~2.0)    |
| Flexural Strength                |                     |                  |                         |                   |
| Warp                             | IPC-TM-650 2.4.4    | Kpsi (MPa)       | 60 (415) minimum        | 87 (600)          |
| Fill                             | IPC-TM-650 2.4.4    | Kpsi (MPa)       | 50 (345) minimum        | 72 (500)          |
| <b>Physical Properties</b>       |                     |                  |                         |                   |
| Moisture Absorption              | IPC-TM-650 2.6.2.1  | %                | 0.80 maximum            | 0.25              |
| Flammability                     | UL-94               | Rating           | V0 minimum              | V0                |

所有提供的测试数据均为典型值，非特定规范。