

PCB Manufacturing Notes

General Info

Board dimensions – 55mm x 90mm
Number of layers – 2
Smallest hole – 0.3mm
Number of holes – Approx 300
Minimum Track & Gap – 0.15mm
RoHS/Lead Free – Yes
Material – FR4 for Lead Free process

Stackup

Stackup is to be as follows:

Layer	Copper Weight (Pre-Plating)
Layer 01 (Top)	0.5oz
Layer 02 (Bottom)	0.5oz

Finished board thickness to be 1.6mm ±0.1mm

Impedance Control

Not required.

Copper Thieving/Balancing

The supplier may not add copper thieving/balancing.

Finish

A.) Conductive finish

Plating to be immersion gold.

B.) Soldermask

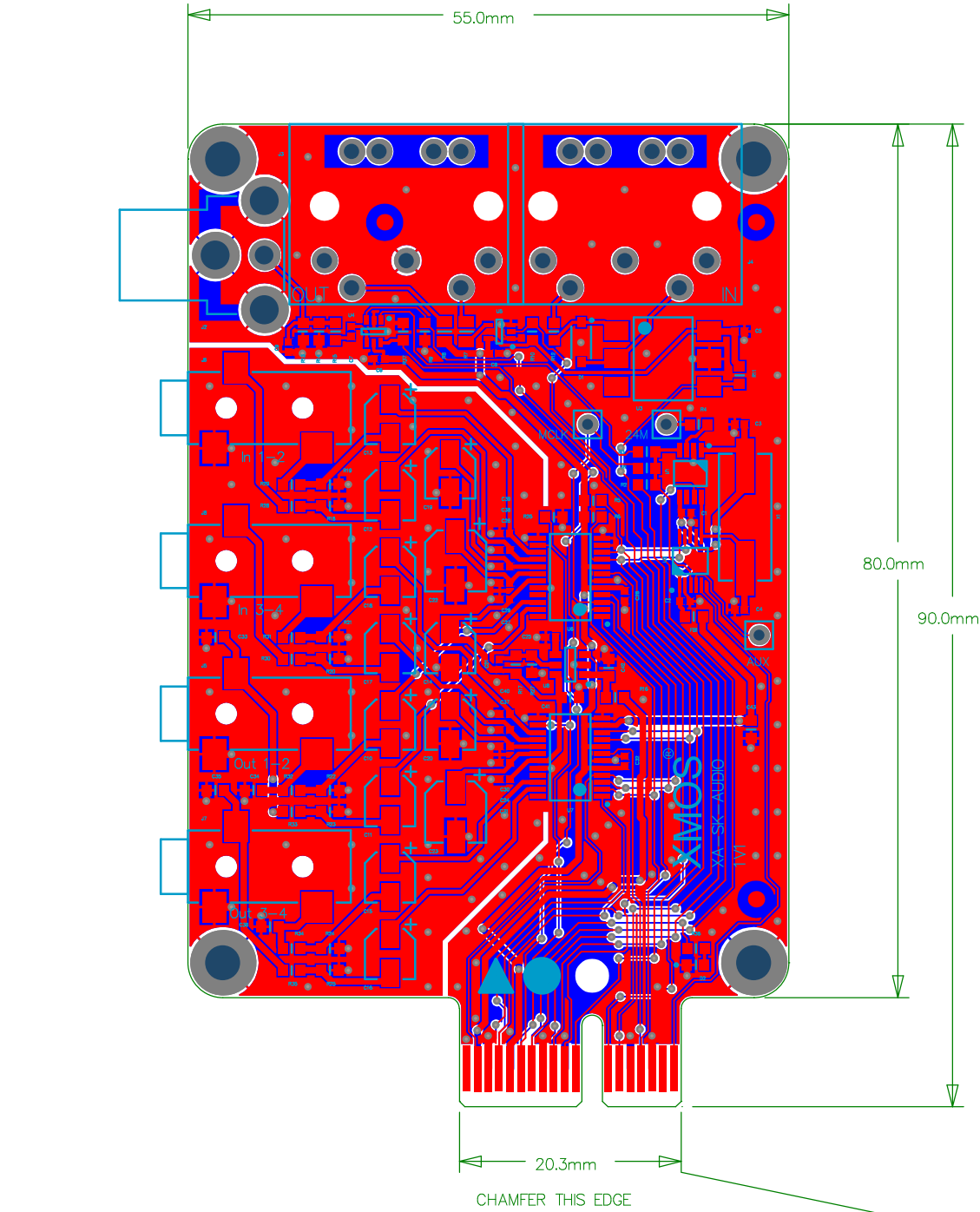
Liquid photo imageable soldermask (green). Pads have not been oversized.
Supplier should oversize soldermask on pads to suit process.

C.) Silkscreen

Colour white. Supplier should remove any silkscreen which overhangs pads.

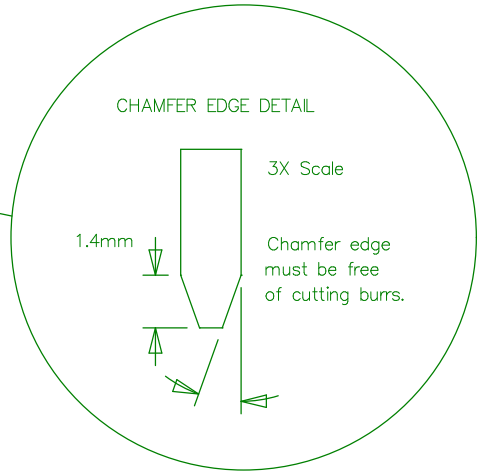
Drill Data

Drill data is in Excellon format, metric (000.000), no zero suppression, absolute coordinates.
Hole size is finished size.



XMOS LTD = XPCB-057 = 1V0 = 16 JULY 2012

LAYER – FABRICATION INSTRUCTIONS
PCB COPPER LAYER 1 (TOP) SILKSCREEN TOP
PCB COPPER LAYER 2 (BOTTOM)



XMOS®

Project Name
XPCB-057 (XA-SK-AUDIO)

Sheet	Date	Revision
A4	29 August 2012	1V1

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	0.5oz

Finished board thickness to be 1.6mm ±0.1mm

Impedance Control

Not required.

Copper Thieving/Balancing

The supplier may not add copper thieving/balancing.

Finish

A.) Conductive finish

Plating to be immersion gold.

B.) Soldermask

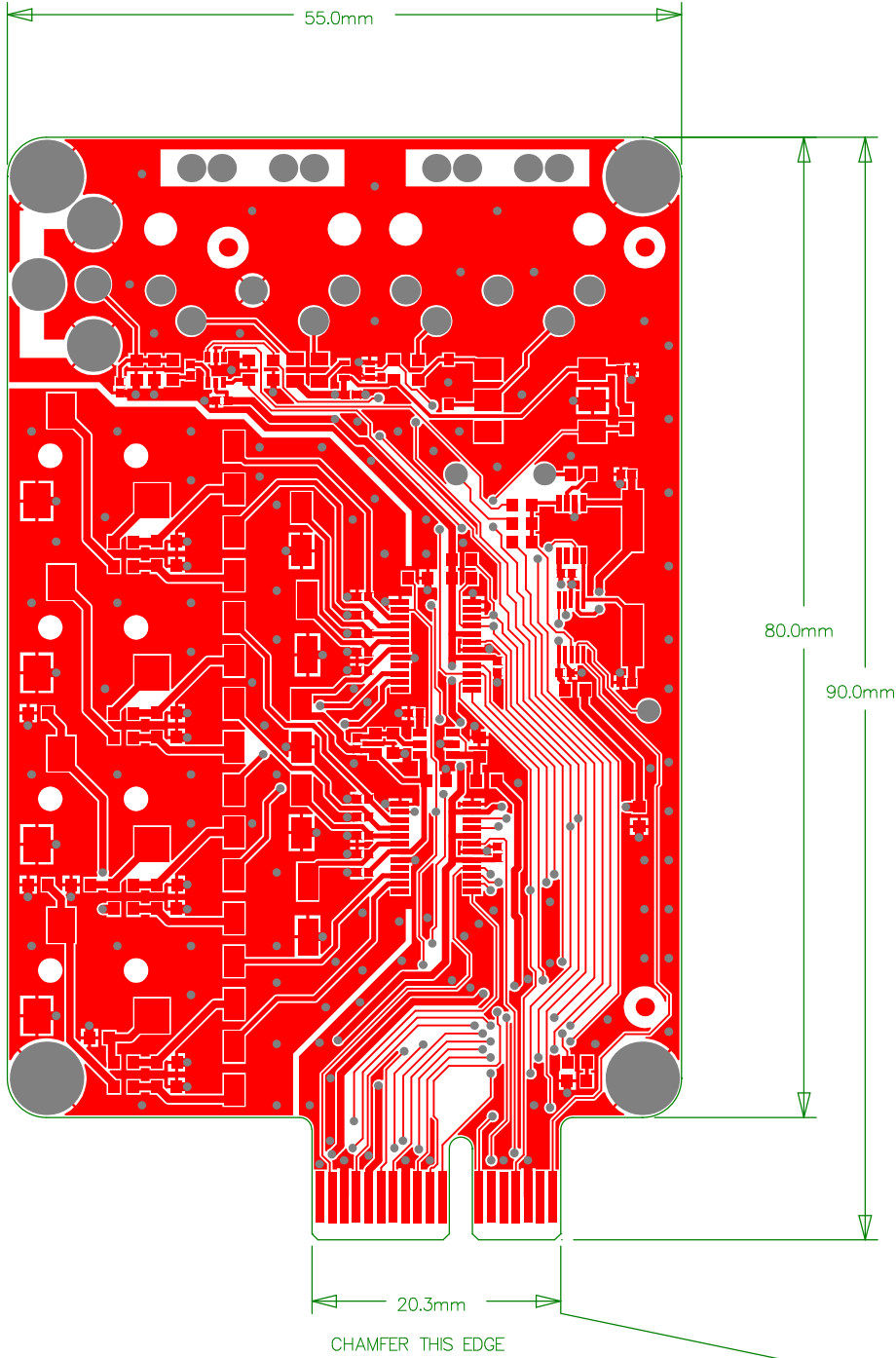
Liquid photo imageable soldermask (green). Pads have not been oversized.
Supplier should oversize soldermask on pads to suit process.

C.) Silkscreen

Colour white. Supplier should remove any silkscreen which overhangs pads.

Drill Data

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FABRICATION INSTRUCTIONS
PCB COPPER LAYER 1 (TOP)

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Smallest hole – 0.3mm
Number of holes – Approx 300
Minimum Track & Gap – 0.15mm
RoHS/Lead Free – Yes
Material – FR4 for Lead Free process

Stackup

Stackup is to be as follows:

Layer	Copper Weight (Pre-Plating)
	0.5oz
Layer 02 (Bottom)	0.5oz

Finished board thickness to be 1.6mm ±0.1mm

Impedance Control

Not required.

Copper Thieving/Balancing

The supplier may not add copper thieving/balancing.

Finish

A.) Conductive finish

Plating to be immersion gold.

B.) Soldermask

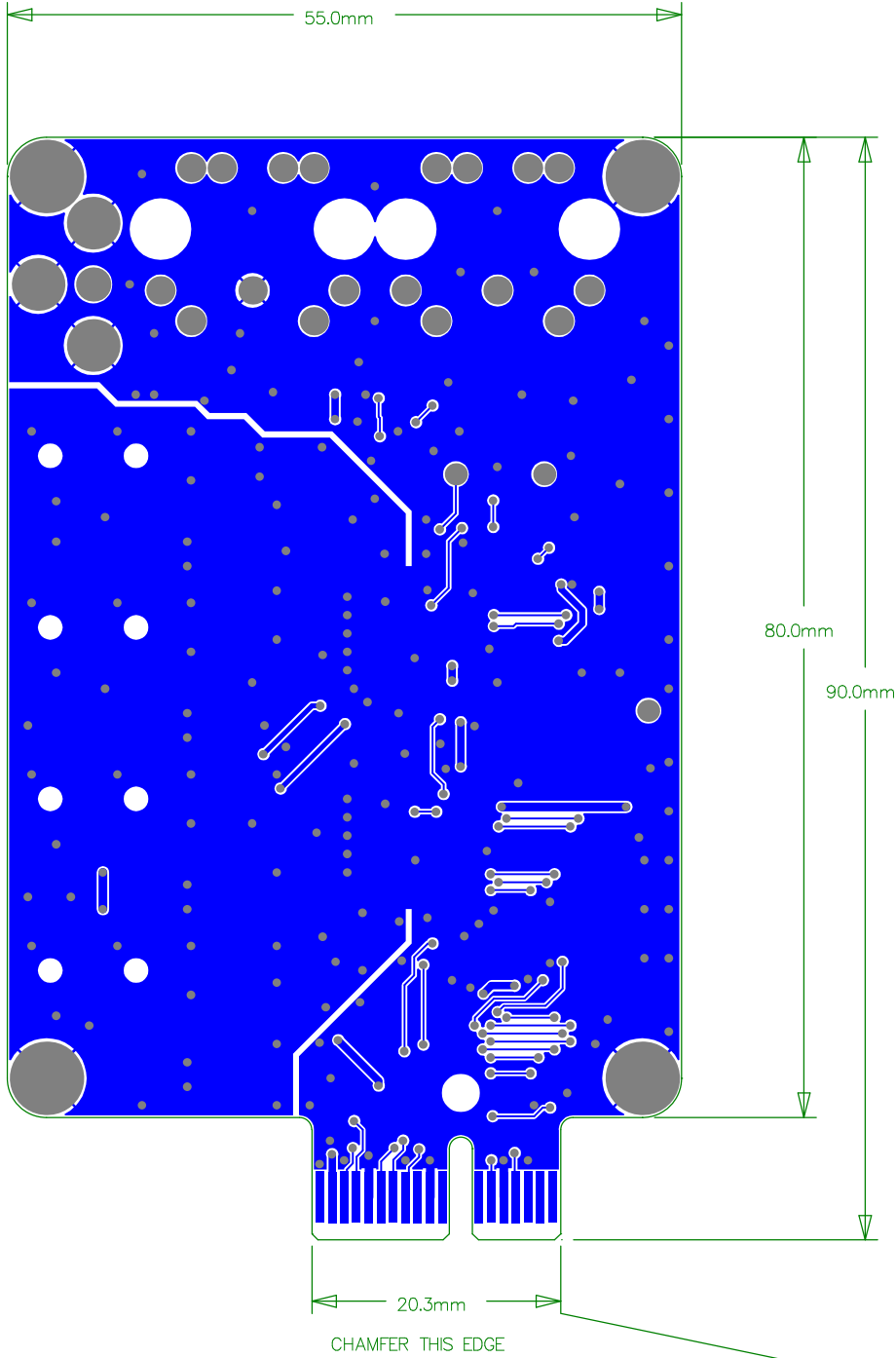
Liquid photo imageable soldermask (green). Pads have not been oversized.
Supplier should oversize soldermask on pads to suit process.

C.) Silkscreen

Colour white. Supplier should remove any silkscreen which overhangs pads.

Drill Data

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Hole size is finished size.



FABRICATION INSTRUCTIONS

PCB COPPER LAYER 2 (BOTTOM)

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Project Name
XPCB-057 (XA-SK-AUDIO)

Sheet	Date	Revision
A4	29 August 2012	1V1

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PCB Manufacturing Notes

General Info

Board dimensions – 55mm x 90mm
Number of layers – 2
Smallest hole – 0.3mm
Number of holes – Approx 300
Minimum Track & Gap – 0.15mm
RoHS/Lead Free – Yes
Material – FR4 for Lead Free process

Stackup

Stackup is to be as follows:

Layer	Copper Weight (Pre-Plating)
	0.5oz
	0.5oz

Finished board thickness to be 1.6mm ±0.1mm

Impedance Control

Not required.

Copper Thieving/Balancing

The supplier may not add copper thieving/balancing.

Finish

A.) Conductive finish

Plating to be immersion gold.

B.) Soldermask

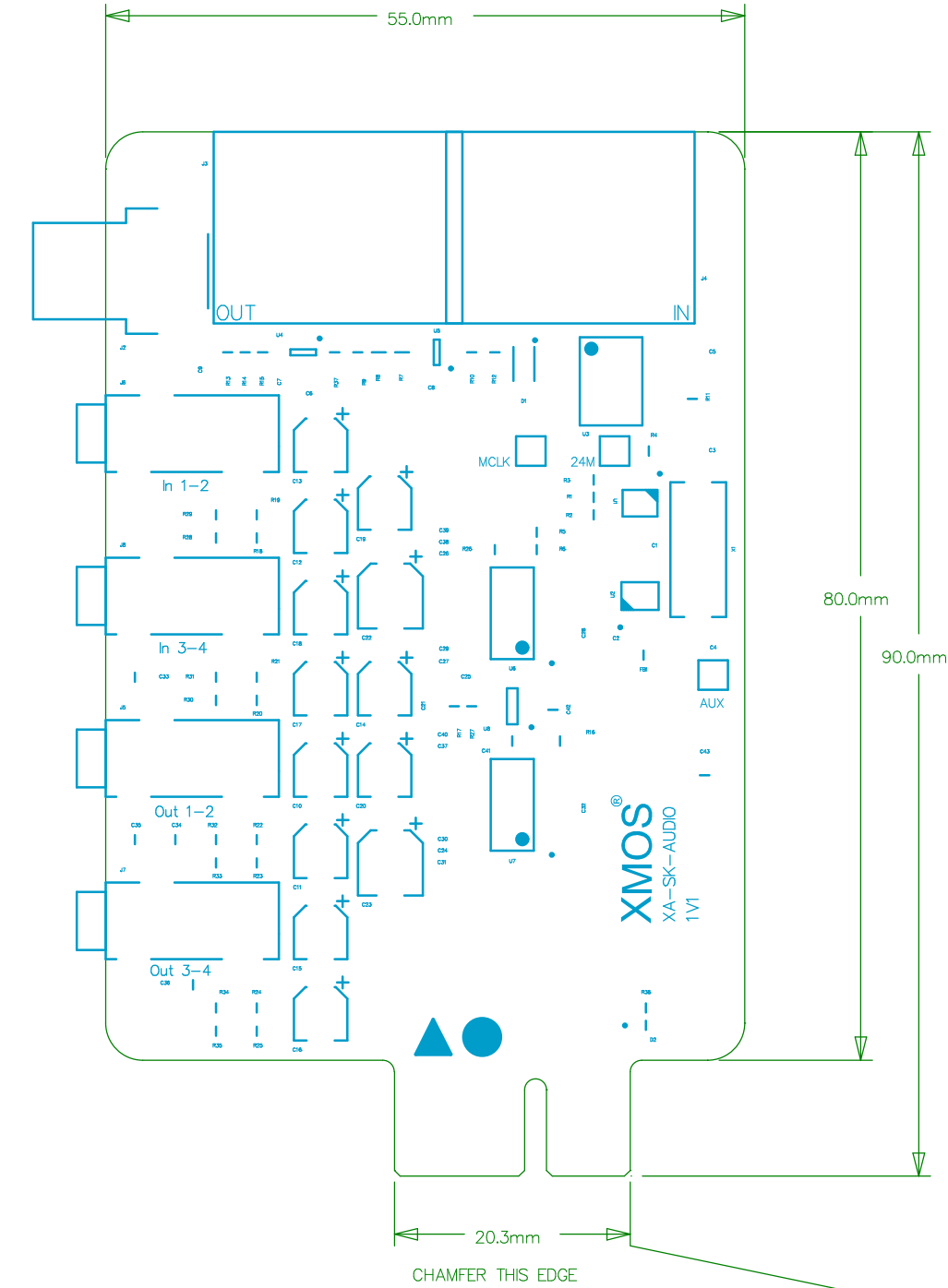
Liquid photo imageable soldermask (green). Pads have not been oversized.
Supplier should oversize soldermask on pads to suit process.

C.) Silkscreen

Colour white. Supplier should remove any silkscreen which overhangs pads.

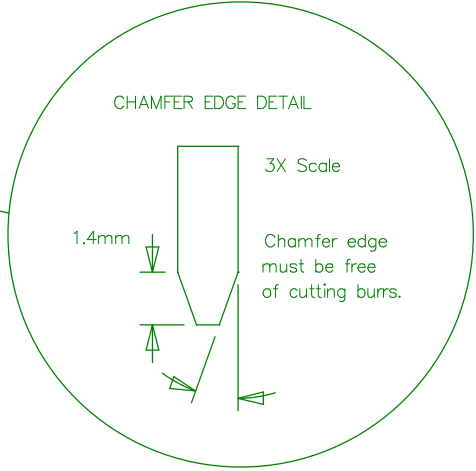
Drill Data

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Hole size is finished size.



FABRICATION INSTRUCTIONS

SILKSCREEN TOP



X MOS

Project Name
XPCB-057 (XA-SK-AUDIO)

Sheet	Date	Revision
A4	29 August 2012	1V1

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PCB Manufacturing Notes

General Info

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Minimum Track & Gap – 0.15mm
RoHS/Lead Free – Yes
Material – FR4 for Lead Free process

Stackup

Stackup is to be as follows:

Layer	Copper Weight (Pre-Plating)
	0.5oz
	0.5oz

Finished board thickness to be 1.6mm ±0.1mm

Impedance Control

Not required.

Copper Thieving/Balancing

The supplier may not add copper thieving/balancing.

Finish

A.) Conductive finish

Plating to be immersion gold.

B.) Soldermask

Liquid photo imageable soldermask (green). Pads have not been oversized.
Supplier should oversize soldermask on pads to suit process.

C.) Silkscreen

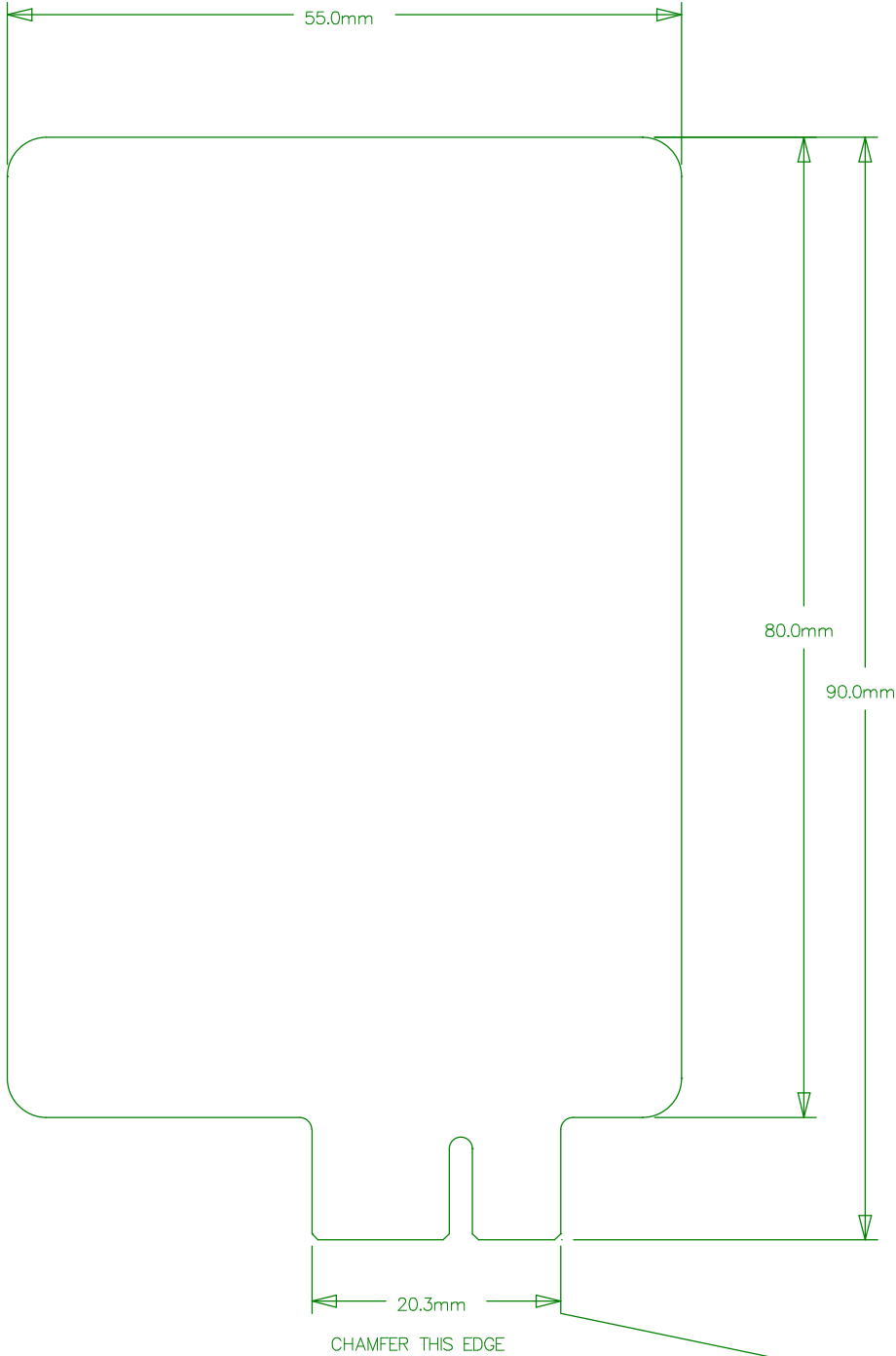
Colour white. Supplier should remove any silkscreen which overhangs pads.

Drill Data

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Hole size is finished size.

FABRICATION INSTRUCTIONS

SILKSCREEN BOTTOM



XMOS®

Project Name
XPCB-057 (XA-SK-AUDIO)

Sheet	Date	Revision
A4	29 August 2012	1V1

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PCB Manufacturing Notes

General Info

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Smallest hole – 0.3mm
Number of holes – Approx 300
Minimum Track & Gap – 0.15mm
RoHS/Lead Free – Yes
Material – FR4 for Lead Free process

Stackup

Stackup is to be as follows:

Layer	Copper Weight (Pre–Plating)
	0.5oz
	0.5oz

Finished board thickness to be 1.6mm ±0.1mm

Impedance Control

Not required.

Copper Thieving/Balancing

The supplier may not add copper thieving/balancing.

Finish

A.) Conductive finish

Plating to be immersion gold.

B.) Soldermask

Liquid photo imageable soldermask (green). Pads have not been oversized.
Supplier should oversize soldermask on pads to suit process.

C.) Silkscreen

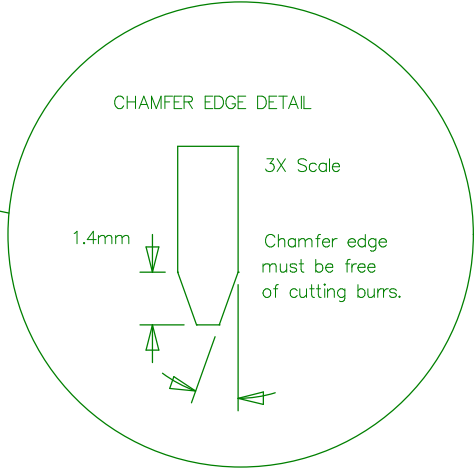
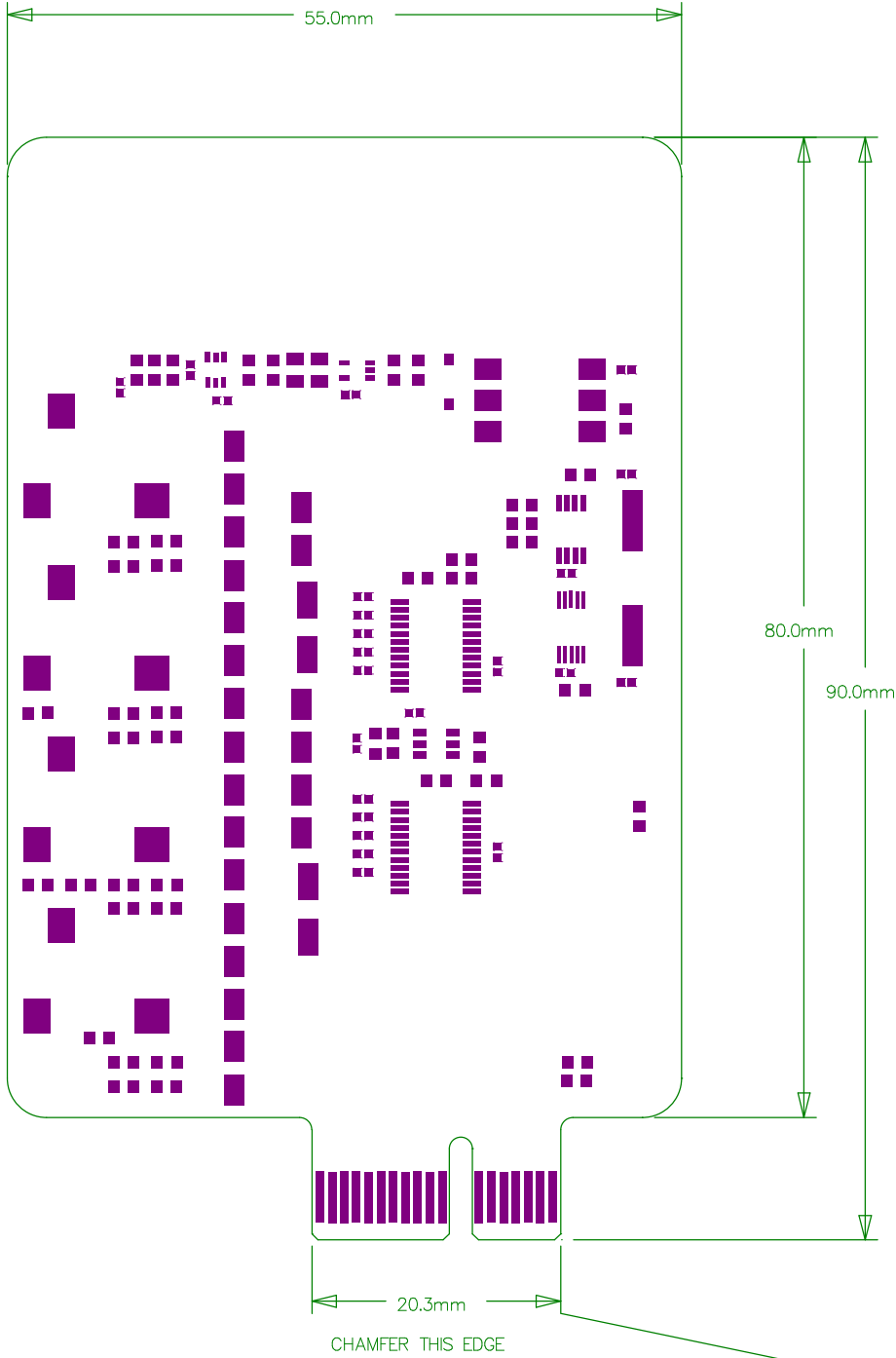
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FABRICATION INSTRUCTIONS

PASTE MASK TOP



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Layer	Copper Weight (Pre–Plating)
	0.5oz
	0.5oz

Finished board thickness to be 1.6mm ±0.1mm

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Not required.

Copper Thieving/Balancing

The supplier may not add copper thieving/balancing.

Finish

A.) Conductive finish

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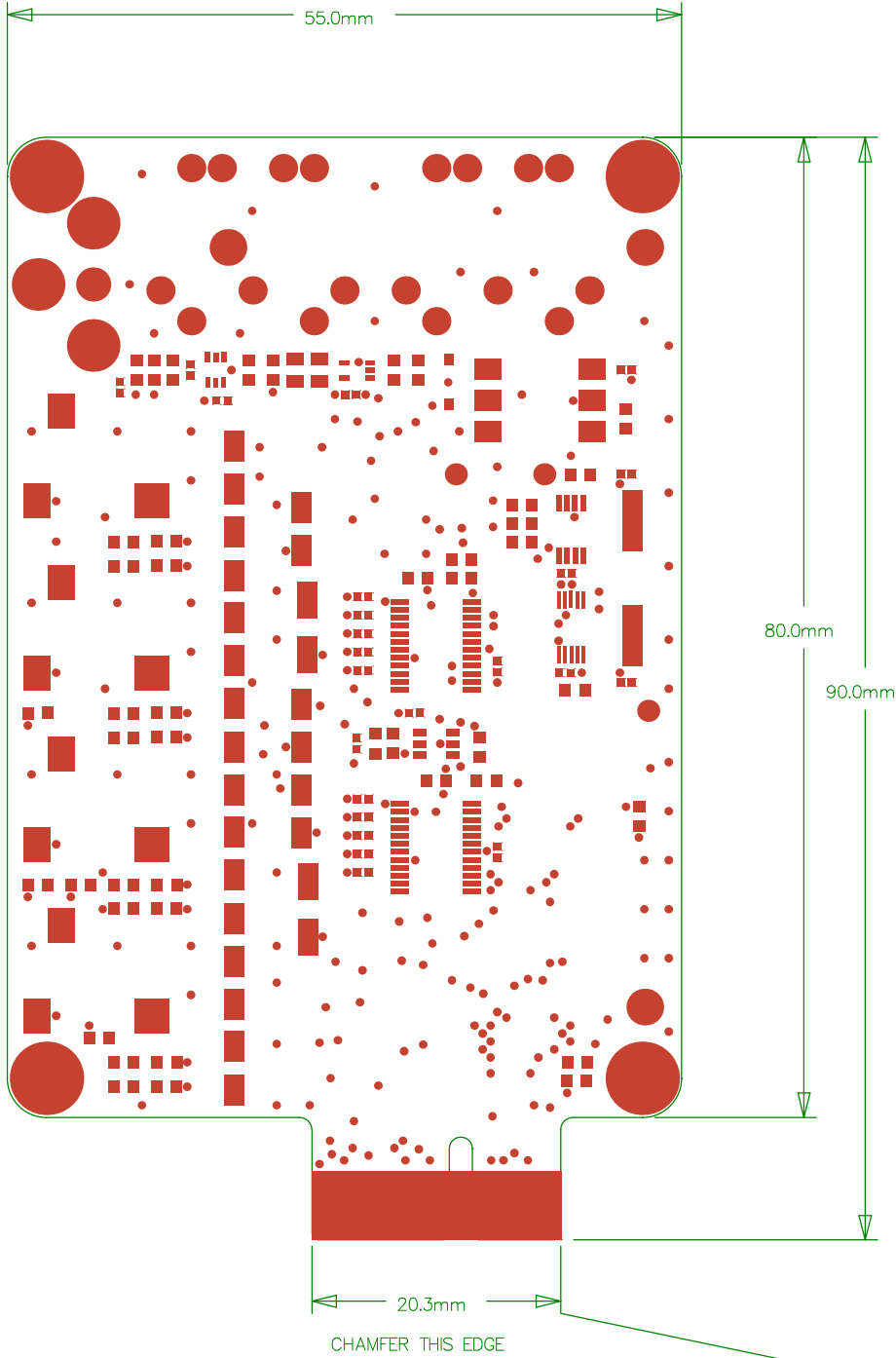
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FABRICATION INSTRUCTIONS

SOLDER MASK TOP



XMOS®

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XPCB–057 (XA–SK–AUDIO)

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Finish

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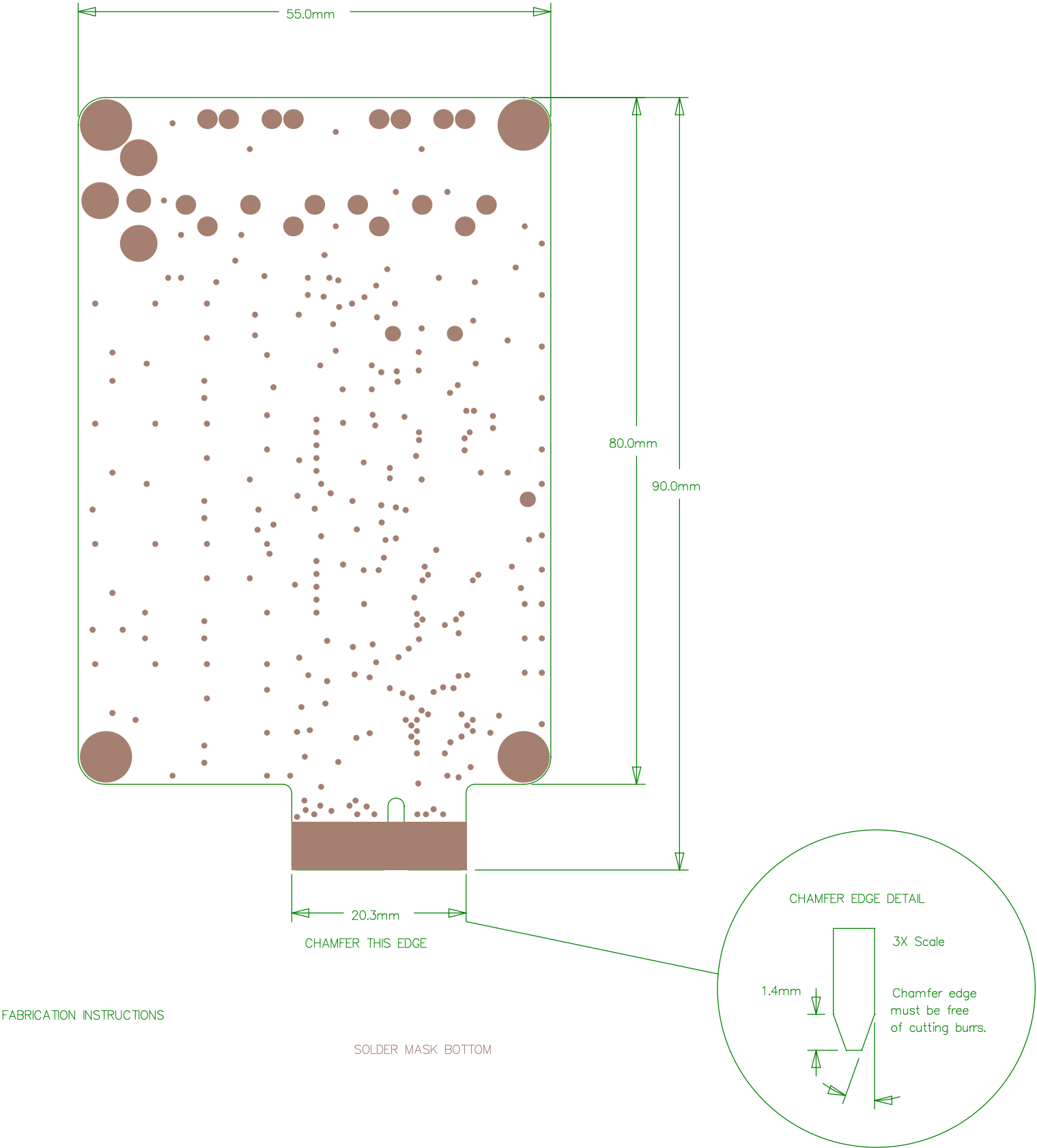
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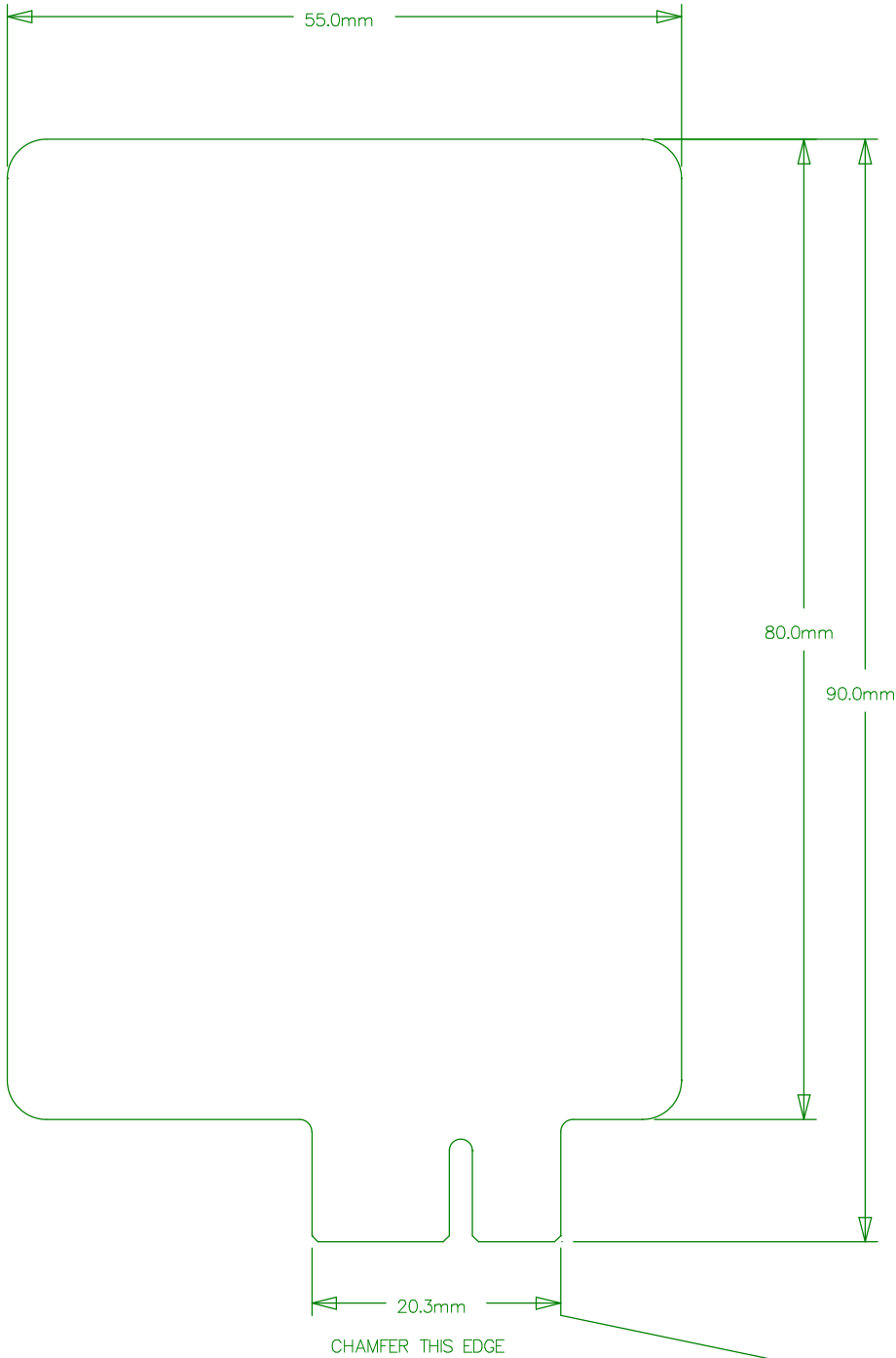
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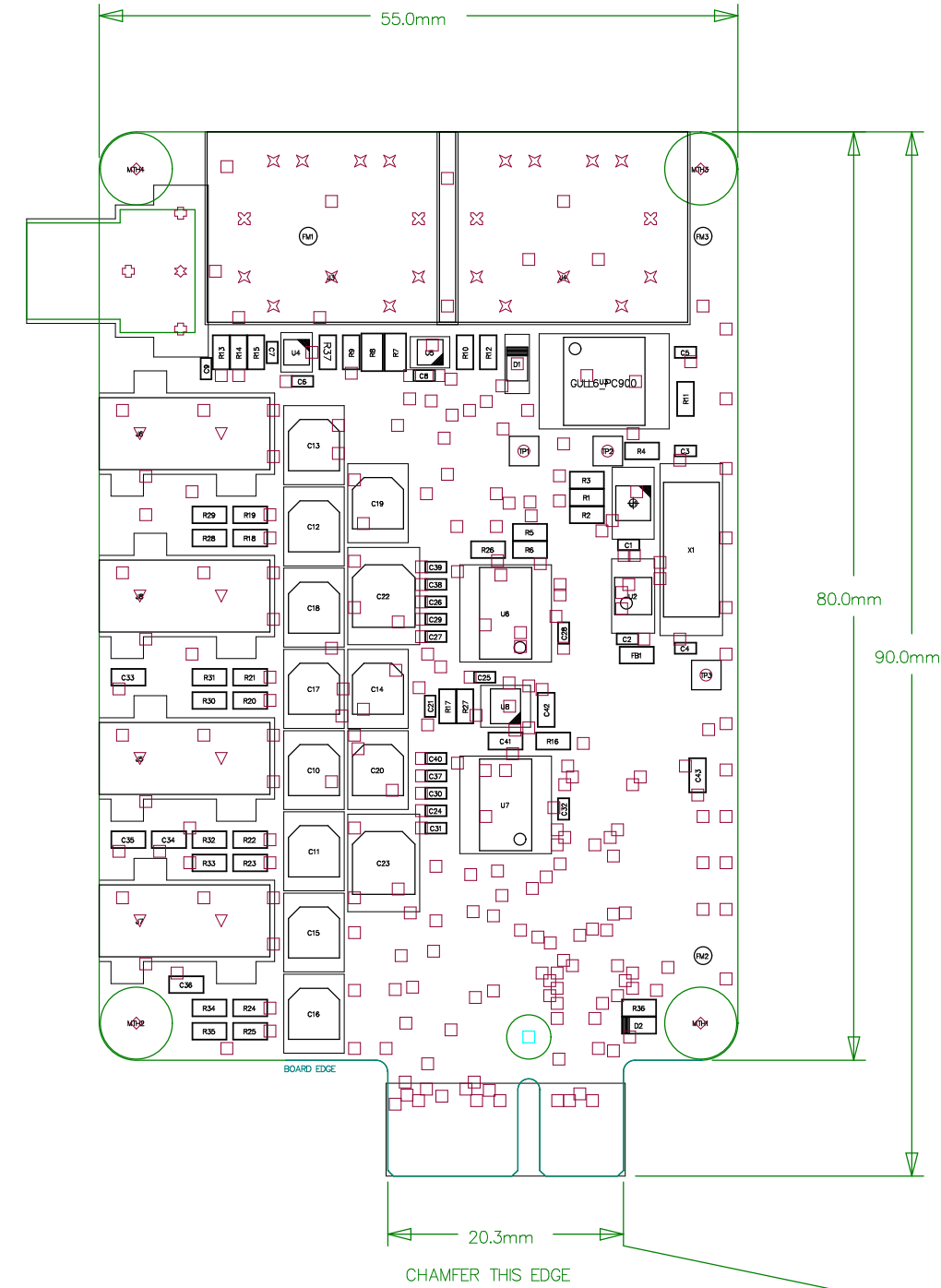
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Symbol	Hit Count	Tool Size	Plated	Hole Type
□	255	0.3mm (11.811mil)	PTH	Round
○	3	1mm (39.37mil)	PTH	Round
✕	18	1.4mm (55.118mil)	PTH	Round
▽	8	1.7mm (66.929mil)	NPTH	Round
☆	1	1.7mm (66.929mil)	PTH	Round
✕	4	2.4mm (94.488mil)	NPTH	Round
⊕	3	2.65mm (104.331mil)	PTH	Round
□	1	2.8mm (110.236mil)	NPTH	Round
◇	4	3.2mm (125.984mil)	PTH	Round
	297 Total			

Drill Drawing.

ABRICATION INSTRUCTIONS DRILL DRAWING

ASSEMBLY DRAWING TOP
ASSEMBLY DRAWING BOTTOM

XMOS

Project Name
XPCB-057 (XA-SK-AUDIO)

Sheet	Date	Revision
A4	29 August 2012	1V1

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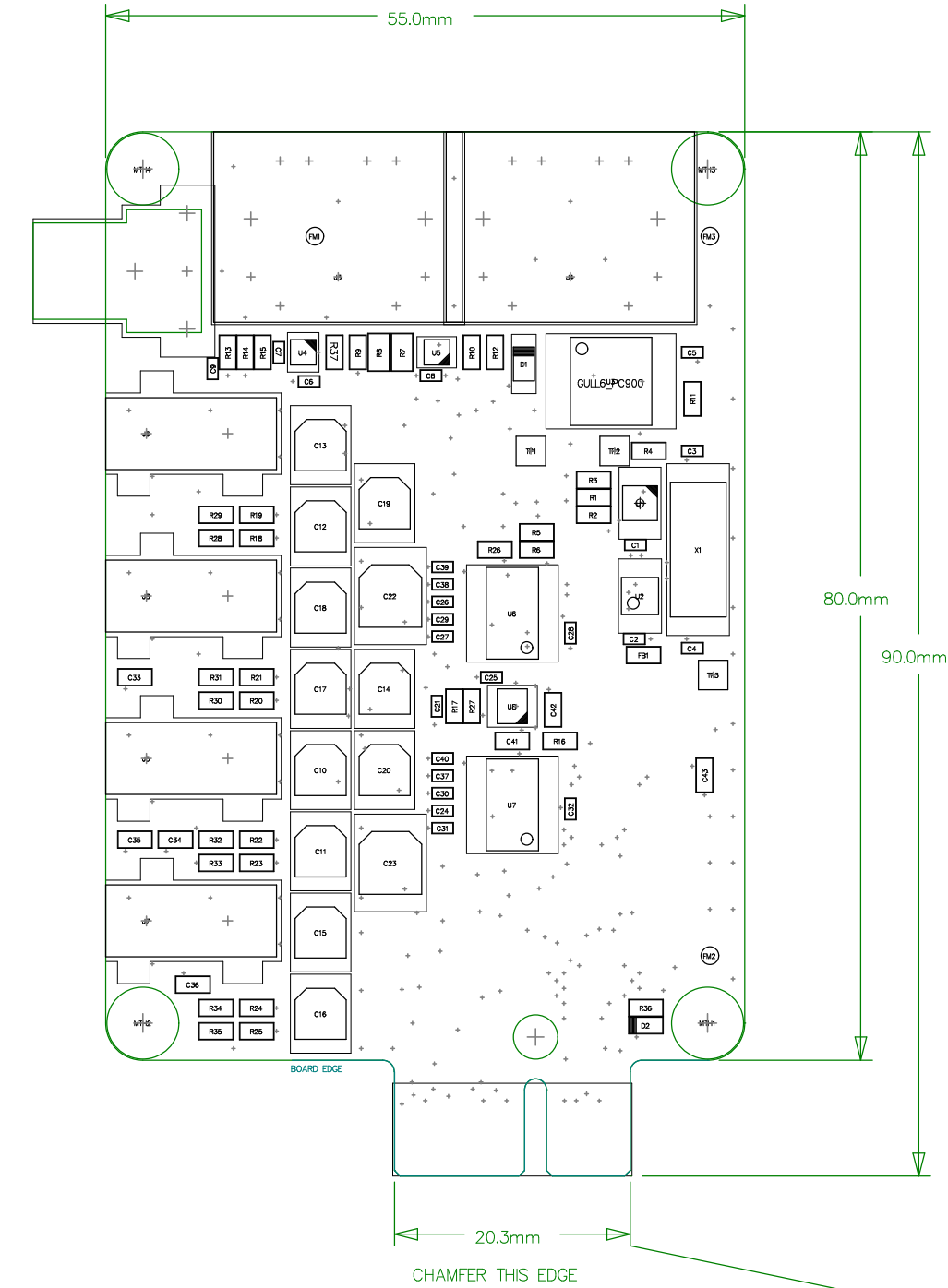
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FABRICATION INSTRUCTIONS

ASSEMBLY DRAWING TOP
ASSEMBLY DRAWING BOTTOM



Project Name
XPCB-057 (XA-SK-AUDIO)

Sheet	Date	Revision
A4	29 August 2012	1V1

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BOM

TOP_LEVEL

Source Data From:

XPCB-057.PrjPCB

Project:

XPCB-057.PrjPCB

Variant:

None



Report Date:

07/12/2012

13:52:30

Print Date:

07-Dec-12

1:52:36 PM

#	LibRef	Designator	Description	Quantity
1	E-01-0001	R36	RES 1k 0603 1%	1
2	E-01-0002	R9, R10, R22, R23, R24, R25, R26, R37	RES 10k 0603 1%	8
3	E-01-0008	R1, R2, R3, R4	RES 33R 0603 1%	4
4	E-01-0018	R27	RES 2.7k 0603 1%	1
5	E-01-0021	R5, R6, R28, R29, R30, R31	RES 4.7k 0603 1%	6
6	E-01-0022	R32, R33, R34, R35	RES 470R 0603 1%	4
7	E-01-0030	R16	RES 1R 0603 5%	1
8	E-01-0037	R17	RES 6.8k 0603 1%	1
9	E-01-0038	R18, R19, R20, R21	RES 3.3k 0603 1%	4
10	E-01-0086	R11, R12, R13, R14, R15	RES 220R 0603 1%	5
11	E-01-0263	R7, R8	RES 75R 0805 1%	2
12	E-02-0002	C1, C5, C6, C7, C8, C24, C25, C26, C27, C28, C29, C30, C31, C32	MLCC 100nF 0402 X7R 16V	14
13	E-02-0008	C9	MLCC 33pF 0402 COG 50V	1
14	E-02-0013	C33, C34, C35, C36	MLCC 2.2nF 0603 COG 50V	4
15	E-02-0016	C37, C38, C39, C40	MLCC 220pF 0402 COG 50V	4
16	E-02-0019	C41, C42, C43	MLCC 2.2uF 0603 X5R 10V	3
17	E-02-0026	C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20	Al Elec 10uF 25V CaseB SMD	11
18	E-02-0031	C22, C23	Al Elec 47uF 16V CaseC SMD	2
19	E-02-0057	C2, C3, C4	MLCC 0402 No Fit	3
20	E-02-0062	C21	MLCC 100pF 0402 COG 50V	1
21	E-04-0023	J5, J6, J7, J8	TRS jack, 3.5mm, SMD	4
22	E-04-0030	J2	RCA Jack, Right Angle, Through Hole, Orange	1
23	E-04-0034	J3, J4	DIN Socket, 5pin, 180°, Right Angle, Through Hole	2
24	E-04-0058	J1	PCIe Edge Connector Plug, x1, 36 Pin, DNF	1
25	E-05-0009	U8	Voltage regulator, LDO, Adjustable, 200mA	1
26	E-07-0030	X1	Crystal, 24MHz, HC49/US SMD, Fundamental, 18pF, Tol. ±30ppm, Stab. ±50ppm	1
27	E-08-0007	FB1	Ferrite Bead, 120R AT 100MHz, 0603, 500mA	1
28	E-10-0013	D1	Diode, 100V, 0.3A, SOD123	1
29	E-12-0001	D2	LED, GREEN, 0603	1
30	E-13-0005	U4	Single D-Type Flip-Flop, UHS Series, SC70	1
31	E-13-0006	U5	Logic Buffer, Tri-State, UHS Series, SC70	1
32	E-13-0092	U3	Digital Output Optocoupler, Normal OFF Operation, Open Collector, 6 Pin Gullwing SMD	1
33	E-13-0094	U6, U7	Audio CODEC, 2 In, 2 Out, 24Bit, 192KHz, TSSOP24	2
34	E-13-0095	U1	Clock Generator, 24MHz in, 22.5792MHz or 24.576MHz out, MSOP8	1
35	E-13-0107	U2	Fractional-N Clock Multiplier, Crystal Reference, MSOP10	1
36	E-14-0002	MTH1, MTH2, MTH3, MTH4	Mounting Hole, Plated, for M3 Screw, 6mm Dia	4
37	E-14-0014	MECH1	Mounting Hole, Non Plated, 2.8mm Dia	1
38	E-15-0003	TP1, TP2, TP3	Through Hole Testpoint	3
39	E-15-0004	FM1, FM2, FM3	Fiducial, 1.5mm dot, 3mm keepout	3
40	P-01-0011	PROD1, PROD2, PROD3, PROD4	Feet, Nylon, M3, 6mm Standoff	4
41	P-01-0043	PROD5, PROD6, PROD7, PROD8	Metric Machine Screw, M2 Thread, Steel, BZP, Pan Head, Pozidriv, 6mm Length	4
Approved			Notes	119