

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

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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

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CHECK	YUN, C.Y	DEV. STEP	MP			PART NO. BA41-00509A
APPROVAL	LIM, J.G	REV	1.0			
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Clocking
CK-410M
PG 5

FAN
PG 11

CPU Thermistor
MAX6656
PG 11

Mobile Processor
Dothan(w/533MHz)
PG 8,9,10 L2 Cache : 2 MB 478pin

CPU DC/DC
IMVP-IV
R 1.3
PG 50

System DC/DC
PG 46

PCIE Graphics Module

Ext. AGP
ATI M22-P
PG 24,25,26,27

100P X 2
PEG x16 External Graphics

MCH-M ALVISO
1257 FCBGA
PG 12,13,14,15,16

Channel A (Standard)
Dual channel DDR II 533/400

Channel B (Reverse)

DDR II SODIMM 0
PG 17

DDR II SODIMM 1
PG 17

FSB
533 MHz

Internal Graphics
LVDS CRT/TV

LCD
30P PG 33

CRT
PG 32

TV
PG 33

SVHS

USB
PG 44

USB 0,1,2,3

ICH6-M
609 BGA
PG 19,20,21,22

Direct Media Interface
x4/x2, 1.5V

CARD BUS
R5C841
R5532V002
PG 34,35

5-IN-1
PG 36

CardBus
PG 36

EEPROM
PG 34

1394 spin
PG 35

CARD BUS Module

BROADCOM
BCM4401
PG 42

Mini PCI CONN.
PG 37

33MHz, 3.3V PCI

Azalia/AC97 Primary

AUDIO
AMP PG 39

AD1981B
PG 38

HP & SPDIF MIC-IN
PG 43

4P
PG 39

SPKR R

SPKR L

MDC Modem (TBD)
30P PG 40

Azalia/AC97 Secondary

HDD
U-ATA 100
PG 40

Pri. IDE master
PATA

Pri. IDE slave

CD-ROM
CD / DVD
PG 40

FWB
PG 23

3.3V LPC, 33MHz

60x2P

MICOM
Hitachi H8S
HD64F2169/2160
PG 41

Touch PAD
PG 43

KBD
PG 43

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DATE
6/15/2005

DEV. STEP
MP

REV
1.0

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TITLE
FIRENZE
MAIN
BLOCK DIAGRAM

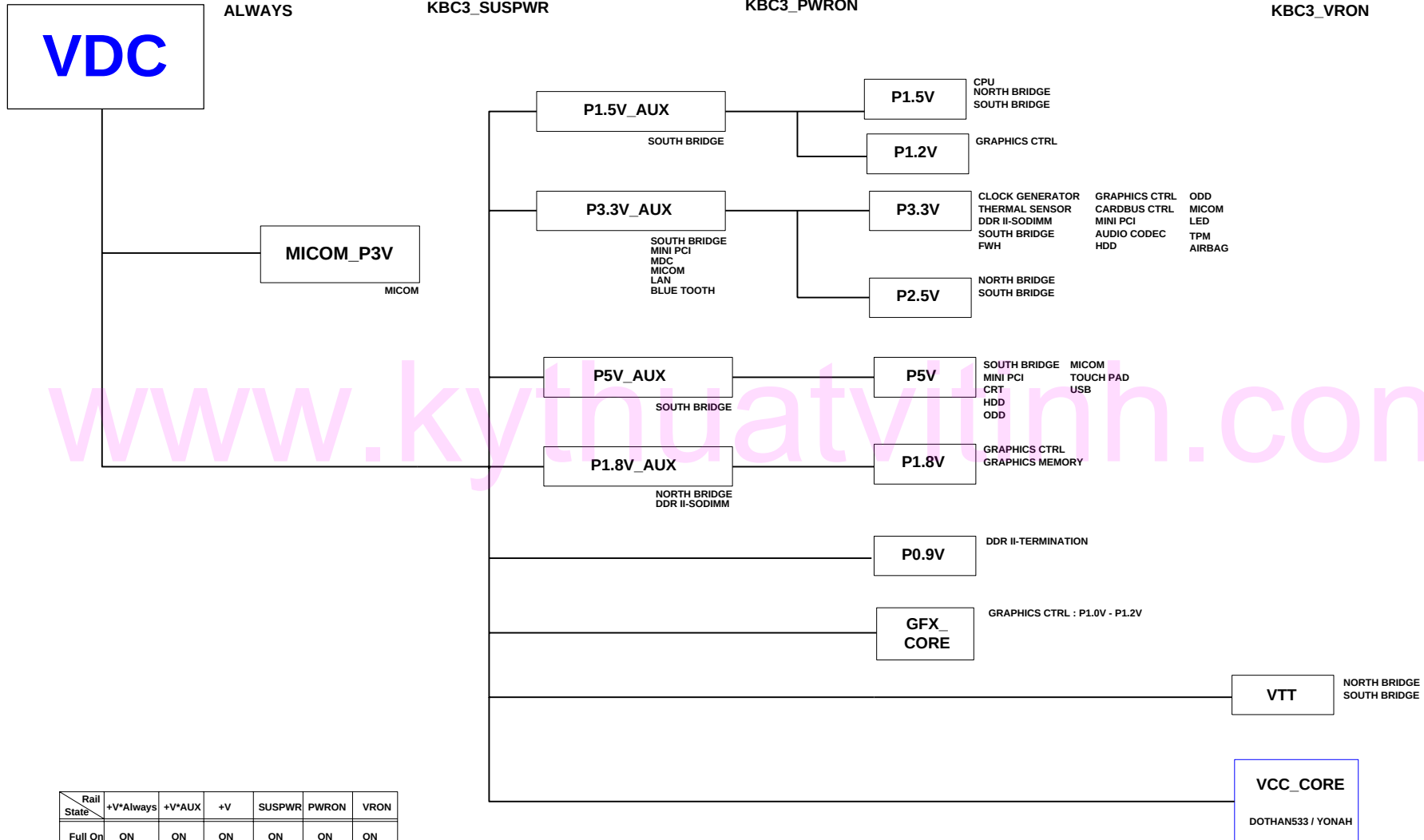
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Power Diagram



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

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APPROVAL	LIM, J.G	REV	1.0			
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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 (Interposer B'd)
	0	0	0	0	0	1	1.692 V	1	0	0	0	0	1	1.180 V	
	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	0	1	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	0	1.356 V	1	1	0	1	1	0	0.844 V	Lowest Freq.
	0	1	0	1	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

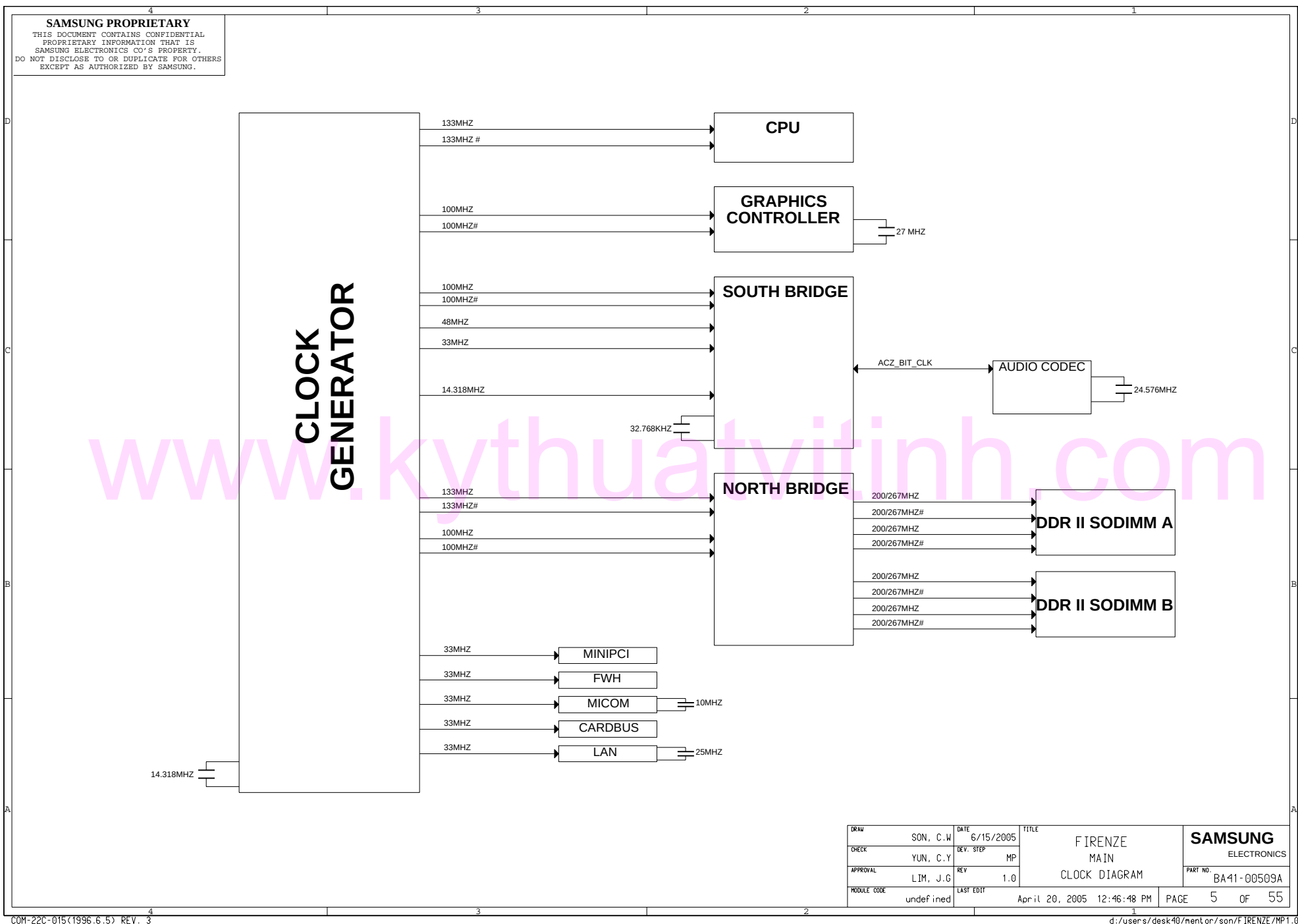
- CHP3_SLPS1* S1, Powered-On-Suspend(POS) : In this state, all clocks(except the 32.768KHz clock) are stopped. The system context is maintained in system DRAM. Power is maintained to PCI, the CPU, memory controller, memory, and all other critical subsystems. Note that this state does not preclude power 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.

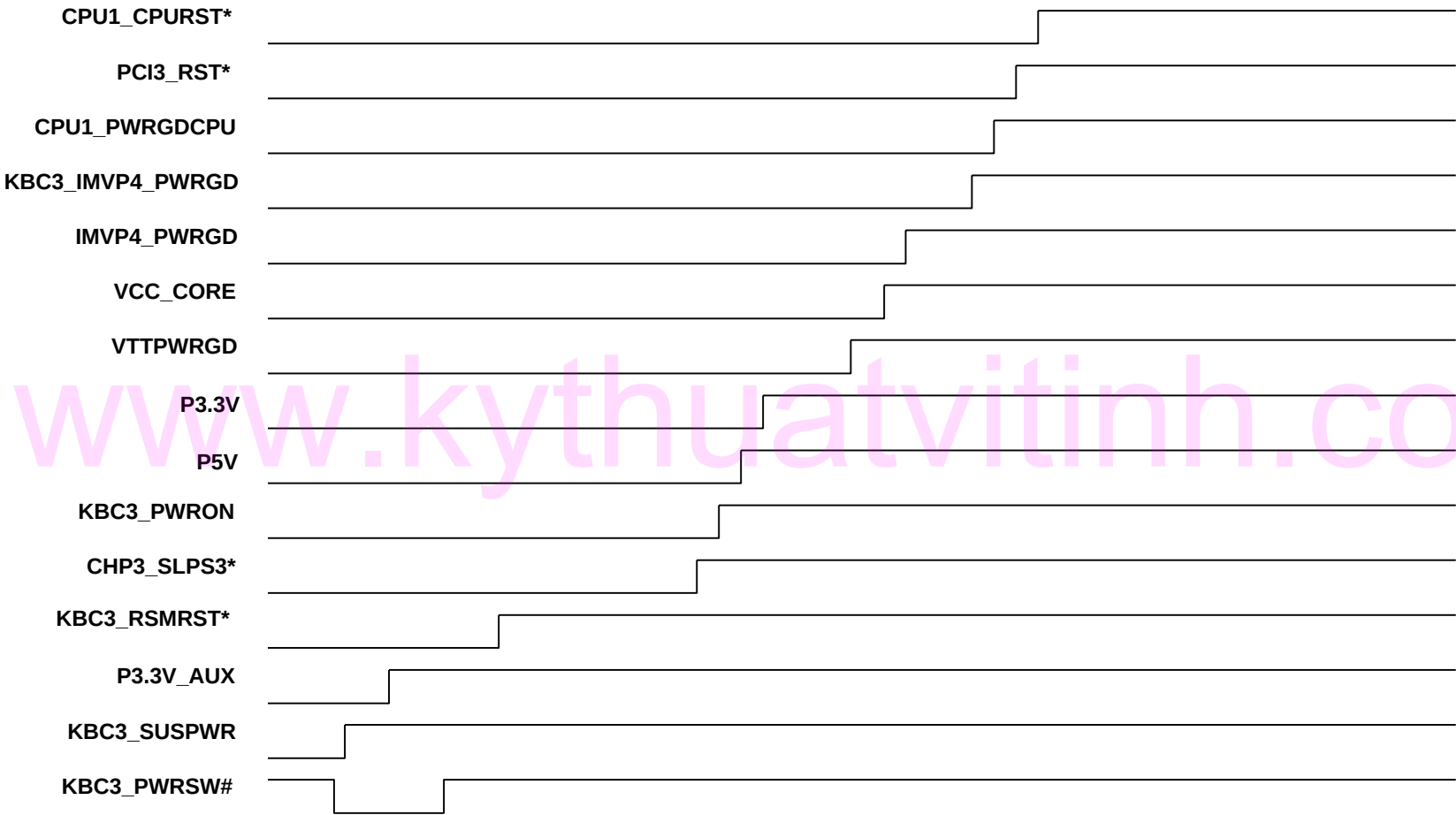
MiniPCI SLOT1

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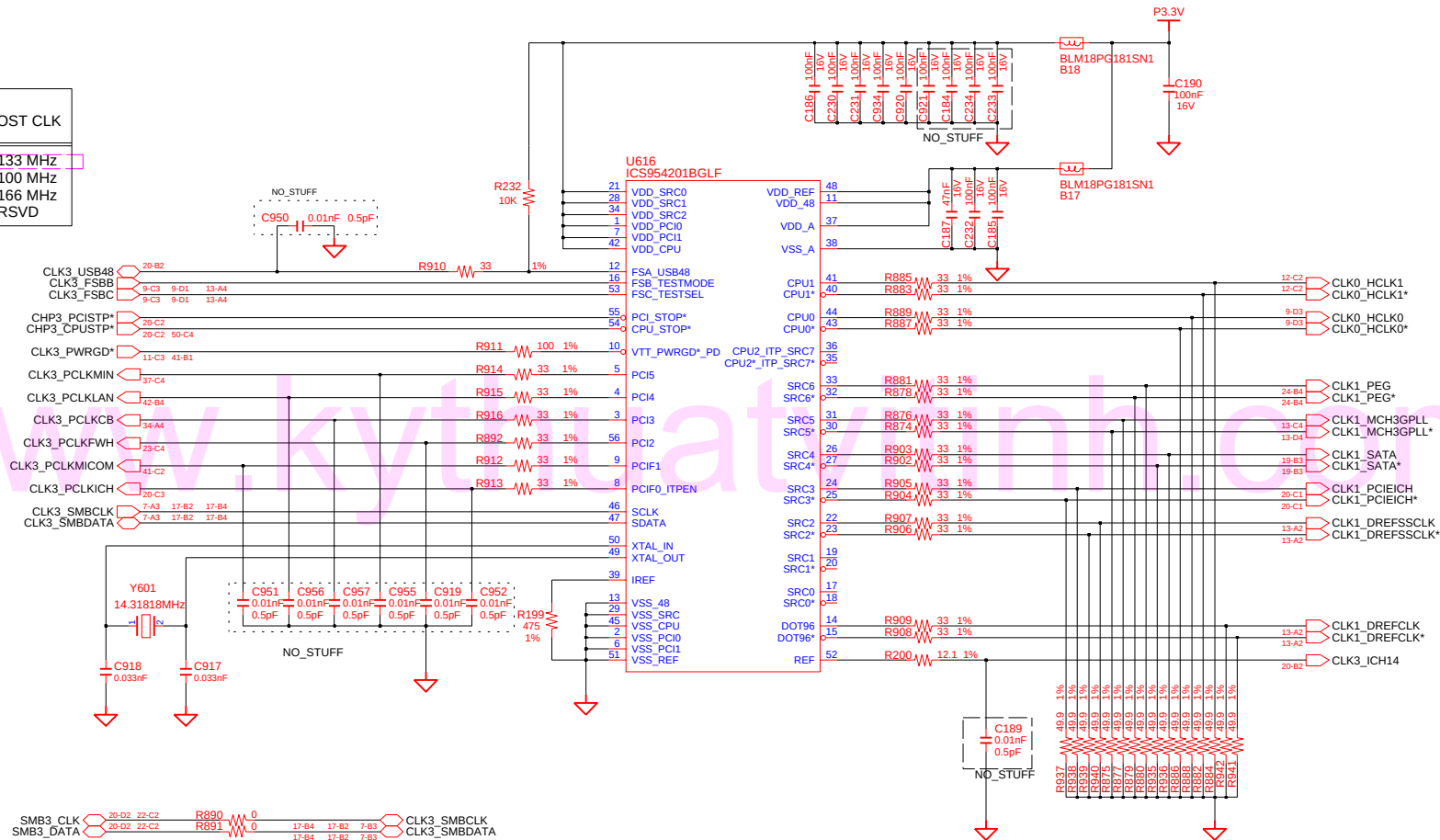
RESET DIAGRAM



DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE MAIN RESET DIAGRAM	SAMSUNG ELECTRONICS
CHECK	YUN, C.Y	DEV. STEP	MP	REV	1.0	PART NO. BA41-00509A
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MODULE CODE	undefined					

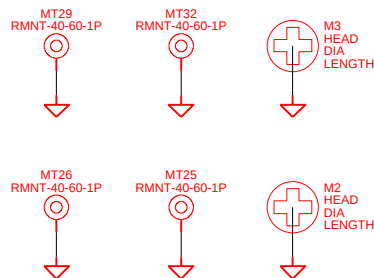
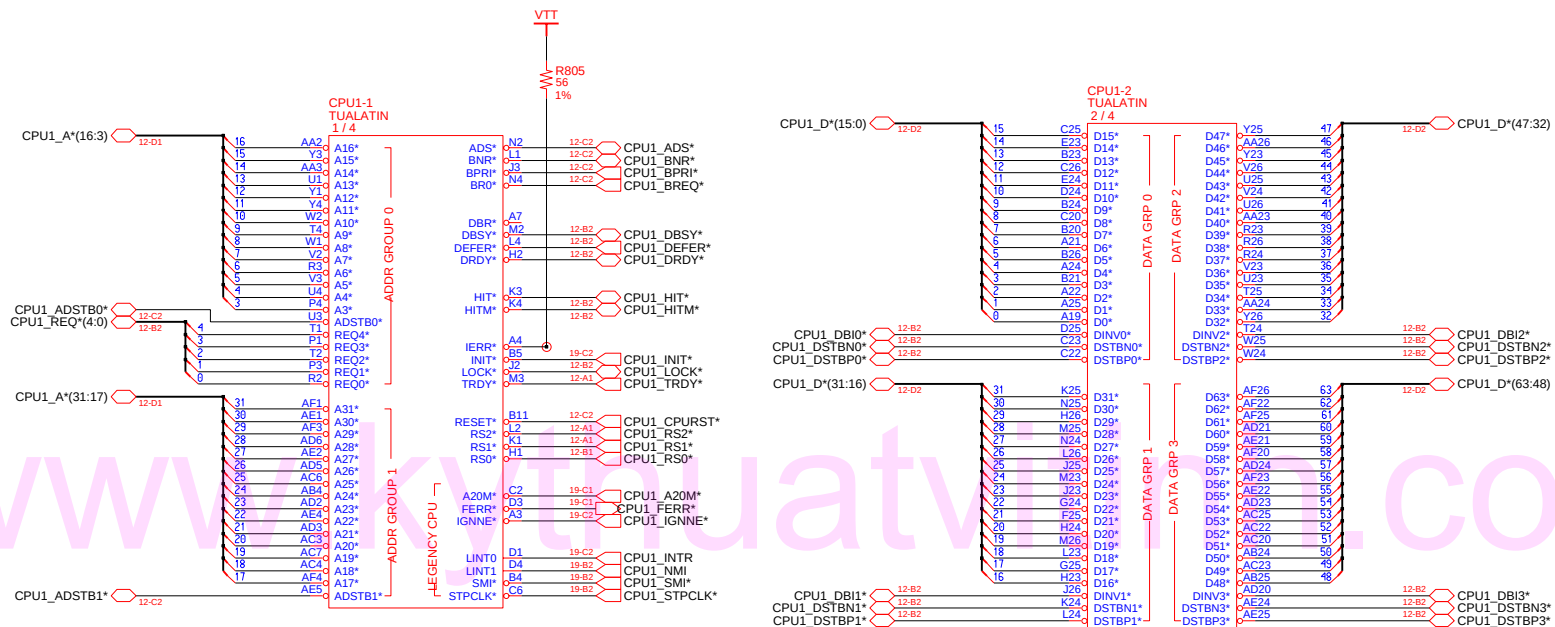
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FSA	FSB	FSC	HOST CLK
BSEL2	BSEL1	BSEL0	
1	0	0	133 MHz
1	0	1	100 MHz
1	1	0	166 MHz
1	1	1	RSVD

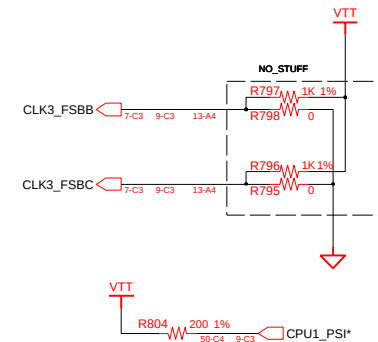
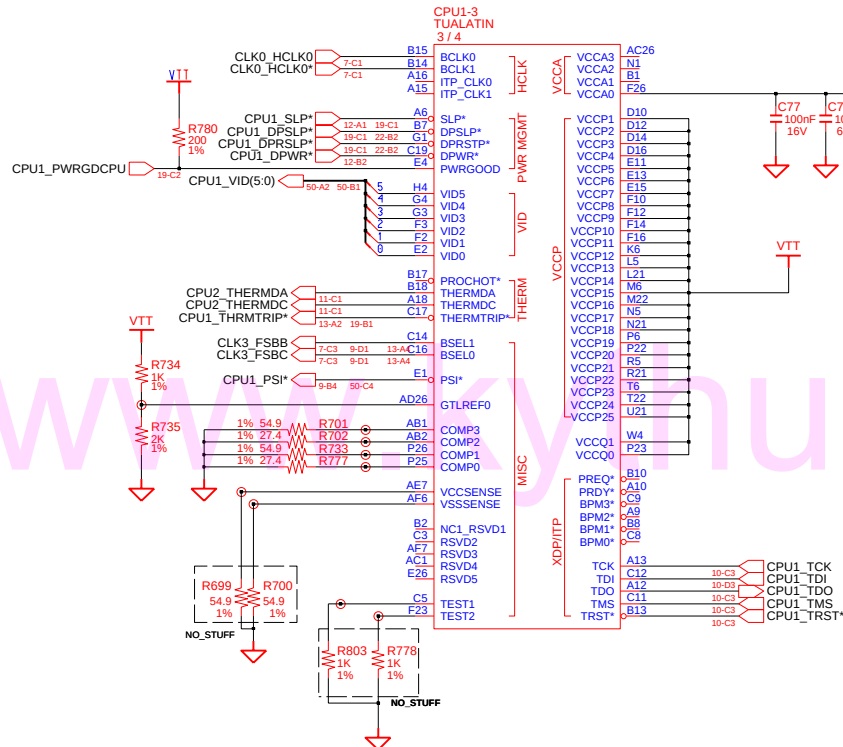


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CHECK	YUN, C.Y	DEV. STEP	MP			PART NO. BA41-00509A
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APPROVAL	LIM, J.G	REV	1.0			
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	8	OF 55

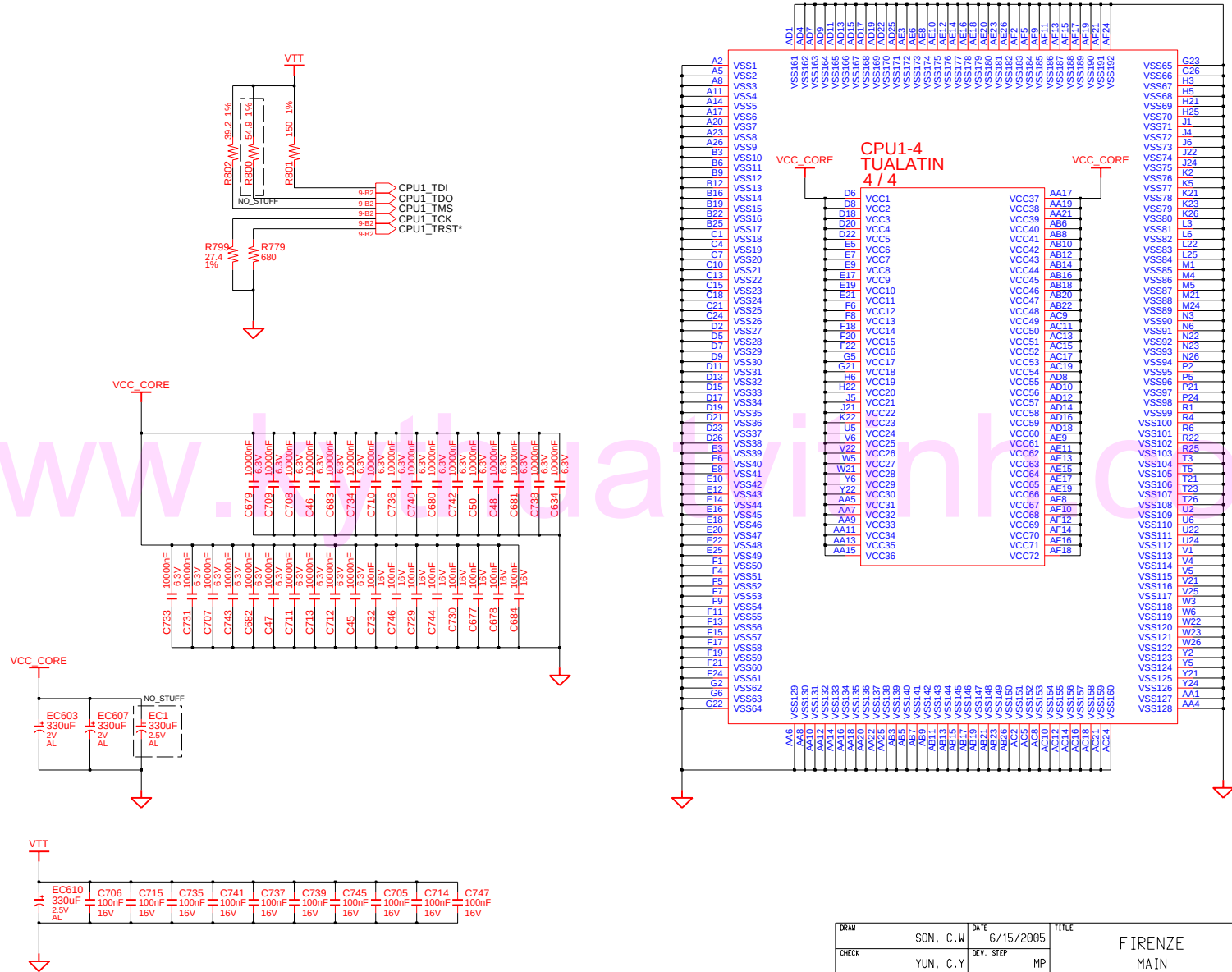


CPU Core Voltage Table

VID(5.0)	Voltage	VID(5.0)	Voltage
0 0 0 0 0 0	1.708 V	1 0 0 0 0 0	1.196 V
0 0 0 0 0 1	1.692 V	1 0 0 0 0 1	1.180 V
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 0 1 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
0 1 0 1 1 0	1.356 V	1 1 0 1 1 0	0.844 V
0 1 0 1 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
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

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

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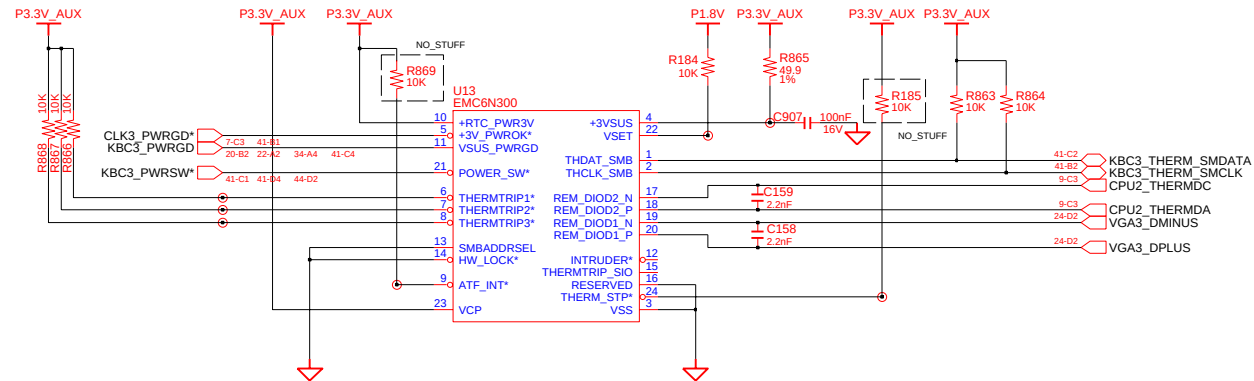


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CHECK	YUN, C. Y	DEV. STEP	MP	MAIN	
APPROVAL	LIM, J. G	REV	1.0	CPU(3/3)	
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	10 OF 55

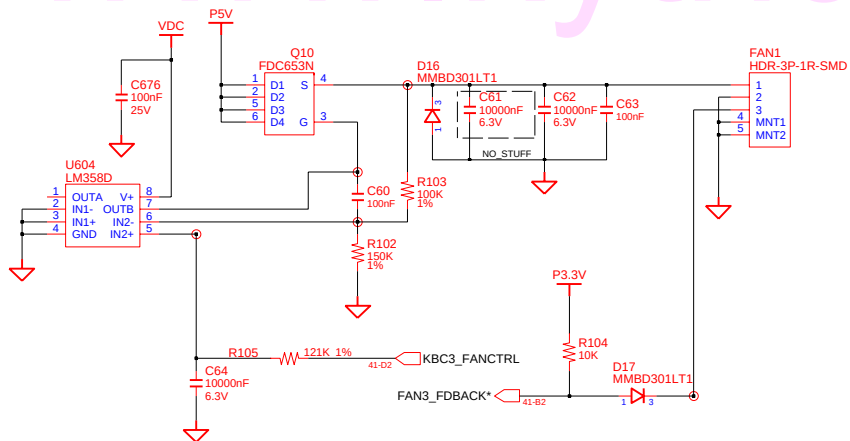
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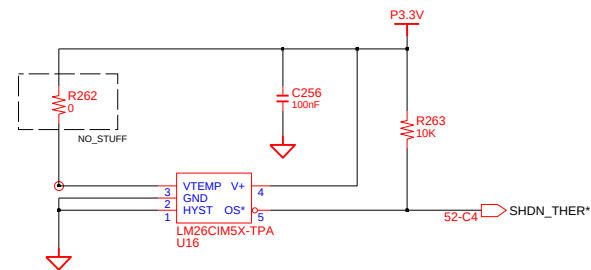
CPU/GFX Thermal Sensor



FAN CONTROL

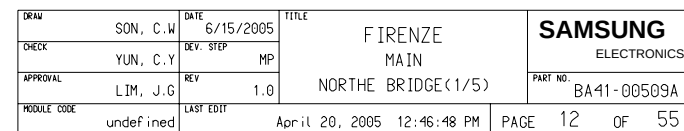


OPT CIRCUIT

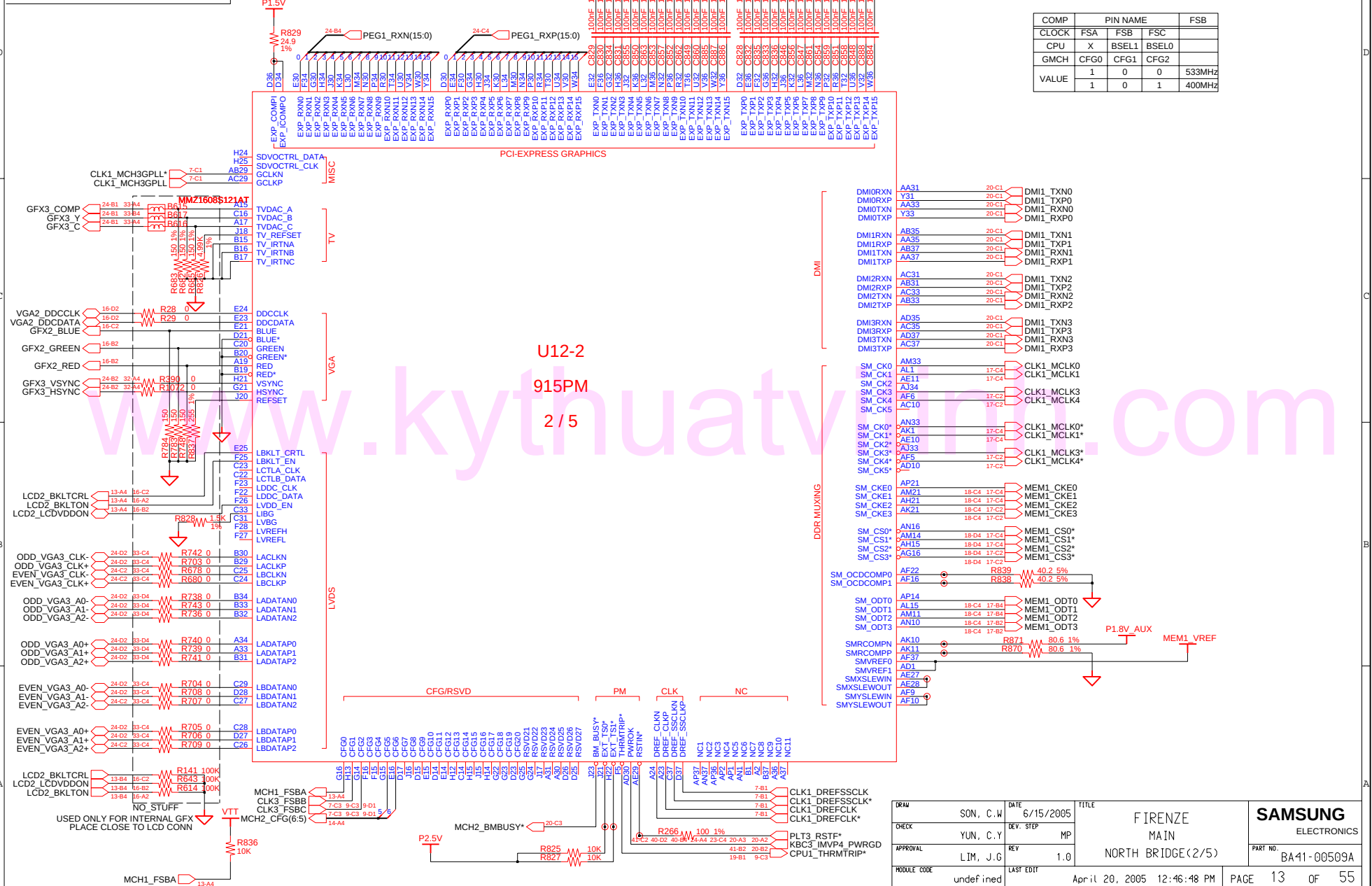


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APPROVAL	LIM, J.G	REV	1.0		THERMAL SENSOR/FAN CTRL	PART NO. BA41-00509A
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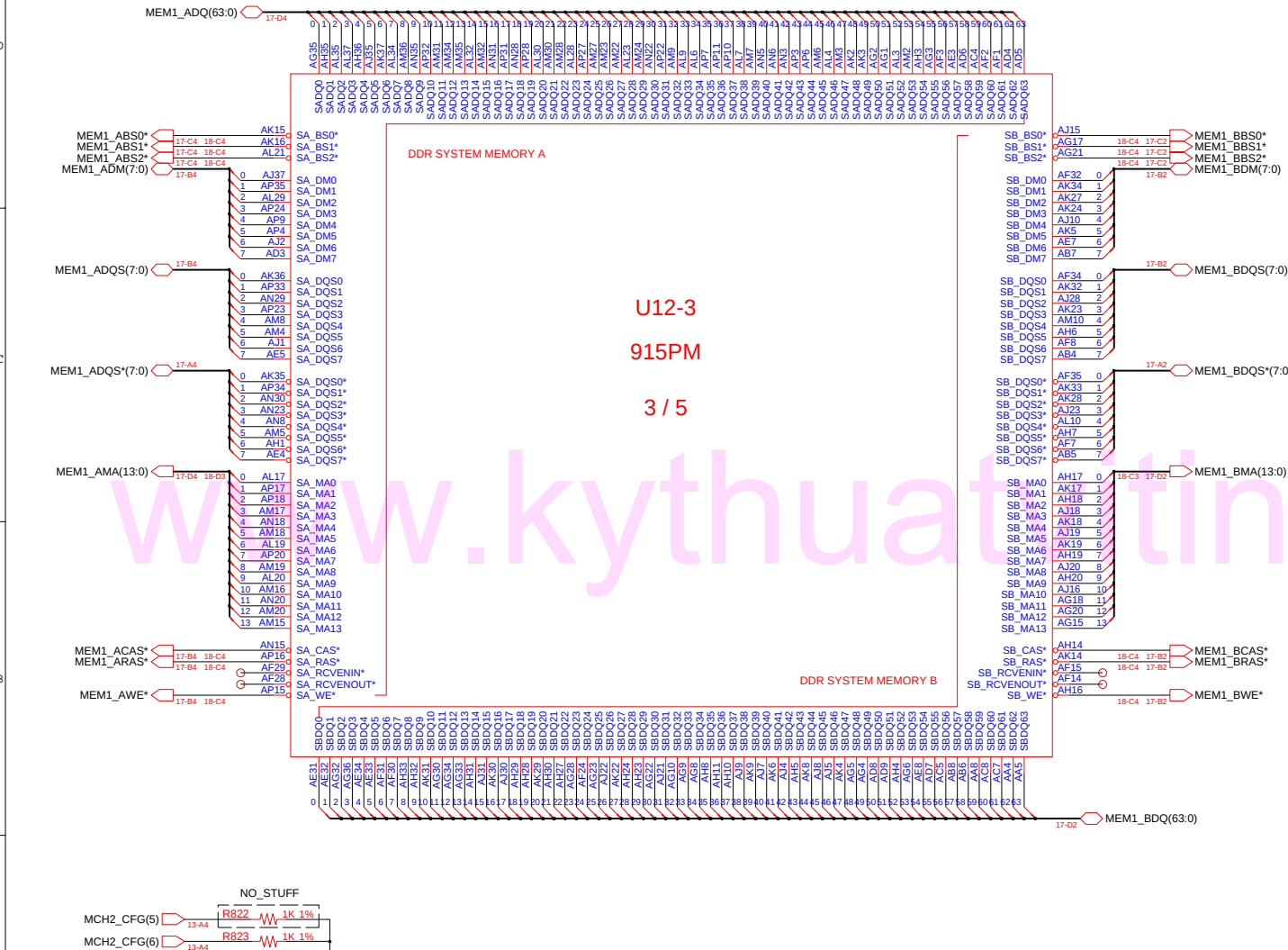
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DDR-II ONLY	DDR-I
SA_DQS(7:0)*	NC
SB_DQS(7:0)*	NC
SM_ODT(3:0)	NC

Dual Channel	Ch. A (So-DIMM A)	Ch. B (So-DIMM B)
SM_CK(2:0)	SA_CK(2:0)	N/A
SM_CK(2:0)*	SA_CK(2:0)*	N/A
SM_CK(5:3)	N/A	SB_CK(2:0)
SM_CK(5:3)*	N/A	SB_CK(2:0)*
SM_CS(1:0)*	SA_CS(1:0)*	N/A
SM_CKE(1:0)	SA_CKE(1:0)	N/A
SM_ODT(1:0)	SA_ODT(1:0)	N/A
SM_CS(3:2)*	N/A	SB_CS(3:2)*
SM_SKE(3:2)	N/A	SB_CKE(3:2)
SM_ODT(3:2)	N/A	SB_ODT(3:2)

SDVO Mode	PEG (SAGP) Mode
SDVOB_RED*	EXP_TXN_0
SDVO_RED	EXP_TXP_0
SDVOB_GREEN*	EXP_TXN_1
SDVOB_GREEN	EXP_TXP_1
SDVOB_BLUE*	EXP_TXN_2
SDVOB_BLUE	EXP_TXP_2
SDVOB_CLK*	EXP_TXN_3
SDVOB_CLK	EXP_TXP_3
SDVOC_RED*	EXP_TXN_4
SDVOB_ALPHA*	EXP_TXP_4
SDVOC_RED	EXP_TXN_5
SDVOB_ALPHA	EXP_TXP_5
SDVOC_GREEN*	EXP_TXN_6
SDVOC_GREEN	EXP_TXP_6
SDVOC_BLUE*	EXP_TXN_7
SDVOC_BLUE	EXP_TXP_7
SDVOC_CLK*	EXP_TXN_8
SDVOC_CLK	EXP_TXP_8
SDVO_TVCLKIN*	EXP_RXN_0
SDVO_TVCLKIN	EXP_RXP_0
SDVOB_INT*	EXP_RXN_1
SDVOB_INT	EXP_RXP_1
SDVO_STALLB	EXP_RXN_2
SDVO_STALL	EXP_RXP_2
SDVOC_INTB	EXP_RXN_5
SDVOC_INT	EXP_RXP_5

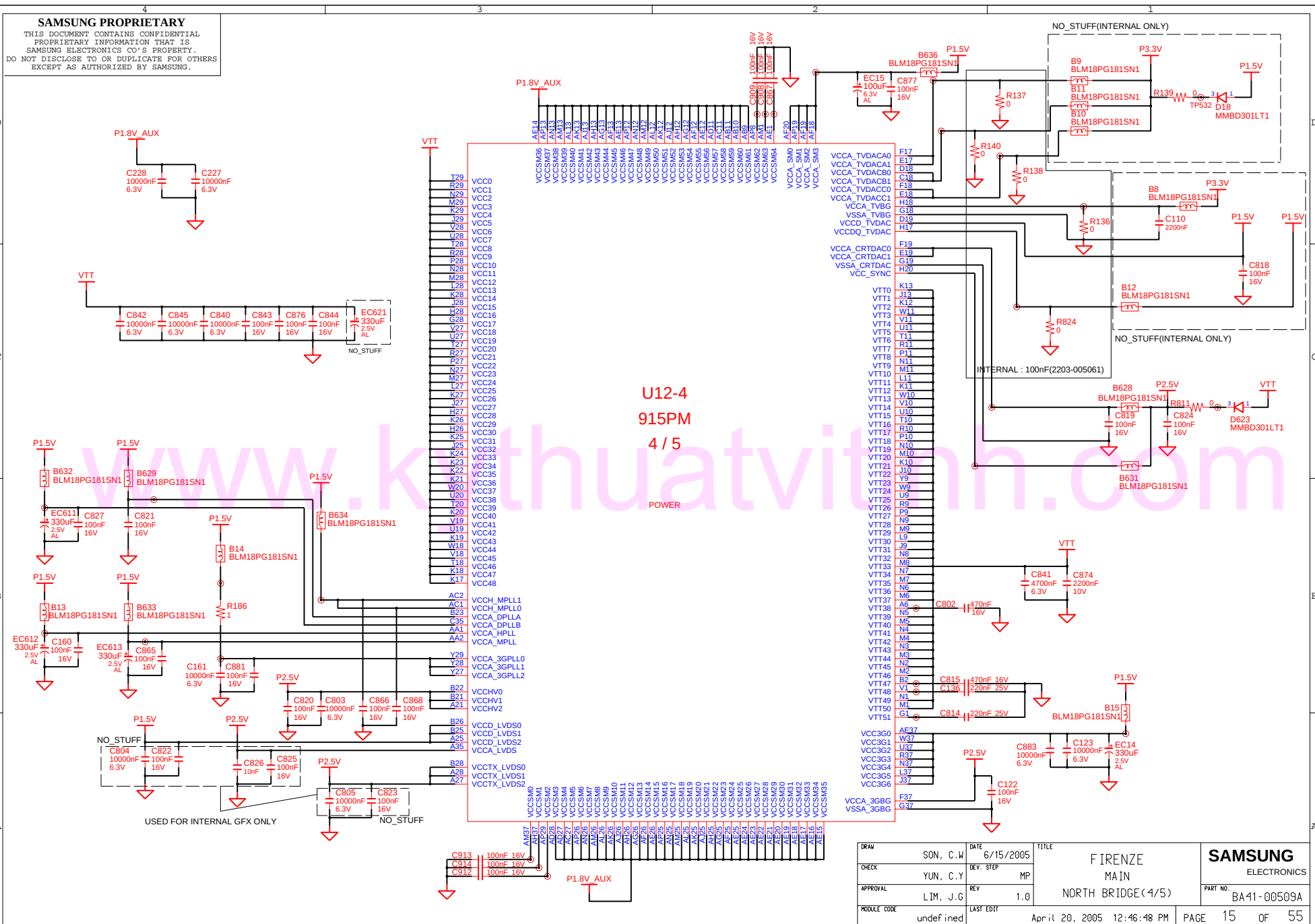
def. : default Option

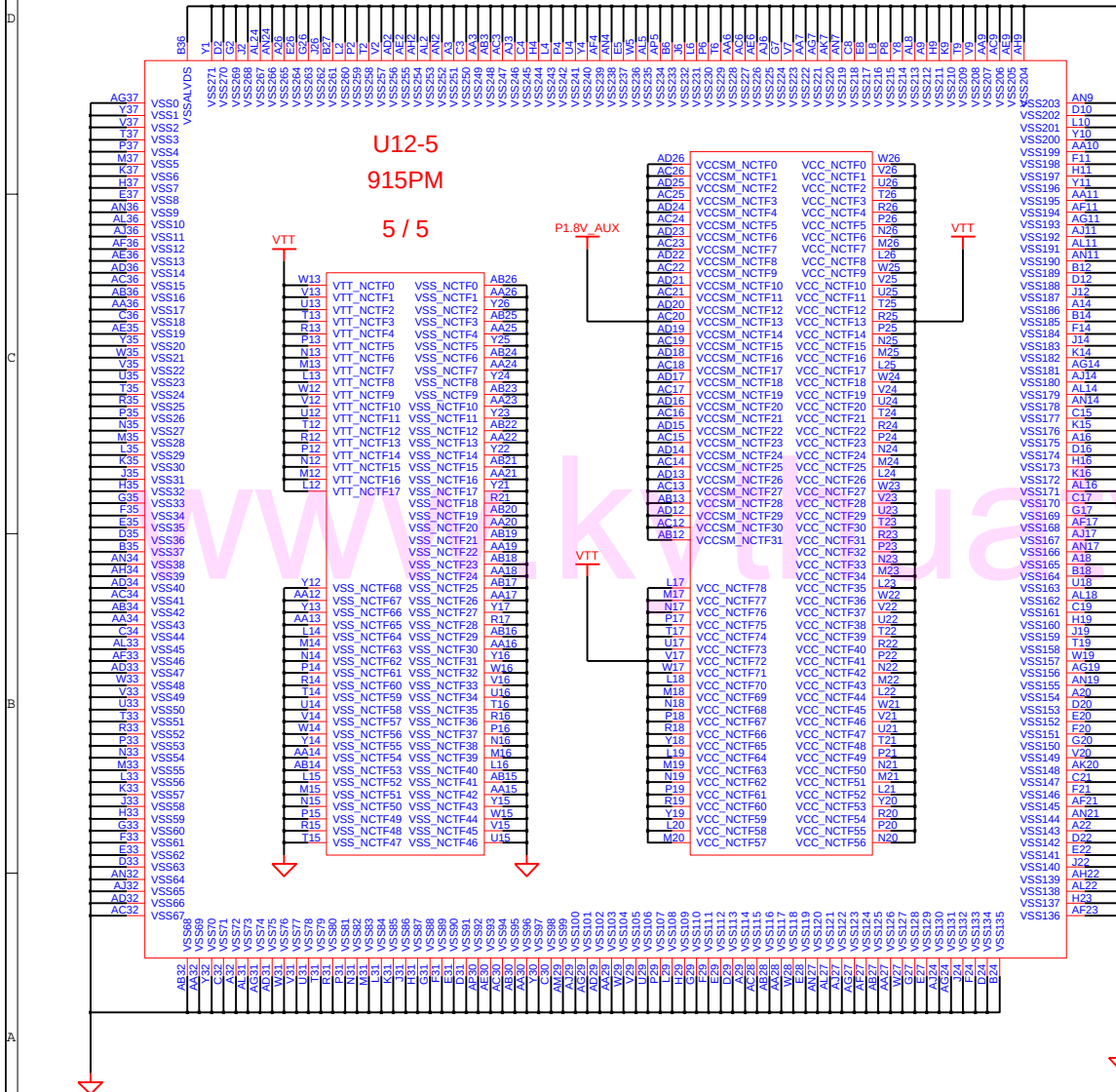
CFG#	Low	High
CFG(5)	DMix2	DMix4 (def.)
CFG(6)	DDR-1	DDR-1
CFG(7)	DT/Transportable	Mobile CPU (def.)
CFG(9)	PEG Reversal	Normal
CFG(10)	TBD	TBD
CFG(11)	TBD	TBD
CFG(16)	Dynamic ODT	Enabled (def.)
	Disabled	
CFG(18)	VCC 1.05V (def.)	VCC 1.5V
CFG(19)	VTT 1.05V (def.)	VTT 1.2V
SDVODTA	No (def.)	SDVO Present

DIM x2 / x4 x4 only

DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE MAIN NORTH BRIDGE(3/5)	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	14	OF 55

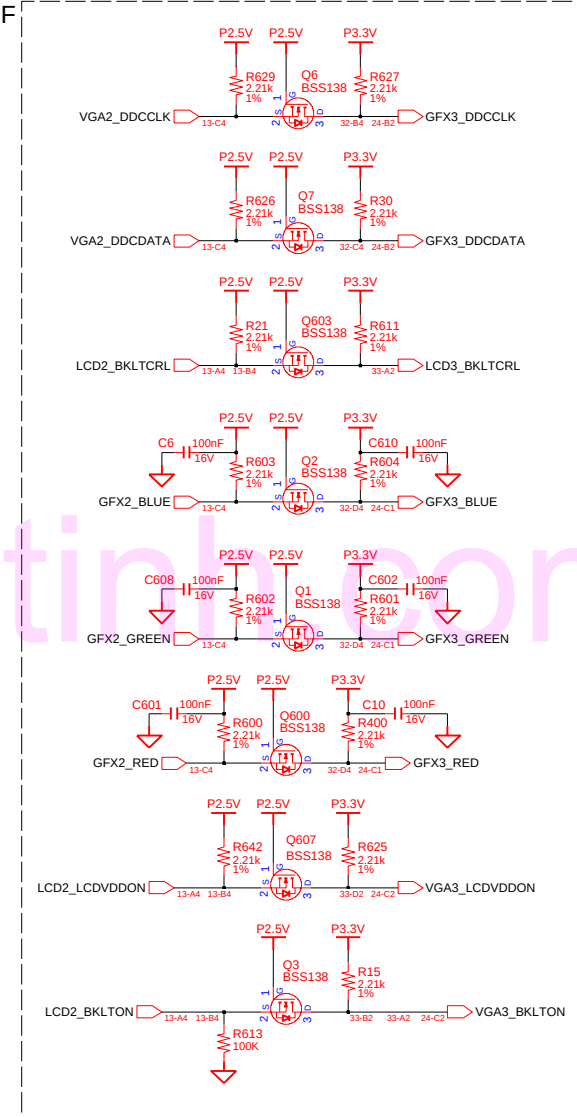
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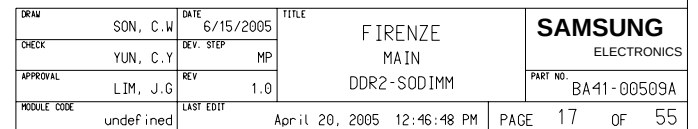
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LVDS Voltage Translation Logic (2.5V -> 3.3V) INTERNAL GFX ONLY

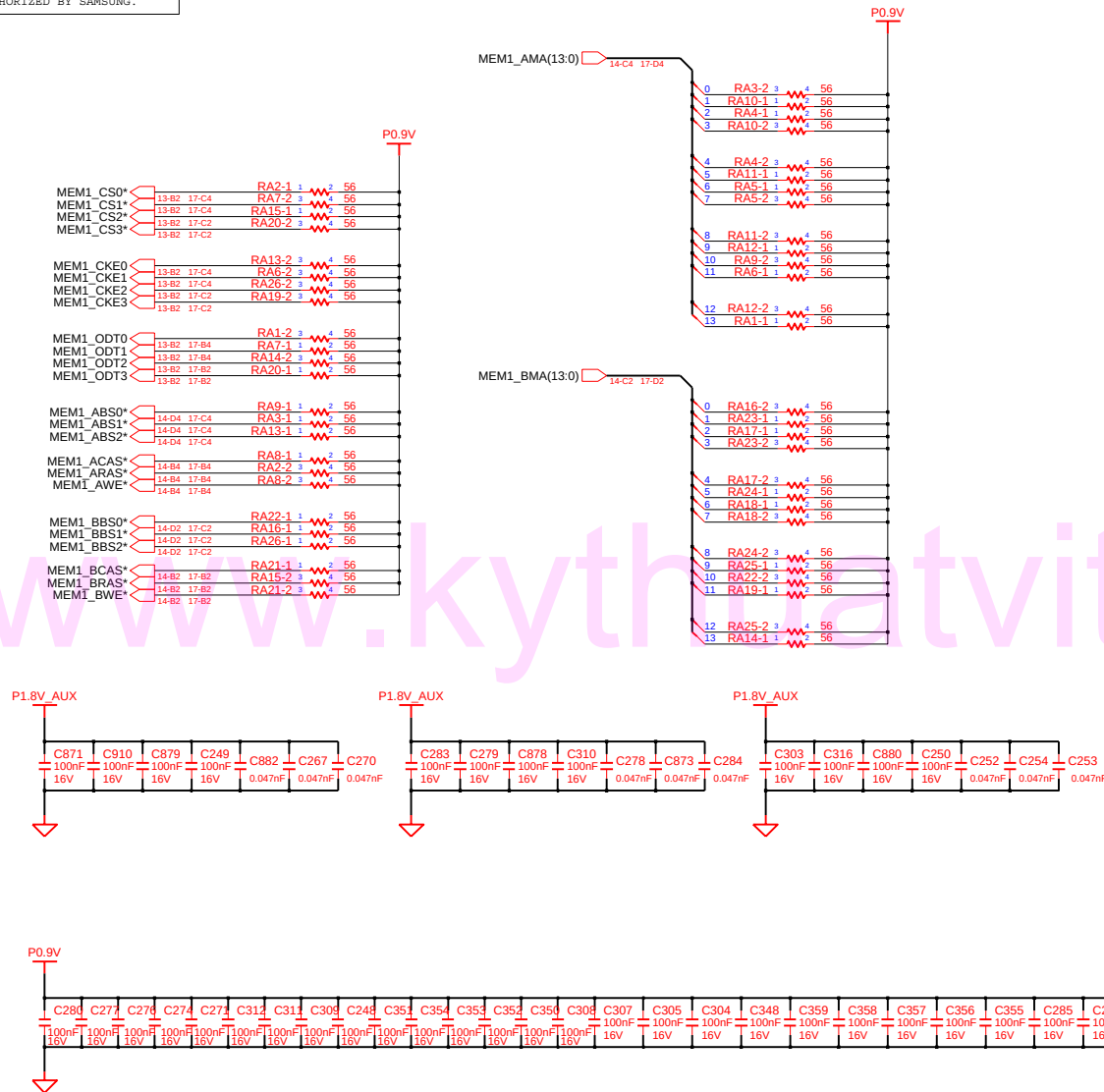


DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE MAIN NORTH BRIDGE(5/5)	SAMSUNG ELECTRONICS
CHECK	YUN, C.Y	DEV. STEP	MP			PART NO. BA41-00509A
APPROVAL	LIM, J.G	REV	1.0			
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	16	OF 55

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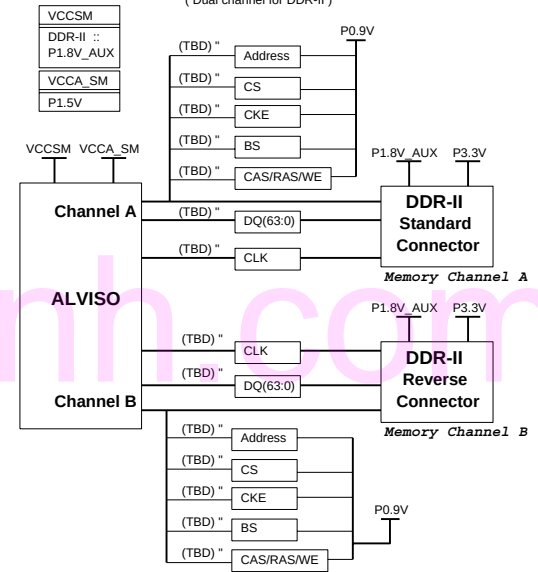


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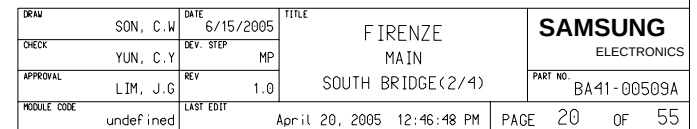


Memory Topology

(Dual channel for DDR-II)



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		DDR2-TERMINATION	
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	18	OF 55

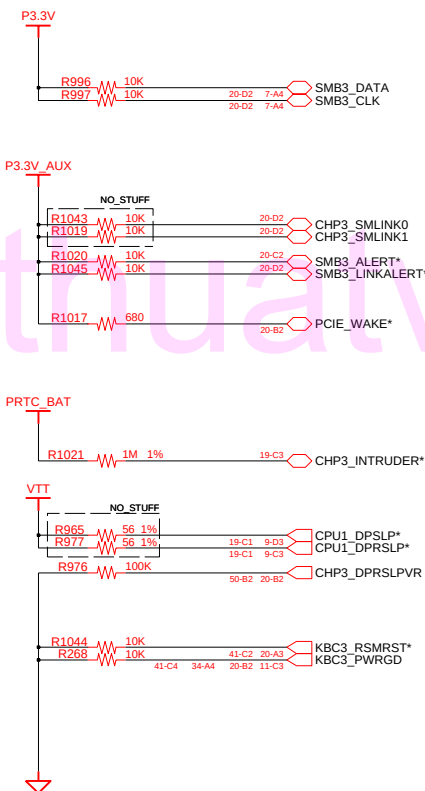


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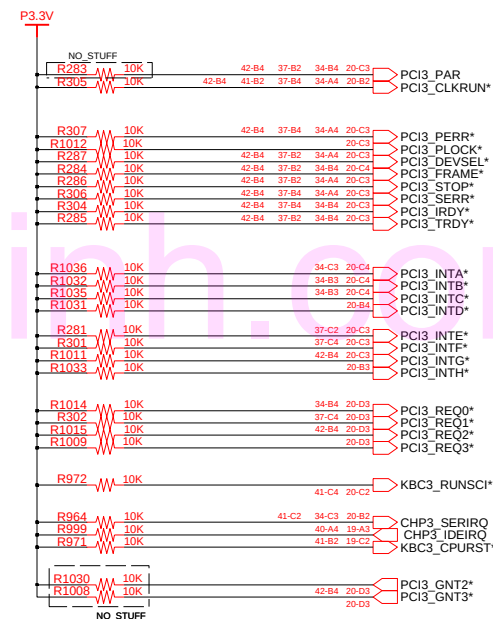
U23-5
82801FBM
5 / 5

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	L25
AD15	VSS_148	VSS_62	L24
AD10	VSS_147	VSS_61	L23
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	J22
AC3	VSS_136	VSS_50	J1
AB19	VSS_135	VSS_49	H27
AB10	VSS_134	VSS_48	H26
AB9	VSS_133	VSS_47	H23
AB7	VSS_132	VSS_46	G27
AB2	VSS_131	VSS_45	G17
AB1	VSS_130	VSS_44	G9
AA16	VSS_129	VSS_43	G7
AA13	VSS_128	VSS_42	G1
AA11	VSS_127	VSS_41	F22
AA4	VSS_126	VSS_40	F19
Y27	VSS_125	VSS_39	F17
Y26	VSS_124	VSS_38	F14
Y23	VSS_123	VSS_37	E27
Y6	VSS_122	VSS_36	E26
W25	VSS_121	VSS_35	E19
W24	VSS_120	VSS_34	E18
W23	VSS_119	VSS_33	E15
W7	VSS_118	VSS_32	E14
W1	VSS_117	VSS_31	D27
V27	VSS_116	VSS_30	D26
V26	VSS_115	VSS_29	D18
V23	VSS_114	VSS_28	D14
V4	VSS_113	VSS_27	D13
U25	VSS_112	VSS_26	D10
U24	VSS_111	VSS_25	D7
U23	VSS_110	VSS_24	D1
U15	VSS_109	VSS_23	C27
U13	VSS_108	VSS_22	C26
T27	VSS_107	VSS_21	C18
T26	VSS_106	VSS_20	C14
T23	VSS_105	VSS_19	C4
T16	VSS_104	VSS_18	B25
T15	VSS_103	VSS_17	B24
T14	VSS_102	VSS_16	B23
T13	VSS_101	VSS_15	B16
T12	VSS_100	VSS_14	B15
T7	VSS_99	VSS_13	B12
T1	VSS_98	VSS_12	B11
R25	VSS_97	VSS_11	A26
R24	VSS_96	VSS_10	A23
R17	VSS_95	VSS_9	A21
R16	VSS_94	VSS_8	A19
R15	VSS_93	VSS_7	A15
R14	VSS_92	VSS_6	A12
R13	VSS_91	VSS_5	A9
R12	VSS_90	VSS_4	A7
R11	VSS_89	VSS_3	A4
R4	VSS_88	VSS_2	A1
	VSS_87	VSS_1	



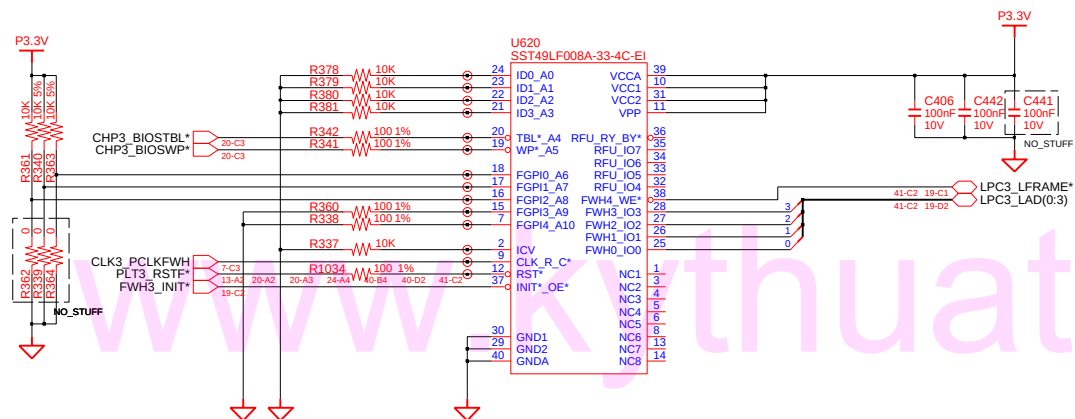
ICH6-m Strapping Options

	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



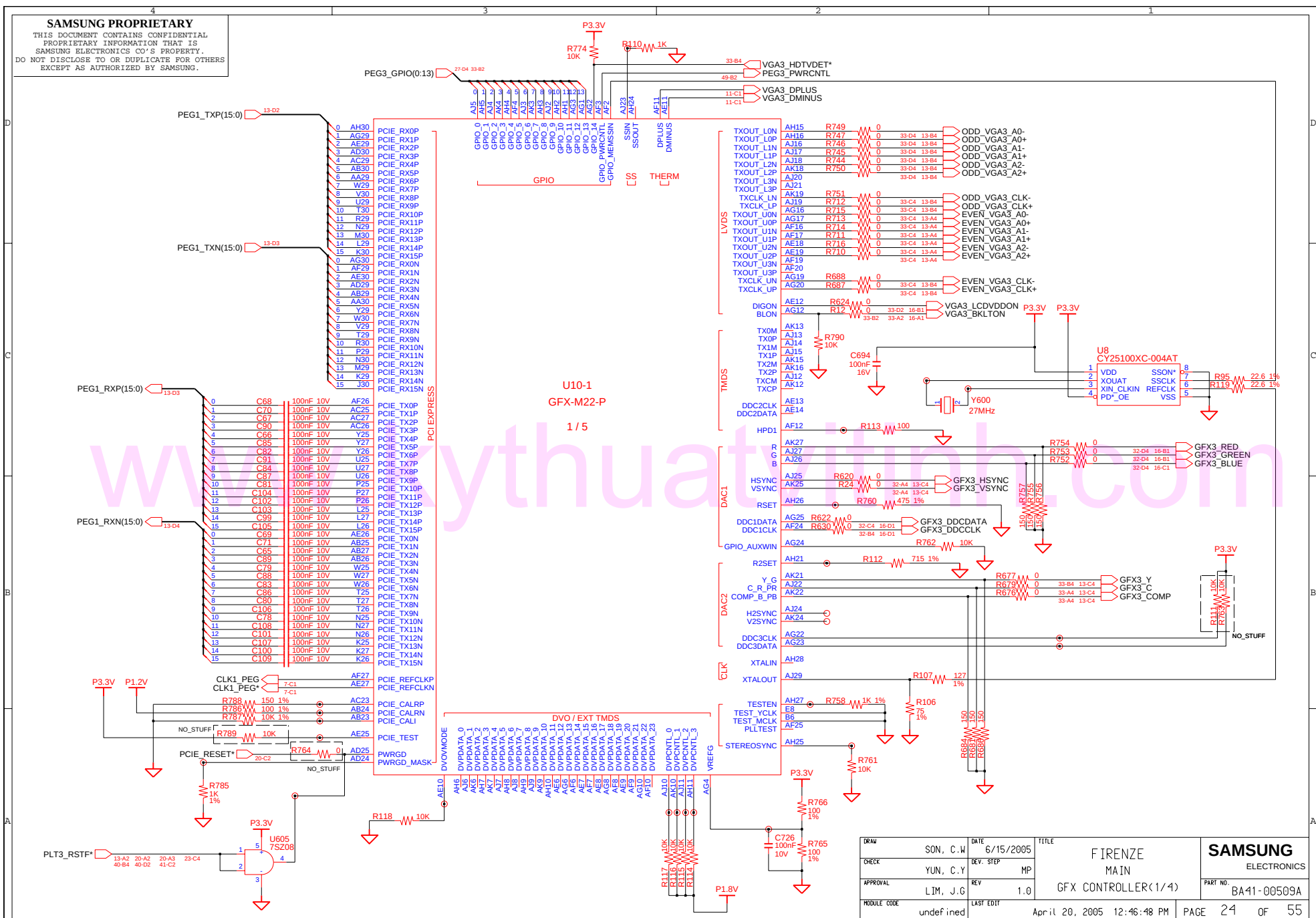
DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE	SAMSUNG ELECTRONICS
CHECK	YUN, C.Y	DEV. STEP	MP	MAIN	BA41-00509A	
APPROVAL	LIM, J.G	REV	1.0	SOUTH BRIDGE(4/4)		
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	22	OF 55

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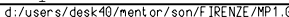
- | | | | |
|----|------------------------------------|----|---------------------------------|
| 02 | VERIFY REAL MODE | 66 | CONFIGURE ADVANCE CACHE REG. |
| 03 | DISABLE NMI | 6A | DISPLAY EXTERNAL CACHE SIZE |
| 04 | GET CPU TYPE | 6C | DISPLAY SHADOW MESSAGE |
| 06 | INIT. SYSTEM H/W | 6E | DISPLAY 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



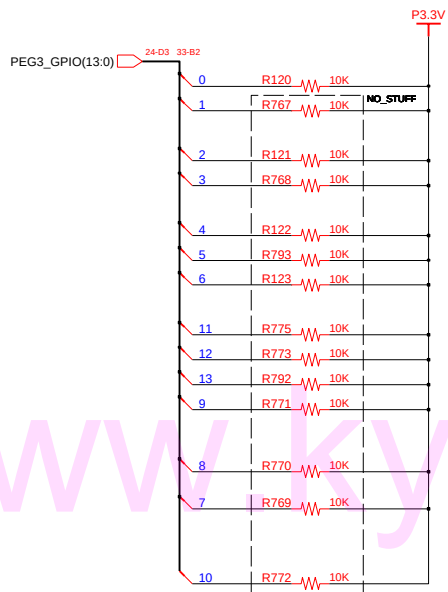
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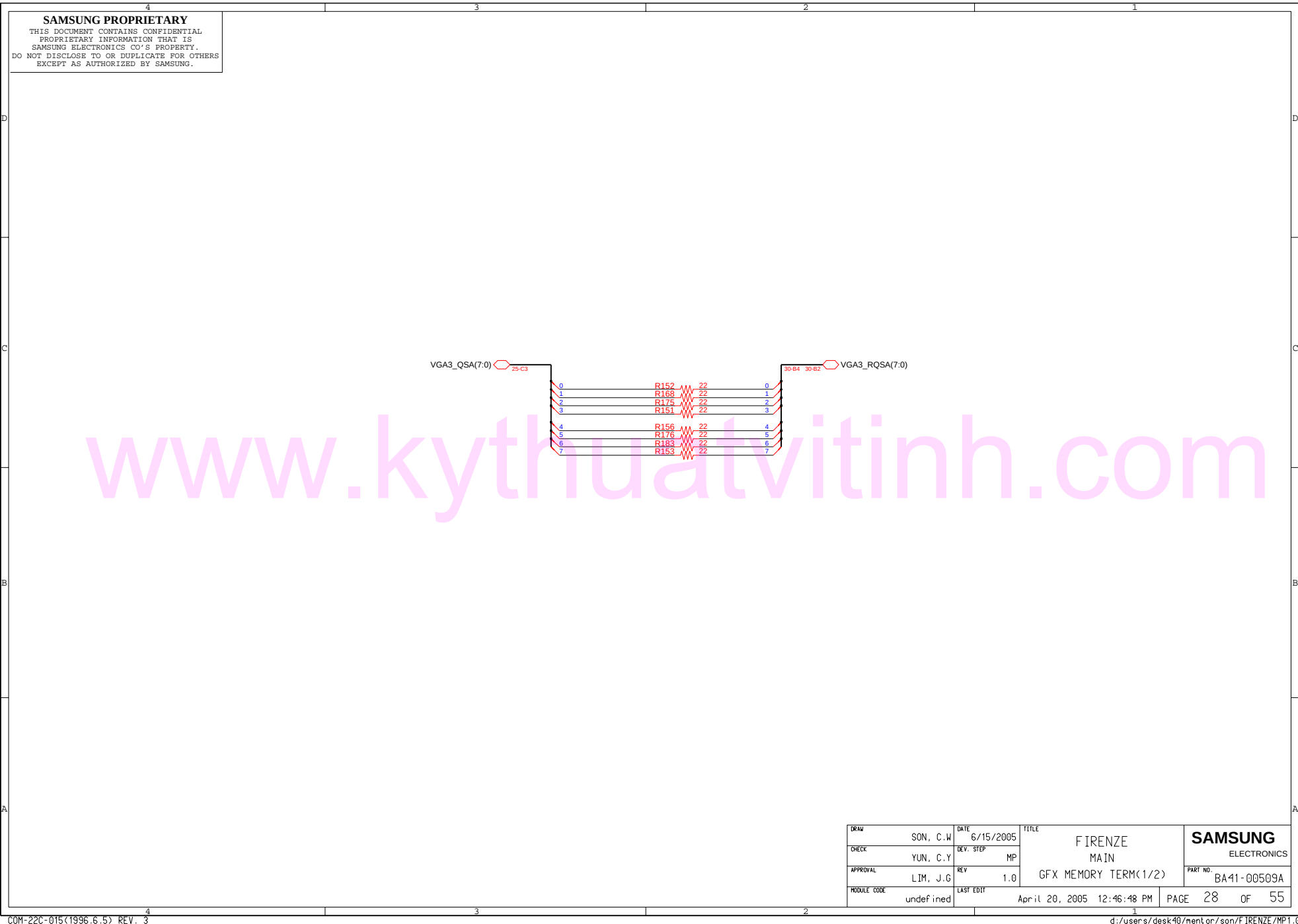
DATE	SON, C. W.	6/15/2005	TITLE FIRENZE MAIN GFX CONTROLLER(3/4)			
CHECK	YUN, C. Y.	DEV. STEP MP				
APPROVAL	LIM, J. G.	REV 1.0				
PART NO.		BA14-00509A				
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	26	OF 55

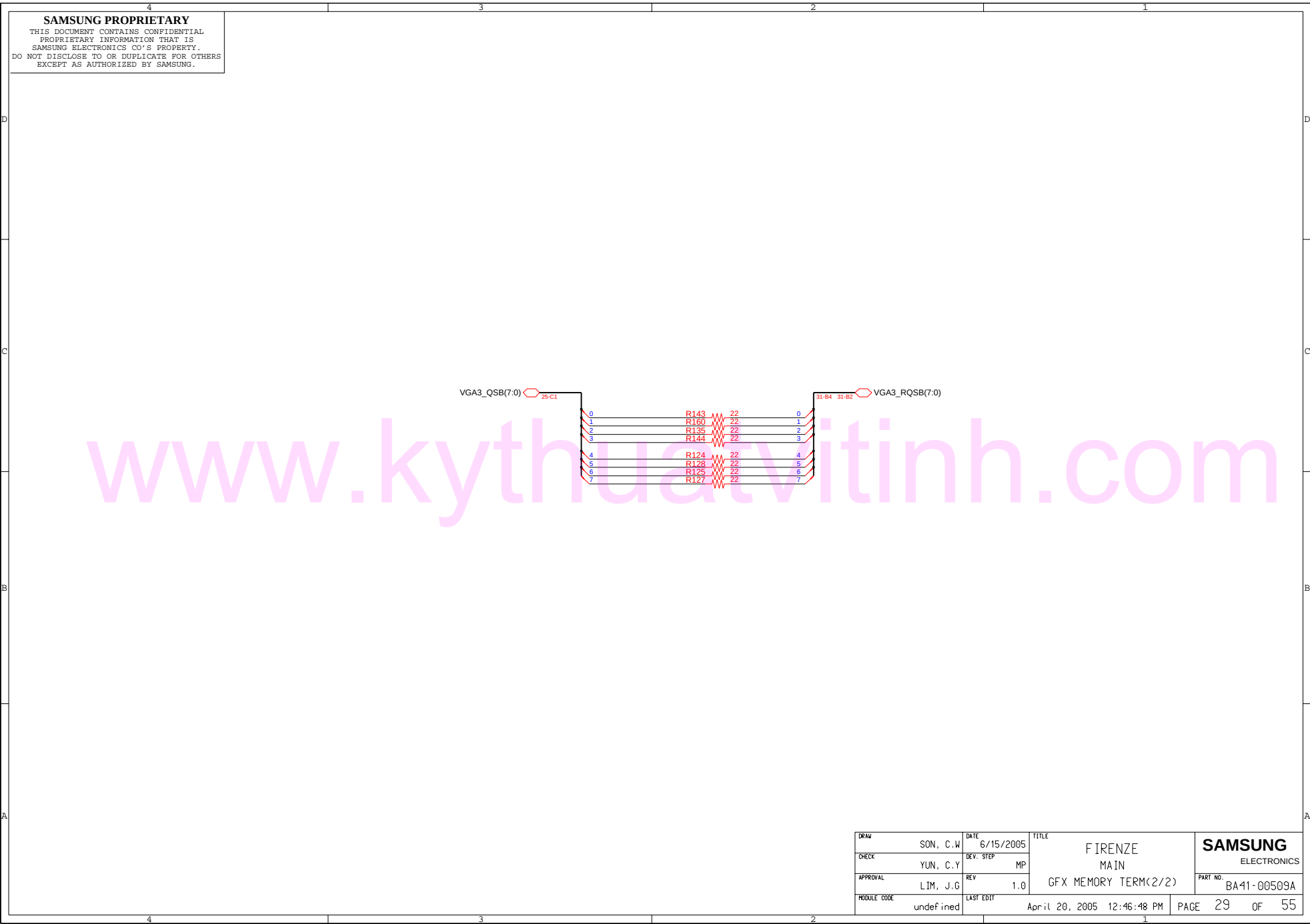
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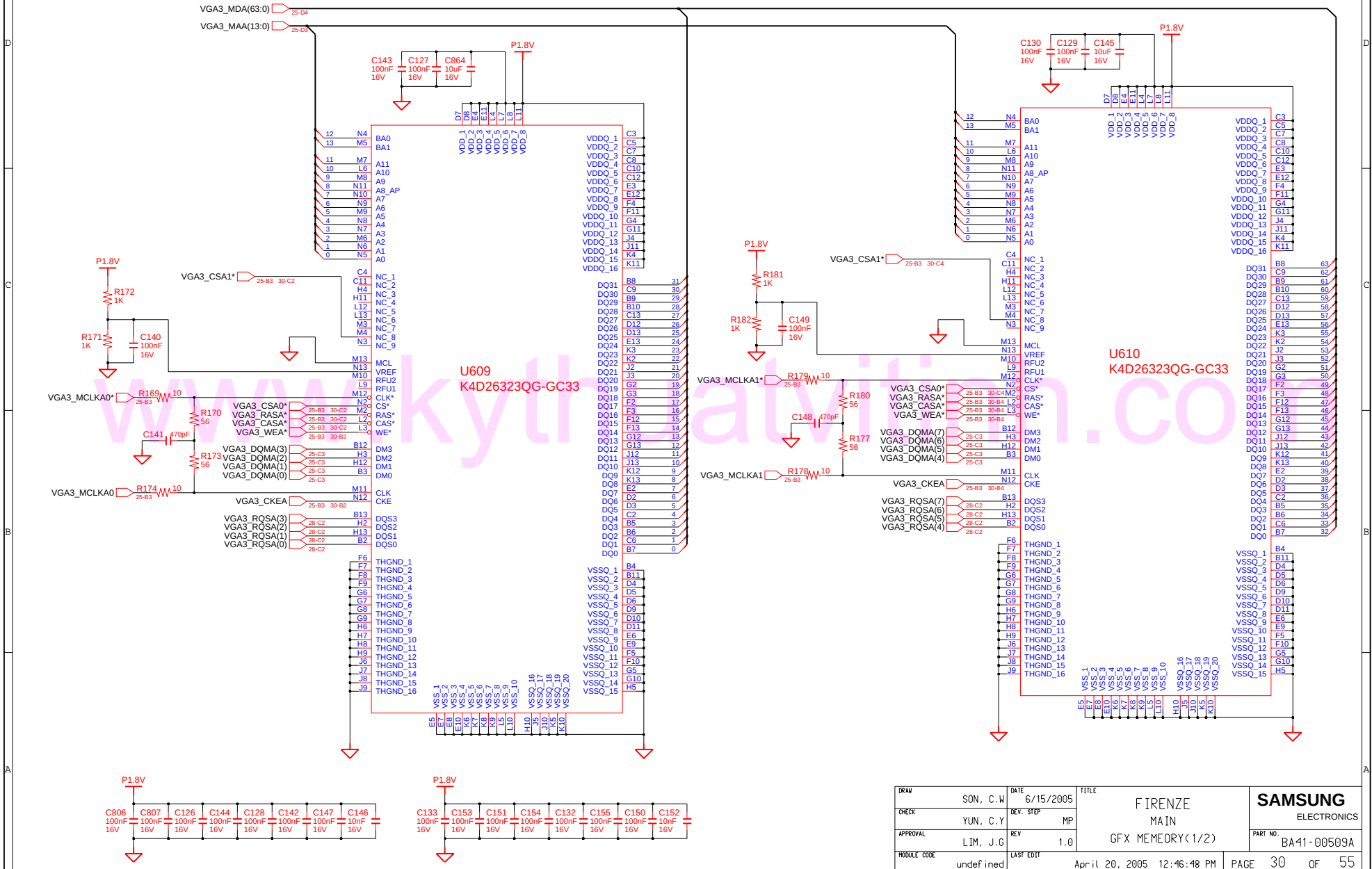
Straps	Pin Number	Descriptions
CAL_BG_BACKUP	GPIO0	PCI-Express Current Calibration Bandgap Backup 0 : use reference voltage from bandgap (Default) 1: use reference voltage from resistor divider
PLL_CAL_FORCE_EN	GPIO1	PCI-Express PLL Calibration Force Enable 0: Disable PLL force calibration (Default) 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.

DRAW	SON, C.W	DATE	6/15/2005	TITLE FIRENZE MAIN GFX CONTROLLER(4/4)		SAMSUNG ELECTRONICS PART NO. BA41-00509A	
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	27 OF 55

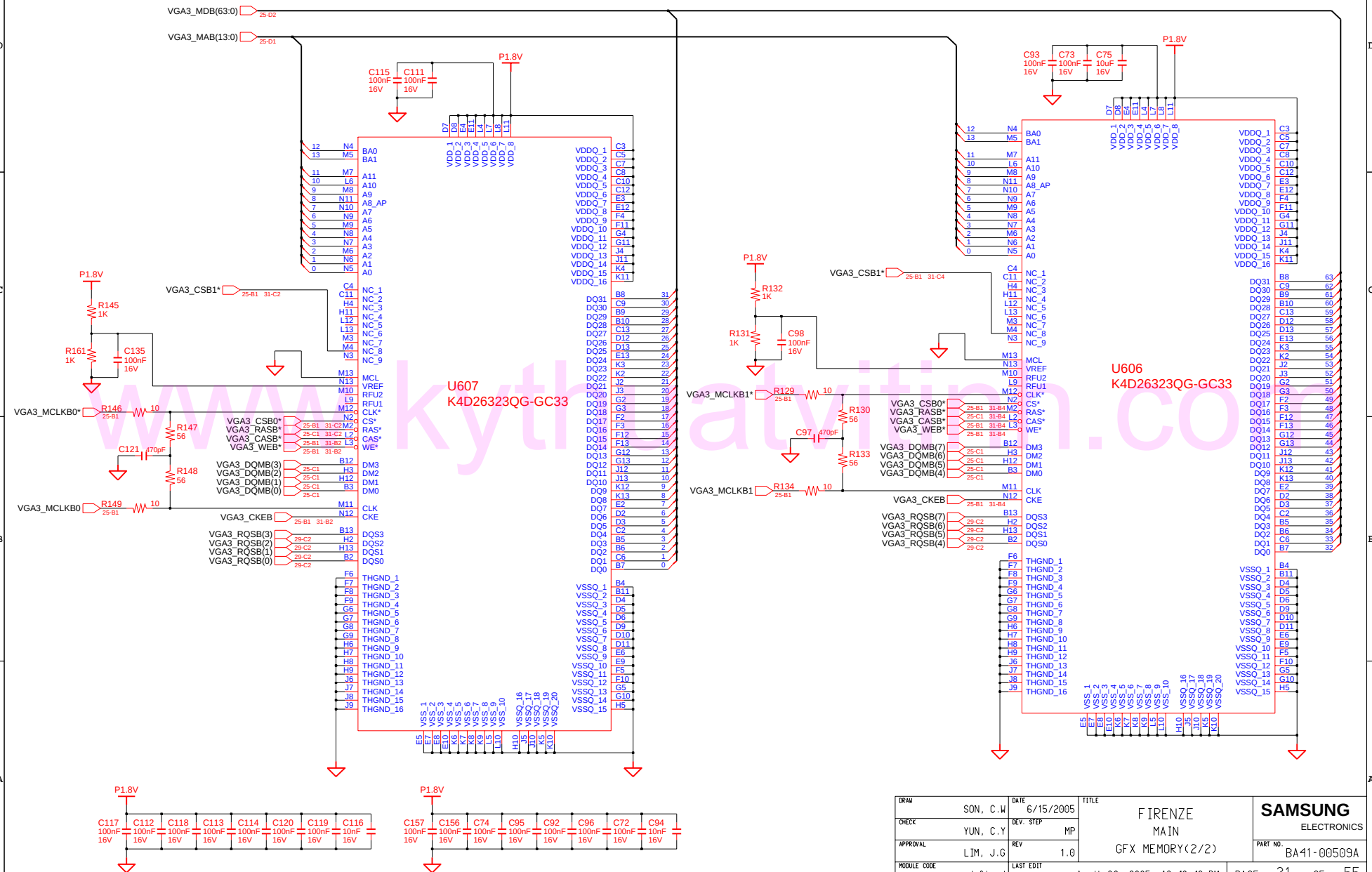




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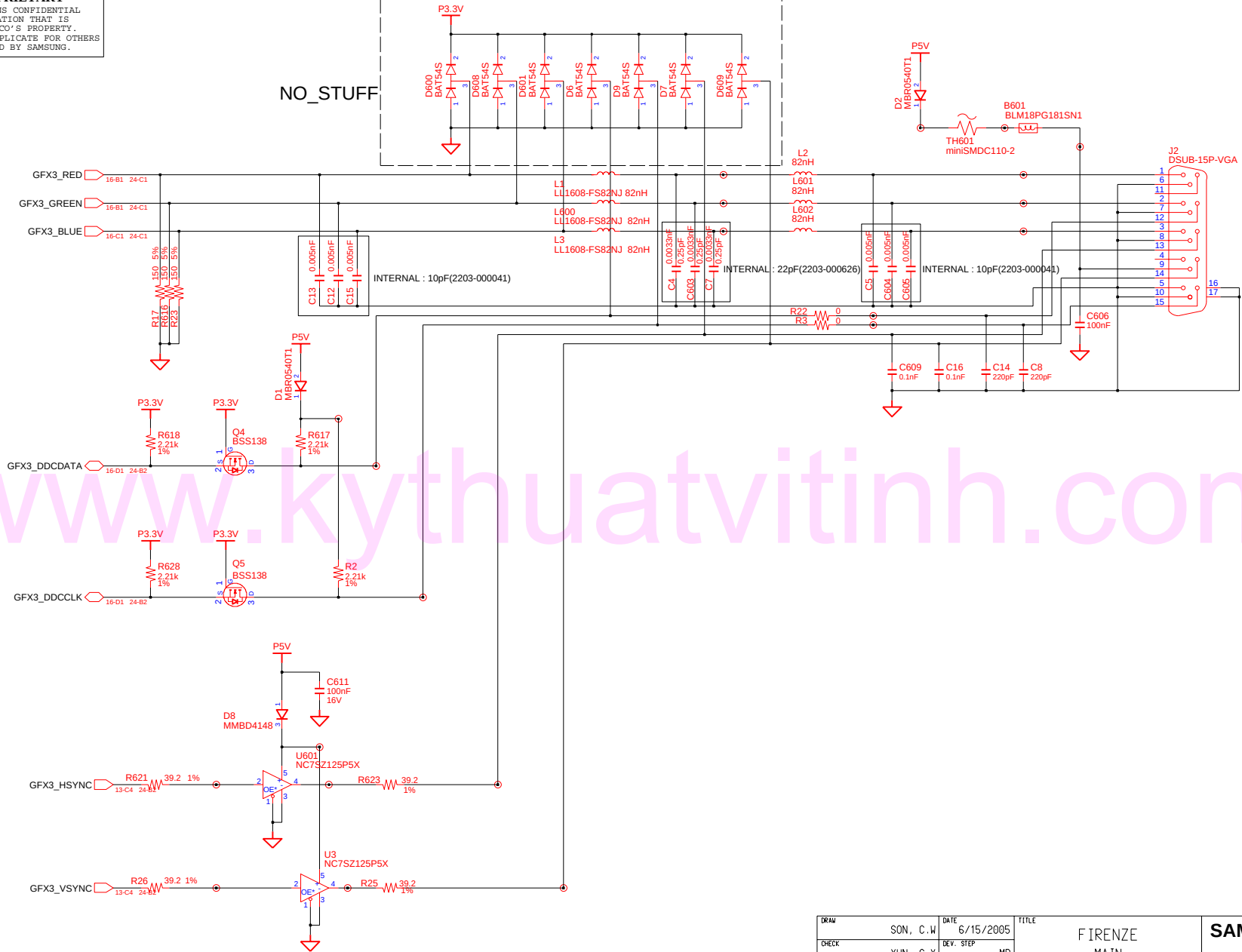


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NO_STUFF

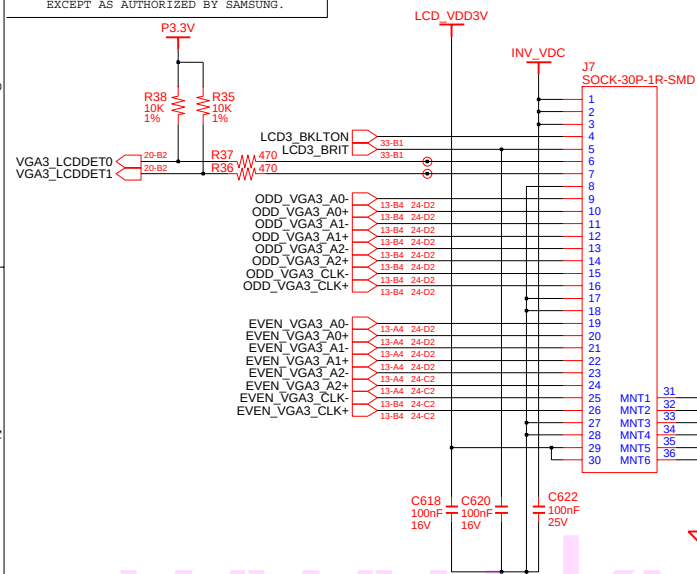


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CHECK	YUN, C.Y	DEV. STEP	MP			PART NO. BA41-00509A
APPROVAL	LIM, J.G	REV	1.0			
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	32	OF 55

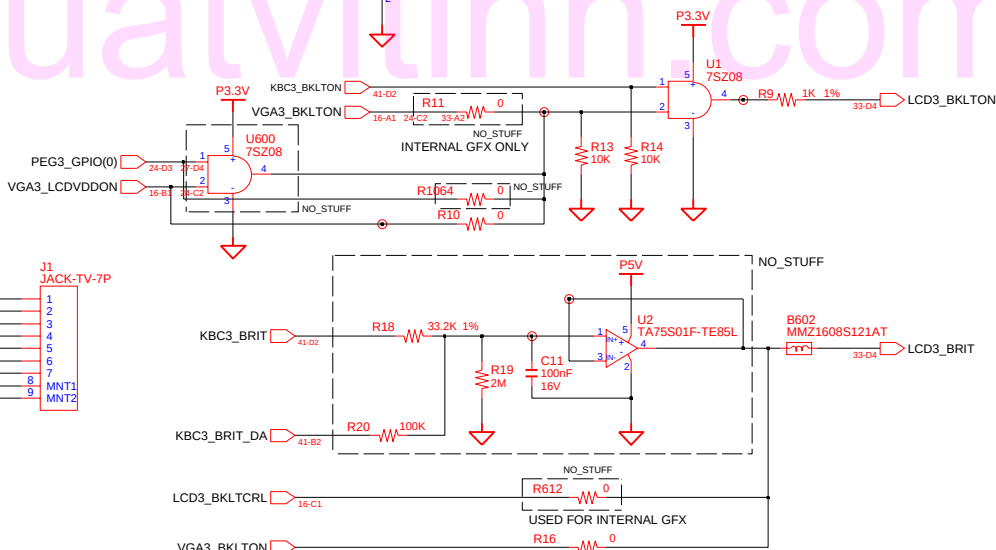
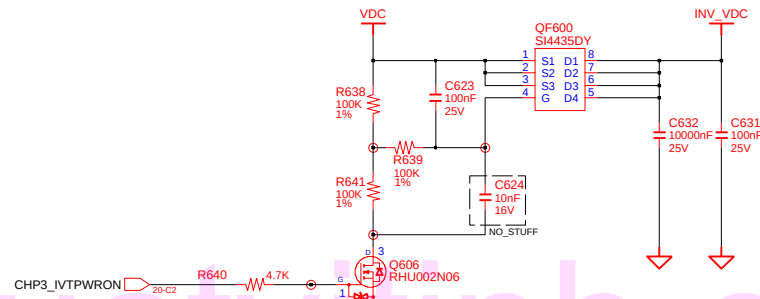
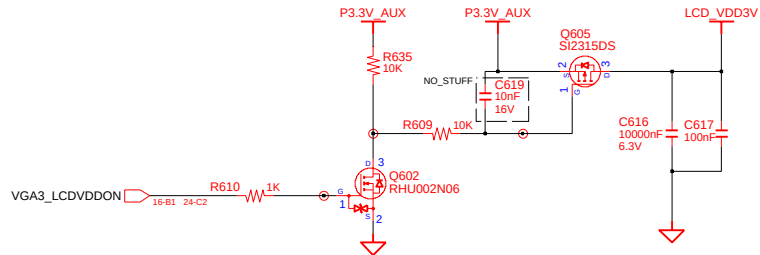
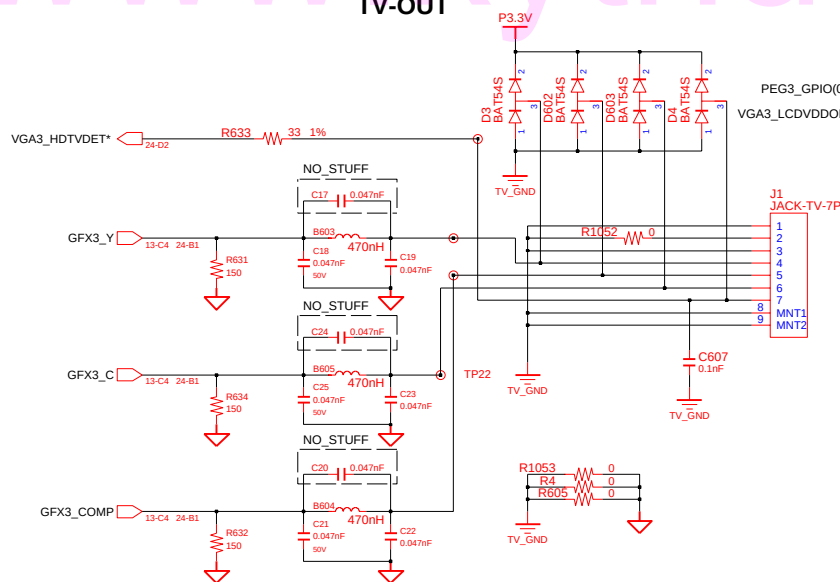
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LCD CONNECTOR

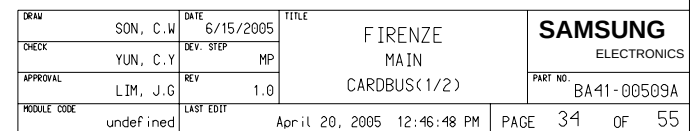


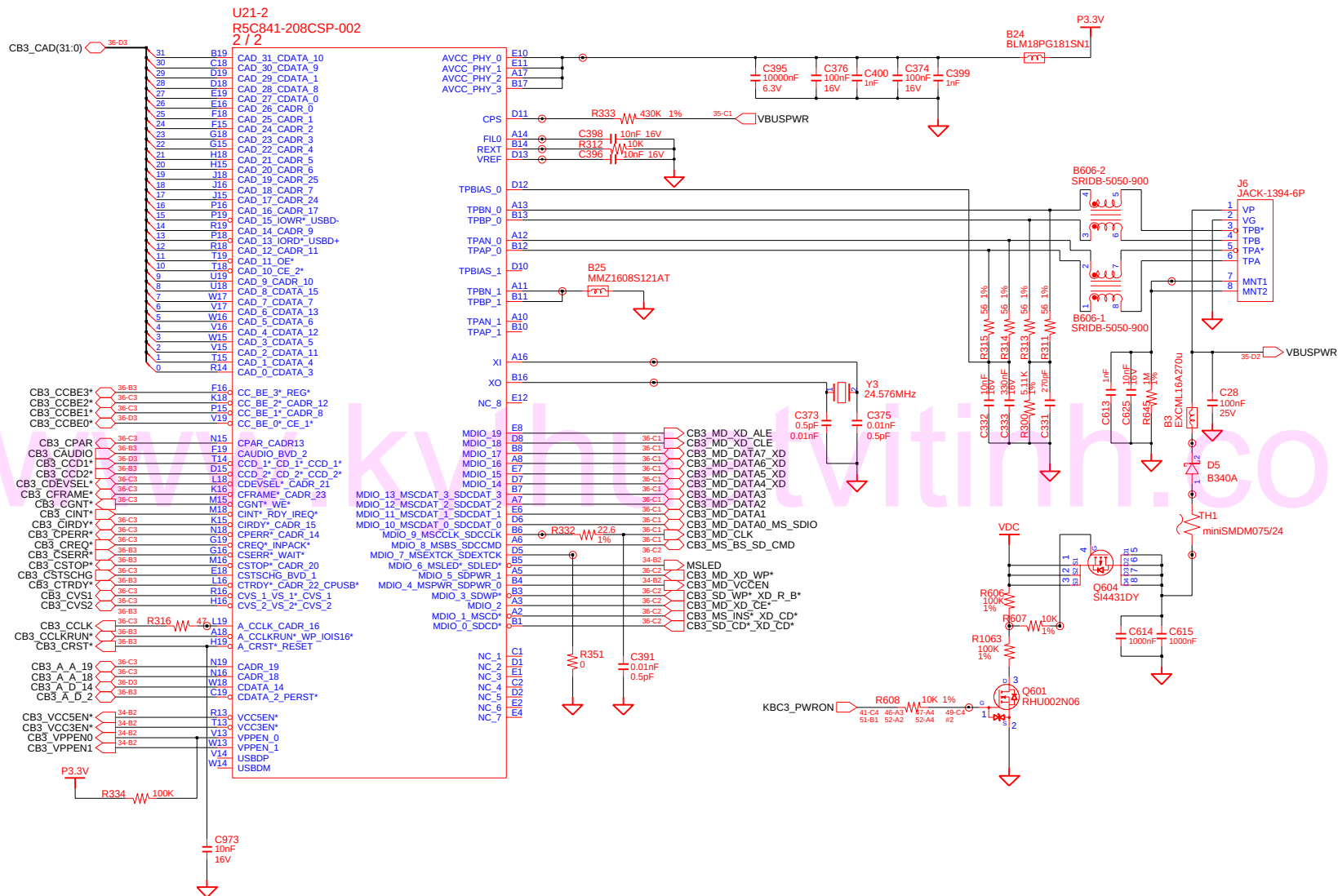
TV-OUT



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

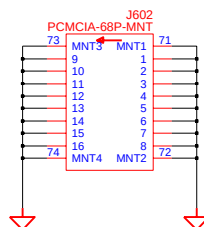
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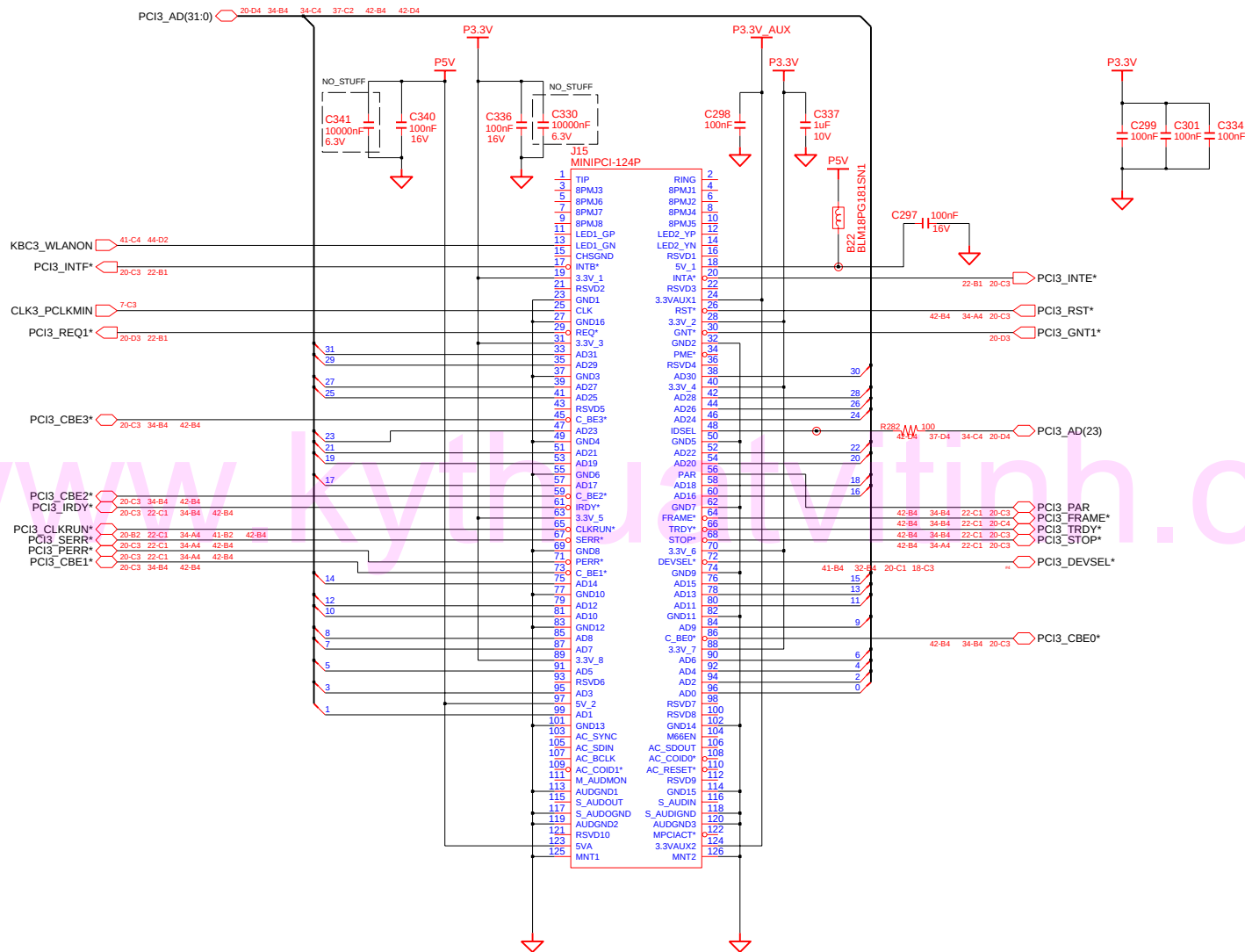
DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE	SAMSUNG
CHECK	YUN, C.Y	DEV. STEP	MP	MAIN	BA41-00509A	ELECTRONICS
APPROVAL	LIM, J.G	REV	1.0	CARDBUS(2/2)		
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	35	OF 55

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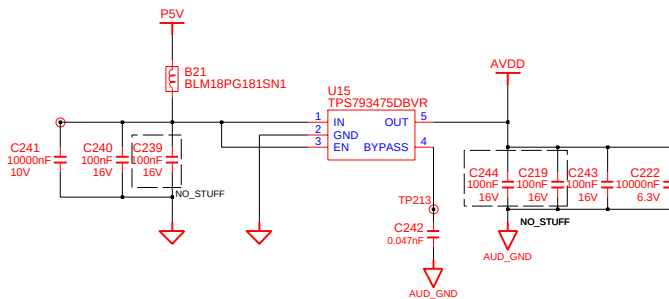
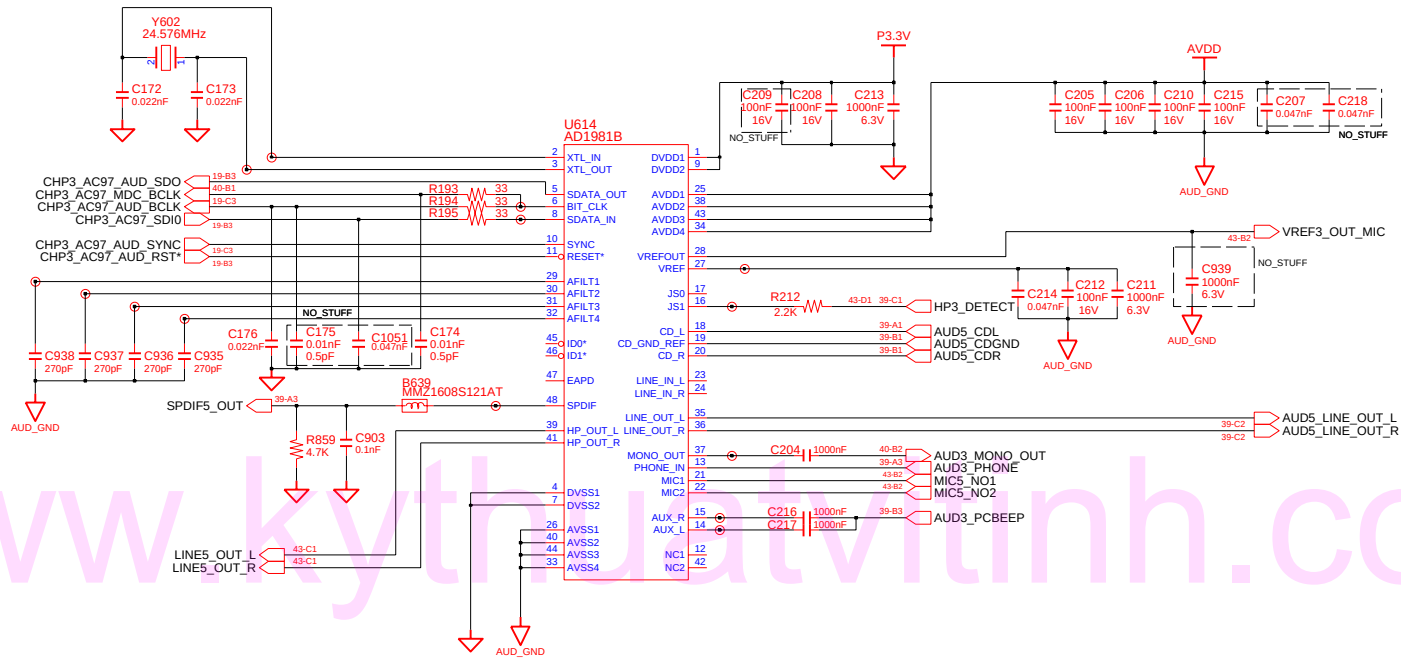
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APPROVAL	LIM, J.G.	REV	1.0	CARDBUS CONN/MEDIA CARD		PART NO.		BA41-00509A	
MODULE CODE	undefined	LAST EDIT							
				April 20, 2005 12:46:48 PM		PAGE		36	OF 55

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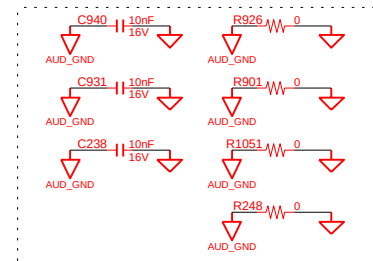


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CHECK	YUN, C.Y	DEV. STEP	MP			PART NO. BA41-00509A
APPROVAL	LIM, J.G	REV	1.0			
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	37	OF 55

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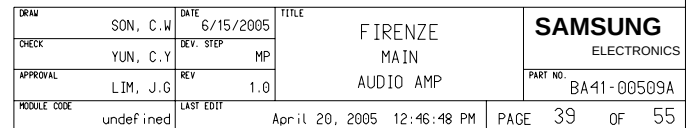


ALL TYPE IS 1608



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

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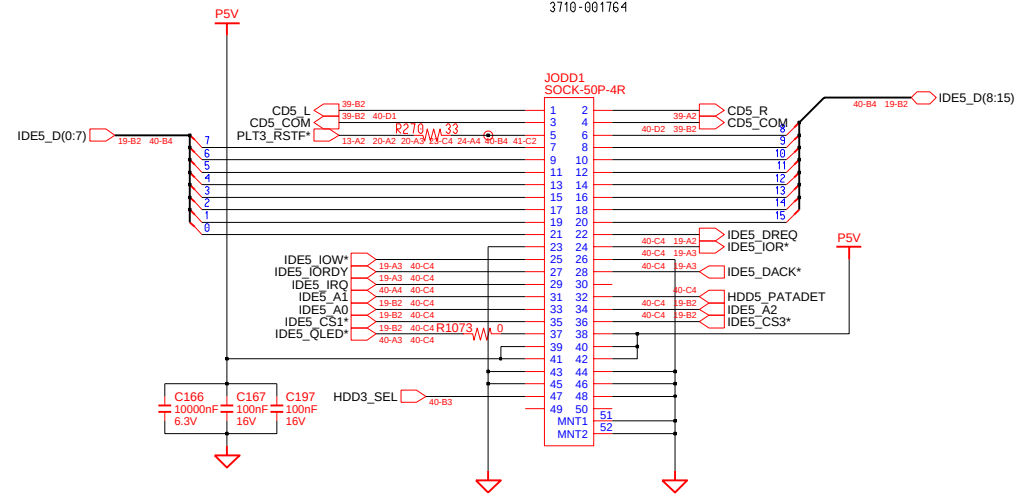


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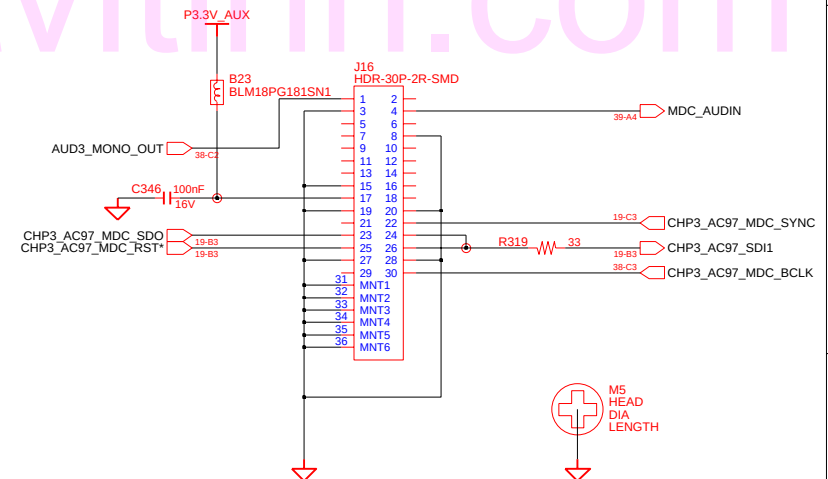
MAIN TO HDD

MAIN TO ODD

3710-001764



MDC Connector

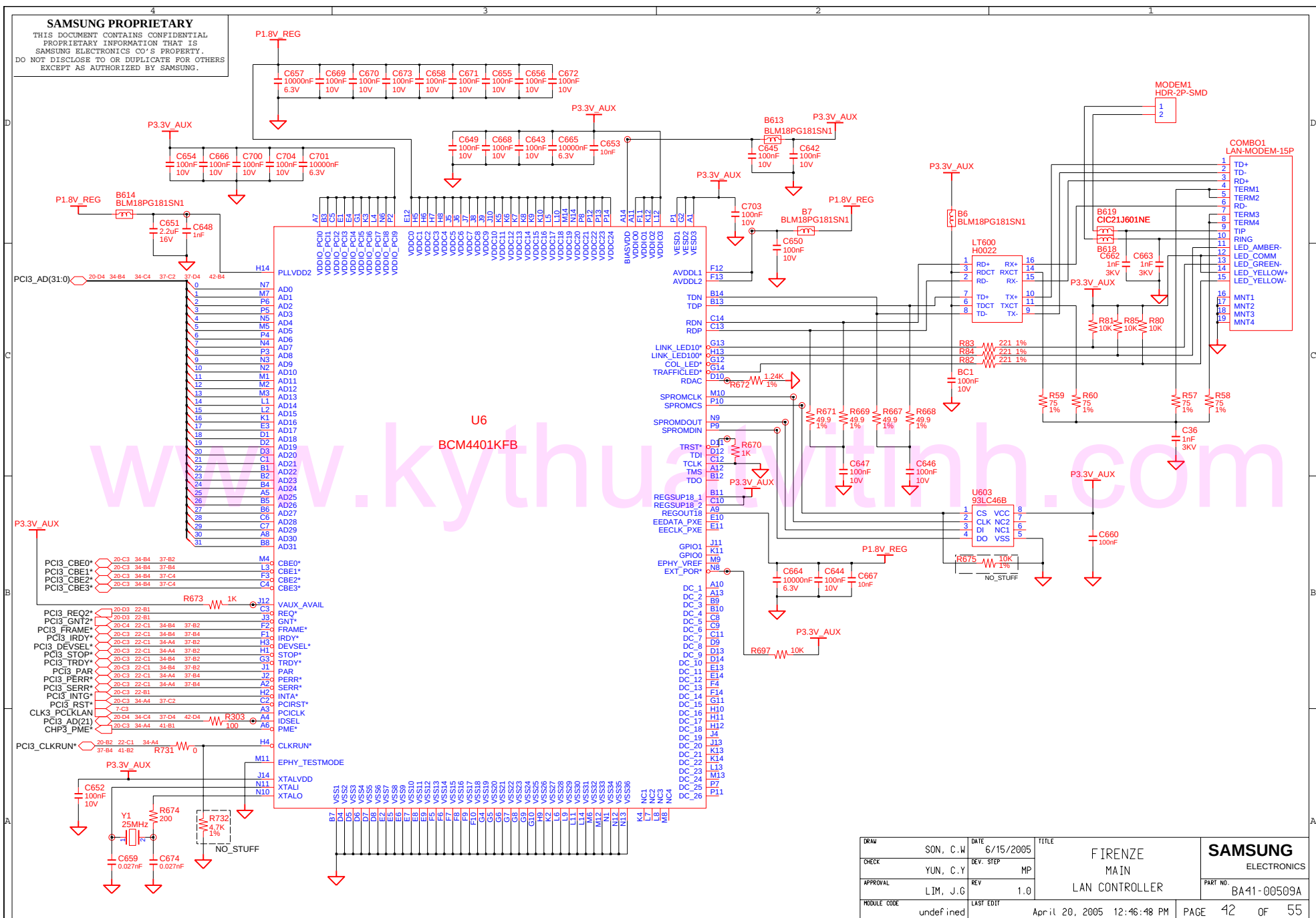


DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE MAIN HDD/ODD/MDC CONN	SAMSUNG ELECTRONICS
CHECK	YUN, C.Y	DEV. STEP	MP			PART NO. BA41-00509A
APPROVAL	LIM, J.G	REV	1.0			
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	40	OF 55

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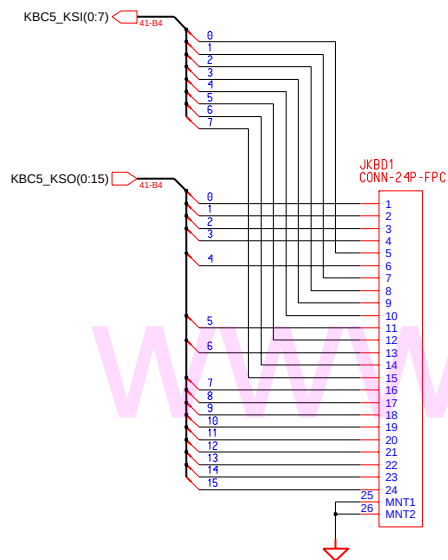


DRAM	SON, C.W.	DATE	6/15/2005	TITLE FIRENZE MAIN LAN CONTROLLER		SAMSUNG ELECTRONICS PART NO. BA1A-00509A	
CHECK	YUN, C.Y.	DEV. STEP	MP				
APPROVAL	LIM, J.G.	REV	1.0				
MODULE CODE		LAST EDIT		April 20, 2005 12:46:48 PM	PAGE	42	OF 55

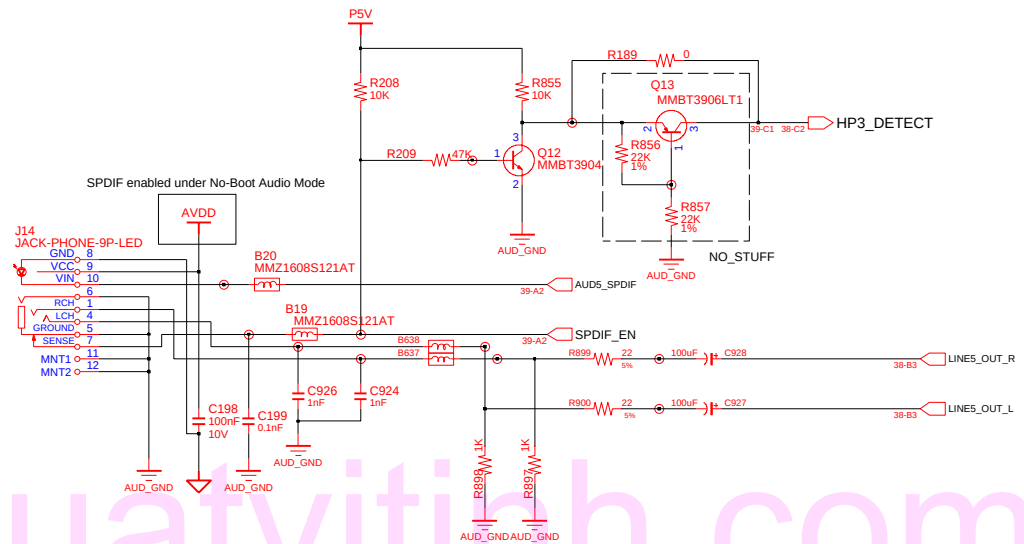
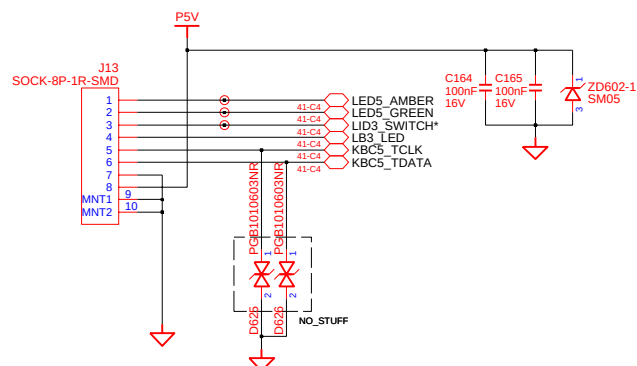
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OPTICAL SPDIF OUTPUT & HEADPHONE

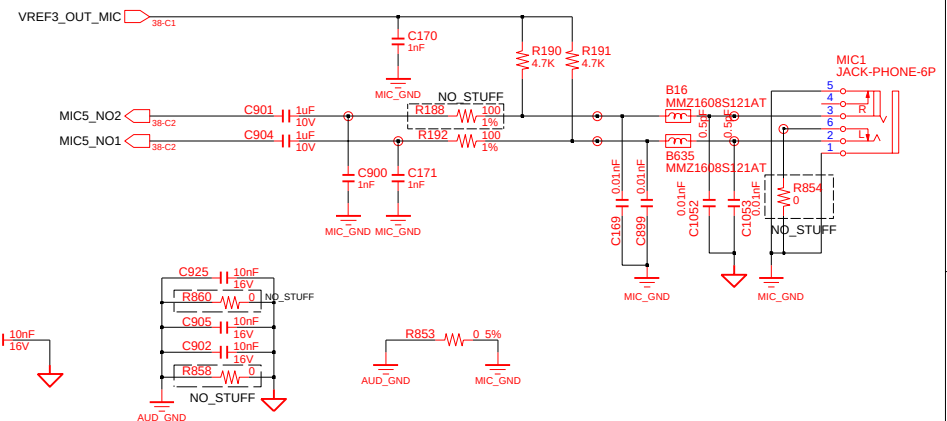
KEYBOARD



TOUCH PAD



MICROPHONE

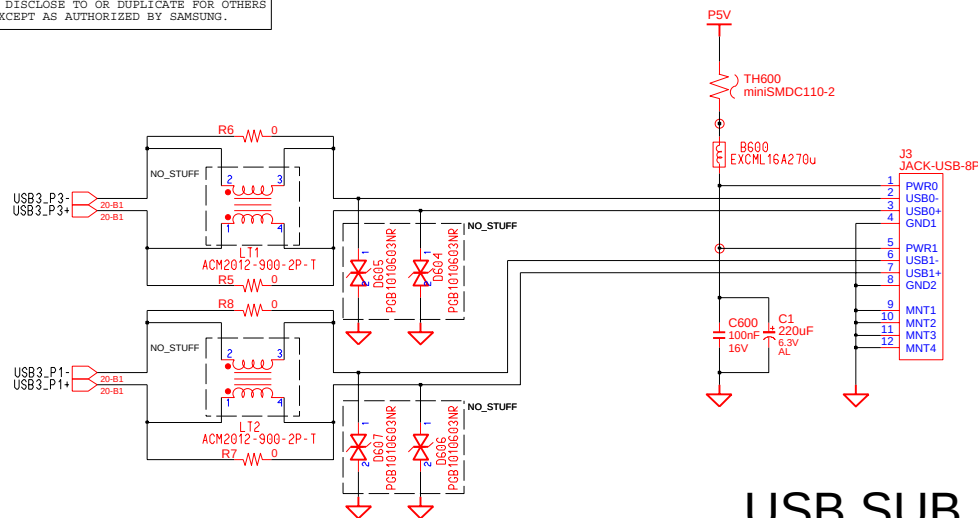


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CHECK	YUN, C.Y	DEV. STEP	MP	MAIN	BA41-00509A	ELECTRONICS
APPROVAL	LIM, J.G	REV	1.0	KBD/TPAD/HP/MIC		
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	43	OF 55

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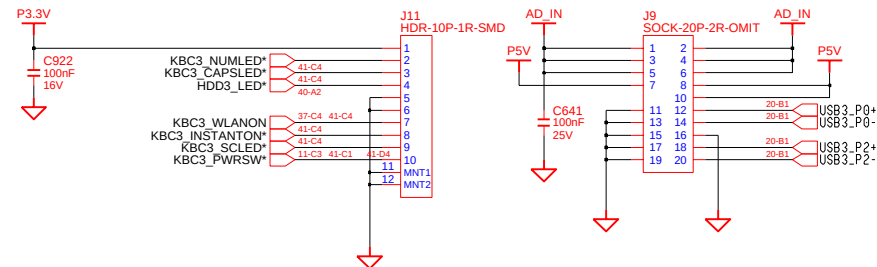
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USB PORT

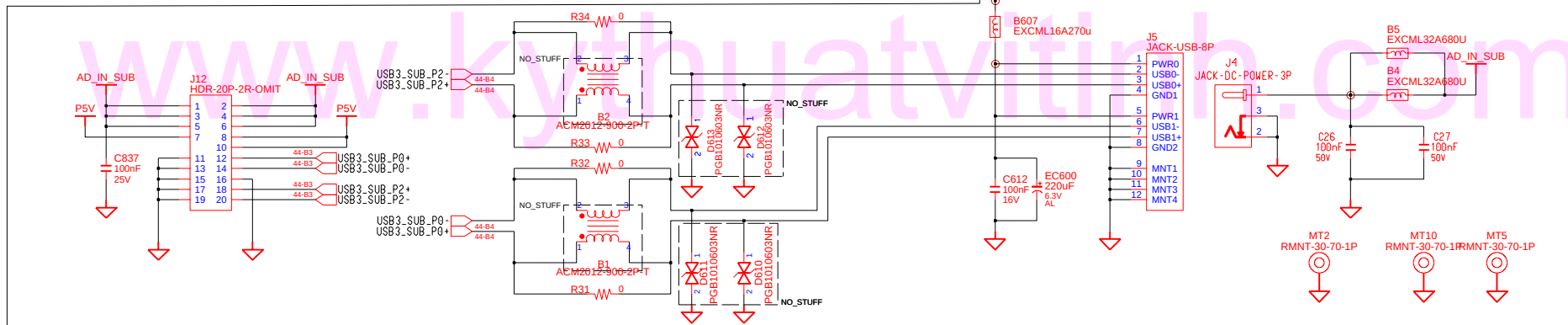


MAIN TO ON-TOP

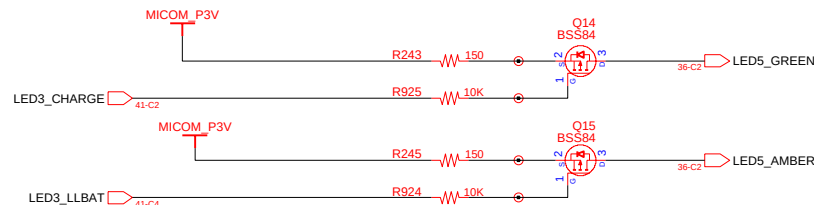
MAIN TO USB



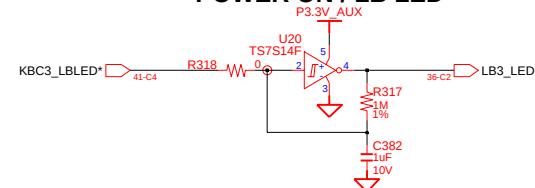
USB SUB B'D



ADAPTER IN / CHARGER LED

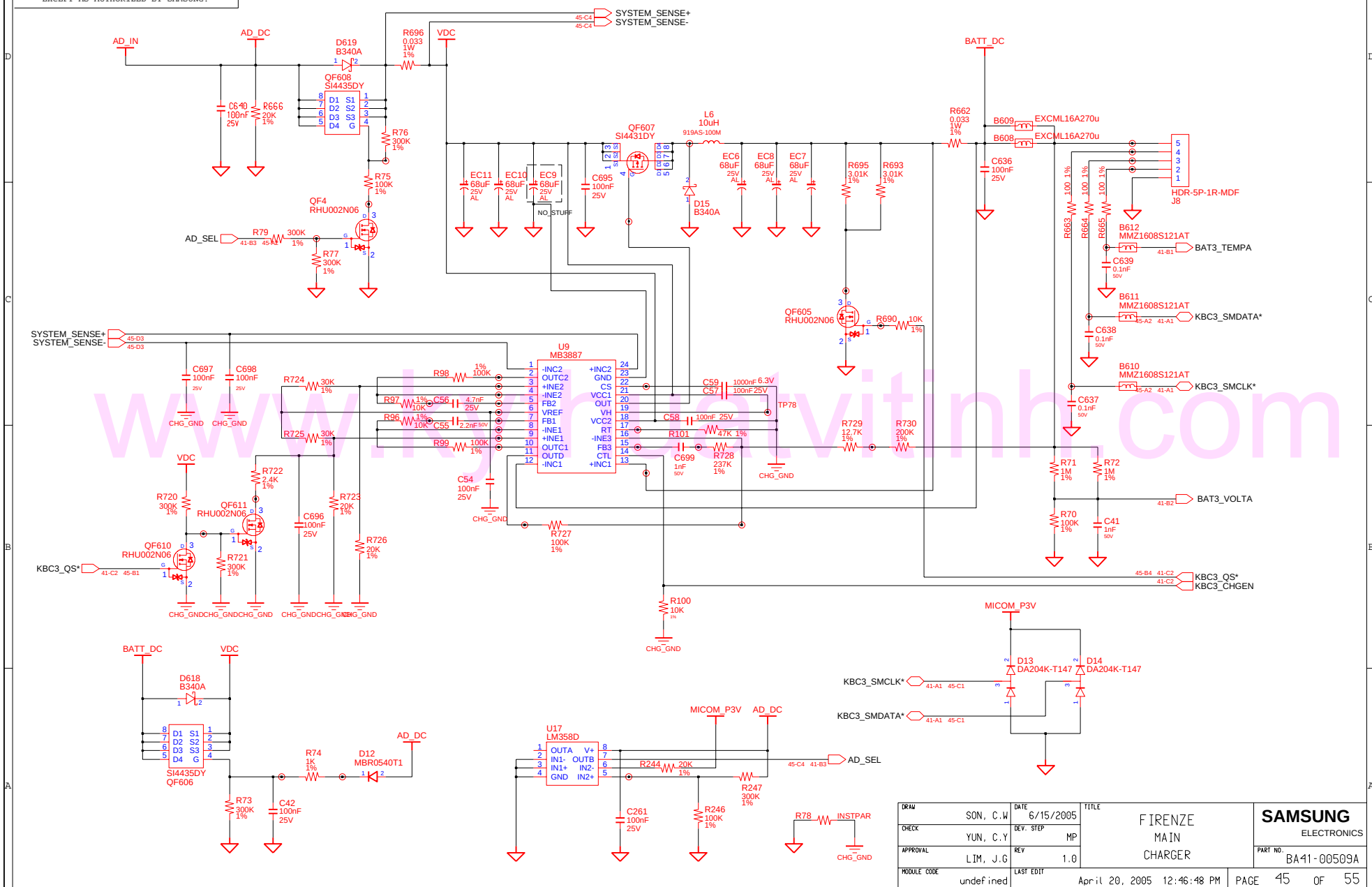


POWER ON / LB LED

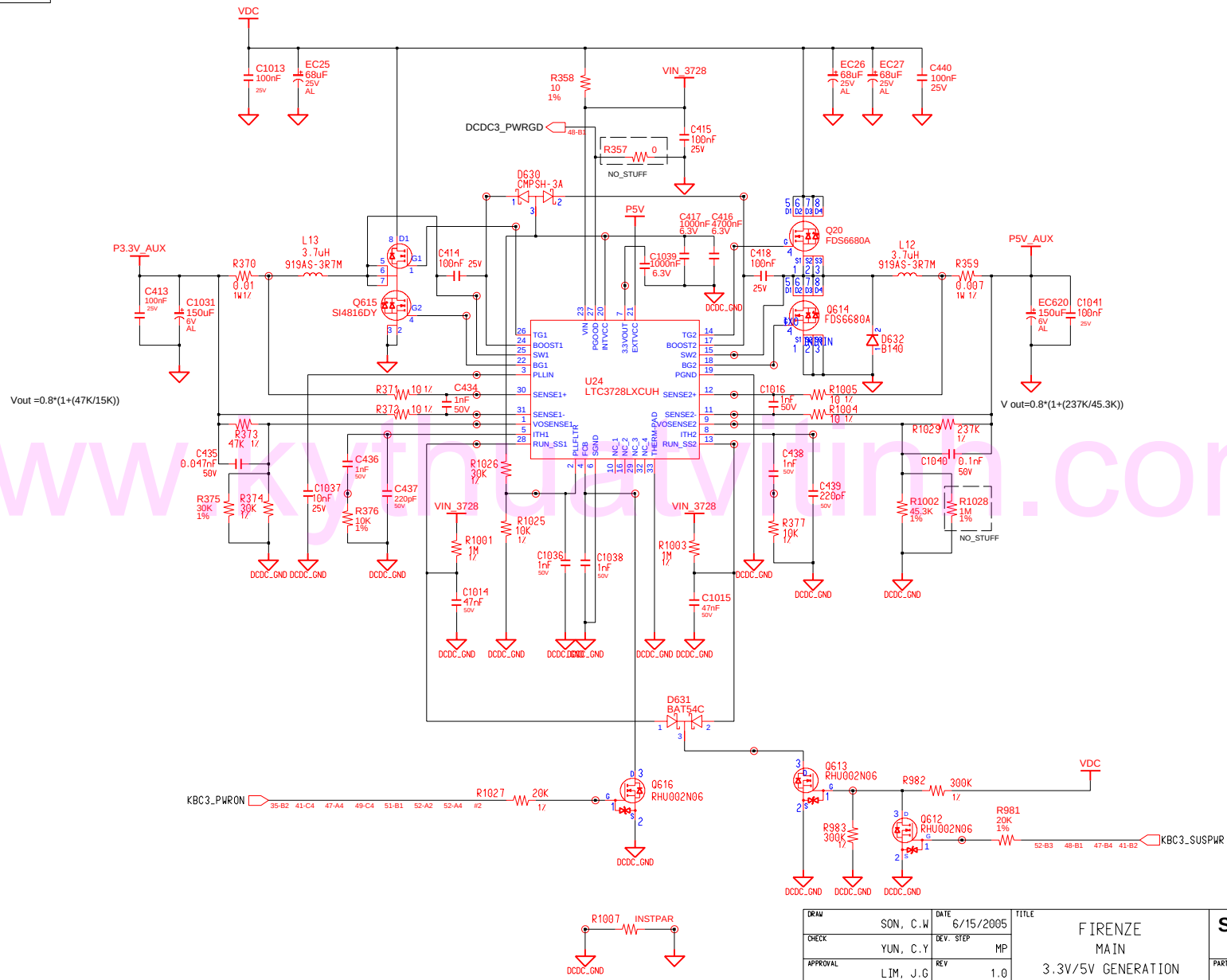


DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE	SAMSUNG
CHECK	YUN, C.Y	DEV. STEP	MP		MAIN	ELECTRONICS
APPROVAL	LIM, J.G	REV	1.0		USB PORT/LED/ON-TOP	PART NO. BA41-00509A
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	44	OF 55

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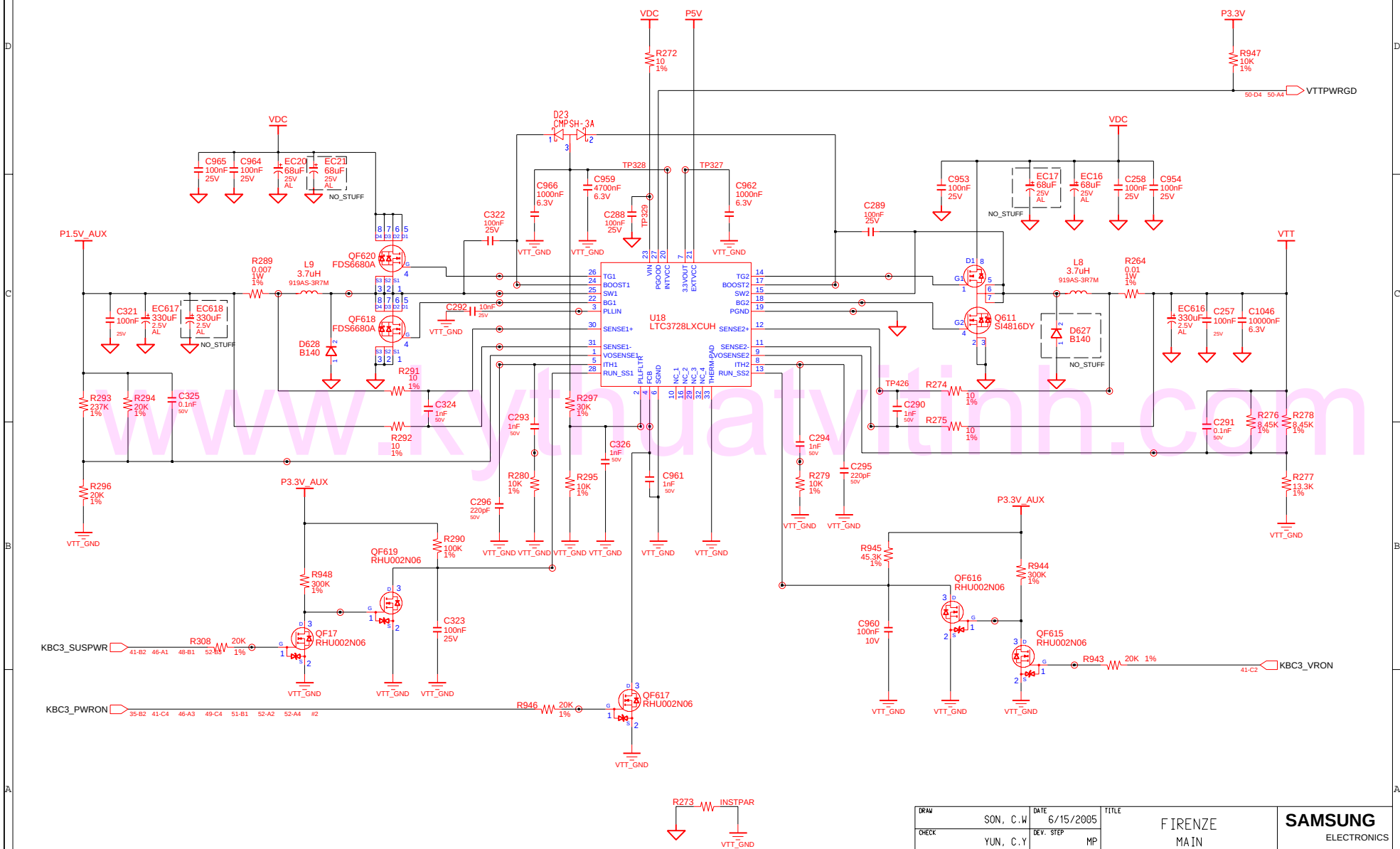


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DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE	SAMSUNG ELECTRONICS
CHECK	YUN, C.Y	DEV. STEP	MP		MAIN	
APPROVAL	LIM, J.G	REV	1.0		3.3V/5V GENERATION	
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	46 OF 55	

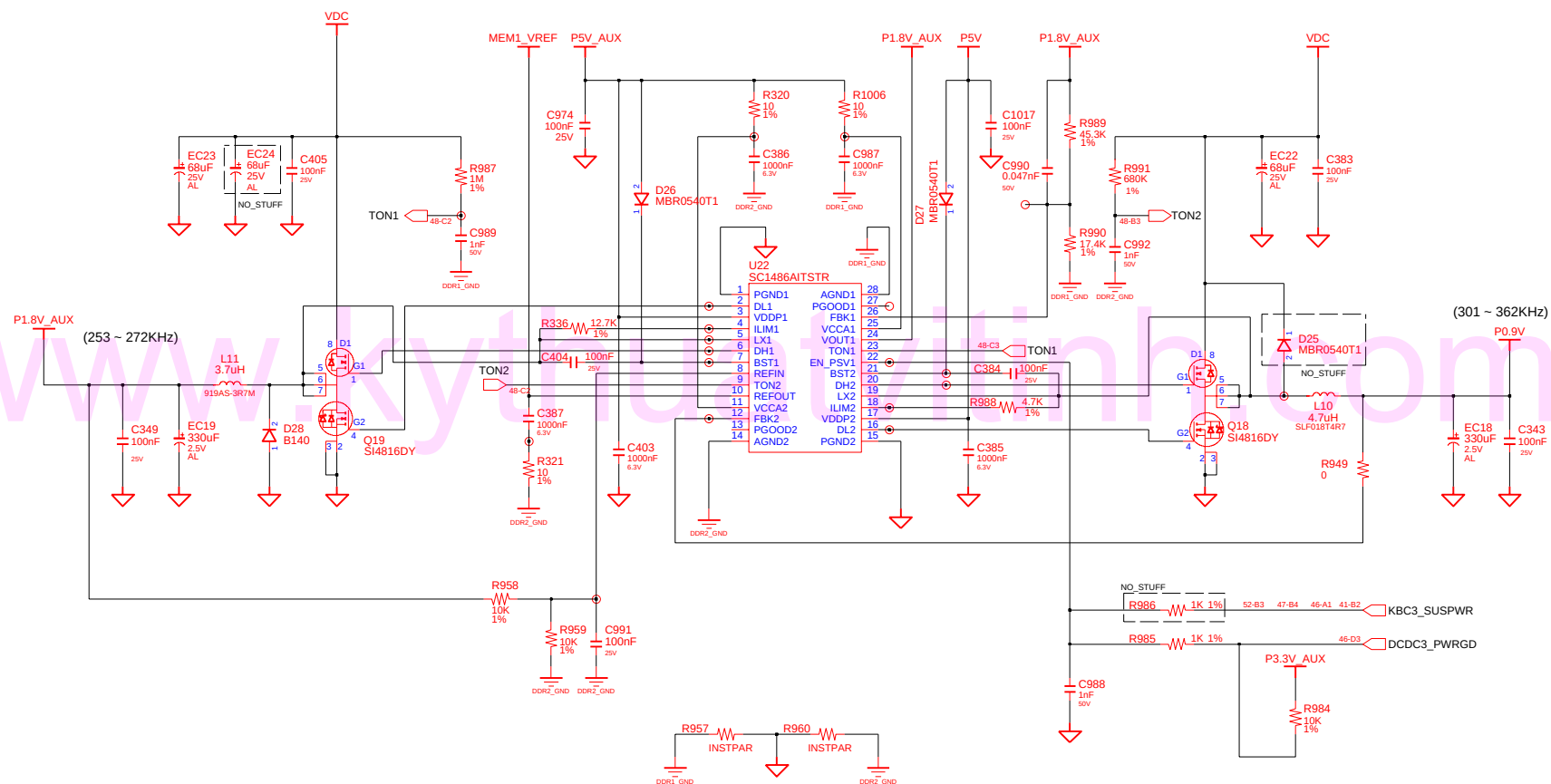
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DRAW	SON, C.W.	DATE	6/15/2005	TITLE FIRENZE MAIN 1.5V_AUX/VTT		SAMSUNG ELECTRONICS					
CHECK	YUN, C.Y.	DEV. STEP	MP								
APPROVAL	LIM, J.G.	REV	1.0								
				PART NO.	BA41-00509A						
MODULE CODE		undefined		LAST EDIT		April 20, 2005 12:46:48 PM		PAGE	47	OF	55

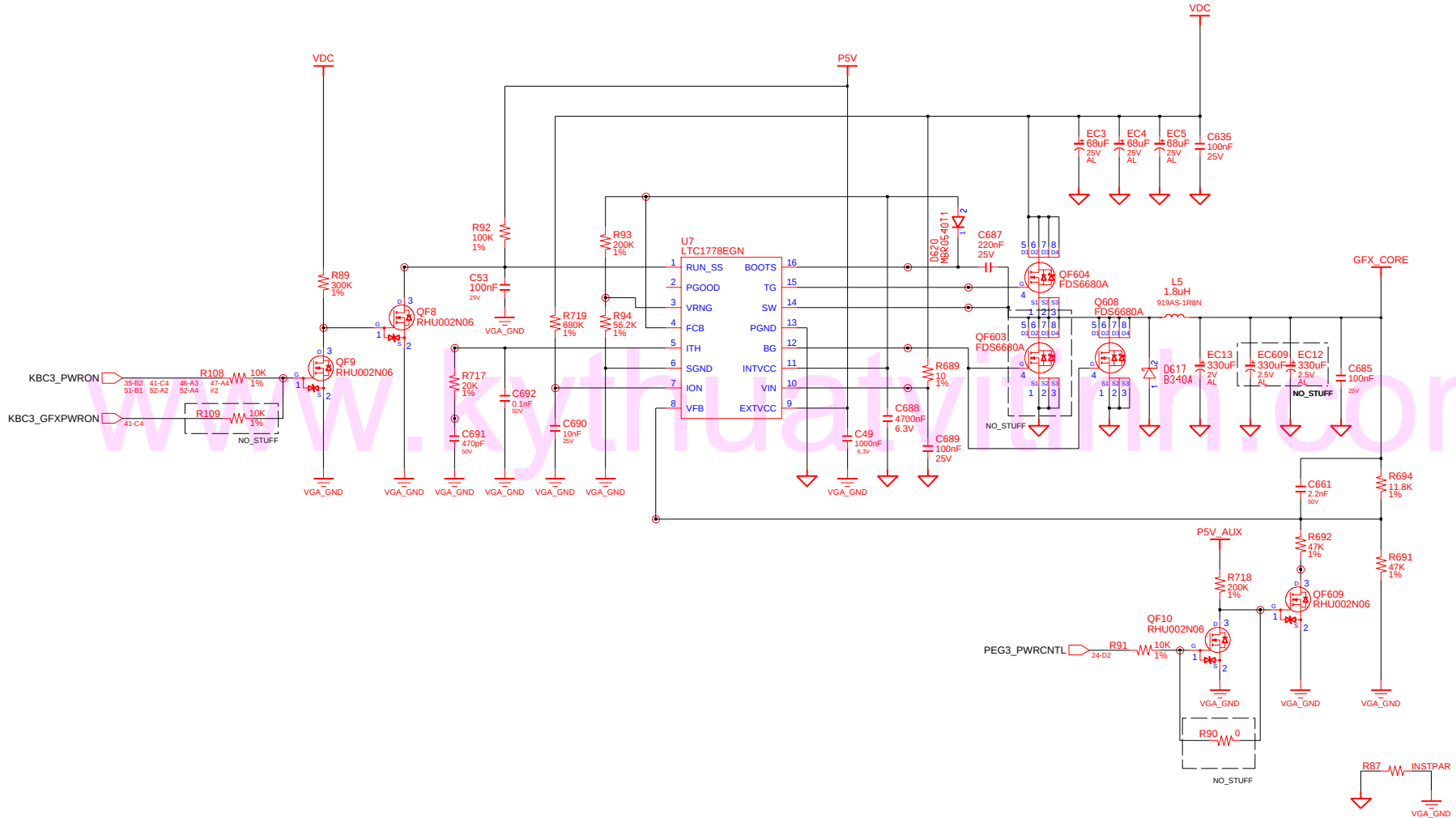
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DDR2 POWER

DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE MAIN DDR2 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	48	OF 55

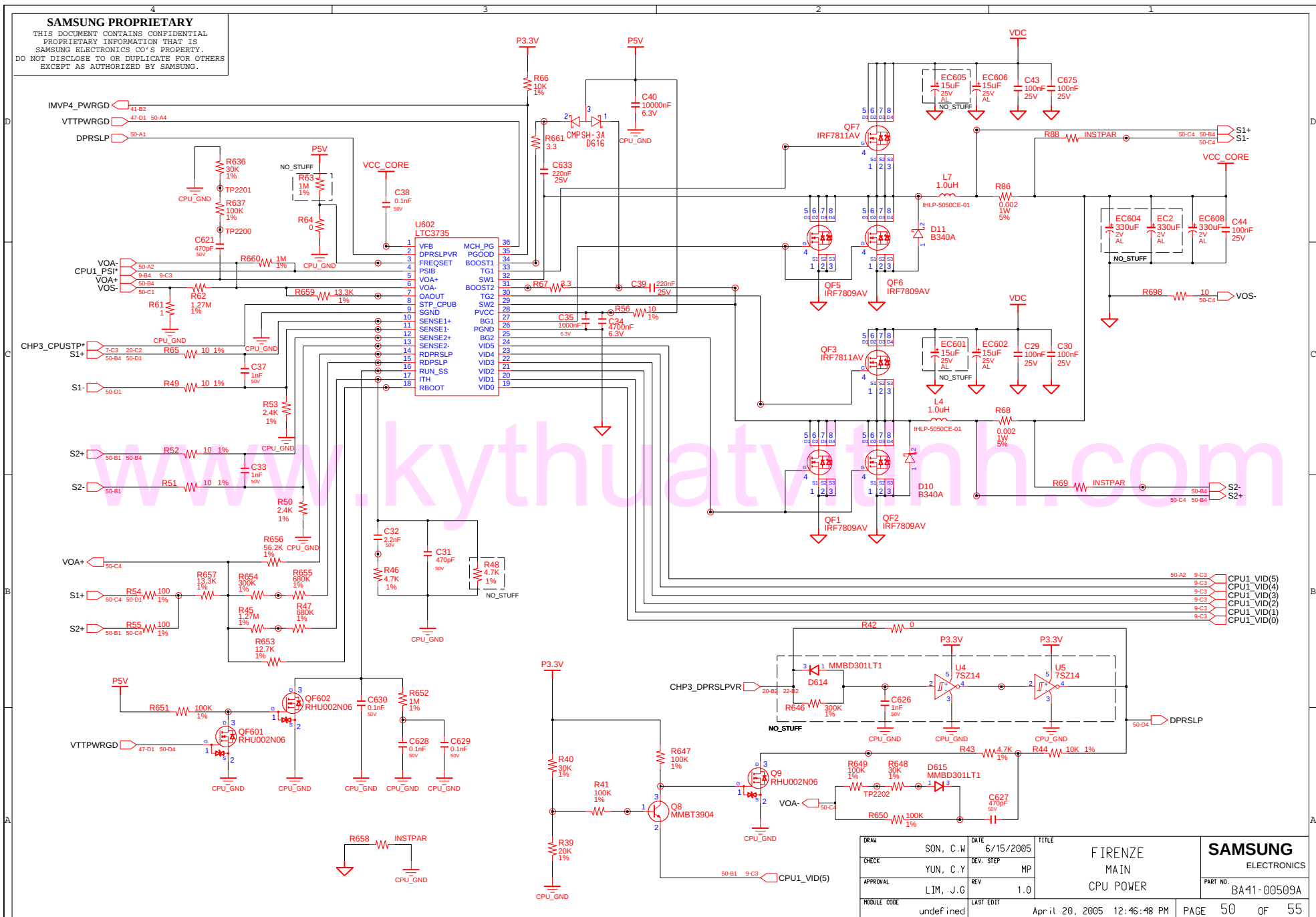
Graphic Core Power



DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE MAIN GRAPHIC CORE 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	49 OF 55	

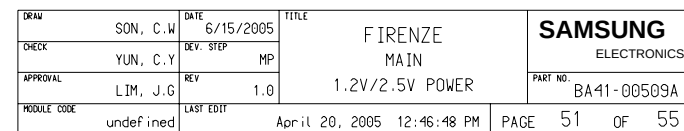
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DRAW	SON, C.W	DATE	6/15/2005	TITLE	FIRENZE MAIN CPU POWER	SAMSUNG ELECTRONICS
CHECK	YUN, C.Y	DEV. STEP	MP			PART NO. BA41-00509A
APPROVAL	LIM, J.G	REV	1.0			
MODULE CODE	undefined	LAST EDIT	April 20, 2005 12:46:48 PM	PAGE	50	OF 55

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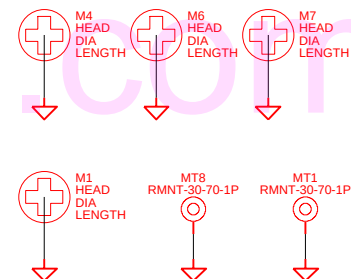
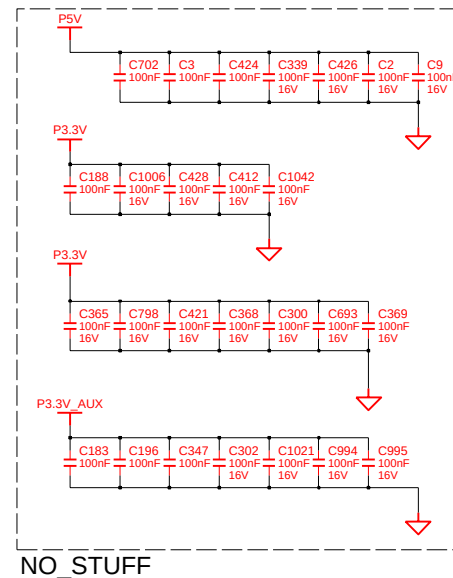
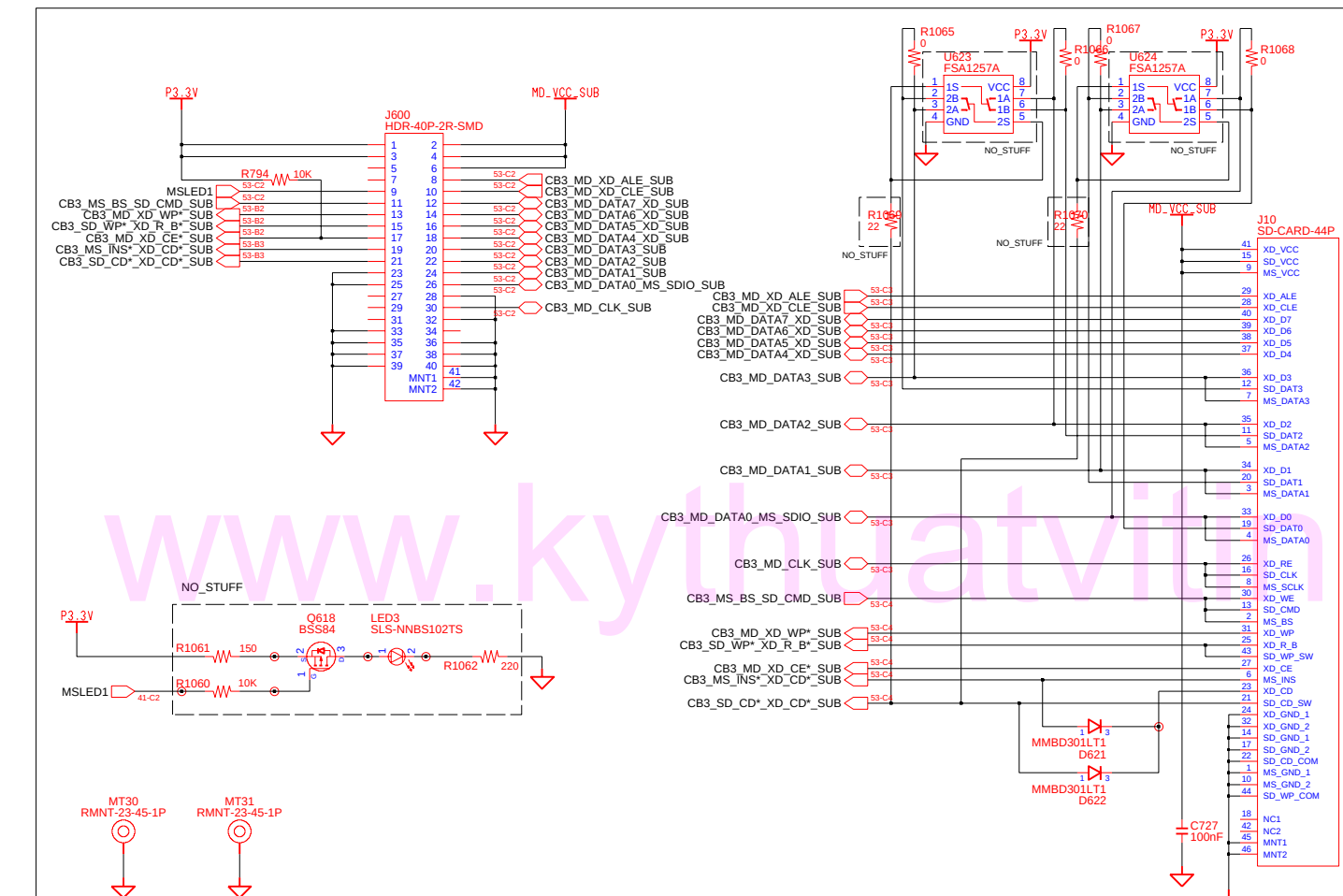
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[illegible]

The schematic diagram illustrates the power supply section of the KBC3 board. It features a 1.8V AUX input connected through a 20K resistor (R844) to a network of capacitors (C890, C891, C892, C898) and resistors (R845, R846). The circuit includes two operational amplifiers, QF612 (Si4465DY) and QF613 (RHU002N06), which are configured as buffers or comparators. The output of the circuit is connected to the KBC3_PWRON pin. The schematic also shows ground connections and various component values and footprints.

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

5-IN-1 SUB B'D



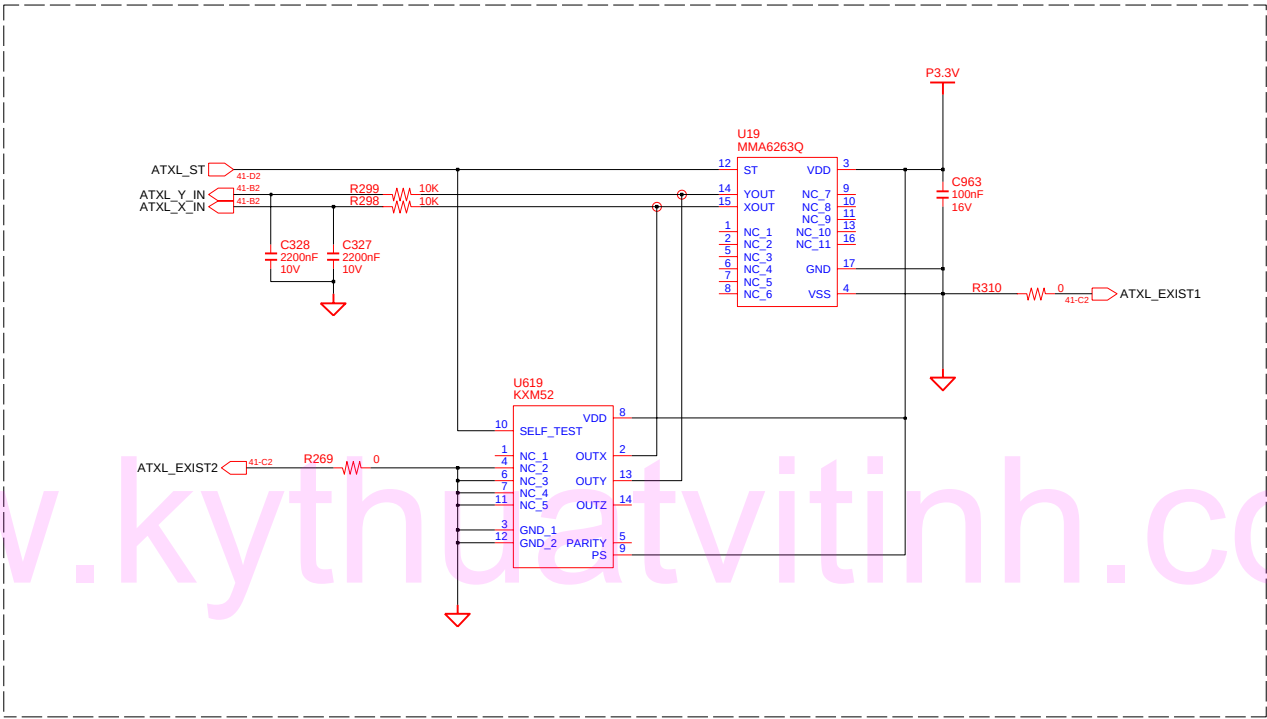
PCB REVISION CONTROL (ICT)				
NO	CONNECTION	DATE(Y/MM/DD)	REVISION	STEP
1	N.C.			
2	1-2			
3	2-3			
4	3-1			
5	1-2-3			
6	N.C.			
7	1-2			
8	2-3			
9	3-1			
10	1-2-3			

REV600
1
2 3

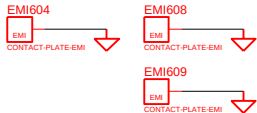
 C1032
0.047nF
 C445
0.1nF
 C1033
0.033nF
 C1035
0.027nF
 C1034
0.01nF
0.5pF
 C448
0.022nF
 C447
0.005nF
 C446
0.0033nF

DRAM	SON, C.W.	DATE	6/15/2005	TITLE	FIRENZE MAIN 5-IN-1 SUB B'D	
CHECK	YUN, C.Y.	DEV. STEP	MP			
APPROVAL	LIM, J.G.	REV	1.0			
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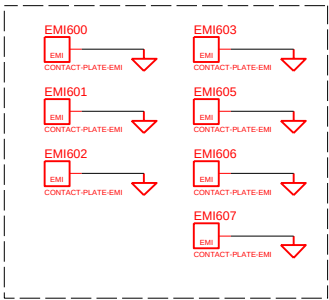
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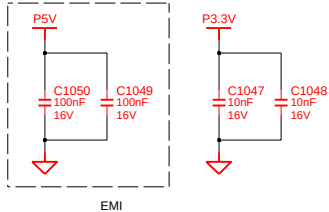
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NO_STUFF



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

