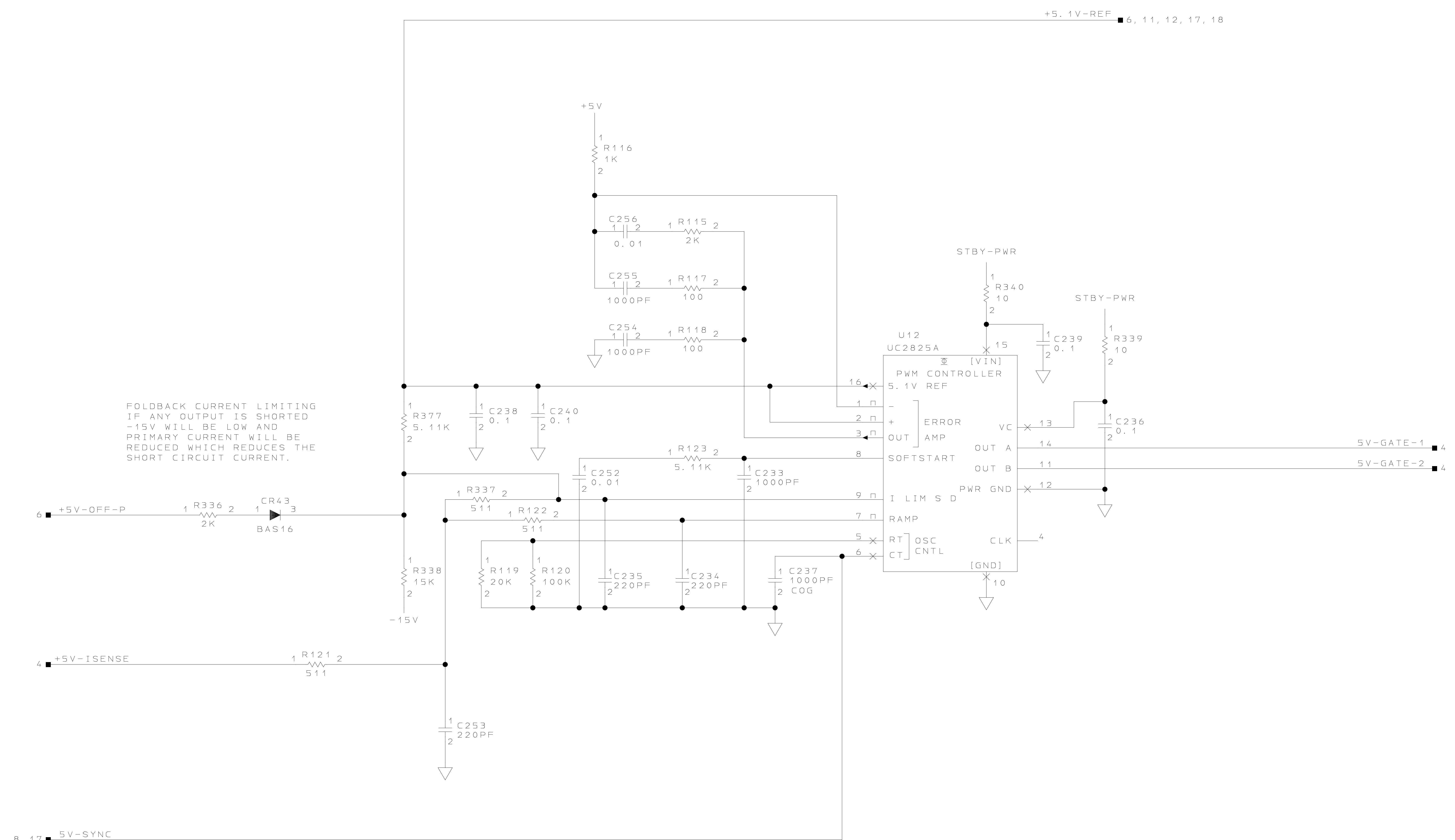


REV		DESCRIPTION	DATE
5204	F	CHANGED BORDER.	07-09-02



5V FLYBACK CONTROLLER
SCHEMATIC DIAGRAM SHEET NO. 5

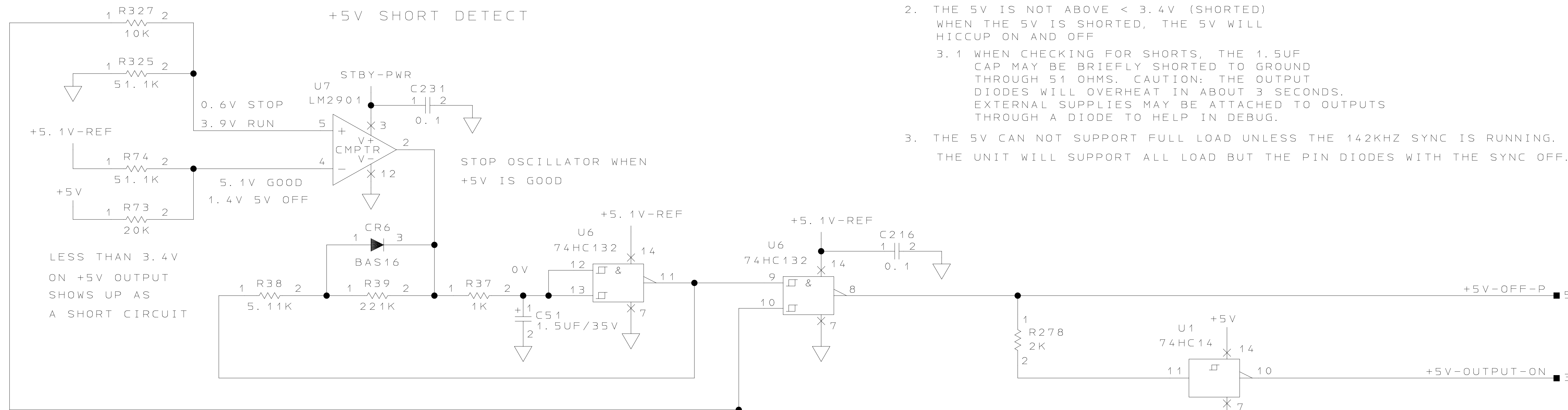
COMPUTER GENERATED

7-3-2002_16:58	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 E	CAGE CODE 1WYD3	DRAWING NO. 9000015-001	REV F
SCALE		SHEET 17			

REVISED		DESCRIPTION	DATE
CR	REV		
5204	F	CHANGED BORDER.	07-09-02

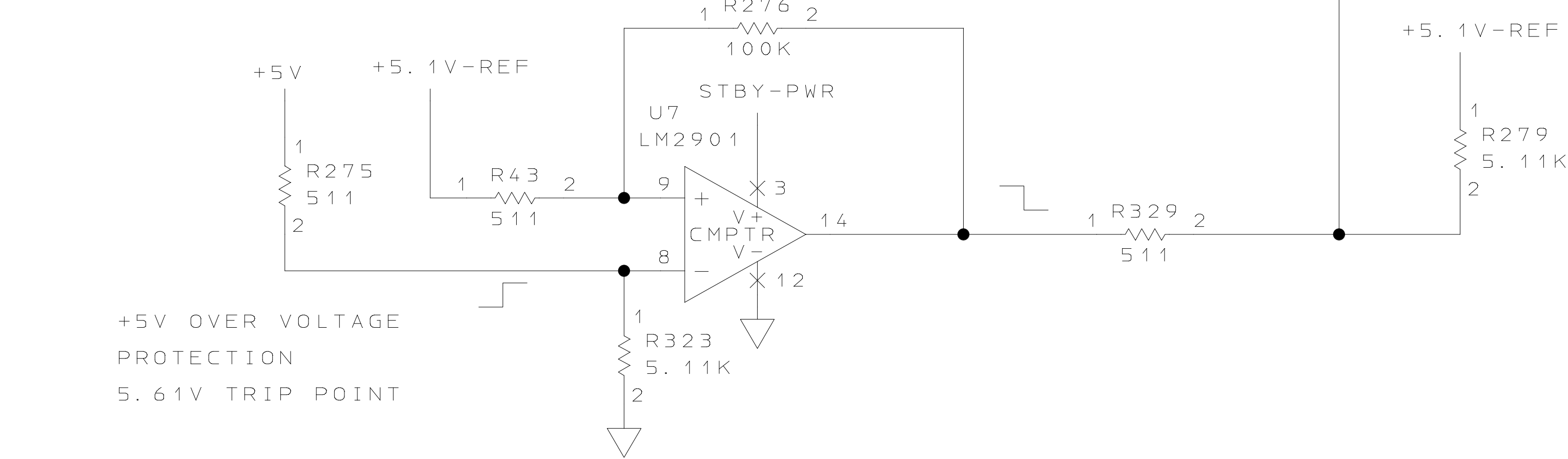
TURN 5V OFF WHEN:

1. THE 5V IS >5.5V
2. THE 5V IS NOT ABOVE < 3.4V (SHORTED)
WHEN THE 5V IS SHORTED, THE 5V WILL HICCUP ON AND OFF
- 3.1 WHEN CHECKING FOR SHORTS, THE 1.5UF CAP MAY BE BRIEFLY SHORTED TO GROUND THROUGH 51 OHMS. CAUTION: THE OUTPUT DIODES WILL OVERHEAT IN ABOUT 3 SECONDS. EXTERNAL SUPPLIES MAY BE ATTACHED TO OUTPUTS THROUGH A DIODE TO HELP IN DEBUG.
3. THE 5V CAN NOT SUPPORT FULL LOAD UNLESS THE 142KHZ SYNC IS RUNNING.
THE UNIT WILL SUPPORT ALL LOAD BUT THE PIN DIODES WITH THE SYNC OFF.



LESS THAN 3.4V
ON +5V OUTPUT
SHOWS UP AS
A SHORT CIRCUIT

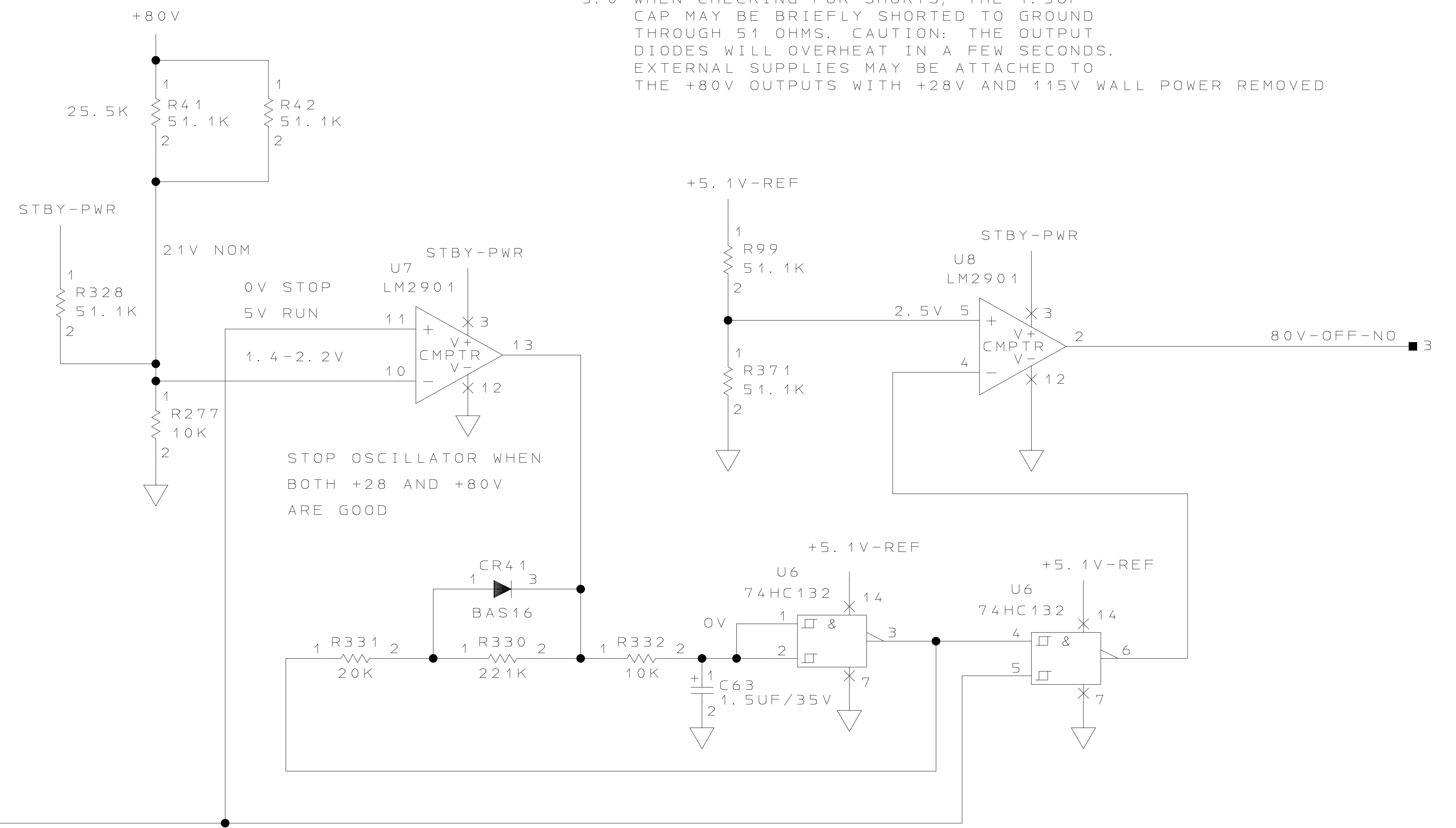
STOP OSCILLATOR WHEN
+5V IS GOOD



+5V OVER VOLTAGE
PROTECTION
5.61V TRIP POINT

TURN 80V AND 50V/36V/28V OFF WHEN:

1. MASTER_OFF* IS LOW
MASTER OFF IS LOW WHEN
THE +28V/+36V/+50V/+80V IS OVER VOLTAGED
2. +80 IS SHORTED (<13.9-15.2V)
- 3.0 WHEN CHECKING FOR SHORTS, THE 1.5UF CAP MAY BE BRIEFLY SHORTED TO GROUND THROUGH 51 OHMS. CAUTION: THE OUTPUT DIODES WILL OVERHEAT IN A FEW SECONDS. EXTERNAL SUPPLIES MAY BE ATTACHED TO THE +80V OUTPUTS WITH +28V AND 115V WALL POWER REMOVED



STOP OSCILLATOR WHEN
BOTH +28 AND +80V
ARE GOOD

5V AND 80V OVER VOLTAGE / OVER
CURRENT PROTECTION

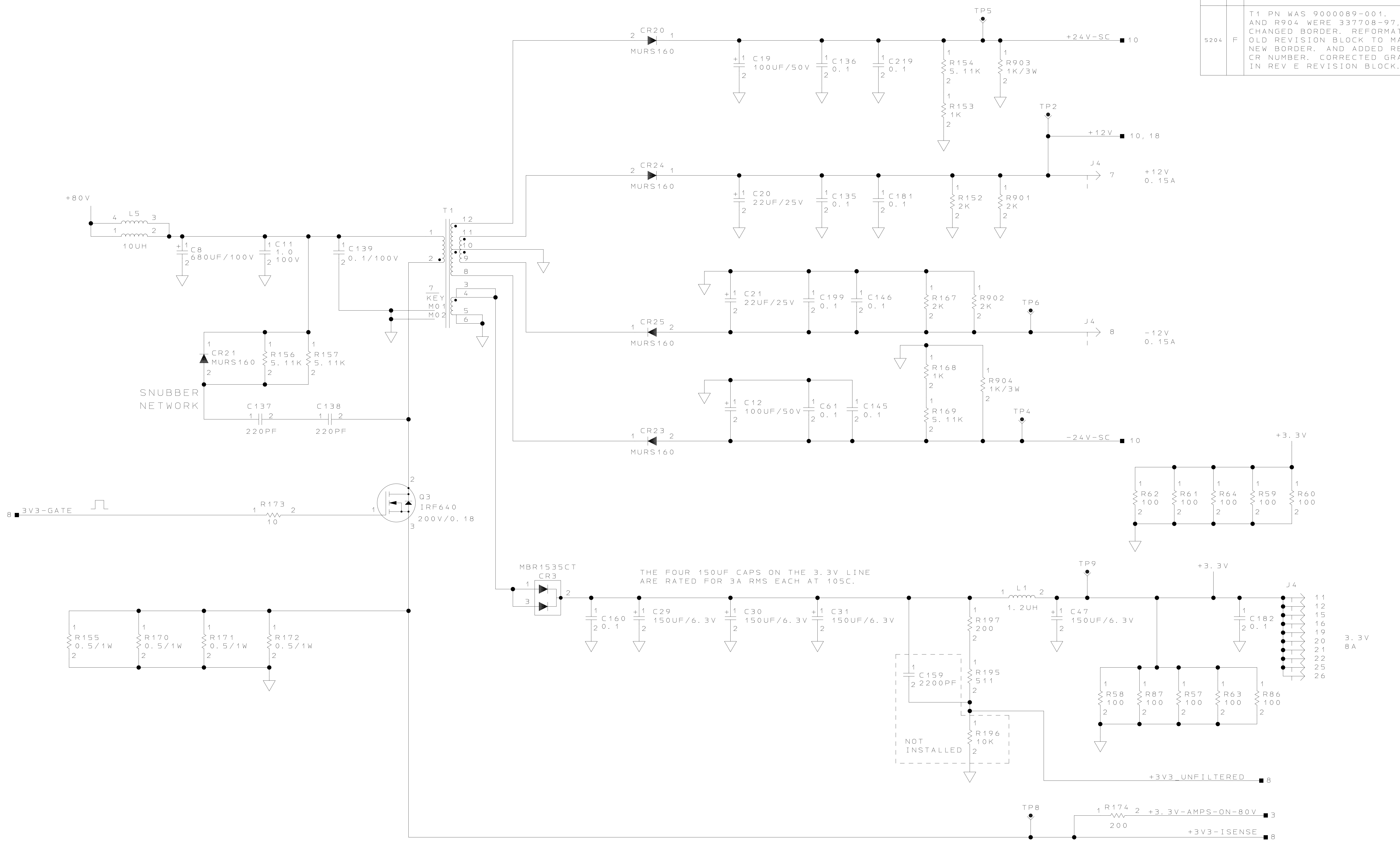
SCHEMATIC DIAGRAM SHEET NO. 6

COMPUTER GENERATED

7-3-2002_16: 58

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 E	CAGE CODE 1WYD3	DRAWING NO. 9000015-001	REV F
	SCALE		SHEET 18		

REVISED		DESCRIPTION
2969	E	CHANGED L5 TO A 4 PIN INDUCTORS, INDUCTORS, CHANGED / ADDED T1 POLARITIES, ADDED R901 - R904, C12 AND C19 WERE 22UF/30V, UNINSTALLED C159. 05-14-02
5204	F	T1 PN WAS 9000089-001, R903 AND R904 WERE 337708-97, 1K, CHANGED BORDER, REFORMATTED OLD REVISION BLOCK TO MATCH NEW BORDER, AND ADDED REV E CR NUMBER, CORRECTED GRAMMAR IN REV E REVISION BLOCK. 07-09-02



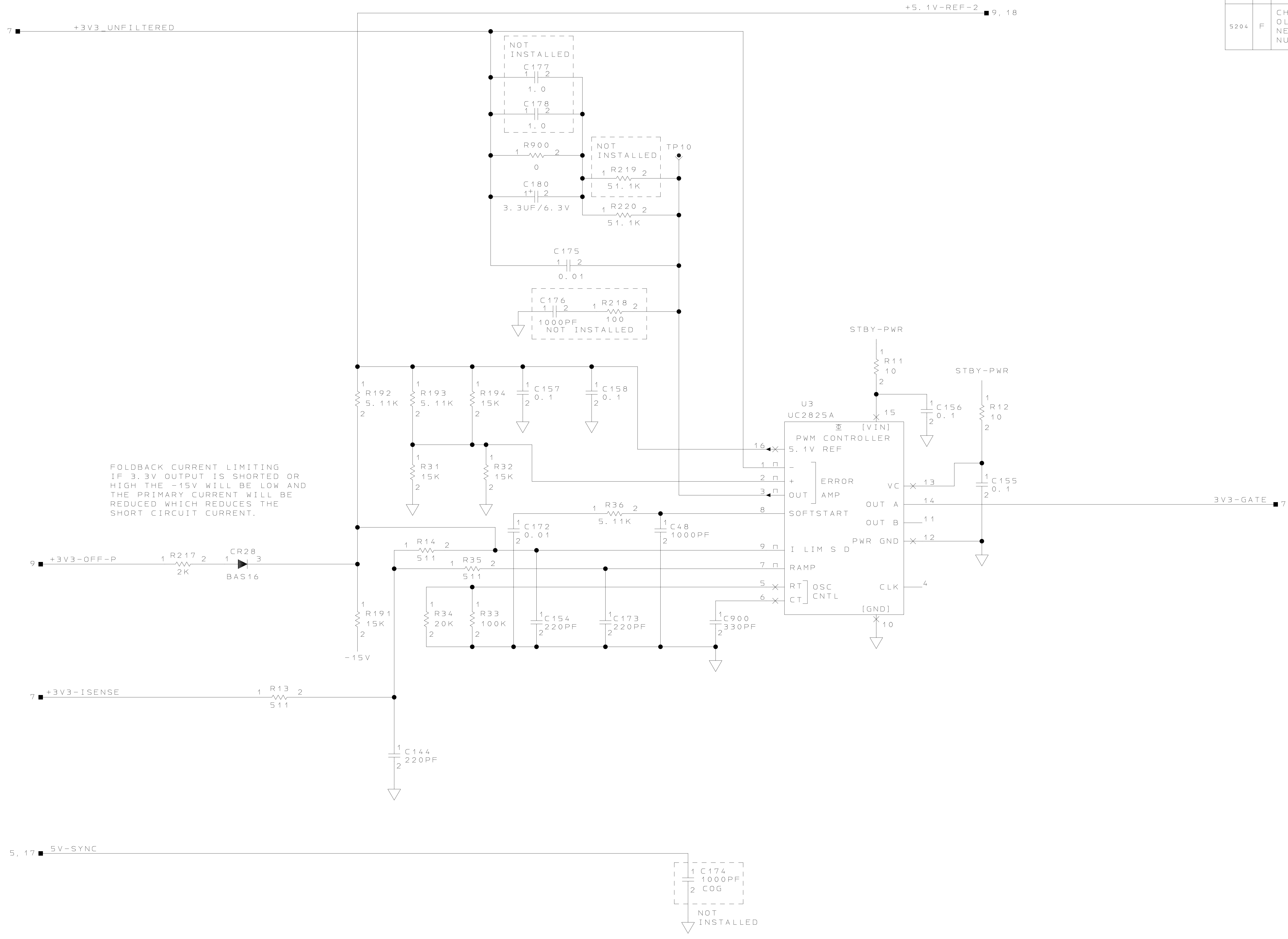
3.3V FLYBACK SUPPLY
SCHEMATIC DIAGRAM SHEET NO. 7

COMPUTER GENERATED

7-3-2002_16:58

	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: E CAGE CODE: 1WYD3 SCALE: —	DRAWING NO.: 9000015-001 REV: F SHEET 19
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REV		DESCRIPTION
2969	E	UNINSTALLED C174 AND R219, AND INSTALLED C900 AND R900. 05-14-02
5204	F	CHANGED BORDER, REFORMATTED OLD REVISION BLOCK TO MATCH NEW BORDER. ADDED REV E CR NUMBER. 07-09-02



FOLDBACK CURRENT LIMITING
IF 3.3V OUTPUT IS SHORTED OR
HIGH THE -15V WILL BE LOW AND
THE PRIMARY CURRENT WILL BE
REDUCED WHICH REDUCES THE
SHORT CIRCUIT CURRENT.

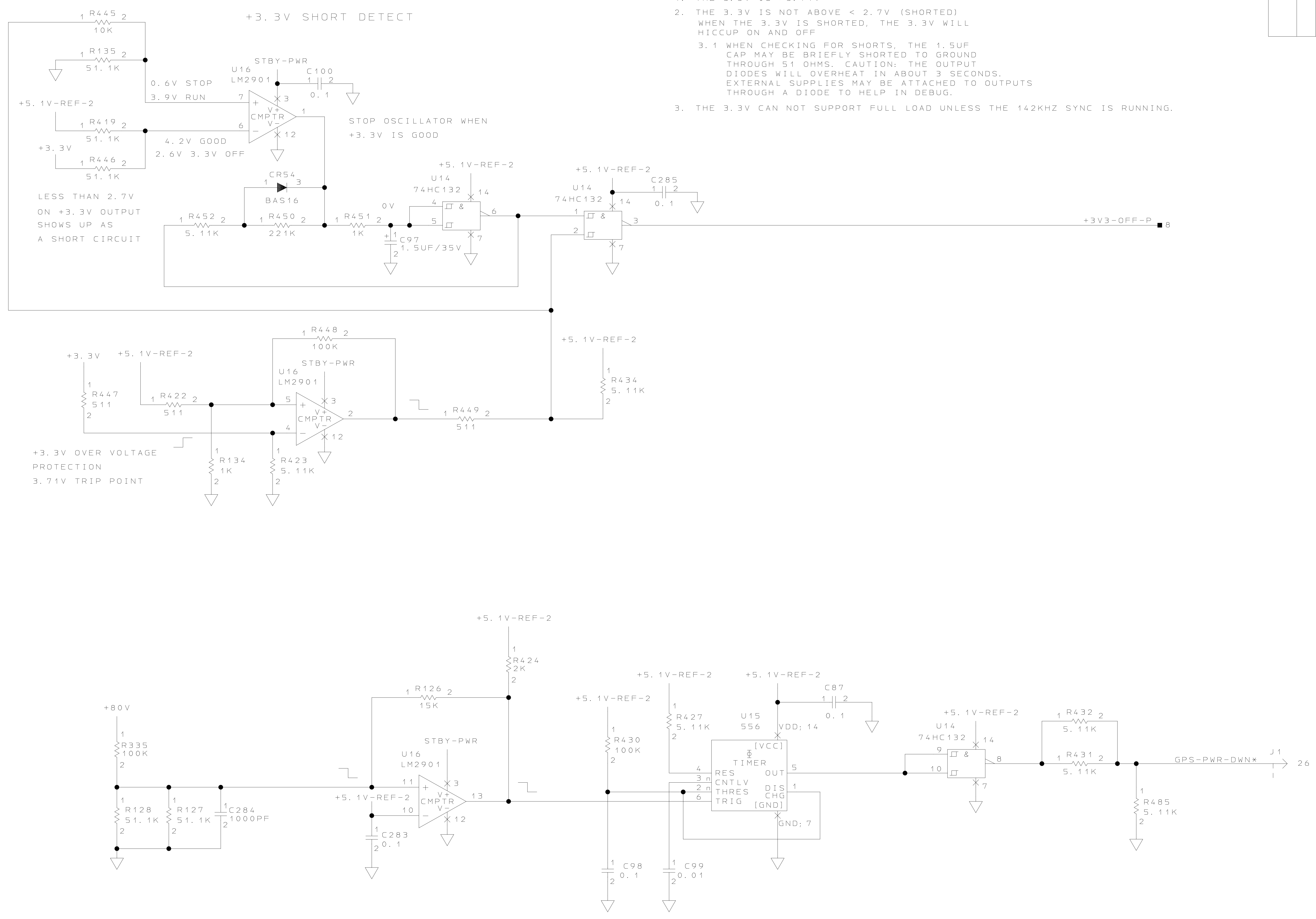
3.3V FLYBACK CONTROLLER
SCHEMATIC DIAGRAM SHEET NO. 8

COMPUTER GENERATED

7-3-2002_16:01	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 E 1WYD3	DRAWING NO. 9000015-001	REV F
ACSS	SCALE	SHEET 20		

REVIEWS		DESCRIPTION
2969	E	CORRECTED GRAMMAR IN TEXT. 05-14-02
5204	F	C87-LEFT, R424-TOP, R427-TOP, R430-TOP, AND U15-14 WERE CONNECTED TO +5V. CHANGED BORDER. REFORMATTED OLD REVISION BLOCK TO MATCH NEW BORDER. ADDED REV E CR NUMBER. CORRECTED GRAMMAR IN REV E REVISION BLOCK. 07-09-02

- TURN 3.3V OFF WHEN:
1. THE 3.3V IS >3.71V
 2. THE 3.3V IS NOT ABOVE < 2.7V (SHORTED) WHEN THE 3.3V IS SHORTED, THE 3.3V WILL HICCUP ON AND OFF
 - 3.1 WHEN CHECKING FOR SHORTS, THE 1.5UF CAP MAY BE BRIEFLY SHORTED TO GROUND THROUGH 51 OHMS. CAUTION: THE OUTPUT DIODES WILL OVERHEAT IN ABOUT 3 SECONDS. EXTERNAL SUPPLIES MAY BE ATTACHED TO OUTPUTS THROUGH A DIODE TO HELP IN DEBUG.
 3. THE 3.3V CAN NOT SUPPORT FULL LOAD UNLESS THE 142KHZ SYNC IS RUNNING.



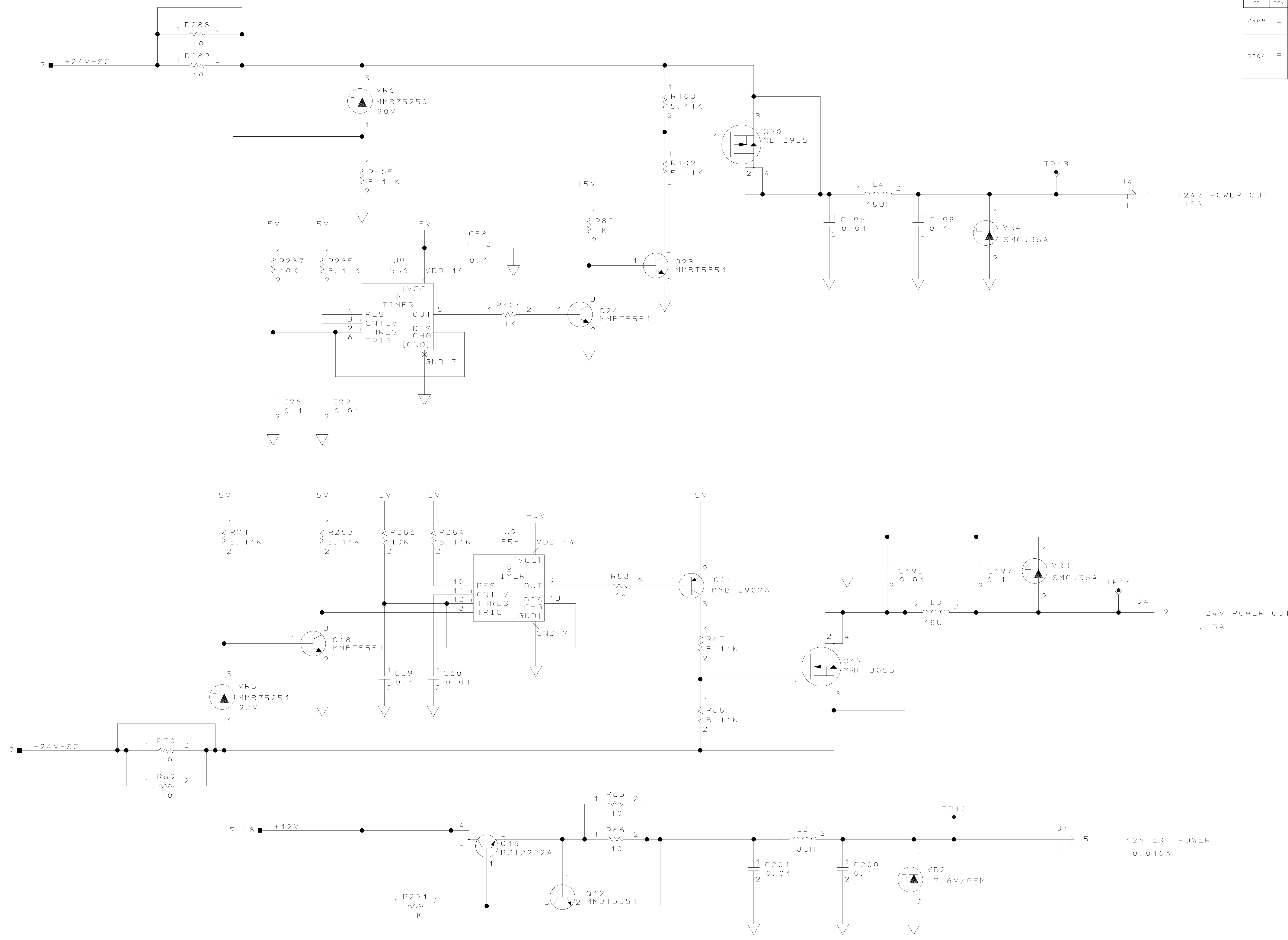
3.3V OVER VOLTAGE/OVER CURRENT PROTECTION AND GPS POWER DOWN WARNING SCHEMATIC DIAGRAM SHEET NO. 9

COMPUTER GENERATED

7-18-2002_17:37

	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: E 1WYD3 SCALE: —	DRAWING NO.: 9000015-001 REV: F SHEET 21
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REVISED		DESCRIPTION	DATE
2969	E	ADDED JUMPERS ACROSS Q17, Q20, R70, AND R288.	05-14-02
5204	F	CHANGED BORDER, REFORMATTED OLD REVISION BLOCK TO MATCH NEW BORDER. ADDED REV E CR NUMBER.	07-09-02

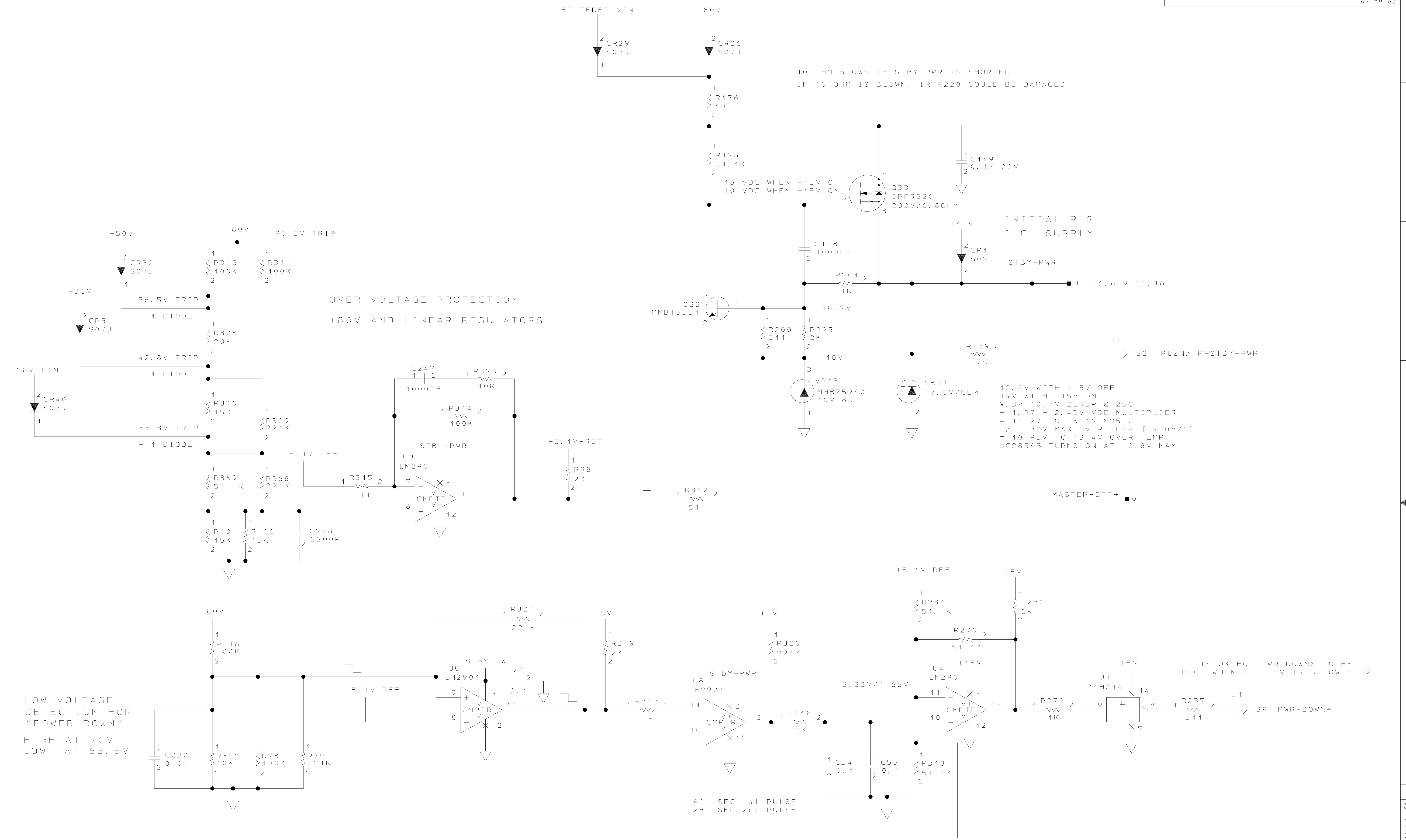


+/-24V AND +12V-EXT-POWER SHORT
CIRCUIT PROTECTION
SCHEMATIC DIAGRAM SHEET NO. 10

COMPUTER GENERATED

7-18-2002_17:22	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 E 1WYD3	DRAWING NO. 9000015-001	REV F
ACSS	SCALE	SHEET 22		

REVISED		DESCRIPTION	DATE
CR	REV		
5204	F	CHANGED BORDER.	07-09-02

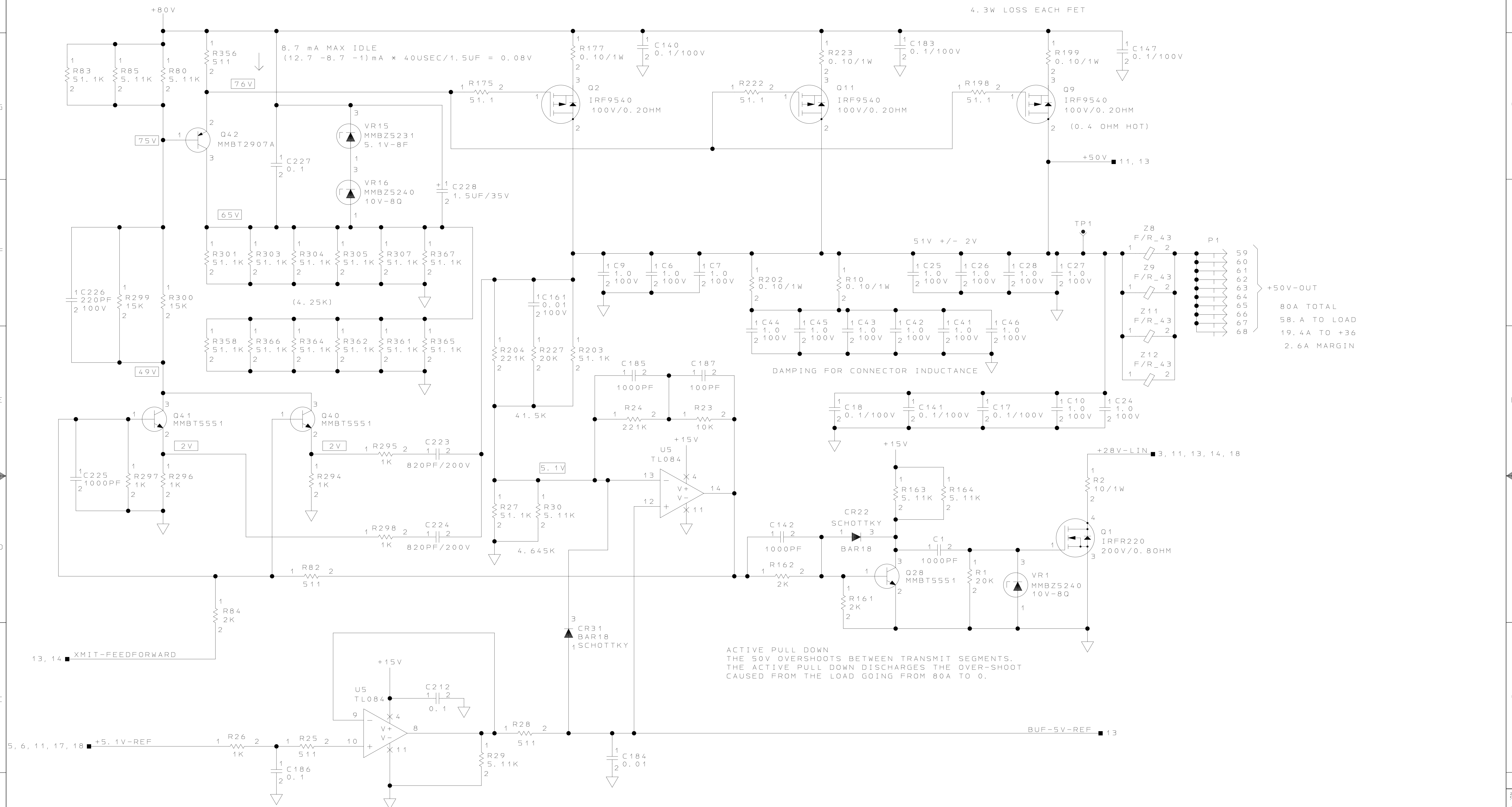


COMPUTER GENERATED

7-3-2002_16:09

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 E 1WYD3	CAGE CODE 9000015-001	DRAWING NO. F	REV SHEET 23
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REVISED		DESCRIPTION	DATE
CR	REV		
5204	F	CHANGED BORDER.	07-09-02



ACTIVE PULL DOWN
 THE 50V OVERSHOTS BETWEEN TRANSMIT SEGMENTS.
 THE ACTIVE PULL DOWN DISCHARGES THE OVER-SHOOT
 CAUSED FROM THE LOAD GOING FROM 80A TO 0.

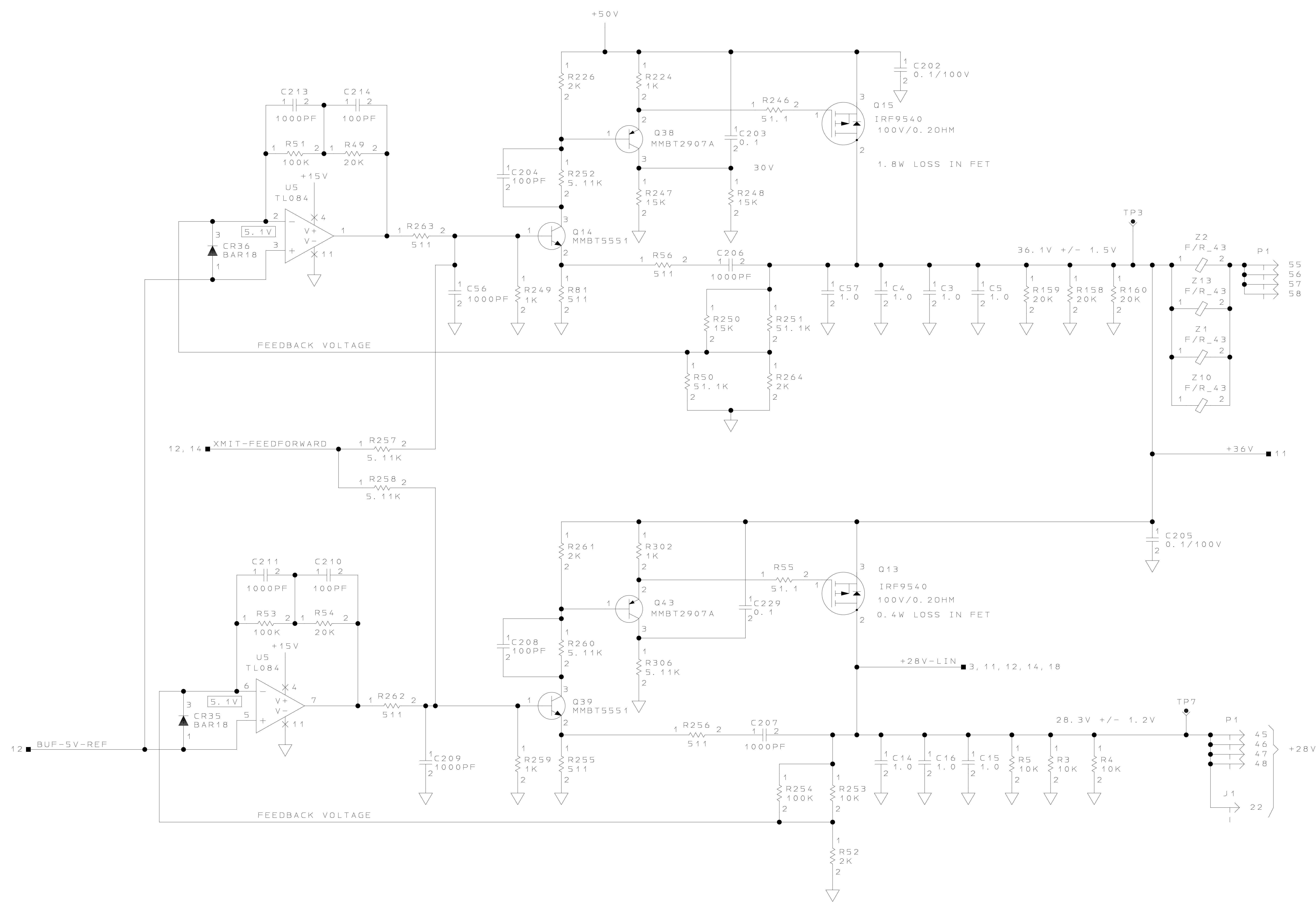
+50V-OUT
 80A TOTAL
 58. A TO LOAD
 19.4 A TO +36
 2.6 A MARGIN

FAST +50V LINEAR REGULATOR
 SCHEMATIC DIAGRAM SHEET NO. 12

COMPUTER GENERATED
 7-3-2002_16: 09

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 E 1WYD3	CAGE CODE 9000015-001	REV F
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REVISED		DESCRIPTION	DATE
CR	REV		
5204	F	CHANGED BORDER.	07-09-02



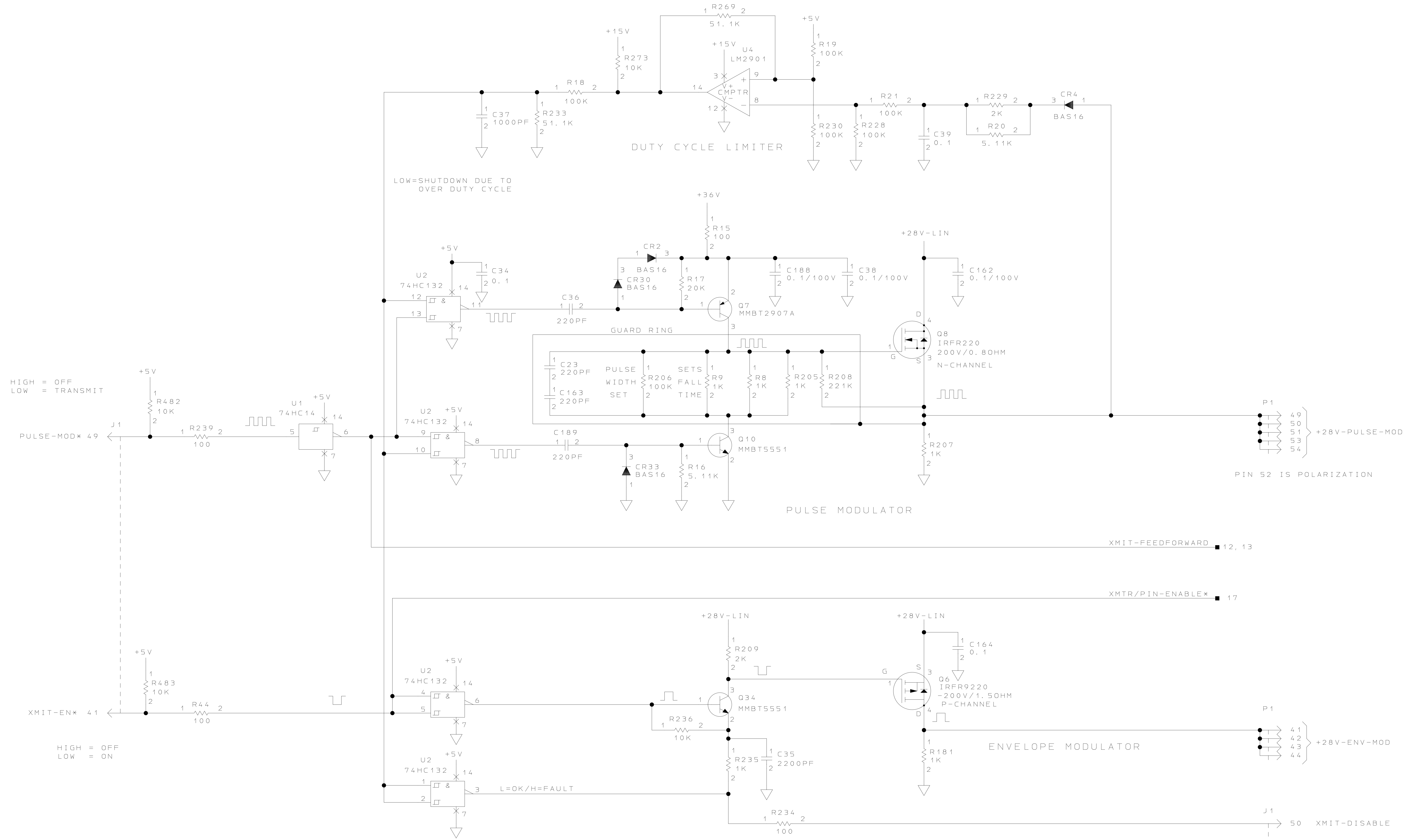
19.4A TOTAL
15.0A TO LOAD
4.4A TO +28V

FAST +36V AND +28V LINEAR REGULATORS
SCHEMATIC DIAGRAM SHEET NO. 13

COMPUTER GENERATED

7-3-2002_16:09	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 E 1WYD3	DRAWING NO. 9000015-001	REV F
ACSS	SCALE		SHEET 25	

REVIEWS		DESCRIPTION	DATE
CR	REV		
5204	F	CHANGED BORDER.	07-09-02



HIGH = OFF
LOW = TRANSMIT

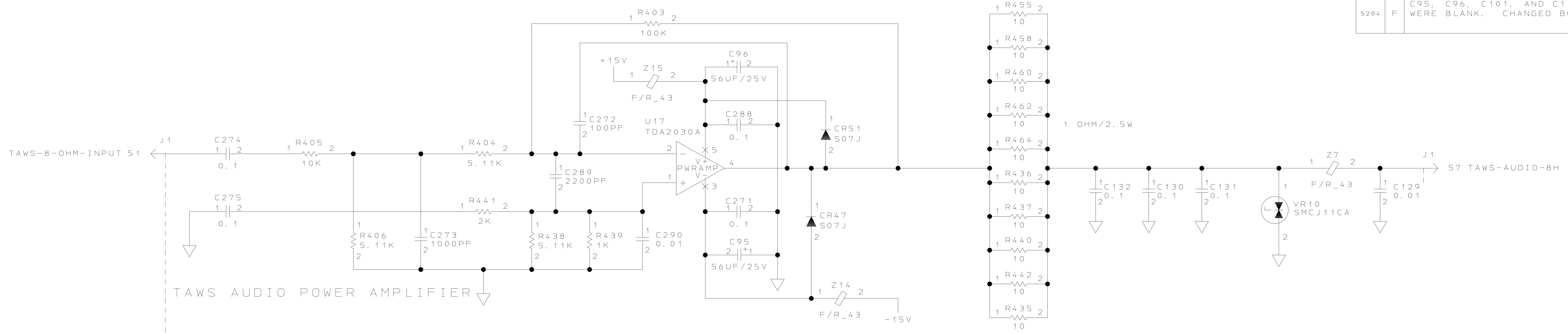
HIGH = OFF
LOW = ON

PULSE AND ENVELOPE MODULATOR
WITH OVERDUTY CYCLE SHUT DOWN
SCHEMATIC DIAGRAM SHEET NO. 14

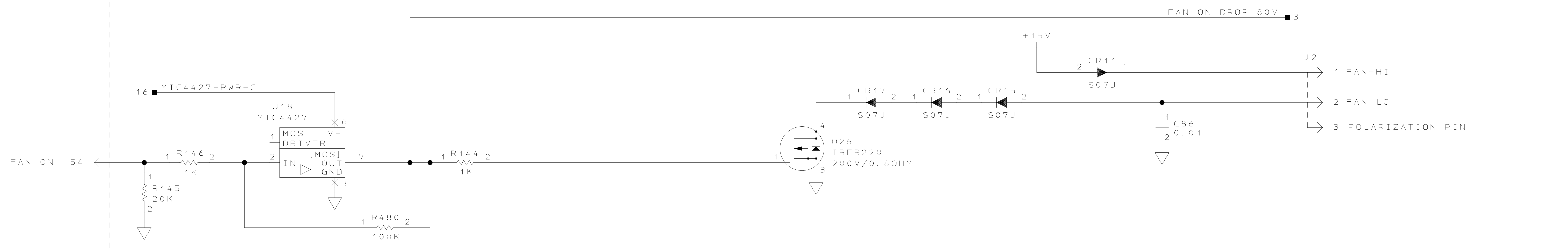
COMPUTER GENERATED

7-3-2002_16:09	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 E 1WYD3	DRAWING NO. 9000015-001	REV F
ACSS		SCALE	SHEET 26	

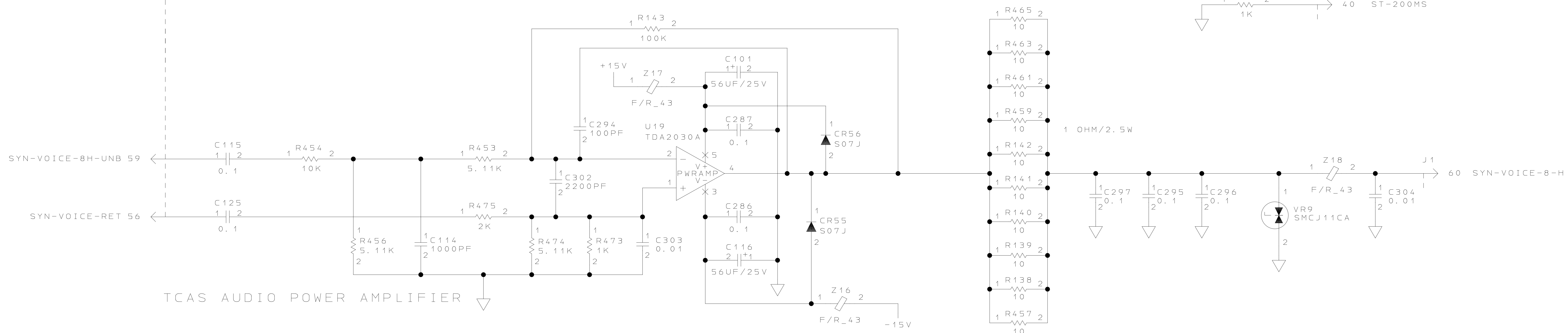
REVISED		DESCRIPTION
CR	REV	
5204	F	C95, C96, C101, AND C116 PN'S WERE BLANK. CHANGED BORDER.



TAWS AUDIO POWER AMPLIFIER



FAN-ON-DROP-80V



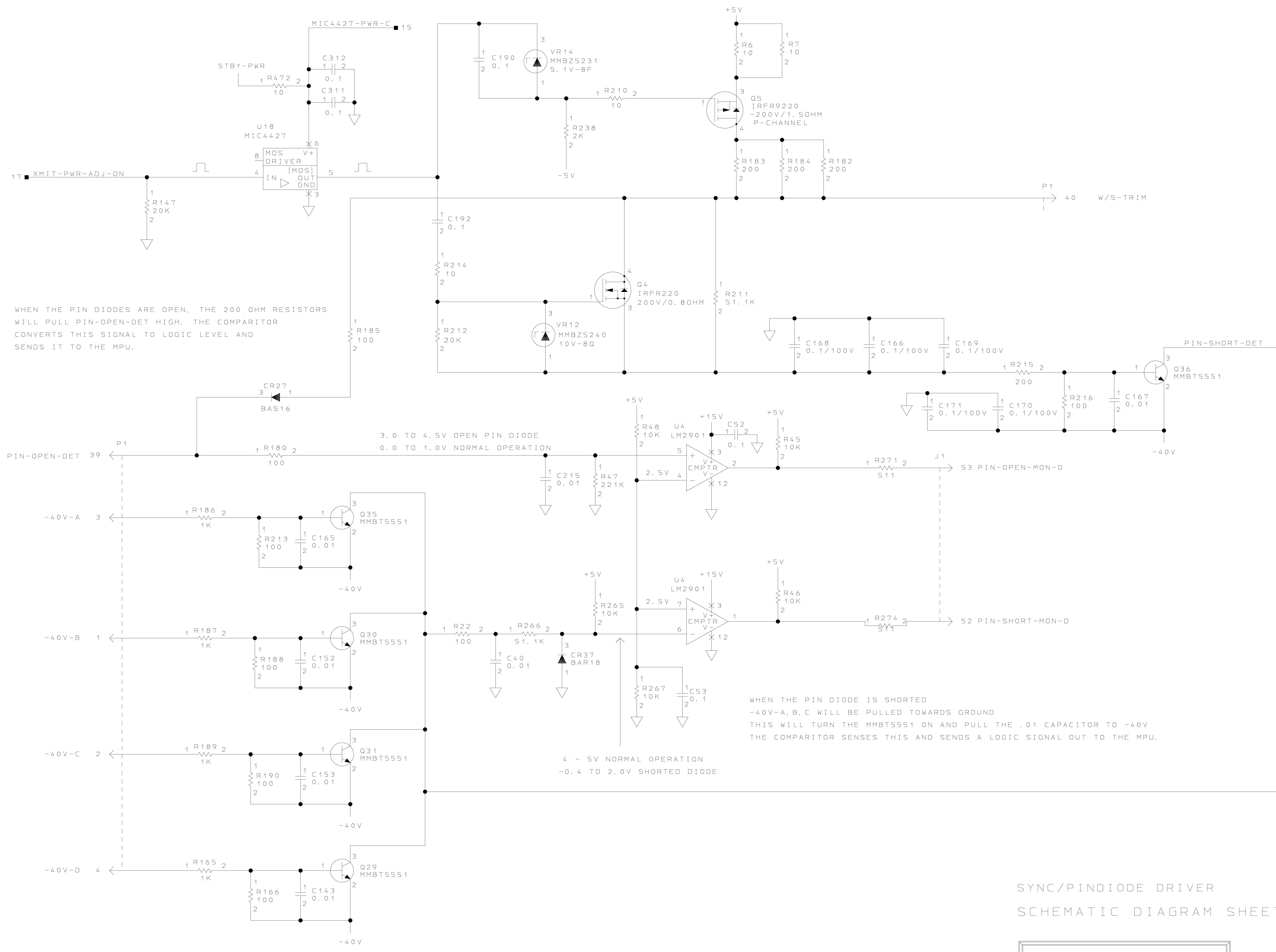
TCAS AUDIO POWER AMPLIFIER

AUDIOAMPS AND FAN DRIVER
SCHEMATIC DIAGRAM SHEET NO. 15

COMPUTER GENERATED

7-3-2002_16: 26	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 E	CAGE CODE 1WYD3	DRAWING NO. 9000015-001	REV F
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REVISED		DESCRIPTION	DATE
CR	REV		
5204	F	CHANGED BORDER.	07-09-02



WHEN THE PIN DIODES ARE OPEN, THE 200 OHM RESISTORS WILL PULL PIN-OPEN-DET HIGH. THE COMPARATOR CONVERTS THIS SIGNAL TO LOGIC LEVEL AND SENDS IT TO THE MPU.

3.0 TO 4.5V OPEN PIN DIODE
0.0 TO 1.0V NORMAL OPERATION

4 - 5V NORMAL OPERATION
-0.4 TO 2.0V SHORTED DIODE

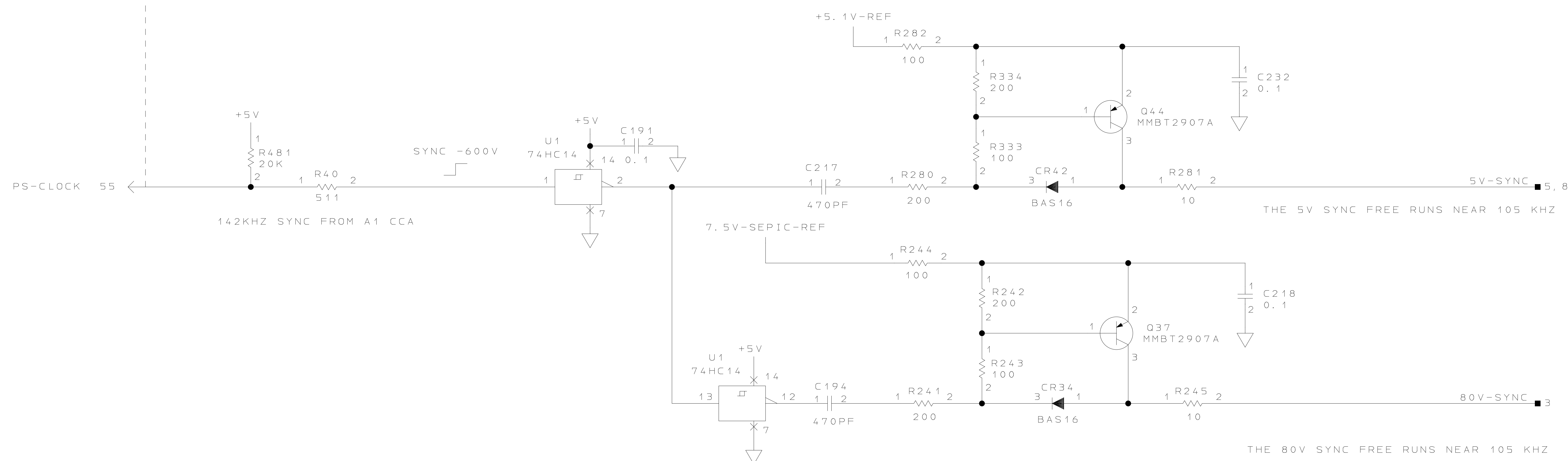
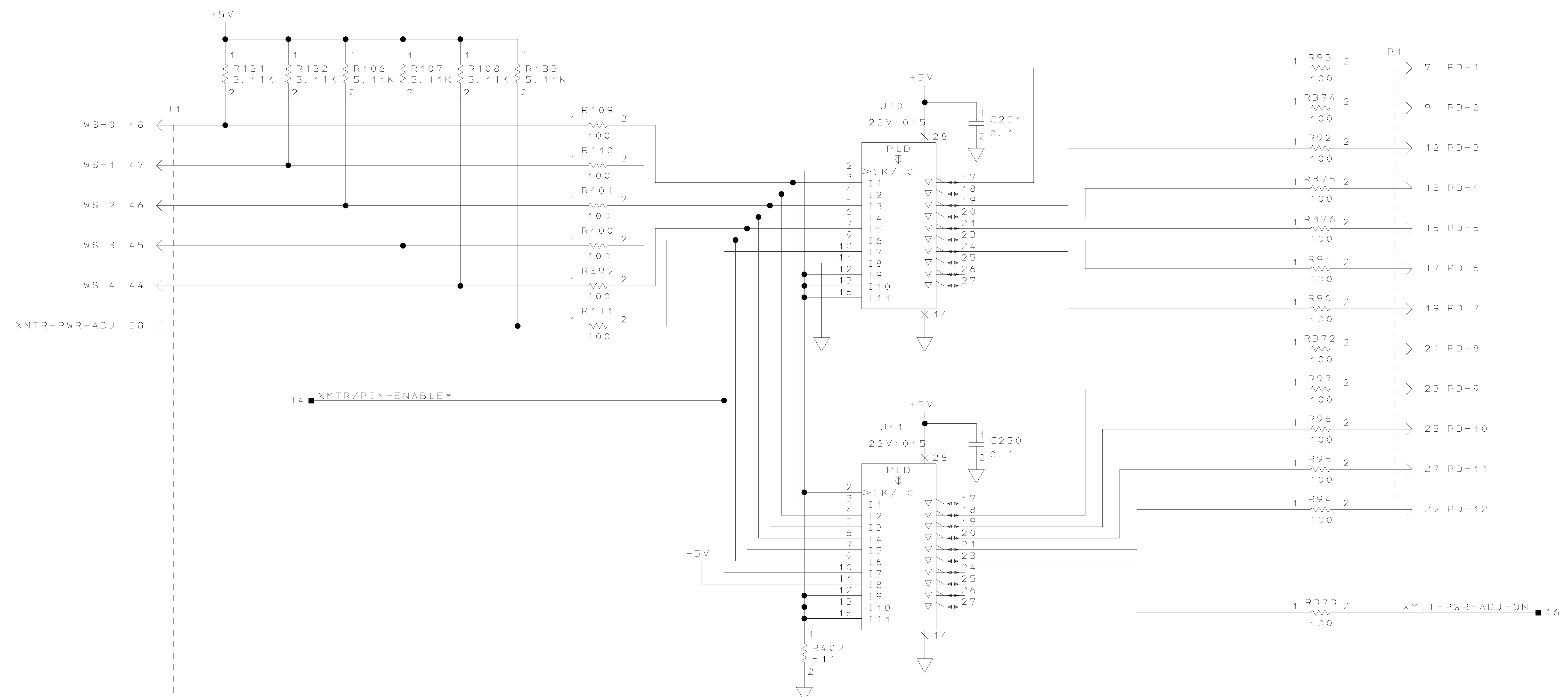
WHEN THE PIN DIODE IS SHORTED
-40V-A, B, C WILL BE PULLED TOWARDS GROUND
THIS WILL TURN THE MMBT5551 ON AND PULL THE .01 CAPACITOR TO -40V
THE COMPARATOR SENSES THIS AND SENDS A LOGIC SIGNAL OUT TO THE MPU.

SYNC/PINDIODE DRIVER
SCHEMATIC DIAGRAM SHEET NO. 16

COMPUTER GENERATED

7-3-2002_16:26	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 E	CAGE CODE 1WYD3	DRAWING NO. 9000015-001	REV F
			SCALE	SHEET 28		

REVISED		DESCRIPTION	DATE
CR	REV		
5204	F	CHANGED BORDER.	07-09-02



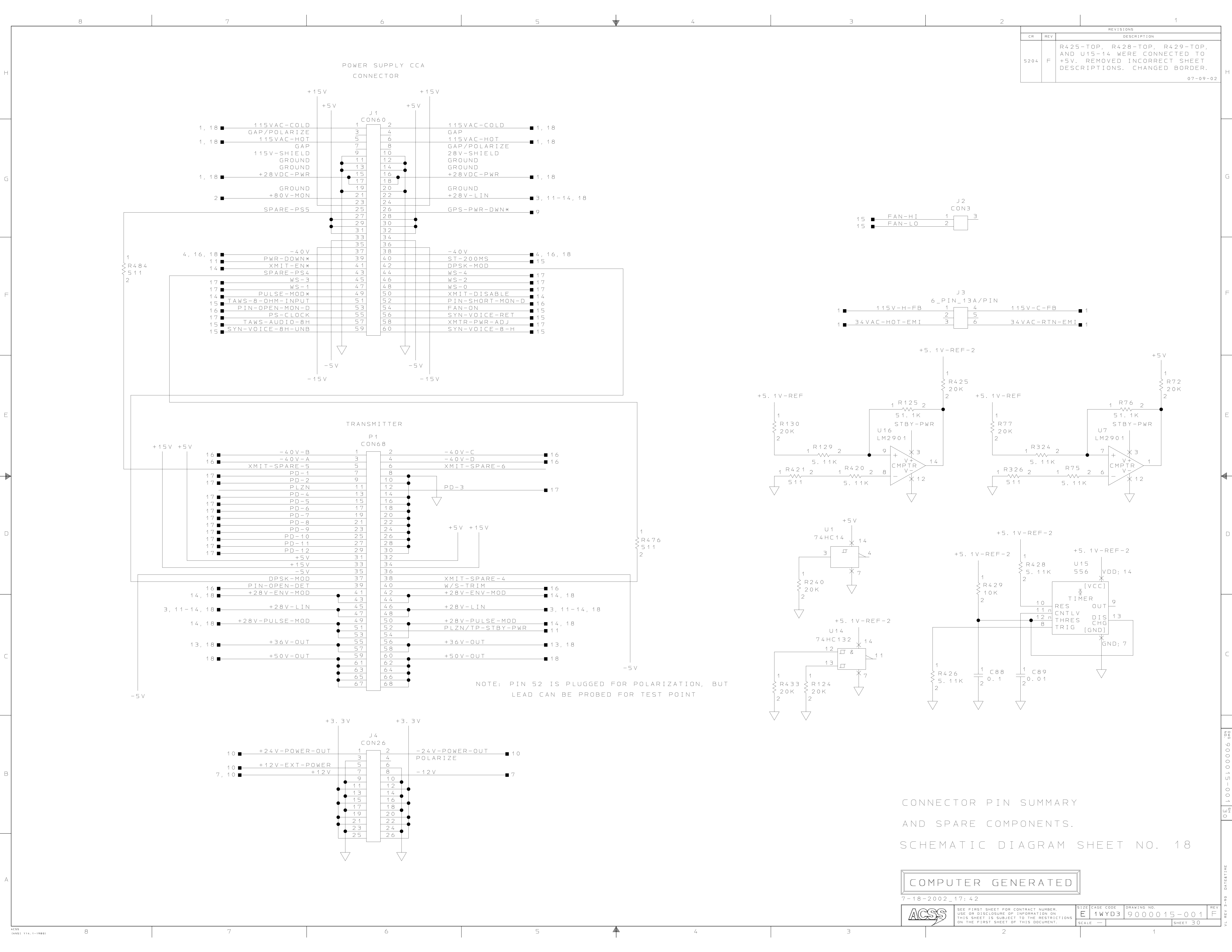
XMIT PIN DIODE CONTROL AND PS SYNC
SCHEMATIC DIAGRAM SHEET NO. 17

COMPUTER GENERATED

7-3-2002_16: 26	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 E	CAGE CODE 1WYD3	DRAWING NO. 9000015-001	REV F
ACSS		SCALE		SHEET 29	

REVISED		DESCRIPTION
CR	REV	
5204	F	R425-TOP, R428-TOP, R429-TOP, AND U15-14 WERE CONNECTED TO +5V. REMOVED INCORRECT SHEET DESCRIPTIONS. CHANGED BORDER.

07-09-02



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

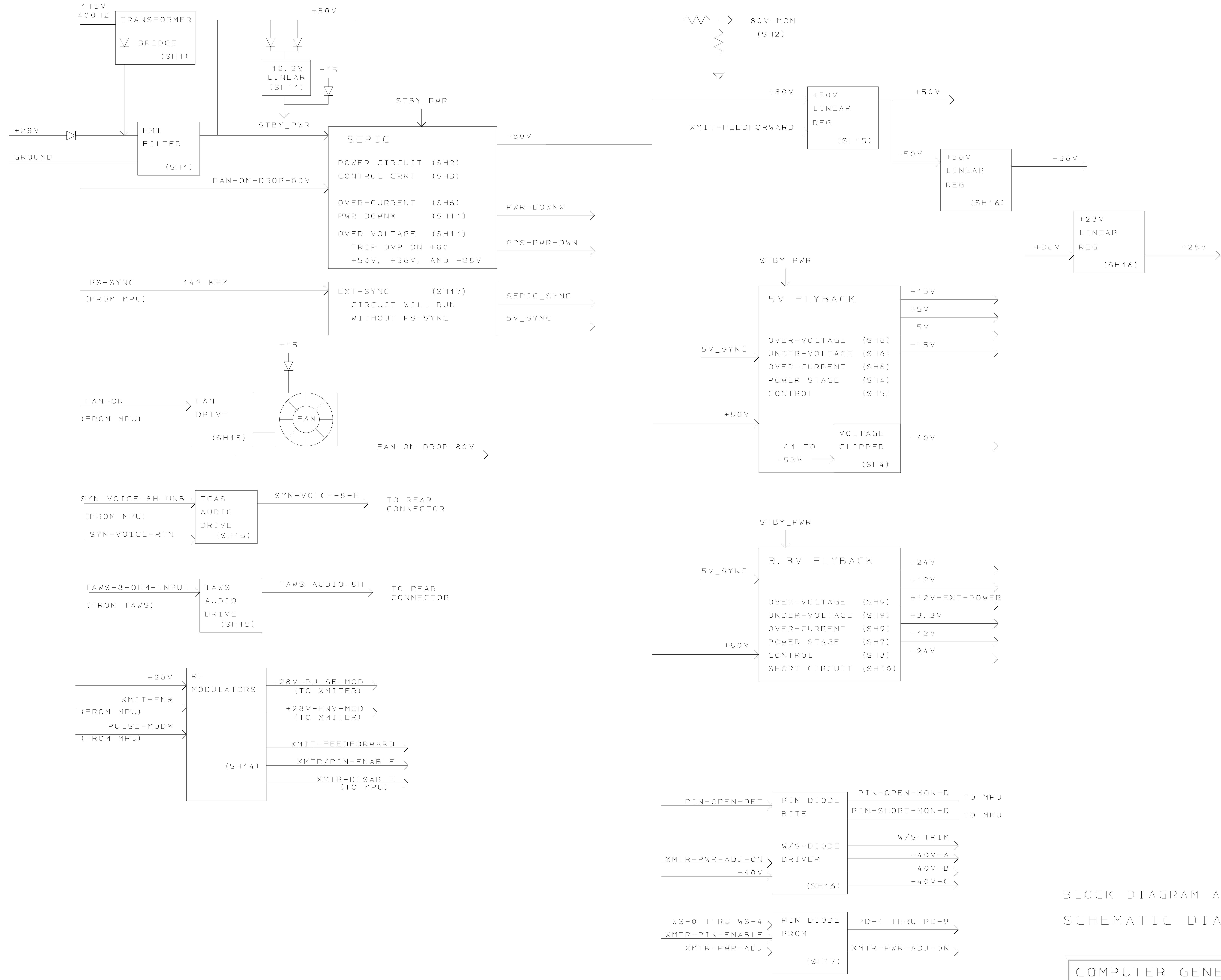
CONNECTOR PIN SUMMARY
AND SPARE COMPONENTS.
SCHEMATIC DIAGRAM SHEET NO. 18

COMPUTER GENERATED

7-18-2002_17: 42	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 E 1WYD3	CAGE CODE	DRAWING NO. 9000015-001	REV F
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9000015-001 18

REVISED		DESCRIPTION	DATE
CR	REV		
5204	F	CHANGED BORDER.	07-09-02



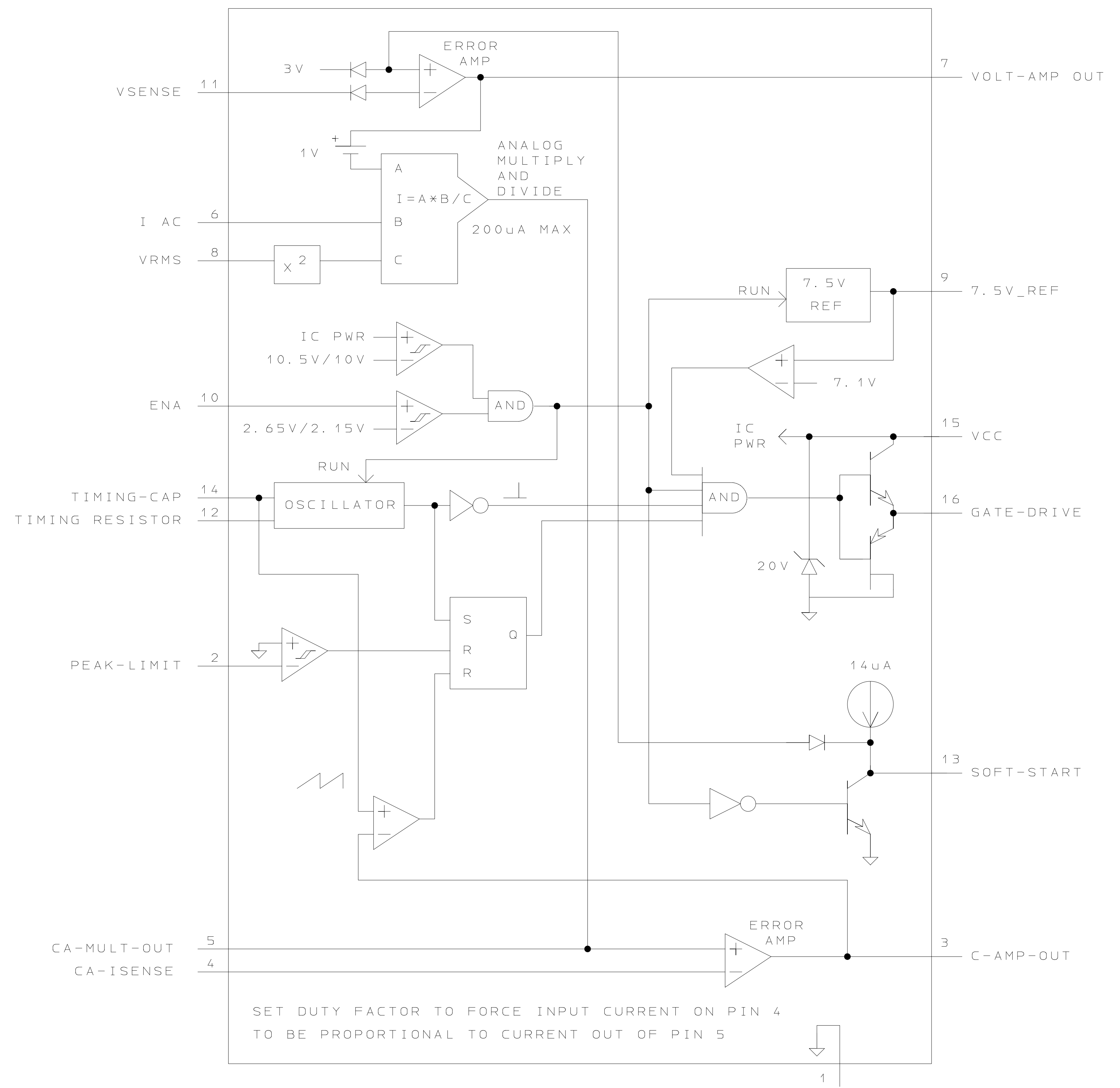
BLOCK DIAGRAM A4 CCA
SCHEMATIC DIAGRAM SHEET NO. 19

COMPUTER GENERATED

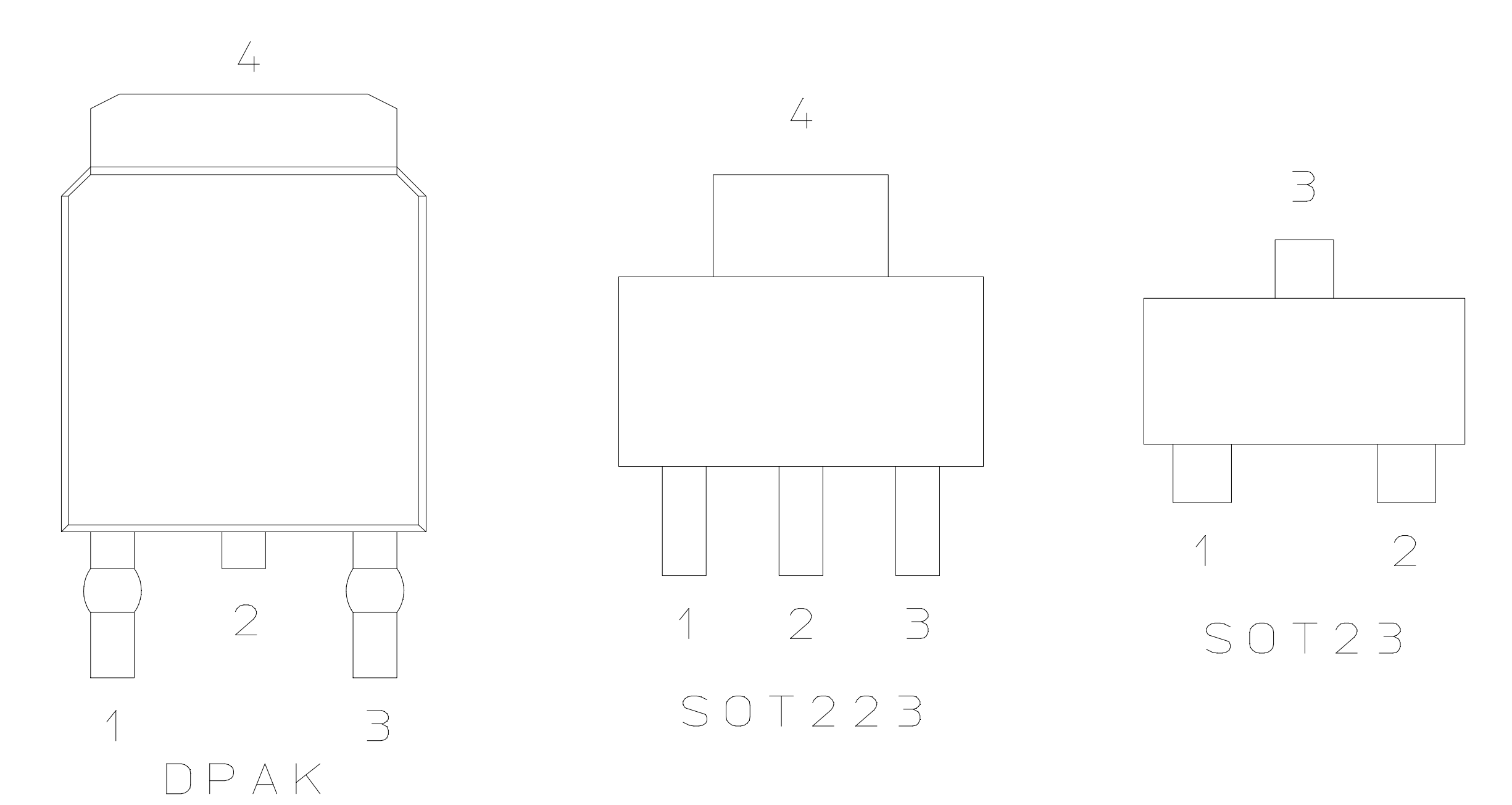
90000151	SH 19	7-3-2002_16: 01	REV
ACSS	SEE FIRST SHEET FOR CONTRACT NUMBER. USE OR DISCLOSURE OF INFORMATION ON THIS SHEET IS SUBJECT TO THE RESTRICTIONS ON THE FIRST SHEET OF THIS DOCUMENT.	SIZE CAGE CODE DRAWING NO. E 1WYD3 9000015-001	F
SCALE		SHEET 31	

REV		DESCRIPTION	DATE
5204	F	CHANGED BORDER.	07-09-02

UC2854B
16 PIN SMT OR LEADED



PINOULTS OF SMT DEVICES



NOTE: PIN 2 IS CONNECTED TO PIN 4. ALSO, PIN 2 DOES NOT MOUNT TO PWB

BLOCK DIAGRAM CONTROLLER ICS
SCHEMATIC DIAGRAM SHEET NO. 20

COMPUTER GENERATED

7-3-2002_16:01	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 E 1WYD3	CAGE CODE 9000015-001	DRAWING NO. F	REV 1	SHEET 32
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