



SML02G(X)

(UL ANSI: FR-15.1) High Tg, Low CTE, Mid-Loss Multilayer Material

FEATURES

- High Tg >170°C (DSC), Halogen Free
- Lower X/Y-axis CTE (<10ppm), offering superior PTH reliability
- Lower insertion loss, Dk/Df@10GHz: 4.35/0.010
- Excellent Anti-CAF performance

APPLICATIONS

Improve soldering reliability with large sockets, can be used in server, switch, base station.

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	175
Td	IPC-TM-650 2.4.24.6	5% Wt. loss	°C	410
T300	IPC-TM-650 2.4.24.1	TMA	min	60
T288	IPC-TM-650 2.4.24.1	TMA	min	60
Thermal Stress	IPC-TM-650 2.4.13.1	288°C, solder dipping	min	>10
CTE (X/Y-axis)	IPC-TM-650 2.4.24.5	50-125°C	ppm/°C	7-9
CTE (Z-axis)	IPC-TM-650 2.4.24.5	Before Tg	ppm/°C	18
	IPC-TM-650 2.4.24	After Tg	ppm/°C	120
	IPC-TM-650 2.4.24	50-260°C	%	1.1
Dielectric Constant	IPC-TM-650 2.5.5.9	1GHz	-	4.29
	IPC-TM-650 2.5.5.5	10GHz	-	4.26
	IEC 61189-2-721	10GHz	-	4.35
Dissipation Factor	IPC-TM-650 2.5.5.9	1GHz	-	0.006
	IPC-TM-650 2.5.5.5	10GHz	-	0.010
	IEC 61189-2-721	10GHz	-	0.010
Volume Resistivity	IPC-TM-650 2.5.17.1	C-96/35/90	MΩ-cm	3.76×10 ⁷
Surface Resistivity	IPC-TM-650 2.5.17.1	C-96/35/90	MΩ	4.16×10 ⁷
Arc Resistance	IPC-TM-650 2.5.1	D-48/50+D-0.5/23	s	180
Dielectric Breakdown	IPC-TM-650 2.5.6	D-48/50+D-0.5/23	kV	> 45
Peel Strength(H OZ)	IPC-TM-650 2.4.8	288°C/10s	N/mm	0.90
Flexural Strength(LW/CW)	IPC-TM-650 2.4.4	A	Mpa	550/450
Water Absorption	IPC-TM-650 2.6.2.1	D-24/23	%	0.08
Flammability	UL94	C-48/23/50	Rating	V-0

Remarks:

1. Specification sheet: IPC-4101/130, is for your reference only.
2. The typical CTE value is based on specimen with 2116, while the Tg is for specimen ≥0.50mm.
3. 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.



SML02GB(X) PREPREG

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PREPREG PARAMETERS

Glass fabric type	Resin content (%)	Cured thickness (mm)	Standard size (Roll type)
106	75	0.051	1.260m×150m
	80	0.064	
	83	0.076	
1080	68	0.076	1.260m×300m
	72	0.089	
	75	0.102	
3313	60	0.102	1.260m×250m
	64	0.114	
2116	56	0.114	
	60	0.127	
	63	0.140	
1506	49	0.152	
	52	0.165	
7628	52	0.203	
	54	0.216	

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

HOT PRESSING CYCLE

- Heat up rate: 2.0-3.2°C/min (80-140°C) as usual.
- Curing time: >100min (190~200°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.

PURCHASING INFORMATION

Thickness	Copper foil	Standard size
0.50mm to 3.2mm	18um to 70 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.