



S1000-2M

(UL ANSI: FR-4.0) High Tg, High Performance, Low CTE

FEATURES

- Anti-CAF capability
- Lead-free compatible
- Excellent thermal reliability
- Excellent through-hole reliability
- Excellent mechanical process ability

APPLICATIONS

Computer
Communication
Automotive electronics
Suitable for high multilayer PCB

GENERAL PROPERTIES

Test Items	Test Method	Test Condition	Unit	Typical Value
Tg	IPC-TM-650 2.4.24.2	DMA	°C	185
	IPC-TM-650 2.4.25D	DSC	°C	180
Td	IPC-TM-650 2.4.24.6	TGA (5% W.L)	°C	355
T260	IPC-TM-650 2.4.24.1	TMA	min	>60
T288	IPC-TM-650 2.4.24.1	TMA	min	30
T300	IPC-TM-650 2.4.24.1	TMA	min	15
Thermal Stress	IPC-TM-650 2.4.13.1	288°C, solder dip	s	>100
CTE (Z-axis)	IPC-TM-650 2.4.24	Before Tg	ppm/°C	41
	IPC-TM-650 2.4.24	After Tg	ppm/°C	208
	IPC-TM-650 2.4.24	50-260°C	%	2.4
Permittivity (1GHz)	IPC-TM-650 2.5.5.9	C-24/23/50	-	4.6
Loss Tangent (1GHz)	IPC-TM-650 2.5.5.9	C-24/23/50	-	0.018
Volume Resistivity	IPC-TM-650 2.5.17.1	C-96/35/90	MΩ-cm	8.7×10 ⁸
Surface Resistivity	IPC-TM-650 2.5.17.1	C-96/35/90	MΩ	2.2×10 ⁷
Arc Resistance	IPC-TM-650 2.5.1	D-48/50+D-0.5/23	s	133
Dielectric Breakdown	IPC-TM-650 2.5.6	D-48/50+D-0.5/23	kV	>45
Peel Strength (1oz)	IPC-TM-650 2.4.8	288°C/10s	N/mm [lb/in]	1.3 [7.43]
Flexural Strength (LW/CW)	IPC-TM-650 2.4.4	A	Mpa	567/442
Water Absorption	IPC-TM-650 2.6.2.1	D-24/23	%	0.08
Flammability	UL94	C-48/23/50	Rating	V-0
CTI	IEC60112	A	Rating	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 (8*7628) 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.



S1000-2MB PREPREG

(UL ANSI: FR-4.0) Bonding Prepreg For S1000-2M

PREPREG PARAMETERS

Glass fabric type	Resin content (%)	Cured thickness (mm)	Standard size (Roll type)
106/1037	72	0.050	1.260m×150m
	77	0.060	
1080/1078	64	0.072	1.260m×300m
	69	0.086	
2313	56	0.096	1.260m×250m
2116	51	0.108	
	55	0.120	
1506	57	0.127	1.260m×150m
	45	0.150	
7628	44	0.187	
	46	0.196	
	50	0.216	
	52	0.227	

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

HOT PRESSING CYCLE

- The heat-up rate depends on the inner copper or the structure of multilayer PCB.
- Curing time: >60min (185~195°C).
- 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. Keeping in normal condition, prepreg might absorb moisture and its bonding strength would be weakened.
- Avoid UV-rays and strong light.

PURCHASING INFORMATION

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

Remarks: Other sheet size and thickness could be available upon request.

Based Material Line Up



S1000-2M/S1000-2MB

1. CORE (C-STAGE)

Thickness		ply-up	RC (%)	Dk				Df			
mm	mil			1 GHz	3 GHz	5 GHz	10 GHz	1 GHz	3 GHz	5 GHz	10 GHz
0.050	2.00	1x106	74	3.87	3.76	3.7	3.66	0.022	0.022	0.024	0.025
0.075	3.00	1x1080	64	4.14	4.07	4.02	3.97	0.019	0.02	0.021	0.021
0.100	4.00	1X2116	48	4.51	4.49	4.44	4.4	0.016	0.017	0.018	0.019
0.120	4.70	1x2116	55	4.34	4.29	4.25	4.2	0.017	0.018	0.019	0.02
0.127	5.00	1X2116	58	4.27	4.21	4.16	4.11	0.018	0.019	0.02	0.021
0.150	6.00	1x1500/1X1506	45	4.59	4.58	4.53	4.48	0.015	0.016	0.017	0.018
0.180	7.10	1x7628	43	4.64	4.63	4.59	4.54	0.015	0.016	0.017	0.018
0.200	8.00	1x7628	47	4.54	4.52	4.47	4.42	0.016	0.017	0.018	0.019
0.254	10.00	2X2116	54	4.36	4.32	4.27	4.23	0.017	0.018	0.019	0.02
0.280	11.00	1080+2116+1080	60	4.22	4.15	4.1	4.06	0.018	0.019	0.021	0.021
0.300	12.00	2X1500	45	4.59	4.58	4.53	4.48	0.015	0.016	0.017	0.018
0.330	13.00	2X1500	48	4.51	4.49	4.44	4.4	0.016	0.017	0.018	0.019
0.360	14.00	2X7628	43	4.64	4.63	4.59	4.54	0.015	0.016	0.017	0.018
0.380	15.00	2X7628	46	4.56	4.55	4.5	4.45	0.016	0.016	0.018	0.019
0.600	23.60	3X7628	46	4.56	4.55	4.5	4.45	0.016	0.016	0.018	0.019
1.000	39.40	5X7628	46	4.56	4.55	4.5	4.45	0.016	0.016	0.018	0.019
1.200	47.00	6X7628	46	4.56	4.55	4.5	4.45	0.016	0.016	0.018	0.019

