Autolad2G

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

FEATURES

- CTI≥600V for hash environment
- High voltage anti-CAF
- Extreme thermal cycling resistance
- MOT 150℃ (≥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

Property	Test Items		Test Method	Test Condition	Unit	Typical Value
Thermal	Tg		2.4.24.4	DMA	℃	190
			2.4.25	DSC		175
	Td		2.4.24.6	5% wt. loss	℃	402
	T288		2.4.24.1	TMA	min	60
	T300		2.4.24.1	TMA	min	60
	Thermal Stress		2.4.13.1	288℃, solder bath	-	PASS
		Z-axis	2.4.24c	Before Tg	ppm/℃	35
			2.4.24c	After Tg	ppm/℃	190
			2.4.24c	50-260℃	%	2.2
Electrical	Dk* RC56%	1GHz	2.5.5.9	C-24/23/50	-	4.3
	Df* RC56%	1GHz	2.5.5.9	C-24/23/50	-	0.015
	Volume Resistivity		2.5.17.1	After Moisture Resistance	MΩ-cm	3.86×10^{8}
	Surface Resistivity		2.5.17.1	After Moisture Resistance	MΩ	3.27×10^{7}
	Arc Resistance		2.5.1	D-48/50+D-0.5/23	s	130
	Dielectric Breakdown		2.5.6	D-48/50+D-0.5/23	kV	45+
	Electric Strength		2.5.6	D-48/50+D-0.5/23	kV/mm	40+
	CTI		IEC 60112	As Received	Rating	PLC 0
Physical	Peel Strength (1Oz)		2.4.8	288℃/10s	N/mm [lb/in]	1.3 [7.43]
	Flexural Strength	Length	2.4.4	As Received	MPa	520
		Width	2.4.4	As Received	MPa	400
	Water Absorption		2.6.2.1	E-1/105+D-24/23	%	0.09
	Flammability		UL94	C-48/23/50, E-24/125	Rating	V-0

Explanation: C=Humidity conditioning, D=Immersion conditioning in distilled water, E=Temperature conditioning. The first digit following the letter indicates the duration of preconditioning in hours, the second digit the preconditioning temperature in ℃ and the third digit the relative humidity.

Remarks:
1. Applicable IPC slash sheet: IPC-4101/130.Unless otherwise specified, all test methods follow IPC-TM-650.
2. All typical value is based on the 1.6mm (8*7628) specimen, " * " is based on the 1.0mm(9X2116) specimen but not guarantee data.
3. All typical values listed above are for your reference only and not intended for specification.
4. Please refer to lineup document for more specification and parameters, or contact Shengyi Technology Co., Ltd. for detailed information.

Autolad2GB

(FR-15.1) Bonding Prepreg for Autolad2G

Product Specification

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	
2116	54	0.117	1.260m×250m
	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	

Remark: 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.