

8 7 6 5 4 3 2 1

REVISIONS						
REV	ZONE	NO.	DESCRIPTION	E.C.	BY	APVD. DATE
A			RELEASE PER EDR # 71677		DD RK	7/30/03
B			RELEASE PER EC # EC18562		DD RK	8/22/03
C			RELEASE PER EC # EC18895		KK RK	10/07/03

GEMINI COLOR INTERFACE BOARD SCHEMATIC REV C

TABLE OF CONTENTS:

1. TITLE PAGE, REVISION NOTES
2. MTM INTERFACE
3. LCD TIMING
4. BACKLIGHT AND POWER SUPPLIES
5. GAMMA AND GATE DRIVERS
6. TFT PANEL POWER SEQUENCING
7. LCD INTERFACE

Reference BOM TABLE (DNI=Do Not Install)
Designator Build
===== 01
R6 DNI
C234 DNI

CHANGES FROM..TO:

REV A
 INITIAL RELEASE
REV B
 CHANGED C5 AND C180 TO 10UF 1206 FOR
 CORRECTED NOTE FOR DISPLAY POWER SEQUENCING
REV C
 REMOVED C234

SCHEMATIC ROOMS:

- ROOMS:
- LCD_CONTROLLER
 - LED_BKLT
 - LCD_SUPPLIES
 - GAMMA_DRIVERS
 - TFT_PWR_SEQ

ITEM	QTY.	PART NO.	DESCRIPTION	REMARKS/REF. SYMBOL
PARTS LIST				
UNLESS OTHERWISE SPECIFIED		APPROVALS		DATE
DRAWN G. COLELLA		10/31/02		SYMBOL TECHNOLOGIES INC. Bohemia, New York GEMINI COLOR INTERFACE BOARD SCHEMATIC
CHECKED R. KOTSAY		10/31/02		
ENGINEER G. COLELLA		10/31/02		
MFG. ENG.				
DIMENSIONS ARE IN INCHES		MATERIAL:		PRODUCT
.XX + .01		FRACTIONS ± 1/64		QUALITY
.XXX + .005				TEST ENG.
FINISH:				SIZE DWG. NO.
				D 17-59785-01
				REV C
NEXT ASSY		USED ON		DO NOT SCALE DRAWING
				FINISH:
				TEST ENG.
Tue Oct 7 09:07:35 2003				SHEET 1 OF 7

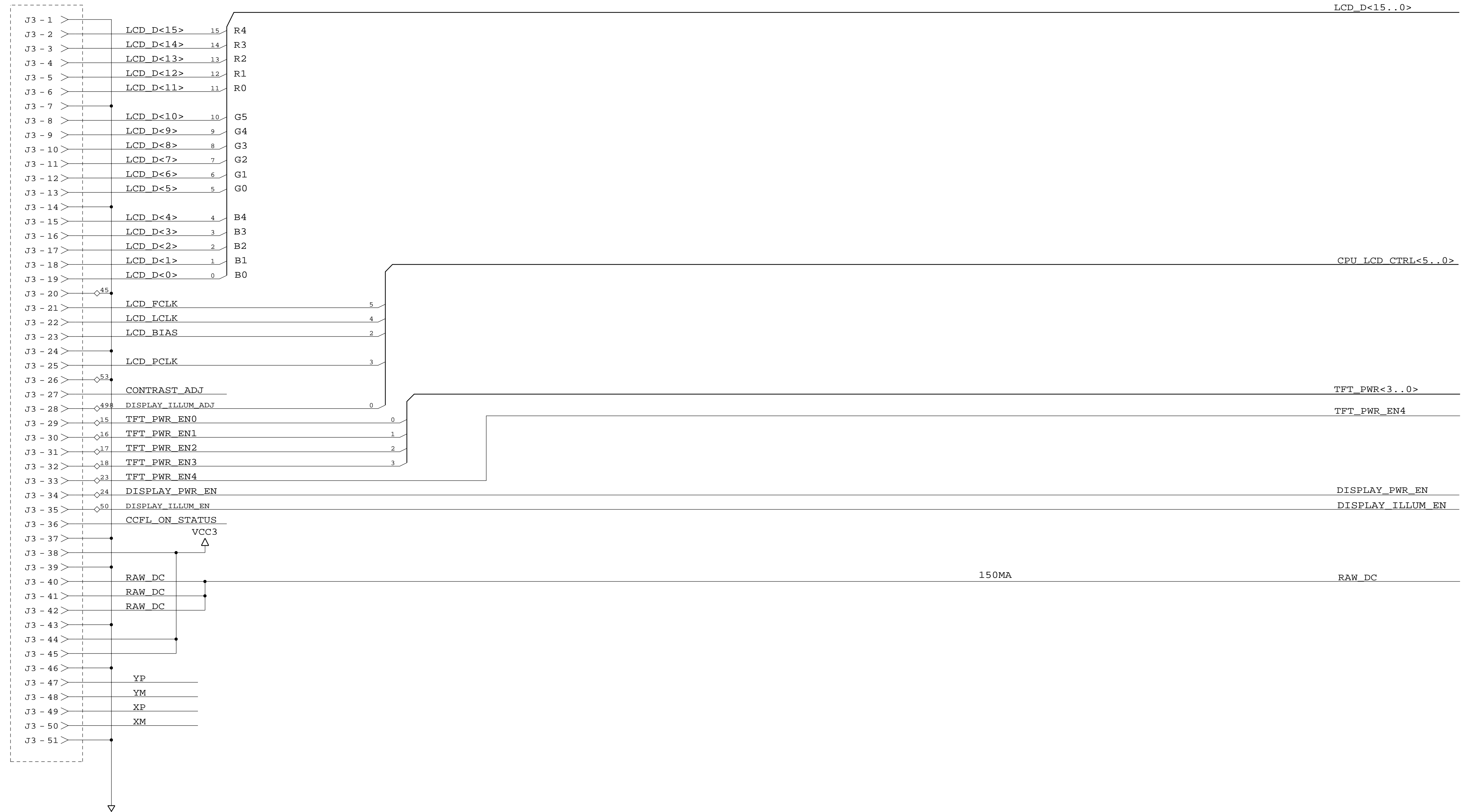
8 7 6 5 4 3 2 1

REVISIONS							
REV	ZONE	NO.	DESCRIPTION	E.C.	BY	APVD.	DATE
			SEE SHEET 1				

MTM INTERFACE

CONNECTOR TO MTM

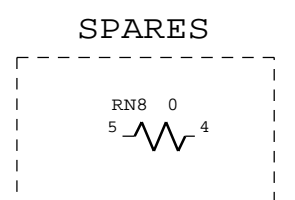
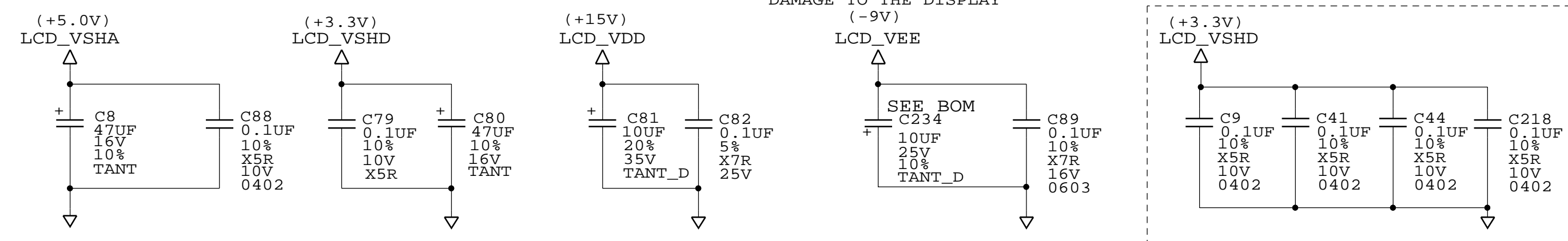
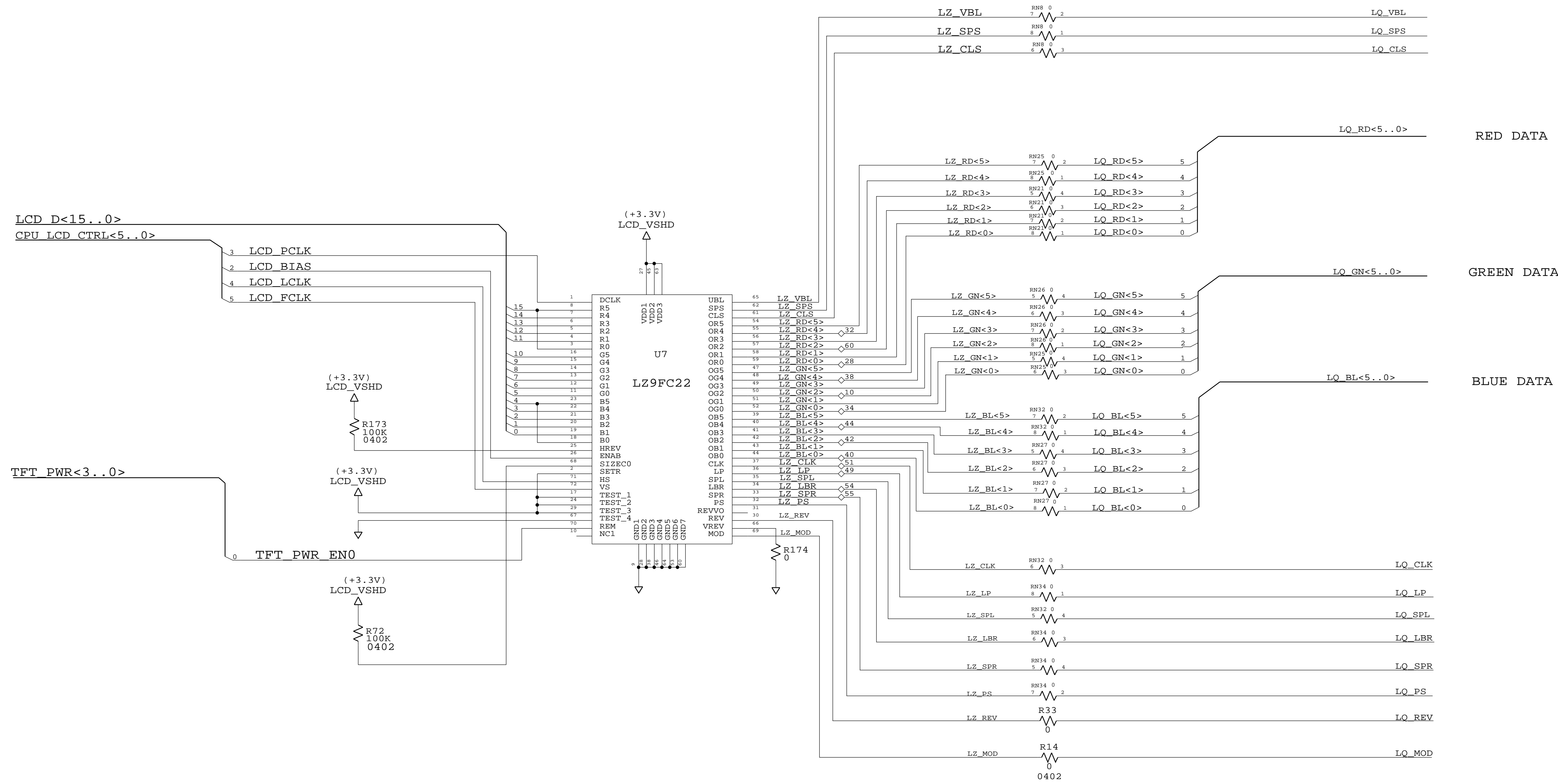
50-12100-1010



SYMBOL TECHNOLOGIES INC.			
Bohemia, New York			
GEMINI COLOR INTERFACE BOARD			
MTM INTERFACE			
SIZE	DWG. NO.	REV	
D	17-59785-01	C	
Tue Oct 7 09:19:43 2003		SHEET 2 OF 7	

REVISIONS							
REV	ZONE	NO.	DESCRIPTION	E.C.	BY	APVD.	DATE
			SEE SHEET 1				

LCD TIMING CONTROLLER

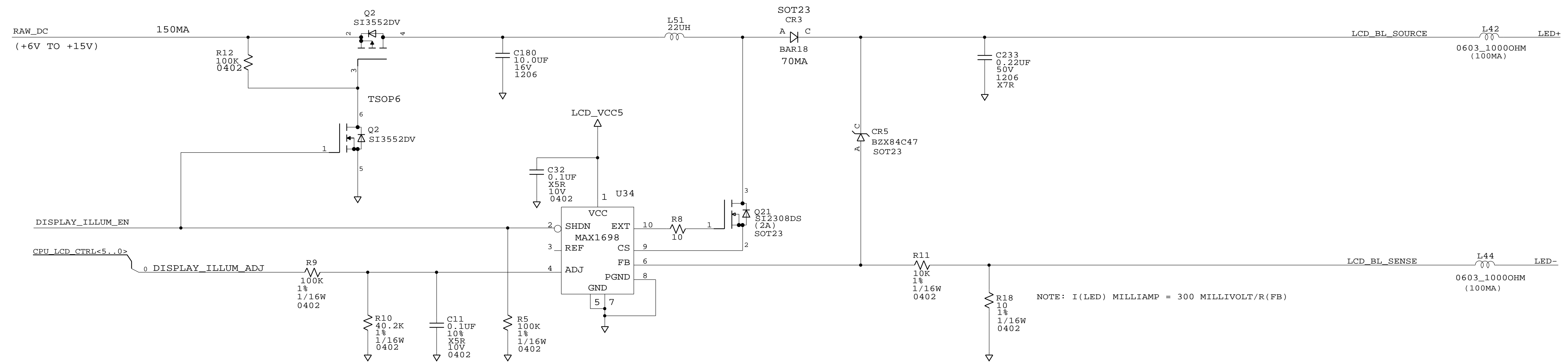


SYMBOL TECHNOLOGIES INC.		
Bohemia, New York		
GEMINI COLOR INTERFACE BOARD		
LCD TIMING		
SIZE	DWG. NO.	REV
D	17-59785-01	C
Tue Oct 7 09:19:35 2003		SHEET 3 OF 7

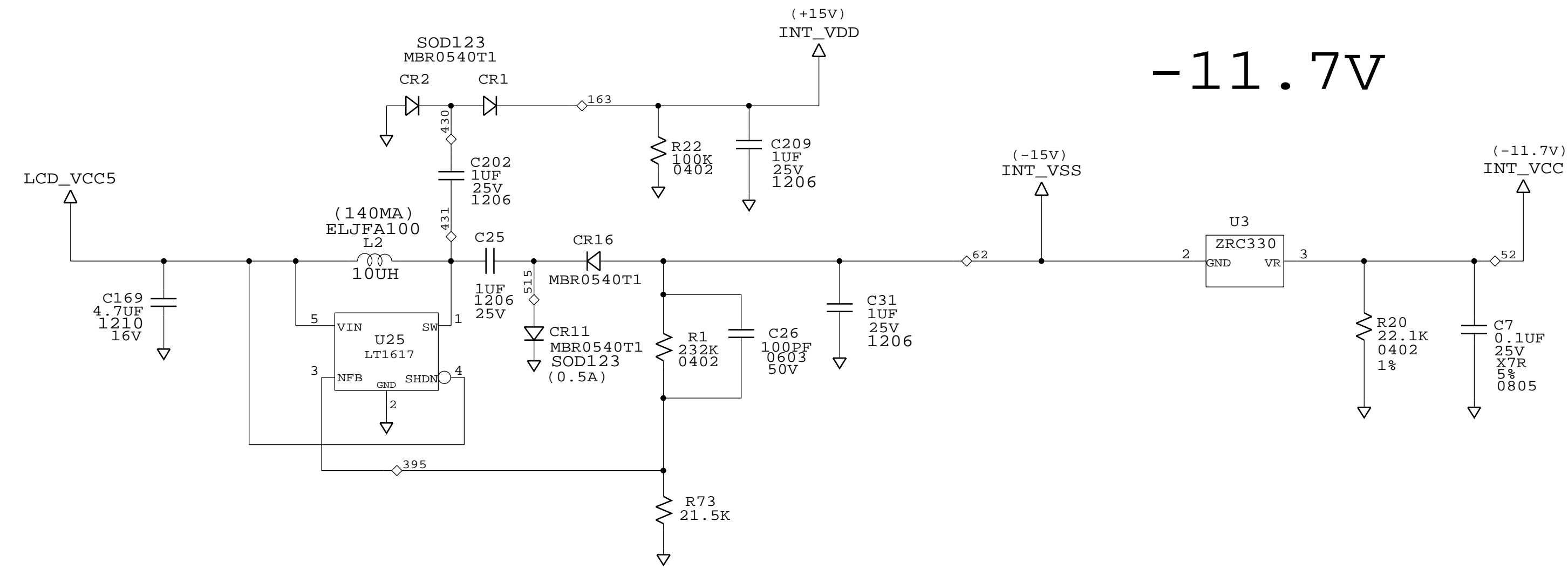
LED BACKLIGHT & POWER SUPPLIES

LED BACKLIGHT

REVISIONS							
REV	ZONE	NO.	DESCRIPTION	E.C.	BY	APVD.	DATE
			SEE SHEET 1				

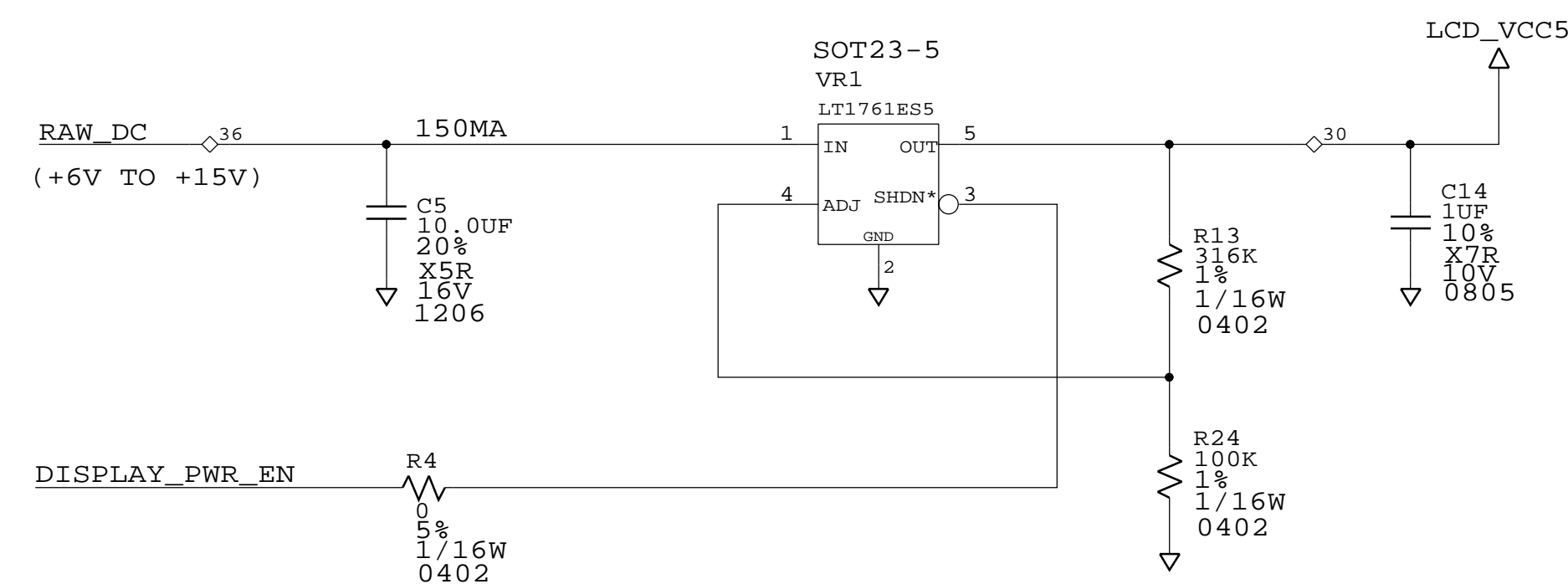


+15 & -15 VOLT SUPPLY



-11.7V

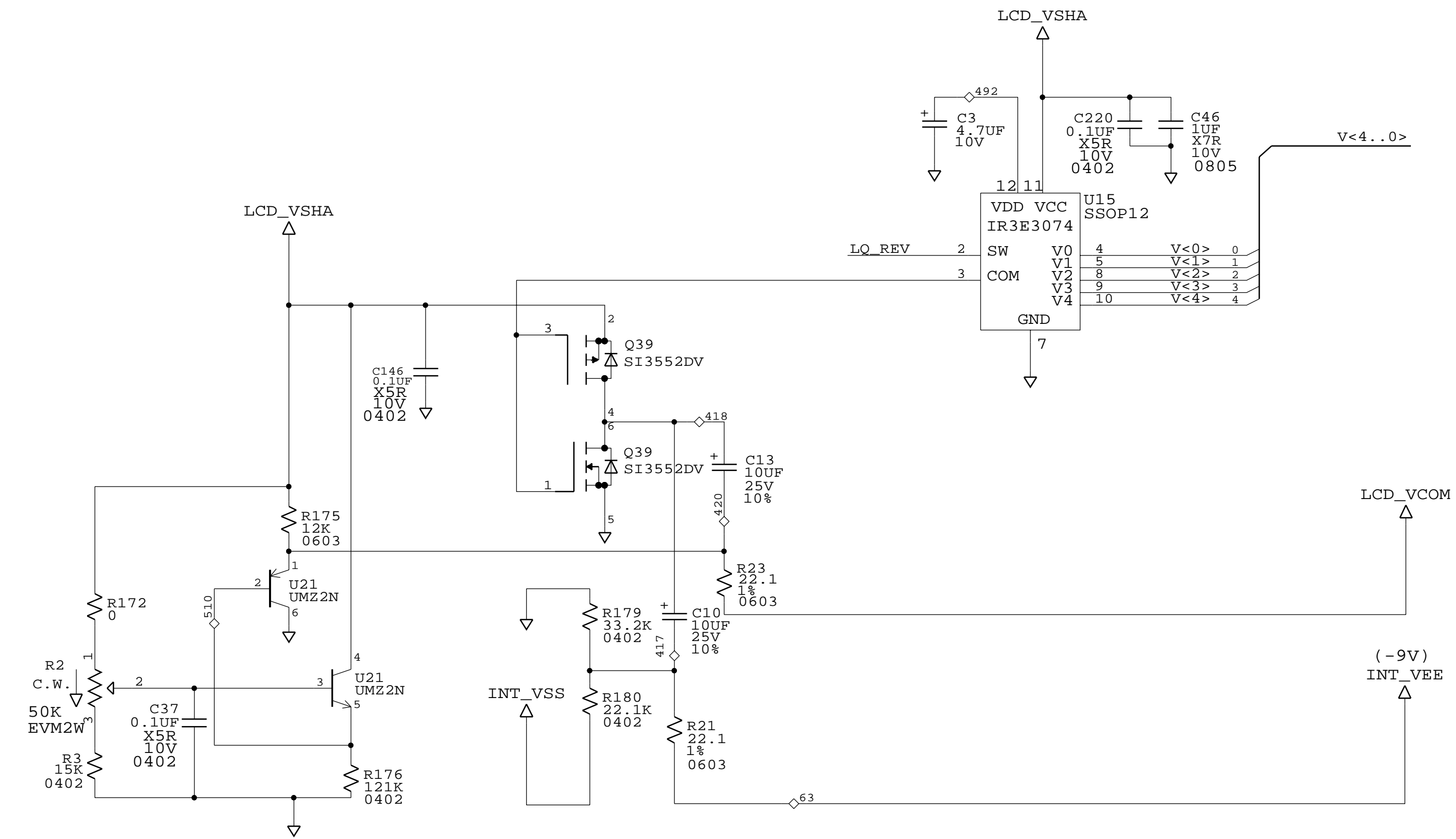
+5.0V SUPPLY



SYMBOL TECHNOLOGIES INC.		
Bohemia, New York		
GEMINI COLOR INTERFACE BOARD		
LED BACKLIGHT & POWER SUPPLIES		
SIZE	DWG. NO.	REV
D	17-59785-01	C
Tue Oct 7 09:19:37 2003		SHEET 4 OF 7

REVISIONS					
REV	ZONE	NO.	DESCRIPTION	E.C.	DATE
			SEE SHEET 1		

GAMMA & GATE DRIVERS



NOTE: COM MUST BE CALIBRATED ON THE MANUFACTURING FLOOR WITH THE PANEL THAT WILL BE USED FOR THAT PARTICULAR UNIT.

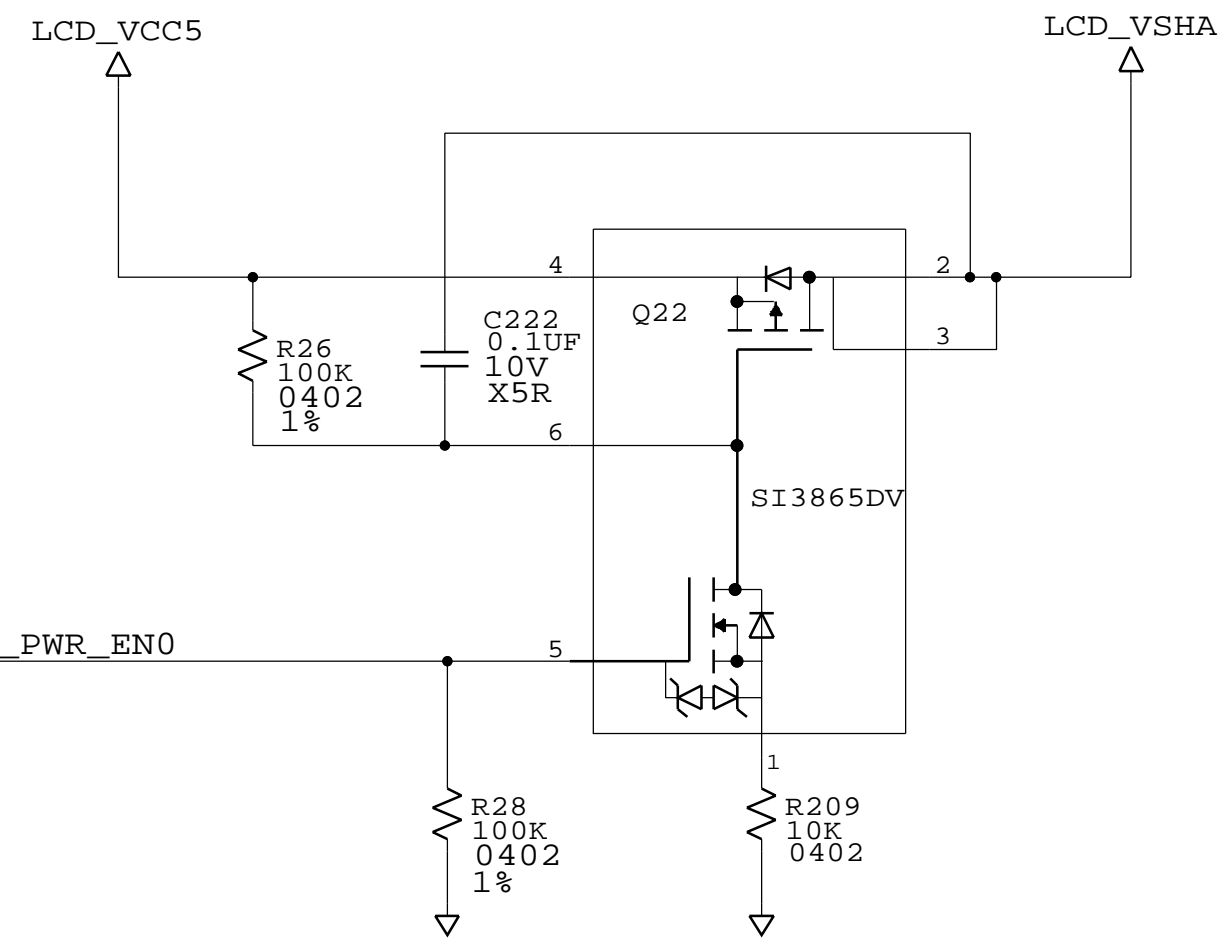
SYMBOL TECHNOLOGIES INC.		
Bohemia, New York		
GEMINI COLOR INTERFACE BOARD		
GAMMA & GATE DRIVERS		
SIZE	DWG. NO.	REV
D	17-59785-01	C
Tue Oct 7 09:19:38 2003		SHEET 5 OF 7

TFT PANEL POWER SEQUENCING

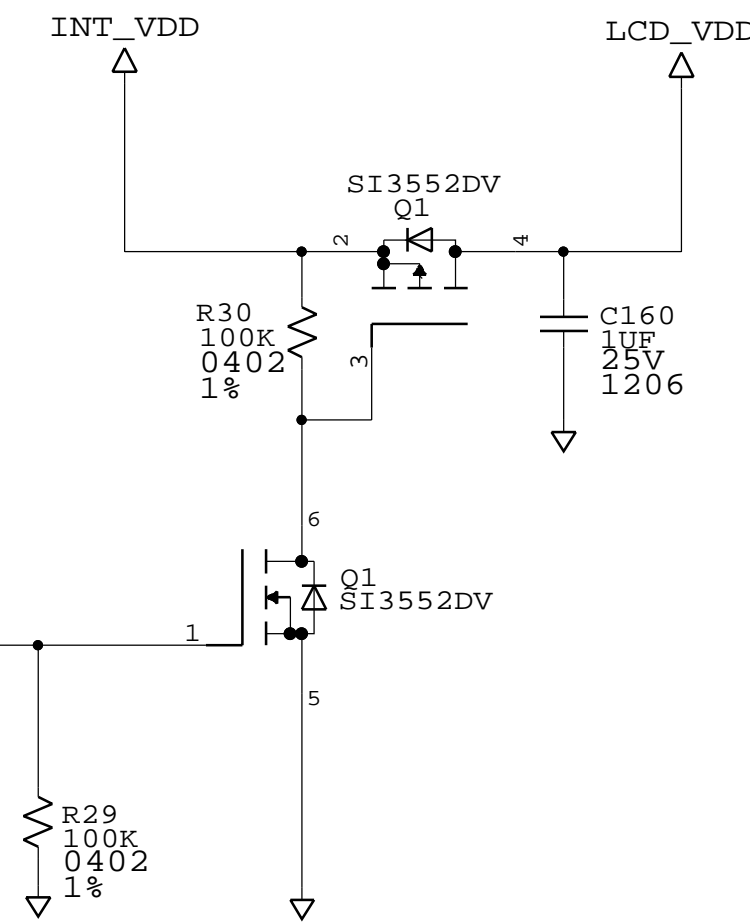
REVISIONS							
REV	ZONE	NO.	DESCRIPTION	E.C.	BY	APVD.	DATE
			SEE SHEET 1				

TFT_PWR<3..0>

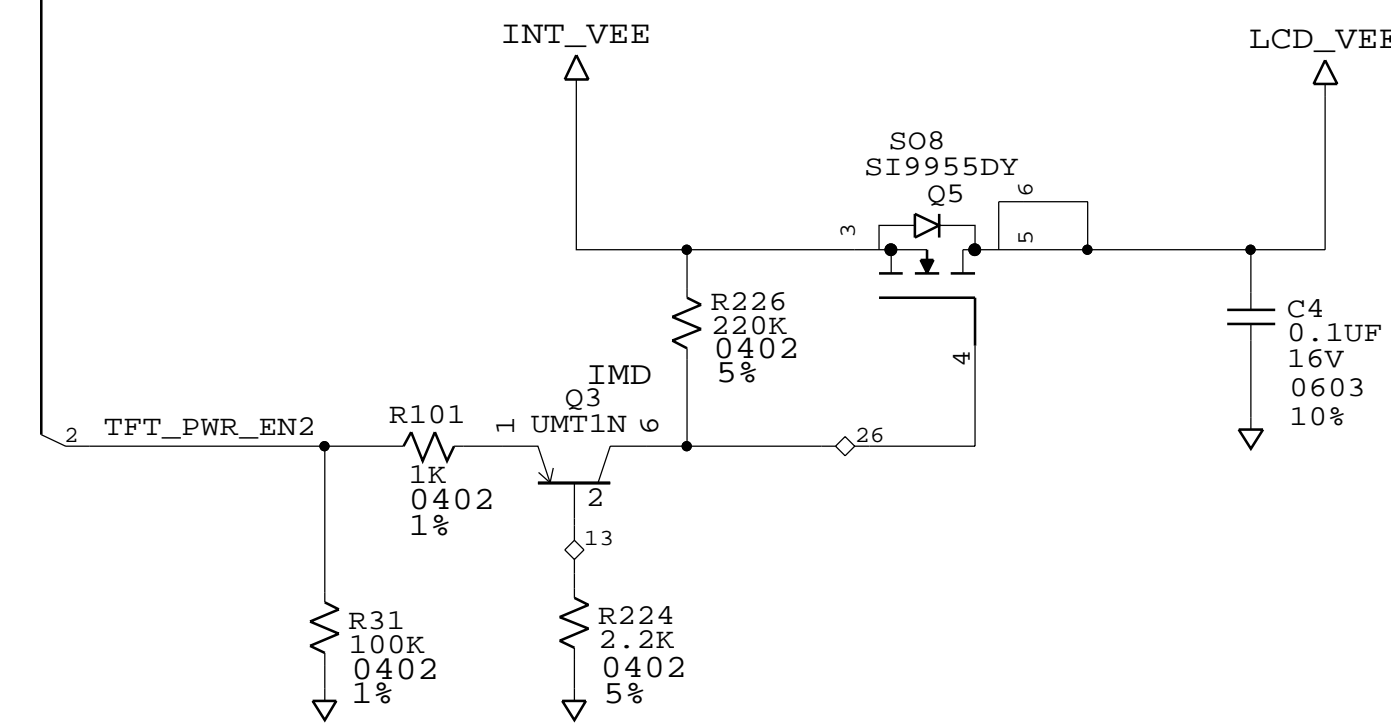
DISPLAY 5.0 VOLTS



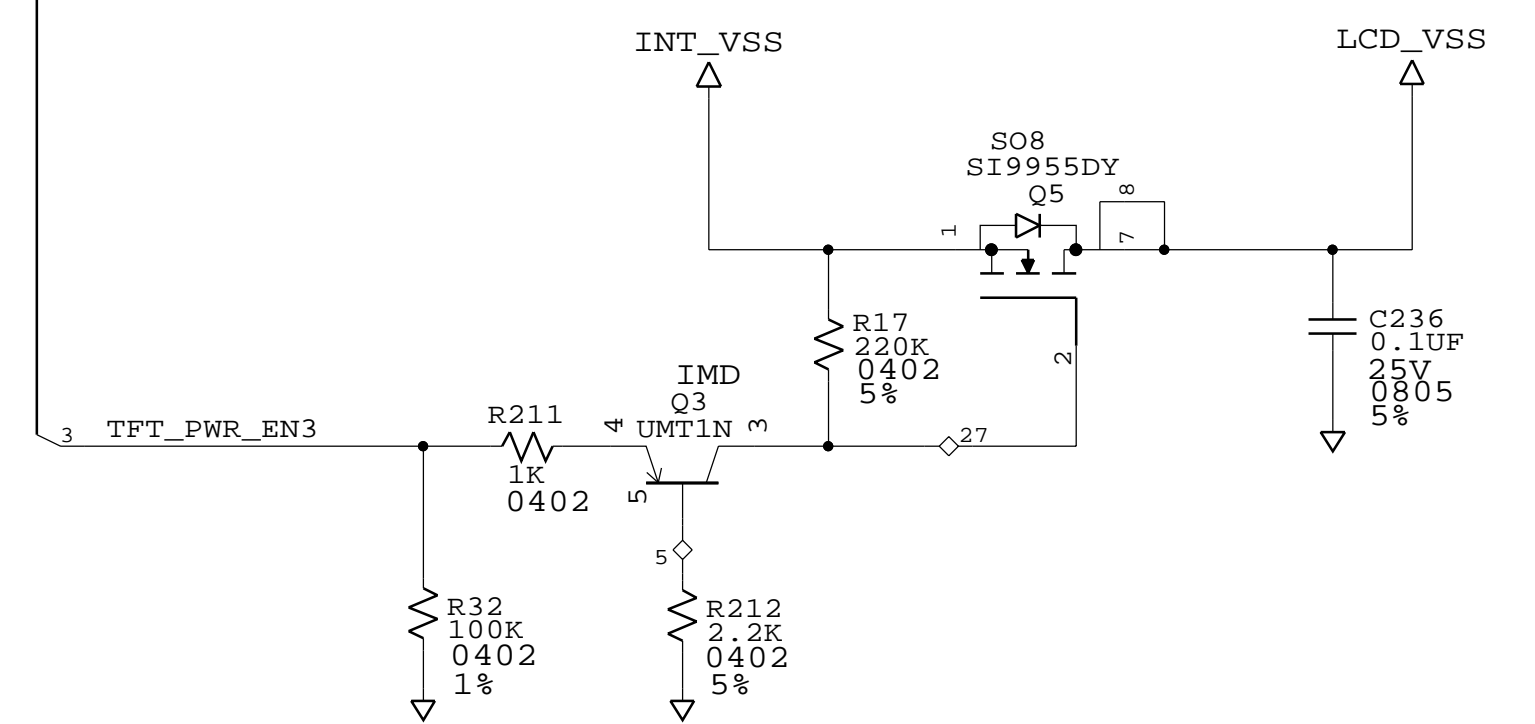
DISPLAY +15.0 VOLTS



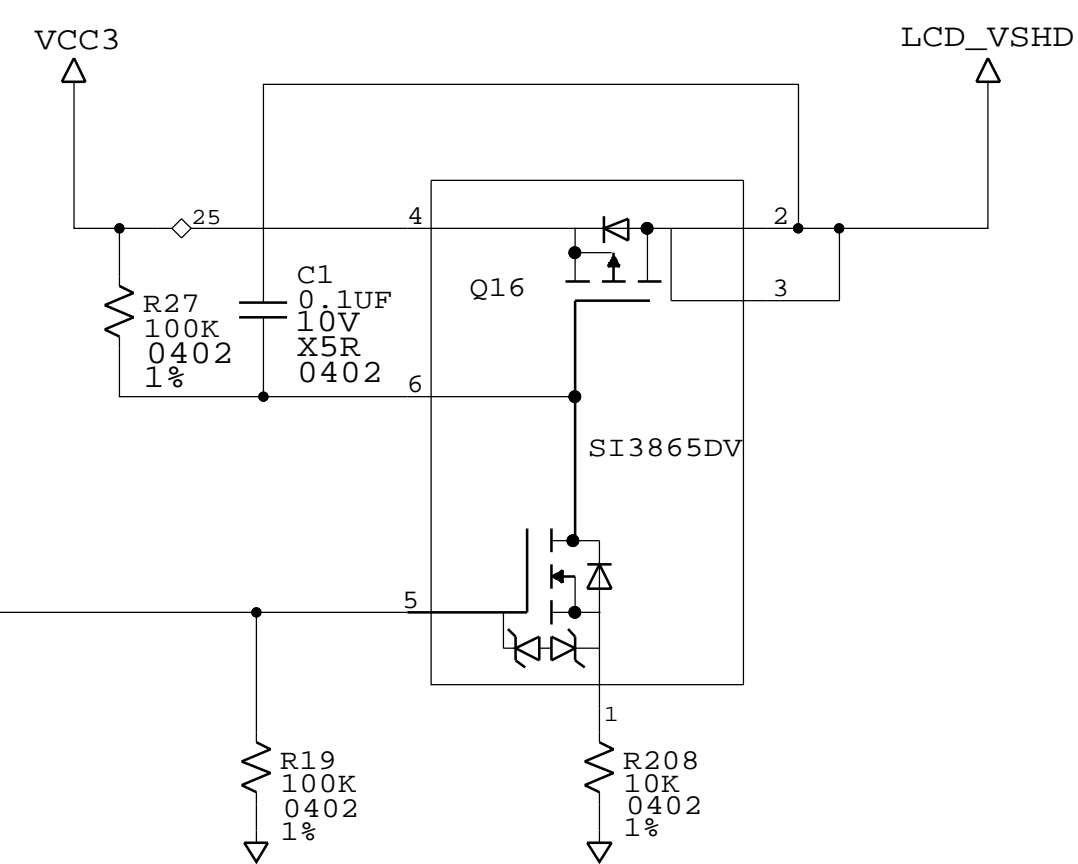
DISPLAY VEE -9.0 VOLTS



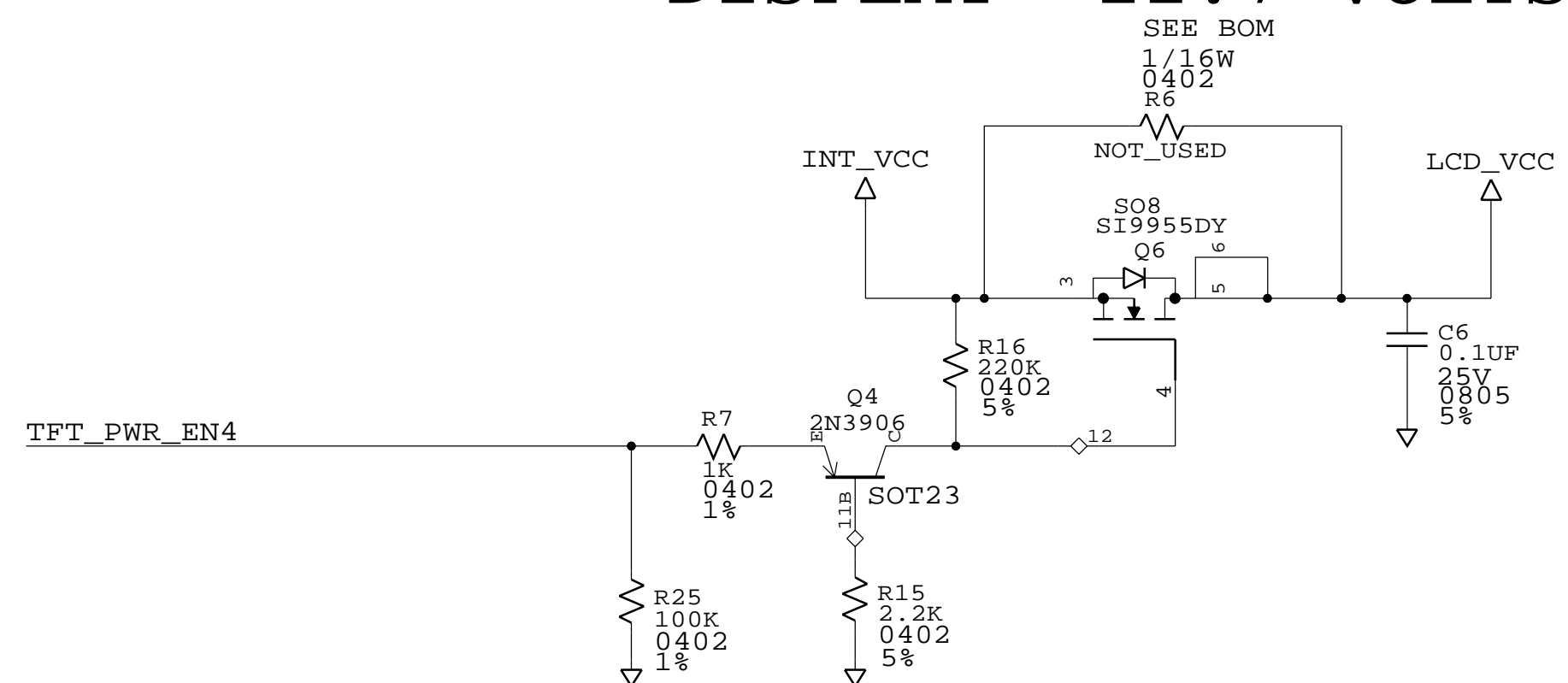
DISPLAY -15.0 VOLTS



DISPLAY 3.3 VOLTS



DISPLAY -11.7 VOLTS



TFT DISPLAY PWR

VSHD: +3.3VDC @ 1.8 MA(TYP)(3.6 MA MAX)
 VSHA: +5.0VDC @ 5 MA(TYP)(10 MA MAX)
 VCC: -11.7VDC @ -0.02MA(TYP)(-0.04MA MAX)
 VSS: -15VDC @ +0.06MA(TYP)(-0.12MA MAX)
 VEE: -9.0VDC @ -0.03MA(TYP)(-0.06MA MAX)
 VDD: +15 VDC @ 0.05MA(TYP)(0.10MA MAX)

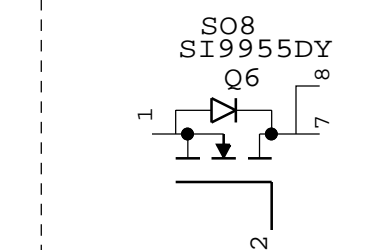
VCOM: (+/-2.5)+1.1VDC

POWER SEQUENCE

TURN ON
 VSHD->VSHA->VSS->VCC->VEE->VDD

TURN OFF
 VDD->VEE->VCC->VSS->VSHA->VSHD

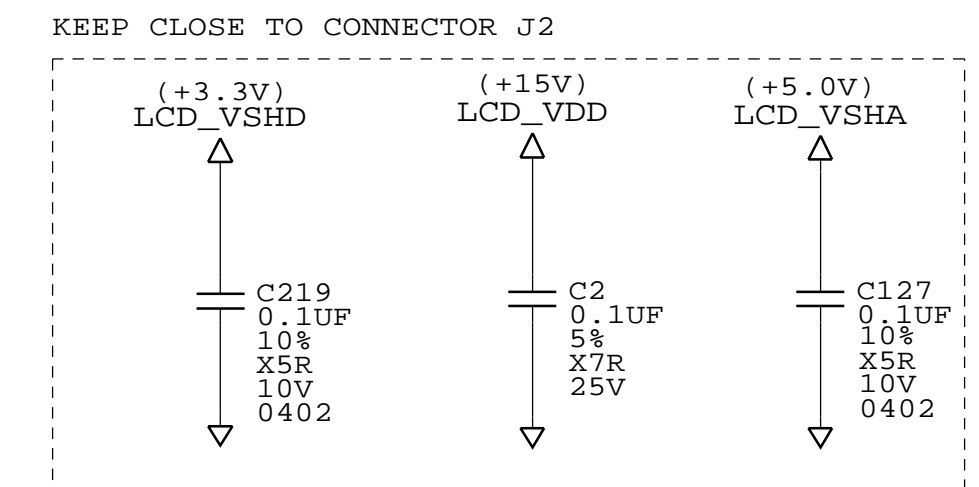
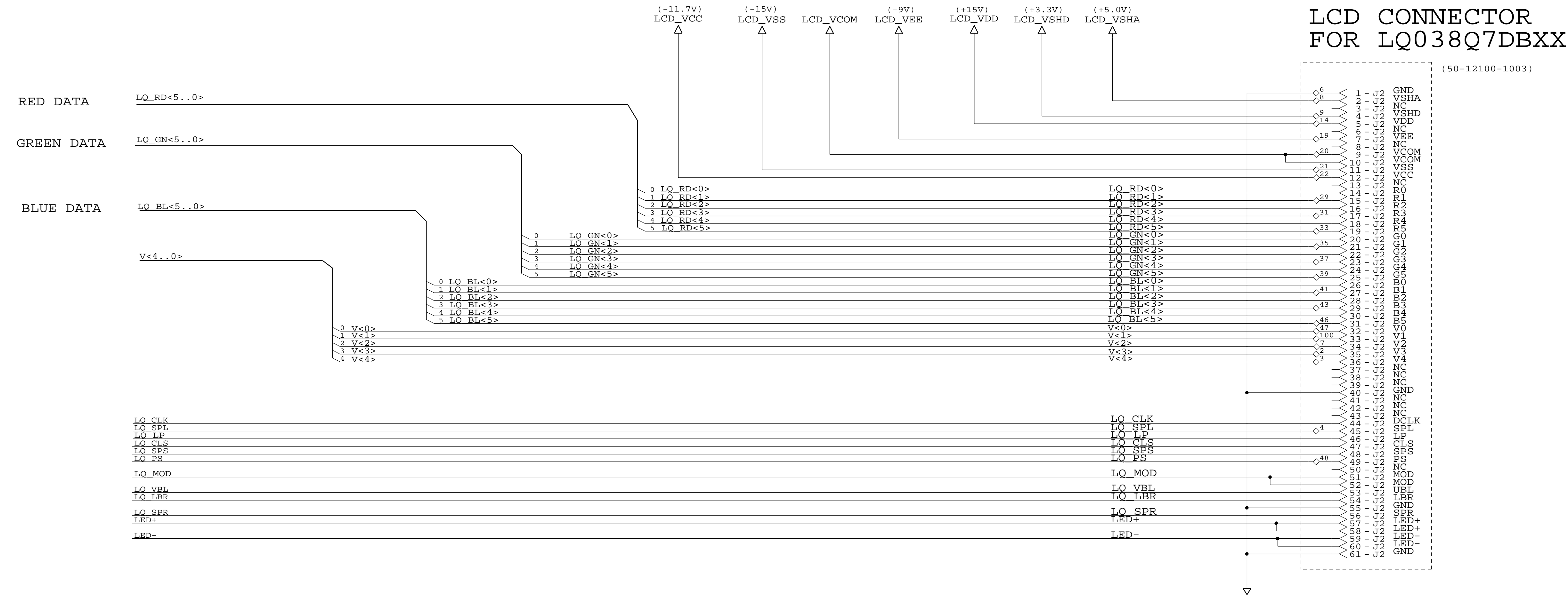
SPARES



SYMBOL TECHNOLOGIES INC.		
Bohemia, New York		
GEMINI COLOR INTERFACE BOARD		
LCD POWER SEQUENCING		
SIZE	DWG. NO.	REV
D	17-59785-01	C
Tue Oct 7 09:19:40 2003		SHEET 6 OF 7

REVISIONS							
REV	ZONE	NO.	DESCRIPTION	E.C.	BY	APVD.	DATE
			SEE SHEET 1				

LCD INTERFACE



SYMBOL TECHNOLOGIES INC.			
Bohemia, New York			
GEMINI COLOR INTERFACE BOARD			
LCD INTERFACE			
SIZE	DWG. NO.	REV	
D	17-59785-01	C	
Tue Oct 7 09:19:42 2003		SHEET 7 OF 7	

GEMINI MAIN TERMINAL MODULE (MTM) SCHEMATIC (WITH EMBEDDED 802.11B RADIO) REV A

REVISIONS						
REV	ZONE	NO.	DESCRIPTION	E.C.	BY	APVD.
A			RELEASE PER EDR # 72523		MV	R. KOTSAY 12/11/03

CONFIGURATIONS:

-01 : 64 MBYTE FLASH / 64 MBYTE SDRAM WITH EMBEDDED T3 RADIO
 -02 : 32 MBYTE FLASH / 32 MBYTE SDRAM WITH EMBEDDED T3 RADIO
 -03 : 64 MBYTE FLASH / 128 MBYTE SDRAM WITH EMBEDDED T3 RADIO
 -04 : 32 MBYTE FLASH / 32 MBYTE SDRAM BATCH (NO RADIO)
 -05 : 64 MBYTE FLASH / 64 MBYTE SDRAM BATCH (NO RADIO)
 -06 : 64 MBYTE FLASH / 128 MBYTE SDRAM BATCH (NO RADIO)

POPULATIONS:

△ NOT POPULATED ON ANY CONFIGURATION

CHANGES:

CHANGES FROM 64436 REV 5 : NONE

NOTES:

- ALL RESISTORS ARE 0402, 5% UNLESS NOTED OTHERWISE
- ALL CAPACITORS ARE 0402, 10V, X7R OR COG, 10% UNLESS NOTED OTHERWISE

POWER AND GROUND DESIGNATOR	LIST - 1 PART TYPE	
U9	VCC3	NC7S211-SC70-6-VCC=VCC3
GND	14	LCK08-TSSOP14-VCC=VCC3
U19	VCC3	NC7S211-SC70-6-VCC=VCC3
GND	5	
U22	VCC3	TC7S00FU-SOT23-5-VCC=VCC3
GND	5	
U26	VCCF	SAM256MB_WIDE-SAM256MB_WIDE-VCA
GND	A9	
A1	E7	
E3	J9	
J1		
U30	VCCF	SAM256MB_WIDE-SAM256MB_WIDE-VCA
GND	A9	
A1	E7	
E3	J9	
J1		
U33	VCC3	AHC1G32-SC70-VCC=VCC3
GND	5	
U37	VCCF	28F256K3-EBGA64-INT-VCC=VCCF
GND	A6	
B2	H3	
H4		
U38	VCC3	NC7S211-SC70-6-VCC=VCC3
GND	5	
U39	VCC3	NC7S227-SC70-6-VCC=VCC3
GND	5	
U40	VCC3	NC7S211-SC70-6-VCC=VCC3
GND	5	
U44	VCC3	LVC1G17-SC70-VCC=VCC3
GND	5	
U48	VCCF	28F256K3-EBGA64-INT-VCC=VCCF
GND	A6	
B2	H3	
H4		
U55	VCC3	LVC1G17-SC70-VCC=VCC3
GND	5	
U56	VCC3	LVC1G17-SC70-VCC=VCC3
GND	5	
U304	GND	AHC1G32-SC70-VCC=3VDA
3VDA	3	
5		

TABLE OF CONTENTS

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- PAGE 2: XSCALE PROCESSOR
- PAGE 3: MEMORY & BUFFERS
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- PAGE 5: 802.11B RADIO - BASEBAND
- PAGE 6: 802.11B RADIO - IF
- PAGE 7: 802.11B RADIO - RF
- PAGE 8: AUDIO (PIEZO)
- PAGE 9: POWER MICRO
- PAGE 10: DISPLAY INTERFACE & OUTHOUSE CPLD
- PAGE 11: SCANNER & IMAGER INTERFACES
- PAGE 12: SD/MMC, COMMUNICATIONS & TRIGGER INTERFACES
- PAGE 13: USER INTERFACES
- PAGE 14: POWER, BATTERY CHARGER & POWER SUPPLIES
- PAGE 15: CORE SUPPLY, BACKUP BATTERY & ACIN
- PAGE 16: MTM TO OPTION BOARD INTERFACE

CRITICAL SIGNALS

SIGNALS:

BX_SDRAS, BX_SDCAS, BX_SDCS0, BX_SDCLK1, BX_WE, BX_DQM3...0
 MMCMD, MMDAT, MMCMD_DAT3_CS
 YP, YM, XP, XM
 BUF_EN*
 D_DIR
 BX_ADDR, BX_DATA
 LCD<15..0>
 SPI_DO, SPI_DI
 PIX_DATA<7..0>
 RD/WR*
 USB_DPLUS, USB_DMINUS

CLOCK TABLE

CLOCK:	FREQUENCY:
SDCLK1	(100 MHZ)
LCD_PCLK	(MONO=1.66MHZ, COLOR=6.22MHZ)
SDCLK_0	(50 MHZ)
SDCLK_2	(50 MHZ)
SDCLK0	(50 MHZ)
CLK_48M	(50 MHZ)
BX_SDCLK1	(50 MHZ)
48MHZ_GPIO7	(48 MHZ)
MMCLK	(20 MHZ)
AC97_BITCLK	(12.288 MHZ)
USB	(12 MHZ)
PIX_CLK	(12 MHZ)
SPI_CLK	(5 MHZ)
TCLK	(12 MHZ)
IRDA	(4 MHZ)
CLK_3M6	(3.6 MHZ)
SCL	(400 KHZ)
CLK_32K	(32 KHZ)
CPLD_CLK_32K	(32 KHZ)
ISL_CLK	(1 MHZ)
44MHZ_CW	(44 MHZ)
44MHZ_REF	(44 MHZ)

SCHEMATIC ROOMS

ROOMS:

ACIN	COMMCNN
ASIC	DISPLAYCONN
AUDIO	IMAGERCONN
AUDIOSUPPLY	POWERCONN
BACKUPBATTERY	SCANNERCONN
BATTERYCHARGER	SDMMCNN
CPLD	TRIGCONN
CURRENTMONITOR	KEYBOARD_BACKLIGHT
FAULTDETECT	IOCONN
HISPEED	TOUCHSCREENCONN
RADIOATETP	
OPTIONBUFF	
POWERMICRO	
RADIOIDIGITAL	
RADIOIF	
RADIORF	
USB	
3VSUPPLY	

SCHEMATIC ATTRIBUTES

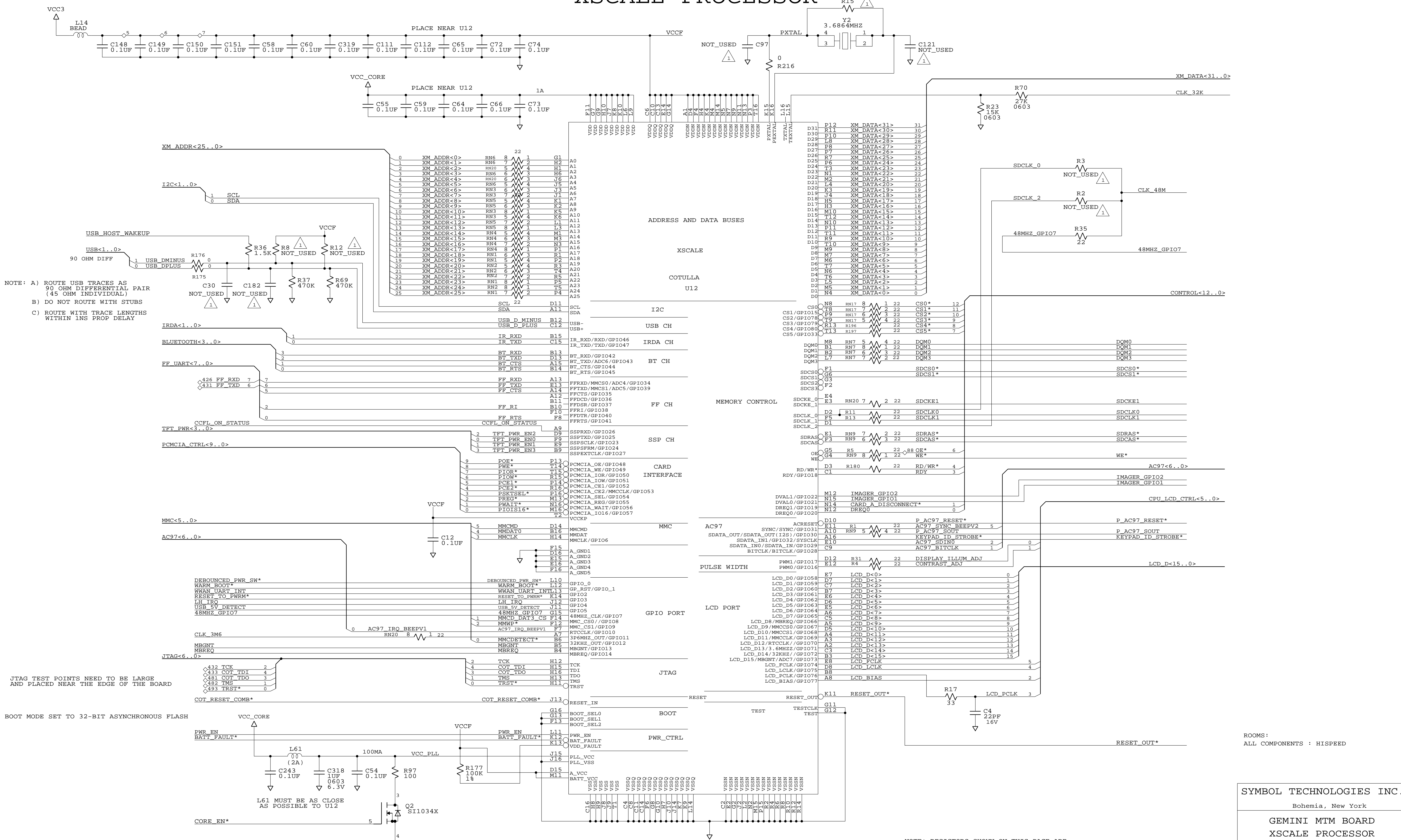
ATTRIBUTES:

NET_PHYSICAL_TYPE
 CLOCK_NET
 DIFFERENTIAL_PAIR
 IMPEDANCE_RULE

ITEM	QTY.	PART NO.	DESCRIPTION	REMARKS/REF. SYMBOL
PARTS LIST				
			APPROVALS	DATE
			DRAWN D. DEMEO	12/11/03
			CHECKED R. KOTSAY	12/11/03
			ENGINEER D. DEMEO	12/11/03
			MFG. ENG. P. IASSO	12/11/03
			PRODUCT G. STILL	12/11/03
			QUALITY B. WATSON	12/11/03
			TEST ENG. D. REED	12/11/03
THE DWG. AND SPECIFICATION CONTAINED HEREON ARE PROPRIETARY AND MUST NOT BE USED, COPIED, REPRODUCED OR OTHERWISE DEALT WITH NOR ITS CONTENTS COMMUNICATED TO OTHERS EXCEPT IN ACCORDANCE WITH WRITTEN INSTRUCTIONS RECEIVED FROM SYMBOL TECHNOLOGIES INC.				
			DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED .XX + .01 .XXX + .005 ANGLES : 1° FRACTIONS ± 1/64	SYMBOL TECHNOLOGIES INC. Bohemia, New York GEMINI MTM BOARD SCHEMATIC SIZE DWG. NO. D 17-64436-01 REV A
NEXT ASSY			USED ON	DO NOT SCALE DRAWING
Thu Dec 11 15:55:51 2003 SHEET 1 OF 16				

XSCALE PROCESSOR

REVISIONS							
REV	ZONE	NO.	DESCRIPTION	E.C.	BY	APVD.	DATE
			SEE SHEET 1				



NOTE: A) ROUTE USB TRACES AS 90 OHM DIFFERENTIAL PAIR (45 OHM INDIVIDUAL)
 B) DO NOT ROUTE WITH STUBS
 C) ROUTE WITH TRACE LENGTHS WITHIN 1NS PROP DELAY

NOTE: RESISTORS SHOWN ON THIS PAGE ARE TO BE PLACED AS CLOSE AS POSSIBLE TO U12

PLACE TP 15,16,19,20,48,49,50,51,52 NEXT TO EACH OTHER
 KEEP JTAG, TX/RX AND VCC3/GND CLOSE TO EDGE OF BOARD

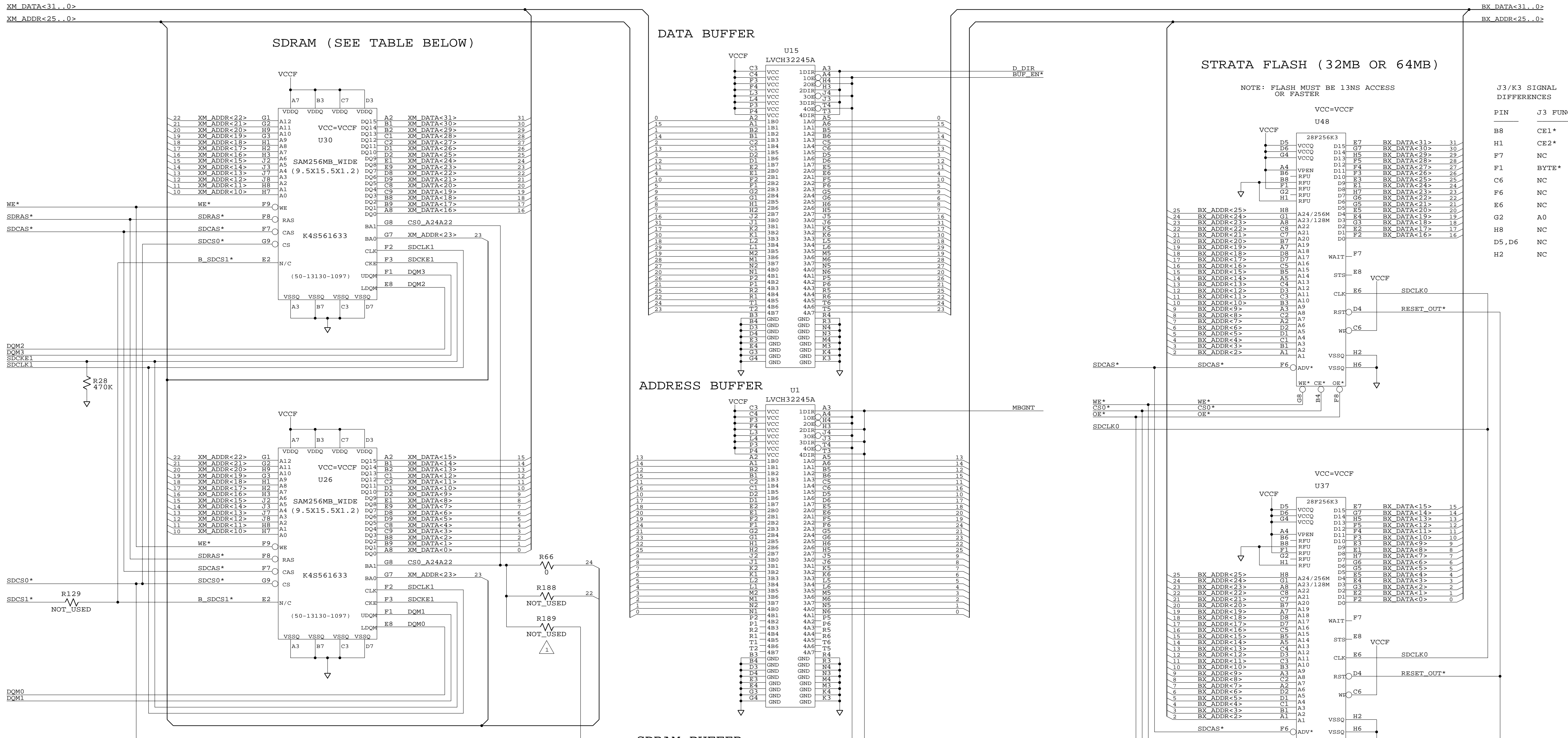
ROOMS:
 ALL COMPONENTS : HISPEED

SYMBOL TECHNOLOGIES INC.
 Bohemia, New York
GEMINI MTM BOARD
XSCALE PROCESSOR

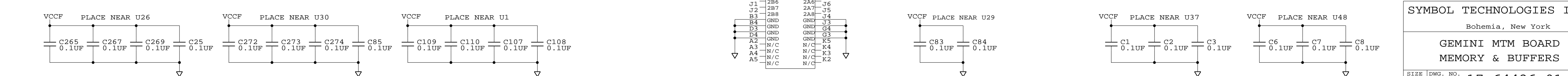
SIZE	DWG. NO.	REV
D	17-64436-01	A
Thu Dec 11 15:58:13 2003		SHEET 2 OF 16

MEMORY & BUFFERS

REVISIONS				E.C.	BY	APVD.	DATE
REV	ZONE	NO.	DESCRIPTION				
			SEE SHEET 1				



DENSITY	R66	R129	R188	R189
128MBYTE (2 CS)	IN	IN	OUT	OUT
64MBYTE	IN	OUT	OUT	OUT
32MBYTE	OUT	OUT	IN	OUT
16MBYTE	OUT	OUT	IN	OUT



ROOMS:
ALL COMPONENTS : HISPEED

SYMBOL TECHNOLOGIES INC.
Bohemia, New York

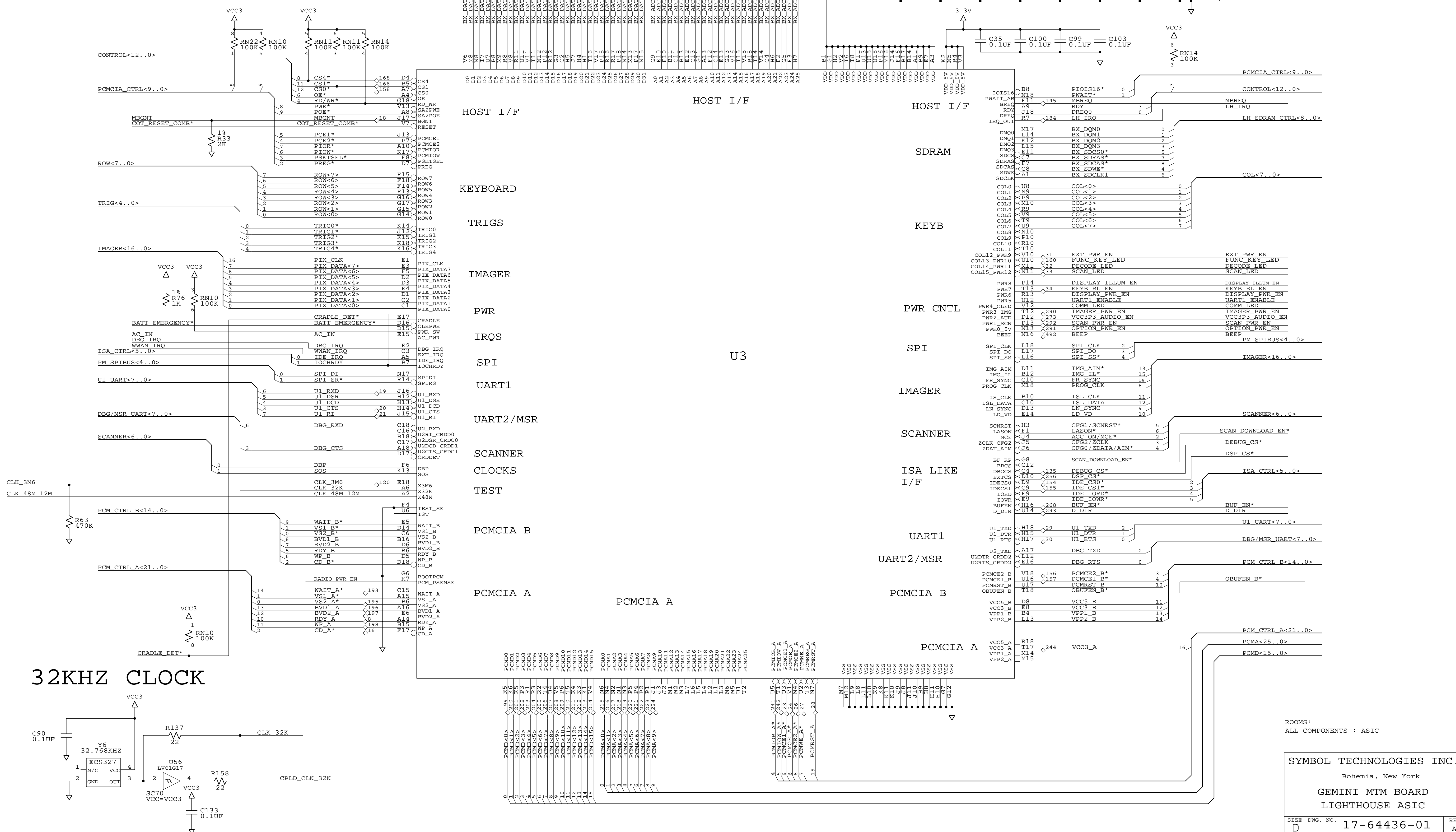
GEMINI MTM BOARD
MEMORY & BUFFERS

SIZE	DWG. NO.	REV
D	17-64436-01	A

Thu Dec 11 15:58:18 2003 SHEET 3 OF 16

REVISIONS							
REV	ZONE	NO.	DESCRIPTION	E.C.	BY	APVD.	DATE
			SEE SHEET 1				

LIGHTHOUSE ASIC



ROOMS:
ALL COMPONENTS : ASIC

SYMBOL TECHNOLOGIES INC.
Bohemia, New York

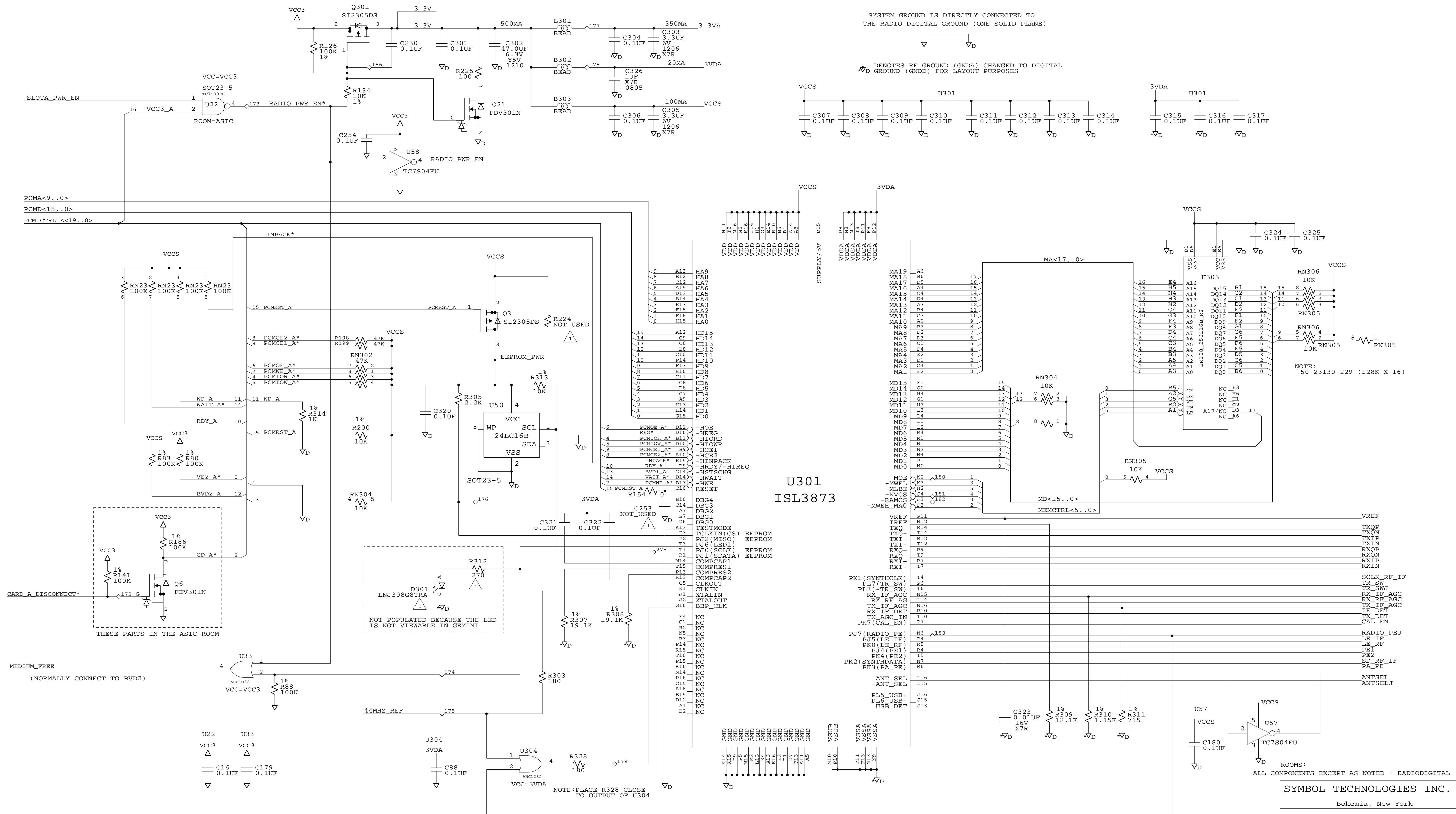
GEMINI MTM BOARD
LIGHTHOUSE ASIC

SIZE	DWG. NO.	REV
D	17-64436-01	A

Thu Dec 11 15:58:32 2003 SHEET 4 OF 16

T3-BASED 802.11B RADIO - BASEBAND

REVISIONS				
REV	ZONE	BY	DATE	DESCRIPTION
SEE SHEET 1				



SYSTEM GROUND IS DIRECTLY CONNECTED TO THE RADIO DIGITAL GROUND (ONE SOLID PLANE)

⚡ DENOTES RF GROUND (GNDA) CHANGED TO DIGITAL GROUND (GNDD) FOR LAYOUT PURPOSES

NOTE: 50-23130-229 (128K X 16)

ROOMS: ALL COMPONENTS EXCEPT AS NOTED : RADIODIGITAL

SYMBOL TECHNOLOGIES INC.
Bohemia, New York

GEMINI MTM BOARD
802.11B RADIO - BASEBAND

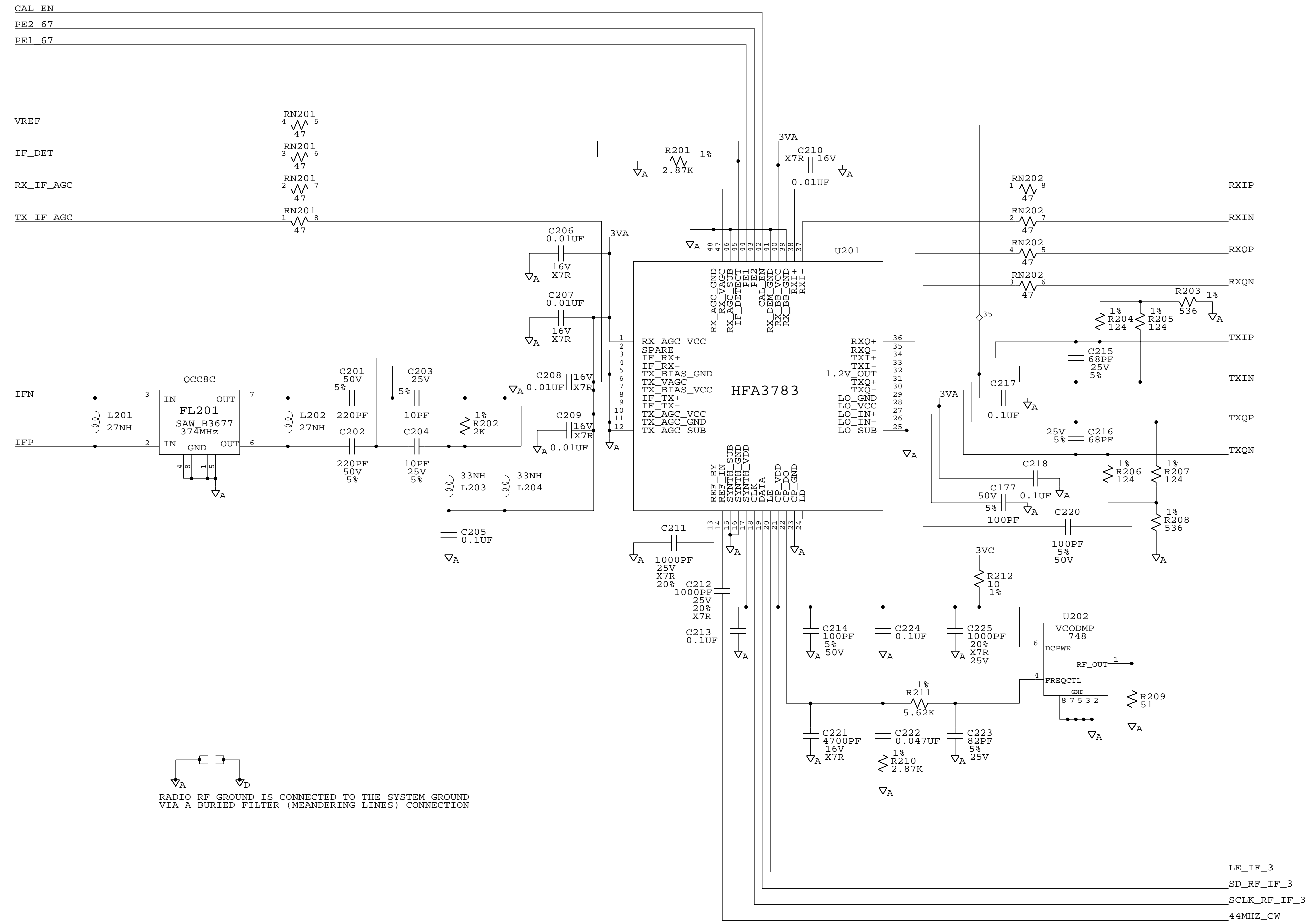
SIZE	DWG. NO.	REV
D	17-64436-01	A

Thu Dec 11 15:58:25 2003 SHEET 5 OF 16

NOTE: PLACE R328 CLOSE TO OUTPUT OF U304

T3-BASED 802.11B RADIO - IF

REVISIONS							
REV	ZONE	NO.	DESCRIPTION	E.C.	BY	APVD.	DATE
			SEE SHEET 1				



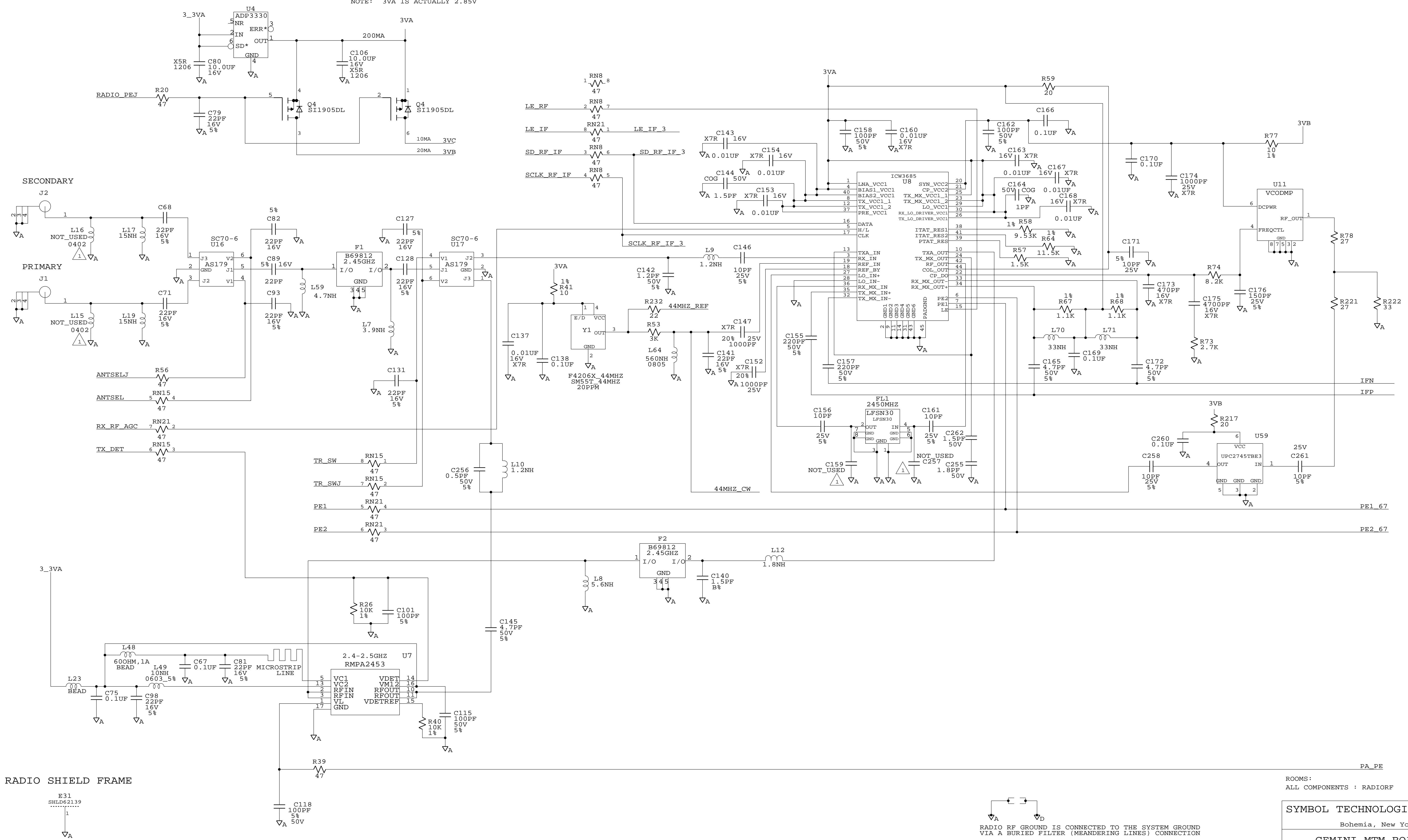
ROOMS:
ALL COMPONENTS : RADIOIF

SYMBOL TECHNOLOGIES INC.		
Bohemia, New York		
GEMINI MTM BOARD		
802.11B RADIO - IF		
SIZE	DWG. NO.	REV
D	17-64436-01	A
Thu Dec 11 15:58:37 2003		SHEET 6 OF 16

802.11B RADIO - RF

REVISIONS							
REV	ZONE	NO.	DESCRIPTION	E.C.	BY	APVD.	DATE
			SEE SHEET 1				

NOTE: 3VA IS ACTUALLY 2.85V



RADIO SHIELD FRAME

RADIO RF GROUND IS CONNECTED TO THE SYSTEM GROUND VIA A BURIED FILTER (MEANDERING LINES) CONNECTION

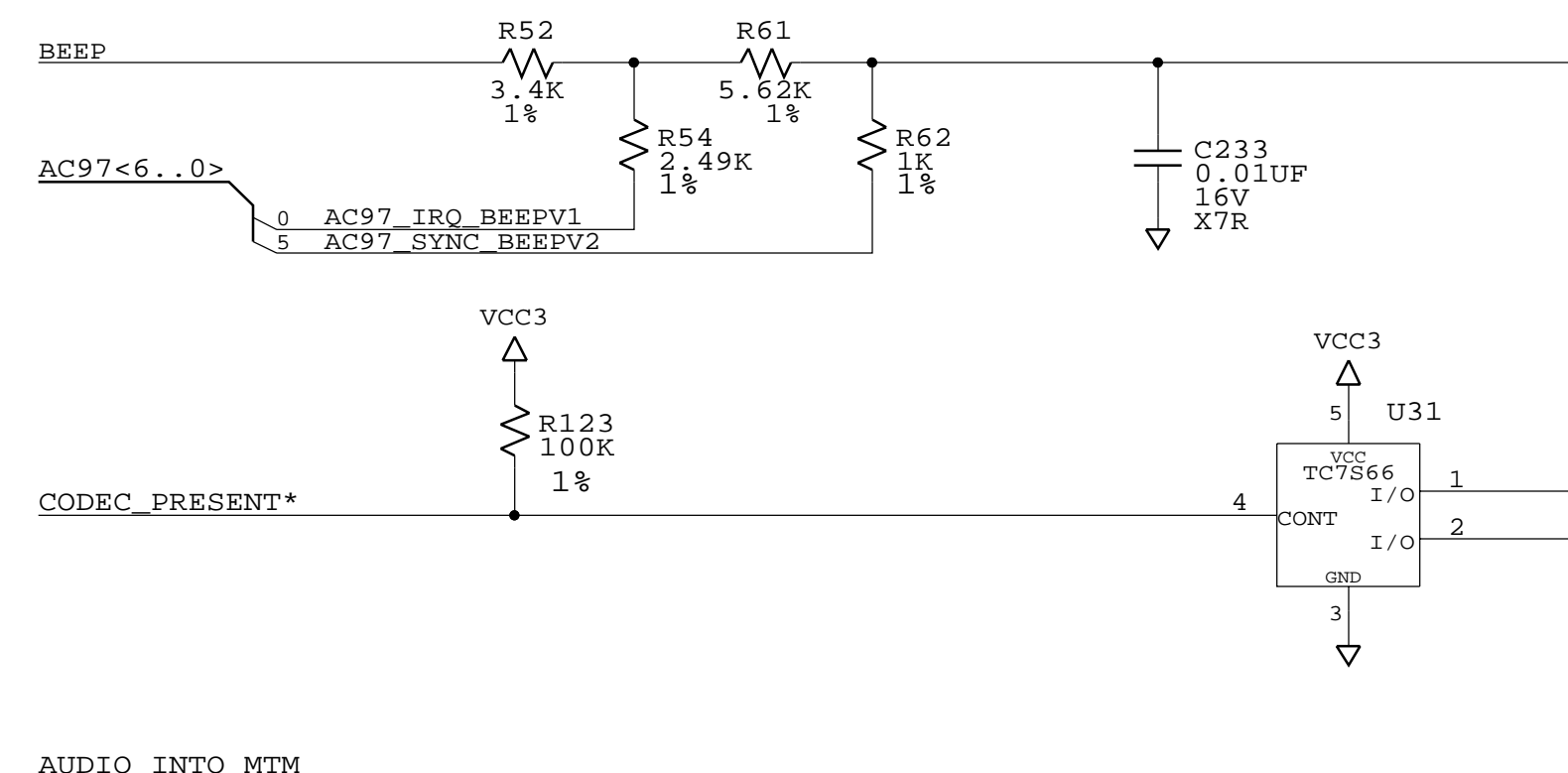
ROOMS:
ALL COMPONENTS : RADIORF

SYMBOL TECHNOLOGIES INC.		
Bohemia, New York		
GEMINI MTM BOARD		
802.11B RADIO - RF		
SIZE	DWG. NO.	REV
D	17-64436-01	A
Thu Dec 11 15:58:41 2003		SHEET 7 OF 16

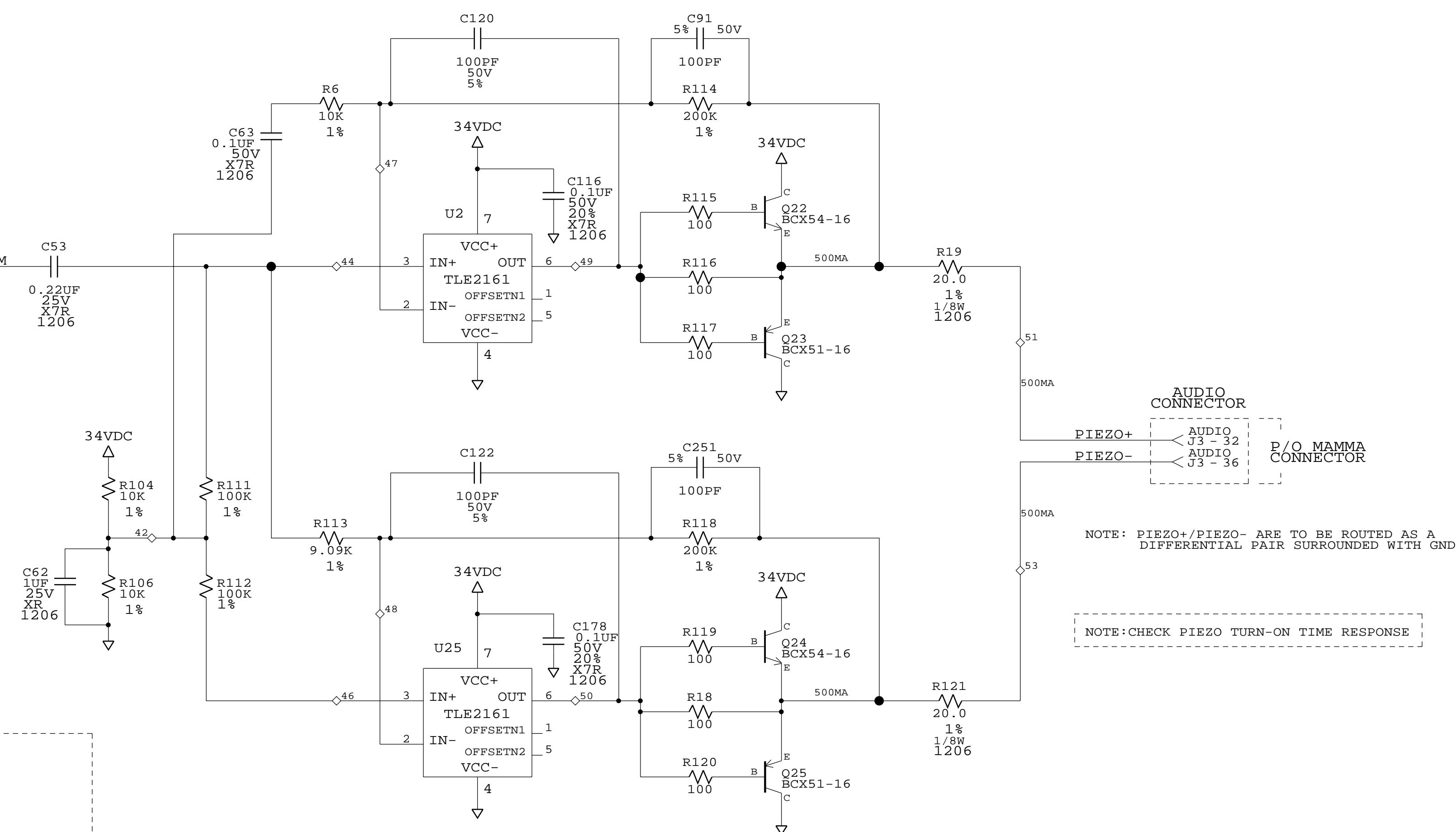
AUDIO

REVISIONS							
REV	ZONE	NO.	DESCRIPTION	E.C.	BY	APVD.	DATE
			SEE SHEET 1				

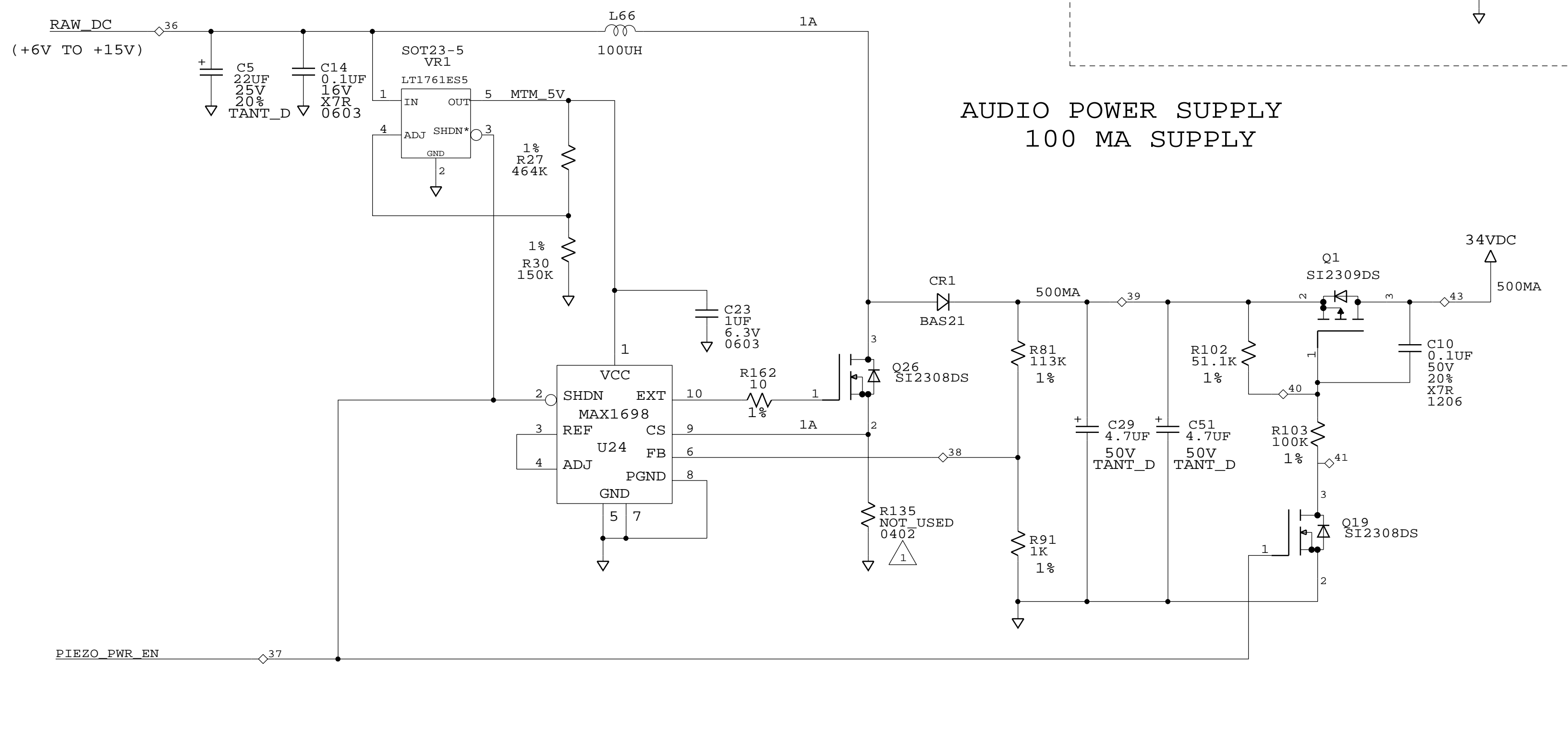
AUDIO MUX



PIEZO DRIVER



AUDIO POWER SUPPLY 100 MA SUPPLY



AUDIO CONNECTOR
PIEZO+
PIEZO-
P/O MAMMA CONNECTOR

NOTE: PIEZO+/PIEZO- ARE TO BE ROUTED AS A DIFFERENTIAL PAIR SURROUNDED WITH GND

NOTE: CHECK PIEZO TURN-ON TIME RESPONSE

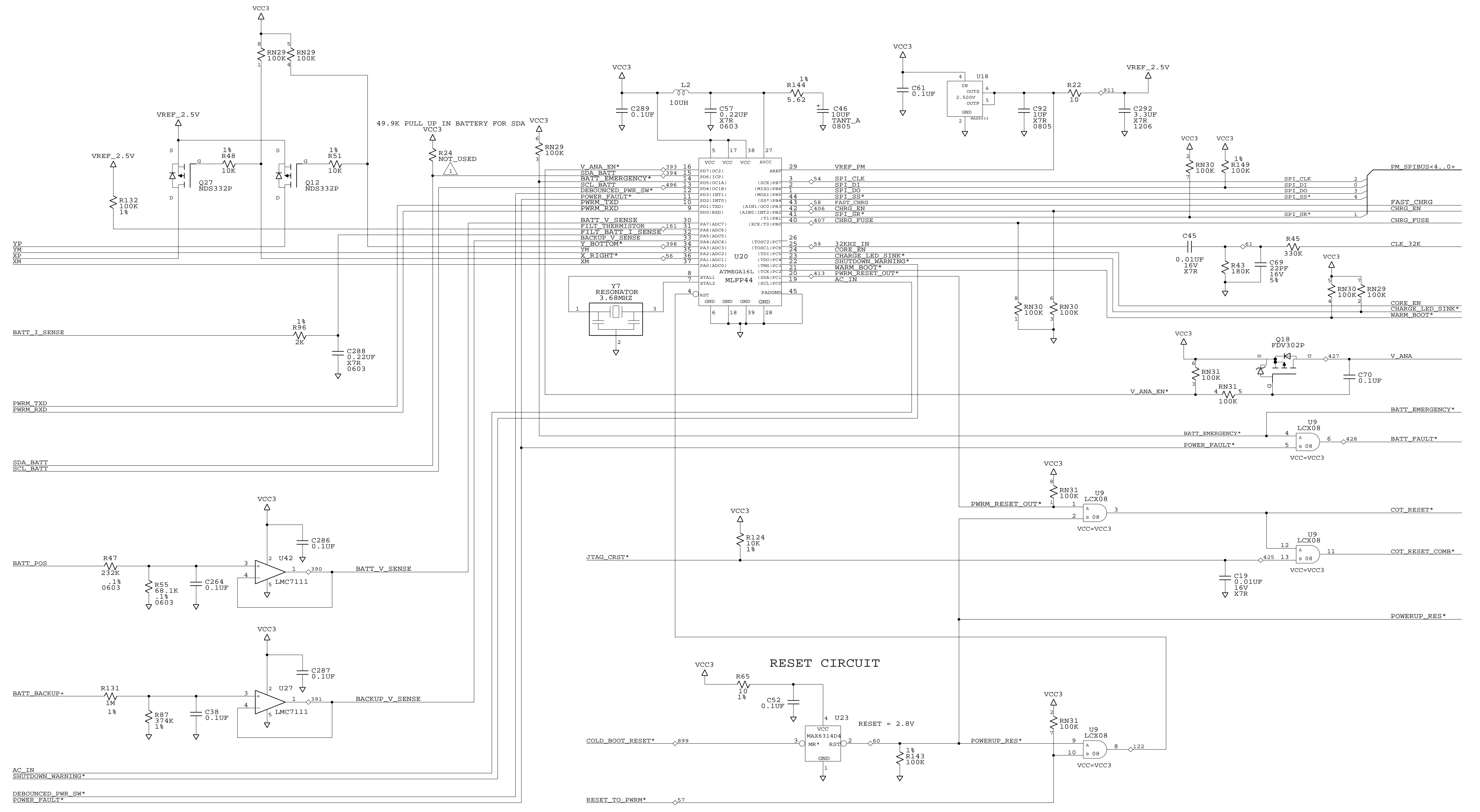
THESE COMPONENTS ARE IN THE AUDIOSUPPLY ROOM

ROOMS:
ALL COMPONENTS EXCEPT AS NOTED : AUDIO

SYMBOL TECHNOLOGIES INC.		
Bohemia, New York		
GEMINI MTM BOARD		
AUDIO		
SIZE	DWG. NO.	REV
D	17-64436-01	A
Thu Dec 11 15:58:46 2003		SHEET 8 OF 16

POWER MICRO

REVISIONS							
REV	ZONE	NO.	DESCRIPTION	E.C.	BY	APVD.	DATE
			SEE SHEET 1				



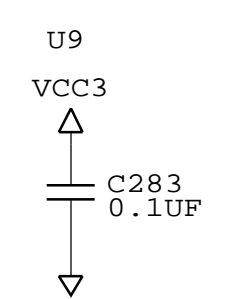
ROOMS:
ALL COMPONENTS : POWERMICRO

SYMBOL TECHNOLOGIES INC.
Bohemia, New York

GEMINI MTM BOARD
POWER MICRO

SIZE	DWG. NO.	REV
D	17-64436-01	A

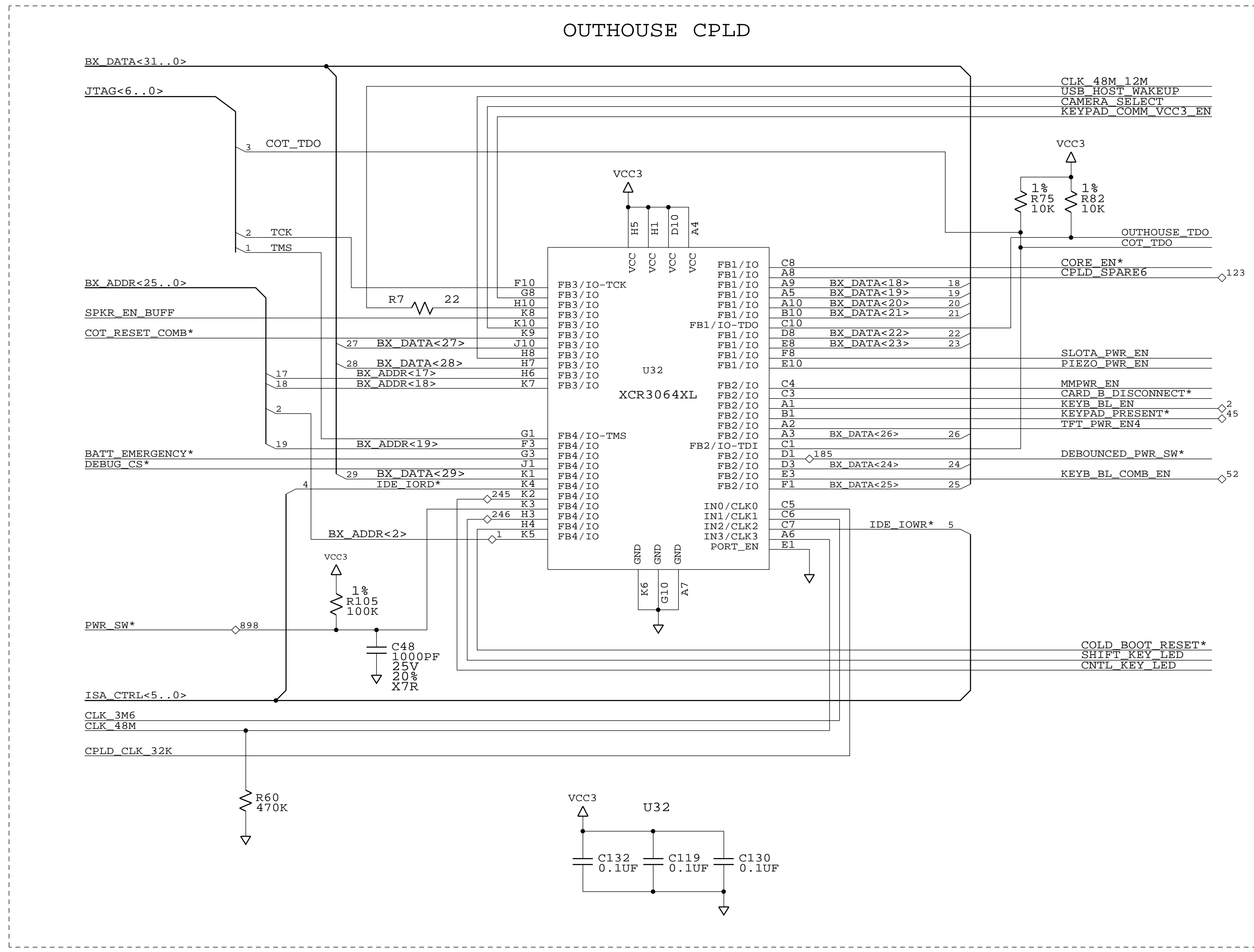
Thu Dec 11 15:58:50 2003 SHEET 9 OF 16



DISPLAY INTERFACE & OUTHOUSE CPLD

REVISIONS							
REV	ZONE	NO.	DESCRIPTION	E.C.	BY	APVD.	DATE
			SEE SHEET 1				

OUTHOUSE CPLD

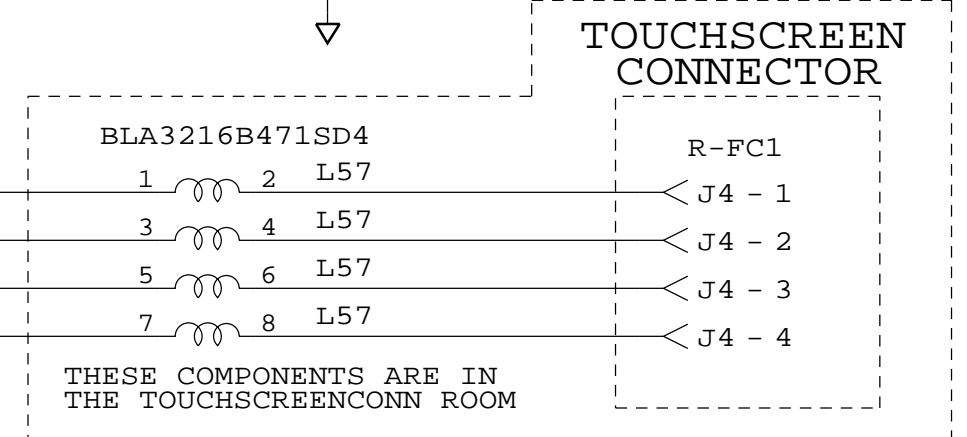
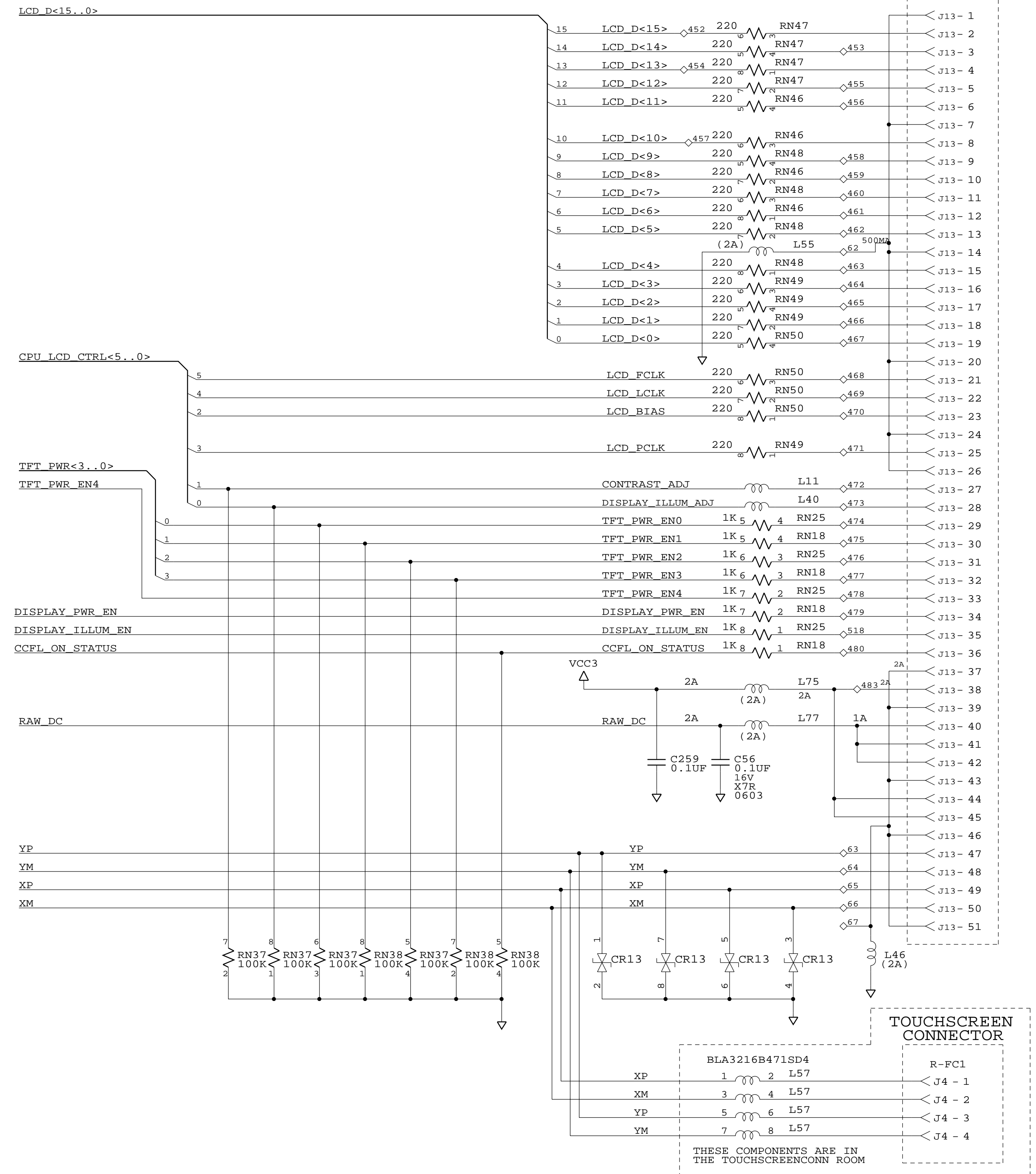


THESE COMPONENTS ARE IN THE CPLD ROOM

CPLD SIGNAL MAPPING

BX_DATA	SIGNAL (ALL OUTPUTS OR INTERNAL)
29	USB_HOST_WAKEUP
28	SHIFT_KEY_LED
27	CNTL_KEY_LED
26	CAMERA_SELECT
25	KEYPAD_COMM_VCC3_EN
24	AUDIO_DURING_SUSPEND (INTERNAL TO CPLD)
23	SLOTA_PWR_EN
22	ASIC_CLK_SEL (INTERNAL TO CPLD)
21	MMPWR_EN*
20	PIEZO_PWR_EN
19	CARD_B_DISCONNECT*
18	TFT_PWR_EN4

DISPLAY CONNECTOR



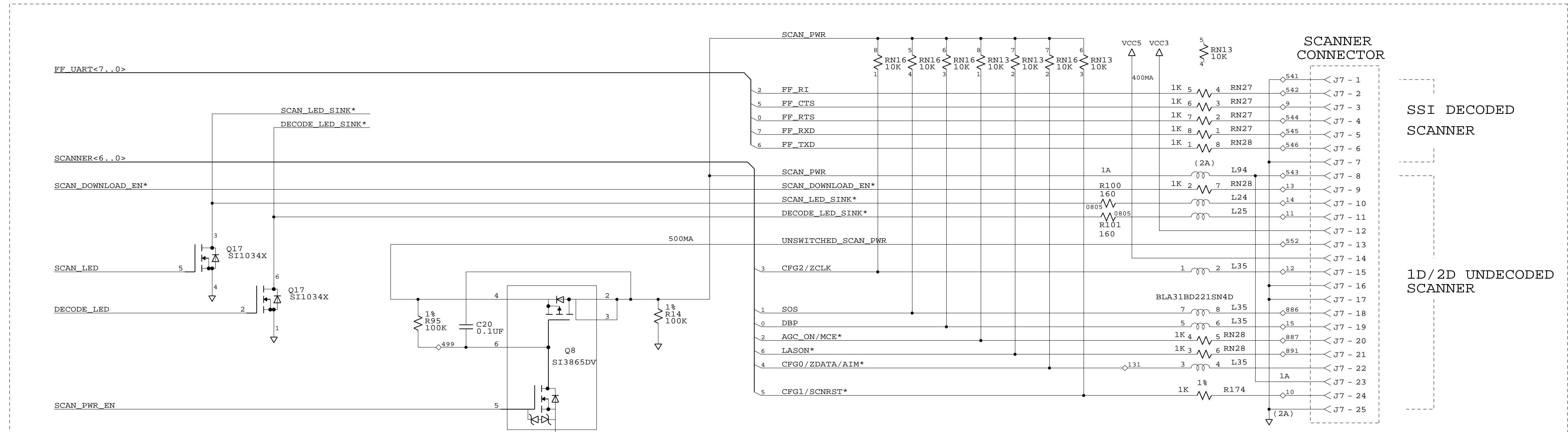
THESE COMPONENTS ARE IN THE TOUCHSCREENCONN ROOM

ROOMS:
ALL COMPONENTS EXCEPT AS NOTED : DISPLAYCONN

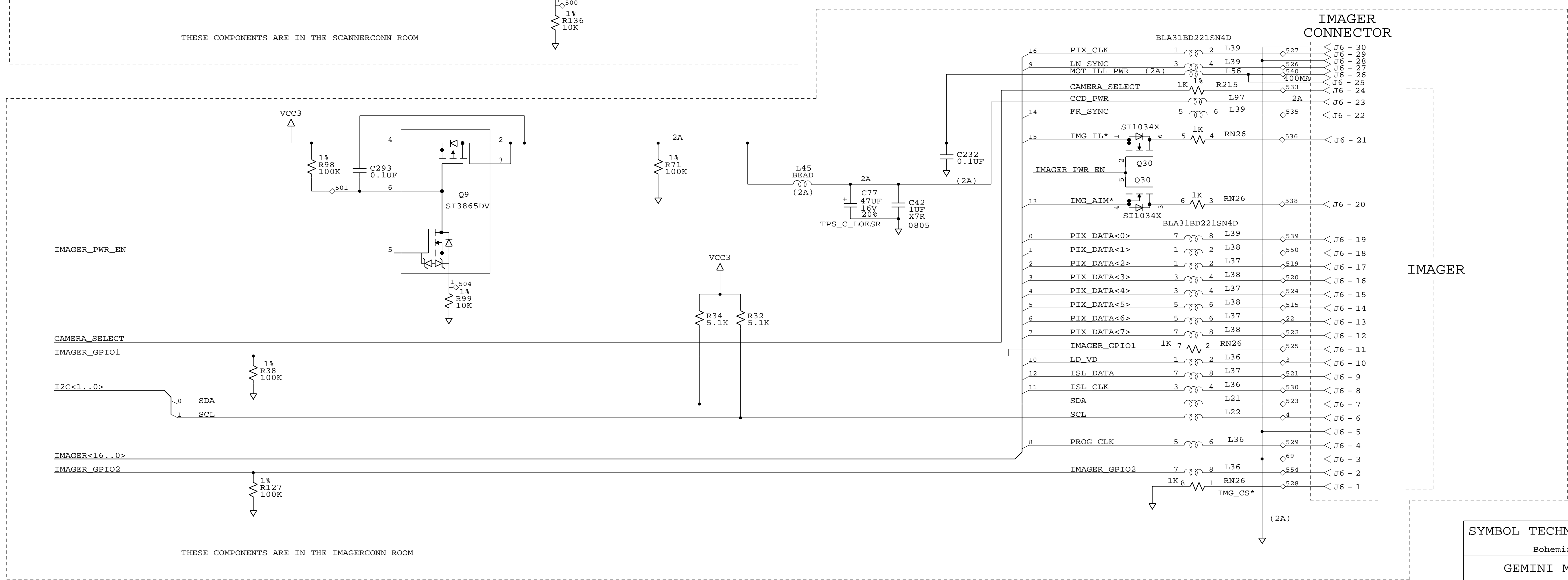
SYMBOL TECHNOLOGIES INC.		
Bohemia, New York		
GEMINI MTM BOARD		
DISPLAY & COMMUNICATIONS		
SIZE	DWG. NO.	REV
D	17-64436-01	A
Thu Dec 11 15:57:36 2003		SHEET 10 OF 16

SCANNER & IMAGER INTERFACES

REVISIONS							
REV	ZONE	NO.	DESCRIPTION	E.C.	BY	APVD.	DATE
			SEE SHEET 1				



THESE COMPONENTS ARE IN THE SCANNERCONN ROOM

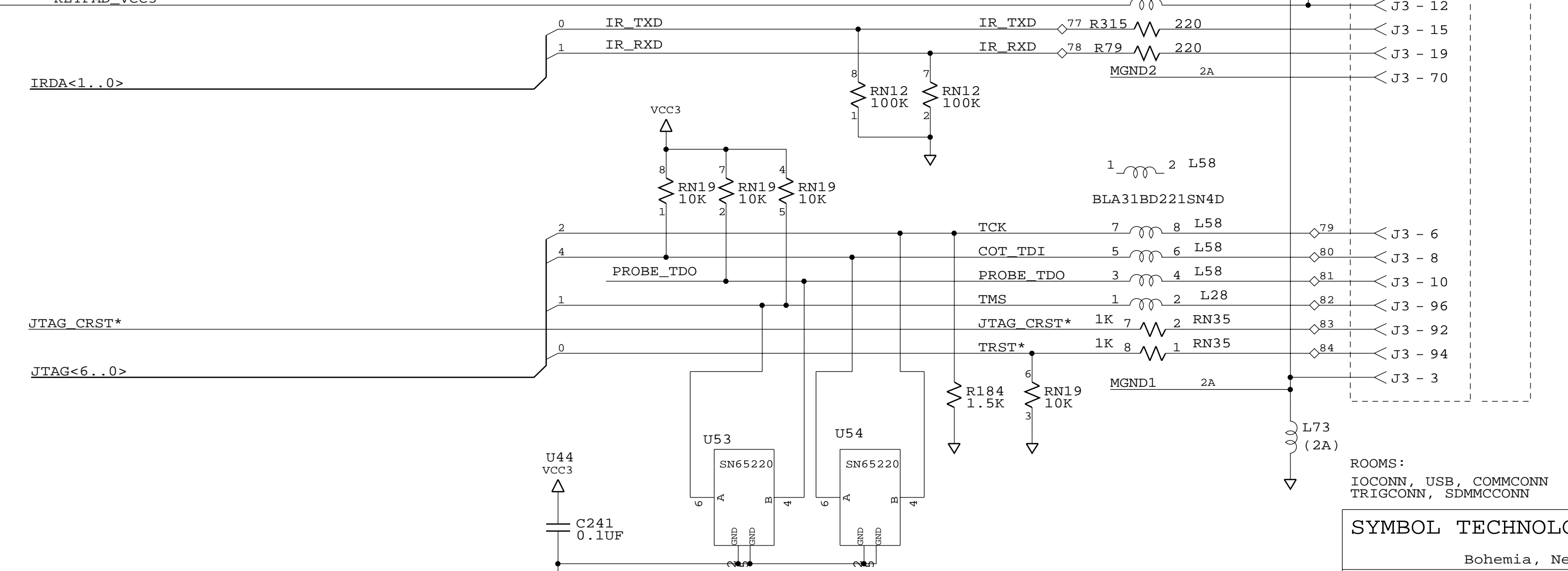
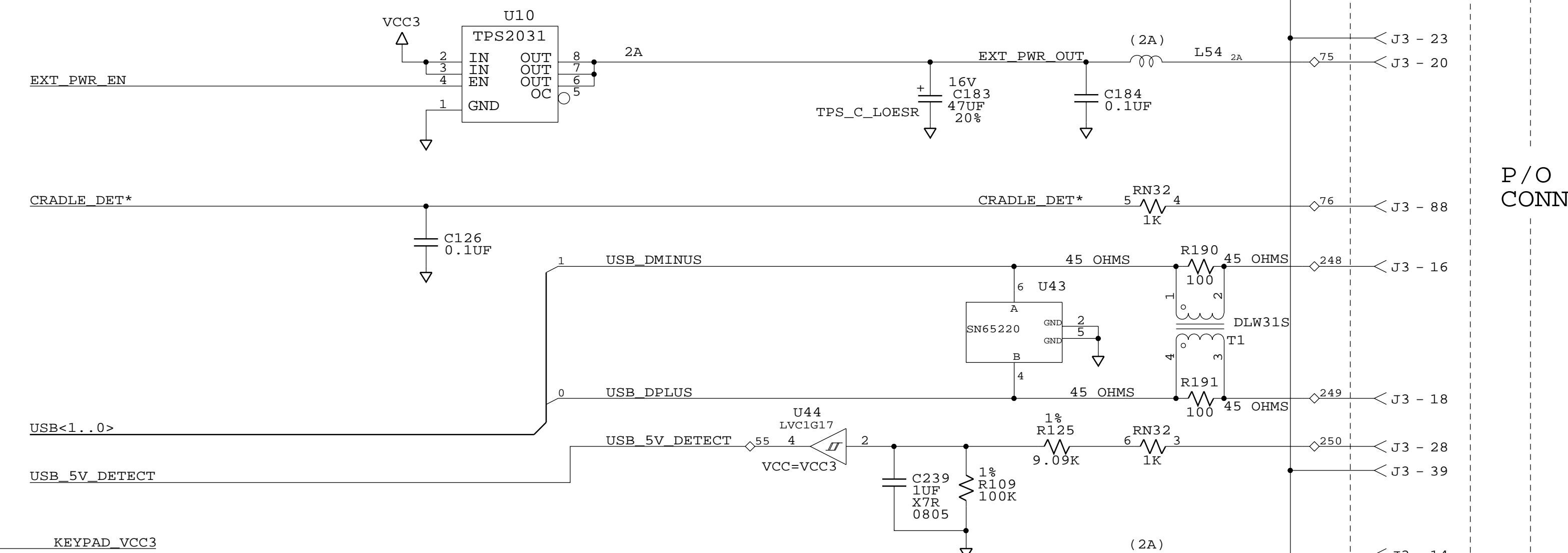
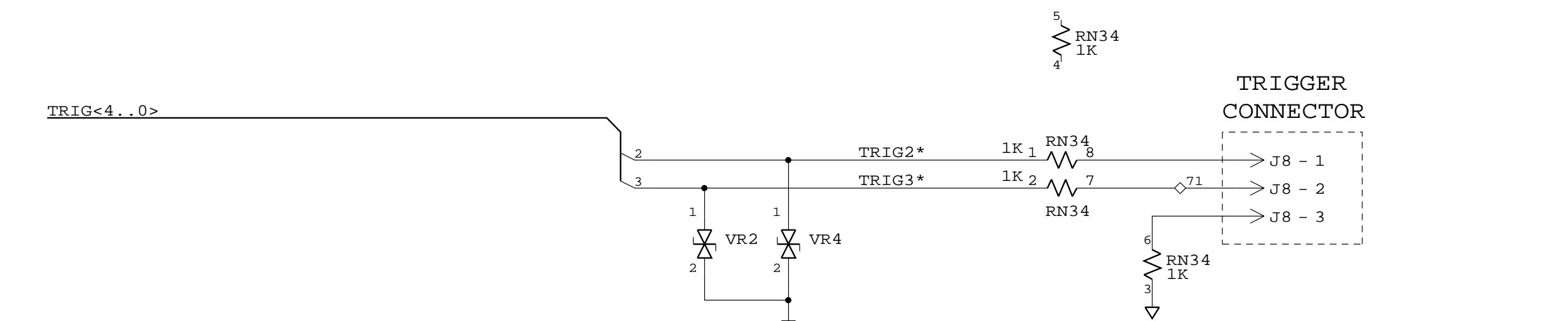
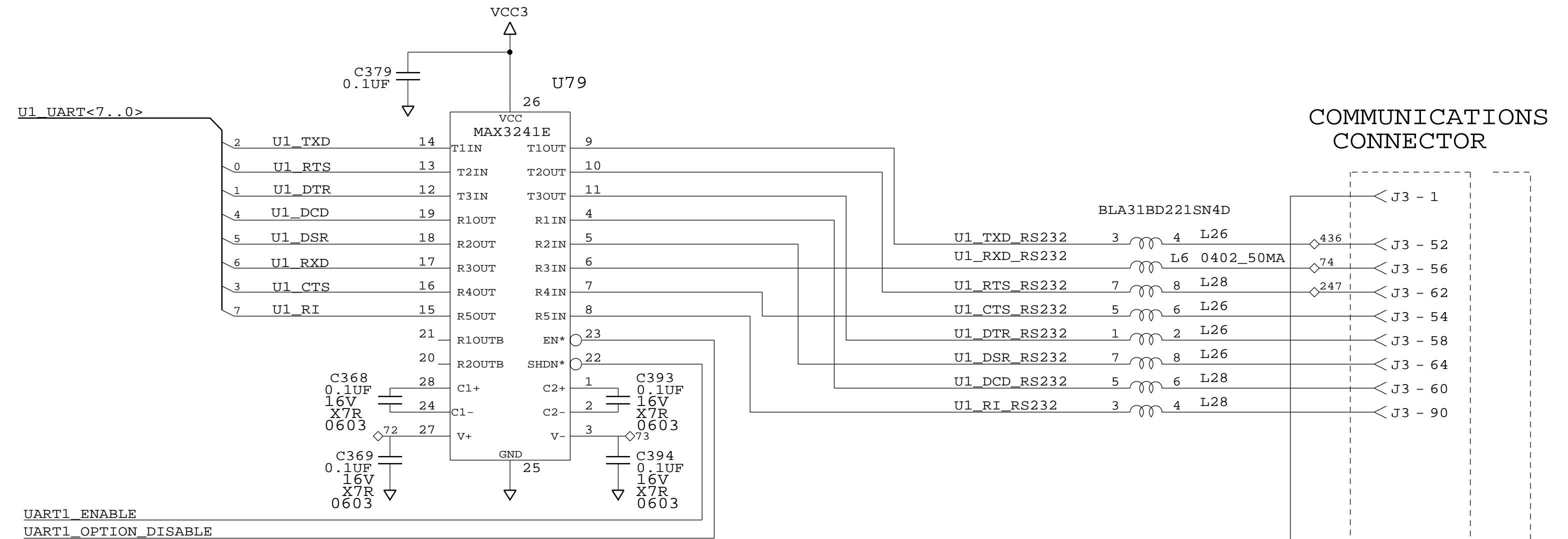
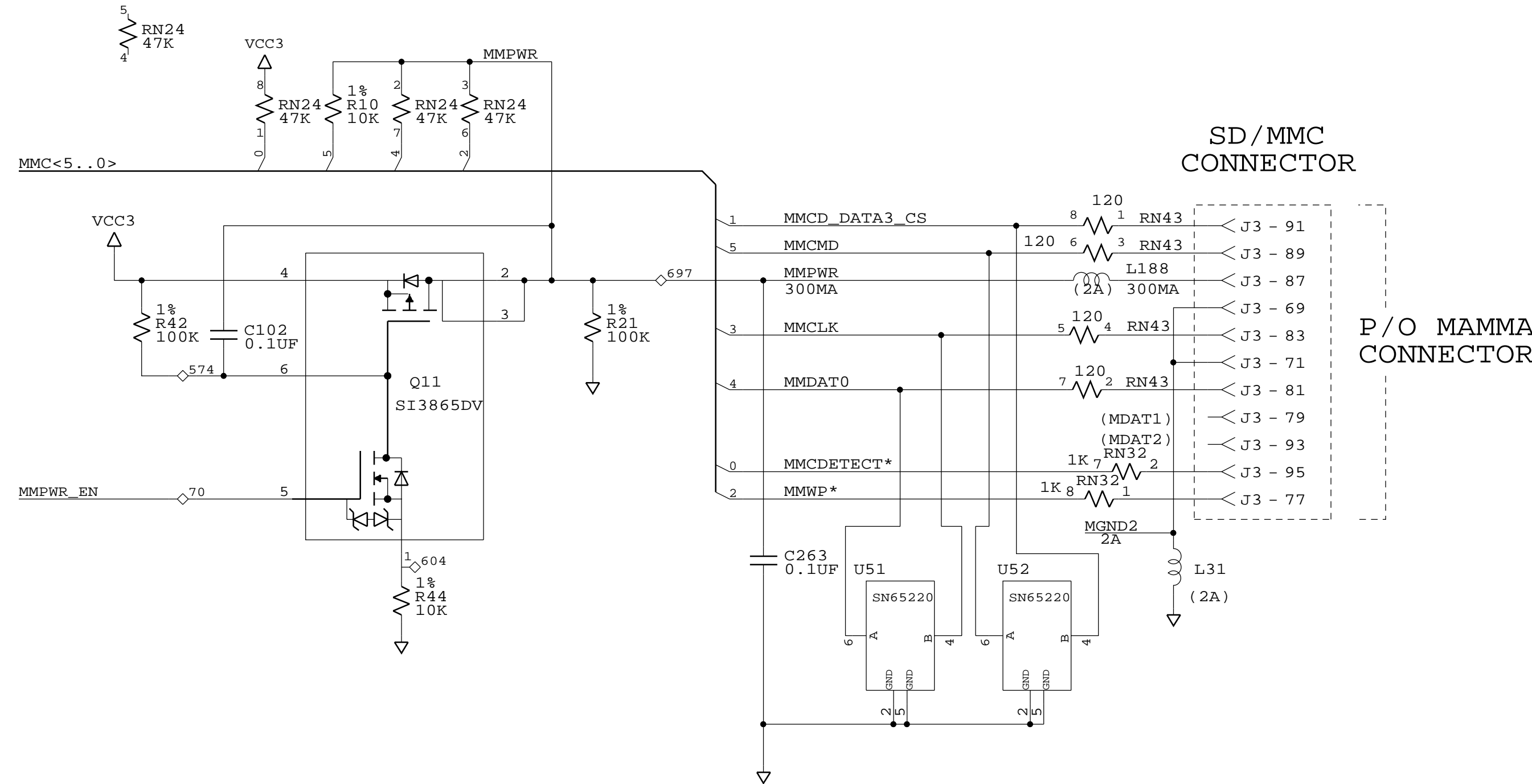


THESE COMPONENTS ARE IN THE IMAGERCONN ROOM

SYMBOL TECHNOLOGIES INC.
 Bohemia, New York
GEMINI MTM BOARD
 SCANNER & IMAGER INTERFACES
 SIZE DWG. NO. 17-64436-01 REV A
 Thu Dec 11 15:57:42 2003 SHEET 11 OF 16

SD/MMC, COMMUNICATION & TRIGGER INTERFACES

REVISIONS							
REV	ZONE	NO.	DESCRIPTION	E.C.	BY	APVD.	DATE
			SEE SHEET 1				



ROOMS:
IOCONN, USB, COMMCONN
TRIGCONN, SDMMCONN

SYMBOL TECHNOLOGIES INC.
Bohemia, New York

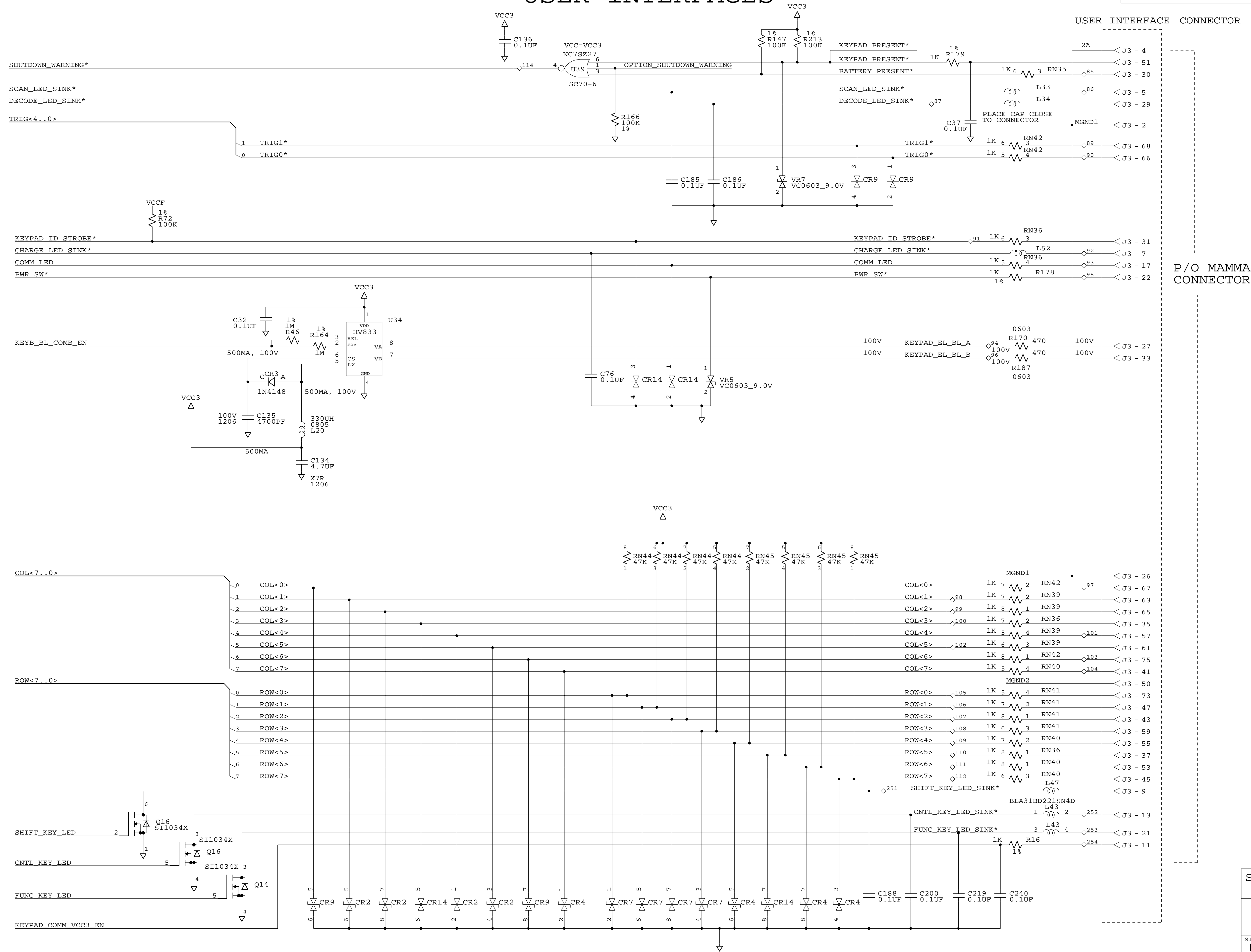
GEMINI MTM BOARD
SD/MMC, COMM & TRIG INTERFACES

SIZE	DWG. NO.	REV
D	17-64436-01	A

Thu Dec 11 15:57:46 2003 SHEET 12 OF 16

USER INTERFACES

REVISIONS							
REV	ZONE	No.	DESCRIPTION	E.C.	BY	APVD.	DATE
			SEE SHEET 1				



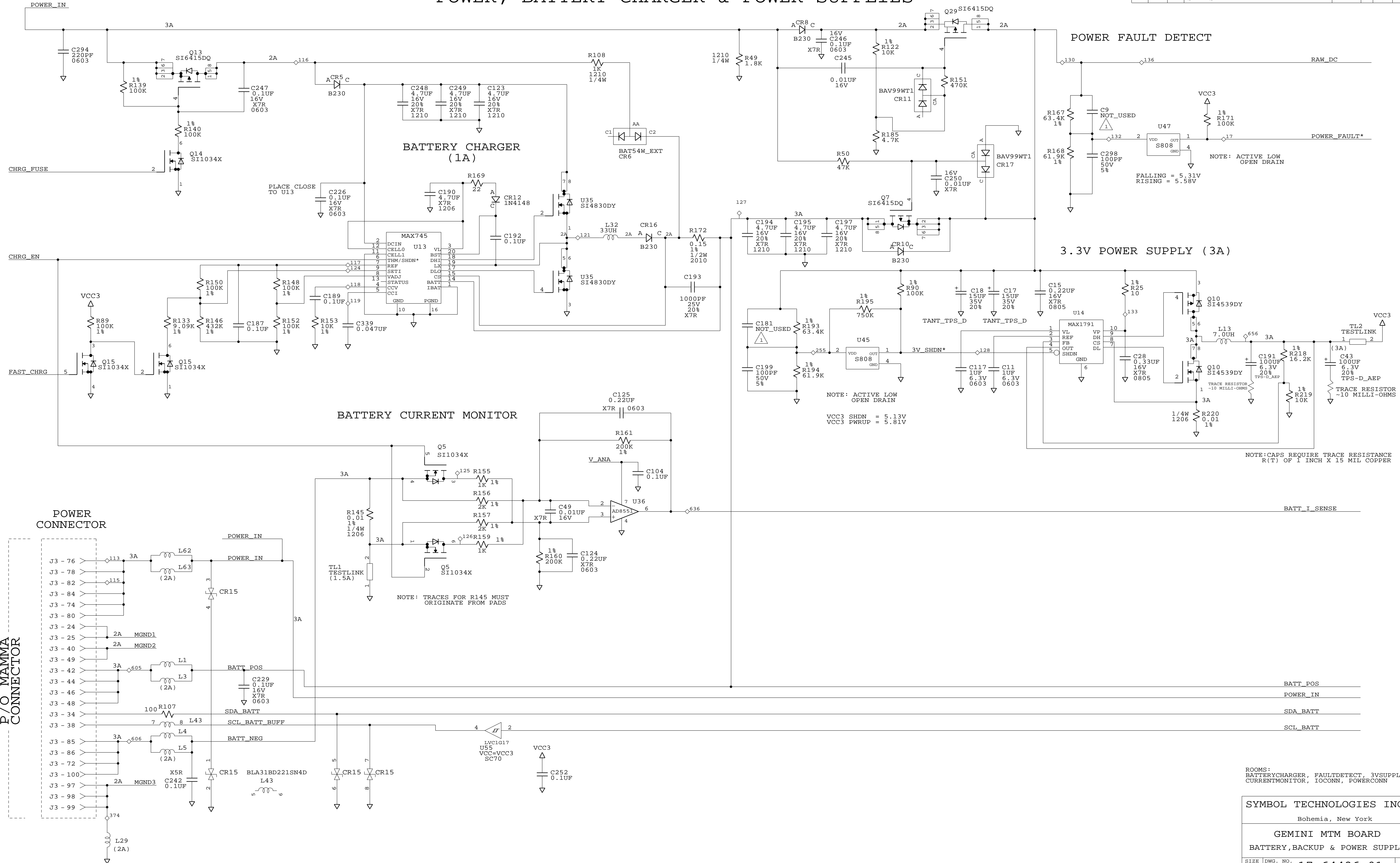
SYMBOL TECHNOLOGIES INC.
Bohemia, New York

GEMINI MTM BOARD
USER INTERFACE

SIZE	DWG. NO.	17-64436-01	REV	A
Thu Dec 11 15:57:51 2003		SHEET 13 OF 16		

POWER, BATTERY CHARGER & POWER SUPPLIES

REVISIONS							
REV	ZONE	NO.	DESCRIPTION	E.C.	BY	APVD.	DATE
			SEE SHEET 1				

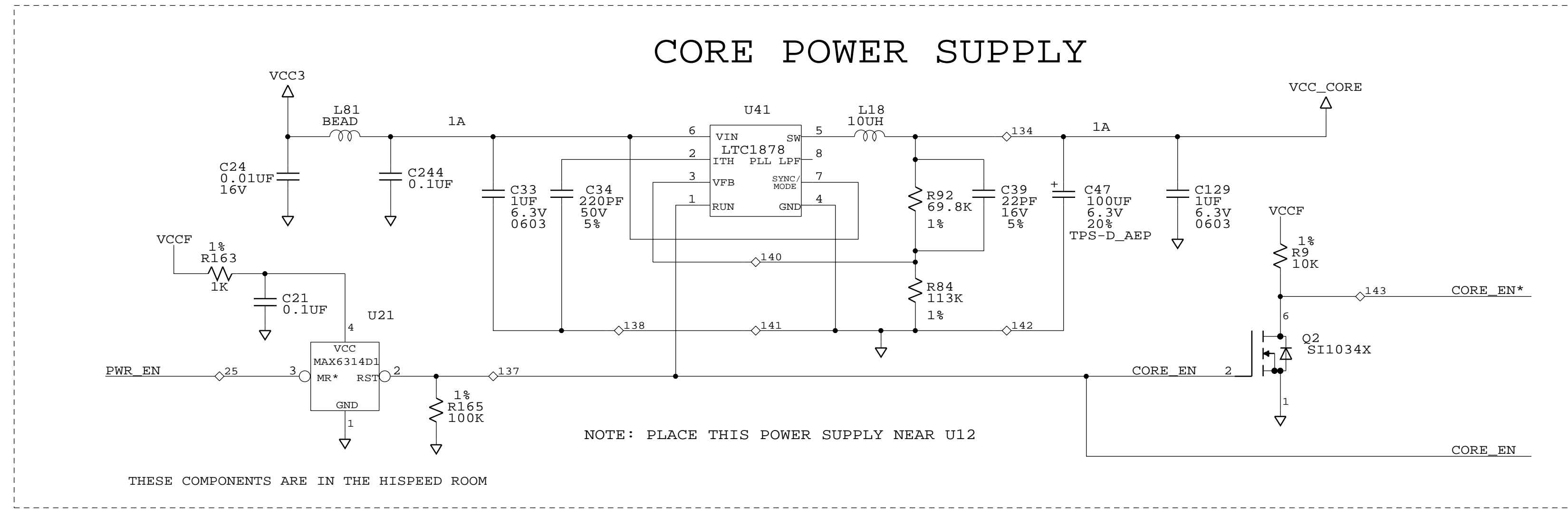


ROOMS:
 BATTERYCHARGER, FAULTDETECT, 3VSUPPLY
 CURRENTMONITOR, IOCONN, POWERCONN

SYMBOL TECHNOLOGIES INC.		
Bohemia, New York		
GEMINI MTM BOARD		
BATTERY, BACKUP & POWER SUPPLY		
SIZE	DWG. NO.	REV
D	17-64436-01	A
Thu Dec 11 15:57:57 2003		SHEET 14 OF 16

REVISIONS							
REV	ZONE	NO.	DESCRIPTION	E.C.	BY	APVD.	DATE
			SEE SHEET 1				

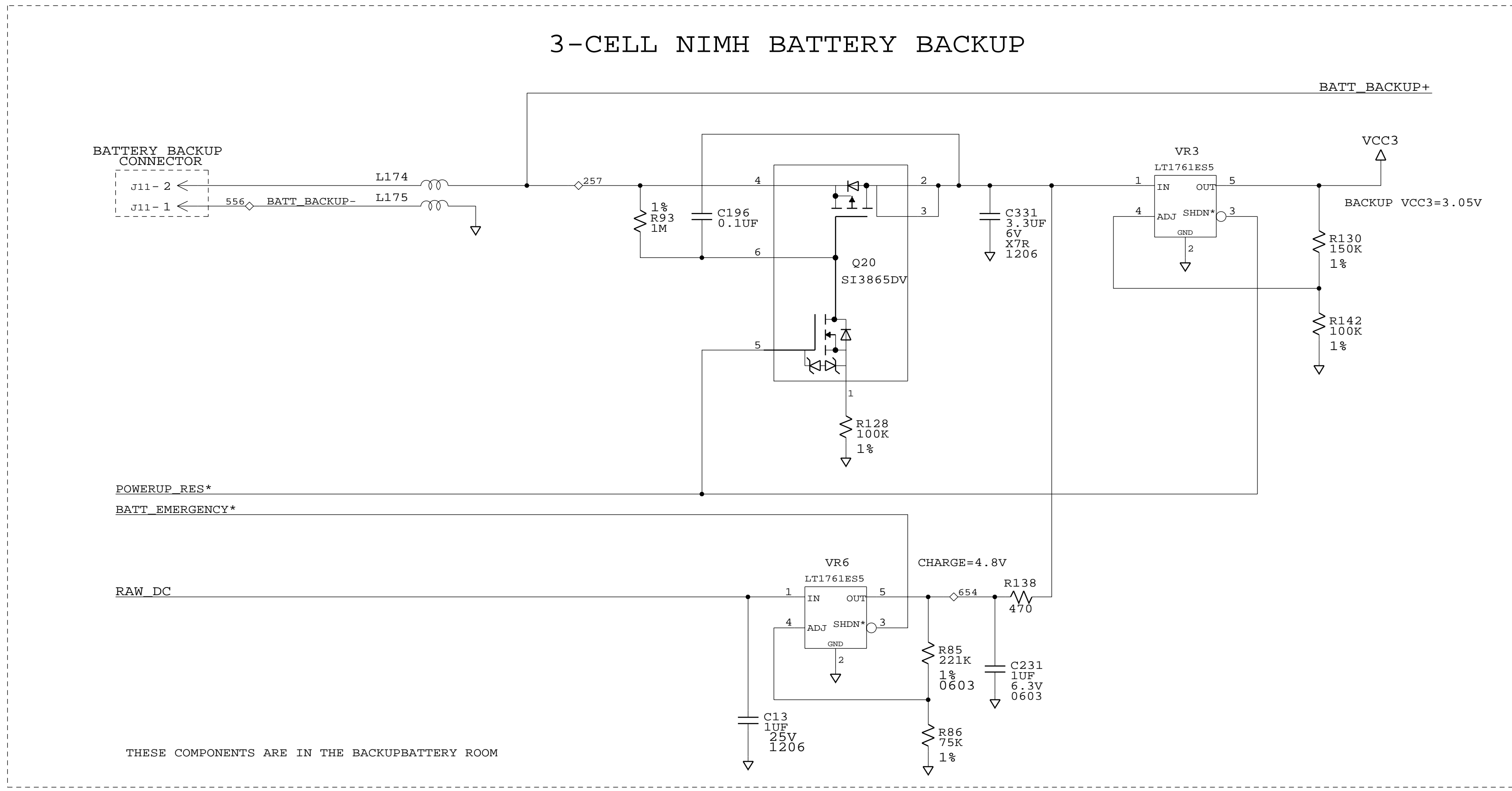
CORE POWER SUPPLY



XSCALE
CORE POWER SUPPLY VOLTAGE
SELECTION MATRIX

VERSION	TEMP	FREQUENCY	VCC_CORE	R84	R92
PXA255A0	EXT'ND	400MHZ	1.3V	113K	69.8K (DEFAULT)

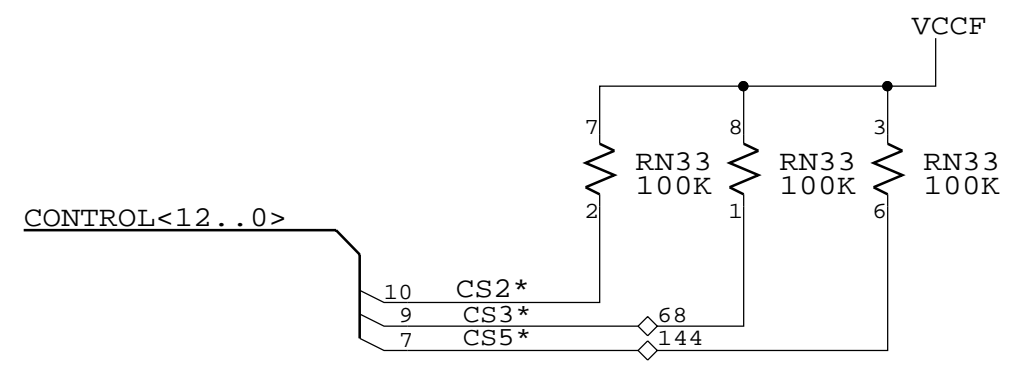
3-CELL NIMH BATTERY BACKUP



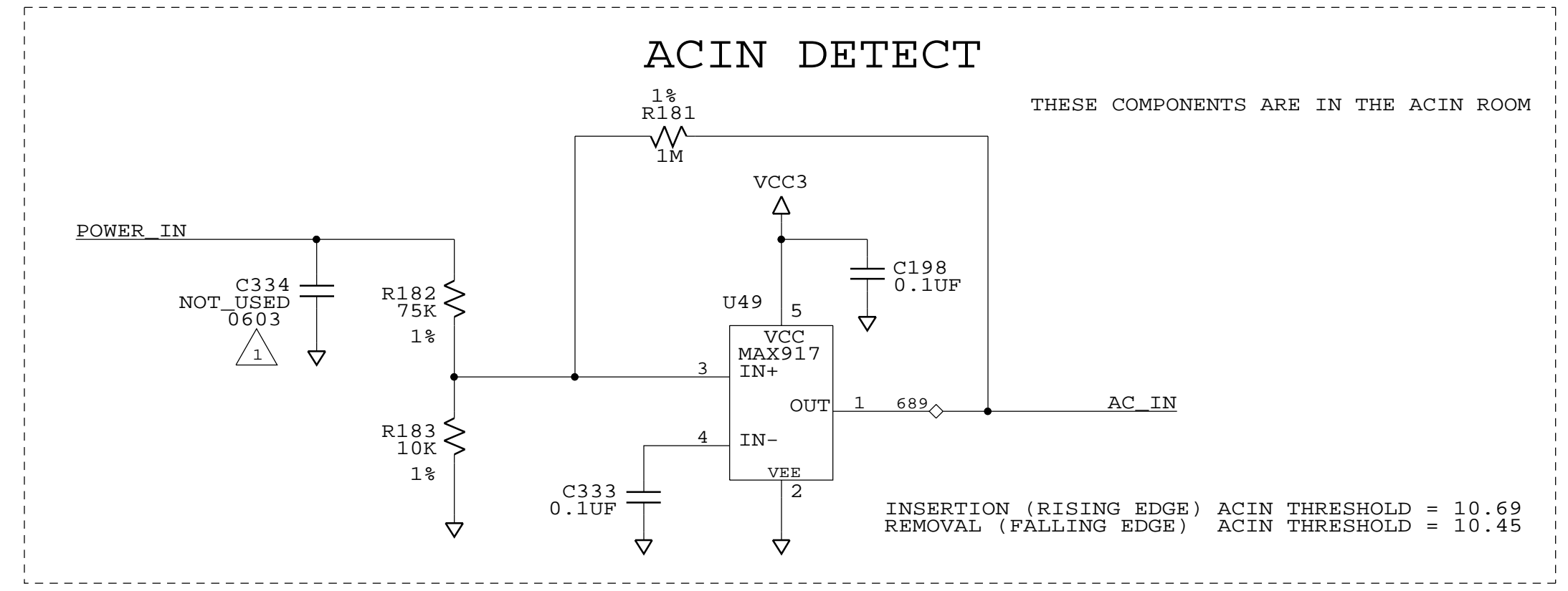
VOLTAGE AND FREQUENCY SPECIFICATIONS
TURBO MODE FREQUENCY (MHZ) VCC (VOLTS)

MIN	MAX	MIN	TYP	MAX
99.5	118.0	0.95	1.0	1.155
99.5	199.1	0.95	1.0	1.32
99.5	298.7	1.045	1.1	1.43
99.5	398.2	1.235	1.3	1.65

TERMINATIONS



ACIN DETECT



SYMBOL TECHNOLOGIES INC.
Bohemia, New York

GEMINI MTM BOARD
CORE SUPPLY, BACKUP BATTERY & ACIN

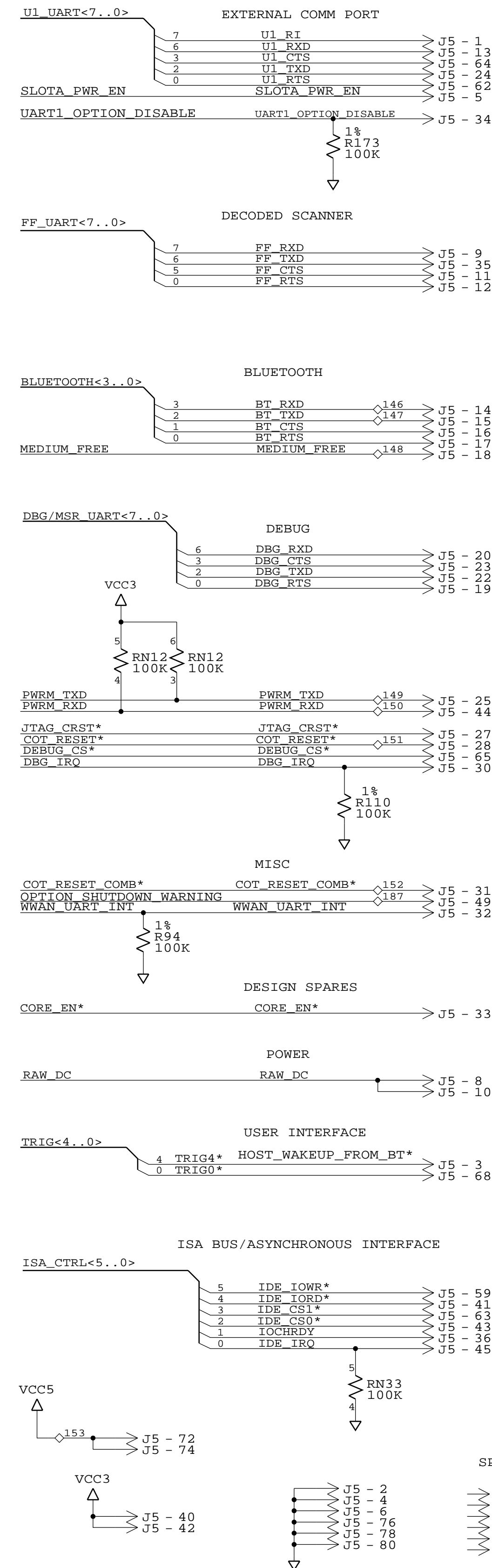
SIZE	DWG. NO.	REV
D	17-64436-01	A

Thu Dec 11 15:58:00 2003 SHEET 15 OF 16

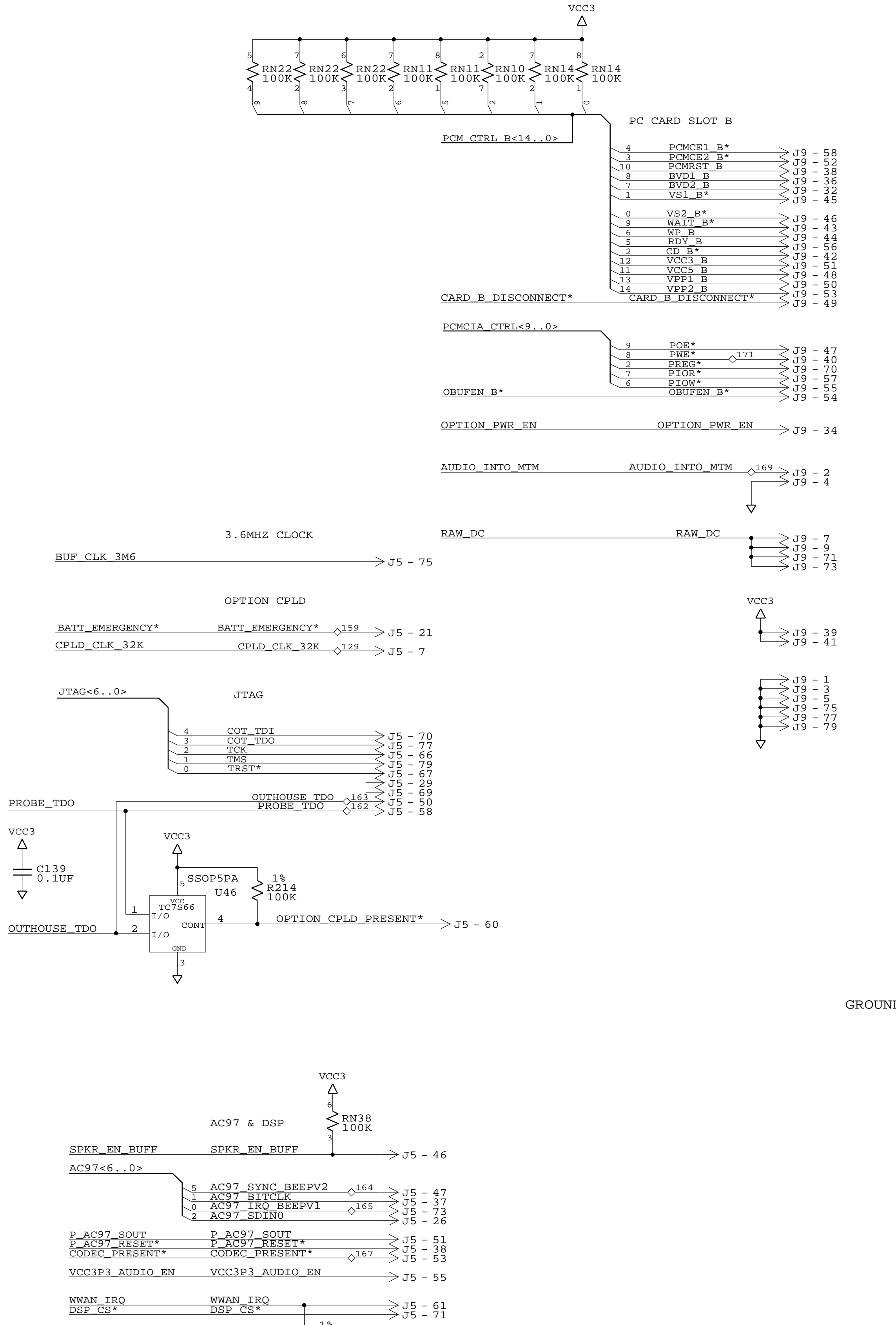
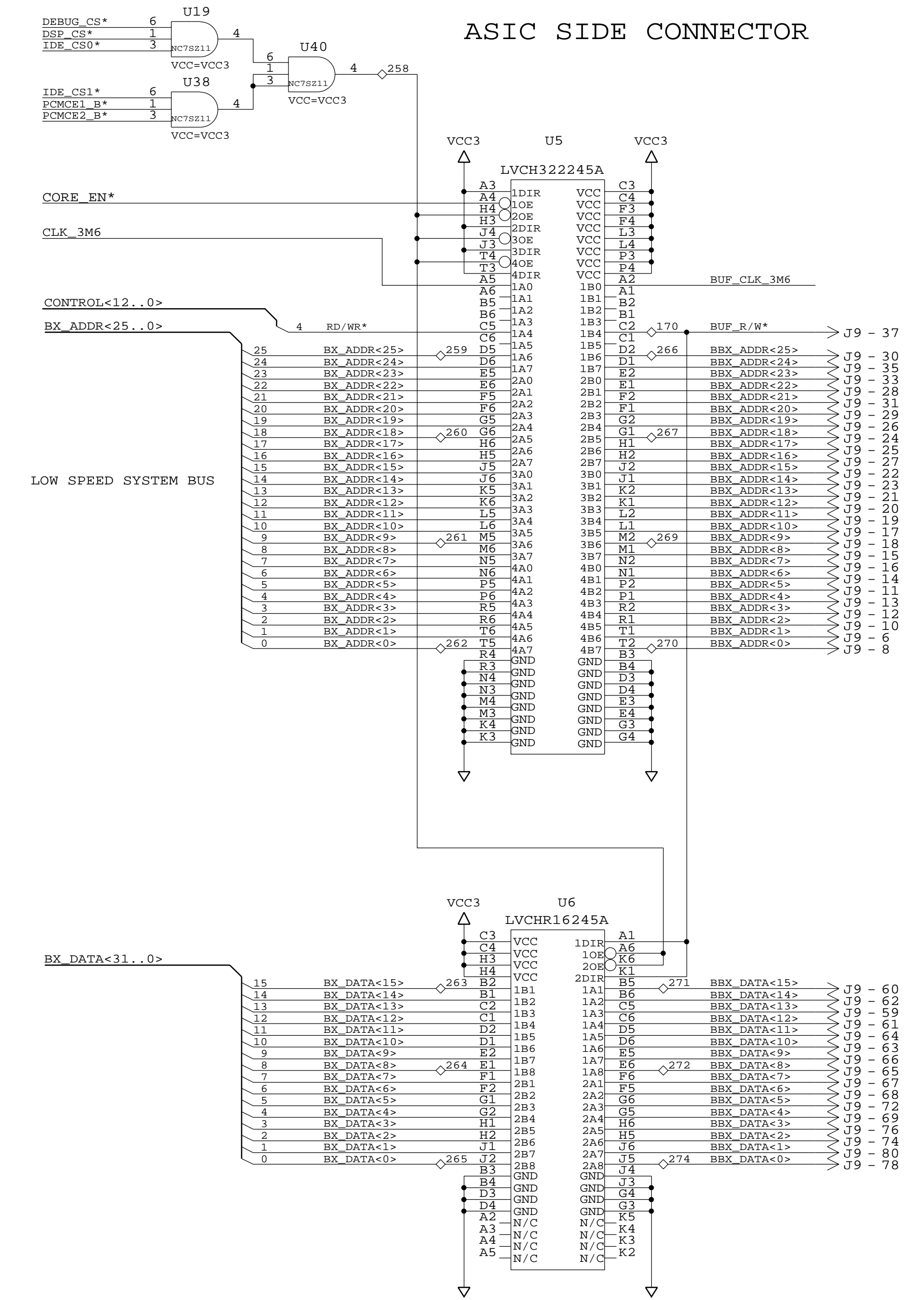
MTM TO OPTION BOARD INTERFACE

REVISIONS							
REV	ZONE	NO.	DESCRIPTION	E.C.	BY	APVD.	DATE
SEE SHEET 1							

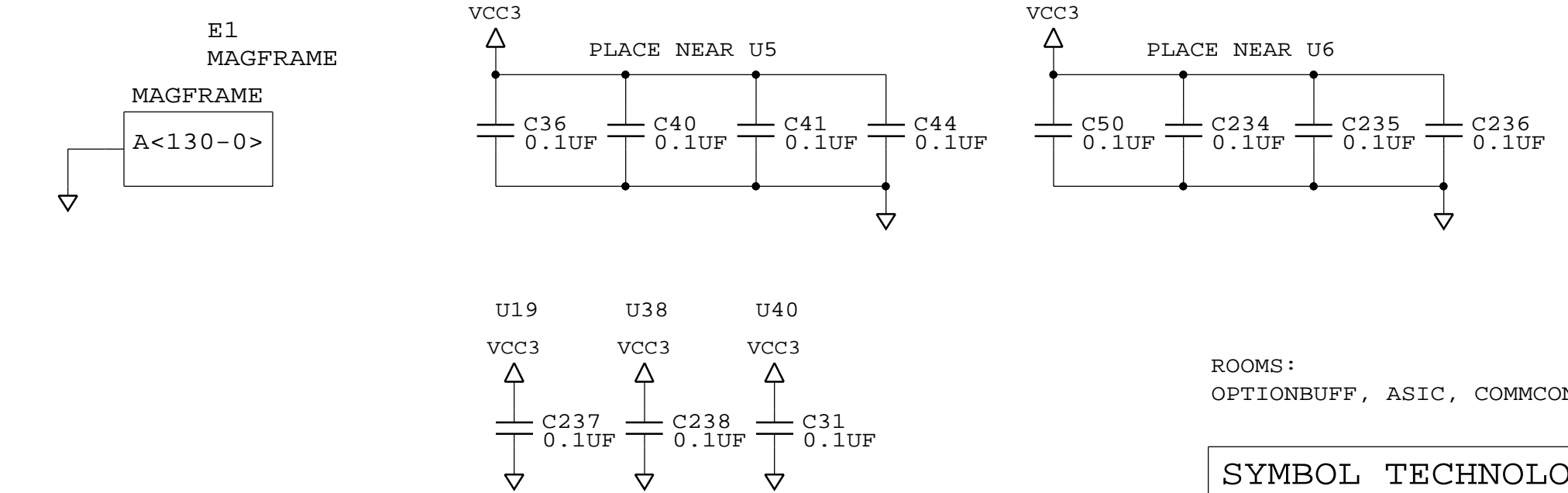
COTULLA SIDE CONNECTOR



ASIC SIDE CONNECTOR



GROUNDING HOLES FOR MAG FRAME



SYMBOL TECHNOLOGIES INC.
Bohemia, New York

GEMINI MTM BOARD
MTM TO OPTION BD INTERFACE

SIZE DWG. NO. 17-64436-01 REV A

Thu Dec 11 15:58:06 2003 SHEET 16 OF 16

8 7 6 5 4 3 2 1

REVISIONS						
REV	ZONE	NO.	DESCRIPTION	E.C.	BY	DATE
A			RELEASE PER EDR 72102		DS	8/11/2003

GEMINI MAIN FLEX

SCHEMATIC REV A

CHANGES FROM... TO:

REV 1.0
 SAME SCHEMATIC AS 58321 REV A. CHANGED ARTWORK/MECHANICALS
 TO CORRECT PROBLEM OF TRACE BREAKAGE NEAR 22 PIN POGO CONN.

REV A
 INITIAL RELEASE

```

Reference BOM TABLE (DNI=Do Not Install)
Designator Build
=====
J12 DNI
J13 DNI
J3 50-12100-821
J5 DNI
  
```

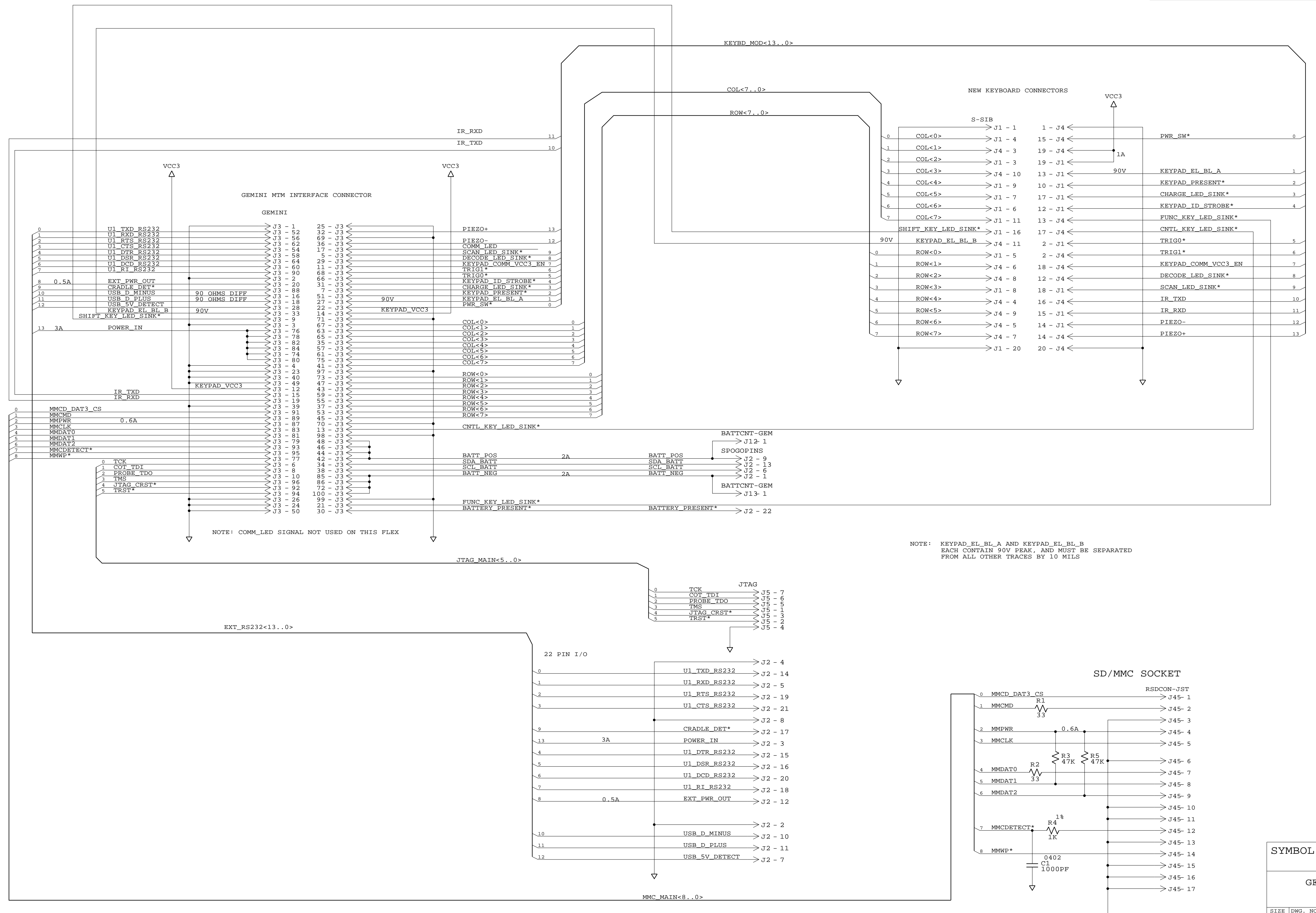
ITEM	QTY.	PART NO.	DESCRIPTION	REMARKS/REF. SYMBOL
PARTS LIST				
THE DWG. AND SPECIFICATION CONTAINED HEREON ARE PROPRIETARY AND MUST NOT BE USED, COPIED, REPRODUCED OR OTHERWISE DEALT WITH NOR ITS CONTENTS COMMUNICATED TO OTHERS EXCEPT IN ACCORDANCE WITH WRITTEN INSTRUCTIONS RECEIVED FROM SYMBOL TECHNOLOGIES INC.		DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED .XX + .01 INCH .XXX + .005 INCH ANGLES ± 1° FRACTIONS ± 1/64		APPROVALS DRAWN D. STERN 4/18/03 CHECKED D. DEMEO 4/18/03 ENGINEER D. STERN 4/18/03 MFG. ENG. P. IASSO 4/18/03 PRODUCT J WICK 4/18/03 QUALITY B WATSON 4/18/03 TEST ENG. D REED 4/18/03
		SYMBOL TECHNOLOGIES INC. Bohemia, New York GEMINI MAIN FLEX SCHEMATIC		SIZE DWG. NO. 17-65060-01 REV A
NEXT ASSY		USED ON	DO NOT SCALE DRAWING	Thu Sep 25 13:18:19 2003 SHEET 1 OF 2

8 7 6 5 4 3 2 1

D
C
B
A

D
C
B
A

REVISIONS							
REV	ZONE	NO.	DESCRIPTION	E.C.	BY	APVD.	DATE
SEE SHEET 1							



NOTE: KEYPAD_EL_BL_A AND KEYPAD_EL_BL_B EACH CONTAIN 90V PEAK, AND MUST BE SEPARATED FROM ALL OTHER TRACES BY 10 MILLS

NOTE: COMM_LED SIGNAL NOT USED ON THIS FLEX

SYMBOL TECHNOLOGIES INC.
Bohemia, New York

**GEMINI MAIN FLEX
SCHEMATIC**

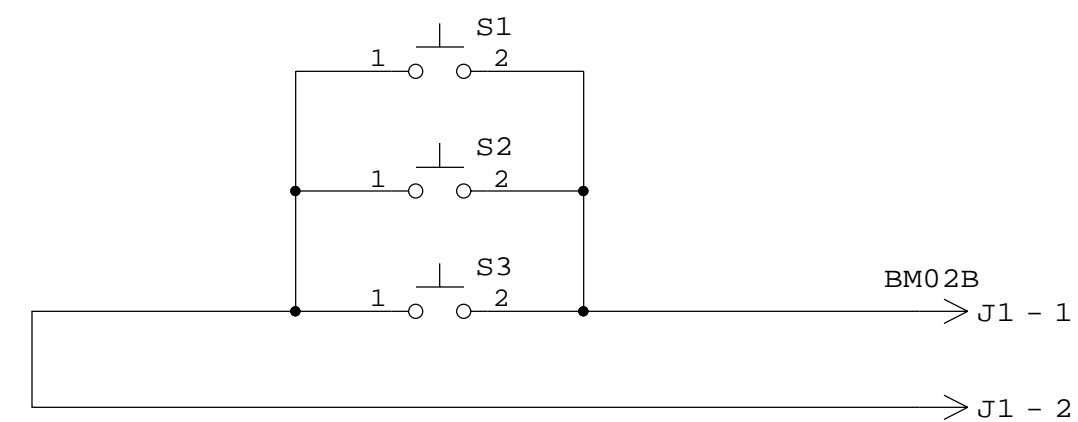
SIZE	DWG. NO.	REV
D	17-65060-01	A

Thu Sep 25 13:18:51 2003 SHEET 2 OF 2

8 7 6 5 4 3 2 1

REVISIONS						
REV	ZONE	BY	DATE	DESCRIPTION	E.C.	APVD.
1			12/02/03	RELEASE PER PPD#78050		KEK RK
A			02/13/04	RELEASE PER EDR#72926		KEK RK

GEMINI BRICK TRIGGER BOARD



CREATED FROM 17-63945-01 REV A
 CHANGED FROM SINGLE MECHANICAL SWITCH TO THREE SNAP DOMES
 TO IMPROVE FEEL ON LONG TRIGGER BUTTON
 CHANGES FROM REV 1 TO REV A
 RELEASED WITH NO CHANGES

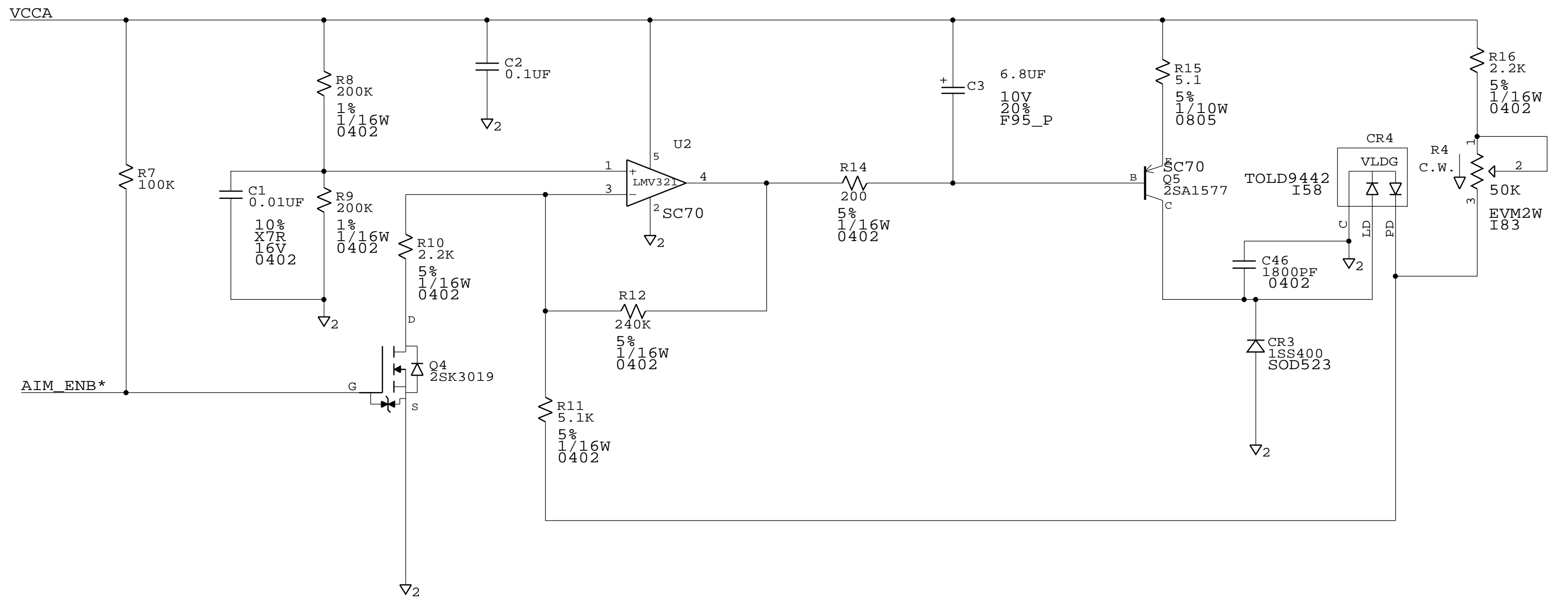
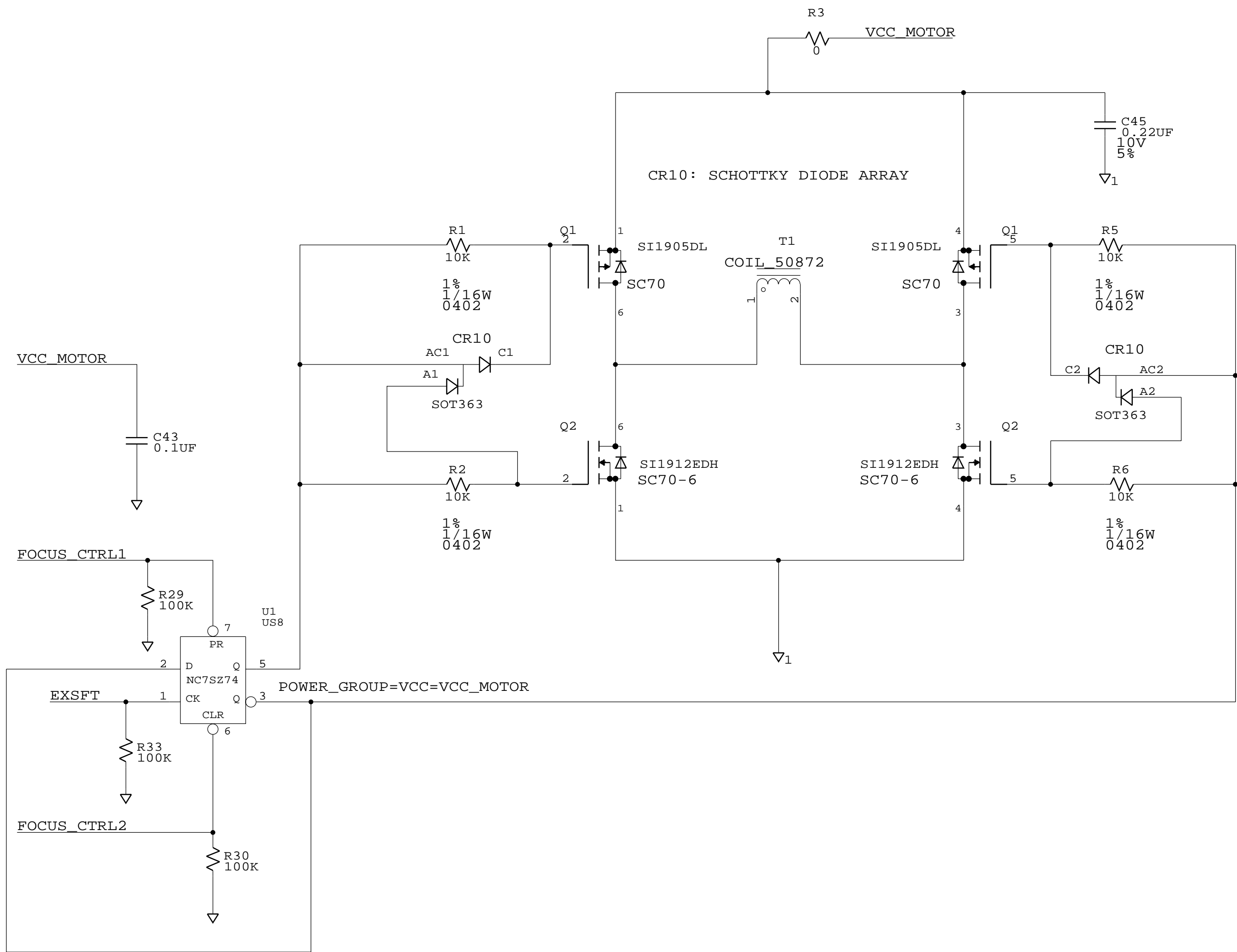
ITEM	QTY.	PART NO.	DESCRIPTION	REMARKS/REF. SYMBOL
PARTS LIST				
THE DWG. AND SPECIFICATION CONTAINED HEREON ARE PROPRIETARY AND MUST NOT BE USED, COPIED, REPRODUCED OR OTHERWISE DEALT WITH NOR ITS CONTENTS COMMUNICATED TO OTHERS EXCEPT IN ACCORDANCE WITH WRITTEN INSTRUCTIONS RECEIVED FROM SYMBOL TECHNOLOGIES INC.		DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED .XX + .01 INCH .XXX + .005 INCH ANGLES ± 1° FRACTIONS ± 1/64		APPROVALS DRAWN: K. KEPPELER CHECKED: R. KOTSAY ENGINEER: K. KEPPELER MFG. ENG.: P. IASSO DATE: 11/20/03
MATERIAL: G. STILL FINISH: TEST ENG.			SYMBOL TECHNOLOGIES INC. Bohemia, New York GEMINI BRICK TRIGGER BOARD SIZE: D DWG. NO. 17-66336-01 REV A DATE: Fri Feb 13 17:46:02 2004 SHEET 1 OF 1	
NEXT ASSY	USED ON	DO NOT SCALE DRAWING		

8 7 6 5 4 3 2 1

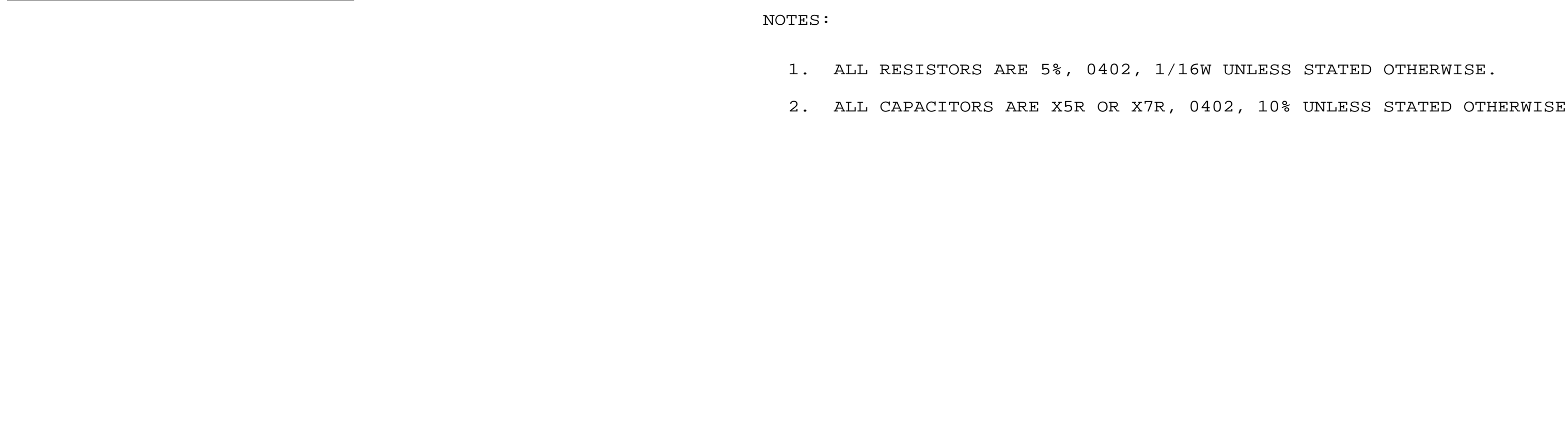
MOTOR DRIVE

LASER DRIVE

REVISIONS							
REV	ZONE	NO.	DESCRIPTION	E.C.	BY	APVD.	DATE
2			RELEASE PER PPD #72457				
3			RELEASE PER PPD #73159				
4			RELEASE PER PPD #73343				
A			RELEASE PER EDR #70318		TB	TB	2/12/03

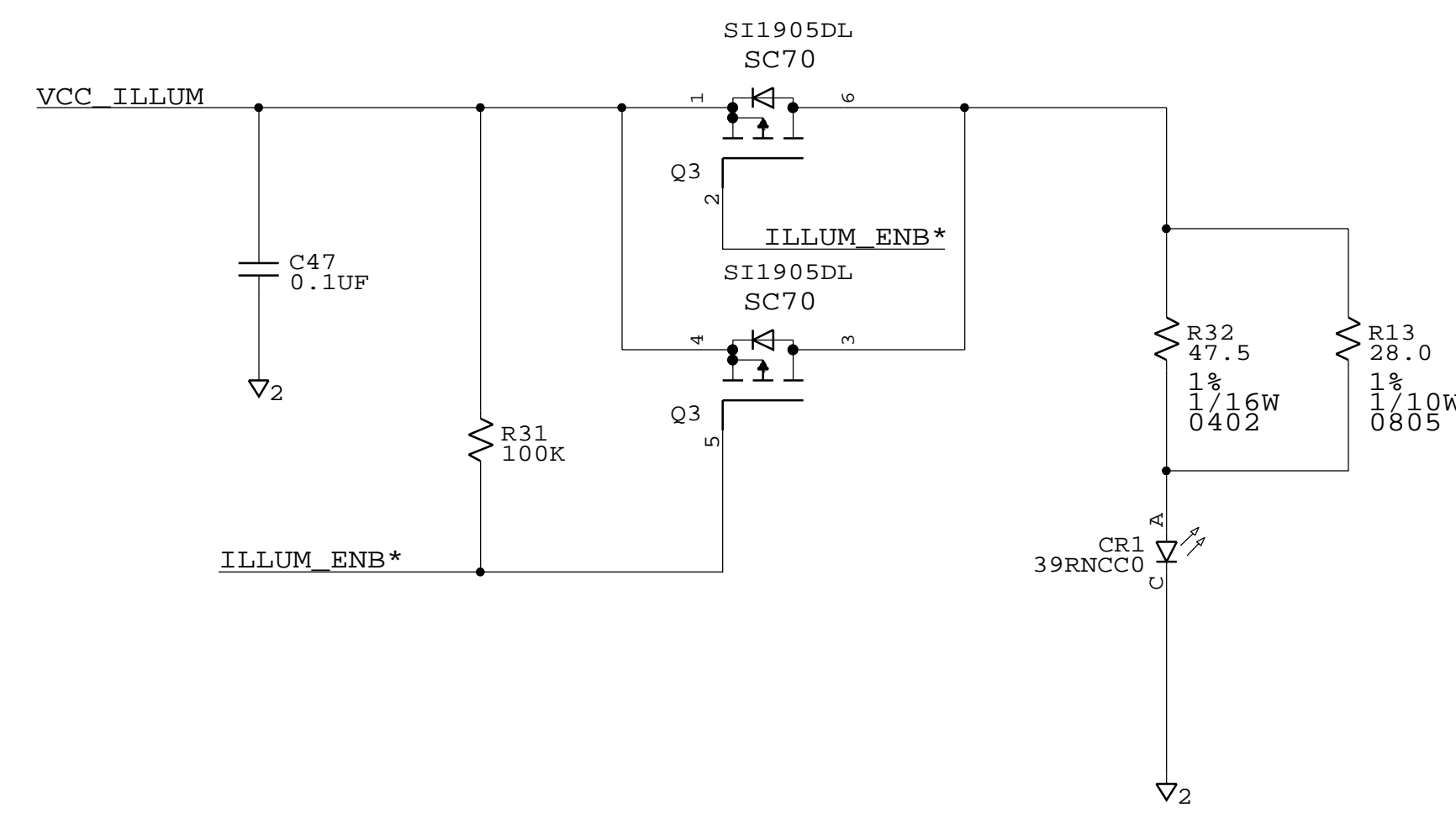


ILLUMINATION DRIVE



- NOTES:
1. ALL RESISTORS ARE 5%, 0402, 1/16W UNLESS STATED OTHERWISE.
 2. ALL CAPACITORS ARE X5R OR X7R, 0402, 10% UNLESS STATED OTHERWISE.

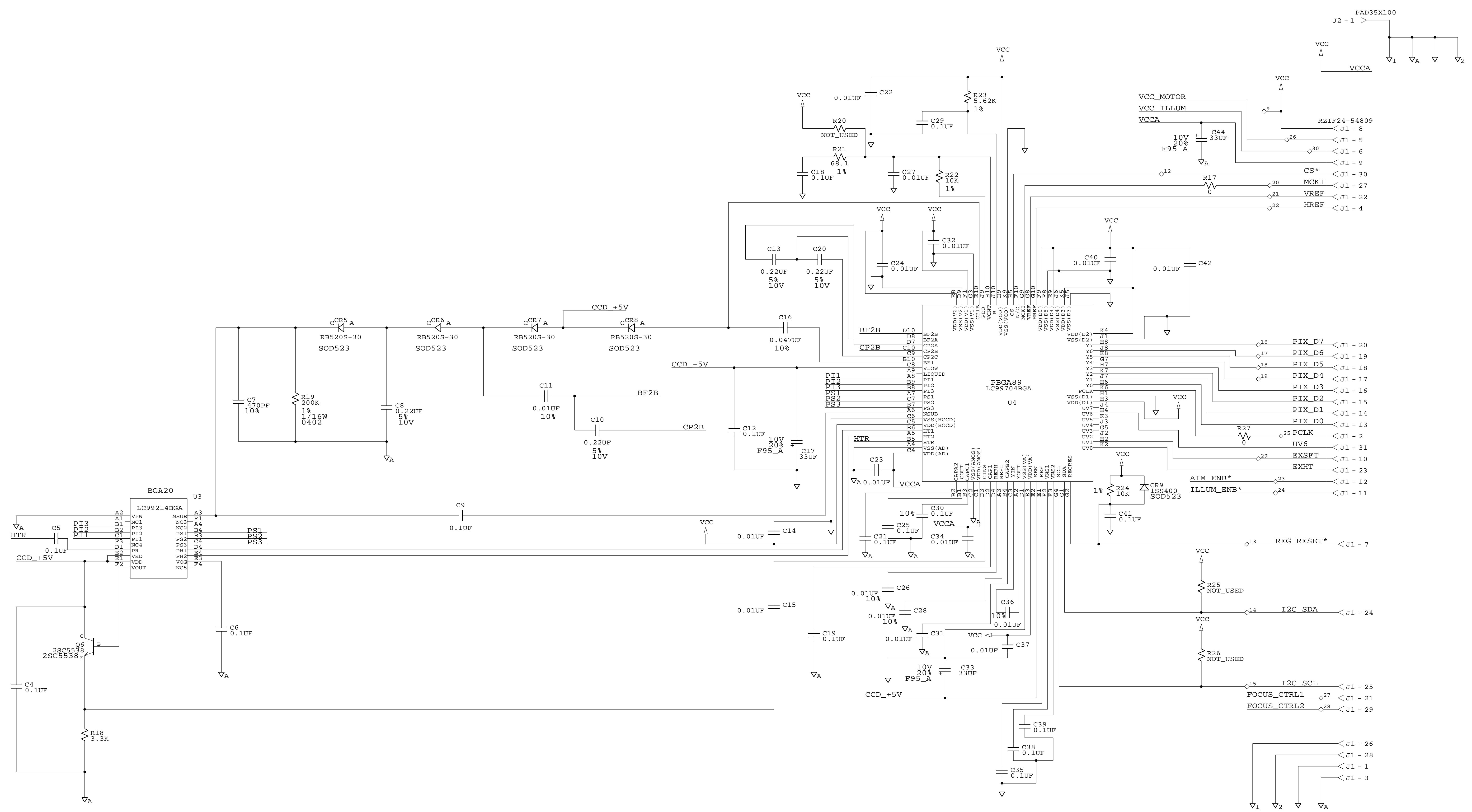
- REVISION HISTORY:
- REV. 2:
- A) REMOVED DIODE FROM Q5-B TO GROUND.
 - B) ADDED 1800PF ACROSS LD.
 - C) ADDED CAP ACROSS H-BRIDGE.
- REV. 3:
- A) ADJUST LED R TO 190HMS
 - B) CHANGE R1, R2, R5, R6 TO 10K
 - C) VLD, R16 MADE 2.2K
 - D) R24 MADE 10K
- REV. 4:
- A) CONNECTED U1 & C43 TO VCC_MOTOR
 - B) REMOVED R28
 - C) CHANGED C15 TO 0.01UF
- REV. A:
- A) CHANGED R8 & R9 TO 200KOHMS.
 - B) CHANGED C1 TO 0.01UF.
 - C) CHANGED R32 TO 47.5OHMS.
 - D) MAKE R25 & R26 DNP.



ITEM	QTY.	PART NO.	DESCRIPTION	REMARKS/REF. SYMBOL
PARTS LIST				
UNLESS OTHERWISE SPECIFIED			APPROVALS	DATE
DRAWN BY: BLANCULLI			CHECKED	
.XX + MM + .01			ENGINEER	
.XXX + + .005			INCH	
ANGLES : 1° FRACTIONS ± 1/64			MFG. ENG.	
MATERIAL:			PRODUCT	
FINISH:			QUALITY	
TEST ENG.				
NEXT ASSY			USED ON	DO NOT SCALE DRAWING

THE DWG. AND SPECIFICATION CONTAINED HEREON ARE PROPRIETARY AND MUST NOT BE USED, COPIED, REPRODUCED OR OTHERWISE DEALT WITH NOR ITS CONTENTS COMMUNICATED TO OTHERS EXCEPT IN ACCORDANCE WITH WRITTEN INSTRUCTIONS RECEIVED FROM SYMBOL TECHNOLOGIES INC.		DIMENSIONS ARE IN INCHES		SYMBOL TECHNOLOGIES INC.	
Bohemia, New York		PROTON SIZED		2D CCD IMAGER	
SIZE	DWG. NO.	17-59440-01	REV	A	
Tue Feb 18 10:50:46 2003		SHEET		1 OF 2	

REVISIONS					
REV	ZONE	NO.	DESCRIPTION	E.C.	DATE
SEE SHEET 1					



SYMBOL TECHNOLOGIES INC.
Bohemia, New York

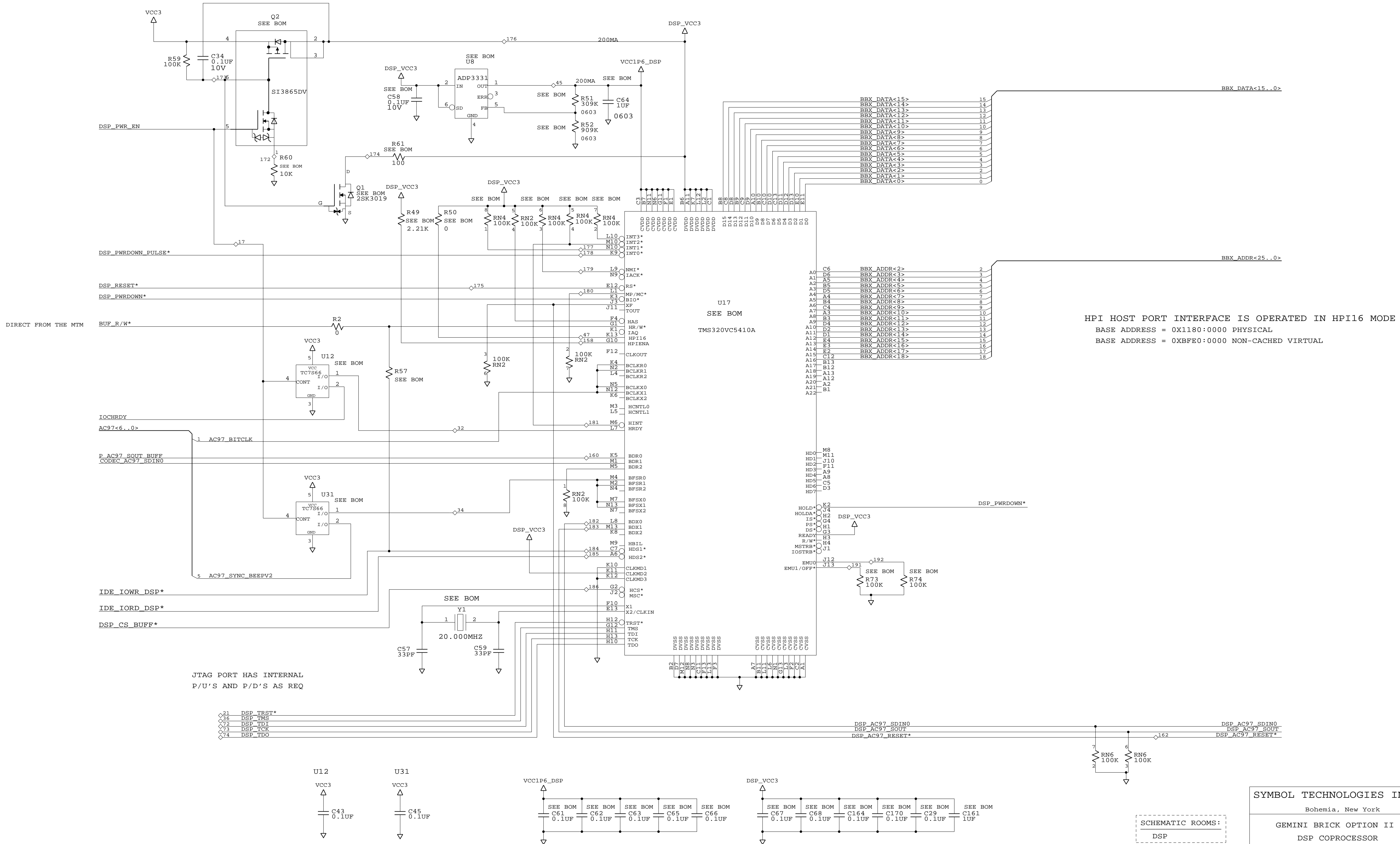
PROTON IMAGED
2D CCD IMAGER

SIZE	DWG. NO.	REV
D	17-59440-01	A

Wed Feb 12 14:03:14 2003 SHEET 2 OF 2

DSP COPROCESSOR

REVISIONS					
REV	ZONE	DESCRIPTION	E.C.	BY	DATE
SEE SHEET 1					



HPI HOST PORT INTERFACE IS OPERATED IN HPI16 MODE
 BASE ADDRESS = 0X1180:0000 PHYSICAL
 BASE ADDRESS = 0XBFEO:0000 NON-CACHED VIRTUAL

JTAG PORT HAS INTERNAL
 P/U'S AND P/D'S AS REQ

- 21 DSP TRST*
- 26 DSP TMS
- 22 DSP TDI
- 23 DSP TCK
- 24 DSP TDO

SCHEMATIC ROOMS:
 DSP

SYMBOL TECHNOLOGIES INC.
 Bohemia, New York

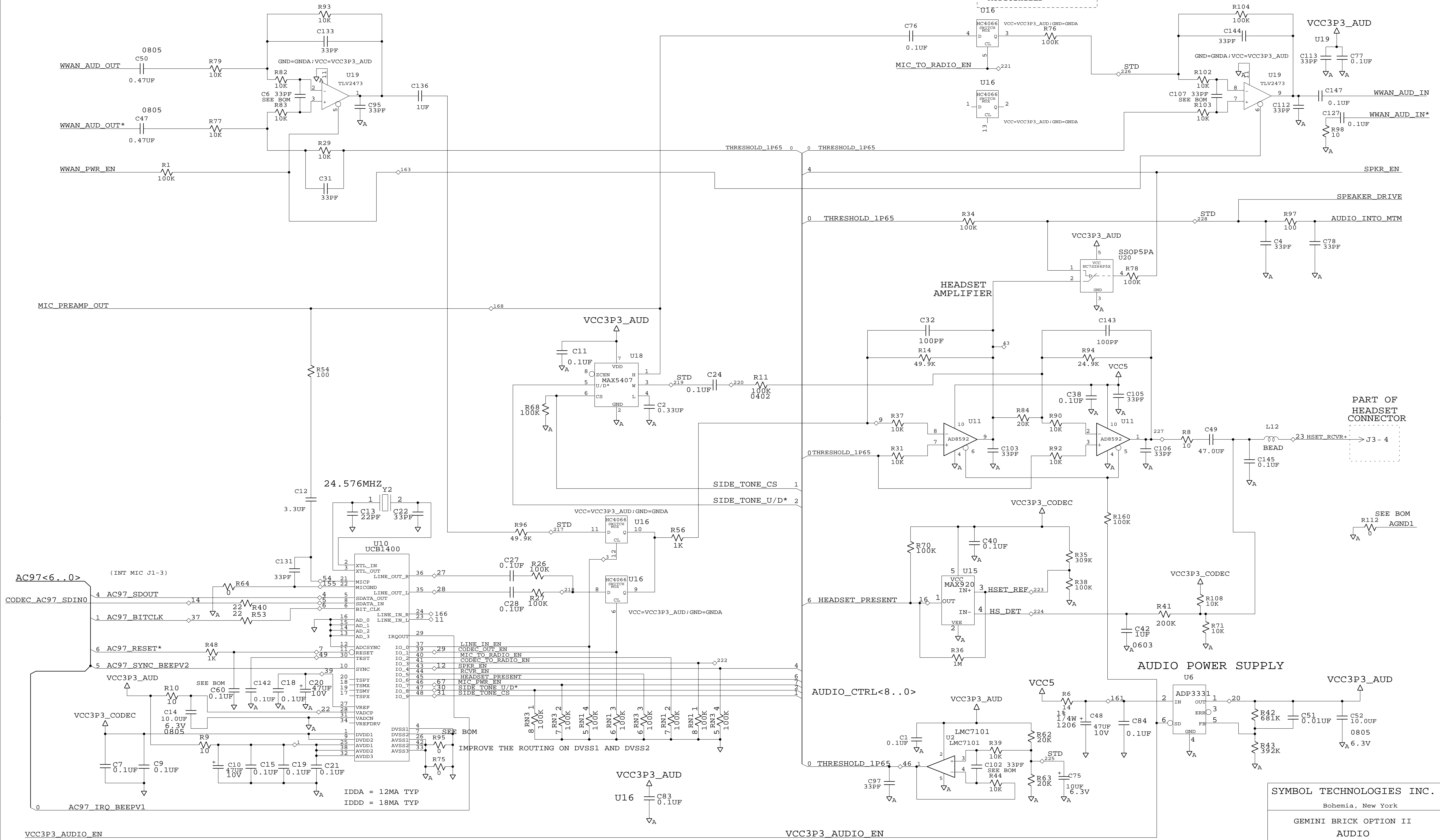
GEMINI BRICK OPTION II
 DSP COPROCESSOR

SIZE	DWG. NO.	REV
D	17-64188-01	4

Thu Mar 4 15:38:22 2004 SHEET 2 OF 8

REVISIONS							
REV	ZONE	NO.	DESCRIPTION	E.C.	BY	APVD.	DATE
			SEE SHEET 1				

SCHMATIC ROOMS:
AUDIOSHIELD



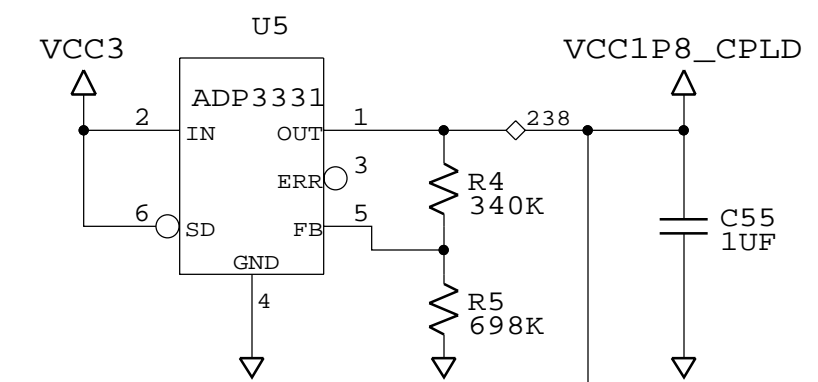
PART OF HEADSET CONNECTOR
→ J3 - 4

SYMBOL TECHNOLOGIES INC.		
Bohemia, New York		
GEMINI BRICK OPTION II AUDIO		
SIZE	DWG. NO.	REV
D	17-64188-01	4
Thu Mar 4 15:38:28 2004		SHEET 3 OF 8

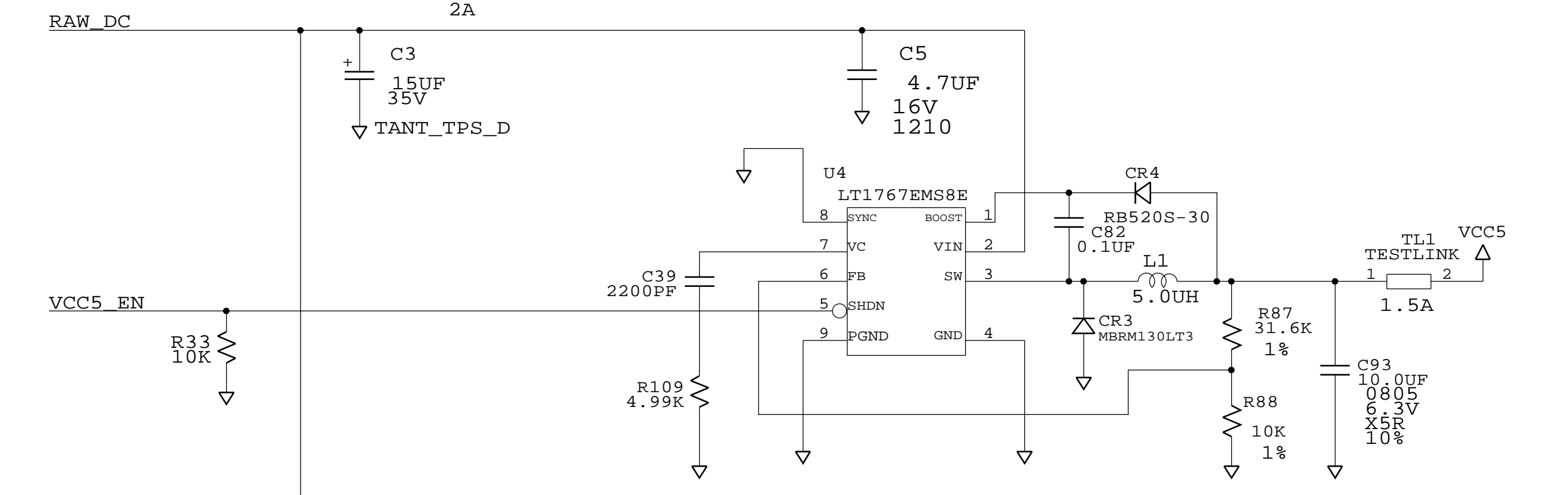
REVISIONS					
REV	ZONE	BY	DATE	E.C.	BY
SEE SHEET 1					

BRICKHOUSE CPLD & 5V SUPPLY

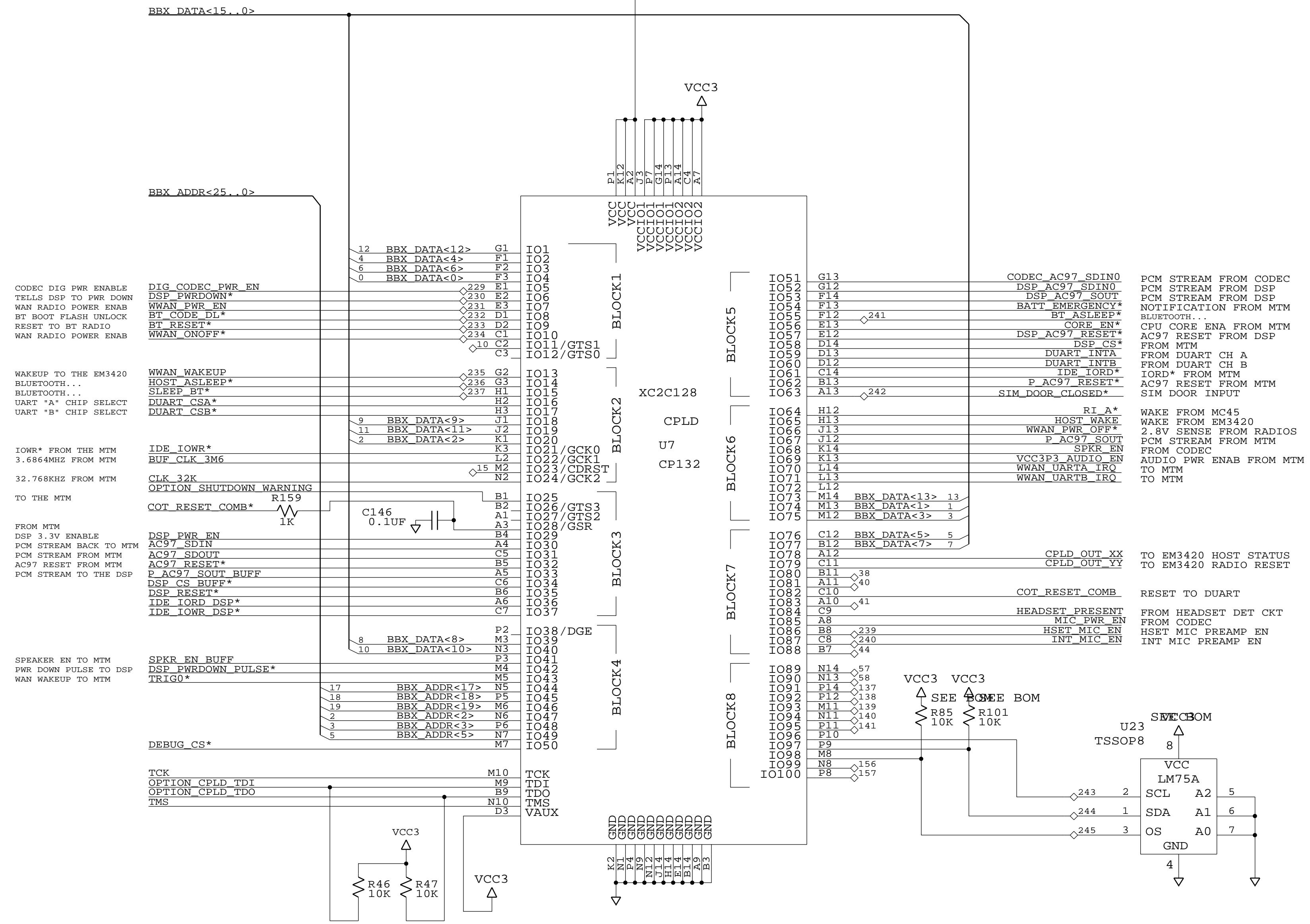
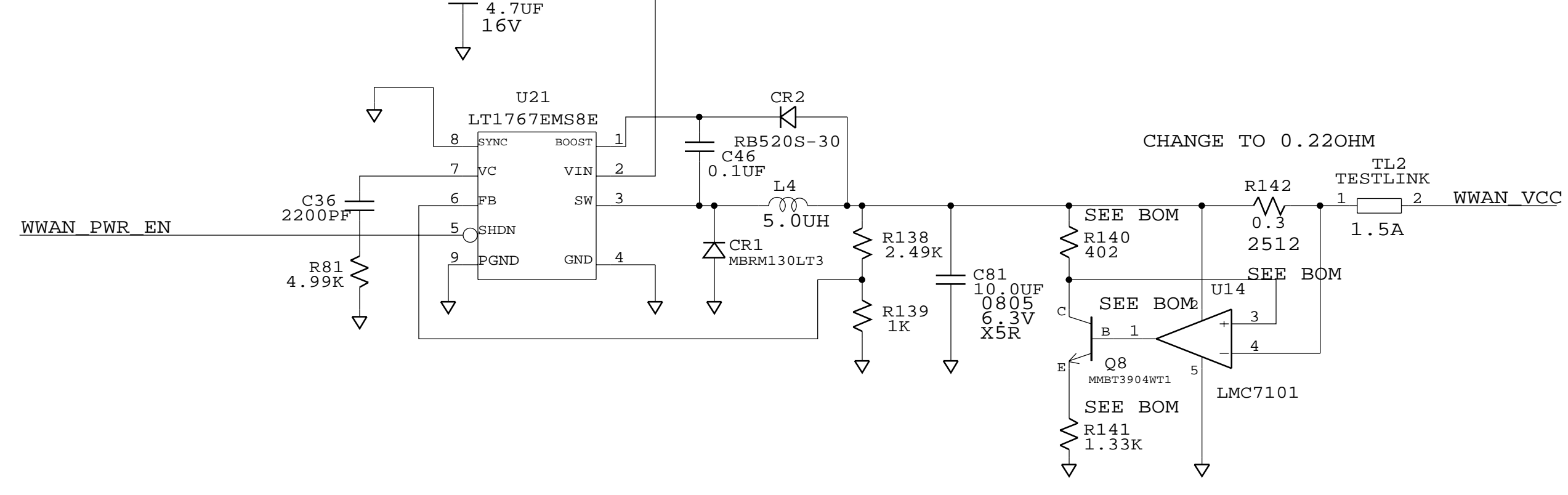
ADD RC FEED ON COT_RESET_COMB* FROM THE HOST



5.0V POWER SUPPLY (1A)



4.1V WAN POWER SUPPLY (1A AVG)



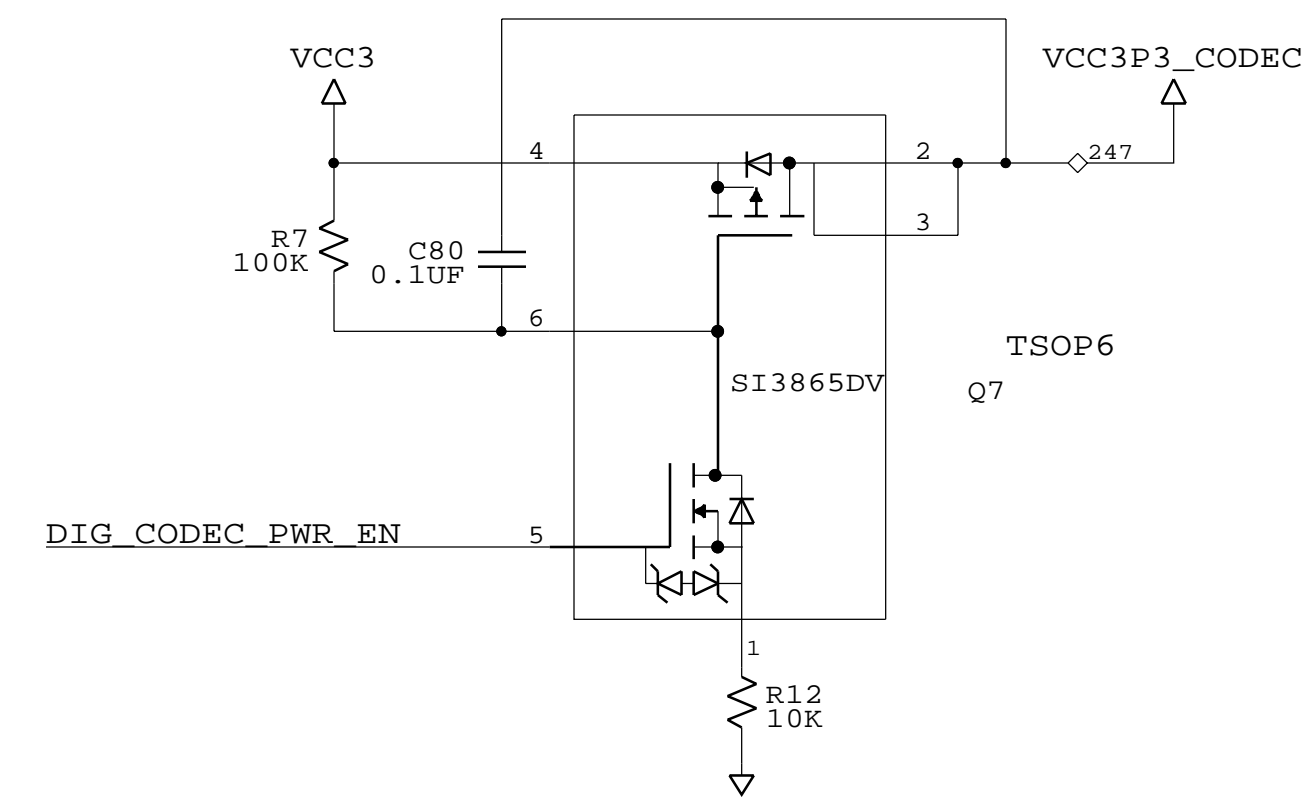
CPLD SIGNAL MAPPING

ADDR = 0X114E0000 (OUTPUTS UNLESS NOTED)		ADDR = 0X114E0004 (ALL INPUTS)		ADDR = 0X114E0008 (OUTPUTS UNLESS NOTED)	
BX_DATA	SIGNAL	BX_DATA	SIGNAL	BX_DATA	SIGNAL
0	BT_RESET*	0	MINOR_REV_0	0	WAN_SELECT
1	BT_CODE_DL*	1	MINOR_REV_1	1	CPLD_OUT_XX
2	WWAN_PWR_EN	2	-- NOT USED --	2	CPLD_OUT_YY
3	SLEEP_BT*	3	MINOR_REV_2	3	-- NOT USED --
4	DSP_PWR_OVERRIDE	4	MAJOR_REV_0	4	-- NOT USED --
5	AC97_CNTL_SEL	5	MAJOR_REV_1	5	-- NOT USED --
6	DSP_PWRDOWN*	6	MAJOR_REV_2	6	-- NOT USED --
7	WWAN_ONOFF*	7	-- NOT USED --	7	-- NOT USED --
8	WWAN_WAKEUP*	8	-- NOT USED --	8	-- NOT USED --
9	BT_ASLEEP* (IN)	9	PART_ID_0	9	-- NOT USED --
10	HOST_ASLEEP*	10	PART_ID_1	10	-- NOT USED --
11	WWAN_PWR_OFF* (IN)	11	-- NOT USED --	11	-- NOT USED --
12	DSP_RESET*	12	PART_ID_2	12	-- NOT USED --
13	DIG_CODEDC_PWR_EN	13	PART_ID_3	13	-- NOT USED --

PART ID = 2 FOR THIS BOARD

DUART CHANNEL A BASE = 0X114C0000
DUART CHANNEL B BASE = 0X114C0020

LM75A TEMP SENSE MAPPING TBD



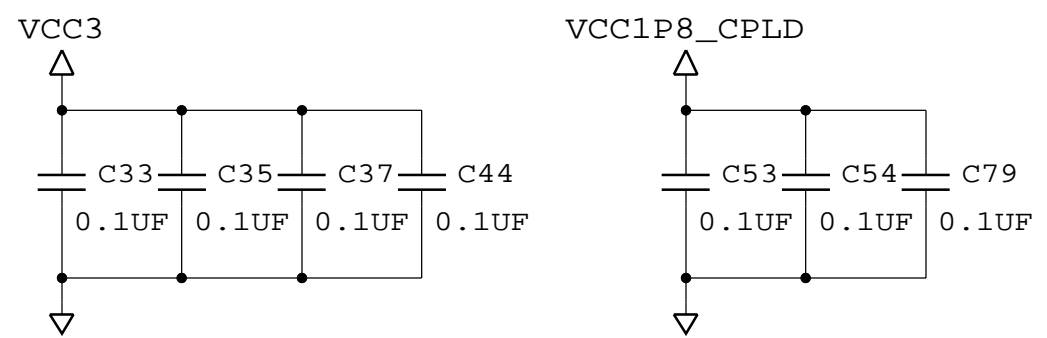
SCHEMATIC ROOMS:
CPLD
5VSUPPLY

SYMBOL TECHNOLOGIES INC.
Bohemia, New York

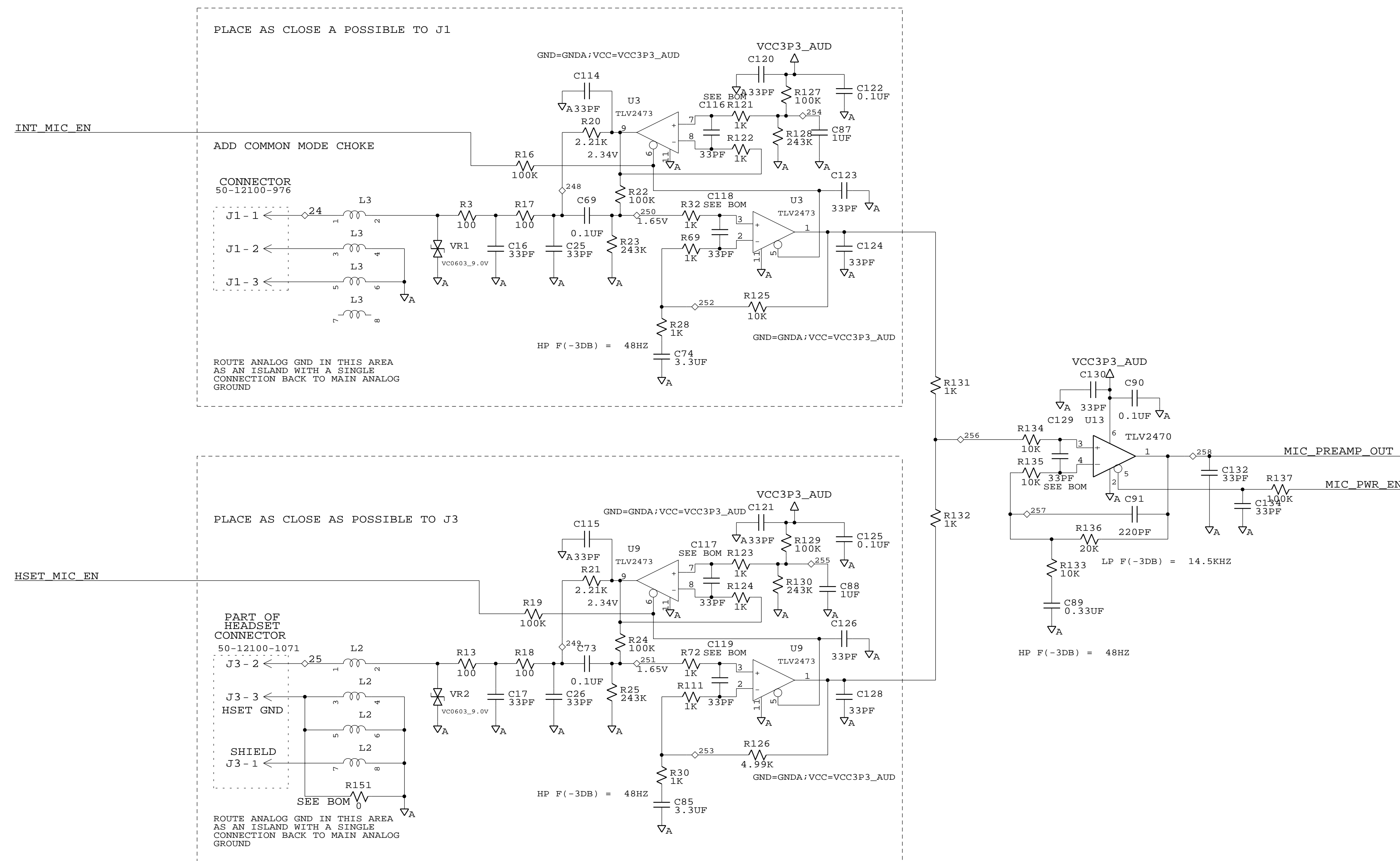
GEMINI BRICK OPTION II
BRICKHOUSE CPLD & 5V SUPPLY

SIZE	DWG. NO.	REV
D	17-64188-01	4

Thu Mar 4 15:38:34 2004 SHEET 4 OF 8



REVISIONS							
REV	ZONE	NO.	DESCRIPTION	E.C.	BY	APVD.	DATE
			SEE SHEET 1				

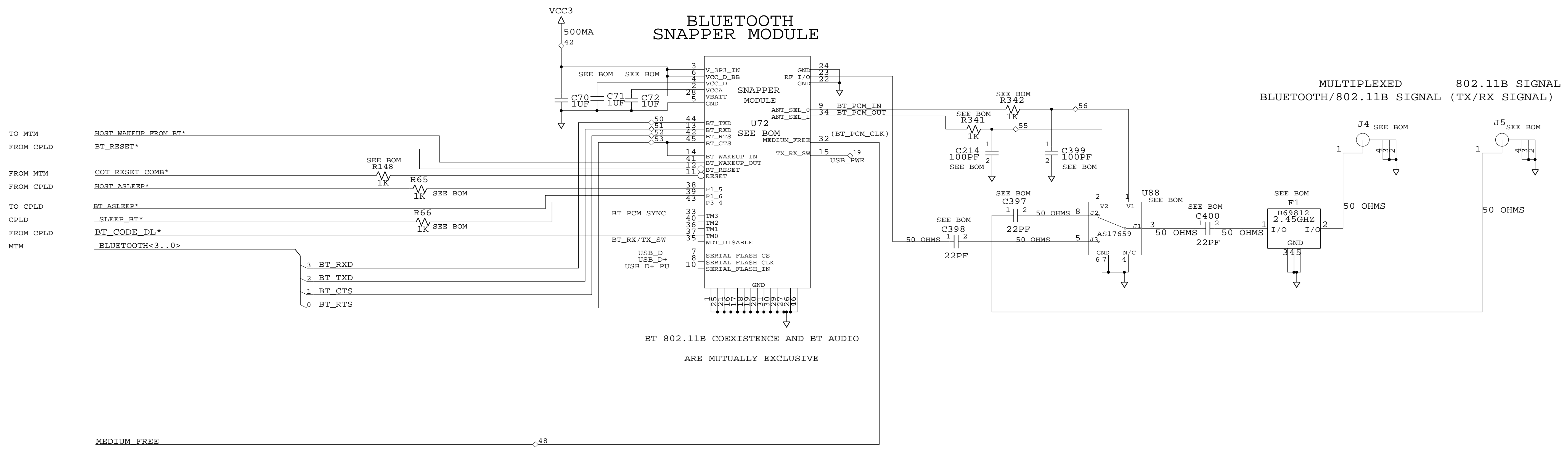


SYMBOL TECHNOLOGIES INC.			
Bohemia, New York			
GEMINI BRICK OPTION II			
MICROPHONE PREAMPS			
SIZE	DWG. NO.	REV	
D	17-64188-01	4	
Thu Mar 4 15:38:39 2004		SHEET 5 OF 8	

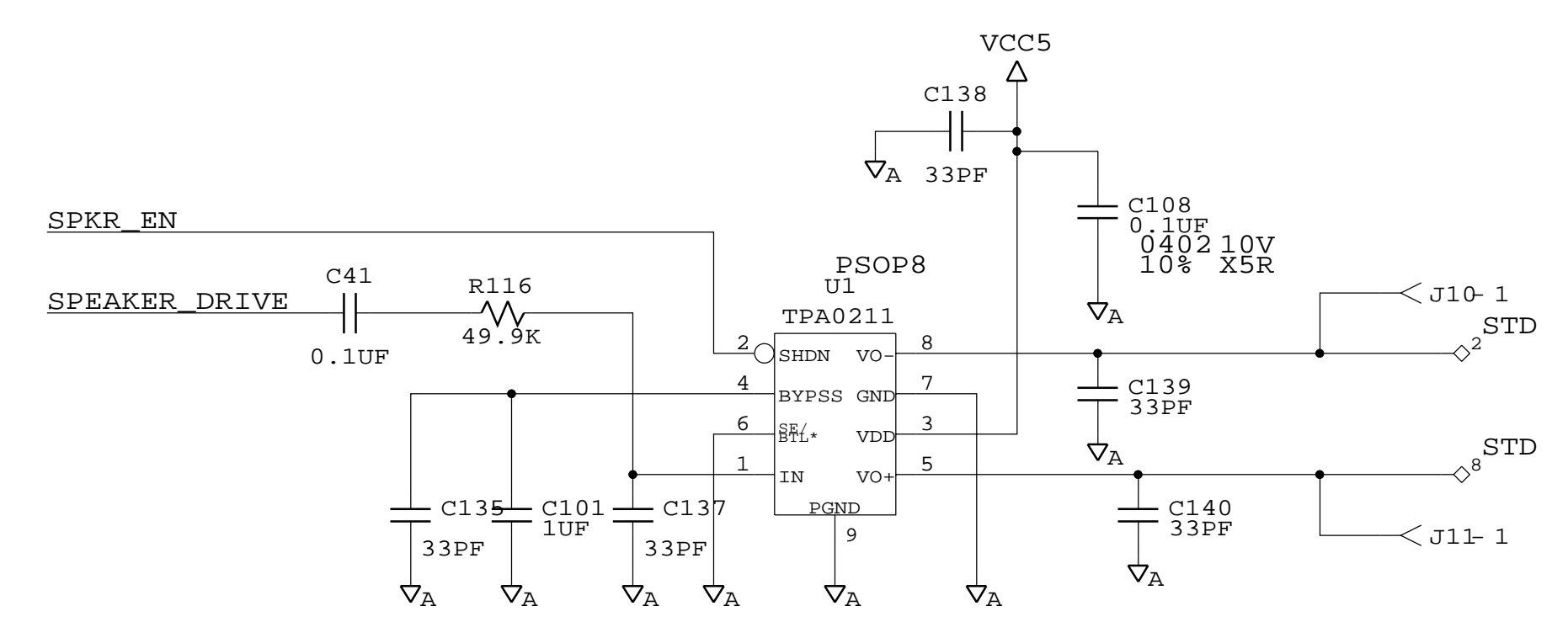
REVISIONS							
REV	ZONE	NO.	DESCRIPTION	E.C.	BY	APVD.	DATE
			SEE SHEET 1				

BLUETOOTH

BLUETOOTH VARIANTS
 24-64188-01: SNAPPER
 24-64188-02: MARLIN
 24-64188-03: MARLIN
 24-64188-04: NO BT RADIO
 24-64188-05: NO BT RADIO

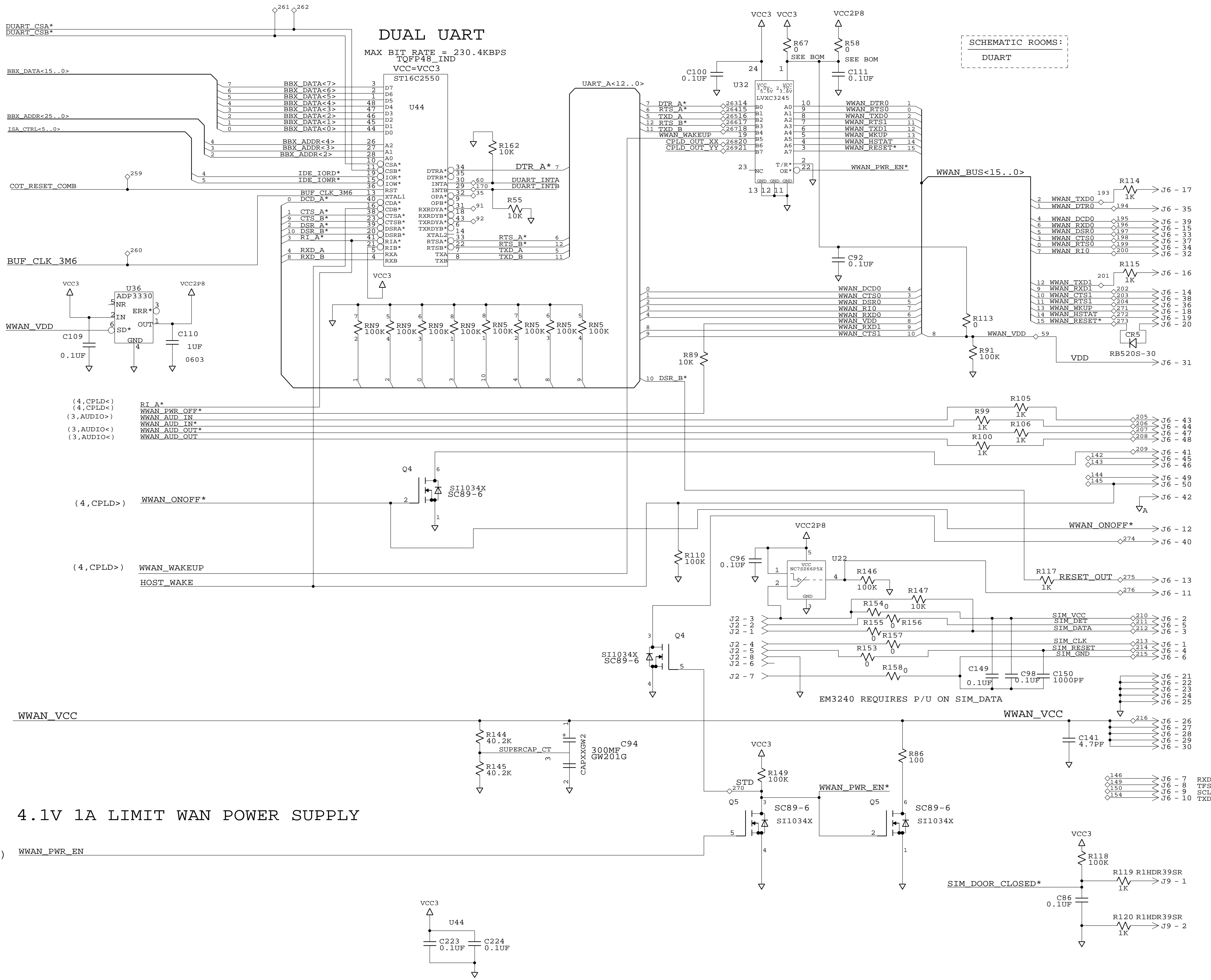


SPEAKER POWER AMP



MEDIUM_FREE	ANT_SEL_0 (V2)	ANT_SEL_1 (V1)	J1-J2	J1-J3	ACTIVE RADIO
H	L	H	C	NC	BLUETOOTH
L	H	L	NC	C	802.11
X	L	L	INVALID	INVALID	INVALID
X	H	H	INVALID	INVALID	INVALID

REVISIONS					
REV	ZONE	NO.	DESCRIPTION	E.C.	DATE
			SEE SHEET 1		



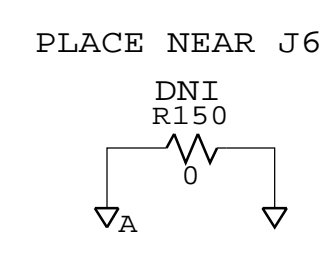
SCHMATIC ROOMS:
DUART

SIEMENS MC45 GSM/GPRS
AIRPRIME EM3420 CDMA

WAKEUP TO HOST = RINGO LOW WAKEUP TO RADIO = "AT" COMMAND		WAKEUP TO HOST = HOST_WAKE HIGH WAKEUP TO RADIO = RADIO_WAKE HIGH	
17	TXD0	19	TXD1
35	DTR0	17	DTR1
39	DCD0	14	DCD1
15	RXD0	20	RXD1
34	DSR0	18	DSR1
34	CTS0	19	CTS1
32	RINGO	13	R11
16	TXD1	21	TXD2
14	RXD1	22	RXD2
36	CTS1	23	CTS2
36	RTS1	24	RTS2
XX	N.C.	28	MODULE_WAKE
XX	N.C.	28	HOST_STATUS
XX	N.C.	25	RADIO_RESET
31	VDD	32	VCC_RADIO
43	MICN1	6	MIC_N
44	MICP1	5	MIC_P
47	EPN1	5	SPK_N
48	EPP1	3	SPK_P
41	/IGT	XX	N.C.
45	N.C.	XX	N.C.
46	N.C.	XX	N.C.
49	N.C.	XX	N.C.
50	N.C.	29	HOST_WAKE
42	AGND	XX	N.C.
XX	N.C.	27	ON/OFF*
40	/EMERGOFF	29	N.C.
XX	N.C.	26	RESET_OUT
XX	N.C.	10	RUIW_EN
32	SIM_VCC	XX	N.C.
33	SIM_DET	2	/RUIW_DETECT
33	SIM_I/O_DATA	11	RUIW_IO
1	SIM_CLK	9	RUIW_CLK
6	SIM_RESET	12	/RUIW_RESET
6	SIM_GND		GND
21	GND	7	GND
22	GND	8	GND
23	GND	34	GND
24	GND	36	GND
25	GND	40	GND
26	BATT+	33	VBATT
27	BATT+	35	VBATT
28	BATT+	36	VBATT
29	BATT+	39	VBATT
30	BATT+	31	VCC_BB

EM3420 REQUIRES P/U ON SIM_DATA

<146> J6 - 7 RXDDAI: DIGITAL AUDIO RCV DATA OUT
 <149> J6 - 8 TFSDAI: DIGITAL AUDIO TX FRAME SYNC
 <150> J6 - 9 SCLK: DIGITAL AUDIO BIT CLOCK
 <154> J6 - 10 TXDAI: DIGITAL AUDIO TX DATA IN



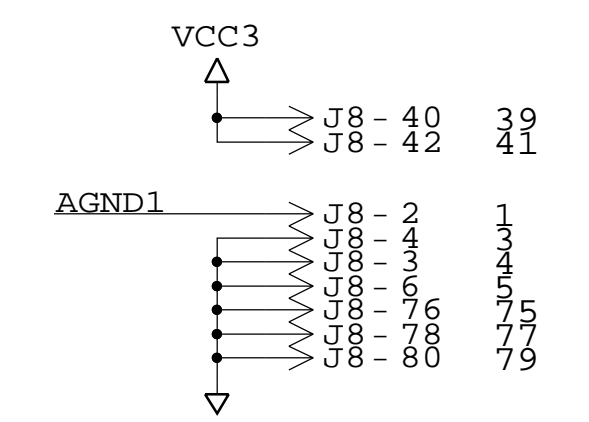
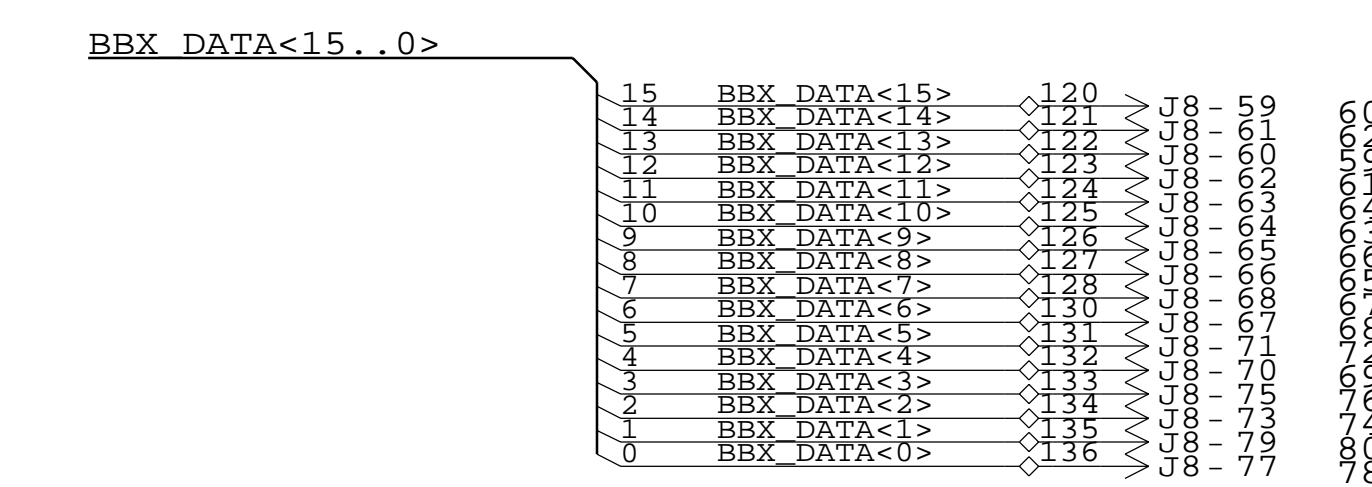
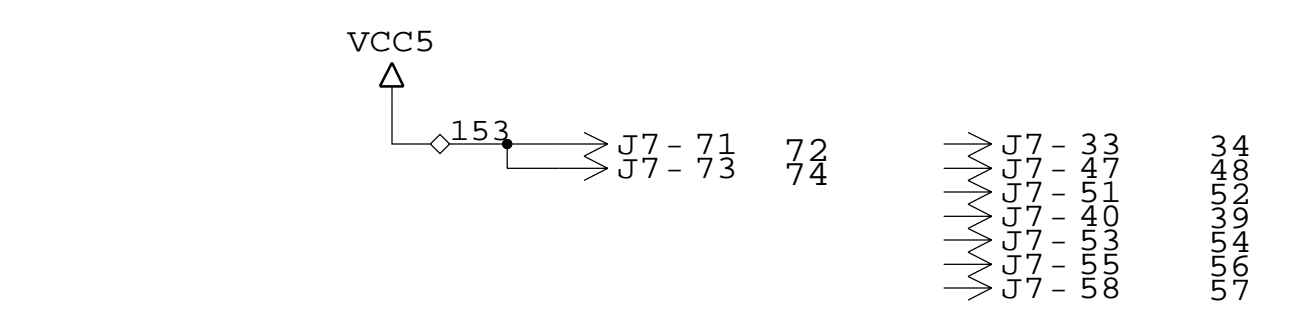
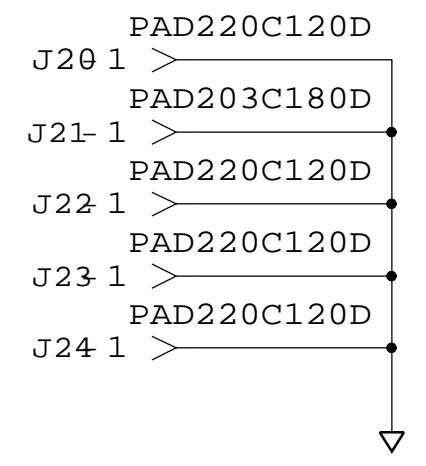
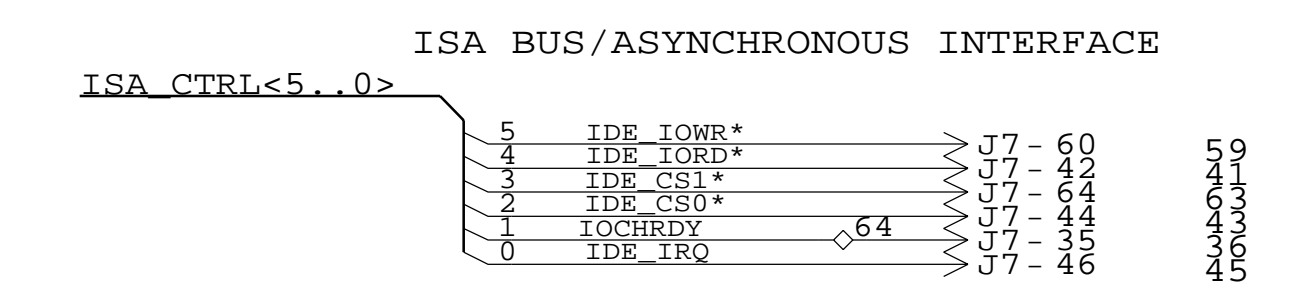
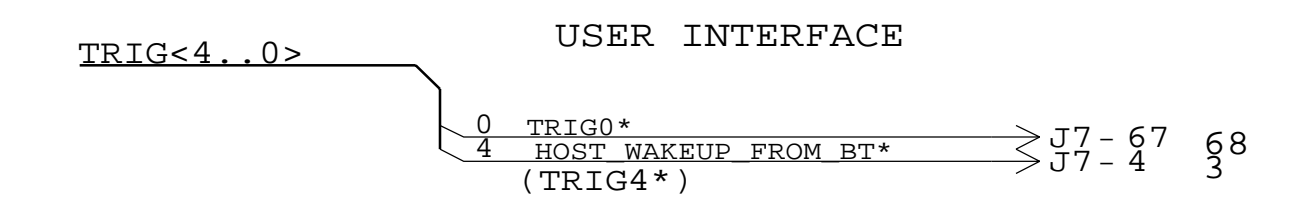
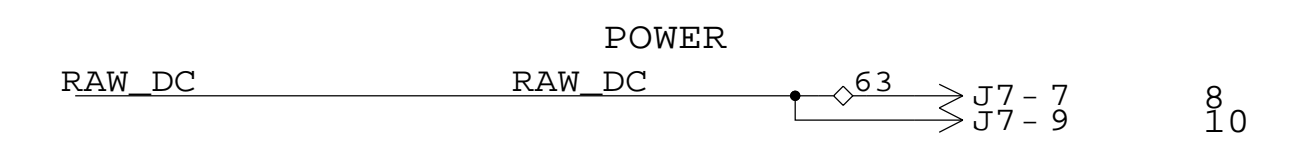
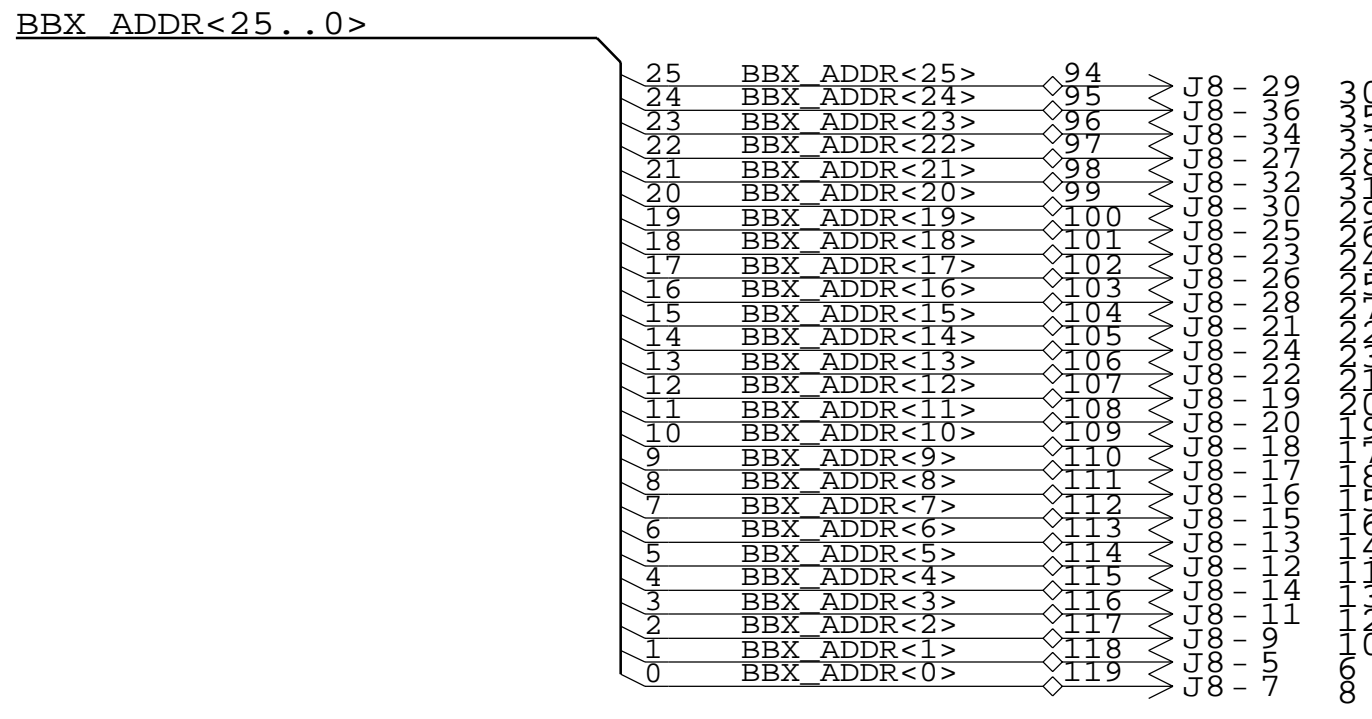
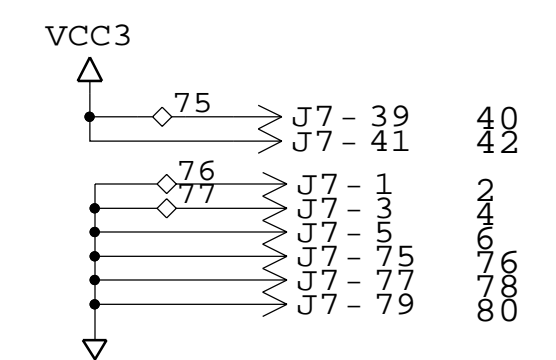
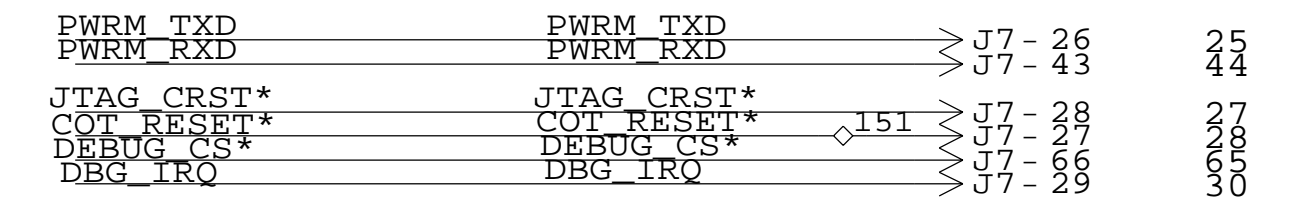
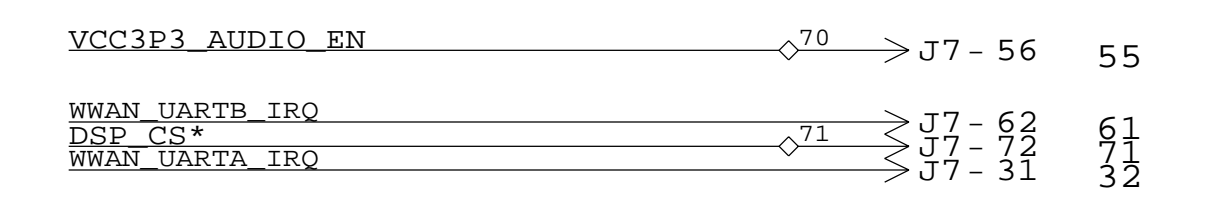
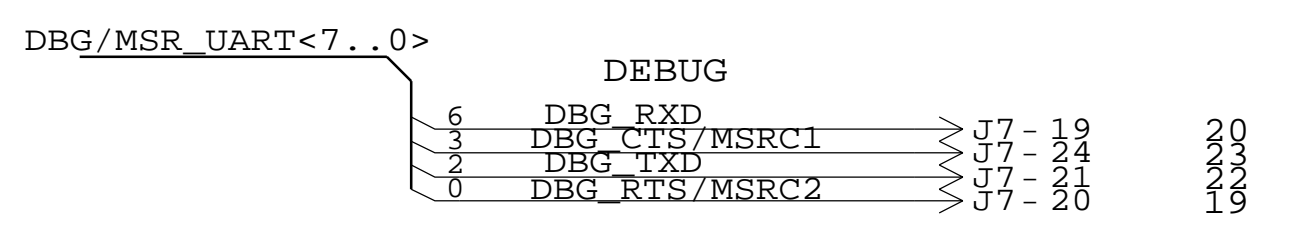
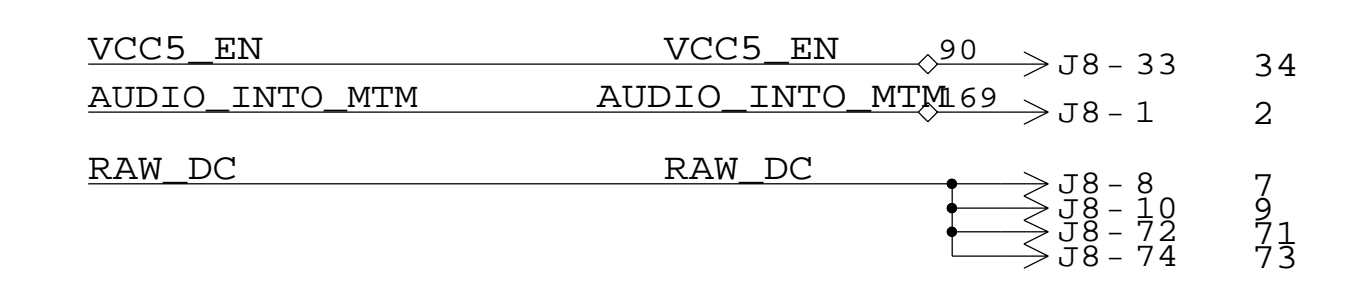
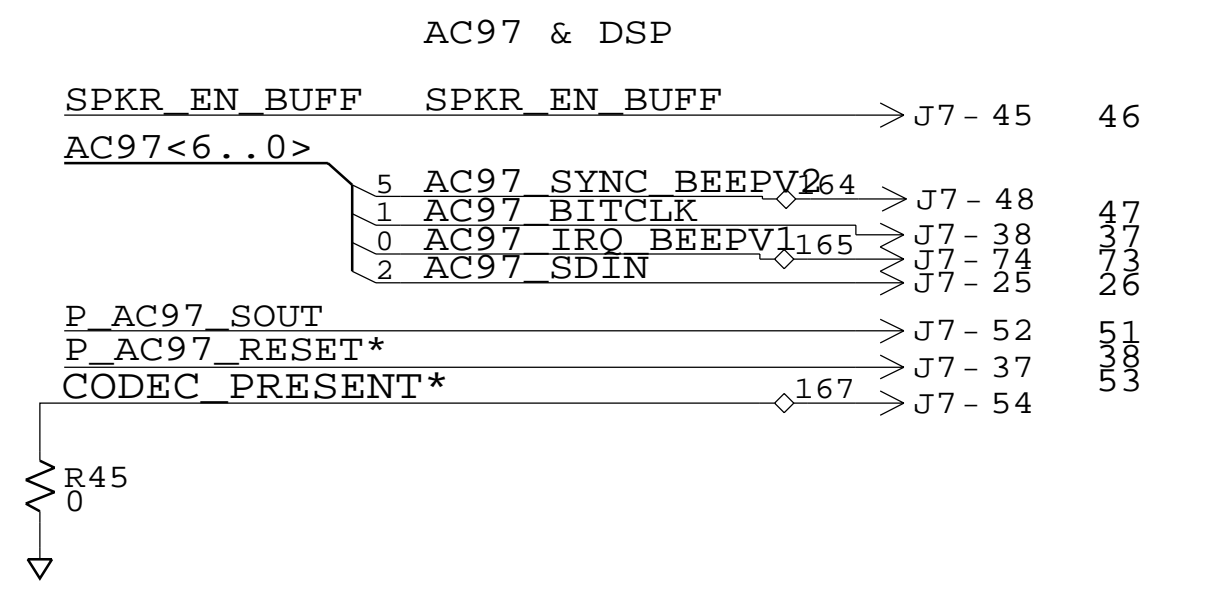
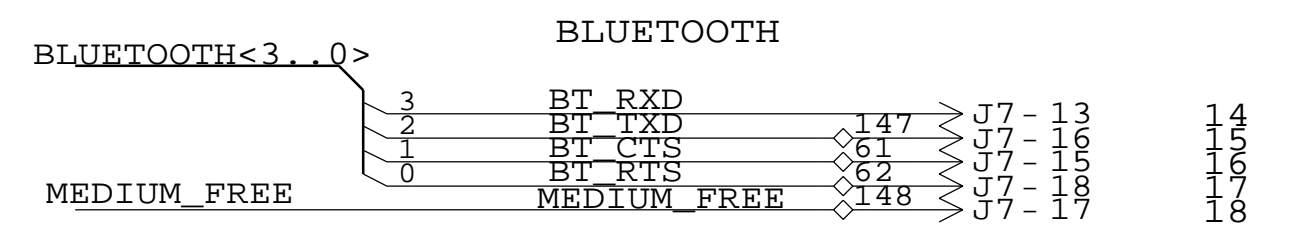
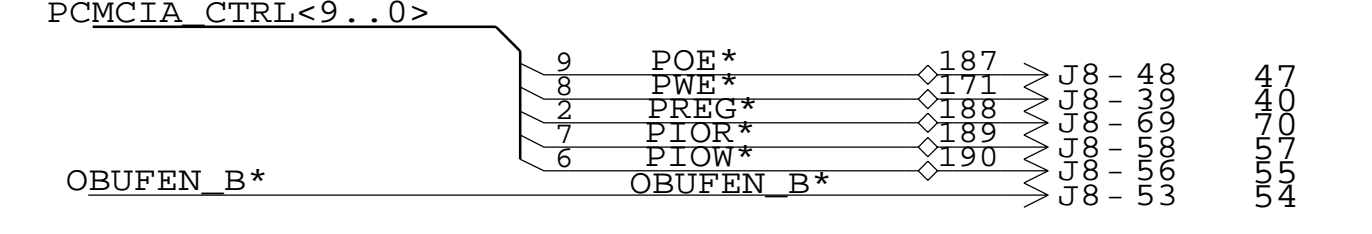
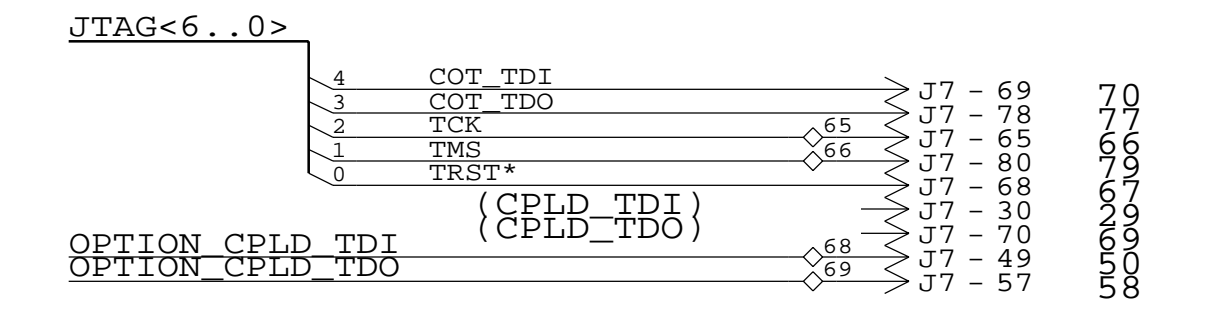
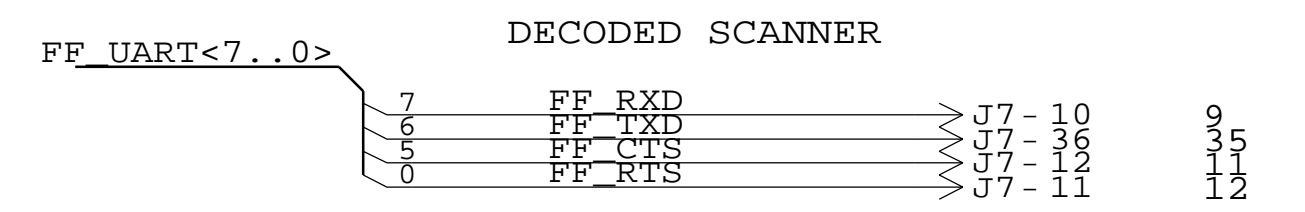
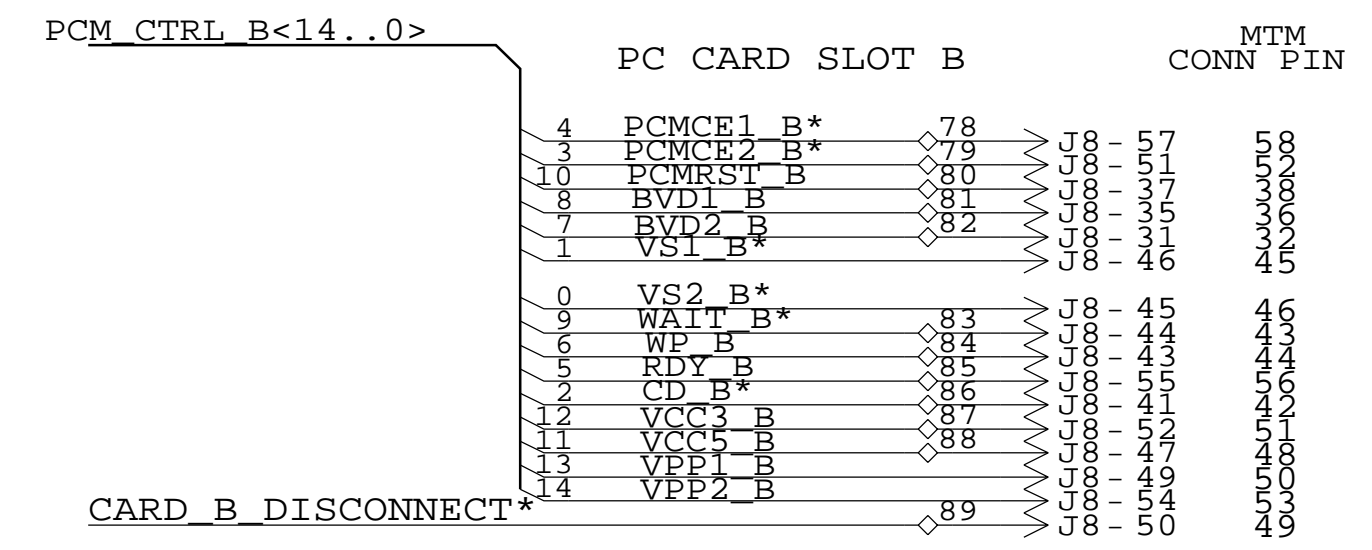
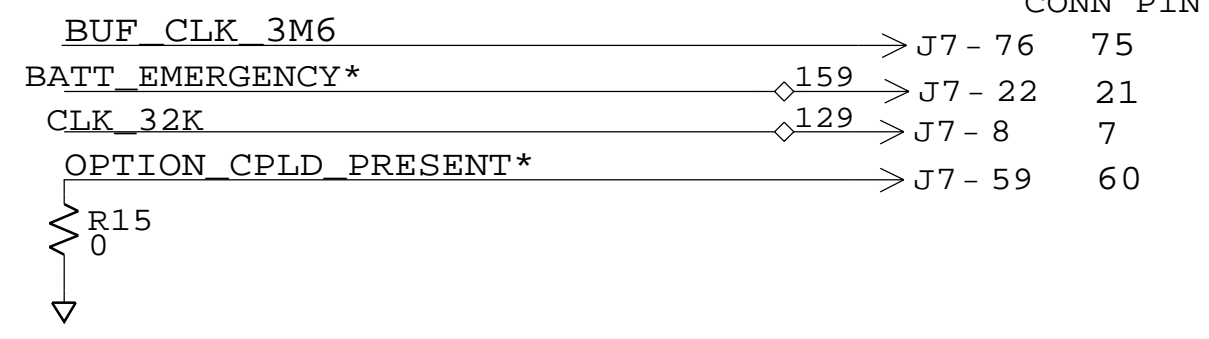
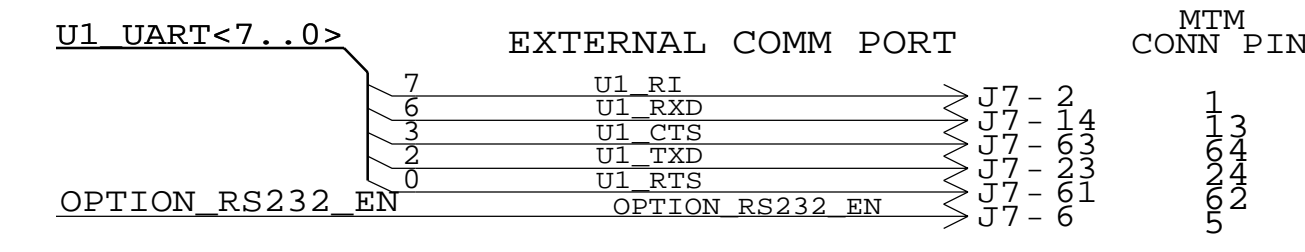
REVISIONS							
REV	ZONE	NO.	DESCRIPTION	E.C.	BY	APVD.	DATE
			SEE SHEET 1				

MTM TO OPTION BOARD INTERFACE

COTULLA SIDE CONNECTOR ON MTM

OPTION CPLD

ASIC CONNECTOR SIDE ON MTM

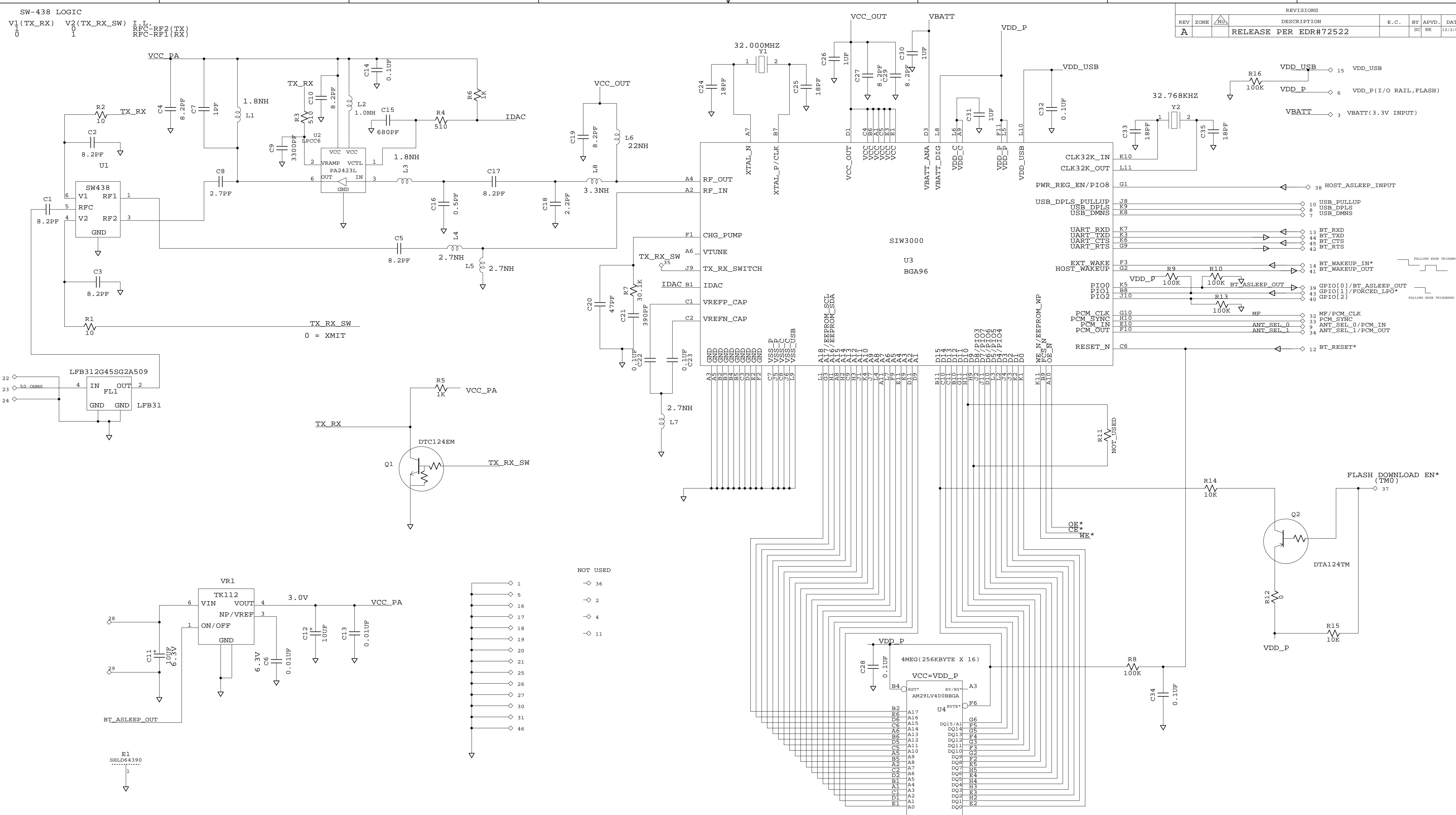


SYMBOL TECHNOLOGIES INC.
Bohemia, New York

GEMINI BRICK OPTION SCHEMATIC
MTM TO OPTION BD INTERFACE

SIZE	DWG. NO.	REV
D	17-64188-01	4

Thu Mar 4 15:38:54 2004 SHEET 8 OF 8



REVISIONS					
REV	ZONE	DESCRIPTION	E.C.	BY	DATE
A		RELEASE PER EDR#72522		SC	12/2/03

SYMBOL TECHNOLOGIES CONFIDENTIAL

ITEM	QTY.	PART NO.	DESCRIPTION	REMARKS/REF. SYMBOL
PARTS LIST				
UNLESS OTHERWISE SPECIFIED			APPROVALS	DATE
DRAWN				
CHECKED				
ENGINEER SC			7/03	
MFG. ENG.				
PRODUCT				
QUALITY				
TEST ENG.				
SIZE		DWG. NO.	REV	
D		17-64282-01	A	
Fri Dec 12 09:58:09 2003				SHEET 1 OF 1

THE DWG. AND SPECIFICATION CONTAINED HEREON ARE PROPRIETARY AND MUST NOT BE USED, COPIED, REPRODUCED OR OTHERWISE DEALT WITH NOR ITS CONTENTS COMMUNICATED TO OTHERS EXCEPT IN ACCORDANCE WITH WRITTEN INSTRUCTIONS RECEIVED FROM SYMBOL TECHNOLOGIES INC.

UNLESS OTHERWISE SPECIFIED

.XX	+	MM	INCH
.XXX	+	+	.005

ANGLES: 1" FRACTIONS ± 1/64

FINISH:

DO NOT SCALE DRAWING

SYMBOL TECHNOLOGIES INC.
Bohemia, New York

MARLIN CLASS 1
BLUETOOTH MODULE

REVISIONS							
REV	ZONE	NO.	DESCRIPTION	E.C.	BY	APVD.	DATE
A			RELEASE PER EDR # 71714		DD	RK	8/15/2003

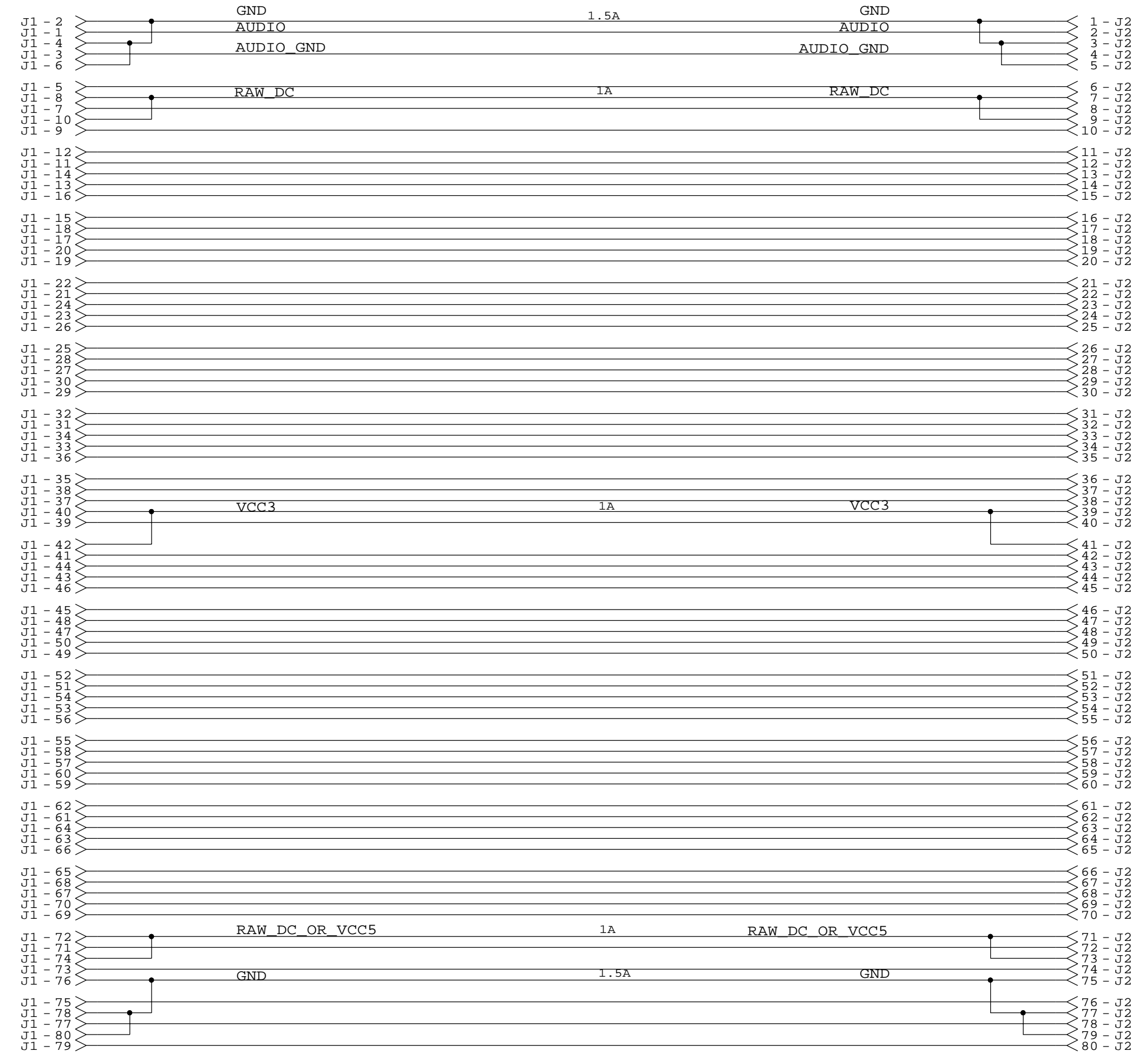
GEMINI CPU BOARD TO OPTION BOARD FLEX

THIS SIDE CONNECTS TO J5 (COTULLA SIDE)
ON THE CPU PCB

THIS SIDE CONNECTS TO J8 (ASIC SIDE)
ON THE OPTION PCB

THIS SIDE CONNECTS TO J7 (COTULLA SIDE)
ON THE OPTION PCB

THIS SIDE CONNECTS TO J9 (ASIC SIDE)
ON THE CPU PCB



THIS FLEX WAS DESIGNED SYMMETRICALLY TO ALLOW
USE FOR BOTH 80-PIN OPTION CONNECTORS.
AN S-SHAPE IN THE FLEX FORCES IT TO BE INSTALLED
IN THE PROPER DIRECTION FOR EACH CONNECTOR

J1 ON THIS FLEX ATTACHES TO J5 ON THE CPU PCB
J2 ON THIS FLEX ATTACHES TO J9 ON THE CPU PCB

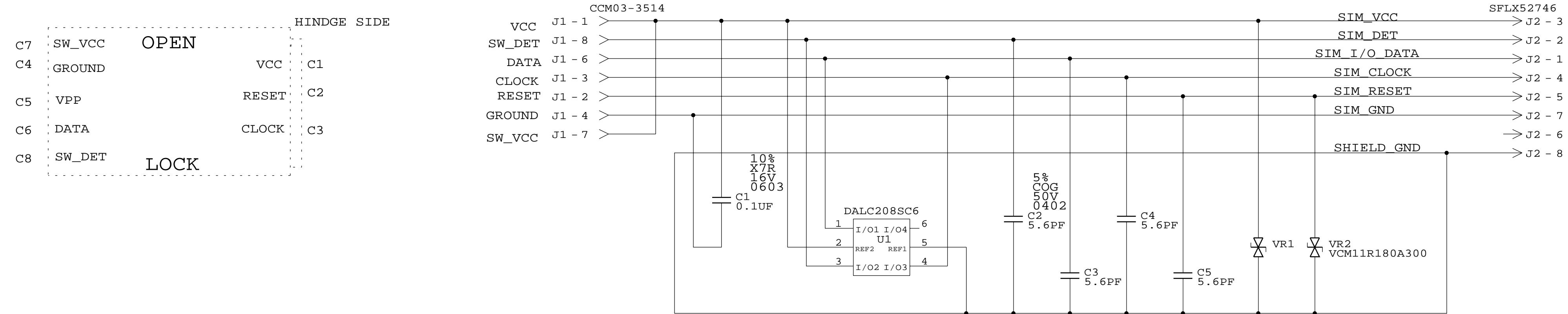
ITEM	QTY.	PART NO.	DESCRIPTION	REMARKS/REF. SYMBOL																																								
PARTS LIST																																												
THE DWG. AND SPECIFICATION CONTAINED HEREON ARE PROPRIETARY AND MUST NOT BE USED, COPIED, REPRODUCED OR OTHERWISE DEALT WITH NOR ITS CONTENTS COMMUNICATED TO OTHERS EXCEPT IN ACCORDANCE WITH WRITTEN INSTRUCTIONS RECEIVED FROM SYMBOL TECHNOLOGIES INC.		<table border="1"> <tr> <td colspan="2">DIMENSIONS ARE IN INCHES</td> <td colspan="2">APPROVALS</td> <td>DATE</td> </tr> <tr> <td colspan="2">UNLESS OTHERWISE SPECIFIED</td> <td colspan="2">DRAWN D DEMEO</td> <td>03/03</td> </tr> <tr> <td colspan="2">.XX + .01</td> <td colspan="2">CHECKED</td> <td></td> </tr> <tr> <td colspan="2">.XXX + .005</td> <td colspan="2">ENGINEER D DEMEO</td> <td>03/03</td> </tr> <tr> <td colspan="2">ANGLES ± 1° FRACTIONS ± 1/64</td> <td colspan="2">MFG. ENG.</td> <td></td> </tr> <tr> <td colspan="2">MATERIAL:</td> <td colspan="2">PRODUCT</td> <td></td> </tr> <tr> <td colspan="2">FINISH:</td> <td colspan="2">QUALITY</td> <td></td> </tr> <tr> <td colspan="2">TEST ENG.</td> <td colspan="2"></td> <td></td> </tr> </table>		DIMENSIONS ARE IN INCHES		APPROVALS		DATE	UNLESS OTHERWISE SPECIFIED		DRAWN D DEMEO		03/03	.XX + .01		CHECKED			.XXX + .005		ENGINEER D DEMEO		03/03	ANGLES ± 1° FRACTIONS ± 1/64		MFG. ENG.			MATERIAL:		PRODUCT			FINISH:		QUALITY			TEST ENG.					<p>SYMBOL TECHNOLOGIES INC. Bohemia, New York</p> <p>GEMINI CPU BOARD TO TO OPTION BOARD FLEX</p> <p>SIZE DWG. NO. 17-59980-01 REV A</p>
DIMENSIONS ARE IN INCHES		APPROVALS		DATE																																								
UNLESS OTHERWISE SPECIFIED		DRAWN D DEMEO		03/03																																								
.XX + .01		CHECKED																																										
.XXX + .005		ENGINEER D DEMEO		03/03																																								
ANGLES ± 1° FRACTIONS ± 1/64		MFG. ENG.																																										
MATERIAL:		PRODUCT																																										
FINISH:		QUALITY																																										
TEST ENG.																																												
NEXT ASSY		USED ON	DO NOT SCALE DRAWING	SCALE: NONE SHEET 1 OF 1																																								

REVISIONS							
REV	ZONE	NO.	DESCRIPTION	E.C.	BY	APVD.	DATE
1			RELEASE PER PPD 76262		CH	RK	07/28/03
2			RELEASE PER PPD 77479		CH	RK	10/15/03

REV2:
 1) REMOVED SPLIT PCB ARTWORK THAT FUNCTIONED AS A SWITCH FOR SIM DETECT
 2) REMOVED ZERO OHM RESISTOR THAT BYPASSED SPLIT PCB ARTWORK

SIM SOCKET

50-12100-1160

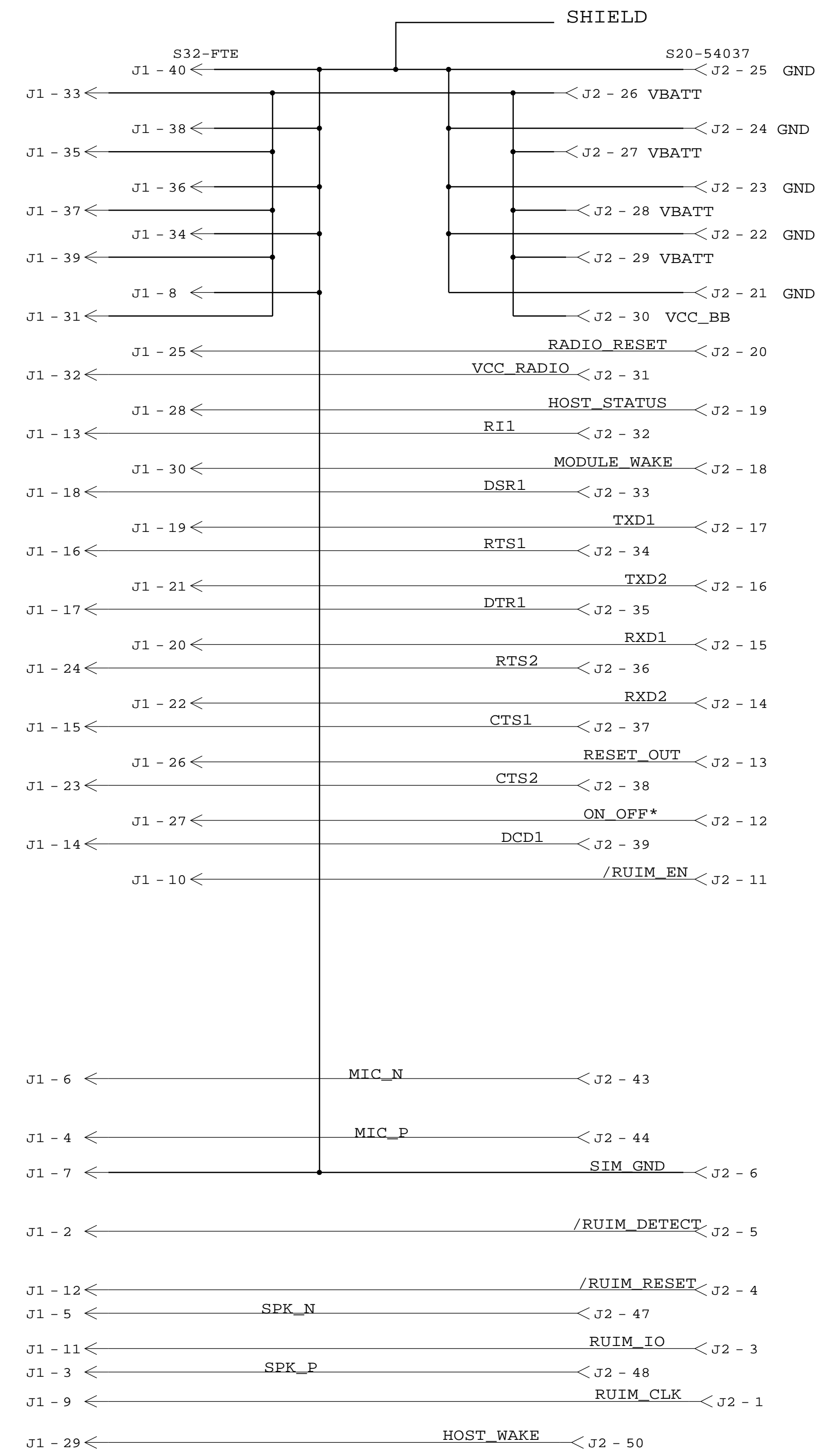


2. BOTTOM SIDE IS GROUNDED COPPER.
3. SIM_CR_CLOCK IS ISOLATED FROM OTHER SIGNALS AND GROUND.

ITEM	QTY.	PART NO.	DESCRIPTION	REMARKS/REF. SYMBOL
PARTS LIST				
		APPROVALS		DATE
		DRAWN		07/28/03
		CHECKED		07/28/03
		ENGINEER		07/28/03
		MFG. ENG.		
		PRODUCT		
		QUALITY		
		TEST ENG.		
		MATERIAL:		
		FINISH:		
		NEXT ASSY		USED ON
		DO NOT SCALE DRAWING		

SYMBOL TECHNOLOGIES INC.			
Bohemia, New York			
WWAN SIM CARD FLEX BOARD			
FLEX DESIGN			
SIZE	DWG. NO.	REV	
D	17-62643-01	2	
Thu Oct 16 09:07:15 2003		SHEET 1 OF 1	

EM3420 RADIO
HEADER
50-12100-1153
SAMTEC FTE-120-01-G-DV-ES-PTR



OPTION BOARD
HEADER
50-12100-1149
MOLEX 54037-0507

REVISIONS						
REV	ZONE	REV	DESCRIPTION	E.C.	BY	DATE
1			RELEASE PER PPD # 76713		CH	08/18/03

NOTES:

- 1) SILVER EPOXY SHIELD ON BOTH SIDES
- 2) INCLUDE STENCIL ON EACH END TO IDENTIFY EITHER RADIO OR OPTION BOARD
- 3) INCLUDE PIN 1, 25, 26, 50 STENCIL ON J2 AND PIN 1, 2, 39, 40 STENCIL ON J1
- 4) PROVIDE WIDE GND AND VBATT TRACE - 1.5 AMP
- 5) KEEP MIC_N AND MIC_P CLOSE TO EACH OTHER
- 6) PROVIDE GND ISOLATION AROUND RUIIM_CLK

ITEM	QTY.	PART NO.	DESCRIPTION	REMARKS/REF. SYMBOL																							
PARTS LIST																											
THE DWG. AND SPECIFICATION CONTAINED HEREON ARE PROPRIETARY AND MUST NOT BE USED, COPIED, REPRODUCED OR OTHERWISE DEALT WITH NOR ITS CONTENTS COMMUNICATED TO OTHERS EXCEPT IN ACCORDANCE WITH WRITTEN INSTRUCTIONS RECEIVED FROM SYMBOL TECHNOLOGIES INC.		<table border="1"> <tr> <td>DIMENSIONS ARE IN INCHES</td> <td>UNLESS OTHERWISE SPECIFIED</td> </tr> <tr> <td>.XX</td> <td>+ .01</td> </tr> <tr> <td>.XXX</td> <td>+ .005</td> </tr> <tr> <td>ANGLES</td> <td>± 1° FRACTIONS ± 1/64</td> </tr> <tr> <td>MATERIAL:</td> <td>PRODUCT</td> </tr> <tr> <td>FINISH:</td> <td>QUALITY</td> </tr> <tr> <td>TEST ENG.</td> <td>TEST ENG.</td> </tr> </table>		DIMENSIONS ARE IN INCHES	UNLESS OTHERWISE SPECIFIED	.XX	+ .01	.XXX	+ .005	ANGLES	± 1° FRACTIONS ± 1/64	MATERIAL:	PRODUCT	FINISH:	QUALITY	TEST ENG.	TEST ENG.	<table border="1"> <tr> <td>APPROVALS</td> <td>DATE</td> </tr> <tr> <td>DRAWN C. HEADLEY</td> <td>08/18/03</td> </tr> <tr> <td>CHECKED R. KOTSAY</td> <td>08/18/03</td> </tr> <tr> <td>ENGINEER C. HEADLEY</td> <td>08/18/03</td> </tr> </table>	APPROVALS	DATE	DRAWN C. HEADLEY	08/18/03	CHECKED R. KOTSAY	08/18/03	ENGINEER C. HEADLEY	08/18/03	SYMBOL TECHNOLOGIES INC. Bohemia, New York AIRPRIME WAN INTERFACE FLEX
DIMENSIONS ARE IN INCHES	UNLESS OTHERWISE SPECIFIED																										
.XX	+ .01																										
.XXX	+ .005																										
ANGLES	± 1° FRACTIONS ± 1/64																										
MATERIAL:	PRODUCT																										
FINISH:	QUALITY																										
TEST ENG.	TEST ENG.																										
APPROVALS	DATE																										
DRAWN C. HEADLEY	08/18/03																										
CHECKED R. KOTSAY	08/18/03																										
ENGINEER C. HEADLEY	08/18/03																										
SIZE DWG. NO. 17-64187-01 DATE: Tue Aug 19 14:14:33 2003 SHEET 1 OF 1				REV 1																							

8 7 6 5 4 3 2 1

REVISIONS							
REV	ZONE	NO.	DESCRIPTION	E.C.	BY	APVD.	DATE
A			RELEASE PER EDR71711		DMS	K. KOSIAY	8/4/03

GEMINI KEYFLEX 53-KEY

REFER TO DOCUMENT NUMBER 70-63878-01 FOR KEYBOARD CONFIGURATIONS AND ID'S. FOR EACH NEW KEYBOARD VARIATION, BE SURE TO UPDATE THIS DOCUMENT SO THERE ARE NO DUPLICATE KEYBOARD ID'S.

D
C
B
A

D
C
B
A

ITEM	QTY.	PART NO.	DESCRIPTION	REMARKS/REF. SYMBOL
PARTS LIST				
THE DWG. AND SPECIFICATION CONTAINED HEREON ARE PROPRIETARY AND MUST NOT BE USED, COPIED, REPRODUCED OR OTHERWISE DEALT WITH NOR ITS CONTENTS COMMUNICATED TO OTHERS EXCEPT IN ACCORDANCE WITH WRITTEN INSTRUCTIONS RECEIVED FROM SYMBOL TECHNOLOGIES INC.	DIMENSIONS ARE IN INCHES		APPROVALS	DATE
	UNLESS OTHERWISE SPECIFIED		DRAWN	D. STERN 3/17/03
	.XX	MM	CHECKED	
	.XXX	INCH	ENGINEER	D. STERN 3/17/03
			MFG. ENG.	P. IASSO 3/17/03
		ANGLES ± 1° FRACTIONS ± 1/64	PRODUCT	M. HORAN 3/17/03
		MATERIAL:	QUALITY	B. WATSON 3/17/03
		FINISH:	TEST ENG.	D. REED 3/17/03
NEXT ASSY	USED ON	DO NOT SCALE DRAWING		

SYMBOL TECHNOLOGIES INC.
 Bohemia, New York
GEMINI KEYFLEX
53-KEY
 SIZE DWG. NO. **17-62289-01** REV **A**
 Fri Aug 1 22:21:16 2003 SHEET 1 OF 3

8 7 6 5 4 3 2 1

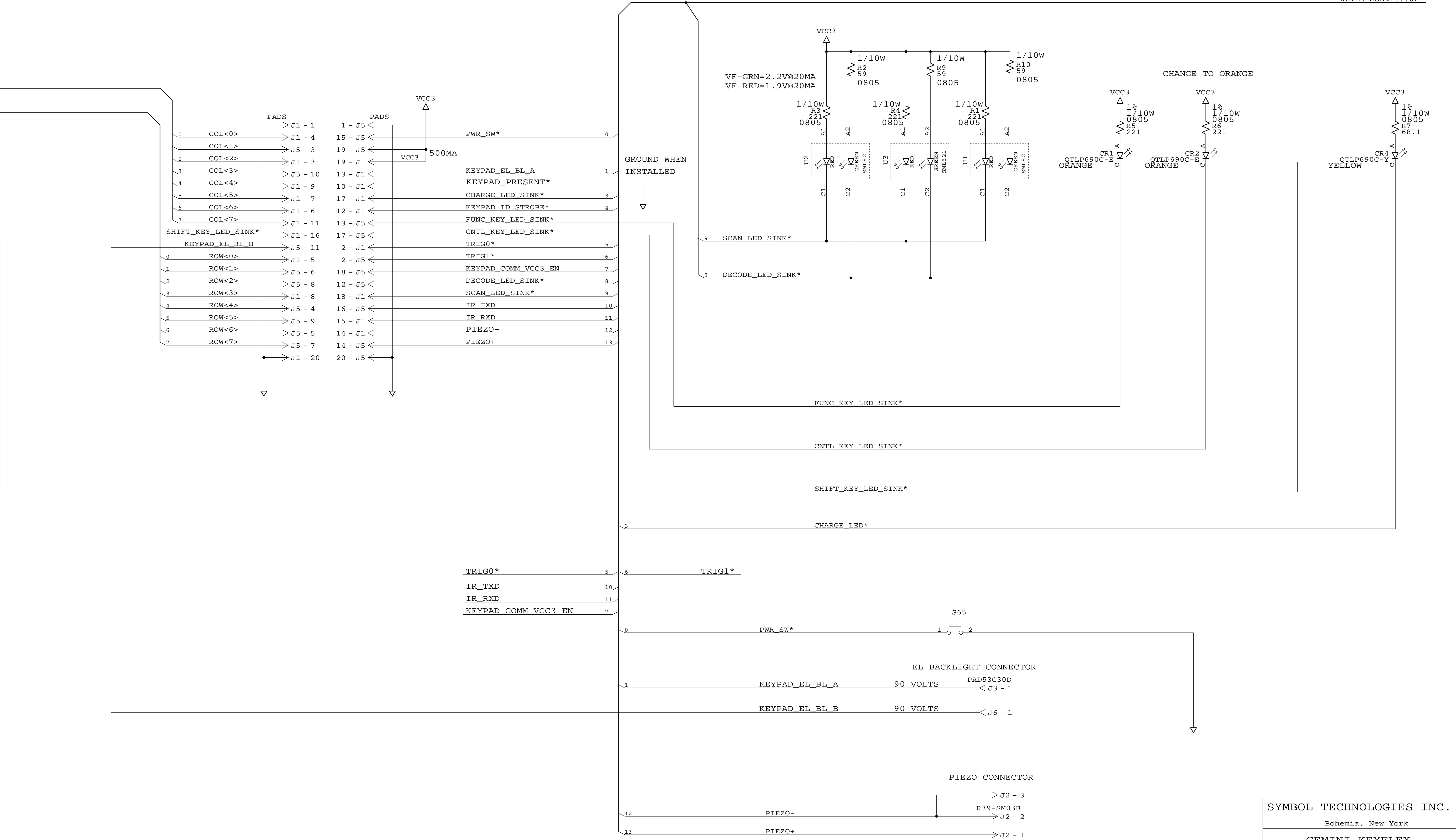
KEYFLEX TO MTM INTERFACE

REVISIONS					
REV	ZONE	NO.	DESCRIPTION	E.C.	DATE
			SEE SHEET 1		

COL<7..0>

ROW<7..0>

KEYBD MOD<13..0>



SYMBOL TECHNOLOGIES INC.
Bohemia, New York

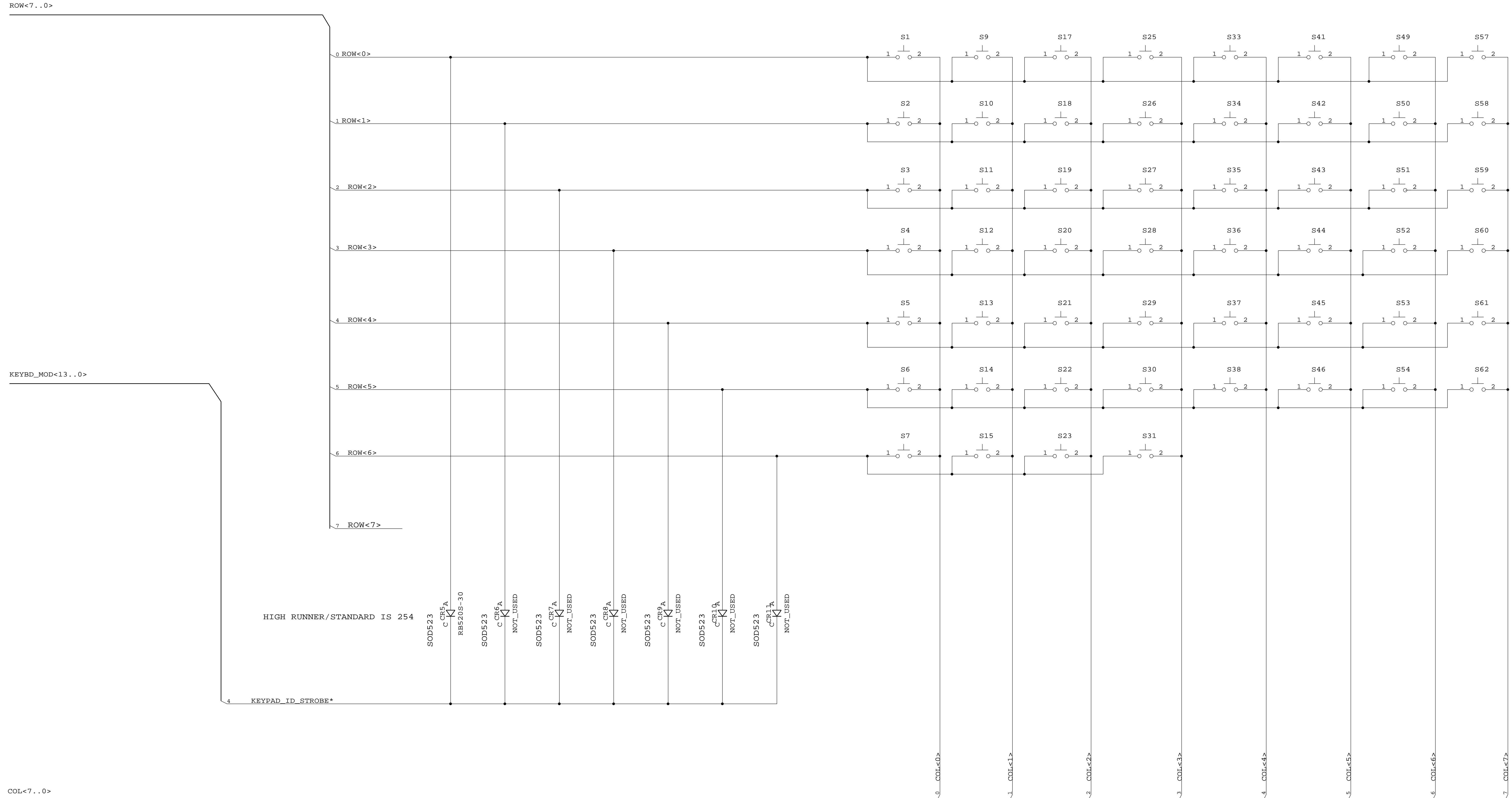
GEMINI KEYFLEX
53-KEY

SIZE	DWG. NO.	REV
D	17-62289-01	A

Fri Aug 1 22:21:59 2003 SHEET 2 OF 3

KEYFLEX 7X8 MATRIX (52 KEYS)

REVISIONS							
REV	ZONE	NO.	DESCRIPTION	E.C.	BY	APVD.	DATE
			SEE SHEET 1				



SYMBOL TECHNOLOGIES INC. Bohemia, New York		
GEMINI KEYFLEX 53-KEY		
SIZE	DWG. NO.	REV
D	17-62289-01	A
Fri Aug 1 22:22:02 2003		SHEET 3 OF 3