

JLCPBCB Impedance Calculator

The JLCPBCB Impedance Calculator computes track width values and recommended stack-ups from user-input values of board layer, thickness, copper weight, target impedance, trace spacing (for edge-coupled pairs), and impedance trace to copper gap (coplanar waveguides). [Click here](#) to see the user guide of our impedance calculator.

* The first stack-up calculated below is highly recommended as it has lowest cost and quickest turn-around.

Layers	4	PCB Thickness	1.6	Inner Copper Weight	0.5oz	Outer Copper Weight	1oz	Unit	mm
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Impedance (Ω)	Type	Signal Layer	Top Ref	Bottom Ref	Trace Spacing (mm)	Impedance trace to copper (mm)
50	Coplanar Single Ended	L1	/	L2	/	0.2


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90	Coplanar Differential Pair	L3	L2	L4	0.2	0.2
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[JLC04161H-7628\(Standard/Finished thickness 1.59mm±10%\)](#)
[JLC04161H-7628A\(Special/Finished thickness 1.55mm±10%\)](#)
[JLC04161H-7628B\(JLCPCB\)](#)

Impedance (Ω)	Type	Signal Layer	Top Ref	Bottom Ref	Trace Width	Trace Spacing	Impedance trace to copper
50	Coplanar Single Ended	L1	/	L2	0.2939	/	0.2000
90	Coplanar Differential Pair	L1	/	L2	0.2644	0.2000	0.2000
90	Coplanar Differential Pair	L3	L2	L4	0.2029	0.2000	0.2000
Layer	Material			Thickness (mil)		Thickness (mm)	
L1	Outer Copper Weight 1oz			1.38		0.0350	
Prepreg	7628, RC 49%, 8.6 mil			8.28		0.2104	
L2	Inner Copper Weight			0.60		0.0152	
Core	1.1mm H/H0Z with copper			41.93		1.0650	
L3	Inner Copper Weight			0.60		0.0152	
Prepreg	7628, RC 49%, 8.6 mil			8.28		0.2104	
L4	Outer Copper Weight 1oz			1.38		0.0350	

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