

KB-6165F Copper Clad Laminates

KB

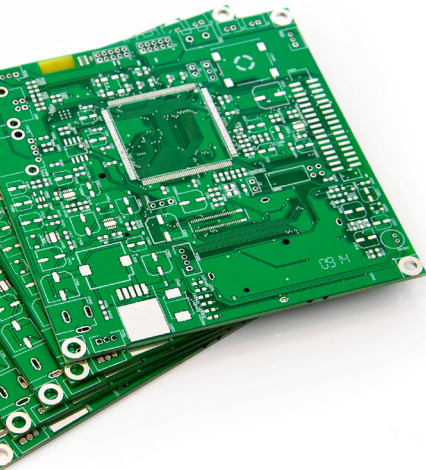
KINGBOARD

Features

- Lead-free DSC Tg > 150°C
- Excellent thermal reliability
- Low Z-CTE
- Anti-CAF capability

Applications

- Computer and NB
- Instruments
- Consumer Electronics
- Automotive Electronics



Lead-free, Tg 150, Low CTE

KB6165F is a filled, mid Tg, lead free compatible material that is capable of withstanding lead free reflow cycles. The primary slash sheet is IPC4101 /99. KB6165F is an ideal choice when value and quality are key requirements in a highly competitive industry.

Laminate Properties

Item		Typical Value	Test Method (IPC-TM-650)	Test Condition	Unit	Specification	
Thermal	Thermal Stress	> 240	2.4.13.1	Float 288°C/ unetched	sec	≥ 10	
	Glass Transition (Tg)	157	2.4.25	E-2/105 DSC	°C	≥ 130	
	CTE/Z-Axis Expansion	40	2.4.24	Alpha 1	ppm/°C	≤ 60	
		230		Alpha 2		≤ 300	
		3.0		50 - 260°C	%	≤ 3.5	
	X/Y CTE	12/15	2.4.24	40 - 125°C	ppm/°C	—	
	T-260	> 60	2.4.24.1	TMA	min	≥ 30	
	T-288	> 30	2.4.24.1	TMA	min	≥ 5	
	TD (5% weight loss)	346	2.4.24.6	TGA	°C	≥ 325	
Flammability	V-0	UL94	E-24/23	Rating	V-0		
Electrical	Surface Resistivity	2.6 x 10 ⁸	2.5.17.1	C-96/35/90	MΩ	≥ 10 ⁴	
	Volume Resistivity	3.4 x 10 ⁹	2.5.17.1	C-96/35/90	MΩ-cm	≥ 10 ⁶	
	Dielectric Breakdown	65	2.5.6	D-48/50+D0.5/23	kV	≥ 40	
	Dielectric Constant	4.8	2.5.5.2	Etched (R/C 50%)	@ 1MHz	—	≤ 5.4
		4.6			@ 1GHz		
	Loss Tangent	0.015	2.5.5.2	Etched (R/C 50%)	@ 1MHz	—	≤ 0.035
		0.016			@ 1GHz		
CTI	> 175	IEC60112	A	V	—		
Arc Resistance	127	2.5.1	D-48/50+D0.5/23	sec	≥ 60		
Mechanical	Peel Strength (1oz)	1.3	2.4.8	125°C	N/mm	≥ 0.70	
		1.5		Float 288°C/10 sec		≥ 1.05	
		1.1		After Process Solution		≥ 0.80	
	Flexural Strength	540	2.4.4	Length Direction	N/mm ²	≥ 415	
		480		Cross Direction		≥ 345	
Moisture Absorption	0.10	2.6.2.1	D-24/23	%	≤ 0.5		

Remarks:

- Typical values for reference only.
- Standard values according to IPC-4101E /99
- Typical value of specimen thickness is 1.6mm (8 * 7628)

UL: E123995

RoHS