

VT-547C

UL Approval: E214381 Version: 30/10/2025 /127 /128 /130

Laminate/Prepreg

General Information

- > Phenolic Cured System
- > Halogen Free & High Tg
- > No ANSI & MOT 180°C
- > CTI 600V
- > UV Blocking
- > High Voltage CAF Resistance
- > Low Z-CTE
- > Excellent Thermal Reliability

Application

- > PEV & HEV Automotive
- > BAPV
- > Instrumentation
- > Communication Equipment
- > Electronic Game Machine
- > White Goods, etc

Availability

- > Core Thickness: 0.004" (0.10mm) to .200" (5mm), available in sheet or panel form
- > Copper Foil: 1/2oz to 6oz
- > Prepregs are available in roll or panel form
- > E-Glass styles: 7628, 2116, 108

Storage Condition

Properties		Prepreg	
Storage Condition	Temperature	Below 23°C (73°F)	Below 5°C (41°F)
	Relative Humidity	Below 55% RH	/
Shelf Life		3 Months	6 Months

Note: The prepreg exceeding shelf life should be retested.

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Properties IPC-4101E /127 /128 /130

Properties	Test Method	Units	Specification	Typical Value	
Thermal Properties					
Tg	IPC-TM-650 2.4.25	°C	170 minimum	190	
Td	ASTM D3850	°C	340	380	
T260	IPC-TM-650 2.4.24.1	Minute	30 minimum	>60	
T288	IPC-TM-650 2.4.24.1	Minute	15 minimum	>20	
Thermal Stress @ 288°C	IPC-TM-650 2.4.13.1	Second	Pass 10s	>200	
Z-axis CTE	Before Tg	IPC-TM-650 2.4.24	ppm/°C	60 maximum	35
	After Tg	IPC-TM-650 2.4.24	ppm/°C	300 maximum	185
	Total Expansion (50~260°C)	IPC-TM-650 2.4.24	%	3.5 maximum	2.1
MOT	UL 746E	°C	-	180	
Electrical Properties					
Dk RC 50%	@ 1GHz	IPC-TM-650 2.5.5.9	-	5.4 maximum	4.6
Df RC 50%	@ 1GHz	IPC-TM-650 2.5.5.9	-	0.035 maximum	0.011
Volume Resistivity	After Moisture Resistance	IPC-TM-650 2.5.17.1	MΩ-cm	1.0E+6 minimum	5.0E+8
	E-24/125	IPC-TM-650 2.5.17.1	MΩ-cm	1.0E+3 minimum	5.0E+6
Surface Resistivity	After Moisture Resistance	IPC-TM-650 2.5.17.1	MΩ	1.0E+4 minimum	5.0E+7
	E-24/125	IPC-TM-650 2.5.17.1	MΩ	1.0E+3 minimum	5.0E+6
Electrical Strength		IPC-TM-650 2.5.6.2	Volt/mil (KV/mm)	762 (30) minimum	1200~1400 (54)
Dielectric Breakdown		IPC-TM-650 2.5.6	KV	40 minimum	60
Comparative Tracking Index (CTI)		ASTM D3638	Rating (Volt)	-	Grade 0 (>600)
Arc Resistance		ASTM D495	Second	60 minimum	187
Mechanical Properties					
Peel Strength (1oz)	As received	IPC-TM-650 2.4.8	lb/in (N/mm)	-	6 (1.05)
	After thermal stress	IPC-TM-650 2.4.8	lb/in (N/mm)	6 (1.05) minimum	6 (1.05)
Flexural Strength	Warp	IPC-TM-650 2.4.4	Kpsi (MPa)	60 (415) minimum	72 (500)
	Fill	IPC-TM-650 2.4.4	Kpsi (MPa)	50 (345) minimum	58 (400)
Physical Properties					
Moisture Absorption		IPC-TM-650 2.6.2.1	%	0.80 maximum	0.15
Flammability		UL-94	Rating	V-0 minimum	V-0

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

Disclaimer: The information and data contained in this technical literature is based on data and knowledge correct at the time of publishing/printing and is believed to be accurate and is offered in good faith for the benefit of the user. The user should make his own tests to verify the suitability of this product for any application before its use. All data are typical values only and subject to change without notice.