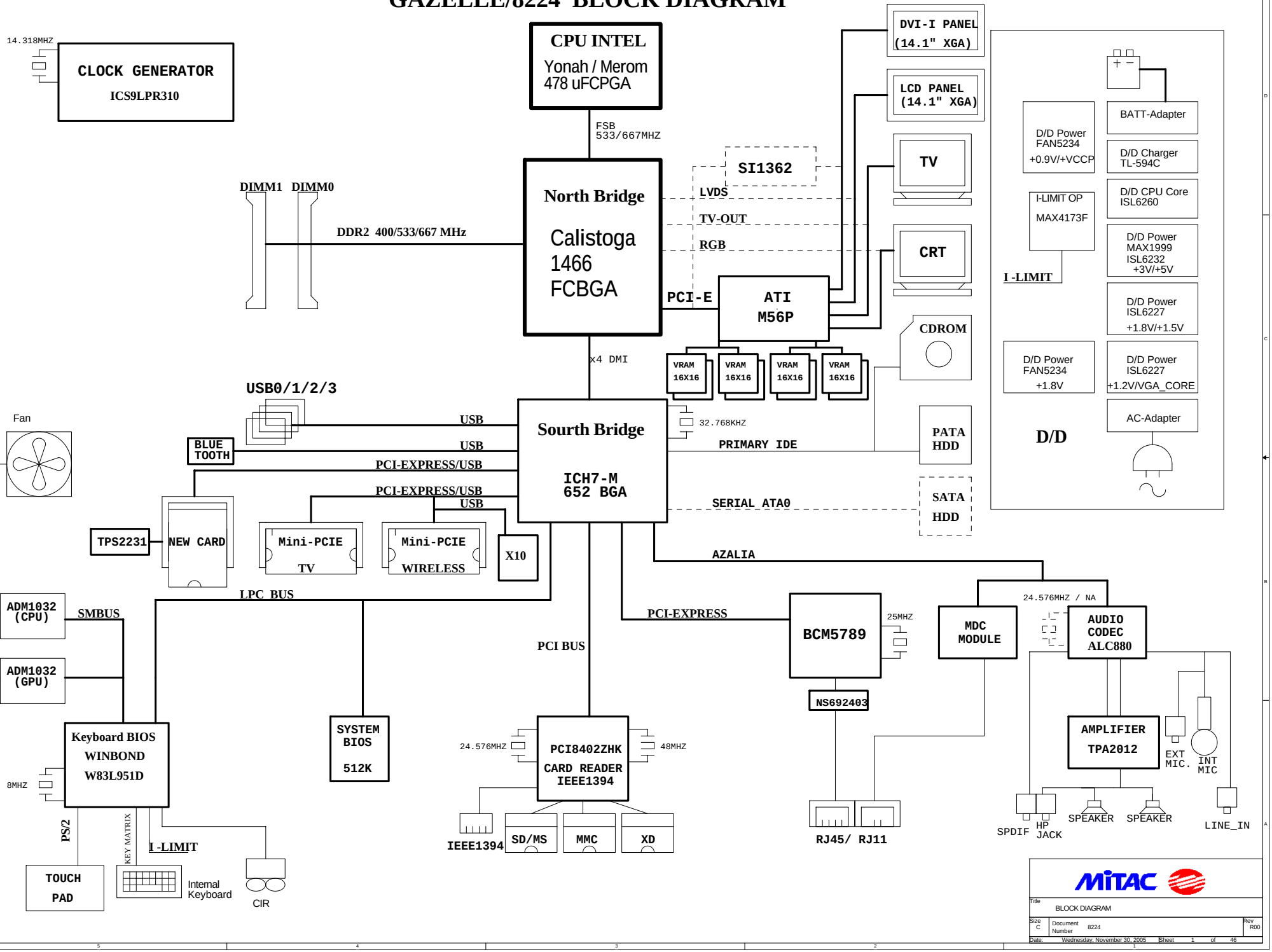
# GAZELLE/8224 BLOCK DIAGRAM




MiTAC

| | | |
|---|---|---|
| Title | BLOCK DIAGRAM | |
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# 8224 R00

**PROJECT CODE- G239** **PCB P/N:XXXXXXXXXXXX**
**PRODUCT CODE- 8044** **ASSY P/N:XXXXXXXXXXXX**


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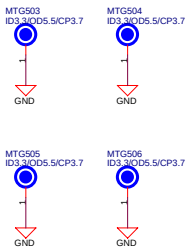
| PCI DEVICE | INTERRUPT | REQ/GNT | IDSEL |
|---|---|---|---|
| CARDREADER | PCI_INTA# | PCI_REQ0# / PCI_GNT0# | AD20 |
| IEEE1394 | PCI_INTB# | PCI_REQ1# / PCI_GNT1# | AD21 |
| MINIPCI | PCI_INTD# | PCI_REQ2# / PCI_GNT2# | AD17 |

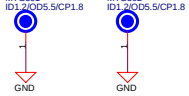
## POWER STATUS

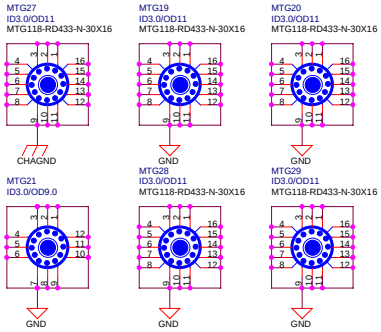
| CONTROL SIGNAL | S0/S1 | S3 | S4 | S5 | POWER | NOTE |
|---|---|---|---|---|---|---|
| ADP/BATT IN | V | V | V | V | +DVMAIN | |
| ADP/BATT IN | V | V | V | V | +VDD3_A | |
| ADP/BATT IN | V | V | V | V | +VDD3_AVREF/+VDD3 | |
| ADP/BATT IN | V | V | V | V | +VDD5_A | |
| KBC_PWRON_VDD3S | V | V | V | V | +VDD3S | |
| DCON5V | V | V | | | +5V | |
| DCON3V | V | V | | | +3V | |
| DCON3V | V | V | | | +2.5V | |
| SUSC1.8V | V | V | | | +1.8VDDS | |
| SUSC1.2V | V | V | | | +1.2V | |
| SUSB0.9V | V | V | | | +0.9VS | |
| SUSB5V | V | | | | +5VS | |
| SUSB3V | V | | | | +3VS | |
| SUSB2.5V | V | | | | 2.5VDDM | |
| SUSB1.8V | V | | | | 1.8VDDM | |
| SUSB1.5V | V | | | | +1.5VS | |
| SUSB1.2V | V | | | | 1.2VDDM | |
| SUSB_VGA_C | V | | | | +VGA_CORE(1.2V) | |
| SUSB_VCCP | V | | | | +VCCP(+1.05V) | |
| SUSB_VCC_CORE | V | | | | +VCC_CORE | |

MINI-PCIE



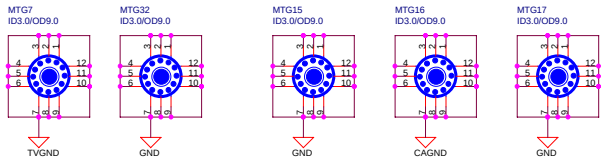

MDC

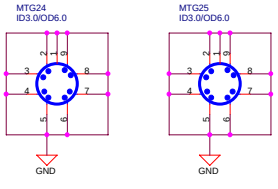


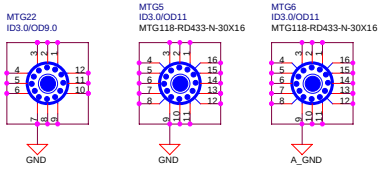



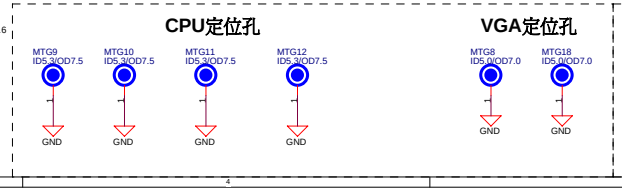


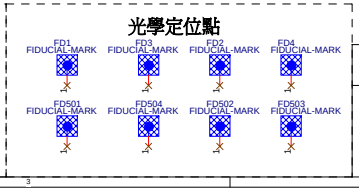





**PCB STACK 1.2mm**

| | | |
|---|---|---|
| | **Component side** | layer 1: 1/2 oz |
| 3.5 mil | | |
| | **Ground 1** | layer 2: 1 oz |
| 4 mil | | |
| | **Signal layer (IN1)** | layer 3: 1 oz |
| 8 mil | | |
| | **Ground 3 (IN2)** | layer 4: 1 oz |
| 4 mil | | |
| | **Power layer** | layer 5: 1 oz |
| 8 mil | | |
| | **Signal layer (IN3)** | layer 6: 1 oz |
| 4 mil | | |
| | **Ground 2** | layer 7: 1 oz |
| 3.5 mil | | |
| | **Solder side** | layer 8: 1/2 oz |

| | Impedance | Differential Pair (width/space/width) | Single end (width/space/width) |
|---|---|---|---|
| 1.Host clk | 100 ohm | 4/7/4 | |
| 2.DMI | 100 ohm | 4/7/4 | |
| 3.LVDS | 100 ohm | 4/7/4 | |
| 4.USB | 90 ohm | 4/5/4 | |
| 5.DDR2 | 70 ohm | 7/4/7 | 7/4/7 |
| 6.CRT | 37.5 ohm | x | 9/20/9 |
| 7.LAN | 100 ohm | 4/7/4 | |
| 8.DVI-D | 100 ohm | 4/7/4 | |

| DRAWN | DESIGN | CHECK | ISSUES |
|---|---|---|---|
| | | | |

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Title: TITLE

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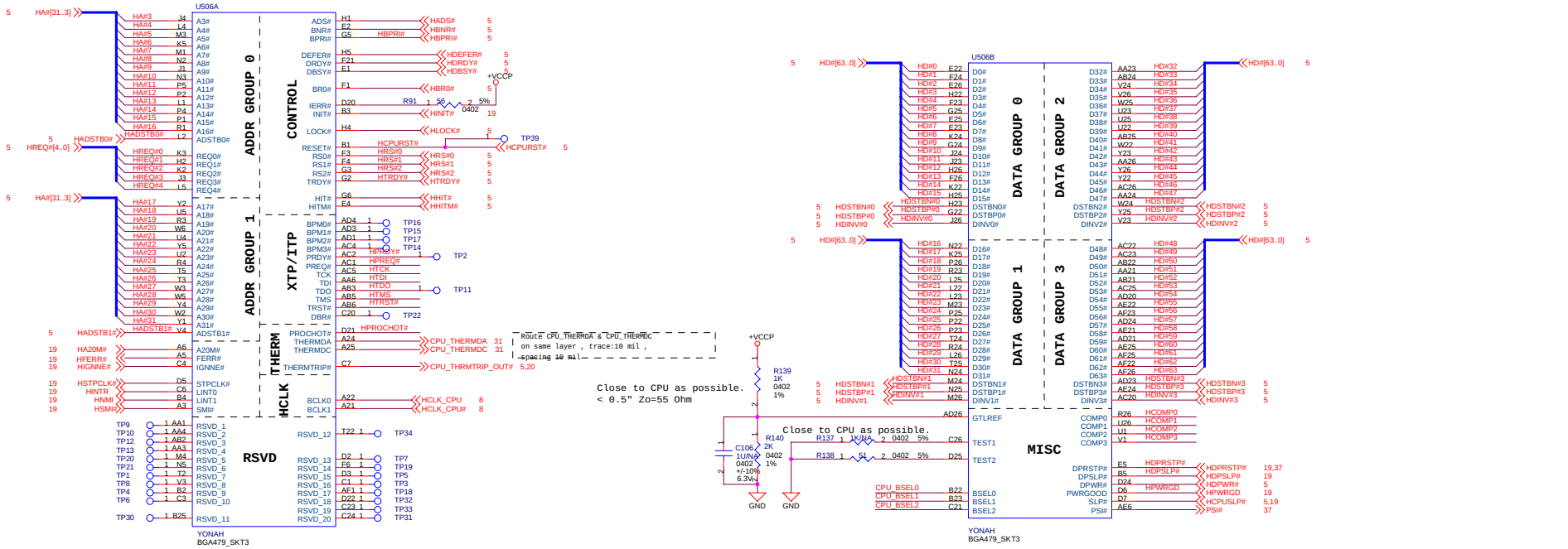
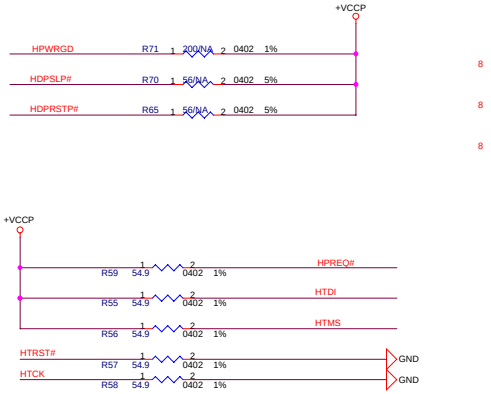
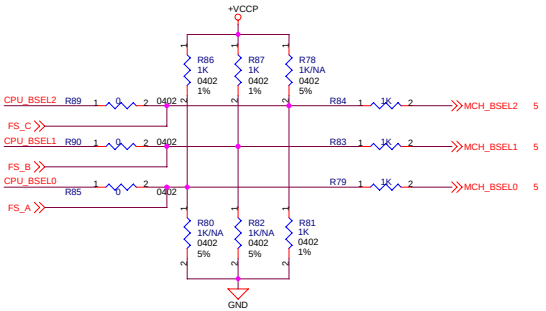






PLACEMENT MAX. 3" FROM CPU.
Don't overlay by CHOKE or vibrating signals.

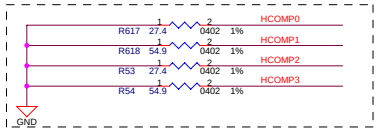
| FSB Freq(MHz) | CPU AUTO DETECT | |
|---|---|---|
| | | FS_A => L<br>FS_B => H<br>FS_C => H |
| | 533 | FS_A => H<br>FS_B => L<br>FS_C => L |
| | 667 | FS_A => H<br>FS_B => H<br>FS_C => L |

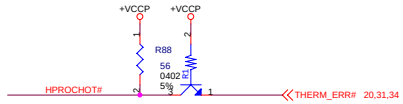
HCOMP1 & HCOMP3 should be route as Zo=55ohm trace shorter than 0.5"

HCOMP1 & HCOMP3 should be route with 5 mil width

HCOMP0 & HCOMP2 should be route as Zo=27.4ohm trace shorter than 0.5"

HCOMP0 & HCOMP2 should be route with 18 mil width

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| | | |
|---|---|---|
| Title | YONAH(1/2) | |
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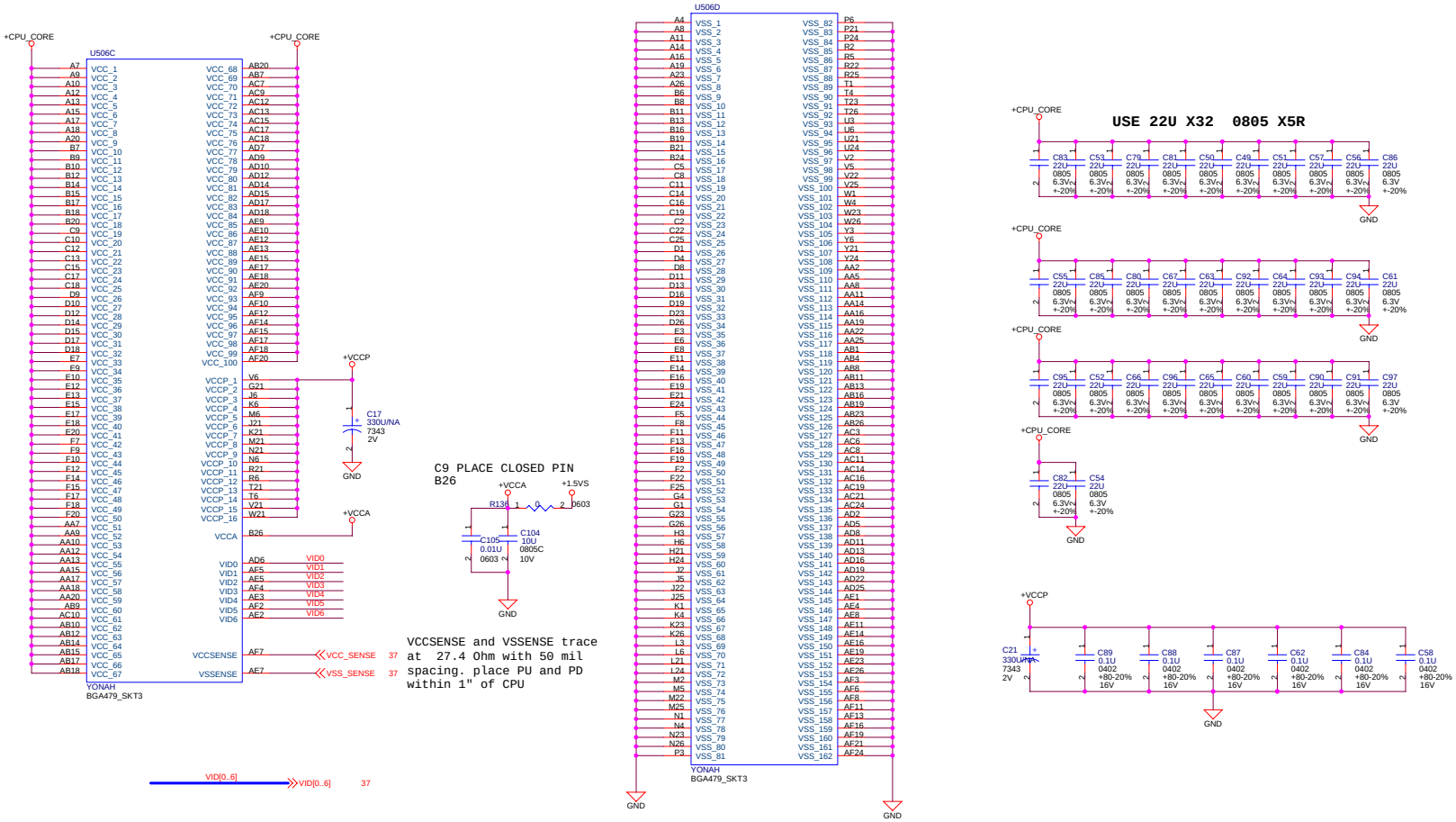


Title: YONAH(2/2)

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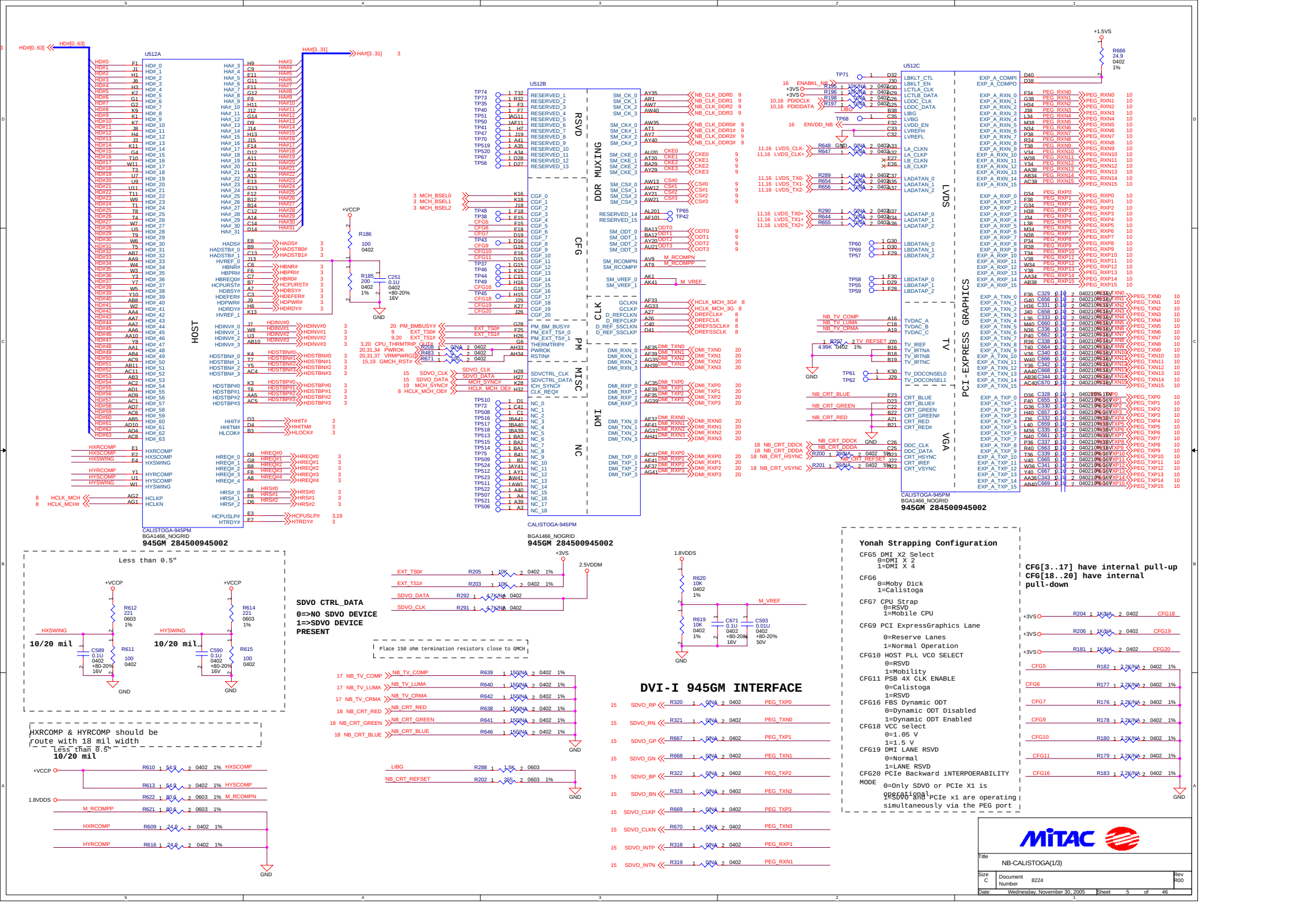
U512A
HOST
CALISTOGA-945PM
BGA1466_NOGRID
945GM 284500945002
U512B
RSVD
DDR MUXING
CFG
CLK
PM
MISC
DMI
NC
U512C
LVDS
TV
PCI-EXPRESS GRAPHICS
VGA
CALISTOGA-945PM
BGA1466_NOGRID
945GM 284500945002
Less than 0.5"
10/20 mil
SDVO CTRL_DATA
0=>NO SDVO DEVICE
1=>SDVO DEVICE PRESENT
Place 150 ohm termination resistors close to GMCH
HXRCOMP & HYRCOMP should be route with 18 mil width
DVI-I 945GM INTERFACE
Yonah Strapping Configuration
CFG5 DMI_X2 Select
0=DMI X 2
1=DMI X 4
CFG6
0=Moby Dick
1=Calistoga
CFG7 CPU Strap
0=RSVD
1=Mobile CPU
CFG9 PCI ExpressGraphics Lane
0=Reserve Lanes
1=Normal Operation
CFG10 HOST PLL VCO SELECT
0=RSVD
1=Mobility
CFG11 PSB 4X CLK ENABLE
0=Calistoga
1=RSVD
CFG16 FBS Dynamic ODT
0=Dynamic ODT Disabled
1=Dynamic ODT Enabled
CFG18 VCC select
0=1.05 V
1=1.5 V
CFG19 DMI LANE RSVD
0=Normal
1=LANE RSVD
CFG20 PCIe Backward iNTERPOERABILITY MODE
0=Only SDVO or PCIe X1 is operational
1=SDVO and PCIe x1 are operating simultaneously via the PEG port
CFG[3..17] have internal pull-up
CFG[18..20] have internal pull-down
MiTAC
Title
NB-CALISTOGA(1/3)
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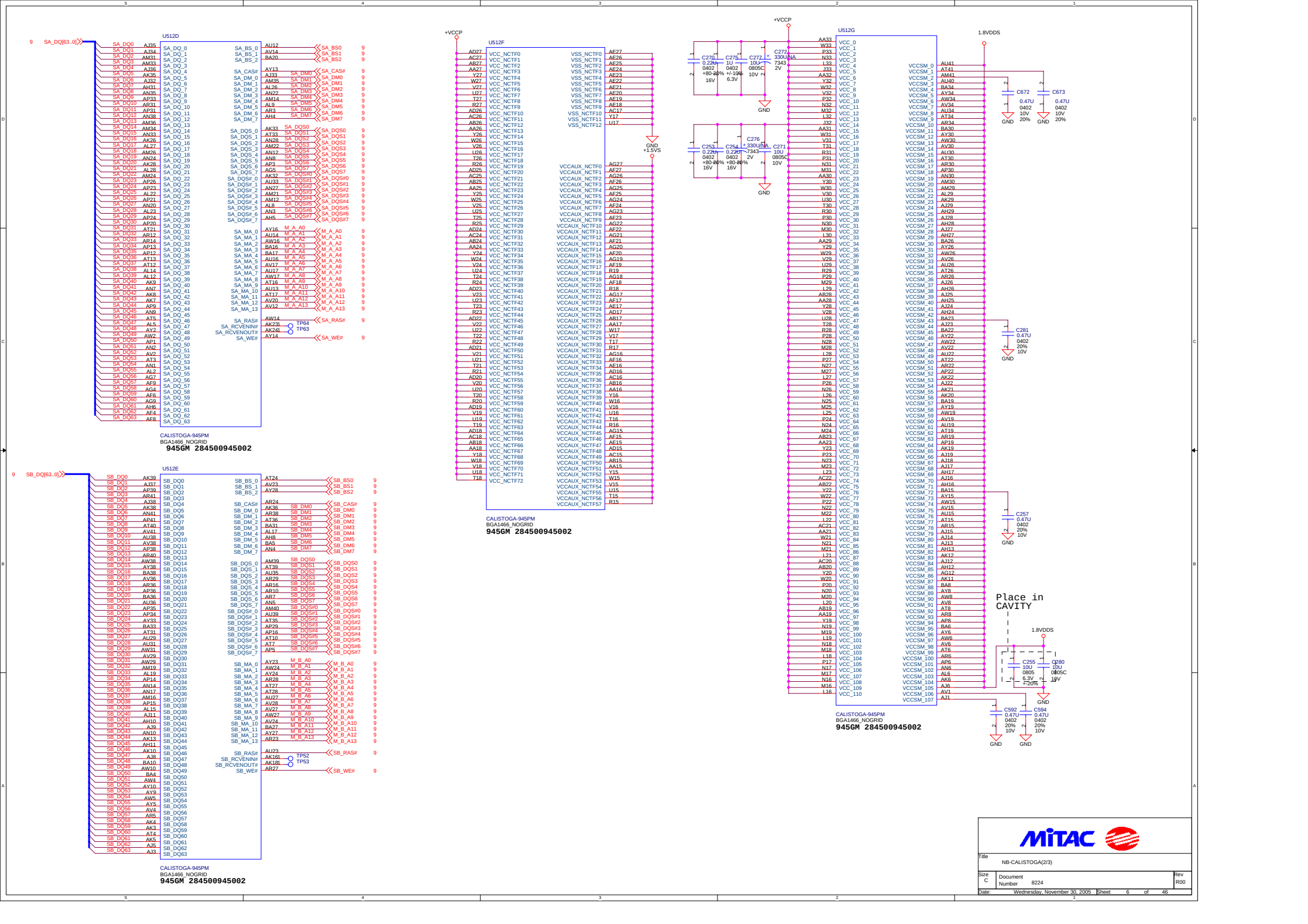


| | | | |
|---|---|---|---|
| Title | NB-CALISTOGA(2/3) | | |
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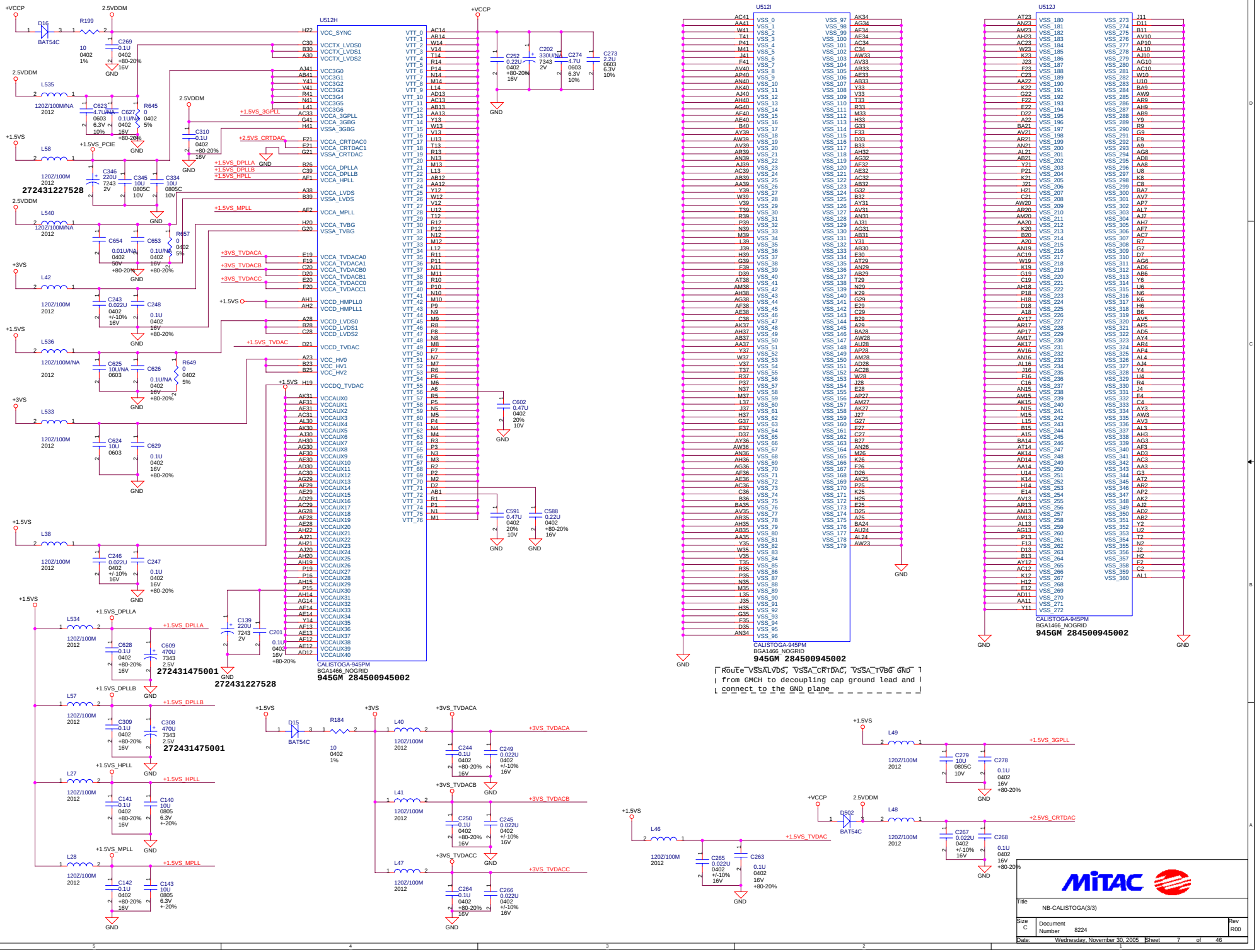
U512H
CALISTOGA-945PM
BGA1466_NOGRID
945GM 284500945002
U512I
CALISTOGA-945PM
BGA1466_NOGRID
945GM 284500945002
U512J
CALISTOGA-945PM
BGA1466_NOGRID
945GM 284500945002
272431227528
272431475001
272431475001
272431227528
Route VSSALVDS, VSSA_CRTDAC, VSSA_TVBG GND from GMCH to decoupling cap ground lead and connect to the GND plane
MiTAC
Title
NB-CALISTOGA(3/3)
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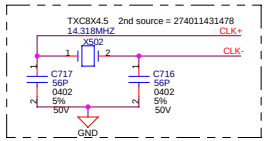
# CLOCK SYNTHERIZER

Layout note: Place crystal within
500 mils of CLK Gen.



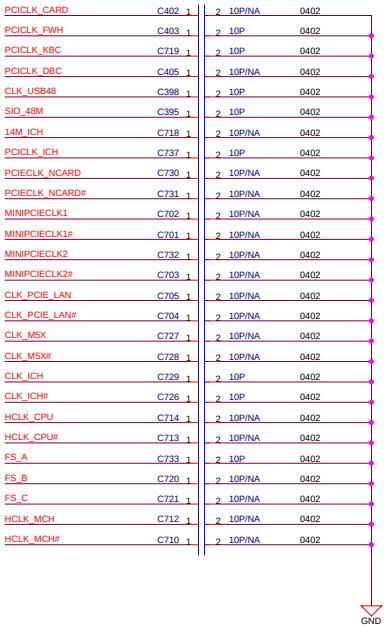

Ce=2*CL-(Cs+Ci)

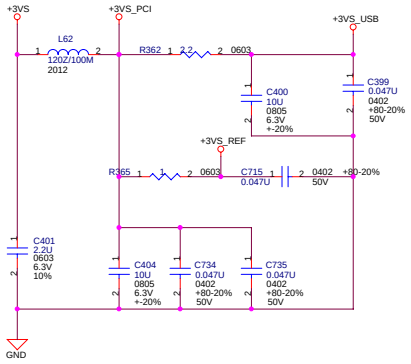
T=>+
C=>-

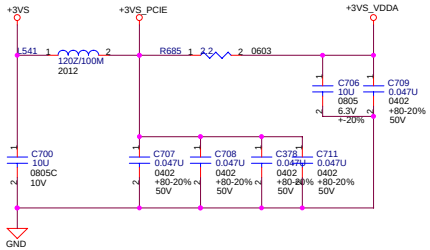






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| | | |
|---|---|---|
| Title | ICS CLOCK GENERATOR | |
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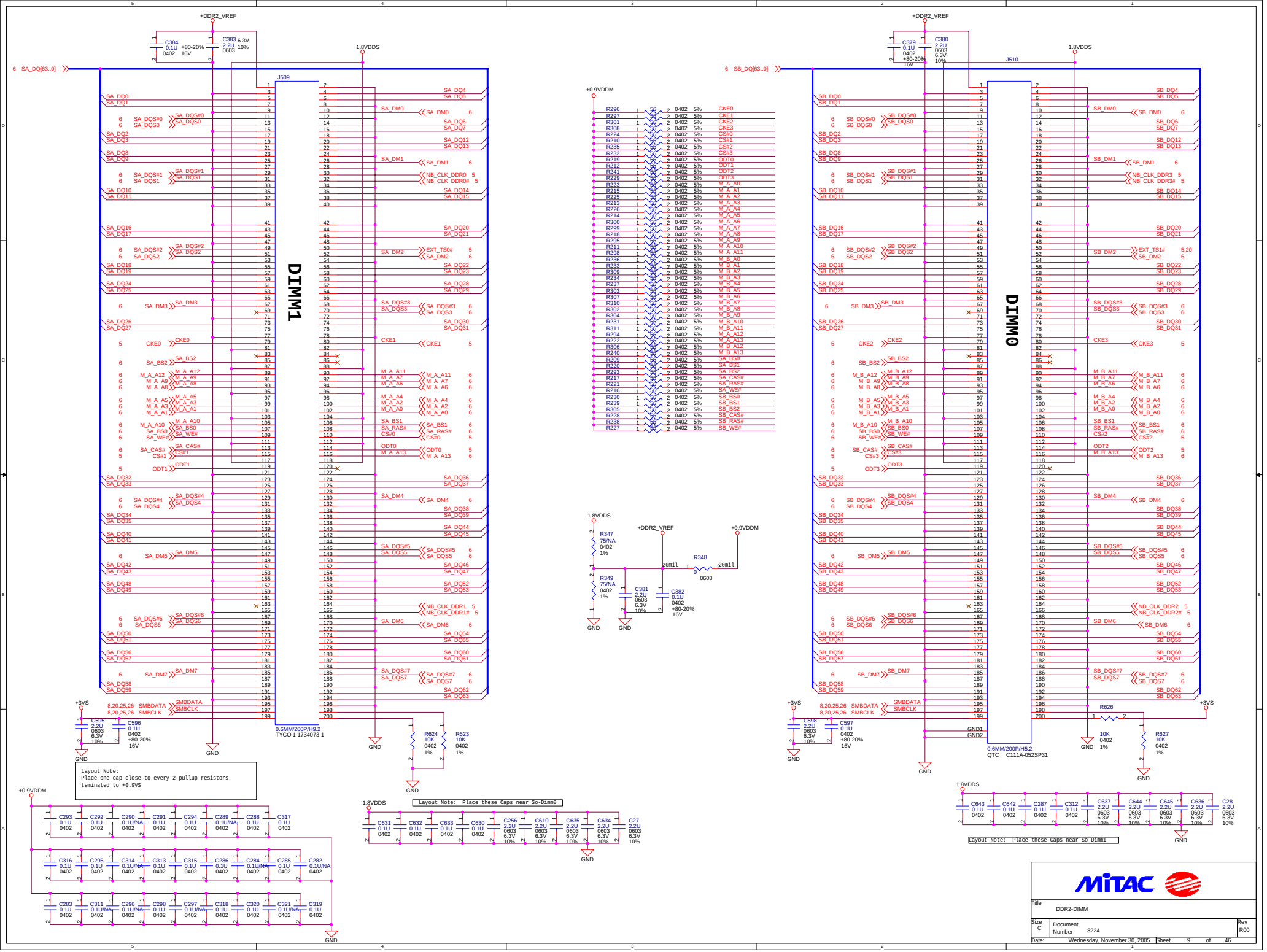
+DDR2_VREF
1.8VDDS
6 SA_DQ[63..0]
J509
DIMM1
0.6MM/200P/H9.2
TYCO 1-1734073-1
+0.9VDDM
+3VS
8,20,25,26 SMBDATA
8,20,25,26 SMBCLK
SMBDATA
SMBCLK
GND
Layout Note:
Place one cap close to every 2 pullup resistors
teminated to +0.9VS
Layout Note: Place these Caps near So-Dimm0
6 SB_DQ[63..0]
J510
DIMM0
0.6MM/200P/H5.2
QTC C111A-052SP31
GND1
GND2
Layout Note: Place these Caps near So-Dimm1
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Title
DDR2-DIMM
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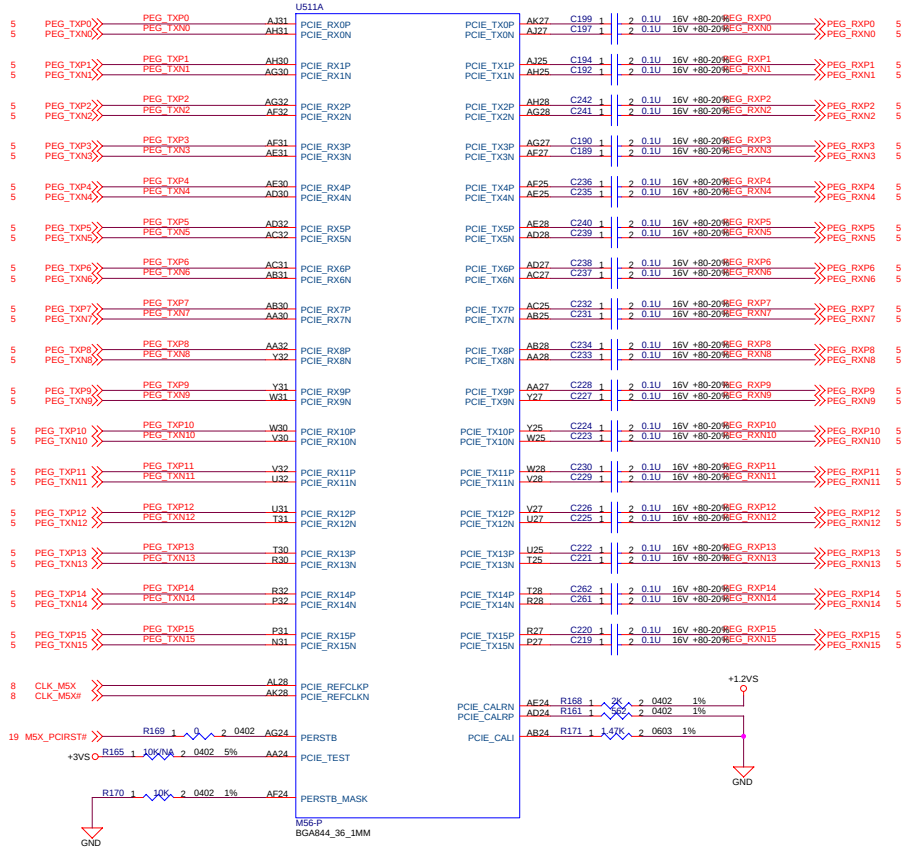
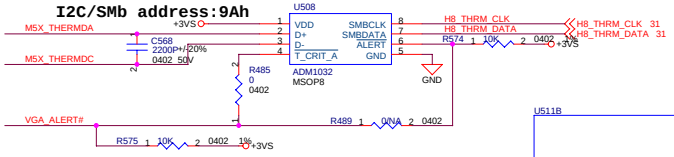
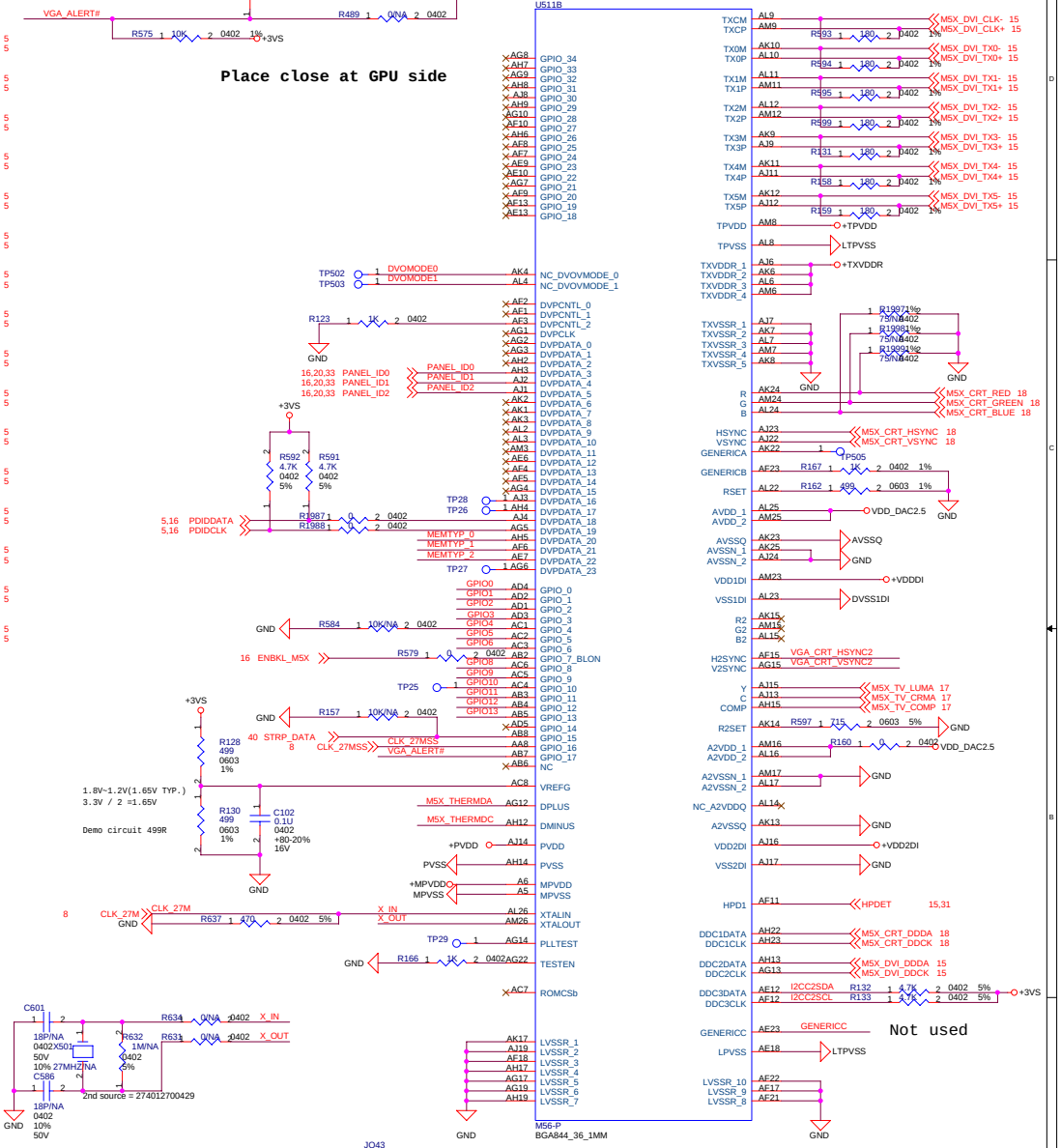
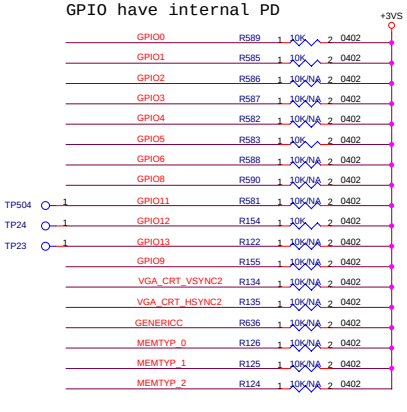
# ATI M56-P (1/3)




Place close at GPU side




```
R125/R124 select  VRAM
     L  L  -->256M
     L  H  -->128M
     H  L  -->512M
     H  H  --> 64M

  R126 select Vendor :
  L : Hynix
  H : Infineon VRAM
```




| | |
|---|---|
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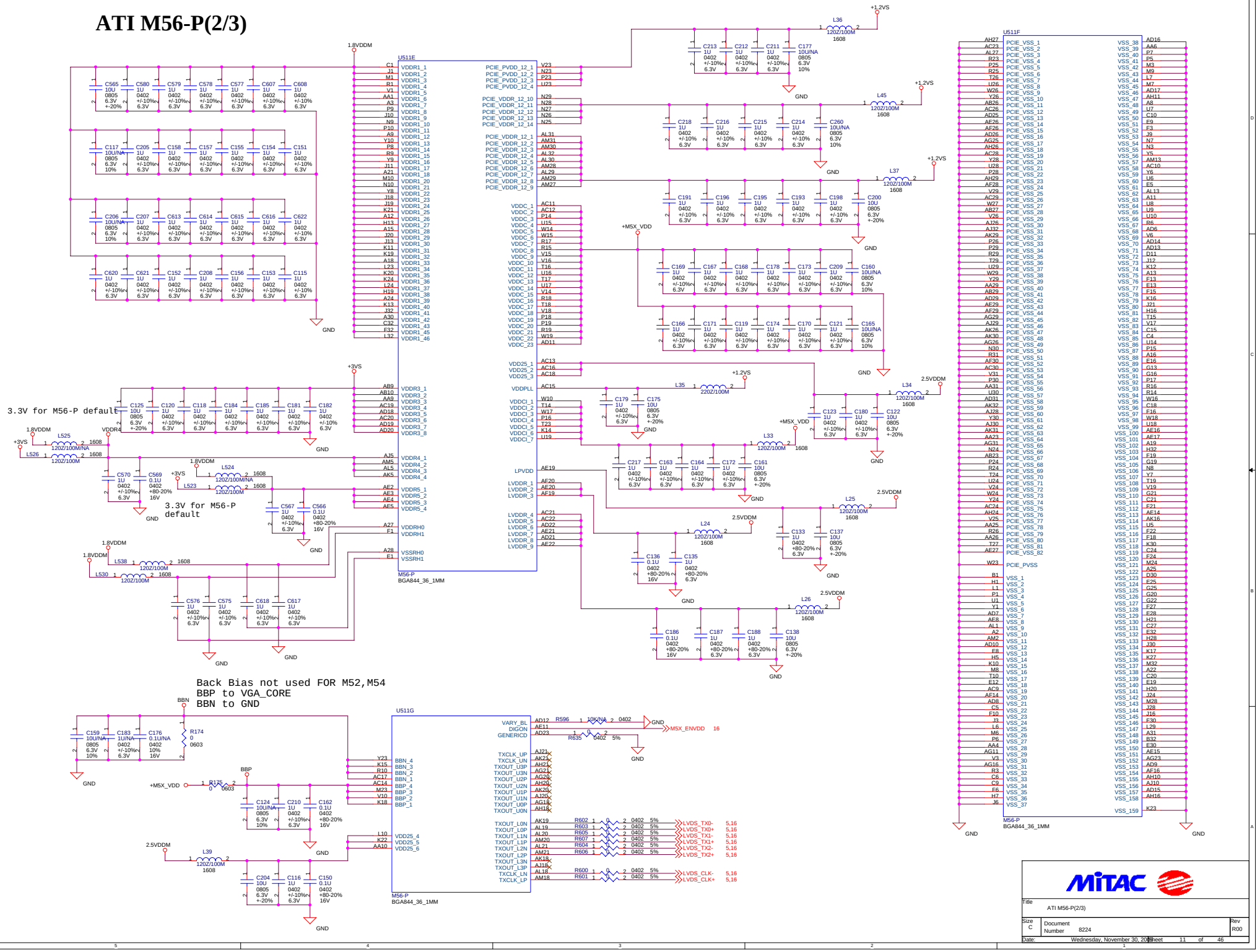
# ATI M56-P(2/3)




| | |
|---|---|
| Title | ATI M56-P(2/3) |
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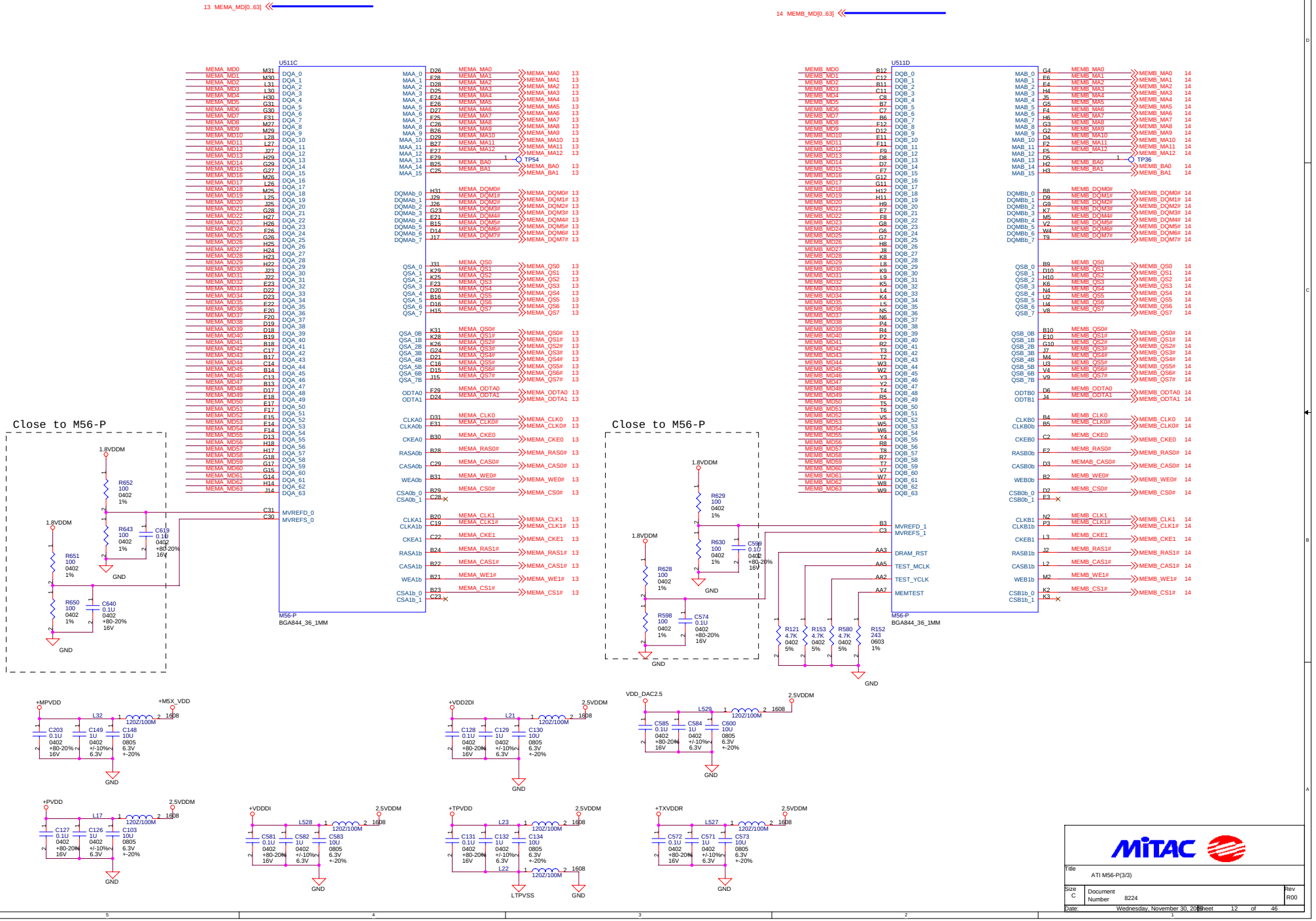
# ATI M56-P (3/3)




| | | | |
|---|---|---|---|
| Title | ATI M56-P(3/3) | | |
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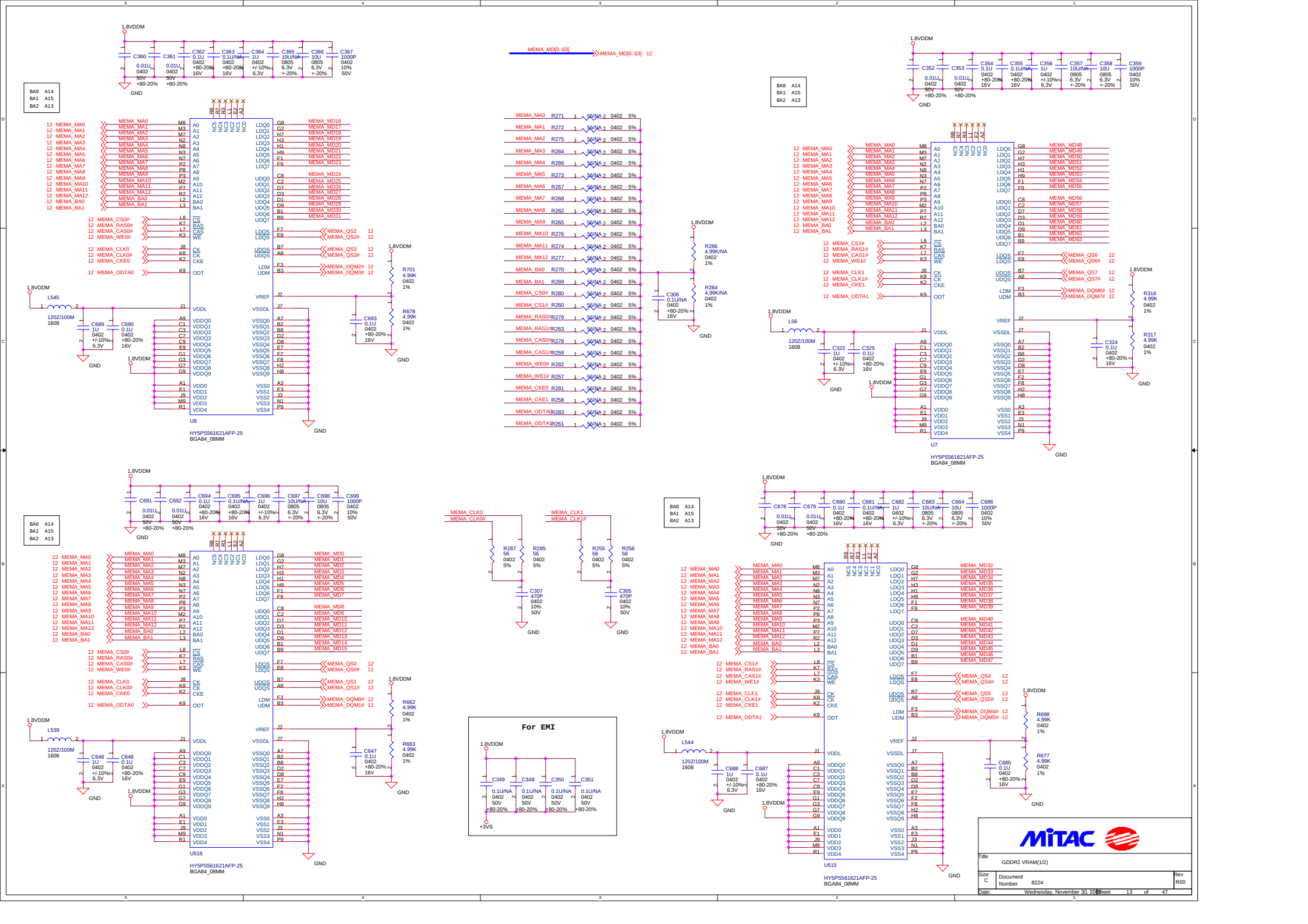
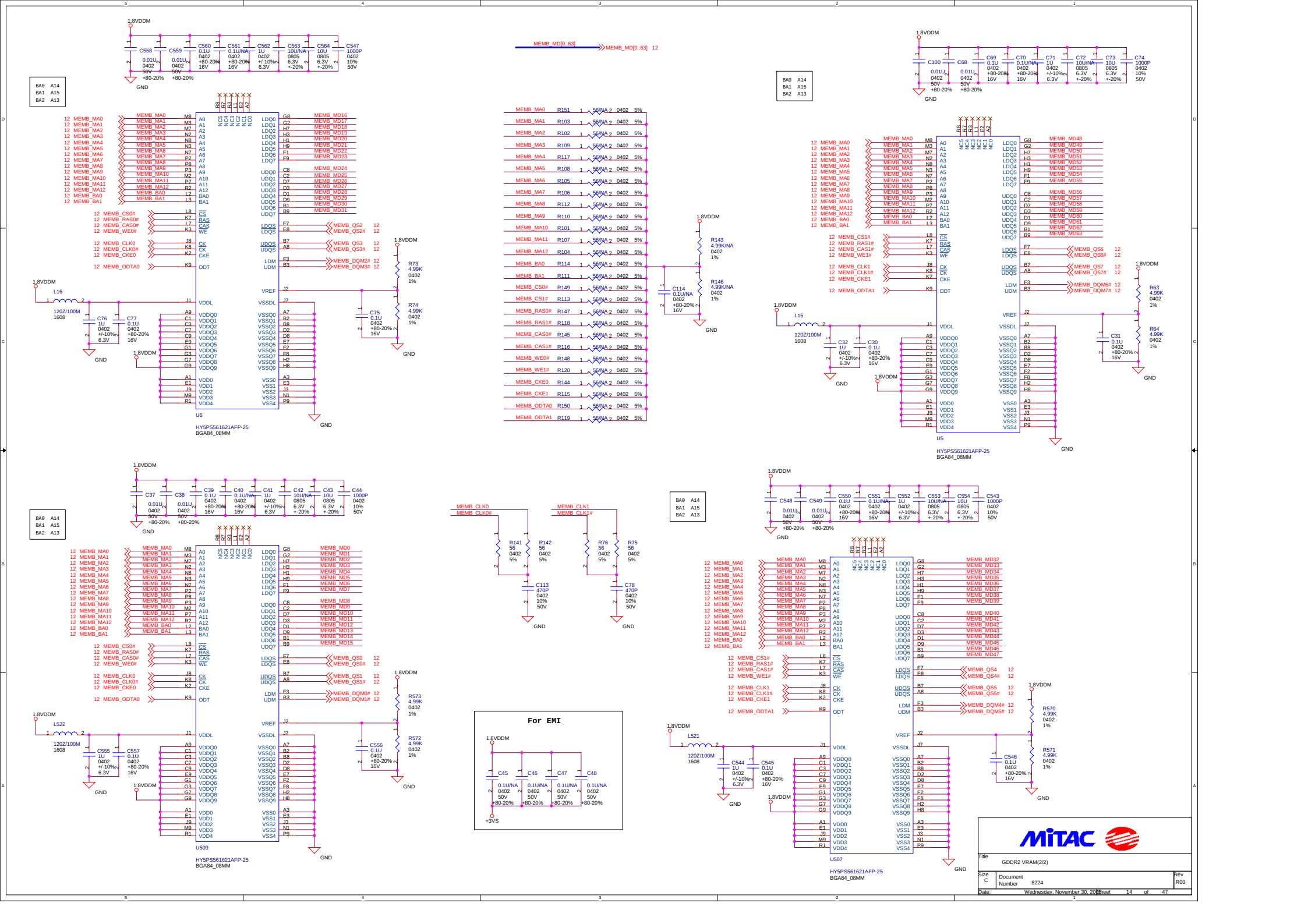
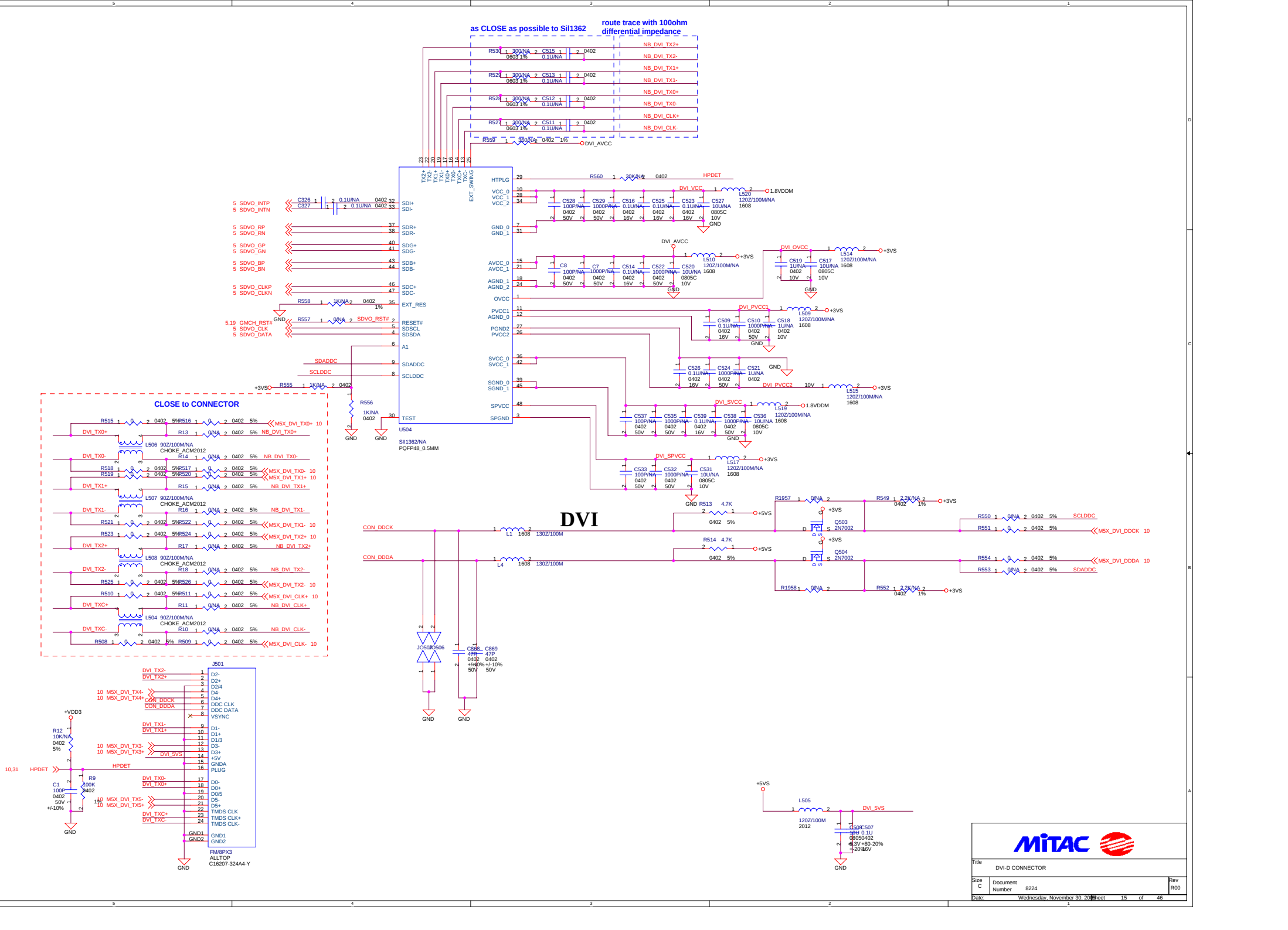

1.8VDDM
GND
MEMA_MD[0..63]
MEMA_MD[0..63] 12
BA0 A14
BA1 A15
BA2 A13
U8
U7
U516
U515
HY5PS561621AFP-25
BGA84_08MM
L545
L56
L539
L544
120Z/100M
1608
C360 C361 C362 C363 C364 C365 C366 C367
C352 C353 C354 C355 C356 C357 C358 C359
C689 C690 C323 C325 C646 C648 C688 C687
C691 C692 C694 C695 C696 C697 C698 C699
C678 C679 C680 C681 C682 C683 C684 C686
C693 C647 C685 C324
R701 4.99K
R678 4.99K
R316 4.99K
R317 4.99K
R662 4.99K
R663 4.99K
R698 4.99K
R677 4.99K
R286 4.99K/NA
R284 4.99K/NA
C306 0.1U/NA
R271 R272 R275 R264 R266 R273 R267 R268 R262 R265 R276 R274 R277 R270 R269 R280 R260 R279 R263 R278 R259 R282 R257 R281 R258 R283 R261
56/NA
R287 R285 R255 R256
C307 470P
C305 470P
MEMA_CLK0
MEMA_CLK0#
MEMA_CLK1
MEMA_CLK1#
For EMI
C349 C348 C350 C351
0.1U/NA
+3VS
MEMA_MA0 MEMA_MA1 MEMA_MA2 MEMA_MA3 MEMA_MA4 MEMA_MA5 MEMA_MA6 MEMA_MA7 MEMA_MA8 MEMA_MA9 MEMA_MA10 MEMA_MA11 MEMA_MA12 MEMA_BA0 MEMA_BA1
MEMA_CS0# MEMA_RAS0# MEMA_CAS0# MEMA_WE0#
MEMA_CLK0 MEMA_CLK0# MEMA_CKE0
MEMA_ODTA0
MEMA_CS1# MEMA_RAS1# MEMA_CAS1# MEMA_WE1#
MEMA_CLK1 MEMA_CLK1# MEMA_CKE1
MEMA_ODTA1
MEMA_QS2 MEMA_QS2# MEMA_QS3 MEMA_QS3# MEMA_QS0 MEMA_QS0# MEMA_QS1 MEMA_QS1# MEMA_QS6 MEMA_QS6# MEMA_QS7 MEMA_QS7# MEMA_QS4 MEMA_QS4# MEMA_QS5 MEMA_QS5#
MEMA_DQM2# MEMA_DQM3# MEMA_DQM0# MEMA_DQM1# MEMA_DQM6# MEMA_DQM7# MEMA_DQM4# MEMA_DQM5#
MEMA_MD16 MEMA_MD17 MEMA_MD18 MEMA_MD19 MEMA_MD20 MEMA_MD21 MEMA_MD22 MEMA_MD23 MEMA_MD24 MEMA_MD25 MEMA_MD26 MEMA_MD27 MEMA_MD28 MEMA_MD29 MEMA_MD30 MEMA_MD31
MEMA_MD0 MEMA_MD1 MEMA_MD2 MEMA_MD3 MEMA_MD4 MEMA_MD5 MEMA_MD6 MEMA_MD7 MEMA_MD8 MEMA_MD9 MEMA_MD10 MEMA_MD11 MEMA_MD12 MEMA_MD13 MEMA_MD14 MEMA_MD15
MEMA_MD48 MEMA_MD49 MEMA_MD50 MEMA_MD51 MEMA_MD52 MEMA_MD53 MEMA_MD54 MEMA_MD55 MEMA_MD56 MEMA_MD57 MEMA_MD58 MEMA_MD59 MEMA_MD60 MEMA_MD61 MEMA_MD62 MEMA_MD63
MEMA_MD32 MEMA_MD33 MEMA_MD34 MEMA_MD35 MEMA_MD36 MEMA_MD37 MEMA_MD38 MEMA_MD39 MEMA_MD40 MEMA_MD41 MEMA_MD42 MEMA_MD43 MEMA_MD44 MEMA_MD45 MEMA_MD46 MEMA_MD47
MiTAC
Title
GDDR2 VRAM(1/2)
Size C
Document Number 8224
Rev R00
Date: Wednesday, November 30, 2005
Sheet 13 of 47

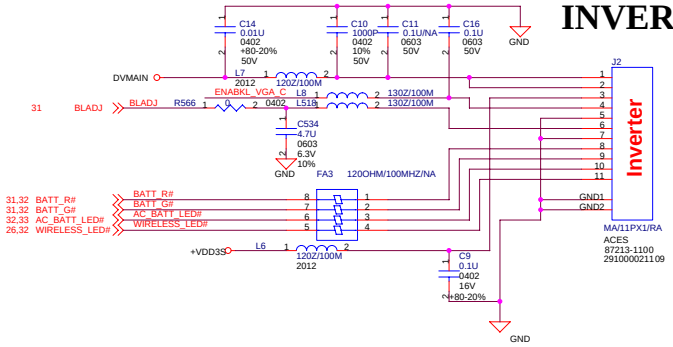

MEMB_MD[0..63]
MEMB_MD[0..63] 12
1.8VDDM
GND
U6
U5
U509
U507
HY5PS561621AFP-25
BGA84_08MM
BA0 A14
BA1 A15
BA2 A13
For EMI
+3VS
MiTAC
Title
GDDR2 VRAM(2/2)
Size C
Document Number 8224
Rev R00
Date: Wednesday, November 30, 2005
Sheet 14 of 47

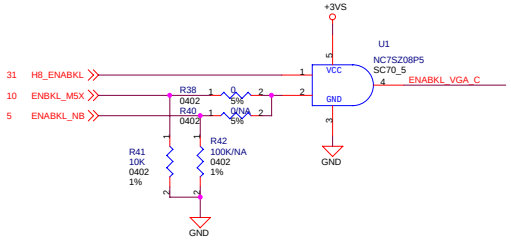

as CLOSE as possible to Sil1362
route trace with 100ohm differential impedance
CLOSE to CONNECTOR
DVI
U504
SII1362/NA
PQFP48_0.5MM
J501
FM/8PX3
ALLTOP
C16207-324A4-Y
Title
DVI-D CONNECTOR
Size C
Document Number 8224
Rev R00
Date: Wednesday, November 30, 2005
Sheet 15 of 46

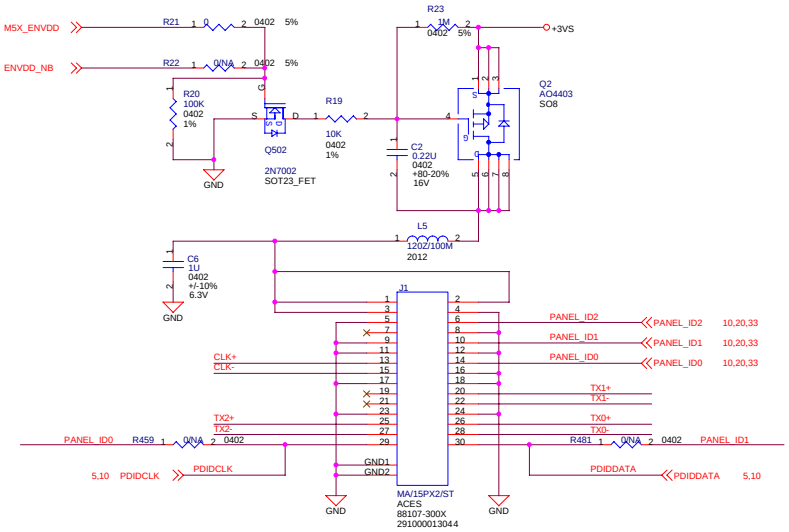
# Display (LCD)

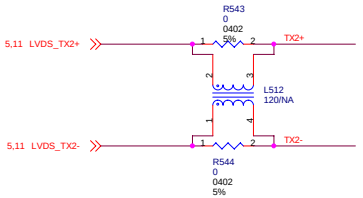
| Pannel ID | | | |
|---|---|---|---|
| LCD_ID0 | LCD_ID1 | LCD_ID2 | PANEL TYPE |
| 0 | 0 | 0 | |
| 0 | 0 | 1 | |
| 0 | 1 | 0 | |
| 0 | 1 | 1 | AU |
| 1 | 0 | 0 | |
| 1 | 0 | 1 | |
| 1 | 1 | 0 | |
| 1 | 1 | 1 | CHIMEI |

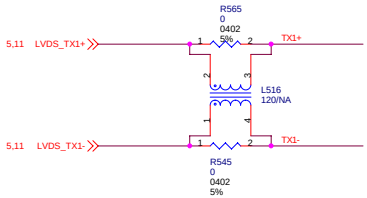
## INVERTER

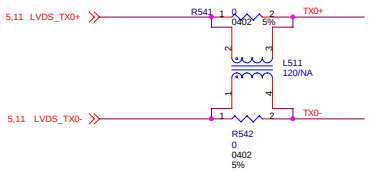


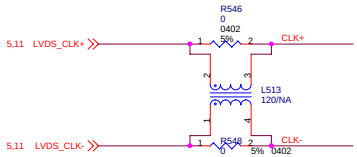



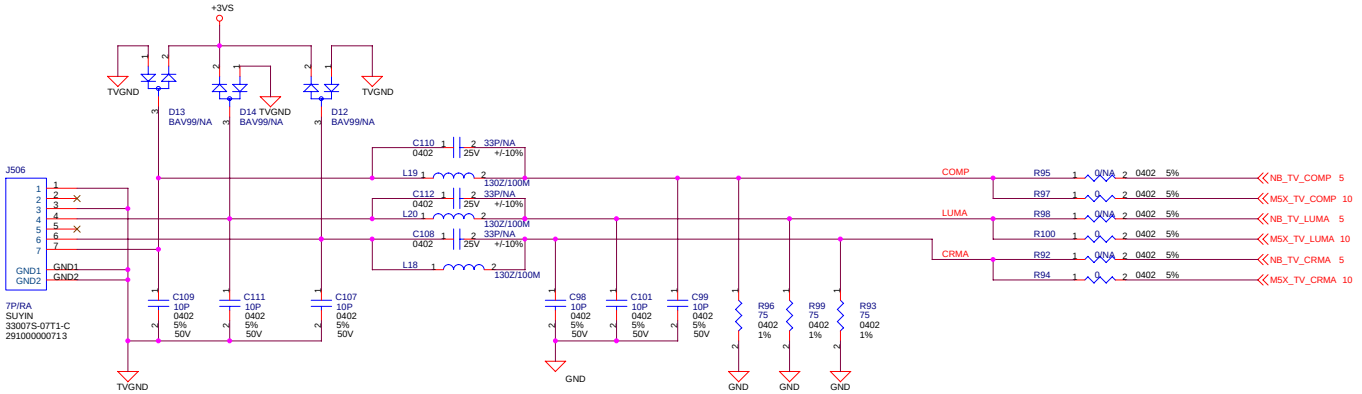



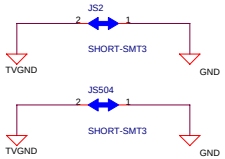




MiTAC

| | | | |
|---|---|---|---|
| Title | LCD CONNECTOR | | |
| Size C | Document Number 8224 | | Rev R00 |
| Date: Wednesday, November 30, 2005 | Sheet 16 | of | 41 |

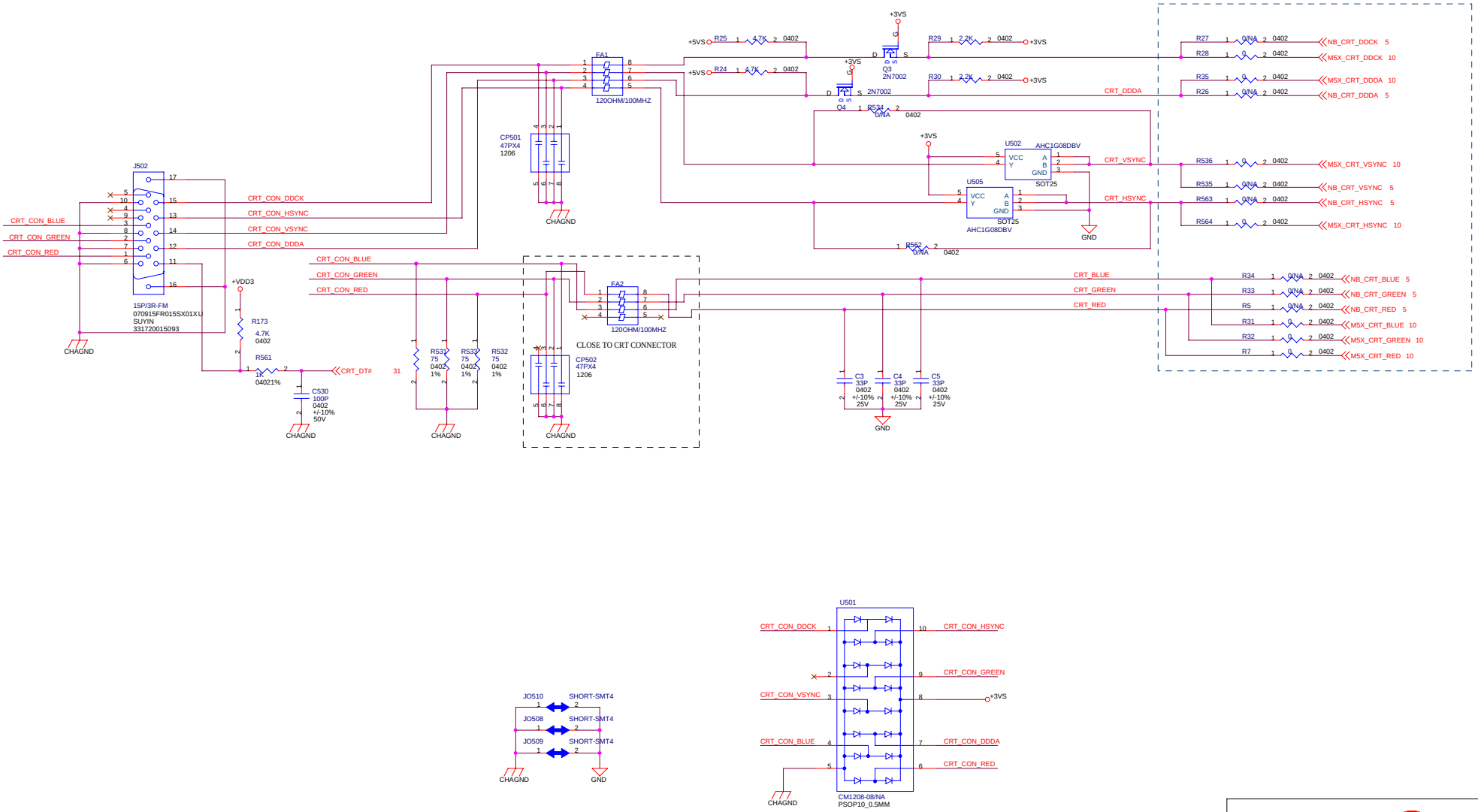
# TV CONNECTOR




| | | |
|---|---|---|
| Title | TV-OUT CONNECTOR | |
| Size C | Document Number 8224 | Rev R00 |
| Date: Wednesday, November 30, 2005 | Sheet 17 of 41 | |

# CRT



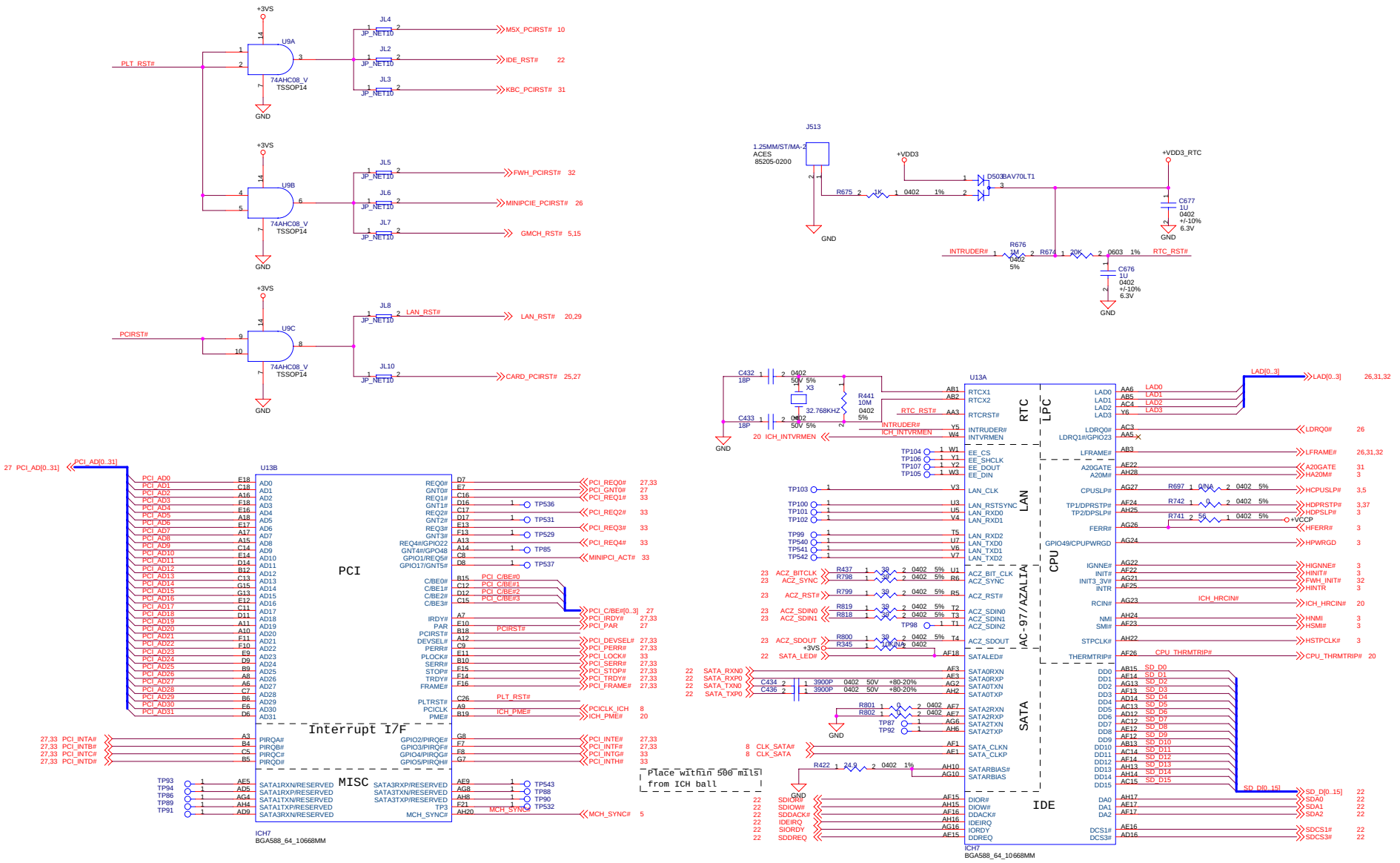




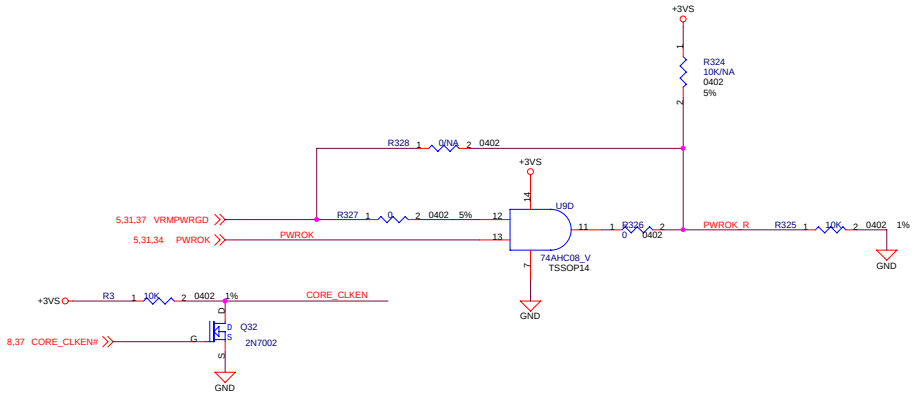


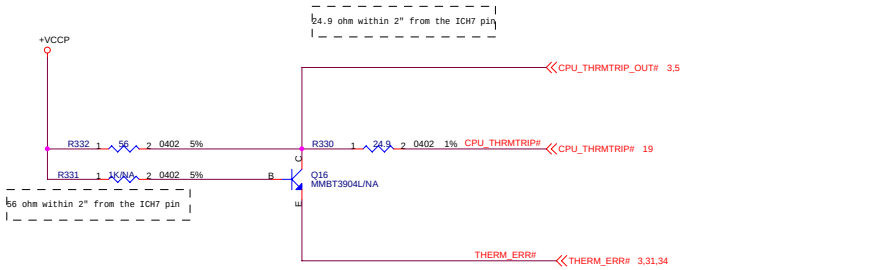

MiTAC

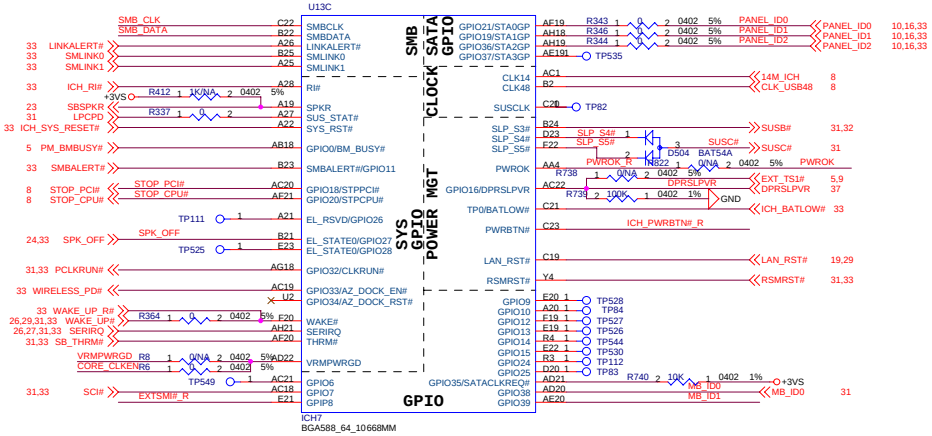
| | | |
|---|---|---|
| Title | CRT CONNECTOR | |
| Size C | Document Number 8224 | Rev R00 |
| Date: Wednesday, November 30, 2005 | Sheet 18 of 41 | |

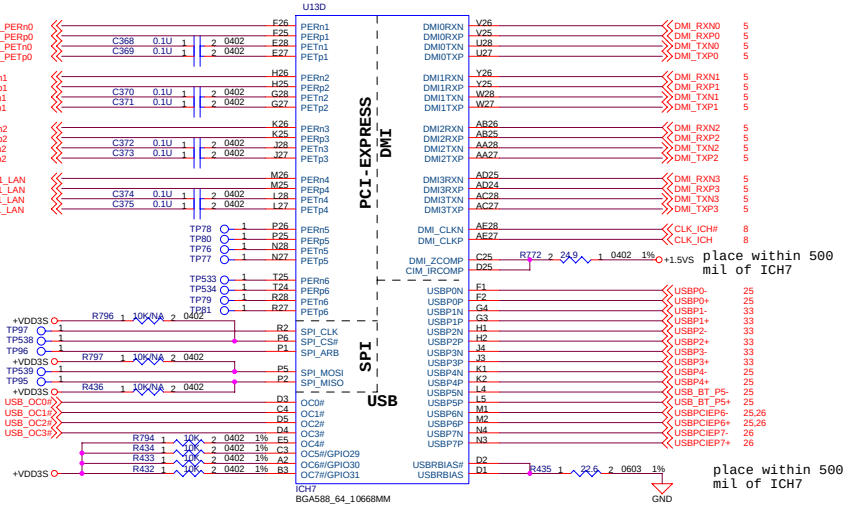


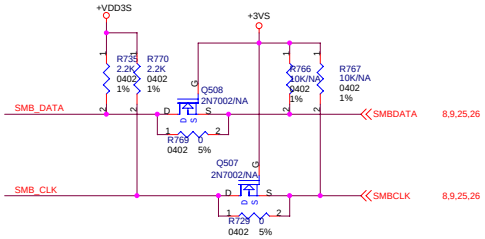

| | | | |
|---|---|---|---|
| Title | ICH7-M(1/3) | | |
| Size C | Document Number 8224 | | Rev R00 |
| Date: | Wednesday, November 30, 2005 | Sheet 19 of 41 | |



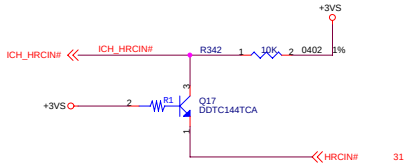



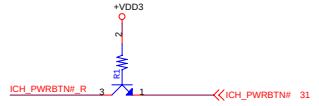



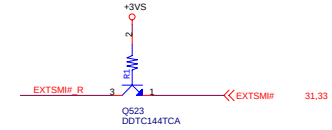

ICH7 internal VR enable strap

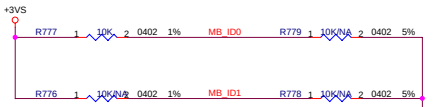
| | INTVRMEN | PU R461 | PD R465 |
|---|---|---|---|
| Enable (default) | 1 | ON | NA |
| Disable | 0 | NA | ON |






M/B ID SELECT

| | PU | PD |
|---|---|---|
| PM | R777 | |
| GM | | R779 |

MiTAC

| | | |
|---|---|---|
| Title | ICH7-M(2/3) | |
| Size C | Document Number 8224 | Rev R00 |
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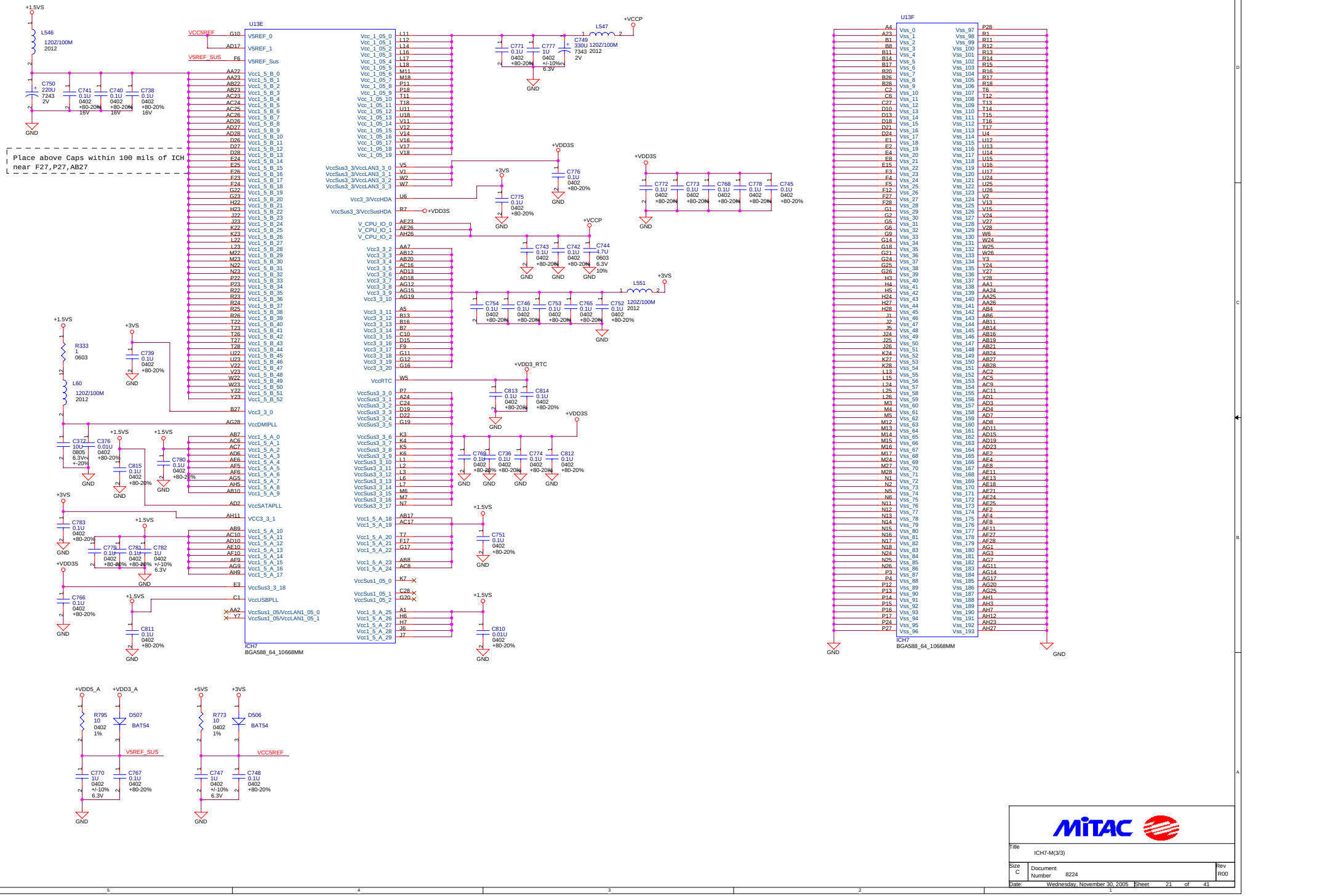
U13E
ICH7
BGA588_64_10668MM
U13F
ICH7
BGA588_64_10668MM
Place above Caps within 100 mils of ICH
near F27,P27,AB27
+1.5VS
+3VS
+VCCP
+VDD3S
+VDD3_RTC
+5VS
+VDD5_A
+VDD3_A
GND
L546
120Z/100M
2012
L547
330U 120Z/100M
7343 2012
2V
L551
120Z/100M
2012
L60
120Z/100M
2012
R333
1
0603
R795
10
0402
1%
R773
10
0402
1%
D507
BAT54
D506
BAT54
V5REF_SUS
VCC5REF
Title
ICH7-M(3/3)
Size
C
Document
Number
8224
Rev
R00
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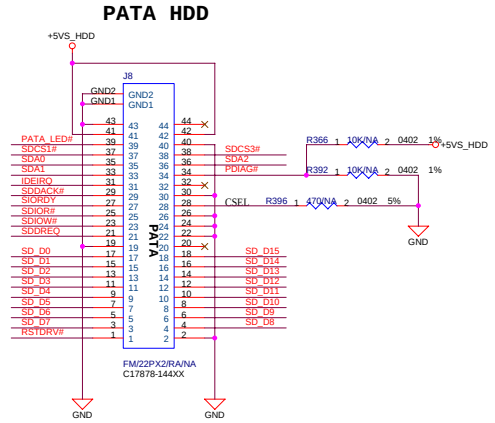
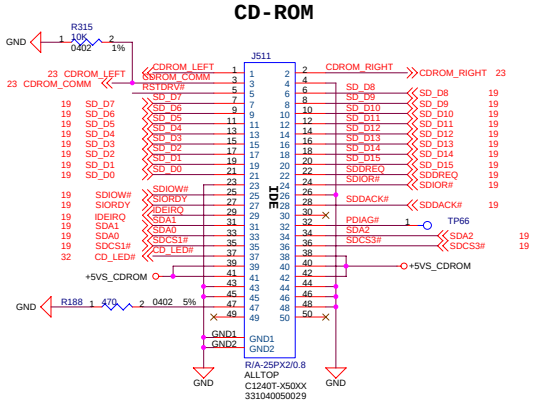
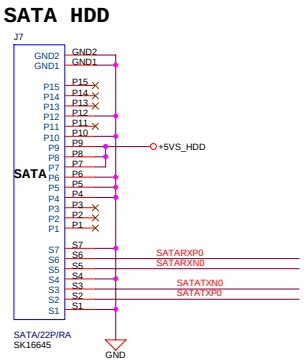
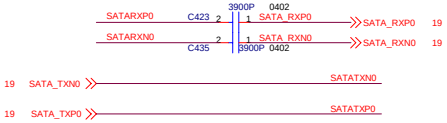
41

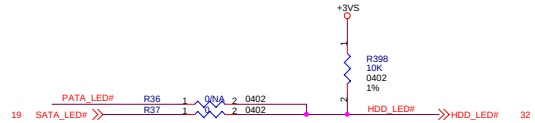
# CDROM- SECONDARY IDE CONNECTOR

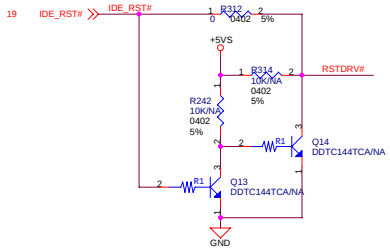


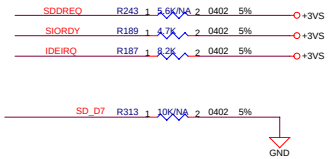



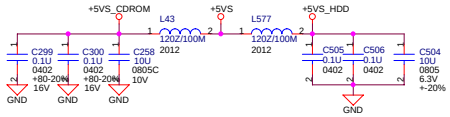



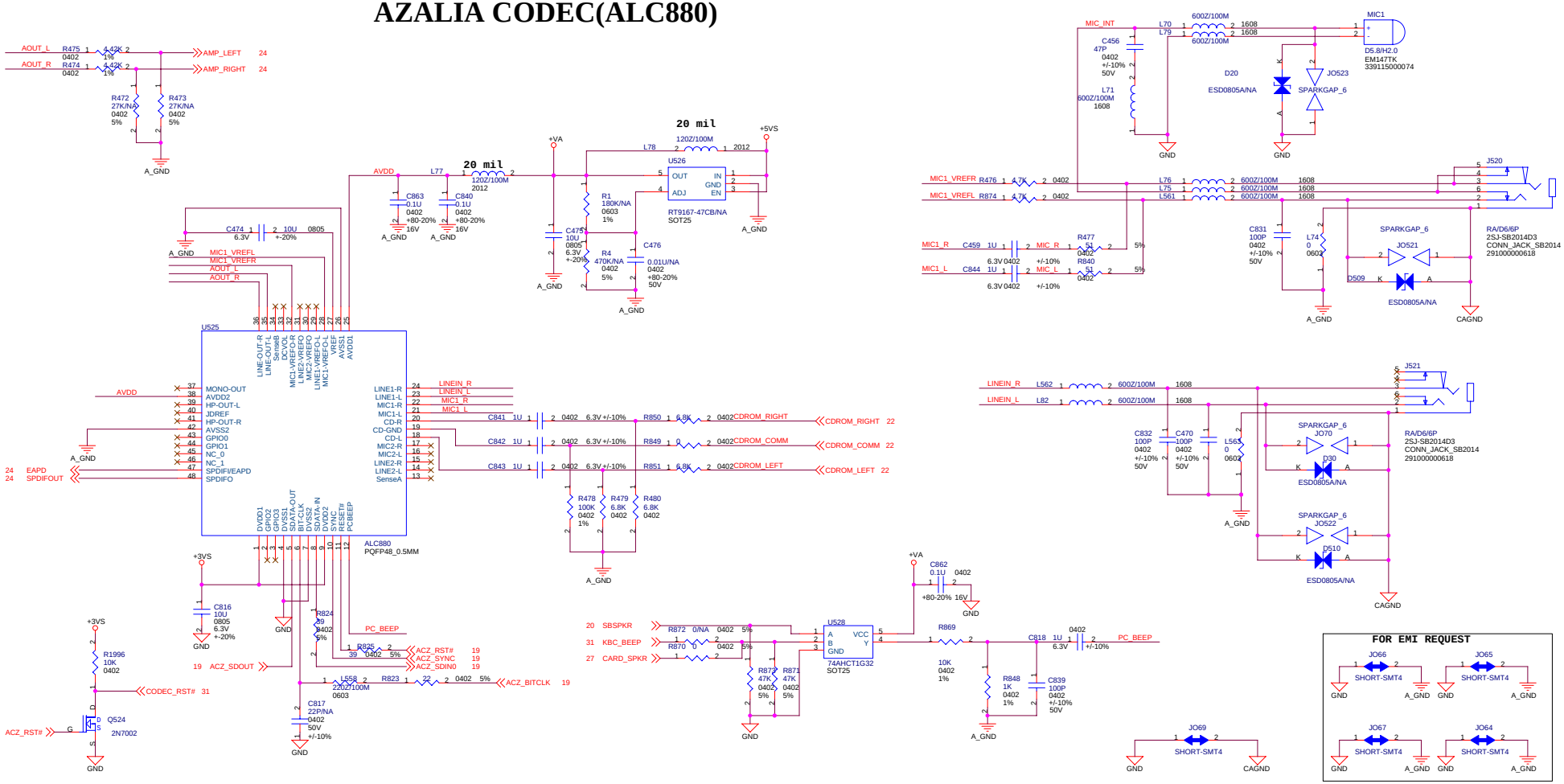



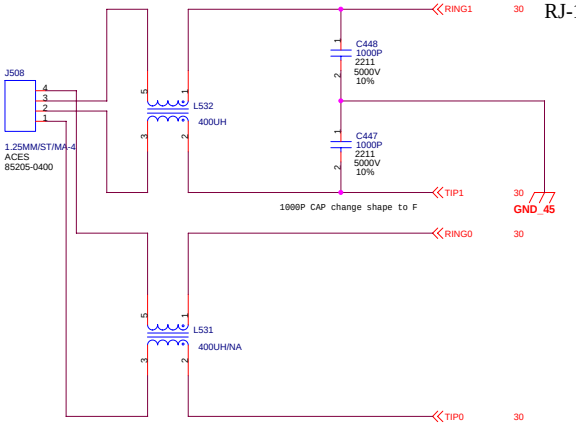




| | | |
|---|---|---|
| MiTAC | | |
| Title | CDROM/HDD CONNECTOR | |
| Size C | Document Number 8224 | Rev R00 |
| Date: Wednesday, November 30, 2005 | Sheet 22 of 41 | |

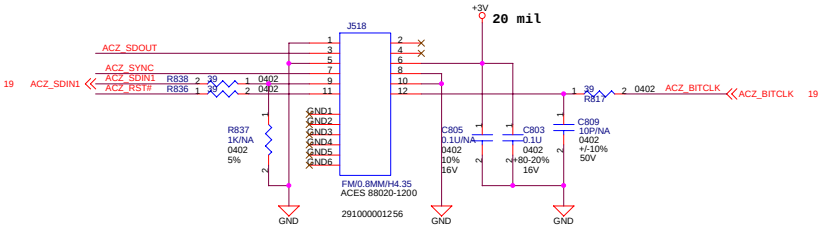
# AZALIA CODEC(ALC880)




# RJ-11



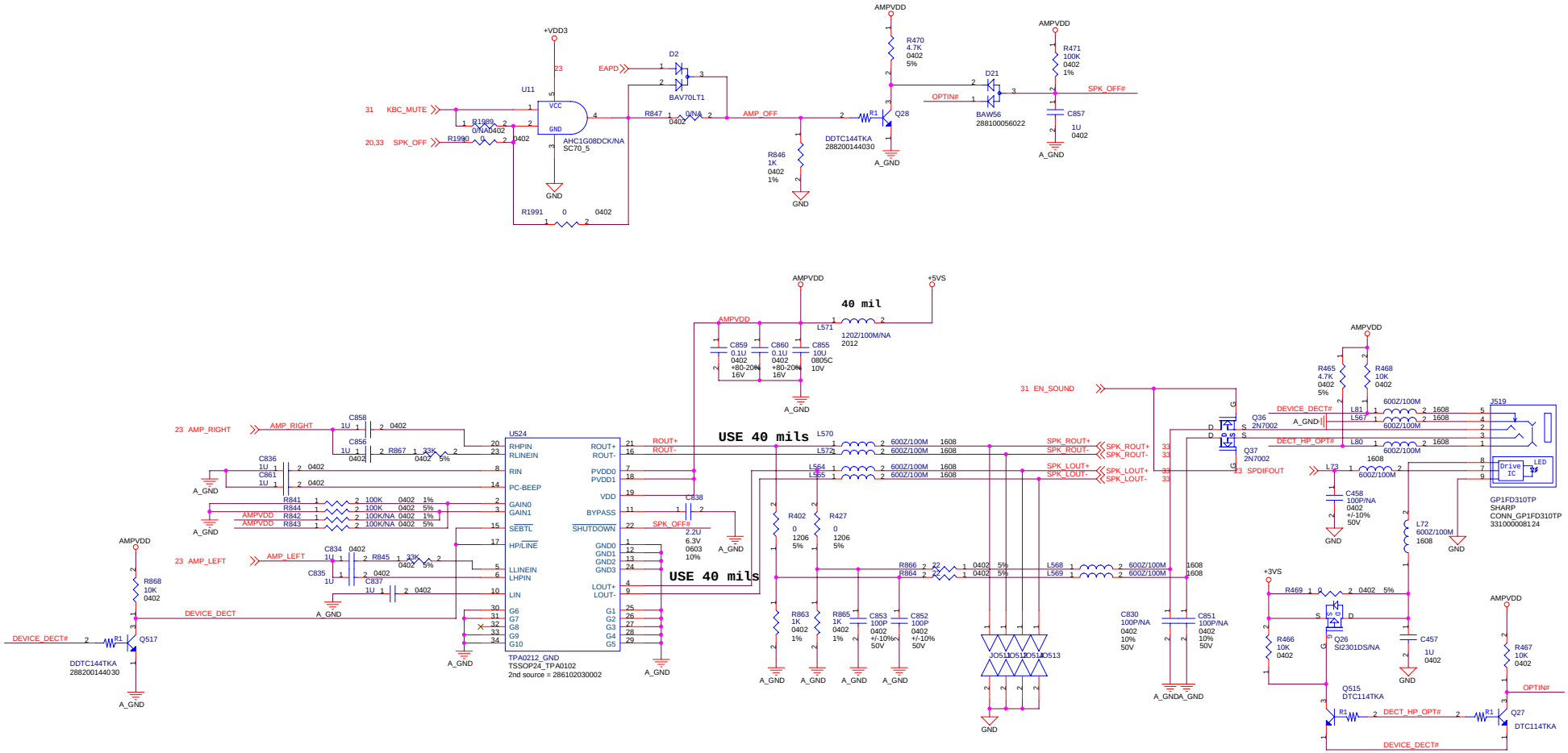

# MDC




MiTAC

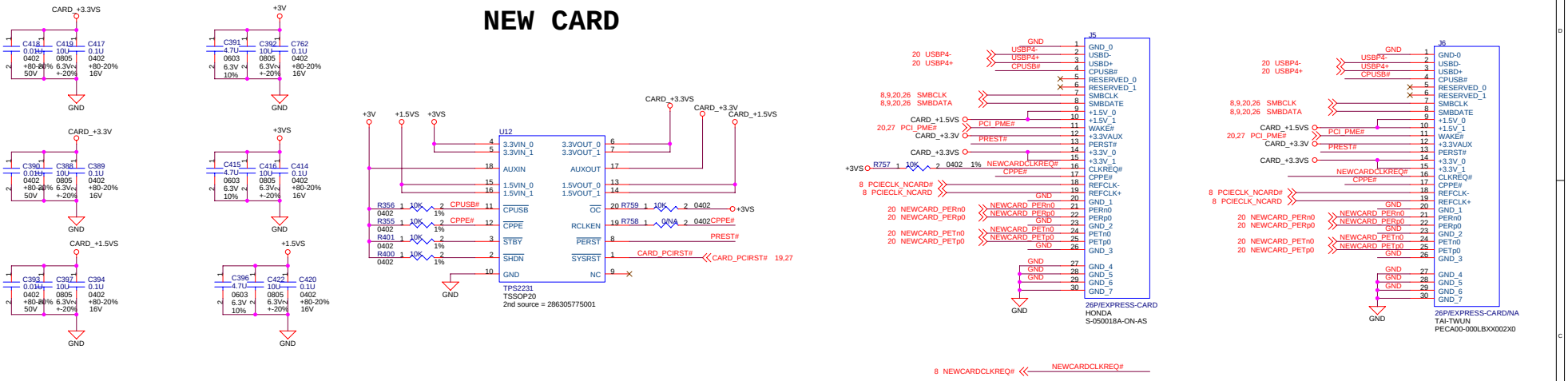
| | | |
|---|---|---|
| Title | AZALIA CODEC(ALC880)/MDC | |
| Size C | Document Number 8224 | Rev R00 |
| Date: Wednesday, November 30, 2005 | Sheet 23 of 41 | |

# AUDIO AMPLIFIER




| | | | |
|---|---|---|---|
| Title | AUDIO AMPLIFIER | | |
| Size C | Document Number 8224 | | Rev R00 |
| Date: Wednesday, November 30, 2005 | Sheet 24 of 41 | | |

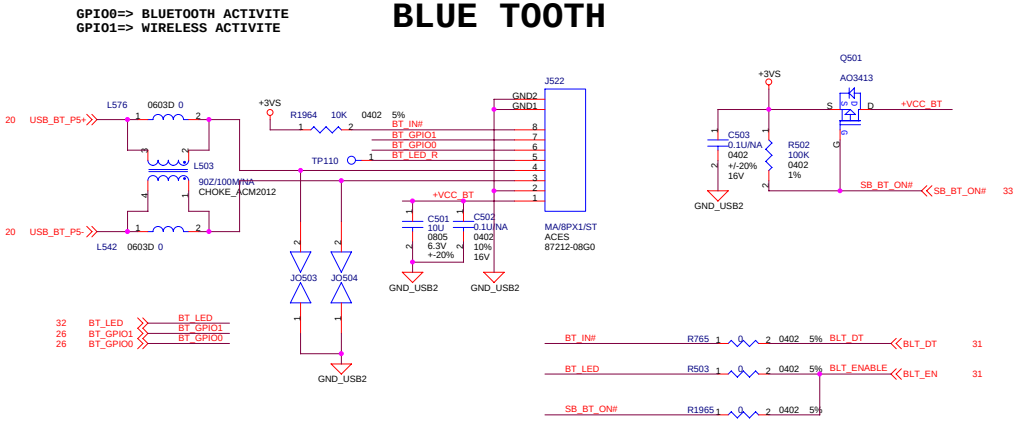
# NEW CARD



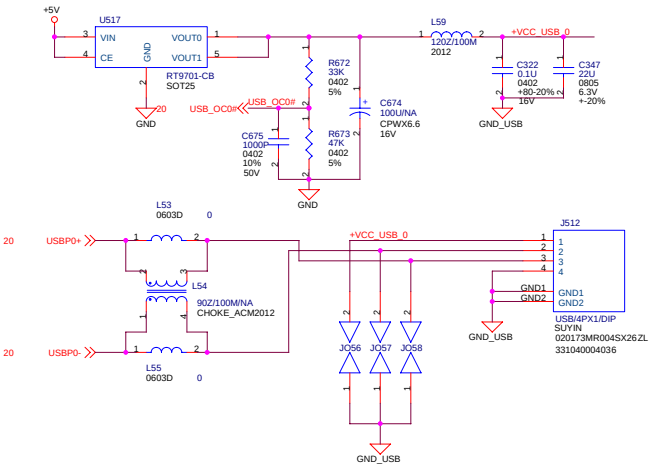

# USB

## BLUE TOOTH

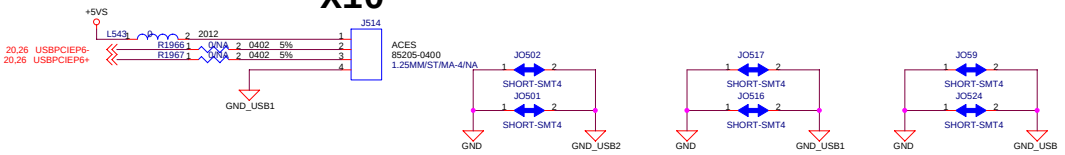
GPIO0=> BLUETOOTH ACTIVITE
GPIO1=> WIRELESS ACTIVITE




## USB CONNECTOR




## X10



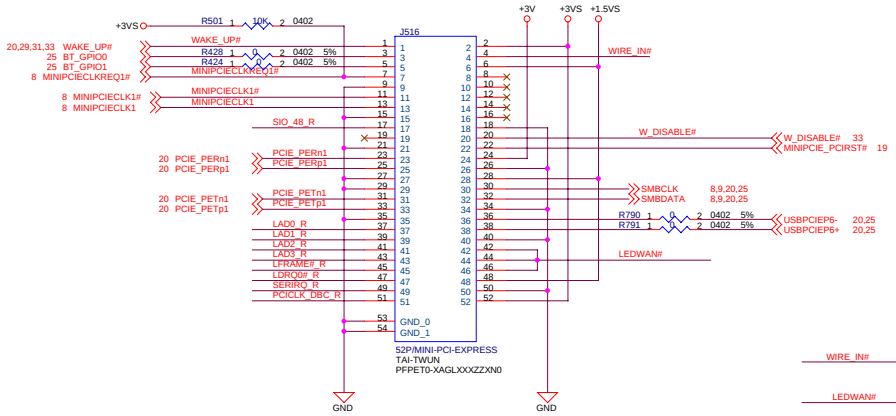

MiTAC

Title: NEW CARD/BLUE TOOTH/USB CONNECTOR

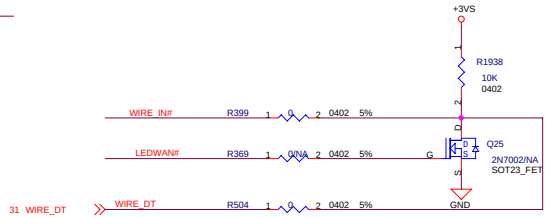
Size: C | Document Number: 8224 | Rev: R00

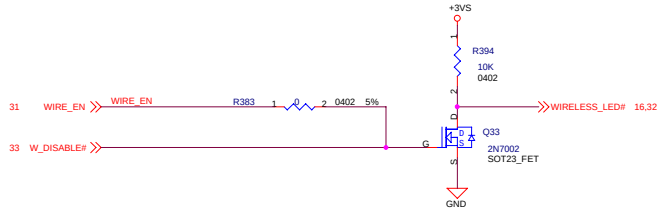
Date: Wednesday, November 30, 2005 | Sheet 25 of 47

# WIRELESS LAN CARD

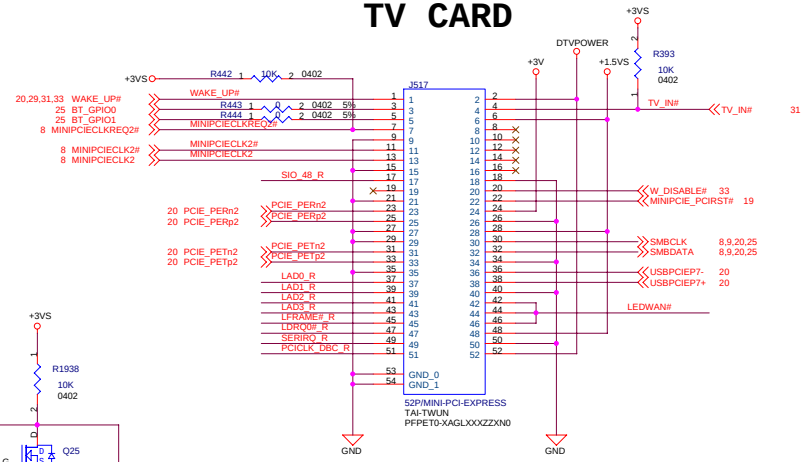


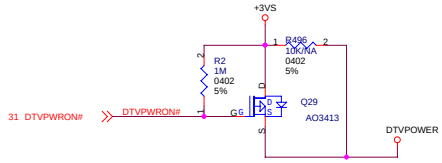





# TV CARD




| | | | |
|---|---|---|---|
| Title | MINI PCI-E (WIRELESS LAN / TV CARD) | | |
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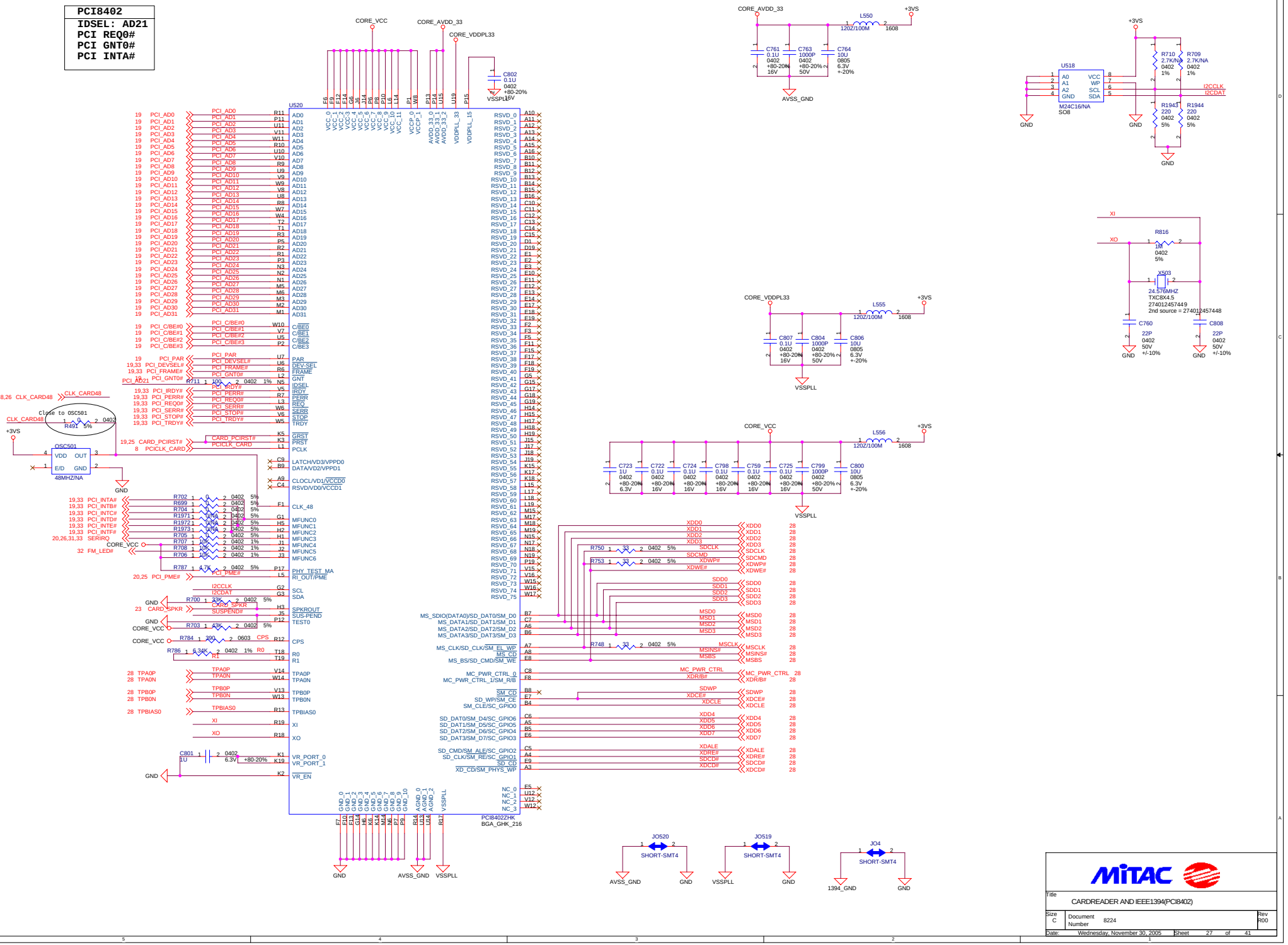
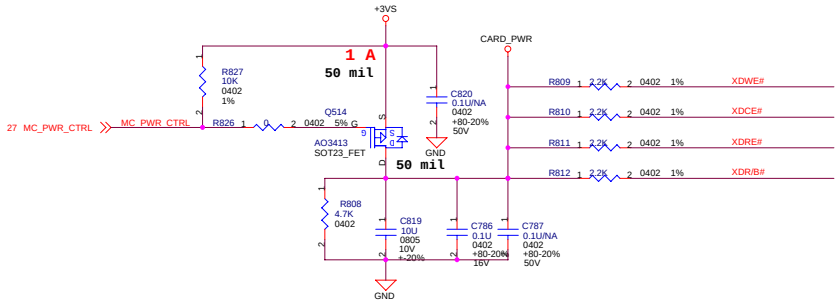
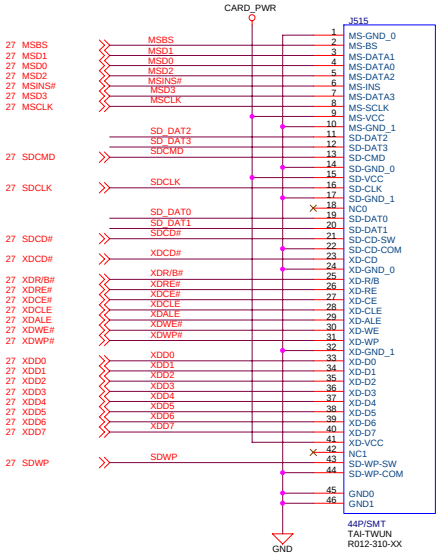
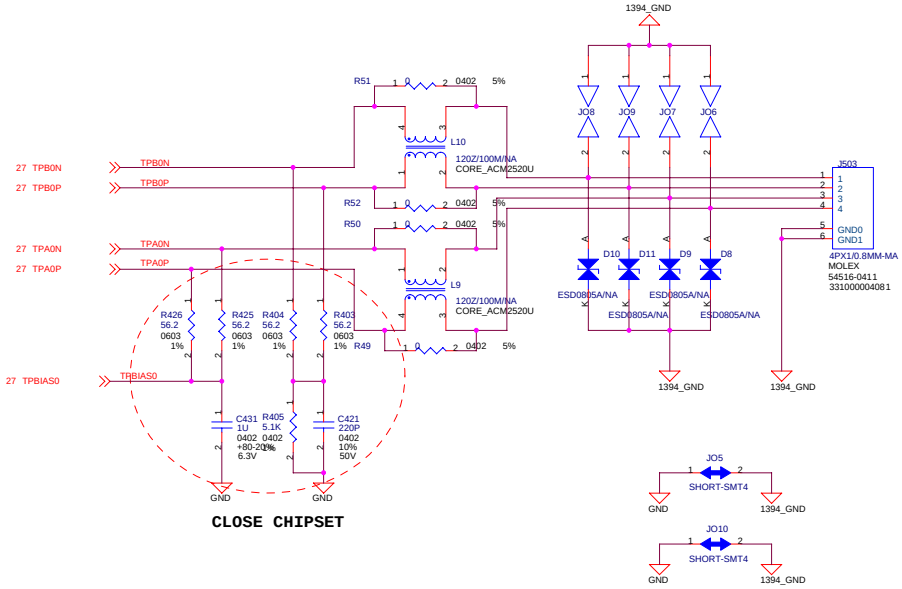
| Date: Wednesday, November 30, 2005 | Sheet 26 of 41 | | |

**PCI8402**
**IDSEL: AD21**
**PCI REQ0#**
**PCI GNT0#**
**PCI INTA#**



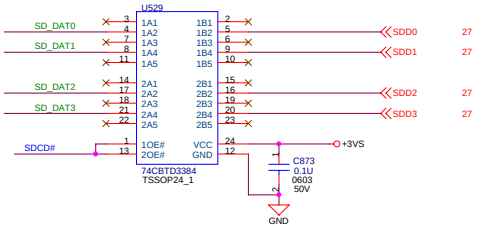


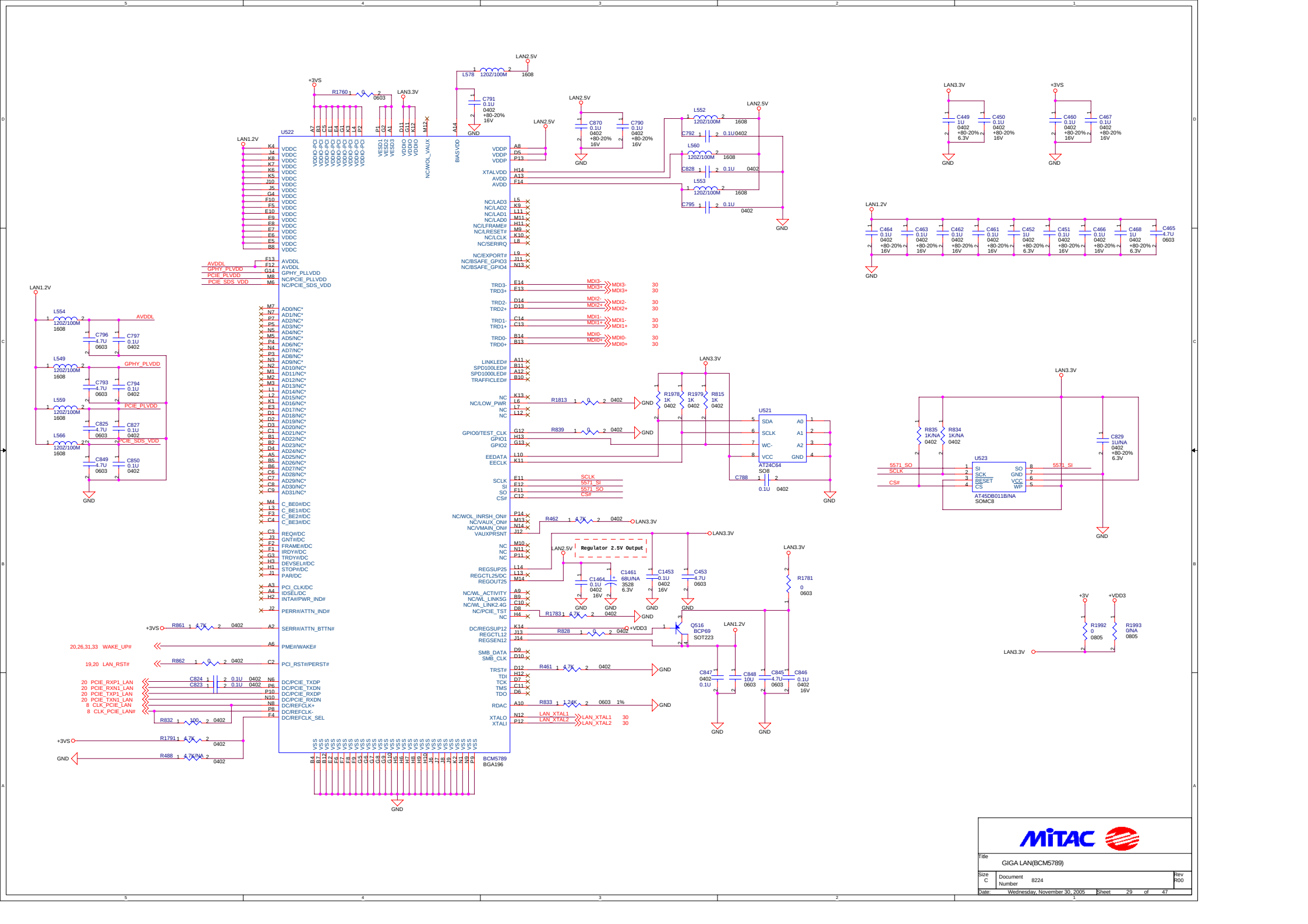




## Buffer

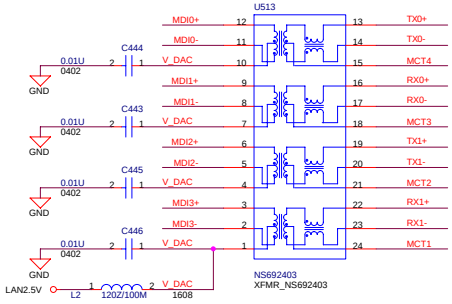
**Fix when insert MS DUO/MS DUO PRO, SD_DAT0,1,3 will short altogether and can not open.**

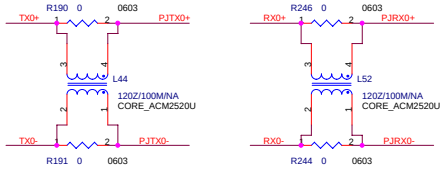


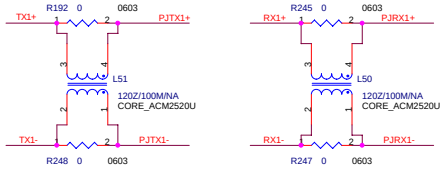

| | | | |
|---|---|---|---|
| MiTAC | | | |
| Title | CARDREADER AND IEEE1394 CONNECTOR | | |
| Size C | Document Number 8224 | | Rev R00 |
| Date: Wednesday, November 30, 2005 | Sheet 28 of 41 | | |

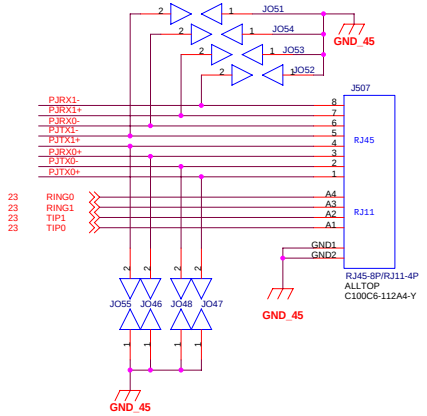

U522
BCM5789
BGA196
LAN1.2V
LAN2.5V
LAN3.3V
+3VS
+VDD3
GND
Regulator 2.5V Output
U521
AT24C64
SO8
U523
AT45DB011B/NA
SOMC8
Q516
BCP69
SOT223
MiTAC
Title
GIGA LAN(BCM5789)
Size C
Document Number 8224
Rev R00
Date: Wednesday, November 30, 2005
Sheet 29 of 47

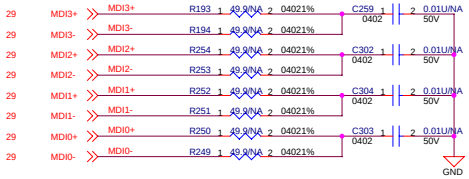
Please place these bead close
to RJ45 connector



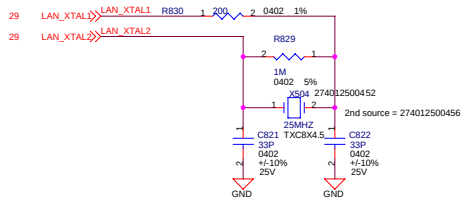



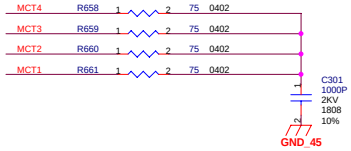




Crystal should be placed
far away from I/O port and
Tx,Rx,power,magnetics.



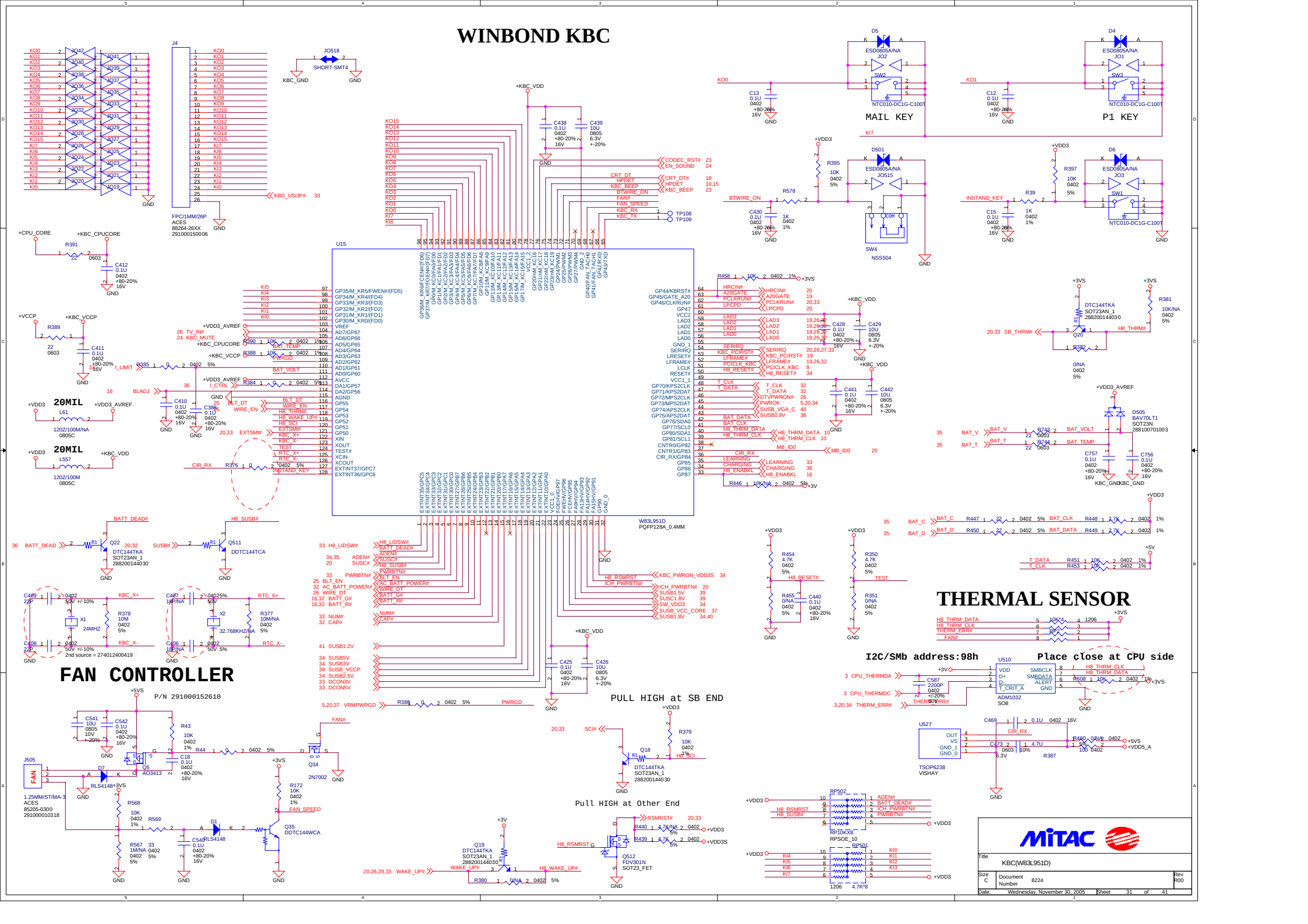





MiTAC

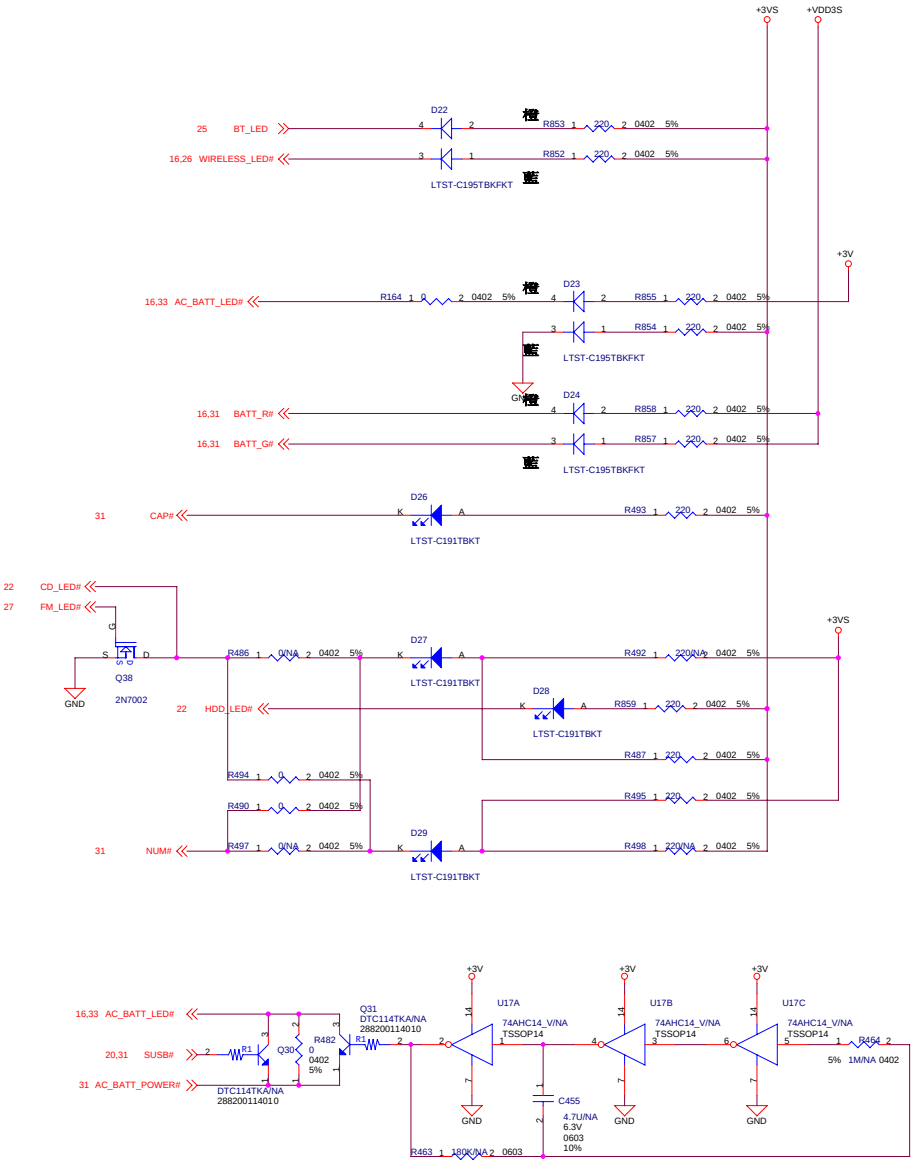
| | | |
|---|---|---|
| Title | LAN CONNECTOR | |
| Size C | Document Number 8224 | Rev R00 |
| Date: Wednesday, November 30, 2005 | Sheet 30 of 41 | |

# WINBOND KBC

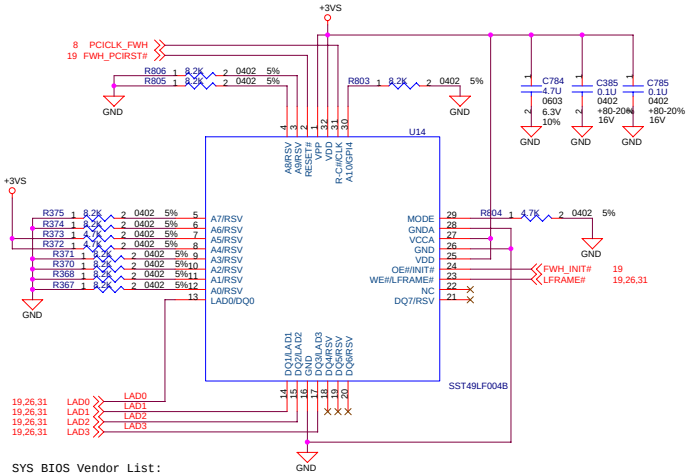

MAIL KEY
P1 KEY
THERMAL SENSOR
FAN CONTROLLER
I2C/SMb address:98h
Place close at CPU side
PULL HIGH at SB END
Pull HIGH at Other End
W83L951D
PQFP128A_0.4MM
P/N 291000152610
2nd source = 274012400419
MiTAC
KBC(W83L951D)
Wednesday, November 30, 2005

1.WLAN + BT
2.AC+Battery
3.Charger
4.Caps Lock
5.MEMERY CARD IN
6.HDD + ODD
7.Num Lock

# LED




# FWH

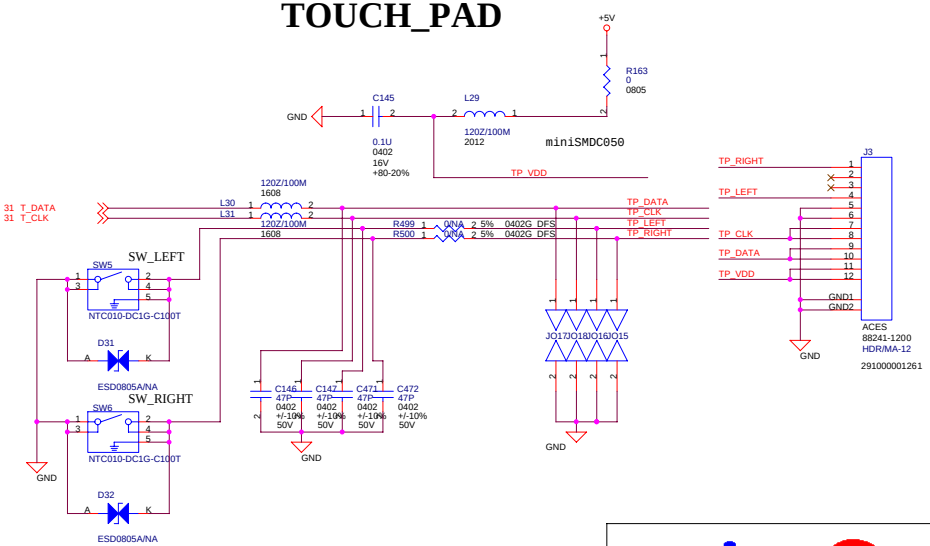



SYS BIOS Vendor List:

SST49LF004B : 283468470005

**TF041-TH-IC;FLASH,512K*8,LPC & FWH,SST49LF004B,PLCC32**

# TOUCH_PAD

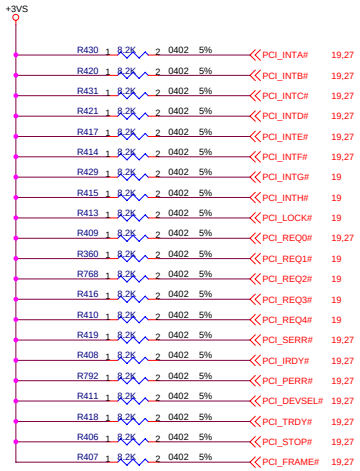



MiTAC

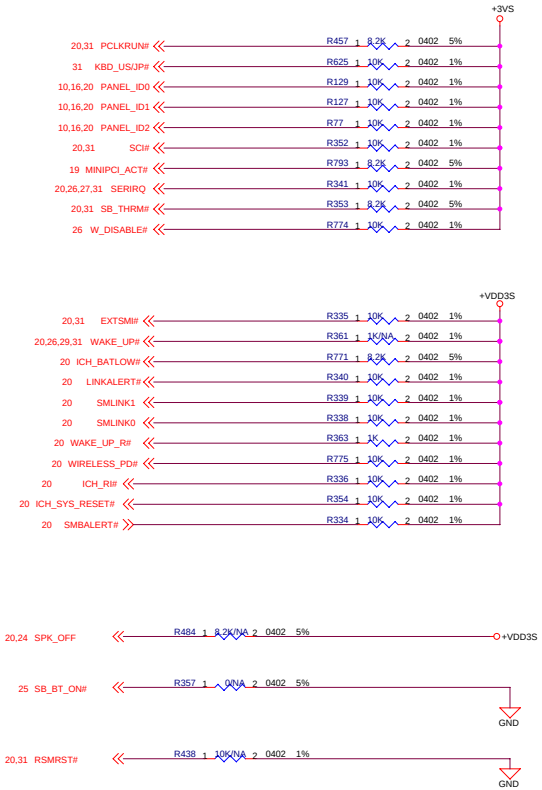
| | | | |
|---|---|---|---|
| Title | FWH/LED/TOUCH PAD | | |
| Size C | Document Number 8224 | | Rev R00 |
| Date: Wednesday, November 30, 2005 | Sheet 32 | of 41 | |

# PULL -HIGH

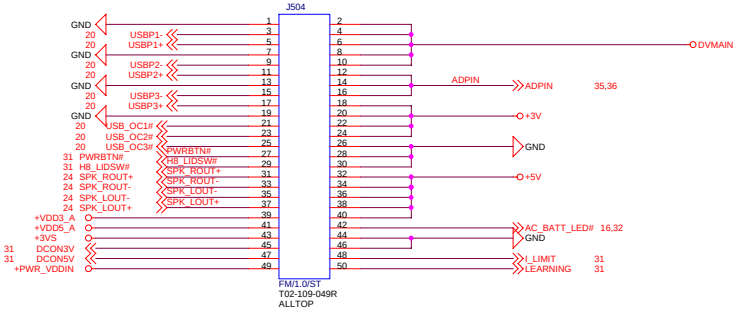
## PCI PULL HIGH




## GPIO PULL HIGH

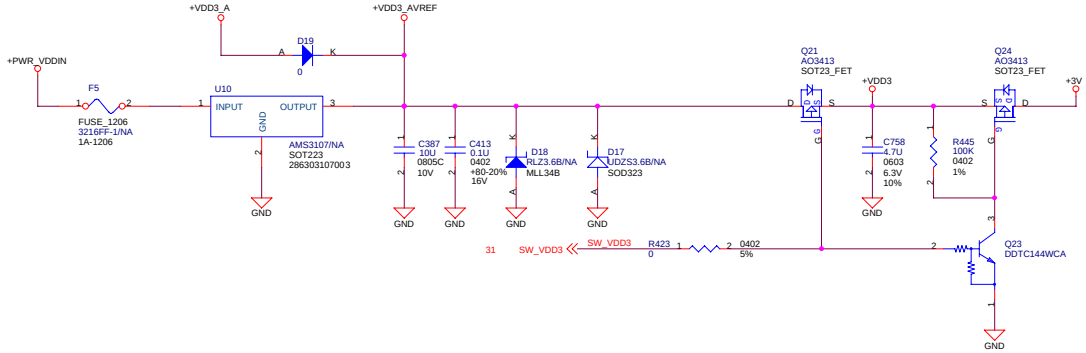



## BOARD TO BOARD CNN

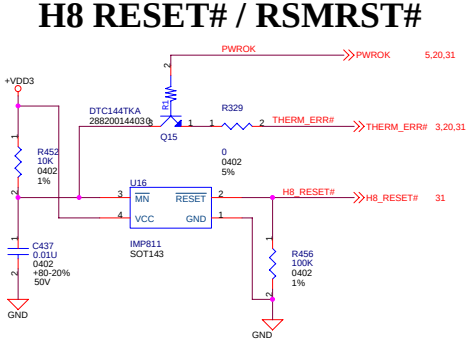


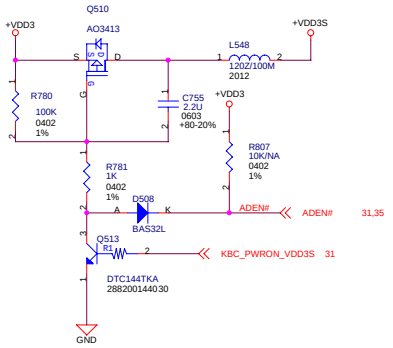

| | | | |
|---|---|---|---|
| Title | PULL HI/DAUGHTER BOARD CONNECTOR | | |
| Size C | Document Number 8224 | | Rev R00 |
| Date: Wednesday, November 30, 2005 | | Sheet 33 of 41 | |

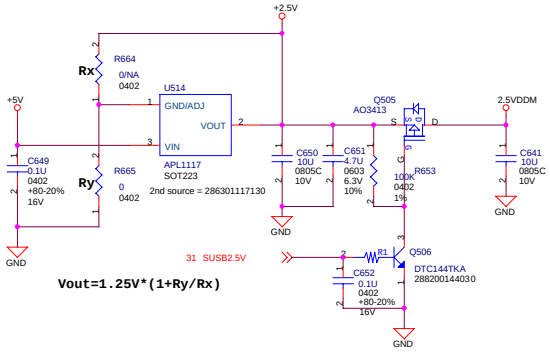
# POWER ON PERPHERIAL CIRCUIT

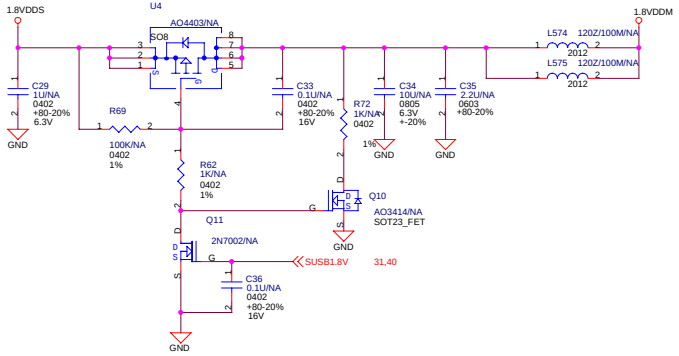


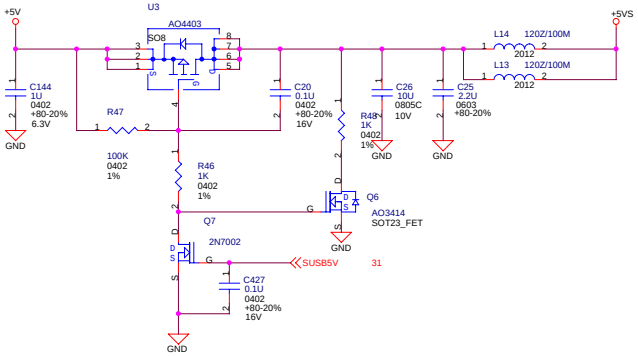

## H8 RESET# / RSMRST#

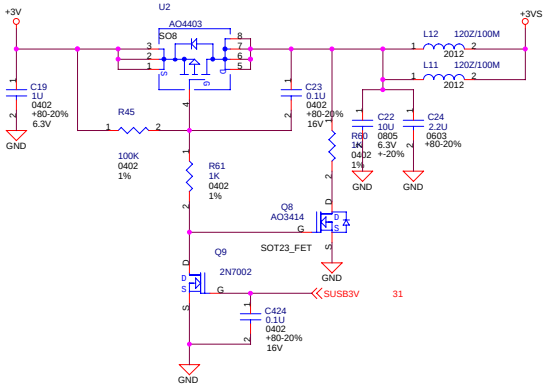


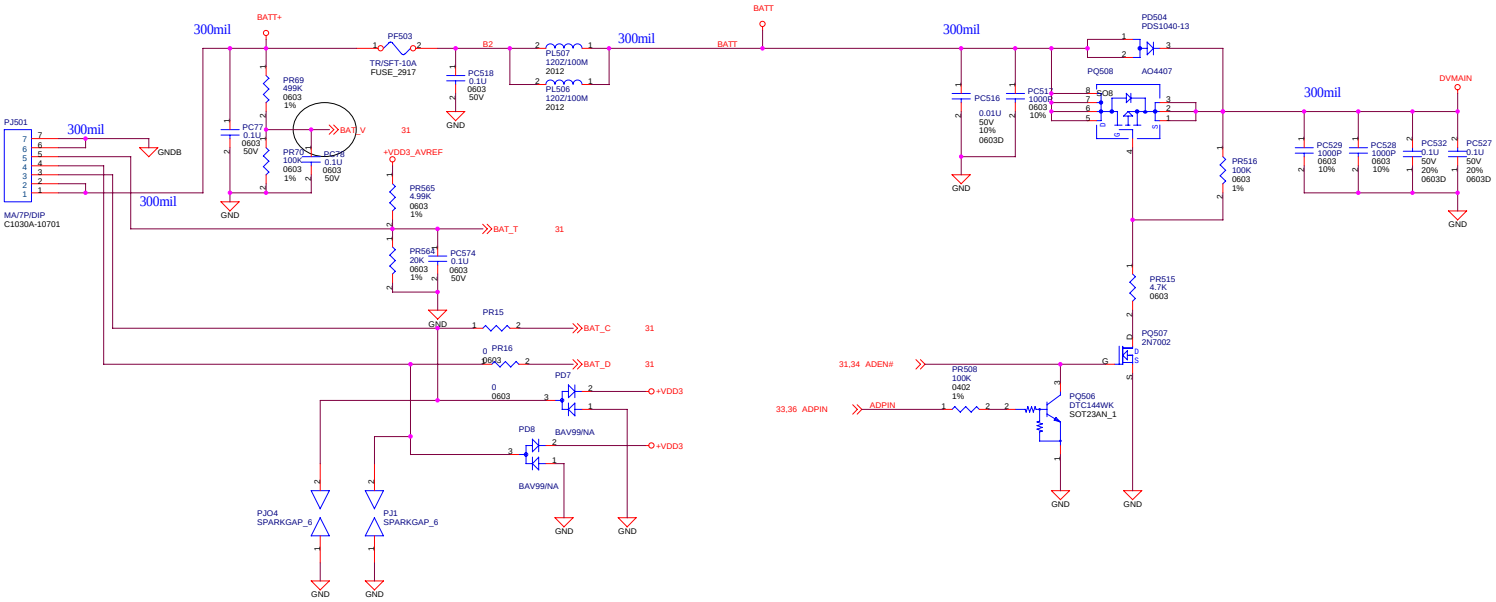

MiTAC

Title: PERPHERIAL

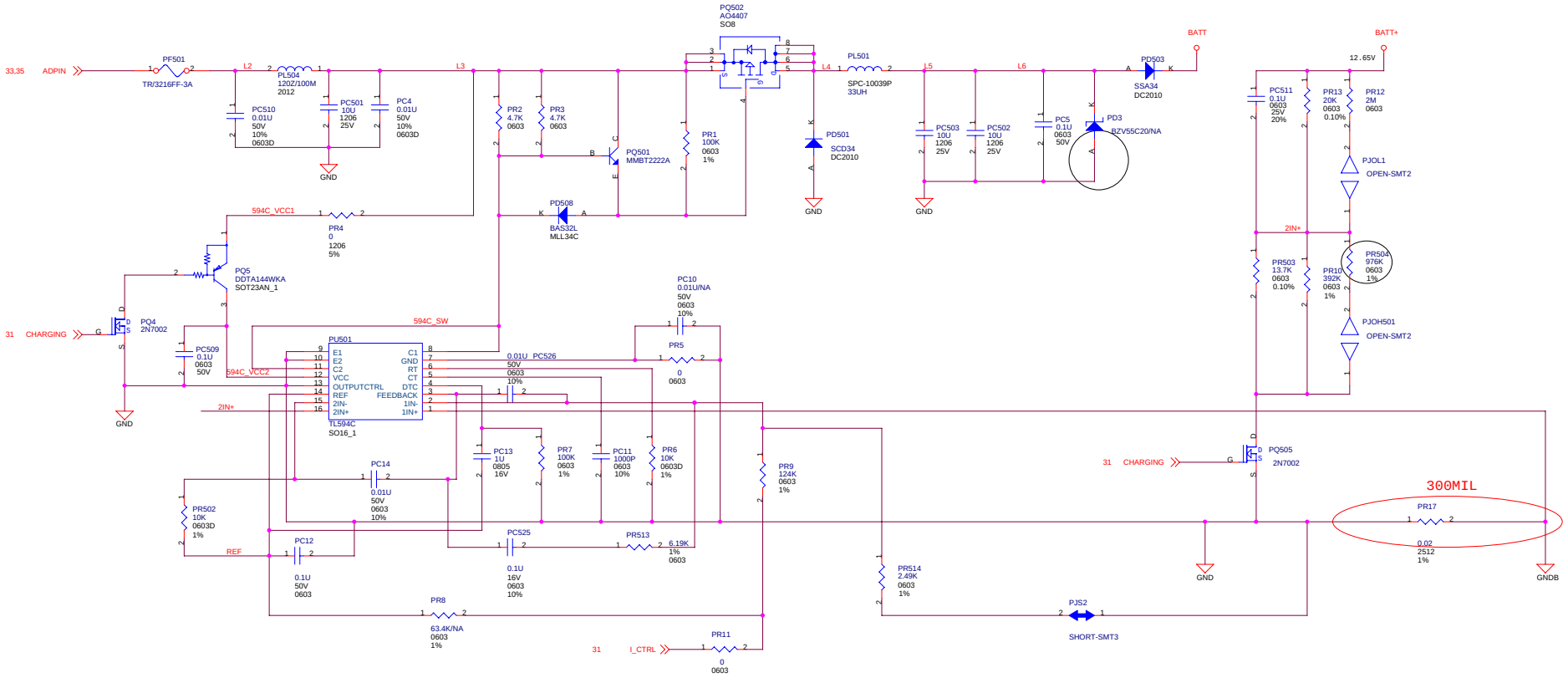
| Size | Document Number | Rev |
|---|---|---|
| C | 8224 | R00 |

Date: Wednesday, November 30, 2005 Sheet 34 of 41

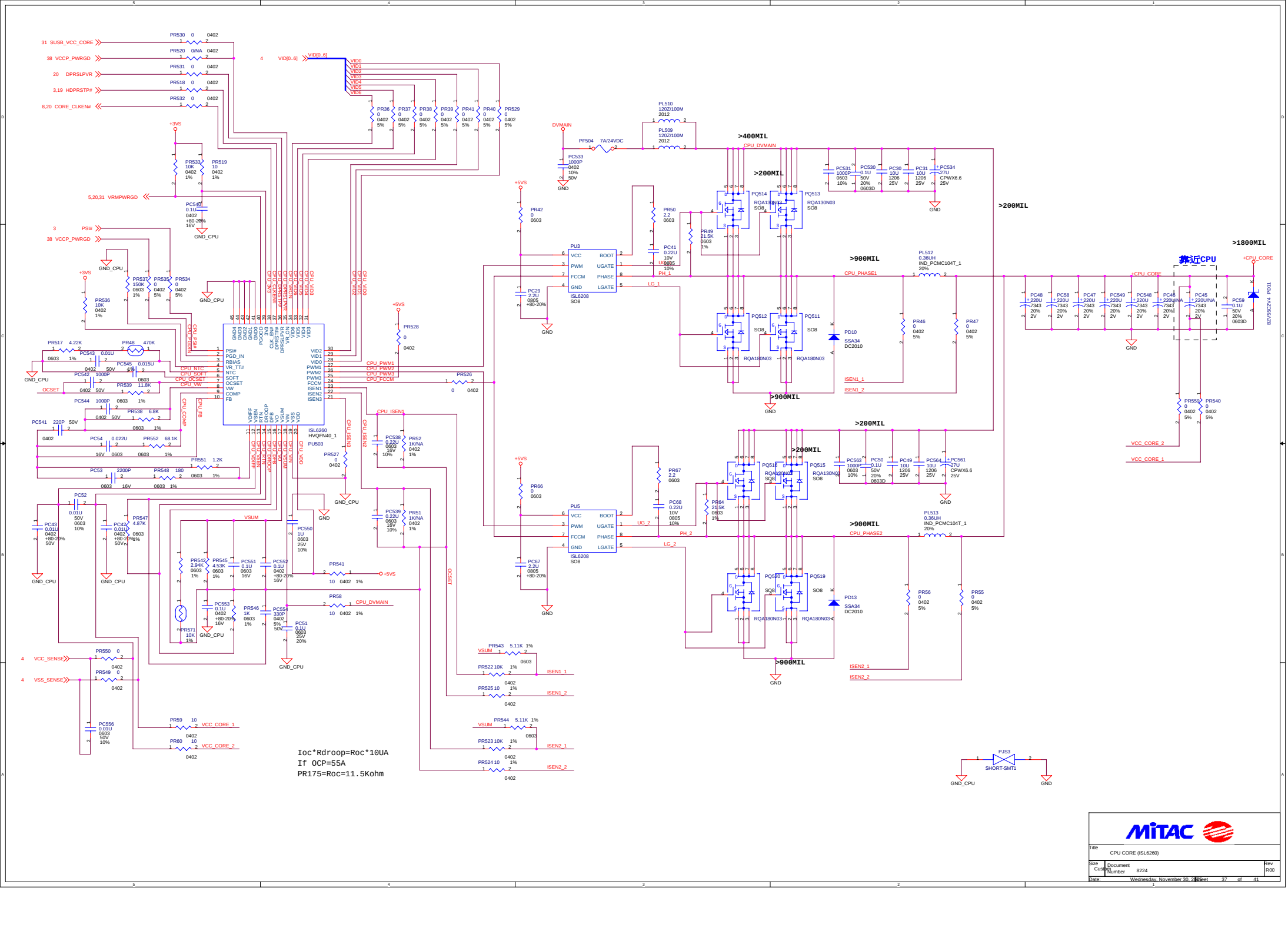
# DISCHARGE



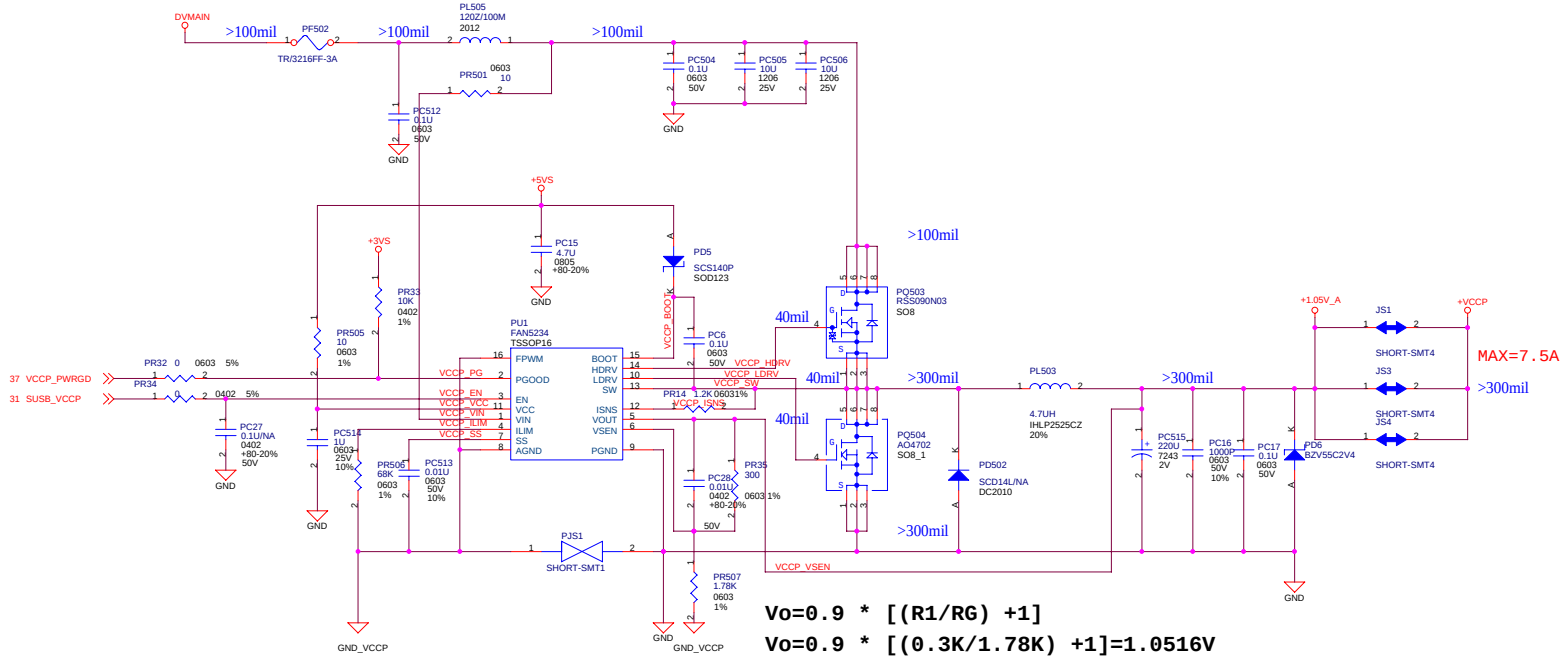

| | | | |
|---|---|---|---|
| Title | DISCHARGE | | |
| Size: Custom | Document Number: 8224 | | Rev: R00 |
| Date: Wednesday, November 30, 2005 | Sheet 35 of 41 | | |




| | | | |
|---|---|---|---|
| Title | CHARGER (TL594C) | | |
| Size C | Document Number 8224 | | Rev R00 |
| Date: Wednesday, November 30, 2005 | Sheet 36 of 41 | | |



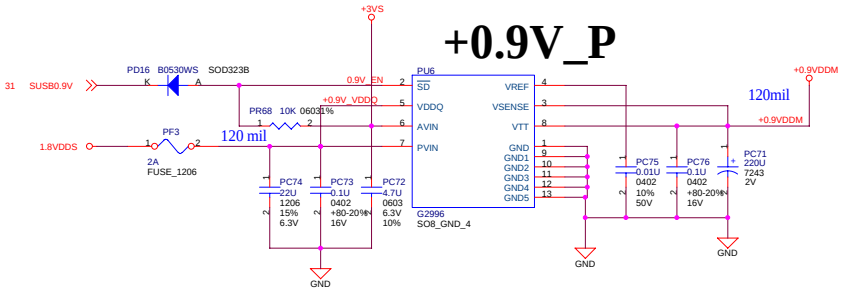

| | |
|---|---|
| Title | CPU CORE (ISL6260) |
| Size | Custom |
| Document Number | 8224 |
| Rev | R00 |
| Date: | Wednesday, November 30, 2005 |
| Sheet | 37 of 41 |




**Vo=0.9 * [(R1/RG) +1]**

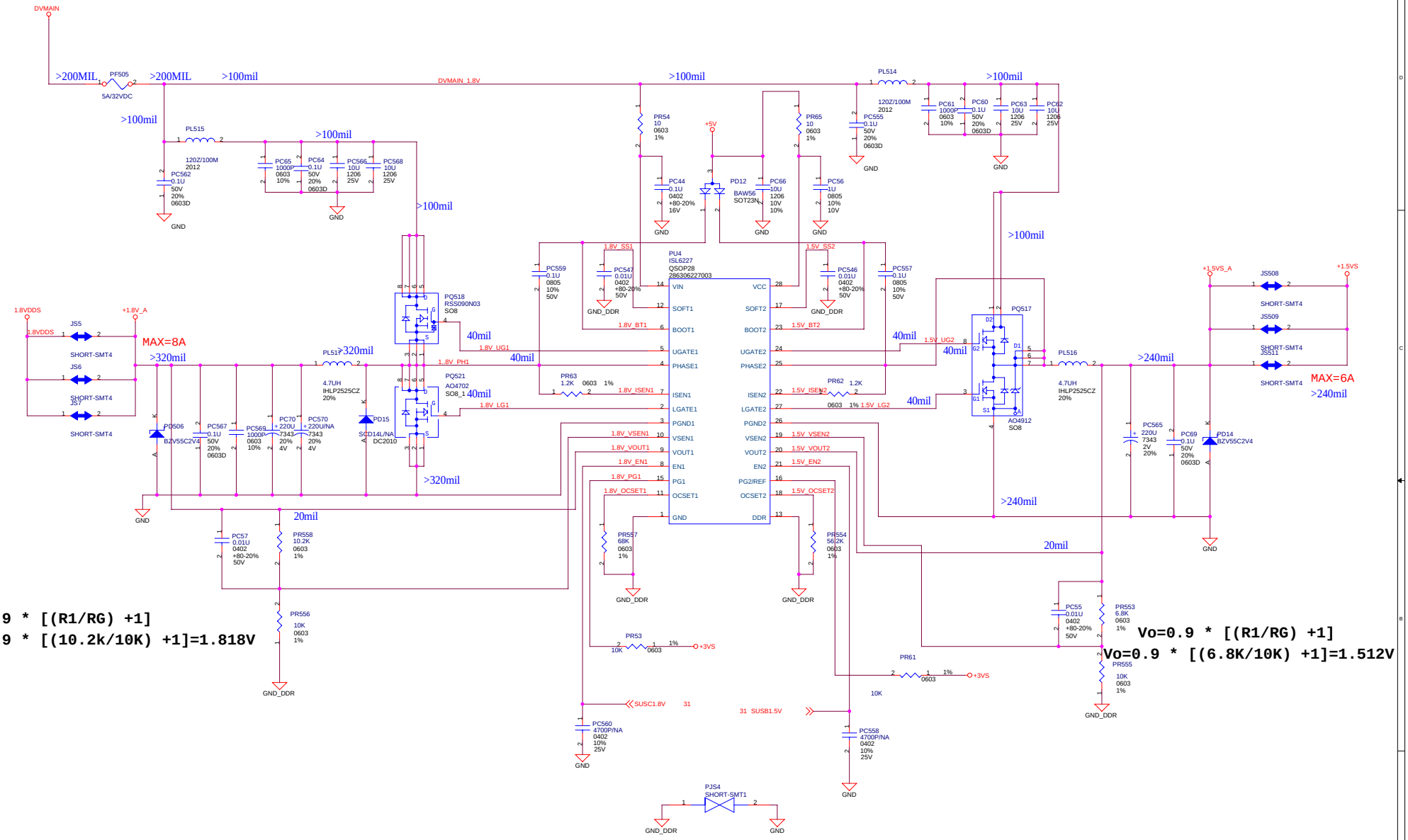
**Vo=0.9 * [(0.3K/1.78K) +1]=1.0516V**

# +0.9V_P




| | | | |
|---|---|---|---|
| Title | VCCP(FAN5234) / 0.9V(G2996) | | |
| Size C | Document Number 8224 | | Rev R00 |
| Date: Wednesday, November 30, 2005 | Sheet 38 of 41 | | |

# +1.8V_P / +1.05V_P

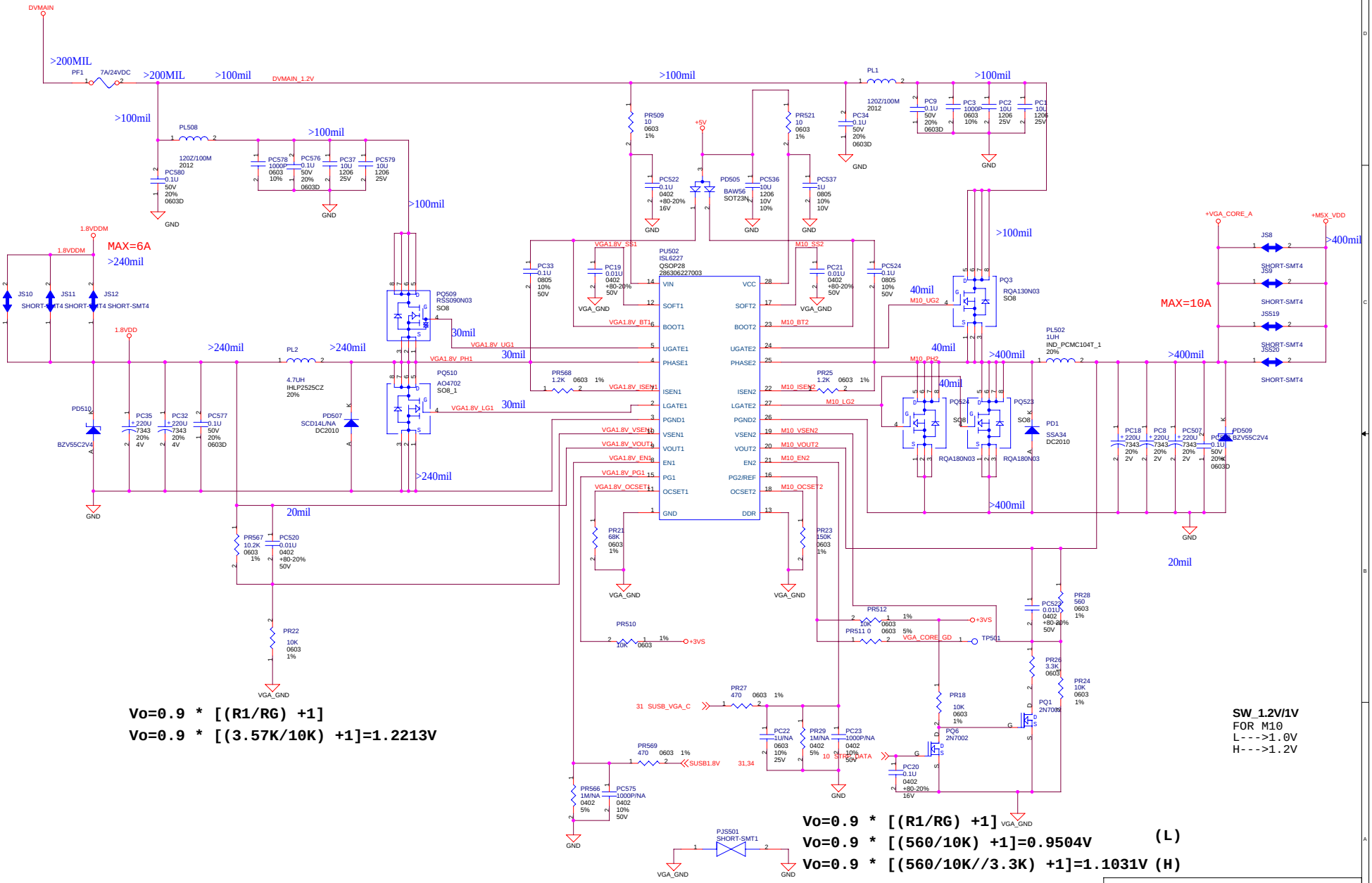



**Vo=0.9 * [(R1/RG) +1]**
**Vo=0.9 * [(10.2k/10K) +1]=1.818V**

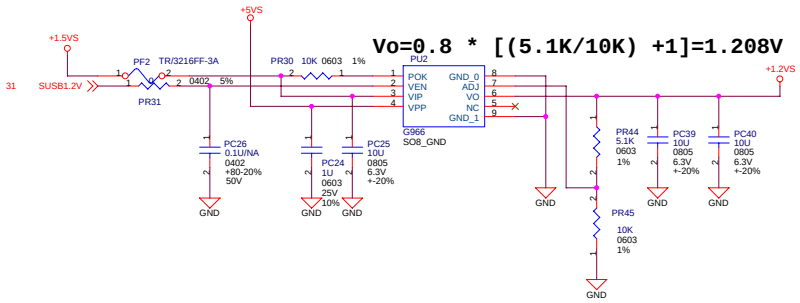
**Vo=0.9 * [(R1/RG) +1]**
**Vo=0.9 * [(6.8K/10K) +1]=1.512V**

| | | | |
|---|---|---|---|
| MiTAC | | | |
| Title | +1.8V/+1.5V(ISL6227) | | |
| Size C | Document Number 8224 | | Rev R00 |
| Date: | Wednesday, November 30, 2005 | Sheet 39 of 41 | |

# VGA_CORE / +1.2V_P




| | | | |
|---|---|---|---|
| Title | VGA_CORE (1.2V/1.0V) ISL6227 | | |
| Size C | Document Number 8224 | | Rev R00 |
| Date: Wednesday, November 30, 2005 | Sheet 40 of 47 | | |



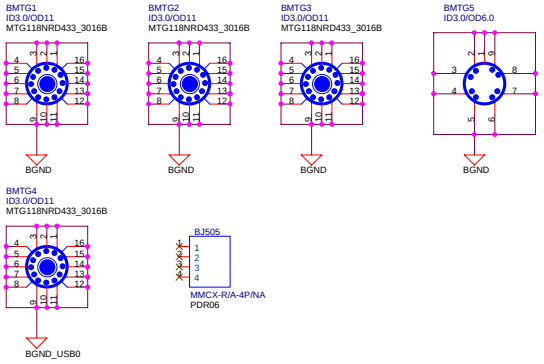

| | | |
|---|---|---|
| Title | VGA(1.8V) FAN5234 | |
| Size C | Document Number 8224 | Rev R00 |
| Date: Wednesday, November 30, 2011 | Sheet 41 of 47 | |

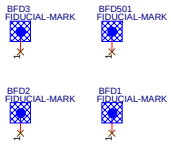
# 8224 Daughter Board R00

**PROJECT CODE- GXXX** **PCB P/N:XXXXXXXXXXXX**
**PRODUCT CODE- XXXX** **ASSY P/N:XXXXXXXXXXXX**

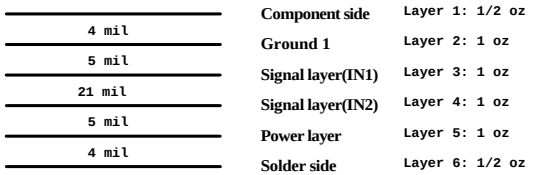

PAGE 1 TITLE
PAGE 2 CONNECTER
PAGE 3 USB CONN
PAGE 4 +3VS/+5VS(ISL6232)


| REVISION | TAPEOUT DAY | HISTORY |
|---|---|---|
| **R00** | 2004/09/13 | Initial Release. |
| **R0A** | | |
| **R01** | | |




**PCB STACK 1.2mm**




**Differential Pair :**

**USB -->6/6/6 Z(diff) = 90 ohm**

| DRAWN | DESIGN | CHECK | ISSUES |
|---|---|---|---|
| | | | |

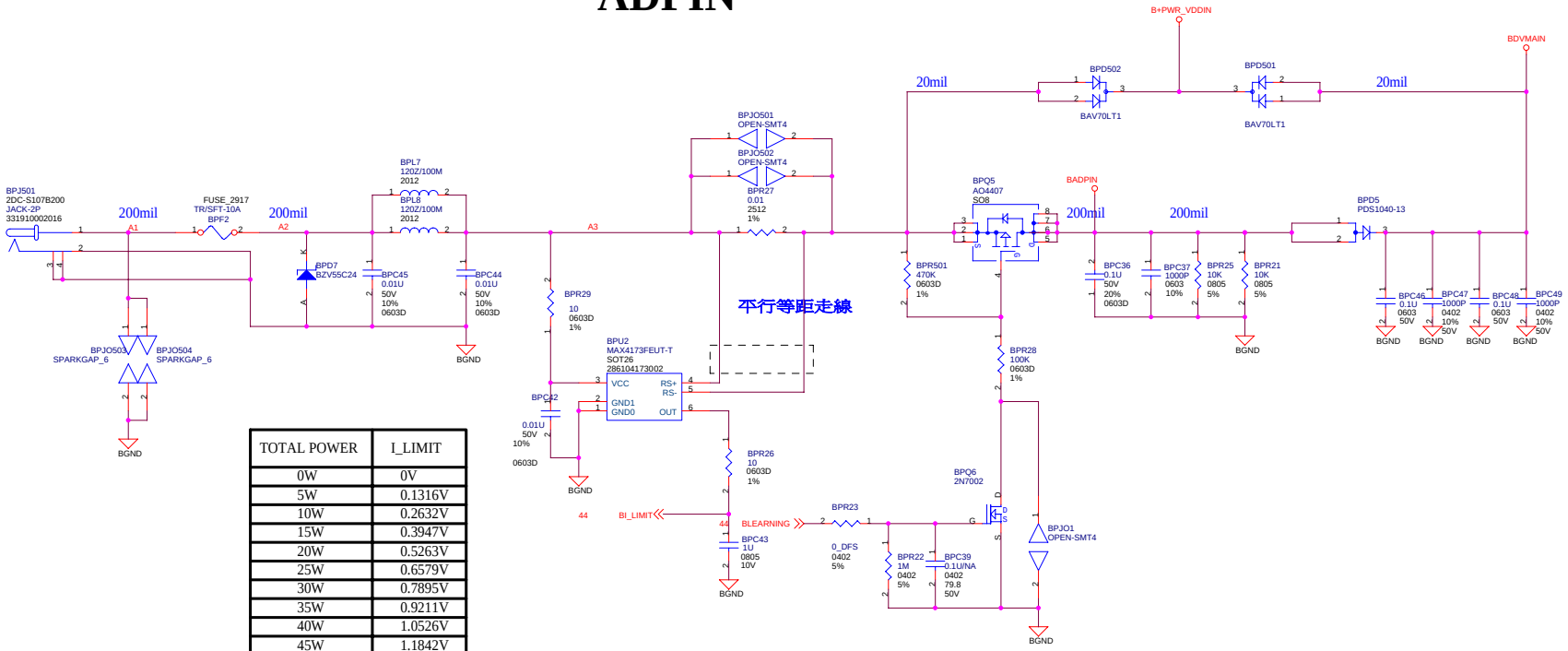
MiTAC

Title: DAUGHTER BOARD TITTLE

Size: C | Document Number: 8224 | Rev: R00

Date: Wednesday, November 30, 2005 | Sheet 42 of 47

# ADPIN

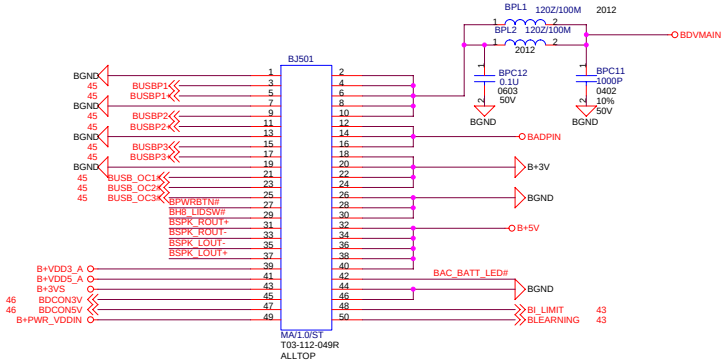



| TOTAL POWER | I_LIMIT |
|---|---|
| 0W | 0V |
| 5W | 0.1316V |
| 10W | 0.2632V |
| 15W | 0.3947V |
| 20W | 0.5263V |
| 25W | 0.6579V |
| 30W | 0.7895V |
| 35W | 0.9211V |
| 40W | 1.0526V |
| 45W | 1.1842V |
| 50W | 1.3158V |
| 55W | 1.4474V |
| 60W | 1.5789V |
| 65W | 1.7105V |
| 70W | 1.8421V |
| 75W | 1.9737V |
| 80W | 2.1052V |
| 85W | 2.2368V |
| 90W | 2.3684V |

MiTAC

| | | |
|---|---|---|
| Title | ADAPTOR/ VMAIN | |
| Size C | Document Number 8224 | Rev R00 |
| Date: Wednesday, November 30, 2016 | Sheet 43 of 47 | |

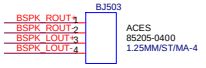
# BOARD TO BOARD CNN



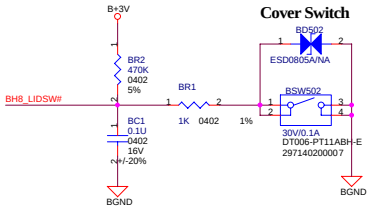

| | |
|---|---|
| DVMAIN | 6 PIN |
| +5V | 6 PIN |
| +3V | 4 PIN |
| +PWR_VDDIN | 1 PIN |
| +VDD3_A | 1 PIN |
| +VDD5_A | 1 PIN |
| GND | 12 PIN |

PWR:GND=19:12

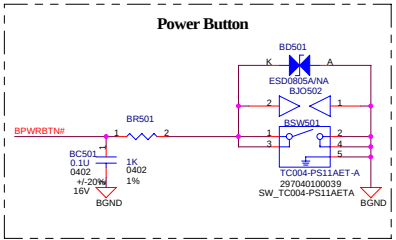
## SPEAKER



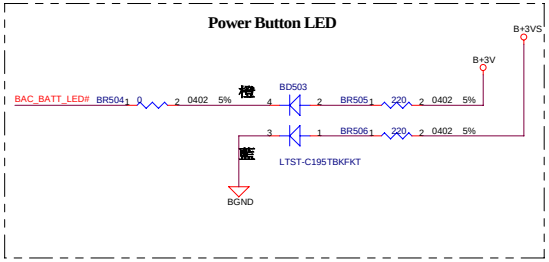

## Cover Switch




## Power Button

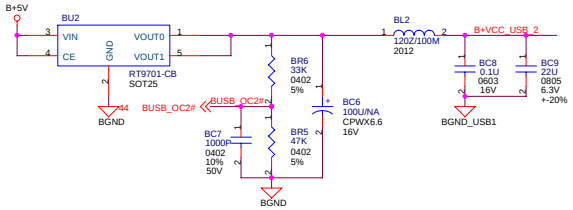


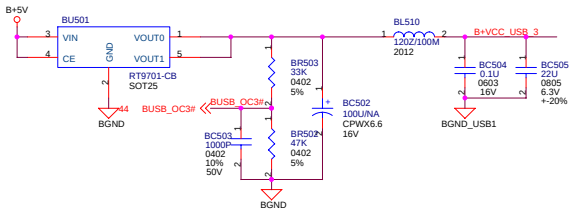

## Power Button LED

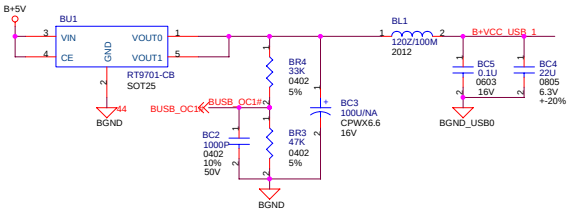


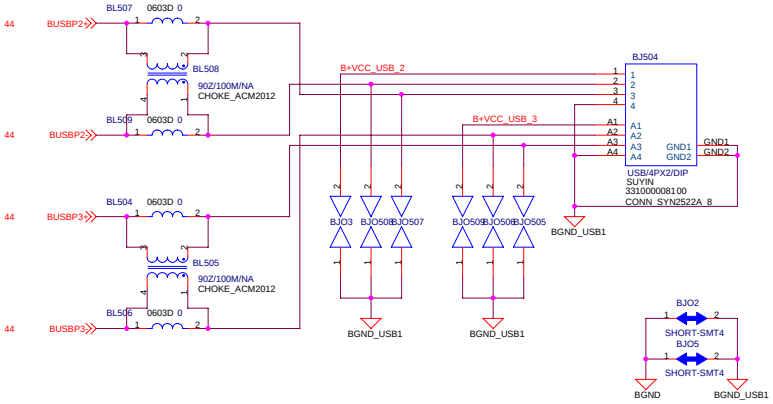

| | | | |
|---|---|---|---|
| Title | DAUGHTER CONNECTOR | | |
| Size C | Document Number 8224 | | Rev R00 |
| Date: Wednesday, November 30, 2005 | Sheet 44 of 47 | | |

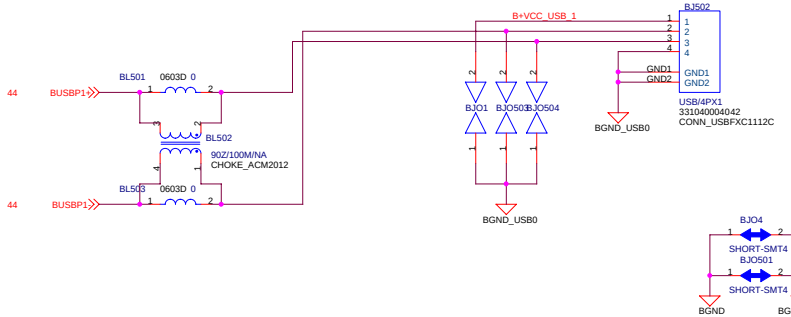
# USB CONNECTOR




MiTAC

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|---|---|---|
| Title | DAUGHTER BOARD USB CONNECTOR | |
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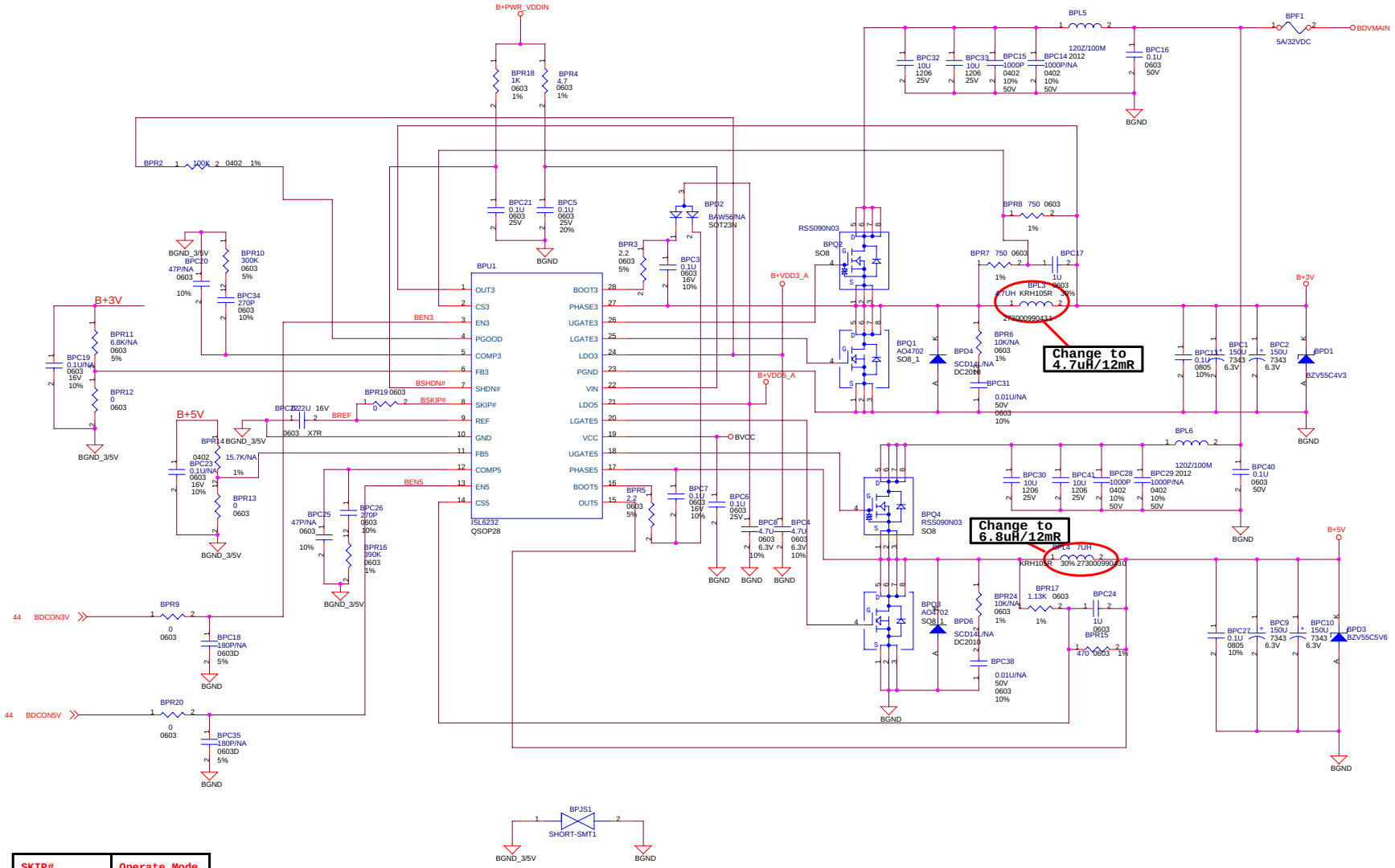


| SKIP# | Operate Mode |
|---|---|
| VCC | PWM |
| REF | Ultrasonic |
| GND | Pluse Skip |

| SHDN# | EN3 | EN5 | LDO3 | LDO5 | 3.3V Buck | 5V Buck |
|---|---|---|---|---|---|---|
| LOW | X | X | OFF | OFF | OFF | OFF |
| High | LOW | LOW | ON | ON | OFF | OFF |
| High | LOW | High | ON | ON | OFF | ON |
| High | High | LOW | ON | ON | ON | OFF |
| High | High | High | ON | ON | ON | ON |
| High | High | REF | ON | ON | ON | ON after 3.3V up |
| High | REF | High | ON | ON | ON after 3.3V up | ON |

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Title: +3VS/+5VS(ISL6232)

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| REVISION | TAPEOUT DAY | HISTORY |
|---|---|---|
| R00 | | 1.Modify CLK differential signal from 33 ohm to 22 ohm<br>2.Modify R637 from 100 ohm to 470 ohm .ATI M56p clk must be under 1.2V<br>3.DNS VRAM pull hi resistor with over 350MHZ R271 ,R272 ,R275 ,R264 ,R266 ,R273 ,R267 ,R268 ,R262 ,R265 ,R276 ,R274 ,R277 ,R270 ,R269 ,R280 ,R260 ,R279 ,R263 ,R278 ,R259 ,R282 ,R257 ,R281 ,R258 ,R283 ,R261 ,R286 ,R284 ,C306 ,R151 ,R103 ,R102 ,R109 ,R117 ,R108 ,R105 ,R106 ,R112 ,R110 ,R101 ,R107 ,R104 ,R114 ,R111 ,R149 ,R113 ,R147 ,R118 ,R145 ,R116 ,R148 ,R120 ,R144 ,R115 ,R150 ,R119 ,R143 ,R146 ,C114.<br>4.Add panel EDID pin on connector J1<br>5.Add CRT detect pin pull hi<br>6.Add TI card reade IRQ#,prevent all device use the same IRQ#<br>7.Add 2 buffer 2n7002 with ICH_PTN# and EXTSMI# prevent KBC power lose.<br>7.Add 2 buffer 2n7002 with ICH_PTN# and EXTSMI# prevent KBC power lose. |

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Title <Title>

Size C | Document Number <Doc> | Rev R0A

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