

Universidad del Istmo de Guatemala
Emprendimiento y Realidad Guatemalteca
Ing. Victor Vargas
11 de noviembre 2025



Exámen Final

José Ricardo Alonzo González

Cotization

JLCPCB Online PCB Quote

Detected 4 layer board of 69.31×58.32mm(2.73×2.3 inches).

Base Material: FR-4, Flex, Aluminum, Copper Core, Rogers, PTFE Teflon

Layers: 1, 2, 4 (High Precision PCB), 8, 10, 12, 14, 16, More

Dimensions: 58.32, 69.31

PCB Qty: 10

Product Type: Industrial/Consumer electronics, Aerospace, Medical

PCB Specifications

- Different Design: 1, 2, 3, 4, More
- Delivery Format: Single PCB, Panel by Customer, Panel by JLCPCB
- PCB Thickness: 0.4mm, 0.6mm, 0.8mm, 1.0mm, 1.2mm, 1.6mm, 2.0mm
- PCB Color: Green, Purple, Red, Yellow, Blue, White, Black
- Silkscreen: White
- Material Type: FR4 TG135, FRA TG155, Nan Ya NP-140F, KB6164 - TG135, Nan Ya NP-155F
- Surface Finish: KB-6165 - TG155, S1141 TG140, S1000H TG155
- Gold Thickness: 1U, 2U

High-spec Options

Surface Finish: HASL (with lead), Lead-Free HASL, ENIG

Gold Thickness: 1U, 2U

Charge Details

	\$13.00
Special Offer	\$13.00
Via Covering	\$0.00
Surface Finish	\$16.40
Material Type	\$3.33
Inner Copper Weight	\$16.03

Economic PCBA Price \$48.76

PCB Build Time

- 3-4 days: \$0.00
- 3 days: **PCBA Only** \$0.00
- 2-3 days: \$62.90

Calculated Price \$48.76

Shipping Estimate \$34.12

Weight: 0.26kg

Coupons: Save \$20.00, Save \$15.00

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JLCPCB Surface Finish: HASL (with lead), Lead-Free HASL, ENIG

Gold Thickness: 1U, 2U

High-spec Options

Outer Copper Weight: 1oz, 2oz

Inner Copper Weight: 0.5oz, 1oz, 2oz

Specify Layer Sequence: No, Yes

Specify Stackup: No, Yes, Impedance calculator >

Via Covering: Plugged, Untested, Epoxy Filled & Capped, Copper Paste Filled & Capped, Tested

Min via hole size/diameter: 0.3mm(0.4/0.5mm), 0.25mm(0.35/0.4mm), 0.2mm(0.3/0.35mm), 0.15mm(0.25/0.3mm)

Board Outline Tolerance: +0.2mm(Regular), +0.1mm(Precision)

Confirm Production file: No, Yes

Mark on PCB: Remove Mark, Order Number(Specify Position), 2D barcode (Serial Number), Order Number

Electrical Test: Flying Probe Fully Test

Gold Fingers: No, Yes

Castellated Holes: No, Yes

Press-Fit Hole: No, Yes (Tolerance +/-0.05mm)

Edge Plating: No, Yes

Blind Slots: No, Yes

UI Marking: No, Yes (Any Position), Yes (Specify Position)

Advanced Options

PCB Remark:

PCB Assembly

Assembly cost starting from \$0 with coupon:

Charge Details

	\$13.00
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PCB Assembly

coupons Assembly cost starting from \$0 with coupon+

Assemble top side Assemble bottom side

PCBA Type Economic Standard [What's the difference?](#)

Assembly Side Top Side Bottom Side Both Sides

PCBA Qty 10 5 20 50 100

Tooling holes Added by JLCPCB Added by Customer

Confirm Parts Placement No Yes We recommend you also confirm the production file of your PCB.

Stencil Storage No Yes

Fixture Storage No Yes

Parts Selection By Customer By JLCPCB

Advanced Options

Bake Components	<input type="radio"/> No	Photo Confirmation	<input type="radio"/> No
Board Cleaning	<input type="radio"/> No	Conformal Coating (cleaning included)	<input type="radio"/> No
Packaging	<input type="radio"/> Antistatic bubble fil	Depanel boards & edge rail before delivery	<input type="radio"/> No
Solder Paste	<input type="radio"/> High temp.	Flying Probe Test	<input type="radio"/> No
Add paste for unpopulated pad & step stencil opening	<input type="radio"/> No	Nitrogen reflow soldering	<input type="radio"/> Yes (for Economic)
Function test	<input type="radio"/> No	PCBA remark	<input type="radio"/> No

Charge Details

Special Offer	\$13.00
Via Covering	\$0.00
Surface Finish	\$16.40
Material Type	\$3.33
Inner Copper Weight	\$16.03
Economic PCBA Price	\$48.76
Components	-
Extended components fee	-
SMT Assembly	-
Hand-soldering labor fee	-
Manual Assembly	-

PCB Build Time 3 days 3-4 days 2-3 days \$0.00

Calculated Price **\$48.76** Additional charges may apply for special cases

NEXT

Shipping Estimate \$34.12
 DHL Express 3-6 business days
 Weight 0.26kg

Coupons Save \$20.00 Save \$15.02

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PCB Bill of Materials Component Placements Quote & Order

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Top **Bottom**

PCB Type: Economic **Assembly Side:** Top Side **PCBA Qty:** 10

NEXT

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Top Side Total 35 parts detected 21 Parts confirmed 10 parts inventory shortage 12 parts not selected			Review Matched Parts								
Uploaded BOM Data			Matched Part Detail								
Top Designator	Comment	Footprint	Qty	Source	Lib Type	Total Cost	Select				
C1,C2,C3,C4,C5,C6,C7,C8,C9,C10...	100N	capc0603-33n	270	JLCPCB	Basic	\$0.6480	<input checked="" type="checkbox"/>				
C22,C23,C24,C25,C39,C40,C41,C4...	47U	CC0805M0X5R	100	JLCPCB	Basic	\$1.9400	<input checked="" type="checkbox"/>				
C47	2U2	capc0603-33n	10	JLCPCB	Basic	\$0.0540	<input checked="" type="checkbox"/>				
C63	10P	capc0603-33n	10	JLCPCB	Basic	\$0.0450	<input checked="" type="checkbox"/>				
D1	BAV992_215	BAV99215	BAV99215	C2500	Q	10	JLCPCB	Basic	\$0.3680	<input checked="" type="checkbox"/>	
IC4	TPS62177DQC R	SON50P20X030	TPS62177DQC R	C91241	Q	10	JLCPCB	Extended	\$4.5300	<input checked="" type="checkbox"/>	
Q1	2N7002-7-F	SOT7002-7-F	2N7002-7-F	CS8049	Q	15	JLCPCB	Extended	\$0.3330	<input checked="" type="checkbox"/>	
Q3	MMBT3904LT-3G	SOT706P237XTL	MMBT3904LT-3G	C150052	Q	15	JLCPCB	Extended	\$0.4275	<input checked="" type="checkbox"/>	
R3,R4,R28,R29,R3...	0R	CR2010PMR050	CR2010FR-070...	C109227	Q	0	JLCPCB	Extended	Standard Dmg		
R1,R12,R13,R20,R...	10K	RC0603FR-0710	0603WAF1002T5E	C23804	Q	100	JLCPCB	Basic	\$0.0900	<input checked="" type="checkbox"/>	
R23,R24,R45...	200K	RC2010FR-0720	0201WAF1002T5E	C270397	Q	0	JLCPCB	Extended	Standard Dmg		
R38	49.9K	resc0603-26n	RN12W49.1K071B1	C35639	Q	11	JLCPCB	Extended	\$0.2178	<input checked="" type="checkbox"/>	
U1	USB252C	usb7252	USBT252CT/DX	C3210689	Q	10	JLCPCB	Extended	\$154.5000	<input checked="" type="checkbox"/>	
IC2,IC3	UCS2114T-1-V	QFN50P30X30	UCS2114T-1-VLX	C625029	Q	20		Extended	20 shortfall		
IC5	MIC2320YMA-TR	SON50P30X30	MIC2320YML-TR	C621769	Q	10		Extended	10 shortfall		
J1	484050003	484050003	484050003	C565032	Q	10	1 JLCPCB	Extended	\$2.2920	9 shortfall	
J2,J3	12401810E4#2	12401810E4#2A	12401810E4#2A	C519948	Q	20	7 JLCPCB	Extended	\$10.5210	13 shortfall	
L7	744325120	WE-HCIJ_05023	744325120	C1391072	Q	10		Extended	10 shortfall		
L9,L10	7440424100	7440424100	7440424100	C2045103	Q	20		Extended	20 shortfall		
Q8,Q9	BSC093N04L SGATMAI	BSC340NBNS3 G	BSC093N04LSGATMAI	C2844467	Q	20		Extended	20 shortfall		
R68	4M	sm1206	CR08404F	C4193235	Q	15		Extended	15 shortfall		
R69	4M	P00504040BN	P005WJ0405T5E	C2767629	Q	20		Extended	20 shortfall		
Y1	DSC1001C1-0	DSC1001C1-025.0000	DSC1001C1-025.0000	C1070840	Q	10	3 JLCPCB	Extended	\$3.1635	7 shortfall	
Unmatched components											
C48,C49	22U	capc1005x5n	No Part Selected	Search Q	Pre-order						
C56,C57,C58	2U2	capc1005x5n	No Part Selected	Search Q	Pre-order						
J4	48392-0003	48392-0003	No Part Selected	Search Q	Pre-order						
J5	5138-0578-T	513870578TR250	No Part Selected	Search Q	Pre-order						
R19,R60	12K	resc0603-26n	No Part Selected	Search Q	Pre-order						
R30,R31,R41,R54,R55,R56,R59	100K	resc0603-26n	No Part Selected	Search Q	Pre-order						
R35,R51	33K	resc0603-26n	No Part Selected	Search Q	Pre-order						
R39	43K	resc0603-26n	No Part Selected	Search Q	Pre-order						
R40	47K	resc0603-26n	No Part Selected	Search Q	Pre-order						
R63	500R	resc0603-26n	No Part Selected	Search Q	Pre-order						
R66	115K	resc0603-26n	No Part Selected	Search Q	Pre-order						

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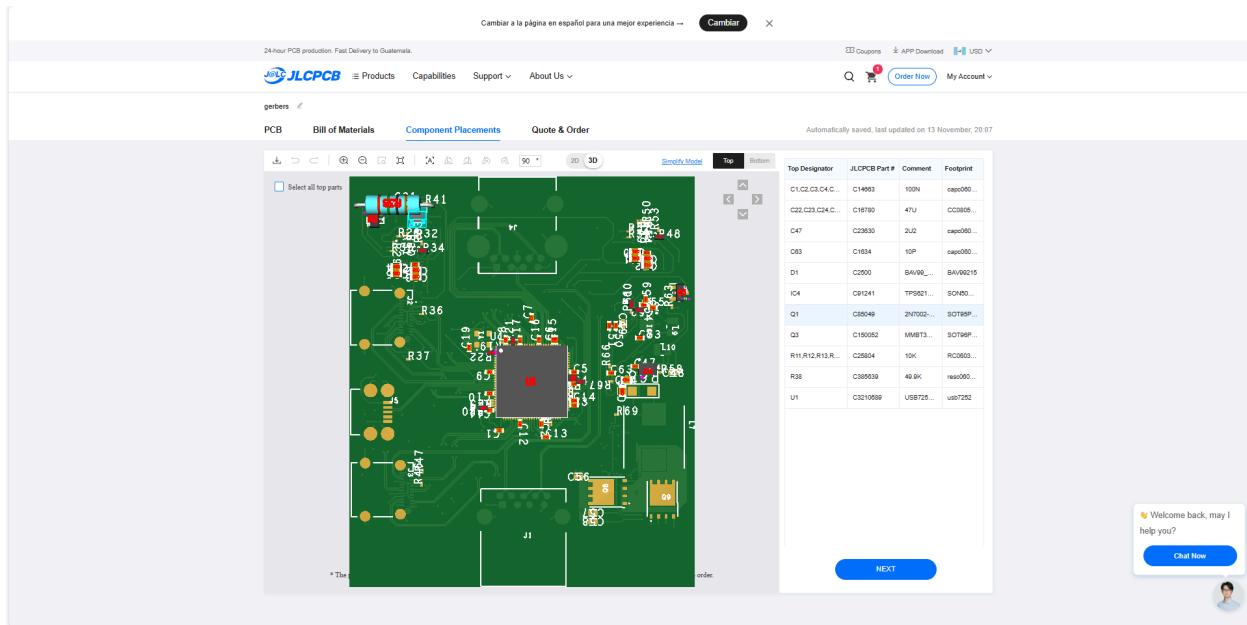
Uploaded BOM Data			Review Matched Parts								
Top Designator	Comment	Footprint	Matched Part Detail	Qty	Source	Lib Type	Total Cost	Select			
I5	-TR	0X00-1N-0	-40°C~+125°C(1u) 1.15mm 2.7V~5.5V 2A ...	Q	10	Extended	10 shortfall				
J1	484050003	484050003	484050003	Q	10	1 JLCPCB	Extended	9 shortfall			
J2,J3	12401810E4#2	12401810E4#2A	12401810E4#2A	C519948	Q	20	7 JLCPCB	Extended	\$10.5210	13 shortfall	
L7	744325120	WE-HCIJ_05023	744325120	C1391072	Q	10		Extended	10 shortfall		
L9,L10	7440424100	7440424100	7440424100	C2045103	Q	20		Extended	20 shortfall		
Q8,Q9	BSC093N04L SGATMAI	BSC340NBNS3 G	BSC093N04LSGATMAI	C2844467	Q	20		Extended	20 shortfall		
R68	4M	sm1206	CR08404F	C4193235	Q	15		Extended	15 shortfall		
R69	4M	P00504040BN	P005WJ0405T5E	C2767629	Q	20		Extended	20 shortfall		
Y1	DSC1001C1-0	DSC1001C1-025.0000	DSC1001C1-025.0000	C1070840	Q	10	3 JLCPCB	Extended	\$3.1635	7 shortfall	
Unmatched components											
C48,C49	22U	capc1005x5n	No Part Selected	Search Q	Pre-order						
C56,C57,C58	2U2	capc1005x5n	No Part Selected	Search Q	Pre-order						
J4	48392-0003	48392-0003	No Part Selected	Search Q	Pre-order						
J5	5138-0578-T	513870578TR250	No Part Selected	Search Q	Pre-order						
R19,R60	12K	resc0603-26n	No Part Selected	Search Q	Pre-order						
R30,R31,R41,R54,R55,R56,R59	100K	resc0603-26n	No Part Selected	Search Q	Pre-order						
R35,R51	33K	resc0603-26n	No Part Selected	Search Q	Pre-order						
R39	43K	resc0603-26n	No Part Selected	Search Q	Pre-order						
R40	47K	resc0603-26n	No Part Selected	Search Q	Pre-order						
R63	500R	resc0603-26n	No Part Selected	Search Q	Pre-order						
R66	115K	resc0603-26n	No Part Selected	Search Q	Pre-order						

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NOTA: Hay varios componentes que JLCPCB no reconoce pero que su MFRPN si existe en digikey.



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Charge Details

PCB Price	\$48.76
Via Covering:	\$0.00
Special Offer:	\$13.00
Surface Finish:	\$16.40
Inner Copper Weight:	\$16.03
Material Type:	\$3.33
Confirm Production file:	\$0.00
Economic PCBA Price	\$193.42
Setup Fee	\$8.00
Stencil	\$1.50
Panel:	\$0.00
Large Size	\$0.00
Components(11 items):	\$163.15
Extended components fee:	\$12.00
SMT Assembly	\$3.55
Confirm Parts Placement:	\$0.43
Hand-soldering labor fee:	\$3.50
Manual Assembly	\$0.35
Nitrogen reflow soldering:	\$0.94
Build Time: ⓘ	
PCB: 3 days	\$0.00
Assembly: ⓘ 4 - 5 days	\$0.00

Total Price: \$242.18

Weight ⓘ 883.05g
Product Description ⓘ
Audio and Video Appliance / Audio Equip...

SAVE TO CART

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SHOPPING CART

All (0)	JLCPCB (1)	JLC3DP (0)	JLCNC (0)	JLCMC (0)	Flex Heater (0)	Search
<input checked="" type="checkbox"/> Item	Qty	Build Time	Price			
<input checked="" type="checkbox"/> JLCPCB (PCB/PCBA/Stencil)	10	3 days	\$48.76			
gerbers_V3						
PCB prototype Y3-1023822A						
Green 1.6 Thickness, ENIG						
Customer #: E						
Product Details Edit Order						
gerbers_Y3	10	4 - 5 days	\$193.42			
Economic PCB: SMT02511460177-112...						
Assemble top side						
Customer #: E						
Product Details						

SUMMARY 2 items>

Merchandise Total	\$242.18
Shipping Estimated	\$41.23
Coupons	-\$15.00
Subtotal	\$268.41

Est. shipping date 2025-11-20
Order won't be shipped until all items are ready.

Weight 0.88kg

Secure Checkout

+Add new item

Payment method may vary by country.

SSL ENCRYPTED PAYMENT

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TOTAL= \$268.41