



## EM-370(Z) / EM-37B(Z)

### High Tg / High Reliability / Halogen Free

- Applications include: automotive, power system, server and heavy copper PCB.
- Designed for high thermal reliability with excellent CAF resistance.
- Very Low Z-axis CTE: 1.8% (50~260°C)
- RoHS Compliant
- UL File: E150504
- Applicable IPC Slash Sheets: IPC-4101 /127, /128, /130; IPC-4103 /250, /550

#### Basic Laminate Property

Property	Item		Typical Value	Unit	Test Condition	IPC-TM-650	
Thermal	Tg		190	°C	DSC	2.4.25	
			180	°C	TMA	2.4.24	
			210	°C	DMA	2.4.24.4	
		CTE, X/Y-axis		11/13	ppm/°C	< Tg, TMA	2.4.24.5
		CTE, Z-axis		35~40	ppm/°C	< Tg, TMA	2.4.24
				140~160	ppm/°C	> Tg, TMA	
		Z-axis Expansion		1.8	%	50~260 °C	2.4.24
		Td		390	°C	TGA (5% W.L)	2.4.24.6
		T288		>60	min.	Clad	2.4.24.1
				>60	min.	Etched	
	Thermal Conductivity		0.58	W/m.K	-	ASTM D5470	
Electrical	Dk (RC: 50/70%)	1 GHz	4.4/4.0	-	C-24/23/50	2.5.5.9	
		10 GHz	4.2/3.8	-		Cavity Resonator	
	Df (RC: 50/70%)	1 GHz	0.012/0.014	-	C-24/23/50	2.5.5.9	
		10 GHz	0.015/0.019	-		Cavity Resonator	
	Volume Resistivity		>10 <sup>10</sup>	MΩ-cm	C-96/35/90	2.5.17.1	
	Surface Resistivity		>10 <sup>9</sup>	MΩ	C-96/35/90	2.5.17.1	
Water Absorption		0.14	%	E-1/105+D-24/23	2.6.2.1		
Physical	Peel Strength (HTE)	H oz	6.0	lb/in	As Received	2.4.8	
			6.0	lb/in	After Thermal Stress		
		1 oz	8.0	lb/in	As Received		
			8.0	lb/in	After Thermal Stress		
	Flexural Strength	Warp	570~630	MPa	As Received	2.4.4	
		Fill	500~550	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.