



Autolad2G

(FR-15.1) Hi-Tg, CTI \geq 600V, HFR-free, Automotive-used PCB Base Material

FEATURES

- CTI \geq 600V for hash environment and critical design for safety creepage distance
- High voltage anti-CAF
- Extreme thermal cycling resistance
- MOT 150 $^{\circ}$ C (\geq 0.63mm)

APPLICATIONS

High power & high voltage applications
PEV & HEV automotive electrification
On board charger (OBC), etc.

GENERAL PROPERTIES

| Test Items | Test Method | Test Condition | Unit | Typical Value |
|---------------------------|---------------------|-------------------------------------|-------------------|----------------------|
| Tg | IPC-TM-650 2.4.24.4 | DMA | $^{\circ}$ C | 190 |
| | IPC-TM-650 2.4.25D | DSC | | 175 |
| Td | IPC-TM-650 2.4.24.6 | TGA (5% wt. loss) | $^{\circ}$ C | 402 |
| T288 | IPC-TM-650 2.4.24.1 | TMA | min | 45 |
| T260 | IPC-TM-650 2.4.24.1 | TMA | min | 60 |
| Thermal Stress | IPC-TM-650 2.4.13.1 | 288 $^{\circ}$ C, solder dipping | s | >100 |
| CTE (Z-axis) | IPC-TM-650 2.4.24 | Before Tg | ppm/ $^{\circ}$ C | 45 |
| | IPC-TM-650 2.4.24 | After Tg | ppm/ $^{\circ}$ C | 210 |
| | IPC-TM-650 2.4.24 | 50-260 $^{\circ}$ C | % | 2.2 |
| Permittivity (1GHz)* | IPC-TM-650 2.5.5.9 | C-24/23/50 | - | 4.3 |
| Loss Tangent (1GHz)* | IPC-TM-650 2.5.5.9 | C-24/23/50 | - | 0.015 |
| Volume Resistivity | IPC-TM-650 2.5.17.1 | C-96/35/90 | M Ω -cm | 4.83×10^7 |
| Surface Resistivity | IPC-TM-650 2.5.17.1 | C-96/35/90 | M Ω | 4.98×10^6 |
| Arc Resistance | IPC-TM-650 2.5.1 | D-48/50+D-0.5/23 | s | 130 |
| Dielectric Breakdown | IPC-TM-650 2.5.6 | D-48/50+D-0.5/23 | kV | 45+kV NB |
| Peel Strength (1oz) | IPC-TM-650 2.4.8 | 288 $^{\circ}$ C/10s | N/mm [lb/in] | 1.3 [7.43] |
| Flexural Strength (LW/CW) | IPC-TM-650 2.4.4 | A | Mpa | 520/400 |
| Water Absorption | IPC-TM-650 2.6.2.1 | D-24/23 | % | 0.09 |
| Flammability | UL94 | C-48/23/50 | Rating | V-0 |
| CTI | IEC 60112 | A | Rating | PLC 0 (\geq 600V) |

Remark:

1. Specification sheet: IPC-4101/130, is for your reference only.
2. All the typical value is based on the 1.6mm (8X7628) specimen, “*” is based on the 1.0mm(9X2116) specimen.
3. In order to satisfy CTI \geq 600V, 2116(RC \geq 54%), 7628(RC \geq 45%) or above thickness prepreg is suggested to be used for outer prepreg layer. If you have any queries, please turn to Shengyi Technology Co., Ltd for detailed information.
4. All the typical value listed above is for your reference only, please turn to Shengyi Technology Co., Ltd for detailed information, and all rights from this data sheet are reserved by Shengyi Technology Co., Ltd.