

AUTHOR: CCB

CODE NUMBER:

REVISION: 1_00

LAYER STACKUP:

TOP / BOTTOM: GND PLANE + SIGNALS

GENERAL NOTES:

1. LAMINATE SPECIFICATIONS:

- TOTAL THICKNESS: 1.0 mm +/- 0.1 mm
- LAYER NUMBERS: 2
- Cu THICKNESS (FINISHED): 1 oz / 1 oz
- RAW MATERIAL: FR-4
- TG MIN.: 150 °C
- TD MIN.: 310 °C

4. SILKSCREEN MASK:

- WHITE (THERMAL CURE EPOXY)

5. SOLDER MASK:

- BOTH SIDES
- GREEN EPOXY THERMAL CURE OR PHOTO IMAGEABLE
- IONIC CONTAMINATION AFTER SOLDERING: 14 ug NaCl / in² MAX.
- COVER VIAS WITH SOLDER MASK ON BOTH SIDES EXCEPT ON CN21 BORDERS, AS INDICATED IN GERBER

2. HOLE CHARACTERISTICS:

- PLATED HOLE TOLERANCE: +/- 0.1 mm
- NON PLATED HOLE TOLERANCE: +/- 0.1 mm
- DISPLACEMENT: 0.1 mm MAX.
- Cu THICKNESS ON HOLE: 20 um + SnPb MIN.

6. SPECIFIED STANDARDS:

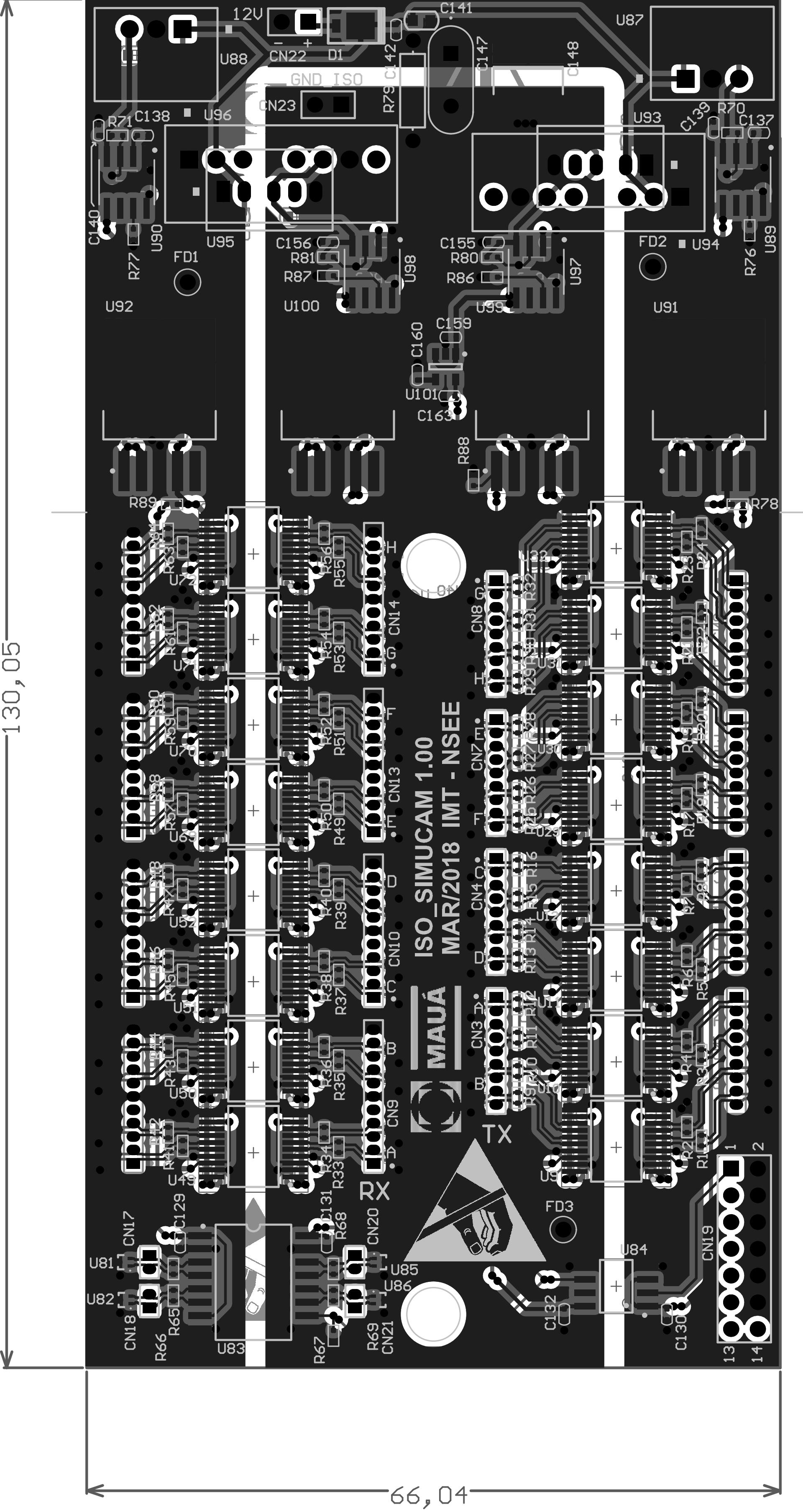
- IPC-6011 CLASS 2 / IPC-6012 CLASS 2 / IPC-A-600 CLASS 2

3. FINISHING:

- HOT AIR SOLDER LEVELING (HASL) - SnPb

7. ADDITIONAL NOTES:

- DIMENSIONAL TOLERANCE: +/- 0.2 mm
- ELECTRICAL TESTS ARE MANDATORY
- GERBER MODIFICATIONS ARE ONLY ALLOWED WITH EXPLICIT AUTHOR / RESPONSIBLE AUTHORIZATION



BOARD TITLE: ISO_SIMUCAM

REVISIONS DESCRIPTION:

1_00 - Initial revision - Mar - 2018

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GENERAL NOTES:

I. LAMINATE SPECIFICATIONS.

- TOTAL THICKNESS: 1.0 mm +/- 0.1 mm
 - LAYER NUMBERS: 2
 - Cu THICKNESS (FINISHED): 1 oz / 1 oz
 - RAW MATERIAL: FR-4
 - TG MIN.: 150 °C
 - TD MIN.: 310 °C

4. SILKSCREEN MASK:

- WHITE (THERMAL CURE EPOXY)

POETRY SIDES

- GREEN EPOXY THERMAL CURE OR PHOTO IMAGEABLE
 - IONIC CONTAMINATION AFTER SOLDERING: 14 ug NaCl / in² MAX.
 - COVER VIAS WITH SOLDER MASK ON BOTH SIDES
EXCEPT ON CN21 BORDERS, AS INDICATED IN GERBER

SPECIFIED STANDARDS:

- IPC-6011 CLASS 2 / IPC-6

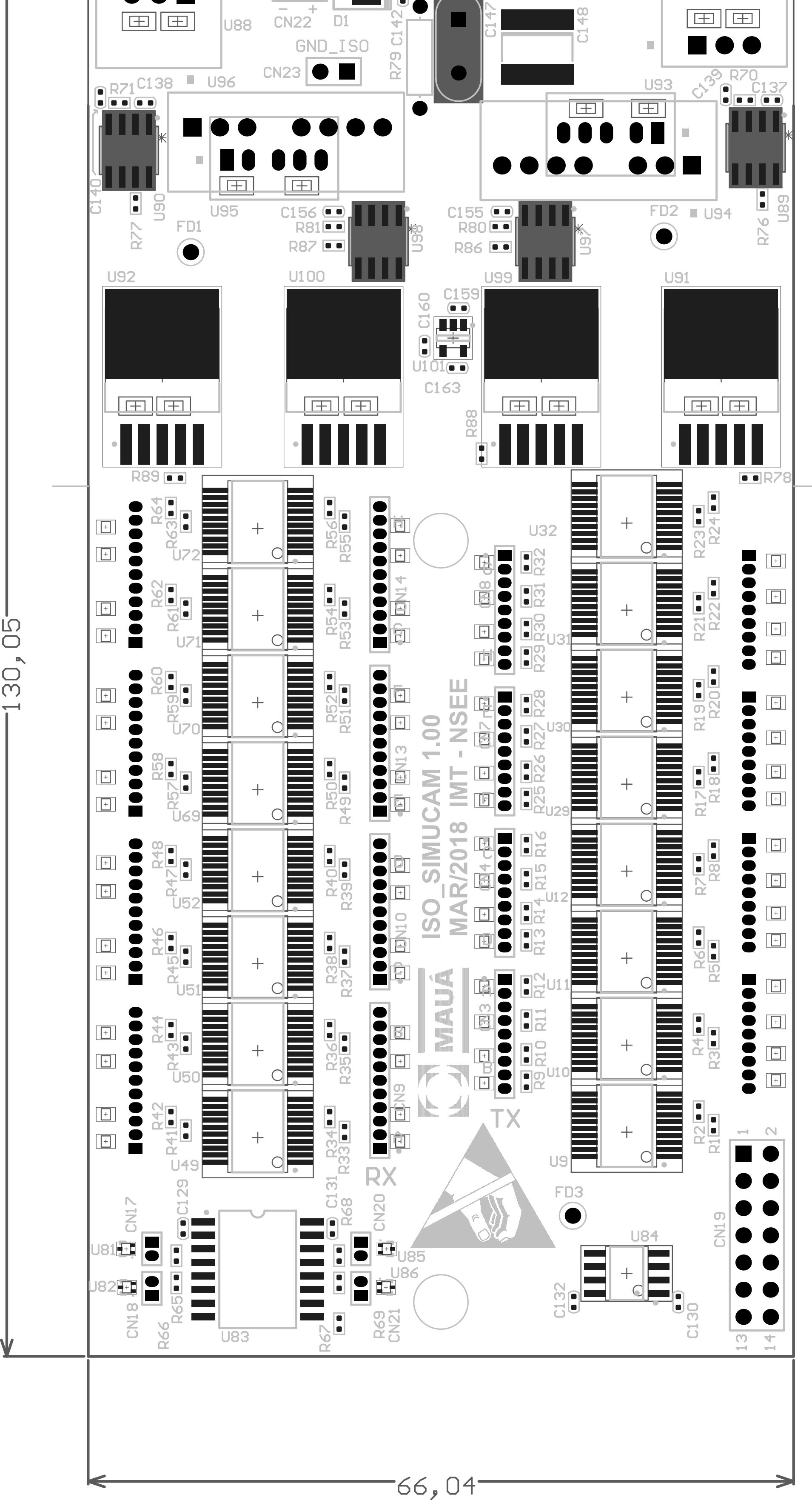
- DIMENSIONAL TOLERANCES

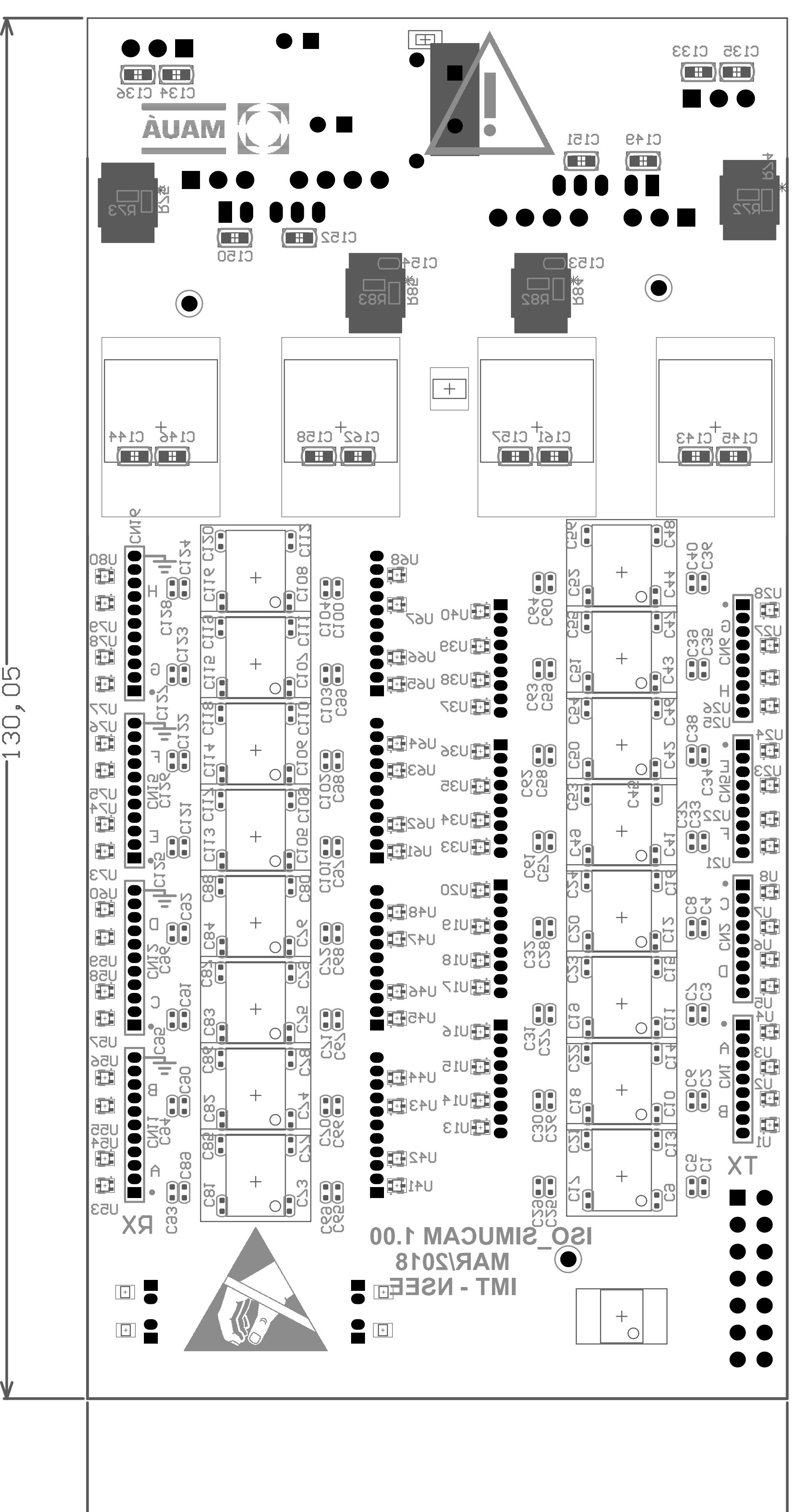
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DISPLACEMENT 0.1 mm

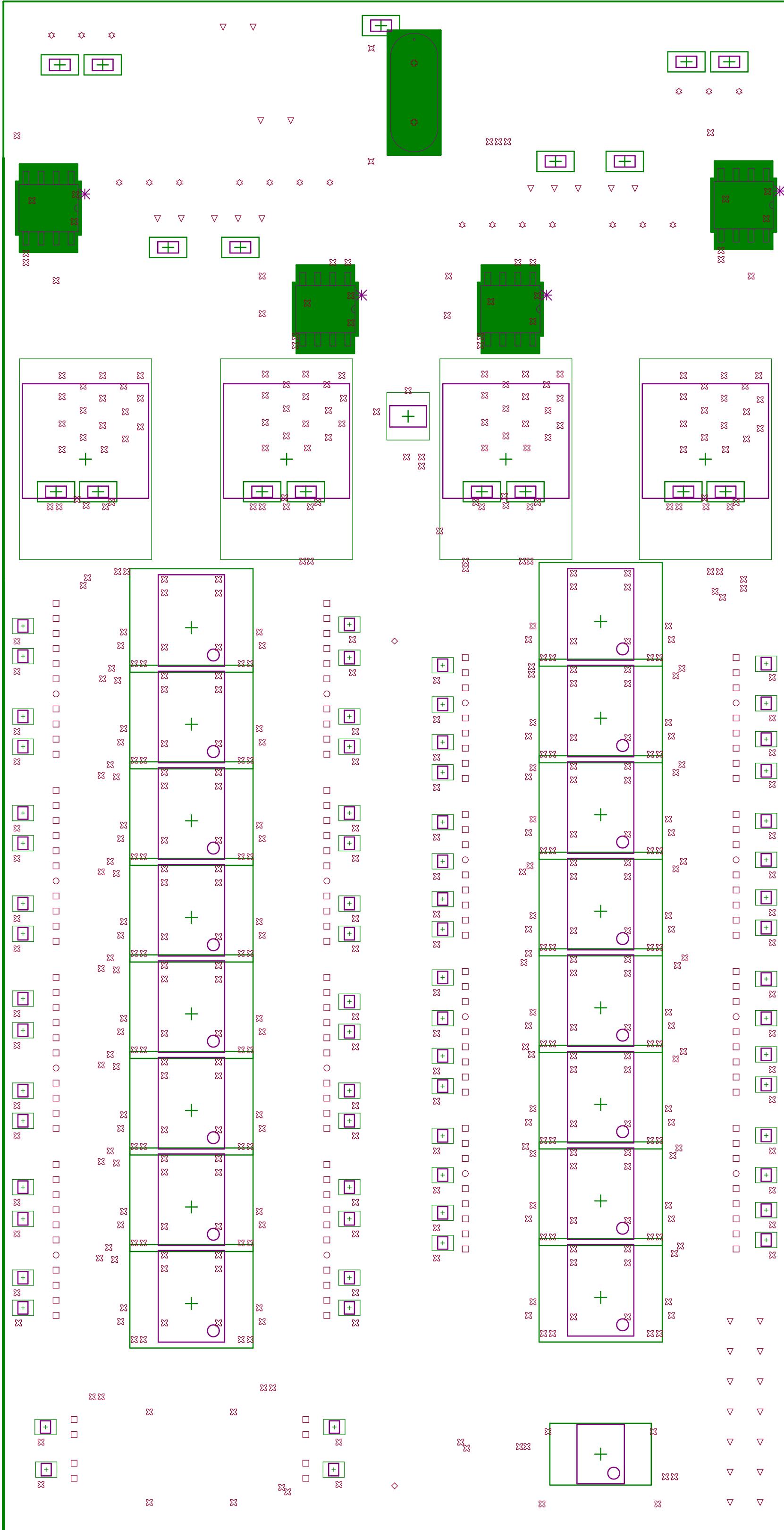
- NON PLATED HOLE TOLERANCE: +/- 0.1 mm
 - DISPLACEMENT: 0.1 mm MAX.
 - Cu THICKNESS ON HOLE: 20 um + SnPb MIN.

- HOT AIR S

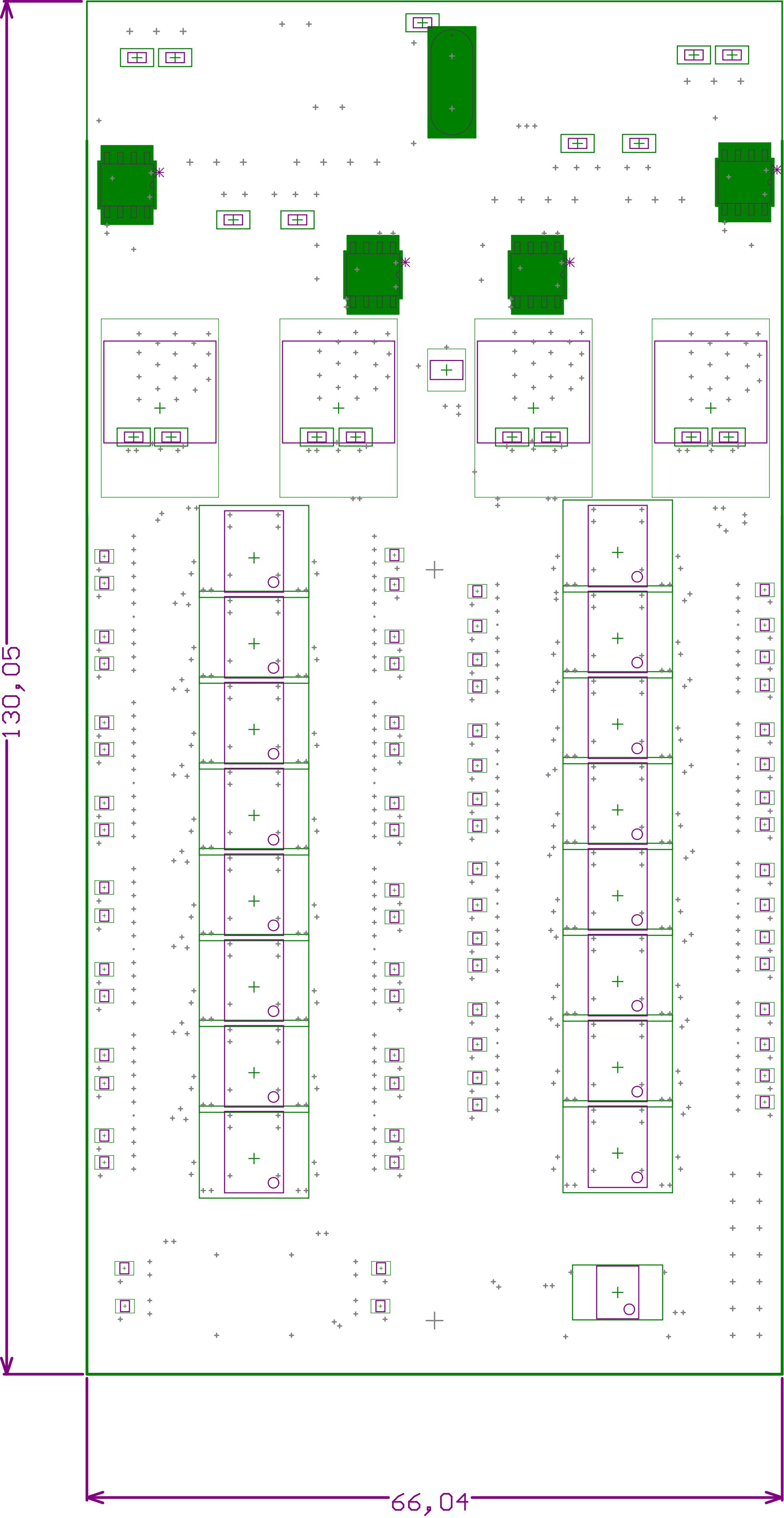




130,05



66,04



Comment	Description	Designator	Footprint	LibRef	Quantity	Valor
#P1	ATENCAO		ATENCAO	ATENCAO		Aviso
Capacitor Cerâmico SMD	Capacitor Cerâmico SMD	C01	0402-cap	Capacitor Cerâmico SMD	64	1u
Capacitor Cerâmico SMD	Capacitor Cerâmico SMD	C1, C2, C3, C4, C9, C10, C11, C12, C13, C18, C19, C20, C29, C30, C31, C32, C33, C34, C35, C36, C38, C41, C42, C43, C44, C49, C50, C51, C52, C53, C54, C56, C57, C58, C59, C60, C69, C70, C71, C72, C77, C78, C79, C80, C85, C87, C88, C89, C90, C91, C92, C101, C102, C103, C104, C109, C110, C111, C112, C117, C118, C119, C120, C121, C122, C123, C124, C129, C130, C131, C132, C139, C140, C142, C155, C156	0402-cap	Capacitor Cerâmico SMD	73	100n
Capacitor Cerâmico SMD	Capacitor Cerâmico SMD	C5, C6, C7, C8, C13, C14, C15, C16, C21, C22, C23, C24, C25, C26, C27, C28, C37, C38, C39, C40, C45, C46, C47, C48, C53, C54, C55, C56, C57, C58, C59, C60, C69, C70, C71, C72, C77, C78, C79, C80, C85, C87, C88, C89, C90, C91, C92, C101, C102, C103, C104, C109, C110, C111, C112, C117, C118, C119, C120, C121, C122, C123, C124, C129, C130, C131, C132, C139, C140, C142, C155, C156	0402-cap	Capacitor Cerâmico SMD	17	10u
Capacitor Cerâmico SMD	Capacitor Cerâmico SMD	C133, C134, C135, C136, C141, C143, C144, C145, C146, C149, C150, C151, C152, C157, C158, C161, C162	0603 - CAP - montagem na máquina	Capacitor Cerâmico SMD	4	1m
Capacitor Cerâmico SMD	Capacitor Cerâmico SMD	C137, C138, C153, C154	0402-cap	Capacitor Cerâmico SMD	1	10n @ 2KV
DFR310102ZAB	Imported	C147	CAP_10X4	DFR310102ZAB	1	10n @ 2KV
Capacitor Cerâmico SMD	Capacitor Cerâmico SMD	C148	C2225	Capacitor Cerâmico SMD	1	100n @ 2KV
Capacitor Cerâmico SMD	Capacitor Cerâmico SMD	C159, C163	0402-cap	Capacitor Cerâmico SMD	2	47u
Capacitor Cerâmico SMD	Capacitor Cerâmico SMD	C160	0402-cap	Capacitor Cerâmico SMD	1470p	
MHDRI9Y	Header 9-Pin	CN1, CN2, CN3, CN4, CN5, CN6, CN7, CN8	MHDRI9Y_Atron	MHDRI9Y	8	
MHDRTX11	Header 11-Pin	CN9, CN10, CN11, CN12, CN13, CN14, CN15, CN16	MHDRTX11_Atron	MHDRTX11	8	
MHDRTX12	Header 12-Pin	CN17, CN18, CN20, CN21	MHDRTX12_Atron	MHDRTX12	4	Header 1.27 mm - 2 vias
MHDRTX72	Header 7-Pin Daul row	CN7	MHDRTX72	MHDRTX72	2	
Header 2	Header 2-Pin	CN2, CN23	MHDRI2	MHDRI2	2	Header 2.54 mm
NW98M1308T3G	Surface Mount Schottky Power Rectifier - 1.0 AMPERES, 30 VOLTS	01	DO-214AA	NW98M1308T3G	1	
FEN	ESD	ESD1	ESTATICA	ESD	1	
FEN	ESD	ESD2	ESTATICA	ESD	1	ESD logo
Comment		fab1	TXTO FABRICACAO	Texto de fabricação	1	
#F4	Inductal	FD1, FD2, FD3	INDUCLAL	Inductal	3	
R033	Resistor	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R21, R22, R23, R24, R25, R26, R27, R28, R29, R30, R31, R32, R33, R34, R35, R36, R37, R38, R39, R40, R41, R42, R43, R44, R45, R46, R47, R48, R49, R50, R51, R52, R53, R54, R55, R56, R57, R58, R59, R60, R61, R62, R63, R64, R65, R66, R67, R68, R69	0402-res	R033	68 100R	
R033	Resistor	R67, R88	0402-res	R033	2 10k	
R033	Resistor	R70, R71, R76, R80, R81, R89	0402-res	R033	6 DR	
R033	Resistor	R72, R73, R82, R83	0402-res	R033	4 15A - 1%	
R033	Resistor	R74, R75, R84, R85	0402-res	R033	4 4% - 1%	
R033	Resistor	R76, R77, R86, R87	0402-res	R033	4 82%	
R033	Resistor	R79	CR05	R033	1 1M - PTH - 1.4W - 1.6 KV	
TFD2009DRTR	ESD Protection Array for High-Speed Data Interfaces, 2 Channels, -40 to +85 degC, 3-pin SOT (DRI), Green (RoHS & No SnPb)	U1, U2, U3, U4, U5, U6, U7, U8, U13, U14, U15, U16, U17, U18, U19, U20, U21, U22, U23, U24, U25, U26, U27, U28, U33, U34, U35, U36, U37, U38, U39, U40, U41, U42, U43, U44, U45, U46, U47, U48, U49, U50, U51, U52, U53, U54, U55, U56, U57, U58, U59, U60, U61, U62, U63, U64, U65, U66, U67, U68, U73, U74, U75, U76, U77, U78, U79, U80, U81, U82, U85	DRI13	TFD2009DRTR	68	
ADN46450BRSZ	5.5 V RMS/2.75 V RMS, 400 Mbps, Dual-Channel LVDS Isolators	U9, U10, U11, U12, U2, U30, U31, U32, U49, U50, U51, U52, U69, U70, U71, U72	IS20-RS-20	ADN46450BRSZ	16	
SD7821L1-DW	High-Performance, 800-Vp-p Reinforced Isolated Dual-LVDS Buffer	U83	SOC16-DW	SD7821L1-DW	1	
SD7821L1-DW	High-Performance, 800-Vp-p Reinforced Isolated Dual-LVDS Buffer	U84	SOC18	SD7821L1-DW	1	
78V81-0.1A	2-Terminal Positive dc-dc regulator, 5V @ 1A	U87, U88	TO-220	78V81-0.1A	2	5V - 1A
TFS291214DR	Imported	U89, U90, U92, U98	2W	TFS291214DR	4	
MFPI926-3J2Q2/ET	2000 mA, Low Voltage, Low-Distortion Current LDO Regulator, 5-Pin DOPAK, Extended Temperature	U91, U92, U99, U100	DCP126-ET5_N	MFPI926-3J2Q2/ET	4	
TP931-211	2-Terminal Positive dc-dc ldo regulator , 5V @ 0.4A	U93, U95	TP931-221	TP931-221	2	5V 0.6A
PSA-1205S	2-Terminal Positive dc-dc ldo regulator , 5V @ 1.2A	U94, U96	PSA-1205S	PSA-1205S	2	5V 1.2A
TIC1014-3.3VCT713	20 mA, 100 mA and 150 mA CMOS LDOs with Active-Low Shutdown and Reference Bypass, 5-Pin SOT-23, Extended Temperature, Tape and Reel	U101	SOT-23-C75_N	TIC1014-3.3VCT713	1	

Design Rules Verification Report

Filename : C:\projetos\simucam_iso\hw\pim_iso_simucam\pcb\iso_simucam.PcbDoc

Warnings 6
Rule Violations 0

Warnings

Zero hole size multi-layer pad(s) detected	3
Multilayer Pads with 0 size Hole found	3
Total	6

Rule Violations

Clearance Constraint (Gap=20mil) (InNamedPolygon('gnd_iso_bottom')),(All)	0
Clearance Constraint (Gap=20mil) (InNamedPolygon('gnd_iso_top')),(All)	0
Clearance Constraint (Gap=20mil) (InNamedPolygon('gnd_bottom')),(All)	0
Clearance Constraint (Gap=8mil) (All),(All)	0
Clearance Constraint (Gap=20mil) (InNamedPolygon('gnd_top')),(All)	0
Clearance Constraint (Gap=75mil) (InNamedPolygon('gnd_top')),(InNamedPolygon('gnd_iso_top'))	0
Clearance Constraint (Gap=60mil) (HoleDiameter = 125:),(InNamedPolygon('gnd_iso_bottom'))	0
Clearance Constraint (Gap=60mil) (HoleDiameter = 125:),(InNamedPolygon('gnd_iso_top'))	0
Clearance Constraint (Gap=7mil) (HasFootprint('SSOP-RS-20')),(All)	0
Clearance Constraint (Gap=75mil) (InNamedPolygon('gnd_bottom')),(InNamedPolygon('gnd_iso_bottom'))	0
Short-Circuit Constraint (Allowed=No) (All),(All)	0
Un-Routed Net Constraint (All)	0
Width Constraint (Min=10mil) (Max=20mil) (Preferred=15mil) (All)	0
Power Plane Connect Rule(Direct Connect)(Expansion=20mil) (Conductor Width=10mil) (Air Gap=10mil) (Entries=4)	0
Hole Size Constraint (Min=0mil) (Max=500mil) (All)	0
Hole To Hole Clearance (Gap=10mil) (All),(All)	0
Minimum Solder Mask Sliver (Gap=0mil) (All),(All)	0
Silk To Solder Mask (Clearance=0mil) (IsPad),(All)	0
Silk to Silk (Clearance=2mil) (All),(All)	0
Net Antennae (Tolerance=0mil) (All)	0
Height Constraint (Min=0mil) (Max=1000mil) (Prefered=500mil) (All)	0
Total	0

Zero hole size multi-layer pad(s) detected

Pad FD1-0(378mil,4061mil) on Multi-Layer on Net GND
Pad FD2-0(2122mil,4119mil) on Multi-Layer on Net GND
Pad FD3-0(1786mil,517mil) on Multi-Layer on Net GND_ISO

Multilayer Pads with 0 size Hole found

Pad FD1-0(378mil,4061mil) on Multi-Layer
Pad FD2-0(2122mil,4119mil) on Multi-Layer
Pad FD3-0(1786mil,517mil) on Multi-Layer

Electrical Rules Check Report

Class	Document	Message
		Successful Compile for iso_simucam.PrjPCB