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NOTICE
 FREEDOM OF INFORMATION ACT (5 USC 552) AND DISCLOSURE OF CONFIDENTIAL INFORMATION GENERALLY (18 USC 1905)
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REVISIONS	
CRNO.	DESCRIPTION
008298	INITIAL RELEASE 03-01-05
008520	A UPDATE DRAWING. PL AFFECTED. 04-13-05
008089	B UPDATE DRAWING. PL AFFECTED. 06-03-05
008760	C ADD TABLE 1. PL AFFECTED. 07-06-05
008799	D TABLE 1: COND 603. FROM WAS R601-LEFT (PAD). ADD NOTE 19. 08-04-05
008895	E PL AFFECTED ONLY. 08-16-05



TABLE 1 
 BUSWIRE DATA

CONDUCTOR		PWB SIDE	FROM CIRCUIT POINT	TO CIRCUIT POINT	REF VIEW
COND. NO.	ITEM NO.				
600	705	BOT	R404-LEFT (PAD)	R416-BOT (PAD)	
601	705	TOP	R107-LEFT (PAD)	CR600-3 (PIN)	G
602	705	TOP	R601-LEFT (PIN)	R32-BOT (PAD)	H

NOTES:

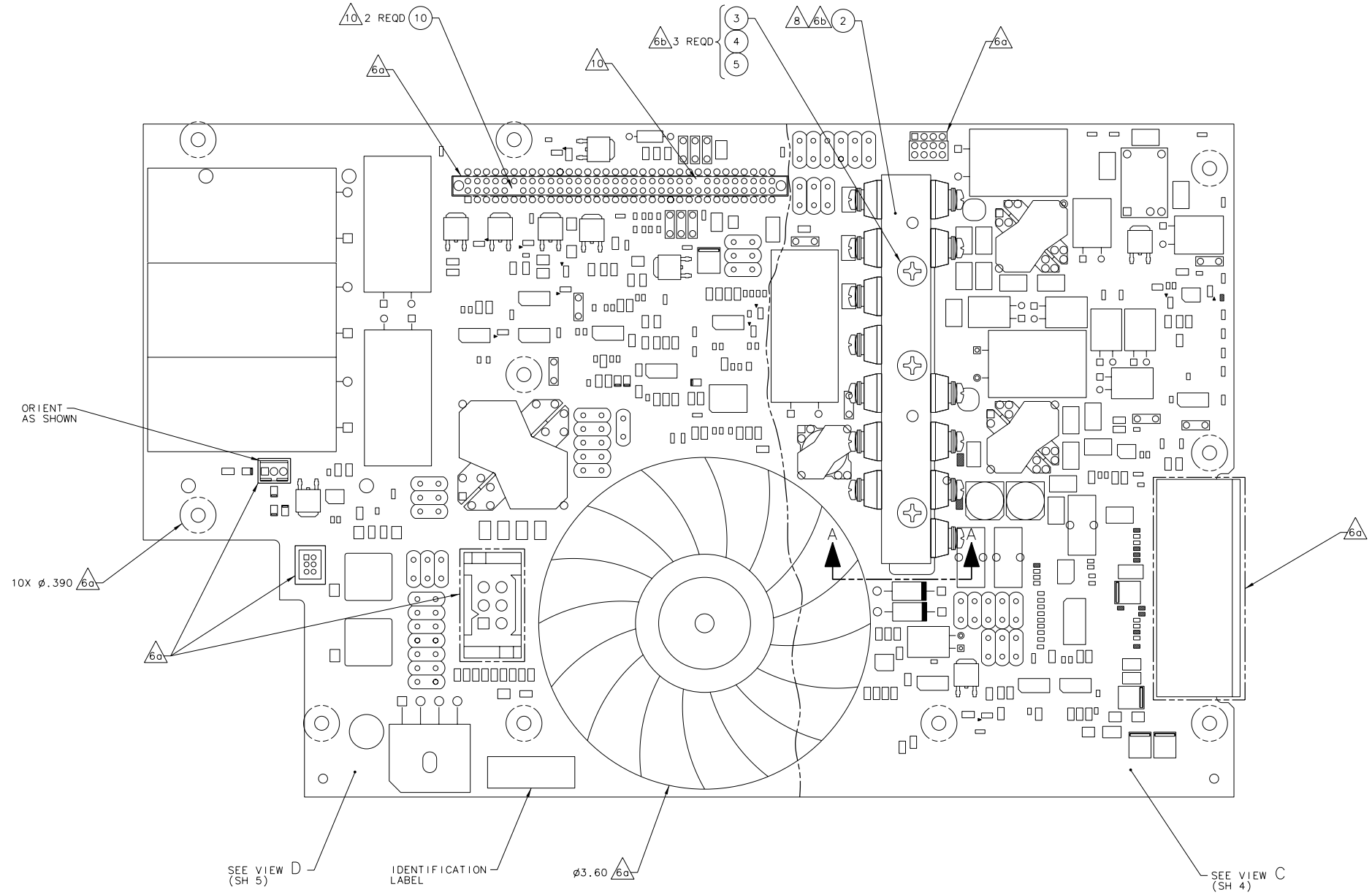
1. ASSEMBLE PER ITEM 701 (M7012784).
2.  THIS ASSEMBLY INCLUDES COMPONENTS WHICH ARE SUBJECT TO DAMAGE BY ELECTROSTATIC CHARGES; THEREFORE, ALL COMPONENTS SHALL BE HANDLED IN ACCORDANCE WITH GUIDELINES FOR ELECTROSTATIC DISCHARGE DAMAGE.
3. COMPONENT LEADS PROTRUSION SHALL BE .080 MAXIMUM, BARE COPPER PERMISSIBLE ON COMPONENT LEADS AT TRIMMED SURFACES.
4. COMPONENTS CR1, CR12, CR13, Q10, Q11, Q12, Q16, Q19, Q20, Q21, Q23, Q24 AND Q25 MUST MOUNT FLUSH TO HEATSINK BAR (ITEM 2).
5. SECURE C11, C14, C27, C29, C30, C42, C47, C50, C55, C56, C67, C70, C72, C73, C87, C88, C122, AND CR14 TO PWB (ITEM 1) USING RTV (ITEM 703).
- 6a. CONFORMAL COAT CCA PER ITEM 702, EXCEPT AREAS NOTED.
- 6b. OMIT CONFORMAL COAT (ITEM 702) ON HEATSINK BAR AND ATTACHED COMPONENTS (ITEMS 2 THRU 9, ITEM 12, CR1, CR12, CR13, Q10, Q11, Q12, Q16, Q19, Q20, Q21, Q23, Q24 AND Q25) TOP AND BOTTOM SIDES.
7. APPLY LOCTITE (ITEM 704) TO THE THREADS OF ITEM 12 PRIOR TO INSTALLATION.
8. PRIOR TO SECURING COMPONENTS CR1, CR12, CR13, Q10, Q11, Q12, Q16, Q19, Q20, Q21, Q23, Q24 AND Q25, TO THE HEAT BAR (ITEM 2), ENSURE THAT THE SURFACES OF THE HEATBAR (ITEM 2), THE INSULATOR PAD (ITEM 9), AND THE ABOVE LISTED COMPONENTS ARE CLEAN AND FREE OF METALLIC BURRS AND FILINGS.
9. J1-J3 AND P1-P3 SHALL BE FLUSH TO .010 MAX ABOVE TOP SIDE OF ITEM 1.
10. INSTALL ITEM 10 IN P2-11 AND P2-52 CONTACTS FROM THIS SIDE.
11. APPLY 5.0±.5 INCH-LBS OF TORQUE TO ITEM 6 AND 2.3±.5 INCH-LBS OF TORQUE TO ITEM 12.
12. SECURE: C5-C10, C21, C23, C24, C39-C41, C58, C60, C79-C85, C103-C111, C113-C118, C123, C125, AND C126 WITH RTV (ITEM 703) ALONG TOP SURFACE OF PART TO ADJACENT PARTS.
13. SECURE T1 - T4 TO PWB (ITEM 1) USING RTV (ITEM 703). COMPONENTS ARE TO BE FLUSH TO WITHIN .010 OF PWB (ITEM 1) AND ARE TO BE SECURED AFTER BEING SOLDERED TO THE PWB.
14. SHADED COMPONENTS ARE NOT INSTALLED.
15. SECURE L5, L6 AND L7 TO PWB (ITEM 1) USING RTV (ITEM 703).
16. C128 HAS BEEN REPLACED BY R531. CR48 HAS BEEN REPLACED BY R600.
17. INSTALL ITEM 13 ON P1 ON PINS IN COLUMNS A & B.
18. INSTALL BUSWIRES PER TABLE 1, LEFT OR RIGHT, TOP OR BOTTOM, AS VIEWED FROM INDICATED SIDE.
19. INSTALL CR600 PER DETAIL G. INSTALL R601 PER DETAIL H.

REVISION STATUS OF PARTS LIST SHALL BE THE SAME AS THE BASIC DRAWING NUMBER. SEE SEPARATE PARTS LIST.

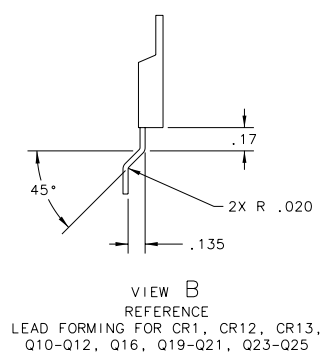
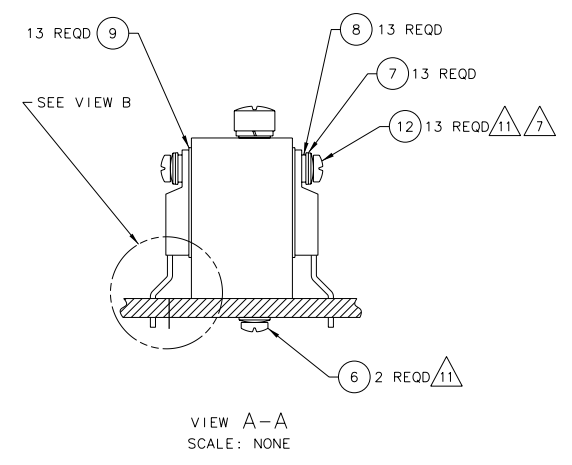
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES: TOLERANCES: ANGLES ± - 2 PL DEC ± - 3 PL DEC ± -		THIRD ANGLE PROJECTION	OPERATIONAL NOTE
INTERPRET DIMENSIONS AND TOLERANCES PER AMS E 114, 5M-1994			 Aviation Communication & Surveillance Systems 18010 North 7th Avenue Phoenix, Arizona 85027-4400
FOR REFERENCE		TITLE	
ORIGINAL C.R.	PRODUCT LINE NO.	AW/PS ANALYSIS EB	
REF. DWG.	REF. SPEC.		
9000000-55	9000000-55001		CIRCUIT CARD ASSEMBLY - POWER SUPPLY (A4)
NEXT ASSY	END ITEM		SIZE/CAGE CODE: E11WYD3 DRAWING NO.: 9003030-002
APPLICATION			SCALE: NONE SHEET 1 OF 30

9003030-002
 SH 1

REVISIONS	
CRNO.	REV
008520	A
ADDED SHADED COMPONENTS.	
04-13-05	

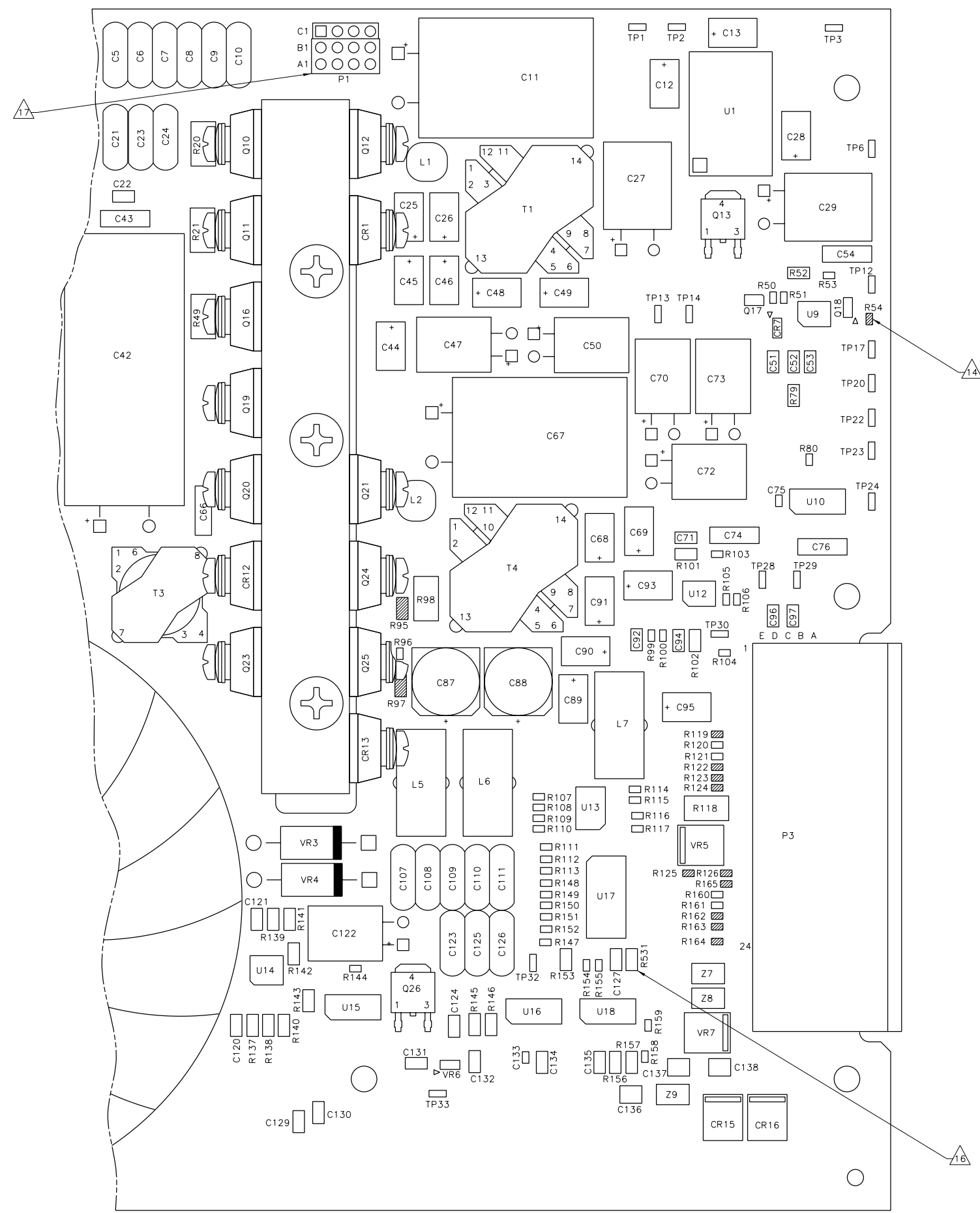


VIEWING TOP SIDE



REVISIONS	
CRNO.	REV
008520	A
008760	C

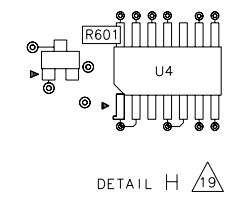
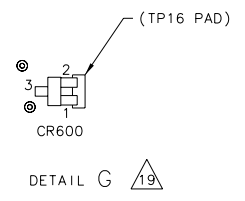
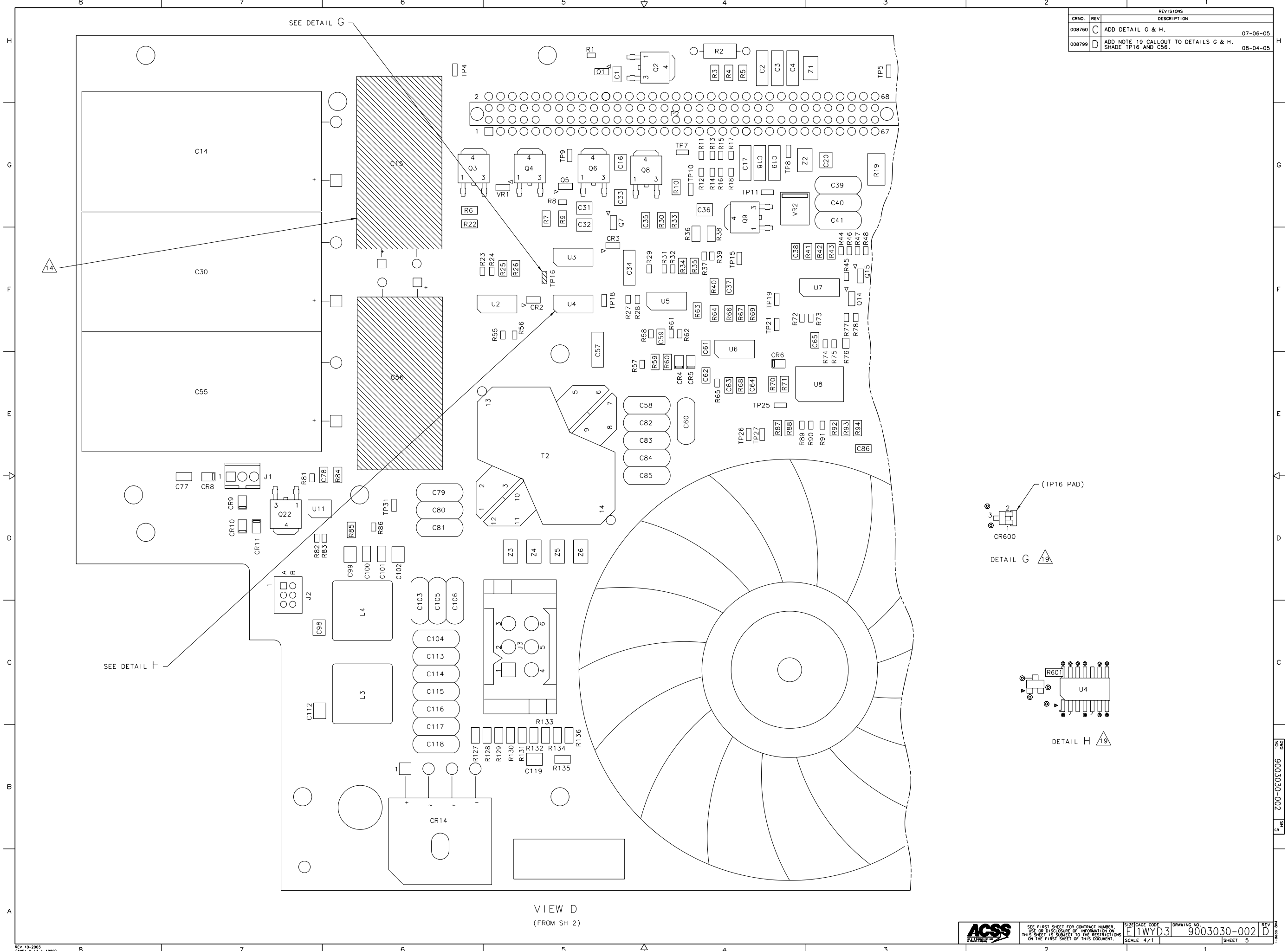
DESCRIPTION		DATE
ADDED SHADED COMPONENTS.		04-13-05
SHADED R163, UNSHADED R107.		07-06-05



VIEW C
(FROM SH 2)

REVISIONS	
CRNO.	REV
008760	C
008799	D

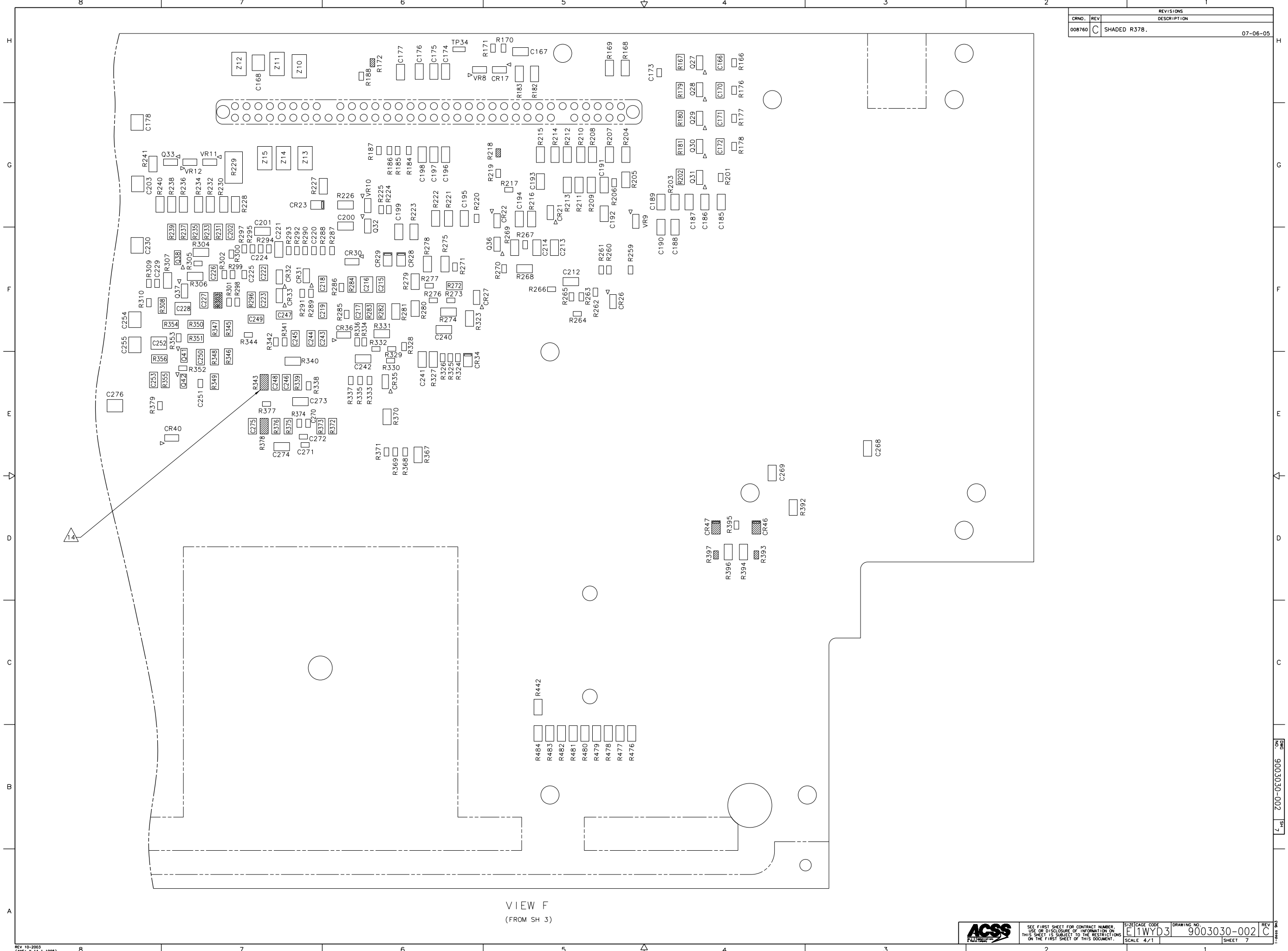
DESCRIPTION		
ADD DETAIL G & H.		07-06-05
ADD NOTE 19 CALLOUT TO DETAILS G & H. SHADE TP16 AND C56.		08-04-05



VIEW D
(FROM SH 2)

REVISIONS	
CRNO.	REV
008760	C

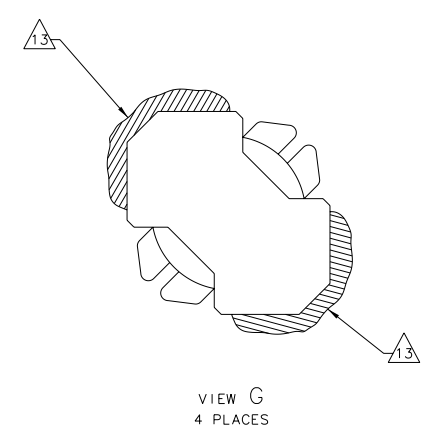
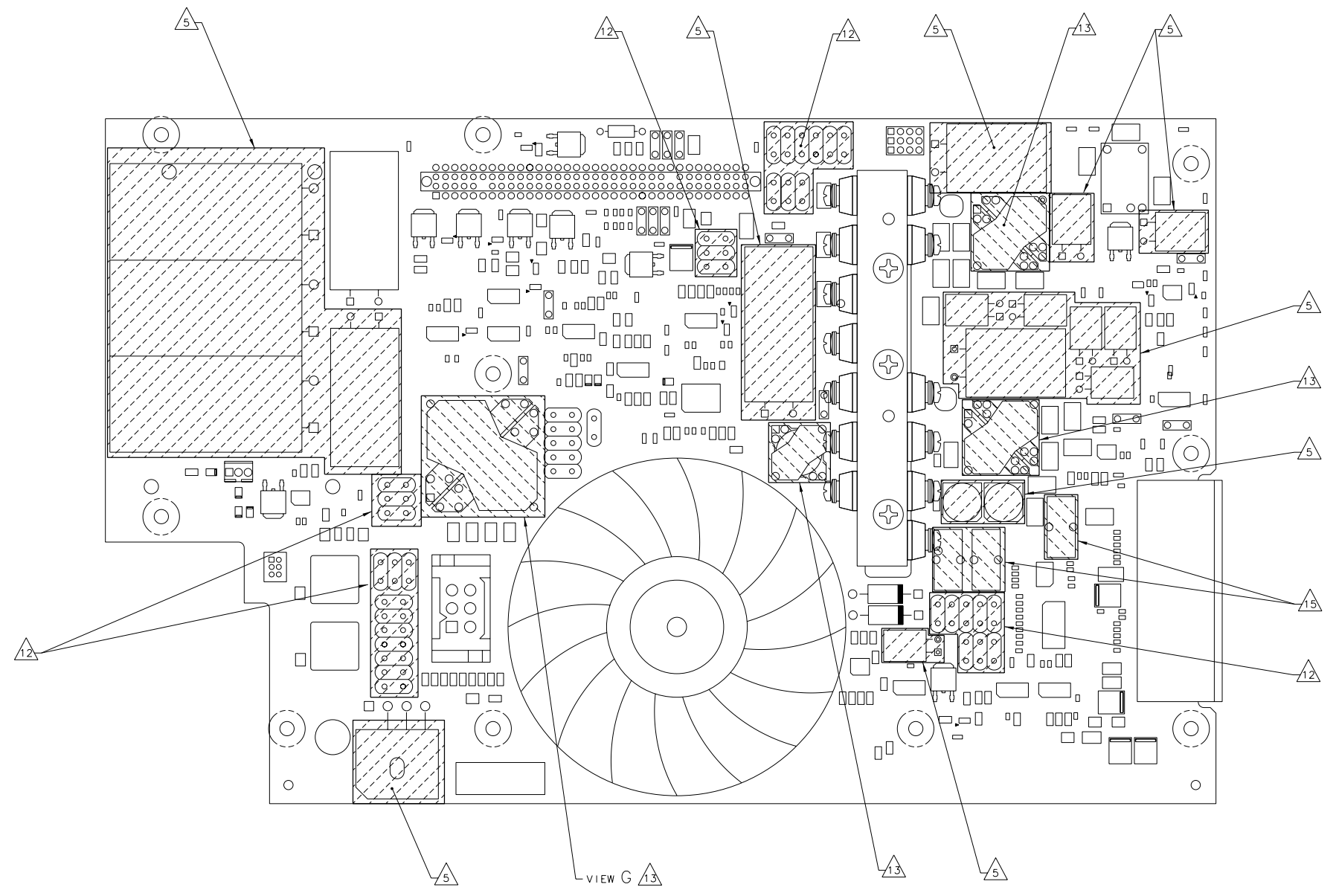
DESCRIPTION	
SHADED R378.	07-06-05



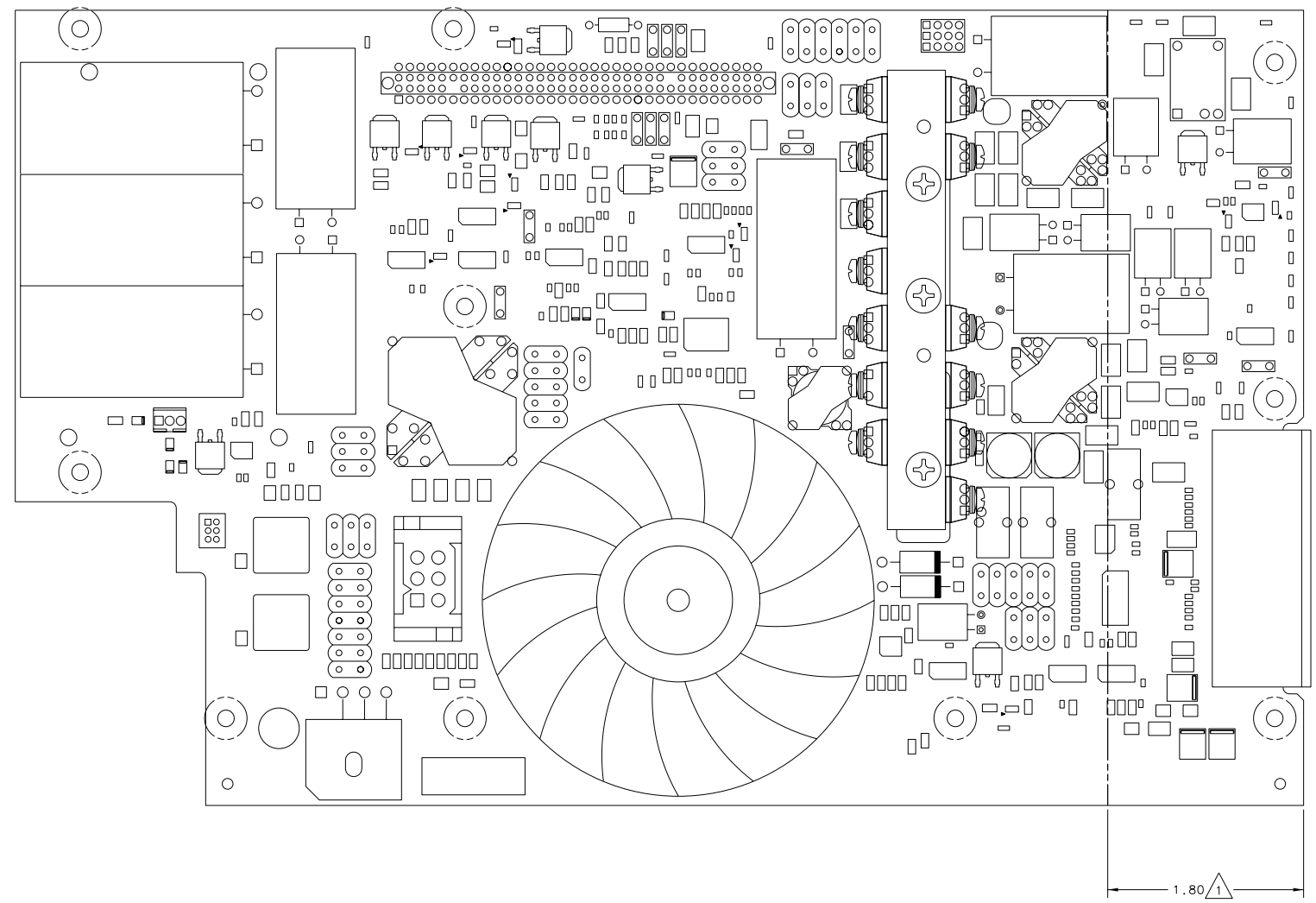
VIEW F
(FROM SH 3)

	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 E11WYD3	DRAWING NO. 9003030-002	REV C
	SCALE 4/1	SHEET 7	9003030-002	7

REVISIONS	
CRNO.	REV



REVISIONS	
CRNO.	DESCRIPTION



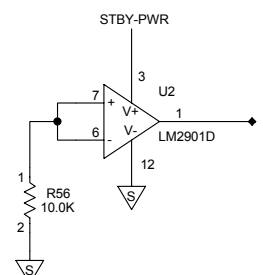
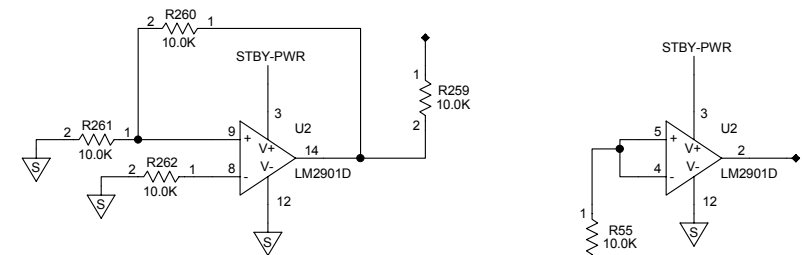
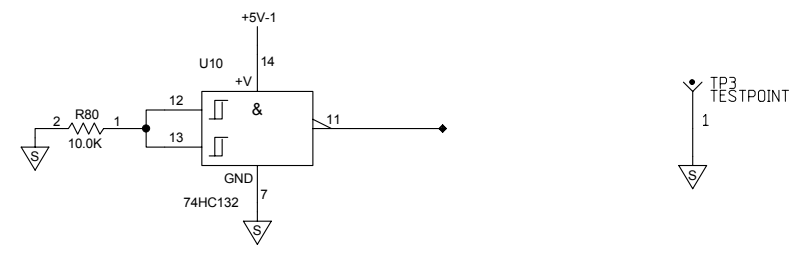
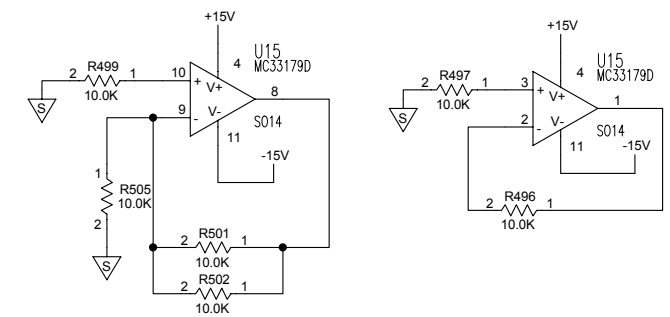
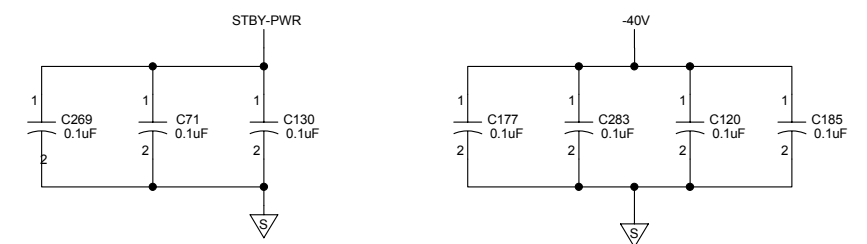
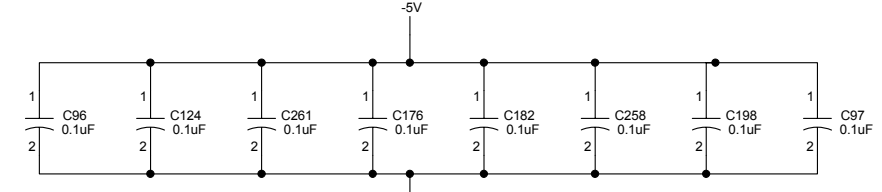
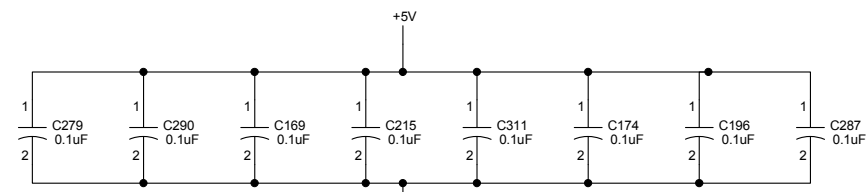
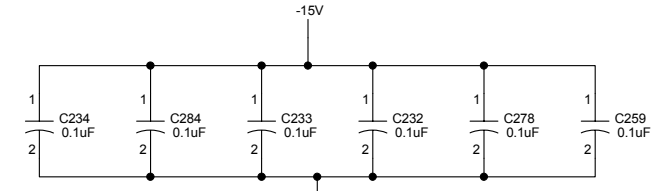
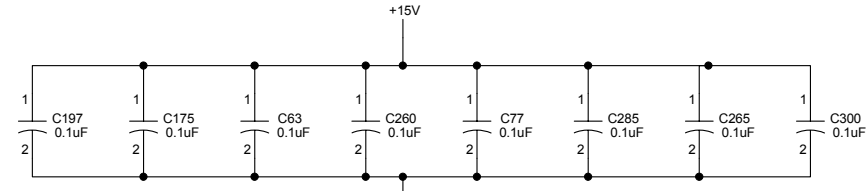
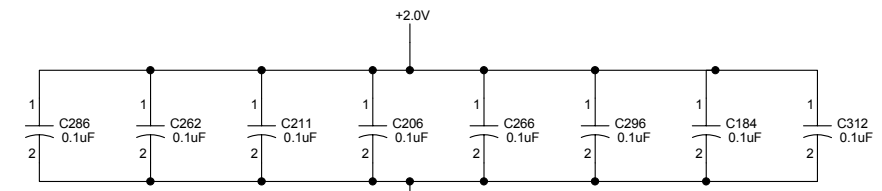
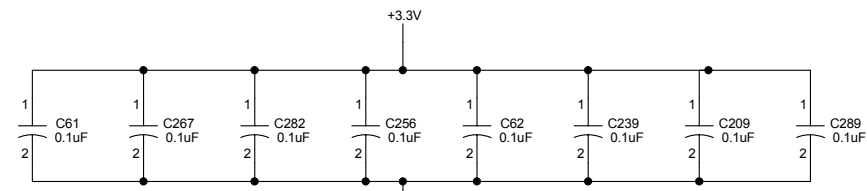
THIS SHEET IS FOR
DESIGN REFERENCE ONLY

NOTES:
 1 MAXIMUM COMPONENT HEIGHT TOP SIDE SHALL BE .800, EXCEPT
 AREA NOTED ON CCA TO BE .550 MAX, AND HEATSINK BAR (ITEM 2)
 AND ATTACHED COMPONENTS TO BE 1.180 MAX.

REV
NO. 9003030-002
SHEET 9

	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 E11WYD3	DRAWING NO. 9003030-002	REV -
	SCALE 2/1	SHEET 9	REV -	REV -

REVISIONS	
REV	DESCRIPTION
-	Initial Release ECR008298
B	ECR008089 Correct PN for U15

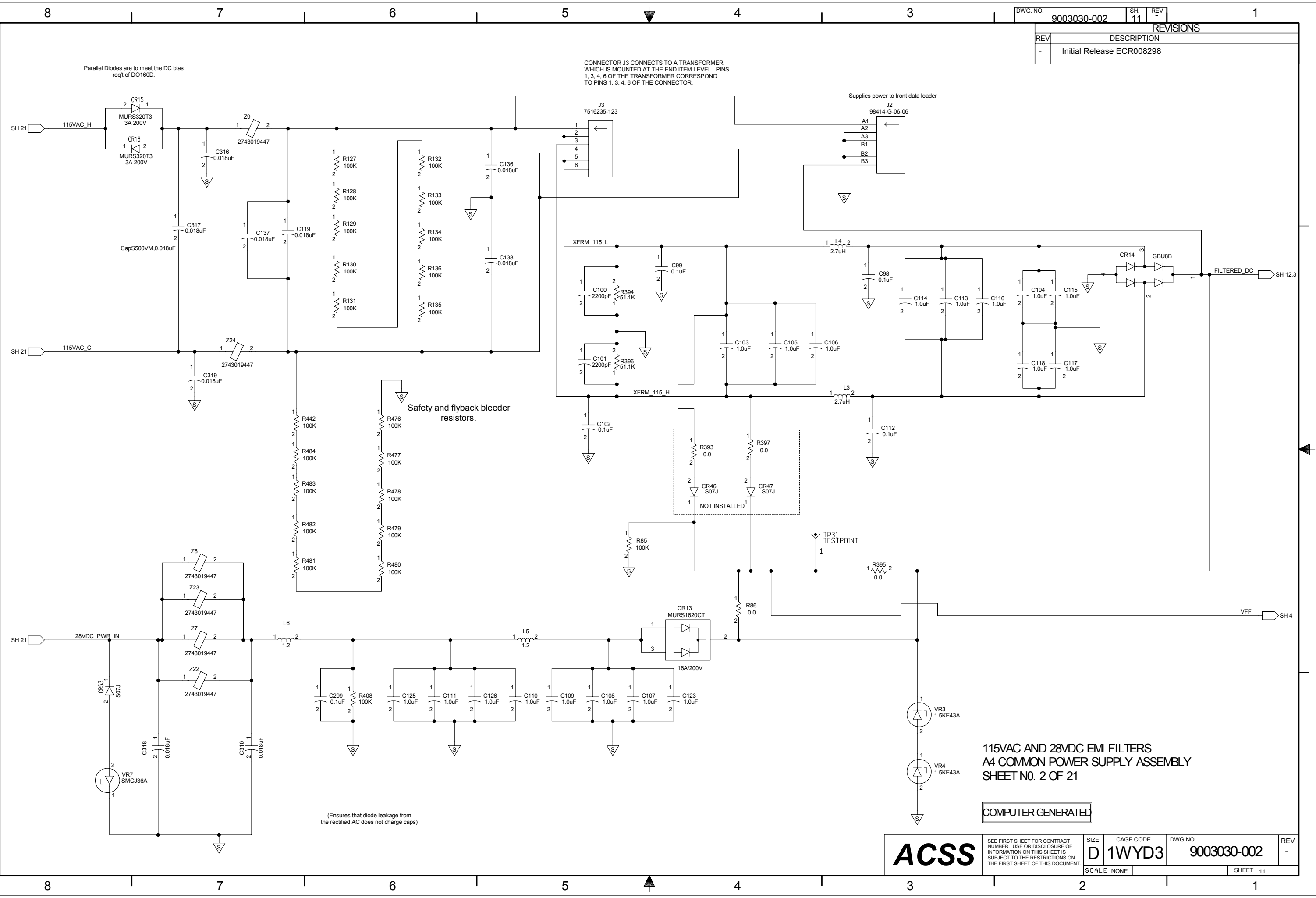


- Notes:
UNLESS OTHERWISE SPECIFIED:
- 1) ALL CAPACITANCE VALUES ARE IN MICROFARADS.
 - 2) ALL RESISTANCE VALUES ARE IN OHMS.
 - 3) ALL INDUCTANCE VALUES ARE IN MICROHENRIES.
 - 4) PARTIAL REFERENCE DESIGNATIONS ARE SHOWN; FOR COMPLETE DESIGNATIONS PREFIX PART DESIGNATION WITH SUBASSEMBLY DESIGNATION.
 - 5) INTERPRET DRAWING PER ANSI Y32.2-1975 AND ANSI/IEEE STD 991-1986. LOGIC SYMBOLS CONFORM TO ANSI/IEEE STD 91-1984.
 - 6) SHEET TAGGING REFERS TO THE SCHEMATIC SHEET, NOT THE DOCUMENT SHEET.

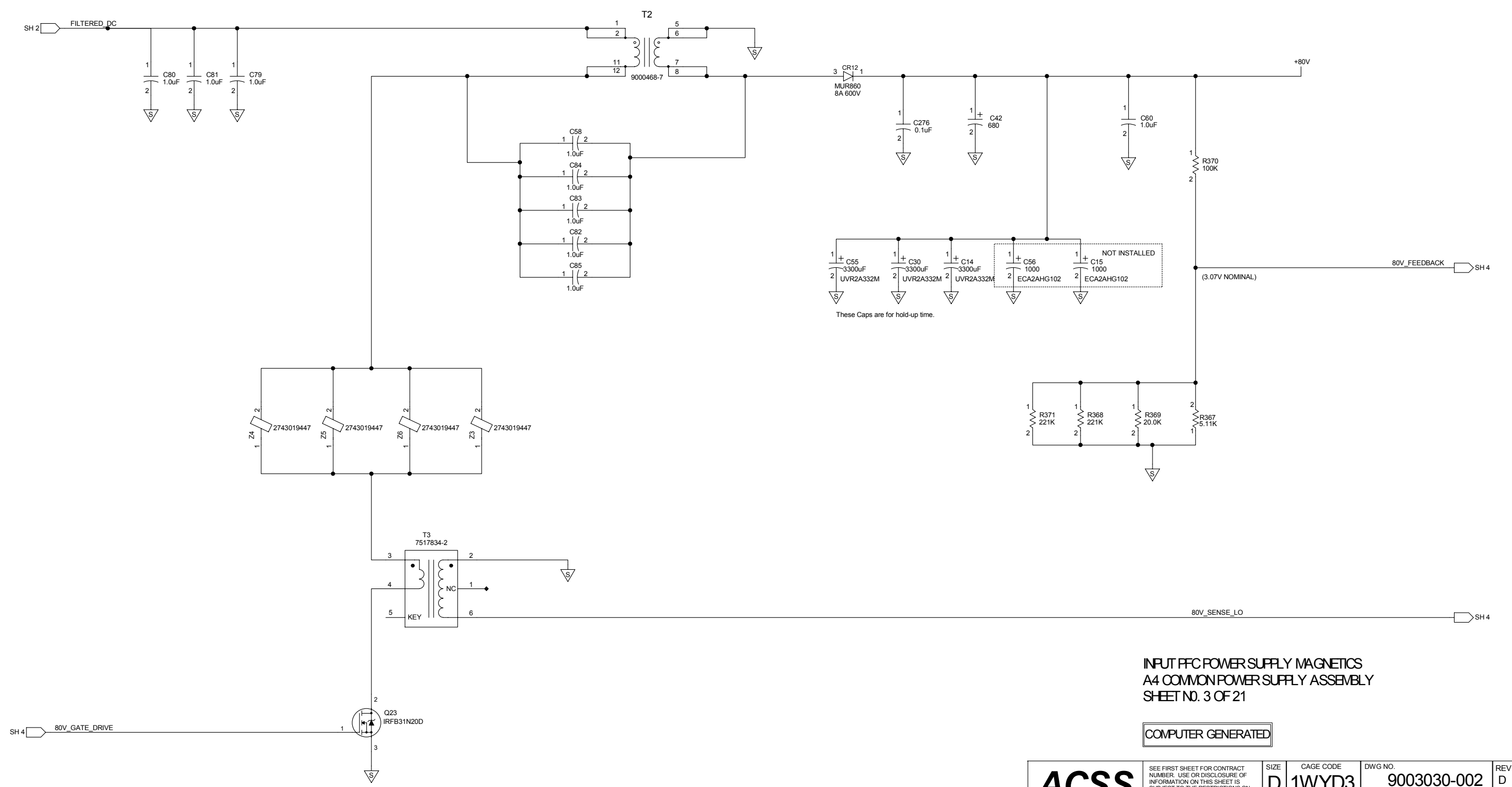
NOTES, GENERAL BYPASS, SPARES
A4 COMMON POWER SUPPLY ASSEMBLY
SHEET NO. 1 OF 21

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 D	CAGE CODE 1WYD3	DWG NO. 9003030-002	REV B
	SCALE NONE	SHEET 10			



REVISIONS	
REV	DESCRIPTION
-	Initial Release ECR008298
D	C56 NOT INSTALLED ECR008799

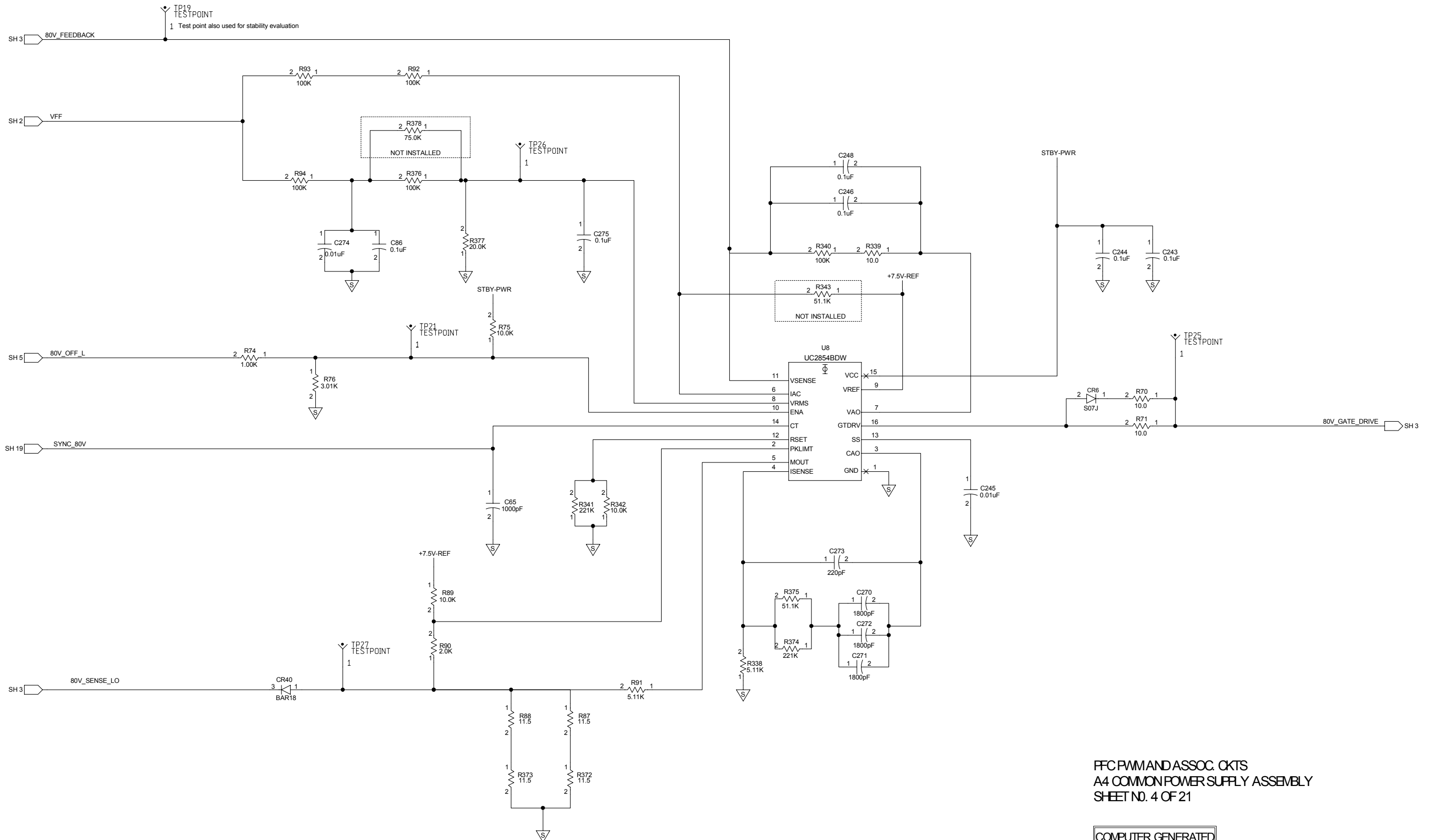


INPUT PFC POWER SUPPLY MAGNETICS
 A4 COMMON POWER SUPPLY ASSEMBLY
 SHEET NO. 3 OF 21

COMPUTER GENERATED

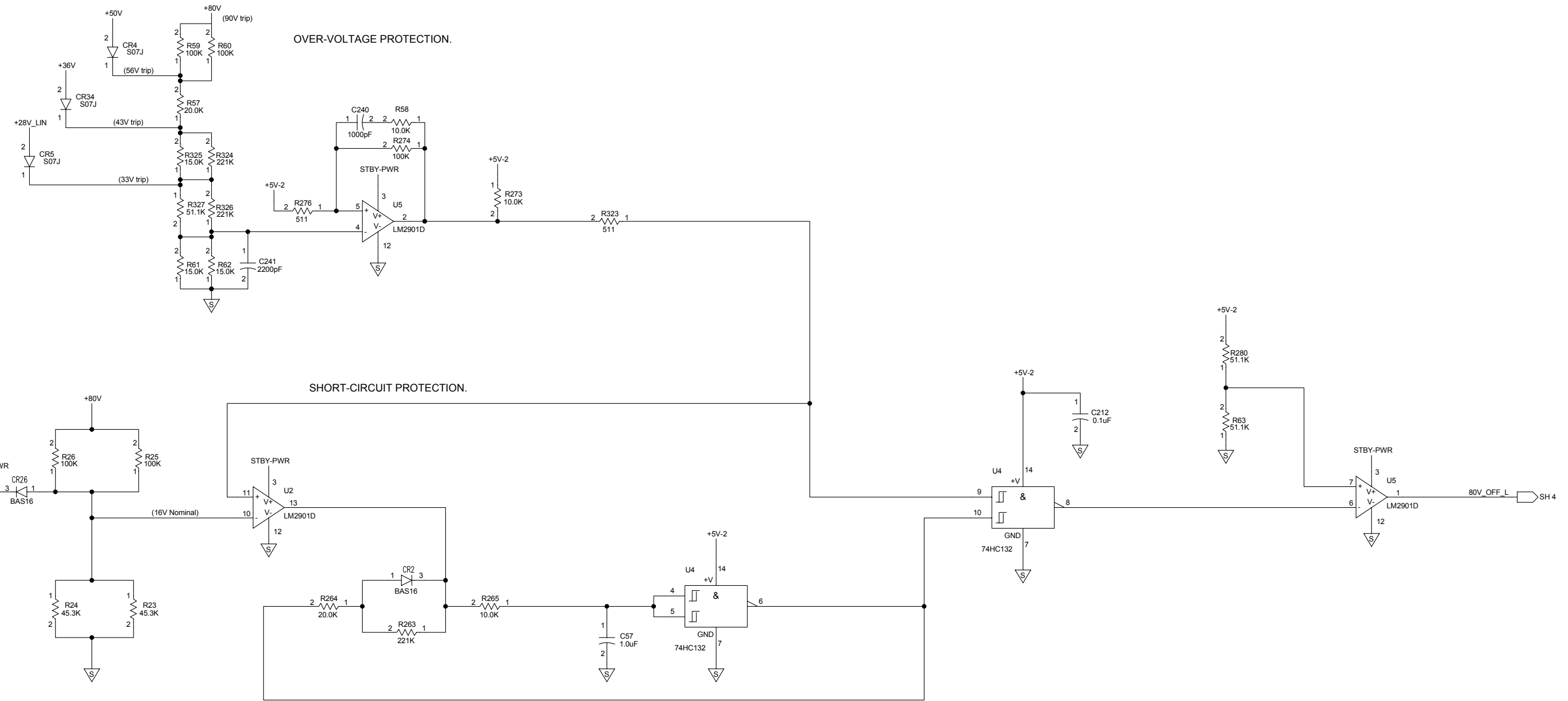
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		D	1WYD3	9003030-002	D
SCALE: NONE		SHEET 12			

REVISIONS	
REV	DESCRIPTION
-	Initial Release ECR008298
D	R87, R88, R372, R373 CHANGED ECR008799



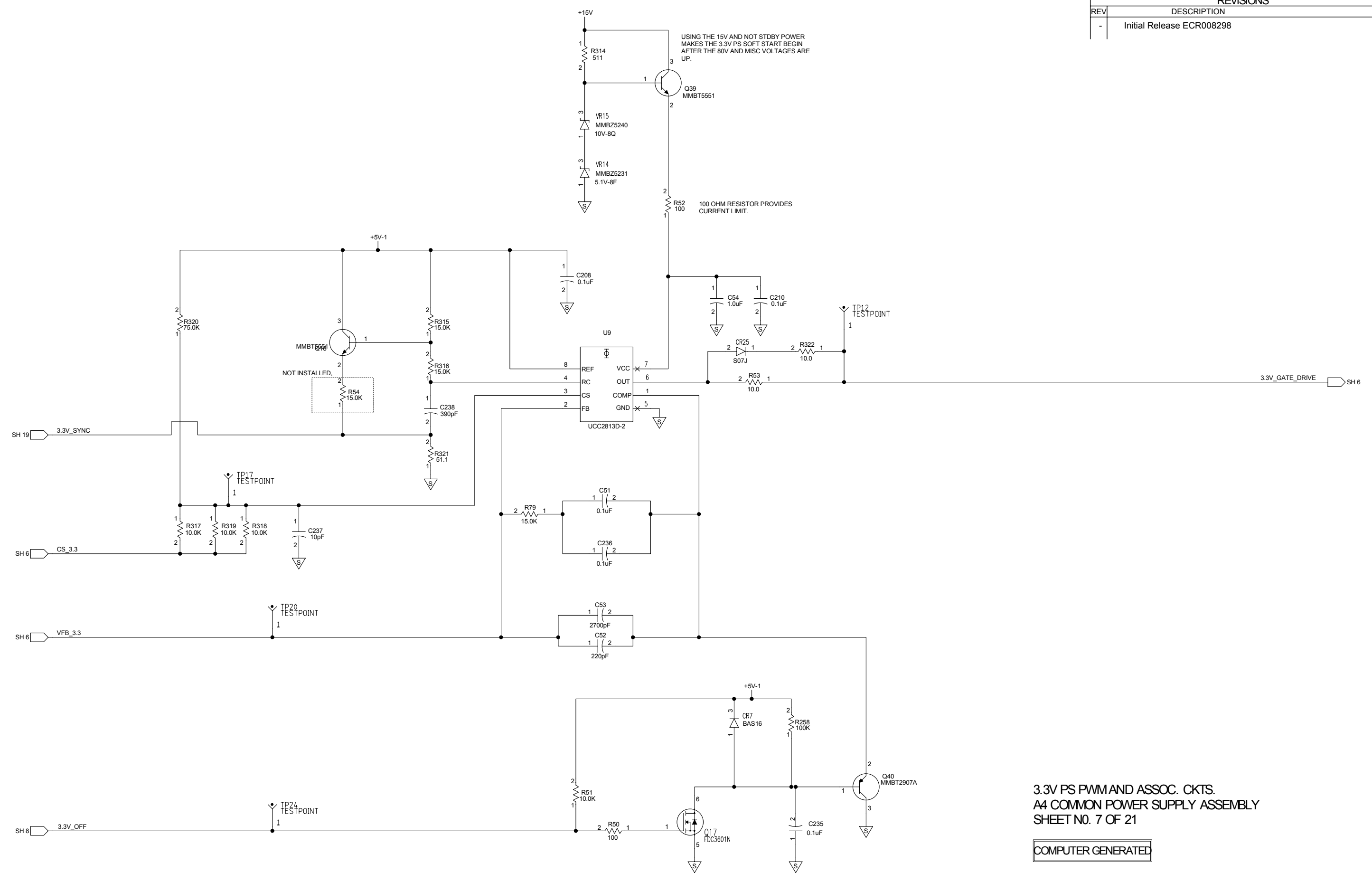
FFC PWM AND ASSOC. CKTS
A4 COMMON POWER SUPPLY ASSEMBLY
SHEET NO. 4 OF 21

COMPUTER GENERATED



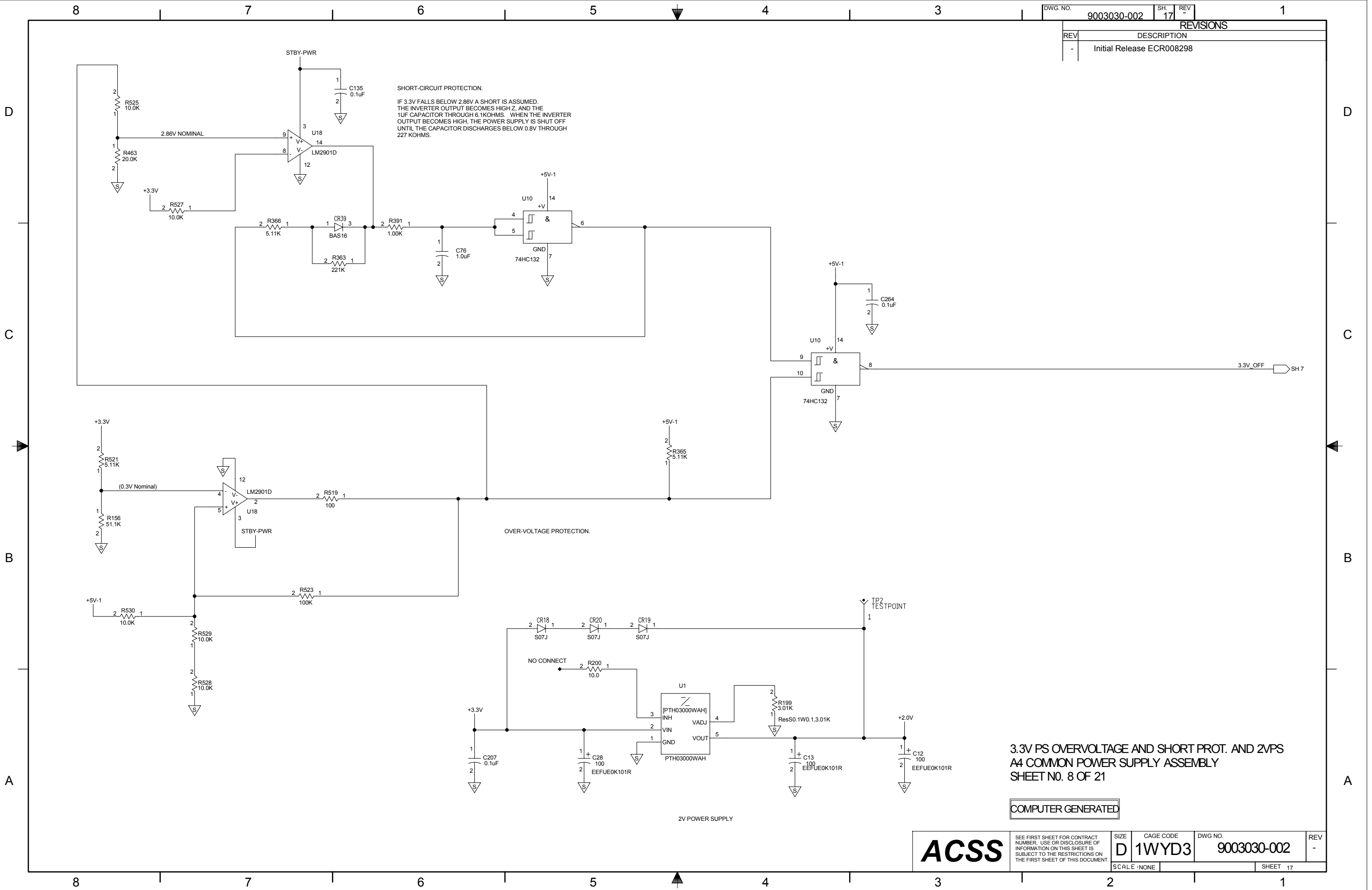
PFC OVERVOLTAGE AND SHORT PROTECTION
A4 COMMON POWER SUPPLY ASSEMBLY
SHEET NO. 5 OF 21

COMPUTER GENERATED

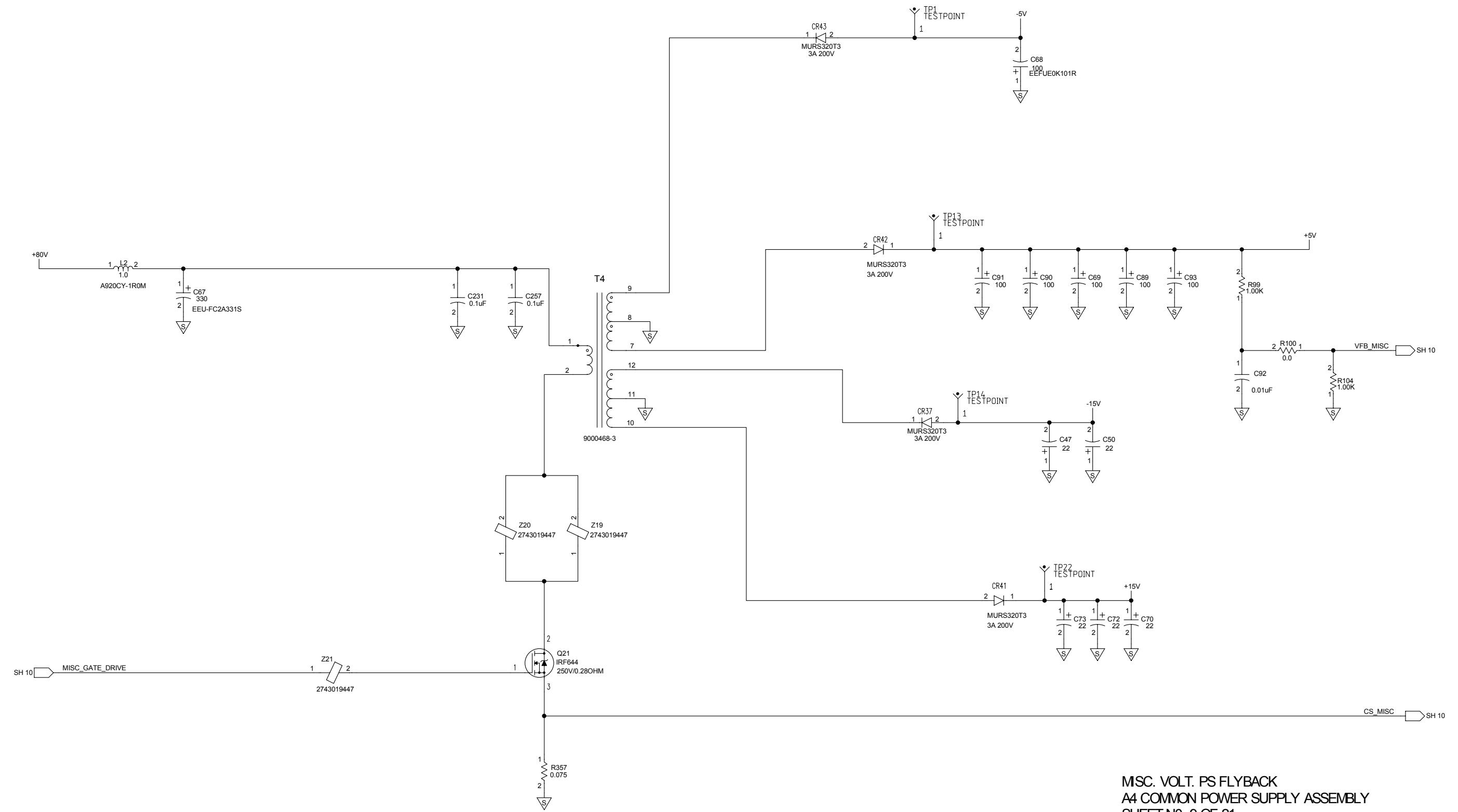


3.3V PS PWM AND ASSOC. CKTS.
A4 COMMON POWER SUPPLY ASSEMBLY
SHEET NO. 7 OF 21

COMPUTER GENERATED



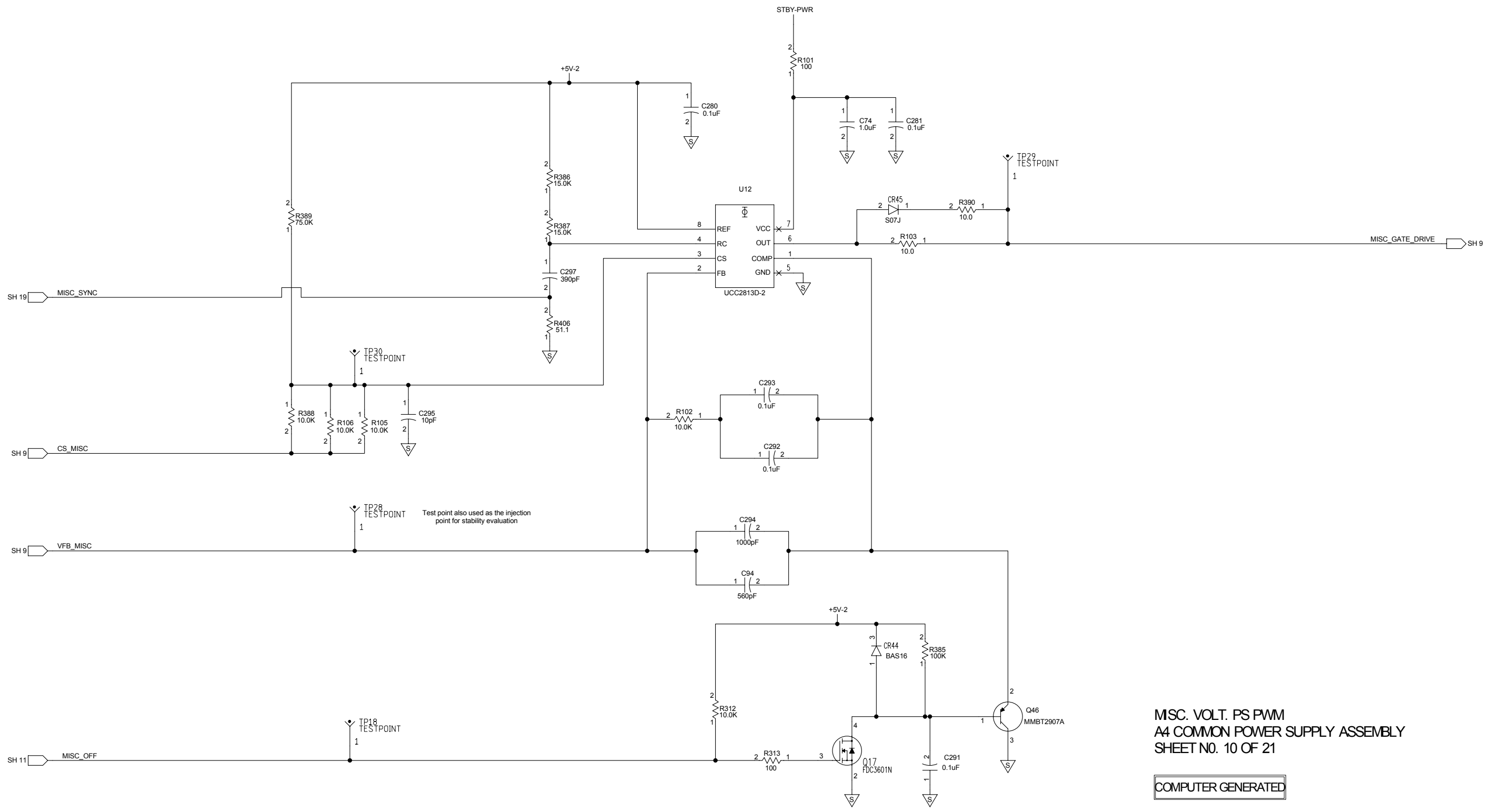
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MISC. VOLT. PS FLYBACK
 A4 COMMON POWER SUPPLY ASSEMBLY
 SHEET NO. 9 OF 21

COMPUTER GENERATED

DWG. NO.	9003030-002	SH.	19	REV	-
				REVISIONS	
REV	DESCRIPTION				
-	Initial Release ECR008298				

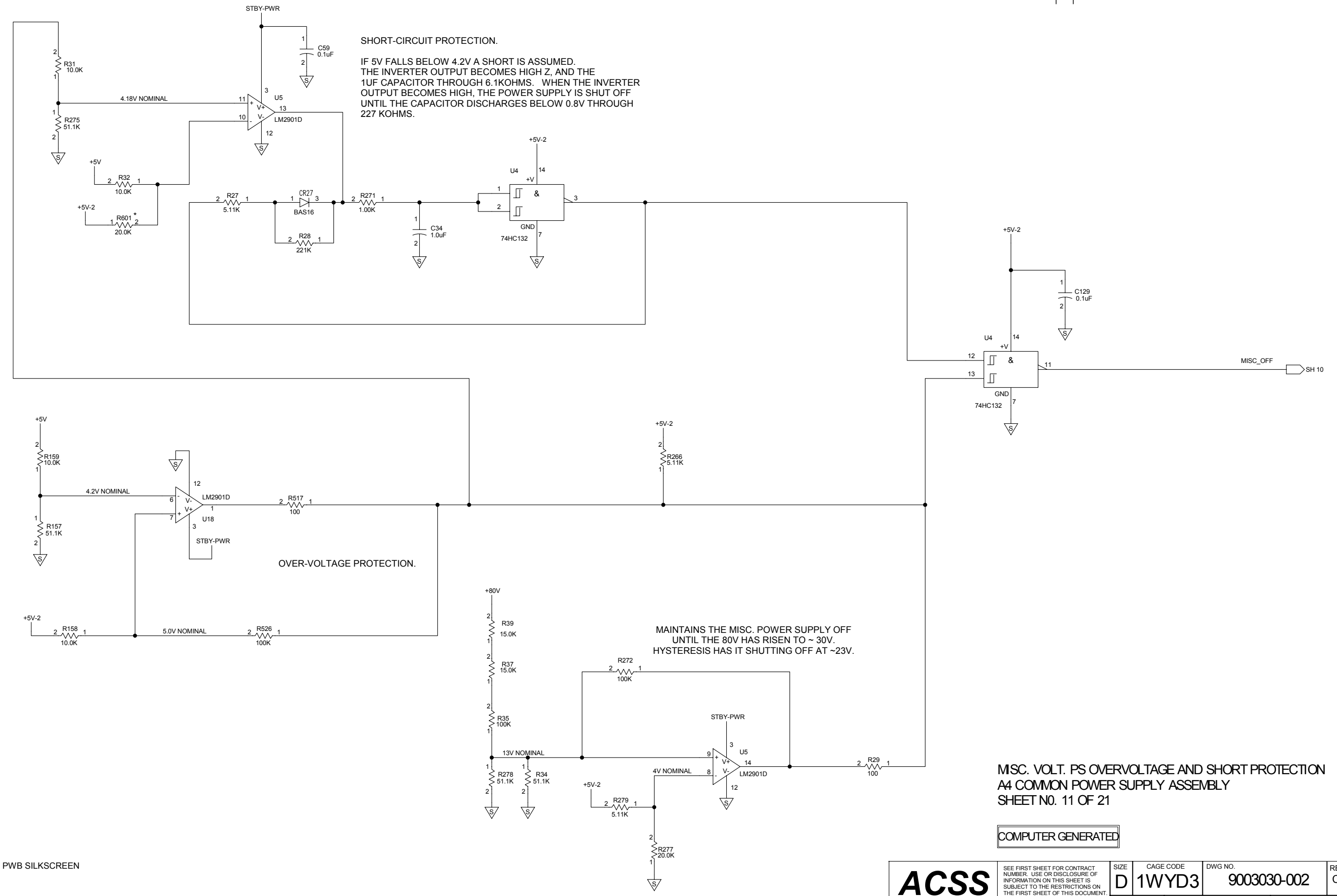


MISC. VOLT. PS PWM
A4 COMMON POWER SUPPLY ASSEMBLY
SHEET NO. 10 OF 21

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	D	CAGE CODE	1WYD3	DWG. NO.	9003030-002	REV	-
	SCALE	NONE	SHEET		19				

REVISIONS	
REV	DESCRIPTION
-	Initial Release ECR008298
C	Added R601 & Note ECR008760



SHORT-CIRCUIT PROTECTION.
 IF 5V FALLS BELOW 4.2V A SHORT IS ASSUMED. THE INVERTER OUTPUT BECOMES HIGH Z, AND THE 1UF CAPACITOR THROUGH 6.1KOHMS. WHEN THE INVERTER OUTPUT BECOMES HIGH, THE POWER SUPPLY IS SHUT OFF UNTIL THE CAPACITOR DISCHARGES BELOW 0.8V THROUGH 227 KOHMS.

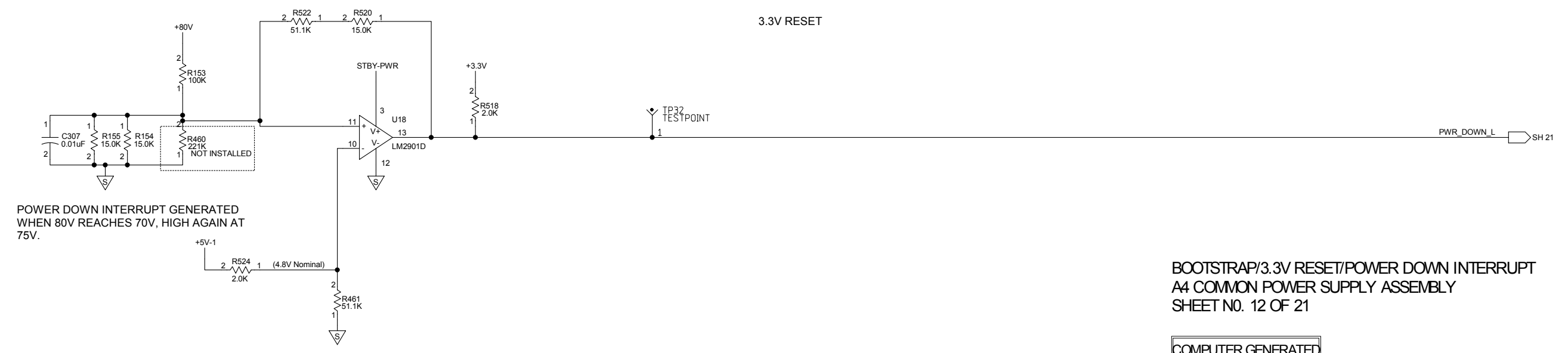
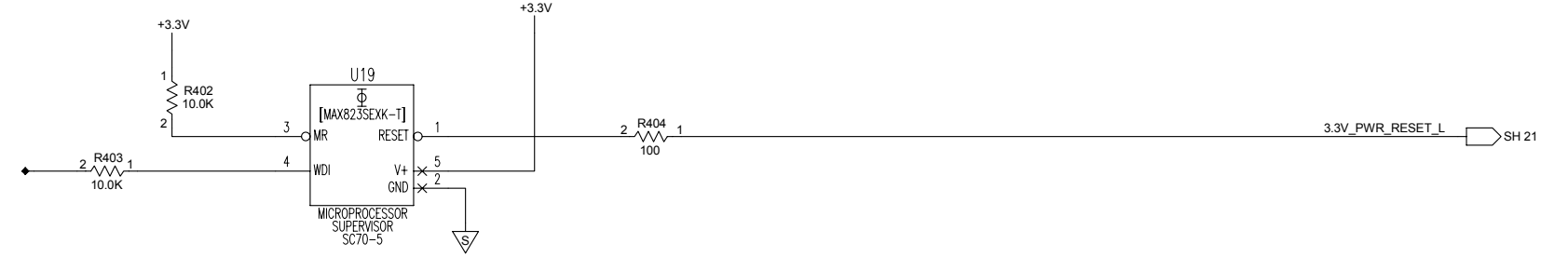
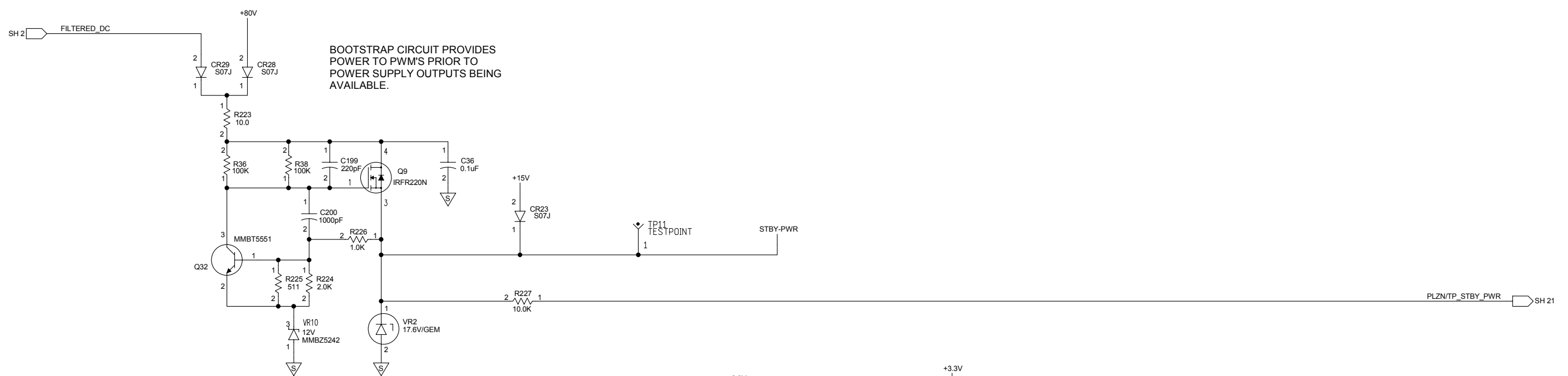
OVER-VOLTAGE PROTECTION.

MAINTAINS THE MISC. POWER SUPPLY OFF UNTIL THE 80V HAS RISEN TO ~ 30V. HYSTERESIS HAS IT SHUTTING OFF AT ~23V.

**MISC. VOLT. PS OVERVOLTAGE AND SHORT PROTECTION
 A4 COMMON POWER SUPPLY ASSEMBLY
 SHEET NO. 11 OF 21**

COMPUTER GENERATED

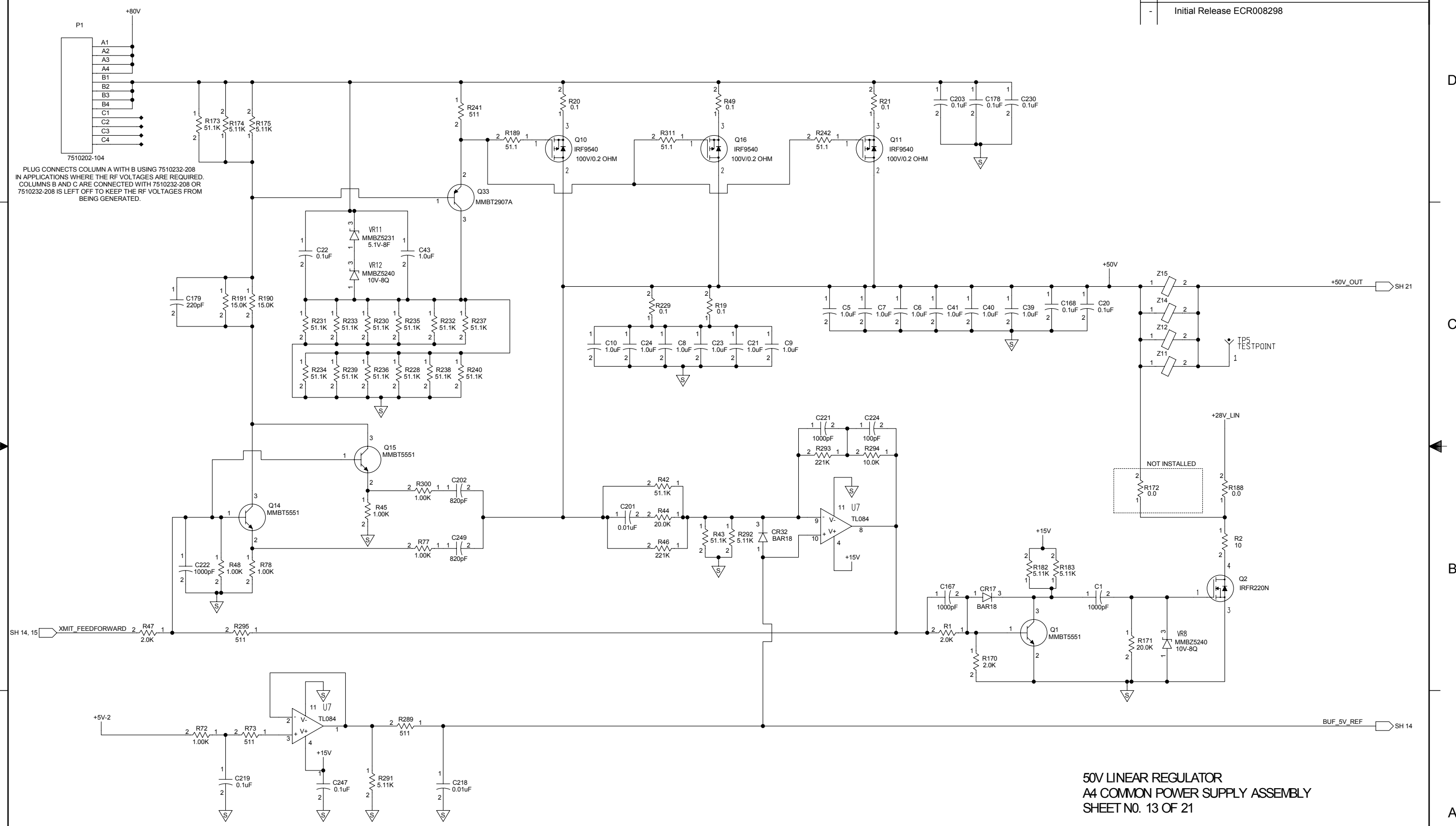
* R601 NOT ON PWB SILKSCREEN



BOOTSTRAP/3.3V RESET/POWER DOWN INTERRUPT
A4 COMMON POWER SUPPLY ASSEMBLY
SHEET NO. 12 OF 21

COMPUTER GENERATED

REVISIONS	
REV	DESCRIPTION
-	Initial Release ECR008298

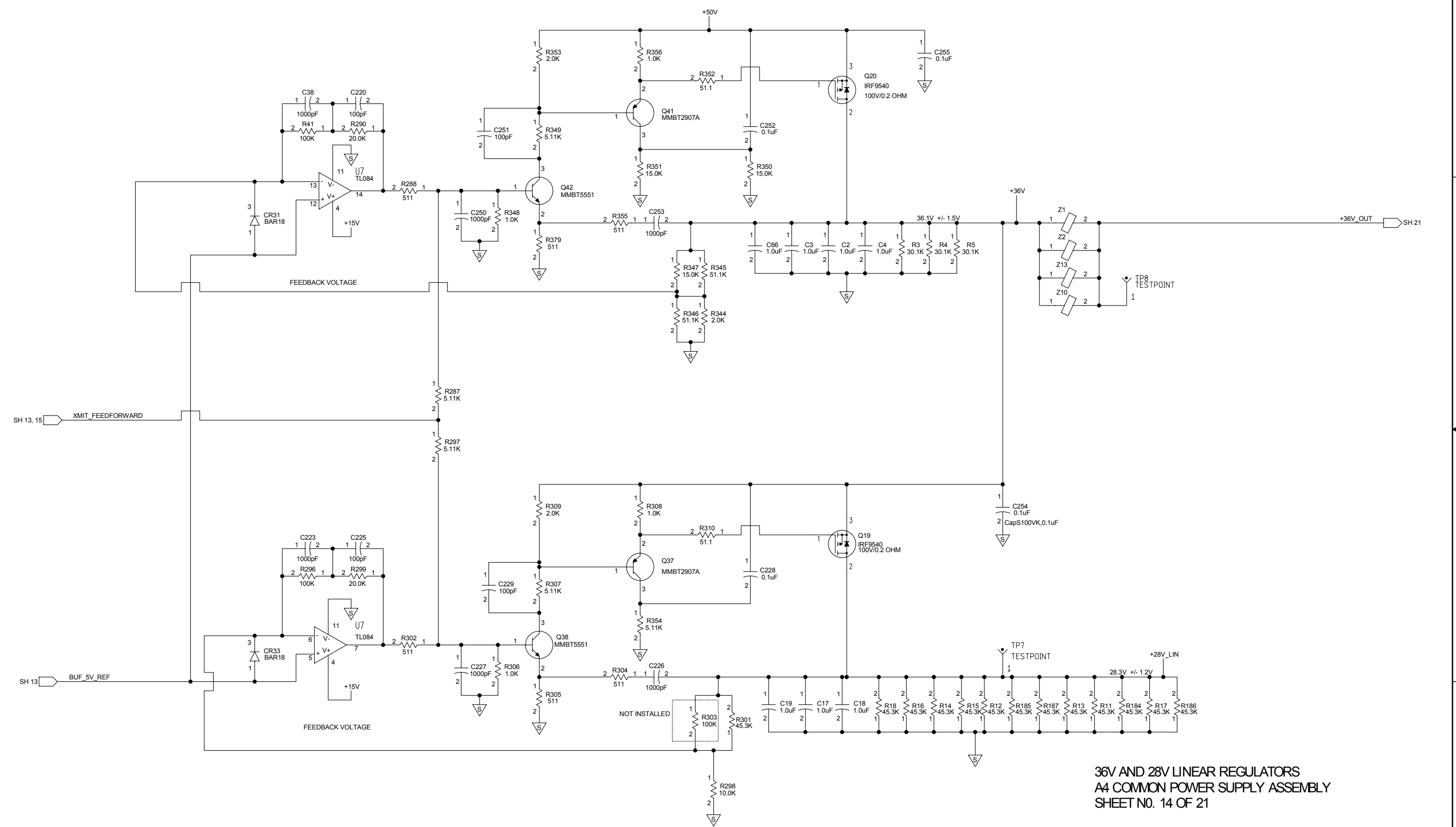


PLUG CONNECTS COLUMN A WITH B USING 7510232-208 IN APPLICATIONS WHERE THE RF VOLTAGES ARE REQUIRED. COLUMNS B AND C ARE CONNECTED WITH 7510232-208 OR 7510232-208 IS LEFT OFF TO KEEP THE RF VOLTAGES FROM BEING GENERATED.

50V LINEAR REGULATOR
A4 COMMON POWER SUPPLY ASSEMBLY
SHEET NO. 13 OF 21

COMPUTER GENERATED

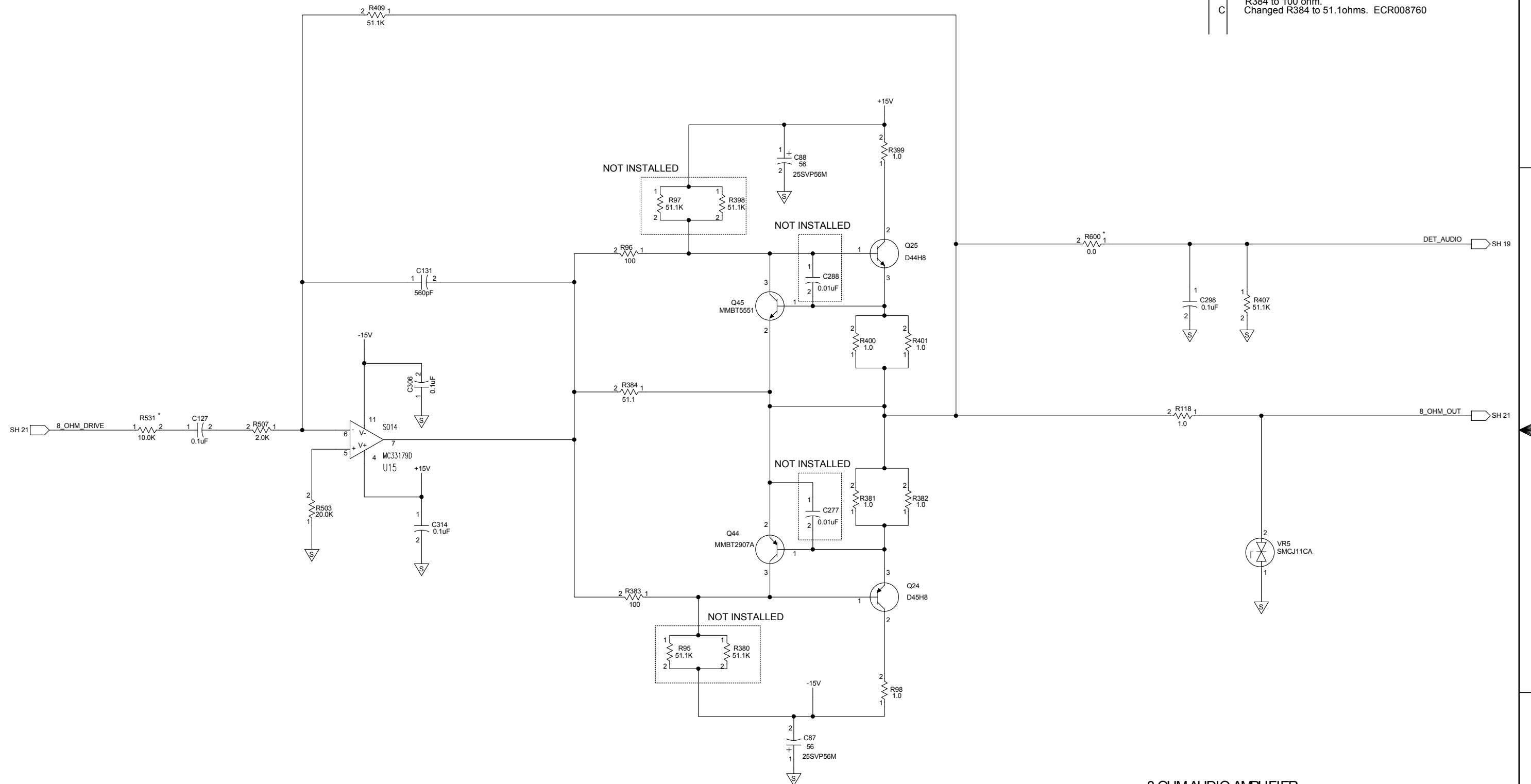
ACSS	SEE FIRST SHEET FOR CONTRACT NUMBER. USE OR DISCLOSURE OF INFORMATION ON THIS SHEET IS SUBJECT TO THE RESTRICTIONS ON THE FIRST SHEET OF THIS DOCUMENT.	SIZE	CAGE CODE	DWG. NO.	REV
		D	1WYD3	9003030-002	-
		SCALE	NONE	SHEET	22



36V AND 28V LINEAR REGULATORS
A4 COMMON POWER SUPPLY ASSEMBLY
SHEET NO. 14 OF 21

COMPUTER GENERATED

REVISIONS	
REV	DESCRIPTION
-	Initial Release ECR008298
A	Q24, Q25, U16, R96, R383, R384, R507 new components, R95, R97, R380, R384, C288, and C277 removed. ECR008520
B	ECR008089 Replace CR48 w/a 0 ohm res, Change R384 to 100 ohm.
C	Changed R384 to 51.1ohms. ECR008760

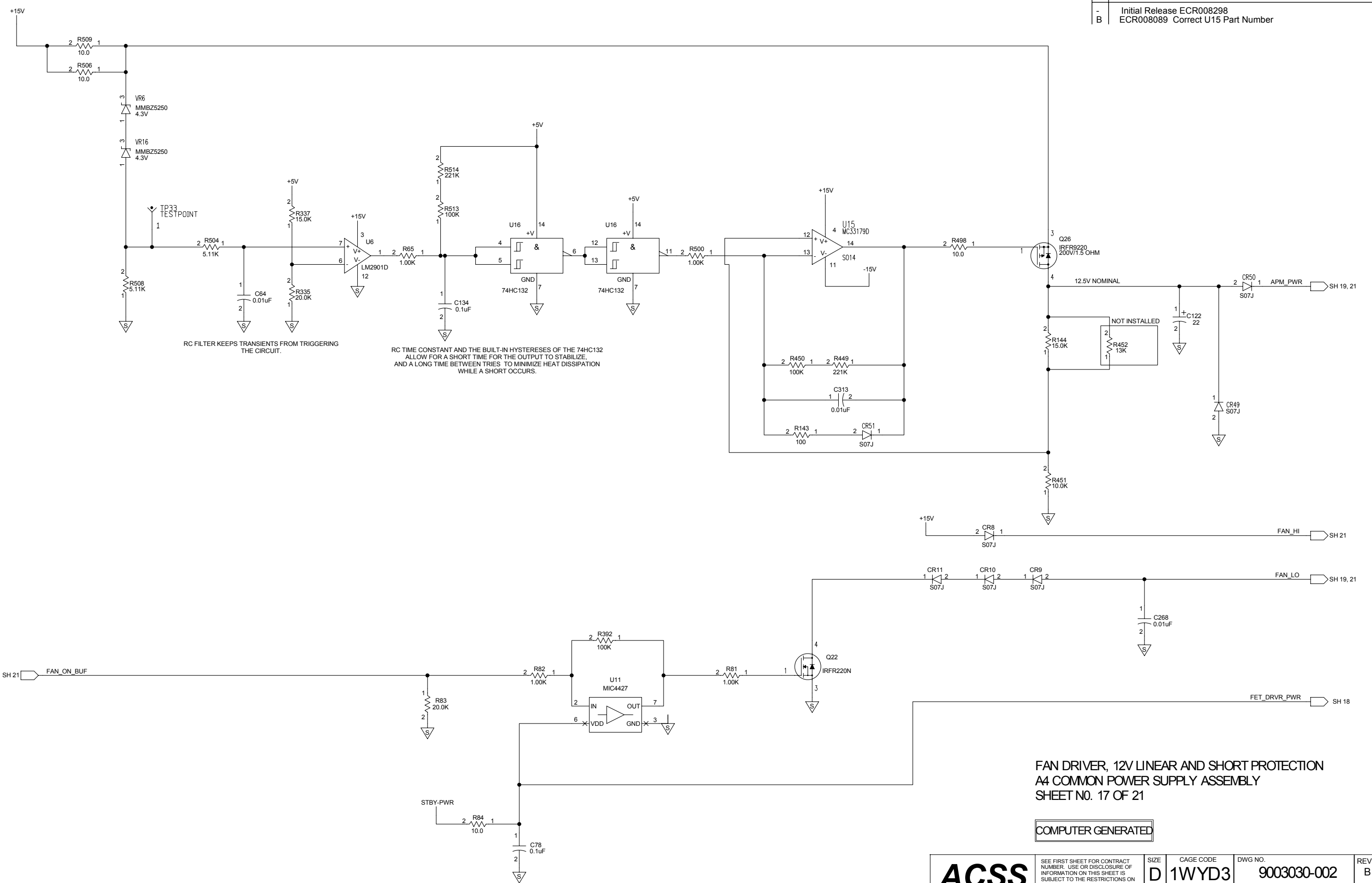


8 OHM AUDIO AMPLIFIER
A4 COMMON POWER SUPPLY ASSEMBLY
SHEET NO. 16 OF 21

COMPUTER GENERATED

* R531 is C128 on the PWB silkscreen
* R600 is CR48 on the PWB silkscreen

REVISIONS	
REV	DESCRIPTION
-	Initial Release ECR008298
B	ECR008089 Correct U15 Part Number



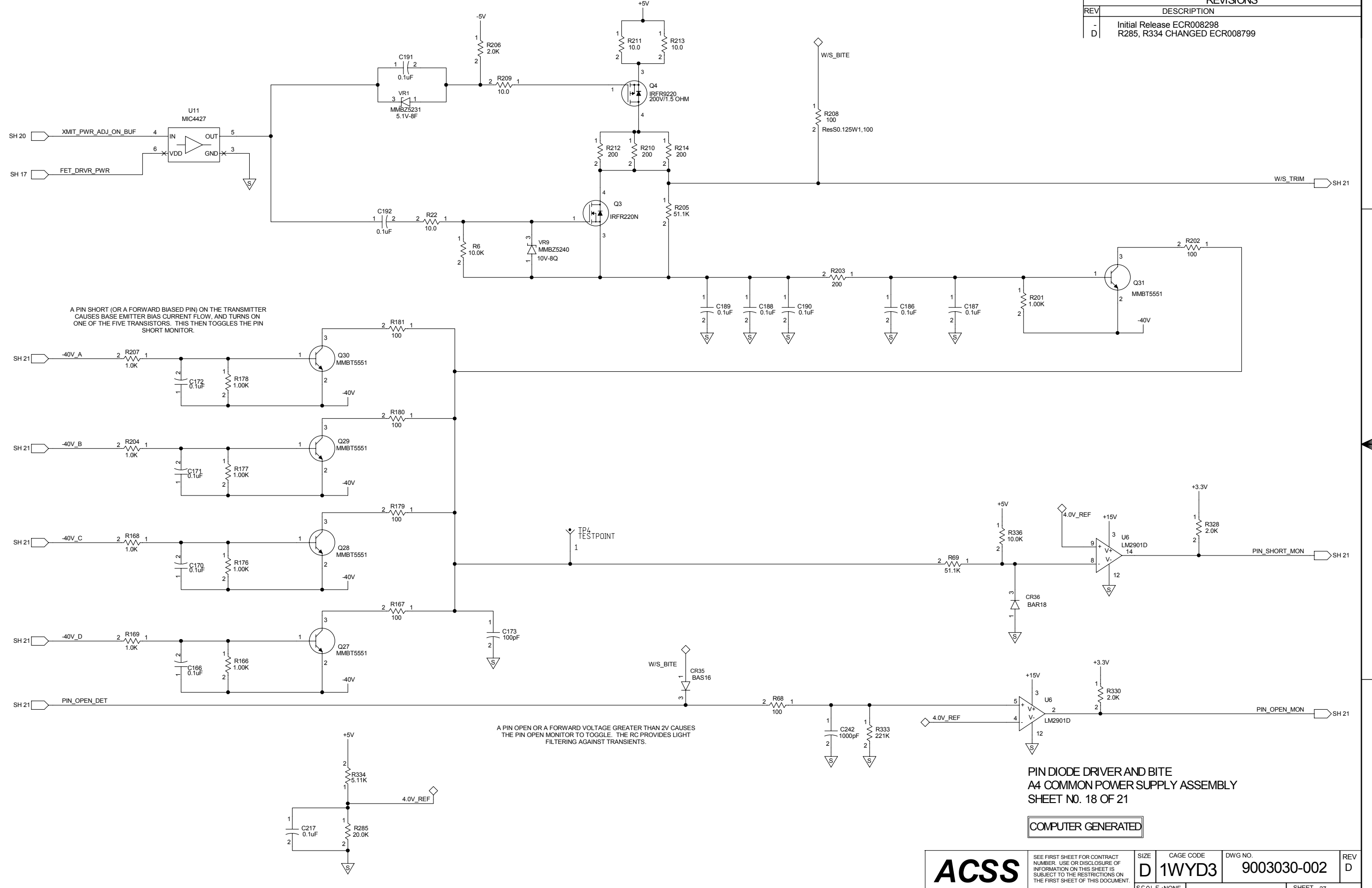
RC FILTER KEEPS TRANSIENTS FROM TRIGGERING THE CIRCUIT.

RC TIME CONSTANT AND THE BUILT-IN HYSTERESES OF THE 74HC132 ALLOW FOR A SHORT TIME FOR THE OUTPUT TO STABILIZE, AND A LONG TIME BETWEEN TRIES TO MINIMIZE HEAT DISSIPATION WHILE A SHORT OCCURS.

FAN DRIVER, 12V LINEAR AND SHORT PROTECTION
 A4 COMMON POWER SUPPLY ASSEMBLY
 SHEET NO. 17 OF 21

COMPUTER GENERATED

REVISONS	
REV	DESCRIPTION
-	Initial Release ECR008298
D	R285, R334 CHANGED ECR008799



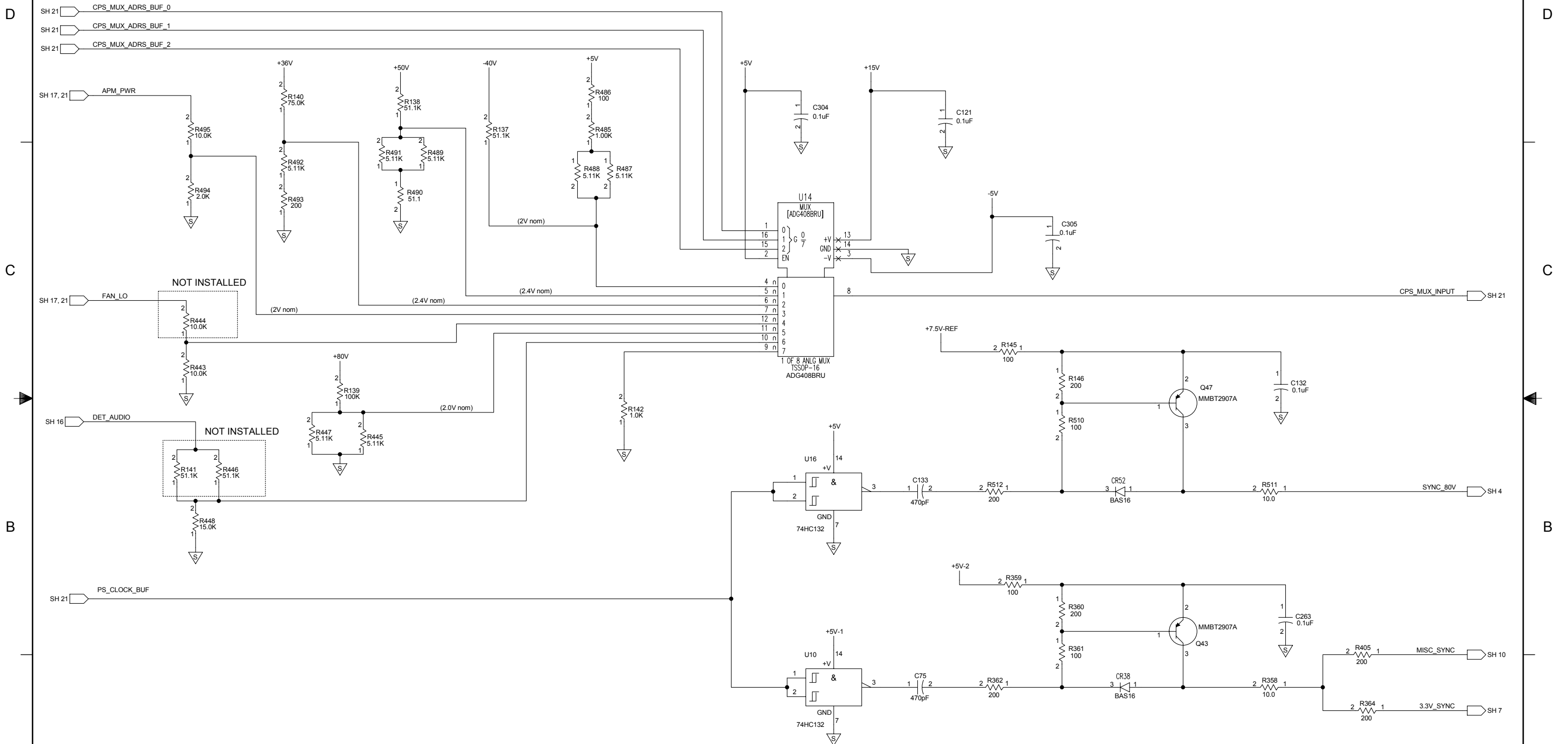
A PIN SHORT (OR A FORWARD BIASED PIN) ON THE TRANSMITTER CAUSES BASE EMITTER BIAS CURRENT FLOW, AND TURNS ON ONE OF THE FIVE TRANSISTORS. THIS THEN TOGGLS THE PIN SHORT MONITOR.

A PIN OPEN OR A FORWARD VOLTAGE GREATER THAN 2V CAUSES THE PIN OPEN MONITOR TO TOGGLE. THE RC PROVIDES LIGHT FILTERING AGAINST TRANSIENTS.

PIN DIODE DRIVER AND BITE
A4 COMMON POWER SUPPLY ASSEMBLY
SHEET NO. 18 OF 21

COMPUTER GENERATED

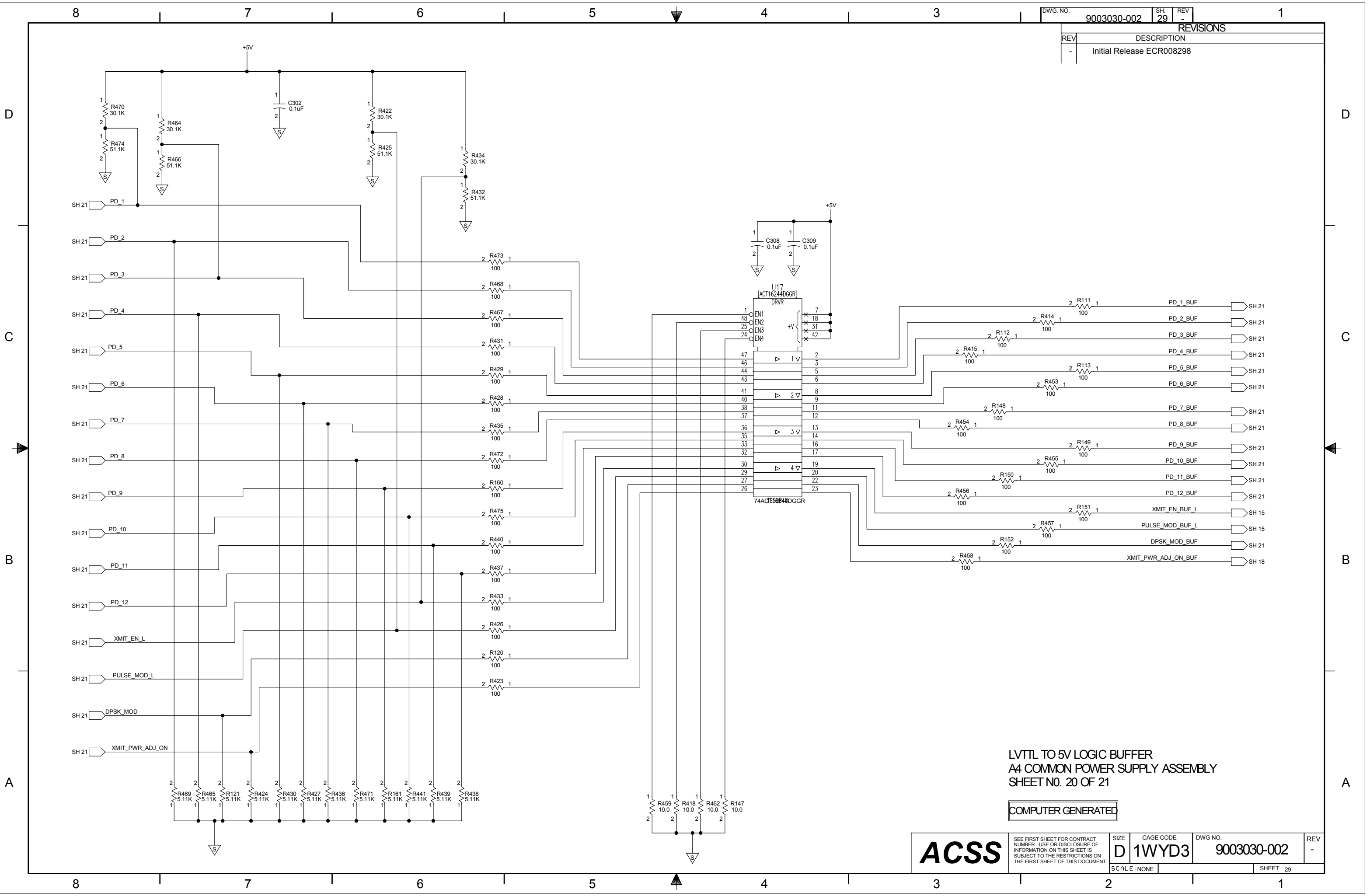
REVISIONS	
REV	DESCRIPTION
-	Initial Release ECR008298
B	ECR008089 R141, R444, R446 removed.



PS SYNC, BITE MUX
A4 COMMON POWER SUPPLY ASSEMBLY
SHEET NO. 19 OF 21

COMPUTER GENERATED

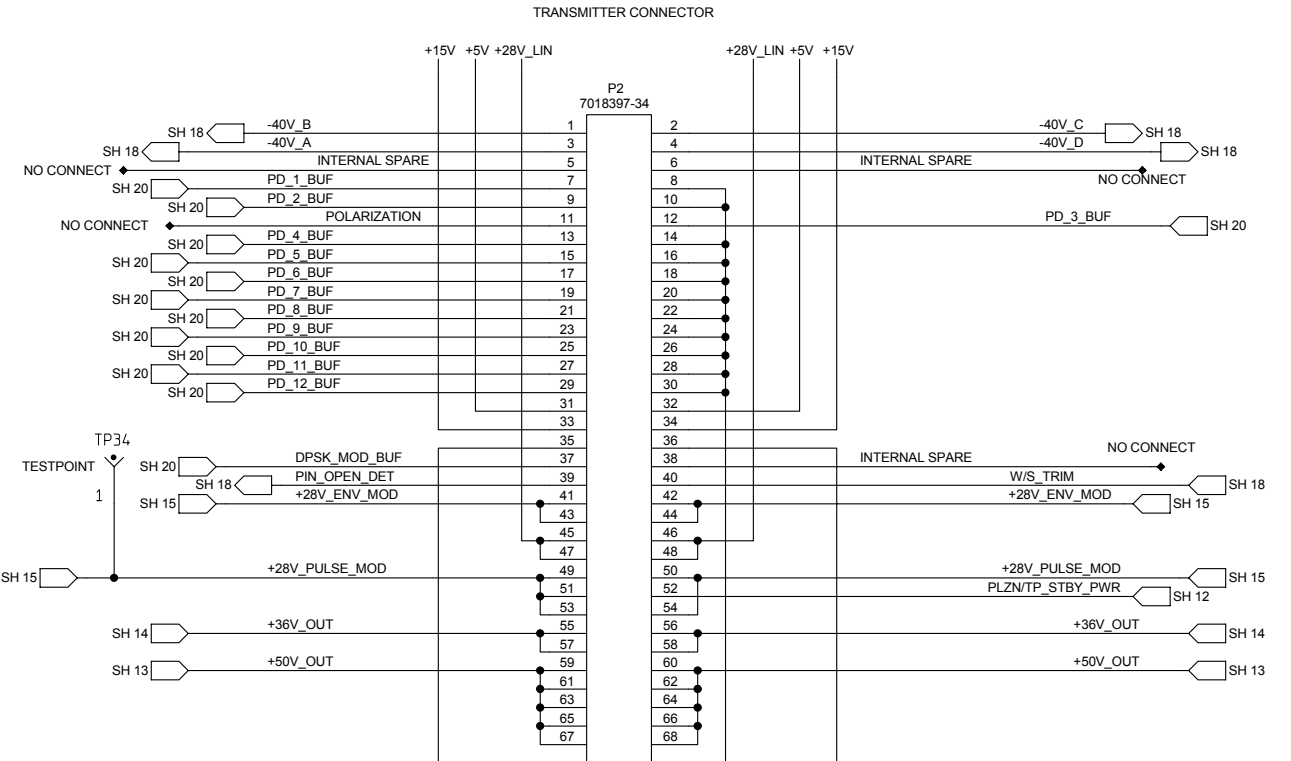
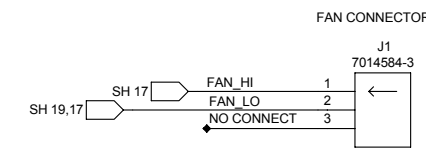
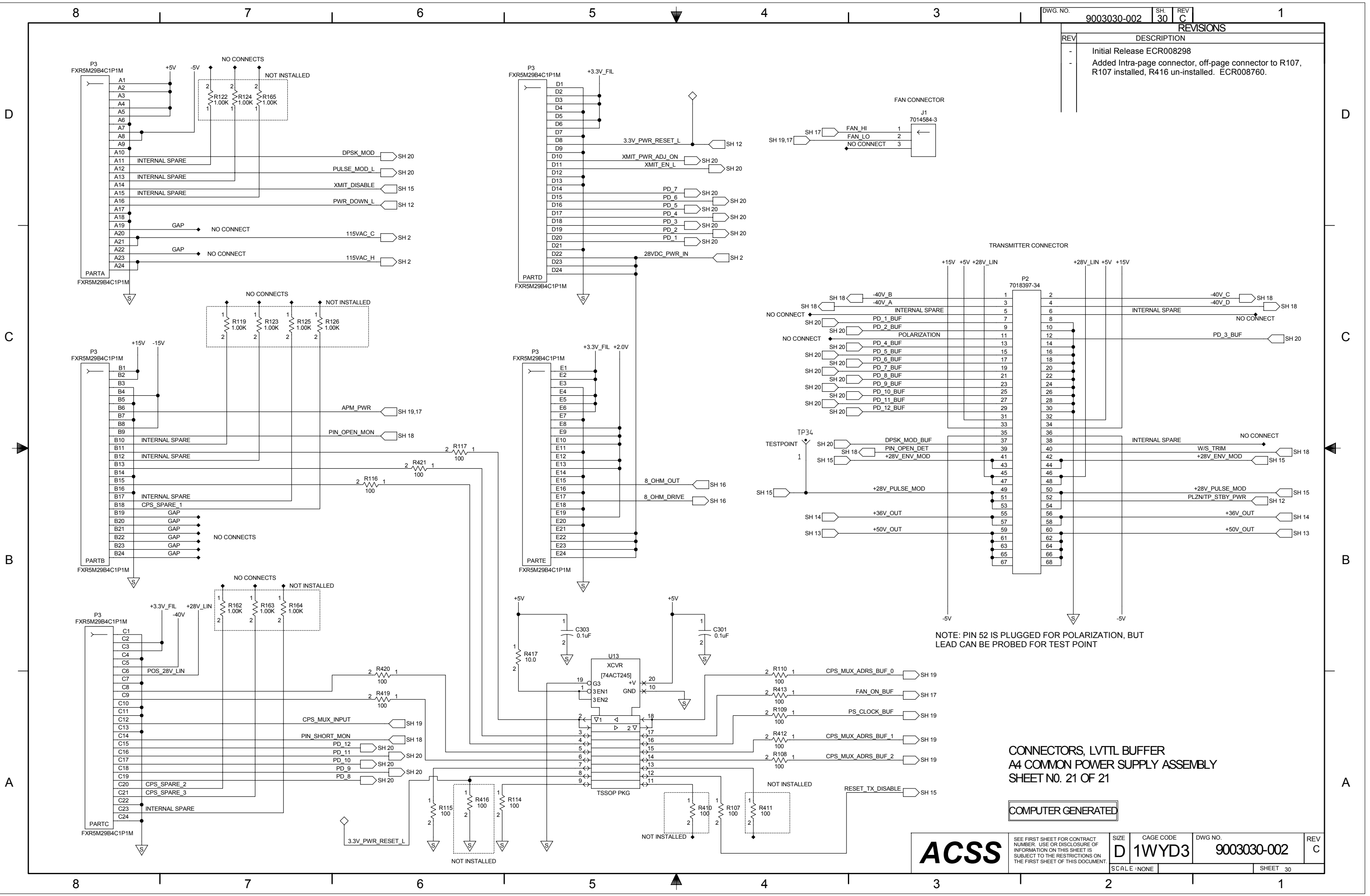
REVISIONS	
REV	DESCRIPTION
-	Initial Release ECR008298



LV TTL TO 5V LOGIC BUFFER
A4 COMMON POWER SUPPLY ASSEMBLY
SHEET NO. 20 OF 21

COMPUTER GENERATED

REVISIONS	
REV	DESCRIPTION
-	Initial Release ECR008298
-	Added Intra-page connector, off-page connector to R107, R107 installed, R416 un-installed. ECR008760.



NOTE: PIN 52 IS PLUGGED FOR POLARIZATION, BUT LEAD CAN BE PROBED FOR TEST POINT

CONNECTORS, LVTTL BUFFER
A4 COMMON POWER SUPPLY ASSEMBLY
SHEET NO. 21 OF 21

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