REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	XC	INITIAL X RELEASE OF SHEET 1 THRU 18	03AUG01	D.FLIPPO
	XD	NOTES: NOTE 9 WAS: TORQUE---(ITEM 6)---. NOTE 11 WAS: SECURE L42---. ADD NOTE 13 THRU 18. TABLES: ADD TBL. I, II. SH 1OF REV. PL AFFECTED.	03AUG01	A.WHIDDEN

TABLE I
CUT RUN DATA (15)

CUT NO.	PWB SIDE	FROM CIRCUIT POINT	TO CIRCUIT POINT
1	B	R11-TOP	R16-LEFT
2	B	R48-BOTTOM LAND	R48-BOTTOM PROBE PAD

TABLE II
BUSWIRE DATA (16)

CONDUCTOR		PWB SIDE	FROM CIRCUIT POINT	TO CIRCUIT POINT
COND. NO.	ITEM NO.			
601	706	B	R11-TOP	R16-RIGHT
602	706	B	R48-BOTTOM	R17-BOTTOM
603	706	B	L62-RIGHT	C381-RIGHT

(17)

NOTES:

1. ASSEMBLE AND SOLDER PER ITEM 701.
2. 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. MAXIMUM COMPONENT HEIGHT SHALL BE .XXX.
4. COMPONENT LEAD PROTRUSION SHALL BE .060 MAXIMUM: BARE COPPER PERMISSIBLE ON COMPONENT LEADS AT TRIMMED SURFACES.
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. TORQUE SCREWS (ITEMS 3, 6 AND 13) TO 5±1 IN-LBS.
10. SURFACE SOLDER TABS OF SHIELD (ITEM 11) TO PWB (ITEM 1).
11. SECURE L35 TO PWB (ITEM 1) USING ITEM 704.
12. P1 IS TO BE FLUSH TO PWB (ITEM 1).
13. SECURE L35, L55, L59, L62, AND C381 TO PWB (ITEM 1) USING ITEM 703.
14. APPLY ITEM 705 BETWEEN PWB (ITEM 1) AND Q3 AND Q4.
15. MAKE CUTS PER TABLE I, LEFT OR RIGHT, TOP OR BOTTOM AS VIEWED FROM INDICATED SIDE.
16. INSTALL BUS WIRES PER TABLE II, LEFT OR RIGHT, TOP OR BOTTOM AS VIEWED FROM INDICATED SIDE.
17. INSTALL C381 AND L62 AS SHOWN.
18. ITEMS 3 AND 7 ARE USED TO HOLD THE CCA IN PLACE ON ITEM 9 WHILE Q3 AND Q4 ARE INSTALLED. REMOVE AND DISCARD PRIOR TO INSTALLING ITEM 10.

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

7026201	7026201
NEXT ASSY	USED ON (SYS)
APPLICATION	

FOR HONEYWELL REFERENCE
MFG REF NO.
DPA NO. A24847
PRODUCT LINE NO. 6720
AW/PS ANALYSIS EB 7510800
REF DWG | REF SPEC

INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M-1994
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES; TOLERANCES: ANGLES ± —— 2 PL DEC ± —— 3 PL DEC ± ——
MATL-PROCESS-FINISH | MILITARY DESIGNATION | MATERIAL PROCESS, FINISH, SEE 00.40.
MATL
PROCESS
FINISH

REV: 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 — XC XC XC XC XD XD XD XD XD XD XD XD XD XC XD XD XD XD XD XD XD XD XD XD XD
SHEET INDEX: SHEET 1

ITEM CODE (PER EB6993B4) 3
THIRD ANGLE PROJECTION
DWG CLASS A
FIRST USED ON 7026201

CONTRACT VDR
DRAWN BY A.WHIDDEN DATE 13JUL01
DESIGNED BY DATE
CHECKED BY DATE
APVD FOR MFG DATE
APVD FOR QE DATE
APVD FOR ENGRG DATE 26OCT01
APVD FOR ENGRG DATE
APVD FOR DATE

OPERATIONAL NOTE
SIMILAR ASSEMBLY

Honeywell
COMMERCIAL FLIGHT SYSTEMS GROUP PHOENIX, ARIZONA

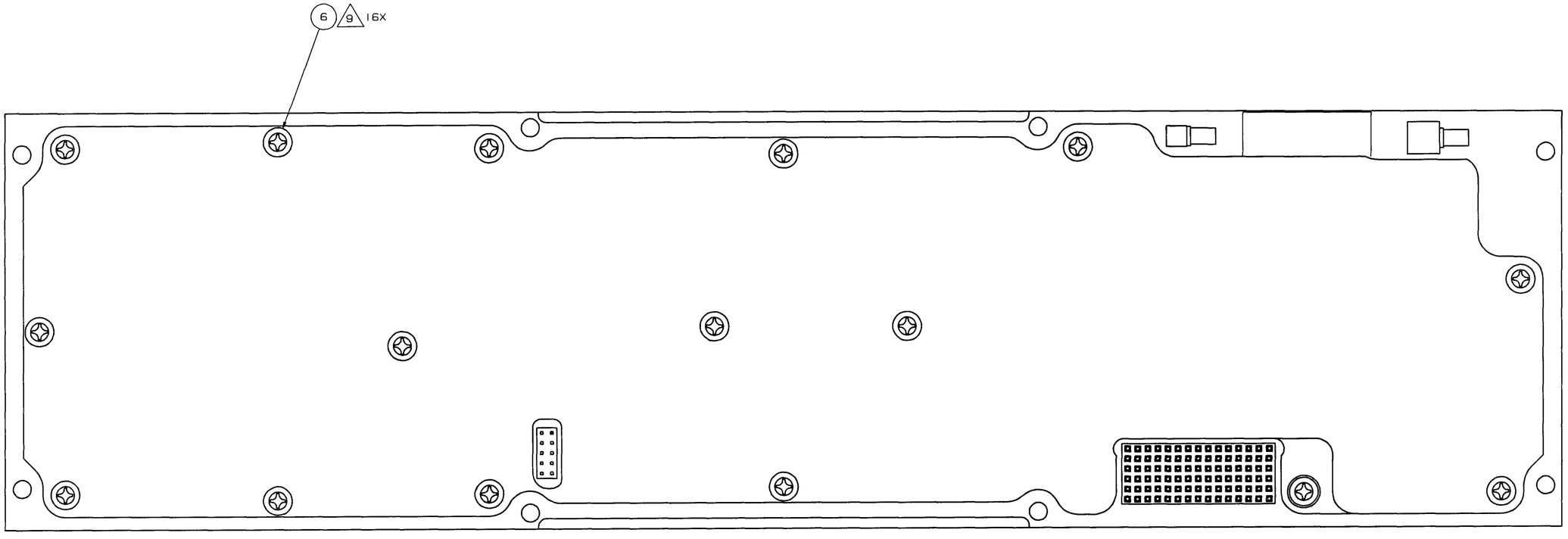
TITLE
CIRCUIT CARD ASSEMBLY-TRANSMITTER

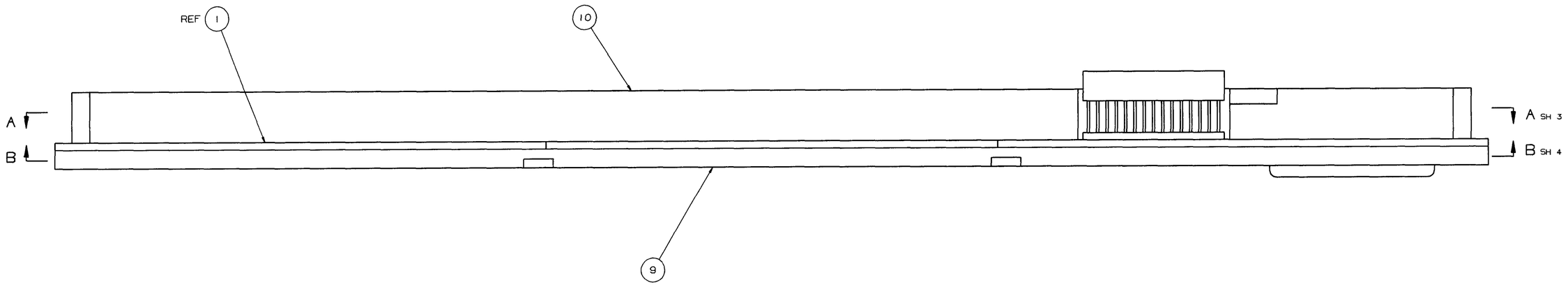
SIZE E | CAGE CODE 55939 | DRAWING NO. 7026236-902 | REV XD
SCALE NONE | UNIT WT | SHEET 1 OF 19

DWG NO. 7026236-902 REV

COMPUTER GENERATED
OCT 22 2001 awhidden 11:00:01

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	XD	8.ITEM 6 WAS 15X. UOTO VIEW.		A.WHIDDEN





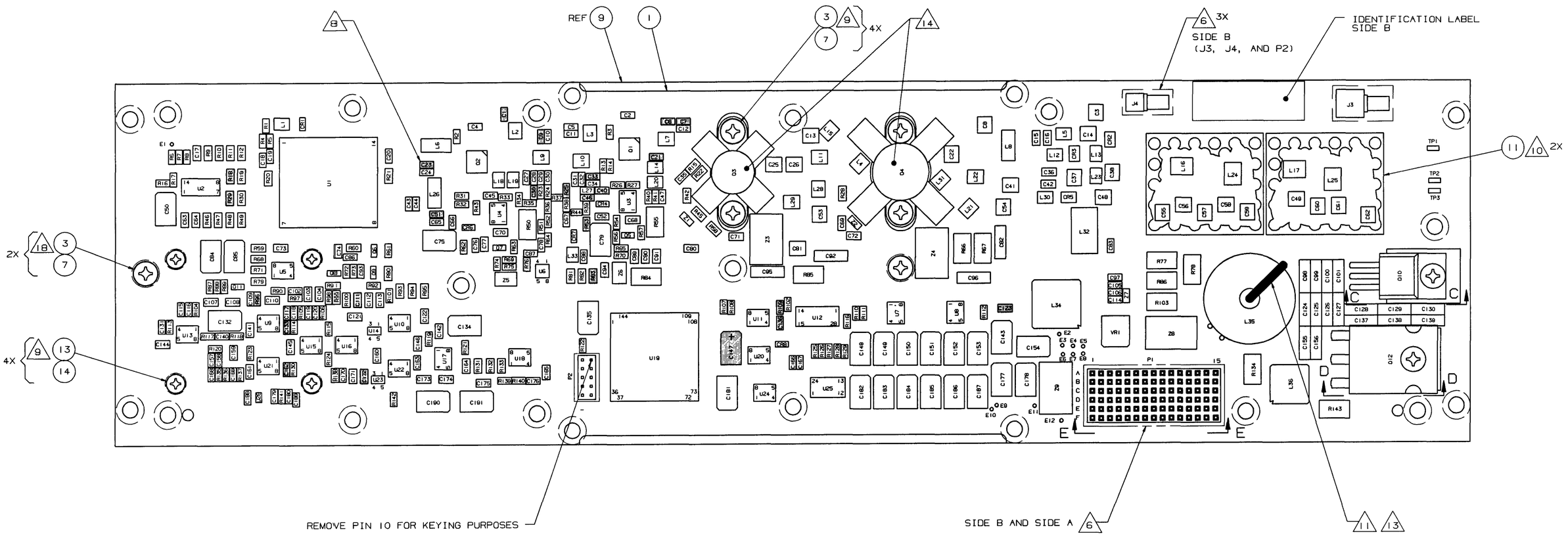
5231-04) (ASME Y14.5M-1994) HONEYWELL INC.
(REV 3-87)

COMPUTER GENERATED
OCT 22 2001 awhidden 11:00:01

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	7026236-902	XD
		SCALE NONE		SHEET 2	

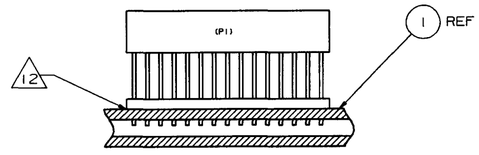
7026236-902 SH 2

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	XD	ADD NOTE 13, 14, 18 CALLOUT. UDTD VIEW.		A.WHIDDEN

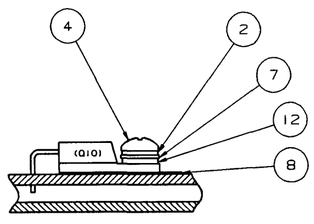


VIEWING SIDE B

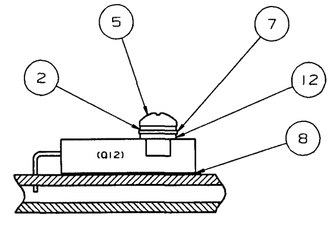
SECTION A-A (SH 2)
(ITEMS 6 AND 10 NOT SHOWN FOR CLARITY)



SECTION E-E



SECTION C-C



SECTION D-D

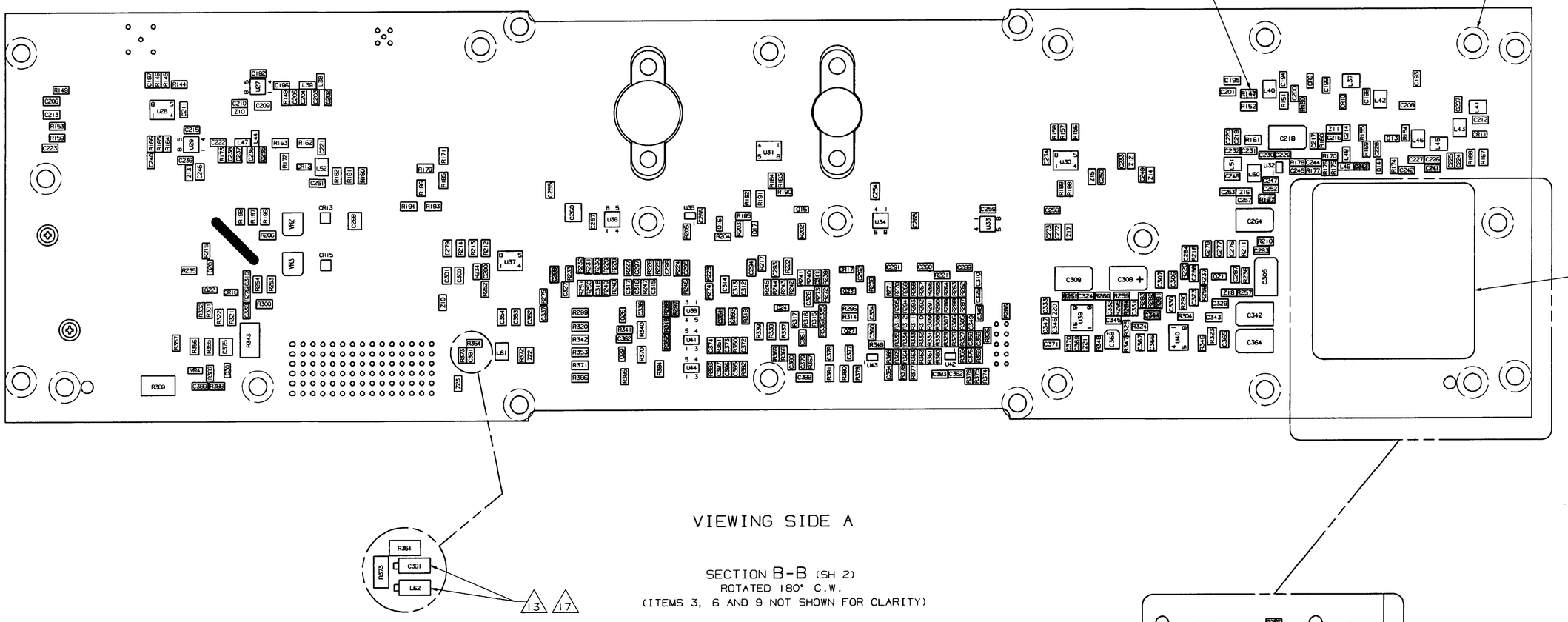
Honeywell	SEE FIRST SHEET FOR CONTRACT NUMBER. USE OR DISCLOSURE OF INFORMATION ON THIS SHEET IS SUBJECT TO THE RESTRICTIONS ON THE FIRST SHEET OF THIS DOCUMENT	SIZE/CAGE CODE: E 55939	DRAWING NO. 7026236-902 REV. XD
		SCALE NONE	SHEET 3

COMPUTER GENERATED

OCT 22 2001 awhidden 11:00:02

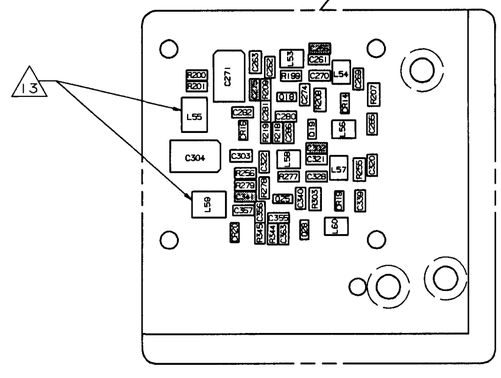
DWG 7026236-902 SH 3

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	XD	ADD NOTE 6, 13, 17 CALLOUT. UDTD VIEW.		A.WHIDDEN



VIEWING SIDE A

SECTION B-B (SH 2)
ROTATED 180° C.W.
(ITEMS 3, 6 AND 9 NOT SHOWN FOR CLARITY)



(ITEM 15 NOT SHOWN FOR CLARITY)

DWG NO. 7026236-902 SH 4

5231-041 (ASME Y14.5M-1994) HONEYWELL INC. (REV 3-97)

Honeywell

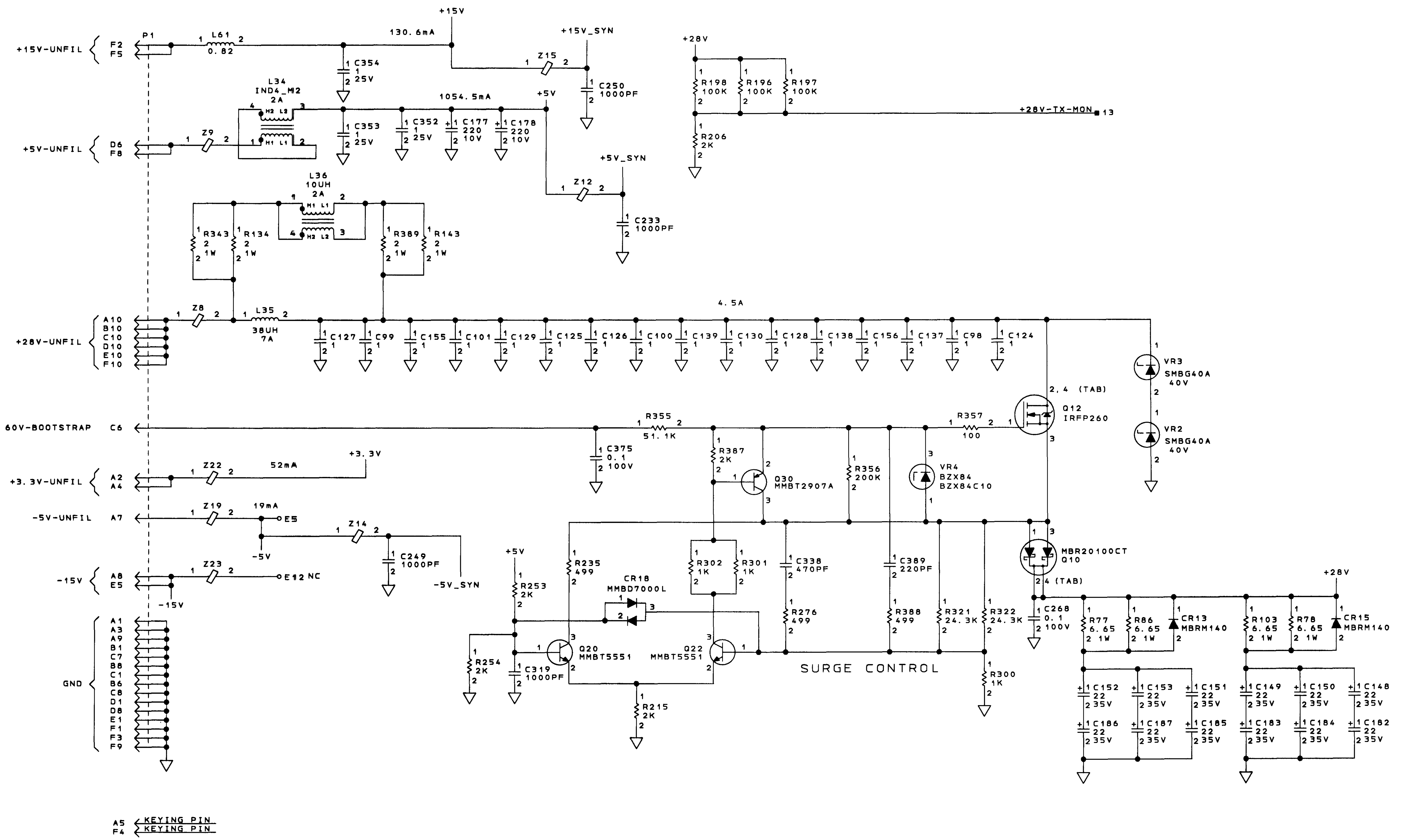
SEE FIRST SHEET FOR CONTRACT NUMBER. USE OR DISCLOSURE OF INFORMATION ON THIS SHEET IS SUBJECT TO THE RESTRICTIONS ON THE FIRST SHEET OF THIS DOCUMENT

SIZE	CAGE CODE	DRAWING NO.	REV
E	55939	7026236-902	XD

SCALE NONE SHEET 4

COMPUTER GENERATED

OCT 22 2001 awhidden 11:00:02



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.

SHUTDOWN TO CPLD THRU COMPARATOR

SMALL BEADS OK FOR PWR LINES??

Z7 CURR RATING

Z12, Z13 BIG PADS, 2 VIAS EACH SIDE

REDO CURRENT DRAW .XLS

POWER INPUTS/28V SURGE CONTROL

SCHEMATIC DIAGRAM SHEET NO. 1 OF 15

COMPUTER GENERATED

10-11-2001 11:57 PAUL_COBLENTZ

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	7026236-902	XC

SCALE — SHEET 5

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	XD	THIS SHEET EXTENSIVELY REVISED.		PAUL C.

+15V_SYN
U17 LT1763 [VIN] VOLT REG OUT SHUT DOWN BYP [GND] ADJ
R93 1K, R94 1K, R95 1K, C122 1 25V, C142 1 25V, C134 22 35V
C163 0.01, R119 16.2K, C174 1 25V, C309 220 10V, R121 4.99K, 1.22V
14.1mA
+5.2V-PLL
3 LO-EN

+5V_SYN
U5 LT1763 [VIN] VOLT REG OUT SHUT DOWN BYP [GND] ADJ
R71 10, R79 10, R68 10, R59 10, C104 1 25V, C73 1 25V, C85 22 35V
C102 0.01, R90 8.45K, C103 1 25V, C264 220 10V, R97 4.99K, 1.22V
13ma
+3.3V-BUF

+15V_SYN
U18 LT1763 [VIN] VOLT REG OUT SHUT DOWN BYP [GND] ADJ
R131 511, R132 511, R133 511, C175 1 25V, C164 1 25V, C190 22 35V
C176 0.01, R139 16.2K, C165 1 25V, C191 220 10V, R140 4.99K
47mA
+5V-REG
2, 3 +5.2V-EN

+15V
U37 LT1763 [VIN] VOLT REG OUT SHUT DOWN BYP [GND] ADJ
R214 511, R212 511, R213 511, C279 1 25V, C301 1 25V, C154 22 35V
C299 0.01, R234 16.2K, C300 1 25V, C143 220 10V, R252 4.99K
24.5mA
+5.2V
2, 3 +5.2V-EN

-5V_SYN
R89 24.9, C132 22 35V, R88 1K, R87 1K, C107 1 25V, C84 22 35V, C108 1 25V
MMBT2907A Q11
-4.2V

+15V_SYN
Z18, C277 1 25V, C329 1 25V, C342 22 35V, C278 1 25V
R257 1K, R236 1K, C276 1 25V, C287 1 25V
Q21 MMBT5551
+14.2V
43mA
19mA

+5V
Q27 MGSF1P02LT1
R296 1K, R314 200, C388 1 25V
80mA
+5V-SW

+5V-REG
Q8 MGSF1P02LT1
R100 10, C74 0.1, R99 1K, R98 1K, R91 200
25mA
RX_SYN_SW 7

+5V-REG
Q9 MGSF1P02LT1
R80 10, C93 0.1 16V, R72 1K, R73 1K, R92 200
25mA
TX_SYN_SW 7
C86 0.1
Q6 MGSF1N02LT1
R61 200

+5V
Q29 MGSF1P02LT1
R370 10, C362 0.1 16V, R312 1K, R313 1K, R385 200
50mA
TX-ON 11

+5V
Q26 MGSF1P02LT1
R340 10, C336 0.1 16V, R365 1K, R378 1K, R341 200
50mA
RX-ON 11

3 +5V-SW-EN#
3 TX-SYN-SW-EN#
3 TX-ON-EN#
3 RX-ON-EN#

VOLTAGE REGULATORS/VOLTAGE SWITCHING
SCHEMATIC DIAGRAM SHEET NO. 2

COMPUTER GENERATED

10-16-2001 18:08 PAUL COBLENTZ

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 E	CAGE CODE 55939	DRAWING NO. 7026236-902	REV XD
		SCALE —		SHEET 6	

REPRO 7026236-902 SHT 6

INTEGRATED SYSTEMS

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	XD	THIS SHEET EXTENSIVELY REVISED.		PAUL C.

RESET-N 12, 14
FILTERED-CLOCK 4

+3.3V
50mA

C135 220 10V
C181 220 10V
R286 10K
R374 10K
R271 10K

U19
XC95288XL
VCCINT
VCCIO

C334 0.1 16V
C310 0.1 16V
C291 0.1 16V
C325 0.1 16V
C360 0.1 16V
C382 0.1 16V
C290 0.1 16V
C289 0.1 16V
C383 0.1 16V
C348 0.1 16V

P2
+3.3V 9
CPLD-TDI 2
CPLD-TCK 3
CPLD-TMS 4
GND 7
8

TDI
TCK
TMS
GCK1
GCK3
GTS1
GTS2
GTS3
GTS4
GSR
GCK2

CLK 52
OE

+3.3V
1mA
C349 0.1 16V
U42 74AHCT1G00
R263 1K
R376 100
C376 1000PF
R358 100K
+3.3V
R372 10K

BUFFERED-CLK B7
P1
R373 24.9
R354 0
R326 0
L63 100NH
L62 33NH
C359 220PF
C381 22PF

RESET-N F7
CONTROL-FSAX B2
CONTROL-FSX B3
CONTROL-CLKX C2
CONTROL-DX E2
CONTROL-FSAR C4
CONTROL-FSR E3
CONTROL-CLKR C3
CONTROL-DR D2
VHFTX-DSP-FS B9
VHFTX-DSP-CLK C9
VHFTX-DSP-DR D9
VHFTX-DSP-DX E9
VALID D5
RX+/TX- F6

A2D-DB0
A2D-DB1
A2D-DB2
A2D-DB3
A2D-DB4
A2D-DB5
A2D-DB6
A2D-DB7
13 A2D-DB[7:0]
13 A2D-EOC#
4 LOCK-DETECT
6 MOD-SH
R377 100

+3.3V
C384 0.1 16V
U43 74AHC1G14
R349 100

TDO
R264 37.4

P2
6 CPLD-TDO

R366 100	HIVCO-EN	5	
R364 100	LOVCO-EN	5	
R262 100	SYNTH-LE	4	
R305 100	SYNTH-CE	4	
R362 100	SYNTH-CLK	4	
R363 100	SYNTH-DATA	4	
R306 100	MOD-CS#	6	
R307 100	MOD-DIN	6	
R292 100	MOD-CLK	6	
R293 100	LPF-CLK	6	
R360 100			
R361 100			
R335 100	MON-A2D-CS#	13	
R359 100	MON-A2D-RD#	13	
R295 100	MON-A2D-CONVST#	13	
R287 100	MON-A2D-A0		
R269 100	MON-A2D-A1		
R270 100	MON-A2D-A2		MON-A2D-A[2:0] 13
R331 100	DCP-SDI	12	
R266 100	DCP-SCLK	12	
R328 100	DCP-CS#	12	
R268 100	DCP-SHDN#	12	
R310 100	LO-EN	2	
R265 100	+5.2V-EN	2	
R288 100	BUF-EN	8	
R334 100	PRE-DRIVE-EN	9	
R375 100	ENV-LOOP-EN#	9	
R311 100	GATE-BIAS-EN	12	
R333 100	DRIVER-BIAS-EN	12	
R291 100	FINAL-BIAS-EN	12	
R327 100			
R308 100			
R290 100			
R329 100			
R332 100			
R289 100			
R309 100			
R330 100			
R267 1K			
R294 1K			

+5V
+5.2V
R238 2K
R221 2K

+5V-SW-EN#	2
TX-SYN-SW-EN#	2
TX-ON-EN#	2
RX-ON-EN#	2

GND

WILL NEED TO SWAP PIN OUTS-GREG

TRANSMITTER CPLD

TRANSMITTER CPLD

SCHEMATIC DIAGRAM SHEET NO. 3

COMPUTER GENERATED

10-11-2001 11:57 PAUL COBLENTZ

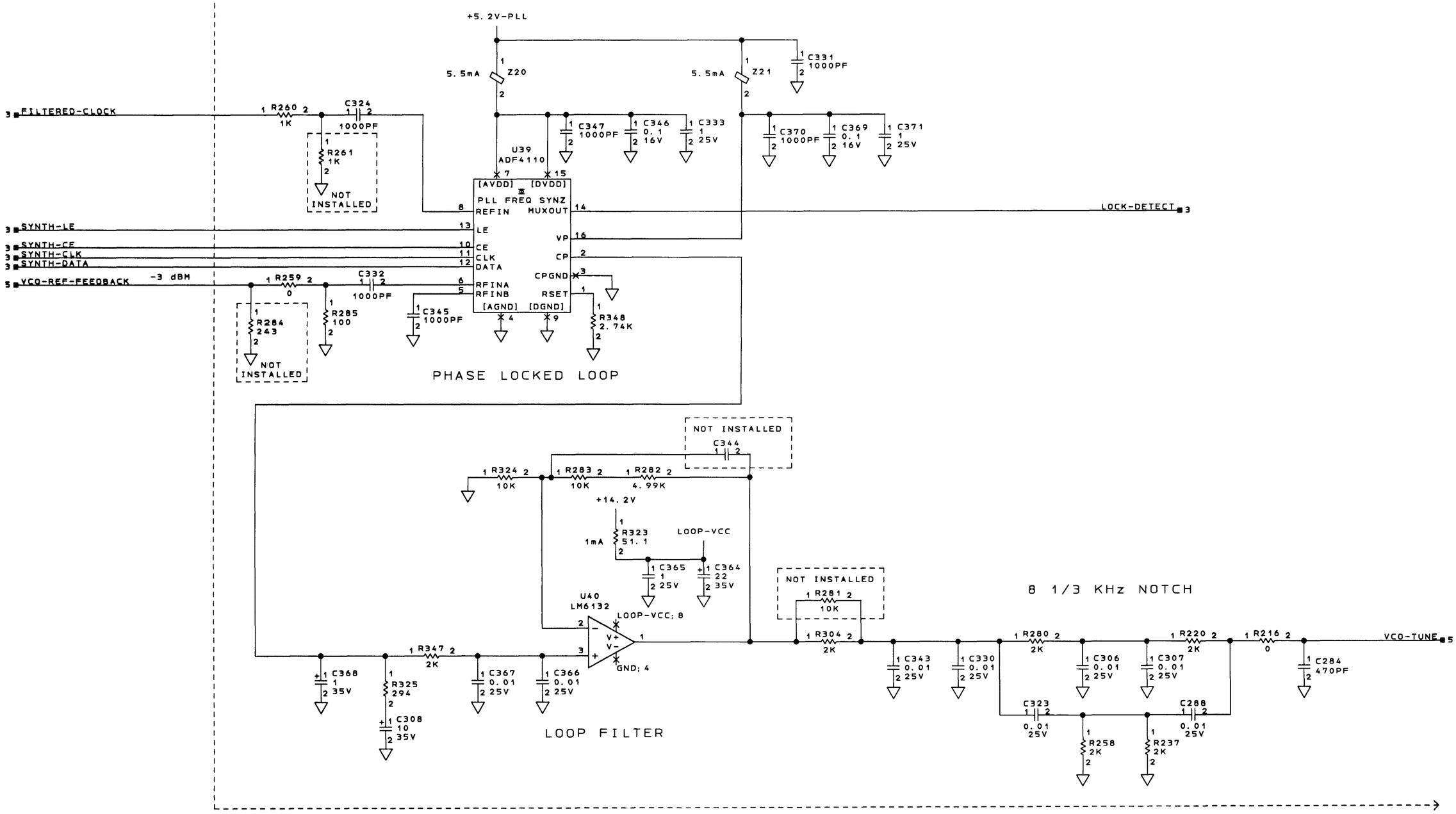
Honeywell

SIZE	CAGE CODE	DRAWING NO.	REV
E	55939	7026236-902	XD

SCALE — SHEET 7

DRG 7026236-902 SHT 7

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	XD	REFDES R261 WAS INSTALLED; PN WAS 7022518-392.		PAUL C.



ADJUST LEVELS ON CLOCK

CE PIN OFF GRID

NOTE: LM6132 MADE FROM LM1458 SYMBOL, SEE SHEET 13 ALSO

SYNTHESIZER PLL/ LOOP FILTER

SCHEMATIC DIAGRAM SHEET NO. 4

COMPUTER GENERATED

10-11-2001 11:57 PAUL COBLENTZ

SIZE	CAGE CODE	DRAWING NO.	REV
E	55939	7026236-902	XD

SCALE — SHEET 8

7026236-902 SH 8

VL REV 3-00 DATETIME

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	XD	THIS SHEET EXTENSIVELY REVISED.		PAUL C.

+14.2V
R210 1K
R211 1K
C283 1000PF
C305 22 35V
HIVCO-EN
LOVCO-EN
VCO-TUNE
VCO-OUT
VCO-REF-FEEDBACK
HIGH VCO
108-152 MHZ
LO VCO
5.5mA
R279 1K
R256 1K
C322 1000PF
C303 1 25V
C304 22 35V
R278 10K
R277 294
L58 0.18
R255 392
C328 1000PF
L57 0.82
C321 470PF
C320 0.1 16V
R345 1K
C356 100PF
C357 5.6PF
CR20 BBY31
L59 120NH 2%
C355 82PF
R344 4.99K
C340 68PF
C302 4.7PF NOT INSTALLED
Q25 BFR92
R303 681
C341 2.2PF NOT INSTALLED
C363 1000PF
Q28 MGSF1N02LT1
CR19 MMBV3700L
C339 15PF
L60 0.82
NOT INSTALLED C243 1000PF
L49 100NH
L48 100NH
R160 49.9
Z11
C216 1000PF
C218 22 35V
C217 1000PF
C214 1000PF
R155 10K
L46 0.68UH
R154 619
C227 1000PF
L45 0.33UH
L43 0.1UH
C226 3.3PF NOT INSTALLED
C241 3.3PF
C225 4.7PF
C224 4.7PF
Q13 BFR92
C228 1000PF
R169 4.99K
R174 49.9
C242 1000PF
Q14 BFR92
R170 10K
R175 100
R176 10
C244 1000PF
5.5mA
R200 1K
R201 1K
C262 1000PF
C263 1 25V
C271 22 35V
R209 10K
R199 294
L53 0.18
R207 392
C270 1000PF
L54 0.82
C261 470PF
C269 0.1 16V
R219 1K
C281 1000PF
C282 10PF
CR16 BBY31
L55 120NH 2%
C280 100PF
C274 68PF
C256 4.7PF NOT INSTALLED
Q18 BFR92
R208 681
C275 2.2PF NOT INSTALLED
C286 1000PF
Q19 MGSF1N02LT1
CR14 MMBV3700L
C285 15PF
L56 0.82
+3.3V-BUF
13mA
Z16
C253 1000PF
C257 1000PF
L50 0.82
C232 2.2PF
C248 2.2PF
L51 0.082
U32 MGA-72543
GND
+14 dB
R177 294
C245 1000PF
R178 2K
C231 1000PF
C219 10PF
C220 3.9PF
R161 16.2
C230 0.1 16V
C229 1000PF
C247 1000PF
C252 0.1 16V
R187 16.2 NOT INSTALLED
BUFFER AMP

SYNTHESIZER VCO'S/BUFFER AMPS

SCHEMATIC DIAGRAM SHEET NO. 5

COMPUTER GENERATED

10-11-2001 12:39 PAUL COBLENTZ

Honeywell

SIZE	CAGE CODE	DRAWING NO.	REV
E	55939	7026236-902	XD

SCALE — SHEET 9

7026236-902 9

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	XD	REFDES R17; PIN 2 WAS CONN TO REFDES R16, PIN 1 AND REFDES U2, PIN 1 ONLY. REFDES R16, PIN 2, REFDES U9 AND U21, PIN 2 AND 3 WAS CONN TO SIG NAME 2.048V-REF.		PAUL C.

I/O FILT SHIELD

3 MOD-CS#
3 MOD-DIN
3 MOD-CLK
3 MOD-SH
3 LPF-CLK

U10 LT1655 [VCC] LD CS VOUT DIN VREF CLK DOUT [GND]
U22 LT1655 [VCC] LD CS VOUT DIN VREF CLK DOUT [GND]
U14 MAX4599 SPDT IN NO V+ COM GND NC
U23 MAX4599 SPDT IN NO V+ COM GND NC
U16 AD822 +5V-REG; 8 GND; 4
U2 AD824 +5V_SYN; 4 -4.2V; 11
U9 LT1569-6 [V+] LOWPASS FILTER VIN+ VIN- CLK VOUT RX GND [V-]
U21 LT1569-6 [V+] LOWPASS FILTER VIN+ VIN- CLK VOUT RX GND [V-]
U15 AD822 +5V-REG; 8 GND; 4
U13 AD822 +5V-REG; 8 GND; 4
U26 74AHCT1G00

+5V-REG
5mA
1mA
6mA
25V
16V
NOT INSTALLED
470PF ARE 1%
-23dB@70KHz
2.048V-REF
+5V_SYN
-4.2V
I-OUT
Q-OUT

R101 100
R142 100
R123 100
R17 0
R16 1K
R115 10K
R124 10K
R137 10K
R104 0
R120 0
R114 0
R130 0
R106 25.5K
R105 4.99K
R138 25.5K
R141 4.99K
R118 10K
R117 25.5K
R113 4.99K
R136 25.5K
R135 4.99K
R96

C146 C113 C111 1000PF C121 1000PF C112 1 25V
C173 C160 C172 1000PF C171 1000PF
C63 1 25V C50 22 35V C64 1 25V C17 1 25V
C141 C161 C144 1 25V
C117 470PF C110 1 25V C159 1 25V
C109 470PF C120 470PF C119 470PF C118 100PF
C170 470PF C180 470PF C189 470PF C179 100PF
C162 470PF C133 470PF
C140 470PF C116 470PF C115 470PF C131 100PF
C169 470PF C158 470PF C157 470PF C168 100PF
C188 0.1 16V

I/O FILT SHIELD
TO SH 7

IQ DAC'S/IQ FILTERING
SCHEMATIC DIAGRAM SHEET NO. 6

COMPUTER GENERATED

10-11-2001 14:36 PAUL COBLENTZ

Honeywell

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SIZE	CAGE CODE	DRAWING NO.	REV
E	55939	7026236-902	XD

SCALE — SHEET 10

DWG NO. 7026236-902 REV

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	XD	REFDES CR10, CR9, CR1; GENERIC TYPE WAS HSMP3800, PN WAS 7500361-100. REFDES R5; PN WAS 7022518-223, VAL WAS 17.4. REFDES R1, R4 WAS INSTALLED; PN WAS 7022518-341.		PAUL C.

I/Q FILT SHIELD
SH6

6 2.048V-REF — R11 10K — U2 AD824 (+5V_SYN; 4, −4.2V; 11) — R12 10K — R19 200 — R18 1K NOT INSTALLED

6 I-OUT — R10 10K — R9 10K

6 Q-OUT — R47 10K — R48 10K — U2 AD824 (+5V_SYN; 4, −4.2V; 11) — R49 10K — R30 200 — R29 1K NOT INSTALLED — R46 10K

SYNTHESIZER SHIELD
SH4 & SH5

SWITCH SHIELD

TX_SYN_SW 2 — R151 154 — R150 154 NOT INSTALLED

C198 1000PF — C200 0.01 — L42 0.82

5 VCO-OUT — C208 470PF — CR10 MMBV3700L — C199 470PF

C212 470PF — L41 0.82 — L37 0.82 — C207 470PF — C193 470PF

CR11 HSMP3800 — CR9 MMBV3700L

R167 86.6 — R168 86.6

L40 0.82 — C201 0.01 — C195 1000PF — C194 470PF

R152 154 — RX_SYN_SW 2

R147 154 NOT INSTALLED

MODULATOR SHIELD

C18 100PF — C20 100PF

U1 JCIQ-176M — GND — I — Q — LO — OUT — MOD-OUT 8 — GND

R20 49.9 — R21 49.9

L1 0.82 — CR1 MMBV3700L — R5 0 — C19 470PF

R1 294 NOT INSTALLED — R4 294

DIVIDE BY 2/VECTOR MODULATOR
SCHEMATIC DIAGRAM SHEET NO. 7

COMPUTER GENERATED

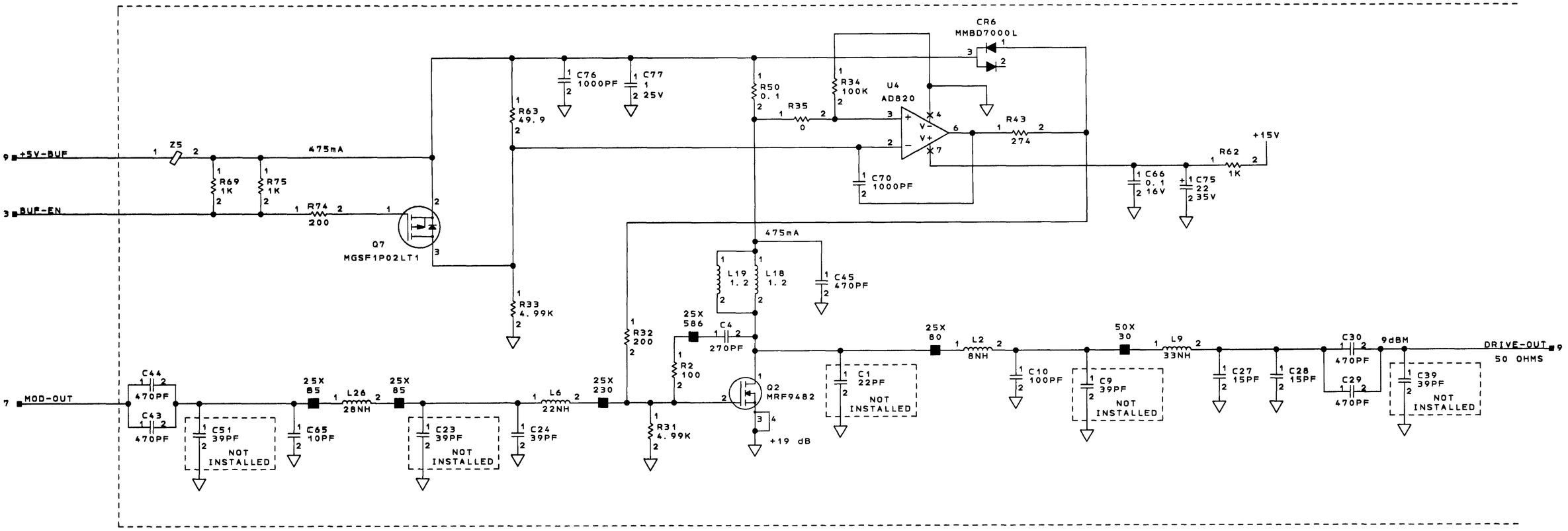
10-11-2001 14:41 PAUL_COBLENTZ

Honeywell	SIZE	CAGE CODE	DRAWING NO.	REV
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.	E	55939	7026236-902	XD
	SCALE —		SHEET 11	

DWG NO. 7026236-902 REV XD

VL REV 3-99 DATAETIME

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	XD	REFDES C10; PN WAS 7022904-820, VAL WAS 82PF. REFDES L9; PN WAS 7029531-28, VAL WAS 28NH.		PAUL C.



3 RF BUFFER AMPS/LOW PASS FILTER

SCHEMATIC DIAGRAM SHEET NO. 8

COMPUTER GENERATED

10-11-2001 11:57 PAUL COBLENTZ

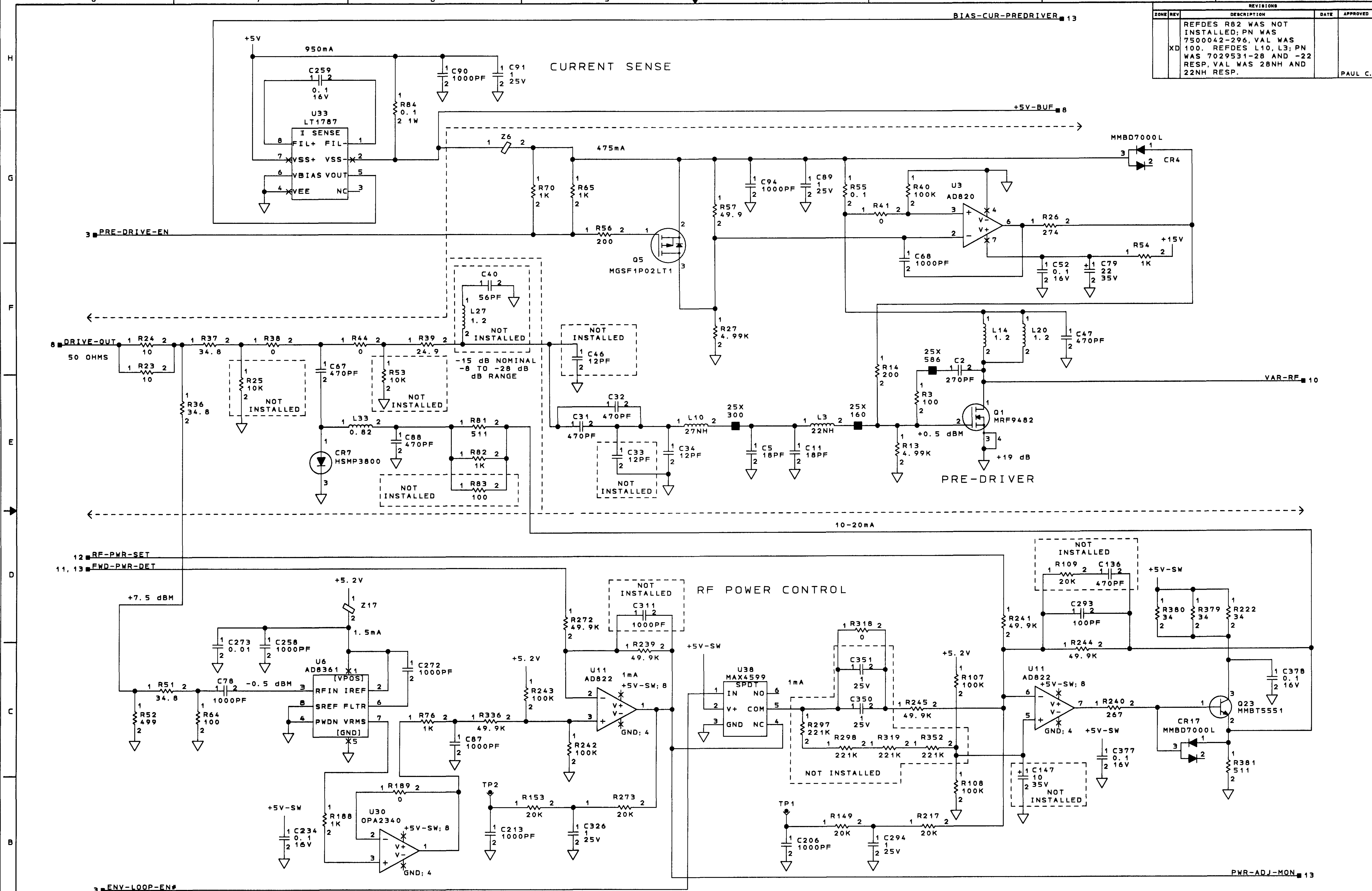
Honeywell

SIZE	CAGE CODE	DRAWING NO.	REV
E	55939	7026236-902	XD

SCALE — SHEET 12

DRG NO. 7026236-902 SH 12

DATASTAQ INC REV A



ZONE	REV	DESCRIPTION	DATE	APPROVED
	XD	REFDES R82 WAS NOT INSTALLED; PN WAS 7500042-296, VAL WAS 100. REFDES L10, L3; PN WAS 7029531-28 AND -22 RESP, VAL WAS 28NH AND 22NH RESP.		PAUL C.

RF POWER CONTROL
PRE-DRIVER/CURRENT SENSE
SCHEMATIC DIAGRAM SHEET NO. 9

COMPUTER GENERATED

10-11-2001 12:30 PAUL COBLENTZ

Honeywell

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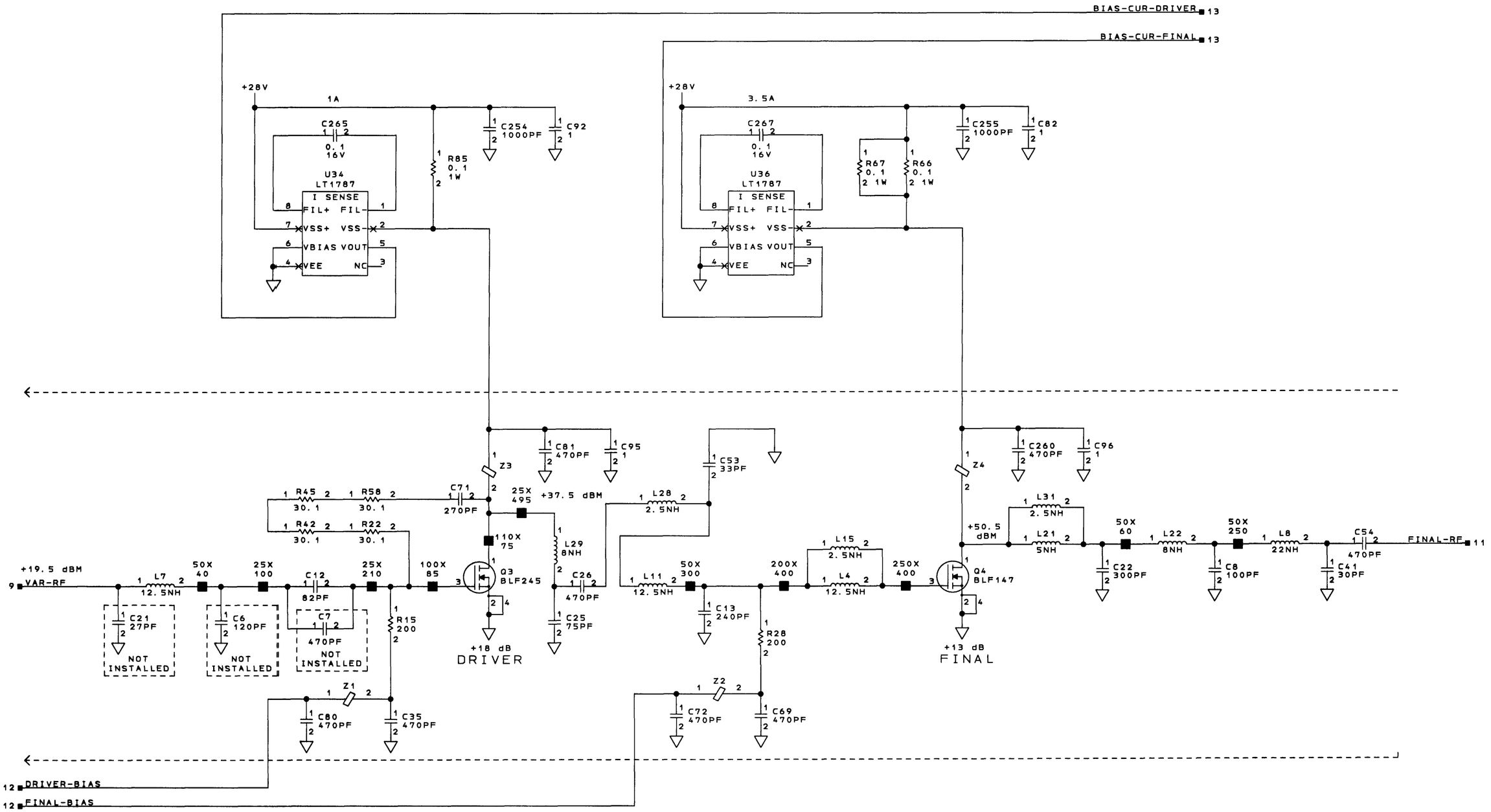
SIZE	CAGE CODE	DRAWING NO.	REV
E	55939	7026236-902	XD
SCALE —			SHEET 13

DWG NO 7026236-902 SH 13

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	XD	REFDES C35; PN WAS 7011730-509, VAL WAS 470PF. REFDES C53; PN WAS 7015930-164, VAL WAS 56PF. REFDES L22; PN WAS 7021384-2, VAL WAS 5NH.		PAUL C.

CURRENT SENSE



DRIVER/FINAL/CURRENT SENSE

SCHEMATIC DIAGRAM SHEET NO. 10

COMPUTER GENERATED

10-11-2001 14:47 PAUL COBLENTZ

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 E	CAGE CODE 55939	DRAWING NO. 7026236-902	REV XD
		SCALE —		SHEET 14	

DRWG NO. 7026236-902 REV XD SHEET 14

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	XD	REFDES R181 WAS NOT INSTALLED; PN WAS 7500042-296, VAL WAS 100.		PAUL C.

FORWARD POWER DETECTOR

REVERSE POWER DETECTOR

T/R SWITCH

TRANSMIT LOW PASS FILTER

J4 P/N WRONG

FILTER VALUES AT ANT CONN

TR SWITCH/LOW PASS FILTER
COUPLER/POWER DETECTORS
SCHEMATIC DIAGRAM SHEET NO. 11

COMPUTER GENERATED

10-11-2001 12:31 PAUL_COBLENTZ

Honeywell	SIZE	CAGE CODE	DRAWING NO.	REV
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.	E	55939	7026236-902	XD
	SCALE —		SHEET 15	

7026236-902 SH 15

V1 REV 3-99 DATATRINE

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

3, 14 RESET-N
3 GATE-BIAS-EN
3 DRIVER-BIAS-EN
3 FINAL-BIAS-EN
3 DCP-SDI
3 DCP-SCLK
3 DCP-CS#
3 DCP-SHDN#

+5. 2V
+28V
1mA
C266 0.1 16V
U35 74AHC1G08
R205 1K
R195 2K
R203 499
R192 100K
R191 1K
R202 2K
R204 2K
Q15 MMBT5551
Q16 MMBT5551
Q17 MMBT5551

U44 MAX4599 SPDT (IN, NO, V+, COM, GND, NC)
C335 0.1 16V
U20 AD822 +5. 2V; 8 GND; 4
R315 1K
DRIVER-BIAS 10

U41 MAX4599 SPDT (IN, NO, V+, COM, GND, NC)
R316 1K
FINAL-BIAS 10

C386 0.1 16V
C373 0.01
3mA
U25 AD8403 DIGITAL POTENTIOMETER (+5V, SDI, SCLK, CS, SDO, RS, SHDN, DGND, AGND1-4)
R384 1K
R350 1K
R382 1K
R351 1K
R383 1K
C385 0.1 16V
C372 0.1 16V
C387 0.1 16V
C374 0.1 16V

C380 0.1 16V
U24 AD822 +5. 2V; 8 GND; 4
R367 1K
C292 1000PF
RF-PWR-SET 9
+5V-SW
R337 34
R338 34
R339 34
C361 0.1 16V
R368 10K
C379 1000PF
R369 267
Q24 MMBT5551
CR8 MMBD7000L
R317 499
FWD-PWR-SET 11

DRIVER/FINAL BIAS SET
RF POWER SET/FORWARD POWER SET
SCHEMATIC DIAGRAM SHEET NO. 12

COMPUTER GENERATED

10-11-2001 11:57 PAUL COBLENTZ

Honeywell

SIZE	CAGE CODE	DRAWING NO.	REV
E	55939	7026236-902	XC

SCALE — SHEET 16

DOC NO 7026236-902 REV 16

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

+5.2V
12mA
C313 0.01
C312 0.1 16V
C314 1 25V
U12 AD7829
MON-A2D-CS# 5 CS#
MON-A2D-RD# 6 WR#
MON-A2D-CONVST# 4 CONVST#
MON-A2D-A[2:0]
MON-A2D-A0 11 A0
MON-A2D-A1 10 A1
MON-A2D-A2 9 A2
BIAS-CUR-FINAL 19 VIN1
BIAS-CUR-DRIVER 18 VIN2
BIAS-CUR-PREDRIVER 17 VIN3
+28V-TX-MON 16 VIN4
15 VIN5
14 VIN6
13 VIN7
12 VIN8
[DGND] 7
[VDD] 22
EOC# 8
DB0 3
DB1 2
DB2 1
DB3 28
DB4 27
DB5 26
DB6 25
DB7 24
AGND 23
VREF 21
VMID 20
R102 100
A2D-EOC#
A2D-DB[7:0]
R116 R111 R110 R129 R128 R127 R126 R125 2 100
A2D-DB0 A2D-DB1 A2D-DB2 A2D-DB3 A2D-DB4 A2D-DB5 A2D-DB6 A2D-DB7
ANALOG MUX
C167 0.1 16V
+5.2V
1.5mA
R184 2K
U31 LM335
R183 10K
R190 10K
C166 0.1 16V
TEMPERATURE SENSOR
TP3
C223 0.01
R159 20K
C337 1000PF
R275 20K
FWD-PWR-DET
+5V-SW
C327 0.1 16V
U8 AD822 5mA
+5V-SW; 8
V+ V- GND; 4
R229 100K
R249 25.5K
R228 1K
R248 1K
C318 0.1 16V
C316 0.01
NOT INSTALLED
C298 1 25V
C123 1 25V
R112 0
R230 20K
R251 10K
R231 10K
R250 10K
R233 1K
R232 1K
SIDETONE
+5V-SW
C297 0.1 16V
U7 AD822 5mA
+5V-SW; 8
REV-PWR-DET
R226 100K
R225 25.5K
C296 0.1 16V
C315 0.01
R274 1K
R223 1K
U7 AD822
+5V-SW; 8
R246 100K
R227 25.5K
C295 0.1 16V
C317 0.01
R224 1K
R247 1K
PWR-ADJ-MON

TEMPERATURE SENSER/ANALOG MUX
POWER DETECTOR FILTERS/SIDETONE
SCHEMATIC DIAGRAM SHEET NO. 13

COMPUTER GENERATED
10-11-2001 11:57 PAUL COBLENTZ

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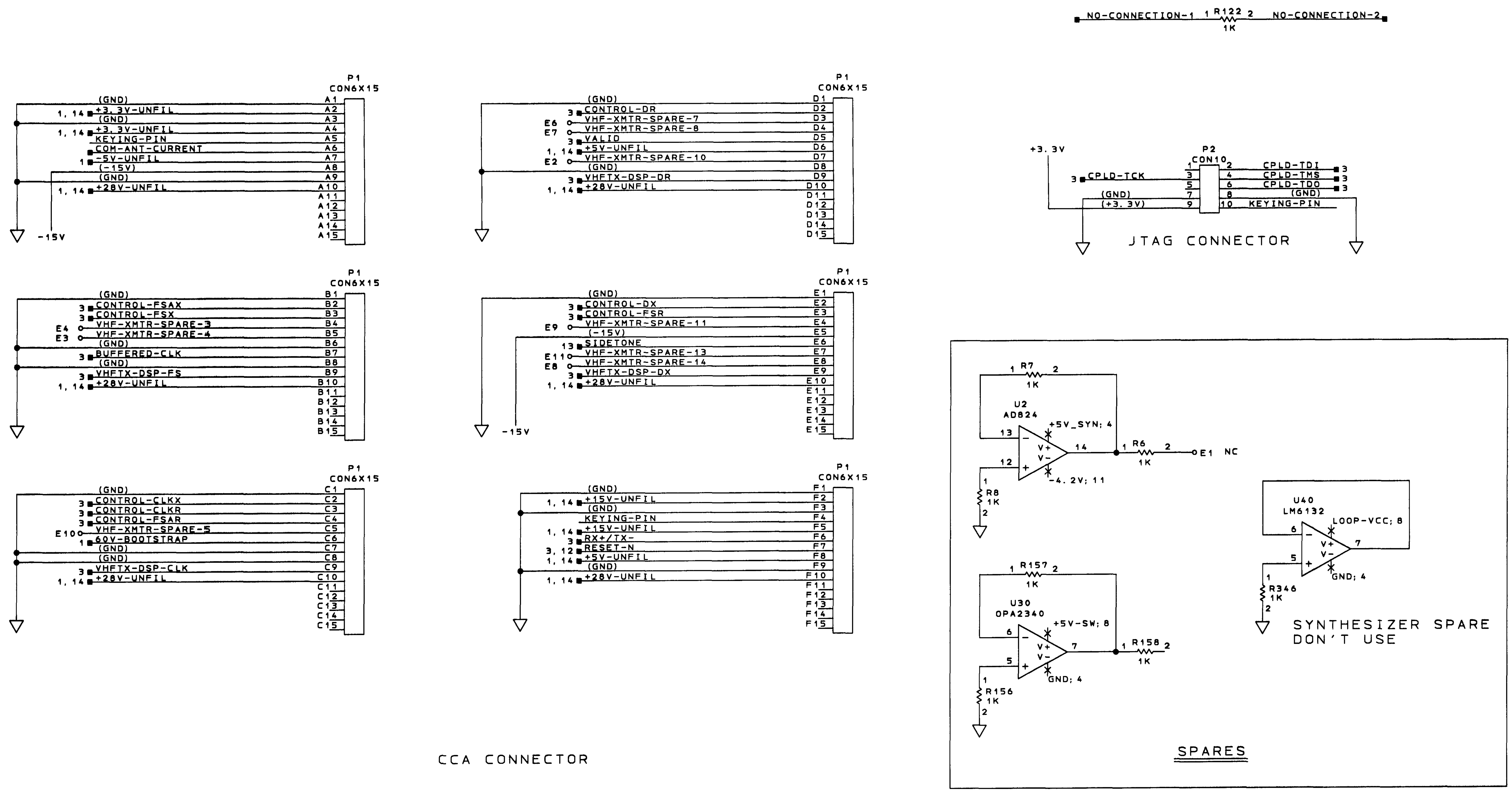
		SCALE —		SHEET 17	

DRAWING NO. 7026236-902 REV XC SHT 17



CONNECTOR PIN SUMMARY
AND SPARE COMPONENTS
CAD REFERENCE/REQUIREMENT
SCHEMATIC DIAGRAM SHEET NO. 14

ADD OUTLINE/CODES

COMPUTER GENERATED

10-11-2001 11:57 PAUL_COBLENTZ

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SIZE	CAGE CODE	DRAWING NO.	REV
E	55939	7026236-902	XC
SCALE —		SHEET 18	

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

+28 VDC UNFIL
+15 VDC UNFIL
+5 VDC UNFIL
+3.3 VDC UNFIL
-5 VDC UNFIL
INPUT LINE FILTERING
+15 VDC
+5 VDC
+3.3 VDC
-5 VDC
OVER VOLTAGE SHUTDOWN
+28 VDC
CURRENT SENSE LT1787
CURRENT SENSE LT1787
CURRENT SENSE LT1787
RX
TX
-1 dB
+16 dBM
50 OHM
CASCODE AMP
2X BFR92
+20 dB
+17 dBM
-18 dBM
MGA 72543
FEEDBACK
-4 dBM
-1 dB
+1 dBM
+1 dBM
+3 dBM
+3 dBM
108-152 MHZ
HI VCO BFR92
LO VCO BFR92
HI VCO ENABLE
LO VCO ENABLE
LOOP FILTER LM6132
PHASE LOCKED LOOP ADF4110
-5 dBM
-3 dB
-23 dB
+13 dBM
VECTOR MODULATOR MCL JCIQ-176M
I
Q
AD 822
LPF
SWITCHED FILTER LT1569-6
VOLTAGE REF
SAMPLE & HOLD
DAC LT1655
-11 dBM
MRF 9482
+20 dB
+9 dBM
-12 dB NOM
+7.5 dBM
-3 dBM
PRE-DRIVE
MRF 9482
+20 dB
+17 dBM
DRIVER
BLF 245
+18 dB
+35 dBM
FINAL
BLF 147
+13 dB
+48 dBM
-0.2 dB
-24 dB
-0.35 dB
T/R SWITCH
-0.5 dB
TRANSMIT LOW PASS FILTER
+47 dBM
ANTENNA SELF TEST
TO RECEIVER
RF LEVEL DETECTOR AD8361
-0.5 dBM
-8 dB
RF POWER CONTROL -6 TO -26 dB RANGE
SWITCH SPDT MAX4599
-19 dB NOM
+0 dBM
FORWARD POWER DETECTOR AD8361
REVERSE POWER DETECTOR AD8361
OPA 2340
52.5 MHZ REFERENCE
LPF Fc= 70 MHZ
74AHC1G00
RX+/TX-
TX DSP BUS
CONTROL BUS
TRANSMITTER CPLD
XC95288XL
DIGITAL POTS AD8403
TEMP SENSOR LM335
ON CCA BETWEEN DRIVER& FINAL
MONITOR A/D AD7829
SIDETONE AUDIO

BLOCK DIAGRAM

SCHEMATIC DIAGRAM SHEET NO. 15

COMPUTER GENERATED

10-11-2001 11:57 PAUL COBLENTZ

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SIZE	CAGE CODE	DRAWING NO.	REV
E	55939	7026236-902	XC

SCALE — SHEET 19

DWG NO. 7026236-902 REV 19

INSTALLED 08-1-A REV YA