



ST115G

Halogen-Free, High Thermal Conductivity CCL

FEATURES

- Excellent heat dissipation
- Excellent thermal and insulation reliability
- Lower Z-axis CTE., High CTI
- Halogen-free, Tg 175°C (DMA)

APPLICATIONS

- PCB heat dissipation solution
- Automotive Electronics, LED Headlamp
- Consumer Electronics (Intelligent terminal, SSD)

GENERAL PROPERTIES

| Test Items | Test Method | Test Condition | Unit | Typical Value |
|----------------------------|---------------------|-------------------|---------|-----------------|
| Thermal Conductivity | ASTM D5470 | A | W/(m•K) | 1.6 |
| | ASTM E1461 | | | 2.0 |
| Tg | IPC-TM-650 2.4.25c | DSC | °C | 170 |
| Tg | IPC-TM-650 2.4.24.4 | DMA | °C | 175 |
| Td | IPC-TM-650 2.4.24.6 | TGA (5% W.L) | °C | 410 |
| T288 | IPC-TM-650 2.4.24.1 | TMA | min | >30 |
| Thermal Stress | IPC-TM-650 2.4.13.1 | 288°C, solder dip | - | >30min |
| CTE(Z-axis) | IPC-TM-650 2.4.24 | Before Tg | ppm/°C | 37 |
| | IPC-TM-650 2.4.24 | After Tg | ppm/°C | 166 |
| | IPC-TM-650 2.4.24 | 50-260°C | % | 2.2 |
| Dielectric Constant (1GHz) | IPC-TM-650 2.5.5.9 | C-24/23/50 | - | 5.10 |
| Dissipation Factor (1GHz) | IPC-TM-650 2.5.5.9 | C-24/23/50 | - | 0.0104 |
| Volume Resistivity | IPC-TM-650 2.5.17.1 | C-96/35/90 | MΩ-cm | 10 ⁸ |
| Surface Resistivity | IPC-TM-650 2.5.17.1 | C-96/35/90 | MΩ | 10 ⁷ |
| Arc Resistance | IPC-TM-650 2.5.1 | D-48/50+D-0.5/23 | S | 200 |
| Dielectric Breakdown | IPC-TM-650 2.5.6 | D-48/50+D-0.5/23 | KV | >45 |
| Peel Strength(10z) | IPC-TM-650 2.4.8 | 288°C/10s | N/mm | 1.05 |
| Water Absorption | IPC-TM-650 2.6.2.1 | E-1/105+D-24/23 | % | 0.11 |
| Flammability | UL94 | C-48/23/505 | Rating | V-0 |
| CTI | IEC60112 | A | Rating | PLC 0 |

Remarks:

1. All the typical value is based on the 1.0mm specimen, while the Tg is for specimen≥0.50mm.
2. All the typical values listed above are for your reference only and not intended for specification. Please contact Shengyi Technology Co., Ltd. for detailed information. All rights from this data sheet are reserved by Shengyi Technology Co., Ltd.
3. UL certificated Single/Double side PCB min. thickness 0.38mm.

Explanation: C=Humidity conditioning, D=Immersion conditioning in distilled water, E=Temperature conditioning
The first digit following the letter indicates the duration of preconditioning in hours, the second digit the preconditioning temperature in °C and the third digit the relative humidity.



ST115G PREPREG

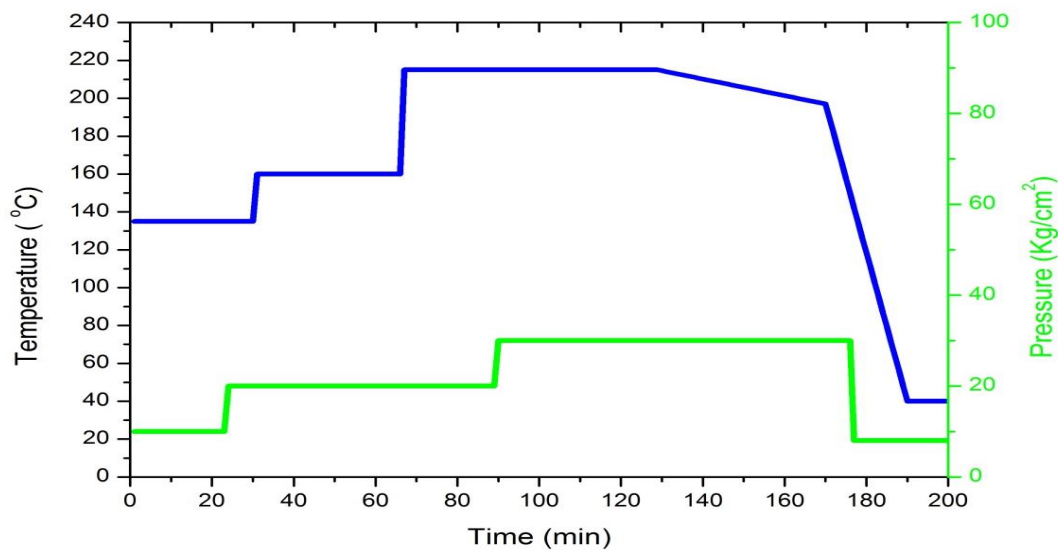
Bonding Prepreg For ST115G

PREPREG PARAMETERS

| Glass fabric type | Resin content (%) | Cured thickness (um) | Standard size (Roll type) |
|-------------------|-------------------|----------------------|---------------------------|
| 1080 | 85 | 138 | 1.260m×150m |
| 106 | 90 | 105 | |
| 1027 | 88 | 72 | |
| 1027 | 90 | 86 | |

Standar prepreg type ,resin content and size could be available upon request,, 1080 specification is not recommended for $\geq 3oz$ copper filler. please turn to Shengyi Technology Co.,Ltd for detailed information.

HOT PRESSING CYCLE



- Heat up rate: 2.5-3.5°C/min (80-140°C).
- Curing time: >90min (>190°C).
- The hot pressing parameter is for your reference only, please turn to Shengyi Technology Co., Ltd for detailed information.

STORAGE CONDITION

- Thress months when stored at < 23°C and <50% RH.
- Six 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.Were kept in normal condition, prepreg might absorb moisture and its bonding strength would be weakened.