

VT-901

DATASHEETS

VT-901 Laminate / Prepreg

UL Approval: E214381 Version: Rev. B5

POLYIMIDE

General Information

- Tg 250°C
- High Td (Td 400°C)
- 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: .002”(0.05mm) to .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, 1500, 2113, 2313, 3313, 2116, 1080, 106 etc

Note: Double side treated copper foil and reverse copper foil are not suggested using on VT-901 laminates because the peel strength would not be as good as conventional materials.

Storage Condition & Shelf Life

		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)

Note: The prepreg exceeding shelf life should be retested.

VT-901

PROPERTIES

Properties Sheet IPC-4101C Slash Sheets /40/41/42. IPC-4101D Slash Sheet(s) /42

Properties	Test Method	Units	Specification	Typical Value
Thermal Properties				
Glass Transition Temp. (Tg)	DSC	IPC-TM-650 2.4.25	°C	-
	TMA	IPC-TM-650 2.4.24	°C	200 minimum
Td		ASTM D3850	°C	395
T260		IPC-TM-650 2.4.24.1	Minute	>60
T288		IPC-TM-650 2.4.24.1	Minute	>60
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	50
	After Tg	IPC-TM-650 2.4.24	ppm/°C	150
	Total Expansion (50~260°C)	IPC-TM-650 2.4.24	%	1.4
MOT		UL 94	°C	140
Electrical Properties				
Dielectric Constant @ 1GHz RC 40%		IPC-TM-650 2.5.5.9	-	5.4 maximum
Dissipation Factor @ 1GHz RC 40%		IPC-TM-650 2.5.5.9	-	0.035 maximum
Volume Resistivity	After Moisture Resistance	IPC-TM-650 2.4.17.1	MΩ-cm	10 ⁶ minimum
	E-24/125	IPC-TM-650 2.5.17.1	MΩ-cm	10 ⁶ minimum
Surface Resistivity	After Moisture Resistance	IPC-TM-650 2.5.17.1	MΩ	10 ⁶ minimum
	E-24/125	IPC-TM-650 2.5.17.1	MΩ	10 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
Mechanical Properties				
Peel Strength (1oz)	As received	IPC-TM-650 2.4.8	lb/in (N/mm)	-
	After thermal stress	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
Physical Properties				
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.