CIRCUIBRAS printed circuit boards

Global PCB manufacturing solutions, made in Brazil.

Roadmap

Rigid PCB

YEAR	2024		2025		2026		2027	
TECHNICAL SPECIFICATIONS	STANDARD	ADVANCED	STANDARD	ADVANCED	STANDARD	ADVANCED	STANDARD	ADVANCED
PRODUCTION CAPACITY	5,500m²/month		6,050 m²/month		6,600 m²/month		8,250 m²/month	
MAX LAYERS	16 layers	> 16 layers	20 layers	> 20 layers	22 layers	> 22 layers	24 layers	Upon request
HDI (LAMINATED DESIGN)	2+N+2	Upon request	3+N+3	Upon request	3+N+3	Upon request	3+N+3	Upon request
RAW MATERIAL	FR4-Lead Free Compatible FR4-Halogen Free	Other materials upon request	FR4-Lead Free Compatible FR4-Halogen Free	Other materials upon request	FR4-Lead Free Compatible FR4-Halogen Free	Other materials upon request	FR4-Lead Free Compatible FR4-Halogen Free	Other materials upon request
TG	135°C (CTI ≥ 600V) / 150°C / 180°C							
UL CERTIFICATION	94V-0 [ZPM V2 & V8]							
CAPPED VIA	According to IPC-4761 Type VII							
BACK DRILLING	According to IPC-2221							
PRODUCT TYPES	-HDI -Impedance control -BGA & Fine Pitch Board -HF (High Frequency) -RF (Radio Frequency)		-HDI -Impedance control -BGA & Fine Pitch Board -HF (High Frequency) -RF (Radio Frequency) -Semiflex		-HDI -Impedance control -BGA & Fine Pitch Board -HF (High Frequency) -RF (Radio Frequency) -Semiflex -Rigid-flex		-HDI -Impedance control -BGA & Fine Pitch Board -HF (High Frequency) -RF (Radio Frequency) -Semiflex -Rigid-flex	
MINIMUM SOLDER MASK THICKNESS	6µm layer or according to IPC SM 840							
	Available colors: Green, Blue, Black, Red, White, other colors upon request							
INK LEGEND COMPONENTS	Minimum trace width: 100µm (0.004")							
	Minimum character height: 700µm (0.028")							
	Available colors: White, Black, Yellow, Red, other colors upon request							
SURFACE FINISHING	HASL Sn/Pb		HASL Sn/Pb		-		-	
	-		HASL Lead Free		HASL Lead Free		HASL Lead Free	
	ENIG-Electroless Nickel Immersion Gold		ENIG-Electroless Nickel Immersion Gold		ENIG-Electroless Nickel Immersion Gold		ENIG-Electroless Nickel Immersion Gold	
	OSP-Organic Solderability Preservative		OSP-Organic Solderability Preservative		OSP-Organic Solderability Preservative		OSP-Organic Solderability Preservative	
COMPLEMENTS	Peelable (Solder Out)							
	Carbon paste contacts							
	Hard Gold: According to IPC 6012 or customer spec							
ELECTRICAL TEST	According to IPC 9252 Class 2 (100% of boards tested) - Voltage: 250V, Continuity ≤50 Ω and Isolation ≥ 2MΩ							
MINIMUM PCB THICKNESS	0.60mm (0.024')	< 0.60mm (0.024')	0.40mm (0.016')	< 0.40mm (0.016')	0.40mm (0.016')	< 0.40mm (0.016')	0.40mm (0.016')	< 0.40mm (0.016')
MAXIMUM PCB THICKNESS	3.20mm (0.125')	> 3.20mm (0.125')	5.00mm (0.197')	> 5.00mm (0.197')	5.00mm (0.197')	> 5.00mm (0.197')	5.00mm (0.197')	> 5.00mm (0.197')
MINIMUM BGA	0.35mm (0,014')	0.30mm (0,012')	0.30mm (0,012')	upon request	0.30mm (0,012')	upon request	0.30mm (0,012')	upon request

ISO 9001 ISO 14001 IATF 16949

YEAR		2024				2025				2026				2027			
TECHNICAL SPECIFICATIONS	COPPER LAYER	STANDARD		ADVANCED		STANDARD		ADVANCED		STANDARD		ADVANCED		STANDARD		ADVANCED	
		TRACK	GAP	TRACK	GAP	TRACK	GAP	TRACK	GAP	TRACK	GAP	TRACK	GAP	TRACK	GAP	TRACK	GAP
MIN EXTERNAL LAYERS TRACK/GAP	1/2oz (17.5µm)	100µm (0.004')	100µm (0.004')	75µm (0.003')	75µm (0.003')	75µm (0.003')	75µm (0.003')	50µm (0.002')	50µm (0.002')	75µm (0.003')	75µm (0.003')	50µm (0.002')	50µm (0.002')	75µm (0.003')	75µm (0.003')	50µm (0.002')	50µm (0.002')
	1oz (35µm)	125µm (0.005')	125µm (0.005')	100µm (0.004')	100µm (0.004')	100µm (0.004')	100µm (0.004')	75µm (0.003')	75µm (0.003')	100µm (0.004')	100µm (0.004')	75µm (0.003')	75µm (0.003')	100µm (0.004')	100µm (0.004')	75µm (0.003')	75µm (0.003')
	2oz (70µm)	175µm (0.007')	175µm (0.007')	150µm (0.006')	150µm (0.006')	150µm (0.006')	150µm (0.006')	125µm (0.005')	125µm (0.005')	150µm (0.006')	150µm (0.006')	125µm (0.005')	125µm (0.005')	150µm (0.006')	150µm (0.006')	125µm (0.005')	125µm (0.005')
	3oz (105µm)	225µm (0.009')	225µm (0.009')	Upon request		225µm (0.009')	225µm (0.009')	Upon request		225µm (0.009')	225µm (0.009')	Upon request		225µm (0.009')	225µm (0.009')	Upon request	
MIN INNER LAYERS TRACK/GAP	1/2oz (17.5µm)	75µm (0.003')	75µm (0.003')	50µm (0.002')	50µm (0.002')	50µm (0.002')	50µm (0.002')	Upon request		50µm (0.002')	50µm (0.002')	Upon request		50µm (0.002')	50µm (0.002')	Upon request	
	1oz (35µm)	100µm (0.004')	100µm (0.004')	75µm (0.003')	75µm (0.003')	75µm (0.003')	75µm (0.003')	Upon request		75µm (0.003')	75µm (0.003')	Upon request		75µm (0.003')	75µm (0.003')	Upon request	
	2oz (70µm)	150µm (0.006')	150µm (0.006')	125µm (0.005')	125µm (0.005')	125µm (0.005')	125µm (0.005')	Upon request		125µm (0.005')	125µm (0.005')	Upon request		125µm (0.005')	125µm (0.005')	Upon request	
	3oz (105µm)	188µm (0.0075')	188µm (0.0075')	163µm (0.0065')	163µm (0.0065')	163µm (0.0065')	163µm (0.0065')	Upon request		163µm (0.0065')	163µm (0.0065')	Upon request		163µm (0.0065')	163µm (0.0065')	Upon request	
PTH COPPER THICKNESS		20µm (0.0008') – IPC Class 2															
		≥ 25µm (0.0010') – IPC Class 3															
MINIMUM ANNULAR RING		100µm(0.004') with teardrop		75µm (0.003') with teardrop		100µm(0.004') with teardrop		75µm (0.003') with teardrop		100µm(0.004') with teardrop		75µm (0.003') with teardrop		75µm (0.003') with teardrop		50µm (0.002') with teardrop	
MINIMUM HOLE DIAMETER		150µm (0.006')		<150µm (0.006')		150µm (0.006')		100µm (0.004')		150µm (0.006')		100µm (0.004')		75µm (0.003')		50µm (0.002')	
DRILLING TOLERANCE		+/-100µm to130µm		+/-75µm (0.003')		+/-100µm to130µm		+/-5µm(0.002')		+/-100µm to130µm		+/-5µm(0.002')		+/-75µm (0.003')		+/-50µm (0.002')	
DIMENSIONAL TOLERANCE		+/-200µm to130µm (0.008' to 0.005')		< +/- 130µm (0.005')		+/-200µm to130µm (0.008' to 0.005')		+/-100µm (0.004')		+/-200µm to130µm (0.008' to 0.005')		+/-100µm (0.004')		130µm to100µm (0.005' to 0.004')		+/-75µm (0.003')	
CONTROLLED IMPEDENCE		+/- 10%		Upon request		+/- 10%		Upon request		+/- 10%		Upon request		+/- 10%		Upon request	
MINIMUM DIELECTRIC THICKNESS		100µm(0.004')		Upon request		76µm (0.003')		Upon request		76µm (0.003')		Upon request		60µm(0.0024')		Upon request	
EXTERNAL COPPER THICKNESS		1/3oz-3oz (12µm-105µm)		4oz (140µm)		1/3oz-3oz (12µm-105µm)		5oz (175µm)		1/3oz-3oz (12µm-105µm)		6oz (210µm)		1/3oz-3oz (12µm-105µm)		Upon request	
INTERNAL COPPER THICKNESS		1/2oz-3oz (17.5µm-35µm)		> 2oz (70µm)		1/2oz-3oz (17.5µm-35µm)		>3oz(105µm)		1/2oz-3oz (17.5µm-35µm)		>3oz(105µm)		1/2oz-3oz (17.5µm-35µm)		>3oz(105µm)	

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website