

- NOTES: UNLESS OTHERWISE SPECIFIED.
- FABRICATE PER IPC-6012A CLASS 2.
 - FOR BOARD THICKNESS AND IMPEDANCE DETAILS REFER STACKUP DOCUMENT.
 - PRINTED WIRING BOARD SHALL COMPLY WITH REQUIREMENTS OF ANSI/J-STD-003.
 - SURFACE FINISH: IMMERSION SILVER
 - SOLDERMASK ON BOTH SIDES OF THE BOARD SHALL BE LPI, COLOR XXXXXX.
 - SILK SCREEN LEGEND TO BE APPLIED PER LAYER STACKUP USING WHITE NON-CONDUCTIVE EPOXY INK.
 - THIS PRINTED WIRING BOARD IS DESIGNED WITH A MINIMUM CONDUCTOR WIDTH AND SPACING OF 4 MIL & 4 MILS.
 - ALL VIAS ARE TENTED ON BOTH SIDES UNLESS SOLDERMASK OPENED IN GERBER.
 - ALL VIAS ON PAD SHOULD BE FILLED WITH NON CONDUCTIVE EPOXY AND SURFACE SHOULD BE FLAT. FLATNESS TOLERANCE FOR VIA ON PADS: +0.000 /- 0.001 INCHES ON BOTH SIDES. THE MANUFACTURER IS REQUESTED TO SIZE PER THEIR SOLDERMASK TOLERANCE.
 - SOLDER MASK OPENING IS KEPT SAME SIZE AS PAD (1:1) FOR ALL COMPONENTS
 - VENDOR SHOULD FOLLOW ROHS COMPLIANT PROCESS AND Pb FREE FOR MANUFACTURING
 - MANUFACTURER'S IDENTIFICATION, DATECODE LETTER SHALL BE SILKSCREENED ON SOLDER SIDE OF THE BOARD.
 - TRACE WIDTH SHOULD BE ACCURATELY ETCHED. MAX TOLERANCE +/- 1 MIL
 - ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.
 - FLATNESS REQUIREMENTS:
 - BOW AND TWIST OF ASSEMBLY SUB-PANEL OR SINGULATED PWB SHALL NOT EXCEED 0.7% OF LONGEST SIDE
 - TEST IN ACCORDANCE WITH THE CURRENT REVISION OF IPC-TM-650 2.4.22
 - PCB MATERIAL REQUIREMENTS:
 - FLAMMABILITY RATING MUST MEET OR EXCEED UL94V-0 REQUIREMENTS. PCB MUST BEAR THE UL94V-0 REGISTERED MATERIAL ID NUMBER.
 - Tg XXXXX C OR EQUIVALENT.
 - EQUIVALENT MATERIAL SHALL BE RoHS COMPLIANT, HALOGEN FREE AND APPROVED BY ABC-Corp.
 - LAYER TO LAYER REGISTRATION SHALL BE WITHIN +/-2 MIL
 - FOR ETCHING TOLERANCE ON REF-DES XXXXX, REFER to "XXXXX ETCHING REQUIREMENTS" DOCUMENT.
 - IMPEDANCE CONTROL REQUIREMENTS (ALL TOLERANCES +/- 10%):
 - ALL 0.nn MM WIDE SINGLE-END TRACES ON LAYER X SHALL BE 50 OHMS.
 - ALL 0.nn MM WIDE/0.nn MM SPACE PAIRS ON LAYER Y SHALL BE 90 OHMS.
 - ALL 0.nn MM WIDE/0.nn MM SPACE PAIRS ON LAYER Z SHALL BE 90 OHMS.
 - VENDOR MAY ADJUST DESIGN GEOMETRIES UP TO +/-20% TO ACHIEVE TARGET IMPEDANCE. ADJUSTMENTS BEYOND

Layer Stack Legend

Material	Layer	Thickness	Dielectric Material	Type	Gerber
	Top Overlay			Legend	GTO
	Surface Material	0.01mm	Solder Resist	Solder Mask	GTS
Copper	Top Layer	0.04mm		Signal	GTL
		1.54mm	FR-4	Dielectric	
Copper	Bottom Layer	0.04mm		Signal	GBL
Surface Material	Bottom Solder	0.01mm	Solder Resist	Solder Mask	GBS
	Bottom Overlay			Legend	GBO
Total thickness: 1.63mm					

Drill Table

Symbol	Count	Hole Size	Plated	Hole Tolerance
□	32	30.00	Plated	
○	2	60.00	Plated	+/-3.00
☆	4	20.00	Plated	+/-3.00
✕	10	10.00	Plated	+/-3.00

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE			
		DIMENSIONS ARE IN INCHES	DRAWN		6/20/2024			
		TOLERANCES:	CHECKED			Shield Board for Arduino UNO		
		FRACTIONAL±	ENG APPR.					
		ANGULAR: MACH± BEND ±	MFG APPR.					
		TWO PLACE DECIMAL ±	Q.A.					
		THREE PLACE DECIMAL ±	COMMENTS:					
		INTERPRET GEOMETRIC TOLERANCING PER:						
		MATERIAL						
		FINISH						
NEXT ASSY	USED ON					SIZE	DWG. NO.	
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:1	WEIGHT:	SHEET 1 OF 2

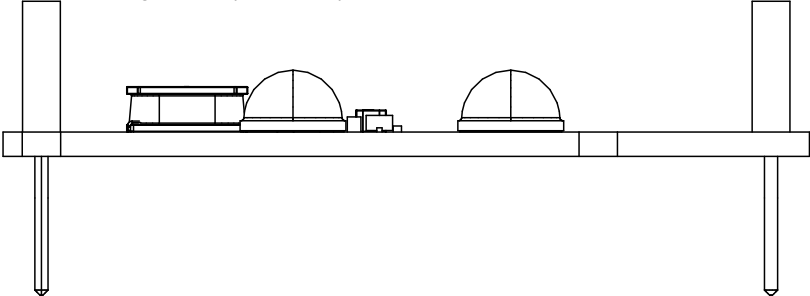
A

B

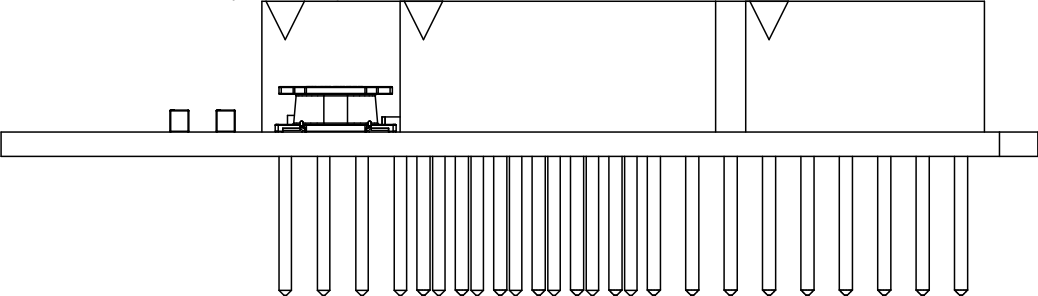
C

D

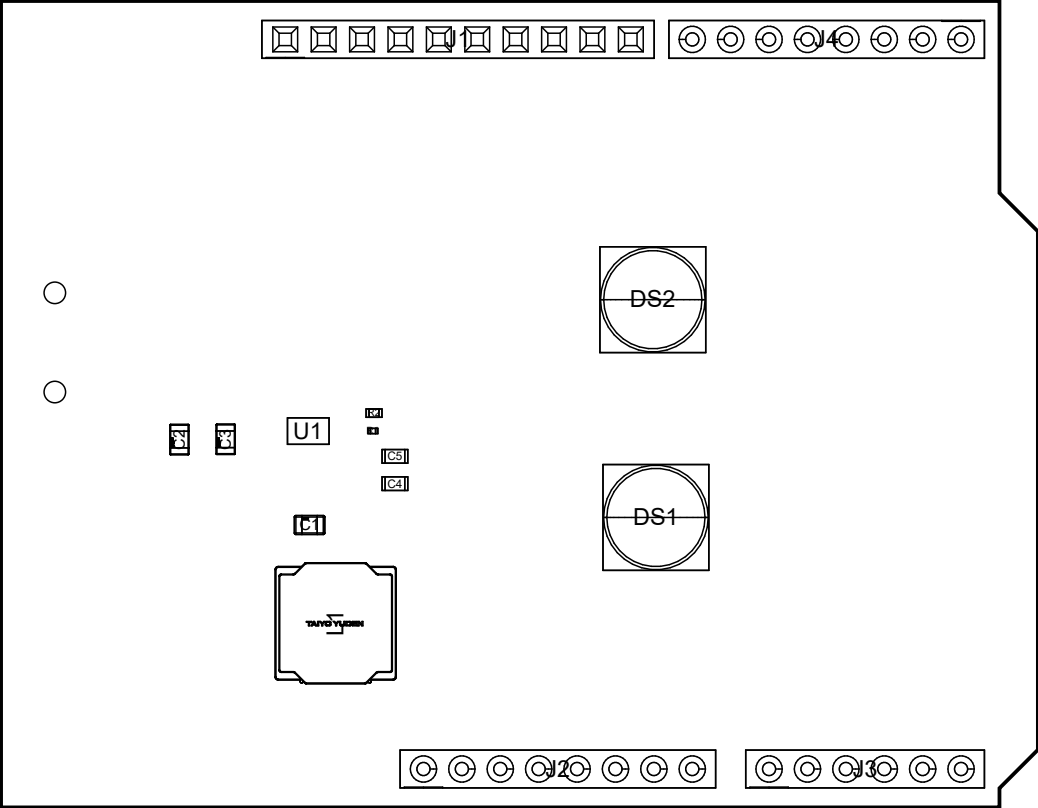
View from Right side (Scale 2:1)



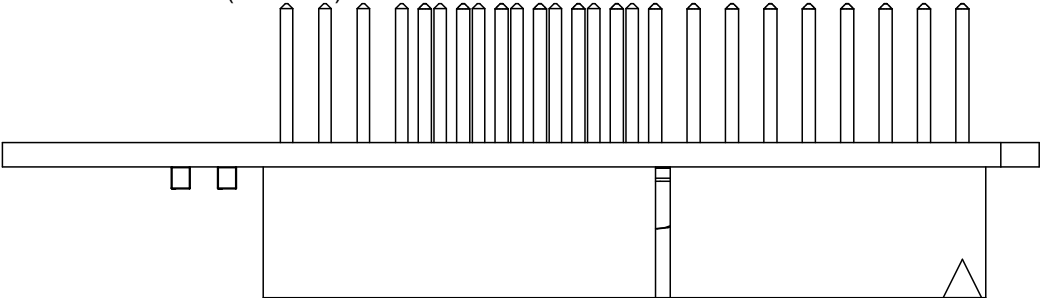
View from Front side (Scale 2:1)



View from Top side (Scale 2:1)



View from Back side (Scale 2:1)



ASSEMBLY NOTES

Board Name: Shield Board for Arduino UNO

Rev: A

- 1. Assemble in accordance with IPC-A-610, current revision, Class 2.
- 2. Solder electrical connections per latest revision of IPC J-STD-001.
- 3. This assembly contains ESD sensitive components. Handle per ANSI/ESD S20.20.
- 4. RoHS compliance required: Yes.
- 5. Mark with current assembly revision.
- 6. Mount components with polarity and orientation as shown on component designators/silkscreen.

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		MATERIAL							
NEXT ASSY	USED ON	FINISH							
APPLICATION		DO NOT SCALE DRAWING				SCALE:	1:1	WEIGHT:	SHEET 2 OF 2