

# Hangzhou Hanchuang Electronics Material Co.,LTD

## 杭州韩创电子材料有限公司

### Test report and certificate for CCL

Type:	FR-4							
Specification:	1.60mm 35μm/35μm UV							
No	Item	Unit	Test method	Specification			Test value	Judgement
1	Visual	---	IPC-TM650	AABUS			A	ACC
2	Thickness	mm	IPC-4101	Class B/L			1.51-1.68	ACC
3	Peel Strength	LBS/IN	A Float 288℃ IPC-TM-650 2.4.8	Horz	35μm	2oz	8.0-10.0	ACC
				≥6.0	≥8.0	≥10.0		
				≥6.0	≥8.0	≥10.0	8.0-10.0	
4	Bow	%	A IPC-TM-650 2.4.22.1	double sided	single sided		0.1-1.0	ACC
				≤1.0	≤1.5			
5	Twist	%	A IPC-TM-650 2.4.22.1	double sided	single sided		0.1-1.0	ACC
				≤1.0	≤1.5			
6	Thermal Stress	Sec	Float 288℃ IPC-TM-650 2.4.13.1	Unetched	≥10	40-60	ACC	
				Etched	≥10	40-57		
7	Dielectric Breakdown	KV	D48/50+D0.5/23 IPC-TM-650 2.5.6	≥30			35	ACC
8	Water absorption	%	D24/23 IPC-TM-650 2.6.2.1	≤0.80			0.25-0.45	ACC
9	Loss Tangent	---	Etched/@1MHZ IPC-TM-650 2.5.5.2	≤0.050			0.045-0.048	ACC
10	Glass transition	℃	E2/105 DSC IPC-TM-650 2.4.25	≥110			128	ACC
FINAL TESTING RESULT <input checked="" type="checkbox"/> ACC <input type="checkbox"/> NG    INSPECTOR:    APPROVED:								