

# EM-370(D)-15 / EM-37B(D)-15

## High Tg / Upper Mid Loss / Halogen Free

- Applications include: high performance server, network and telecom.
- Low moisture absorption and excellent CAF resistance.
- Standard FR-4 Dk and lower Df.
- Z-axis CTE: 2.2% (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	175	°C	DSC	2.4.25	
		170	°C	TMA	2.4.24	
		195	°C	DMA	2.4.24.4	
	CTE, X/Y-axis	12/15	ppm/°C	< Tg, TMA	2.4.24.5	
	CTE, Z-axis	35~40	ppm/°C	< Tg, TMA	2.4.24	
		160~180	ppm/°C	> Tg, TMA		
	Z-axis Expansion	2.2	%	50~260 °C	2.4.24	
	Td	385	°C	TGA (5% W.L)	2.4.24.6	
	T288	>60	min.	Clad	2.4.24.1	
Thermal Conductivity	0.47	W/m.K	-	ASTM D5470		
Electrical	Dk (R/C:50%)	1 GHz	4.1	-	C-24/23/50	2.5.5.9
		10 GHz	4.0	-		Cavity Resonator
	Df (R/C:50%)	1 GHz	0.011	-	C-24/23/50	2.5.5.9
		10 GHz	0.015	-		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	
Physical	Water Absorption	0.13	%	E-1/105+D-24/23	2.6.2.1	
	Peel Strength (RTF)	H oz	4.5 (4.5)	lb/in	As Received (After thermal stress)	2.4.8
		1 oz	5.0 (5.0)	lb/in		
	Flexural Strength	Warp	510~570	MPa	As Received	2.4.4
		Fill	450~500	MPa		
Flame Resistance	UL-94	-	A & E-24/125	V-0		

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