S1000-2

(ANSI:FR-4) Low CTE / Hi-Tg / Excellent Thermal Resistance

特点

- 无铅兼容FR-4板材。
- 高Tg170℃(DSC), UV Blocking和AOI兼容。
- 高耐热性。
- 较低Z-CTE值。
- 优异的通孔可靠性。
- 优异的Anti-CAF性能。
- 低吸水率。

FEATURES

- Lead-free compatible FR-4 laminate.
- Tg 170℃ (DSC), UV Blocking / AOI compatible.
- High heat resistance .
- Lower Z-axis CTE.
- Excellent through-hole reliability.
- Excellent anti-CAF performance.
- Low water absorption.

应用领域

适合于厚铜、厚径比较大结构的高多层印制线路板，广泛应用于计算机与通讯设备，工业控制用高档仪器仪表、路由器等。

APPLICATIONS

Suitable for high aspect ratio and high-layer PCB.
Widely used in computer, communication equipment, precise apparatus and instrument, router, etc.

GENERAL PROPERTIES

Test Item		Treatment Condition	Unit	Property Data	
				SPEC	Typical Value
Tg		DSC	℃	⩾170	175
Flammability		C-48/23/50	-	V-0	V-0
		E-24/125+des			
Volume Resistivity		After moisture resistance	MΩ-cm	⩾ 10^{6}	2.2×10^{8}
		E-24/125		⩾ 10^{3}	4.5×10^{7}
Surface Resistivity		After moisture resistance	MΩ	⩾ 10^{4}	7.9×10^{6}
		E-24/125		⩾ 10^{3}	1.7×10^{7}
Arc Resistance		D-48/50+D-0.5/23	S	⩾ 60	100
Dielectric Breakdown		D-48/50+D-0.5/23	KV	⩾ 40	63
Dielectric Constant (1MHz)		C-24/23/50	-	⩽ 5.4	4.8
Dissipation Factor (1MHz)		C-24/23/50	-	⩽ 0.035	0.013
Thermal Stress	Unetched	288℃, solder dip	-	>10s No delamination	100s No delamination
	Etched				
Peel Strength	1oz Cu. Foil	288℃,10s	N/mm	⩾ 1.05	1.38
		125℃		⩾ 0.70	1.07
Flexural Strength	LW	A	MPa	⩾ 415	562
	CW			⩾ 345	518
Water Absorption		D-24/23	%	⩽ 0.5	0.10
CTE Z-axis	Before Tg	TMA	PPM/℃	⩽60	45
	After Tg	TMA	PPM/℃	⩽300	230
	50~260℃	TMA	%	⩽3.5	2.95
Td		10℃/min,N_2,5%Wt Loss	℃	⩾325	335
T288		TMA	min	⩾5	10
T260		TMA	min	⩾30	60
CTI		IEC60112 Method	V	175~250（grade3）	200

Remarks: All the data listed above can meet IPC-4101/99 requirement.
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 ℃ and with the third digit the relative humidity.

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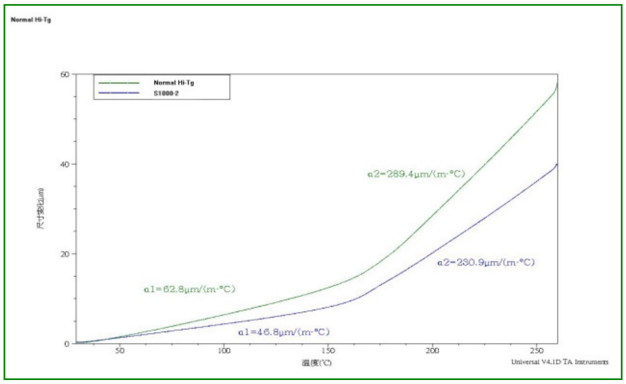
■ Lower Z-axis CTE

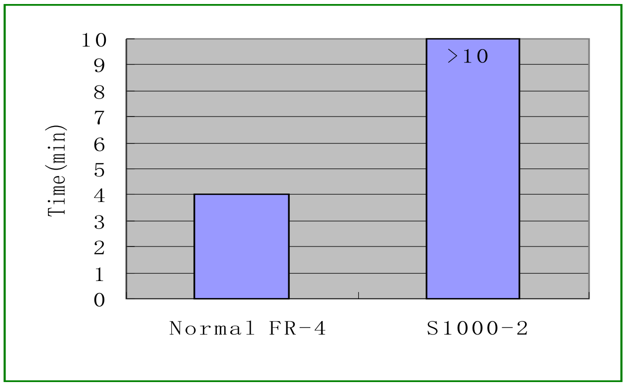


Test Sample: S1000-2 and normal FR-4 CCL

Test Method: TMA

Test Results: The Z-CTE of S1000-2 is lower than that of normal FR-4

■ Excellent Thermal Stress Resistance

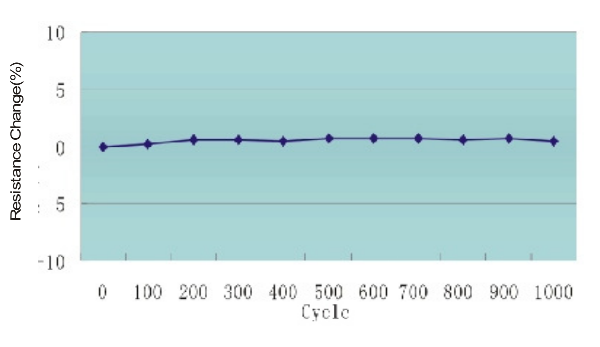


Test Sample: S1000-2 and normal FR-4 CCL

Test Method: Solder dip 288℃

Test Results: S1000-2 is better than normal FR-4 (time to delamination)

■ High Thermal Shock Resistance

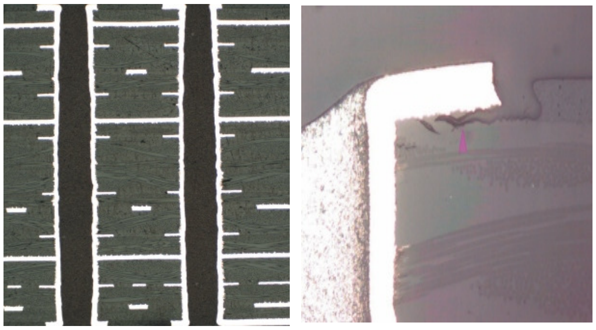


Test Sample: S1000-2 multi-layer board

Test Method: Q1000（-45℃～130℃）

Test Results: Pass 1000 cycles

■ Excellent PTH Reliability



S1000-2 Normal FR-4

Test Sample: S1000-2 and normal FR-4 CCL

Test Method: Q1000 and micro-section

Test Results: Comparing to normal FR-4, S1000-2 has less lifted lands, barrel crack, and corner crack.