



S1150GH

(UL ANSI: FR-4.1) High Performance, Mid-Tg Halogen-free Material

FEATURES

- Lead-free compatible and excellent CAF resistance
- Lower Z-CTE
- Halogen, antimony and red phosphorous free
- For advanced HDI application

APPLICATIONS

Smartphone, Tablet, NB
LED, Game station
Communication equipment

GENERAL PROPERTIES

| Test Items | Test Method | Test Condition | Unit | Typical Value |
|---------------------------|---------------------|------------------------------|-----------------|---------------------|
| Tg | IPC-TM-650 2.4.25D | DSC | °C | 160 |
| | IPC-TM-650 2.4.24.4 | DMA | °C | 170 |
| Td | IPC-TM-650 2.4.24.6 | TGA (5% W.L) | °C | 400 |
| 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°C, solder dip | - | Pass |
| CTE (Z-axis) | IPC-TM-650 2.4.24 | Before Tg | ppm/°C | 35 |
| | IPC-TM-650 2.4.24 | After Tg | ppm/°C | 189 |
| | IPC-TM-650 2.4.24 | 50-260°C | % | 2.3 |
| Permittivity | IPC-TM-650 2.5.5.9 | C-24/23/50, (R/C: 50%, 1GHz) | - | 4.30 |
| Loss Tangent | IPC-TM-650 2.5.5.9 | C-24/23/50, (R/C: 50%, 1GHz) | - | 0.010 |
| Volume Resistivity | IPC-TM-650 2.5.17.1 | C-96/35/90 | MΩ-cm | 6.0×10 ⁸ |
| Surface Resistivity | IPC-TM-650 2.5.17.1 | C-96/35/90 | MΩ | 8.0×10 ⁷ |
| Arc Resistance | IPC-TM-650 2.5.1 | D-48/50+D-0.5/23 | s | 148 |
| 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°C/10s | N/mm [lb/in] | 1.35 [7.71] |
| Flexural Strength (LW/CW) | IPC-TM-650 2.4.4 | A | Mpa | 550/430 |
| Water Absorption | IPC-TM-650 2.6.2.1 | D-24/23 | % | 0.09 |
| Flammability | UL94 | C-48/23/50 | Rating | V-0 |

Remark:

1. All the typical value is based on the 1.6mm (8*7628) specimen. The Dk and Df value is based on 50% RC.
2. 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.

Explanations: C=Humidity conditioning; D=Immersion conditioning in distilled water; E=Temperature conditioning.

The figures following the letter symbols indicate with the first digit the duration of the preconditioning in hours, with the second digit the preconditioning temperature in °C and with the third digit the relative humidity.



S1150GHB PREPREG

(UL ANSI: FR-4.1) Bonding Prepreg For S1150GH

PREPREG PARAMETERS

| Glass fabric type | Resin content (%) | Cured thickness (mm) |
|-------------------|-------------------|----------------------|
| 1027 | 72 | 0.041 |
| | 75 | 0.046 |
| | 77 | 0.051 |
| 1037 | 72 | 0.048 |
| | 75 | 0.053 |
| | 77 | 0.058 |
| 106 | 72 | 0.051 |
| | 75 | 0.056 |
| | 77 | 0.061 |
| 1067 | 70 | 0.058 |
| | 72 | 0.064 |
| | 75 | 0.071 |

Other type, resin content and size could be available upon request.

HOT PRESSING CYCLE

- Kiss pressure: 70-100psi (5-7Kg/cm²)
- Full pressure: 350-430psi (25-30Kg/cm²) apply at 80-100°C
- Heating rate: 1.5-2.5°C/min (80-140°C)
- Curing condition: 180°C/60min
- Cooling rate: <2°C/min (≤1.5°C/min is preferred)

The hot pressing parameter is for your reference only. If you need any more detail information, please turn to Shengyi Technology Co., Ltd.

STORAGE CONDITION

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