

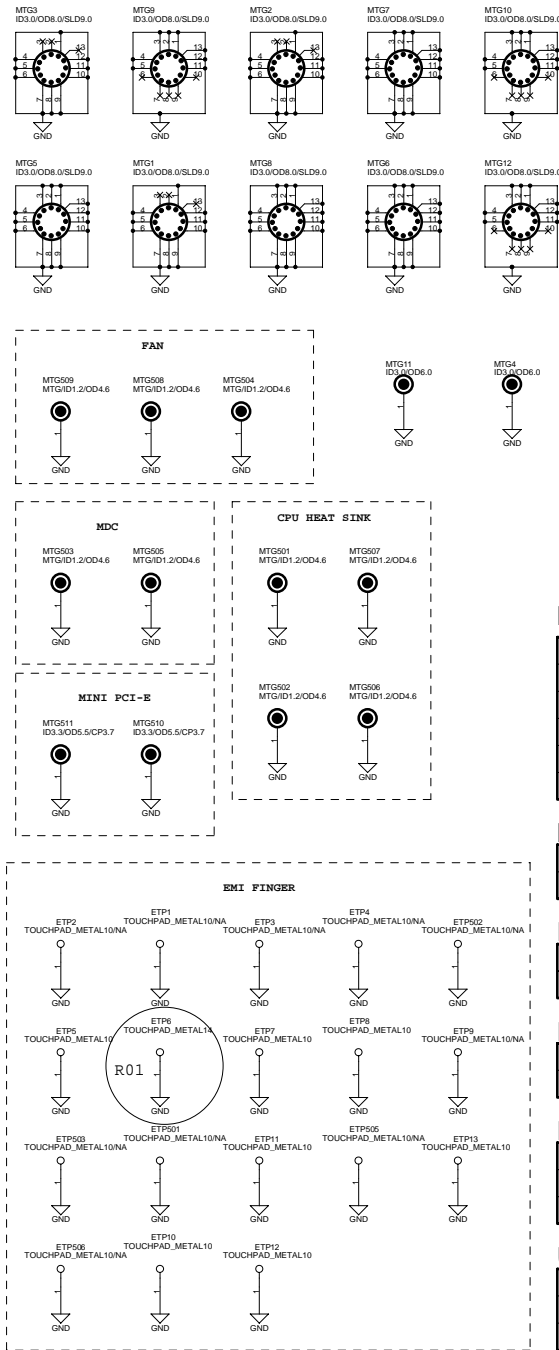
MODEL : 8515 Revision R0A

Project Code : G383
Product Code :8171
PCB : 316817100002
PCBA : 411817100001

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DRAW	DESIGN	CHECK	ISSUED

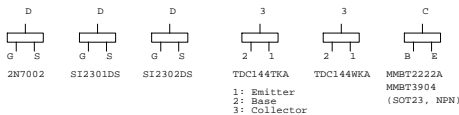


POWER STATES

STATE SIGNAL	VOTAGE	POWER ON	STR (S3)	STD (S4)	MEC-OFF (S5)	REMARK
SUSB#	-	HIGH	LOW	LOW	LOW	
SUSC#	-	HIGH	HIGH	LOW	LOW	
ADP	+19V	O	O	O	O	
BATTERY	+12V	O	O	O	O	
+VDD3_ALW	+3.3V	O	O	O	O	
+VDD3_AVREF	+3.3V	O	O	O	O / X	SS : X in Battery mode
VDD3S	+3.3V	O	O	O	O / X	SS : X in Battery mode
VDD2.5S	+2.5V	O	O	O	O / X	SS : X in Battery mode
+5V	+5V	O	O	X	X	
+3V	+3.3V	O	O	X	X	
+2.5V	+2.5V	O	O	X	X	
+1.8V	+1.8V	O	O	X	X	
+1.5V	+1.5V	O	O	X	X	
+5VS	+5V	O	X	X	X	
+3VS	+3.3V	O	X	X	X	
+2.5VS	+2.5V	O	X	X	X	
+1.8VS	+1.8V	O	X	X	X	
+1.5VS	+1.5V	O	X	X	X	
+1.05V_VCCP	+1.05V	O	X	X	X	
+0.9VS	+0.9V	O	X	X	X	
+CPU_CORE		O	X	X	X	

I2C / SMB Address

DEVICE	WRITE	READ
ICS953009	D2	D3
ICS9P956	DC	DD
DIMM0	A0	A1
DIMM1	A2	A3
AD1032	98	99



IDSEL

IDSEL	CHIP
	N/A

BUS MASTER

REQ/GNT	CHIP
	N/A

PCIINT

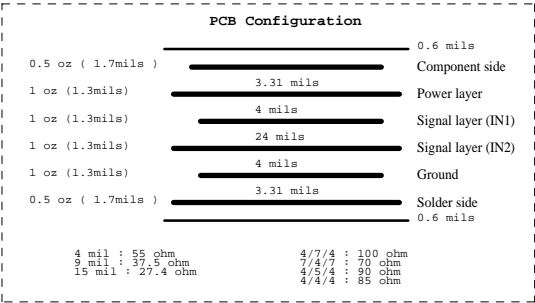
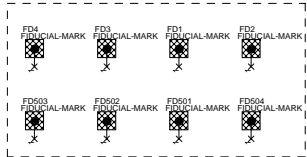
PCIINT	CHIP
	N/A

PCIE LANE

LANE	DEVICE
1	Mini Card
2	Express Card

USB

PORT	DEVICE
4	Mini Card
5	Express Card



Title
8515 COVER SHEET

Size
Custom

Document
Number

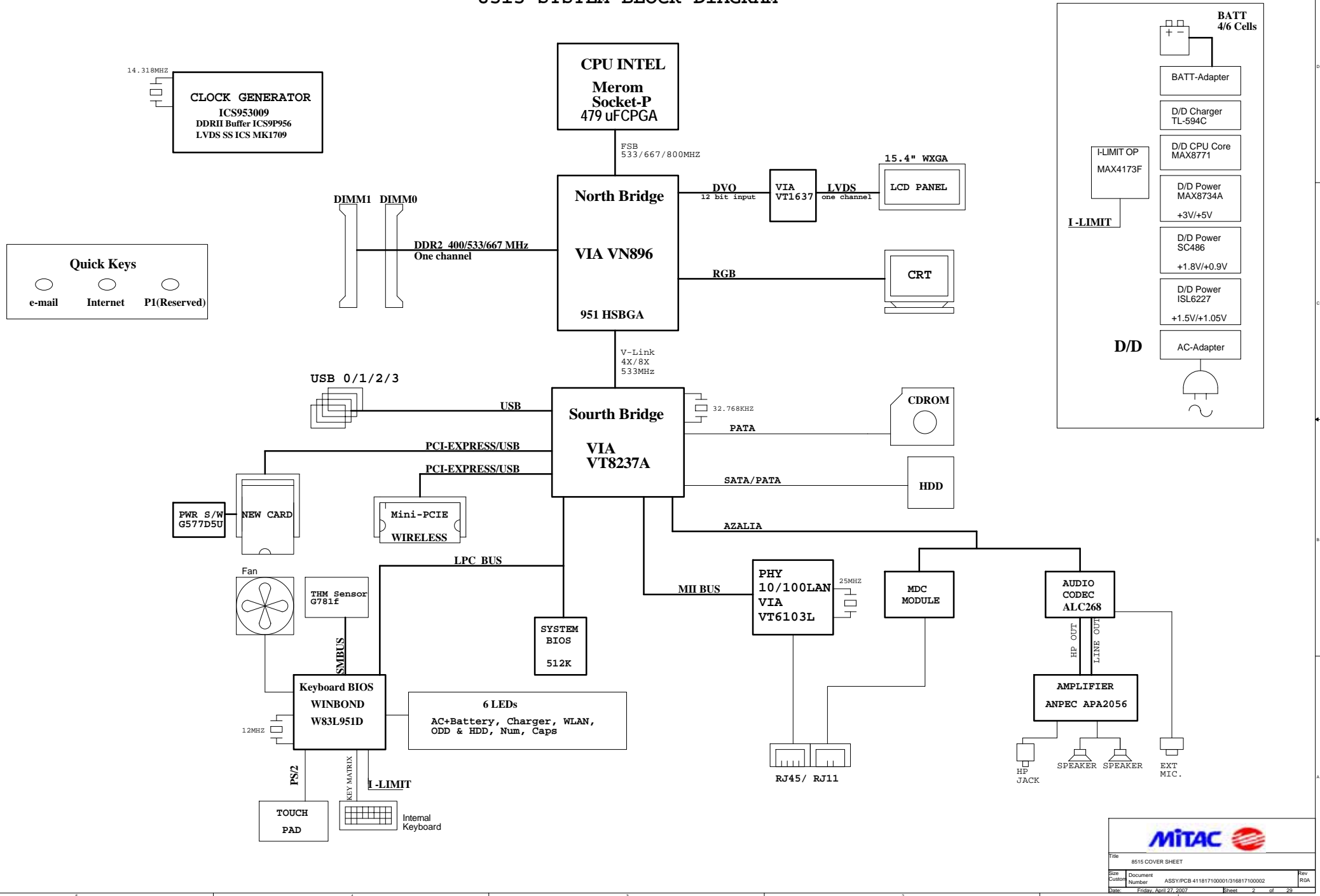
ASSY/PCB 411817100001/316817100002

Rev
R0A

Date
Friday, April 27, 2007

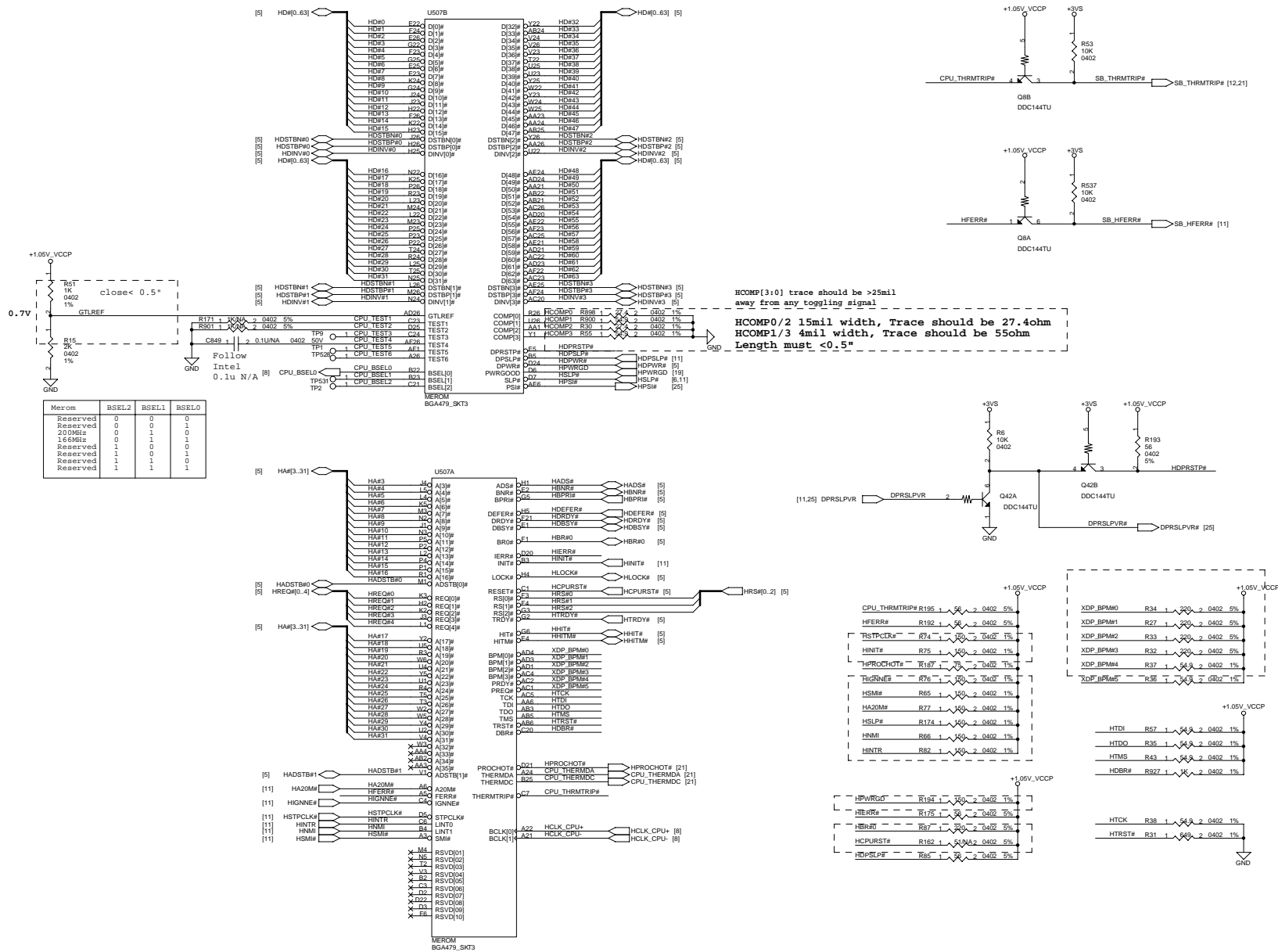
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8515 SYSTEM BLOCK DIAGRAM



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CPU -Merom socket-p(1/2)

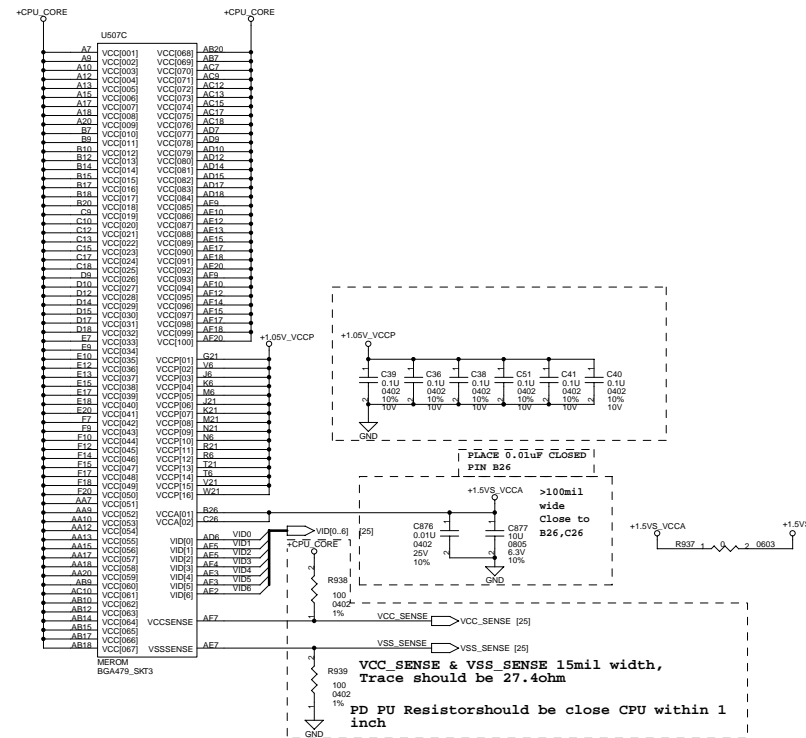
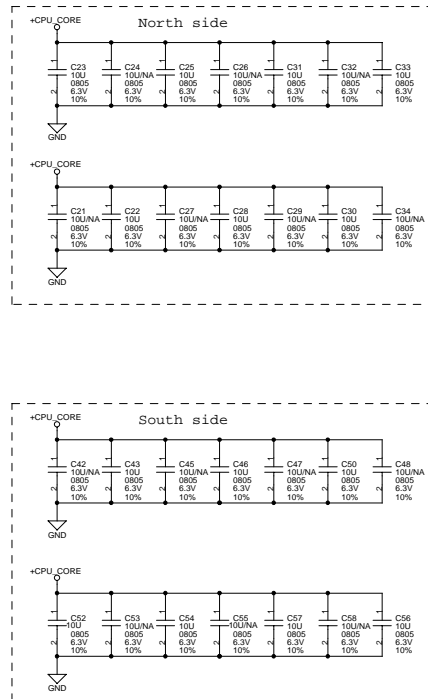


Title			
8515 CPU Merom(1/2)			
Size	Document	ASSY/PCB 411817100001/316817100002	Rev
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CPU - Merom socket-p (2/2)

330uF x 4

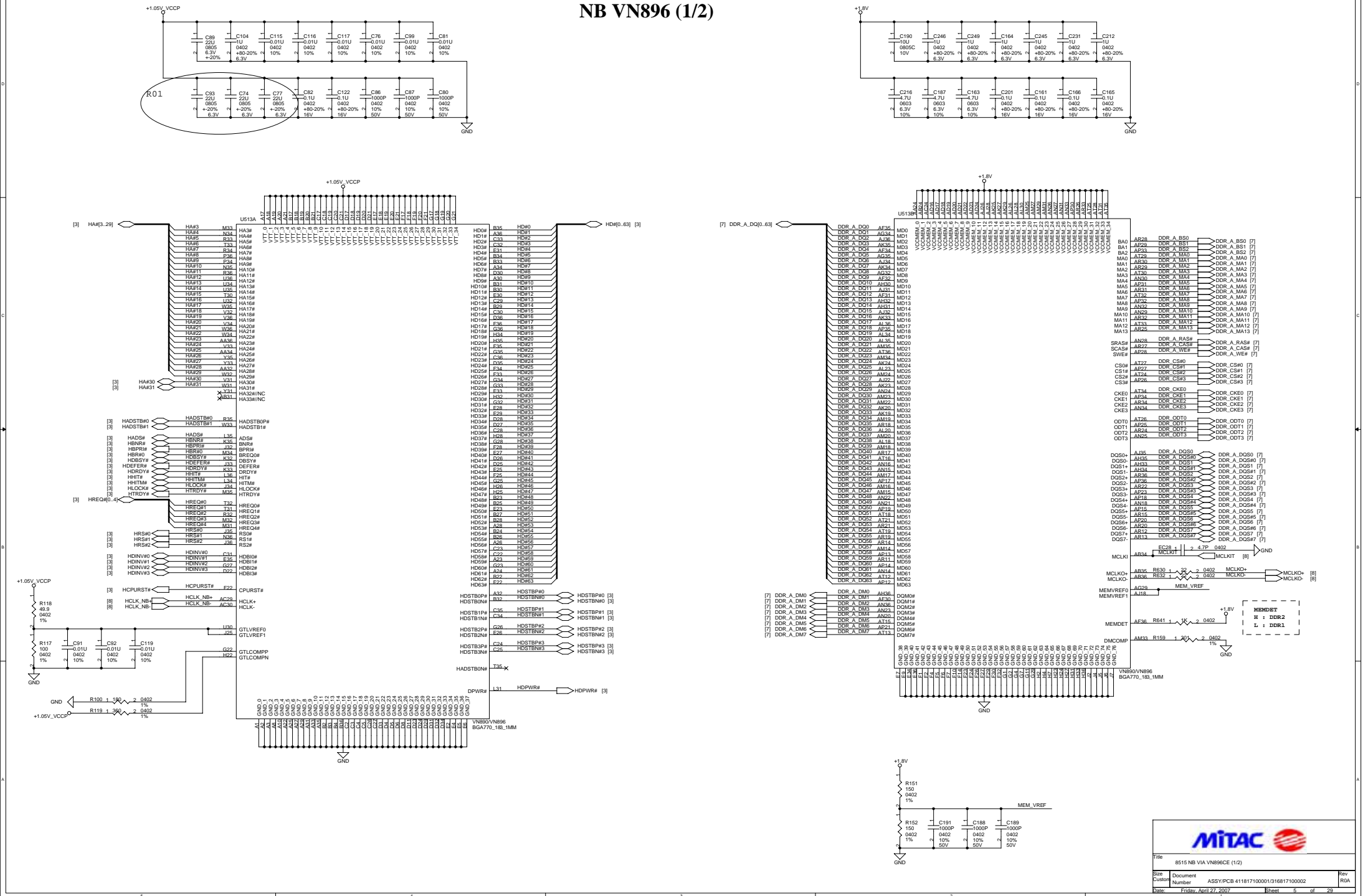
CPU Mid-Freq Decoupling



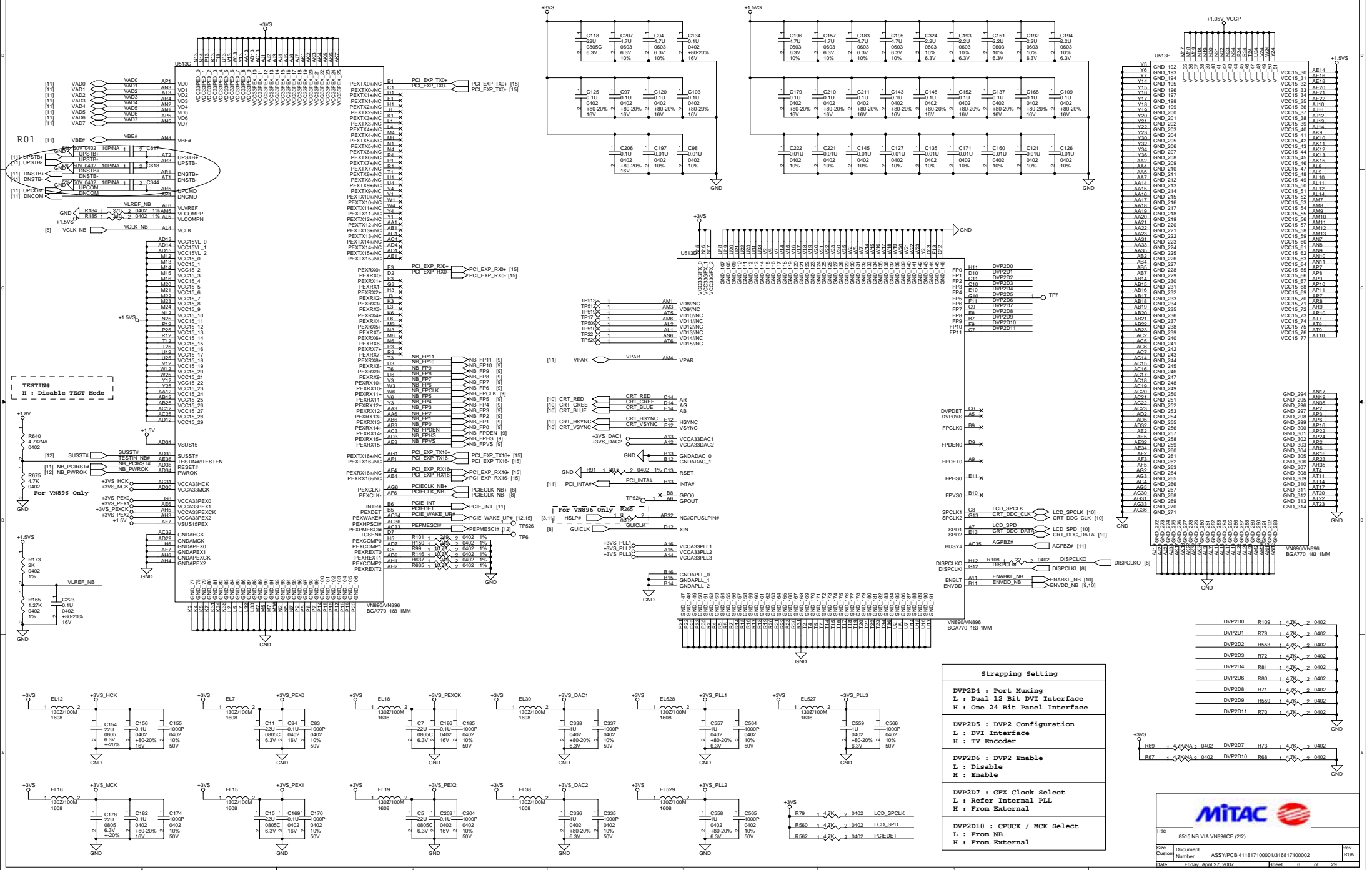
US070		
A4	V5S0002	B6
A5	V5S0003	C01
A11	V5S0004	P24
A12	V5S0005	V5S0006
A13	V5S0006	R05
A14	V5S0007	V5S0008
A15	V5S0008	R07
A16	V5S0009	R22
A17	V5S0010	V5S0011
A18	V5S0011	V5S0012
A19	V5S0012	V5S0013
A20	V5S0013	V5S0014
A21	V5S0014	V5S0015
A22	V5S0015	V5S0016
A23	V5S0016	V5S0017
A24	V5S0017	V5S0018
A25	V5S0018	V5S0019
A26	V5S0019	V5S0020
A27	V5S0020	V5S0021
A28	V5S0021	V5S0022
A29	V5S0022	V5S0023
A30	V5S0023	V5S0024
A31	V5S0024	V5S0025
A32	V5S0025	V5S0026
A33	V5S0026	V5S0027
A34	V5S0027	V5S0028
A35	V5S0028	V5S0029
A36	V5S0029	V5S0030
A37	V5S0030	V5S0031
A38	V5S0031	V5S0032
A39	V5S0032	V5S0033
A40	V5S0033	V5S0034
A41	V5S0034	V5S0035
A42	V5S0035	V5S0036
A43	V5S0036	V5S0037
A44	V5S0037	V5S0038
A45	V5S0038	V5S0039
A46	V5S0039	V5S0040
A47	V5S0040	V5S0041
A48	V5S0041	V5S0042
A49	V5S0042	V5S0043
A50	V5S0043	V5S0044
A51	V5S0044	V5S0045
A52	V5S0045	V5S0046
A53	V5S0046	V5S0047
A54	V5S0047	V5S0048
A55	V5S0048	V5S0049
A56	V5S0049	V5S0050
A57	V5S0050	V5S0051
A58	V5S0051	V5S0052
A59	V5S0052	V5S0053
A60	V5S0053	V5S0054
A61	V5S0054	V5S0055
A62	V5S0055	V5S0056
A63	V5S0056	V5S0057
A64	V5S0057	V5S0058
A65	V5S0058	V5S0059
A66	V5S0059	V5S0060
A67	V5S0060	V5S0061
A68	V5S0061	V5S0062
A69	V5S0062	V5S0063
A70	V5S0063	V5S0064
A71	V5S0064	V5S0065
A72	V5S0065	V5S0066
A73	V5S0066	V5S0067
A74	V5S0067	V5S0068
A75	V5S0068	V5S0069
A76	V5S0069	V5S0070
A77	V5S0070	V5S0071
A78	V5S0071	V5S0072
A79	V5S0072	V5S0073
A80	V5S0073	V5S0074
A81	V5S0074	V5S0075
A82	V5S0075	V5S0076
A83	V5S0076	V5S0077
A84	V5S0077	V5S0078
A85	V5S0078	V5S0079
A86	V5S0079	V5S0080
A87	V5S0080	V5S0081
A88	V5S0081	V5S0082
A89	V5S0082	V5S0083
A90	V5S0083	V5S0084
A91	V5S0084	V5S0085
A92	V5S0085	V5S0086
A93	V5S0086	V5S0087
A94	V5S0087	V5S0088
A95	V5S0088	V5S0089
A96	V5S0089	V5S0090
A97	V5S0090	V5S0091
A98	V5S0091	V5S0092
A99	V5S0092	V5S0093
A100	V5S0093	V5S0094
A101	V5S0094	V5S0095
A102	V5S0095	V5S0096
A103	V5S0096	V5S0097
A104	V5S0097	V5S0098
A105	V5S0098	V5S0099
A106	V5S0099	V5S0100
A107	V5S0100	V5S0101
A108	V5S0101	V5S0102
A109	V5S0102	V5S0103
A110	V5S0103	V5S0104
A111	V5S0104	V5S0105
A112	V5S0105	V5S0106
A113	V5S0106	V5S0107
A114	V5S0107	V5S0108
A115	V5S0108	V5S0109
A116	V5S0109	V5S0110
A117	V5S0110	V5S0111
A118	V5S0111	V5S0112
A119	V5S0112	V5S0113
A120	V5S0113	V5S0114
A121	V5S0114	V5S0115
A122	V5S0115	V5S0116
A123	V5S0116	V5S0117
A124	V5S0117	V5S0118
A125	V5S0118	V5S0119
A126	V5S0119	V5S0120
A127	V5	

MCR04	
BQ4747	SKT3

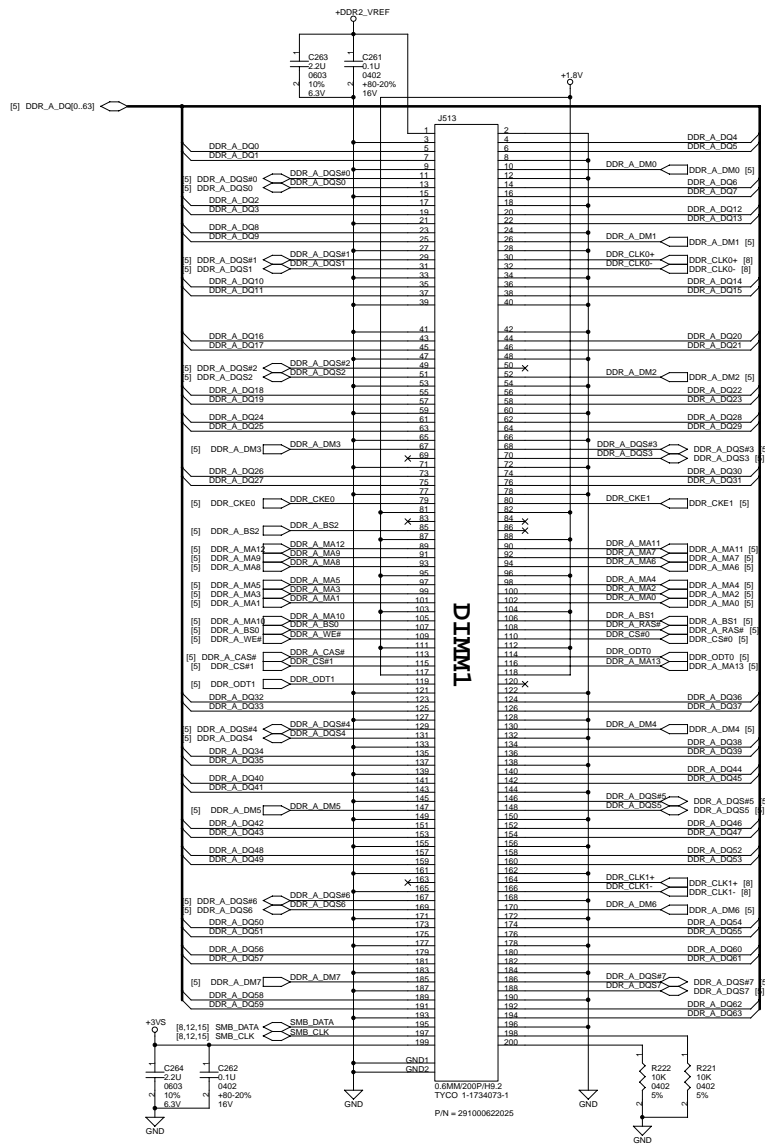
GROUND

NB VN896 (1/2)

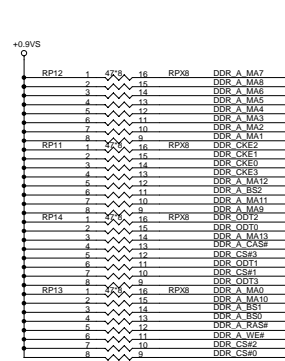
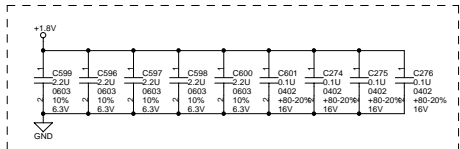
NB VN896 (2/2)



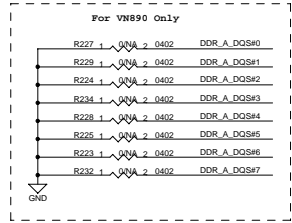
DDR2 SODIMM



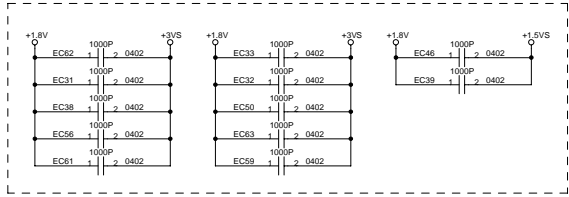
Place these caps near So-Dimm 0



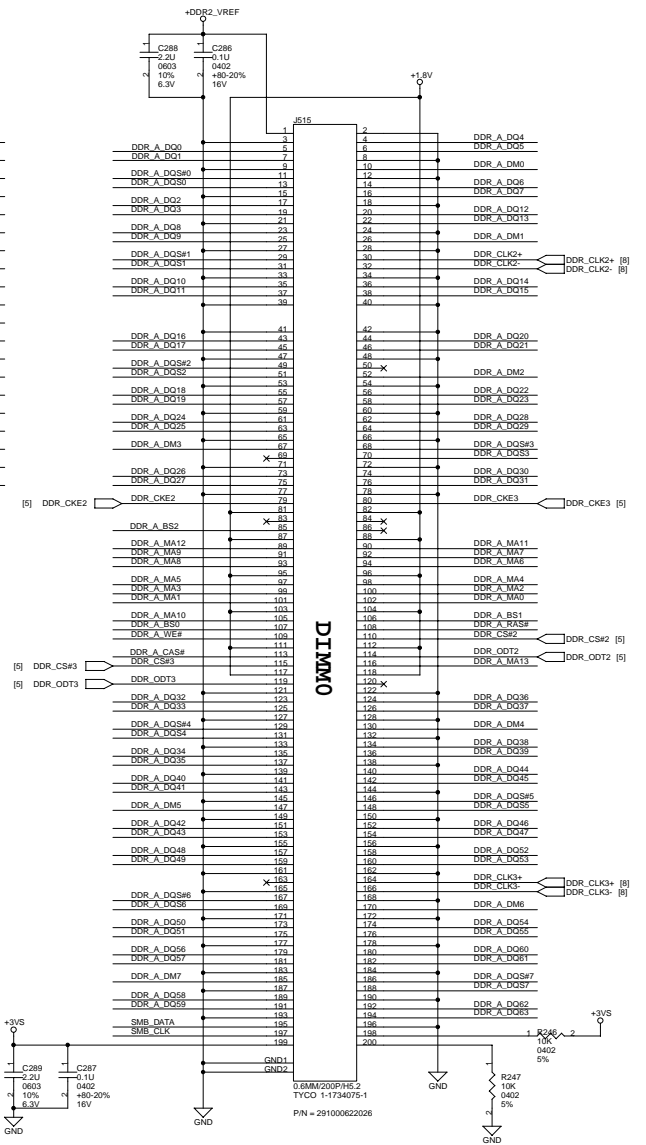
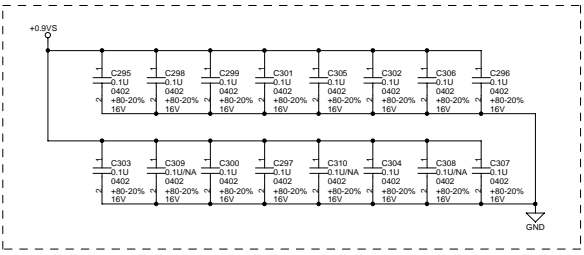
Close to SO-DIMM



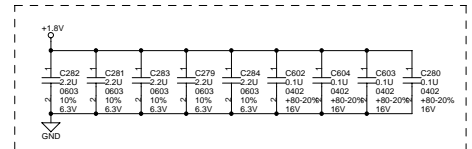
FOR EMI REQUEST



Place one cap close to every 2 pullup resistors terminated to +0.9V5

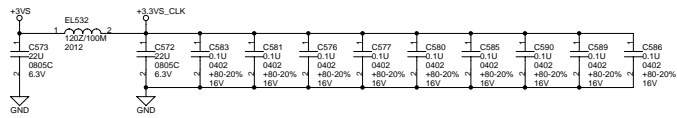


Place these caps near So-Dimm 1



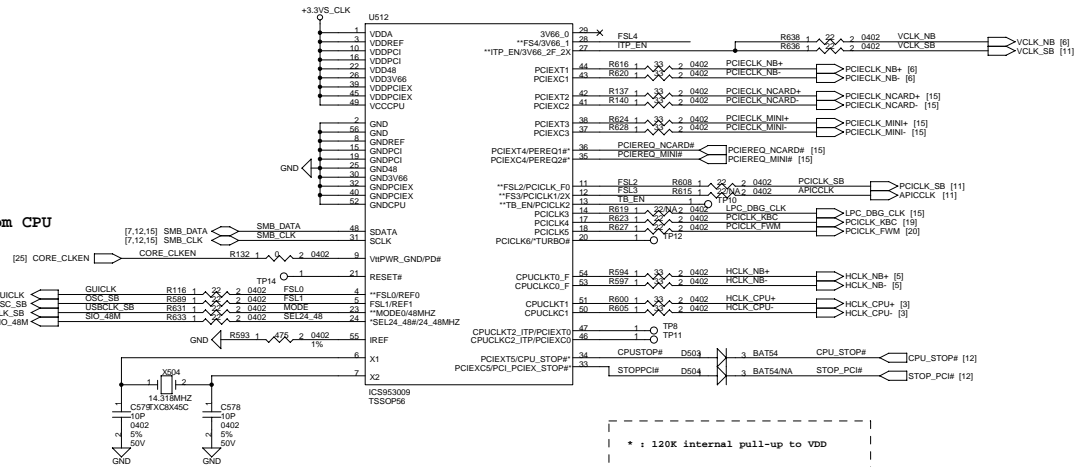
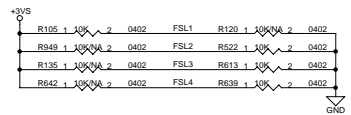
File	8515 DDR2 SODIMM	Rev	
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CLOCK GENERATOR



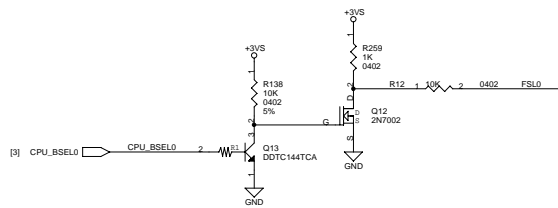
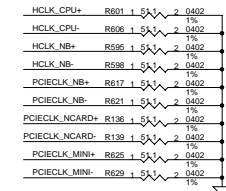
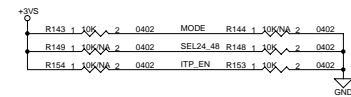
Frequency Setting					
FSL4	FSL3	FSL2	FSL1	FSL0	CPU
0	0	1	0	1	100 MHz
0	0	0	0	1	133 MHz
0	0	0	1	1	166 MHz
0	0	0	1	0	200 MHz

- For Merom CPU

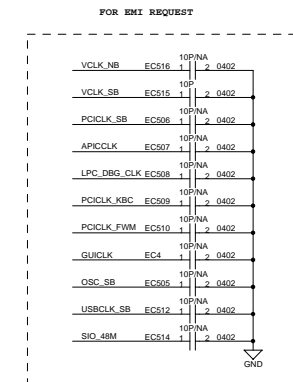
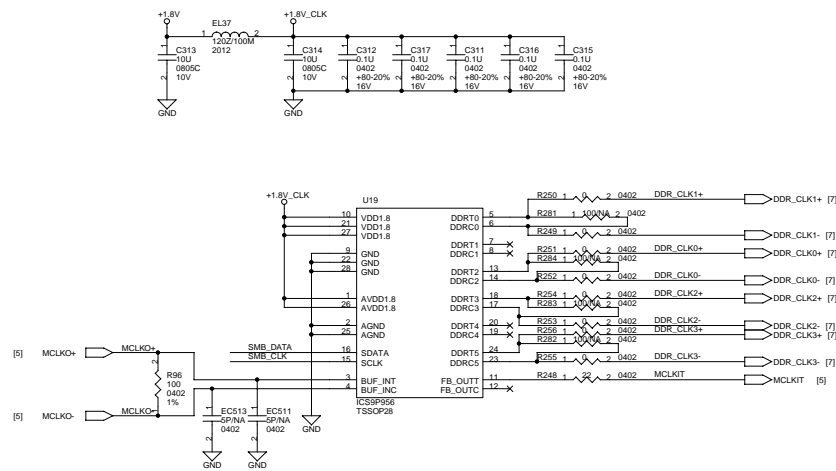
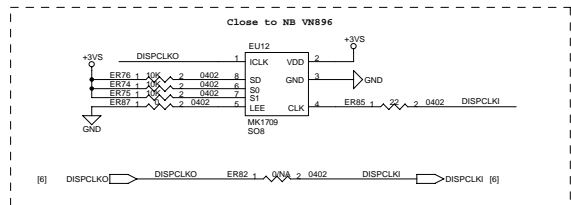


* : 120K internal pull-up to VDD

** : 120K internal pull-down to GND

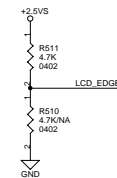
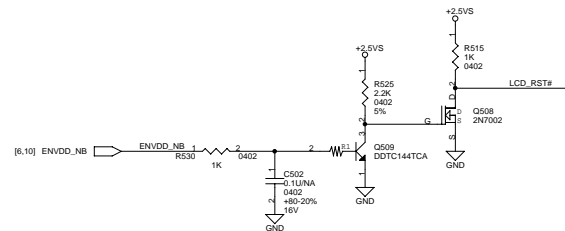
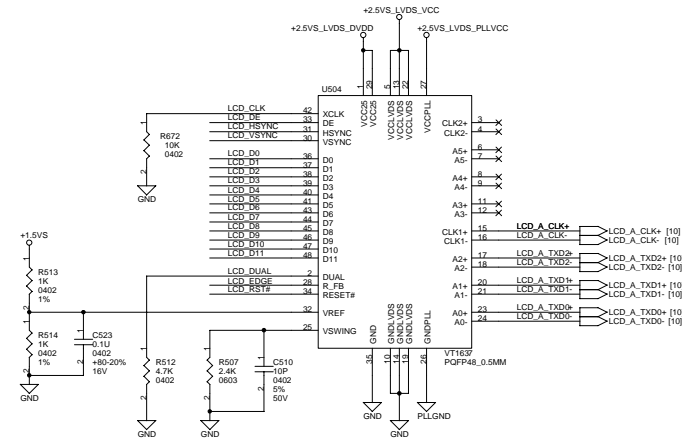
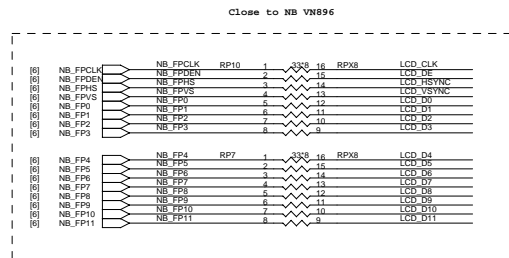
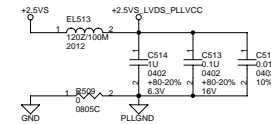
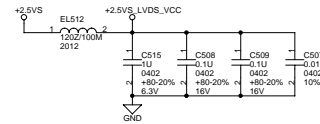
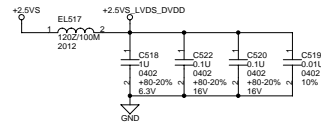


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Title			
8515 CLK GEN ICS953009 & ICS9P956			
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LVDS TRANSMITTER (VT1637)

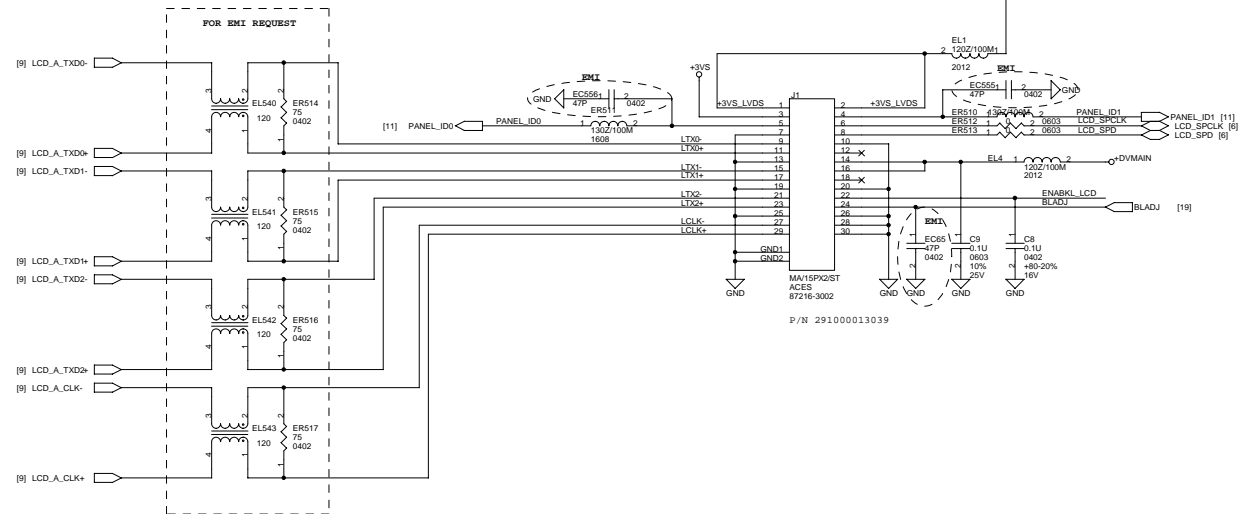
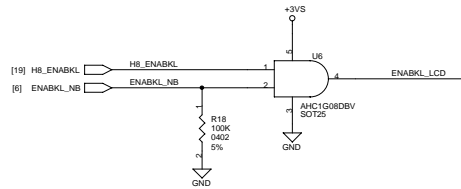


LCD_EDGE	
0	Falling
1	Rising

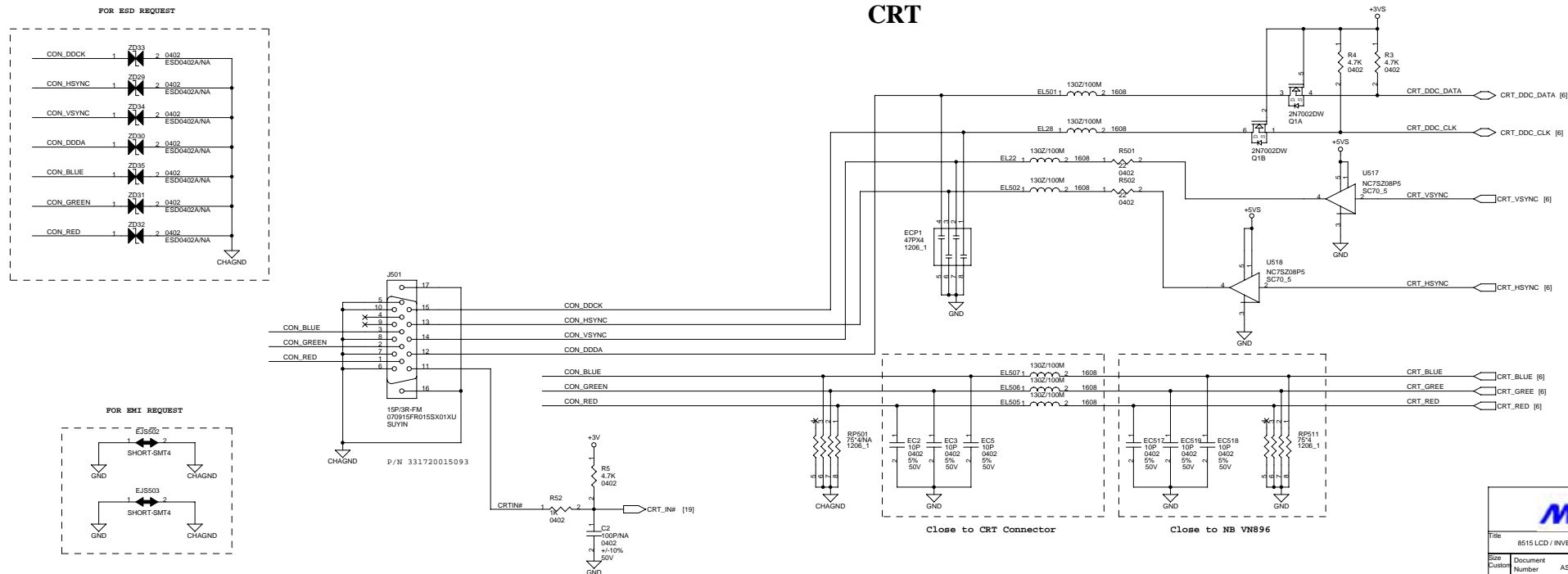


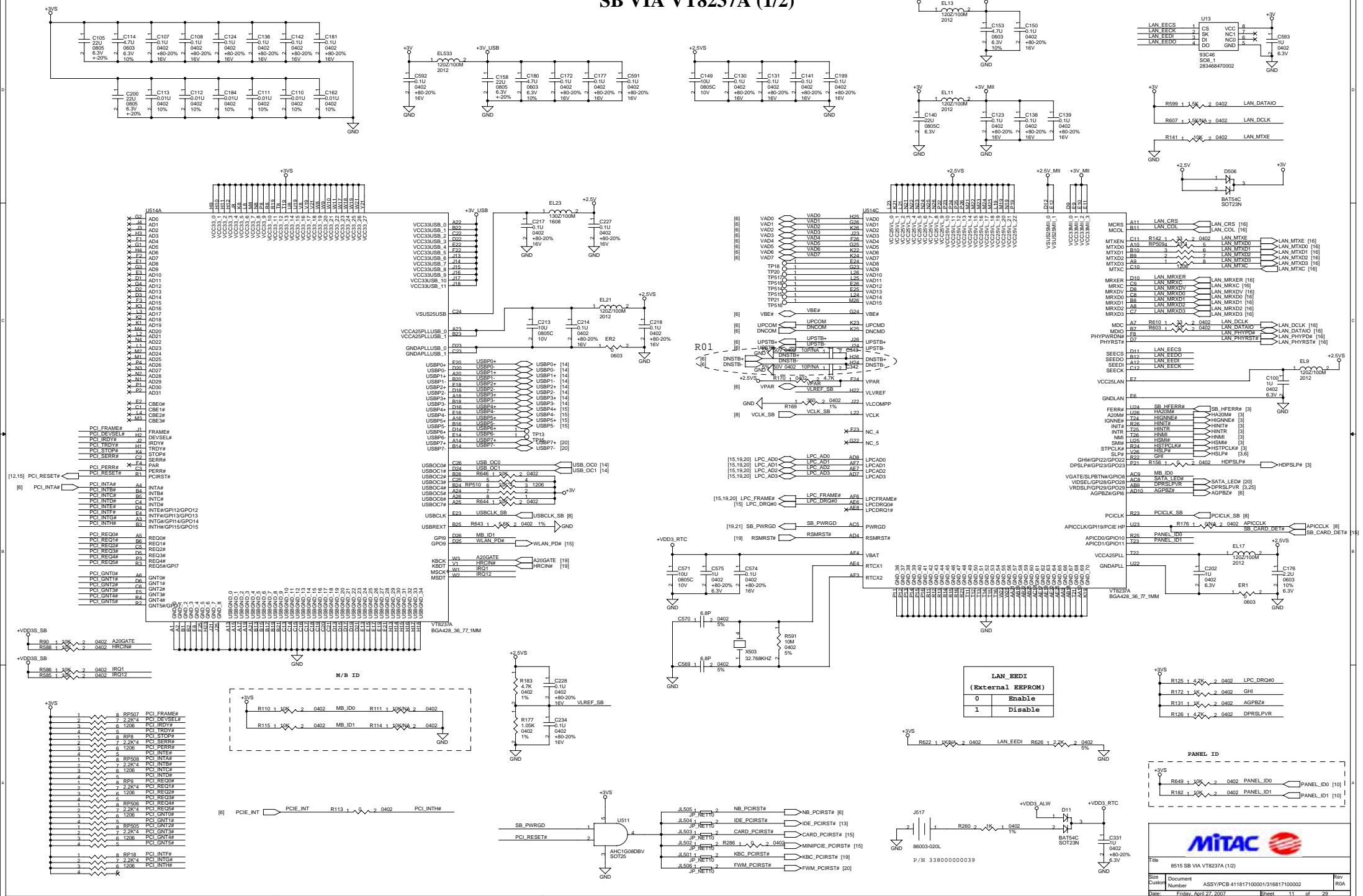
Title	8515 LVDS TRANSMITTER VIA VT1637	Rev	Rev
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LCD / INVERTER

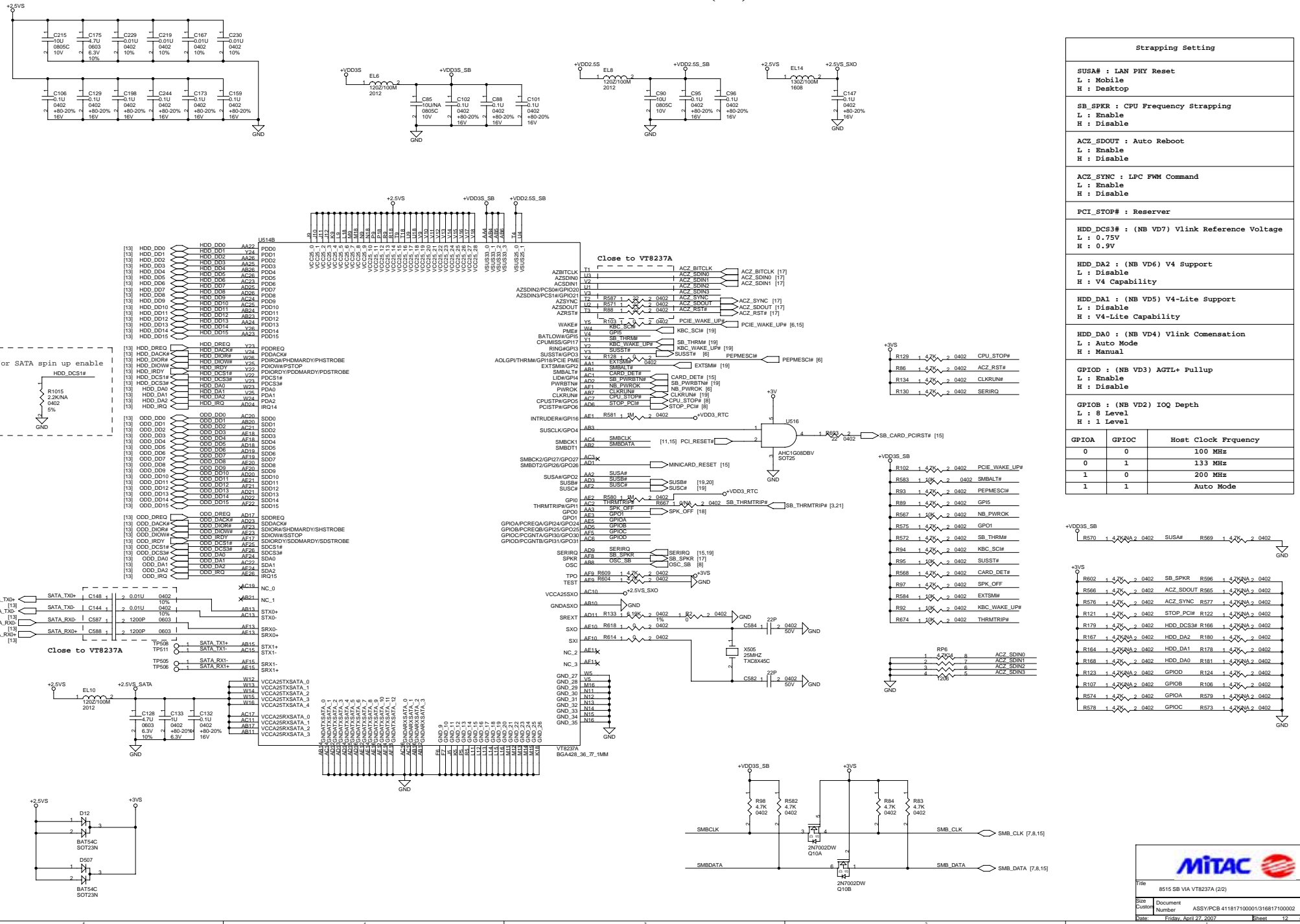


Pannel ID		
LCD_ID1	LCD_ID0	PANEL TYPE
0	0	
0	1	
1	0	
1	1	



SB VIA VT8237A (1/2)

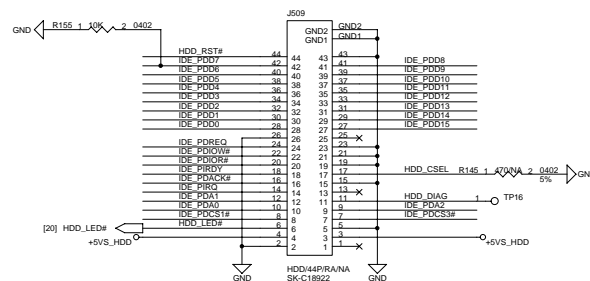
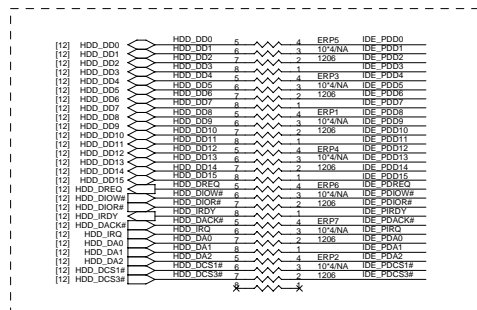
SB VIA VT8237A (2/2)



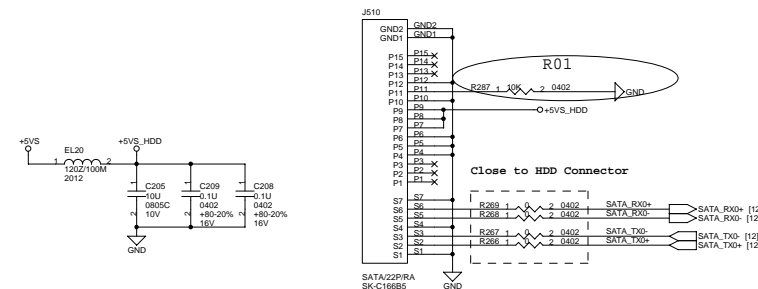
HDD SATA CONNECTOR

FOR EMI REQUEST

Close to Connector

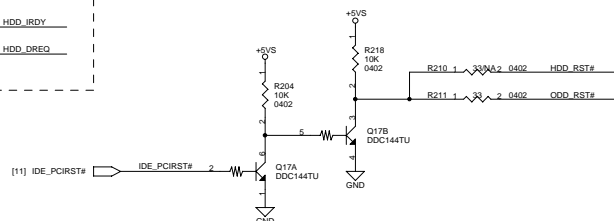
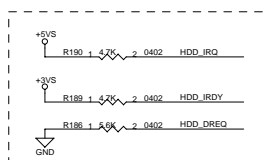


P/N 291000014431



P/N 331000022012

Close to SB VT8237A



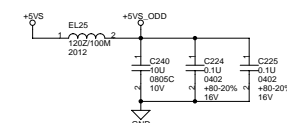
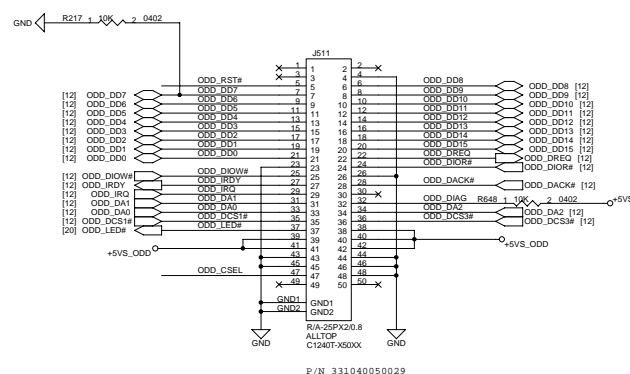
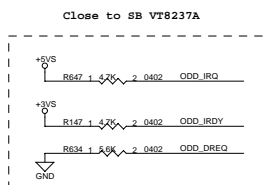
SATA PCBA : 411813900004

- ```

(a) Add C144, C148, C587, C588 ----> Page 12
(b) Add R266, R267, R268, R269 ----> Page 13
(c) Add J510 ----> Page 13
(d) Del ERP1, ERP2, ERP3, ERP4, ERP5, ERP6, ERP7 ----> Page 13
(e) Del J509 ----> Page 13
(f) Del R145 ----> Page 13
(g) Del R210 ----> Page 13
(h) Del R7 ----> Page 20
 Add R11 ----> Page 20

```

## ODD SECONDARY IDE CONNECTOR

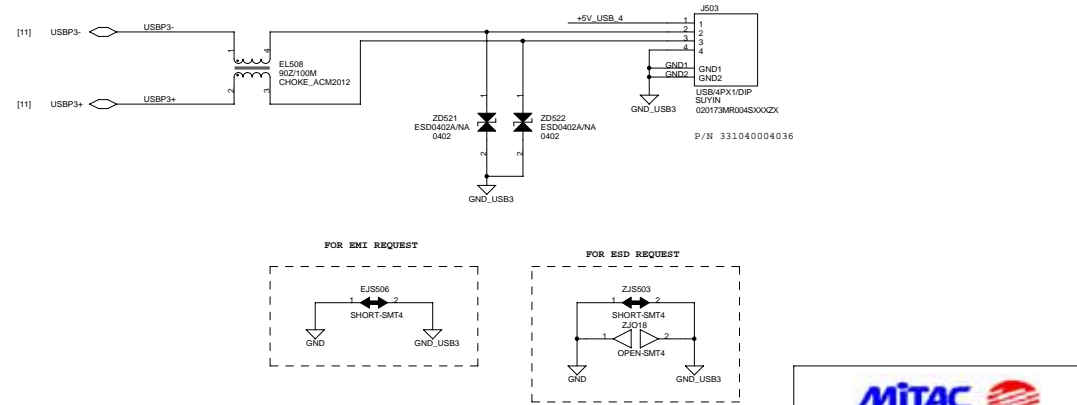
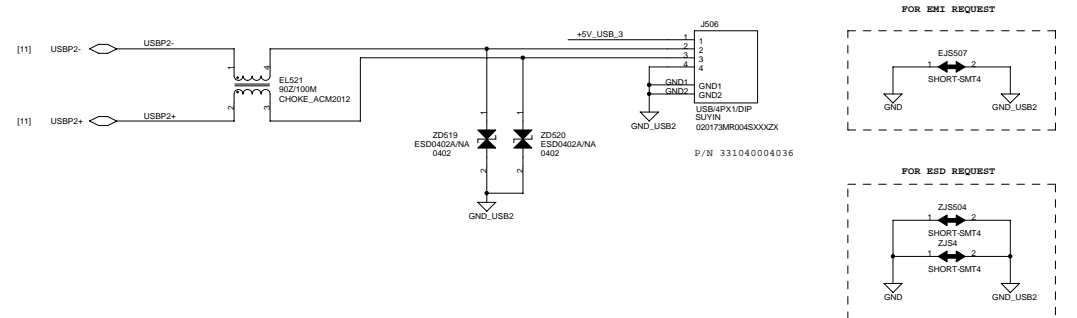
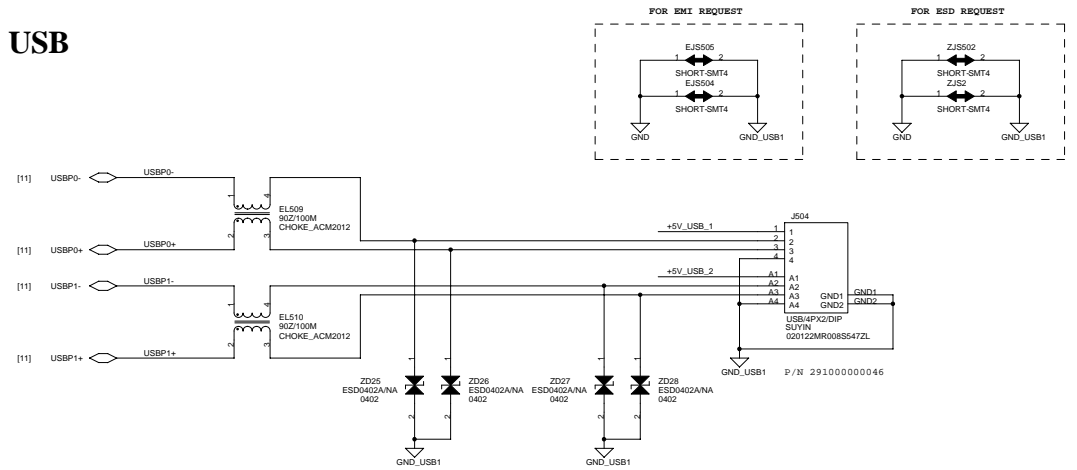
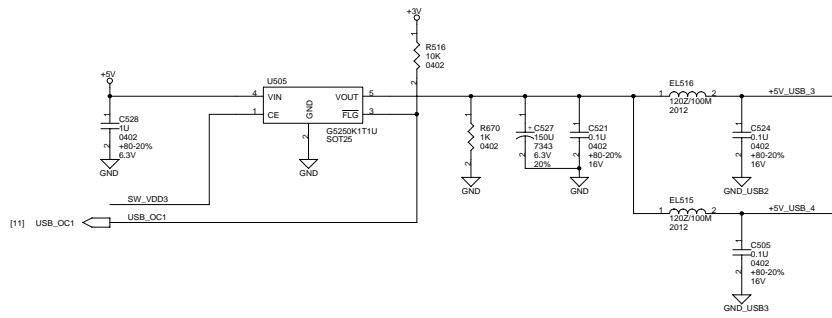
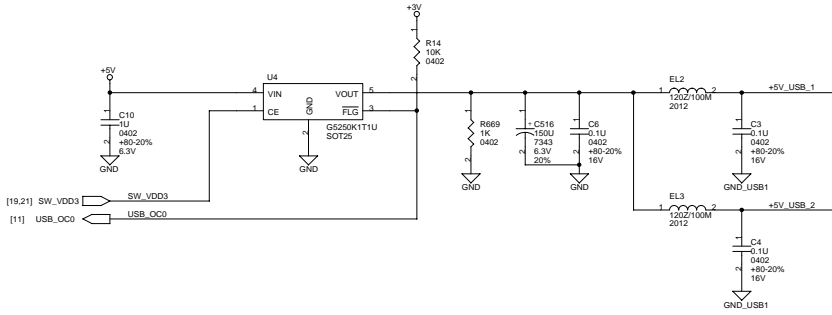


P/N 331040050029

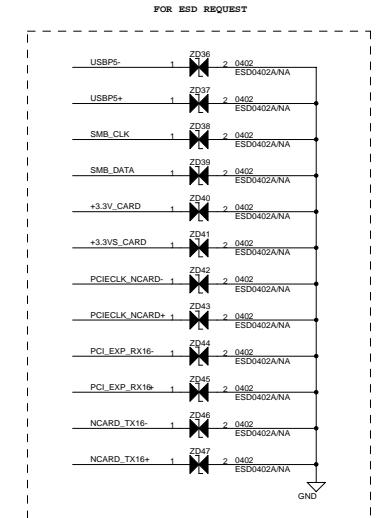
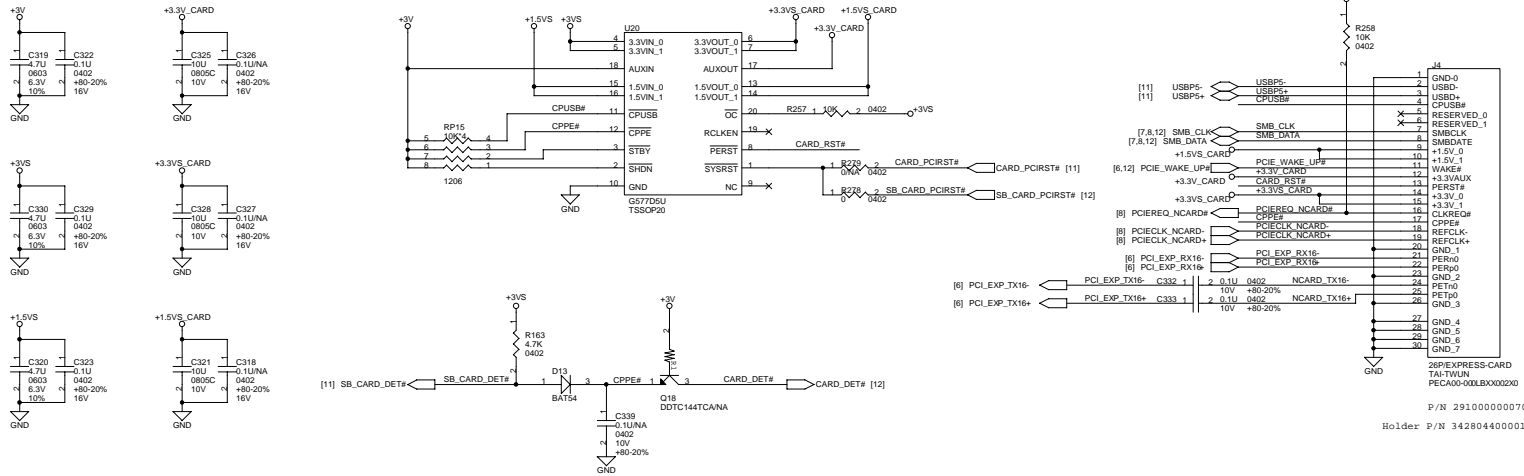


|                            |                        |                                    |          |
|----------------------------|------------------------|------------------------------------|----------|
| Title                      |                        |                                    |          |
| 8515 SATA / PATA HDD & ODD |                        |                                    |          |
| Size                       | Document               |                                    | Rev      |
| Custom                     | Number                 | ASSY/PCB 411817100001/316817100002 | RO       |
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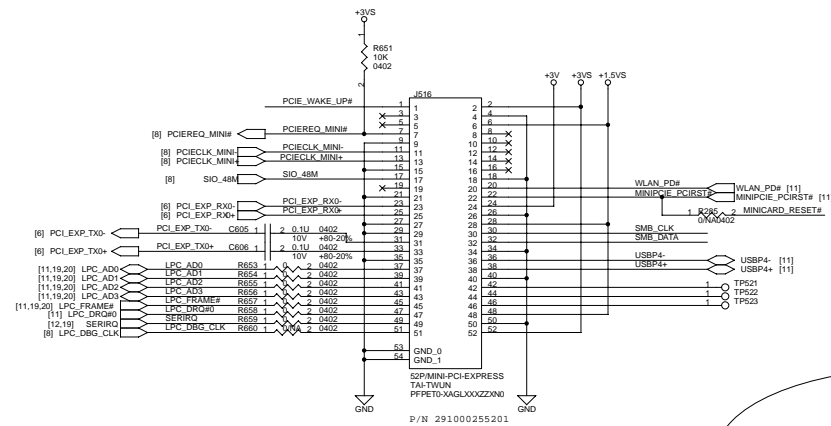
## USB



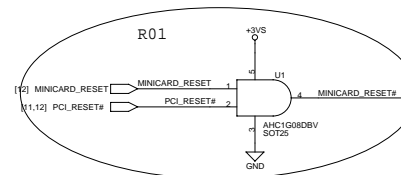
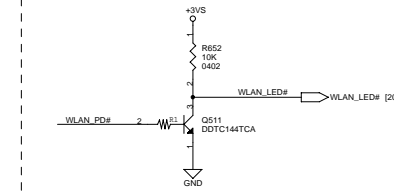
## NEW CARD



## WIRELESS LAN CARD



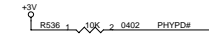
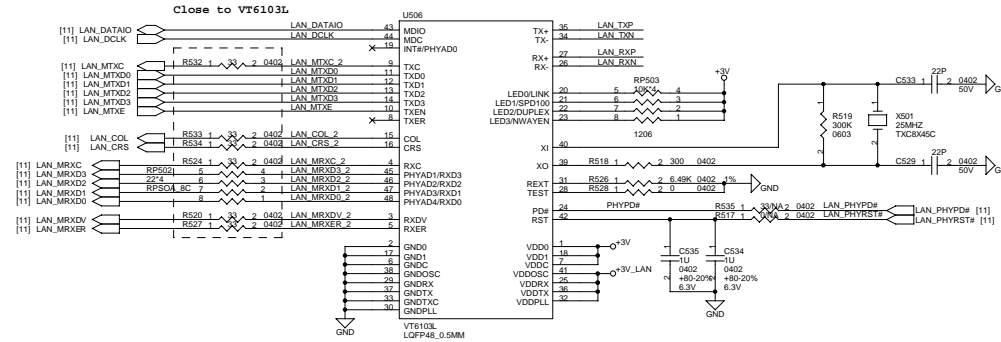
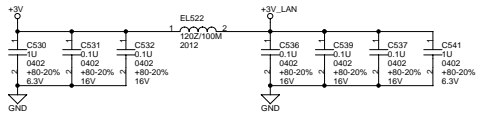
### Wireless LED Use



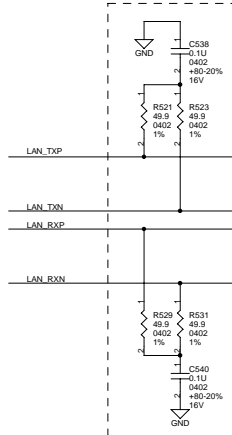
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|--------|--------------------------------|------------------------------------|----------|
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| Title  | 8515 NEW CARD / MINI PCIE CARD |                                    |          |
| Size   | Document                       | ASSY/PCB 411817100001/316817100002 | Rev      |
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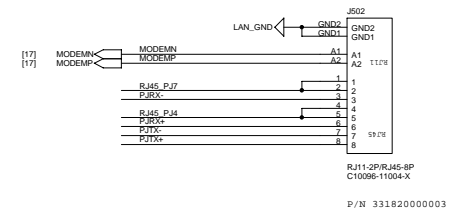
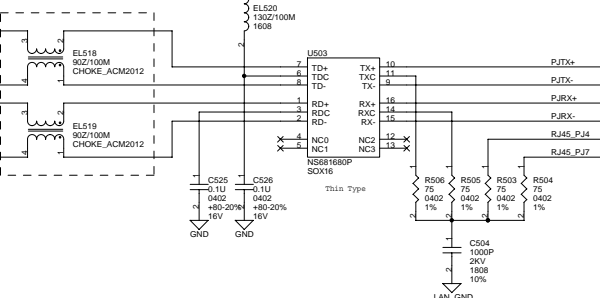
# LAN PHY (VT6103L)



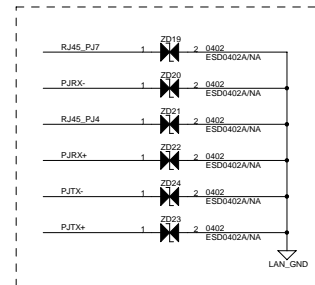
Close to VT6103L PHY



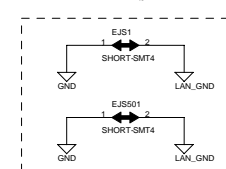
Close to Connector



FOR ESD REQUEST

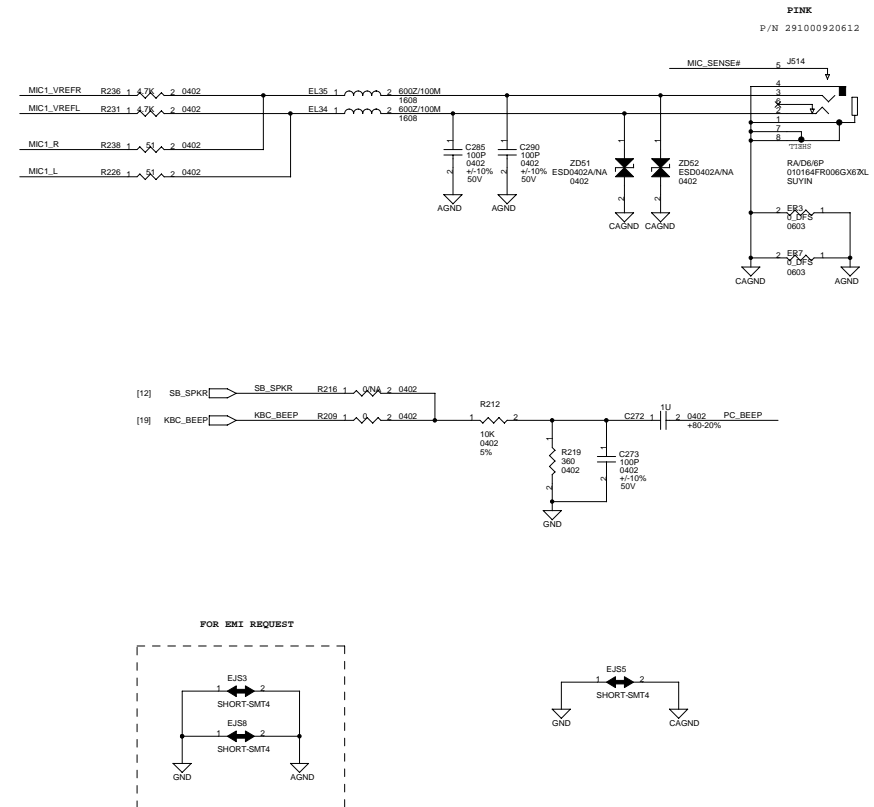
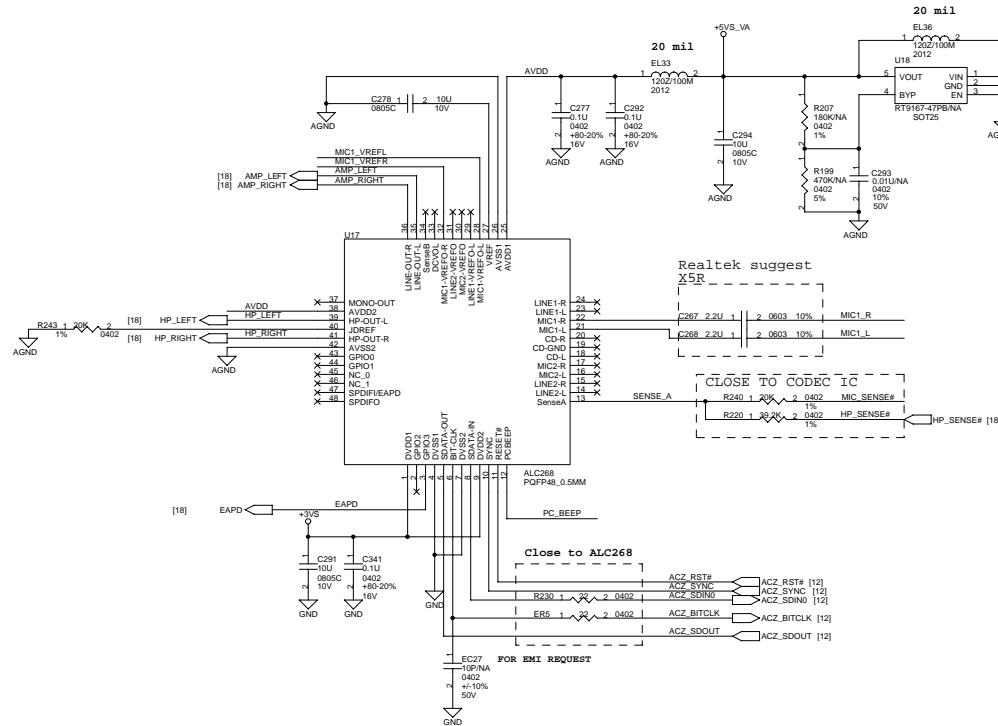


FOR EMI REQUEST

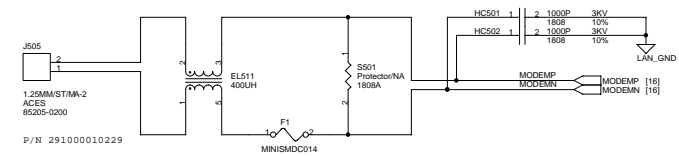
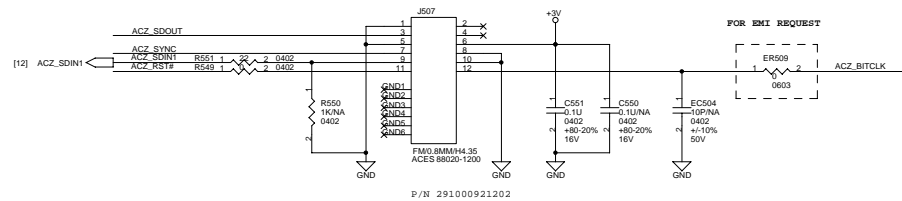



|                          |                                  |        |          |
|--------------------------|----------------------------------|--------|----------|
| Title                    |                                  |        |          |
| 8515 LAN PHY VIA VT6103L |                                  |        |          |
| Size                     | Document                         | Number | Rev      |
| Custom                   | ASSY/PCB 41181710001/31681710002 |        | RG4      |
| Date:                    | Friday, April 27, 2007           | Sheet  | 16 of 29 |

## AZALIA CODEC (ALC268)

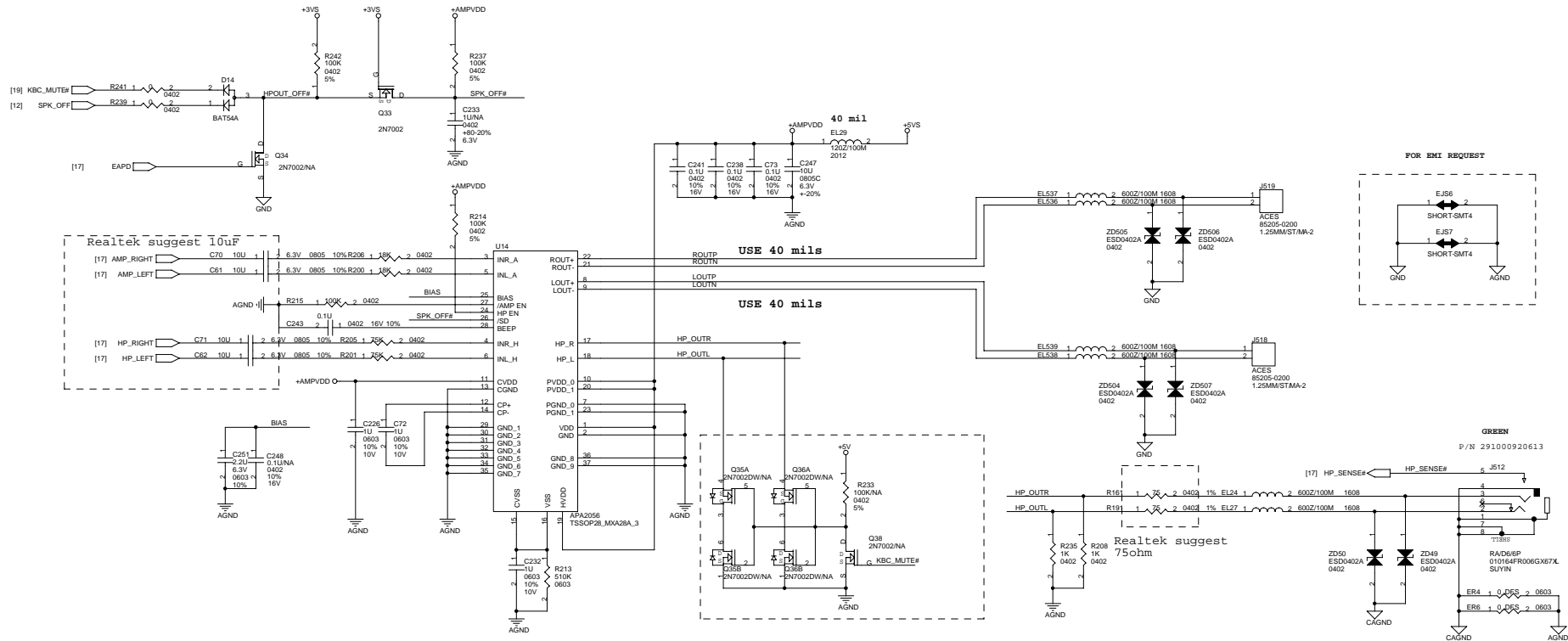


**MDC**



|                                                                                                                                                                             |                        |                                    |          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------------------------------|----------|
|   |                        |                                    |          |
| Title                                                                                                                                                                       |                        |                                    |          |
| 8515 AZALIA CODEC ALC268 & MDC                                                                                                                                              |                        |                                    |          |
| Size                                                                                                                                                                        | Document               |                                    | Rev      |
| Custom                                                                                                                                                                      | Number                 | ASSY/PCB 411817100001/316817100002 | ROA      |
| Date:                                                                                                                                                                       | Friday, April 27, 2007 | Sheet                              | 17 of 29 |

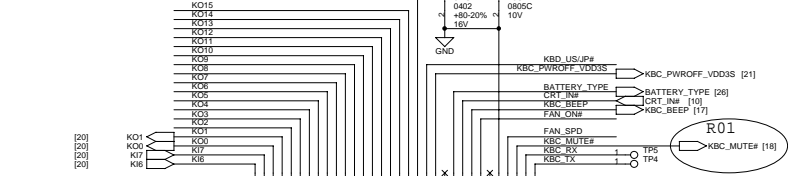
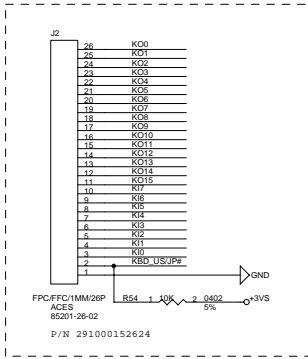
# AUDIO AMPLIFIER



|        |                                    |          |          |
|--------|------------------------------------|----------|----------|
|        |                                    |          |          |
| Title  | 8515 AUDIO AMPLIFIER APA2056       |          |          |
| Size   | Custom                             | Document | Rev      |
| Number | ASSY/PCB 411817100001/316817100002 |          | RG4      |
| Date   | Friday, April 27, 2007             | Sheet    | 18 of 29 |

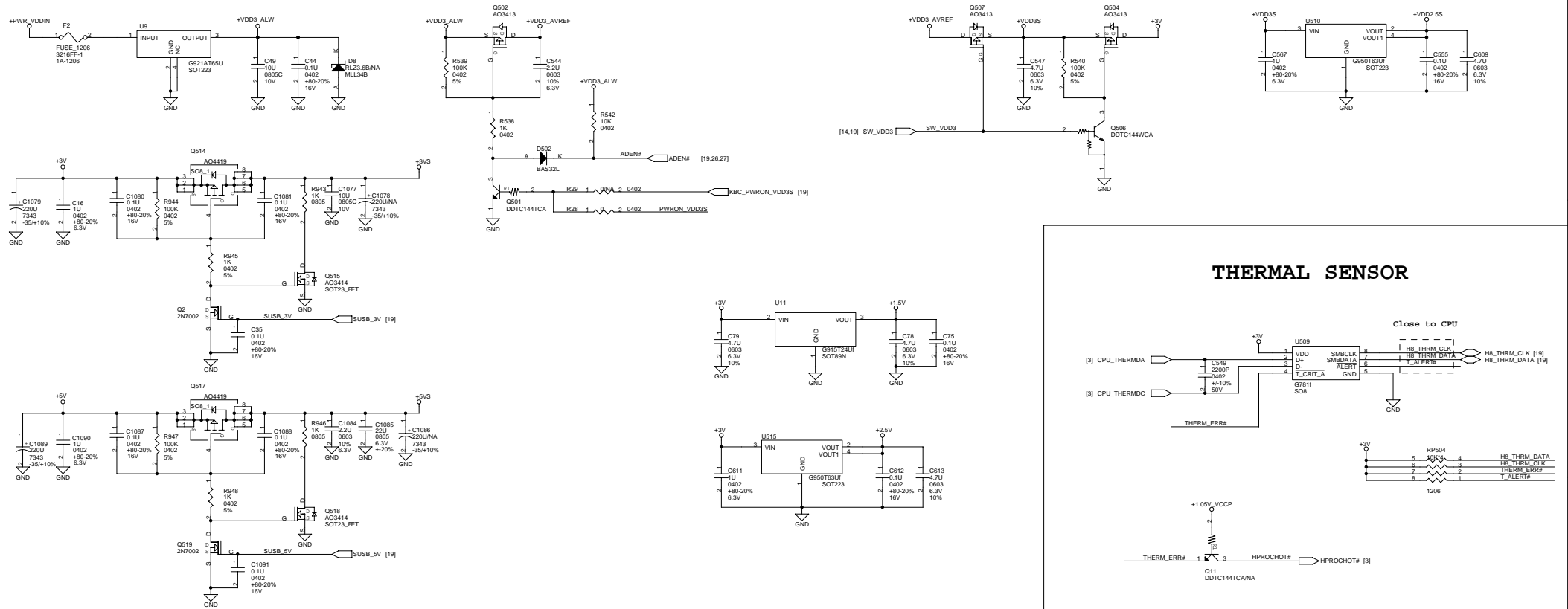
# KBC (W83L951D)

Use 8050 Keyboard

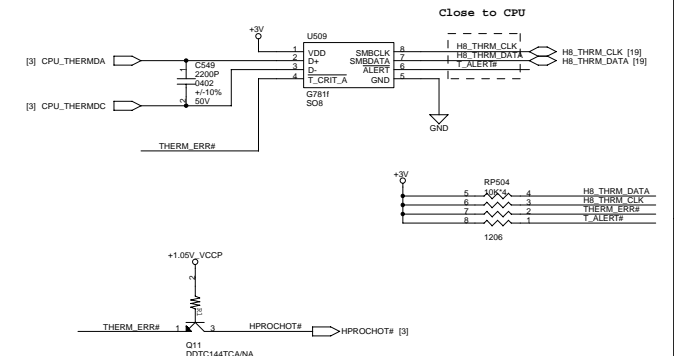




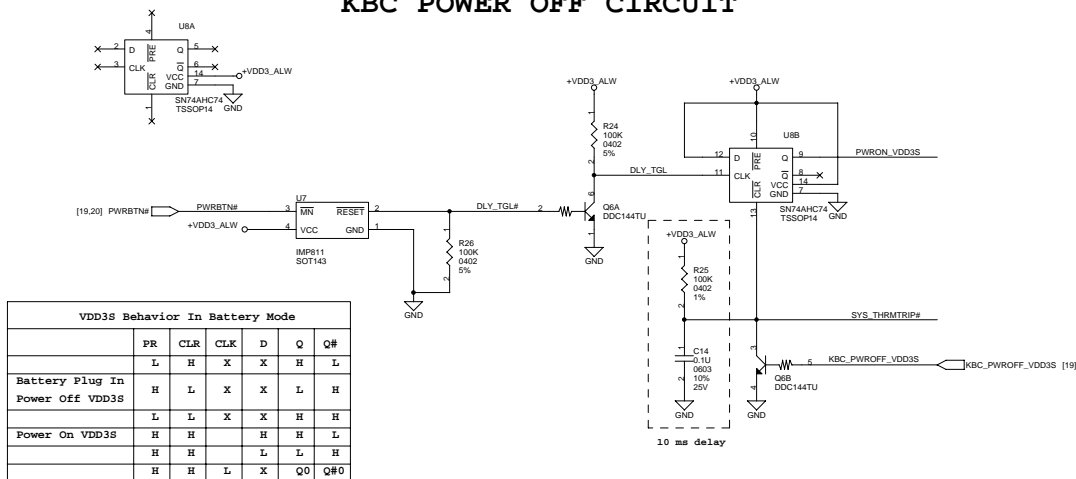
## POWER ON PERIPHERAL CIRCUIT



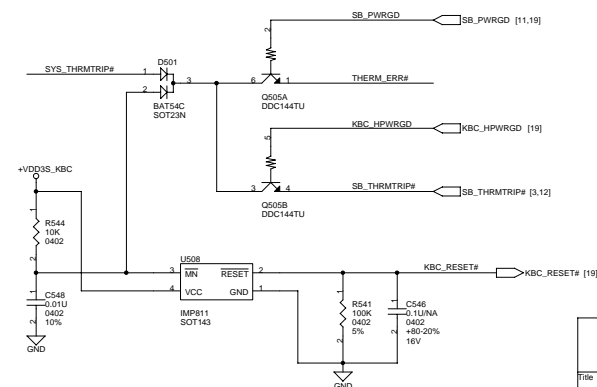
## THERMAL SENSOR



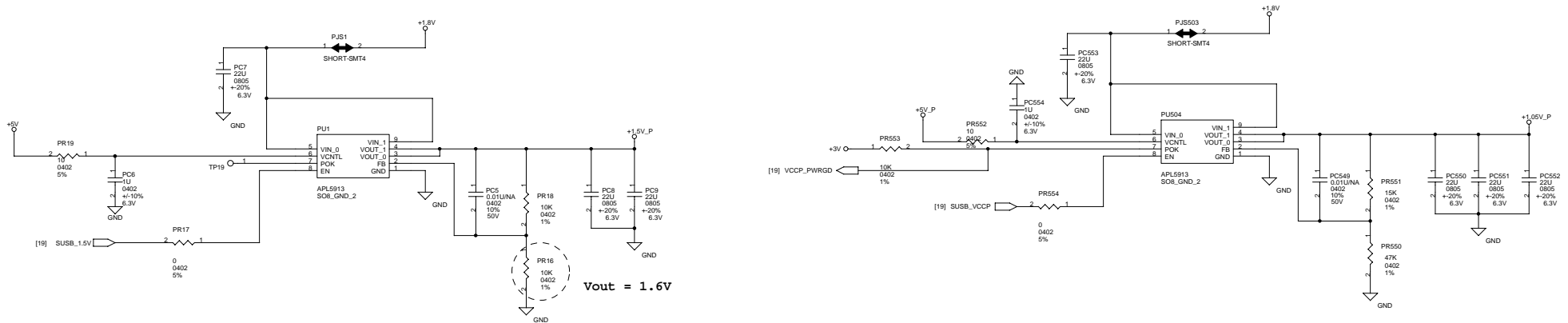
## KBC POWER OFF CIRCUIT



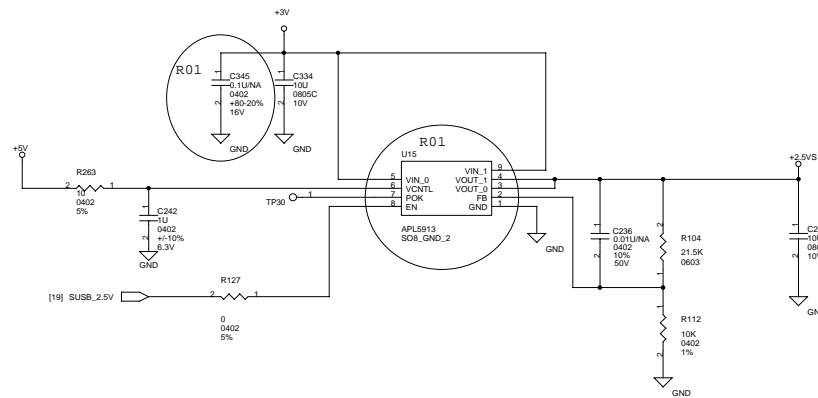
## H8 RESET# / RSMRST#



## +1.5V\_P & +1.05V\_P

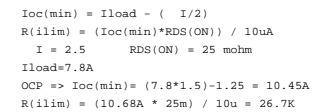


## + 2.5 VS

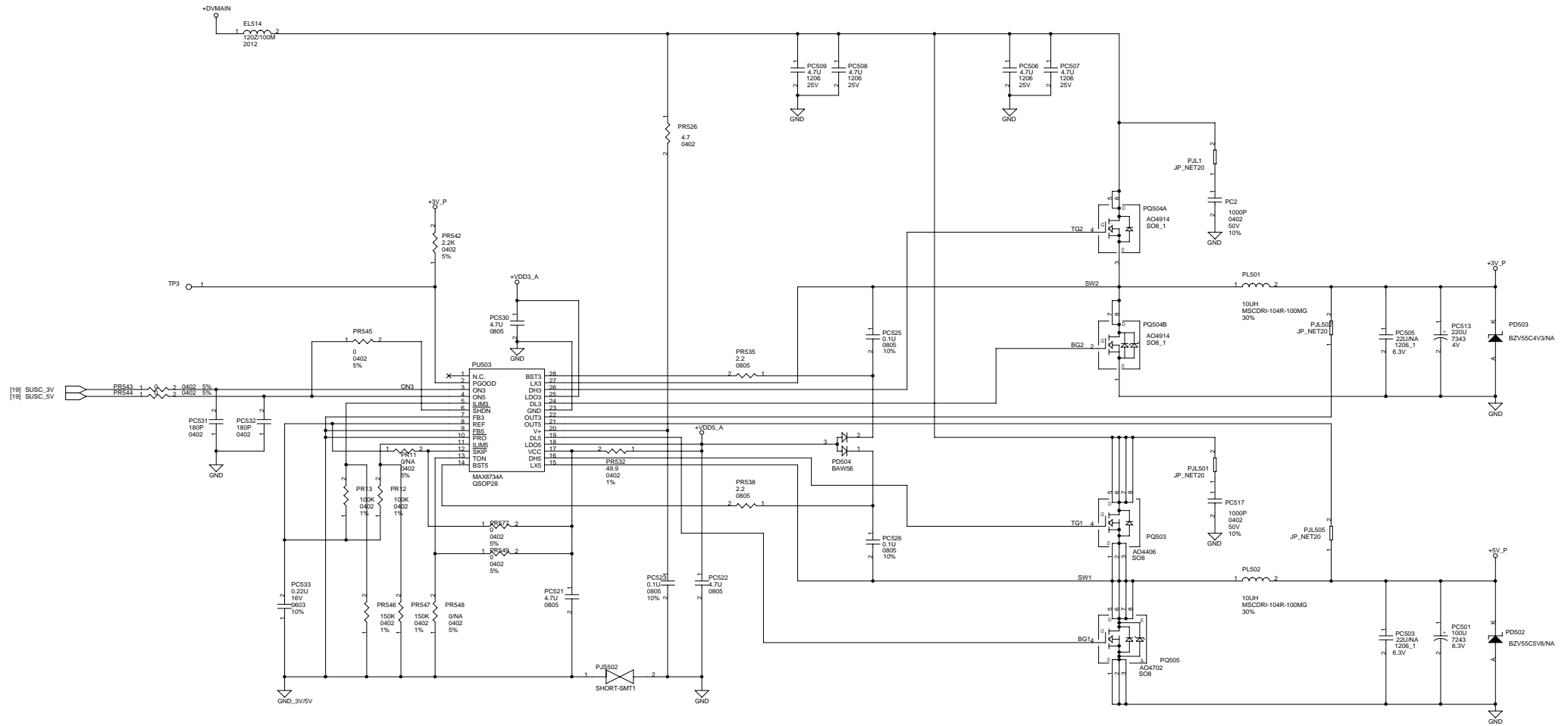


|        |                        |                                    |                                   |
|--------|------------------------|------------------------------------|-----------------------------------|
| Title  |                        |                                    | 8515 +1.5V_P & +1.05V_P (APL5913) |
| Size   | Document               | Rev                                |                                   |
| Custom | Number                 | ASSY/PCB 411817100001/316817100002 | ROA                               |
| Date:  | Friday, April 27, 2007 | Sheet                              | 22 of 29                          |





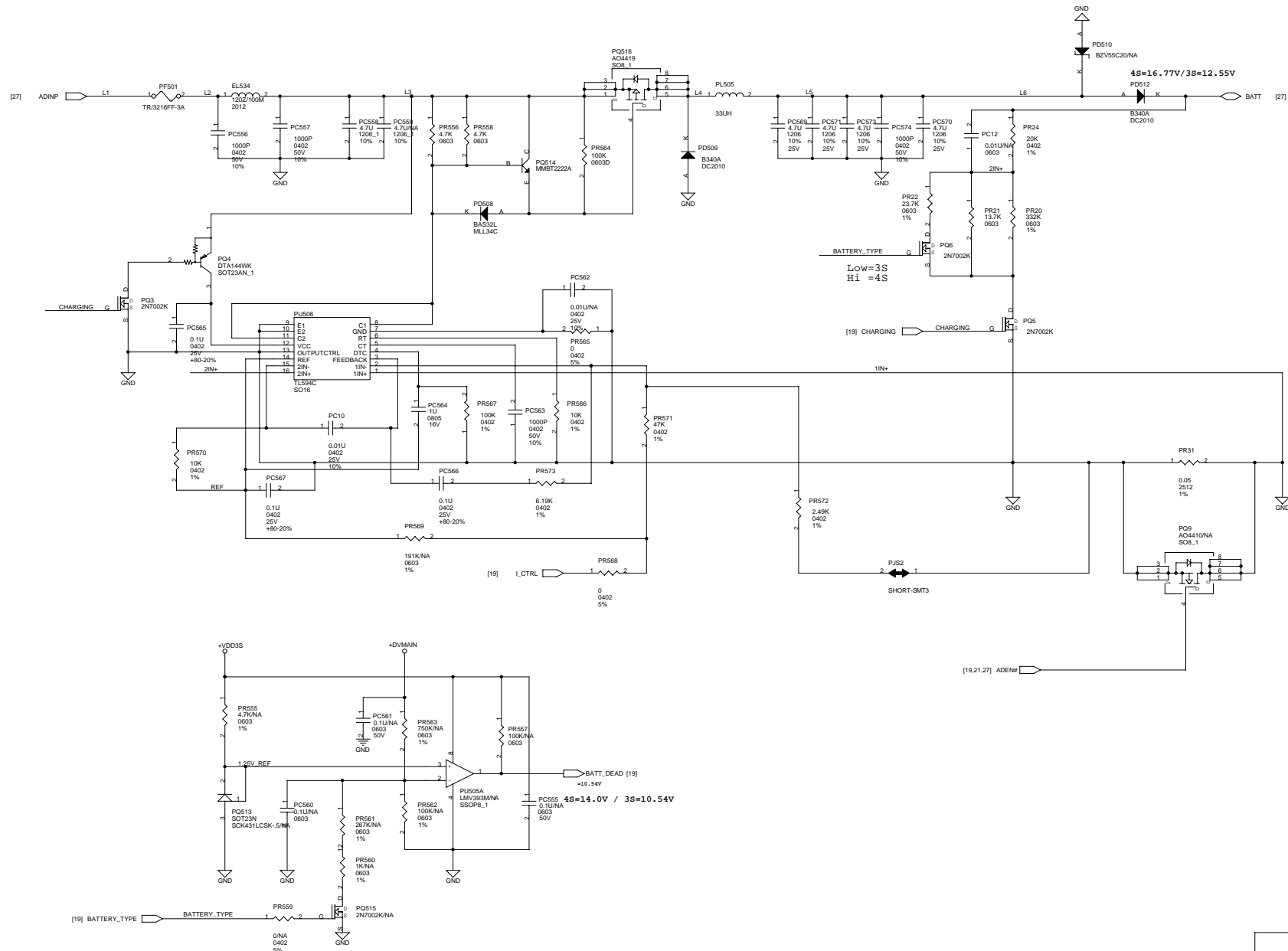
# +3.3V\_P / +5V\_P\_MAX8734A



|          |                        |                                    |
|----------|------------------------|------------------------------------|
| Title    |                        | 8515 +3V5/+5V5 (MAX8734A)          |
| Size     | Custom                 |                                    |
| Document | Number                 | ASSY/PCB 411817100001/316817100002 |
| Date     | Friday, April 27, 2007 | Sheet 24 of 29                     |

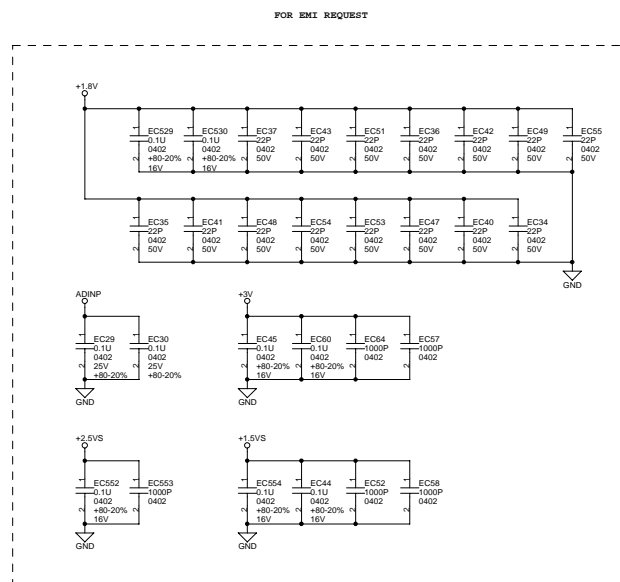
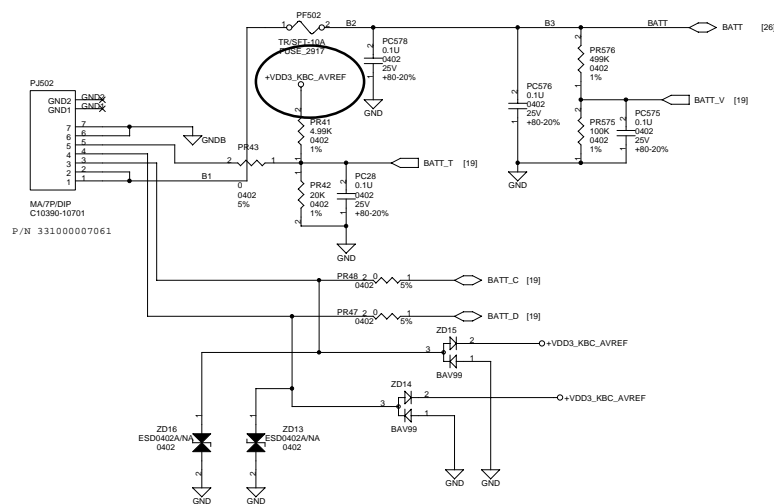
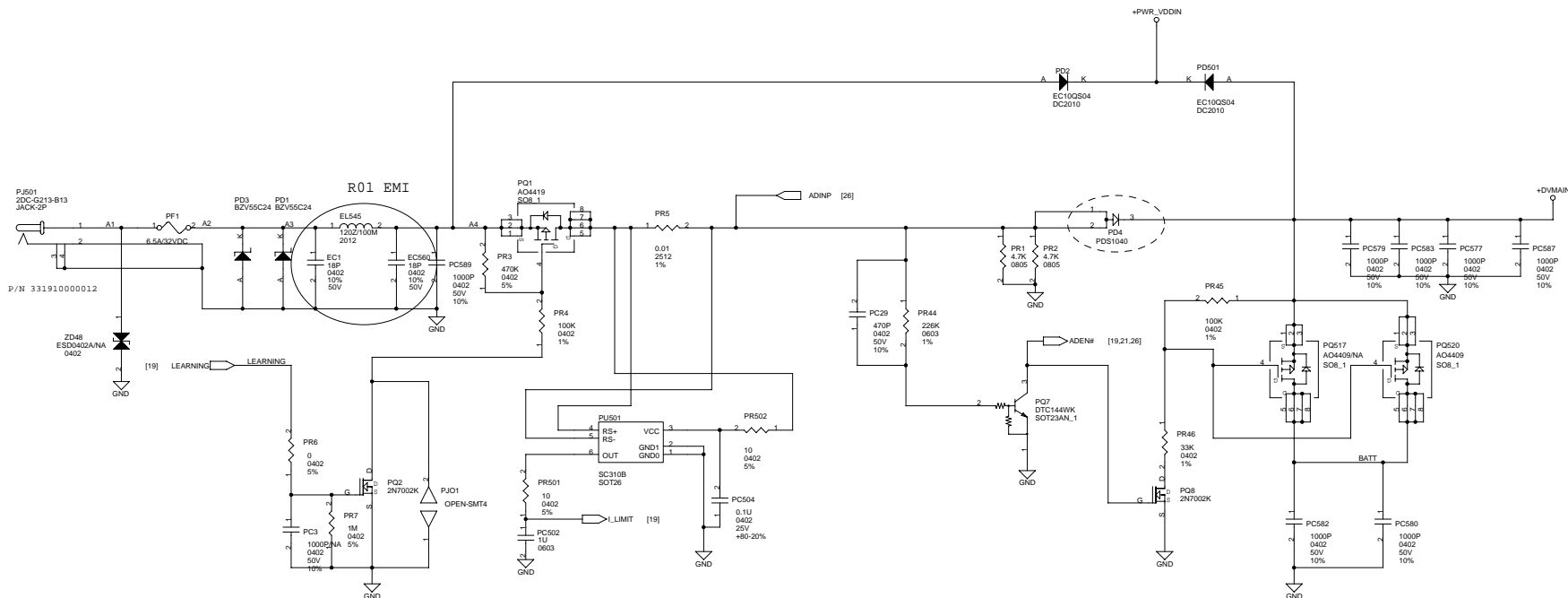


# CHARGING



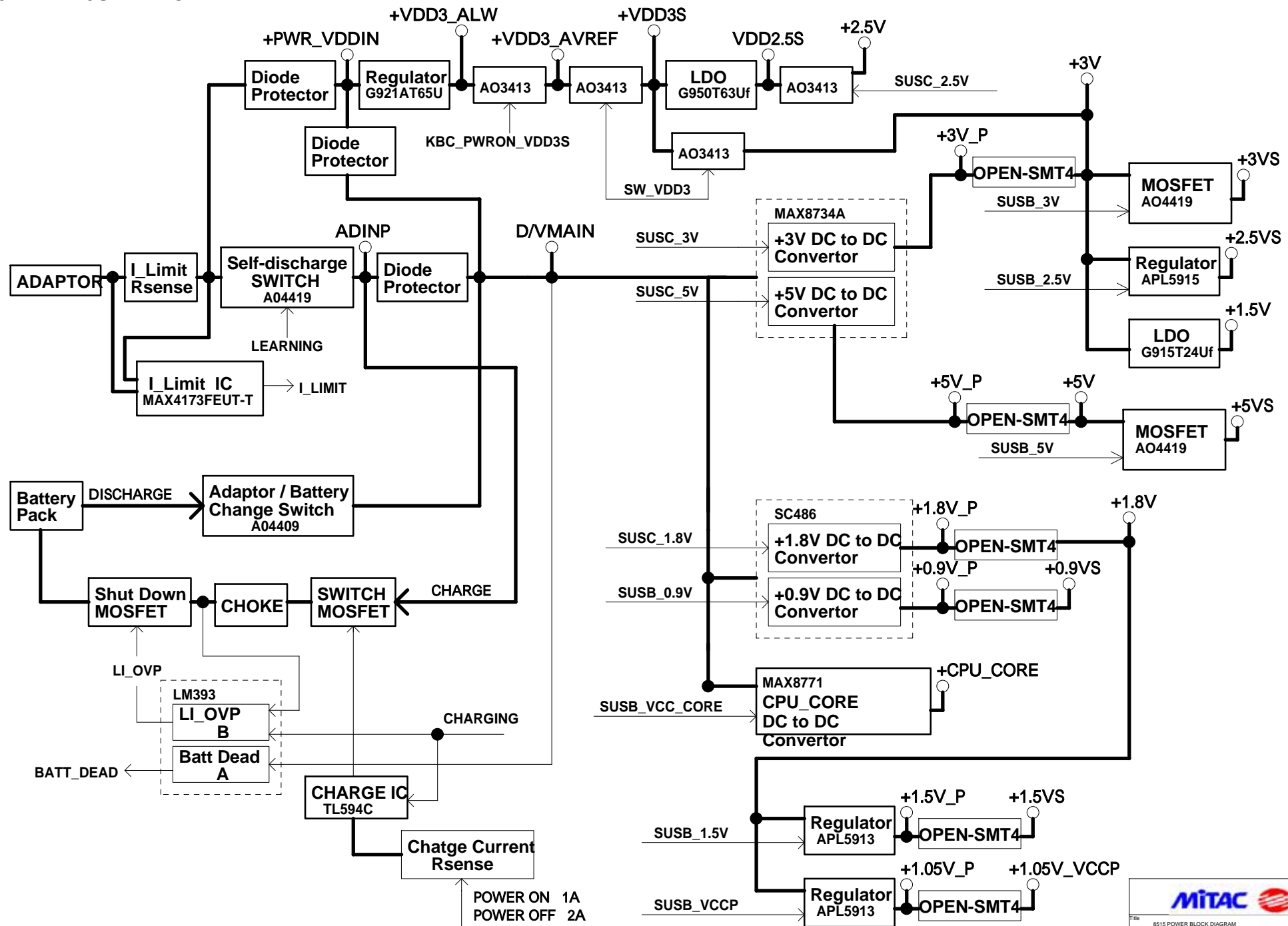
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|--------|------------------------|----------|------------------------------------|
| Title  |                        |          | 8515 CHARGING (TL594C)             |
| Size   | Custom                 | Document | ASSY/PCB 411817100001/316817100002 |
| Number |                        |          |                                    |
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## ADPIN & Discharge



|                                                                                       |                        |                                    |    |       |
|---------------------------------------------------------------------------------------|------------------------|------------------------------------|----|-------|
|  |                        |                                    |    |       |
| Title 8515 ADPIN & DISCHARGE                                                          |                        |                                    |    |       |
| Size                                                                                  | Document               |                                    |    | Re    |
| Custor                                                                                | Number                 | ASSY/PCB 411817100001/316817100002 |    | RO    |
| Date:                                                                                 | Friday, April 27, 2007 | Esheet                             | 27 | of 29 |

8515 POWER BLOCK DIAGRAM



HISTORY

| HISTORY |                                     |
|---------|-------------------------------------|
| R0A     | Initial Release (4/26 DVT tape-out) |



|       |          |                                    |                |
|-------|----------|------------------------------------|----------------|
| Title |          |                                    | 8515 HISTORY   |
| Size  | Document |                                    | Rev            |
|       | Number   | ASSY/PCB 411817100001/316817100002 |                |
| Date: |          | Friday, April 27, 2007             | Sheet 28 of 28 |