# Autolad2G

## (FR-15.1) Halogen-free, High-Tg, High-CTI, Automotive-use Materials

### FEATURES

- CTI≥600V for hash environment
- High voltage anti-CAF
- Extreme thermal cycling resistance
- MOT 150℃ (≥0.63mm)
- Halogen, antimony and red phosphorous free

### 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 | ℃ | 190 |
| | IPC-TM-650 2.4.25D | DSC | | 175 |
| Td | IPC-TM-650 2.4.24.6 | TGA (5% wt. loss) | ℃ | 402 |
| T288 | IPC-TM-650 2.4.24.1 | TMA | min | 60 |
| T260 | IPC-TM-650 2.4.24.1 | TMA | min | 60 |
| Thermal Stress | IPC-TM-650 2.4.13.1 | 288℃, solder dipping | s | ＞100 |
| CTE (Z-axis) | IPC-TM-650 2.4.24 | Before Tg | ppm/℃ | 35 |
| | IPC-TM-650 2.4.24 | After Tg | ppm/℃ | 190 |
| | IPC-TM-650 2.4.24 | 50-260℃ | % | 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 | MΩ-cm | $4.83\times10^{7}$ |
| Surface Resistivity | IPC-TM-650 2.5.17.1 | C-96/35/90 | MΩ | $4.98\times10^{6}$ |
| 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℃/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(≥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. 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.

# Autolad2GB

(FR-15.1) Bonding Prepreg for Autolad2G

## PREPREG PARAMETERS

| Glass fabric type | Resin content (%) | Cured thickness (mm) | Standard size (Roll type) |
|---|---|---|---|
| 1037 | 73 | 0.048 | 1.260m×150m |
| | 75 | 0.053 | |
| 106 | 73 | 0.050 | |
| | 77 | 0.060 | |
| 1067 | 66 | 0.050 | |
| | 71 | 0.060 | |
| | 77 | 0.076 | |
| 1080/1078 | 66 | 0.076 | 1.260m×300m |
| | 69 | 0.085 | |
| | 71 | 0.092 | |
| | 74 | 0.104 | |
| 3313 | 58 | 0.102 | |
| 2116 | 54 | 0.117 | 1.260m×250m |
| | 57 | 0.127 | |
| | 60 | 0.134 | |
| | 63 | 0.150 | |
| 7628 | 43 | 0.180 | 1.260m×150m |
| | 45 | 0.190 | |
| | 48 | 0.200 | |
| | 50 | 0.210 | |

Remark: In order to satisfy CTI≥600V, 2116(RC≥54%)，7628(RC≥45%) or above thickness prepreg is suggested to be used for outer prepreg layer.

## HOT PRESSING CYCLE

- The heat-up rate depends on the inner copper or the structure of multilayer PCB.
- Curing time: >60min (185~195℃).
- If you need any more detail information, please turn to Shengyi Technology Co., Ltd.

## STORAGE CONDITION

- 3 months when stored at < 23℃ and <50% RH.
- 6 months when stored at <5℃. Normalize in room temperature for at least 4h before using.
- Beware of moisture, always keep wrapped in damp-proof material. Keeping in normal condition, prepreg might absorb moisture and its bonding strength would be weakened.
- Avoid UV-rays and strong light.