

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

DATE

ENG APPD

DATE

?

?

SCHEM, DUBLIN, M87

10/12/07

DVT

PDF PAGE

CSA PAGE

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DATE

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10/05/2007

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10/05/2007

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10/05/2007

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12/06/2006

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07/05/2007

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PART#

QTY

DESCRIPTION

REFERENCE DESIGNATOR(S)

CRITICAL

BOM OPTION

051-7447

1

SCHEM, DUBLIN, M87

SW1

CRITICAL

820-2273

1

PCBF, DUBLIN, M87

PCB1

CRITICAL

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 INC.

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TITLE

SCHEM, DUBLIN, M87

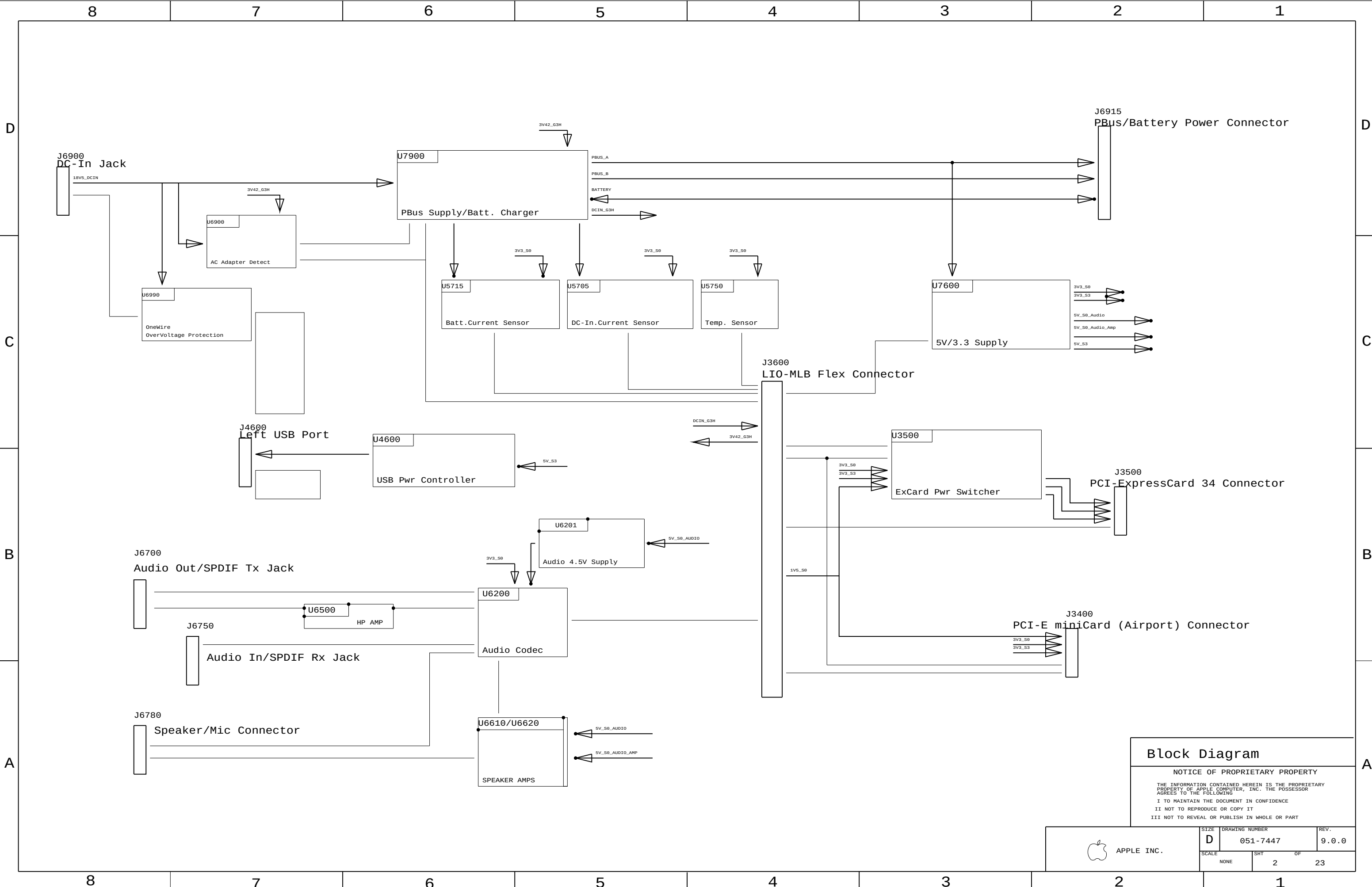
DRAWING NUMBER

051-7447

REV.

9.0.0

SHT 1 OF 23



Block Diagram

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| SIZE  | DRAWING NUMBER | REV.  |
|-------|----------------|-------|
| D     | 051-7447       | 9.0.0 |
| SCALE | SHT            | OF    |
| NONE  | 2              | 23    |

| BOM NUMBER | BOM NAME          | BOM OPTIONS                                              |
|------------|-------------------|----------------------------------------------------------|
| 630-9094   | PCBA, DUBLIN, M87 | ALTERNATE, COMMON, M87_COMMON, INV_BYPASS, X5F, BKLT_LED |

|            |             |
|------------|-------------|
| BOM GROUP  | BOM OPTIONS |
| M87_COMMON | ISL6257H    |

Bar Code Label / EEE #'s

| PART NUMBER | QTY | DESCRIPTION                  | REFERENCE DES | CRITICAL | BOM OPTION |
|-------------|-----|------------------------------|---------------|----------|------------|
| 000-0041    | 1   | PLACEHOLDER FOR EEE/CCC INFO | [EEE:Z3M]     | CRITICAL | X5F        |

## Alternate Parts

| PART NUMBER | ALTERNATE FOR PART NUMBER | BOM OPTION | REF DES | COMMENTS:                |
|-------------|---------------------------|------------|---------|--------------------------|
| 37650448    | 37650445                  |            | ALL     | S17806ADN For FSM6296    |
| 12850001    | 12850001                  |            | ALL     | 150uF, 6, 3V, 250MHM, C2 |
| 12850093    | 12850092                  |            | ALL     | 33uF, 16V, 45MHM, D2E    |
| 35351717    | 35351297                  |            | ALL     | LM397, COMPARETOR        |
| 37650560    | 37650532                  |            | ALL     | S179809D For S17913DN    |

|                                                                                                                                                                                                                                                                                                                                          |  |                |  |                      |       |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------|--|----------------------|-------|--|--|
| SYNCH_MASTER= (Master)                                                                                                                                                                                                                                                                                                                   |  |                |  | SYNCH_DATE= (Master) |       |  |  |
| <p align="center"><b>NOTICE OF PROPRIETARY PROPERTY</b></p> <p>THE INFORMATION CONTAINED HEREIN IS THE PROPRIETARY PROPERTY OF APPLE COMPUTER, INC. THE POSSESSOR AGREES TO THE FOLLOWING</p> <p>I TO MAINTAIN THE DOCUMENT IN CONFIDENCE</p> <p>IT NOT TO REPRODUCE OR COPY IT</p> <p>III NOT TO REVEAL OR PUBLISH IN WHOLE OR PART</p> |  |                |  |                      |       |  |  |
| SIZE                                                                                                                                                                                                                                                                                                                                     |  | DRAWING NUMBER |  |                      | REV.  |  |  |
| D                                                                                                                                                                                                                                                                                                                                        |  | 051-7447       |  |                      | 9.0.0 |  |  |
| SCALE                                                                                                                                                                                                                                                                                                                                    |  | SHT            |  | OF                   |       |  |  |
| NONE                                                                                                                                                                                                                                                                                                                                     |  | 3              |  | 23                   |       |  |  |



APPLE INC.

**SIZE**

D

ING NUMBER

051-7447

REV.

9.0.0

SCALE

NON

SHT

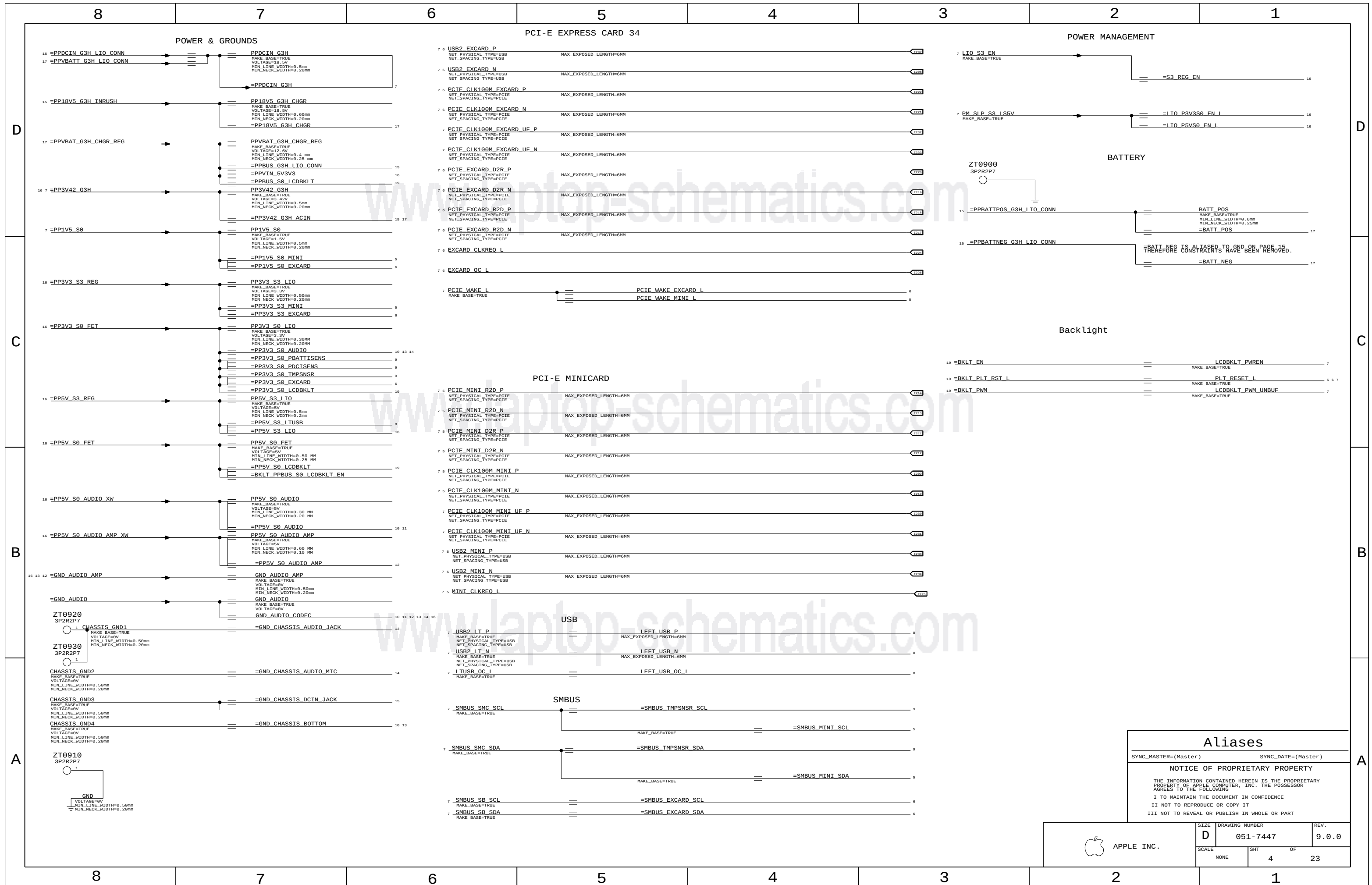
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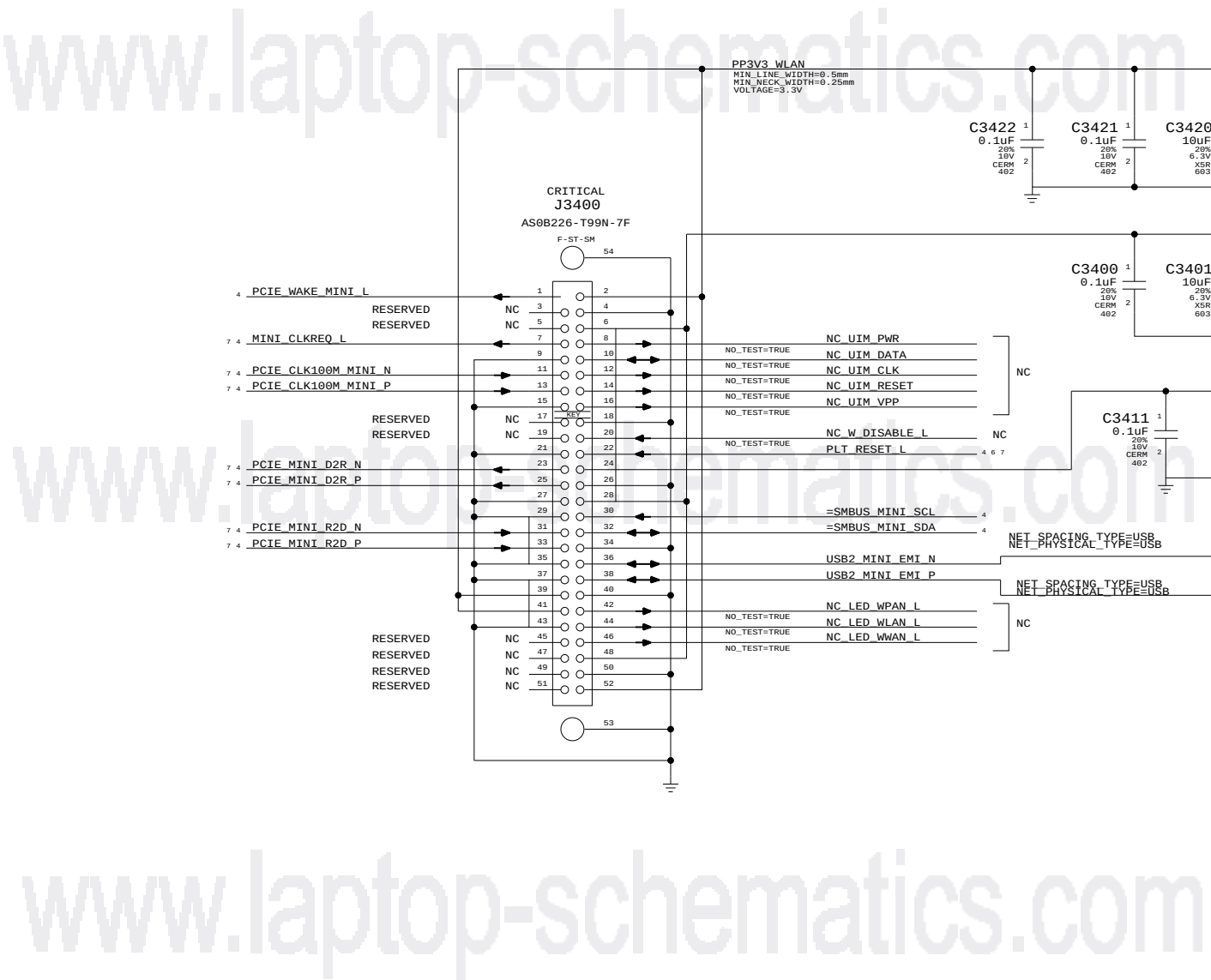
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23

23

23



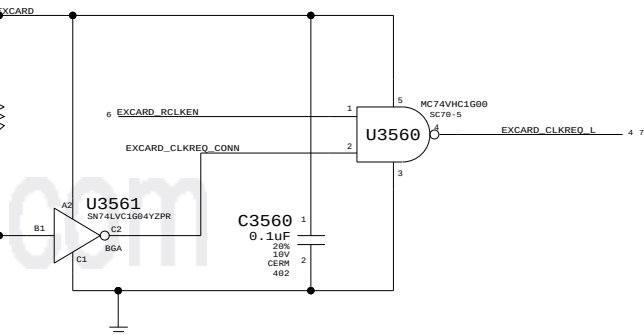
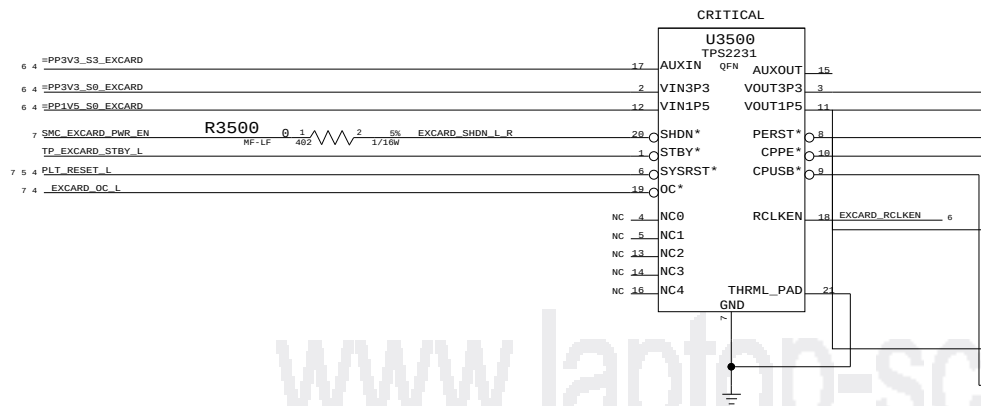


www.laptop-schematics.com

OUTPUT DECOUPLING

PP3V3 USB3\_EXCARD\_SWITCH 6

7 4 USB2\_EXCARD\_N



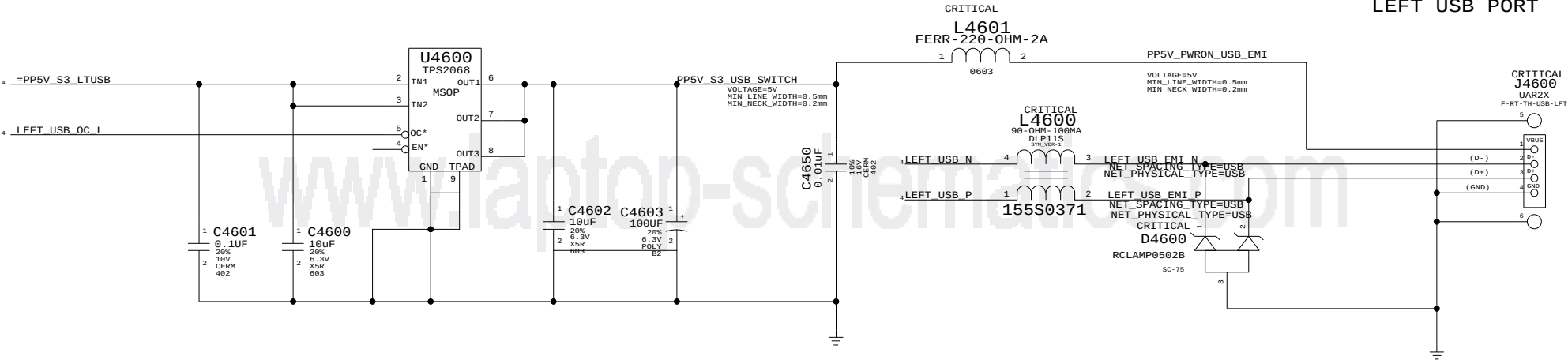
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|--------------------------------------------------------------------------------------------------|------------------|-----------------------------------|----------------------|
|  APPLE INC. | SIZE<br><b>D</b> | DRAWING NUMBER<br><b>051-7447</b> | REV.<br><b>9.0.0</b> |
|                                                                                                  | SCALE<br>NONE    | SHT<br><b>6</b>                   | OF<br><b>23</b>      |







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PUT L4600, L4601, ACROSS THE MOAT

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Left USB Port

SYNC\_MASTER=(Master)

SYNC\_DATE=(Master)

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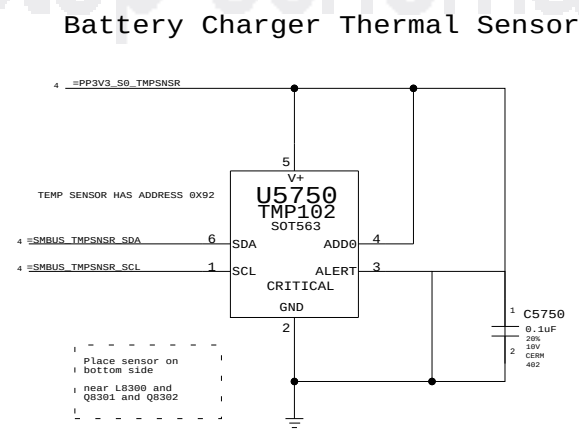
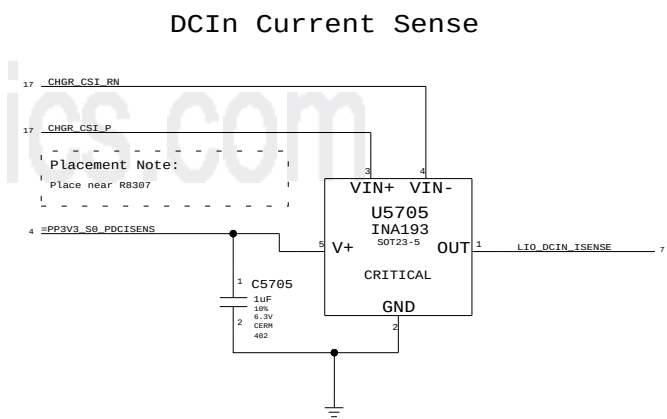
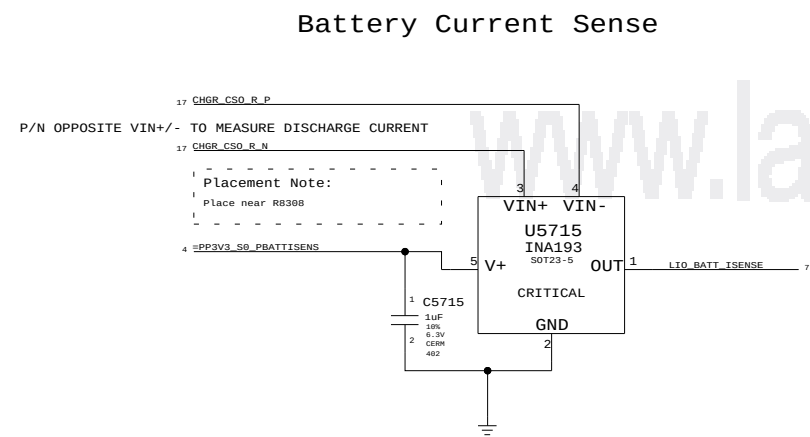
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|            | D    | 051-7447       | 9.0.0 |
| SCALE      |      | SHT            | OF    |
| NONE       |      | 8              | 23    |





## Current & Thermal Sensors

```
SYNC_MASTER=(Master)
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INC\_DATE=(Master)

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|      |                |
|------|----------------|
| SIZE | DRAWING NUMBER |
|------|----------------|



APPLE INC.

|      |
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| SIZE |
| D    |

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SCALE

E

SHT

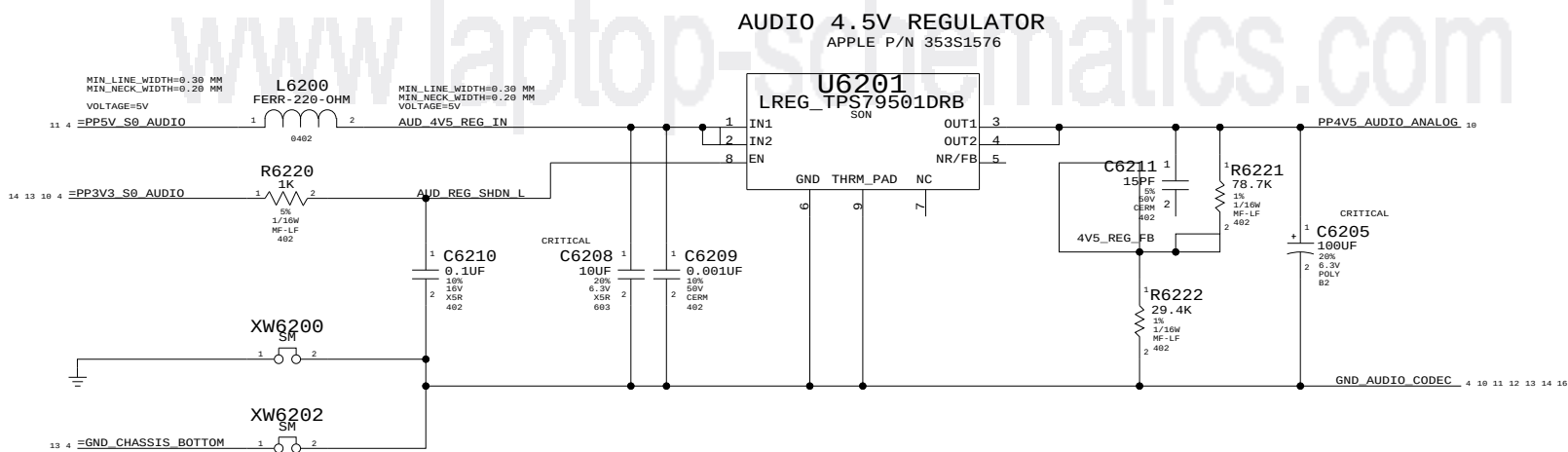
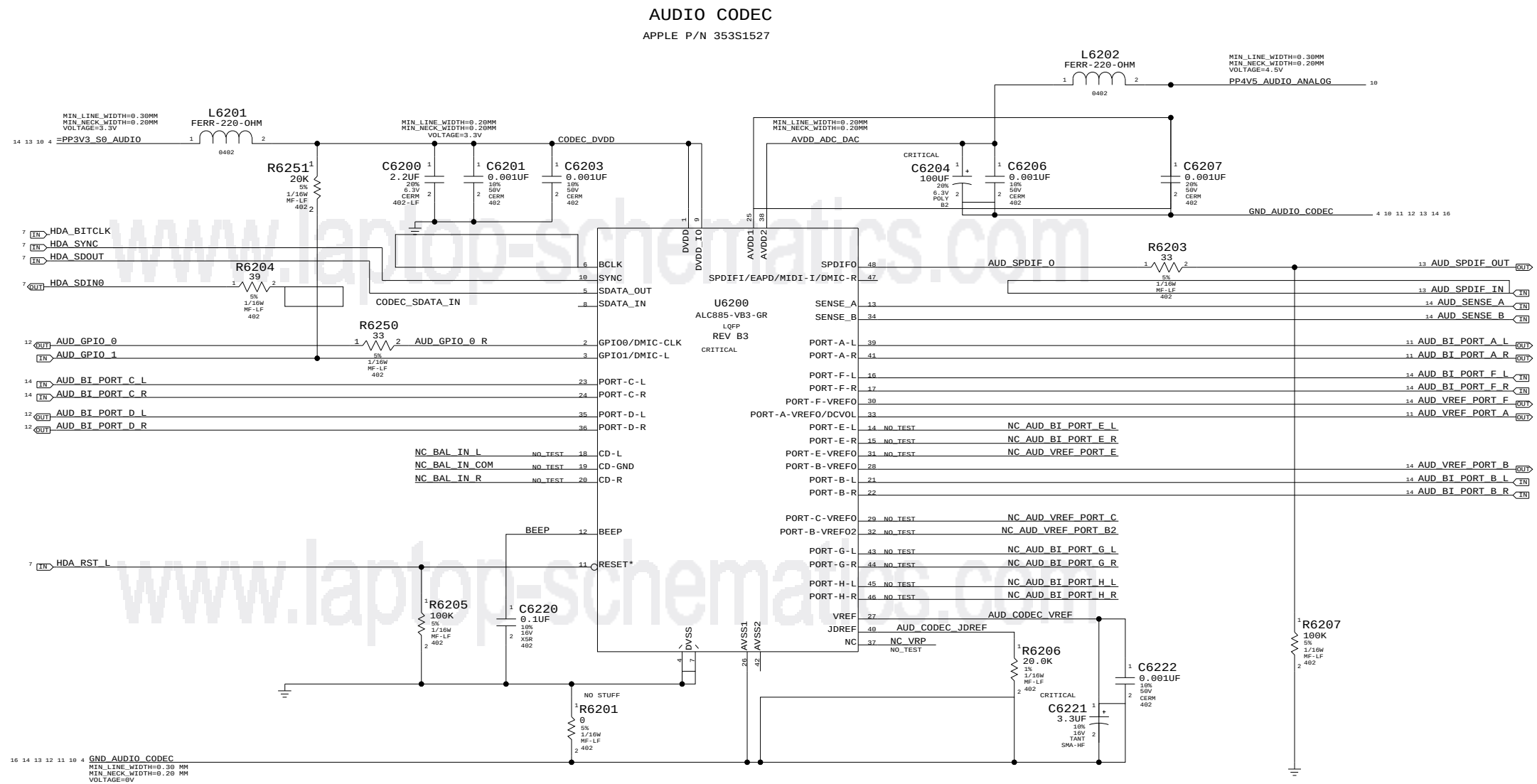
OF

|  |  |
|--|--|
|  |  |
|--|--|

NONE

9

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|                                                                                                                                  |                      |
|----------------------------------------------------------------------------------------------------------------------------------|----------------------|
| <b>AUDIO : CODEC</b>                                                                                                             |                      |
| SYNC_MASTER=LENGO_M87_AUDIO                                                                                                      | SYNC_DATE=10/05/2007 |
| <b>NOTICE OF PROPRIETARY PROPERTY</b>                                                                                            |                      |
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| I II NOT TO REVEAL OR PUBLISH IN WHOLE OR PART                                                                                   |                      |

D

C

B

A

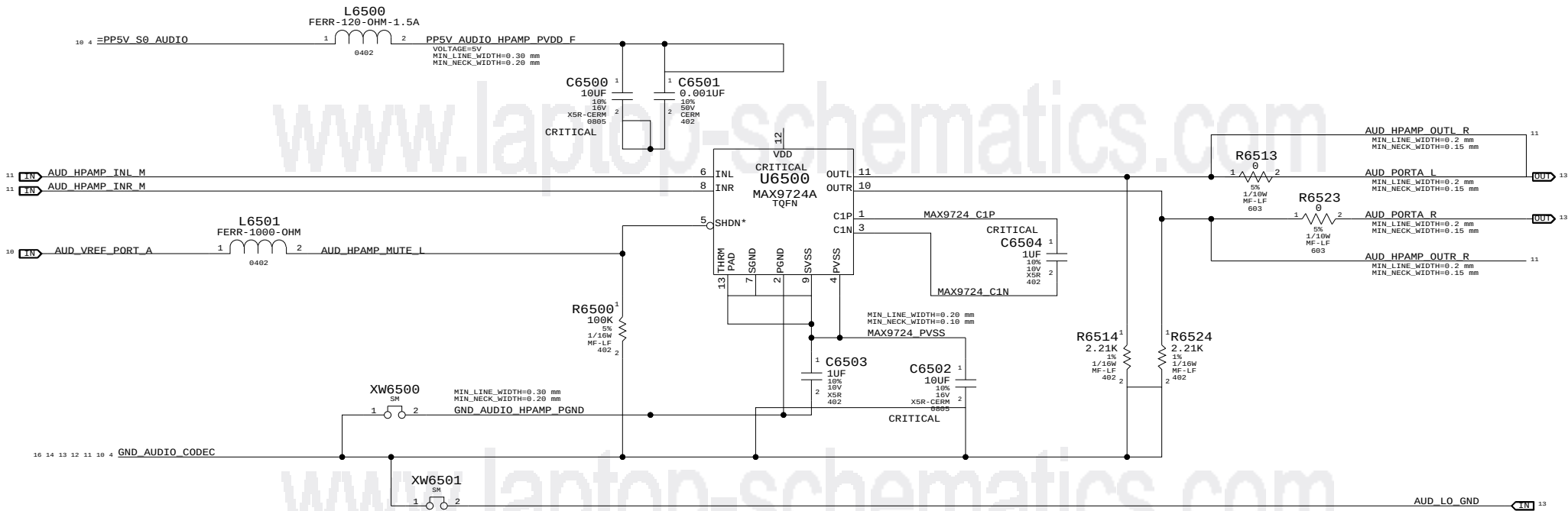
D

C

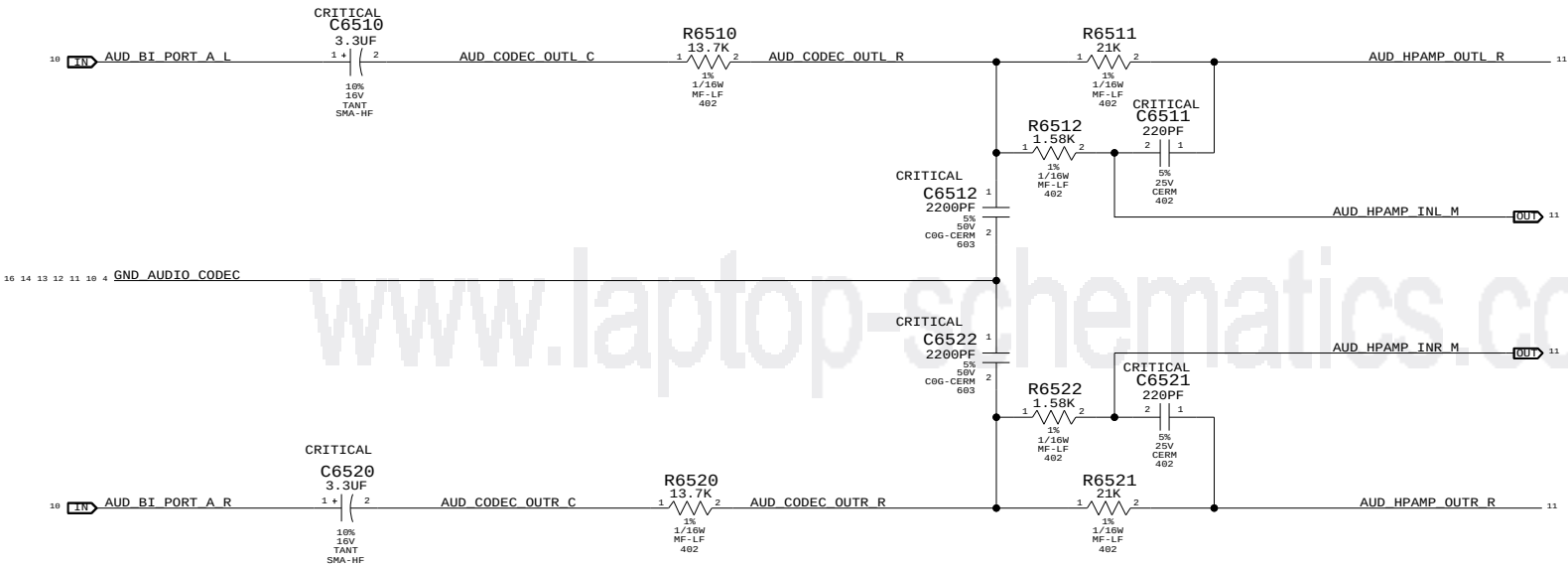
B

A

Headphone Amplifier (MAX9724A)  
APN:353S1637  
VOLTAGE GAIN:1.53



2nd Order DAC Filter  
HP:3.52 HZ LP:39 KHZ



AUDIO: HEADPHONE AMP

SYNC\_MASTER=LENGO\_M87\_AUDIO SYNC\_DATE=10/05/2007

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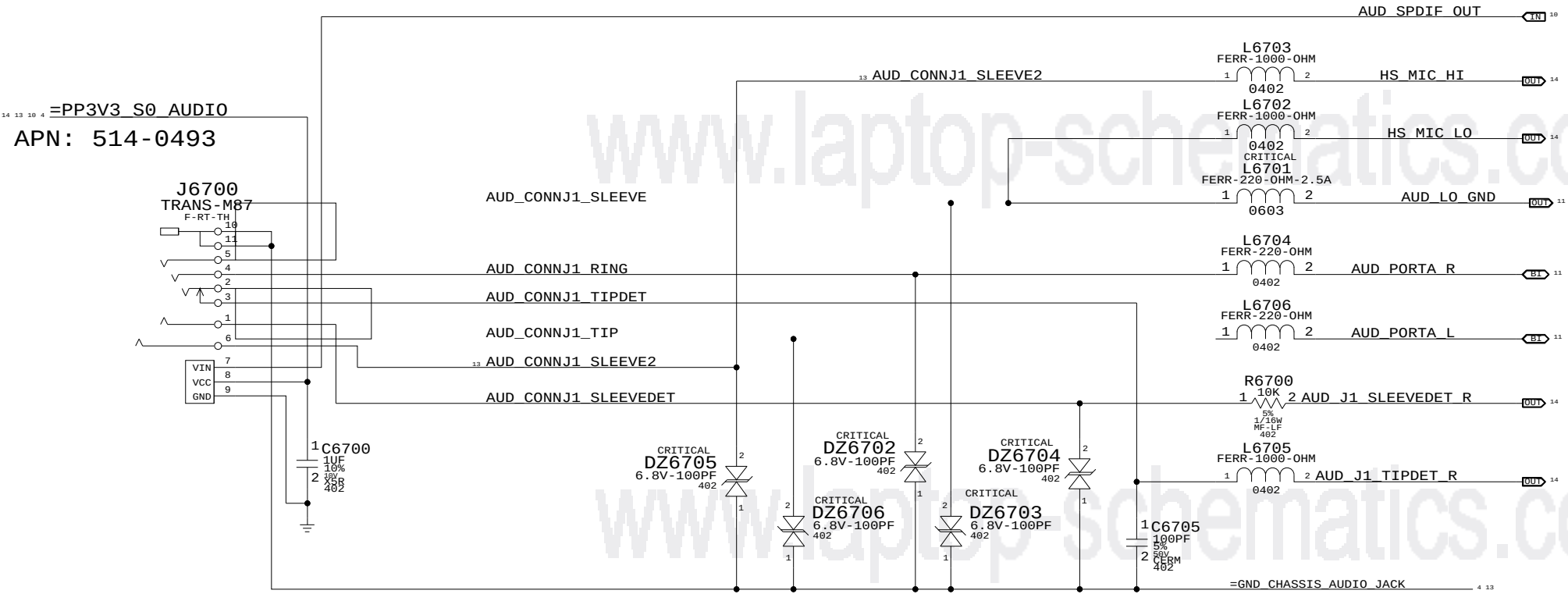


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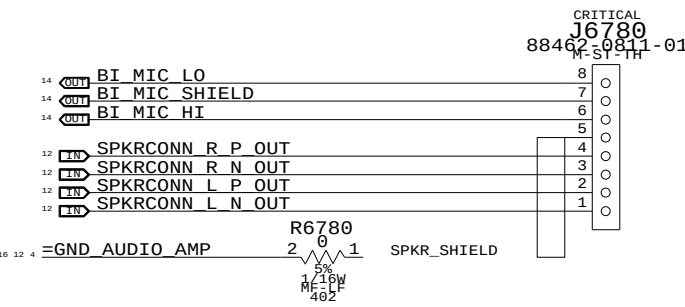
| SIZE  | DRAWING NUMBER | REV.  |
|-------|----------------|-------|
| D     | 051-7447       | 9.0.0 |
| SCALE | SHT            | OF    |
| NONE  | 11             | 23    |



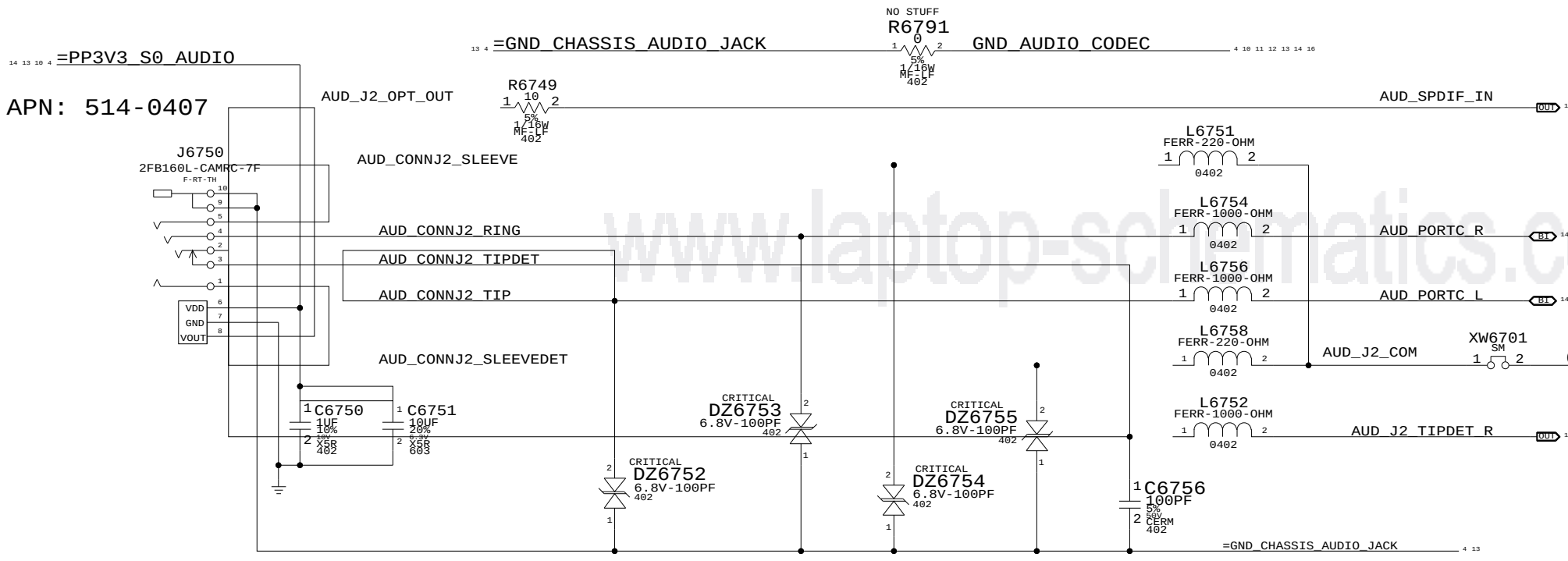
AUDIO JACK 1 LO/HP JACK, SPDIF TX



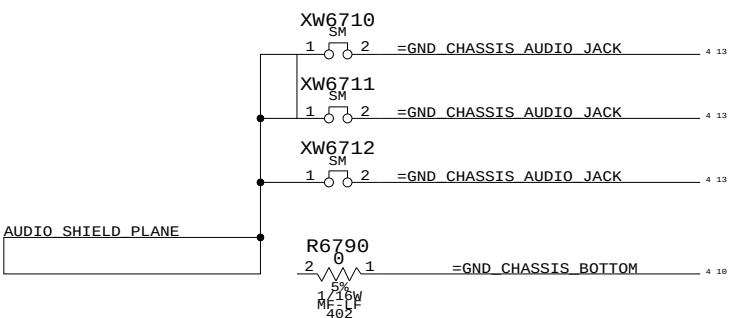
SPEAKER/MIC CONNECTOR  
APN: 518-0262



PLACE AT GROUND MOAT



AUDIO SHIELD  
(FILLED SHAPE)



AUDIO JACK 2 LINE IN JACK, SPDIF RX

**AUDIO: JACKS**

SYNC\_MASTER=LENGO\_M87\_AUDIO SYNC\_DATE=10/05/2007

NOTICE OF PROPRIETARY PROPERTY

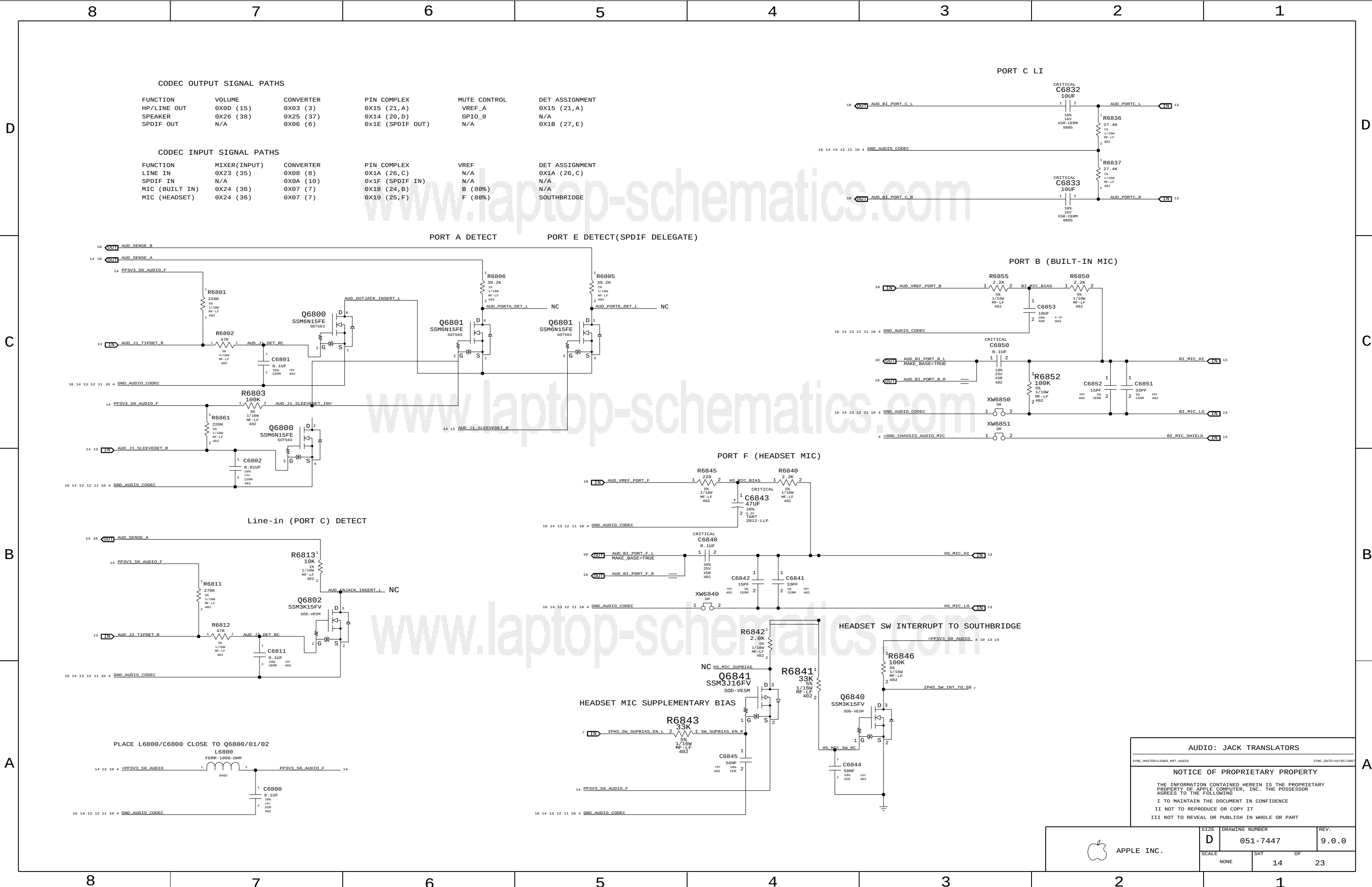
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|            |               |                            |               |
|------------|---------------|----------------------------|---------------|
| APPLE INC. | SIZE<br>D     | DRAWING NUMBER<br>051-7447 | REV.<br>9.0.0 |
|            | SCALE<br>NONE | SHT<br>13                  | OF<br>23      |



AUDIO: JACK TRANSLATORS

SYNC\_MASTER=LENGO\_MBT\_AUDIO SYNC\_DATE=18/05/2007

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|   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|
| 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|---|



C

## B



C

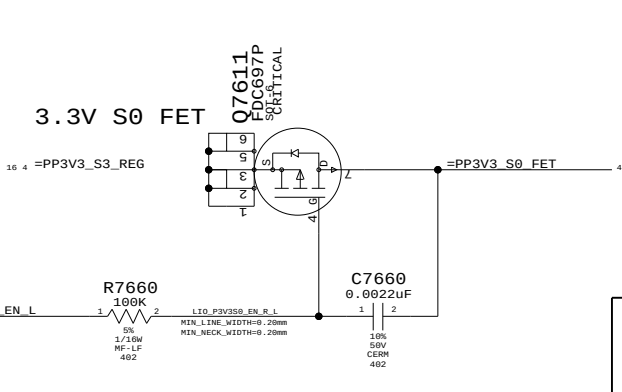
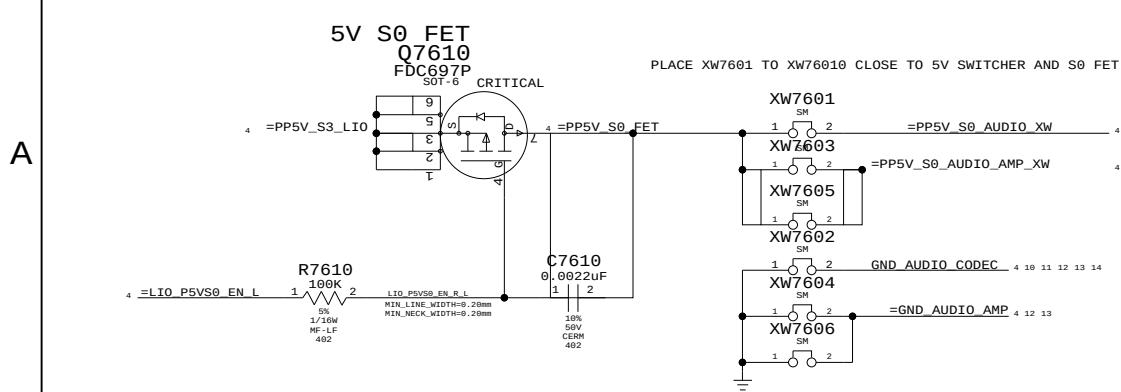
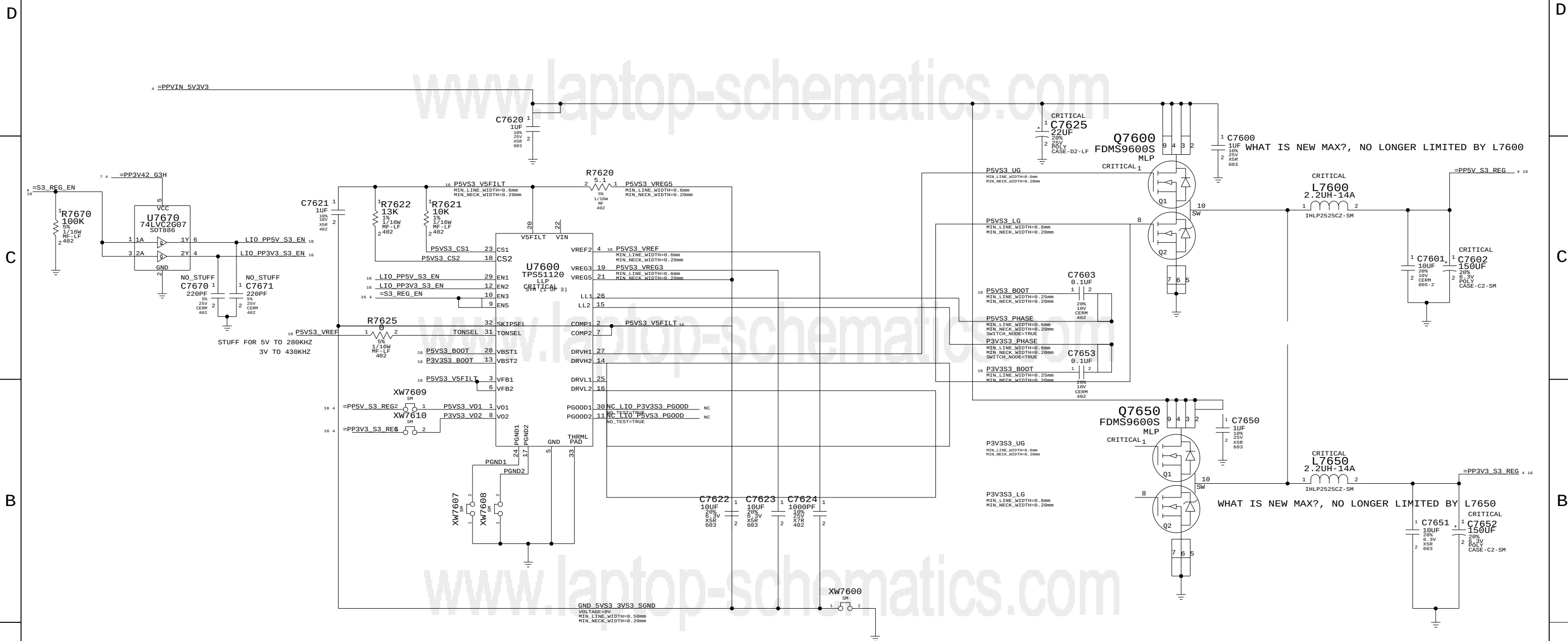
A

A

|   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|
| 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|---|



5V/3.3V POWER SUPPLY



| 5V/3.3V SUPPLY                                                                                                             |                |       |
|----------------------------------------------------------------------------------------------------------------------------|----------------|-------|
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| SIZE                                                                                                                       | DRAWING NUMBER | REV.  |
| D                                                                                                                          | 051-7447       | 9.0.0 |
| SCALE                                                                                                                      | SHT            | OF    |
| NONE                                                                                                                       | 16             | 23    |



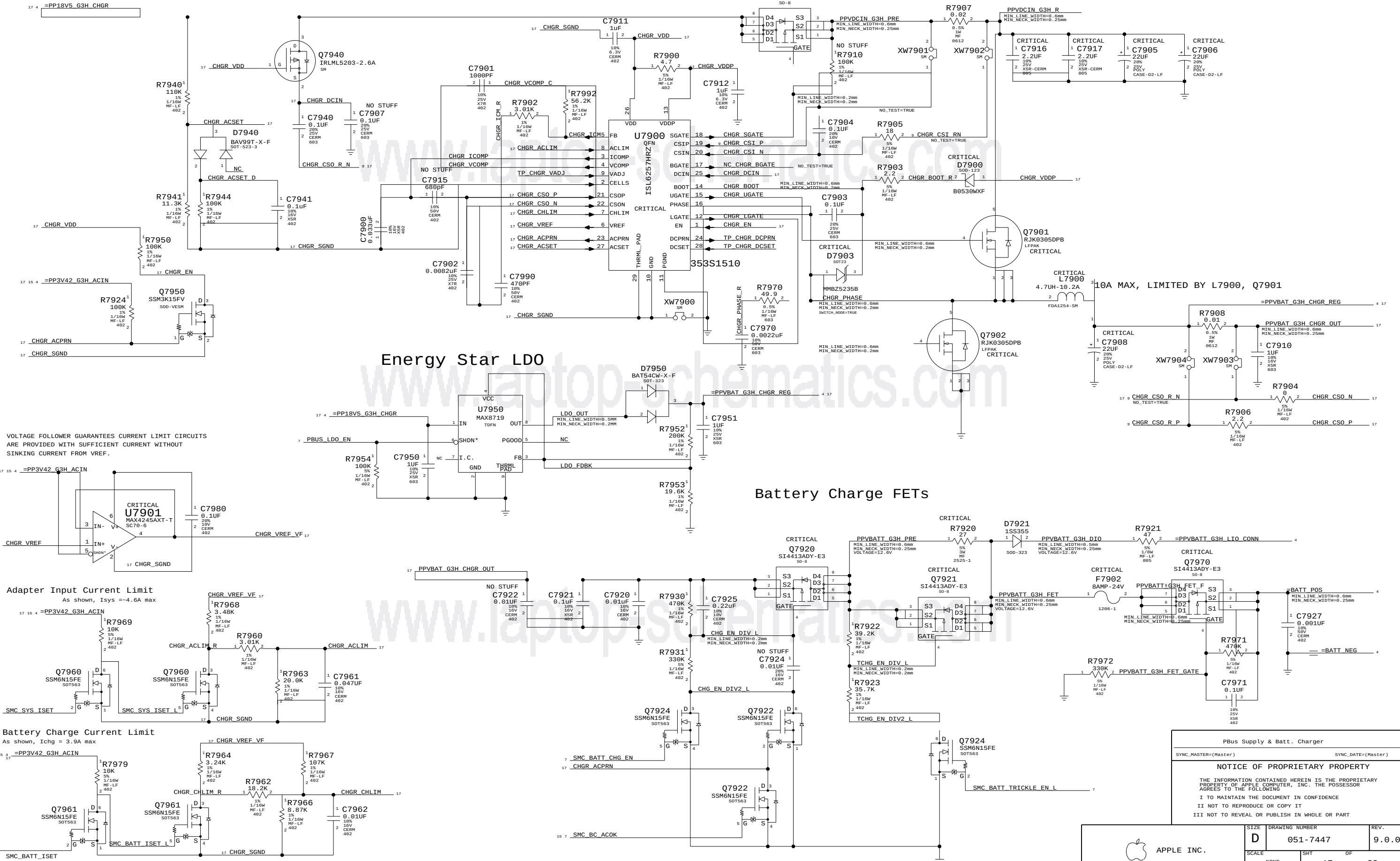
APPLE INC.



PBus Supply & Battery Charger

Energy Star LDO

Battery Charge FETs

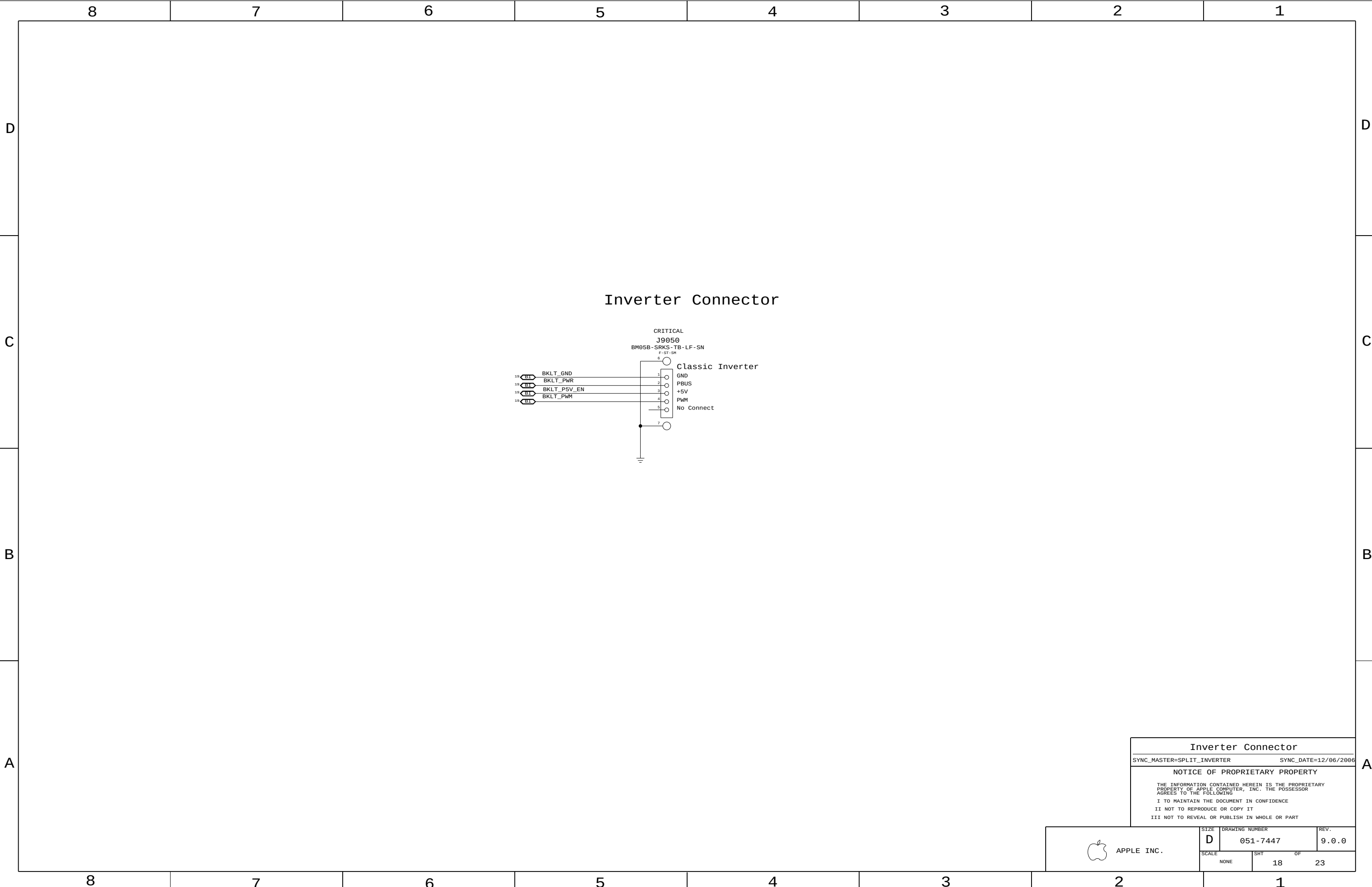


VOLTAGE FOLLOWER GUARANTEES CURRENT LIMIT CIRCUITS ARE PROVIDED WITH SUFFICIENT CURRENT WITHOUT SINKING CURRENT FROM VREF.

Adapter Input Current Limit  
As shown, Isys = -4.6A max

Battery Charge Current Limit  
As shown, Ichg = 3.9A max

PBus Supply & Batt. Charger  
SYNC\_MASTER=(Master) SYNC\_DATE=(Master)  
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| 8 |                           |  |  | 7                                   |  |  |                                           | 6 |  |                         |  | 5 |  |  |  | 4 |  |  |  | 3 |  |  |  | 2 |  |  |  | 1 |  |  |  |
|---|---------------------------|--|--|-------------------------------------|--|--|-------------------------------------------|---|--|-------------------------|--|---|--|--|--|---|--|--|--|---|--|--|--|---|--|--|--|---|--|--|--|
| D | Title: Cref Part Report   |  |  | C7907 CAP_603 lio[17D6]             |  |  | 563                                       |   |  | R7922 RES_402 lio[17A4] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | Design: lio               |  |  | C7908 CAP_P_CASE-D2-LF lio[17C2]    |  |  | Q6910 TRA_SSM3K15FV_SOD-VE lio[15B4]      |   |  | R7923 RES_402 lio[17A4] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | Date: Oct 5 17:43:38 2007 |  |  | C7910 CAP_603 lio[17C1]             |  |  | SM                                        |   |  | R7924 RES_402 lio[17C8] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   |                           |  |  | C7911 CAP_402 lio[1705]             |  |  | Q6950 TRA_SI4413ADY_S0-8 lio[15B4]        |   |  | R7930 RES_402 lio[17B5] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | C3409 CAP_402 lio[5C3]    |  |  | C7912 CAP_402 lio[17D4]             |  |  | Q7600 TRA_FDM59600S_MLP lio[16C3]         |   |  | R7931 RES_402 lio[17A5] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | C3401 CAP_603 lio[5C3]    |  |  | C7915 CAP_402 lio[17C6]             |  |  | Q7610 TRA_FDC697P_SOT-6 lio[16A7]         |   |  | R7940 RES_402 lio[17D7] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | C3410 CAP_603 lio[5C3]    |  |  | C7916 CAP_805 lio[1703]             |  |  | Q7611 TRA_FDC697P_SOT-6 lio[16A3]         |   |  | R7941 RES_402 lio[17C7] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | C3411 CAP_402 lio[5C3]    |  |  | C7917 CAP_805 lio[1702]             |  |  | Q7650 TRA_FDM59600S_MLP lio[16B2]         |   |  | R7944 RES_402 lio[17C7] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | C3420 CAP_603 lio[5C3]    |  |  | C7920 CAP_402 lio[17B5]             |  |  | Q7900 TRA_SI4413ADY_S0-8 lio[17D4]        |   |  | R7950 RES_402 lio[17C8] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | C3421 CAP_402 lio[5C3]    |  |  | C7921 CAP_402 lio[17B5]             |  |  | Q7901 TRA_R3K_LFPAK lio[17C3]             |   |  | R7952 RES_402 lio[17B5] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| C | C3422 CAP_402 lio[5C3]    |  |  | C7922 CAP_402 lio[17B5]             |  |  | Q7902 TRA_R3K_LFPAK lio[17C3]             |   |  | R7953 RES_402 lio[17B5] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | C3450 CAP_402 lio[5C3]    |  |  | C7924 CAP_402 lio[17A4]             |  |  | Q7920 TRA_SI4413ADY_S0-8 lio[17B4]        |   |  | R7954 RES_402 lio[17B6] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | C3451 CAP_402 lio[5C2]    |  |  | C7925 CAP_402 lio[17B4]             |  |  | Q7921 TRA_SI4413ADY_S0-8 lio[17B3]        |   |  | R7960 RES_402 lio[17A7] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | C3500 CAP_402 lio[6C4]    |  |  | C7927 CAP_402 lio[17B1]             |  |  | Q7922 TRA_DUAL_SSM6N15FE_S lio[17A4 17A4] |   |  | R7962 RES_402 lio[17A7] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | C3501 CAP_402 lio[6C4]    |  |  | C7940 CAP_603 lio[17D7]             |  |  | OT563                                     |   |  | R7963 RES_402 lio[17A7] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | C3502 CAP_402 lio[6C4]    |  |  | C7941 CAP_402 lio[17C7]             |  |  | Q7924 TRA_DUAL_SSM6N15FE_S lio[17A3 17A5] |   |  | R7964 RES_402 lio[17A7] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | C3503 CAP_603 lio[6C4]    |  |  | C7950 CAP_603 lio[17B6]             |  |  | OT563                                     |   |  | R7966 RES_402 lio[17A7] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | C3504 CAP_603 lio[6C4]    |  |  | C7951 CAP_603 lio[17B4]             |  |  | Q7940 TRA_18LM75203_SM lio[17D7]          |   |  | R7967 RES_402 lio[17A7] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | C3505 CAP_603 lio[6C4]    |  |  | C7961 CAP_402 lio[17A7]             |  |  | Q7950 TRA_SSM3K15FV_SOD-VE lio[17C7]      |   |  | R7968 RES_402 lio[17B7] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | C3530 CAP_402 lio[6C8]    |  |  | C7962 CAP_402 lio[17A7]             |  |  | SM                                        |   |  | R7969 RES_402 lio[17A8] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| B | C3531 CAP_603 lio[6C7]    |  |  | C7970 CAP_603 lio[17C4]             |  |  | Q7960 TRA_DUAL_SSM6N15FE_S lio[17A7 17A8] |   |  | R7970 RES_603 lio[17C4] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | C3534 CAP_402 lio[6C8]    |  |  | C7971 CAP_402 lio[17A2]             |  |  | OT563                                     |   |  | R7971 RES_402 lio[17A2] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | C3535 CAP_603 lio[6C7]    |  |  | C7980 CAP_402 lio[17B7]             |  |  | Q7961 TRA_DUAL_SSM6N15FE_S lio[17A7 17A8] |   |  | R7972 RES_402 lio[17A2] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | C3550 CAP_402 lio[6A7]    |  |  | C7990 CAP_402 lio[17C6]             |  |  | OT563                                     |   |  | R7979 RES_402 lio[17A8] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | C3560 CAP_402 lio[6A3]    |  |  | C9800 CAP_402 lio[19A7]             |  |  | Q7970 TRA_SI4413ADY_S0-8 lio[17B2]        |   |  | R7992 RES_402 lio[17D5] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | C4600 CAP_603 lio[8B6]    |  |  | C9801 CAP_402 lio[19A5]             |  |  | Q9805 TRA_DUAL_NPCH_NT2D31 lio[19B6 19C6] |   |  | R9805 RES_402 lio[19C6] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | C4601 CAP_402 lio[8B7]    |  |  | C9802 CAP_402 lio[1906]             |  |  | 55C1_SOT-563                              |   |  | R9806 RES_402 lio[19A6] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | C4602 CAP_603 lio[8B5]    |  |  | C9805 CAP_402 lio[19C6]             |  |  | Q9806 TRA_FDMA530PZ_MICROF lio[19D5]      |   |  | R9807 RES_402 lio[19B5] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | C4603 CAP_P_B2 lio[8B5]   |  |  | C9807 CAP_402 lio[19B5]             |  |  | ET                                        |   |  | R9808 RES_402 lio[19D6] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | C4650 CAP_402 lio[8C4]    |  |  | C9892 CAP_402 lio[19C3]             |  |  | Q9807 TRA_SSM3K15FV_SOD-VE lio[19C6]      |   |  | R9809 RES_402 lio[19D5] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
| A | C5705 CAP_402 lio[9C3]    |  |  | C9893 CAP_402 lio[19C3]             |  |  | SM                                        |   |  | R9810 RES_402 lio[19B6] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | C5715 CAP_402 lio[9C7]    |  |  | C9894 CAP_402 lio[19B3]             |  |  | R3450 RES_402 lio[5C2]                    |   |  | R9889 RES_402 lio[19C4] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | C5750 CAP_402 lio[9B4]    |  |  | D4600 DIODE_SCHOT_3P_A_SC- lio[8B3] |  |  | R3451 RES_402 lio[5C2]                    |   |  | R9810 RES_402 lio[19B6] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | C5750 CAP_402 lio[9B4]    |  |  | D4600 DIODE_SCHOT_3P_A_SC- lio[8B3] |  |  | R3451 RES_402 lio[5C2]                    |   |  | R9810 RES_402 lio[19B6] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | C5750 CAP_402 lio[9B4]    |  |  | D4600 DIODE_SCHOT_3P_A_SC- lio[8B3] |  |  | R3451 RES_402 lio[5C2]                    |   |  | R9810 RES_402 lio[19B6] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | C5750 CAP_402 lio[9B4]    |  |  | D4600 DIODE_SCHOT_3P_A_SC- lio[8B3] |  |  | R3451 RES_402 lio[5C2]                    |   |  | R9810 RES_402 lio[19B6] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | C5750 CAP_402 lio[9B4]    |  |  | D4600 DIODE_SCHOT_3P_A_SC- lio[8B3] |  |  | R3451 RES_402 lio[5C2]                    |   |  | R9810 RES_402 lio[19B6] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | C5750 CAP_402 lio[9B4]    |  |  | D4600 DIODE_SCHOT_3P_A_SC- lio[8B3] |  |  | R3451 RES_402 lio[5C2]                    |   |  | R9810 RES_402 lio[19B6] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | C5750 CAP_402 lio[9B4]    |  |  | D4600 DIODE_SCHOT_3P_A_SC- lio[8B3] |  |  | R3451 RES_402 lio[5C2]                    |   |  | R9810 RES_402 lio[19B6] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |
|   | C5750 CAP_402 lio[9B4]    |  |  | D4600 DIODE_SCHOT_3P_A_SC- lio[8B3] |  |  | R3451 RES_402 lio[5C2]                    |   |  | R9810 RES_402 lio[19B6] |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |   |  |  |  |

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| D      | U9900   | BD9828FV_SSOP | lio[20C5] |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  | D |   |   |
|        | XW6200  | SHORT_SM      | lio[10A6] |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |   |   |
|        | XW6202  | SHORT_SM      | lio[10A6] |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |   |   |
|        | XW6500  | SHORT_SM      | lio[11C6] |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |   |   |
|        | XW6501  | SHORT_SM      | lio[11C5] |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |   |   |
|        | XW6701  | SHORT_SM      | lio[13A3] |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |   |   |
|        | XW6710  | SHORT_SM      | lio[13B2] |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |   |   |
|        | XW6711  | SHORT_SM      | lio[13B2] |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |   |   |
|        | XW6712  | SHORT_SM      | lio[13B2] |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |   |   |
|        | XW6800  | SHORT_SM      | lio[14C3] |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |   |   |
|        | XW7600  | SHORT_SM      | lio[16A4] |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |   |   |
|        | XW7601  | SHORT_SM      | lio[16A6] |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |   |   |
|        | XW7602  | SHORT_SM      | lio[16A6] |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |   |   |
|        | XW7603  | SHORT_SM      | lio[16A6] |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |   |   |
|        | XW7604  | SHORT_SM      | lio[16A6] |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |   |   |
|        | XW7605  | SHORT_SM      | lio[16A6] |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |   |   |
|        | XW7606  | SHORT_SM      | lio[16A6] |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |   |   |
|        | XW7607  | SHORT_SM      | lio[16B6] |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |   |   |
|        | XW7608  | SHORT_SM      | lio[16B6] |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |   |   |
|        | XW7609  | SHORT_SM      | lio[16B6] |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |   |   |
|        | XW7610  | SHORT_SM      | lio[16B6] |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |   |   |
|        | XW7900  | SHORT_SM      | lio[17C5] |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |   |   |
|        | XW7901  | SHORT_SM      | lio[17D3] |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |   |   |
|        | XW7902  | SHORT_SM      | lio[17D3] |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |   |   |
|        | XW7903  | SHORT_SM      | lio[17C2] |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |   |   |
|        | XW7904  | SHORT_SM      | lio[17C2] |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |   |   |
|        | XW9900  | SHORT_SM      | lio[20D5] |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |   |   |
|        | ZT0900  | MTGHOLE       | lio[4D3]  |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |   |   |
|        | ZT0910  | MTGHOLE       | lio[4A8]  |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |   |   |
|        | ZT0920  | MTGHOLE       | lio[4B8]  |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |   |   |
| ZT0930 | MTGHOLE | lio[4A8]      |           |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |   |   |
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