Elite Material Co., Ltd.
http://www.emctw.com
Datasheet

EM-S530K / EM-S53BK
High Tg / Ultra Low Loss / Halogen Free

- Suitable for high-speed and high frequency applications like mmWave and AiP.
- Excellent dielectric properties.
- High heat resistance and high thermal reliability capability.
- High peel strength with low profile copper foil.
- UL File: E150504
- Applicable IPC Slash Sheets: IPC-4101 /134; IPC-4103 /230, /530

Basic Laminate Property

Property	Item		Typical Value	Unit	Test Condition	IPC-TM-650
Thermal	Tg		N/A	°C	DSC	2.4.25
			235	°C	TMA	2.4.24
			260	°C	DMA	2.4.24.4
	CTE, X/Y-axis		9/10	ppm/ °C	< Tg, TMA	2.4.24.5
	CTE, Z-axis		25~30	ppm/ °C	< Tg, TMA	2.4.24
			120~140	ppm/ °C	> Tg, TMA	
	Td		445	°C	TGA (5%W.L)	2.4.24.6
	T288		> 60	min.	Clad	2.4.24.1
			> 60	min.	Etched	
	Thermal Conductivity		0.83	W/m.K	-	ASTM D5470
Electrical	Dk (R/C:50/70%)	1GHz	3.36 / 3.05	-	C-24/23/50	2.5.5.9
		10GHz	3.24 / 2.95	-		Cavity Resonator
	Df (R/C:50/70%)	1GHz	0.0021/0.0021	-	C-24/23/50	2.5.5.9
		10GHz	0.0028/0.0027	-		Cavity Resonator
	Volume Resistivity		> 10^{10}	MΩ-cm	C-96/35/90	2.5.17.1
	Surface Resistivity		> 10^{9}	MΩ		
Physical	Water Absorption		0.11	%	E-1/105+D-24/23	2.6.2.1
	Peel Strength	RTF, 18 um	0.8	kg/cm	As Received	2.4.8
		3um plated to 36um	0.9	kg/cm		
	Flexural Modulus	Warp	22~24	GPa	As Received	2.4.4
		Fill	21~23	GPa		
	Flame Resistance		V-0	-	A & E-4/125	UL-94

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

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