High Tg / Low CTE / Lead Free

EM-827 / EM-827B

- Low Z-axis CTE < 3.0% (50~260℃)
- Excellent thermal stability for lead-free processing
- For general application
- Applicable IPC-4101 Slash Sheets: /98, /99, /101, /126

Basic Laminate Property

Property	Item		IPC-TM-650	Test Condition	Unit	Typical Value
Thermal	Tg		2.4.25	DSC	℃	175
			2.4.24	TMA	℃	160
			2.4.24.4	DMA	℃	185
	CTE, X/Y-axis		2.4.24.5	< Tg, TMA	ppm/℃	12/15
	CTE, Z-axis		2.4.24	< Tg, TMA	ppm/℃	40~45
				> Tg, TMA	ppm/℃	200~220
	Z-axis Expansion		2.4.24	50~260℃	%	2.6
	Td		2.4.24.6	TGA (5% W.L)	℃	350
	T288		2.4.24.1	Clad	Min.	>25
				Etched	Min.	>30
Electrical	Dk (R/C: 50%)	1 MHz	2.5.5.9	C-24/23/50	-	4.8
		1 GHz			-	4.3
	Df (R/C: 50%)	1 MHz	2.5.5.9	C-24/23/50	-	0.018
		1 GHz			-	0.019
	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	$>10^{9}$
Physical	Water Absorption		2.6.2.1	E-1/105+D-24/23	%	0.15
	Peel Strength (HTE)	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
	Flexural Strength	Warp	2.4.4	As Received	MPa	510~570
		Fill		As Received	MPa	450~500
	Flame Resistance		UL-94	A & E-24/125	-	V-0

Above typical values are tested under specified constructions and not intended for specification.