

FIRENZE

CPU : Dothan533
Chip Set : ALVISO & ICH6-M
Remarks : EXTERNAL GFX

Model Name : FIRENZE

PBA Name : MAIN

PCB Code : BA41-00509A

Dev. Step : MP

Revision : 1.0

T.R. Date : 2005.06.07

DRAW	CHECK	APPROVAL
SON, C.W	YUN, C.Y	LIM, J.G

TABLE OF CONTENTS

1. COVER PAGE

2. BLOCK DIAGRAM

3. POWER DIAGRAM

4. BOARD INFORMATION

5. CLOCK DIAGRAM

6. RESET DIAGRAM

7. CLOCK GENERATOR

8. CPU (1/3)

9. CPU (2/3)

10. CPU (3/3)

11. THERMAL SENSOR / FAN CONTROL

12. NORTH BRIDGE (1/5)

13. NORTH BRIDGE (2/5)

14. NORTH BRIDGE (3/5)

15. NORTH BRIDGE (4/5)

16. NORTH BRIDGE (5/5)

17. DDR2 - SODIMM

18. DDR2- TERMINATION

19. SOUTH BRIDGE (1/4)

20. SOUTH BRIDGE (2/4)

21. SOUTH BRIDGE (3/4)

22. SOUTH BRIDGE (4/4)

23. FWH

24. GRAPHICS CONTROLLER (1/4)

25. GRAPHICS CONTROLLER (2/4)

26. GRAPHICS CONTROLLER (3/4)

27. GRAPHICS CONTROLLER (4/4)

28. GRAPHICS MEMORY TERMINATION (1/2)

29. GRAPHICS MEMORY TERMINATION (2/2)

30. GRAPHICS MEMORY (1/2)

31. GRAPHICS MEMORY (2/2)

32. CRT PORT

33. LCD / TV-OUT

34. CARDBUS CONTROLLER (1/2)

35. CARDBUS CONTROLLER (2/2)

36. CARDBUS CONNECTOR / MEDIA CARD

37. MINI PCI
38. AC97 AUDIO CODEC

39. AUDIO AMP

40. HDD / ODD / MDC CONNECTOR

41. MICOM

42. LAN CONTROLLER

43. KBD/TOUCHPAD/HP/MIC

44. USB PORTS / LED / ON-TOP

45. CHARGER

46. 3.3V / 5V GENERATION

47. 1.5V_AUX / VTT

48. DDR2 POWER

49. GRAPHIC CORE POWER

50. CPU POWER

51. 1.2V / 2.5V POWER

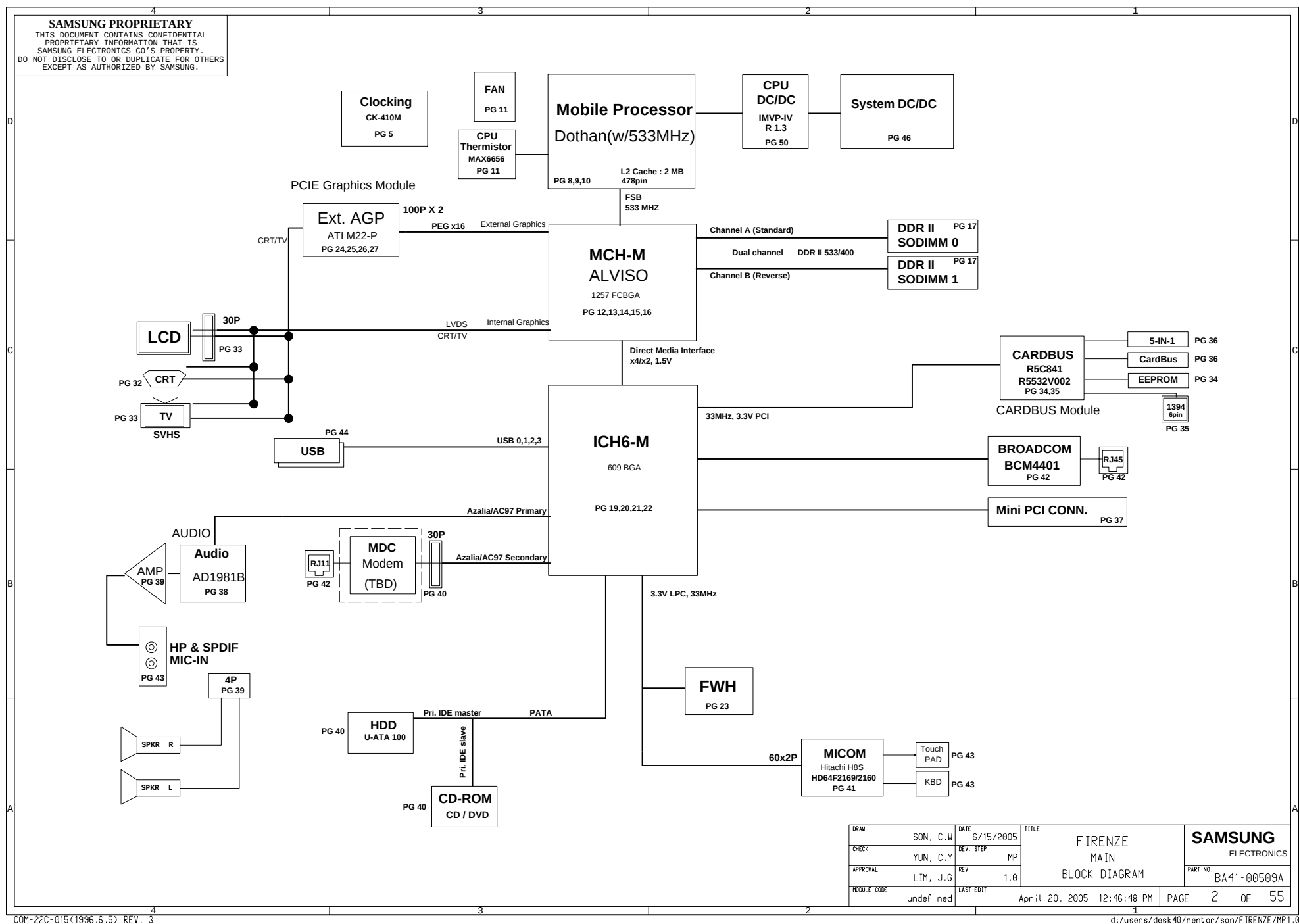
52. MICOM & SWITCHED POWER

53. 5-IN-1 SUB B'D

54. AIR BAG

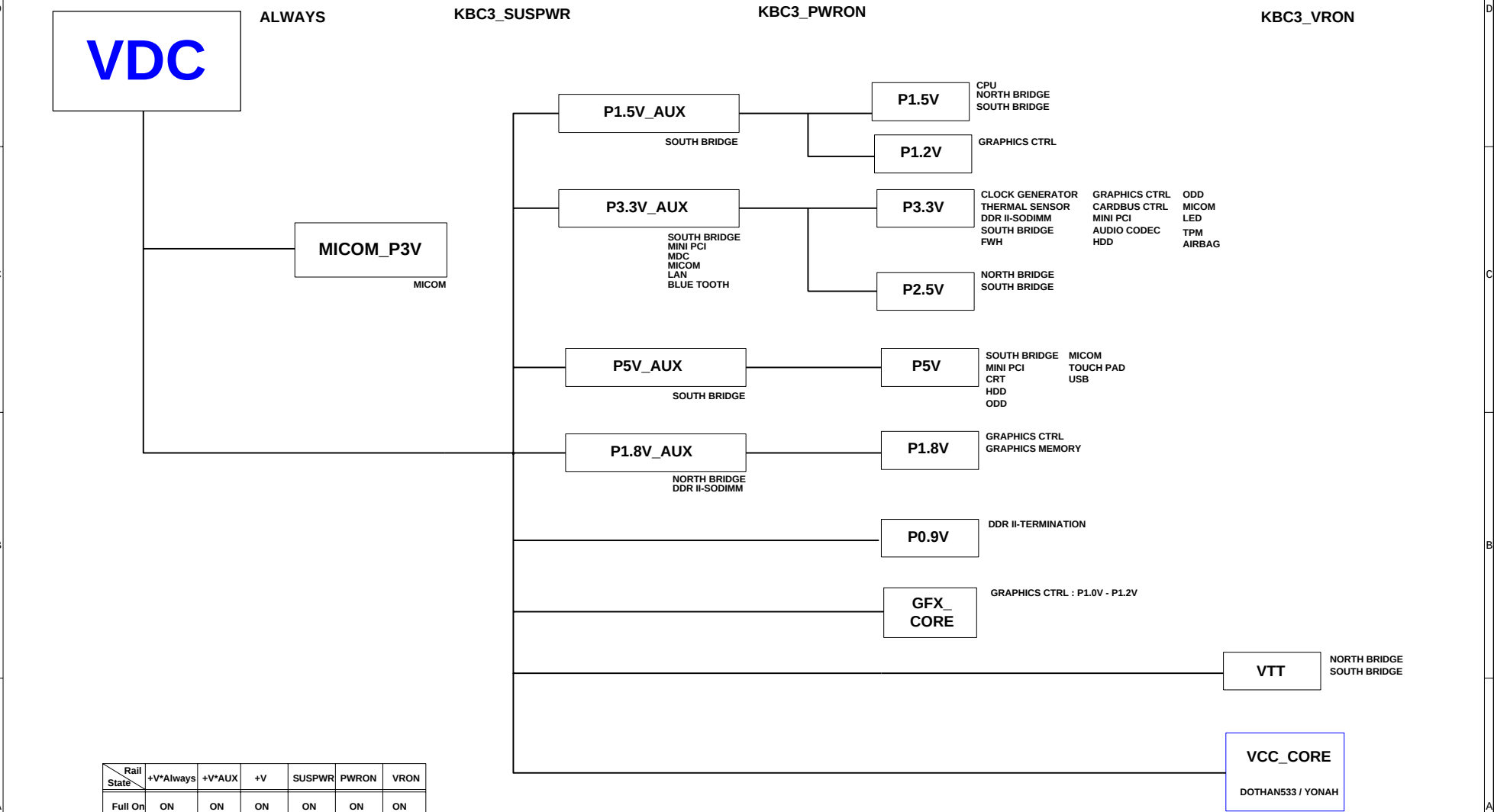
55. TESTPOINTS-1

DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE MAIN BOARD INFORMATION	SAMSUNG ELECTRONICS
CHECK	YUN, C.Y	DEV. STEP	MP			PART NO. BA41-00509A
APPROVAL	LIM, J.G	REV	1.0			
MODULE CODE	undefined	LAST EDIT	June 15, 2005 4:12:30 PM	PAGE	1	OF 55



SAMSUNG PROPRIETARY
THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO.'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.

Power Diagram



Rail State	+V*Always	+V*AUX	+V	SUSPWR	PWRON	VRON
Full On	ON	ON	ON	ON	ON	ON
S3	ON	ON	OFF	ON	OFF	OFF
S4	ON	OFF	OFF	OFF	OFF	OFF
S5	ON	OFF	OFF	OFF	OFF	OFF

DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE MAIN POWER DIAGRAM	SAMSUNG ELECTRONICS
CHECK	YUN, C.Y	DEV. STEP	MP			PART NO. BA41-00509A
APPROVAL	LIM, J.G	REV	1.0			
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	3 OF 55	

SCHEMATIC ANNOTATIONS AND BOARD INFORMATION

PCI Devices

DEVICES	IDSEL#	REQ/GNT#	INTERRUPTS
CARDBUS CONTROLLER	AD25	0	A,B,C
MINIPCI	AD23	1	E,F
LAN CONTROLLER	AD21	2	G

Voltage Rails

VDC	Primary DC system power supply (9 to 20V)
VCC_CORE	Core voltage for DOTHAN (0.7~1.708V)
VTT	DOTHAN/ALVISO Processor System Bus(PSB) Termination (1.05V)
GFX_CORE	MCH-M Core Voltage (off in S3-S5) ATI M24-P Core Voltage (1.0~1.2V) (off in S3-S5)
P0.9V	0.9V power rail (off in S3-S5)
P1.2V	1.2V power rail (off in S3-S5)
P1.5V	1.5V switched power rail (off in S3-S5)
P1.5V_AUX	1.5V power rail (off in S4-S5)
P1.8V	1.8V switched power rail (off in S3-S5)
P1.8V_AUX	1.8V power rail(off in S4-S5)
P2.5V	2.5V power rail (off in S3-S5)
MICOM_P3V	3.3V always on power rail for MICOM
P3.3V	3.3V switched power rail (off in S3-S5)
P3.3V_AUX	3.3V power rail (off in S4-S5)
P5V	5.0V switched power rail (off in S3-S5)
P5V_AUX	5.0V power rail (off in S4-S5)

CPU Core Voltage Table

VID5	VID4	VID3	VID2	VID1	VID0	Voltage	VID5	VID4	VID3	VID2	VID1	VID0	Voltage	
0	0	0	0	0	0	1.708 V	1	0	0	0	0	0	1.196 V	Northwood-B
0	0	0	0	0	1	1.692 V	1	0	0	0	0	1	1.180 V	(Interposer B'd)
0	0	0	0	1	0	1.676 V	1	0	0	0	1	0	1.164 V	
0	0	0	0	1	1	1.660 V	1	0	0	0	1	1	1.148 V	
0	0	1	0	0	0	1.644 V	1	0	0	1	0	0	1.132 V	
0	0	0	1	0	1	1.628 V	1	0	0	1	0	1	1.116 V	
0	0	0	1	1	0	1.612 V	1	0	0	1	1	0	1.100 V	
0	0	0	1	1	1	1.596 V	1	0	0	1	1	1	1.084 V	
0	0	1	0	0	0	1.580 V	1	0	1	0	0	0	1.068 V	
0	0	1	0	0	1	1.564 V	1	0	1	0	0	1	1.052 V	
0	0	1	0	1	0	1.548 V	1	0	1	0	1	0	1.036 V	
0	0	1	0	1	1	1.532 V	1	0	1	0	1	1	1.020 V	
0	0	1	1	0	0	1.516 V	1	0	1	1	0	0	1.004 V	
0	0	1	1	0	1	1.500 V	1	0	1	1	0	1	0.988 V	
0	0	1	1	1	0	1.484 V	1	0	1	1	1	0	0.972 V	
0	0	1	1	1	1	1.468 V	1	0	1	1	1	1	0.956 V	
0	1	0	0	0	0	1.452 V	1	1	0	0	0	0	0.940 V	
0	1	0	0	0	1	1.436 V	1	1	0	0	0	1	0.924 V	
0	1	0	0	1	0	1.420 V	1	1	0	0	1	0	0.908 V	
0	1	0	0	1	1	1.404 V	1	1	0	0	1	1	0.892 V	
0	1	0	1	0	0	1.388 V	1	1	0	1	0	0	0.876 V	
0	1	0	1	0	1	1.372 V	1	1	0	1	0	1	0.860 V	
Highest Freq.	0	1	0	1	1	1.356 V	1	1	0	1	1	0	0.844 V	Lowest Freq.
	0	1	0	1	1	1.340 V	1	1	0	1	1	1	0.828 V	
0	1	1	0	0	0	1.324 V	1	1	1	0	0	0	0.812 V	
0	1	1	0	0	1	1.308 V	1	1	1	0	0	1	0.796 V	
0	1	1	0	1	0	1.292 V	1	1	1	0	1	0	0.780 V	
0	1	1	0	1	1	1.276 V	1	1	1	0	1	1	0.764 V	
0	1	1	1	0	0	1.260 V	1	1	1	1	0	0	0.748 V	Deeper Sleep
0	1	1	1	0	1	1.244 V	1	1	1	1	0	1	0.732 V	
0	1	1	1	1	0	1.228 V	1	1	1	1	1	0	0.716 V	
0	1	1	1	1	1	1.212 V	1	1	1	1	1	1	0.700 V	

IC / SMB Address

Devices	Address	Hex	Bus
SOUTH BRIDGE	Master	-	SMBUS Master
ADM1032(CPU Thermal Sensor)	1001 110X	9Ch	Thermal Sensor
SODIMM0	1010 0000	A0h	-
SODIMM1	1010 001X	A2h	-
CK-408 (Clock Generator)	1101 001x	D2h	Clock, Unused Clock Output Disable

USB PORT Assign

PORT NUMBER	ASSIGNED TO
1,3	SYSTEM PORT A
0,2	SYSTEM PORT B

System Power States

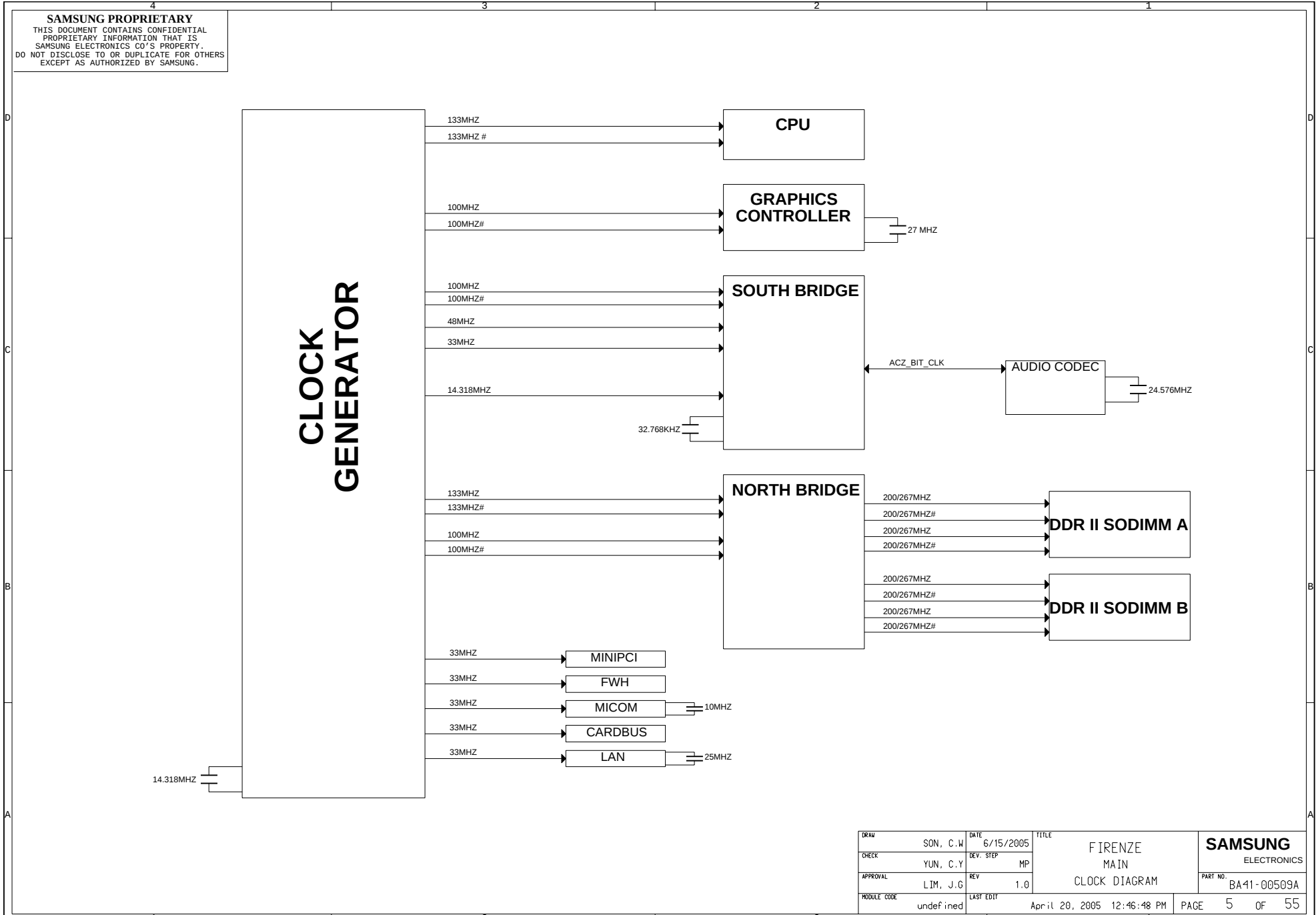
- CHP3_SLPS1* S1, Powered-On-Suspend(POS) : In this state, all clocks(except the 32.768KHz clock) are stopped. The system context is maintained in system DRAM. Power is maintained to PCI, the CPU, memory controller, memory, and all other critical subsystems. Note that this state does not preclude power being removed from non-essential devices, such as disk drives. During this state, CPU can be selected for either Deep Sleep or Deeper Sleep.
- In Deeper Sleep, CPU voltage reduced in this state to reduce the leakage power.
- CHP3_SLPS3* S3, Suspend-To-RAM(STR) : The system context is maintained in system DRAM, but power is shut off to non-critical circuits. Memory is retained, and refreshes continue. All clocks stop except RTC clock.
- CHP3_SLPS4* S4, Suspend-To-Disk(STD) : The Context of the system is maintained on the disk. All power is then shut off to the system except for the logic required to resume. Externally appears same as S5, but may have different wake events.
- CHP3_SLPS5* S5, Soft Off(SOFF) : System context is not maintained. All power is shut off except for the logic required to restart. A full boot is required when waking.

REVISION HISTORY

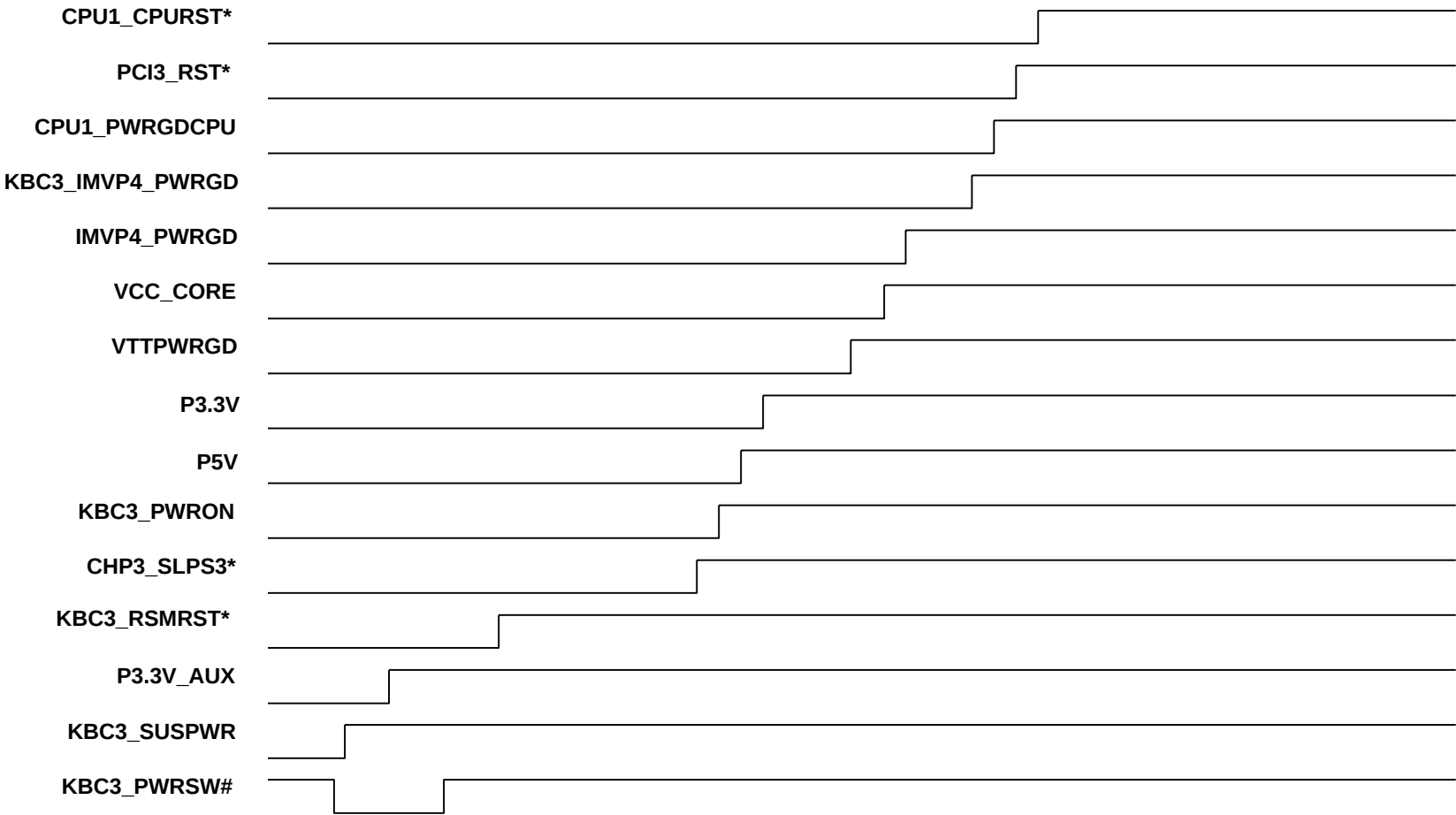
See rev notes in the changes file for more information.

MiniPCI SLOT1

DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE MAIN BOARD INFORMATION	SAMSUNG ELECTRONICS
CHECK	YUN, C.Y	DEV. STEP	MP			PART NO. BA41-00509A
APPROVAL	LIM, J.G	REV	1.0			
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	4	OF 55



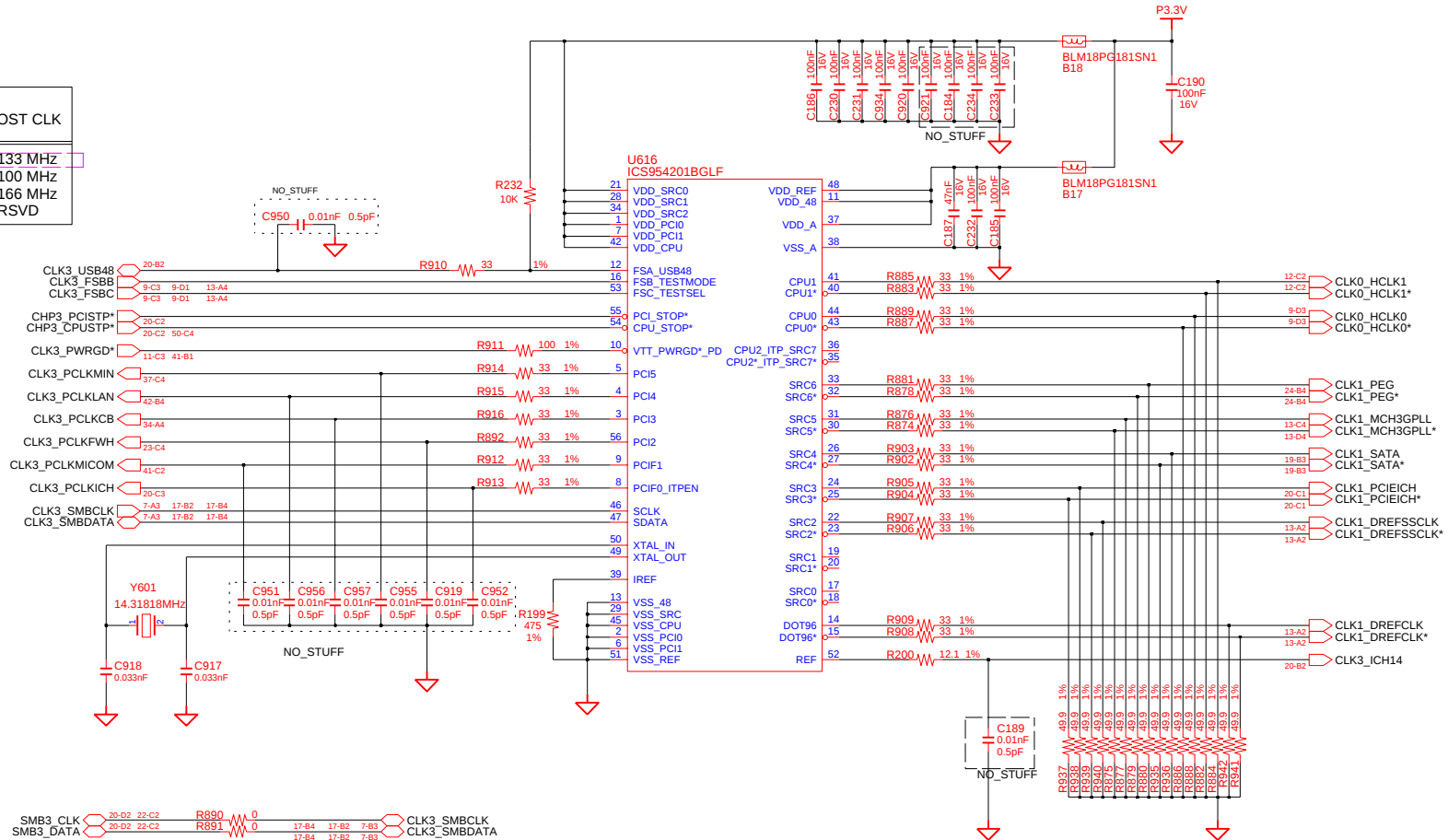
RESET DIAGRAM



DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE MAIN RESET DIAGRAM	SAMSUNG ELECTRONICS
CHECK	YUN, C.Y	DEV. STEP	MP			PART NO. BA41-00509A
APPROVAL	LIM, J.G	REV	1.0			
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	6	OF 55

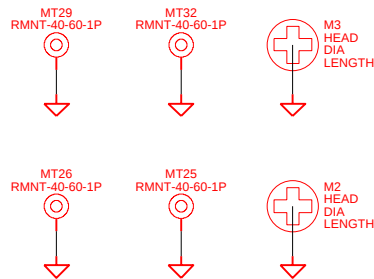
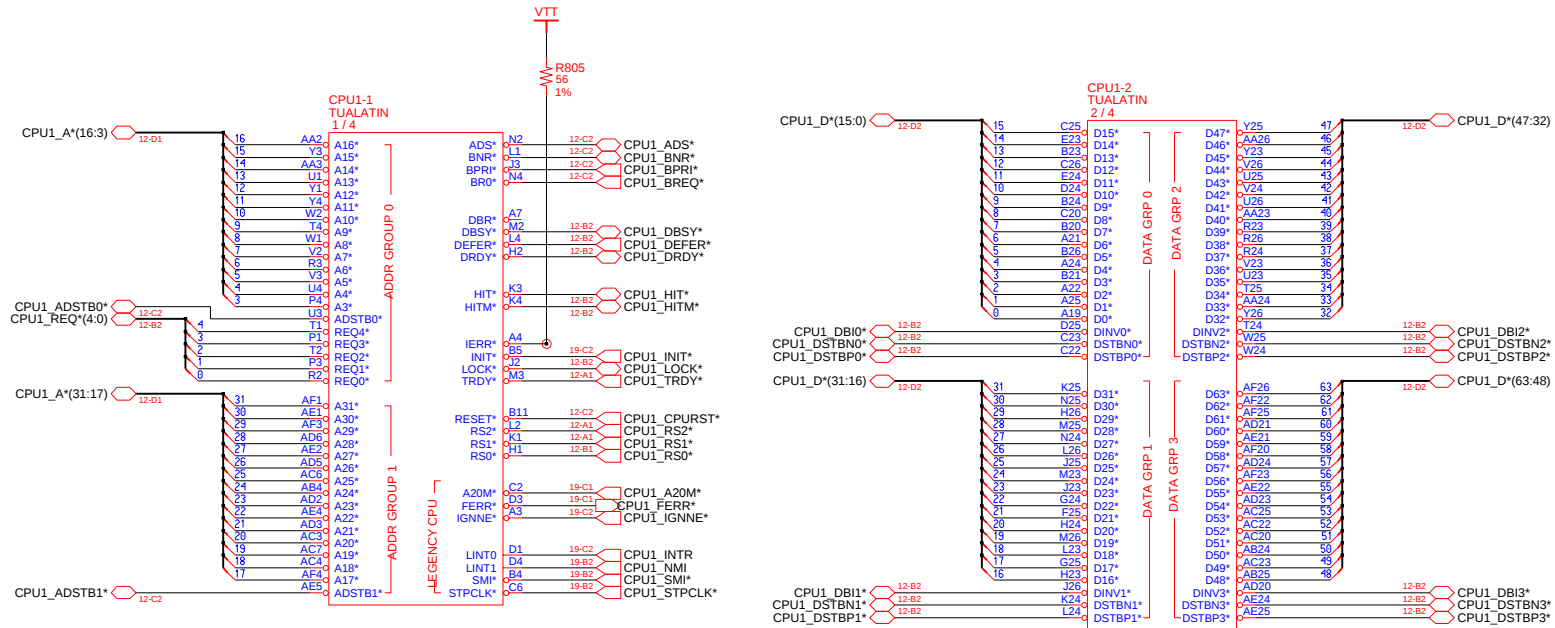
SAMSUNG PROPRIETARY
THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO.'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.

FSA	FSB	FSC	HOST CLK
BSEL2	BSEL1	BSEL0	
1	0	0	133 MHz
1	0	1	100 MHz
1	1	0	166 MHz
1	1	1	RSVD

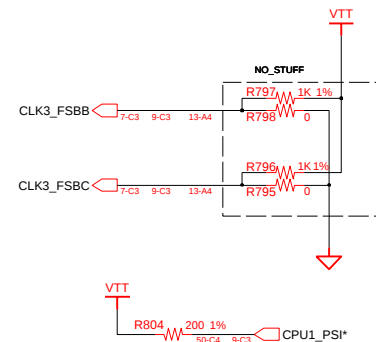


DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE MAIN CLOCK GENERATOR	SAMSUNG ELECTRONICS
CHECK	YUN, C.Y	DEV. STEP	MP			PART NO. BA41-00509A
APPROVAL	LIM, J.G	REV	1.0			
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	7	OF 55

SAMSUNG PROPRIETARY
THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO.'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.



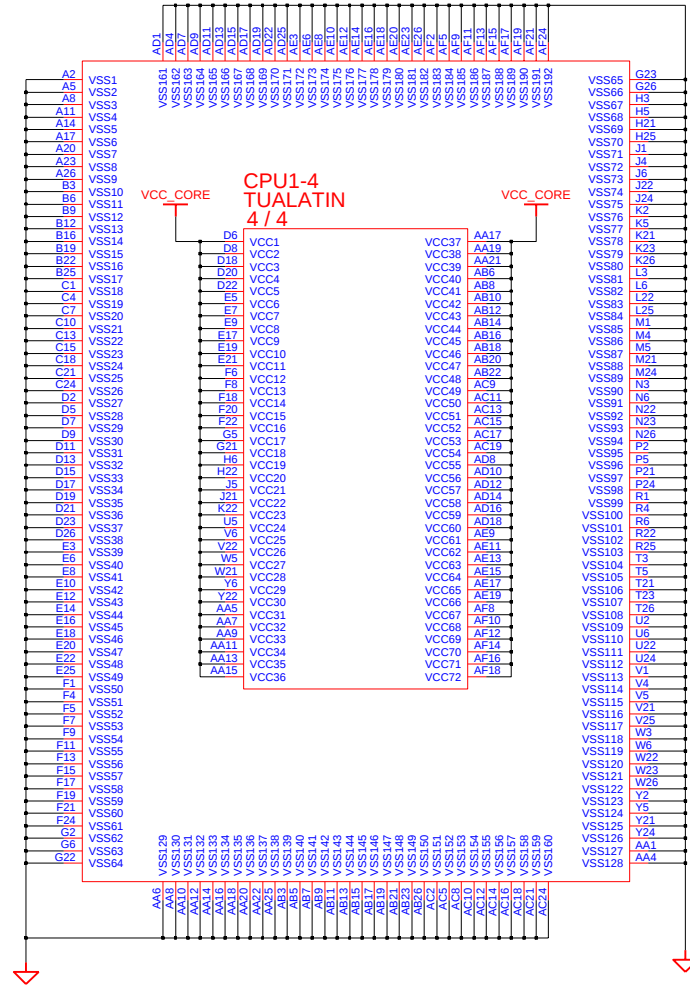
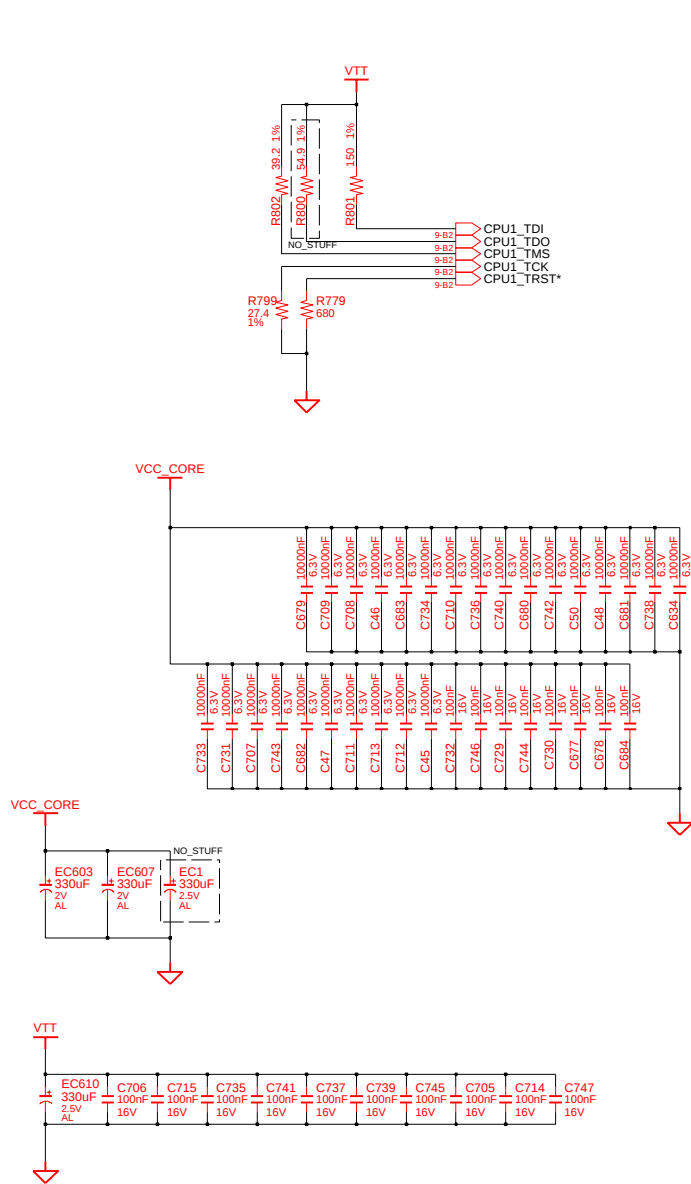
DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE MAIN CPU(1/3)	SAMSUNG ELECTRONICS
CHECK	YUN, C.Y	DEV. STEP	MP			PART NO. BA41-00509A
APPROVAL	LIM, J.G	REV	1.0			
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	8 OF 55	



Highest Freq. of Dothan400(1.8GHz)
* Highest Freq. of Dothan533(?? GHz : TBD)

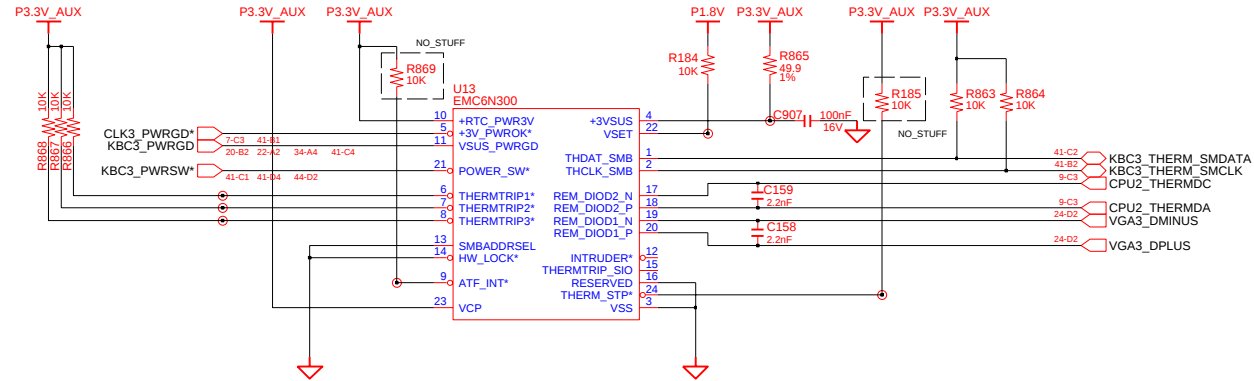
d:/users/desk40/mentor/son/FIRENZE/MP1.0

SAMSUNG PROPRIETARY
THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO.'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.

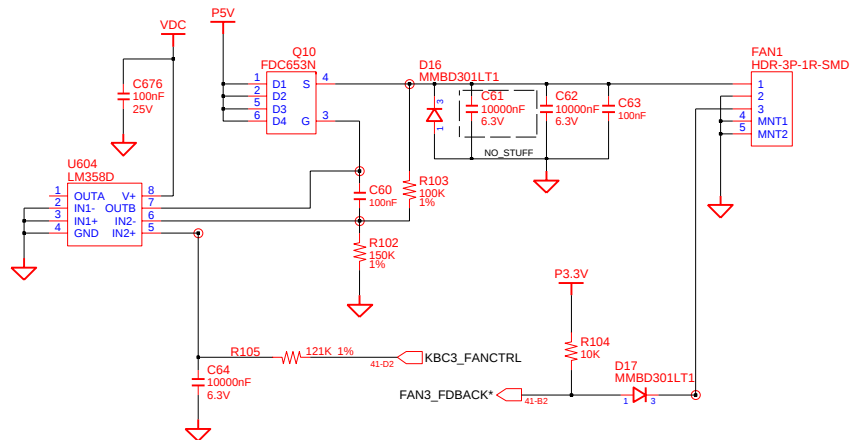


DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE	SAMSUNG ELECTRONICS
CHECK	YUN, C.Y	DEV. STEP	MP	MAIN	MAIN	
APPROVAL	LIM, J.G	REV	1.0	CPU(3/3)	PART NO. BA41-00509A	
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	10 OF 55	

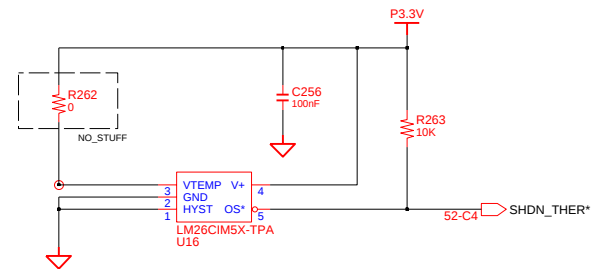
CPU/GFX Thermal Sensor



FAN CONTROL

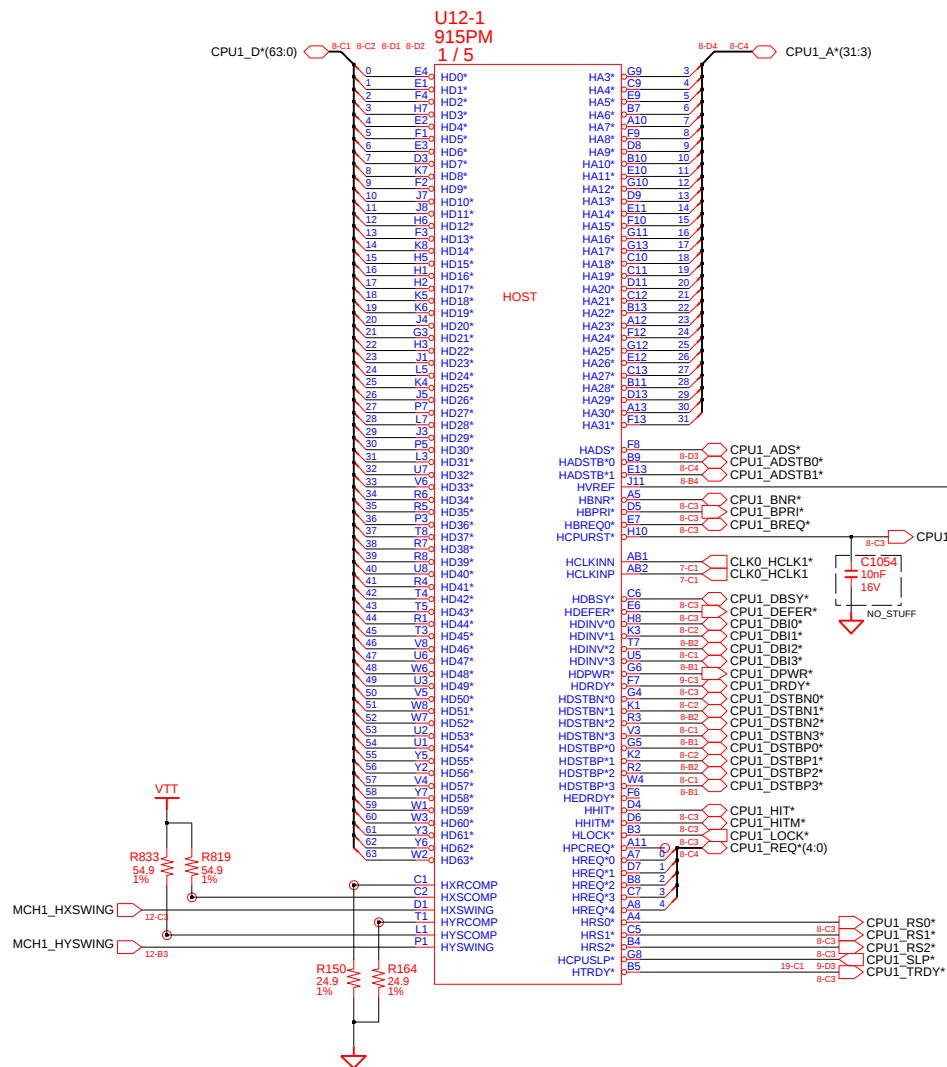


OPT CIRCUIT



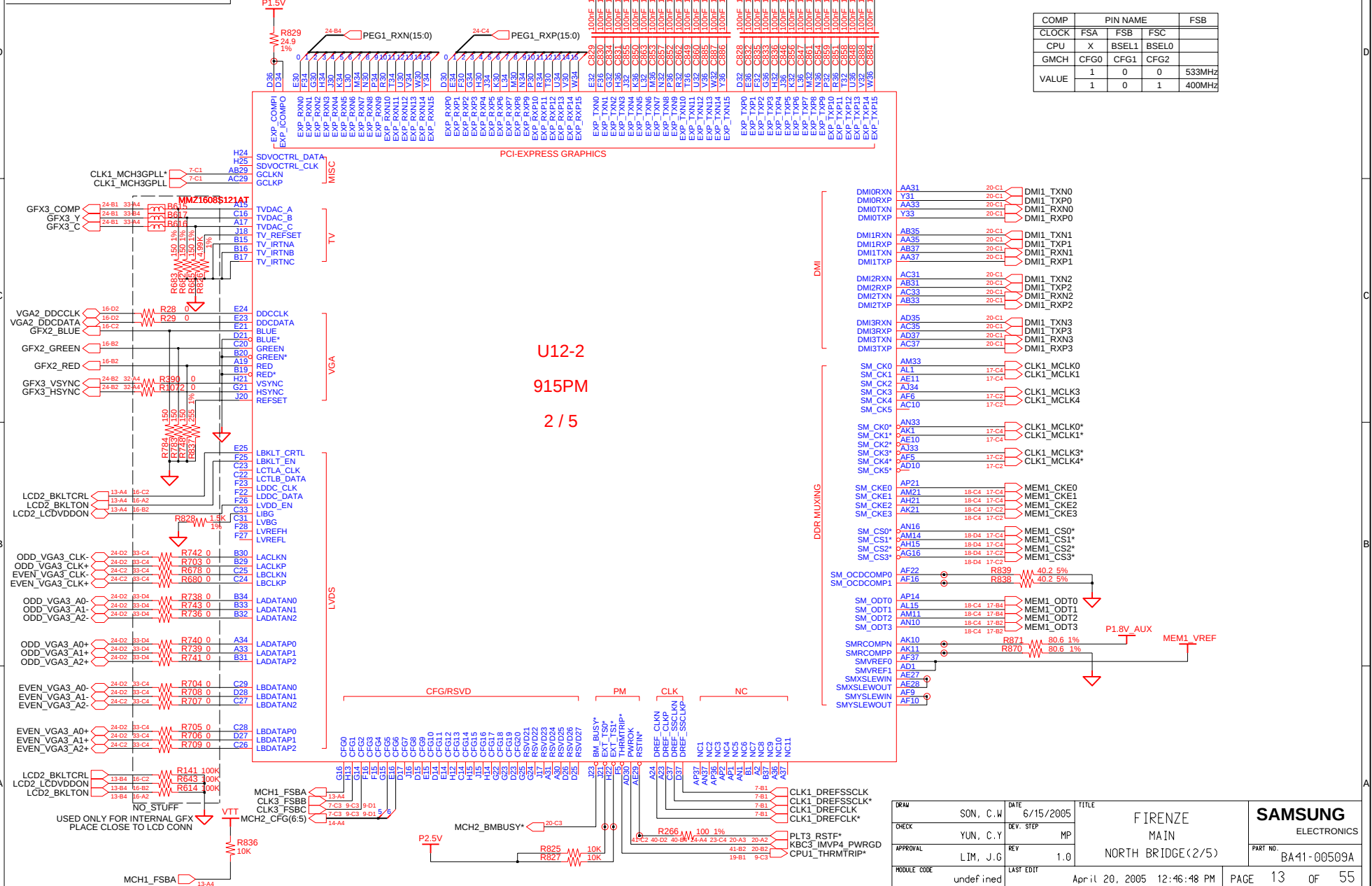
DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE MAIN	SAMSUNG ELECTRONICS
CHECK	YUN, C.Y	DEV. STEP	MP			
APPROVAL	LIM, J.G	REV	1.0		THERMAL SENSOR/FAN CTRL	PART NO. BA41-00509A
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	11	OF 55

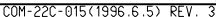
SAMSUNG PROPRIETARY
THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.



DRAW	SON, C.W	DATE	6/15/2005	TITLE FIRENZE MAIN NORTHE BRIDGE(1/5)		SAMSUNG ELECTRONICS	
CHECK	YUN, C.Y	DEV. STEP	MP				
APPROVAL	LIM, J.G	REV	1.0				
MODULE CODE		LAST EDIT		April 20, 2005 12:46:48 PM	PAGE	12	OF 55

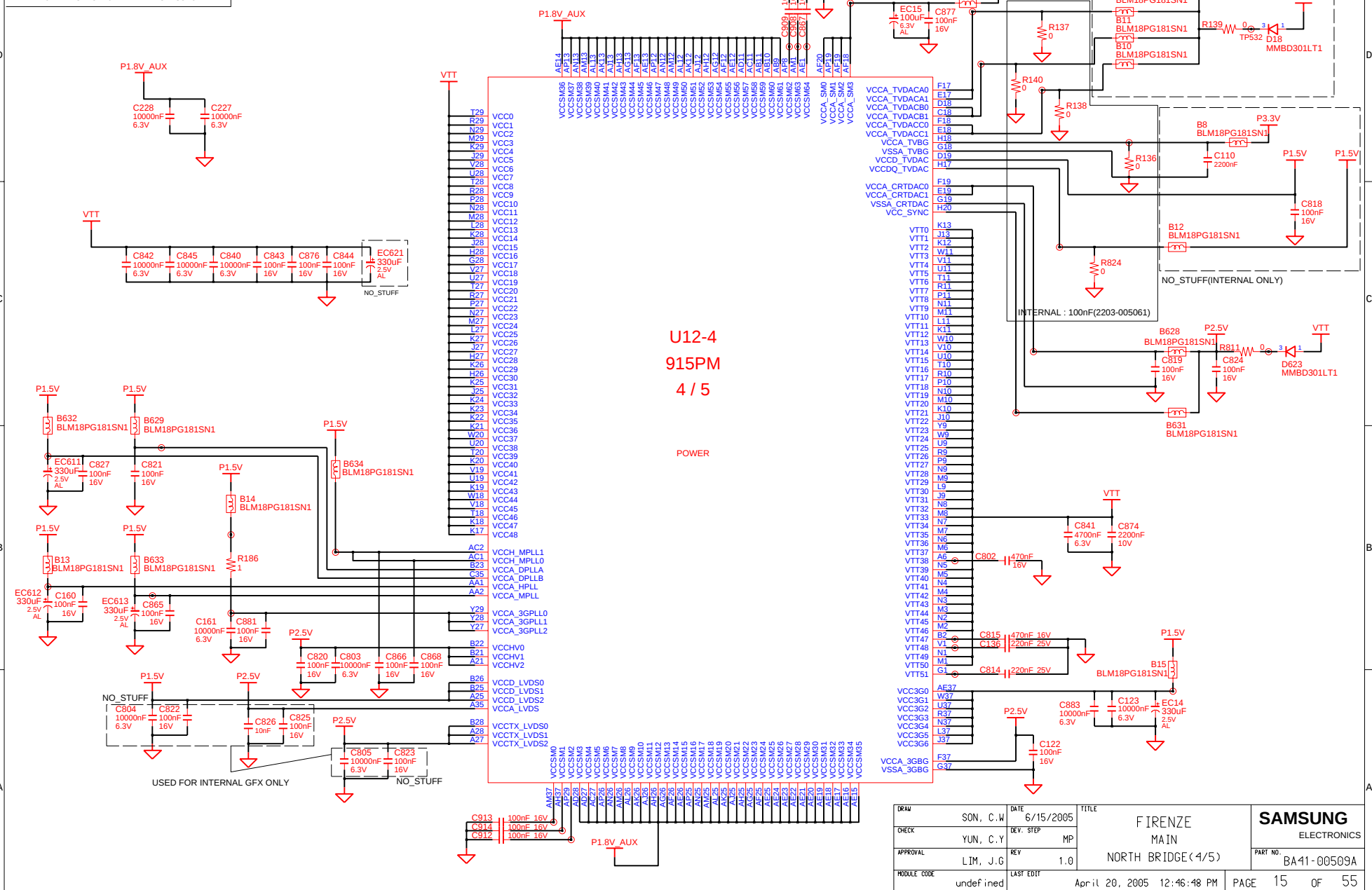
SAMSUNG PROPRIETARY
THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO.'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.

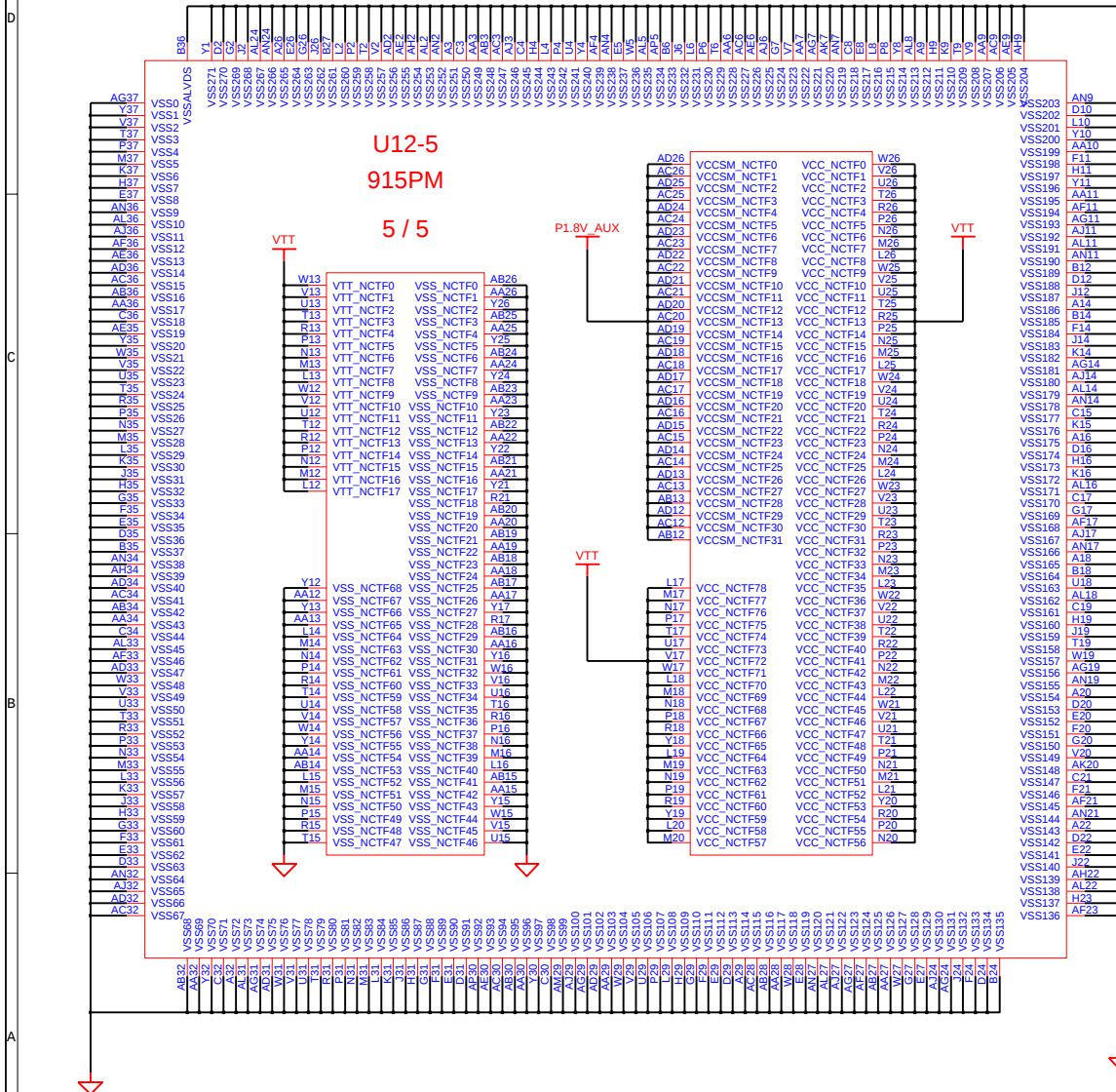


DMI x2 / x4 x4 only

d:/users/desk40/mentor/son/FIRENZE/MP1.0

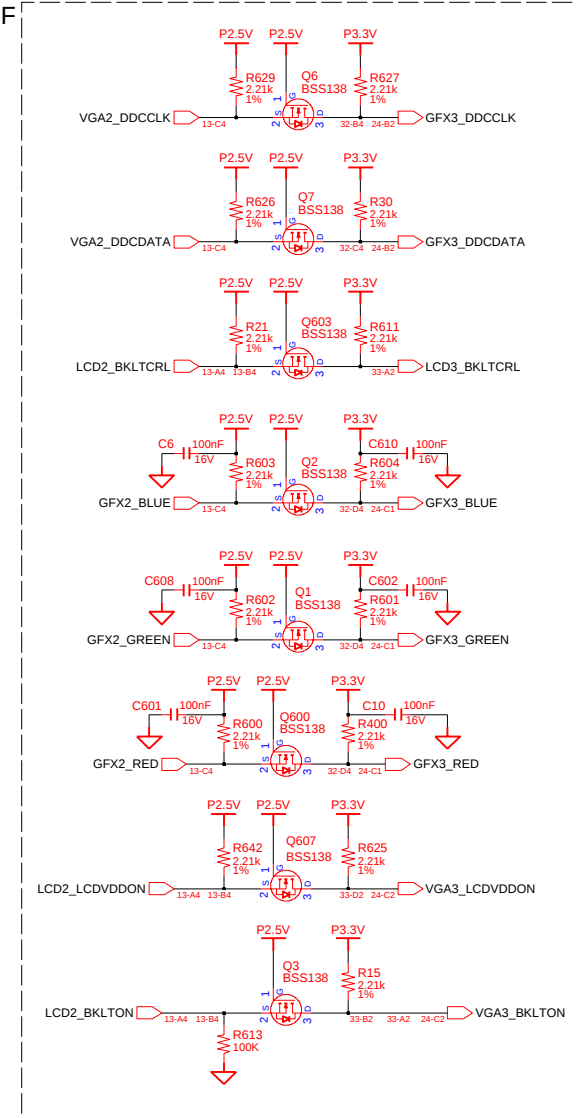
SAMSUNG PROPRIETARY
THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.



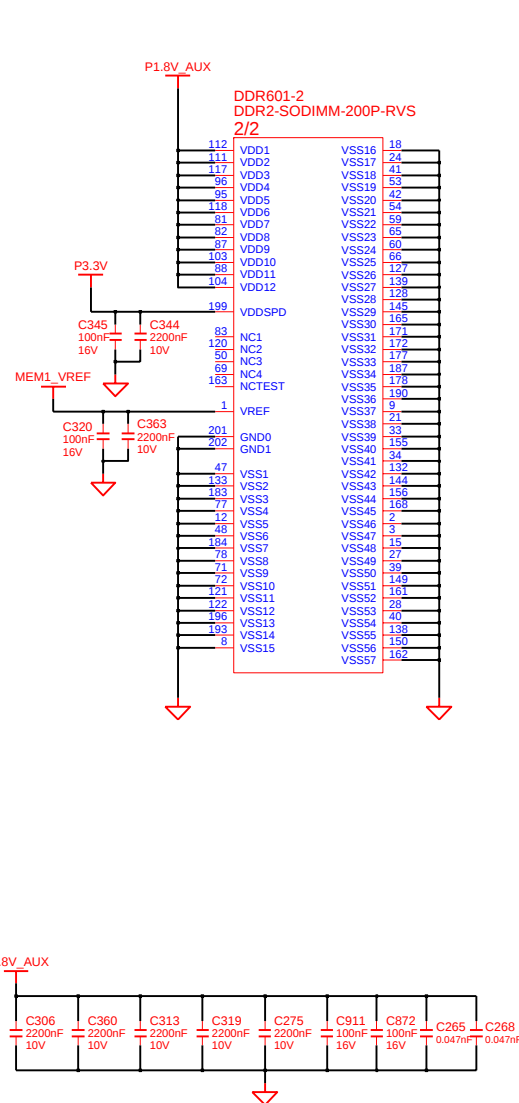
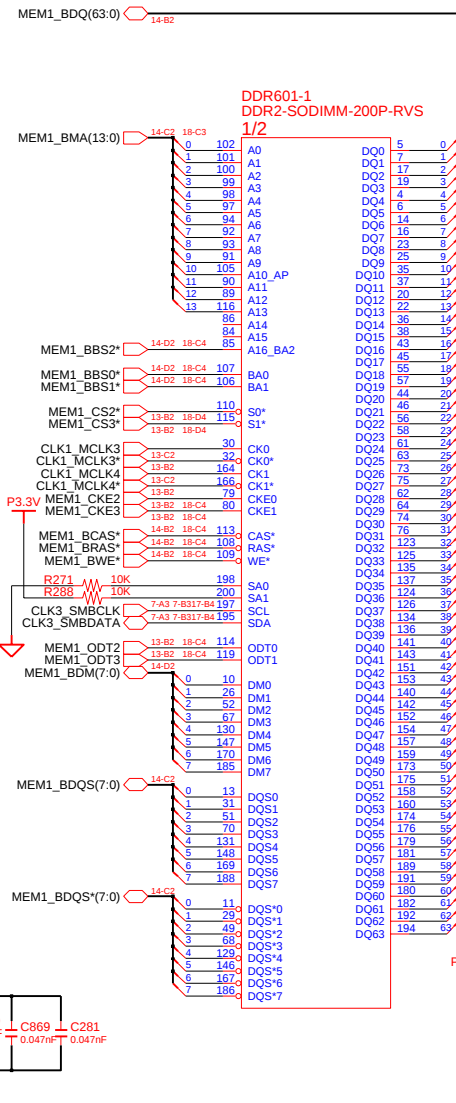
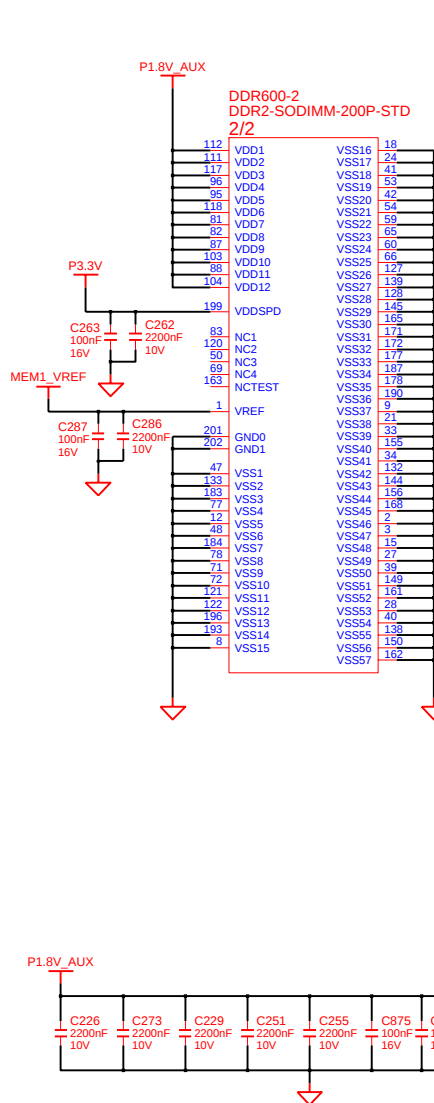


NO_STUFF

LVDS Voltage Translation Logic
(2.5V -> 3.3V)
INTERNAL GFX ONLY



DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE	SAMSUNG
CHECK	YUN, C.Y	DEV. STEP	MP		MAIN	ELECTRONICS
APPROVAL	LIM, J.G	REV	1.0		NORTH BRIDGE(5/5)	PART NO. BA41-00509A
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	16	OF 55



DRAM	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE MAIN	SAMSUNG ELECTRONICS
CHECK	YUN, C.Y	DEV. STEP	MP			
APPROVAL	LIM, J.G	REV	1.0			
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	17	OF 55

SAMSUNG PROPRIETARY
THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO.'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.

MEM1_CS0*
MEM1_CS1*
MEM1_CS2*
MEM1_CS3*

MEM1_CKE0
MEM1_CKE1
MEM1_CKE2
MEM1_CKE3

MEM1_ODT0
MEM1_ODT1
MEM1_ODT2
MEM1_ODT3

MEM1_ABS0*
MEM1_ABS1*
MEM1_ABS2*

MEM1_ACAS*
MEM1_ARAS*
MEM1_AWE*

MEM1_BBS0*
MEM1_BBS1*
MEM1_BBS2*

MEM1_BCAS*
MEM1_BRAS*
MEM1_BWE*

MEM1_AMA(13:0)

MEM1_BMA(13:0)

0 RA3-2
1 RA10-1
2 RA4-1
3 RA10-2

4 RA4-2
5 RA11-1
6 RA5-1
7 RA5-2

8 RA11-2
9 RA12-1
10 RA9-2
11 RA6-1

12 RA12-2
13 RA1-1

0 RA16-2
1 RA23-1
2 RA17-1
3 RA23-2

4 RA17-2
5 RA24-1
6 RA18-1
7 RA18-2

8 RA24-2
9 RA25-1
10 RA22-2
11 RA19-1

12 RA25-2
13 RA14-1

P1.8V_AUX

P1.8V_AUX

P1.8V_AUX

C871
100nF
16V

C283
100nF
16V

C303
100nF
16V

P0.9V

C280
100nF
16V

C279
100nF
16V

C305
100nF
16V

C304
100nF
16V

C303
100nF
16V

C302
100nF
16V

C278
100nF
16V

C277
100nF
16V

C276
100nF
16V

C275
100nF
16V

C274
100nF
16V

C273
100nF
16V

C272
100nF
16V

C271
100nF
16V

C270
100nF
16V

C269
100nF
16V

C268
100nF
16V

C267
100nF
16V

C266
100nF
16V

C265
100nF
16V

C264
100nF
16V

C263
100nF
16V

C262
100nF
16V

C261
100nF
16V

C260
100nF
16V

C259
100nF
16V

C258
100nF
16V

C257
100nF
16V

C256
100nF
16V

C255
100nF
16V

C254
100nF
16V

C253
100nF
16V

C252
100nF
16V

C251
100nF
16V

C250
100nF
16V

C249
100nF
16V

C248
100nF
16V

C247
100nF
16V

C246
100nF
16V

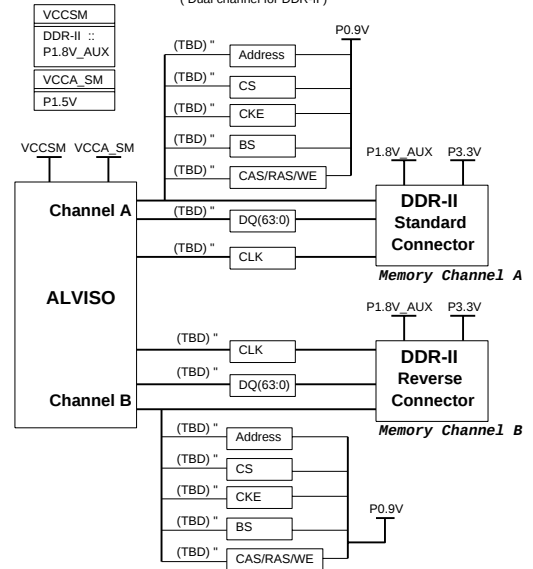
C245
100nF
16V

C244
100nF
16V

C243
100nF
16V

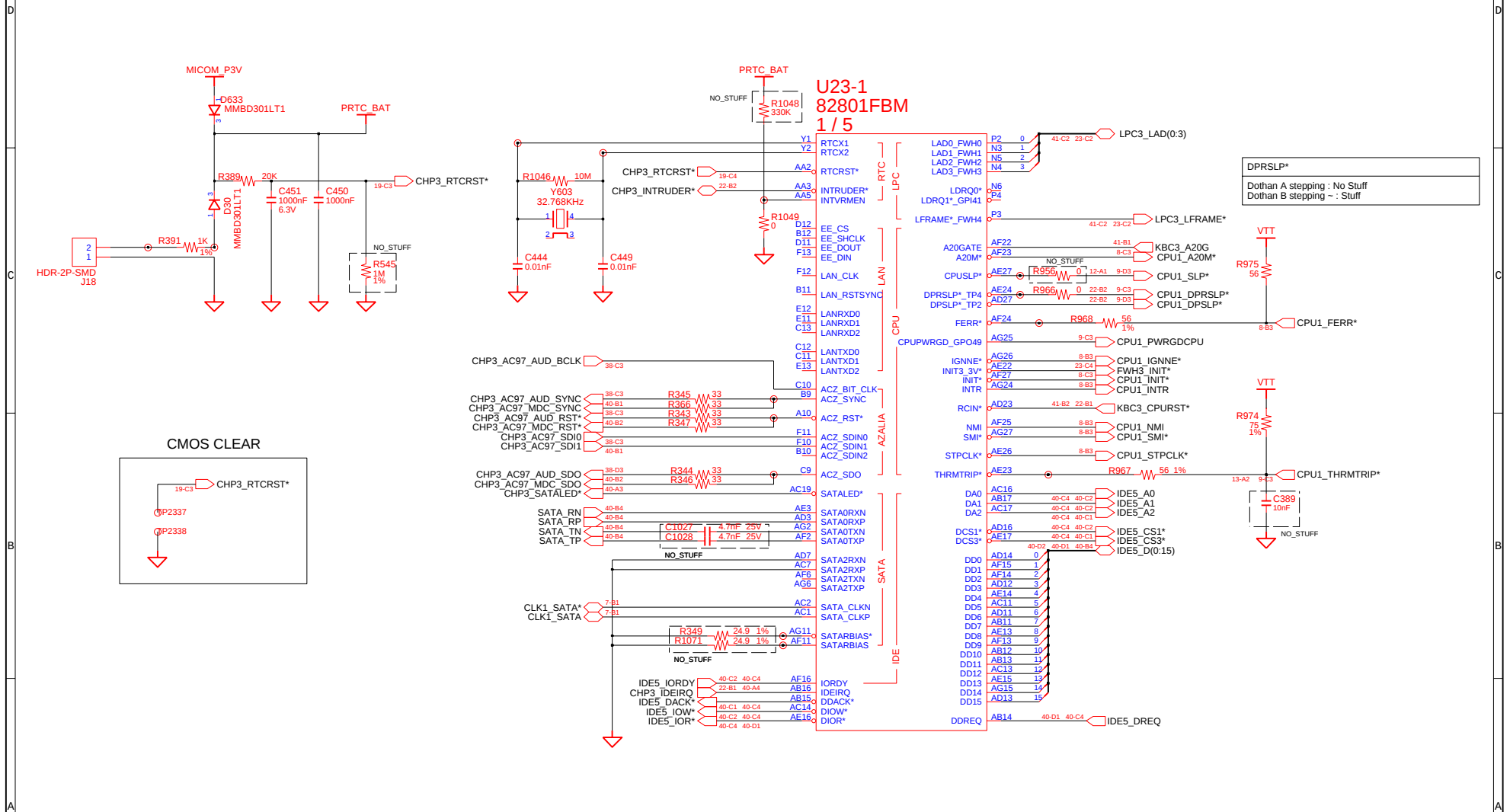
Memory Topology

(Dual channel for DDR-II)

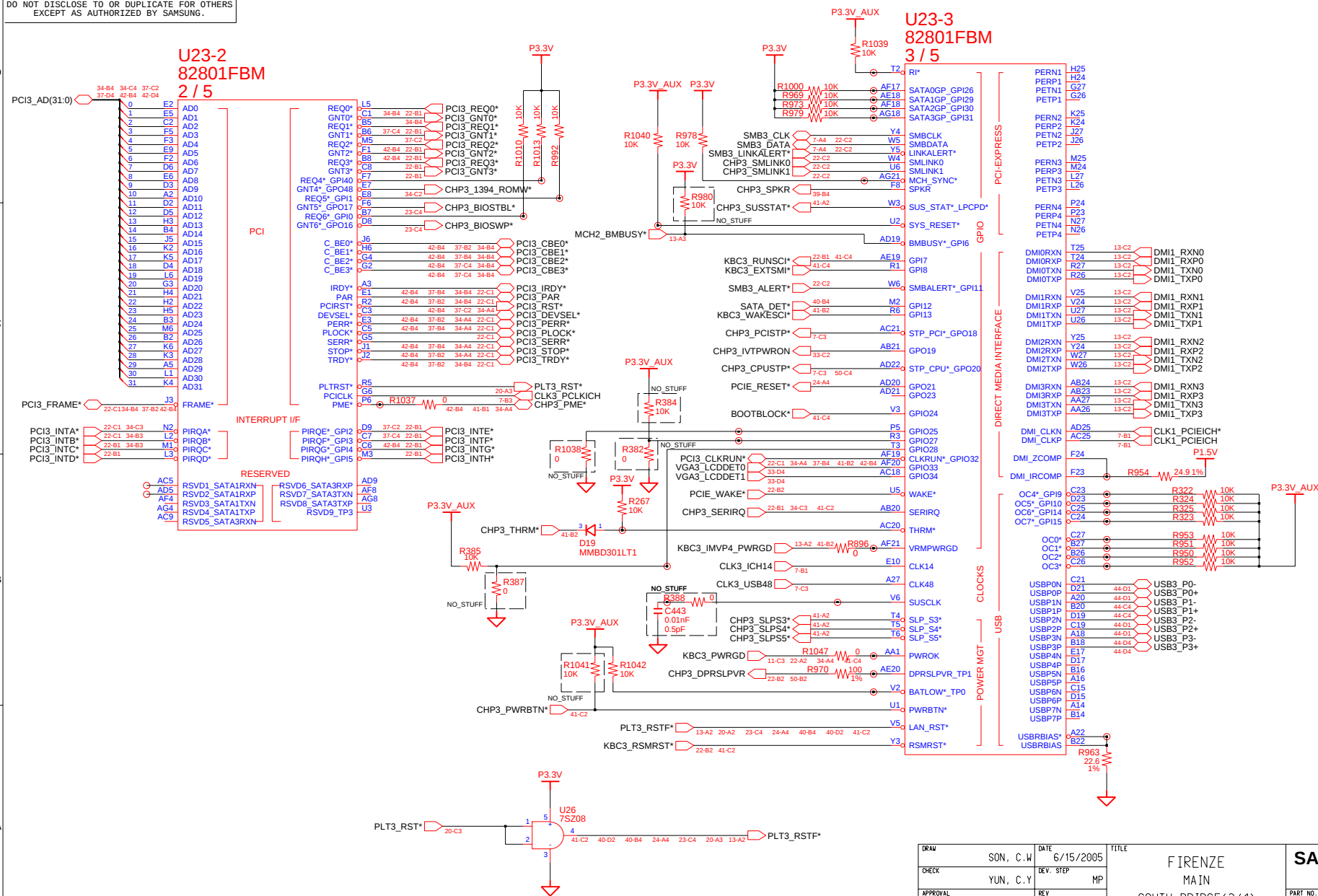


DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE MAIN DDR2-TERMINATION	SAMSUNG ELECTRONICS
CHECK	YUN, C.Y	DEV. STEP	MP			PART NO. BA41-00509A
APPROVAL	LIM, J.G	REV	1.0			
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	18	OF 55

SAMSUNG PROPRIETARY
THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO.'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.



DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE MAIN	SAMSUNG ELECTRONICS
CHECK	YUN, C.Y	DEV. STEP	MP			
APPROVAL	LIM, J.G	REV	1.0		SOUTH BRIDGE(1/4)	PART NO. BA41-00509A
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	19	OF 55



DRAM	SON, C.W.	DATE	6/15/2005	TITLE	FIRENZE MAIN SOUTH BRIDGE(2/4)	
CHECK	YUN, C.Y.	DEV. STEP	MP			
APPROVAL	LIM, J.G.	REV	1.0			
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM			

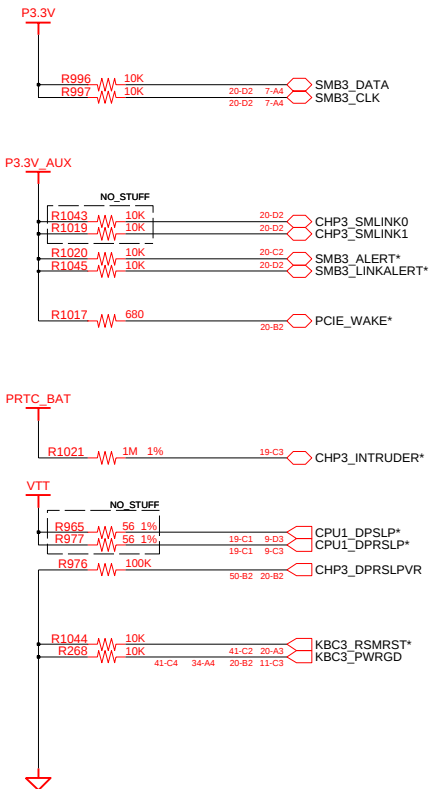
[illegible]

COM-22C-015(1996.6.5) REV. 3

SAMSUNG PROPRIETARY
THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO.'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.

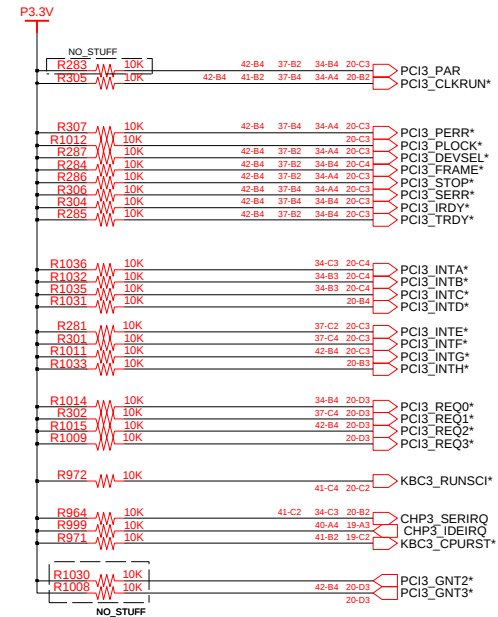
U23-5
82801FBM
5 / 5

AG22	VSS_172	VSS_86	P22
AG20	VSS_171	VSS_85	P16
AG17	VSS_170	VSS_84	P15
AG14	VSS_169	VSS_83	P14
AG12	VSS_168	VSS_82	P13
AG7	VSS_167	VSS_81	P12
AG3	VSS_166	VSS_80	N17
AG1	VSS_165	VSS_79	N16
AF26	VSS_164	VSS_78	N15
AF12	VSS_163	VSS_77	N14
AF10	VSS_162	VSS_76	N13
AF7	VSS_161	VSS_75	N12
AF3	VSS_160	VSS_74	N11
AF1	VSS_159	VSS_73	N7
AE25	VSS_158	VSS_72	N1
AE21	VSS_157	VSS_71	M27
AE12	VSS_156	VSS_70	M26
AE11	VSS_155	VSS_69	M23
AE10	VSS_154	VSS_68	M18
AE7	VSS_153	VSS_67	M16
AE6	VSS_152	VSS_66	M14
AE2	VSS_151	VSS_65	M13
AD24	VSS_150	VSS_64	M12
AD18	VSS_149	VSS_63	M4
AD15	VSS_148	VSS_62	L25
AD10	VSS_147	VSS_61	L24
AD6	VSS_146	VSS_60	L23
AD2	VSS_145	VSS_59	L13
AD1	VSS_144	VSS_58	K27
AC26	VSS_143	VSS_57	K26
AC24	VSS_142	VSS_56	K23
AC23	VSS_141	VSS_55	K1
AC22	VSS_140	VSS_54	J25
AC12	VSS_139	VSS_53	J24
AC10	VSS_138	VSS_52	J23
AC6	VSS_137	VSS_51	J4
AC3	VSS_136	VSS_50	H27
AB19	VSS_135	VSS_49	H26
AB10	VSS_134	VSS_48	H23
AB9	VSS_133	VSS_47	G27
AB7	VSS_132	VSS_46	G12
AB2	VSS_131	VSS_45	G9
AB1	VSS_130	VSS_44	G7
AA16	VSS_129	VSS_43	G1
AA13	VSS_128	VSS_42	F22
AA11	VSS_127	VSS_41	F19
AA4	VSS_126	VSS_40	F17
Y27	VSS_125	VSS_39	F4
Y26	VSS_124	VSS_38	E27
Y23	VSS_123	VSS_37	E26
Y6	VSS_122	VSS_36	E19
W25	VSS_121	VSS_35	E18
W24	VSS_120	VSS_34	E15
W23	VSS_119	VSS_33	E14
W7	VSS_118	VSS_32	D22
W1	VSS_117	VSS_31	D20
V27	VSS_116	VSS_30	D18
V26	VSS_115	VSS_29	D14
V23	VSS_114	VSS_28	D13
V4	VSS_113	VSS_27	D10
U25	VSS_112	VSS_26	D7
U24	VSS_111	VSS_25	D1
U23	VSS_110	VSS_24	C22
U15	VSS_109	VSS_23	C20
U13	VSS_108	VSS_22	C18
T27	VSS_107	VSS_21	C14
T26	VSS_106	VSS_20	C4
T23	VSS_105	VSS_19	B25
T16	VSS_104	VSS_18	B24
T15	VSS_103	VSS_17	B23
T14	VSS_102	VSS_16	B18
T13	VSS_101	VSS_15	B15
T12	VSS_100	VSS_14	B13
T7	VSS_99	VSS_13	A26
T1	VSS_98	VSS_12	A23
R25	VSS_97	VSS_11	A21
R24	VSS_96	VSS_10	A19
R23	VSS_95	VSS_9	A15
R17	VSS_94	VSS_8	A12
R16	VSS_93	VSS_7	A9
R15	VSS_92	VSS_6	A7
R14	VSS_91	VSS_5	A4
R13	VSS_90	VSS_4	A1
R12	VSS_89	VSS_3	
R11	VSS_88	VSS_2	
R4	VSS_87	VSS_1	



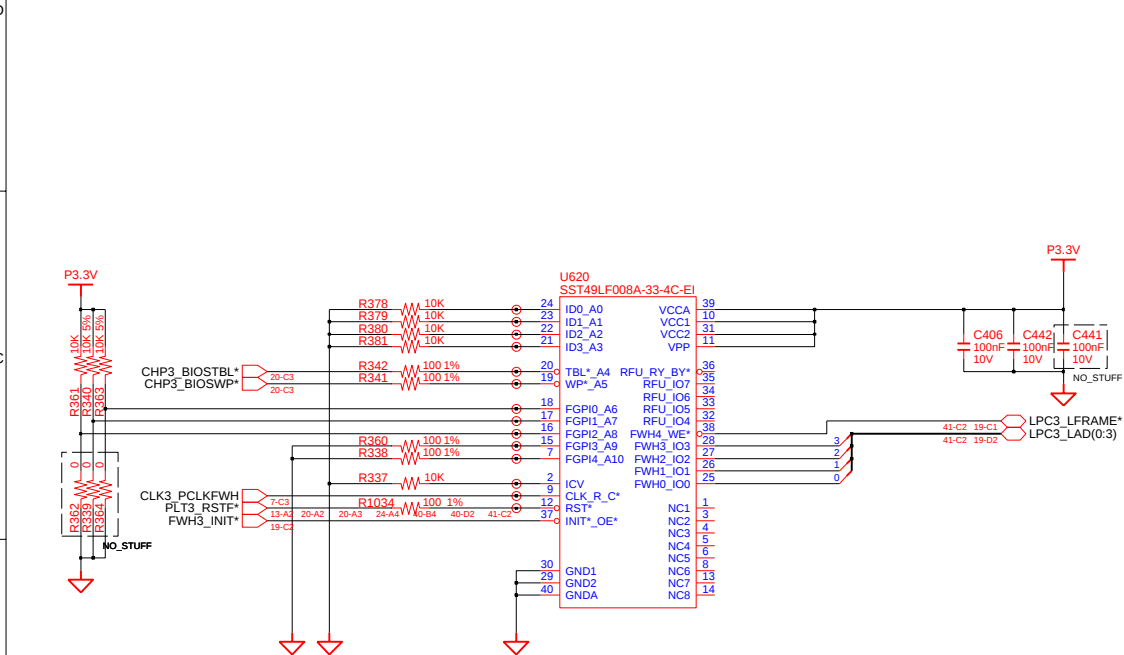
ICH6-m Strapping Options

	Function	Default
CHP3_SPKR	No Reboot	No Stuff
CHP3_BIOSWP*	Boot BIOS	No Stuff
PC/PCI_GNTA*	A16 swap override	No Stuff
AC97_SDOUT	Safe Mode	TBD
EEP_DOUT		TBD



DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE	SAMSUNG ELECTRONICS
CHECK	YUN, C.Y	DEV. STEP	MP	MAIN	BA41-00509A	
APPROVAL	LIM, J.G	REV	1.0	SOUTH BRIDGE(4/4)		
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	22 OF 55	

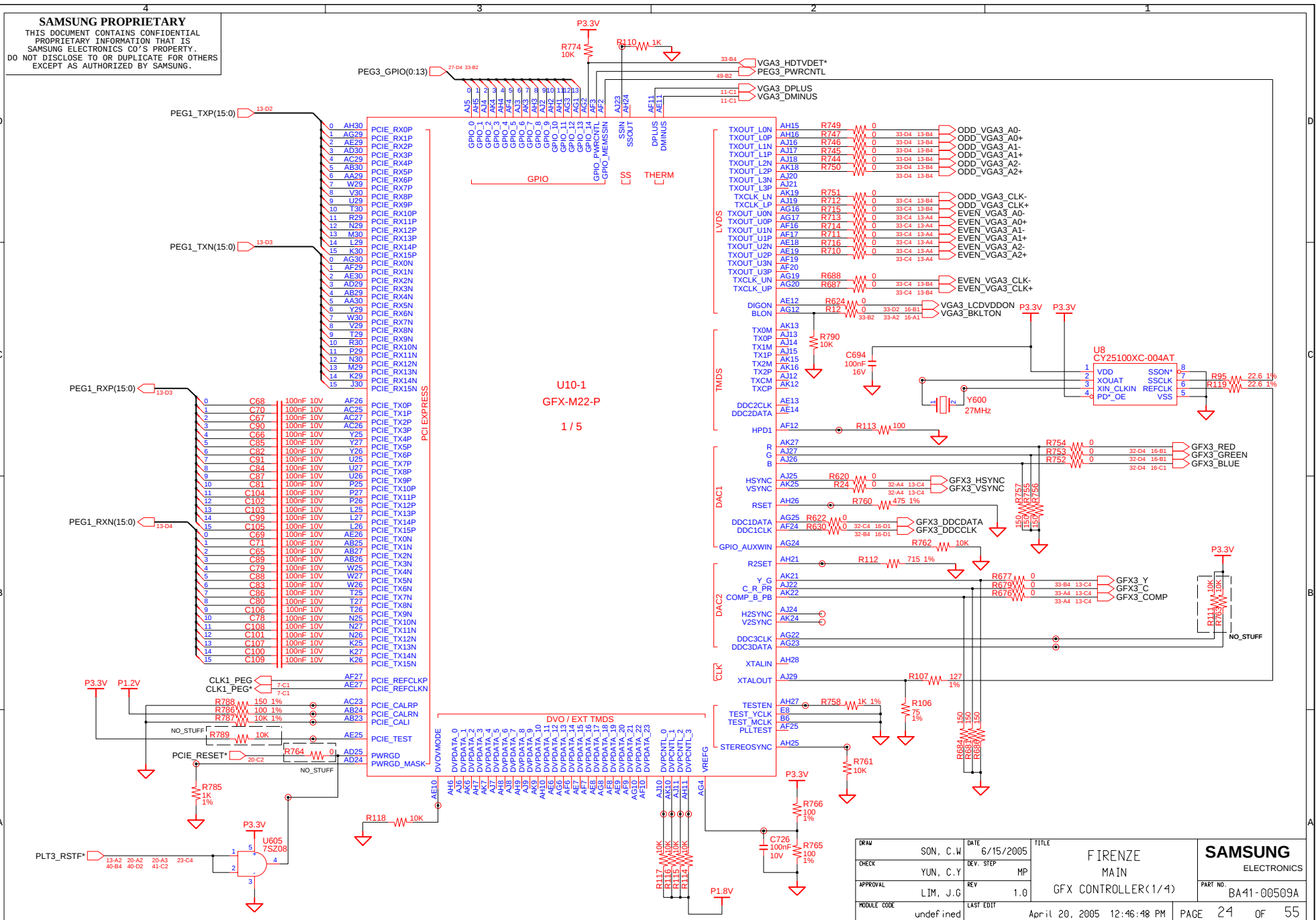
SAMSUNG PROPRIETARY
THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO.'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.



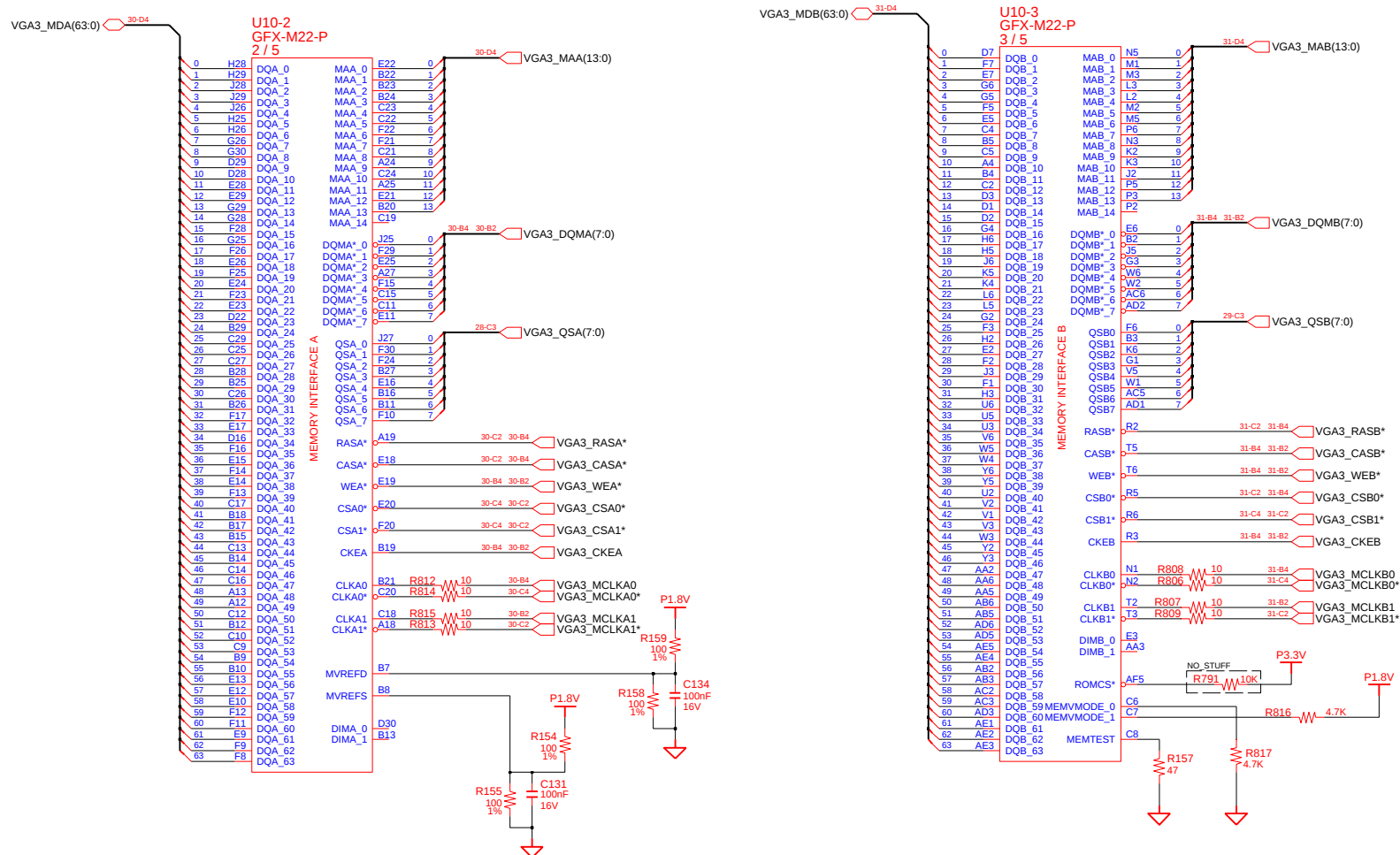
- | | | | |
|----|------------------------------------|----|---------------------------------|
| 02 | VERIFY REAL MODE | 66 | CONFIGURE ADVANCE CACHE REG. |
| 03 | DISABLE NMI | 6A | DISPLAY EXTERNAL CACHE SIZE |
| 04 | GET CPU TYPE | 6C | DISPLAY SHADOW MESSAGE |
| 06 | INIT. SYSTEM H/W | 6E | DISPLAY NON-DISPOSABLE SEGMENT |
| 08 | INIT. CHIPSET REG. | 70 | DISPLAY ERROR MESSAGE |
| 09 | SET IN POST FLAG | 72 | CHECK FOR CONFIGURATION ERROR |
| 0A | INIT CPU.REG | 74 | TEST REAL-TIME CLOCK |
| 0B | CPU CACHE ON | 76 | CHECK FOR KEYBOARD ERROR |
| 0C | INIT.CACHE TO POST | 7C | SETUP HARDWARE INTERRUPT VECTOR |
| 0E | INIT. I/O VALUE | 7E | TEST COPROCESSER IF PRESENT |
| 0F | ENABLE THE L-BUS IDE | 80 | DISABLE ON-BOARD I/O PORT |
| 10 | INIT. POWER MANAGER | 82 | DETECT AND INSTALL EXT.RS232C |
| 11 | LOAD ALTERNATE REG. | 84 | DETECT AND INSTALL EXT.PARALLEL |
| 13 | PCI BUS MASTER RESET | 86 | RE-INIT. ON-BOARD I/O PORT |
| | WITH INITIAL POST VALUE | 88 | INIT. BIOS DATA ROM |
| 14 | INIT. KEYBOARD CONTROLLER | 8A | INIT.EXTENDED BIOS DATA AREA |
| 16 | CHECK CHECKSUM | 8C | INIT. FDD CONTROLLER |
| 18 | 8254 TIMER INIT. | 9A | SHADOW OPTION ROMS |
| 1A | 8237 DMA CONTROLLER INIT. | 9C | SETUP POWER MANAGEMENT |
| 1C | RESET INTERRUPT CONTROLLER | 9E | ENABLE H/W INTERRUPT |
| 20 | TEST DRAM REFRESH | A0 | SET TIME OF DAY |
| 22 | TEST 8742 KEYBOARD CONTROLLER | A4 | INIT. TYPEMATIC RATE |
| 24 | SET ES SEGMENT REG. TO 4GB | A8 | ERASE F2 PROMPT |
| 26 | ENABLE A20 | AA | SCAN FOR F2 KEY STROKE |
| 28 | AUTO SIZING DRAM | AC | ENTER SETUP |
| 32 | COMPUTE THE CPU SPEED | AE | CLEAR IN POST FLAG |
| 34 | TESET CMOS RAM | B0 | CHECK FOR ERRORS |
| 38 | SHADOW SYSTEM BIOS ROM | B2 | POST DONE-PREPARE TO BOOT O/S |
| 3A | AUTO SIZING CACHE | B4 | ONE BEEP |
| 3C | CONFIGURE ADVANCED CHIPSET REG. | B6 | CHECK PASSWORD (OPTION) |
| 3D | LOAD ALTER REG. WITH CMOS VALUE | B7 | ACPI INIT |
| 42 | INIT. INTERRUPT VECTOR | BA | DMI INIT |
| 44 | INIT. BIOS INTERRUPT | BE | CLEAR SCREEN |
| 46 | CHECK ROM COPYRIGHT NOTICE | C0 | TRY BOOT WITH INT19 |
| 47 | INIT. I20 SUPPORT IF INSTALLED | D0 | INTERRUPT HANDLER ERROR |
| 48 | CHECK VIDEO CONFIGURE AGAINST CMOS | D2 | UNKNOWN INTERRUPT ERROR |
| 49 | INIT. PCI BUS AND DEVICE | D4 | PENDING INTERRUPT ERROR |
| 4A | INIT. ALL VIDEO BIOS ROM | D6 | SHUTDOWN 5 |
| 4C | SHADOW VIDEO BIOS ROM | D8 | SHUTDOWN ERROR |
| 50 | DISPLAY CPU TYPE AND SPEED | DA | EXTENDED BLOCK MOVE |
| 52 | TEST KEYBOARD | DC | SHUTDOWN 10 |
| 54 | SET KEYCLICK IF ENABLED | 89 | ENABLE NMI |
| 56 | ENABLE KEYBOARD | 90 | INIT. HDD CONTROLLER |
| 58 | TEST FOR UNEXPECTED INTERRUPTS | 91 | INIT. LOCAL BUS HDD CONTROLLER |
| 5A | DISPLAY "PRESS SETUP" | 92 | JUMP TO USER PATCH 2 |
| 5C | TEST RAM BETWEEN 512K AND 640K | 94 | DISABLE A20 ADDRESS LINE |
| 60 | TEST EXTENDED MEMORY | 96 | CLEAR HUGE ES SEGMENT REG. |
| 62 | TEST EXTENDED MEMORY ADDRESS LINE | 98 | SEARCH FOR OPTION ROMS |
| 64 | JUMP TO USER PATCH 1 | | |

DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE	SAMSUNG
CHECK	YUN, C.Y	DEV. STEP	MP		MAIN	ELECTRONICS
APPROVAL	LIM, J.G	REV	1.0		FWH	PART NO.
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM			BA41-00509A
				PAGE	23	OF 55

SAMSUNG PROPRIETARY
THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO.'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.

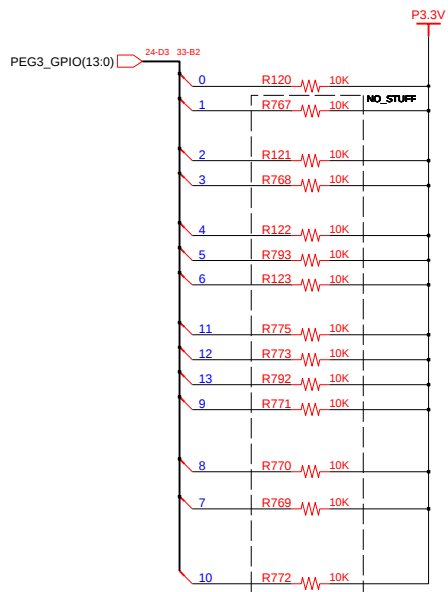


THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.



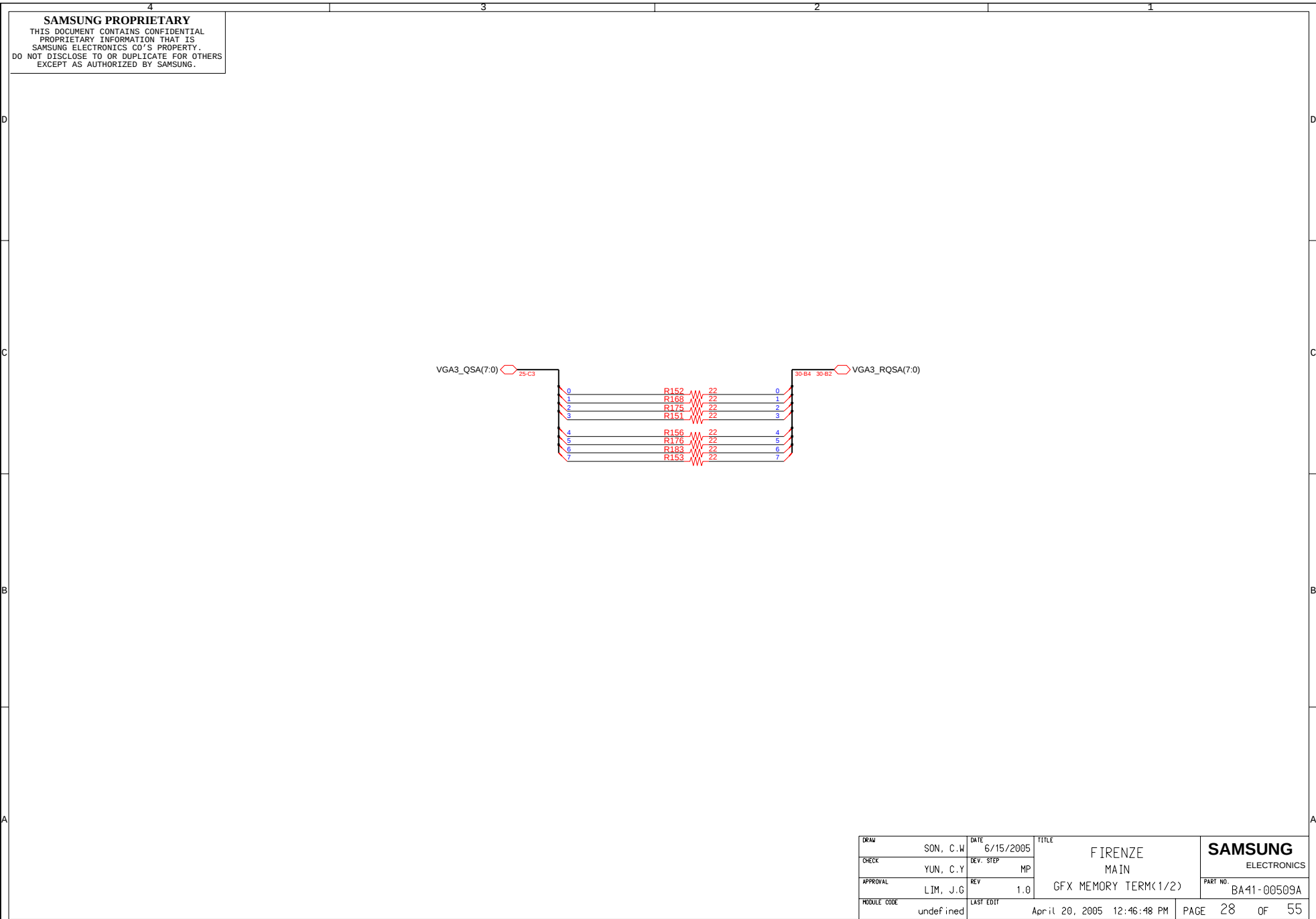
DATE	6/15/2005	TITLE	FIRENZE		SAMSUNG	
CHECK	YUN, C. Y.	DEV. STEP	MAIN		ELECTRONICS	
APPROVAL	LIM, J. G.	REV	1.0		PART NO. BA41-00509A	
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM		PAGE	25 OF 55
			GFX CONTROLLER(2/4)			

THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.

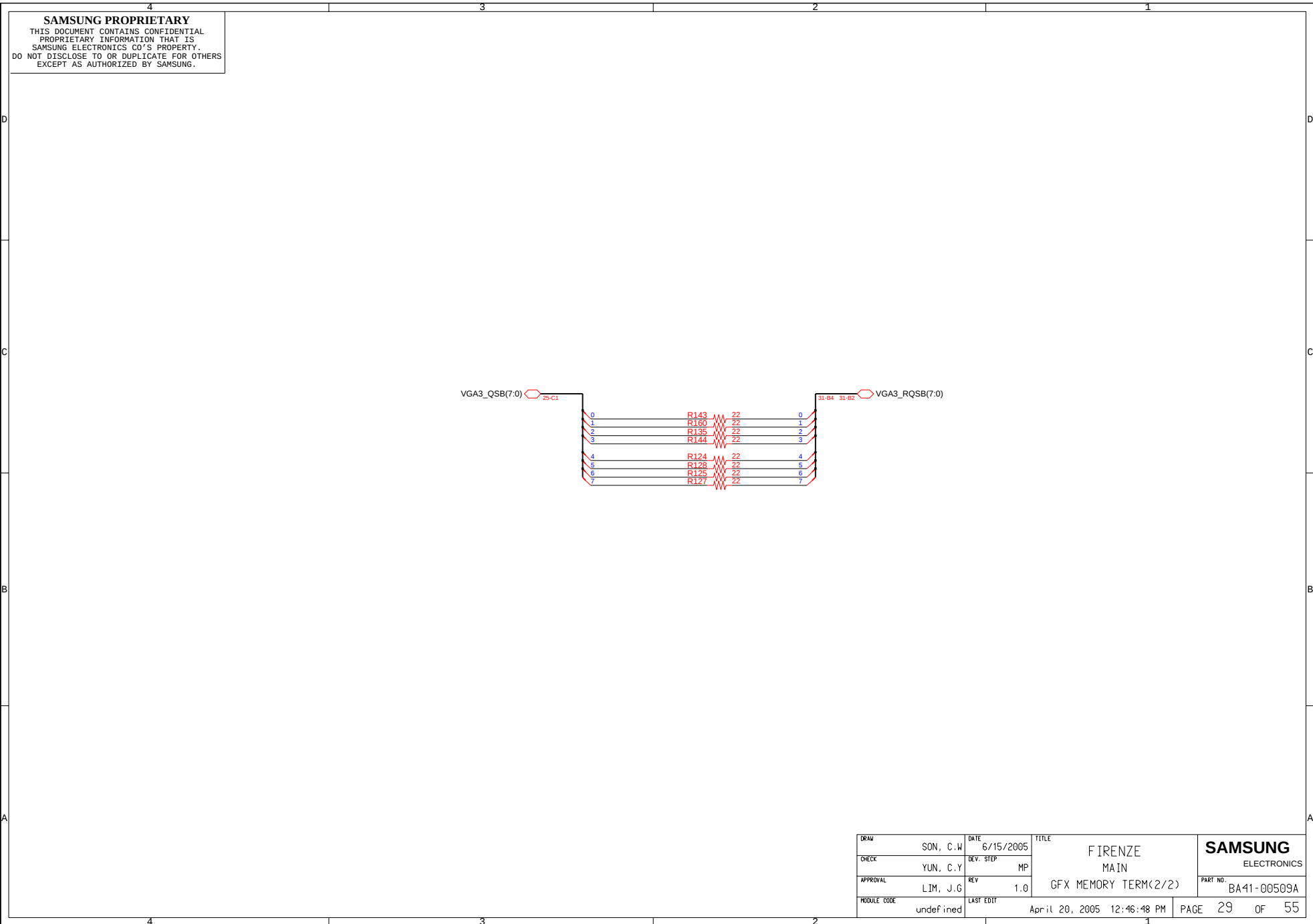


Straps	Pin Number	Descriptions
CAL_BG_BACKUP	GPIO0	PCI-Express Current Calibration Bandgap Backup 0 : use reference voltage from bandgap (Default) 1 : use reference voltage from resistor divider
PLL_CAL_FORCE_EN	GPIO1	PCI-Express PLL Calibration Force Enable 0 : Disable PLL force calibration (Default) 1 : Enable PLL force calibration
PCIE Mode(1:0)	GPIO(3:2)	PCI-Express Mode 00 : PCI Express 1.0A mode (Default) 01 : Reserved 10 : PCI Express 1.0 mode 11 : Reserved
CAL_OFF	GPIO4	Turn-Off PCI-Express Impedance / Strength Calibration 0 : Enable (Default) 1 : Disable Also, used to demux VCOREF / CALREF
BYPASS_PLL	GPIO5	Bypass PCI-Express PLL 0 : - (Default) 1 : -
ICOMP	GPIO6	PCI-Express Transmitter Current Compensation 0 : Normal (Default) 1 : Inject extra current for output buffer switching
ROMIDCFG(3:0)	GPIO(9,13:11)	If no ROM attached, controls chip IDs. 0000 : No ROM, CHG_ID = 0 0001 : No ROM, CHG_ID = 1 0100 : Reserved 0110 : Reserved Others : ROM (Third party vendors)
DEBUG_ACCESS	GPIO8	Strap to set the debug muxes to bring out DEBUG signals even if registers are inaccessible.

DRAM	SON, C.W.	DATE	6/15/2005	TITLE FIRENZE MAIN GFX CONTROLLER(4/4)	
CHECK	YUN, C.Y.	DEV. STEP	MP		
APPROVAL	LIM, J.G.	REV	1.0		
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM		

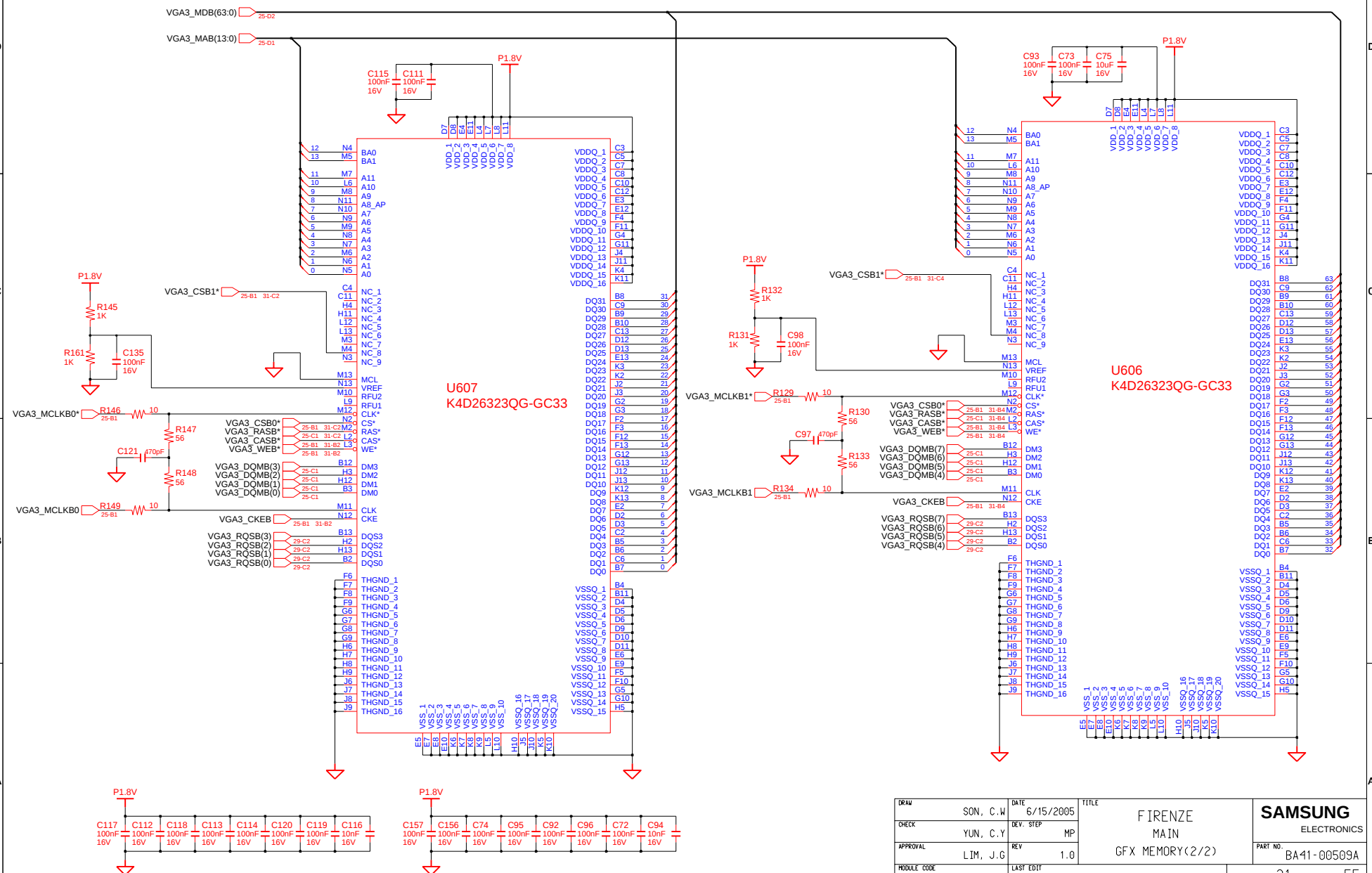


DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE MAIN	SAMSUNG ELECTRONICS
CHECK	YUN, C.Y	DEV. STEP	MP			
APPROVAL	LIM, J.G	REV	1.0		GFX MEMORY TERM(1/2)	PART NO. BA41-00509A
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	28	OF 55



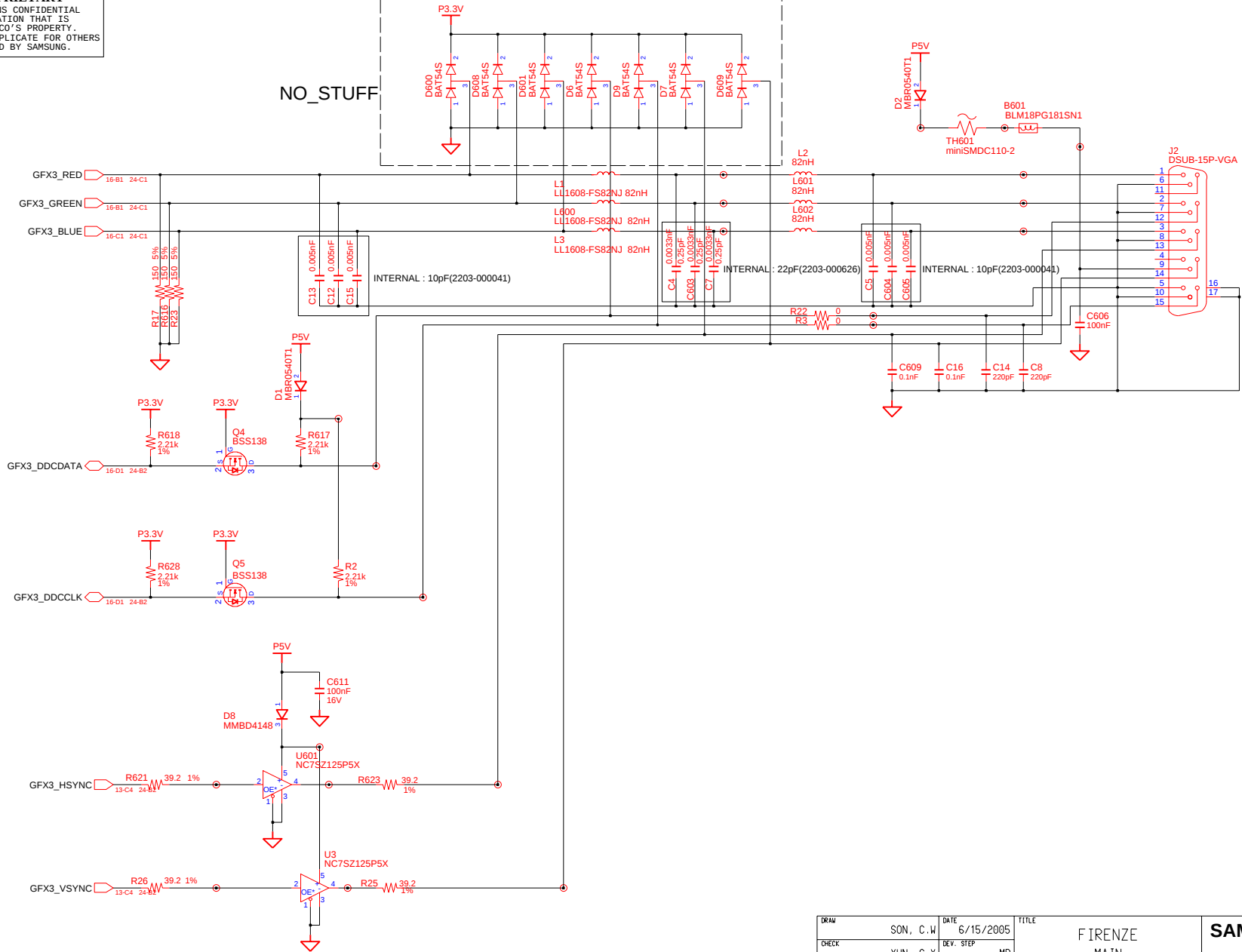
DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE MAIN GFX MEMORY TERM(2/2)	SAMSUNG ELECTRONICS
CHECK	YUN, C.Y	DEV. STEP	MP			
APPROVAL	LIM, J.G	REV	1.0			
MODULE CODE		LAST EDIT		PART NO. BA41-00509A		
undefined		April 20, 2005 12:46:48 PM		PAGE 29 OF 55		

THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.



SAMSUNG PROPRIETARY
THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO.'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.

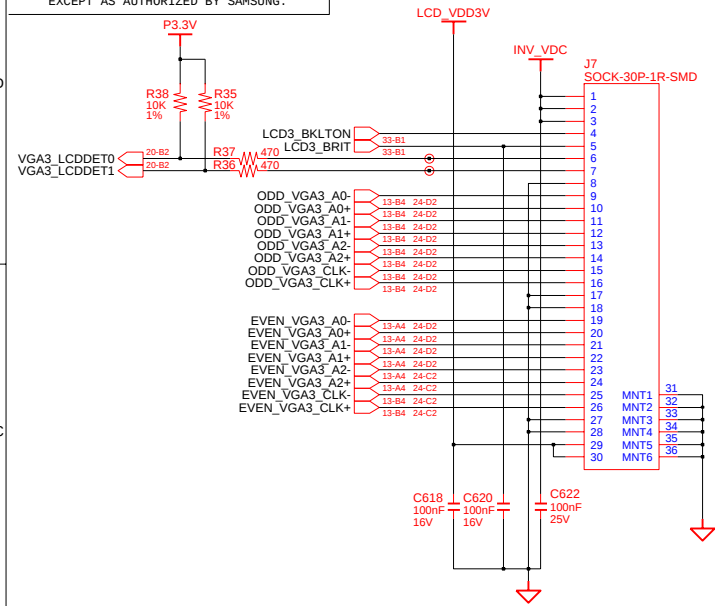
NO_STUFF



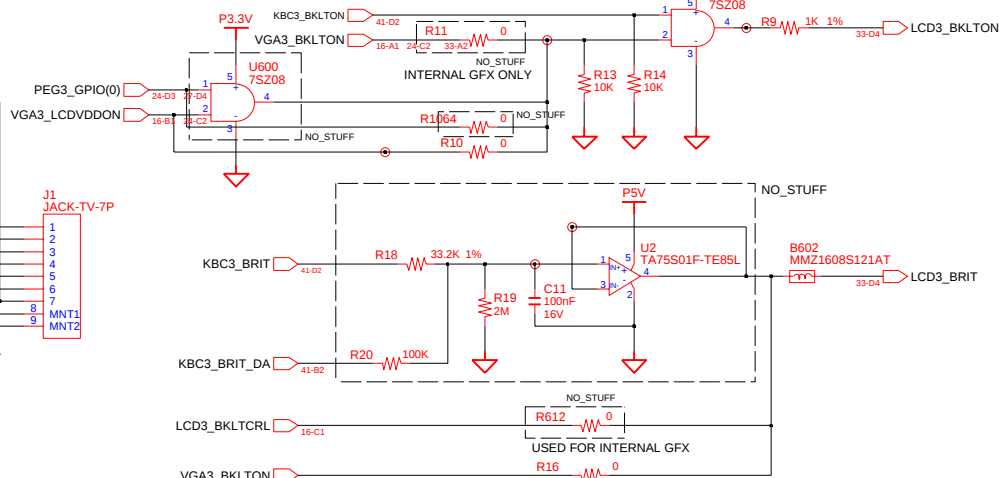
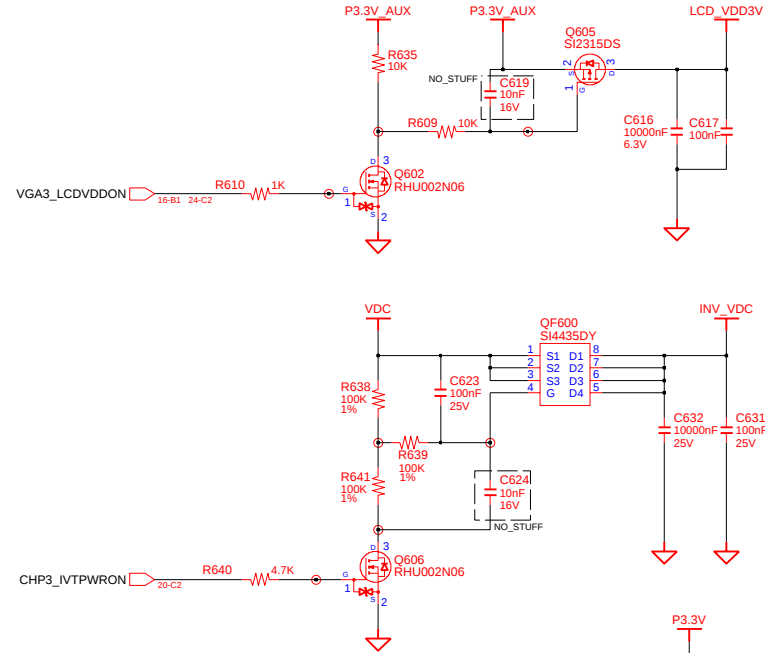
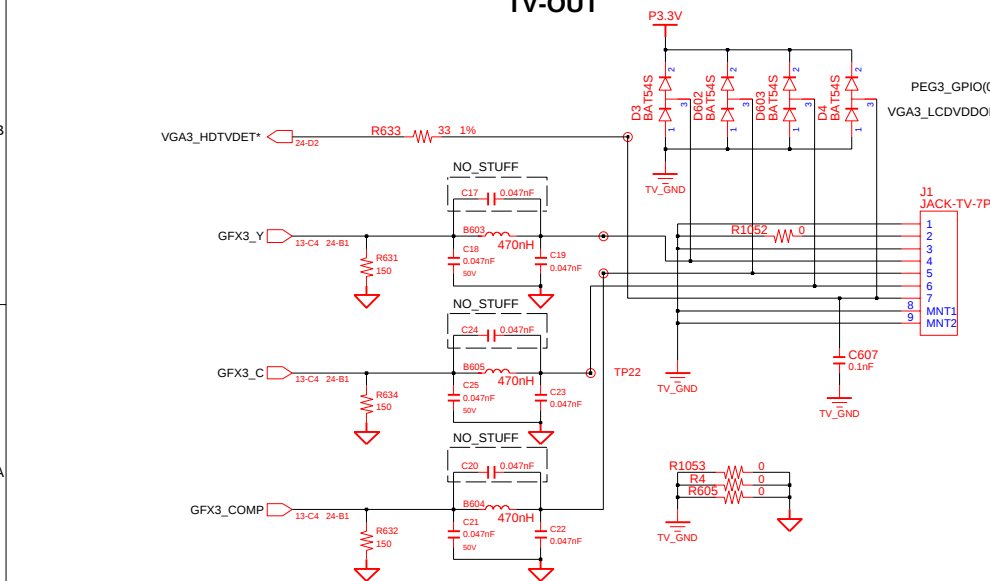
DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZA MAIN CRT PORT	SAMSUNG ELECTRONICS
CHECK	YUN, C.Y	DEV. STEP	MP			PART NO. BA41-00509A
APPROVAL	LIM, J.G	REV	1.0			
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	32	OF 55

SAMSUNG PROPRIETARY
THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO.'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.

LCD CONNECTOR



TV-OUT



DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE MAIN LCD/TV-OUT	SAMSUNG ELECTRONICS
CHECK	YUN, C.Y	DEV. STEP	MP			PART NO. BA41-00509A
APPROVAL	LIM, J.G	REV	1.0			
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	33	OF 55

SAMSUNG PROPRIETARY
THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO.'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.

U21-1 R5C841-208CSP-002 1/2

U25 S524C20D21

U622 R5532V002-TR-FA

U621 TS7S14F

U623 TS7S14F

U624 TS7S14F

U625 TS7S14F

U626 TS7S14F

U627 TS7S14F

U628 TS7S14F

U629 TS7S14F

U630 TS7S14F

U631 TS7S14F

U632 TS7S14F

U633 TS7S14F

U634 TS7S14F

U635 TS7S14F

U636 TS7S14F

U637 TS7S14F

U638 TS7S14F

U639 TS7S14F

U640 TS7S14F

U641 TS7S14F

U642 TS7S14F

U643 TS7S14F

U644 TS7S14F

U645 TS7S14F

U646 TS7S14F

U647 TS7S14F

U648 TS7S14F

U649 TS7S14F

U650 TS7S14F

U651 TS7S14F

U652 TS7S14F

U653 TS7S14F

U654 TS7S14F

U655 TS7S14F

U656 TS7S14F

U657 TS7S14F

U658 TS7S14F

U659 TS7S14F

U660 TS7S14F

U661 TS7S14F

U662 TS7S14F

U663 TS7S14F

U664 TS7S14F

U665 TS7S14F

U666 TS7S14F

U667 TS7S14F

U668 TS7S14F

U669 TS7S14F

U670 TS7S14F

U671 TS7S14F

U672 TS7S14F

U673 TS7S14F

U674 TS7S14F

U675 TS7S14F

U676 TS7S14F

U677 TS7S14F

U678 TS7S14F

U679 TS7S14F

U680 TS7S14F

U681 TS7S14F

U682 TS7S14F

U683 TS7S14F

U684 TS7S14F

U685 TS7S14F

U686 TS7S14F

U687 TS7S14F

U688 TS7S14F

U689 TS7S14F

U690 TS7S14F

U691 TS7S14F

U692 TS7S14F

U693 TS7S14F

U694 TS7S14F

U695 TS7S14F

U696 TS7S14F

U697 TS7S14F

U698 TS7S14F

U699 TS7S14F

U700 TS7S14F

U701 TS7S14F

U702 TS7S14F

U703 TS7S14F

U704 TS7S14F

U705 TS7S14F

U706 TS7S14F

U707 TS7S14F

U708 TS7S14F

U709 TS7S14F

U710 TS7S14F

U711 TS7S14F

U712 TS7S14F

U713 TS7S14F

U714 TS7S14F

U715 TS7S14F

U716 TS7S14F

U717 TS7S14F

U718 TS7S14F

U719 TS7S14F

U720 TS7S14F

U721 TS7S14F

U722 TS7S14F

U723 TS7S14F

U724 TS7S14F

U725 TS7S14F

U726 TS7S14F

U727 TS7S14F

U728 TS7S14F

U729 TS7S14F

U730 TS7S14F

U731 TS7S14F

U732 TS7S14F

U733 TS7S14F

U734 TS7S14F

U735 TS7S14F

U736 TS7S14F

U737 TS7S14F

U738 TS7S14F

U739 TS7S14F

U740 TS7S14F

U741 TS7S14F

U742 TS7S14F

U743 TS7S14F

U744 TS7S14F

U745 TS7S14F

U746 TS7S14F

U747 TS7S14F

U748 TS7S14F

U749 TS7S14F

U750 TS7S14F

U751 TS7S14F

U752 TS7S14F

U753 TS7S14F

U754 TS7S14F

U755 TS7S14F

U756 TS7S14F

U757 TS7S14F

U758 TS7S14F

U759 TS7S14F

U760 TS7S14F

U761 TS7S14F

U762 TS7S14F

U763 TS7S14F

U764 TS7S14F

U765 TS7S14F

U766 TS7S14F

U767 TS7S14F

U768 TS7S14F

U769 TS7S14F

U770 TS7S14F

U771 TS7S14F

U772 TS7S14F

U773 TS7S14F

U774 TS7S14F

U775 TS7S14F

U776 TS7S14F

U777 TS7S14F

U778 TS7S14F

U779 TS7S14F

U780 TS7S14F

U781 TS7S14F

U782 TS7S14F

U783 TS7S14F

U784 TS7S14F

U785 TS7S14F

U786 TS7S14F

U787 TS7S14F

U788 TS7S14F

U789 TS7S14F

U790 TS7S14F

U791 TS7S14F

U792 TS7S14F

U793 TS7S14F

U794 TS7S14F

U795 TS7S14F

U796 TS7S14F

U797 TS7S14F

U798 TS7S14F

U799 TS7S14F

U800 TS7S14F

U801 TS7S14F

U802 TS7S14F

U803 TS7S14F

U804 TS7S14F

U805 TS7S14F

U806 TS7S14F

U807 TS7S14F

U808 TS7S14F

U809 TS7S14F

U810 TS7S14F

U811 TS7S14F

U812 TS7S14F

U813 TS7S14F

U814 TS7S14F

U815 TS7S14F

U816 TS7S14F

U817 TS7S14F

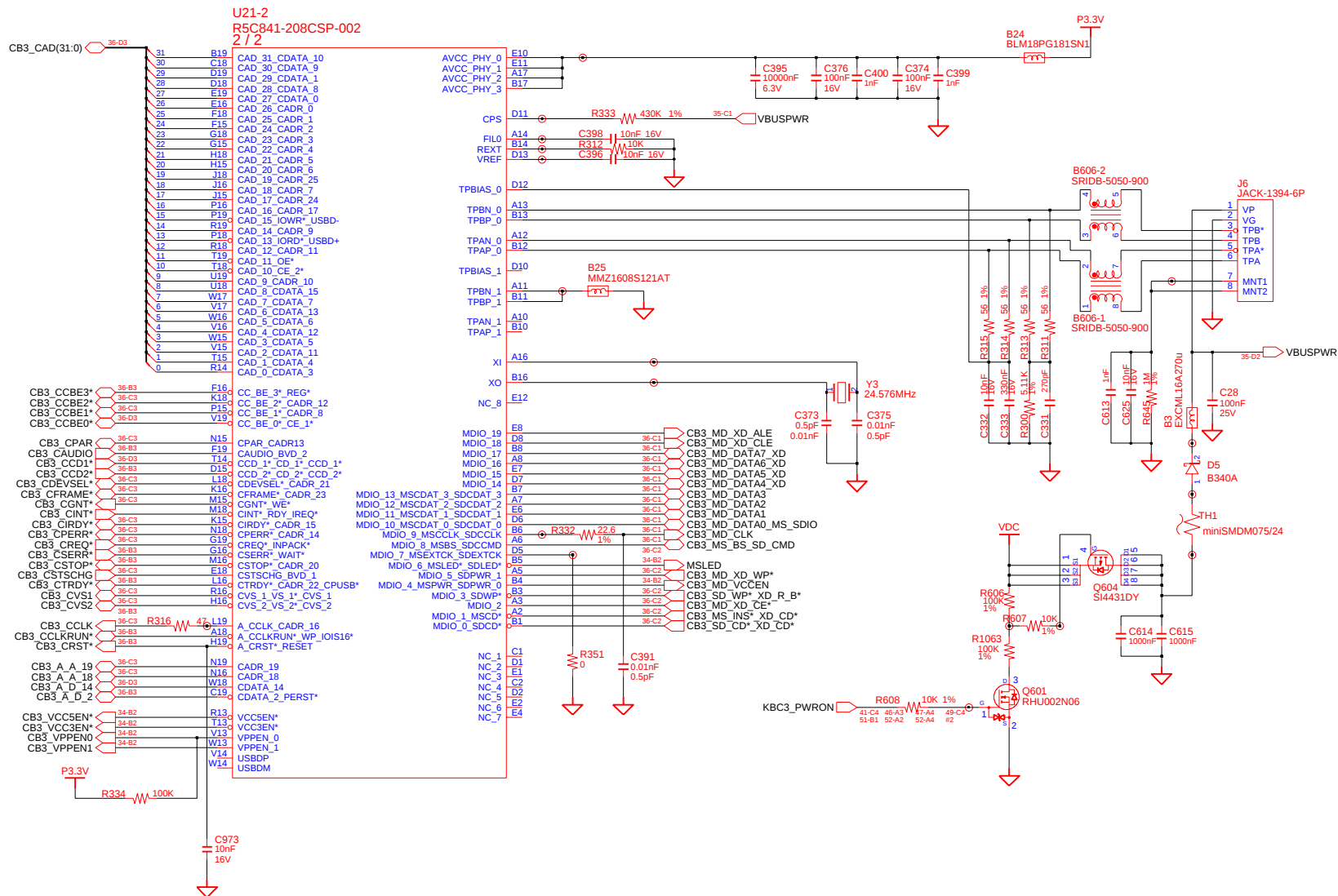
U818 TS7S14F

U819 TS7S14F

U820 TS

COM-22C-015(1996.6.5) REV. 3	4	3	2	1
------------------------------	---	---	---	---

SAMSUNG PROPRIETARY
THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO.'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.



DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE	SAMSUNG
CHECK	YUN, C.Y	DEV. STEP	MP	MAIN	BA41-00509A	ELECTRONICS
APPROVAL	LIM, J.G	REV	1.0	CARDBUS(2/2)		
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	35	OF 55

SAMSUNG PROPRIETARY
THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO.'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.

PCMCIA-68P-REVERSE J601

PCMCIA-68P-MNT J602

SOCKET-40P-2R-SMD J17

COMPONENTS:
C958: 270pF
C986: 270pF
C335: 1000F 16V
C338: 1000F 16V
P3_3V: 3V
MSLED: LED

PINOUTS:

J601 (PCMCIA-68P-REVERSE):

Pin	Signal
1	GND1
2	GND2
3	CAD0
4	CCD1*
5	CAD1
6	CAD2
7	CAD3
8	CAD4
9	CAD5
10	CAD6
11	CAD7
12	RSRVD1
13	CB3_A_D_14
14	CB3_CBE0*
15	CB3_CBE1*
16	CB3_CPAR
17	CB3_A_A_18
18	CB3_CPERR*
19	CB3_A_A_19
20	CB3_CGNT*
21	CB3_CSTOP*
22	CB3_CINT*
23	CB3_CDEVSEL*
24	CB3_CCLK
25	CB3_CTRDY*
26	CB3_CIRDY*
27	CB3_CFRAME*
28	CB3_CBE2*
29	CB3_CVS2
30	CB3_CRST*
31	CB3_CSERR*
32	CB3_CREQ*
33	CB3_CBE3*
34	CB3_CAUDIO
35	CB3_CSTSCHG
36	CB3_A_D_2
37	CB3_CCLKRUN*
38	CB3_CCD2*
39	GND3
40	GND4
41	MNT1
42	MNT2

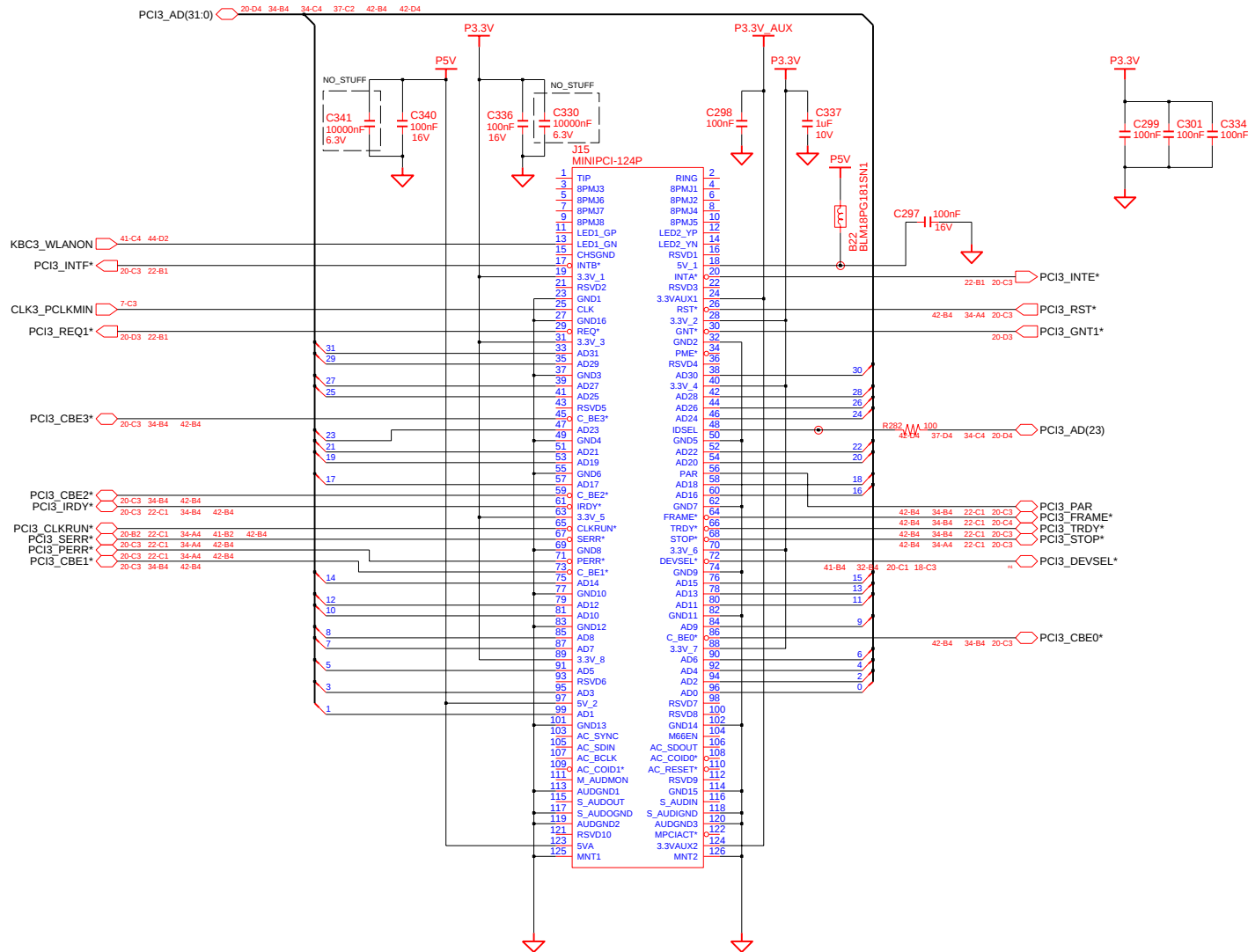
J602 (PCMCIA-68P-MNT):

Pin	Signal
1	MNT1
2	MNT2
3	MNT1
4	MNT2
5	MNT1
6	MNT2
7	MNT1
8	MNT2
9	MNT1
10	MNT2
11	MNT1
12	MNT2
13	MNT1
14	MNT2
15	MNT1
16	MNT2
17	MNT1
18	MNT2
19	MNT1
20	MNT2
21	MNT1
22	MNT2
23	MNT1
24	MNT2
25	MNT1
26	MNT2
27	MNT1
28	MNT2
29	MNT1
30	MNT2
31	MNT1
32	MNT2
33	MNT1
34	MNT2
35	MNT1
36	MNT2
37	MNT1
38	MNT2
39	MNT1
40	MNT2

J17 (SOCKET-40P-2R-SMD):

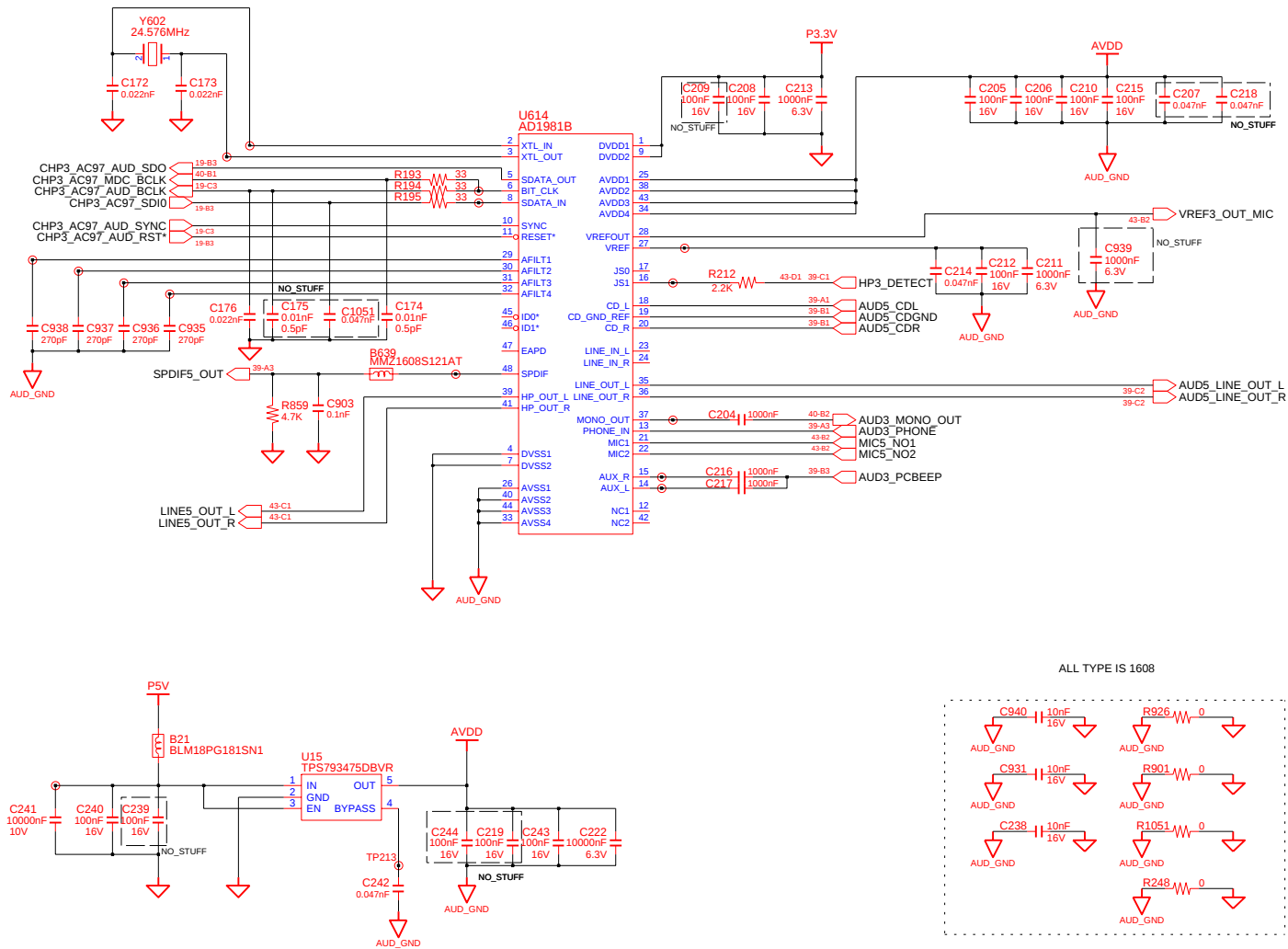
Pin	Signal
1	CB3_MD_XD_ALE
2	CB3_MD_XD_CLE
3	CB3_MD_DATA7_XD
4	CB3_MD_DATA6_XD
5	CB3_MD_DATA5_XD
6	CB3_MD_DATA4_XD
7	CB3_MD_DATA3
8	CB3_MD_DATA2
9	CB3_MD_DATA1
10	CB3_MD_DATA0_MS_SDIO
11	CB3_MD_CLK
12	CB3_MD_XD_ALE
13	CB3_MD_XD_CLE
14	CB3_MD_DATA7_XD
15	CB3_MD_DATA6_XD
16	CB3_MD_DATA5_XD
17	CB3_MD_DATA4_XD
18	CB3_MD_DATA3
19	CB3_MD_DATA2
20	CB3_MD_DATA1
21	CB3_MD_DATA0_MS_SDIO
22	CB3_MD_CLK
23	CB3_MD_XD_ALE
24	CB3_MD_XD_CLE
25	CB3_MD_DATA7_XD
26	CB3_MD_DATA6_XD
27	CB3_MD_DATA5_XD
28	CB3_MD_DATA4_XD
29	CB3_MD_DATA3
30	CB3_MD_DATA2
31	CB3_MD_DATA1
32	CB3_MD_DATA0_MS_SDIO
33	CB3_MD_CLK
34	CB3_MD_XD_ALE
35	CB3_MD_XD_CLE
36	CB3_MD_DATA7_XD
37	CB3_MD_DATA6_XD
38	CB3_MD_DATA5_XD
39	CB3_MD_DATA4_XD
40	CB3_MD_DATA3

SAMSUNG PROPRIETARY
THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO.'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.



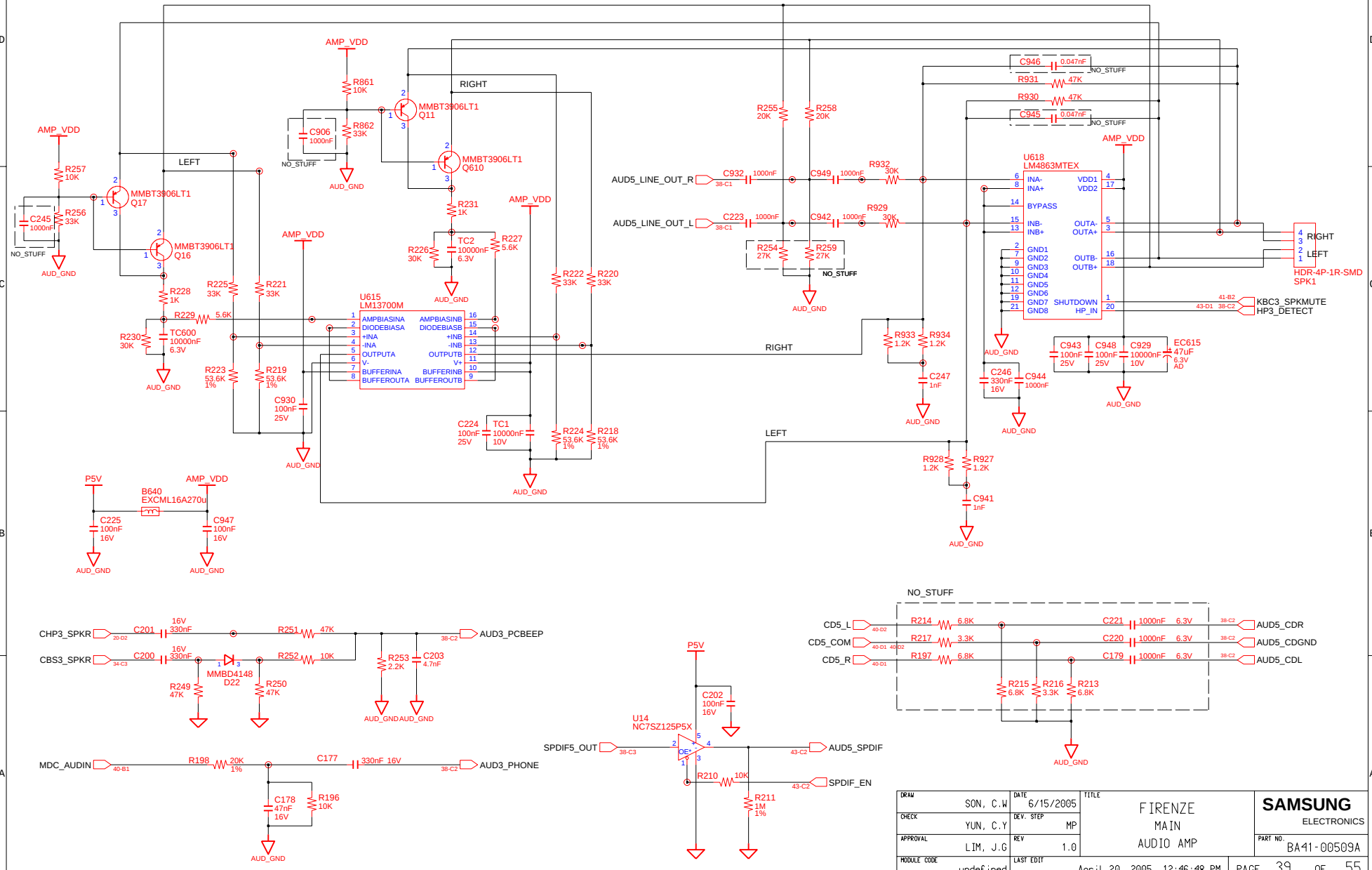
DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE MAIN MINI PCI	SAMSUNG ELECTRONICS
CHECK	YUN, C.Y	DEV. STEP	MP			PART NO. BA41-00509A
APPROVAL	LIM, J.G	REV	1.0			
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	37	OF 55

SAMSUNG PROPRIETARY
THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO.'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.



DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE MAIN AUDIO CODEC	SAMSUNG ELECTRONICS
CHECK	YUN, C.Y	DEV. STEP	MP			PART NO. BA41-00509A
APPROVAL	LIM, J.G	REV	1.0			
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	38 OF 55	

SAMSUNG PROPRIETARY
THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO.'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.



DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE MAIN AUDIO AMP	SAMSUNG ELECTRONICS
CHECK	YUN, C.Y	DEV. STEP	MP			PART NO. BA41-00509A
APPROVAL	LIM, J.G	REV	1.0			
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	39	OF 55

SAMSUNG PROPRIETARY
THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO.'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.

MAIN TO HDD

P3.3V P5V JHDD600 FPC-50S-SMD

IDE5_QLED* IDE5_CS3* IDE5_CS1* IDE5_A2 IDE5_A0 HDD5_PATADET IDE5_A1 IDE5_IRQ IDE5_DACK* IDE5_IOR* IDE5_IOW* IDE5_IORDY IDE5_A1 IDE5_A0 IDE5_CS1* IDE5_QLED*

IDE5_D(8:15) IDE5_D(0:7)

SATA_RN SATA_TP SATA_TN SATA_TP

SATA_DET* PLT3_RSTF*

C367 C972 C971 C366 C838

R309 R998 D24 MMBD301LT1

D624 MMBD301LT1 U608 TSZ08

HDD3_SEL

HDD3_LED*

MAIN TO ODD

3710-001764

JODD1 SOCK-50P-4R

CD5_L CD5_COM PLT3_RSTF*

IDE5_IOW* IDE5_IORDY IDE5_IRQ IDE5_A1 IDE5_A0 IDE5_CS1* IDE5_QLED*

CD5_R CD5_COM

IDE5_DREQ IDE5_IOR* IDE5_DACK* HDD5_PATADET IDE5_A2 IDE5_CS3*

HDD3_SEL

MNT1 MNT2

MDC Connector

P3.3V_AUX B23 BLM18PG181SN1

AUD3_MONO_OUT

CHP3_AC97_MDC_SDO CHP3_AC97_MDC_RST*

CHP3_AC97_MDC_SYNC CHP3_AC97_SD1I CHP3_AC97_MDC_BCLK

J16 HDR-30P-2R-SMD

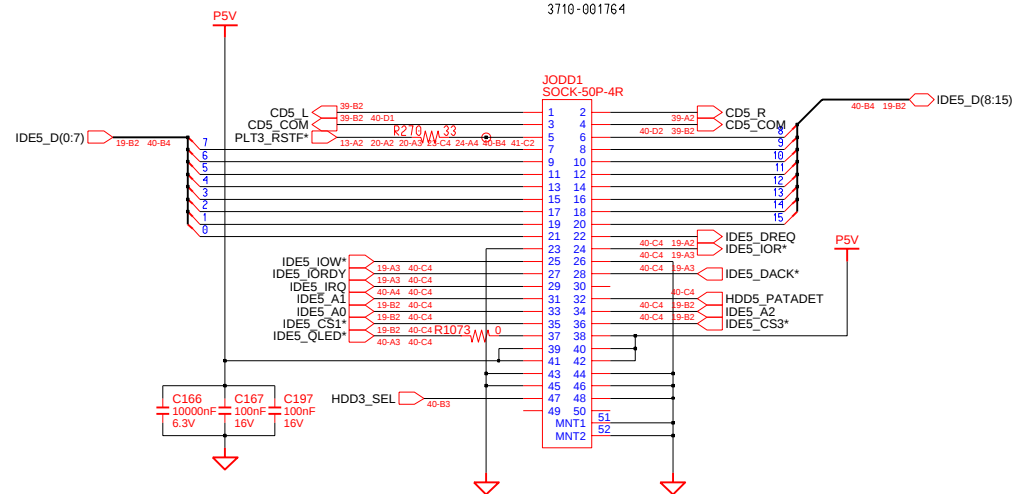
M5 HEAD DIA LENGTH

DATE	TITLE
6/15/2005	FIRENZE MAIN
DEV. STEP MP	HDD/ODD/MDC CONN
REV 1.0	
LAST EDIT	

DRAW SON, C.W.
CHECK YUN, C.Y.
APPROVAL LIM, J.G.
MODULE CODE undefined

PAGE 40 OF 55

3710-001764



The schematic shows the J16 HDR-30P-2R-SMD connector with the following connections:

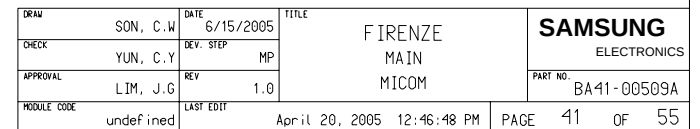
- Pins 1-18:** Connected to a common ground plane.
- Pins 19-20:** Connected to **AUD3_MONO_OUT** (38-C).
- Pins 21-22:** Connected to **MDC_AUDIN** (39-A4).
- Pins 23-24:** Connected to **CHP3_AC97_MDC_SYNC** (19-C3).
- Pins 25-26:** Connected to **CHP3_AC97_SD1** (19-B3) through resistor **R319** (33).
- Pins 27-28:** Connected to **CHP3_AC97_MDC_RST*** (19-B3).
- Pins 29-30:** Connected to **CHP3_AC97_MDC_BCLK** (38-C3).
- Pins 31-36:** Connected to a common ground plane.

Additional components shown include:

- B23 BLM18PG181SN1**: A capacitor connected between pins 19 and 20.
- C346**: A 100nF capacitor connected between pins 21 and 22.
- M5 HEAD DIA LENGTH**: A dimension line indicating the length of the header.

DRAM	SON, C.W.	DATE	6/15/2005	TITLE FIRENZE MAIN HDD/ODD/MDC CONN	SAMSUNG ELECTRONICS	
CHECK	YUN, C.Y.	DEV. STEP	MP			
APPROVAL	LIM, J.G.	REV	1.0			
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM			
					PART NO.	BA41-00509A

THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.

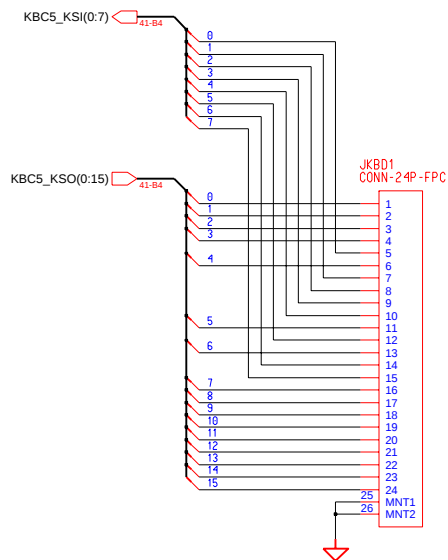


COM-22C-015(1996.6.5) REV. 3	3	2	1	d:/users/desk40/ment or/son/FIRENZE/MP1.0
------------------------------	---	---	---	---

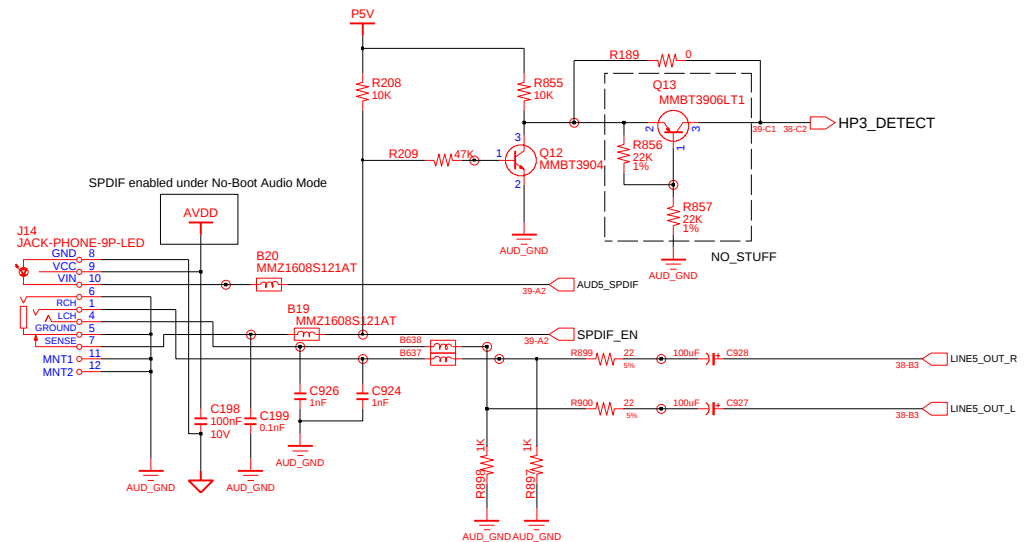
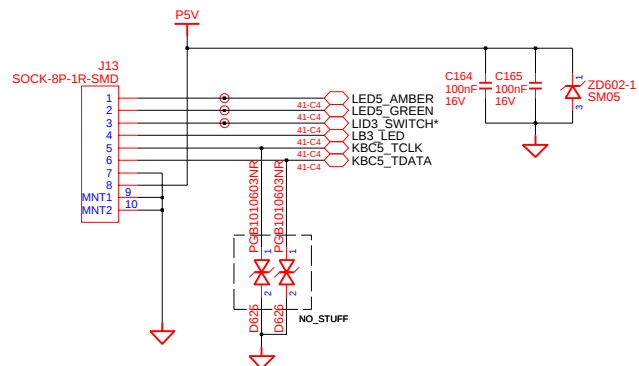
SAMSUNG PROPRIETARY
THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO.'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.

OPTICAL SPDIF OUTPUT & HEADPHONE

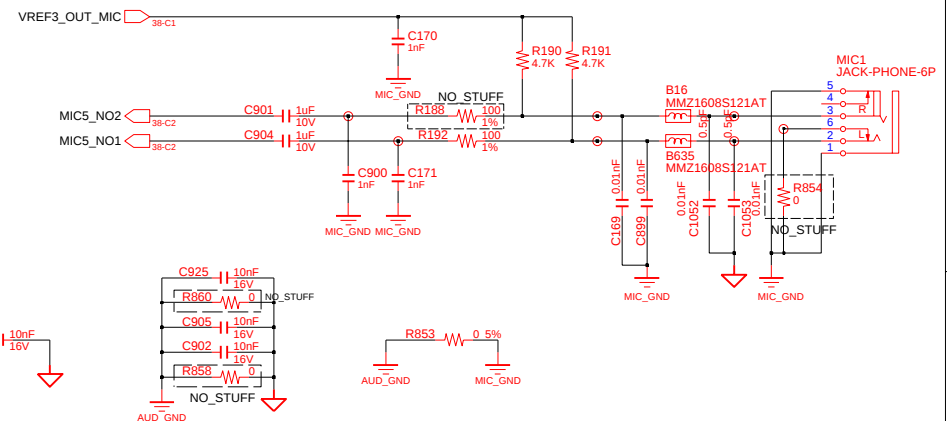
KEYBOARD



TOUCH PAD



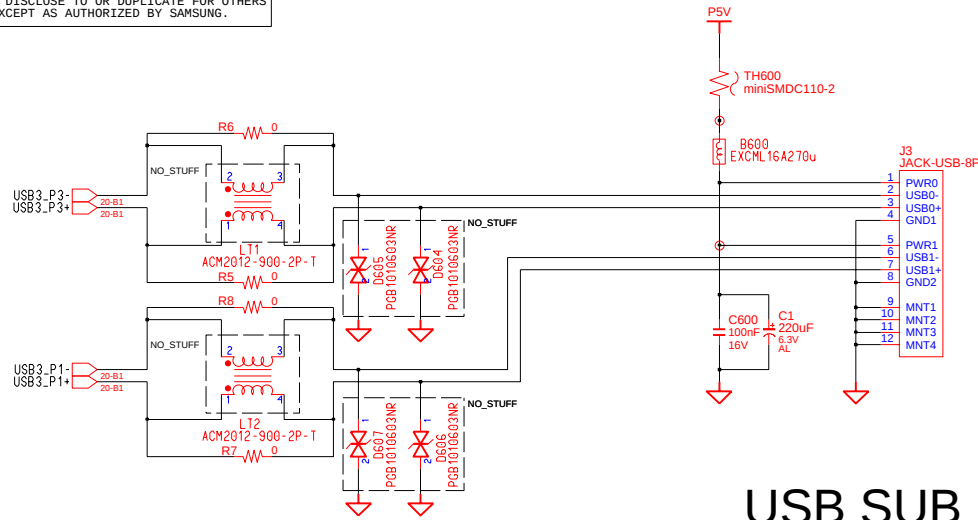
MICROPHONE



DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE	SAMSUNG
CHECK	YUN, C.Y	DEV. STEP	MP	MAIN		ELECTRONICS
APPROVAL	LIM, J.G	REV	1.0	KBD/TPAD/HP/MIC		PART NO. BA41-00509A
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	43	OF 55

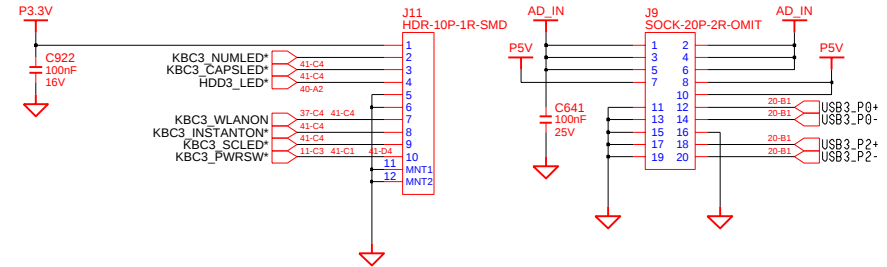
SAMSUNG PROPRIETARY
THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO.'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.

USB PORT

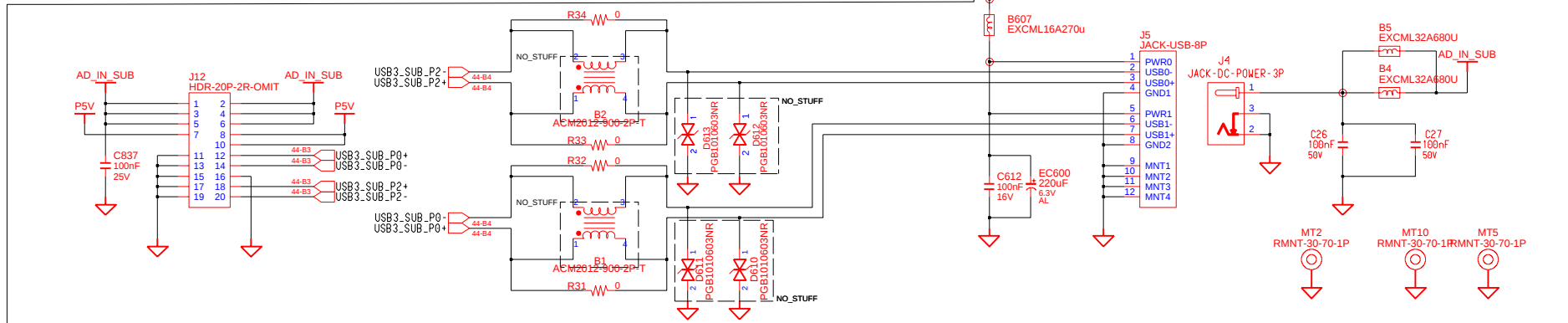


MAIN TO ON-TOP

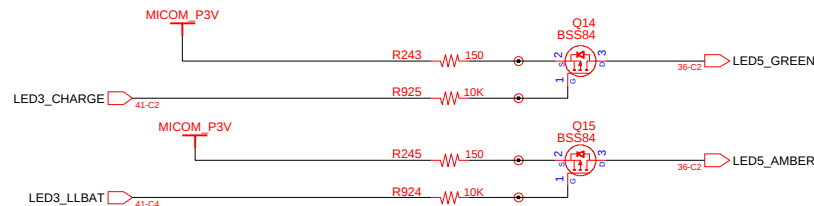
MAIN TO USB



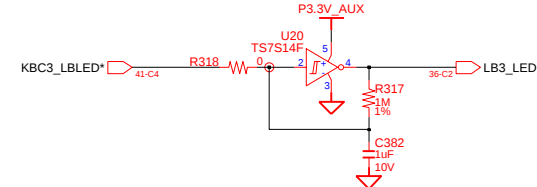
USB SUB B'D



ADAPTER IN / CHARGER LED

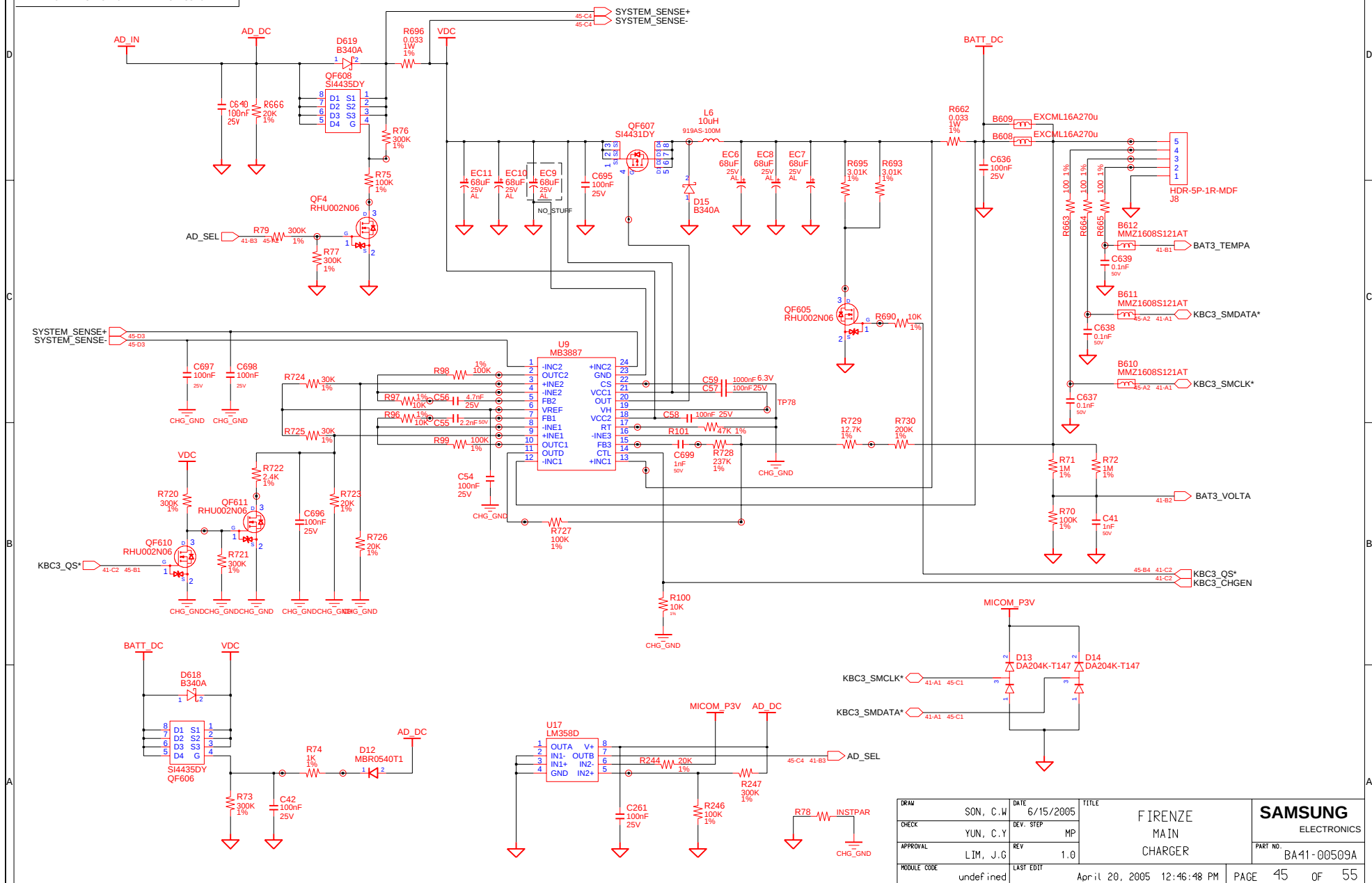


POWER ON / LB LED



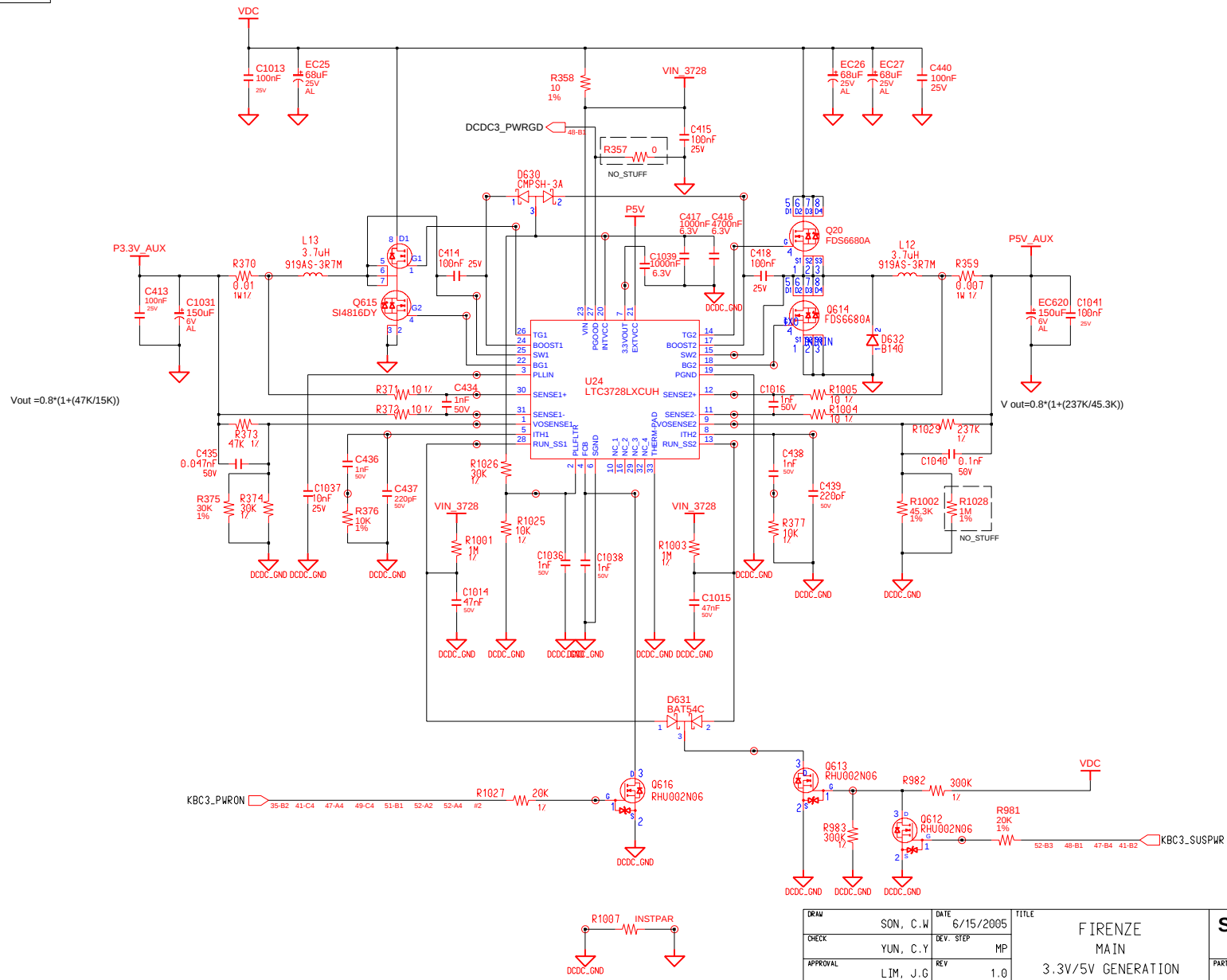
DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE	SAMSUNG ELECTRONICS
CHECK	YUN, C.Y	DEV. STEP	MP		MAIN	
APPROVAL	LIM, J.G	REV	1.0		USB PORT/LED/ON-TOP	PART NO.
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	44	OF 55
						BA41-00509A

SAMSUNG PROPRIETARY
THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.



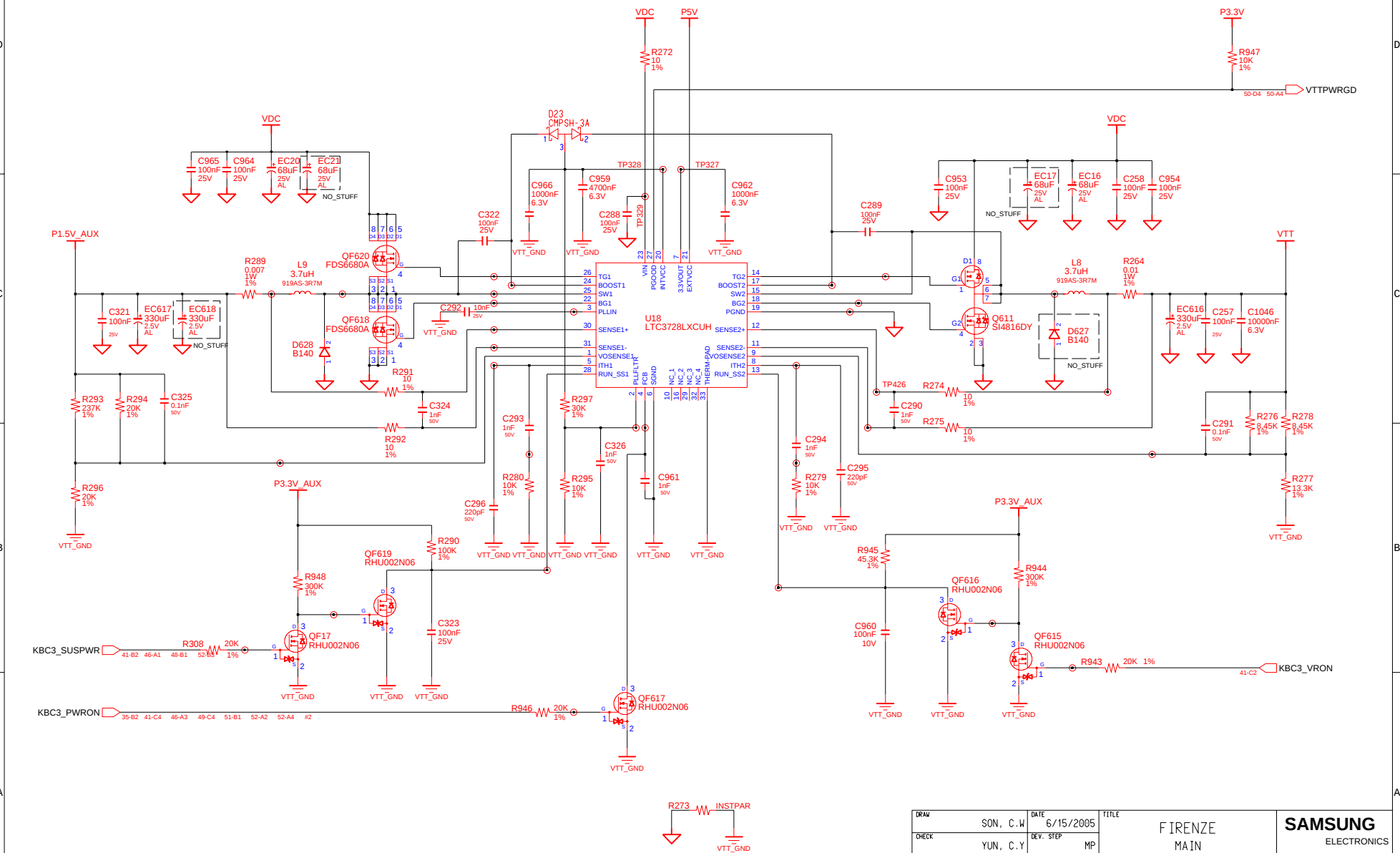
DRAM	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE MAIN CHARGER	SAMSUNG ELECTRONICS		
CHECK	YUN, C.Y	DEV. STEP	MP					
APPROVAL	LIM, J.G	REV	1.0				PART NO.	BA1-00509A
MODULE CODE	LAST EDIT		April 20, 2005 12:46:48 PM				PAGE	45 OF 55

SAMSUNG PROPRIETARY
 THIS DOCUMENT CONTAINS CONFIDENTIAL
 PROPRIETARY INFORMATION THAT IS
 SAMSUNG ELECTRONICS CO.'S PROPERTY.
 DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
 EXCEPT AS AUTHORIZED BY SAMSUNG.

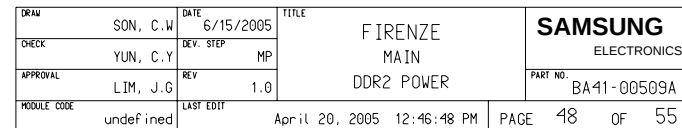


DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE MAIN	SAMSUNG ELECTRONICS
CHECK	YUN, C.Y	DEV. STEP	MP	REV	3.3V/5V GENERATION	
APPROVAL	LIM, J.G	REV	1.0	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE 46 OF 55
MODULE CODE	undefined					

SAMSUNG PROPRIETARY
THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.

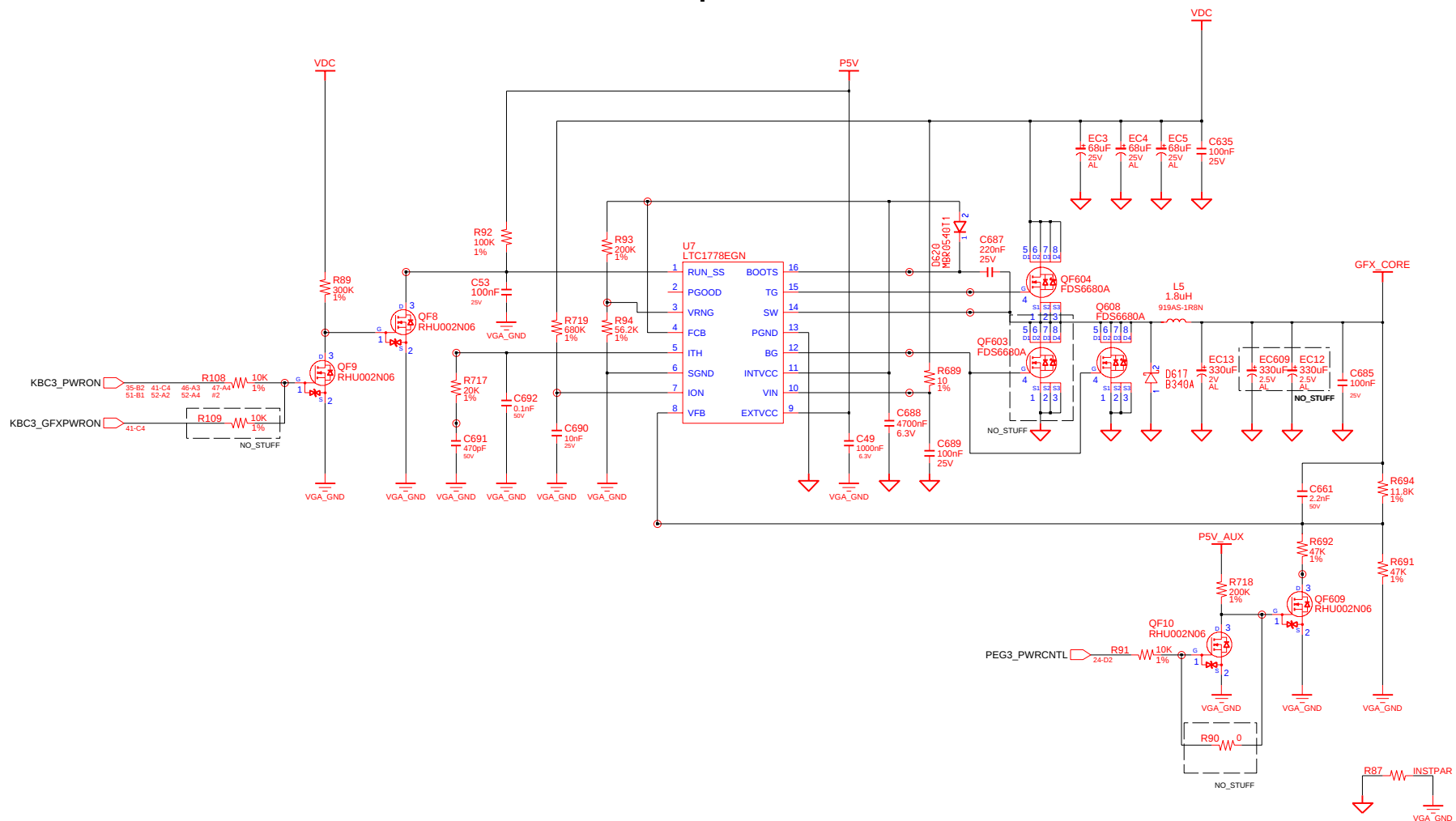


DRAM	SON, C.W.	DATE	6/15/2005	FIRENZE MAIN 1.5V_AUX/VTT	SAMSUNG ELECTRONICS
CHECK	YUN, C.Y.	DEV. STEP	MP		
APPROVAL	LIM, J.G.	REV	1.0		
MODULE CODE	undef ined	LAST EDIT	April 20, 2005 12:46:48 PM		



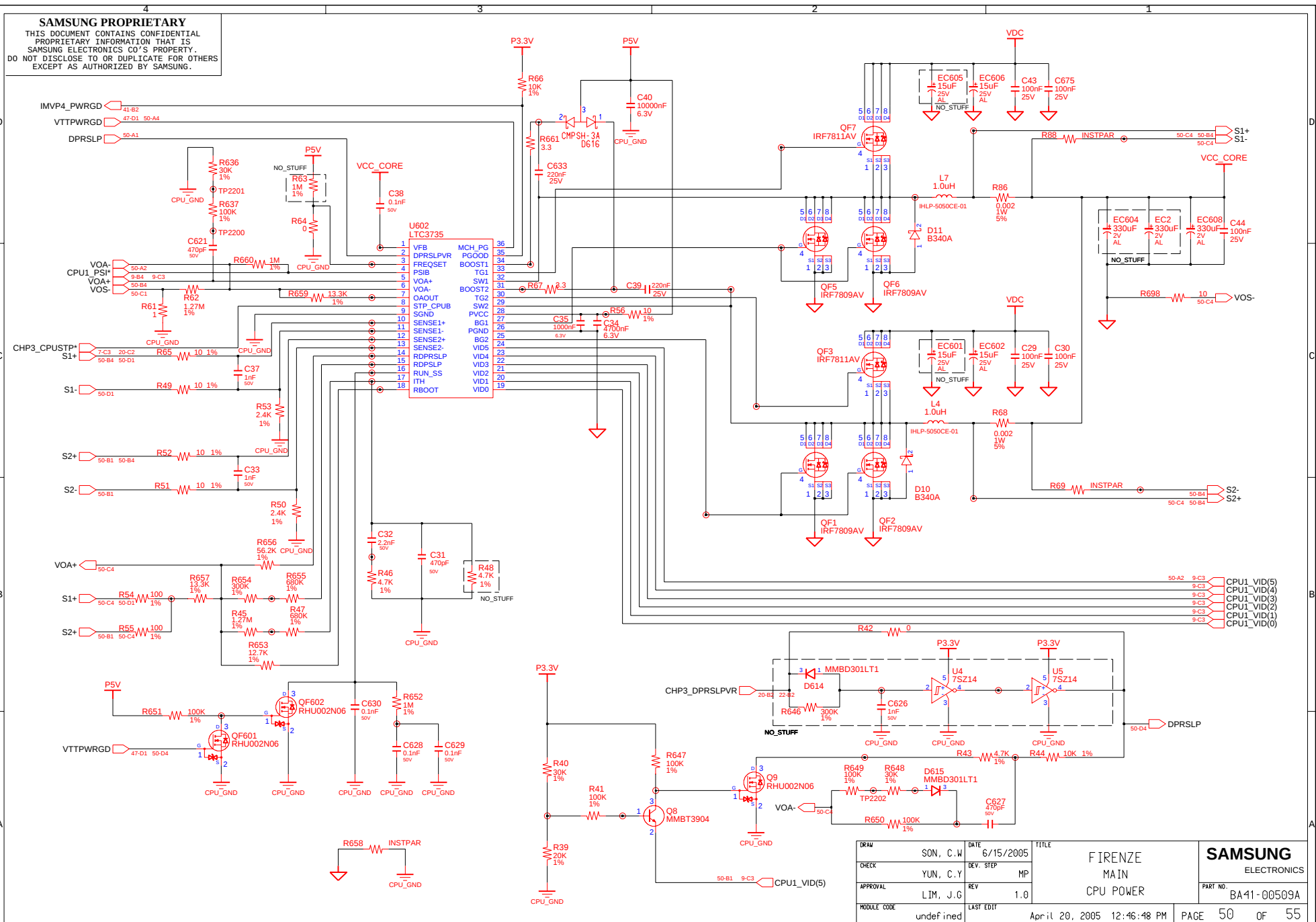
SAMSUNG PROPRIETARY
THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.

Graphic Core Power



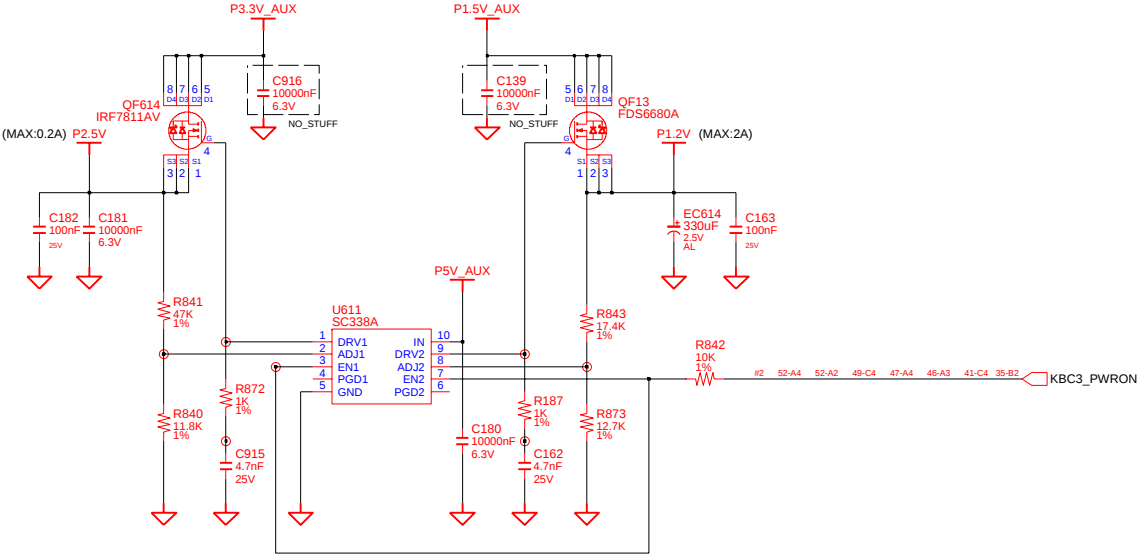
DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE		SAMSUNG	
CHECK	YUN, C.Y	DEV. STEP	MP	MAIN		ELECTRONICS		
APPROVAL	LIM, J.G	REV	1.0	GRAPHIC CORE POWER		PART NO.	BA41-00509A	
MODULE CODE	undefined		LAST EDIT		April 20, 2005 12:46:48 PM	PAGE	49	OF 55

SAMSUNG PROPRIETARY
 THIS DOCUMENT CONTAINS CONFIDENTIAL
 PROPRIETARY INFORMATION THAT IS
 SAMSUNG ELECTRONICS CO.'S PROPERTY.
 DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
 EXCEPT AS AUTHORIZED BY SAMSUNG.



DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE MAIN CPU POWER	SAMSUNG ELECTRONICS
CHECK	YUN, C.Y	DEV. STEP	MP			PART NO. BA41-00509A
APPROVAL	LIM, J.G	REV	1.0			
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	50	OF 55

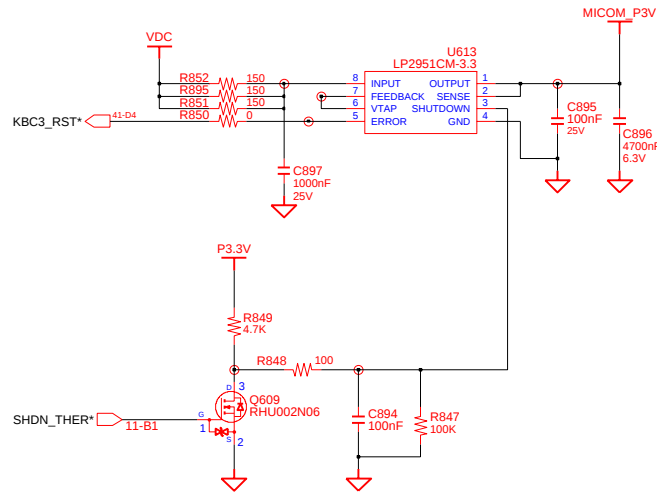
P1.2V / P2.5V POWER



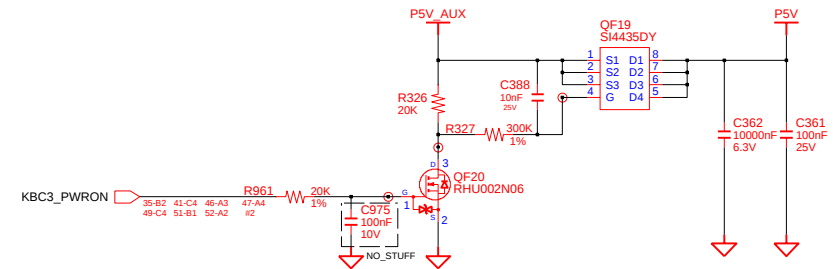
DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE MAIN 1.2V/2.5V POWER	SAMSUNG ELECTRONICS
CHECK	YUN, C.Y	DEV. STEP	MP			PART NO. BA41-00509A
APPROVAL	LIM, J.G	REV	1.0			
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	51	OF 55

SAMSUNG PROPRIETARY
 THIS DOCUMENT CONTAINS CONFIDENTIAL
 PROPRIETARY INFORMATION THAT IS
 SAMSUNG ELECTRONICS CO.'S PROPERTY.
 DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
 EXCEPT AS AUTHORIZED BY SAMSUNG.

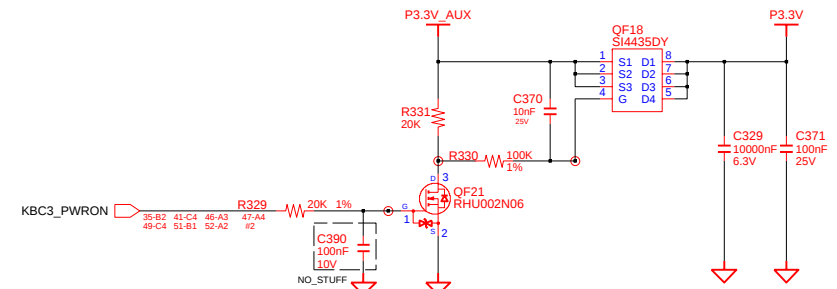
MICOM_P3V Power



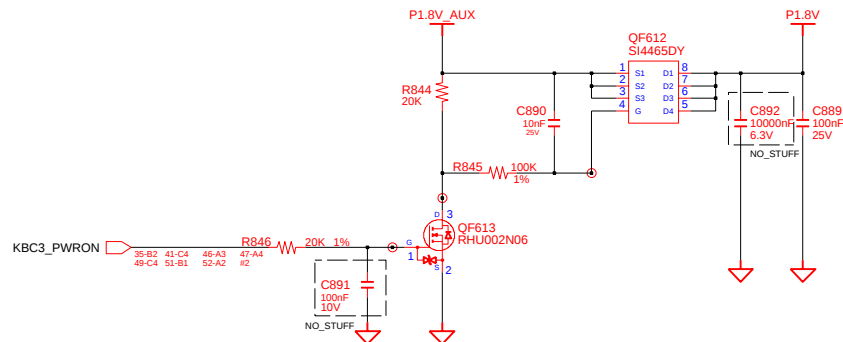
Switched Power On (P5V)



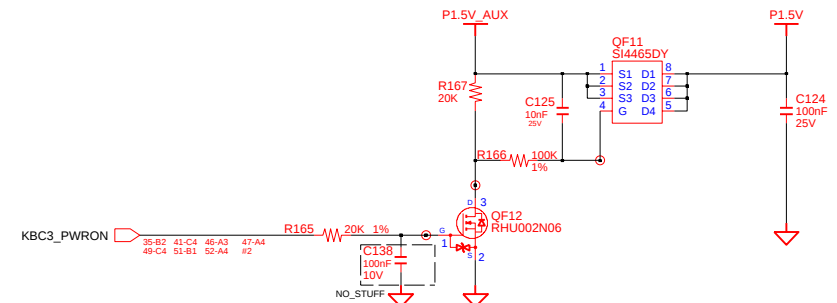
Switched Power On (P3.3V)



Switched Power On (P1.8V)

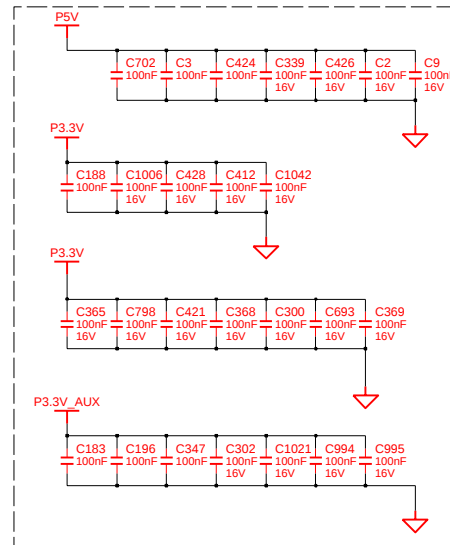


Switched Power On (P1.5V)



DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE MAIN	SAMSUNG ELECTRONICS
CHECK	YUN, C.Y	DEV. STEP	MP			PART NO. BA41-00509A
APPROVAL	LIM, J.G	REV	1.0		MICOM&SWITCHED POWER	
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	52	OF 55

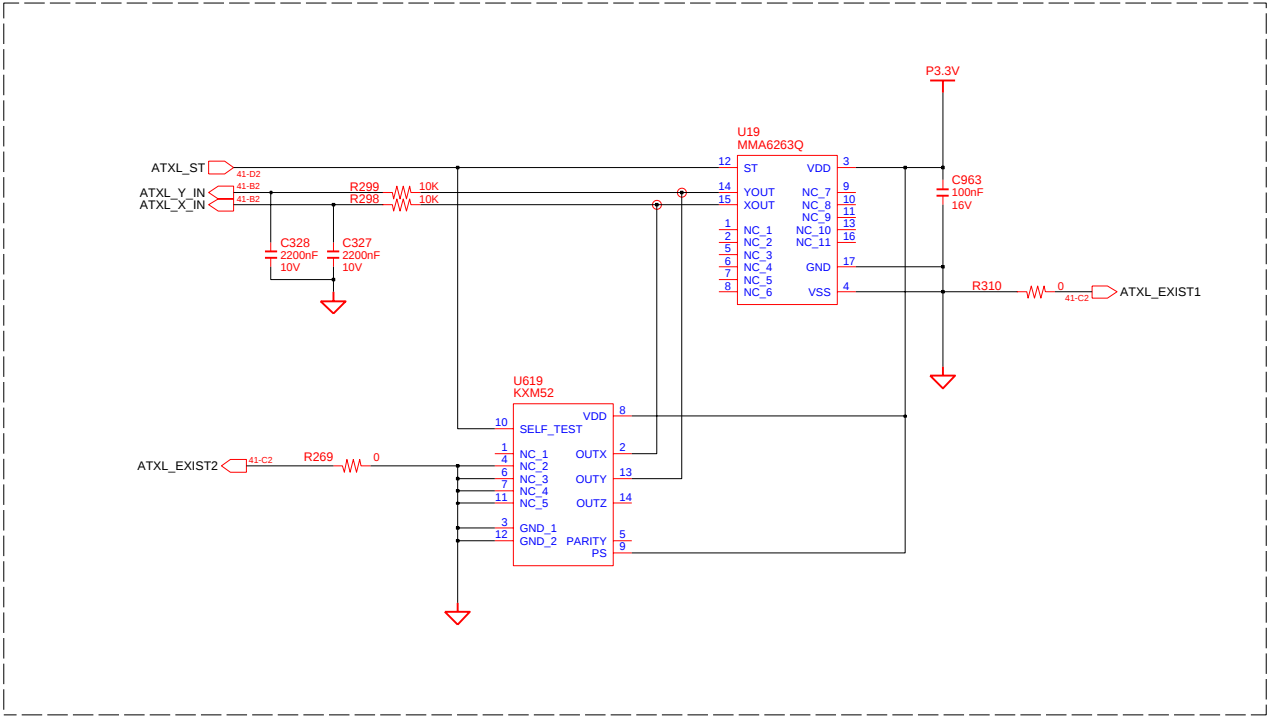
5-IN-1 SUB B'D



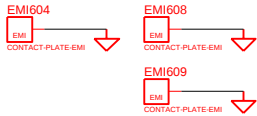
 C1032
0.047nF
 C445
0.1nF
 C1033
0.033nF
 C1035
0.027nF
 C1034
0.01nF
0.5pF
 C448
0.022nF
 C447
0.005nF
 C446
0.0033nF

COM-22C-015(1996.6.5) REV. 3

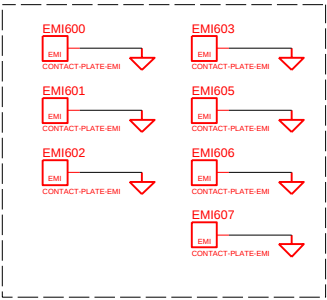
SAMSUNG PROPRIETARY
THIS DOCUMENT CONTAINS CONFIDENTIAL
PROPRIETARY INFORMATION THAT IS
SAMSUNG ELECTRONICS CO.'S PROPERTY.
DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS
EXCEPT AS AUTHORIZED BY SAMSUNG.



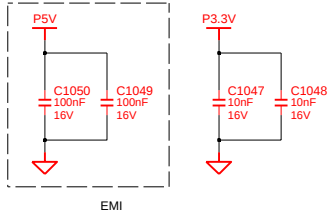
NO_STUFF



NO_STUFF



NO_STUFF



DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE MAIN AIR BAG	SAMSUNG ELECTRONICS
CHECK	YUN, C.Y	DEV. STEP	MP			PART NO. BA41-00509A
APPROVAL	LIM, J.G	REV	1.0			
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	54	OF 55

4				3				2				1			
SAMSUNG PROPRIETARY THIS DOCUMENT CONTAINS CONFIDENTIAL PROPRIETARY INFORMATION THAT IS SAMSUNG ELECTRONICS CO.'S PROPERTY. DO NOT DISCLOSE TO OR DUPLICATE FOR OTHERS EXCEPT AS AUTHORIZED BY SAMSUNG.															
TP911O ADAPTER_IN* TP912O AD_SEL TP913O ATXL_EXIS11 TP915O ATXL_ST TP916O ATXL_X_IN TP917O ATXL_Y_IN TP918O AUD3_MONO_OUT TP919O AUD3_PHONE TP920O AUD5_CGND TP921O AUD5_CDL TP922O AUD5_CDR TP923O AUD5_LINE_OUT_L TP924O AUD5_LINE_OUT_R TP925O AUD5_SPDIF TP926O BAT3_TEMP TP927O BAT3_VOLT TP928O BOOTBLOCK* TP929O CB3_A_A_18 TP930O CB3_A_A_19 TP931O CB3_A_D_14 TP932O CB3_A_D_2 TP933O CB3_CAD(0) TP934O CB3_CAD(1) TP935O CB3_CAD(10) TP936O CB3_CAD(11) TP937O CB3_CAD(12) TP938O CB3_CAD(13) TP939O CB3_CAD(14) TP940O CB3_CAD(15) TP941O CB3_CAD(16) TP942O CB3_CAD(17) TP943O CB3_CAD(18) TP944O CB3_CAD(19) TP945O CB3_CAD(2) TP946O CB3_CAD(20) TP947O CB3_CAD(21) TP948O CB3_CAD(22) TP949O CB3_CAD(23) TP950O CB3_CAD(24) TP951O CB3_CAD(25) TP952O CB3_CAD(26) TP953O CB3_CAD(27) TP954O CB3_CAD(28) TP955O CB3_CAD(29) TP956O CB3_CAD(3) TP957O CB3_CAD(30) TP958O CB3_CAD(31) TP959O CB3_CAD(4) TP960O CB3_CAD(5) TP961O CB3_CAD(6) TP962O CB3_CAD(7) TP963O CB3_CAD(8) TP964O CB3_CAD(9) TP965O CB3_CAD10 TP966O CB3_CCBEO* TP967O CB3_CCBF1* TP968O CB3_CCBF2* TP969O CB3_CCBF3* TP970O CB3_CCD1* TP971O CB3_CCD2* TP972O CB3_CCLK TP973O CB3_CCLKRUN* TP974O CB3_CDEYSEL* TP975O CB3_CFRAME* TP976O CB3_CGNT* TP977O CB3_CINT* TP978O CB3_CIRDY* TP979O CB3_CPAR TP980O CB3_CPERR* TP981O CB3_CPERP* TP982O CB3_CCREQ* TP983O CB3_CCRST* TP984O CB3_CSERR* TP985O CB3_CSTOP* TP986O CB3_CSTSTCHG TP987O CB3_CSTRDY* TP988O CB3_CVSI TP989O CB3_CVS2 TP990O CB3_MD_CLK TP991O CB3_MD_CLK_SUB				TP863O CB3_MD_DATA0_MS_SDIO TP864O CB3_MD_DATA0_MS_SDIO_SUB TP865O CB3_MD_DATA1 TP866O CB3_MD_DATA1_SUB TP867O CB3_MD_DATA2 TP868O CB3_MD_DATA2_SUB TP869O CB3_MD_DATA3 TP870O CB3_MD_DATA3_SUB TP871O CB3_MD_DATA4_XD TP872O CB3_MD_DATA4_XD_SUB TP873O CB3_MD_DATA5_XD TP874O CB3_MD_DATA5_XD_SUB TP875O CB3_MD_DATA6_XD TP876O CB3_MD_DATA6_XD_SUB TP877O CB3_MD_DATA7_XD TP878O CB3_MD_DATA7_XD_SUB TP879O CB3_MD_VCCEN TP880O CB3_MD_XD_ALE TP881O CB3_MD_XD_ALE_SUB TP882O CB3_MD_XD_CE* TP883O CB3_MD_XD_CE* TP884O CB3_MD_XD_CLE TP885O CB3_MD_XD_CLE_SUB TP886O CB3_MD_XD_WP* TP887O CB3_MD_XD_WP* TP888O CB3_MS_BS_SD_CMD TP889O CB3_MS_BS_SD_CMD_SUB TP890O CB3_MS_INS* TP891O CB3_MS_INS* TP892O CB3_MS_INS* TP893O CB3_MS_INS* TP894O CB3_MS_INS* TP895O CB3_MS_INS* TP896O CB3_MS_INS* TP897O CB3_MS_INS* TP898O CB3_MS_INS* TP899O CB3_MS_INS* TP900O CB3_MS_INS* TP901O CB3_MS_INS* TP902O CB3_MS_INS* TP903O CB3_MS_INS* TP904O CB3_MS_INS* TP905O CB3_MS_INS* TP906O CB3_MS_INS* TP907O CB3_MS_INS* TP908O CB3_MS_INS* TP909O CB3_MS_INS* TP910O CB3_MS_INS* TP911O CB3_MS_INS* TP912O CB3_MS_INS* TP913O CB3_MS_INS* TP914O CB3_MS_INS* TP915O CB3_MS_INS* TP916O CB3_MS_INS* TP917O CB3_MS_INS* TP918O CB3_MS_INS* TP919O CB3_MS_INS* TP920O CB3_MS_INS* TP921O CB3_MS_INS* TP922O CB3_MS_INS* TP923O CB3_MS_INS* TP924O CB3_MS_INS* TP925O CB3_MS_INS* TP926O CB3_MS_INS* TP927O CB3_MS_INS* TP928O CB3_MS_INS* TP929O CB3_MS_INS* TP930O CB3_MS_INS* TP931O CB3_MS_INS* TP932O CB3_MS_INS* TP933O CB3_MS_INS* TP934O CB3_MS_INS* TP935O CB3_MS_INS* TP936O CB3_MS_INS* TP937O CB3_MS_INS* TP938O CB3_MS_INS* TP939O CB3_MS_INS* TP940O CB3_MS_INS* TP941O CB3_MS_INS* TP942O CB3_MS_INS* TP943O CB3_MS_INS* TP944O CB3_MS_INS* TP945O CB3_MS_INS* TP946O CB3_MS_INS* TP947O CB3_MS_INS* TP948O CB3_MS_INS* TP949O CB3_MS_INS* TP950O CB3_MS_INS* TP951O CB3_MS_INS* TP952O CB3_MS_INS* TP953O CB3_MS_INS* TP954O CB3_MS_INS* TP955O CB3_MS_INS* TP956O CB3_MS_INS* TP957O CB3_MS_INS* TP958O CB3_MS_INS* TP959O CB3_MS_INS* TP960O CB3_MS_INS* TP961O CB3_MS_INS* TP962O CB3_MS_INS* TP963O CB3_MS_INS* TP964O CB3_MS_INS* TP965O CB3_MS_INS* TP966O CB3_MS_INS* TP967O CB3_MS_INS* TP968O CB3_MS_INS* TP969O CB3_MS_INS* TP970O CB3_MS_INS* TP971O CB3_MS_INS* TP972O CB3_MS_INS* TP973O CB3_MS_INS* TP974O CB3_MS_INS* TP975O CB3_MS_INS* TP976O CB3_MS_INS* TP977O CB3_MS_INS* TP978O CB3_MS_INS* TP979O CB3_MS_INS* TP980O CB3_MS_INS* TP981O CB3_MS_INS* TP982O CB3_MS_INS* TP983O CB3_MS_INS* TP984O CB3_MS_INS* TP985O CB3_MS_INS* TP986O CB3_MS_INS* TP987O CB3_MS_INS* TP988O CB3_MS_INS* TP989O CB3_MS_INS* TP990O CB3_MS_INS* TP991O CB3_MS_INS* TP992O CB3_MS_INS* TP993O CB3_MS_INS* TP994O CB3_MS_INS* TP995O CB3_MS_INS* TP996O CB3_MS_INS* TP997O CB3_MS_INS* TP998O CB3_MS_INS* TP999O CB3_MS_INS*				TP609O KBC3_K50(15) TP610O KBC3_K50(2) TP611O KBC3_K50(3) TP612O KBC3_K50(4) TP613O KBC3_K50(5) TP614O KBC3_K50(6) TP615O KBC3_K50(7) TP616O KBC3_K50(8) TP617O KBC3_K50(9) TP618O KBC3_K50(10) TP619O KBC3_K50(11) TP620O KBC3_K50(12) TP621O KBC3_K50(13) TP622O KBC3_K50(14) TP623O KBC3_K50(15) TP624O KBC3_K50(16) TP625O KBC3_K50(17) TP626O KBC3_K50(18) TP627O KBC3_K50(19) TP628O KBC3_K50(20) TP629O KBC3_K50(21) TP630O KBC3_K50(22) TP631O KBC3_K50(23) TP632O KBC3_K50(24) TP633O KBC3_K50(25) TP634O KBC3_K50(26) TP635O KBC3_K50(27) TP636O KBC3_K50(28) TP637O KBC3_K50(29) TP638O KBC3_K50(30) TP639O KBC3_K50(31) TP640O KBC3_K50(32) TP641O KBC3_K50(33) TP642O KBC3_K50(34) TP643O KBC3_K50(35) TP644O KBC3_K50(36) TP645O KBC3_K50(37) TP646O KBC3_K50(38) TP647O KBC3_K50(39) TP648O KBC3_K50(40) TP649O KBC3_K50(41) TP650O KBC3_K50(42) TP651O KBC3_K50(43) TP652O KBC3_K50(44) TP653O KBC3_K50(45) TP654O KBC3_K50(46) TP655O KBC3_K50(47) TP656O KBC3_K50(48) TP657O KBC3_K50(49) TP658O KBC3_K50(50) TP659O KBC3_K50(51) TP660O KBC3_K50(52) TP661O KBC3_K50(53) TP662O KBC3_K50(54) TP663O KBC3_K50(55) TP664O KBC3_K50(56) TP665O KBC3_K50(57) TP666O KBC3_K50(58) TP667O KBC3_K50(59) TP668O KBC3_K50(60) TP669O KBC3_K50(61) TP670O KBC3_K50(62) TP671O KBC3_K50(63) TP672O KBC3_K50(64) TP673O KBC3_K50(65) TP674O KBC3_K50(66) TP675O KBC3_K50(67) TP676O KBC3_K50(68) TP677O KBC3_K50(69) TP678O KBC3_K50(70) TP679O KBC3_K50(71) TP680O KBC3_K50(72) TP681O KBC3_K50(73) TP682O KBC3_K50(74) TP683O KBC3_K50(75) TP684O KBC3_K50(76) TP685O KBC3_K50(77) TP686O KBC3_K50(78) TP687O KBC3_K50(79) TP688O KBC3_K50(80) TP689O KBC3_K50(81) TP690O KBC3_K50(82) TP691O KBC3_K50(83) TP692O KBC3_K50(84) TP693O KBC3_K50(85) TP694O KBC3_K50(86) TP695O KBC3_K50(87) TP696O KBC3_K50(88) TP697O KBC3_K50(89) TP698O KBC3_K50(90) TP699O KBC3_K50(91) TP700O KBC3_K50(92) TP701O KBC3_K50(93) TP702O KBC3_K50(94) TP703O KBC3_K50(95) TP704O KBC3_K50(96) TP705O KBC3_K50(97) TP706O KBC3_K50(98) TP707O KBC3_K50(99) TP708O KBC3_K50(100) TP709O KBC3_K50(101) TP710O KBC3_K50(102) TP711O KBC3_K50(103) TP712O KBC3_K50(104) TP713O KBC3_K50(105) TP714O KBC3_K50(106) TP715O KBC3_K50(107) TP716O KBC3_K50(108) TP717O KBC3_K50(109) TP718O KBC3_K50(110) TP719O KBC3_K50(111) TP720O KBC3_K50(112) TP721O KBC3_K50(113) TP722O KBC3_K50(114) TP723O KBC3_K50(115) TP724O KBC3_K50(116) TP725O KBC3_K50(117) TP726O KBC3_K50(118) TP727O KBC3_K50(119) TP728O KBC3_K50(120) TP729O KBC3_K50(121) TP730O KBC3_K50(122) TP731O KBC3_K50(123) TP732O KBC3_K50(124) TP733O KBC3_K50(125) TP734O KBC3_K50(126) TP735O KBC3_K50(127) TP736O KBC3_K50(128) TP737O KBC3_K50(129) TP738O KBC3_K50(130) TP739O KBC3_K50(131) TP740O KBC3_K50(132) TP741O KBC3_K50(133) TP742O KBC3_K50(134) TP743O KBC3_K50(135) TP744O KBC3_K50(136) TP745O KBC3_K50(137) TP746O KBC3_K50(138) TP747O KBC3_K50(139) TP748O KBC3_K50(140) TP749O KBC3_K50(141) TP750O KBC3_K50(142) TP751O KBC3_K50(143) TP752O KBC3_K50(144) TP753O KBC3_K50(145) TP754O KBC3_K50(146) TP755O KBC3_K50(147) TP756O KBC3_K50(148) TP757O KBC3_K50(149) TP758O KBC3_K50(150) TP759O KBC3_K50(151) TP760O KBC3_K50(152) TP761O KBC3_K50(153) TP762O KBC3_K50(154) TP763O KBC3_K50(155) TP764O KBC3_K50(156) TP765O KBC3_K50(157) TP766O KBC3_K50(158) TP767O KBC3_K50(159) TP768O KBC3_K50(160) TP769O KBC3_K50(161) TP770O KBC3_K50(162) TP771O KBC3_K50(163) TP772O KBC3_K50(164) TP773O KBC3_K50(165) TP774O KBC3_K50(166) TP775O KBC3_K50(167) TP776O KBC3_K50(168) TP777O KBC3_K50(169) TP778O KBC3_K50(170) TP779O KBC3_K50(171) TP780O KBC3_K50(172) TP781O KBC3_K50(173) TP782O KBC3_K50(174) TP783O KBC3_K50(175) TP784O KBC3_K50(176) TP785O KBC3_K50(177) TP786O KBC3_K50(178) TP787O KBC3_K50(179) TP788O KBC3_K50(180) TP789O KBC3_K50(181) TP790O KBC3_K50(182) TP791O KBC3_K50(183) TP792O KBC3_K50(184) TP793O KBC3_K50(185) TP794O KBC3_K50(186) TP795O KBC3_K50(187) TP796O KBC3_K50(188) TP797O KBC3_K50(189) TP798O KBC3_K50(190) TP799O KBC3_K50(191) TP800O KBC3_K50(192) TP801O KBC3_K50(193) TP802O KBC3_K50(194) TP803O KBC3_K50(195) TP804O KBC3_K50(196) TP805O KBC3_K50(197) TP806O KBC3_K50(198) TP807O KBC3_K50(199) TP808O KBC3_K50(200) TP809O KBC3_K50(201) TP810O KBC3_K50(202) TP811O KBC3_K50(203) TP812O KBC3_K50(204) TP813O KBC3_K50(205) TP814O KBC3_K50(206) TP815O KBC3_K50(207) TP816O KBC3_K50(208) TP817O KBC3_K50(209) TP818O KBC3_K50(210) TP819O KBC3_K50(211) TP820O KBC3_K50(212) TP821O KBC3_K50(213) TP822O KBC3_K50(214) TP823O KBC3_K50(215) TP824O KBC3_K50(216) TP825O KBC3_K50(217) TP826O KBC3_K50(218) TP827O KBC3_K50(219) TP828O KBC3_K50(220) TP829O KBC3_K50(221) TP830O KBC3_K50(222) TP831O KBC3_K50(223) TP832O KBC3_K50(224) TP833O KBC3_K50(225) TP834O KBC3_K50(226) TP835O KBC3_K50(227) TP836O KBC3_K50(228) TP837O KBC3_K50(229) TP838O KBC3_K50(230) TP839O KBC3_K50(231) TP840O KBC3_K50(232) TP841O KBC3_K50(233) TP842O KBC3_K50(234) TP843O KBC3_K50(235) TP844O KBC3_K50(236) TP845O KBC3_K50(237) TP846O KBC3_K50(238) TP847O KBC3_K50(239) TP848O KBC3_K50(240) TP849O KBC3_K50(241) TP850O KBC3_K50(242) TP851O KBC3_K50(243) TP852O KBC3_K50(244) TP853O KBC3_K50(245) TP854O KBC3_K50(246) TP855O KBC3_K50(247) TP856O KBC3_K50(248) TP857O KBC3_K50(249) TP858O KBC3_K50(250) TP859O KBC3_K50(251) TP860O KBC3_K50(252) TP861O KBC3_K50(253) TP862O KBC3_K50(254) TP863O KBC3_K50(255) TP864O KBC3_K50(256) TP865O KBC3_K50(257) TP866O KBC3_K50(258) TP867O KBC3_K50(259) TP868O KBC3_K50(260) TP869O KBC3_K50(261) TP870O KBC3_K50(262) TP871O KBC3_K50(263) TP872O KBC3_K50(264) TP873O KBC3_K50(265) TP874O KBC3_K50(266) TP875O KBC3_K50(267) TP876O KBC3_K50(268) TP877O KBC3_K50(269) TP878O KBC3_K50(270) TP879O KBC3_K50(271) TP880O KBC3_K50(272) TP881O KBC3_K50(273) TP882O KBC3_K50(274) TP883O KBC3_K50(275) TP884O KBC3_K50(276) TP885O KBC3_K50(277) TP886O KBC3_K50(278) TP887O KBC3_K50(279) TP888O KBC3_K50(280) TP889O KBC3_K50(281) TP890O KBC3_K50(282) TP891O KBC3_K50(283) TP892O KBC3_K50(284) TP893O KBC3_K50(285) TP894O KBC3_K50(286) TP895O KBC3_K50(287) TP896O KBC3_K50(288) TP897O KBC3_K50(289) TP898O KBC3_K50(290) TP899O KBC3_K50(291) TP900O KBC3_K50(292) TP901O KBC3_K50(293) TP902O KBC3_K50(294) TP903O KBC3_K50(295) TP904O KBC3_K50(296) TP905O KBC3_K50(297) TP906O KBC3_K50(298) TP907O KBC3_K50(299) TP908O KBC3_K50(300) TP909O KBC3_K50(301) TP910O KBC3_K50(302) TP911O KBC3_K50(303) TP912O KBC3_K50(304) TP913O KBC3_K50(305) TP914O KBC3_K50(306) TP915O KBC3_K50(307) TP916O KBC3_K50(308) TP917O KBC3_K50(309) TP918O KBC3_K50(310) TP919O KBC3_K50(311) TP920O KBC3_K50(312) TP921O KBC3_K50(313) TP922O KBC3_K50(314) TP923O KBC3_K50(315) TP924O KBC3_K50(316) TP925O KBC3_K50(317) TP926O KBC3_K50(318) TP927O KBC3_K50(319) TP928O KBC3_K50(320) TP929O KBC3_K50(321) TP930O KBC3_K50(322) TP931O KBC3_K50(323) TP932O KBC3_K50(324) TP933O KBC3_K50(325) TP934O KBC3_K50(326) TP935O KBC3_K50(327) TP936O KBC3_K50(328) TP937O KBC3_K50(329) TP938O KBC3_K50(330) TP939O KBC3_K50(331) TP940O KBC3_K50(332) TP941O KBC3_K50(333) TP942O KBC3_K50(334) TP943O KBC3_K50(335) TP944O KBC3_K50(336) TP945O KBC3_K50(337) TP946O KBC3_K50(338) TP947O KBC3_K50(339) TP948O KBC3_K50(340) TP949O KBC3_K50(341) TP950O KBC3_K50(342) TP951O KBC3_K50(343) TP952O KBC3_K50(344) TP953O KBC3_K50(345) TP954O KBC3_K50(346) TP955O KBC3_K50(347) TP956O KBC3_K50(348) TP957O KBC3_K50(349) TP958O KBC3_K50(350) TP959O KBC3_K50(351) TP960O KBC3_K50(352) TP961O KBC3_K50(353) TP962O KBC3_K50(354) TP963O KBC3_K50(355) TP964O KBC3_K50(356) TP965O KBC3_K50(357) TP966O KBC3_K50(358) TP967O KBC3_K50(359) TP968O KBC3_K50(360) TP969O KBC3_K50(361) TP970O KBC3_K50(362) TP971O KBC3_K50(363) TP972O KBC3_K50(364) TP973O KBC3_K50(365) TP974O KBC3_K50(366) TP975O KBC3_K50(367) TP976O KBC3_K50(368) TP977O KBC3_K50(369) TP978O KBC3_K50(370) TP979O KBC3_K50(371) TP980O KBC3_K50(372) TP981O KBC3_K50(373) TP982O KBC3_K50(374) TP983O KBC3_K50(375) TP984O KBC3_K50(376) TP985O KBC3_K50(377) TP986O KBC3_K50(378) TP987O KBC3_K50(379) TP988O KBC3_K50(380) TP989O KBC3_K50(381) TP990O KBC3_K50(382) TP991O KBC3_K50(383) TP992O KBC3_K50(384) TP993O KBC3_K50(385) TP994O KBC3_K50(386) TP995O KBC3_K50(387) TP996O KBC3_K50(388) TP997O KBC3_K50(389) TP998O KBC3_K50(390) TP999O KBC3_K50(391)				TP700O KBC3_EXTSM1* TP701O KBC3_FANCTRL TP702O KBC3_GFXPURGN TP703O KBC3_IWP4_PWRGD TP704O KBC3_LBLED* TP705O KBC3_NUMLED* TP706O KBC3_PWRON TP707O KBC3_PWRS* TP708O KBC3_PWRS* TP709O KBC3_PWRS* TP710O KBC3_PWRS* TP711O KBC3_PWRS* TP712O KBC3_PWRS* TP713O KBC3_PWRS* TP714O KBC3_PWRS* TP715O KBC3_PWRS* TP716O KBC3_PWRS* TP717O KBC3_PWRS* TP718O KBC3_PWRS* TP719O KBC3_PWRS* TP720O KBC3_PWRS* TP721O KBC3_PWRS* TP722O KBC3_PWRS* TP723O KBC3_PWRS* TP724O KBC3_PWRS* TP725O KBC3_PWRS* TP726O KBC3_PWRS* TP727O KBC3_PWRS* TP728O KBC3_PWRS* TP729O KBC3_PWRS* TP730O KBC3_PWRS* TP731O KBC3_PWRS* TP7			