

To : CUSTOMER

Date: Sep. 01, 2006

CCP-508 Y

銅箔積層板
COPPER CLAD LAMINATE

長春人造樹脂廠股份有限公司
CHANG CHUN PLASTICS CO., LTD.

CCP-508 Y

CCP-508Y 玻纖布環氧樹脂覆銅箔積層板是針對使用高密度自動插件、晶片零件表面粘著等之精密印刷電路板而開發。

CCP-508Y, glass cloth and kraft paper coupled with UV-blocking epoxy resin, is launched in 2006 as a newly developed copper clad laminate. It responds to the requirement of high precision printed circuit board made by high density automatic insertion, surface mounting of chip parts, etc.

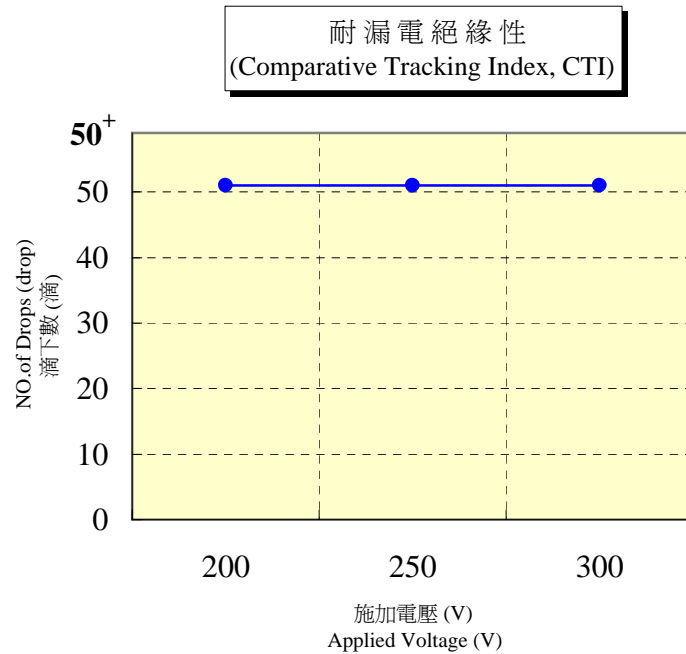
品名	CCP-508 Y	
Type		
規格	ANSI(NEMA)	CEM-1
Grade	UL	94V-0
組成 Construction	玻纖布、漂白牛皮紙、環氧樹脂、高純度電解銅箔。 Woven Glass Cloth, Kraft Paper, Epoxy Resin, high purity of Electrolytic Copper Foil.	
特性 Characteristics	<p>*一般300V耐漏電絕緣性，高電壓大電流下耐電弧發火性良好。 *For general <u>tracking performance of 300V and excellent in resisting arc sparking.</u></p> <p>*常溫沖孔性良好 最適當之沖孔溫度為30~60℃。高密度沖孔加工性優良，能改善沖孔後外觀與尺寸精度。 *<u>Good punchability at ambient temperature</u> Optimum punching temperature is 30~60℃. Suitable for high density punching process, permitting improvement of punched appearance and dimensional precision of PCB.</p> <p>*彎曲度、扭曲度小且穩定、適用無鉛製程 印刷電路板加工及零件裝配過程中，彎曲度、扭曲度小且穩定。 *<u>Warpage and twist are small and stable for Lead free Process</u> During PCB manufacturing and parts mounting process, warpage and twist are small and stable.</p>	

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*IEC-112法 耐漏電絕緣性
CTI值大於300V

*IEC-112 METHOD ANTI-TRACKING PERFORMANCE

Comparative Tracking Index is
Over 300V.



IEC-112 法 (IEC-112 Method)

- * Test Solution : 0.1 wt% NH₄Cl
- * Drop Size : 20 mm³/drop
- * Interval of Drops : 1 drop/30sec
- * Electrodes : Platinum Electrode
- * Pitch of Electrodes : 4 mm
- * Short Current : 1.0 A

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*冲孔性

高密度冲孔加工性良好，
冲孔粉屑毛邊大量減少。

*PUNCHABILITY

Good punchability for high density processing. The shape of burr after punching are punched hole is clean.

*冲孔後孔徑收縮

*PUNCHED HOLE SHRINKAGE

最適冲孔時基板表面溫度範圍

Optimum Surface Temperature Range for Punching

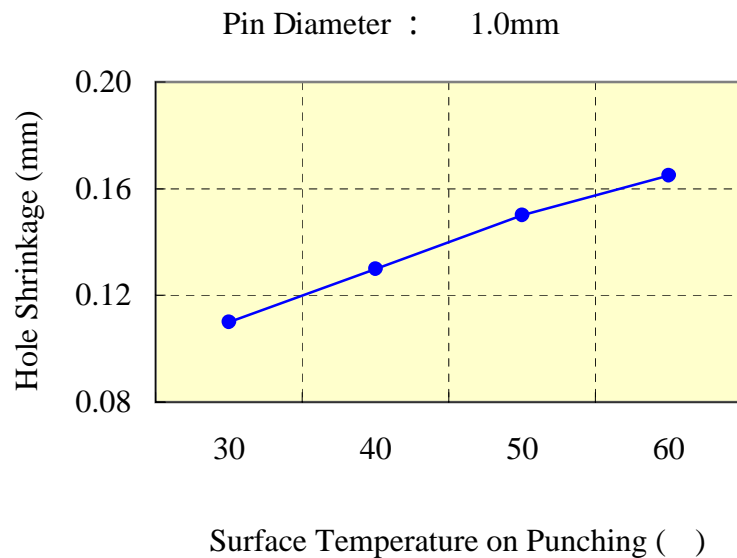
品名 Type	冲孔時基板表面溫度範圍 () Surface Temperature Range for Punching			
	30	40	50	60
CCP-508 Y				



Suitable punch temperature for
PCB pattern with IC hole pitch
2.55 mm



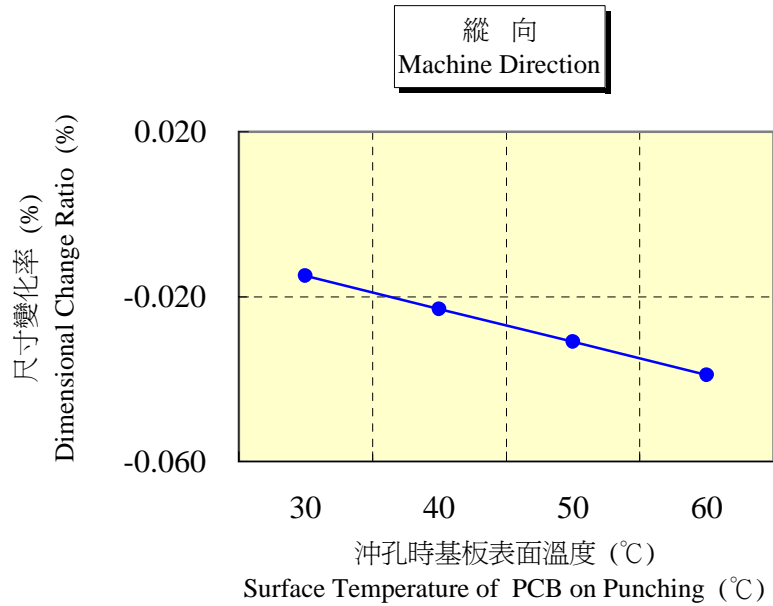
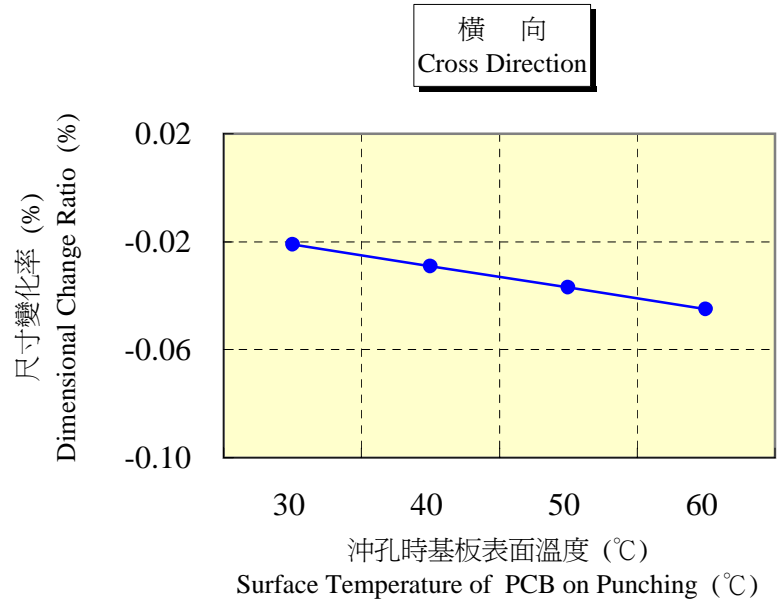
Suitable punch temperature for
PCB pattern with IC hole pitch
< 2.55 mm



CCP-508 Y

*沖孔過程之尺寸變化

*DIMENSIONAL
CHANGE OF PCB
PUNCHED



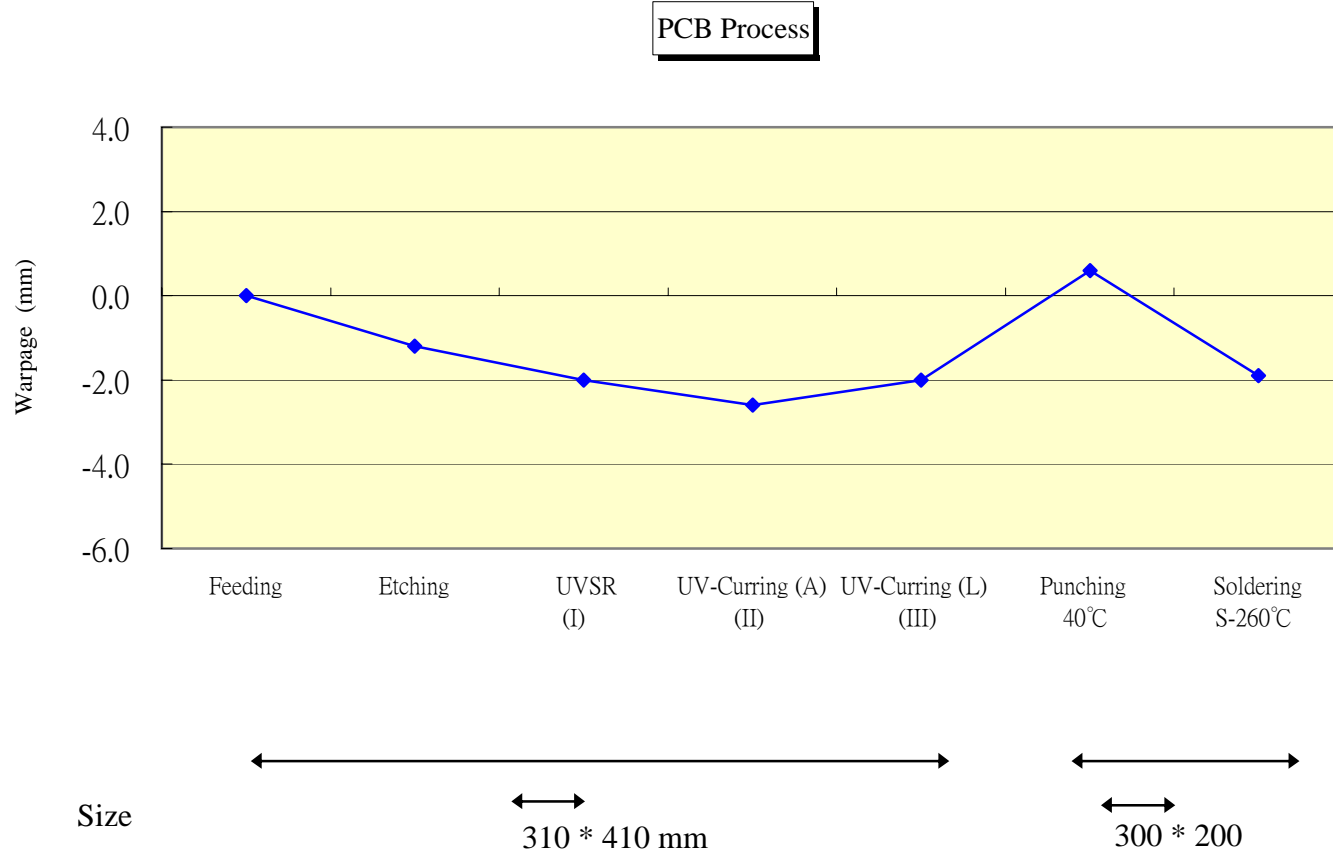
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*印刷電路板加工時 彎曲度

加工過程中，彎曲、扭曲小且穩定。

*WARPAGE OF PCB IN PROCESSING

Warpage and twist are small and stable during PCB manufacturing process.



CCP-508 Y

*一般性能

*GENERAL PROPERTIES

檢驗項目 Test Item		單位 Unit	處理條件 Condition	CCP-508 Y	
				實績值 Typical Values	保證值 Guaranteed Value
焊錫耐熱性 Solder Float	S-260°C	sec	A	60 ↑	≥ 20
	S-288°C	sec	A	30	≥ 10
抗撕強度 Peel Strength		Kgf/cm	A	2.2	≥ 1.4
			S-260°C / 20sec	2.1	≥ 1.4
耐燃性 Flammability	UL94	----		PASS	V-0
絕緣阻抗 Insulation Resistance		Ω	C-96/20/65	3.6×10^{14}	$\geq 5 \times 10^{12}$
			+D-2/100	3.1×10^{13}	$\geq 5 \times 10^{10}$
曲折強度 Flexural Strength	橫向 CD	Kgf/mm ²	A	32	≥ 25
	縱向 MD			36	≥ 30
耐漏電絕緣性 CTI		Volt	IEC-112 Method	PASS	≥ 300
體積阻抗率 Volume Resistivity		Ω-cm	C-96/20/65	3.3×10^{15}	$\geq 1 \times 10^{14}$
			+C-96/40/90	3.9×10^{14}	$\geq 1 \times 10^{13}$
表面阻抗 Surface Resistance	蝕刻面 Etched-Side	Ω	C-96/20/65	3.5×10^{13}	$\geq 1 \times 10^{12}$
			+C-96/40/90	4.5×10^{12}	$\geq 1 \times 10^{11}$
	基板面 Unclad-Side	Ω	C-96/20/65	2.6×10^{13}	$\geq 1 \times 10^{12}$
			+C-96/40/90	4.7×10^{12}	$\geq 1 \times 10^{11}$
介質常數 (1 MHZ) Dielectric Constant		----	C-96/20/65	4.8	≤ 5.0
			+D-48/50	4.9	≤ 5.5
散失因子 (1 MHZ) Dissipation Factor		----	C-96/20/65	0.033	≤ 0.035
			+D-24/23	0.036	≤ 0.045
吸水率 Water Absorption		%	E-24/50	0.18	≤ 0.30
			+D-24/23		
玻璃轉移溫度 Glass Transition Temperature (Tg)		°C	TMA 法	約 104	NA
膨脹係數 CTE	橫向 CD	ppm/°C	Ambience to 100°C	21.2	NA
	縱向 MD			16.8	NA
耐熱性 Heat Resistance		----	E-1hr/140°C	No Blistering	No Blistering
			E-30min/190°C		
耐藥品性 Chemical Resistance		Trichloroethylene/ 3 min		No Apparent Change	No Apparent Change
		FeCl3 (37%) / 40°C / 3min			
		NaOH (3%) / 40°C / 3min			

*所表示之特性為實測之參考值 (All of the data are for reference)