KINGBROTHER PCB Capability

Item		Technical Capability	
		Sample	Batch
Product Type		Embedded Resistor & Capacitor Embedded Magnetic Core Embedded Component Embedded Copper Block Embedded Sub-board 77G Radar Products Self-clinching Nut High resistance carbon oil Substrate-Like PCB IC-Substrate	Single / Double Sided Multi-layer HDI High-frequency Cavity Rigid-flex Heavy Copper Hybrid High-Frequency Mechanical Buried & Blind Via Metal Base Metal Core High-speed Backplane High-speed Optical Module 5G Antenna
Material		Halogen Free/ Lead Free	SHENGYI: S1000H（has UL & CUL）、S1000-2M（has UL & CUL）、S1150G、S1170G； Wazam H150、H1170;（both has UL & CUL） ITEQ IT158、IT180A (has UL & CUL）； TU752、TU865
		High-speed Material	SHENGYI S6N、S7439； Panasonic M6； TU872-SLK、TU883、TU933+ 、TU943N； ITEQ IT-170GT
		High-frequency Material	Rogers RO3003、RO45350（has UL）； Taconic TLY-5、TLX-8、TSM-DS3； Panasonic R5575； SHENGYI SG220/255/300； Wazam: F4BM； FSD220/255/300/615T/1020T
		Flex Section Material	Panasonic RF-775； ThinFlex W、High-speed Flex Board (LK series)； Dupont AG Flex Board
		Others	BT Material High Thermal Conductivity Material Copper Base Aluminum Base Rigid PI (VT901), Buried Capacitor Material, Buried Resistor Copper Foil, Magnetic Core Material, High Resistance Carbon ink.
Signal Transfer Rate		Max: 112Gbps	Max: 25Gbps
Layers	FR4	68	30

	Rigid-Flex	Total/Flexible: 28/16	Total/Flexible: 20/12
	Hybrid High-Frequency	28	20
	Pure PTFE	24	16
	HDI	28/5+N+5	20/3+N+3
	Substrate	4	2
Size	Rigid Board	Max:550mm*900mm	Max:550mm*620mm
	Double-sided Flexible Board	Max:2000*200mm	Max:1250*200mm
Max Final Board Thickness		12mm	6.5mm
Line Width/ Space	PCB	Min:2.0/2.0 mil	Min:3.0/3.0 mil
	Substrate(-like)	Min:30/30 um	Min:40/40 um
Max Conductor Thickness		18 OZ	6 OZ
Via Diameter	Mechanical Hole	Min:0.10mm	Min:0.15mm
	Laser Hole	Min:0.10mm	Min:0.10mm
	Half Hole	Min:0.30mm	Min:0.40mm
Via to Via Clearance	Same Nets	Min:0.13mm	Min:0.2mm
	Different Nets	Min:0.25mm	Min:0.30mm
Via to inner layer copper/track	≤10L	Min:0.125mm	Min:0.15mm
	＞10L	Min:0.15mm	Min:0.18mm
Aspect Ratio		20:1	16：1
Solder Bridge	Green	Min:3.0 mil	Min:4.0 mil
	Other Colors	Min:4.5 mil	Min:5.0 mil
Resin Filling Via Diameter		0.08-0.8 mm	0.1-0.6 mm
Impedance Tolerance		±5%	±10%
Gold Thickness	ENIG	MAX：5-8u"	MAX：3-8u"
	Soft Ni/Au Plating	MAX：80-120u"	MAX：1-3u"
	Hard Ni/Au Plating	MAX：80 u"	MAX：30 u"
Surface Finish		HASL-LF; OSP; Immersion Ag; Immersion Tin; ENIG; ENEPIG; Plating Gold	
Special Capabilities		Thick Copper with Blind Buried Via Metal Core Rigid-flex Embedded Copper Block Hybrid High-frequency Gold Finger Back Drilling Deep Slot Milling Hole on Pad Half Hole	Countersink Hole Sidestep Slot Via Overlapping Via Peelable Mask Laser Cutting Resin Filling Mixed Surface Treatment Buried Components Buried Sub-board Self-clinching Nut Welding Metal Board