

EM-S532K / EM-S532BK

High Tg / Extreme Low Loss / Halogen Free

- Applications Include: mmWave and package (antenna, Front-end module)
- Multiple lamination and high thermal reliability applications
- Excellent dielectric properties (extreme low Df and Dk)
- RoHS Compliant
- UL File: E150504
- Applicable IPC-4101 Slash Sheets: /134; IPC-4103 Slash Sheets: 230/530

Basic Laminate Property

Property	Item		Typical Value	Unit	Test Condition	IPC-TM-650
Thermal	Tg		N/A	℃	DSC	2.4.25
			180	℃	TMA	2.4.24
			215	℃	DMA	2.4.24.4
	CTE, X/Y-axis		12/13	ppm/℃	< Tg, TMA	2.4.24.5
	CTE, Z-axis		40~45	ppm/℃	< Tg, TMA	2.4.24
			185~205	ppm/℃	> Tg, TMA	
	Z-axis Expansion		1.8	%	50~260℃	2.4.24
	Td		420	℃	TGA (5% W.L)	2.4.24.6
	T288		>60	Min	Clad	2.4.24.1
			>60	Min	Etched	
	Thermal Conductivity		0.46	W/m.K	-	ASTM D5470
Electrical	Dk (R/C: 55/70%)	1 GHz	3.11/2.93	-	C-24/23/50	2.5.5.9
		10 GHz	3.00/2.84			Cavity Resonator
			3.00/2.84			SPC method
	Df (R/C: 55/70%)	1 GHz	0.0014/0.0012	-	C-24/23/50	2.5.5.9
		10 GHz	0.0019/0.0017			Cavity Resonator
			0.0015/0.0013			SPC method
Physical	Water Absorption		0.07	%	E-1/105+D-24/23	2.6.2.1
	Peel Strength (LP)	H oz	0.6	kN/m	As Received	2.4.8
	Flame Resistance		V-0	-	C-48/23/50	UL-94

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