

EM-827(I) / EM-827B(I)

High Tg / CAF Resistance / Lead Free

- Applications include: automotive, server, computer and consumer electronics.
- Designed for high thermal reliability with excellent CAF resistance.
- Low Z-axis CTE: < 3.0% (50~260°C)
- RoHS Compliant
- UL File: E150504
- Applicable IPC Slash Sheets: IPC-4101 /98, /99, /101, /126; IPC-4103 /250, /550

Basic Laminate Property

Property	Item	Typical Value	Unit	Test Condition	IPC-TM-650	
Thermal	Tg	175	°C	DSC	2.4.25	
		160	°C	TMA	2.4.24	
		185	°C	DMA	2.4.24.4	
	CTE, X/Y-axis	12/15	ppm/°C	< Tg, TMA	2.4.24.5	
	CTE, Z-axis	40~45	ppm/°C	< Tg, TMA	2.4.24	
		200~220	ppm/°C	> Tg, TMA		
	Z-axis Expansion	2.6	%	50~260 °C	2.4.24	
	Td	350	°C	TGA (5% W.L)	2.4.24.6	
	T288	>25	min.	Clad	2.4.24.1	
		>30	min.	Etched		
Thermal Conductivity	0.44	W/m.K	-	ASTM D5470		
Electrical	Dk (R/C: 50%)	1 MHz	4.8	-	C-24/23/50	2.5.5.9
		1 GHz	4.3	-		
	Df (R/C: 50%)	1 MHz	0.018	-	C-24/23/50	2.5.5.9
		1 GHz	0.019	-		
	Volume Resistivity	>10 ¹⁰	MΩ-cm	C-96/35/90	2.5.17.1	
Surface Resistivity	>10 ⁹	MΩ	C-96/35/90	2.5.17.1		
Physical	Water Absorption	0.15	%	E-1/105+D-24/23	2.6.2.1	
	Peel Strength (HTE)	H oz	6.5	lb/in	As Received	2.4.8
			6.5	lb/in	After Thermal Stress	
		1 oz	8.5	lb/in	As Received	
			8.5	lb/in	After Thermal Stress	
	Flexural Strength	Warp	510~570	MPa	As Received	2.4.4
		Fill	450~500	MPa	As Received	
Flame Resistance	V-0	-	A & E-24/125	UL-94		

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