



S1000

(UL ANSI:FR-4.0)Low Z-CTE

特点

- 无铅兼容FR-4板材。
- Tg(DSC)155℃,UV Blocking 和 AOI兼容。
- 优良的耐热性。
- 比普通FR-4降低约30~35%的Z轴热膨胀系数。
- 优良的通孔可靠性。
- 优异的耐CAF性和Q1000性能。
- 低吸水性。

FEATURES

- Lead-free compatible FR-4 Laminate.
- Tg(DSC)155℃,UV Blocking/ AOI compatible.
- Excellent thermal reliability.
- Z-CTE 30~35% less than conventional FR-4.
- Excellent T/H reliability.
- Excellent anti-CAF and Q1000 performance.
- Low water absorption.

应用领域

电脑、仪器仪表、摄像机、通讯设备、汽车、电子游戏机等。

APPLICATIONS

Computer, Instrumentation, VCR, communication equipment, automotive electronics, electronic game machine, and etc.

GENERAL PROPERTIES

Test Item	Treatment Condition	Unit	Property Data		
			SPEC	Typical Value	
Tg	DSC	℃	≥150	155	
Flammability	C-48/23/50	-	V-0	V-0	
	E-24/125				
Volume Resistivity	After moisture resistance	MΩ-cm	≥10 ⁶	7.4×10 ⁶	
	E-24/125		≥10 ³	5.6×10 ⁶	
Surface Resistivity	After moisture resistance	MΩ	≥10 ⁴	7.6×10 ⁷	
	E-24/125		≥10 ³	2.8×10 ⁶	
Arc Resistance	D-48/50+D-0.5/23	S	≥60	147	
Dielectric Breakdown	D-48/50+D-0.5/23	KV	≥40	45	
Dielectric Constant (1MHz)	C-24/23/50	-	≤5.4	4.9	
Dissipation Factor (1MHz)	C-24/23/50	-	≤0.035	0.011	
Thermal Stress	Unetched	288℃,solder dip	-	>10s	100s
	Etched			No delamination	No delamination
Peel Strength	1oz Cu. Foil	288℃,10s	N/mm	≥1.05	1.4
		125℃		≥0.70	1.2
Flexural Strength	LW	A	MPa	≥415	540
	CW			≥345	450
Water Absorption	D-24/23	%	≤0.5	0.09	
CTE	Before Tg	TMA	PPM/℃	≤60	49
	After Tg	TMA	PPM/℃	≤300	250
Z-axis	50~260℃	TMA	%	≤3.5	3.4
Td	10℃/min,N ₂	℃	≥325	335	
T288	TMA	min	≥5	10	
T260	TMA	min	≥30	60	
CTI	IEC60112	V	PLC 3(175V--249V)	PLC 3	

Remarks: 1.Specification sheet:IPC-4101/99, is for your reference only.
 2.All the typical value is based on the 1.6mm specimen,while the Tg is for specimen ≥0.50mm.
 3.All the typical value listed above is for your reference only, please turn to Shengyi Technology Co., Ltd. for detailed information, and all rights from this data sheet are reserved by Shengyi Technology Co., Ltd.

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 ℃ and with the third digit the relative humidity.

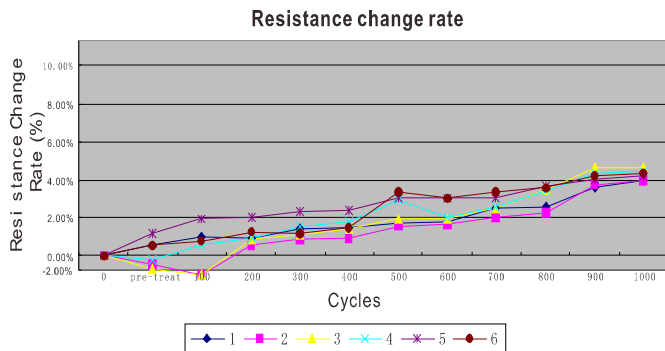


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Thermal Change Test - Q1000

- A) Pre-Treatment:
125 °C / 2hour in the oven.
- B) Thermal shock condition:
-40°C(30min)~+125°C(30min),transfer time<2min.

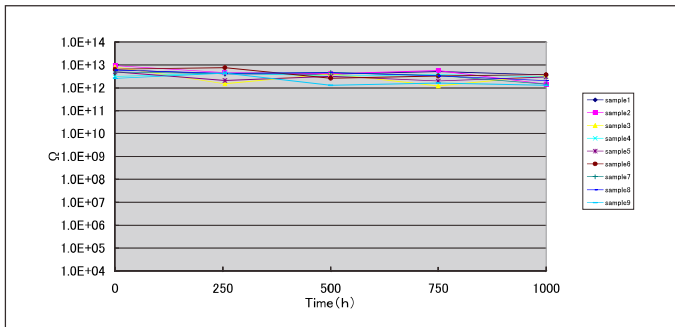


Micro-section after Q1000



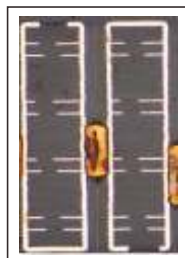
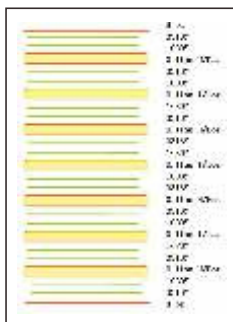
X200 micro-section X50 micro-section

Anti-CAF Test



Specimen: Pitch=0.7mm, ϕ =0.25mm, DC50V/85°C/85%RH

High layer count application evaluation



Structure : 16-Layer, 0.30mm/1.0Pitch
Overall thickness : 2.4mm
Test : 260 °C reflow 5times

PURCHASING INFORMATION

Thickness	Copper foil	Standard Size	
0.05mm to 3.2mm	12 μ m	1,020×1,220mm (40" × 48")	915×1,220mm (36" × 48")
	to 105 μ m	1,070×1,220mm (42" × 48")	

- ❖ Other sheet size and thickness could be available upon request.
- ❖ UL 认可单、双面PCB板，最小厚度0.38mm。