

8

7

6

5

4

3

2

1

1. ALL RESISTANCE VALUES ARE IN OHMS, 0.1 WATT +/- 5%.

2. ALL CAPACITANCE VALUES ARE IN MICROFARADS.

3. ALL CRYSTALS & OSCILLATOR VALUES ARE IN HERTZ.

REV

ZONE

ECN

DESCRIPTION OF CHANGE

CK APPD

ENG APPD

DATE

DATE

A

356279

PRODUCTION RELEASED

12/17/04

D

C

B

A

PAGE

1

2

3

4

5

6

7

8

9

10

11

12

CONTENTS

TITLE PAGE AND CONTENTS

PCB NOTES AND HOLES

DC POWER INPUT

USB I/O CONNECTOR (LEFT) & ALS (LEFT)

SNAPPER (AUDIO) CONTROL INTERFACE

SPEAKER DRIVER

HEADPHONE DRIVER

MICROPHONE AMP. & LINE-IN AMP.

SIGNAL & POWER CONSTRAINTS

REVISION HISTORY

SIGNAL LOCATIONS

COMPONENT LOCATIONS

SCHEM, LEFT I/O BRD, PB15"

12/17/2004

PART#

QTY

DESCRIPTION

REFERENCE DESIGNATOR(S)

BOM OPTION

051-6686

1

SCHEM, LEFT I/O BRD, PB15

SCH1

820-1685

1

PCBF, LEFT I/O BRD, PB15

PCB1

DIMENSIONS ARE IN MILLIMETERS

XX ±

X.XX ±

X.XXX ±

ANGLES ±

DO NOT SCALE DRAWING

THIRD ANGLE PROJECTION

METRIC

DRAFTER

ENG APPD

QA APPD

RELEASE

DESIGN CK

MFG APPD

DESIGNER

SCALE

MATERIAL/FINISH NOTED AS APPLICABLE

SIZE D

Apple Computer Inc.

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TITLE

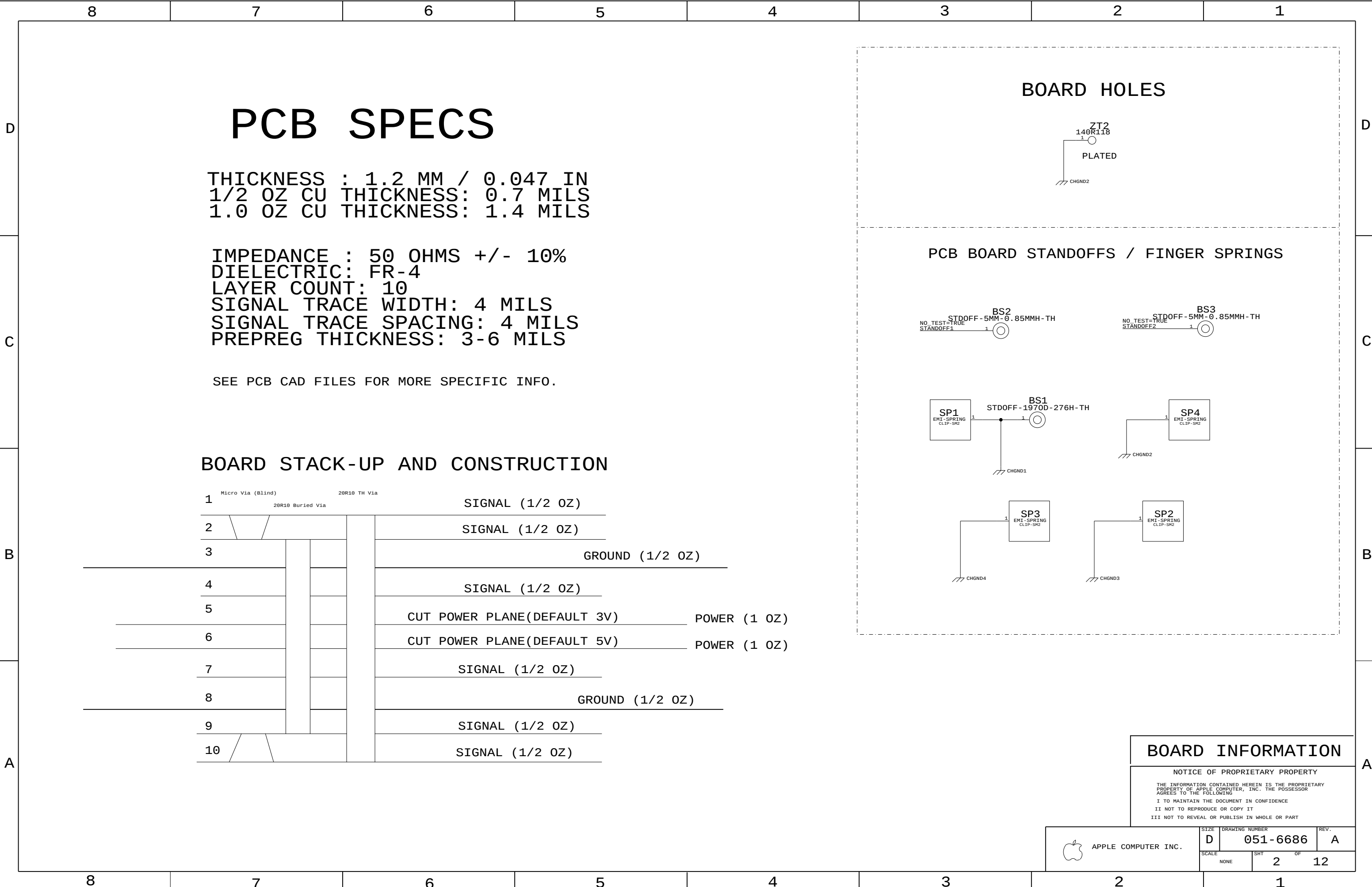
SCHEM, LEFT I/O BRD, PB15

DRAWING NUMBER

051-6686

REV. A

SHT 1 OF 12



PCB SPECS

THICKNESS : 1.2 MM / 0.047 IN
1/2 OZ CU THICKNESS: 0.7 MILS
1.0 OZ CU THICKNESS: 1.4 MILS

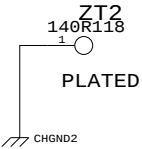
IMPEDANCE : 50 OHMS +/- 10%
DIELECTRIC: FR-4
LAYER COUNT: 10
SIGNAL TRACE WIDTH: 4 MILS
SIGNAL TRACE SPACING: 4 MILS
PREPREG THICKNESS: 3-6 MILS

SEE PCB CAD FILES FOR MORE SPECIFIC INFO.

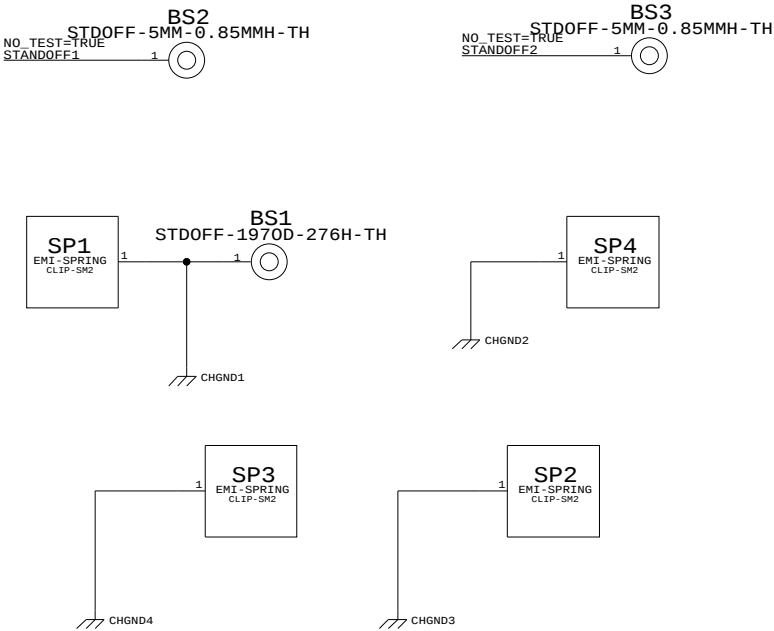
BOARD STACK-UP AND CONSTRUCTION

1	Micro Via (Blind)	20R10 TH Via	SIGNAL (1/2 OZ)
2	20R10 Buried Via		SIGNAL (1/2 OZ)
3			GROUND (1/2 OZ)
4			SIGNAL (1/2 OZ)
5			CUT POWER PLANE(DEFAULT 3V) POWER (1 OZ)
6			CUT POWER PLANE(DEFAULT 5V) POWER (1 OZ)
7			SIGNAL (1/2 OZ)
8			GROUND (1/2 OZ)
9			SIGNAL (1/2 OZ)
10			SIGNAL (1/2 OZ)

BOARD HOLES



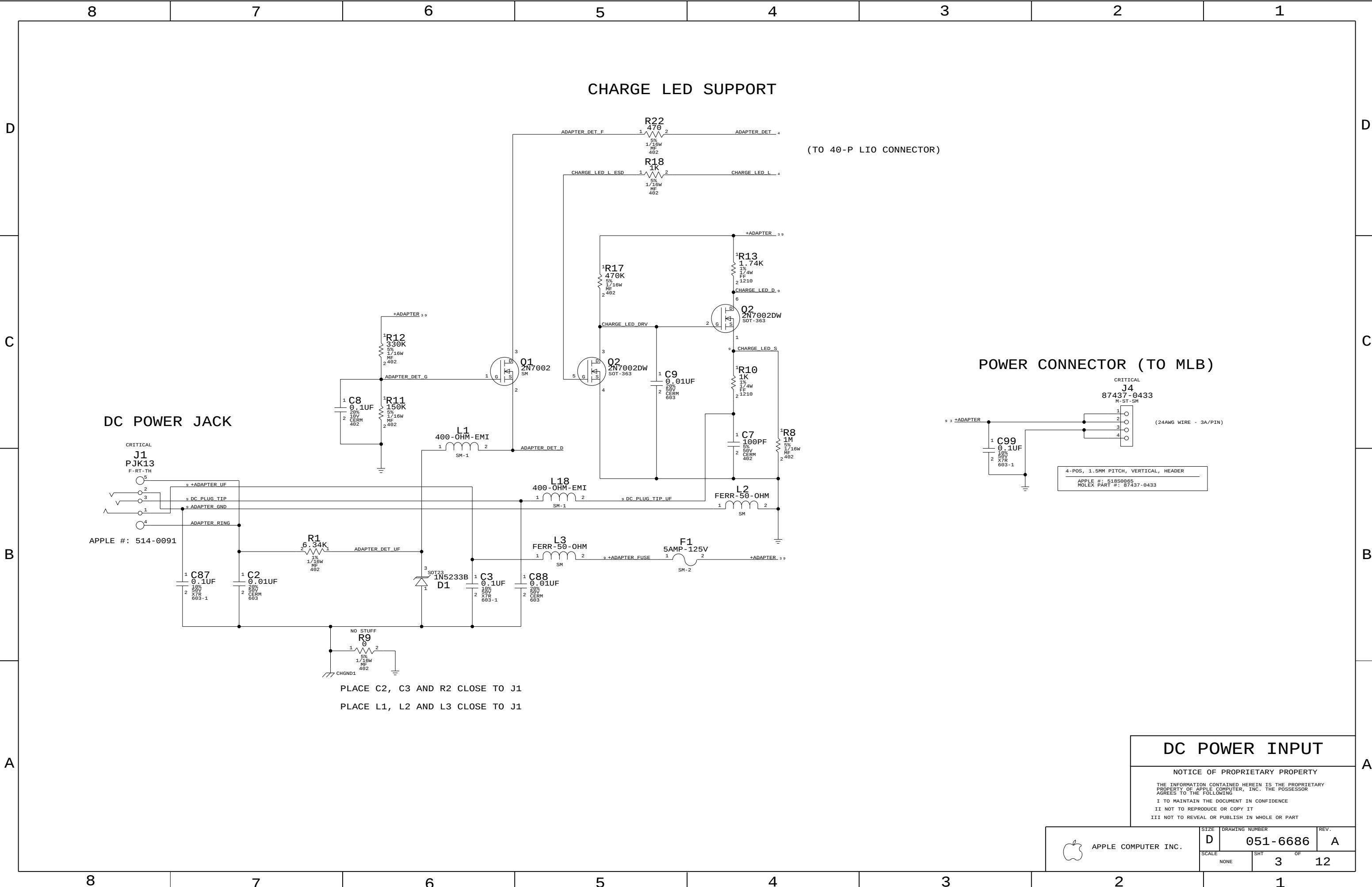
PCB BOARD STANDOFFS / FINGER SPRINGS



BOARD INFORMATION

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APPLE COMPUTER INC.	SIZE	DRAWING NUMBER		REV.
	D	051-6686		A
SCALE		SHT	OF	REV.
NONE		2	12	



DC POWER JACK

CHARGE LED SUPPORT

POWER CONNECTOR (TO MLB)

DC POWER INPUT

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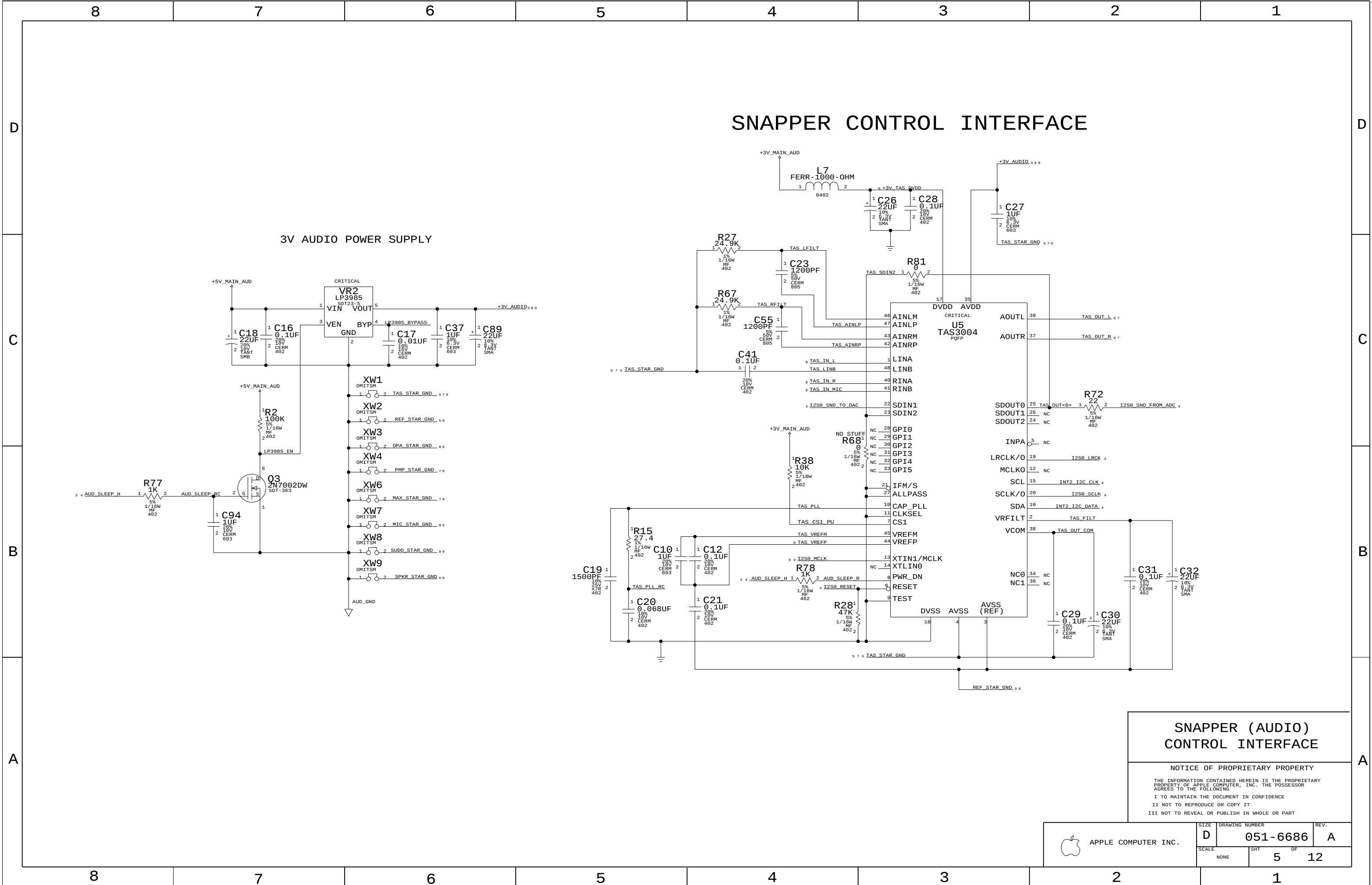


APPLE COMPUTER INC.

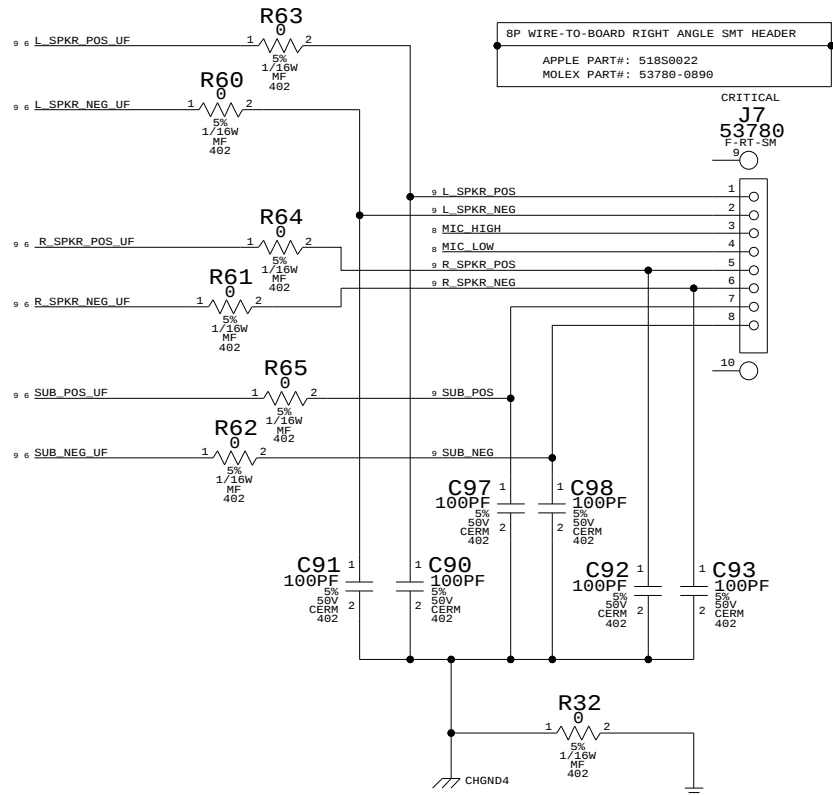
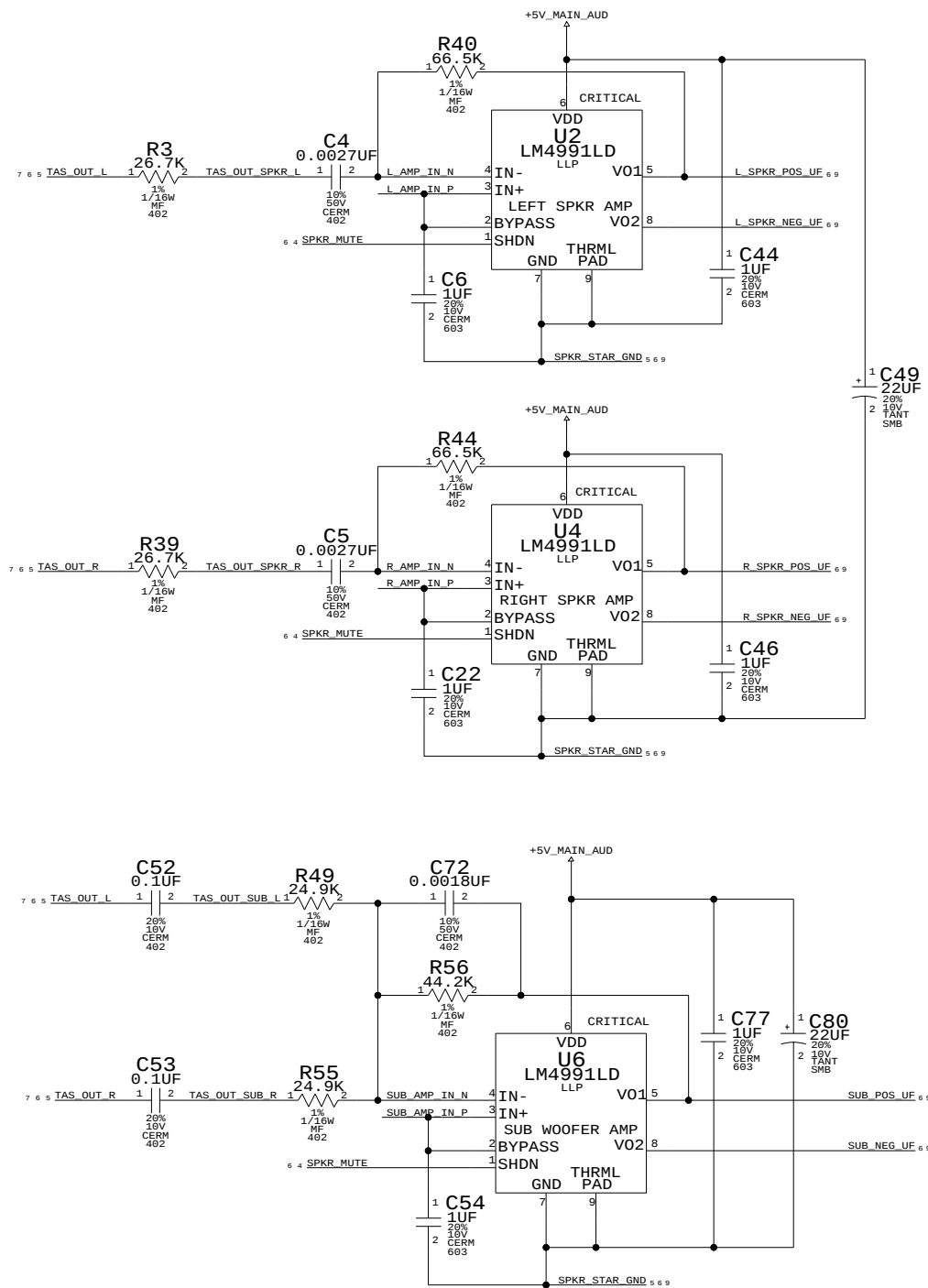
SIZE DRAWING NUMBER REV.

D 051-6686 A

SCALE SHT OF 12



SPEAKER DRIVER



SPEAKER DRIVERS

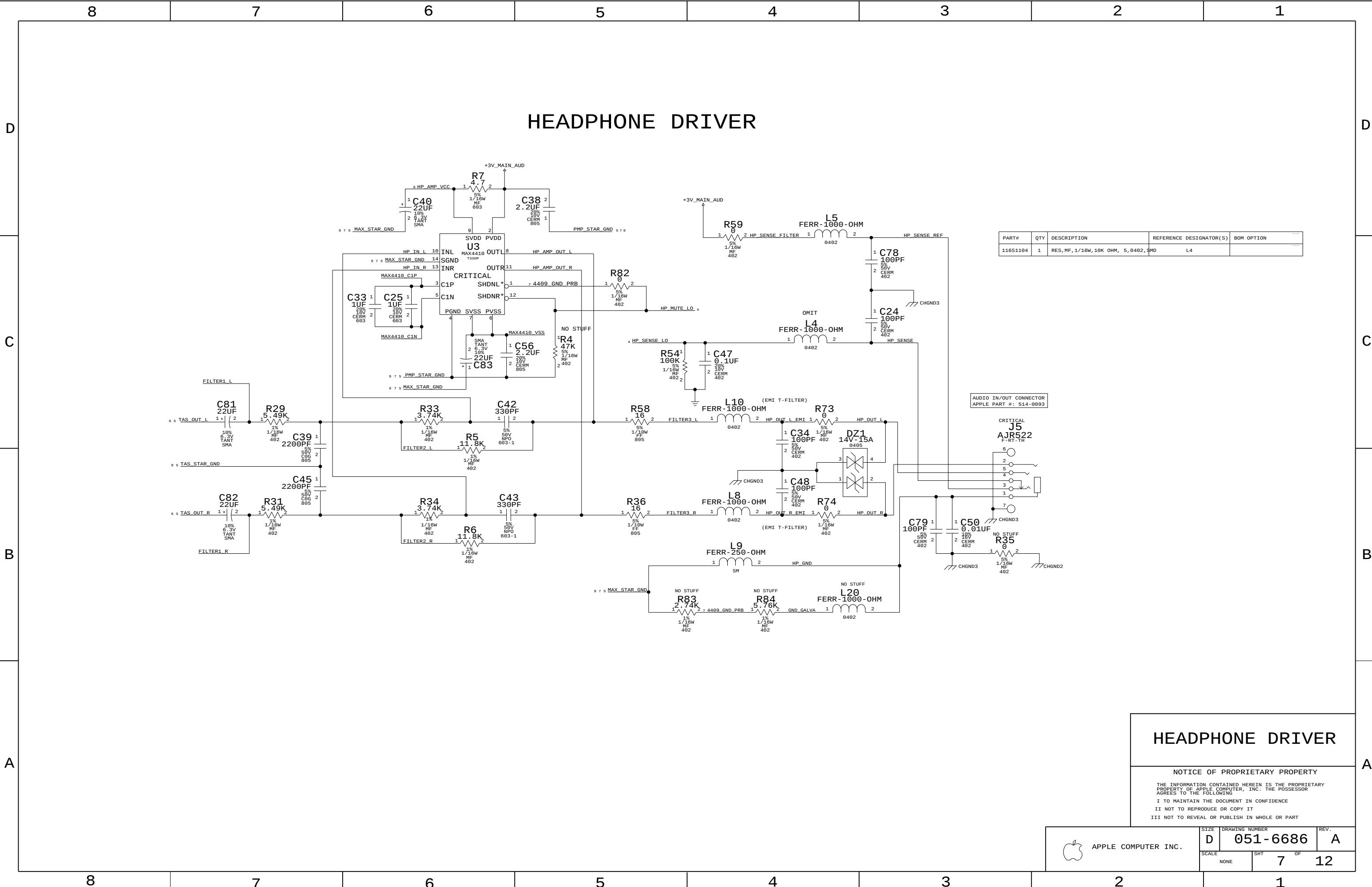
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SIZE	DRAWING NUMBER	REV.
D	051-6686	A
SCALE	SHT	OF
NONE	6	12



PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
116S1104	1	RES,MF,1/16W,10K OHM, 5, 0402, SMD	L4	

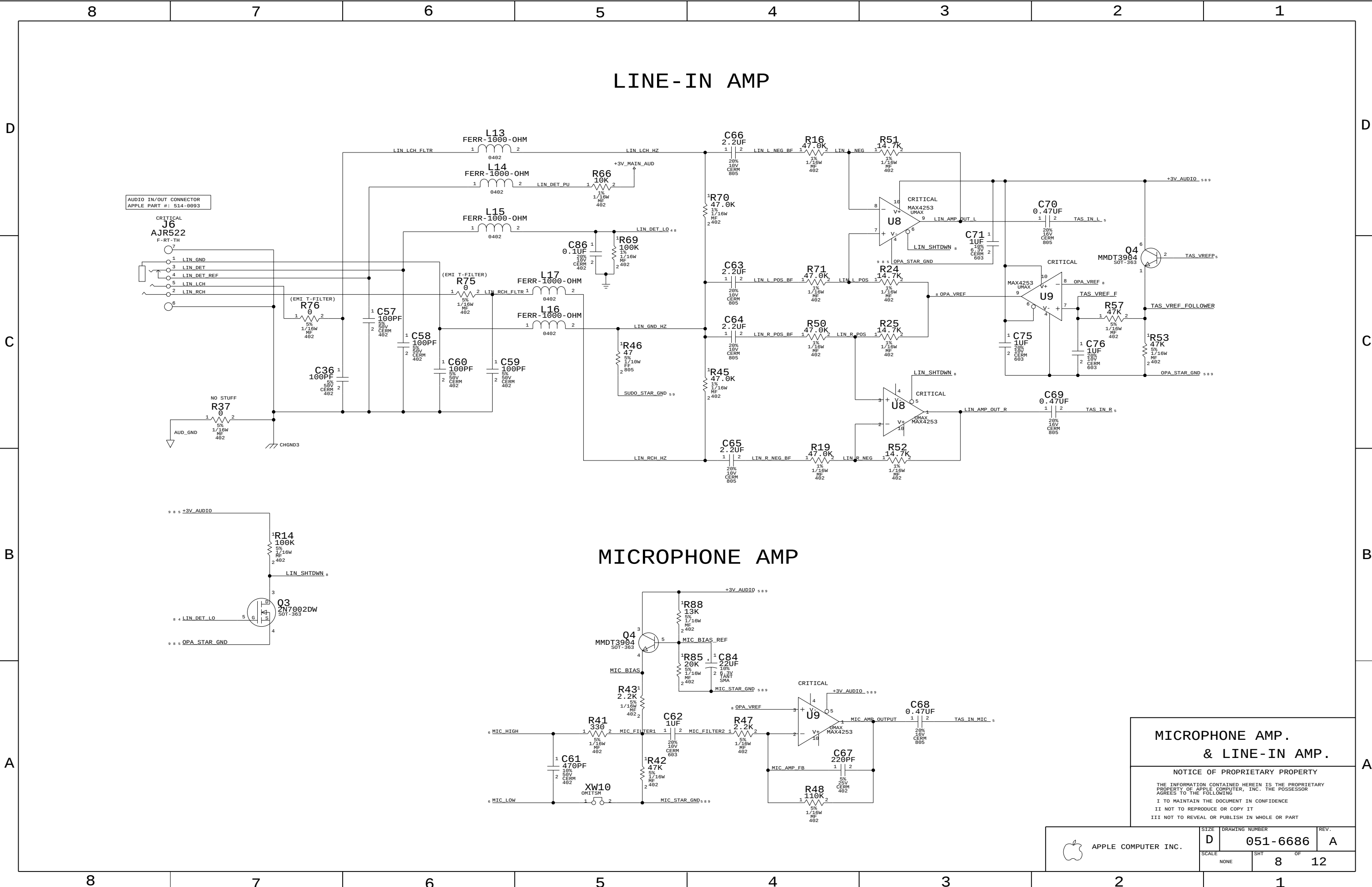
AUDIO IN/OUT CONNECTOR
APPLE PART #: 514-0093

HEADPHONE DRIVER

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	D	051-6686		A
SCALE		NONE	SHT	7 OF 12



**MICROPHONE AMP.
& LINE-IN AMP.**

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	D	051-6686	A
SCALE		SHT	OF
NONE		8	12

8	7	6	5	4	3	2	1
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D

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LAYER 2 (STRIP LINES)
E=3.8, W=4.7, H=3, T=0.7, S=12.3(IN MIL)
ZSINGLE = 45.0 OHM
ZDIFF = 89.1 OHM

```

D

C

A

A

 APPLE COMPUTER INC.	SIZE	DRAWING NUMBER		REV.
	D	051-6686		A
	SCALE	SHT	OF	
	NONE	9	12	



APPLE COMPUTER INC.

SIZE	DRAWING NUMBER	REV.
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D	051-6686
---	----------

SCALE	SHT	OF
-------	-----	----

NONE	9	12
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[illegible]

8		7		6		5		4		3		2		1	
D	*** Part Cross-Reference for the entire design ***														
	B51	PCB_STANDOFF	2	R39	RES	6	R40	RES	6	R41	RES	8	R42	RES	8
	C1	CAP_P	4	R43	RES	8	R44	RES	6	R45	RES	8	R46	RES	8
	C2	CAP	3	R47	RES	8	R48	RES	8	R49	RES	6	R50	RES	8
	C3	CAP	3	R51	RES	8	R52	RES	8	R53	RES	8	R54	RES	7
	C4	CAP	6	R55	RES	6	R56	RES	6	R57	RES	8	R58	RES	7
	C5	CAP	6	R59	RES	7	R60	RES	6	R61	RES	6	R62	RES	6
	C6	CAP	6	R63	RES	6	R64	RES	6	R65	RES	6	R66	RES	8
	C7	CAP	3	R67	RES	5	R68	RES	5	R69	RES	8	R70	RES	8
	C8	CAP	3	R71	RES	8	R72	RES	5	R73	RES	7	R74	RES	7
	C9	CAP	3	R75	RES	8	R76	RES	8	R77	RES	5	R78	RES	5
C	C10	CAP	5	R81	RES	5	R82	RES	7	R83	RES	7	R84	RES	7
	C11	CAP	4	R85	RES	8	R86	RES	8	SP1	SPRING_CLIP_IP_EMI	2	SP2	SPRING_CLIP_IP_EMI	2
	C12	CAP	5	SP3	SPRING_CLIP_IP_EMI	2	SP4	SPRING_CLIP_IP_EMI	2	U1	SMT_MTC2825	4	U2	AUDIO_LM4991LD	6
	C13	CAP	4	U3	MAX4418	7	U4	AUDIO_LM4991LD	6	U5	TAS3884	5	U6	AUDIO_LM4991LD	6
	C14	CAP	4	U8	OPAMP_MAX4253	8	U9	OPAMP_MAX4253	8	V82	VREG_LP3985	5	X81	SHORT	5
	C15	CAP	4	X82	SHORT	5	X83	SHORT	5	X84	SHORT	5	X85	SHORT	5
	C16	CAP	5	X86	SHORT	5	X87	SHORT	5	X88	SHORT	5	X89	SHORT	5
	C17	CAP	5	X90	SHORT	8	ZT2	MTGHOLE	2						
	C18	CAP_P	5												
	C19	CAP	5												
	C20	CAP	5												
B	C21	CAP	5												
	C22	CAP	6												
	C23	CAP	5												
	C24	CAP	7												
	C25	CAP	7												
	C26	CAP_P	5												
	C27	CAP	5												
	C28	CAP	5												
	C29	CAP	5												
	C30	CAP_P	5												
	C31	CAP	5												
A	C32	CAP_P	5												
	C33	CAP	7												
	C34	CAP	7												
	C35	CAP	8												
	C36	CAP	8												
	C37	CAP	5												
	C38	CAP	7												
	C39	CAP	7												
	C40	CAP_P	7												
	C41	CAP	5												
	C42	CAP	7												

12