

technical specification of copper-based ccl

Products Performance Index(Measured value)	us bergquist substrate	japan nrk substrate	taiwan plain therma conductive substrate	domestic 1060 substrate	our substrate
peeling strength(n/mm)	3	3	2.2	1.8	2.2
insulation resistance (1Ω)	>100*10g	>10*10g	>10*10g	>1*10g	>10*10g
breakdown voltage (vdc)	6k	5.5k	5k	4k	6k
soakable soldering (/m)	300 ,1min,no bubble; no delamination	300 ,1min,no bubble,no delamination	300 ,1min,no bubble,no delamination	280 ,1min,no bubble,no delamination	288 ,1min,no bubble,no delamination
thermal conductivity (w/m-k)	>1.8	>1.8	>1.2	>0.8	>1.8
thermal resistance (/w)	<0.45	<0.45	<1	<1.2	<0.45
combustibility	fv-o	fv-o	fv-o	fv-o	fv-o
dielectric constant (1mhz)	6	6	5	4	5
dielectric loss angle(tangent)	0.02	0.02	0.02	0.03	0.02

items	technical index			
product model	al substrate	cu substrate		
material model	domestic al	imported al	domestic cu	imported cu
	a1100	a5052	a6061	a6063 c1100
surface disposal	spray tin/ chemical tin/chemical gold/osp/ immersion tin			
layers	single-side al substrate / double-side al substrate /four-layer al substrate			

maximum measurement	1100mm*480mm
minimum measurement	5mm*5mm
line width/space	0.1mm
warp and twist	±0.5% (thickness: 1.6mm, measurement: 300mm × 300mm)
processing thickness	0.3 - 4.5mm
copper foil thickness	35um 70um 105um 140um
molding dimension tolerance	±0.15mm
v-cut positioning accuracy	±0.1mm
processing capability	6000m ²
cu thickness of inner aperture	20-25um
aperture location deviation	±0.076mm
minimum diameter of piercing	lower than 1.0mm 1.0mm 1.2-3.0mm 1.5mm
minimum specification of the square groove	plate thickness lower than 1.0mm 0.8mm × 0.8mm plate thickness 1.2-3.0mm 1.0 × 1.0mm
circuit printing deviation	±0.076mm
scope of molding dimension tolerance	cnc : ±0.1mm punching the shape : ±0.15mm
mini aperture	0.8mm not limited to the maximum aperture diameter
coating thickness	gold plating : ni 2.5-5um au 0.05-0.1um 0.025 - 0.075um immersion gold : ni 5-8um au 0.08-0.1um spray tin 3-30um 4-30um
v - cut angle deviation	±5°
scope of v-cut plates	0.6mm-3.2mm
marking font of the smallest component	0.15mm
smallest windowing of pad	0.01mm