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Scala3-14CRV

CPU : IVY Bridge PGA
Chip Set : Intel Panther Point
GFX : NVIDIA N13M-GS/GE
Remarks : Chief River Platform

Model Name : Scala3-14CRV
PBA Name : MAIN_Dual
PCB Code : BA41-02092A (GCE)
BA41-02093A (HST)
BA41-02094A (PTC)
BA41-02098A (GBM)

Dev. Step : MP
Revision : 1.1
T.R. Date : 2012.06.14

Design	CHECK	APPROVAL
Tao Xiaofeng	Chu XF	BL LEE

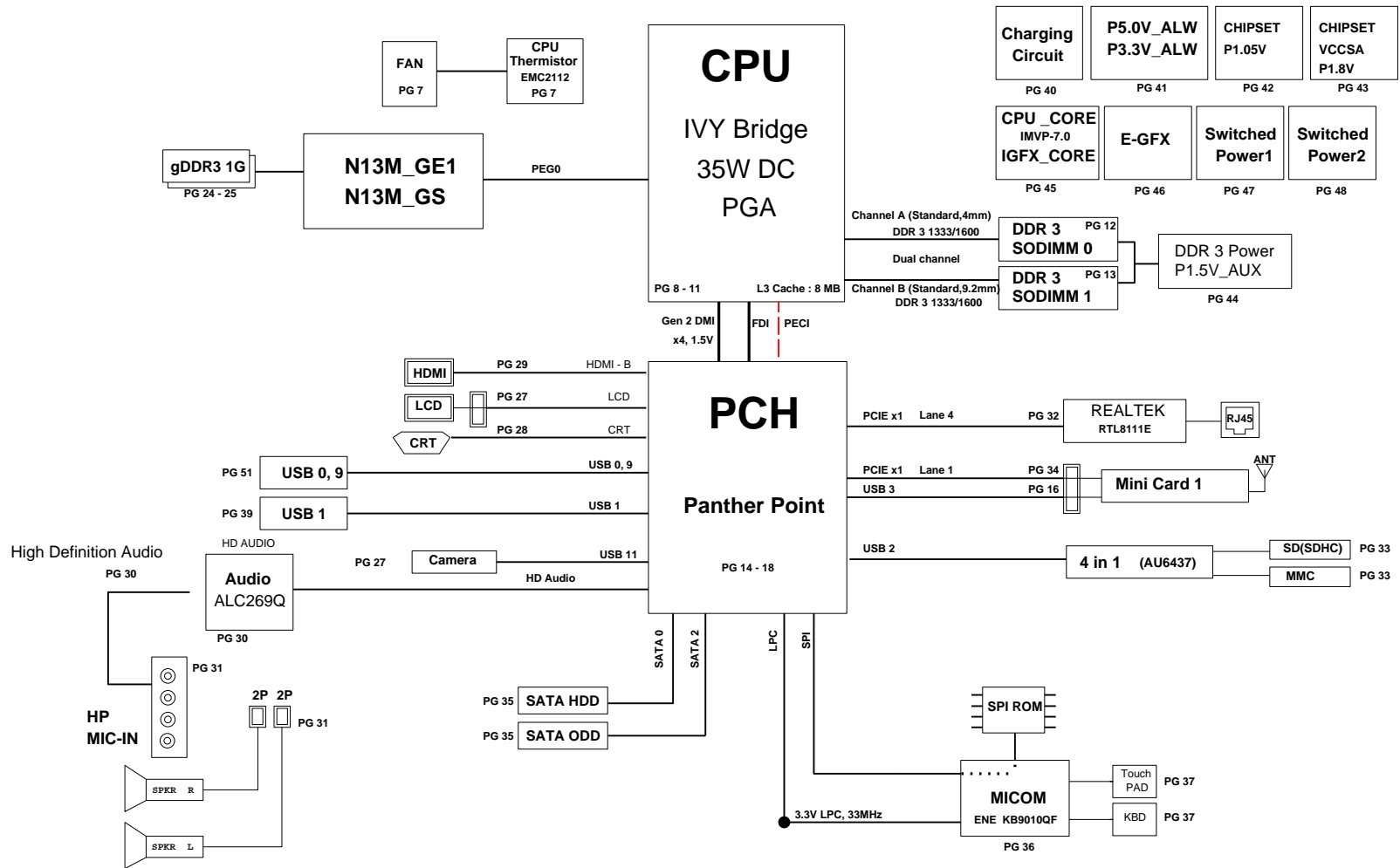
Owner : SEC Mobile R & D Signature : X

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- sheet15 : PCH-CougarPoint
- sheet16 : PCH-CougarPoint
- sheet17 : PCH-CougarPoint
- sheet18 : PCH-CougarPoint
- sheet19 : N12P-GVR
- sheet20 : N12P-GVR
- sheet21 : N12P-GVR
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- sheet36 : MICOM / BIOS
- sheet37 : MICOM Glue Logic (KBD / TP)
- sheet38 : LED for 14" & for 15"
- sheet39 : USB connector
- sheet40 : Power - charger
- sheet41 : Power - P3.3V_AUX / P5.0V_AUX
- sheet42 : Power - P1.05V (Chipset Power)
- sheet43 : Power - P0.8V (Chipset Power)
- sheet44 : Power - DDR3
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- sheet46 : Power - EGFX_CORE
- sheet47 : Power - Switched Power 1
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- sheet50 : Mount Hole / Thermal Hole
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DRAW	XF TAO	DATE	11/06/2012	TITLE	Scala3-14R	SAMSUNG ELECTRONICS
CHECK	XF CHU	DEV.STEP	MP	MAIN		
APPROVAL	BL LEE	REV	REV 1.1	COVER		PART NO. BA41-02092-94A
MODULE CODE		LAST EDIT	May 23, 2012 08:40:30 AM	PAGE	1	OF 51

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BLOCK DIAGRAM



DRAW	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R	SAMSUNG ELECTRONICS
CHECK	XF CHU	DEV. STEP	MP	MAIN		
APPROVAL	BL LEE	REV	REV 1.0	BLOCK DIAGRAM		PART NO. BA41-02092-94A
MODULE CODE	undefined	LAST EDIT	May 23, 2012 08:40:30 AM	PAGE	2	OF 51

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BOARD INFORMATION

SCHEMATIC ANNOTATIONS AND BOARD INFORMATION

Voltage Rails	Active in	
VDC P3.3V_MICOM P5.0V_STB P5.0V_ALW P3.3V_ALW P12.0V_ALW	Primary DC system power supply (7 to 21V) 3.3V always power rail (for Micom) 5.0V always power rail 5.0V always power rail 3.3V always power rail 12.0V always power rail	S4 - S5
P5.0V_AUX P3.3V_AUX P1.5V_AUX	5.0V switched on power rail (off in S4-S5) 3.3V switched on power rail (off in S4-S5) 1.5V power rail for DDR3 (off in S4-S5)	S3
P5.0V P3.3V P1.8V P1.5V P0.75V P0.8V	5.0V switched power rail (off in S3-S5) 3.3V switched power rail (off in S3-S5) 1.8V switched power rail (off in S3-S5) 1.5V switched power rail (off in S3-S5) 0.75V power rail for DDR3 (off in S3-S5) 0.8V switched power rail (off in S3-S5)	S0
VCC_CORE EGFX_CORE P1.05V (VCCP)	Core Voltage for CPU Core Voltage for GPU VCC for COUGARPOINT	S0
P3.3V_D P1.5V_D P1.05V_D	3.3V discrete power rail for N12X 1.5V discrete power rail for N12X 1.05V discrete power rail for N12X	

Crystal / Oscillator			
TYPE	FREQUENCY	DEVICE	USAGE
Crystal	32.768KHz	HM65	Real Time Clock
Crystal	25MHz	LAN	Intel LAN
Crystal	25MHz	GREENCLK	GREENCLK
Crystal	25MHz	HM65	INTEL
Crystal	27MHz	N12P-GVR	NVIDIA

LCD Pannel Detect (TBD)		
Devices	Resolution	PANNEL_DETECT_0

USB PORT Assign		PCI Express Assign	
PORT #	ASSIGNED TO	PORT #	ASSIGNED TO
0	SYSTEM PORT 0	1	Mini Card 1 (WLAN)
1	SYSTEM PORT 1	2	NC
2	Mini PCI Express	3	NC
3	Multi Memory Card Controller	4	LAN CONTROLLER
4	SYSTEM PORT 2	5	NC
5	NC	6	NC
6	NC	7	NC
7	NC	8	NC
8	NC		
9	NC		
10	BLUETOOTH		
11	Camera(LCD Cable)		
12	NC		
13	NC		

I ² C / SMB Address			
Devices	Address	Hex	Bus
HM65	Master	-	SMBUS Master
CPU Thermal Sensor	0111 101x	7Ah	Thermal Sensor
SODIMM0	1010 000x	A0h	-
SODIMM1	1010 010x	A4h	-
Thermal Sensor on SODIMM0	0011 000x	30h	-
Thermal Sensor on SODIMM1	0011 010x	34h	-
Thermal Sensor on board	1101 100x	98h	-
Power thermal management TS	1101 011x	96h	-

SATA PORT Assign	
PORT #	ASSIGNED TO
0	HDD
1	NC
2	ODD
3	NC
4	NC
5	NC

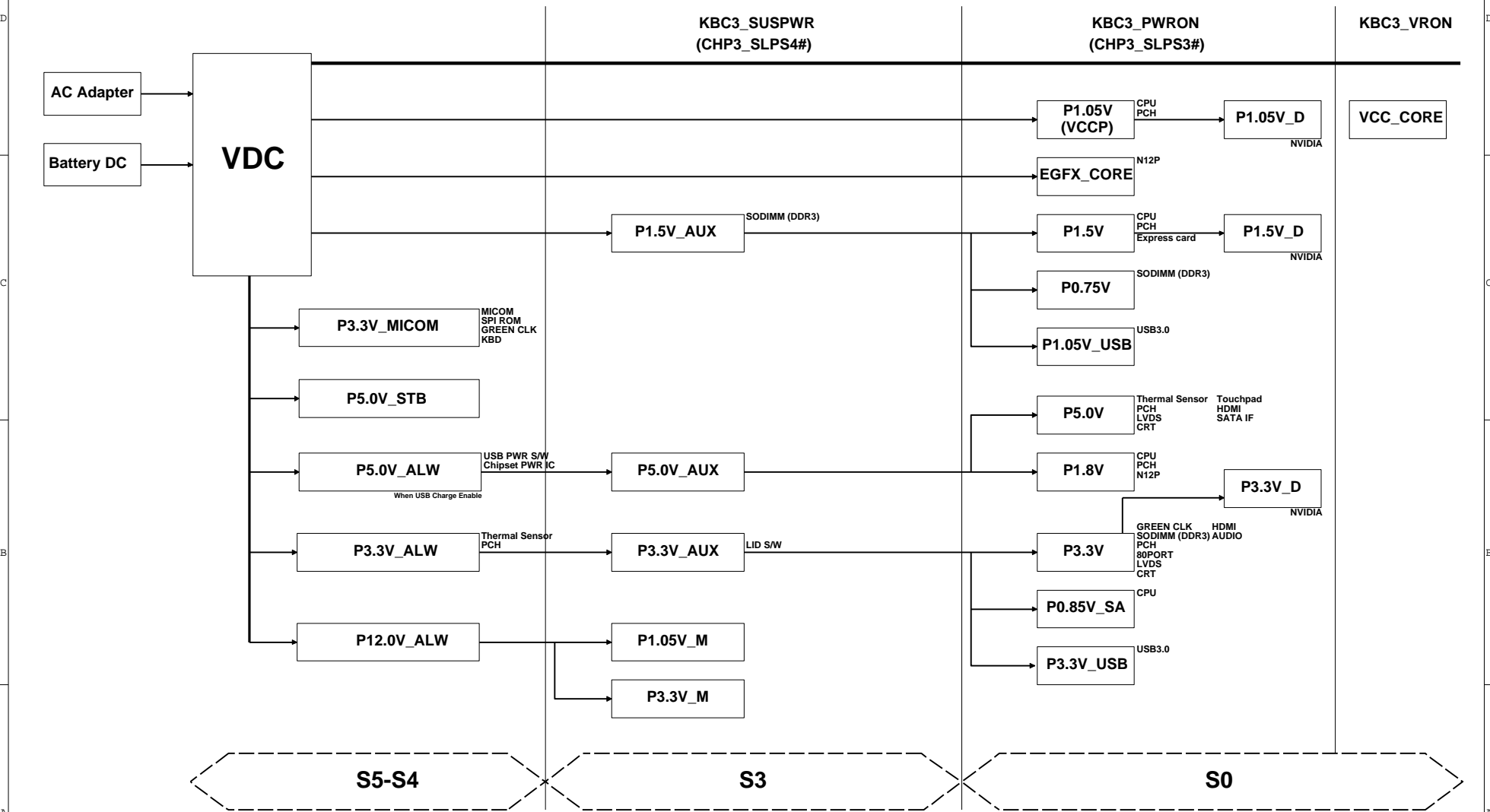
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CHECK	XF CHU	DEV. STEP	MP		MAIN	
APPROVAL	BL LEE	REV	REV 1.0		BOARD INFO	PART NO. BA41-02092-94A
MODULE CODE	undefined	LAST EDIT	May 23, 2012 08:40:30 AM	PAGE	3	OF 51

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POWER DIAGRAM

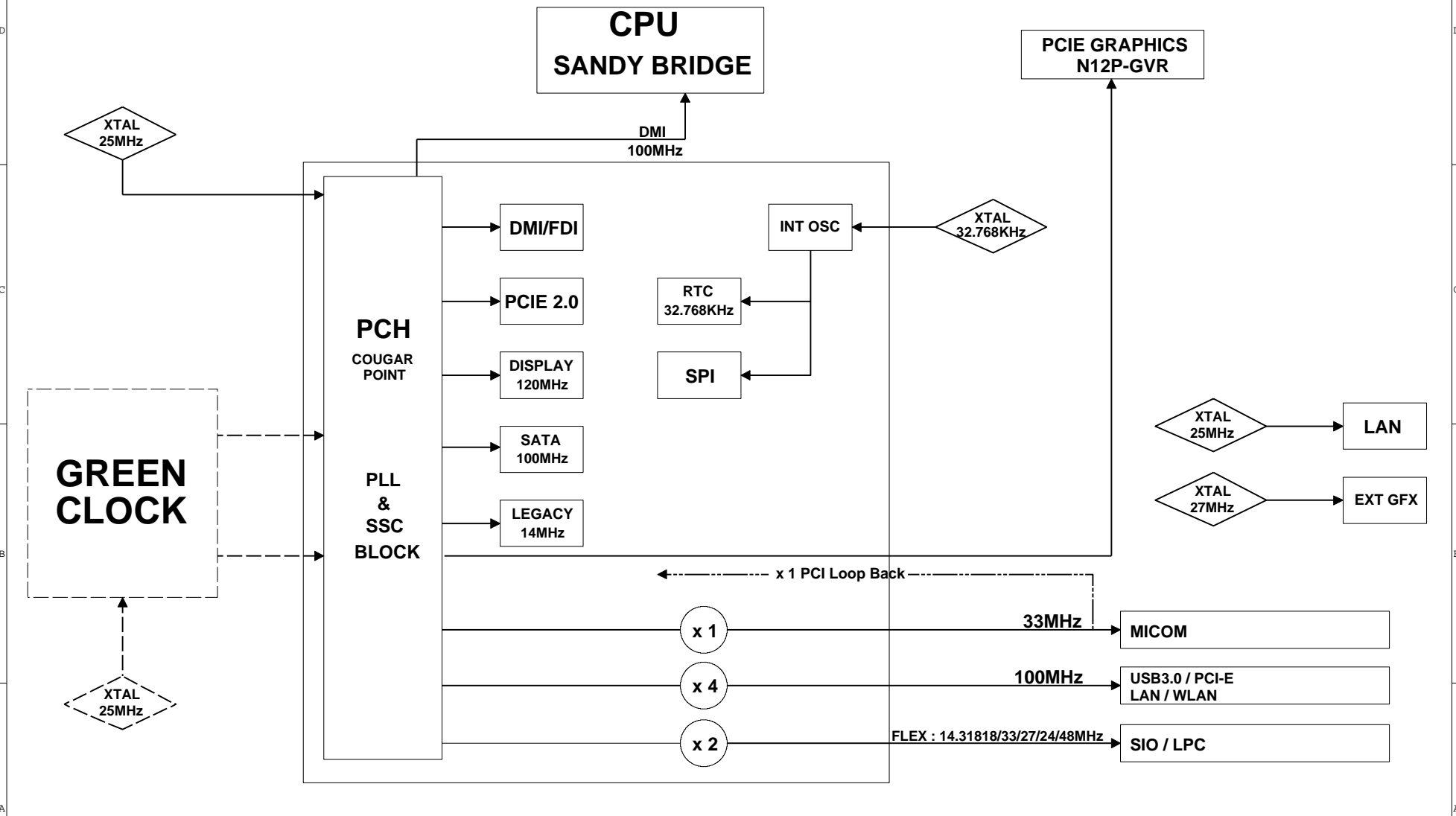
Rev 0.8



DRAW	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R	SAMSUNG ELECTRONICS
CHECK	XF CHU	DEV. STEP	MP	MAIN		
APPROVAL	BL LEE	REV	REV 1.0	POWER DIAGRAM	PART NO.	BA41-02092-94A
MODULE CODE	undefined	LAST EDIT	May 23, 2012 08:40:30 AM	PAGE	4	OF 51

CLOCK DISTRIBUTION Rev. 0.8

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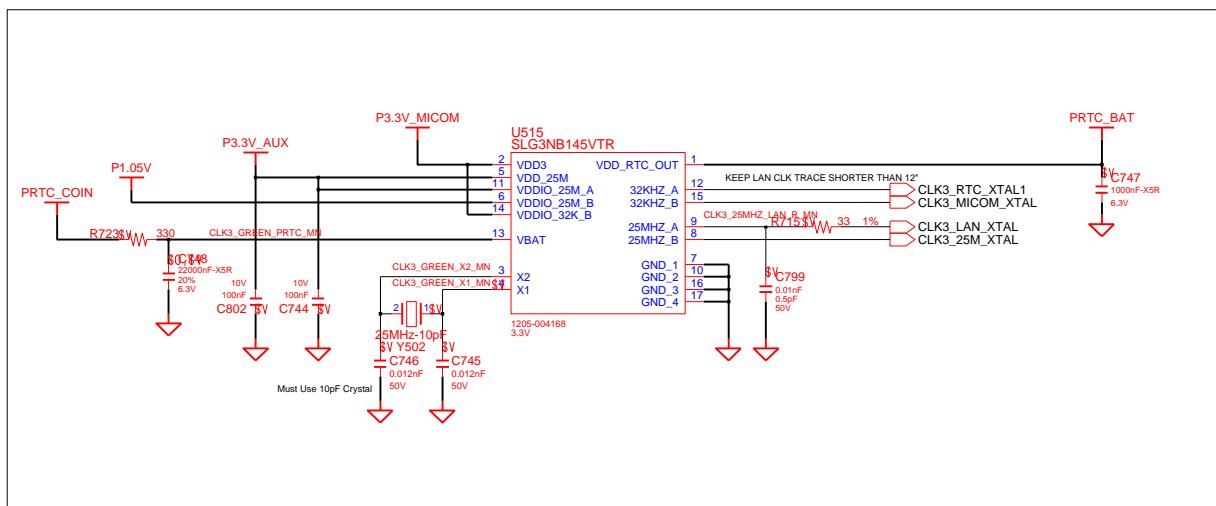


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CHECK	XF CHU	DEV. STEP	MP	MAIN		
APPROVAL	BL LEE	REV	REV 1.0	CLOCK DIAGRAM	PART NO.	BA41-02092-94A
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CLOCK DISTRIBUTOR



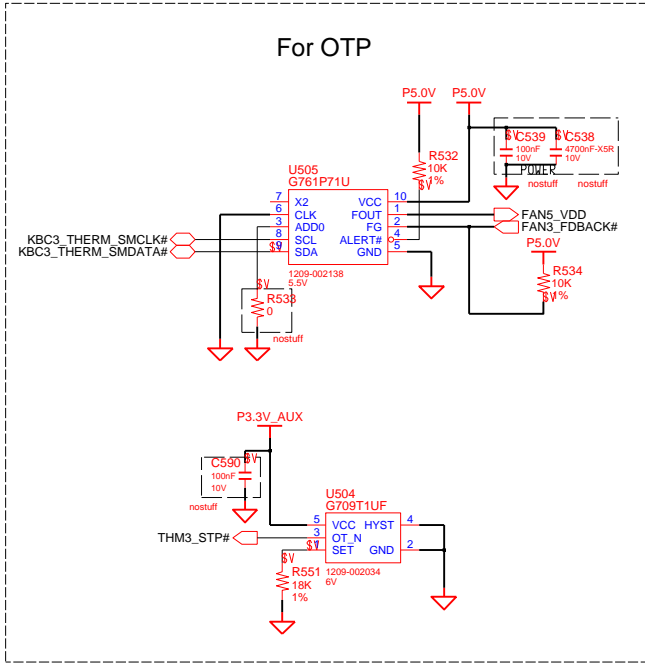
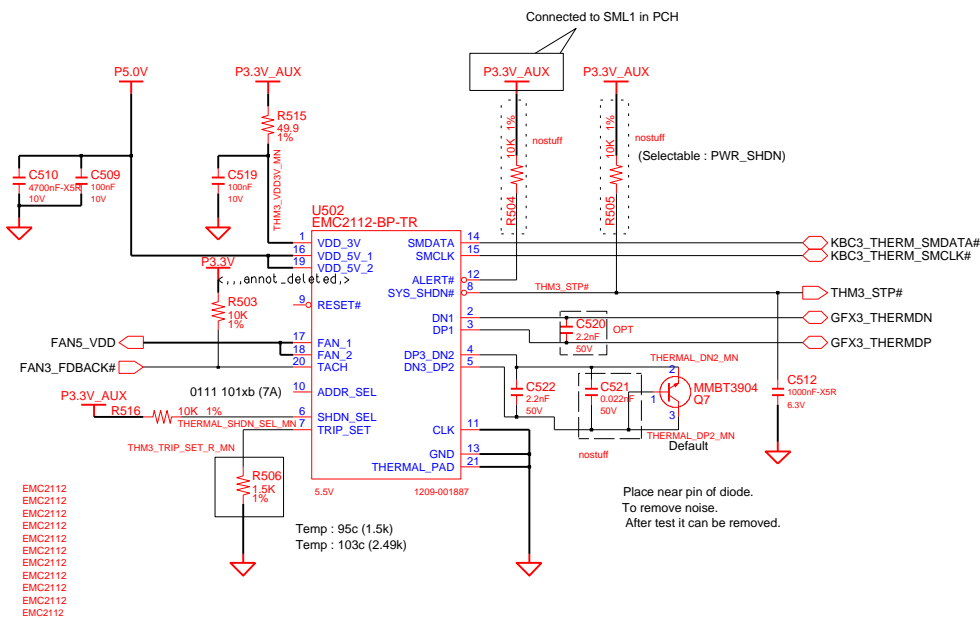
GREENCLK
GREENCLK
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GREENCLK
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GREENCLK
GREENCLK
GREENCLK
GREENCLK
GREENCLK

DRAW	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R	SAMSUNG ELECTRONICS
CHECK	XF CHU	DEV. STEP	MP	CLOCK		
APPROVAL	BL LEE	REV	REV 1.0	CLOCK DISTRIBUTION	PART NO.	BA41-02092-94A
MODULE CODE	undefined	LAST EDIT	May 23, 2012 08:40:30 AM	PAGE	6	OF 51

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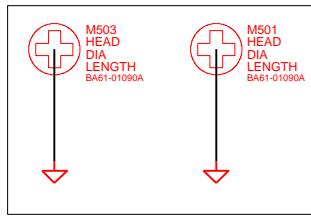
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THERMAL SENSOR & FAN CONTROL



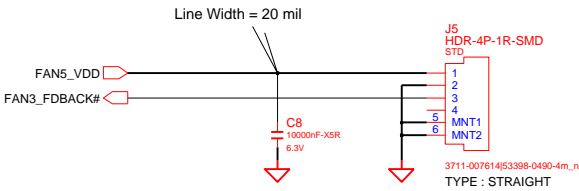
Temperature : 95.78c
confirmed by thermal charger
(2011.05.02)
R_{th(j-c)} (kohm) = 0.0012T² - 0.9308T + 96.147

FAN PEM



ADDRESSSEL MODE	
0	0101 111xb
✓ HIGH Z	0111 101xb (7A)
1	0101 110xb

SHDNSEL MODE	
0	INTEL TR MODE AMD CPU/DIODE MODE
✓ 1	EXT.DIODE 2 MODE



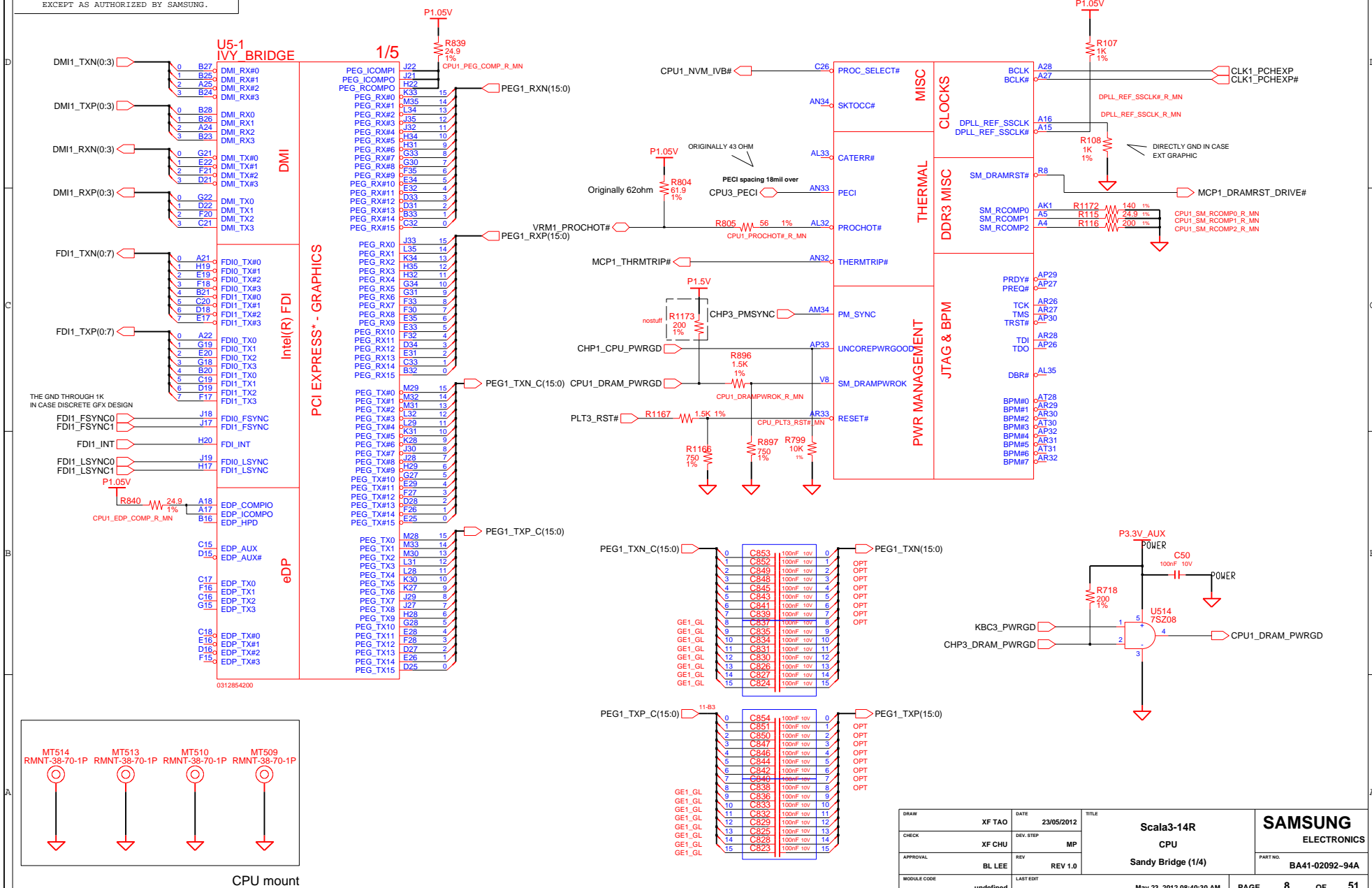
DESIGN	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R
CHECK	XF CHU	DEV.STEP	MP		THERMAL SENSOR
APPROVAL	BL LEE	REV	REV 1.0		THERMAL SENSOR EMC2112
MODULE CODE		LAST EDIT			
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PART NO.	BA41-02092-94A

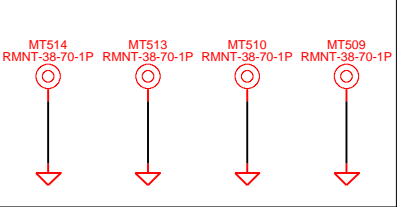
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IVY BRIDGE PROCESSOR (DMI,PEG, FDI)



0312854200

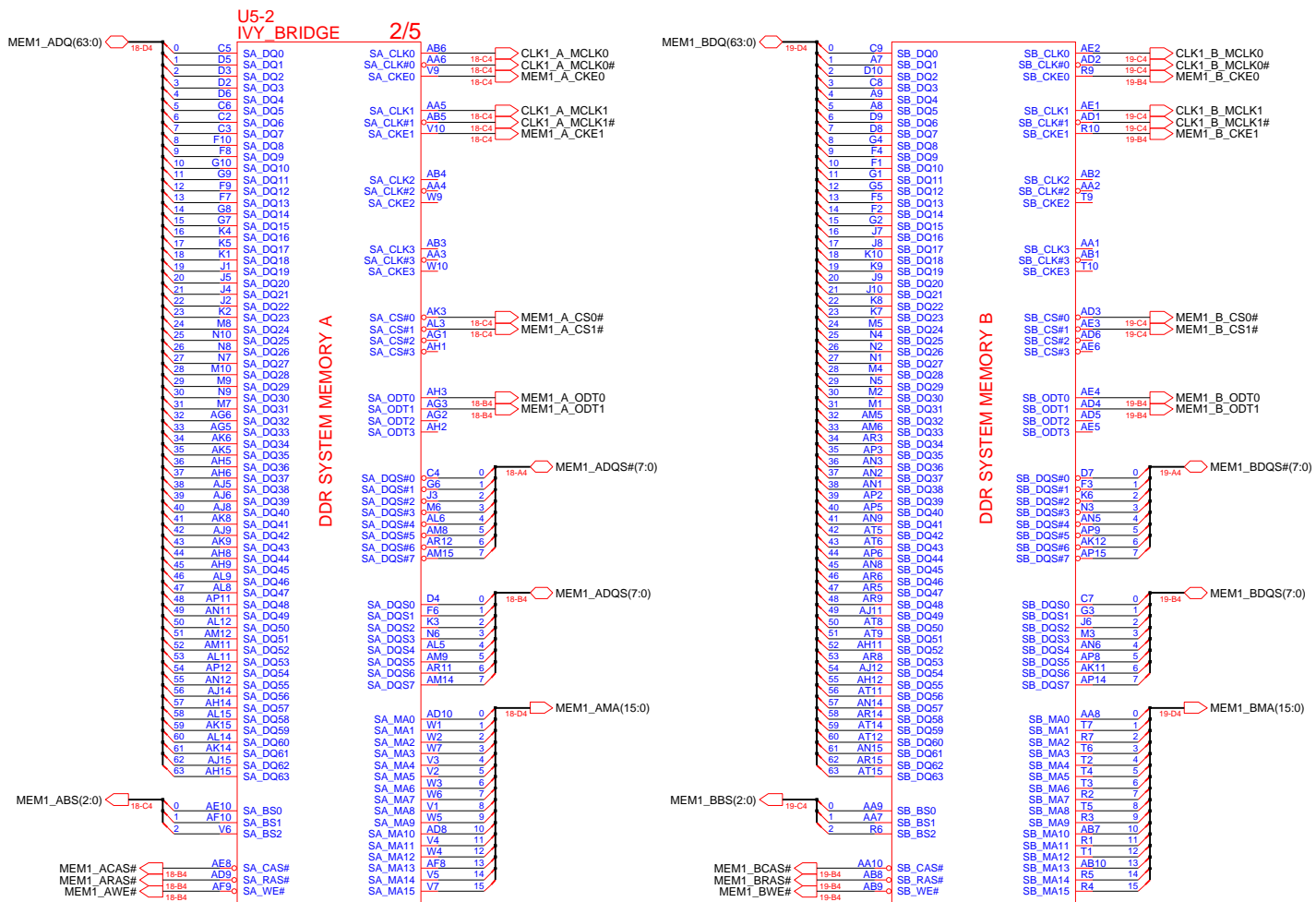


CPU mount

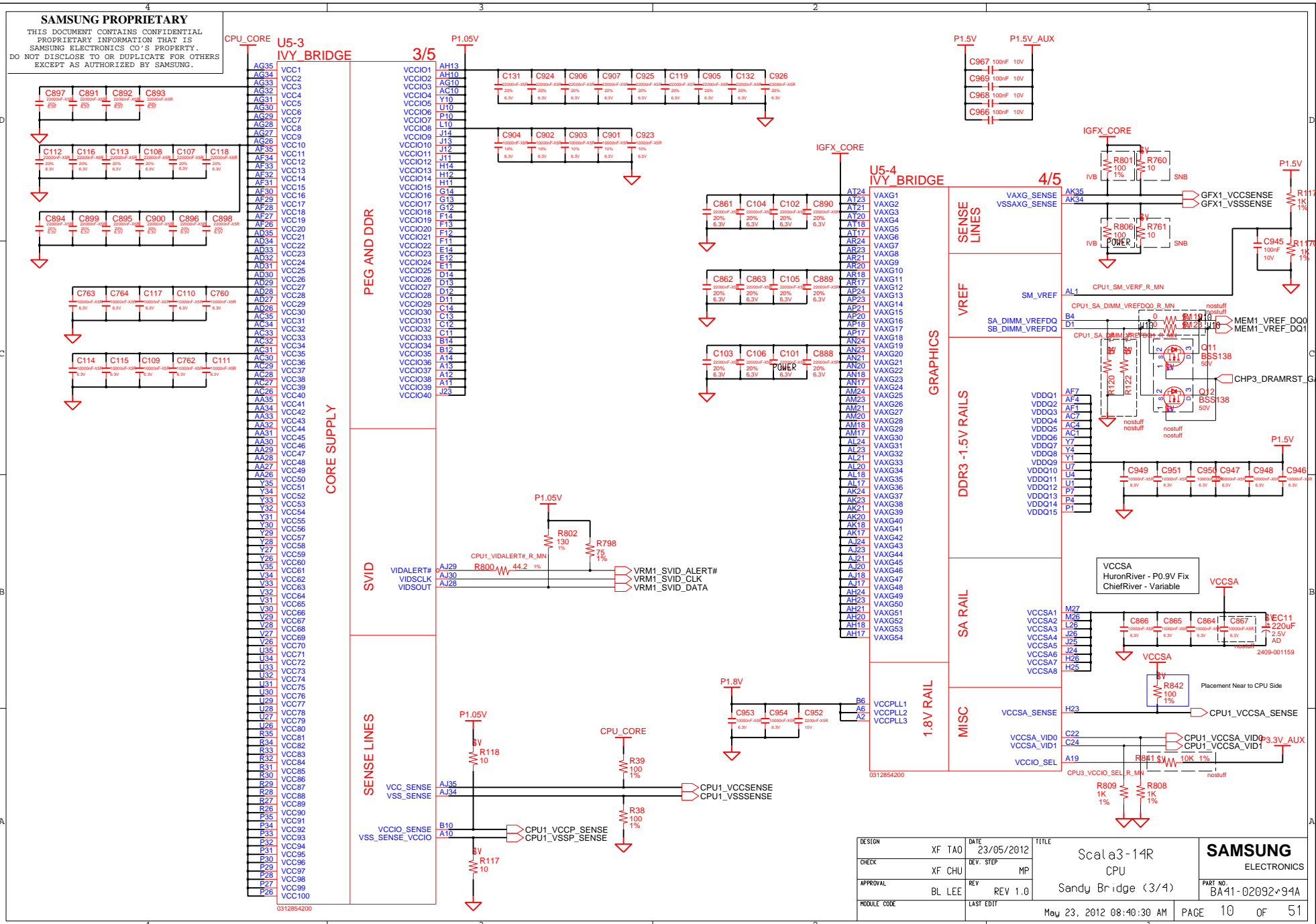
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CHECK	XF CHU	DEV. STEP	MP		CPU	
APPROVAL	BL LEE	REV	REV 1.0		Sandy Bridge (1/4)	PART NO. BA41-02092-94A
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DRAW	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R	SAMSUNG ELECTRONICS
CHECK	XF CHU	DEV. STEP	MP		CPU	
APPROVAL	BL LEE	REV	REV 1.0		Sandy Bridge (2/4)	PART NO. BA41-02092-94A
MODULE CODE	undefined	LAST EDIT	May 23, 2012 08:40:30 AM	PAGE	9	OF 51



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- CPU CORE**
- U5-3
 - IYV BRIDGE
 - 3/5
- PEG AND DDR**
- AA35
 - AA34
 - AA33
 - AA32
 - AA31
 - AA30
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 - AA1
 - AA0
- CORE SUPPLY**
- VCC1
 - VCC2
 - VCC3
 - VCC4
 - VCC5
 - VCC6
 - VCC7
 - VCC8
 - VCC9
 - VCC10
 - VCC11
 - VCC12
 - VCC13
 - VCC14
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 - VCC88
 - VCC89
 - VCC90
 - VCC91
 - VCC92
 - VCC93
 - VCC94
 - VCC95
 - VCC96
 - VCC97
 - VCC98
 - VCC99
 - VCC100
- SVID**
- VIDALERT#
 - VIDCLK
 - VIDSOUT
- SENSE LINES**
- VCC_SENSE
 - VSS_SENSE
 - VCCIO_SENSE
 - VSS_SENSE_VCCIO

- AH13
- AH10
- AH10
- AC10
- Y10
- LI10
- VCCIO6
- VCCIO7
- VCCIO8
- VCCIO9
- VCCIO10
- VCCIO11
- VCCIO12
- VCCIO13
- VCCIO14
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- VAXG53
- VAXG54

- SM_VREF
- SA_DIMM_VREFD0
- SB_DIMM_VREFD0
- VDDQ1
- VDDQ2
- VDDQ3
- VDDQ4
- VDDQ5
- VDDQ6
- VDDQ7
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- VDDQ9
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- VCCSA3
- VCCSA4
- VCCSA5
- VCCSA6
- VCCSA7
- VCCSA8

- AF7
- AF4
- AF1
- AC7
- AC4
- AC1
- Y4
- Y1
- U7
- U4
- U1
- P7
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- U100

- VAXG_SENSE
- VSSAXG_SENSE
- CPU1_SM_VREF_R_MN
- CPU1_SA_DIMM_VREFD0_E_MN
- CPU1_SA_DIMM_VREFD0_F_MN
- CPU1_SA_DIMM_VREFD0_G_MN
- CPU1_VCCSA_SENSE
- CPU1_VCCSA_VID0
- CPU1_VCCSA_VID1
- CPU1_VCCSA_VID1_AUX
- CPU1_VCCSP_SENSE
- CPU1_VSSP_SENSE

- R117
- R119
- R120
- R122
- R801
- R760
- R806
- R761
- R117
- R119
- R120
- R122
- R801
- R760
- R806
- R761
- R842
- R809
- R808
- R117
- R119
- R120
- R122
- R801
- R760
- R806
- R761
- R842
- R809
- R808

- IGFX_CORE
- IGFX_VREF
- IGFX_VDDQ
- IGFX_VCCSA
- IGFX_MISC
- IGFX_SENSE
- IGFX_SENSE
- IGFX_VREF
- IGFX_VDDQ
- IGFX_VCCSA
- IGFX_MISC
- IGFX_SENSE
- IGFX_SENSE

- MEM1_VREF_D00
- MEM1_VREF_D01
- MEM1_VREF_D02
- MEM1_VREF_D03
- MEM1_VREF_D04
- MEM1_VREF_D05
- MEM1_VREF_D06
- MEM1_VREF_D07
- MEM1_VREF_D08
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- MEM1_VREF_D98
- MEM1_VREF_D99
- MEM1_VREF_D100

DESIGN	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R CPU	SAMSUNG ELECTRONICS PART NO. BA11-02092*94A
CHECK	XF CHU	DEV. STEP	MP			
APPROVAL	BL LEE	REV	REV 1.0			
MODULE CODE		LAST EDIT				
				May 23, 2012 08:40:30 AM	PAGE 10 OF 51	

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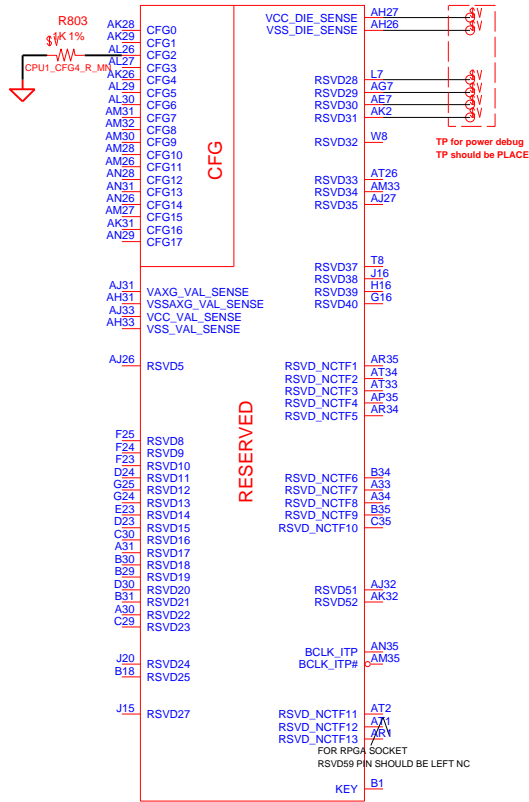
**U5-5
 IVY BRIDGE 5/5**

AT35	VSS1	VSS81	AJ22
AT34	VSS2	AJ19	
AT29	VSS52	AJ16	
AT27	VSS53	VSS83	AJ13
VSS54	VSS94	VSS164	
AT25	VSS55	F31	VSS165
AT22	VSS56	VSS86	AJ7
AT19	VSS58	VSS98	AJ4
AT16	VSS57	VSS87	AJ3
VSS59	VSS99	VSS89	AJ2
AT13	VSS90	VSS90	AH35
AT10	VSS10	VSS91	AH34
AT7	VSS11	VSS92	AH32
AT4	VSS12	VSS93	AH30
AT3	VSS13	VSS94	AH28
AR25	VSS14	VSS95	AH25
AR22	VSS15	VSS96	AH24
AR19	VSS16		
AR16	VSS17		
AR13	VSS18		
AR10	VSS19		
AR7	VSS20		
AR4	VSS21		
AR2	VSS22		
AP34	VSS23		
AP31	VSS24		
AP29	VSS25		
AP28	VSS25		
AP22	VSS26		
AP19	VSS28		
AP13	VSS29		
AP10	VSS30		
AP7	VSS31		
AP4	VSS32		
AP1	VSS33		
AN30	VSS34		
AN27	VSS35		
AN25	VSS36		
AN22	VSS37		
AN19	VSS38		
AN16	VSS39		
AN13	VSS40		
AN10	VSS42		
AN7	VSS43		
AN4	VSS44		
AM29	VSS45		
AM25	VSS46		
AM22	VSS47		
AM19	VSS48		
AM16	VSS49		
AM13	VSS50		
AM10	VSS51		
AM7	VSS52		
AM4	VSS53		
AM3	VSS54		
AM2	VSS55		
AM1	VSS56		
AL31	VSS57		
AL28	VSS58		
AL25	VSS60		
AL22	VSS61		
AL19	VSS62		
AL16	VSS63		
AL13	VSS64		
AL10	VSS65		
AL7	VSS66		
AL2	VSS67		
AK33	VSS69		
AK30	VSS70		
AK27	VSS71		
AK25	VSS72		
AK22	VSS73		
AK19	VSS74		
AK16	VSS75		
AK13	VSS76		
AK10	VSS77		
AK7	VSS78		
AK4	VSS79		
AJ25	VSS80		

VSS

T35	VSS161	VSS234	F22
T34	VSS162	VSS235	F19
T33	VSS163	VSS236	E30
T32	VSS164	VSS237	E27
T31	VSS165	AL27	E24
T30	VSS166	VSS238	E21
T29	VSS167	VSS239	E18
T28	VSS168	VSS240	E15
T27	VSS169	VSS241	E13
T26	VSS170	VSS242	E10
T25	VSS171	VSS243	E9
P8	VSS172	VSS244	E8
P6	VSS173	VSS245	E7
P5	VSS174	VSS246	E6
P3	VSS175	VSS247	E5
P2	VSS176	VSS248	E4
N35	VSS177	VSS249	E3
N34	VSS178	VSS250	E2
N33	VSS179	VSS251	E1
N32	VSS180	VSS252	D35
N31	VSS181	VSS253	D32
N30	VSS182	VSS254	D29
N29	VSS183	VSS255	D26
N28	VSS184	VSS256	D20
N27	VSS185	VSS257	D17
N26	VSS186	VSS258	C34
N25	VSS187	VSS259	C31
M34	VSS188	VSS260	C29
L33	VSS189	VSS261	C28
L30	VSS190	VSS262	C27
L27	VSS191	VSS263	C25
L9	VSS192	VSS264	C10
L8	VSS193	VSS265	C1
L6	VSS194	VSS266	B22
L5	VSS195	VSS267	B15
L4	VSS196	VSS268	B17
L3	VSS197	VSS269	B15
L2	VSS198	VSS270	B13
L1	VSS199	VSS271	B11
K35	VSS200	VSS272	B9
K32	VSS201	VSS273	B8
K29	VSS202	VSS274	B7
K26	VSS203	VSS275	B5
J34	VSS204	VSS276	B3
J31	VSS205	VSS277	B2
H33	VSS206	VSS278	A35
H30	VSS207	VSS279	A35
H27	VSS208	VSS280	A32
H24	VSS209	VSS281	A29
H21	VSS210	VSS282	A26
H18	VSS211	VSS283	A23
H15	VSS212	VSS284	A20
H13	VSS213	VSS285	A3
H10	VSS214		
H9	VSS215		
H8	VSS216		
H7	VSS217		
H6	VSS218		
H4	VSS219		
H3	VSS220		
H2	VSS221		
H1	VSS222		
G35	VSS223		
G32	VSS224		
G29	VSS225		
G26	VSS226		
G23	VSS227		
G20	VSS228		
G17	VSS229		
G11	VSS230		
F34	VSS231		
F31	VSS232		
F29	VSS233		

VSS



CFG Straps for Processor

PEG STATIC LANE REVERSAL - CFG2 IS FOR THE 16X	
CFG2	1 : (DEFAULT) NORMAL OPERATION 0 : LANE REVERSED
PCIe PORT BIFURCATION STRAPS	
CFG6[5]	11 : (DEFAULT) X16 - DEVICE 1 FUNCTIONS 1 AND 2 DISABLED 10 : X8, X8 - DEVICE 1 FUNCTION 1 ENABLED ; FUNCTION 2 DISABLED 01 : RESERVED - (DEVICE 1 FUNCTION 1 DISABLED ; FUNCTION 2 ENABLED) 00 : X8, X4, X4 - DEVICE 1 FUNCTIONS 1 AND 2 ENABLED
Display Port Presence	
CFG4	1 : Disabled - No DP device is connected to eDP 0 : Enabled - (DP device is connected to eDP)
PEG DEFER TRAINING	
CFG7	1 : (DEFAULT) PEG TRAIN IMMEDIATELY FOLLOWING XXRESETB DEASSERTION 0 : PEG WAIT FOR BIOS FOR TRAINING

DESIGN	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R	SAMSUNG ELECTRONICS
CHECK	XF CHU	DEV. STEP	MP		CPU	
APPROVAL	BL LEE	REV	REV 1.0		Sandy Bridge (4/4)	PART NO. BA41-02092*94A
MODULE CODE		LAST EDIT		May 23, 2012 08:40:30 AM	PAGE	11 OF 51

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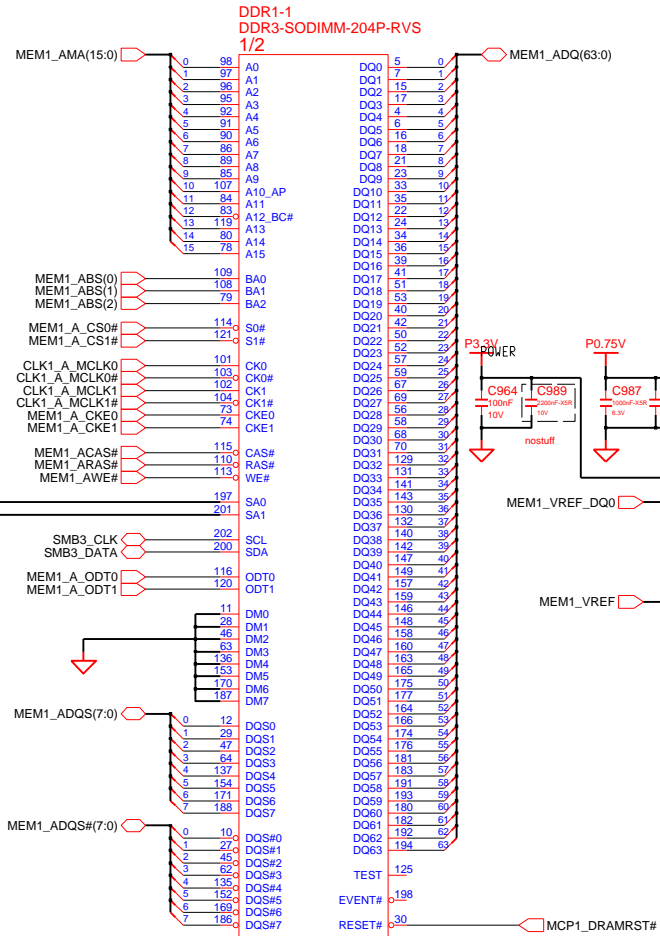
SO-DIMM#0 : 2nd SO-DIMM

DDR SO-DIMM #0

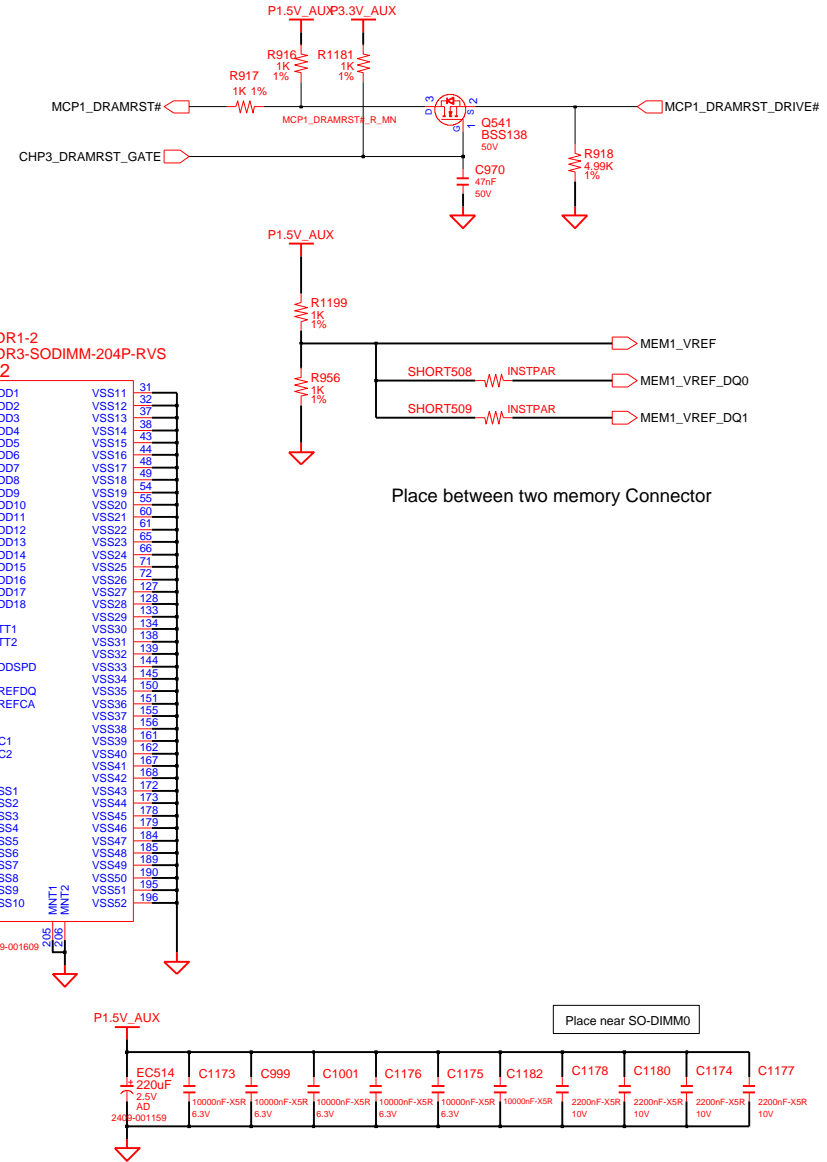
Height : 9.2 mm (REVERSE)

P/N : 3709-001656 (Foxconn)

P/N : 3709-001609 (Concraft)



SA0	0	0
SA1	0	1
SPD ADD	0xA0	0xA2
TS ADD	0x30	0x32



Place between two memory Connector

Place near SO-DIMM0

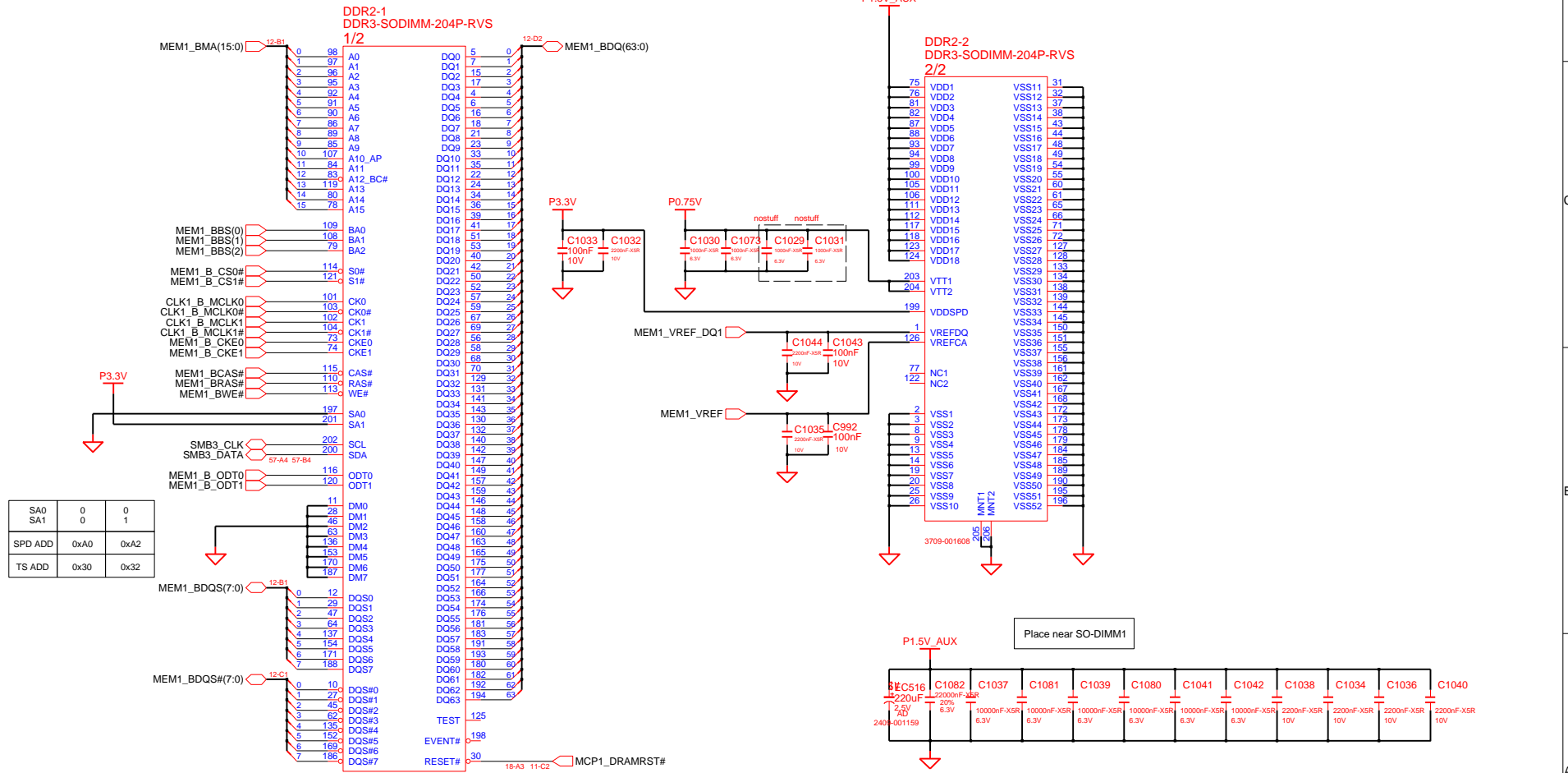
DRAW	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R	SAMSUNG ELECTRONICS PART NO. BA41-02092-94A
CHECK	XF CHU	DEV. STEP	MP	SODIMM A DDR3		
APPROVAL	BL LEE	REV	REV 1.0	May 23, 2012 08:40:30 AM PAGE 12 OF 51		
MODULE CODE	undefined	LAST EDIT				

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SO-DIMM#1 : 1st SO-DIMM

DDR SO-DIMM #1

Height : 4.0 mm (REVERSE)
 P/N : 3709-001654 (Foxconn)
 P/N : 3709-001608 (Concraft)



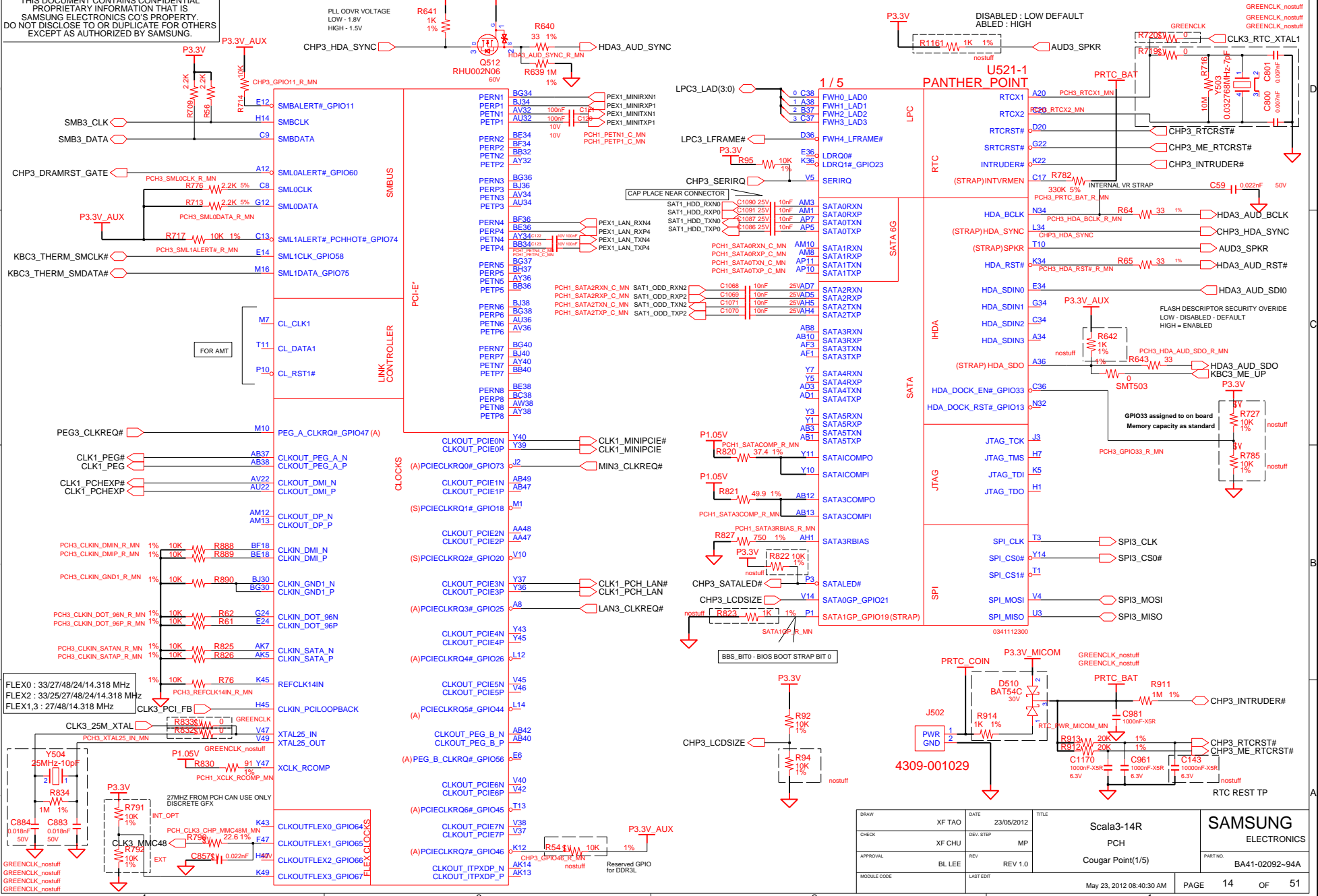
SA0	0	0	1
SA1	0	0	1
SPD ADD	0xA0	0xA2	
TS ADD	0x30	0x32	

DRAW	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R	SAMSUNG ELECTRONICS
CHECK	XF CHU	DEV. STEP	MP		SODIMM B	
APPROVAL	BL LEE	REV	REV 1.0		DDR3	PART NO. BA41-02092-94A
MODULE CODE		LAST ENT				

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NO REBOOT STRAP

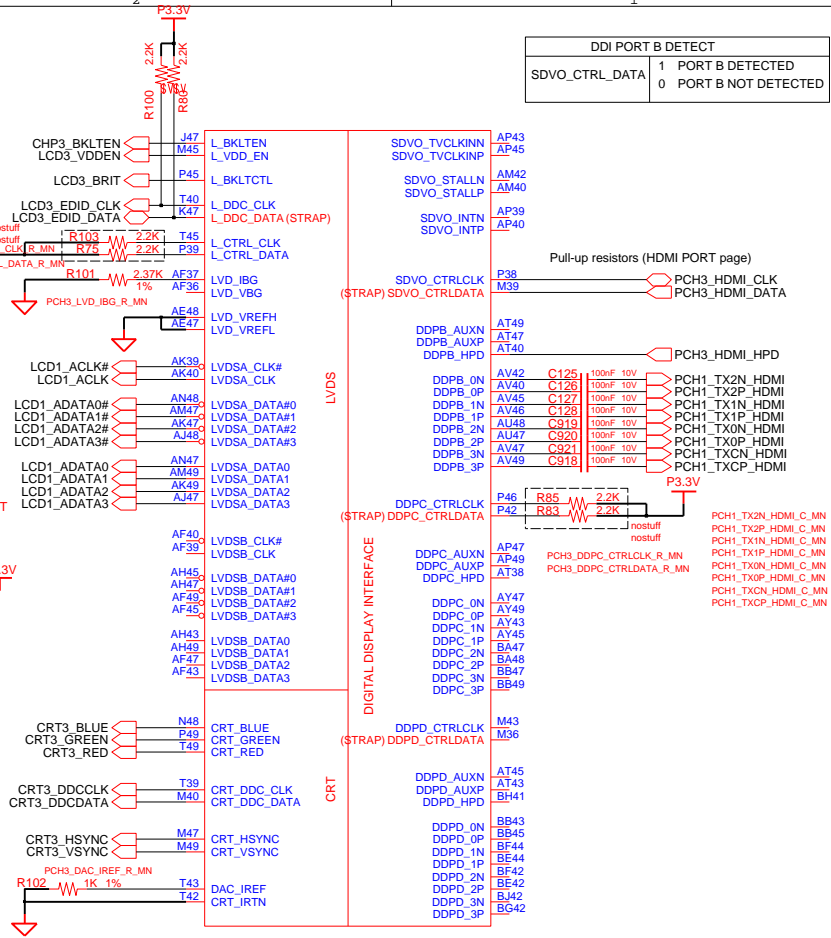
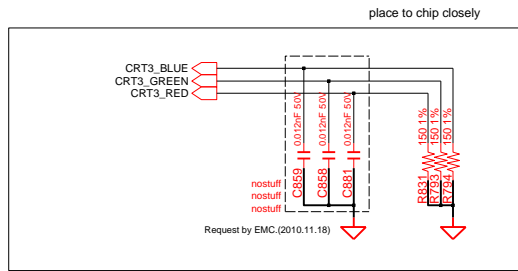
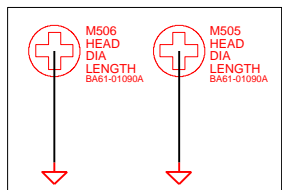
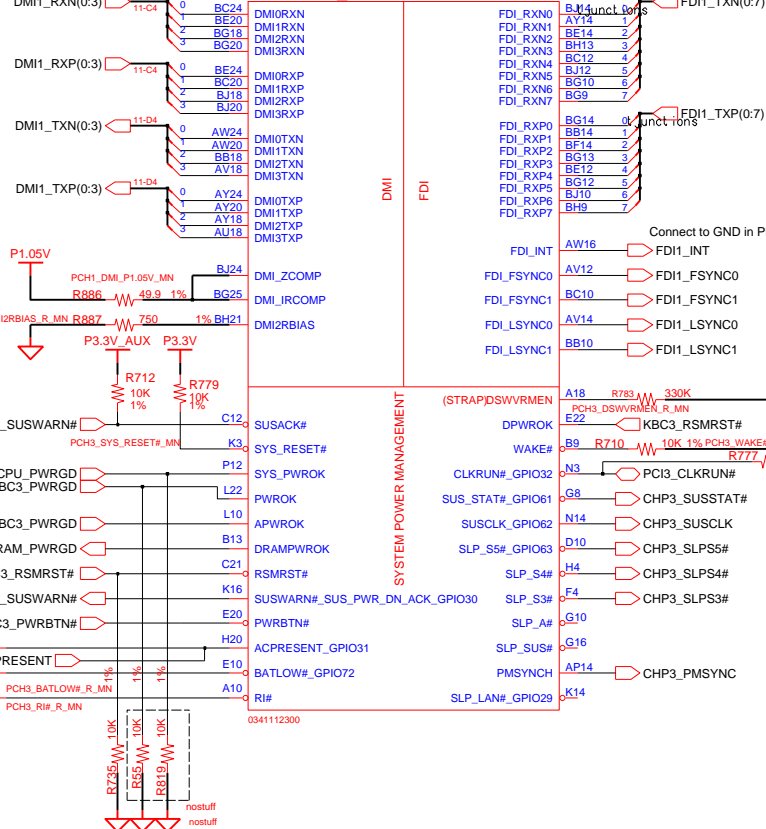


DRAW	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R
CHECK	XF CHU	DEV_STEP	MP		PCH
APPROVAL	BL LEE	REV	REV 1.0		Cougar Point(1/5)
MODULE CODE		LAST ENT			
			May 23, 2012 08:40:30 AM	PAGE	14 OF 51

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U521-2 PANTHER POINT



DDI PORT B DETECT	
SDVO_CTRL_DATA	1 PORT B DETECTED
	0 PORT B NOT DETECTED

Pull-up resistors (HDMI PORT page)

PCH3_HDMI_CLK, PCH3_HDMI_DATA

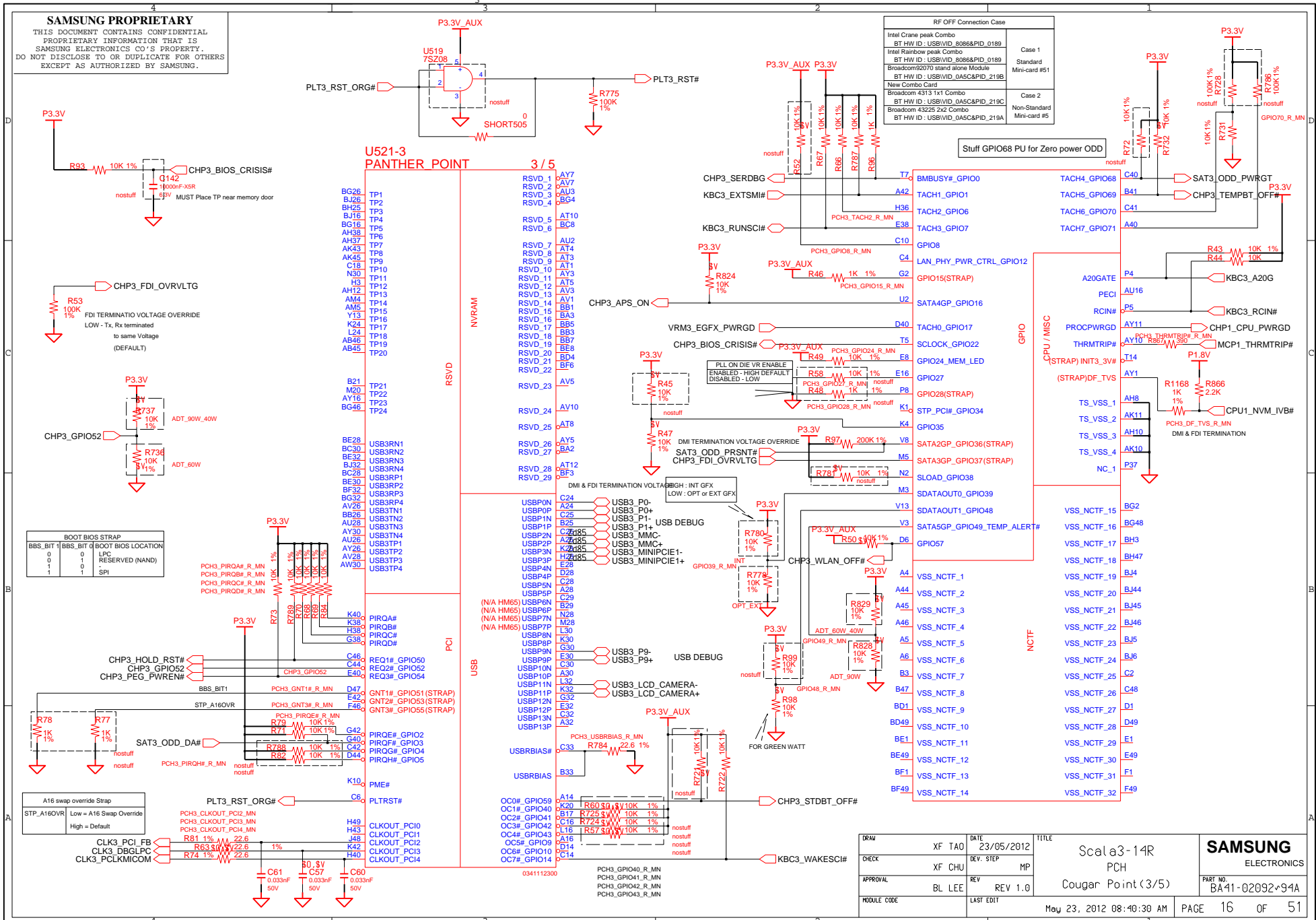
- PCH3_HDMI_HPD
- PCH1_TX2N_HDMI
- PCH1_TX2P_HDMI
- PCH1_TX1N_HDMI
- PCH1_TX1P_HDMI
- PCH1_TX0N_HDMI
- PCH1_TX0P_HDMI
- PCH1_TXCN_HDMI
- PCH1_TXCP_HDMI

- PCH1_TX2N_HDMI_C_MN
- PCH1_TX2P_HDMI_C_MN
- PCH1_TX1N_HDMI_C_MN
- PCH1_TX1P_HDMI_C_MN
- PCH1_TX0N_HDMI_C_MN
- PCH1_TX0P_HDMI_C_MN
- PCH1_TXCN_HDMI_C_MN
- PCH1_TXCP_HDMI_C_MN

- PCH1_TXCP_HDMI to R869 (619 1%)
- PCH1_TXCN_HDMI to R870 (619 1%)
- PCH1_TX2P_HDMI to R873 (619 1%)
- PCH1_TX2N_HDMI to R875 (619 1%)
- PCH1_TX1P_HDMI to R876 (619 1%)
- PCH1_TX1N_HDMI to R871 (619 1%)
- PCH1_TX0P_HDMI to R874 (619 1%)
- PCH1_TX0N_HDMI to R872 (619 1%)

DRAW	XF TAO	DATE	23/05/2012	TITLE
CHECK	XF CHU	DEV. STEP	MP	
APPROVAL	BL LEE	REV	REV 1.0	
MODULE CODE		LAST EDIT		

Scala3-14R		SAMSUNG ELECTRONICS
PCH		
Cougar Point(2/5)		PART NO. BA41-02092-94A
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RF OFF Connection Case		
Intel Crane peak Combo BT HW ID: USBVID_8086&PID_0189	Case 1	Standard
Intel Rainbow peak Combo BT HW ID: USBVID_8086&PID_0189	Case 1	Mini-card #51
Broadcom92070 stand alone Module BT HW ID: USBVID_0A5C&PID_219B	Case 2	Non-Standard
New Combo Card Broadcom 4313 1x1 Combo BT HW ID: USBVID_0A5C&PID_219C	Case 2	Mini-card #5
Broadcom 43225 2x2 Combo BT HW ID: USBVID_0A5C&PID_219A	Case 2	Mini-card #5

BBS_BIT 1	BBS_BIT 0	BOOT BIOS LOCATION
0	0	LPC
0	1	RESERVED (NAND)
1	1	SPI

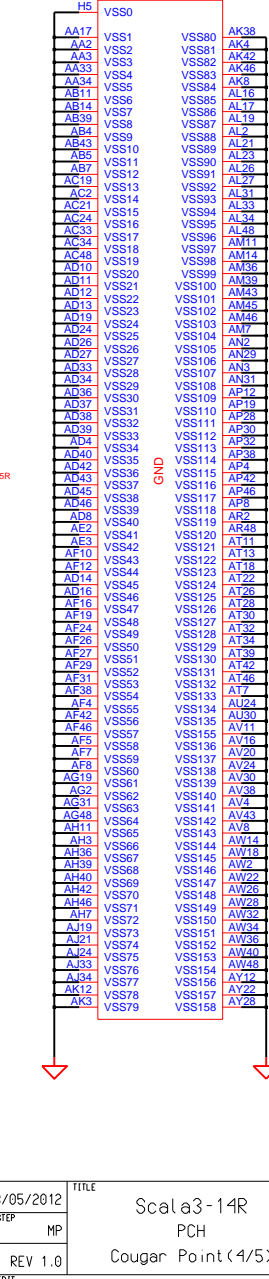
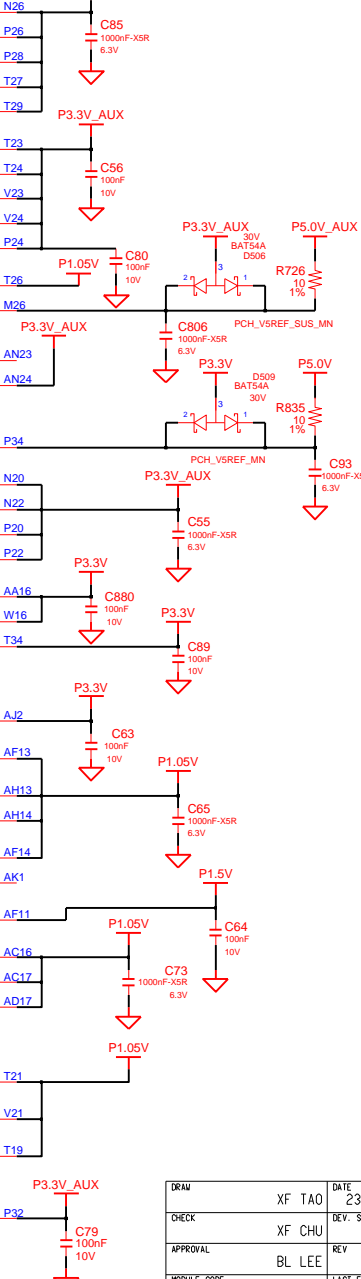
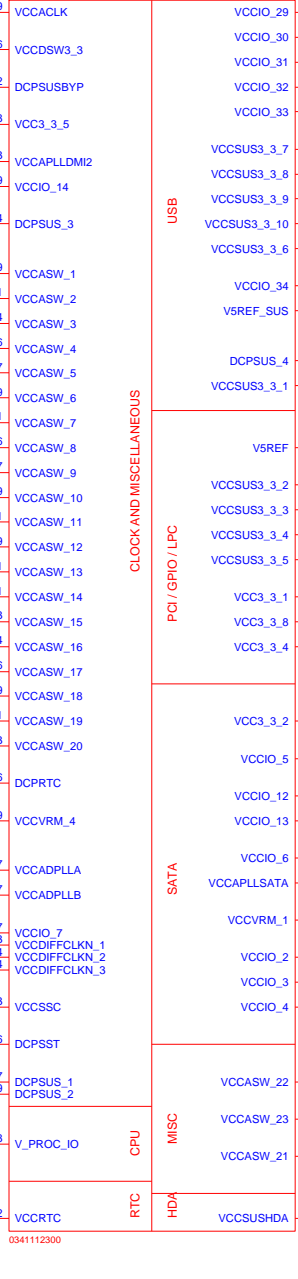
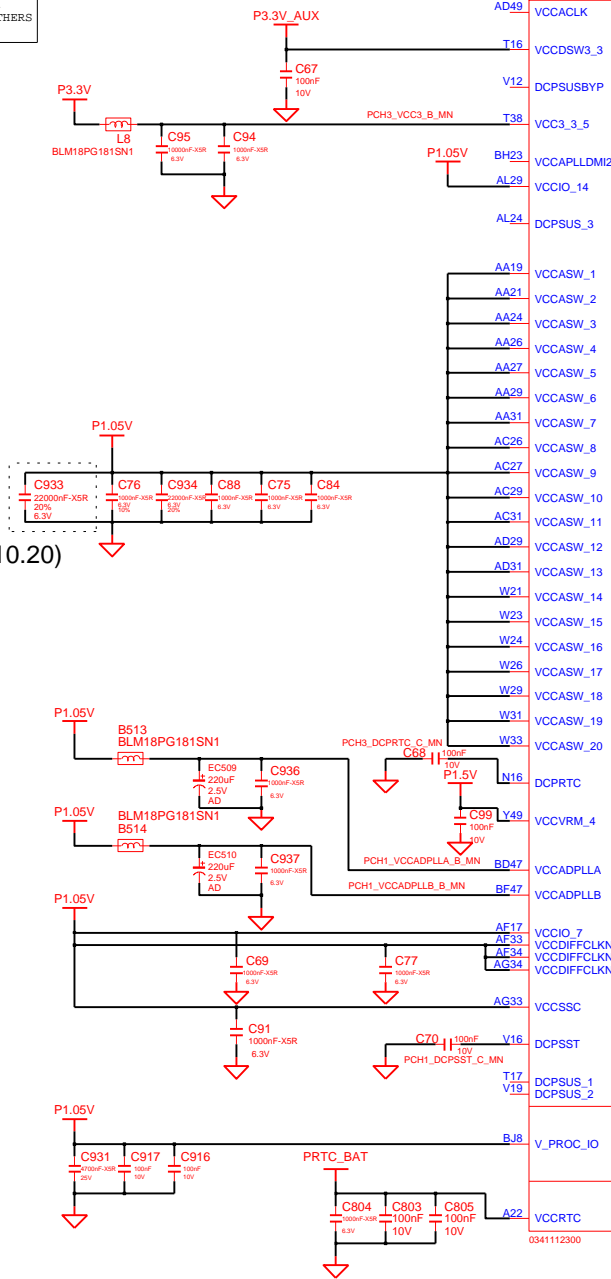
STP_A16OVR	Low = A16 Swap Override	High = Default
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DRAW	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R
CHECK	XF CHU	REV. STEP	MP		PCH
APPROVAL	BL LEE	REV	REV 1.0		Cougar Point (3/5)
MODULE CODE		LAST EDIT	May 23, 2012 08:40:30 AM		

SAMSUNG ELECTRONICS	
PART NO.	BA11-02092-91A
PAGE	16 OF 51

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**U521-4
PANTHER POINT**



PI Request (2010.10.20)

DRAW	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R
CHECK	XF CHU	DEV. STEP	MP		PCH
APPROVAL	BL LEE	REV	REV 1.0		Cougar Point(4/5)
MODULE CODE		LAST EDIT			

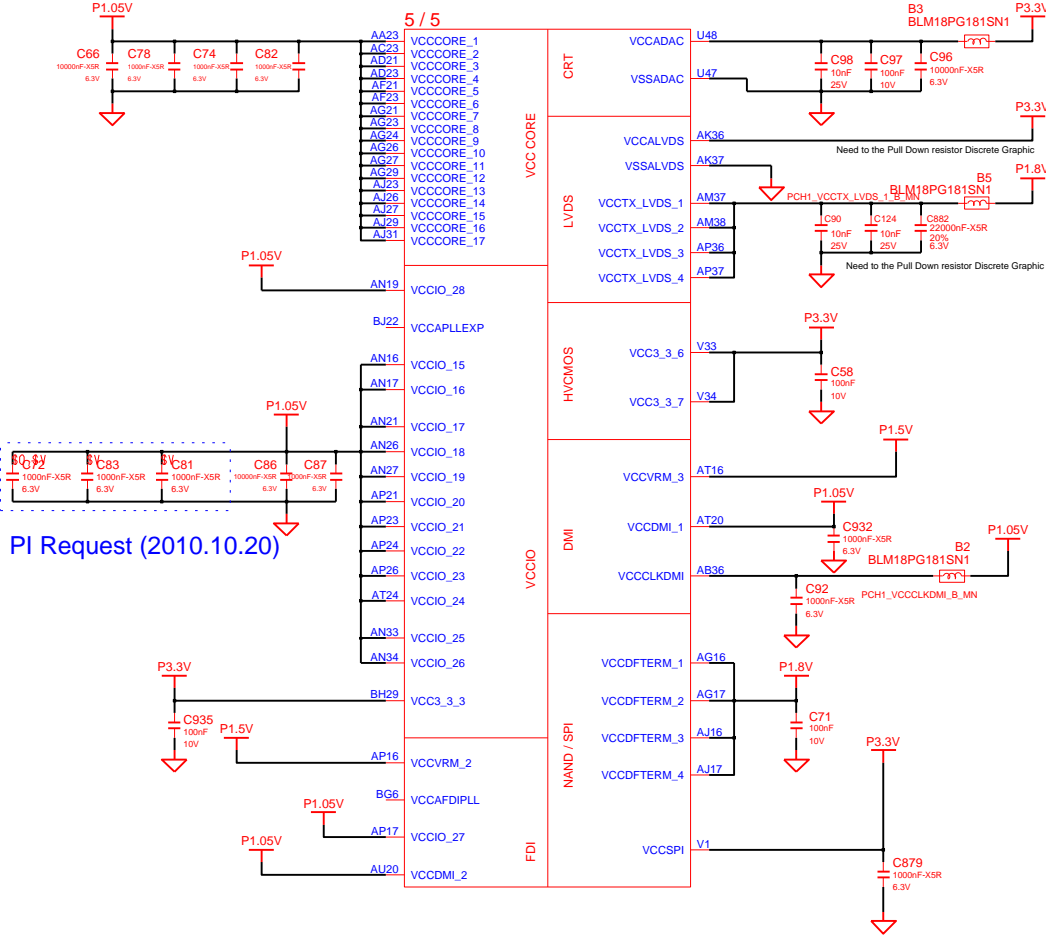
May 23, 2012 08:40:30 AM		PAGE	17	OF	601
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**U521-5
 PANTHER_POINT**

This power share with thermal sensor

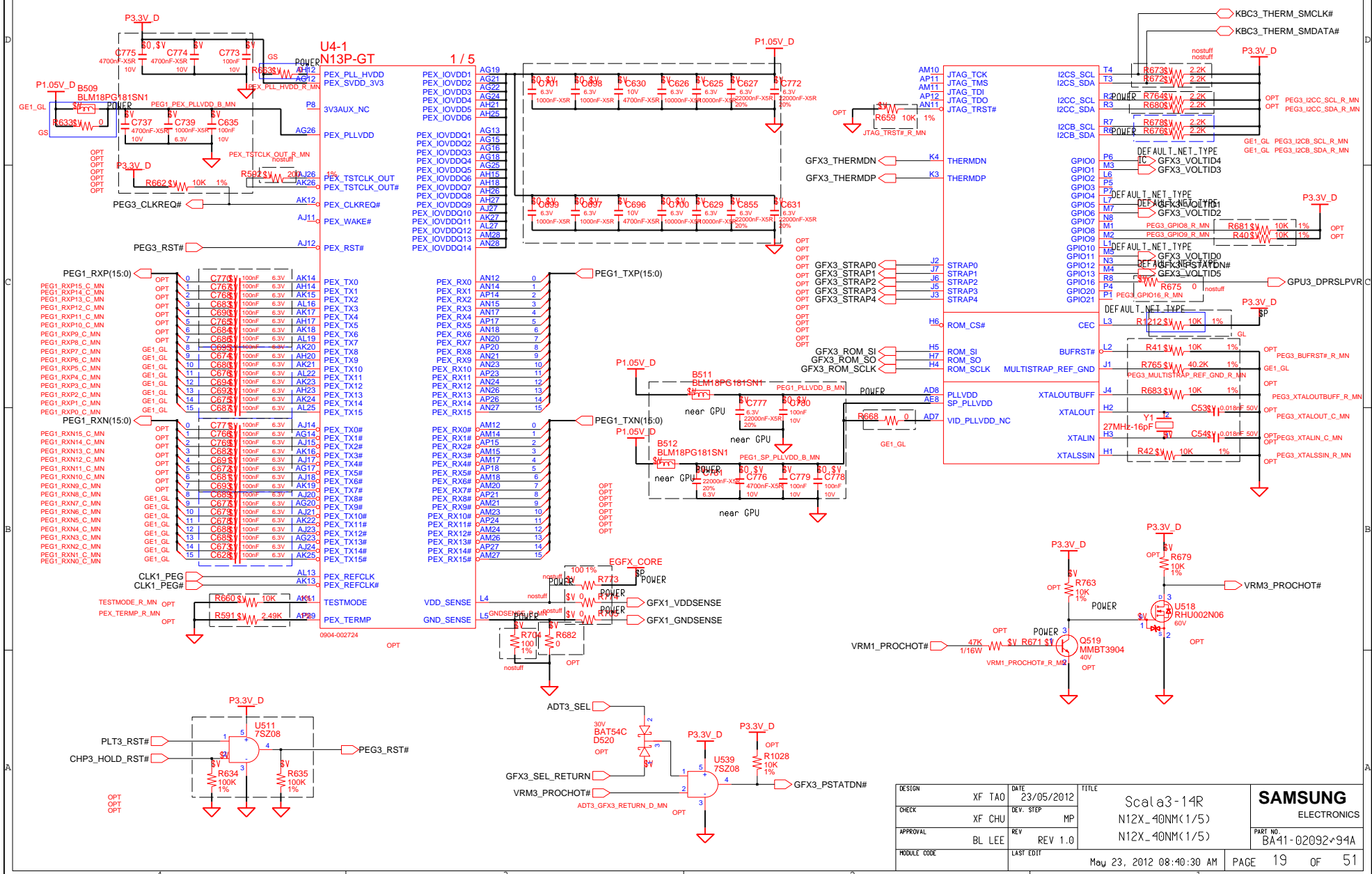
AY4	VSS159	VSS259	H46
AY42	VSS160	VSS260	K18
AY46	VSS161	VSS261	K26
AY8	VSS162	VSS262	K30
B11	VSS163	VSS263	K46
B15	VSS164	VSS264	K7
B19	VSS165	VSS265	L2
B23	VSS166	VSS266	L20
B27	VSS167	VSS267	L26
B31	VSS168	VSS268	L26
B35	VSS169	VSS269	L28
B39	VSS170	VSS270	L48
B7	VSS171	VSS271	M12
F45	VSS172	VSS272	M18
BB12	VSS173	VSS273	M18
BB16	VSS174	VSS274	M22
BB20	VSS175	VSS275	M24
BB22	VSS176	VSS276	M30
BB24	VSS177	VSS277	M32
BB28	VSS178	VSS278	M34
BB30	VSS179	VSS279	M38
BB38	VSS180	VSS280	M4
BB4	VSS181	VSS281	M42
BB46	VSS182	VSS282	M48
BC14	VSS183	VSS283	N18
BC18	VSS184	VSS284	N18
BC2	VSS185	VSS285	N47
BC22	VSS186	VSS286	P30
BC26	VSS187	VSS287	P47
BC32	VSS188	VSS288	P18
BC34	VSS189	VSS289	T33
BC36	VSS190	VSS290	P40
BC40	VSS191	VSS291	P47
BC42	VSS192	VSS292	P47
BC48	VSS193	VSS293	R2
BD46	VSS194	VSS294	R48
BD5	VSS195	VSS295	R48
BE22	VSS196	VSS296	T12
BE26	VSS197	VSS297	T31
BE40	VSS198	VSS298	T37
BF10	VSS199	VSS299	T4
BF12	VSS200	VSS300	W34
BF16	VSS201	VSS301	T46
BF20	VSS202	VSS302	T47
BF22	VSS203	VSS303	T8
BF24	VSS204	VSS304	T8
BF26	VSS205	VSS305	V11
BF28	VSS206	VSS306	V17
BF30	VSS207	VSS307	V26
BF38	VSS208	VSS308	V27
BF40	VSS209	VSS309	V29
BF9	VSS210	VSS310	V31
BG17	VSS211	VSS311	V36
BG21	VSS212	VSS312	V38
BG33	VSS213	VSS313	V43
BG44	VSS214	VSS314	V7
BG8	VSS215	VSS315	W17
BH11	VSS216	VSS316	W2
BH15	VSS217	VSS317	W27
BH17	VSS218	VSS318	W48
BH19	VSS219	VSS319	W48
H10	VSS220	VSS320	Y12
BH27	VSS221	VSS321	Y38
BH31	VSS222	VSS322	Y4
BH33	VSS223	VSS323	Y42
BH35	VSS224	VSS324	Y46
BH39	VSS225	VSS325	Y8
BH43	VSS226	VSS326	BG29
BH7	VSS227	VSS327	N24
D3	VSS228	VSS328	AJ3
D12	VSS229	VSS329	AD47
D16	VSS230	VSS330	E43
D18	VSS231	VSS331	BE10
D22	VSS232	VSS332	BG11
D24	VSS233	VSS333	G14
D26	VSS234	VSS334	H18
D30	VSS235	VSS335	T36
D32	VSS236	VSS336	BG22
D34	VSS237	VSS337	BG24
D38	VSS238	VSS338	C22
D42	VSS239	VSS339	AP13
D8	VSS240	VSS340	M14
E18	VSS241	VSS341	AP3
E26	VSS242	VSS342	AP1
E18	VSS243	VSS343	BE16
G18	VSS244	VSS344	BC18
G20	VSS245	VSS345	BG28
G26	VSS246	VSS346	BJ28
G28	VSS247	VSS347	
G36	VSS248	VSS348	
G48	VSS249	VSS349	
H12	VSS250	VSS350	
H18	VSS251	VSS351	
H22	VSS252	VSS352	
H24	VSS253		
H26	VSS254		
H30	VSS255		
H32	VSS256		
H34	VSS257		
F3	VSS258		



DRAW	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R	SAMSUNG ELECTRONICS
CHECK	XF CHU	DEV. STEP	MP		PCH	
APPROVAL	BL LEE	REV	REV 1.0		Cougar Point(5/5)	PART NO. BA41-02092-94A
MODULE CODE	undefined	LAST EDIT	May 23, 2012 08:40:30 AM	PAGE	18	OF 51

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DESIGN	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R
CHECK	XF CHU	DEV. STEP	MP		N12X_40NM(1/5)
APPROVAL	BL LEE	REV	REV 1.0		N12X_40NM(1/5)
MODULE CODE		LAST EDIT			
				May 23, 2012 08:40:30 AM	PAGE 19 OF 51

SAMSUNG	
ELECTRONICS	
PART NO.	BA41-02092*94A

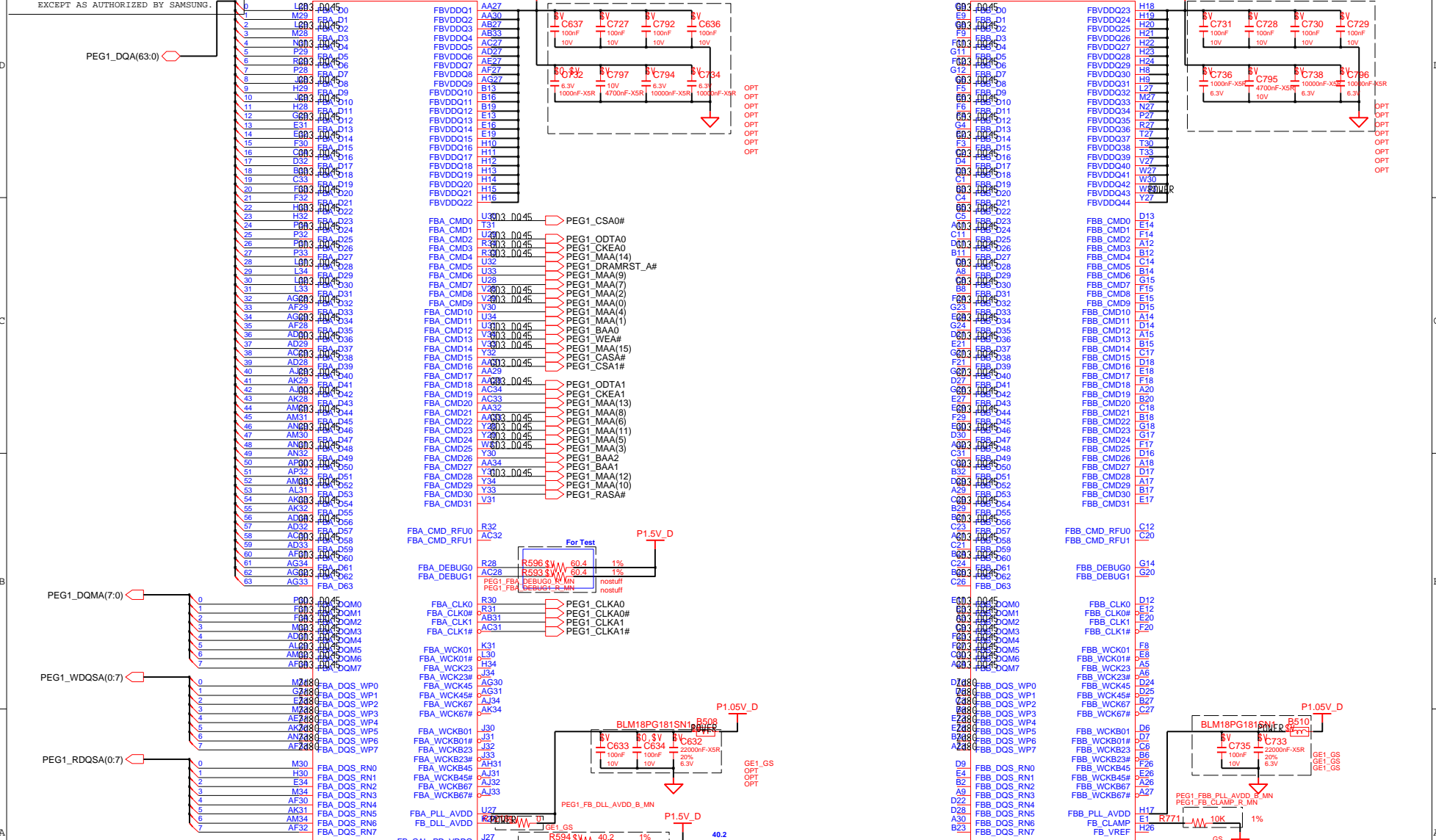
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U4-2 N13P-GT 2/5

P1.5V_D

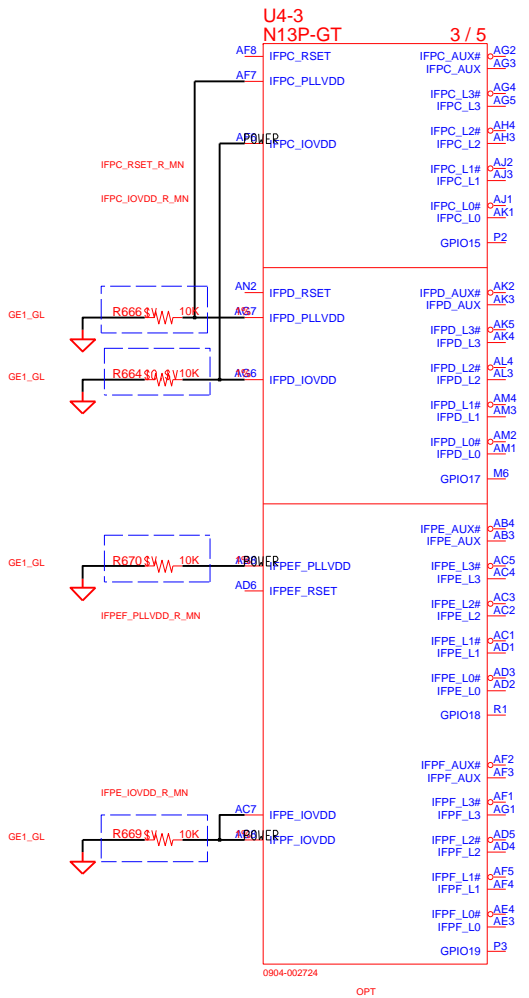
P1.5V_D



DESIGN	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R	SAMSUNG ELECTRONICS PART NO. BA11-02092*94A
CHECK	XF CHU	DEV. STEP	MP		N12X_40NM(2/5)	
APPROVAL	BL LEE	REV	REV 1.0		N12X_40NM(2/5)	
MODULE CODE		LAST EDIT				
				May 23, 2012 08:40:30 AM	PAGE 20 OF 51	

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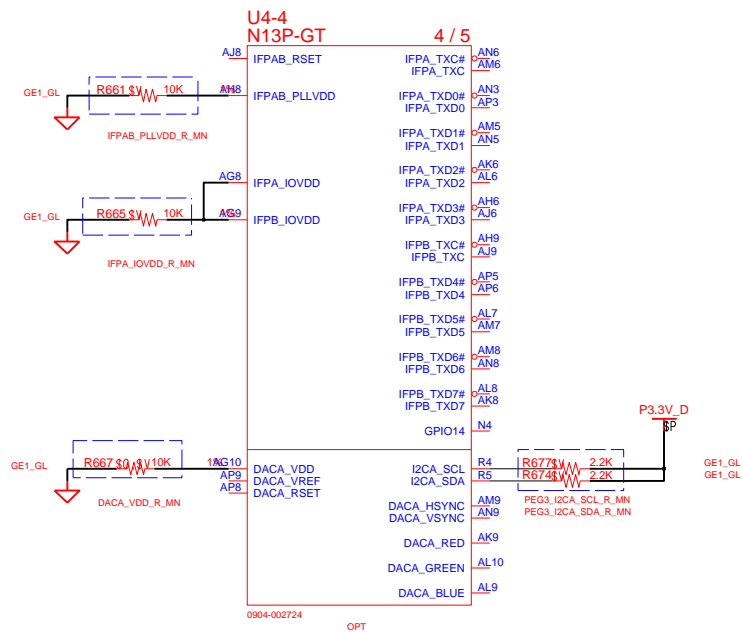
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DESIGN	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R	SAMSUNG ELECTRONICS PART NO. BA41-02092-94A
CHECK	XF CHU	DEV. STEP	MP		N12X_40NM(3/5)	
APPROVAL	BL LEE	REV	REV 1.0		N12X_40NM(3/5)	
MODULE CODE		LAST EDIT		May 23, 2012 08:40:30 AM	PAGE 21 OF 51	

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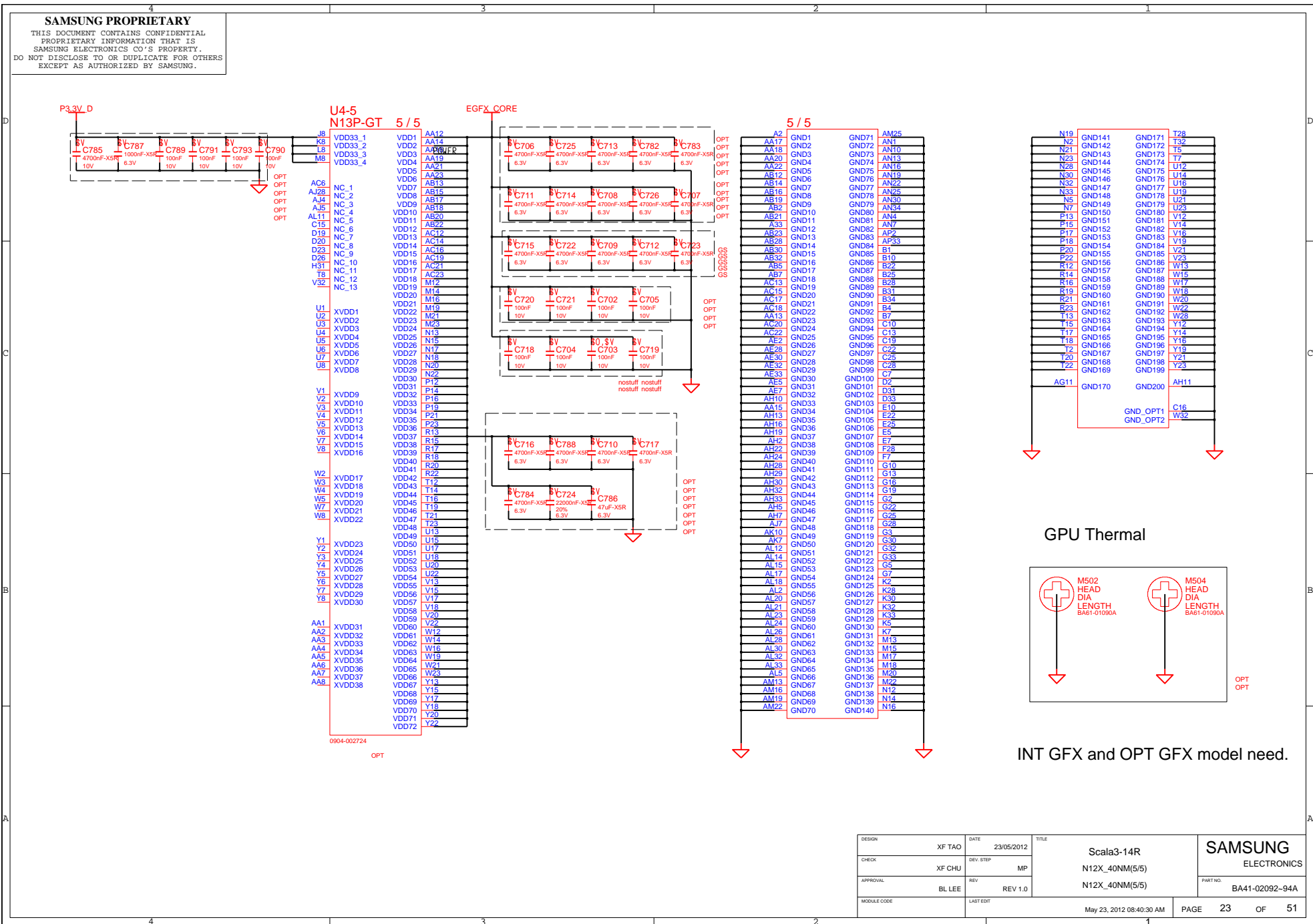


0904-002724 OPT

DESIGN	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R	SAMSUNG ELECTRONICS PART NO. BA41-02092-94A
CHECK	XF CHU	DEV. STEP	MP		N12X_40NM(4/5)	
APPROVAL	BL LEE	REV	REV 1.0		N12X_40NM(4/5)	
MODULE CODE		LAST EDIT		May 23, 2012 08:40:30 AM	PAGE 22 OF 51	

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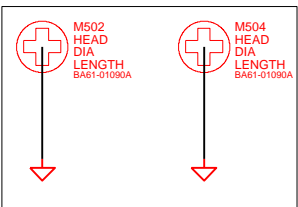
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0904-002724

OPT

GPU Thermal

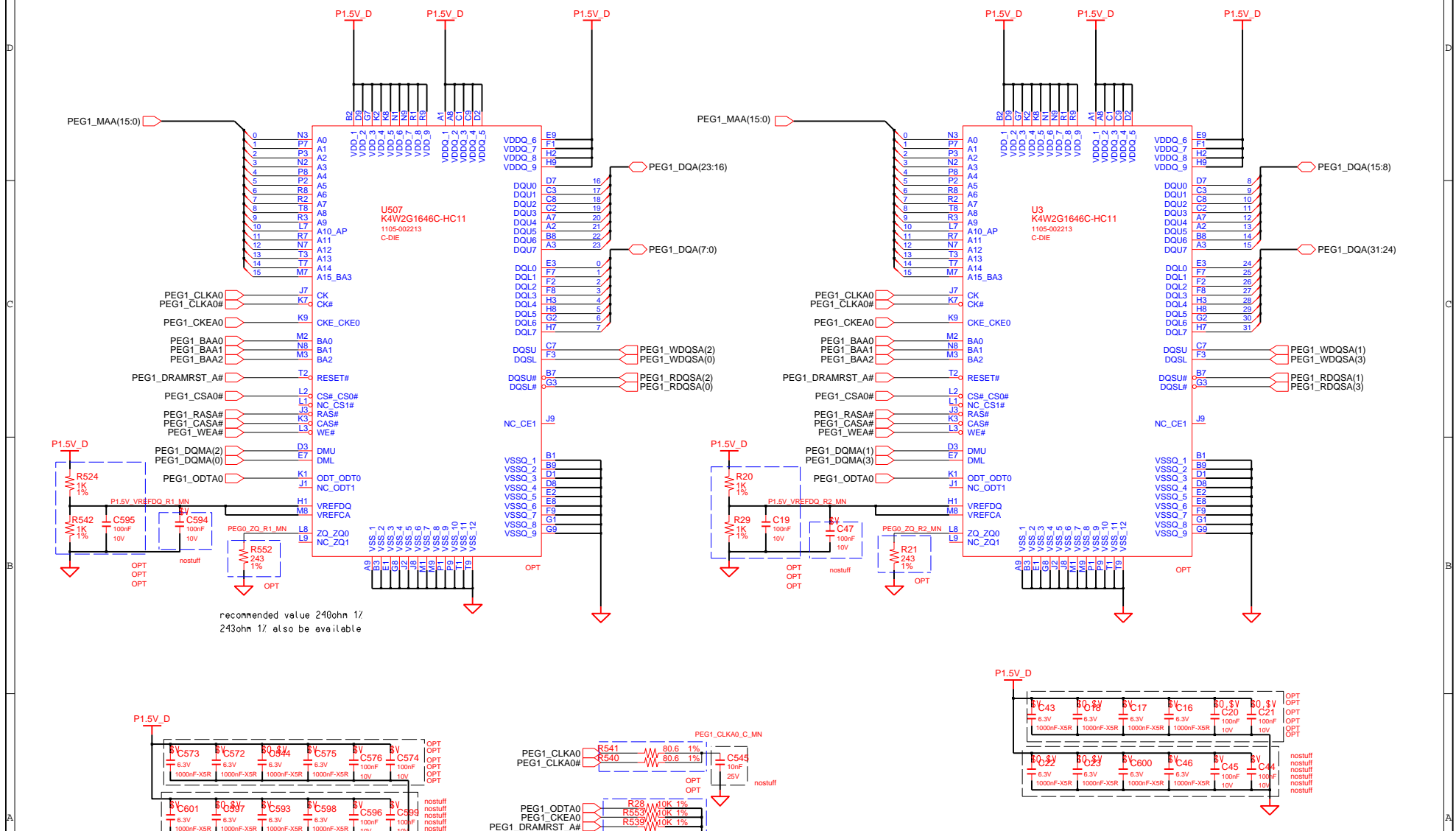


INT GFX and OPT GFX model need.

DESIGN	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R	SAMSUNG ELECTRONICS PART NO. BA41-02092-94A
CHECK	XF CHU	DEV. STEP	MP		N12X_40NM(5/5)	
APPROVAL	BL LEE	REV	REV 1.0		N12X_40NM(5/5)	
MODULE CODE		LAST EDIT		May 23, 2012 08:40:30 AM		
					PAGE	23 OF 51

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A-Channel #0 (D-mode)

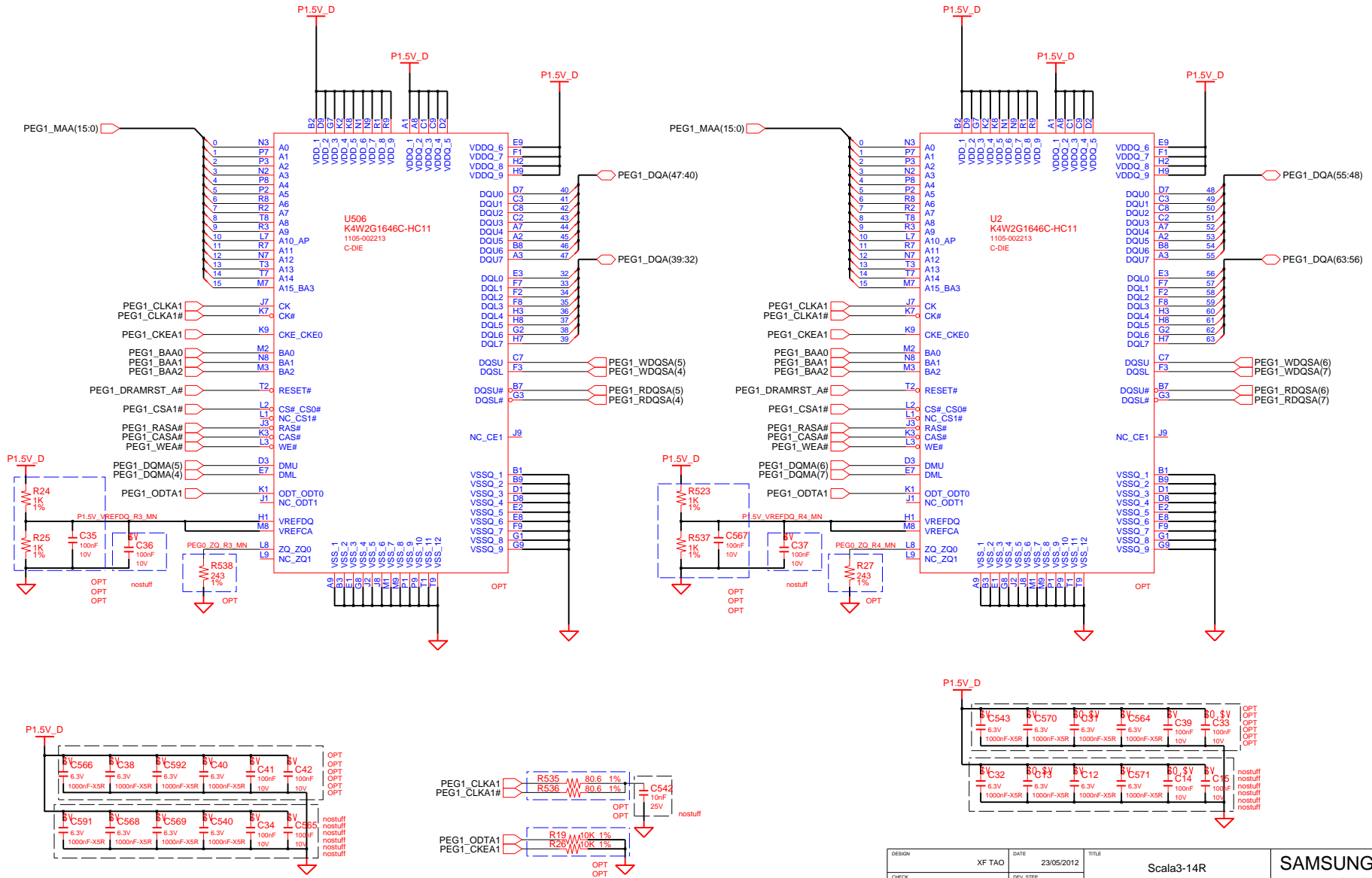


DESIGN	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R
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APPROVAL	BL LEE	REV	REV 1.0		GRAPHIC_MEM A#0
MODULE CODE		LAST EDIT			
					May 23, 2012 08:40:30 AM
					PAGE 24 OF 51

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A-Channel #1 (D-mode)



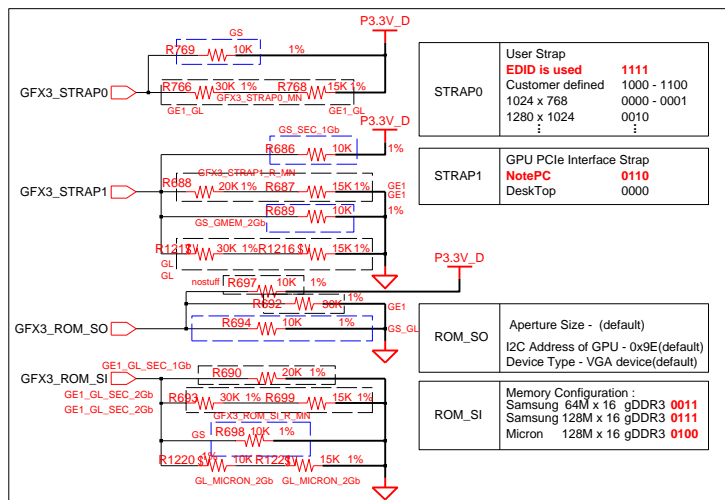
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CHECK	XF CHU	DEV. STEP	MP	GRAPHIC_MEM A#1		
APPROVAL	BL LEE	REV	REV 1.0	GRAPHIC_MEM A#1		
MODULE CODE		LAST EDIT				
					May 23, 2012 08:40:30 AM	PAGE 25 OF 51

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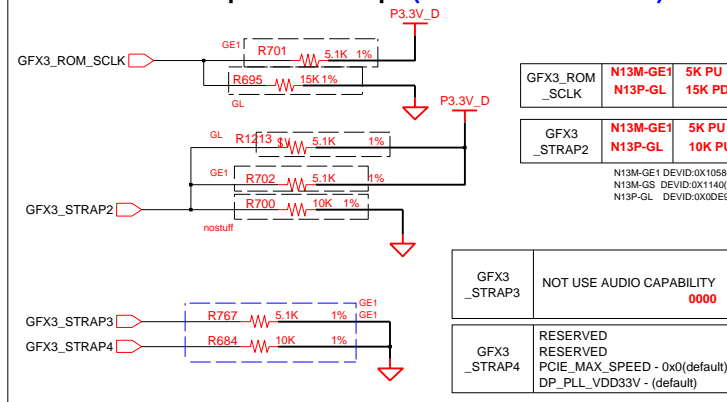
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N13x STRAP

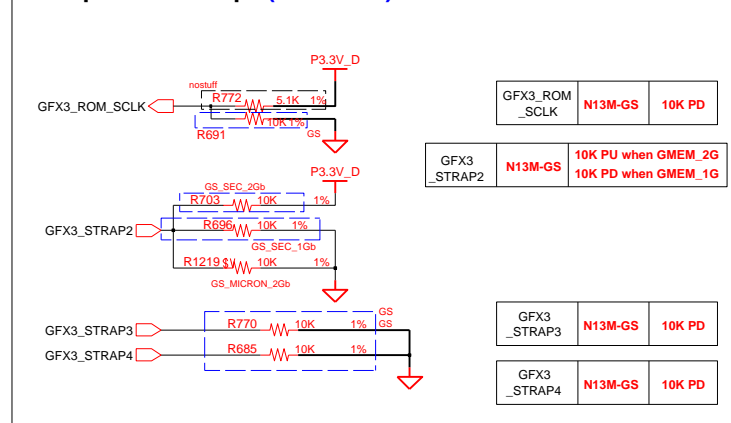
Function Straps



Chip Select Straps (N13M-GE1/N13P-GL)



Chip Select Straps (N13M-GS)



STRAP PIN	STRAP MAPPING	Resistance	Polarity
STRAP0	RAMCFG[0]	10K ohm	Pull-up to 3V3 for binary '1'
STRAP1	RAMCFG[1]	10K ohm	Pull-down to GND for binary '0'
STRAP2	RAMCFG[2]	10K ohm	Samsung 64M x 16 gDDR3 0011
STRAP3	RAMCFG[3]	10K ohm	Samsung 128M x 16 gDDR3 0101
			Micron 128M x 16 gDDR3 0001
ROM_SO	VGA_DEVICE	10K ohm	Pull-down to GND(no display)
ROM_SI	SUB_VENDOR	10K ohm	Pull-up to 3V3 if VBIOS ROM exists
			Pull-down to GND if no VBIOROM
ROM_SCLK	SMB_ALT_ADDR	10K ohm	Pull-down to GND
STRAP4	PCI_MAX_SPEED	10K ohm	Pull-down to GND

RESISTOR	PULL UP	PULL DOWN
5K	1000	0000
10K	1001	0001
15K	1010	0010
20K	1011	0011
25K	1100	0100
30K	1101	0101
35K	1110	0110
45K	1111	0111

STRAP PIN	BIT 3	BIT 2	BIT 1	BIT 0
STRAP0	USER[3]	USER[2]	USER[1]	USER[0]
STRAP1	3GIO_PAD_CFG_ADR[3]	3GIO_PAD_CFG_ADR[2]	3GIO_PAD_CFG_ADR[1]	3GIO_PAD_CFG_ADR[0]
ROM_SO	FB[1] (GE1)	FB[0] (GE1)	SMB_ALT_ADDR	VGA_DEVICE
ROM_SI	RAMCFG[3] (GL)	RAMCFG[2] (GL)	RAMCFG[1]	RAMCFG[0]
STRAP2	PCI_DEVID[3]	PCI_DEVID[2]	PCI_DEVID[1]	PCI_DEVID[0]
ROM_SCLK	PCI_DEVID[4]	SUB_VENDOR	SLOT_CLK_CFG (GE1) (GL)	PEX_PLL_EN_TERM
STRAP3	SOR3_EXPOSED	SOR2_EXPOSED	SOR1_EXPOSED	SOR0_EXPOSED
STRAP4	RESERVED	RESERVED	PCIE_MAX_SPEED	DP_PLL_VDD33V

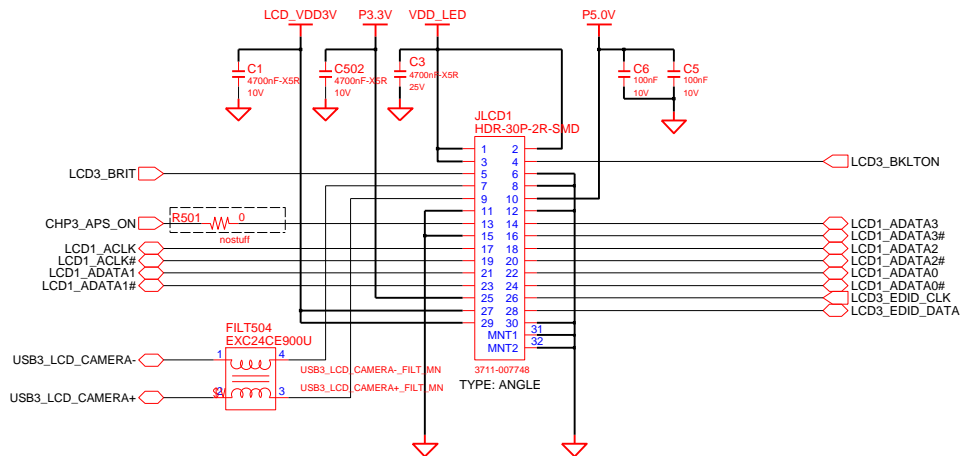
DESIGN	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R	SAMSUNG ELECTRONICS
CHECK	XF CHU	DEV. STEP	MP	GRAPHIC_MEM C#0		
APPROVAL	BL LEE	REV	REV 1.0	GRAPHIC_MEM C#0	PART NO.	BA41-02092-94A
MODULE CODE		LAST EDIT			May 23, 2012 08:40:30 AM	PAGE 26 OF 51

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LVDS LOGIC

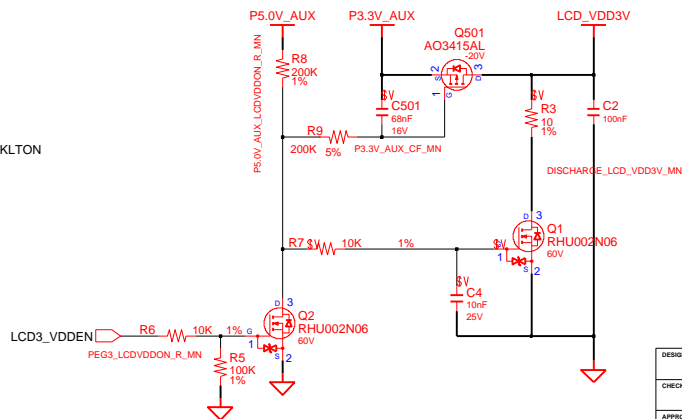
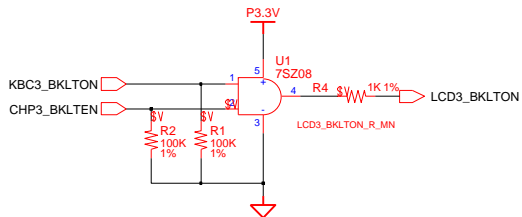
1Ch. LCD Connector + CAMERA



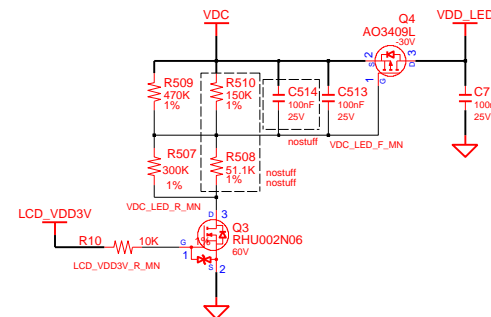
LCD Power

EBL Purpose

Backlight On



LED Power

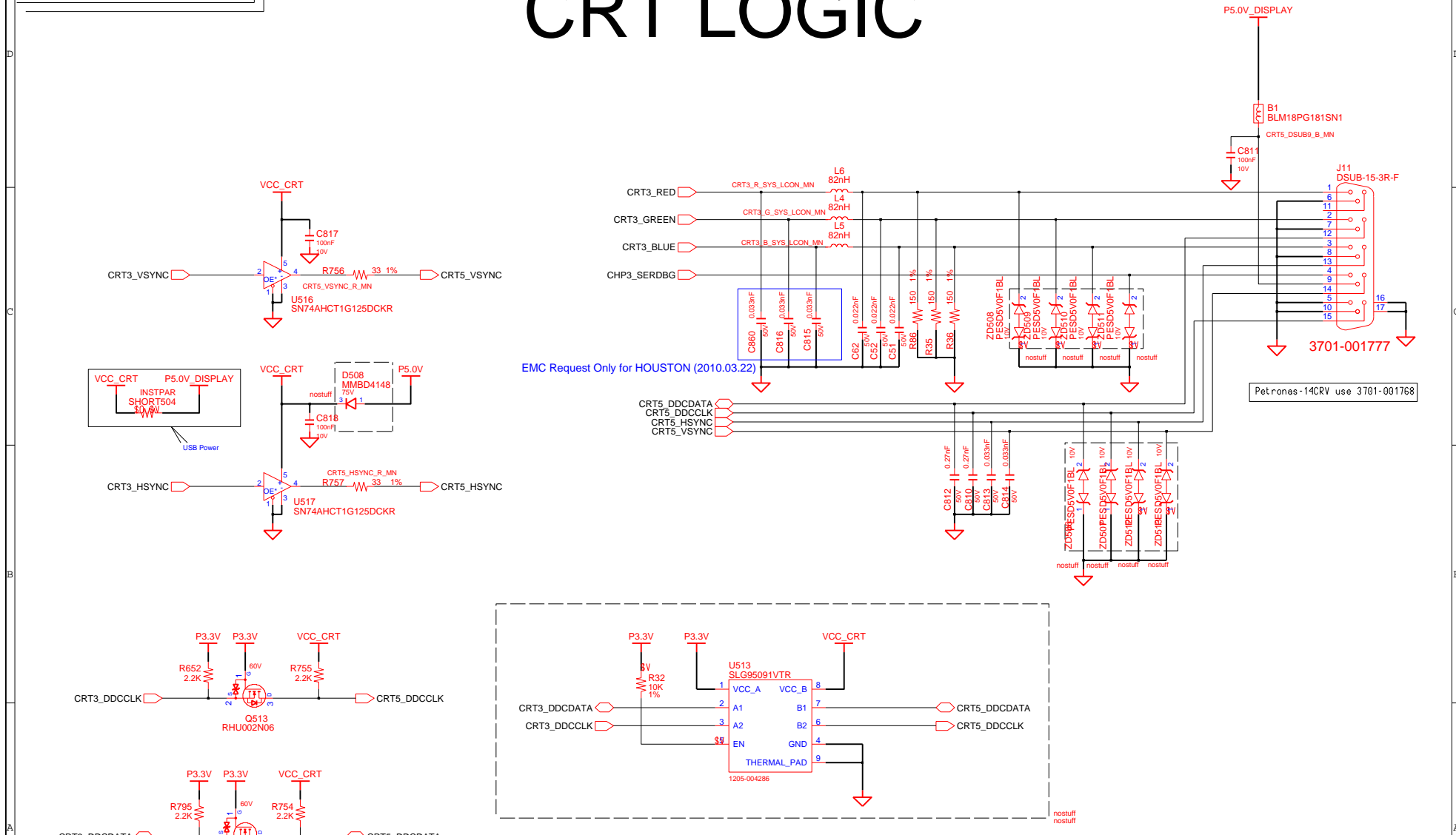


DESIGN	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R	SAMSUNG ELECTRONICS
CHECK	XF CHU	DEV. STEP	MP	GRAPHICS_IF	PART NO.	
APPROVAL	BL LEE	REV	REV 1.0	LVDS	BA41-02092-94A	
MODULE CODE		LAST EDIT			May 23, 2012 08:40:30 AM	PAGE 27 OF 51

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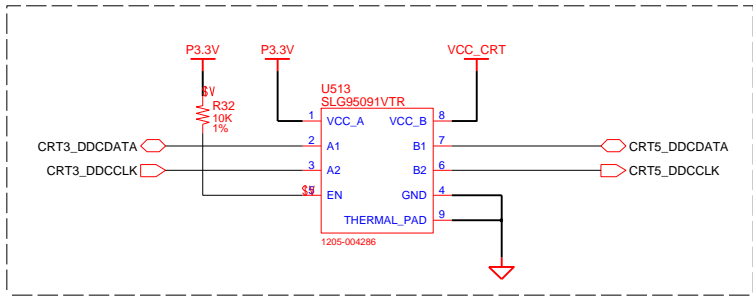
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CRT LOGIC



EMC Request Only for HOUSTON (2010.03.22)

Petronas-14CRV use 3701-001768



DESIGN	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R
CHECK	XF CHU	DEV. STEP	MP		GRAPHICS_IF
APPROVAL	BL LEE	REV	REV 1.0		CRT
MODULE CODE		LAST EDIT			
				May 23, 2012 08:40:30 AM	PAGE 28 OF 51

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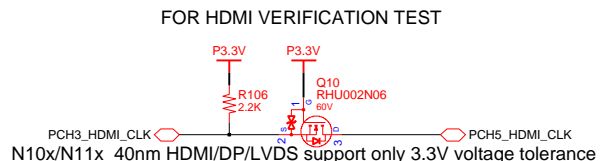
HDMI Graphic

After checking, Houston need to use CMC for each signal.

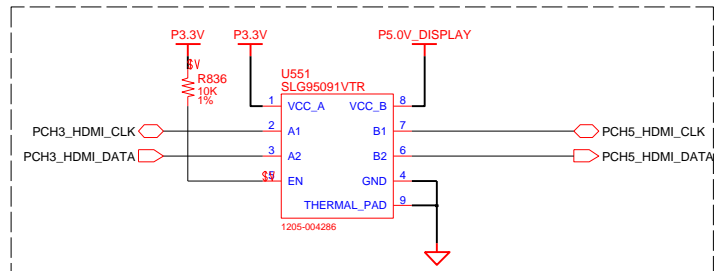
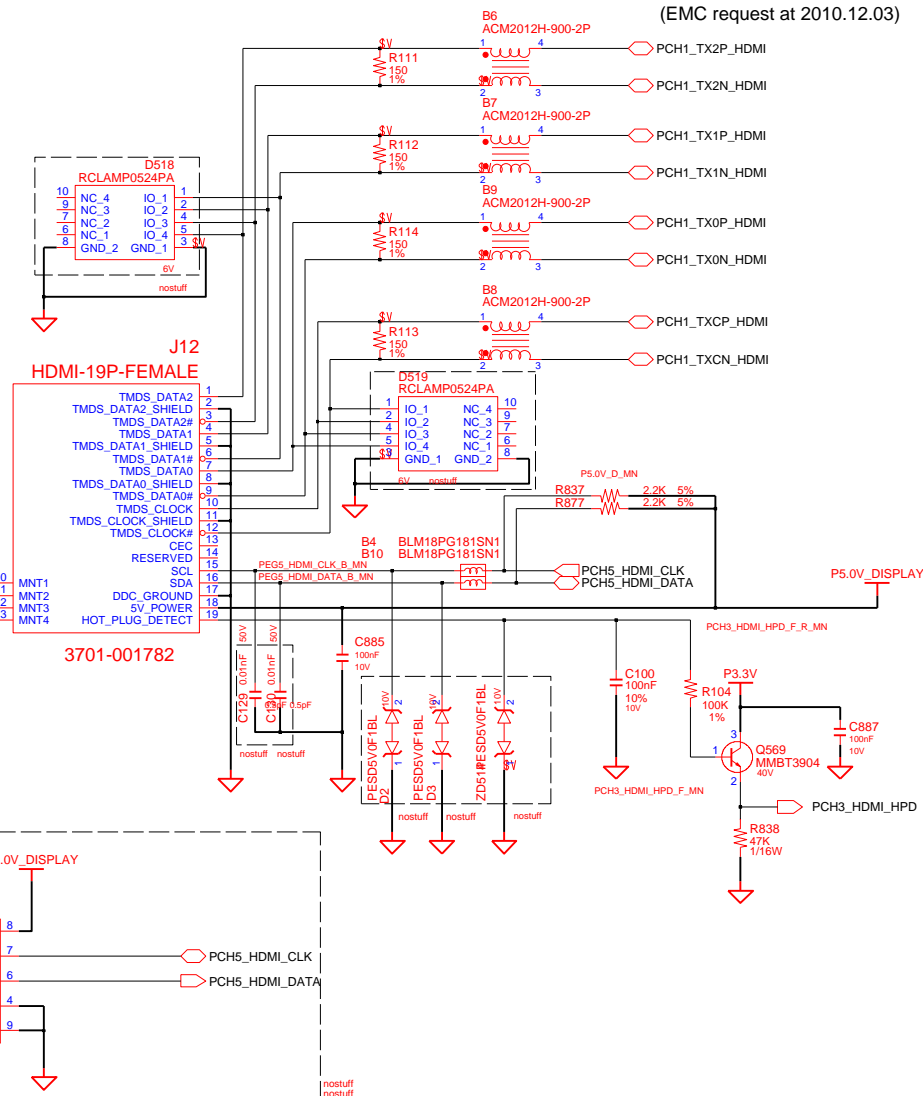
(EMC request at 2010.04.15)

After checking, Veyron_R don't need to use CMC for each signal.

(EMC request at 2010.12.03)



Petrones-14CRV use 3701-001785



DESIGN	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R	SAMSUNG ELECTRONICS
CHECK	XF CHU	DEV.STEP	MP	GRAPHICS_IF	PART NO.	
APPROVAL	BL LEE	REV	REV 1.0	HDMI	BA41-02092-94A	
MODULE CODE		LAST EDIT		May 23, 2012 08:40:30 AM	PAGE	29 OF 51

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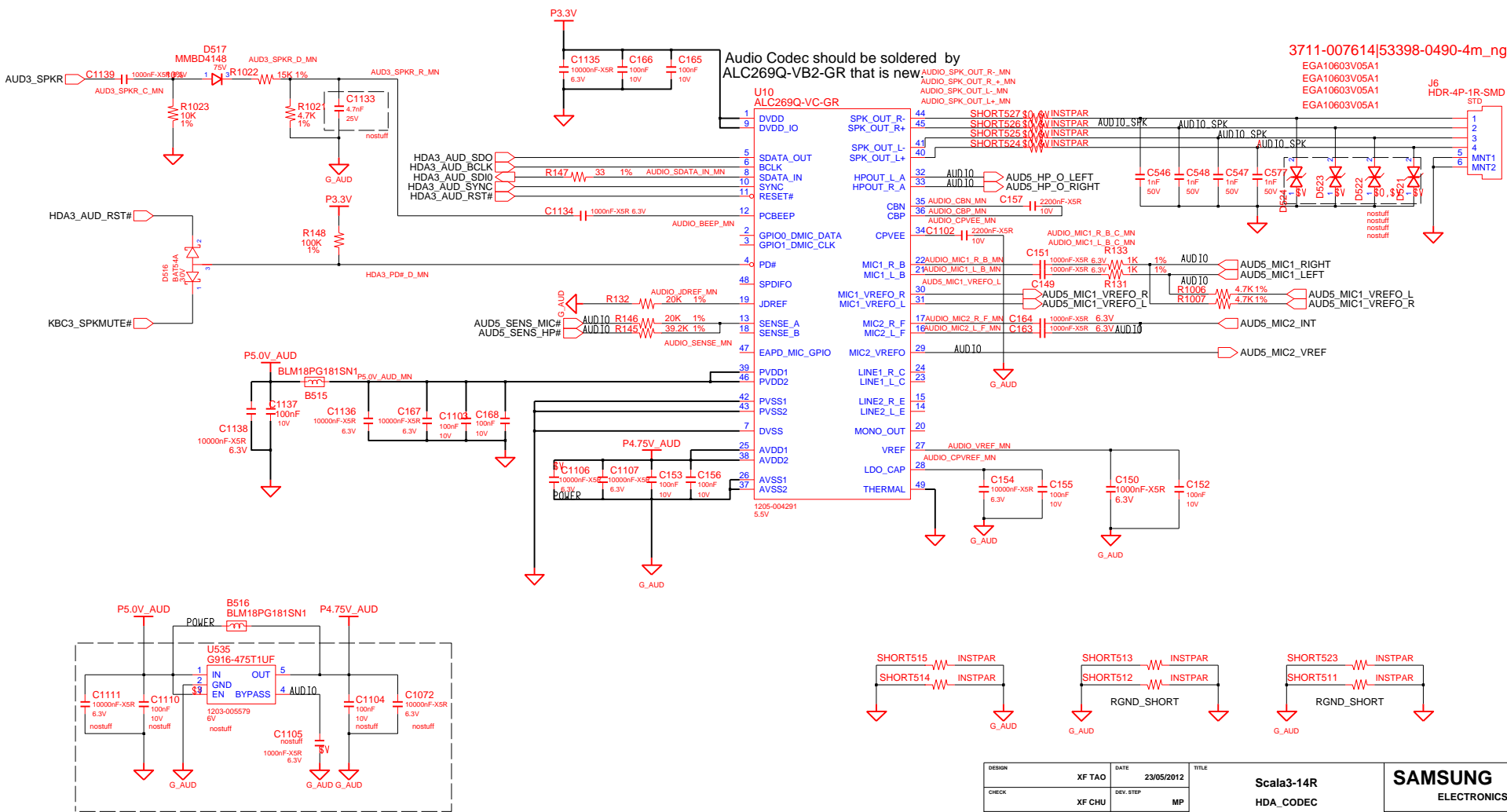
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HD AUDIO

Codec Pin9 Setting	
S/B with Low Voltage IO	S/B without Low Voltage IO
Pin9 : 1.5V	Pin9 : 3.3V

Audio Codec should be soldered by ALC269Q-VB2-GR that is new.

3711-007614|53398-0490-4m_ng



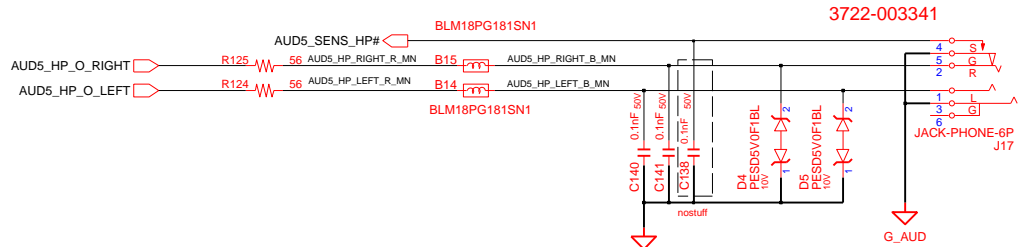
DESIGN	DATE	TITLE	Scala3-14R HDA_CODEC AUDIO CODEC ALC269	SAMSUNG ELECTRONICS
XF TAO	23/05/2012			
CHECK	DEV.STEP	MP		
APPROVAL	REV	REV 1.0		
MODULE CODE	LAST EDIT			

PART NO.	BA41-02092-94A
PAGE	30 OF 51

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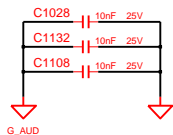
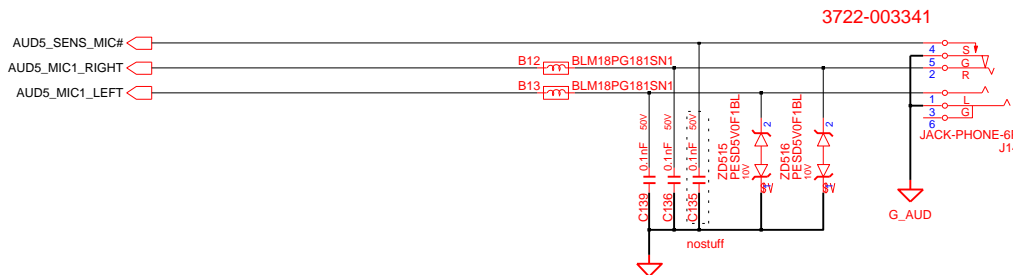
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HEADPHONE

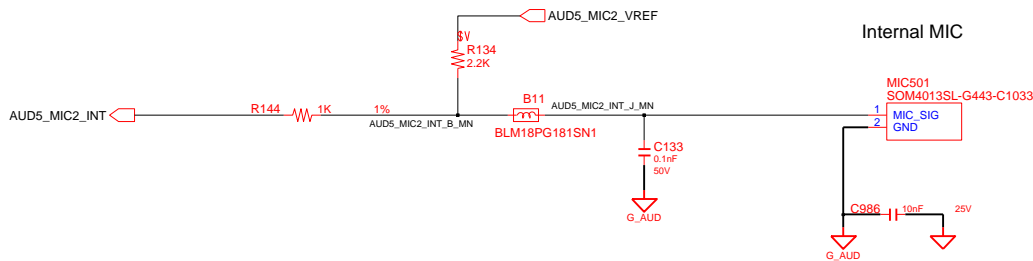


Petrones-14CRV J14 J17 use 3722-003324

MIC JACK



Internal MIC

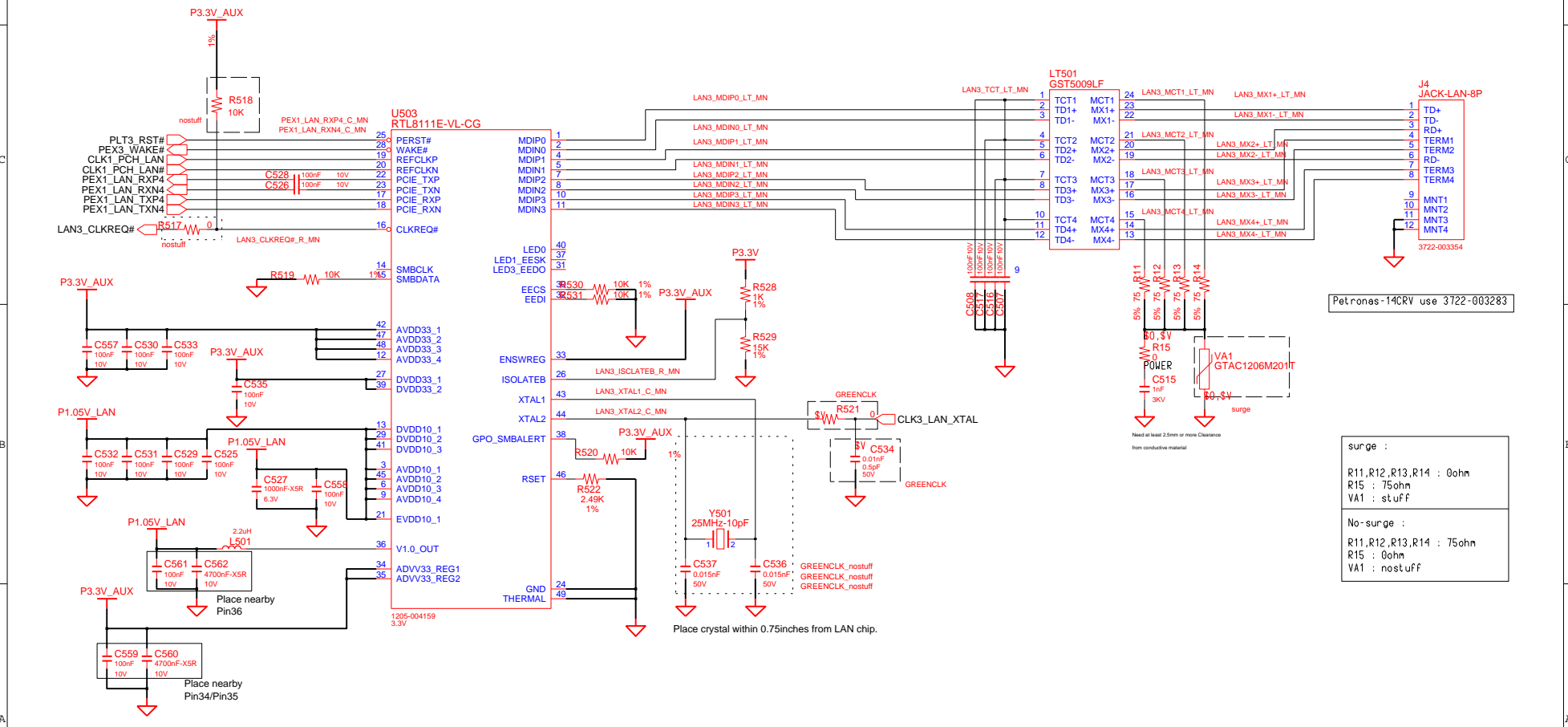


DESIGN	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R	SAMSUNG ELECTRONICS
CHECK	XF CHU	DEV.STEP	MP	HDA_CODEC		
APPROVAL	BL LEE	REV	REV 1.0	AUDIO JACK	PART NO. BA41-02092-94A	
MODULE CODE		LAST EDIT		May 23, 2012 08:40:30 AM	PAGE	31 OF 51

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Reatek RTL8111E



Petronas-14CRV use 3722-003283

surge :
 R11,R12,R13,R14 : 0ohm
 R15 : 75ohm
 VA1 : stuf

No-surge :
 R11,R12,R13,R14 : 75ohm
 R15 : 0ohm
 VA1 : nostuff

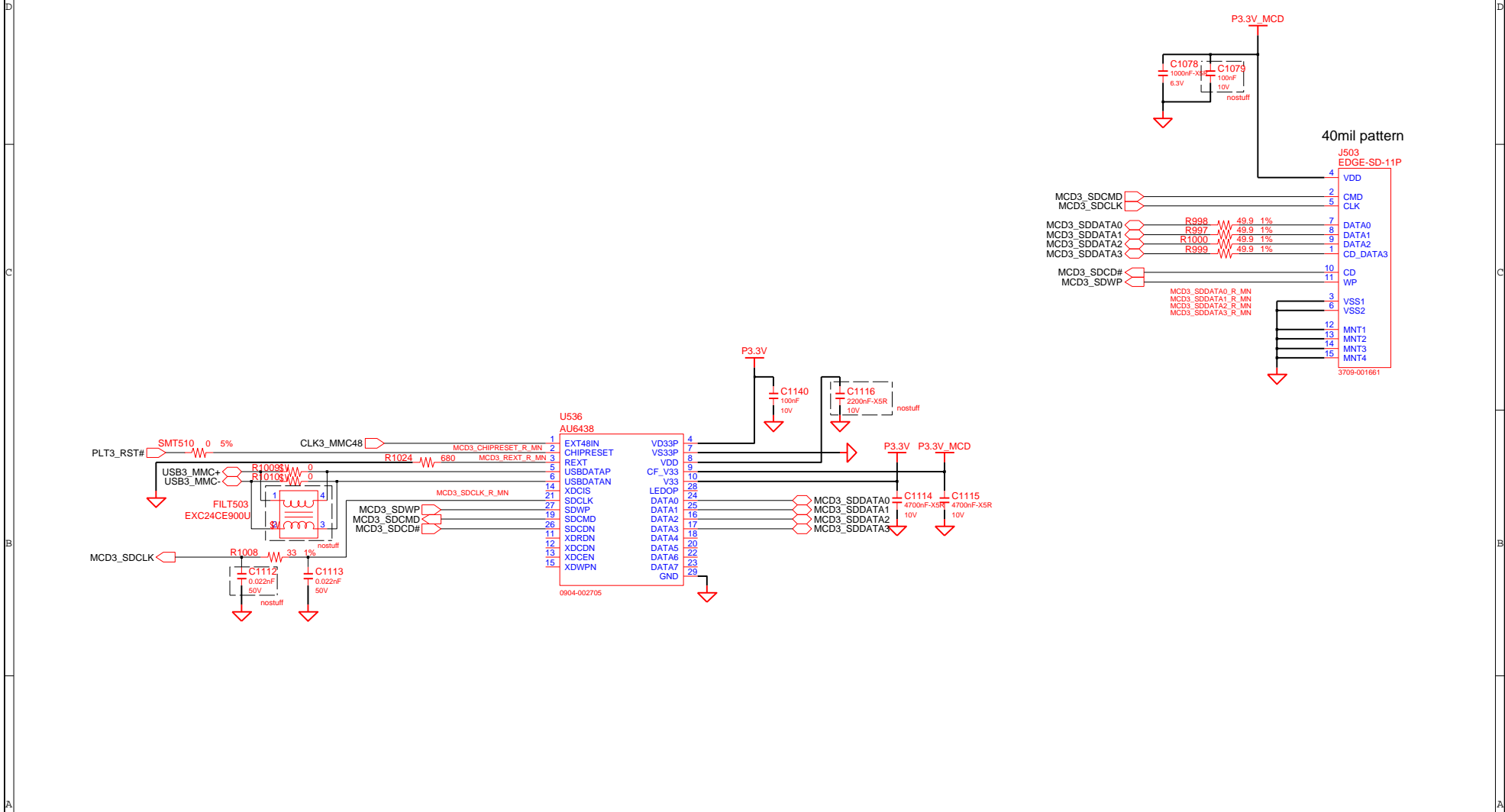
Place crystal within 0.75inches from LAN chip.

DESIGN	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R	SAMSUNG ELECTRONICS
CHECK	XF CHU	DEV. STEP	MP		LAN	
APPROVAL	BL LEE	REV	REV 1.0		LAN_Reatek_RTL8111E	
MODULE CODE		LAST EDIT				PART NO. BA41-02092-94A
May 23, 2012 08:40:30 AM						PAGE 32 OF 51

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4 IN 1 CARD

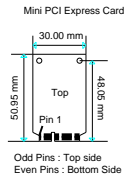
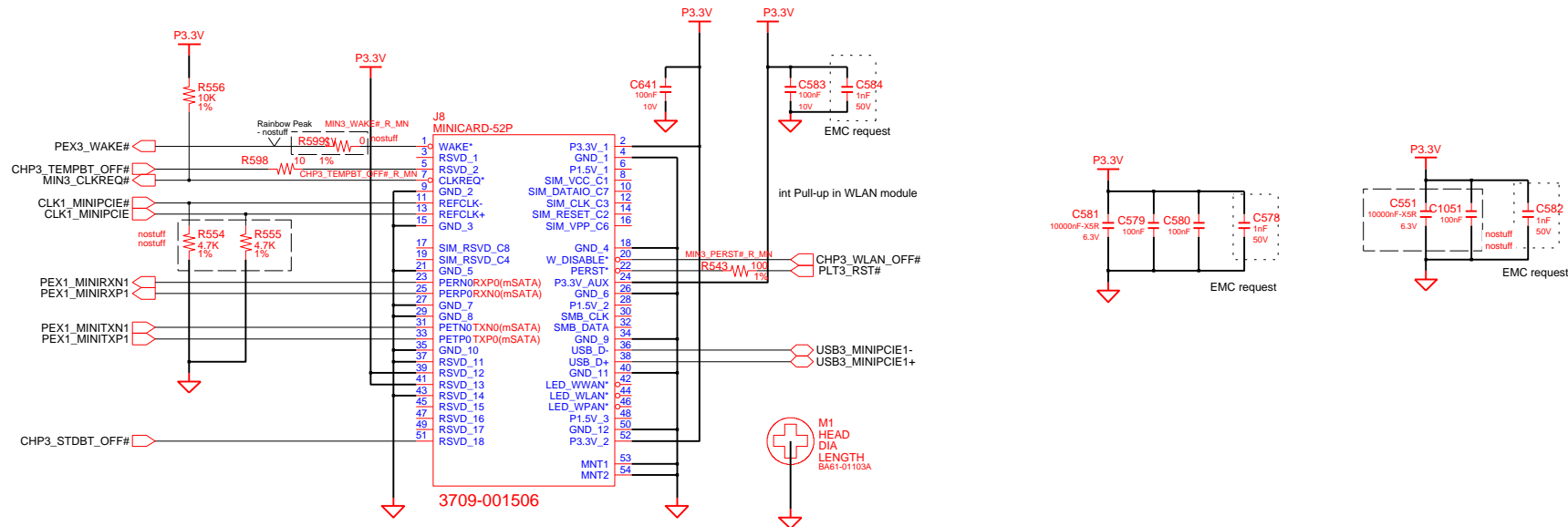


DESIGN	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R	SAMSUNG ELECTRONICS
CHECK	XF CHU	DEV. STEP	MP		MULTICARD	
APPROVAL	BL LEE	REV	REV 1.0		4 IN 1 CARD(AU6438)	
MODULE CODE		LAST EDIT				PART NO. BA41-02092-94A
				May 23, 2012 08:40:30 AM	PAGE	33 OF 51

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WLAN, 7mm

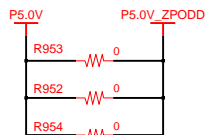
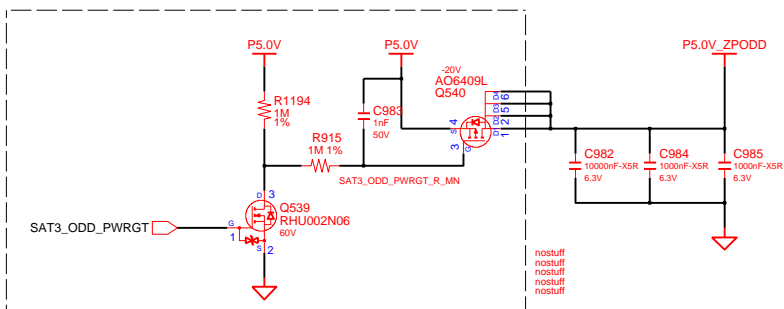


DESIGN	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R	SAMSUNG ELECTRONICS PART NO. BA41-02092-94A
CHECK	XF CHU	DEV. STEP	MP		MINI_PCIE_CONN	
APPROVAL	BL LEE	REV	REV 1.0		WLAN	
MODULE CODE		LAST EDIT		May 23, 2012 08:40:30 AM	PAGE	34 OF 51

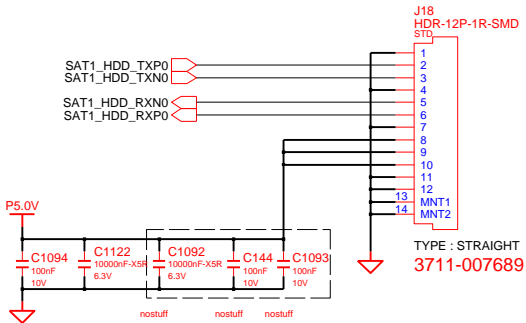
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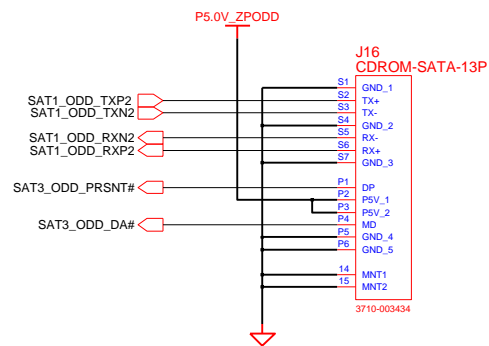
SATA I/F CONN



SATA HDD CONN



SATA ODD CONN 14"



Petrones-14CRV use 3710-002796

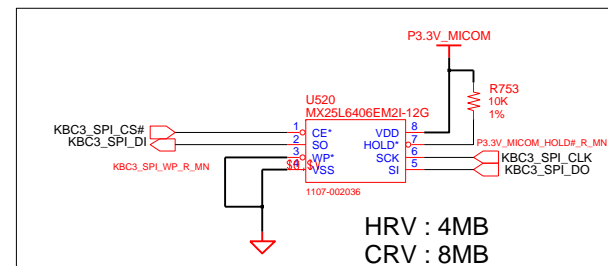
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CHECK	XF CHU	DEV. STEP	MP	SATA_DEVICES	PART NO.	
APPROVAL	BL LEE	REV	REV 1.0	HDD & ODD SUB CONNECTOR	BA41-02092-94A	
MODULE CODE		LAST EDIT		May 23, 2012 08:40:30 AM	PAGE	35 OF 51

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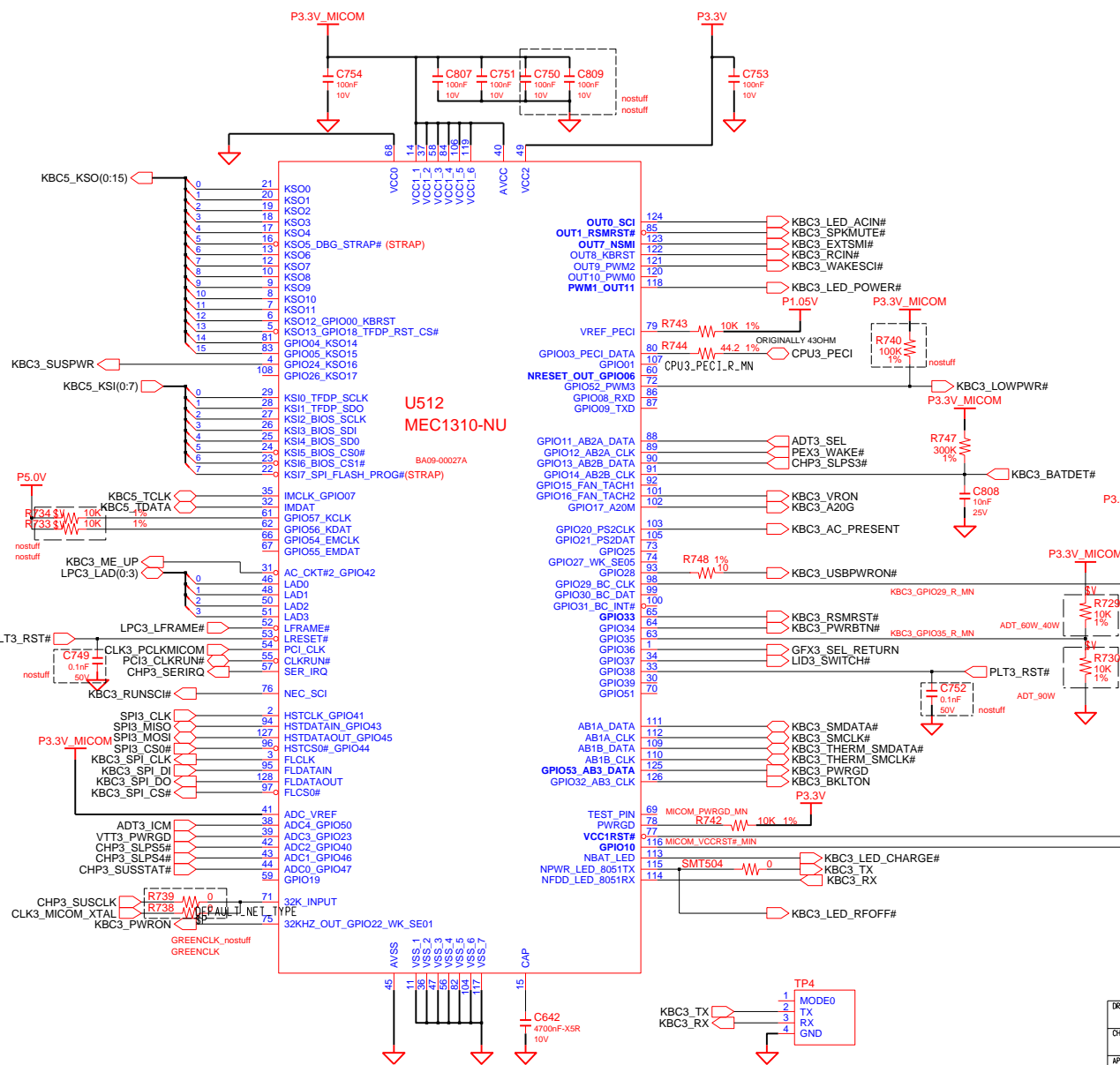
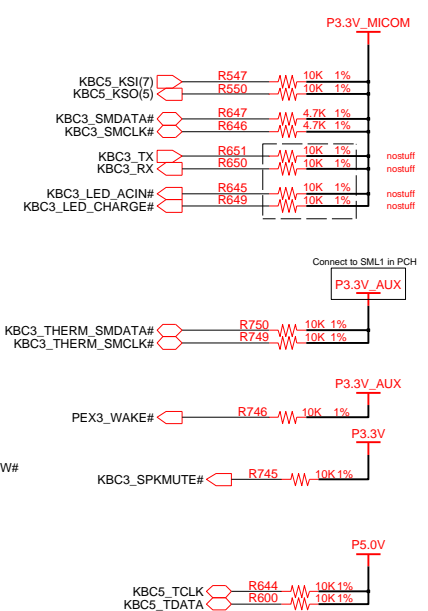
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MAIN BOARD (MICOM)

BE CAUTION SPI ROM SIZE!!



STRAP



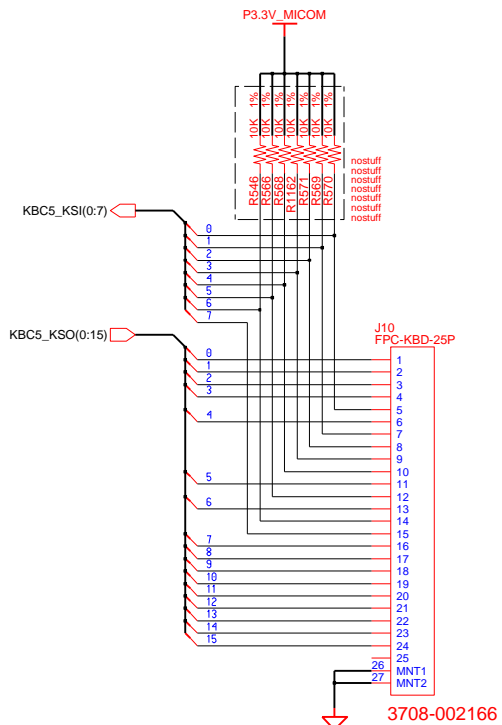
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CHECK	XF CHU	DEV. STEP	MP		MICOM	
APPROVAL	BL LEE	REV	REV 1.0		MICOM_SMSC_MEC1310	PART NO. BA41-02092*94A
MODULE CODE		LAST EDIT		May 23, 2012 08:40:30 AM		PAGE 36 OF 51

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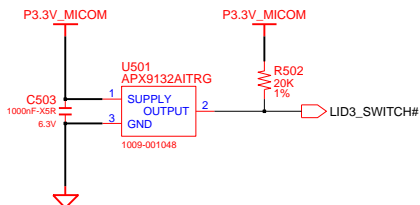
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Micom Glue Logic

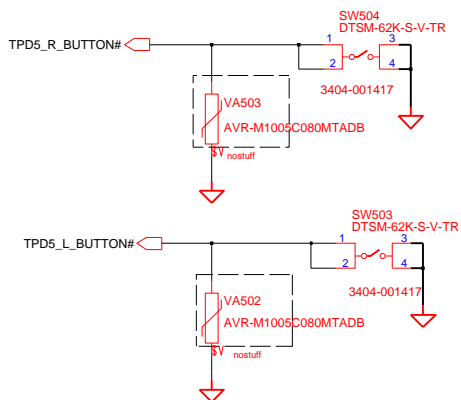
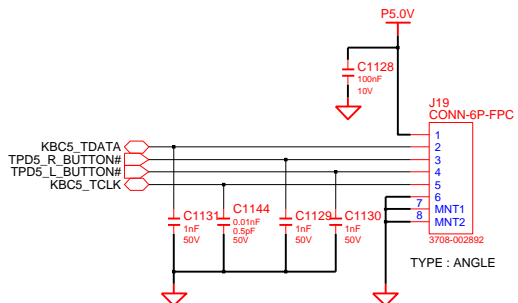
KEYBOARD



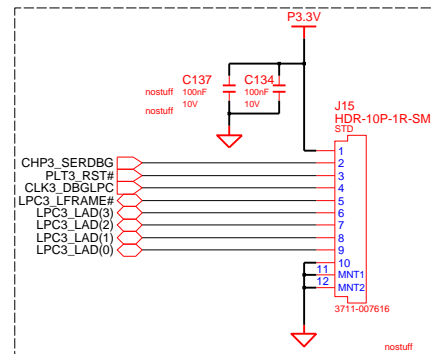
LID_SWITCH



TOUCHPAD



80H PORT DEBUG

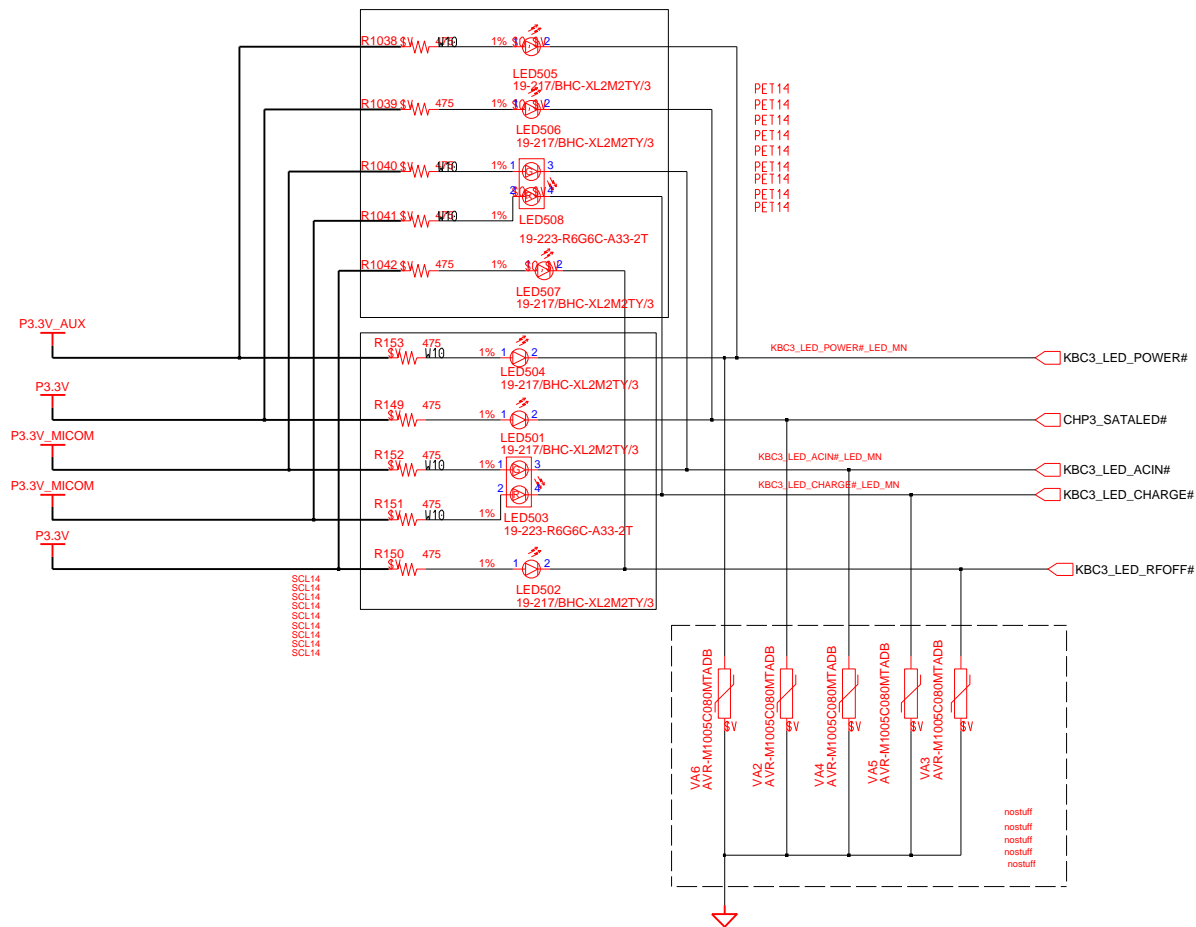


DESIGN	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R	SAMSUNG ELECTRONICS PART NO. BA41-02092-94A
CHECK	XF CHU	DEV. STEP	MP			
APPROVAL	BL LEE	REV	REV 1.0			
MODULE CODE		LAST EDIT				
					May 23, 2012 08:40:30 AM	PAGE 37 OF 51

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LED for 14"

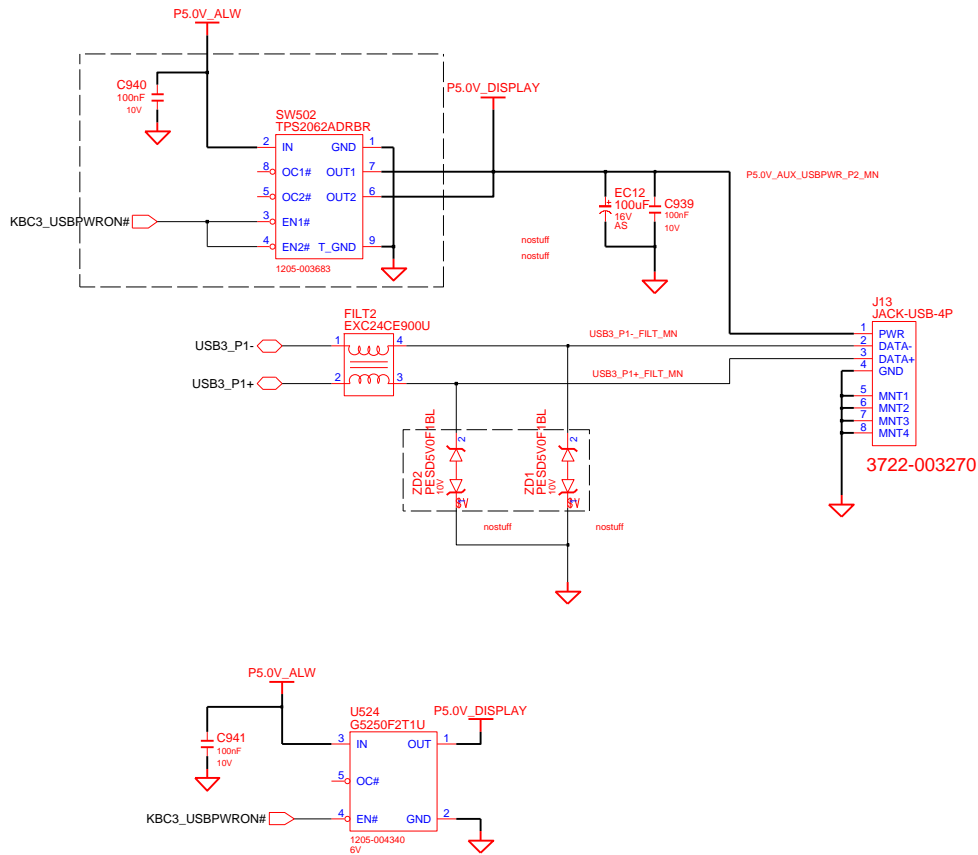


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CHECK	XF CHU	DEV. STEP	MP	LED_SWITCH	LED_SWITCH	
APPROVAL	BL LEE	REV	REV 1.0	LED_SWITCH	PART NO.	BA41-02092-94A
MODULE CODE		LAST EDIT			PAGE	38 OF 51

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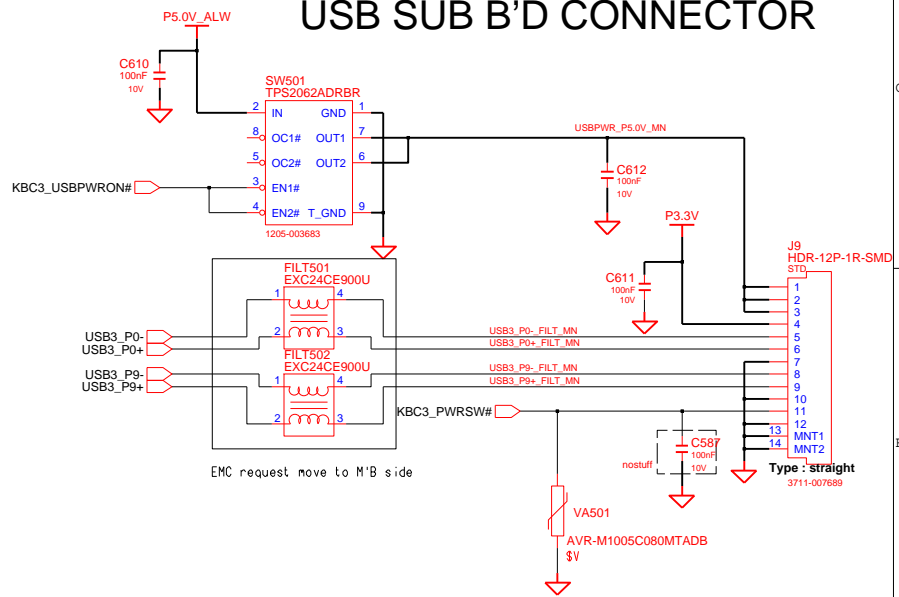
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USB Single connector



MAIN TO SUB USB CONN Right 2USB Port

USB SUB B'D CONNECTOR

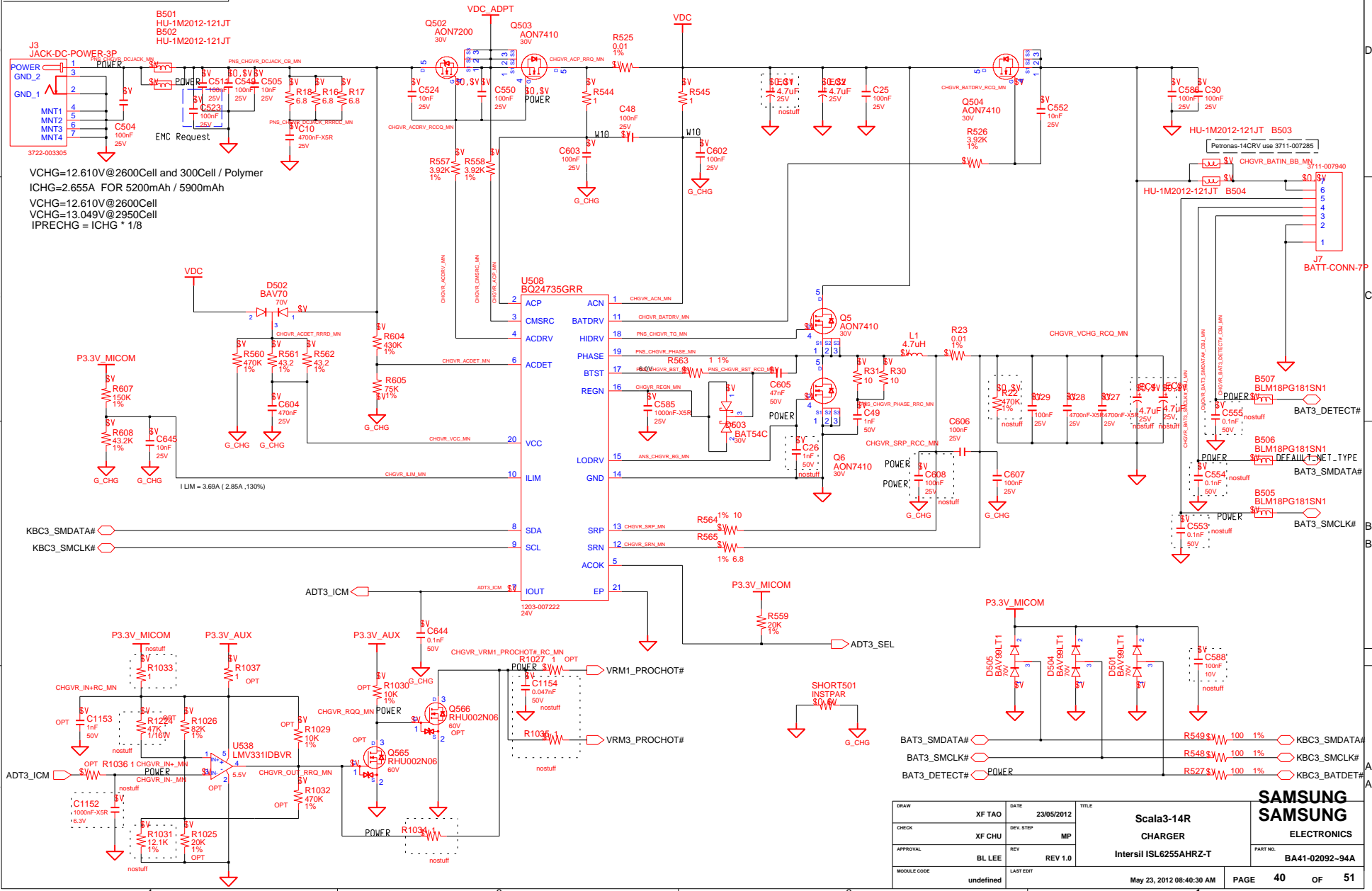


PLACE CLOSE TO USB SUB B'D Conenctor

DESIGN	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R	SAMSUNG ELECTRONICS
CHECK	XF CHU	DEV. STEP	MP	USB_CONN		
APPROVAL	BL LEE	REV	REV 1.0	USB Port	PART NO. BA41-02092-94A	
MODULE CODE		LAST EDIT		May 23, 2012 08:40:30 AM	PAGE	39 OF 51

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CHARGER & POWER MANAGEMENT



VCHG=12.610V@2600Cell and 300Cell / Polymer
 ICHG=2.655A FOR 5200mAh / 5900mAh
 VCHG=12.610V@2600Cell
 VCHG=13.049V@2950Cell
 IPRECHG = ICHG * 1/8

I LIM = 3.69A (2.85A, 130%)

KBC3_SMDATA#
 KBC3_SMCLK#

ADT3_ICM
 ADT3_ICM

P3.3V_MICOM
 P3.3V_AUX

CHGVR_IN+RC_MN
 OPT

ADT3_ICM
 CHGVR_IN+RC_MN

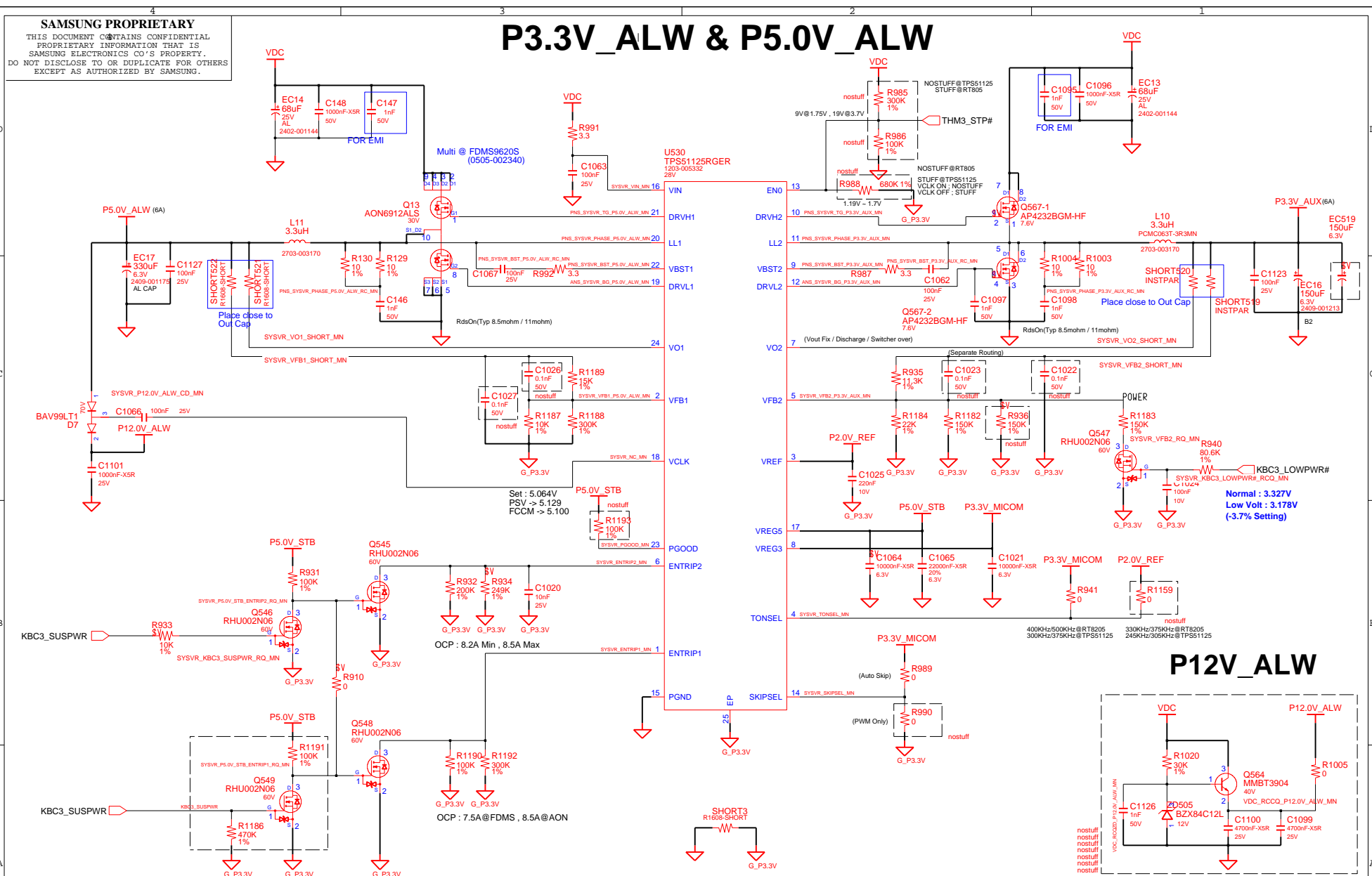
CHGVR_IN+RC_MN
 OPT

CHGVR_IN+RC_MN
 OPT

DRAW	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R	SAMSUNG ELECTRONICS	
CHECK	XF CHU	DEV_STEP	MP		CHARGER		
APPROVAL	BL LEE	REV	REV 1.0		Intersil ISL6255AHR-T	PART NO.	
MODULE CODE	undefined	LAST EDIT				BA41-02092-94A	
May 23, 2012 08:40:30 AM						PAGE	40 OF 51

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P3.3V_ALW & P5.0V_ALW



DESIGN	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R
CHECK	XF CHU	DEV. STEP	MP		P3.3V_AUX / P5.0V_ALW
APPROVAL	BL LEE	REV	REV 1.0		TI TPS51125
MODULE CODE		LAST EDIT			

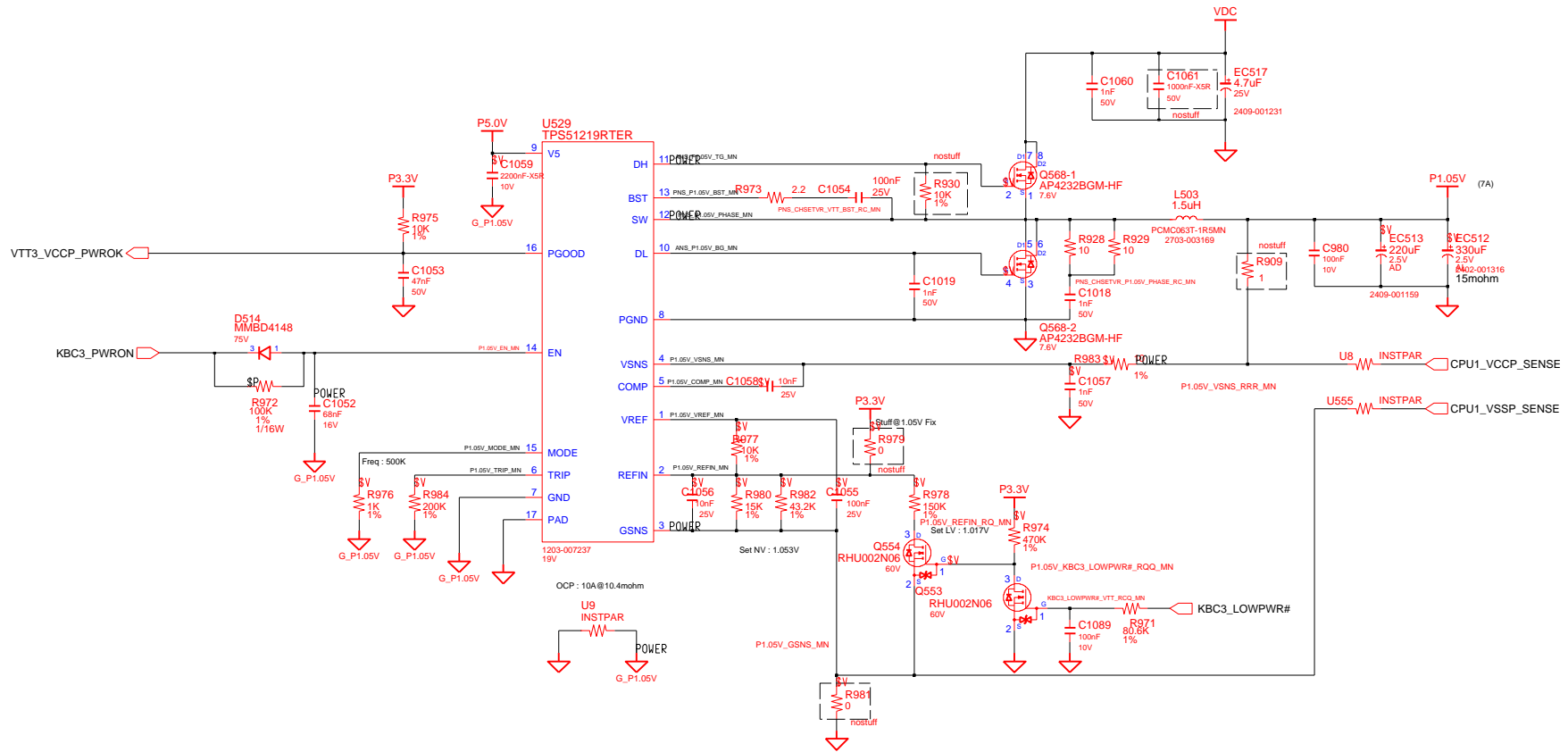
May 23, 2012 08:40:30 AM

SAMSUNG ELECTRONICS	
PART NO.	BA41-02092*94A
PAGE	41 OF 51

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Chipset Power (P1.05V)

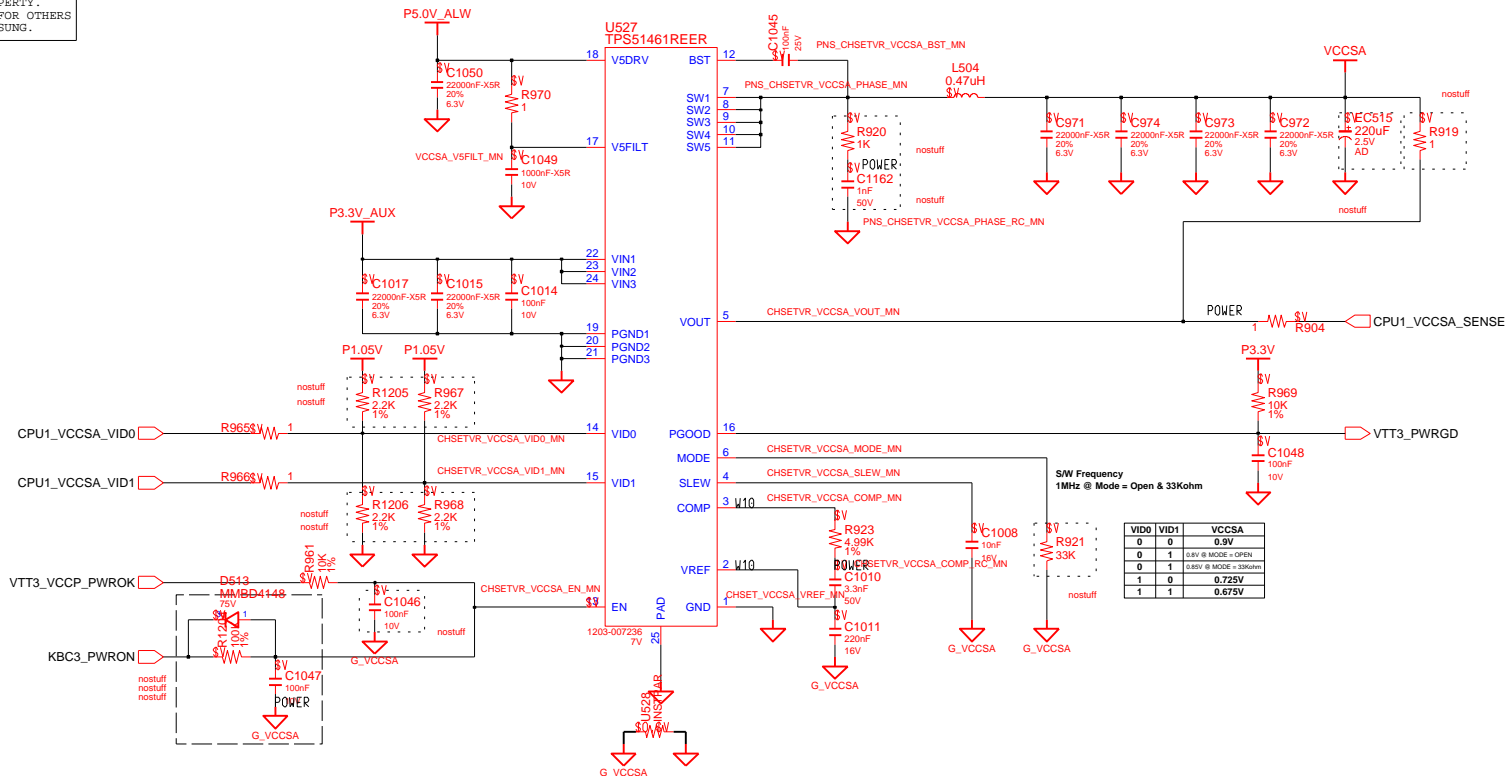


DRAW	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R	SAMSUNG ELECTRONICS PART NO. BA41-02092*94A
CHECK	XF CHU	DEV. STEP	MP		P1.05V	
APPROVAL	BL LEE	REV	REV 1.0		TI TPS51125	
MODULE CODE	undef ined	LAST EDIT	May 23, 2012 08:40:30 AM	PAGE	42	OF 51

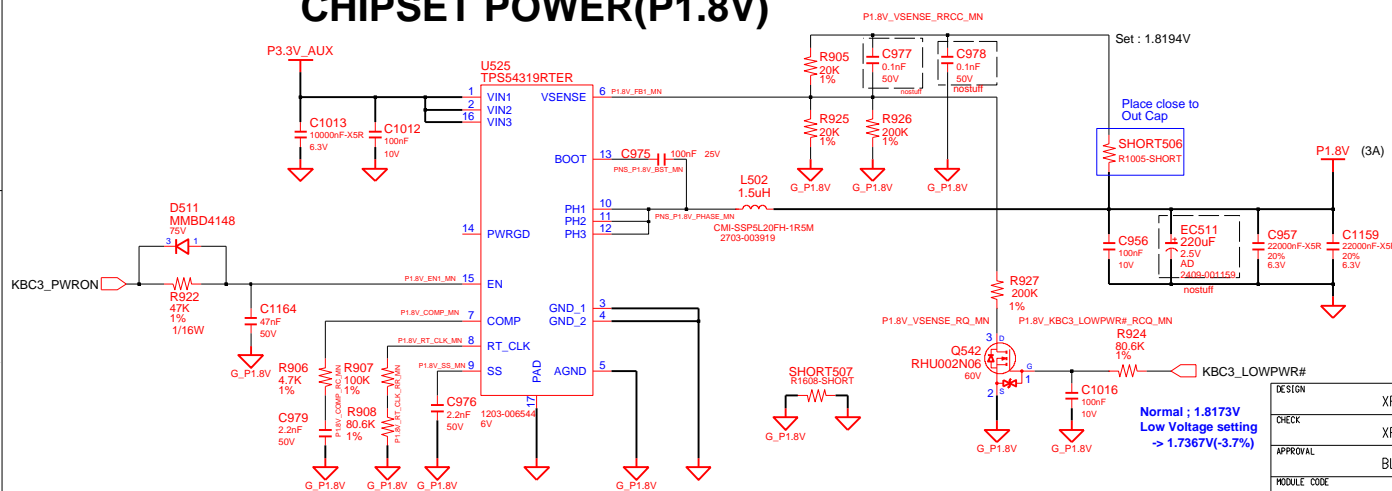
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CHIPSET POWER(VCCSA)



CHIPSET POWER(P1.8V)



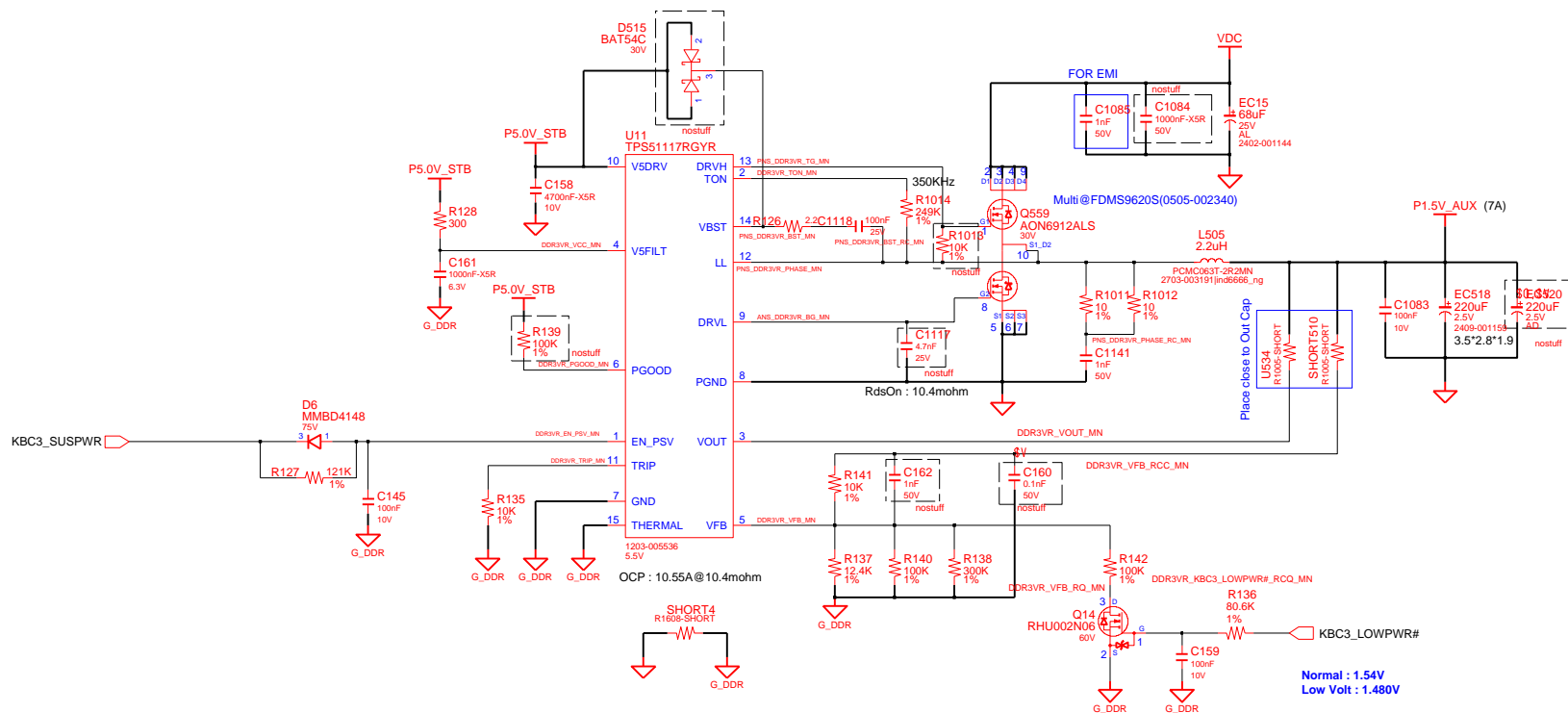
DESIGN	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R
CHECK	XF CHU	DEV. STEP	MP		P1.1V_VTT
APPROVAL	BL LEE	REV	REV 1.0		
MODULE CODE		LAST EDIT			

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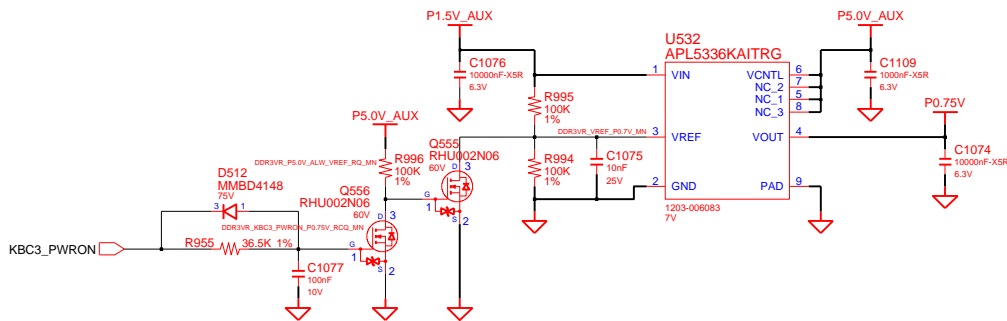
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DDR3 Power

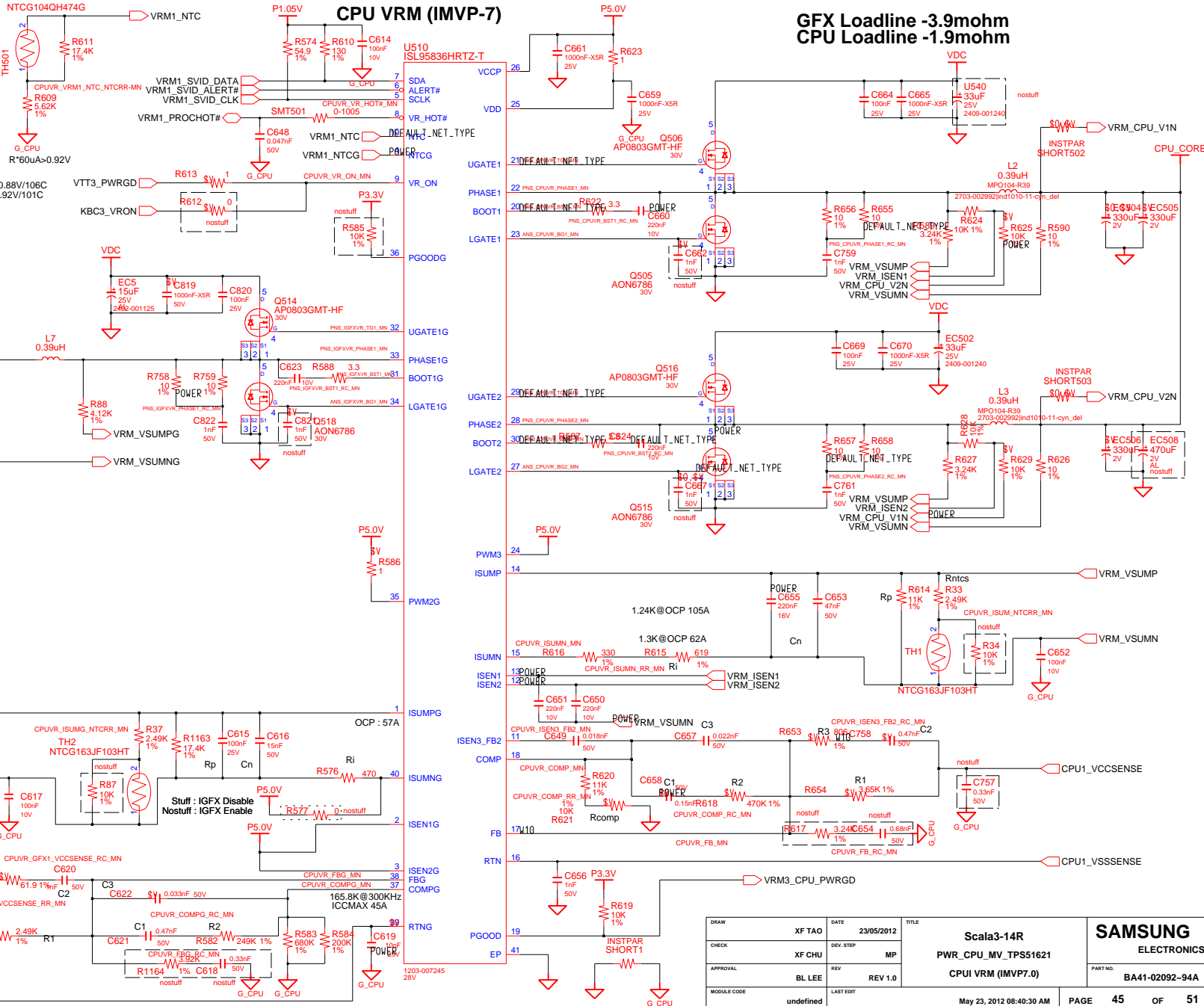


DDR3 VTT(0.75V)



DRAW	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R	SAMSUNG ELECTRONICS
CHECK	XF CHU	DEV.STEP	MP		PWR_MEMORY	
APPROVAL	BL LEE	REV	REV 1.0		DDR3 POWER	PART NO. BA41-02092-94A
MODULE CODE	undefined	LAST EDIT	May 23, 2012 08:40:30 AM	PAGE	44	OF 51

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DRAW	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R
CHECK	XF CHU	DEV. STEP	MP		PWR_CPU_MV_TPS51621
APPROVAL	BL LEE	REV	REV 1.0		CPU VRM (IMVP7.0)
MODULE CODE	undefined	LAST EDIT			May 23, 2012 08:40:30 AM

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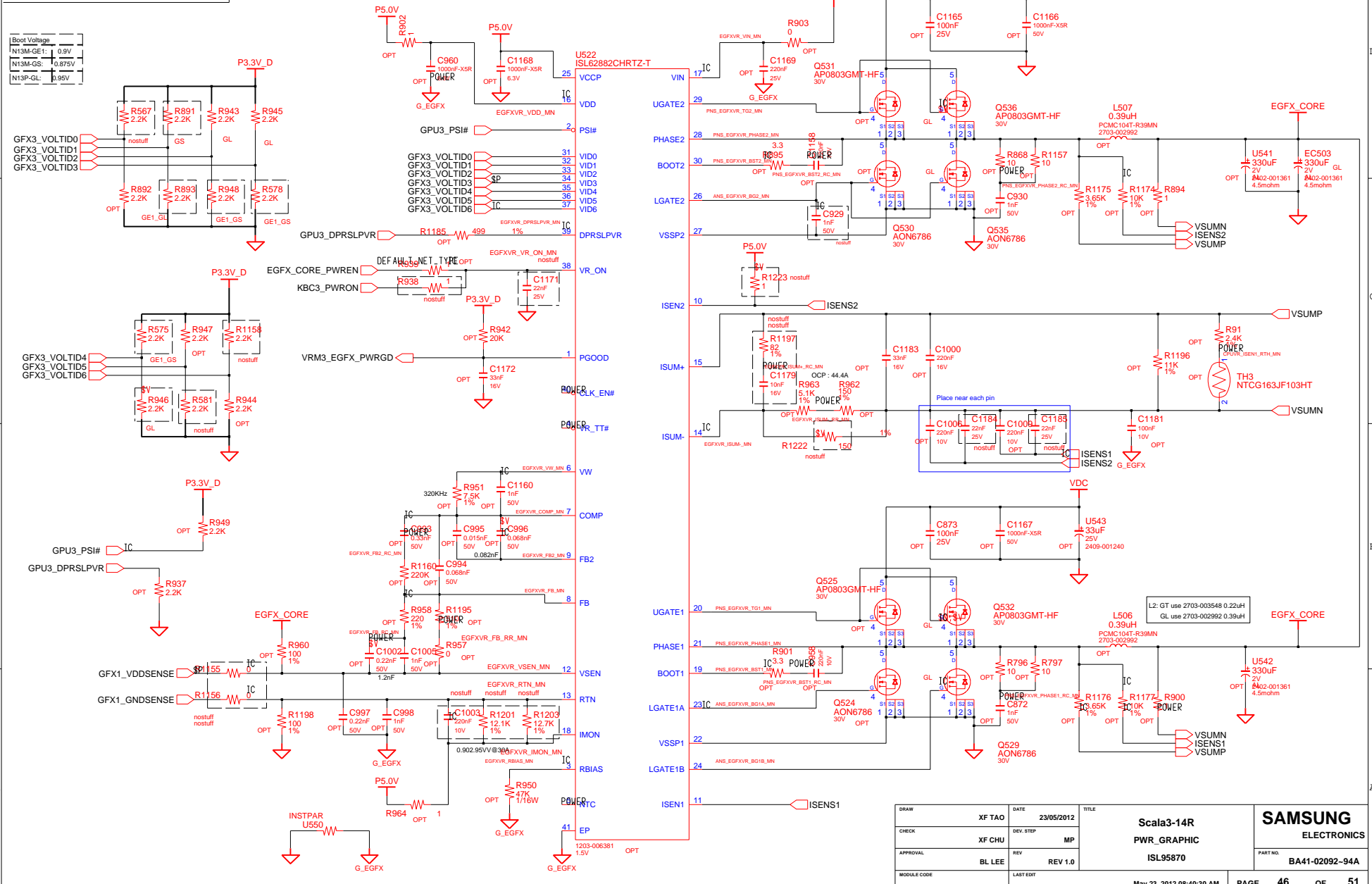
PART NO: BA41-02092-94A

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External Graphic Core Power

Slot Voltage	
N13M-GE1	1.09V
N13M-GS	0.875V
N13P-GL	0.95V



DRAW	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R
CHECK	XF CHU	DEV. STEP	MP		PWR_GRAPHIC
APPROVAL	BL LEE	REV	REV 1.0		ISL95870
MODULE CODE		LAST EDIT			
May 23, 2012 08:40:30 AM					
				PAGE	46 OF 51

SAMSUNG ELECTRONICS
PART NO. BA41-02092-94A

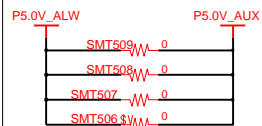
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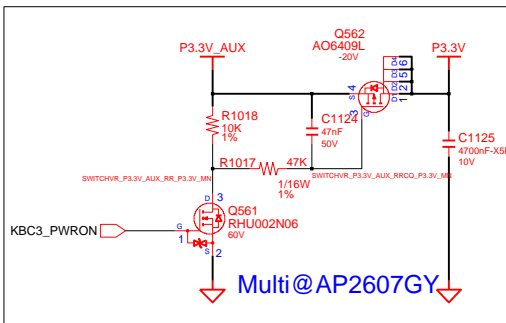
Switched Power 1

(P5.0V -> P3.3V -> EGFX_CORE -> P1.8V ->P1.5V -> P0.75V -> P1.05V -> P0.85V_SA -> CPU_CORE)

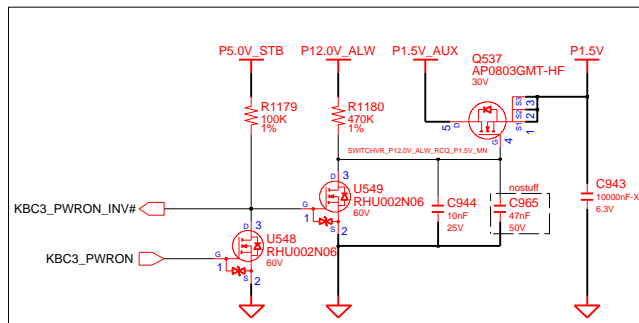
P5.0V_AUX



Switched Power On (P3.3V)

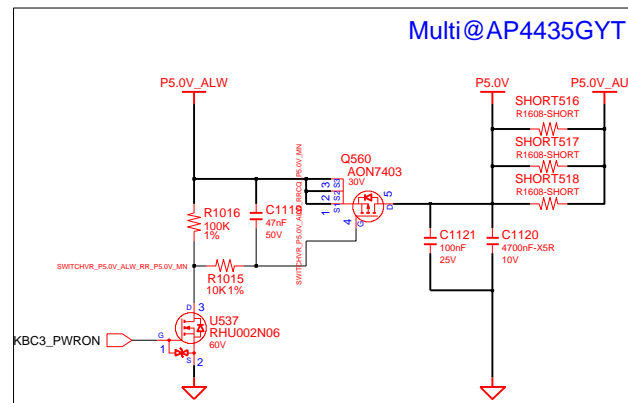


Switched Power On (P1.5V)



For nVIDIA GFX PWR Sequence
NVDD(EGFX_CORE) first and then FBVDDQ(gDDR3)

Switched Power On (P5.0V)



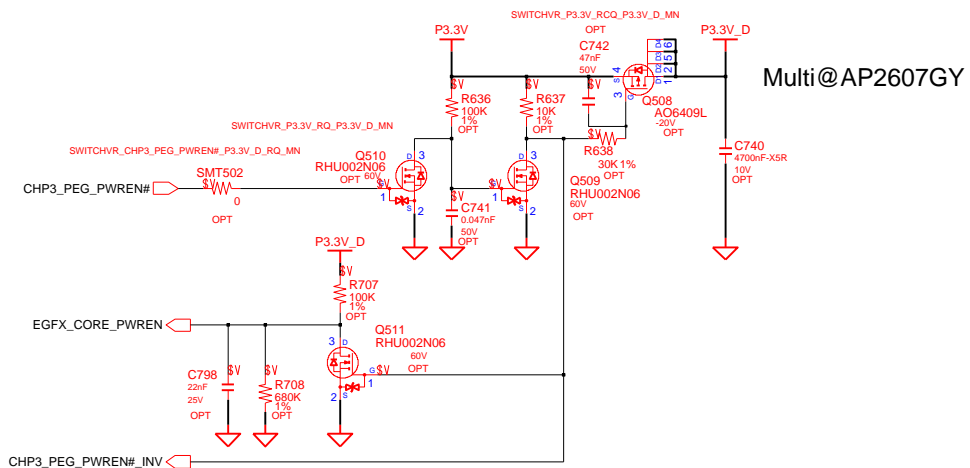
DRAW	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R	SAMSUNG ELECTRONICS PART NO. BA41-02092-94A
CHECK	XF CHU	DEV. STEP	MP		Switched PWR 2	
APPROVAL	BL LEE	REV	REV 1.0		Switched Power	
MODULE CODE	undefined	LAST EDIT	May 23, 2012 08:40:30 AM	PAGE	47 OF 51	

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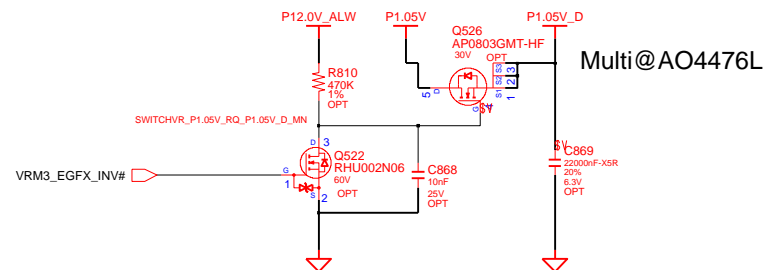
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Switched Power 2 (For nVidia GFX Power Sequence)

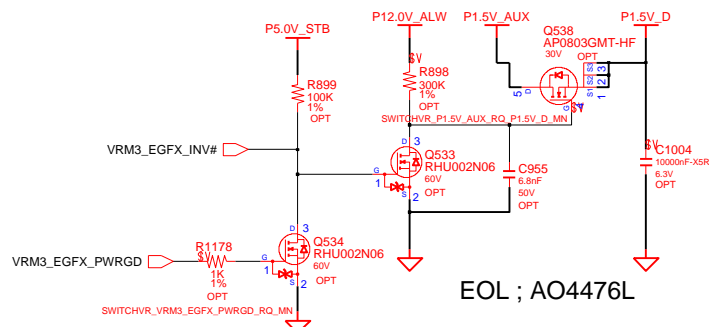
Discrete Switched Power (D3.3V : Max_1.2A)



Discrete Switched Power (D1.05V : Max 3.6A)



Discrete Switched Power (D1.5V : Max 5.0A)

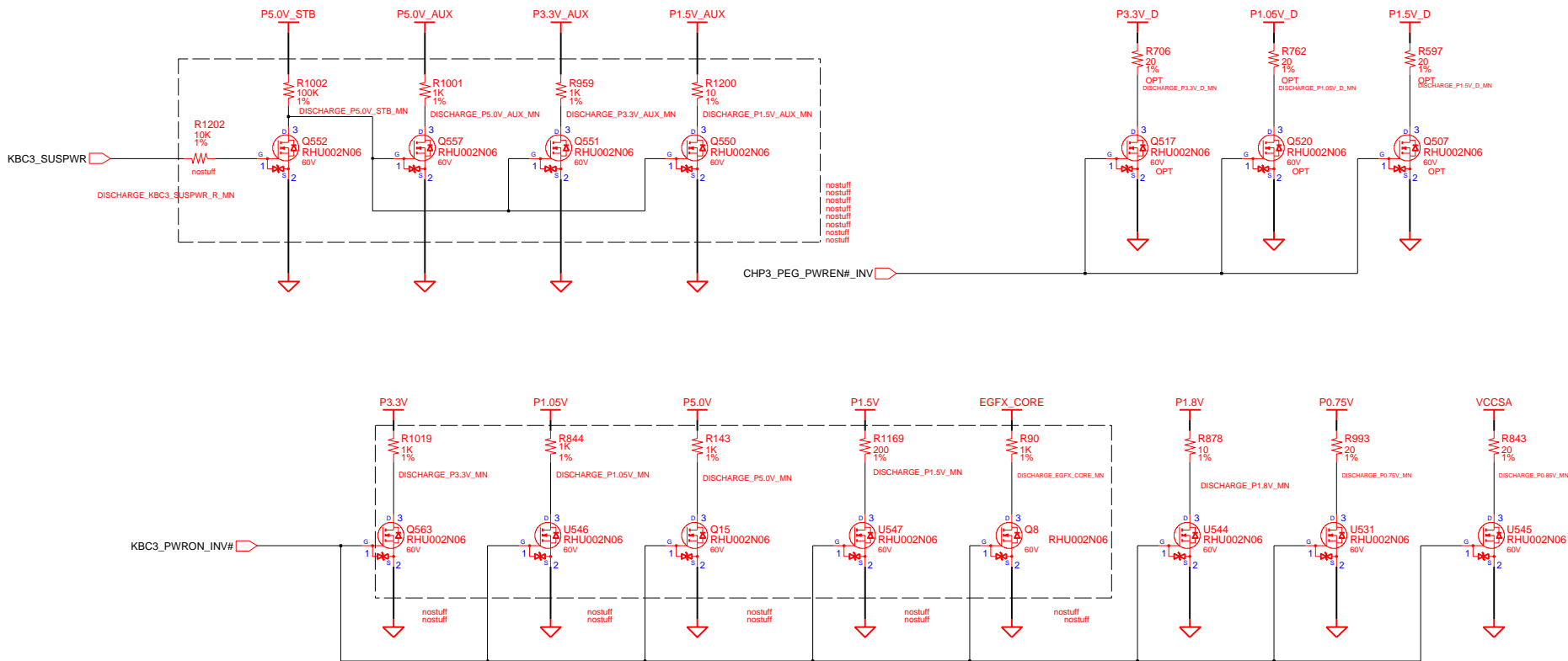


DRAW	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R	SAMSUNG ELECTRONICS
CHECK	XF CHU	DEV. STEP	MP	Switched PWR	PART NO.	
APPROVAL	BL LEE	REV	REV 1.0	FOR OPTIMUS PWR	BA41-02092-94A	
MODULE CODE		LAST EDIT		May 23, 2012 08:40:30 AM	PAGE	48 OF 51

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POWER DISCHARGER

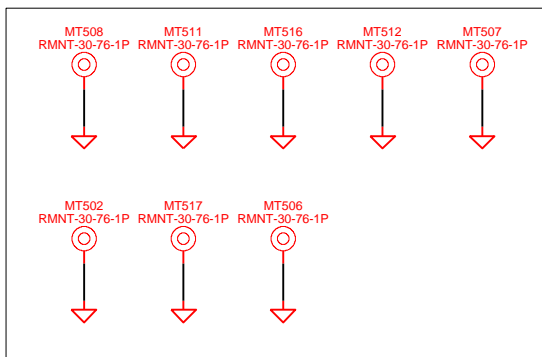


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CHECK	XF CHU	DEV. STEP	MP	DISCHARGER LOGIC		
APPROVAL	BL LEE	REV	REV 1.0	DISCHARGING LOGIC		PART NO. BA41-02092-94A
MODULE CODE		LAST EDIT	May 23, 2012 08:40:30 AM	PAGE	49	OF 51

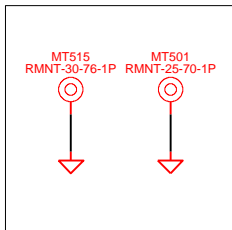
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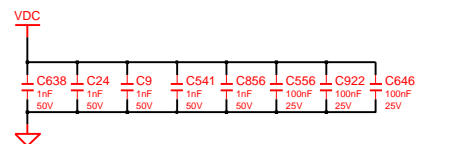
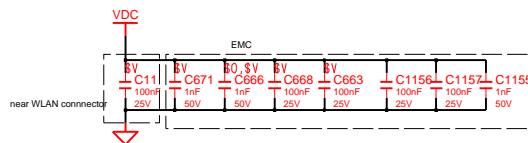
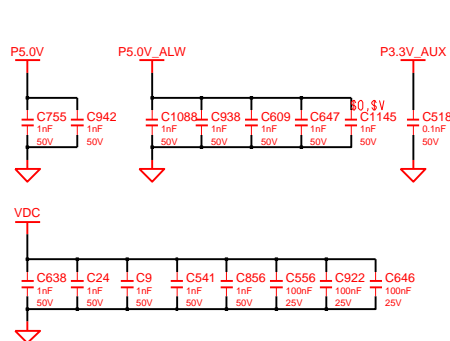
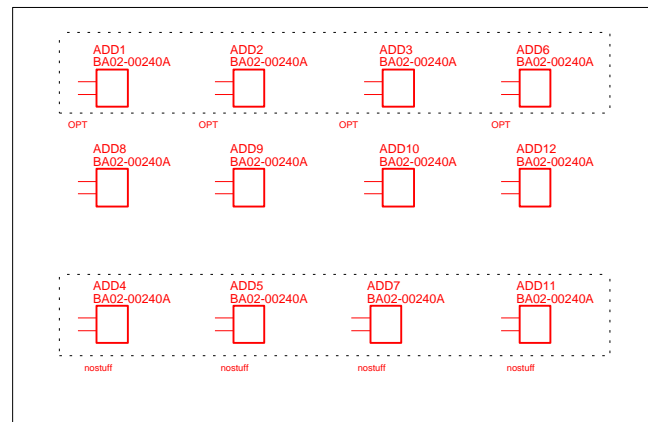
Mainboard Mount ((30-76)X8EA)



PCB FIX



Corner Fill for GPU, PCH



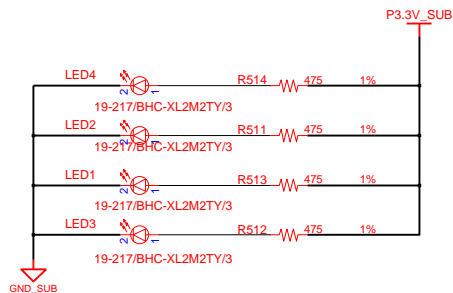
EMC request

DESIGN	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R	SAMSUNG ELECTRONICS
CHECK	XF CHU	DEV. STEP	MP		MT Hole	
APPROVAL	BL LEE	REV	REV 1.0		MT Hole	PART NO. BA41-02092-94A
MODULE CODE		LAST EDIT		May 23, 2012 08:40:30 AM	PAGE	50 OF 51

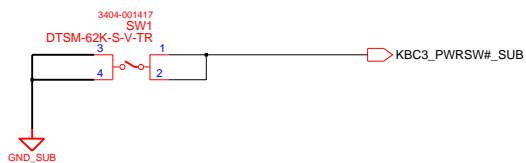
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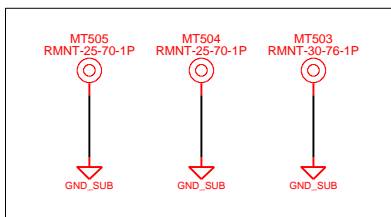
USB SUB BOARD



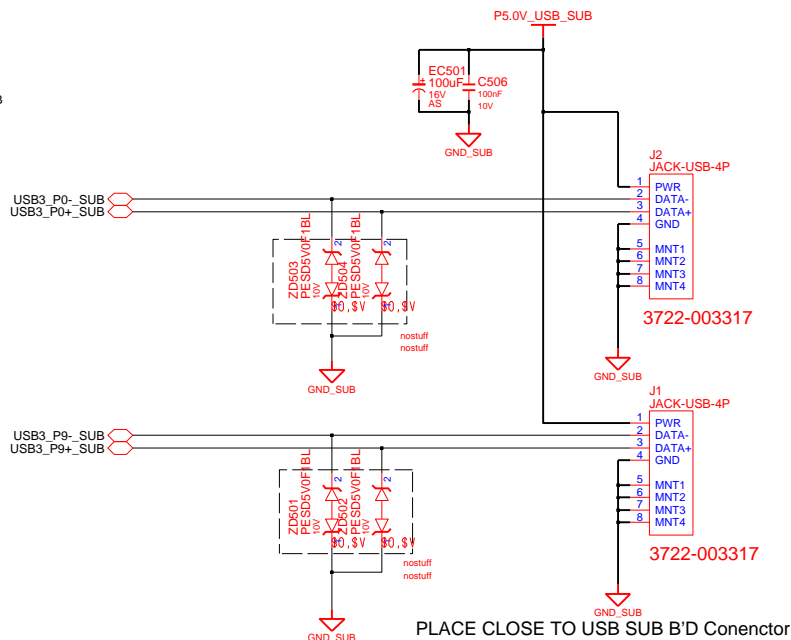
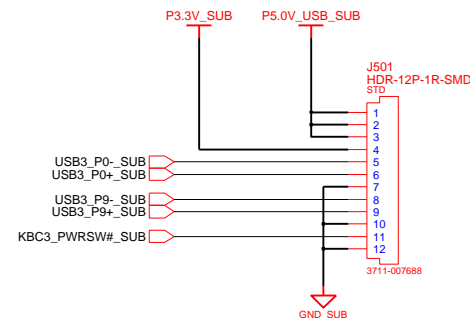
Power Switch Button



PCB Mount



SUB TO MAIN



DESIGN	XF TAO	DATE	23/05/2012	TITLE	Scala3-14R	SAMSUNG ELECTRONICS
CHECK	XF CHU	DEV. STEP	MP	SUB BOARD		
APPROVAL	BL LEE	REV	REV 1.0	SUB BOARD		PART NO. BA41-02092-94A
MODULE CODE		LAST EDIT		May 23, 2012 08:40:30 AM	PAGE	51 OF 51

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