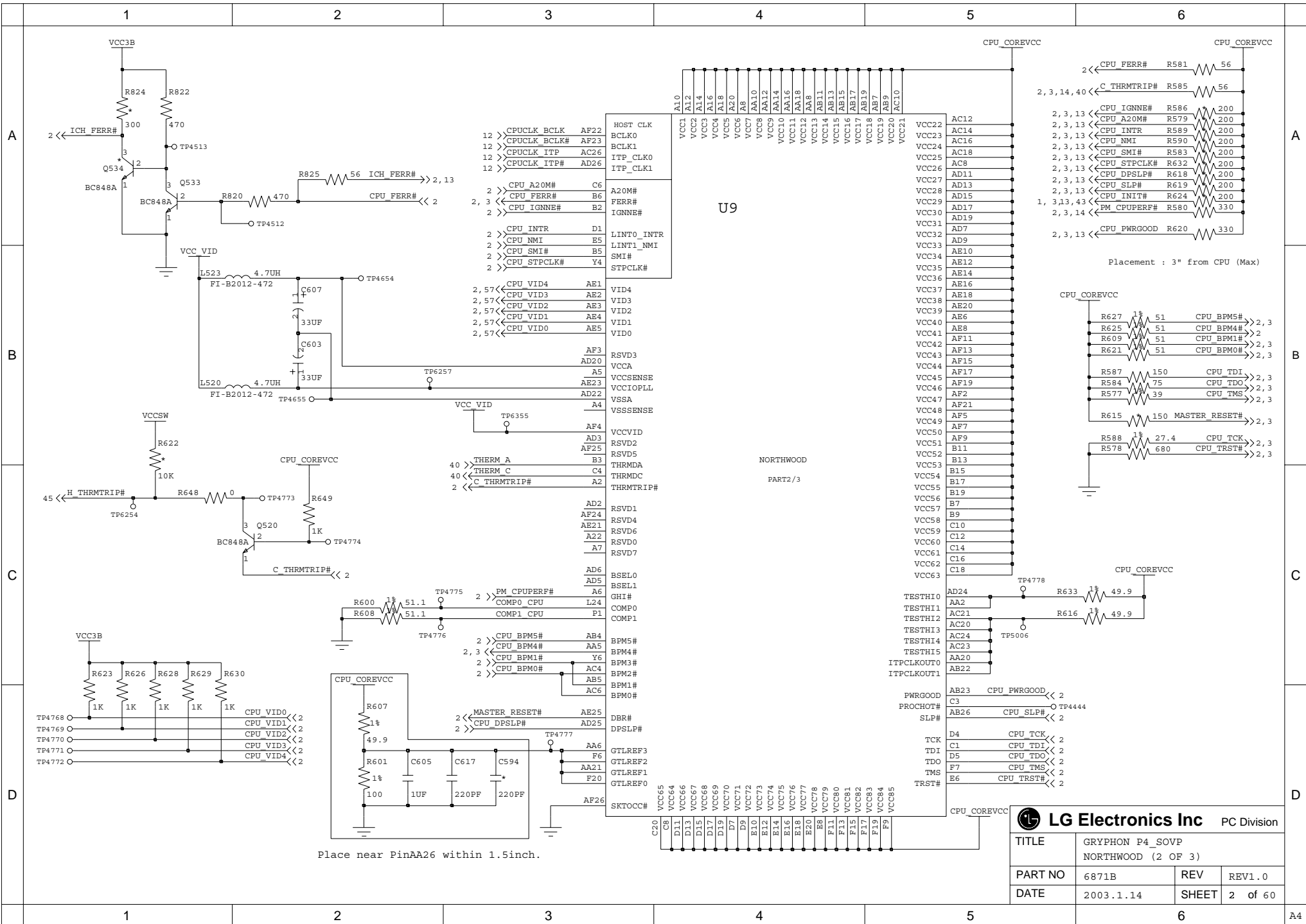


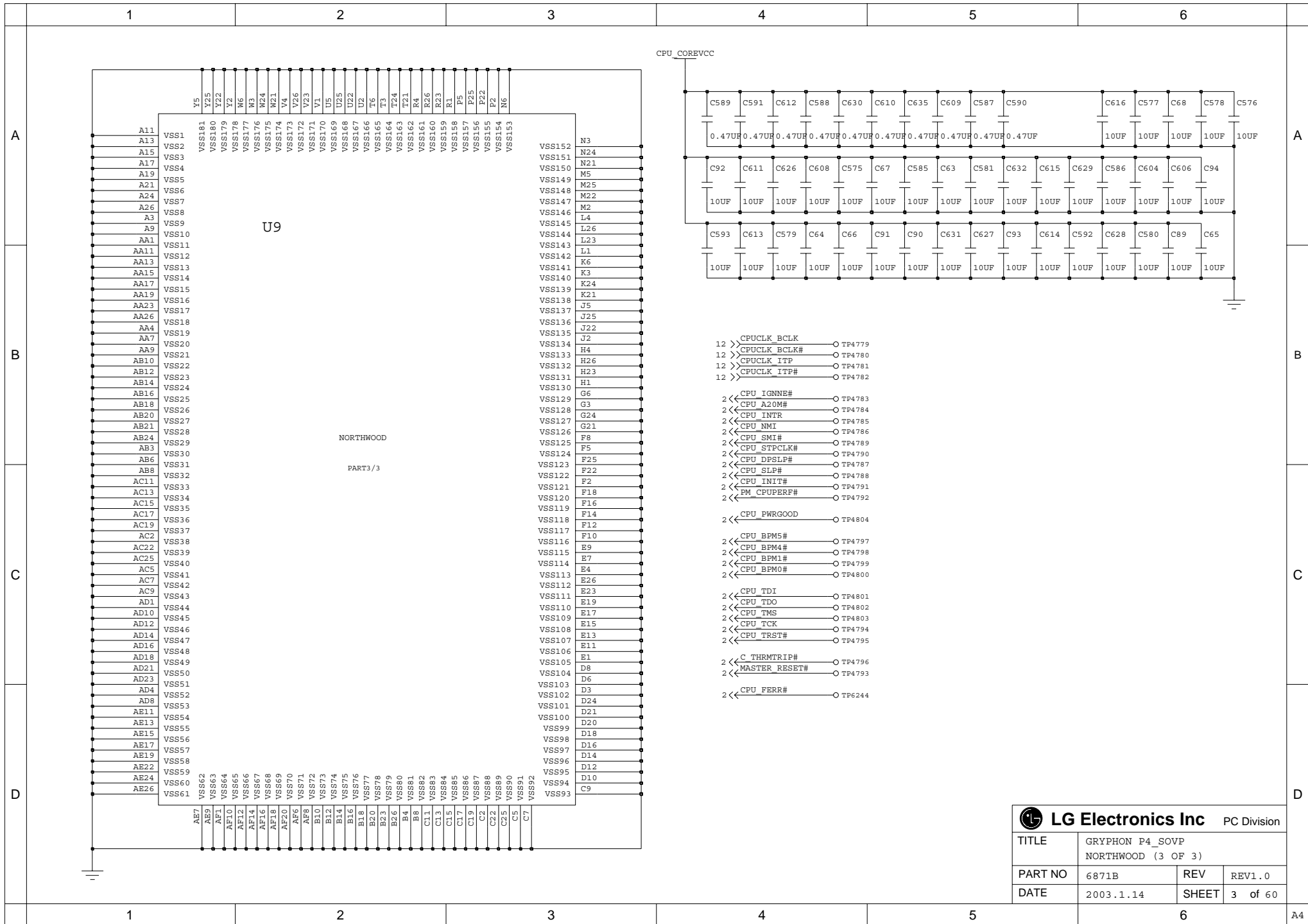
R582 should be placed near Pin H6 within 0.5inch.  
R617 should be placed near Pin AB25 within 0.5inch.

LG Electronics Inc PC Division			
TITLE			
GRYPHON P4_SOVPC			
NORTHWOOD (1 OF 3)			
PART NO	REV	REV1.0	
DATE	2003.1.14	SHEET	1 of 60



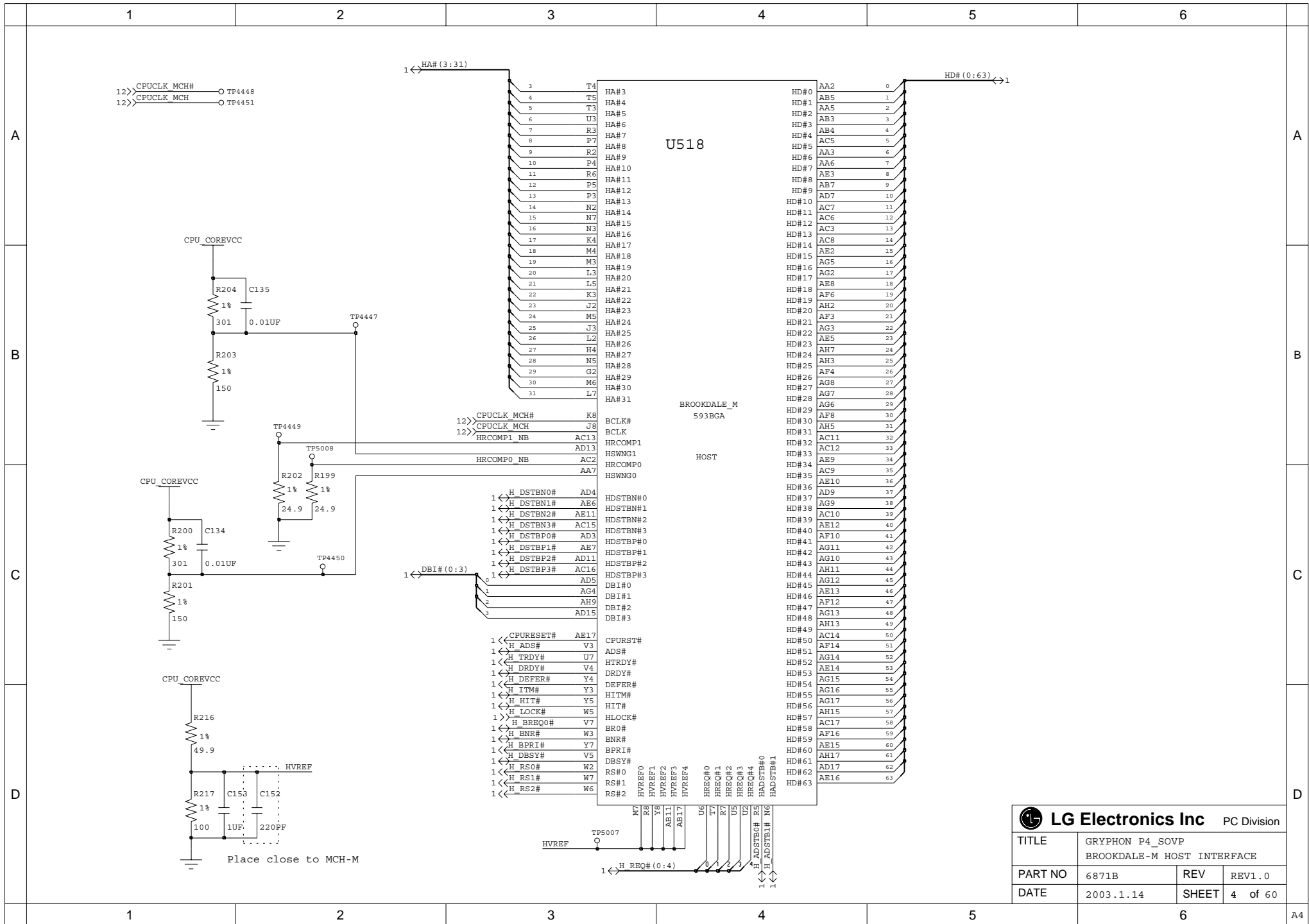
Place near PinAA26 within 1.5inch.

<b>LG Electronics Inc</b> PC Division			
TITLE: GRYPHON P4_SOVP NORTHWOOD (2 OF 3)			
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	2 of 60

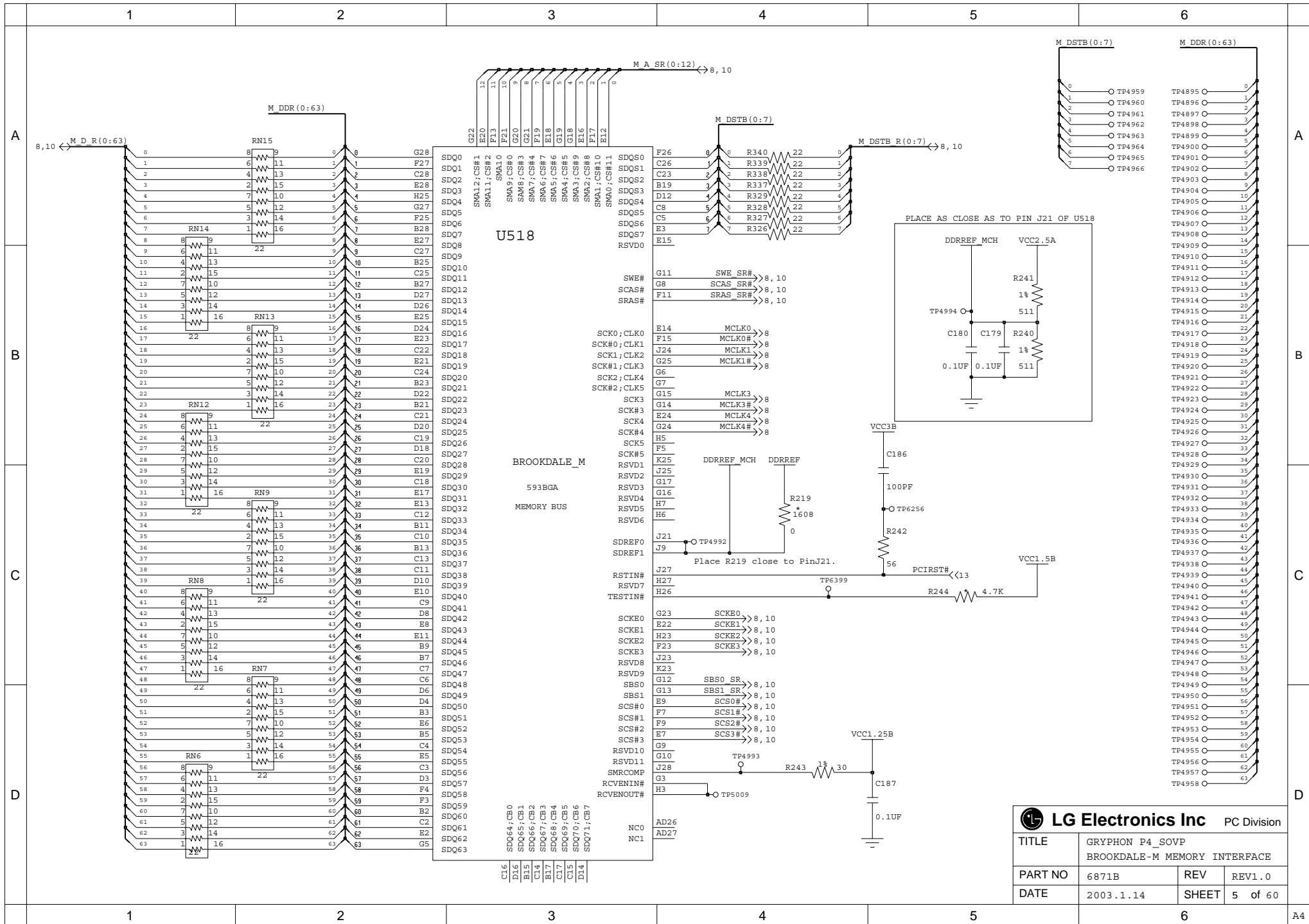


- 12 >> CPUCLK\_BCLK ○ TP4779
- 12 >> CPUCLK\_BCLK# ○ TP4780
- 12 >> CPUCLK\_ITP ○ TP4781
- 12 >> CPUCLK\_ITP# ○ TP4782
- 2 << CPU\_IGNNE# ○ TP4783
- 2 << CPU\_AZ0M# ○ TP4784
- 2 << CPU\_INTR ○ TP4785
- 2 << CPU\_NMI ○ TP4786
- 2 << CPU\_SMI# ○ TP4789
- 2 << CPU\_STPCLK# ○ TP4790
- 2 << CPU\_DPSLP# ○ TP4787
- 2 << CPU\_SLP# ○ TP4788
- 2 << CPU\_INIT# ○ TP4791
- 2 << PM\_CPUPERF# ○ TP4792
- 2 << CPU\_PWRGOOD ○ TP4804
- 2 << CPU\_BPM5# ○ TP4797
- 2 << CPU\_BPM4# ○ TP4798
- 2 << CPU\_BPM1# ○ TP4799
- 2 << CPU\_BPM0# ○ TP4800
- 2 << CPU\_TDI ○ TP4801
- 2 << CPU\_TDO ○ TP4802
- 2 << CPU\_TMS ○ TP4803
- 2 << CPU\_TCK ○ TP4794
- 2 << CPU\_TRST# ○ TP4795
- 2 << C\_THRMTRIP# ○ TP4796
- 2 << MASTER\_RESET# ○ TP4793
- 2 << CPU\_FERR# ○ TP6244

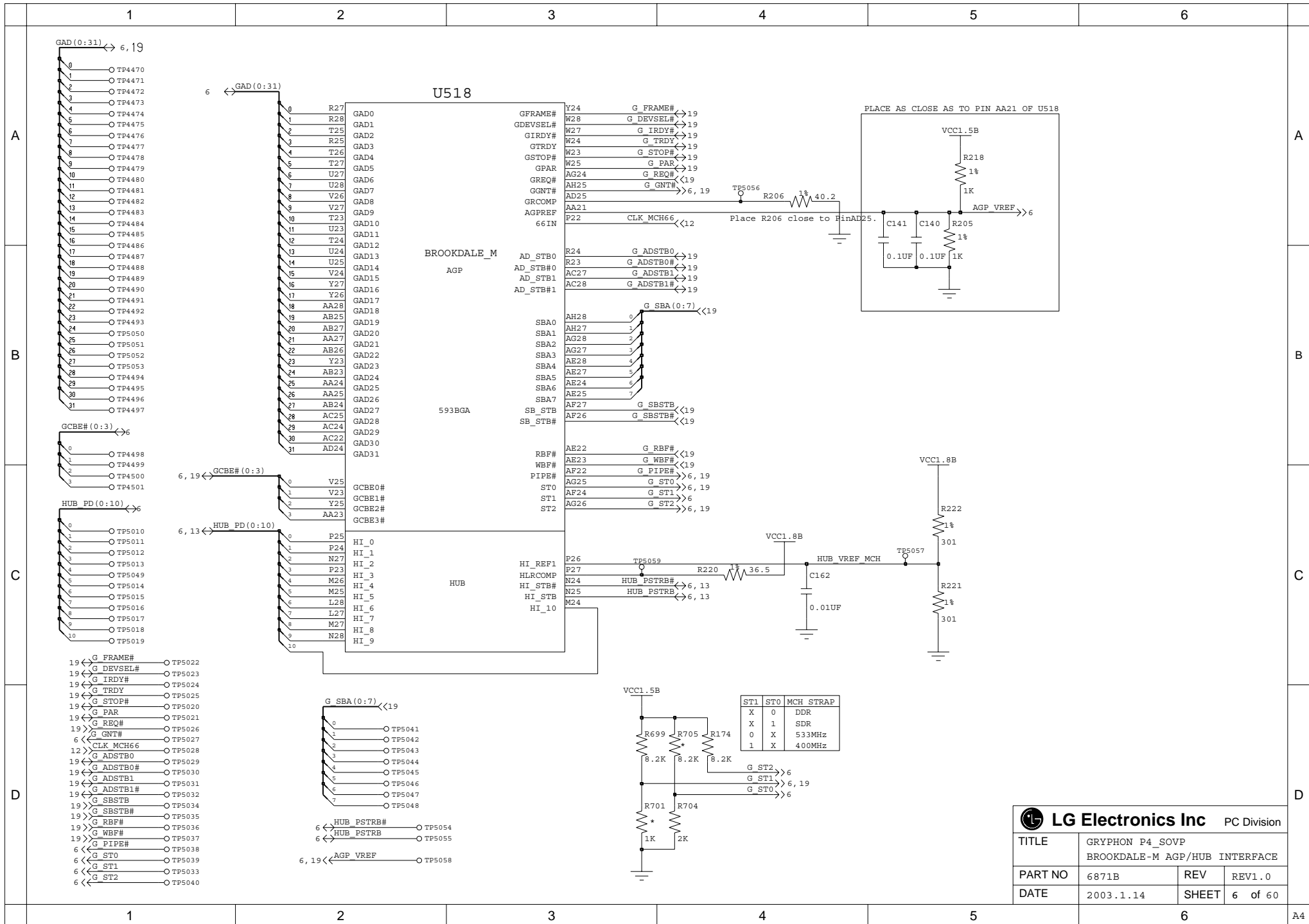
<b>LG Electronics Inc</b> PC Division			
TITLE	GRYPHON P4_SOVPC NORTHWOOD (3 OF 3)		
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	3 of 60



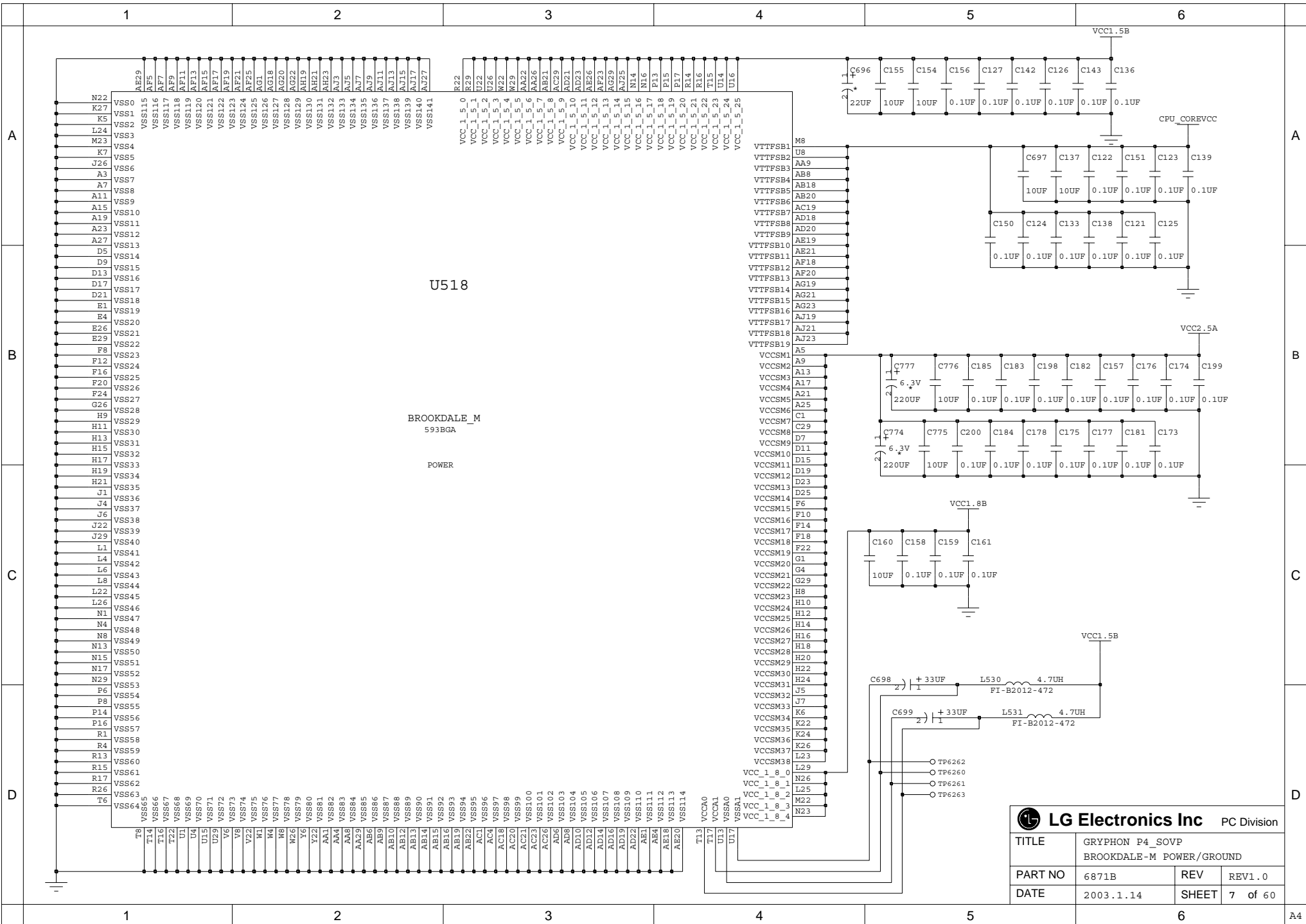
LG Electronics Inc PC Division			
TITLE GRYPHON P4_SOVP BROOKDALE-M HOST INTERFACE			
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	4 of 60



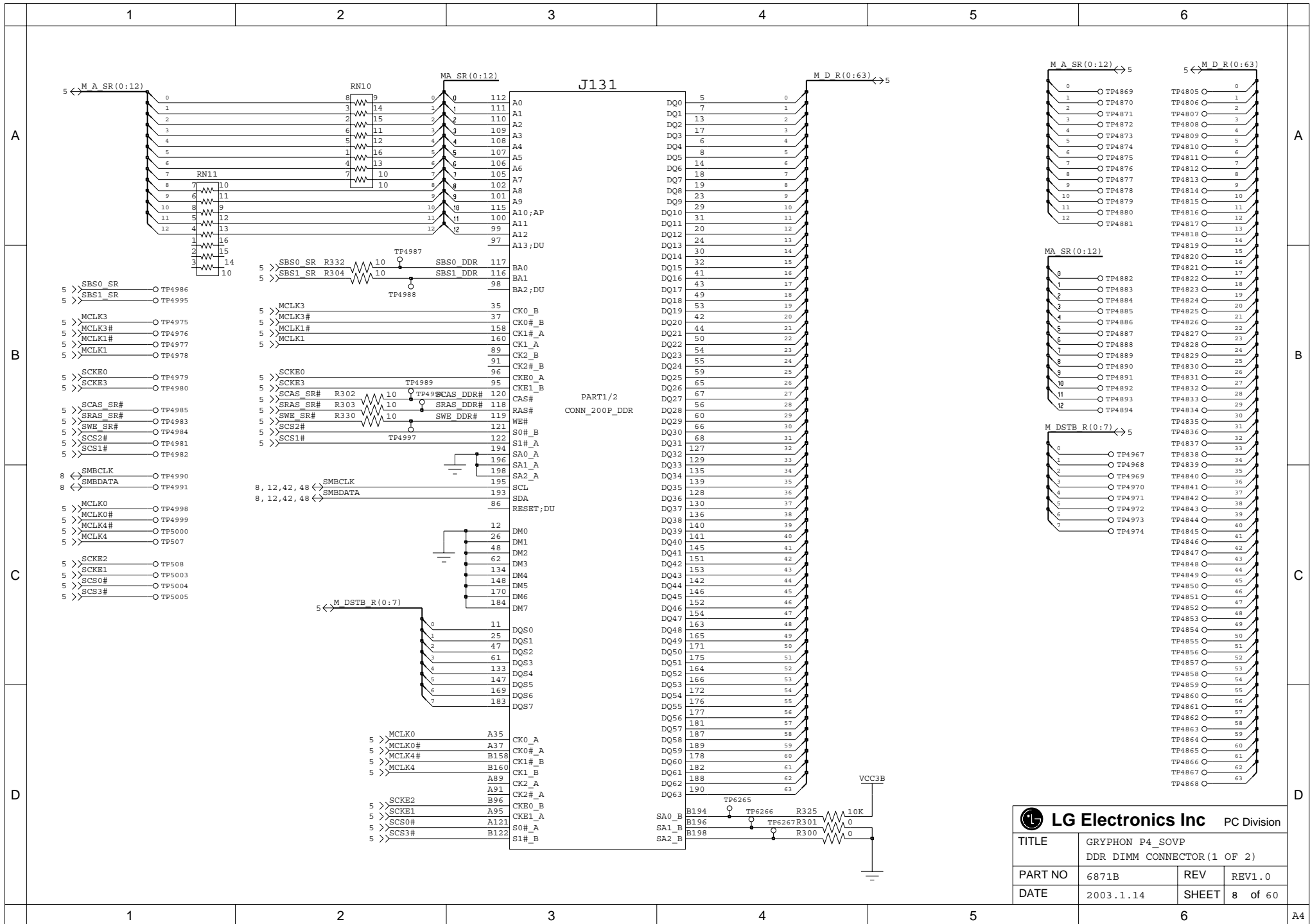
<b>LG Electronics Inc</b> PC Division			
TITLE	GRYPHON P4_SOV BROOKDALE-M MEMORY INTERFACE		
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	5 of 60



<b>LG Electronics Inc</b> PC Division			
TITLE	GRYPHON P4_SOVP BROOKDALE-M AGP/HUB INTERFACE		
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	6 of 60

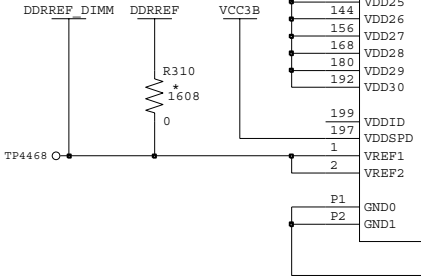
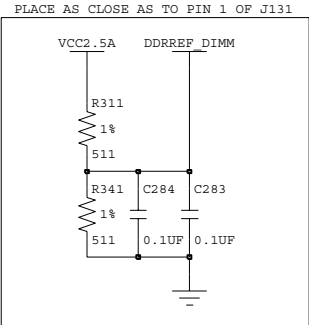
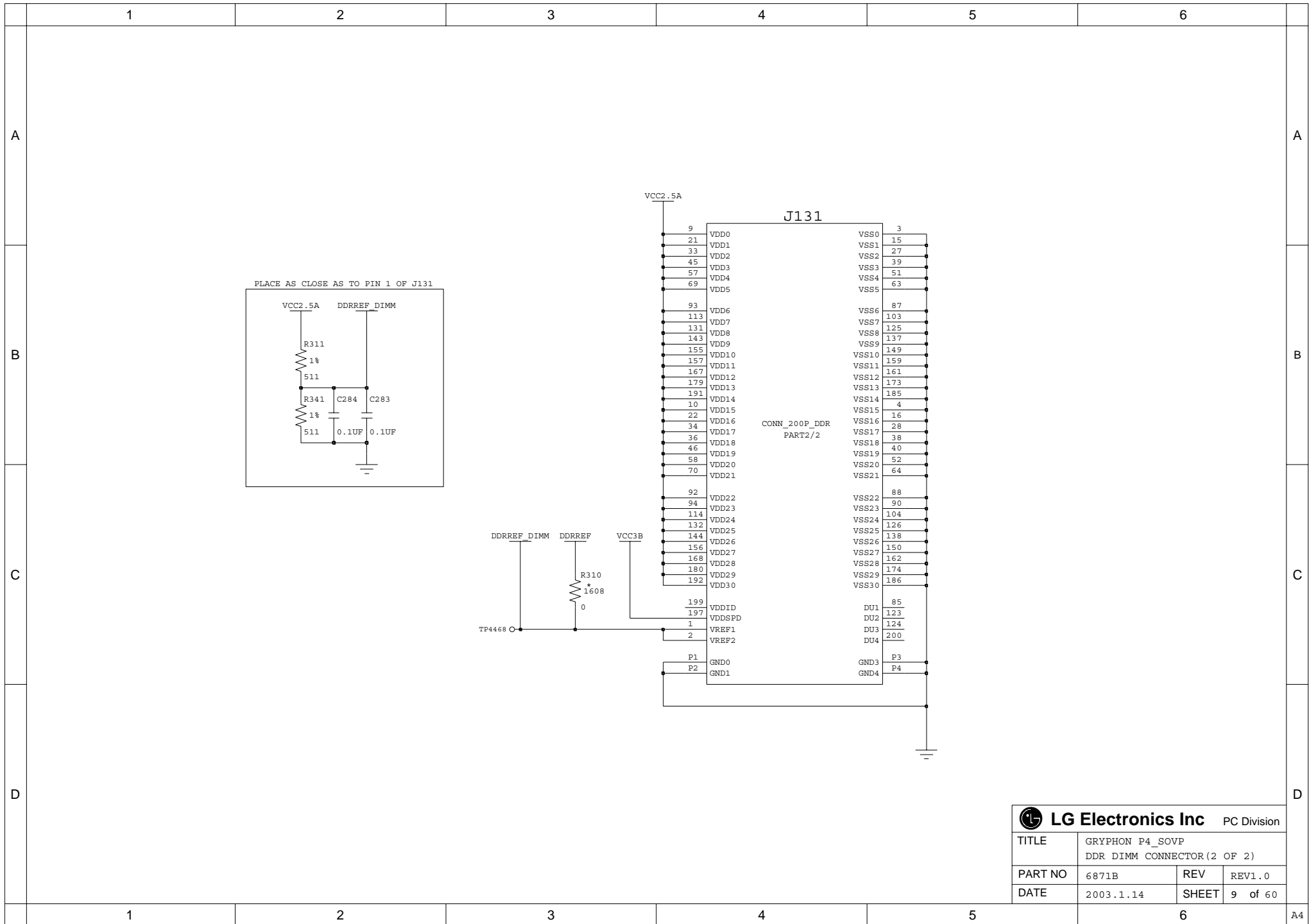


<b>LG Electronics Inc</b> PC Division			
TITLE: GRYPHON P4_SOVP BROOKDALE-M POWER/GROUND			
PART NO:	6871B	REV:	REV1.0
DATE:	2003.1.14	SHEET:	7 of 60

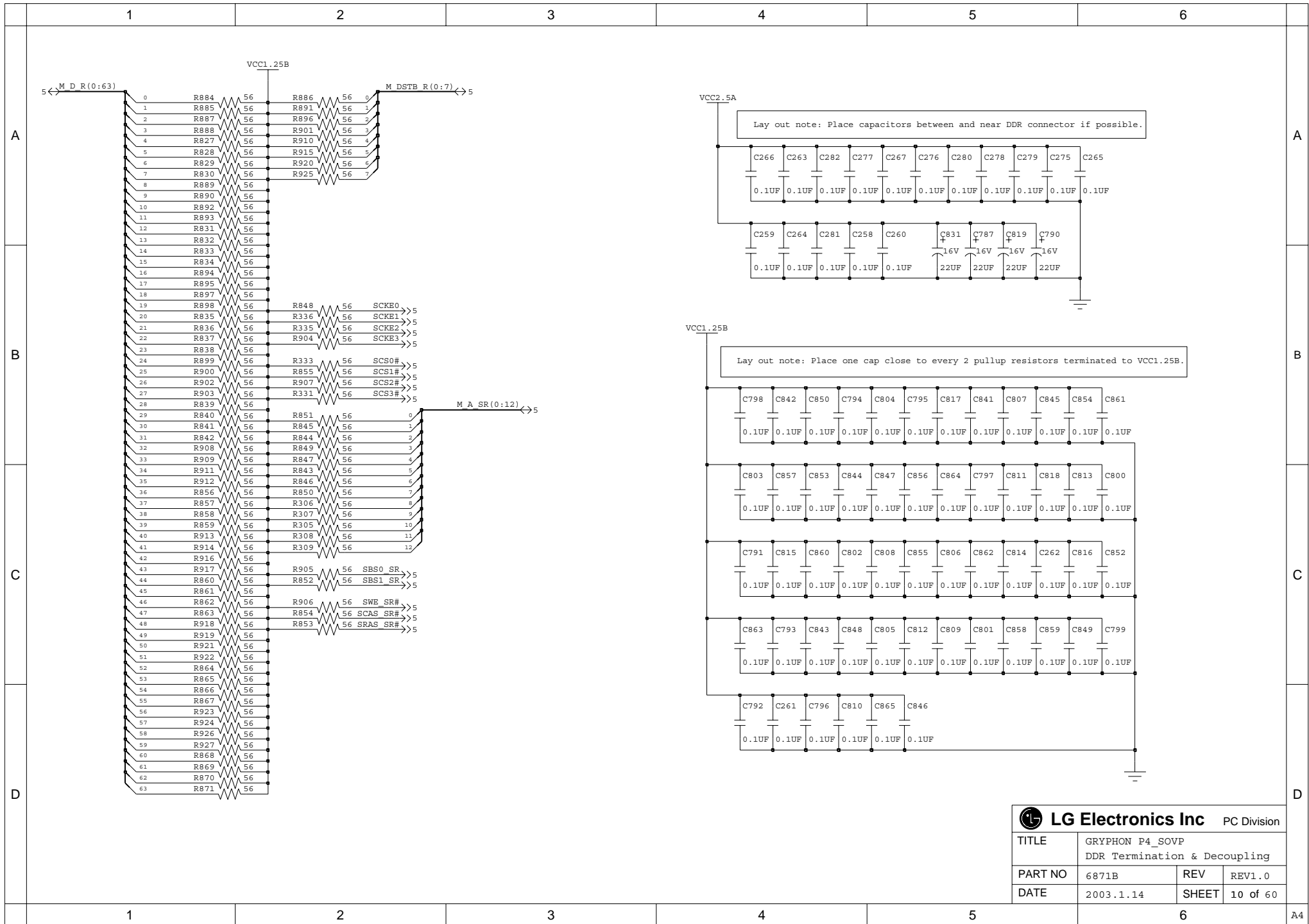


<b>LG Electronics Inc</b> PC Division			
TITLE	GRYPHON P4_SOVP DDR DIMM CONNECTOR (1 OF 2)		
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	8 of 60





<b>LG Electronics Inc</b> PC Division			
TITLE	GRYPHON P4_SOVP DDR DIMM CONNECTOR (2 OF 2)		
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	9 of 60

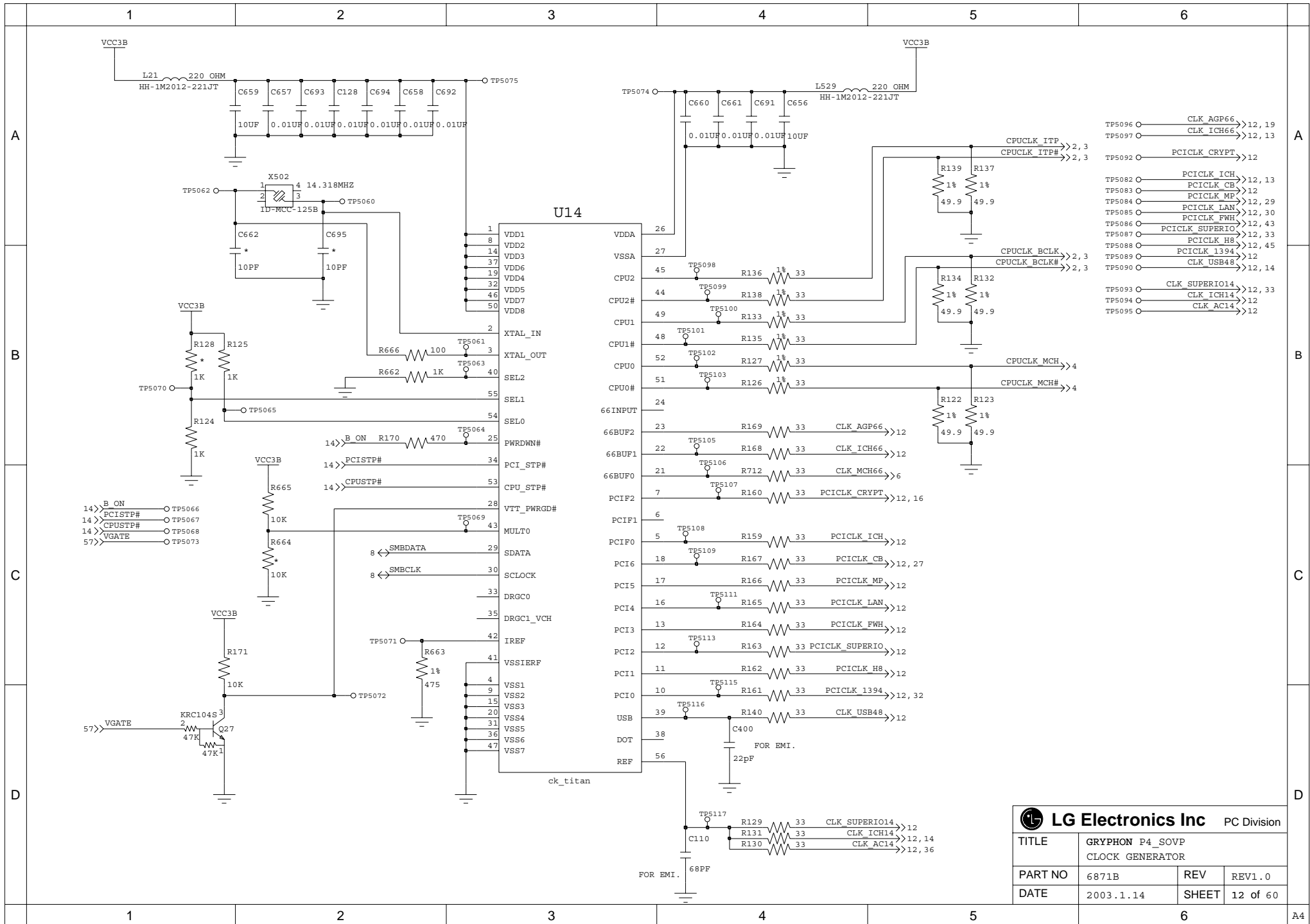


<b>LG Electronics Inc</b> PC Division			
TITLE	GRYPHON P4_S0VP DDR Termination & Decoupling		
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	10 of 60

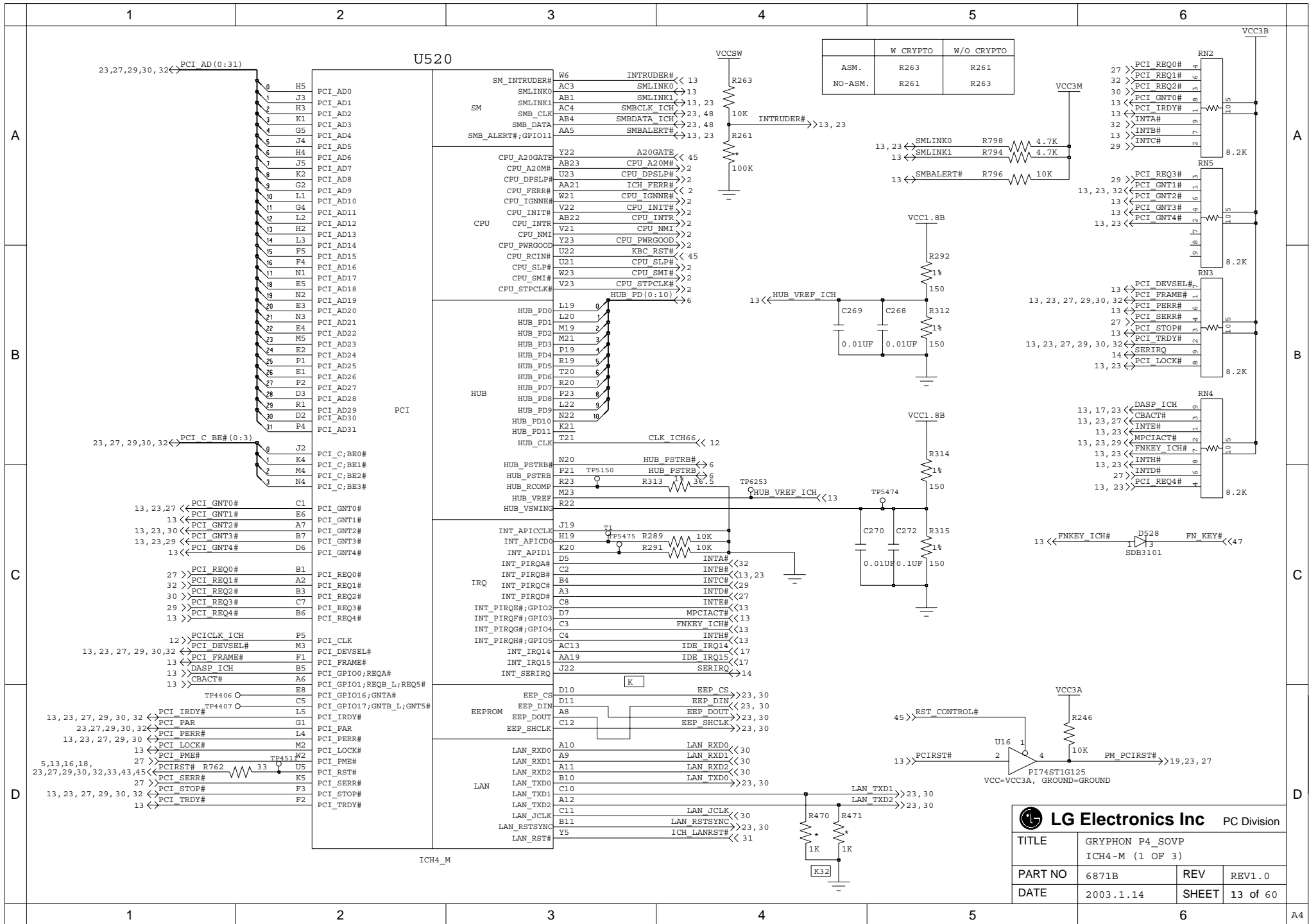
# GRYPHON (P4) SCHEMATICS SOVP.

- |   |  |
|---|--|
| <p>01 : NORTHWOOD (1 OF 3) .</p> <p>02 : NORTHWOOD (2 OF 3) .</p> <p>03 : NORTHWOOD (3 OF 3) .</p> <p>04 : BROOKDALE-M HOST INTERFACE .</p> <p>05 : BROOKDALE-M MEMORY INTERFACE .</p> <p>06 : BROOKDALE-M AGP/HUB INTERFACE .</p> <p>07 : BROOKDALE-M POWER/GROUND .</p> <p>08 : DDR DIMM CONNECTOR (1 OF 2) .</p> <p>09 : DDR DIMM CONNECTOR (2 OF 2) .</p> <p>10 : DDR TERMINATIONS &amp; DECOUPLINGS .</p> <p>11 : SCHEMATICS CONTENTS .</p> <p>12 : CLOCK GENERATOR .</p> <p>13 : ICH4-M (1 OF 3) .</p> <p>14 : ICH4-M (2 OF 3) .</p> <p>15 : ICH4-M (3 OF 3) .</p> <p>16 : CRYPT &amp; CDC CONNECTOR .</p> <p>17 : HDD CONNECTOR .</p> <p>18 : ULTRABAY CONNECTOR .</p> <p>19 : ATI VIDEO CONTROLLER (1 OF 4) .</p> <p>20 : ATI VIDEO CONTROLLER (2 OF 4) .</p> <p>21 : ATI VIDEO CONTROLLER (3 OF 4) .</p> <p>22 : ATI VIDEO CONTROLLER (4 OF 4) .</p> <p>23 : TEST POINTS .</p> <p>24 : LCD CONNECTOR .</p> <p>25 : CRT CONNECTOR .</p> <p>26 : BLANK .</p> <p>27 : CARDBUS CONTROLLER (PCI1510) .</p> <p>28 : CARDBUS SLOT .</p> <p>29 : MINIPCI CONNECTOR .</p> <p>30 : LAN CONTROLLER .</p> <p>31 : RJ45/RJ11 CONNECTOR .</p> <p>32 : IEEE1394 CONTROLLER (TSB43AB21) .</p> <p>33 : SUPER I/O (PC87392) .</p> <p>34 : RS-232 &amp; PIO CONNECTOR .</p> | <p>35 : BLANK .</p> <p>36 : AUDIO CODEC (AD1981A) .</p> <p>37 : AUDIO HP &amp; MIC CONNECTOR .</p> <p>38 : AUDIO AMP (TPA0232) .</p> <p>39 : LED SIGNALS .</p> <p>40 : THERMAL SENSOR &amp; FAN CONNECTOR .</p> <p>41 : USB CONNECTOR .</p> <p>42 : DOCKING CONNECTOR .</p> <p>43 : FWH .</p> <p>44 : SPARE GATES .</p> <p>45 : SCP (H8_2169) .</p> <p>46 : TOUCH PAD CONNECTOR .</p> <p>47 : INTERNAL KBD CONNECTOR .</p> <p>48 : SMBUS &amp; RFID .</p> <p>49 : SYSTEM DCDC-I .</p> <p>50 : SYSTEM DCDC-II .</p> <p>51 : SYSTEM DCDC-III .</p> <p>52 : CHARGER LOGIC .</p> <p>53 : AC-IN LOGIC .</p> <p>54 : BATTERY RAIL .</p> <p>55 : BATTERY SELECTION .</p> <p>56 : SYSTEM VCC-M .</p> <p>57 : CPU_COREVCC LOGIC .</p> <p>58 : DDR DCDC LOGIC .</p> <p>59 : BLOCK DIAGRAM .</p> <p>60 : REVISION HISTORY .</p> |
|---|--|

<b>LG Electronics Inc</b> PC Division			
TITLE	GRYPHON P4_SOVP SCHEMATICS CONTENTS .		
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	11 of 60



<b>LG Electronics Inc</b> PC Division			
TITLE		GRYPHON P4_SQVP CLOCK GENERATOR	
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	12 of 60



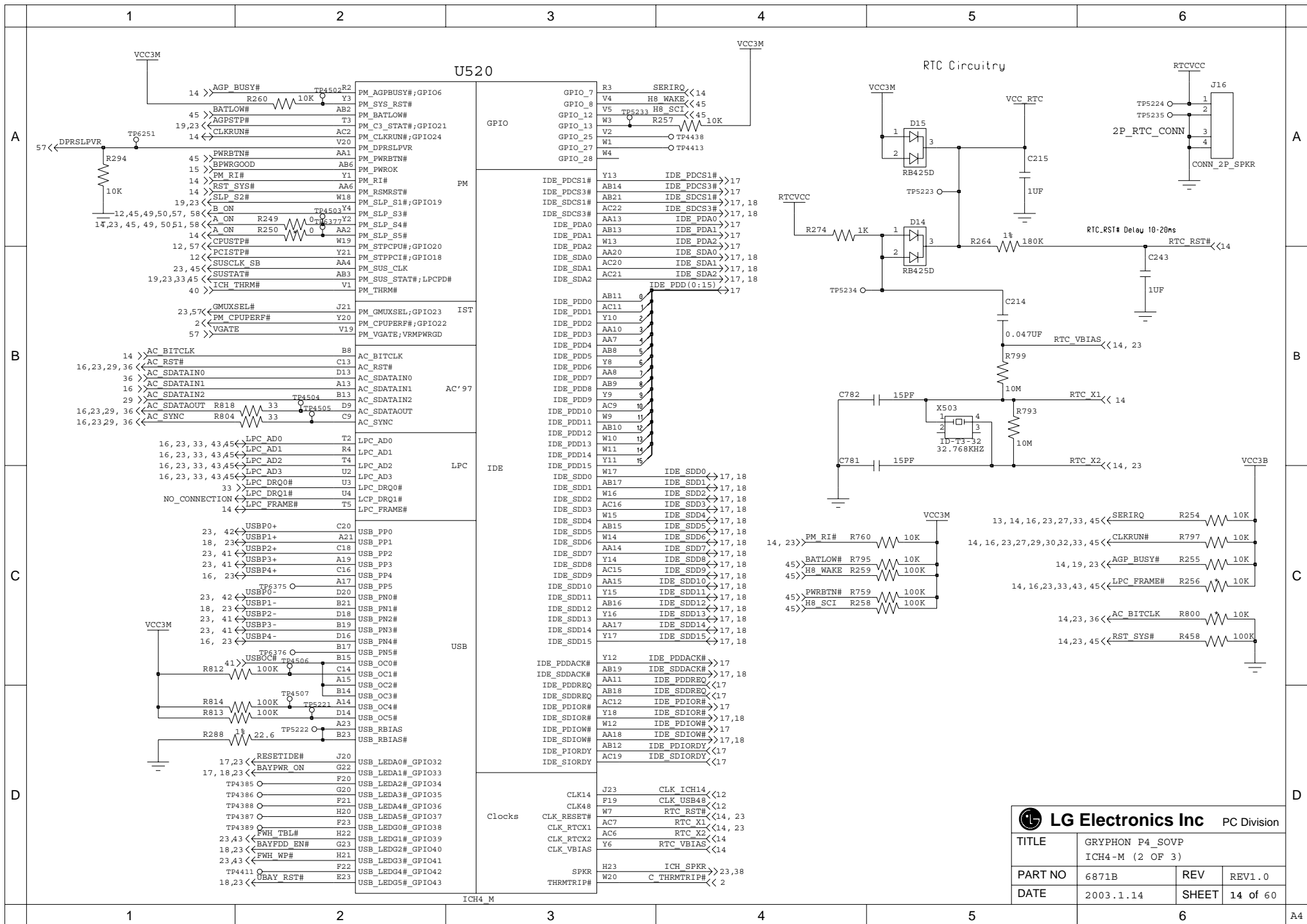
A

B

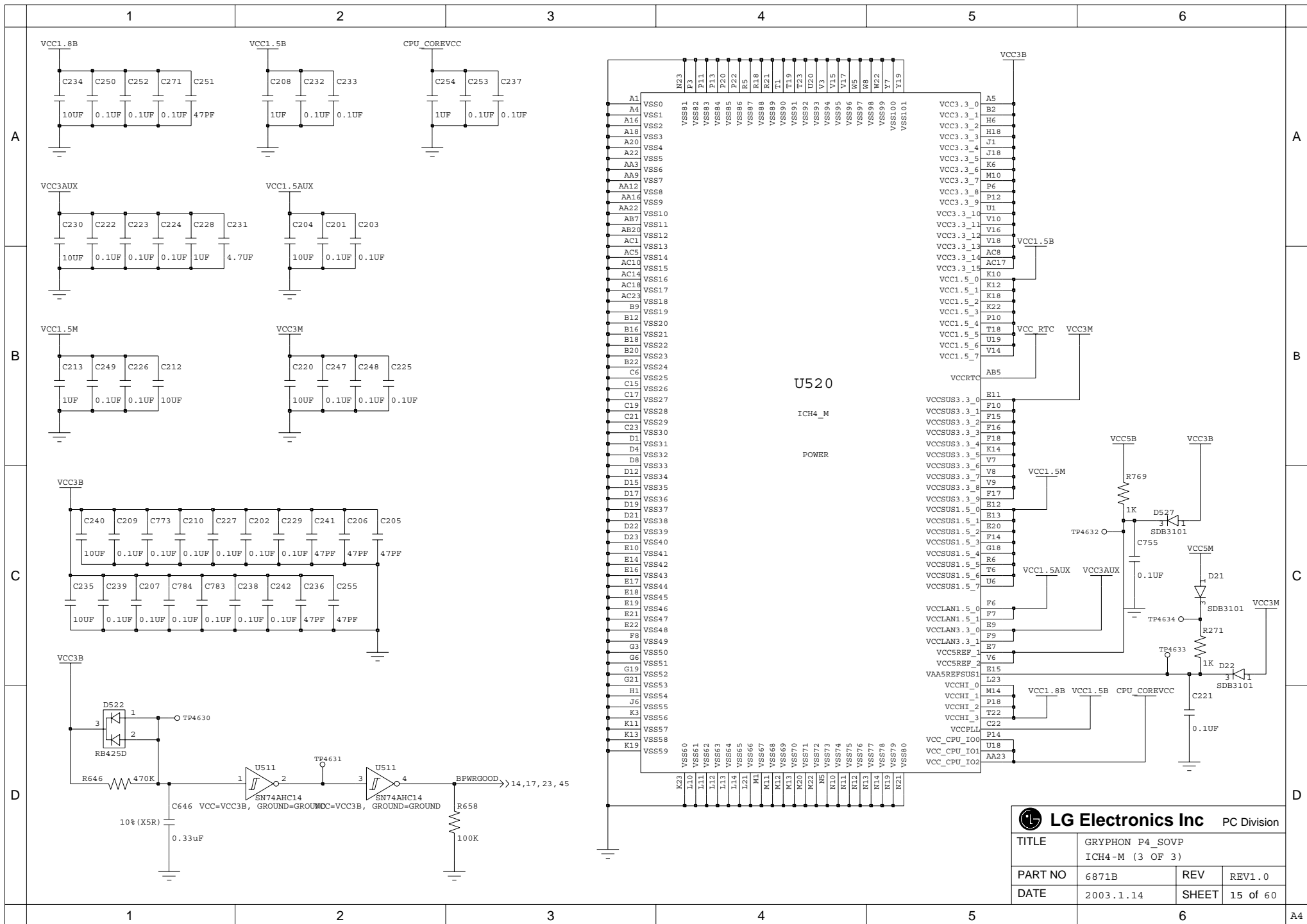
C

D

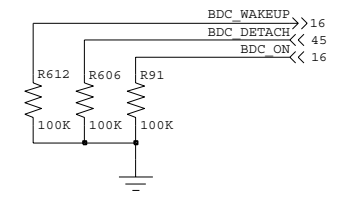
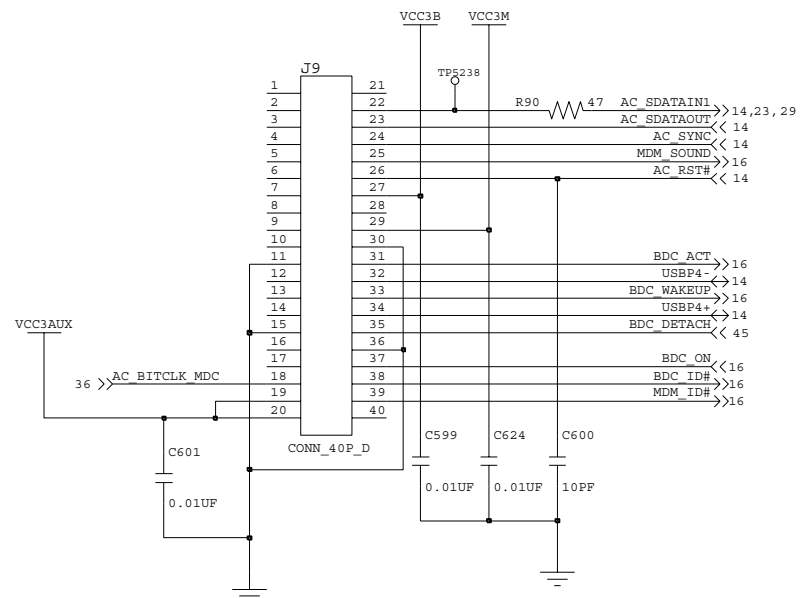
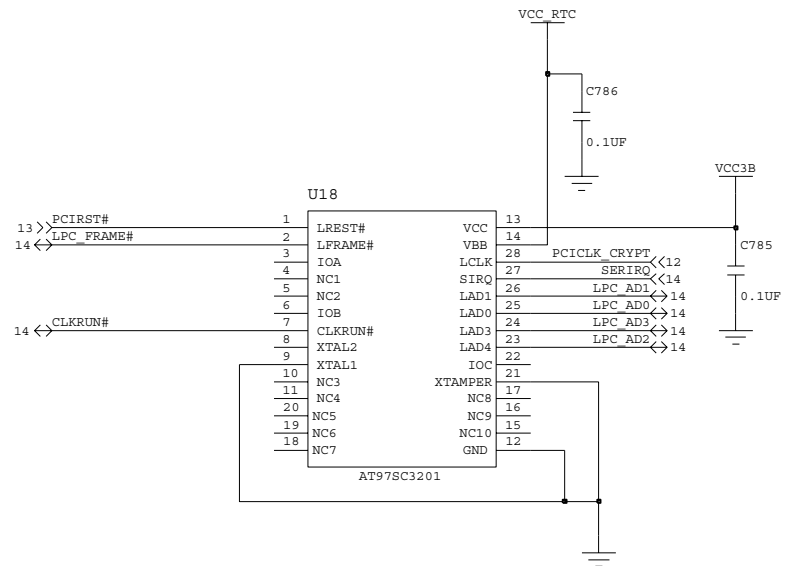
A4



<b>LG Electronics Inc</b> PC Division			
TITLE	GRYPHON P4_SOVP ICH4-M (2 OF 3)		
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	14 of 60



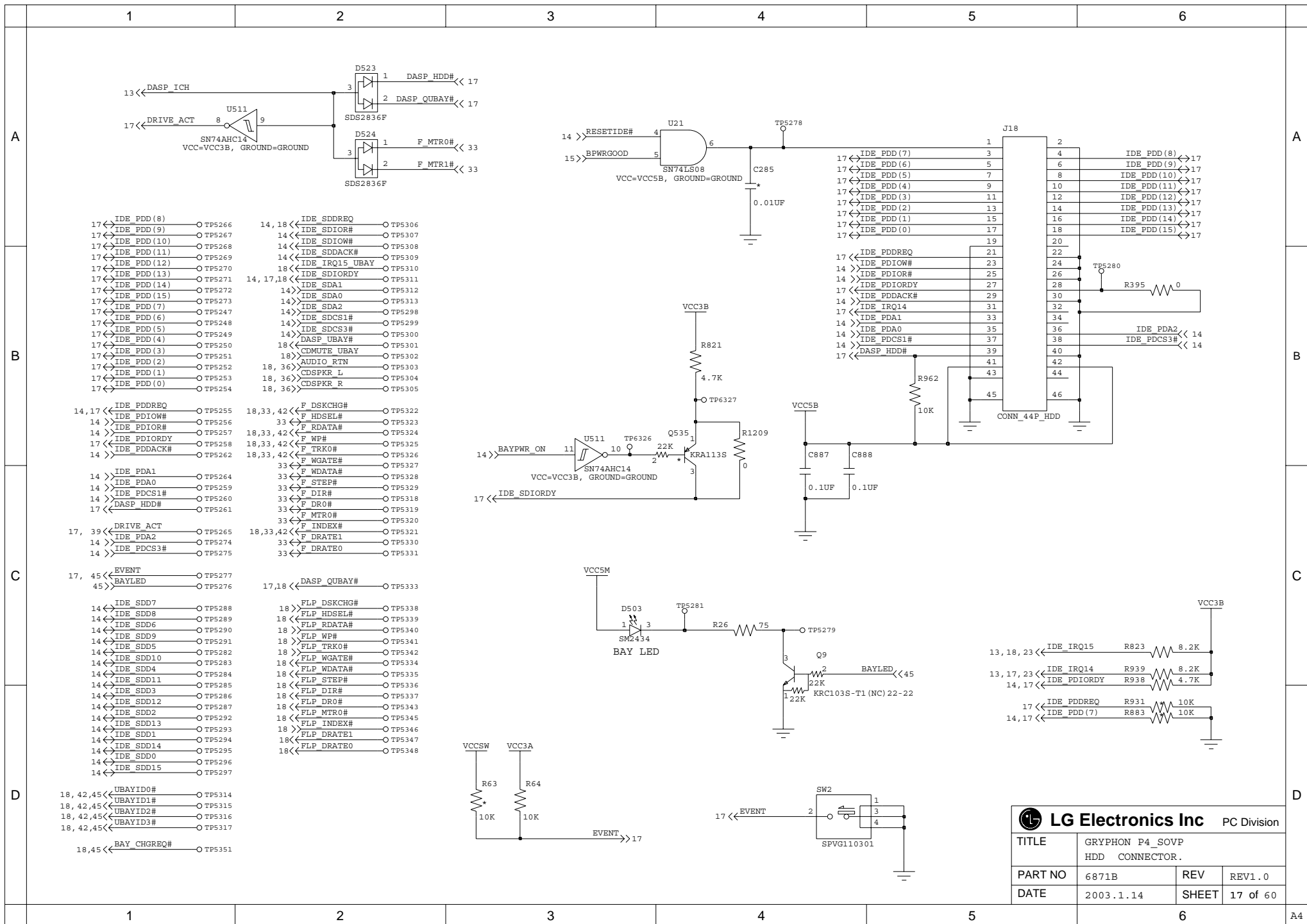
<b>LG Electronics Inc</b> PC Division			
TITLE		GRYPHON P4_SOVP ICH4-M (3 OF 3)	
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	15 of 60



- TP5237 AC\_BITCLK\_MDC << 36
- TP5239 MDM\_SOUND >> 16,36
- TP5241 BDC\_ACT >> 16,39
- TP5242 BDC\_WAKEUP >> 16,45
- TP5243 BDC\_DETACH << 45
- TP5244 BDC\_ON << 16,45
- TP5245 BDC\_ID# >> 16,33
- TP5246 MDM\_ID# >> 16,33

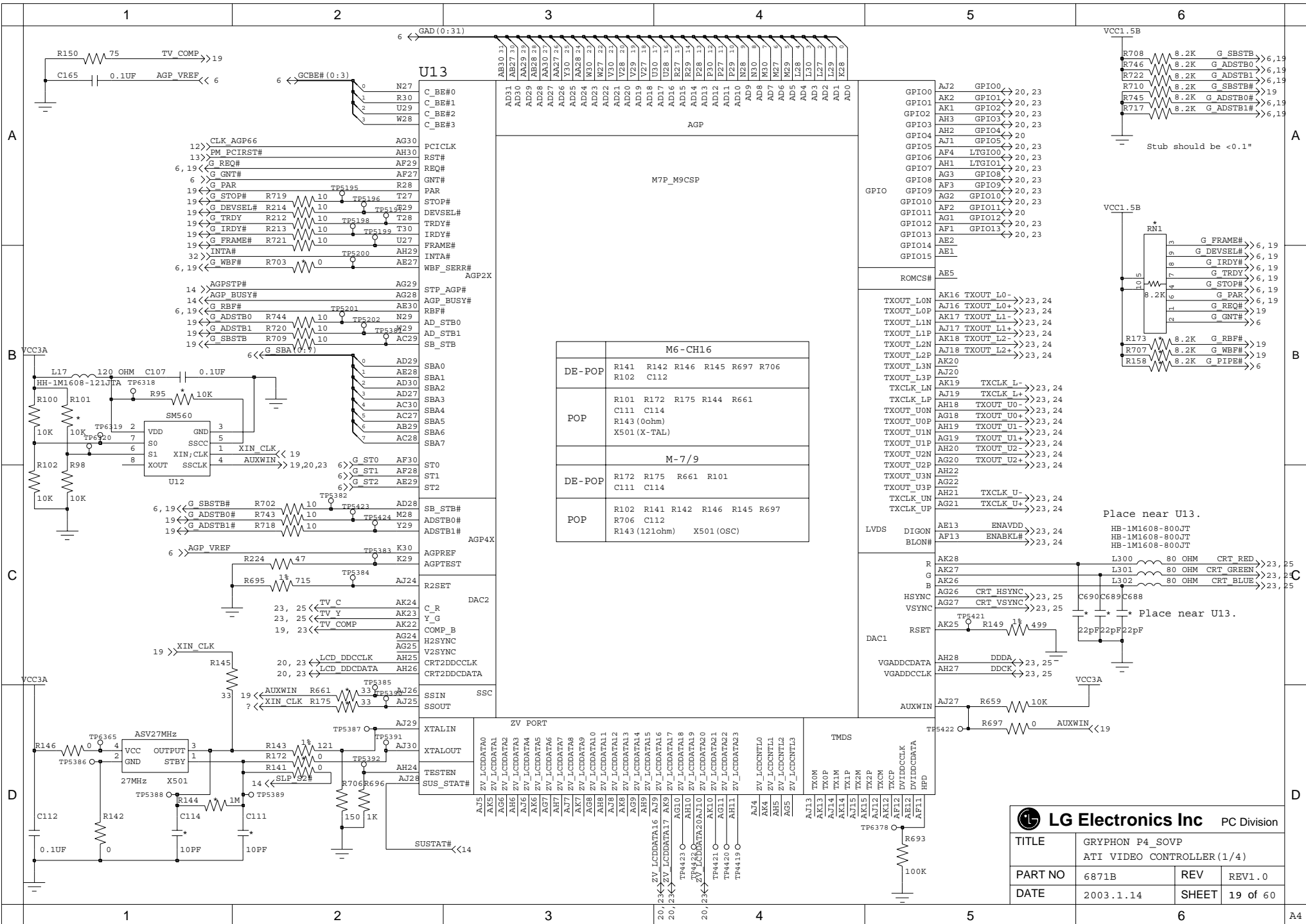
<b>LG Electronics Inc</b> PC Division			
TITLE		GRYPHON P4_SOVP CRYPT & CDC CONNECTOR	
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	16 of 60





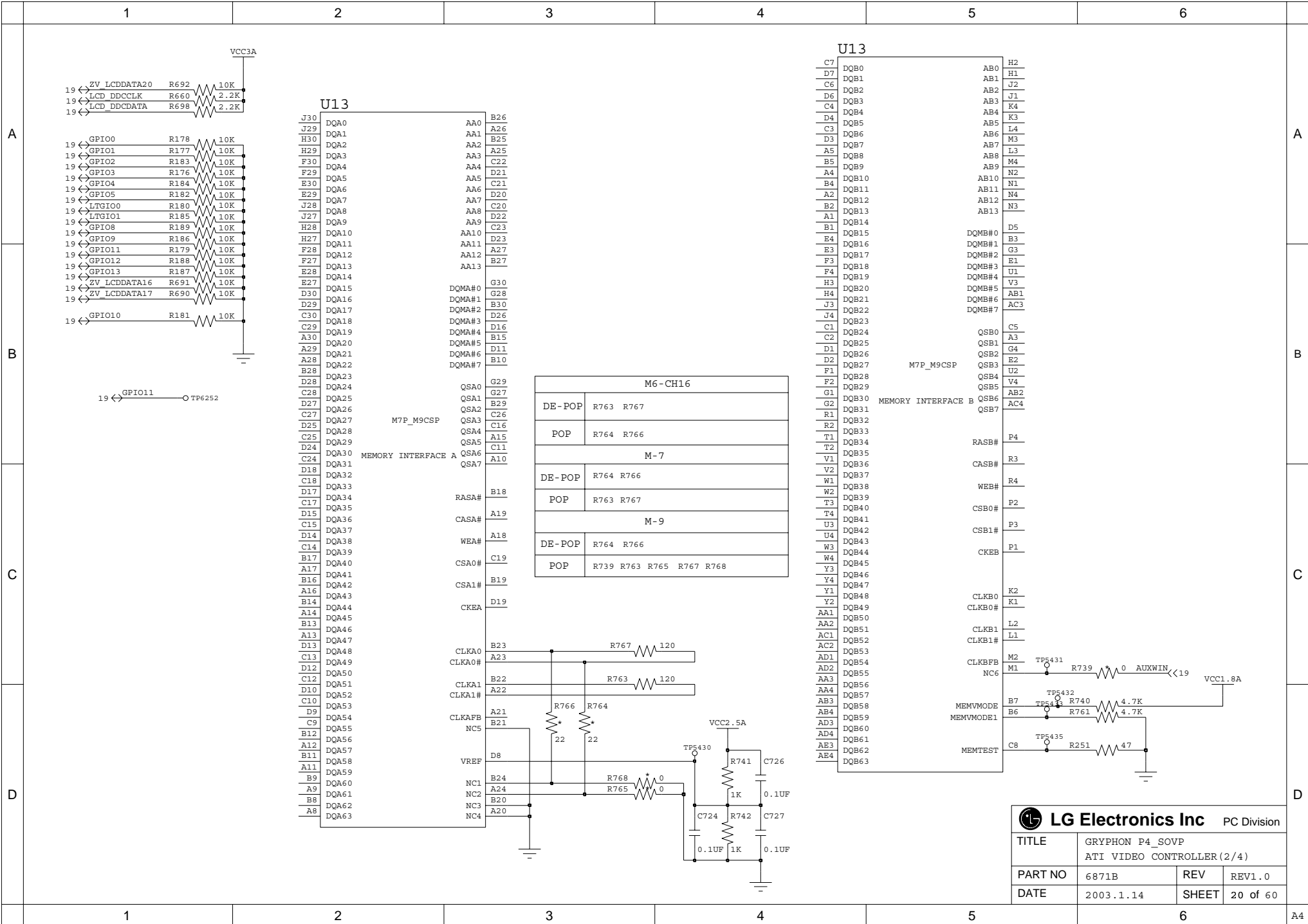
LG Electronics Inc PC Division			
TITLE	GRYPHON P4_SOVP HDD CONNECTOR.		
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	17 of 60





M6-CH16						
DE-POP	R141	R142	R146	R145	R697	R706
	R102	C112				
POP	R101	R172	R175	R144	R661	
	C111	C114				
	R143 (0ohm)					
	X501 (X-TAL)					
M-7/9						
DE-POP	R172	R175	R661	R101		
	C111	C114				
POP	R102	R141	R142	R146	R145	R697
	R706	C112				
	R143 (121ohm)					X501 (OSC)

<b>LG Electronics Inc</b> PC Division			
TITLE	GRYPHON P4_S0VP ATI VIDEO CONTROLLER (1/4)		
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	19 of 60



**U13**

J30	DQA0	AA0	B26
J29	DQA1	AA1	A26
H30	DQA2	AA2	B25
H29	DQA3	AA3	A25
F30	DQA4	AA4	C22
F29	DQA5	AA5	D21
E30	DQA6	AA6	C21
E29	DQA7	AA7	D20
J28	DQA8	AA8	C20
J27	DQA9	AA9	D22
H28	DQA10	AA10	C23
H27	DQA11	AA11	D23
F28	DQA12	AA12	A27
F27	DQA13	AA13	B27
E28	DQA14		
E27	DQA15	DQMA#0	G30
D30	DQA16	DQMA#1	G28
D29	DQA17	DQMA#2	B30
C30	DQA18	DQMA#3	D26
C29	DQA19	DQMA#4	D16
A30	DQA20	DQMA#5	B15
A29	DQA21	DQMA#6	D11
A28	DQA22	DQMA#7	B10
B28	DQA23		G29
D28	DQA24	QSA0	G27
C28	DQA25	QSA1	B29
D27	DQA26	QSA2	C26
C27	DQA27	QSA3	C16
D25	DQA28	QSA4	A15
C25	DQA29	QSA5	C11
D24	DQA30	QSA6	A10
C24	DQA31	QSA7	
D18	DQA32		B18
C18	DQA33	RASA#	
D17	DQA34		A19
C17	DQA35	CASA#	
D15	DQA36		A18
C15	DQA37	WEA#	
D14	DQA38		C19
C14	DQA39	CSA0#	
B17	DQA40		B19
A17	DQA41	CSA1#	
B16	DQA42		D19
A16	DQA43	CKEA	
B14	DQA44		B23
A14	DQA45	CLKA0	A23
B13	DQA46	CLKA0#	
A13	DQA47		B22
D13	DQA48	CLKA1	A22
C13	DQA49	CLKA1#	
D12	DQA50		B21
C12	DQA51	CLKAFB	A21
D10	DQA52		B21
C10	DQA53	NCS	
D9	DQA54		D8
C9	DQA55	VREF	
B12	DQA56		B24
A12	DQA57	NC1	A24
B11	DQA58	NC2	B20
A11	DQA59	NC3	A20
B9	DQA60	NC4	
A9	DQA61		
B8	DQA62		
A8	DQA63		

**M6-CH16**

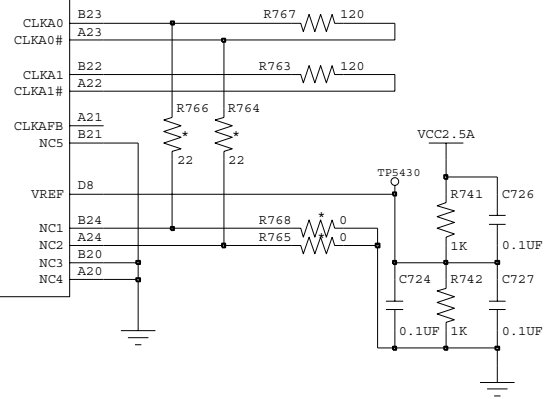
DE-POP	R763	R767
POP	R764	R766

**M-7**

DE-POP	R764	R766
POP	R763	R767

**M-9**

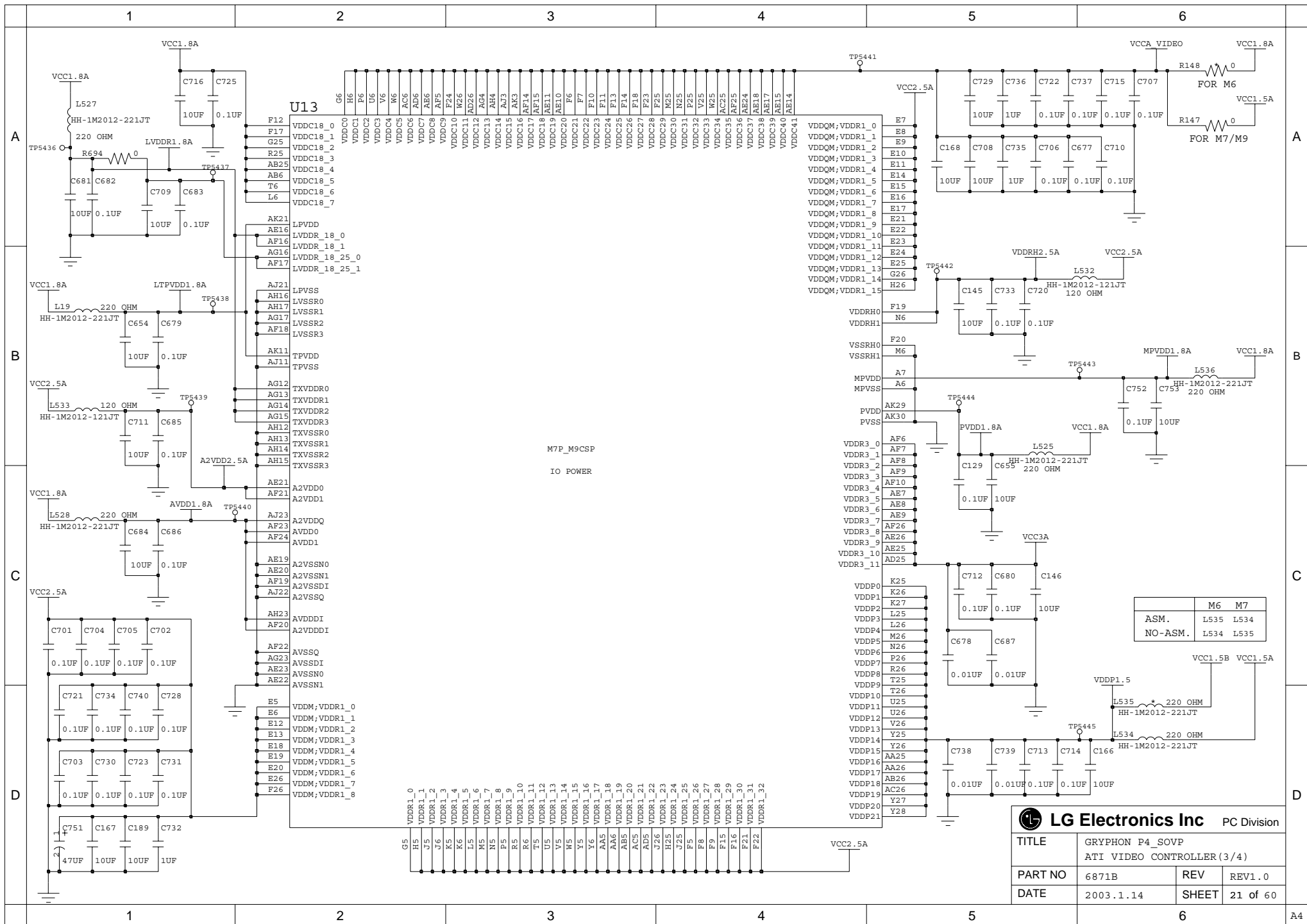
DE-POP	R764	R766			
POP	R739	R763	R765	R767	R768



**U13**

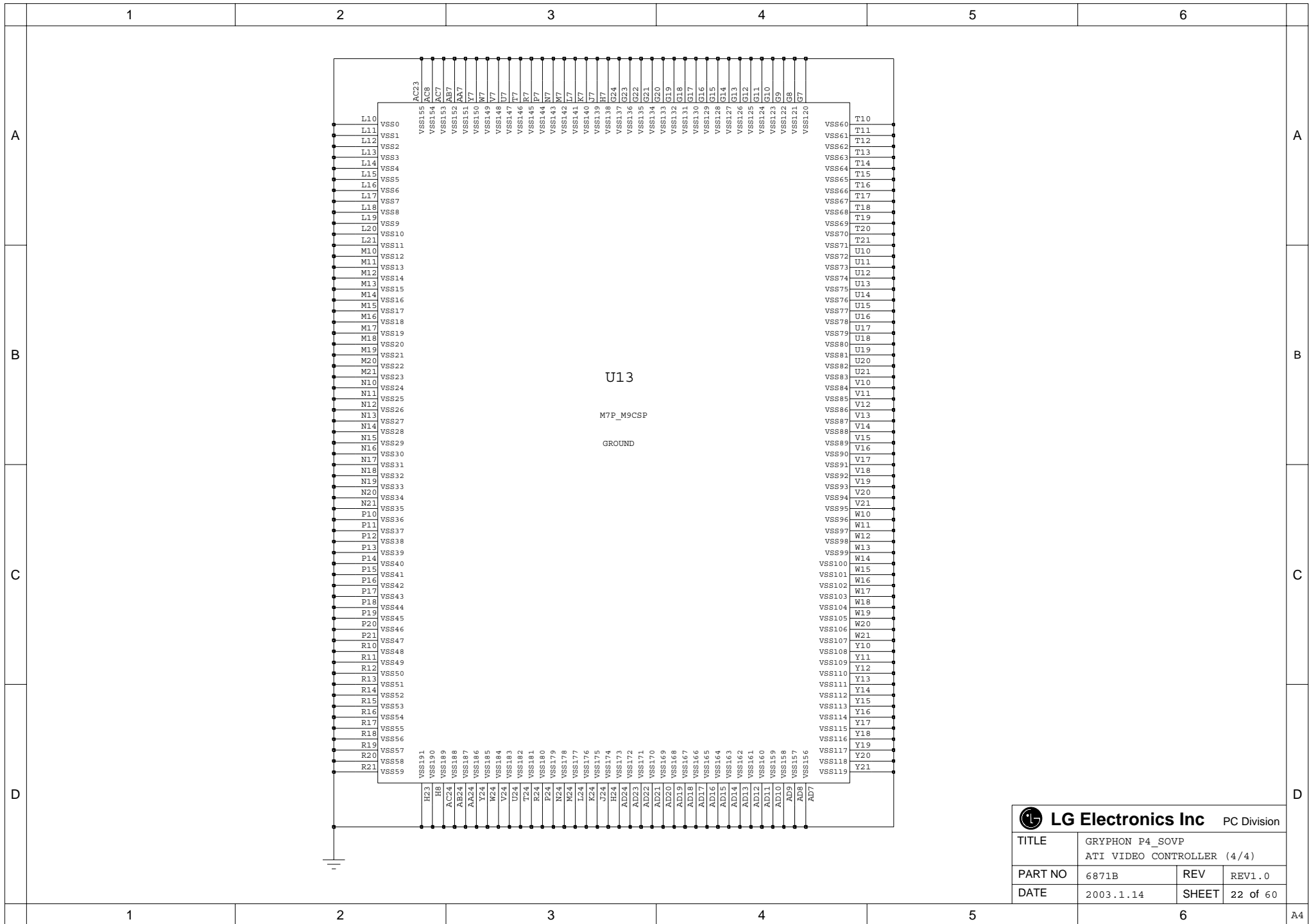
C7	DQB0	AB0	H2
D7	DQB1	AB1	H1
C6	DQB2	AB2	J2
D6	DQB3	AB3	J1
C4	DQB4	AB4	K4
D4	DQB5	AB5	K3
C3	DQB6	AB6	L4
D3	DQB7	AB7	M3
A5	DQB8	AB8	L3
B5	DQB9	AB9	M4
A4	DQB10	AB10	N2
B4	DQB11	AB11	N1
A2	DQB12	AB12	N4
B2	DQB13	AB13	N3
A1	DQB14		
B1	DQB15	DQMB#0	D5
E4	DQB16	DQMB#1	B3
B3	DQB17	DQMB#2	G3
F3	DQB18	DQMB#3	E1
F4	DQB19	DQMB#4	U1
H3	DQB20	DQMB#5	V3
H4	DQB21	DQMB#6	AB1
J3	DQB22	DQMB#7	AC3
J4	DQB23		
C1	DQB24	QSB0	C5
C2	DQB25	QSB1	A3
D1	DQB26	QSB2	G4
D2	DQB27	QSB3	E2
F1	DQB28	QSB4	U2
F2	DQB29	QSB5	V4
G1	DQB30	QSB6	AB2
G2	DQB31	QSB7	AC4
R1	DQB32		
R2	DQB33		
T1	DQB34	RASB#	P4
T2	DQB35		
V1	DQB36	CASB#	R3
V2	DQB37		
W1	DQB38	WEB#	R4
W2	DQB39		
T3	DQB40	CSB0#	P2
T4	DQB41		
U3	DQB42	CSB1#	P3
U4	DQB43		
W3	DQB44	CKEB	P1
W4	DQB45		
Y3	DQB46		
Y4	DQB47		
Y1	DQB48	CLKB0	K2
Y2	DQB49	CLKB0#	K1
AA1	DQB50		
AA2	DQB51		
AC1	DQB52	CLKB1	L2
AC2	DQB53	CLKB1#	L1
AD1	DQB54		
AD2	DQB55	CLKBFB	M2
AA3	DQB56	NC6	M1
AA4	DQB57		
AB3	DQB58	MEMVMODE	B7
AB4	DQB59	MEMVMODE1	B6
AD3	DQB60		
AD4	DQB61	MEMTEST	C8
AE3	DQB62		
AE4	DQB63		

LG Electronics Inc PC Division			
TITLE	GRYPHON P4_SOVP ATI VIDEO CONTROLLER (2/4)		
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	20 of 60



<b>LG Electronics Inc</b> PC Division			
TITLE GRYPHON P4_SOVP ATI VIDEO CONTROLLER (3/4)			
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	21 of 60

	M6	M7
ASM.	L535	L534
NO-ASM.	L534	L535



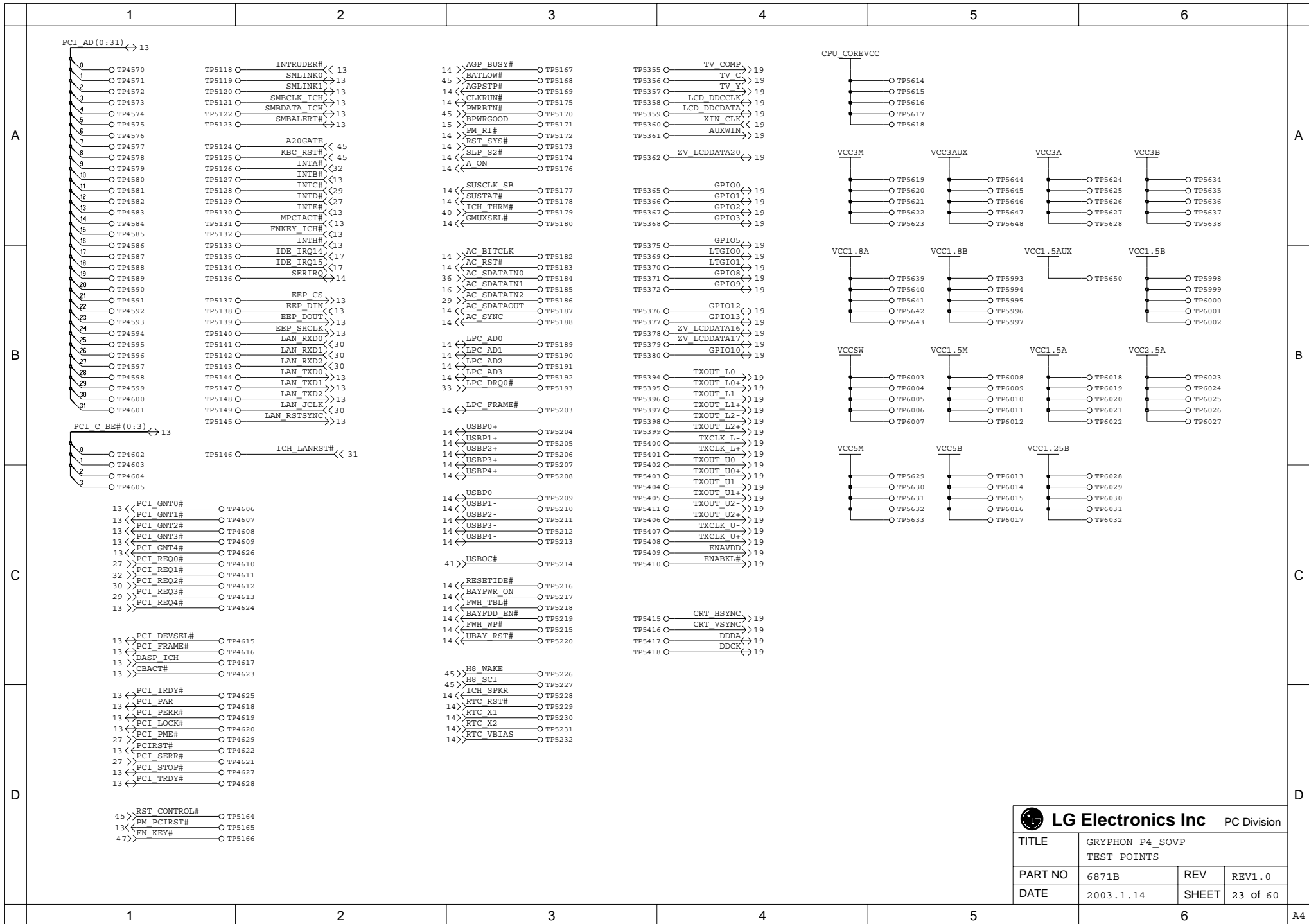
U13

M7P\_M9CSP

GROUND

**LG Electronics Inc** PC Division

TITLE	GRYPHON P4_SOVP ATI VIDEO CONTROLLER (4/4)		
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	22 of 60



**LG Electronics Inc** PC Division

TITLE	GRYPHON P4_SOVP TEST POINTS		
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	23 of 60

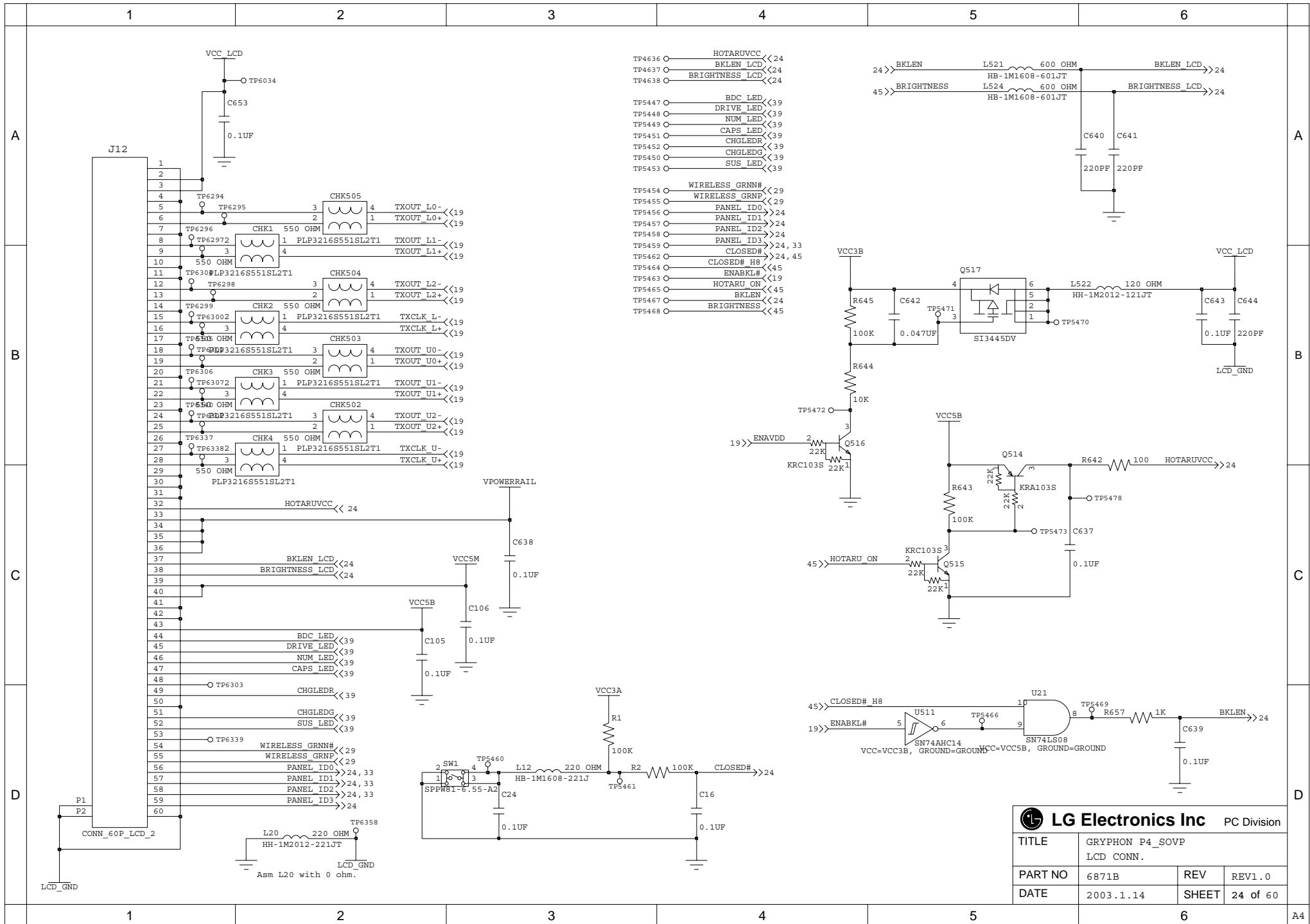
A

B

C

D

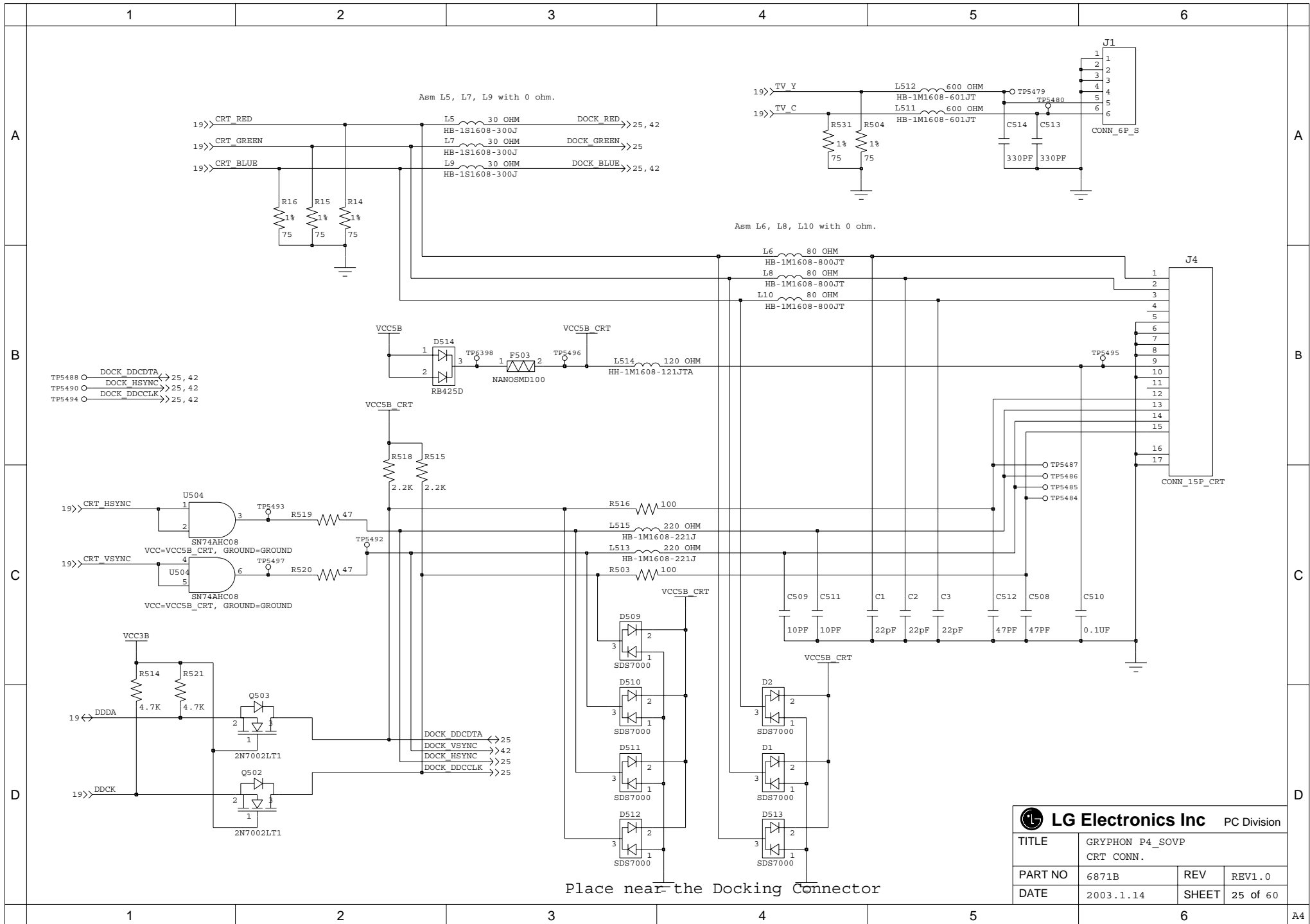
A4



- TP4636 ○ HOTARUVCC <<24
- TP4637 ○ BKLEN\_LCD <<24
- TP4638 ○ BRIGHTNESS\_LCD <<24
- TP5447 ○ BDC\_LED <<39
- TP5448 ○ DRIVE\_LED <<39
- TP5449 ○ NUM\_LED <<39
- TP5451 ○ CAPS\_LED <<39
- TP5452 ○ CHGLEDR <<39
- TP5450 ○ CHGLEDG <<39
- TP5453 ○ SUS\_LED <<39
- TP5454 ○ WIRELESS GRNN# <<29
- TP5455 ○ WIRELESS GRNP <<29
- TP5456 ○ PANEL ID0 >>24
- TP5457 ○ PANEL ID1 >>24
- TP5458 ○ PANEL ID2 >>24
- TP5459 ○ PANEL ID3 >>24, 33
- TP5462 ○ CLOSED# >>24, 45
- TP5464 ○ CLOSED# H8 >>45
- TP5463 ○ ENABKL# <<19
- TP5465 ○ HOTARU\_ON <<45
- TP5467 ○ BKLEN <<24
- TP5468 ○ BRIGHTNESS <<45

<b>LG Electronics Inc</b> PC Division			
TITLE GRYPHON P4_SOVP LCD CONN.			
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	24 of 60




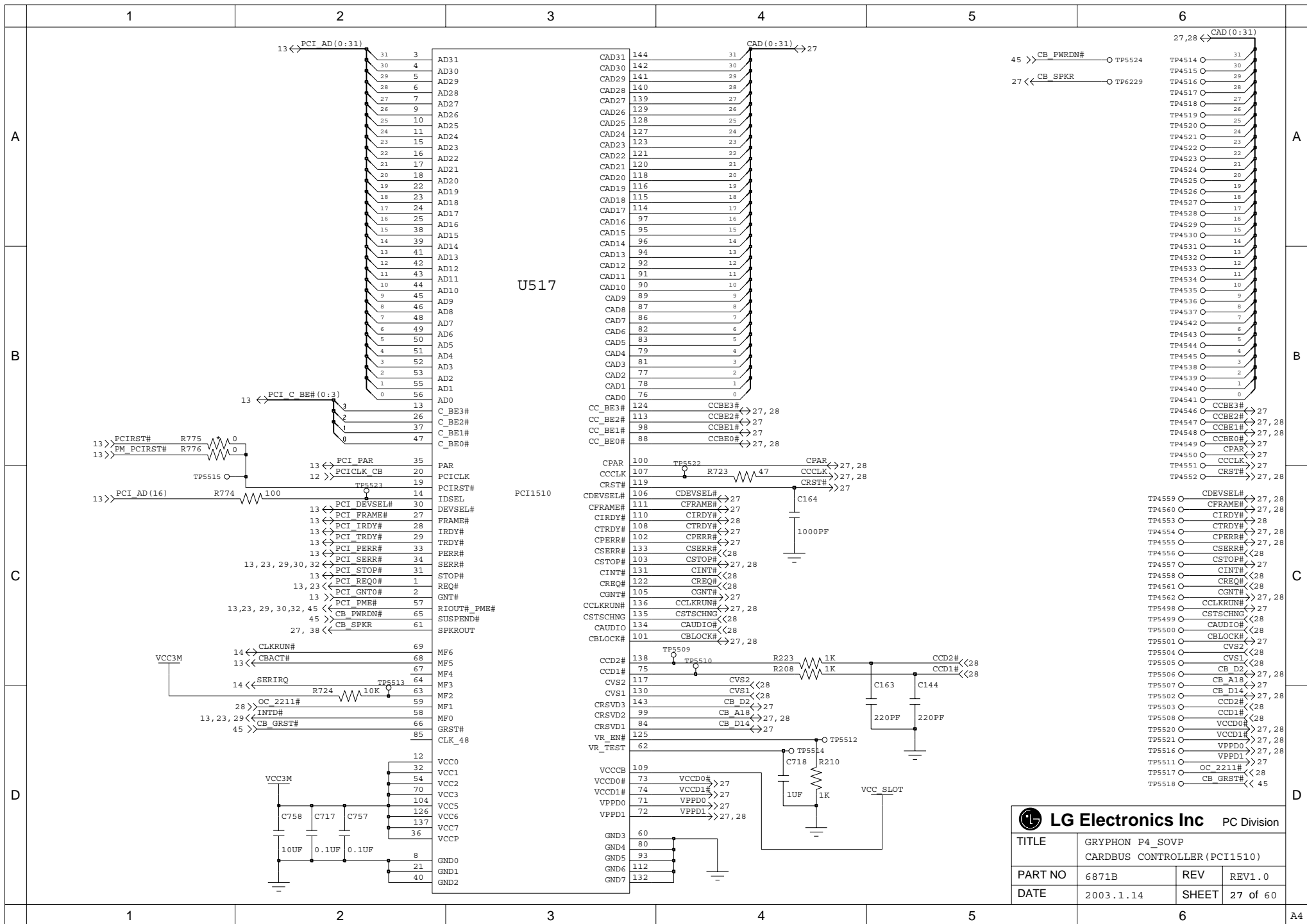


Place near the Docking Connector

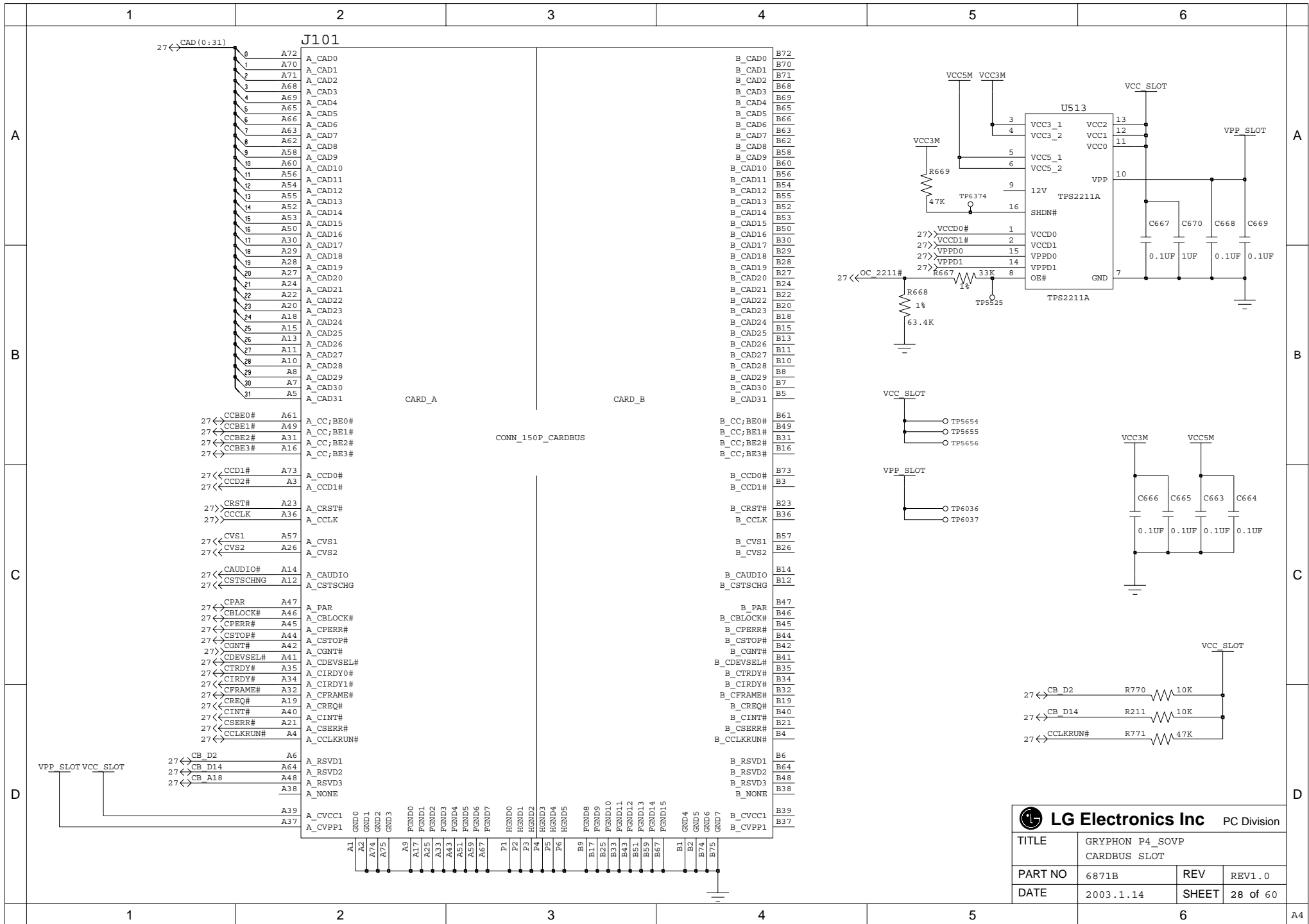
<b>LG Electronics Inc</b> PC Division			
TITLE		GRYPHON P4_SOVP CRT CONN.	
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	25 of 60

	1	2	3	4	5	6	
A							A
B							B
C							C
D							D
	1	2	3	4	5	6	A4

 <b>LG Electronics Inc</b> PC Division			
TITLE	GRYPHON P4_SOVP BLANK		
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	26 of 60

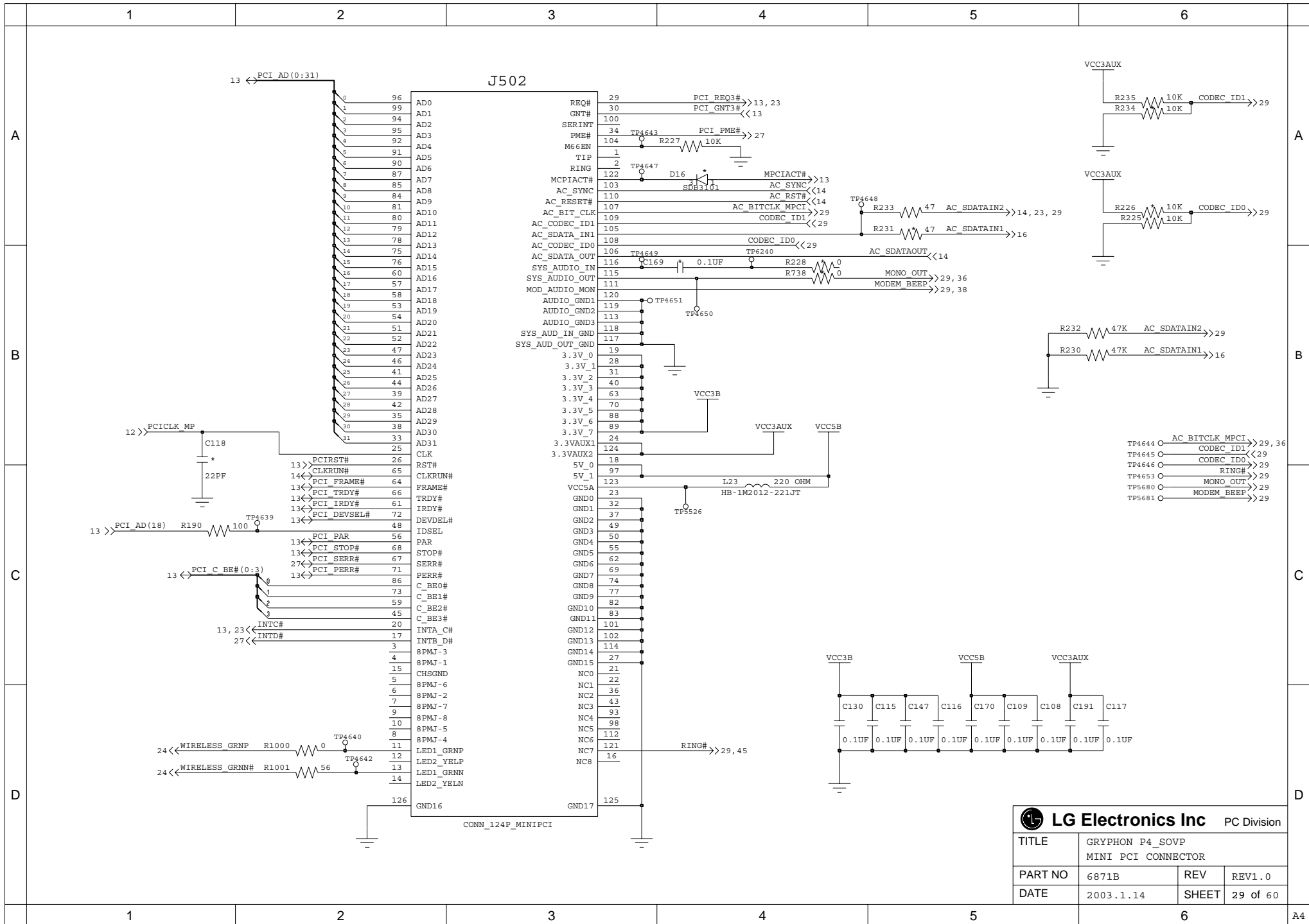


<b>LG Electronics Inc</b> PC Division			
TITLE	GRYPHON P4_SOVP CARDBUS CONTROLLER (PCI1510)		
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	27 of 60



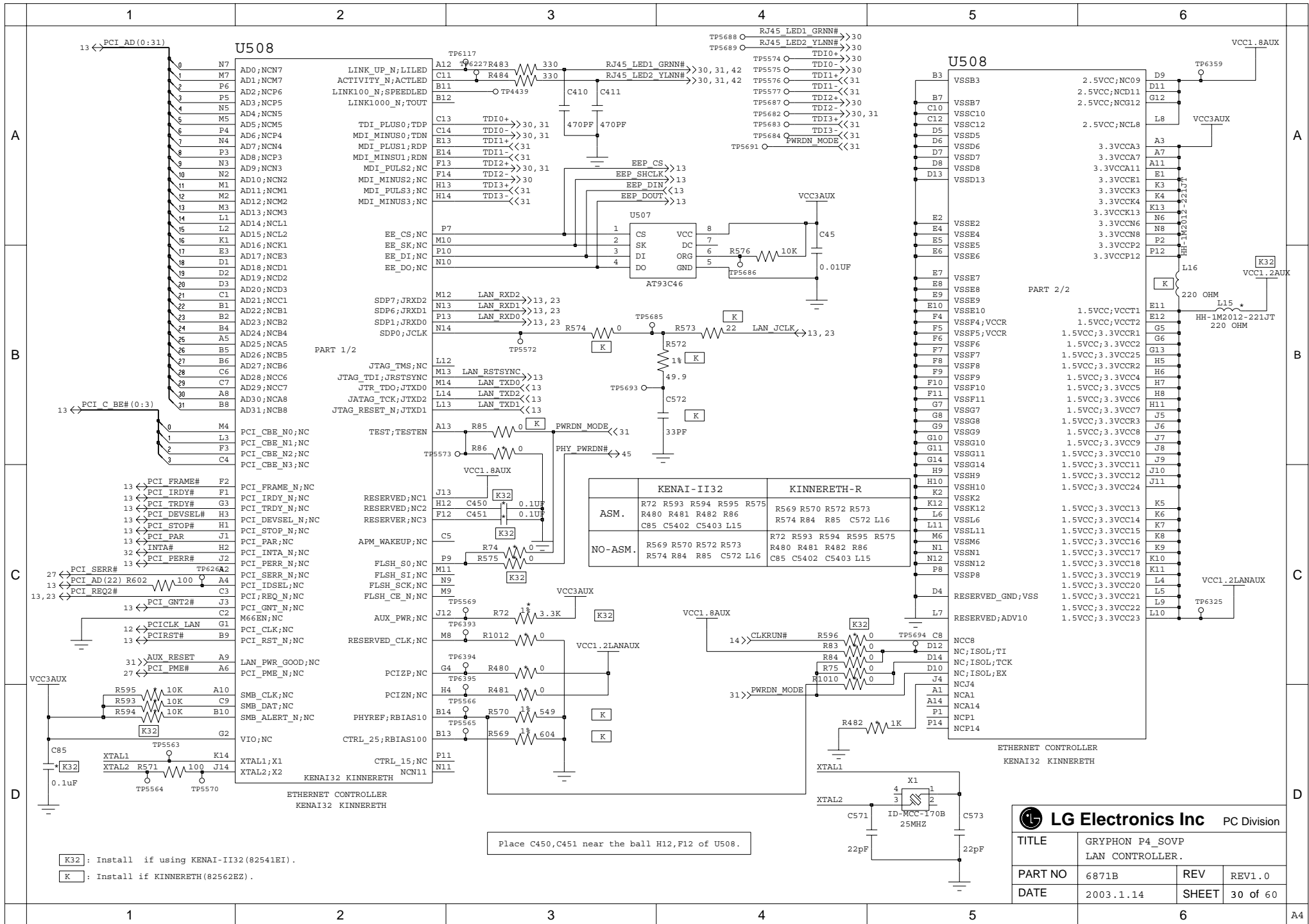
**LG Electronics Inc** PC Division

TITLE	GRYPHON P4_SOVP CARDBUS SLOT		
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	28 of 60



**LG Electronics Inc** PC Division

TITLE	GRYPHON P4_SOVP MINI PCI CONNECTOR		
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	29 of 60

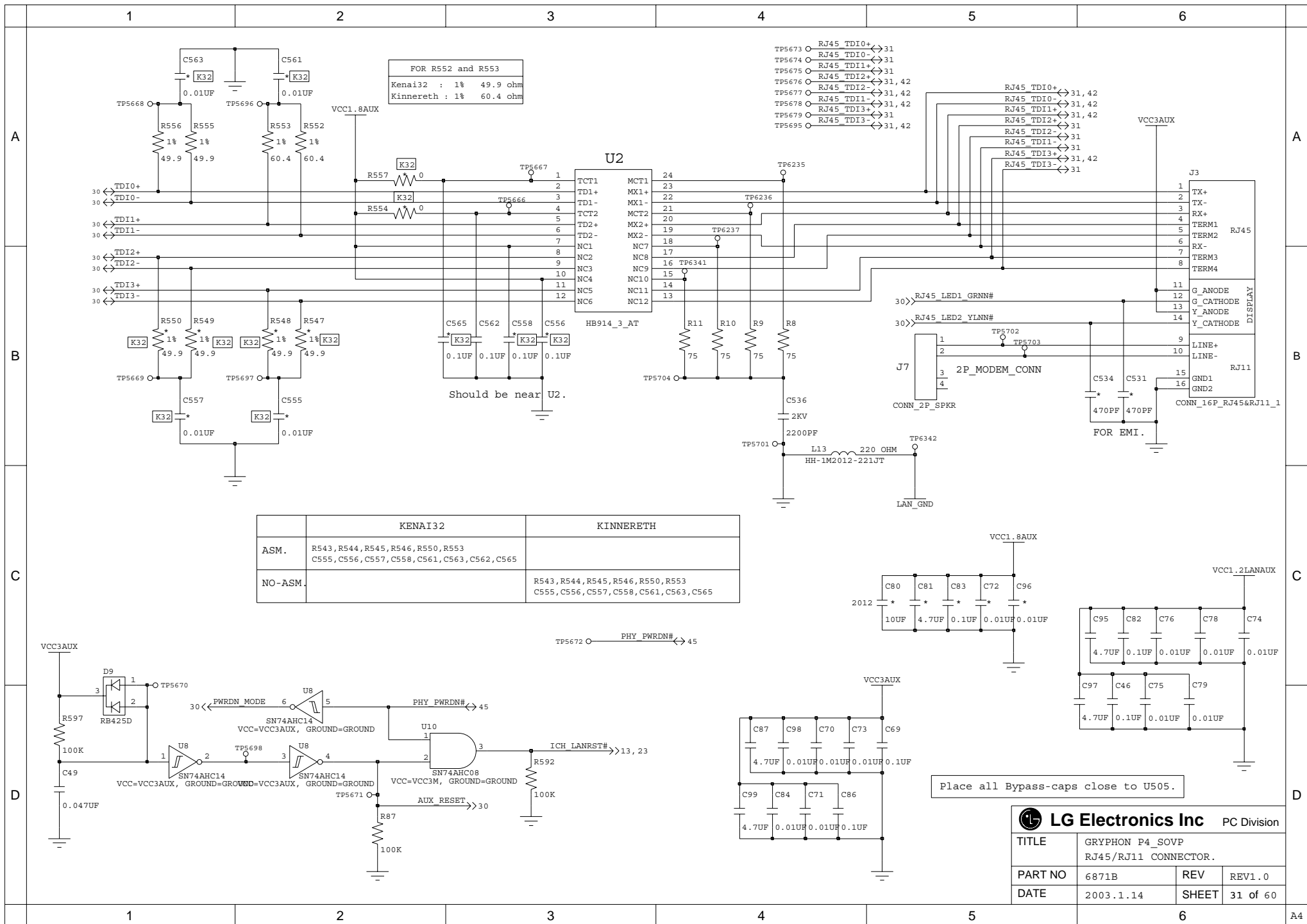


[K32]: Install if using KENAI-III32(82541E1).  
[K]: Install if KINNERETH(82562EZ).

Place C450,C451 near the ball H12,F12 of U508.

**LG Electronics Inc** PC Division

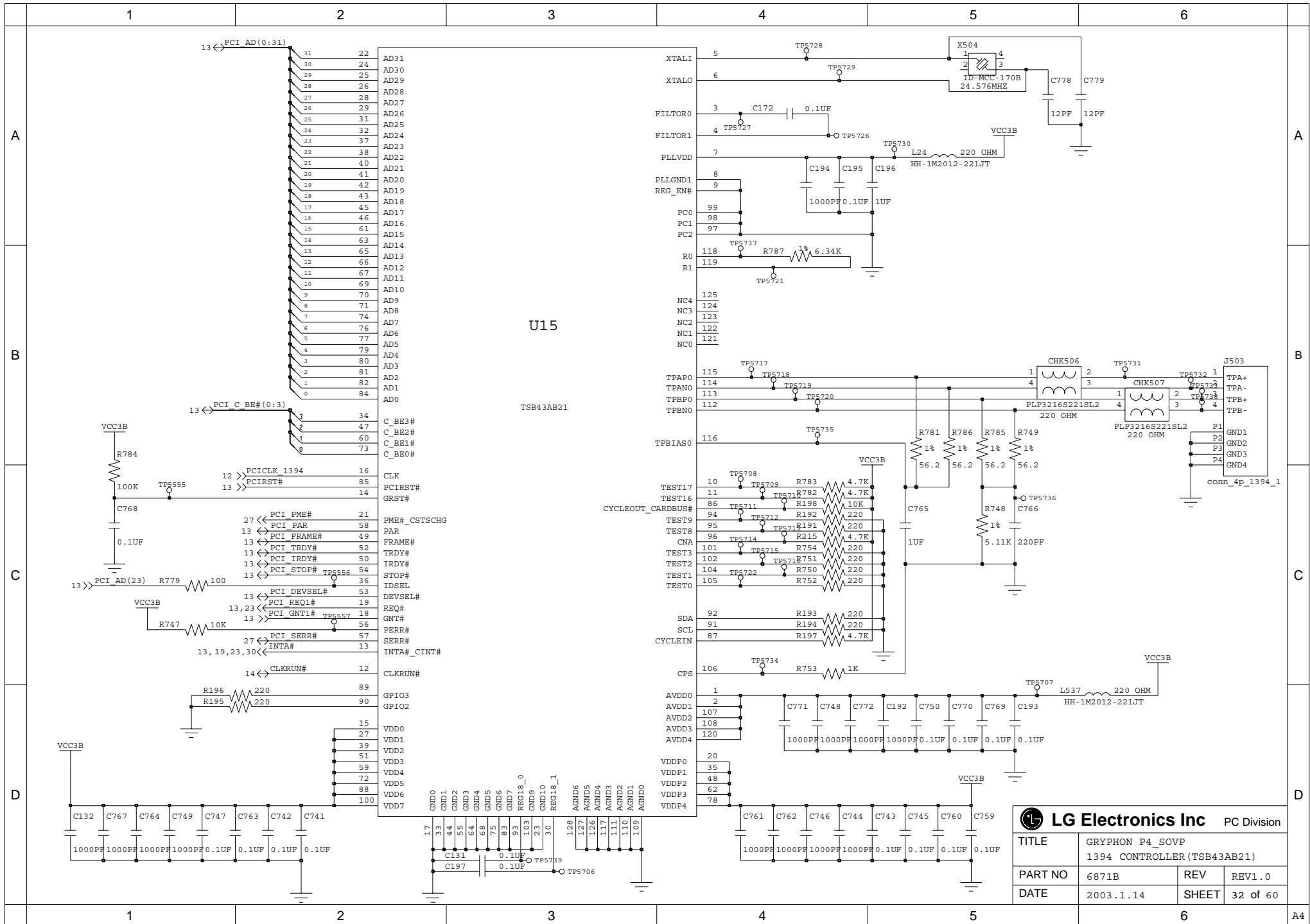
TITLE	GRYPHON P4_SOVP LAN CONTROLLER.		
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	30 of 60



	KENAI32	KINNERETH
ASM.	R543, R544, R545, R546, R550, R553 C555, C556, C557, C558, C561, C562, C565	
NO-ASM.		R543, R544, R545, R546, R550, R553 C555, C556, C557, C558, C561, C562, C565

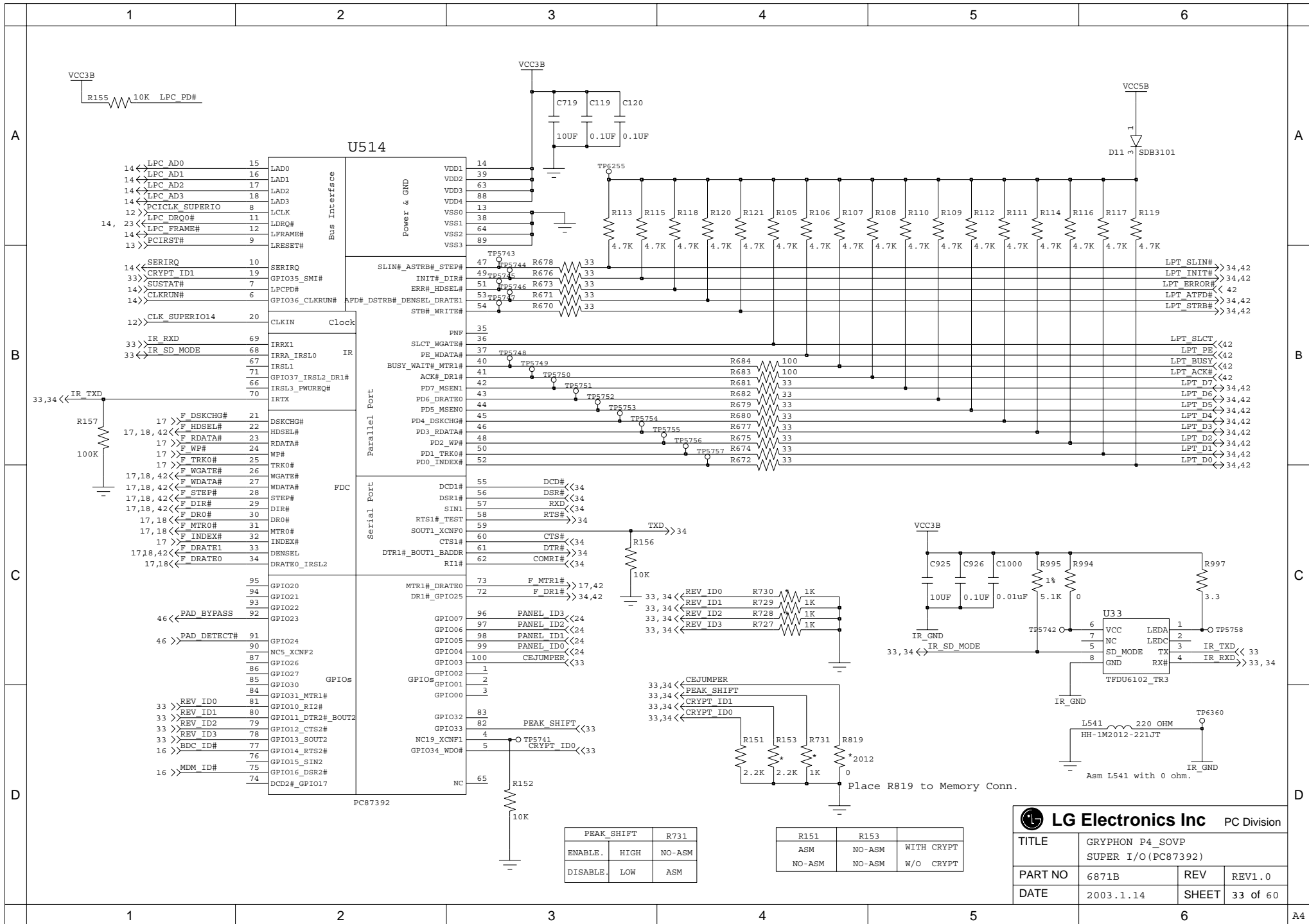
Place all Bypass-caps close to U505.

<b>LG Electronics Inc</b> PC Division			
TITLE		GRYPHON P4_SOVP RJ45/RJ11 CONNECTOR.	
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	31 of 60



<b>LG Electronics Inc</b> PC Division			
TITLE GRYPHON P4_SOVP 1394 CONTROLLER (TSB43AB21)			
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	32 of 60





14	<<	LPC_ADO	15	LAD0
14	<<	LPC_AD1	16	LAD1
14	<<	LPC_AD2	17	LAD2
14	<<	LPC_AD3	18	LAD3
14	<<	PCICLK_SUPERIO	8	LAD3
14	<<	LPC_DRQ0#	11	LCLK
23	<<	LPC_FRAME#	12	LDRQ#
14	<<	PCIRST#	9	LFRAME#
13	<<	PCIRST#	9	LRESET#
14	<<	SERIRQ	10	SERIRQ
33	<<	CRYPT_ID1	19	GPI035_SMI#
14	<<	SUSTAT#	7	LPCPD#
14	<<	CLKRUN#	6	GPI036_CLKRUN#
12	>>	CLK_SUPERIO4	20	CLKIN
33	<<	IR_RXD	69	IRRX1
33	<<	IR_SD_MODE	68	IRRA_IRSL0
71	<<	IRSL1	67	IRSL1
71	<<	GPI037_IRSL2_DR1#	71	GPI037_IRSL2_DR1#
66	<<	IRSL3_PWUREQ#	70	IRSL3_PWUREQ#
70	<<	IRTX	70	IRTX
17	>>	F_DSKCHG#	21	DSKCHG#
17, 18, 42	>>	F_HDSEL#	22	HDSSEL#
17	>>	F_RDATA#	23	RDATA#
17	>>	F_WP#	24	WP#
17	>>	F_TRK0#	25	TRK0#
17	>>	F_WGATE#	26	WGATE#
17, 18, 42	>>	F_WDATA#	27	WDATA#
17, 18, 42	>>	F_STEP#	28	STEP#
17, 18, 42	>>	F_DIR#	29	DIR#
17, 18, 42	>>	F_DRO#	30	DIR#
17, 18	>>	F_MTR0#	31	DR0#
17, 18	>>	F_INDEX#	32	MTR0#
17	>>	F_INDEX#	32	INDEX#
17, 18, 42	>>	F_DRATE1	33	DENSEL
17, 18	>>	F_DRATE0	34	DRATE0_IRSL2
95	>>	GPI020	95	GPI020
94	>>	GPI021	94	GPI021
93	>>	GPI022	93	GPI022
46	<<	PAD_BYPASS	92	GPI023
46	>>	PAD_DETECT#	91	GPI024
87	>>	NC5_XCNF2	87	NC5_XCNF2
86	>>	GPI026	86	GPI026
85	>>	GPI027	85	GPI027
84	>>	GPI030	84	GPI030
81	>>	GPI031_MTR1#	81	GPI031_MTR1#
80	>>	REV_ID0	80	GPI010_RI2#
79	>>	REV_ID1	79	GPI011_DTR2#_BOUT2
78	>>	REV_ID2	78	GPI033
77	>>	REV_ID3	77	GPI012_CTS2#
76	>>	BDC_ID#	76	GPI013_SOUT2
75	>>	MDM_ID#	75	GPI014_RTS2#
74	>>	MDM_ID#	74	GPI015_SIN2
74	>>	MDM_ID#	74	GPI016_DSR2#
74	>>	MDM_ID#	74	GPI017

14	VDD1
39	VDD2
63	VDD3
88	VDD4
13	VSS0
38	VSS1
64	VSS2
89	VSS3
47	TP5743
49	TP5744
51	TP5746
53	TP5747
54	TP5748
35	PNF
36	SLCT_WGATE#
37	IRRA_IRSL0
40	IRRA_IRSL1
41	IRRA_IRSL2
42	IRRA_IRSL3
43	IRRA_IRSL4
44	IRRA_IRSL5
45	IRRA_IRSL6
46	IRRA_IRSL7
48	IRRA_IRSL8
50	IRRA_IRSL9
52	IRRA_IRSL10
55	DCD1#
56	DCD2#
57	DCD3#
58	DCD4#
59	DCD5#
60	DCD6#
61	DCD7#
62	DCD8#
73	F_MTR1#
72	F_DR1#
96	PANEL_ID3
97	PANEL_ID2
98	PANEL_ID1
99	PANEL_ID0
100	CEJUMPER
1	GPI002
2	GPI001
3	GPI000
83	PEAK_SHIFT
82	CRYPT_ID1
81	CRYPT_ID0
4	NC19_XCNF1
5	GPI034_WDO#
65	NC

PEAK_SHIFT		R731
ENABLE.	HIGH	NO-ASM
DISABLE.	LOW	ASM

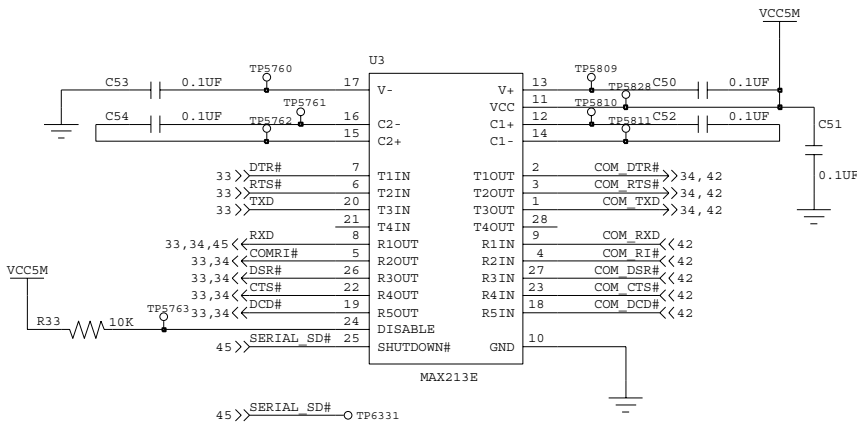
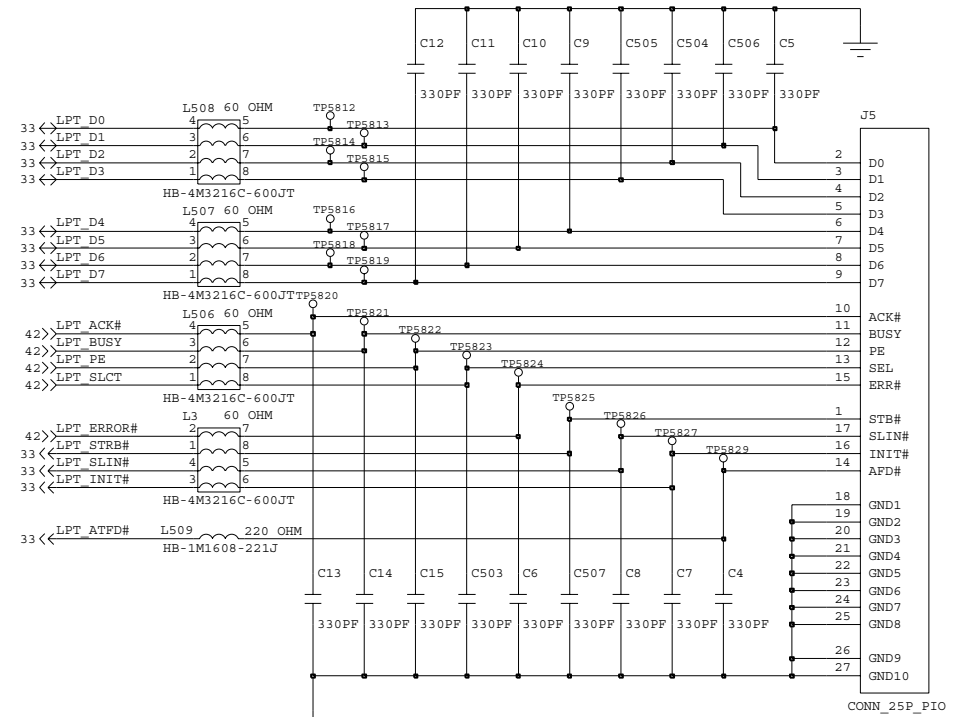
R151	R153	WITH CRYPT
ASM	NO-ASM	W/O CRYPT
NO-ASM	NO-ASM	

<b>LG Electronics Inc</b> PC Division			
TITLE	GRYPHON P4_SQVP SUPER I/O (PC87392)		
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	33 of 60

Place R819 to Memory Conn.

Asm L541 with 0 ohm.

TP5790	IR TXD	>>33	TP5808	COM DTR#	>>34
TP5791	IR RXD	>>33	TP5801	COM RTS#	>>34
TP5792	IR SD MODE	>>33	TP5802	COM TXD	>>34
TP5793	PEAK SHFT	<<33	TP5803	COM RXD	<<42
TP5794	CRYPT ID0	<<33	TP5804	COM RI#	<<42
TP5795	CRYPT ID1	<<33	TP5805	COM DSR#	<<42
TP5796	CEJUMPER	>>33	TP5806	COM CTS#	<<42
TP5797	REV ID0	>>33	TP5807	COM DCD#	<<42
TP5798	REV ID1	>>33			
TP5799	REV ID2	>>33			
TP5800	REV ID3	>>33			
TP5764	DCD#	<<34			
TP5765	DSRH#	<<34			
TP5766	RXD	<<34			
TP5767	RTSH#	<<34			
TP5768	F DRH#	>>33			
TP5769	CTSH#	<<34			
TP5770	DTRH#	>>33			
TP5771	COMRI#	<<34			
TP5772	LPT INITH#	>>33			
TP5773	LPT ERROR#	<<42			
TP5774	LPT ATFD#	>>33			
TP5775	LPT STRB#	>>33			
TP5776	TXD	>>33			
TP5789	LPT SLCT	<<42			
TP5788	LPT PE	<<42			
TP5787	LPT BUSY	<<42			
TP5786	LPT ACK#	<<42			
TP5785	LPT D7	<<33			
TP5784	LPT D6	<<33			
TP5783	LPT D5	<<33			
TP5782	LPT D4	<<33			
TP5781	LPT D3	<<33			
TP5780	LPT D2	<<33			
TP5779	LPT D1	<<33			
TP5778	LPT D0	<<33			
TP5777	LPT SLIN#	>>33			



<b>LG Electronics Inc</b> PC Division			
TITLE	GRYPHON P4_SOVP RS-232 & PIO CONNECTOR.		
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	34 of 60

A

B

C

D


A

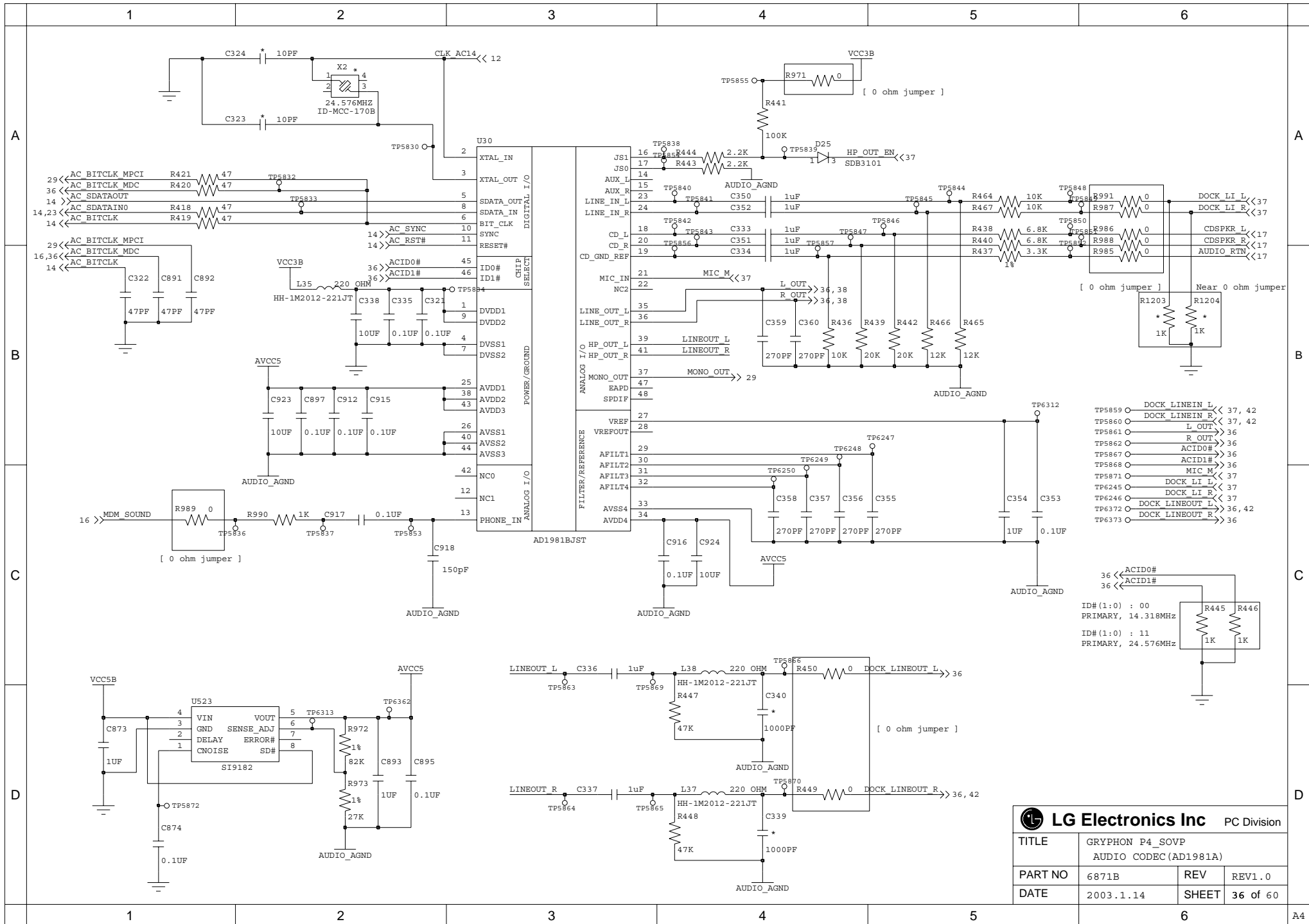
B

C

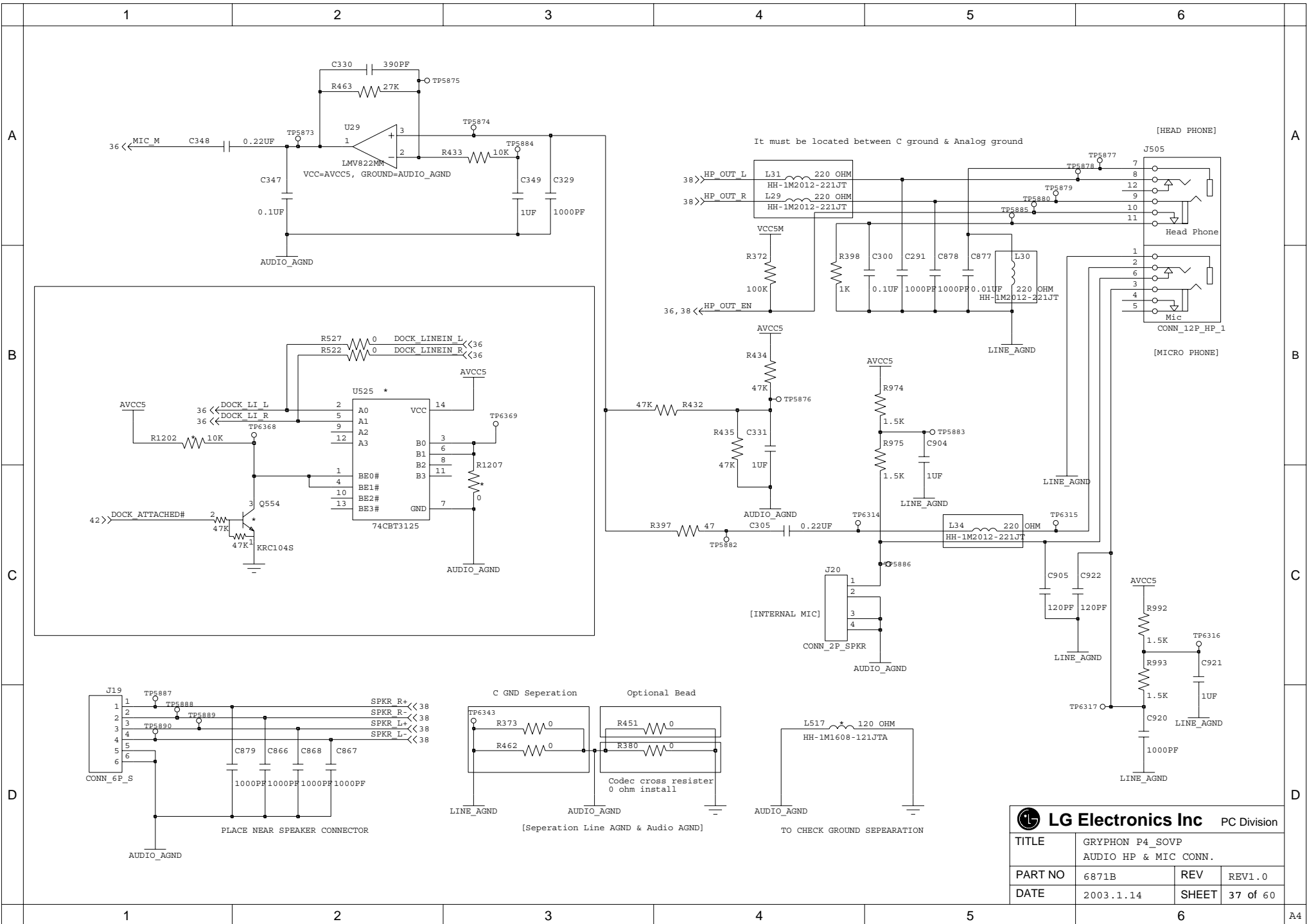
D

	1	2	3	4	5	6	
A							A
B							B
C							C
D							D
	1	2	3	4	5	6	A4

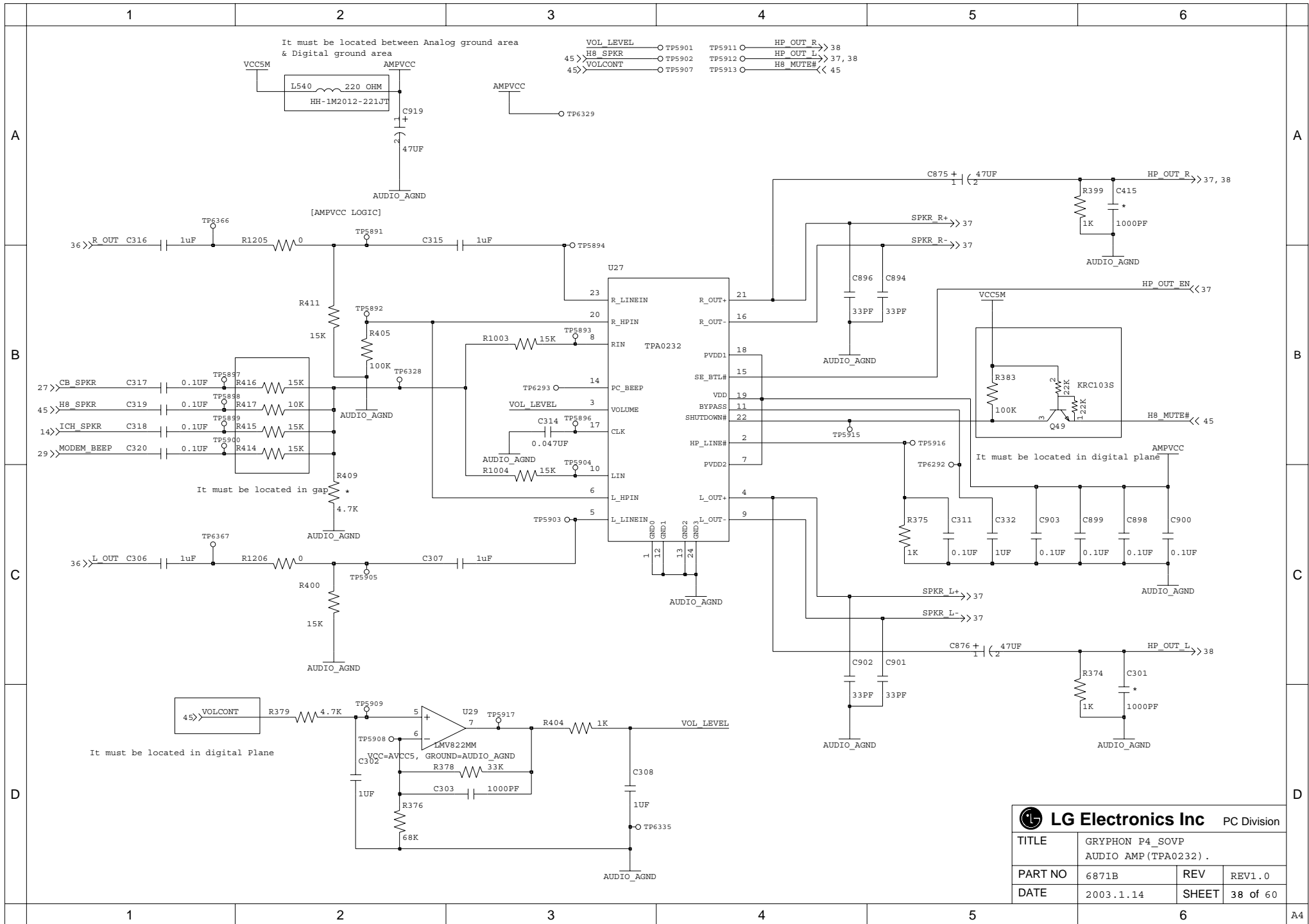
 <b>LG Electronics Inc</b> PC Division			
TITLE	GRYPHON P4_SOVP BLANK		
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	35 of 60



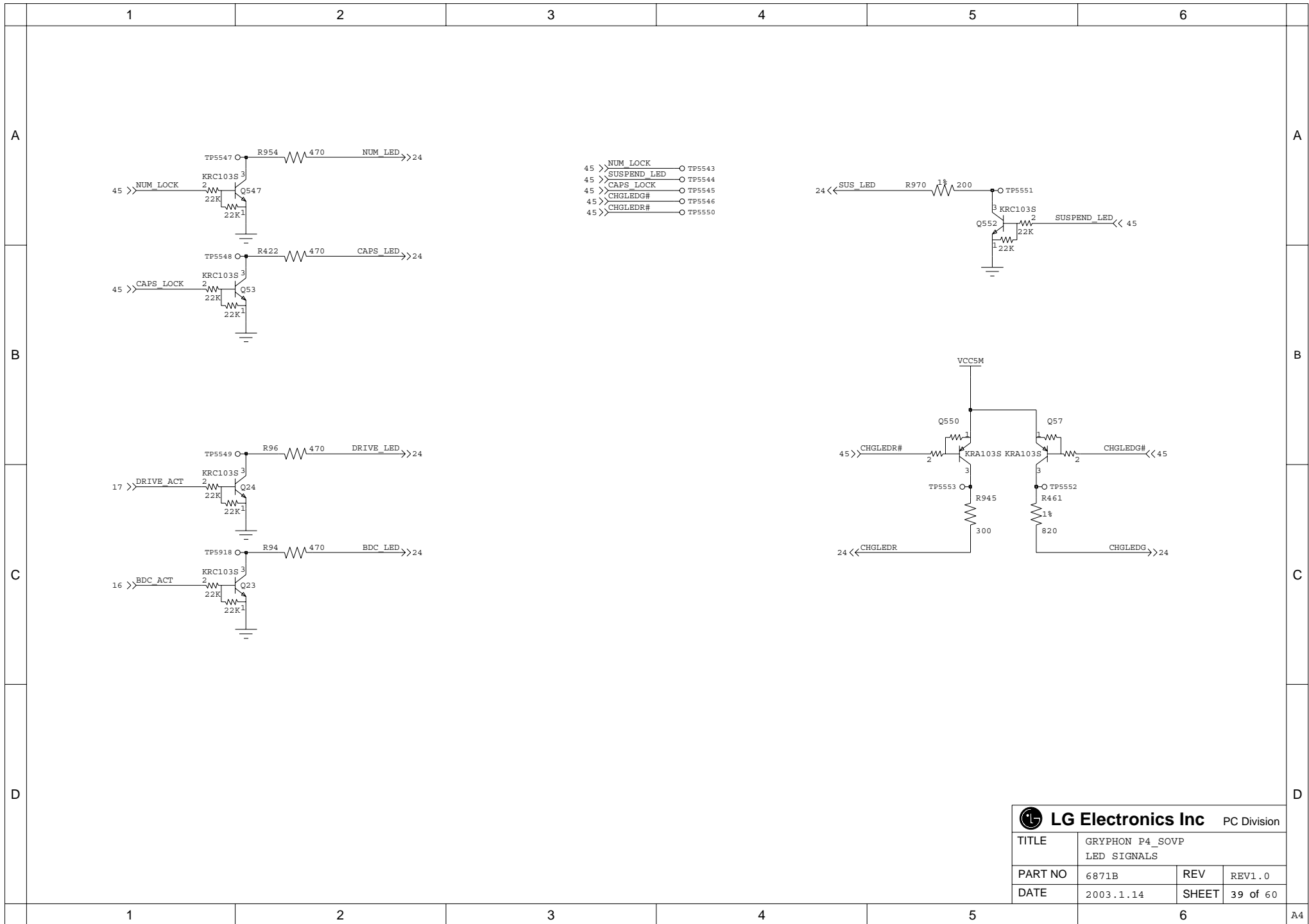
<b>LG Electronics Inc</b> PC Division			
TITLE	GRYPHON P4_S0VP AUDIO CODEC (AD1981A)		
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	36 of 60



<b>LG Electronics Inc</b> PC Division			
TITLE		GRYPHON P4_SOVP AUDIO HP & MIC CONN.	
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	37 of 60



<b>LG Electronics Inc</b> PC Division			
TITLE		GRYPHON P4_SQVP AUDIO AMP (TPA0232) .	
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	38 of 60

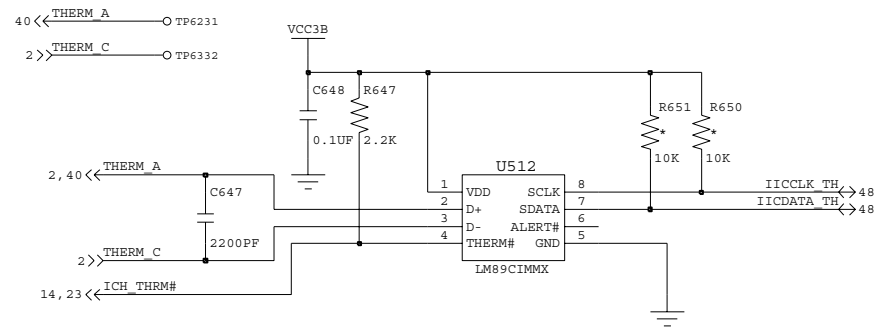


- 45 >> NUM\_LOCK ○ TP5543
- 45 >> SUSPEND\_LED ○ TP5544
- 45 >> CAPS\_LOCK ○ TP5544
- 45 >> CHGLEDR# ○ TP5546
- 45 >> CHGLEDR# ○ TP5550

<b>LG Electronics Inc</b> PC Division			
TITLE	GRYPHON P4_S0VP LED SIGNALS		
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	39 of 60

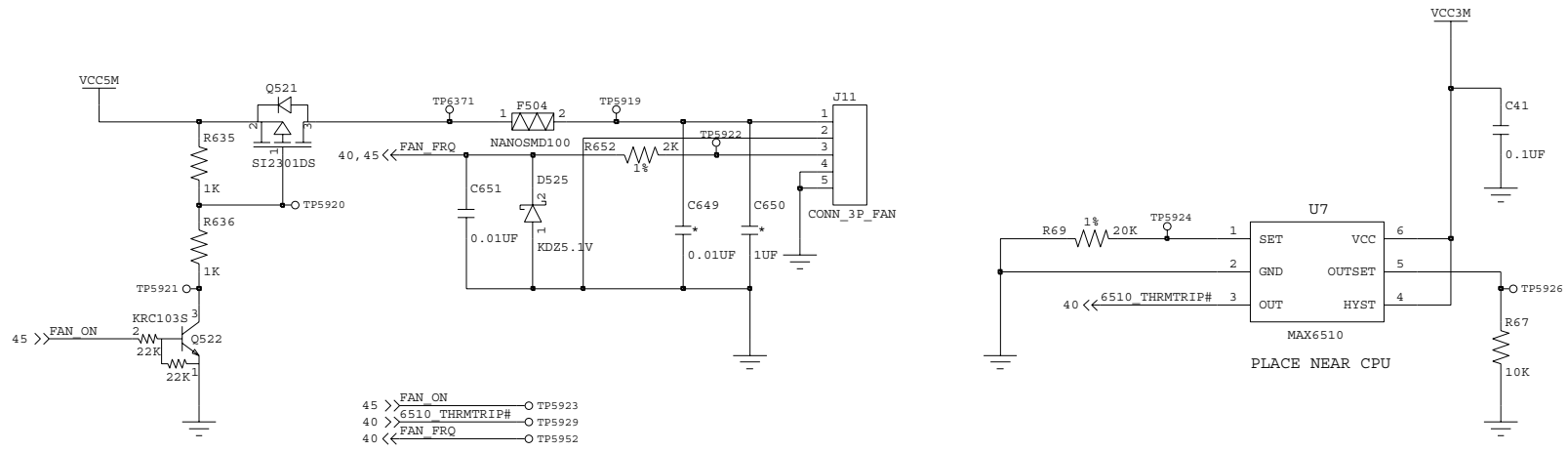
A

A



B

B

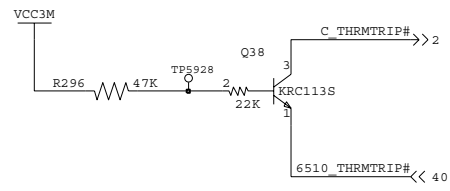


C

C

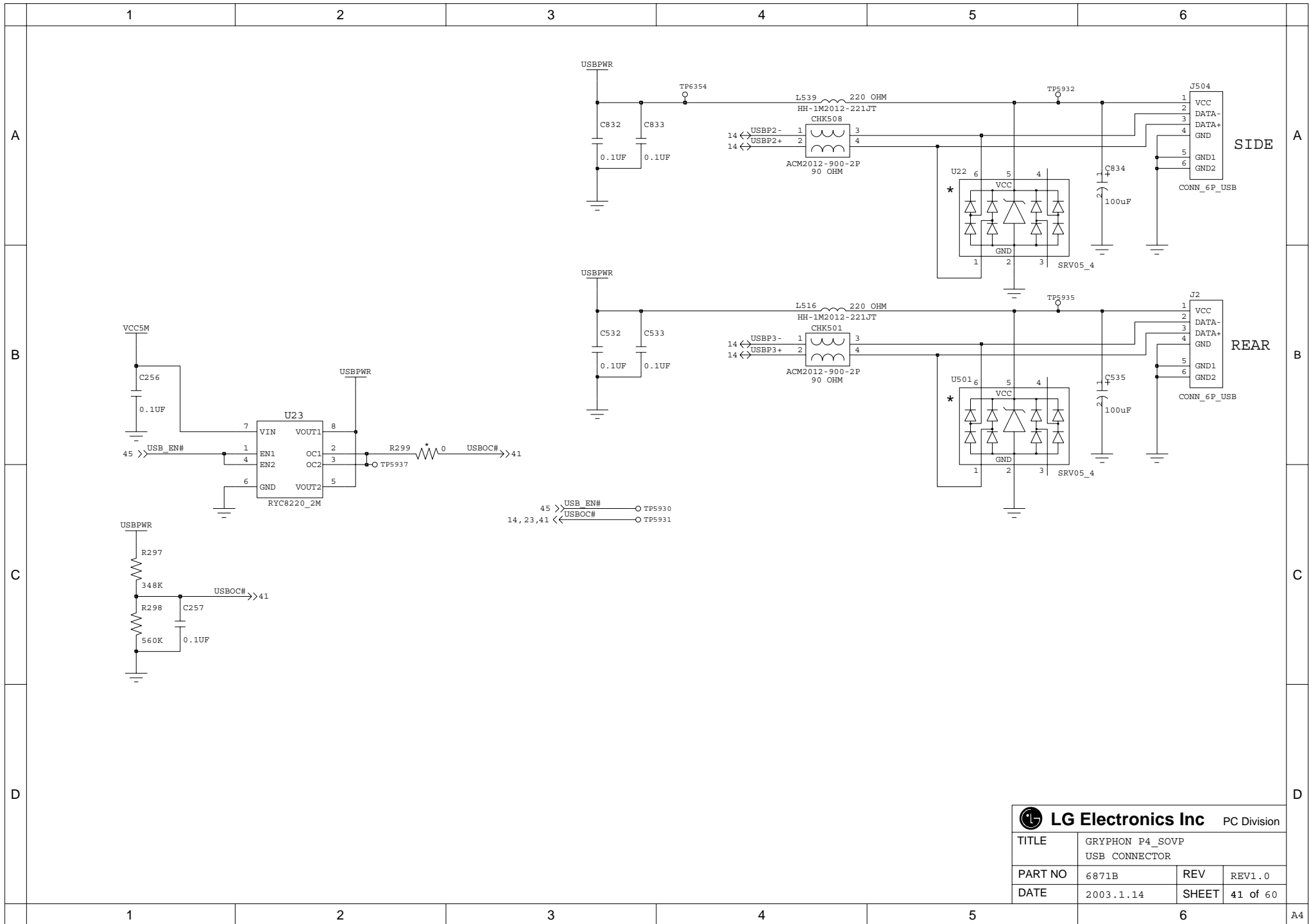
D


D

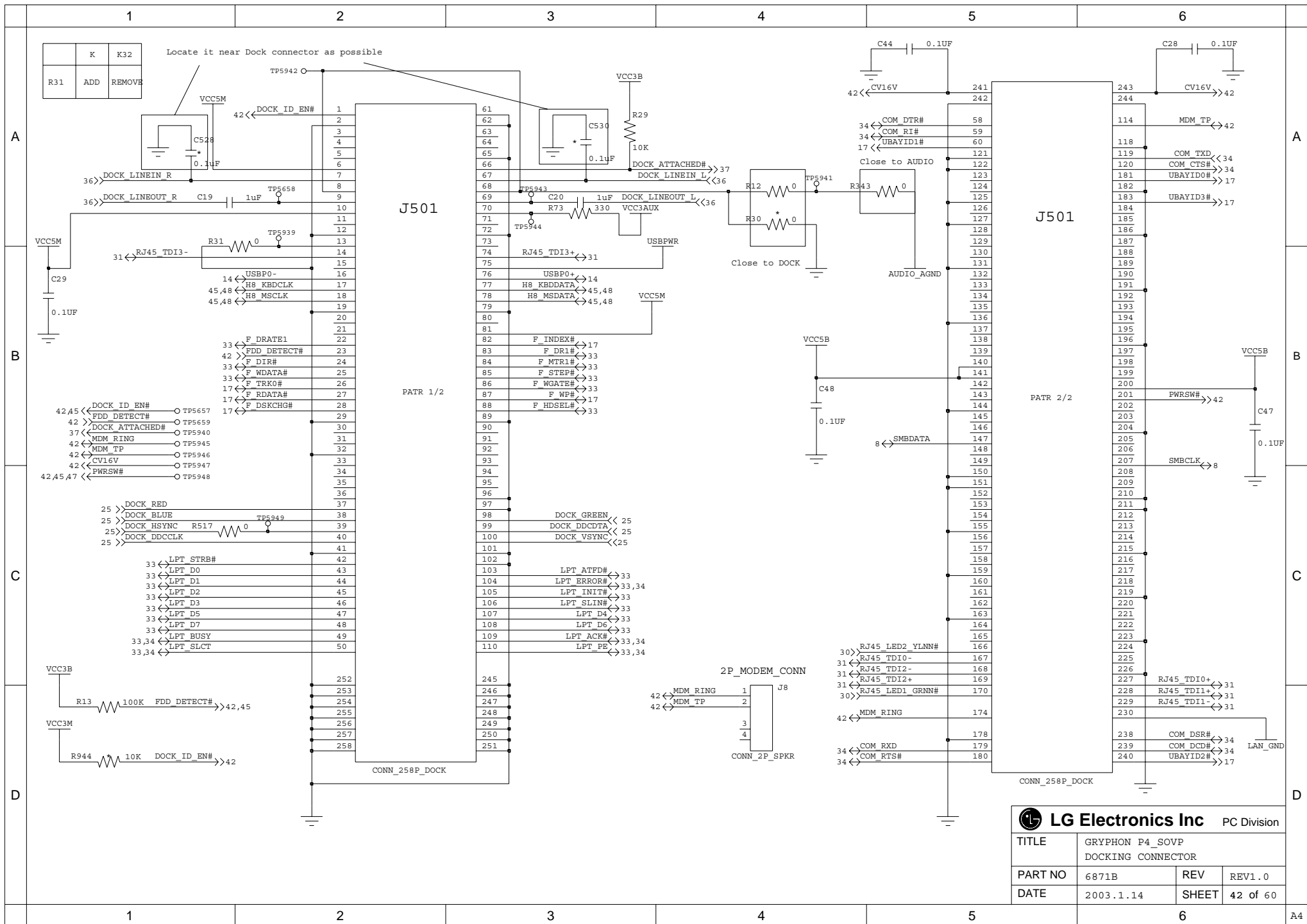


<b>LG Electronics Inc</b> PC Division			
TITLE		GRYPHON P4_SOVP THERMAL SENSOR & FAN CONNECTOR	
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	40 of 60

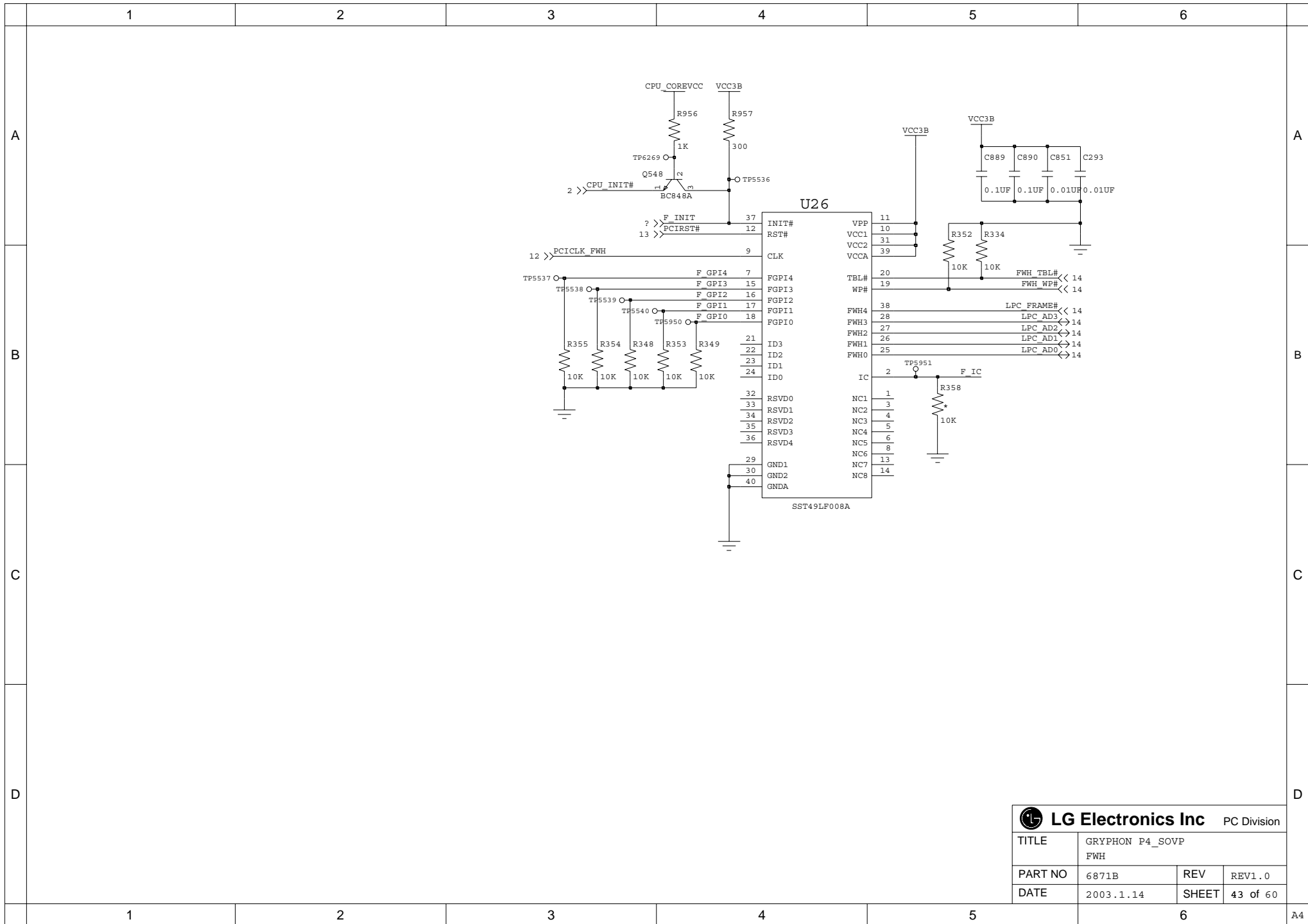




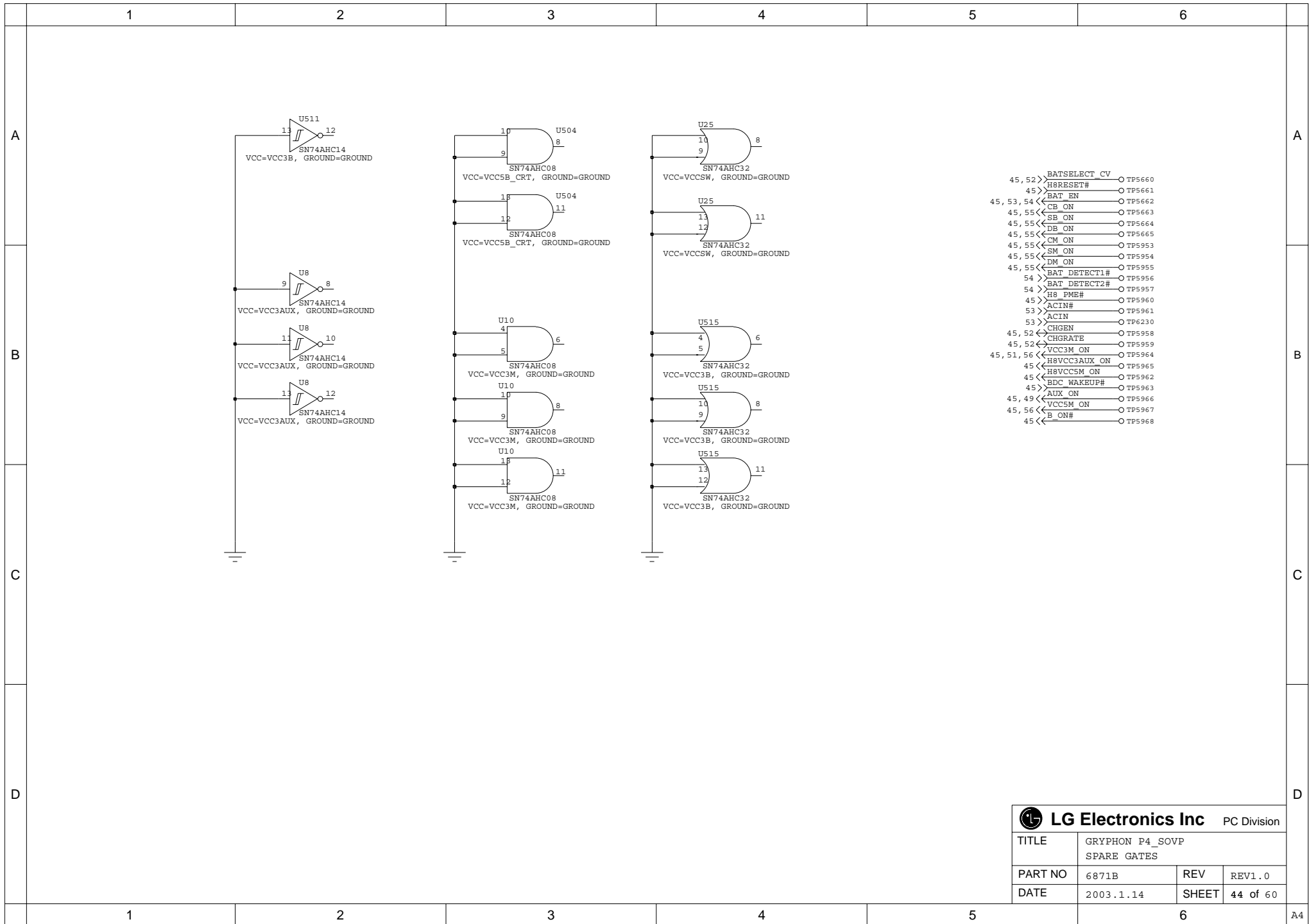
 <b>LG Electronics Inc</b> PC Division			
TITLE	GRYPHON P4_SQVP USB CONNECTOR		
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	41 of 60



<b>LG Electronics Inc</b> PC Division			
TITLE		GRYPHON P4_SOVP DOCKING CONNECTOR	
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	42 of 60

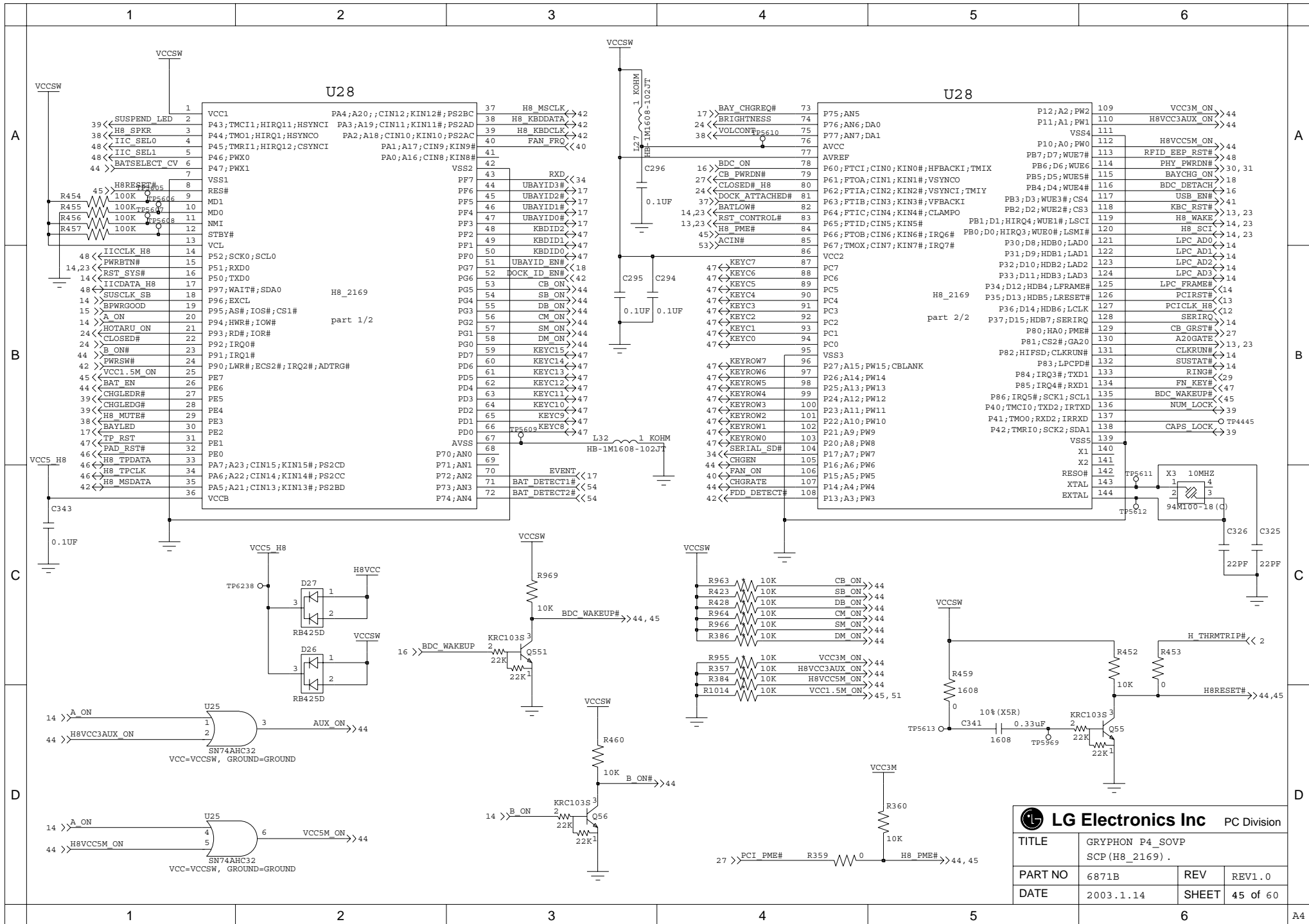


<b>LG Electronics Inc</b> PC Division			
TITLE	GRYPHON P4_SOVP FWH		
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	43 of 60

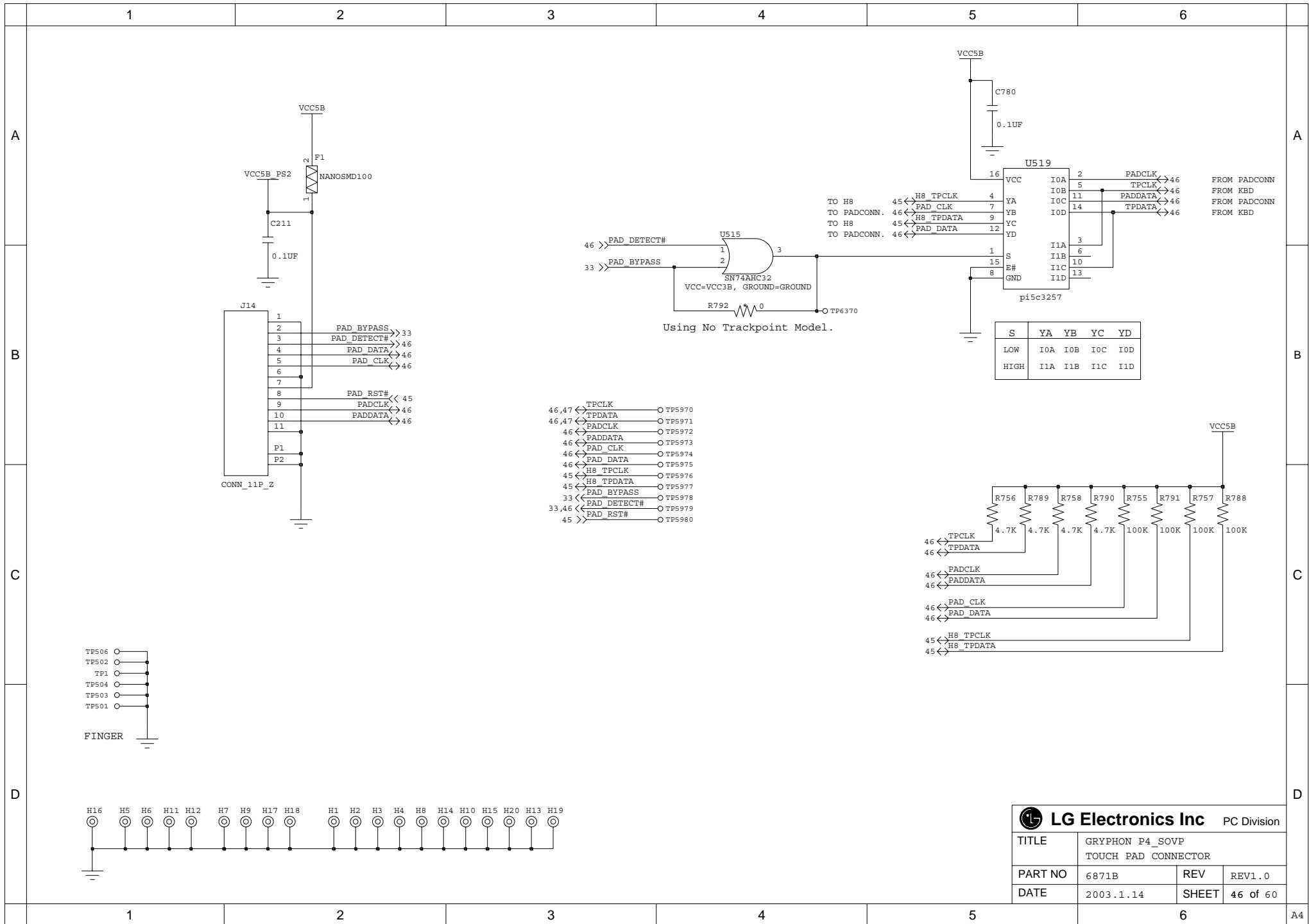


- 45, 52 > BATSELECT CV ○ TP5660
- 45 > H8RESET# ○ TP5661
- 45, 53, 54 < BAT EN ○ TP5662
- 45, 55 < CB ON ○ TP5663
- 45, 55 < SB ON ○ TP5664
- 45, 55 < DB ON ○ TP5665
- 45, 55 < CM ON ○ TP5953
- 45, 55 < SM ON ○ TP5954
- 45, 55 < DM ON ○ TP5955
- 54 > BAT\_DETECT1# ○ TP5956
- 54 > BAT\_DETECT2# ○ TP5957
- 45 > H8 PME# ○ TP5960
- 53 > ACIN# ○ TP5961
- 53 > ACIN ○ TP6230
- 45, 52 < CHGRATE ○ TP5958
- 45, 52 < VCC3M ON ○ TP5959
- 45, 51, 56 < H8VCC3AUX ON ○ TP5964
- 45 < H8VCC5M ON ○ TP5965
- 45 < H8VCC5M ON ○ TP5962
- 45 > BDC\_WAKEUP# ○ TP5963
- 45, 49 < AUX ON ○ TP5966
- 45, 56 < VCC5M ON ○ TP5967
- 45 < B\_ON# ○ TP5968

<b>LG Electronics Inc</b> PC Division			
TITLE	GRYPHON P4_SQVP SPARE GATES		
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	44 of 60



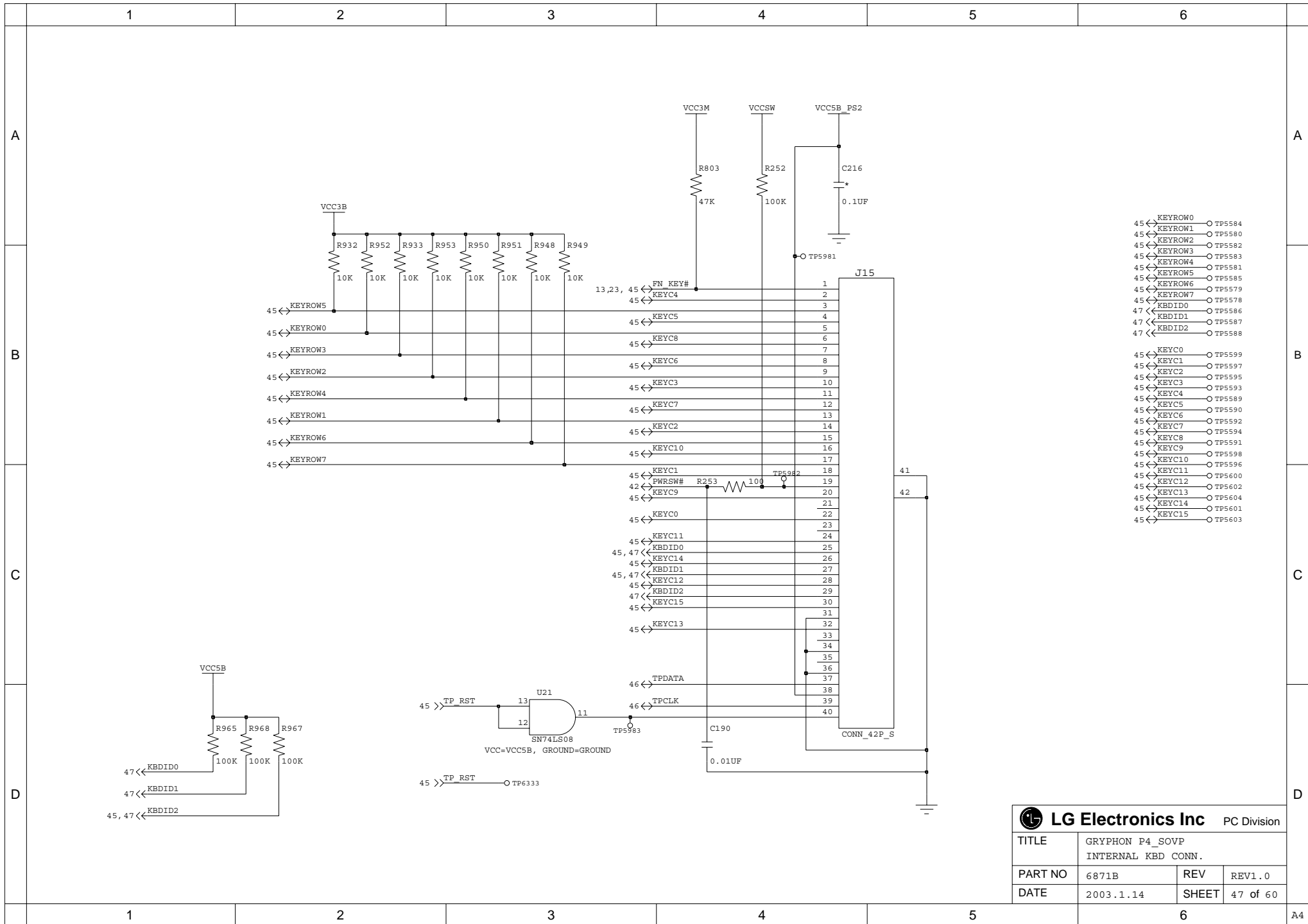
<b>LG Electronics Inc</b> PC Division			
TITLE		GRYPHON P4_S0VP SCP (H8_2169) .	
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	45 of 60



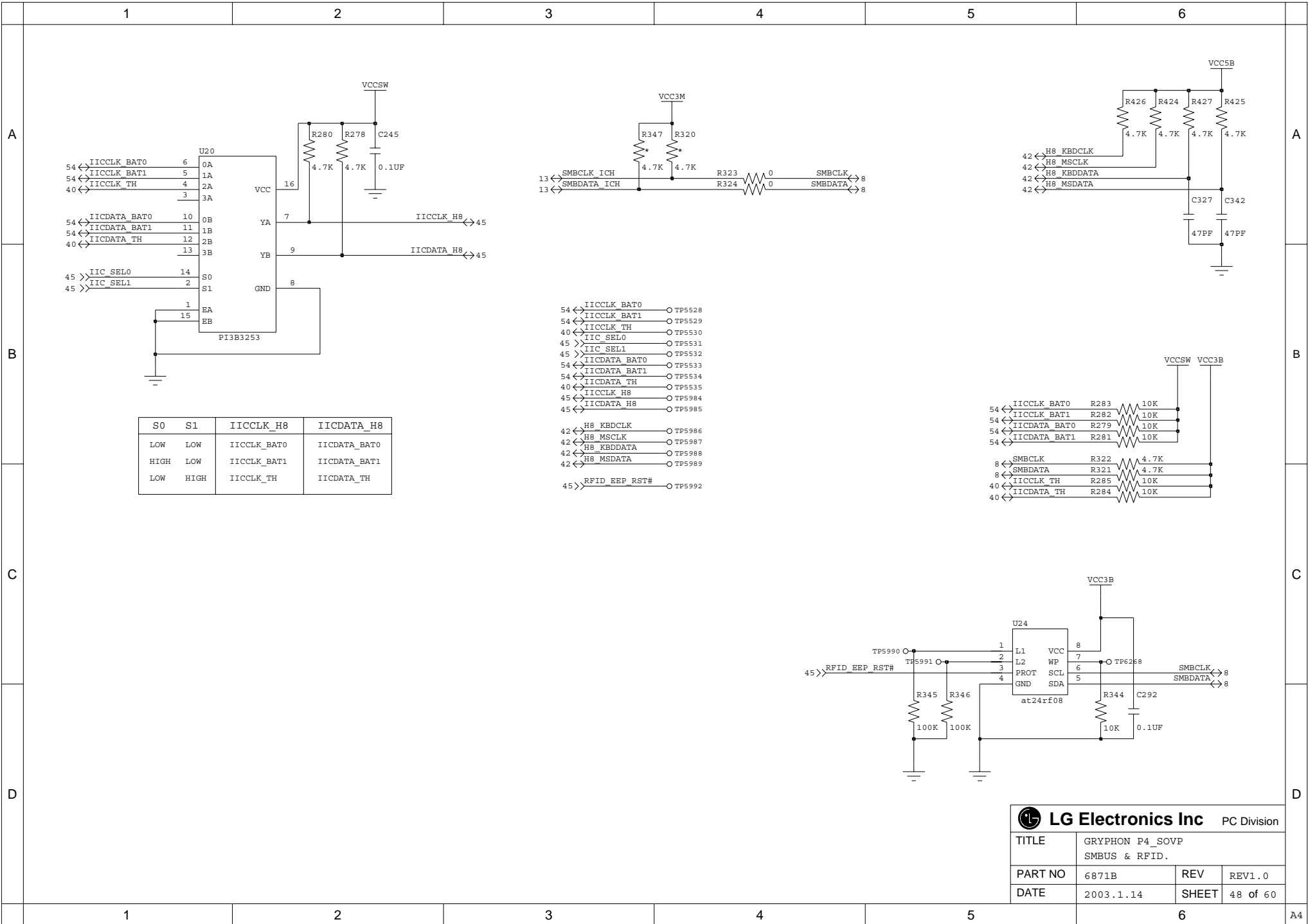
- Using No Trackpoint Model.
- 46,47 <-> TPCLK ○ TP5970
  - 46,47 <-> TPDATA ○ TP5971
  - 46 <-> PADCLK ○ TP5972
  - 46 <-> PADDATA ○ TP5973
  - 46 <-> PAD\_CLK ○ TP5974
  - 46 <-> PAD\_DATA ○ TP5975
  - 46 <-> H8\_TPCLK ○ TP5976
  - 45 <-> H8\_TPDATA ○ TP5976
  - 45 <-> PAD\_BYPASS ○ TP5977
  - 33 <-> PAD\_DETECT# ○ TP5978
  - 33,46 <-> PAD\_DETECT# ○ TP5979
  - 45 >> PAD\_RST# ○ TP5980

S	YA	YB	YC	YD
LOW	I0A	I0B	I0C	I0D
HIGH	I1A	I1B	I1C	I1D

<b>LG Electronics Inc</b> PC Division			
TITLE	GRYPHON P4_SOVP TOUCH PAD CONNECTOR		
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	46 of 60



<b>LG Electronics Inc</b> PC Division			
TITLE	GRYPHON P4_SOVP INTERNAL KBD CONN.		
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	47 of 60

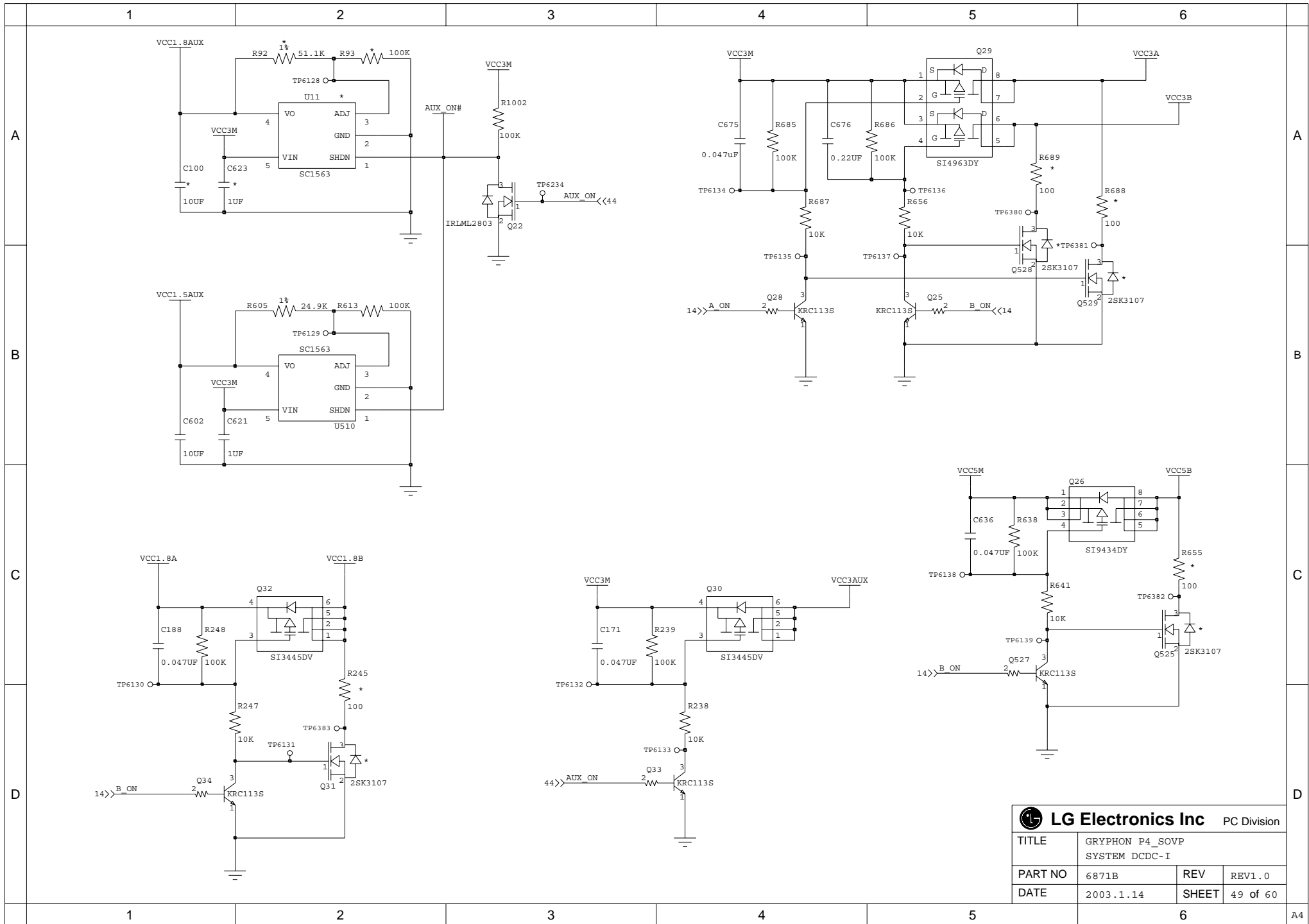


S0	S1	IICCLK_H8	IICDATA_H8
LOW	LOW	IICCLK_BAT0	IICDATA_BAT0
HIGH	LOW	IICCLK_BAT1	IICDATA_BAT1
LOW	HIGH	IICCLK_TH	IICDATA_TH

- 54 <> IICCLK\_BAT0 ○ TP5528
- 54 <> IICCLK\_BAT1 ○ TP5529
- 40 <> IICCLK\_TH ○ TP5530
- 40 <> IIC SEL0 ○ TP5531
- 45 >> IIC SEL1 ○ TP5532
- 45 >> IICDATA\_BAT0 ○ TP5532
- 54 <> IICDATA\_BAT0 ○ TP5533
- 54 <> IICDATA\_BAT1 ○ TP5534
- 40 <> IICDATA\_TH ○ TP5535
- 45 <> IICCLK\_H8 ○ TP5984
- 45 <> IICDATA\_H8 ○ TP5985
- 42 <> H8\_KBDCLK ○ TP5986
- 42 <> H8\_MSCLK ○ TP5987
- 42 <> H8\_KBDDATA ○ TP5988
- 42 <> H8\_MSDDATA ○ TP5989
- 45 >> RFID\_EEP\_RST# ○ TP5992

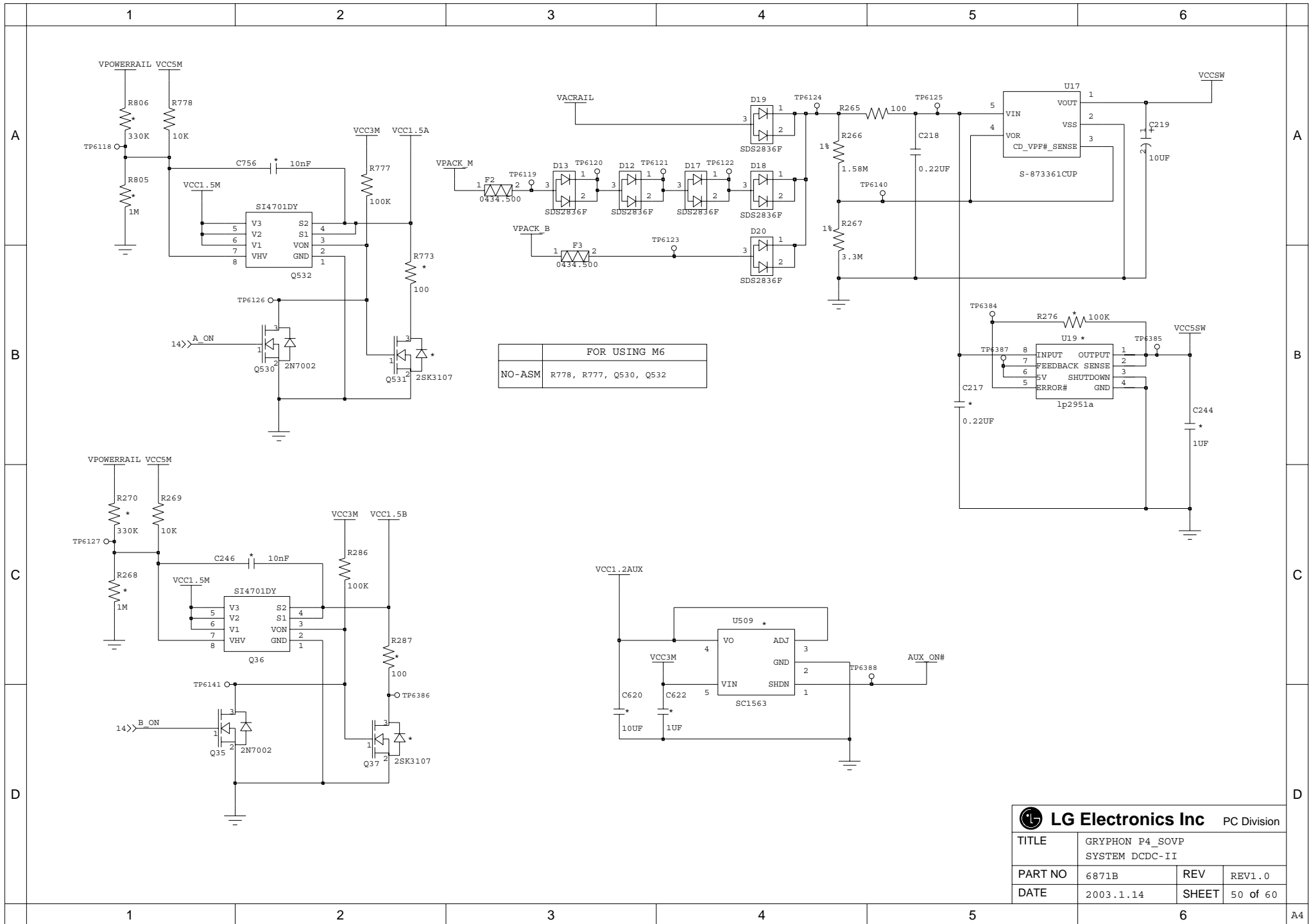
<b>LG Electronics Inc</b> PC Division			
TITLE GRYPHON P4_SOVPC SMBUS & RFID.			
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	48 of 60



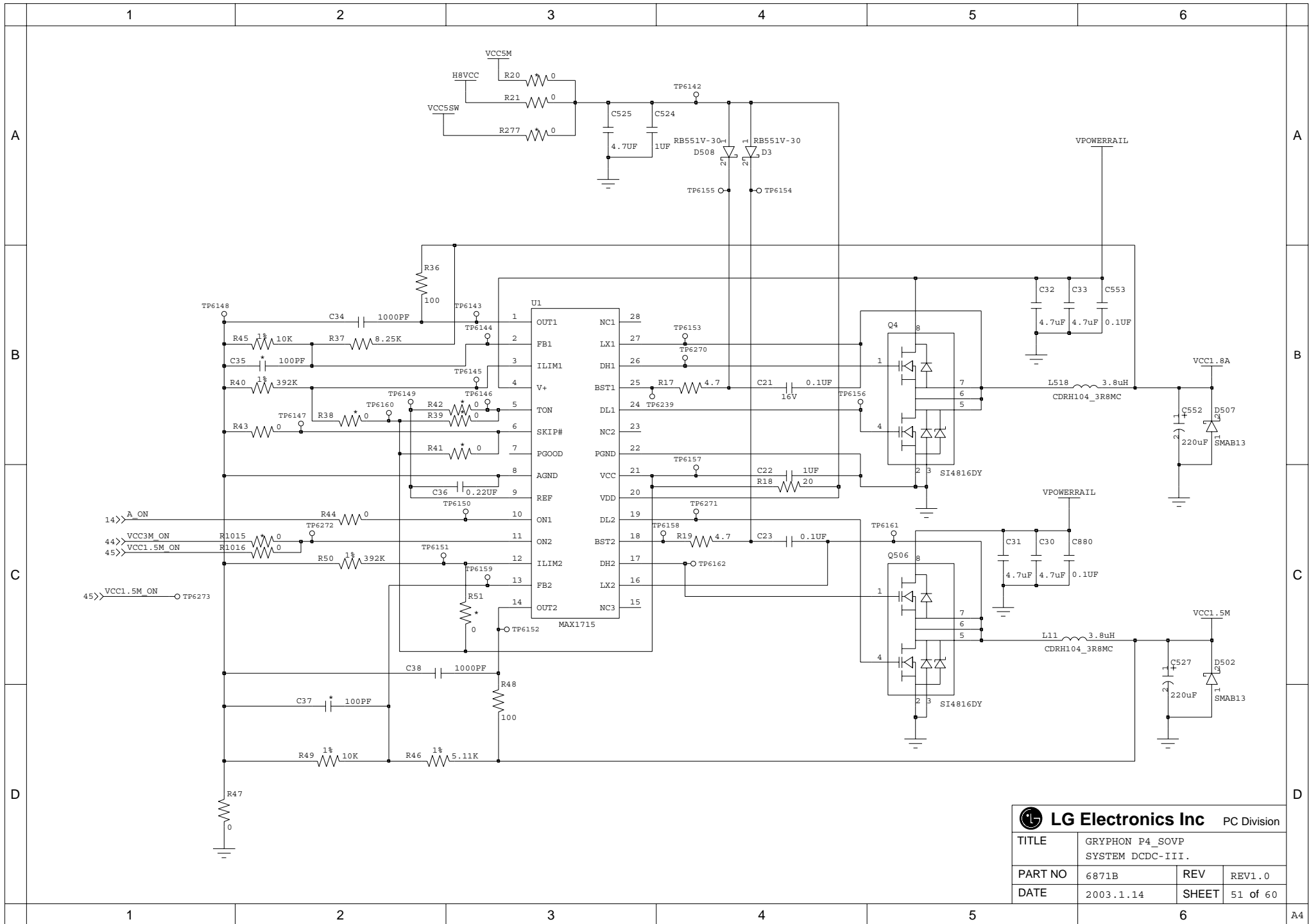


**LG Electronics Inc** PC Division

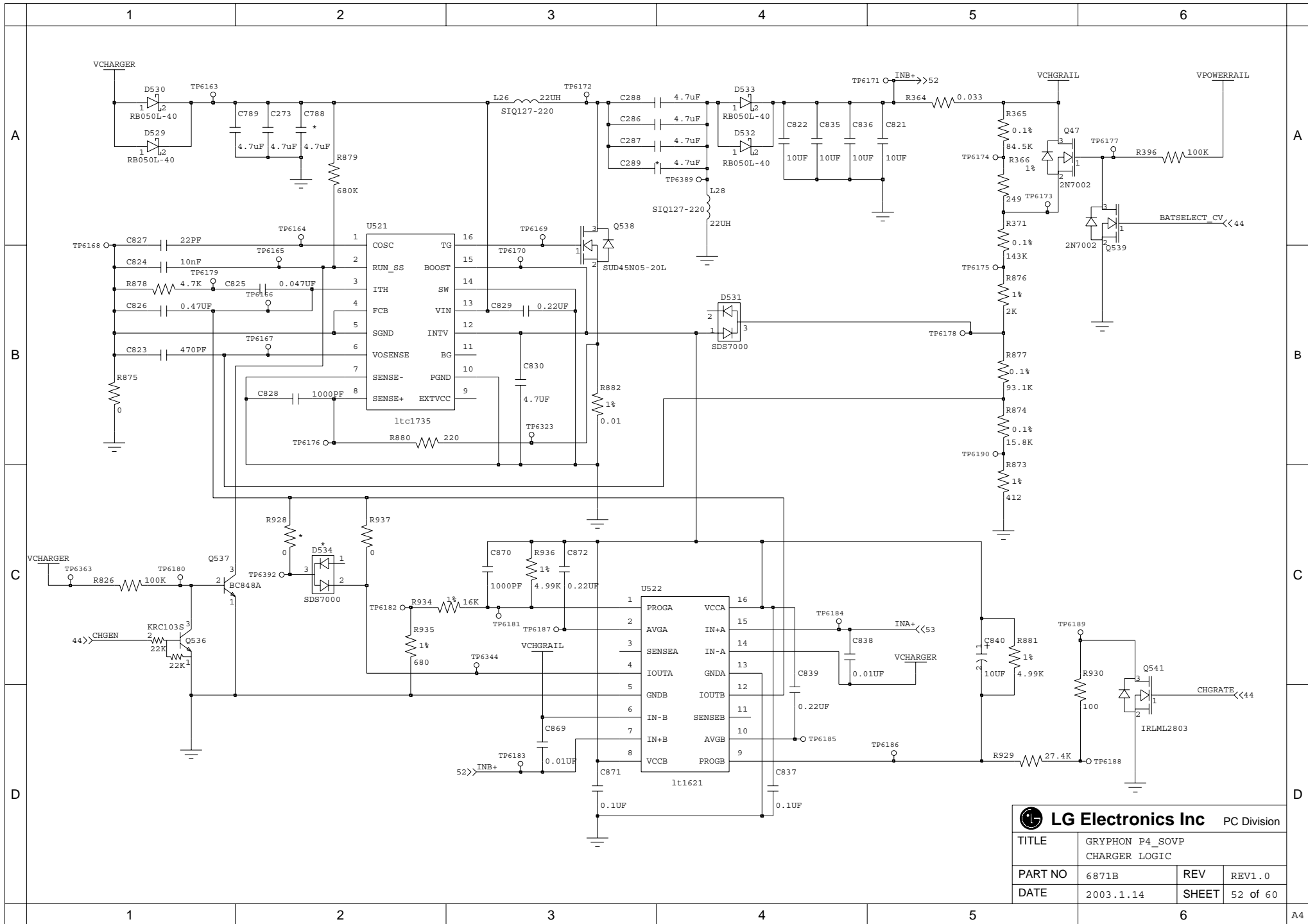
TITLE	GRYPHON P4_SOVP SYSTEM DCDC-I		
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	49 of 60



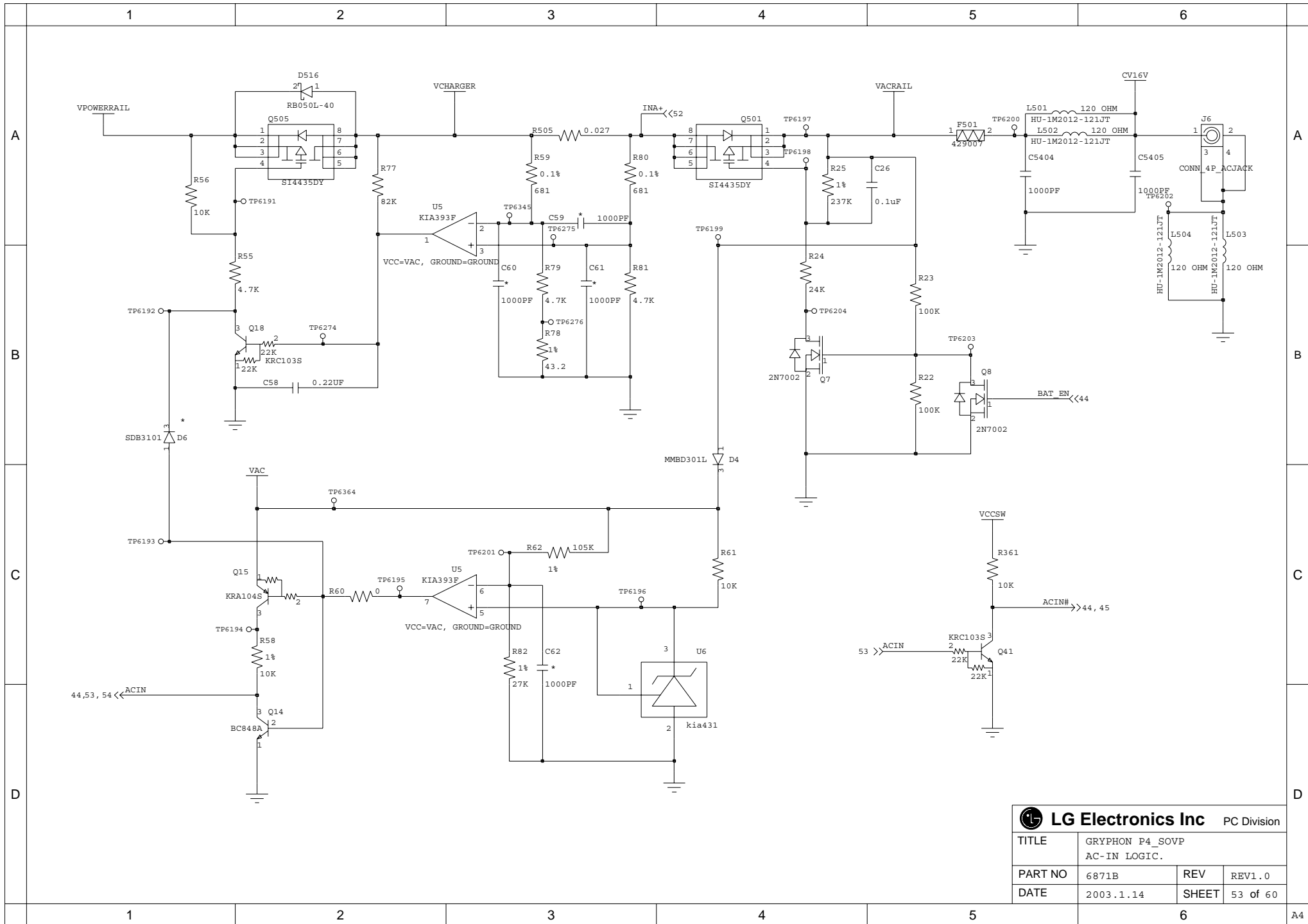
LG Electronics Inc PC Division			
TITLE GRYPHON P4_SOVP SYSTEM DCDC-II			
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	50 of 60



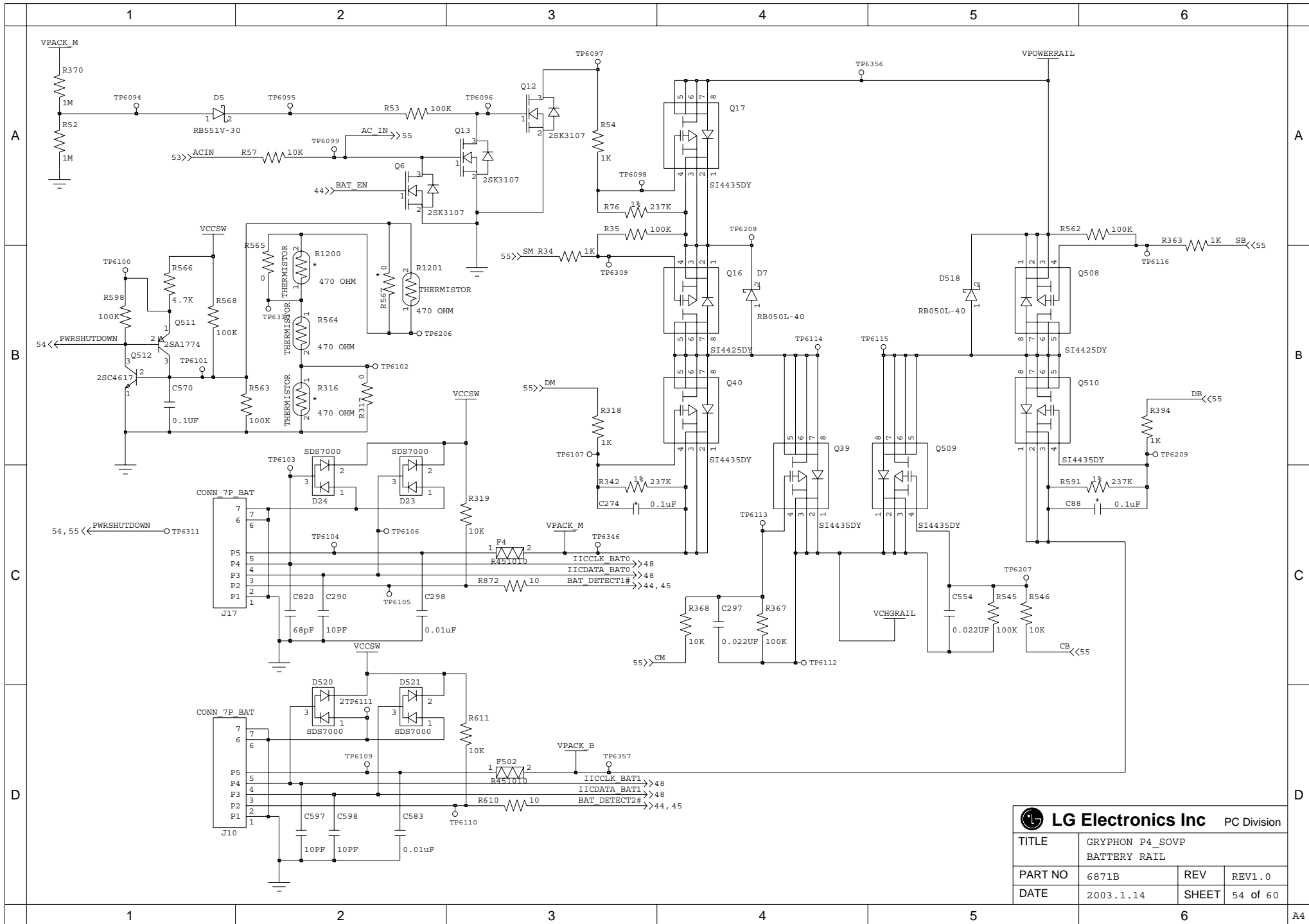
<b>LG Electronics Inc</b> PC Division			
TITLE		GRYPHON P4_SQVP SYSTEM DCDC-III.	
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	51 of 60



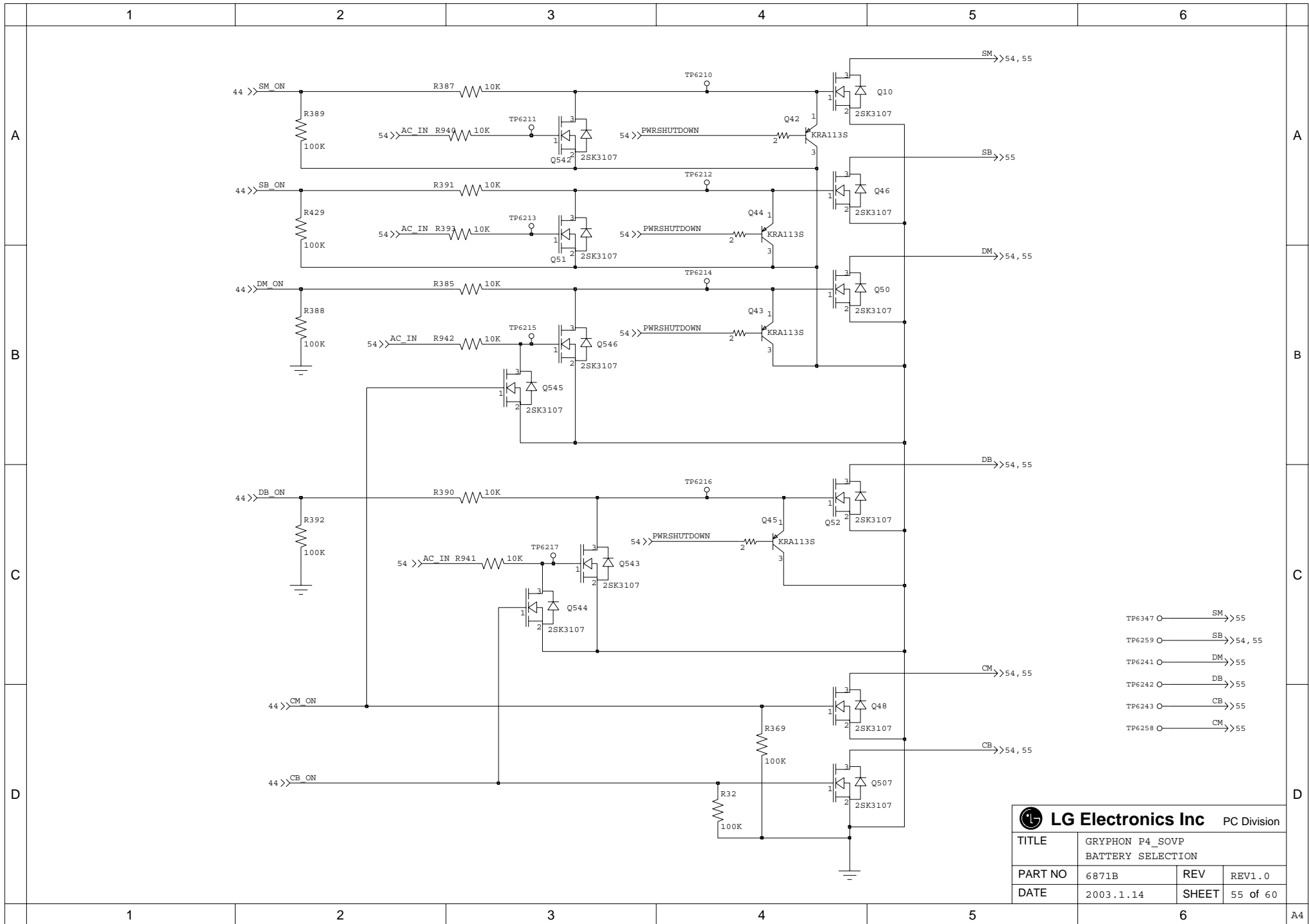
<b>LG Electronics Inc</b> PC Division			
TITLE		GRYPHON P4_SOVP CHARGER LOGIC	
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	52 of 60

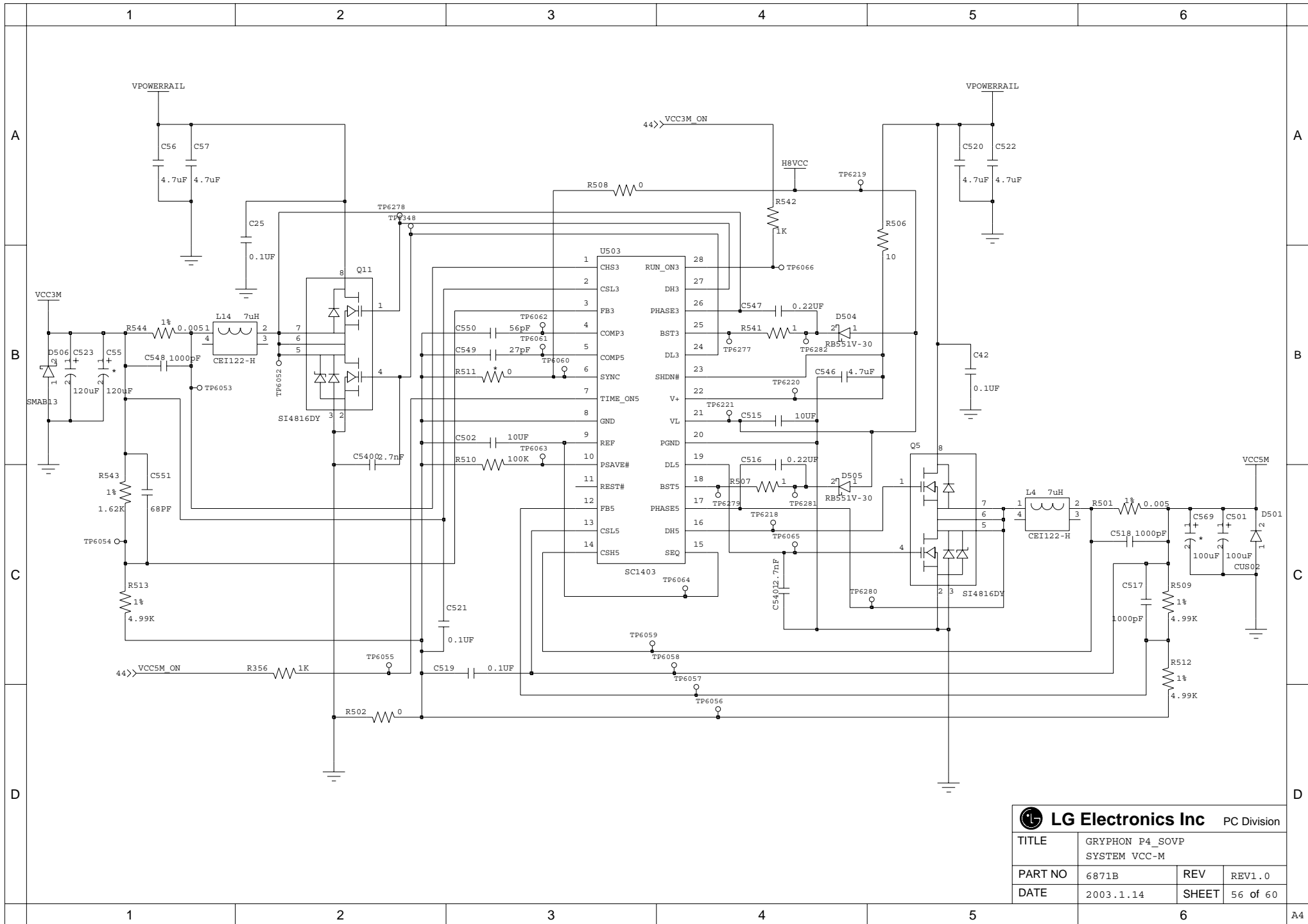


<b>LG Electronics Inc</b> PC Division			
TITLE GRYPHON P4_S0VP AC-IN LOGIC.			
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	53 of 60



<b>LG Electronics Inc</b> PC Division			
TITLE    GRYPHON P4_SOV BATTERY RAIL			
PART NO	6871B	REV	REV1.0
DATE	2003.1.14	SHEET	54 of 60

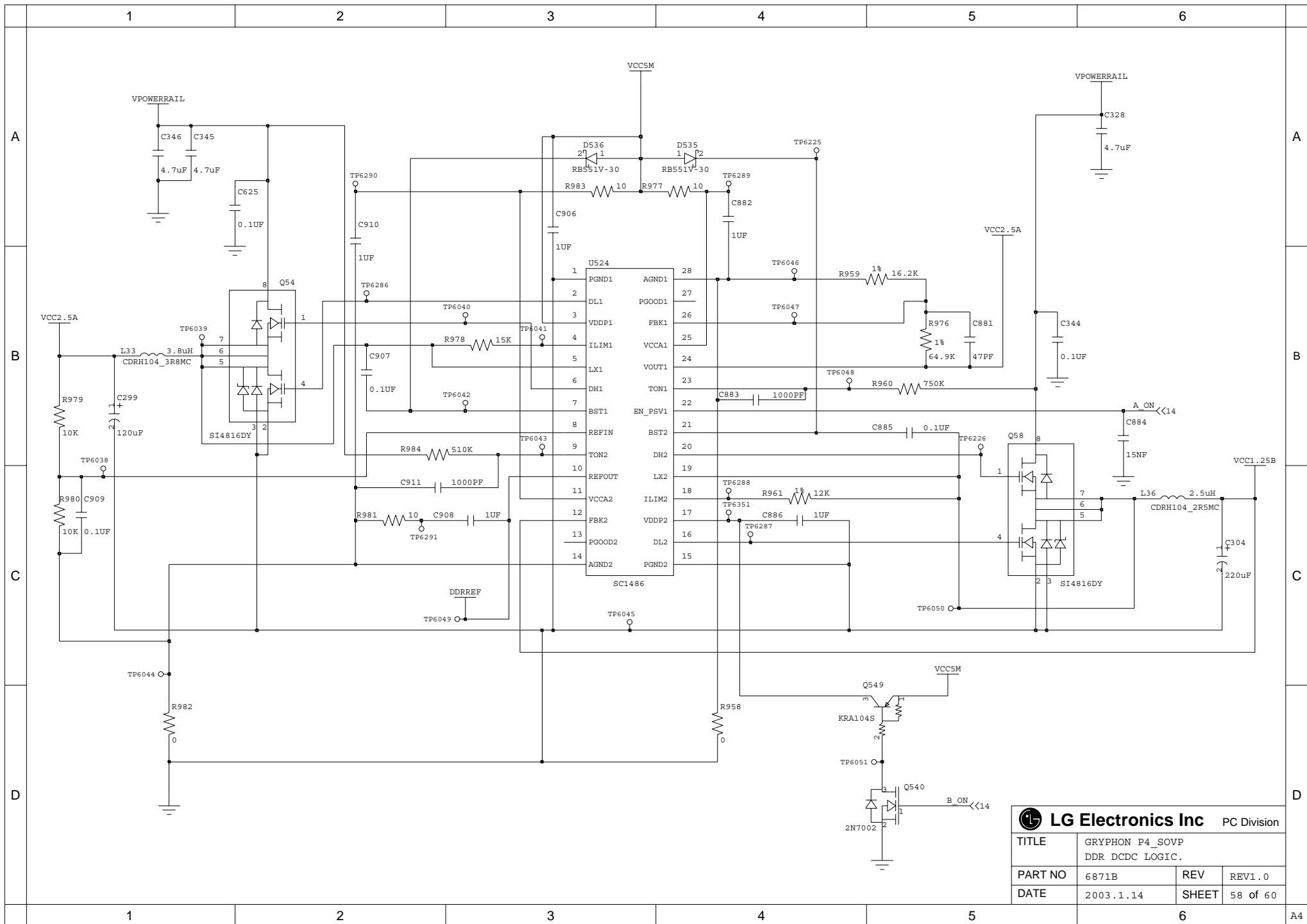




<b>LG Electronics Inc</b> PC Division			
TITLE	GRYPHON P4_SOVP SYSTEM VCC-M		
PART NO	6871B	REV	REV1.0
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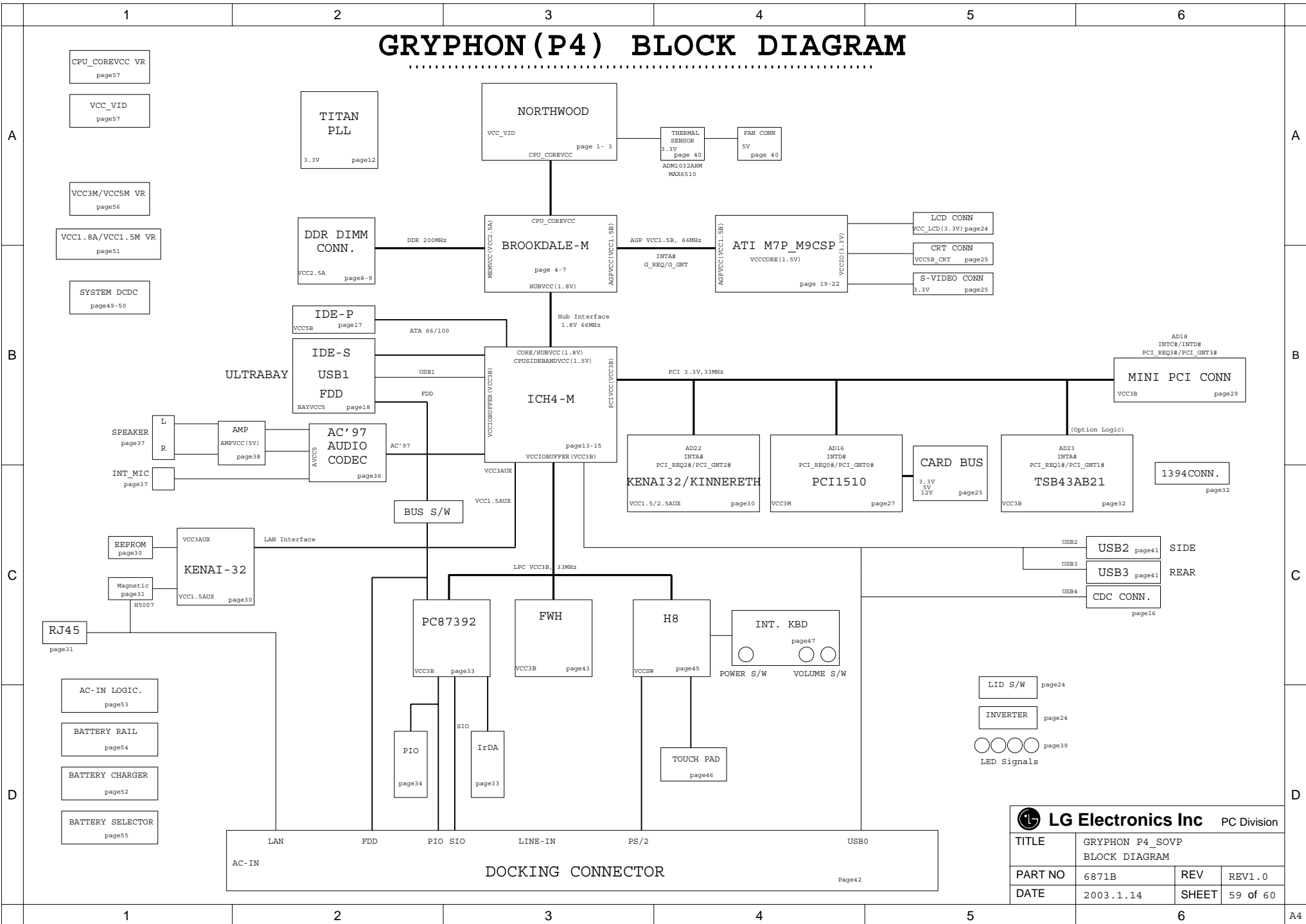






<b>LG Electronics Inc</b> PC Division			
TITLE		GRYPHON P4_SOVP DDR DCDC LOGIC.	
PART NO	6871B	REV	REV1.0
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# GRYPHON (P4) BLOCK DIAGRAM



<b>LG Electronics Inc</b> PC Division			
TITLE	GRYPHON P4_SOVP BLOCK DIAGRAM		
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A4

## Revision History

Revision	Page	Description	Revision	Page	Description					
A	0.2	12 Signal change from SLP_S2# to B_ON in Pin25 of CK_TITAN. 13 1.Add Pull-Up resistor to VCCSW on INTRUDER# signal.(Option) 14 2.Signal change from INT_AB# to FNKEY_ICH# in PinC3 of ICH4. 15 Add Pull-Up resistor to VCC3M on GPIO13 of ICH4. 16 Change part from RB425D to SDB3101 on D508 and Add one SDB3101 on PinE15 of ICH4. 17 1.Change part from SN74AHC08 to SN74LS08 on U575.(Same as UBAY_RST# signal) 18 2.Remove Pull-Up resistor on DASP_ICH signal. 19 Add Pull-Down resistor to CDMUTE_UBAY signal. 20 Redraw LID switch logic. 21 1.Add capacitor to CRST# signal. 22 2.Change value to 220PF on CCD1#,CCD2# signal. 23 DV-I Add Pull-Up resistor to CCLKRUN# 24 1.Change part from SN74AHC04 to SN74AHC14 on U582. 25 2.Add Pull-Down resistor on ICH_LANRST signal. 26 3.Add Bypass Capacitors on VCC1.5AUX and VCC2.5AUX. 27 Reformed Super I/O signals. 28 Add Pull-Down resistor to Pin20 of TPA0202. 29 1.Redraw THRMTRIP# logic of MAX6510. 30 2.Remove Voltage transition logic of CPUHOT#. 31 Add clamping Diode on USB signals. 32 Adapted Docking Pin assign. 33 Reformed H8 signals. 34 35 36 37 38 39 40 41 42 43 44 45	B	0.5	30	1. Change Device from AT93C66 to AT93C46 in U6. --> TO solve writing error. 2. Change part from Resistor to Capacitor(C400, 0.01uF). --> TO support KENAI-II32. 3. Add Resistor(R980,R981) to U505. --> TO support KENAI-II32.				
	31	Add Diode(D540,RB425D) to pin1 of U7. --> IBM Recommend.								
	SIV	40		Change device from ADM1032ARM to LM86 in U508.						
	B	0.3		5 Move series resistors(R302,303,304,333,335) to DDR DIMM Conn. 6 Change device from KRCL03S to KRCL04S in Q27. 7 --> TO Prevent voltage drop. 8 9 10 Change U21 from SN74LS08 to SN74AHC08. 11 --> To solve LID S/W Level Problem. 12 13 Correct PIN Error( Pin65 <--> Pin70 ). 14 Add NET Name to PinL10 with VCC1.5LANAUX.(LAN CONTROLLER) 15 1. Change part PLP3216S551SL2 to ACM2012-900-2P-T in USB data line. 16 --> For signal accuracy. 17 2. Correct shape Error in J504(USB Connector). 18 Add signal to Pin70(Docking Conn.) with AUX_RESET. 19 --> IBM Recommend. 20 1.Change signal FAN_FRQ to CB_PWRDN# in Pin25(H8). 21 2.Change signal CB_PWRDN# to FAN_FRQ in Pin40(H8). 22 3.Change value from 100K to 0ohm in R442. --> H8RESET# TIMING. 23 4.Change value from 0.1uF to 0.33uF in C330. --> H8RESET# TIMING. 24 25 Change value from 330uF(2.5V) to 220uF(4V) in C542,C563. 26 --> To get more voltage de-rating. 27 Change Value from 10K to 0ohm in R55. --> To solve AC-IN Problem. 28 Change Parts from KRA104S to KRCL13S in Q42,Q43,Q44,Q45. 29 Add C352(120uF,4V), C922(100uF,6.3V). --> No ASM. 30 Change Value from 220uF(4V) to 120uF(4V,SP-CAP) in C286. 31 --> To get more voltage de-rating. 32 33 34 35 36 37 38 39 40 41 42 43 44 45	C	0.5	15	Add Diode(D539,SDB3101) to R280. --> To solve leakage problem(1.3V level in Battery PWR-OFF mode). 16 1.Add 1M resistor between C92 and C94. 17 --> To solve don't work crystal. 18 2.Add 10ohm resistors in Pin AD28,M28,Y29. 19 --> ATI Recommend. 20 SIV Change Voltage source from VCC1.8B to VCC1.8A in L17,L530. 21 --> To solve leakage problem.		
		19								
		21								
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				19						
				21						

<b>LG Electronics Inc</b> PC Division			
TITLE	GRYPHON P4_SOVP REVISION HISTORY.		
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