



High Tg / Ultra Low Loss / Halogen Free

EM-S530K / EM-S53BK

- Excellent dielectric properties
- High heat resistance and high thermal reliability applications
- High peel strength with low profile copper foil
- Suitable for high speed and high frequency device like mmWave and AiP

Basic Laminate Property

Property	Item		IPC-TM-650	Test Condition	Unit	Typical Value
Thermal	Tg		2.4.24	TMA	°C	235
			2.4.24.4	DMA	°C	260
	CTE, X/Y-axis		2.4.24.5	< Tg, TMA	ppm/°C	9/10
	CTE, Z-axis		2.4.24	< Tg, TMA	ppm/°C	25~30
				> Tg, TMA	ppm/°C	120~140
	Td		2.4.24.6	TGA (5%W.L)	°C	445
T288		2.4.24.1	Clad	Min	> 60	
			Etched	Min	> 60	
Electrical	Dk (R/C:50/70%)	1GHz	2.5.5.9	C-24/23/50	-	3.36 / 3.05
		10GHz	Cavity Resonator			3.24 / 2.95
	Df (R/C:50/70%)	1GHz	2.5.5.9	C-24/23/50	-	0.0021/0.0021
		10GHz	Cavity Resonator			0.0028/0.0027
	Volume Resistivity		2.5.17.1	C-96/35/90	MΩ-cm	> 10 ¹⁰
Surface Resistivity		MΩ			> 10 ⁹	
Physical	Water Absorption		2.6.2.1	E-1/105+D-24/23	%	0.11
	Peel Strength (RTF)	18 um	2.4.8	As Received	Kg/cm	0.8
	Peel Strength (ultra-thin copper foil)	36 um (3um+ plating)				0.9
	Flexural Modulus	Warp	2.4.4	As Received	GPa	22~24
		Fill				21~23
Flame Resistance		UL-94	A & E-4/125	-	V-0	

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