IT-140

Features

- Tg >135 ℃ (DSC)
- Consistent Dimensional Stability
- UL 94 V-0
- AOI and UV blocking characteristic

Properties

ITEQ Laminate/ Prepreg : IT-140TC / IT-140BS
IPC-4101B Spec / 21

LAMINATE(IT-140TC)

Property	Thickness<0.50 mm [0.0197 in]		Thickness≧0.50 mm [0.0197 in]		Units	Test Method
	Typical Value	Spec	Typical Value	Spec	Metric (English)	IPC-TM-650 (or as noted)
Peel Strength, minimum A. Low profile copper foil and very low profile copper foil - all copper weights > 17μm [0.669 mil] B. Standard profile copper foil 1. After Thermal Stress 2. At 125°C [257 F]	0.96(5.5) 1.75(10.0) 1.66(9.5)	0.70(4.0) 0.80 (4.57) 0.70 (4.00)	0.96(5.5) 1.93(11.0) 1.66(9.5)	0.70(4.0) 1.05 (6.00) 0.70 (4.00)	N/mm (lb/inch)	2.4.8 2.4.8.2 2.4.8.3
Volume Resistivity, minimum A. C-96/35/90 B. After moisture resistance C. At elevated temperature E-24/125	$5x10^8$ - $5x10^7$	10^6 — 10^3	 $5x10^8$ $5x10^7$	--- 10^4 10^3	MΩ-cm	2.5.17.1
Surface Resistivity, minimum A. C-96/35/90 B. After moisture resistance C. At elevated temperature E-24/125	$3.5x10^6$ --- $6x10^6$	10^4 — 10^3	 $3.5x10^6$— $6x10^6$	--- 10^4 10^3	MΩ	2.5.17.1
Moisture Absorption, maximum	0.30	-	0.1	0.8	%	2.6.2.1
Dielectric Breakdown, minimum	-	-	60	40	kV	2.5.6
Permittivity at 1 MHz, maximum (Laminate & Prepreg as laminated)	4.6	5.4	4.6	5.4	—	2.5.5.
Loss Tangent at 1 MHz, maximum (Laminate & Prepreg as laminated)	0.016	0.035	0.016	0.035	—	2.5.5.
Flexural Strength, minimum A. Length direction B. Cross direction	 - -	 — —	 496(72,000) 434(63,000)	 415 (60,190) 345 (50,040)	N/mm^2 (lb/in^2)	2.4.4
Arc Resistance, minimum	120	60	120	60	S	2.5.1
Thermal Stress 10 s at 288°C [550.4F],minimum A. Unetched B. Etched	 Pass Pass	 Pass Visual Pass Visual	 Pass Pass	 Pass Visual Pass Visual	Rating	2.4.13.1
Electric Strength, minimum (Laminate & Prepreg as laminated)	45	30	-	—	kV/mm	2.5.6.2
Flammability, (Laminate & Prepreg as laminated)	V-0	V-0	V-0	V-0	Rating	UL94
Glass Transition Temperature	140	110 minimum	140	110 minimum	°C	2.4.25
Decomposition Temperature		--	305	-	°C	2.2.24.6 (5% wt loss)
Z-Axis CTE A. Alpha 1 B. Alpha 2 C. 50 to 260 Degrees C	 - - -	 -- -- --	 55 290 4.2	 - - -	 PPM/°C PPM/°C %	2.4.24
Thermal Resistance A. T260 B. T288	 - -	 -- --	 15 2	 - --	 Minutes Minutes	2.4.24.1

PREPREG(IT-140BS)

	Typical Value	Specification	Units	Test Method
1. Shelf Life, minimum (Condition 1/Condition 2)	Meet requirement	180/90	Days	AABUS
2. Volatile content maximum	0.3	0.75	%	2.3.19

*AABUS = As agreed upon between user and supplier.

Recommended Press Cycle For IT140