



S1000-2

(UL ANSI:FR-4) Low CTE / Hi-Tg / Excellent Thermal Resistance

特点

- 无铅兼容FR-4板材。
- 高Tg 170℃ (DSC), UV Blocking和AOI兼容。
- 高耐热性。
- 较低Z-CTE值。
- 优异的通孔可靠性。
- 优异的Anti-CAF性能。
- 低吸水率。

FEATURES

- Lead-free compatible FR-4 laminate.
- Tg 170℃ (DSC), UV Blocking / AOI compatible.
- High heat resistance .
- Lower Z-axis CTE.
- Excellent through-hole reliability.
- Excellent anti-CAF performance.
- Low water absorption.

应用领域

适合于厚铜、厚径比较大结构的高多层印制线路板，广泛应用于计算机与通讯设备，工业控制用高档仪器仪表、路由器等。

APPLICATIONS

Suitable for high aspect ratio and high-layer PCB. Widely used in computer, communication equipment, precise apparatus and instrument, router, and etc.

GENERAL PROPERTIES

Test Item		Treatment Condition	Unit	Property Data	
				SPEC	Typical Value
Tg		DSC	℃	≥170	180
		DMA		-	185
Flammability		C-48/23/50	Rating	V-0	V-0
		E-24/125+des			
Volume Resistivity		After moisture resistance	MΩ-cm	≥10 ⁶	2.2×10 ⁸
		E-24/125		≥10 ³	4.5×10 ⁶
Surface Resistivity		After moisture resistance	MΩ	≥10 ⁴	7.9×10 ⁷
		E-24/125		≥10 ³	1.7×10 ⁶
Arc Resistance		D-48/50+D-0.5/23	S	≥60	100
Dielectric Breakdown		D-48/50+D-0.5/23	KV	≥40	63
Dielectric Constant (1MHz)		C-24/23/50	-	≤5.4	4.8
Dissipation Factor (1MHz)		C-24/23/50	-	≤0.035	0.013
Thermal Stress	Unetched	288℃, solder dip	-	>10s	100s
	Etched			No delamination	No delamination
Peel Strength	1oz	288℃, 10s	N/mm	≥1.05	1.38
	Cu. Foil	125℃		≥0.70	1.07
Flexural Strength	LW	A	MPa	≥415	562
	CW			≥345	518
Water Absorption		D-24/23	%	≤0.5	0.10
CTE Z-axis	Before Tg	TMA	PPM/℃	≤60	45
	After Tg	TMA	PPM/℃	≤300	220
	50~260℃	TMA	%	≤3.0	2.8
Td		10℃/min, N ₂ , 5%Wt Loss	℃	≥340	345
T288		TMA	min	≥15	20
T260		TMA	min	≥30	60
T300		TMA	min	≥2	5
CTI		IEC60112 Method	V	PLC 3(175V--249V)	PLC 3

Remarks: 1.Specification sheet:IPC-4101/126, 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.

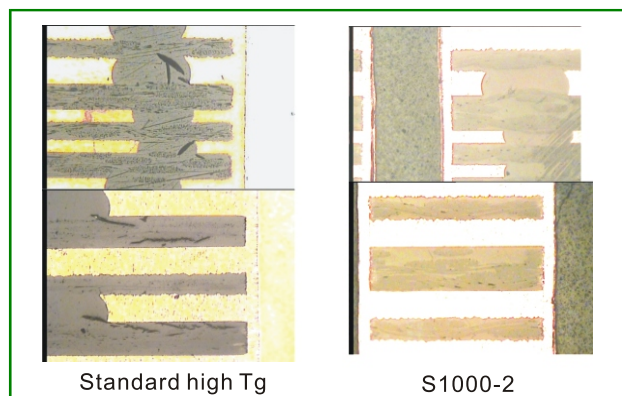
The figures following the letter symbols indicate with the first digit the duration of the preconditioning in hours, with the second digit the preconditioning temperature in ℃ and with the third digit the relative humidity.



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■ Heavy copper board application

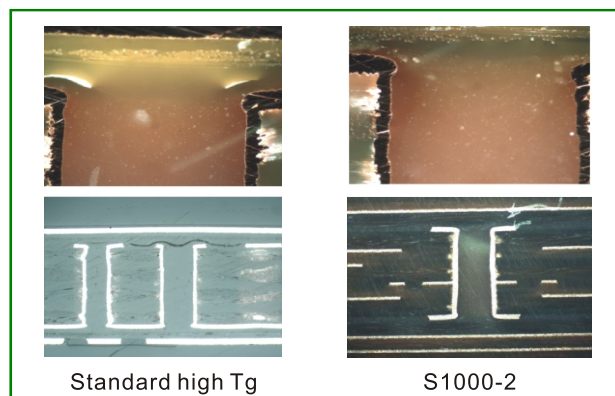


Test Sample: S1000-2 and standard high Tg,
inner copper 4OZ

Test Method: Solder dip 288℃, 10s, 3x

Test Results: S1000-2 is better than standard high Tg

■ Eyebrow crack for HDI

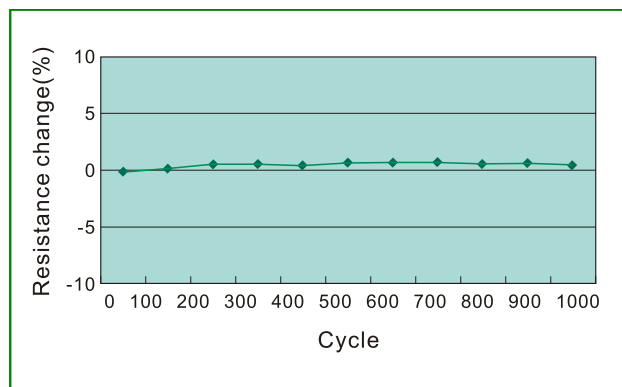


Test Sample: S1000-2 and standard high Tg

Test Method: LD reflow 3x

Test Results: S1000-2 is better than standard high Tg

■ High Thermal Shock Resistance

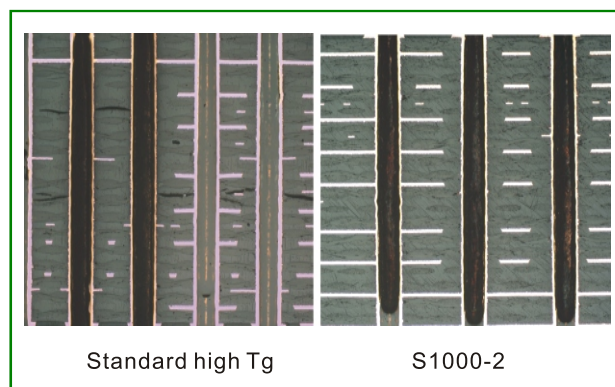


Test Sample: S1000-2 multi-layer board

Test Method: Q1000 (-45℃ ~ 130℃)

Test Results: Pass 1000 cycles

■ Excellent PTH Reliability



Test Sample: S1000-2 and standard high Tg,

Test Method: Solder dip 288℃, 10s, 3x

Test Results: S1000-2 is better than standard high Tg

PURCHASING INFORMATION

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

❖ Other sheet size and thickness could be available upon request.

❖ UL 認可 単、 双面 PCB 板， 最小厚度 0.38mm。



S1000-2B PREPREG

(UL ANSI:FR-4) Bonding Prepreg For S1000-2

特点

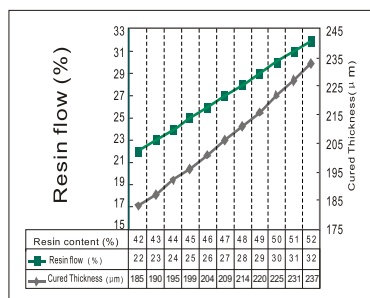
- 高Tg 170℃(DSC).
- 良好的粘结性能与PCB加工性能。

FEATURES

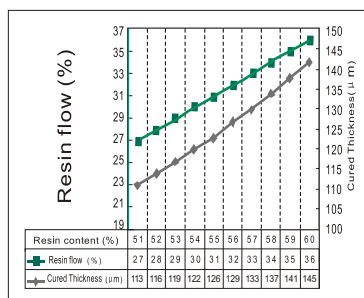
- High Tg 170℃ (DSC).
- Excellent adhesion property and PCB processability.

PREPREG PARAMETERS

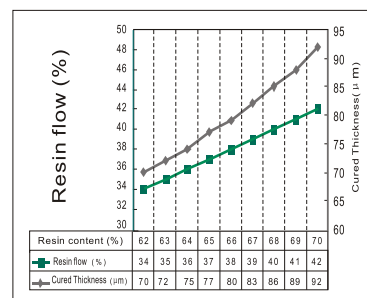
7628 TYPE PREPREG



2116 TYPE PREPREG



1080 TYPE PREPREG



Designation	Glass fabric type	Performance	Gel time (sec)	Resin Content (%)	Resin flow (%)	Cured Thickness (μm)	Standard Size (roll type)
S1000-2B	106	High Performance	115±20	72±3	37±5	50±10	1,260mm×114.3m (125yards)
	106LD			72±3	37±5	50±10	
	1078LD			65±3	37±5	78±10	
	1080			65±3	37±5	78±10	
	2313			56±3	27±5	100±15	
	2116			53±3	29±5	120±15	
	1500			46±3	23±5	160±15	
	7628			44±3	24±5	195±20	

Type, Resin Content and Size Could be Available Upon Request



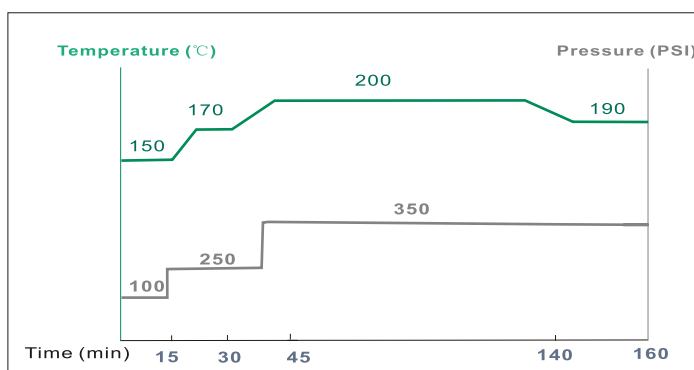
S1000-2B PREPREG

(UL ANSI:FR-4) Bonding Prepreg For S1000-2

PREPREG TEST METHOD

- Resin Content, Resin Flow, Gel Time: IPC-TM-650

HOT PRESSING CYCLE



Heat-up rate: 1.0~2.5°C/min (80~140°C)

Curing time: >60min (185~195°C)

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

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.