

KB-5150/KB-5150A/5150& (ANSI: CEM-1)

Copper-clad modified epoxy paper core glass cloth composite base laminate

Features

- Excellent punching property, suitable for punching at 45°C~70°C.
- Excellent heat resistance.
- IPC-4101 D/10 specification is applicable.
- Plated Through Holes are not recommended for the cellulose core, which is easily attacked by the electrolyte.

Note:

KB-5150: CTI \geq 175V; KB-5150A: CTI \geq 300V; KB-5150&: CTI \geq 600V

General Properties

Test Item	Unit	Test Method (IPC-TM-650)	Test Condition	Specification (IPC-4101D)	Typical Value
Peel Strength (1 oz.)	N/mm	2.4.8	125°C	--	1.65
			Float 260°C / 10 Sec	≥ 1.05	1.6/1.45
Thermal Stress	Sec	2.4.13.1	Float 260°C/unetched	≥ 10	25
Bow / Twist	%	2.4.22.1	A	≤ 1.5	0.3 / 0.4
Flexural Strength	N/mm ²	2.4.4	Length direction	≥ 242	420
			Cross direction	≥ 172	290
Flammability	Rating	UL94	UL-94	UL94 V-0	V-0
Surface Resistivity	M Ω	2.5.17.1	C-96/35/90	$\geq 1.0 \times 10^4$	1.0×10^7
Volume Resistivity	M Ω -cm	2.5.17.1	C-96/35/90	$\geq 1.0 \times 10^6$	1.0×10^8
Z-Axis Expansion	ppm/°C	2.4.24	E-2/105 TMA	---	100/320
	%			---	6.0
Dielectric Constant	—	2.5.5.2	Etched/@1 MHZ	≤ 5.4	4.6
Loss Tangent	—	2.5.5.2	Etched/@1 MHZ	≤ 0.035	0.023
Arc Resistance	Sec	2.5.1	D-48/50+D-0.5/23	≥ 60	125
Moisture Absorption	%	2.6.2.1	D-24/23	≤ 0.5	0.15
Comparative Tracking Index	V	IEC 60112	Etched/0.1% NH ₄ CL	≥ 175	175/300/600

Remarks: Specimen Thickness: 1.6mm 1/0

A = Keep the specimen originally without any process

C = Temperature and humidity conditioning

D = Immersing in distilled water with temperature control

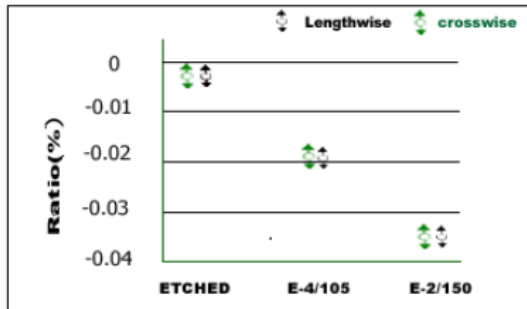
E = Temperature conditioning

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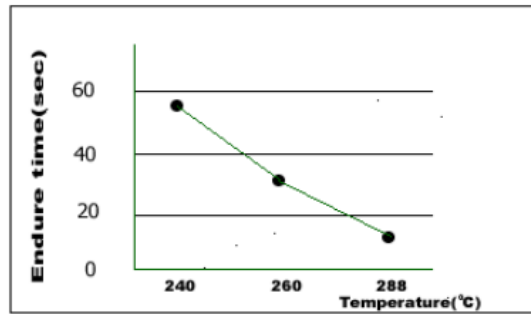
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Specialty Chart

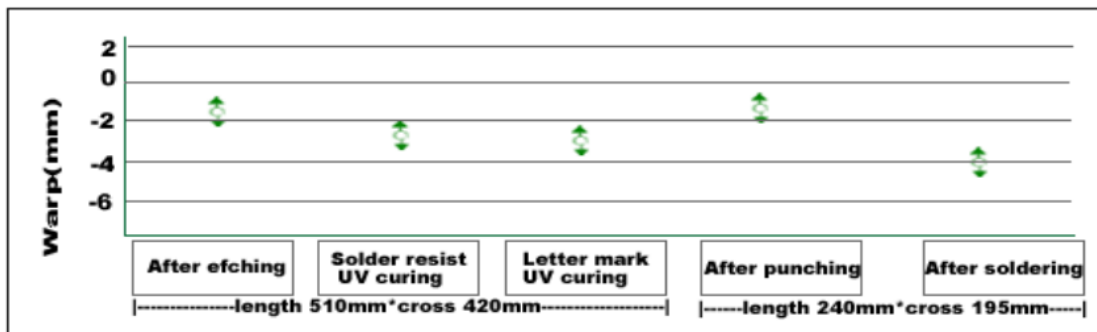
Dimensional Stability



Solder Resistance



Warpage Through PCB Process (thickness: 1.6mm single side)



Applications

Display, VCR, power supply, industrial instrument, digital sound recorder, etc.

Purchasing Information

Base Color	Thickness	Copper Cladding	Regular Size(mm)	CTI Value
CEM-1 (pure-white)	0.8mm~ 1.6mm	18μm	915*1220mm (36"*48")	KB-5150:175V
CEM-1W (white)		35μm	1020*1220mm (0"*48")	KB-5150A:300V
CEM-1F (yellow)		70μm	1067*1220mm (2"*48")	KB-5150&: 600V

Note:

Other sheet size and thickness could be available upon request.

KB-5150& is NOT recommended for solder mask rework.