



# VT-901

UL Approval: E214381 Version: B7 /40 /41

## Laminate/Prepreg

### General Information

- > Tg 250° C
- > High Td
- > Improved Fracture Toughness
- > Low Z-axis CTE
- > Meets NASA requirements for no visible bromine



### Application

- > Chip Manufacturers
- > Engine/Flight Controls
- > Power Supply/Backplane
- > Military and Burn-in Board

### Availability

- > Core Thickness: 0.002" (0.05mm) to 0.125" (3mm), available in sheet or panel form
- > Copper Foil: 1/4oz to 6oz
- > Prepregs are available in roll or panel form
- > E-Glass styles: 7628, 1506, 2113, 2313, 3313, 2116, 1080, 106 etc

Properties		Prepreg		Laminate
Storage Condition	Temperature	Below 23° C (73° F)	Below 5° C (41° F)	Room
	Relative humidity	Below 55% RH	/	/
Shelf Life		3 months	6 months	24 months (airproof)

The prepreg exceeding shelf life should be retested.

#### CORPORATE HEADQUARTERS

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### Properties Sheet IPC-4101E /40 /41

Properties	Test Method	Units	Specification	Typical Value
<b>Thermal Properties</b>				
Tg	DSC	IPC-TM-650 2.4.25	°C	-
	TMA	IPC-TM-650 2.4.24	°C	200 minimum
Td		ASTM D3850	°C	-
T260		IPC-TM-650 2.4.24.1	Minute	-
T288		IPC-TM-650 2.4.24.1	Minute	-
Thermal Stress @ 288°C		IPC-TM-650 2.4.13.1	Second	Pass 10s
Z-axis CTE	Before Tg	IPC-TM-650 2.4.24	ppm/°C	-
	After Tg	IPC-TM-650 2.4.24	ppm/°C	-
	Total Expansion (50~260°C)	IPC-TM-650 2.4.24	%	-
X-Y CTE		IPC-TM-650 2.4.24	ppm/°C	-
MOT		UL 94	°C	-
<b>Electrical Properties</b>				
DK @ 1GHz RC 40%		IPC-TM-650 2.5.5.9	-	5.4 maximum
DF @ 1GHz RC 40%		IPC-TM-650 2.5.5.9	-	0.035 maximum
Volume Resistivity	After Moisture Resistance	IPC-TM-650 2.5.17.1	MΩ-cm	1.0E+6 minimum
	E-24/125	IPC-TM-650 2.5.17.1	MΩ-cm	1.0E+6 minimum
Surface Resistivity	After Moisture Resistance	IPC-TM-650 2.5.17.1	MΩ	1.0E+6 minimum
	E-24/125	IPC-TM-650 2.5.17.1	MΩ	1.0E+6 minimum
Electrical Strength		IPC-TM-650 2.5.6.2	Volt/mil (KV/mm)	762 (30) minimum
Dielectric Breakdown		IPC-TM-650 2.5.6	KV	40 minimum
Comparative Tracking Index (CTI)		ASTM D3638	Rating (Volt)	-
Arc Resistance		ASTM D495	Second	120 minimum
<b>Mechanical Properties</b>				
Peel Strength (1oz)	RTF	IPC-TM-650 2.4.8	lb/in (N/mm)	-
	HTE	IPC-TM-650 2.4.8	lb/in (N/mm)	5.14 (0.90) minimum
Flexural Strength	Warp	IPC-TM-650 2.4.4	Kpsi (MPa)	60 (415) minimum
	Fill	IPC-TM-650 2.4.4	Kpsi (MPa)	47 (325) minimum
<b>Physical Properties</b>				
Moisture Absorption		IPC-TM-650 2.6.2.1	%	1.0 maximum
Flammability		UL-94	Rating	HB minimum

Note: All test data provided are typical values and are not intended to be specification values.

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