



# 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 $^{\circ}$ 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	$^{\circ}$ C	190
	IPC-TM-650 2.4.25D	DSC		175
Td	IPC-TM-650 2.4.24.6	TGA (5% wt. loss)	$^{\circ}$ 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 $^{\circ}$ C, solder dipping	s	>100
CTE (Z-axis)	IPC-TM-650 2.4.24	Before Tg	ppm/ $^{\circ}$ C	35
	IPC-TM-650 2.4.24	After Tg	ppm/ $^{\circ}$ C	190
	IPC-TM-650 2.4.24	50-260 $^{\circ}$ 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	M $\Omega$ -cm	4.83 $\times$ 10 <sup>7</sup>
Surface Resistivity	IPC-TM-650 2.5.17.1	C-96/35/90	M $\Omega$	4.98 $\times$ 10 <sup>6</sup>
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 $^{\circ}$ 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. In order to satisfy CTI $\geq$ 600V, 2116(RC $\geq$ 54%), 7628(RC $\geq$ 45%) or above thickness prepreg is suggested to be used for outer prepreg layer.
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.