

PCB FABRICATION NOTES

CONSTRUCTION

FAB SPECIFICATION  
LEAD-FREE RoHS  
MATERIAL  
FINAL PCB THICKNESS  
LAYER COUNT  
LAYER STACK-UP  
IMPEDANCE CONTROL  
SPECIAL CORES  
BOARD EDGE  
BOW & TWIST  
PROFILING

IPC-6012 CLASS ☐ 1 ☐ 2 ☒ 3 ☐ MIL-SPEC P-55110  
☐ YES TO EU DIRECTIVE ☒ NOT REQD  
REFER TO STACKUP FOR DETAIL  
☐ 0.8mm ☐ 1.0mm ☐ 1.2mm ☐ 1.6mm ☐ 2.4mm ☒ 0.6mm  
☐ 1 ☐ 2 ☒ 4 ☐ 6 ☐ 8 ☐ 10 ☐ 12 ☐ OTHER\_\_\_\_  
SEE DETAIL DRAWING  
☐ YES ☒ NO  
☒ YES ☐ NO IF YES, See Stackup Detail  
NO METAL BURRS AND SHARP EDGES  
1% MAX ON SMD PCBs  
☐ NC-ROUTE ☐ V-SCORE ☒ BOTH AS INDICATED

CONDUCTIVE MATERIAL

CU THICKNESS INTERNAL ☐ 17um ☒ 35um ☐ 70um ☐ \_\_\_\_\_um FINISHED  
FINAL CU THICKNESS EXT ☐ 17um ☒ 35um ☐ 70um ☐ 105um FINISHED  
PLATING FINISH ☐ HASL ☐ ENIG ☐ FLASH GOLD ☐ I-Sn (Imm-Tin) ☒ DIG  
PLATING PARAMETERS Au 0.0254um to 0.0762um Ni 4.0-6.0um  
SELECTIVE Au PLATING ☒ NO ☐ YES ON EDGE FINGERS ☐ AS INDICATED

INTERCONNECTS

DRILL PROCESS ☒ THT ☒ BACK DRILL VIAS ☒ BLIND VIAS  
HOLE WALL PLATING AS SPECIFIED IN IPC-6012 CLASS  
FINAL HOLE SIZE AS PER TABLE, AFTER TH PLATING (TOL -0.0mm +0.1mm)  
MIN HOLE SIZE (mm) ☐ 0.10 ☐ 0.15 ☒ 0.2 ☐ 0.25 ☐ LARGER  
QTY SIGNAL LAYERS ☐ 1 ☐ 2 ☒ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10  
QTY COPPER PLANES ☒ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6  
MIN TRACE WIDTH (mm) ☐ 0.10 ☐ 0.15 ☒ 0.2 ☐ 0.3 ☐ LARGER  
MIN TRACE SPACING (mm) ☐ 0.10 ☐ 0.15 ☒ 0.2 ☐ 0.3 ☐ LARGER

COSMETICS

SOLDERMASK SIDES ☐ TOP ☒ BOT ☐ BOTH SIDES ☐ NO MASK  
SOLDER MASK TYPE SOLDER MASK OVER BARE COPPER (SMOBC)  
SOLDER MASK COLOUR ☐ GRN ☒ WHITE ☐ YEL ☐ RED ☐ BLACK  
SOLDERMASK WEBBING GANG RELIEF NOT ALLOWED, UNLESS BELOW CAPABILITY  
SILKSCREEN COLOUR ☒ BLACK ☐ YEL ☐ WHITE  
SILKSCREEN PRINT NO LEGEND TO BE APPLIED OVER SOLDER PADS  
SILKSCREEN QTY ☐ TOP ☒ BOT ☐ BOTH SIDES ☐ NONE  
SILKSCREEN LINE WIDTH ☒ 0.1mm ☐ 0.15mm ☐ 2mm  
SILKSCREEN OVER PADS NOT PERMITTED, PLEASE REMOVE IF PRESENT

MANUFACTURING DEVIATIONS

PAD REMOVAL ALLOWED ON UNUSED PADS ON INNER LAYERS  
TEARDROPPING PREFERRED  
THIEVING ALLOWED ON PANEL STRIPS  
VIA SIZE REDUCTION NOT ALLOWED

ADDITIONAL REQUIREMENTS

ELECTRICAL TEST ☐ NONE ☐ FIXTURE ☒ FLYING PROBE  
MANUFACTURER LOGO ☐ YES ☒ NO  
BATCH No ON S/SCREEN ☐ YES ☒ NO  
CERTIFICATE REQ'D ☒ E-TEST ☐ UL ☐ IPC-6011/12 ☐ MIL-SPEC P-55110

MANUFACTURING DATA

GERBER DATA FILENAME.EXT: EEE5004Z Antenna

TOP COPPER ☒ YES ☐ NO .GTL  
NO COPPER ☐ YES ☒ NO .GP1  
GND COPPER ☒ YES ☐ NO .GP2  
BOTTOM COPPER ☒ YES ☐ NO .GBL  
TOP SOLDER MASK ☒ YES ☐ NO .GTS  
BOTTOM SOLDER MASK ☒ YES ☐ NO .GBS  
TOP OVERLAY ☐ YES ☒ NO .GTO  
BOTTOM OVERLAY ☒ YES ☐ NO .GBO  
TOP SELECTIVE GOLD ☐ YES ☒ NO .GTG  
BOTTOM SELECTIVE GOLD ☐ YES ☒ NO .GBG  
TOP PEELABLE BLUE ☐ YES ☒ NO .GTB  
BOTTOM PEELABLE BLUE ☐ YES ☒ NO .GBB  
MANUFACTURING DRAWING ☒ YES ☐ NO .GM2  
PCB OUTLINE ☒ YES ☐ NO .GM1  
DRILL GUIDE ☒ YES ☐ NO .GG1  
DRILL DRAWING ☒ YES ☐ NO .GD1

DRILL SET #1 (ROUND) ☒ YES ☐ NO EEE5004Z Antenna.TXT  
DRILL SET #2 (SLOTS) ☐ YES ☒ NO EEE5004Z Antenna.TXT

MANUFACTURING ZIP FILENAME: EEE5004Z Antenna

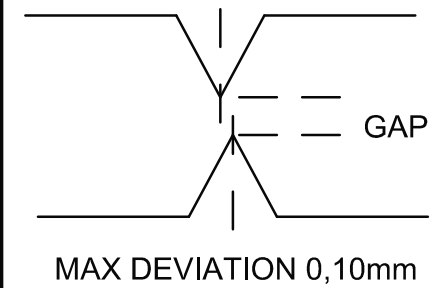
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ALL DIMENSIONS IN mm

0 5 10 15 20  
Scale in Millimeters

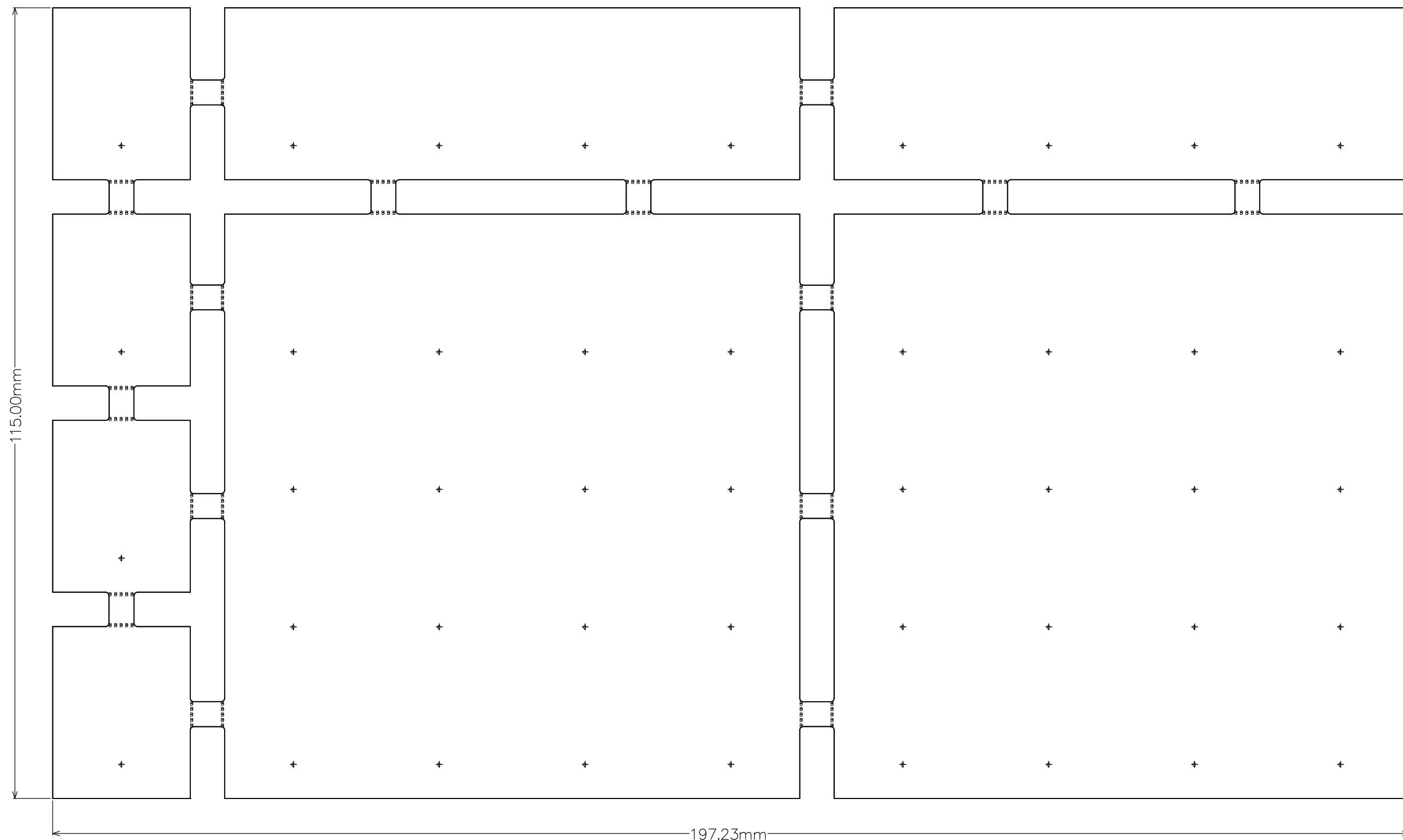
V-GROOVE DETAIL

APPLY TO PANELISED PCB IF APPLICABLE AND REQUESTED



PCB WIDTH	V-GROOVE WIDTH	GAP
0,80mm	0,16mm +/- 0,10mm	0,3mm +/- 0,10mm
1,60mm	0,50mm +/- 0,10mm	0,4mm +/- 0,10mm
2,40mm	0,80mm +/- 0,10mm	0,5mm +/- 0,10mm

OWNER: Reutech Radar Systems, a Division of Reutech (Pty) Ltd.		
PCB NAME: EEE5004Z Antenna		
PCB #: EEE5004Z Antenna	REV: 1	GERBER LAYER: DRILL GUIDE
PCB FILENAME: EEE5004Z.PcbDoc		GERBER FILENAME: Combination Drill Guide - Top Layer - Bottom Layer



THROUGH HOLES

Symbol	Count	Hole Size	Plated	Hole Type	Drill Layer Pair
A	1386	0.200mm	PTH	Round	Layer 3 - Bottom Layer
B	150	0.400mm	NPTH	Round	Top Layer - Bottom Layer
C	44	0.900mm	PTH	Round	Top Layer - Bottom Layer
1580 Total					

Layer	Name	Material	Thickness
	Top Overlay		
	Top Surface Finish	DIG (Direct Immersion Gold)	0.005mm
1	Top Layer	18u + Plating	0.035mm
	Dielectric 1	R04003C	0.203mm
2	Layer 2	No Copper Required	0.001mm
	Dielectric 2	R04450F	0.102mm
3	Layer 3	35u	0.035mm
	Dielectric 3	R04003C	0.203mm
4	Bottom Layer	18u + Plating	0.035mm
	Bottom Surface Finish	DIG (Direct Immersion Gold)	0.005mm
	Bottom Overlay		
Total board thickness:			0.624mm

BUILD STATISTICS

GENERAL	
NETS	17
COMPONENTS	22
PRIMITIVES	
PLLS	154
TRACKS	1542
STRINGS	753
ARCS	704
LANDS	
PADS	194
VIAS	1430
PRINT SCALE	
SCALE	SCALE: 1:00
PRINT DATE	13/02/2025
PRINT TIME	12:52:51

REUTECH  
RADAR SYSTEMS

Altium  
24.9.1.31

TITLE: EEE5004Z Antenna

DRAWING NUMBER: EEE5004Z Antenna\_D

ASSEMBLY NUMBER: EEE5004Z Antenna

FILE NAME: EEE5004Z.PcbDoc

A2

SHEET  
1 OF 6

PCB FABRICATION NOTES

CONSTRUCTION

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BATCH No ON S/SCREEN ☐ YES ☒ NO  
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NO COPPER ☐ YES ☒ NO .GP1  
GND COPPER ☒ YES ☐ NO .GP2  
BOTTOM COPPER ☒ YES ☐ NO .GBL

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BOTTOM SOLDER MASK ☒ YES ☐ NO .GBS  
TOP OVERLAY ☐ YES ☒ NO .GTO  
BOTTOM OVERLAY ☒ YES ☐ NO .GBO

TOP SELECTIVE GOLD ☐ YES ☒ NO .GTG  
BOTTOM SELECTIVE GOLD ☐ YES ☒ NO .GBG  
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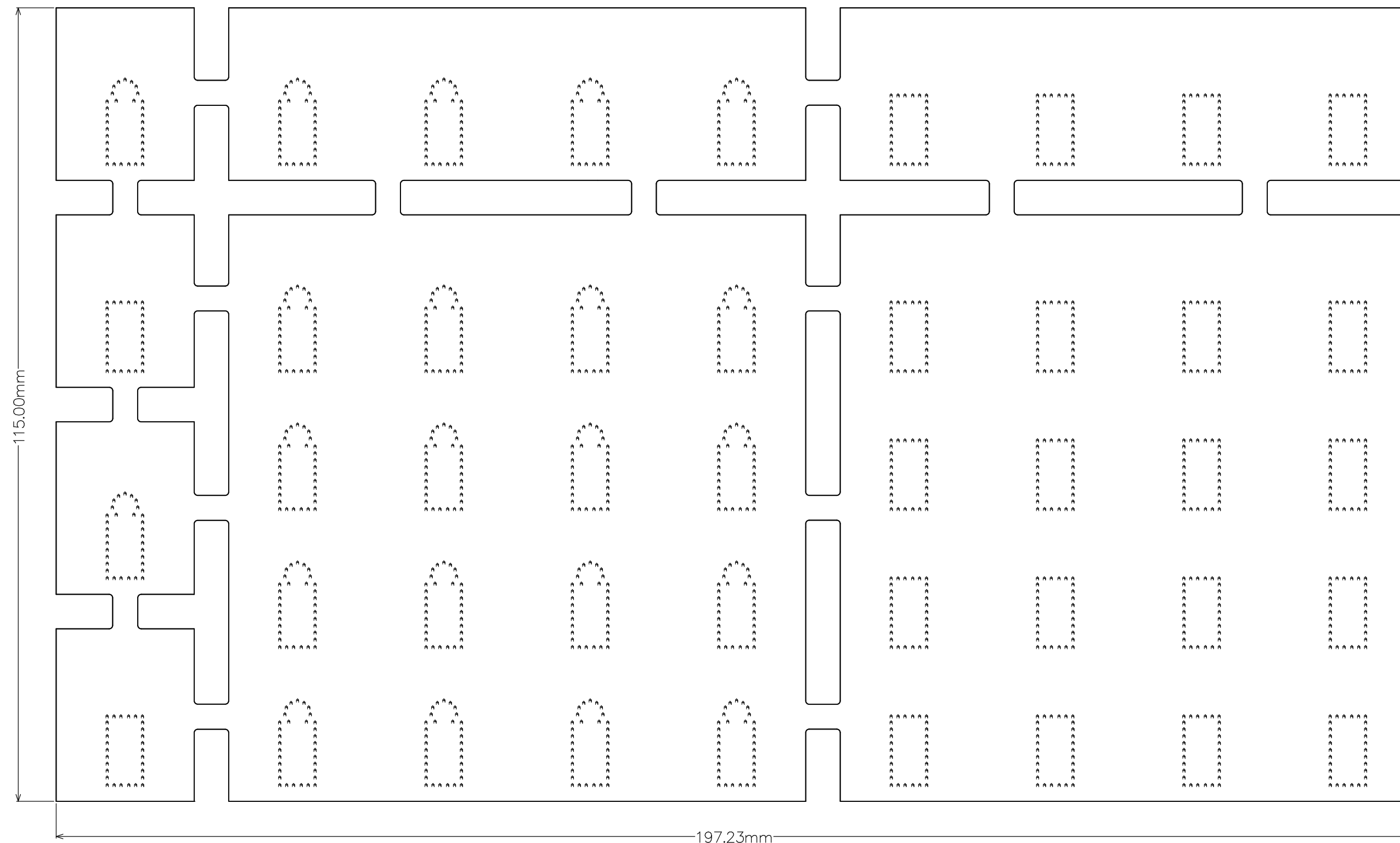
MANUFACTURING DRAWING ☒ YES ☐ NO .GM2  
PCB OUTLINE ☒ YES ☐ NO .GM1  
DRILL GUIDE ☒ YES ☐ NO .GG1  
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MANUFACTURING ZIP FILENAME: EEE5004Z Antenna

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PCB NAME: EEE5004Z Antenna		
PCB #: EEE5004Z Antenna	REV: 1	GERBER LAYER: DRILL GUIDE
PCB FILENAME: EEE5004Z.PcbDoc		GERBER FILENAME: Combination Drill Guide - Bottom Layer



BLIND VIAS BOTTOM

Symbol	Count	Hole Size	Plated	Hole Type	Drill Layer Pair
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B	150	0.400mm	NPTH	Round	Top Layer - Bottom Layer
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	Dielectric 3	R04003C	0.203mm
4	Bottom Layer	18u + Plating	0.035mm
	Bottom Surface Finish	DIG (Direct Immersion Gold)	0.005mm
	Bottom Overlay		
Total board thickness:			0.624mm

BUILD STATISTICS

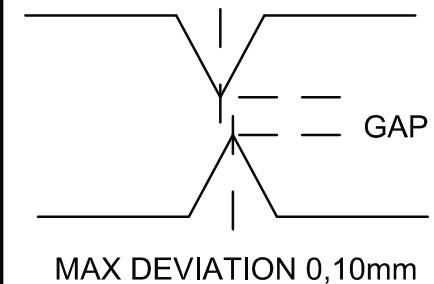
GENERAL	
NETS	17
COMPONENTS	22
PRIMITIVES	
PILLS	154
TRACKS	1542
STRINGS	753
ARCS	704
LANDS	
PADS	194
VIAS	1430
PRINT SCALE	
SCALE	SCALE: 1:00
PRINT DATE	13/02/2025
PRINT TIME	12:52:52

ALL DIMENSIONS IN mm

0 5 10 15 20  
Scale in Millimeters

V-GROOVE DETAIL

APPLY TO PANELISED PCB IF APPLICABLE AND REQUESTED



PCB WIDTH	V-GROOVE WIDTH	GAP
0,80mm	0,16mm +/- 0,10mm	0,3mm +/- 0,10mm
1,60mm	0,50mm +/- 0,10mm	0,4mm +/- 0,10mm
2,40mm	0,80mm +/- 0,10mm	0,5mm +/- 0,10mm

REUTECH  
RADAR SYSTEMS

Altium  
24.9.1.31

TITLE: EEE5004Z Antenna

DRAWING NUMBER: EEE5004Z Antenna\_D

ASSEMBLY NUMBER: EEE5004Z Antenna

B Louts

DESIGNER

APPROVED

1

REVISION

04/02/2025

DATE

N/A

ECP No

A2

SHEET  
1 OF 6

FILE NAME: EEE5004Z.PcbDoc