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CRNO.

REV

DESCRIPTION

F

INITIAL RELEASE

2970

G

FOR DESCRIPTION SEE CHANGE REQUEST.

07-10-02

5275

H

FOR DESCRIPTION SEE CHANGE REQUEST.

10-10-02

5643

J

FOR DESCRIPTION SEE CHANGE REQUEST.

11-08-02

TABLE I

COMPONENT INSTALLATION DATA

7

REF DES	CCA SIDE	COND NO.	ITEM NO.	FROM CIRCUIT POINT	TO CIRCUIT POINT	REF VIEW
R1141	B	601	702	R1141-TOP	U15-1 (VIA)	N
		602		R1141-BOTTOM	U15-7 (VIA)	
R1142	B	603		R1142-LEFT	U27-31 (VIA)	P
		604		R1142-RIGHT	U27-25 (VIA)	
R1145	B	605		R1145-RIGHT	J7-17 (VIA)	Q
		606		R1145-LEFT	C95-LEFT (PAD)	
R1143	A	607		R1143-LEFT	R995-RIGHT (PAD)	R
		608		R1143-RIGHT	U58-AF2 (VIA)	
R1139	A	609		R1139-TOP	R1030-2 (VIA)	S
		610		R1139-BOTTOM	U134-31 (VIA)	
R1144	A	611		R1144-LEFT	U7-AF2 (VIA)	T
		612		R1144-RIGHT	C397-BOTTOM (PAD)	
R1140	A	613		R1140-TOP	R569-2 (VIA)	U
		614		R1140-BOTTOM	U111-31 (VIA)	
R1147	B	615		R1147-TOP	U11-6 (VIA)	X
		616		R1147-BOTTOM	VIA-5	
R1146	B	617		R1146-TOP	VIA-4	Y
		618	702	R1146-BOTTOM	U14-1 (VIA)	
C83	A	-		C83-LEFT	U40-5 (VIA)	Z
		-		C83-RIGHT	C545-LEFT (PAD)	
R1149	B	619	702	R1149-TOP	U65-2 (PAD)	AA
		620		R1149-BOTTOM	C150-LEFT (PAD)	
R1152	B	621		R1152-TOP	R268-RIGHT (PAD)	AB
		622		R1152-BOTTOM	U84-9 (PAD)	
R1150	A	623		R1150-TOP	R879-BOTTOM (PAD)	AC
		624		R1150-BOTTOM	U131-2 (PAD)	
R1151	A	625		R1151-LEFT	C509-RIGHT (PAD)	AD
		626		R1151-RIGHT	U120-32 (PAD)	
R1153	A	627		R1153-TOP	R879-BOTTOM (PAD)	AC
		628		R1153-BOTTOM	U131-1 (PAD)	
R1154	A	629		R1154-TOP	U131-16 (PAD)	AC
		630		R1154-BOTTOM	R963-RIGHT (PAD)	
R1155	A	631		R1155-TOP	U131-15 (PAD)	AC
		632		R1155-BOTTOM	R963-RIGHT (PAD)	
R1156	B	633		R1156-LEFT	U40-3 (VIA)	AE
		634		R1156-RIGHT	U40-3 (PAD)	
R1157	B	635		R1157-TOP	U40-1 (PAD)	AE
		636		R1157-BOTTOM	U40-2 (PAD)	
R1158	A	654		R1158-TOP	C382-TOP	AF
		655	702	R1158-BOTTOM	VIA-6	

TABLE II

BUSWIRE DATA

8

CCA SIDE	COND NO.	ITEM NO.	FROM CIRCUIT POINT	TO CIRCUIT POINT	REF VIEW
B/A	637	702	U94-8 (PAD)	VIA-2 (SIDE A)	W
B	638		U94-9 (PAD)	VIA-1	V
B/A	639		U94-14 (PAD)	VIA-3 (SIDE A)	W
B	640		U94-15 (PAD)	U94-14 (VIA)	
B	641		VR7-1 (PAD)	R328-RIGHT	
B	642		VR7-2 (PAD)	R324-LEFT	
A	643		R799-LEFT (PAD)	R814-LEFT (PAD)	
A	644		R790-LEFT (PAD)	R803-LEFT (PAD)	
A	645		R815-LEFT (PAD)	R816-RIGHT (PAD)	
A	646		R407-LEFT (PAD)	R406-LEFT (PAD)	
A	647		R408-LEFT (PAD)	R402-LEFT (PAD)	
A	648		R403-RIGHT (PAD)	R409-RIGHT (PAD)	
B	649		VIA-7	U32-14 (PAD)	AG
B	650		U32-11 (PAD)	U32-12 (PAD)	
A	651		R891-RIGHT (PAD)	R954-RIGHT (PAD)	
A	652		U131-9 (PAD)	U131-14 (PAD)	
A	653	702	U36-A7	U36-B7	AH

TABLE III

CUT RUN DATA

14

CUT NO.	PWB SIDE	FROM CIRCUIT POINT	TO CIRCUIT POINT	REF VIEW
1	B	U94-8 (PAD)	U94-8 (VIA)	
2	B	U94-9 (PAD)	U94-9 (VIA)	
3	B	U94-14 (PAD)	U94-14 (VIA)	
4	B	U94-15 (PAD)	U94-15 (VIA)	
5	B	VR7-1 (PAD)	VR7-1 (VIA)	AB
6	B	VR7-2 (PAD)	VR7-2 (VIA)	AB
7	A	R799-LEFT (PAD)	R799-LEFT (VIA)	
8	A	R790-LEFT (PAD)	R790-LEFT (VIA)	
9	A	R815-LEFT (PAD)	R815-LEFT (VIA)	
10	A	R407-LEFT (PAD)	R407-LEFT (VIA)	
11	A	R408-LEFT (PAD)	R408-LEFT (VIA)	
12	A	R403-RIGHT (PAD)	R403-RIGHT (VIA)	
13	B	U40-1 (PAD)	U40-2 (PAD)	
14	B	U40-3 (PAD)	U40-3 (VIA)	

NOTES:

1. ASSEMBLE PER M7012784.

CAUTION

ELECTROSTATIC SENSITIVE EQUIPMENT
SPECIAL HANDLING REQUIRED

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. COMPONENT LEAD PROTRUSION SHALL BE .060 MAXIMUM. BARE COPPER PERMISSIBLE ON COMPONENT LEADS AT TRIMMED SURFACES.

4. MAXIMUM COMPONENT HEIGHT ON SIDE B SHALL BE .550. MAXIMUM COMPONENT HEIGHT ON SIDE A SHALL BE .070.

5. SQUARE PADS, WHEN PRESENT, ON PRINTING WIRING BOARD INDICATE PIN 1.

6 CONFORMAL COAT CCA PER M7010975-3. EXCEPT AREAS NOTED.

7 INSTALL COMPONENTS PER TABLE I, LEFT OR RIGHT, TOP OR BOTTOM, AS VIEWED FROM INDICATED SIDE. SECURE COMPONENTS USING ITEM 701.

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

9. SOME COMPONENTS SHOWN OVERSIZE TO PROVIDE SPACE FOR DESIGNATORS.

10 SHADED COMPONENTS ARE NOT INSTALLED.

11 PRIOR TO INSTALLATION OF J1, REMOVE ALIGNMENT POSTS FROM BOTTOM OF CONNECTOR IF PRESENT.

12 PRIOR TO INSTALLATION OF J5, CUT PIN 5 FLUSH TO CONNECTOR BODY.

13 PRIOR TO INSTALLATION OF U45, U46, U47, U52 AND U53 ON SIDE B, CONFORMAL COAT OR SOLDERMASK PWB PER M7010975-3 THE AREA SHOWN IN REF VIEW AJ.

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

15. INSTALL R1148 IN PLACE OF C83.

16 SECURE C29, C41 AND P2 TO PWB, ITEM 1, USING RTV, ITEM 703.

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES: TOLERANCES: ANGLES ± - 2 PL DEC ± - 3 PL DEC ± -

THIRD ANGLE PROJECTION

OPERATIONAL NOTE

INTERPRET DIMENSIONS AND TOLERANCES PER AMSE Y14.5M-1994

FOR REFERENCE

ORIGINAL C.R.

PRODUCT LINE NO.

AW/PS ANALYSIS EB

REF DWG

REF SPEC

90000000-20

90000000-20

90000000-10

90000000-10

NEXT ASSY

END ITEM

APPLICATION

SCALE NONE

SHEET 1 OF 103

TITLE

CIRCUIT CARD ASSEMBLY - TAWS/RWS (A7)

SIZE

CAGE CODE

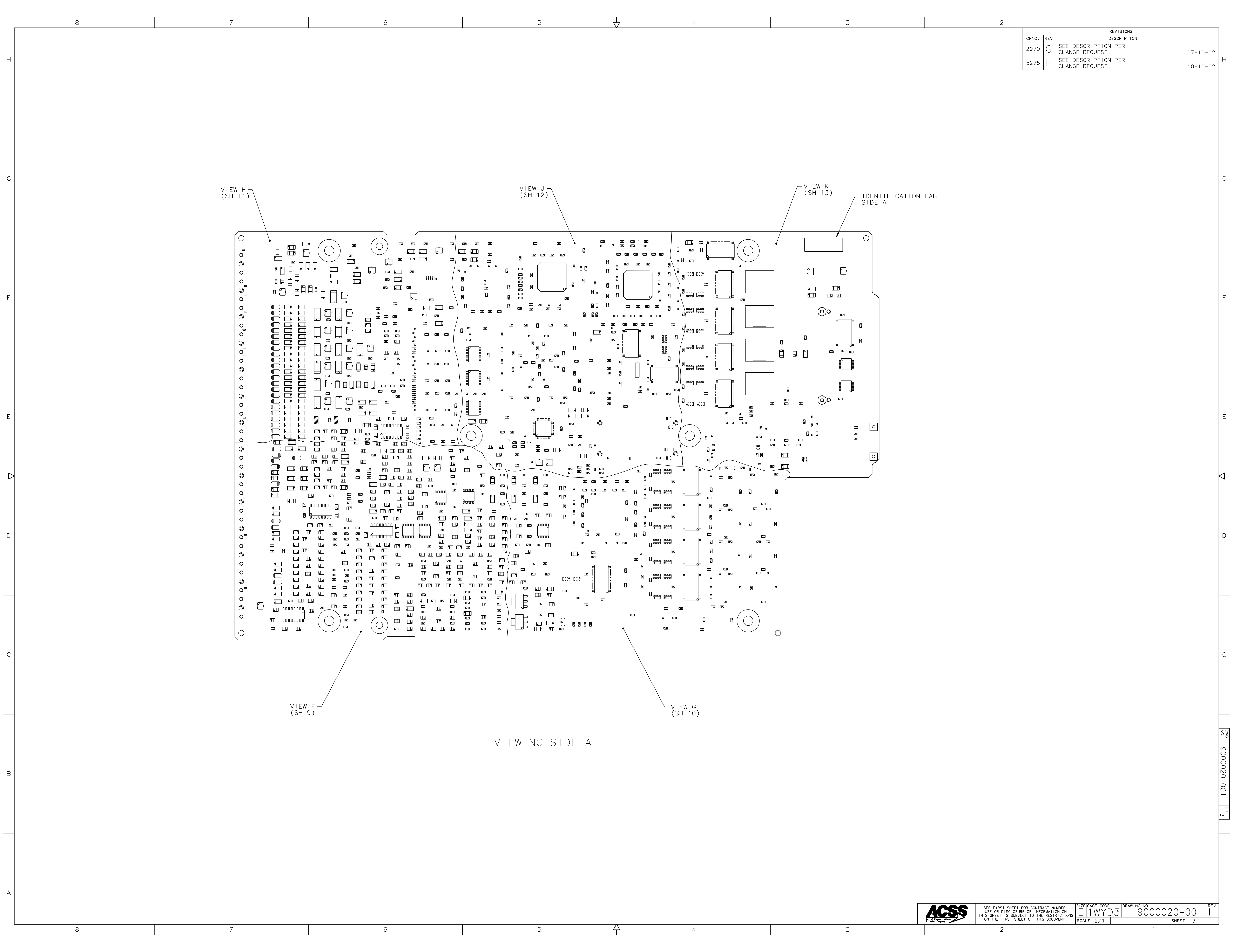
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REV

E11WYD3

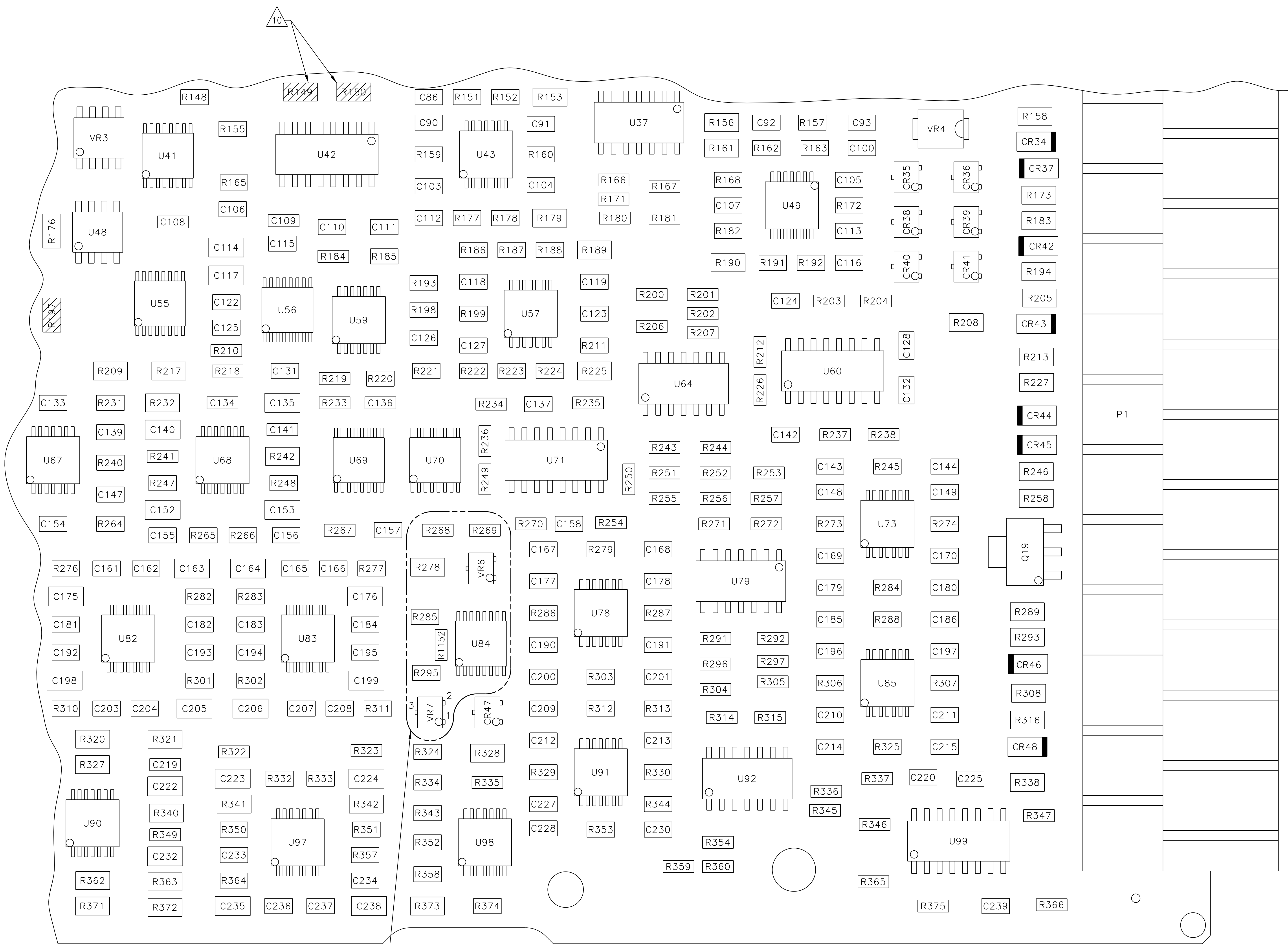
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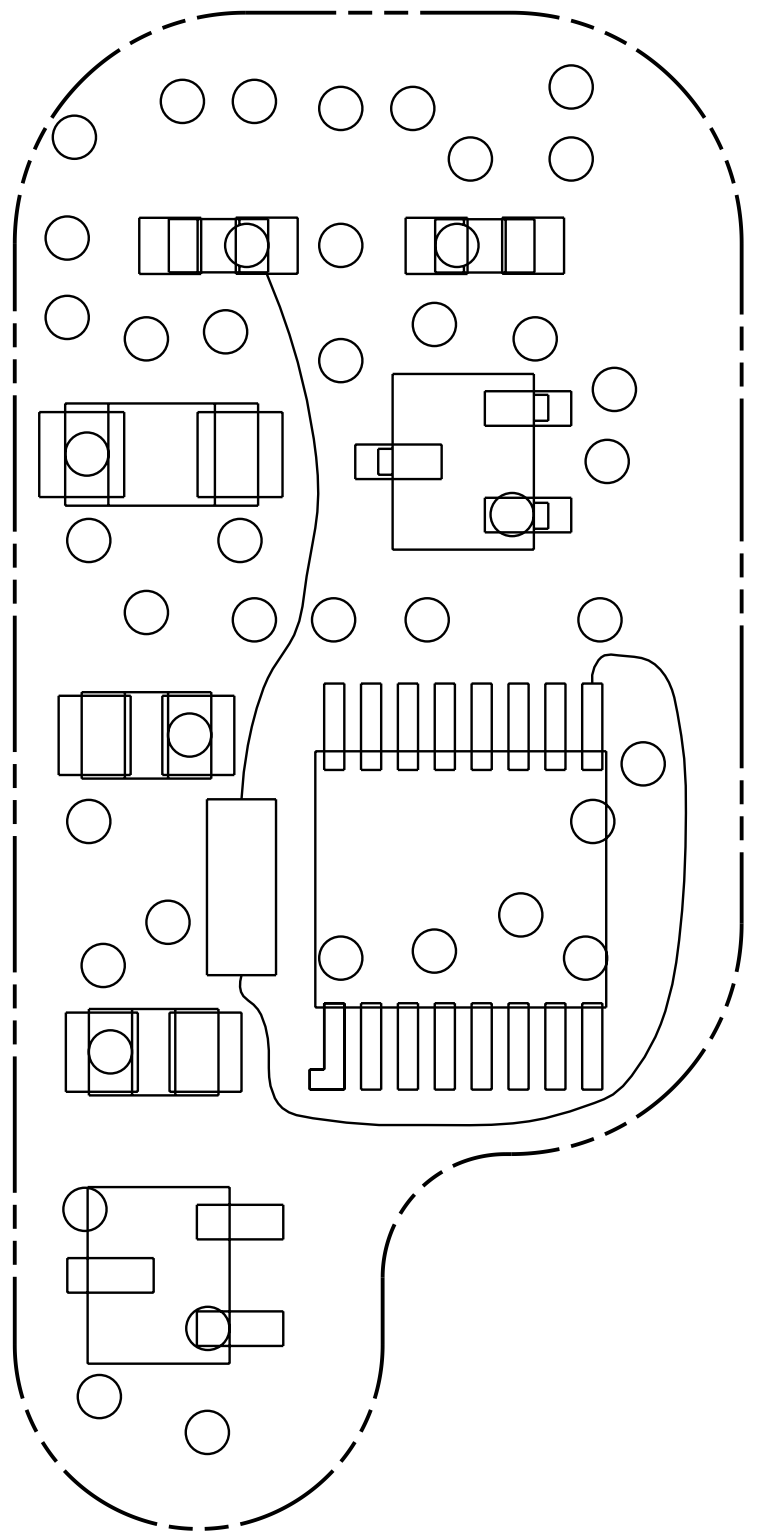
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CRNO.	REV	DESCRIPTION	
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5275	H	SEE DESCRIPTION PER CHANGE REQUEST.	10-10-02

REV		REVISIONS	
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5275	H	SEE DESCRIPTION PER CHANGE REQUEST.	10-10-02

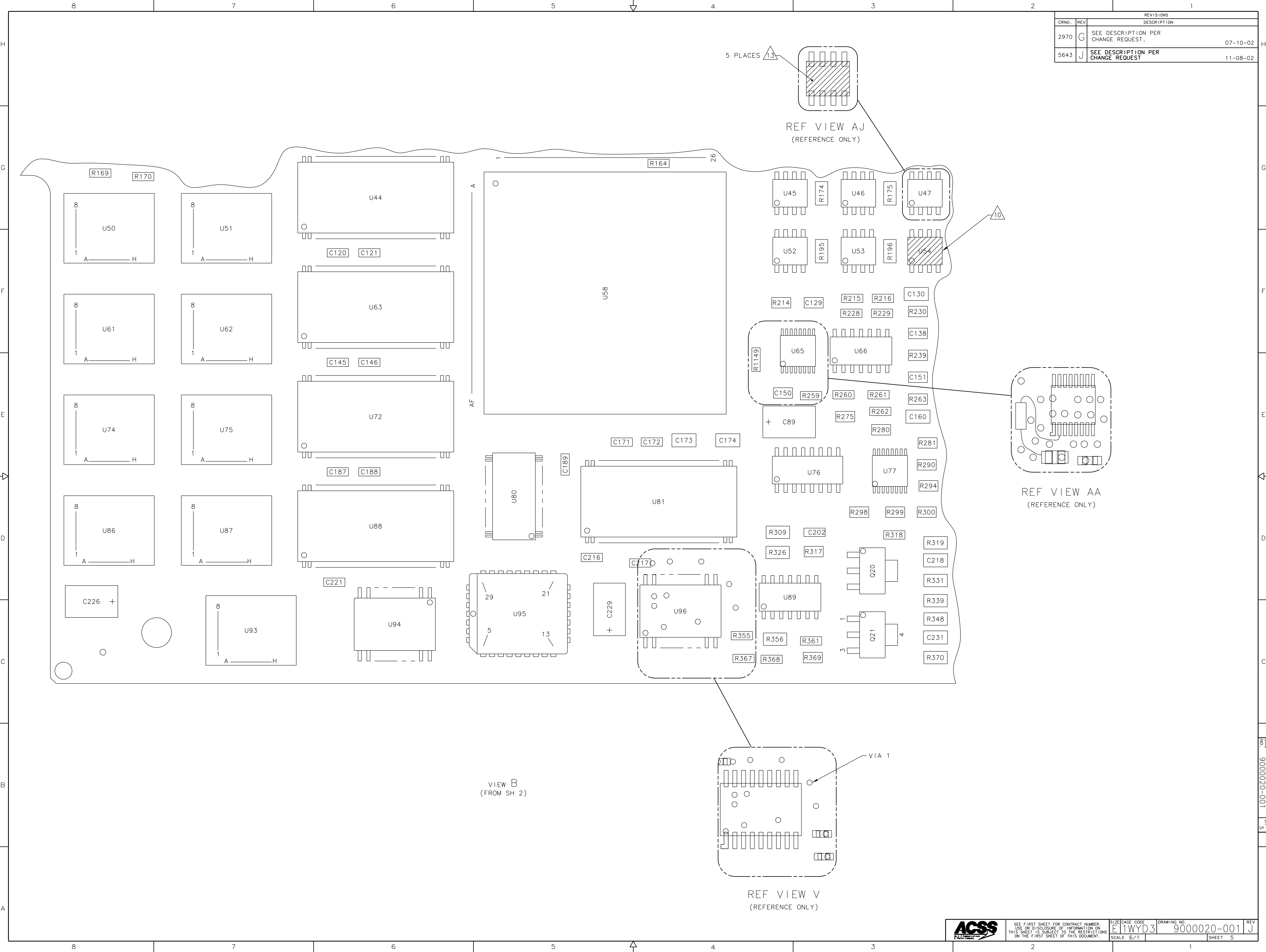


SEE REF VIEW AB

VIEW A
(FROM SH 2)



REF VIEW AB
(REFERENCE ONLY)

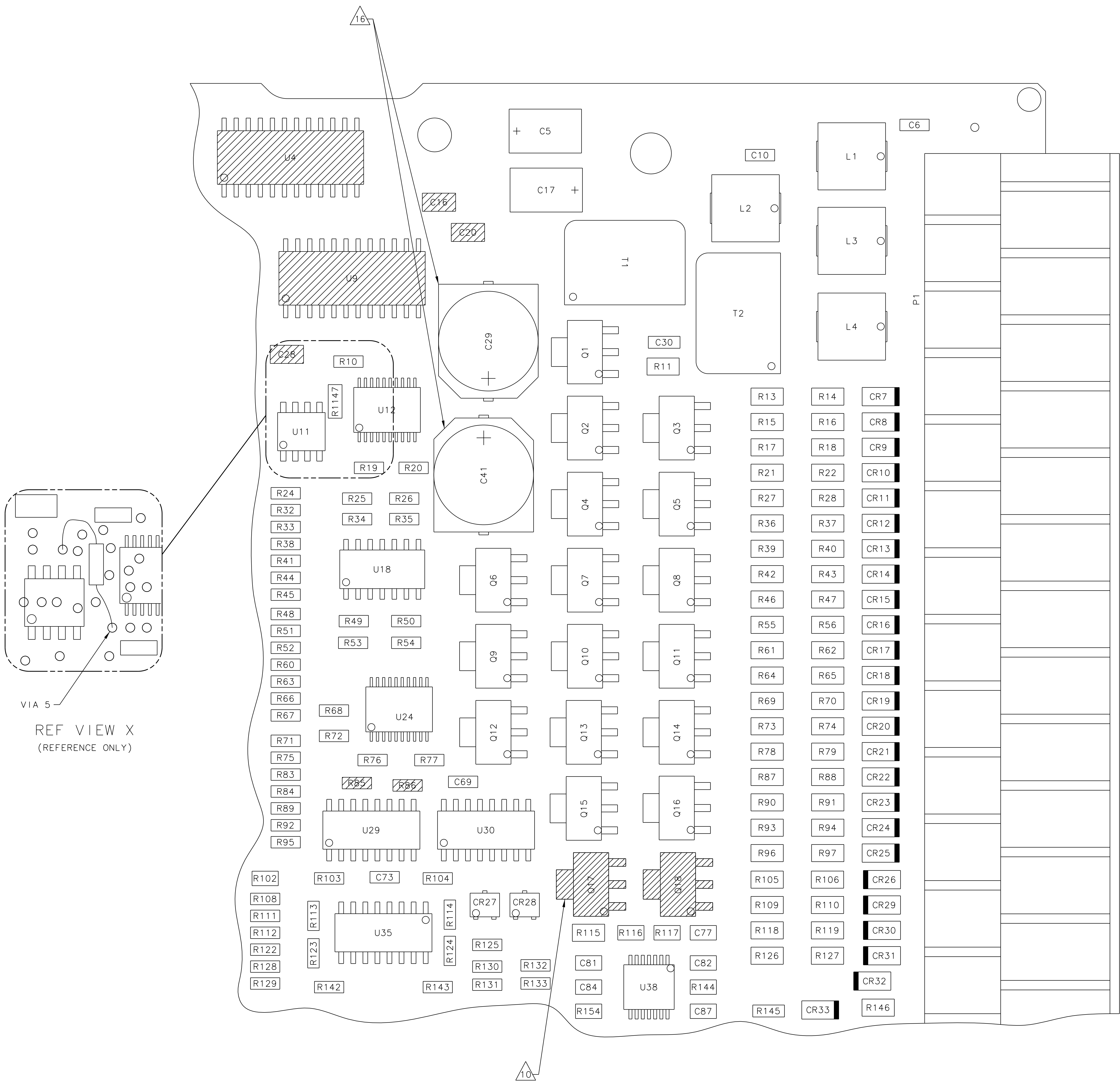


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2970	G	SEE DESCRIPTION PER CHANGE REQUEST.	
5643	J	SEE DESCRIPTION PER CHANGE REQUEST	

07-10-02

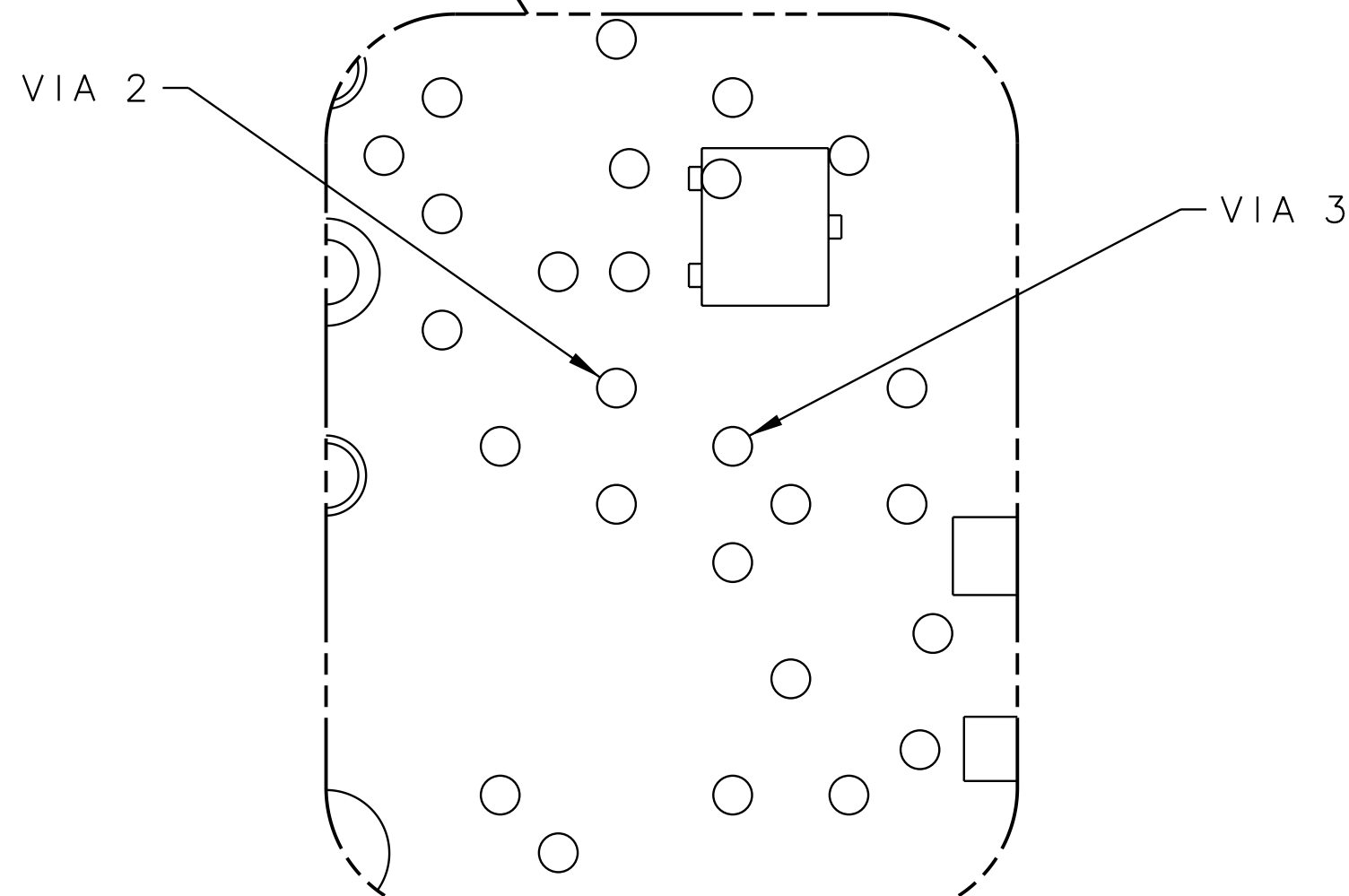
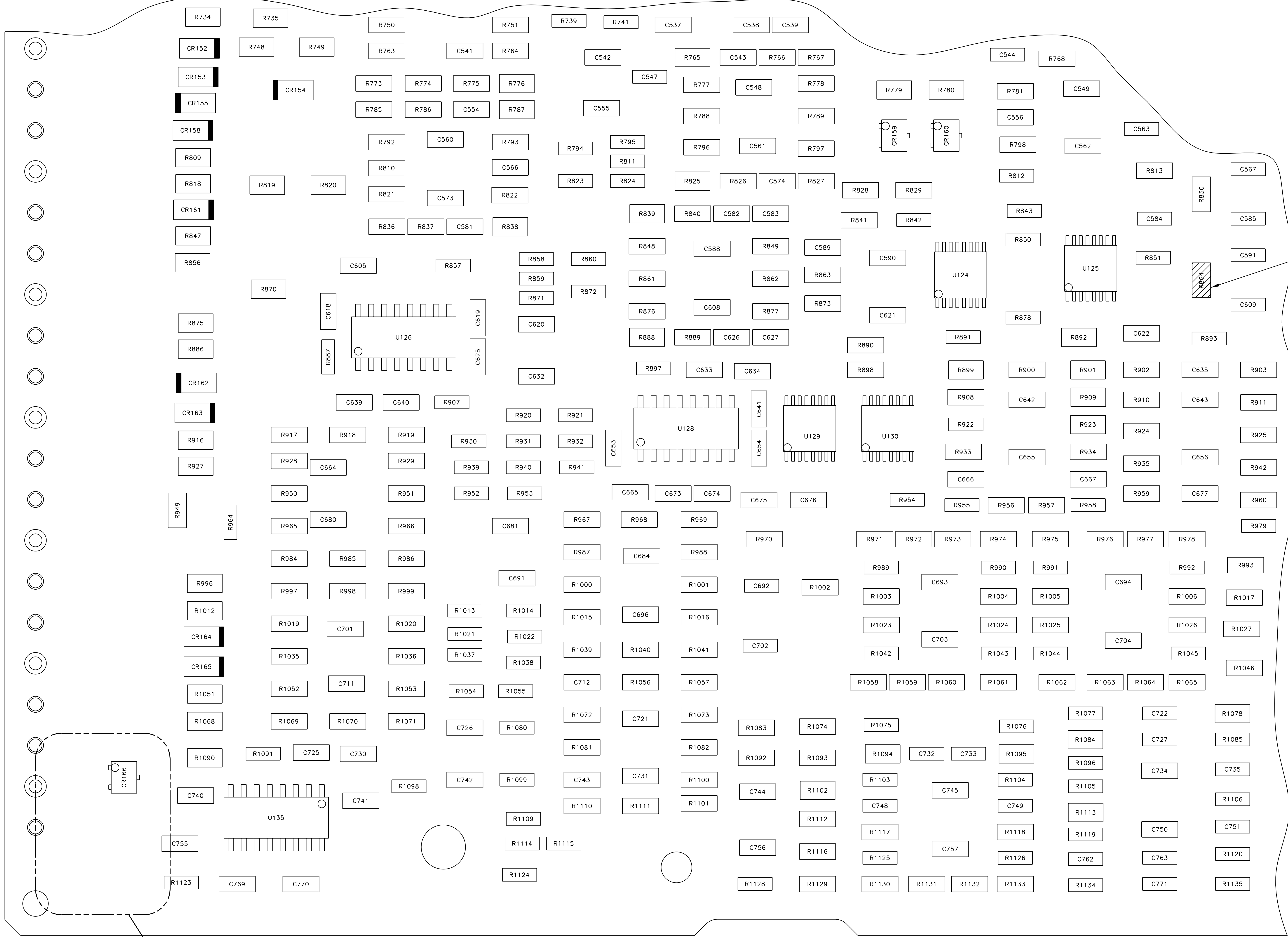
11-08-02

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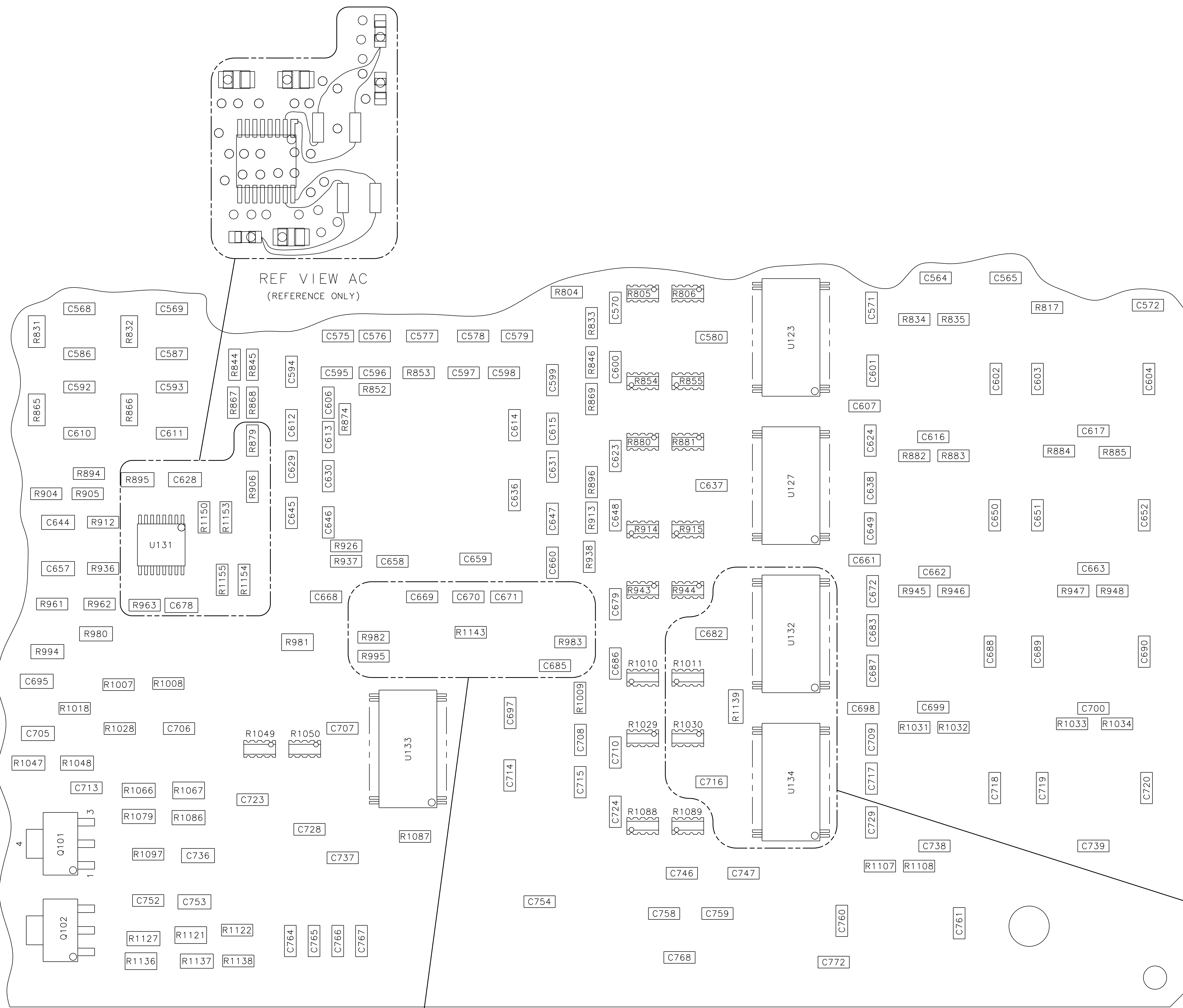
VIEW C
(FROM SH 2)

REVNO.		REV		REVISIONS	
CRNO.		REV		DESCRIPTION	
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				07-10-02	



VIEW F
(FROM SH 3)

CRNO.		REV	REVISIONS	
			DESCRIPTION	
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5275		H	SEE DESCRIPTION PER CHANGE REQUEST.	10-10-02



REF VIEW AC
(REFERENCE ONLY)

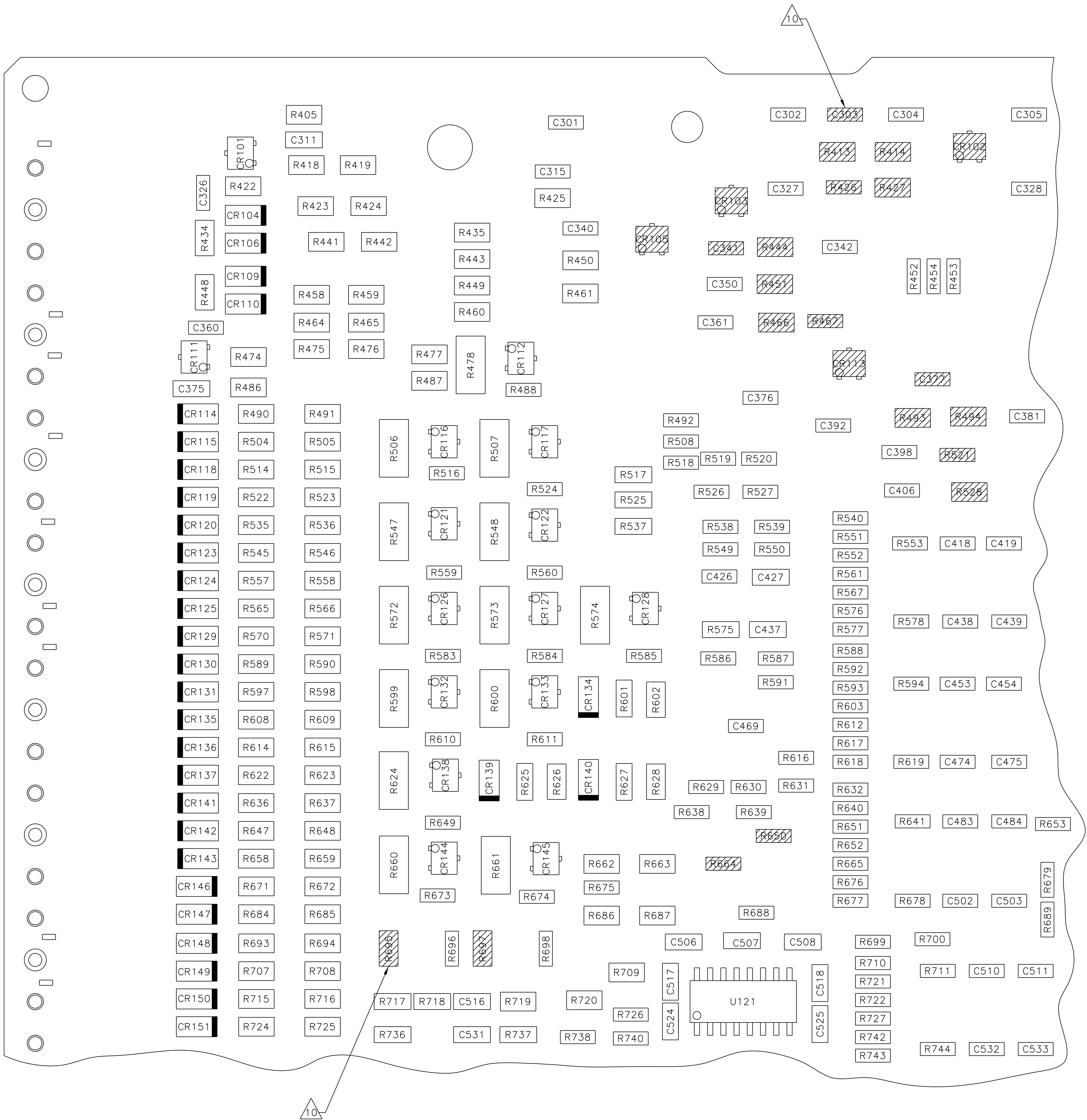
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REF VIEW S
(REFERENCE ONLY)

VIEW G
(FROM SH 3)

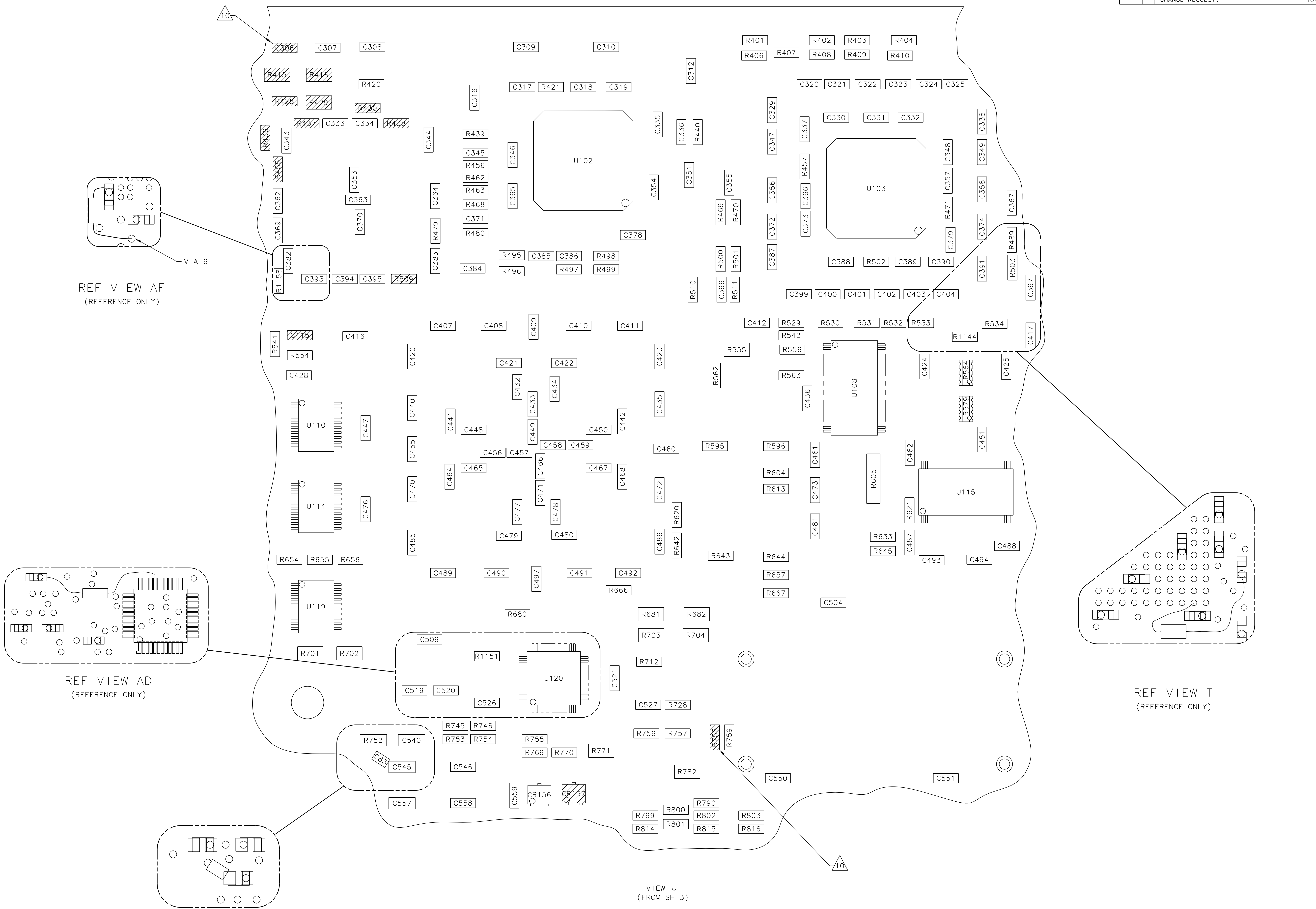


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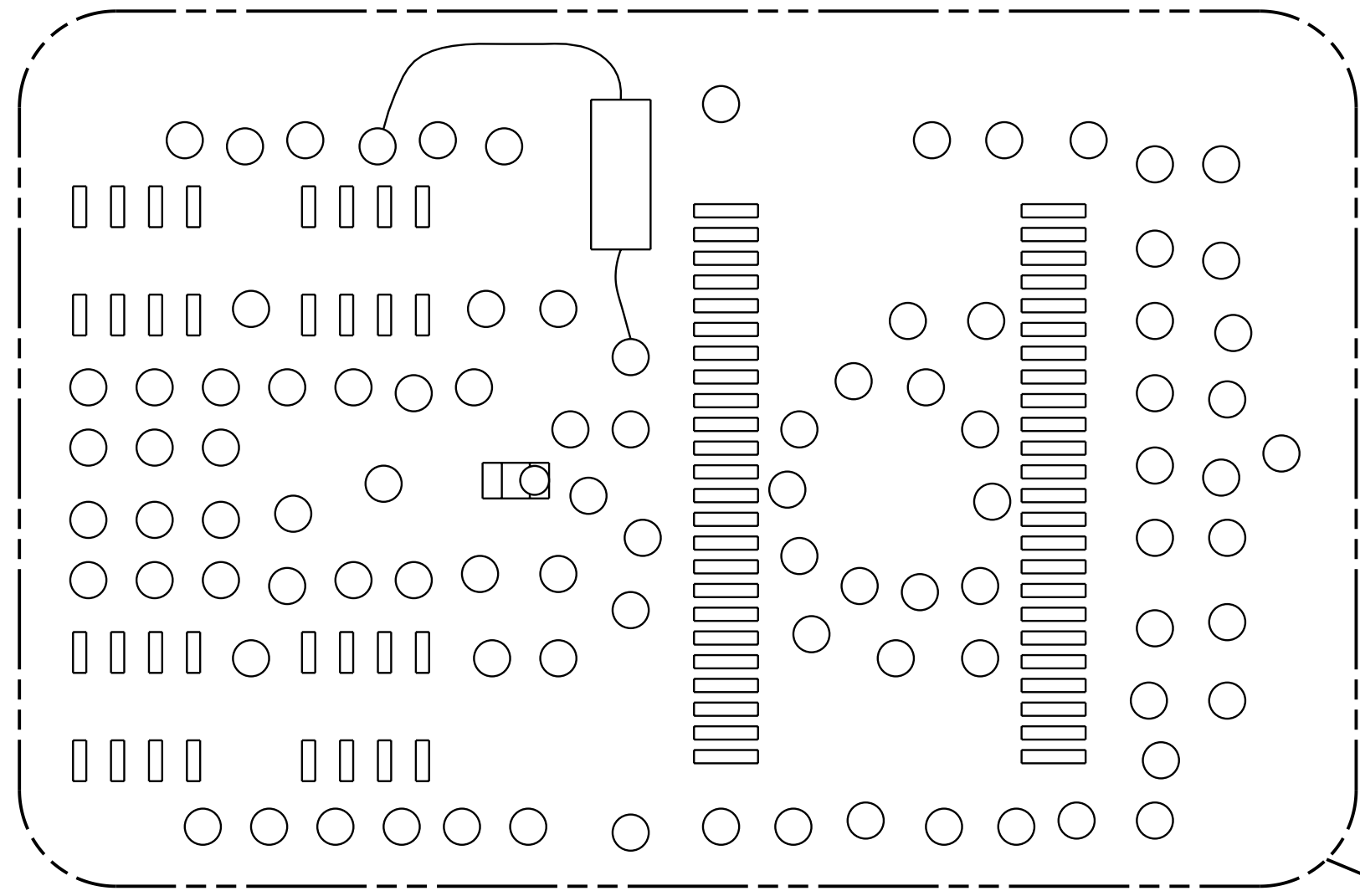


VIEW H
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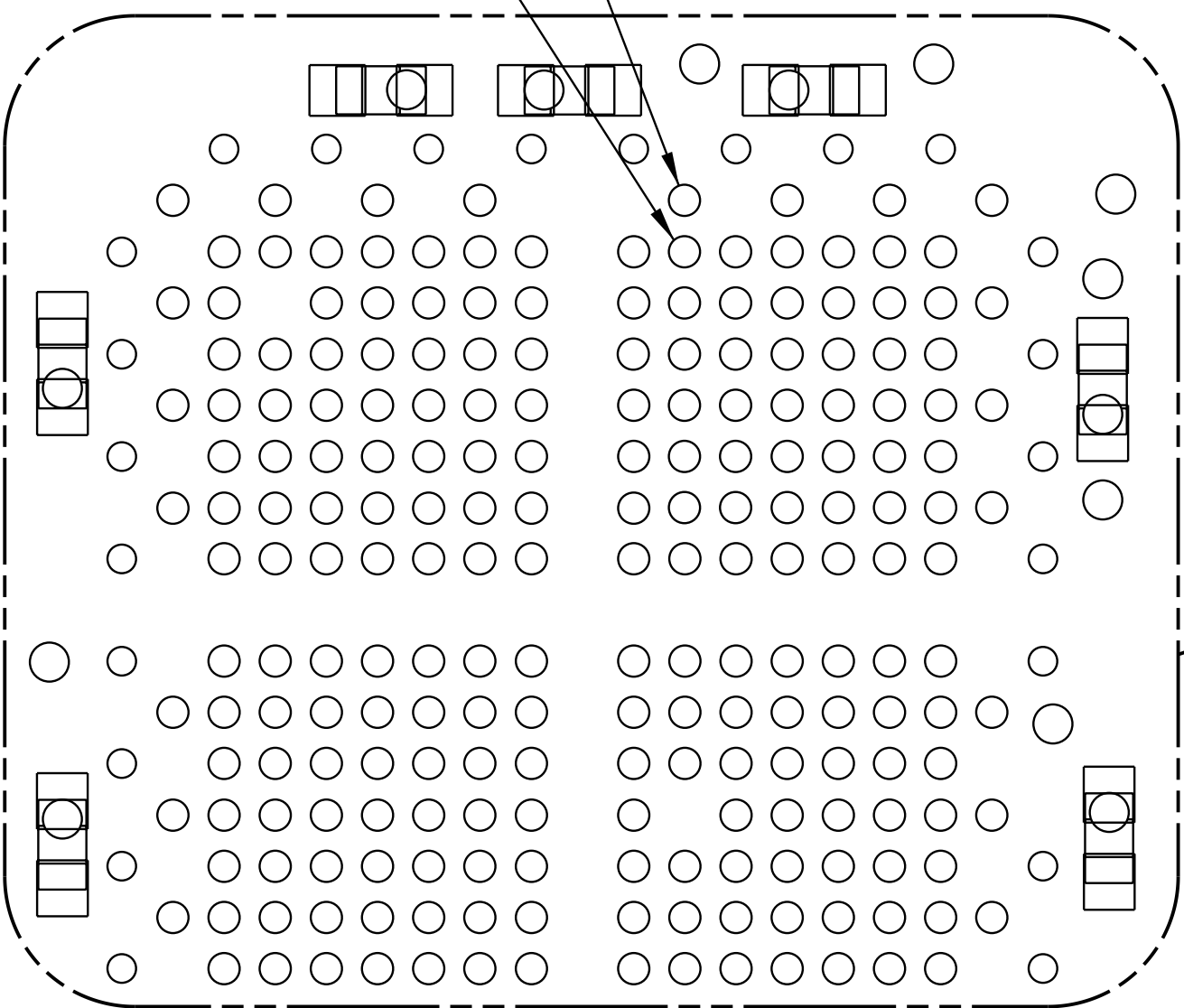
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5275	H	SEE DESCRIPTION PER CHANGE REQUEST.	10-10-02



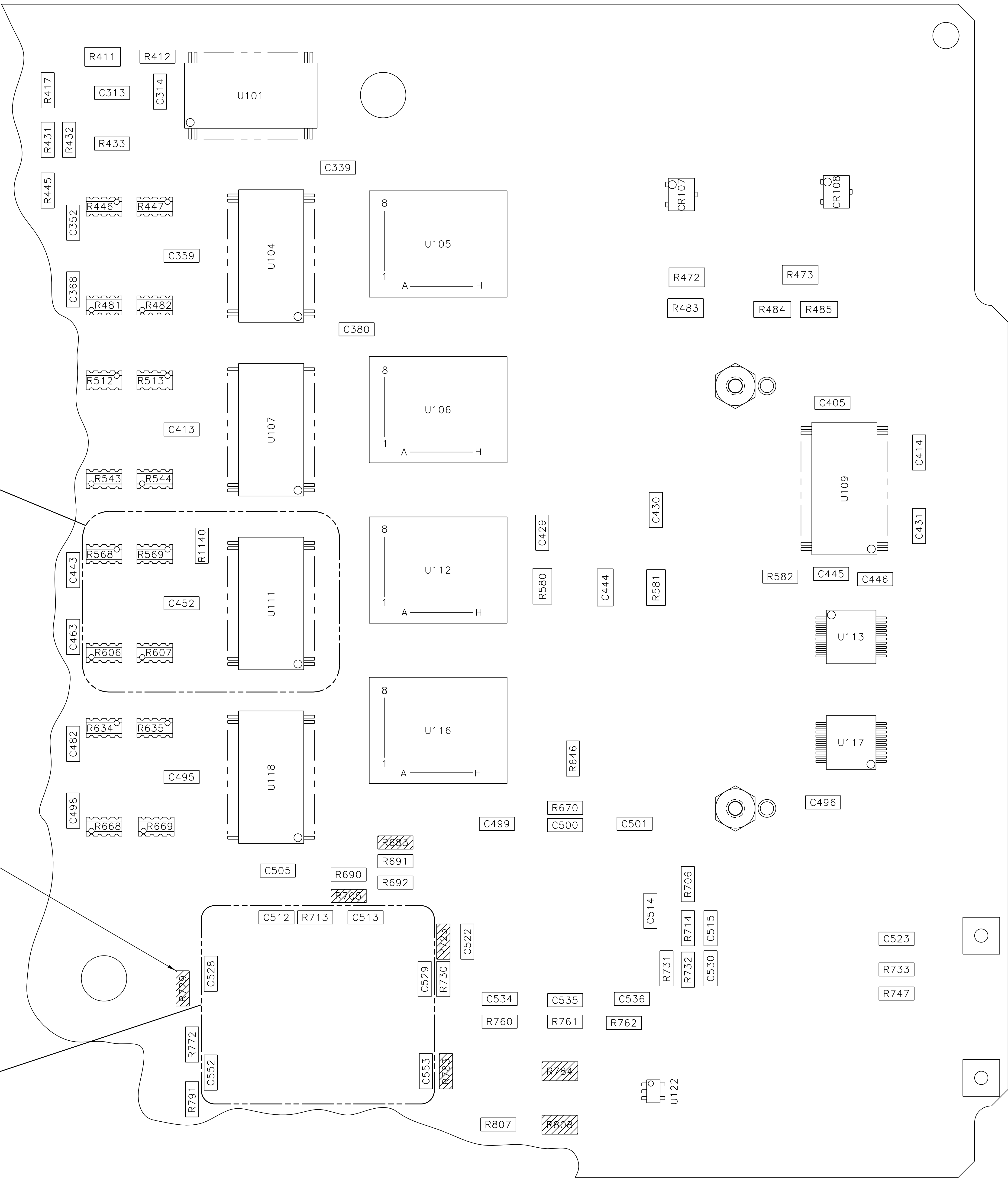
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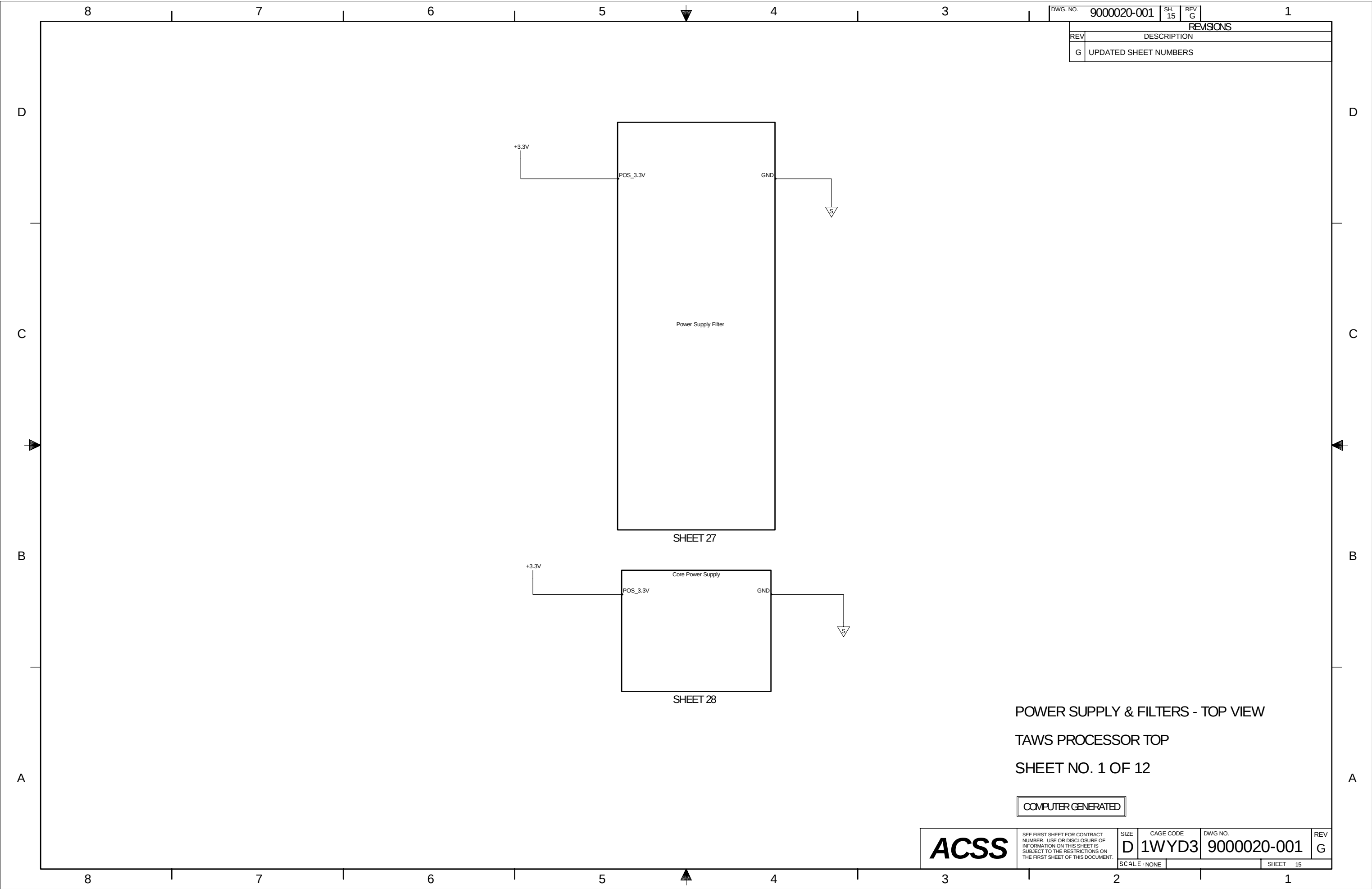
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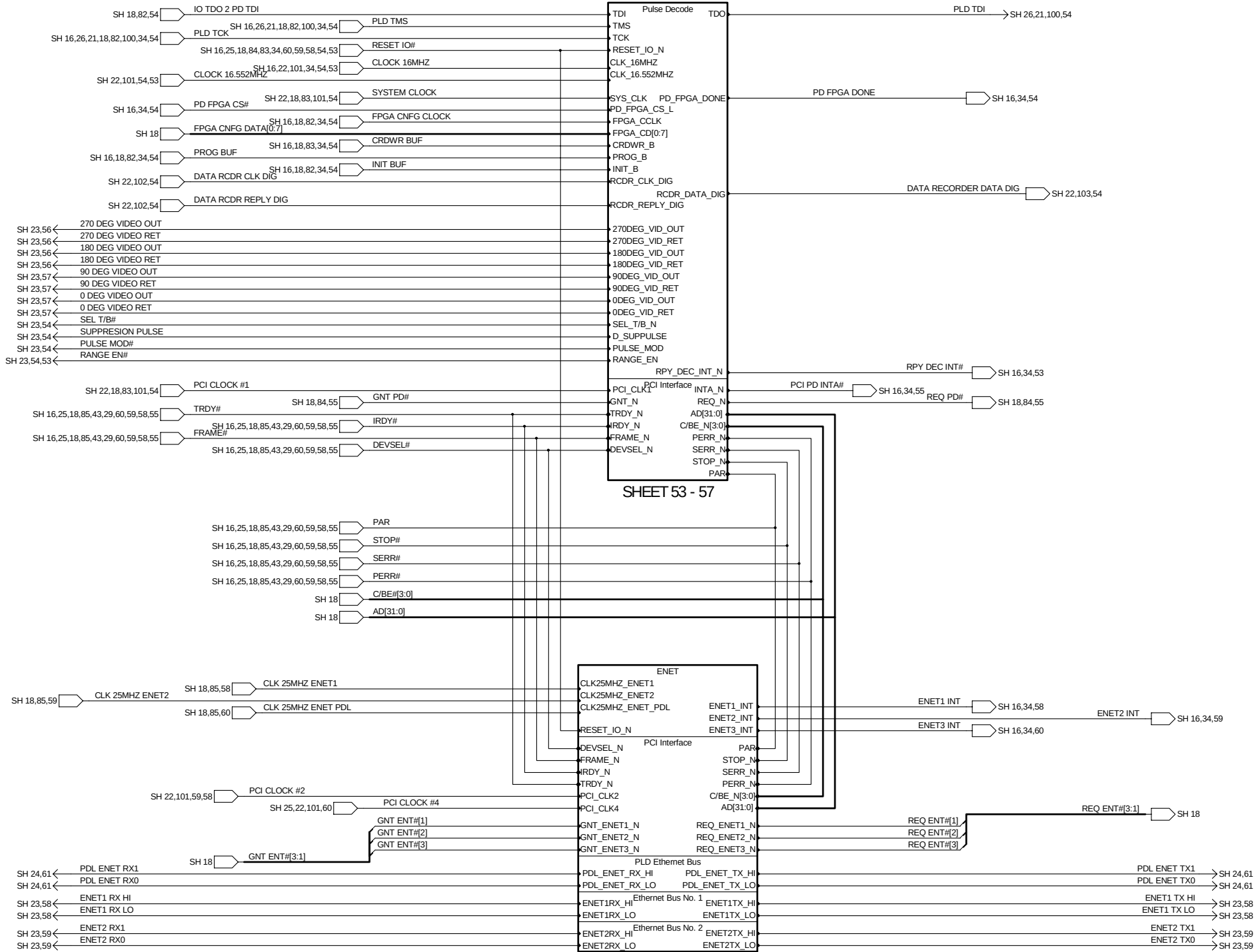
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VIEW K
(FROM SH 3)



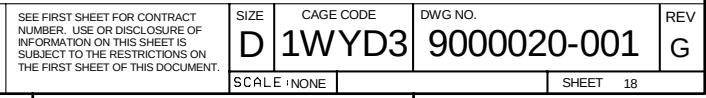
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G	UPDATED SHEET NUMBERS			

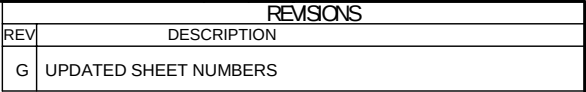


PULSE DECODER & ETHERNET - TOP VIEW
TAWS PROCESSOR TOP
SHEET NO. 3 OF 12

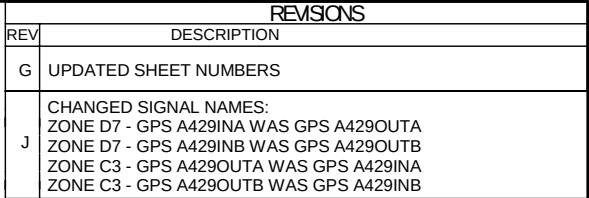
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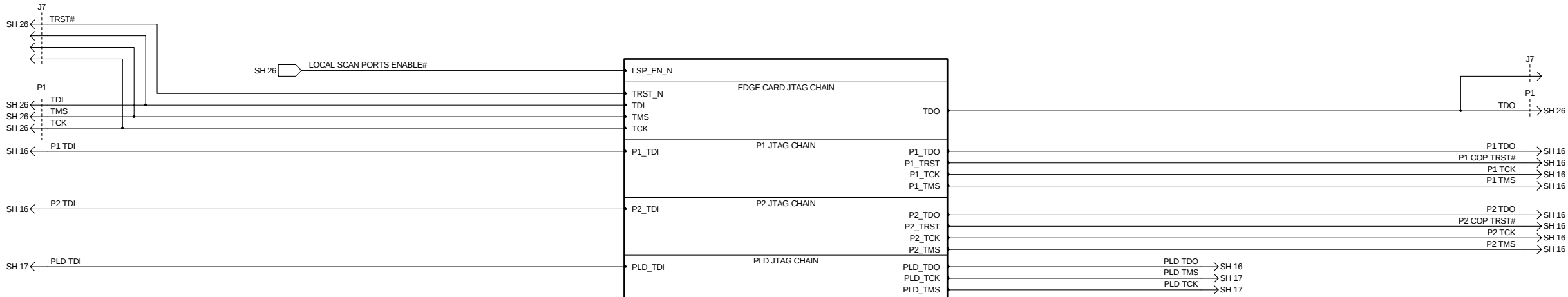


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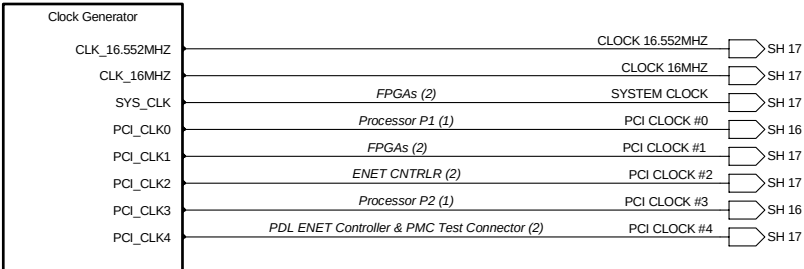
SHEET 100

JTAG SCAN CHAINS
TAWS PROCESSOR TOP
SHEET NO. 7 OF 12

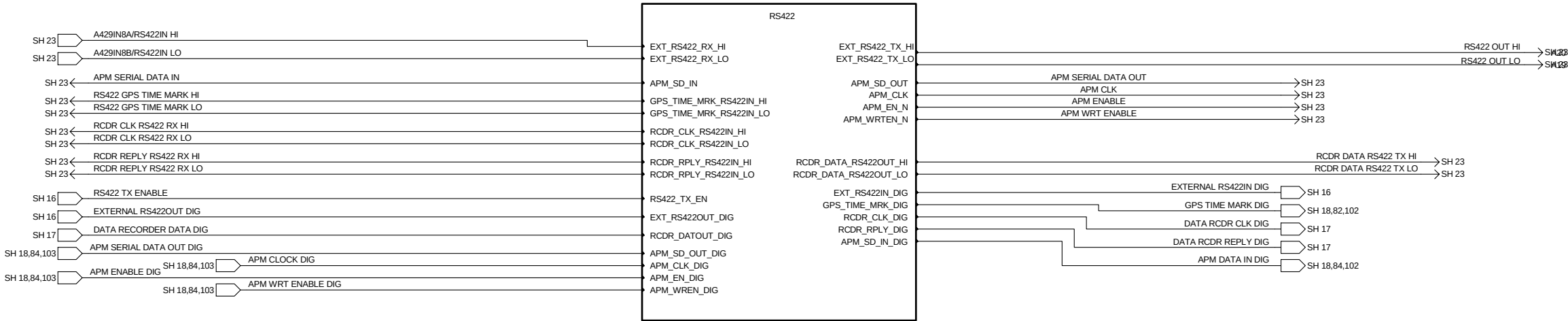
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G	UPDATED SHEET NUMBERS		



SHEET 101



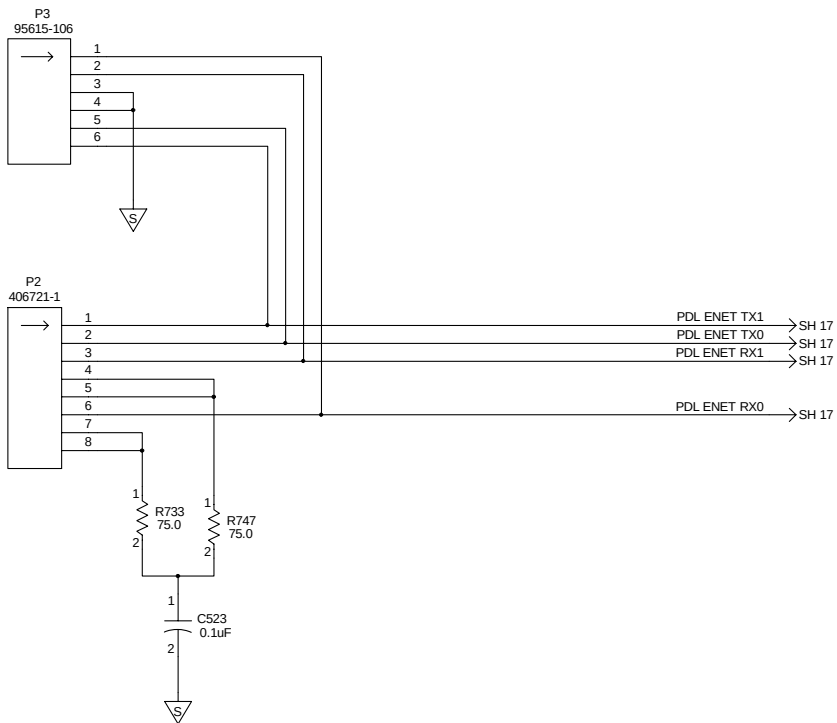
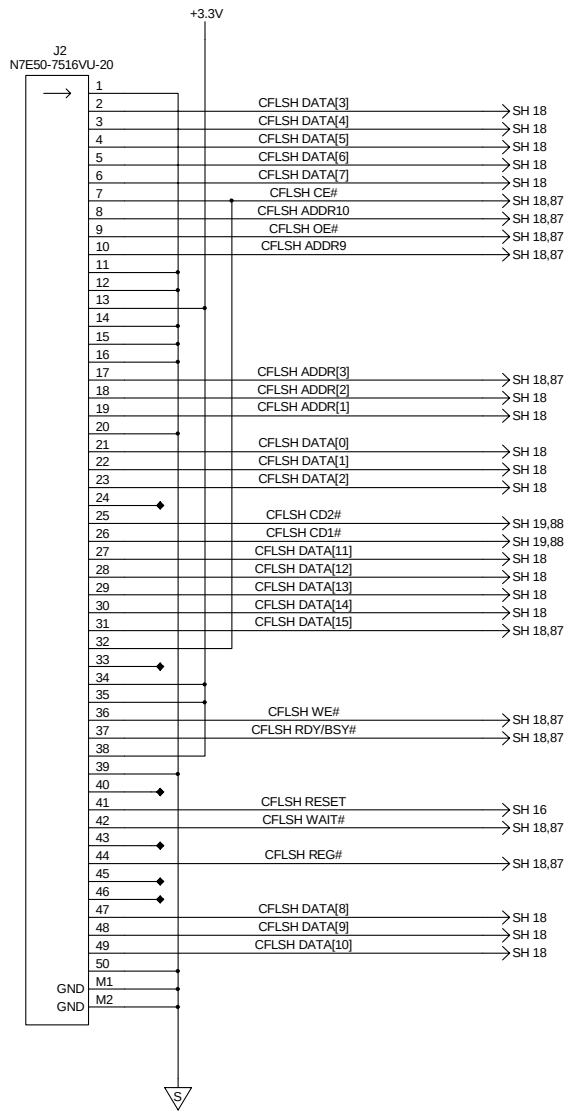
SHEET 102 - 103

CLOCK GENERATION & RS422 TX/RX - TOP VIEW
TAWs PROCESSOR TOP
SHEET NO. 8 OF 12

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DWG. NO.	9000020-001	SH.	24	REV	G
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REV	DESCRIPTION				
G	UPDATED SHEET NUMBERS				



COMPACT FLASH & PDL ETHERNET CONNECTORS
TAWS PROCESSOR TOP
SHEET NO. 10 OF 12

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SIZE

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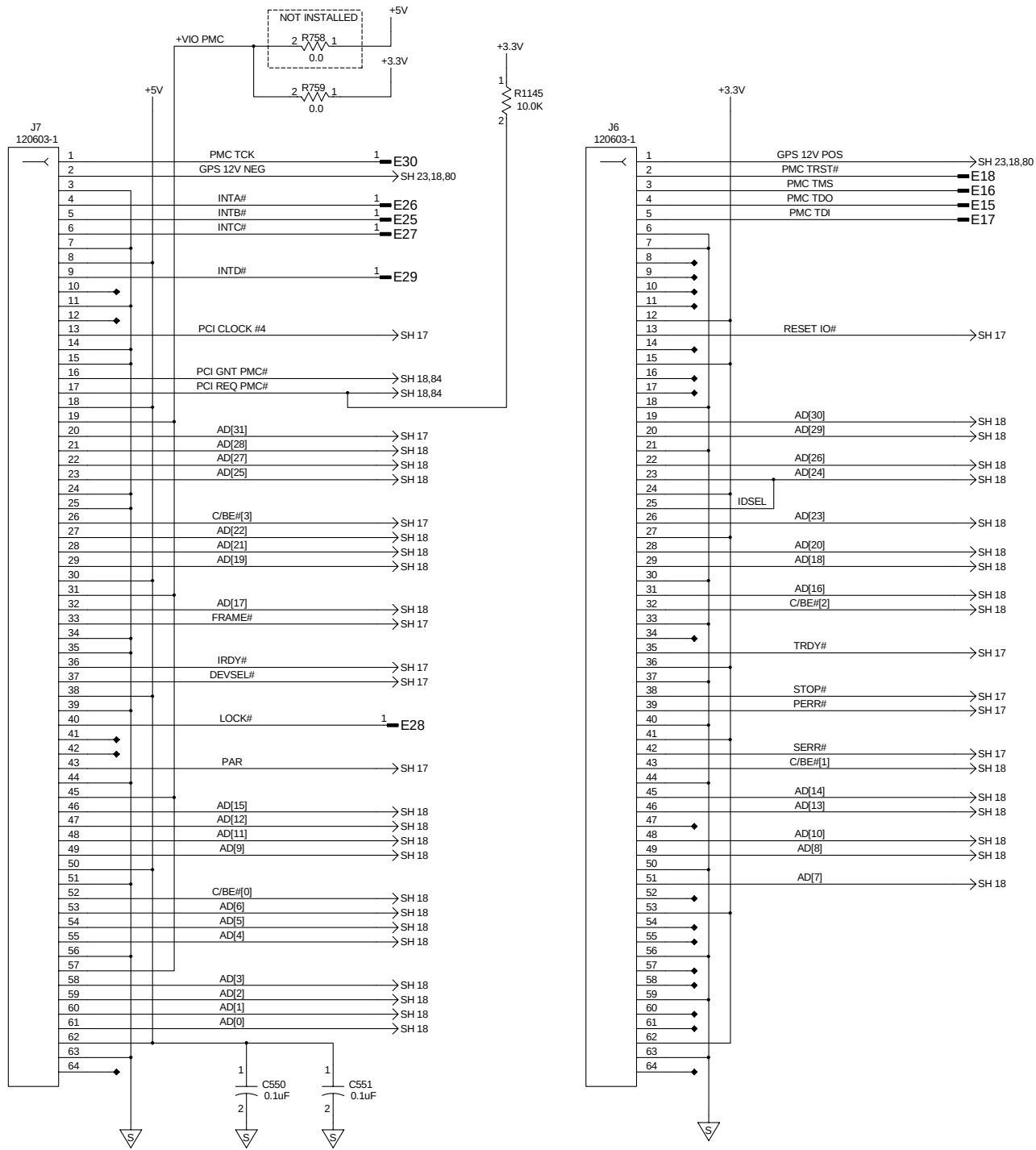
REV

G

SCALE : NONE

SHEET 24

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REV	DESCRIPTION				
G	UPDATED SHEET NUMBERS. ADDED R1145.				



PMC CONNECTOR
TAWs PROCESSOR TOP
SHEET NO. 11 OF 12

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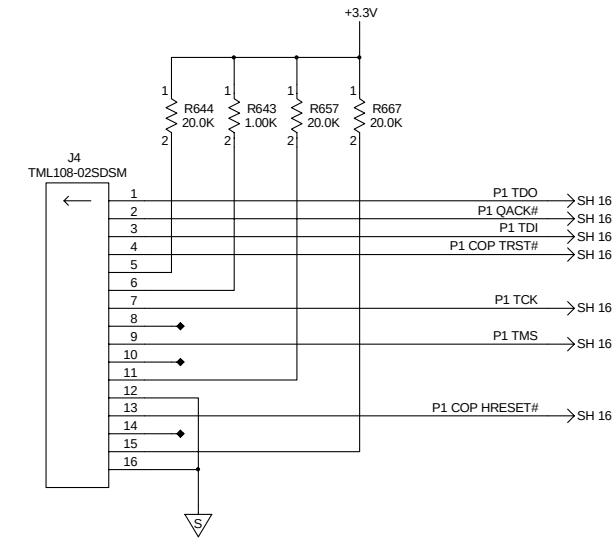
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REV
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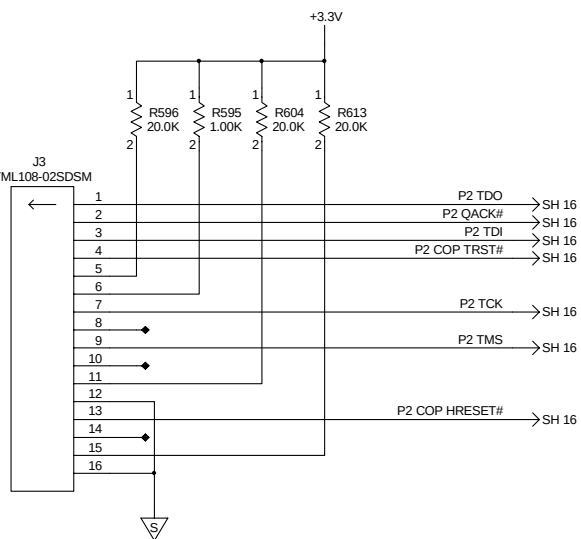
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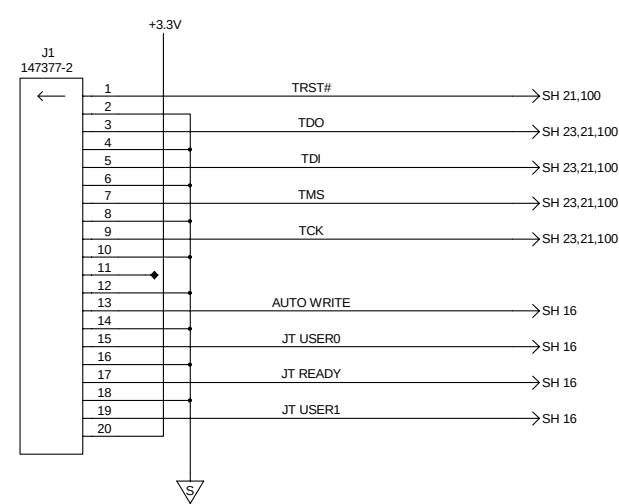
P1 JTAG Emulator Connector



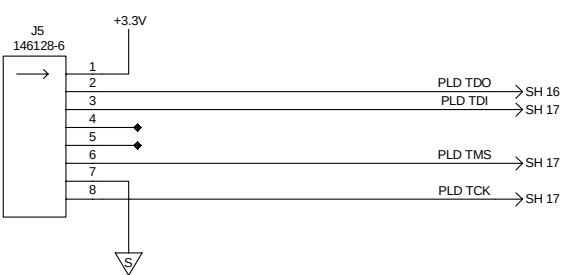
P2 JTAG Emulator Connector



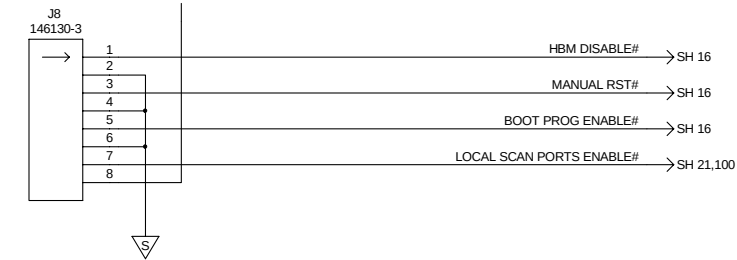
JTAG Test Connector



Programmable Logic Device JTAG Programming Header



Debug Header



TEST, PROGRAMMING & DEBUG CONNECTORS
TAWS PROCESSOR TOP
SHEET NO. 12 OF 12

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SIZE
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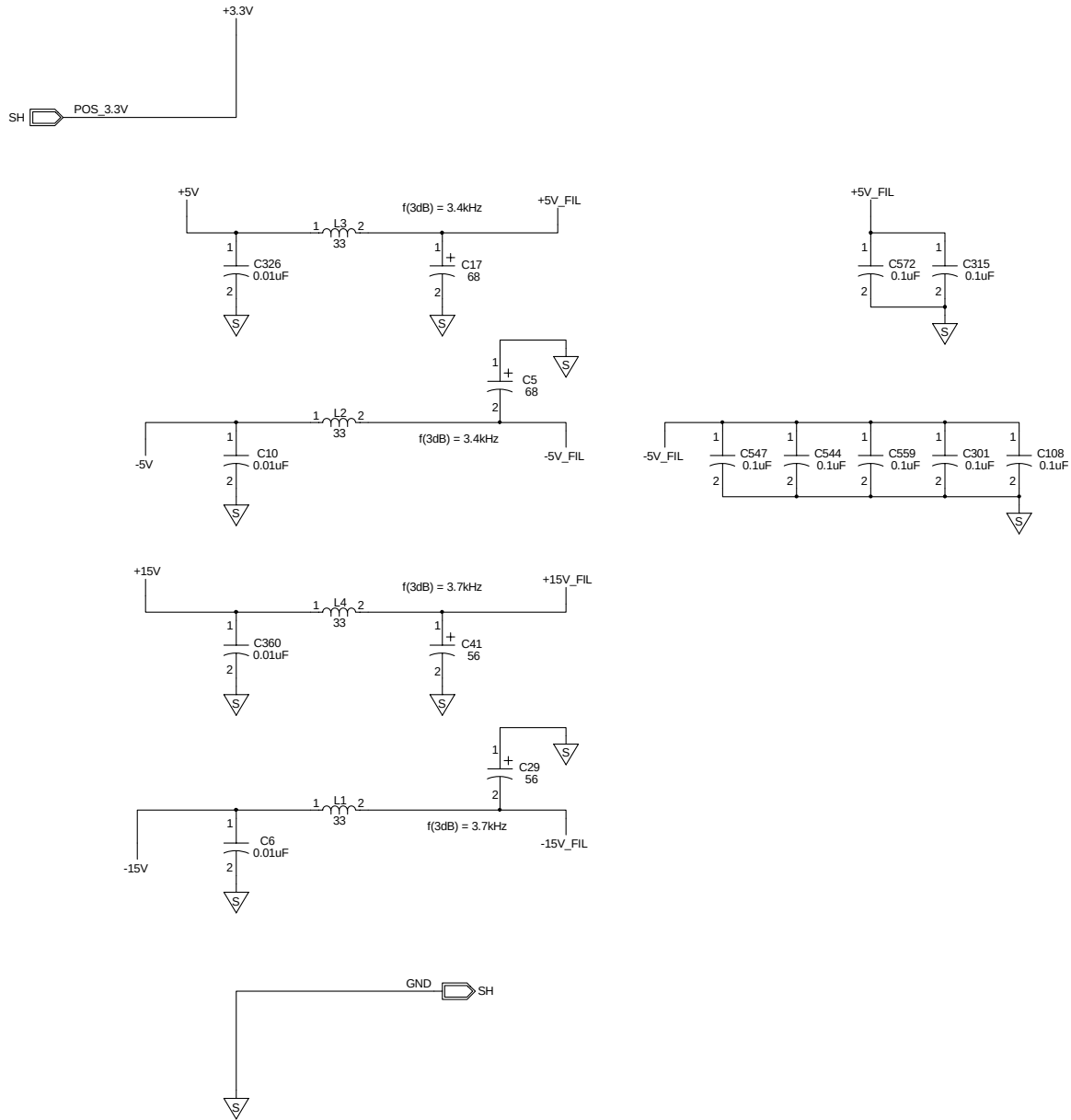
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DWG NO.
REV
G

SCALE: NONE

SHEET 26

REVISIONS	
REV	DESCRIPTION
G	UPDATED SHEET NUMBERS



POWER SUPPLY FILTER
SHEET NO. 1 OF 1

COMPUTER GENERATED

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SIZE

D

CAGE CODE

1WYD3

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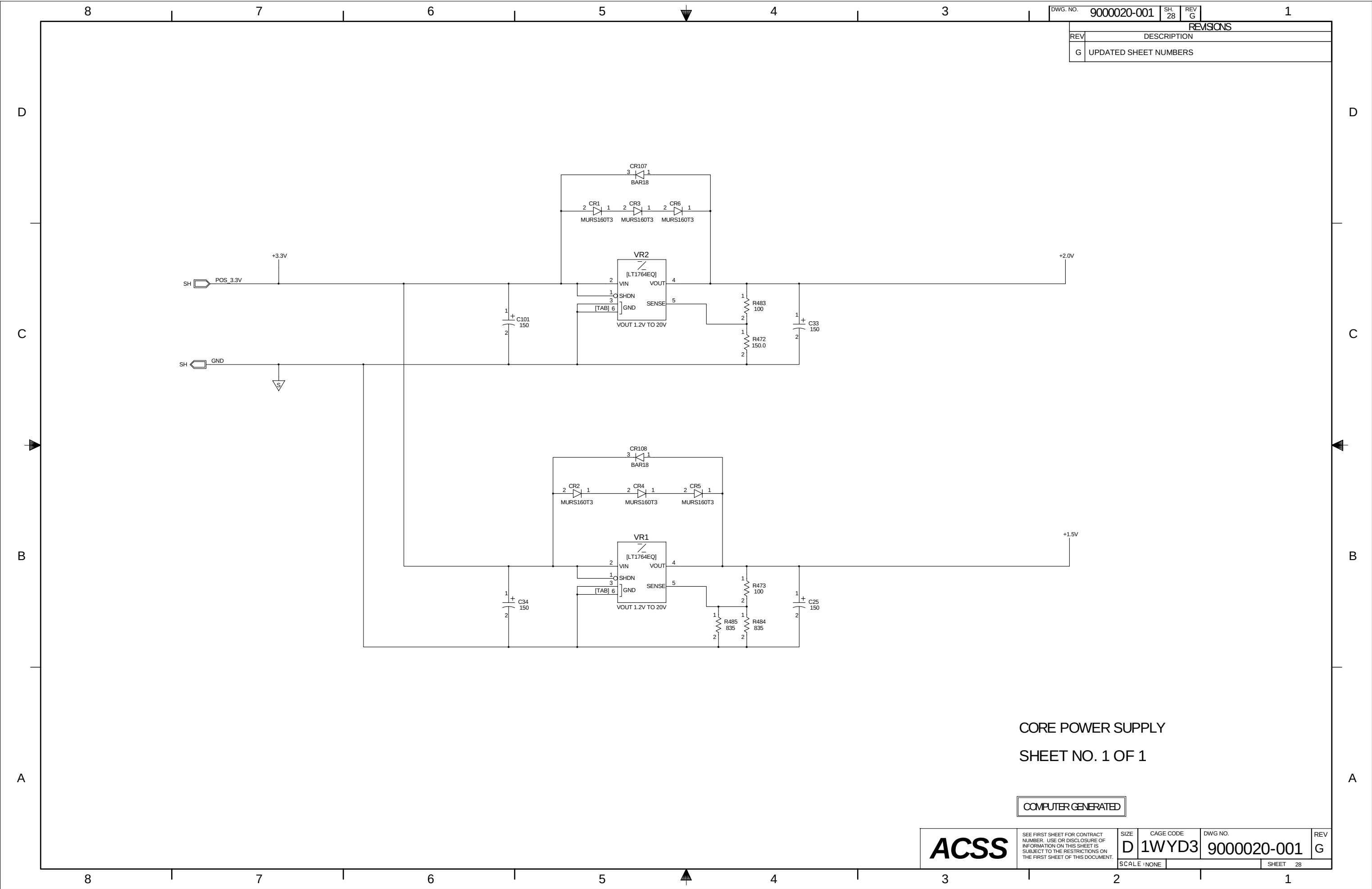
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REV

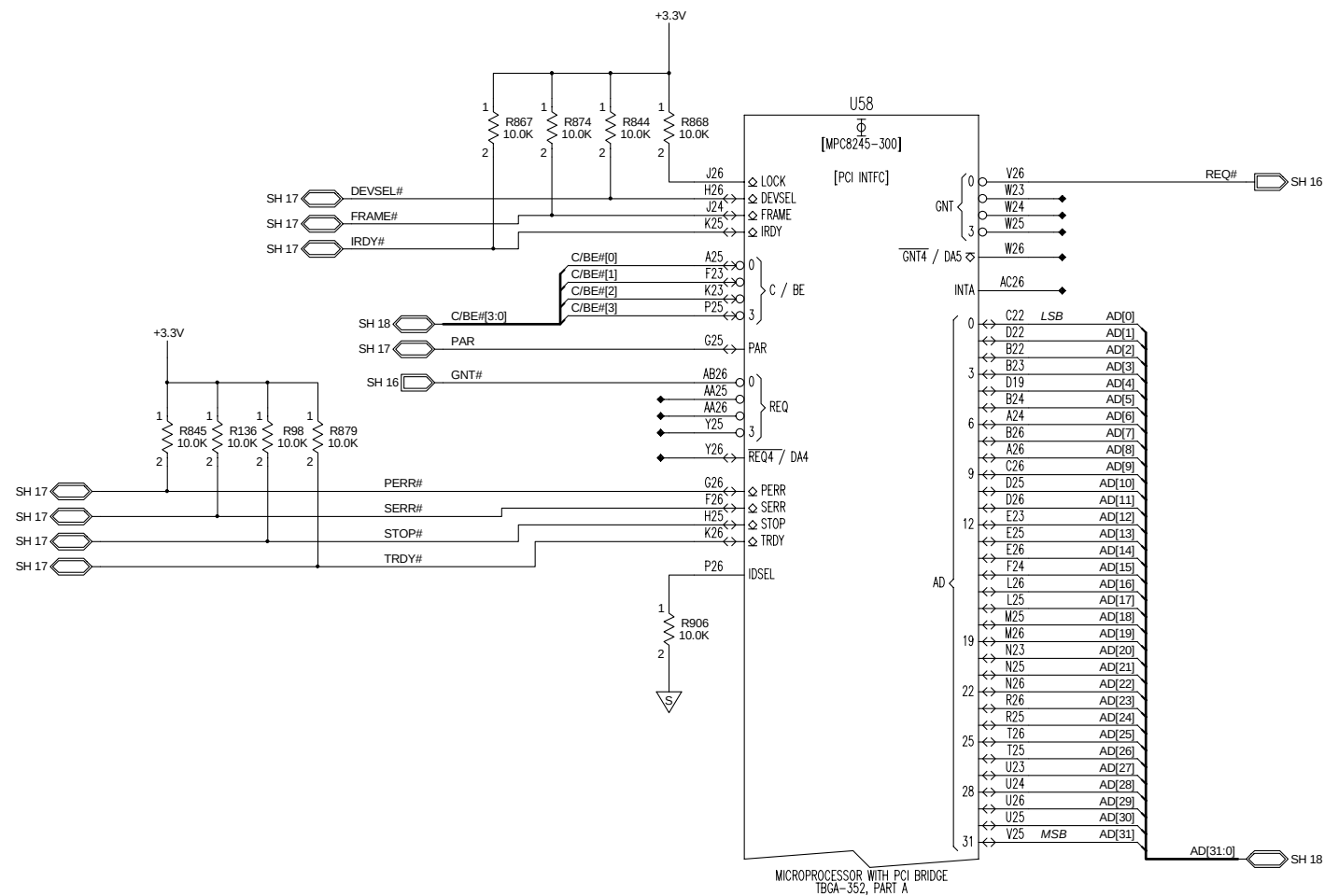
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SCALE: NONE

SHEET 27



DWG. NO.	9000020-001	SH.	29	REV	G
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REV	DESCRIPTION				
G	CHANGE U58 - WAS MPC8245-250. UPDATED SHEET NUMBERS.				



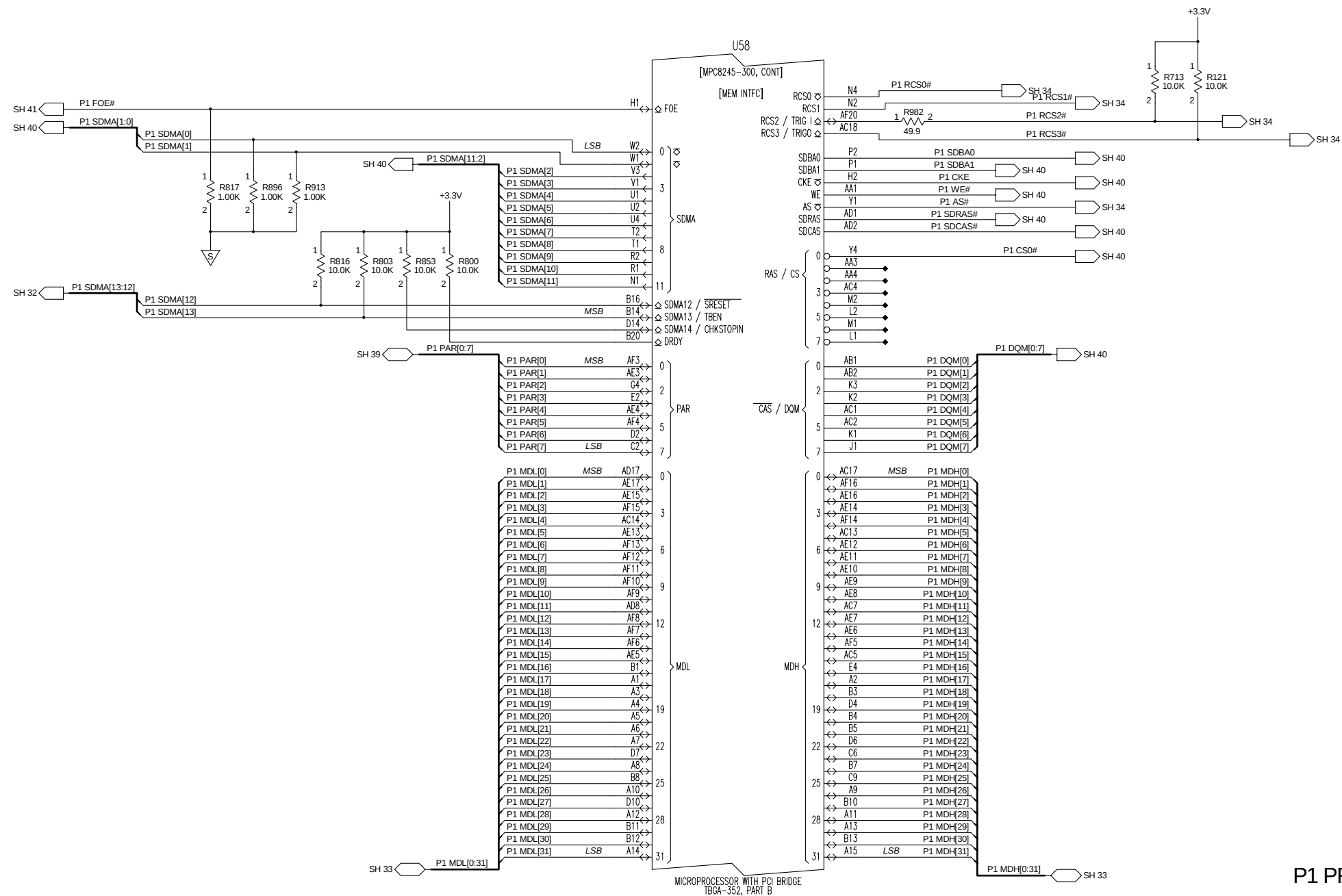
P1 PROCESSOR - MPC8245
PCI INTERFACE
SHEET NO. 1 OF 14

COMPUTER GENERATED

- Notes:
1. When external arbiter is used REQ0 becomes the PCI GNT input pin and GNT0 becomes the PCI REQ output pin.
 2. MPC8245 Data sheet recommends pull-up/down resistors of 2K to 10K.

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		D	1WYD3	9000020-001	G
		SCALE: NONE		SHEET 29	

DWG. NO.	9000020-001	SH.	30	REV	G	1
REVISIONS						
REV	DESCRIPTION					
G	CHANGE U58 - WAS MPC8245-250. UPDATED SHEET NUMBER.					



P1 PROCESSOR - MPC8245
MEMORY INTERFACE
SHEET NO. 2 OF 14

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SIZE
D 1WYD3

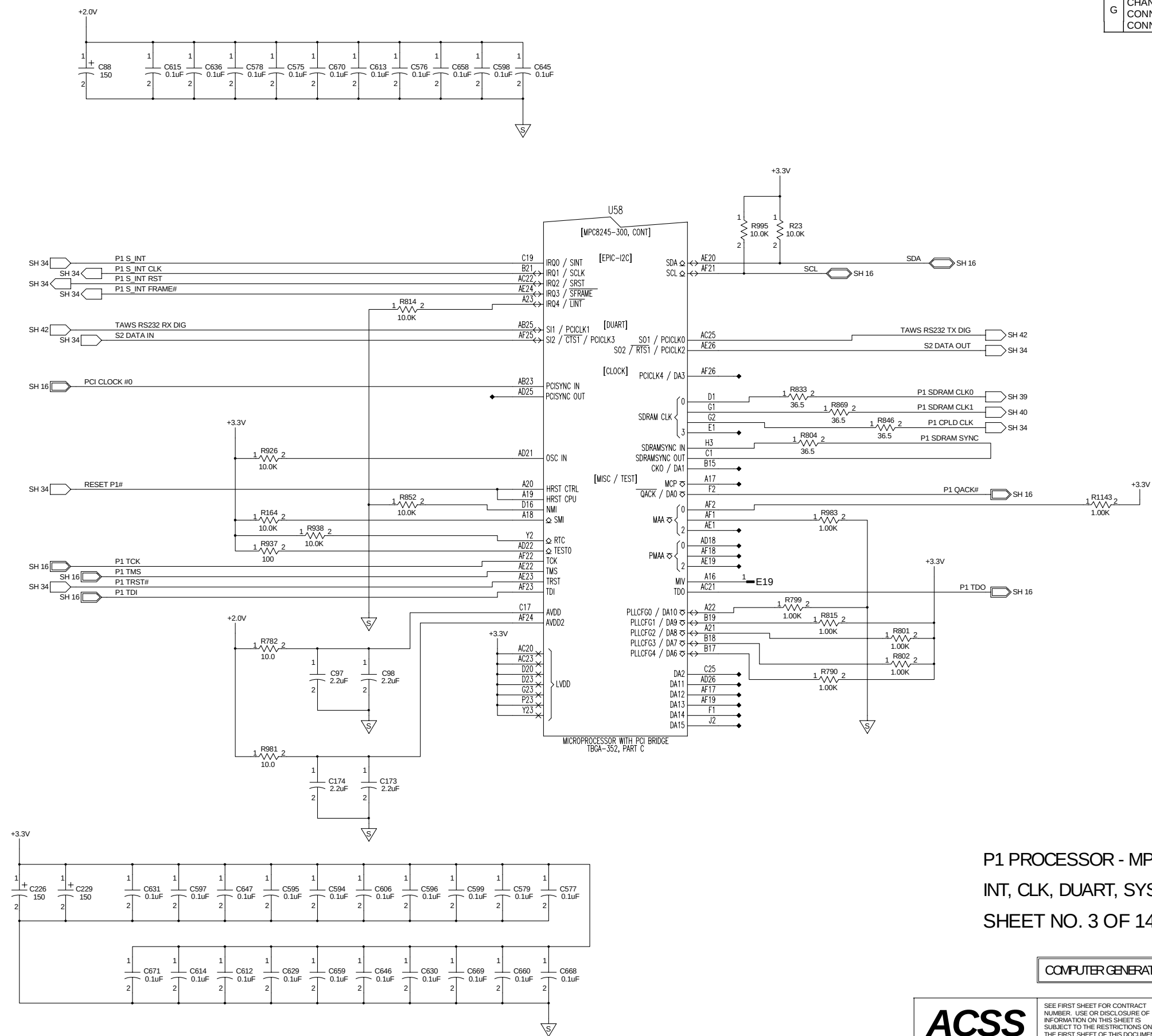
SCALE: NONE

DWG. NO.
9000020-001

REV
G

SHEET 30

DWG. NO.	9000020-001	SH.	31	REV	G
REVISONS					
REV	DESCRIPTION				
G	CHANGE U58 - WAS MPC8245-250. ADDED R1143. CHANGE R799 CONNECTION FROM 3.3V TO GND. CHANGE R790 AND R815 CONNECTION FROM GND TO 3.3V. UPDATED SHEET NUMBER.				

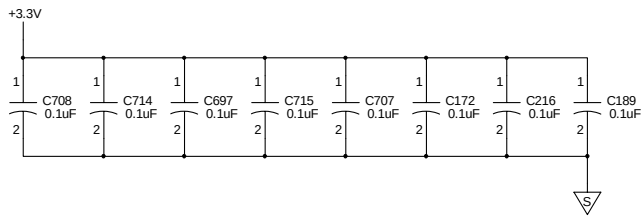
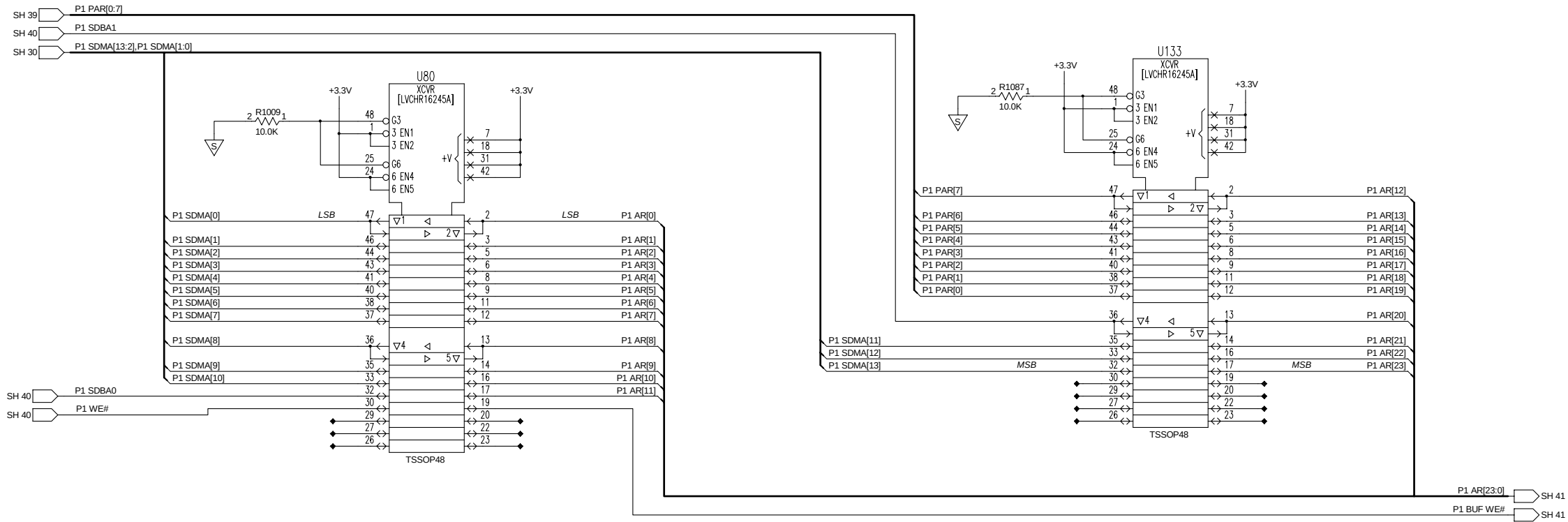


P1 PROCESSOR - MPC8245
INT, CLK, DUART, SYS, I2C, DEBUG & TST INTERFACE
SHEET NO. 3 OF 14

COMPUTER GENERATED

ACSS	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	DWG NO.	REV
		D	1WYD3	9000020-001	G
		SCALE: NONE		SHEET 31	

DWG. NO.	9000020-001	SH.	32	REV	G
REVISIONS					
REV	DESCRIPTION				
G	UPDATED SHEET NUMBERS				



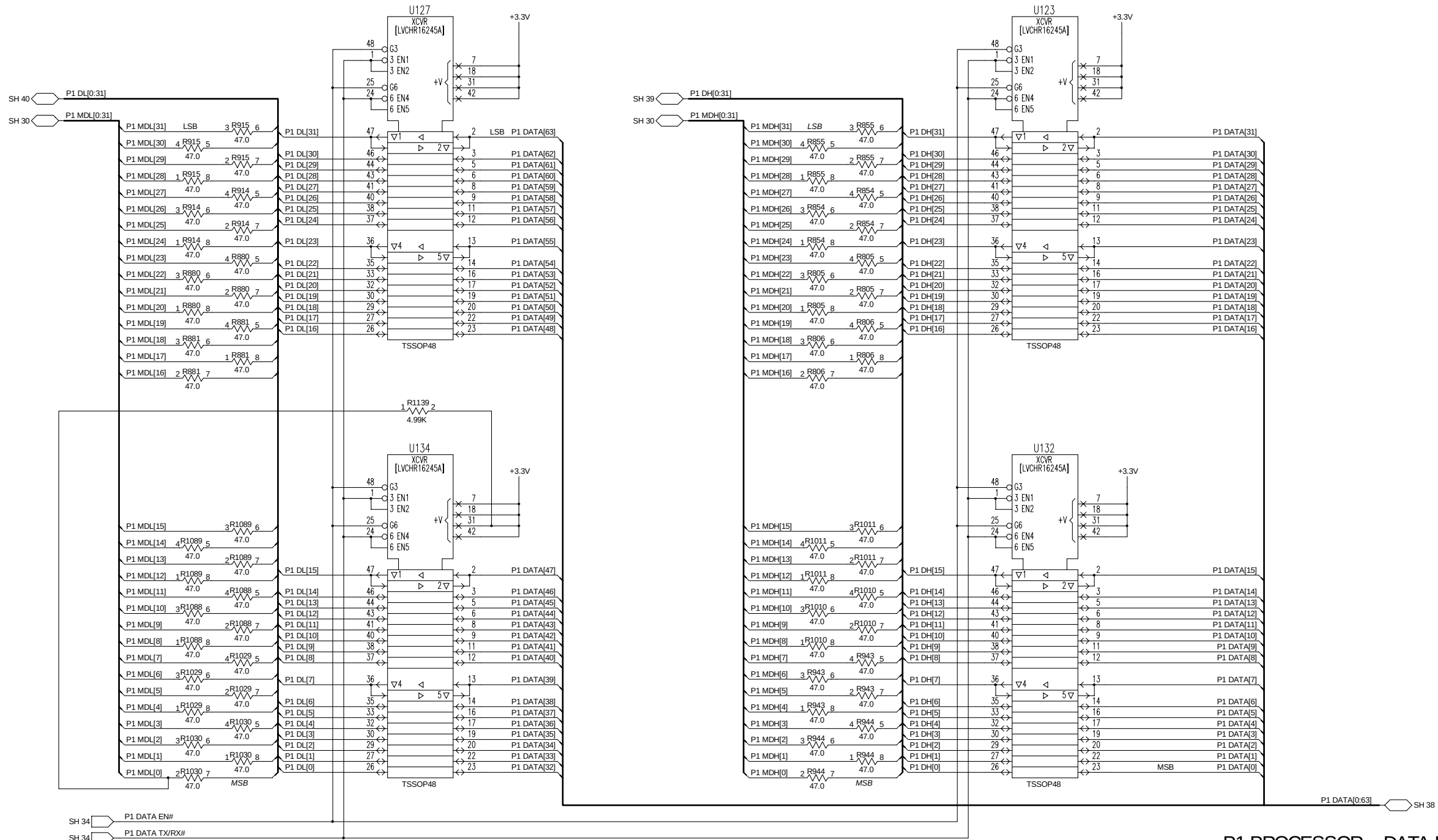
P1 PROCESSOR - ADDRESS BUS BUFFERS

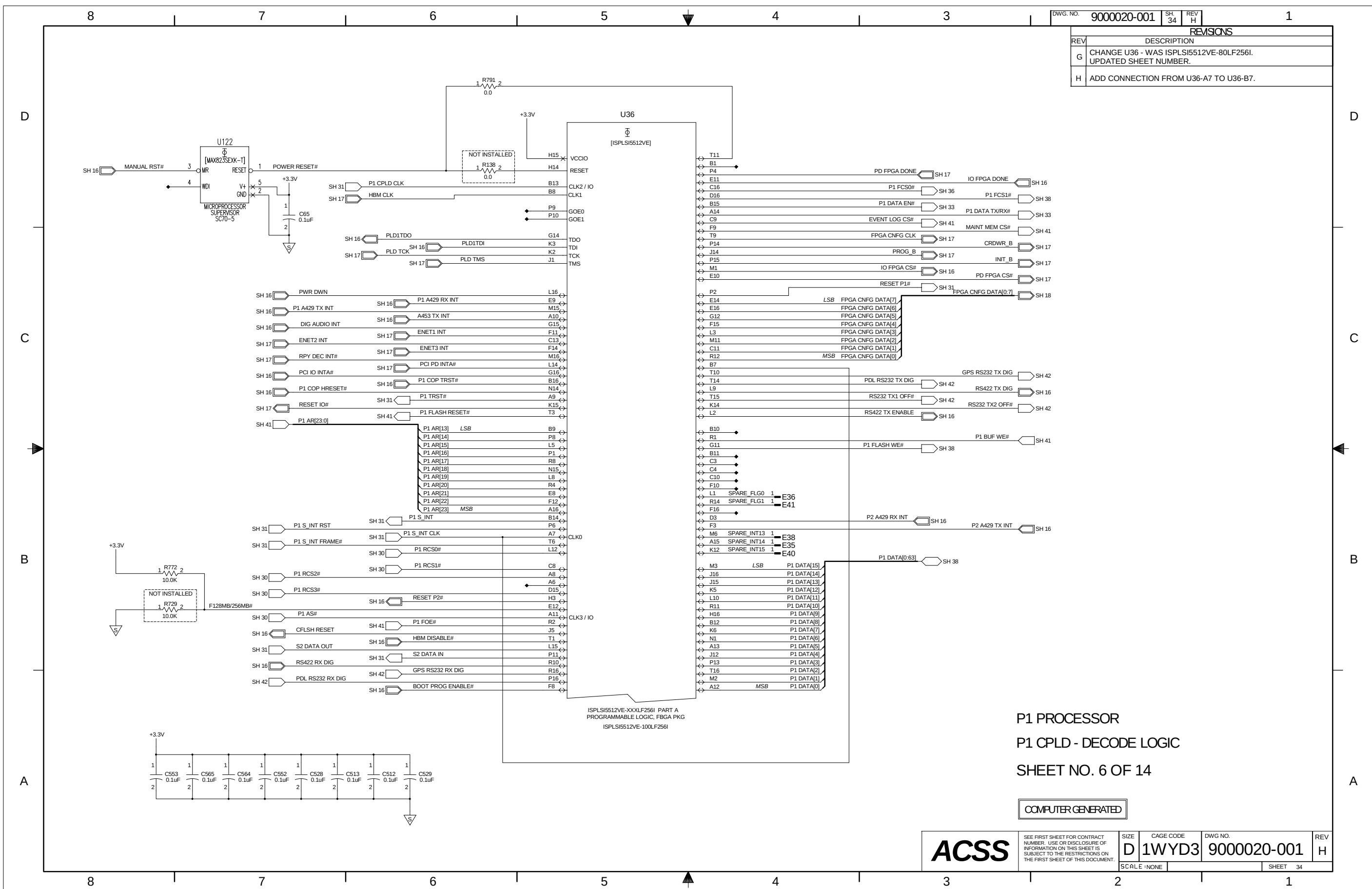
SHEET NO. 4 OF 14

COMPUTER GENERATED

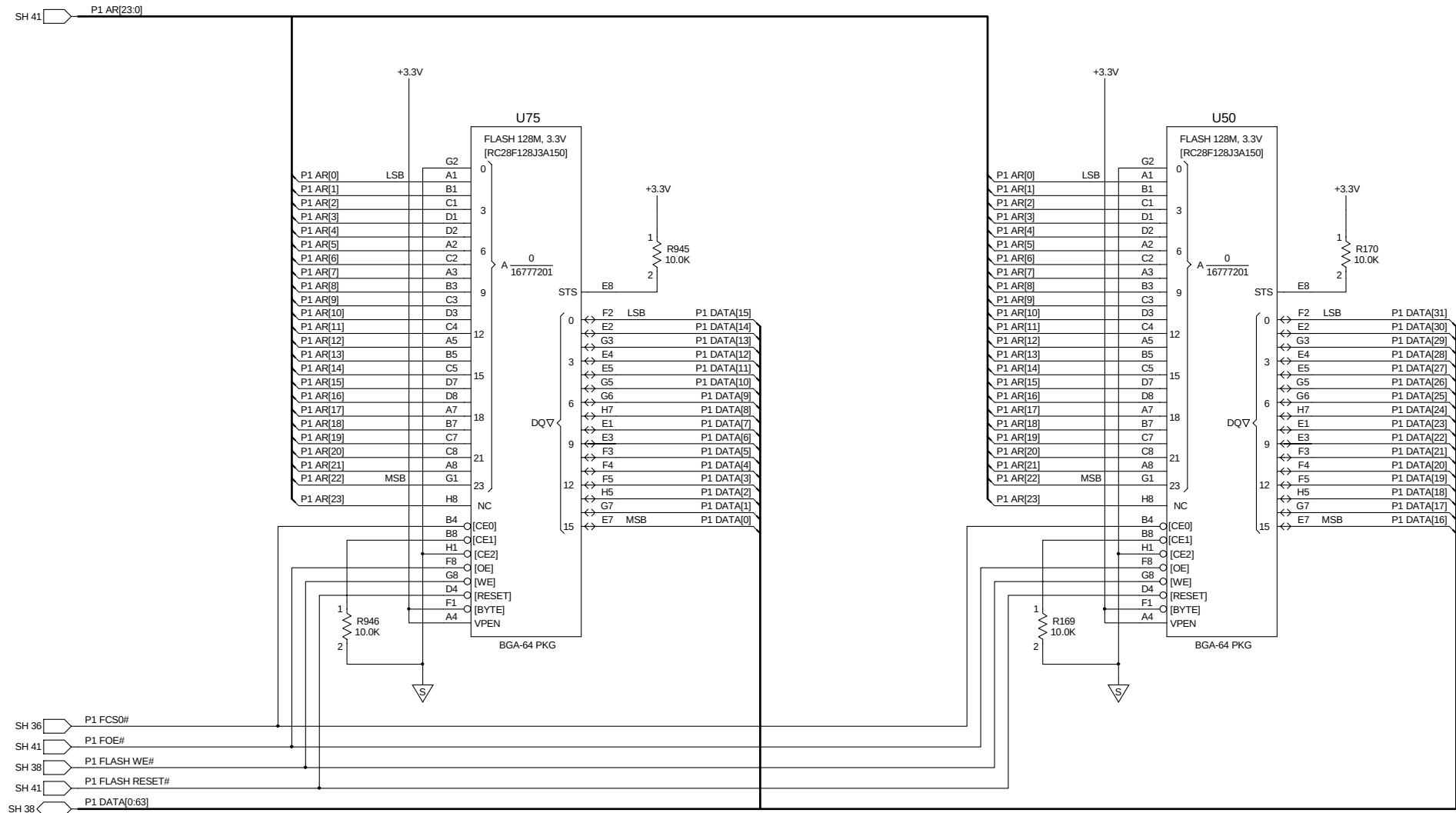
ACSS	SEE FIRST SHEET FOR CONTRACT NUMBER. USE OR DISCLOSURE OF INFORMATION ON THIS SHEET IS SUBJECT TO THE RESTRICTIONS ON THE FIRST SHEET OF THIS DOCUMENT.	SIZE	CAGE CODE	DWG NO.	REV
		D	1WYD3	9000020-001	G
		SCALE: NONE		SHEET 32	

DWG. NO.	9000020-001	SH.	33	REV	G	1
REVISIONS						
REV	DESCRIPTION					
G	ADDED R1139. UPDATED SHEET NUMBERS.					

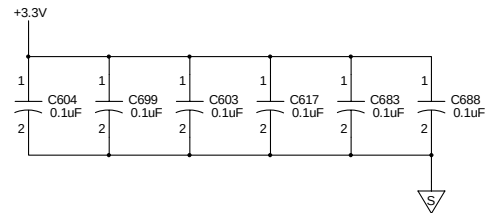




DWG. NO.	9000020-001	SH	35	REV	G
REVISIONS					
REV	DESCRIPTION				
G	UPDATED SHEET NUMBERS				



- SH 36 P1 FCS0#
- SH 41 P1 FOE#
- SH 38 P1 FLASH WE#
- SH 41 P1 FLASH RESET#
- SH 38 P1 DATA[0:63]



Design Notes:

1. The MPC8245 accommodates only single-beat writes to Flash memory. If an attempt is made to write to Flash with a data size other than the full data-path size, the MPC8245 does not report an error. Thus, if software is writing to Flash, the write operations should be sized to the data-path width (64 bits) because only a single write enable (WE#) strobe is available

P1 PROCESSOR
P1 FLASH MEMORY - BANK 1 (1 OF 2)
64M BYTES
SHEET NO. 7 OF 14

COMPUTER GENERATED

ACSS	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	DWG NO.	REV
		D	1WYD3	9000020-001	G
		SCALE: NONE		SHEET 35	