
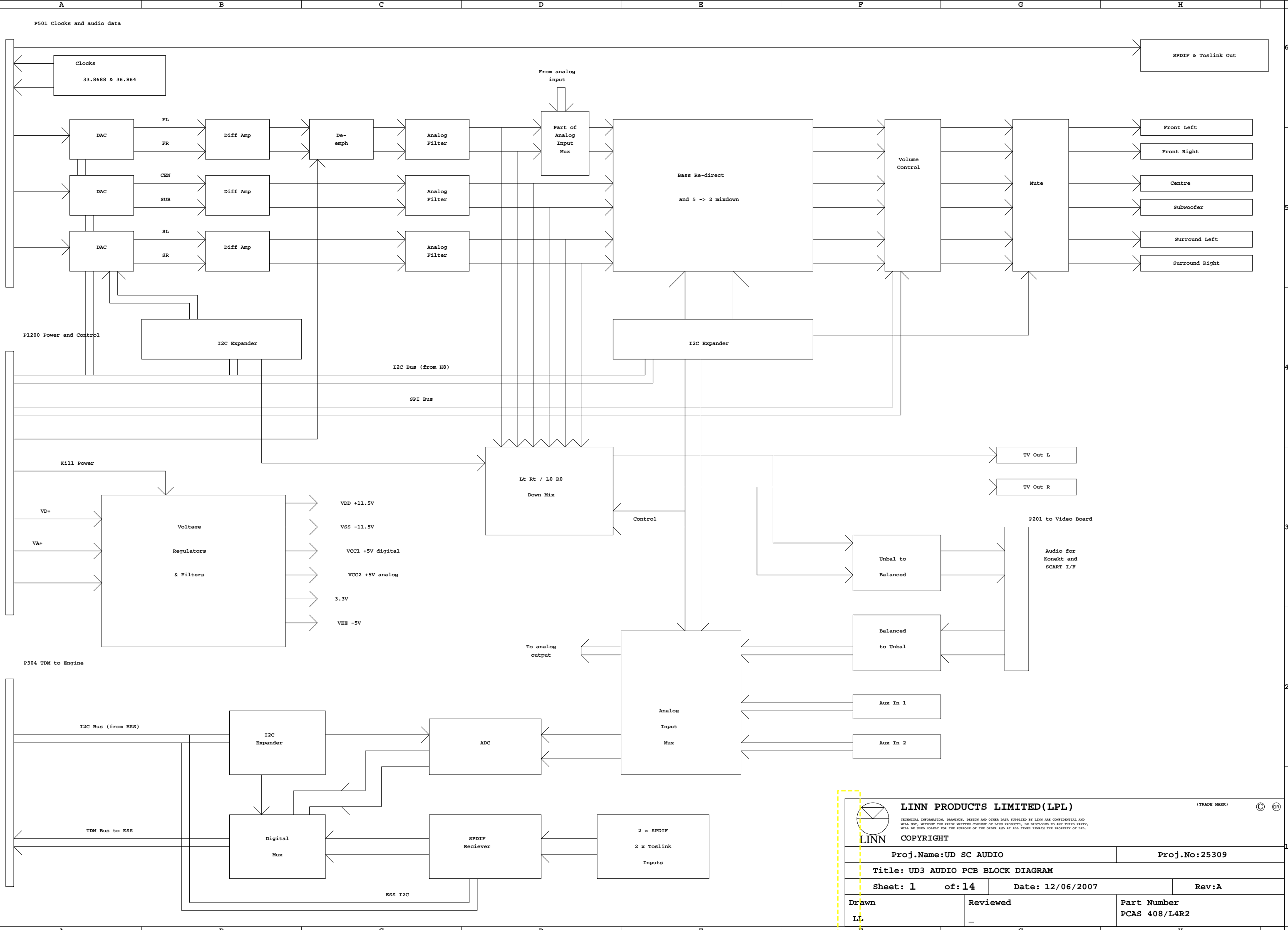





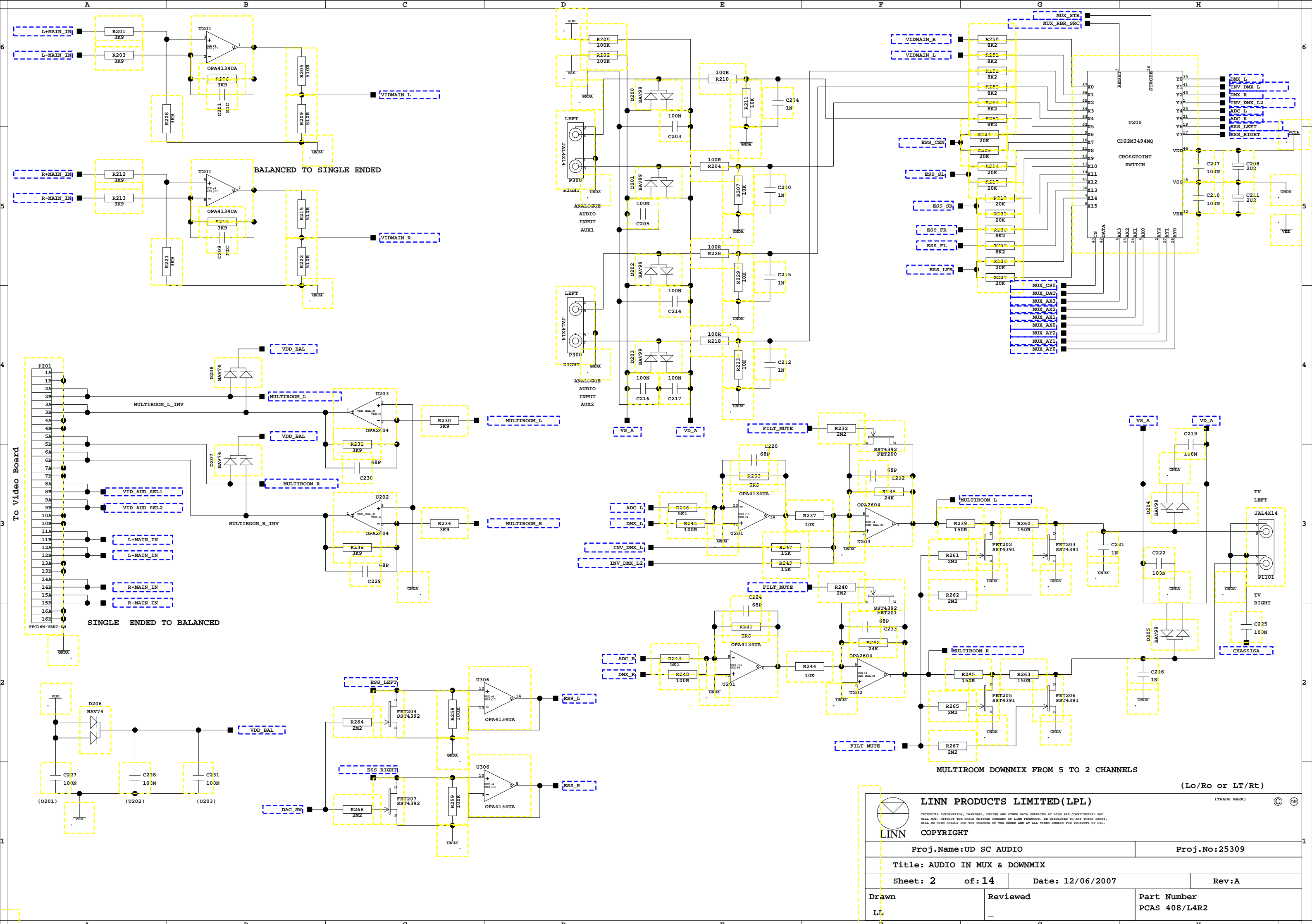
Introducing Statement.

Our new flagship amplification system, crafted without
compromis 





| | | |
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| Proj.Name:UD SC AUDIO | | Proj.No:25309 |
| Title: UD3 AUDIO PCB BLOCK DIAGRAM | | |
| Sheet: 1 | of: 14 | Date: 12/06/2007 |
| Rev:A | | Part Number PCAS 408/L4R2 |
| Drawn LL | Reviewed | |

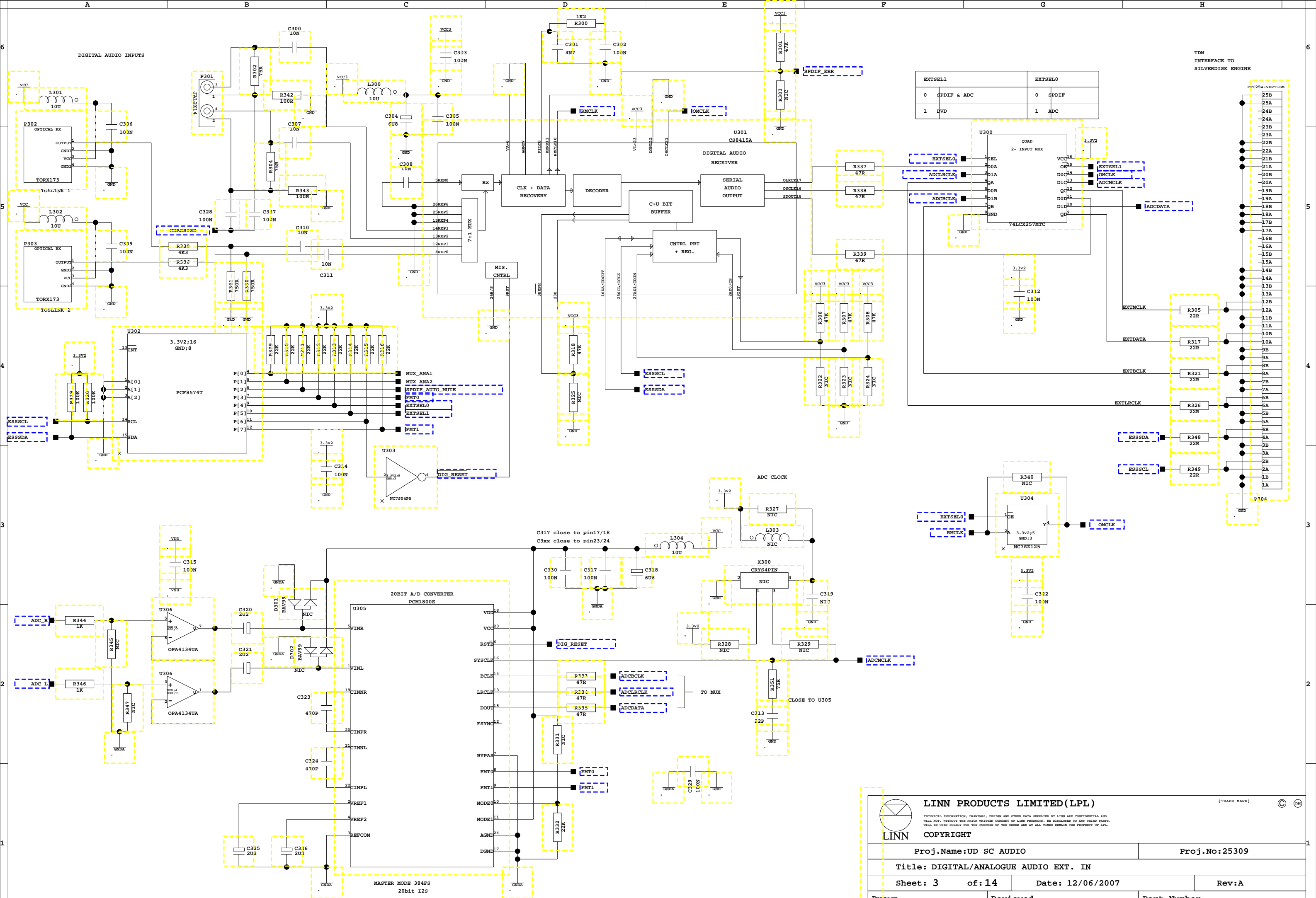


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|-------------------------------|----------|------------------------------|-------|
| Proj.Name:UD SC AUDIO | | Proj.No:25309 | |
| Title: AUDIO IN MUX & DOWNMIX | | | |
| Sheet: 2 | of: 14 | Date: 12/06/2007 | Rev:A |
| Drawn LL | Reviewed | Part Number PCAS 408/L4R2 | |



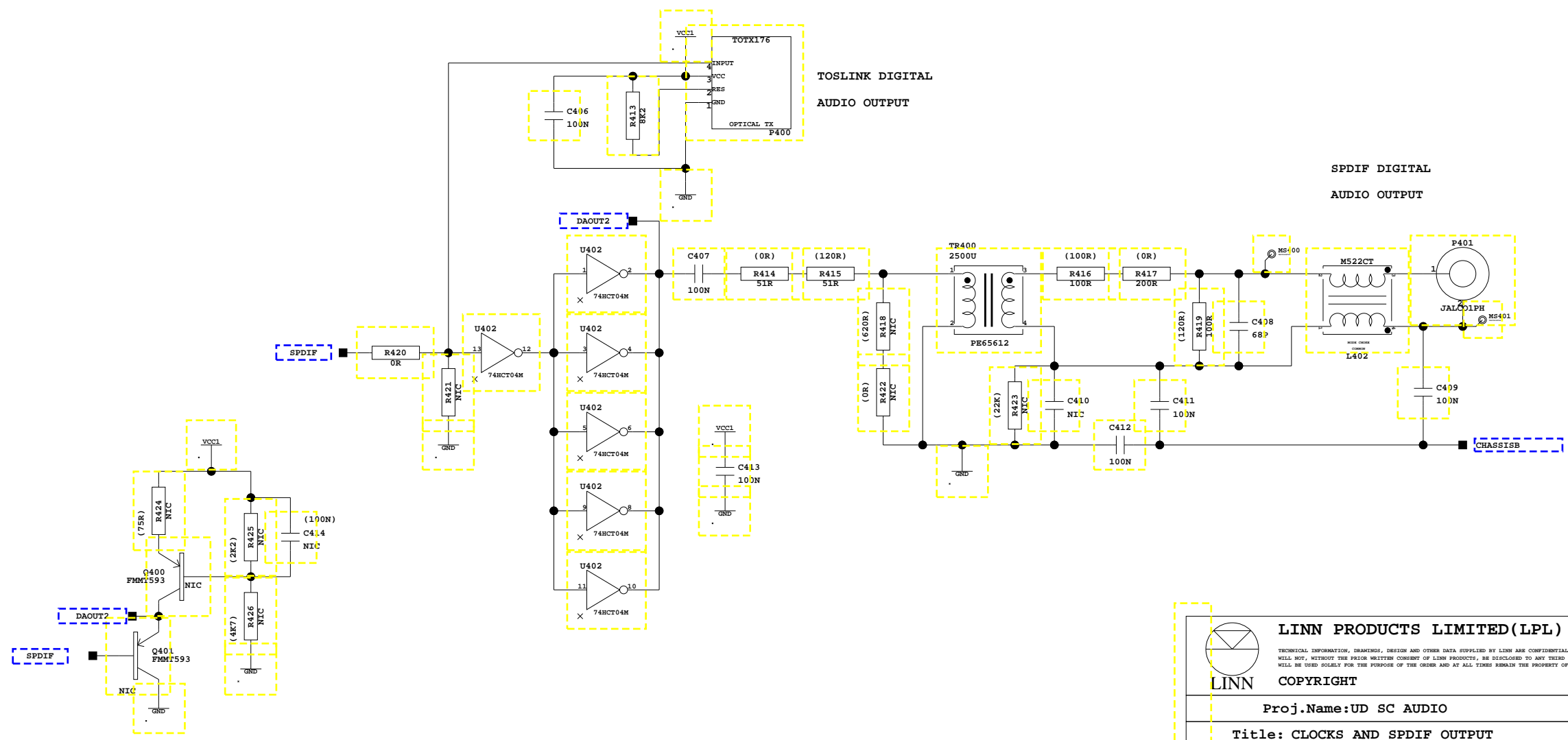
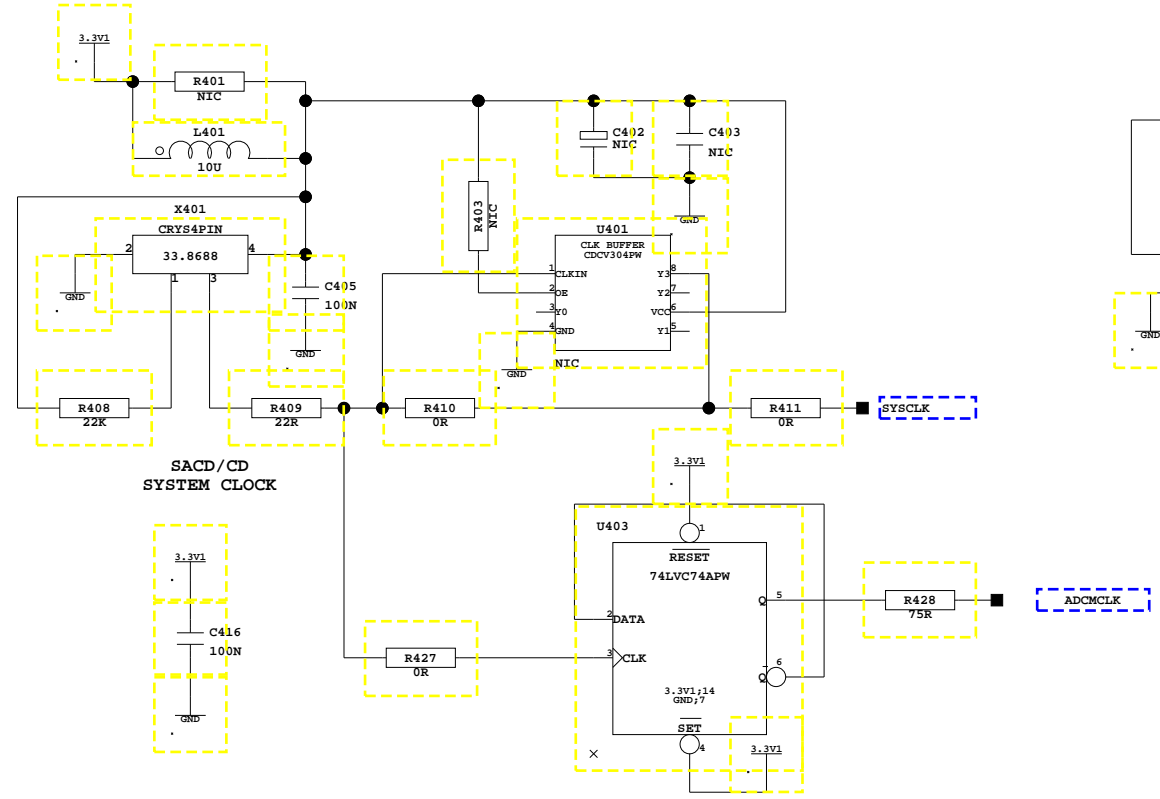
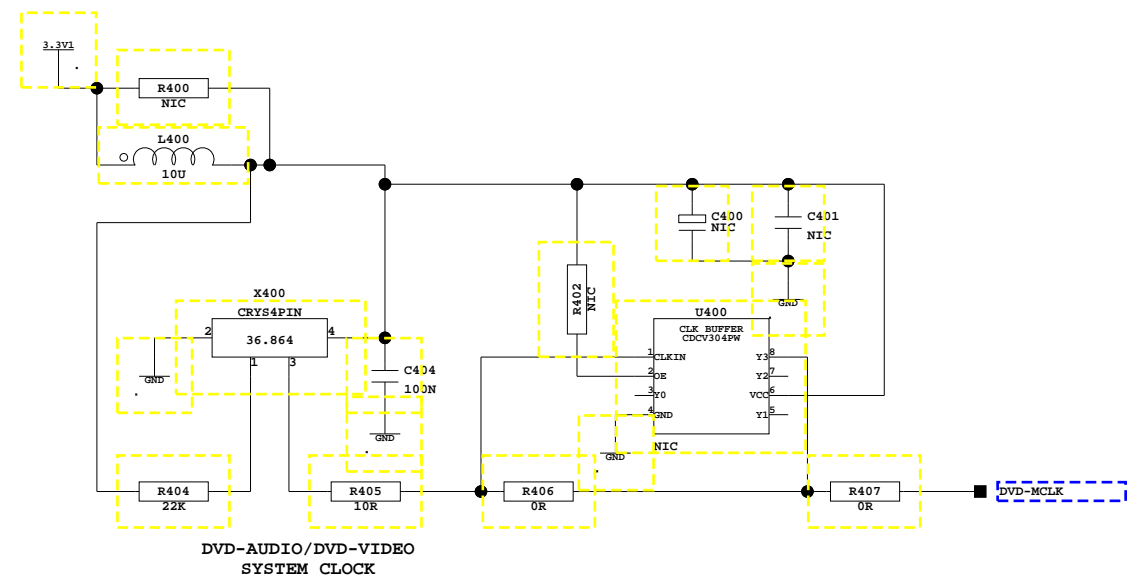
| EXTSEL1 | | EXTSEL0 | |
|---------|-------------|---------|-------|
| 0 | SPDIF & ADC | 0 | SPDIF |
| 1 | DVD | 1 | ADC |


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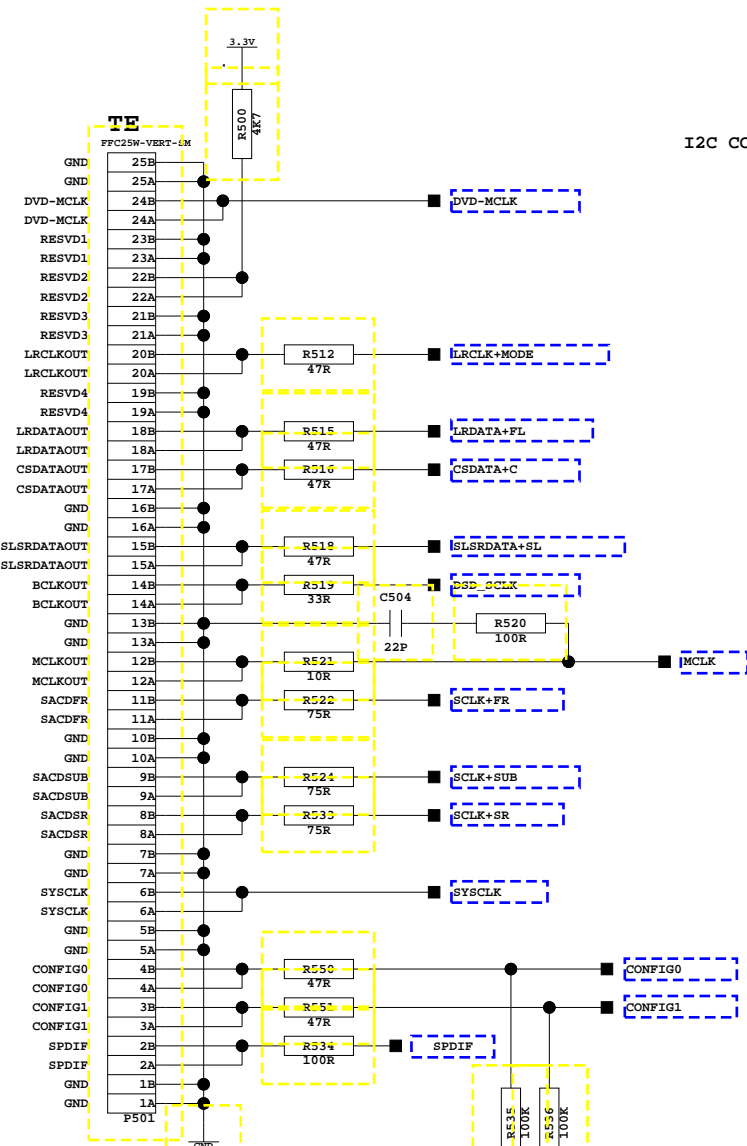
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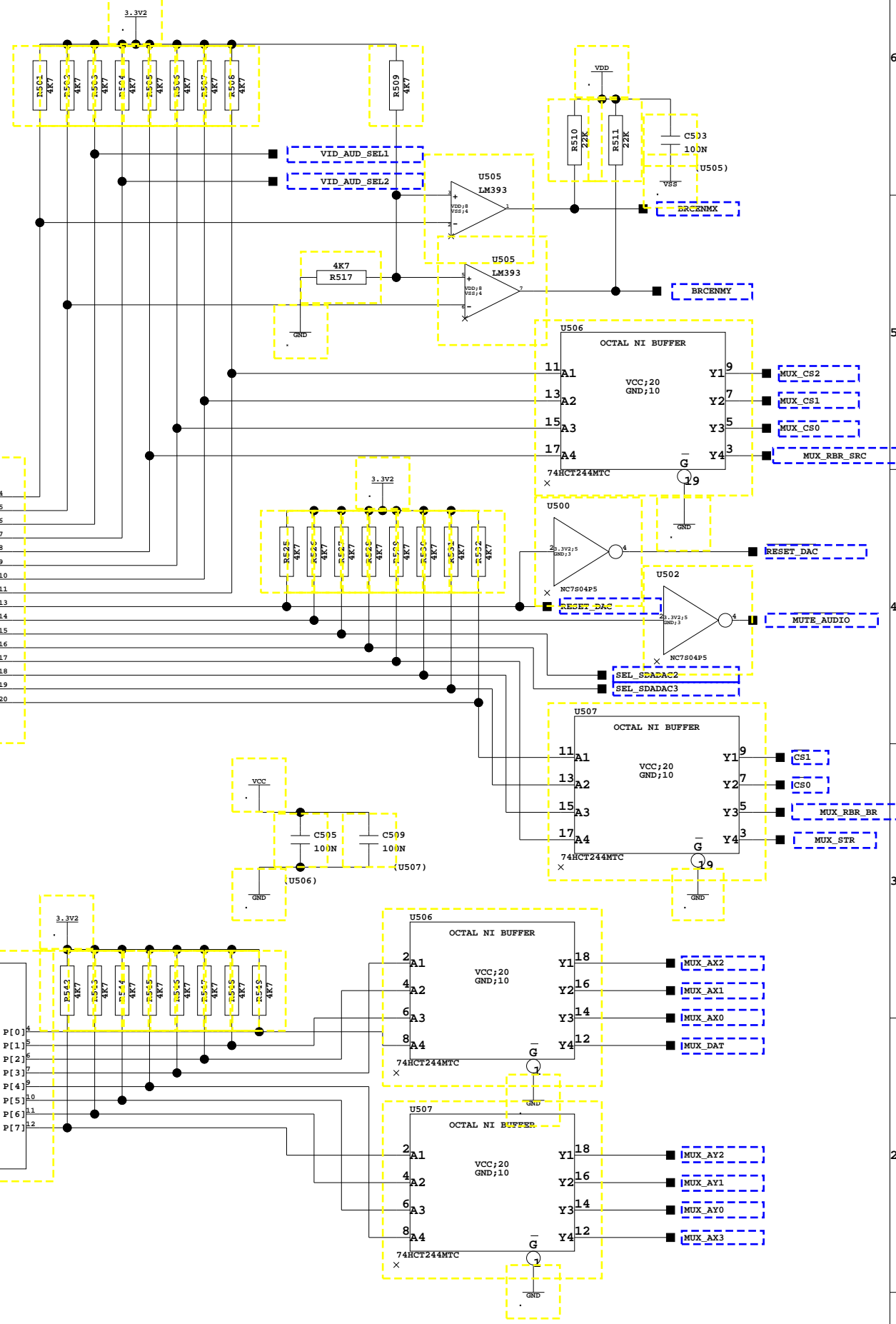
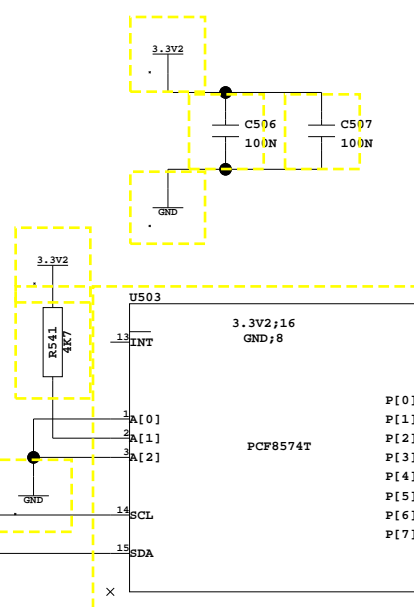
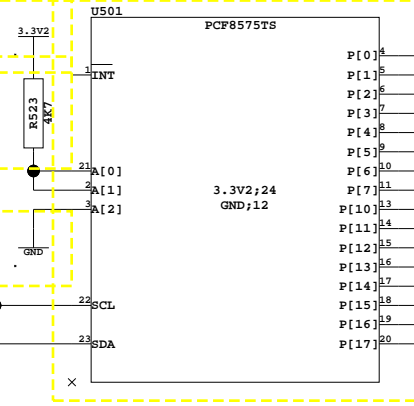
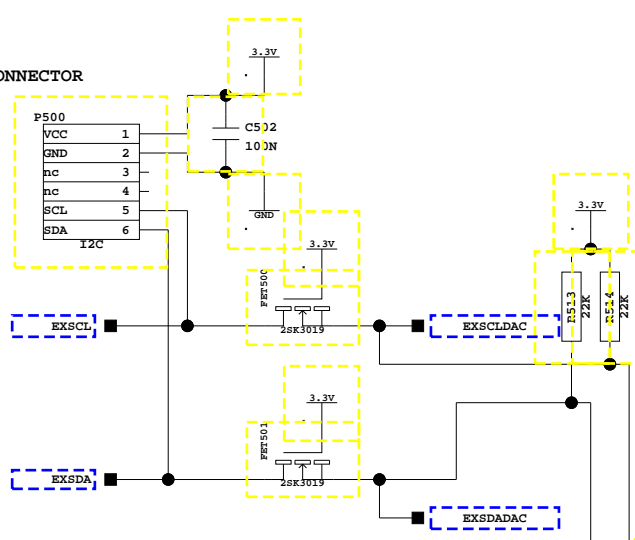
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|---------------------------------------|----------|------------------------------|-------|
| Proj.Name:UD SC AUDIO | | Proj.No:25309 | |
| Title: DIGITAL/ANALOGUE AUDIO EXT. IN | | | |
| Sheet: 3 | of: 14 | Date: 12/06/2007 | Rev:A |
| Drawn AJC | Reviewed | Part Number PCAS 408/L4R2 | |



| | | | |
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| Proj.Name:UD SC AUDIO | | Proj.No:25309 | |
| Title: CLOCKS AND SPDIF OUTPUT | | | |
| Sheet: 4 | of: 14 | Date: 12/06/2007 | Rev:A |
| Drawn LL | Reviewed | Part Number PCAS 408/L4R2 | |



I2C CONNECTOR



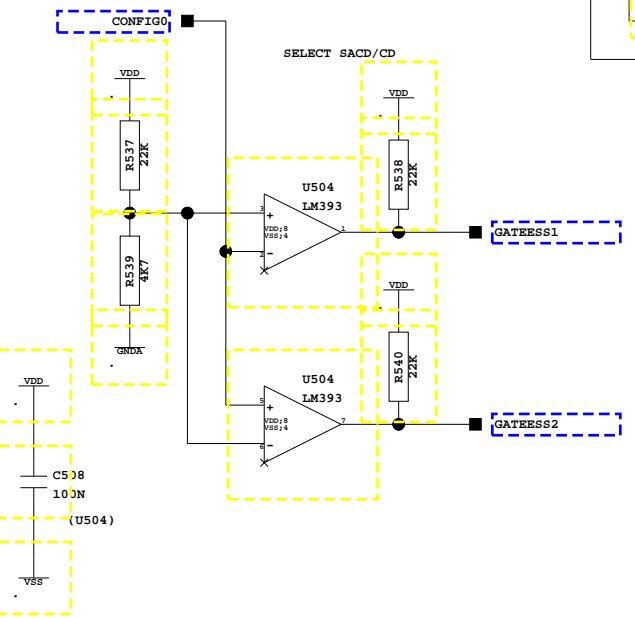
TO SILVERDISC ENGINE

| | | | | |
|----------|---|---|---|---|
| RESVD | 4 | 3 | 2 | 1 |
| Solution | 0 | 0 | 1 | 0 |

| FORMAT | CONFIG1 | CONFIG0 |
|-------------|---------|---------|
| CD | 0 | 0 |
| DVD | 0 | 1 |
| SACD-MULTI | 1 | 0 |
| SACD-STEREO | 1 | 1 |

| CONNECTOR | PCM MODE | DSD MODE |
|-------------|------------|----------|
| MCLKOUT | MCLK | MCLK |
| BCLKOUT | GND | DSD_SCLK |
| LRCLKOUT | LRCLK | DSD_MODE |
| LRDATAOUT | SDATA_LR | DSD_FL |
| CSDATAOUT | SDATA_CS | DSD_C |
| SLSRDATAOUT | SDATA_SLSR | DSD_SL |
| SACDFR | SCLK | DSD_FR |
| SACDSUB | SCLK | DSD_SUB |
| SACDSR | SCLK | DSD_SR |
| SYSCLK | - | - |
| DVD-MCLK | - | - |

| POWER SUPPLIES | | |
|----------------|--------|----------------------------|
| VCC1 | +5V | SPDIF |
| VCC2 | +5V | DACs (Analog side) + Logic |
| 3.3V1 | +3.3V | DACs (Digital side) |
| 3.3V2 | +3.3V | I2C + Logic |
| VDD | +11.5V | Analog Audio |
| VSS | -11.5V | Analog Audio |
| VD | +4.8V | Standby supply |
| | | |
| 5VP | +5V | RS232 + Remote |

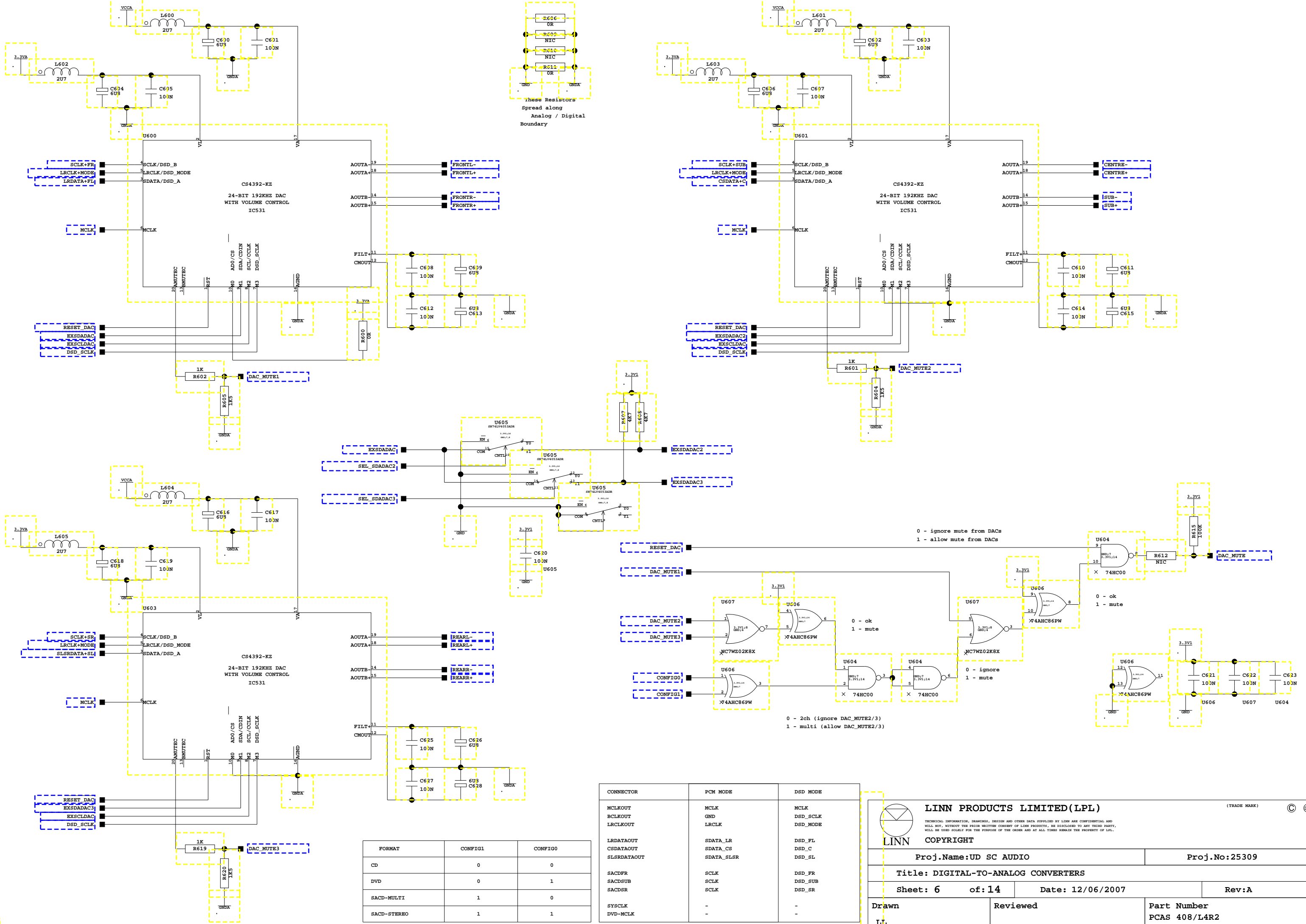


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|-----------------------|----------|------------------------------|-------|
| Proj.Name:UD SC AUDIO | | Proj.No:25309 | |
| Title: I2C EXP | | | |
| Sheet: 5 | of: 14 | Date: 12/06/2007 | Rev:A |
| Drawn LL | Reviewed | Part Number PCAS 408/L4R2 | |



These Resistors Spread along Analog / Digital Boundary

0 - ignore mute from DACs
1 - allow mute from DACs


0 - ok
1 - mute

0 - ignore
1 - mute

0 - 2ch (ignore DAC_MUTE2/3)
1 - multi (allow DAC_MUTE2/3)

| FORMAT | CONFIG1 | CONFIG0 |
|-------------|---------|---------|
| CD | 0 | 0 |
| DVD | 0 | 1 |
| SACD-MULTI | 1 | 0 |
| SACD-STEREO | 1 | 1 |

| CONNECTOR | PCM MODE | DSD MODE |
|-------------|------------|----------|
| MCLKOUT | MCLK | MCLK |
| BCLKOUT | GND | DSD_SCLK |
| LRCLKOUT | LRCLK | DSD_MODE |
| LRDATAOUT | SDATA_LR | DSD_FL |
| CSDATAOUT | SDATA_CS | DSD_C |
| SLSRDATAOUT | SDATA_SLSR | DSD_SL |
| SACDFR | SCLK | DSD_FR |
| SACDSUB | SCLK | DSD_SUB |
| SACDSR | SCLK | DSD_SR |
| SYSCLK | - | - |
| DVD-MCLK | - | - |



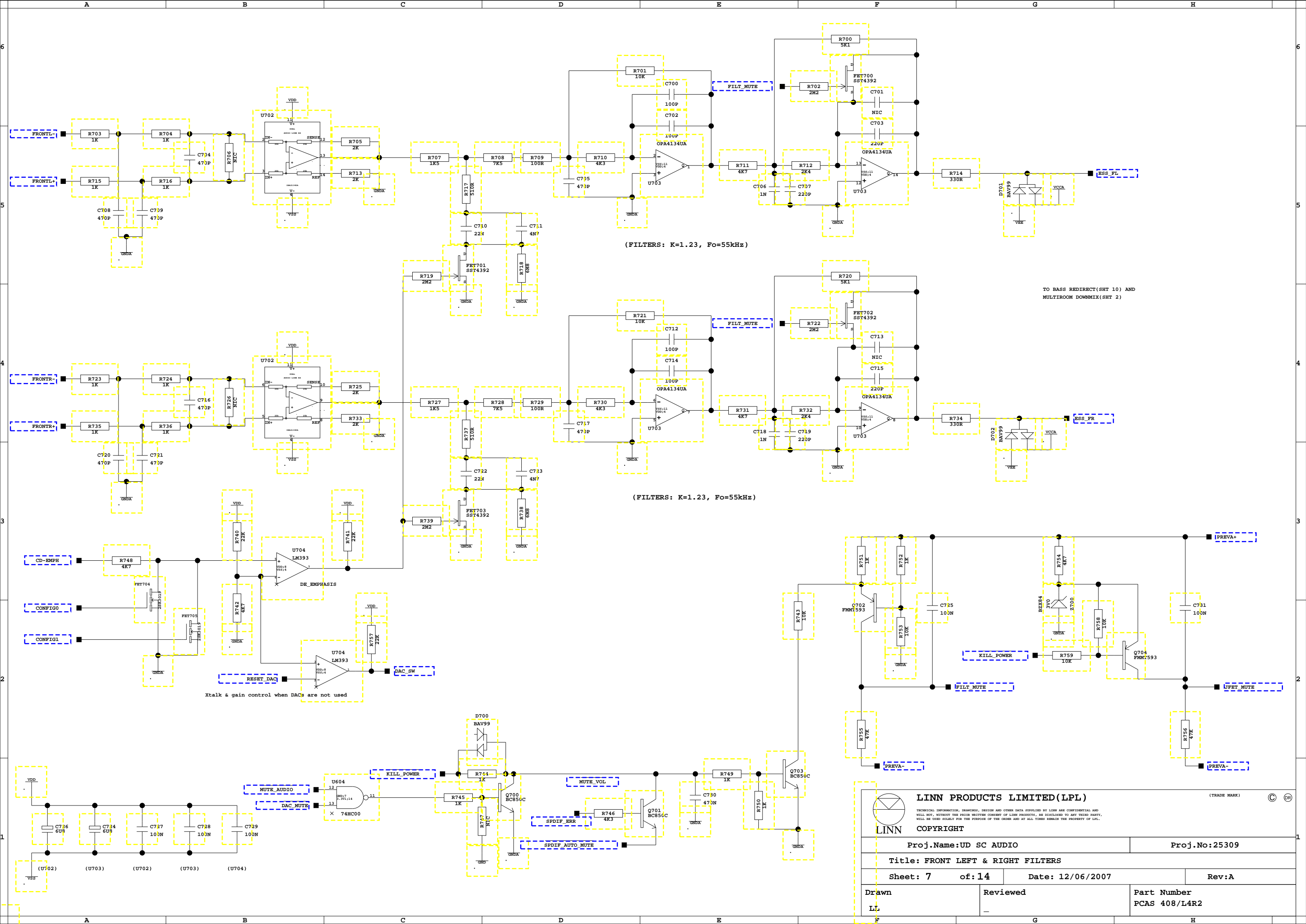
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Proj.No:UD SC AUDIO
Title: DIGITAL-TO-ANALOG CONVERTERS
Sheet: 6 of: 14 Date: 12/06/2007

Drawn: LL
Reviewed: _____

Proj.No:25309
Rev:A
Part Number: PCAS 408/L4R2

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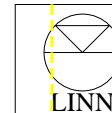


(FILTERS: K=1.23, Fo=55kHz)

(FILTERS: K=1.23, Fo=55kHz)

TO BASS REDIRECT(SHT 10) AND
MULTIROOM DOWNMIX(SHT 2)

Xtalk & gain control when DACs are not used



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Proj.Name:UD SC AUDIO

Proj.No:25309

Title: FRONT LEFT & RIGHT FILTERS

Sheet: 7

of: 14

Date: 12/06/2007

Rev:A

Drawn
LL

Reviewed

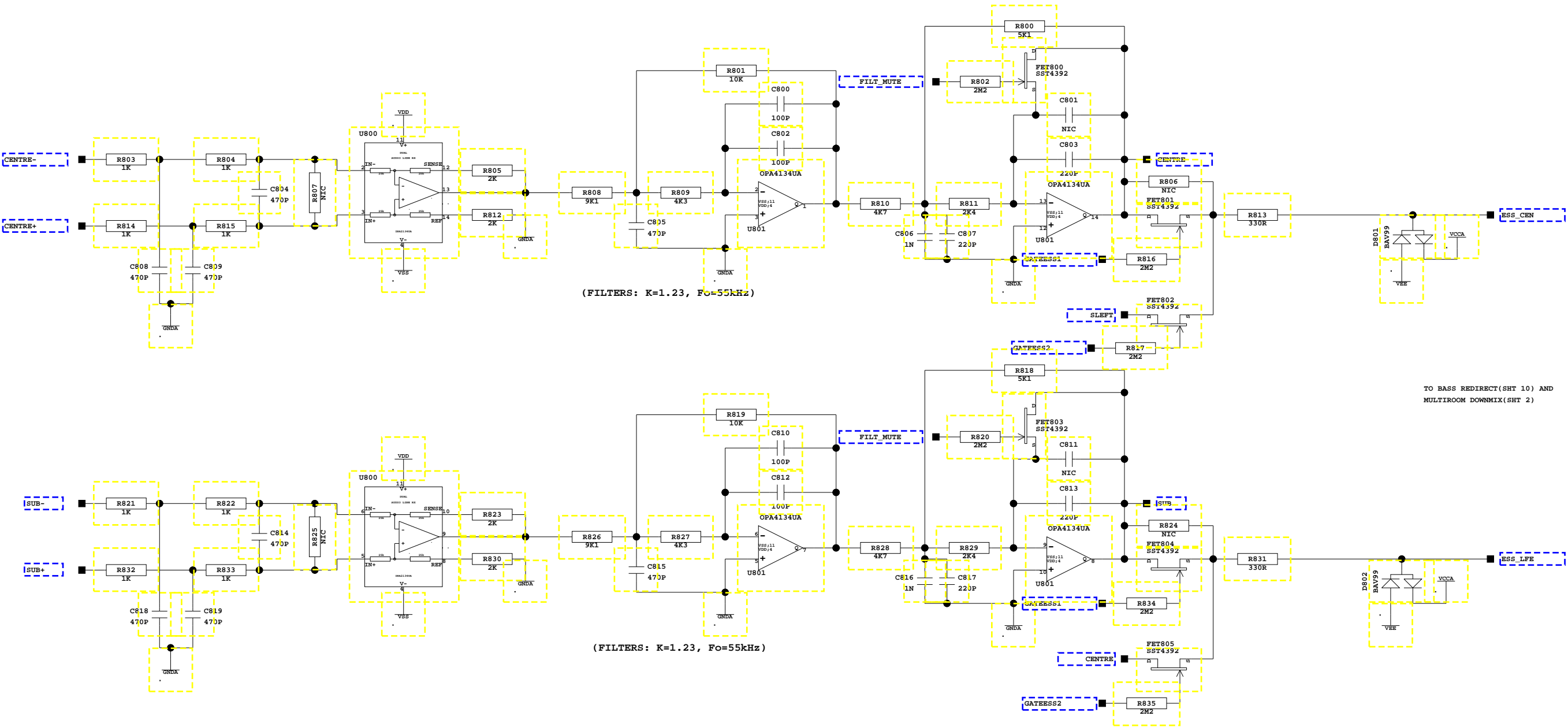
Part Number
PCAS 408/L4R2

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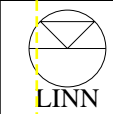
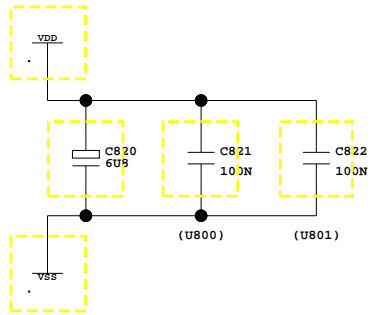
DR



(FILTERS: K=1.23, Fo=55kHz)

(FILTERS: K=1.23, Fo=55kHz)

TO BASS REDIRECT(SHT 10) AND MULTIROOM DOWNMIX(SHT 2)

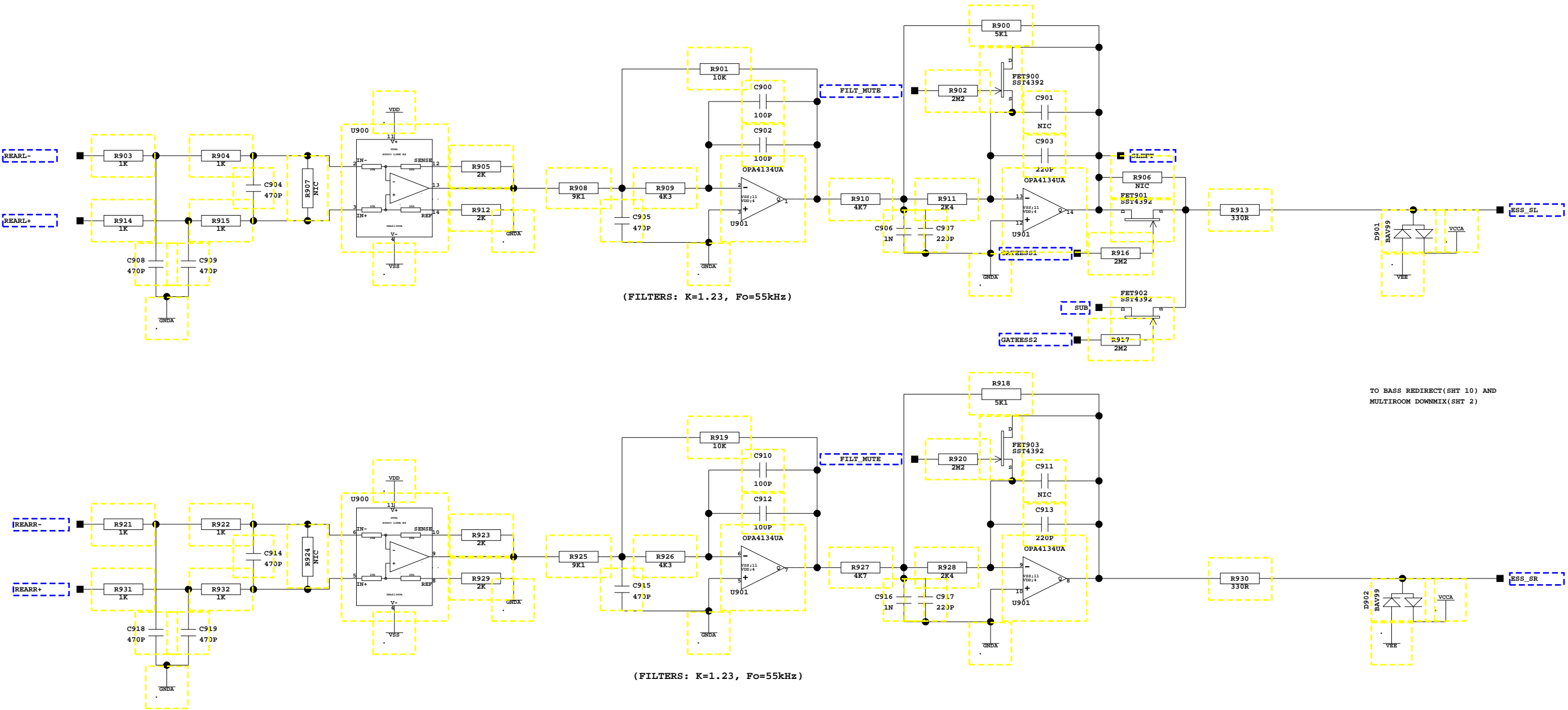


LINN PRODUCTS LIMITED (LPL)

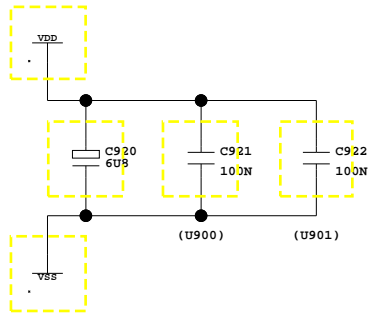
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| Proj.Name:UD SC AUDIO | | Proj.No:25309 | |
| Title: CENTRE & SUB FILTERS | | | |
| Sheet: 8 | of: 14 | Date: 12/06/2007 | Rev:A |
| Drawn LL | Reviewed | Part Number PCAS 408/L4R2 | |



TO BASS REDIRECT(SHT 10) AND
MULTIROOM DOWNMIX(SHT 2)





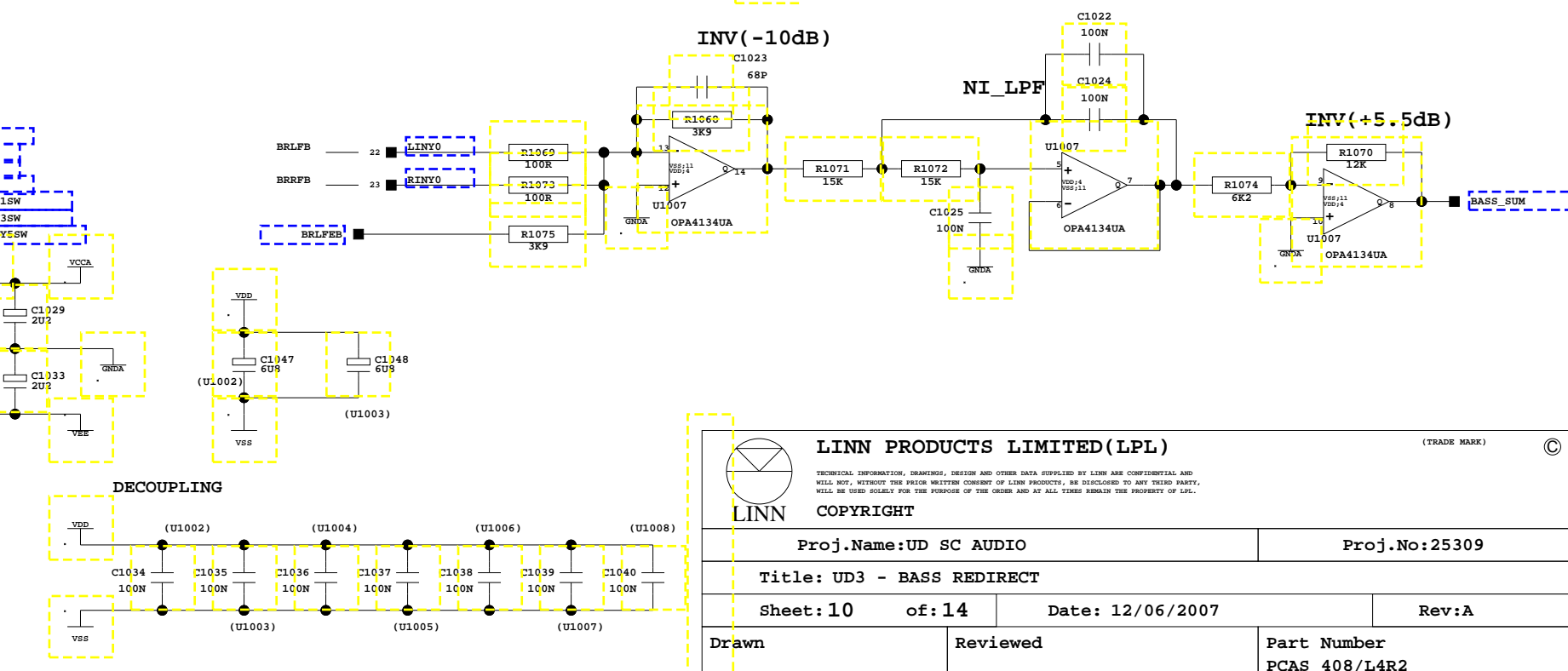
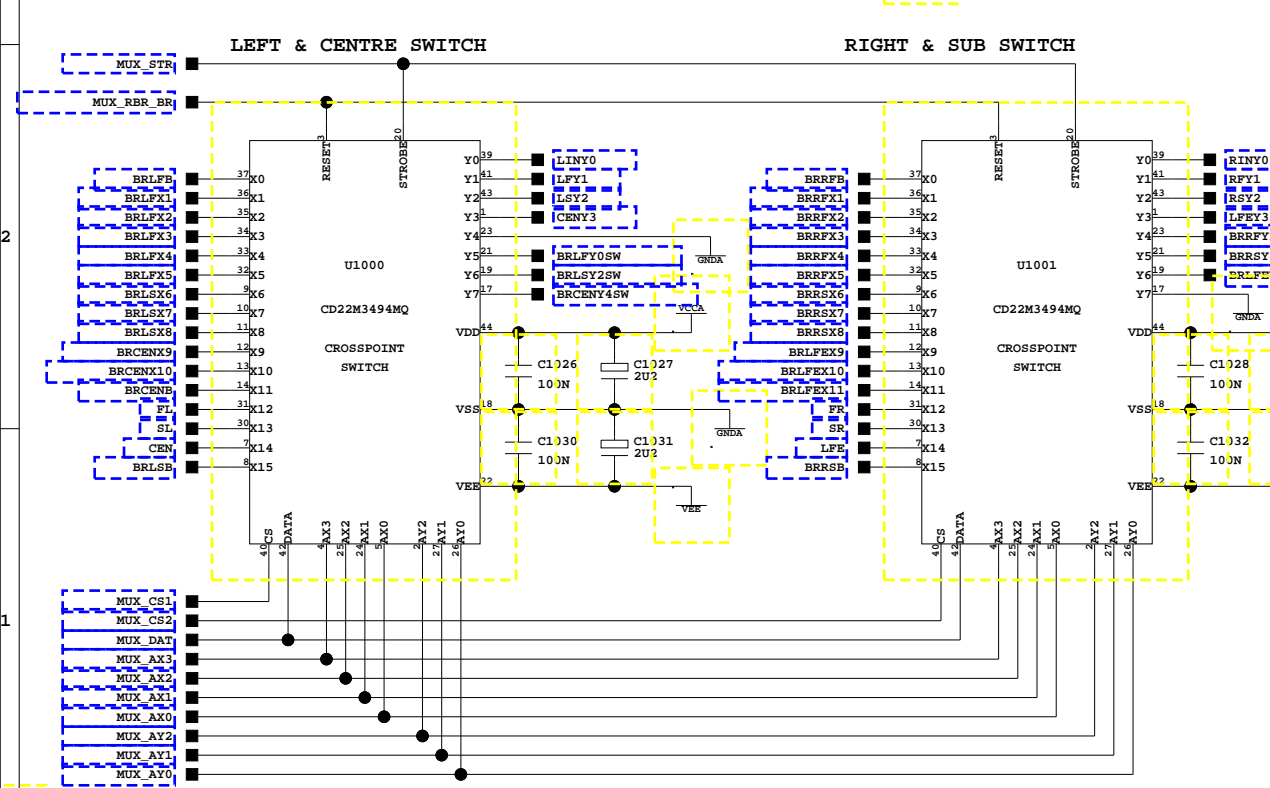
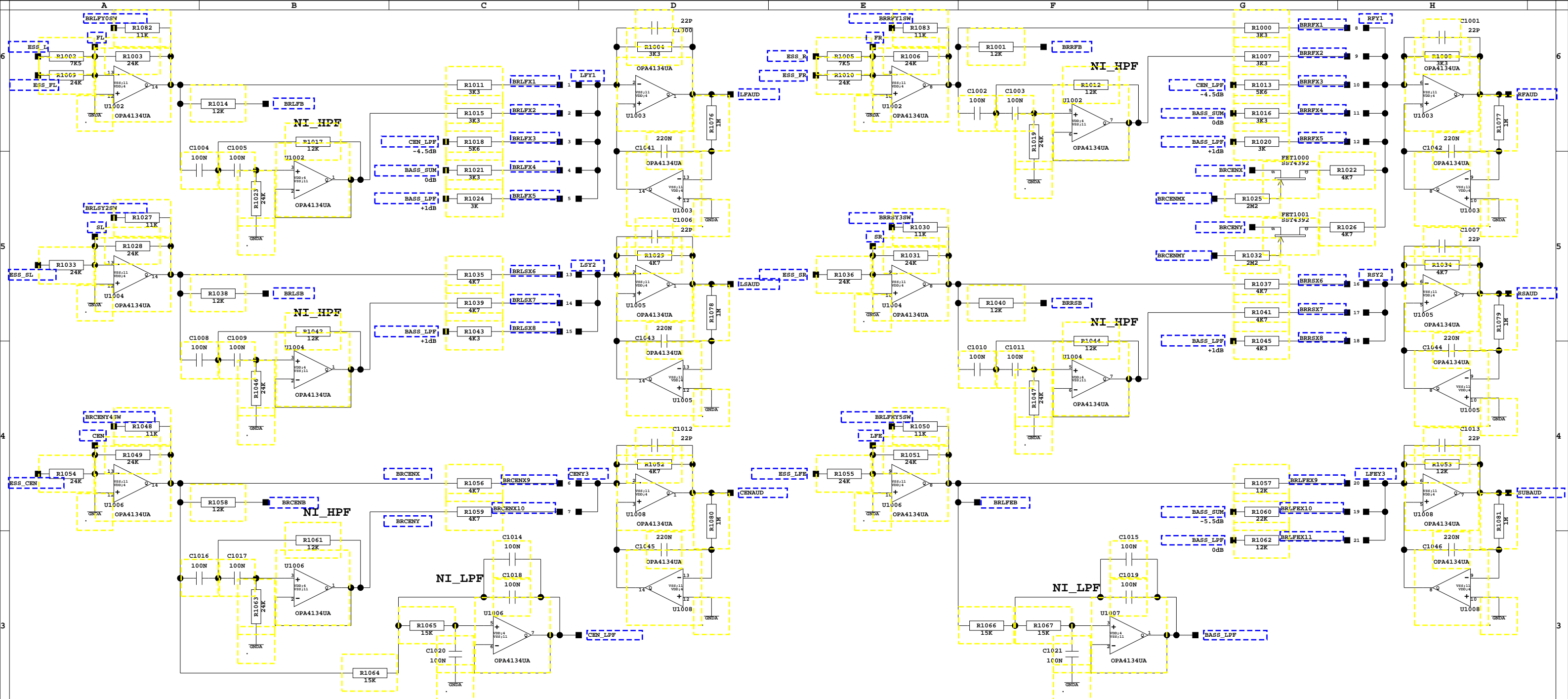
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| Proj.Name:UD SC AUDIO | | Proj.No:25309 | |
| Title: REAR LEFT & RIGHT FILTERS | | | |
| Sheet: 9 | of: 14 | Date: 12/06/2007 | Rev:A |
| Drawn LL | Reviewed | Part Number PCAS 408/L4R2 | |





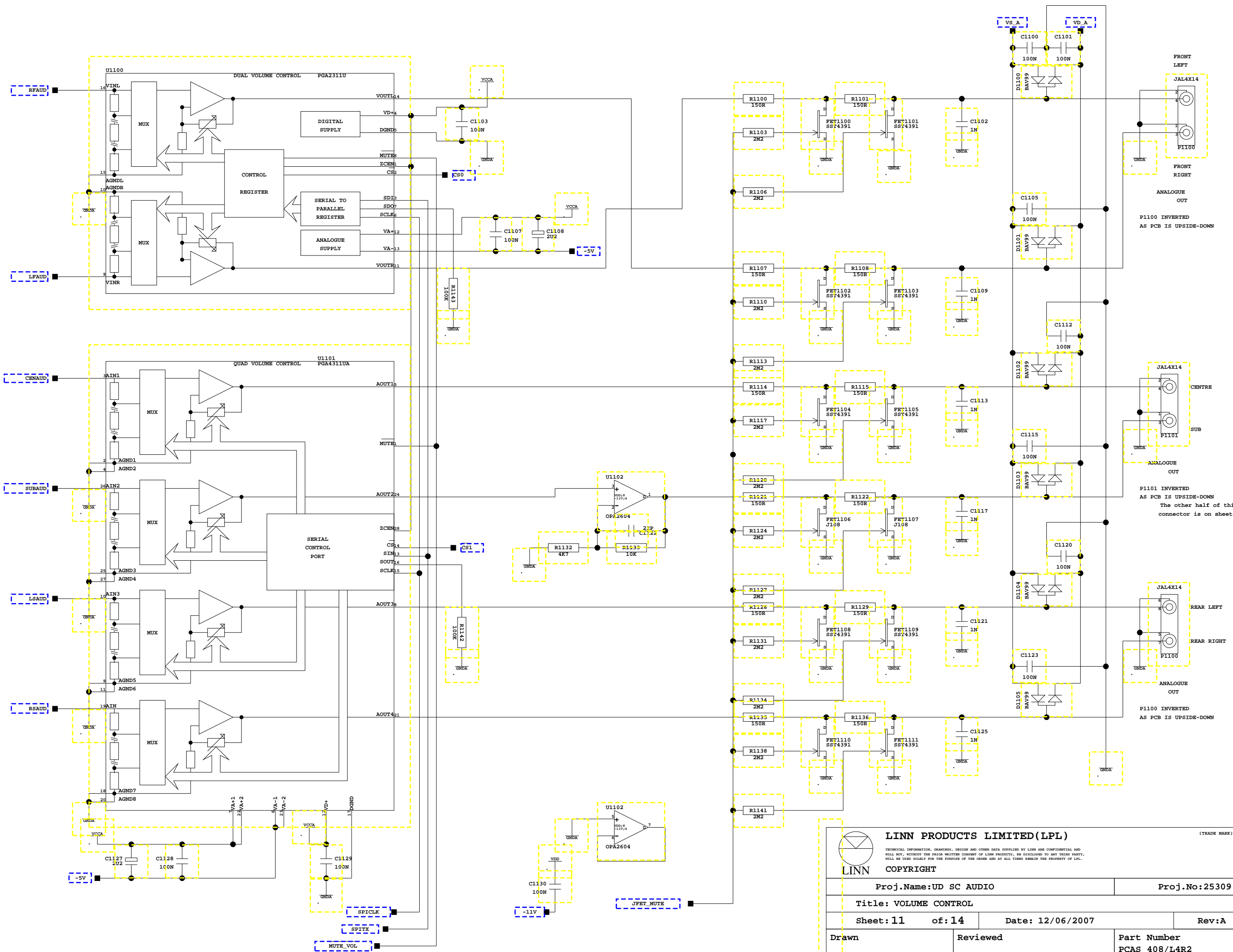
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|---------------------------|----------|------------------------------|-------|
| Proj.Name:UD SC AUDIO | | Proj.No:25309 | |
| Title:UD3 - BASS REDIRECT | | | |
| Sheet:10 | of:14 | Date:12/06/2007 | Rev:A |
| Drawn AM | Reviewed | Part Number PCAS 408/L4R2 | |



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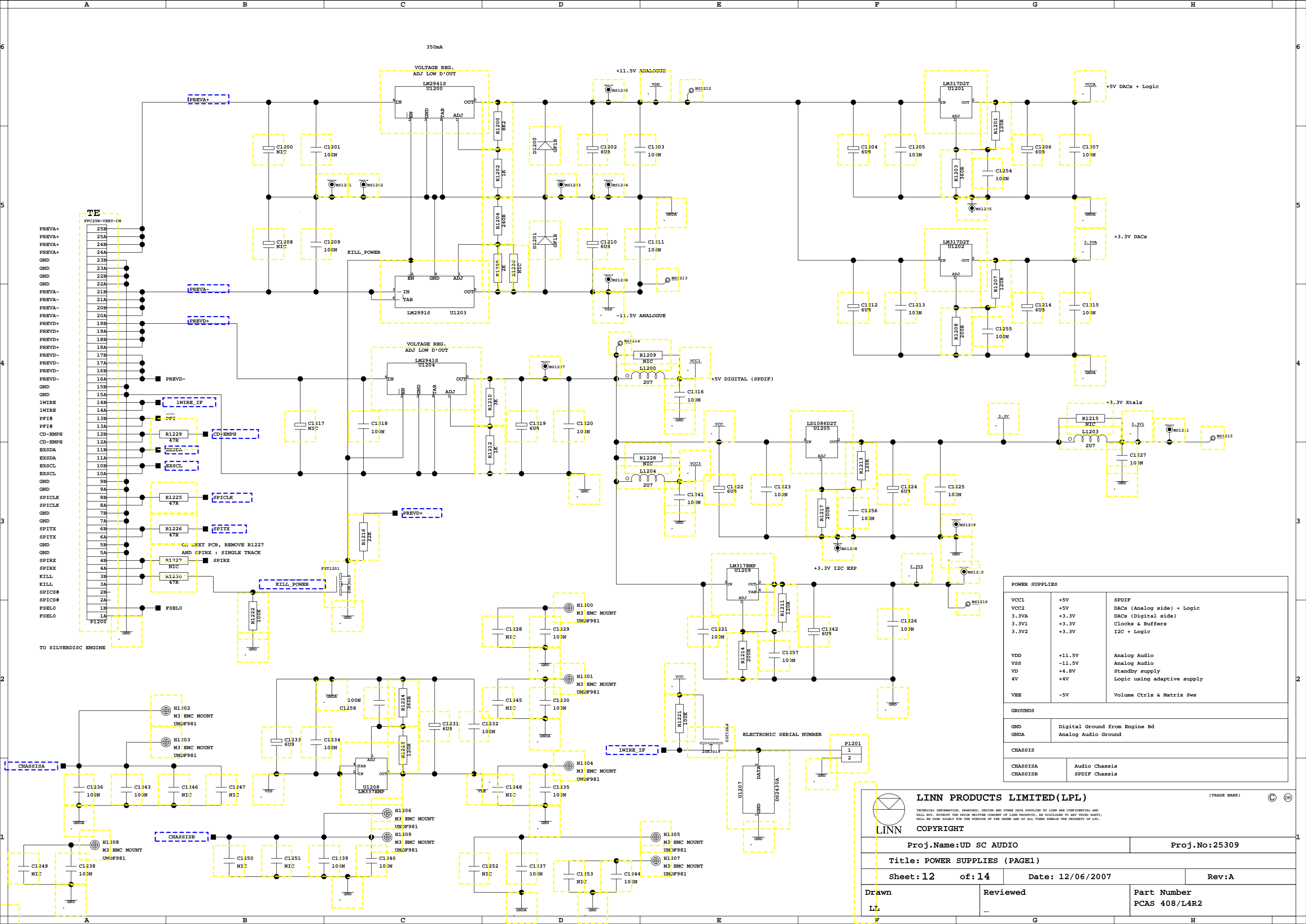
Proj.Name: UD SC AUDIO **Proj.No: 25309**

Title: VOLUME CONTROL


Sheet: 11 of: 14 **Date: 12/06/2007** **Rev: A**

Part Number
PCAS 408/L4R2

Drawn _____ Reviewed _____



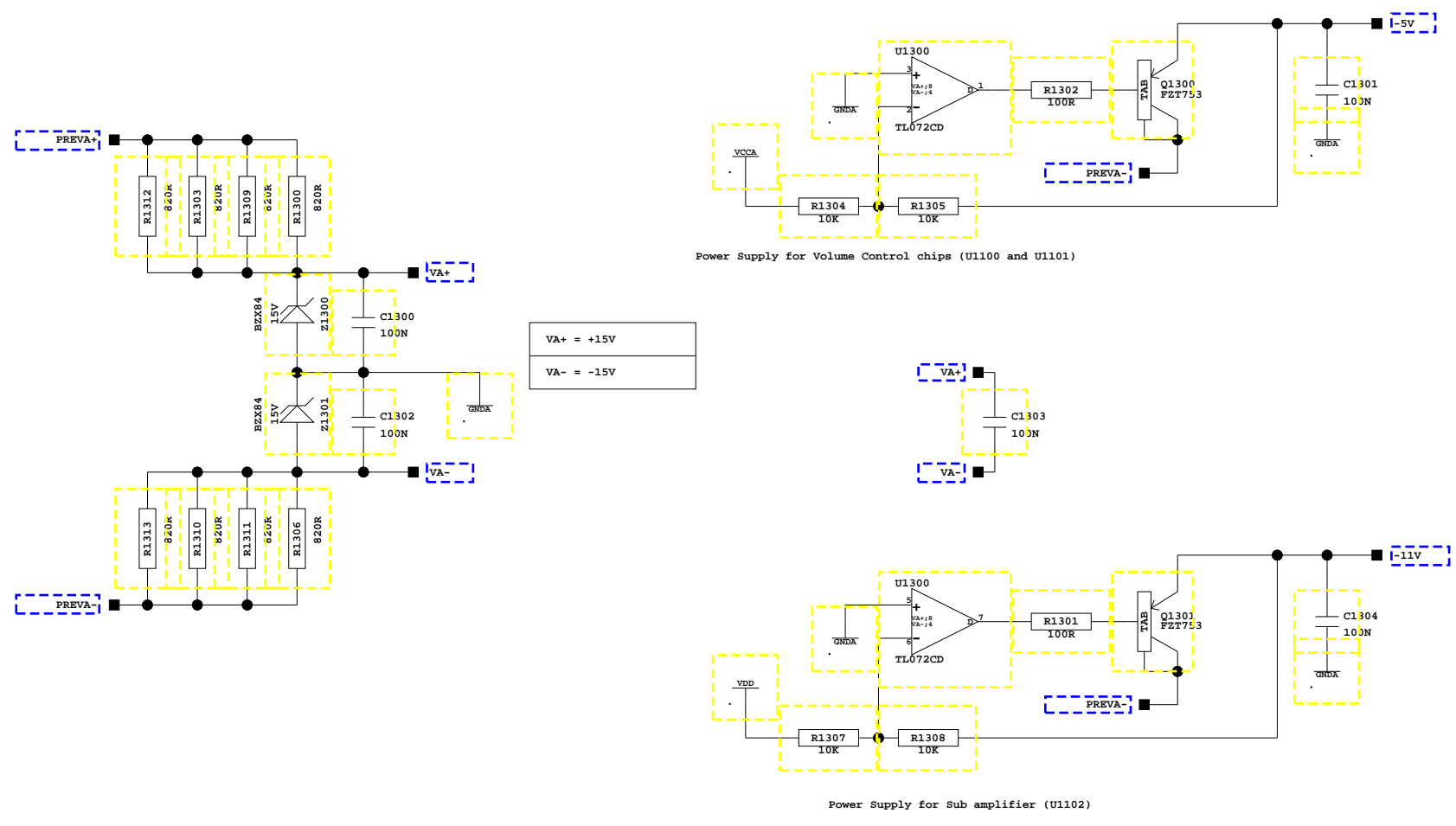
| POWER SUPPLIES | | |
|----------------|-------------------------------|-----------------------------|
| VCC1 | +5V | SPDIF |
| VCC2 | +5V | DACs (Analog side) + Logic |
| 3.3VA | +3.3V | DACs (Digital side) |
| 3.3V1 | +3.3V | Clocks & Buffers |
| 3.3V2 | +3.3V | I2C + Logic |
| VDD | +11.5V | Analog Audio |
| VSS | -11.5V | Analog Audio |
| VD | +4.8V | Standby supply |
| 4V | +4V | Logic using adaptive supply |
| VEE | -5V | Volume Ctrl's & Matrix Sws |
| GROUNDS | | |
| GND | Digital Ground from Engine Bd | |
| GNDA | Analog Audio Ground | |
| CHASSIS | | |
| CHASSISA | Audio Chassis | |
| CHASSISB | SPDIF Chassis | |



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| Proj.Name:UD SC AUDIO | | Proj.No:25309 | |
| Title: POWER SUPPLIES (PAGE1) | | | |
| Sheet: 12 | of: 14 | Date: 12/06/2007 | Rev:A |
| Drawn LL | Reviewed | Part Number PCAS 408/L4R2 | |



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| Proj.Name:UD SC AUDIO | | Proj.No:25309 | |
| Title: POWER SUPPLIES (PAGE2) | | | |
| Sheet: 13 | of: 14 | Date: 12/06/2007 | Rev:A |
| Drawn LL | Reviewed | Part Number PCAS 408/L4R2 | |

GENERAL DESIGN NOTES

1. Add any general design notes if required.

Keep all decoupling CAPs close to their IC

Power supply track at 25 tho'

Keep GND under SPDIF net and related circuitry

10mm of CHASSIS plane on layer 3 under rear connectors

(Sheet 4)

PCB DESIGN NOTES

1. COMPONENT PLACEMENT.

Component placement on top side only.

Main component placement indicated in board layout drawing.

2. LAYER DEFINITION AND STACKING

Layer 1, Top, Tracking.
 Layer 2, Inner, GND Plane.
 Layer 3, Inner, Power Planes(Various)
 Layer 4, Bottom, Tracking.

3. HEATSINK REQUIREMENTS

All Regulator - Requires a minimum of 20mm2 of 1oz copper (Avg = 0.5Watts)

4. POWER/GROUND PLANES AND NETS

VCC1, VCC2, Power track, 25mils minimum width, 10mils minimum clearance
 3.3V1, 3.3V2 Power track, 25mils minimum width, 10mils minimum clearance
 VDD, VSS Power track, 25mils minimum width, 10mils minimum clearance
 GND, GNDA Ground Plane on inner layer 2.

Split Ground Planes connected by R606, 609, 610 & 611 Place near DACs

Via types as per standard ECIT practice.

5. CRITICAL ROUTING

Power Supply Isolation - Analog and Digital supplies to be kept separate

Safety Critical Nets - Detail nets or Not Applicable.

Controlled Impedance Nets - Not Applicable.

High Speed Nets - P304 pins 14, 16, 18 & 20; everything on sheet 4

SPDIF, SYSCLK, SCLK+SR, SCLK+SUB, SCLK+FR, MCLK, DSD_SCLK

SLSRDATA+SL, CSDATA+C, LRDATA+FL, LRCLK+MODE & DVDMCLK

Differential Net Pairs - Not Applicable.

Critical Routing - Audio from DACs to rear connectors

6. PIN/GATE SWAPPABLE DEVICES

SHT2:U200 the X inputs all swappable & the Y outputs

SHT3:U301 RXP mux inputs swappable

SHT4:U403, U404 gates swappable

SHT7: U702, U703 gate swappable

SHT8: U800, U801 gate swappable

SHT9: U900, U901 gate swappable

SHT10:U1000 & U1001 X inputs swappable & Y outputs

SHT11:U1102 gates swappable

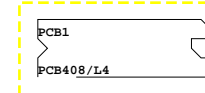
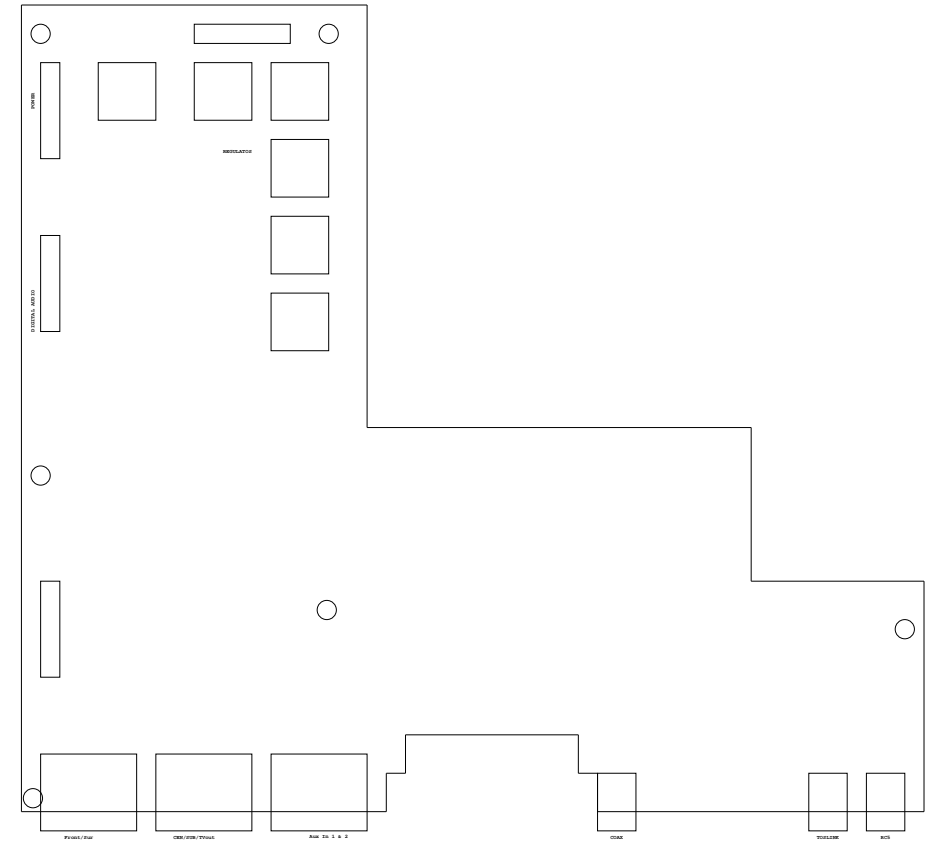
7. PCB SPECIFICATION

Material:FR4; Copper:1oz; PCB Thickness:1.6mm. Finish: HASL.

Note: Any modifications in new revisions to be highlighted (Revision in brackets after note)

BOARD LAYOUT AND PANELISATION

Keep connectors as per Unidisk 1.1



GENERAL MECHANICAL PARTS

| | | |
|--------|---------|----------|
| GEN909 | UNDF993 | SNAP OFF |
| GEN910 | UNDF993 | SNAP OFF |
| GEN911 | UNDF993 | SNAP OFF |
| GEN912 | UNDF993 | SNAP OFF |
| GEN913 | UNDF993 | SNAP OFF |
| GEN914 | UNDF993 | SNAP OFF |
| GEN915 | UNDF993 | SNAP OFF |
| GEN916 | UNDF993 | SNAP OFF |
| GEN917 | UNDF993 | SNAP OFF |
| GEN918 | UNDF993 | SNAP OFF |
| GEN919 | UNDF993 | SNAP OFF |
| GEN920 | UNDF993 | SNAP OFF |
| GEN921 | UNDF993 | SNAP OFF |
| GEN922 | UNDF993 | SNAP OFF |

TOP SIDE FIDUCIALS

| | | |
|------|---------|----------------------------------|
| FID0 | UNDF996 | REFERENCE FIDUCIAL |
| FID1 | UNDF995 | PLACEMENT FIDUCIAL MARK |
| FID2 | UNDF995 | PLACEMENT FIDUCIAL MARK |
| FID3 | UNDF997 | FIXTURELESS TESTER FIDUCIAL MARK |
| FID4 | UNDF997 | FIXTURELESS TESTER FIDUCIAL MARK |

BOTTOM SIDE FIDUCIALS

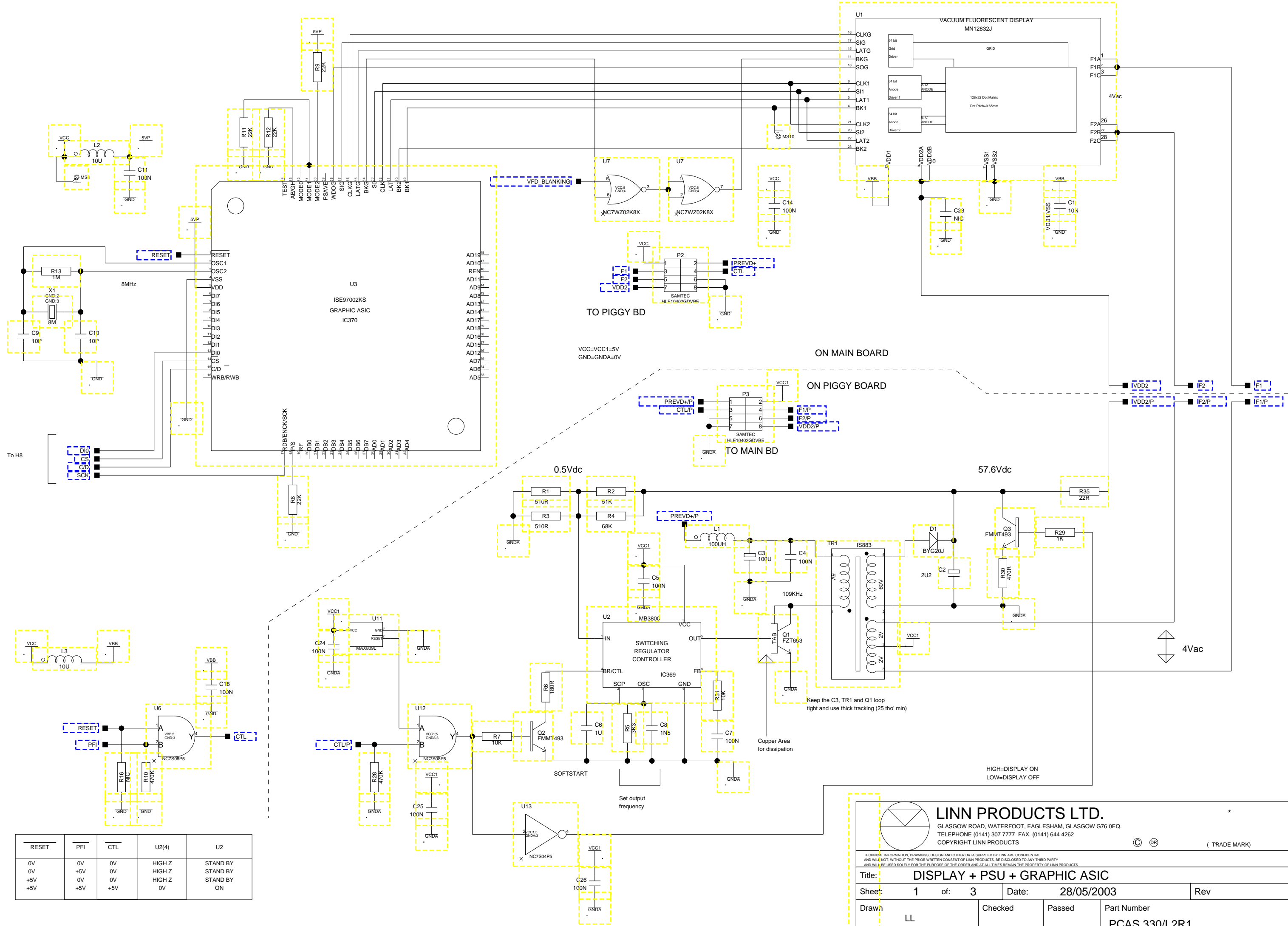
| | | |
|------|---------|----------------------------------|
| FID5 | UNDF997 | FIXTURELESS TESTER FIDUCIAL MARK |
| FID6 | UNDF997 | FIXTURELESS TESTER FIDUCIAL MARK |

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| Proj.Name:UD SC AUDIO | | Proj.No:25309 | |
| Title: PCB LAYOUT INSTRUCTIONS | | | |
| Sheet: 14 | of: 14 | Date: 12/06/2007 | Rev:A |
| Drawn LL | Reviewed - | Part Number PCAS 408/L4R2 | |



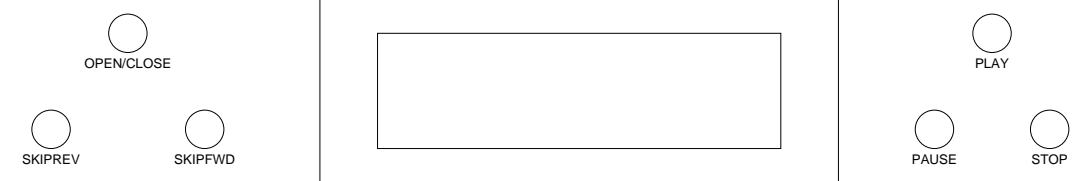
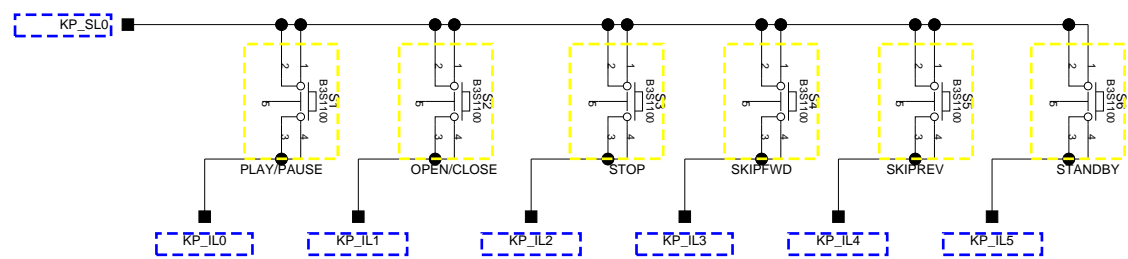
| RESET | PFI | CTL | U2(4) | U2 |
|-------|-----|-----|--------|----------|
| 0V | 0V | 0V | HIGH Z | STAND BY |
| 0V | +5V | 0V | HIGH Z | STAND BY |
| +5V | 0V | 0V | HIGH Z | STAND BY |
| +5V | +5V | +5V | 0V | ON |

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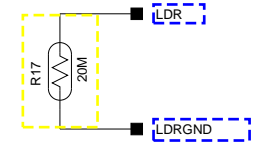
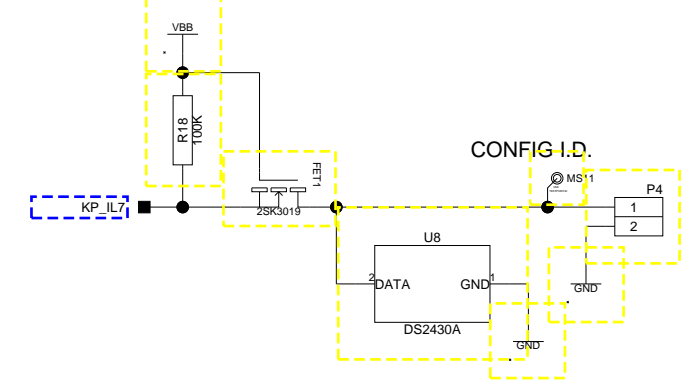
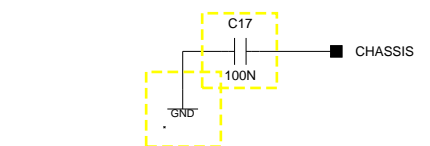
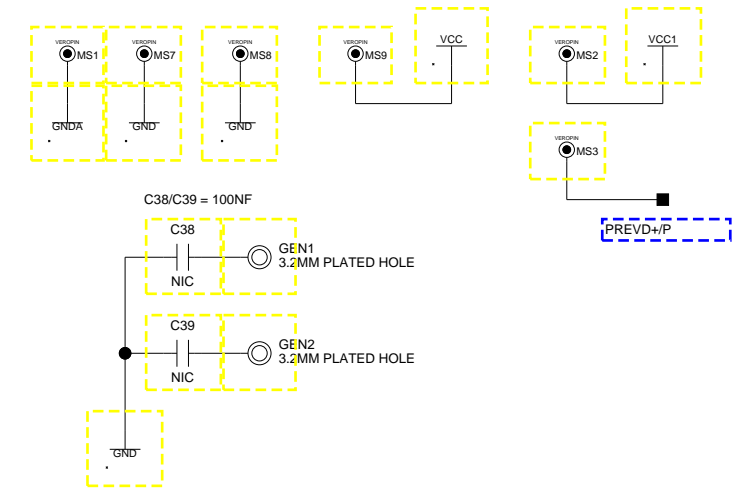
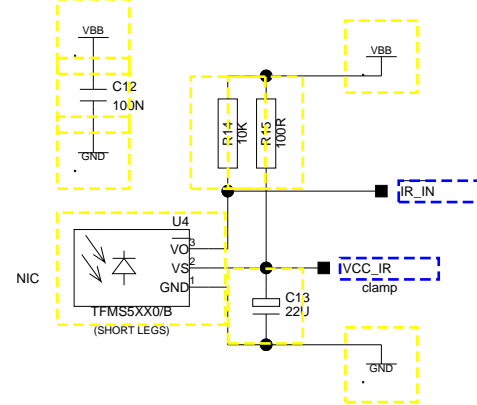
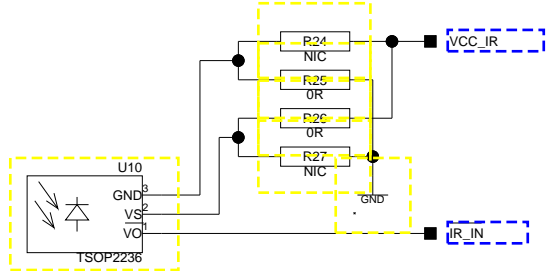
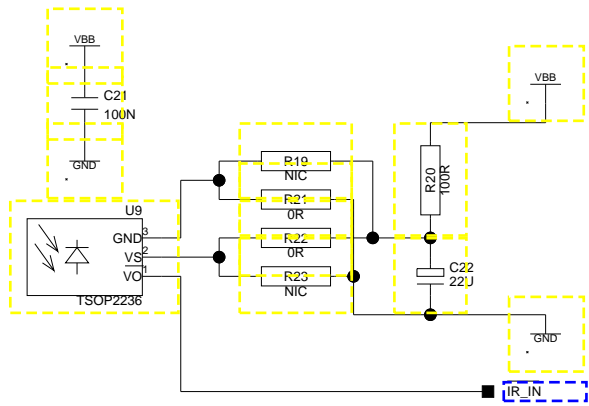
(TRADE MARK)

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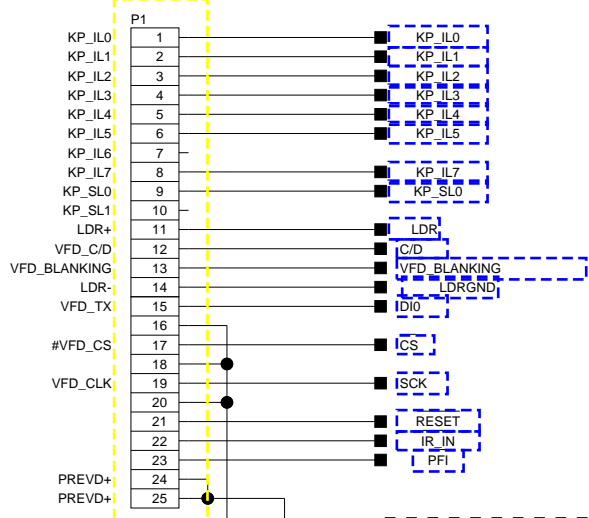
| | | | |
|--------------------------------------------|--------------|-------------------------|-----------------------------------|
| Title: DISPLAY + PSU + GRAPHIC ASIC | | Date: 28/05/2003 | Rev |
| Sheet: 1 | of: 3 | | |
| Drawn: LL | Checked | Passed | Part Number: PCAS 330/L2R1 |



| | TSOP2236 | TSOP1836 |
|-----|----------|----------|
| R19 | NIC | 0R |
| R21 | 0R | NIC |
| R22 | 0R | NIC |
| R23 | NIC | 0R |
| R24 | NIC | 0R |
| R25 | 0R | NIC |
| R26 | 0R | NIC |
| R27 | NIC | 0R |

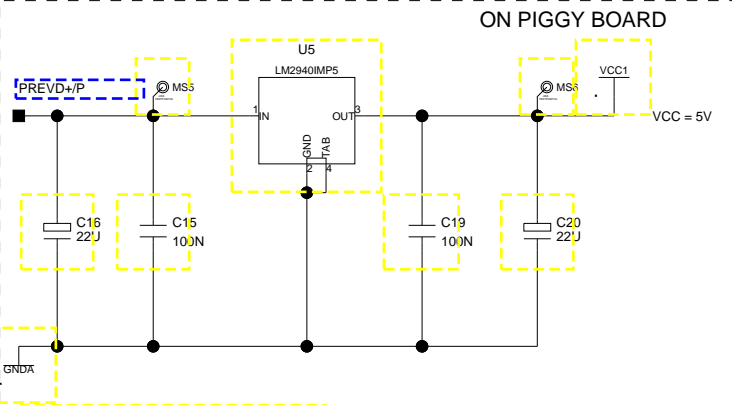


TO ENGINE



CONNECTOR TO ENGINE BOARD

| | | |
|--------|---------|------------------------------|
| GEN101 | UNDF993 | SNAP OFF |
| GEN102 | UNDF993 | SNAP OFF |
| GEN103 | UNDF993 | SNAP OFF |
| GEN105 | UNDF993 | SNAP OFF |
| GEN107 | UNDF993 | SNAP OFF |
| GEN109 | UNDF993 | SNAP OFF |
| GEN110 | UNDF993 | SNAP OFF |
| GEN111 | UNDF993 | SNAP OFF |
| GEN112 | UNDF993 | SNAP OFF |
| GEN114 | UNDF993 | SNAP OFF |
| GEN104 | UNDF993 | SNAP OFF |
| GEN106 | UNDF993 | SNAP OFF |
| FID0 | UNDF996 | REF FID |
| FID102 | UNDF996 | REF FID |
| FID103 | UNDF996 | REF FID |
| FID104 | UNDF996 | REF FID |
| FID111 | UNDF997 | FIXLESSFID |
| FID112 | UNDF997 | FIXLESSFID |
| FID113 | UNDF997 | FIXLESSFID |
| FID114 | UNDF997 | FIXLESSFID |
| GEN115 | TAPE012 | TAPE FOR TSOP1736 |
| GEN120 | CONN743 | 8 PIN BOARD STACKER |
| GEN121 | CONN893 | DOUBLE-SIDED ADHESIVE TAPE |
| GEN3 | UNDF930 | 3.1MM DIAMETER UNPLATED HOLE |
| GEN4 | UNDF930 | 3.1MM DIAMETER UNPLATED HOLE |



| | | |
|--------|---------|-------------------|
| GEN122 | MECH364 | STAND OFF FOR LDR |
| GEN118 | MCP1100 | TAPE FOR TSOP2236 |
| GEN119 | MCP1100 | TAPE FOR TSOP2236 |
| GEN108 | UNDF993 | SNAP OFF |
| GEN113 | UNDF993 | SNAP OFF |
| GEN116 | UNDF993 | SNAP OFF |
| GEN117 | UNDF993 | SNAP OFF |

CLASSIK D

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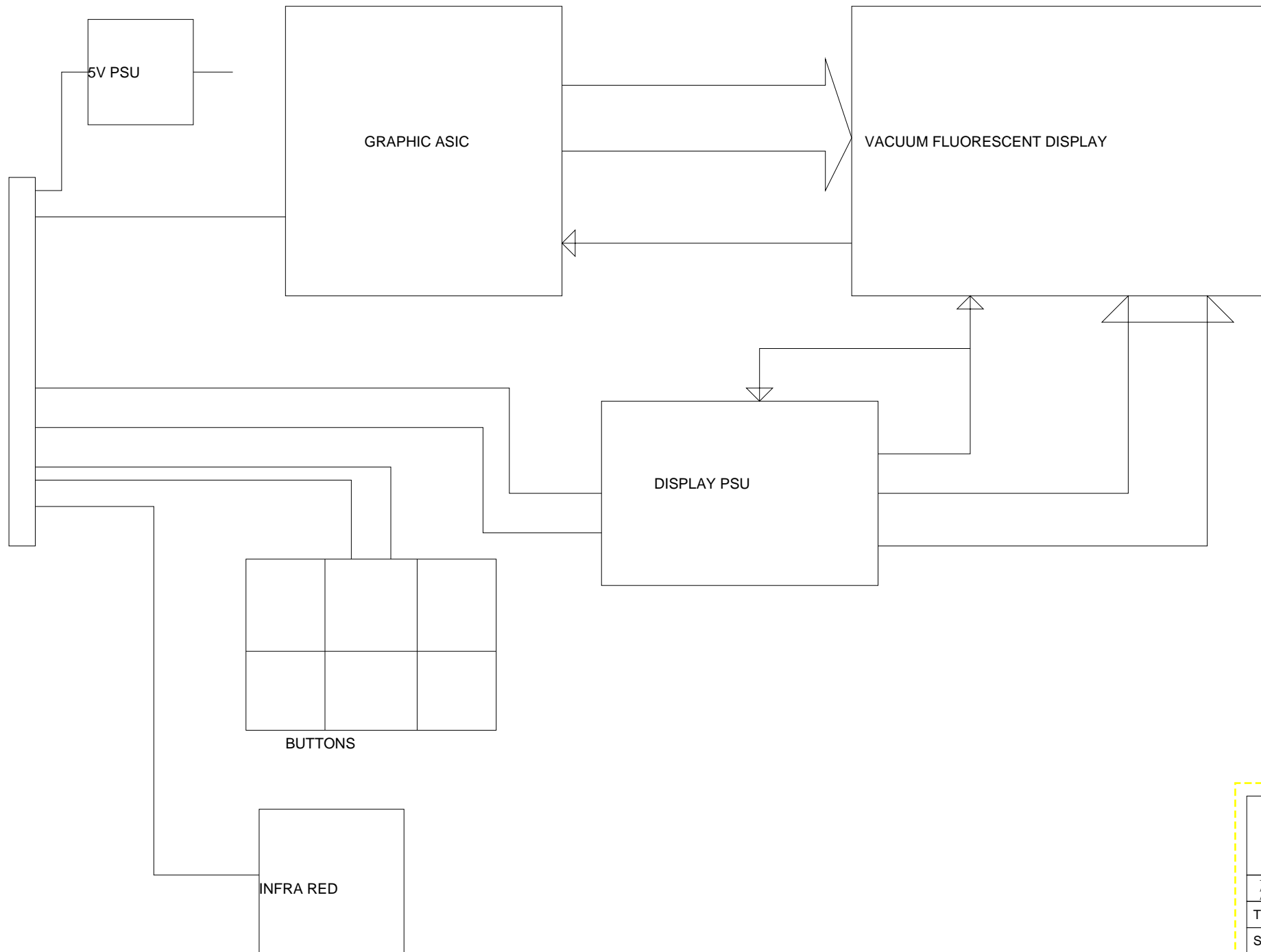
Title: **SWITCHES+CONN+IR+RESET**

Sheet: 2 of 3 Date: 28/05/2003 Rev

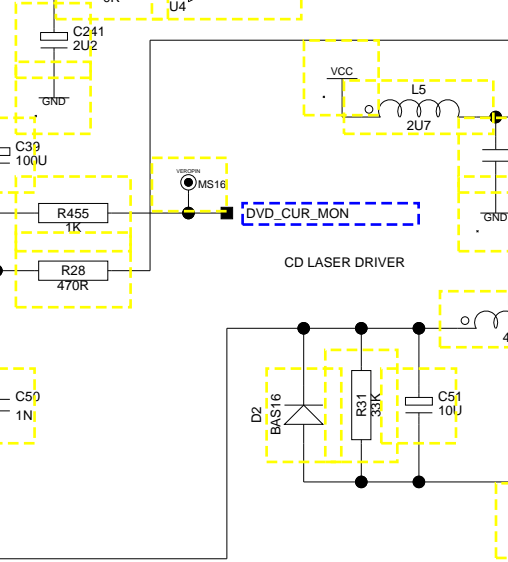
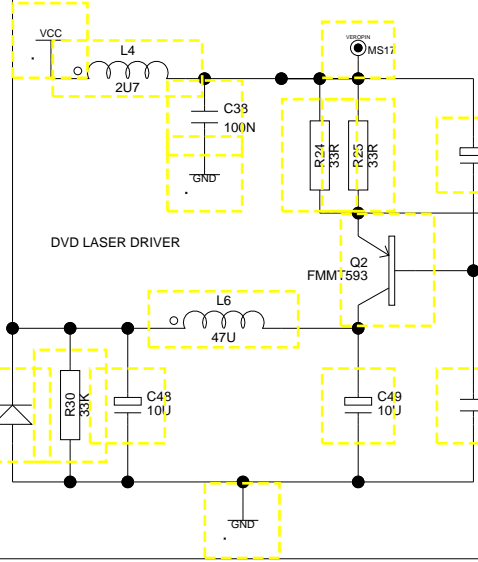
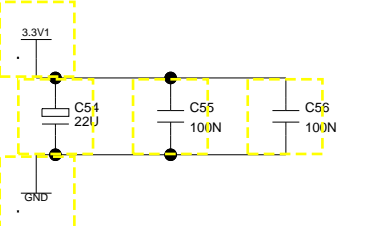
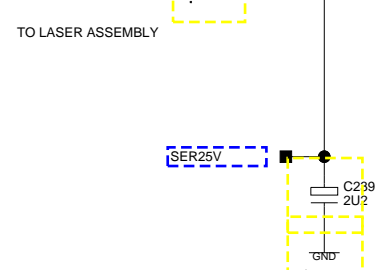
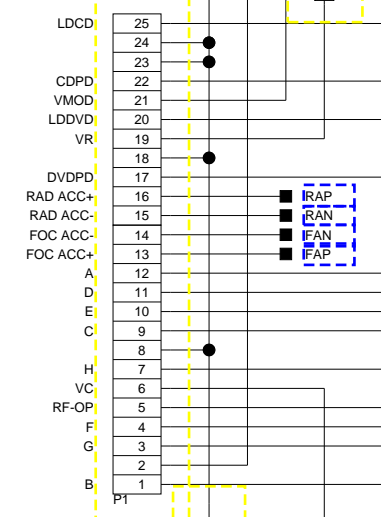
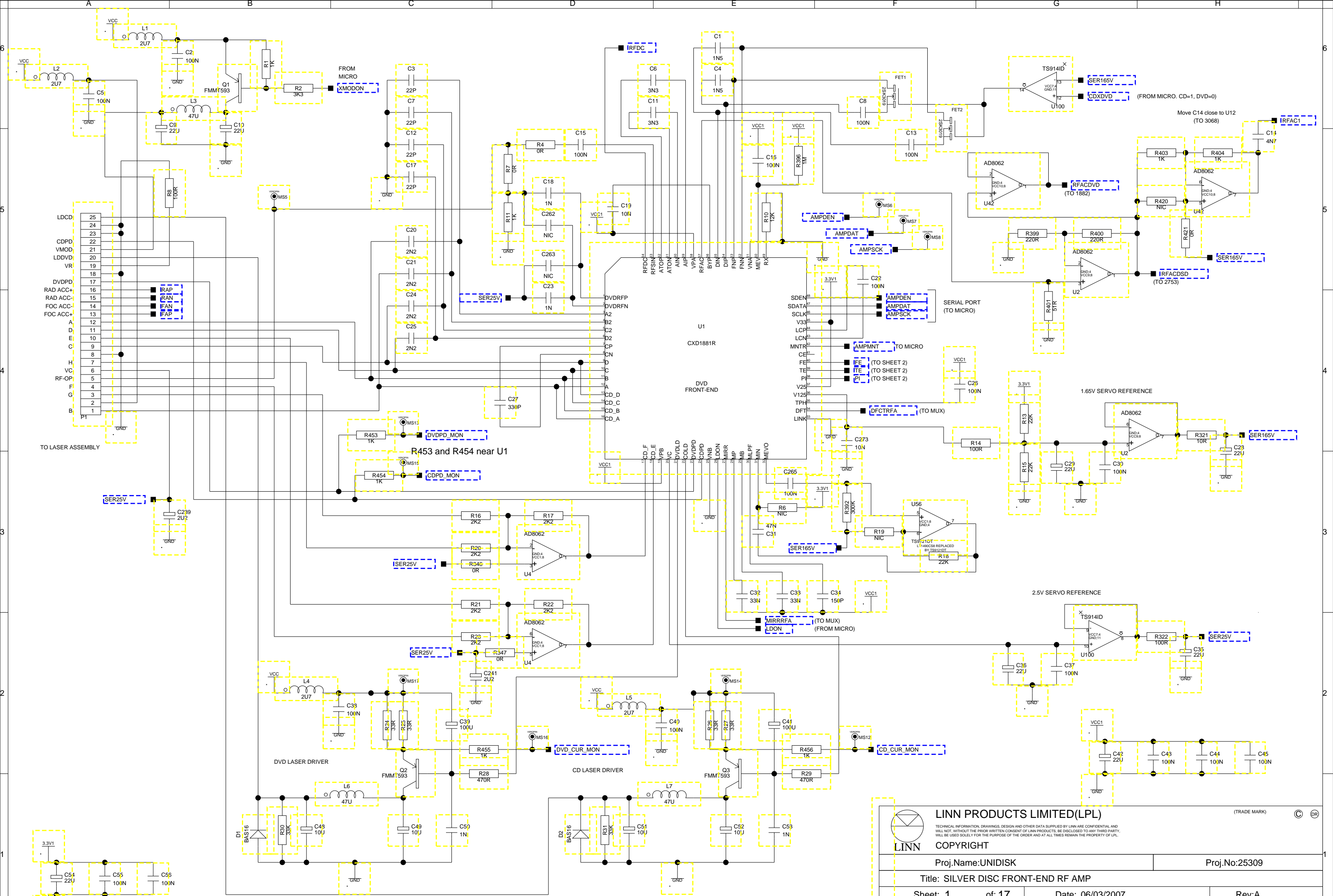
Drawn: LL Checked: Passed Part Number: PCAS 330/L2R1


PCB LAYOUT INSTRUCTIONS

- 1) Keep the C3, TR1 and Q1 loop tight and use thick tracking (25 tho' min)
- 2) Copper Area for dissipation around Q1
- 3) Keep filter sequence around U6 the Reset Chip (Display sinking current)
- 4) Make PREVD+ a thick track



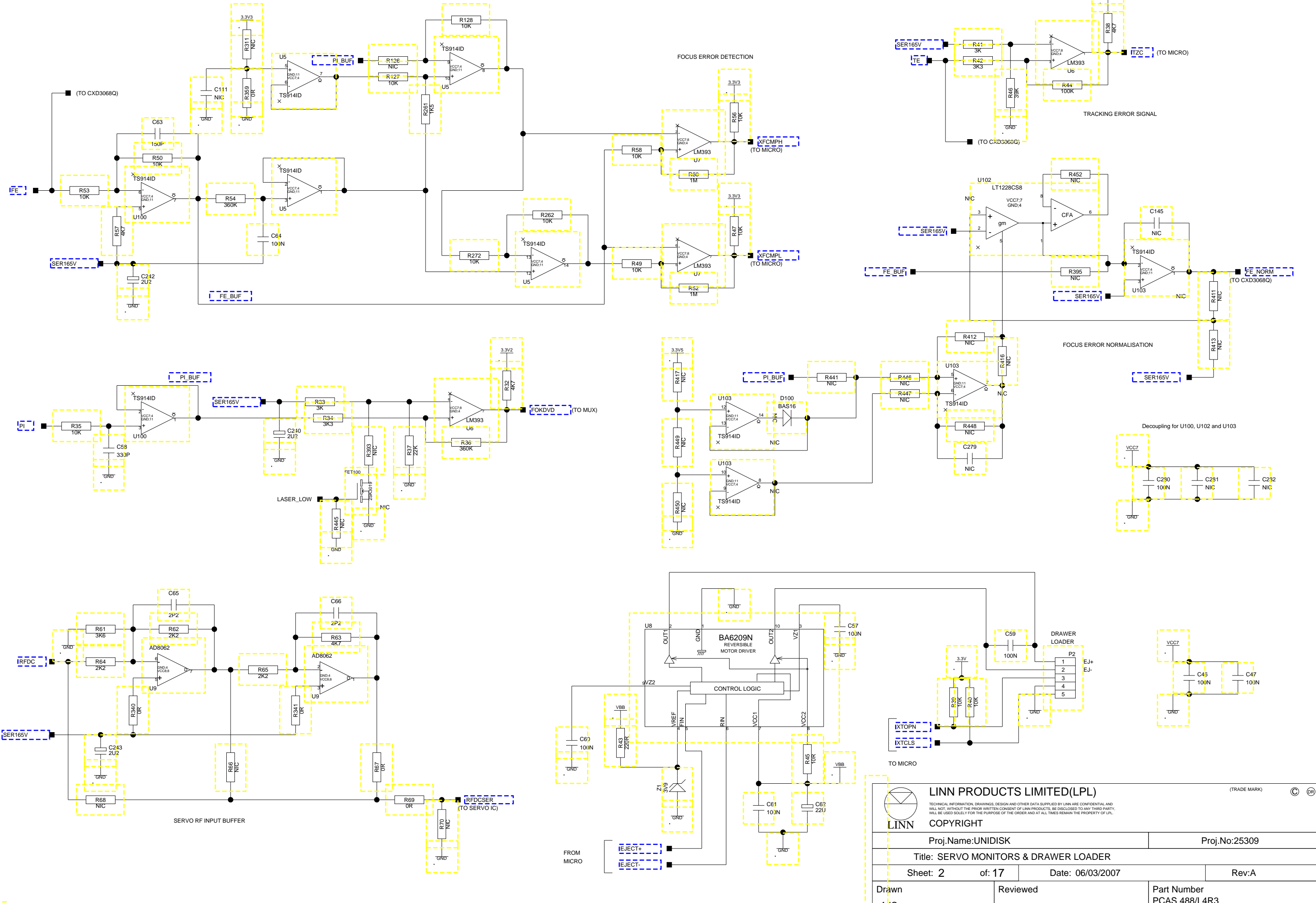
| | | | | | |
|---------------------------------------------------------------------------------------|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | | LINN PRODUCTS LTD. GLASGOW ROAD, WATERFOOT, EAGLESHAM, GLASGOW G76 0EQ. TELEPHONE (0141) 307 7777 FAX. (0141) 644 4262 COPYRIGHT LINN PRODUCTS | | | * <small>TECHNICAL INFORMATION, DRAWINGS, DESIGN AND OTHER DATA SUPPLIED BY LINN ARE CONFIDENTIAL AND WILL NOT, WITHOUT THE PRIOR WRITTEN CONSENT OF LINN PRODUCTS, BE DISCLOSED TO ANY THIRD PARTY AND WILL BE USED SOLELY FOR THE PURPOSE OF THE ORDER AND AT ALL TIMES REMAIN THE PROPERTY OF LINN PRODUCTS</small> |
| | | <small>©</small> <small>®</small> (TRADE MARK) | | | |
| Title: PCB LAYOUT INFORMATION | | | | | |
| Sheet: | 3 | of: | 3 | Date: | 28/05/2003 |
| Drawn | LL | Checked | | Passed | |
| | | | Part Number | | PCAS 330/L2R1 |



| | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------------------------|--------|
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| | | | |
| Proj.Name: UNIDISK | | Proj.No: 25309 | |
| Title: SILVER DISC FRONT-END RF AMP | | | |
| Sheet: 1 | of: 17 | Date: 06/03/2007 | Rev: A |
| Drawn A/JC | Reviewed | Part Number PCAS 488/L4R3 | |

PCAS 488/P9R1 BASED ON PCAS 488/L2R1

PI_BUF and FE_BUF to be tracked on layer PWR_GND H+V

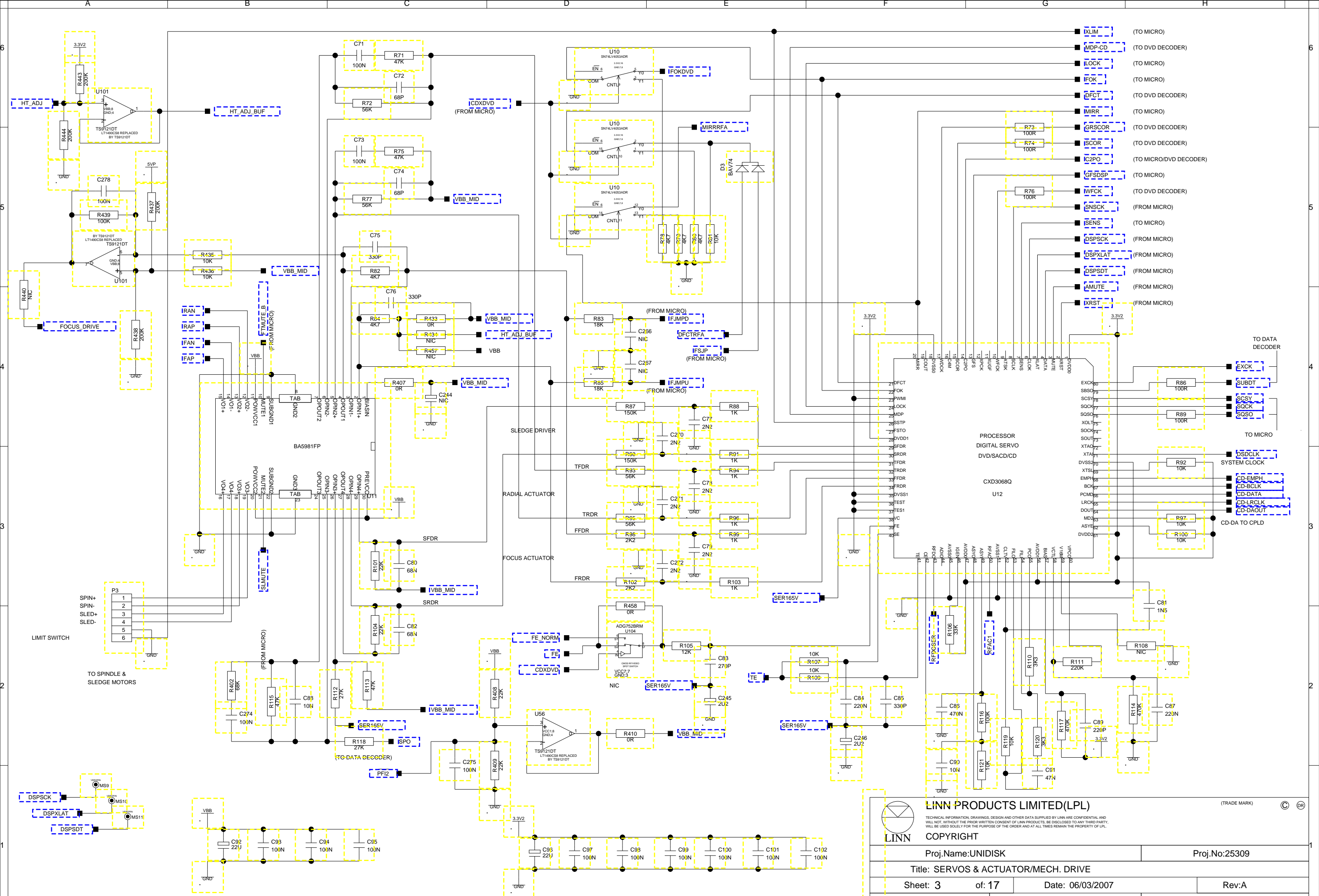



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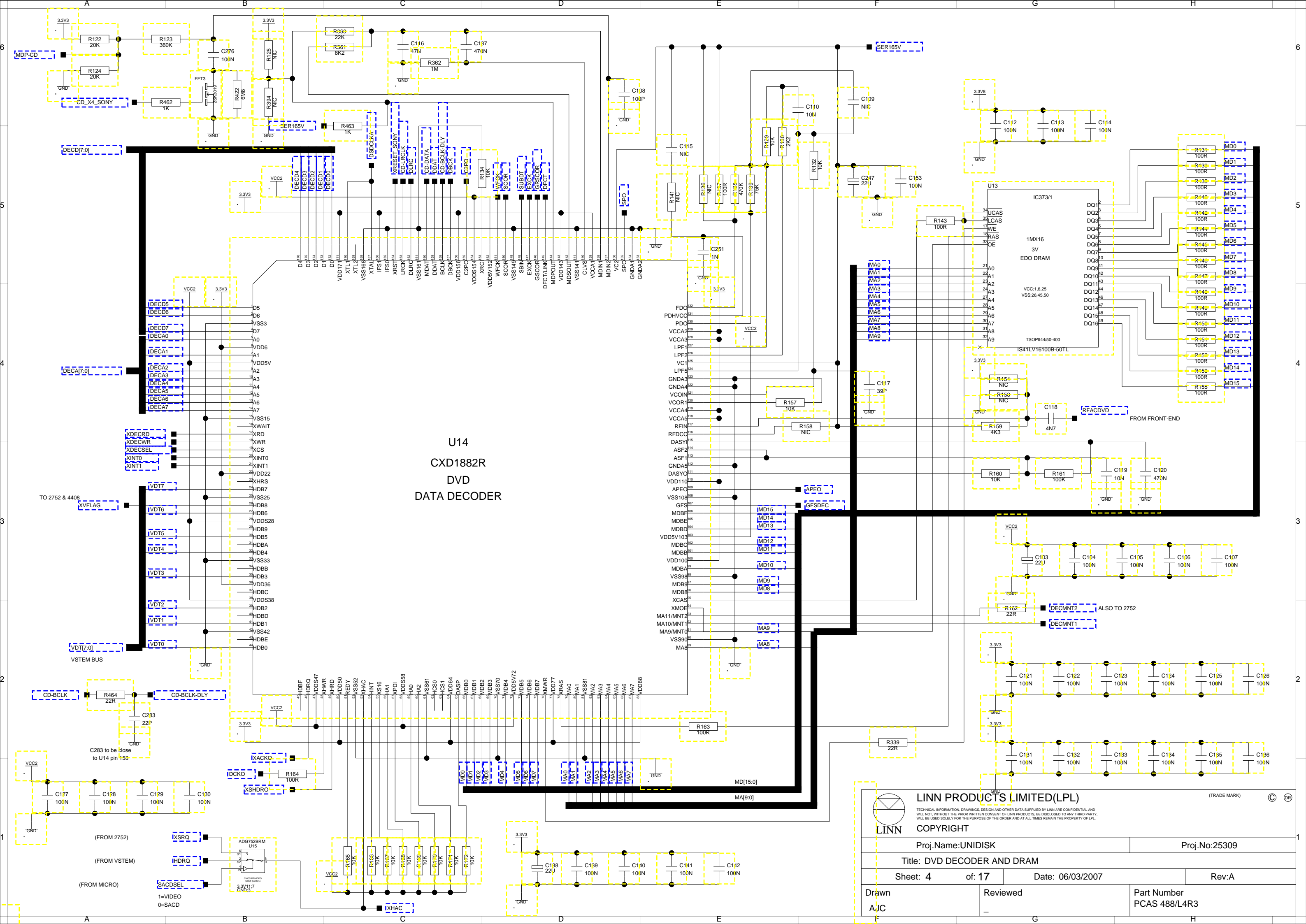
LINN COPYRIGHT

| | | | |
|---------------------------------------|----------|------------------------------|--------|
| Proj.Name: UNIDISK | | Proj.No: 25309 | |
| Title: SERVO MONITORS & DRAWER LOADER | | | |
| Sheet: 2 | of: 17 | Date: 06/03/2007 | Rev: A |
| Drawn AJC | Reviewed | Part Number PCAS 488/L4R3 | |




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| | | | |
|-------------------------------------------------|---------------------|-------------------------------------|---------------|
| Proj.Name: UNIDISK | | Proj.No: 25309 | |
| Title: SERVOS & ACTUATOR/MECH. DRIVE | | | |
| Sheet: 3 | of: 17 | Date: 06/03/2007 | Rev: A |
| Drawn A/JC | Reviewed | Part Number PCAS 488/L4R3 | |



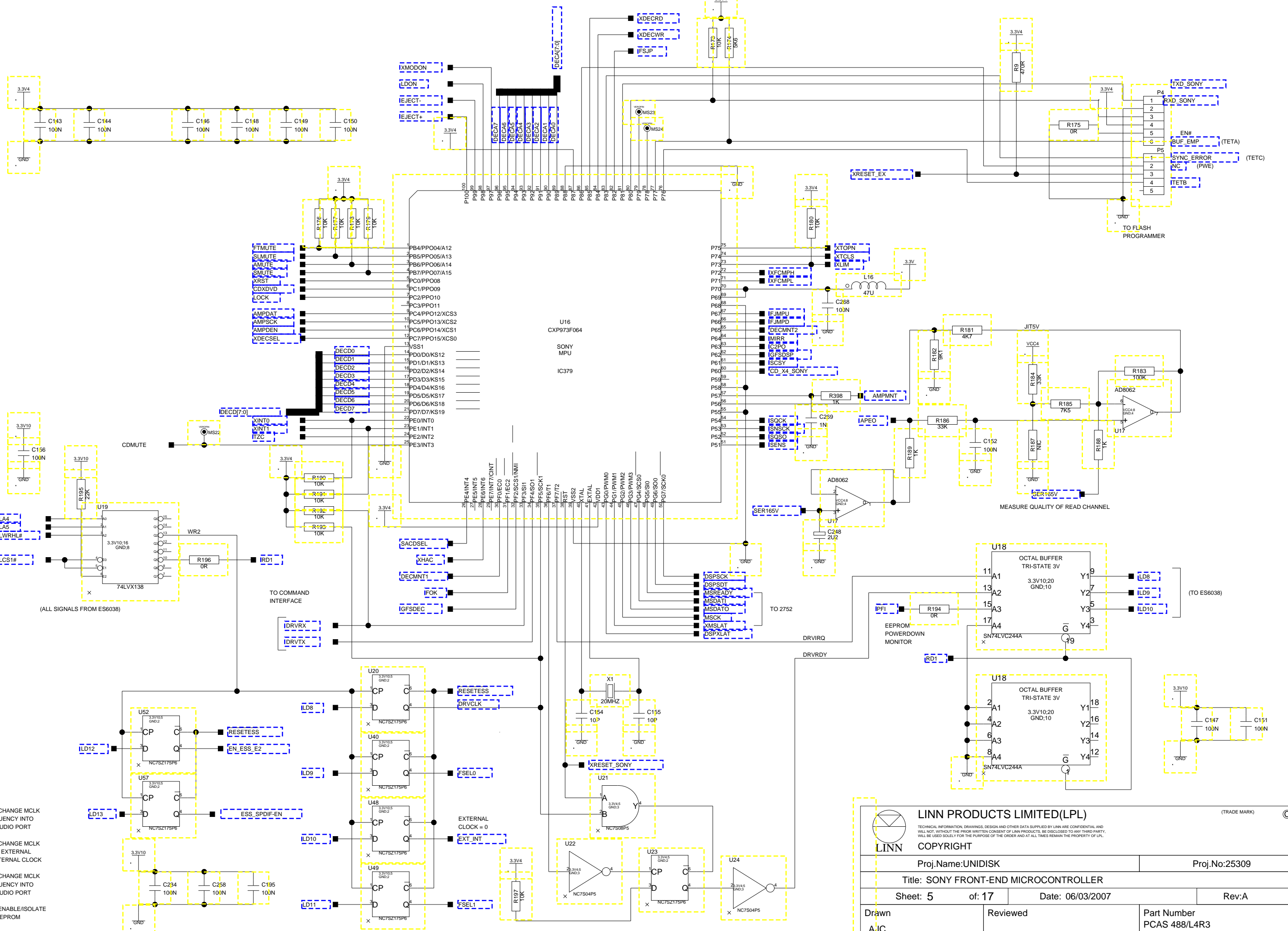
U14
CXD1882R
DVD
DATA DECODER

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| | | | |
|-----------------------------|----------|------------------------------|-------|
| Proj.Name:UNIDISK | | Proj.No:25309 | |
| Title: DVD DECODER AND DRAM | | | |
| Sheet: 4 | of: 17 | Date: 06/03/2007 | Rev:A |
| Drawn A/JC | Reviewed | Part Number PCAS 488/L4R3 | |



U40 - CHANGE MCLK FREQUENCY INTO ESS AUDIO PORT

U48 - CHANGE MCLK FROM EXTERNAL TO INTERNAL CLOCK

U49 - CHANGE MCLK FREQUENCY INTO ESS AUDIO PORT

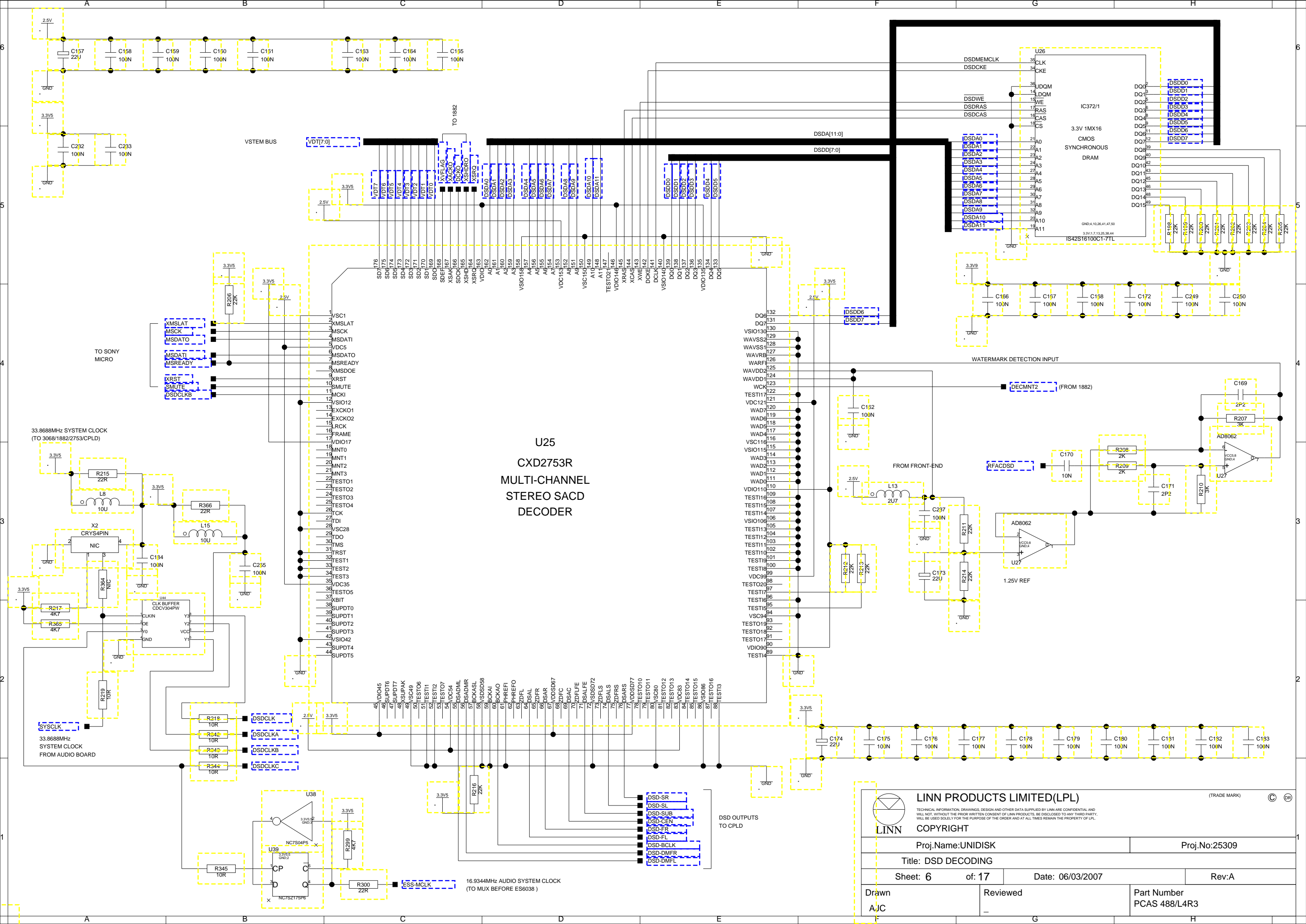
U52 - ENABLE/ISOLATE ESS EEPROM

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|---------------------------------------|----------|------------------------------|--------|
| Proj.Name: UNIDISK | | Proj.No: 25309 | |
| Title: SONY FRONT-END MICROCONTROLLER | | | |
| Sheet: 5 | of: 17 | Date: 06/03/2007 | Rev: A |
| Drawn AJC | Reviewed | Part Number PCAS 488/L4R3 | |



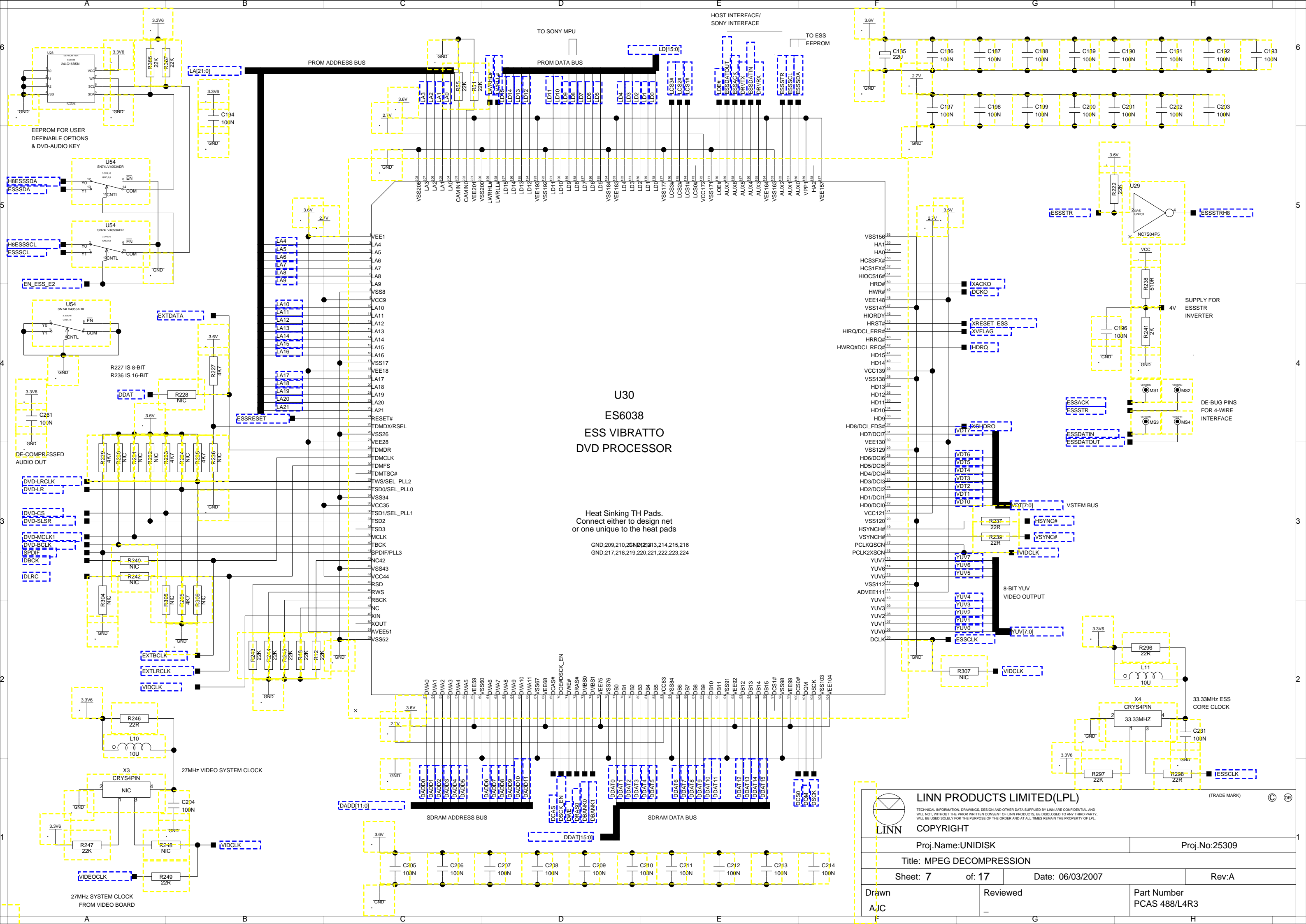
U25
CXD2753R
MULTI-CHANNEL
STEREO SACD
DECODER

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| | | | |
|---------------------|-----------|----------------------------|--------|
| Proj.Name: UNIDISK | | Proj.No: 25309 | |
| Title: DSD DECODING | | | |
| Sheet: 6 | of: 17 | Date: 06/03/2007 | Rev: A |
| Drawn: AJC | Reviewed: | Part Number: PCAS 488/L4R3 | |



U30
ES6038
ESS VIBRATTO
DVD PROCESSOR

Heat Sinking TH Pads.
Connect either to design net
or one unique to the heat pad

GND:209,210,250,211,213,214,215,216
GND:217,218,219,220,221,222,223,224

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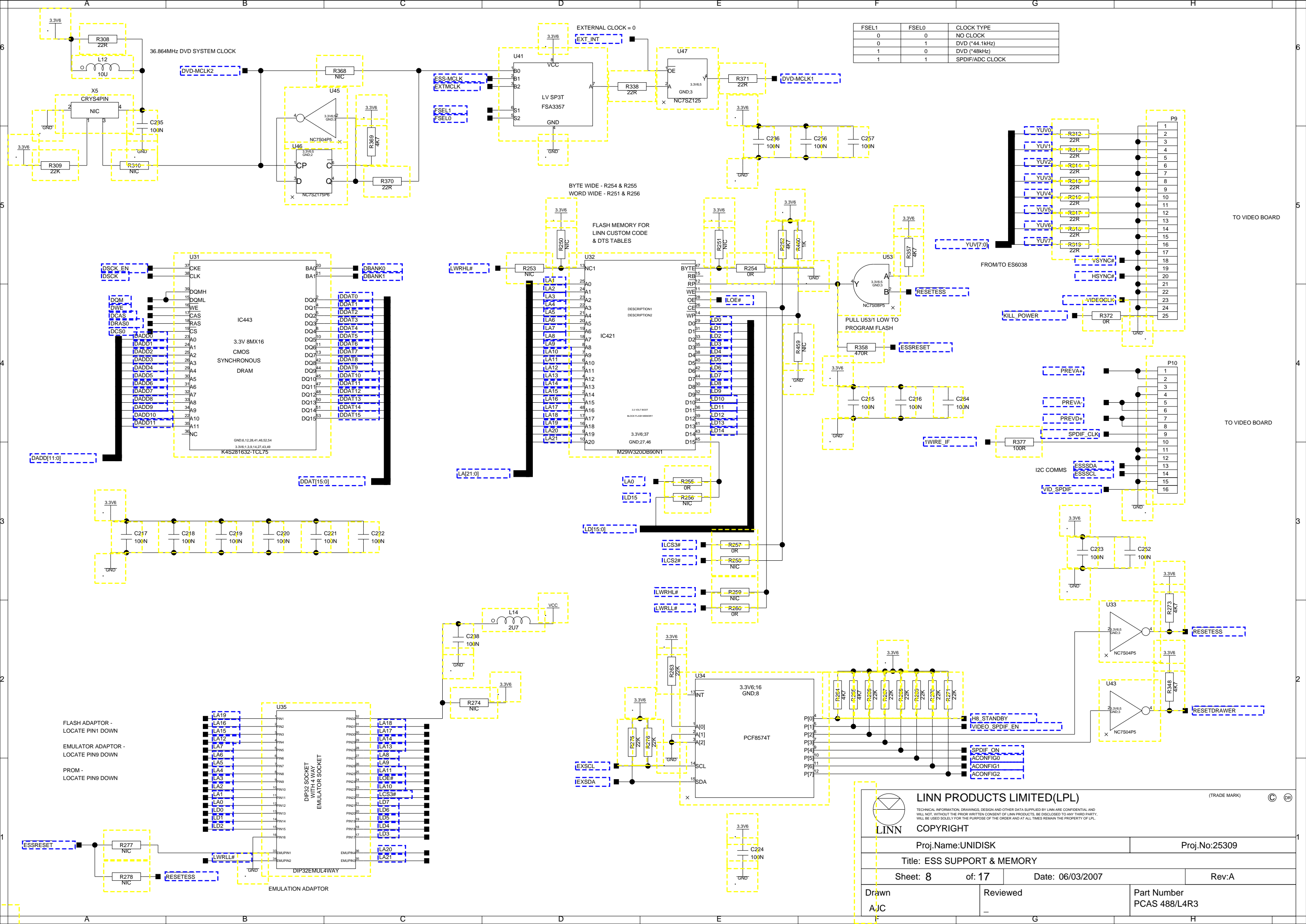
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Proj.Name: UNIDISK **Proj.No: 25309**

Title: MPEG DECOMPRESSION

Sheet: 7 of 17 **Date: 06/03/2007** **Rev:A**

Drawn: AJC **Reviewed:** **Part Number: PCAS 488/L4R3**

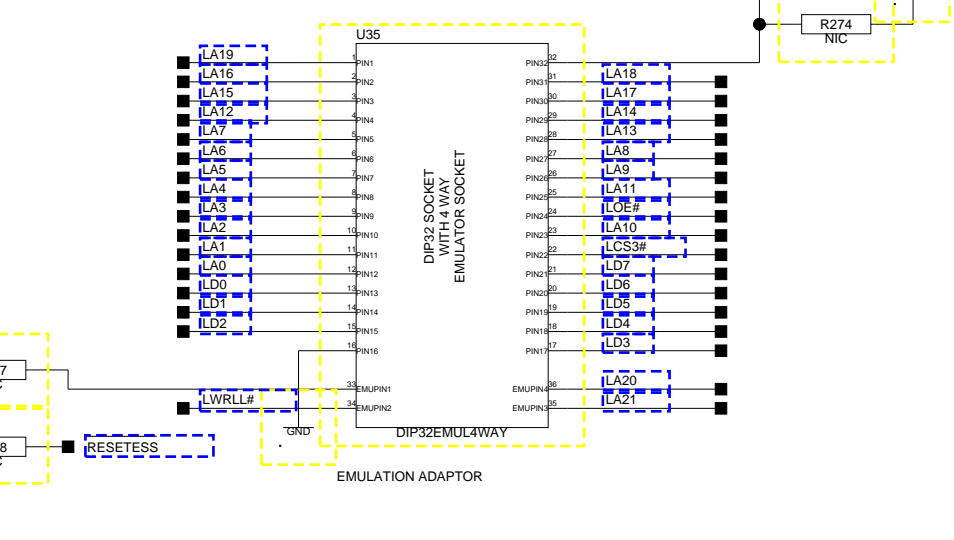
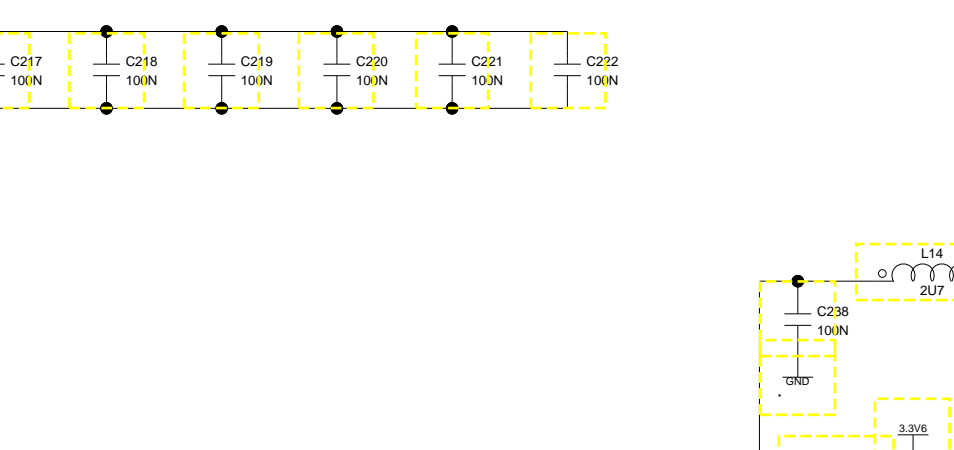
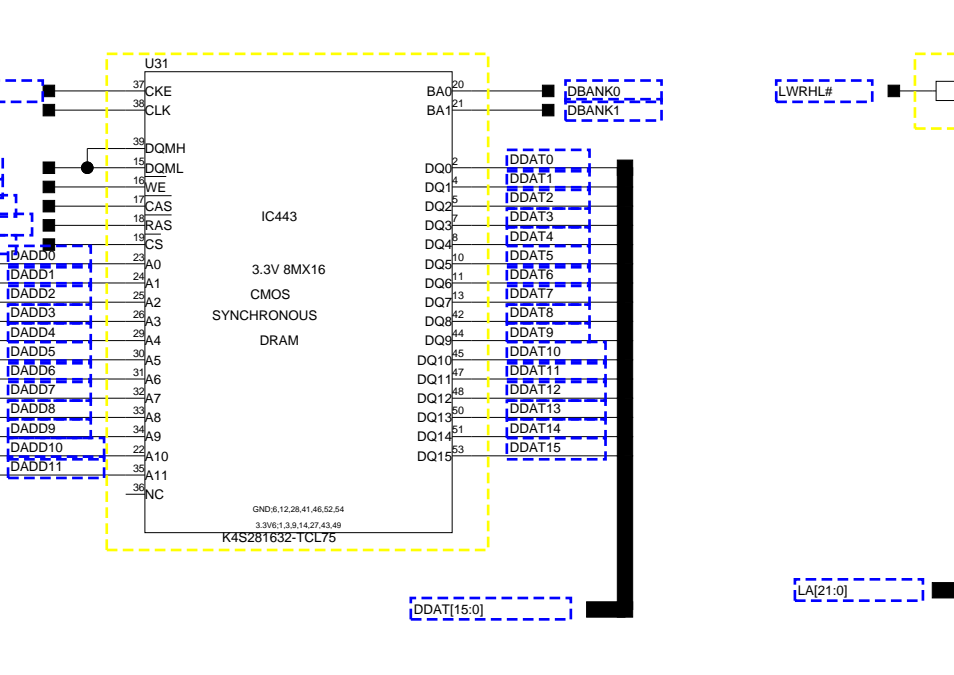
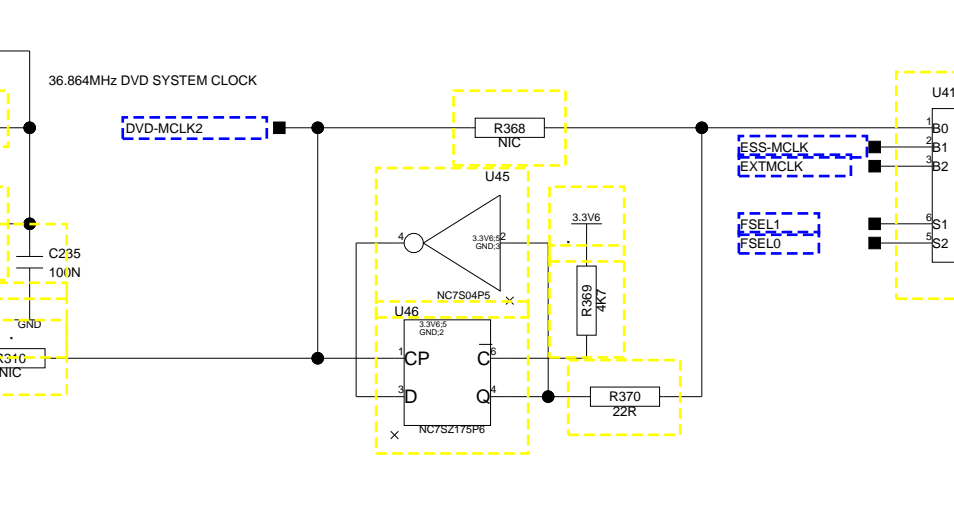
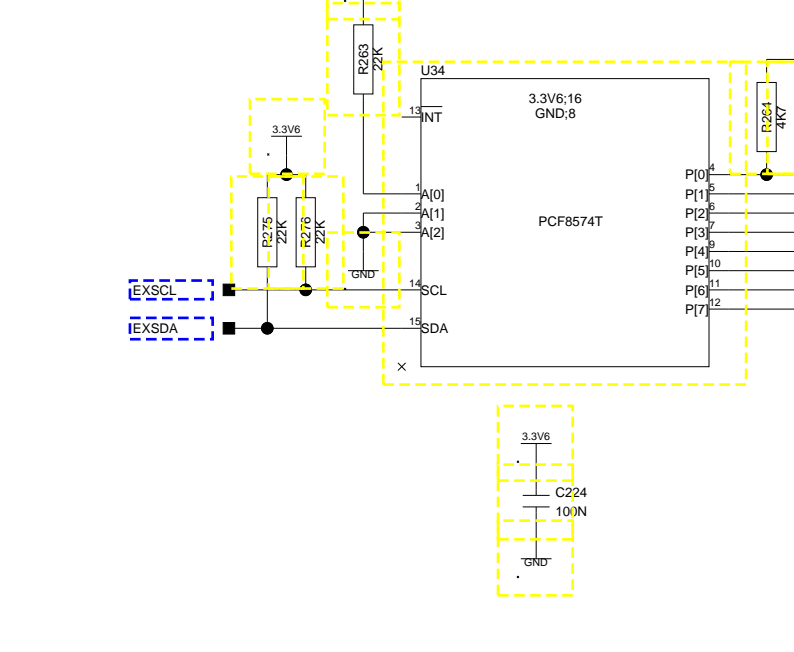
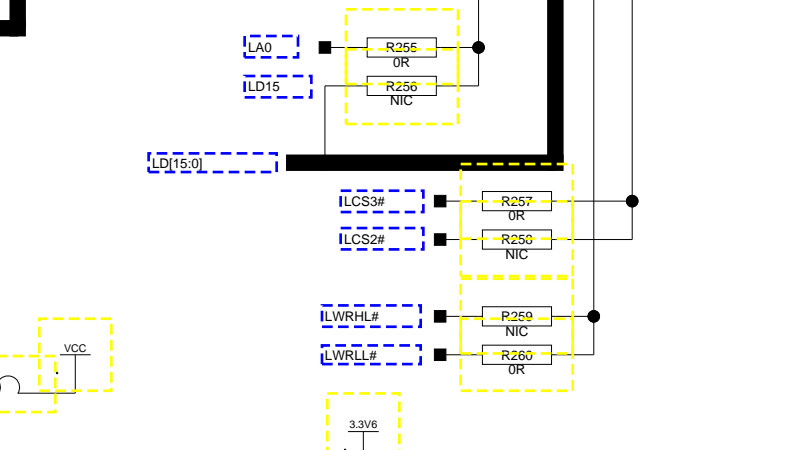
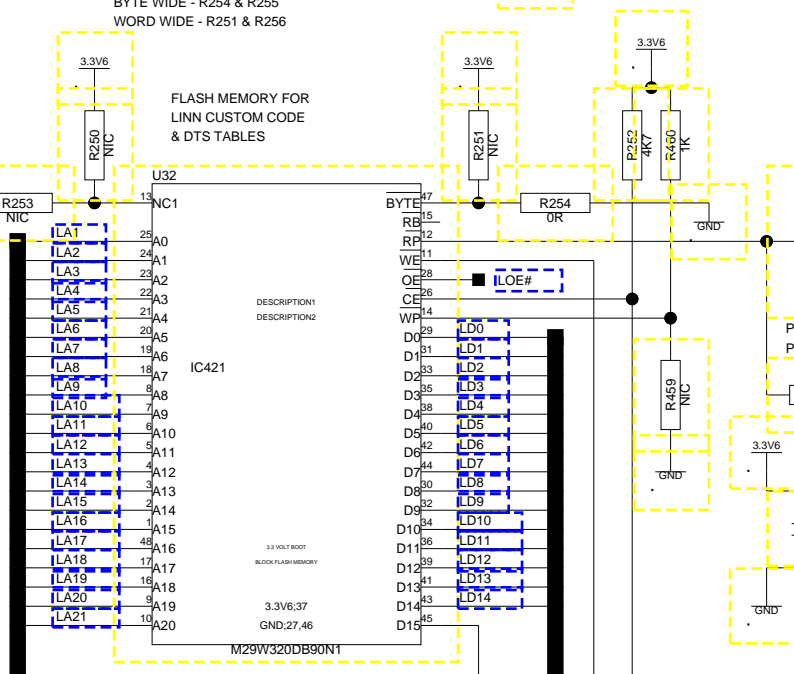
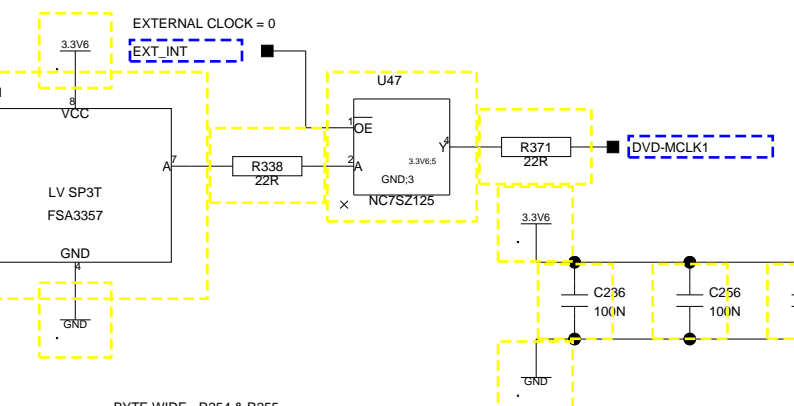
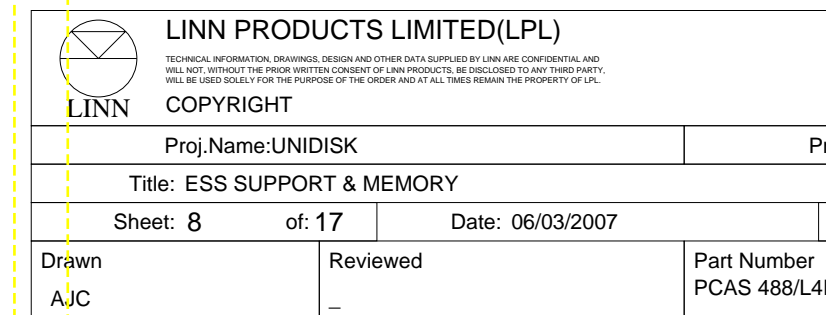
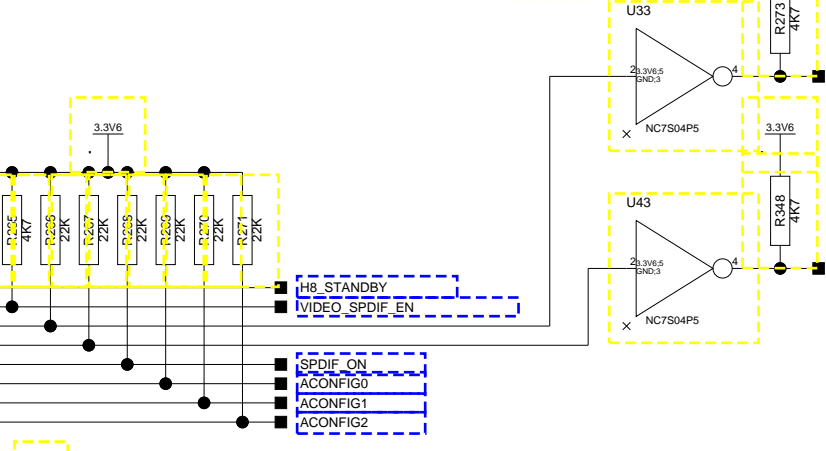
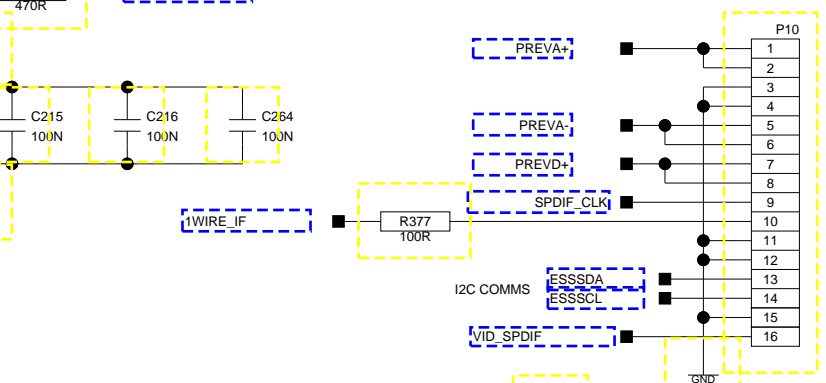
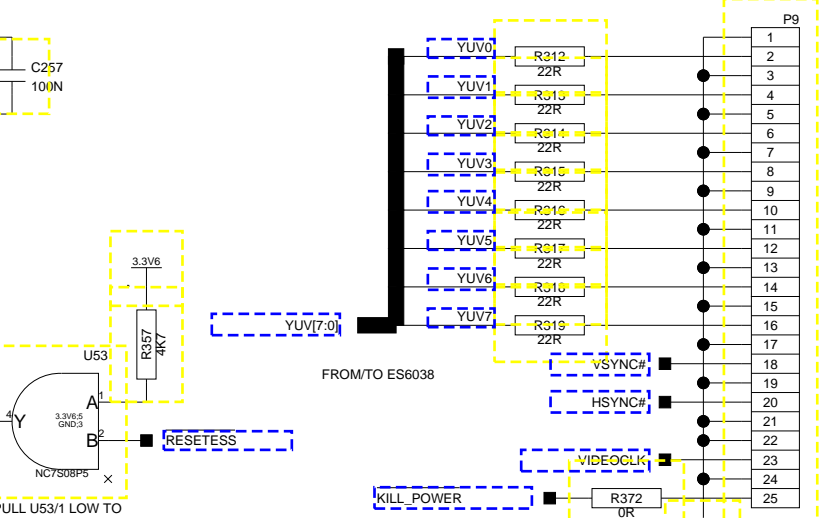


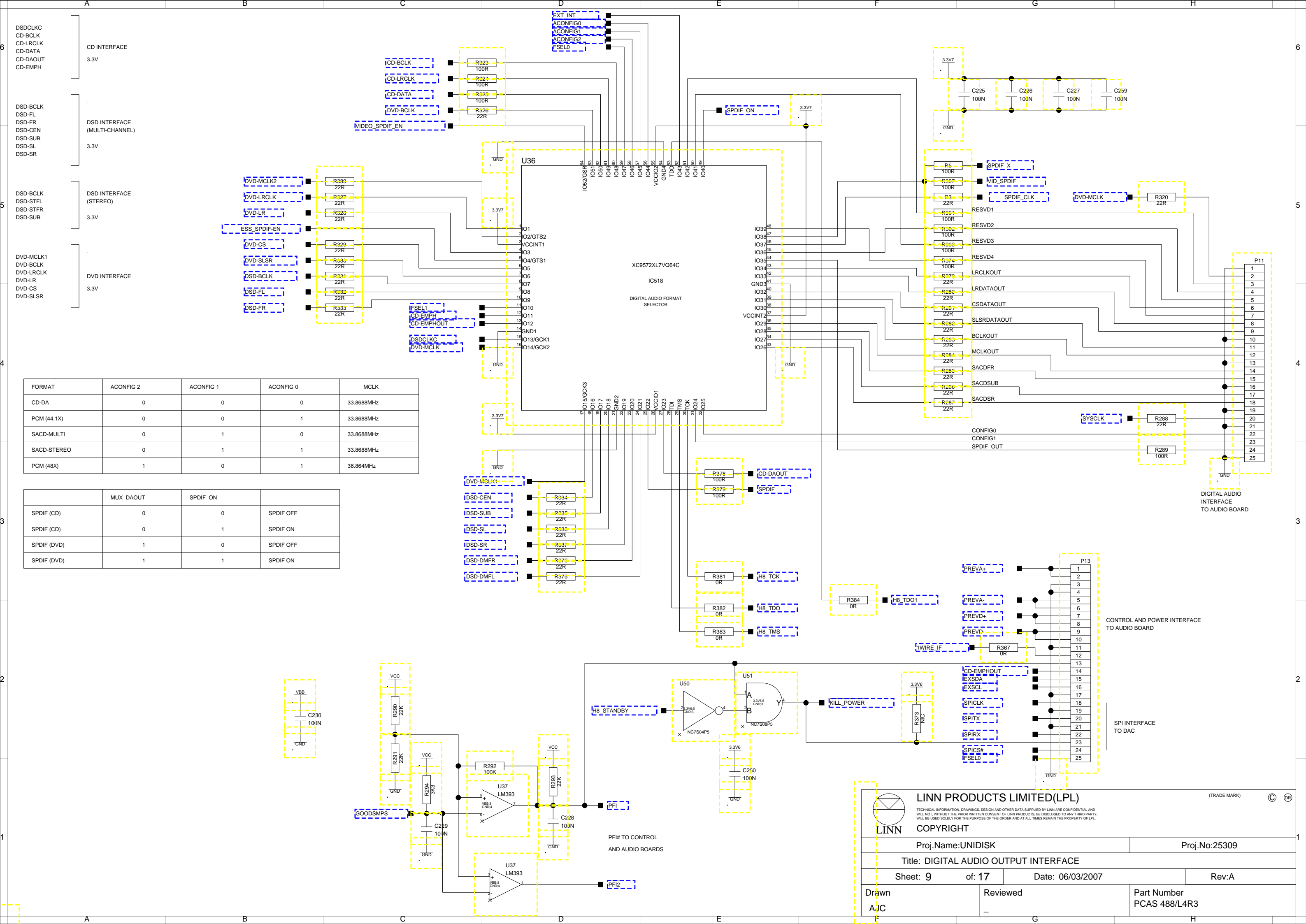
| FSEL1 | FSEL0 | CLOCK TYPE |
|-------|-------|-----------------|
| 0 | 0 | NO CLOCK |
| 0 | 1 | DVD (*44.1kHz) |
| 1 | 0 | DVD (*48kHz) |
| 1 | 1 | SPDIF/ADC CLOCK |

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| | | | |
|-----------------------------|----------|------------------------------|-------|
| Proj.Name:UNIDISK | | Proj.No:25309 | |
| Title: ESS SUPPORT & MEMORY | | | |
| Sheet: 8 | of: 17 | Date: 06/03/2007 | Rev:A |
| Drawn AJC | Reviewed | Part Number PCAS 488/L4R3 | |





| FORMAT | ACONFIG 2 | ACONFIG 1 | ACONFIG 0 | MCLK |
|-------------|-----------|-----------|-----------|------------|
| CD-DA | 0 | 0 | 0 | 33.8688MHz |
| PCM (44.1X) | 0 | 0 | 1 | 33.8688MHz |
| SACD-MULTI | 0 | 1 | 0 | 33.8688MHz |
| SACD-STEREO | 0 | 1 | 1 | 33.8688MHz |
| PCM (48X) | 1 | 0 | 1 | 36.864MHz |

| | MUX_DAOUT | SPDIF_ON | |
|-------------|-----------|----------|-----------|
| SPDIF (CD) | 0 | 0 | SPDIF OFF |
| SPDIF (CD) | 0 | 1 | SPDIF ON |
| SPDIF (DVD) | 1 | 0 | SPDIF OFF |
| SPDIF (DVD) | 1 | 1 | SPDIF ON |

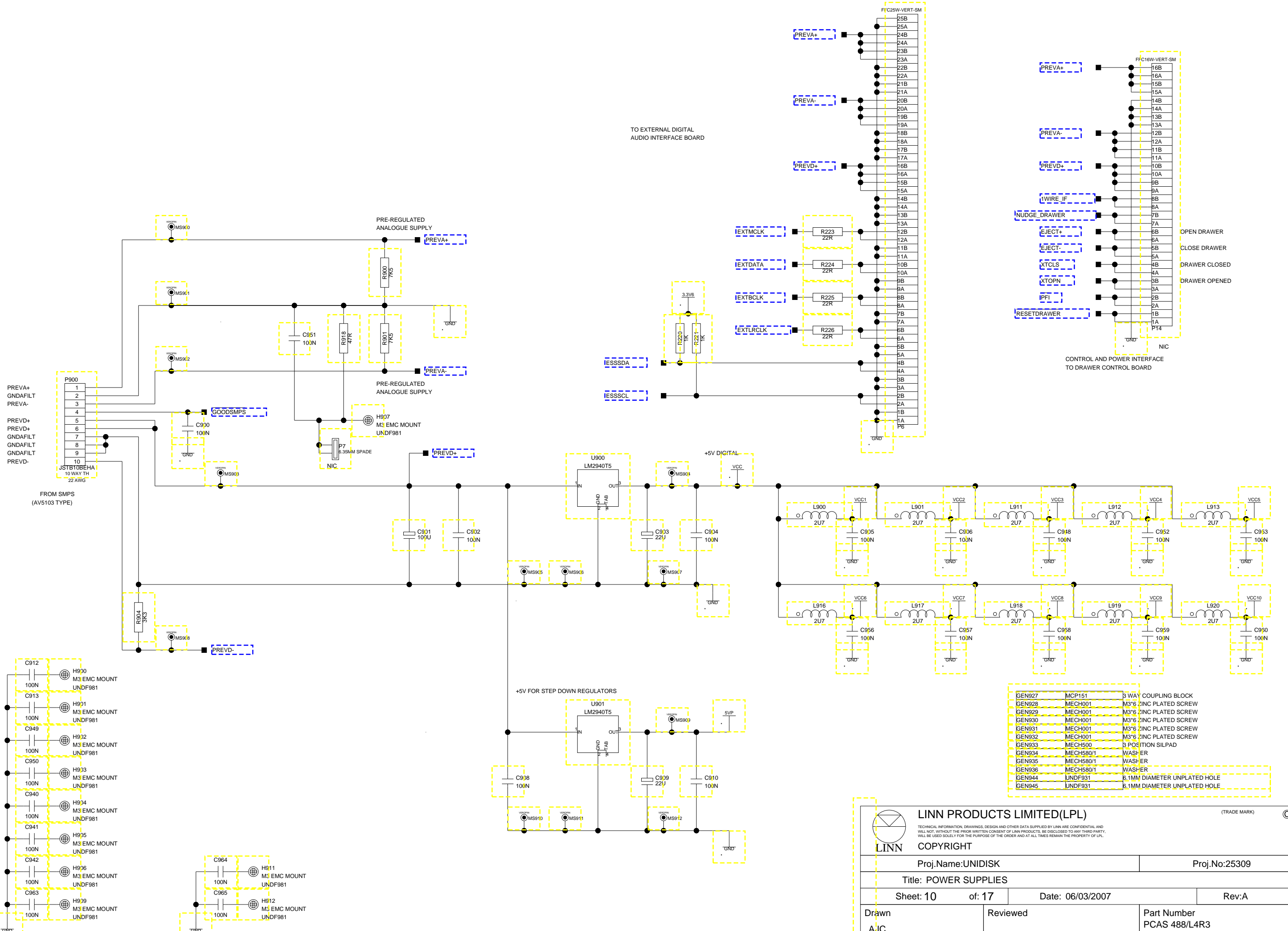


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| | | | |
|---------------------------------------|----------|------------------------------|--------|
| Proj.Name: UNIDISK | | Proj.No: 25309 | |
| Title: DIGITAL AUDIO OUTPUT INTERFACE | | | |
| Sheet: 9 | of: 17 | Date: 06/03/2007 | Rev: A |
| Drawn AJC | Reviewed | Part Number PCAS 488/L4R3 | |



PREVA+
GND/FILT
PREVA-
PREVD+
PREVD-
GND/FILT
GND/FILT
GND/FILT
PREVD-

C912 H990 M3 EMC MOUNT UNDF981
C913 H991 M3 EMC MOUNT UNDF981
C949 H992 M3 EMC MOUNT UNDF981
C950 H993 M3 EMC MOUNT UNDF981
C940 H994 M3 EMC MOUNT UNDF981
C941 H995 M3 EMC MOUNT UNDF981
C942 H996 M3 EMC MOUNT UNDF981
C963 H999 M3 EMC MOUNT UNDF981

C964 H911 M3 EMC MOUNT UNDF981
C965 H912 M3 EMC MOUNT UNDF981

TO EXTERNAL DIGITAL AUDIO INTERFACE BOARD

IESSSDA
IESSSCL

EXTMCLK
EXTDATA
EXTBCLK
EXTLRCLK

+5V DIGITAL
VCC

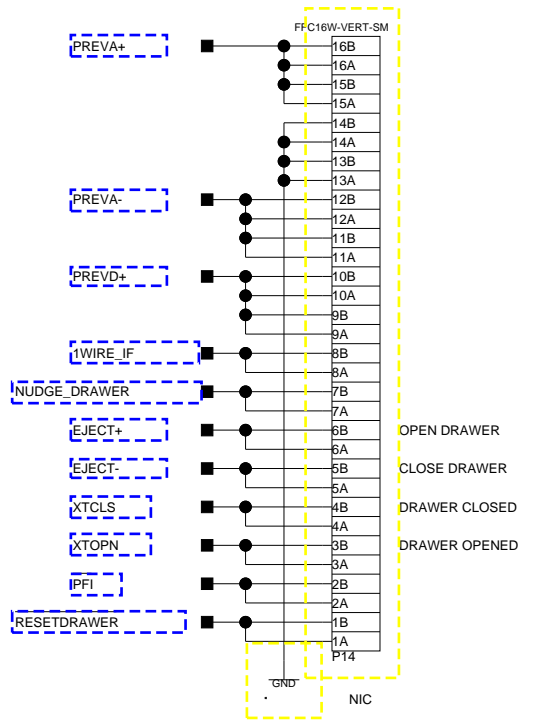
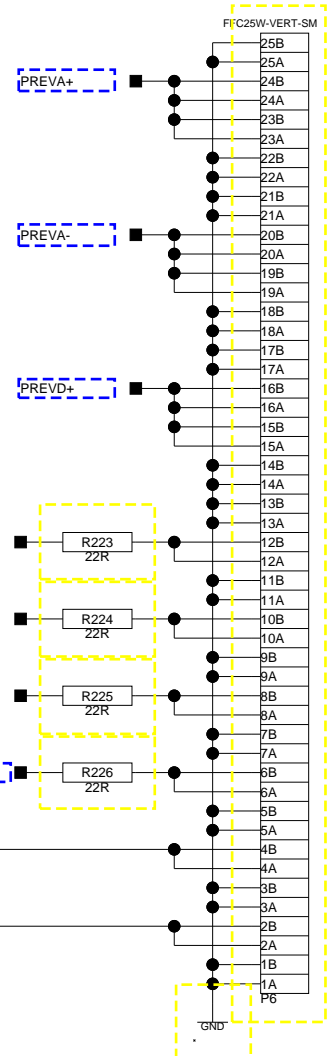
+5V FOR STEP DOWN REGULATORS

U901 LM2940T5

MS909

C908
C909
C910

MS910 MS911 MS912



CONTROL AND POWER INTERFACE TO DRAWER CONTROL BOARD

OPEN DRAWER
CLOSE DRAWER
DRAWER CLOSED
DRAWER OPENED

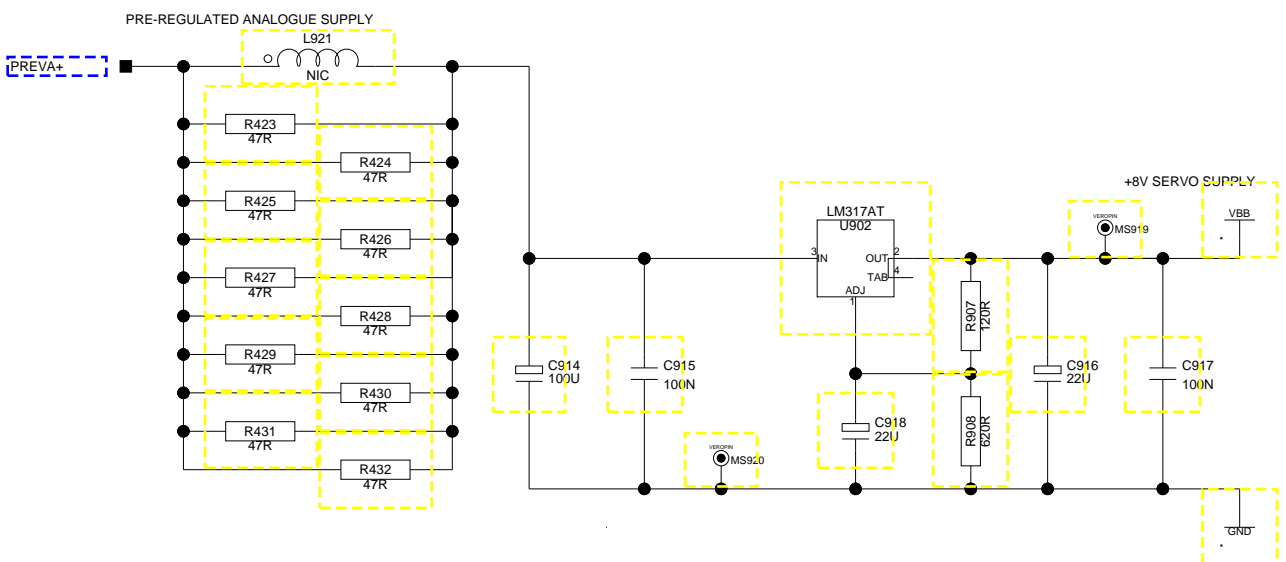
| | | |
|--------|-----------|------------------------------|
| GEN927 | MCP151 | 3 WAY COUPLING BLOCK |
| GEN928 | MECH001 | M3*6 ZINC PLATED SCREW |
| GEN929 | MECH001 | M3*6 ZINC PLATED SCREW |
| GEN930 | MECH001 | M3*6 ZINC PLATED SCREW |
| GEN931 | MECH001 | M3*6 ZINC PLATED SCREW |
| GEN932 | MECH001 | M3*6 ZINC PLATED SCREW |
| GEN933 | MECH500 | 3 POSITION SILPAD |
| GEN934 | MECH580/1 | WASHER |
| GEN935 | MECH580/1 | WASHER |
| GEN936 | MECH580/1 | WASHER |
| GEN944 | LUNDF931 | 6.1MM DIAMETER UNPLATED HOLE |
| GEN945 | LUNDF931 | 6.1MM DIAMETER UNPLATED HOLE |

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| Proj.Name: UNIDISK | | Proj.No: 25309 | |
| Title: POWER SUPPLIES | | | |
| Sheet: 10 | of: 17 | Date: 06/03/2007 | Rev: A |
| Drawn AJC | Reviewed | Part Number PCAS 488/L4R3 | |



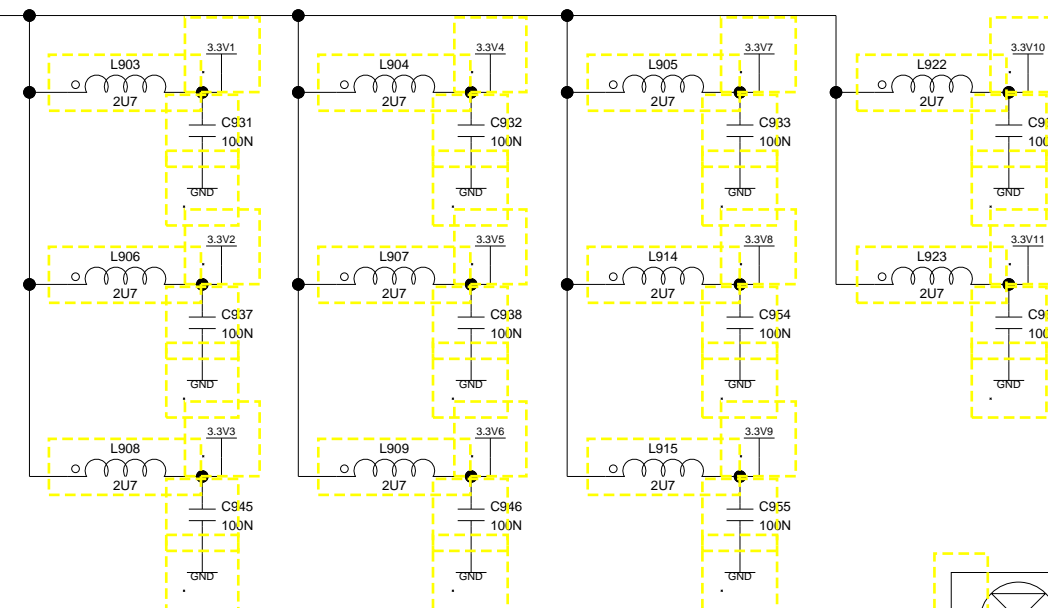
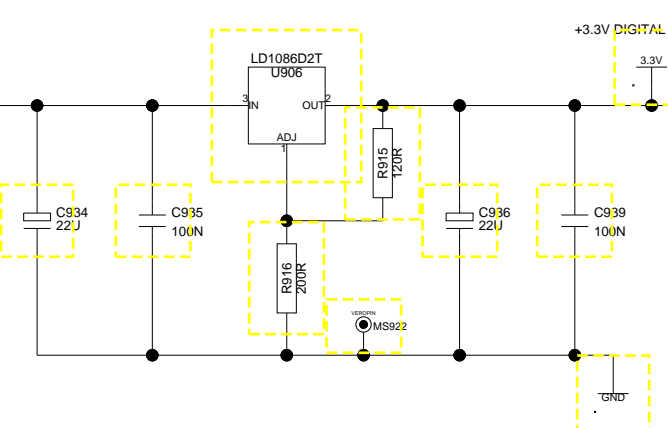
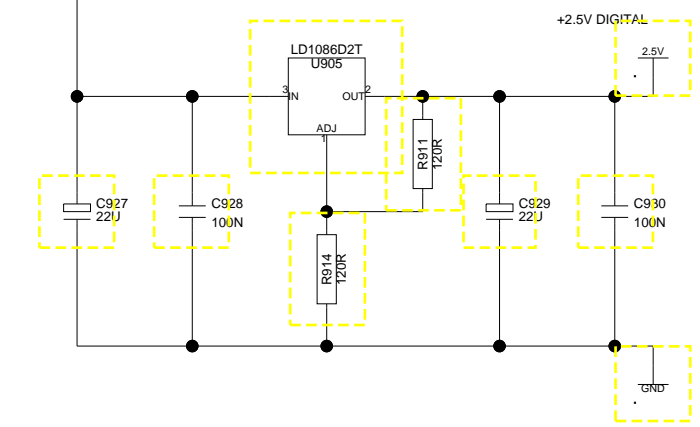
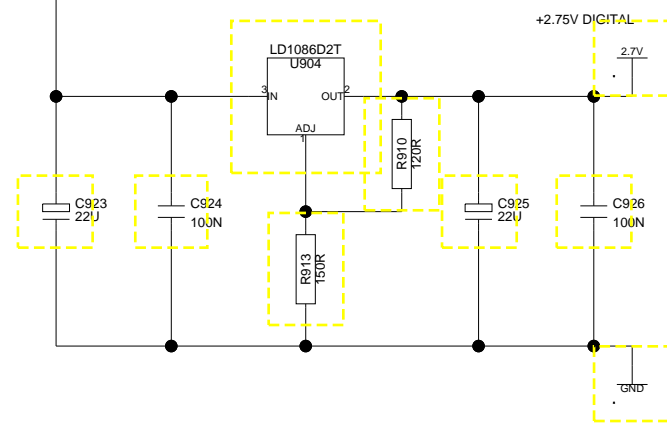
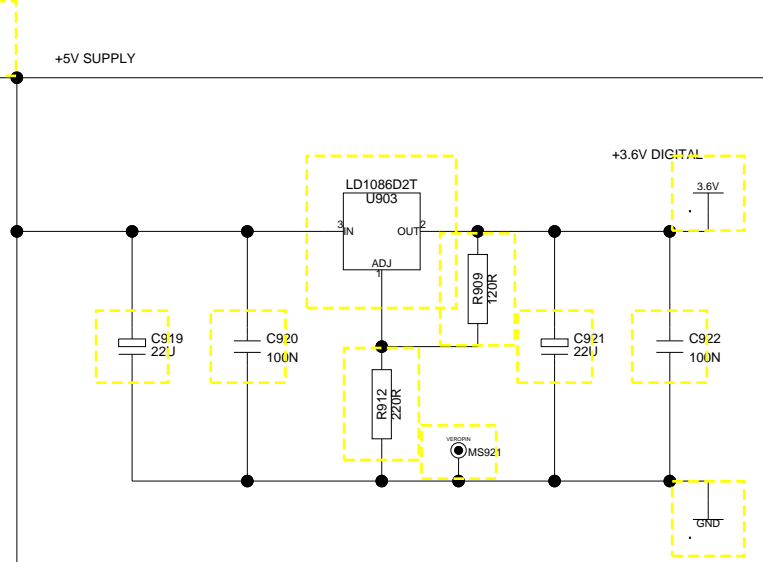
PCB900
PCB488/L4

TOP SIDE FIDUCIALS

| | | |
|------|---------|----------------------------------|
| FID0 | UNDF996 | REFERENCE FIDUCIAL |
| FID1 | UNDF996 | REFERENCE FIDUCIAL |
| FID2 | UNDF996 | REFERENCE FIDUCIAL |
| FID3 | UNDF996 | REFERENCE FIDUCIAL |
| FID4 | UNDF997 | FIXTURELESS TESTER FIDUCIAL MARK |
| FID5 | UNDF997 | FIXTURELESS TESTER FIDUCIAL MARK |
| FID6 | UNDF997 | FIXTURELESS TESTER FIDUCIAL MARK |


BOTTOM SIDE FIDUCIALS

| | | |
|------|---------|----------------------------------|
| FID7 | UNDF997 | FIXTURELESS TESTER FIDUCIAL MARK |
| FID8 | UNDF997 | FIXTURELESS TESTER FIDUCIAL MARK |
| FID9 | UNDF997 | FIXTURELESS TESTER FIDUCIAL MARK |



GENERAL MECHANICAL PARTS

| | | |
|--------|---------|------------------------------|
| GEN916 | UNDF964 | 2.6MM UNPLATED HOLE |
| GEN917 | UNDF964 | 2.6MM UNPLATED HOLE |
| GEN902 | UNDF974 | 7.5MM DIAMETER UNPLATED HOLE |
| GEN908 | UNDF993 | SNAP OFF |
| GEN909 | UNDF993 | SNAP OFF |
| GEN910 | UNDF993 | SNAP OFF |
| GEN911 | UNDF993 | SNAP OFF |
| GEN912 | UNDF993 | SNAP OFF |
| GEN913 | UNDF993 | SNAP OFF |
| GEN914 | UNDF993 | SNAP OFF |
| GEN915 | UNDF993 | SNAP OFF |
| GEN919 | UNDF993 | SNAP OFF |
| GEN920 | UNDF993 | SNAP OFF |
| GEN921 | UNDF993 | SNAP OFF |
| GEN922 | UNDF993 | SNAP OFF |
| GEN923 | UNDF993 | SNAP OFF |
| GEN924 | UNDF993 | SNAP OFF |
| GEN925 | UNDF993 | SNAP OFF |
| GEN926 | UNDF993 | SNAP OFF |
| GEN937 | UNDF993 | SNAP OFF |
| GEN938 | UNDF993 | SNAP OFF |
| GEN939 | UNDF993 | SNAP OFF |
| GEN940 | UNDF993 | SNAP OFF |
| GEN941 | UNDF993 | SNAP OFF |
| GEN942 | UNDF993 | SNAP OFF |
| GEN943 | UNDF993 | SNAP OFF |

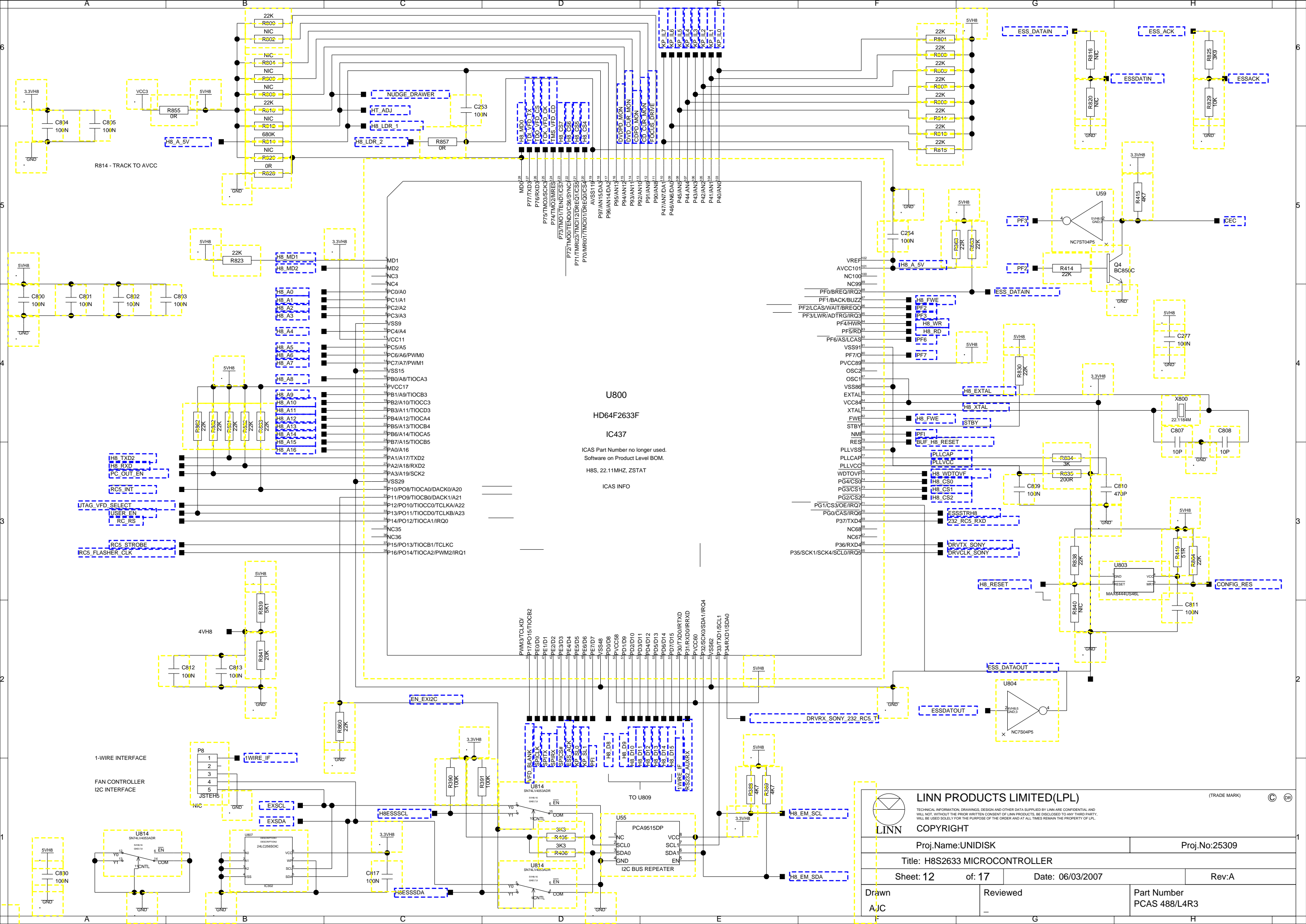


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| Drawn AJC | Reviewed _ | Part Number PCAS 488/L4R3 | |



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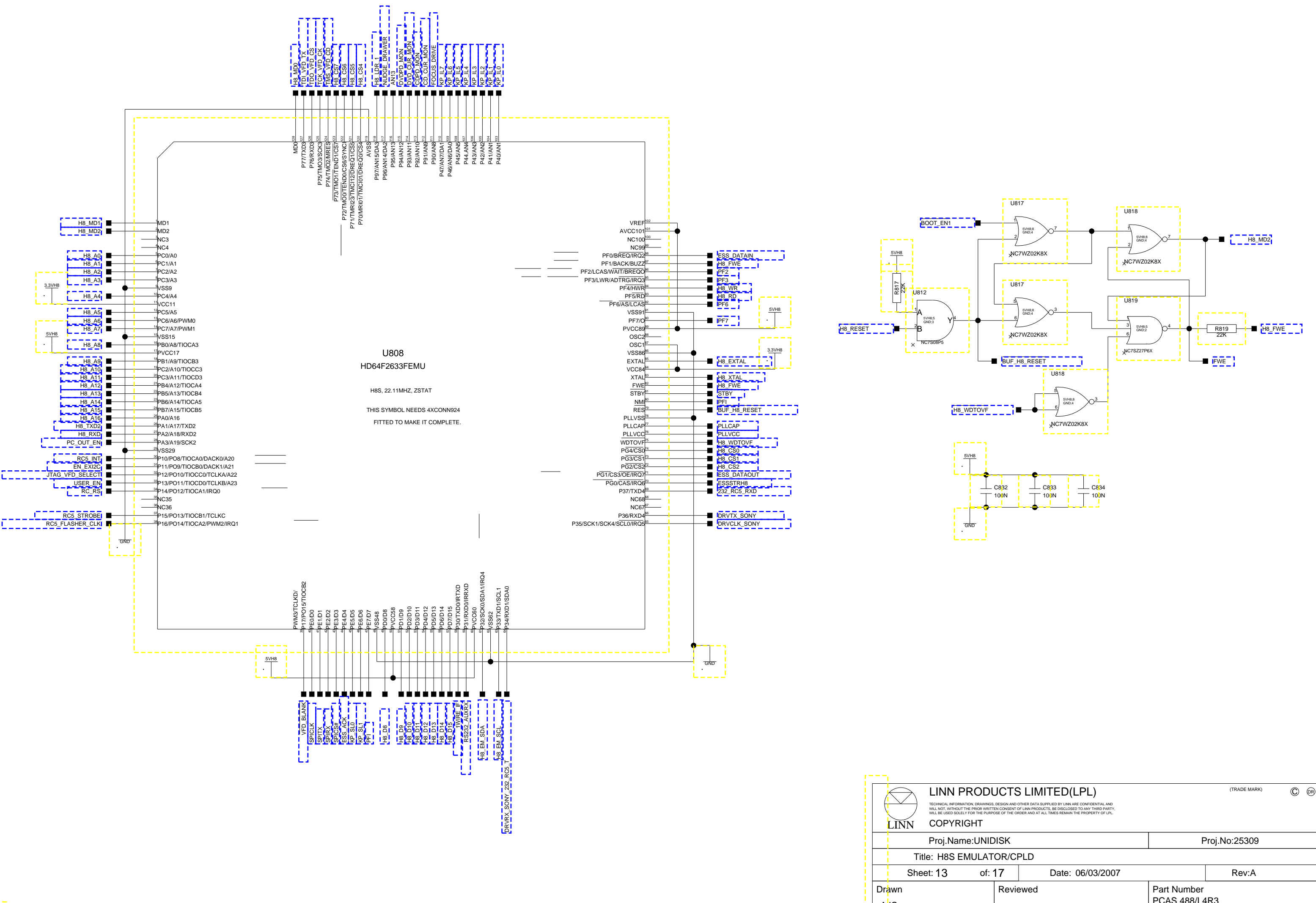
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Proj.Name: UNIDISK **Proj.No: 25309**

Title: H8S2633 MICROCONTROLLER

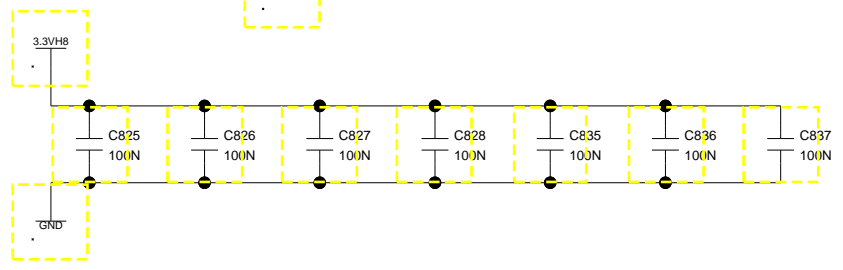
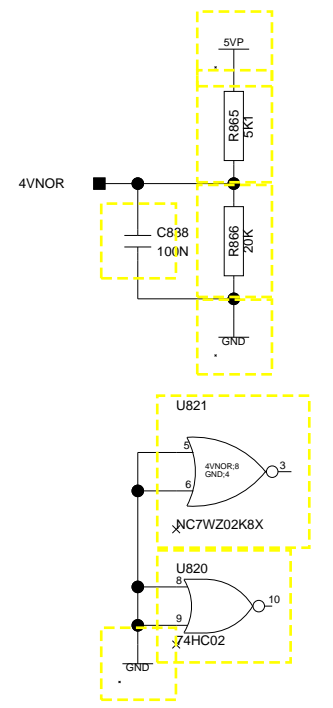
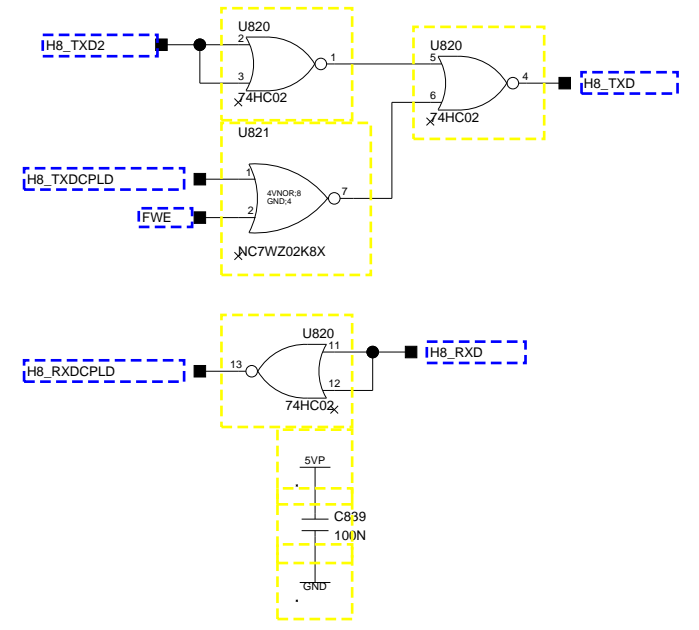
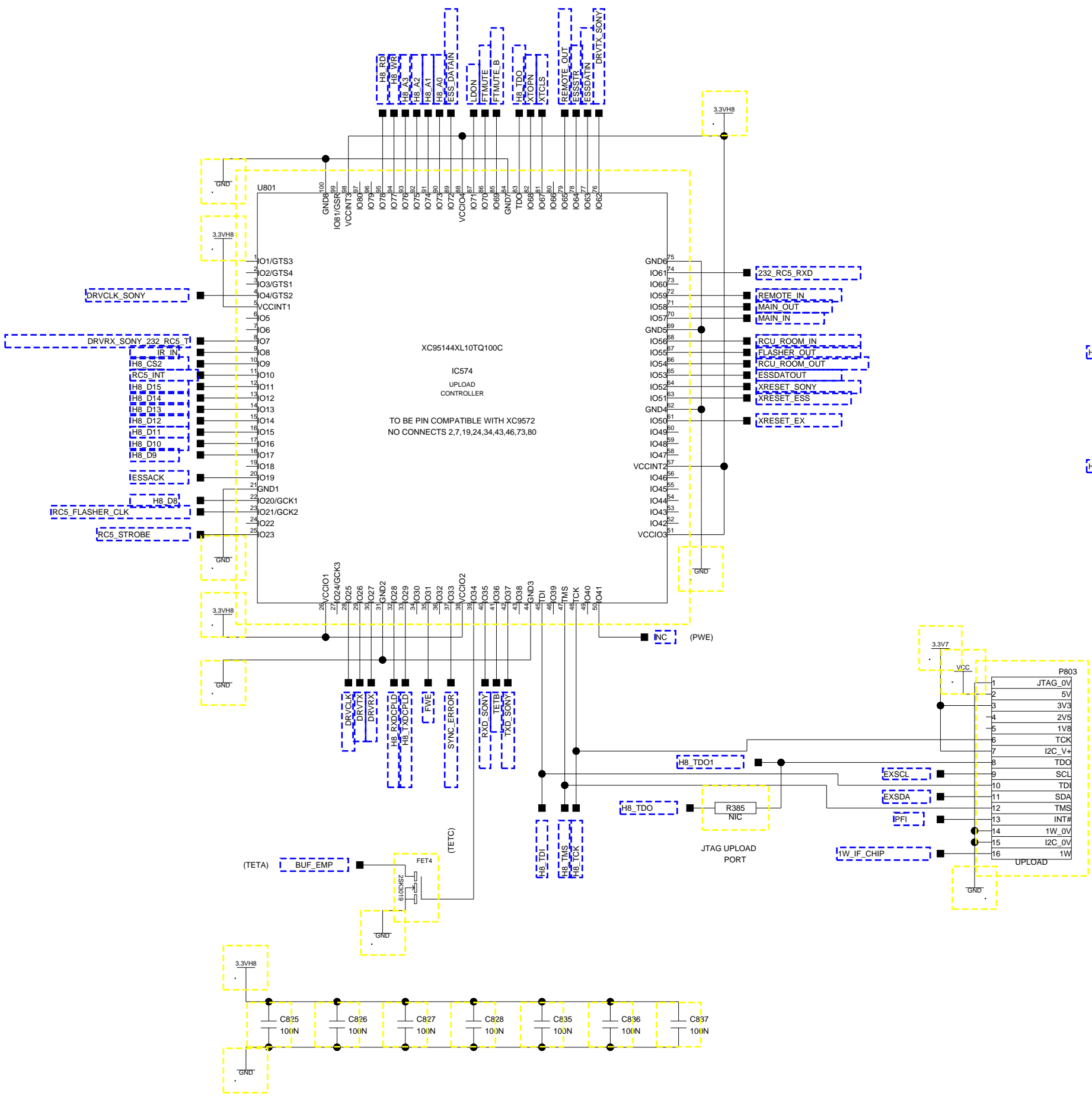
Sheet: 12 of 17 **Date: 06/03/2007** **Rev: A**

Drawn: AJC **Reviewed:** **Part Number: PCAS 488/L4R3**



| | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------------------------------------------------------------|
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| Copyright | | |
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| Title: H8S EMULATOR/CPLD | | |
| Sheet: 13 | of: 17 | Date: 06/03/2007 |
| | | Rev:A |
| Drawn AJC | Reviewed | Part Number PCAS 488/L4R3 |

UPLOAD_SONY ■■■
 USER_EN ■■■

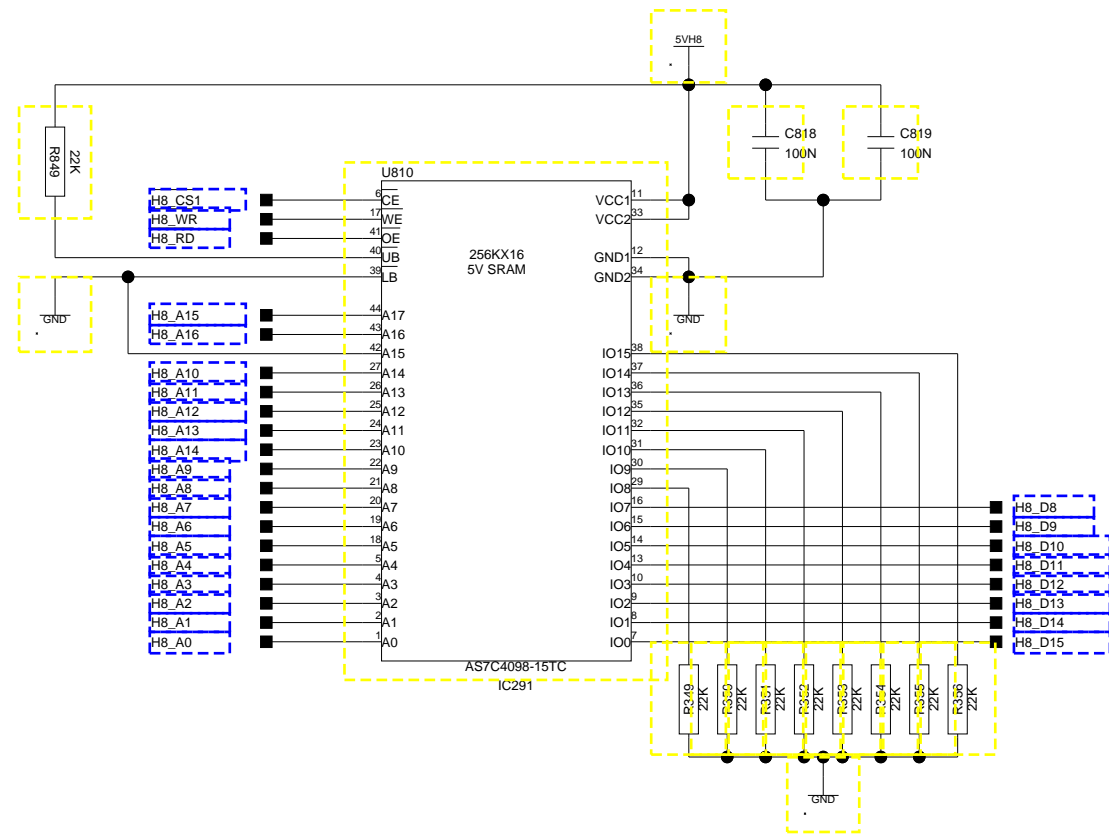


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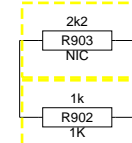
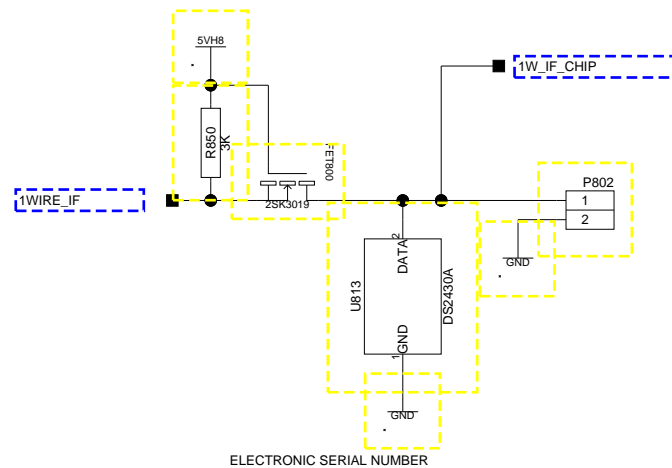
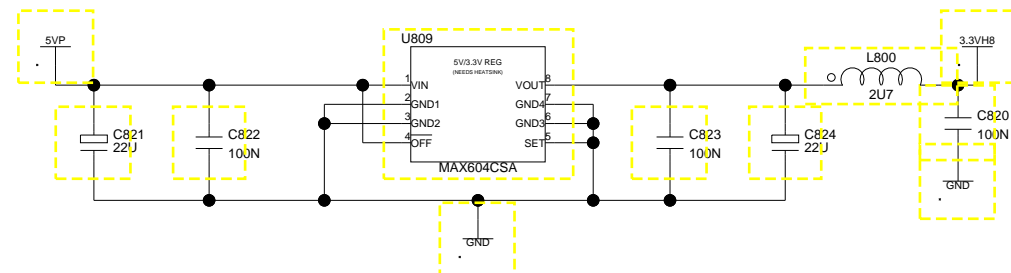
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| Proj.Name:UNIDISK | | Proj.No:25309 | |
| Title: SOFTWARE UPLOAD CONTROLLER | | | |
| Sheet: 14 | of: 17 | Date: 06/03/2007 | Rev:A |
| Drawn A/JC | Reviewed | Part Number PCAS 488/L4R3 | |



ADDRESS AND DATA LINES HAVE BEEN SWAPPED TO FIT ROUTING REQUIREMENTS



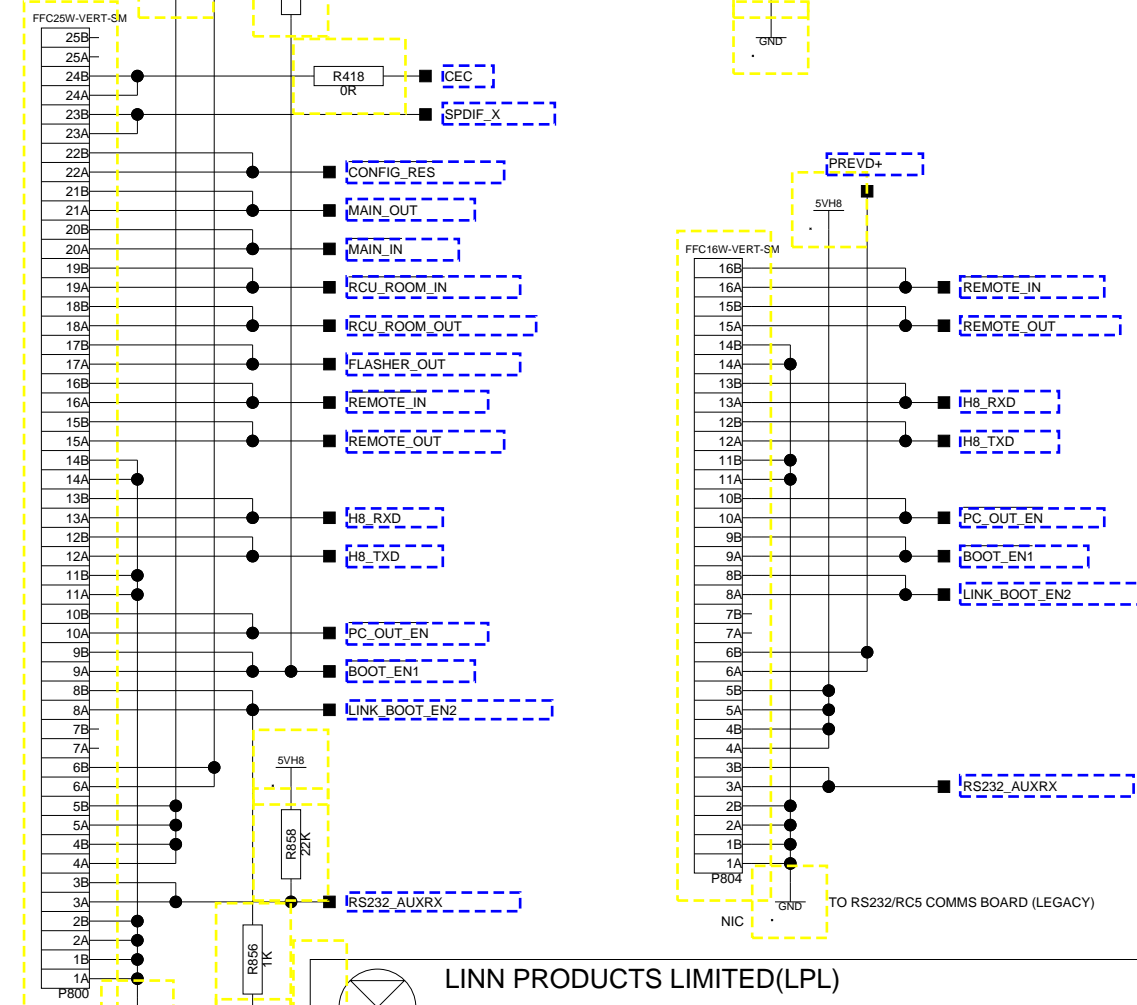
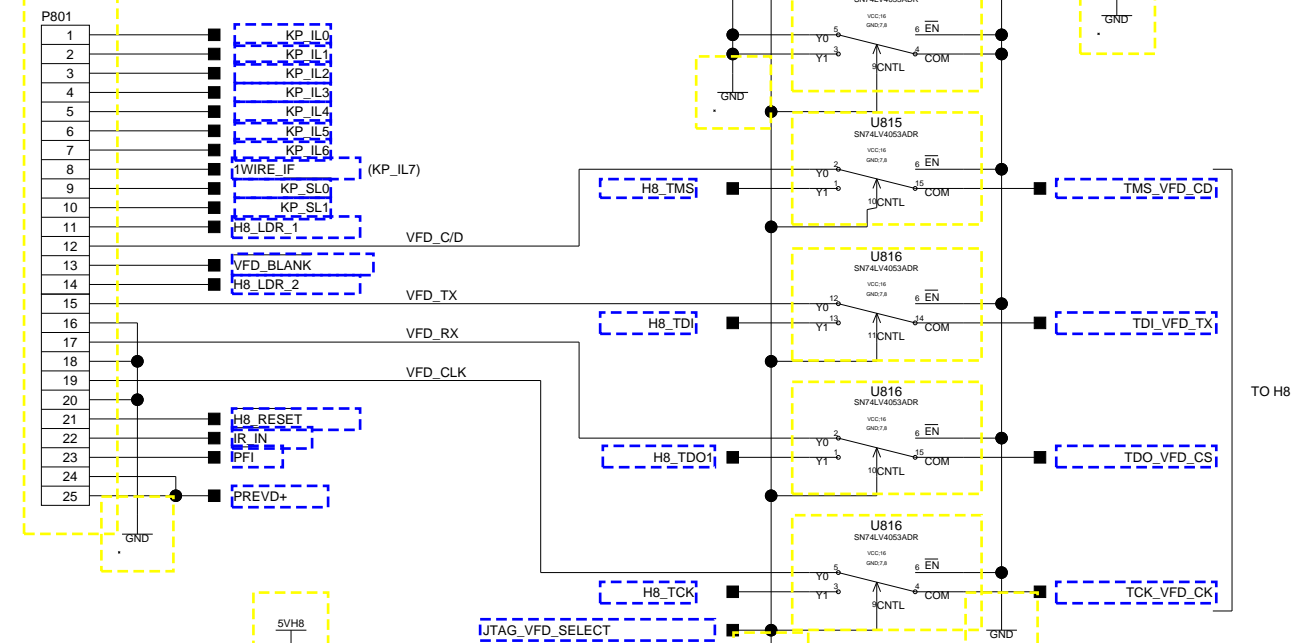
R902/3 indicates board use:

R902 fitted = PCAS488


R903 fitted = PCAS297

VFD BLANKING

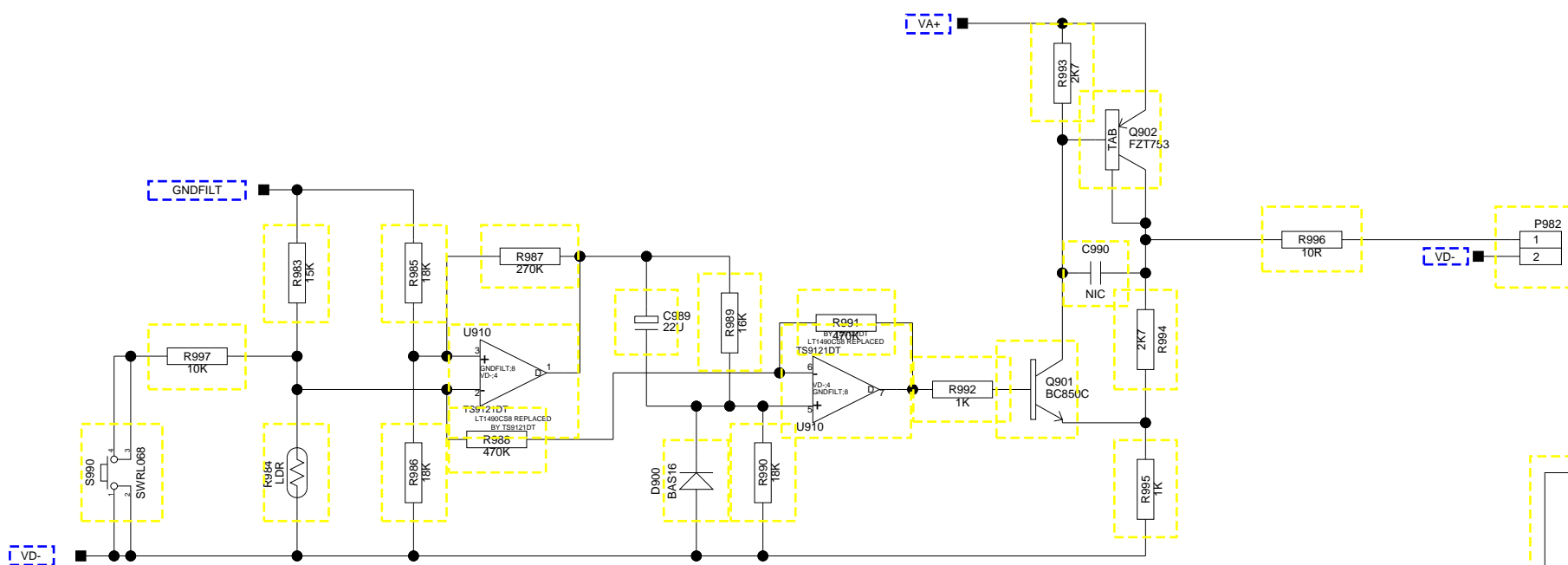
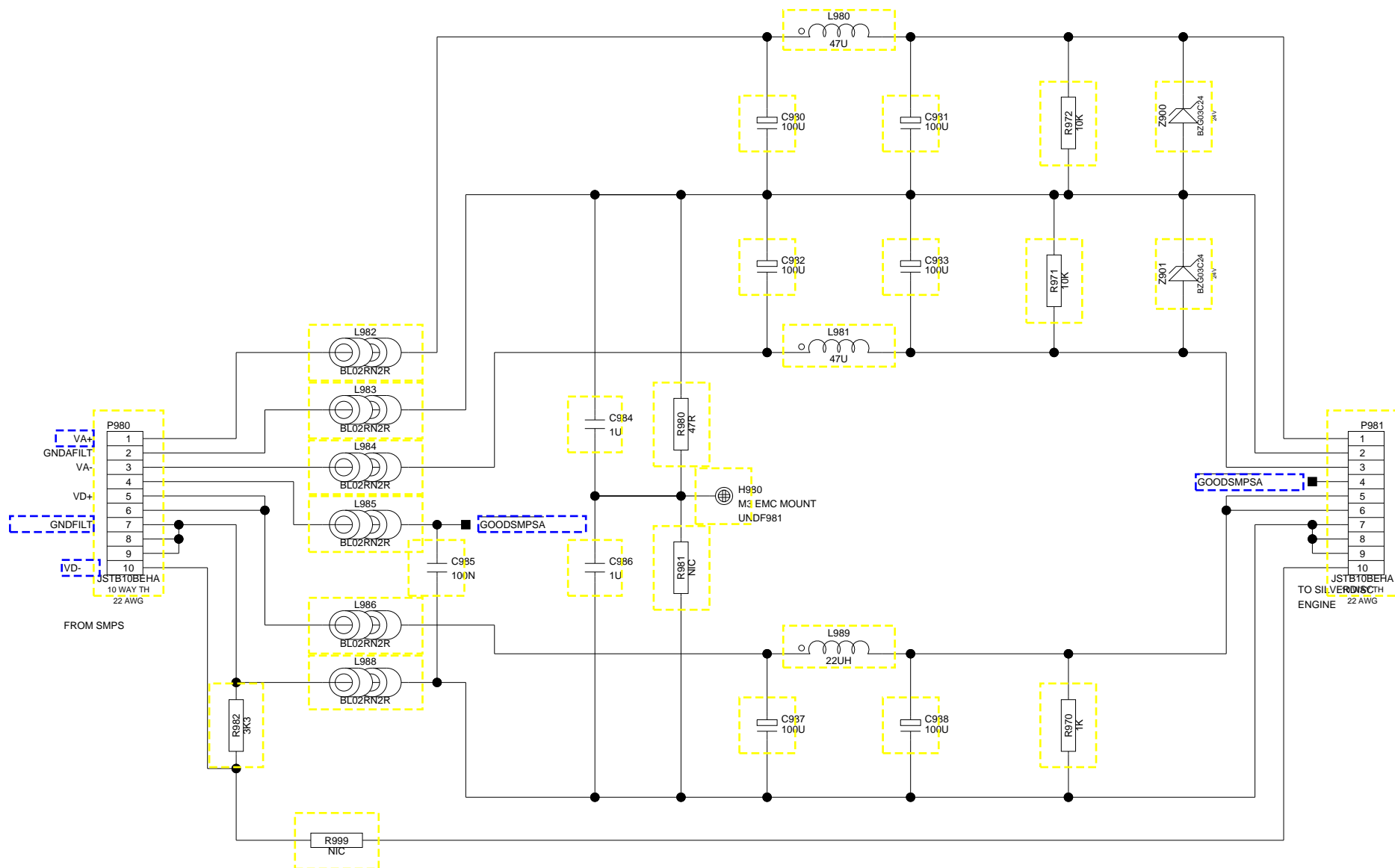
TO DISPLAY BOARD




TO RS232/RC5 COMMS BOARD

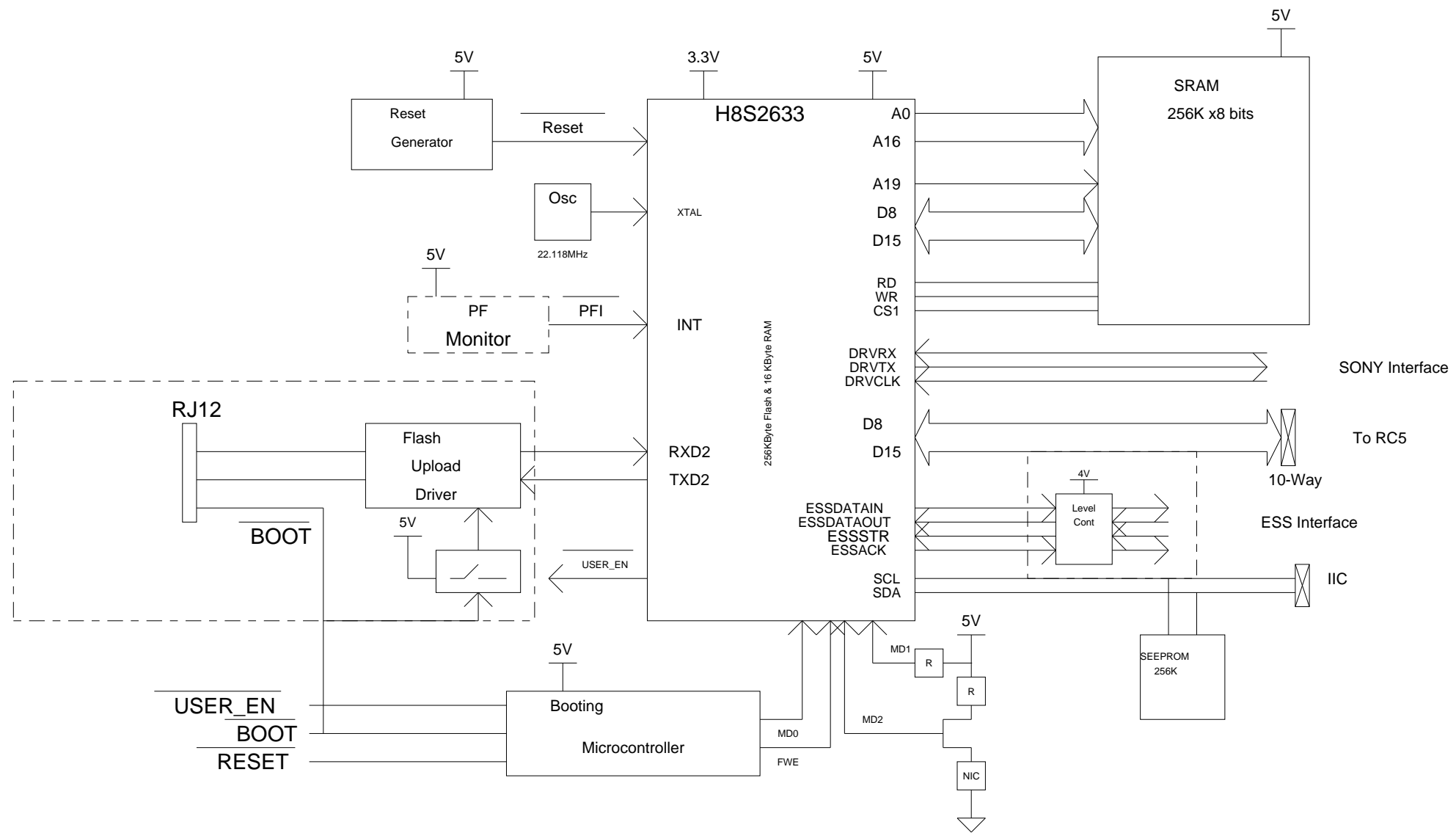

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| Proj.Name: UNIDISK | | Proj.No: 25309 | |
| Title: H8S SRAM, SUPPLY & INTERFACES | | | |
| Sheet: 15 | of: 17 | Date: 06/03/2007 | Rev: A |
| Drawn AJC | Reviewed | Part Number PCAS 488/L4R3 | |

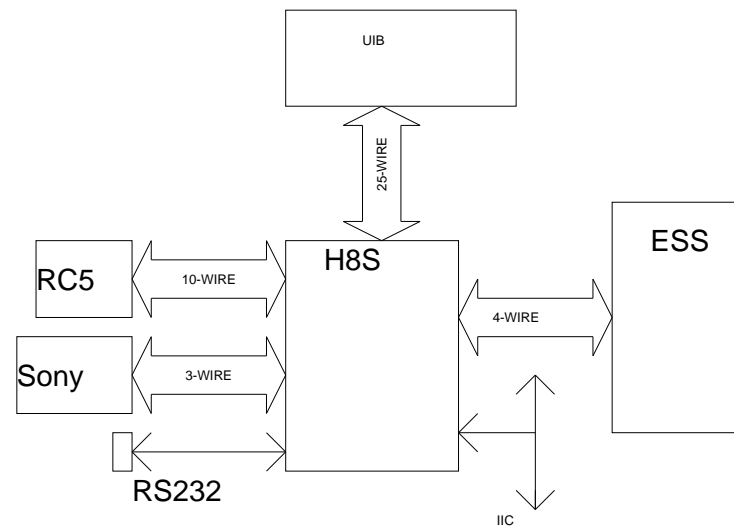




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| | | | |
|----------------------------------|----------|------------------------------|--------|
| Proj.Name: UNIDISK | | Proj.No: 25309 | |
| Title: POWER SUPPLY FILTER BOARD | | | |
| Sheet: 16 | of: 17 | Date: 06/03/2007 | Rev: A |
| Drawn A/JC | Reviewed | Part Number PCAS 488/L4R3 | |

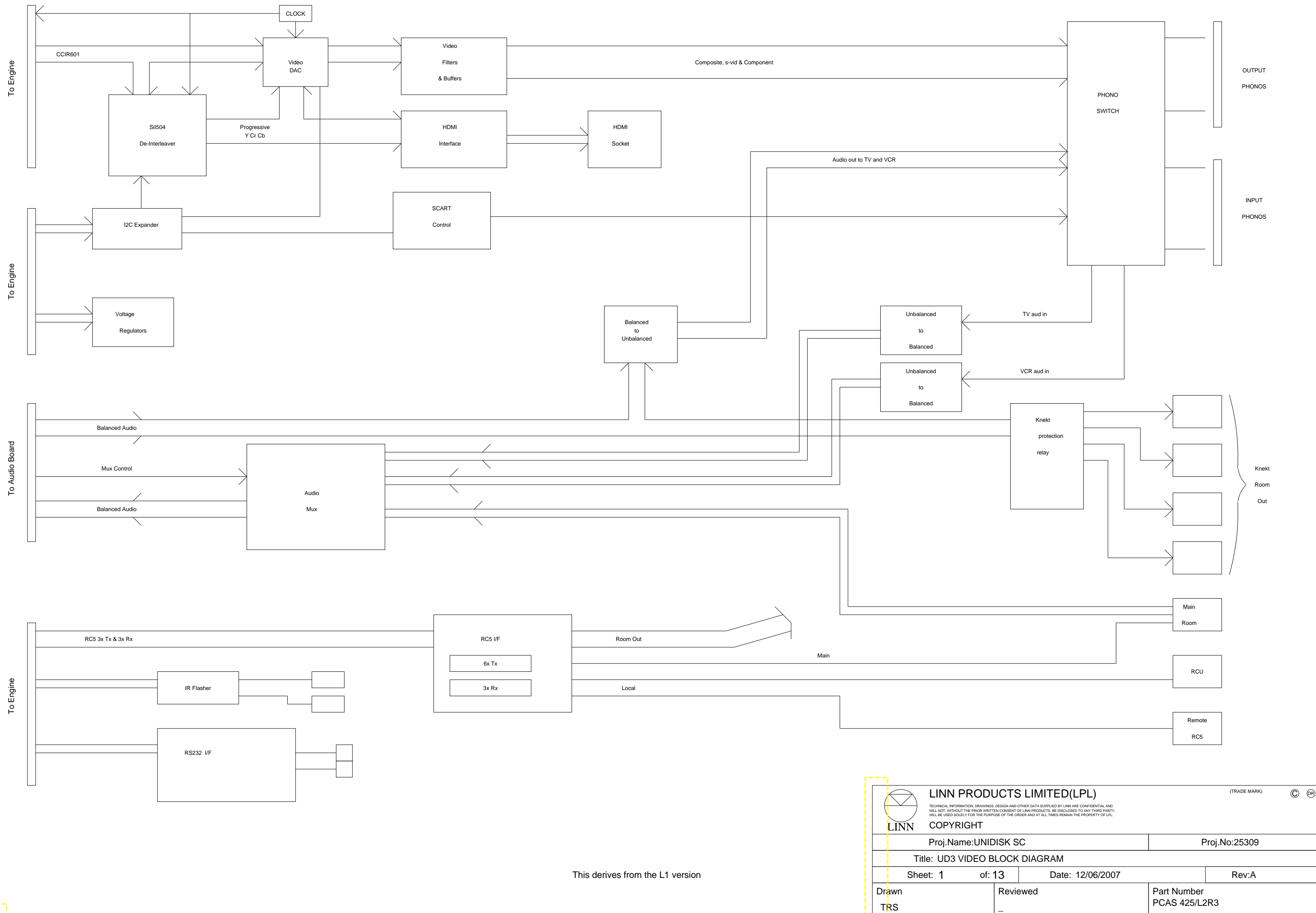


| | fwe | MD0 | MD1 | MD2 |
|------------------------------------|-----|-----|-----|-----|
| Normal operation with external RAM | 0 | 1 | 1 | 0 |
| Normal operation single chip | 0 | 1 | 1 | 1 |
| Flash uploading | 1 | 0 | 1 | X |




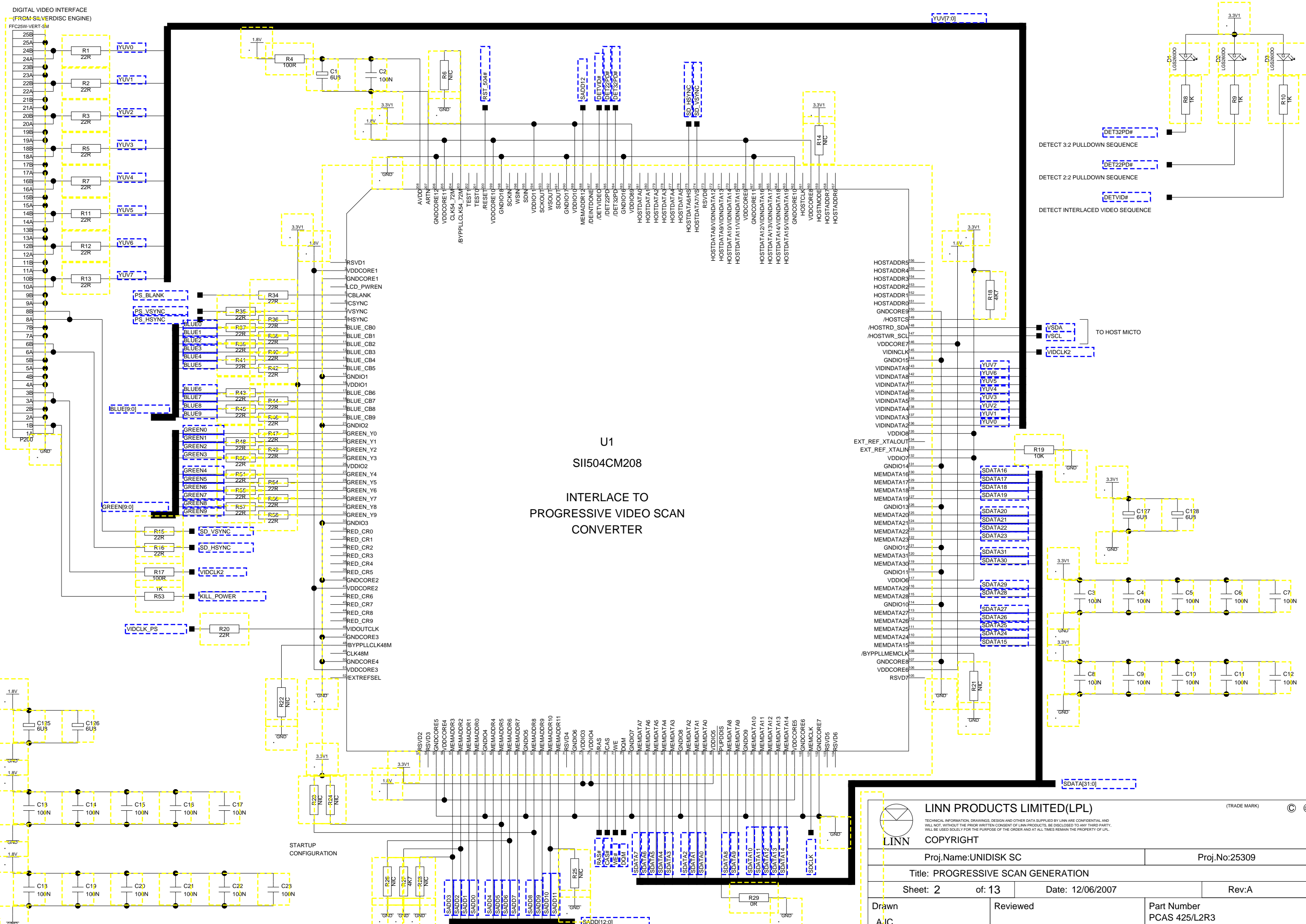

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|-------------------------|----------|------------------------------|-------|
| Proj.Name:UNIDISK | | Proj.No:25309 | |
| Title: H8 BLOCK DIAGRAM | | | |
| Sheet: 17 | of: 17 | Date: 06/03/2007 | Rev:A |
| Drawn | Reviewed | Part Number PCAS 488/L4R3 | |



This derives from the L1 version

| | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------|--|
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| | | Proj.No:UNIDISK SC | |
| Title: UD3 VIDEO BLOCK DIAGRAM | | | |
| Sheet: 1 | | of: 13 | |
| Date: 12/06/2007 | | Rev:A | |
| Drawn TRS | | Reviewed - | |
| Part Number PCAS 425/L2R3 | | | |



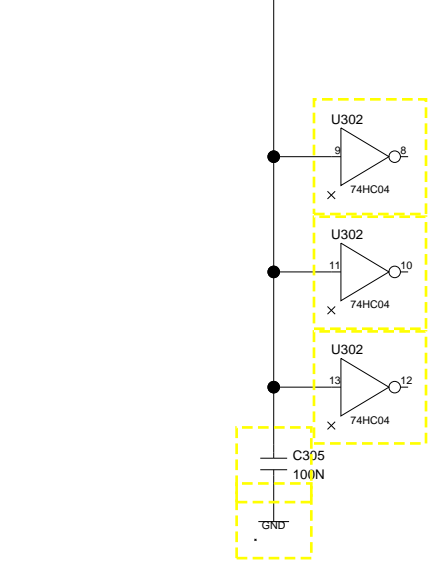
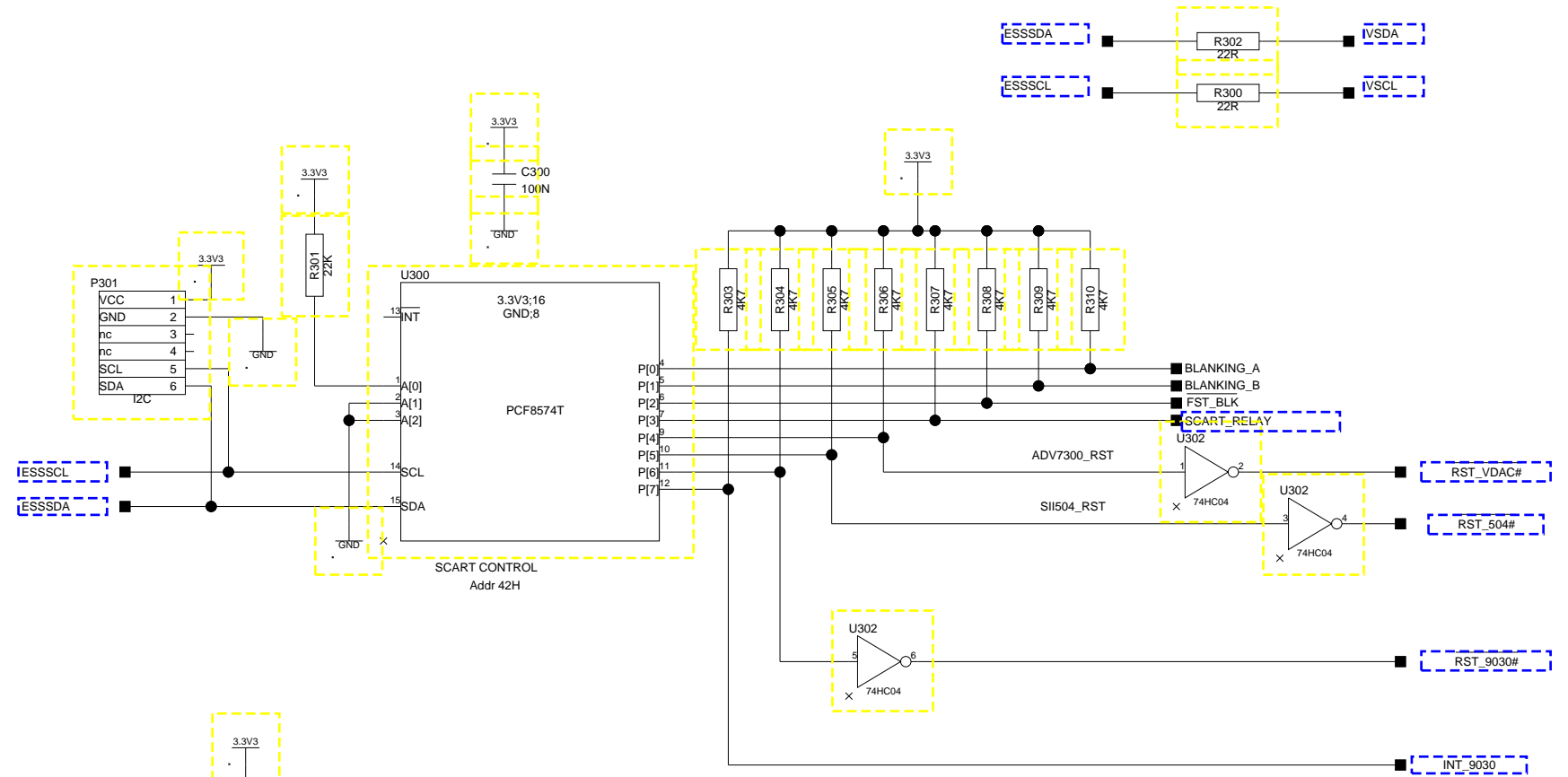
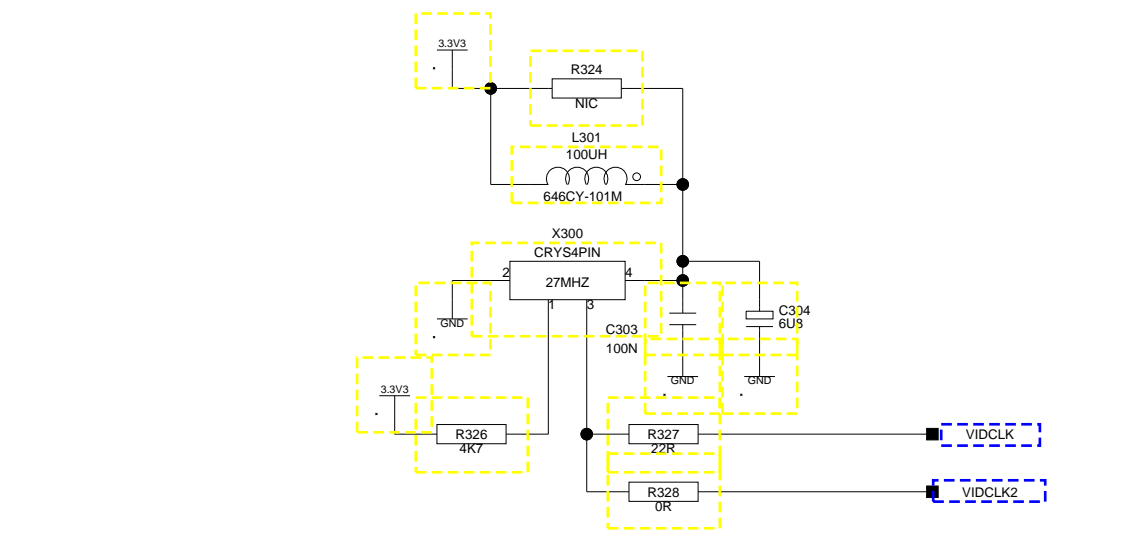
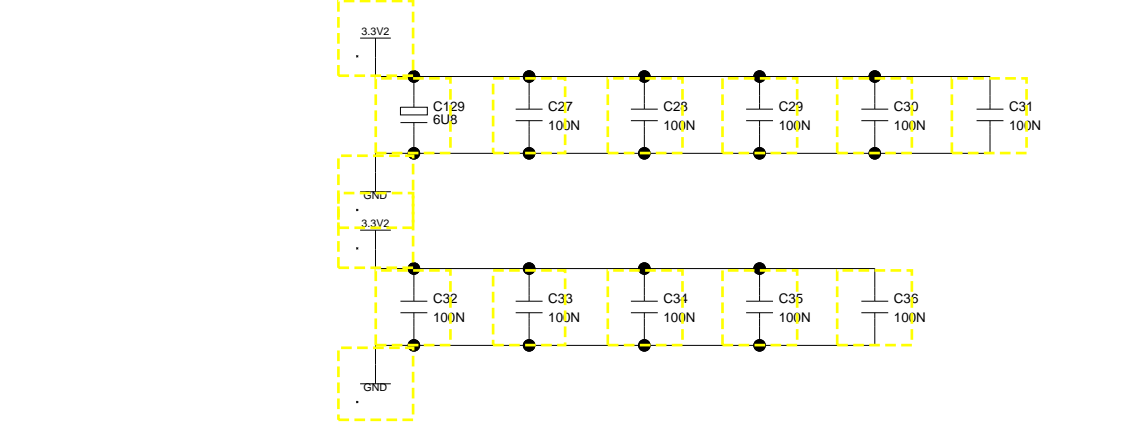
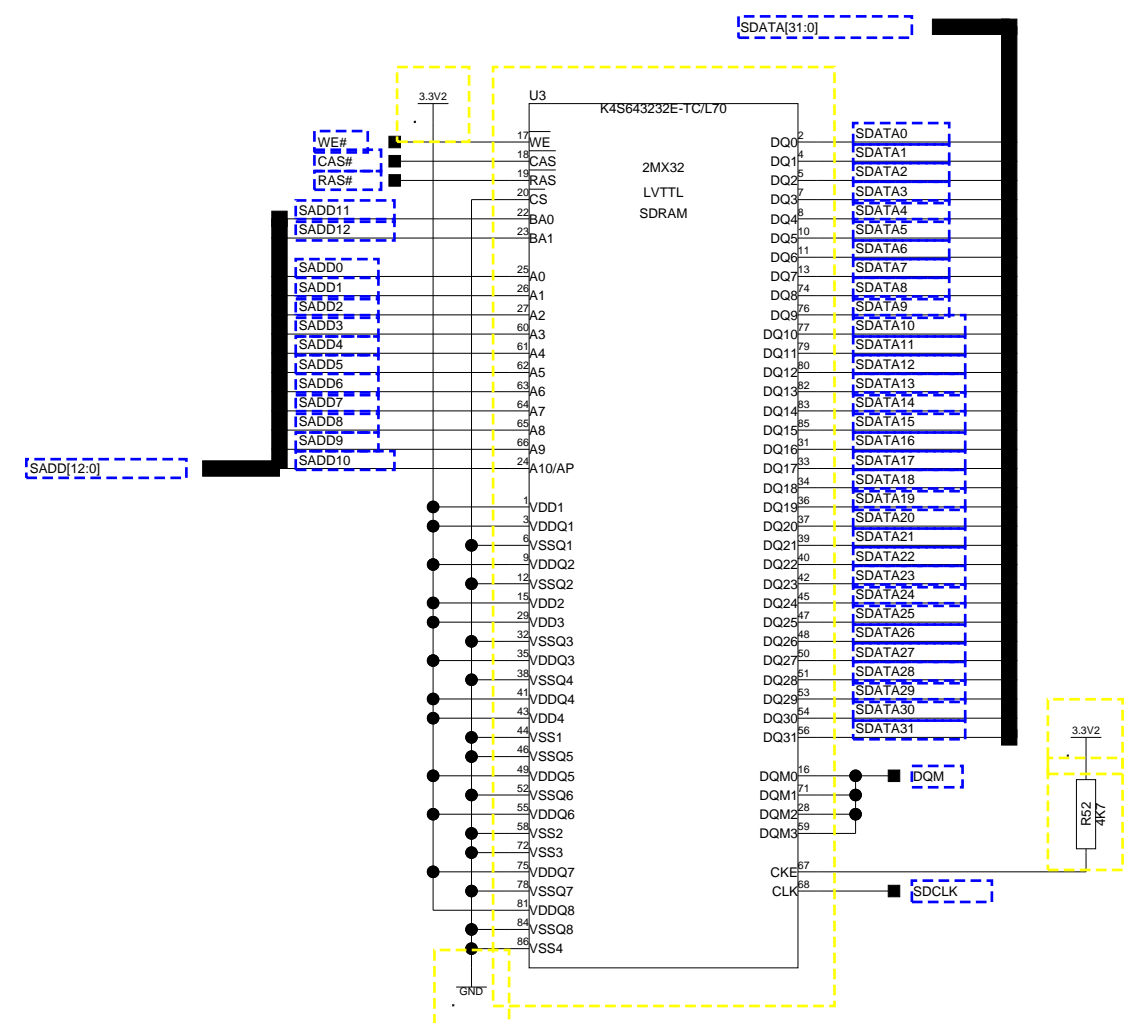
U1
SII504CM208
INTERLACE TO
PROGRESSIVE VIDEO SCAN
CONVERTER

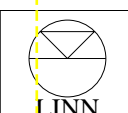
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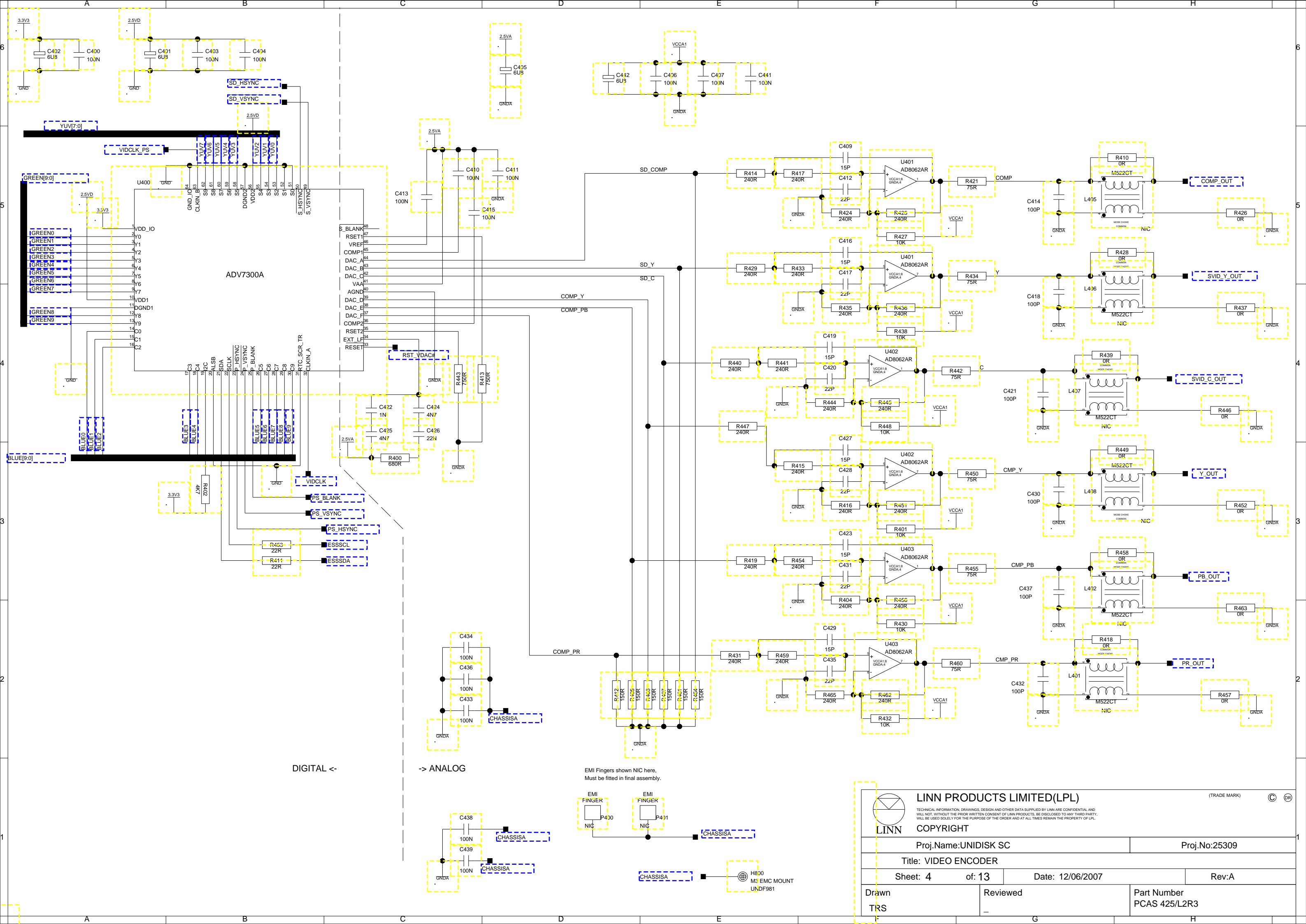
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|------------------------------------|----------|------------------------------|--------|
| Proj.Name: UNIDISK SC | | Proj.No: 25309 | |
| Title: PROGRESSIVE SCAN GENERATION | | | |
| Sheet: 2 | of: 13 | Date: 12/06/2007 | Rev: A |
| Drawn A/JC | Reviewed | Part Number PCAS 425/L2R3 | |




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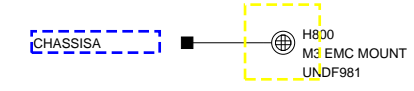
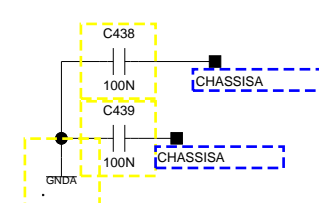
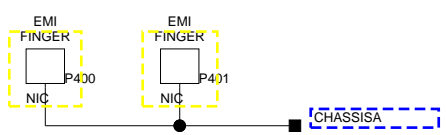
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| Proj.Name:UNIDISK SC | | Proj.No:25309 | |
| Title: SDRAM FOR SII504 | | | |
| Sheet: 3 | of: 13 | Date: 12/06/2007 | Rev:A |
| Drawn TRS | Reviewed | Part Number PCAS 425/L2R3 | |

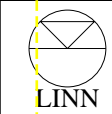


DIGITAL <-

>- ANALOG

EMI Fingers shown NIC here, Must be fitted in final assembly.



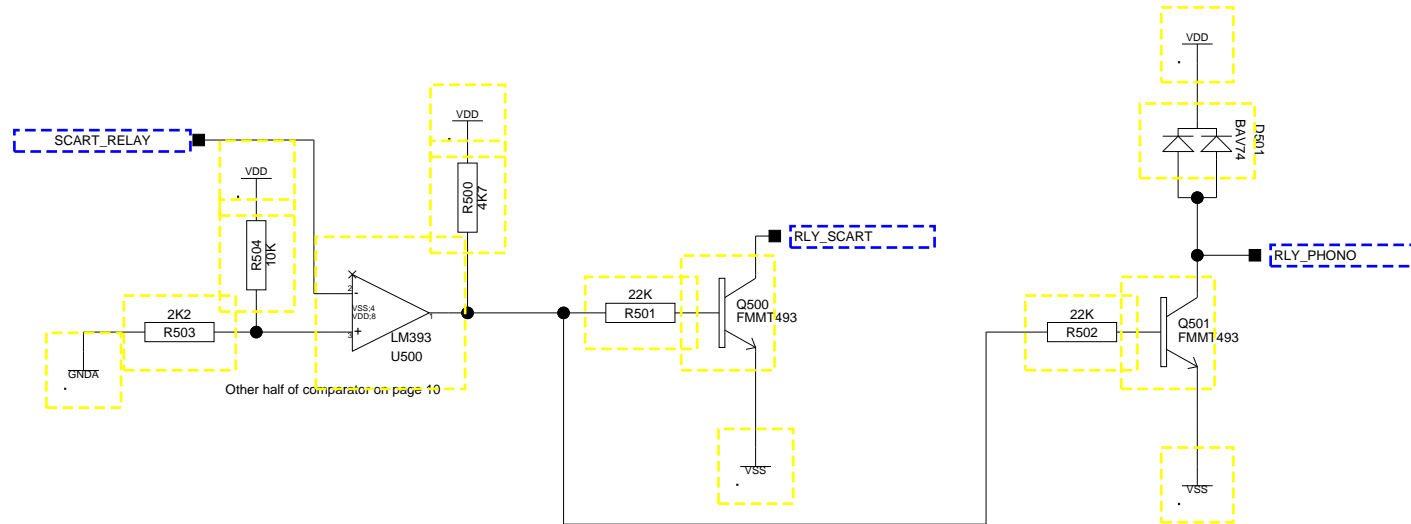
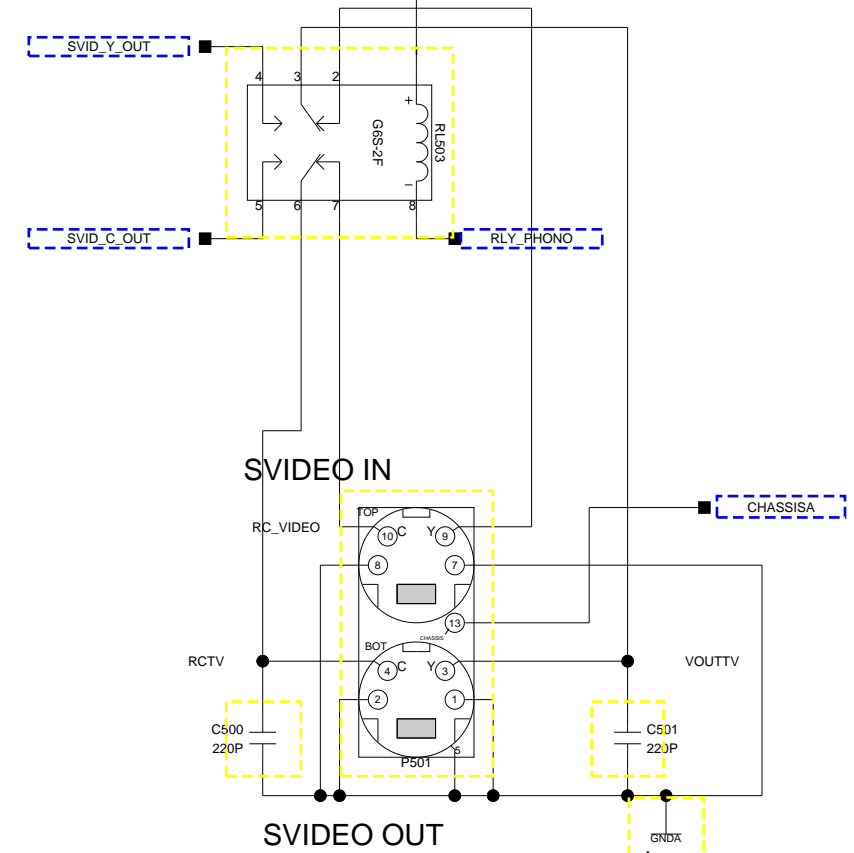
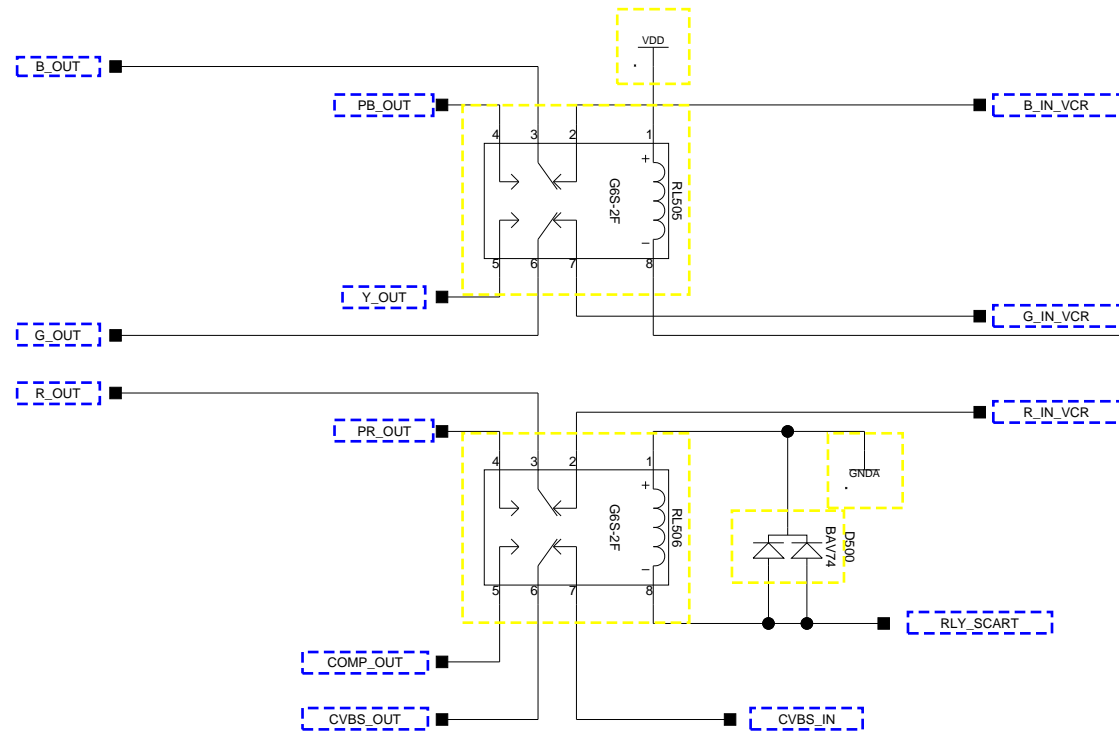
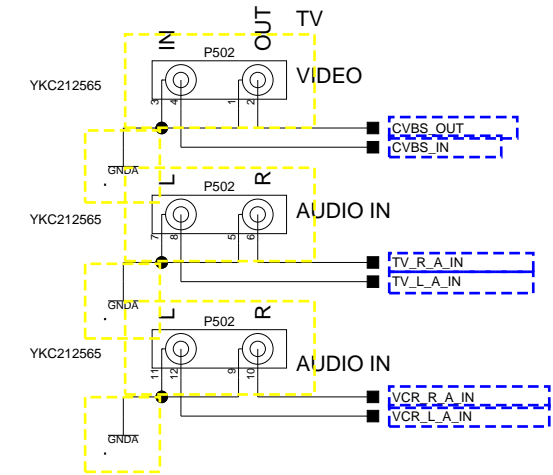
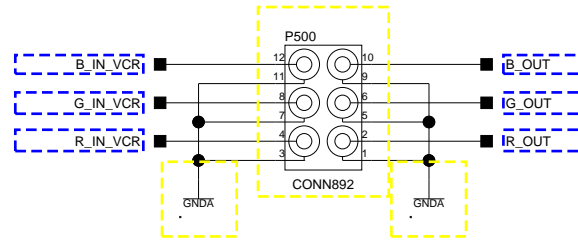


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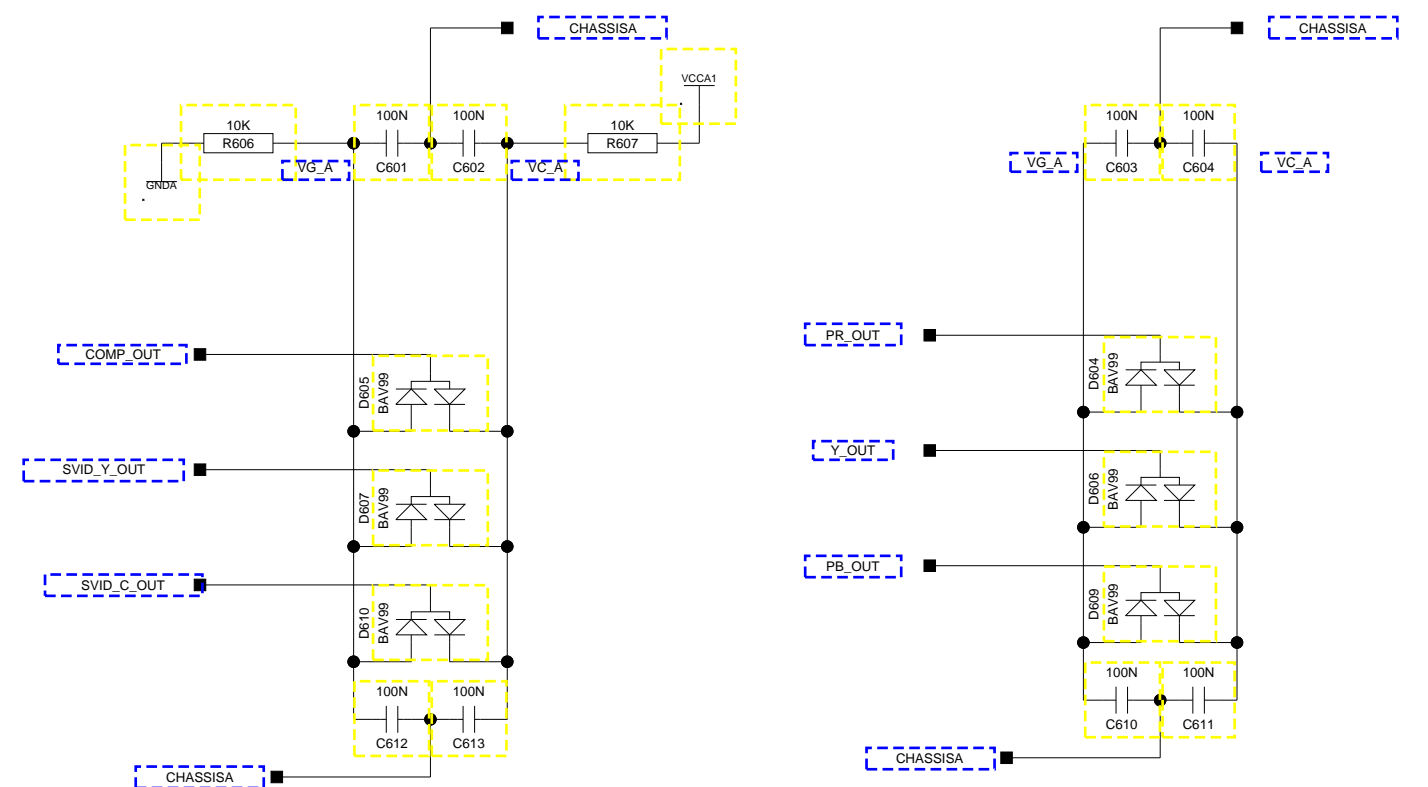
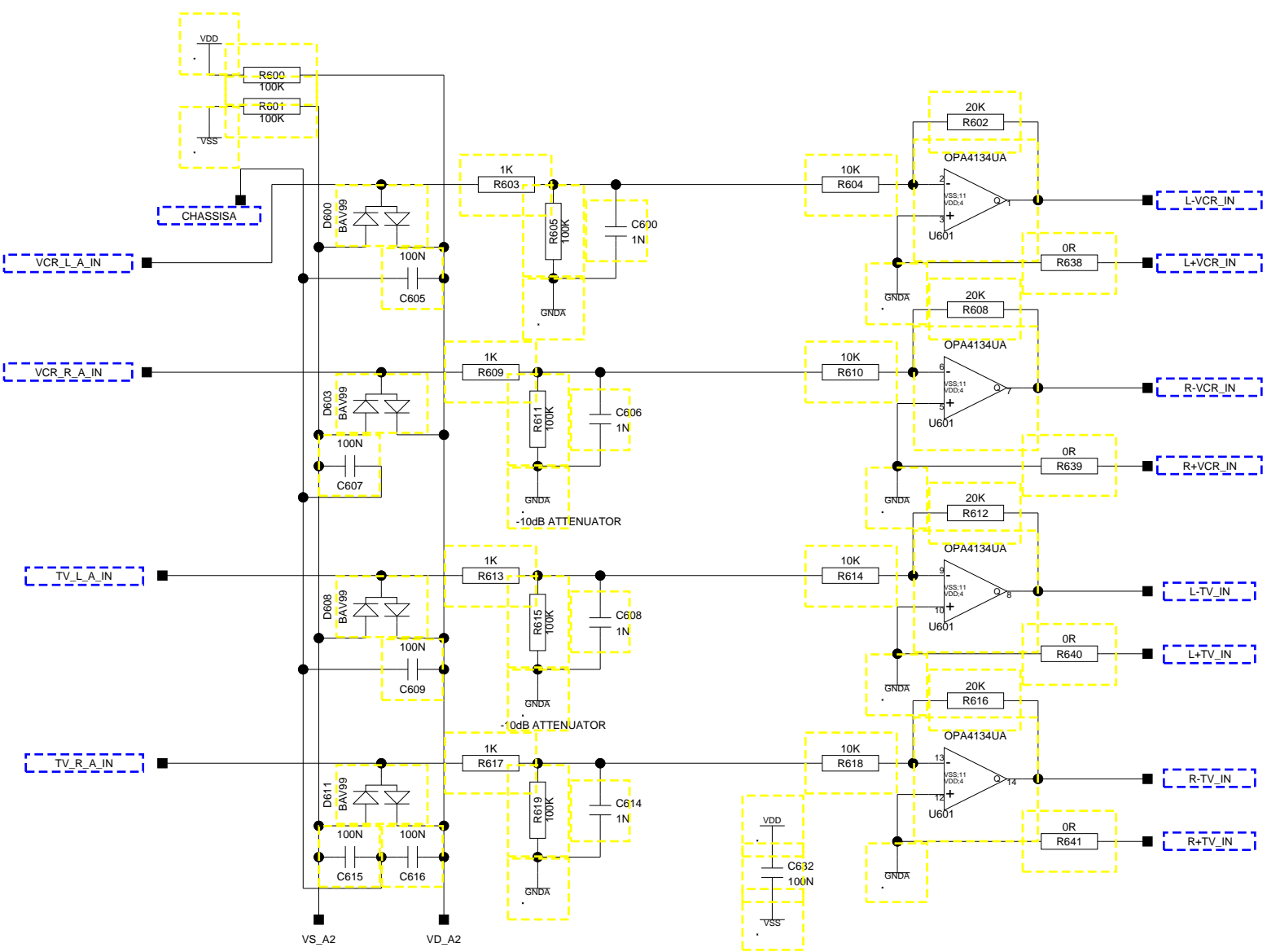
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| Proj.Name: UNIDISK SC | | Proj.No: 25309 | |
| Title: VIDEO ENCODER | | | |
| Sheet: 4 | of: 13 | Date: 12/06/2007 | Rev: A |
| Drawn TRS | Reviewed | Part Number PCAS 425/L2R3 | |



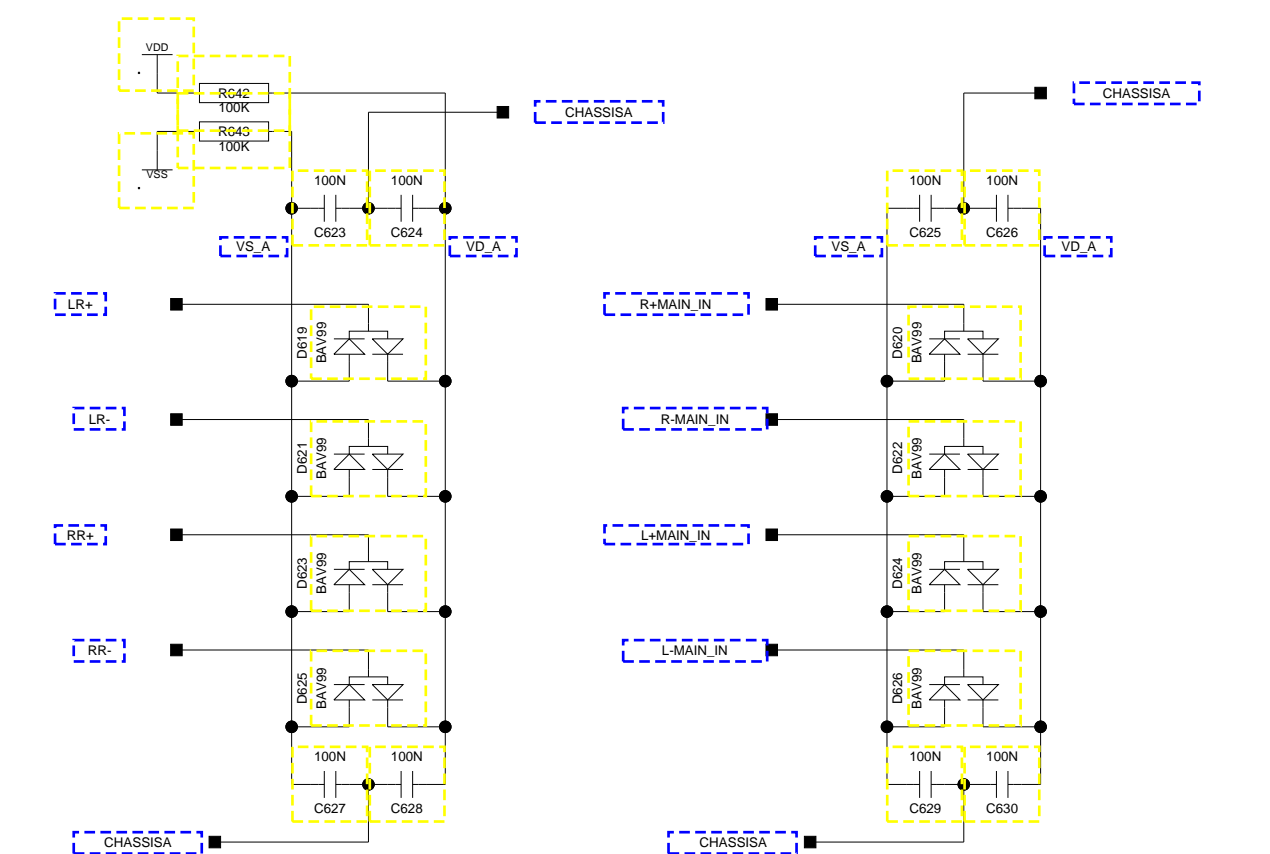
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| Proj.Name: UNIDISK SC | | Proj.No: 25309 | |
| Title: UNIDISK 3 VIDEO CONNECTORS | | | |
| Sheet: 5 | of: 13 | Date: 12/06/2007 | Rev: A |
| Drawn A/JB | Reviewed - | Part Number PCAS 425/L2R3 | |



ESD Protection for Video (Sheet 4)



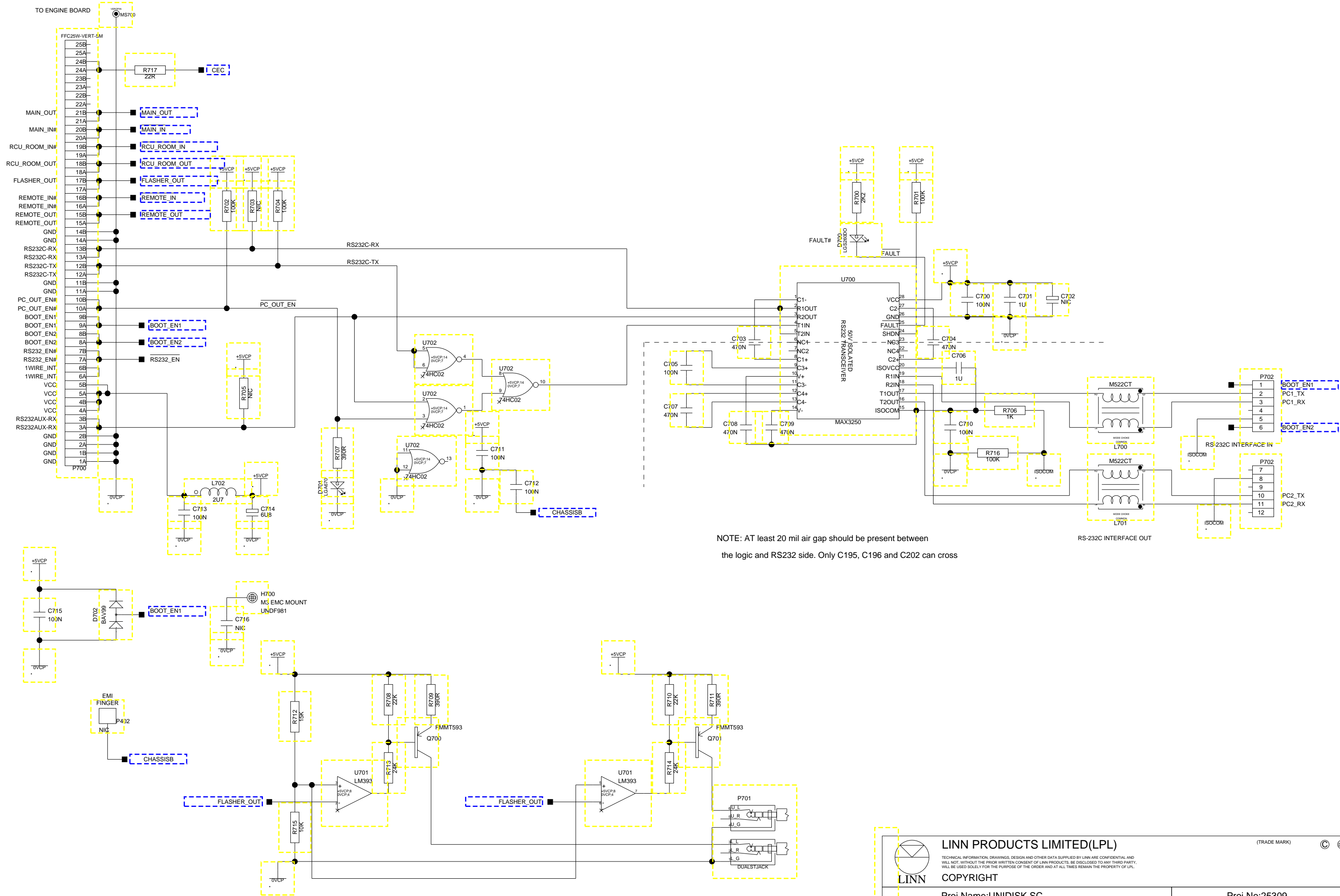
ESD Protection for Knekt Audio (Sheet 10)

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|--------------------------------------|---------------|------------------------------|--------|
| Proj.Name: UNIDISK SC | | Proj.No: 25309 | |
| Title: BALANCED <-> UNBAL CONVERSION | | | |
| Sheet: 6 | of: 13 | Date: 12/06/2007 | Rev: A |
| Drawn TRS | Reviewed _ | Part Number PCAS 425/L2R3 | |



NOTE: AT least 20 mil air gap should be present between the logic and RS232 side. Only C195, C196 and C202 can cross



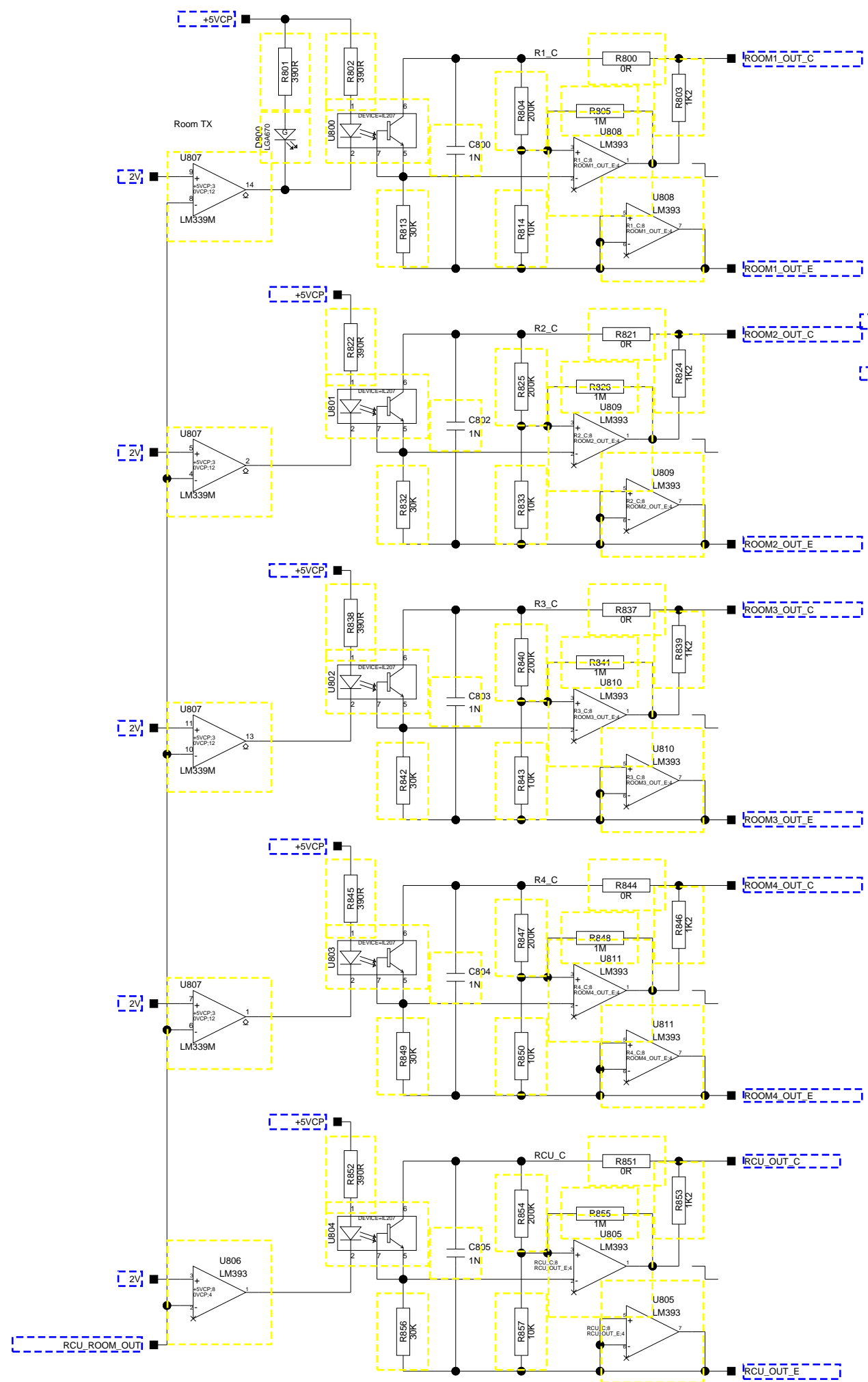
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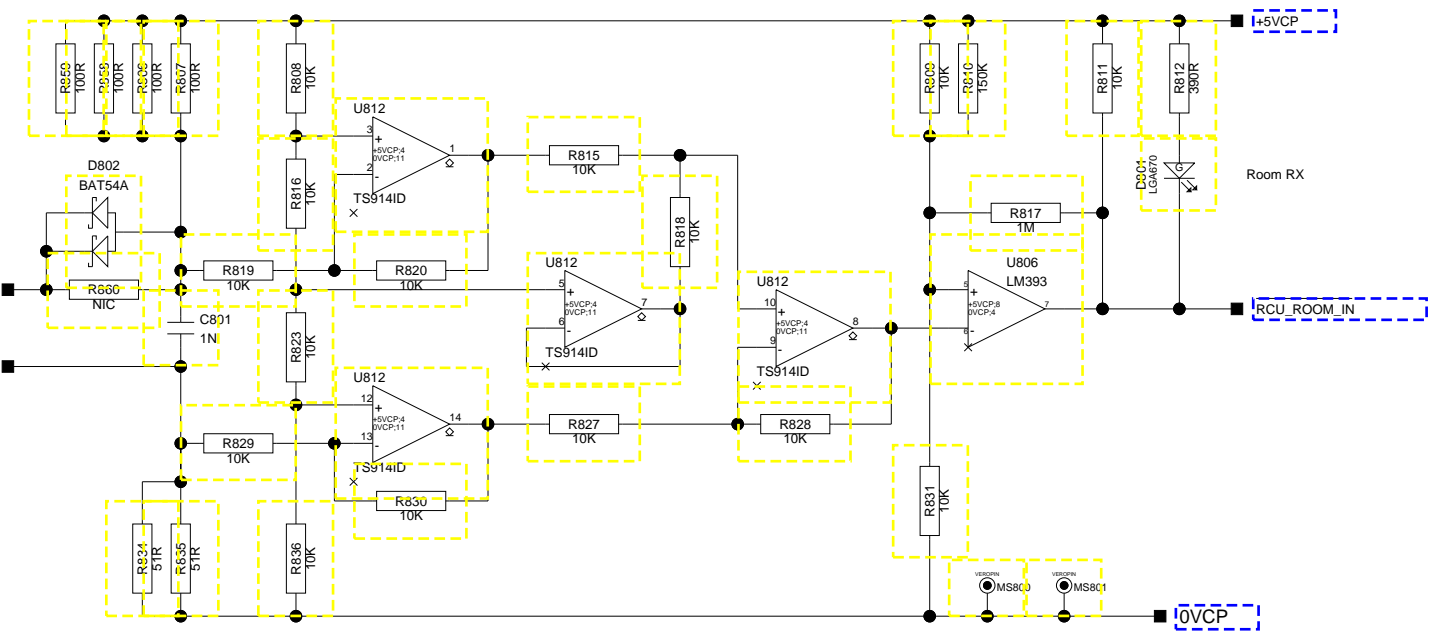
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| | | | |
|---------------------------|----------|------------------------------|--------|
| Proj.Name: UNIDISK SC | | Proj.No: 25309 | |
| Title: RS232 & IR FLASHER | | | |
| Sheet: 7 | of: 13 | Date: 12/06/2007 | Rev: A |
| Drawn TRS | Reviewed | Part Number PCAS 425/L2R3 | |

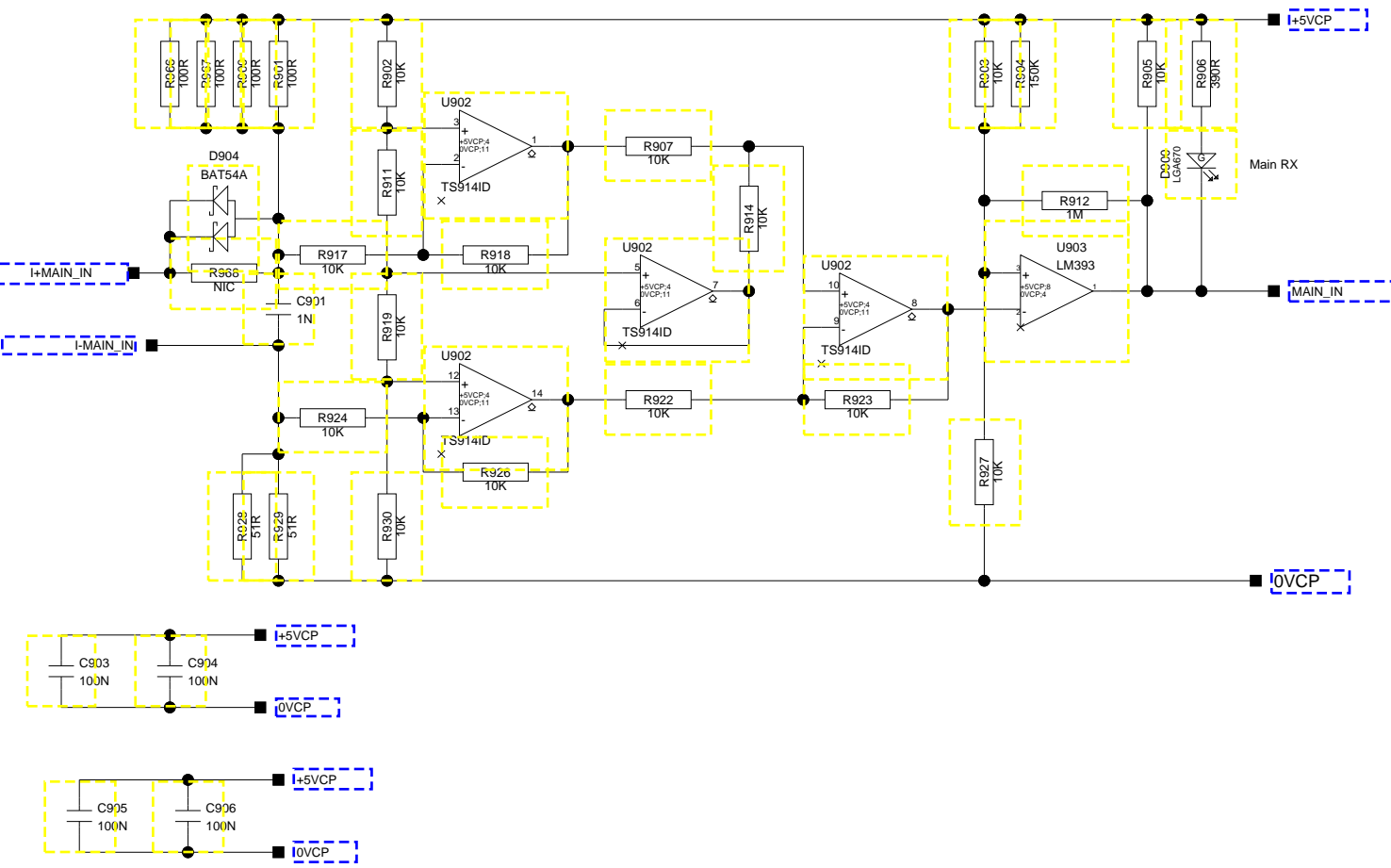


ROOM CURRENT RECEIVER

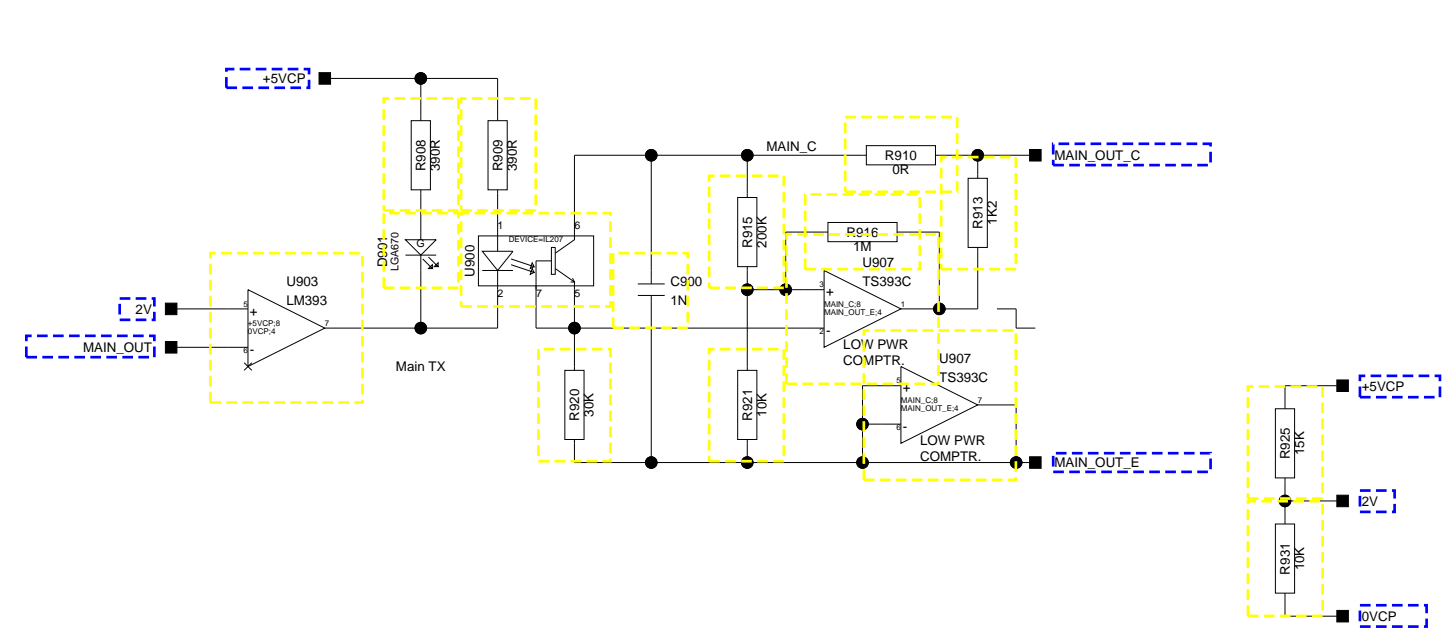


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| Title: ROOM AND RCU RC5 I/F | | | |
| Sheet: 8 | of: 13 | Date: 12/06/2007 | Rev:A |
| Drawn TRS | Reviewed | Part Number PCAS 425/L2R3 | |

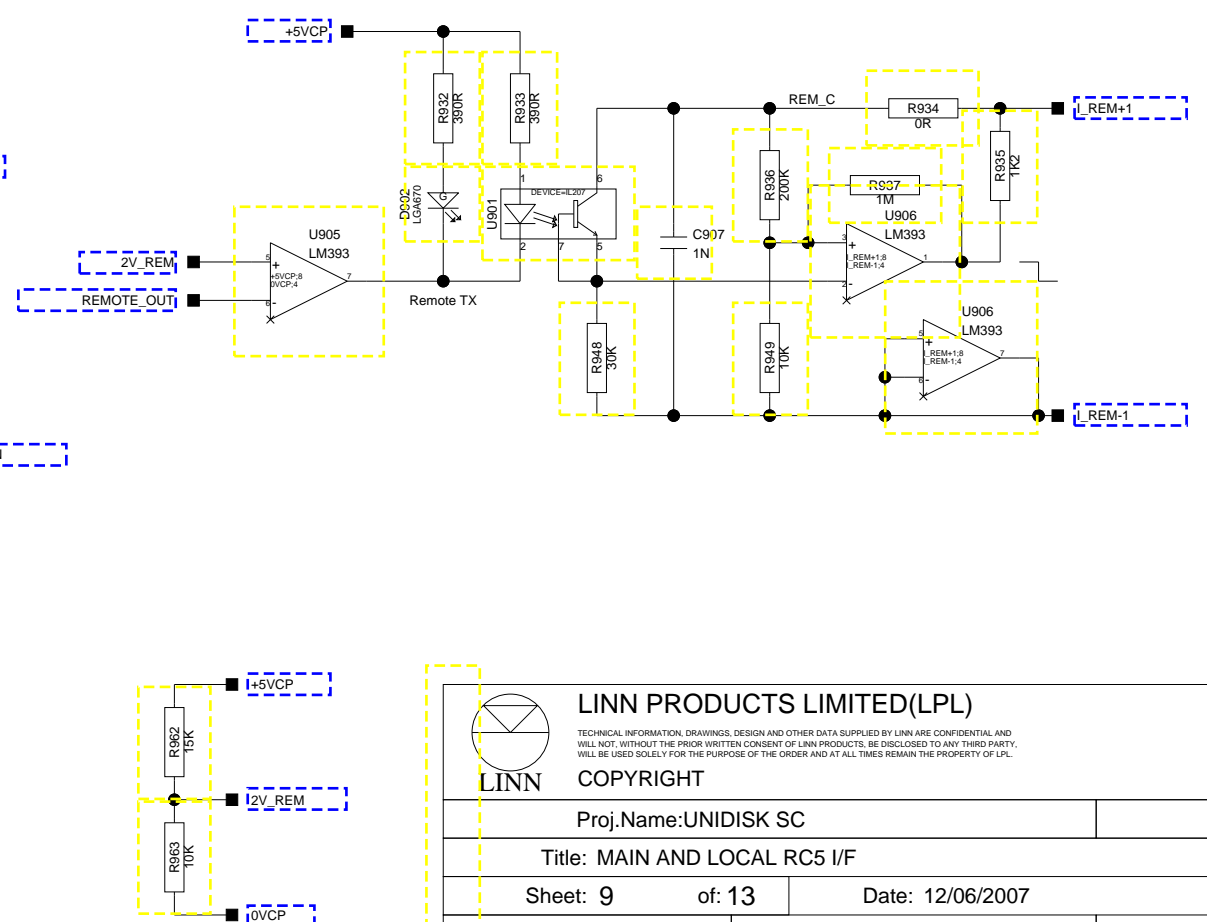
MAIN INPUT CURRENT RECEIVER



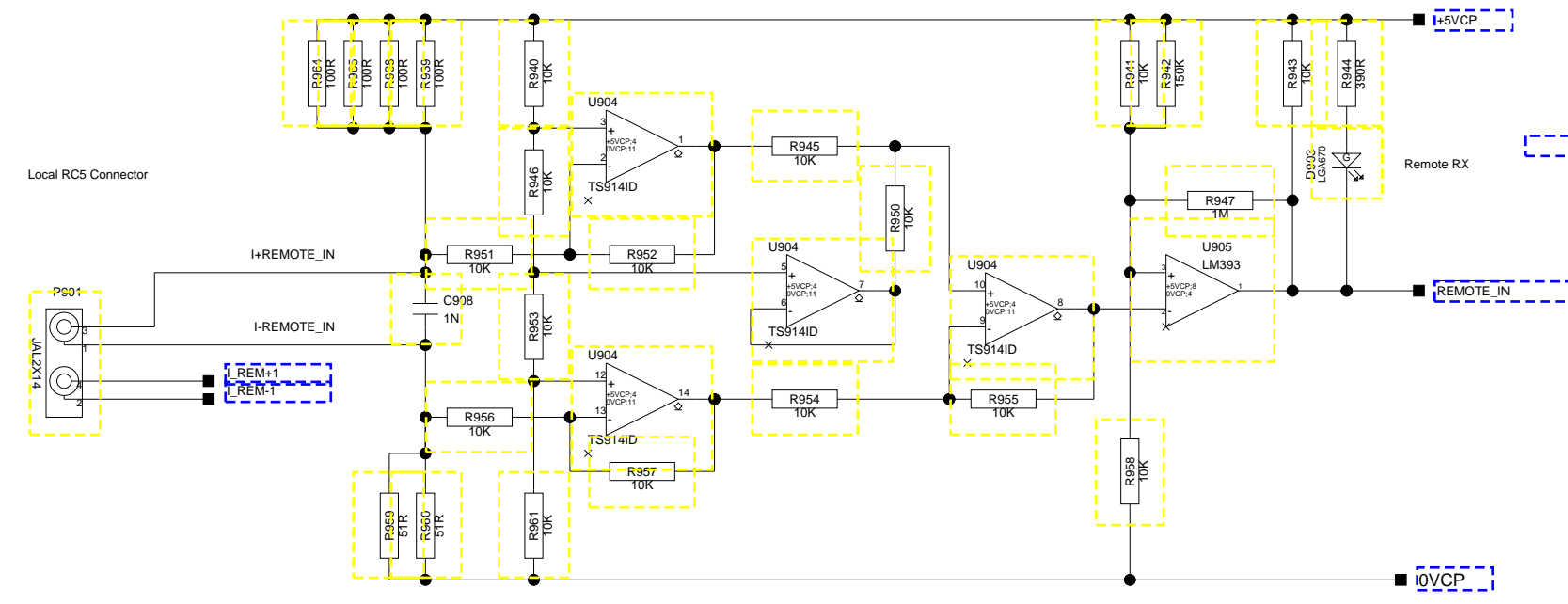
MAIN OUTPUT CURRENT TRANSMITTER




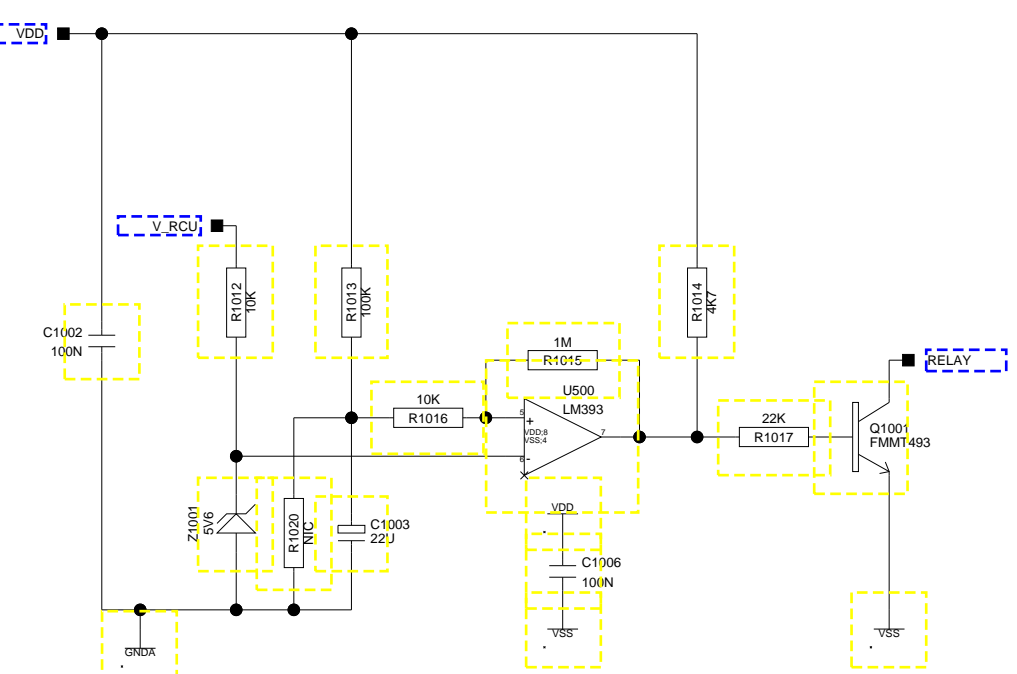
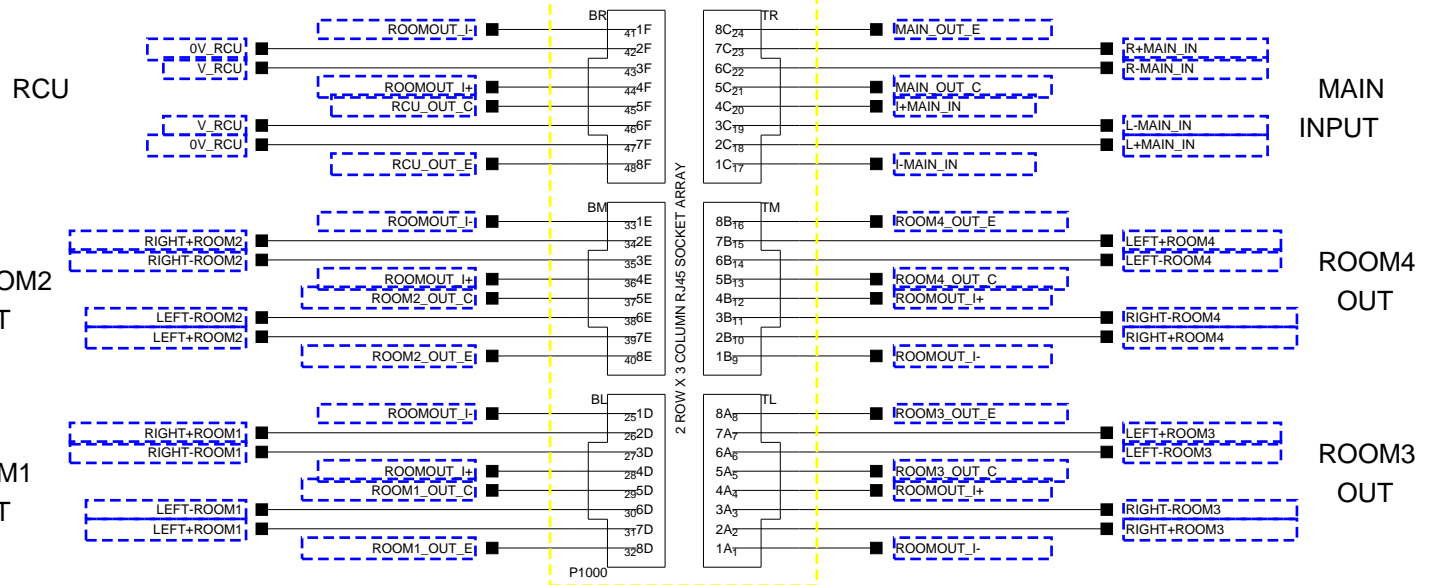
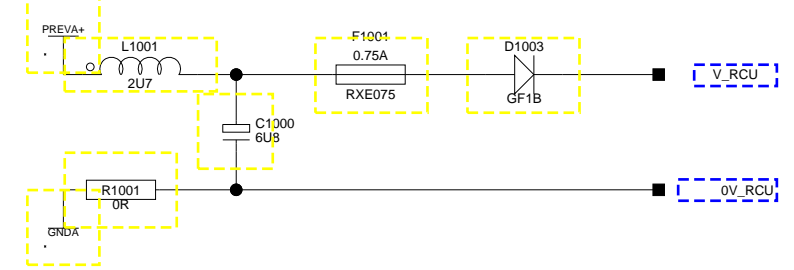
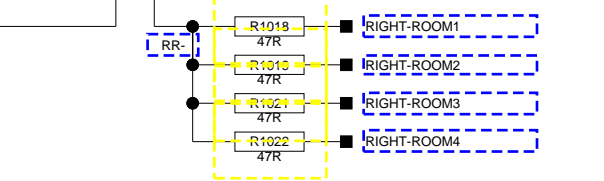
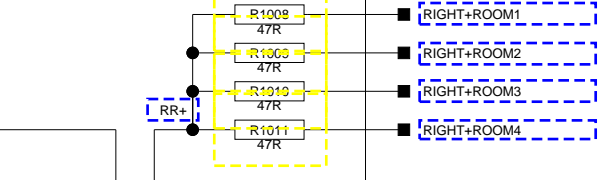
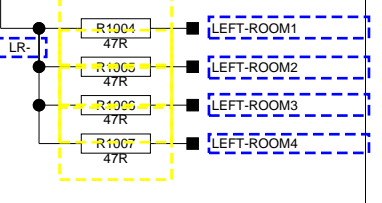
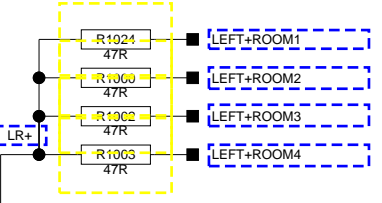
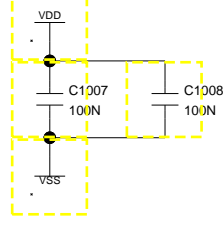
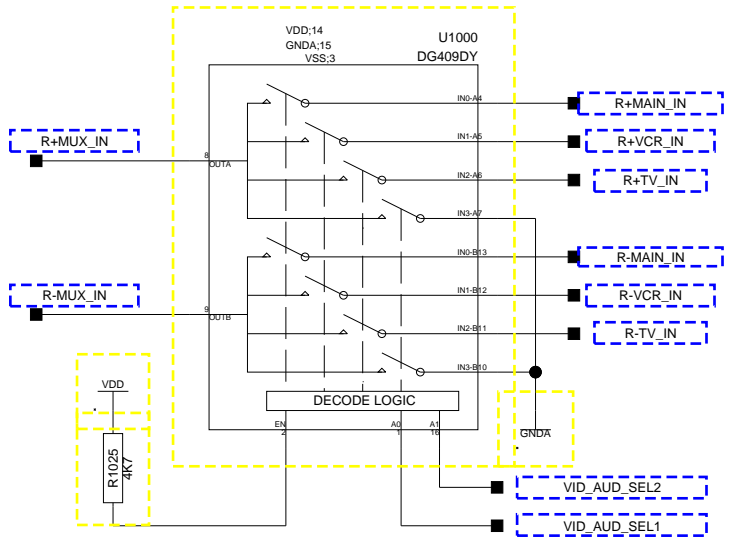
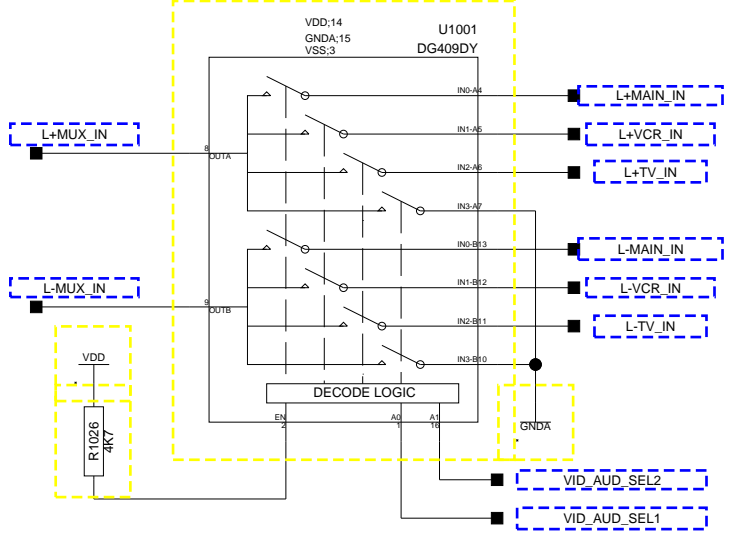
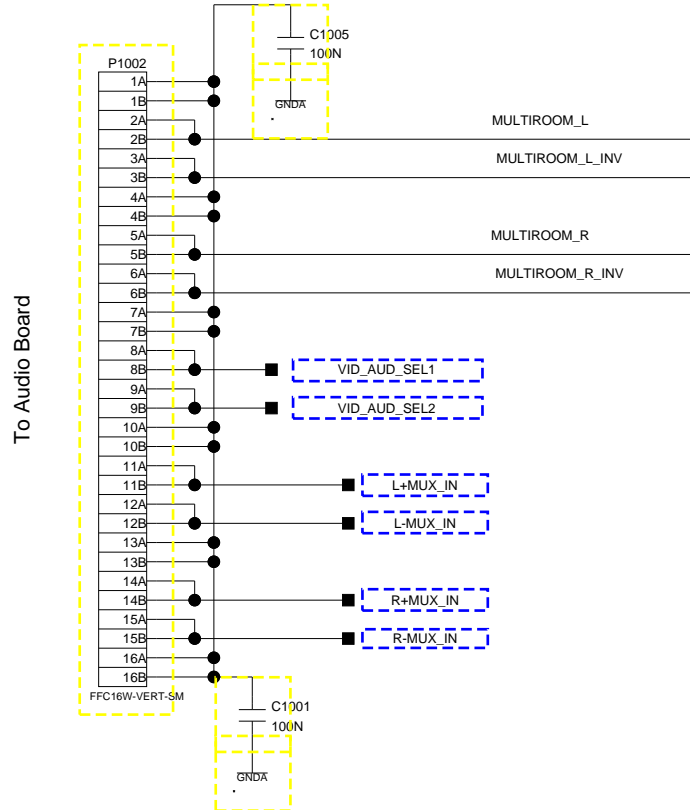
LOCAL OUTPUT CURRENT TRANSMITTER




LOCAL INPUT CURRENT RECEIVER

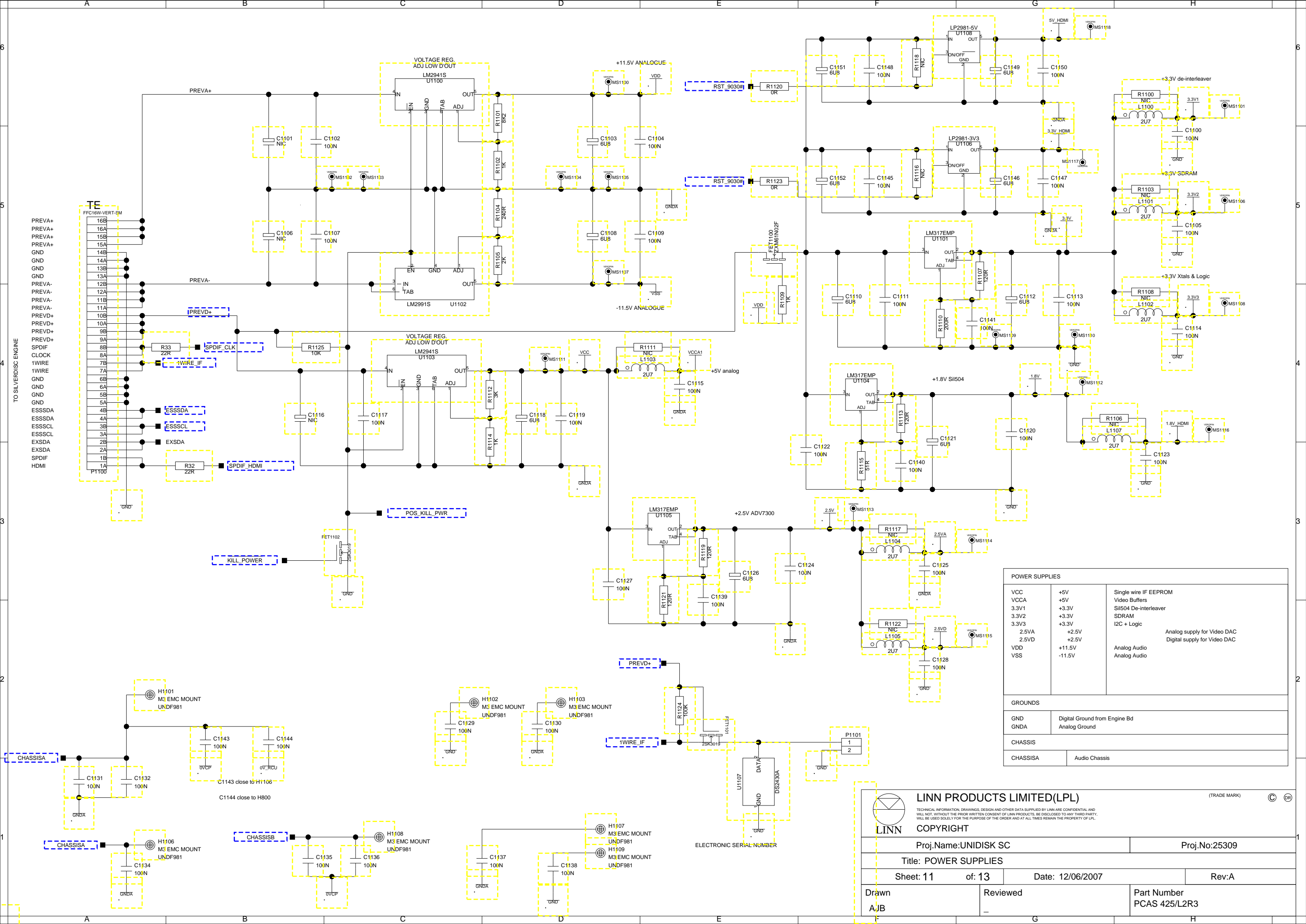


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| Title: MAIN AND LOCAL RC5 I/F | | | |
| Sheet: 9 | of: 13 | Date: 12/06/2007 | Rev:A |
| Drawn TR5 | Reviewed | Part Number PCAS 425/L2R3 | |





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| Proj.Name: UNIDISK SC | | Proj.No: 25309 | |
| Title: KNEKT INTERFACE | | | |
| Sheet: 10 | of: 13 | Date: 12/06/2007 | Rev: A |
| Drawn TRS | Reviewed | Part Number PCAS 425/L2R3 | |

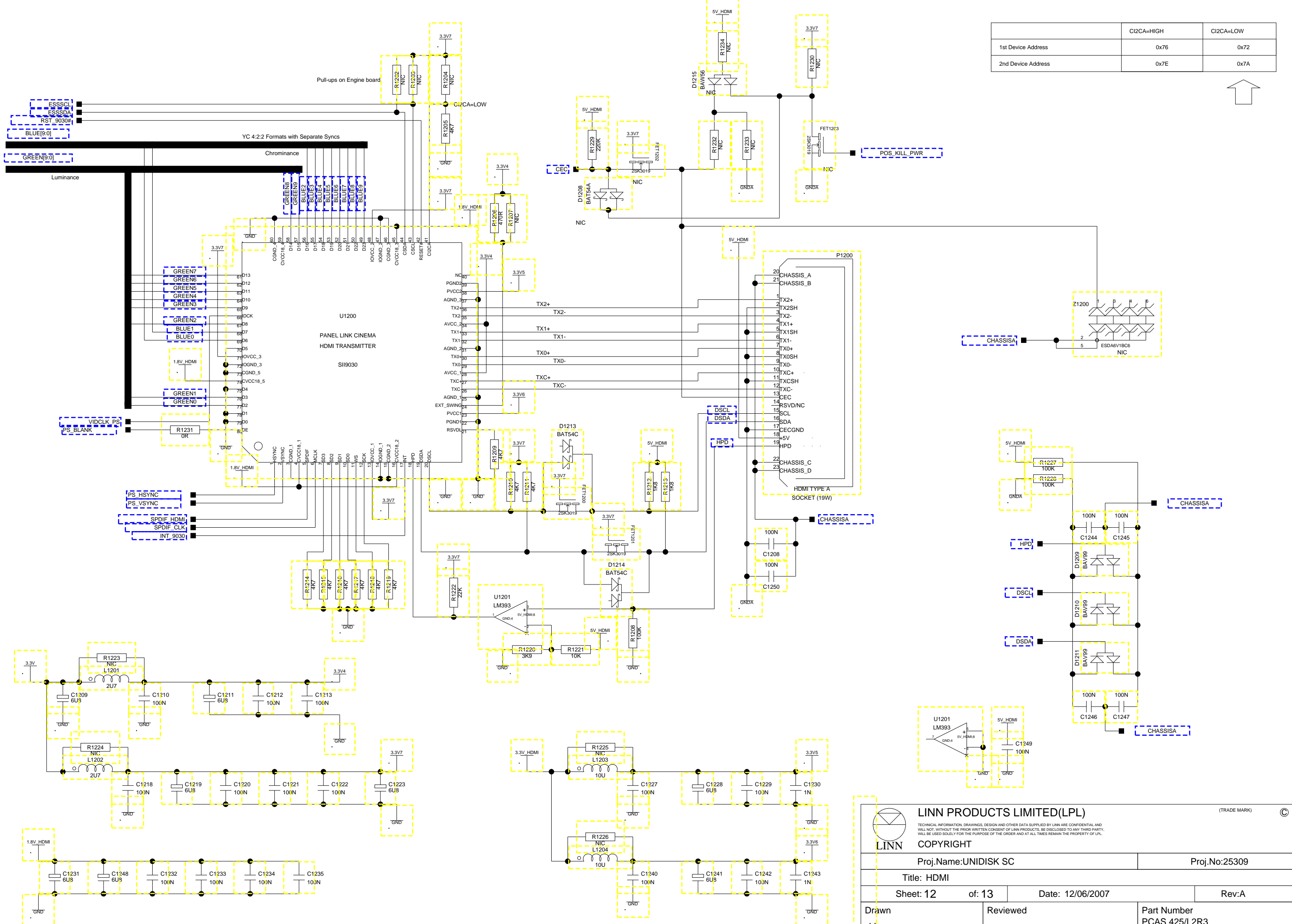


| POWER SUPPLIES | | |
|----------------|-------------------------------|-------------------------------------------------------------|
| VCC | +5V | Single wire IF EEPROM Video Buffers |
| VCCA | +5V | |
| 3.3V1 | +3.3V | Si504 De-interleaver SDRAM |
| 3.3V2 | +3.3V | |
| 3.3V3 | +3.3V | I2C + Logic |
| 2.5VA | +2.5V | Analog supply for Video DAC Digital supply for Video DAC |
| 2.5VD | +2.5V | |
| VDD | +11.5V | Analog Audio |
| VSS | -11.5V | Analog Audio |
| GROUNDS | | |
| GND | Digital Ground from Engine Bd | |
| GND_A | Analog Ground | |
| CHASSIS | | |
| CHASSISA | Audio Chassis | |


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 Proj.Name: UNIDISK SC
 Title: POWER SUPPLIES
 Sheet: 11 of 13
 Date: 12/06/2007
 Rev: A
 Drawn: A/JB
 Reviewed: _____
 Part Number: PCAS 425/L2R3

| | C12CA=HIGH | C12CA=LOW |
|--------------------|------------|-----------|
| 1st Device Address | 0x76 | 0x72 |
| 2nd Device Address | 0x7E | 0x7A |

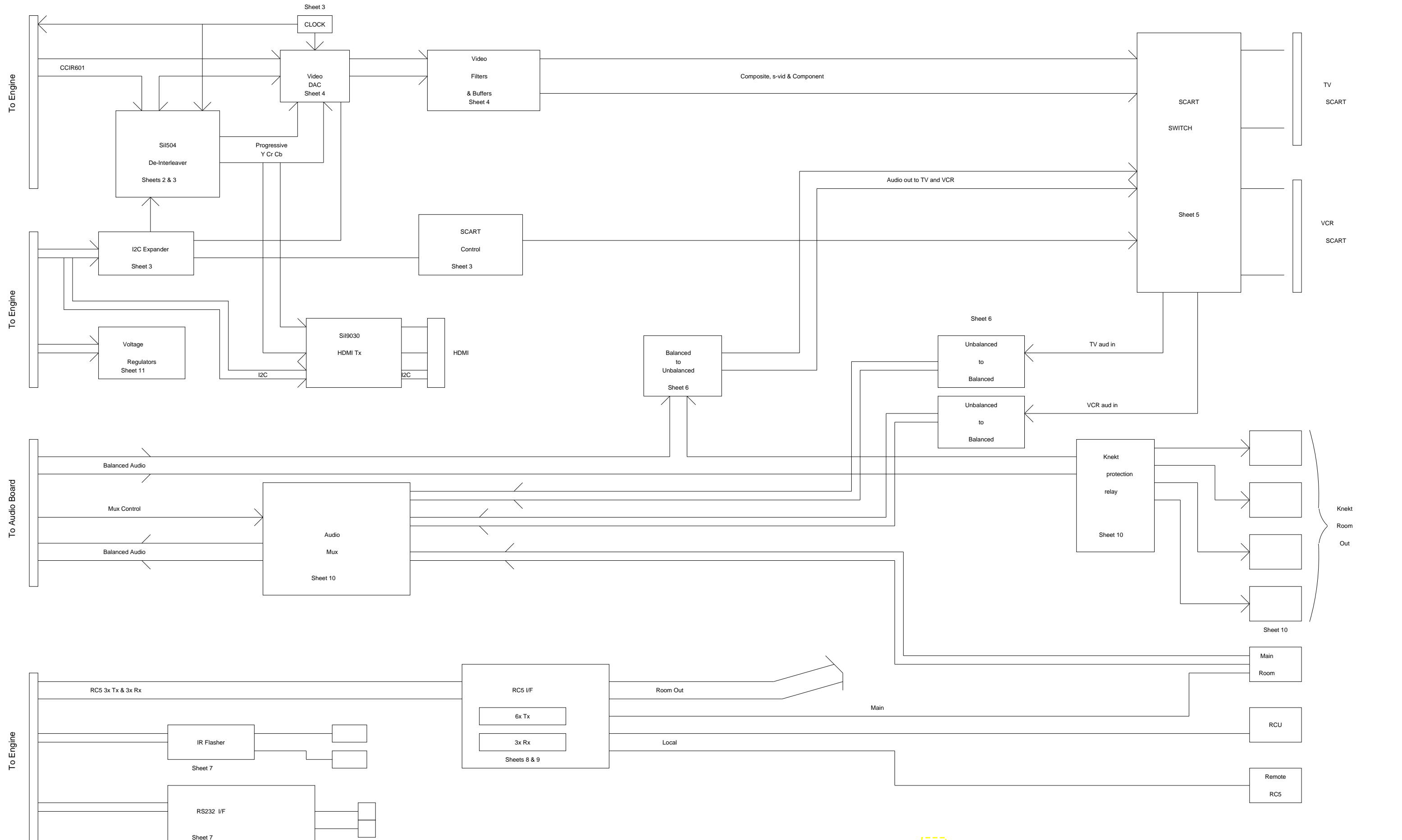


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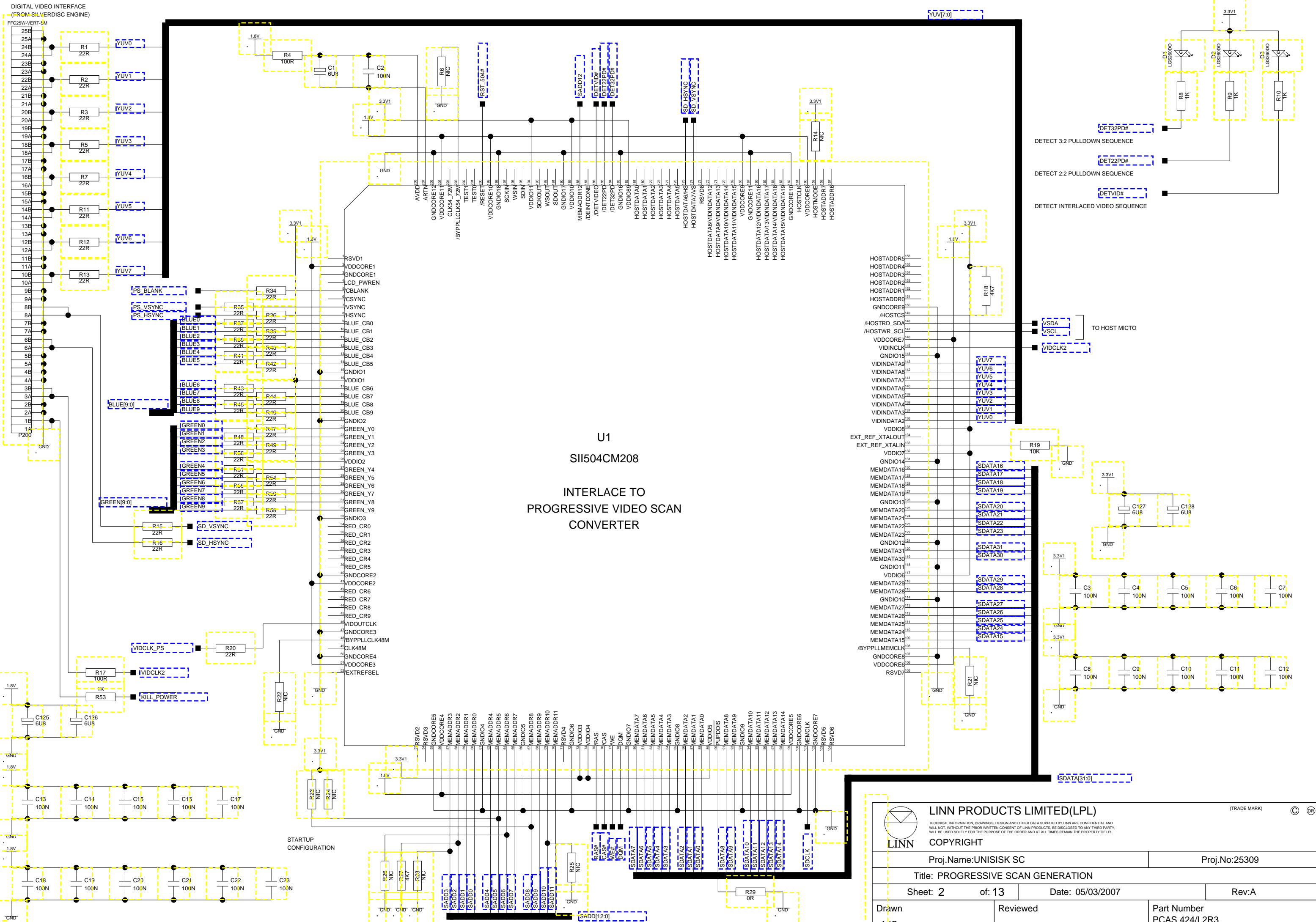
LIINN COPYRIGHT

| | | | |
|-----------------------|-----------|----------------------------|--------|
| Proj.Name: UNIDISK SC | | Proj.No: 25309 | |
| Title: HDMI | | | |
| Sheet: 12 | of: 13 | Date: 12/06/2007 | Rev: A |
| Drawn: LL | Reviewed: | Part Number: PCAS 425/L2R3 | |




From P3 schematic

| | | | |
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| | | Proj.No:25309 | |
| Title: UD3 VIDEO BLOCK DIAGRAM | | | |
| Sheet: 1 | of: 13 | Date: 05/03/2007 | Rev:A |
| Drawn TRS | Reviewed - | Part Number PCAS 424/L2R3 | |



U1
SII504CM208
INTERLACE TO
PROGRESSIVE VIDEO SCAN
CONVERTER

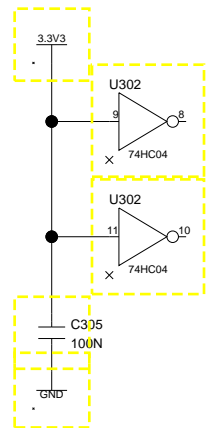
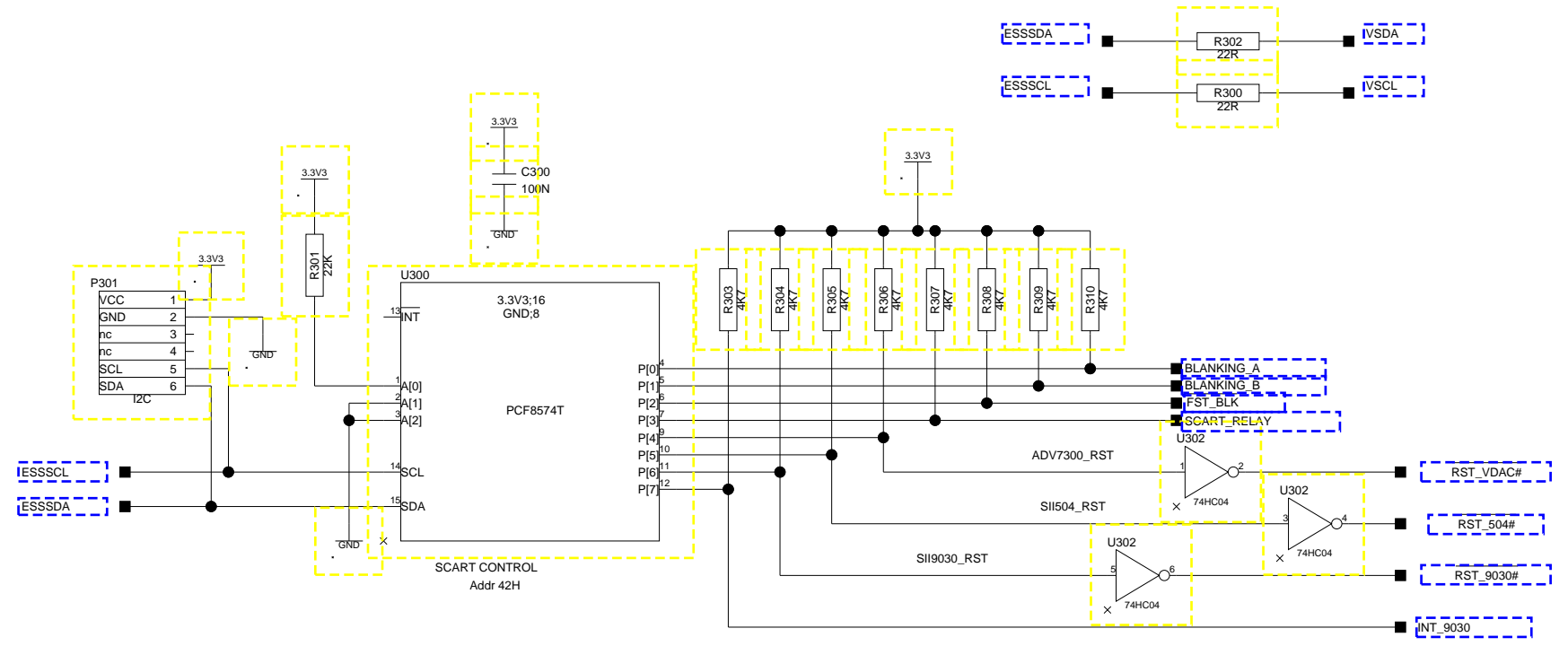
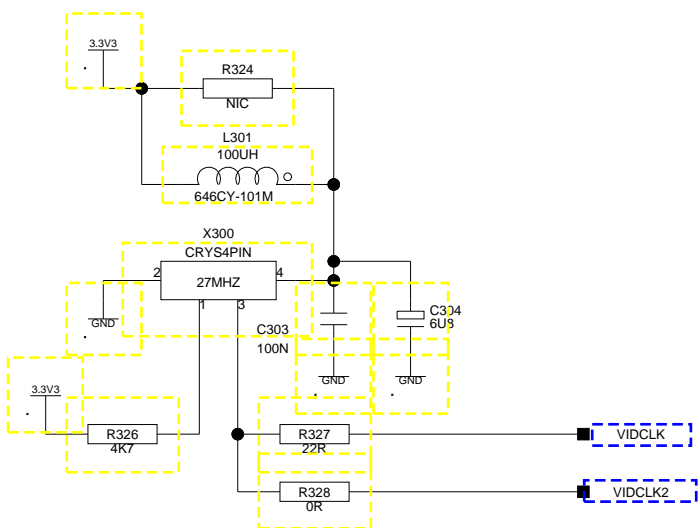
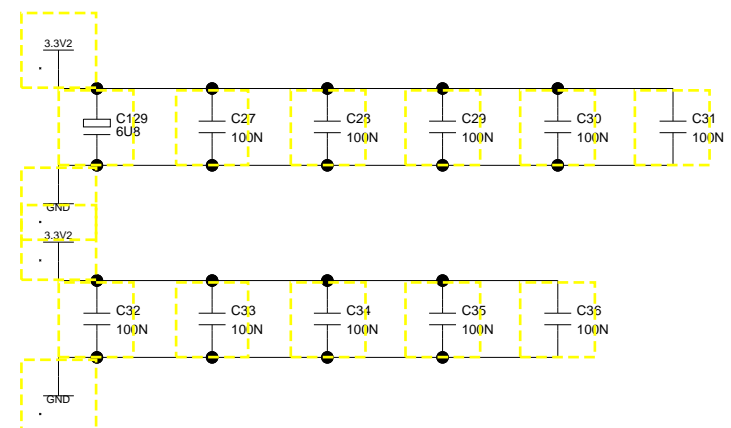
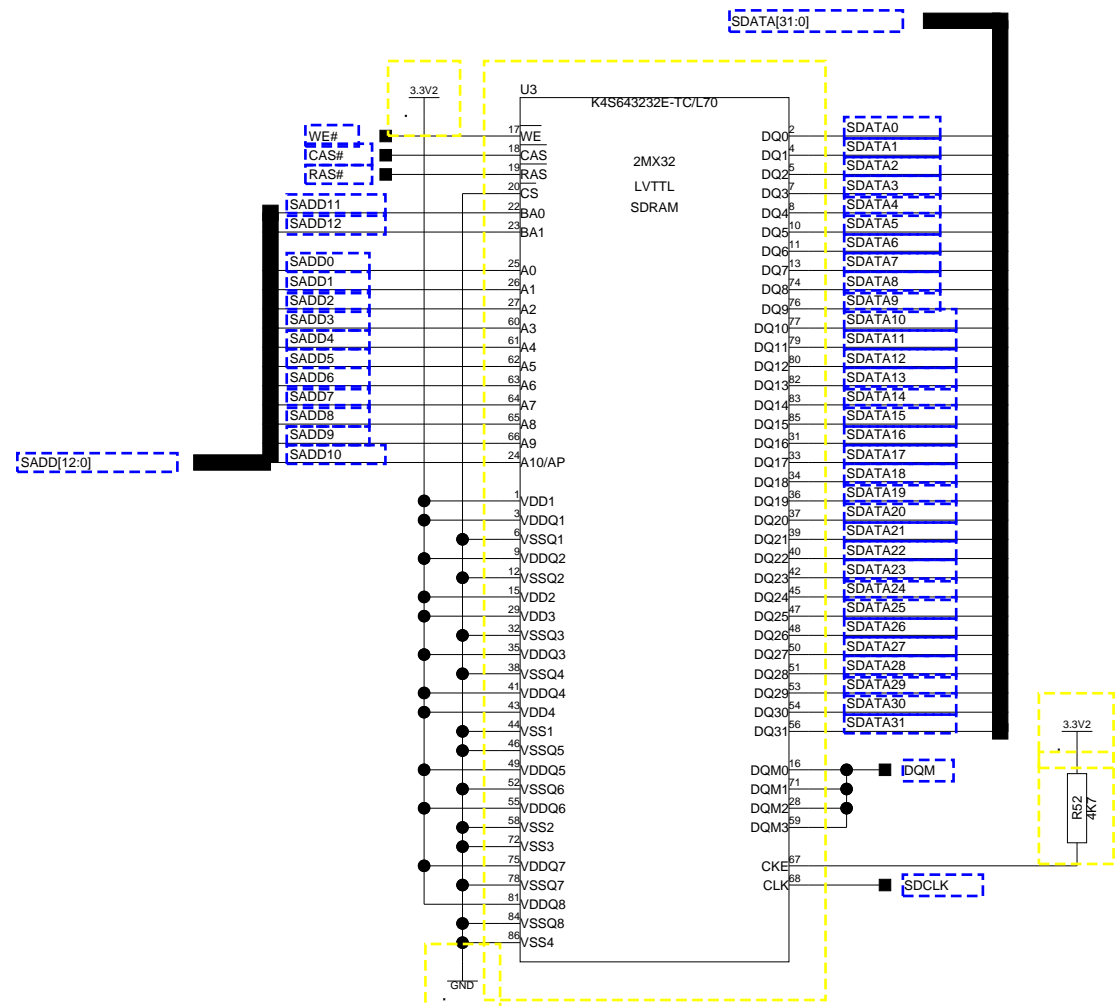


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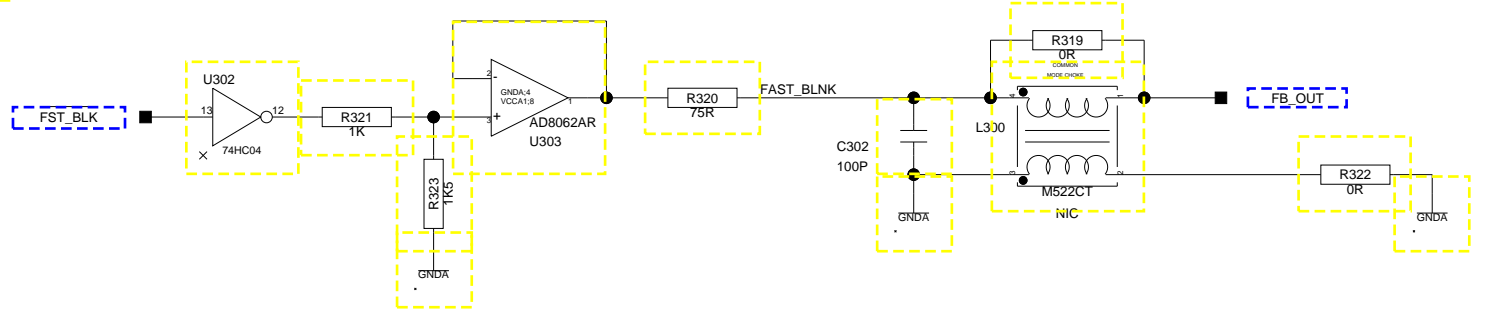
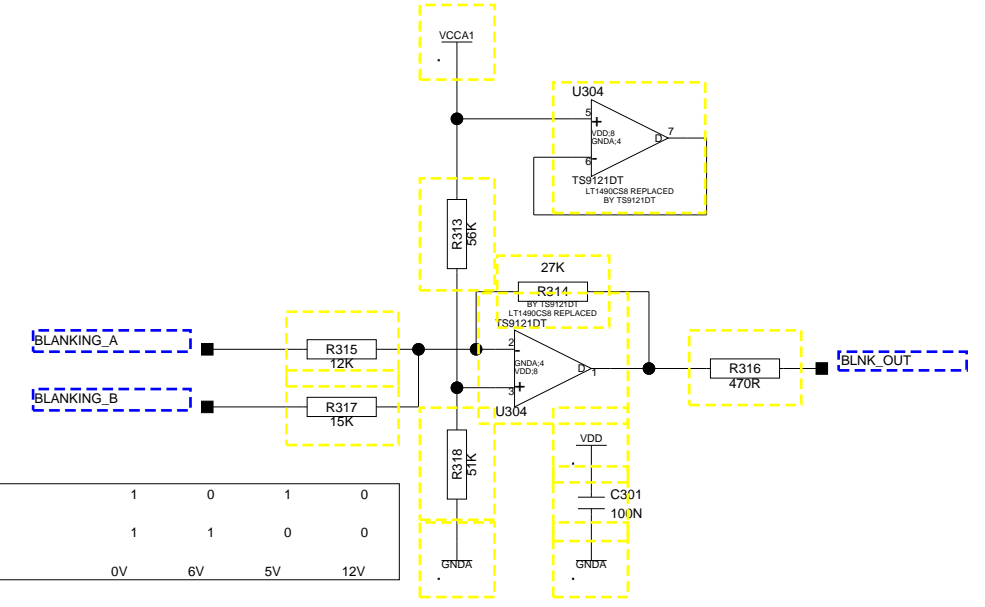
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|------------------------------------|----------|------------------------------|--------|
| Proj.Name: UNISISK SC | | Proj.No: 25309 | |
| Title: PROGRESSIVE SCAN GENERATION | | | |
| Sheet: 2 | of: 13 | Date: 05/03/2007 | Rev: A |
| Drawn A/JC | Reviewed | Part Number PCAS 424/L2R3 | |



| | | | | |
|-----------------|----|----|----|-----|
| BLANKING_A | 1 | 0 | 1 | 0 |
| BLANKING_B | 1 | 1 | 0 | 0 |
| Blanking Output | 0V | 6V | 5V | 12V |

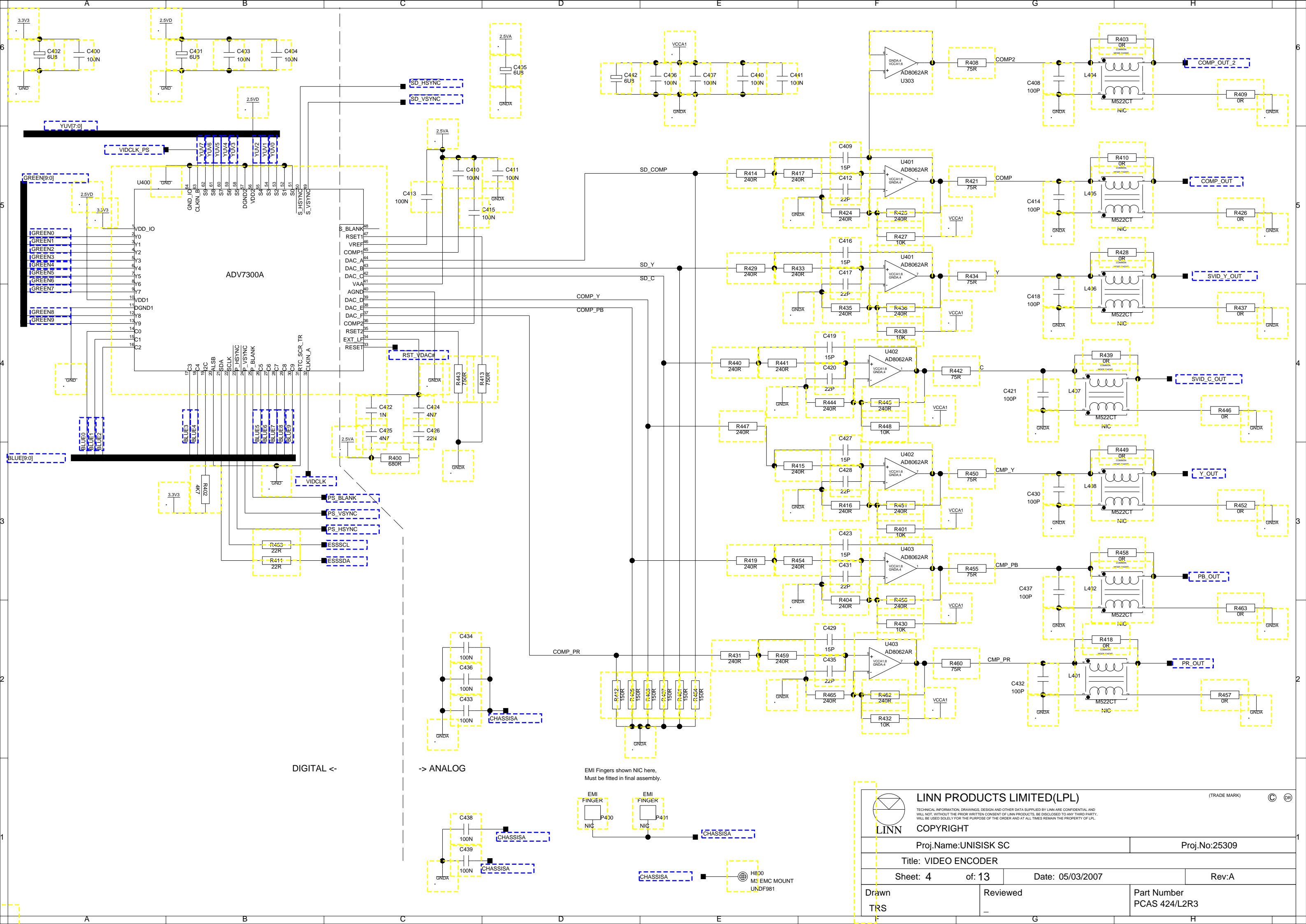


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|-------------------------|---------------|------------------------------|--------|
| Proj.Name: UNISISK SC | | Proj.No: 25309 | |
| Title: SDRAM FOR SII504 | | | |
| Sheet: 3 | of: 13 | Date: 05/03/2007 | Rev: A |
| Drawn TRS | Reviewed - | Part Number PCAS 424/L2R3 | |



EMI Fingers shown NIC here.
Must be fitted in final assembly.

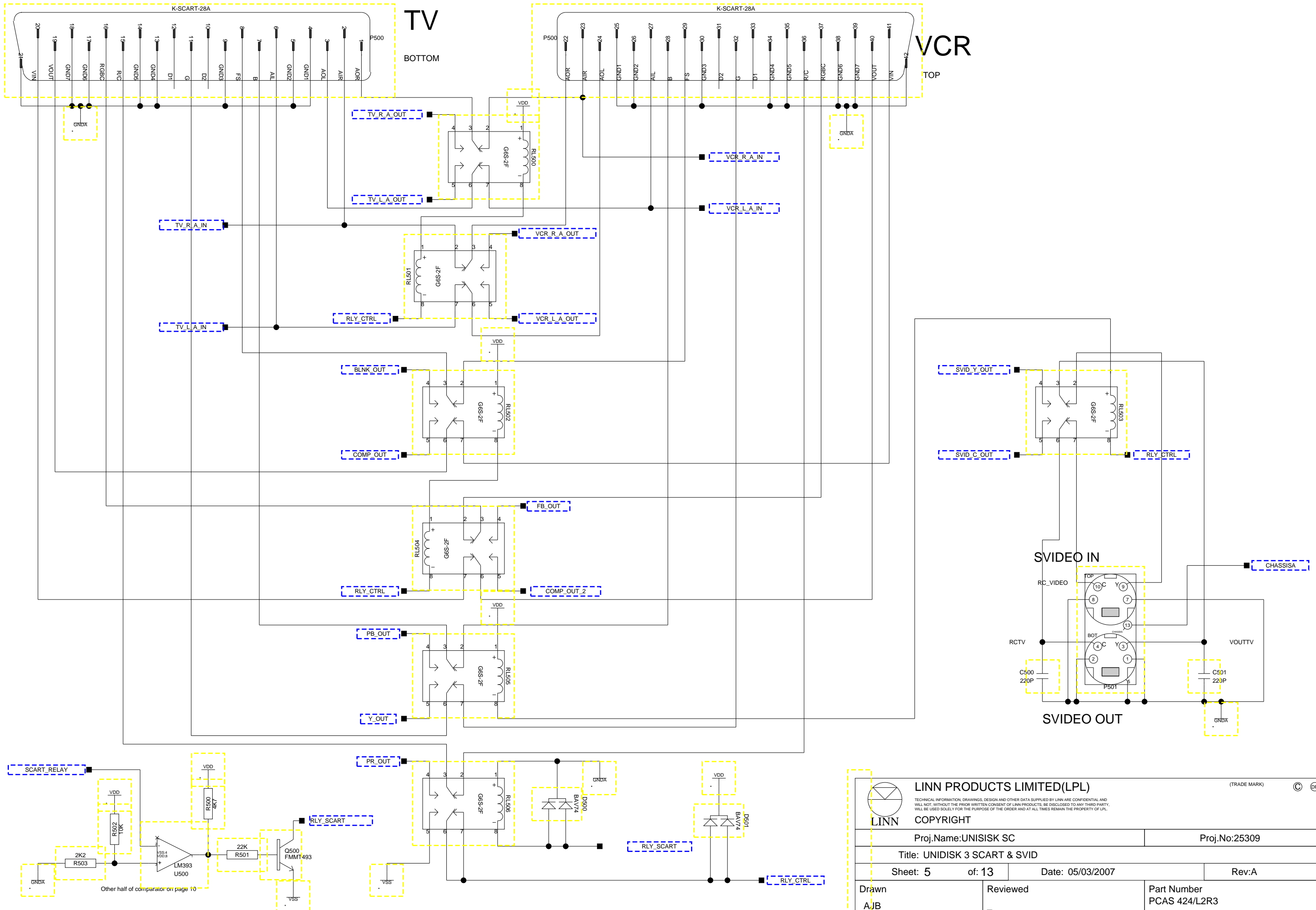
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| Title: VIDEO ENCODER | | | |
| Sheet: 4 | of: 13 | Date: 05/03/2007 | Rev:A |
| Drawn TRS | Reviewed | Part Number PCAS 424/L2R3 | |


H800
M3 EMC MOUNT
UNDF981

DIGITAL <-

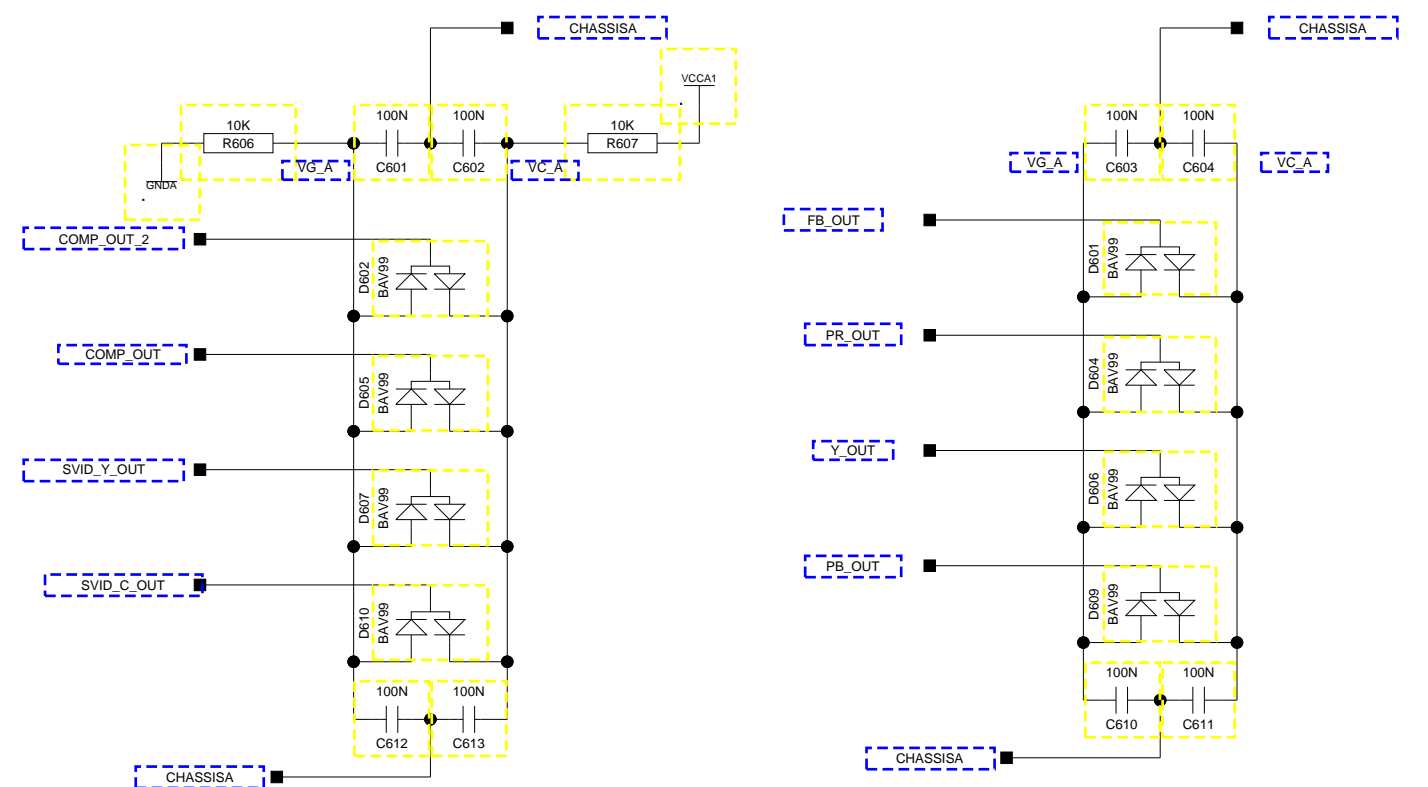
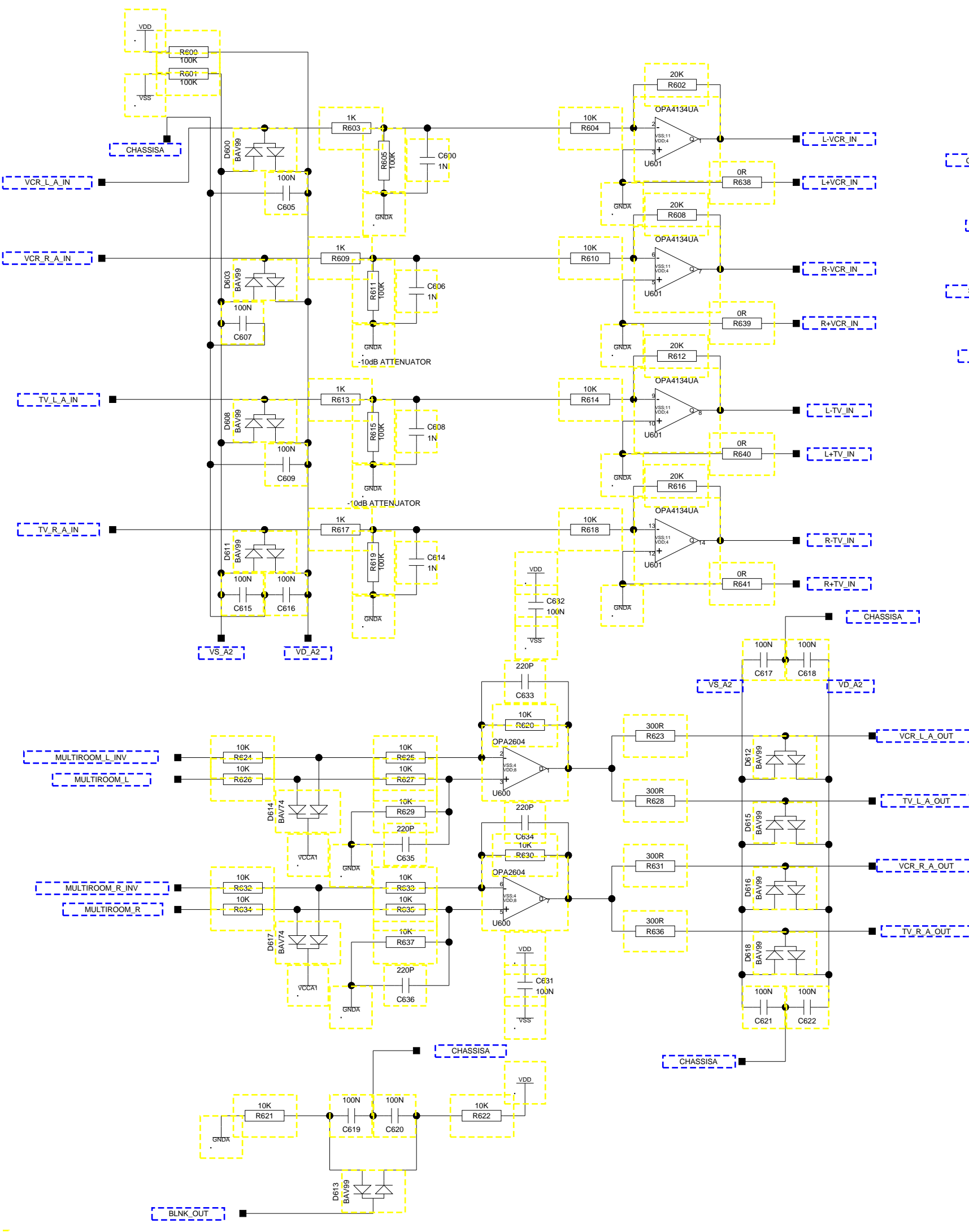
<- ANALOG

Move P500 a few mm on board

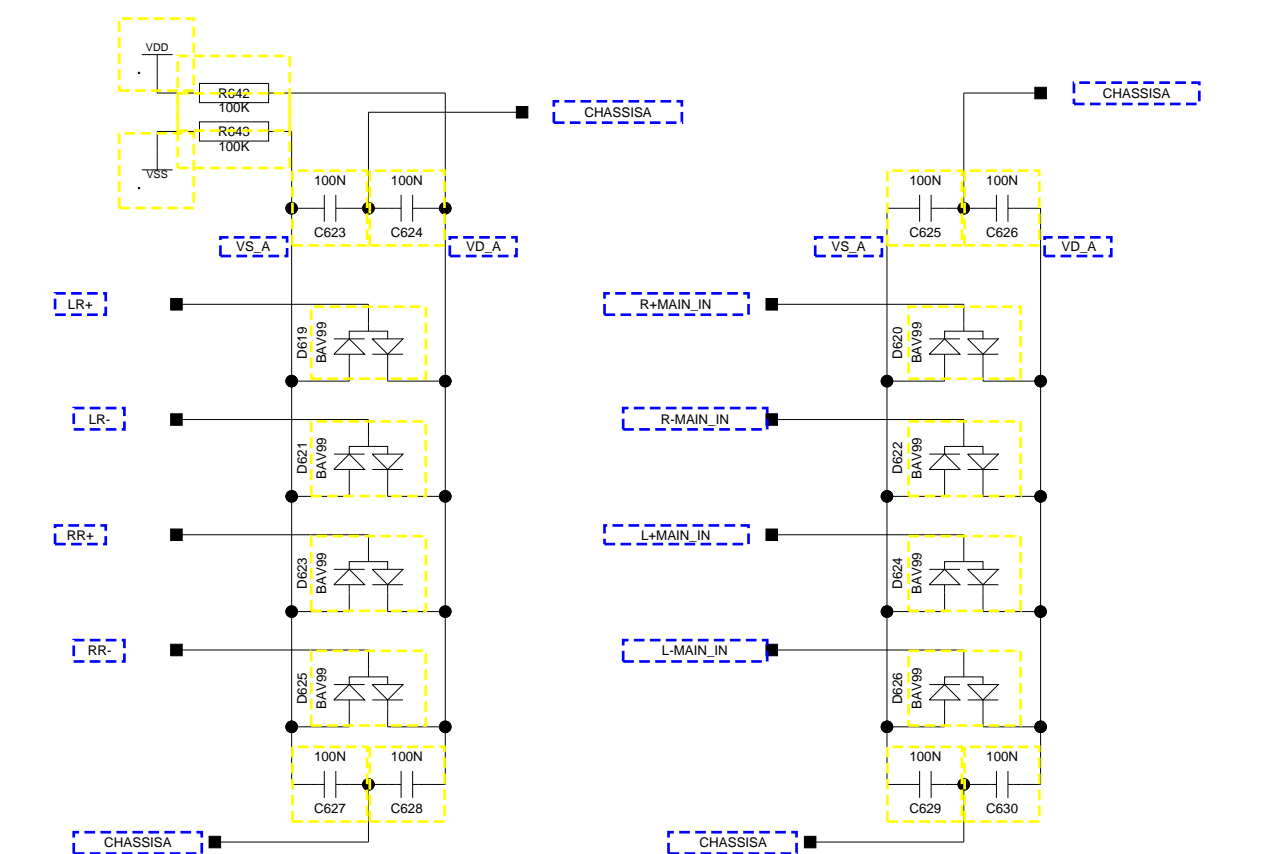


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| Title: UNIDISK 3 SCART & SVID | | | | |
| Sheet: 5 | of: 13 | Date: 05/03/2007 | Rev:A | |
| Drawn AJB | Reviewed | Part Number PCAS 424/L2R3 | | |

Other half of comparator on page 10



ESD Protection for Video (Sheet 4)



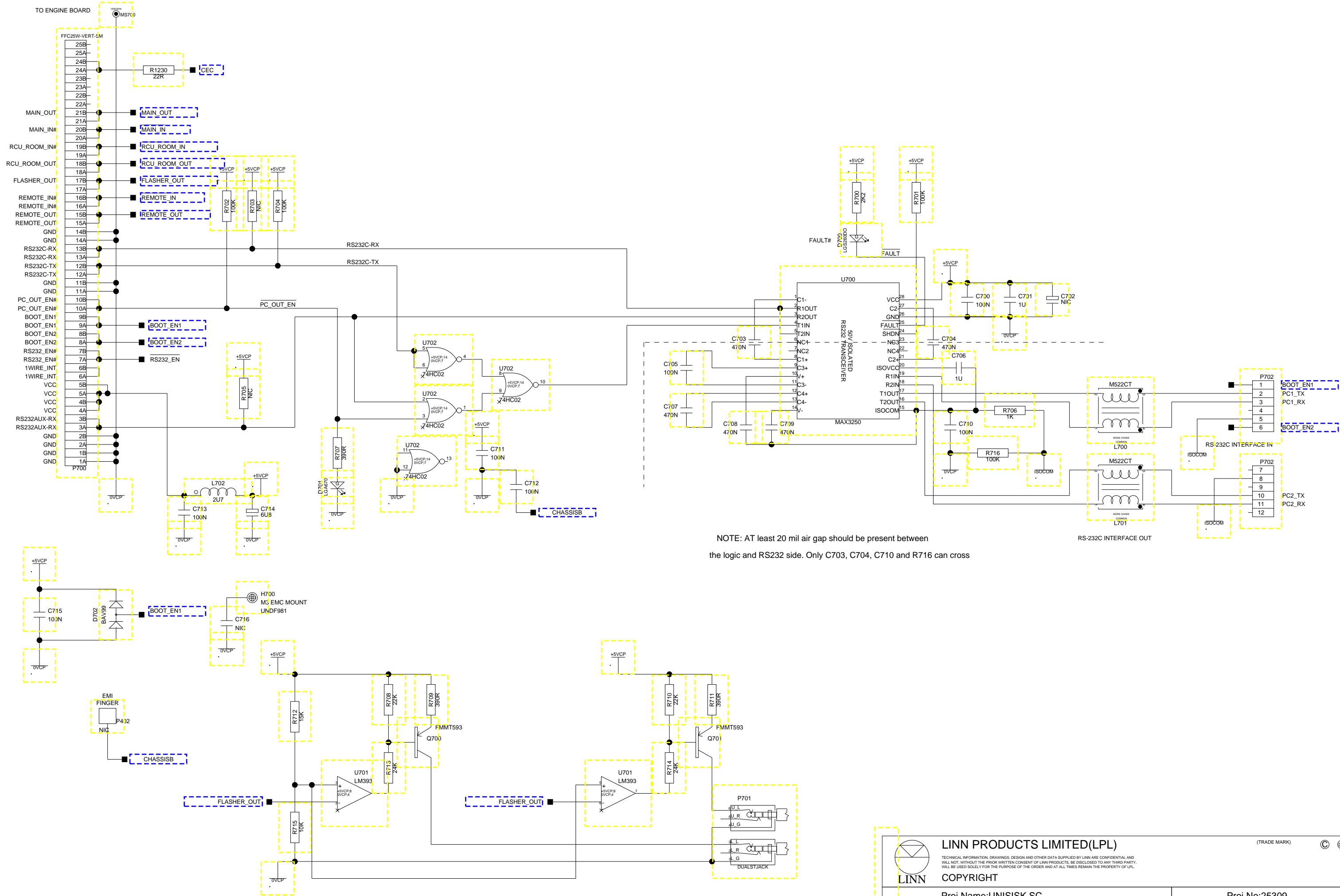
ESD Protection for Knekt Audio (Sheet 10)

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|--------------------------------------|----------|------------------------------|--------|
| Proj.Name: UNISISK SC | | Proj.No: 25309 | |
| Title: BALANCED <-> UNBAL CONVERSION | | | |
| Sheet: 6 | of: 13 | Date: 05/03/2007 | Rev: A |
| Drawn TRS | Reviewed | Part Number PCAS 424/L2R3 | |



NOTE: AT least 20 mil air gap should be present between the logic and RS232 side. Only C703, C704, C710 and R716 can cross



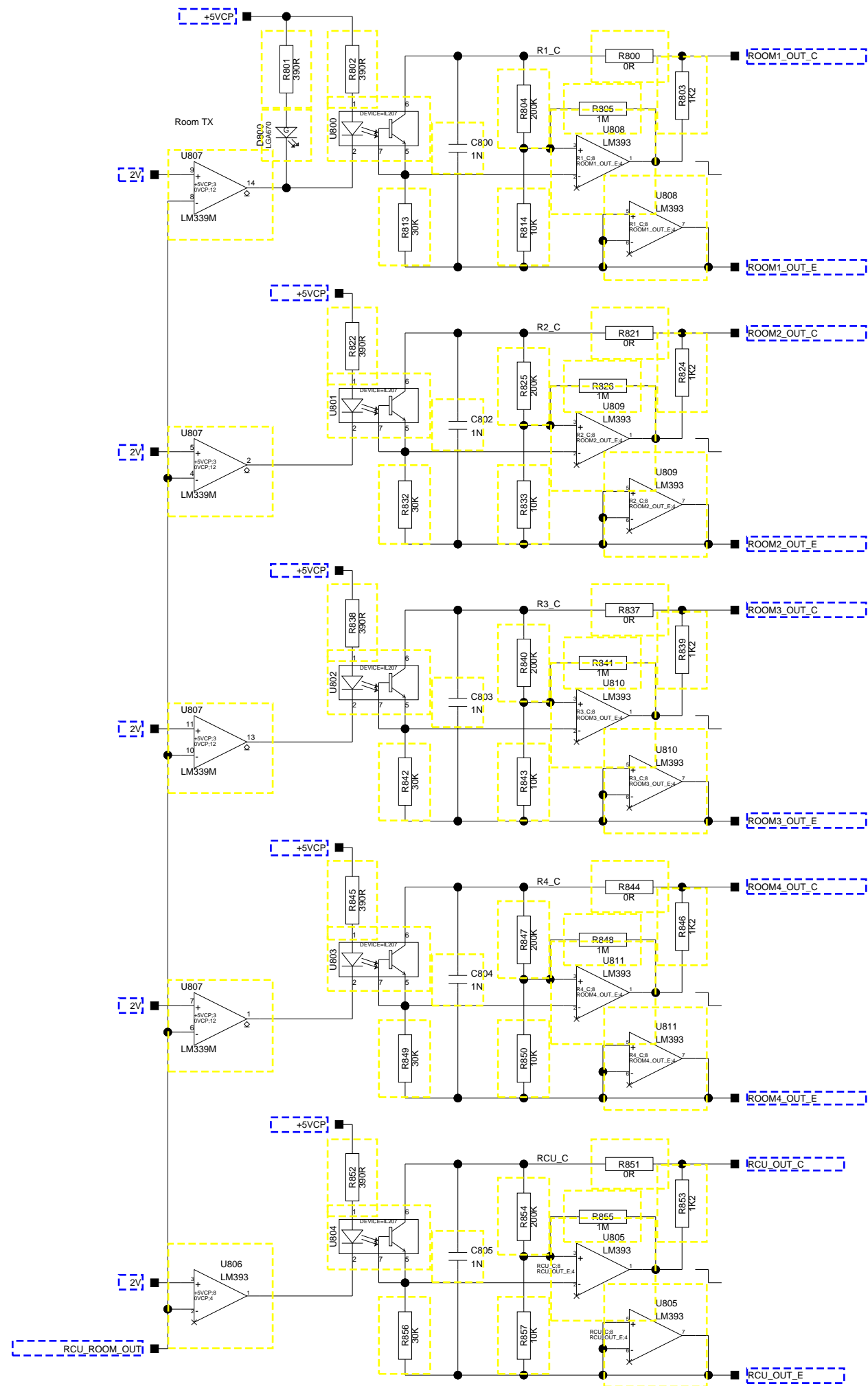
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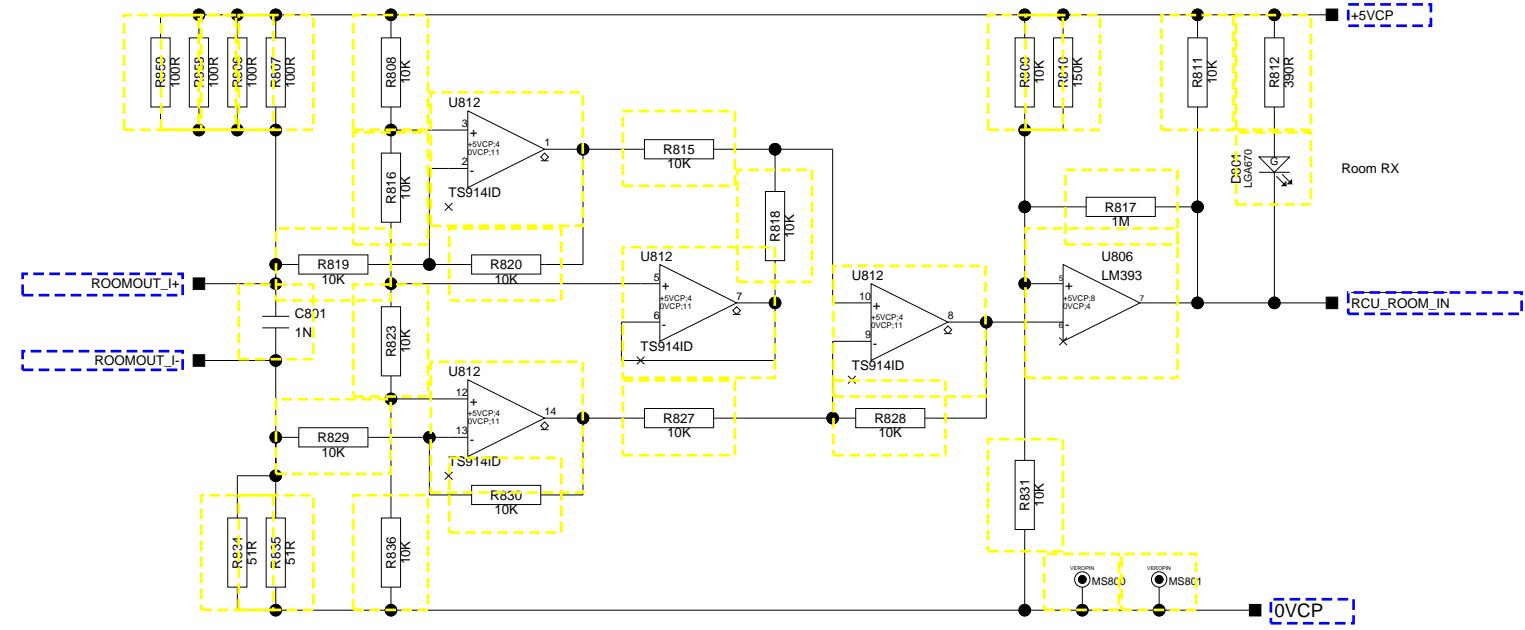
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| Proj.Name: UNISISK SC | | Proj.No: 25309 | |
| Title: RS232 & IR FLASHER | | | |
| Sheet: 7 | of: 13 | Date: 05/03/2007 | Rev: A |
| Drawn TRS | Reviewed | Part Number PCAS 424/L2R3 | |

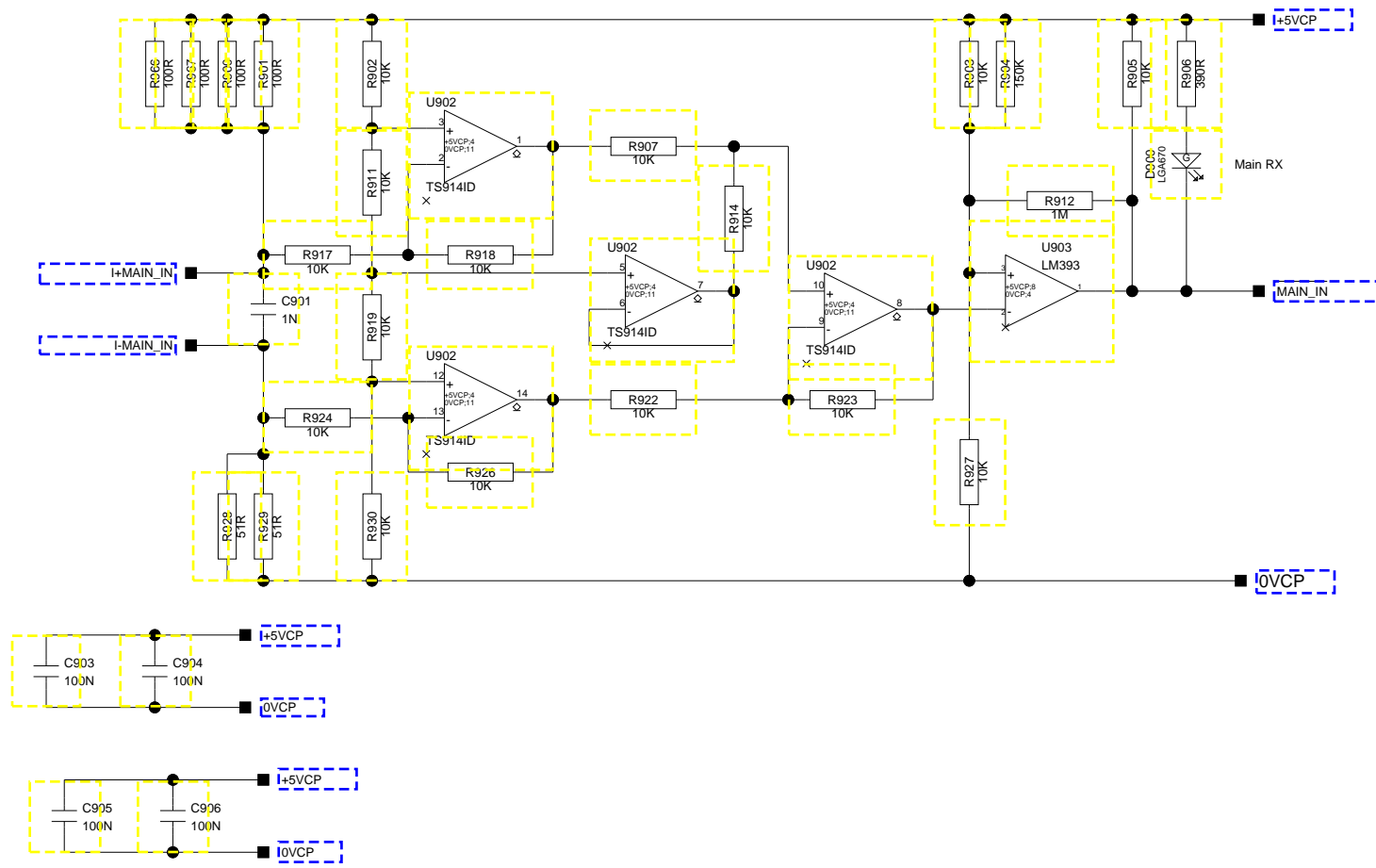


ROOM CURRENT RECEIVER

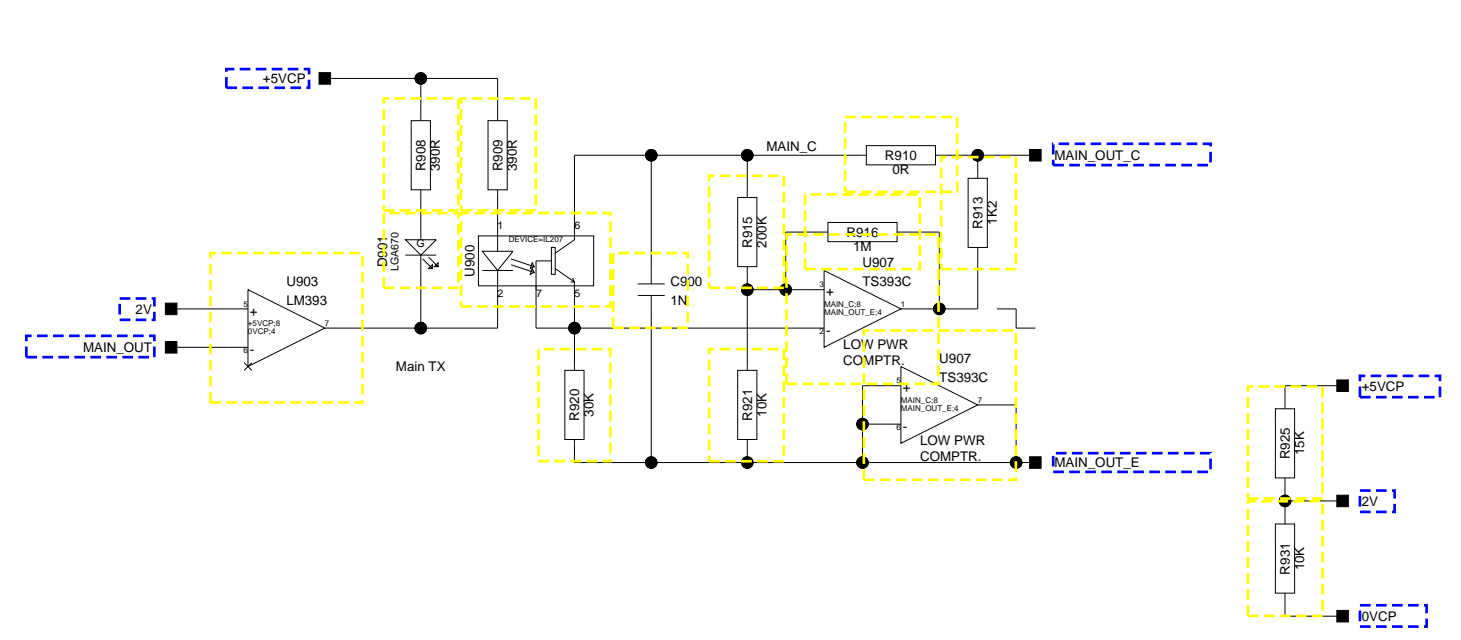


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| Title: ROOM AND RCU RC5 I/F | | | |
| Sheet: 8 | of: 13 | Date: 05/03/2007 | Rev:A |
| Drawn TRS | Reviewed | Part Number PCAS 424/L2R3 | |

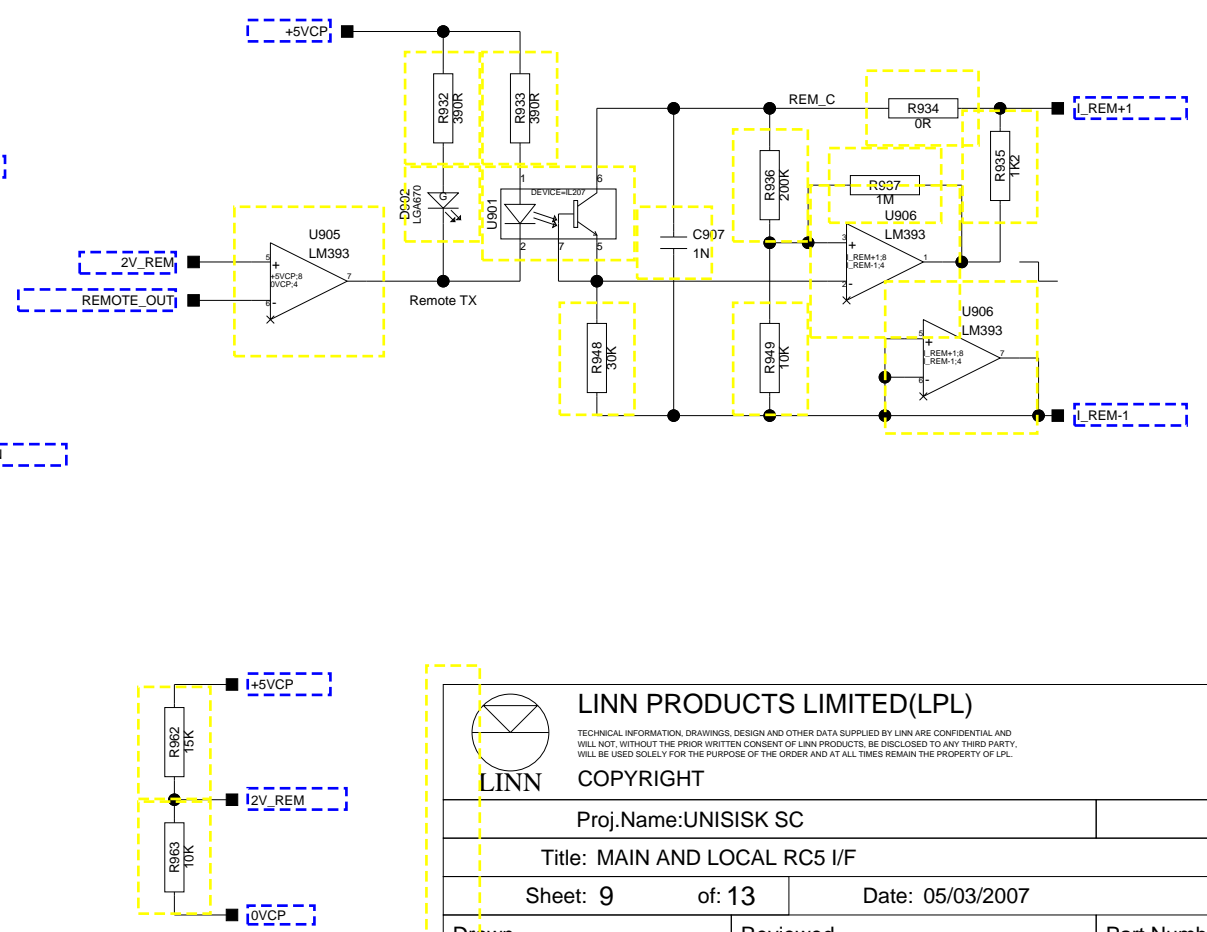
MAIN INPUT CURRENT RECEIVER



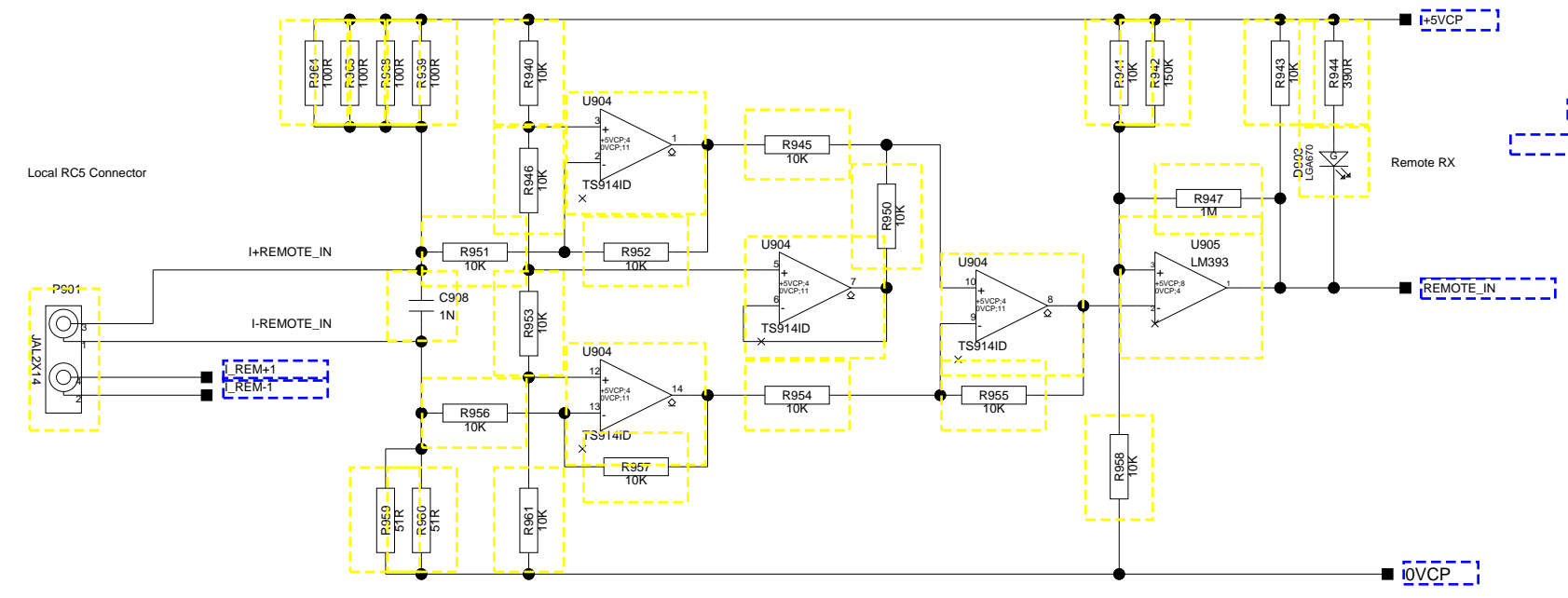
MAIN OUTPUT CURRENT TRANSMITTER




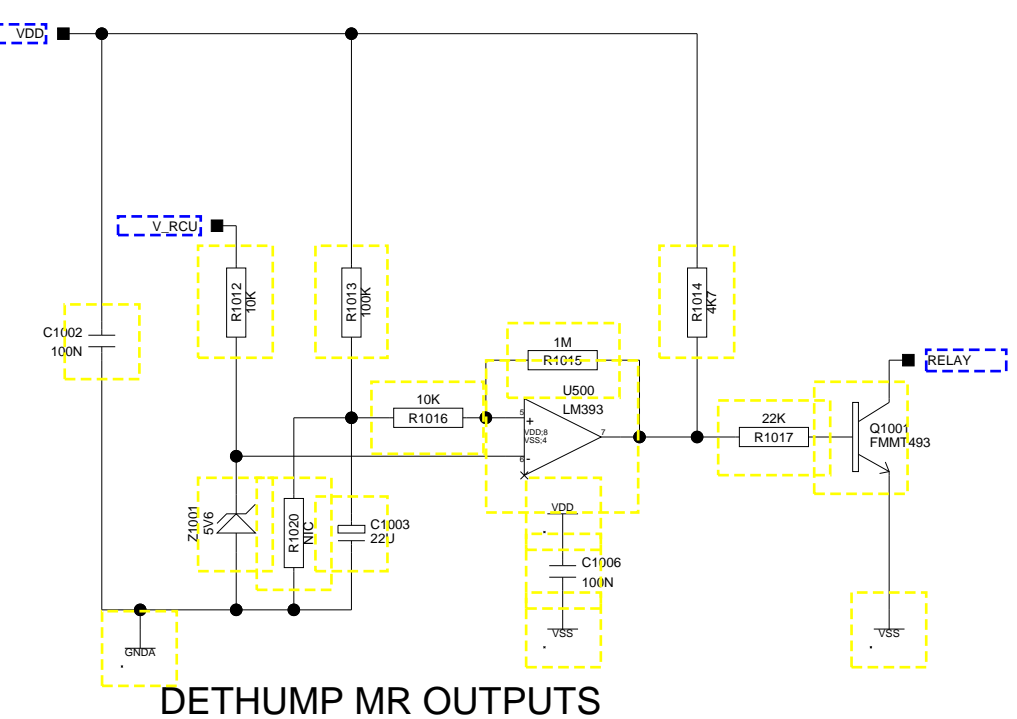
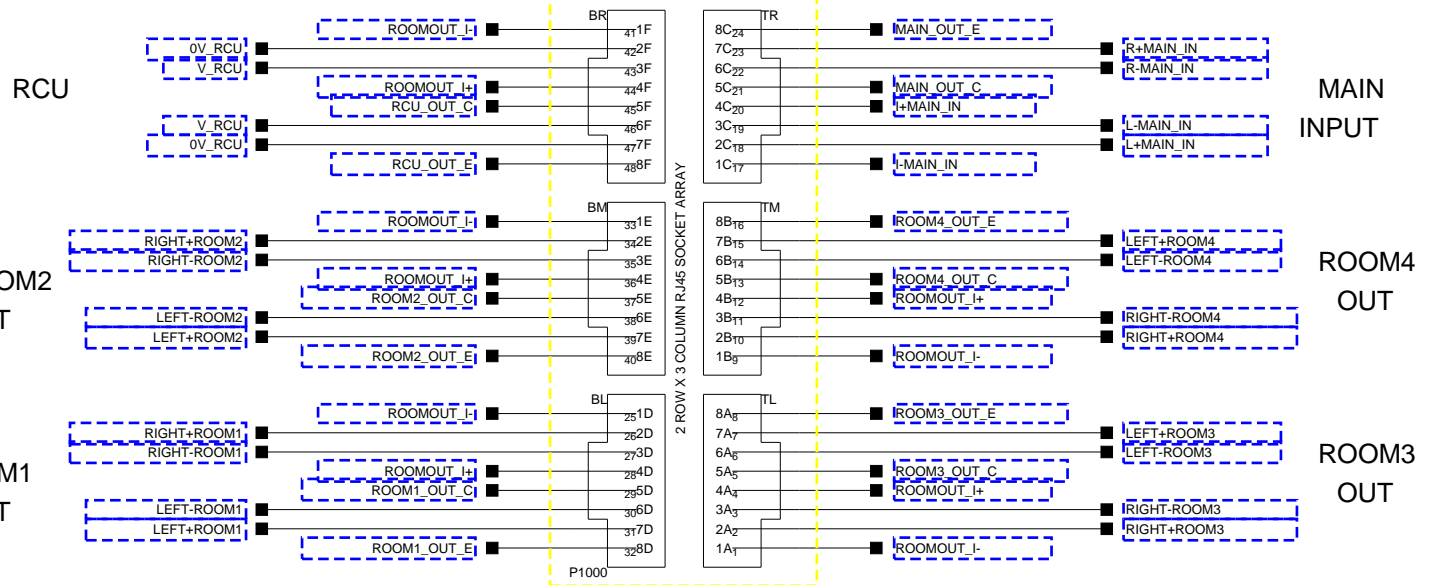
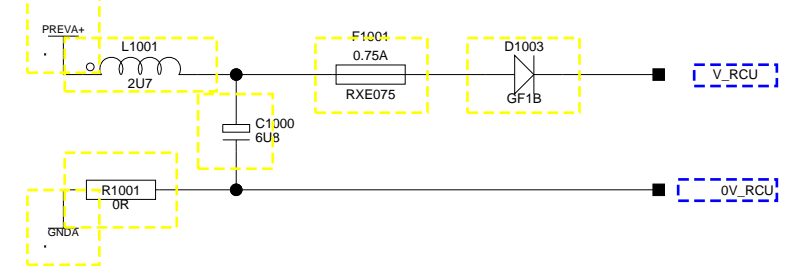
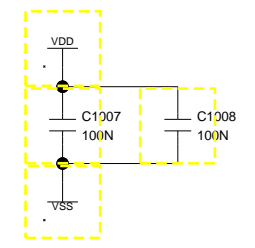
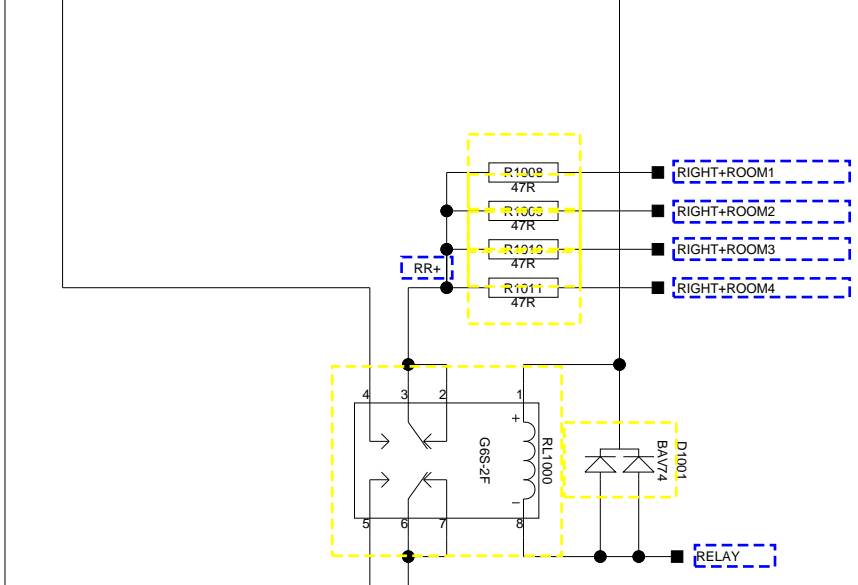
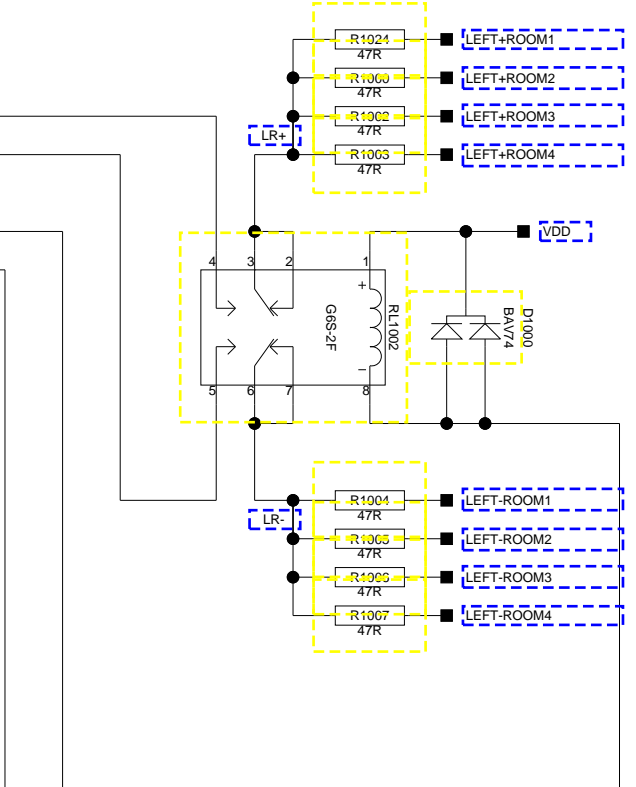
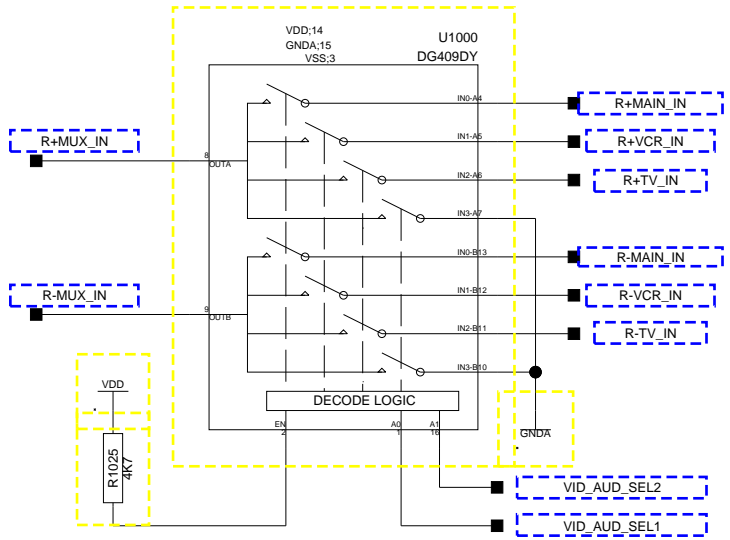
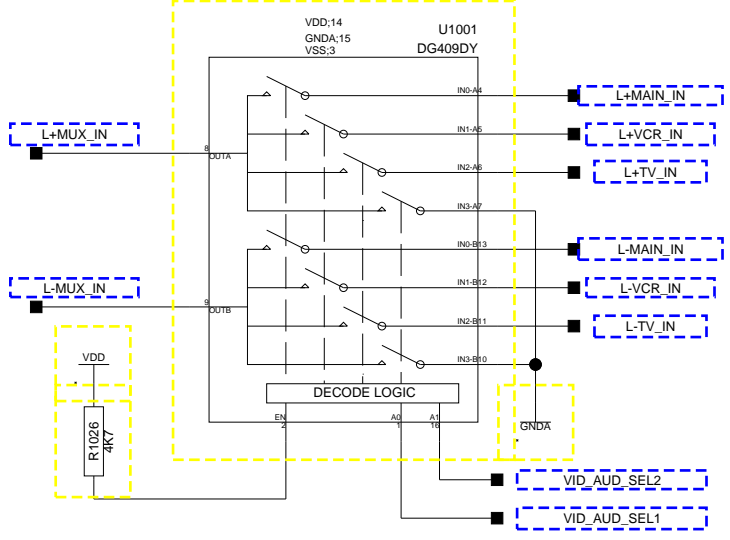
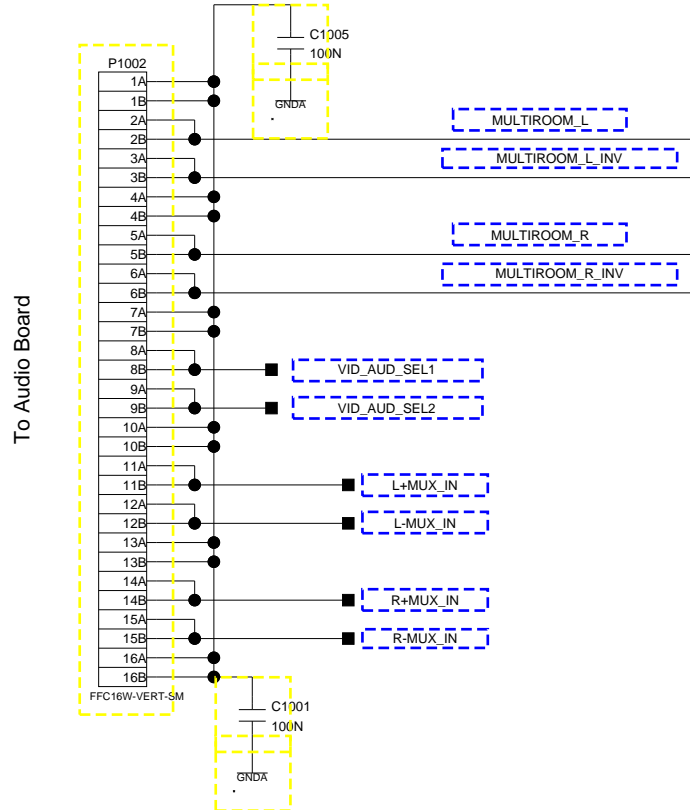
LOCAL OUTPUT CURRENT TRANSMITTER




LOCAL INPUT CURRENT RECEIVER

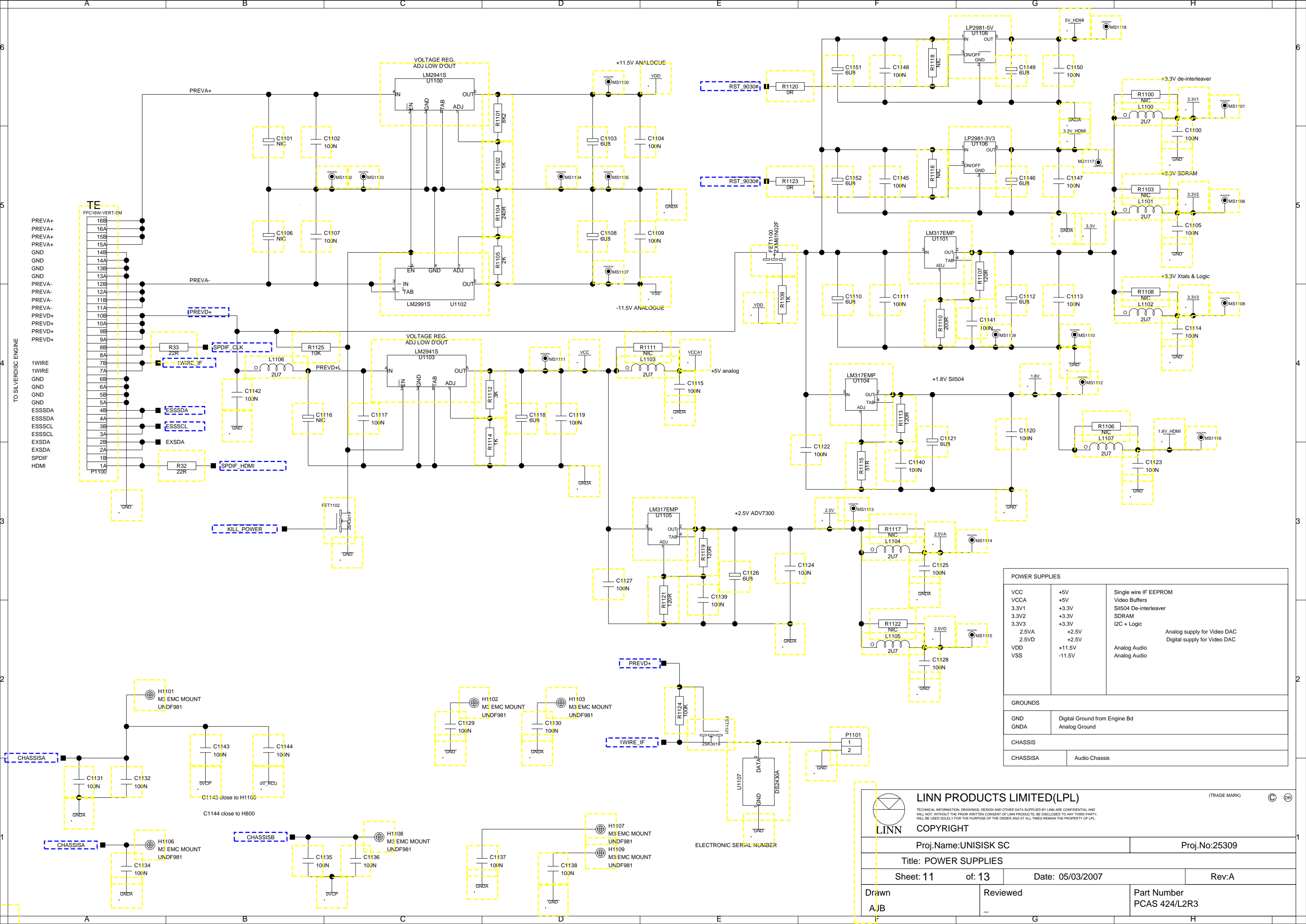


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| Sheet: 9 | of: 13 | Date: 05/03/2007 | Rev:A | |
| Drawn TRS | Reviewed | Part Number PCAS 424/L2R3 | | |





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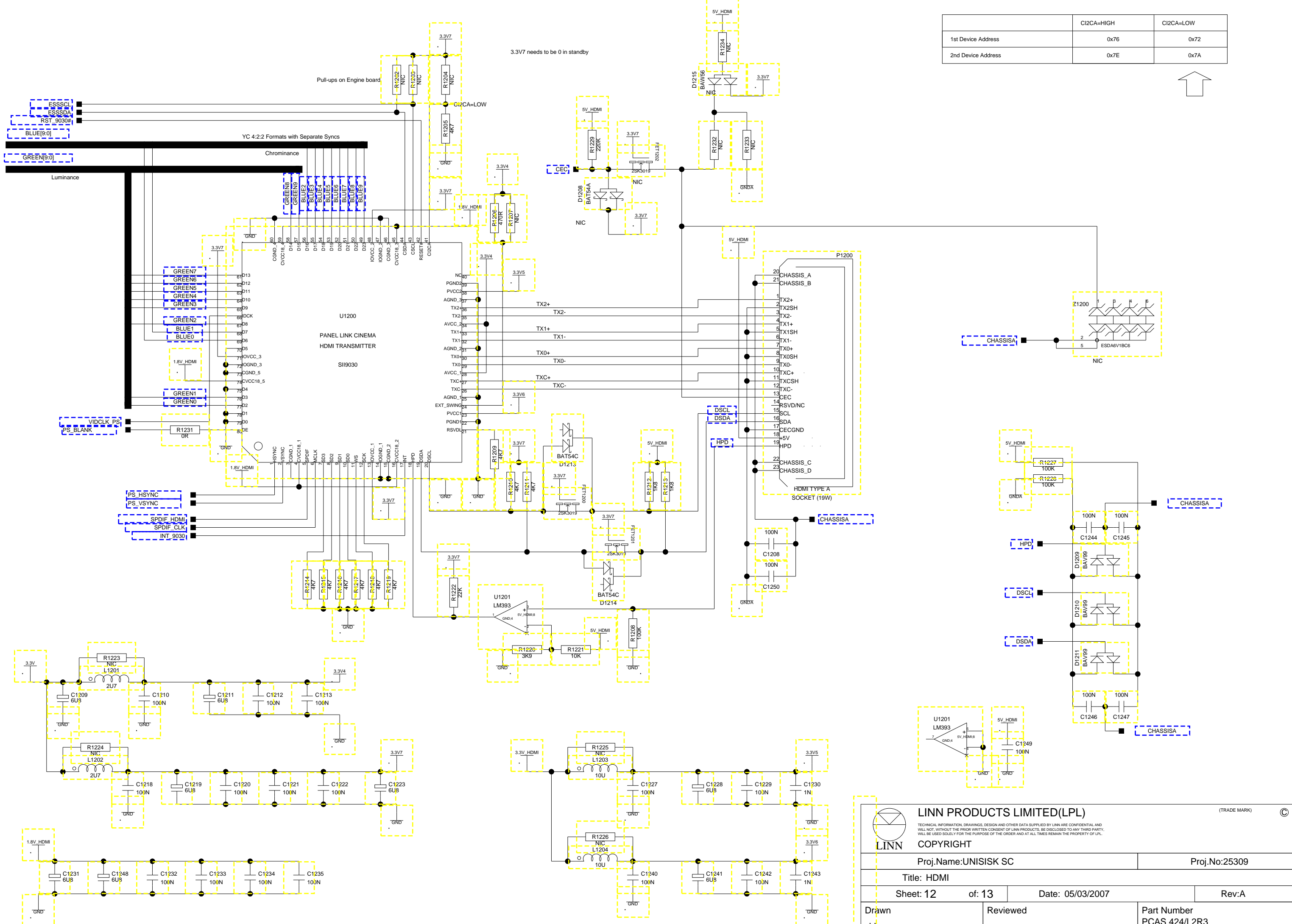
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|------------------------|----------|------------------------------|-------|
| Proj.Name:UNISISK SC | | Proj.No:25309 | |
| Title: KNEKT INTERFACE | | | |
| Sheet: 10 | of: 13 | Date: 05/03/2007 | Rev:A |
| Drawn TRS | Reviewed | Part Number PCAS 424/L2R3 | |



| POWER SUPPLIES | | |
|----------------|-------------------------------|------------------------------|
| VCC | +5V | Single wire IF EEPROM |
| VCCA | +5V | Video Buffers |
| 3.3V1 | +3.3V | Si504 De-interleaver |
| 3.3V2 | +3.3V | SDRAM |
| 3.3V3 | +3.3V | I2C + Logic |
| 2.5VA | +2.5V | Analog supply for Video DAC |
| 2.5VD | +2.5V | Digital supply for Video DAC |
| VDD | +11.5V | Analog Audio |
| VSS | -11.5V | Analog Audio |
| GROUNDS | | |
| GND | Digital Ground from Engine Bd | |
| GND_A | Analog Ground | |
| CHASSIS | | |
| CHASSISA | Audio Chassis | |



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 Proj.Name: UNISISK SC
 Title: POWER SUPPLIES
 Sheet: 11 of 13 Date: 05/03/2007
 Drawn: A/JB Reviewed: Part Number: PCAS 424/L2R3
 Proj.No: 25309 Rev:A



| | CI2CA=HIGH | CI2CA=LOW |
|--------------------|------------|-----------|
| 1st Device Address | 0x76 | 0x72 |
| 2nd Device Address | 0x7E | 0x7A |





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| | | | |
|----------------------|----------|------------------------------|-------|
| Proj.Name:UNISISK SC | | Proj.No:25309 | |
| Title: HDMI | | | |
| Sheet: 12 | of: 13 | Date: 05/03/2007 | Rev:A |
| Drawn LL | Reviewed | Part Number PCAS 424/L2R3 | |

GENERAL DESIGN NOTES

1. There are three regions on the PCB:

Digital - GND, 3.3V, 1.8V
 Analog - GNDA, VCCA, VDD, VSS, 2.5V
 KONECT - OVCP, +5VCP

There are no electrical connections between the Konekt parts and the Analog & Digital areas
 The KNEKT region will have to be split on the PCB (see diagram).
 The two halves should be connected by tracks on the bottom side.
 CHASSISA is associated with the Analog region.
 CHASSISB is associated with the KONEKT region

PCB DESIGN NOTES

1. COMPONENT PLACEMENT.

Component placement on top side only.

Test pad placement on bottom side only.

Main component placement indicated in board layout drawing.

2. LAYER DEFINITION AND STACKING

| | | |
|----------|---------|-----------------------|
| Layer 1, | Top, | Tracking. |
| Layer 2, | Inner, | GND Plane. |
| Layer 3, | Inner, | Power Planes(Various) |
| Layer 4, | Bottom, | Tracking. |

3. HEATSINK REQUIREMENTS

U1101, U1104, U1103, U 1105, U1101 & U1102 - Requires a minimum of 50mm2 of 1oz copper (1Watt)

4. POWER/GROUND PLANES AND NETS

Net name, Power track, 25mils minimum width, 10mils minimum clearance

Net name, Power track, 25mils minimum width, 10mils minimum clearance

GND net, Ground Plane on inner layer 2.

Split Ground Plane GND (Digital) and GNDA (Analog), to be shorted near VDAC (U400).

Via types as per standard ECIT practice.

5. CRITICAL ROUTING

Power Supply Isolation - OVCP and +5VCP to be kept separate from other power and ground nets.

Safety Critical Nets - None.

Controlled Impedance Nets - COMP, COMP2, Y, C, CMP_Y, CMP_PR and CMP_PB are 75R single ended.

High Speed Nets - VIDCLK, VIDCLK2 and all the signal tracks around U1 and U2.

Differential Net Pairs - There are four audio pairs on P1002.

Critical Routing - Maintain separation between analog and digital especially around U400.

6. PIN/GATE SWAPPABLE DEVICES

SHTxx,Uyyy Gate swap if required.

7. PCB SPECIFICATION

Material:FR4; Copper:1oz; PCB Thickness:1.6mm. Finish: HASL.

Note: Any modifications in new revisions to be highlighted (Revision in brackets after note)

Move F1001 away from EMC finger

Move P700 sideways

Remove short near U1100

Move SCART connector inboard a few mm

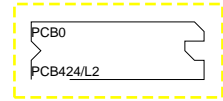
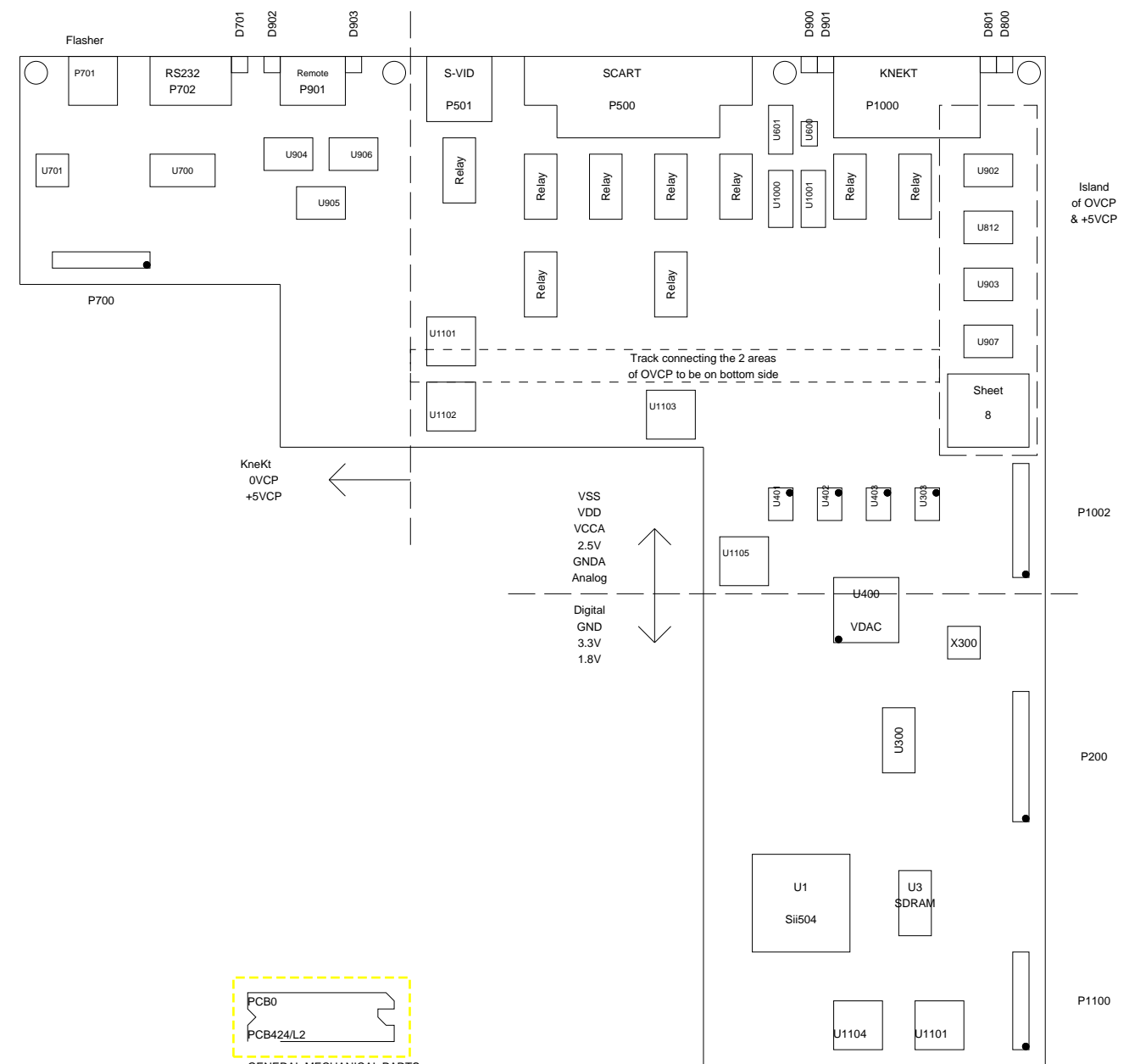
HDMI

TX2+/-, TX1+/-, TX0+/-, TXC+/- should be as short as possible.

TX2+/-, TX1+/-, TX0+/-, TXC+/- should have 100 ohms differential impedance for each differential pair.

Minimise capacitance on DSCL and DSDA

BOARD LAYOUT



GENERAL MECHANICAL PARTS

| | | |
|-------|---------|----------|
| GEN1 | UNDF993 | SNAP OFF |
| GEN2 | UNDF993 | SNAP OFF |
| GEN3 | UNDF993 | SNAP OFF |
| GEN4 | UNDF993 | SNAP OFF |
| GEN5 | UNDF993 | SNAP OFF |
| GEN6 | UNDF993 | SNAP OFF |
| GEN7 | UNDF993 | SNAP OFF |
| GEN8 | UNDF993 | SNAP OFF |
| GEN9 | UNDF993 | SNAP OFF |
| GEN10 | UNDF993 | SNAP OFF |
| GEN11 | UNDF993 | SNAP OFF |
| GEN12 | UNDF993 | SNAP OFF |

TOP SIDE FIDUCIALS

| | | |
|--------|---------|----------------------------------|
| FID000 | UNDF996 | REFERENCE FIDUCIAL |
| FID001 | UNDF996 | REFERENCE FIDUCIAL |
| FID002 | UNDF996 | REFERENCE FIDUCIAL |
| FID010 | UNDF997 | FIXTURELESS TESTER FIDUCIAL MARK |
| FID011 | UNDF997 | FIXTURELESS TESTER FIDUCIAL MARK |

BOTTOM SIDE FIDUCIALS

| | | |
|--------|---------|----------------------------------|
| FID012 | UNDF997 | FIXTURELESS TESTER FIDUCIAL MARK |
| FID013 | UNDF997 | FIXTURELESS TESTER FIDUCIAL MARK |

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| Proj.Name:UNISISK SC | | Proj.No:25309 | |
| Title: LAYOUT NOTES | | | |
| Sheet: 13 | of: 13 | Date: 05/03/2007 | Rev:A |
| Drawn TRS | Reviewed - | Part Number PCAS 424/L2R3 | |