

PENTIUM II  
MOBILE MODULE

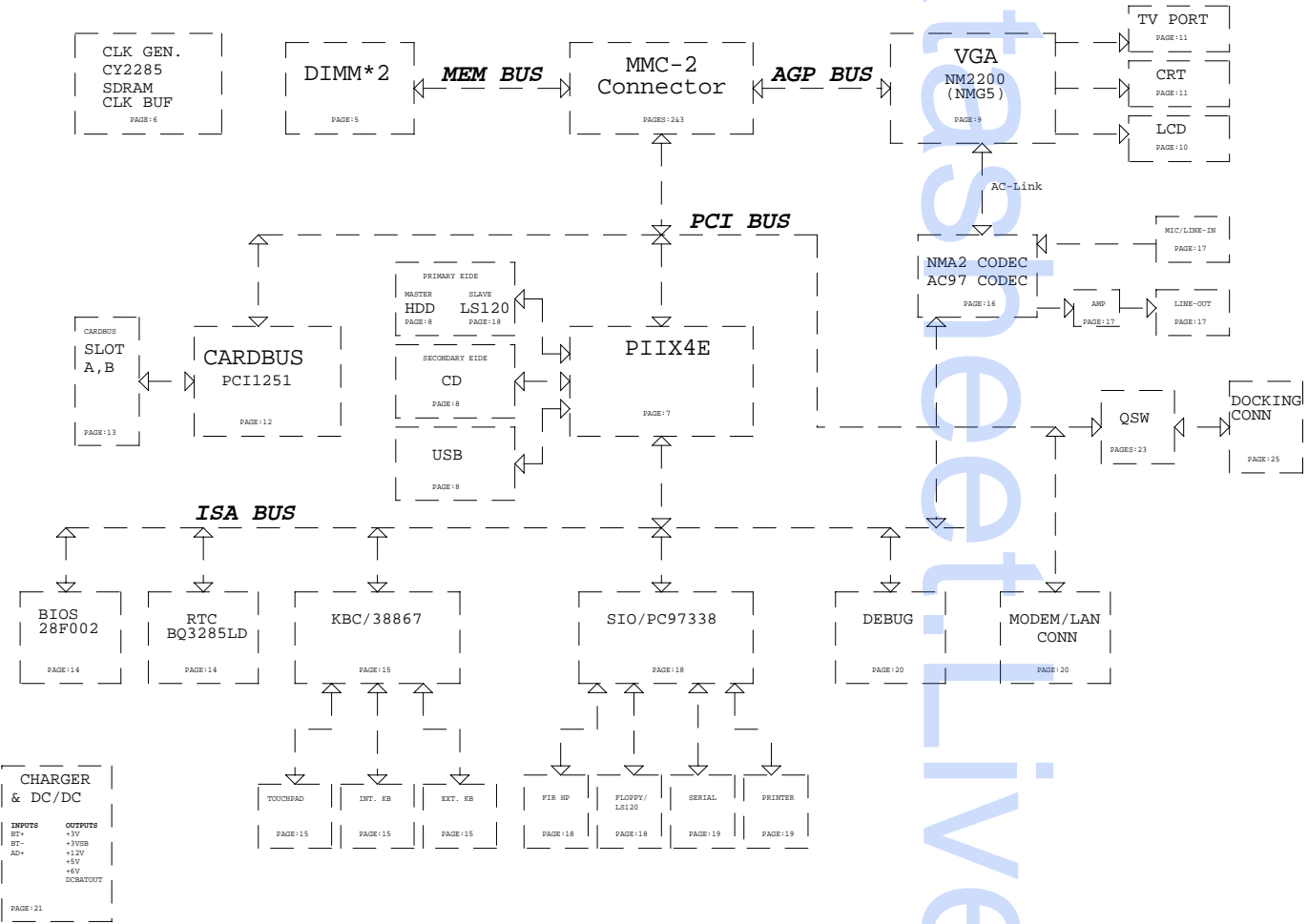
VREG TAG

CPU L2  
CACHE

443BX  
NORTH  
BRIDGE

SHEET INDEX

Sheet	Sheet Name	Description
1	LINK	ARCHITECTURE BLOCK DIAGRAM
2	NMC2A.SCH	NMC-2 CONNECTOR (CPU, DRAM I/F)
3	NMC2B.SCH	NMC-2 CONNECTOR (PCI/AGP I/F)
4	IDRAM.SCH	DIMM SELECT, CAPACITORS, RESISTORS
5	DIMM.SCH	DIMM SOCKETS
6	CLOCKEN.SCH	CLOCK GENERATOR
7	PIIX4.SCH	PIIX4 SOUTH BRIDGE
8	HDD.SCH	HDD, CPROM, USB CONNECTORS
9	VGA.SCH	VIDEO CONTROLLER (NM200/NMG5)
10	LCD.SCH	LCD CONNECTOR
11	CRT.SCH	CRT & TV PORT CONNECTOR
12	CARBUS.SCH	PCMCIA/CARBUS CONTROLLER (PC11250)
13	PCM_CONN.SCH	PCMCIA/CARBUS CONNECTOR
14	BIOS.SCH	BIOS/RTC
15	KBC.SCH	KBC M38867, INT KEYBOARD, & TOUCH PAD
16	AUD101.SCH	AUDIO CODECS
17	AUD102.SCH	AUDIO AMPLIFIER AND JACKS
18	SIO.SCH	SUPER I/O CHIP NP97338, IR, FLOPPY CONN
19	POWER.SCH	SERIAL & PARALLEL PORTS
20	GFINGER.SCH	GOLDEN FINGER & MODEM CONNECTORS
21	POWER1.SCH	CHARGER & DC/DC CONNECTOR
22	POWER2.SCH	POWER MOS, LED CONNECTOR, COVER SWITCH
23	DOCK_QSW.SCH	DOCKING/UNDOCKING Q-SWITCHES
24	DOCK_SRA.SCH	DOCKING/UNDOCKING SEQUENCE
25	DOCK_CONN.SCH	DOCKING CONNECTOR
26	MOGATES.SCH	GATES NOT USED
27	HOLE.SCH	SCREEN HOLES



720

V1.0

12/2/98

98204-1


48.42C01.001

720

PCB LAYER

- L1 : SIGNAL1 (TOP)
- L2 : GND
- L3 : SIGNAL2 (IN1)
- L4 : SIGNAL3 (IN2)
- L5 : VCC
- L6 : SIGNAL4 (IN3)
- L7 : GND
- L8 : SIGNAL5 (BOT)

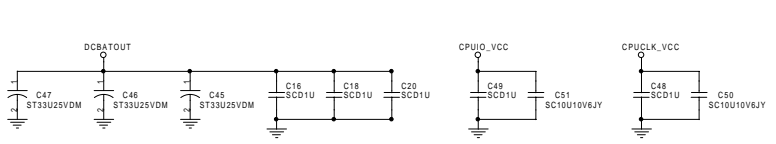
720.SCH

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5701 Airport Road  
Temple, Texas

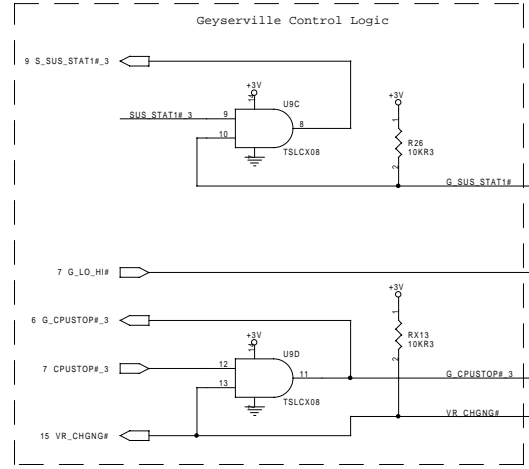
File: BLOCK DIAGRAM  
Size C Document Number 700+ Rev .  
Date: Thursday, December 03, 1998 Sheet 1 of 27

# MMC-2 Connector

(CPU & DRAM Interfaces)



VCC Regulator Input (5-21V)  
 CPU0\_VCC CMOS Open Drain P0A (2.5V)  
 CPUCLK\_VCC CPU Clock Driver (2.5V)

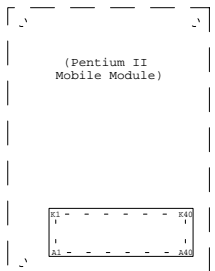


## Mobile Module Connector 2 (MMC-2)

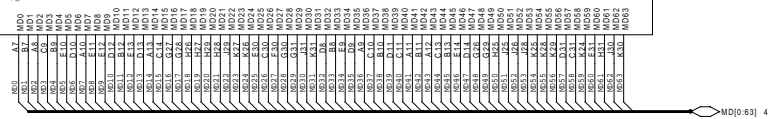
400 Pin BGA

Part 1 of 2

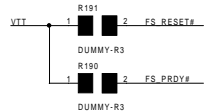
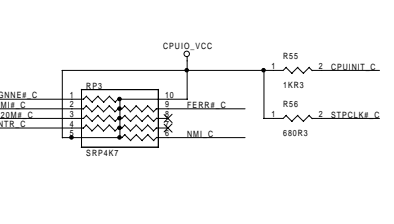
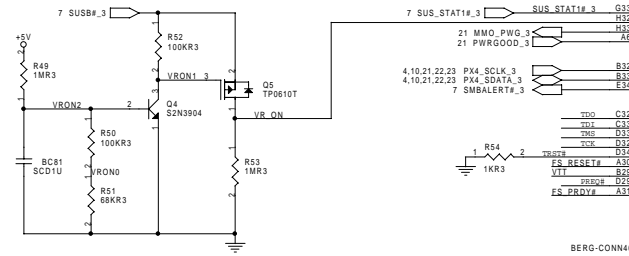
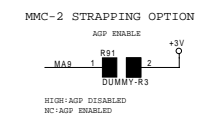
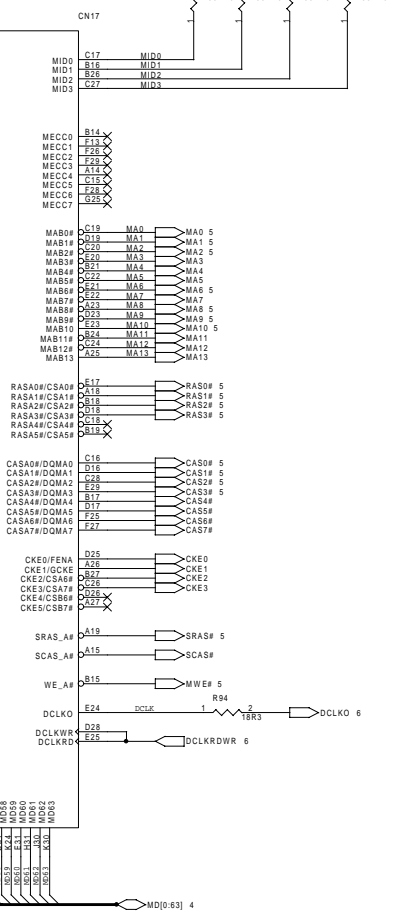
Processor Interface



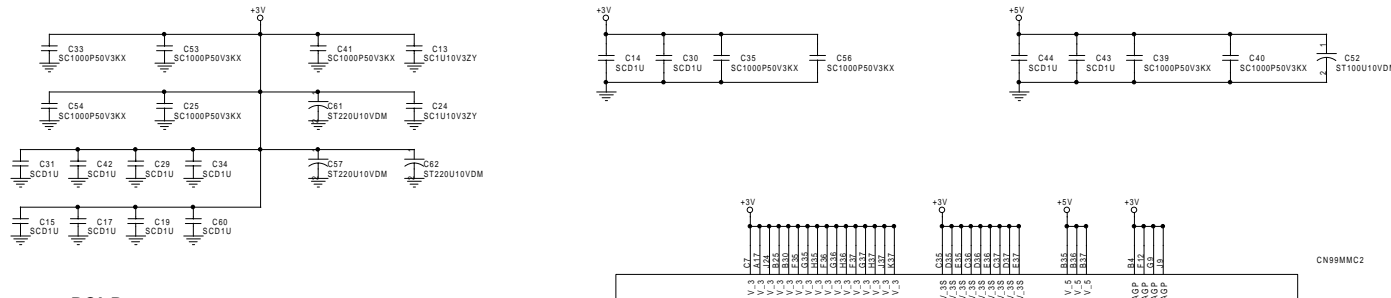
Memory Data Bus



DRAM Interface



MMC-2  
Connector  
(PCI & AGP Interfaces)

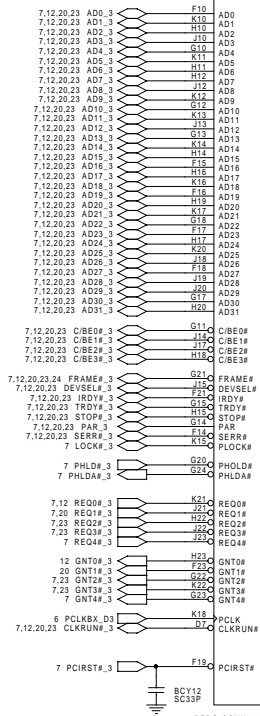


PCI Resources

REQ#/GNT	DEVICE
PHLD#/PHLDA#	PIIX4
REQ#/GNT0#	NM2200
REQ1#/GNT1#	PCI Modem
REQ2#/GNT2#	Dock
REQ3#/GNT3#	Dock
REQ4#/GNT4#	Unused

IDSEL	DEVICE
AD15	PIIX4
GAD16	NM2200
AD17	PCI1251
AD19	PCI Modem

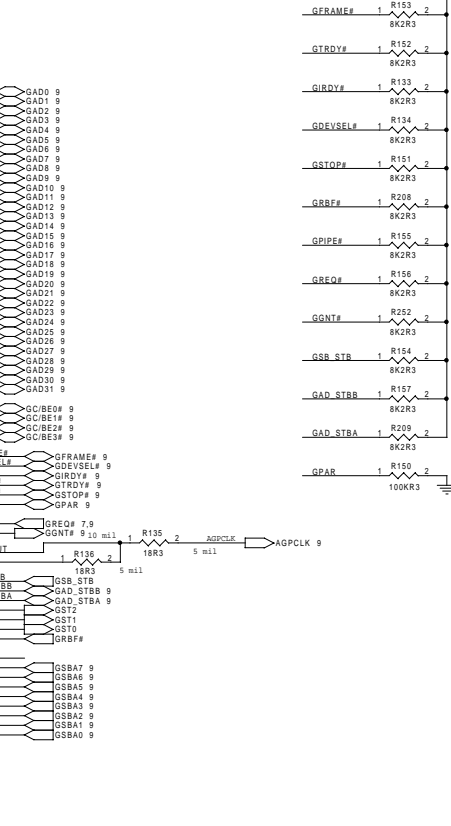
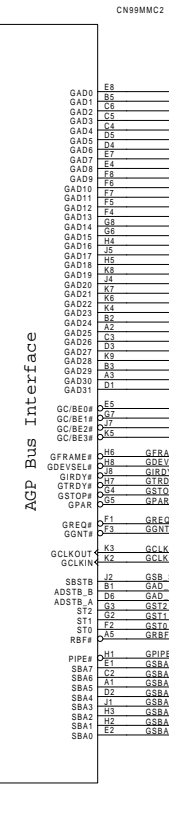
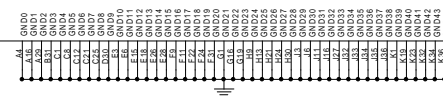
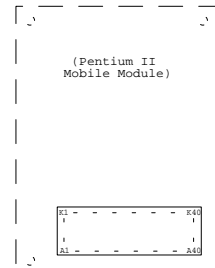
INTERRUPT	DEVICE
INTA	NM2200-Audio (NM2200-Video)
INTB	PCI1251 PCI Modem Dock
INTC	Dock PCI Modem (NM2200-Video)
INTD	USB



Mobile Module Connector 2  
(MMC-2)

400 Pin BGA

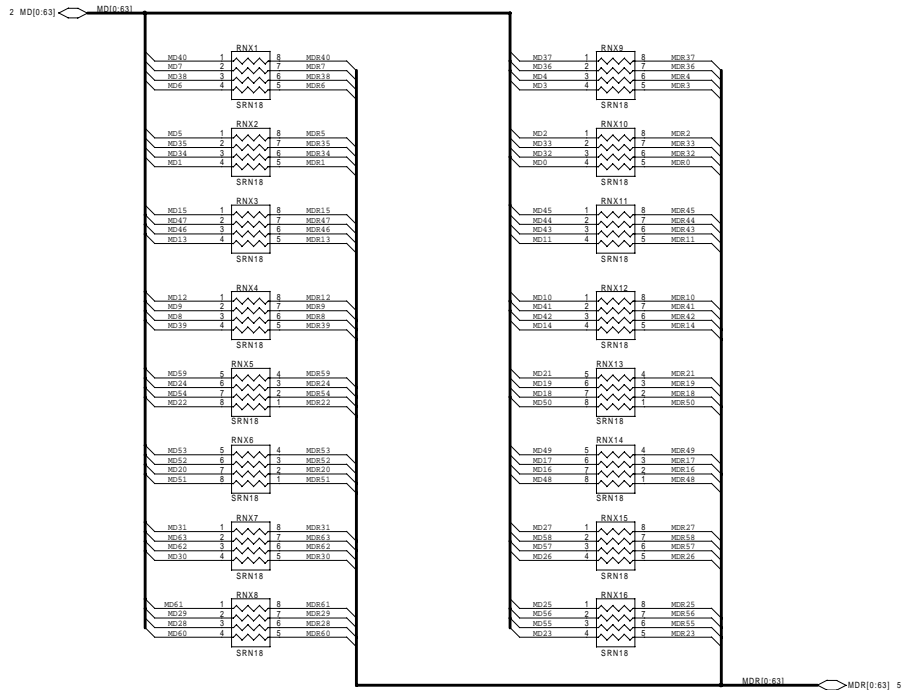
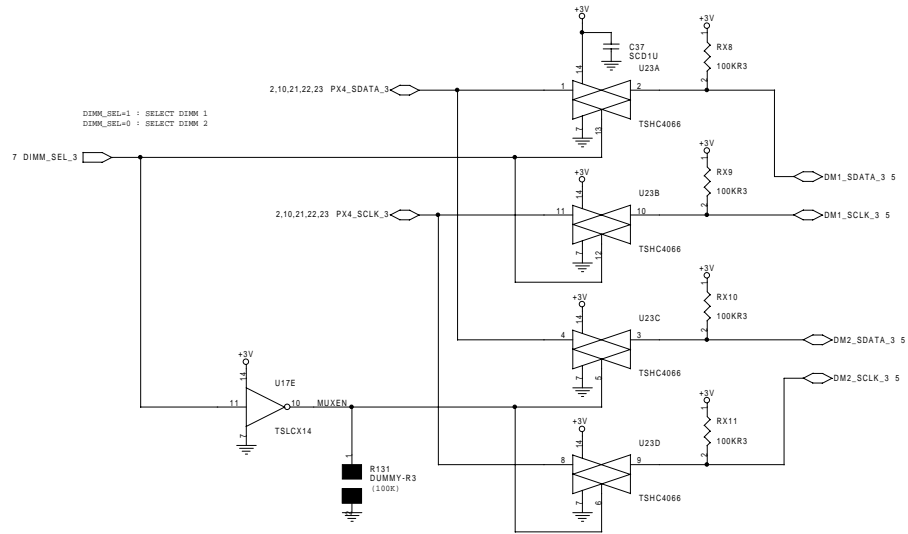
Part 2 of 2



MMC2B.SCH

		Acer Advanced Labs 5701 Airport Road Temple, Texas
File	MMC-2 CONNECTOR (Part 2)	
Size	Document Number	Rev
C	700+	
Date:	Thursday, December 03, 1998	Sheet 3 of 27

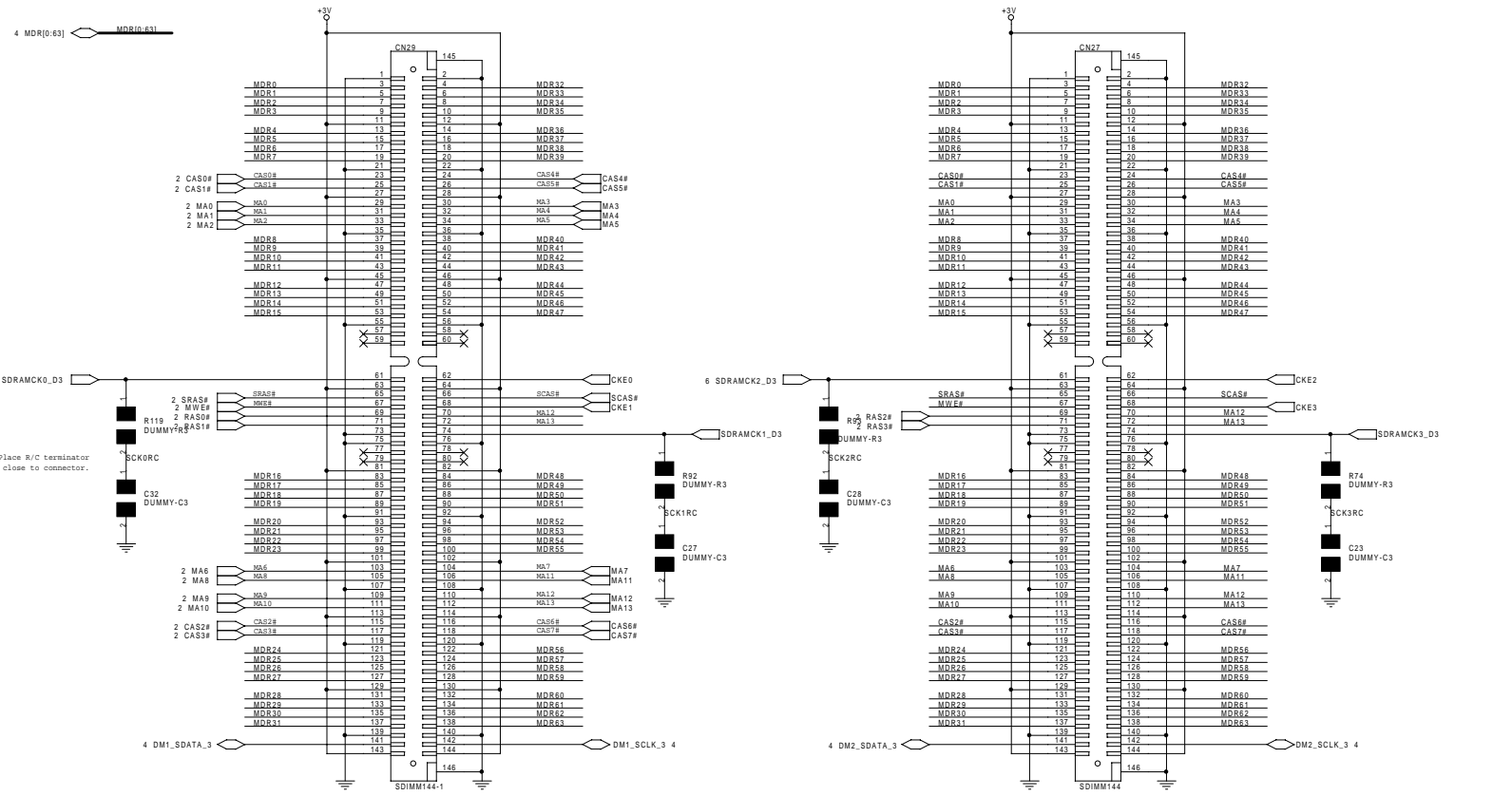
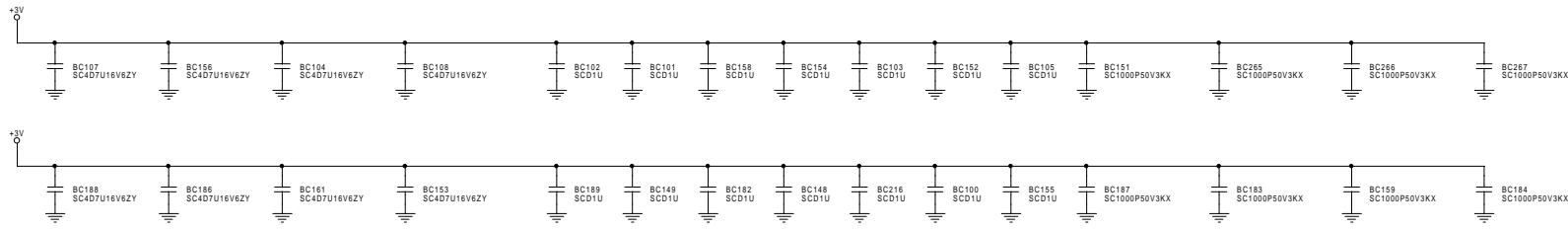
# DIMM Select, Terminations



DRAM\_SCH

		Acer Advanced Labs 5701 Airport Road Temple, Texas	
File DIMM SELECT, RESISTORS			
Size C	Document Number 720	Date: Thursday, December 03, 1998	Rev ..
Sheet 4		of 27	

# SO-DIMM Module Connectors

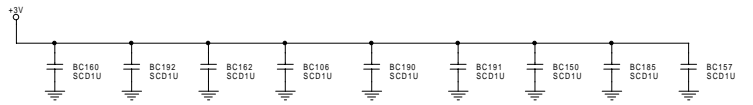


Place R/C terminator close to connector.

EDD\_Sig#  
RASX#  
CASX#

SDRAM Signals  
CS#  
DMX

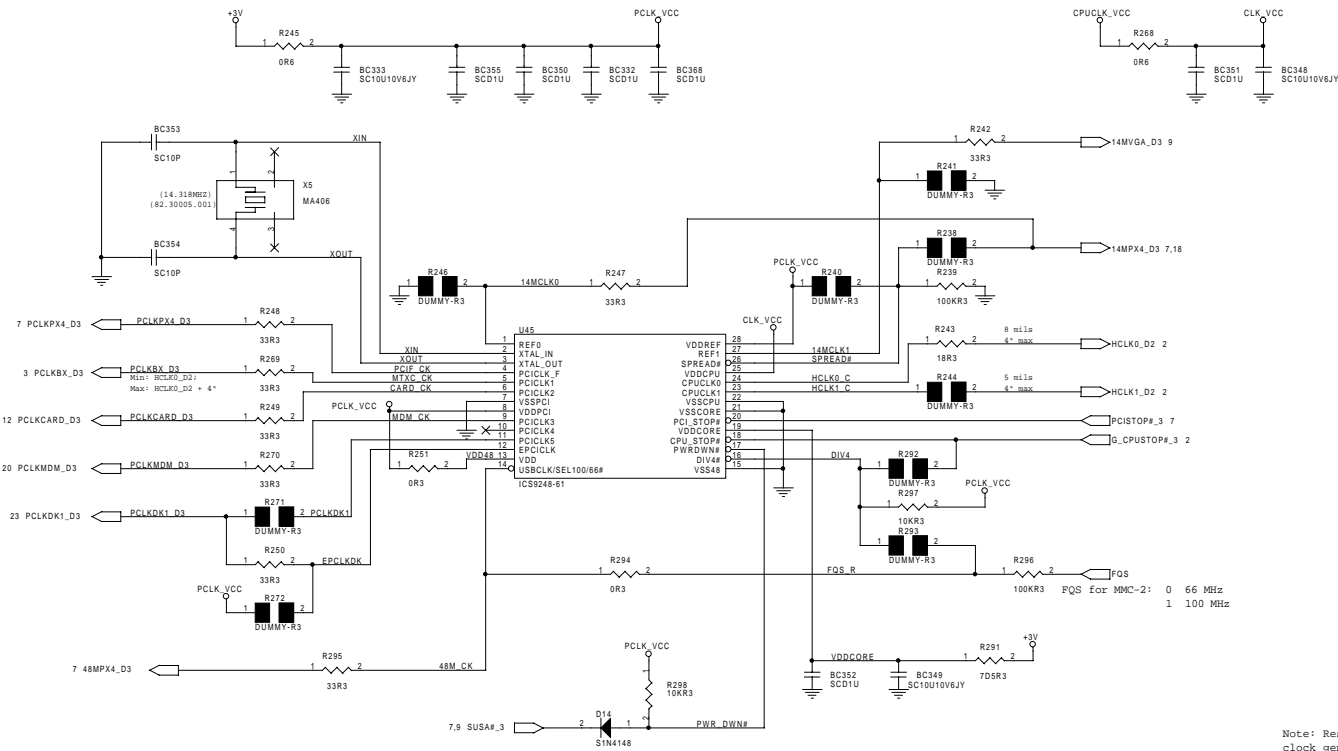
REVERSE DIMM CONN  
62.10017.051



DIMM.SCH

<b>ACER</b>		Acer Advanced Labs 5701 Airport Road Temple, Texas	
File: SO-DIMM SOCKETS			
Size	Document Number	Rev	
C	700+	.	
Date:	Thursday, December 03, 1998	Sheet	5 of 27

# Clock Synthesizer & SDRAM Clock Buffer



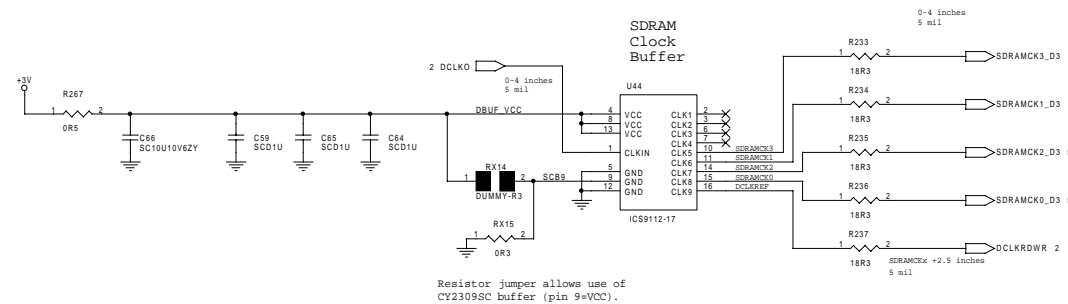
LAYOUT NOTE: Place series resistors near clock drivers.

SPREAD SPECTRUM ENABLE/DISABLE

	R240	R239
ENABLE	OPEN	100K
DISABLE	100K	OPEN

Note: Resistor jumpering allows use of standard CK100SM clock generator (CY2285-1) or Acer special CK100SM (CY2285-2) as shown in the table below:

	CY2285-1	CY2285-2
R238	33	OPEN
R241	100K	OPEN
R246	0	OPEN
R247	OPEN	33
R250	OPEN	33
R251	OPEN	0
R271	33	OPEN
R272	0	OPEN
R292	OPEN	0 (To enable DIV4 function)
R293	0	OPEN
R294	OPEN	0

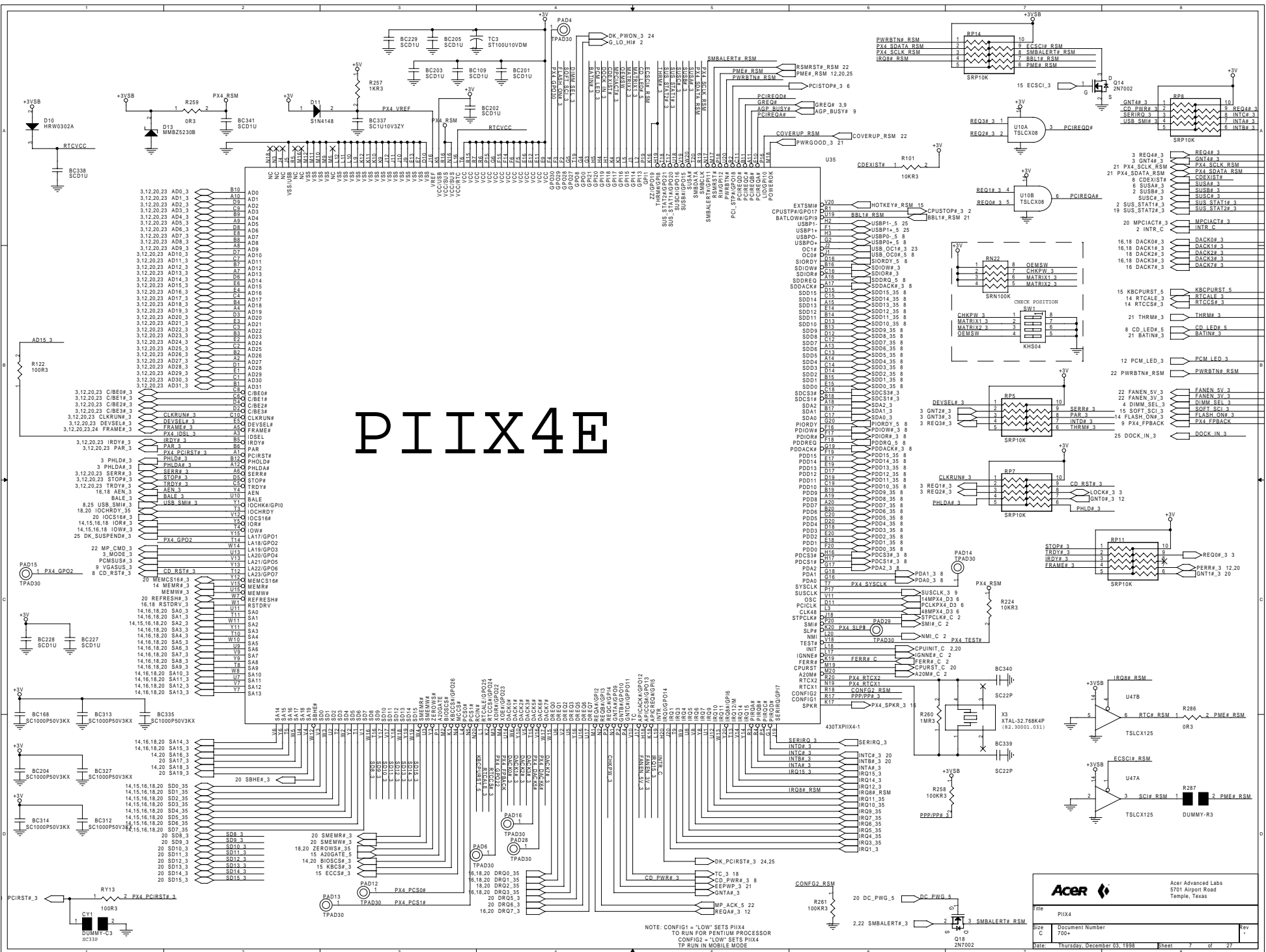


Resistor jumper allows use of CY2309SC buffer (pin 9=VCC).

CLKGEN.SCH

<b>ACER</b>		Acer Advanced Labs 5701 Airport Road Tempe, Texas
FILE CLOCK GENERATOR		
Size C	Document Number 720	Rev ..
Date: Thursday, December 03, 1998		Sheet 6 of 27

# PIIX4E

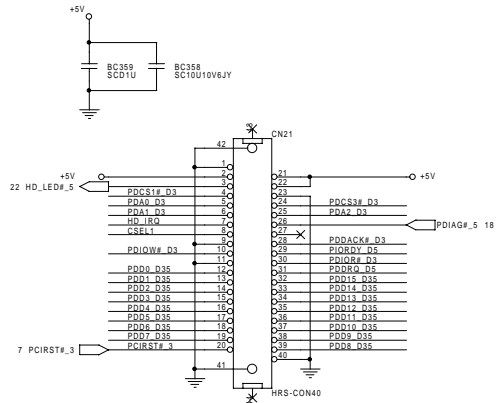


NOTE: CONFIG1 = 'LOW' SETS PIIX4 TO RUN FOR PENTIUM PROCESSOR  
CONFIG2 = 'LOW' SETS PIIX4 TP RUN IN MOBILE MODE

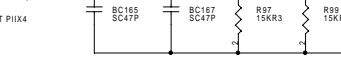
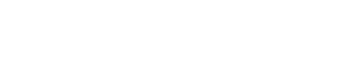
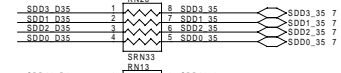
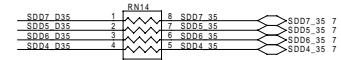
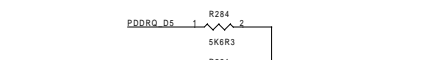
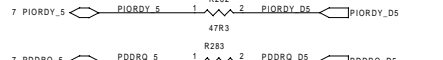
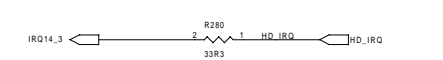
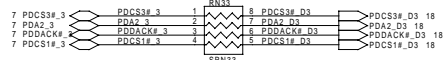
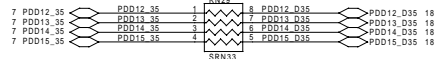
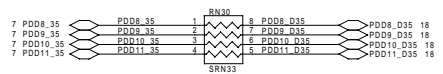
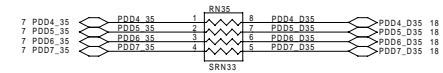
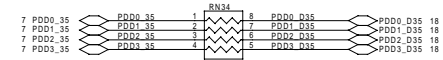
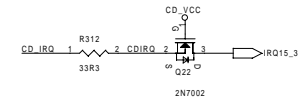
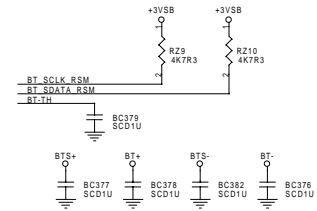
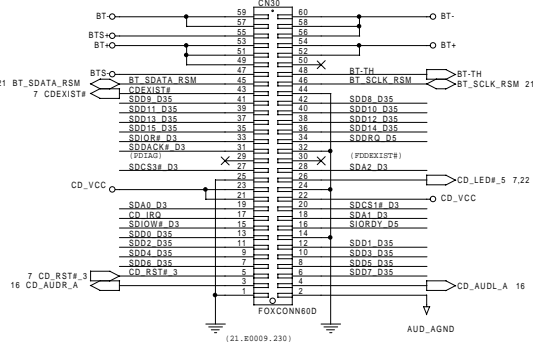
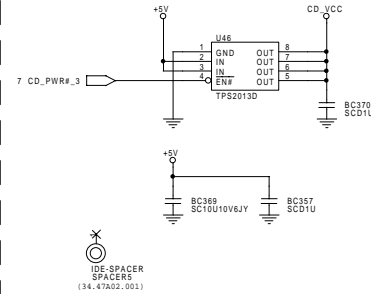
**Acer** Acer Advanced Labs  
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Temple, Texas

PIIX4  
Document Number 700+  
Date: Thursday, December 03, 1998 Sheet 7 of 27

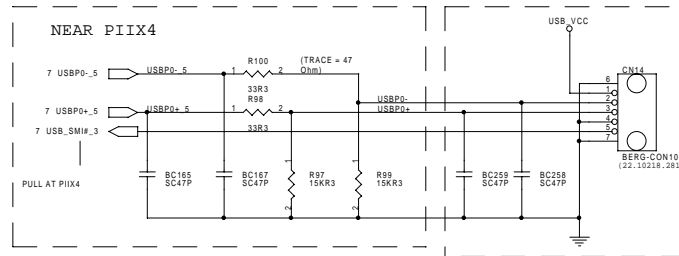
# HDD



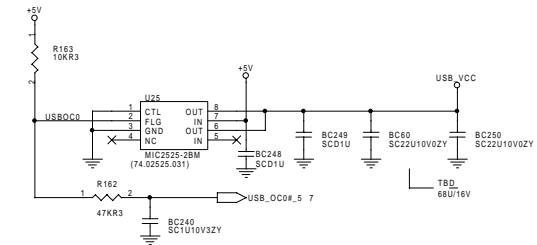
# CDROM/BATT CONN (IDE BRD)



# USB



NO PLUGGED : PIN4.5  
OPEN  
PLUGGED : PIN4.5  
CLOSED



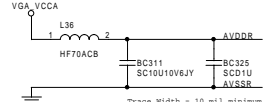
HDD\_SCH

<b>Acer</b>		Acer Advanced Labs 5701 Airport Road Tempe, Texas	
File	HDD, IDE BD CONN, USB		
Size	Document Number	Rev	
C	700+		
Date:	Thursday, December 03, 1998	Sheet	8 of 27



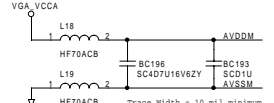
**ANALOG POWER FILTERING**

**DAC Analog Power Input**



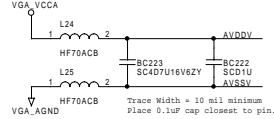
Trace Width = 10 mil minimum  
Place 0.1uF cap closest to pin.

**Memory Clock PLL Analog Power**



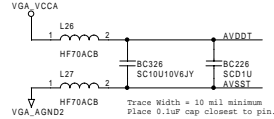
Trace Width = 10 mil minimum  
Place 0.1uF cap closest to pin.

**Video PLL Analog Power**



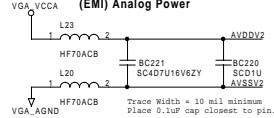
Trace Width = 10 mil minimum  
Place 0.1uF cap closest to pin.

**TV PLL Analog Power**



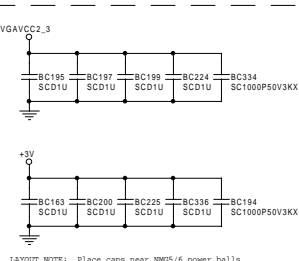
Trace Width = 10 mil minimum  
Place 0.1uF cap closest to pin.

**NMG6 Magic Pass II (EMI) Analog Power**

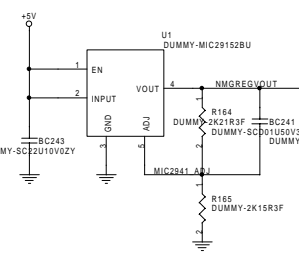


Trace Width = 10 mil minimum  
Place 0.1uF cap closest to pin.

**DIGITAL POWER BYPASS CAPS**

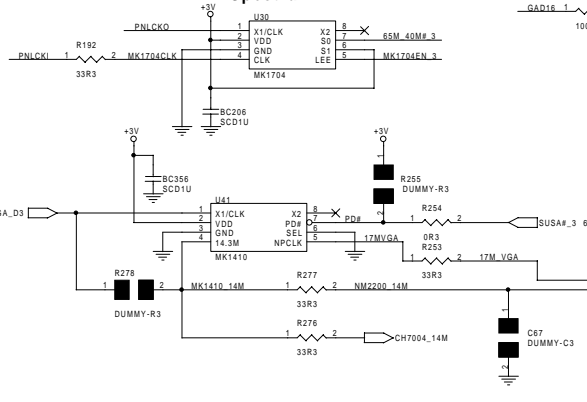


LAYOUT NOTE: Place caps near NM250/6 power balls.

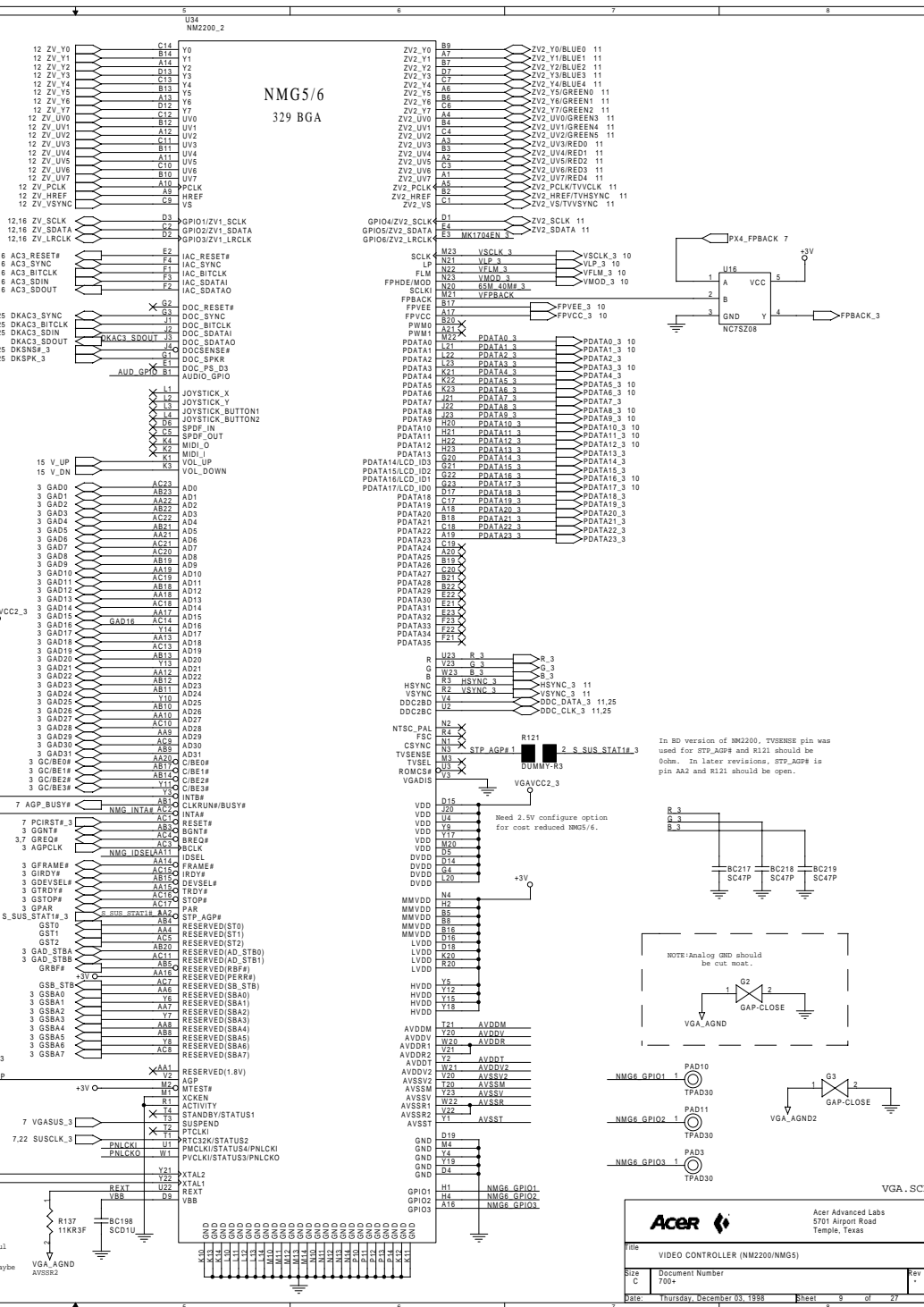


Trace Width = 10 mil minimum  
Place 0.1uF cap closest to pin.

**LCD Panel Clock Spread Spectrum**



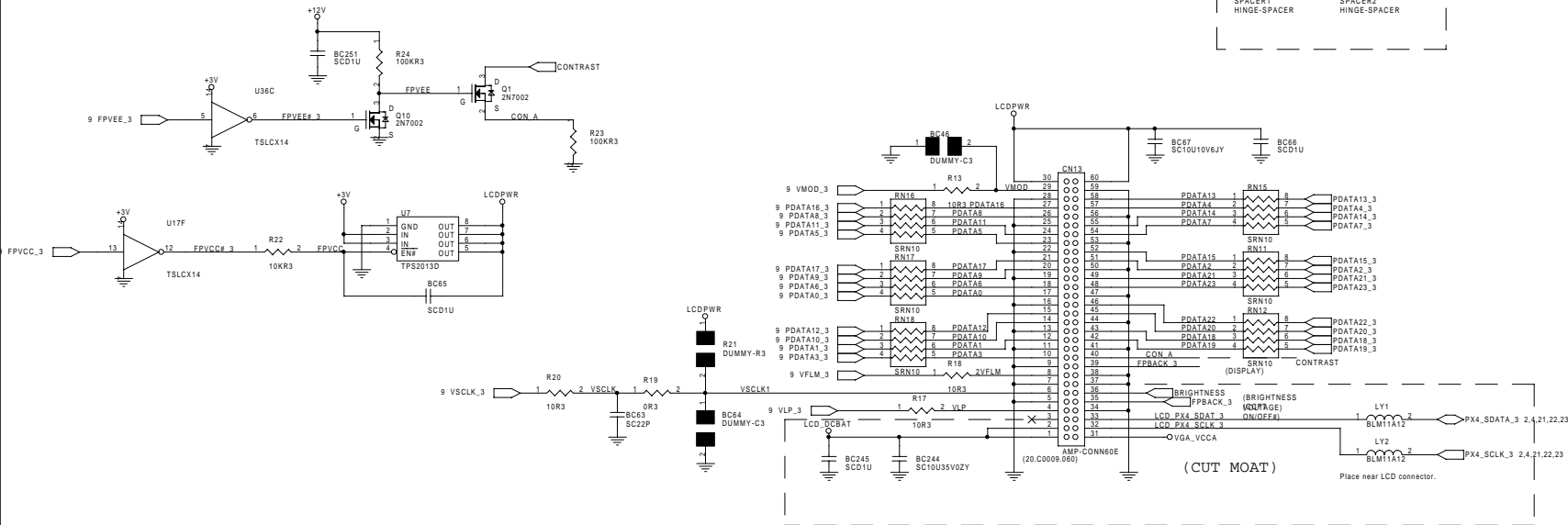
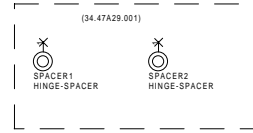
LAYOUT NOTE: Be careful not to route digital signal around REXT. Maybe add ground or mat.



**VIDEO CONTROLLER (NM2200/NMG5)**

File: \_\_\_\_\_  
Size C: \_\_\_\_\_  
Date: Thursday, December 03, 1998 Sheet 9 of 27

# LCD

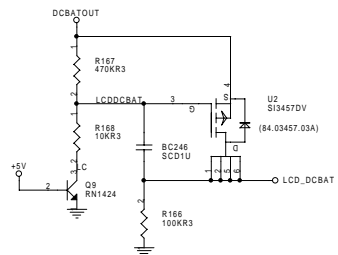


TFT	DSTN	DSTN	TFT
Q0	UDATA8 (URRD1)	UDATA11 (URRD0)	R0
Q1	LDATA10 (LRRD0)	UDATA9 (URR0)	R1
Q2	LDATA10 (LRRD0)	UDATA9 (URR0)	R2
Q3	UDATA5 (URRD2)	UDATA6 (URR0E1)	R3
Q4	LDATA6 (LRRD1)	LDATA7 (LRRD0)	R4
Q5	UDATA1 (URR0E3)	LDATA4 (LRRD2)	R5
Q6	UDATA3 (URR0E2)	LDATA1 (LRRD3)	R6
Q7	LDATA2 (LRRD3)	LDATA9 (LRRD0)	R7
Q8	LDATA5 (LRRD2)	LDATA8 (LRRD0)	R8
Q9	UDATA0 (URR0E3)	UDATA7 (URR0E1)	R9
Q10	LDATA0 (LRRD3)	UDATA4 (URR0E2)	R10
Q11	LDATA3 (LRRD2)		R11
Q12	LDATA3 (LRRD2)		R12
Q13	LDATA3 (LRRD2)		R13
Q14	LDATA3 (LRRD2)		R14
Q15	LDATA3 (LRRD2)		R15
Q16	LDATA3 (LRRD2)		R16
Q17	LDATA3 (LRRD2)		R17
Q18	LDATA3 (LRRD2)		R18
Q19	LDATA3 (LRRD2)		R19
Q20	LDATA3 (LRRD2)		R20
Q21	LDATA3 (LRRD2)		R21
Q22	LDATA3 (LRRD2)		R22
Q23	LDATA3 (LRRD2)		R23
Q24	LDATA3 (LRRD2)		R24
Q25	LDATA3 (LRRD2)		R25
Q26	LDATA3 (LRRD2)		R26
Q27	LDATA3 (LRRD2)		R27
Q28	LDATA3 (LRRD2)		R28
Q29	LDATA3 (LRRD2)		R29
Q30	LDATA3 (LRRD2)		R30
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Q40	LDATA3 (LRRD2)		R40
Q41	LDATA3 (LRRD2)		R41
Q42	LDATA3 (LRRD2)		R42
Q43	LDATA3 (LRRD2)		R43
Q44	LDATA3 (LRRD2)		R44
Q45	LDATA3 (LRRD2)		R45
Q46	LDATA3 (LRRD2)		R46
Q47	LDATA3 (LRRD2)		R47
Q48	LDATA3 (LRRD2)		R48
Q49	LDATA3 (LRRD2)		R49
Q50	LDATA3 (LRRD2)		R50
Q51	LDATA3 (LRRD2)		R51
Q52	LDATA3 (LRRD2)		R52
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Q56	LDATA3 (LRRD2)		R56
Q57	LDATA3 (LRRD2)		R57
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Q68	LDATA3 (LRRD2)		R68
Q69	LDATA3 (LRRD2)		R69
Q70	LDATA3 (LRRD2)		R70
Q71	LDATA3 (LRRD2)		R71
Q72	LDATA3 (LRRD2)		R72
Q73	LDATA3 (LRRD2)		R73
Q74	LDATA3 (LRRD2)		R74
Q75	LDATA3 (LRRD2)		R75
Q76	LDATA3 (LRRD2)		R76
Q77	LDATA3 (LRRD2)		R77
Q78	LDATA3 (LRRD2)		R78
Q79	LDATA3 (LRRD2)		R79
Q80	LDATA3 (LRRD2)		R80
Q81	LDATA3 (LRRD2)		R81
Q82	LDATA3 (LRRD2)		R82
Q83	LDATA3 (LRRD2)		R83
Q84	LDATA3 (LRRD2)		R84
Q85	LDATA3 (LRRD2)		R85
Q86	LDATA3 (LRRD2)		R86
Q87	LDATA3 (LRRD2)		R87
Q88	LDATA3 (LRRD2)		R88
Q89	LDATA3 (LRRD2)		R89
Q90	LDATA3 (LRRD2)		R90
Q91	LDATA3 (LRRD2)		R91
Q92	LDATA3 (LRRD2)		R92
Q93	LDATA3 (LRRD2)		R93
Q94	LDATA3 (LRRD2)		R94
Q95	LDATA3 (LRRD2)		R95
Q96	LDATA3 (LRRD2)		R96
Q97	LDATA3 (LRRD2)		R97
Q98	LDATA3 (LRRD2)		R98
Q99	LDATA3 (LRRD2)		R99
Q100	LDATA3 (LRRD2)		R100

## PANEL ID TABLE

PANEL ID	LCD Type
0	RESERVED
1	18-bit SVGA 12.1" TFT
2	RESERVED
3	24-bit XGA 13.0" DSTN
4	18-bit XGA 13.3" TFT
5	RESERVED
6	16-bit SVGA 12.1" DSTN
7	NO PANEL

(Panel ID values stored in EEPROM on LCD inverter board.)



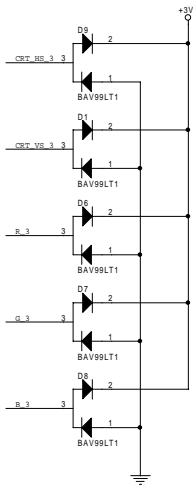
LCD\_SCH

**Acer** Acer Advanced Labs  
5701 Airport Road  
Tempe, Texas

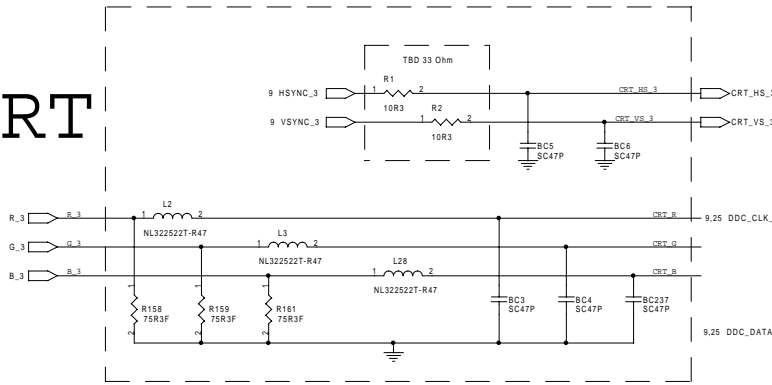
File: LCD CONNECTOR

Size C Document Number 700+ Rev .

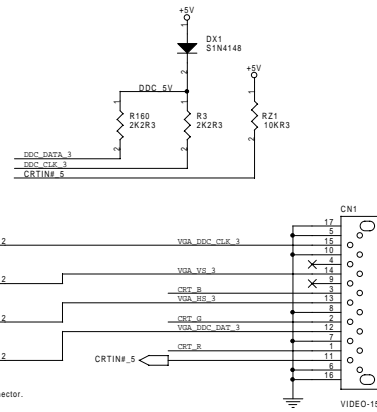
Date: Thursday, December 03, 1998 Sheet 10 of 27



CRT

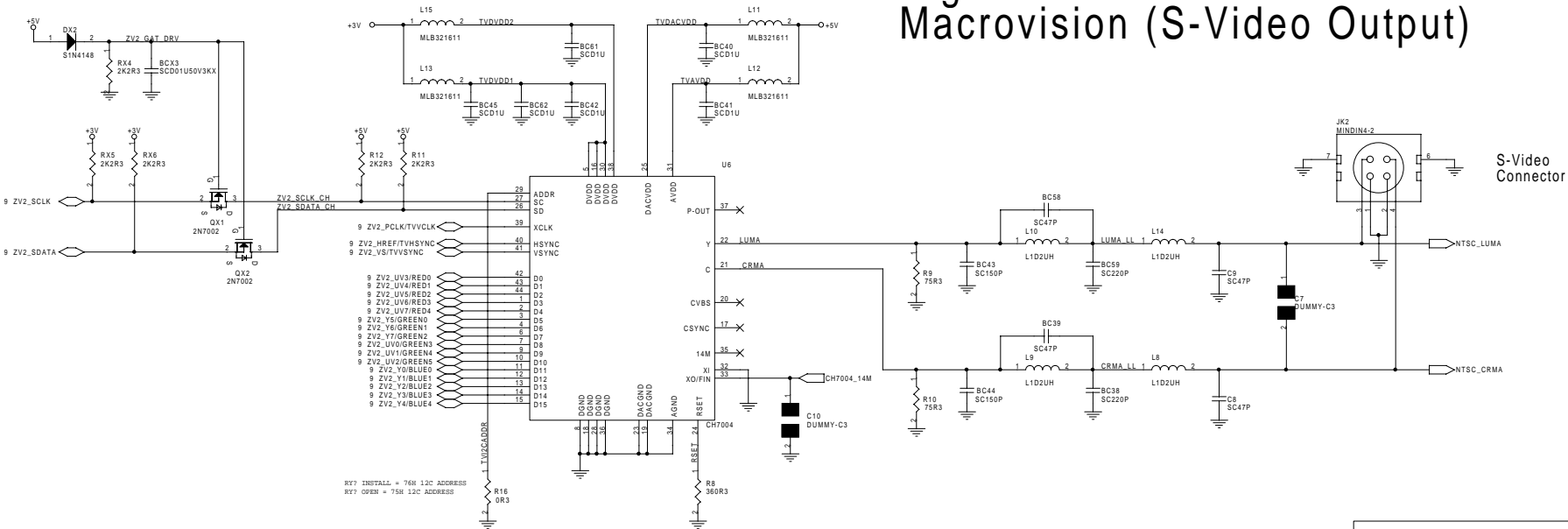


LAYOUT NOTE: Place filters near connector.



Place near VGA connector.

## Digital PC to TV Encoder with Macrovision (S-Video Output)



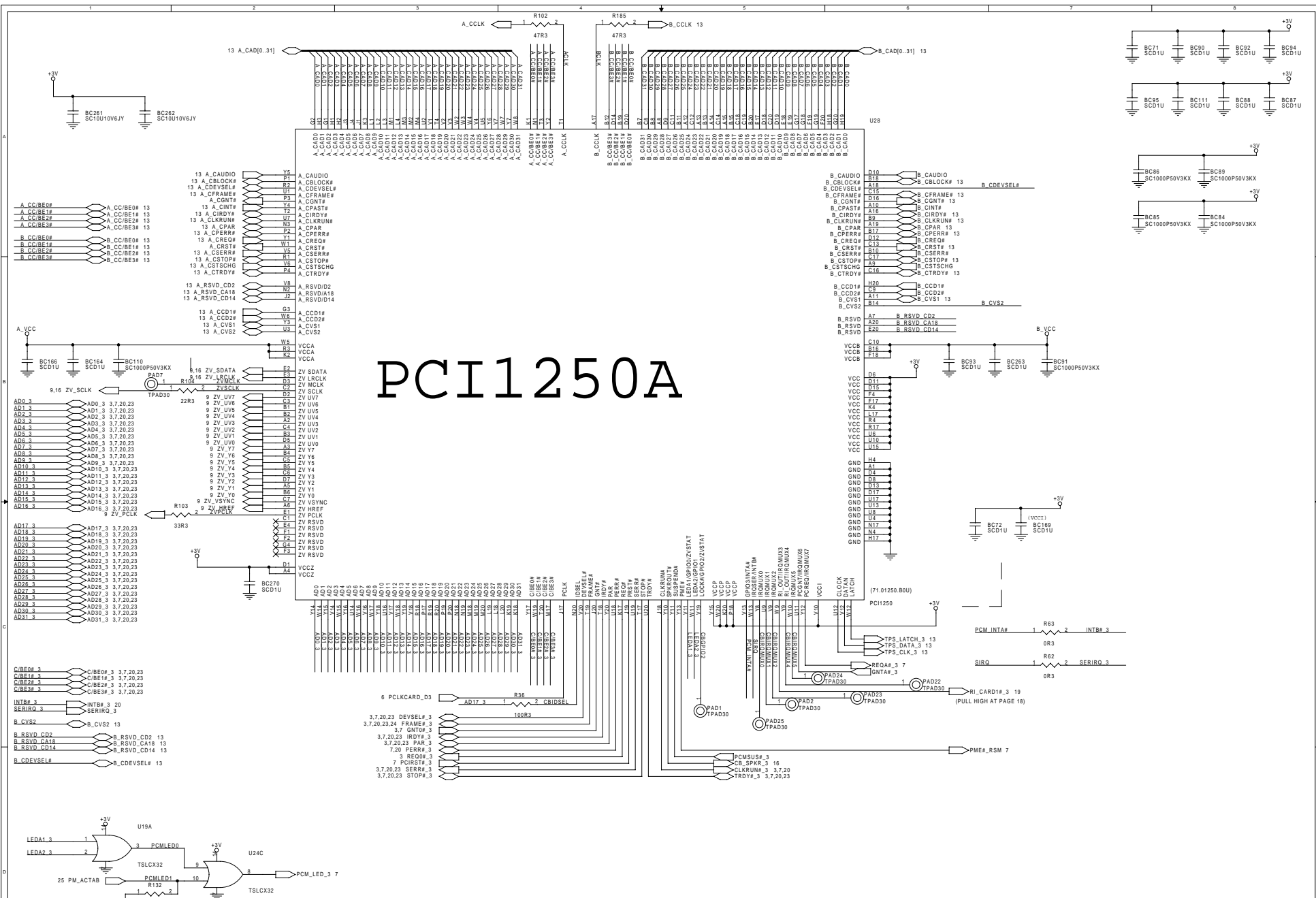
R7? INSTALL = 76H 12C ADDRESS  
R7? OPEN = 75H 12C ADDRESS

LAYOUT NOTE: Use short, wide traces to connect reference resistor to ground.

CRT\_.SCH

<b>Acer</b>		Acer Advanced Labs 5701 Airport Road Temple, Texas
Title CRT & TV PORT CONNECTOR		
Size C	Document Number 700+	Rev ..
Date: Thursday, December 03, 1998 Sheet 11 of 27		

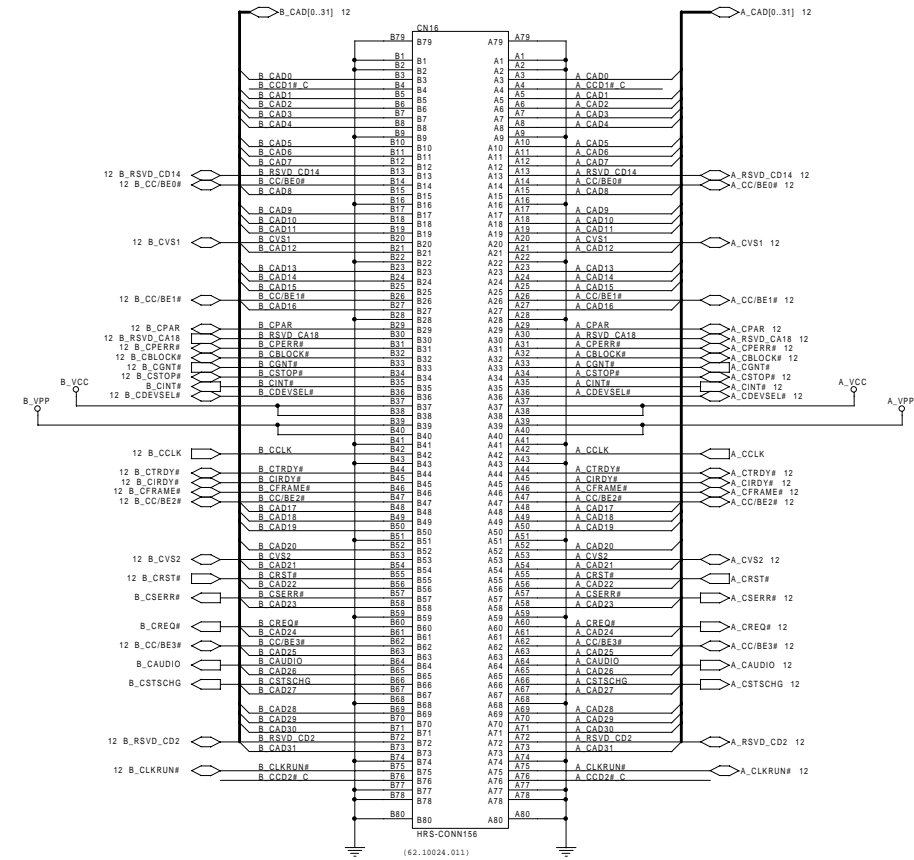
# PCI1250A



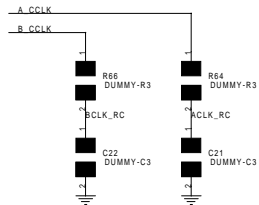
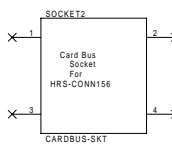
CARBUS .SCH

		Acer Advanced Labs 5701 Airport Road Tempe, Texas	
File: CARBUS CONTROLLER PCI1250			
Size C	Document Number	700+	Rev
Date: Thursday, December 03, 1998 Sheet 12 of 27			

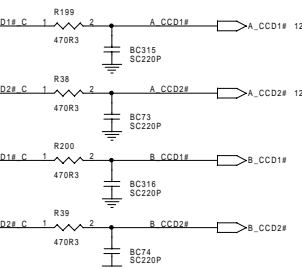
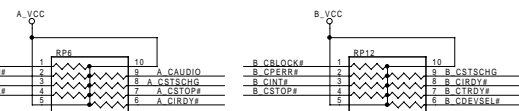
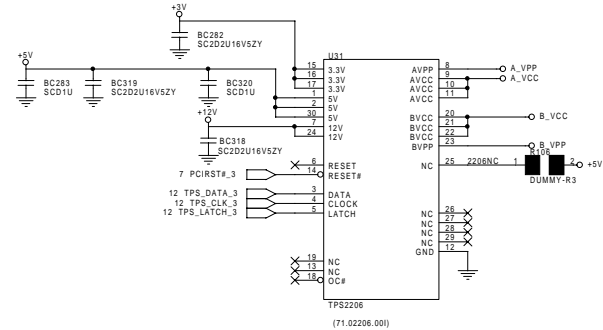
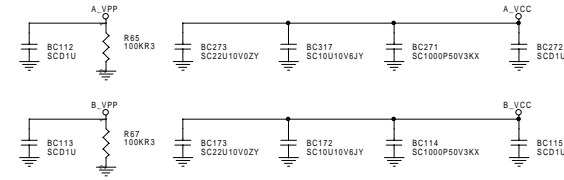
# PCMCIA CONNECTOR



(22.10172.051)



Clock terminations for EMI. Place termination near PCMCIA connector.

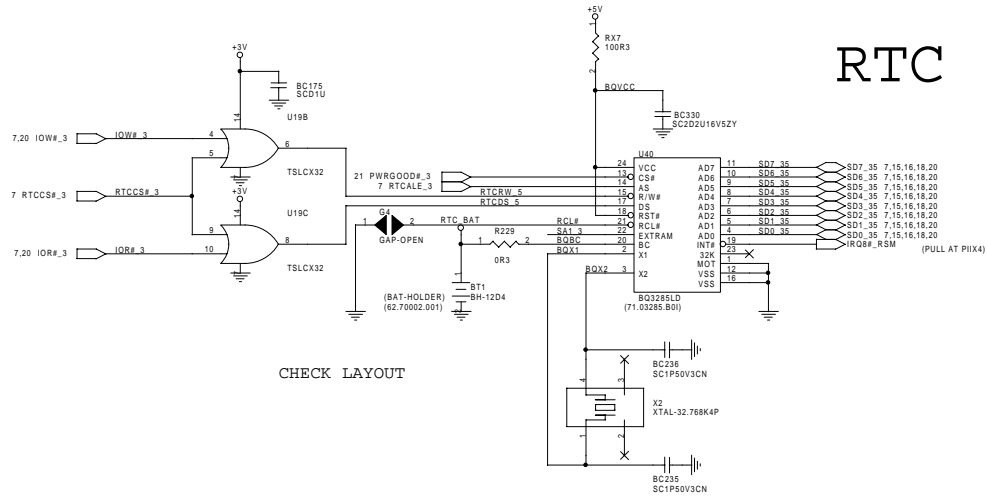
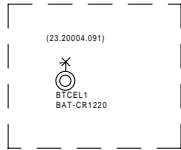


Place filters near PCMCIA connector.

PCM\_CONN\_SCH

<b>ACER</b>		Acer Advanced Labs 5701 Airport Road Tempe, Texas	
File	PCMCIA SLOT		
Size	Document Number	700+	
C	Date:	Thursday, December 03, 1998	Sheet 13 of 27

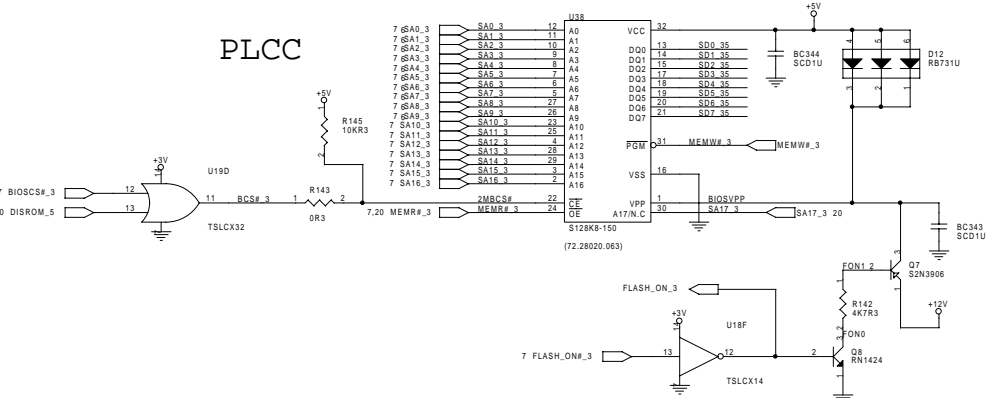
PUT OUT OF BOARD



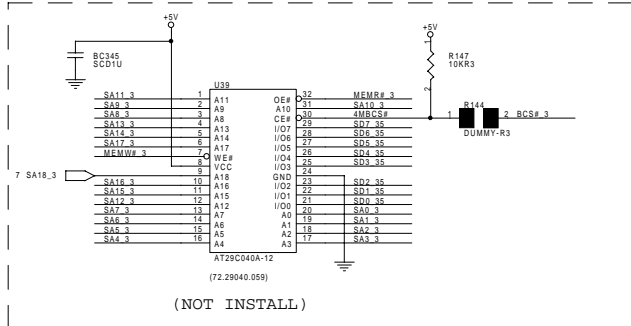
CHECK LAYOUT

**BIOS**

**PLCC**



**TSOP32 4M FLASH ROM**

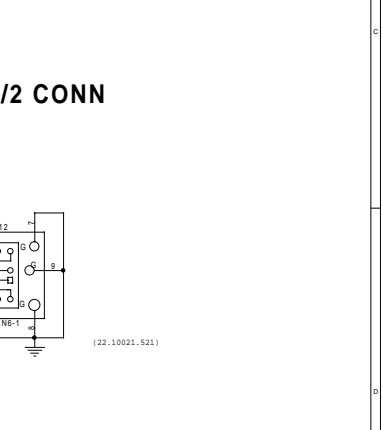
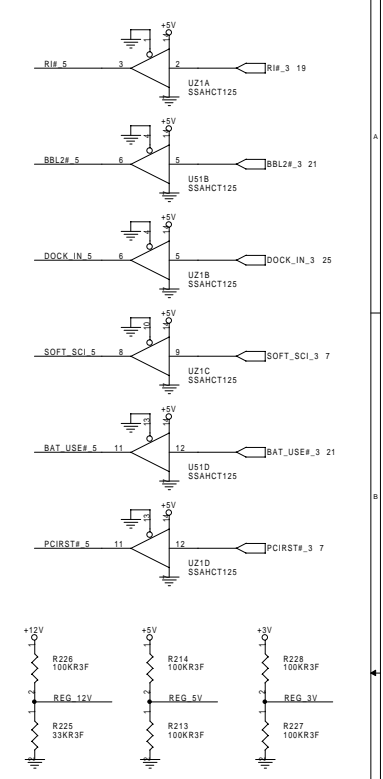
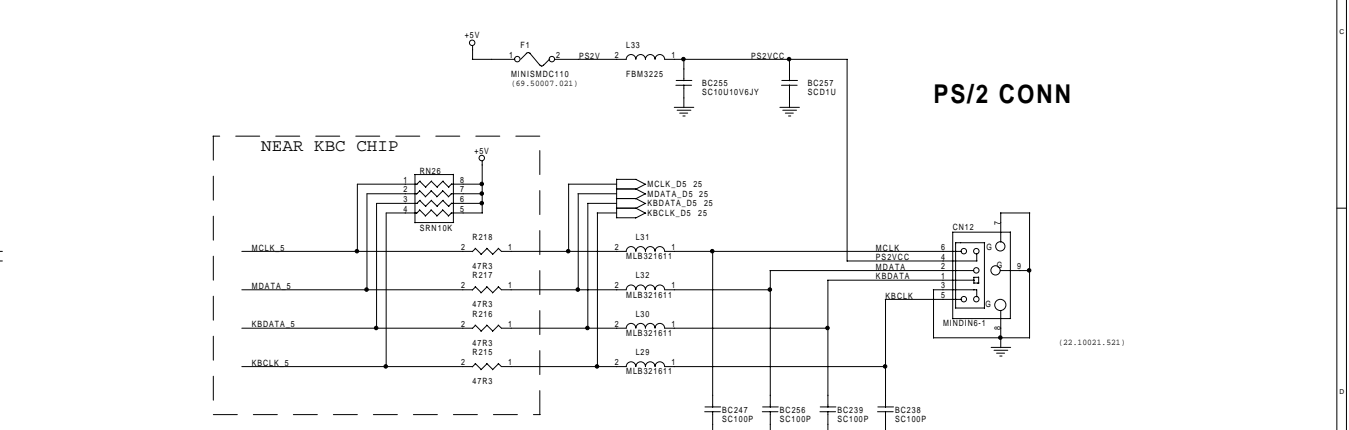
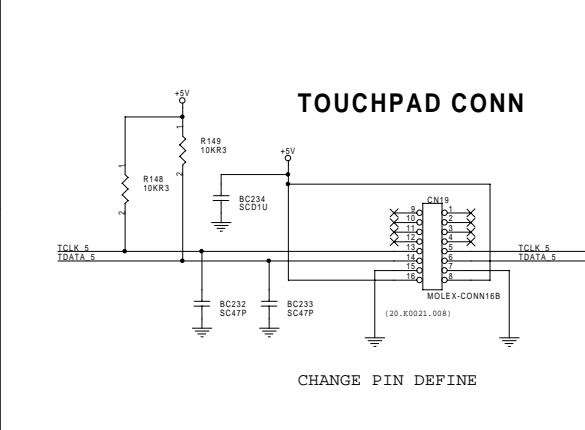
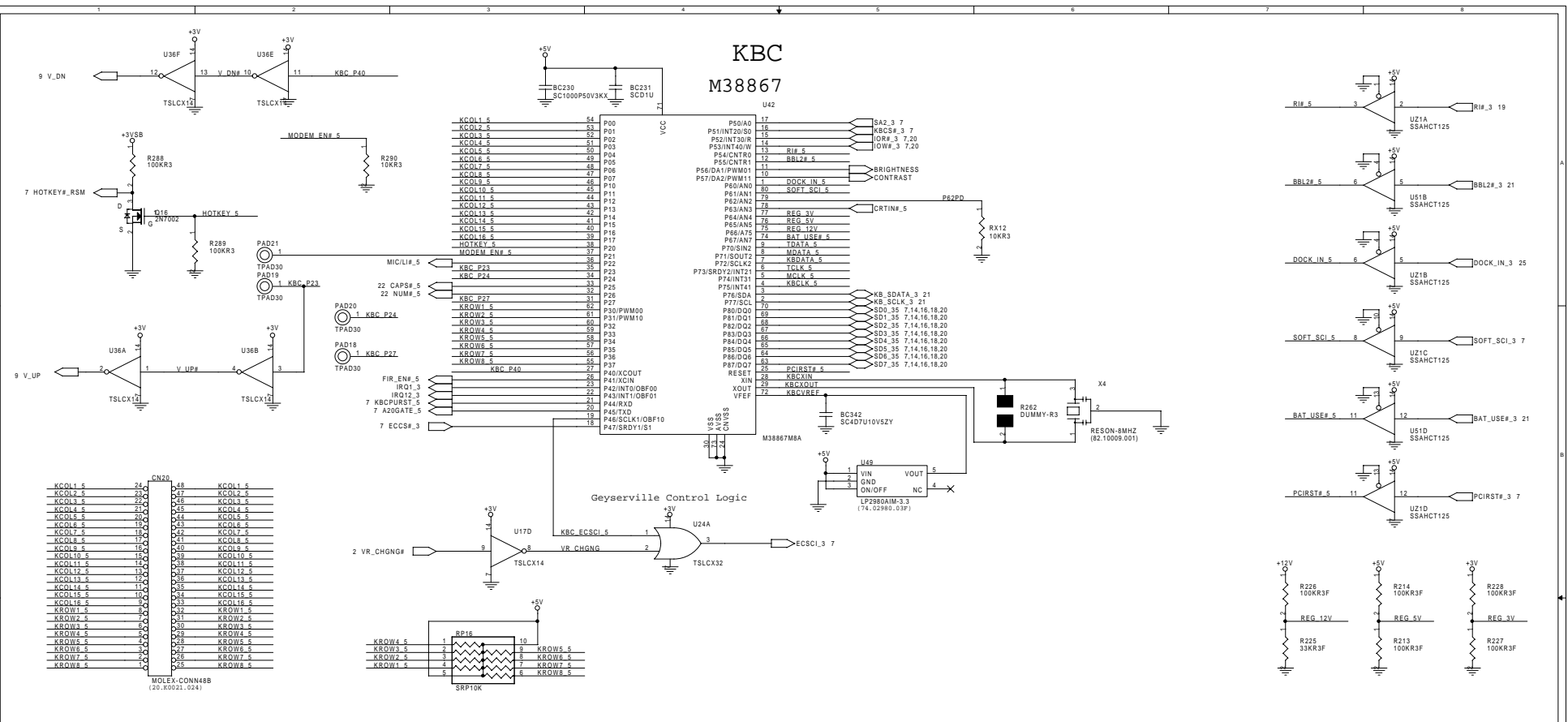


(NOT INSTALL)

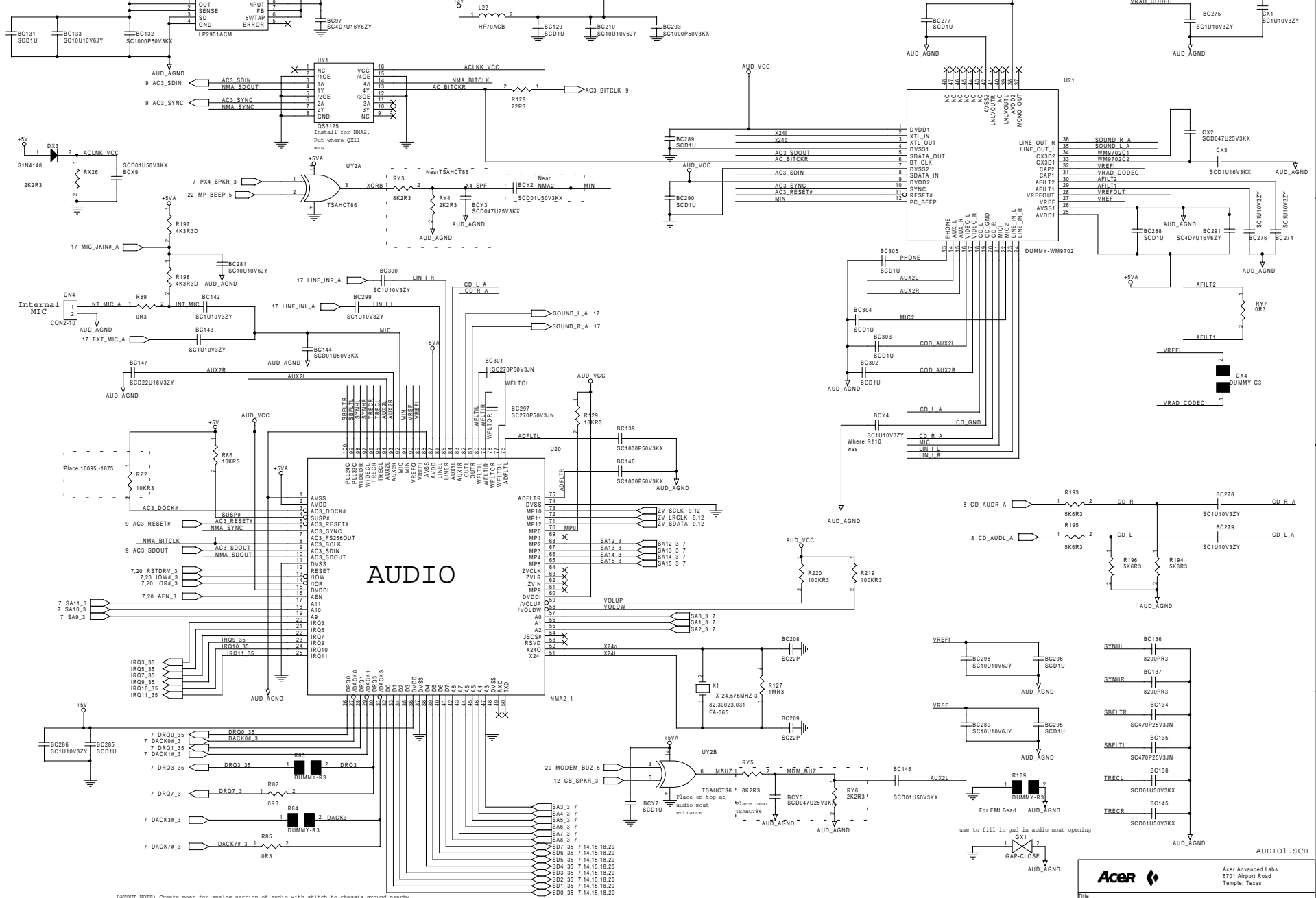
WHEN USE  
 #000# RX3B.OPEN  
 RX37  
 WHEN USE 4M  
 #000# RX37.OPEN  
 RX38

**BIOS.SCH**

		Acer Advanced Labs 5701 Airport Road Tempe, Texas	
File	BIOS & RTC		
Size	Document Number	Rev	
C	700+		
Date:	Thursday, December 03, 1998	Sheet	14 of 27



The analog section AUDIO runs on +5A.  
The I/O section runs on +5.  
The digital core runs on +3.3V.



# AUDIO

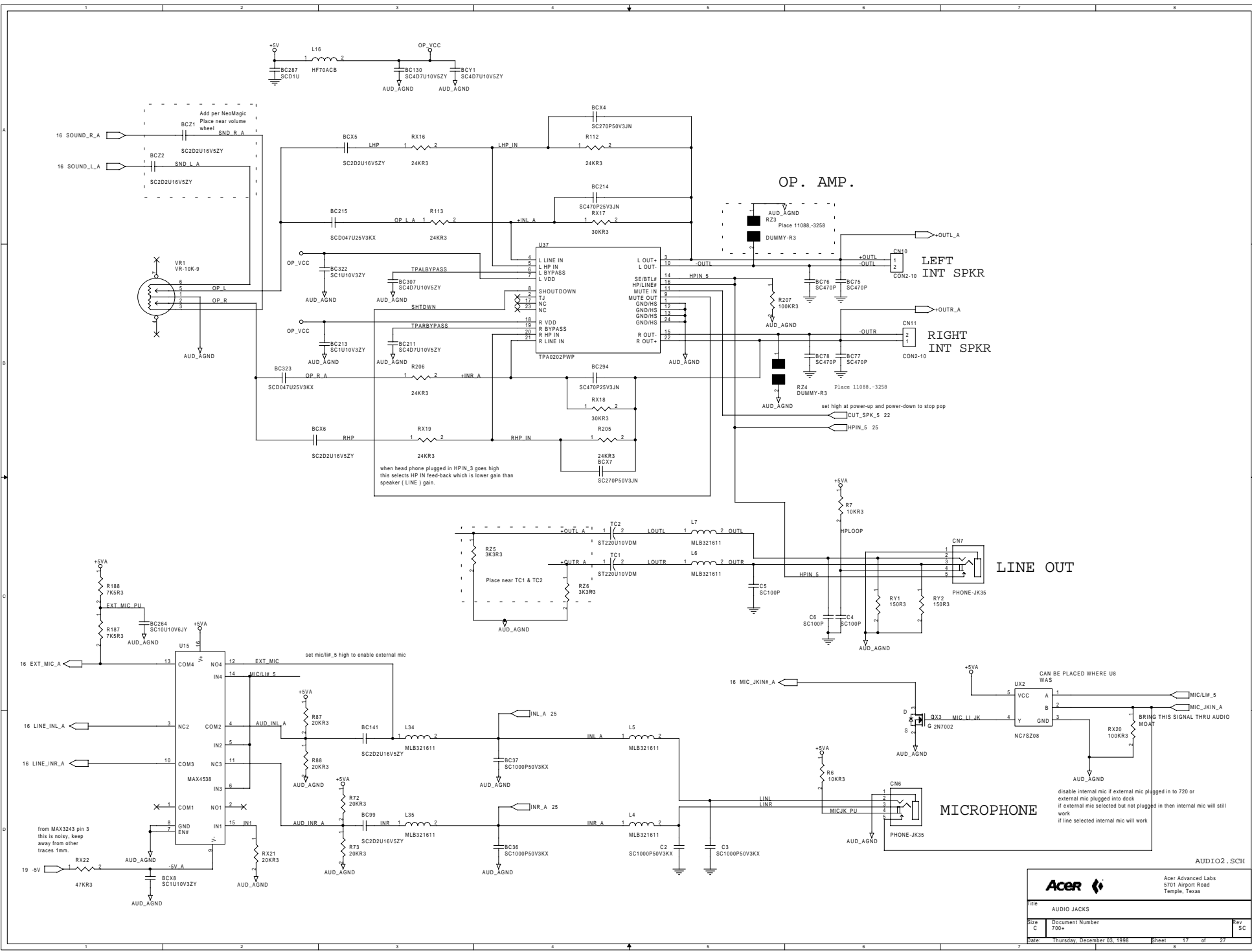
LAYOUT NOTE: Create moat for analog section of audio with stitch to chassis ground nearby.

AUDIO1.SCH

**Acer** Acer Advanced Labs  
5701 Airport Road  
Tempe, Texas

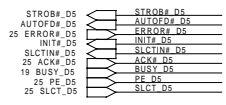
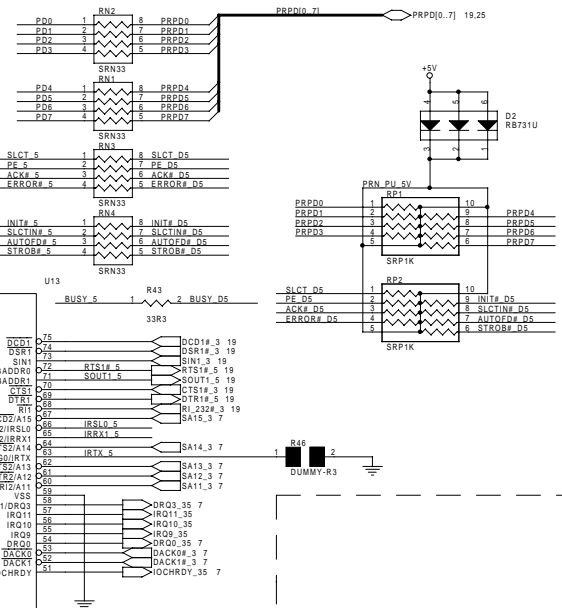
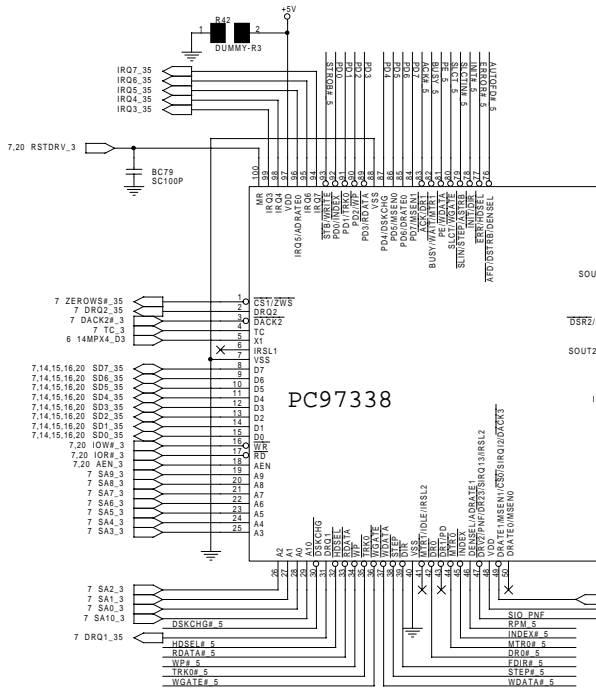
File	AUDIO CODECS	
Size	Document Number	Rev
C	700+	SC
Date:	Thursday, December 03, 1998	Sheet 16 of 27



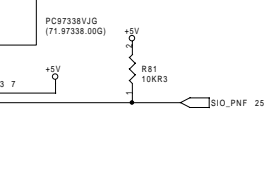


AUDIO2.SCH

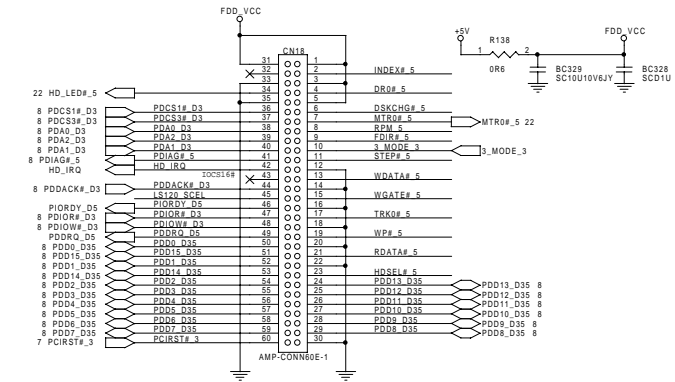
<b>Acer</b>		Acer Advanced Labs 5701 Airport Road Temple, Texas	
Title AUDIO JACKS			
Size C	Document Number 700+	Rev SC	
Date: Thursday, December 03, 1998		Sheet 17 of 27	



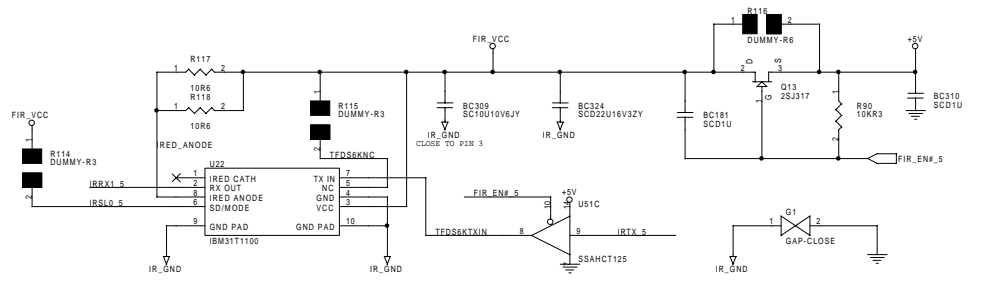
SOFTWARE CONFIGURATION		
BADDR	INDEX	DATA
1	0	
0	0	399h 399h
0	1	399h 399h
1	0	15Ch 15Dh
1	1	2Eh 2Fh



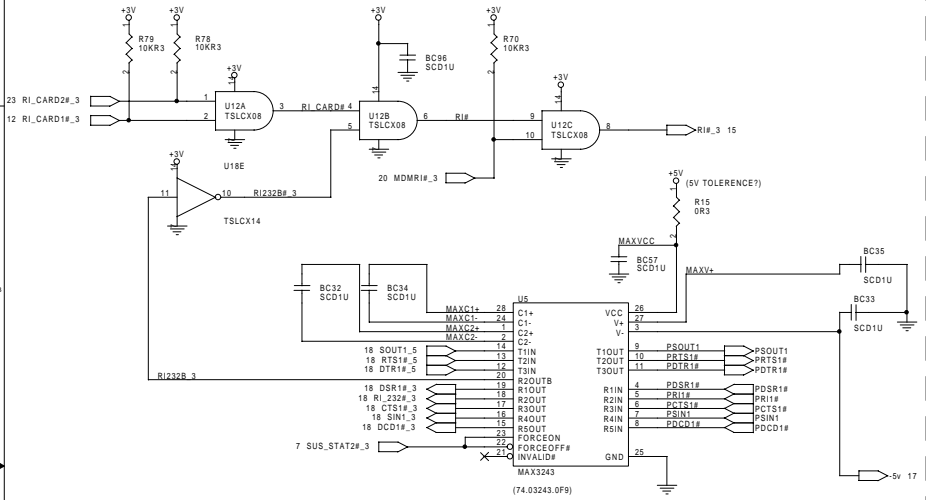
### LS120/FDD



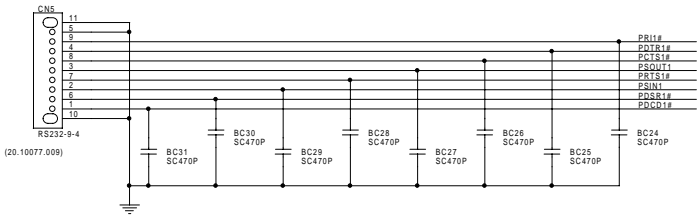
### FIR



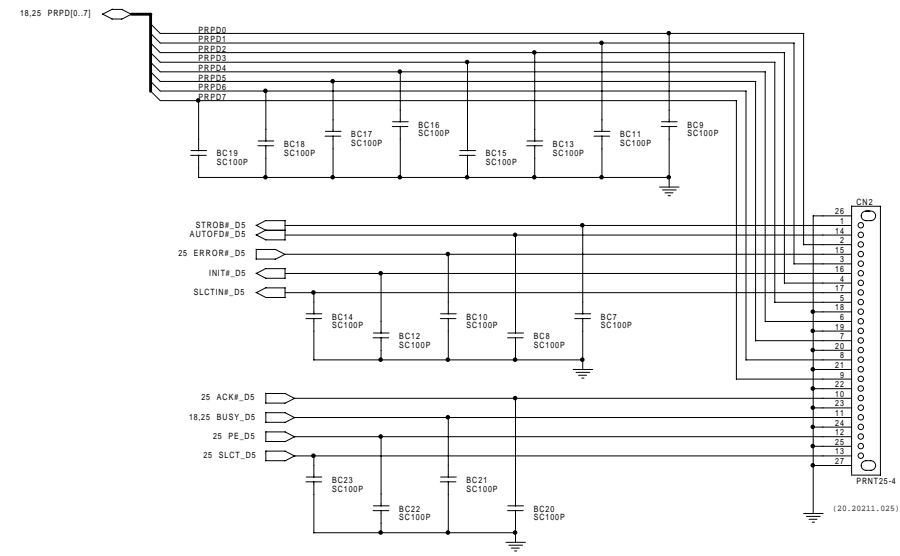
# SERIAL PORT



FORCEOFF#	T_OUT	R_OUT	R2OUTB
0	High-Z	High-Z	Active
1	Active	Active	Active



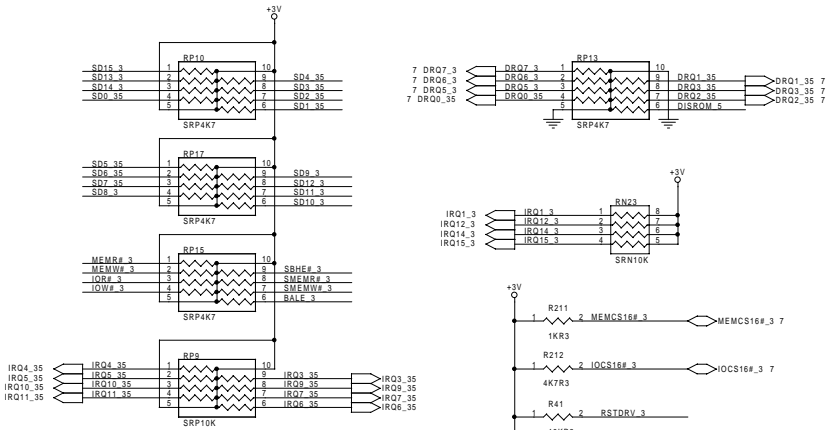
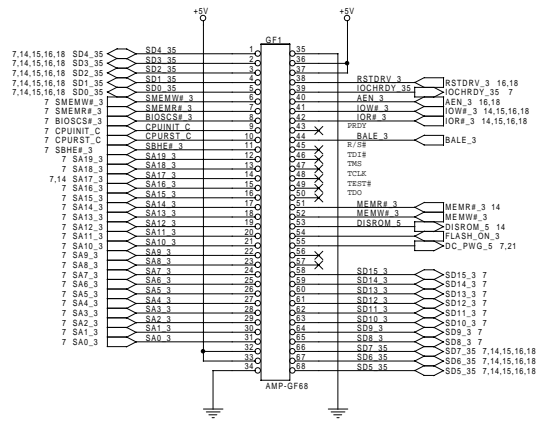
# PRINTER PORT



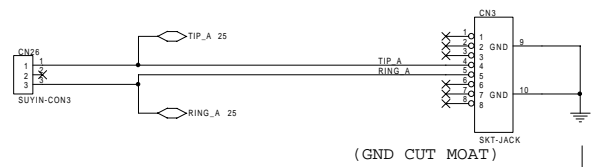
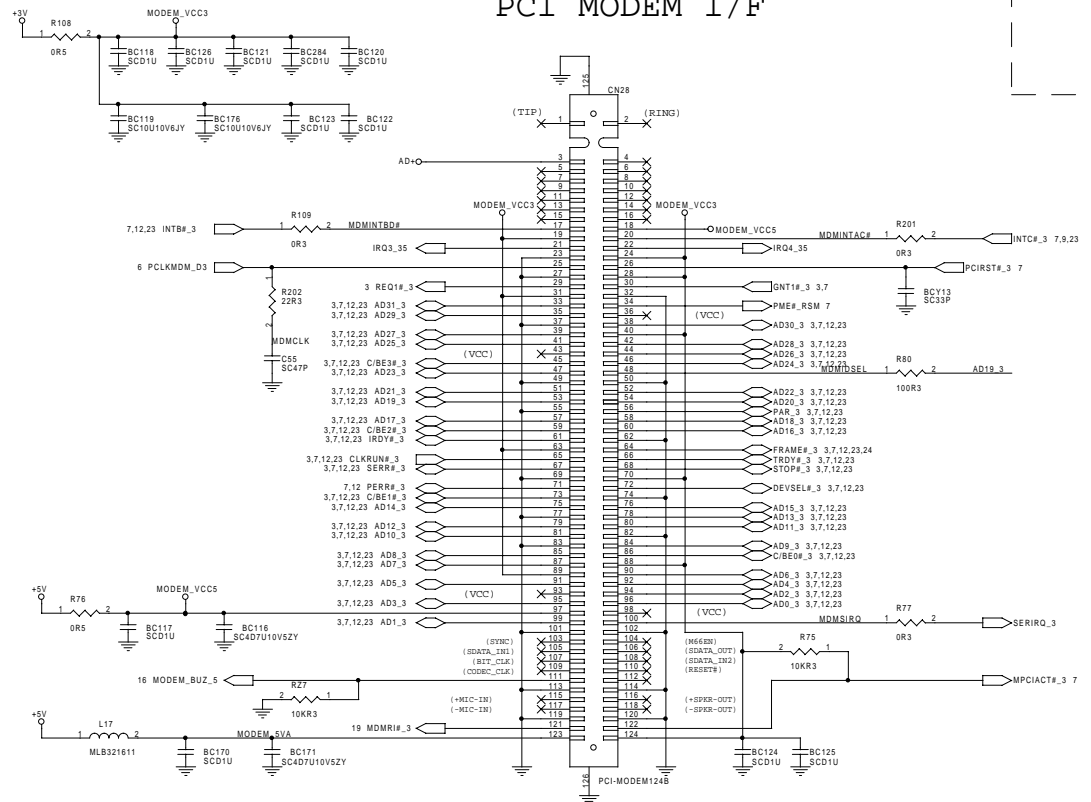
PORT.SCH

		Acer Advanced Labs 5701 Airport Road Temple, Texas	
SERIAL & PARALLEL PORT			
File			
Size	Document Number	Rev	
C	700+		
Date:	Thursday, December 03, 1998	Sheet	19 of 27

# GOLDEN FINGER FOR DEBUG BOARD



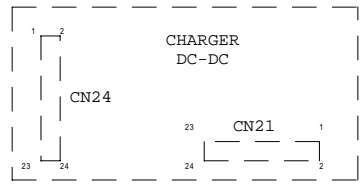
# PCI MODEM I/F



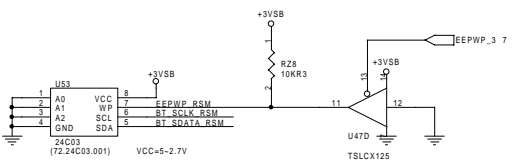
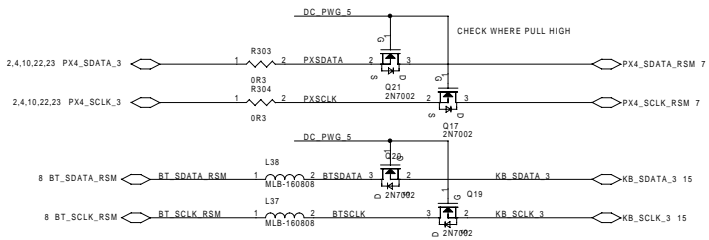
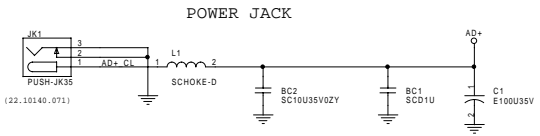
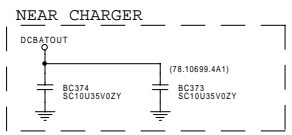
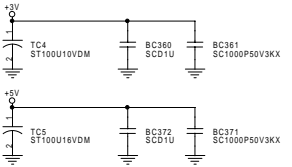
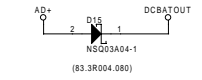
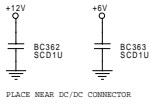
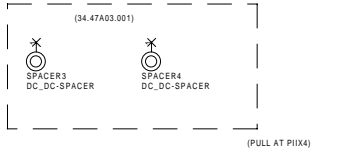
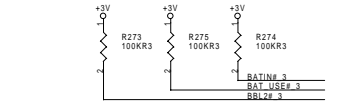
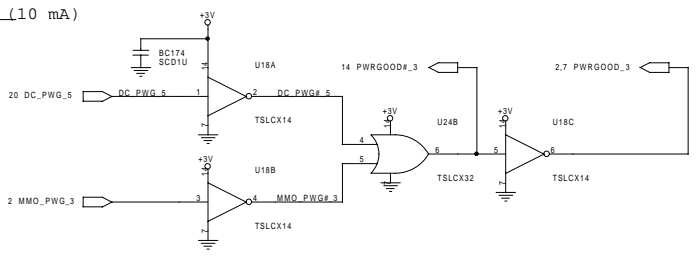
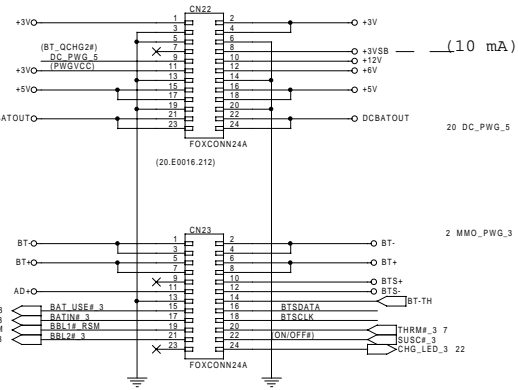
GFINGER.SCH

**Acer** Acer Advanced Labs  
5701 Airport Road  
Tempe, Texas

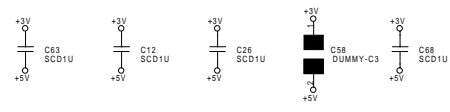
File	MODEM & GOLDEN FINGER	Rev	1
Size	Document Number		
C	700+		
Date:	Thursday, December 03, 1998	Sheet	20 of 27



**CHARGER DC-DC**

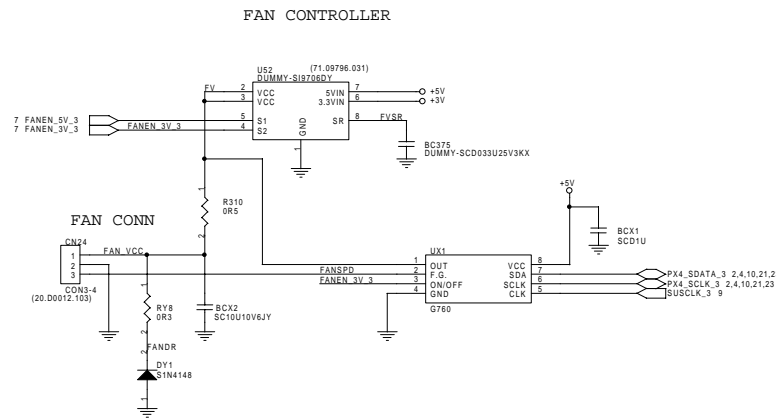
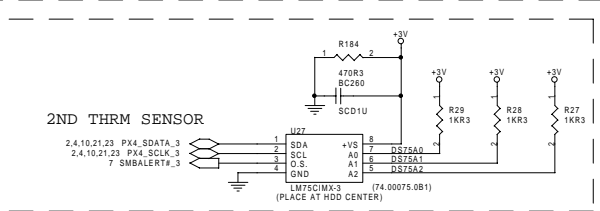
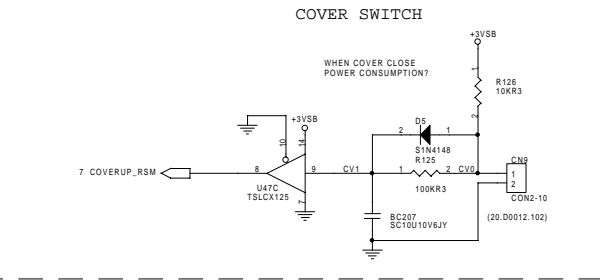
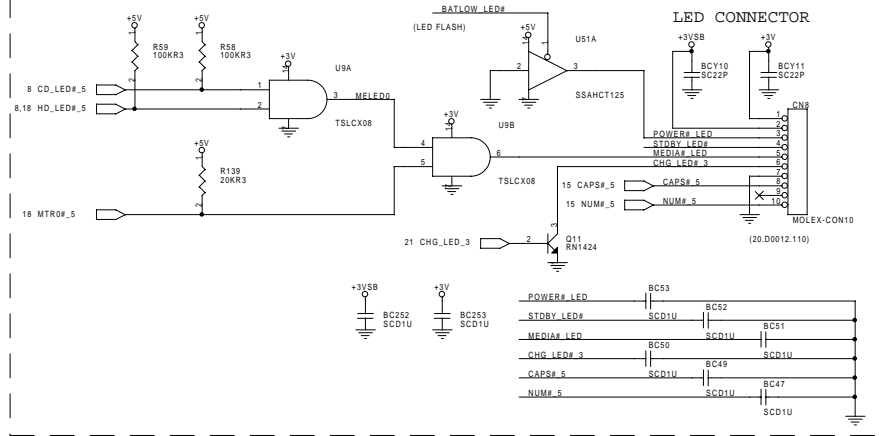
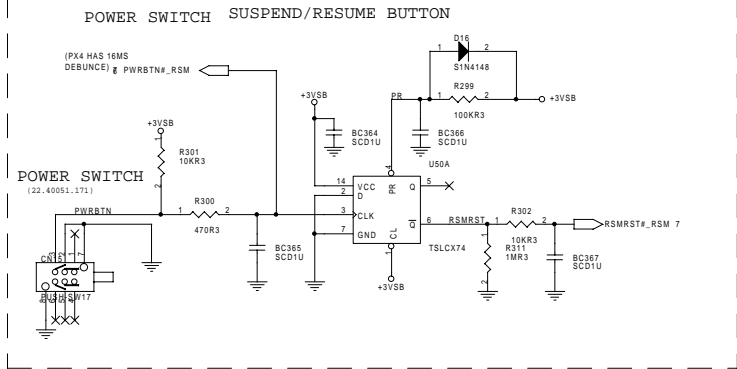
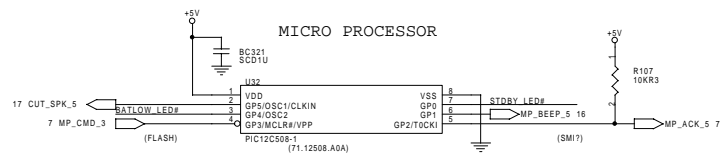


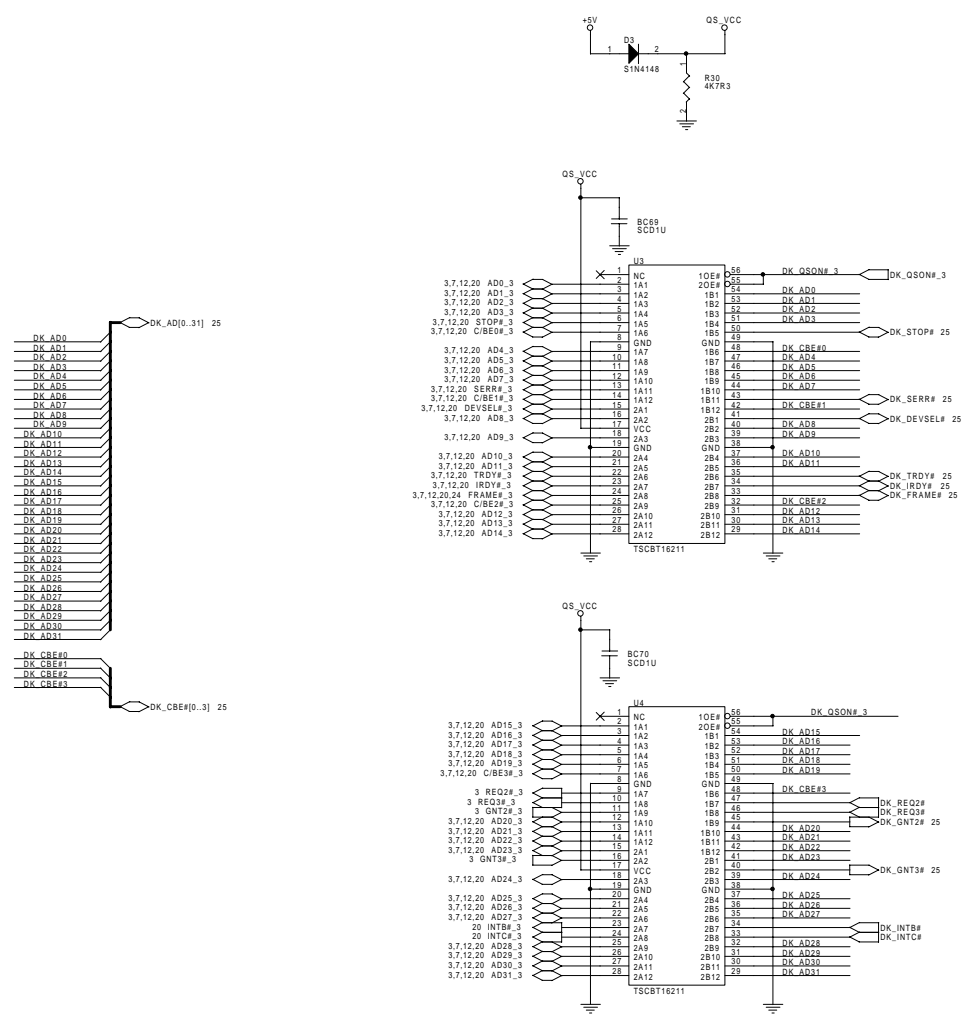
**CAPS ADDED FOR EMI**



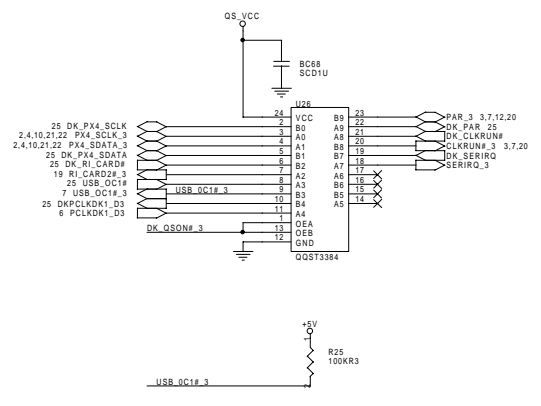
POWER1.SCH

<b>Acer</b>		Acer Advanced Labs 5701 Airport Road Temple, Texas	
File: CHARGER & DC/DC			
Size C	Document Number 700+	Rev	
Date: Thursday, December 05, 1998		Sheet 21	of 27





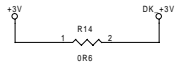
(CHANGE TO TSSOP PACKAGE)



DOCK\_QSW.SCH

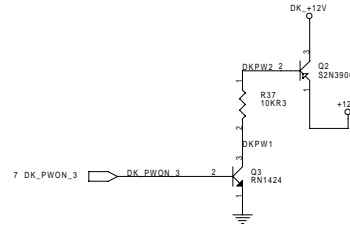
<b>ACER</b>		Acer Advanced Labs 5701 Airport Road Tempe, Texas	
Title DOCKING Q-SWITCH			
Size C	Document Number 700+	Rev	.
Date: Thursday, December 03, 1998	Sheet 23	of 27	

(STEP 2) TURN ON POWER



(+5V TO DOCK +5V)

(POWER MOS AT DOCKING SIDE)



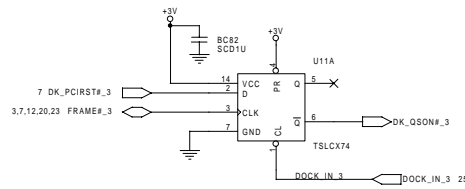
(STEP 3)

CLK GEN. TURN ON DK PCICLK


(STEP 4)

GPO GENERATE PCIRST#

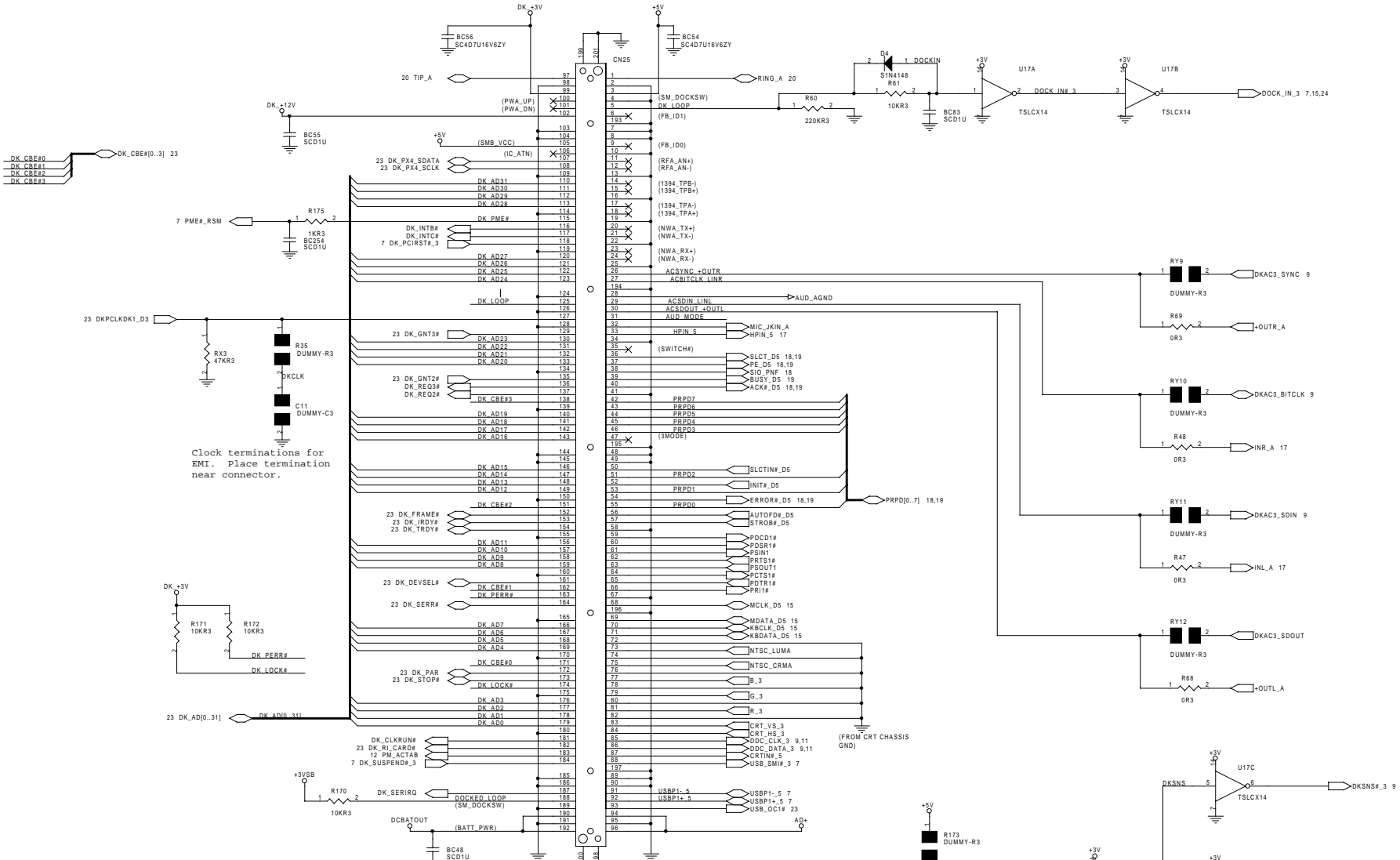
(STEP 5) TURN ON Q-SW



DOCK\_SEQ.SCH

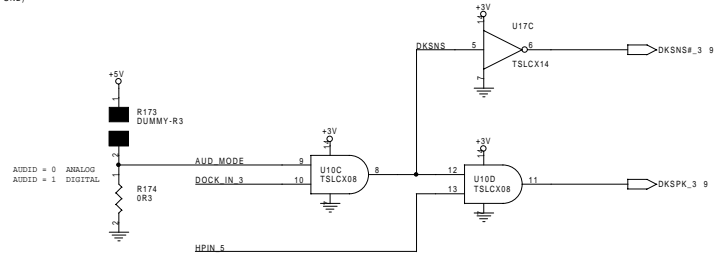
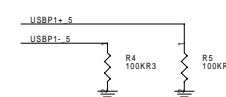
<b>Acer</b> 		Acer Advanced Labs 5701 Airport Road Temple, Texas	
Title DOCKING SEQUENCE			
Size C	Document Number 700+	Rev .	
Date: Thursday, December 03, 1998		Sheet 24	of 27






Clock terminations for EMI. Place termination near connector.

CURRENT RATINGS 3A : 1-3,94-99,190-192  
0.5A : 4-93,100-189



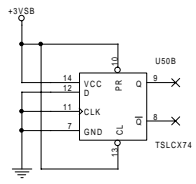
DOCKCONN.SCH

**Acer** 

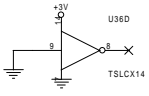
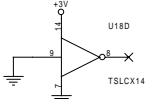
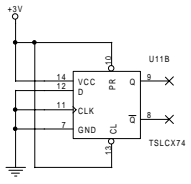
Acer Advanced Labs  
5701 Airport Road  
Tempe, Texas

File		DOCKING CONNECTOR	
Size	Document Number	Rev	
C	700+	..	
Date:	Thursday, December 05, 1998	Sheet	25 of 27

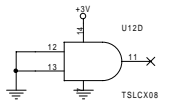
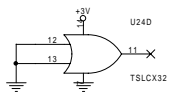
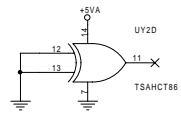
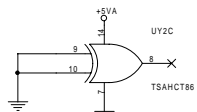
+3VSB




+3V



+5VA



NCGATES.SCH

<b>ACER</b> 		Acer Advanced Labs 5701 Airport Road Temple, Texas	
File: UNUSED GATES			
Size: C	Document Number: 700+	Rev: 1	
Date: Thursday, December 03, 1998		Sheet: 26	of 27

# REVISION HISTORY

## 98204-SA

V0.1	5/22/98	Chg MMC connector to MMC2.
V0.2	6/1/98	Incorporated 700v1.2 schematics with 700+.SCH, AUDIO1.SCH, AUDIO2.SCH, CRT.SCH, DIMM.SCH, DRAM.SCH, and VGA.SCH from 800MDV04.
V0.3	6/9/98	Fixed spare gates U19 & U53. Delete U65 and use spare inverter U33E. Swapped XIN & XOUT on X4 to improve routing. Del series R on SIO_VCC. Cleaned up nets on SDRAM SMBus. Line out conn pin 4 and mic conn caps chg from AUD_AGND to GND. Delete MOS switches on HDD & CD. Delete PAD40 (PX4_GPI19), PAD41 (PX4_GPI18), & PAD42 (PX4_GPI17) and replace with 10kohm pullup to +3.3V. Delete LCD ID pullup/pulldown resistors. Added RC termination on A_CLK, B_CLK. Delete R294. Add SCDIU near L28. Chg Line out pin 4 and mic pin 5 pullups to +5VA. added series R on A_CCD1#, A_CCD2#, B_CCD1#, B_CCD2#. Added series ferrite bead on BT_SDATA_RSM AND BT_SCLK_RSM. Updated modem pinout. Added RC termination to modem PCI clock. Deleted filters on RJ45. Changed SD[15:0], MEMR#_3, MEMW#_3, IOR#_3, IOW#_3, SBHE#_3, SMEMR#_3, SMEMW#_3, BALE_3, IOCS16#_3 pullups to 4K7R3. Delete +3V_S and U66, R361, R360, U38F. Connected PCI modem pin 112 (MPCIACT#_3) to GPI17 on PX4. Del RI (pin 121), move 17C to NCGATES. M66EN (pin 104) chg to NC. Added 5V reg for modem. Delete C24, C27, C29, C31 on MMC2A. Added DUMMY-C3 from VGA_VCCA and VGA_AGND to GND for EMI. Connected LS120_LED# to media access LED through U30C. Added AMP CONN60E to SIO and pinned out for floppy and LS120. Delete C40 on MMC2B. Chg R331, R332, R333, R334 pullup voltage from +3V_S to +3V. Chg BC470, BC484, BC477 from SC10U to S4D7U so they would fit on top side. Add RX+, RX-, TX+, TX- to modem and RJ45 conns. Substitute reverse DIMM conn for CN28. Chg clock gen. SIO clock chg from 24M to 14M. RGB signals route to dock before VGA conn. Named all nets. Chg C48, C54, C55 to 220U10VDM and del C60 & C61. Add BC536 & BC537 to modem +5VA. Swap XIN & XOUT on clockgen. Rename Suyin 3 pin conn to SUYIN-CON3 to match ACER.PDB.
V0.4	6/25/98	Delete R412. Add TPS2013D for CD_VCC pwr switch. Added 2N7002 for CD_IRQ isolation. Delete PAD50 and conn GPO7 to CD_RST#_3. Del PAD51 and conn GPO11 to CD_PWR#_3. Add 10KR3 pullup on GPI18. Del SMBALERT#_3 on CN21 pin 33. Added 2N7002 for PME#_RSM isolation. Renamed CN99-E34 from THRM#_3 to SMBALERT#_3. Add U52C, U38A, U38B, U17C. Rename COVERUP_3 to COVERUP_RSM. Add MDMR#_3 to CN27-121. Moved BBL#_3 from U8-13 to U48-12. Move U48-12 to U48-13 and rename to RI#_3 from RI_CARD_3. Chg RP16-1 form COVERUP_RSM to PWRBTN#_RSM. Chg RP16-6 from RIA#_RSM to PME#_RSM. Del R404. Chg U44-H4 from PX4-GPI19 to DOCK_IN_3. Chg U44-P18 form RIA#_RSM to PME#_RSM. Del DX1, R213, Qy1, R256, R257. Chg L53 & L54 to MLB-160808. Chg U62 to TPA0202PWP. Chg U59 to ES1918. Chg FIR_XCVR to IBM3T1100. Chg CN30-2 to CD_AGND. Chg U46 to LM75CIMX-3. Chg BC410 to SCLU10V3ZY. Chg BC413 & BC414 to SC22P. Add R434 & R435. Repin modem conn for ethernet. Add RJ45-7 & -8.
V0.5	7/8/98	Back annotate reference designators

## 98204-SB

V0.6	8/23/98	Chg clock gen to CY2285-2. Add RX14 and RX15. Add pullups to SDRAM SMBus. Chg memory data series r-pack from 16P8R to 8P4R. Chg X2 to SMT. Chg BT1 to SMT. Chg R121 to DUMMY. Connect NMG5-E3 to MK1704-5. Chg L33 to FEM3225. Routed PCLKD1_D3 thru Q-switch. Added 100R3 to RTCVCC. Add SIM4148 to DDC pullups. Connect RN22-8 to SW1-4 to GPI21. Connect SW1-5 to GND. Chg R137 form 10KR3F to 11KR3F. Move MPCIACT#_3 from CN28-112 to CN28-122. Add CH7004 I2C 5V/3V translation HW. Delete op amp fan controller and add G760. Tie CH7004-X1 to GND. Moved MTR0#_5 to U9B-5. Connect HD_LED#_5 to LS120 (DASP-). CN18-41 chg to PDIAG#_5. Connect SIO_PNF to CN25-35. Chg U42-1 to DOCK_IN_3. Connect INTA#_3 to NMG5 INTB# and INT#_3 to INTB#. Chg C8, C9 & C55 to SC47P. Chg R202 to 22R3. Add 47KR3 pulldown on DKPCLKD1_D3. Chg CN25-116 to DK_INTB#, U4-23 to INTB#_3, U4-34 to DK_INTB#. Chg C63, C12, C26, C68 to SCDIU. Del Q6. CUT_SPK_3 is used to mute the pop during power-up or power-down. Connected mute_out to shutdown on U37. Q-switch removed, mute pop built-in to TPA0202 ( U37 ) if activated by cut_spk_3. Replaced hct4066 (U15 ) analog switch with max4538 analog switch with -V. Fix Vss/Vdd swap on CODEC ( U21). Change Ak4540 ( U21) to ES1918/WM9702. Replace Dummy R111 connection for CD gnd with 0ohm. Replace R71 with gap-close to fill audio moat opening with gnd. Added second feed-back loop on TPA0202 for higher gain with internal speakers and lower gain with headphone/line-out. Added 2N7002 and NC7SZ08 to audio2 for internal mic functionality when line-in or external mic selected but not plugged-in. Swapped AC3_SDIN and AC3_SDOUT on NMA2. Changed 24.576MHZ crystal X1 to FA-368 (lower profile part).
V0.7	8/25/98	Chg AUD_MODE pullup to +5V. Add digital audio/dock logic. Added AC97 codec level translation HW. Rotated RNX13, RNX14, RNX5, RNX6 to ease routing. Chg BC276 and BC274 to AUD_AGND. Swap OEMSW and BATIN#_3 on PX4. Chg RJ45 to SKT-JACK.



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Sheet 27		of 27	