



# Autolad1

(UL ANSI: FR-4.0) Automotive-use Materials

## FEATURES

- Anti-CAF capability
- Lead-free compatible
- Low water absorption
- Excellent thermal reliability
- Excellent through-hole reliability

## APPLICATIONS

Specified for automotive electronics, like junction box, ECU in engine and body

## GENERAL PROPERTIES

Test Items	Test Method	Test Condition	Unit	Typical Value
Tg	IPC-TM-650 2.4.24.4	DMA	°C	165
	IPC-TM-650 2.4.25D	DSC		156
Td	IPC-TM-650 2.4.24.6	TGA (5% W.L)	°C	353
T288	IPC-TM-650 2.4.24.1	TMA	min	25
T260	IPC-TM-650 2.4.24.1	TMA	min	> 60
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	37
	IPC-TM-650 2.4.24	After Tg	ppm/°C	210
	IPC-TM-650 2.4.24	50-260°C	%	2.8
Permittivity (10GHz)	IPC-TM-650 2.5.5.5	C-24/23/50	-	3.89
Loss Tangent (10GHz)	IPC-TM-650 2.5.5.5	C-24/23/50	-	0.0145
Volume Resistivity	IPC-TM-650 2.5.17.1	C-96/35/90	MΩ-cm	2.7×10 <sup>8</sup>
Surface Resistivity	IPC-TM-650 2.5.17.1	C-96/35/90	MΩ	4.2×10 <sup>7</sup>
Arc Resistance	IPC-TM-650 2.5.1	D-48/50+D-0.5/23	s	150
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]	1.25 [7.15]
Flexural Strength (LW/CW)	IPC-TM-650 2.4.4	A	Mpa	538/425
Water Absorption	IPC-TM-650 2.6.2.1	E-1/105+D-24/23	%	0.09
Flammability	UL94	C-48/23/50	Rating	V-0
CTI	IEC60112	A	Rating	PLC 3

Remarks: 1. Specification sheet: IPC-4101/99, is for your reference only.

2. All the typical value is based on the 1.6mm (8\*7628) specimen. The Dk and Df value is based on 56% RC.

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.



# Autolad1B PREPREG

(UL ANSI: FR-4.0) Bonding Prepreg for Autolad1

## PREPREG PARAMETERS

Glass fabric type	Resin content (%)	Cured thickness (mm)	Standard size (Roll type)
106/1037	73	0.050	1.260m×150m
	78	0.063	
1067	70	0.057	1.260m×150m
	73	0.064	
	76	0.073	
1080/1078	65	0.072	1.260m×300m
	68	0.081	
	70	0.087	
2313/3313	57	0.100	1.260m×250m
2116	55	0.120	
	58	0.130	
1506	48	0.160	1.260m×150m
7628	46	0.195	
	48	0.205	
	50	0.215	
	52	0.225	

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: >45min (180~190°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.