

Service Service Service



Service Manual

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3141 785 31570

1.0 TECHNICAL SPECIFICATION

General

| | |
|--------------------------------|---|
| Dimensions (W x H x D): | 255 x 170 x 31 mm |
| Weight: | 0.97kg |
| Power supply: | 100 – 240V (AC adaptor) DC 12V (Battery) |
| Power consumption: | 24W |
| Operating temp. & RH: | 0 – 45 degC / 30 – 90% RH |
| Audio System | |
| Output voltage 1kHz: | 1.2Vrms typical |
| THD 20-20kHz (%): | 0.03% typical |
| Dynamic range: | >80dB |
| Signal/Noise ratio: | >80dB |
| Frequency response (20-20kHz): | +1dB/-0.5 |
| Channel Separation 1kHz | >=85dB |
| Channel Balance 1kHz | 1dB |

Current consumption

| DC-IN SUPPLY (9V) | |
|-------------------|-----------|
| Standby Power off | 5mA |
| BATT. SUPPLY | |
| Voltage | 7.4V |
| Capacity | 2600mAH |
| Battery playtime | 3 hour |
| Charging time | <4.0 hour |
| Standby Power off | <300uA |

Headphone out (headphone output load 2x16 ohm)

| | |
|--------------------------------|--------------|
| Maximum output power: | 10mW |
| Frequency response: | +/-3dB |
| SNR (A-wght): | >80dB |
| THD (0.2-20kHz): | 0.2% typical |
| Left-Right Channel Separation: | >55dB |
| Left-Right Channel Balance: | <1dB |

Supported disc type

Video Playback Formats:



Audio Playback Formats:



Playback disc type:

DVD, Picture-CD,
SVCD, Video CD, MP3-CD, CD-R/CD-RW, WMA-CD, DVD-R, DVD-RW, DVD+R, DVD+RW

Video Playback Format:

DVD / VCD / JPEG /
MPEG4 / DIVX3,4,5,6

Audio Playback Format:

CD/MP3, MP3-DVD, WMA

Disc Diameter

12cm

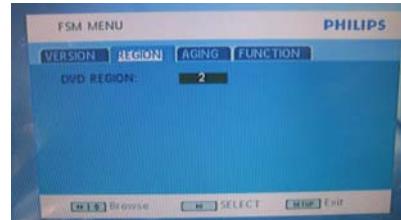
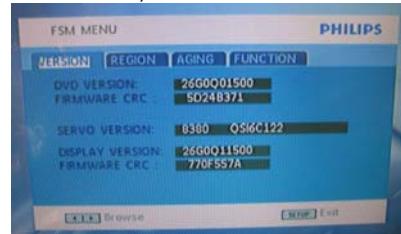
Pixel specification

Zero bright-dot & max. 3 dark-dots

Factory Service Mode (FSM)

To check the software version and change region code of your DVD Portable.

1. Press “■▲” (STOP/EJECT) on the main set
2. Press “▶■” (PLAY/PAUSE) on the main set
3. Press “1” -> “4” -> “0” -> “0” by remote control
4. The screen is under “FSM MENU”
5. Press “▲, ▼, ◀, ▶” to select “VERSION”, “REGION”, “AGING” and “FUNCTION”



6. Refer below table for your region code setting

| Region Code | Region |
|-------------|-------------------------------|
| 1 | USA |
| 2 | EUROPE |
| 3 | ASIA PACIFIC |
| 4 | AUSTRALIA, NEW ZEALAND, LATAM |
| 5 | RUSSIA, INDIA |
| 6 | CHINA |

7. Press “▶■” to save your setting
8. Press “SETUP” to exit

1.0 TECHNICAL SPECIFICATION

Procedure on how to upgrade the software of the DVD Portable

For the best performance of your DVD Portable. Check www.philips.com/support for latest software upgrades available.

A) PANEL firmware upgrade

1. Unzip the WDR830.ROM
2. Drag-n-drop to USB drive
3. Power on PET830 with AC/DC adaptor
4. Insert USB drive to the USB port of the main set
5. The set will detect the updated firmware
6. Press "OK" to confirm and proceed

Warning: Do not unplug the AC adaptor during firmware upgrade to prevent flash corrupt of the set!!



B) DVD firmware upgrade

7. Unzip the WDR830.ROM (different file from step 1)
8. Drag-n-drop to USB drive
9. Power on PET830 with AC/DC adaptor
10. Insert USB drive to the USB port of the main set
11. The set will detect the updated firmware
12. Press "OK" to confirm and proceed

Warning: Do not unplug the AC adaptor during firmware upgrade to prevent flash corrupt of the set!!



2.0 SAFETY INSTRUCTIONS

GB WARNING

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically. When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance. Keep components and tools also at this potential.

ESD



NL WAARSCHUWING

Alle IC's en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD). Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen. Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat. Houd componenten en hulpmiddelen ook op ditzelfde potentiaal.

F ATTENTION

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges statiques (ESD). Leur longévité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise à leur manipulation. Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfiler le bracelet serti d'une résistance de sécurité. Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

D WARNUNG

Alle ICs und viele andere Halbleiter sind empfindlich gegenüber elektrostatischen Entladungen (ESD). Unsorgfältige Behandlung im Reparaturfall kann die Lebensdauer drastisch reduzieren. Veranlassen Sie, dass Sie im Reparaturfall über ein Pulsarmband mit Widerstand verbunden sind mit dem gleichen Potential wie die Masse des Gerätes. Bauteile und Hilfsmittel auch auf dieses gleiche Potential halten.

I AVVERTIMENTO

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD). La loro longevità potrebbe essere fortemente ridotta in caso di non osservazione della più grande cauzione alla loro manipolazione. Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un braccialetto a resistenza. Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

GB

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified, be used.

"Pour votre sécurité, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne".

NL

Veiligheidsbepalingen vereisen, dat het apparaat bij reparatie in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast.



F

Les normes de sécurité exigent que l'appareil soit remis à l'état d'origine et que soient utilisées les pièces de rechange identiques à celles spécifiées.

GB Warning !

Invisible laser radiation when open.
Avoid direct exposure to beam.

S Varning !

Osynlig laserstrålning när apparaten är öppnad och spärren är urkopplad. Betrakta ej strålen.

SF Varoitus !

Avatussa laitteessa ja suojalukituksen ohittaaessa olet alittina näkymättömälle laserisäteilylle. Älä katso sääteenseen!

DK Advarse !

Usynlig laserstrålning ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

I

Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambio identici a quelli specificati.

"After servicing and before returning set to customer perform a leakage current measurement test from all exposed metal parts to earth ground to assure no shock hazard exist. The leakage current must not exceed 0.5mA."

2.1 ESD PROTECTION

- レンズには絶対に触れないでください。
- DO NOT TOUCH THE LENS.
- LINSE NICHT BRÜHREN.
- NE PAS TOUCHER LA LENTILLE.

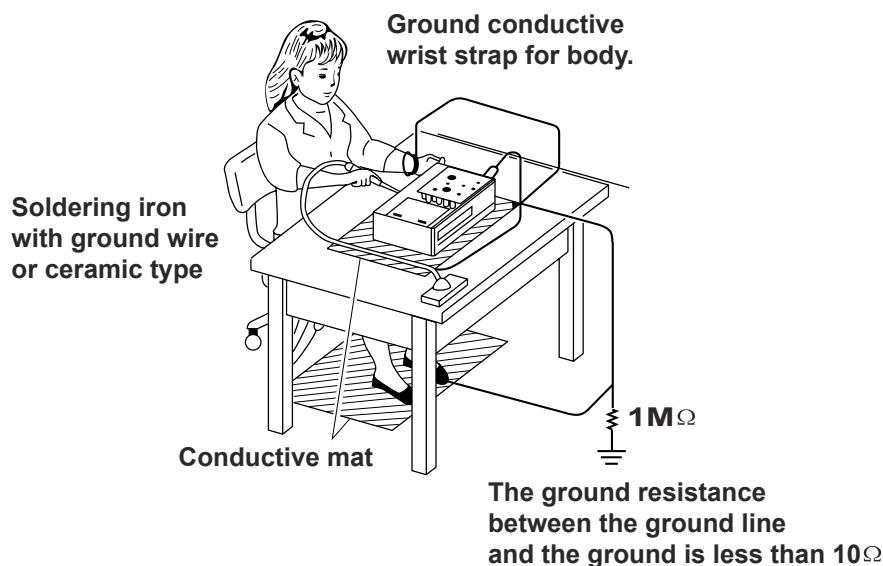
When the power supply is being turned on, you may not remove this laser cautions label. If it removes, radiation of laser may be received.

PREPARATION OF SERVICING

Pickup Head consists of a laser diode that is very susceptible to external static electricity.

Although it operates properly after replacement, if it was subject to electrostatic discharge during replacement, its life might be shortened. When replacing, use a conductive mat, soldering iron with ground wire,etc. to protect the laser diode from damage by static electricity.

And also, the LSI and IC are same as above.



SAFTY NOTICE

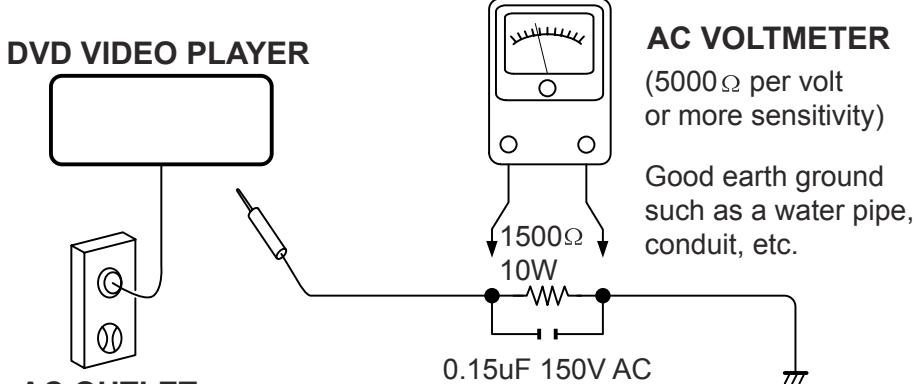
SAFTY PRECAUTIONS

LEAKAGE CURRENT CHECK

Plug the AC line cord directly into a 120V AC outlet (do not use an isolation transformer for this check). Use an AC voltmeter, having 5000Ω per volt or more sensitivity. Connect a 1500Ω 10W resistor, paralleled by a $0.15\mu F$ 150V AC capacitor between a known good earth ground (water pipe, conduit, etc.) and all exposed metal parts of cabinet (antennas, handle bracket, metal cabinet screwheads, metal overlays, control shafts, etc.).

Measure the AC voltage across the 1500Ω resistor. The test must be conducted with the AC switch on and then repeated with the AC switch off. The AC voltage indicated by the meter may not exceed 0.3V. A reading exceeding 0.3V indicates that a dangerous potential exists, the fault must be located and corrected. Repeat the above test with the DVD VIDEO PLAYER power plug reversed. NEVER RETURN A DVD VIDEO PLAYER TO THE CUSTOMER WITHOUT TAKING NECESSARY CORRECTIVE ACTION.

READING SHOULD NOT EXCEED 0.3V

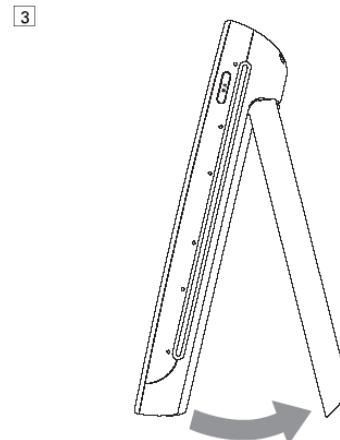
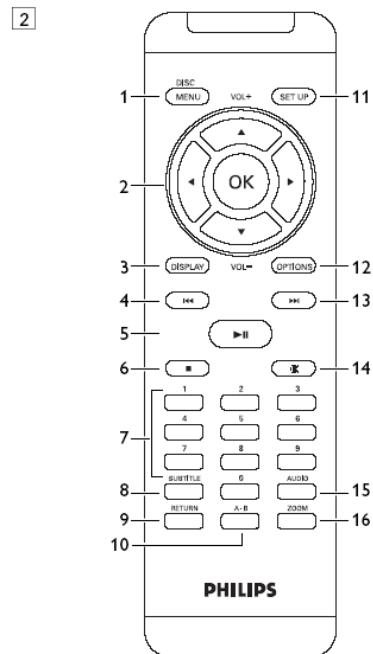
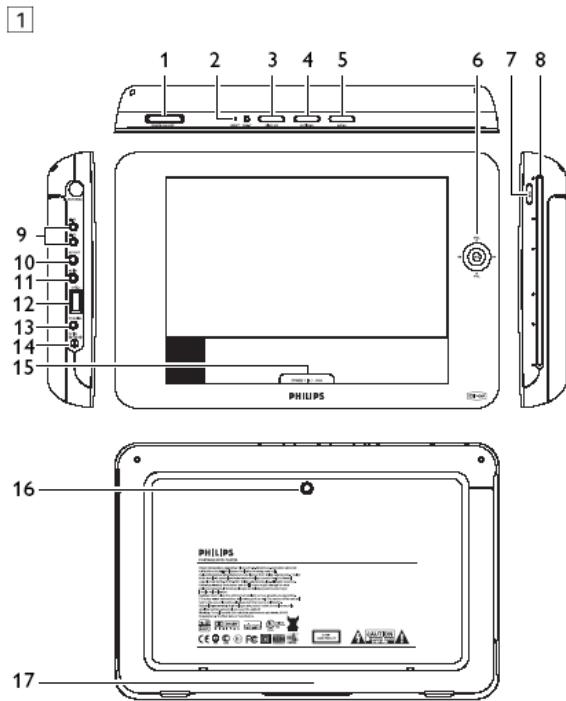


The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

3.0 INSTRUCTION FOR USE



1.1 Top of the player (see figure 1)

1 POWER ON/OFF

Switch the player on / off

2 RESET

Reset the player when it hangs

3 DISPLAY

Adjust the display value of the system

4 OPTIONS

Access additional functions

5 MENU

Display the DVD disc menu

1.2 Left side of the player (see figure 1)

9 Headphone jack

10 AV OUT Audio video output

11 AV IN Audio video input

12 USB USB connector

13 Coaxial Digital audio output

14 DC IN Charger / Adapter connection for power supply

1.3 Front side of the player (see figure 1)

6 ►||

OK or play/pause

▲ / ▼ Up/down navigation key or up/down volume control during playback

◀◀ / ▶▶ Left/right navigation key or previous/next track or fast search backward/forward

15 POWER·IR·CHG

POWER Power LED in green

IR IR sensor

Charging Charging LED appears in RED during charging and goes off when fully charged.

1.4 Right side of the player (see figure 1)

7 ■▲

Press once to stop playback. Press twice to eject the disc

8 Disc slot

1.5 Right side of the player (see figure 1)

16 Car mounting screw hole

17 Stand

1.6 Remote Control (see figure 2)

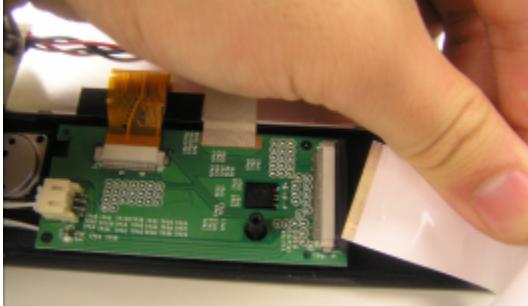
| | |
|--------------|--|
| 1 MENU | Display MENU page |
| 2 ▲, ▼, ◀, ▶ | Up / down / left / right navigation key |
| OK | Confirm selection |
| VOL+ / - | Volume control |
| 3 DISPLAY | Adjust the display value of the system |
| 4 ◀◀ | Skip to previous chapter, track or title |
| 5 ► | Start / pause / resume playback |
| 6 ■ | Press twice to stop playback |
| 7 0 - 9 | Numeric keypad |
| 8 SUBTITLE | Subtitle language selector |
| 9 RETURN | For VCD menu page |
| 10 A - B | To repeat or loop a sequence in a title |
| 11 SETUP | Enter SETUP menu |
| 12 OPTION | Access additional functions |
| 13 ▶▶ | Skip to next chapter, track or title |
| 14 *# | Mute player volume |
| 15 AUDIO | Audio language selector |
| 16 ZOOM | Enlarge video image |

1.7 Desk stand of the player (see figure 3)

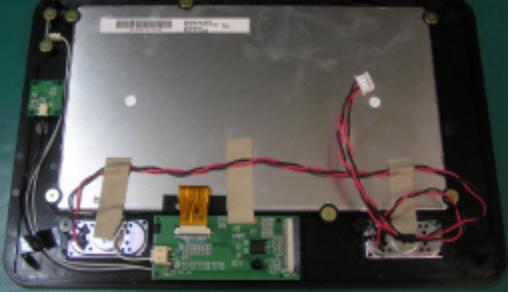
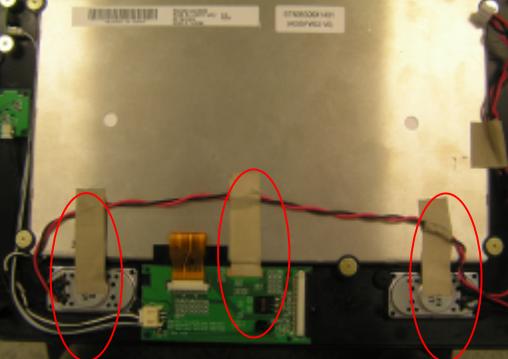
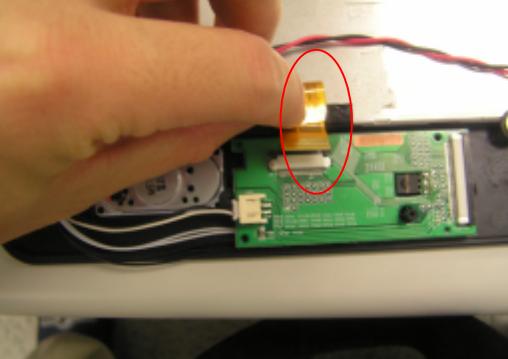
You can prop up the DVD player on your table for movie watching.

Pull out the stand at the rear of the player.

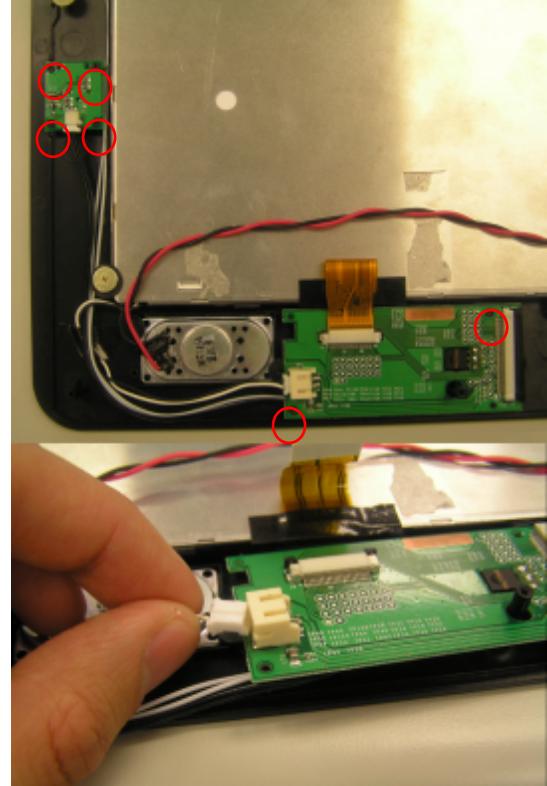
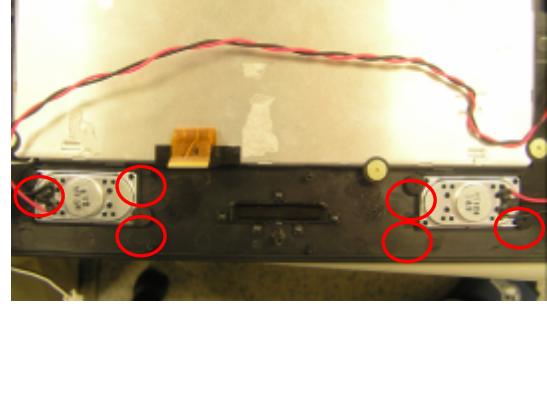
4.0 MECHANICAL INSTRUCTION

| Disassembly Procedure on PET830 | | | Spare Parts |
|---|---|--|---|
|  | 1 | Remove five screws on back cabinet to separate top cabinet and back cabinet. | (5pcs)  |
|  | 2 | Generally open the front cabinet. | |
|  | 3 | Disassemble FPC from turn board on top cabinet. | |
|  | 4 | Disassemble connecter of speaker from main board. | |
| | | | |

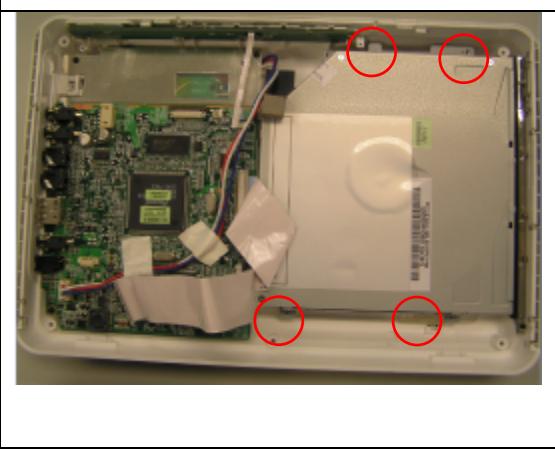
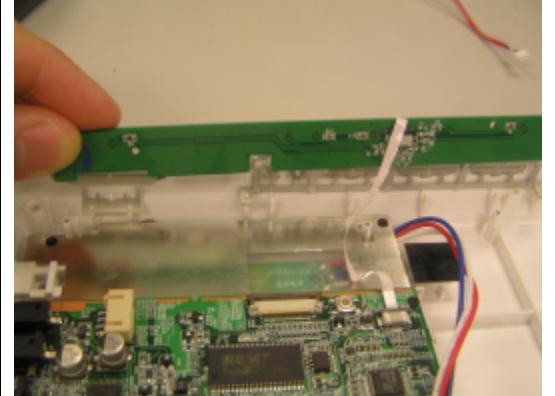
4.0 MECHANICAL INSTRUCTION

| | | |
|--|---|--|
|   | 5 After 3 and 4 procedures, we will get top cabinet assembly and back cabinet assembly. | |
|  | 6 Remove three conductive fabrics. (3pcs) |  |
|  | 7 Disassemble FPC of TFT-LCD from turn board. | |

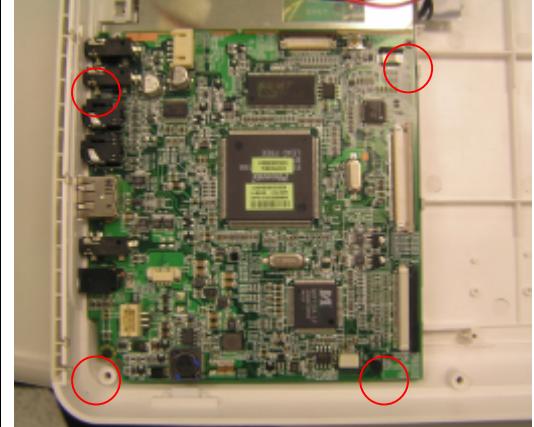
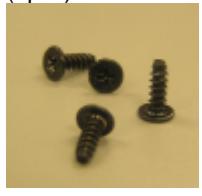
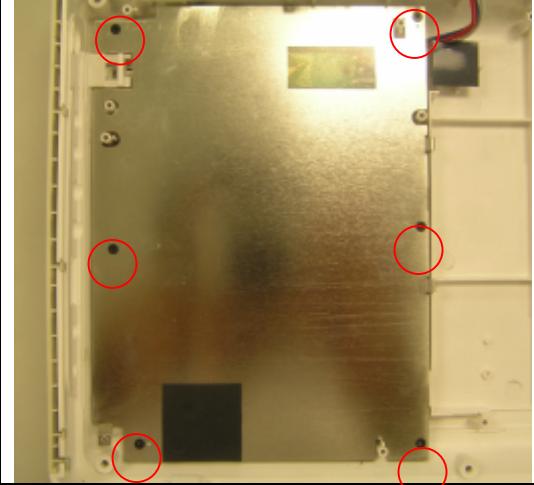
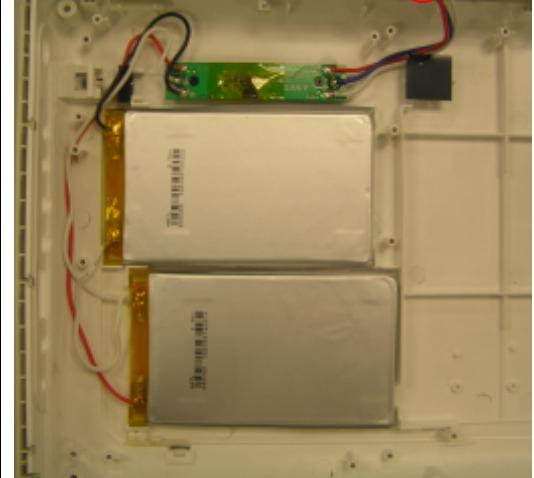
4.0 MECHANICAL INSTRUCTION

| | | |
|---|--|---|
|  | 8 Remove six screws on turn board and jogging board. Disassemble connecter of TFT-LCD from turn board. | (6pcs)  |
|  | 9 Remove two screws on eject board. | (2pcs)  |
|  | 10 Remove all PCB boards on top cabinet. Remove six screws on speaker, and then remove speaker. | (6pcs)  |

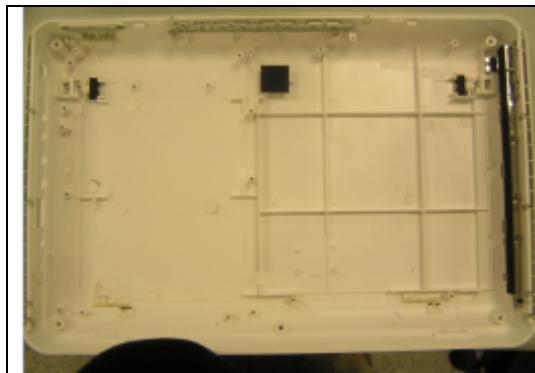
4.0 MECHANICAL INSTRUCTION

| | | |
|---|--|--|
|  | 11 Remove six screws and sponges on TFT-LCD. (6pcs) |  (6pcs)  |
|  | 12 Remove TFT-LCD and disassembly of top cabinet is ok. | |
|  | 13 Remove four screws on driver and FFC of driver from main board. (4pcs) |   |
|  | 14 Remove top keypad board from back cabinet, and disassemble FFC from main board. |   |

4.0 MECHANICAL INSTRUCTION

| | | |
|---|--|---|
|  | 15 Remove four screws on main board. | (4pcs)  |
|  | 16 Remove six screws on plate metal EMI. | (6pcs)  |
|  | 17 Remove two screws on PCB of battery. | (2pcs)  |
|  | 18 Use tool to remove battery from back cabinet. | |

4.0 MECHANICAL INSTRUCTION

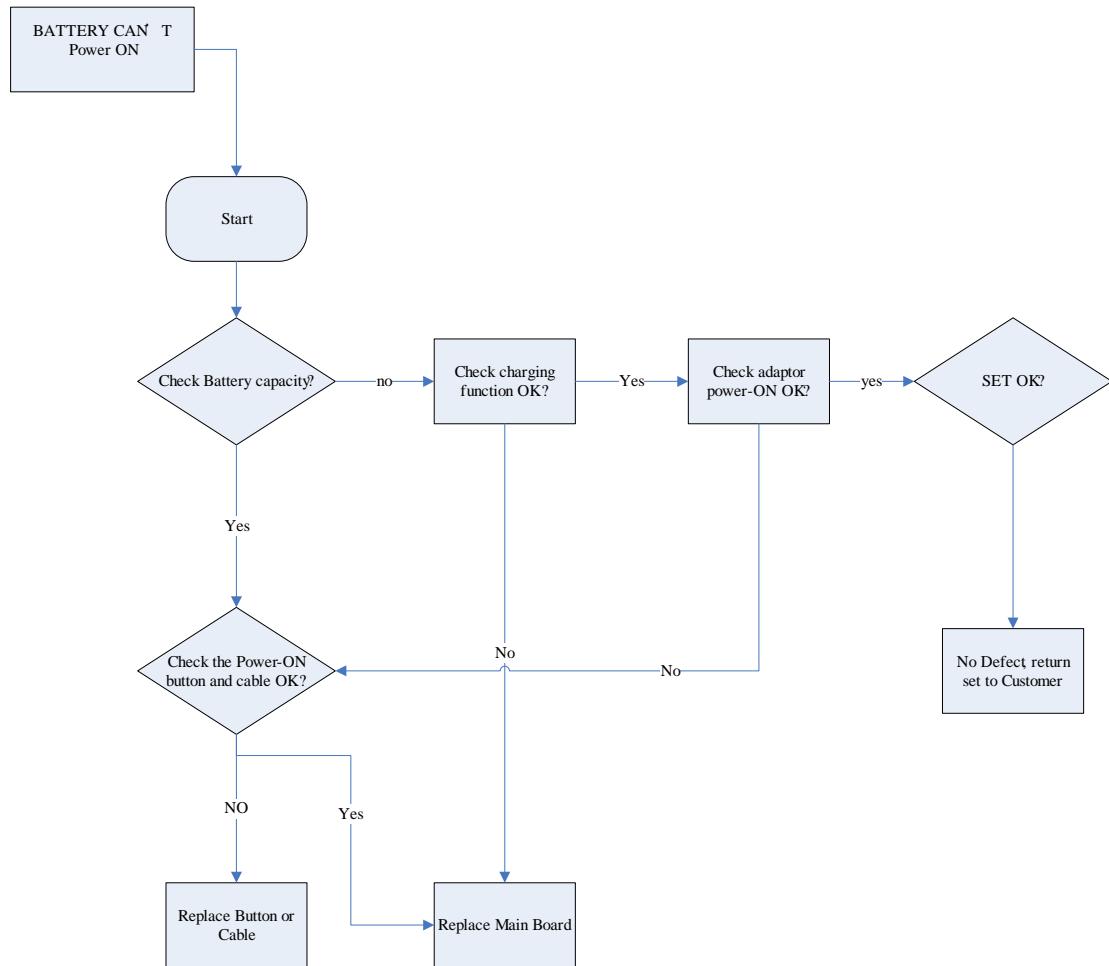


19

Finally, we will get the
back cabinet.

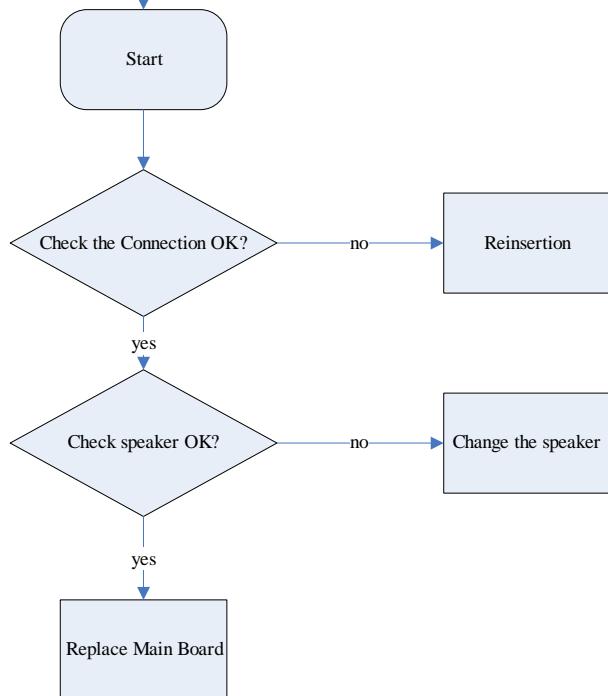
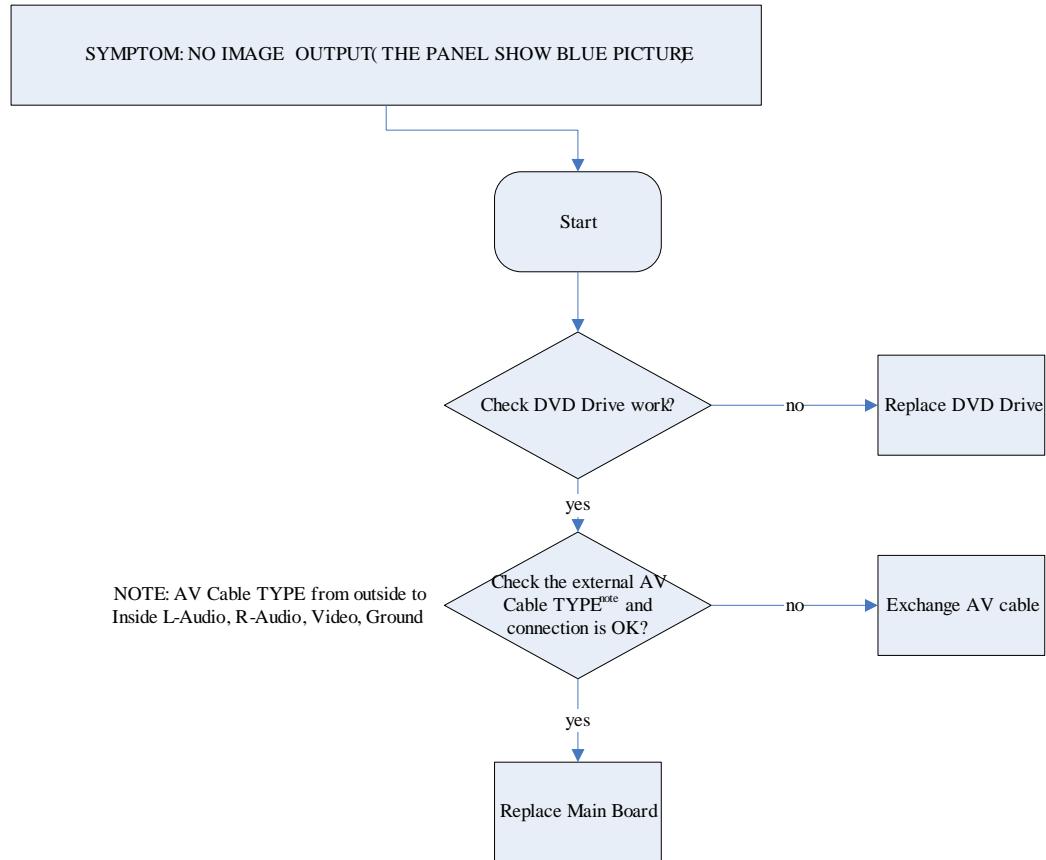
5.0 TROUBLESHOOTING

SYMPTOM: BATTERY NO POWER



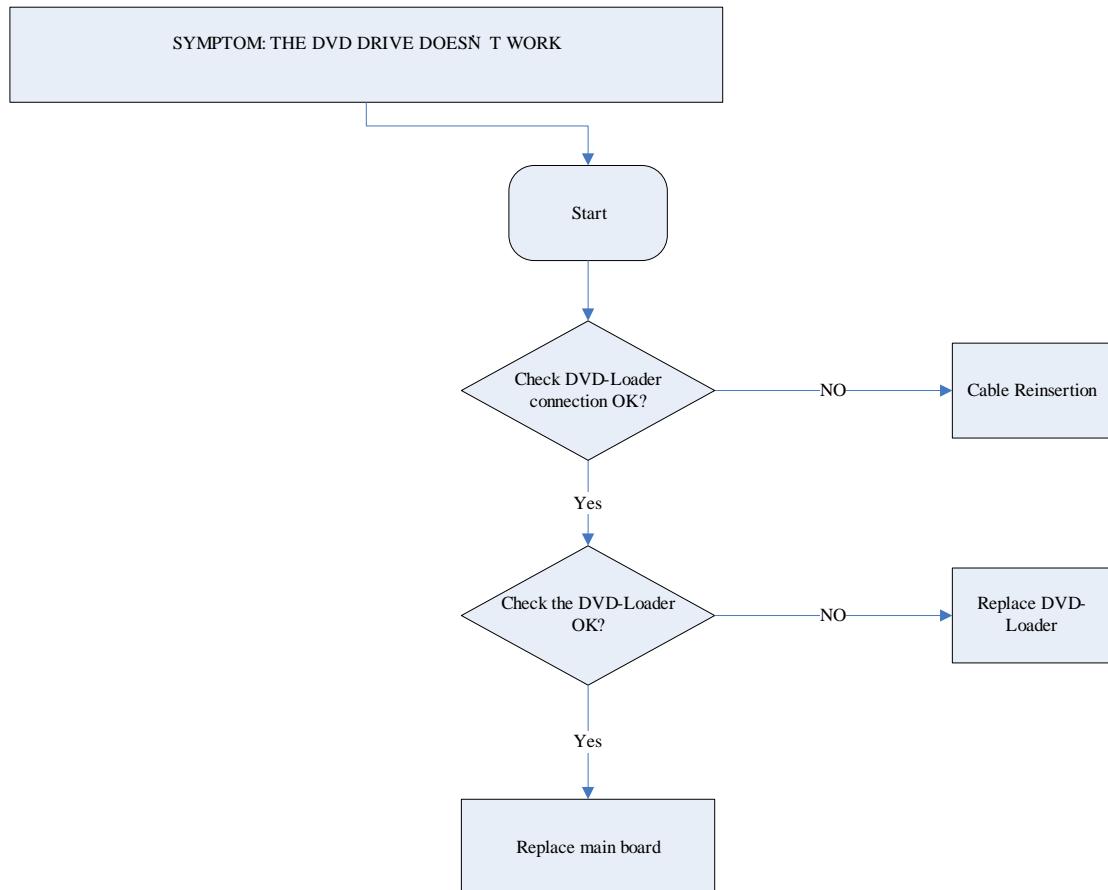
5.0 TROUBLESHOOTING

SYMPTOM: NO IMAGE / NO SOUND



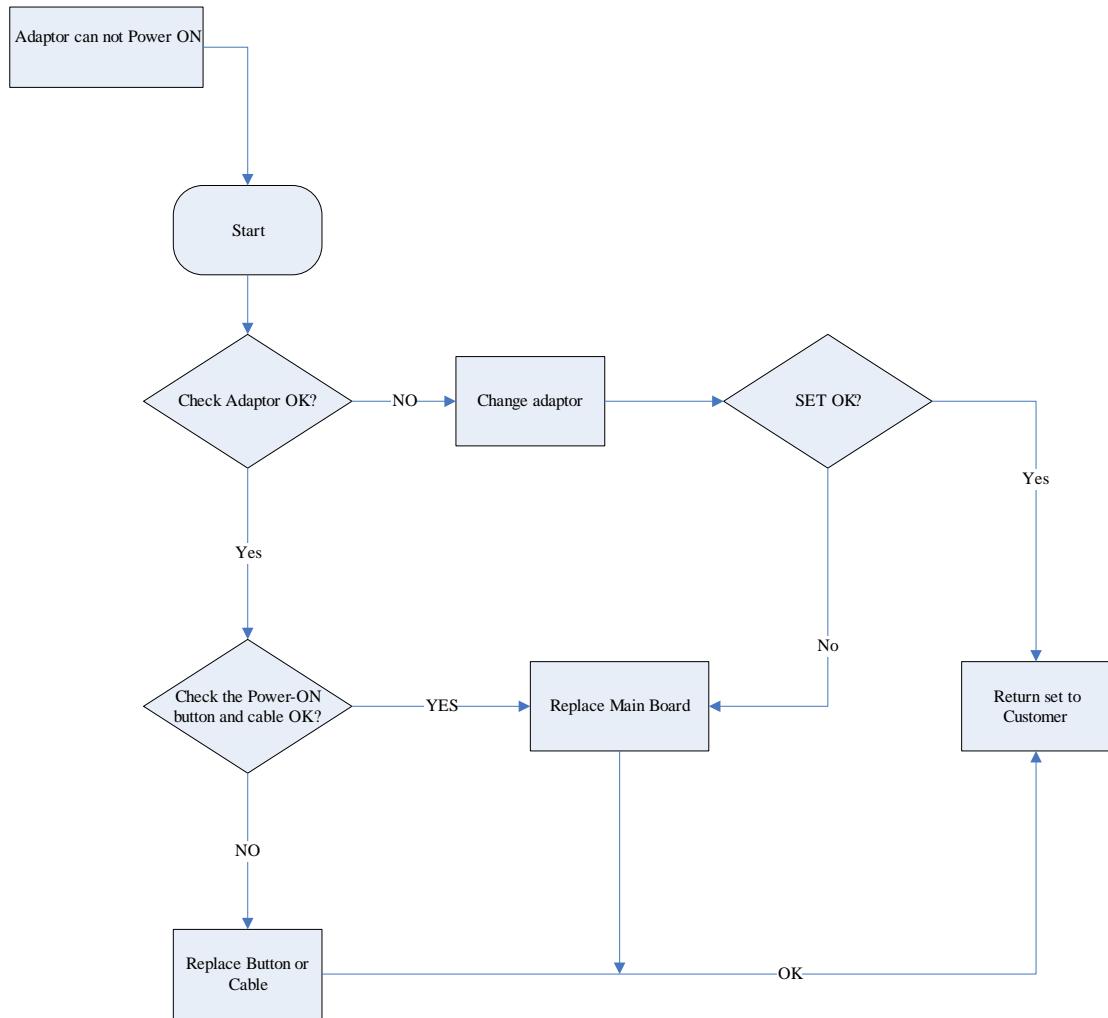
5.0 TROUBLESHOOTING

SYMPTOM: THE DVD DRIVE DOES NOT WORK



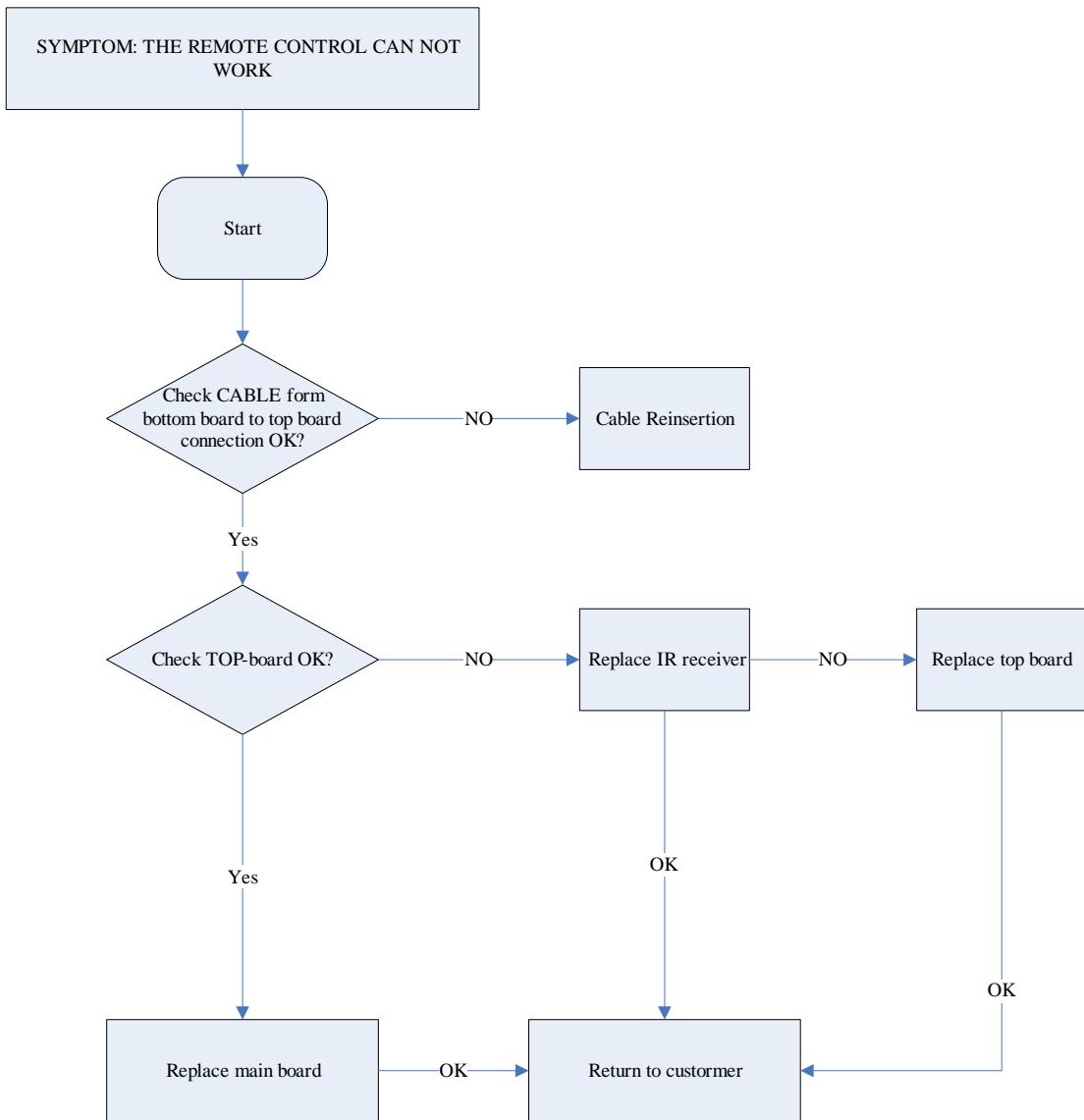
5.0 TROUBLESHOOTING

SYMPTOM: ADAPTOR CANNOT POWER ON



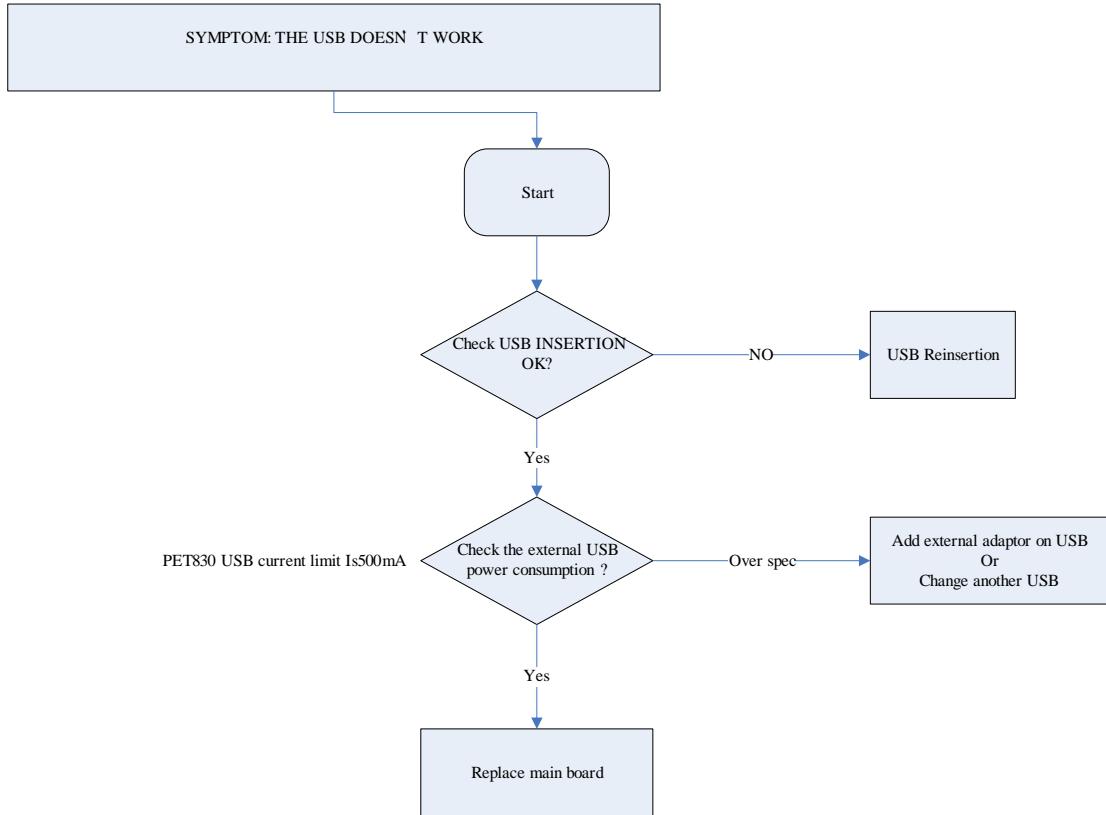
5.0 TROUBLESHOOTING

SYMPTOM: REMOTE CONTROL CANNOT WORK

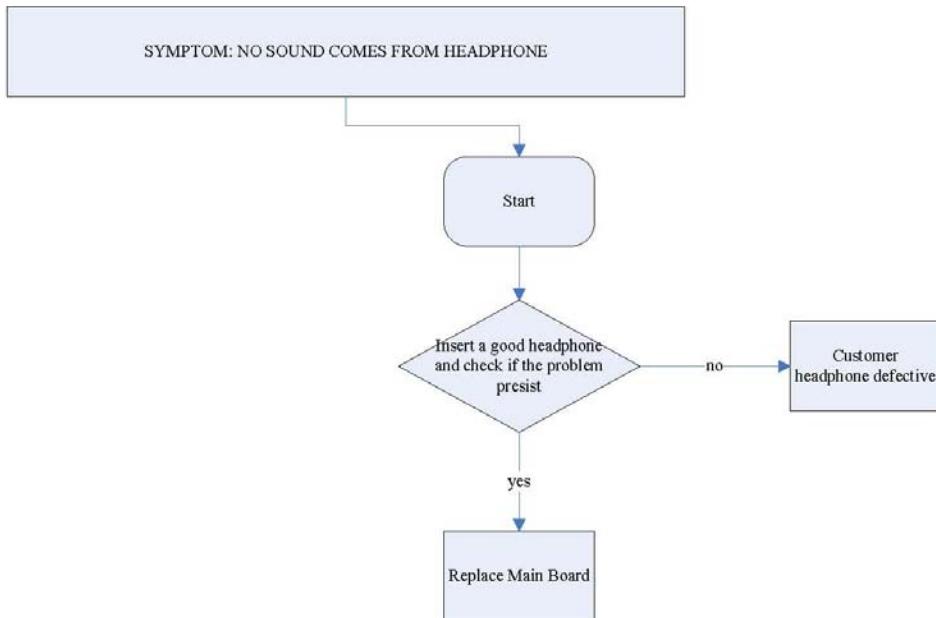


5.0 TROUBLESHOOTING

SYMPTOM: USB CANNOT WORK

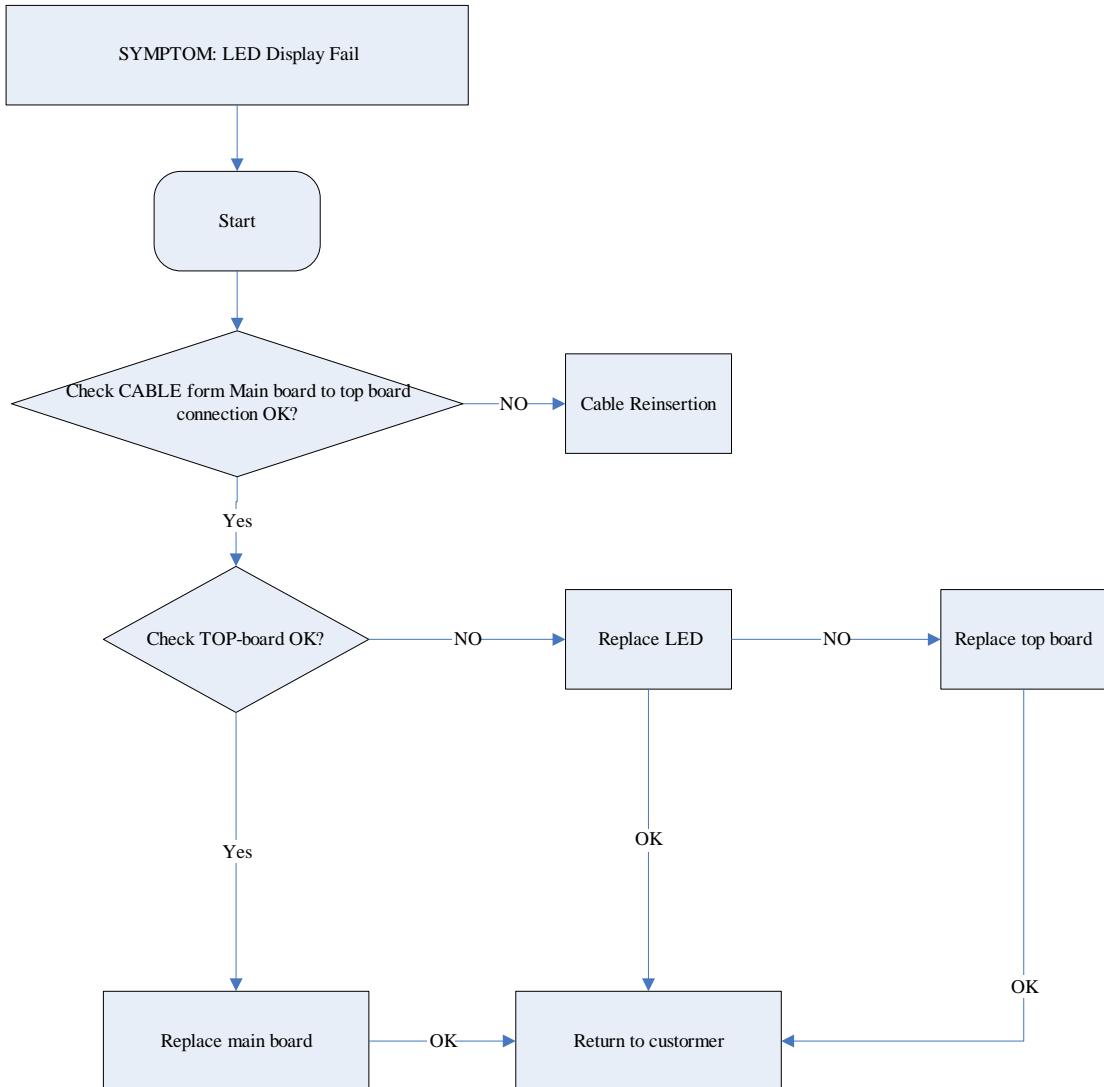


SYMPTOM: NO SOUND FROM HEADPHONE



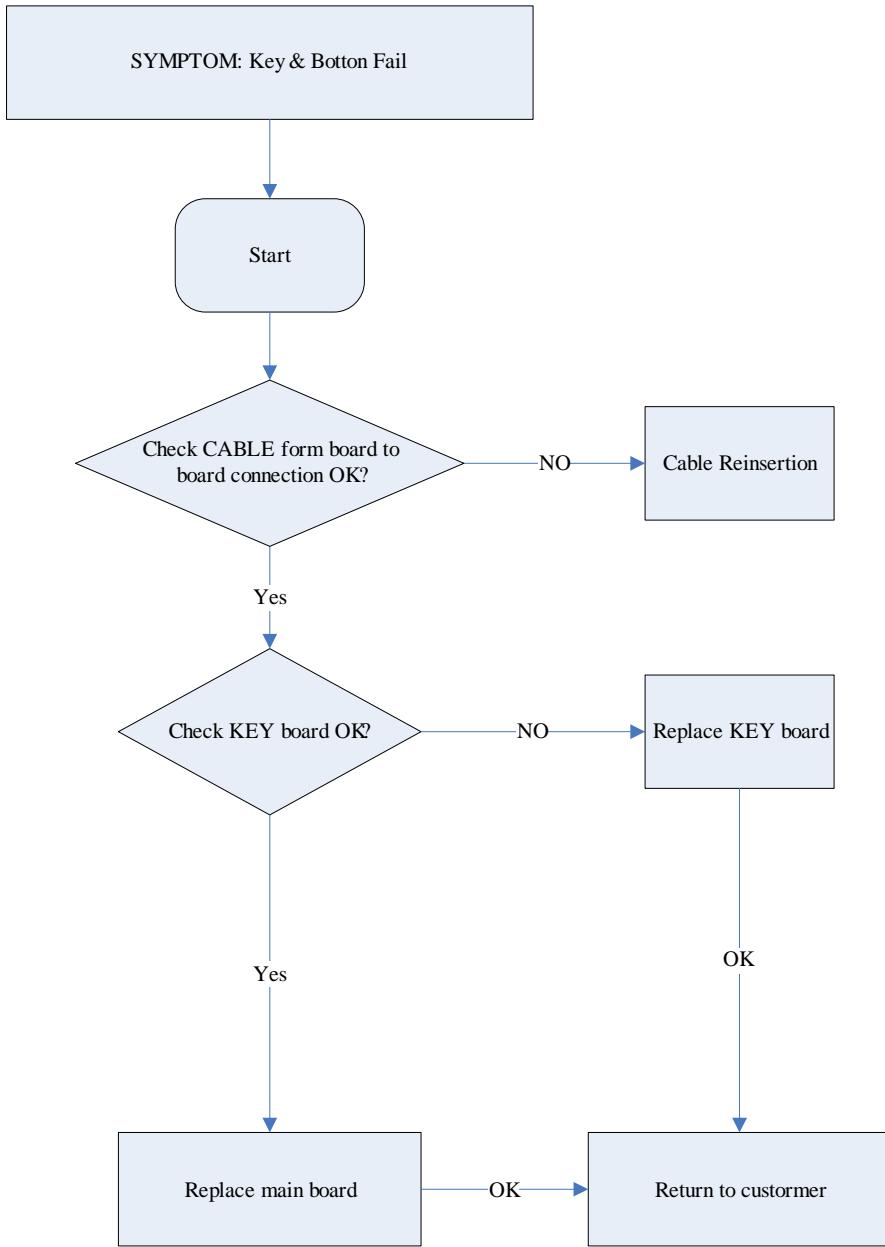
5.0 TROUBLESHOOTING

SYMPTOM: LED DISPLAY FAILURE

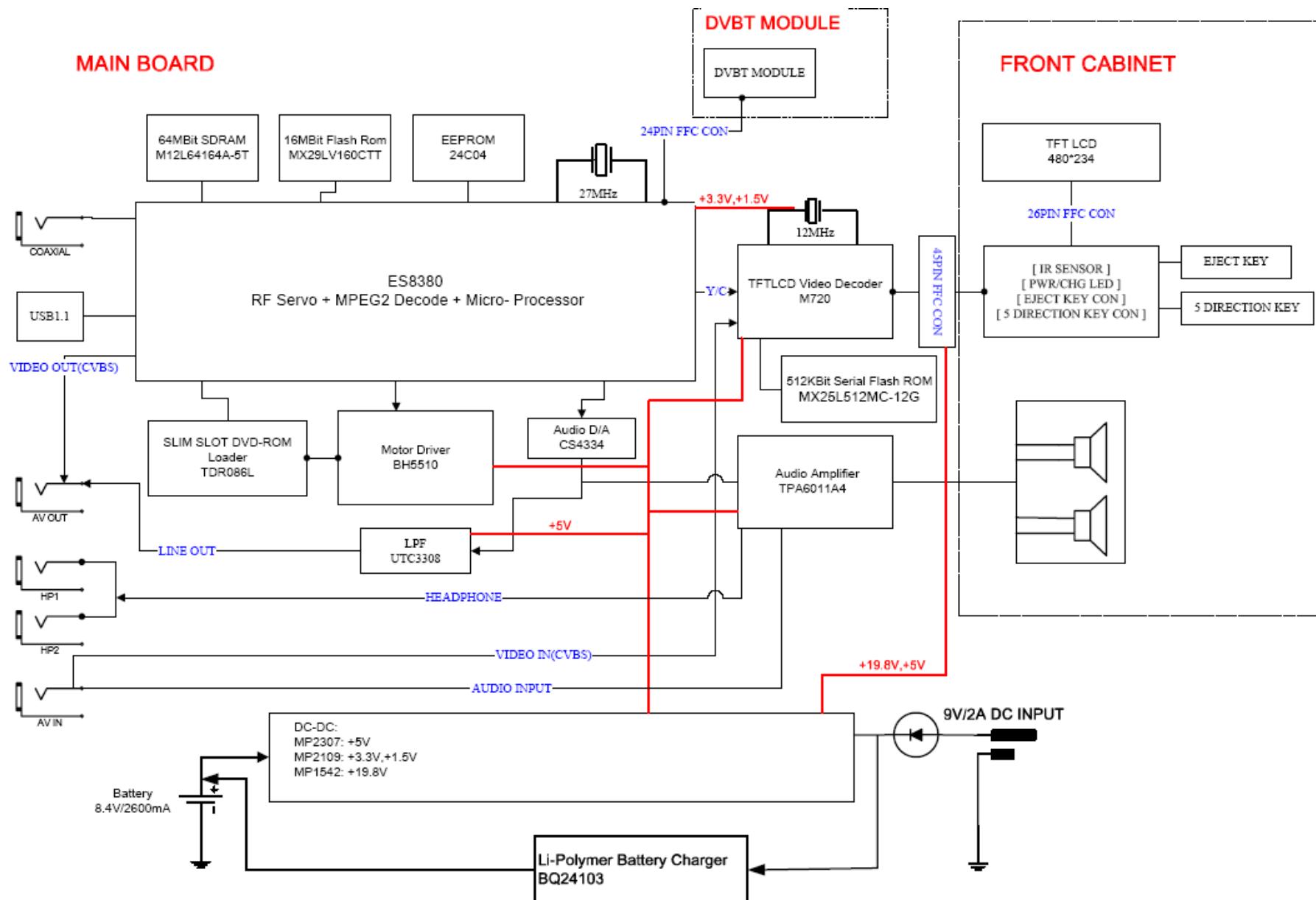


5.0 TROUBLESHOOTING

SYMPTOM: KEY & BOTTON FAILURE



6.0 OVERALL BLOCK DIAGRAM

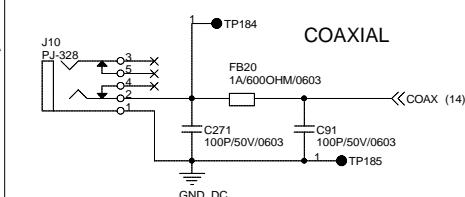
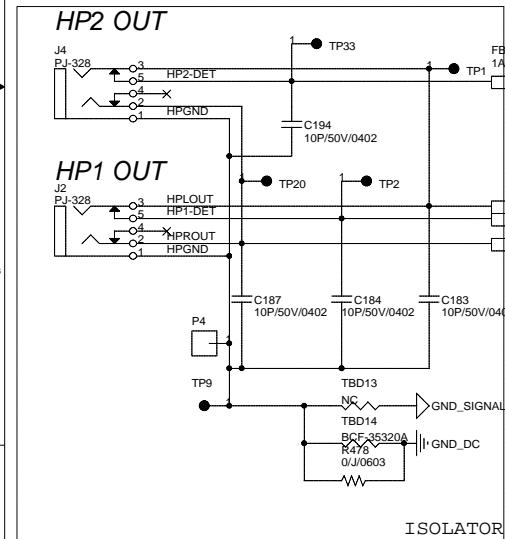
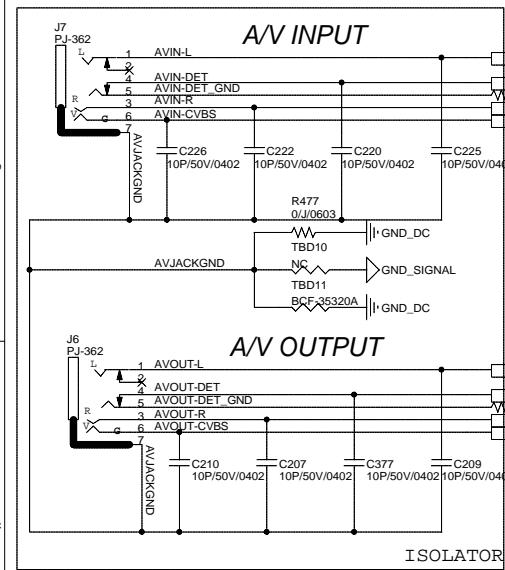


7.0 ELECTRICAL DIAGRAM

3

2

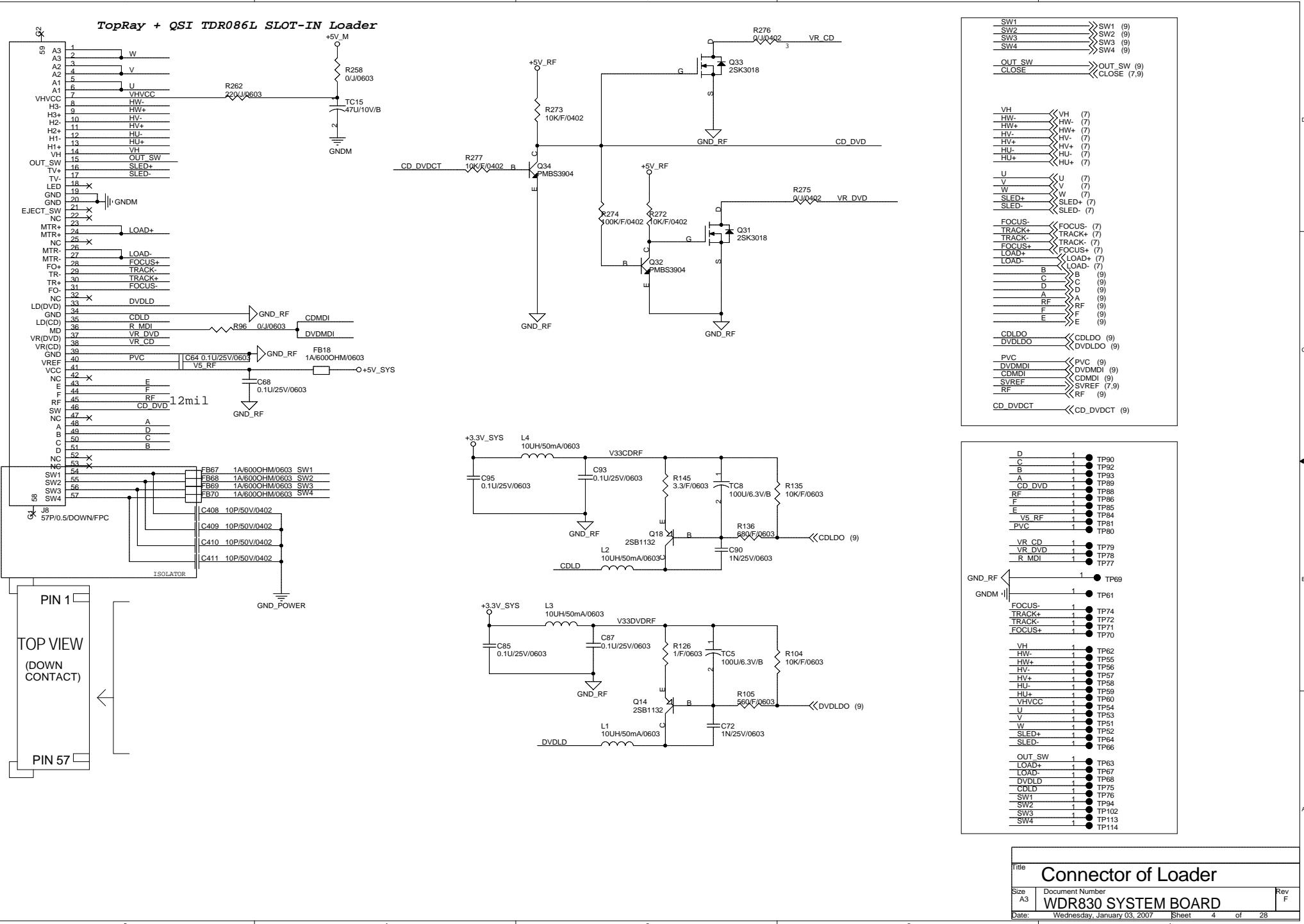
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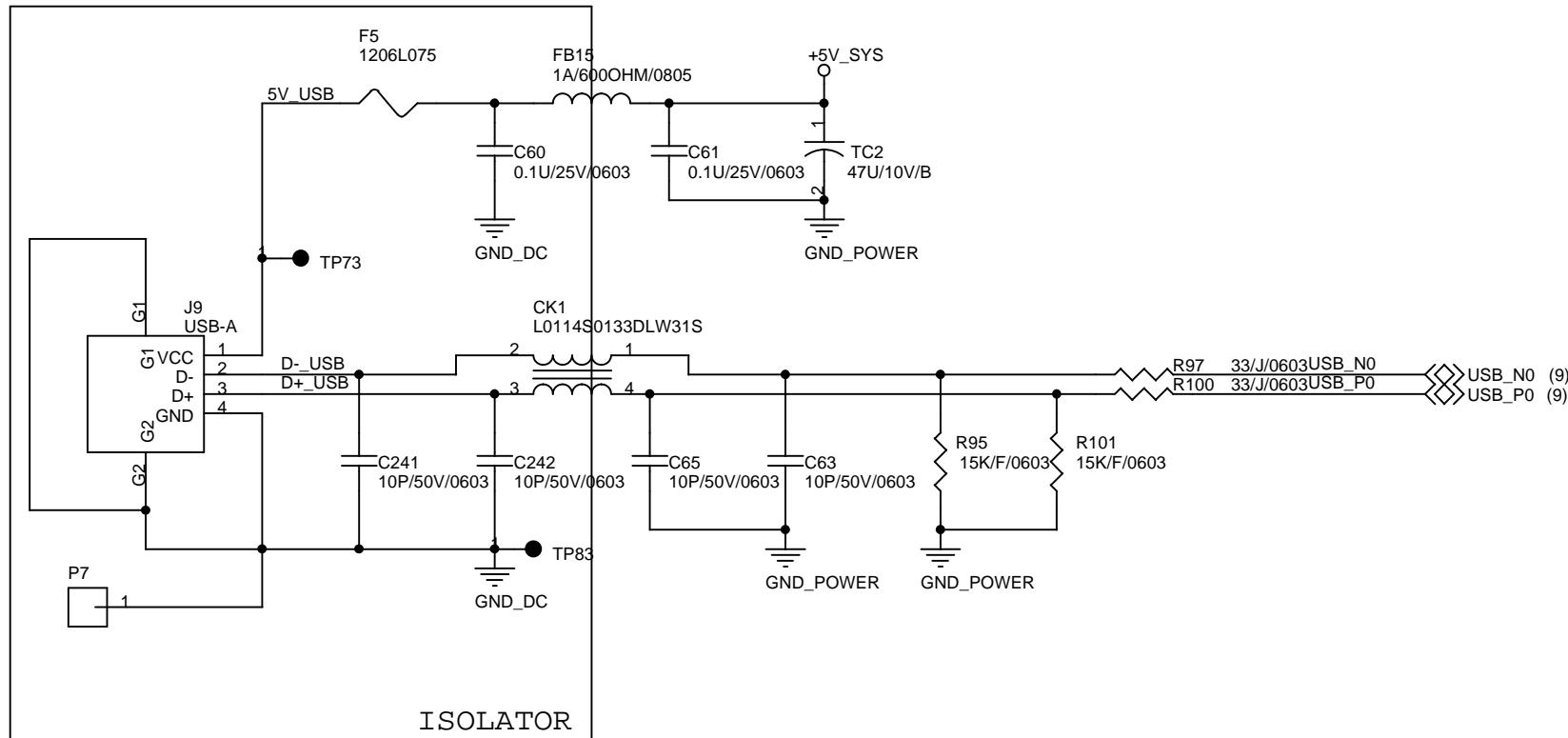
| | | |
|-------|---------------------|-----|
| Title | AV PORT | |
| Size | Document Number | Rev |
| A3 | WDR830 SYSTEM BOARD | F |

Date: Wednesday, January 03, 2007 Sheet 3 of 28

7.0 ELECTRICAL DIAGRAM

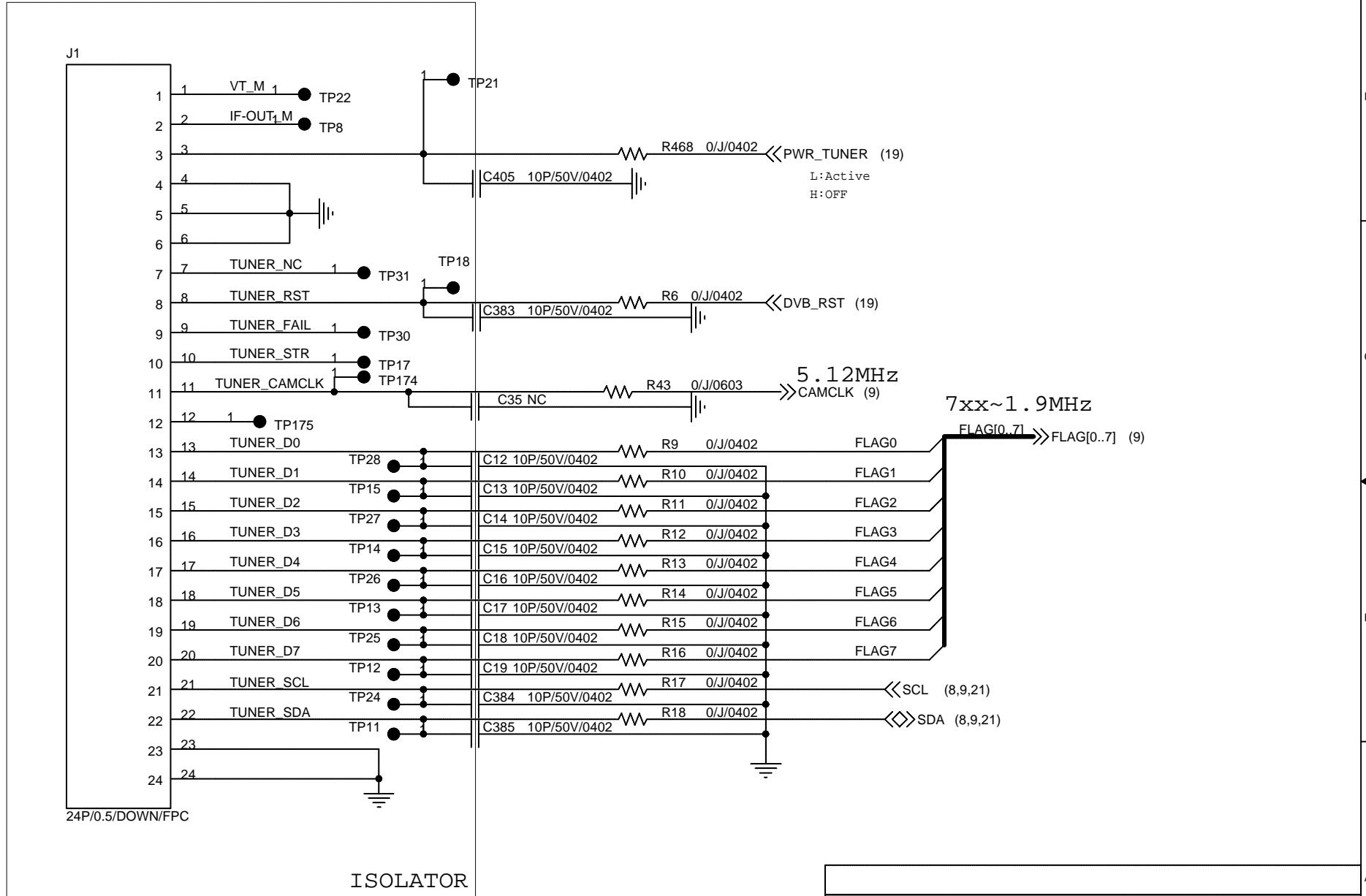


7.0 ELECTRICAL DIAGRAM



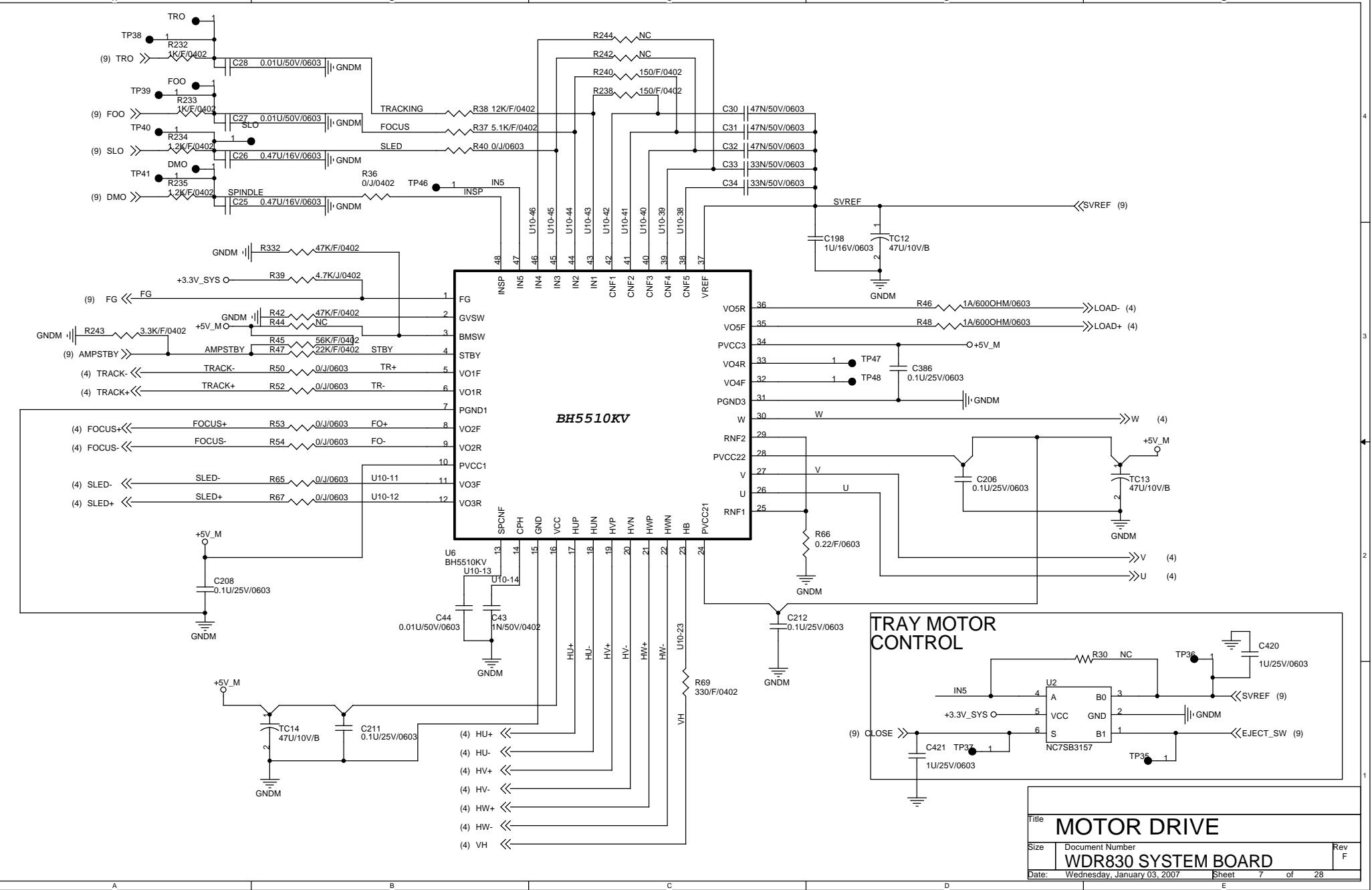
| | | | |
|-------|-----------------------------|---------|---------|
| Title | | CON_USB | |
| Size | Document Number | Rev | |
| A | WDR830 SYSTEM BOARD | | |
| Date: | Wednesday, January 03, 2007 | Sheet | 5 of 28 |
| | 2 | 1 | |

7.0 ELECTRICAL DIAGRAM

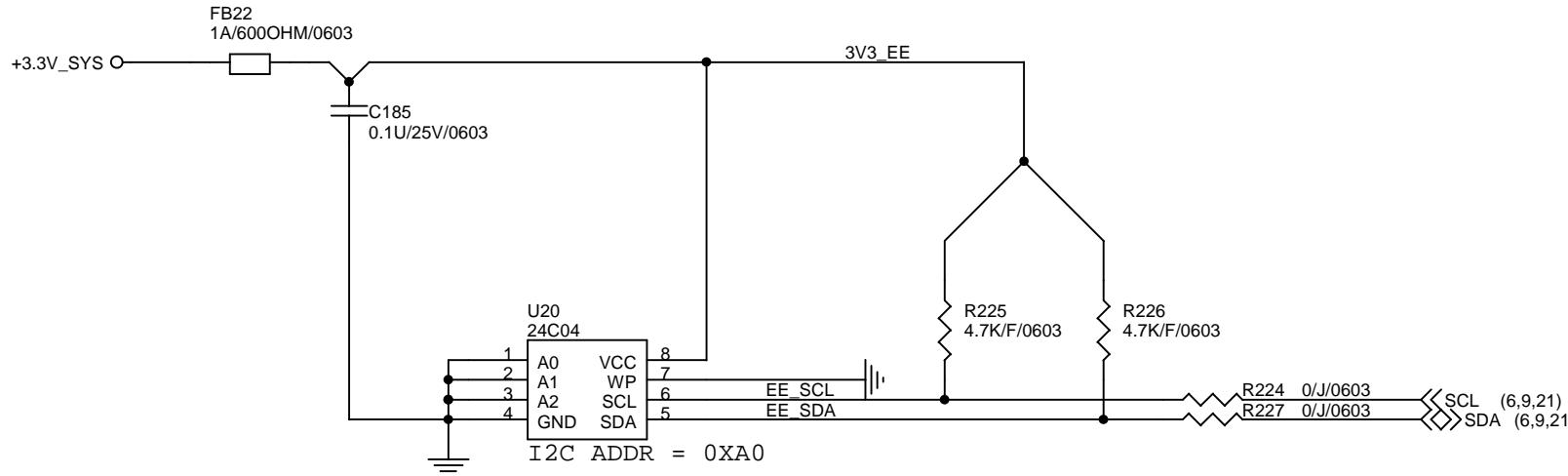


| CON OF NIM Module | | |
|-----------------------------------|---------------------|-----|
| Size | Document Number | Rev |
| A | WDR830 SYSTEM BOARD | F |
| Date: Wednesday, January 03, 2007 | Sheet 6 of 28 | |

7.0 ELECTRICAL DIAGRAM

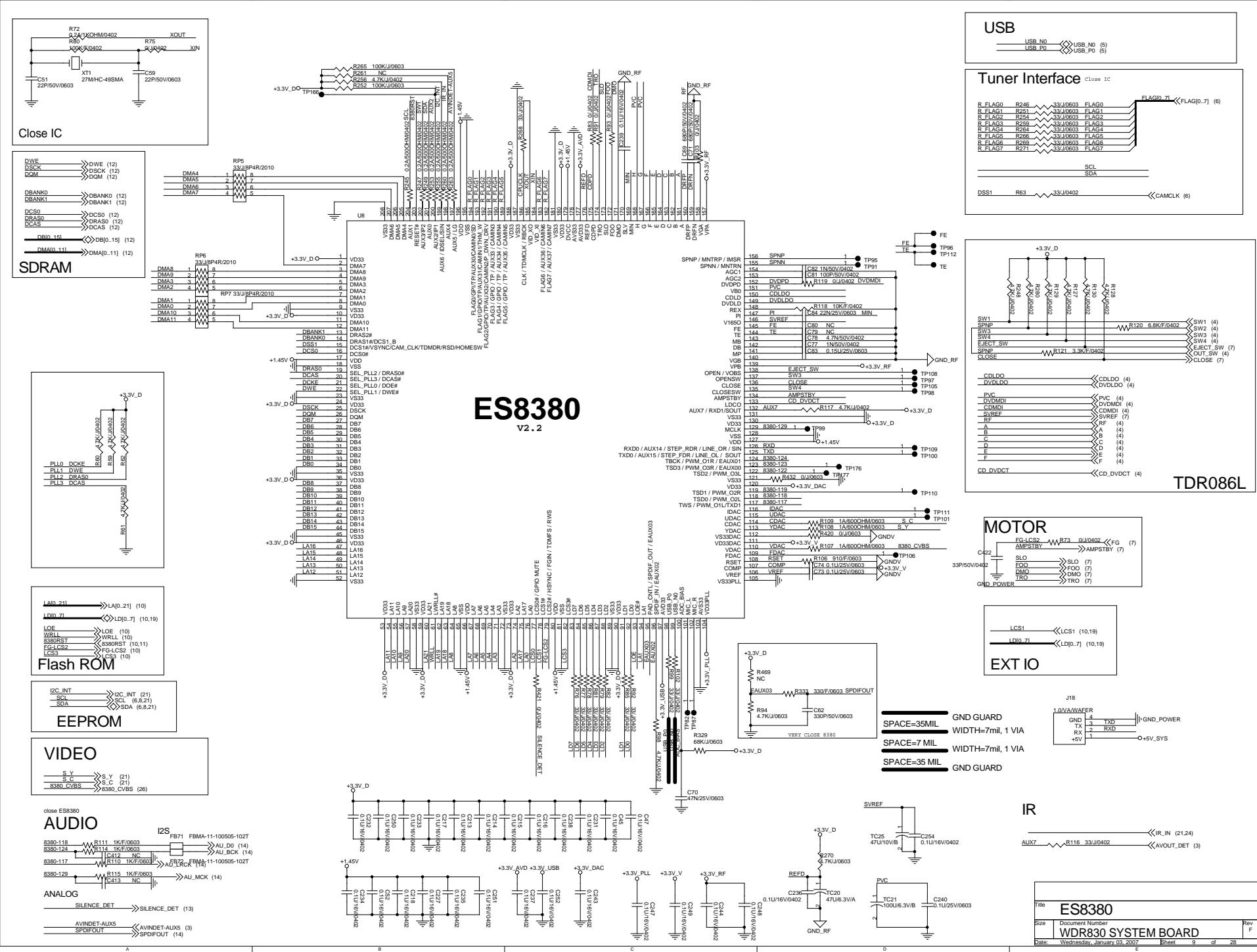


7.0 ELECTRICAL DIAGRAM

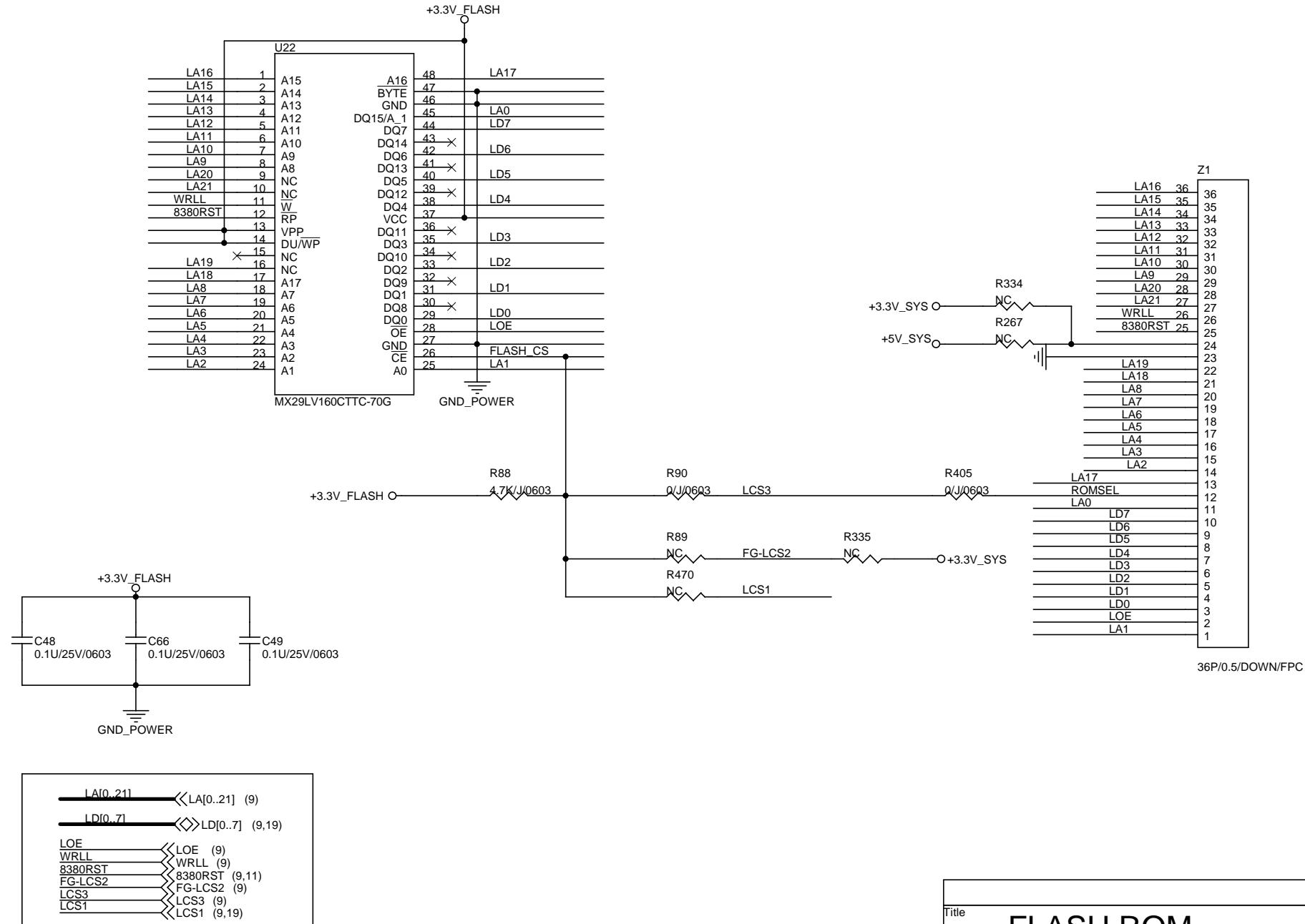


| Title | | |
|-----------------------------------|---------------------|-----|
| EEPROM | | |
| Size | Document Number | Rev |
| A | WDR830 SYSTEM BOARD | F |
| Date: Wednesday, January 03, 2007 | Sheet 8 of 28 | |

7.0 ELECTRICAL DIAGRAM

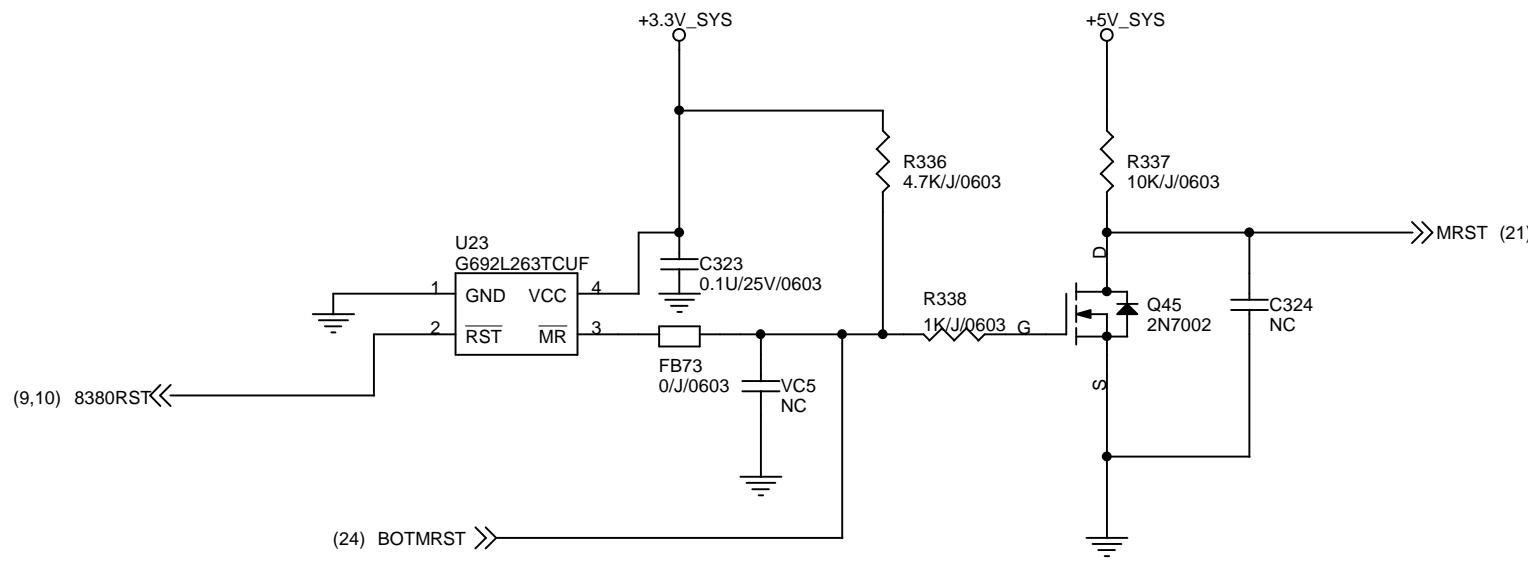


7.0 ELECTRICAL DIAGRAM



Title: **FLASH ROM**
 Size: A4 Document Number: **WDR830 SYSTEM BOARD**
 Rev: F Date: Wednesday, January 03, 2007 Sheet: 10 of 28

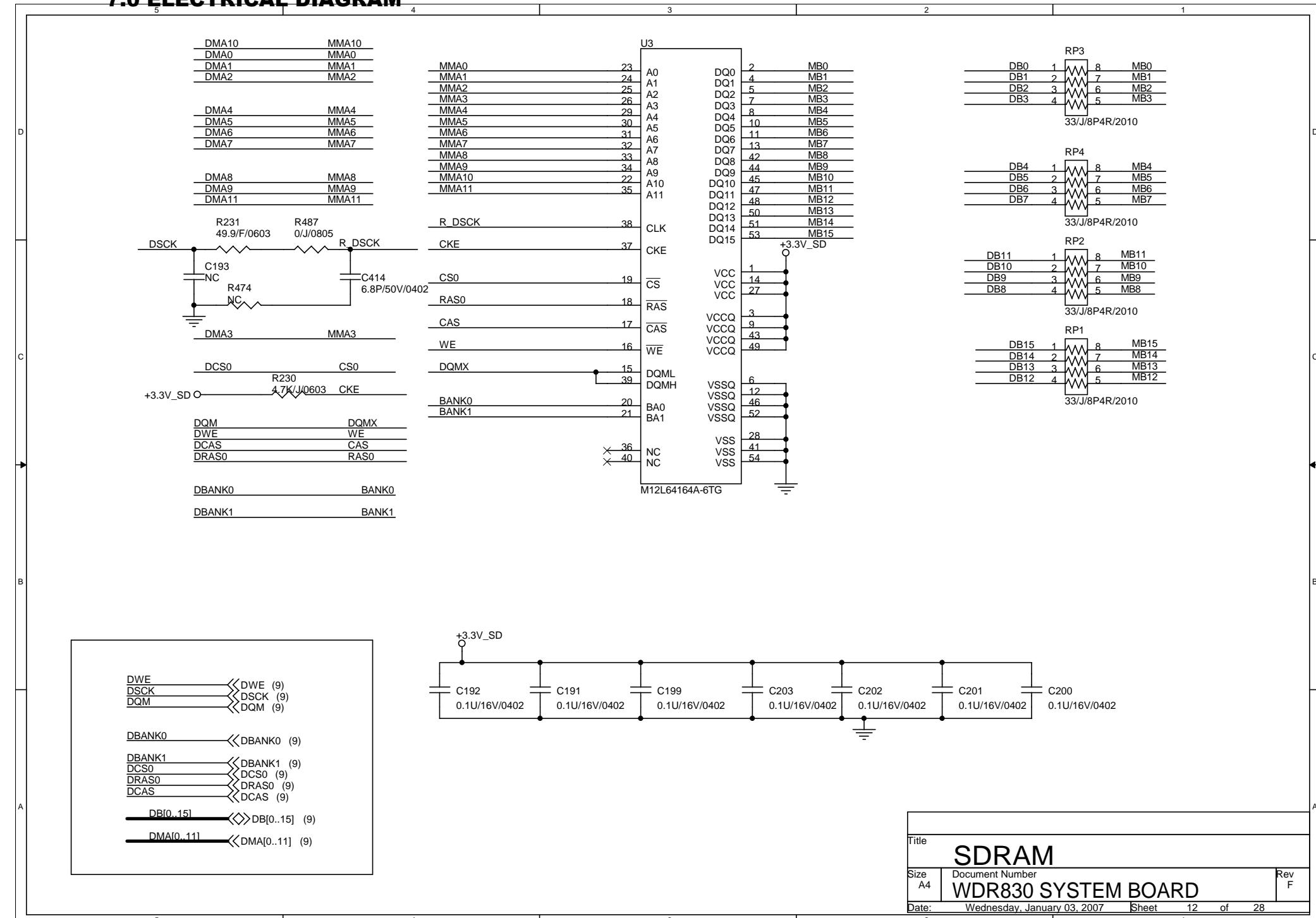
7.0 ELECTRICAL DIAGRAM



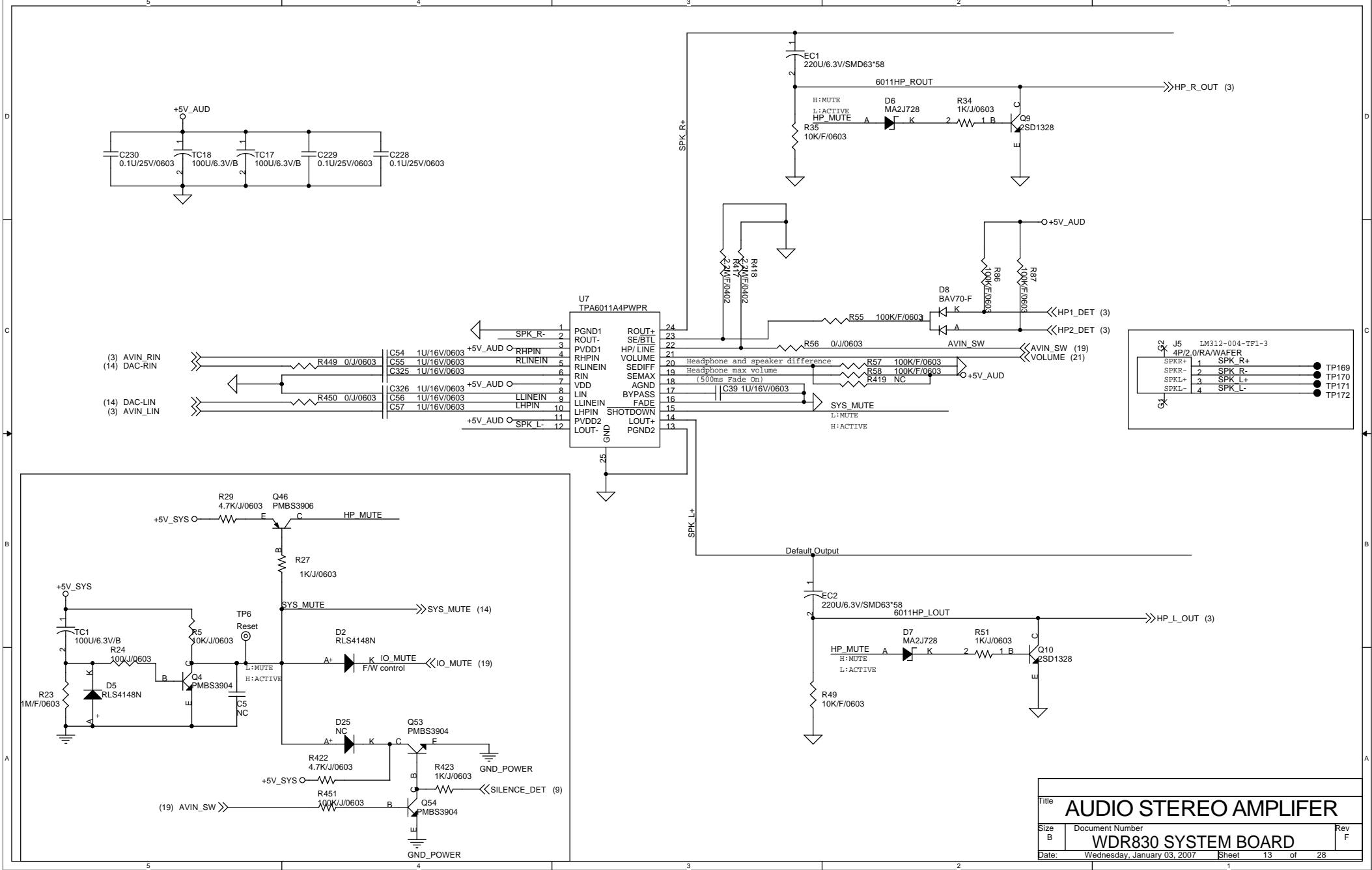
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| Title | | |
| RESET | | |
| Size A | Document Number | Rev F |
| WDR830 SYSTEM BOARD | | |

Date: Wednesday, January 03, 2007 Sheet 11 of 28

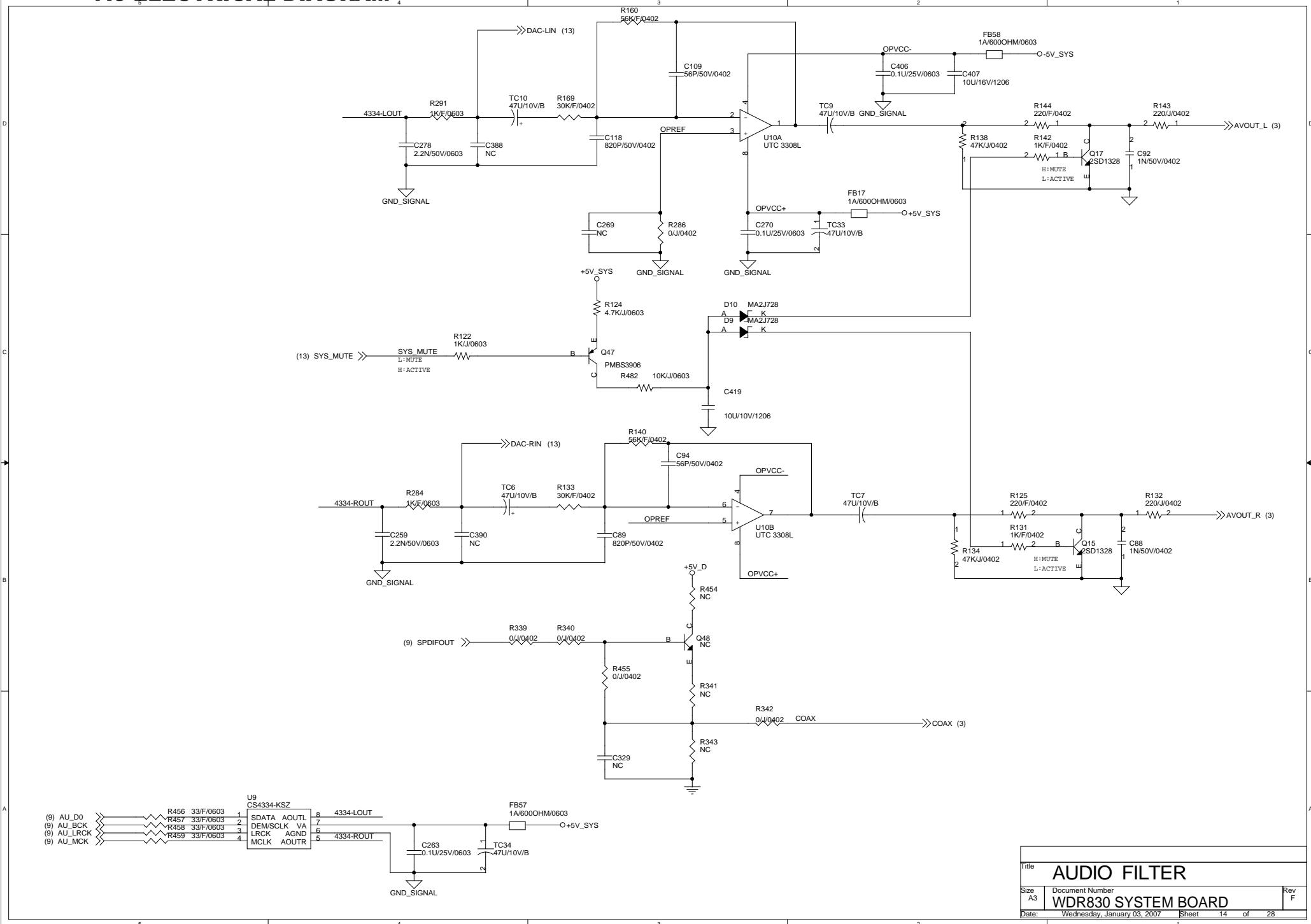
7.0 ELECTRICAL DIAGRAM



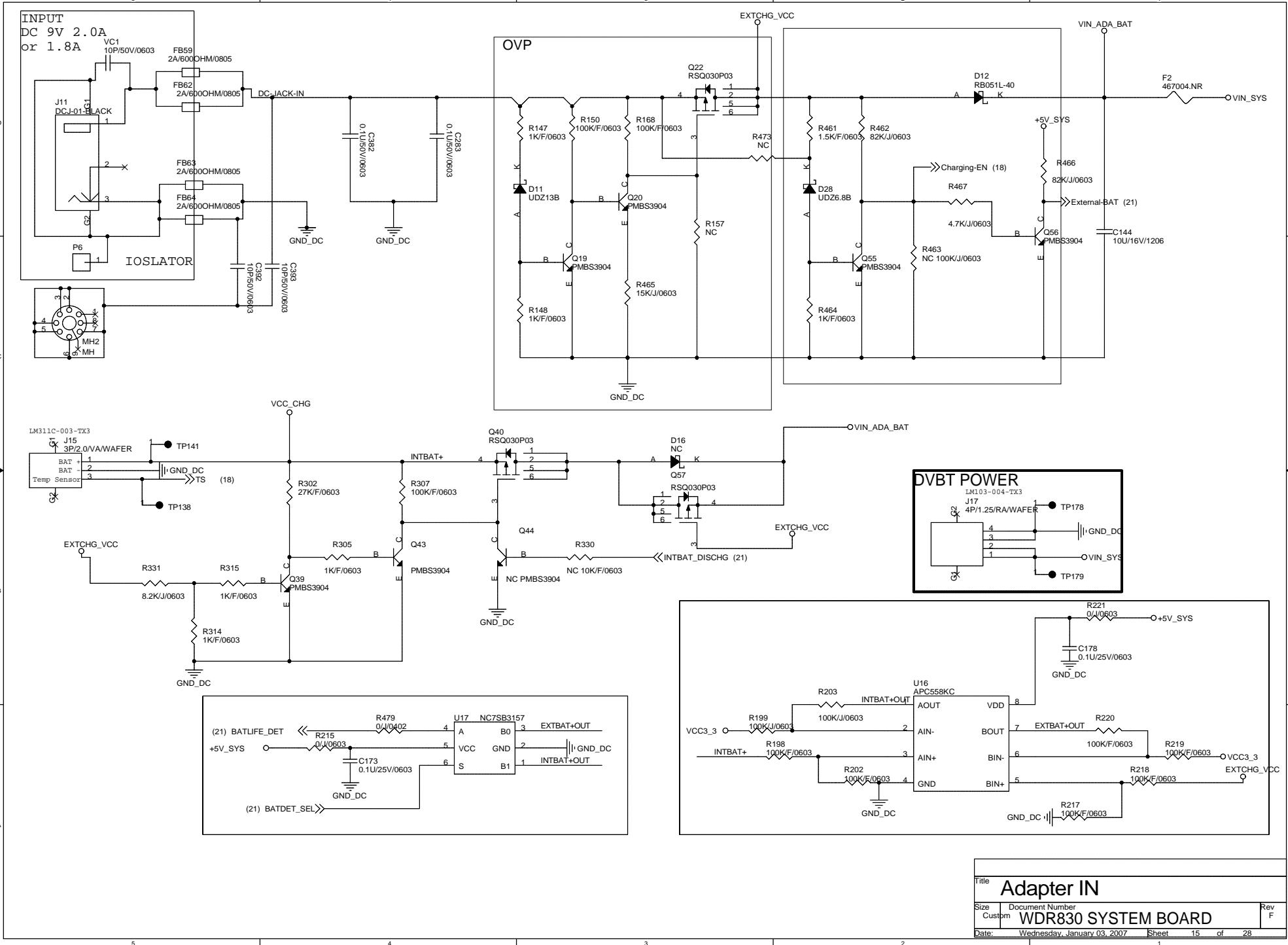
7.0 ELECTRICAL DIAGRAM



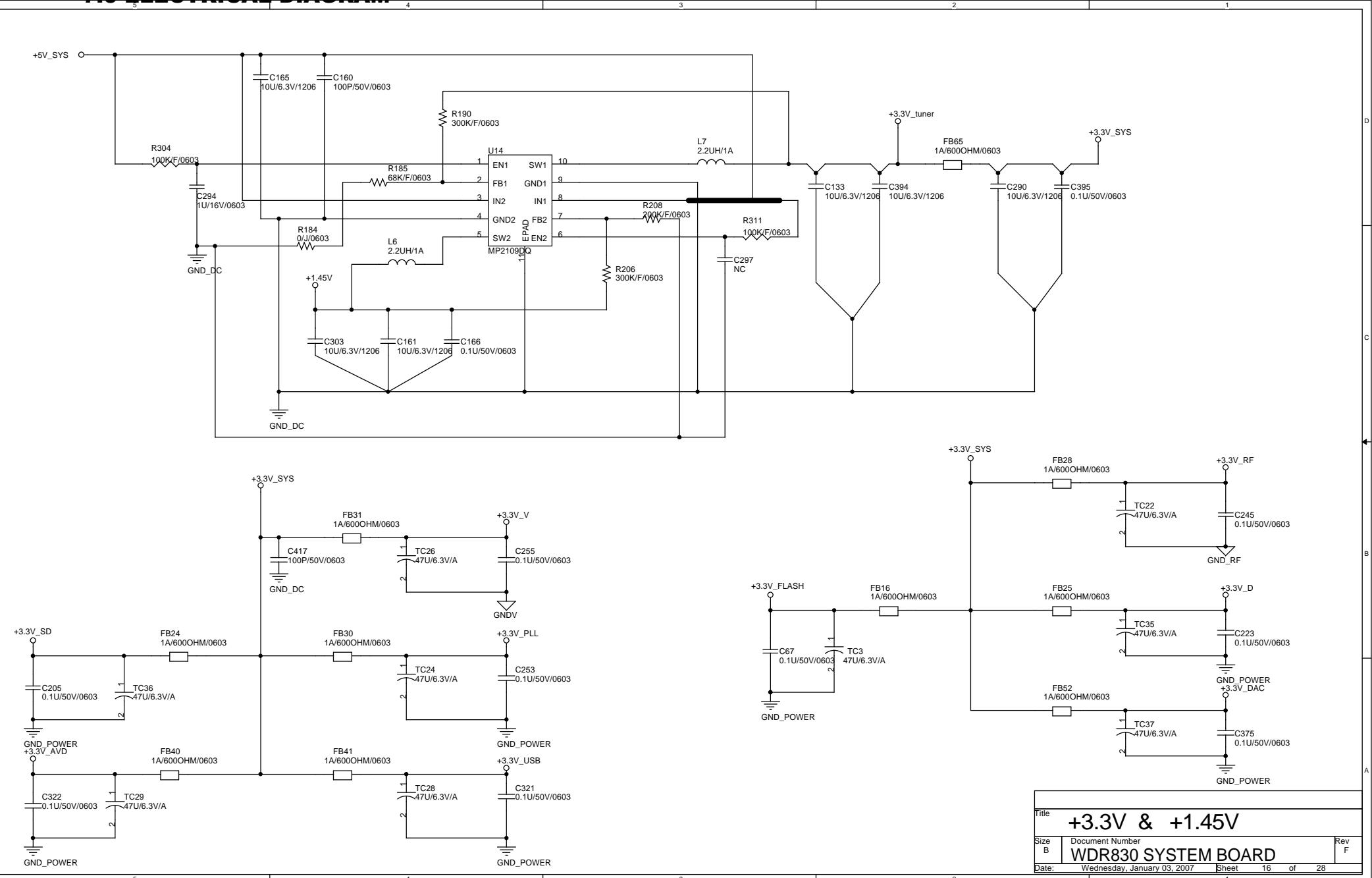
7.0 ELECTRICAL DIAGRAM



7.0 ELECTRICAL DIAGRAM



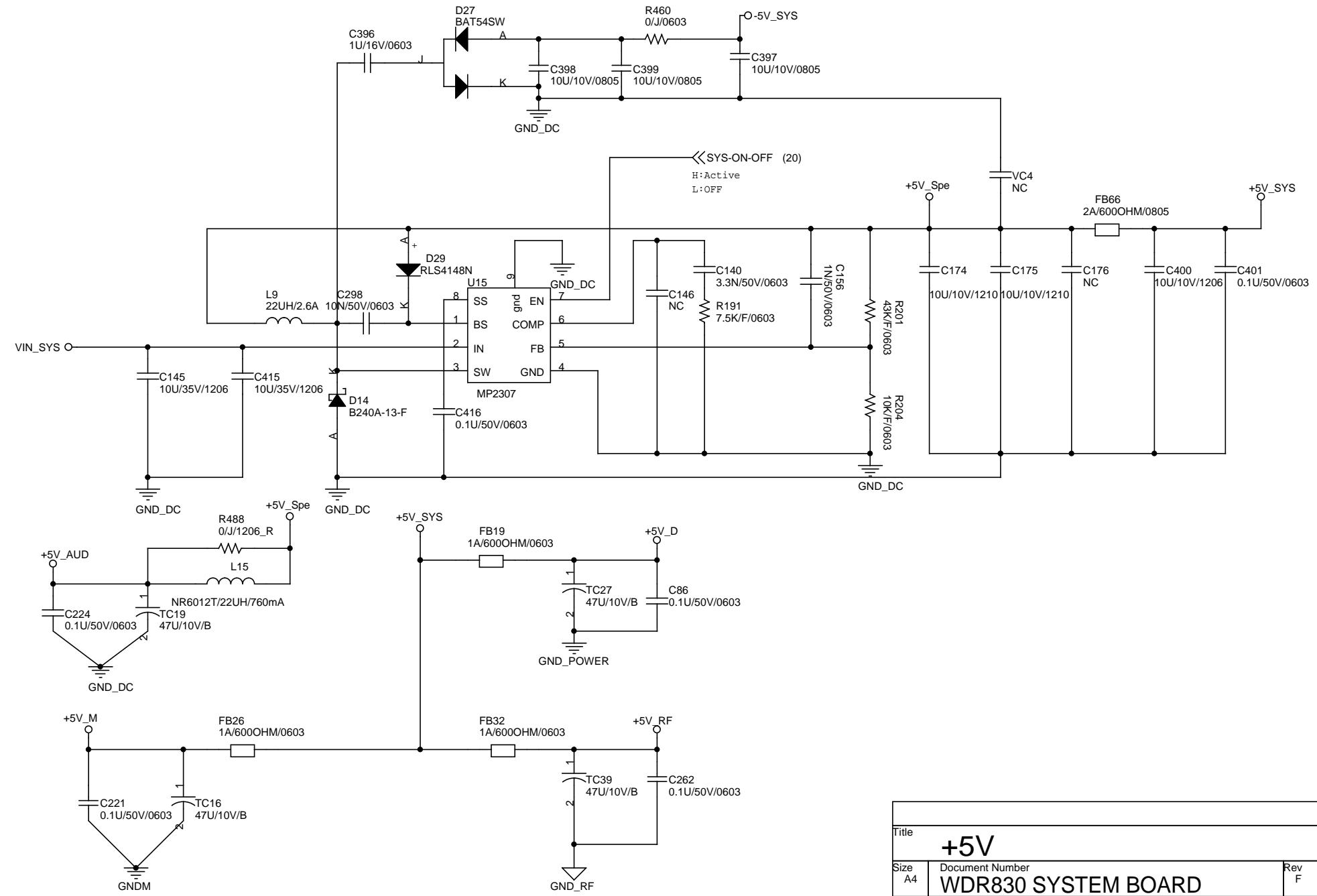
7.0 ELECTRICAL DIAGRAM



| | | |
|------|---------------------|-----|
| Size | Document Number | Rev |
| B | WDR830 SYSTEM BOARD | F |

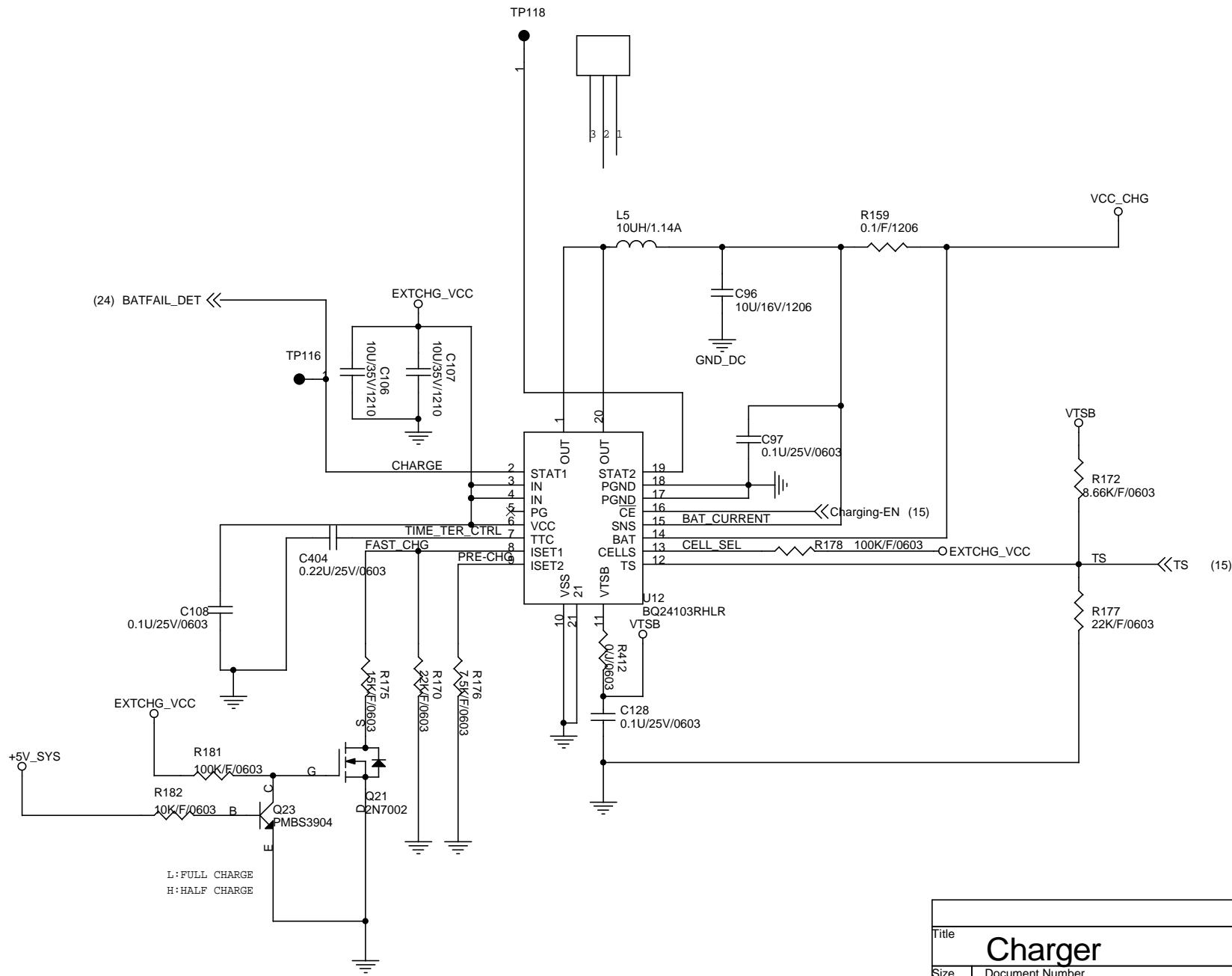
Date: Wednesday, January 03, 2007 Sheet 16 of 28

7.0 ELECTRICAL DIAGRAM



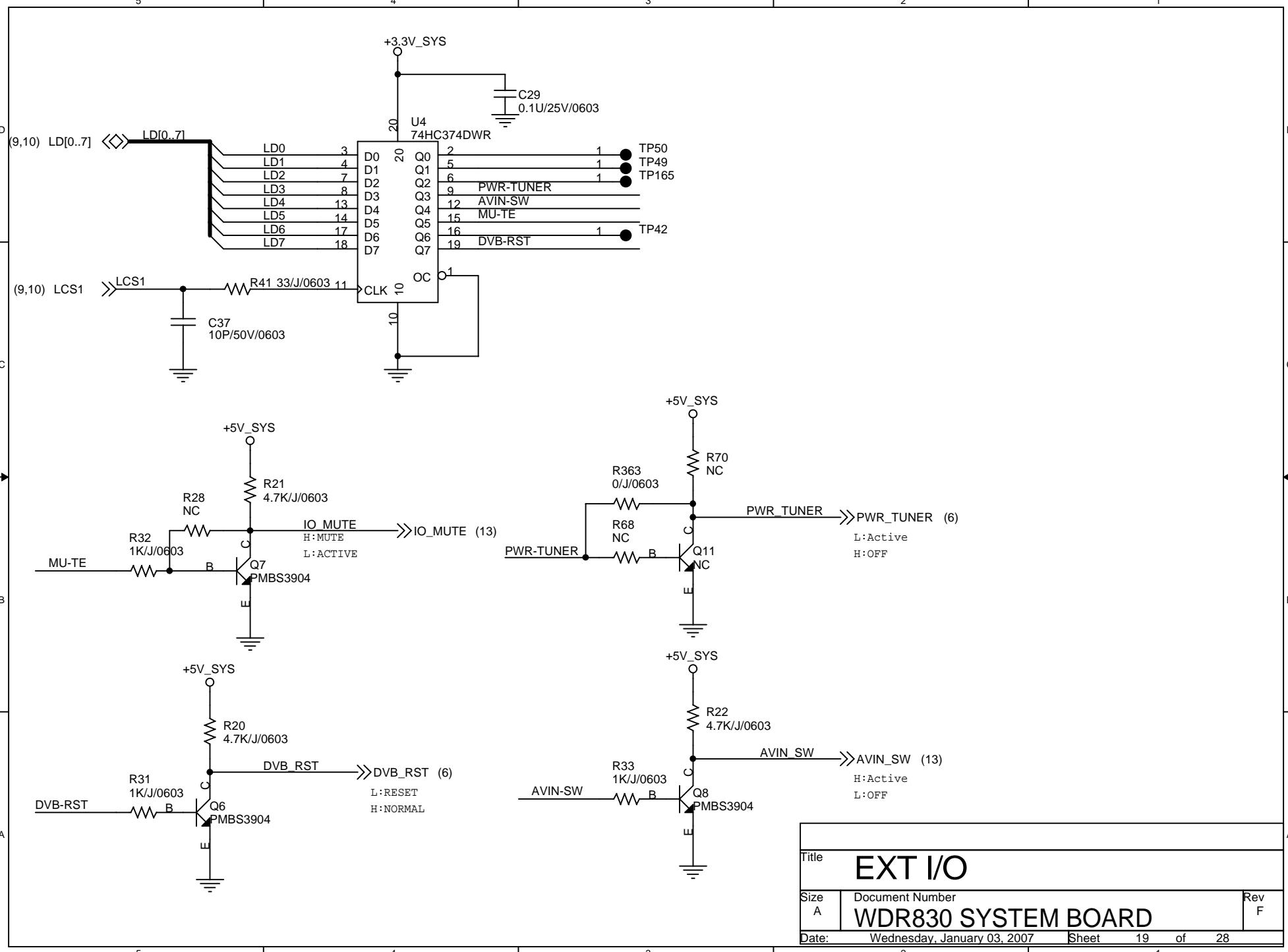
| | |
|-------------|---|
| Title | |
| +5V | |
| Size A4 | Document Number WDR830 SYSTEM BOARD |
| Rev F | Date: Wednesday, January 03, 2007 |
| Sheet 17 | of 28 |

7.0 ELECTRICAL DIAGRAM

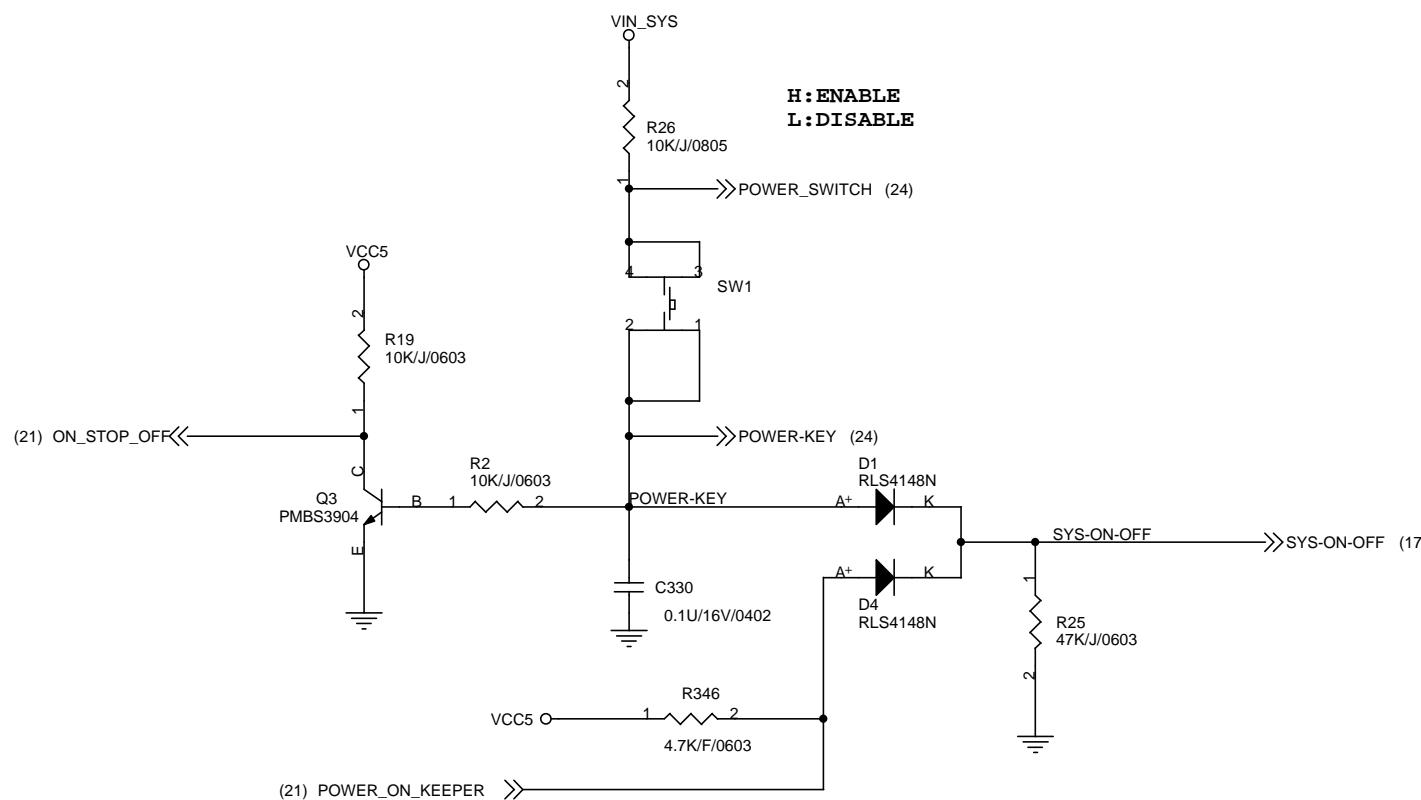


| Title | | |
|-----------------------------------|---------------------|-----|
| Size | Document Number | Rev |
| A4 | WDR830 SYSTEM BOARD | F |
| Date: Wednesday, January 03, 2007 | Sheet 18 of 28 | |

7.0 ELECTRICAL DIAGRAM



7.0 ELECTRICAL DIAGRAM

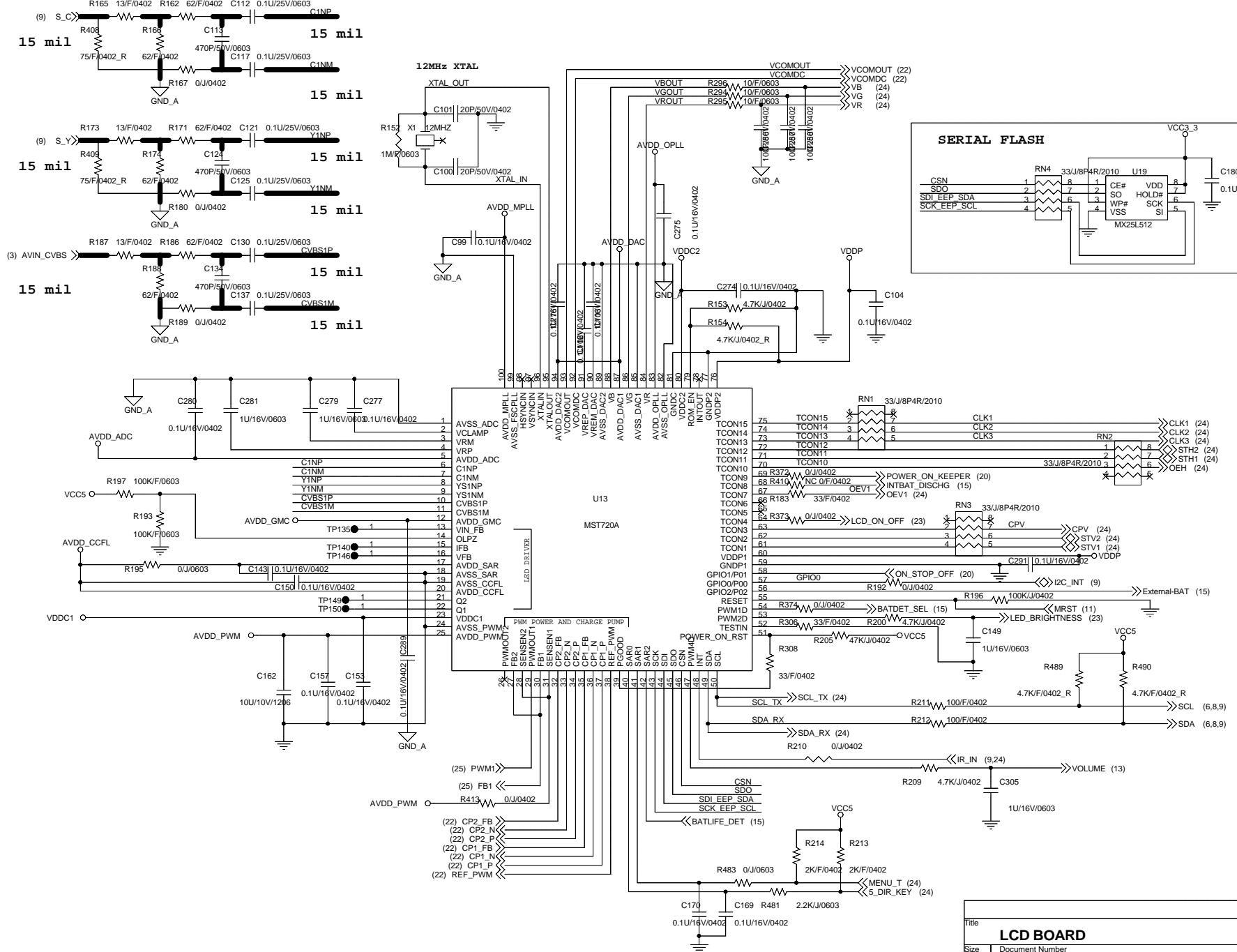


Title **POWER ON/OFF SWITCH**

Size A4 Document Number
WDR830 SYSTEM BOARD Rev F

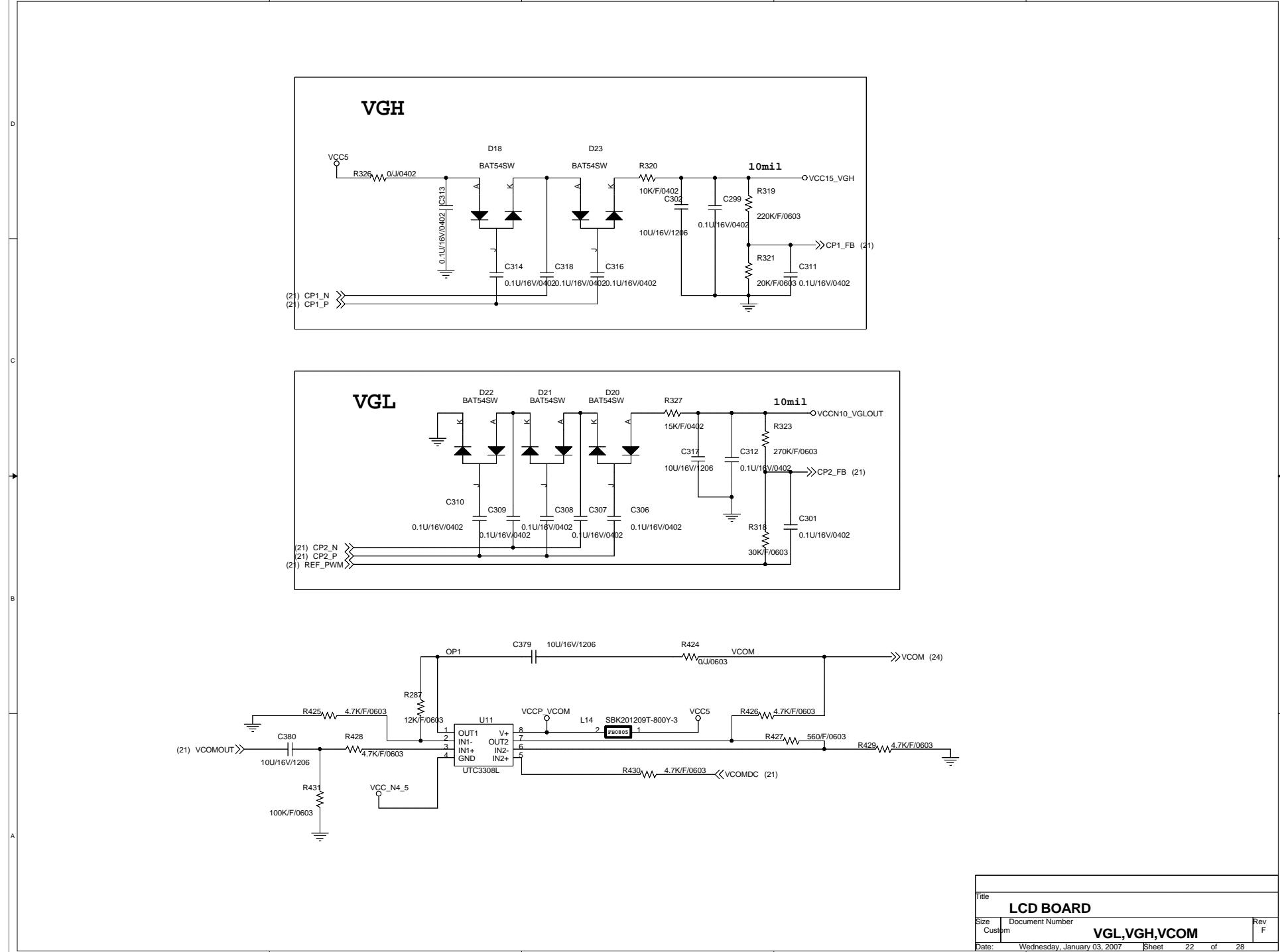
Date: Wednesday, January 03, 2007 Sheet 20 of 28

7.0 ELECTRICAL DIAGRAM



| LCD BOARD | |
|-----------|-----------------------------|
| Size | Document Number |
| Custom | MST720A |
| Date: | Wednesday, January 03, 2007 |
| Rev | F |

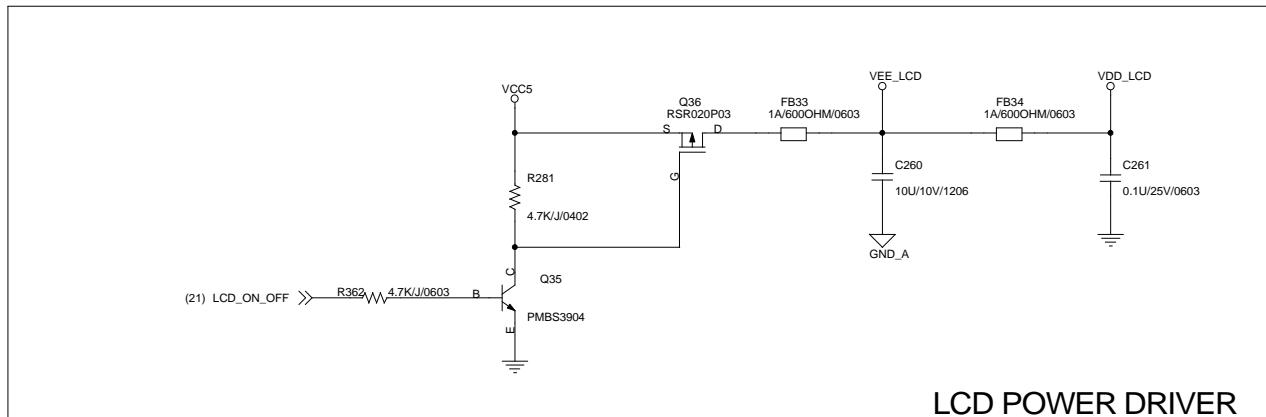
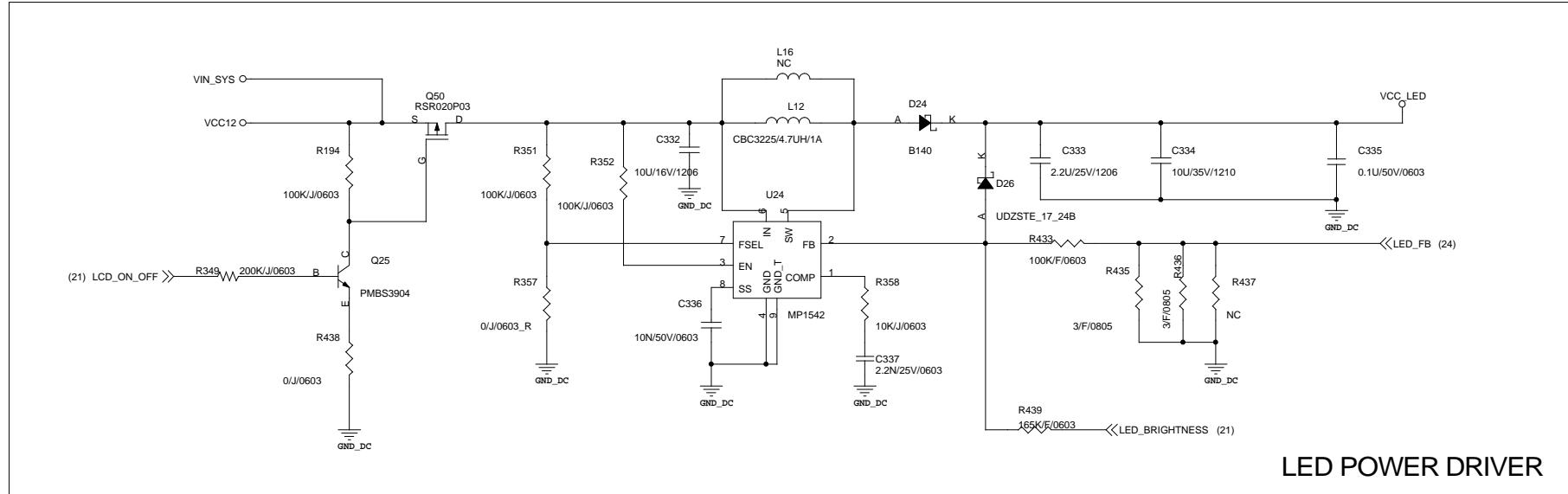
7.0 ELECTRICAL DIAGRAM



7.0 ELECTRICAL DIAGRAM

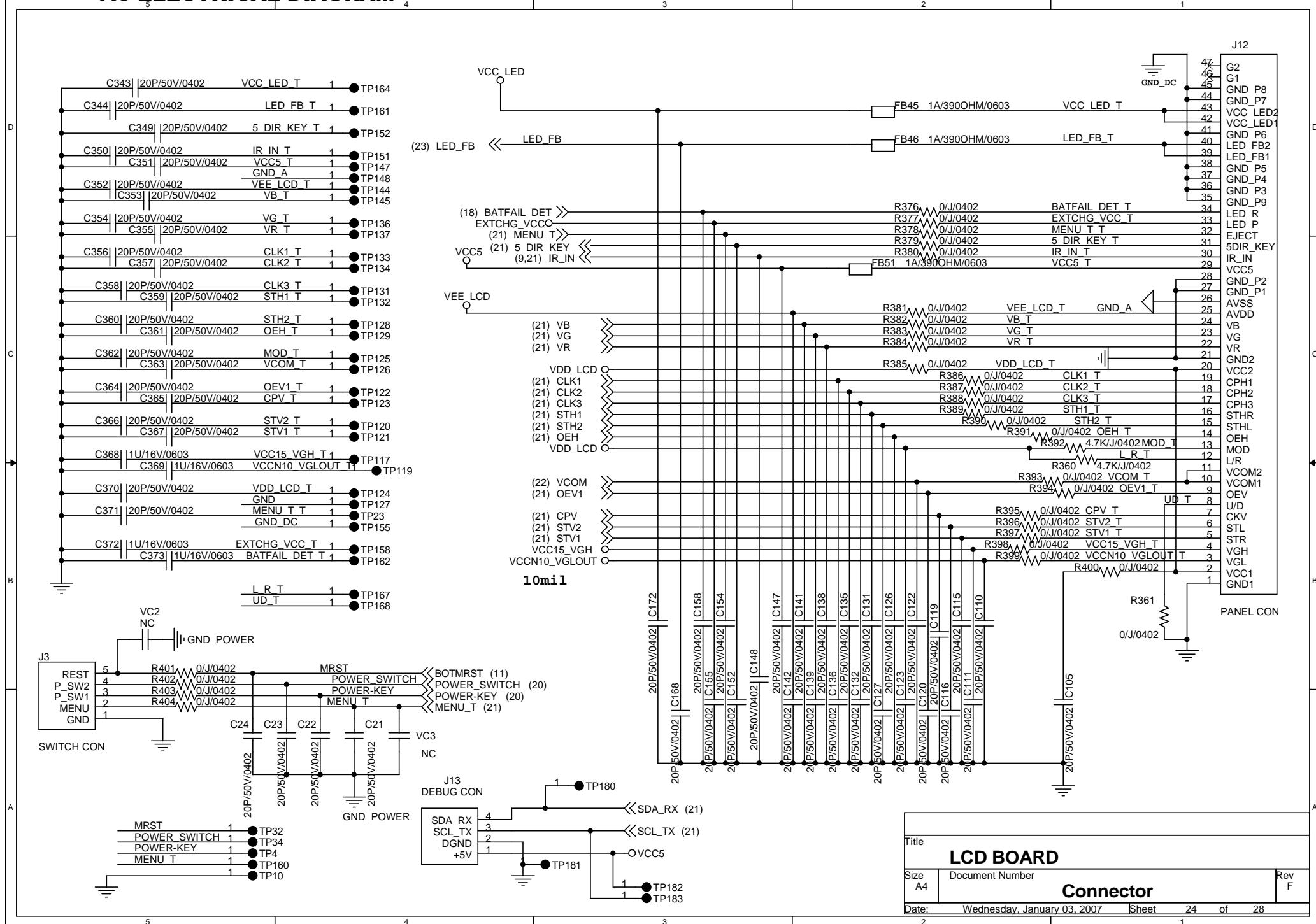
20V, 100mA LED Backlight

$$I_{out} = V_{bri} / (3 \times R_{128})$$

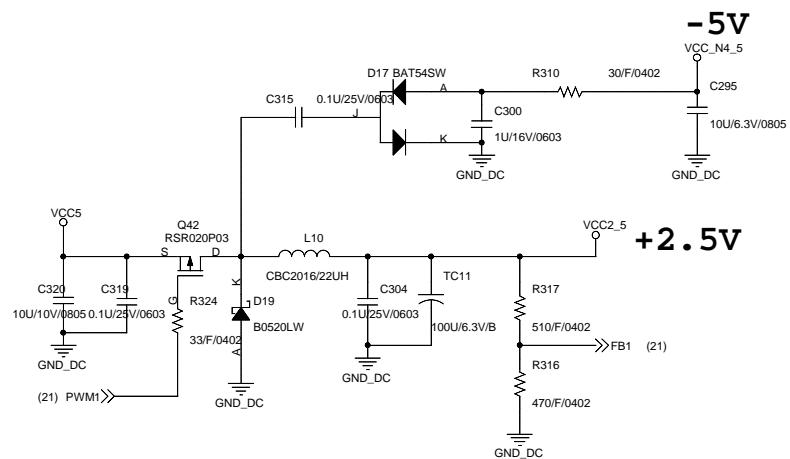


| Title | | |
|--|----------------------------|-----|
| Size | Document Number | Rev |
| Custom | WDR830 SYSTEM BOARD | 01 |
| Date: Wednesday, January 03, 2007 Sheet 23 of 28 | | |

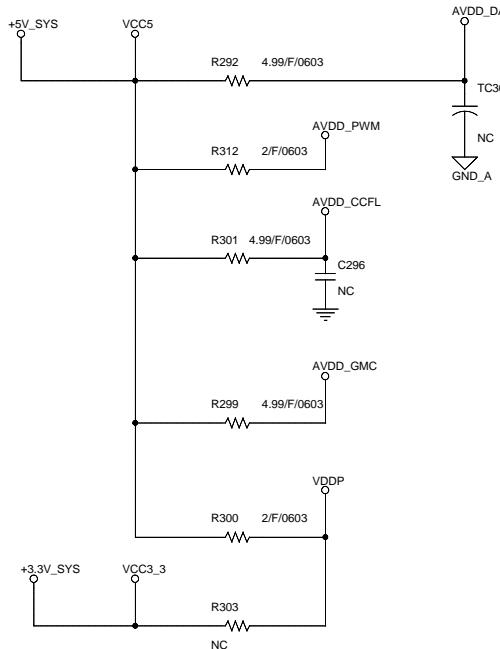
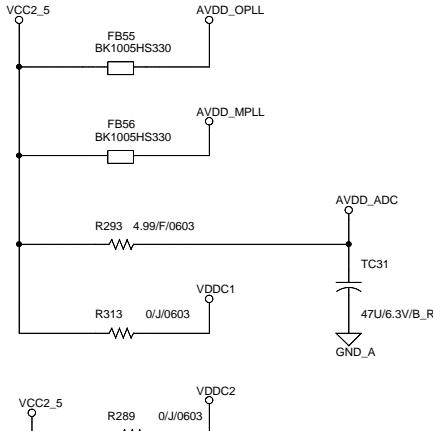
7.0 ELECTRICAL DIAGRAM



7.0 ELECTRICAL DIAGRAM



OUTPUT CONTROL by M720

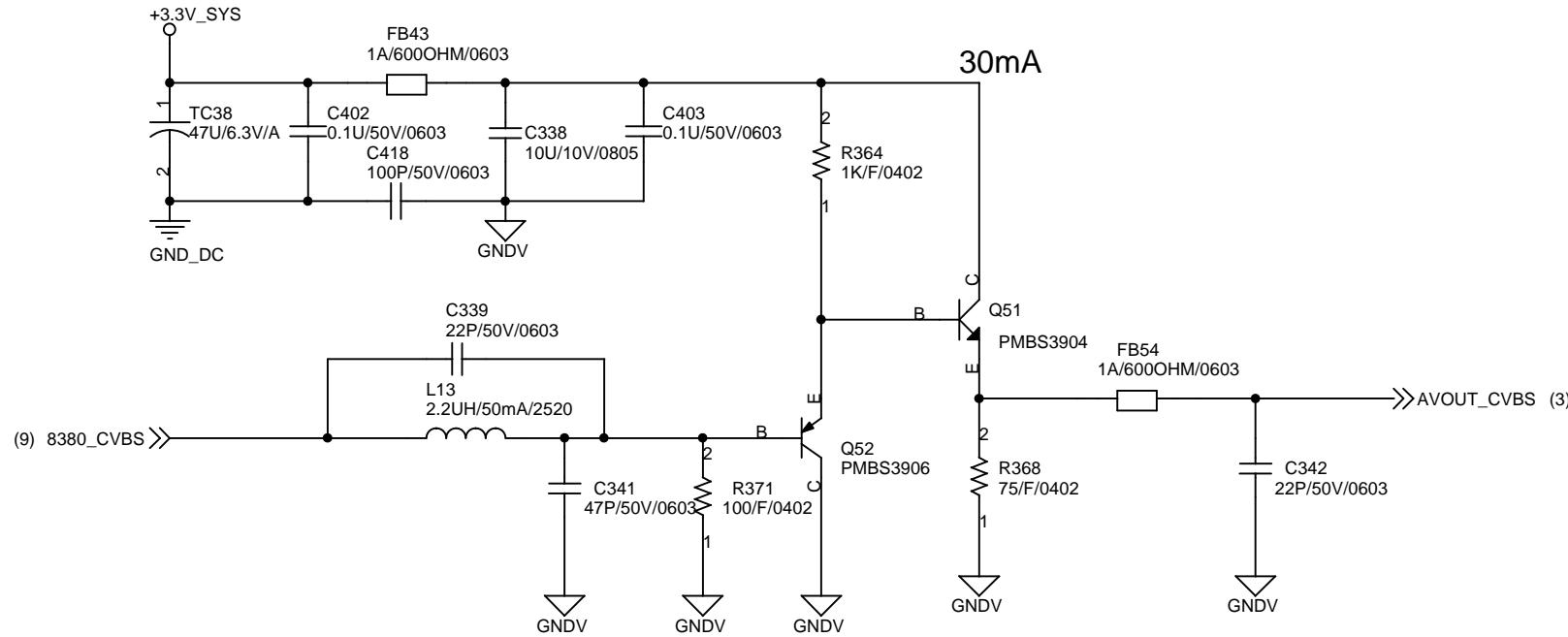


| | |
|-------------------|-----------------|
| Title | |
| M720 POWER | |
| Size | Document Number |
| Custom | Power |

Rev 01

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7.0 ELECTRICAL DIAGRAM



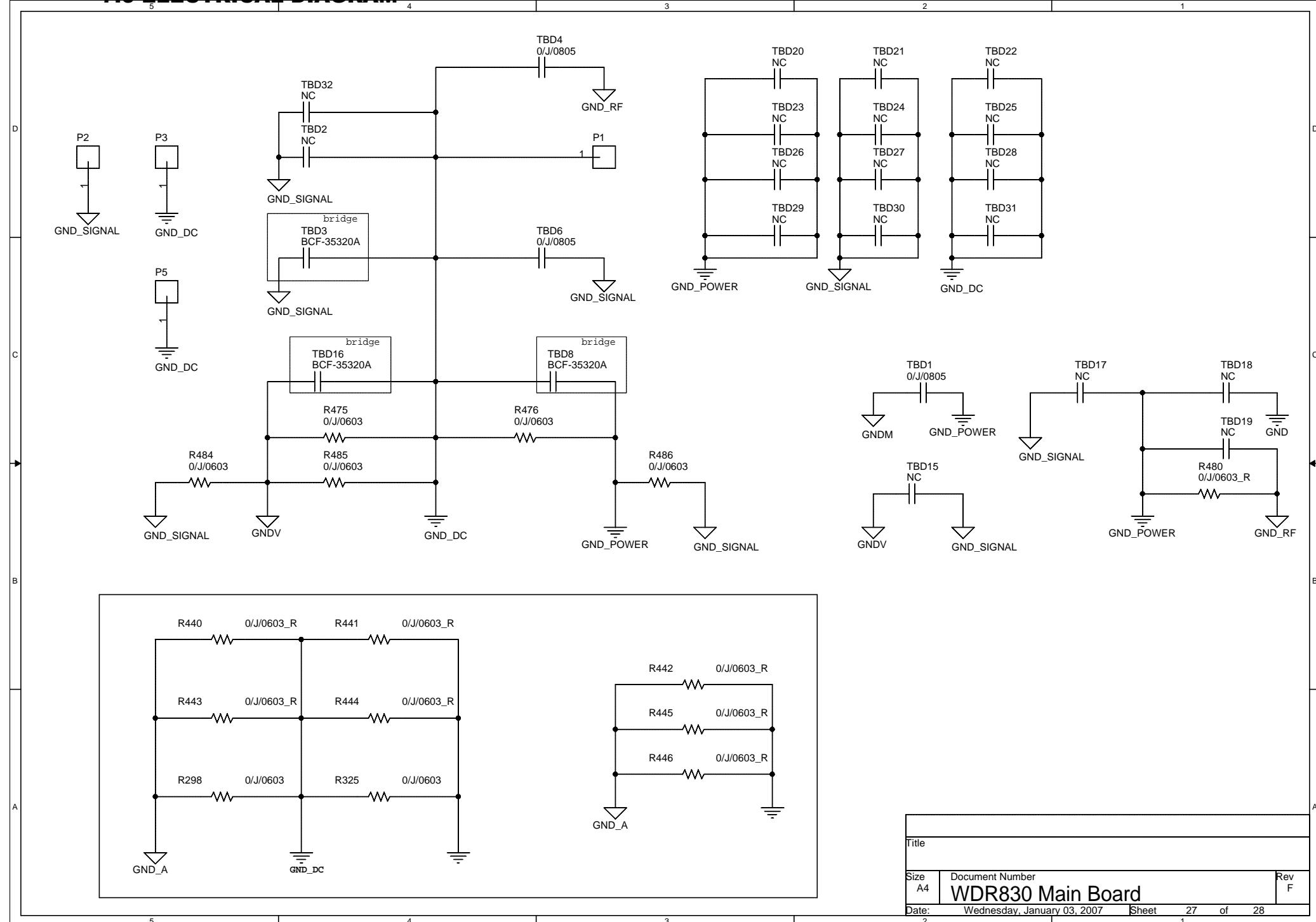
Title
Video buffer

Size A Document Number

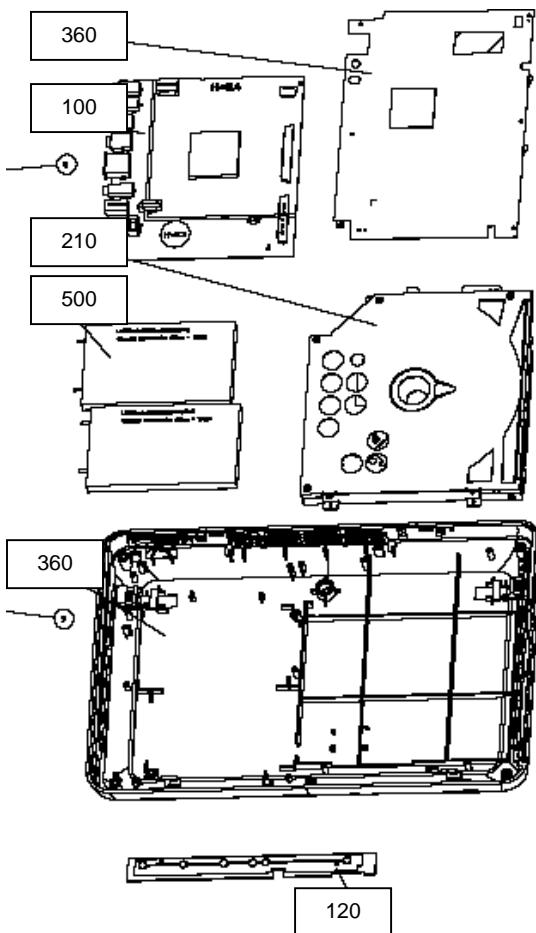
Rev F

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7.0 ELECTRICAL DIAGRAM



8.0 EXPLODED VIEW DIAGRAM & SERVICE PART LIST



Electrical Part list:

| Pos No. | 12NC | Description |
|---------|--------------|----------------------------------|
| 100 | 996510001019 | MAIN PCBA |
| 110 | 996510001020 | 3-IN-1 KEYPAD PCBA |
| 120 | 996510001021 | TOP KEYPAD PCBA |
| 141 | 996510001022 | FFC 5PIN P=0.5 L=80 LINK KEYPAD |
| 142 | 996510001023 | FCC 45PIN P=0.5 L=140 LINK TUNER |

Mechanical Part list:

| Pos No. | 12NC | Description |
|---------|--------------|---------------------------------|
| 200 | 996510001024 | TFT LCD |
| 210 | 996510001025 | DVD LOADER |
| 220 | 996510001026 | SPEAKER ASSY(IN PAIR) |
| 300 | 996510001027 | FRONT CABINET ASSY |
| 310 | 996510001028 | JOGGING BUTTON |
| 320 | 996510001029 | CONDUCTIVE FABER TUNER BOARD |
| 330 | 996510001030 | SPONGE LCD PANEL |
| 340 | 996510001031 | WIRE 1.0MM PITCH 2P/155MM BLACK |
| 350 | 996510001032 | WIRE 1.0MM PITCH 2P/195MM WHITE |
| 360 | 996510001033 | BACK CABINET ASSY |
| 370 | 996510001034 | RUBBER HEAT CONDUCTOR |
| 500 | 996510001035 | BATTERY ASSY |

Accessories Part list:

| Pos No. | 12NC | Description |
|------------|--------------|---|
| ACADAPTOR | 996510001049 | AD/DC ADAPTOR AY4129/00 (FOR PET830/00 & PET830/58) |
| | 996510001052 | AD/DC ADAPTOR AY4129/05 (FOR PET830/05) |
| | 996510001041 | AD/DC ADAPTOR AY4129/37 (FOR PET830/37) |
| | 996510001051 | AD/DC ADAPTOR AY4129/44 (FOR PET830/44) |
| | 996510001050 | AD/DC ADAPTOR AY4129/75 (FOR PET830/75) |
| CARADAPTOR | 996510001036 | CAR ADAPTOR |
| RC | 996510001037 | REMOTE CONTROL |
| RCA CABLE | 996510001038 | RCA CABLE |
| BAG | 996510001039 | CARRY BAY (POUCH) |
| CARMOUNT | 996510001040 | CAR MOUNT EXT ASSY |

9.0 REVISION LIST

Version 1.0 (3141 785 31570)

- Initial release PET830/00/05/37/44/58/75