



Autolad2G

(FR-15.1) Halogen-free, High-Tg, High-CTI, Automotive-use Materials

FEATURES

- CTI $\geq$ 600V for hash environment
- High voltage anti-CAF
- Extreme thermal cycling resistance
- MOT 150°C ($\geq$ 0.63mm)
- Halogen, antimony and red phosphorous free

APPLICATIONS

High power & high voltage applications
PEV & HEV automotive electrification
On board charger (OBC), etc.

GENERAL PROPERTIES

Test Items	Test Method	Test Condition	Unit	Typical Value
Tg	IPC-TM-650 2.4.24.4	DMA	°C	190
	IPC-TM-650 2.4.25D	DSC		175
Td	IPC-TM-650 2.4.24.6	TGA (5% wt. loss)	°C	402
T288	IPC-TM-650 2.4.24.1	TMA	min	60
T260	IPC-TM-650 2.4.24.1	TMA	min	60
Thermal Stress	IPC-TM-650 2.4.13.1	288°C, solder dipping	s	>100
CTE (Z-axis)	IPC-TM-650 2.4.24	Before Tg	ppm/°C	35
	IPC-TM-650 2.4.24	After Tg	ppm/°C	190
	IPC-TM-650 2.4.24	50-260°C	%	2.2
Permittivity (1GHz)*	IPC-TM-650 2.5.5.9	C-24/23/50	-	4.3
Loss Tangent (1GHz)*	IPC-TM-650 2.5.5.9	C-24/23/50	-	0.015
Volume Resistivity	IPC-TM-650 2.5.17.1	C-96/35/90	MΩ-cm	4.83×10 ⁷
Surface Resistivity	IPC-TM-650 2.5.17.1	C-96/35/90	MΩ	4.98×10 ⁶
Arc Resistance	IPC-TM-650 2.5.1	D-48/50+D-0.5/23	s	130
Dielectric Breakdown	IPC-TM-650 2.5.6	D-48/50+D-0.5/23	kV	45+kV NB
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	520/400
Water Absorption	IPC-TM-650 2.6.2.1	D-24/23	%	0.09
Flammability	UL94	C-48/23/50	Rating	V-0
CTI	IEC 60112	A	Rating	PLC 0($\geq$ 600V)

Remark:

1. Specification sheet: IPC-4101/130, is for your reference only.
2. All the typical value is based on the 1.6mm (8X7628) specimen, " * " is based on the 1.0mm(9X2116) specimen.
3. Thin core thickness less than 0.80mm may not satisfy CTI $\geq$ 600V due to thickness or structure.
4. 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.



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(FR-15.1) Bonding Prepreg for Autolad2G

PREPREG PARAMETERS

Glass fabric type	Resin content (%)	Cured thickness (mm)	Standard size (Roll type)
1037	73	0.048	1.260m×150m
	75	0.053	
106	73	0.050	
	77	0.060	
1067	66	0.050	
	71	0.060	
	77	0.076	
1080/1078	66	0.076	1.260m×300m
	69	0.085	
	71	0.092	
	74	0.104	
3313	58	0.102	1.260m×250m
2116	54	0.117	
	57	0.127	
	60	0.134	
	63	0.150	
7628	43	0.180	1.260m×150m
	45	0.190	
	48	0.200	
	50	0.210	

In order to satisfy CTI≥600V, 2116(RC≥54%), 7628(RC≥45%) or above thickness prepreg is suggested to be used for outer prepreg layer.

HOT PRESSING CYCLE

- The heat-up rate depends on the inner copper or the structure of multilayer PCB.
- Curing time: >60min (185~195℃).
- If you need any more detail information, please turn to Shengyi Technology Co., Ltd.

STORAGE CONDITION

- 3 months when stored at < 23℃ and <50% RH.
- 6 months when stored at <5℃. 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.