

S1141

(UL ANSI:FR-4.0)UV Blocking

FEATURES

- Tg140℃ (DSC).
- UV Blocking/AOI Compatible.
- Excellent mechanical processability.

APPLICATIONS

Computer, Instrumentation, VCR, communication equipment, electronic game machine, automotive electronics, aviation, and etc.

Not suitable for Anti-CAF application.

GENERAL PROPERTIES

| Test Item | Treatment Condition | Unit | Property Data | | |
|----------------------------|--------------------------------------|------------------|-------------------------|------------------------|-------|
| | | | SPEC | Typical Value | |
| Tg | DSC | ℃ | ≥130 | 140 | |
| Flammability | C-48/23/50 | - | V-0 | V-0 | |
| | E-24/125 | | | | |
| Volume Resistivity | After moisture resistance | MΩ-cm | ≥10 ⁶ | 5.2×10 ⁸ | |
| | E-24/125 | | ≥10 ³ | 5.2×10 ⁶ | |
| Surface Resistivity | After moisture resistance | MΩ | ≥10 ⁴ | 5.4×10 ⁷ | |
| | E-24/125 | | ≥10 ³ | 5.6×10 ⁶ | |
| Arc Resistance | D-48/50+D-0.5/23 | S | ≥60 | 120 | |
| Dielectric Breakdown | D-48/50+D-0.5/23 | KV | ≥40 | 60 | |
| Dielectric Constant (1MHz) | C-24/23/50 | - | ≤5.4 | 4.6 | |
| Dissipation Factor (1MHz) | C-24/23/50 | - | ≤0.035 | 0.015 | |
| Thermal Stress | Unetched | 288℃, solder dip | >10s No delamination | 60s No delamination | |
| | Etched | | | | |
| Peel Strength | 1oz | 288℃, 10s | N/mm | ≥1.05 | 1.8 |
| | Cu. Foil | 125℃ | | | |
| Flexural Strength | LW | A | MPa | ≥415 | 600 |
| | CW | | | ≥345 | 500 |
| Water Absorption | D-24/23 | % | ≤0.80 | 0.15 | |
| CTE Z-axis | Before Tg | TMA | μm/m℃ | - | 65 |
| | After Tg | TMA | μm/m℃ | - | 300 |
| | 50~260℃ | TMA | % | - | 4.5 |
| Td | 10℃/min, N ₂ , 5% Wt Loss | ℃ | - | - | 310 |
| T260 | TMA | min | - | - | 15 |
| T288 | TMA | min | - | - | 2 |
| CTI | IEC60112 Method | V | PLC 3(175V--249V) | - | PLC 3 |

Remarks: 1.Specification sheet:IPC-4101/21, is for your reference only.
 2.All the typical value is based on the 1.6mm specimen, while the Tg is for specimen ≥0.50mm.
 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.

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

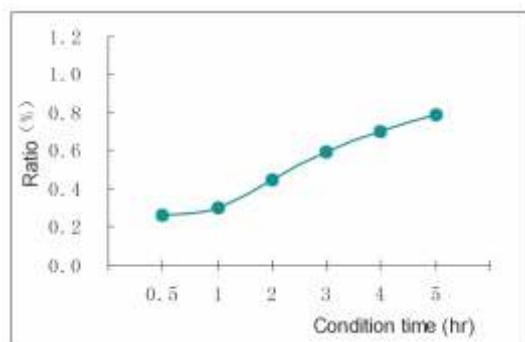
The figures following the letter symbols indicate with the first digit the duration of the preconditioning in hours, with the second digit the preconditioning temperature in ℃ and with the third digit the relative humidity.



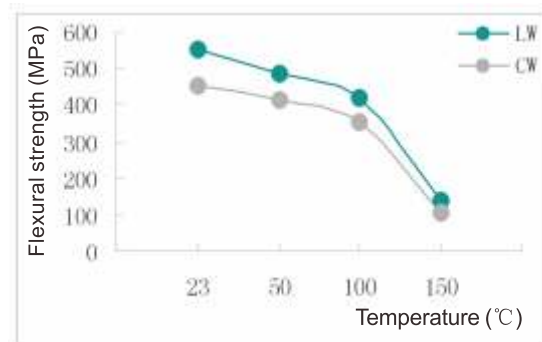
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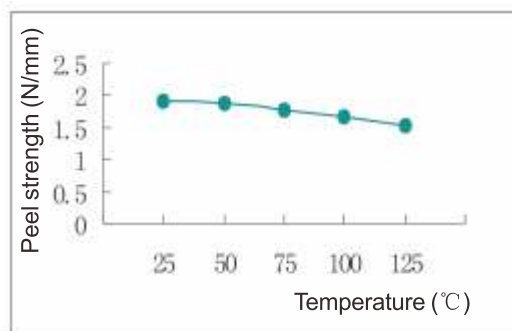
Water absorption at pressure cooker



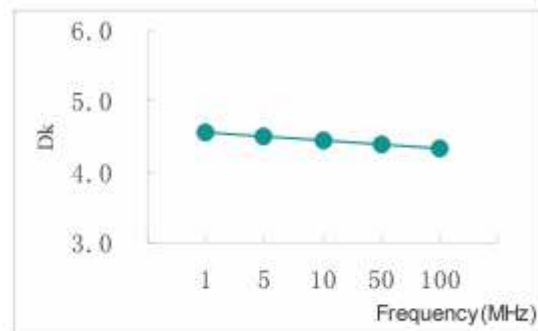
Flexural strength



Peel strength



Dielectric constant



PURCHASING INFORMATION

| Thickness | Copper foil | Standard Size | |
|-----------------|-------------|----------------------------|--------------------------|
| 0.05mm to 3.2mm | 12 μ m | 1,020×1,220mm (40" × 48") | 915×1,220mm (36" × 48") |
| | to 105 μ m | 1,070×1,220mm (42" × 48") | |

- ✘ Other sheet size and thickness could be available upon request.
- ✘ UL认可单、双面PCB板，最小厚度0.38mm。

S0401 PREPREG

(UL ANSI:FR-4.0) Bonding Prepreg For S1141

FEATURES

- Tg140°C (DSC) .
- UV Blocking/AOI Compatible.
- Excellent bonding strength ,wide operating window.

PREPREG PARAMETERS

| Glass fabric type | Resin content(%) | Cured thickness(mm) | DK(1GHz) | Df(1GHz) | Standard size (Roll type) |
|-------------------|------------------|---------------------|----------|----------|---------------------------|
| 106/1037 | 71 | 0.050 | 3.5 | 0.028 | 1.260m X150m |
| | 74 | 0.060 | 3.4 | 0.029 | |
| | 76 | 0.065 | 3.4 | 0.029 | |
| 1080/1078 | 64 | 0.075 | 3.7 | 0.024 | 1.260m X300m |
| | 68 | 0.090 | 3.6 | 0.027 | |
| 2313 | 55 | 0.103 | 3.9 | 0.020 | |
| 2116 | 50 | 0.114 | 4.0 | 0.018 | 1.260m X250m |
| | 52 | 0.120 | 4.0 | 0.019 | |
| | 55 | 0.129 | 3.9 | 0.020 | |
| | 58 | 0.140 | 3.8 | 0.022 | |
| 1506 | 42 | 0.150 | 4.2 | 0.014 | 1.260m X150m |
| | 45 | 0.160 | 4.1 | 0.015 | |
| | 48 | 0.175 | 4.0 | 0.017 | |
| 7628 | 43 | 0.200 | 4.2 | 0.014 | |
| | 45 | 0.205 | 4.1 | 0.015 | |
| | 48 | 0.220 | 4.0 | 0.017 | |
| | 50 | 0.230 | 4.0 | 0.018 | |

Remark: DK and Df are tested according to IPC TM-650 2.5.5.9

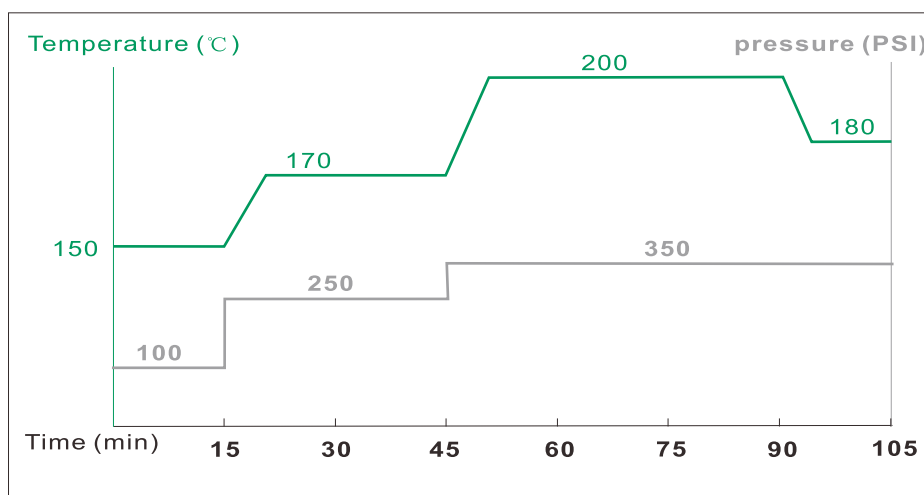
Prepreg type, resin content and size could be available upon request.



S0401 PREPREG

(UL ANSI:FR-4.0) Bonding Prepreg For S1141

HOT PRESSING CYCLE



Heat-up rate: 1.0~2.5°C/min(80~140°C)

Curing time: >30min(170~180°C)

The hot pressing parameters is for your reference only, please turn to Shengyi Technology Co., Ltd for detailed information.

PREPREG STORAGE

STORAGE CONDITION

- Three 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.
- Avoid UV-rays and strong light.