

S1155

(ANSI:FR-4) Halogen-Free Copper Clad Laminate

特点

- 不含卤素、锑、红磷等有毒成分。
- 燃烧时，不产生剧毒气体和残留有毒成分。
- 加工性能及其他性能与普通FR-4相同。

FEATURES

- Free of toxic constituents such as halogen, antimony, red phosphorous, etc..
- No toxic gas emission and no hazardous residue during waste combustion.
- PCB processing and other properties similar to conventional FR-4.

应用领域

电脑、仪器仪表、摄象机、电视机、电子游戏机等。

APPLICATIONS

Computer, Instrumentation, VCR, TV, electronic game machine, etc.

GENERAL PROPERTIES

Test Item	Treatment Condition	Unit	Property Data	
			SPEC	Typical Value
Tg	DSC	°C	≥125	135
Flammability	C-48/23/50	-	V-0	V-0
	E-24/125			
Volume Resistivity	After moisture resistance	MΩ-cm	≥ 10 ⁶	4.5×10 ⁷
	E-24/125		≥ 10 ³	4.9×10 ⁶
Surface Resistance	After moisture resistance	MΩ	≥ 10 ⁴	8.6×10 ⁶
	E-24/125		≥ 10 ³	2.0×10 ⁶
Arc Resistance	D-48/50+D-0.5/23	S	≥ 60	115
Dielectric Breakdown	D-48/50+D-0.5/23	KV	≥ 40	55
Dielectric Constant (1MHz)	C-24/23/50	-	≤ 5.4	4.7
Dissipation Factor (1MHz)	C-24/23/50	-	≤ 0.035	0.010
Thermal Stress	Unetched	-	No delamination	No delamination
	Etched			
Peel Strength	1oz	N/mm	≥ 1.05	1.4
	Cu. Foil		≥ 0.70	1.3
Flexural Strength	LW	MPa	≥ 415	590
	CW		≥ 345	485
Water Absorption	D-24/23	%	≤ 0.35	0.11
CTE z-axis	Before Tg	TMA	μ m/m°C	40.5
	After Tg		μ m/m°C	254

Specimen Thickness:1.6mm

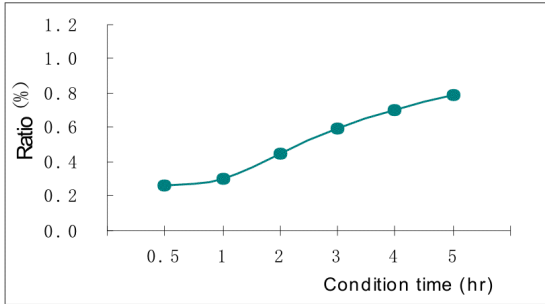
Explanations: C = Humidity conditioning;
 D = Immersion conditioning in distilled water;
 E = Temperature conditioning.

The figures following the letter symbols indicate with the first digit the duration of the preconditioning in hours, with the second digit the preconditioning temperature in °C and with the third digit the relative humidity.

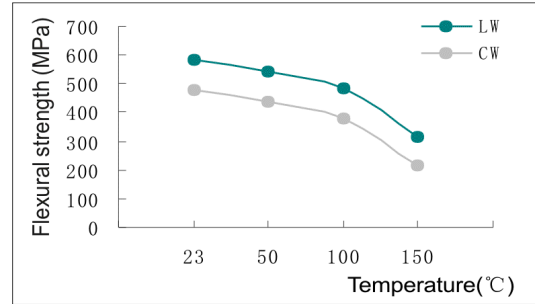
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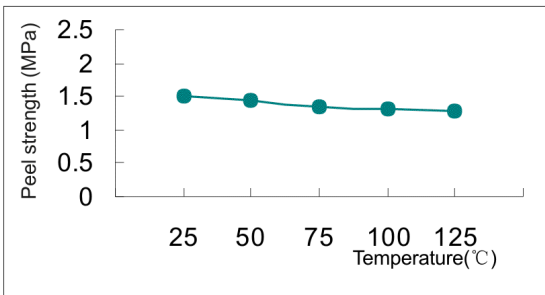
Water absorption at pressure cooker



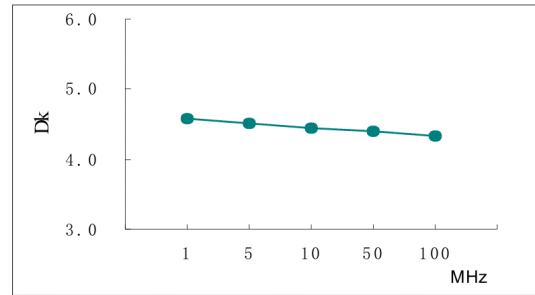
Flexural strength



Peel strength



Dielectric constant



PURCHASING INFORMATION

0.05mm to 3.2mm	12 μ m to 105 μ m	1,020×1,220mm (40" × 48") 1,070×1,220mm (42" × 48")	915×1,220mm (36" × 48")
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✘ Other sheet size and thickness could be available upon request.

HALOGEN CONTENT TEST

✘ JPCA-ES-01-1999 Standard “Test method of halogen-free materials”

Halogen	JPCA Standard	S1155
Cl	≤0.09%	0.05%
Br	≤0.09%	0.00%