



Low CTE Middle Tg Material

EM-825/ EM-825B

- Low Z-axis CTE < 3.5% (50~260 °C)
- Low moisture absorption
- Excellent thermal stability for lead-free processing
- For general application

Basic Laminate Property

Item	IPC-TM-650	Test condition	Unit	Typical Value	
Glass transition temp.	2.4.25	DSC	°C	150	
CTE, X-, Y-axis	2.4.24	Pre-Tg, TMA	ppm/°C	12/15	
CTE, Z-axis	2.4.24	Alpha 1, TMA	ppm/°C	50	
		Alpha 2, TMA	ppm/°C	260	
Z-axis Expansion	2.4.24	50~260°C, TMA	%	3.2	
Decomposition temp.	2.4.24.6	TGA	°C	340	
Thermal stress 10sec 288°C	2.4.13.1	Clad	—	Pass Visual	
		Etched	—	Pass Visual	
Water absorption	2.6.2.1	E-1/105+D-24/23	%	0.10	
Peel strength	0.5 oz	2.4.8	as received	lb/in	6.5
			after thermal stress	lb/in	6.5
	1.0 oz	2.4.8	as received	lb/in	8.5
			after thermal stress	lb/in	8.5
Permittivity (RC 50%)	1 MHz	2.5.5.9	C-24/23/50	—	4.9
	1 GHz			—	4.3
Loss tangent (RC 50%)	1 MHz	2.5.5.9	C-24/23/50	—	0.015
	1 GHz			—	0.016
Volume resistivity	2.5.17.1	C-96/35/90	MΩ-cm	>10 ¹⁰	
Surface resistivity	2.5.17.1	C-96/35/90	MΩ	>10 ⁹	
Flexural strength	Warp	2.4.4	as received	MPa	510~540
	Fill		as received	MPa	410~460
Flame resistance	UL-94	A&E-24/125	—	V-0	

