

8

7

6

5

4

3

2

1

NOTICE

PROPRIETARY NOTICE

THIS DOCUMENT AND THE INFORMATION DISCLOSED HEREIN ARE PROPRIETARY DATA OF HONEYWELL, INC. NEITHER THIS DOCUMENT NOR THE INFORMATION CONTAINED HEREIN SHALL BE REPRODUCED, USED, OR DISCLOSED TO OTHERS WITHOUT THE WRITTEN AUTHORIZATION OF HONEYWELL, INC.

NOTICE

FREEDOM OF INFORMATION ACT (5 USC 552) AND DISCLOSURE OF CONFIDENTIAL INFORMATION GENERALLY (18 USC 1905)

THIS DOCUMENT IS BEING FURNISHED IN CONFIDENCE BY HONEYWELL, INC. THE INFORMATION DISCLOSED HEREIN FALLS WITHIN EXEMPTION (b) (4) OF 5 USC 552 AND THE PROHIBITIONS OF 18 USC 1905.

TABLE I

CUT RUN DATA

14

CUT NO.	PWB SIDE	FROM CIRCUIT POINT	TO CIRCUIT POINT
1	B	U23-11 LAND	U23-11 PROBE PAD

TABLE II

BUSWIRE DATA

15

CONDUCTOR		PWB SIDE	FROM CIRCUIT POINT	TO CIRCUIT POINT
COND. NO.	ITEM NO.			
601	703	B	U23-11 LAND	U23-40
602	703	B	U12-28	C57-TOP (+)

TABLE III

COMPONENT INSTALLATION

16

COMPONENT		TO CIRCUIT POINT	PWB SIDE	SLVG ITEM NO.
REF DES	PIN			
R998	RIGHT	J3-1	A	705
	LEFT	J3-11		
R999	RIGHT	J2-A26	A	705
	LEFT	J2-A22		
CR999	1	U27-9		
	2	NC	B	
	3	U27-5		
C901	TOP	U12-14	B	
	BOTTOM	R901-BOTTOM		
R901	TOP	U12-19	B	
	BOTTOM	C901-BOTTOM		
R902	TOP	C901-TOP	B	
	BOTTOM	U12-13		

NOTES:

1.

ASSEMBLE AND SOLDER PER ITEM 701.

2.

CAUTION

THIS ASSEMBLY INCLUDES COMPONENTS WHICH ARE SUBJECT TO DAMAGE BY ELECTROSTATIC CHARGES; THEREFORE, ALL COMPONENTS SHALL BE HANDLED IN ACCORDANCE WITH GUIDELINES FOR ELECTROSTATIC DISCHARGE CONTROL.

3.

MAXIMUM COMPONENT HEIGHT SHALL BE .XXX.

4.

COMPONENT LEAD PROTRUSION SHALL BE .060 MAXIMUM EXCEPT J1, J2, AND J3; BARE COPPER PERMISSIBLE ON COMPONENT LEADS AT TRIMMED SURFACES. J1, J2, AND J3 LEADS ARE NOT TO BE TRIMMED.

5.

SQUARE PADS ON PRINTED WIRING BOARD INDICATE PIN 1.

6.

COAT ASSEMBLY USING ITEM 702 EXCEPT TEST POINTS AND AREAS NOTED.

7.

SOME COMPONENTS SHOWN OVERSIZE TO PROVIDE SPACE FOR DESIGNATORS.

8.

SHADED COMPONENTS ARE NOT INSTALLED.

9.

INSERT APPLICABLE DASH NUMBER, REVISION LETTER, AND SERIAL NUMBER.

10.

J1 TO BE INSTALLED PER DIMENSION SHOWN. TRIM PINS A5 AND F4 FLUSH TO TOP SURFACE OF UPPER CROSS BAR.

11.

INSTALL KEYING PIN (ITEM TBA) INTO J2-D21.

12.

FOR KEYING PURPOSES, REMOVE J3-14 FLUSH TO CROSSBAR.

13.

SECURE C40 AND C41 TO PWB (ITEM 1) AND EACH OTHER USING ITEM 706.

14.

MAKE CUTS PER TABLE I, LEFT OR RIGHT, TOP OR BOTTOM AS VIEWED FROM INDICATED SIDE.

15.

INSTALL BUS WIRES PER TABLE II, LEFT OR RIGHT, TOP OR BOTTOM AS VIEWED FROM INDICATED SIDE.

16.

INSTALL COMPONENTS PER TABLE III, LEFT OR RIGHT, TOP OR BOTTOM, AS VIEWED FROM INDICATED SIDE.

17.

SLEEVE R998 AND R999 USING ITEM 705 PRIOR TO INSTALLATION.

18.

INSTALL CR999 UPSIDE DOWN ON TOP OF U27 USING ADHESIVE (ITEM 704) AS SHOWN. ATTACH LEADS USING WIRE (ITEM 703).

19.

SECURE T1, L4, AND L5 TO PWB (ITEM 1) USING ITEM 706 ON OPPOSITE SIDES OF CASE. EXTERNAL FILLET SHALL BE .125 MIN. SECURE AFTER SOLDERING PART TO PWB.

20.

PLACE C901, R901, AND R902 ON TOP OF U12.

REV STATUS OF PARTS LIST SHALL BE SAME AS BASIC DRAWING NUMBER SEE SEPARATE PARTS LIST

OPERATIONAL NOTE

SIMILAR ASSEMBLY

Honeywell

COMMERCIAL FLIGHT SYSTEMS GROUP PHOENIX, ARIZONA

CIRCUIT CARD ASSEMBLY- POWER SUPPLY, CPU

SIZE: 3.939 INCHES

DRAWING NO. 7026230-902

REV. 1

5231-040 (ASME Y14.5M-1994) HONEYWELL INC. (REV 3-87)

7

6

5

4

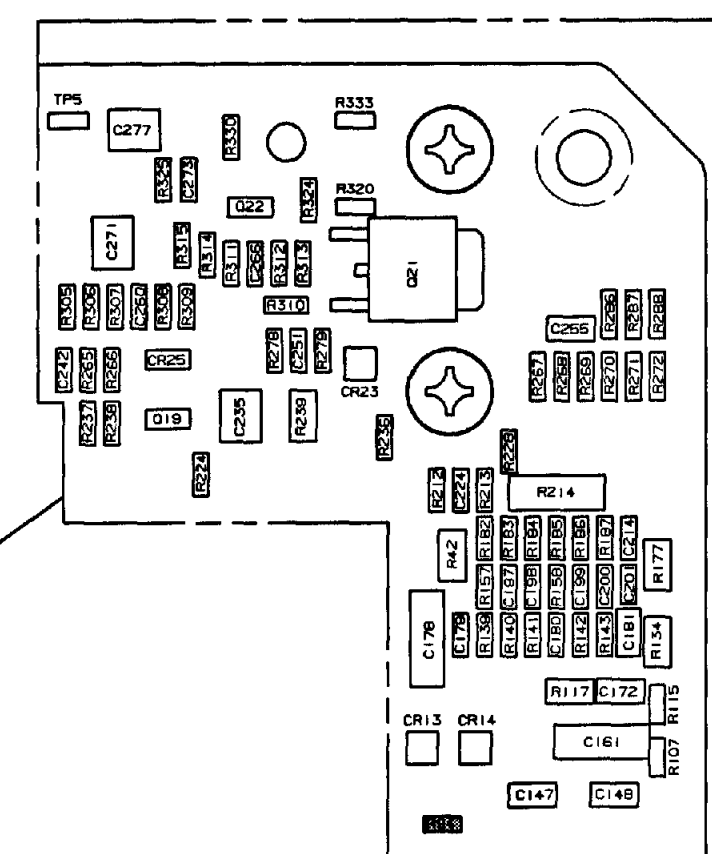
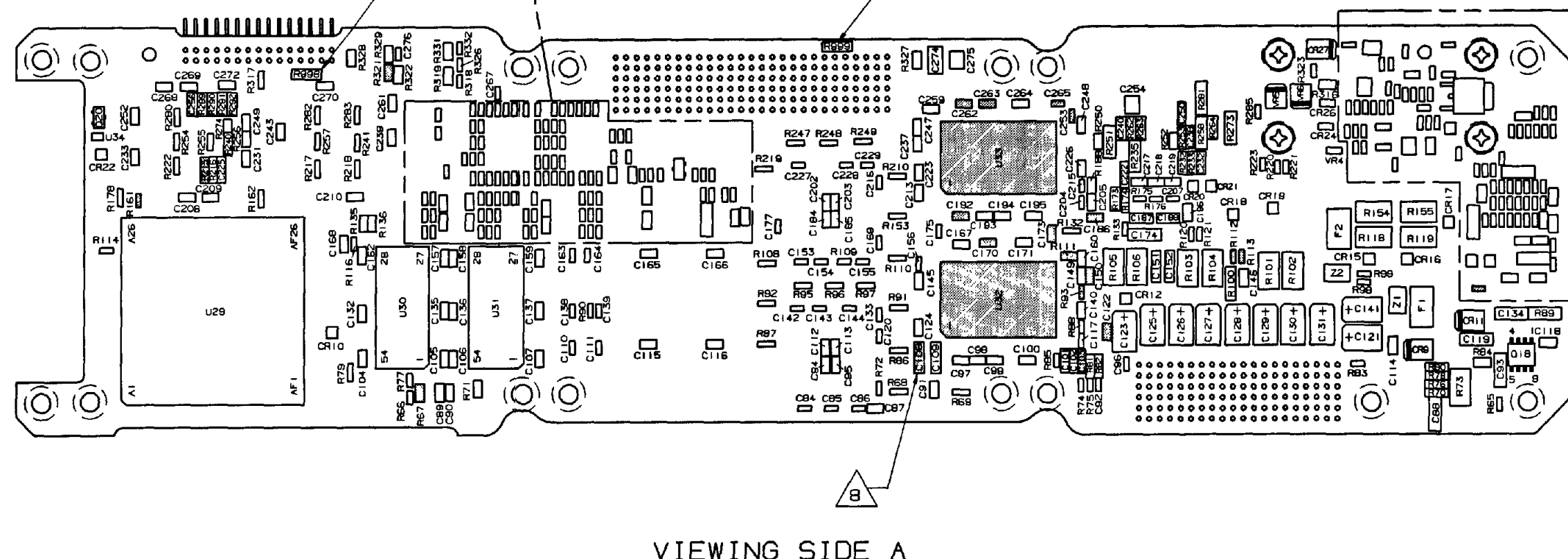
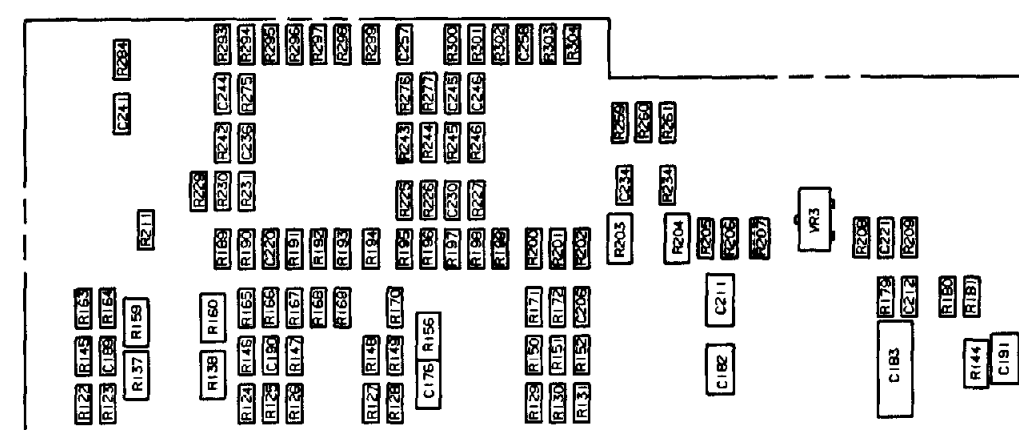
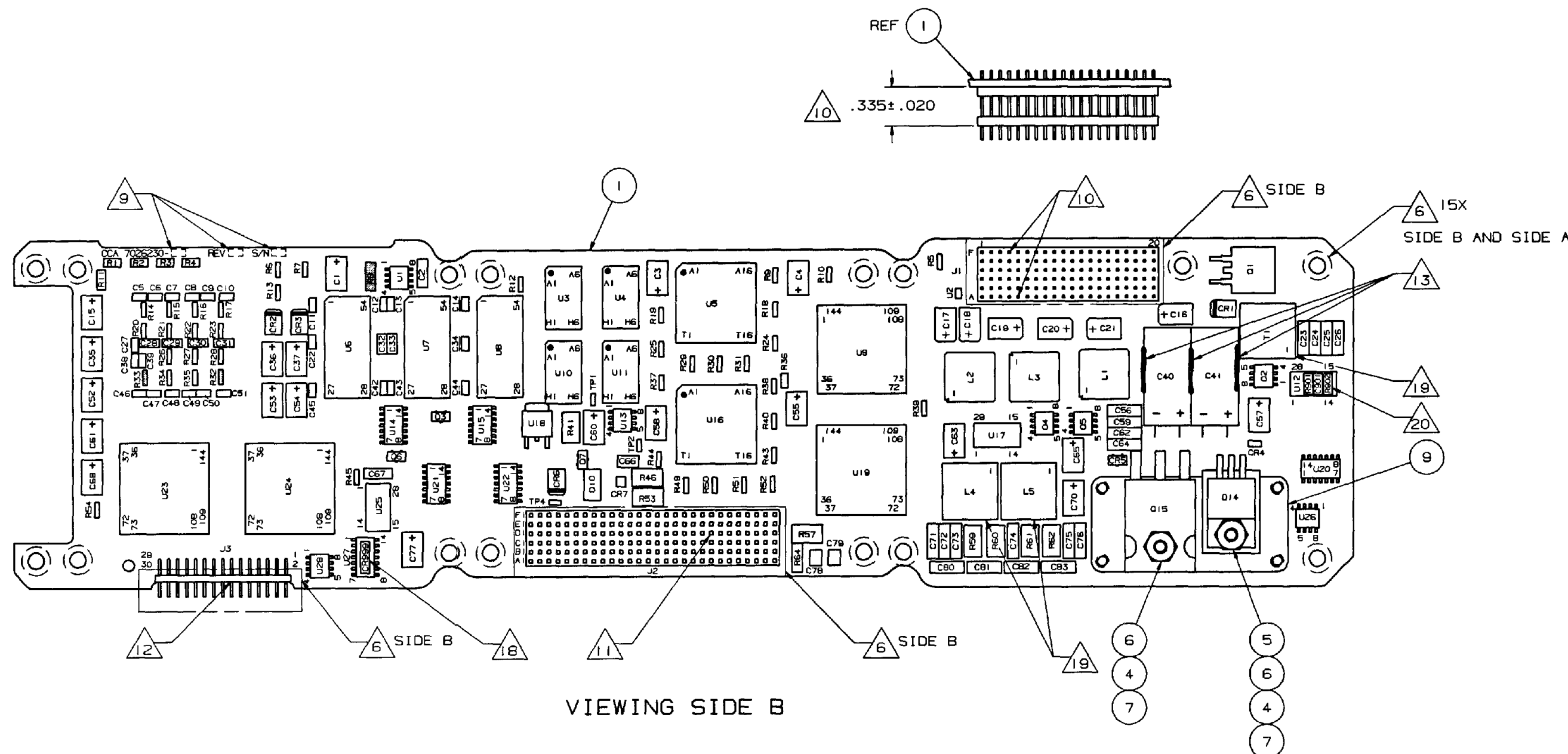
3

2

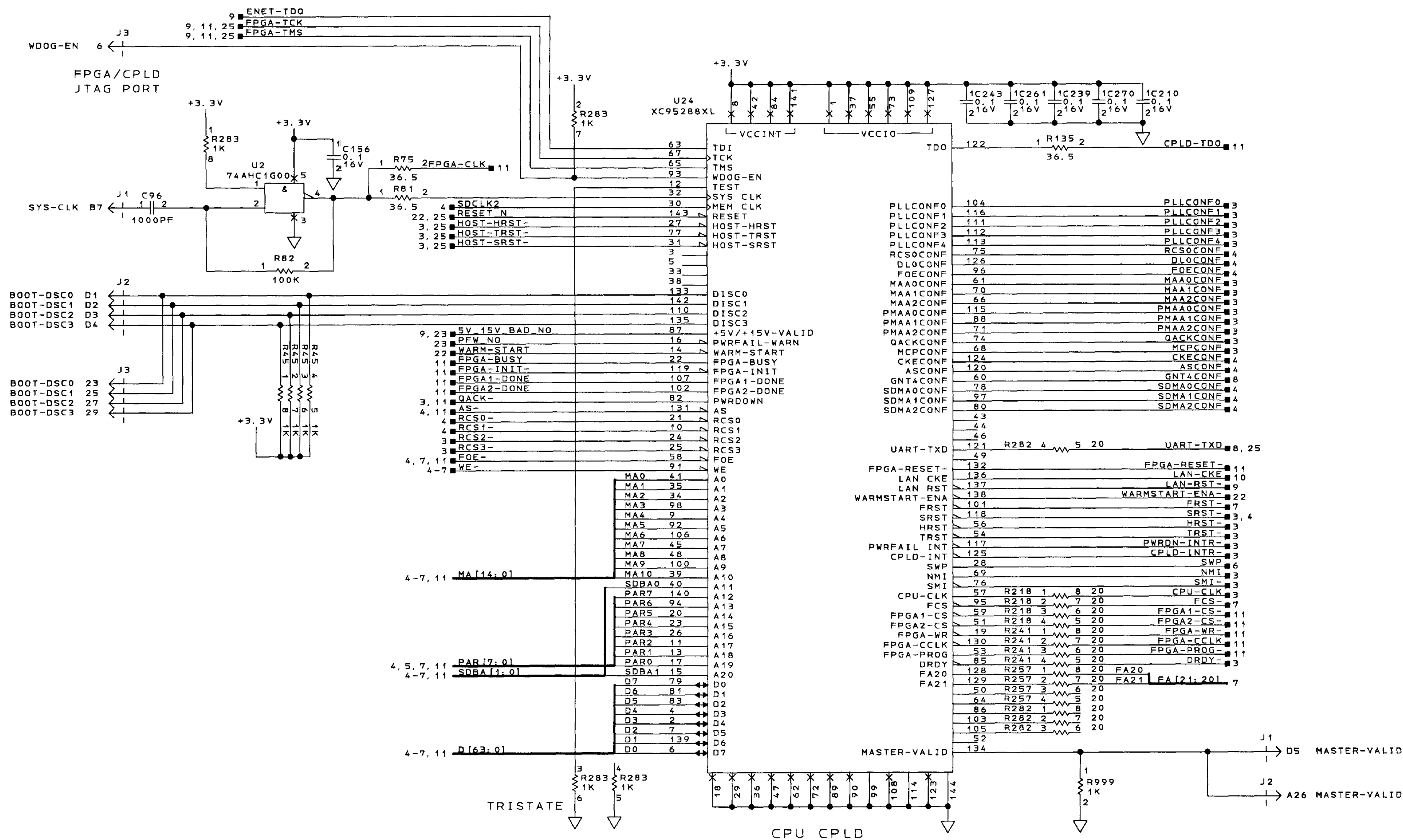
1

DEC 18 2001 awhidden 13:21:00

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	XC	ADD NOTE 10, 11, 12, 13, 17, 18 CALLOUT. DIM:	06/04/01	E. THIESSEN
	XD	ADD .355±.020. UPD TO VIEW.		A. WHIDDEN
		ADD NOTE 19, 20 CALLOUT. UOYD VIEW.		A. WHIDDEN



REVISIONS			
ZONE	REV	DESCRIPTION	DATE
	XB	INITIAL XB-RELEASE. SEE DWG. SHEET 1.	15 MAY 01
	XC	ADDED R999 TO U24-134. SEE DWG. SHEET 1.	

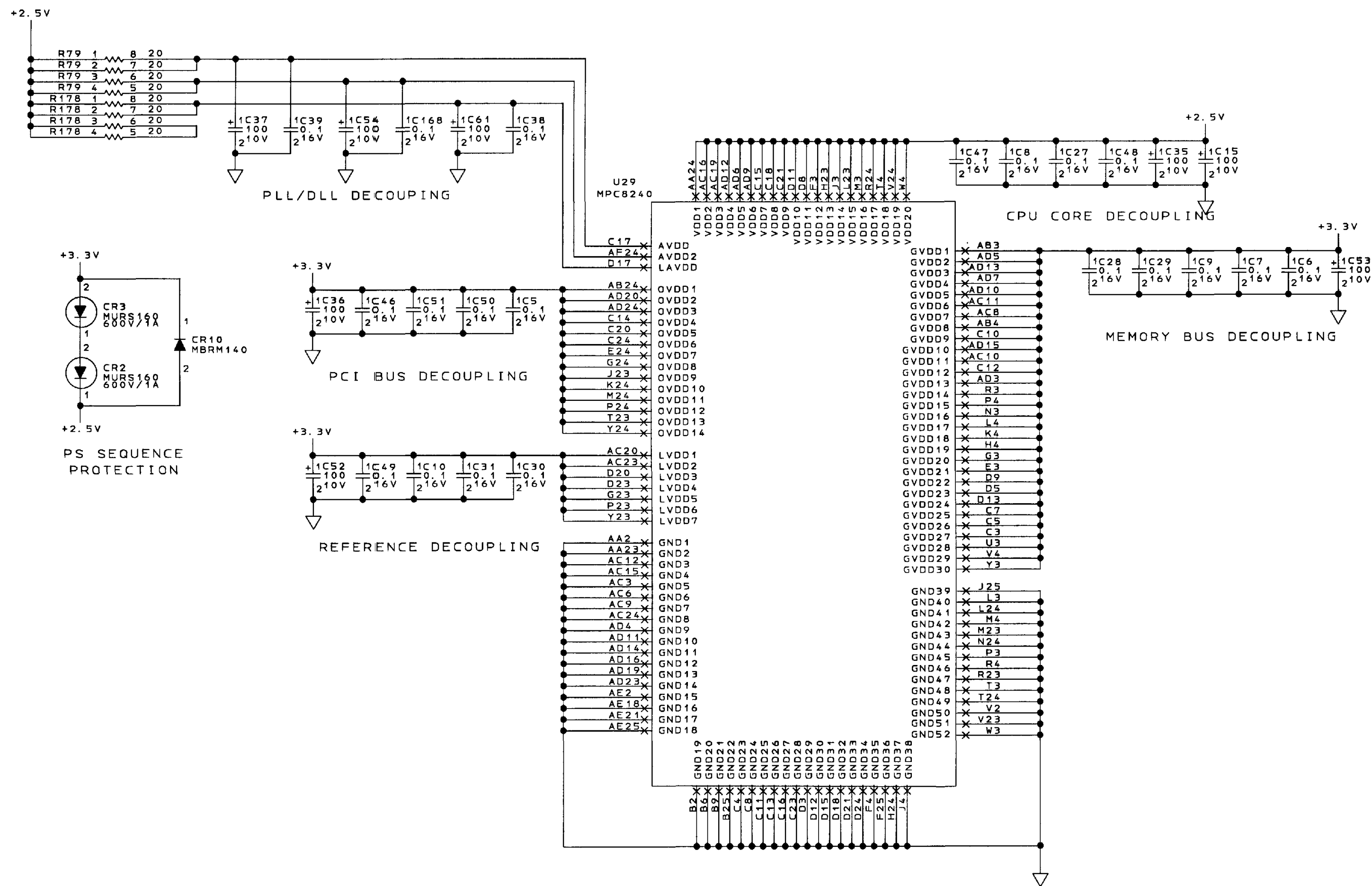


NOTES:
 1. ALL CAPACITANCE VALUES ARE IN MICROFARADS.
 2. ALL RESISTANCE VALUES ARE IN OHMS.
 3. ALL INDUCTANCE VALUES ARE IN MICROHENRIES.
 4. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN;
 FOR COMPLETE DESIGNATIONS PREFIX PART
 DESIGNATION WITH SUBASSEMBLY DESIGNATION.
 5. INTERPRET DRAWING PER ANSI Y32.2-1975 AND
 ANSI/IEEE STD 991-1986. LOGIC SYMBOLS
 CONFORM TO ANSI/IEEE STD 91-1984.

PROCESSOR
 MPC8240 CONTROL LOGIC
 SCHEMATIC DIAGRAM SH NO. 1 OF 27

COMPUTER GENERATED

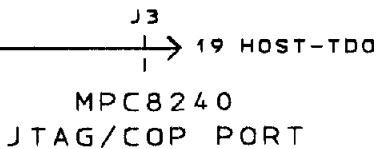
Honeywell	SEE FIRST SHEET FOR CONTRACT NUMBER. USE OR DISCLOSURE OF INFORMATION ON THIS SHEET IS SUBJECT TO THE RESTRICTIONS ON THE FIRST SHEET OF THIS DOCUMENT.	SIZE/CAGE CODE E 55939	DRAWING NO. 7026230-902	REV XC
-----------	--	---------------------------	----------------------------	-----------



- ISSUES
1. BULK TANTALUM DECOUPLING
 2. SANDPOINT HAS 6 MILLIOHM CAP ON VCORE
 3. COMPATIBILITY WITH MPC8245

PROCESSOR
MPC8240 PROCESSOR POWER
SCHEMATIC DIAGRAM SHEET NO. 2

COMPUTER GENERATED

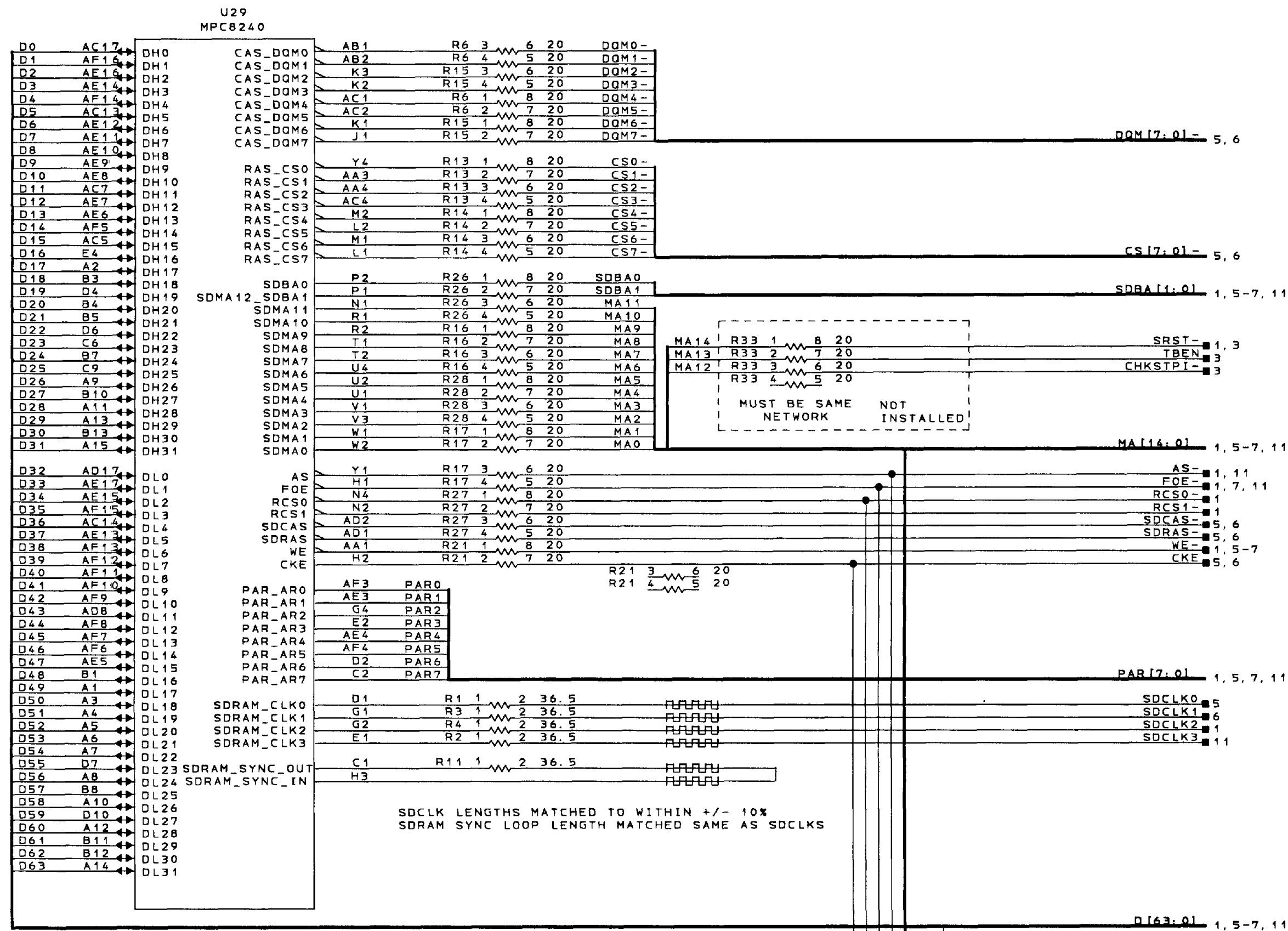


PROCESSOR
MPC8240 PROCESSOR CONFIGURATION
MPC8240 PROCESSOR SYSTEM
SCHEMATIC DIAGRAM SHEET NO. 3

Honeywell

SEE FIRST SHEET FOR CONTRACT NUMBER.
USE OR DISCLOSURE OF INFORMATION ON
THIS SHEET IS SUBJECT TO THE RESTRICTION
ON THE FIRST SHEET OF THIS DOCUMENT.

SIZE	CAGE CODE	DRAWING NO.	REV
E	55939	7026230-902	XB
SCALE			SHEET 5

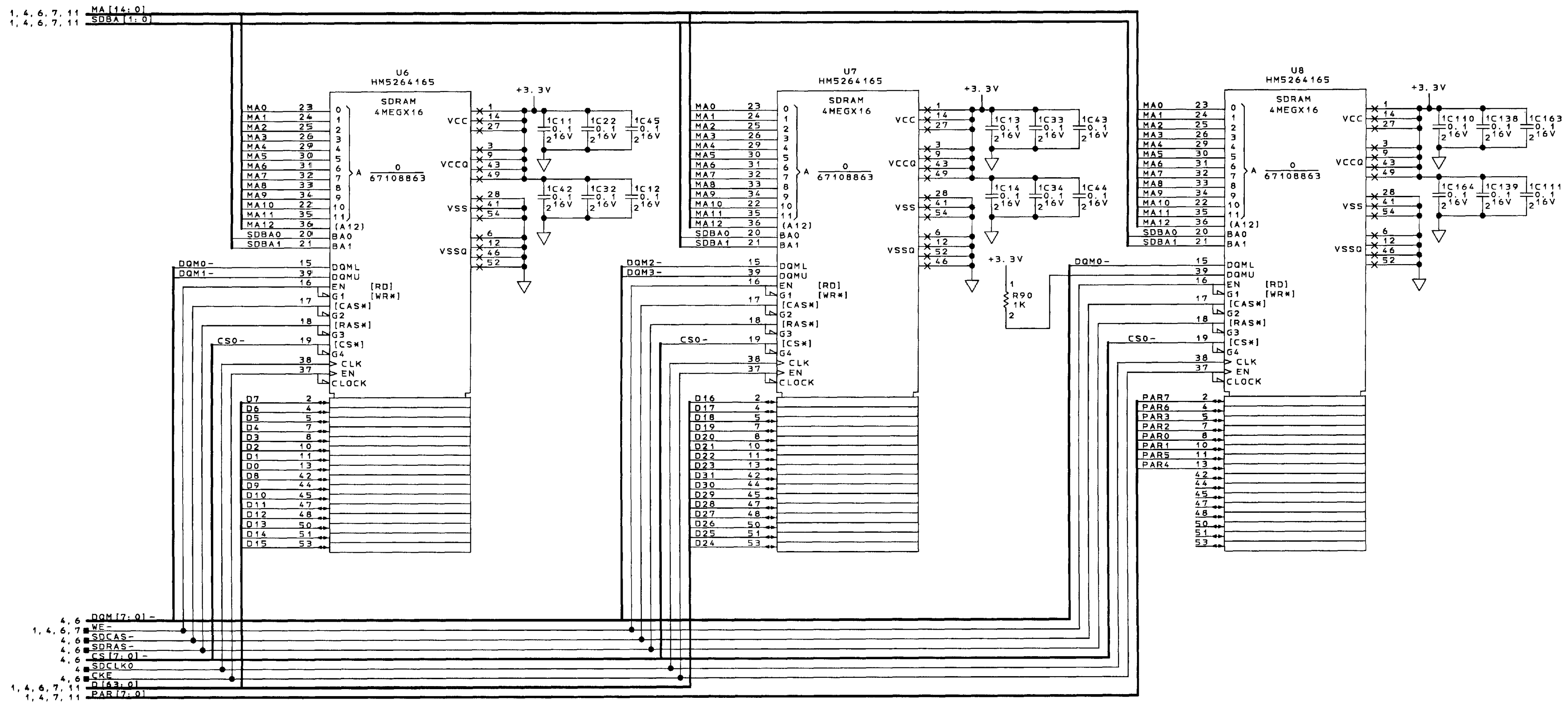


- 1 CKECONF
- 1 RCS0CONF
- 1 FCECONF
- 1 ASCONF
- 1 SDBA0CONF
- 1 SDMA1CONF
- 1 SDMA2CONF
- 1 DLOCNF

ISSUES
 1. CHECK MPC8245 COMPATIBILITY

PROCESSOR
 MPC8240 MEMORY INTERFACE
 SCHEMATIC DIAGRAM SHEET NO. 4

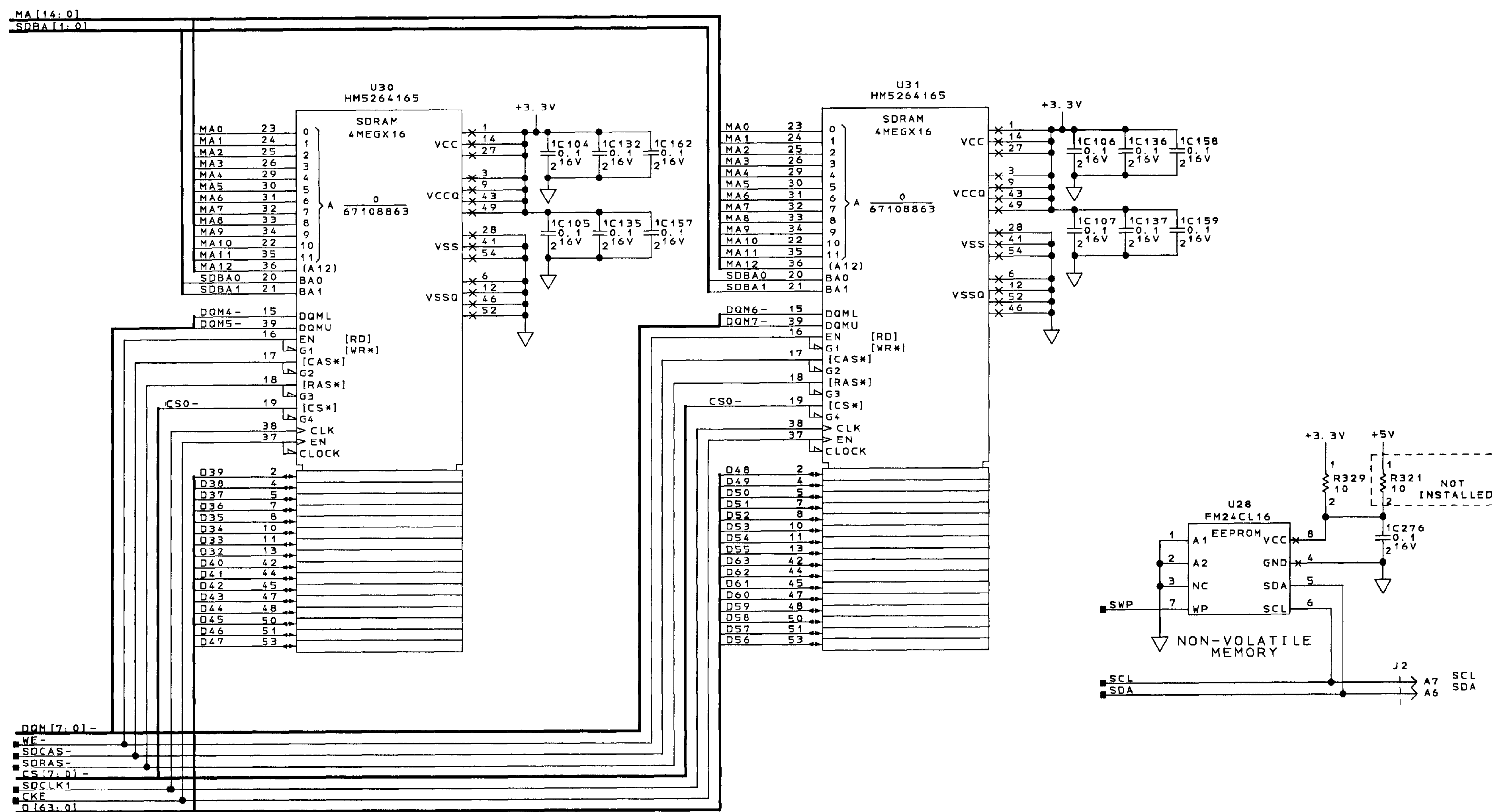
COMPUTER GENERATED



PROCESSOR
SDRAM MEMORY
SCHEMATIC DIAGRAM SHEET NO. 5

COMPUTER GENERATED

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	XC	U28 WAS A 24C16. PL AFFECTED. SEE DWG. SHEET 1.		R. REISEBECK



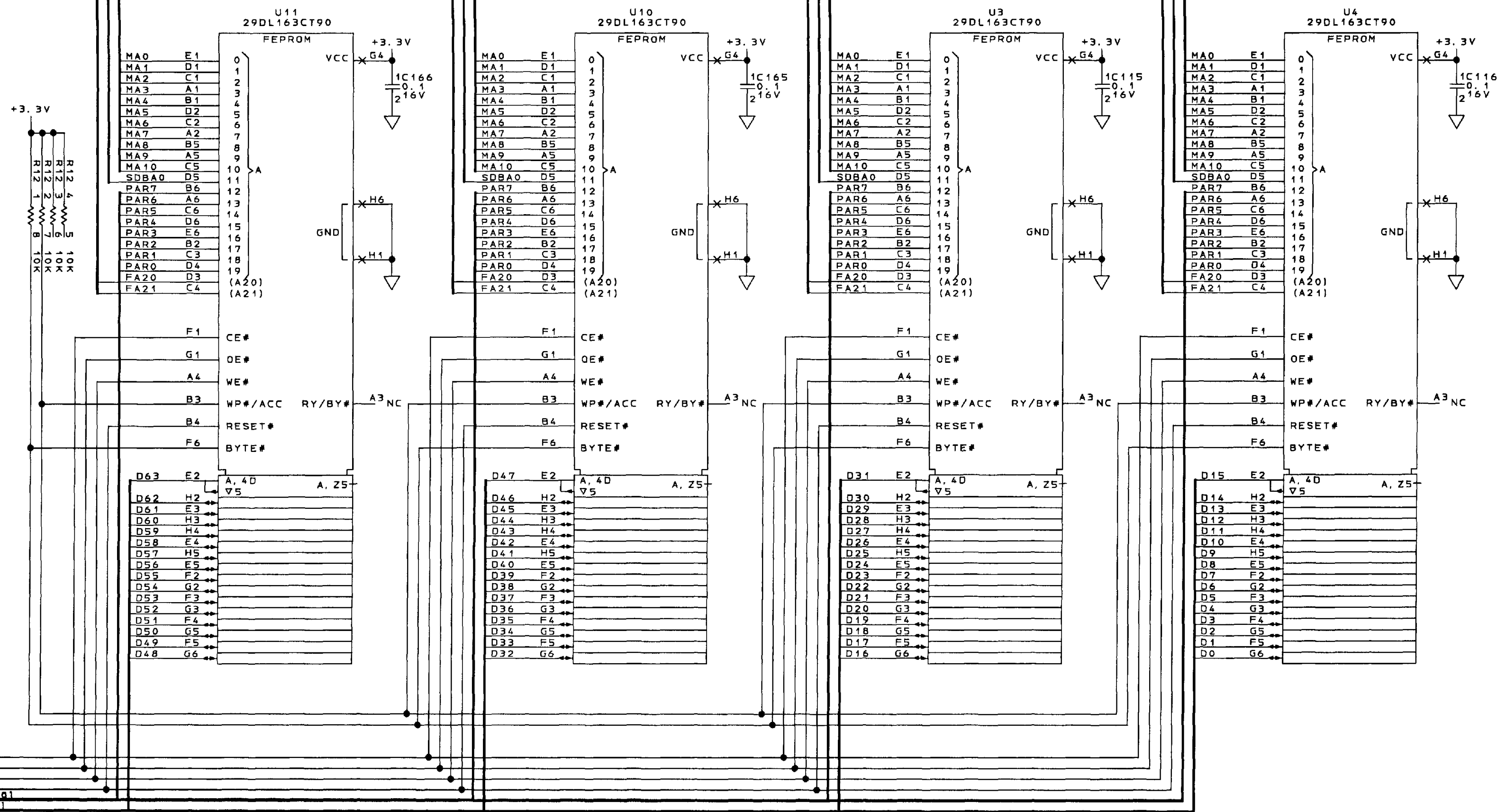
- ISSUES
1. FERROELECTRIC RAM?
 2. CHECK FOOTPRINT
 3. SELECT VCC ON EEPROM

PROCESSOR
SDRAM MEMORY
SCHEMATIC DIAGRAM SHEET NO. 6

COMPUTER GENERATED

Honeywell		SEE FIRST SHEET FOR CONTRACT NUMBER. USE OR DISCLOSURE OF INFORMATION ON THIS SHEET IS SUBJECT TO THE RESTRICTIONS ON THE FIRST SHEET OF THIS DOCUMENT.	SIZE/CAGE CODE E 55939	DRAWING NO. 7026230-902	REV XC
SCALE		SHEET B		DATE/TIME	

1, 4-6, 11 MA[14:0]
1, 4-6, 11 SDBA[1:0]
1, 4-6, 11 FA[21:20]

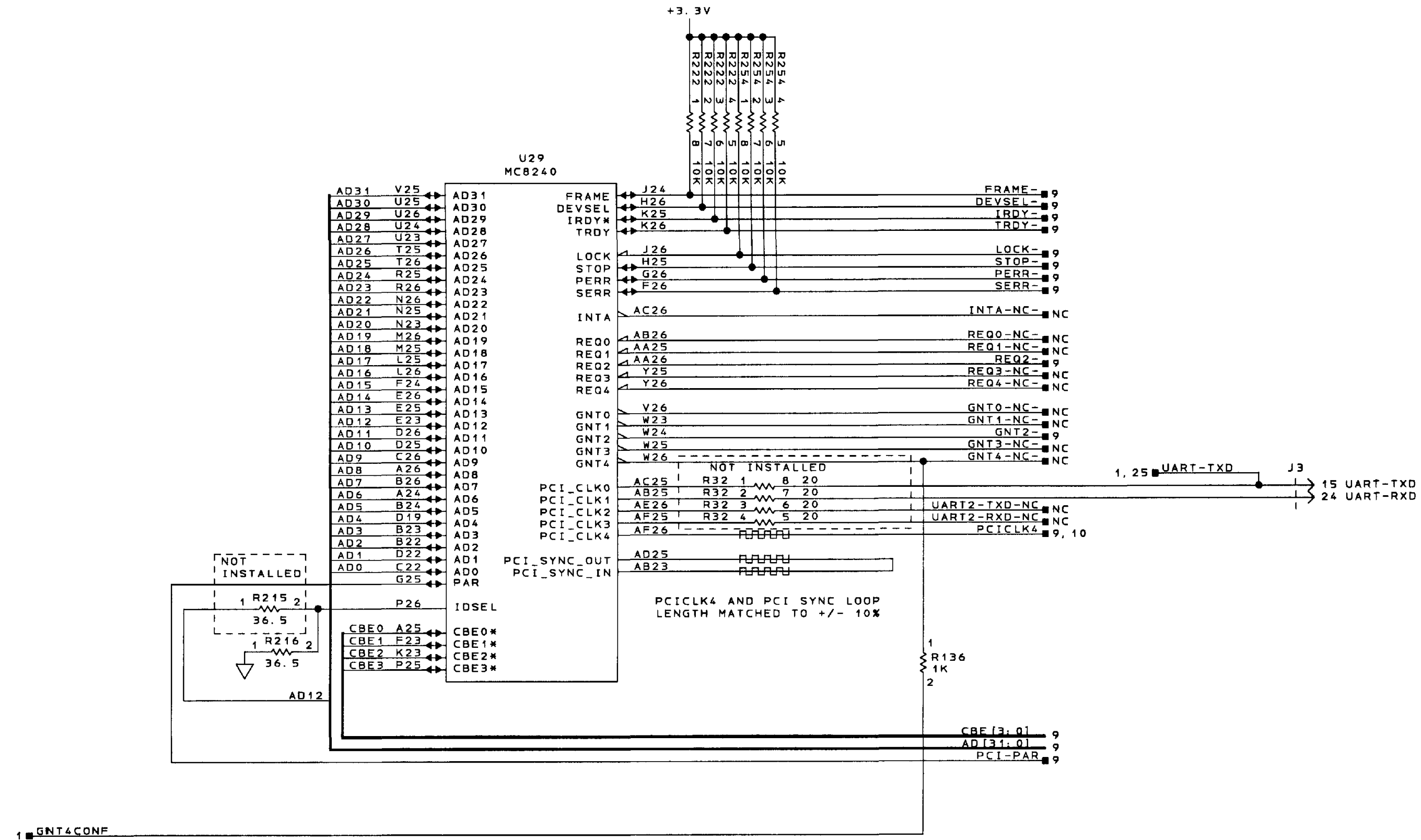


1, 4-6, 11 FCS-
1, 4-6, 11 FDE-
1, 4-6, 11 WE-
1, 4-6, 11 FRST-
1, 4-6, 11 PAR[7:0]
1, 4-6, 11 D[163:0]

PROCESSOR
FLASH MEMORY
SCHEMATIC DIAGRAM SHEET NO. 7

COMPUTER GENERATED

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	XC	U29-P26 WAS "IDSEL". SEE DWG. SHEET 1.		R. REISBECK



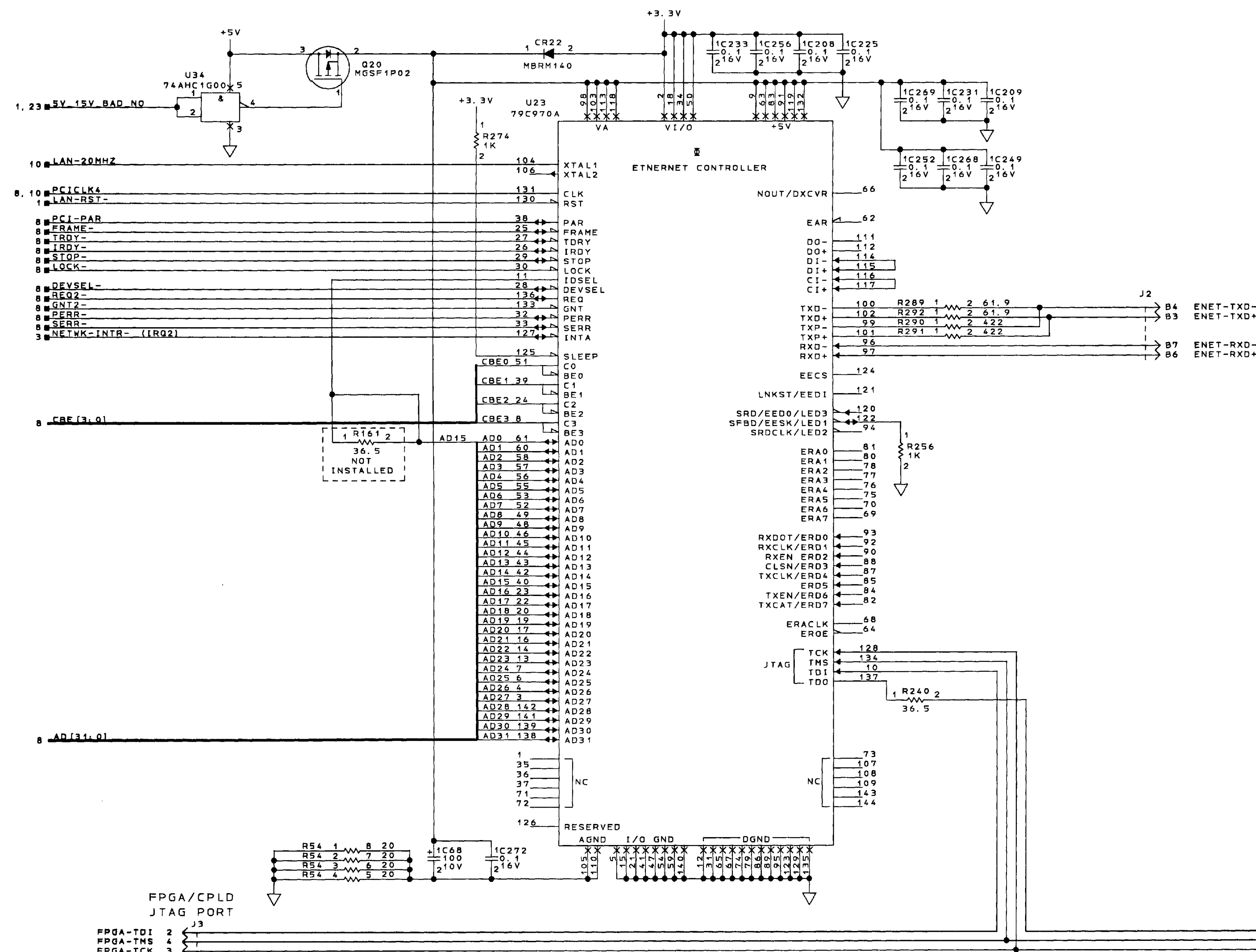
ISSUES

- ~~1. 8245 UART I/O PINS GO TO J3 WITH JUMPER?~~

PROCESSOR
MPC8240 PCI INTERFACE
SCHEMATIC DIAGRAM SHEET NO. 8

COMPUTER GENERATED

REVISIONS			
ZONE	REV	DESCRIPTION	DATE
	XC	R161 WAS INSTALLED, U23-11 WAS LABELED "IDSEL". SEE DWG. SHEET 1.	



ISSUES
1. NEED TO ADD FET ON/OFF SWITCH HERE

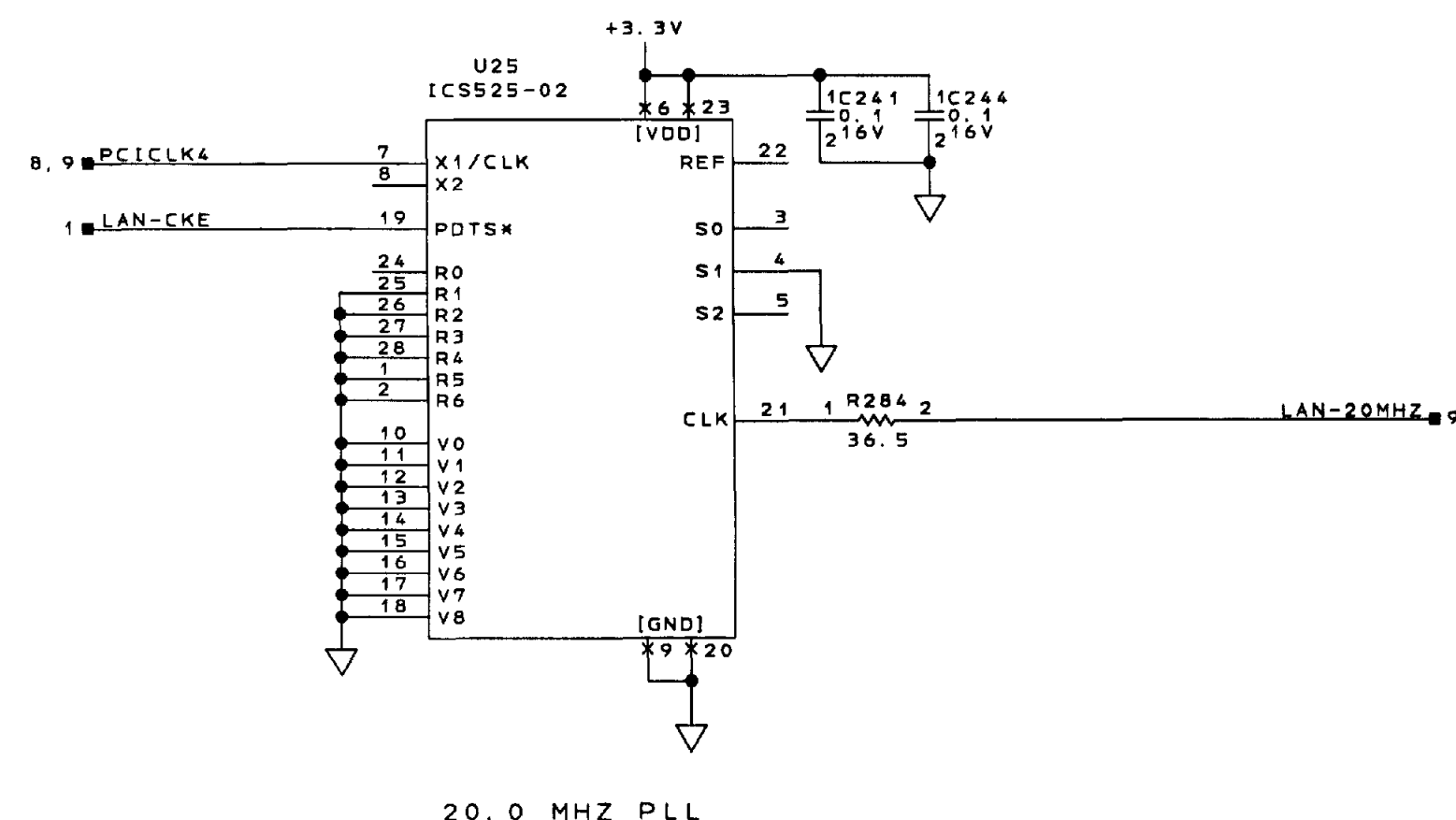
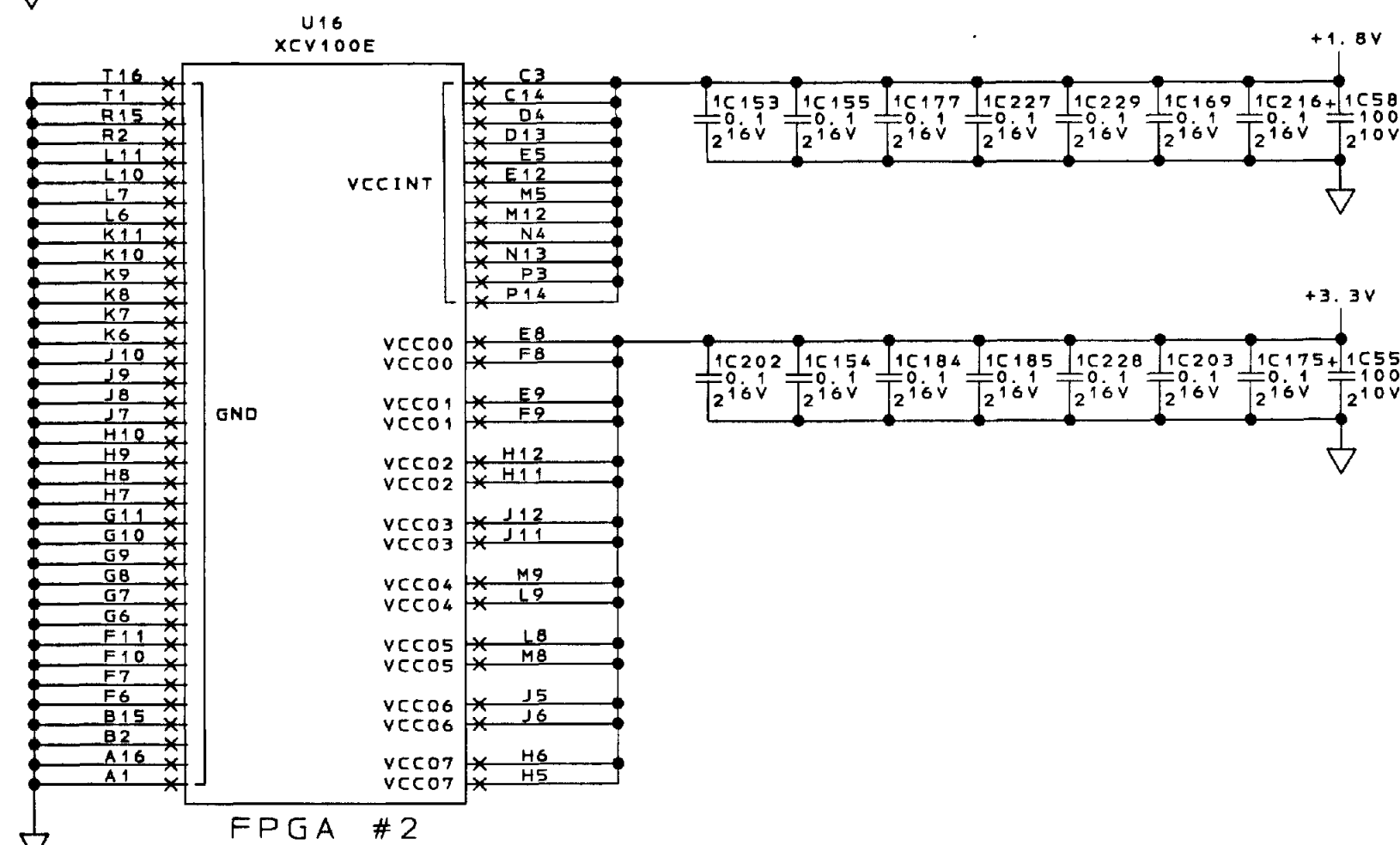
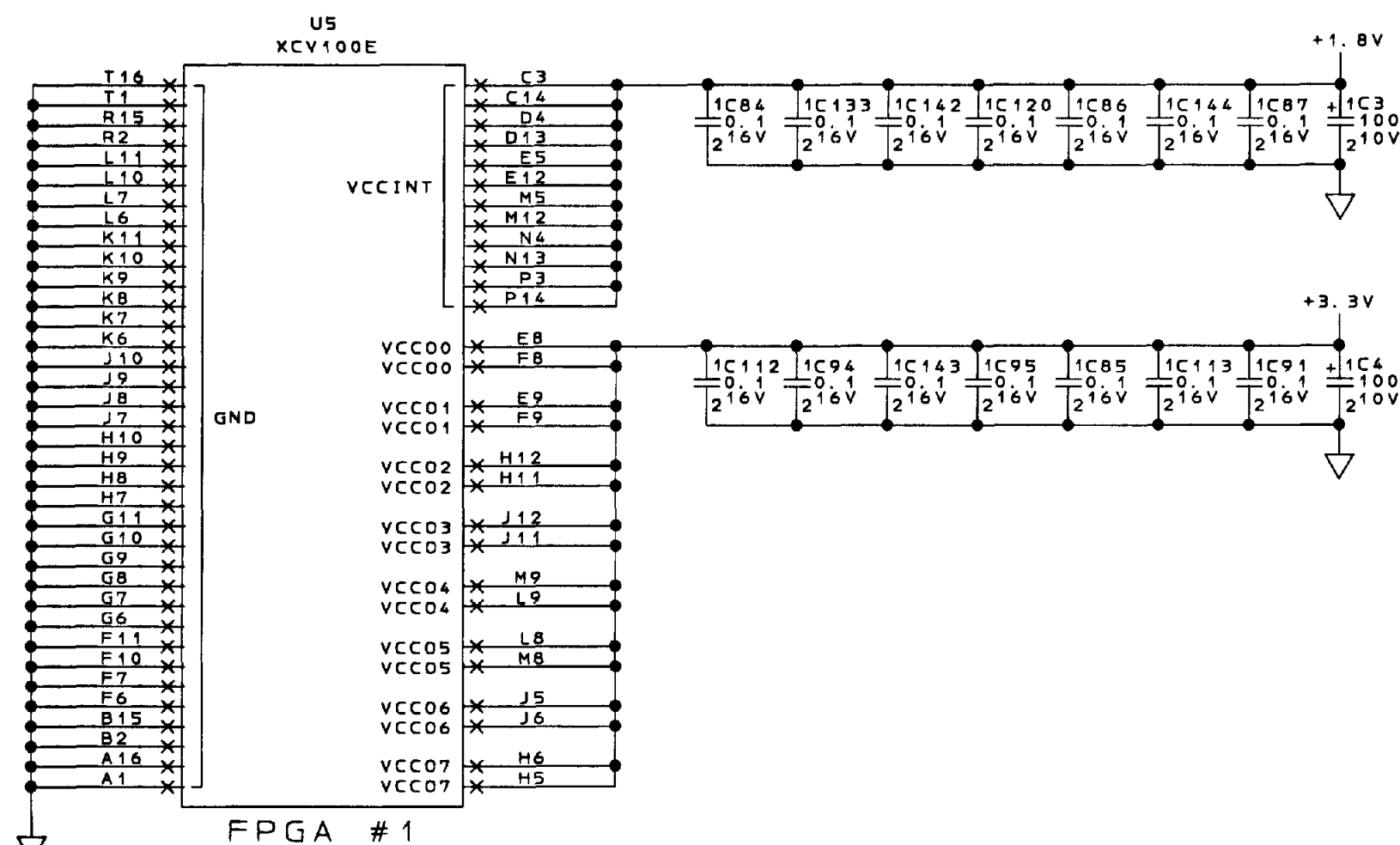
PROCESSOR
NETWORK INTERFACE
SCHEMATIC DIAGRAM SHEET NO. 9

COMPUTER GENERATED

Honeywell	SEE FIRST SHEET FOR CONTRACT NUMBER. USE OR DISCLOSURE OF INFORMATION ON THIS SHEET IS SUBJECT TO THE RESTRICTIONS ON THE FIRST SHEET OF THIS DOCUMENT.	SIZE	CAGE CODE	DRAWING NO.	REV
		E	55939	7026230-902	11

NO. 7026230-902 11

REVISIONS			
ZONE	REV	DESCRIPTION	DATE
XC	1	U5 AND U16 WERE XCV50E. PL AFFECTED. SEE DWG. SHEET 1.	

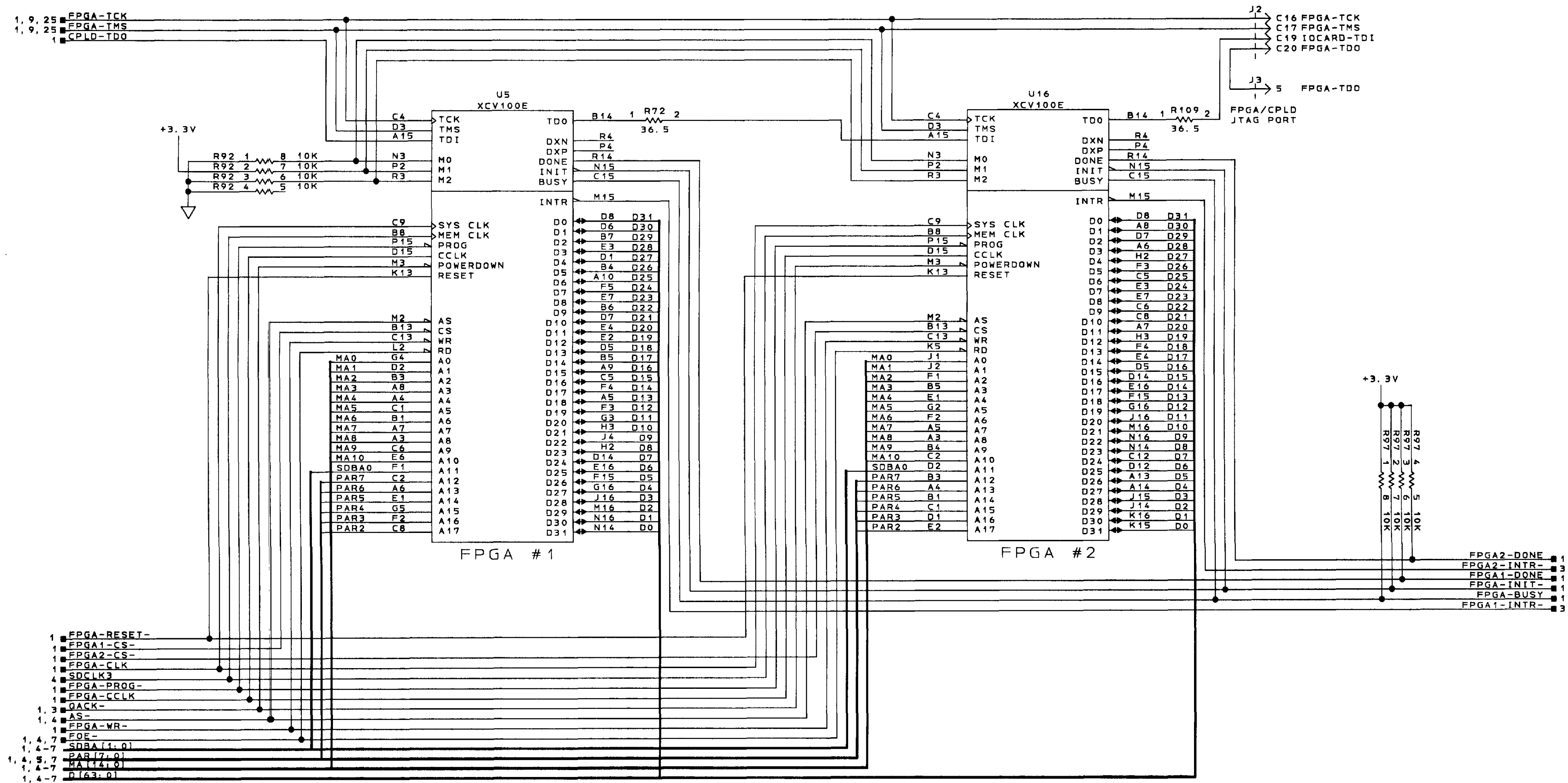


PROCESSOR
FPGA POWER CONNECTIONS
SCHEMATIC DIAGRAM SHEET NO. 10

COMPUTER GENERATED

Honeywell	SEE FIRST SHEET FOR CONTRACT NUMBER. USE OR DISCLOSURE OF INFORMATION ON THIS SHEET IS SUBJECT TO THE RESTRICTIONS ON THE FIRST SHEET OF THIS DOCUMENT.	SIZE	CAGE CODE	DRAWING NO.	REV
		E	55939	7026230-902	XC
		SCALE		SHEET	12

ZONE		REV	DESCRIPTION	DATE	APPROVED
XC			U5 AND U16 WERE XCV50E, PL AFFECTED.		
			SEE DWG. SHEET 1.		
					R. REISBECK



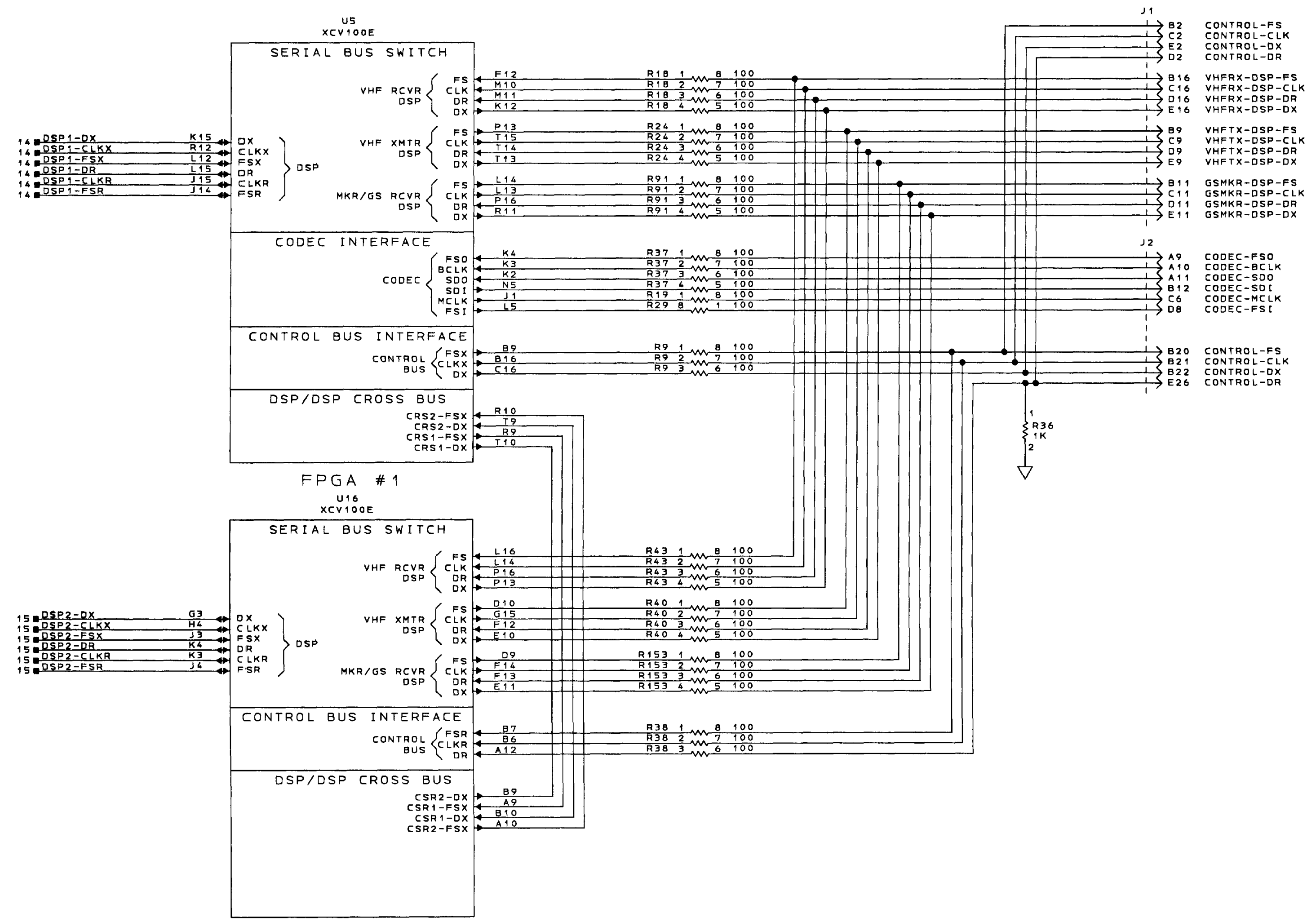
POWERPC FPGA INTERFACE
SCHEMATIC DIAGRAM SHEET NO. 11

COMPUTER GENERATED

Honeywell	SEE FIRST SHEET FOR CONTRACT NUMBER, USE OR DISCLOSURE OF INFORMATION ON THIS SHEET IS SUBJECT TO THE RESTRICTIONS ON THE FIRST SHEET OF THIS DOCUMENT.	SIZE/CAGE CODE	DRAWING NO.	REV
		E 55939	7026230-902 XC	1

DATE: 7026230-902 13

REVISIONS			
ZONE	REV	DESCRIPTION	DATE
XC	1	U5 AND U16 WERE XCV50E, PL AFFECTED. SEE DWG. SHEET 1.	



ISSUES
1. ADD PULLDOWN ON CONTROL-DR LINE

SERIAL BUS INTERFACE
SCHEMATIC DIAGRAM SHEET NO. 12

COMPUTER GENERATED

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
XC	1	U5 AND U16 WERE XCV50E, PL AFFECTED. SEE DWG. SHEET 1.		

U5 XCV100E

ARINC 429 I/O

MISCELLANEOUS SERIAL

XCVR I/O

SPARES

FPGA #1

U16 XCV100E

ARINC 429 I/O

MISCELLANEOUS SERIAL

XCVR I/O

SPARES

FPGA #2

ISSUES

1. UPDATE PER LATEST FPGA INFO
2. CLEAN UP PINS WITH ??

COMPUTER GENERATED

**MRK/GS DIGITAL SIGNAL PROC
MISC I/O AND INTERCONNECT
SCHEMATIC DIAGRAM SHEET NO. 13**

**SEE FIRST SHEET FOR CONTRACT NUMBER,
USE OR DISCLOSURE OF INFORMATION ON
THIS SHEET IS SUBJECT TO THE RESTRICTIONS**

SIZE CAGE CODE 55939

DRAWING NO. 7026230-902

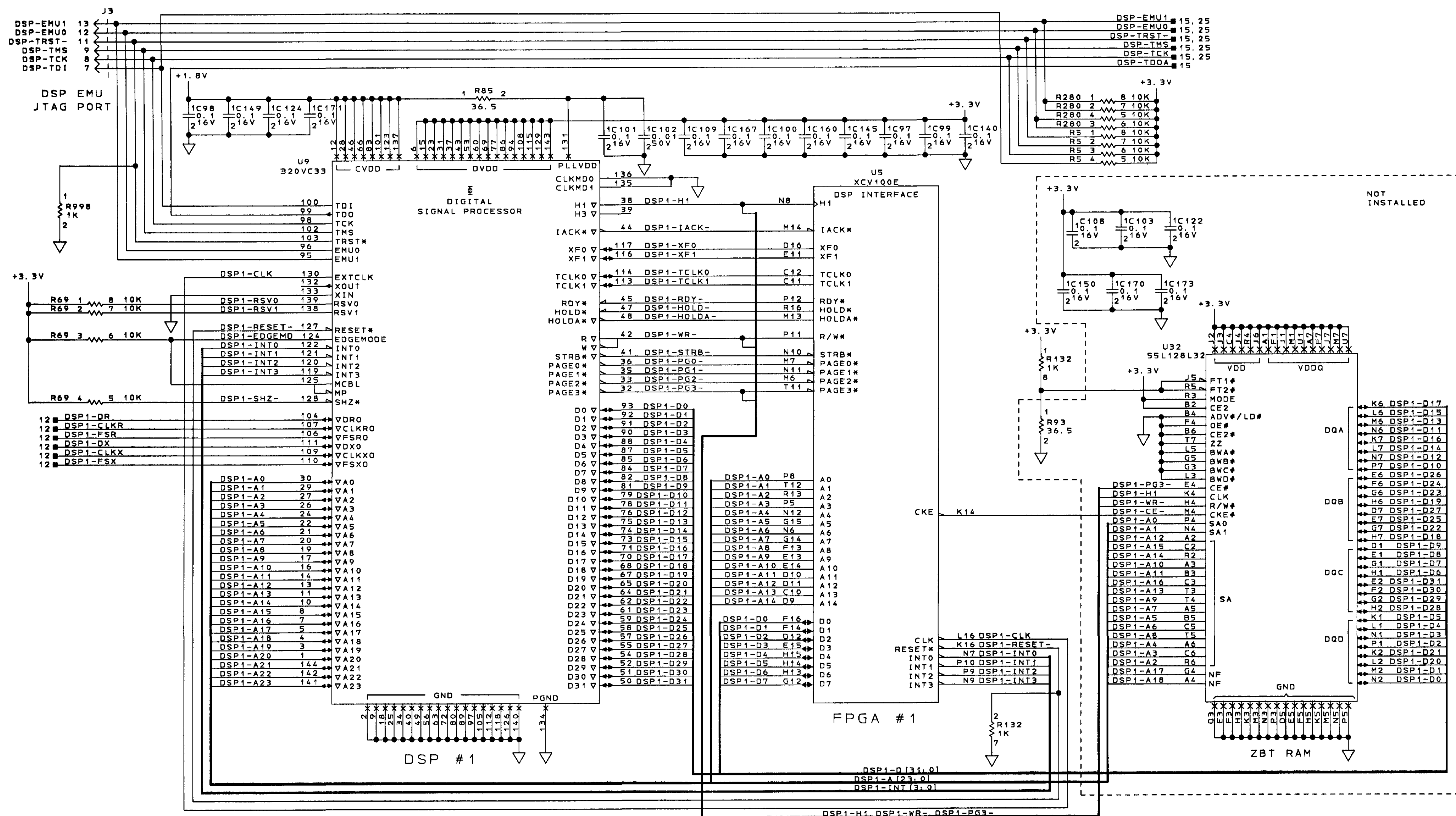
REV

- 1. UPDATE PER LATEST FPGA INFO
- 2. CLEAN UP PINS WITH ??

MKR/GS DIGITAL SIGNAL PROC
MISC I/O AND INTERCONNECT
SCHEMATIC DIAGRAM SHEET NO. 13

COMPUTER GENERATED

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVE
	XC	US AND WAS XCV50E, ADD R998, PL AFFECTED. SEE DWG. SHEET 1.		



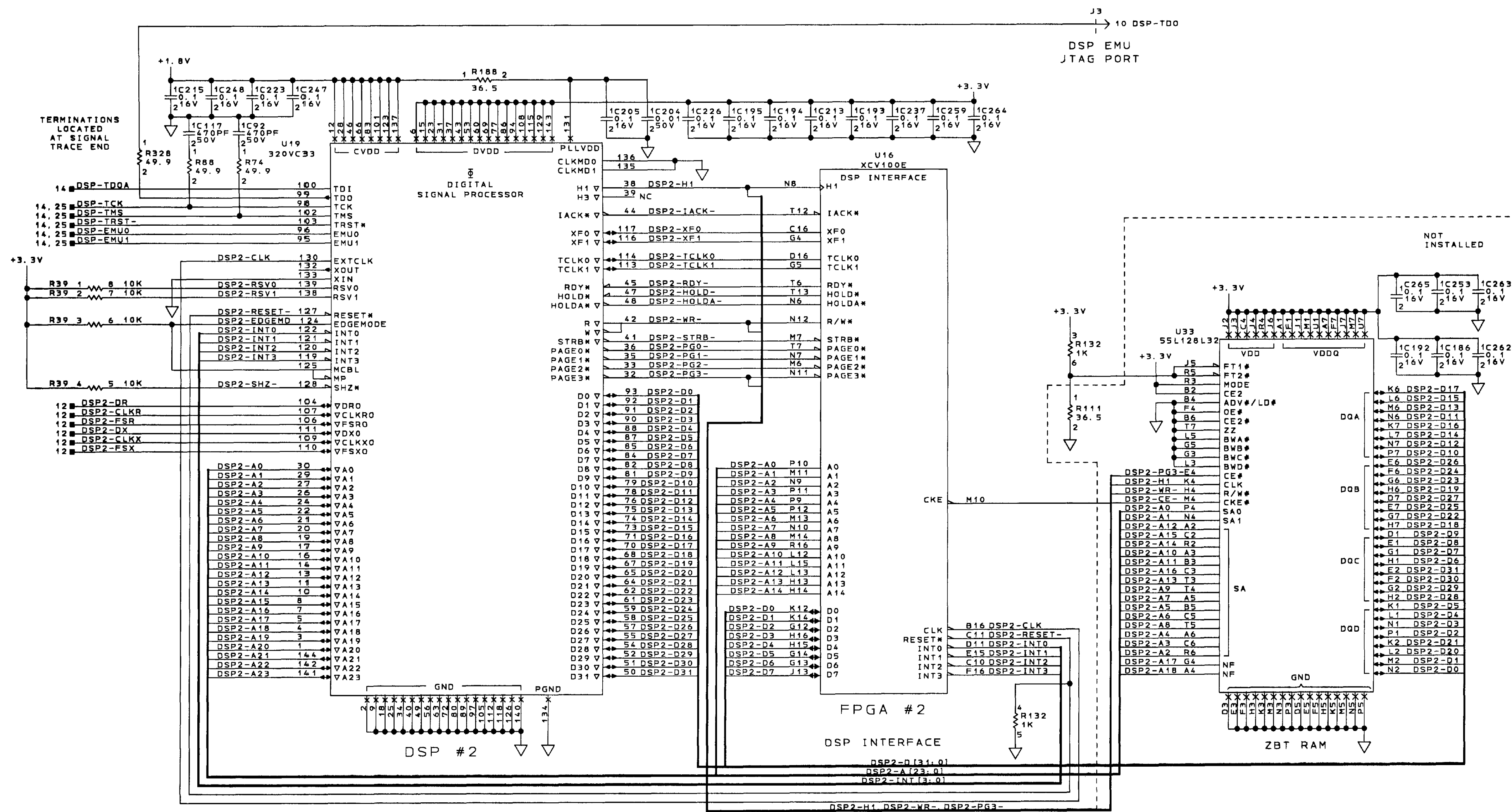
ISSUES

~~1. PULLUPS ON JTAG INPUTS~~

DSP1 DIGITAL SIGNAL PROCESSOR
SCHEMATIC DIAGRAM SHEET NO. 14

COMPUTER GENERATED

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	XC	U16 WAS XCV50E, PL AFFECTED. SEE DWG. SHEET 1.		



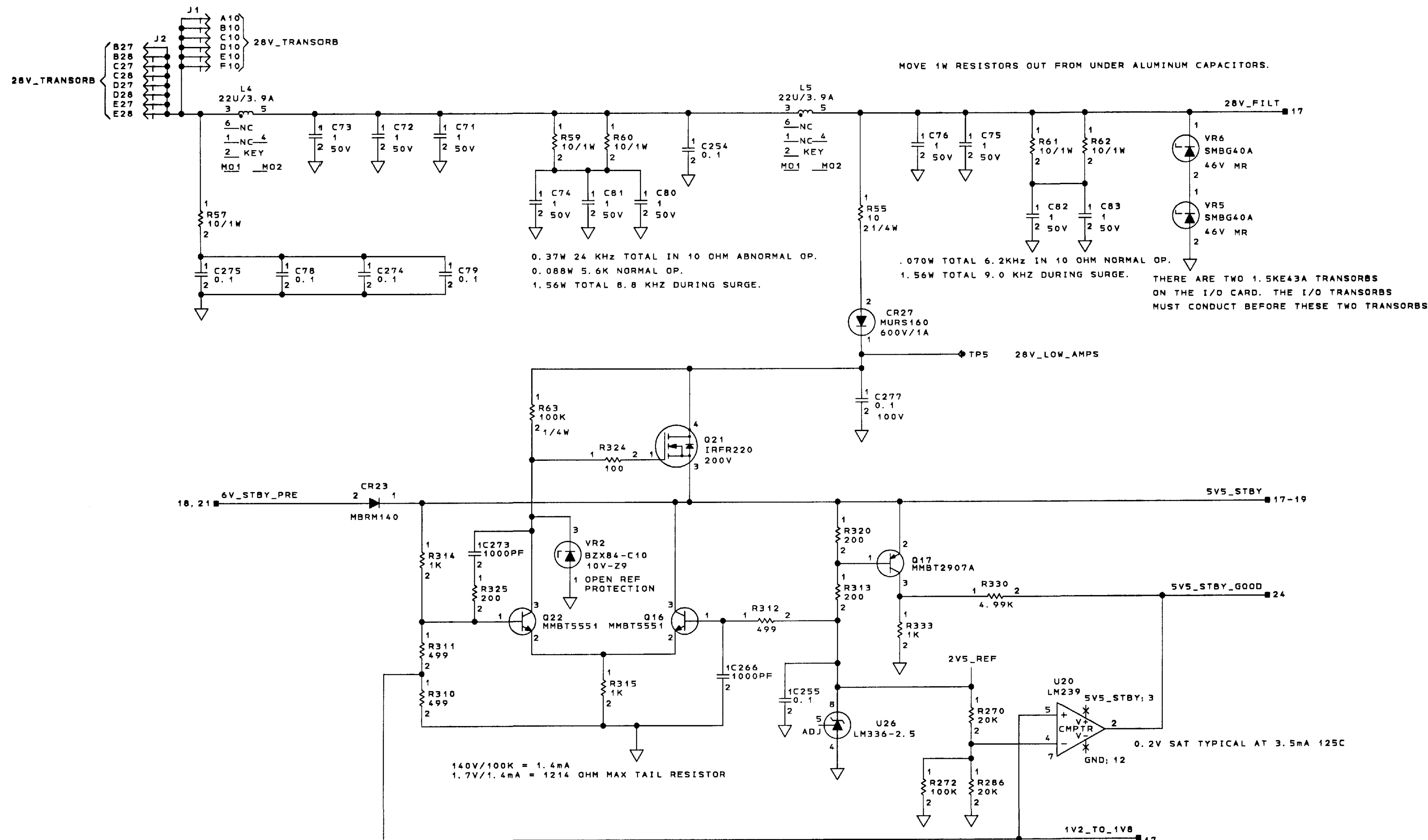
ISSUES

1. TERMINATION NOT INSTALLED??

DSP2 DIGITAL SIGNAL PROCESSOR
SCHEMATIC DIAGRAM SHEET NO. 15

COMPUTER GENERATED

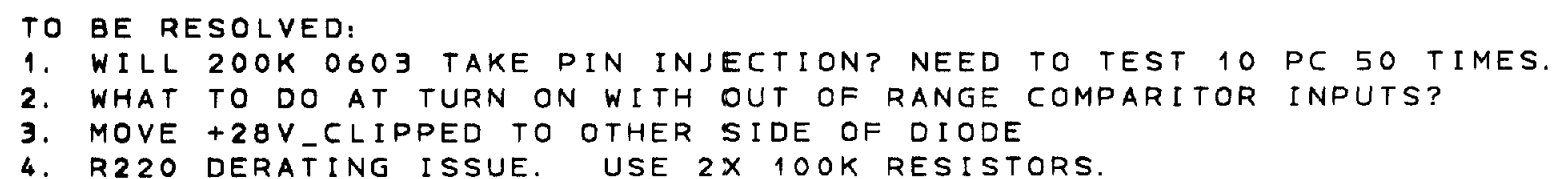
Honeywell	SEE FIRST SHEET FOR CONTRACT NUMBER. USE OR DISCLOSURE OF INFORMATION ON THIS SHEET IS SUBJECT TO THE RESTRICTIONS	SIZE	CAGE CODE	DRAWING NO.	REVISION
		E	55939	7026230-902	X



20mW 1.8V 5% = 178 OHM, 3.3V 5% = 600 ohm, 2.5V 5% = 344, -5V 10% = 1.51k, -15V 10% = 13.6k, 32V = 51.2k

POWER SUPPLY
EMI FILTER, LIGHTNING SUPPR., 5V STBY
SCHEMATIC DIAGRAM SHEET NO. 16

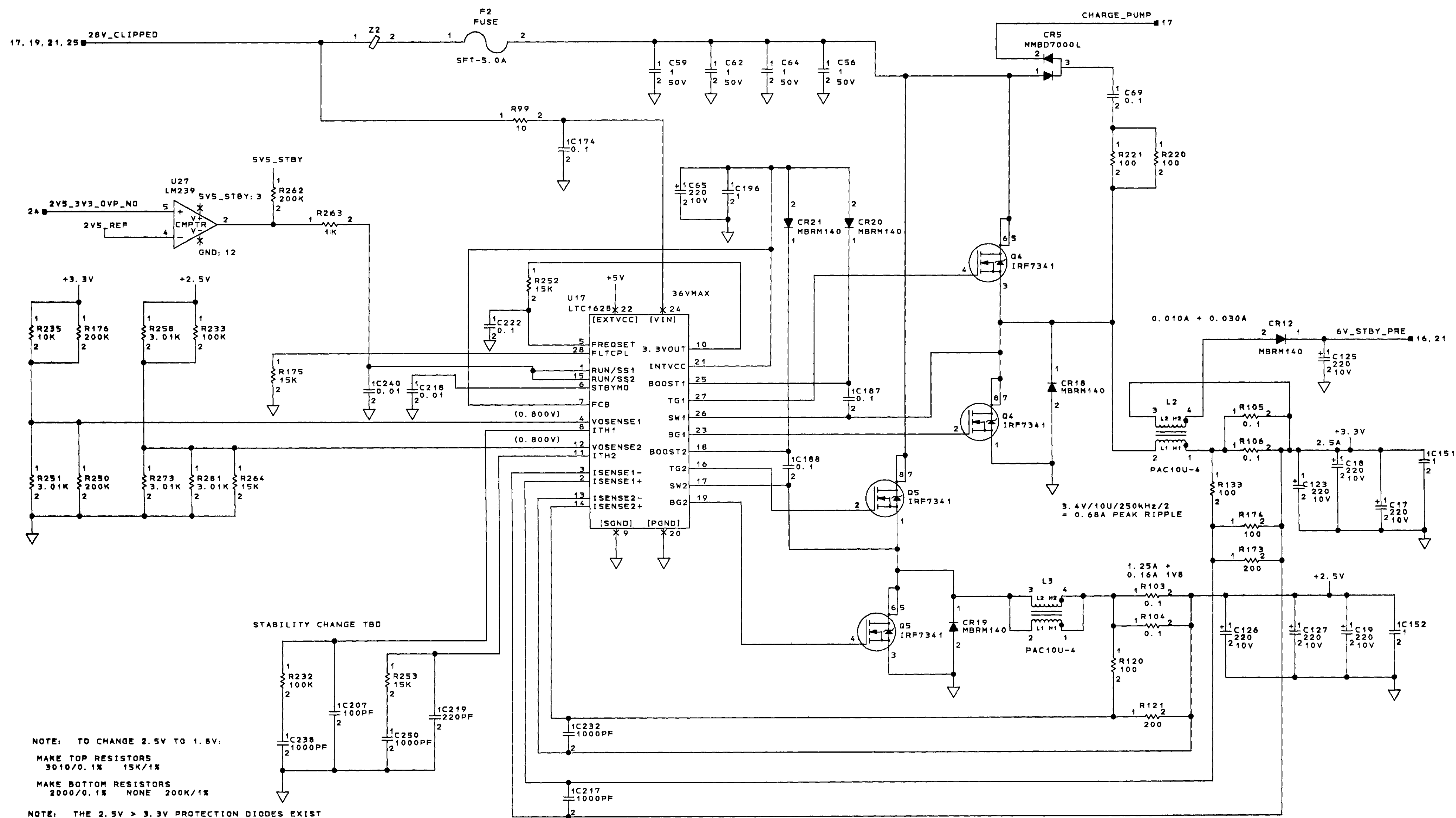
COMPUTER GENERATED



SURGE CONTROL, OFF CONTROL, HOLDUP
SCHEMATIC DIAGRAM SHEET NO. 17

12-26-2001 12:55

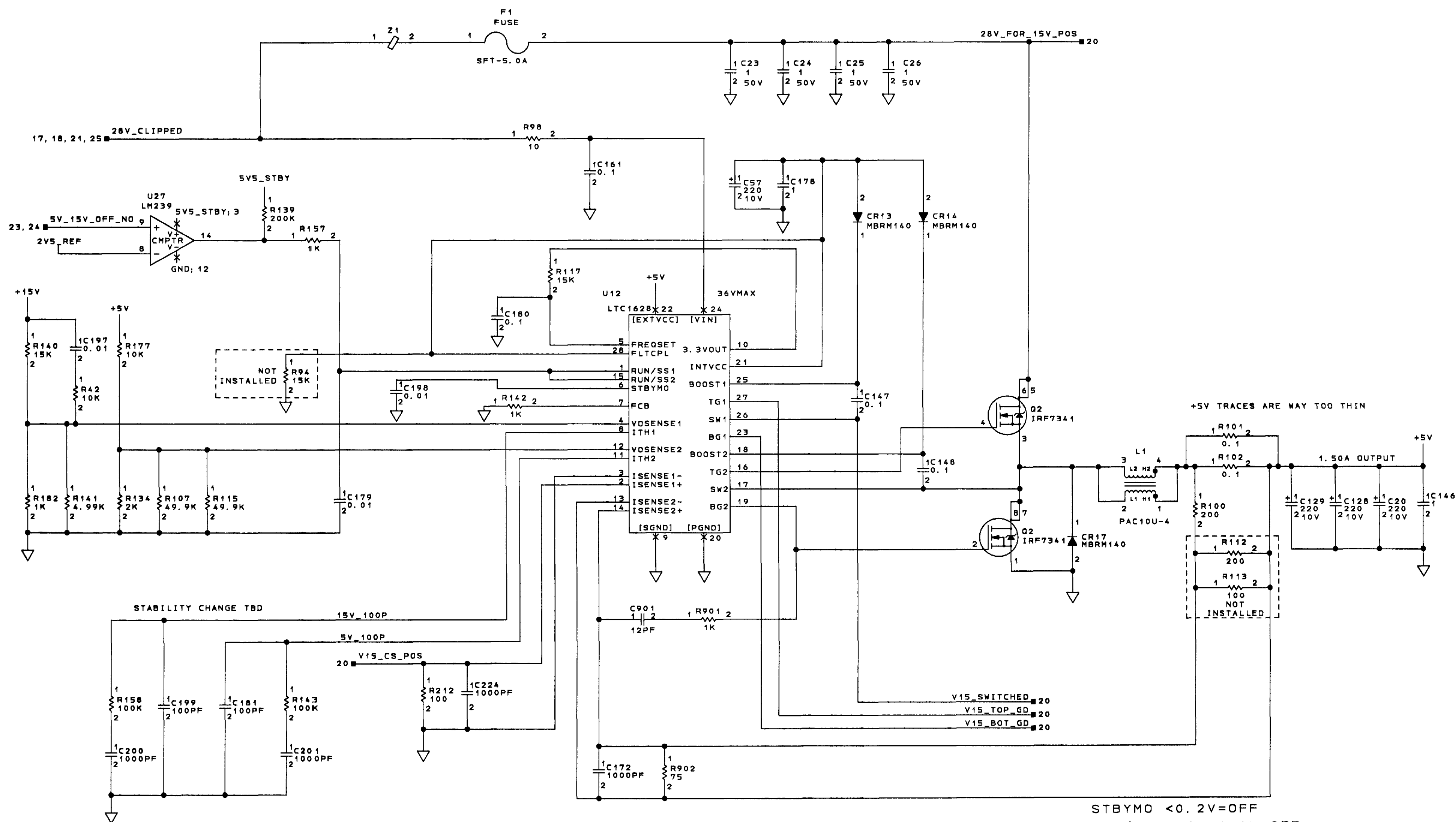
Honeywell	SEE FIRST SHEET FOR CONTRACT NUMBER. USE OR DISCLOSURE OF INFORMATION ON THIS SHEET IS SUBJECT TO THE RESTRICTIONS ON THE FIRST SHEET OF THIS DOCUMENT.	SIZE	CAGE CODE	DRAWING NO.	REV
		E	55939	7026230-902	XE
		SCALE			SHEET 19



POWER SUPPLY
 +3.3V, +2.5V AND V6_STBY OUTPUTS
 SCHEMATIC DIAGRAM SHEET NO. 18

COMPUTER GENERATED

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	XD	EXTENSIVELY CHANGED PARTS LIST AFFECTED. 25503 SEE DWG. SHEET 1.		R. REISBERG



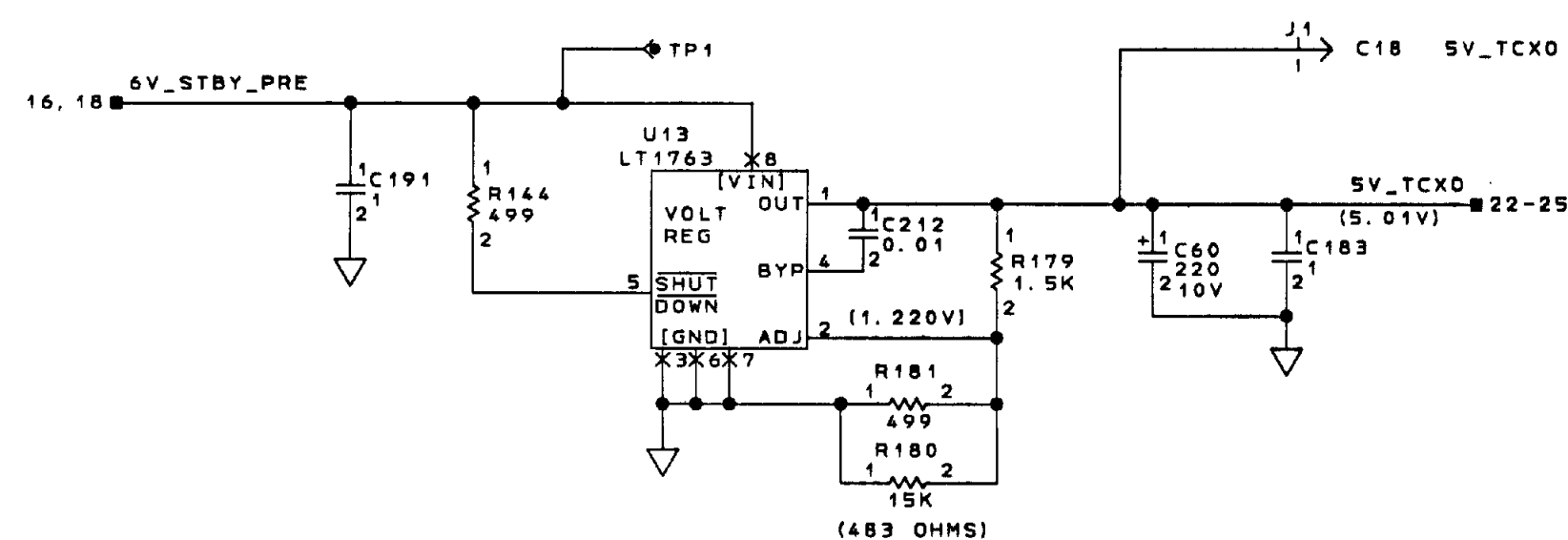
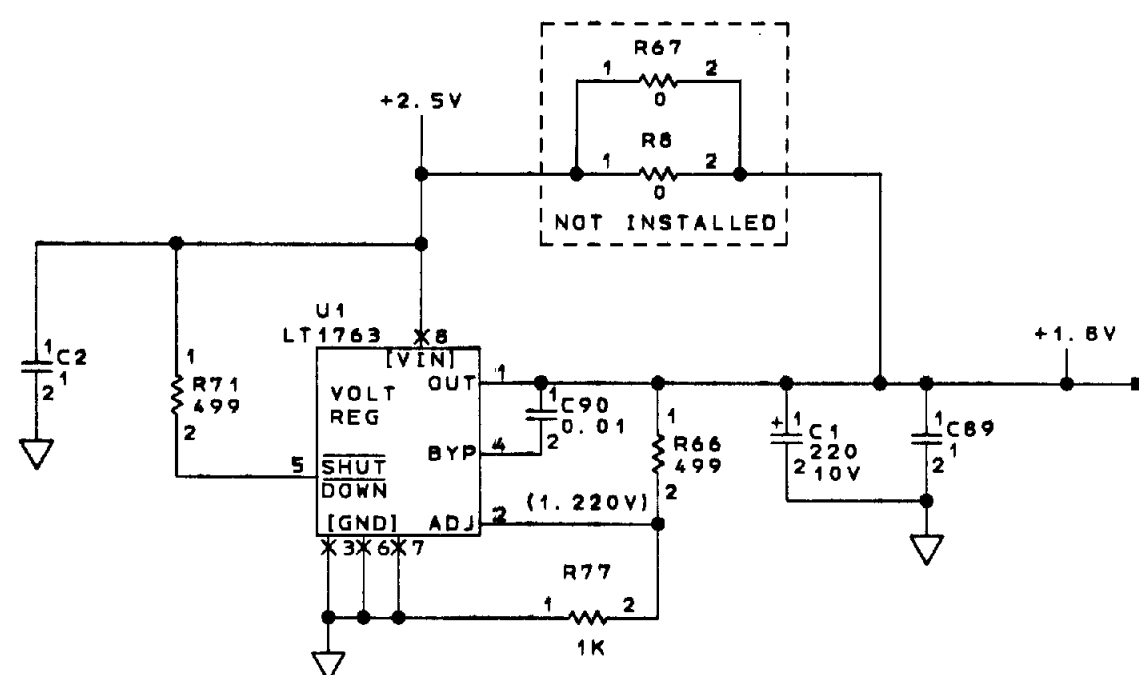
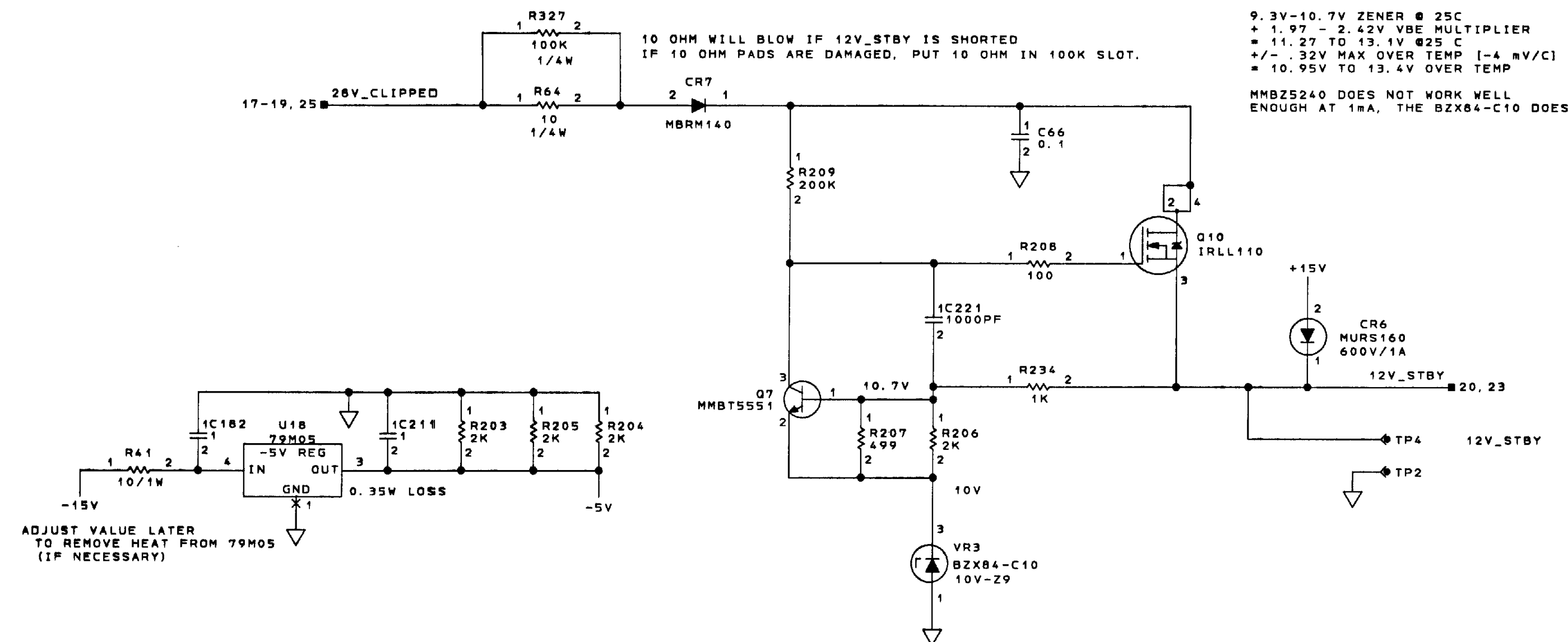
STBYMO <0.2V=OFF
RUN/SS 1&2 <1.0V=OFF

ADD WEIGHTED FEEDBACK FOR +/-15? (60% +15, 40% -15V?)

POWER SUPPLY
+5V OUTPUT AND +5V/+15V/-15V CONTROL
SCHEMATIC DIAGRAM SHEET NO. 19

COMPUTER GENERATED

12-26-2001 12:55	SEE FIRST SHEET FOR CONTRACT NUMBER. USE OR DISCLOSURE OF INFORMATION THIS SHEET IS SUBJECT TO THE RESTRICTIONS ON THE FIRST SHEET OF THIS DOCUMENT.	SIZE E	CASE CODE 55939	DRAWING NO. 7026230-902	REVISION X1
Honeywell		SCALE		SHEET 21	

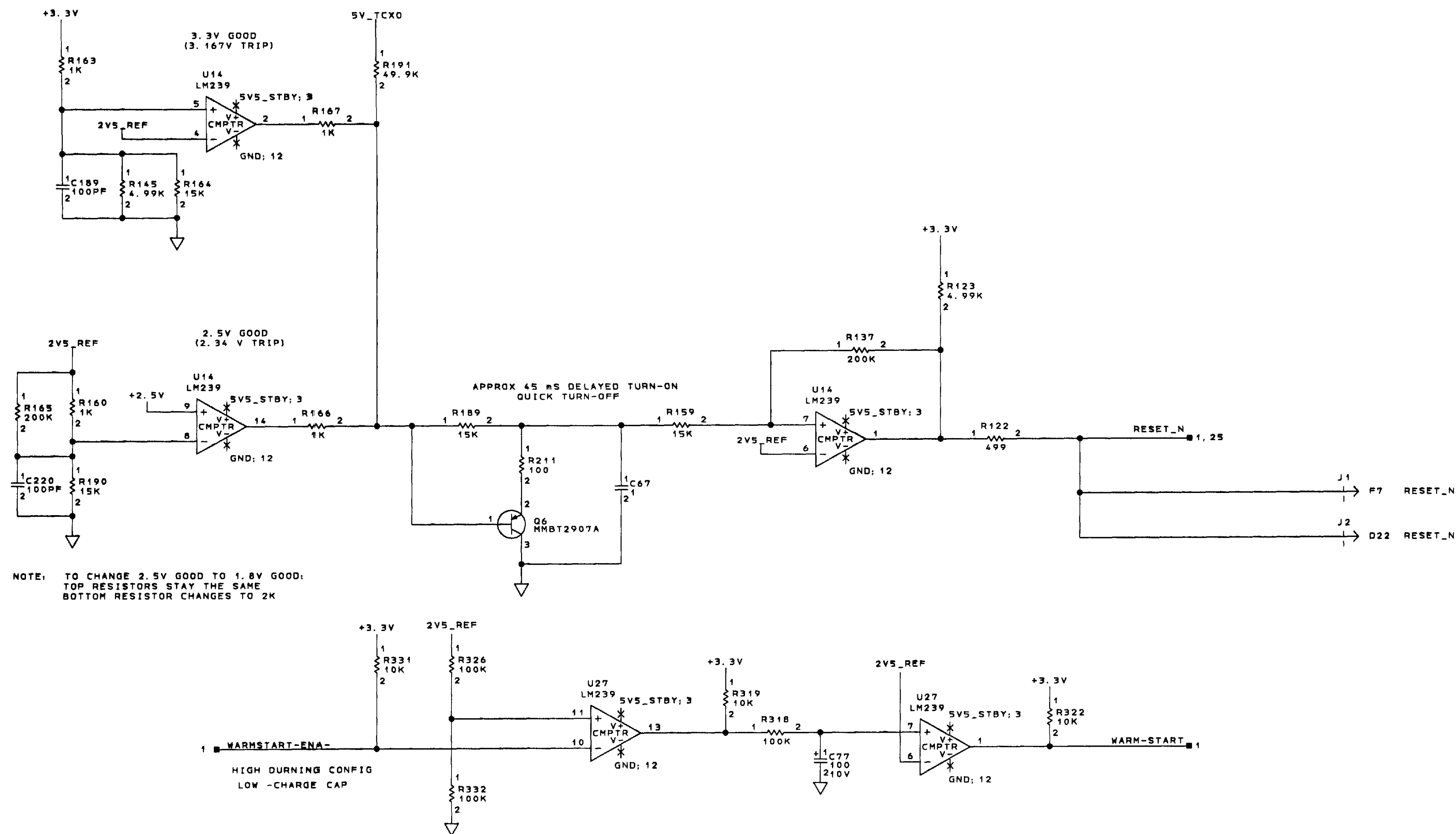


NOTE: IF 5V_TCX0 LINEAR REGULATOR SHORTS INPUT TO OUTPUT
IT WILL SHORT TO APPROXIMATELY 6V,
THEREFORE, OVP ON 5V_OSC DOES NOT BUY MUCH PROTECTION.

- TO BE RESOLVED:
1. USE 1.8V SYMBOL HERE (OTHERWISE IT WON'T BE CONNECTED)
 2. RESOLVE MPC8245 CORE VOLTAGE

POWER SUPPLY
5V_OSC, 1.8V, -5V AND 12V_STBY OUTPUTS
SCHEMATIC DIAGRAM SHEET NO. 21

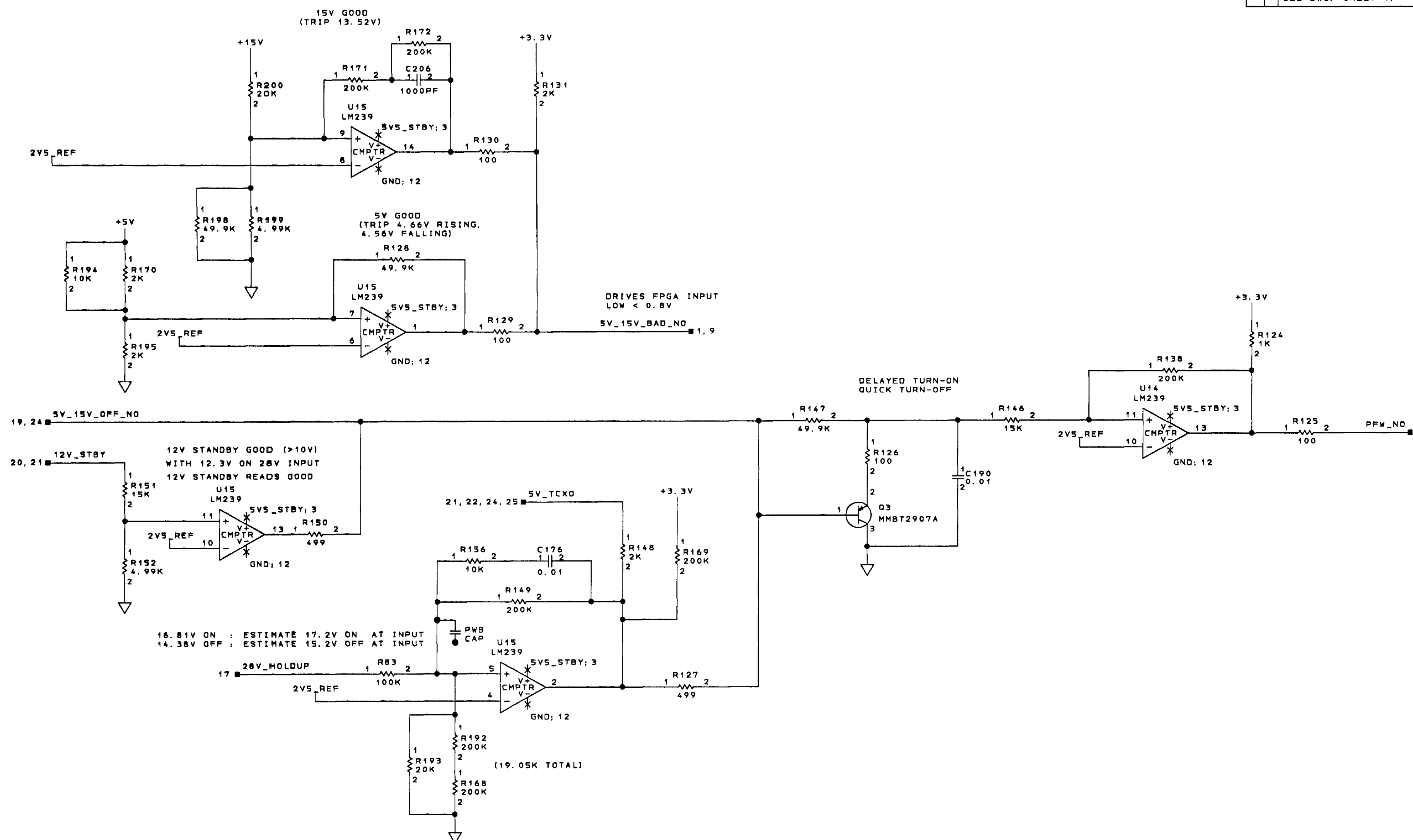
COMPUTER GENERATED



POWER SUPPLY
RESET, WARMSTART
SCHEMATIC DIAGRAM SHEET NO. 22

COMPUTER GENERATED

ZONE REV		DESCRIPTION	DATE	APPROVED
XD	1	ADDED "TRIP...4.66V...FALLING". R131 AND R128 VAL WERE 20K AND 200K RESP. P/L AFFECTED.		
	2	25503		
		SEE DWG. SHEET 1.		

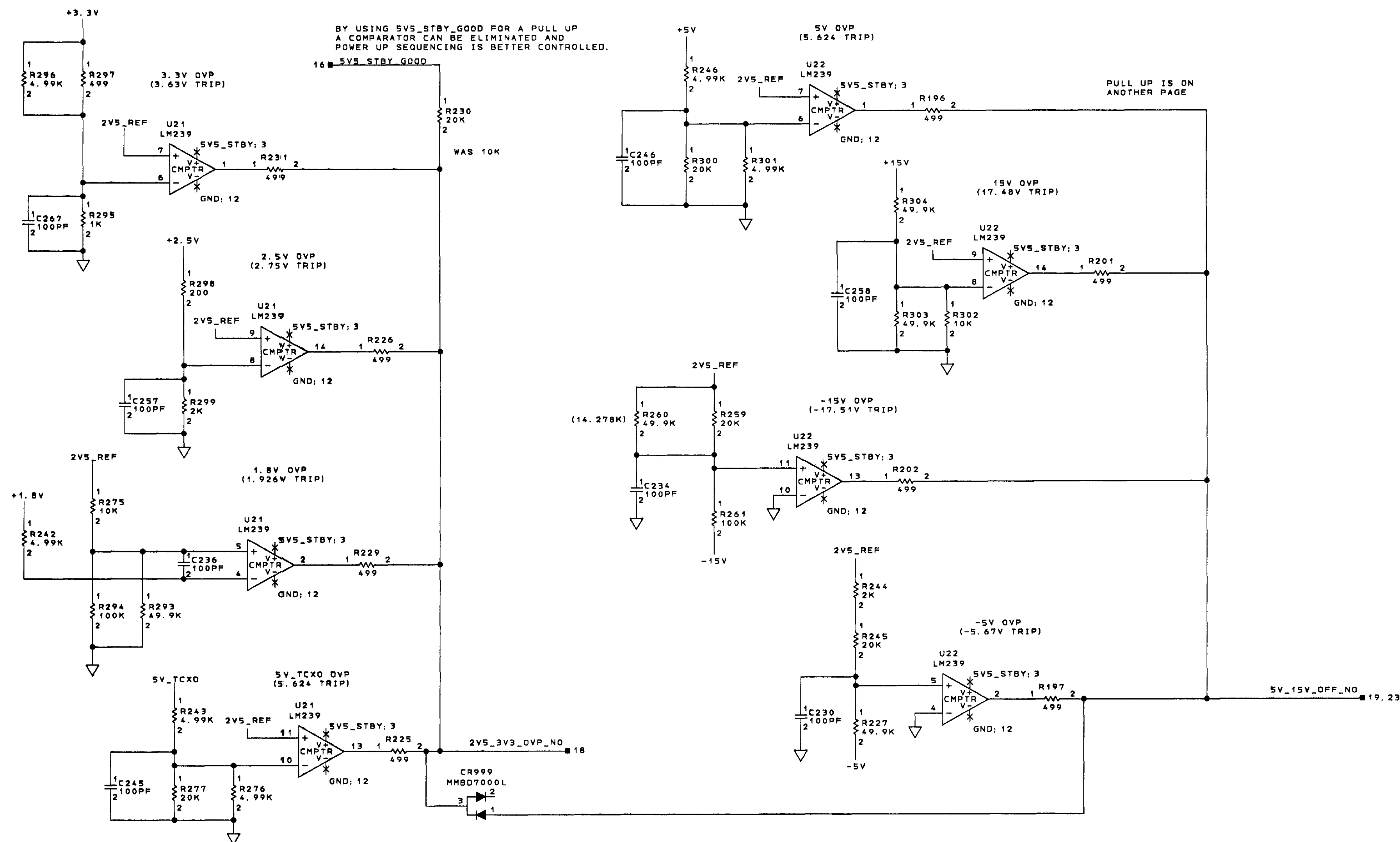


POWER SUPPLY
5V/15V Monitor and Power Fail Warning
SCHEMATIC DIAGRAM SHEET NO. 23

COMPUTER GENERATED

12-26-2001 12:55	SEE FIRST SHEET FOR CONTRACT NUMBER, USE OR DISCLOSURE OF INFORMATION ON THIS SHEET IS SUBJECT TO THE RESTRICTIONS ON THE FIRST SHEET OF THIS DOCUMENT.	SIZE/CAGE CODE E 55939	DRAWING NO. 7029230-902	REV XD
Honeywell		SCALE	SHEET 25	

ZONE		REV		REVISIONS		DATE		APPROVED	
XC				ADDED CR999, P/L AFFECTED SEE DWG. SHEET 1.				R. H. LEBRECHT	



5V_TCXO INSTANCE 4 on U6

POWER SUPPLY
STBY GOOD AND OVERVOLTAGE PROTECTION
SCHEMATIC DIAGRAM SHEET NO. 24

COMPUTER GENERATED

12-26-2001 12:55	SEE FIRST SHEET FOR CONTRACT NUMBER. USE OR DISCLOSURE OF INFORMATION ON THIS SHEET IS SUBJECT TO THE RESTRICTIONS ON THE FIRST SHEET OF THIS DOCUMENT.	SIZE/CAGE CODE	DRAWING NO.	REV
Honeywell		E 55939	7026230-902	XC
		SCALE	SHEET 26	

REV 7026230-902 26

J3 CON30	
SH3	1
GND	2
FPGA-TCK	3
FPGA-TDO	4
DSP-TDI	5
DSP-TMS	6
DSP-TRST-	7
DSP-EMU1	8
UART-TXD	9
HOST-TCK	10
HOST-TDO	11
HOST-HRST-	12
BOOT-DSC0	13
BOOT-DSC1	14
BOOT-DSC2	15
BOOT-DSC3	16
29	17
	18
	19
	20
	21
	22
	23
	24
	25
	26
	27
	28
	29
	30

JTAG PORT

J1 CON6X20	
GND	A1
+3.3V	A2
GND	A3
+3.3V	A4
POLARIZATION	A5
-5V	A6
-15V	A7
GND	A8
28V TRANSORB	A9
GND	A10
GSMKR-SPARE4	A11
GSMKR-SPARE5	A12
GND	A13
GSMKR-SPARE4	A14
GSMKR-SPARE5	A15
GND	A16
VHFRX-SPARE2	A17
GND	A18
VHFRX-SPARE4	A19
VHFRX-SPARE5	A20

J1 CON6X20	
GND	B1
CONTROL-FS	B2
GND	B3
VHFTX-SPARE4	B4
GND	B5
SYS-CLK	B6
GND	B7
VHFTX-DSP-FS	B8
28V TRANSORB	B9
28V TRANSORB	B10
GSMKR-DSP-FS	B11
GND	B12
GND	B13
GND	B14
GND	B15
VHFRX-DSP-FS	B16
GND	B17
VHFRX-SPARE6	B18
GND	B19
GND	B20

J1 CON6X20	
GND	C1
CONTROL-CLK	C2
GND	C3
VHFTX-SPARE5	C4
60V BOOTSTRAP	C5
GND	C6
GND	C7
VHFTX-DSP-CLK	C8
28V TRANSORB	C9
28V TRANSORB	C10
GSMKR-DSP-CLK	C11
GND	C12
GND	C13
GSMKR-SPARE7	C14
GND	C15
VHFRX-DSP-CLK	C16
GND	C17
5V TCXD	C18
SIMULCOM-	C19
GND	C20

J1 CON6X20	
GND	D1
CONTROL-DR	D2
GND	D3
MASTER-VALID	D4
+5V	D5
GND	D6
GND	D7
GND	D8
VHFTX-DSP-DR	D9
28V TRANSORB	D10
GSMKR-DSP-DR	D11
GND	D12
GND	D13
GND	D14
GND	D15
VHFRX-DSP-DR	D16
GND	D17
GND	D18
GND	D19
GND	D20

J1 CON6X20	
GND	E1
CONTROL-DX	E2
GND	E3
-15V	E4
SIDETONE	E5
GND	E6
VHFTX-DSP-DX	E7
28V TRANSORB	E8
28V TRANSORB	E9
GSMKR-DSP-DX	E10
GND	E11
GND	E12
GND	E13
GND	E14
GND	E15
VHFRX-DSP-DX	E16
GND	E17
GND	E18
GND	E19
GND	E20

J1 CON6X20	
GND	F1
+15V	F2
GND	F3
POLARIZATION	F4
+15V	F5
RX+/TX-	F6
RESET N	F7
+5V	F8
GND	F9
28V TRANSORB	F10
GND	F11
GND	F12
GND	F13
GND	F14
GND	F15
GND	F16
GND	F17
GND	F18
GND	F19
GND	F20

CONNECTOR TO VHF RCVR CARD

J2 CON6X28	
GND	A1
GND	A2
+5V	A3
+5V	A4
+2.5V	A5
SDA	A6
SCL	A7
GND	A8
CODEC-FSQ	A9
CODEC-BCLK	A10
CODEC-SDO	A11
+1.8V	A12
GND	A13
GND	A14
GND	A15
GND	A16
SIDETONE	A17
28V CLIPPED	A18
28V CLIPPED	A19
28V CLIPPED	A20
GND	A21
GND	A22
GND	A23
GND	A24
VHFRX-SPARE2	A25
MASTER-VALID	A26
GND	A27
GND	A28

J2 CON6X28	
+3.3V	B1
+3.3V	B2
ENET-TXD+	B3
ENET-TXD-	B4
GND	B5
ENET-RXD+	B6
ENET-RXD-	B7
GND	B8
RX-1B	B9
RX-1A	B10
CODEC-SDI	B11
TX-2A	B12
TX-2B	B13
REMOTE OFF NO	B14
28V CLIPPED	B15
28V CLIPPED	B16
28V CLIPPED	B17
GND	B18
GND	B19
CONTROL-FS	B20
CONTROL-CLK	B21
CONTROL-DX	B22
RX-5A	B23
GND	B24
IO-SPARE2	B25
IO-SPARE12	B26
28V TRANSORB	B27
28V TRANSORB	B28

J2 CON6X28	
+3.3V	C1
+3.3V	C2
GND	C3
RX-4A	C4
RX-4B	C5
CODEC-MCLK	C6
IO-SPARE9	C7
GND	C8
IO-SPARE10	C9
IO-SPARE11	C10
RX+/TX-	C11
NAVAUX-CLK	C12
IO-SPARE13	C13
GND	C14
GND	C15
FPGA-TCK	C16
FPGA-TMS	C17
GND	C18
IOCARD-TDI	C19
FPGA-TDO	C20
GND	C21
GND	C22
RX-6A	C23
RX-5B	C24
RX-2B	C25
RX-3A	C26
28V TRANSORB	C27
28V TRANSORB	C28

J2 CON6X28	
BOOT-DSC0	D1
BOOT-DSC1	D2
BOOT-DSC2	D3
BOOT-DSC3	D4
GND	D5
PTT-	D6
SIMULCOM-	D7
CODEC-FSI	D8
DATA-KEY-	D9
GND	D10
RX-2A	D11
RS422-TX2	D12
NAVAUX-LQ	D13
TX-5A	D14
TXEN0	D15
RS422-TX1	D16
TX-3A	D17
TX-4A	D18
GND	D19
TX-3B	D20
POLARIZATION	D21
RESET N	D22
RX-6B	D23
GND	D24
GND	D25
IO-SPARE12	D26
28V TRANSORB	D27
28V TRANSORB	D28

J2 CON6X28	
-5V	E1
-5V	E2
-15V	E3
RCB-TX	E4
+15V	E5
IO-SPARE6	E6
GND	E7
IO-SPARE5	E8
TX-0A	E9
RX-0A	E10
TX-0B	E11
TX-1B	E12
GND	E13
GND	E14
GND	E15
TX-5B	E16
NAVAUX-DATA	E17
RS422-RX3	E18
RX-7A	E19
RX-7B	E20
GND	E21
GND	E22
RX-8A	E23
RX-8B	E24
GND	E25
CONTROL-DR	E26
28V TRANSORB	E27
28V TRANSORB	E28

J2 CON6X28	
GND	F1
GND	F2
RCB-RX	F3
-15V	F4
GND	F5
+15V	F6
IO-SPARE1	F7
IO-SPARE3	F8
IO-SPARE4	F9
GND	F10
RX-0B	F11
TX-1A	F12
RX-3B	F13
GND	F14
GND	F15
GND	F16
TXEN1	F17
IO-SPARE7	F18
COMAUX-DATA	F19
GND	F20
TX-4B	F21
IO-SPARE14	F22
RS422-RX2	F23
RS422-RX1	F24
GND	F25
RX-9B	F26
RX-9A	F27
GND	F28

CONNECTOR TO I/O CARD

ISSUES

1. LOTS OF SCHEMATIC MARKUPS HERE
2. DELETE CLK-EN
3. DELETE VDD-SENSE
4. POLARIZING PIN ON J3
5. ADD UART TO JTAG PORT
6. ADD 2.5V AND 1.8V TO J1 OR J2

CONNECTORS
SCHEMATIC DIAGRAM SHEET NO. 25

COMPUTER GENERATED

I/O (MEZZANINE) CCA

INPUT
28V D0160D CAT BZ
< 18V START
< 16V RUN
22.0 TO 30.3V NORMAL OPERATION
20.5 TO 32.2V ABNORMAL OPERATION
18V EMERGENCY, 80V SURGE
1.4V RMS RIPPLE 1K TO 15KHz
THREE 5A PINS ON INPUT CONNECTOR.
10A BREAKER

EMI FILTER, 2 POLE,
~200KHZ, ~3 ohm, ~1 Q
86V 3000W TRANSORB.

OPTIONAL SYNCHRO DRIVER
20 W MAXIMUM, 0 W MINIMUM
100 mA RMS RIPPLE CURRENT

CPU/PSU

28V_TRANSORB

4A MAX (PA DRAWS LESS CURRENT
WHEN SUPPLY IS DRAWING 4A)

4 POLE, LOW Q EMI FILTER
0.6W LOSS (EST)

ACTIVE CLAMP
35V WC MAX, 32V NOM
NEEDS HEATSINK
0.96W LOSS
OFF OFF
6.1V/8.8V
REMOTE_OFF_N
OVER_STRESS
(TWO 80V SURGES)

28V_HOLDUP
35V
1.6W LOSS
HOLD UP
CAPS

LINEAR
0.150W LOSS

DUAL BUCK REGULATOR
LTC1628
3.4W LOSS
FLYBACK
CONVERSION
0.83W LOSS
BUCK

LM79M05
LINEAR
0.3W LOSS

DUAL BUCK REGULATOR
LTC1628
1.27W LOSS
BOTH BUCKS

LT1763
LINEAR
0.11W LOSS
BYPASS
JUMPER

29.23W OUT
35.5W FROM 28V_HOLDUP
AT 28V ESTIMATE 36.3W INPUT
AT 15V INPUT ESTIMATE 38W INPUT

OVER VOLTAGE
TURN ON LOGIC
5V5_STBY < 10. x = OFF
12V_STBY > 17.5 = OFF
+15 > 5. x = OFF
+5V < -17. x = OFF
-15V < -5. x = OFF
PFW_N < 2.5V = OFF
3.3V < 2.5V = OFF (SEQUENCING)
5V_TCXO > 5. x = OFF
+3V3 > 3. x = OFF
+2V5 > 2. x = OFF
+1V8 > 2. x = OFF
5V5_STBY_GOOD < 3. x = OFF

LINEAR REGULATOR
0.154W LOSS
5V5_STBY
5V5_STBY_GOOD
6V_XXXX

SHARED SIGNALS
28V_HOLDUP < 14. x = WARN
PFW_N
RESET_N
DELAY RISE,
NO DELAY FALL
+3.3V < 3.1 = BAD
+2.5V < 2.3 = BAD
+15V < 13. x = BAD
+5V < 4. x = BAD
PFW_N < 2.5V = BAD
5V_15V_GOOD_N

28V_HOLDUP
5V_15V_OFF_NO

28V_HOLDUP
2V5_3V3_OFF_NO

+2V5

+1V8_0.15A

0.27W

+66_BOOTSTRAP 28V_TRANSORB

51K

1mA, 1 PIN

5A, 4 PINS

RF POWER AMP

ACTIVE CLAMP
35V WC MAX, 32V NOM
NEEDS HEATSINK

+15 +5 5V_OSC 3V3 -5 -15
2 PINS EACH
GND PFW_N RESET_N
8 PINS 1 PIN 1 PIN

PA

POWER SUPPLY
VDR POWER SYSTEM BLOCK DIAGRAM
SCHEMATIC DIAGRAM SHEET NO. 26

COMPUTER GENERATED



Honeywell

SEE FIRST SHEET FOR CONTRACT NUMBER.
USE OR DISCLOSURE OF INFORMATION ON
THIS SHEET IS SUBJECT TO THE RESTRICT
ON THE FIRST SHEET OF THIS DOCUMENT.

SIZE	CAGE CODE	DRAWING NO.	REV
E	55939	7026230-902	XB
SCALE —		SHEET 28	