

Lead-Free/Mid Tg/Low CTE/High Reliability

特性 (Feature)

- 无铅 Tg190°C
Lead-free DSC Tg190°C
- 优良的耐热性
Excellent thermal reliability
- 超低的Z轴热膨胀系数
Extremely low Z-CTE
- 良好的耐CAF性能
Anti-CAF capability

应用 (Application)

- 高端汽车电子
High-end automotive electronics
- 发动机和汽车三电系统
Engine, Specially for Electric vehicle
- 工业大电源
High Power supplier and Industrial

板材性能 (Laminate Properties)

Test Item 测试项目	Test Method (IPC-TM-650) 测试方法	Test Condition 处理条件	Unit 单位	Typical Value 典型值		
Thermal 热性能	Thermal Stress 热应力	2.4.13.1	Float 288 °C / Unetched	Sec	≥240	
	Glass Transition (Tg) 玻璃化转变温度	2.4.25	DSC	°C	190	
		2.4.24.4	DMA		200	
	CTE / Z-Axis Expansion Z-轴热膨胀系数	2.4.24	Alpha 1	ppm/°C	37	
			Alpha 2		200	
			50 - 260 °C		2.1	
	X/Y CTE X/Y-轴热膨胀系数	2.4.24	40 °C - 125 °C	ppm/°C	12/15	
	T-288	2.4.24.1	TMA	min	>50	
T-300	2.4.24.1	TMA	min	>30		
TD(5% weight loss)	2.4.24.6	TGA	°C	370		
Flammability 燃烧性	UL94	E-24/125	Rating	V-0		
Electrical 电性能	Surface Resistivity 表面电阻率	2.5.17.1	C-96/35/90	MΩ	4.7x10 ⁸	
	Volume Resistivity 体积电阻率	2.5.17.1	C-96/35/90	MΩ-cm	7.2x10 ⁹	
	Dielectric Breakdown 击穿电压	2.5.6	D-48/50+D0.5/23	kV	≥45	
	Dielectric Constant 介电常数	2.5.5.9	Etched (RC50%)	@ 1 MHz	—	4.8
				@ 1 GHz	—	4.6
	Loss Tangent 介质损耗	2.5.5.9	Etched (RC50%)	@ 1 MHz	—	0.015
				@ 1 GHz	—	0.016
CTI 相对漏电起痕指数	IEC60112	Etched/0.1% NH ₄ CL	V	≥300		
Arc Resistance 耐电弧性	2.5.1	D-48/50+D-0.5/23	Sec	129		
Mechanical 机械性能	Peel Strength (1 oz.) 铜箔剥离强度	2.4.8	A	N/mm	--	
			Float 288 °C / 10 Sec		1.30	
	Flexural Strength 弯曲强度	2.4.4	Lengthwise	N/mm ²	560	
			Crosswise		490	
Water Absorption 吸水率	2.6.2.1	D-24/23	%	0.08		

Remarks:

- Typical Values for reference only.
- Standard Values according to IPC-4101E/99/101/126
- Typical Value of Specimen thickness is 1.6mm (#7628*8)

注:

- 典型值只供参考
- 规格值参照 IPC-4101E/99/101/126
- 样品的厚度为 1.6mm (#7628*8)

