

RIGID & RIGID-FLEX PCB

CATEGORY		STANDARD	SPECIAL
Board Thickness	Minimum	0.008"	0.008"
	Maximum	0.200"	0.260"
Panel/Board Dimensions	Minimum Panel Dimensions	9"x12"	9"x12"
	Maximum Panel Dimensions	24"x25"	24"x28"
	Maximum Circuit Dimensions	19"x22"	21"x28"
Minimum Lines & Spaces	Lines-Internal (0.5oz based copper thick)	0.003"	0.0025"
	Lines-External (0.5oz based copper thick)	0.004"	0.003"
	Spaces-Internal (0.5oz based copper thick)	0.003"	0.0025"
	Spaces-External (0.5oz based copper thick)	0.004"	0.003"
Layer Count	Maximum Layer Count - rigid	32	40
	Maximum Layer Count - multi-flex	10	12
	Maximum Layer Count - rigid-flex	26 (Structure related)	30 (Structure related)
Based Copper Thickness Capability	5μ	Yes	Yes
	9μ	Yes	Yes
	0.25z	Yes	Yes
	0.5z	Yes	Yes
	1.0z	Yes	Yes
	2.0z	Yes	Yes
	3.0z	N/A	Yes
	4.0z	N/A	Yes
Annular Ring (pad to drill difference)	Internal Layers	0.010"	0.008" ^{Tear-drops preferred}
	External Layers	0.010"	0.008"
	Minimum Hole to Line	0.008"	0.006"
Drilling Capability	Minimum Drilled Hole	0.010"	0.008"
	Hole Location Accuracy	0.0015"	0.0012"
	Image to Hole Location Accuracy	0.004"	0.004"



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Drilling Capability	Aspect Ratio	1:1	1:13
	Micro-via Drilling Aspect Ratio	1:0.8	1:1
	Micro-via Drilling Diameter	0.004"	0.003"
	Micro-via Stip Pad Diameter	0.012"	0.010"
	Dielectric Thickness of Micro-via Layer	0.002"	0.004"
Solder Mask	Minimum Solder Mask Clearance SMD Pads	0.0015"	0.0010"
	Minimum Solder Mask Dam Between SMD Pads	0.005"	0.004"
	Minimum Solder Mask Thickness	12 μ -18 μ	12 μ -18 μ
Plating Capability	Average Copper Plating	25 μ	25 μ
	Minimum Copper Plating	20 μ	20 μ
	Minimum Tin/Lead as Plated (if applicable)	7 μ	7 μ
	Nickel Thickness	2.5 μ -12 μ	2.5 μ -12 μ
	Gold Edge Connector Thickness	0.8 μ -1.2 μ	0.8 μ -1.2 μ
	Soft Gold 24Kt Thickness	0.8 μ -2.5 μ	Up to 4 μ
	Selective Electrolytic gold plating	0.8 μ -2.0 μ	Up to 4 μ
	OSP Thickness	0.2 μ -0.35 μ	0.2 μ -0.35 μ
	HAL Thickness	1 μ -15 μ	1 μ -15 μ
	Immersion Gold Thickness	0.05 μ -0.15 μ	0.05 μ -0.15 μ
	Immersion Tin Thickness	Up to 1.2 μ	Up to 1.2 μ
	Immersion Silver	Up to 0.2 μ	Up to 0.2 μ
Machining	Routing Tolerance	\pm 0.008"	\pm 0.004"
	Hole to Edge Location	\pm 0.004"	\pm 0.002" <small>laster machine</small>
	V-Groove Angles Capability	20°, 30°, 45°	20°, 30°, 45°
Electrical Test	Single Ended Impedance	Yes	Yes
	Differential Impedance	Yes	Yes
	Test Voltage	0.5-500 volts	
	Max Isolation Resistance	500 M ohm	
	Min Continuity Resistance	1 ohm	
Manufacturing Time	Rigid	8-10 days	2-5 days
	Rigid/Flex	14-21 days	7-10 days