



R522

BONN

SERVICE Manual

R522

Contents



1. High performance notebook computer
 - High performance computer with Intel Core 2 Duo Processor and DDR II Memory
 - Improvement of wireless capacity, such as Wireless LAN (option), Bluetooth (option)
2. Convenient functions
 - For Internal Camera (Option), convenient usage of filming and taking pictures
 - Convenient connection with TV as HDMI port is provided
3. consideration of practical usage
 - Prudent design with consideration of practical usage
 - Flat touch pad is practical and is designed elegantly

If there are the contents not included in this book, please refer to K-zone service manual

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1. Precautions

1-1. General After-Sales Service Precautions

1. Do not let customers repair the product themselves.
▶ There is a danger of injury and the product life time may be shortened.
2. Make sure to disconnect the power cord from the wall outlet before repairing the product (especially for after-sales service of electric parts).
▶ There is a danger of electric shock.
3. Do not let customers plug several electric home appliances into a single wall outlet at the same time
▶ There is a danger of fire due to overheating.
4. Check if the power plug or wall outlet are damaged in any way.
▶ If a defect is found, repair or replace it immediately. (There is a danger of electric shock or fire)
5. Make sure that it is properly grounded. (Check the ground of the wall outlet)
▶ Electricity leakage may cause electric shock.
6. Do not spray water on to the product to clean it.
▶ There is a danger of electric shock or fire and it may shorten the lifetime of the product.
7. Check the assembly status of the product after the after-sales service.
▶ The assembly status of the product must be the same as before the after-sales service.
8. Unplug the power cord holding the power plug (and not the cord).
▶ If the cord is disconnected, it may cause electric shock or fire.
9. Repair the product using only authorized parts.
10. Keep the product away from heating devices such as heaters.
▶ Exposure to heaters may cause deformation of the product or fire.

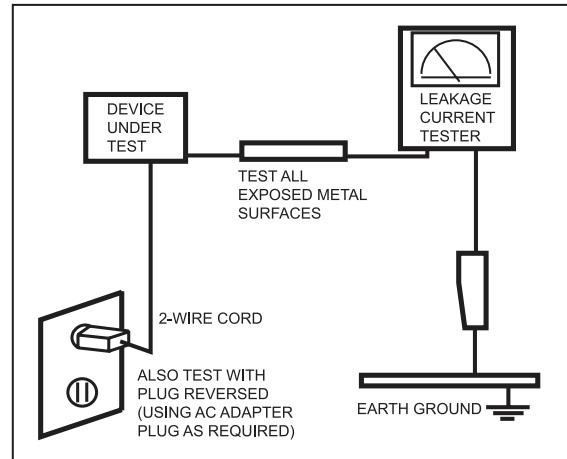


Figure 1-1 Leakage Current Test Circuit

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1. Precautions

1-2. Safety Precautions

(1) EMI

This device has been registered regarding EMI for residential use. It can be used in all areas.

(2) Circuit Test (Logic Test) Precautions

The LSI and MSI used in this product are semiconductor integrated circuits based on MOS-FET or CMOS. Since these types of devices are highly susceptible to static electricity or current leakage, an isolation break may be caused. Therefore read and follow the instructions below.

- 1) When handling an LSI or MSI, make sure your body is grounded through a few mega-ohms of resistance. In addition, wear gloves and a jacket made of cotton and not of synthetic fibers that easily generate static electricity.
- 2) When repairing the product, place a conductive material (e.g. antistatic mat) grounded to the earth on the worktable.
- 3) You must use a soldering iron without a leakage current.
- 4) Do not touch the pin of an IC and carefully insert the IC into the black plastic package.
- 5) When inserting an IC into a PCB, be careful with the direction of the IC. When installing an IC in the wrong direction, it might become damaged.
- 6) When carrying an IC, package the IC with conducting material such as antistatic mat or conducting sponge so as to keep the voltage level of each of the terminals the same.
- 7) Since the storage temperature of an IC is between -20 ~ +70 degrees, keep it at room temperature, if possible.
- 8) Since the storage temperature of an IC is between -20 ~ +70 degrees, keep it at room temperature, if possible.
- 9) When soldering an IC, solder it in as short a time as possible so that unnecessary heat is not applied to the device.
- 10) Avoid leaving excessive amounts of flux within a custom IC or between the pins when soldering a custom IC.
- 11) Take care to not damage the board when installing or separating an Option Board.
- 12) Take care to not break the printed circuit pattern on the PCB when separate an IC.

1-3. Ground

The product must be grounded to protect it from static electricity and other dangers. When using a multitap, please use a multitap with a ground terminal only.

If you use a 220V wall outlet with a ground terminal, you do not need to ground it additionally. Avoid using wall outlets if they are not grounded even if they have a ground terminal.

To ground the product, connect the ground to an exclusive ground terminal or metal water pipe. Connect the ground cable to the ground terminal at the rear of the main body. To ground the product, connect the ground terminal of the product to a metal water pipe, wall outlet or exclusive ground terminal with an electric wire equal to or thicker than #18.

Never ground the product to a PVC water pipe, phone line, TV, radio antenna, aluminum window or gas pipe, because this does not actually ground the product and may be dangerous.

1-4. Static Electricity Precautions

Many parts of the system are susceptible to static electricity. Using an electrostatic discharge (ESD) device is very important for the safety of the user and the user's surroundings. Using an ESD device increases the probability of a successful repair and lowers the expenses for damaged parts.

To prevent static electricity, follow the instructions below.

- 1) Perform the repair in a location without static electricity.
- 2) Touch your hands to a metal water pipe or some metal object connected to the ground to discharge any static electricity from your body before handling the parts.
- 3) Touch only the edges of the board, if possible.
- 4) Do not touch any parts unless absolutely necessary
- 5) Disassemble the parts on the anti-static-electricity pad.
- 6) When a board is not installed in the system, package the board with an anti-static-electricity packaging.

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2. Introduction and Spec

2-1. Product features

High performance notebook computer

- High performance computer with Intel Core 2 Duo Processor and DDR II Memory (option)
- Improvement of wireless capacity such as Wireless LAN (option), Bluetooth (option)



Improvement for multimedia performance

- For Internal Camera (Option), convenient usage of filming and taking pictures
- Convenient connection with TV as HDMI port is provided



Prudent design with consideration of practical usage

- Prudent design with consideration of practical usage
- Flat touch pad is practical and is designed elegantly



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2-2. Specification

ITEM	Description
Processor	Intel® Core™2 Duo Processor T9550 (2.66 GHz, 1066 MHz, 6 MB, 35 W) Intel® Core™2 Duo Processor P8600 (2.4 GHz, 1066 MHz, 3 MB, 25 W) Intel® Core™2 Duo Processor P8700 (2.53 GHz, 1066 MHz, 3 MB, 25 W) Intel® Core™2 Duo Processor P7450 (2.13 GHz, 1066 MHz, 3 MB, 25 W) Intel® Core™2 Duo Processor P4200 (2.00 GHz, 800 MHz, 1 MB, 35 W) Intel® Core™2 Duo Processor P7350 (2.00 GHz, 1066 MHz, 3 MB, 25 W, Tj) Intel® Core™2 Duo Processor T6400 (2.00 GHz, 800 MHz, 2 MB, 35 W, Tj) Intel® Core™2 Duo Processor T6600 (2.20 GHz, 800 MHz, 2 MB, 35 W, Tj) Intel® Pentium (R) Dual core T3400 (2.16GHz, 667MHz, 1 MB)
Chipset (MCH + ICH)	Intel PM45 + ICH9M Intel GM45 + ICH9M
Memory	
Memory capacity	Min. 1 GB ~ Max. 4 GB
Memory type	PC2-5300 (667 MHz), PC2-6400 (800MHz) DDR2 SODIMM
Memory modules	1 GB SODIMM 2 GB SODIMM
Sockets	2-slot SODIMMs
Display	
LCD 1	13.4" 16:9 HD LCD
Vendor	Samsung LCD
Resolution	1,366 x 768 pixel
Colors	262,144 colors
Viewing angle	Left 40° / Right 40° / Up 15° / Down 40°
Dot pitch	0.217 x 0.217 mm (Horizontal x Vertical)
Contrast ratio	Typical 300 CR
Brightness	Typical 200 cd/m ²
Response time	Typical 16 ms
Polarizer	Non Glare
Weigh	Max. 340 g
LCD 2	13.4" 16:9 HD LCD
Vendor	Samsung LCD
Resolution	1,366 x 768 pixel
Colors	262,144 colors
Viewing angle	Left 40° / Right 40° / Up 15° / Down 40°
Dot pitch	0.217 x 0.217 mm (Horizontal x Vertical)
Contrast ratio	Typical 300 CR
Brightness	Typical 200 cd/m ²
Response time	Typical 16 ms
Polarizer	non Gloss
Weight	Max. 340 g
Graphics	
Graphics	NVIDIA GeForce G 105M
Graphic chipset	NVIDIA N10M-GE
Video memory	256 MB GDDR3

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ITEM	Description
GPU TDP	14W
Max. resolution for VGA	2,048 x 1,536
Max. resolution for HDMI	1080p
Max. resolution for S-VHS	None
Graphics (Internal)	Intel® GM45 Express chipset
Graphic chipset	Intel® GM45 Express Chipset
Video memory	Intel® DVMT 5.0 (Max 384 MB)
GPU TDP	12W
Max. resolution for VGA	2,048 x 1,536
Max. resolution for HDMI	1080p
Max. resolution for S-VHS	None
Audio	
Sound	
Codec	Intel® HD (High Definition) audio codec
Chipset	REALTEK ALC272-GR
Conversion	4 Channel High definition audio codec 16/20/24 bit ADC & DAC
Sound effect	SRS
Internal interfaces	Embedded stereo speakers & integrated mono microphone
Speaker power rating	2 speakers x 1.5W with enclosure
External interfaces	Headphone-out, microphone-in
Controls	Keyboard volume control
Microphone	
Type	1 integrated mono microphone
Sensitivity	-40±3 dB
Output impedance	Max. 2,200 Ohm
Noise supression	Noise supression
Storage	
Hard disk drive	Built-in high performance 20 bit ADC & 24 bit DAC
Vendor	EDS (Enhanced Digital Sound)
Type	Embedded stereo speakers & integrated mono microphone
Speed	2 speakers x 1.5 W with enclosure
Average seek time	Headphone-out, microphone-in
Supports	Keyboard volume control
Capacity	120 GB 160 GB 200 GB 250 GB 320 GB 400 GB 500 GB
Optical disk drive	
Super multi dual layer 1	
Vendor	TSST
Type	12.7 mm, S-ATA, Fixed type, slot-in type
Speed	6 x DVD-RAM, 8 x DVD±R, 6 x DVD±R DL, 8 x DVD+RW, 6 x DVD-RW, 24 x CD-R/RW, 8 x DVD, 24 x CD

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ITEM	Description
Average seek time	DVD 130 ms Typ., CD 130 ms Typ.
Weight	Max. 185 g
Software supplied	CyberLink DVD Suite
Security	RPC-II regional encoding
Network communication	
LAN	
Type	10/100/1000 Ethernet
Chipset	Marvell 88E8057
Interface	RJ45 output
Feature	
Wireless LAN 1	
Type	Atheros® 802.11b/g
Interface	Mini card type
Chipset	Atheros XB63
Antenna	2 integrated
Feature	
Wireless LAN 2	
Type	Intel® 802.11a/b/g/n
Interface	Mini card type
Chipset	Intel® WiFi Link 5300
Antenna	3 integrated (Main, AUX, MIMO)
Feature	
Wireless LAN 3	
Type	Intel® 802.11a/b/g/n (11a/b/g for Russia, Ukraine, Pakistan)
Interface	Mini card type
Chipset	Intel® WiFi Link 5100
Antenna	2 integrated (Main, AUX)
Feature	
Bluetooth	
Type	Bluetooth V2.0 + EDR (Enhanced Data Rate)
Interface	USB daughter card type with integrated PIFA (Plane Inverted F Antenna)
Chipset	Broadcom BCM2045
HSDPA	
Type	Multimode HSUPA/HSDPA/UMTS/EDGE/GPRS/GSM (Option GTM382)
Interface	Mini card type
Chipset	Qualcomm ® MSM7225
Antenna	2 integrated
WiBro / WiMAX	No
Type	
Interface	
Chipset	
Antenna	

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ITEM	Description
Ports and interfaces (Input / output)	
PC card slot 1	
Type	ExpressCard/34
Chipset	45PM/45GM
Support	PCI Express 1.1
Memory card slot	YES
Type	
Support	
Input / output ports	
xVGA	2,048 x 1,536
S-Video (TV-out)	No
HDMI	1080p, Support 1.3
Headphone-out	Yes
Microphone-in	Yes
Internal microphone	Yes
USB	1 x USB 2.0 1 x USB 2.0 & eSATA 1 x Chargeable USB 2.0
SIO	No
IEEE1394	No
RJ11 (Modem)	No
RJ45 (LAN)	Yes
TV antenna	No
DC-In (power port)	Yes (5 pie)
Input devices	
Keyboard	Yes
- Amount of keys	87 (UAE, KOR, RUS, UKR, US) 88 (UK, FR, GM, IT, SP, TU, BEL, NOR)
- Feature	Travel length 2.6 mm, key pitch 19.05 mm
- Silver Nano Technology	Yes
- Fast function keys (EZ BLU)	F7 (Magic Doctor), F8 (SpeedUp Manager)
Touchpad	Synaptics touchpad (plat type with scroll area) with gesture function
Button	Power On
LED indicator	Power, AC-in / battery, HDD, num-lock, caps-lock, scroll-lock, wireless antenna
Multimedia	
Integrated digital camera	
Type	1.3M Web-Cam
Chipset	SCB-1700N/B (Namuga)
Image sensor	Color CMOS SXGA (1.3 Mpixel)
SCAN mode	Progressive
Still image capture resolution	SXGA (1,280 x 1,024), VGA (640 x 480), CIF (352 x 288)
Video capture resolution	VGA (640 x 480)
Digital video capture speed	Max. 30 frame , USB 2.0 High speed
Focus	Min. 50 cm ~ infinity

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ITEM	Description
UVC support	USB video class 1.0 standard compliant
Security	
FingerPrint Reader	N/A
Vendor	
Chipset	
Interface	
Application software	
TPM (Trusted Platform Module)	N/A
Vendor	
Chipset	
Interface	
Application software	
Management	
AMT (Advanced Management Technology)	N/A
Vendor	
Version	
Chipset	
Application software	
Power and power management	
System power management	
Power management features	ACPI 1.0b support, standby (S3), hibernate (S4)
Standard battery	5200mAh
Model code	AA-PB9NC6W
Details of cell	6 cells
Battery capacity	5,200 mAh
Voltage	11.1 V
Battery rating	57.7Wh
Color	Black
Dimension	204 x 48.05 x 20.0 mm (W x H x D)
Weight	Max. 350 g
Recharge time	Approx. 3.0 hours
Battery life (DVD play mode)	3.0 hours
- Test program	PowerDVD(Max Battery Mode)
- Test condition	Multimedia mode, LCD Brightness-Level 3(close to 60nits), WLAN R/F Off, discharged by 3%
Battery life (Bench mark mode)	5.4 hours
- Test program	BatteryMark v.4.0.1
- Test condition	Samsung Optimized, LCD Brightness-Minimum, WLAN R/F Off, discharged by 3% P8600(2.4GHz), DDR2 2GB, 13.4" WUXGA(LED), NVIDIA G105M(256MB), 160GB, DVD-Multi, Vista Home Premium
Standard battery	4400mAh
Model code	AA-PB9NC6B
Details of cell	6 cells
Battery capacity	4,400 mAh

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Voltage	11.1 V
Battery rating	48.84 Wh
ITEM	Description
Color	Black
Dimension	204 x 48.5 x 20.0 mm (W x H x D)
Weight	Max. 350 g
Recharge time	Approx. 3.0 hours
Battery life (DVD play mode) - Test program - Test condition	2.6 hours PowerDVD(Max Battery Mode) Multimedia mode, LCD Brightness-Level 3(close to 60nits), WLAN R/F Off, discharged by 3%
Battery life (Bench mark mode) - Test program - Test condition	4.6 hours BatteryMark v.4.0.1 Samsung Optimized, LCD Brightness-Minimum, WLAN R/F Off, discharged by 3% P8600(2.4GHz), DDR2 2GB, 13.4" WUXGA(LED), NVIDIA G105M(256MB), 160GB, DVD-Multi, Vista Home Premium
AC adapter 1	
Scope	CPU <= 25W
Model code	AD6019R
Output power	60 W
Dimension	107.9 X 46.5 X 28 mm (W x H x D)
Weight	Max. 295 g
Worldwide compatibility	Auto-sensing 100-240 VAC
Line frequency	50 Hz / 60 Hz
Adapter rating (input)	100 VAC ~ 240 VAC, 1.7 A
Adapter rating (output)	19.0 VDC, 3.16 A
AC adapter 2	
Scope	CPU >= 35W
Model code	AD6019S
Output power	90 W
Dimension	126 X 50 X 30 mm (W x H x D)
Weight	Typ. 350g
Worldwide compatibility	Auto-sensing 100 - 240 VAC
Line frequency	50 Hz / 60Hz
Adapter Rating - Input	100 VAC ~ 240 VAC, 1.5A
Adapter Rating - Output	19.0 VDC, 4.74 A
Multimedia	
- Fast function keys (EZ BLU)	F7 (Magic Doctor), F8 (SpeedUp Manager)
Touchpad	Synaptics touchpad (plat type with scroll area)
Button	Power On
LED indicator	Power, AC-in / battery, HDD, num-lock, caps-lock, scroll-lock, wireless antenna
System dimensions	
Dimensions (W X D X H)	326mm x 228.5mm x 33.2~36.6mm 12.83" x 9.0" x 1.3~1.44"
Weight	2.23 Kg 4.92lbs
- Condition	Full system with 6 cell battery

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Package dimensions (W X D X H)	390 X 106 X 360mm 15.35" x 4.17" x 14.17"
Package weight	3.53kg 7.78 lbs
- Condition	Full system with 6 cell battery
ITEM	Description
Materials & Design	
- LCD Back	PC/ABS Vo, High Glossy
- LCD Front	PC ABS talc
- System Top	PC/ABS Vo, High Glossy
- System Bottom	PC/ABS Vo
Installed software	
Operating system	Genuine Windows Vista® Home Premium SP1
Software	Samsung Recovery Solution III (optional), Samsung Magic Doctor, Samsung Update Plus Easy Display Manger, Easy Battery Manager, Easy Network Manager, Easy SpeedUp Manager McAfee SecurityCenter, Adobe Acrobat Reader, Microsoft® Office Professional 2007 (free 60-day trial) Battery Life Extender

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2. Introduction and Spec

2-3. Comparing product specifications

MODEL	Bonn		Lyon
	IS	IS-Not	
LCD	15.6" 16:9 HD(1366x768),FHD (1920 x 1080)		15.4" WXGA (1,280 x 800)
CPU	Penryn/ AMD	45W	Intel Penryn/Merom/Celeron (Max 35W)
Chipset	Intel / RS880 (AMD)		Intel PM45, GM45
Memory	Dual channel DDR2		Dual channel DDR2
Graphics	GF G105K / ATI M96 / GDDR3 (256, 512)		GF 9200GS / GDDR2 (64bit)
HDD	2.5 inch SATA		2.5 inch SATA
ODD	Up to BLU-RAY, Weight Saver (2nd HDD)		Super-Multi/DVD
Camera	1.3M /0.3M (TBD)		1.3 Mega (F.option)
Wireless	10/100/1000 Ethernet, 802.11 b/g, b/g/n Modem (F.Option), Bluetooth (F.Option), HSDPA		10/100/1000 Ethernet, 802.11 b/g Modem (F.Option), Bluetooth (F.Option)
Audio/Mic	HD Audio / Stereo Speaker / Internal MIC		HD Audio / Stereo Speaker / Internal MIC
Battery	6cell, 12cell(Option)		6cell, 9cell(Option)
PCB	6층 (Internal Gfx)		6층 (Internal Gfx)
I/O Port	4 USB, e-SATA, VGA , Mic-in, HP-out, 3-in-1, RJ45, RJ11, PCI-Express 54mm, HDMI		3 USB, VGA , Mic-in, HP-out, 3-in-1, RJ45, RJ11, PCI-Express 54mm, HDMI
Keyboard	88/89 Key		88/89 Key
Mechanical	All Plastic		All Plastic
Dimension	376 x 255.5 x 30.4 ~ 37.05 (Max)		358 x 265.2 x 31.8 ~ 38.45 (Max)
Weight	2.62 Kg (2.55kg)		2.68 Kg

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2. Introduction and Spec

2-4. Comparing product specifications jatasa

Model	Bonn	HP G60-120us	HP DV5t	ACER Aspire 5930G	ASUS M51VR
Image					
LCD	15.6" HD	15.6" HD	15.4" WXGA ~ WSXGA+	15.4" WXGA	15.4" WXGA
CPU	Intel Penryn	AMD Turion X2	Core2 Duo Penryn (1066MHz FSB)	Core2 Duo Penryn (1066MHz FSB)	Core2 Duo Penryn (1066MHz FSB)
Chipset	Intel GM45	AMD	Intel PM45	Intel PM45	Intel PM45
Memory	DDR2 800	3GB	1~4GB / DDR2 667	1~4GB / DDR2 667	1~3GB / DDR2 800
Graphics	-	GeForce 8200M	~ GeForce 9600M GT	GeForce 9600M GT	ATI mobility Radeon HD 3470
HDD	2.5 inch SATA (~250G)	2.5 inch SATA 250G	120~320GB / SATA	320GB / SATA	250GB / SATA
ODD	Super Multi	Super Multi	~ Blu-Ray Disc	~ Blu-Ray Disc	DVD-Super Multi
Adapter/ Battery	60W 6cell or 12Cell	65W 6cell or 12Cell	90W / 6cell (2200mA/Cell)	90W / 6cell (2200mA/Cell)	90W / 6cell (2400mA/Cell)
Size (WDH)	376 x 255.5 x 30.4/37.05	378 x 251.5 x 35.1/41.9	356.9 x 259 x 34.8/41.9mm	366 x 274 x 40/ 43mm	365 x 269.5 x 31/40mm
Weight	2.62kg (CRS 적용 : 2.55kg)	2.75kg	2.64 kg	3.0 kg	2.95 kg

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2. Introduction and Spc

2-5. Option Material List

Parts Code	Assembled	Configu ration	pro cess	EA	Description	Service	Replace the materials
0902-002392	P7370_2.0G	001	S	1	IC-MICROPROCESSOR	SA	-
0902-002411	P7450_2.13G	001	S	1	IC-MICROPROCESSOR	SA	-
0902-002337	P8600_2.40G	001	S	1	IC-MICROPROCESSOR	SA	-
0902-002410	P8700_2.53G	001	S	1	IC-MICROPROCESSOR	SA	-
0902-002407	T9550_2.66G	001	S	1	IC-MICROPROCESSOR	SA	-
0902-002426	T6600_2.20G	001	S	1	IC-MICROPROCESSOR	SA	-
0902-002421	T6570_2.10G	001	S	1	IC-MICROPROCESSOR	SA	-
0902-002420	T6400_2.00G	001	S	1	IC-MICROPROCESSOR	SA	-
0902-002386	T3400_2.16G	001	S	1	IC-MICROPROCESSOR	SA	-
0902-002382	CD_T1700_1.83G	001	S	1	IC-MICROPROCESSOR	SA	-
0902-002419	T4200_2.00G	001	S	1	IC-MICROPROCESSOR	SA	-
0902-002389	CD_T1600_1.66G	001	S	1	IC-MICROPROCESSOR	SA	-
0902-002388	CEL_575_2G	001	S	1	IC-MICROPROCESSOR	SA	-
0902-002387	CEL_585_2.16G	001	S	1	IC-MICROPROCESSOR	SA	-
BA59-02455A	S_320G5.4K/FUJI-2	001	S	1	HDD	SA	H3-03-2-0
BA59-02454A	S_250G5.4K/FUJI-2	001	S	1	HDD	SA	H2-03-2-0
BA59-02453A	S_160G5.4K/FUJI-2	001	S	1	HDD	SA	H1-03-2-0
BA59-02398A	S_250G5.4K/WD	001	S	1	HDD	SA	H2-07-2-0
BA59-02395A	S_320G5.4K/WD	001	S	1	HDD	SC	H3-06-2-0
BA59-02377A	S_320G5.4K/TOSH	001	S	1	HDD	SC	H3-05-2-0
BA59-02376A	S_250G5.4K/TOSH	001	S	1	HDD	SA	H2-06-2-0
BA59-02375A	S_160G5.4K/TOSH	001	S	1	HDD	SA	H1-06-2-0
BA59-02355A	S_320G5.4K/SEC	001	S	1	HDD	SC	H3-04-2-0
BA59-02354A	S_250G5.4K/SEC-2	001	S	1	HDD	SC	H2-05-2-0
BA59-02348A	S_250G5.4K/HGST	001	S	1	HDD	SC	H2-02-2-50
BA59-02347A	S_320G5.4K/FUJI-1	001	S	1	HDD	SC	H3-02-2-50
BA59-02346A	S_250G5.4K/FUJI-1	001	S	1	HDD	SC	H2-01-2-50
BA59-02344A	S_160G5.4K/FUJI-1	001	S	1	HDD	SA	H1-02-2-50
BA59-02341A	S_320G5.4K/HGST	001	S	1	HDD	SC	H3-01-2-50
BA59-02340A	S_160G5.4K/HGST	001	S	1	HDD	SA	H1-01-2-50
BA59-02466A	S_400G5.4K/SEC	001	S	1	HDD	SA	H4-01-2-50
BA59-02511A	S_400G5.4K/WD-1	001	S	1	HDD	SA	H4-02-2-50
BA59-02510A	S_400G5.4K/WD-2	001	S	1	HDD	SA	H4-03-2-0
BA59-02477A	S_160G5.4K/WD	001	S	1	HDD	SA	H1-04-2-0
BA59-02474A	S_250G5.4K/SEGA	001	S	1	HDD	SA	H2-04-2-0
BA59-02473A	S_500G5.4K/SEGA	001	S	1	HDD	SA	H5-02-2-50
BA59-02469A	S_160G5.4K/SEC-2	001	S	1	HDD	SA	H1-05-2-0
BA59-02467A	S_500G5.4K/SEC	001	S	1	HDD	SA	H5-01-2-50
1105-001947	2G_D8/2G*1(SEC_R)	001	S	1	IC-DRAM MODULE	SA	M1-02-2-50
1105-001947	3G_D8(2GB)_SEC_R	002	S	1	IC-DRAM MODULE	SA	M2-02-2-50
1105-001947	4G_D8/2G*2(SEC_R)	003	S	2	IC-DRAM MODULE	SA	M3-02-2-50
1105-001900	2G_D8/2G*1(SEC)	001	S	1	IC-DRAM MODULE	SA	M1-01-2-50
1105-001900	3G_D8(2GB)_SEC	002	S	1	IC-DRAM MODULE	SA	M2-01-2-50
1105-001900	4G_D8/2G*2(SEC)	003	S	2	IC-DRAM MODULE	SA	M3-01-2-50
1105-001886	1G_D8/1G*1(SEC)	001	S	1	IC-DRAM MODULE	SA	-
1105-001886	2G_D8/1G*2SEC)	002	S	2	IC-DRAM MODULE	SA	-
1105-001886	3G_D8(1GB)_SEC	003	S	1	IC-DRAM MODULE	SA	-

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Parts Code	Assembled	Configu ration	pro cess	EA	Description	Service	Replace the materials
BA59-02495A	CPT LCD	001	S	1	LCD PANEL-156HD	SA	L1-01-2-50
BA59-02468A	CMO LCD	001	S	1	LCD PANEL-15.6HD	SA	L1-02-2-50
BA59-02456A	CAMERA	001	S	1	MODULE-CAMERA	SA	-
BA59-02297A	INTEL_512AGN 1*2	001	S	1	MODULE-WLAN	SA	-
BA59-02154A	WLAN	001	S	1	MODULE-WLAN	SA	-
BA59-01691A	FOXCON B/T MODULE	001	S	1	MODULE-BLUETOOTH	SA	T1-02-2-50
BA59-01916A	SEMCO B/T MODULE	001	S	1	MODULE-BLUETOOTH	SA	T1-01-2-50
BA59-02486G	KBD_KOR_SUN	001	S	1	KEYBOARD	SA	K1-02-2-50
BA59-02486B	KBD_KOR_OKI	001	S	1	KEYBOARD	SA	K1-01-2-50
BA59-02382A	DV-W28S-R91	002	X	1	DVD-SUPERMULTI_LS	SA	-
BA59-02460A	TS-L633M	002	X	1	DVD-SUPERMULTI	SA	-
BA59-02266A	DV-W28S-R	001	X	1	DVD-SUPERMULTI	SA	-
BA59-02494A	DS-8A3S	002	X	1	DVD-SUPERMULTI	SA	-
BA59-02383A	DS-8A2S	002	X	1	DVD-SUPERMULTI_PLDS	SA	-
BA59-02459A	TS-L633B	002	X	1	DVD-SUPERMULTI	SA	-
BA59-02264B	LS(TS-L633L)	001	X	1	DVD-SUPERMULTI	SA	-
BA59-02234B	DL(TS-L633A)	001	X	1	DVD-SUPERMULTI	SA	-
BA43-00207A	LI640_BK2_SANYO	001	S	1	BATTERY	SA	B2-01-2-50
BA43-00208A	LI640_BK2_SD1	001	S	1	BATTERY	SA	B2-02-2-50
BA43-00200A	LI652_BK2_SD1	001	S	1	BATTERY	SA	B3-01-2-50
BA43-00197A	LI652_BK2_SANYO	001	S	1	BATTERY	SA	B3-02-2-50
BA43-00198A	LI644_BK2_SANYO	001	S	1	BATTERY	SA	B1-02-2-50
BA43-00199A	LI644_BK2_SD1	001	S	1	BATTERY	SA	B1-01-2-50
BA96-03953A	RHE-CCI	001	S	1	ASSY COOLER-CPU	SA	-
BA96-03964A	RHE-CCI	001	S	1	ASSY COOLER-CPU	SA	-
BA44-00242A	ADAPTOR 60W LIS	001	S	1	ADAPTOR	SA	-
BA92-05473A	USB SUB BOARD	001	S	1	ASSY BOARD-USB_SUB	SA	-
BA92-05474A	ODD SUB BOARD	001	S	1	ASSY BOARD-ODD_SUB	SA	-

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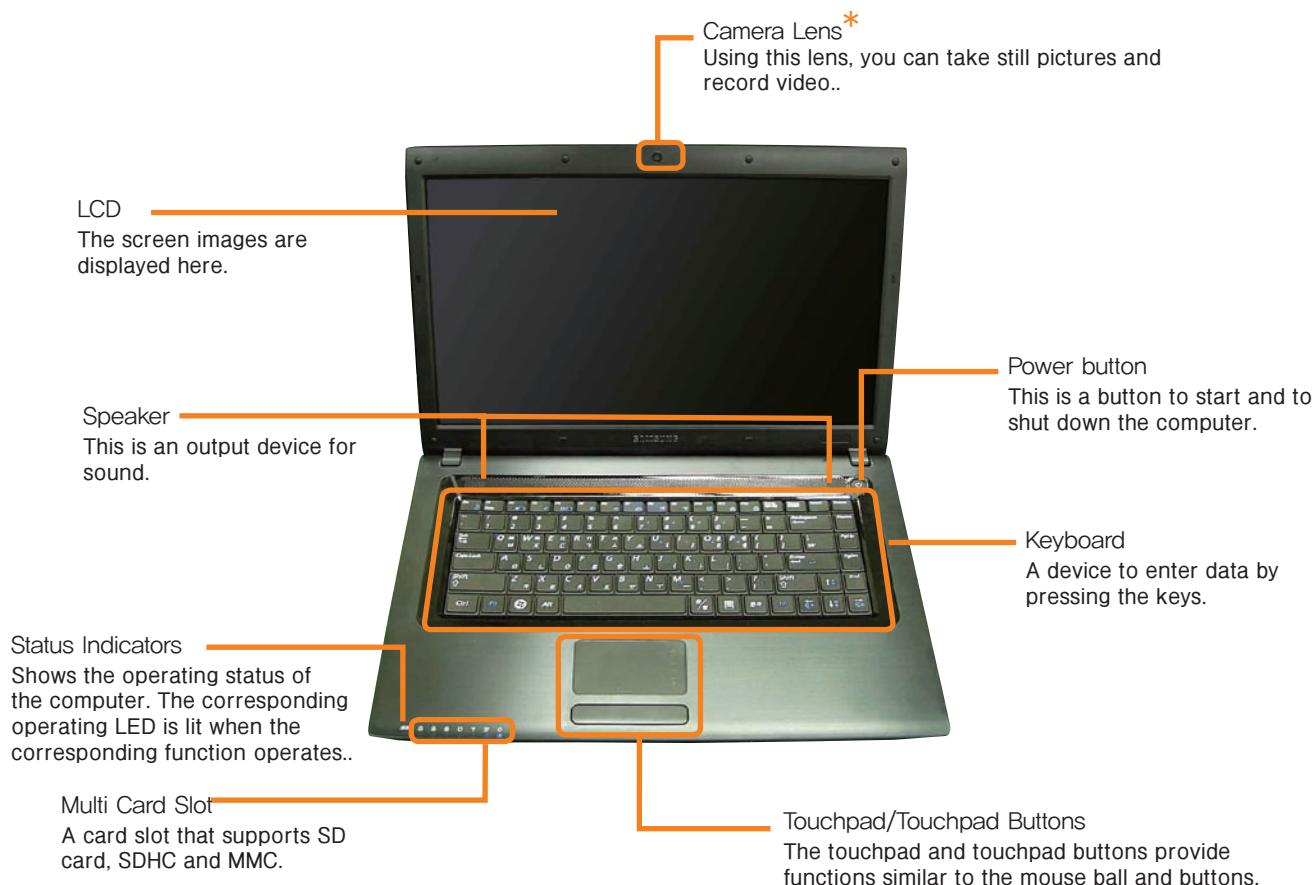
2. Introduction and Spec

2-6. Function of Product

2-6-1. Part names

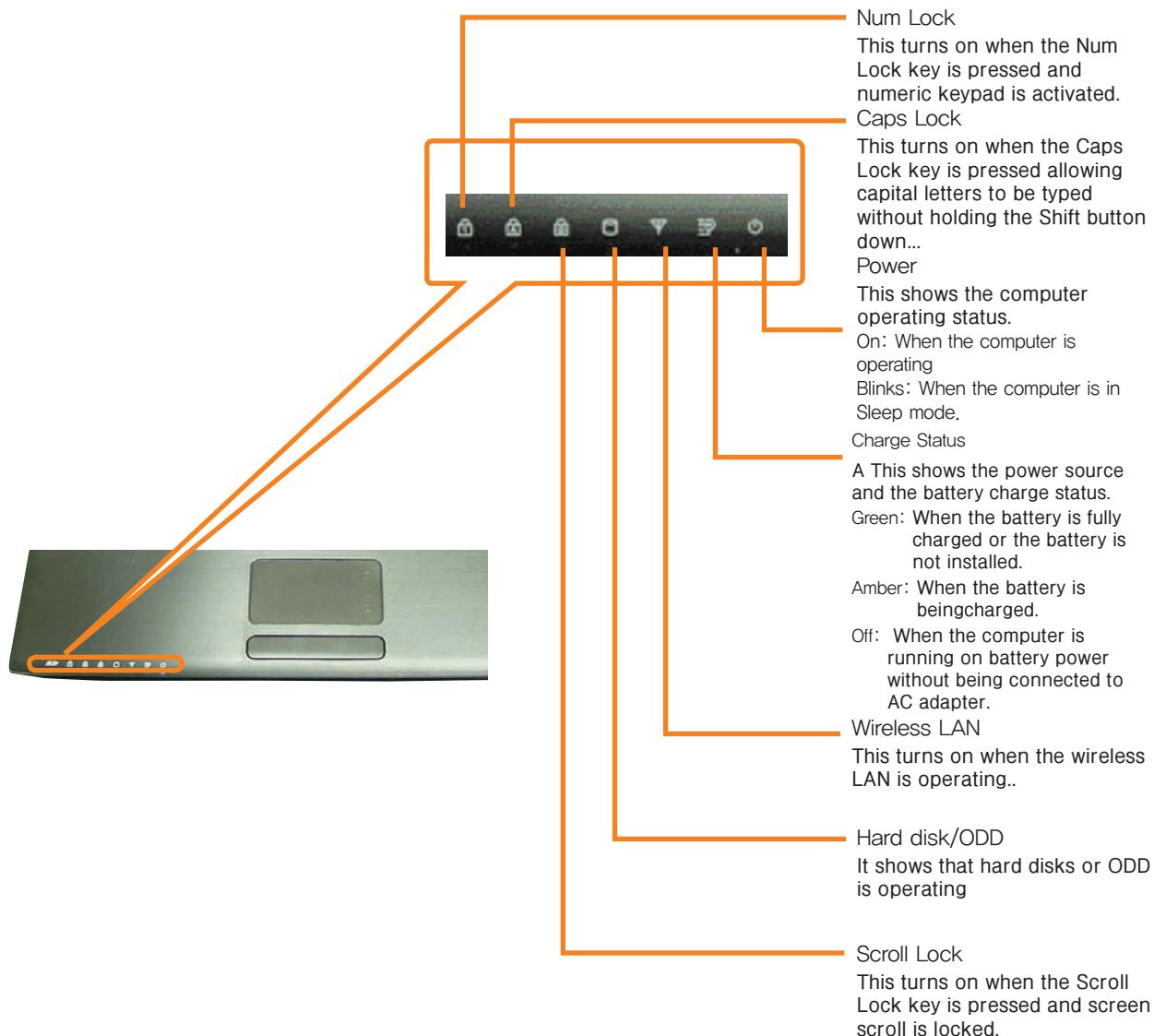
Front View

System color could be changed depending on models.



2. Introduction and Spec

Status Indicators



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2. Introduction and Spec

Right View



CD Drive(ODD)*

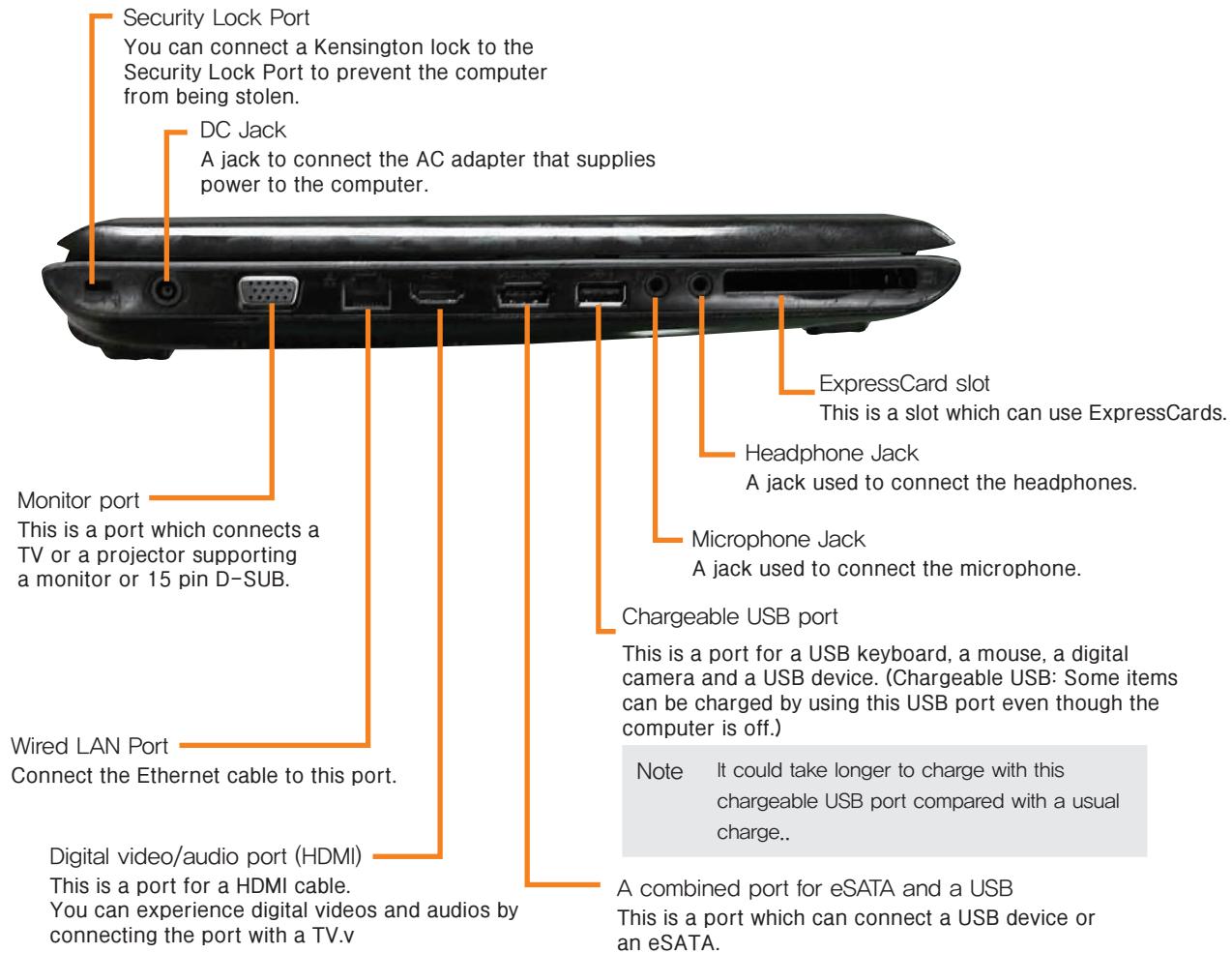
Plays CD or DVD titles. Since an ODD(Optical Disk Drive) is optional, the installed drive depends on the computer model.

USB Port

You can connect USB devices to the USB port such as a keyboard/mouse, digital camera, etc.

2. Introduction and Spec

Left View



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Back View



Battery

This is a Lithium-Ion rechargeable battery that supplies power to the computer.

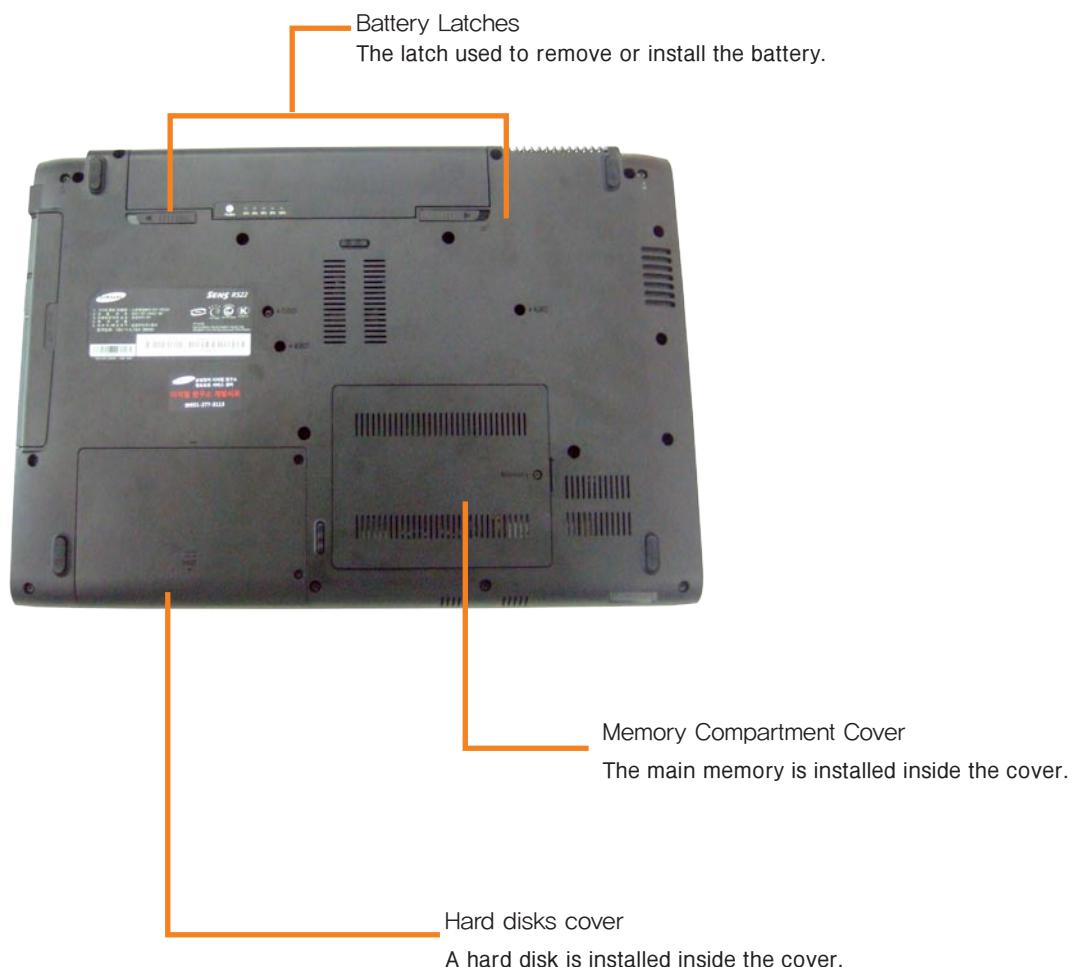


A ventilating opening
It is a place where heat produced by running a computer can be emitted.

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Bottom View



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2. Introduction and Spec

2-6-2. New Added Function

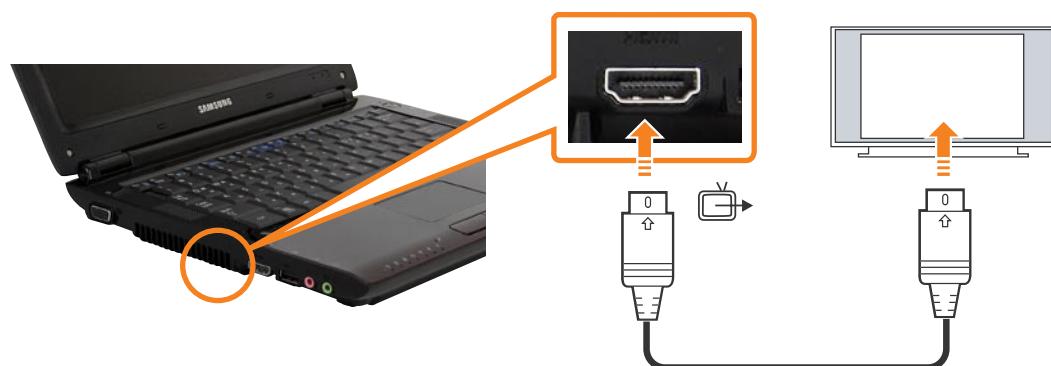
Camera (Option)

Easy use of taking a picture and moving image..



HDMI Port

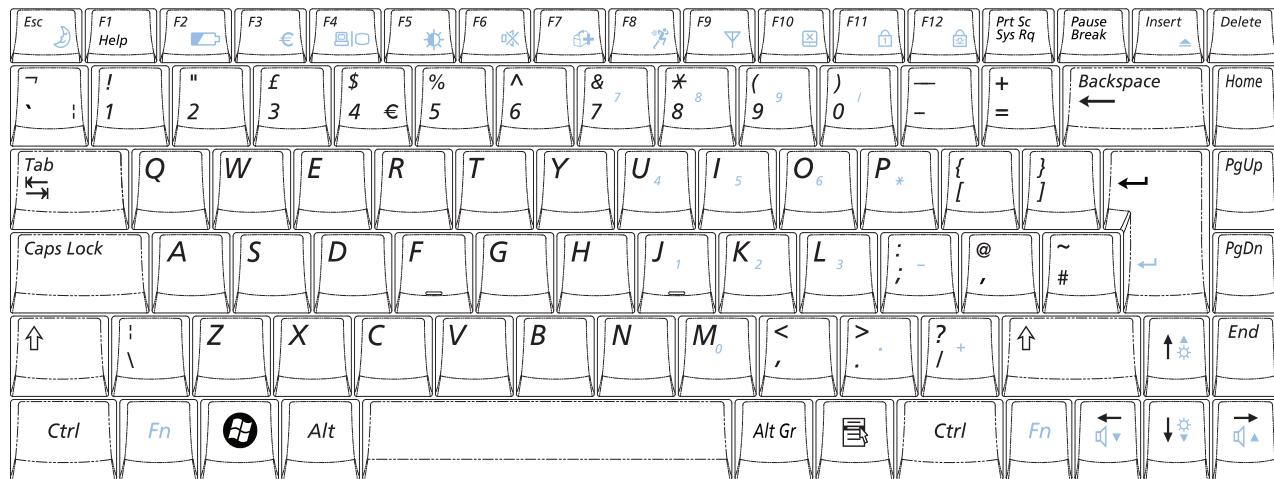
Convenient connection with TV through HDMI port.



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New Keyboard



Shortcut Keys

You can use the following functions by pressing the keys below with the Fn key.



Fn+	Name	Function
[Esc]	REST(Sleep Mode)	Switches to Sleep mode. To wake the computer up, press the Power button.
[F2]	Gauge	Shows the remaining battery charge. You can only use this function when the Easy Display Manager program is installed.
[F3]	Euro	Enters the Euro monetary unit symbol. This key may not be provided depending on the keyboard type.
[F4]	CRT/LCD	Switches the screen output to the LCD or external monitor when an external monitor (or TV) is connected to the computer.
[F5]	Backlit	Turns the LCD backlight on or off.
[F6]	Mute	Mutes or cancels mute.
[F7]	Samsung Magic Doctor	System diagnosis, recovery and Internet consultation program, Samsung Magic Doctor, will be launched.
[F8]	Easy SpeedUP Manager	You can select operation mode when you need maximum system performance or low-noise/low power consumption with one-click. Slient : Low-noise and low power consumption mode Normal : Normal Mode Speed : Maximum performance mode. The system operates in its maximum performance, and system resources are allocated to the currently active program with priority for maximum performance.
[F9]	Wireless LAN	Turns the wireless LAN function on or off in models with wireless LAN capability..

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	Touchpad	Turns the Touchpad function on or off. When using an external mouse only, you can turn the Touchpad off.
	Num Lock	Turns the numeric keyboard on or off.
	Scroll Lock	If you turn the Scroll Lock on, you can scroll the screen up or down without changing the cursor location in some applications.

Screen Brightness Control

To adjust the LCD brightness press the Fn + ( ) key combination or the Fn + ( ) key combination.
The changed screen brightness is displayed at the center of the screen for a moment.

Volume Control

To control the volume, press the Fn + ( ) key combination or the Fn + ( ) key combination.
You can mute the sound or cancel the mute function by clicking the Fn + () key combination.

Numeric Key

The numbers are printed in blue on the numeric keys.
If Num Lock is turned on by pressing the Fn + () key combination, you can use the numeric keys to enter digits.

Other Function Keys

Application Key 

Performs the right-click mouse function (touchpad).

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2-7. SW List

	ItemName	Version
Application	Recovery Environment III	3.0.0.8
Driver	Cantiga Chipset + 8languages	8.7.0.1007
	Intel Matrix Storage Manager-8.7.0.1007PV(DIPMDisable)	8.7.0.1007
	nVidia N10x Vista 32bit Driver [NVIDIA GeForce G 105M]	179.36
	ALC27X Vista Sound Driver	6.0.1.5755
	NVidia Vista HDMI Sound Driver	1.0.0.35
	Vista(32 & 64)-Marvell LAN Driver [10/100 & GbE]	10.67.4.2
	Intel WLAN Driver (Floresville Vista)	12.0.0.82
	Atheros WLAN Driver (Vista,32bit)	7.6.1.162
	Broadcom Bluetooth Driver (BCM92045NMD)	6.1.0.5200
	Touchpad Driver	11.1.3.2
Application	Namuga 1.3M Webcam	343.2001.4001.13
	Samsung Screen Saver	1.0.2.2
	Samsung Update Plus	2.0.0.19
	PC Troubleshooting_ENG	2.0.0.3
	PC Troubleshooting_CHN	2.0.0.3
	PC Troubleshooting_KOR	2.0.0.3
	Adobe Reader (ENG)	9.0.0.332
	CyberLink DVD Suite 6	17
	Easy SpeedUp Manager	2.0.1.3
	Battery Life Extender	1.0.0.1
	Easy Battery Manager 3	3.2.1.9
	Easy Display Manager 2.3	2.3.2.4
	Easy Network Manager	4.0.2.1
	Samsung Magic Doctor 5	5.0.4.3
	Cyberlink YouCam	2.0.0.2411
	Recovery Solution III	3.0.0.8
	McAfee VirusScan (KOR)	9.1.116.0
	Wallpaper VISTA	2.0.1.0 (16:9 Wide)
	Easy Partition Manager	2.2.2.4(10G)
	MS Office 2007 Ready (KOR)	1.4
Application	Play AVStation	4.1.20.51

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2. Introduction and Spc

2-8. System Setup (BIOS Setup)

MAIN

SATA Port 1

- HDD model name is displayed in this item for SATA Port 1.

SATA Port 2

- HDD model name is displayed in this item for SATA Port 2.

Total Memory

- Total memory
 - Total memory size of the system.

Slot1 Memory

- Memory size of the slot 1

Slot2 Memory

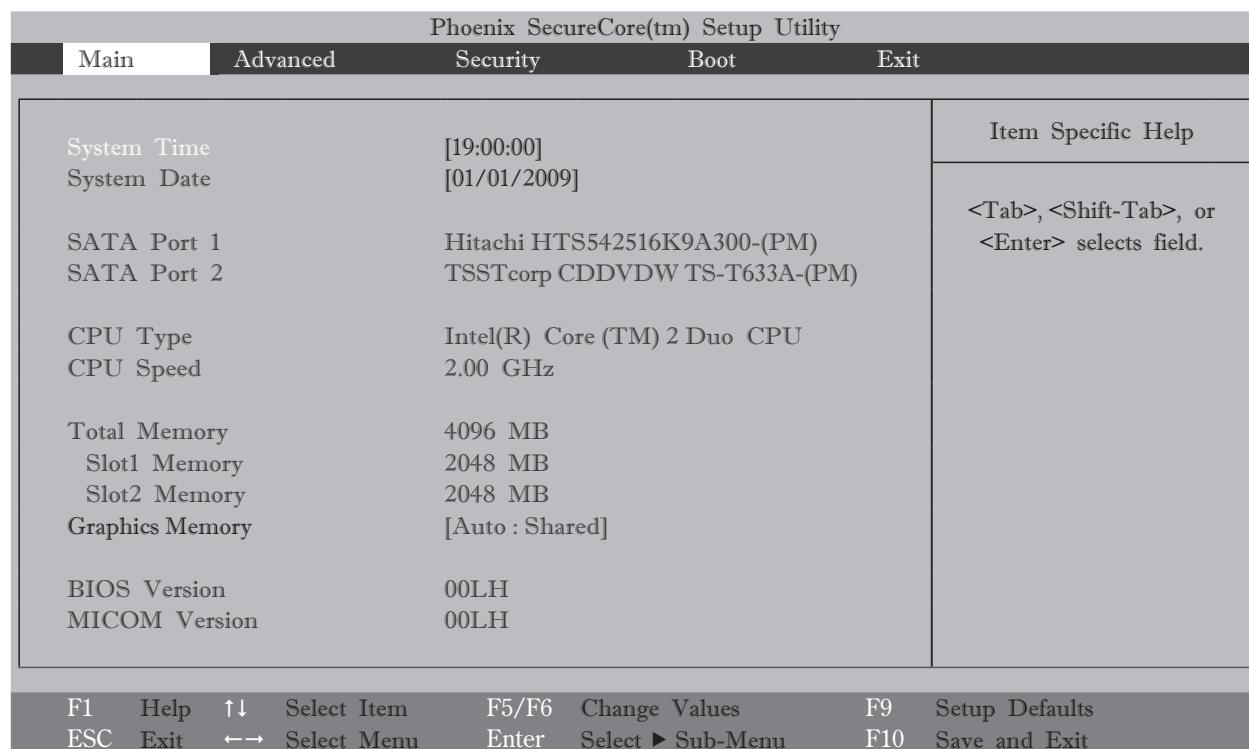
- Memory size of the slot 2

Graphics Memory

- Graphics Memory size is shown in Intel Graphics Model only.

Selects the frame buffer size of graphics memory (Windows XP only)

- [Auto : Shared] : Automatically select the frame buffer size according to system memory size.
 - [128 MB : Shared] : 128MB is set.
 - [256 MB : Shared] : 256MB is set.
 - [Max : Shared] : Max frame buffer size.



2. Introduction and Spec

Advanced

Intel(R) SpeedStep(TM)

- This selects whether Intel® SpeedStep™ Technology is enabled or not.

Legacy USB Support

- Select Enable to attempt Legacy OS Boot only.
Select Disabled to attempt EFI Boot first, Legacy OS Boot Second.

Legacy USB Support

- Enable support for Legacy Universal Serial Bus.

Large Disk Access Mode

- UNIX, Novell NetWare or other O/S, select ‘ Other ’.

AHCI Mode Control

- Select a AHCI mode always enabled or disabled.

EDB (Execute Disable Bit)

- supports the Data Execution Prevention (DEP) feature. DEP is a set of H/W & S/W technologies that perform additional checks on memory to help prevent malicious code from running on a system.

Internal LAN

- “Enabled” will allow the internal LAN to operate correctly.

Touch Pad Mouse

- ‘ Disabled ’ prevents installed Touch Pad mouse from functioning, but frees up IRQ 12. ‘ Enabled ’ forces the Touch Pad mouse to be enabled.

CPU Power Saving Mode

- ‘ Enabled ’ will decrease system power consumption.

Fan Silent Mode

- In silent mode, ‘ Low ’ will spin a system fan at a low speed and minimize the frequency of stopping it. ‘ Auto ’ will repeat spinning it and stopping it.

USB S3 Wake-up

- Select Enabled to support that system can be waked up from ACPI S3 state by USB activities.

USB Charge In Sleep Mode

- ‘ Enabled ’ means that the system supports the USB charge feature at the port which has the special icon, in the sleep mode.
- ‘ Disabled ’ means that the system doesn’t support the USB charge feature in the sleep mode.

Battery Life Cycle Extension

- ‘ Enabled ’ means that the system will charge the battery up to 80% for extending the battery life cycle.
- ‘ Disabled ’ means that the system will charge the battery up to 100%

Purchased Date

- ‘ Enabled ’ will decrease system power consumption.
- Purchased date is displayed after 10 times boot.

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Phoenix SecureCore(tm) Setup Utility				
Main	Advanced	Security	Boot	Exit
Intel (R) SpeedStep (TM) [Enabled] Legacy OS Boot [Enabled] Legacy USB Support [Enabled] Large Disk Access Mode [DOS]				Item Specific Help
AHCI Mode Control [Enabled] EDB (Execute Disable Bit) [Disabled] Internal LAN [Enabled] Touch Pad Mouse [Enabled] CPU Power Saving Mode [Enabled] Fan Silent Mode [Auto] USB S3 Wake-up [Disabled] USB Charge In Sleep Mode [Disabled] Battery Life Cycle Extension [Disabled]				This selects whether Intel (R) SpeedStep (TM) Techhnology is enabled or not. 'Disabled' means that system does not support Intel (R) SpeedStep (TM) Technology.
Purchased Date 2009/01				'Enabled' is recommened.
AHCI Mode Control [Manual] Native AHCI Mode [Enable]				
F1 Help ↑ Select Item	F5/F6 Change Values		F9 Setup Defaults	
ESC Exit ←→ Select Menu	Enter	Select ▶ Sub-Menu	F10 Save and Exit	

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2. Introduction and Spc

Security

set Supervisor Password

- Supervisor Password controls access to the setup utility.

set User Password

- User Password controls access to a few items in the setup utility.

set HDD Password

- User can set a password of a HDD.

Password on Boot

- Supervisor Password controls access to system boot.

Fixed Disk Boot Sector

- [Write Protect] will protect to write in Boot Sector of HDD.

Phoenix SecureCore(tm) Setup Utility							
Main	Advanced	Security	Boot	Exit			
Supervisor Password	Clear						
User Password	Clear						
HDD Password	Clear						
Set Supervisor Password	[Enter]						
Set User Password	[Enter]						
Set HDD Password	[Enter]						
Password on boot	[Enabled]						
Fixed disk boot sector	[Normal]						
Item Specific Help							
Supervisor Password controls access to the setup utility							
F1	Help	↑↓	Select Item	F5/F6 Change Values			
ESC	Exit	↔	Select Menu	Enter Select ► Sub-Menu			
			F9 Setup Defaults				
			F10 Save and Exit				

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2. Introduction and Spc

Boot

Boot Device Priority

- Select system boot options.

NumLock

- Selects Power-on state for Numlock.

Enable Keypad

- Select a method of Keypad.
 - [Only By Fn Key] : Leave the embedded keypad disabled when the Numlock LED is on.
 - [By NumLock] : Enable the embedded keypad when Numlock LED is on and no external keyboard is attached.

Summary Screen

- Display system configuration on boot.

Boot-time Diagnostic Screen

- Display the diagnostic screen during boot.

PXE Oeprom

- This selects whether network boot PXE will be loaded or not during the POST.
 - [Only with F12] : The network boot PXE will be loaded only if F12 is pressed during the POST.
 - [Always] : The network boot PXE will be always loaded during the POST.

Brightness Control Mode

- [Auto] : The brightness values are set by the status of AC adapter at each boot up.
- [User Control] : The brightness values could be remained regardless of the status of AC adapter.

Wireless Device Control

- [Always On / Off] : The wireless devices are turned on or not.
- [Last Status] : The wireless devices are restored to last status.

Smart Battery Calibration

- If you select this option, the system battery will be discharged completely for more accurate battery level detection. This option only works with SMART battery.

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Phoenix SecureCore(tm) Setup Utility																																																					
Main	Advanced	Security	Boot	Exit																																																	
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2. Introduction and Spc

Exit

Exit Saving changes

- Exit System Setup and save your changes to CMOS.

Exit Discarding Changes

- Exit utility without saving Setup data to CMOS.

Load Setup Defaults

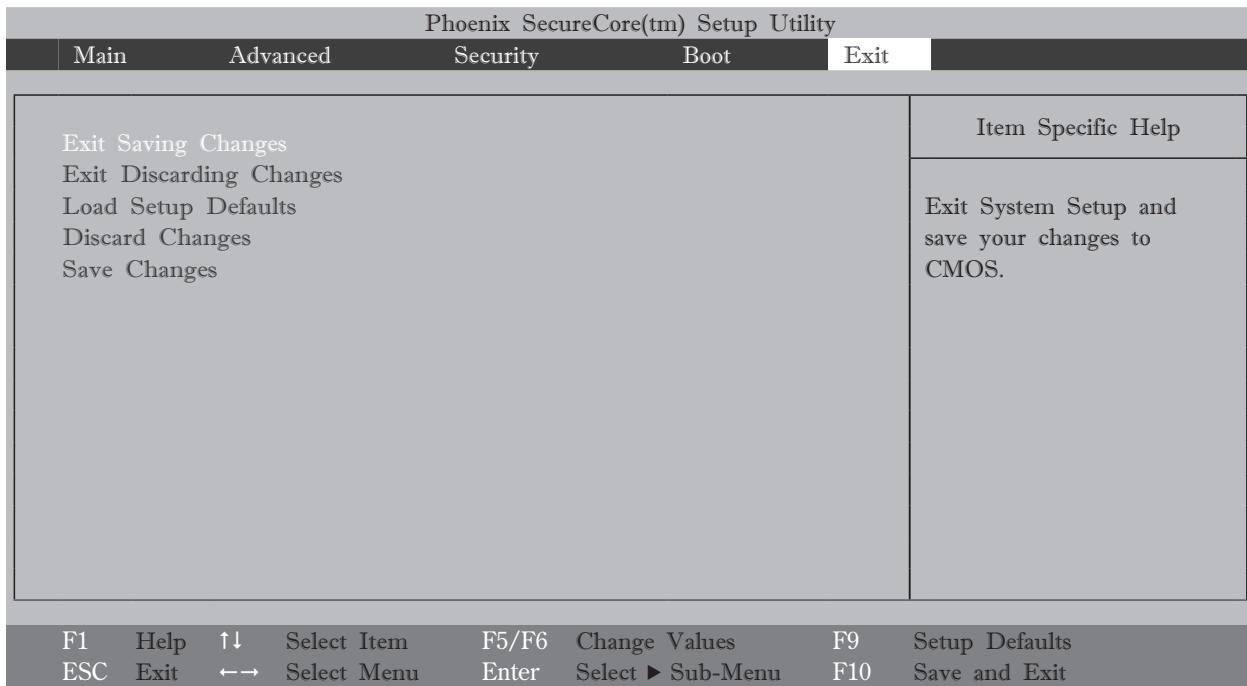
- Load default values for all SETUP items.

Discard Changes

- Load previous values from CMOS for all SETUP items.

Save Changes

- Save Setup Data to CMOS.



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2. Introduction and Spec

BIOS Vendor

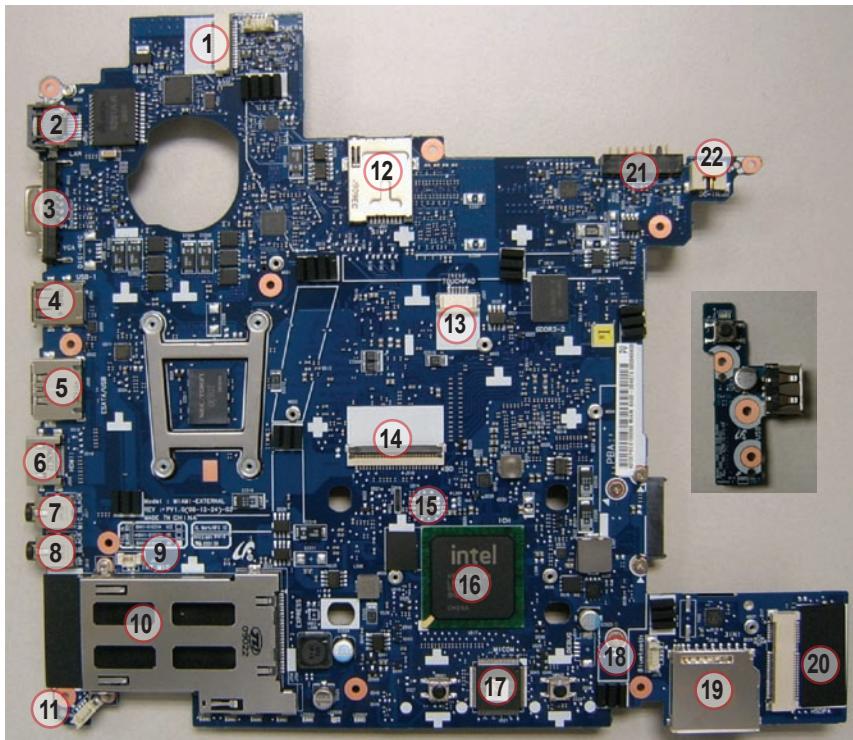
BIOS Vendor : Phoenix

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2. Introduction and Spc

2-9. Mainboard Part Description

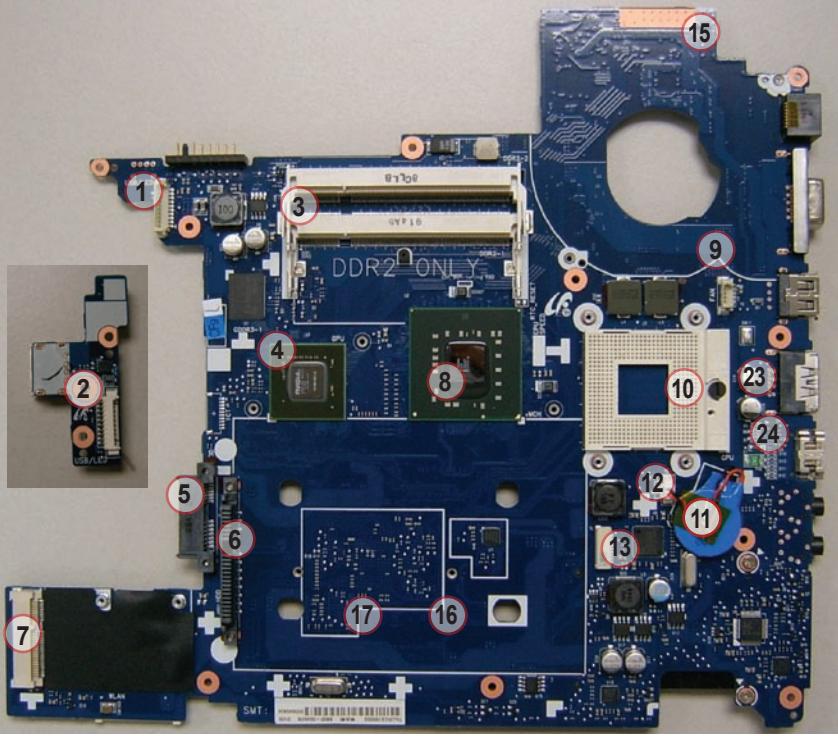
Miami Board component top



1	LCD connector	13	Touchpad connector
2	Lan connector.	14	Keyboard connector
3	RGB connector	15	BIOS rom
4	Chargeable USB port	16	ICH9M
5	E-SATA / USB po	17	MICOM
6	HDMI connector	18	Bluetooth connector
7	MIC Jack	19	3in1 connector
8	Headphone Jack	20	HSDPA connector
9	Internal MIC connector	21	Battery connector
10	Express Card slot	22	DC-IN connector
11	Internal speaker connector	23	Power switch
12	USIM card slot	24	USB port

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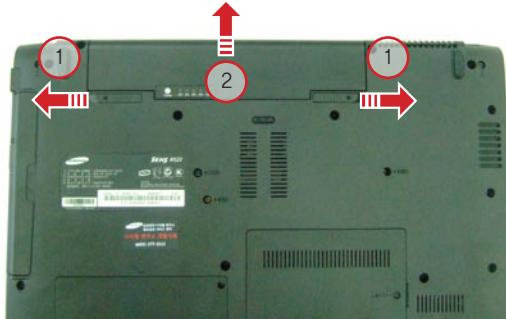
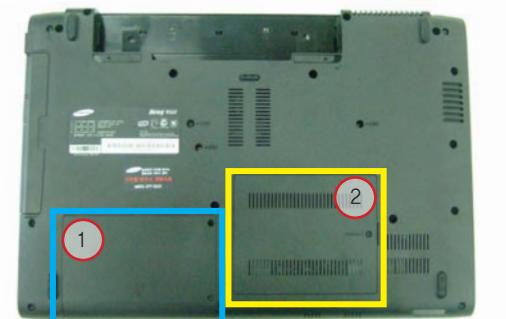
Miami Board component bot	
	
1	Sub board connector(MB)
2	Sub board connector(SB)
3	SODIMM connector
4	GFX chip
5	ODD connector
6	HDD connector
7	WLAN connector
8	MCH
9	Fan connector
10	CPU socket
11	RTC battery
12	RTC battery connector
13	Debugging Port
14	
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3. Disassembly and Reassembly

[Caution] Attention to red sentence

3-1. Disassembly and Reassembly R522

Part	Picture	Description
Main System		1. As shown in picture, adhere Knob to the end closely into the arrow direction(1), then push the battery up (2).
		2. Picture when the battery is separated
		3. Remove the Bottom screw. If only keyboard is disassembled, remove only 2 screws (Yellow) Yellow : M2 X L6, Silver (2EA) Blue : M2 X L2, Black (2EA) Red : M2 X L8, Black (22EA)
		4. Remove the Memory Door (Blue Box) and HDD Door (Yellow Box).

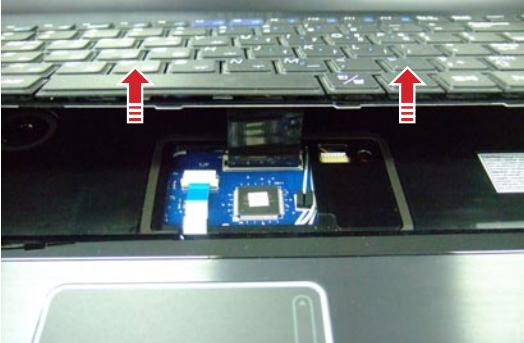
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3. Disassembly and Reassembly

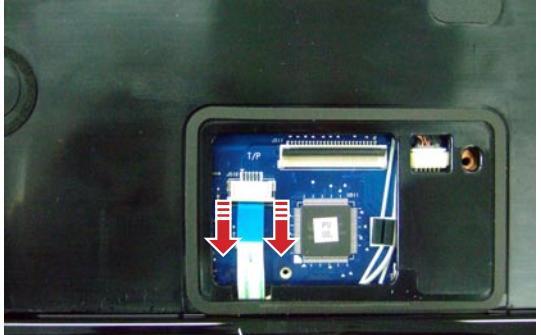
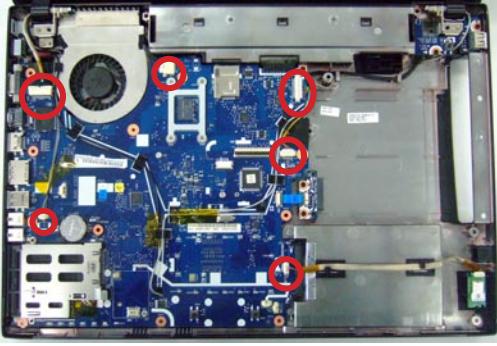
Part	Picture	Description
Main System		5. Remove the memory by pushing the fixed-tap out and Separate the Main board after removing the WLAN cables (2 EA).
		6. INSULATOR by lifting the HDD up to about 70 degrees direction.
		
		7. Remove the DVD to the arrow direction as shown in the picture
		8. Remove Bottom Screw ● : M2 X L2, Black (2EA)

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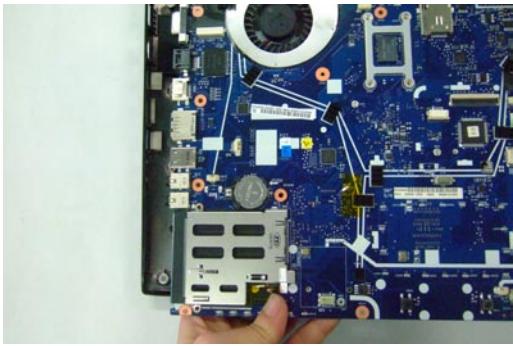
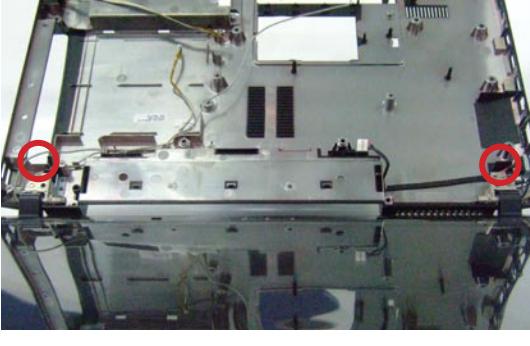
Part	Picture	Description
Main System		<p>9. Push the HOOK up inwards by using a pin-set and then lift the keyboard up.</p> <p>[Caution] Be careful not to scratch on top of the keyboard or LCD panel when you push the hook up.</p>
		10. Lift the top side of the keyboard up carefully as shown in the picture
		11. Lift the keyboard up, and then take the FPC out after lifting the Connector Lock.
		12. Remove the speaker cable connector.

3. Disassembly and Reassembly

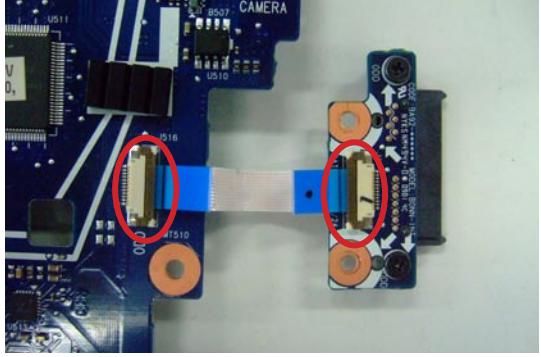
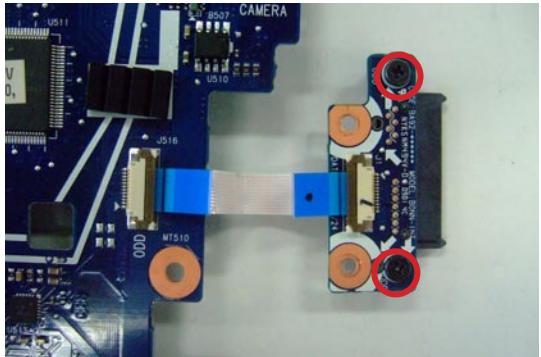
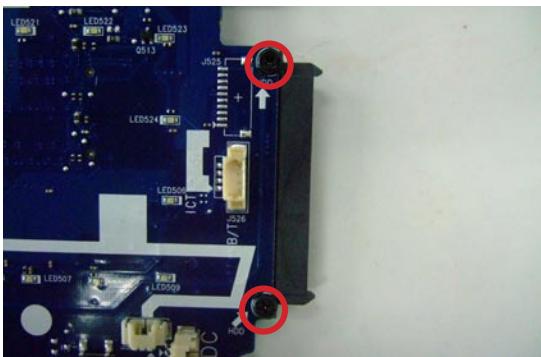
Part	Picture	Description
Main System		13. Separate the Touch Pad by pushing the connector to the arrow direction
		14. Separate it by lifting up by holding the center part of the Top as shown in the Front cover picture.
		15. Remove 6 cables (LCD, speaker, microphone, camera, battery).
		16. Separate the Main board by removing the screw (3EA) which fixes the Main board.

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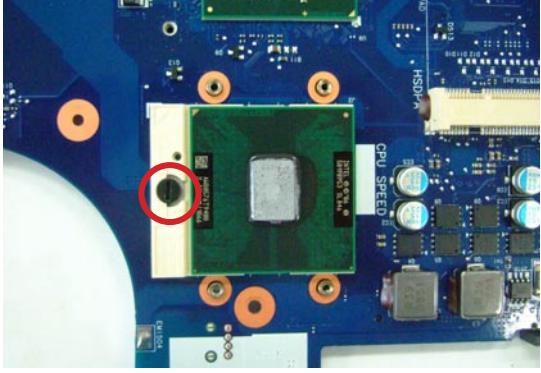
Part	Picture	Description
Main System	 A photograph showing the main system board (motherboard) being lifted from its socket. A hand is visible at the bottom, supporting the board.	17. Remove after Lift the Main board
	 A photograph showing the USB module being separated from the main system board. Two screws are circled in red on the board.	18. Separate USB Module by removing the screw (2 EA) as shown in the picture.
	 A photograph showing the bottom cover of the laptop standing upright against the LCD panel.	19. Make the Bottom Cover upright to the LCD Panel.
	 A photograph showing the LCD panel being separated from the bottom cover. Two screws are circled in red on the bottom cover.	20. Separate LCD Panel and Bottom Cover by removing the screw (2 EA) as shown in the picture.

3. Disassembly and Reassembly

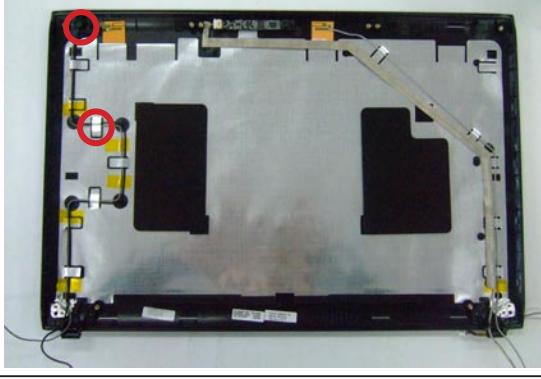
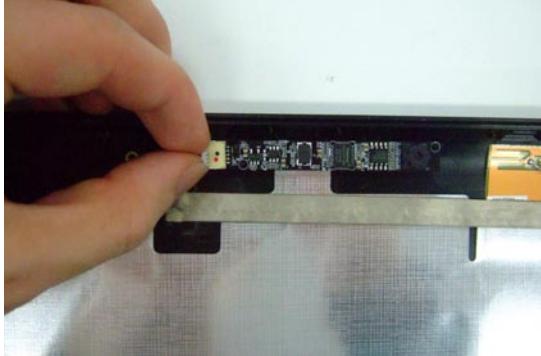
Part	Picture	Description
Main System		21. Picture when the Main board is separated
		22. To remove the ODD Connector Module, unlock the Connector (red circle) as shown, and then remove the FPC cable.
		23. To remove the ODD Connector, remove the Screws (2EA) as shown, and then remove the Connector which connects PCB and ODD..
		24. To remove the HDD Connector, remove the Screws (2EA) as shown, and then remove the Connector which connects PCB and HDD.

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3. Disassembly and Reassembly

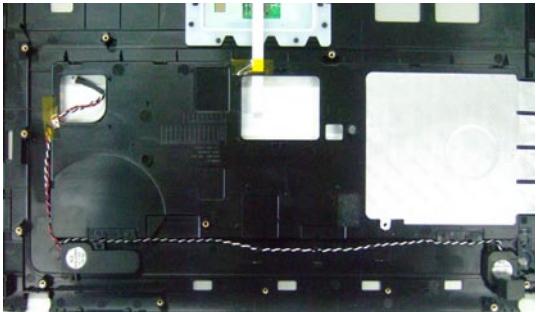
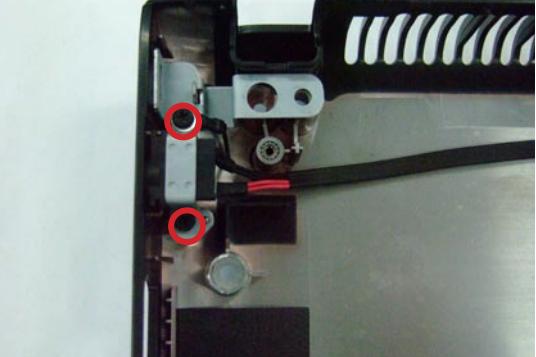
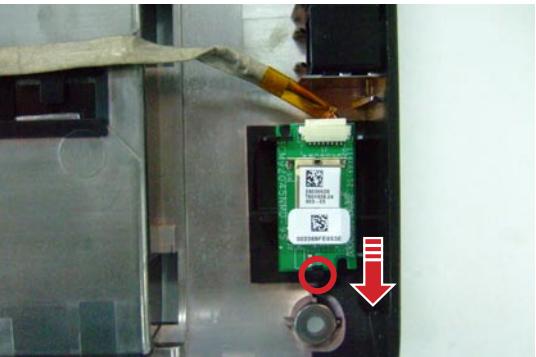
Part	Picture	Description
Main System		25. Separate it to the arrow direction after removing the screw(1EA) which fixes WLAN..
		26. Remove the screw (6EA) and cooling fan cable to separate CPU and the cooling fan of the graphic card.
LCD Ass'y		27. Lift CPU up after rotate the screw fully counterclockwise to separate CPU.
		28. Remove the screw (6 EA) after removing Rubber-LCD Cap as shown in the picture. [Caution] Be careful not to make scratch on the LCD Panel when you removing Rubber-LCD Cap.

3. Disassembly and Reassembly

Part	Picture	Description
LCD Ass'y		29. Insert your hand into the gap of the LCD back and LCD front and then separate first, the upper part of the LCD front and second, both side of the LCD front then finally the bottom side of it.
		30. To separate the LCD Panel, 1) Remove the screw(2EA) at the upper part as shown in the picture. 2) Remove the screw(4EA) which fixes Bracket at the lower part as shown in the picture.
		31. Remove the MIC cable which fixed on the bottom cover, and then remove D-MIC.
		32. Front Cover which is separated from LCD Panel.

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3. Disassembly and Reassembly

Part	Picture	Description
TOP Ass'y		<p>33. To separate speaker 1) Separate the speaker cable from the Bottom Cover.</p> <p>[Caution] Carefully remove the speaker because the speaker fixed with the adhesive on the cover.</p>
		<p>34. Separate the Assy after removing the fixing screw as shown in the picture.</p>
		<p>35. Pull the part (●) as shown in the figure toward the arrow with your fingers or tweezers, and then lift up and remove the Bluetooth.</p> <p>[Caution] When pull the part with your fingers or tweezers, do not apply too much pressure.</p>
		<p>36. The picture of Bottom Cover which is separated completely</p>

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3. Disassembly and Reassembly

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4. Troubleshooting

4-1. General

Tools used for repairing the product

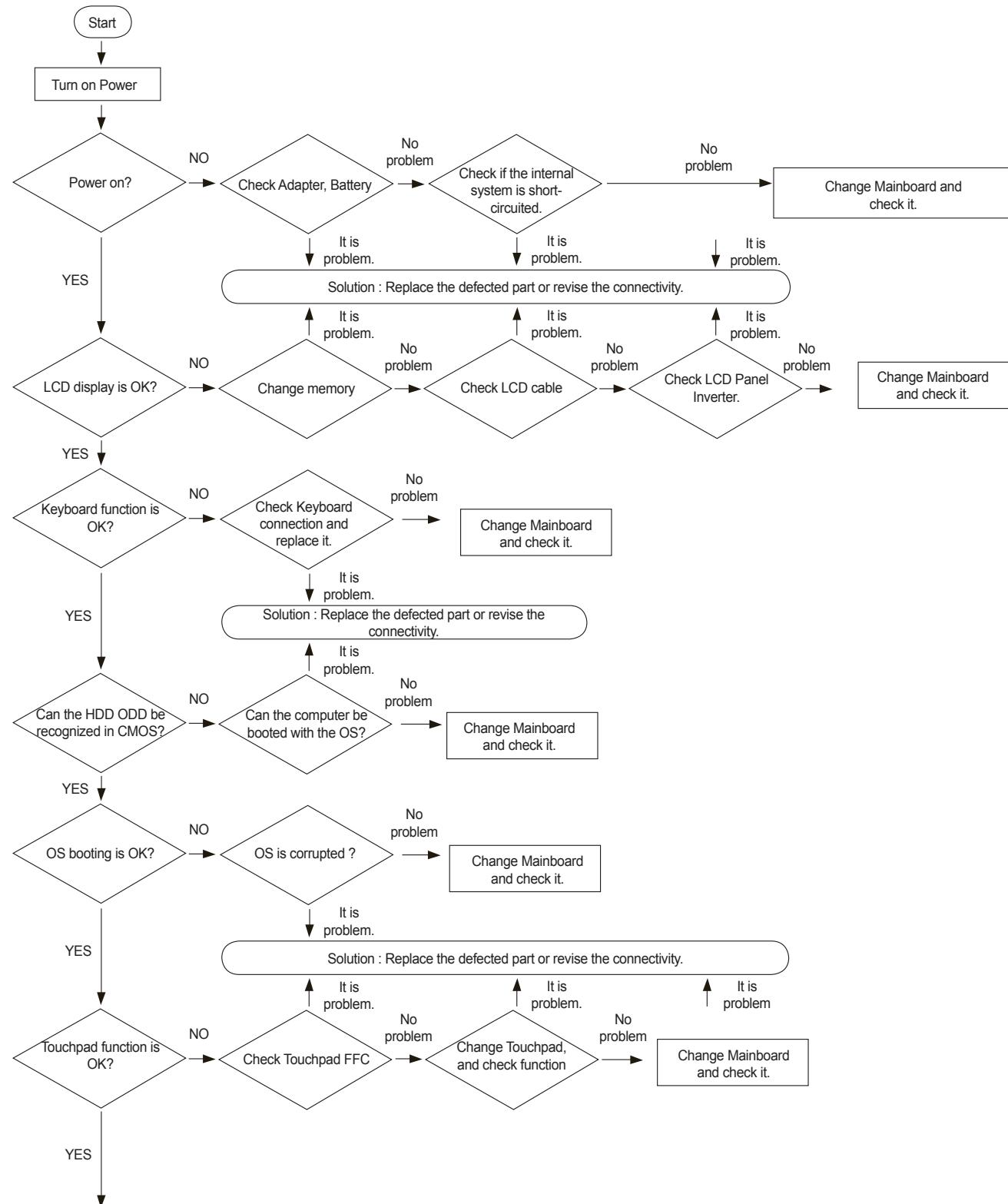
- System Diagnostics Disk
- MS-DOS Booting Disk
- System Diagnostics Card
- Screwdrivers (+, -)
- Pincette
- Multimeter
- Oscilloscope / Logic Analyzer

Replaceable Unit (FRU: Field Replaceable Unit)

- DDR2 SODIMM Module
- 2.5"SATA HDD
- Wireless LAN Module (Option) / Bluetooth Module (Option)
- Keyboard
- System Fan
- Touch Pad
- LCD Panel
- Main Board
- Harness Cable - Touchpad FFC, Bluetooth Cable, LCD Cable, Wireless LAN Antenna (Three case), Camera cable

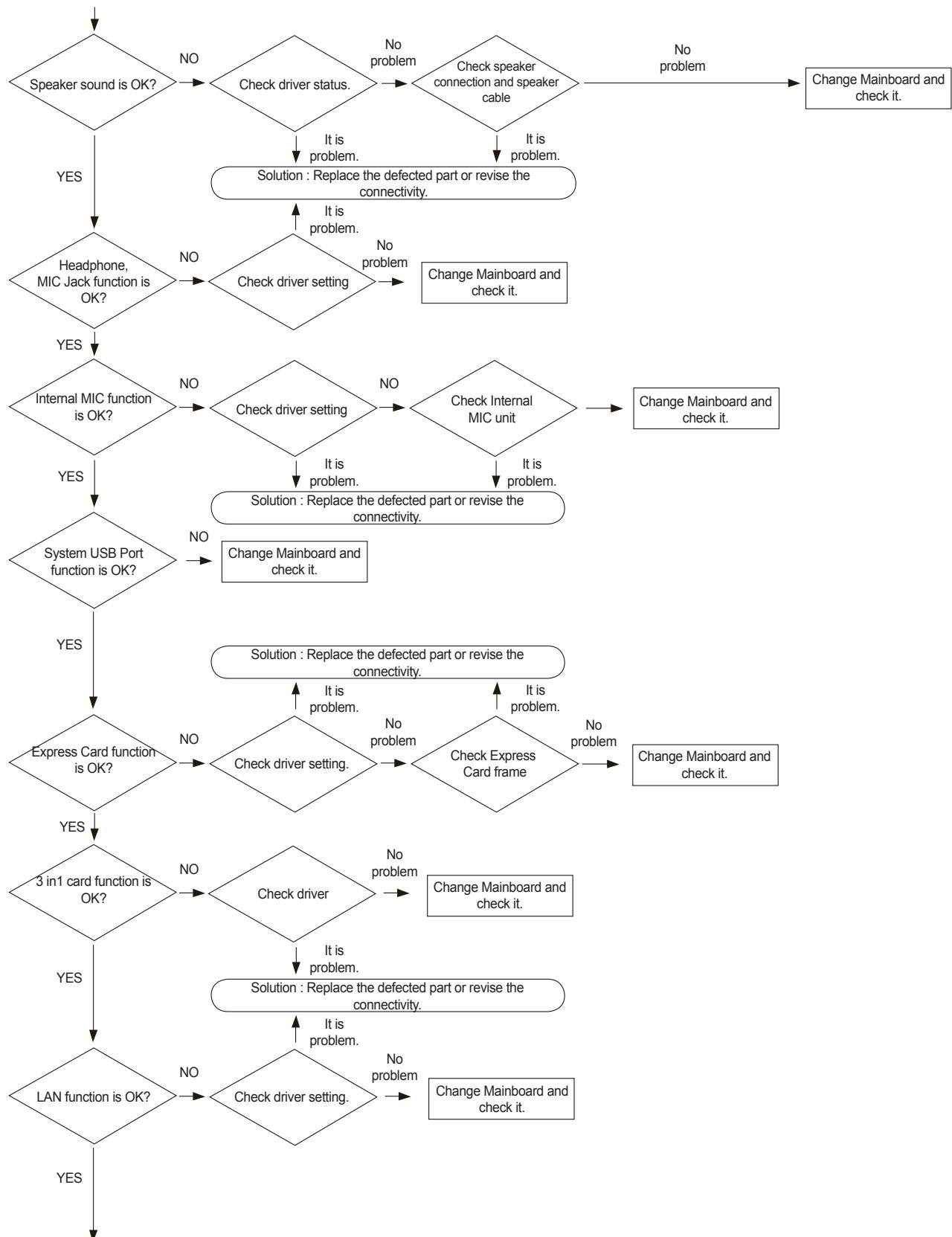
4. Troubleshooting

4-2. Debugging Flow Chart

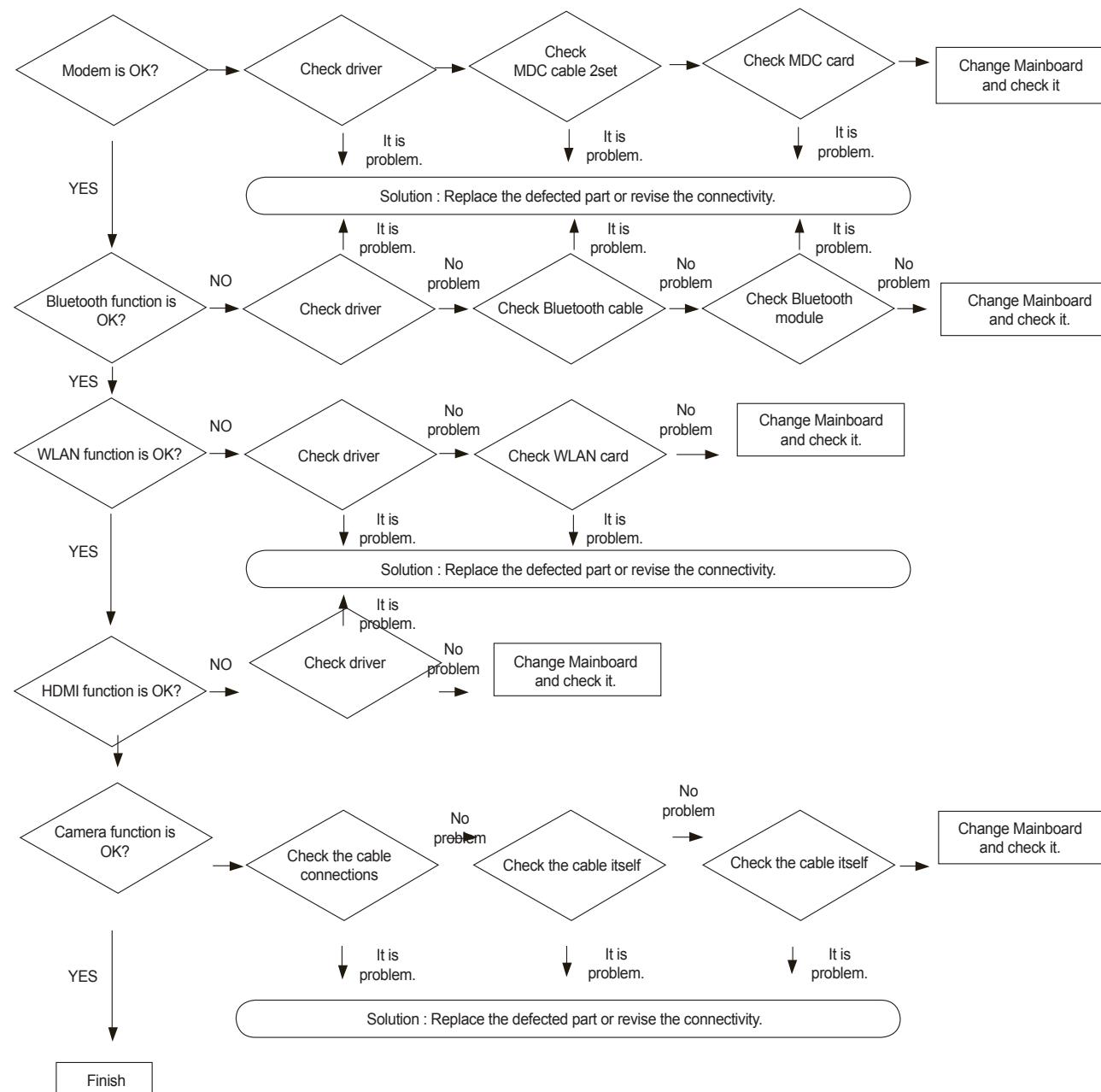


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4. Troubleshooting

4-3. System Diagnosis

System Diagnostics Card

The Diagnostics Card shows the system operations during the POST (Power On Self Test) in a 2 digit hexadecimal number by connecting the cable to the 10 pin connector below the PCMCIA slot after separating the Top part. The card is used to evaluate the reason for the malfunction without disassembling the system when the system malfunctions and to test if the system operates normally after replacing a defective FRU.

Chipset POST Codes Table

POST Code	Function	Phase	Component
0xA0	MRC Entry	PEI	chipset/MRC
0x01	Enable MCHBAR	PEI	chipset/MRC
0x02	Check ME existence	PEI	chipset/MRC
0x03	Check for DRAM initialization interrupt and reset fail	PEI	chipset/MRC
0x04	Determine the system Memory type based on first populated socket	PEI	chipset/MRC
0x05	Verify all DIMMs are DDR2 and SO-DIMMS, which are unbuffered	PEI	chipset/MRC
0x06	Verify all DIMMs are Non-ECC	PEI	chipset/MRC
0x07	Verify all DIMMs are single or double sided and not mixed	PEI	chipset/MRC
0x08	Verify all DIMMs are x8 or x16 width	PEI	chipset/MRC
0x09	Calculate number of Row and Column bits	PEI	chipset/MRC
0x10	Calculate number of banks for each DIMM	PEI	chipset/MRC
0x11	Determine raw card type	PEI	chipset/MRC
0x12	Find a common CAS latency between the DIMMS and the MCH	PEI	chipset/MRC
0x13	Determine the memory frequency and CAS latency to program	PEI	chipset/MRC
0x14	Determine the smallest common timing value for all DIMMS	PEI	chipset/MRC
0x17	Power management resume	PEI	chipset/MRC
0x18	Program DRAM type (DDR2/DDR3) and Power up sequence	PEI	chipset/MRC
0x19	Program the correct system memory frequency	PEI	chipset/MRC
0x20	Program the correct Graphics memory frequency	PEI	chipset/MRC
0x21	Early DRC initialization	PEI	chipset/MRC
0x22	Program the DRAM Row Attributes and DRAM Row Boundary registers PRE JEDEC.b	PEI	chipset/MRC
0x23	Program the RCOMP SRAM registers	PEI	chipset/MRC
0x24	Program DRAM type (DDR2/DDR3) and Power up sequence	PEI	chipset/MRC
0x25	Program the DRAM Timing	PEI	chipset/MRC
0x26	Program the DRAM Bank Architecture register	PEI	chipset/MRC
0x27	Enable all clocks on populated rows	PEI	chipset/MRC
0x28	Program MCH ODT	PEI	chipset/MRC
0x29	Program tRD	PEI	chipset/MRC
0x30	Miscellaneous Pre JEDEC steps	PEI	chipset/MRC
0x31	Program clock crossing registers	PEI	chipset/MRC
0x32	Program the Egress port timings	PEI	chipset/MRC
0x33	Program the Memory IO registers	PEI	chipset/MRC
0x34	Perform steps required before JEDEC	PEI	chipset/MRC
0x35	Perform JEDEC memory initialization for all memory rows	PEI	chipset/MRC
0x36	Setup DRAM control register for normal operation and enable	PEI	chipset/MRC

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POST Code	Function	Phase	Component
0x37	Do ZQ calibration for DDR3	PEI	chipset/MRC
0x38	Perform final Dra/Drb programming, Set the mode of operation for the memory channels	PEI	chipset/MRC
0x39	Set Enhanced addressing mode for each channel	PEI	chipset/MRC
0x40	Perform steps required after JEDEC init	PEI	chipset/MRC
0x41	Program the receive enable reference timing control register	PEI	chipset/MRC
0x42	Post receive enable initialization	PEI	chipset/MRC
0x43	Enable sense amps. Reset read/write DQS pointers	PEI	chipset/MRC
0x44	Perform ME steps	PEI	chipset/MRC
0x45	Clear DRAM initialization bit in the ICH.	PEI	chipset/MRC
0x46	Program Thermal Management	PEI	chipset/MRC
0x47	Program TS on DIMM	PEI	chipset/MRC
0x48	Program TS on Board	PEI	chipset/MRC
0xAF	Exit MRC	PEI	chipset/MRC
0xE0	#define MEM_ERR_BAD_DIMM (S11)	PEI	chipset/MRC
0xE1	#define MEM_ERR_ECC_DIMM (S06)	PEI	chipset/MRC
0xE2	#define MEM_ERR_SIDES (S07)	PEI	chipset/MRC
0xE3	#define MEM_ERR_WIDTH (S08, S10)	PEI	chipset/MRC
0xE4	#define MEM_ERR_TRFC (FindTrasTrpTrcd)	PEI	chipset/MRC
0xE5	#define MEM_ERR_CAS_LATENCY (S12, S13)	PEI	chipset/MRC
0xE6	#define MEM_ERR_REFRESH (ProgDrt)	PEI	chipset/MRC
0xE7	#define MEM_ERR_BL8 (S14)	PEI	chipset/MRC
0xE9	#define MEM_ERR_FREQUENCY (findTCLTacTCIk, S13, S12, ProgramGraphicsFrequency, ProgMchOdt, GetPlatformData)	PEI	chipset/MRC
0xEA	#define MEM_ERR_SIZE (S14)	PEI	chipset/MRC
0xEC	#define MEM_ERR_TRAS (FindTrasTrpTrcd)	PEI	chipset/MRC
0xED	#define MEM_ERR_TRP (FindTrasTrpTrcd)	PEI	chipset/MRC
0xEE	#define MEM_ERR_TRCD (FindTrasTrpTrcd)	PEI	chipset/MRC
0xEF	#define MEM_ERR_TWR (FindTrasTrpTrcd)	PEI	chipset/MRC
0xF0	#define MEM_ERR_RCVEN_FINDLOW (CalibrateRcvenForGroup)	PEI	chipset/MRC
0xF1	#define MEM_ERR_RCVEN_FINDEDGE (CalibrateRcvenForGroup)	PEI	chipset/MRC
0xF2	#define MEM_ERR_RCVEN_FINDPREAMBLE (CalibrateRcvenForGroup)	PEI	chipset/MRC
0xF6	#define MEM_ERR_RCVEN_PREAMBLEEDGE (CalibrateRcvenForGroup)	PEI	chipset/MRC
0xF3	#define MEM_ERR_RCVEN_FINDCENTER (CalibrateRcvenForGroup)	PEI	chipset/MRC
0xF4	#define MEM_ERR_TYPE (S11, S04)	PEI	chipset/MRC
0xF5	#define MEM_ERR_RAWCARD (S11)	PEI	chipset/MRC
0xFA	#define MEM_ERR_SFF (ProgWrioDII)	PEI	chipset/MRC
0xFB	#define MEM_ERR_THERMAL (ProgramThrottling)	PEI	chipset/MRC
0xA0xx	Launch BIOS ACMSclean	PEI	chipset/MRC
0xA4xx	Launch BIOS ACMScheck	PEI	chipset/MRC
0xE5	Wait for ME ready	DXE	HECI/iAMT
0xE6	ME Ready	DXE	HECI/iAMT
0x00	Early Microcode update for CAR	CEI / SEC	Core
0x01	Enable CAR	CEI / SEC	Core

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4. Troubleshooting

POST Code	Function	Phase	Component
0x02	CAR Done, initial stack	CEI / SEC	Core
0xEE	unknown CPU ID to load uCode	CEI / SEC	CPU
0xEF	unknown DT CPU to load uCode	CEI / SEC	CPU
0xnn	File count found in a volume	PEI	Core
0x11	Debug Test driver for debug test PPI 1 (If install debugTest driver)	PEI	Core
0x22	Debug Test driver for debug test PPI 2 (If install debugTest driver)	PEI	Core
0x33	Debug Test driver for debug test PPI 3 (If install debugTest driver)	PEI	Core
0x44	Entry point of loadfile	PEI	Core
0x88	Entry point of apMuLoader	PEI	Core
0x80	A PEIM found	PEI	Core
0x82	PEIM not dispatched yet	PEI	Core
0x84	PEIM satisfies depex	PEI	Core
0x86	Image loaded but fail on security	PEI	Core
0x88	Executing a PEIM	PEI	Core
0x8A	Processing notify event for newly installed PPI	PEI	Core
0x8C	Handing off to next phase (DXE)	PEI	Core
0x8F	Fail to hand off to next phase, system halt	PEI	Core
0x90	All.PEIM.dispatched!.Going.to.Dxepl!	PEI	Core
0xCC	AP Micro-code update	PEI	Core
0x20	S3 resume entry	S3 resume	Core
0x21	Start running Boot-time bootscripts	S3 resume	Core
0x22	Start running Run-time bootscripts	S3 resume	Core
0x23	End of S3 resume, jump back to Waking vector	S3 resume	Core
0x80	Initialize the chipset	Crisis Recovery	Core
0x81	Initialize the bridge	Crisis Recovery	Core
0x82	Initialize the CPU	Crisis Recovery	Core
0x89	Set Huge Segment	Crisis Recovery	Core
0x83	Initialize system timer	Crisis Recovery	Core
0x84	Initialize system I/O	Crisis Recovery	Core
0x88	Initialize Multi Processor	Crisis Recovery	Core
0x8A	Initialize OEM special code	Crisis Recovery	Core
0x8B	Initialize PIC and DMA	Crisis Recovery	Core
0x8C	Initialize Memory type	Crisis Recovery	Core
0x8D	Initialize Memory size	Crisis Recovery	Core
0x8F	Initialize SMM	Crisis Recovery	Core
0x90	System memory test	Crisis Recovery	Core
0x91	Initialize interrupt vectors	Crisis Recovery	Core
0x92	Initialize Run Time Clock	Crisis Recovery	Core
0x99	Initialize security	Crisis Recovery	Core
0x93	Initialize video	Crisis Recovery	Core
0x94	Output one beep	Crisis Recovery	Core
0x98	USB Initialization	Crisis Recovery	Core
0x95	Initialize the installed boot devices	Crisis Recovery	Core
0x96	Clear Huge segment	Crisis Recovery	Core
0x97	Boot Crisis Disk	Crisis Recovery	Core

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POST Code	Function	Phase	Component
0x20	DXE starts	DXE	Core
0x30	BIOSPSM	DXE	Core
0x02	BIOSBlockIO	DXE	Core
0x00	BIOSPSM Exception Handler - Divide error	BIOSPSM	Core
0x38	Cannot locate LegacyRegion DXE	BIOSPSM	Core
0xB1	ACPI Support driver Installed	DXE	Core
0xE0	BDS Entry	DXE	Core
0x07	IA32 variable driver entry	DXE	Core
0xD	conspliter driver entry	DXE	Core
0x10	partition driver entry	DXE	Core
0x49	pciRootBridge driver entry	DXE	Core
0xC6	pciBusDriver entry	DXE	Core
0xE0	Go to legacy BIOS or BDS Entry Point	DXE	Core
0x90	Start Image	DXE	Core
0x90	Start Image Successfully	DXE	Core
0x90	Start Image Failed	DXE	Core
0x33	Debug Test driver for debug test PPI 1	DXE	Core
0x22	Debug Test driver for debug test PPI 2	PEI	Core
0x11	Debug Test driver for debug test PPI 3	PEI	Core
0x02	Invalid event # for measuring Separator Event	PEI	TCG
0x02	Invalid event # for measuring Separator Event	PEI	TCG
0x02	PCR Index over limit (PCR > 23)	PEI	TCG
0x02	TCG copy memory failed	PEI	TCG
0x09	TCG log event failed	PEI	TCG
0x09	Setup event log failed	PEI	TCG
0x12	TIS set active locality failed	PEI	TCG
0x12	TIS relinquish active locality failed	DXE	TCG
0x12	TIS wait command ready failed (prepare to send)	DXE	TCG
0x12	TIS abort 'send 'command due to timeout	DXE	TCG
0x12	TIS abort 'sendAndGo 'command due to timeout	DXE	TCG
0x04	TIS wait bit set failed before send last byte	DXE	TCG
0x12	TIS abort command due to timeout before send last byte	DXE	TCG
0x04	TIS wait bit clear failed when sending last byte	DXE	TCG
0x22	TCG Physical Presence execution	DXE	TCG
0xB1	TCG DXE common pass through	DXE	TCG
0xE3	First Legacy BIOS Task table for legacy reset	LBT	Core
0x20	Verify that DRAM refresh is operating by polling the refresh bit in PO RTB	LBT	Core
0xDA	Dummy PCIE Init entry, now handled by driver	LBT	Core
0x29	PMM (POST Memory Manager) init	LBT	Core
0xE5	WHEA init	LBT	Core
0x33	PDM (Post Dispatcher Manager) init	LBT	Core
0x01	IPMI ini	LBT	Core
0xD8	ASF Init	LBT	Core

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POST Code	Function	Phase	Component
0x09	Set in- POST flag in CMOS that indicates we are in POST. If this bit is not cleared by postClearBootFlagJ (AEh), the TrustedCore on next boot determines that the current configuration caused POST to fail and uses default values for configuration. Clear the	LBT	Core
0x2B	Enhanced CMOS init	LBT	Core
0xE0	EFI Variable Init	LBT	Core
0xC1	PEM (Post Error Manager) init	LBT	Core
0x3B	Debug Service Init (ROM Polit)	LBT	Core
0xDC	POST Update Error	LBT	Core
0x3A	Autosize external cache and program cache size for enabling later in POST.	LBT	Core
0x0B	Enable CPU cache. Set bits in cmos related to cache.	LBT	Core
0x0F	Enable the local bus IDE as primary or secondary depending on other drives detected.	LBT	Core
0x10	Initialize Power Management.	LBT	Core
0x14	Verify that the 8742 keyboard controller is responding. Send a self-test command to the 8742 and wait for results. Also read the switch inputs from the 8742 and write the keyboard controller command byte.	LBT	Core
0x1A	Initialize DMA command register with these settings: 1. Memory to memory disabled 2. Channel 0 hold address disabled 3. Controller enabled 4. Normal timing 5. Fixed priority 6. Late write selection 7. DREQ sense active 8. DACK sense active low. Initialize	LBT	Core
0x22	Reset the keyboard.	LBT	Core
0x40	Test A20 line	LBT	Core
0x67	Quick initialization of all Application Processors in a multi-processor system	LBT	Core
0x32	Compute CPU speed.	LBT	Core
0x69	Initialize the handler for SMM.	LBT	Core
0x6B	If CMOS is bad, load Custom Defaults from flash into CMOS. If successful, reboot.	LBT	Core
0x3C	If CMOS is valid, load chipset registers with values from CMOS, otherwise load defaults and display Setup prompt. If Auto Configuration is enabled, always load the chipset registers with the Setup defaults (Rev 6.0).	LBT	Core
0x3D	Load alternate registers with CMOS values	LBT	Core
0x42	Initialize interrupt vectors 0 thru 77h	LBT	Core
0x46	Verify the ROM copyright notice	LBT	Core
0x45	Initialize all motherboard devices.	LBT	Core
0x49	1. Size the PCI bus topology and set bridge bus numbers. 2. Set the system max bus number. 3. Write a 0 to the command register of every PCI device. 4. Write a 0 to all 6 base registers in every PCI device. 5. Write a -1 to the status register of every PC	LBT	Core
0xC6	Initialize note dock	LBT	Core
0xC5	PnPd dual CMOS (optional)	LBT	Core

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4. Troubleshooting

POST Code	Function	Phase	Component
0x48	Verify that the equipment specified in the CMOS matches the hardware currently installed. If the monitor type is set to 00 then a video ROM must exist. If the monitor type is 1 or 2 set the video switch to CGA. If monitor type 3, set the video switch to m	LBT	Core
0xD1	Initialize BIOS stack	LBT	Core
0xD3	Setup E820h and WAD memory map	LBT	Core
0x24	Set segment-register addressability to 4 GB	LBT	Core
0xCC	Redirect Int 10h to enable target board to use a remote serial video (PICO BIOS).	LBT	Core
0x8A	Initialize Extended BIOS Data Area and initialize the mouse.	LBT	Core
0x9D	Initialize Security Engine.	LBT	Core
0x55	USB Initialization	LBT	Core
0x52	Verify keyboard reset.	LBT	Core
0x54	Initialize keystroke clicker if enabled in Setup.	LBT	Core
0x76	Check status bits for keyboard-related failures. Display error messages on the screen.	LBT	Core
0x4A	Initialize all video adapters in system	LBT	Core
0x4C	Shadow video BIOS ROM if specified by Setup, and CMOS is valid and the previous boot was OK.	LBT	Core
0x59	Register POST Display Services, fonts, and languages with the POST Dispatch Manager.	LBT	Core
0x57	Initialize 1394 Firewire	LBT	Core
0xD6	Initialize PC card	LBT	Core
0x58	Test for unexpected interrupts. First do an STI for hot interrupts. Secondly, test the NMI for an unexpected interrupt. Thirdly, enable the parity checkers and read from memory, checking for an unexpected interrupt	LBT	Core
0x3F	ROMPolit memory init	LBT	Core
0xC4	Install the IRQ vectors (Sever Hotkey)	LBT	Core
0x7C	Initialize the hardware interrupt vectors from 08 to 0F and from 70h to 77H. Also set the interrupt vectors from 60h to 66H to zero.	LBT	Core
0x41	ROM Pilot Init	LBT	Core
0x4B	Initialize QuietBoot if it is installed. Enable both keyboard and timer interrupts (IRQ0 and IRQ1). If your POST tasks require interrupts off, preserve them with a PUSHF and CLI at the beginning and a POPF at the end. If you change the PIC, preserve the e	LBT	Core
0xDE	Initialize and UNDI ROM (fro remote flash)	LBT	Core
0xC6	Initial and install console for UCR	LBT	Core
0x4E	Display copyright notice.	LBT	Core
0xD4	Get CPU branding string	LBT	Core
0x50	Display CPU type and speed	LBT	Core
0xC9	pretask before EISA init	LBT	Core
0x51	EISA Init	LBT	Core
0x5A	Display prompt "Press F2 to enter SETUP"	LBT	Core
0x5B	Disable CPU cache.	LBT	Core
0x5C	Test RAM between 512K and 640K.	LBT	Core
0x60	Determine and test the amount of extended memory available. Determine if memory exists by writing to a few strategic locations and see if the data can beread back. If so, perform an address-line test and a RAM test on the memory. Save the total extended	LBT	Core

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4. Troubleshooting

POST Code	Function	Phase	Component
0x62	The amount of memory available. This test is dependent on the processor, since the test will vary depending on the width of memory (16 or 32 bits). This test will also use A20 as the skew address to prevent corruption of the system memory.	LBT	Core
0x64	Jump to UserPatch1.	LBT	Core
0x66	Set cache registers to their CMOS values if CMOS is valid, unless auto configuration is enabled, in which case load cache registers from the Setup default table.	LBT	Core
0x68	Enable external cache and CPU cache if present. Configure non-cacheable regions if necessary.	LBT	Core
0x6A	Display external cache size on the screen if it is non-zero.	LBT	Core
0x6C	Display shadow message	LBT	Core
0xCA	post EISA init	LBT	Core
0x70	Check flags in CMOS and in the TrustedCore data area for errors detected during POST. Display error messages on the screen.	LBT	Core
0x72	Check status bits to see if configuration problems were detected. If so, display error messages on the screen.	LBT	Core
0x4F	Initialize MultiBoot. Allocate memory for old and new MultiBoot history tables.	LBT	Core
0xCD	Reclaim console vector after HW vectors initialized.	LBT	Core
0x7D	Initialize Intelligent System Monitoring.	LBT	Core
0x7E	The Coprocessor initialization test. Use the floating point instructions to determine if a coprocessor exists instead of the ET bit in CR0.	LBT	Core
0xC1	Check Boot Type (Server BIOS)	LBT	Core
0x80	Disable onboard COM and LPT ports before testing for presence of external I/O devices..	LBT	Core
0xCA	Redirect Int 15h to enable target board to use remote keyboard (PICO BIOS).	LBT	Core
0x88	Initialize interrupt controller.	LBT	Core
0x81	Run late device initialization routines.	LBT	Core
0x87	Initialize motherboard configurable devices.	LBT	Core
0x85	Display any ESCD read errors and configure all PnP ISA devices.	LBT	Core
0x82	Test and identify RS232 ports.	LBT	Core
0x84	Test and identify parallel ports.	LBT	Core
0x86	Initialize onboard I/O and BDA according to CMOS and presence of external devices.	LBT	Core
0x83	Configure Fisk Disk Controller.	LBT	Core
0xCE	Initialize digitizer device and display installed message if successful.	LBT	Core
0x89	Enable non-maskable interrupts.	LBT	Core
0x8C	Initialize both of the floppy disks and display an error message if failure was detected. Check both drives to establish the appropriate diskette types in the TrustedCore data area		
0xCB	Redirect Int 13h to Memory Technologies Devices such as ROM, RAM, PCMCIA, and serial disk (PICO BIOS).		
0xCD	Remap I/O and memory address space for PCMCIA (PICO BIOS).		
0x90	Initialize hard-disk controller. If the CMOS ram is valid and intact, and fixed disks are defined, call the fixed disk init routine to initialize the fixed disk system and take over the appropriate interrupt vectors.		
0x8B	Setup interrupt vector and present bit in Equipment byte.		
0x95	1. Check CMOS for CD-ROM drive present 2. Activate the drive by checking for media present 3. Check sector 11h (17) for Boot Record Volume Descriptor 4. Check the boot catalog for validity 5. Pick a boot entry 6. Create a Specification Packet	LBT	Core

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4. Troubleshooting

POST Code	Function	Phase	Component
0x92	Jump to UserPatch2.	LBT	Core
0xB6	If password on boot is enabled, a call is made to Setup to check password. If the user does not enter a valid password, Setup does not return.	LBT	Core
0x98	Search for option ROMs. Rom scan the area from C800h for a length of BCP_ROM_Scan_Size (or to E000h by default) on every 2K boundary, looking for add on cards that need initialization	LBT	Core
0x93	Build the MPTABLE for multi-processor boards	LBT	Core
0xD9	IPMI late init	LBT	Core
0x9C	Set up Power Management. Initiate power-management state machine.	LBT	Core
0xC7	Late note dock init	LBT	Core
0x9E	Enable hardware interrupts	LBT	Core
0xA0	Setup time tick for current date/time	LBT	Core
0xA2	Setup Numlock indicator. Display a message if key switch is locked.	LBT	Core
0xA4	Initialize typematic rate	LBT	Core
0xDB	StrongROM Test	LBT	Core
0xE2	OEM security key test	LBT	Core
0xC2	Write PEM errors.	LBT	Core
0xBA	Initialize the SMBIOS header and sub-structures.	LBT	Core
0xC3	Display PEM errors.	LBT	Core
0xA8	Overwrite the "Press F2 for Setup" prompt with spaces, erasing it from the screen.	LBT	Core
0xAA	Scan the key buffer to see if the F2 key was struck after keyboard interrupts were enabled. If an F2 keystroke is found, set a flag.	LBT	Core
0xE1	Start Periodic Timer (TC Subscribe)	LBT	Core
0xAC	Check if "Enter SETUP" is pressed.	LBT	Core
0x8F	Count the number of ATA drives in the system and update the number in bdaFdiskcount.	LBT	Core
0x91	Configure the local bus IDE timing register based on the drives attached to it.	LBT	Core
0x9F	Check the total number of Fast Disks (ATA and SCSI) and update the bdaFdiskCount.	LBT	Core
0xD7	Check if FirstWare HPA exists	LBT	Core
0xAE	Clear ConfigFailedBit and InPostBit in CMOS.	LBT	Core
0xB0	Check for errors and decide if needs to run Setup.	LBT	Core
0xB2	Change status bits in CMOS and/or the TrustedCore data area to reflect the fact that POST is complete.	LBT	Core
0xB5	Fade out OEM Logo or post string	LBT	Core
0xC5	End hotkey detection (Server BIOS)	LBT	Core
0xBE	If BCP option is enabled, clear the screen before booting.	LBT	Core
0xB6	If password on boot is enabled, a call is made to Setup to check password. If the user does not enter a valid password, Setup does not return.	LBT	Core
0xBC	Clear parity-error latch	LBT	Core
0xB7	Initialize ACPI BIOS.	LBT	Core
0x9B	Enable CPU management (Geyserville I)	LBT	Core
0xBD	Display Boot First menu if MultiBoot is installed and hotkey pressed.	LBT	Core
0xBF	Check virus and backup reminders.	LBT	Core
0x97	Create pointer to MP table in Extended BDA.	LBT	Core

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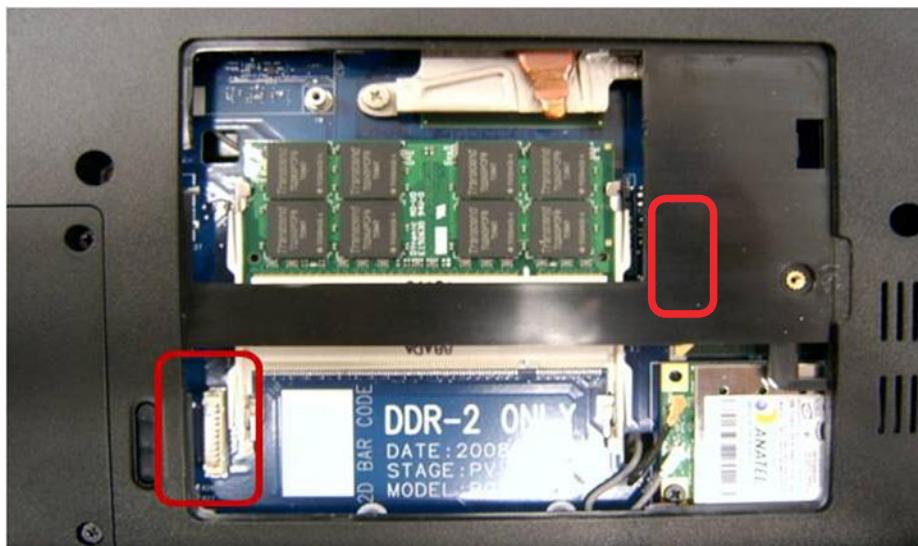
4. Troubleshooting

POST Code	Function	Phase	Component
0x99	Check support status for Self-Monitoring Analysis Reporting Technology (disk-failure warning).	LBT	Core
0xB1	Unload ROM Pilot	LBT	Core
0xDD	Perform remote flash if requested	LBT	Core
0xC7	If UCR redirection is installed, remove display manager and unhook INT10	LBT	Core
0XDF	Shutdown the PXE UNDI code	LBT	Core
0xB3	Store enhanced CMOS values in non-volatile area	LBT	Core
0xE4	Last Legacy BIOS Task before hand off to UEFI/DXE	LBT	Core
0xB9	Clear all screen graphics before booting.	bootLegacy	Core
0xC0	INT19 entry for legacy boot	bootLegacy	Core
0xEF	Invalid AP #	SDXE	Core
0xEF	Non-Yohna and non-Morem class CPU found for SDXE (getTSCFreq)	SDXE	Core
0xEE	AP cannot synch BSP in SDXE (syncWithBSP)	SDXE	Core
0xEE	BSP cannot synch w/ AP in SDXE (syncWithAP)	SDXE	Core

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4. Troubleshooting

System Diagnostics Card



- The Diagnostic Card is inserted into the Debug Card slot, and displays the system operation status as 2 digit-hexadecimal values during the POST (Power On Self Test). It is used to check the error cause without disassembling the system when it seems that the system does not operate properly, or to test whether the system operate properly after replacing the FRU which causes the error.

Debugging Code



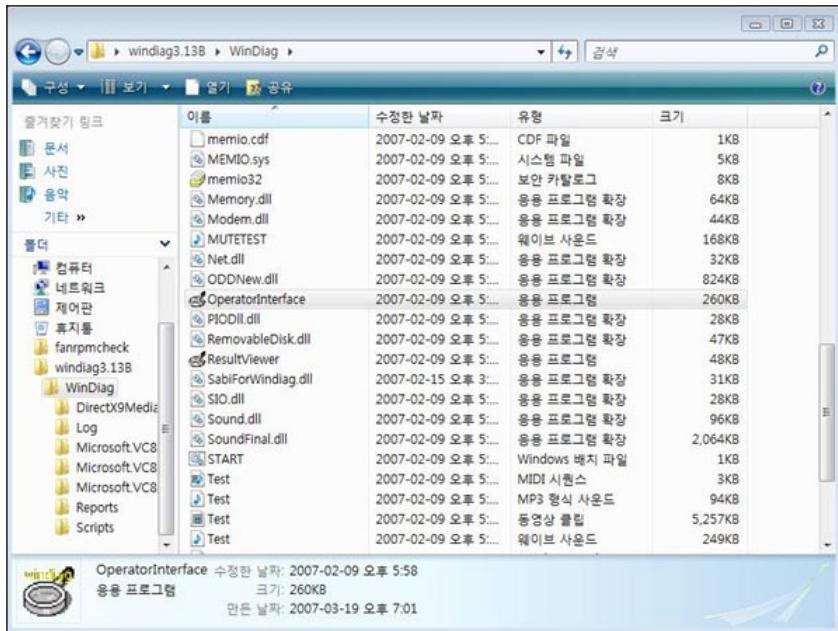
- In general, when circuit problems or inferior parts are found, the system in a specific code stops. The followings are error codes in each part of the system.

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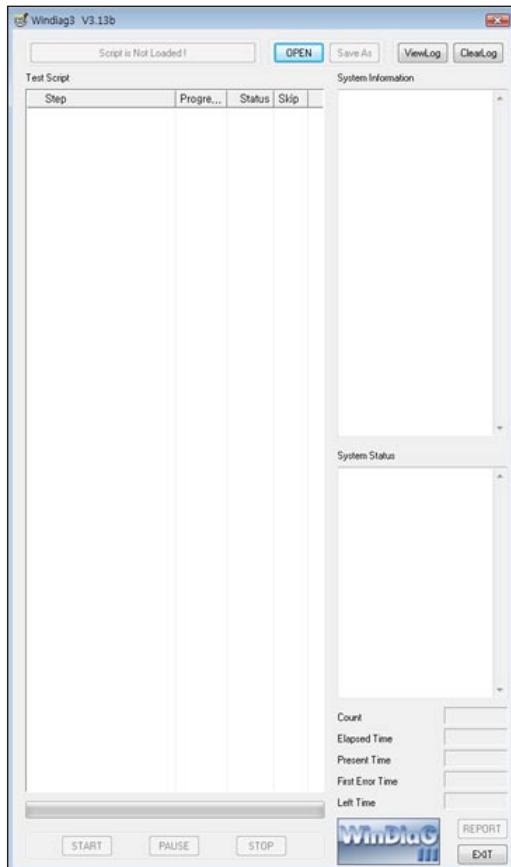
4. Troubleshooting

4-4. Diagnosis application

1. After copying Windiag3 in any folder, execute OperatorInterface.exe.



2. If OperatorInterface.exe runs properly, this window will be shown.



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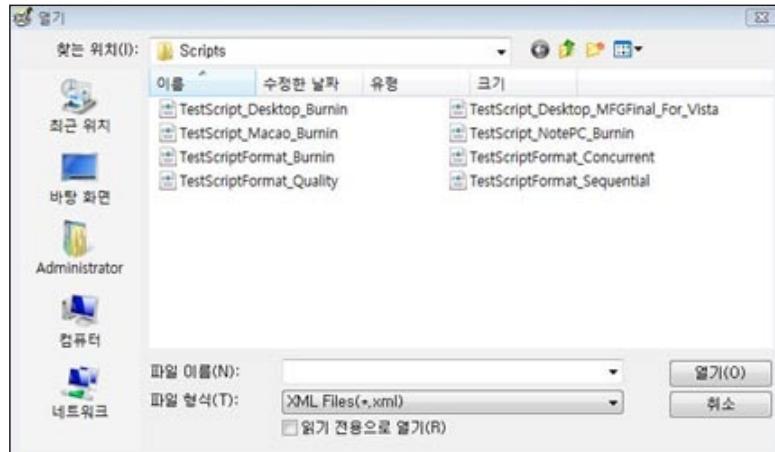
4. Troubleshooting

- Click "Open" to open Script file.

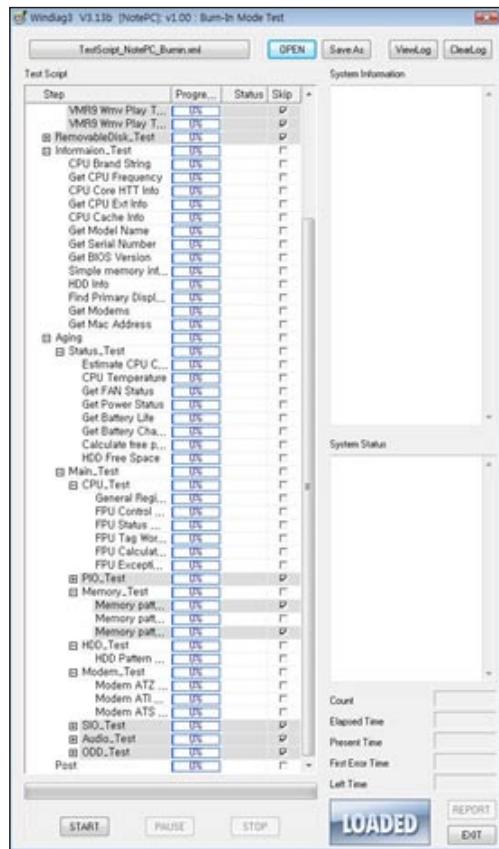
In case of Note PC, click TestScript_NotePC_Bumin.xml.

In case of Desktop, click TestScript/Desktop_Bumin.xml

When you would like to execute each item for only once : Select the testScriptFormat_Concurrent.xml.



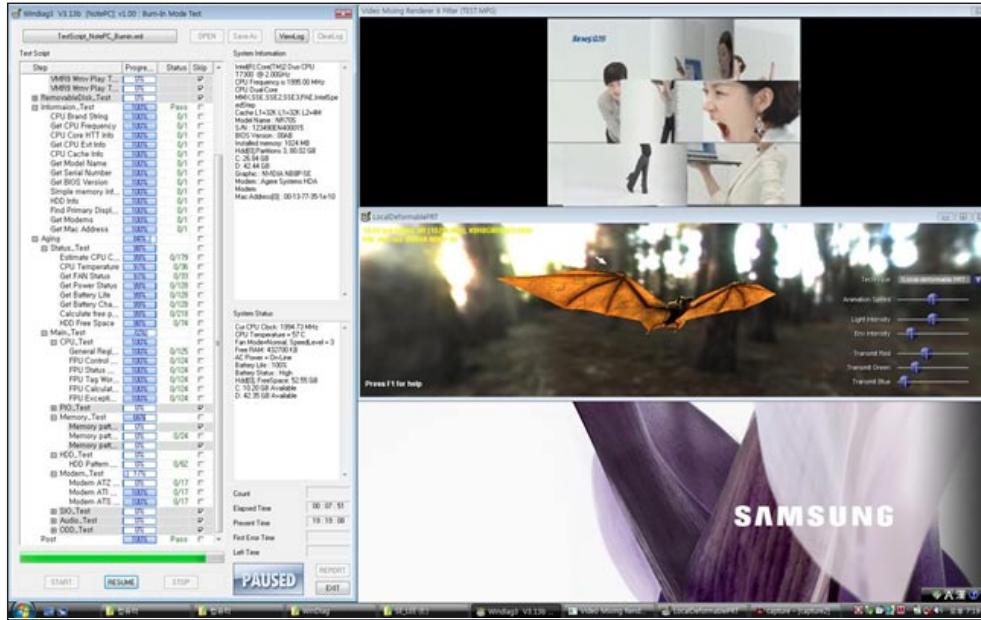
- After that, OperatorInterface shows the following scripts on the left of the display.



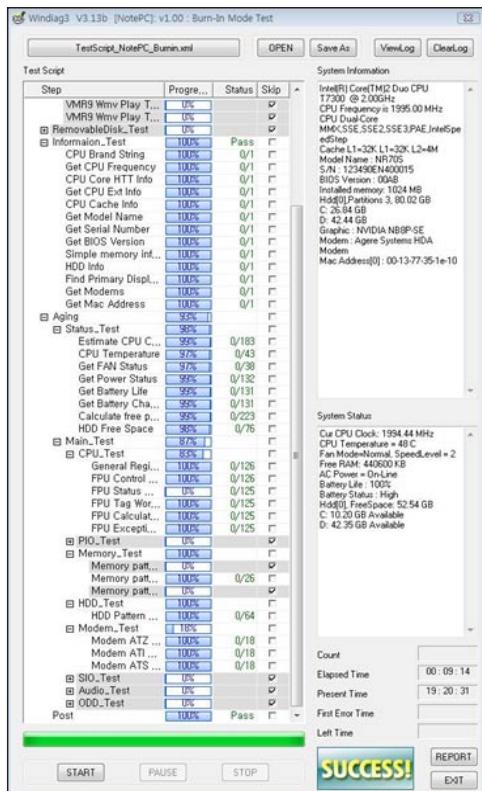
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- Click "Start" button, then test begins.



- If you want to stop this, click "stop" button. If all modules don't stop in 2 minutes 30 seconds, message window will ask you about a forced stop. At that time, by selecting "yes", it can be ended by force.



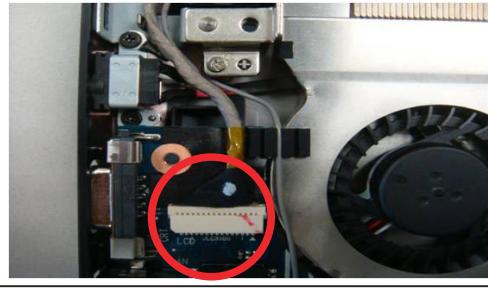
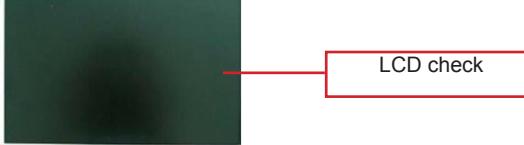
- Click "EXIT", then it will be closed.

4. Troubleshooting

4-5. H/W Troubleshooting

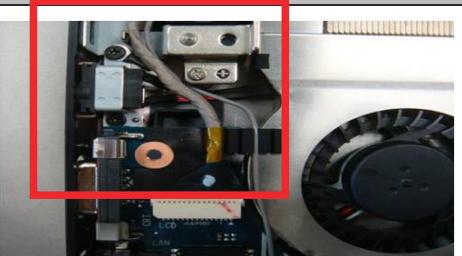
Please refer to the chapter 3 to assemble and disassemble.

LCD Related Troubles

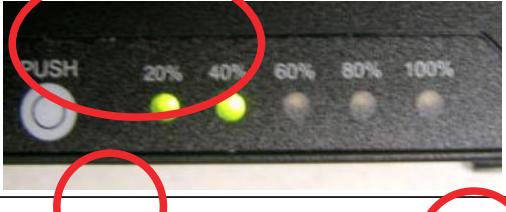
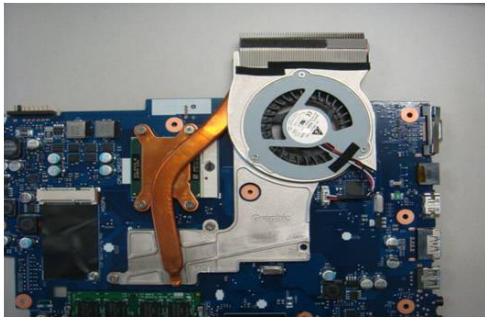
1. The screen is dark or the colors of the screen are distorted.	
1. Check the connection status <ul style="list-style-type: none">- LCD Module LCD Cable- LCD Cable and Main board LCD Connector- LCD Cable <p>→ Re-fixation Cable and Connector</p>	
2. Replace the LCD cable	Defectiveness confirmation
3. Check if there is a part of the LCD that is bent or broken due to impact <p>→ Replace the LCD when it has a fault</p>	
2. No picture appears on the screen.	
1. Check the connection status <ul style="list-style-type: none">- Check the connection of LCD cable of the LCD Module, the Main board and the LCD connector.- Checking the LCD cable connection <p>→ Re-fixation Cable and Connector</p>	
2. Check if the System LED of the main board is blinking.	Check operating or not 
3. Check if the memory module is out of order.	
4. Check if the Power button can be normally pressed.	Check operating or not

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4. Troubleshooting

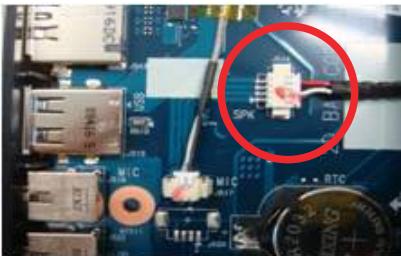
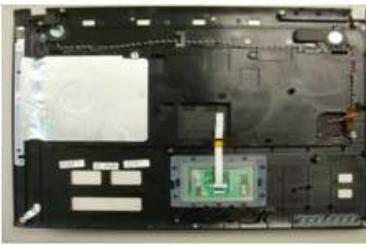
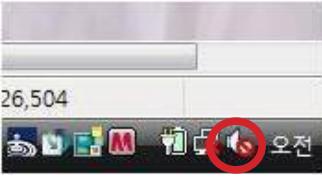
3. The LCD blinks while the system is in operation.	
1. Check if there is a magnetic body near the touch pad button or the system or check if there is an exterior defect to the LCD.	
2. LCD cable.	Replace the new one.

Main System Related Troubles

1. The system is not turned on.	
1. Check if the AC adapter LED is lit and if the adapter is properly connected to the system.	In case that only no. 1, 3, 5 in the LED is turned on: Replace Batteries due to its fault
2. If the AC adapter is not connected, check the charge status of the battery. . Even if the battery is charged, if the remaining battery charge is too low, the system may not be turned on.	Check the battery level through the LED on/off condition by pressing the Push button on the Battery as the figure shown below 
3. Check if there are any alien substances in the Power switch. if have, change the LED.	
4. Replace Main Board.	Check operating or not.
2. the system does not boot or immediately turns off after being turned on.	
1. Since this may be a short circuit in the system.	Disconnect the power immediately, disassemble the system and check if there are any conducting alien objects such as a screw inside.
2. Check the connection status between the CPU and the RHE.	

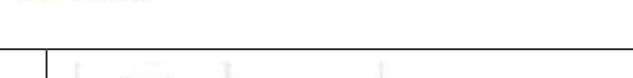
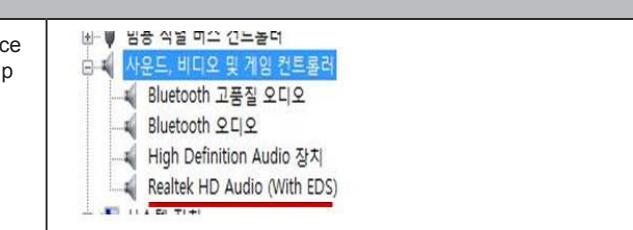
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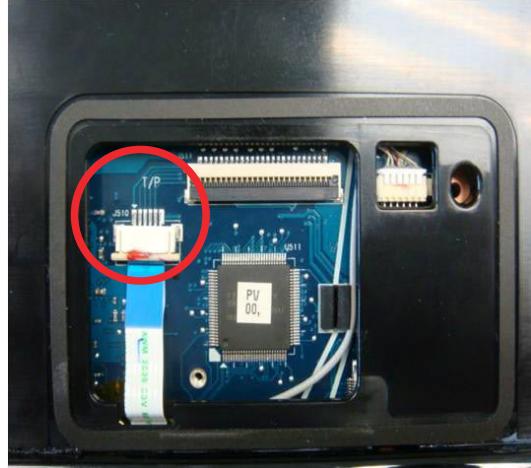
3. After reinstalling the memory module, check the status. If the problem is still occurred, it should be replaced and rechecked..	Check if a short-circuit caused by a removable device such as the Memory module, the WLAN card, the HDD disk, etc. Reset the RTC Reset terminal beneath the Memory socket.
4. RTC Reset.	* How to reset the RTC → Refer to Annex 1
5. Replace Main Board.	Check if it is out of order.
3. Speaker doesn't work.	
1. Check if the sound is muted after booting up Windows. → Fn + F6 (Mute cancellation)	
2. Check whether the default playback device is configured as Speaker from Control Panel > Sound. → Change the default setting to the Speaker when setting up HDMI	
3. Check the connection status of the speaker cable and check if the speaker is out of order.	
4. Check if there is a magnetic object near the speaker.	
5. Replace Main Board.	Check if it is out of order.
4. I cannot hear sound through the headphones.	
1. Check if the sound is muted after booting up Windows. → Fn + F6 (Mute cancellation)	

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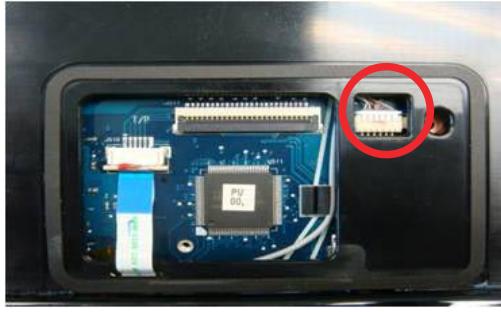
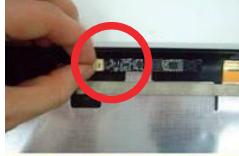
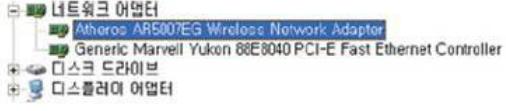
<p>2. Check the status of driver setting in the audio driver (on the Device Manager). Check whether the default playback device is configured as Speaker from Control Panel > Sound. → Change the default setting to the Speaker when setting up HDMI</p>	 
<p>3. Turn the volume up. → Fn key volume adjustment.</p>	
<p>4. Check the Headphone jack.</p>	
<p>5. Replace Main Board.</p>	<p>Check if it is out of order.</p>
<p>5. external/Internal microphone does not work normally.</p> <p>1. Check the status of driver setting in the audio driver (on the Device Manager). As the figure shown, check if recording device is set up as MIC on this Control Panel > Sound.</p>	 
<p>2. Check the connection status of the MIC connector and check if the speaker is out of order.</p>	

4. Troubleshooting

3. Check the Mic jack.	
4. Replace Main Board.	Check if it is out of order.
6. HDD cannot be recognized.	
1. Check if HDD is connected correctly. Check if there is some foreign bodies in connections. (Refer to disassembly and assembly chapter)	
2. It is recognized on CMOS but a message, "Operating system Not found" appears while OS booting. → There are two causes:	When HDD OS has been corrupted → Format the HDD and reinstall the OS When HDD line item has a fault → Replace the HDD *When replacing the HDD, refer to H/W Upgrade
7. Touch Pad does not work normally.	
1. Check the connection status of Touch Pad FFC.	
2. Check the connection status of Touch Pad I/F B'D.	
3. Check the connection status of Touch Pad Module.	
4. Replace Touch-Pad Module.	

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8. Camera does not work normally.	
1. Check the connection status of camera cable between Camera module.	
2. Check the connection status of camera cable between Main board.	
3. Replace Camera module.	
4. Replace Main Board.	Check if it is out of order.
9. WLAN does not operate properly	
1. Check if WLAN driver is installed correctly. → Update the driver when it does not operate properly	
2. Check the connection of wireless LAN antenna cable.	
3. Check by replacing the WLAN card → There are only No. 1 and 2 Antenna on the Intel Shirley Peak 1x2 AGN, Atheros 802.11 BG card and there are No.1, 2 and 3 antenna on the Intel Shirley Peak 3x3 AGN card.	
4. Replace Main Board.	Check if it is out of order.

4. Troubleshooting

10. Bluetooth does not work normally.	
1. Check the connection status of Bluetooth cable between Main board.	
2. Check whether the Bluetooth cable is cut (this cable is very thin so easy to be cut). → Replace Bluetooth cable	
3. Check the connection status of Bluetooth cable between Module..	
4. Replace Bluetooth Module	→ Check if it is out of order. *Replace Bluetooth , refer to 'H/W Upgrade' chapter
11. When the CPU Fan does not operate properly.	
1. You can diagnose with SAFC(Samsung Advanced Fan Control) program.	*Refer to Annex 3 (Diagnostic Program Usage).
2. Check whether the heat sink is fixed properly (if not, it may cause an error). → Fix all of 6 screws (refer to 'Disassembly/Assembly' chapter).	
3. Check whether the FAN cable is connected correctly. → Replace the fan when it is connected properly. (refer to 'Disassembly/Assembly' chapter)	
4. Replace FAN	Check if it is out of order.
5. Replace Main Board.	Check if it is out of order.

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4. Troubleshooting

Other symptoms

1. When booting up the computer	
The "Invalid System Disk. Replace the Disk and then press any key" message appears.	<ul style="list-style-type: none"> - This message may appear when the connected USB memory or CD media does not include bootable data. - The "Reboot and Select the proper Boot device or Insert a bootable media in the selected Boot device and press a key" message appears. - Check if the signal and power cables are properly connected to the hard disk drive. - Check if the hard disk drive is recognized in the BIOS SETUP. - The operating system on the hard disk drive is corrupted. Reinstall Windows.
The "To enter BIOS SETUP, press <F2>. To continue, press <F1>." message appears.	<ul style="list-style-type: none"> - This may happen when the BIOS settings are different from the system environment. In this case, setup the BIOS according to your system environment. - Press <F2> to enter the BIOS SETUP. - Check if the date and time are correct in the BIOS SETUP. - Save the settings and restart the system.
The "CMOS Checksum error" message appears.	<ul style="list-style-type: none"> - This message may appear when the CMOS battery of the main board is completely discharged. In this case, replace the battery with a new one of the same type and set up the BIOS SETUP according to your system environment.
Windows boots up in safe mode.	<ul style="list-style-type: none"> - This may happen when Windows was not shut down normally. Therefore, shut down the system by selecting Start > Turn Off Computer. - This may happen when the system settings have been incompletely recognized. - Run Check Disk.
I cannot boot up the computer with a USB floppy drive or from USB memory.	<ul style="list-style-type: none"> - Check if the diskette is bootable. - This may happen when the booting priority of the device is low. In this case, change the booting priority in the BIOS SETUP.
2. When shutting down the computer	
The computer is not shut down.	<ul style="list-style-type: none"> - If Windows does not end normally, you can forcibly shut down the system by pressing the Power button. If the power-saving feature is activated on the Power button, press the Power button for more than 4 seconds to turn the computer off. If the computer is then turned on again, Check Disk is automatically run.
3. Windows / Screen Related Problems	
The computer hangs while running a program.	<ul style="list-style-type: none"> - If the running program causes an error: In Windows XP, press the <Ctrl>, <Alt> and key combination, select the application program and click on End Task in the Applications tab of the [Windows Task Manager] window. In Windows 2000, press <Ctrl>, <Alt> and at the same time to open the [Close Program] window, select a 'No response' item or a program with an error, and click End Task. - If Windows does not respond, restart the computer. Restart the computer by pressing the Power button.
No picture is displayed on the external monitor.	<ul style="list-style-type: none"> - Press the Switch LCD/CRT Monitor function key and check if the screen output is output to another display device. - Check if the hardware is out of order referring to the descriptions in the LCD related section of the Hardware Troubleshooting.
4. Power-Saving Mode Related Trouble	
Connecting a USB device to the computer in standby mode.	<ul style="list-style-type: none"> - If a USB device is connected to the computer in standby mode, the screen may be abnormally displayed. You have to connect a USB device when the computer is operating normally.
A USB device is not working normally when the computer returns from standby mode.	<ul style="list-style-type: none"> - In this case, separate and reconnect the USB device.
The picture is displayed abnormally when the computer running the Command Prompt (MS-DOS) enters standby mode and then returns from standby mode.	<ul style="list-style-type: none"> - Press the <Alt> and <Tab> key combination to display the picture on the screen

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4. Troubleshooting

4-6. RTC Battery Reset



RTC Reset

Remove the memory cover in the bottom, and then check the RTC reset terminal located in the bottom.
Data saved in the CMOS shall be reset by shorting 20-30 seconds of the both sides of PAD with tweezers.

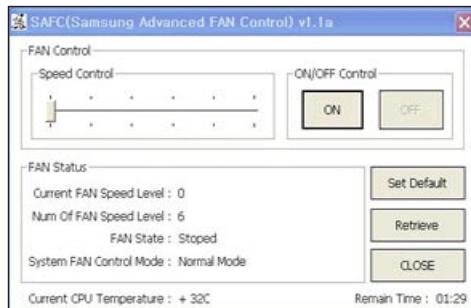
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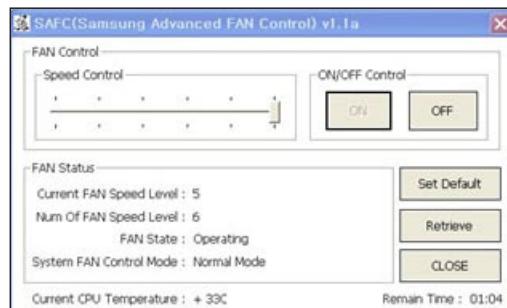
4-7. CPU Fan Control

Checking the Work of FAN

One can turn the fan on & off and check the fan's operational conditions without system disassembly.



Pic (1) Fan off status



Pic (2) Fan on status

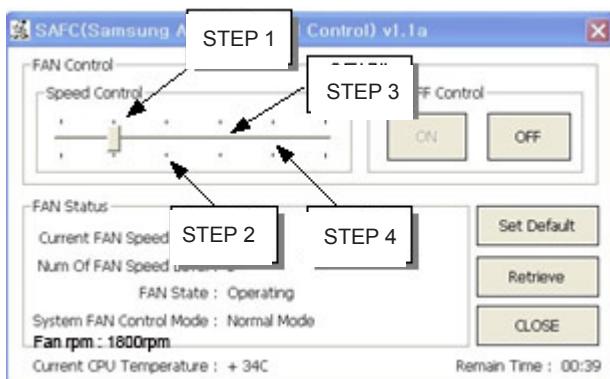
*SAFC's default setting is "Fan off" or "Minimum Fan Speed".

- Press "ON" in "ON/OFF Control" Fan is turned on to maximum fan speed.
- Press "OFF" in "ON/OFF Control" Fan returns to default setting.

Operation Diagnosis by FAN control steps

	FAN [RPM]	FAN Input Voltage [V]	
		Board Level	Ststem Level
Off	0	0	0
Low	2234	2.8	2.6
Middle 1	2508	3.4	3
Middle 2	2731	3.8	3.4
Middle 3	2997	4.4	3.8
High	3234	4.9	4.3

* When the FAN is controlled with rpm control, the FAN input voltage measured at the Board level, the FAN measured after complete assembly of the System can be differentiated. (The FAN is controlled at fixed rpm, so as flowing pressure condition of the FAN can modify input voltage to keep as the fixed rpm value.)



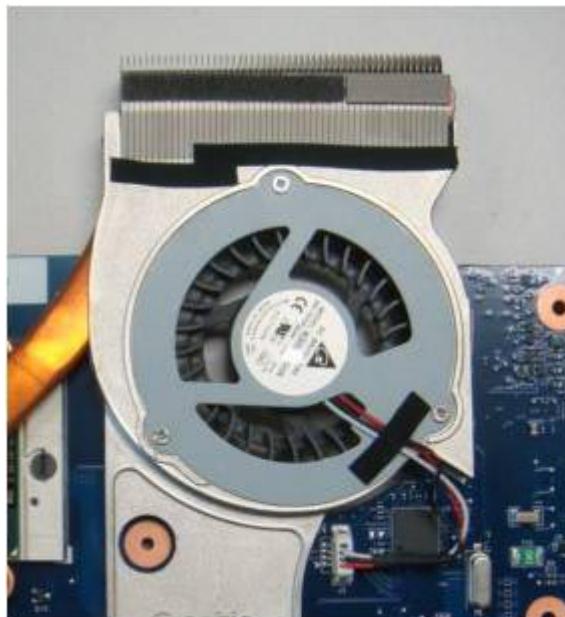
Pic (3) Adjust FAN State

[Fan Voltage Measurement]
- Read Fan RPM indicated in SAFC.

[Fan Voltage Pass/Fail determination]
- If Fan RPM satisfies "rpm spec +/-10%", then Fan test is "PASS"

4. Troubleshooting

BONN CPU Fan



- When the CPU Fan does not operate properly.
 1. Check whether the RHE is fixed correctly
 2. Check whether the FAN cable is connected correctly
 3. Replace FAN

Item	Mode	rpm Design guideline <i>SPEC : ± 10%</i>
FAM Voltage	OFF	0
	1	2000
	2	2200
	3	2400
	4	2700
	5	3000
	6	3300

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4. Troubleshooting

4-8. Battery Use Time

Check the following check lists for systems where the battery use time is too short to diagnose problems.

Check the battery

Check if the battery is out of order referring to the Battery check program distributed to Service Centers and the 'Battery Check Manual' included in the 'Note-PC A/S Guide'.

(1) Battery Check List

Please mark "✓" in the box (□) of each applicable items, after checking the battery status with the "battery checking program"

- 1. Does the battery communicate normally with system?**

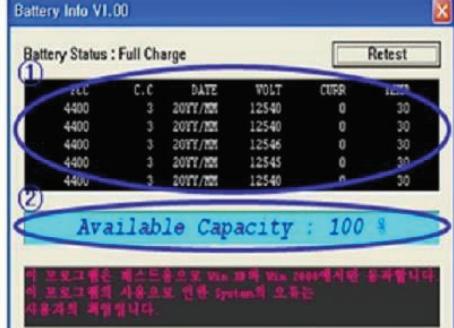
PASS
 FAIL
- 2. Is the battery charged normally?**

PASS
 FAIL
- 3. Is the battery discharged normally?**

PASS
 FAIL
- 4. Is the battery still in warranty?**

Excess than 6/12months : Out of warranty
 Excess than 300 Cycles : Out of warranty
 Less than 6/12 months : PASS
 Less than 6/12 months : FAIL

(2) Criteria for each of the check lists.

1. Does the battery communicate normally with system?	
<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL
<p>①: Data displayed in the data window. ①: The code 65535 displayed</p> <p>②: Available capacity displayed : 0 ~ 100% ②: Displayed the error message in Korean “통신이 원활 하지 않습니다.”</p>	
 	

☞ recommended : When the communication failed, please set a normal battery to the system and check first which -battery or system- has the problem.

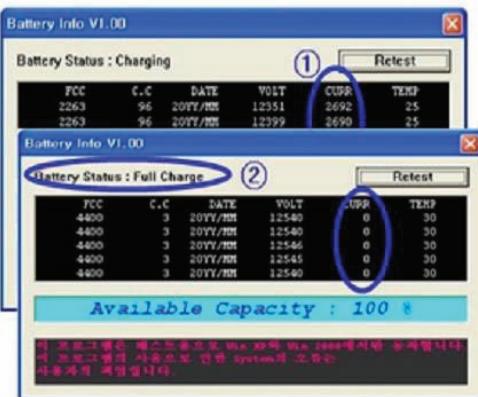
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2. Is the battery charged normally?

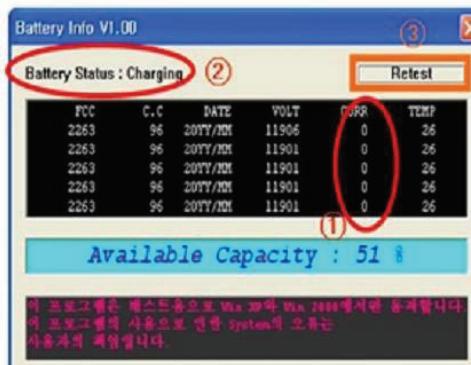
PASS

①: Pass, if the CURR values are within 35 ~ 3500



FAIL

①,②: Fail, if the CURR values are 0 and the battery status is in Charging.



②: Pass, even if the CURR value is 0 but the battery is in status of Full Charge

③: if the CURR value is 0 and in status of Charging, please reconfirm the "fail" after 2~3 times of Retest.

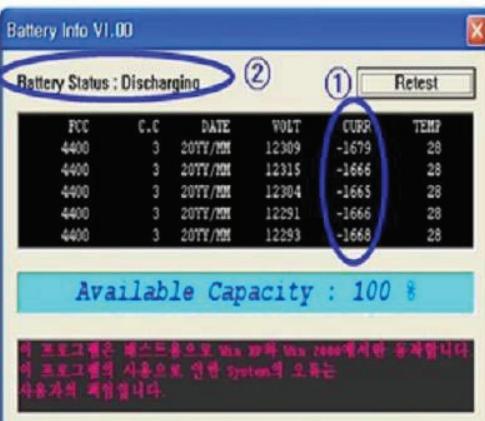
3. Is the battery discharged normally?

PASS

①,②: Pass, if the CURR values are within -50 ~ -5000 and the battery status is in Discharging.

FAIL

Fail, if the System is off status when the adaptor is removed from the System



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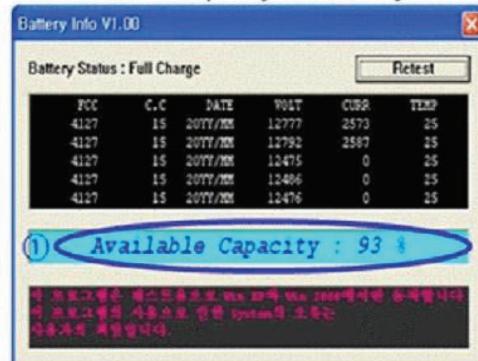
4. Troubleshooting

4. Is the battery still in warranty?

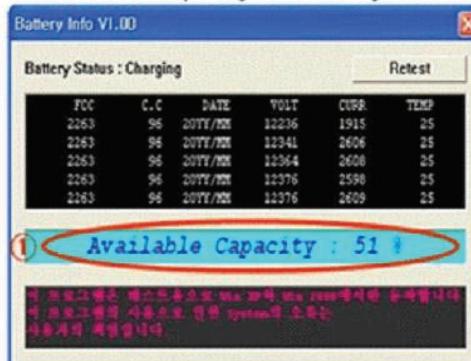
- Excess than 6/12 months : Out of warranty
- Excess than 300 cycles : Out of warranty
- ☞ Warranty period : Within 12 months after sales date, more than 60% of initial electric capacity after 300 cycles.**
- * Reference : If a battery is out of warranty, the battery can not be considered as "defected". So if a customer requests to exchange his battery in this case, the battery should be provided onerously with sales price. So please persuade customer to use continuously his battery, with the explanation of effective capacity of his battery, if the battery have no defect but only small decrease of capacity.
- Less than 6/12 months : PASS
- Less than 6/12 months : FAIL
- ☞ ①Please refer to "Capacity Standard Table" (or ②Capacity Standard Graph). Please judge Pass or Fail after checking the sales date of a battery. Pass, if the capacity of the battery is over than the value of corresponded date of "Available Capacity" column in the Table. Fail, if the capacity is lower than the value.**
- * Reference : The battery capacity can have individual error according to the user's circumstance of the battery. So it is recommended that the battery should be checked (with Battery Check Program) after calibration (Smart Battery Calibration: Full charge/discharge or Full discharge/charge)

[Example]

- Less than 6/12 months: PASS
 ① Available Capacity: 93%
 Duration of Use : 1month(30days)
 Available Capacity of warranty: 87.8%



- Less than 6/12 months: FAIL
 ① Available Capacity: 51%
 Duration of Use : 1month(30days)
 Available Capacity of warranty: 87.8%



- * Reference : If the sale date is 2004.5.10 and service receipt date is 2004.6.10, the Duration of Use is regarded as 1 month(30days)

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(3) Battery capacity Table

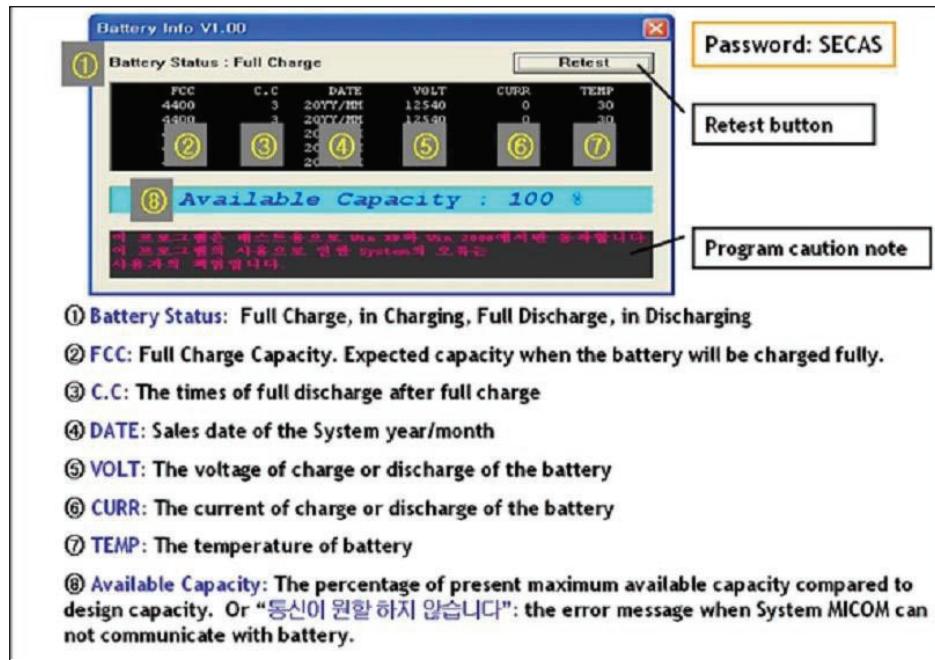
Duration of Use	Available Capacity(%)
Within 0.5month (15days)	More than 93.6 %
Within 1.0month (30days)	More than 87.8 %
Within 1.5month (45days)	More than 82.5 %
Within 2.0month (60days)	More than 77.8 %
Within 2.5month (75days)	More than 73.6 %
Within 3.0month (90days)	More than 70.0 %
Within 3.5month (105days)	More than 66.9 %
Within 4.0month (120days)	More than 64.4 %
Within 4.5month (135days)	More than 62.5 %
Within 5.0month (150days)	More than 61.1 %
Within 5.5month (165days)	More than 60.3 %
Within 6.0month (180days)	More than 60.0 %

* Reference

Duration of Use : The using period from the sales date of the system (with battery)

Available Capacity(%) : The real capacity of the battery, decreased from the design

(4) Battery Check Program



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4. Troubleshooting

Check the battery use environment

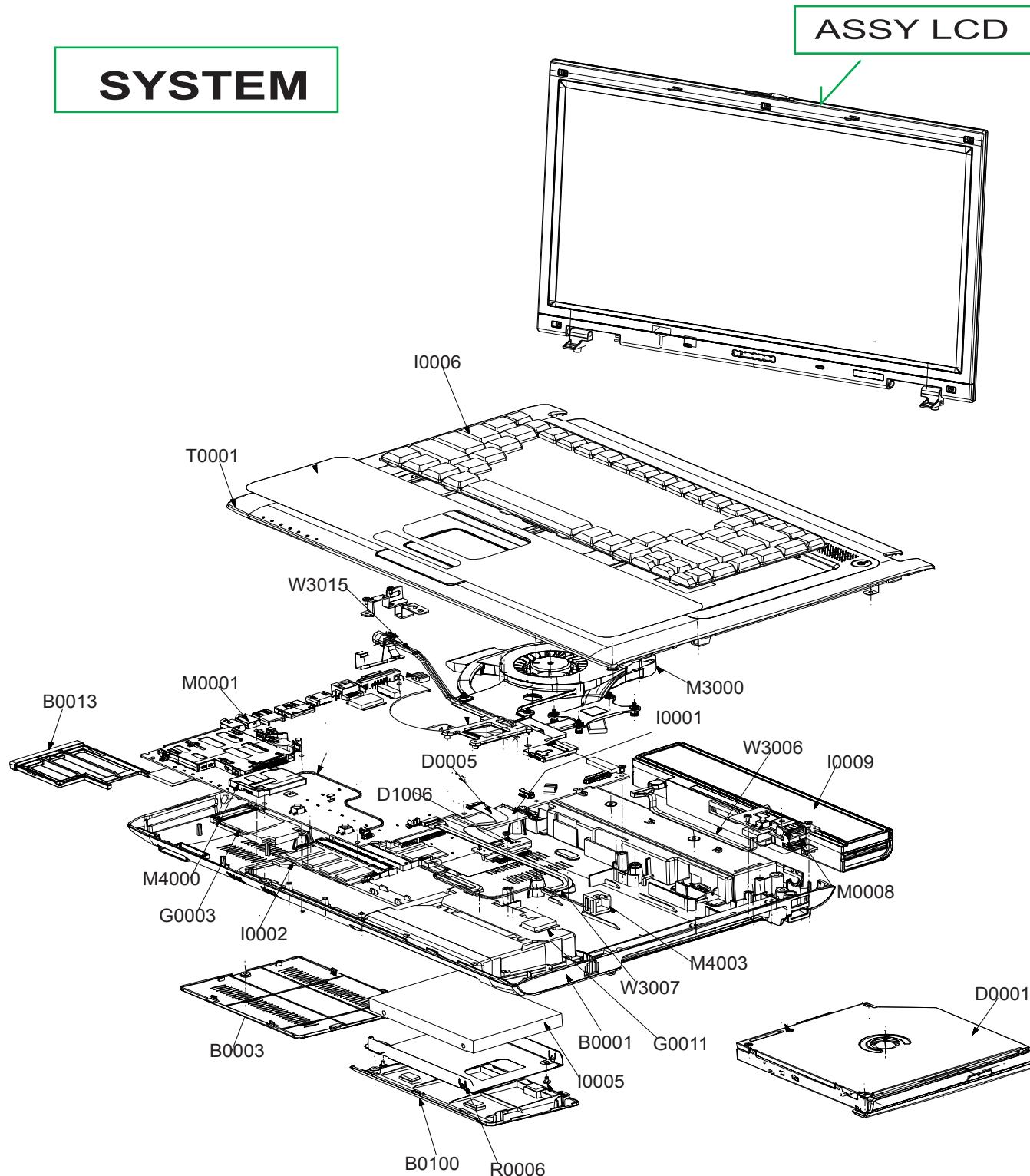
1. Generally, the battery usage time in advertisements by notebook manufacturers refers to the maximum battery use time. Since the system specifications and the usage environment may differ, the user's battery usage time may differ from the advertisement even if there is no problem with the system.
2. Conditions for the company's maximum battery use time
 - a. Minimum LCD brightness, base system, the wireless LAN R/F is turned off, Battery Manager- Maximum Battery Mode
 - b. Measuring Tool: Battery Mark v.4.0.1
3. Customers' complaint about battery longevity: battery longevity can vary depending on model specification and the environment where computers are used. There are some suggestions to keep maximum longevity of batteries.
 - a. Use Battery Manager for economy in power consumption and use power save mode on Battery Manager.
 - b. LCD brightness : keep minimized brightness as long as you feel comfortable
 - c. Disable some devices you do not use
 - : Turn off the R/F Switch of wireless LAN, and disable USB device (DMB, finger recognition, Bluetooth), etc

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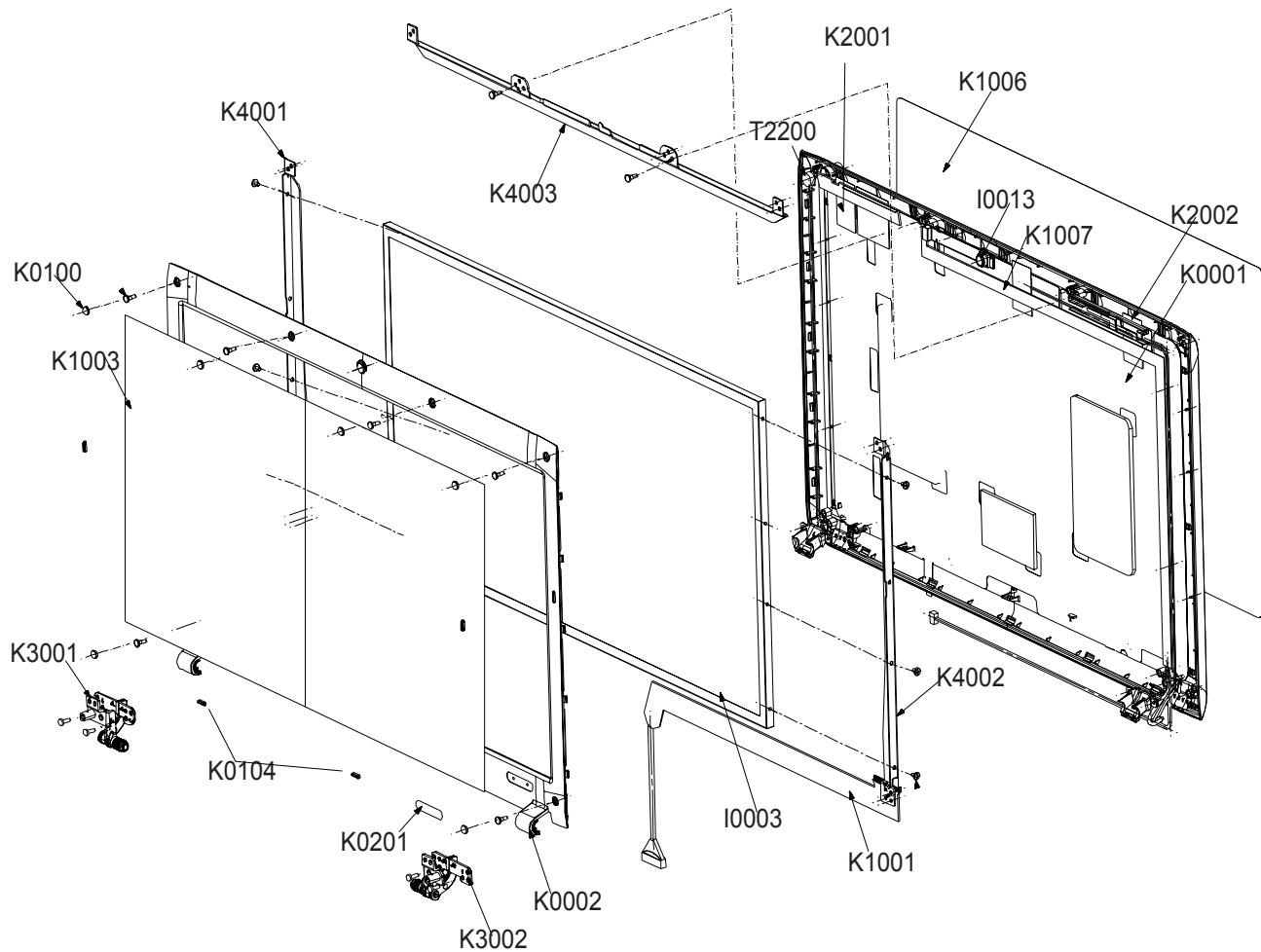
5. Exploded View



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5. Exploded View

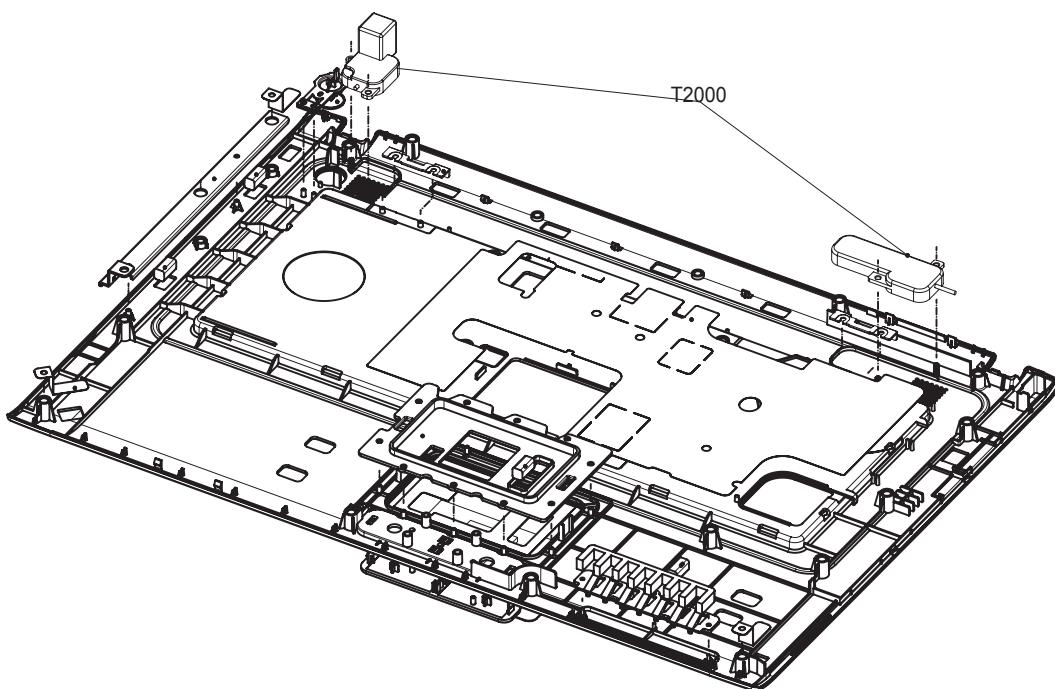
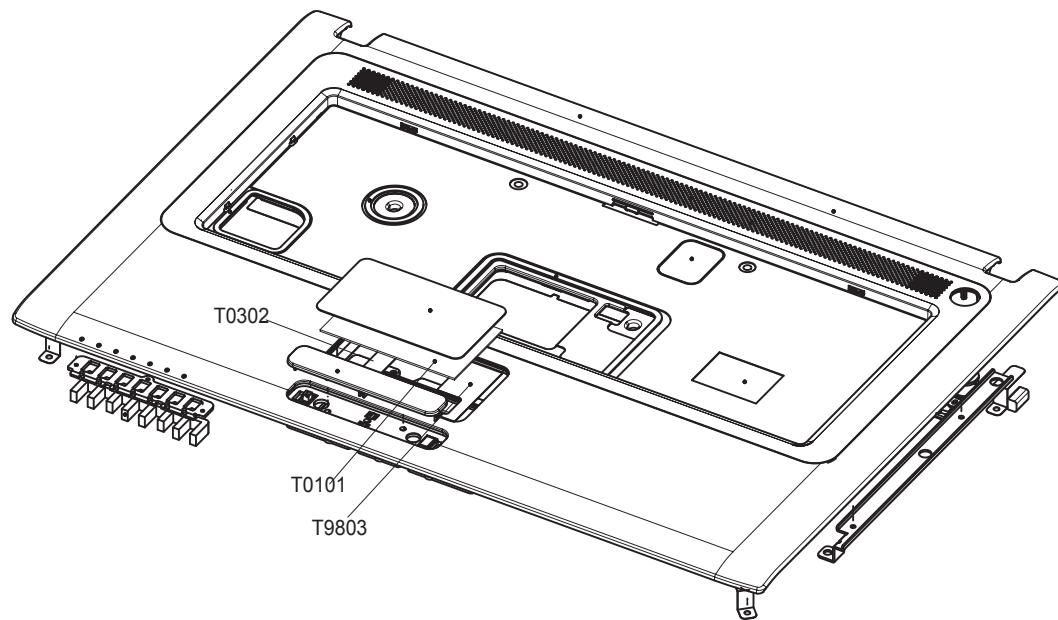
ASSY-LCD



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5. Exploded View

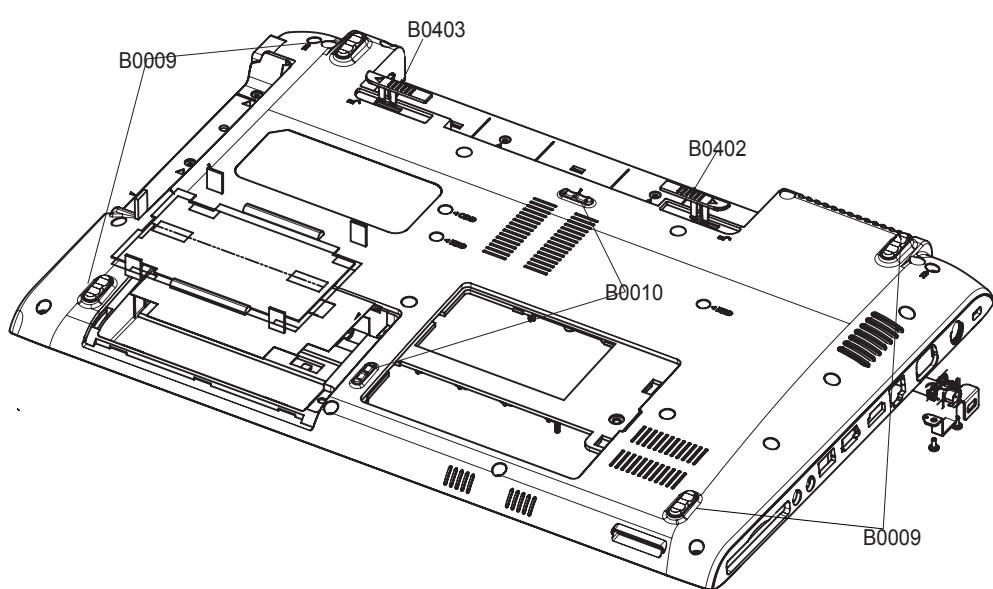
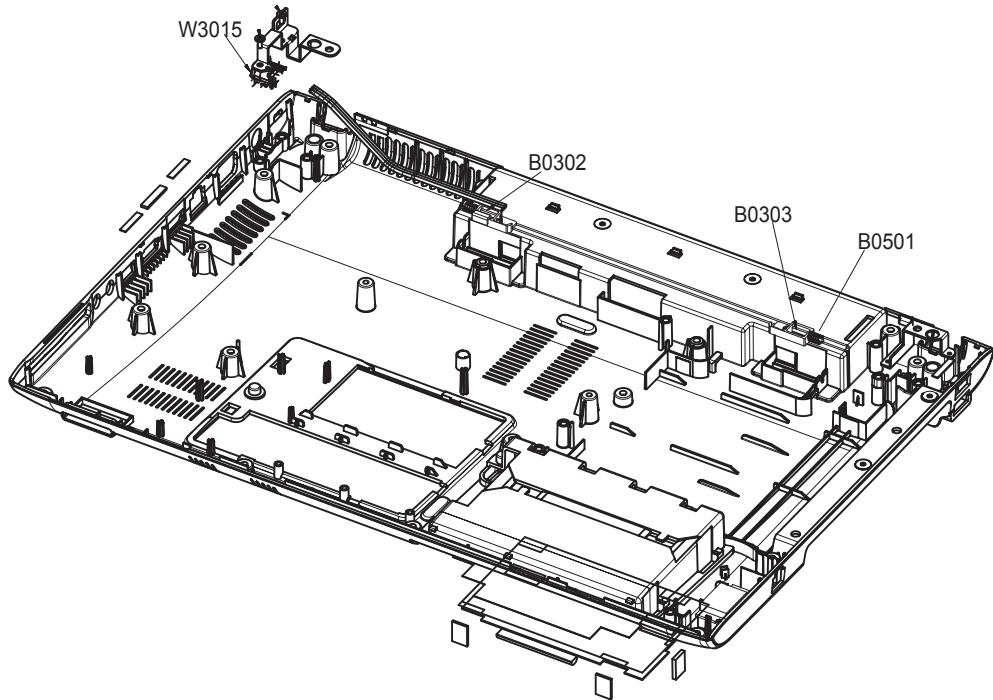
UNIT-HOSUNG_TOP



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5. Exploded View

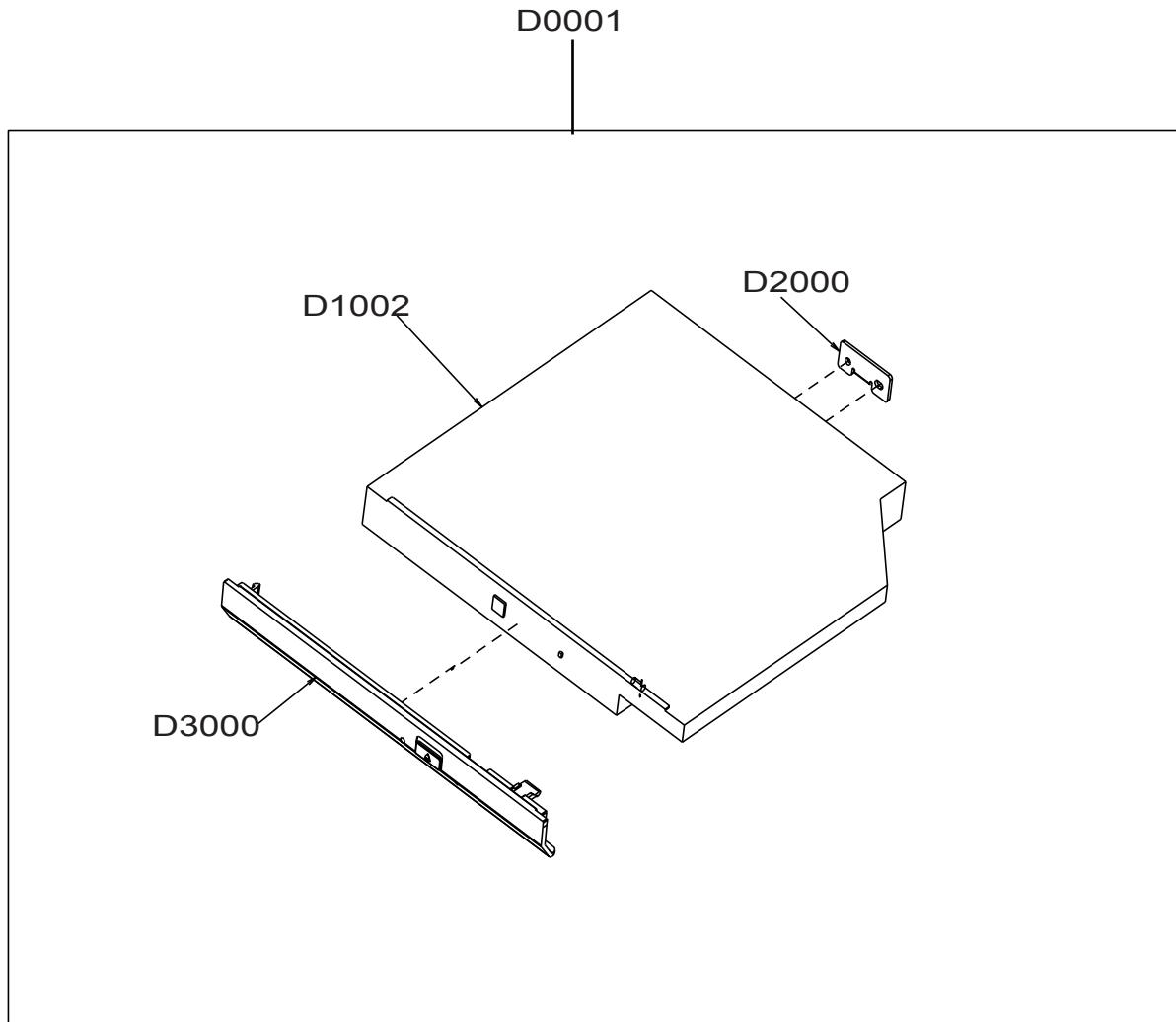
UNIT-HOSUNG_BOTTOM



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5. Exploded View

Unit-ODD



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6. Material List

Level	Part Code	Assembled	EA	Description	Service
.1	0203-001869	KAPTONE(RTC)	0.04	TAPE-KAPTONE	SNA
.1	3709-001491	J524	1	CONNECTOR-CARD SLOT	SA
.1	4301-001070	RTC BAT	1	BATTERY-LI	SA
.1	6001-001570	PCB+EXPRESS	2	SCREW-MACHINE	SA
.1	6001-001570	PCB+HDD CONN	2	SCREW-MACHINE	SA
.1	BA75-01937A	CPU BRKT	1	UNIT-BRACKET_CPU	SA
.1	BA81-04683A	BRACKET-VGA	1	BRACKET-VGA	SNA
.1	BA81-04872A	RUBBER-CABLE	1	RUBBER-CABLE	SNA
.1	BA81-05187A	INSULATOR-EXPCARD	1	INSULATOR-EXPRESS	SNA
.1	BA81-06586A	INSULATOR-LCD	1	INSULATOR-LCD	SNA
.1	BA81-06587A	INSULATOR-CAMERA	1	INSULATOR-CAMERA	SNA
.1	BA92-05528B	SMT	1	ASSY MOTHER BD-SMT	SNA
...2	BA92-05528C	SMT_U	1	ASSY MOTHER BD-SMT_U	SNA
....3	0401-000132	D511	1	DIODE-SWITCHING	SNA
....3	0401-000132	D512	1	DIODE-SWITCHING	SNA
....3	0404-001084	D506	1	DIODE-SCHOTTKY	SNA
....3	0505-000273	Q523	1	FET-SILICON	SNA
....3	0505-001861	Q500	1	FET-SILICON	SNA
....3	0505-001883	Q501	1	FET-SILICON	SNA
....3	0505-001883	Q507	1	FET-SILICON	SNA
....3	0505-001883	Q511	1	FET-SILICON	SNA
....3	0505-001883	Q513	1	FET-SILICON	SNA
....3	0505-001883	Q514	1	FET-SILICON	SNA
....3	0505-001883	Q517	1	FET-SILICON	SNA
....3	0505-001883	U506	1	FET-SILICON	SNA
....3	0505-001883	U507	1	FET-SILICON	SNA
....3	0505-002166	Q515	1	FET-SILICON	SNA
....3	0505-002166	Q524	1	FET-SILICON	SNA
....3	0505-002183	Q520	1	FET-SILICON	SNA
....3	0505-002183	Q521	1	FET-SILICON	SNA
....3	0505-002183	U510	1	FET-SILICON	SNA
....3	0505-002189	Q508	1	FET-SILICON	SNA
....3	0601-002037	LED500	1	LED	SA
....3	0601-002037	LED501	1	LED	SA
....3	0601-002037	LED502	1	LED	SA
....3	0601-002037	LED503	1	LED	SA
....3	0601-002037	LED504	1	LED	SA
....3	0601-002037	LED505	1	LED	SA
....3	0601-002037	LED506	1	LED	SA
....3	0601-002037	LED507	1	LED	SA
....3	0601-002037	LED508	1	LED	SA
....3	0601-002037	LED509	1	LED	SA
....3	0601-002037	LED510	1	LED	SA
....3	0601-002037	LED511	1	LED	SA
....3	0601-002037	LED512	1	LED	SA
....3	0601-002037	LED513	1	LED	SA
....3	0601-002037	LED514	1	LED	SA
....3	0601-002037	LED516	1	LED	SA
....3	0601-002037	LED517	1	LED	SA
....3	0601-002037	LED518	1	LED	SA
....3	0601-002037	LED519	1	LED	SA
....3	0601-002037	LED520	1	LED	SA
....3	0601-002037	LED521	1	LED	SA
....3	0601-002037	LED522	1	LED	SA
....3	0601-002037	LED523	1	LED	SA
....3	0601-002037	LED524	1	LED	SA
....3	0601-002391	LED515	1	LED	SNA
....3	0903-001439	U511	1	IC-MICROCOMPUTER	SA
....3	1006-001427	U508	1	IC-BUS TRANSCEIVER	SA
....3	1107-001600	U514	1	IC-NOR FLASH	SNA
....3	1203-004471	U516	1	IC-PWM CONTROLLER	SA
....3	1203-005009	U505	1	IC-PWM CONTROLLER	SA
....3	1203-005570	U513	1	IC-PWM CONTROLLER	SA
....3	1205-003156	U512	1	IC-CLOCK GENERATOR	SA
....3	1205-003683	U502	1	IC-SWITCH	SA
....3	1205-003683	U509	1	IC-SWITCH	SA
....3	2007-000043	R694	1	R-CHIP	SNA

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Level	Part Code	Assembled	EA	Description	Service
....3	2007-000070	R640	1	R-CHIP	SNA
....3	2007-000070	R641	1	R-CHIP	SNA
....3	2007-000070	R642	1	R-CHIP	SNA
....3	2007-000070	R679	1	R-CHIP	SNA
....3	2007-000070	R681	1	R-CHIP	SNA
....3	2007-000070	R742	1	R-CHIP	SNA
....3	2007-000070	R853	1	R-CHIP	SNA
....3	2007-000071	R867	1	R-CHIP	SNA
....3	2007-000071	R868	1	R-CHIP	SNA
....3	2007-000071	R869	1	R-CHIP	SNA
....3	2007-000138	R881	1	R-CHIP	SNA
....3	2007-000141	R675	1	R-CHIP	SNA
....3	2007-000141	R720	1	R-CHIP	SNA
....3	2007-000141	R722	1	R-CHIP	SNA
....3	2007-000143	R596	1	R-CHIP	SNA
....3	2007-000143	R602	1	R-CHIP	SNA
....3	2007-000143	R635	1	R-CHIP	SNA
....3	2007-000143	R751	1	R-CHIP	SNA
....3	2007-000143	R754	1	R-CHIP	SNA
....3	2007-000147	R577	1	R-CHIP	SNA
....3	2007-000148	R883	1	R-CHIP	SNA
....3	2007-000157	R573	1	R-CHIP	SNA
....3	2007-000157	R707	1	R-CHIP	SNA
....3	2007-000168	R576	1	R-CHIP	SNA
....3	2007-000168	R583	1	R-CHIP	SNA
....3	2007-000168	R876	1	R-CHIP	SNA
....3	2007-000170	R716	1	R-CHIP	SNA
....3	2007-000171	R553	1	R-CHIP	SNA
....3	2007-000171	R555	1	R-CHIP	SNA
....3	2007-000171	R556	1	R-CHIP	SNA
....3	2007-000171	R620	1	R-CHIP	SNA
....3	2007-000171	R622	1	R-CHIP	SNA
....3	2007-000171	R623	1	R-CHIP	SNA
....3	2007-000171	R624	1	R-CHIP	SNA
....3	2007-000171	R645	1	R-CHIP	SNA
....3	2007-000171	R691	1	R-CHIP	SNA
....3	2007-000171	R901	1	R-CHIP	SNA
....3	2007-000174	R582	1	R-CHIP	SNA
....3	2007-000309	R519	1	R-CHIP	SA
....3	2007-000309	R520	1	R-CHIP	SA
....3	2007-000309	R521	1	R-CHIP	SA
....3	2007-000309	R522	1	R-CHIP	SA
....3	2007-000309	R570	1	R-CHIP	SA
....3	2007-000309	R592	1	R-CHIP	SA
....3	2007-000309	R593	1	R-CHIP	SA
....3	2007-000309	R594	1	R-CHIP	SA
....3	2007-000309	R906	1	R-CHIP	SA
....3	2007-000309	R907	1	R-CHIP	SA
....3	2007-000503	R873	1	R-CHIP	SNA
....3	2007-000695	R533	1	R-CHIP	SNA
....3	2007-000695	R535	1	R-CHIP	SNA
....3	2007-000695	R859	1	R-CHIP	SNA
....3	2007-000758	R719	1	R-CHIP	SNA
....3	2007-000969	R739	1	R-CHIP	SNA
....3	2007-000969	R865	1	R-CHIP	SNA
....3	2007-001139	R604	1	R-CHIP	SNA
....3	2007-001292	R658	1	R-CHIP	SNA
....3	2007-001292	R673	1	R-CHIP	SNA
....3	2007-001292	R674	1	R-CHIP	SNA
....3	2007-001325	R539	1	R-CHIP	SNA
....3	2007-002425	R534	1	R-CHIP	SNA
....3	2007-002425	R538	1	R-CHIP	SNA
....3	2007-002425	R650	1	R-CHIP	SNA
....3	2007-002425	R651	1	R-CHIP	SNA
....3	2007-002425	R678	1	R-CHIP	SNA
....3	2007-002910	R502	1	R-CHIP	SNA

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Level	Part Code	Assembled	EA	Description	Service
....3	2007-002918	R850	1	R-CHIP	SNA
....3	2007-002970	R549	1	R-CHIP	SNA
....3	2007-002970	R550	1	R-CHIP	SNA
....3	2007-002970	R609	1	R-CHIP	SNA
....3	2007-002970	R683	1	R-CHIP	SNA
....3	2007-002970	R684	1	R-CHIP	SNA
....3	2007-002970	R686	1	R-CHIP	SNA
....3	2007-002970	R724	1	R-CHIP	SNA
....3	2007-002970	R725	1	R-CHIP	SNA
....3	2007-002970	R726	1	R-CHIP	SNA
....3	2007-002970	R727	1	R-CHIP	SNA
....3	2007-002970	R728	1	R-CHIP	SNA
....3	2007-002970	R729	1	R-CHIP	SNA
....3	2007-002970	R730	1	R-CHIP	SNA
....3	2007-002970	R731	1	R-CHIP	SNA
....3	2007-002970	R732	1	R-CHIP	SNA
....3	2007-002970	R733	1	R-CHIP	SNA
....3	2007-002970	R734	1	R-CHIP	SNA
....3	2007-002970	R735	1	R-CHIP	SNA
....3	2007-002970	R736	1	R-CHIP	SNA
....3	2007-002970	R738	1	R-CHIP	SNA
....3	2007-002970	R757	1	R-CHIP	SNA
....3	2007-002970	R758	1	R-CHIP	SNA
....3	2007-002970	R759	1	R-CHIP	SNA
....3	2007-002970	R760	1	R-CHIP	SNA
....3	2007-002970	R761	1	R-CHIP	SNA
....3	2007-002970	R762	1	R-CHIP	SNA
....3	2007-002970	R763	1	R-CHIP	SNA
....3	2007-002970	R764	1	R-CHIP	SNA
....3	2007-002970	R765	1	R-CHIP	SNA
....3	2007-002970	R766	1	R-CHIP	SNA
....3	2007-002970	R767	1	R-CHIP	SNA
....3	2007-002970	R768	1	R-CHIP	SNA
....3	2007-002970	R769	1	R-CHIP	SNA
....3	2007-002970	R795	1	R-CHIP	SNA
....3	2007-002970	R796	1	R-CHIP	SNA
....3	2007-002970	R797	1	R-CHIP	SNA
....3	2007-002970	R798	1	R-CHIP	SNA
....3	2007-002970	R799	1	R-CHIP	SNA
....3	2007-002970	R800	1	R-CHIP	SNA
....3	2007-002970	R801	1	R-CHIP	SNA
....3	2007-002970	R802	1	R-CHIP	SNA
....3	2007-002970	R803	1	R-CHIP	SNA
....3	2007-002970	R804	1	R-CHIP	SNA
....3	2007-002970	R805	1	R-CHIP	SNA
....3	2007-002970	R806	1	R-CHIP	SNA
....3	2007-002970	R807	1	R-CHIP	SNA
....3	2007-002970	R808	1	R-CHIP	SNA
....3	2007-002970	R809	1	R-CHIP	SNA
....3	2007-002970	R810	1	R-CHIP	SNA
....3	2007-002970	R811	1	R-CHIP	SNA
....3	2007-002970	R812	1	R-CHIP	SNA
....3	2007-002970	R813	1	R-CHIP	SNA
....3	2007-002970	R814	1	R-CHIP	SNA
....3	2007-002970	R815	1	R-CHIP	SNA
....3	2007-002970	R816	1	R-CHIP	SNA
....3	2007-002970	R817	1	R-CHIP	SNA
....3	2007-002970	R818	1	R-CHIP	SNA
....3	2007-002970	R819	1	R-CHIP	SNA
....3	2007-002970	R820	1	R-CHIP	SNA
....3	2007-002970	R821	1	R-CHIP	SNA
....3	2007-007100	R715	1	R-CHIP	SNA
....3	2007-007107	R572	1	R-CHIP	SNA
....3	2007-007107	R578	1	R-CHIP	SNA
....3	2007-007107	R579	1	R-CHIP	SNA
....3	2007-007107	R599	1	R-CHIP	SNA

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....3	2007-007107	R615	1	R-CHIP	SNA
....3	2007-007107	R891	1	R-CHIP	SNA
....3	2007-007107	R892	1	R-CHIP	SNA
....3	2007-007107	R893	1	R-CHIP	SNA
....3	2007-007107	R911	1	R-CHIP	SNA
....3	2007-007108	R696	1	R-CHIP	SNA
....3	2007-007108	R698	1	R-CHIP	SNA
....3	2007-007108	R871	1	R-CHIP	SNA
....3	2007-007142	R213	1	R-CHIP	SNA
....3	2007-007142	R226	1	R-CHIP	SNA
....3	2007-007142	R235	1	R-CHIP	SNA
....3	2007-007142	R532	1	R-CHIP	SNA
....3	2007-007142	R537	1	R-CHIP	SNA
....3	2007-007142	R552	1	R-CHIP	SNA
....3	2007-007142	R580	1	R-CHIP	SNA
....3	2007-007142	R616	1	R-CHIP	SNA
....3	2007-007142	R628	1	R-CHIP	SNA
....3	2007-007142	R630	1	R-CHIP	SNA
....3	2007-007142	R631	1	R-CHIP	SNA
....3	2007-007142	R659	1	R-CHIP	SNA
....3	2007-007142	R661	1	R-CHIP	SNA
....3	2007-007142	R662	1	R-CHIP	SNA
....3	2007-007142	R688	1	R-CHIP	SNA
....3	2007-007142	R701	1	R-CHIP	SNA
....3	2007-007142	R704	1	R-CHIP	SNA
....3	2007-007142	R706	1	R-CHIP	SNA
....3	2007-007142	R709	1	R-CHIP	SNA
....3	2007-007142	R710	1	R-CHIP	SNA
....3	2007-007142	R713	1	R-CHIP	SNA
....3	2007-007142	R718	1	R-CHIP	SNA
....3	2007-007142	R721	1	R-CHIP	SNA
....3	2007-007142	R744	1	R-CHIP	SNA
....3	2007-007142	R747	1	R-CHIP	SNA
....3	2007-007142	R748	1	R-CHIP	SNA
....3	2007-007142	R750	1	R-CHIP	SNA
....3	2007-007142	R752	1	R-CHIP	SNA
....3	2007-007142	R753	1	R-CHIP	SNA
....3	2007-007142	R755	1	R-CHIP	SNA
....3	2007-007142	R770	1	R-CHIP	SNA
....3	2007-007142	R771	1	R-CHIP	SNA
....3	2007-007142	R778	1	R-CHIP	SNA
....3	2007-007142	R779	1	R-CHIP	SNA
....3	2007-007142	R781	1	R-CHIP	SNA
....3	2007-007142	R782	1	R-CHIP	SNA
....3	2007-007142	R784	1	R-CHIP	SNA
....3	2007-007142	R785	1	R-CHIP	SNA
....3	2007-007142	R787	1	R-CHIP	SNA
....3	2007-007142	R788	1	R-CHIP	SNA
....3	2007-007142	R789	1	R-CHIP	SNA
....3	2007-007142	R790	1	R-CHIP	SNA
....3	2007-007142	R791	1	R-CHIP	SNA
....3	2007-007142	R792	1	R-CHIP	SNA
....3	2007-007142	R793	1	R-CHIP	SNA
....3	2007-007142	R794	1	R-CHIP	SNA
....3	2007-007142	R822	1	R-CHIP	SNA
....3	2007-007142	R823	1	R-CHIP	SNA
....3	2007-007142	R834	1	R-CHIP	SNA
....3	2007-007142	R855	1	R-CHIP	SNA
....3	2007-007142	R856	1	R-CHIP	SNA
....3	2007-007226	R627	1	R-CHIP	SNA
....3	2007-007274	R863	1	R-CHIP	SA
....3	2007-007274	R864	1	R-CHIP	SA
....3	2007-007302	R614	1	R-CHIP	SNA
....3	2007-007302	R687	1	R-CHIP	SNA
....3	2007-007302	R775	1	R-CHIP	SNA
....3	2007-007306	R216	1	R-CHIP	SNA
....3	2007-007306	R515	1	R-CHIP	SNA

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Level	Part Code	Assembled	EA	Description	Service
....3	2007-007306	R516	1	R-CHIP	SNA
....3	2007-007306	R613	1	R-CHIP	SNA
....3	2007-007306	R671	1	R-CHIP	SNA
....3	2007-007306	R894	1	R-CHIP	SNA
....3	2007-007306	R895	1	R-CHIP	SNA
....3	2007-007307	R606	1	R-CHIP	SNA
....3	2007-007307	R607	1	R-CHIP	SNA
....3	2007-007307	R636	1	R-CHIP	SNA
....3	2007-007312	R603	1	R-CHIP	SNA
....3	2007-007312	R692	1	R-CHIP	SNA
....3	2007-007312	R889	1	R-CHIP	SNA
....3	2007-007318	R518	1	R-CHIP	SNA
....3	2007-007318	R581	1	R-CHIP	SNA
....3	2007-007318	R584	1	R-CHIP	SNA
....3	2007-007318	R598	1	R-CHIP	SNA
....3	2007-007318	R605	1	R-CHIP	SNA
....3	2007-007318	R610	1	R-CHIP	SNA
....3	2007-007318	R647	1	R-CHIP	SNA
....3	2007-007318	R668	1	R-CHIP	SNA
....3	2007-007318	R676	1	R-CHIP	SNA
....3	2007-007318	R717	1	R-CHIP	SNA
....3	2007-007318	R777	1	R-CHIP	SNA
....3	2007-007318	R786	1	R-CHIP	SNA
....3	2007-007318	R896	1	R-CHIP	SNA
....3	2007-007334	R505	1	R-CHIP	SNA
....3	2007-007334	R743	1	R-CHIP	SNA
....3	2007-007334	R879	1	R-CHIP	SNA
....3	2007-007334	R880	1	R-CHIP	SNA
....3	2007-007489	R849	1	R-CHIP	SNA
....3	2007-007489	R897	1	R-CHIP	SNA
....3	2007-007549	R575	1	R-CHIP	SNA
....3	2007-007642	R690	1	R-CHIP	SNA
....3	2007-007642	R711	1	R-CHIP	SNA
....3	2007-007642	R712	1	R-CHIP	SNA
....3	2007-007766	R517	1	R-CHIP	SNA
....3	2007-007766	R611	1	R-CHIP	SNA
....3	2007-007792	R612	1	R-CHIP	SNA
....3	2007-008015	R608	1	R-CHIP	SNA
....3	2007-008015	R638	1	R-CHIP	SNA
....3	2007-008015	R639	1	R-CHIP	SNA
....3	2007-008032	R697	1	R-CHIP	SNA
....3	2007-008275	R878	1	R-CHIP	SNA
....3	2007-008293	R657	1	R-CHIP	SNA
....3	2007-008293	R663	1	R-CHIP	SNA
....3	2007-008293	R723	1	R-CHIP	SNA
....3	2007-008293	R737	1	R-CHIP	SNA
....3	2007-008293	R740	1	R-CHIP	SNA
....3	2007-008293	R756	1	R-CHIP	SNA
....3	2007-008293	R772	1	R-CHIP	SNA
....3	2007-008293	R826	1	R-CHIP	SNA
....3	2007-008293	R828	1	R-CHIP	SNA
....3	2007-008293	R829	1	R-CHIP	SNA
....3	2007-008293	R841	1	R-CHIP	SNA
....3	2007-008293	R842	1	R-CHIP	SNA
....3	2007-008293	R843	1	R-CHIP	SNA
....3	2007-008293	R844	1	R-CHIP	SNA
....3	2007-008293	R845	1	R-CHIP	SNA
....3	2007-008293	R846	1	R-CHIP	SNA
....3	2007-008293	R847	1	R-CHIP	SNA
....3	2007-008293	R848	1	R-CHIP	SNA
....3	2007-008302	R669	1	R-CHIP	SNA
....3	2007-008302	R677	1	R-CHIP	SNA
....3	2007-008303	R512	1	R-CHIP	SNA
....3	2007-008303	R531	1	R-CHIP	SNA
....3	2007-008304	R886	1	R-CHIP	SNA
....3	2007-008304	R888	1	R-CHIP	SNA
....3	2007-008314	R510	1	R-CHIP	SNA

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Level	Part Code	Assembled	EA	Description	Service
....3	2007-008314	R511	1	R-CHIP	SNA
....3	2007-008314	R513	1	R-CHIP	SNA
....3	2007-008314	R514	1	R-CHIP	SNA
....3	2007-008314	R529	1	R-CHIP	SNA
....3	2007-008314	R530	1	R-CHIP	SNA
....3	2007-008314	R685	1	R-CHIP	SNA
....3	2007-008330	R654	1	R-CHIP	SNA
....3	2007-008330	R655	1	R-CHIP	SNA
....3	2007-008330	R656	1	R-CHIP	SNA
....3	2007-008330	R776	1	R-CHIP	SNA
....3	2007-008359	R667	1	R-CHIP	SNA
....3	2007-008429	R554	1	R-CHIP	SNA
....3	2007-008429	R574	1	R-CHIP	SNA
....3	2007-008429	R600	1	R-CHIP	SNA
....3	2007-008429	R646	1	R-CHIP	SNA
....3	2007-008429	R670	1	R-CHIP	SNA
....3	2007-008708	R632	1	R-CHIP	SNA
....3	2007-008708	R633	1	R-CHIP	SNA
....3	2007-010018	R860	1	R-CHIP	SNA
....3	2007-010019	R861	1	R-CHIP	SNA
....3	2203-000233	C501	1	C-CER,CHIP	SNA
....3	2203-000233	C502	1	C-CER,CHIP	SNA
....3	2203-000233	C566	1	C-CER,CHIP	SNA
....3	2203-000254	C900	1	C-CER,CHIP	SNA
....3	2203-000254	C901	1	C-CER,CHIP	SNA
....3	2203-000257	C613	1	C-CER,CHIP	SNA
....3	2203-000257	C699	1	C-CER,CHIP	SNA
....3	2203-000278	C532	1	C-CER,CHIP	SNA
....3	2203-000278	C533	1	C-CER,CHIP	SNA
....3	2203-000278	C534	1	C-CER,CHIP	SNA
....3	2203-000330	C582	1	C-CER,CHIP	SNA
....3	2203-000330	C583	1	C-CER,CHIP	SNA
....3	2203-000330	C602	1	C-CER,CHIP	SNA
....3	2203-000425	C669	1	C-CER,CHIP	SNA
....3	2203-000425	C670	1	C-CER,CHIP	SNA
....3	2203-000438	C514	1	C-CER,CHIP	SNA
....3	2203-000438	C516	1	C-CER,CHIP	SNA
....3	2203-000438	C548	1	C-CER,CHIP	SNA
....3	2203-000438	C571	1	C-CER,CHIP	SNA
....3	2203-000438	C572	1	C-CER,CHIP	SNA
....3	2203-000438	C578	1	C-CER,CHIP	SNA
....3	2203-000438	C593	1	C-CER,CHIP	SNA
....3	2203-000438	C819	1	C-CER,CHIP	SNA
....3	2203-000438	C821	1	C-CER,CHIP	SNA
....3	2203-000438	C822	1	C-CER,CHIP	SNA
....3	2203-000438	C823	1	C-CER,CHIP	SNA
....3	2203-000438	C824	1	C-CER,CHIP	SNA
....3	2203-000438	C826	1	C-CER,CHIP	SNA
....3	2203-000438	C827	1	C-CER,CHIP	SNA
....3	2203-000438	C828	1	C-CER,CHIP	SNA
....3	2203-000438	C829	1	C-CER,CHIP	SNA
....3	2203-000438	C830	1	C-CER,CHIP	SNA
....3	2203-000438	C831	1	C-CER,CHIP	SNA
....3	2203-000438	C832	1	C-CER,CHIP	SNA
....3	2203-000438	C834	1	C-CER,CHIP	SNA
....3	2203-000438	C835	1	C-CER,CHIP	SNA
....3	2203-000438	C836	1	C-CER,CHIP	SNA
....3	2203-000438	C837	1	C-CER,CHIP	SNA
....3	2203-000438	C838	1	C-CER,CHIP	SNA
....3	2203-000438	C839	1	C-CER,CHIP	SNA
....3	2203-000438	C840	1	C-CER,CHIP	SNA
....3	2203-000438	C841	1	C-CER,CHIP	SNA
....3	2203-000438	C842	1	C-CER,CHIP	SNA
....3	2203-000438	C843	1	C-CER,CHIP	SNA
....3	2203-000438	C844	1	C-CER,CHIP	SNA
....3	2203-000438	C845	1	C-CER,CHIP	SNA

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Level	Part Code	Assembled	EA	Description	Service
....3	2203-000438	C846	1	C-CER,CHIP	SNA
....3	2203-000438	C847	1	C-CER,CHIP	SNA
....3	2203-000438	C848	1	C-CER,CHIP	SNA
....3	2203-000438	C852	1	C-CER,CHIP	SNA
....3	2203-000438	C853	1	C-CER,CHIP	SNA
....3	2203-000438	C854	1	C-CER,CHIP	SNA
....3	2203-000438	C855	1	C-CER,CHIP	SNA
....3	2203-000438	C856	1	C-CER,CHIP	SNA
....3	2203-000438	C857	1	C-CER,CHIP	SNA
....3	2203-000438	C858	1	C-CER,CHIP	SNA
....3	2203-000438	C863	1	C-CER,CHIP	SNA
....3	2203-000438	C905	1	C-CER,CHIP	SNA
....3	2203-000438	C906	1	C-CER,CHIP	SNA
....3	2203-000489	C567	1	C-CER,CHIP	SNA
....3	2203-000575	C535	1	C-CER,CHIP	SNA
....3	2203-000575	C539	1	C-CER,CHIP	SNA
....3	2203-000627	C508	1	C-CER,CHIP	SNA
....3	2203-000627	C509	1	C-CER,CHIP	SNA
....3	2203-000627	C741	1	C-CER,CHIP	SNA
....3	2203-000654	C503	1	C-CER,CHIP	SNA
....3	2203-000654	C510	1	C-CER,CHIP	SNA
....3	2203-000799	C681	1	C-CER,CHIP	SNA
....3	2203-001103	C902	1	C-CER,CHIP	SNA
....3	2203-001405	C781	1	C-CER,CHIP	SNA
....3	2203-001405	C782	1	C-CER,CHIP	SNA
....3	2203-001652	C586	1	C-CER,CHIP	SNA
....3	2203-001652	C608	1	C-CER,CHIP	SNA
....3	2203-001652	C609	1	C-CER,CHIP	SNA
....3	2203-001652	C623	1	C-CER,CHIP	SNA
....3	2203-001652	C628	1	C-CER,CHIP	SNA
....3	2203-001652	C629	1	C-CER,CHIP	SNA
....3	2203-001683	C565	1	C-CER,CHIP	SA
....3	2203-002050	C921	1	C-CER,CHIP	SNA
....3	2203-002443	C549	1	C-CER,CHIP	SNA
....3	2203-002443	C550	1	C-CER,CHIP	SNA
....3	2203-002487	C564	1	C-CER,CHIP	SA
....3	2203-002487	C568	1	C-CER,CHIP	SA
....3	2203-002711	C4	1	C-CER,CHIP	SNA
....3	2203-002711	C513	1	C-CER,CHIP	SNA
....3	2203-002711	C547	1	C-CER,CHIP	SNA
....3	2203-002711	C804	1	C-CER,CHIP	SNA
....3	2203-002711	C909	1	C-CER,CHIP	SNA
....3	2203-002711	C913	1	C-CER,CHIP	SNA
....3	2203-002711	C914	1	C-CER,CHIP	SNA
....3	2203-002711	C915	1	C-CER,CHIP	SNA
....3	2203-002711	C917	1	C-CER,CHIP	SNA
....3	2203-002711	C918	1	C-CER,CHIP	SNA
....3	2203-002720	C512	1	C-CER,CHIP	SNA
....3	2203-002720	C561	1	C-CER,CHIP	SNA
....3	2203-002720	C579	1	C-CER,CHIP	SNA
....3	2203-002720	C601	1	C-CER,CHIP	SNA
....3	2203-002720	C663	1	C-CER,CHIP	SNA
....3	2203-002720	C678	1	C-CER,CHIP	SNA
....3	2203-002720	C737	1	C-CER,CHIP	SNA
....3	2203-002720	C738	1	C-CER,CHIP	SNA
....3	2203-002720	C739	1	C-CER,CHIP	SNA
....3	2203-002720	C740	1	C-CER,CHIP	SNA
....3	2203-005221	C563	1	C-CER,CHIP	SNA
....3	2203-005384	C626	1	C-CER,CHIP	SNA
....3	2203-005384	C627	1	C-CER,CHIP	SNA
....3	2203-005384	C632	1	C-CER,CHIP	SNA
....3	2203-005384	C642	1	C-CER,CHIP	SNA
....3	2203-005384	C644	1	C-CER,CHIP	SNA
....3	2203-005384	C712	1	C-CER,CHIP	SNA
....3	2203-005482	C522	1	C-CER,CHIP	SNA
....3	2203-005482	C523	1	C-CER,CHIP	SNA
....3	2203-005482	C524	1	C-CER,CHIP	SNA

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Level	Part Code	Assembled	EA	Description	Service
....3	2203-005482	C525	1	C-CER,CHIP	SNA
....3	2203-005482	C526	1	C-CER,CHIP	SNA
....3	2203-005482	C527	1	C-CER,CHIP	SNA
....3	2203-005482	C528	1	C-CER,CHIP	SNA
....3	2203-005482	C529	1	C-CER,CHIP	SNA
....3	2203-005482	C546	1	C-CER,CHIP	SNA
....3	2203-005482	C575	1	C-CER,CHIP	SNA
....3	2203-005482	C576	1	C-CER,CHIP	SNA
....3	2203-005482	C577	1	C-CER,CHIP	SNA
....3	2203-005482	C580	1	C-CER,CHIP	SNA
....3	2203-005482	C587	1	C-CER,CHIP	SNA
....3	2203-005482	C590	1	C-CER,CHIP	SNA
....3	2203-005482	C591	1	C-CER,CHIP	SNA
....3	2203-005482	C592	1	C-CER,CHIP	SNA
....3	2203-005482	C594	1	C-CER,CHIP	SNA
....3	2203-005482	C595	1	C-CER,CHIP	SNA
....3	2203-005482	C600	1	C-CER,CHIP	SNA
....3	2203-005482	C603	1	C-CER,CHIP	SNA
....3	2203-005482	C621	1	C-CER,CHIP	SNA
....3	2203-005482	C622	1	C-CER,CHIP	SNA
....3	2203-005482	C624	1	C-CER,CHIP	SNA
....3	2203-005482	C625	1	C-CER,CHIP	SNA
....3	2203-005482	C630	1	C-CER,CHIP	SNA
....3	2203-005482	C631	1	C-CER,CHIP	SNA
....3	2203-005482	C638	1	C-CER,CHIP	SNA
....3	2203-005482	C639	1	C-CER,CHIP	SNA
....3	2203-005482	C640	1	C-CER,CHIP	SNA
....3	2203-005482	C641	1	C-CER,CHIP	SNA
....3	2203-005482	C661	1	C-CER,CHIP	SNA
....3	2203-005482	C662	1	C-CER,CHIP	SNA
....3	2203-005482	C667	1	C-CER,CHIP	SNA
....3	2203-005482	C679	1	C-CER,CHIP	SNA
....3	2203-005482	C685	1	C-CER,CHIP	SNA
....3	2203-005482	C686	1	C-CER,CHIP	SNA
....3	2203-005482	C687	1	C-CER,CHIP	SNA
....3	2203-005482	C688	1	C-CER,CHIP	SNA
....3	2203-005482	C689	1	C-CER,CHIP	SNA
....3	2203-005482	C690	1	C-CER,CHIP	SNA
....3	2203-005482	C691	1	C-CER,CHIP	SNA
....3	2203-005482	C692	1	C-CER,CHIP	SNA
....3	2203-005482	C693	1	C-CER,CHIP	SNA
....3	2203-005482	C694	1	C-CER,CHIP	SNA
....3	2203-005482	C710	1	C-CER,CHIP	SNA
....3	2203-005482	C711	1	C-CER,CHIP	SNA
....3	2203-005482	C715	1	C-CER,CHIP	SNA
....3	2203-005482	C716	1	C-CER,CHIP	SNA
....3	2203-005482	C718	1	C-CER,CHIP	SNA
....3	2203-005482	C719	1	C-CER,CHIP	SNA
....3	2203-005482	C720	1	C-CER,CHIP	SNA
....3	2203-005482	C742	1	C-CER,CHIP	SNA
....3	2203-005482	C743	1	C-CER,CHIP	SNA
....3	2203-005482	C744	1	C-CER,CHIP	SNA
....3	2203-005482	C745	1	C-CER,CHIP	SNA
....3	2203-005482	C746	1	C-CER,CHIP	SNA
....3	2203-005482	C747	1	C-CER,CHIP	SNA
....3	2203-005482	C748	1	C-CER,CHIP	SNA
....3	2203-005482	C751	1	C-CER,CHIP	SNA
....3	2203-005482	C777	1	C-CER,CHIP	SNA
....3	2203-005482	C778	1	C-CER,CHIP	SNA
....3	2203-005482	C780	1	C-CER,CHIP	SNA
....3	2203-005482	C783	1	C-CER,CHIP	SNA
....3	2203-005482	C811	1	C-CER,CHIP	SNA
....3	2203-005482	C814	1	C-CER,CHIP	SNA
....3	2203-005482	C816	1	C-CER,CHIP	SNA
....3	2203-005482	C934	1	C-CER,CHIP	SNA
....3	2203-005509	C500	1	C-CER,CHIP	SNA

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Level	Part Code	Assembled	EA	Description	Service
....3	2203-005918	C636	1	C-CER,CHIP	SA
....3	2203-005918	C708	1	C-CER,CHIP	SA
....3	2203-005918	C709	1	C-CER,CHIP	SA
....3	2203-005918	C919	1	C-CER,CHIP	SA
....3	2203-006048	C2	1	C-CER,CHIP	SA
....3	2203-006048	C218	1	C-CER,CHIP	SA
....3	2203-006048	C219	1	C-CER,CHIP	SA
....3	2203-006048	C238	1	C-CER,CHIP	SA
....3	2203-006048	C245	1	C-CER,CHIP	SA
....3	2203-006048	C27	1	C-CER,CHIP	SA
....3	2203-006048	C519	1	C-CER,CHIP	SA
....3	2203-006048	C545	1	C-CER,CHIP	SA
....3	2203-006048	C558	1	C-CER,CHIP	SA
....3	2203-006048	C559	1	C-CER,CHIP	SA
....3	2203-006048	C573	1	C-CER,CHIP	SA
....3	2203-006048	C574	1	C-CER,CHIP	SA
....3	2203-006048	C6	1	C-CER,CHIP	SA
....3	2203-006048	C614	1	C-CER,CHIP	SA
....3	2203-006048	C617	1	C-CER,CHIP	SA
....3	2203-006048	C619	1	C-CER,CHIP	SA
....3	2203-006048	C649	1	C-CER,CHIP	SA
....3	2203-006048	C650	1	C-CER,CHIP	SA
....3	2203-006048	C651	1	C-CER,CHIP	SA
....3	2203-006048	C652	1	C-CER,CHIP	SA
....3	2203-006048	C671	1	C-CER,CHIP	SA
....3	2203-006048	C672	1	C-CER,CHIP	SA
....3	2203-006048	C673	1	C-CER,CHIP	SA
....3	2203-006048	C674	1	C-CER,CHIP	SA
....3	2203-006048	C675	1	C-CER,CHIP	SA
....3	2203-006048	C702	1	C-CER,CHIP	SA
....3	2203-006048	C721	1	C-CER,CHIP	SA
....3	2203-006048	C724	1	C-CER,CHIP	SA
....3	2203-006048	C725	1	C-CER,CHIP	SA
....3	2203-006048	C729	1	C-CER,CHIP	SA
....3	2203-006048	C730	1	C-CER,CHIP	SA
....3	2203-006048	C733	1	C-CER,CHIP	SA
....3	2203-006048	C736	1	C-CER,CHIP	SA
....3	2203-006048	C752	1	C-CER,CHIP	SA
....3	2203-006048	C754	1	C-CER,CHIP	SA
....3	2203-006048	C755	1	C-CER,CHIP	SA
....3	2203-006048	C756	1	C-CER,CHIP	SA
....3	2203-006048	C757	1	C-CER,CHIP	SA
....3	2203-006048	C760	1	C-CER,CHIP	SA
....3	2203-006048	C765	1	C-CER,CHIP	SA
....3	2203-006048	C766	1	C-CER,CHIP	SA
....3	2203-006048	C767	1	C-CER,CHIP	SA
....3	2203-006048	C769	1	C-CER,CHIP	SA
....3	2203-006048	C770	1	C-CER,CHIP	SA
....3	2203-006048	C771	1	C-CER,CHIP	SA
....3	2203-006048	C774	1	C-CER,CHIP	SA
....3	2203-006048	C776	1	C-CER,CHIP	SA
....3	2203-006048	C786	1	C-CER,CHIP	SA
....3	2203-006048	C787	1	C-CER,CHIP	SA
....3	2203-006048	C789	1	C-CER,CHIP	SA
....3	2203-006048	C792	1	C-CER,CHIP	SA
....3	2203-006048	C793	1	C-CER,CHIP	SA
....3	2203-006048	C795	1	C-CER,CHIP	SA
....3	2203-006048	C797	1	C-CER,CHIP	SA
....3	2203-006090	C520	1	C-CER,CHIP	SA
....3	2203-006090	C55	1	C-CER,CHIP	SA
....3	2203-006090	C562	1	C-CER,CHIP	SA
....3	2203-006090	C570	1	C-CER,CHIP	SA
....3	2203-006090	C58	1	C-CER,CHIP	SA
....3	2203-006090	C607	1	C-CER,CHIP	SA
....3	2203-006090	C620	1	C-CER,CHIP	SA
....3	2203-006090	C653	1	C-CER,CHIP	SA

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....3	2203-006090	C676	1	C-CER,CHIP	SA
....3	2203-006090	C680	1	C-CER,CHIP	SA
....3	2203-006090	C706	1	C-CER,CHIP	SA
....3	2203-006093	C696	1	C-CER,CHIP	SA
....3	2203-006093	C707	1	C-CER,CHIP	SA
....3	2203-006093	C717	1	C-CER,CHIP	SA
....3	2203-006166	C876	1	C-CER,CHIP	SNA
....3	2203-006166	C877	1	C-CER,CHIP	SNA
....3	2203-006166	C878	1	C-CER,CHIP	SNA
....3	2203-006166	C879	1	C-CER,CHIP	SNA
....3	2203-006166	C880	1	C-CER,CHIP	SNA
....3	2203-006166	C883	1	C-CER,CHIP	SNA
....3	2203-006166	C884	1	C-CER,CHIP	SNA
....3	2203-006166	C885	1	C-CER,CHIP	SNA
....3	2203-006166	C886	1	C-CER,CHIP	SNA
....3	2203-006166	C927	1	C-CER,CHIP	SNA
....3	2203-006166	C928	1	C-CER,CHIP	SNA
....3	2203-006170	C537	1	C-CER,CHIP	SNA
....3	2203-006170	C538	1	C-CER,CHIP	SNA
....3	2203-006170	C540	1	C-CER,CHIP	SNA
....3	2203-006260	C599	1	C-CER,CHIP	SNA
....3	2203-006260	C635	1	C-CER,CHIP	SNA
....3	2203-006260	C666	1	C-CER,CHIP	SNA
....3	2203-006260	C668	1	C-CER,CHIP	SNA
....3	2203-006324	C637	1	C-CER,CHIP	SNA
....3	2203-006324	C664	1	C-CER,CHIP	SNA
....3	2203-006324	C677	1	C-CER,CHIP	SNA
....3	2203-006324	C722	1	C-CER,CHIP	SNA
....3	2203-006324	C726	1	C-CER,CHIP	SNA
....3	2203-006324	C728	1	C-CER,CHIP	SNA
....3	2203-006324	C732	1	C-CER,CHIP	SNA
....3	2203-006324	C735	1	C-CER,CHIP	SNA
....3	2203-006324	C753	1	C-CER,CHIP	SNA
....3	2203-006324	C759	1	C-CER,CHIP	SNA
....3	2203-006324	C761	1	C-CER,CHIP	SNA
....3	2203-006324	C762	1	C-CER,CHIP	SNA
....3	2203-006324	C763	1	C-CER,CHIP	SNA
....3	2203-006324	C764	1	C-CER,CHIP	SNA
....3	2203-006324	C775	1	C-CER,CHIP	SNA
....3	2203-006324	C785	1	C-CER,CHIP	SNA
....3	2203-006324	C794	1	C-CER,CHIP	SNA
....3	2203-006348	C700	1	C-CER,CHIP	SNA
....3	2203-006348	C701	1	C-CER,CHIP	SNA
....3	2203-006348	C897	1	C-CER,CHIP	SNA
....3	2203-006377	C930	1	C-CER,CHIP	SNA
....3	2203-006377	C931	1	C-CER,CHIP	SNA
....3	2203-006377	C932	1	C-CER,CHIP	SNA
....3	2203-006399	C531	1	C-CER,CHIP	SNA
....3	2203-006399	C585	1	C-CER,CHIP	SNA
....3	2203-006399	C597	1	C-CER,CHIP	SNA
....3	2203-006399	C634	1	C-CER,CHIP	SNA
....3	2203-006399	C655	1	C-CER,CHIP	SNA
....3	2203-006399	C658	1	C-CER,CHIP	SNA
....3	2203-006399	C779	1	C-CER,CHIP	SNA
....3	2203-006474	C581	1	C-CER,CHIP	SA
....3	2203-006474	C596	1	C-CER,CHIP	SA
....3	2203-006474	C598	1	C-CER,CHIP	SA
....3	2203-006474	C604	1	C-CER,CHIP	SA
....3	2203-006474	C605	1	C-CER,CHIP	SA
....3	2203-006474	C610	1	C-CER,CHIP	SA
....3	2203-006474	C633	1	C-CER,CHIP	SA
....3	2203-006474	C659	1	C-CER,CHIP	SA
....3	2203-006474	C660	1	C-CER,CHIP	SA
....3	2203-006824	C569	1	C-CER,CHIP	SA
....3	2203-006824	C612	1	C-CER,CHIP	SA
....3	2203-006825	C682	1	C-CER,CHIP	SNA

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Level	Part Code	Assembled	EA	Description	Service
....3	2203-006825	C703	1	C-CER,CHIP	SNA
....3	2402-001042	EC507	1	C-AL,SMD	SNA
....3	2409-001159	EC501	1	C-ORGANIC,SMD	SNA
....3	2409-001159	EC502	1	C-ORGANIC,SMD	SNA
....3	2409-001159	EC503	1	C-ORGANIC,SMD	SNA
....3	2409-001159	EC504	1	C-ORGANIC,SMD	SNA
....3	2409-001159	EC505	1	C-ORGANIC,SMD	SNA
....3	2409-001159	EC511	1	C-ORGANIC,SMD	SNA
....3	2409-001170	EC500	1	C-POLYMER ,CHIP	SNA
....3	2603-000107	LT500	1	TRANS-MATCHING	SNA
....3	2801-004665	Y501	1	CRYSTAL-SMD	SNA
....3	3301-001272	B500	1	BEAD-SMD	SNA
....3	3301-001272	B501	1	BEAD-SMD	SNA
....3	3301-001594	B1	1	BEAD-SMD	SA
....3	3301-001594	B2	1	BEAD-SMD	SA
....3	3301-001594	B507	1	BEAD-SMD	SA
....3	3301-001594	B510	1	BEAD-SMD	SA
....3	3301-001649	B506	1	BEAD-SMD	SNA
....3	3301-001649	B508	1	BEAD-SMD	SNA
....3	3301-001649	B509	1	BEAD-SMD	SNA
....3	3301-001649	B511	1	BEAD-SMD	SNA
....3	3301-001649	B512	1	BEAD-SMD	SNA
....3	3301-001649	B514	1	BEAD-SMD	SNA
....3	3301-001649	B515	1	BEAD-SMD	SNA
....3	3301-001649	B516	1	BEAD-SMD	SNA
....3	3301-001721	B502	1	BEAD-SMD	SNA
....3	3301-001721	B503	1	BEAD-SMD	SNA
....3	3301-001721	B504	1	BEAD-SMD	SNA
....3	3301-001721	B505	1	BEAD-SMD	SNA
....3	3404-001311	SW500	1	SWITCH-TACT	SA
....3	3404-001311	SW501	1	SWITCH-TACT	SA
....3	3701-001515	J504	1	CONNECTOR-DSUB	SA
....3	3701-001516	J509	1	CONNECTOR-HDMI	SA
....3	3708-002166	J511	1	CONNECTOR-FPC/FFC/PIC	SA
....3	3708-002190	J516	1	CONNECTOR-FPC/FFC/PIC	SA
....3	3708-002402	J510	1	CONNECTOR-FPC/FFC/PIC	SA
....3	3709-001478	J502	1	CONNECTOR-CARD EDGE	SNA
....3	3710-002498	JLCD500	1	SOCKET-BOARD TO CABLE	SNA
....3	3710-002635	J506	1	SOCKET-INTERFACE	SA
....3	3711-000456	J526	1	HEADER-BOARD TO CABLE	SA
....3	3711-000541	J517	1	HEADER-BOARD TO CABLE	SNA
....3	3711-000556	J507	1	HEADER-BOARD TO CABLE	SNA
....3	3711-000922	J514	1	HEADER-BOARD TO CABLE	SNA
....3	3711-002046	J501	1	HEADER-BOARD TO CABLE	SNA
....3	3711-002049	J512	1	CONNECTOR-HEADER	SNA
....3	3711-006496	J523	1	CONNECTOR-HEADER	SA
....3	3711-007003	J505	1	HEADER-BOARD TO CABLE	SA
....3	3711-007011	J503	1	HEADER-BATTERY	SA
....3	3722-002588	J519	1	JACK-PHONE	SA
....3	3722-002588	J522	1	JACK-PHONE	SA
....3	3722-002601	J500	1	JACK-USB	SA
....3	3722-002767	J515	1	JACK-USB	SA
....3	3722-002843	J508	1	JACK-MODULAR	SA
....3	3722-002850	J513	1	JACK-E SATA	SA
....3	4309-001022	J521	1	BATTERY-HOLDER	SNA
....3	BA41-01039A	PCB	1	PCB MAIN	SNA
....3	BA41-01040A	PCB	1	PCB MAIN	SNA
....3	BA41-01041A	PCB	1	PCB MAIN	SNA
....3	BA46-10292A	BIOS	1	BIOS	SNA
....3	BA46-10293A	MICOM	1	S/W MICOM	SNA
....3	BA61-01090A	M500	1	SUPPORT-MINICARD	SNA
....3	BA61-01090A	M502	1	SUPPORT-MINICARD	SNA
....3	BA68-03588A	BIOS REV	1	LABEL-SPI	SNA
....3	BA68-10191W	SMT_SN	1	LABEL-BARCODE	SNA
....3	BA68-40012N	MICOM_REV	1	LABEL-LOCATION	SNA
....3	BA70-00601A	EMI501	1	GASKET-EMI	SNA

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Level	Part Code	Assembled	EA	Description	Service
....2	BA92-05528D	SMT_D	1	ASSY MOTHER BD-SMT_D	SNA
....3	0401-000191	D16	1	DIODE-SWITCHING	SNA
....3	0401-000191	D18	1	DIODE-SWITCHING	SNA
....3	0401-000191	D2	1	DIODE-SWITCHING	SNA
....3	0401-000191	D6	1	DIODE-SWITCHING	SNA
....3	0403-001047	ZD1	1	DIODE-ZENER	SA
....3	0404-001020	D17	1	DIODE-SCHOTTKY	SNA
....3	0404-001020	D509	1	DIODE-SCHOTTKY	SNA
....3	0404-001084	D19	1	DIODE-SCHOTTKY	SNA
....3	0404-001084	D20	1	DIODE-SCHOTTKY	SNA
....3	0404-001084	D510	1	DIODE-SCHOTTKY	SNA
....3	0404-001084	D9	1	DIODE-SCHOTTKY	SNA
....3	0404-001382	D8	1	DIODE-SCHOTTKY	SNA
....3	0501-000465	Q13	1	TR-SMALL SIGNAL	SNA
....3	0501-000465	Q32	1	TR-SMALL SIGNAL	SNA
....3	0501-000465	Q33	1	TR-SMALL SIGNAL	SNA
....3	0501-000465	Q39	1	TR-SMALL SIGNAL	SNA
....3	0502-001226	U6	1	TR-POWER	SNA
....3	0504-001157	Q512	1	TR-DIGITAL	SNA
....3	0505-000273	Q34	1	FET-SILICON	SNA
....3	0505-000273	Q37	1	FET-SILICON	SNA
....3	0505-000273	Q522	1	FET-SILICON	SNA
....3	0505-001049	Q17	1	FET-SILICON	SNA
....3	0505-001049	Q41	1	FET-SILICON	SNA
....3	0505-001049	Q42	1	FET-SILICON	SNA
....3	0505-001861	Q18	1	FET-SILICON	SNA
....3	0505-001883	Q1	1	FET-SILICON	SNA
....3	0505-001883	Q15	1	FET-SILICON	SNA
....3	0505-001883	Q19	1	FET-SILICON	SNA
....3	0505-001883	Q21	1	FET-SILICON	SNA
....3	0505-001883	Q22	1	FET-SILICON	SNA
....3	0505-001883	Q3	1	FET-SILICON	SNA
....3	0505-001883	Q31	1	FET-SILICON	SNA
....3	0505-001883	Q36	1	FET-SILICON	SNA
....3	0505-001883	Q38	1	FET-SILICON	SNA
....3	0505-001883	Q40	1	FET-SILICON	SNA
....3	0505-001883	Q516	1	FET-SILICON	SNA
....3	0505-001883	Q518	1	FET-SILICON	SNA
....3	0505-001883	U17	1	FET-SILICON	SNA
....3	0505-002183	Q519	1	FET-SILICON	SNA
....3	0505-002189	Q25	1	FET-SILICON	SNA
....3	0505-002189	Q29	1	FET-SILICON	SNA
....3	0505-002189	Q35	1	FET-SILICON	SNA
....3	0505-002189	Q525	1	FET-SILICON	SNA
....3	0505-002189	Q526	1	FET-SILICON	SNA
....3	0505-002195	Q20	1	FET-SILICON	SNA
....3	0505-002332	Q4	1	FET-SILICON	SNA
....3	0505-002332	Q7	1	FET-SILICON	SNA
....3	0505-002333	Q5	1	FET-SILICON	SNA
....3	0505-002333	Q6	1	FET-SILICON	SNA
....3	0505-002333	Q8	1	FET-SILICON	SNA
....3	0505-002333	Q9	1	FET-SILICON	SNA
....3	0601-002037	LED1	1	LED	SA
....3	0801-002628	U500	1	IC-CMOS LOGIC	SA
....3	0801-002998	U1	1	IC-CMOS LOGIC	SNA
....3	0801-002998	U2	1	IC-CMOS LOGIC	SNA
....3	0801-003296	U27	1	IC-CMOS LOGIC	SA
....3	0904-002377	U9	1	IC-DRAM CONTROLLER	SA
....3	0904-002378	U18	1	IC-I/O CONTROLLER	SA
....3	0904-002453	U25	1	IC-BUS CONTROLLER	SA
....3	1009-001010	U3	1	IC-HALL EFFECT S/W	SNA
....3	1201-002810	U16	1	IC-AUDIO AMP	SA
....3	1203-002364	U8	1	IC-RESET	SNA
....3	1203-003344	U21	1	IC-POSI.FIXED REG.	SNA
....3	1203-004687	U517	1	IC-PWM CONTROLLER	SA
....3	1203-005563	U15	1	IC-DC/DC CONVERTER	SA

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Level	Part Code	Assembled	EA	Description	Service
....3	1205-002807	U22	1	IC-SWITCH	SA
....3	1205-003526	U20	1	IC-CODEC	SA
....3	1205-003587	U4	1	IC-ETHERNET CONTROLLER	SA
....3	1209-001718	U5	1	IC-SENSOR	SA
....3	1404-001089	TH2	1	THERMISTOR-PTC	SNA
....3	1404-001152	TH1	1	THERMISTOR-NTC	SNA
....3	2007-000043	R144	1	R-CHIP	SNA
....3	2007-000043	R165	1	R-CHIP	SNA
....3	2007-000043	R541	1	R-CHIP	SNA
....3	2007-000052	R113	1	R-CHIP	SA
....3	2007-000052	R92	1	R-CHIP	SA
....3	2007-000060	R904	1	R-CHIP	SNA
....3	2007-000060	R95	1	R-CHIP	SNA
....3	2007-000070	R183	1	R-CHIP	SNA
....3	2007-000070	R184	1	R-CHIP	SNA
....3	2007-000072	R142	1	R-CHIP	SA
....3	2007-000138	R99	1	R-CHIP	SNA
....3	2007-000141	R1	1	R-CHIP	SNA
....3	2007-000141	R17	1	R-CHIP	SNA
....3	2007-000141	R18	1	R-CHIP	SNA
....3	2007-000141	R2	1	R-CHIP	SNA
....3	2007-000141	R201	1	R-CHIP	SNA
....3	2007-000141	R79	1	R-CHIP	SNA
....3	2007-000141	R8	1	R-CHIP	SNA
....3	2007-000141	R80	1	R-CHIP	SNA
....3	2007-000141	R9	1	R-CHIP	SNA
....3	2007-000143	R117	1	R-CHIP	SNA
....3	2007-000143	R118	1	R-CHIP	SNA
....3	2007-000143	R172	1	R-CHIP	SNA
....3	2007-000143	R174	1	R-CHIP	SNA
....3	2007-000143	R626	1	R-CHIP	SNA
....3	2007-000143	R63	1	R-CHIP	SNA
....3	2007-000143	R67	1	R-CHIP	SNA
....3	2007-000143	R86	1	R-CHIP	SNA
....3	2007-000148	R26	1	R-CHIP	SNA
....3	2007-000148	R45	1	R-CHIP	SNA
....3	2007-000148	R66	1	R-CHIP	SNA
....3	2007-000148	R672	1	R-CHIP	SNA
....3	2007-000148	R700	1	R-CHIP	SNA
....3	2007-000148	R882	1	R-CHIP	SNA
....3	2007-000148	R884	1	R-CHIP	SNA
....3	2007-000157	R852	1	R-CHIP	SNA
....3	2007-000157	R910	1	R-CHIP	SNA
....3	2007-000162	R228	1	R-CHIP	SNA
....3	2007-000171	R134	1	R-CHIP	SNA
....3	2007-000171	R159	1	R-CHIP	SNA
....3	2007-000171	R198	1	R-CHIP	SNA
....3	2007-000171	R219	1	R-CHIP	SNA
....3	2007-000171	R831	1	R-CHIP	SNA
....3	2007-000171	R914	1	R-CHIP	SNA
....3	2007-000171	R915	1	R-CHIP	SNA
....3	2007-000171	R916	1	R-CHIP	SNA
....3	2007-000173	R191	1	R-CHIP	SNA
....3	2007-000173	R192	1	R-CHIP	SNA
....3	2007-000173	R193	1	R-CHIP	SNA
....3	2007-000173	R194	1	R-CHIP	SNA
....3	2007-000173	R195	1	R-CHIP	SNA
....3	2007-000173	R196	1	R-CHIP	SNA
....3	2007-000173	R206	1	R-CHIP	SNA
....3	2007-000173	R214	1	R-CHIP	SNA
....3	2007-000173	R215	1	R-CHIP	SNA
....3	2007-000309	R125	1	R-CHIP	SA
....3	2007-000309	R126	1	R-CHIP	SA
....3	2007-000309	R158	1	R-CHIP	SA
....3	2007-000309	R161	1	R-CHIP	SA
....3	2007-000309	R170	1	R-CHIP	SA

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Level	Part Code	Assembled	EA	Description	Service
....3	2007-000309	R200	1	R-CHIP	SA
....3	2007-000695	R131	1	R-CHIP	SNA
....3	2007-000695	R132	1	R-CHIP	SNA
....3	2007-000695	R149	1	R-CHIP	SNA
....3	2007-000695	R858	1	R-CHIP	SNA
....3	2007-000882	R877	1	R-CHIP	SNA
....3	2007-000962	R177	1	R-CHIP	SNA
....3	2007-000969	R866	1	R-CHIP	SNA
....3	2007-001292	R221	1	R-CHIP	SNA
....3	2007-001313	R123	1	R-CHIP	SNA
....3	2007-001313	R124	1	R-CHIP	SNA
....3	2007-001313	R151	1	R-CHIP	SNA
....3	2007-001313	R222	1	R-CHIP	SNA
....3	2007-001325	R31	1	R-CHIP	SNA
....3	2007-002425	R28	1	R-CHIP	SNA
....3	2007-002425	R96	1	R-CHIP	SNA
....3	2007-002899	R34	1	R-CHIP	SNA
....3	2007-002899	R35	1	R-CHIP	SNA
....3	2007-002910	R227	1	R-CHIP	SNA
....3	2007-002910	R91	1	R-CHIP	SNA
....3	2007-002918	R52	1	R-CHIP	SNA
....3	2007-002970	R171	1	R-CHIP	SNA
....3	2007-002970	R176	1	R-CHIP	SNA
....3	2007-007046	R874	1	R-CHIP	SNA
....3	2007-007046	R875	1	R-CHIP	SNA
....3	2007-007107	R102	1	R-CHIP	SNA
....3	2007-007107	R137	1	R-CHIP	SNA
....3	2007-007107	R157	1	R-CHIP	SNA
....3	2007-007107	R162	1	R-CHIP	SNA
....3	2007-007107	R163	1	R-CHIP	SNA
....3	2007-007107	R197	1	R-CHIP	SNA
....3	2007-007107	R224	1	R-CHIP	SNA
....3	2007-007107	R500	1	R-CHIP	SNA
....3	2007-007107	R501	1	R-CHIP	SNA
....3	2007-007107	R503	1	R-CHIP	SNA
....3	2007-007107	R83	1	R-CHIP	SNA
....3	2007-007107	R88	1	R-CHIP	SNA
....3	2007-007108	R164	1	R-CHIP	SNA
....3	2007-007108	R870	1	R-CHIP	SNA
....3	2007-007108	R872	1	R-CHIP	SNA
....3	2007-007131	R857	1	R-CHIP	SNA
....3	2007-007132	R143	1	R-CHIP	SNA
....3	2007-007132	R178	1	R-CHIP	SNA
....3	2007-007132	R179	1	R-CHIP	SNA
....3	2007-007132	R181	1	R-CHIP	SNA
....3	2007-007132	R182	1	R-CHIP	SNA
....3	2007-007142	R101	1	R-CHIP	SNA
....3	2007-007142	R104	1	R-CHIP	SNA
....3	2007-007142	R105	1	R-CHIP	SNA
....3	2007-007142	R106	1	R-CHIP	SNA
....3	2007-007142	R116	1	R-CHIP	SNA
....3	2007-007142	R167	1	R-CHIP	SNA
....3	2007-007142	R186	1	R-CHIP	SNA
....3	2007-007142	R241	1	R-CHIP	SNA
....3	2007-007142	R243	1	R-CHIP	SNA
....3	2007-007142	R30	1	R-CHIP	SNA
....3	2007-007142	R32	1	R-CHIP	SNA
....3	2007-007142	R33	1	R-CHIP	SNA
....3	2007-007142	R38	1	R-CHIP	SNA
....3	2007-007142	R46	1	R-CHIP	SNA
....3	2007-007142	R47	1	R-CHIP	SNA
....3	2007-007142	R48	1	R-CHIP	SNA
....3	2007-007142	R504	1	R-CHIP	SNA
....3	2007-007142	R64	1	R-CHIP	SNA
....3	2007-007142	R851	1	R-CHIP	SNA
....3	2007-007142	R87	1	R-CHIP	SNA

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....3	2007-007142	R89	1	R-CHIP	SNA
....3	2007-007142	R905	1	R-CHIP	SNA
....3	2007-007142	R97	1	R-CHIP	SNA
....3	2007-007142	R98	1	R-CHIP	SNA
....3	2007-007274	R862	1	R-CHIP	SA
....3	2007-007302	R147	1	R-CHIP	SNA
....3	2007-007306	R168	1	R-CHIP	SNA
....3	2007-007306	R217	1	R-CHIP	SNA
....3	2007-007307	R14	1	R-CHIP	SNA
....3	2007-007307	R15	1	R-CHIP	SNA
....3	2007-007307	R16	1	R-CHIP	SNA
....3	2007-007312	R140	1	R-CHIP	SNA
....3	2007-007312	R169	1	R-CHIP	SNA
....3	2007-007312	R173	1	R-CHIP	SNA
....3	2007-007312	R175	1	R-CHIP	SNA
....3	2007-007312	R180	1	R-CHIP	SNA
....3	2007-007312	R202	1	R-CHIP	SNA
....3	2007-007312	R204	1	R-CHIP	SNA
....3	2007-007312	R53	1	R-CHIP	SNA
....3	2007-007312	R854	1	R-CHIP	SNA
....3	2007-007318	R128	1	R-CHIP	SNA
....3	2007-007318	R129	1	R-CHIP	SNA
....3	2007-007318	R148	1	R-CHIP	SNA
....3	2007-007318	R150	1	R-CHIP	SNA
....3	2007-007318	R185	1	R-CHIP	SNA
....3	2007-007318	R203	1	R-CHIP	SNA
....3	2007-007318	R205	1	R-CHIP	SNA
....3	2007-007318	R37	1	R-CHIP	SNA
....3	2007-007318	R5	1	R-CHIP	SNA
....3	2007-007334	R135	1	R-CHIP	SNA
....3	2007-007334	R136	1	R-CHIP	SNA
....3	2007-007334	R166	1	R-CHIP	SNA
....3	2007-007334	R50	1	R-CHIP	SNA
....3	2007-007334	R90	1	R-CHIP	SNA
....3	2007-007489	R231	1	R-CHIP	SNA
....3	2007-007549	R44	1	R-CHIP	SNA
....3	2007-007615	R902	1	R-CHIP	SNA
....3	2007-007615	R903	1	R-CHIP	SNA
....3	2007-007617	R36	1	R-CHIP	SA
....3	2007-007642	R225	1	R-CHIP	SNA
....3	2007-007642	R69	1	R-CHIP	SNA
....3	2007-007697	R68	1	R-CHIP	SNA
....3	2007-007796	R39	1	R-CHIP	SNA
....3	2007-007942	R246	1	R-CHIP	SNA
....3	2007-008007	R145	1	R-CHIP	SNA
....3	2007-008015	R23	1	R-CHIP	SNA
....3	2007-008015	R24	1	R-CHIP	SNA
....3	2007-008015	R25	1	R-CHIP	SNA
....3	2007-008015	R43	1	R-CHIP	SNA
....3	2007-008096	R160	1	R-CHIP	SNA
....3	2007-008293	R236	1	R-CHIP	SNA
....3	2007-008293	R237	1	R-CHIP	SNA
....3	2007-008293	R238	1	R-CHIP	SNA
....3	2007-008293	R239	1	R-CHIP	SNA
....3	2007-008293	R240	1	R-CHIP	SNA
....3	2007-008293	R242	1	R-CHIP	SNA
....3	2007-008293	R244	1	R-CHIP	SNA
....3	2007-008293	R245	1	R-CHIP	SNA
....3	2007-008293	R6	1	R-CHIP	SNA
....3	2007-008293	R827	1	R-CHIP	SNA
....3	2007-008293	R830	1	R-CHIP	SNA
....3	2007-008294	R70	1	R-CHIP	SNA
....3	2007-008298	R229	1	R-CHIP	SNA
....3	2007-008298	R230	1	R-CHIP	SNA
....3	2007-008298	R232	1	R-CHIP	SNA
....3	2007-008298	R233	1	R-CHIP	SNA
....3	2007-008298	R49	1	R-CHIP	SNA

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Level	Part Code	Assembled	EA	Description	Service
....3	2007-008304	R107	1	R-CHIP	SNA
....3	2007-008304	R887	1	R-CHIP	SNA
....3	2007-008400	R146	1	R-CHIP	SNA
....3	2007-008708	R10	1	R-CHIP	SNA
....3	2007-008708	R11	1	R-CHIP	SNA
....3	2203-000233	C121	1	C-CER,CHIP	SNA
....3	2203-000233	C122	1	C-CER,CHIP	SNA
....3	2203-000233	C129	1	C-CER,CHIP	SNA
....3	2203-000233	C146	1	C-CER,CHIP	SNA
....3	2203-000233	C149	1	C-CER,CHIP	SNA
....3	2203-000254	C103	1	C-CER,CHIP	SNA
....3	2203-000278	C90	1	C-CER,CHIP	SNA
....3	2203-000386	C49	1	C-CER,CHIP	SNA
....3	2203-000386	C70	1	C-CER,CHIP	SNA
....3	2203-000425	C615	1	C-CER,CHIP	SNA
....3	2203-000425	C616	1	C-CER,CHIP	SNA
....3	2203-000438	C123	1	C-CER,CHIP	SNA
....3	2203-000438	C155	1	C-CER,CHIP	SNA
....3	2203-000438	C194	1	C-CER,CHIP	SNA
....3	2203-000438	C241	1	C-CER,CHIP	SNA
....3	2203-000438	C818	1	C-CER,CHIP	SNA
....3	2203-000438	C825	1	C-CER,CHIP	SNA
....3	2203-000438	C833	1	C-CER,CHIP	SNA
....3	2203-000438	C849	1	C-CER,CHIP	SNA
....3	2203-000438	C850	1	C-CER,CHIP	SNA
....3	2203-000438	C851	1	C-CER,CHIP	SNA
....3	2203-000438	C859	1	C-CER,CHIP	SNA
....3	2203-000438	C860	1	C-CER,CHIP	SNA
....3	2203-000438	C861	1	C-CER,CHIP	SNA
....3	2203-000438	C862	1	C-CER,CHIP	SNA
....3	2203-000438	C864	1	C-CER,CHIP	SNA
....3	2203-000438	C87	1	C-CER,CHIP	SNA
....3	2203-000438	C88	1	C-CER,CHIP	SNA
....3	2203-000438	C89	1	C-CER,CHIP	SNA
....3	2203-000438	C904	1	C-CER,CHIP	SNA
....3	2203-000489	C61	1	C-CER,CHIP	SNA
....3	2203-000585	C45	1	C-CER,CHIP	SNA
....3	2203-000604	C40	1	C-CER,CHIP	SNA
....3	2203-000627	C12	1	C-CER,CHIP	SNA
....3	2203-000627	C13	1	C-CER,CHIP	SNA
....3	2203-000627	C14	1	C-CER,CHIP	SNA
....3	2203-000627	C511	1	C-CER,CHIP	SNA
....3	2203-000812	C926	1	C-CER,CHIP	SNA
....3	2203-000940	C60	1	C-CER,CHIP	SNA
....3	2203-001201	C165	1	C-CER,CHIP	SA
....3	2203-001201	C166	1	C-CER,CHIP	SA
....3	2203-001405	C159	1	C-CER,CHIP	SNA
....3	2203-001652	C800	1	C-CER,CHIP	SNA
....3	2203-001683	C922	1	C-CER,CHIP	SA
....3	2203-002050	C43	1	C-CER,CHIP	SNA
....3	2203-002487	C201	1	C-CER,CHIP	SA
....3	2203-002711	C106	1	C-CER,CHIP	SNA
....3	2203-002711	C116	1	C-CER,CHIP	SNA
....3	2203-002711	C134	1	C-CER,CHIP	SNA
....3	2203-002711	C135	1	C-CER,CHIP	SNA
....3	2203-002711	C136	1	C-CER,CHIP	SNA
....3	2203-002711	C139	1	C-CER,CHIP	SNA
....3	2203-002711	C145	1	C-CER,CHIP	SNA
....3	2203-002711	C154	1	C-CER,CHIP	SNA
....3	2203-002711	C16	1	C-CER,CHIP	SNA
....3	2203-002711	C168	1	C-CER,CHIP	SNA
....3	2203-002711	C17	1	C-CER,CHIP	SNA
....3	2203-002711	C18	1	C-CER,CHIP	SNA
....3	2203-002711	C186	1	C-CER,CHIP	SNA
....3	2203-002711	C188	1	C-CER,CHIP	SNA
....3	2203-002711	C19	1	C-CER,CHIP	SNA

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Level	Part Code	Assembled	EA	Description	Service
....3	2203-002711	C541	1	C-CER,CHIP	SNA
....3	2203-002711	C910	1	C-CER,CHIP	SNA
....3	2203-002711	C911	1	C-CER,CHIP	SNA
....3	2203-002711	C912	1	C-CER,CHIP	SNA
....3	2203-002711	C916	1	C-CER,CHIP	SNA
....3	2203-002720	C115	1	C-CER,CHIP	SNA
....3	2203-002720	C127	1	C-CER,CHIP	SNA
....3	2203-002720	C130	1	C-CER,CHIP	SNA
....3	2203-002720	C142	1	C-CER,CHIP	SNA
....3	2203-002720	C147	1	C-CER,CHIP	SNA
....3	2203-002720	C148	1	C-CER,CHIP	SNA
....3	2203-002720	C160	1	C-CER,CHIP	SNA
....3	2203-002720	C161	1	C-CER,CHIP	SNA
....3	2203-002720	C162	1	C-CER,CHIP	SNA
....3	2203-002720	C163	1	C-CER,CHIP	SNA
....3	2203-002720	C164	1	C-CER,CHIP	SNA
....3	2203-002720	C189	1	C-CER,CHIP	SNA
....3	2203-002720	C190	1	C-CER,CHIP	SNA
....3	2203-002720	C191	1	C-CER,CHIP	SNA
....3	2203-002720	C83	1	C-CER,CHIP	SNA
....3	2203-002720	C85	1	C-CER,CHIP	SNA
....3	2203-005172	C198	1	C-CER,CHIP	SNA
....3	2203-005384	C167	1	C-CER,CHIP	SNA
....3	2203-005384	C233	1	C-CER,CHIP	SNA
....3	2203-005384	C618	1	C-CER,CHIP	SNA
....3	2203-005384	C66	1	C-CER,CHIP	SNA
....3	2203-005384	C69	1	C-CER,CHIP	SNA
....3	2203-005384	C98	1	C-CER,CHIP	SNA
....3	2203-005482	C108	1	C-CER,CHIP	SNA
....3	2203-005482	C109	1	C-CER,CHIP	SNA
....3	2203-005482	C111	1	C-CER,CHIP	SNA
....3	2203-005482	C144	1	C-CER,CHIP	SNA
....3	2203-005482	C192	1	C-CER,CHIP	SNA
....3	2203-005482	C195	1	C-CER,CHIP	SNA
....3	2203-005482	C196	1	C-CER,CHIP	SNA
....3	2203-005482	C197	1	C-CER,CHIP	SNA
....3	2203-005482	C203	1	C-CER,CHIP	SNA
....3	2203-005482	C230	1	C-CER,CHIP	SNA
....3	2203-005482	C231	1	C-CER,CHIP	SNA
....3	2203-005482	C244	1	C-CER,CHIP	SNA
....3	2203-005482	C557	1	C-CER,CHIP	SNA
....3	2203-005482	C589	1	C-CER,CHIP	SNA
....3	2203-005482	C611	1	C-CER,CHIP	SNA
....3	2203-005482	C643	1	C-CER,CHIP	SNA
....3	2203-005482	C76	1	C-CER,CHIP	SNA
....3	2203-005482	C77	1	C-CER,CHIP	SNA
....3	2203-005482	C78	1	C-CER,CHIP	SNA
....3	2203-005482	C79	1	C-CER,CHIP	SNA
....3	2203-005482	C80	1	C-CER,CHIP	SNA
....3	2203-005482	C807	1	C-CER,CHIP	SNA
....3	2203-005482	C808	1	C-CER,CHIP	SNA
....3	2203-005482	C809	1	C-CER,CHIP	SNA
....3	2203-005482	C81	1	C-CER,CHIP	SNA
....3	2203-005482	C810	1	C-CER,CHIP	SNA
....3	2203-005482	C812	1	C-CER,CHIP	SNA
....3	2203-005482	C813	1	C-CER,CHIP	SNA
....3	2203-005482	C815	1	C-CER,CHIP	SNA
....3	2203-005482	C82	1	C-CER,CHIP	SNA
....3	2203-005482	C84	1	C-CER,CHIP	SNA
....3	2203-005482	C907	1	C-CER,CHIP	SNA
....3	2203-005482	C908	1	C-CER,CHIP	SNA
....3	2203-005482	C97	1	C-CER,CHIP	SNA
....3	2203-005509	C102	1	C-CER,CHIP	SNA
....3	2203-005509	C110	1	C-CER,CHIP	SNA
....3	2203-005655	C133	1	C-CER,CHIP	SNA
....3	2203-005918	C252	1	C-CER,CHIP	SA

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Level	Part Code	Assembled	EA	Description	Service
....3	2203-005918	C41	1	C-CER,CHIP	SA
....3	2203-005918	C920	1	C-CER,CHIP	SA
....3	2203-006000	C28	1	C-CER,CHIP	SA
....3	2203-006048	C112	1	C-CER,CHIP	SA
....3	2203-006048	C114	1	C-CER,CHIP	SA
....3	2203-006048	C15	1	C-CER,CHIP	SA
....3	2203-006048	C171	1	C-CER,CHIP	SA
....3	2203-006048	C172	1	C-CER,CHIP	SA
....3	2203-006048	C179	1	C-CER,CHIP	SA
....3	2203-006048	C180	1	C-CER,CHIP	SA
....3	2203-006048	C185	1	C-CER,CHIP	SA
....3	2203-006048	C187	1	C-CER,CHIP	SA
....3	2203-006048	C204	1	C-CER,CHIP	SA
....3	2203-006048	C209	1	C-CER,CHIP	SA
....3	2203-006048	C210	1	C-CER,CHIP	SA
....3	2203-006048	C212	1	C-CER,CHIP	SA
....3	2203-006048	C215	1	C-CER,CHIP	SA
....3	2203-006048	C216	1	C-CER,CHIP	SA
....3	2203-006048	C217	1	C-CER,CHIP	SA
....3	2203-006048	C220	1	C-CER,CHIP	SA
....3	2203-006048	C221	1	C-CER,CHIP	SA
....3	2203-006048	C234	1	C-CER,CHIP	SA
....3	2203-006048	C237	1	C-CER,CHIP	SA
....3	2203-006048	C246	1	C-CER,CHIP	SA
....3	2203-006048	C247	1	C-CER,CHIP	SA
....3	2203-006048	C29	1	C-CER,CHIP	SA
....3	2203-006048	C3	1	C-CER,CHIP	SA
....3	2203-006048	C30	1	C-CER,CHIP	SA
....3	2203-006048	C31	1	C-CER,CHIP	SA
....3	2203-006048	C32	1	C-CER,CHIP	SA
....3	2203-006048	C33	1	C-CER,CHIP	SA
....3	2203-006048	C34	1	C-CER,CHIP	SA
....3	2203-006048	C35	1	C-CER,CHIP	SA
....3	2203-006048	C36	1	C-CER,CHIP	SA
....3	2203-006048	C37	1	C-CER,CHIP	SA
....3	2203-006048	C38	1	C-CER,CHIP	SA
....3	2203-006048	C42	1	C-CER,CHIP	SA
....3	2203-006048	C47	1	C-CER,CHIP	SA
....3	2203-006048	C48	1	C-CER,CHIP	SA
....3	2203-006048	C50	1	C-CER,CHIP	SA
....3	2203-006048	C51	1	C-CER,CHIP	SA
....3	2203-006048	C52	1	C-CER,CHIP	SA
....3	2203-006048	C57	1	C-CER,CHIP	SA
....3	2203-006048	C588	1	C-CER,CHIP	SA
....3	2203-006048	C59	1	C-CER,CHIP	SA
....3	2203-006048	C648	1	C-CER,CHIP	SA
....3	2203-006048	C67	1	C-CER,CHIP	SA
....3	2203-006048	C7	1	C-CER,CHIP	SA
....3	2203-006048	C73	1	C-CER,CHIP	SA
....3	2203-006048	C74	1	C-CER,CHIP	SA
....3	2203-006048	C75	1	C-CER,CHIP	SA
....3	2203-006048	C8	1	C-CER,CHIP	SA
....3	2203-006048	C806	1	C-CER,CHIP	SA
....3	2203-006048	C86	1	C-CER,CHIP	SA
....3	2203-006048	C91	1	C-CER,CHIP	SA
....3	2203-006048	C92	1	C-CER,CHIP	SA
....3	2203-006048	C93	1	C-CER,CHIP	SA
....3	2203-006048	C99	1	C-CER,CHIP	SA
....3	2203-006069	C113	1	C-CER,CHIP	SNA
....3	2203-006069	C157	1	C-CER,CHIP	SNA
....3	2203-006090	C107	1	C-CER,CHIP	SA
....3	2203-006090	C143	1	C-CER,CHIP	SA
....3	2203-006090	C224	1	C-CER,CHIP	SA
....3	2203-006090	C236	1	C-CER,CHIP	SA
....3	2203-006090	C54	1	C-CER,CHIP	SA
....3	2203-006090	C654	1	C-CER,CHIP	SA

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....3	2203-006090	C68	1	C-CER,CHIP	SA
....3	2203-006093	C1	1	C-CER,CHIP	SA
....3	2203-006093	C193	1	C-CER,CHIP	SA
....3	2203-006093	C207	1	C-CER,CHIP	SA
....3	2203-006166	C872	1	C-CER,CHIP	SNA
....3	2203-006166	C873	1	C-CER,CHIP	SNA
....3	2203-006166	C874	1	C-CER,CHIP	SNA
....3	2203-006166	C875	1	C-CER,CHIP	SNA
....3	2203-006166	C881	1	C-CER,CHIP	SNA
....3	2203-006166	C882	1	C-CER,CHIP	SNA
....3	2203-006166	C887	1	C-CER,CHIP	SNA
....3	2203-006166	C888	1	C-CER,CHIP	SNA
....3	2203-006166	C948	1	C-CER,CHIP	SNA
....3	2203-006166	C949	1	C-CER,CHIP	SNA
....3	2203-006166	C950	1	C-CER,CHIP	SNA
....3	2203-006170	C39	1	C-CER,CHIP	SNA
....3	2203-006170	C44	1	C-CER,CHIP	SNA
....3	2203-006260	C176	1	C-CER,CHIP	SNA
....3	2203-006260	C177	1	C-CER,CHIP	SNA
....3	2203-006260	C181	1	C-CER,CHIP	SNA
....3	2203-006260	C182	1	C-CER,CHIP	SNA
....3	2203-006260	C183	1	C-CER,CHIP	SNA
....3	2203-006260	C184	1	C-CER,CHIP	SNA
....3	2203-006324	C141	1	C-CER,CHIP	SNA
....3	2203-006324	C174	1	C-CER,CHIP	SNA
....3	2203-006324	C175	1	C-CER,CHIP	SNA
....3	2203-006336	C250	1	C-CER,CHIP	SNA
....3	2203-006348	C158	1	C-CER,CHIP	SNA
....3	2203-006348	C898	1	C-CER,CHIP	SNA
....3	2203-006348	C899	1	C-CER,CHIP	SNA
....3	2203-006361	C173	1	C-CER,CHIP	SNA
....3	2203-006361	C178	1	C-CER,CHIP	SNA
....3	2203-006361	C205	1	C-CER,CHIP	SNA
....3	2203-006361	C208	1	C-CER,CHIP	SNA
....3	2203-006361	C211	1	C-CER,CHIP	SNA
....3	2203-006361	C226	1	C-CER,CHIP	SNA
....3	2203-006361	C228	1	C-CER,CHIP	SNA
....3	2203-006377	C933	1	C-CER,CHIP	SNA
....3	2203-006399	C137	1	C-CER,CHIP	SNA
....3	2203-006399	C138	1	C-CER,CHIP	SNA
....3	2203-006399	C169	1	C-CER,CHIP	SNA
....3	2203-006399	C170	1	C-CER,CHIP	SNA
....3	2203-006399	C199	1	C-CER,CHIP	SNA
....3	2203-006399	C200	1	C-CER,CHIP	SNA
....3	2203-006399	C202	1	C-CER,CHIP	SNA
....3	2203-006399	C232	1	C-CER,CHIP	SNA
....3	2203-006399	C243	1	C-CER,CHIP	SNA
....3	2203-006399	C5	1	C-CER,CHIP	SNA
....3	2203-006474	C124	1	C-CER,CHIP	SA
....3	2203-006474	C125	1	C-CER,CHIP	SA
....3	2203-006474	C65	1	C-CER,CHIP	SA
....3	2203-006474	C71	1	C-CER,CHIP	SA
....3	2203-006474	C817	1	C-CER,CHIP	SA
....3	2203-006474	C96	1	C-CER,CHIP	SA
....3	2203-006852	C140	1	C-CER,CHIP	SNA
....3	2203-006852	C895	1	C-CER,CHIP	SNA
....3	2203-006852	C896	1	C-CER,CHIP	SNA
....3	2402-001042	EC509	1	C-AL,SMD	SNA
....3	2402-001042	EC510	1	C-AL,SMD	SNA
....3	2402-001144	C893	1	C-AL,SMD	SNA
....3	2402-001144	C894	1	C-AL,SMD	SNA
....3	2402-001144	EC15	1	C-AL,SMD	SNA
....3	2402-001144	EC16	1	C-AL,SMD	SNA
....3	2402-001144	EC18	1	C-AL,SMD	SNA
....3	2402-001144	EC20	1	C-AL,SMD	SNA
....3	2402-001144	EC512	1	C-AL,SMD	SNA

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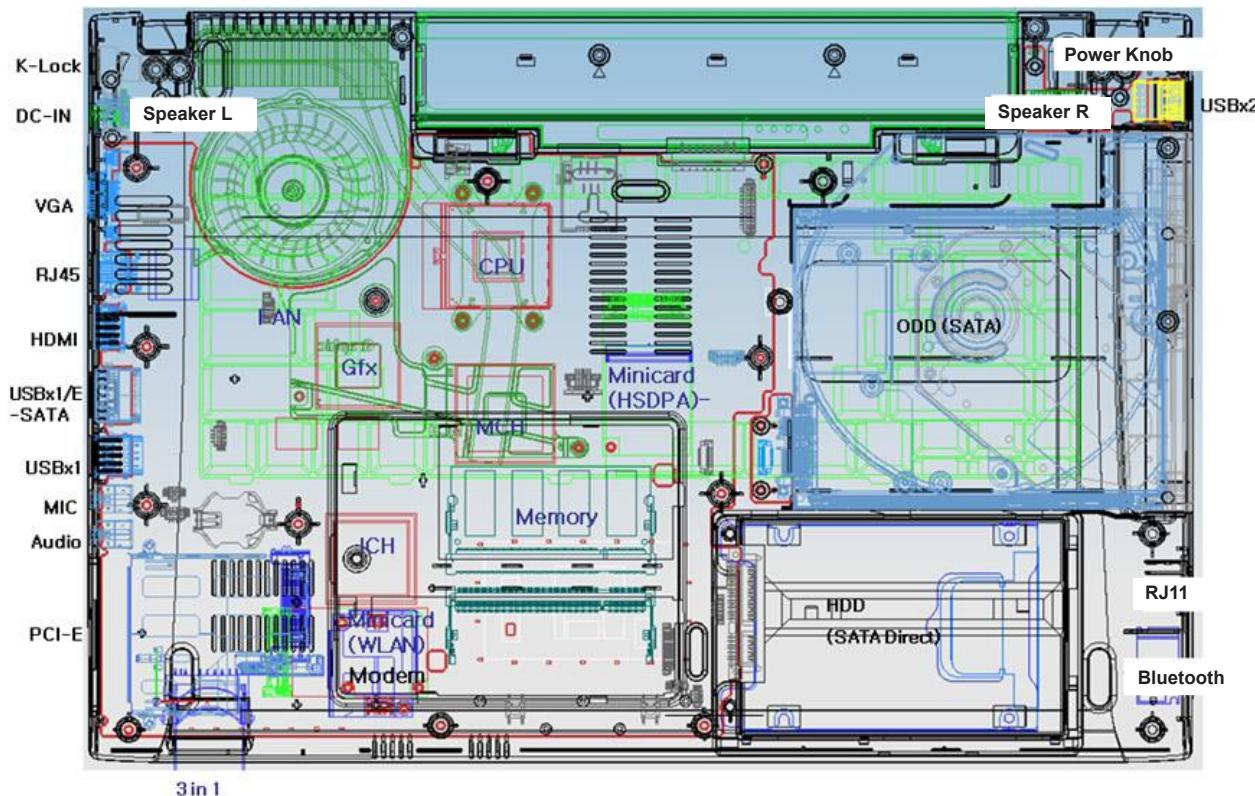
6. Material List

Level	Part Code	Assembled	EA	Description	Service
....3	2402-001144	EC514	1	C-AL,SMD	SNA
....3	2409-001159	EC10	1	C-ORGANIC,SMD	SNA
....3	2409-001159	EC11	1	C-ORGANIC,SMD	SNA
....3	2409-001159	EC12	1	C-ORGANIC,SMD	SNA
....3	2409-001173	EC2	1	C-ORGANIC,SMD	SNA
....3	2409-001173	EC3	1	C-ORGANIC,SMD	SNA
....3	2409-001173	EC5	1	C-ORGANIC,SMD	SNA
....3	2409-001173	EC6	1	C-ORGANIC,SMD	SNA
....3	2409-001175	EC515	1	C-ORGANIC,SMD	SNA
....3	2409-001175	EC516	1	C-ORGANIC,SMD	SNA
....3	2409-001176	EC17	1	C-ORGANIC,SMD	SNA
....3	2409-001176	EC21	1	C-ORGANIC,SMD	SNA
....3	2409-001176	EC22	1	C-ORGANIC,SMD	SNA
....3	2703-001839	L1	1	INDUCTOR-SMD	SNA
....3	2703-001839	L4	1	INDUCTOR-SMD	SNA
....3	2703-001839	L5	1	INDUCTOR-SMD	SNA
....3	2703-002771	L12	1	INDUCTOR-SMD	SNA
....3	2703-002988	L9	1	INDUCTOR-SMD	SNA
....3	2703-002992	L2	1	INDUCTOR-SMD	SNA
....3	2703-002992	L3	1	INDUCTOR-SMD	SNA
....3	2703-003232	L11	1	INDUCTOR-SMD	SNA
....3	2703-003233	L10	1	INDUCTOR-SMD	SNA
....3	2703-003233	L13	1	INDUCTOR-SMD	SNA
....3	2703-003233	L14	1	INDUCTOR-SMD	SNA
....3	2801-003856	Y2	1	CRYSTAL-SMD	SA
....3	2801-004667	Y500	1	CRYSTAL-SMD	SNA
....3	2801-004668	Y1	1	CRYSTAL-SMD	SNA
....3	3301-001272	B518	1	BEAD-SMD	SNA
....3	3301-001272	B519	1	BEAD-SMD	SNA
....3	3301-001594	B13	1	BEAD-SMD	SA
....3	3301-001649	B10	1	BEAD-SMD	SNA
....3	3301-001649	B11	1	BEAD-SMD	SNA
....3	3301-001649	B12	1	BEAD-SMD	SNA
....3	3301-001649	B16	1	BEAD-SMD	SNA
....3	3301-001649	B17	1	BEAD-SMD	SNA
....3	3301-001649	B18	1	BEAD-SMD	SNA
....3	3301-001649	B19	1	BEAD-SMD	SNA
....3	3301-001649	B20	1	BEAD-SMD	SNA
....3	3301-001649	B21	1	BEAD-SMD	SNA
....3	3301-001649	B22	1	BEAD-SMD	SNA
....3	3301-001649	B23	1	BEAD-SMD	SNA
....3	3301-001649	B24	1	BEAD-SMD	SNA
....3	3301-001649	B25	1	BEAD-SMD	SNA
....3	3301-001649	B3	1	BEAD-SMD	SNA
....3	3301-001649	B520	1	BEAD-SMD	SNA
....3	3301-001649	B521	1	BEAD-SMD	SNA
....3	3301-001649	B522	1	BEAD-SMD	SNA
....3	3301-001649	B9	1	BEAD-SMD	SNA
....3	3404-001311	SW1	1	SWITCH-TACT	SA
....3	3708-002190	J1	1	CONNECTOR-FPC/FFC/PIC	SA
....3	3709-001325	DDR2	1	CONNECTOR-CARD EDGE	SNA
....3	3709-001327	DDR1	1	CONNECTOR-CARD EDGE	SA
....3	3709-001492	J7	1	CONNECTOR-CARD SLOT	SA
....3	3709-001498	J5	1	CONNECTOR-CARD EDGE	SNA
....3	3709-001506	J4	1	CONNECTOR-CARD EDGE	SA
....3	3710-002788	JHDD1	1	SOCKET-INTERFACE	SA
....3	3711-000386	J6	1	HEADER-BOARD TO CABLE	SA
....3	3711-000456	J3	1	HEADER-BOARD TO CABLE	SA
....3	BA61-01090A	M2	1	SUPPORT-MINICARD	SNA
....3	BA61-01090A	M3	1	SUPPORT-MINICARD	SNA
....3	BA61-01103A	M1	1	SUPPORT-MINICARD45	SNA
.1	BA99-07566A	SUB MATERIAL	1	ASSY SUB/MATERIAL-NP_PBA	SNA
.2	0202-001498	1.0 PBA	1	SOLDER-WIRE FLUX	SNA
.2	0204-000124	PBA CLEANING	0.017	ETHANOL	SNA
.2	0204-001105	SOLDERING MACHINE	0.001	FLUX	SNA

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7. System Wire Diagram

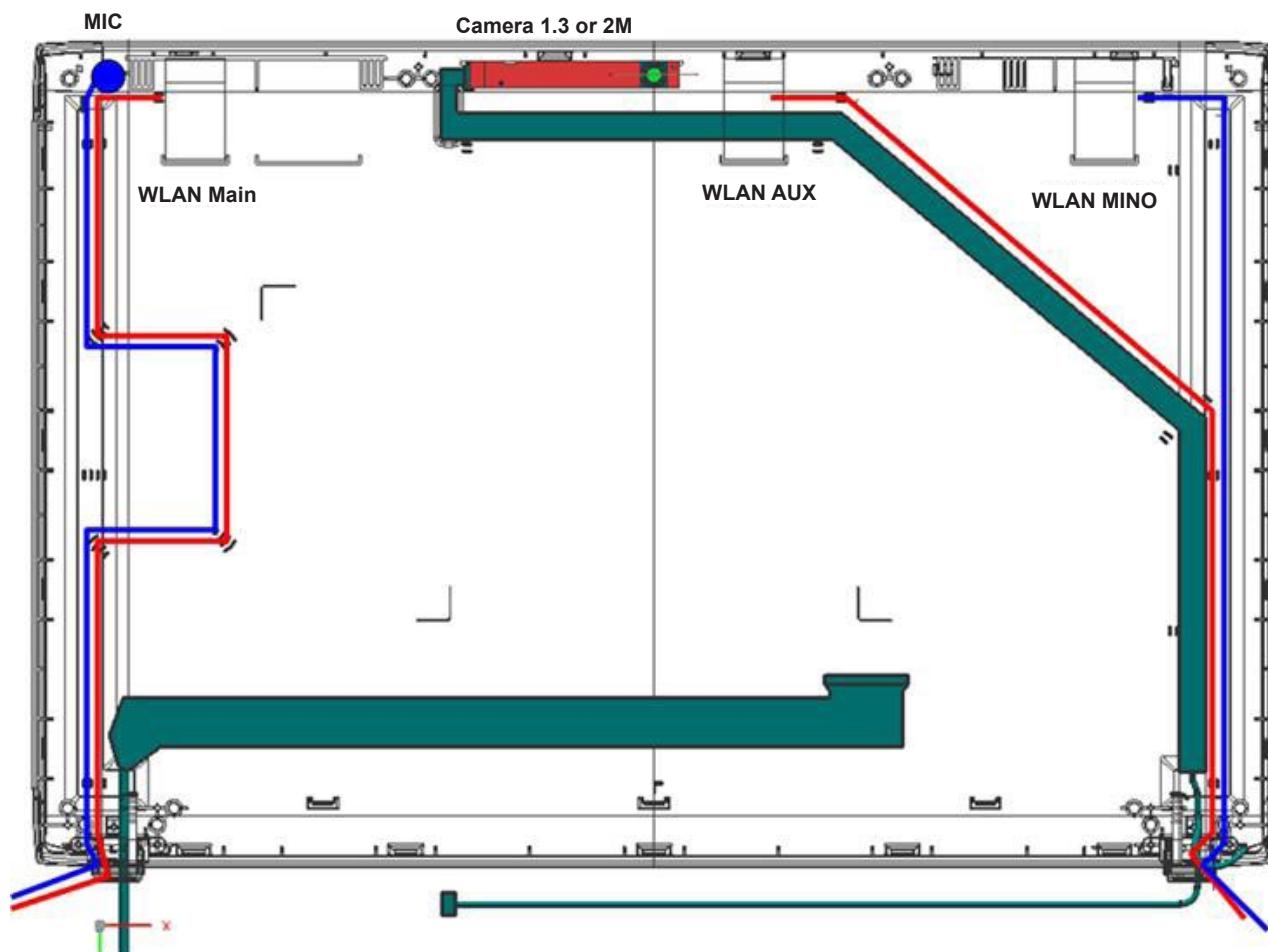
7-1. System Layout



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7. System Wire Diagram

7-2. LCD Layout



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8. Block Diagram and Schematic

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BONN-INT

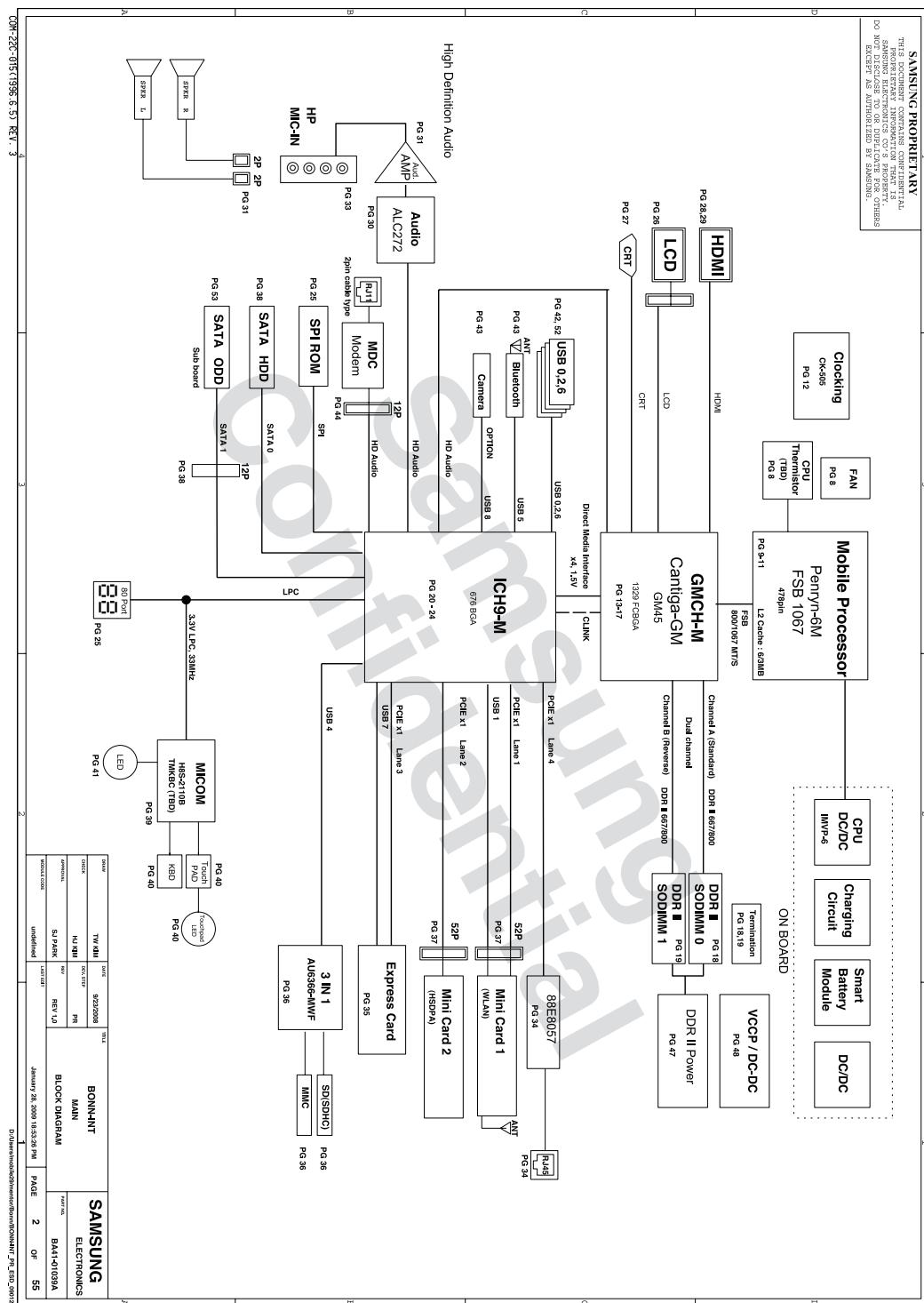
Model	Name : BONN-INT																																					
PBA	Name	: MAIN																																				
PCB	Code	: GCE : BA41-01039A																																				
		NAN	: BA41-01040A																																			
		HAN	: BA41-01041A																																			
Dev.	Step	: PR																																				
Revision		: 1.0																																				
T.R.	Date	: 2009.02.03																																				
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<input type="checkbox"/> Owner : SEC Mobile R & D <input checked="" type="checkbox"/> Signature : X																																						
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8. Block Diagram and Schematic



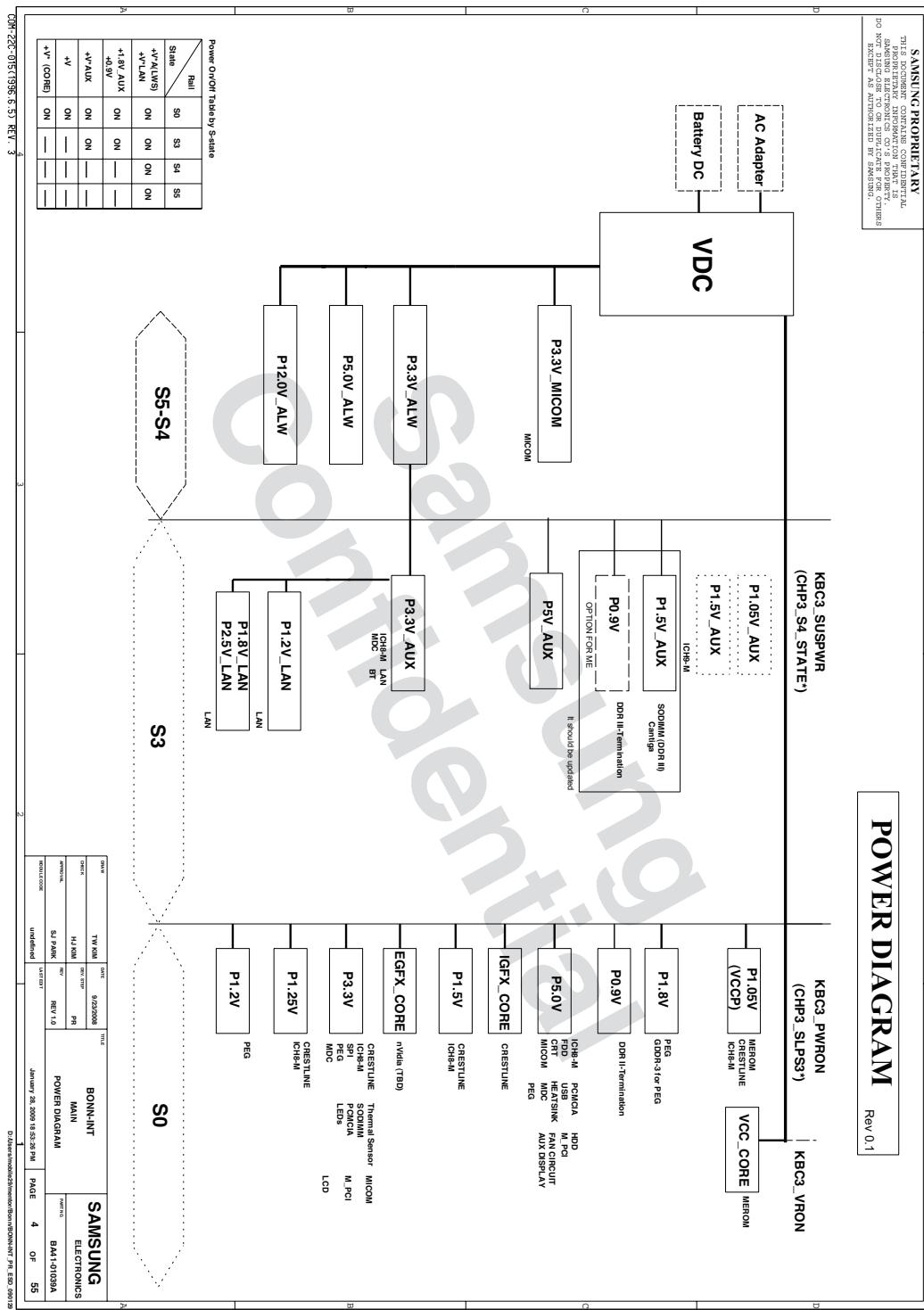
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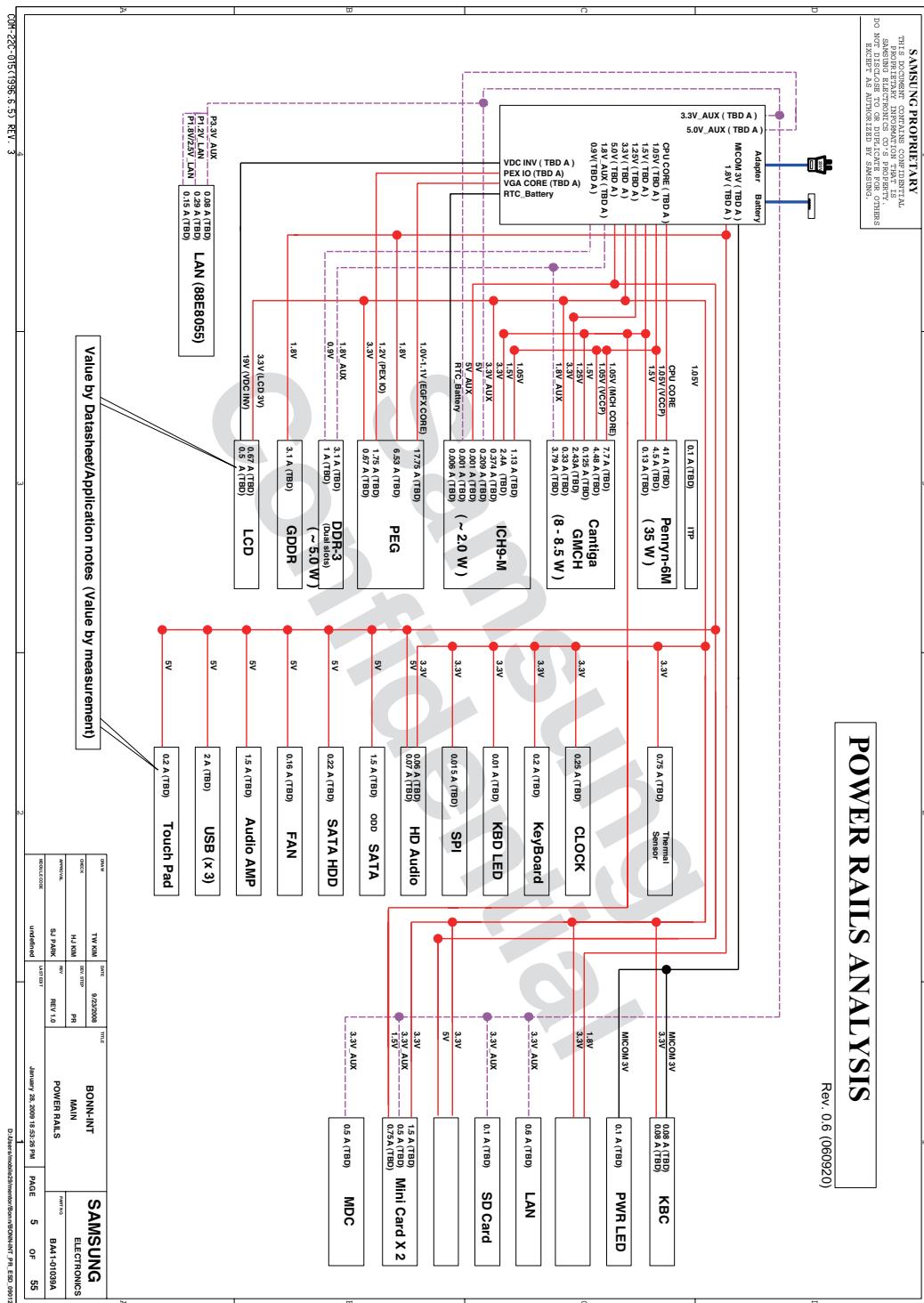
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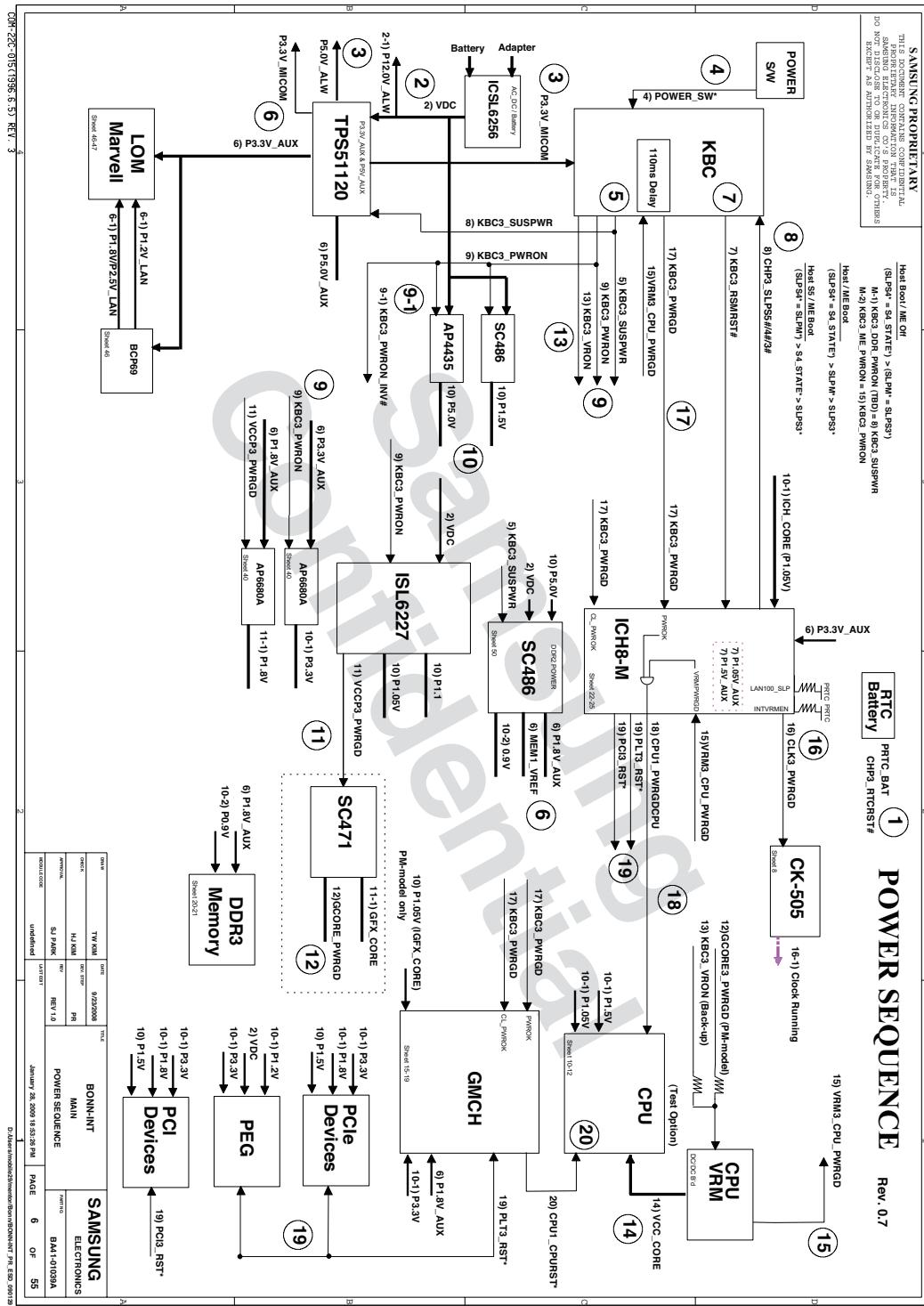
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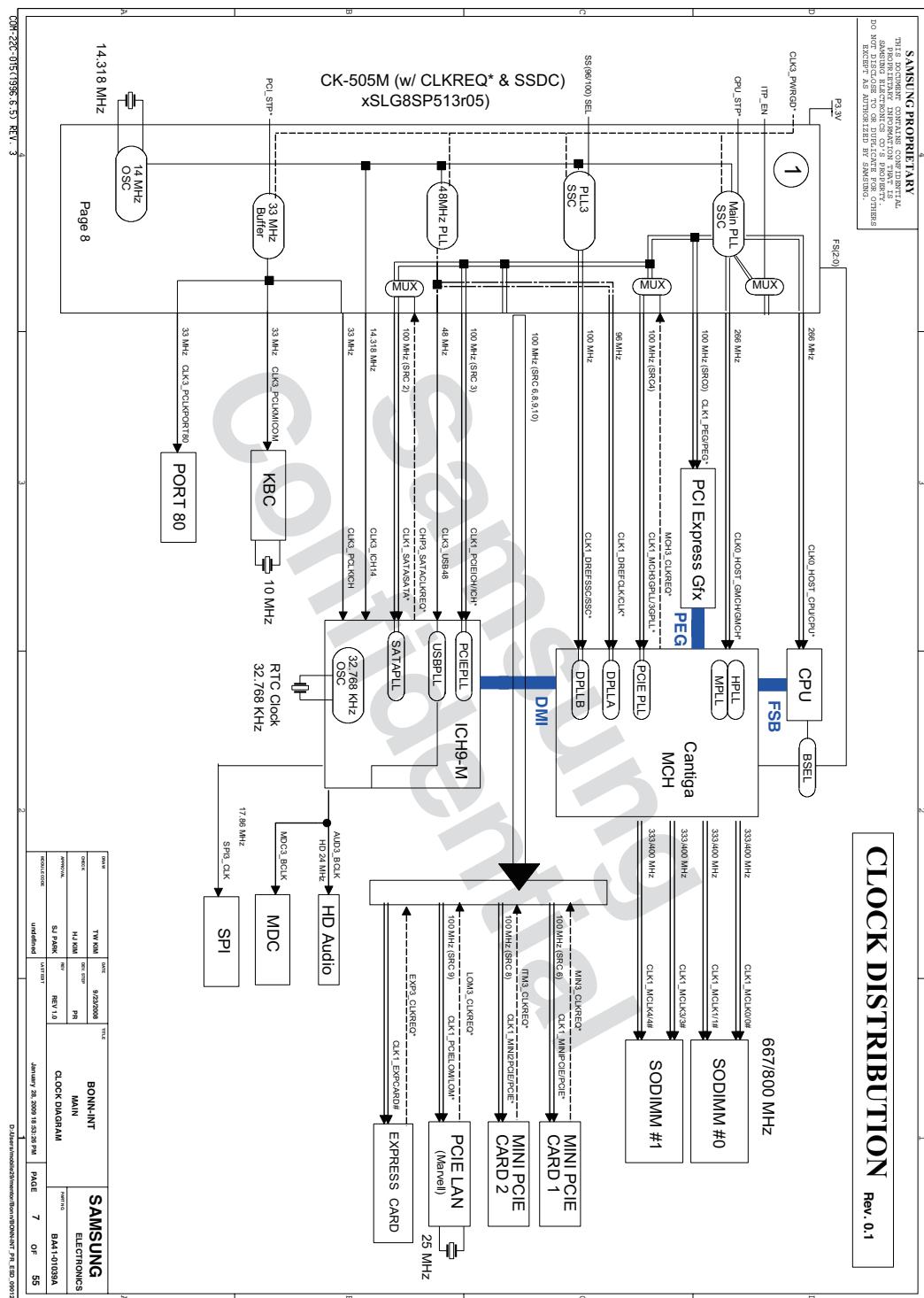
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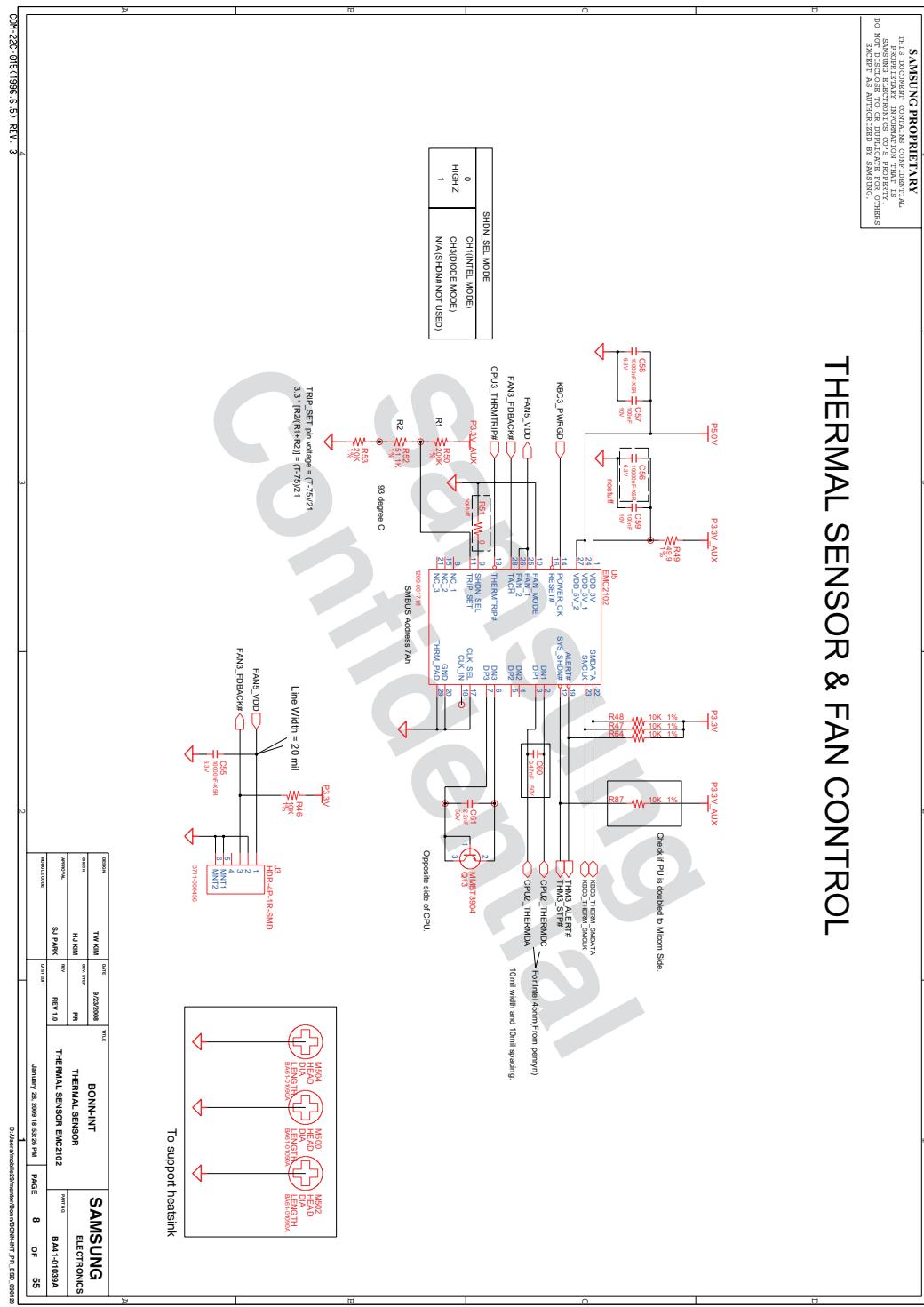


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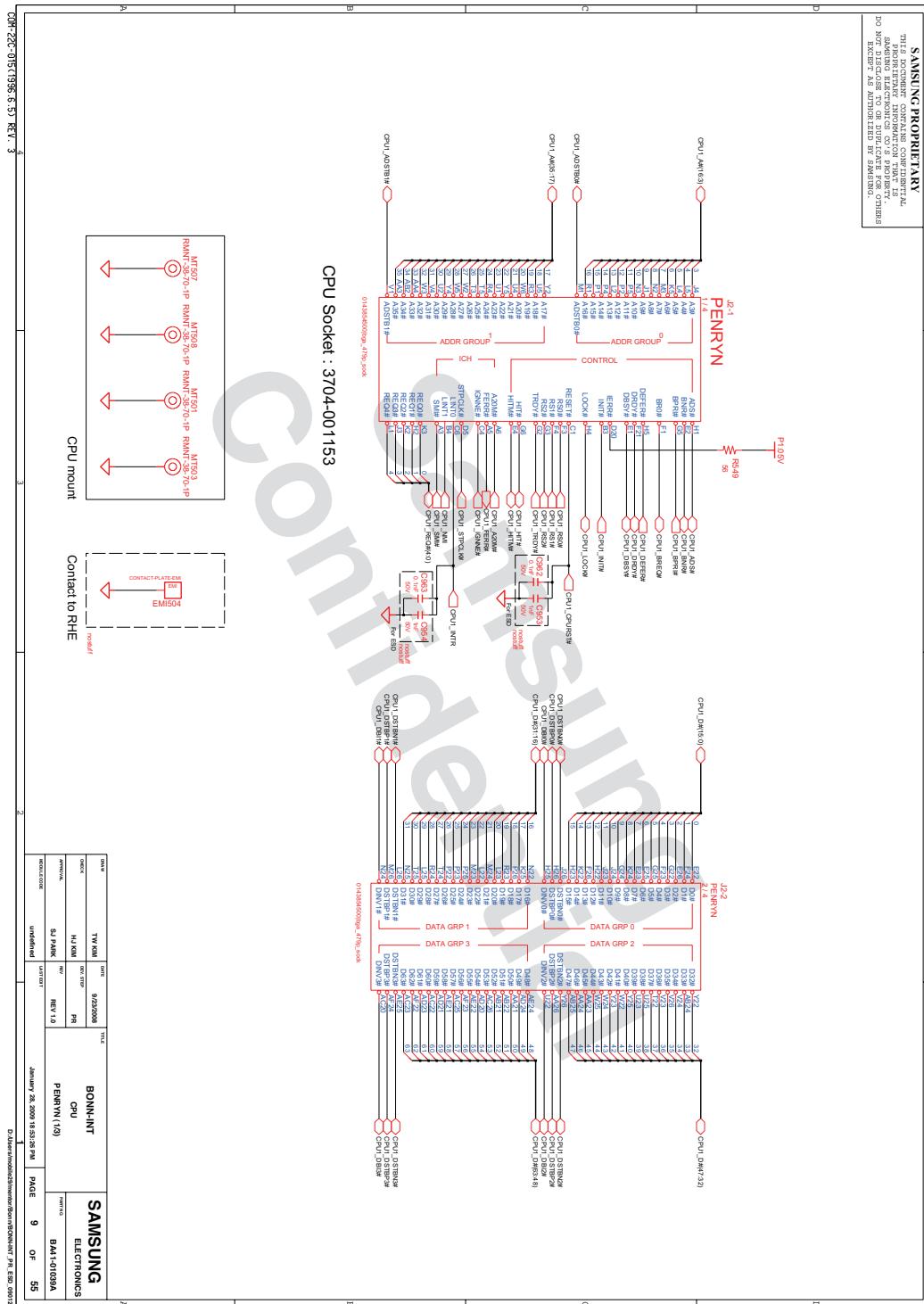
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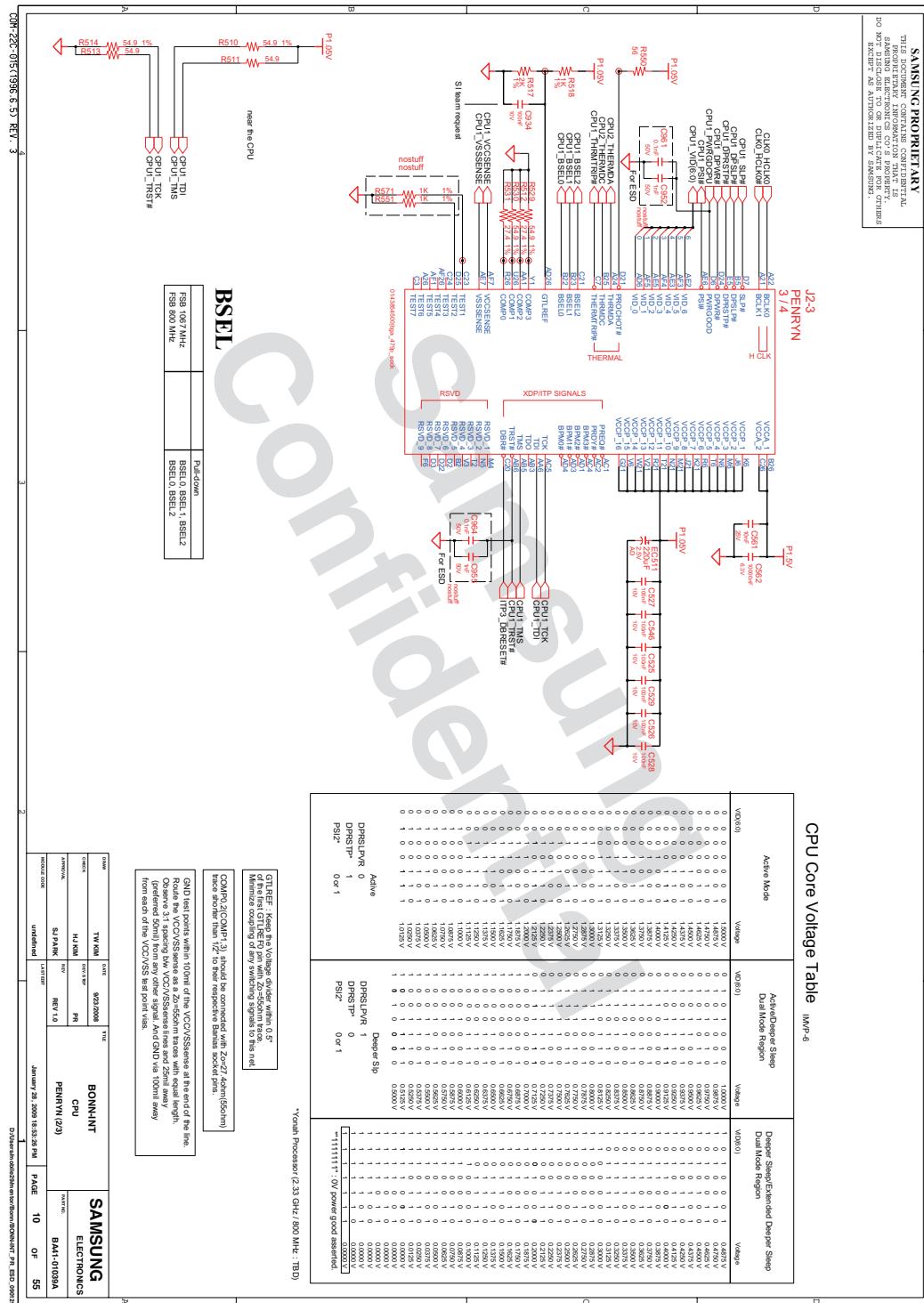
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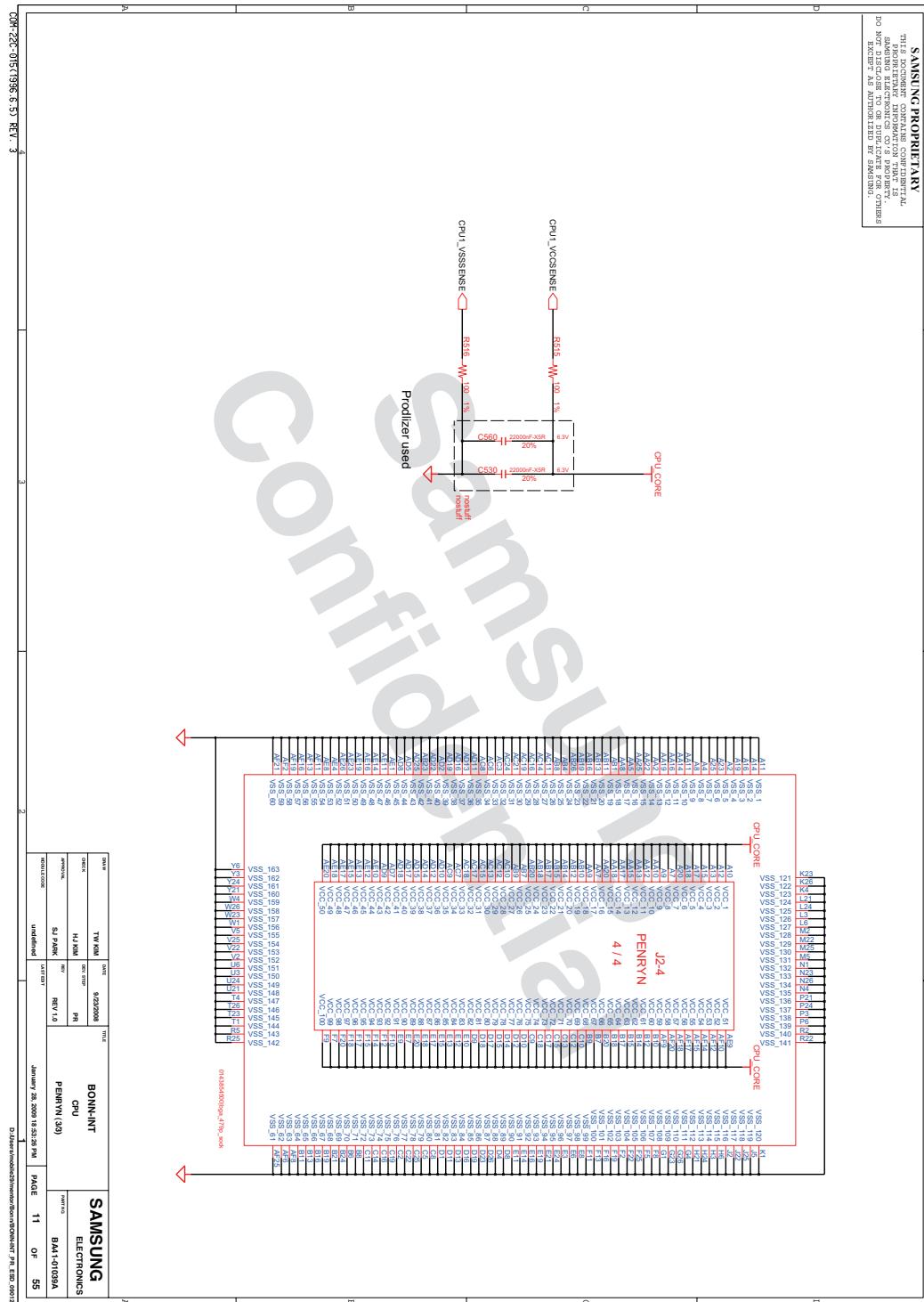
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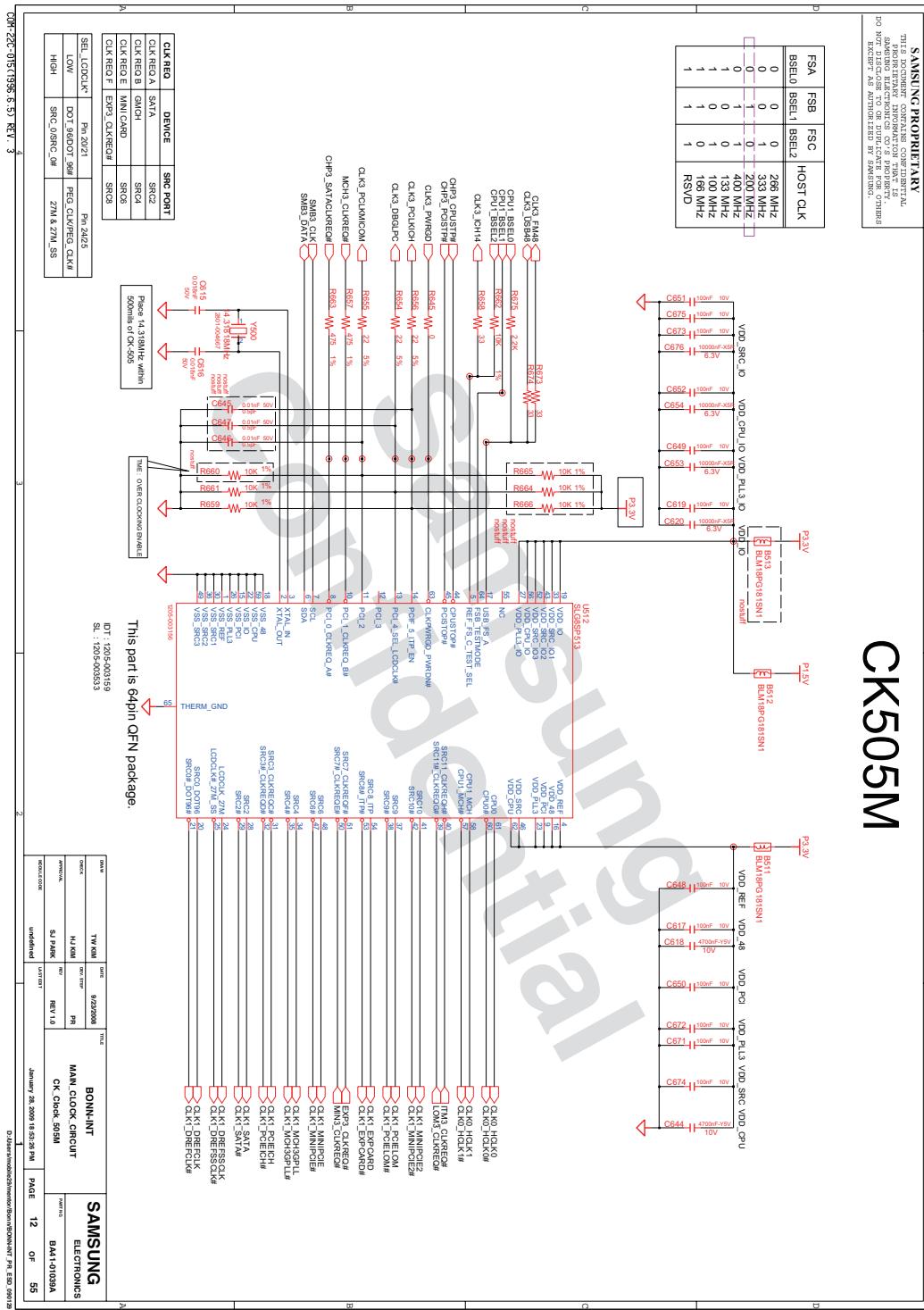
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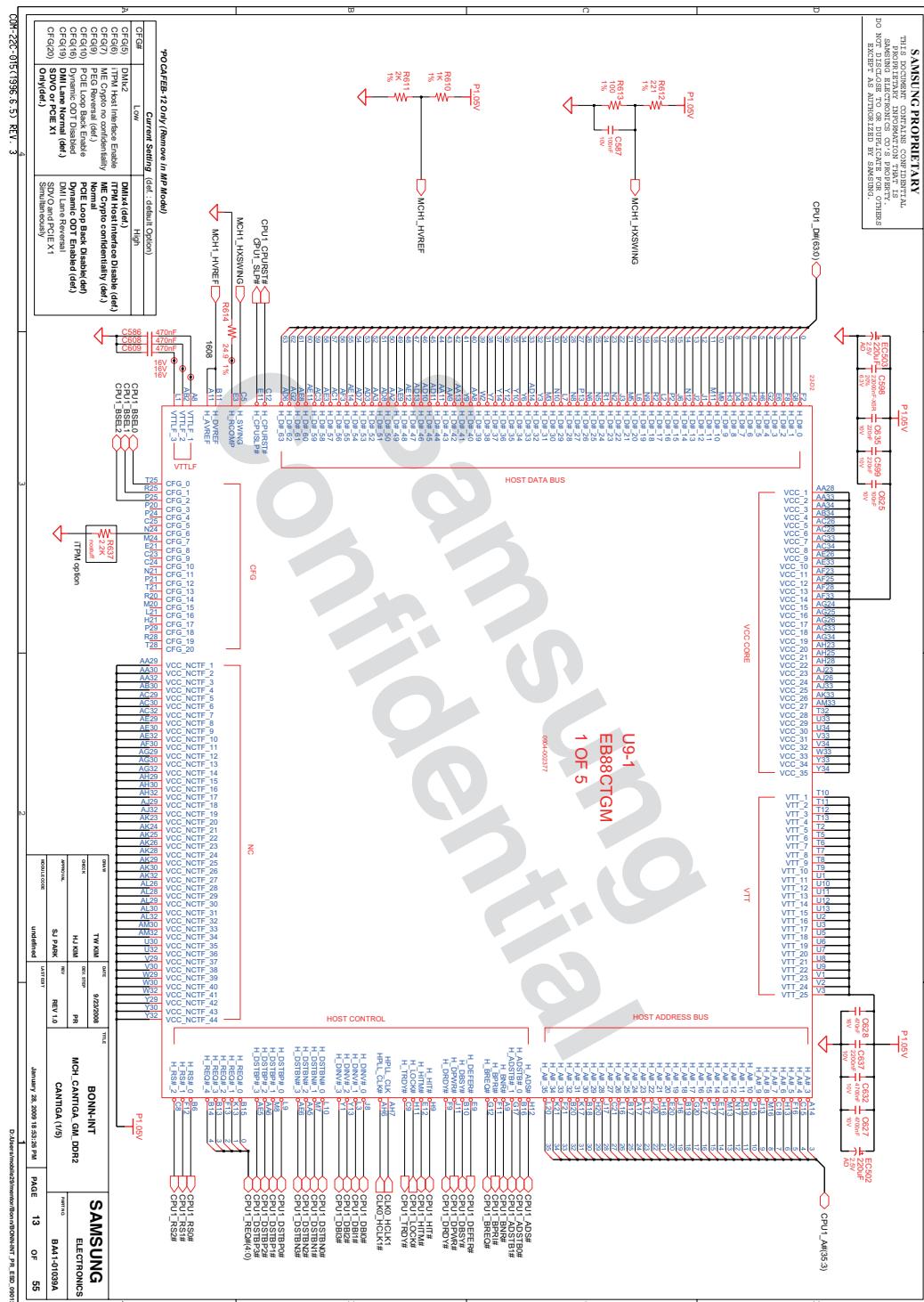
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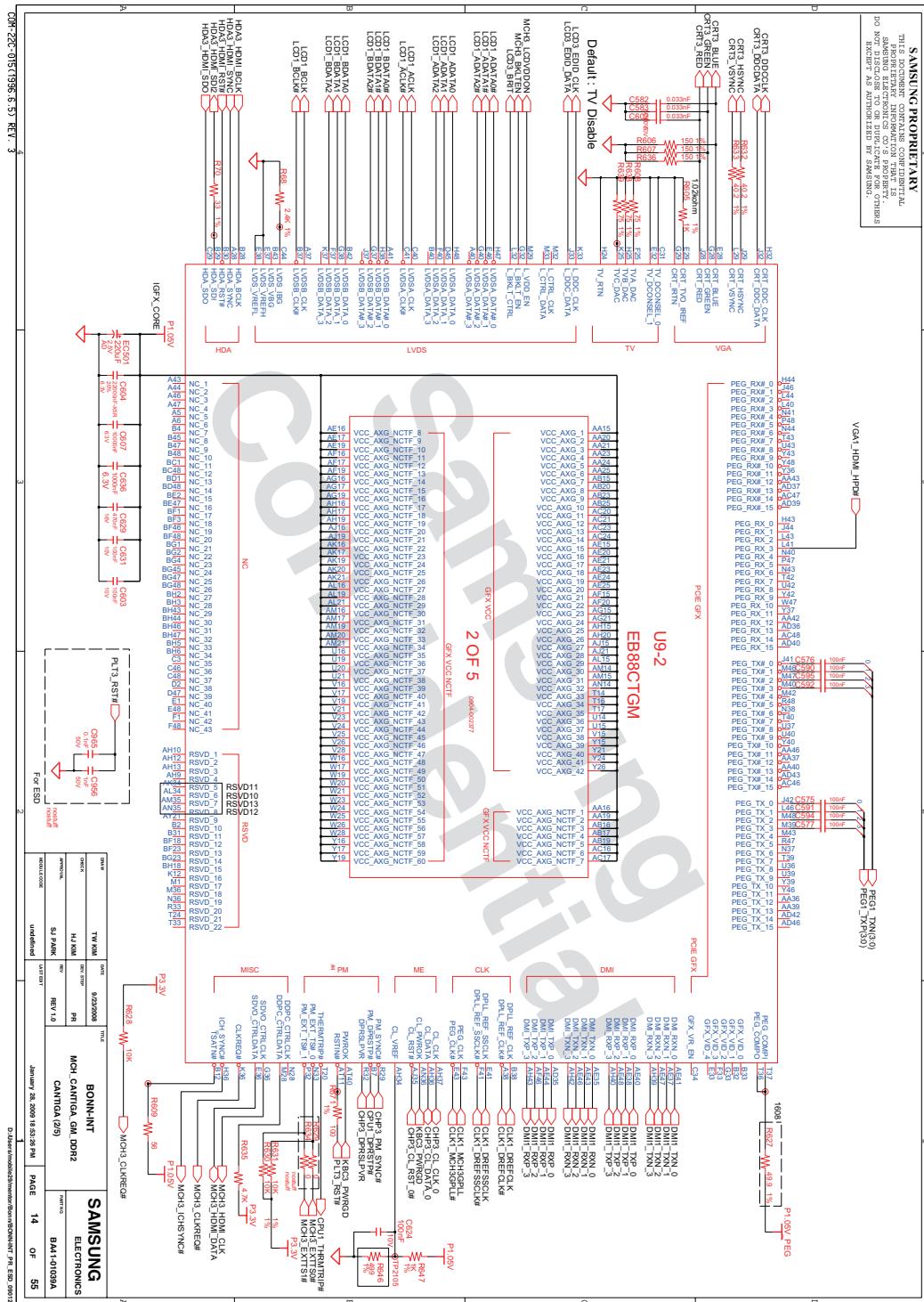
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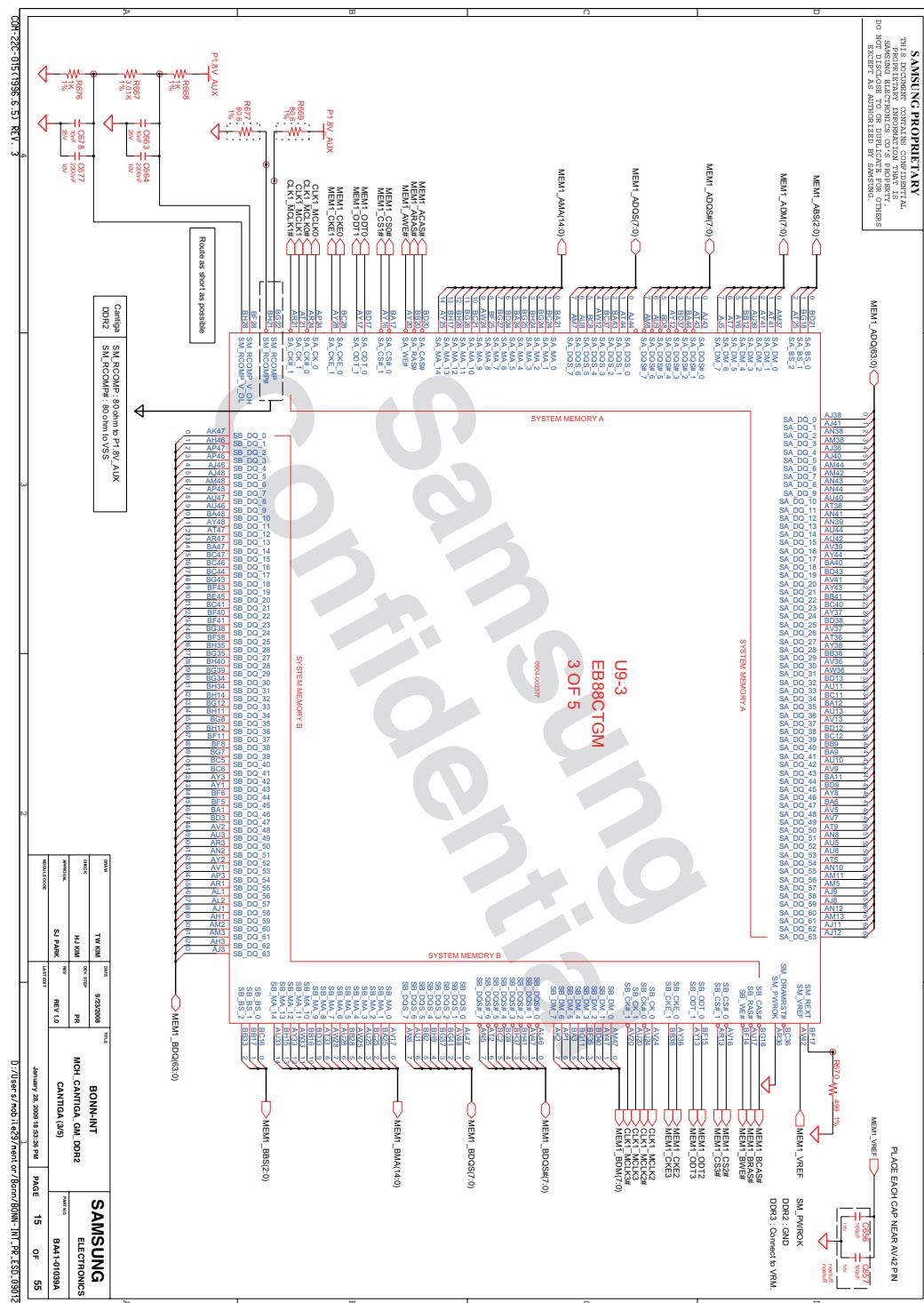
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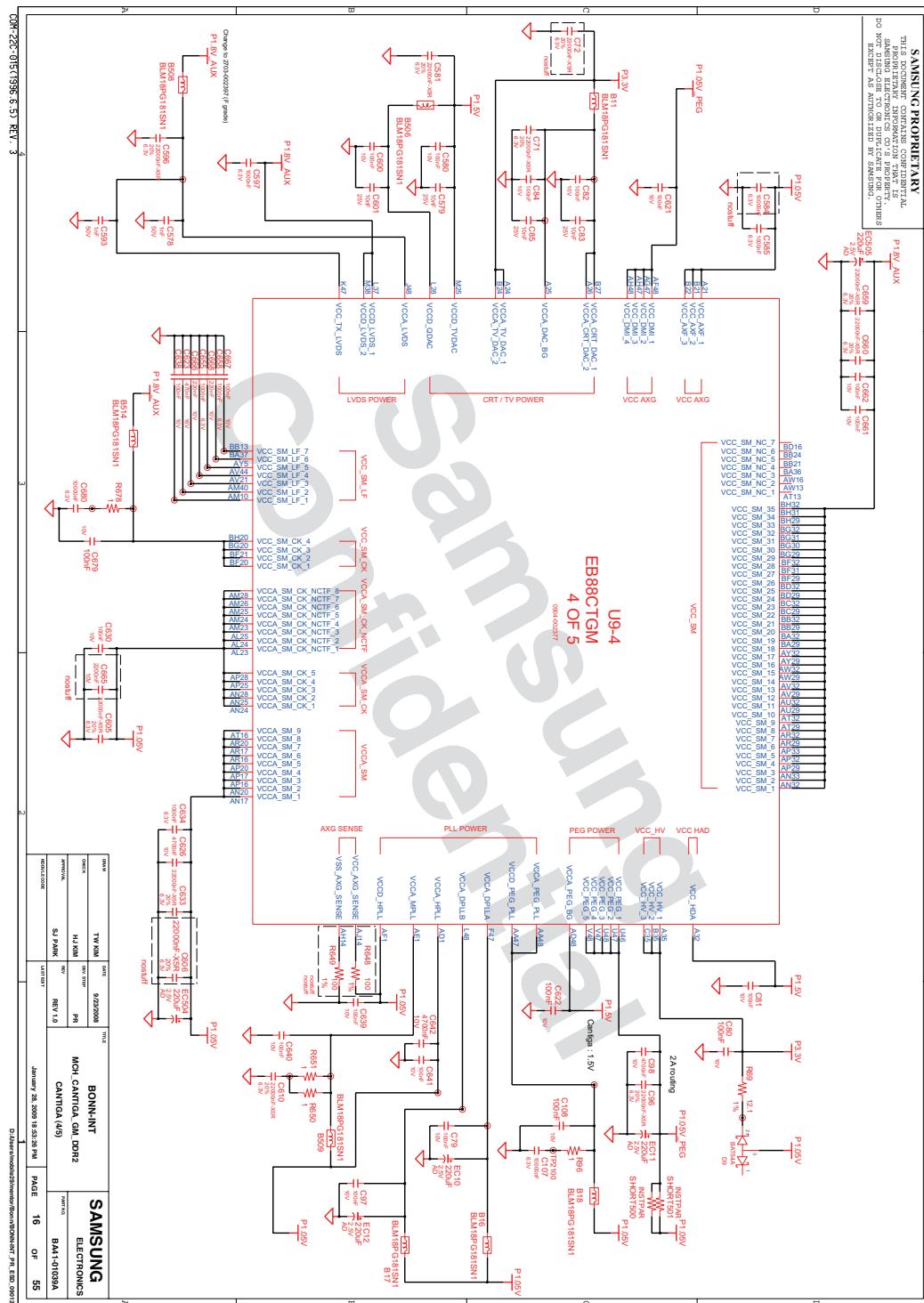
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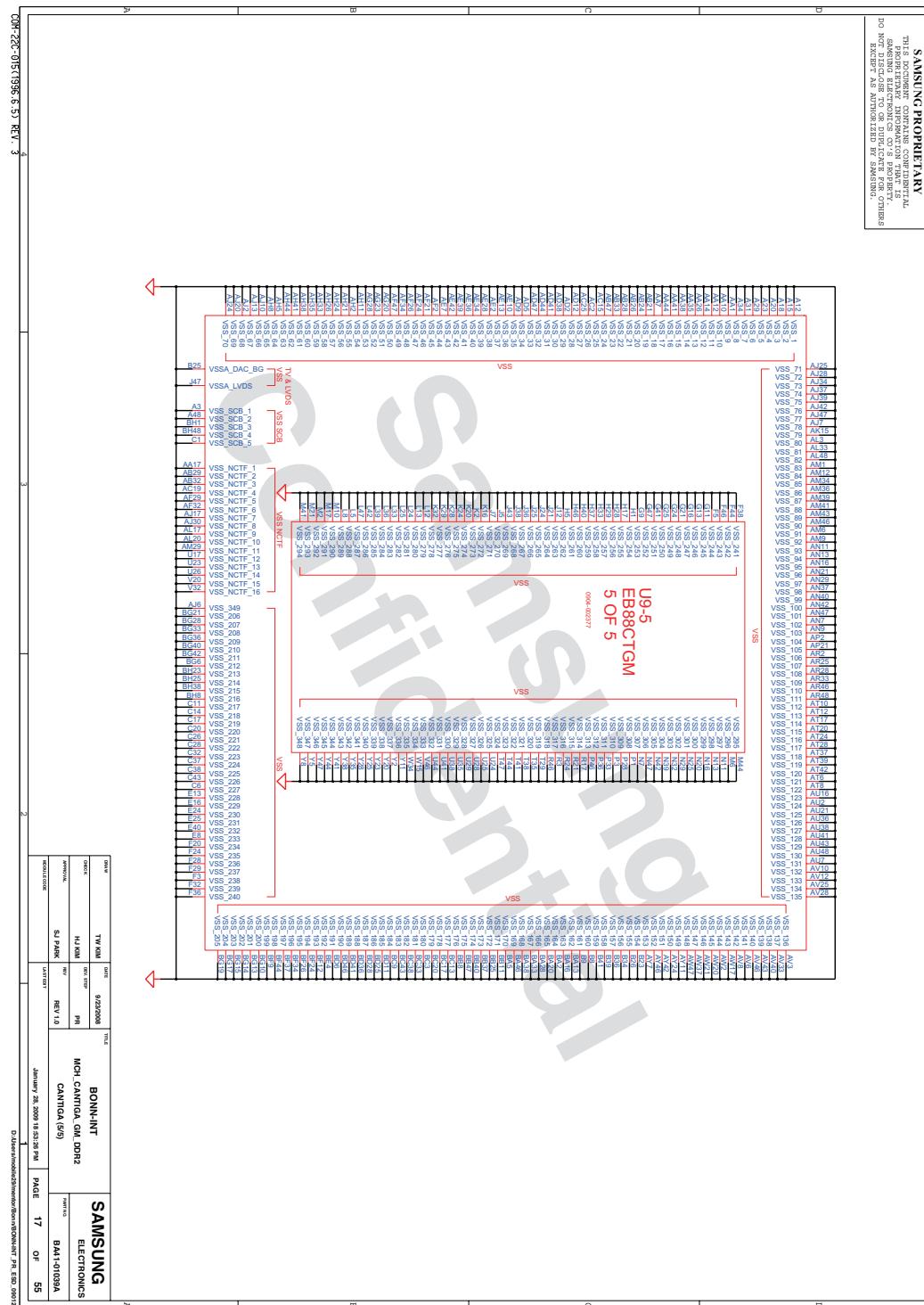
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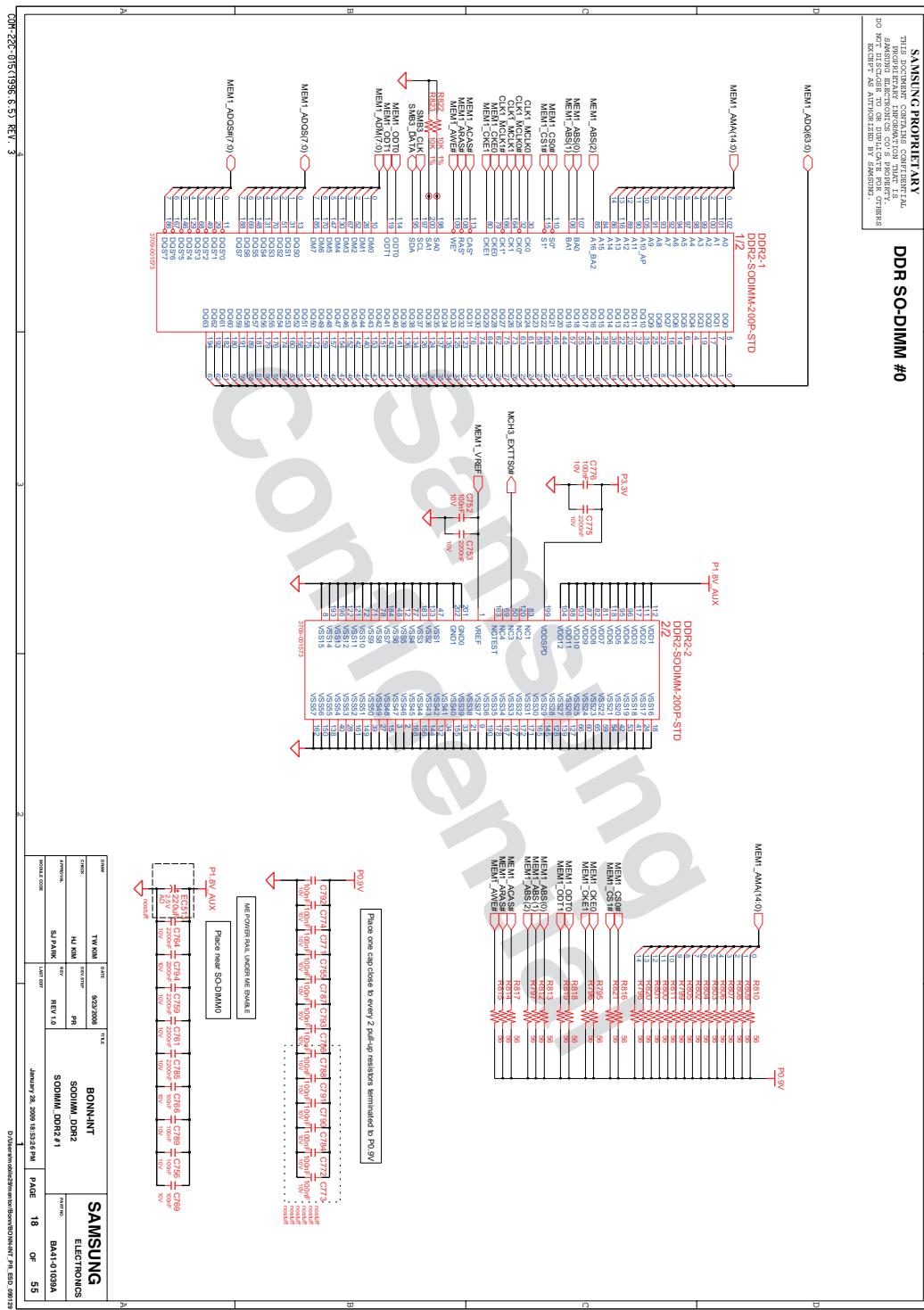
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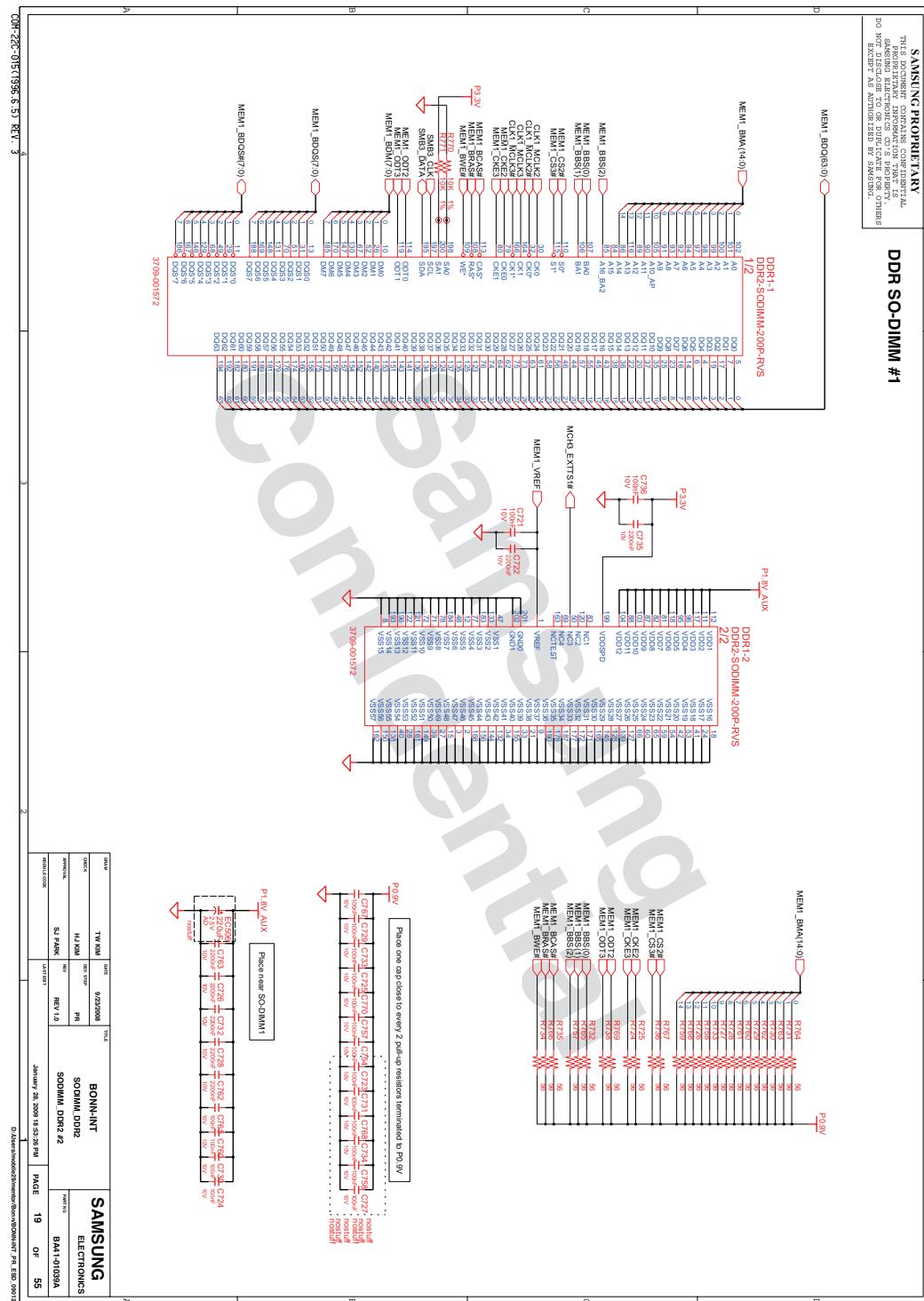
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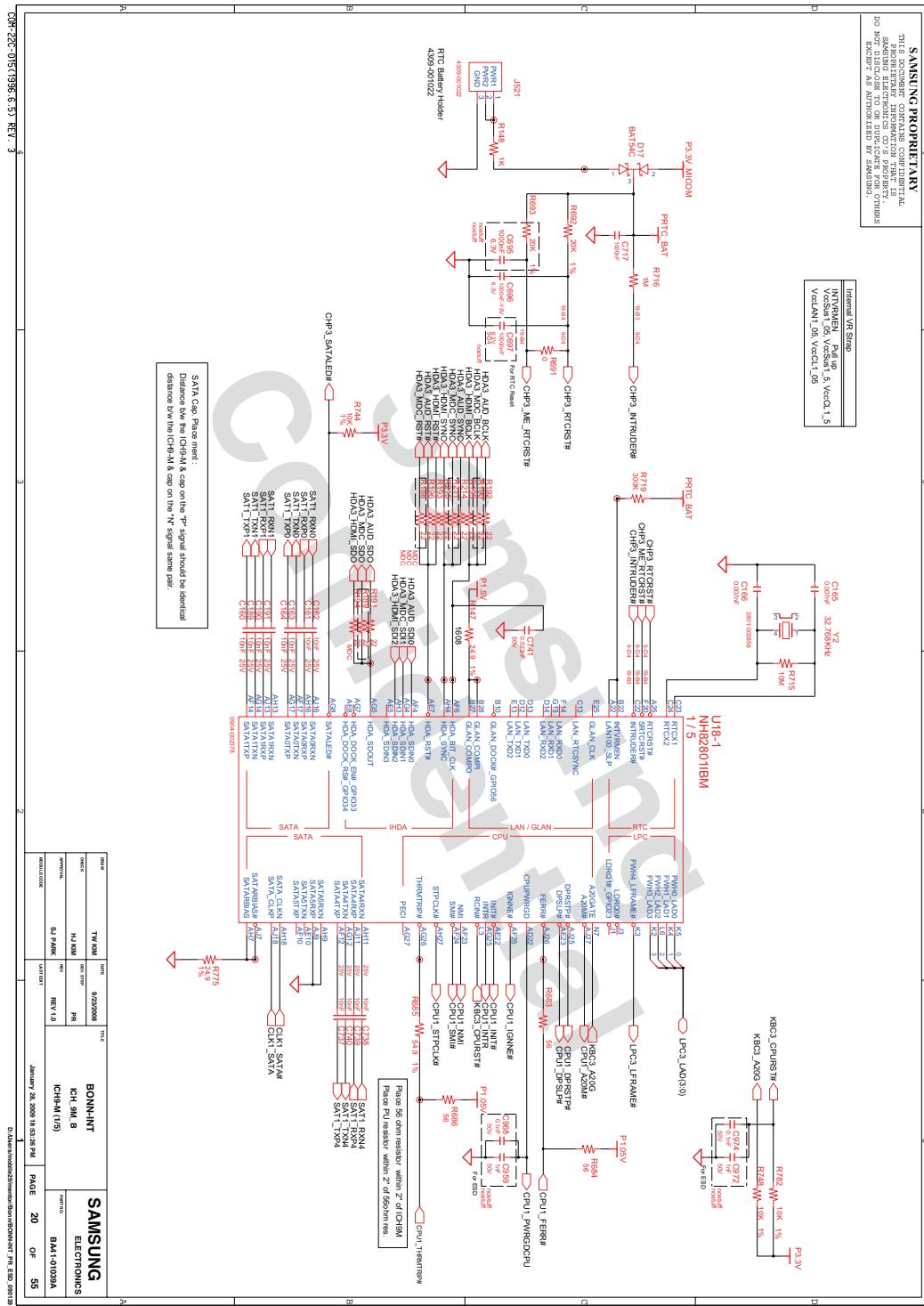
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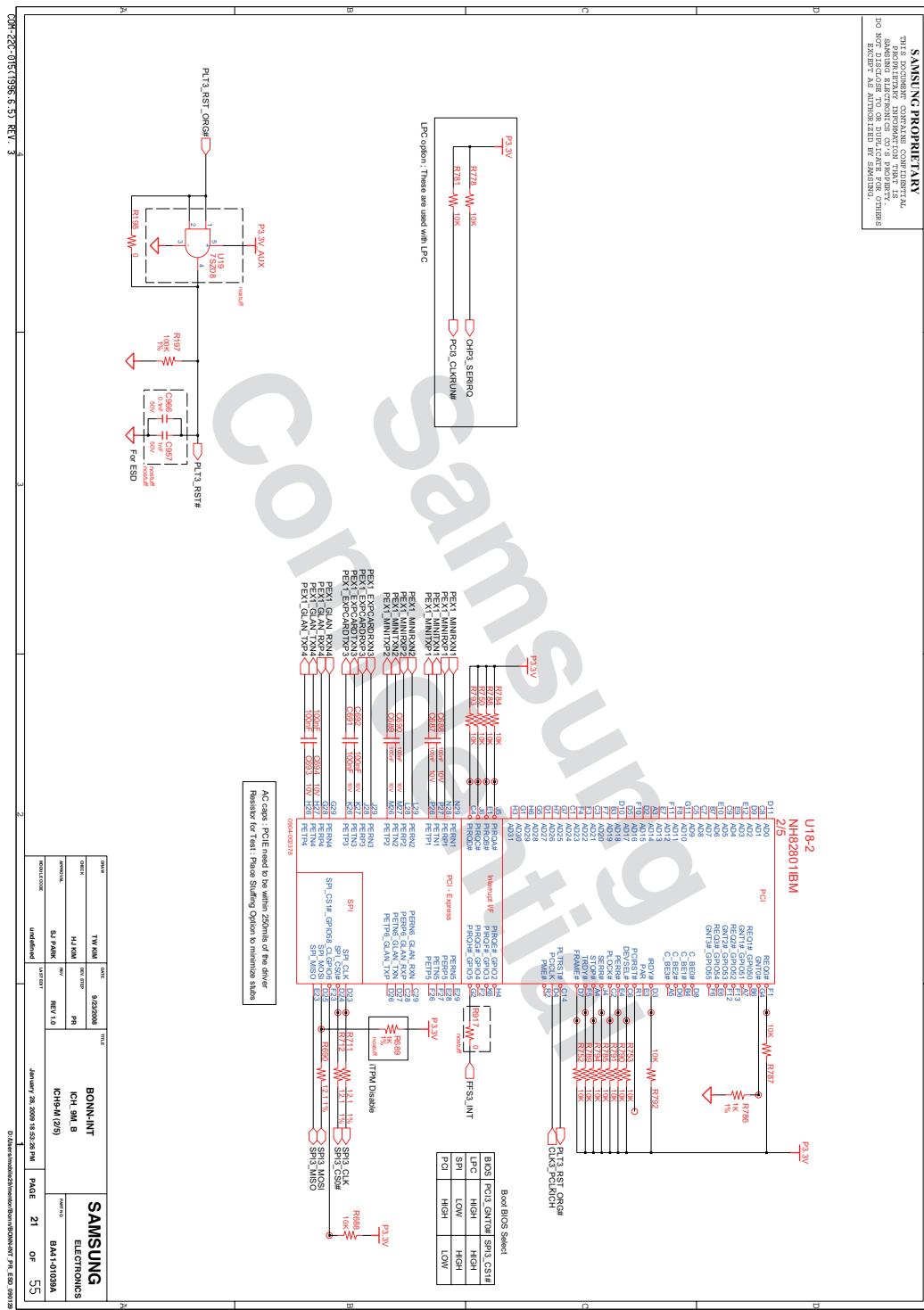
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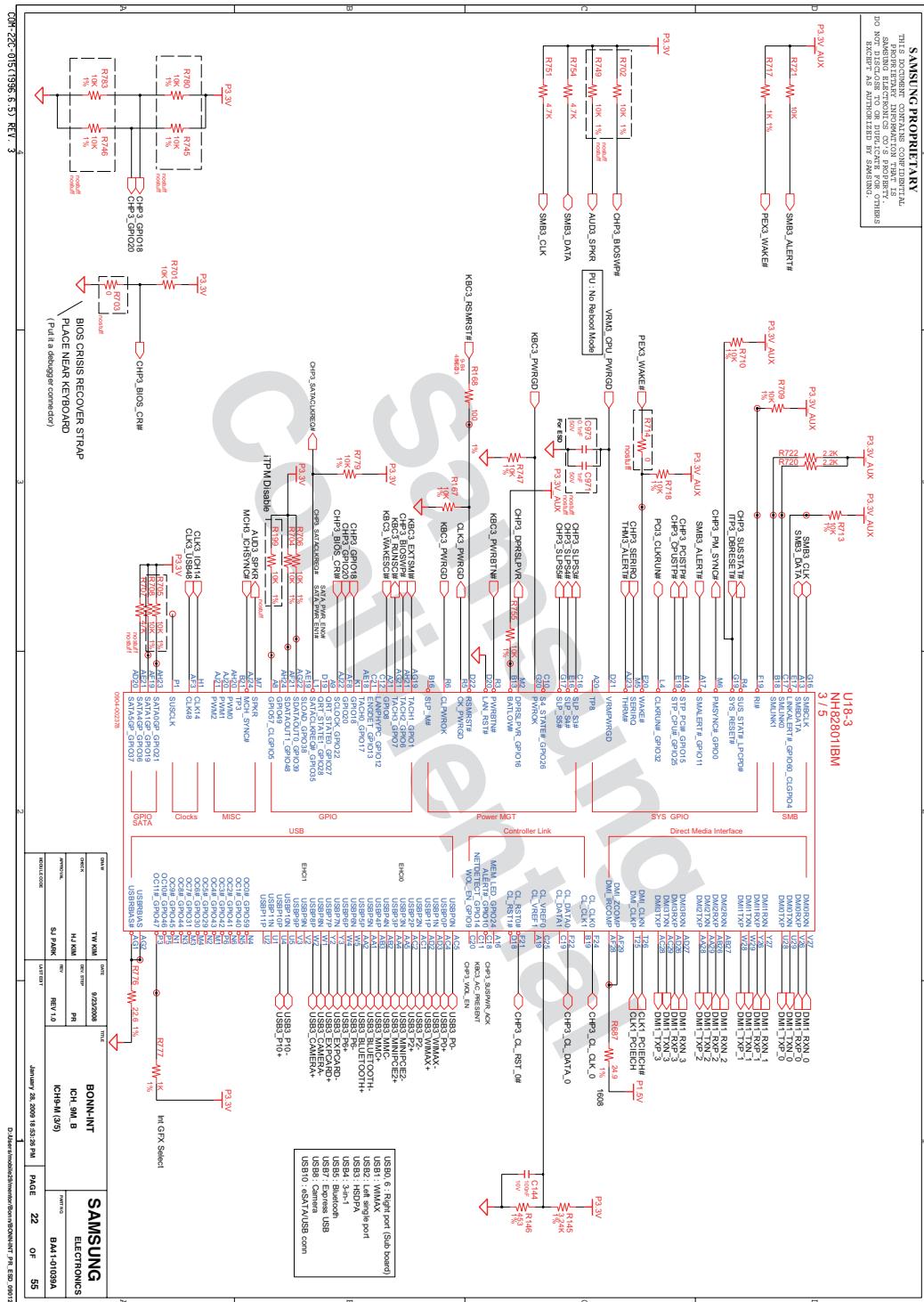
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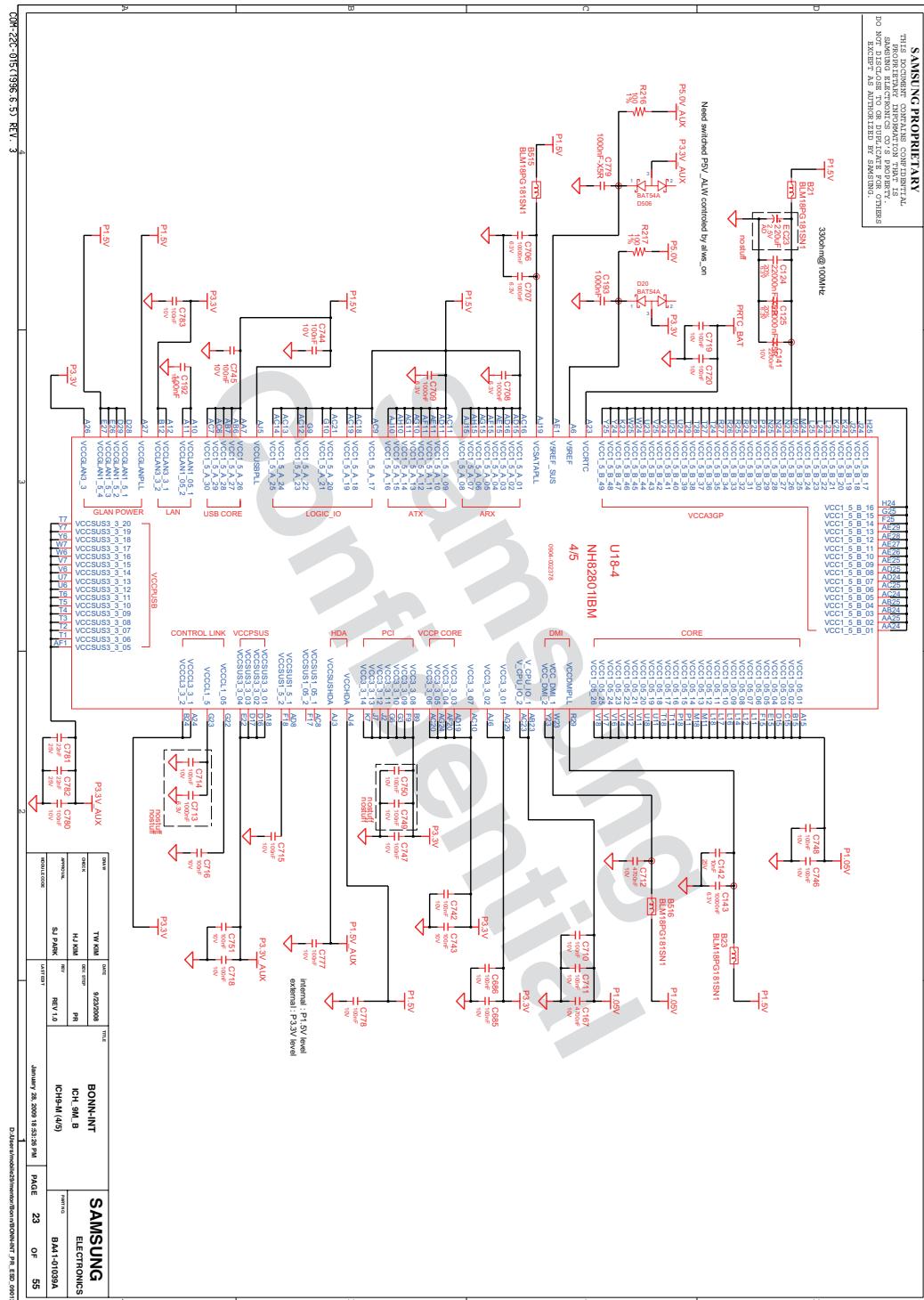
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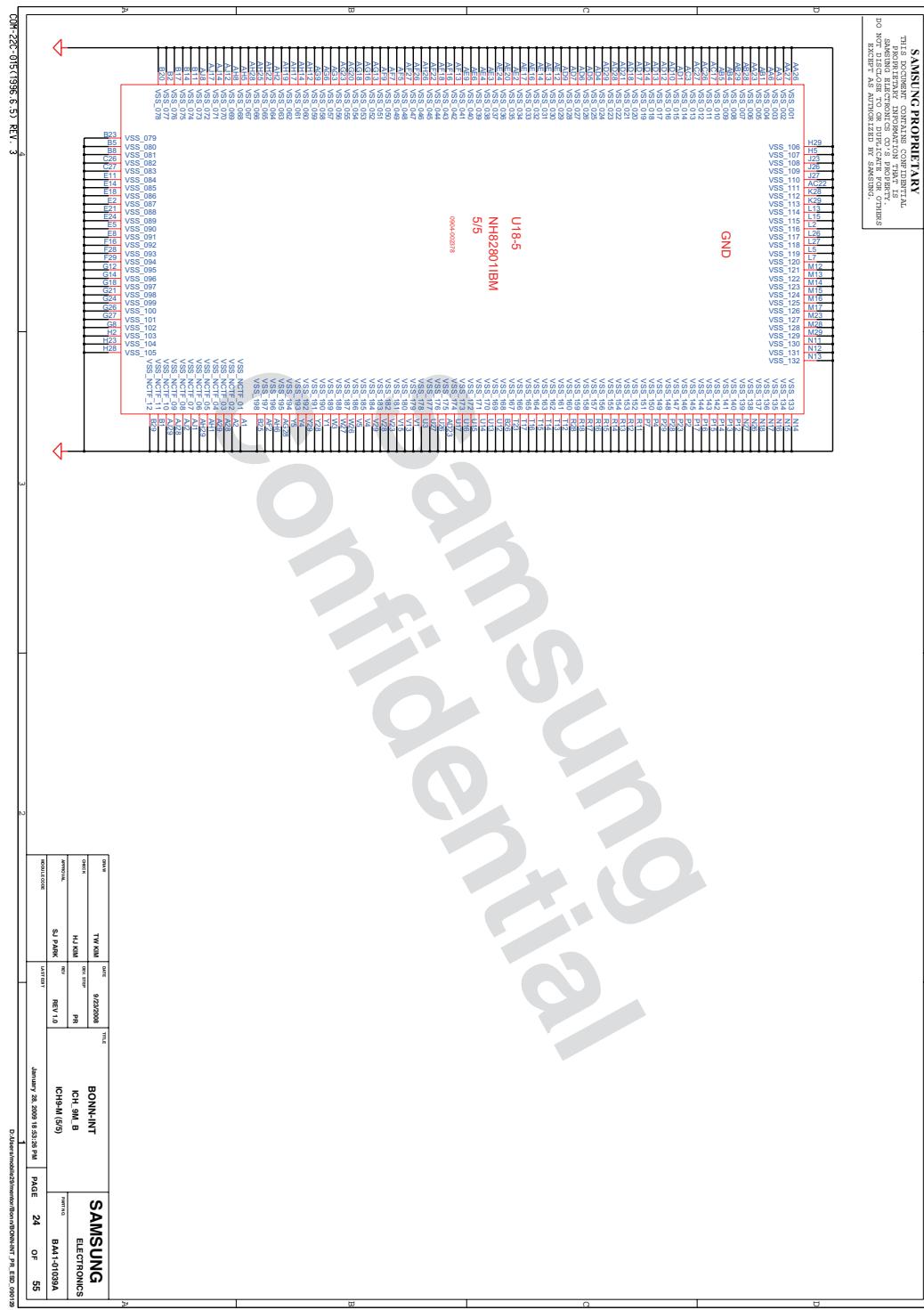
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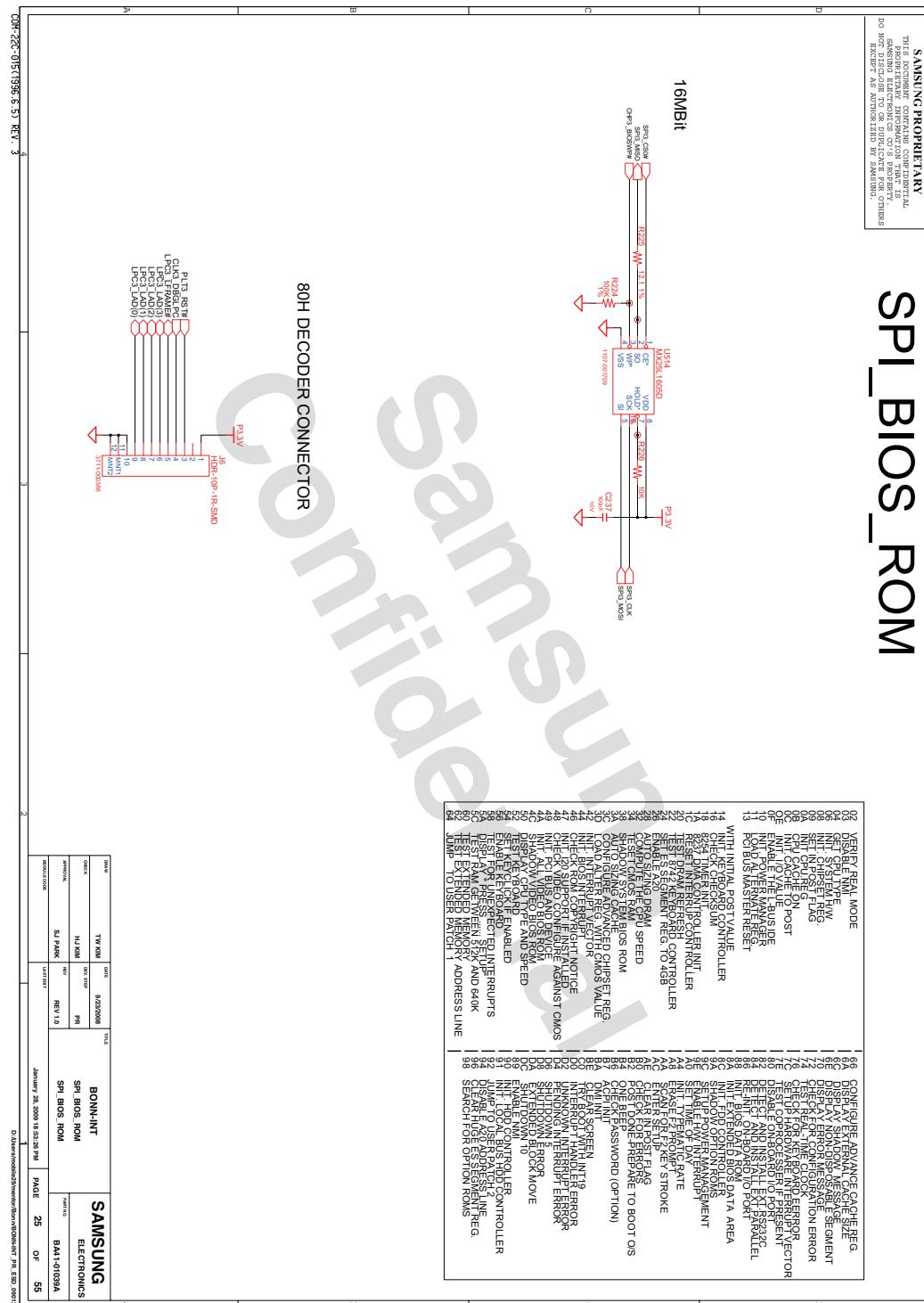
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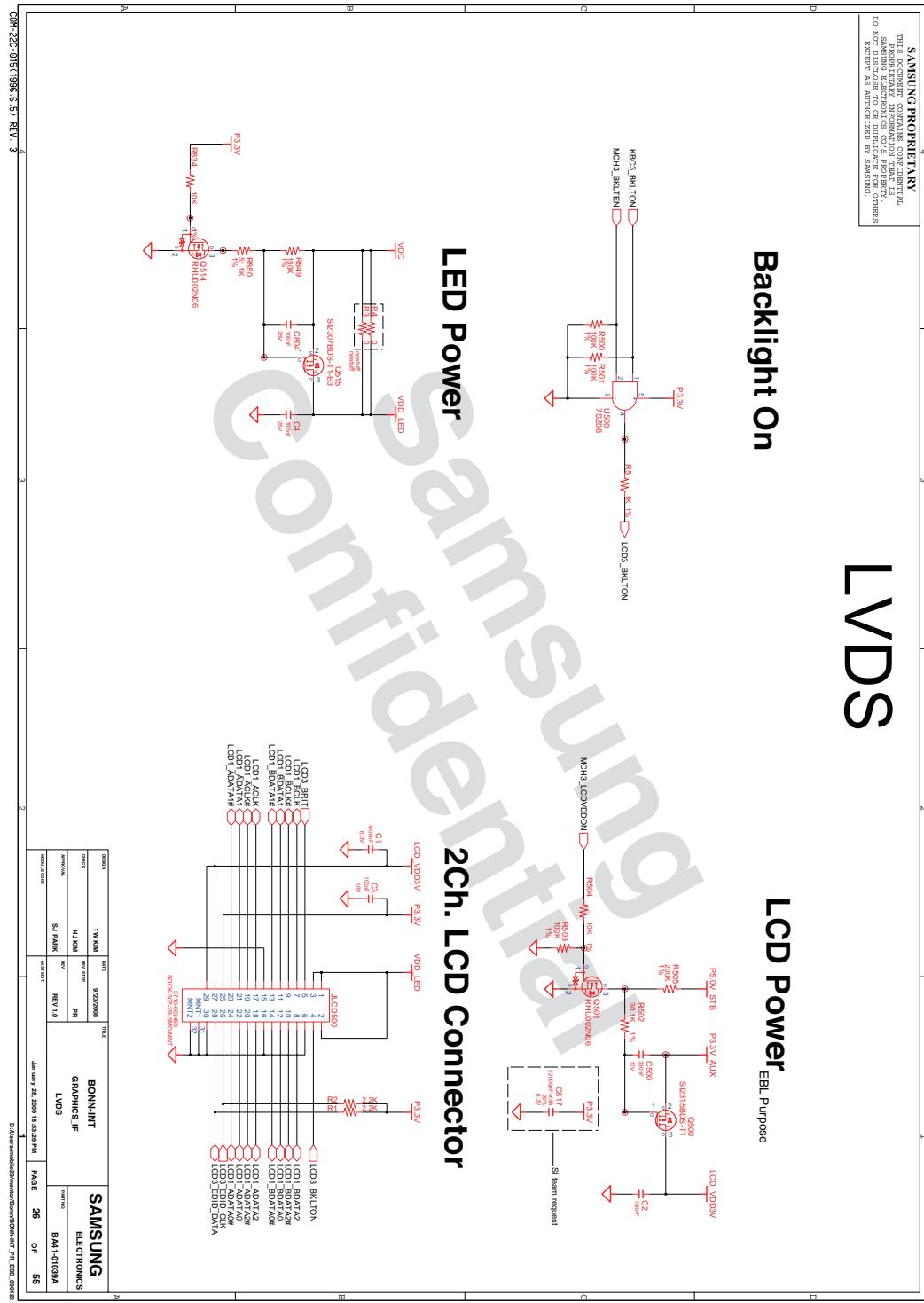
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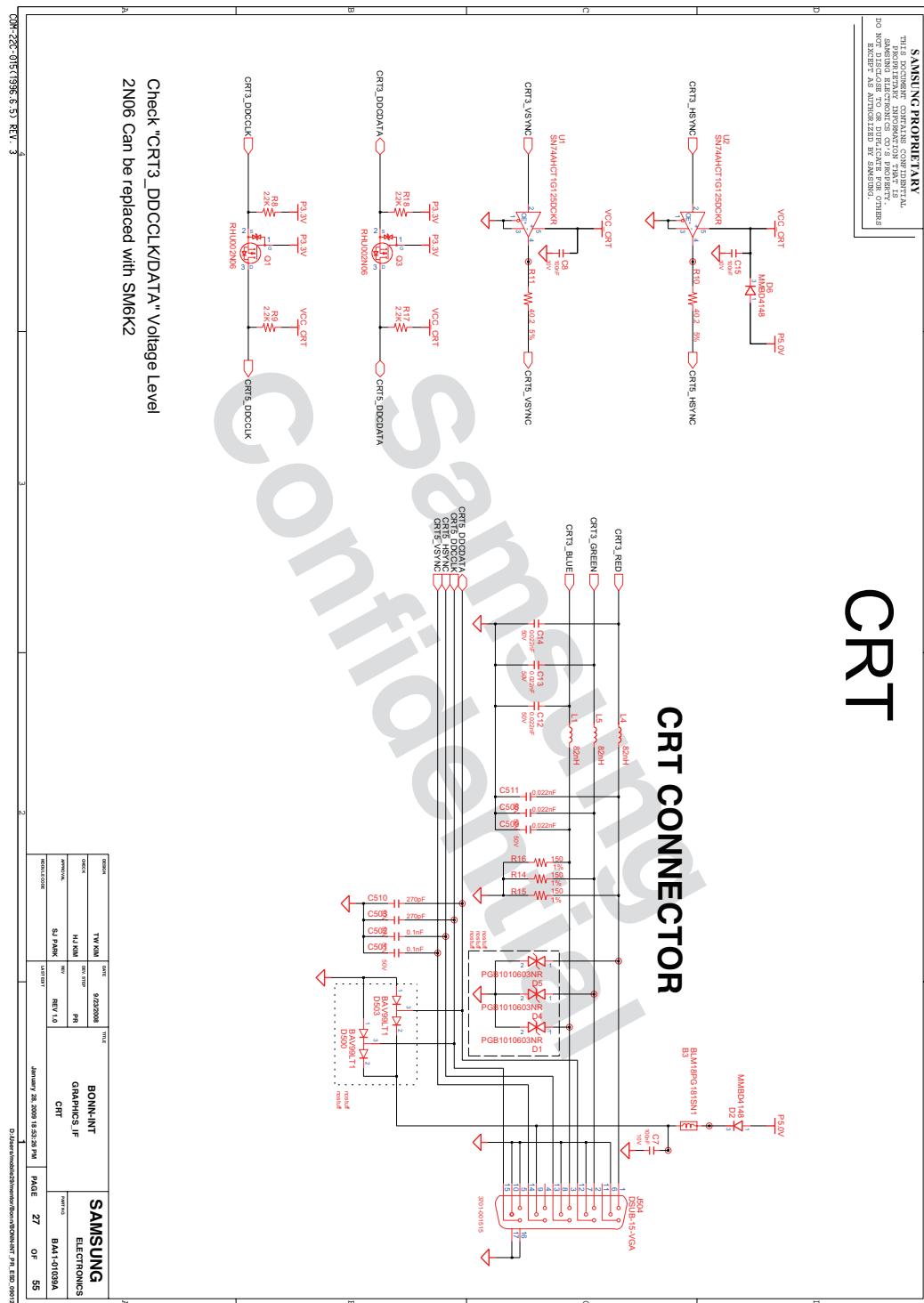
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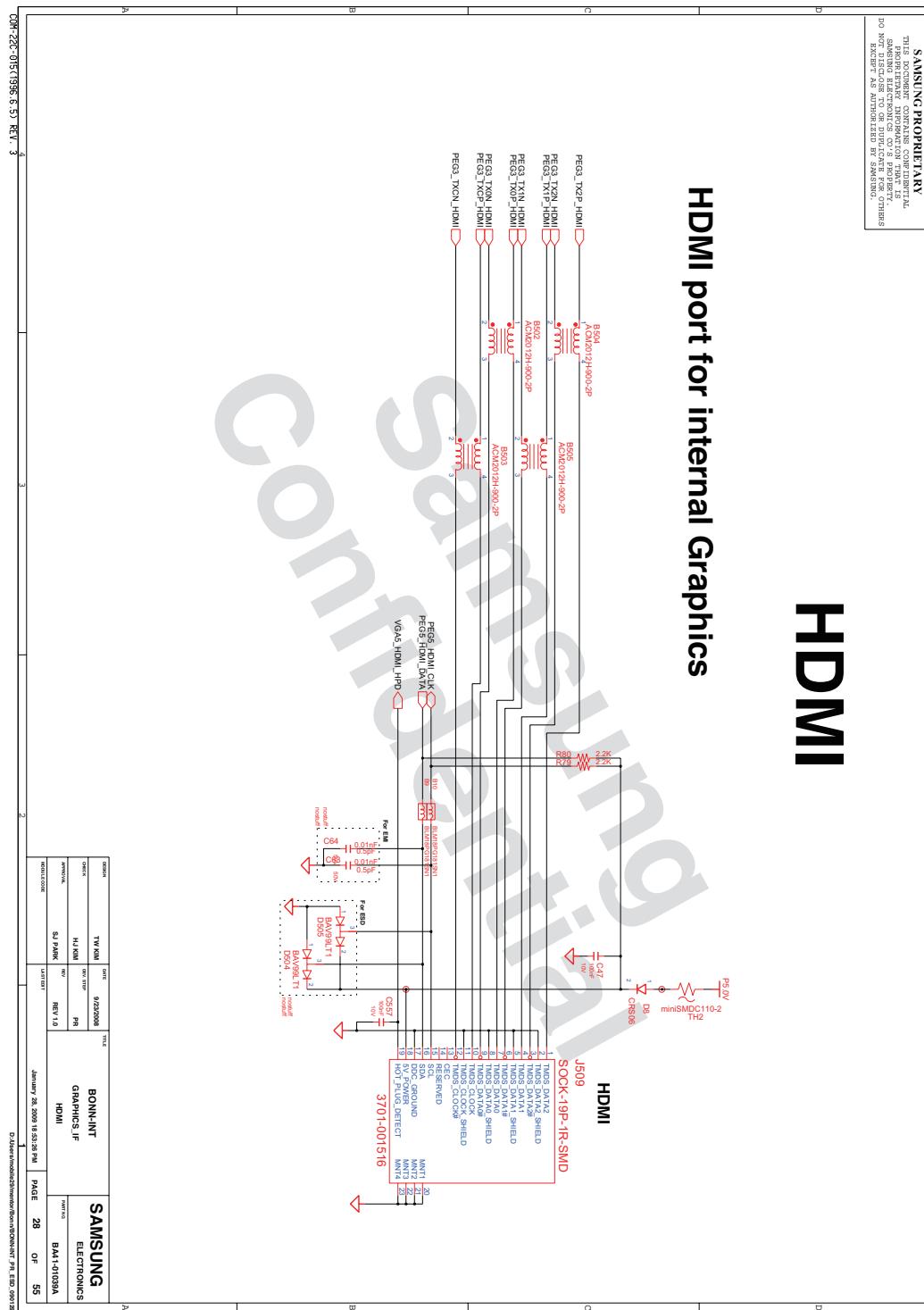
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Check "CRT3_DDCCLK/DATA" Voltage Level
2N06 Can be replaced with SM6K2

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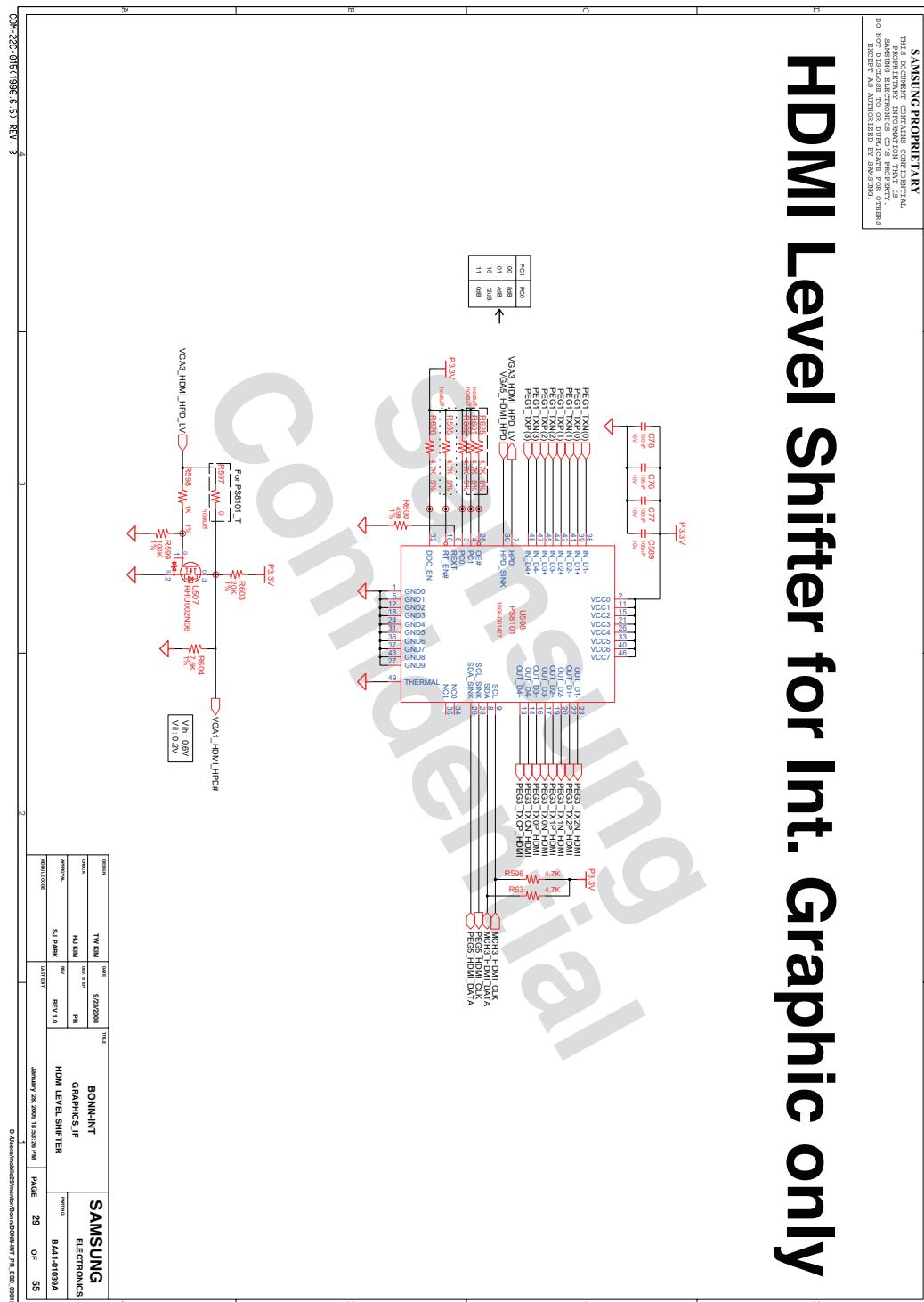
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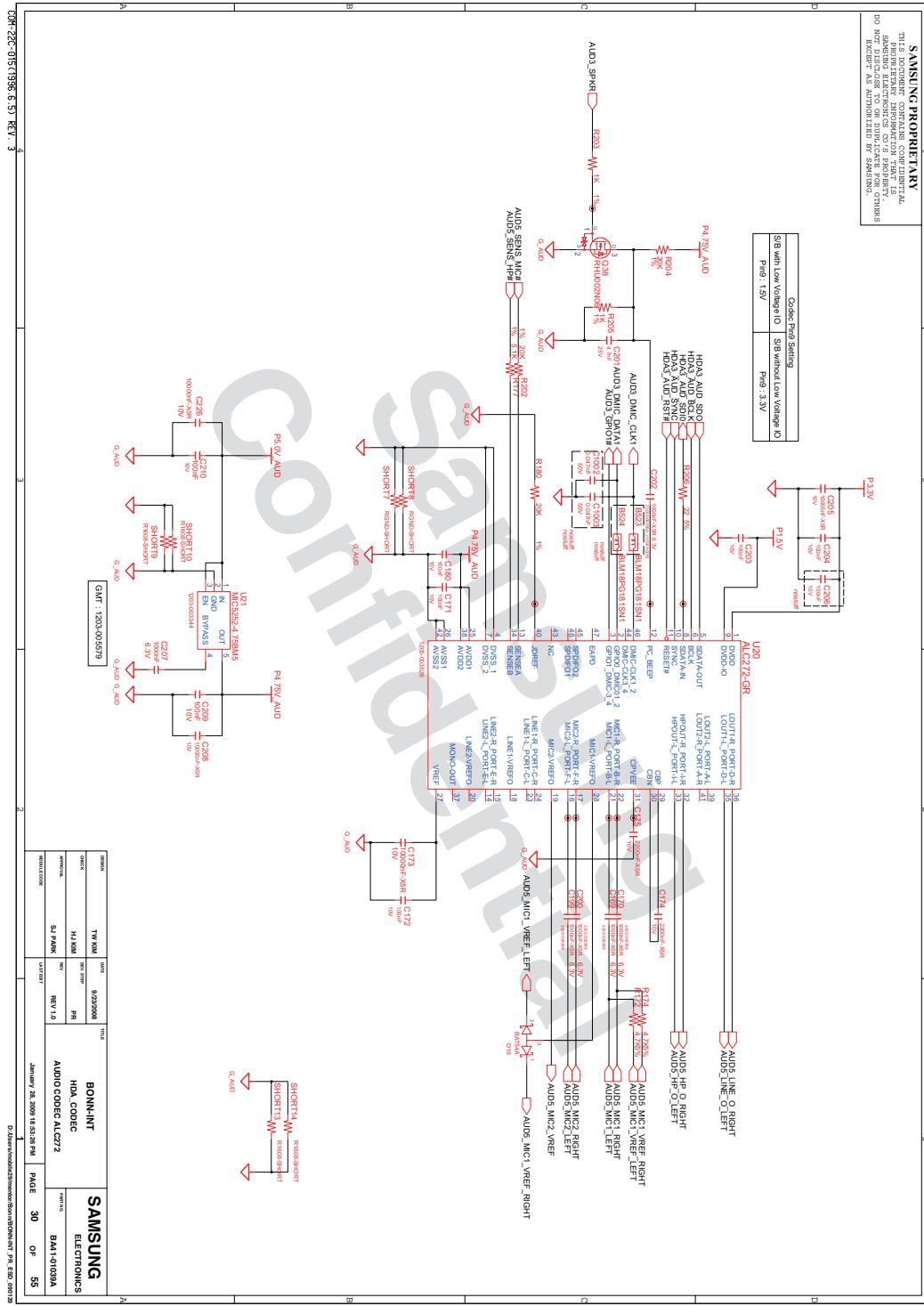
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HDMI Level Shifter for Int. Graphic only



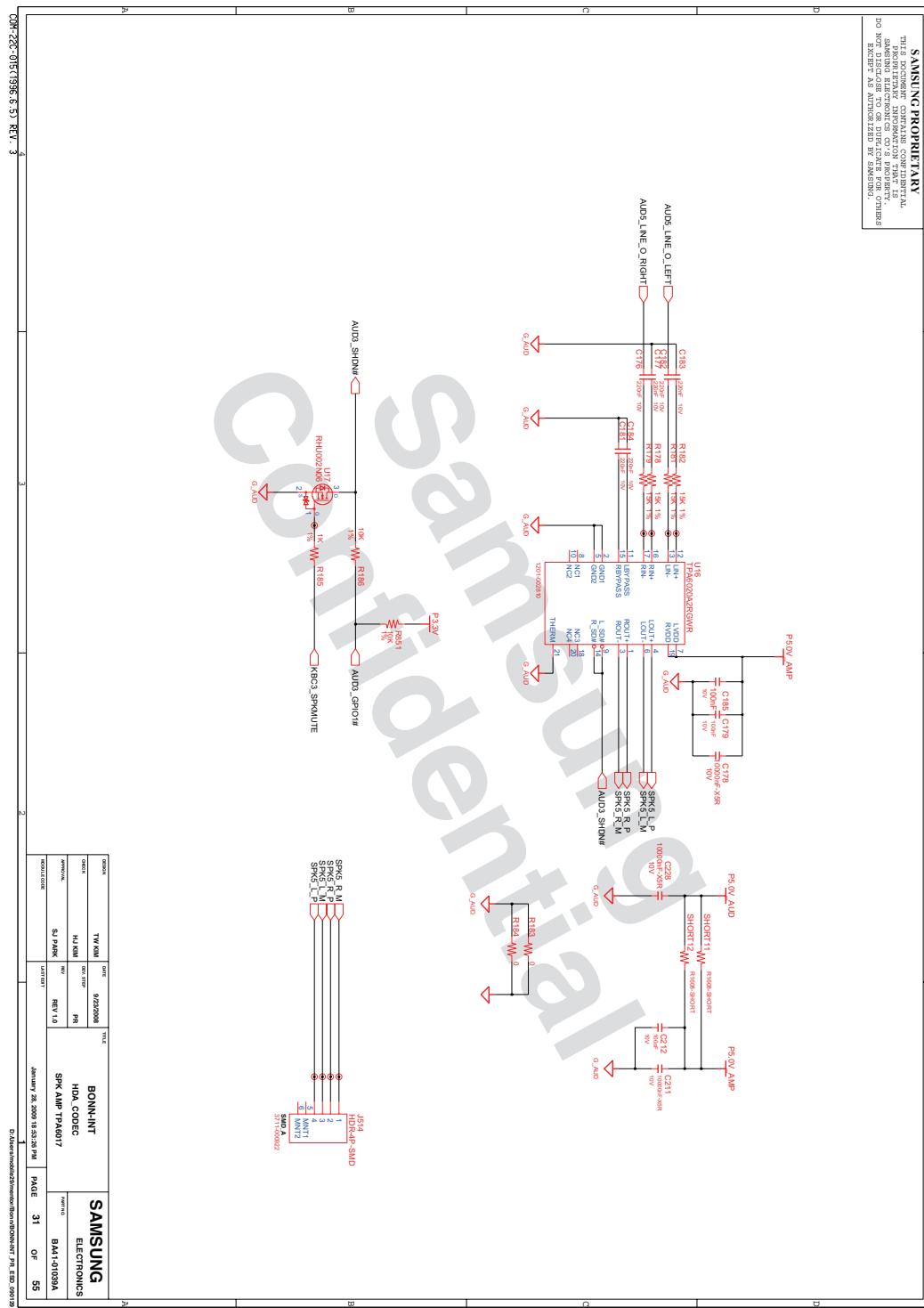
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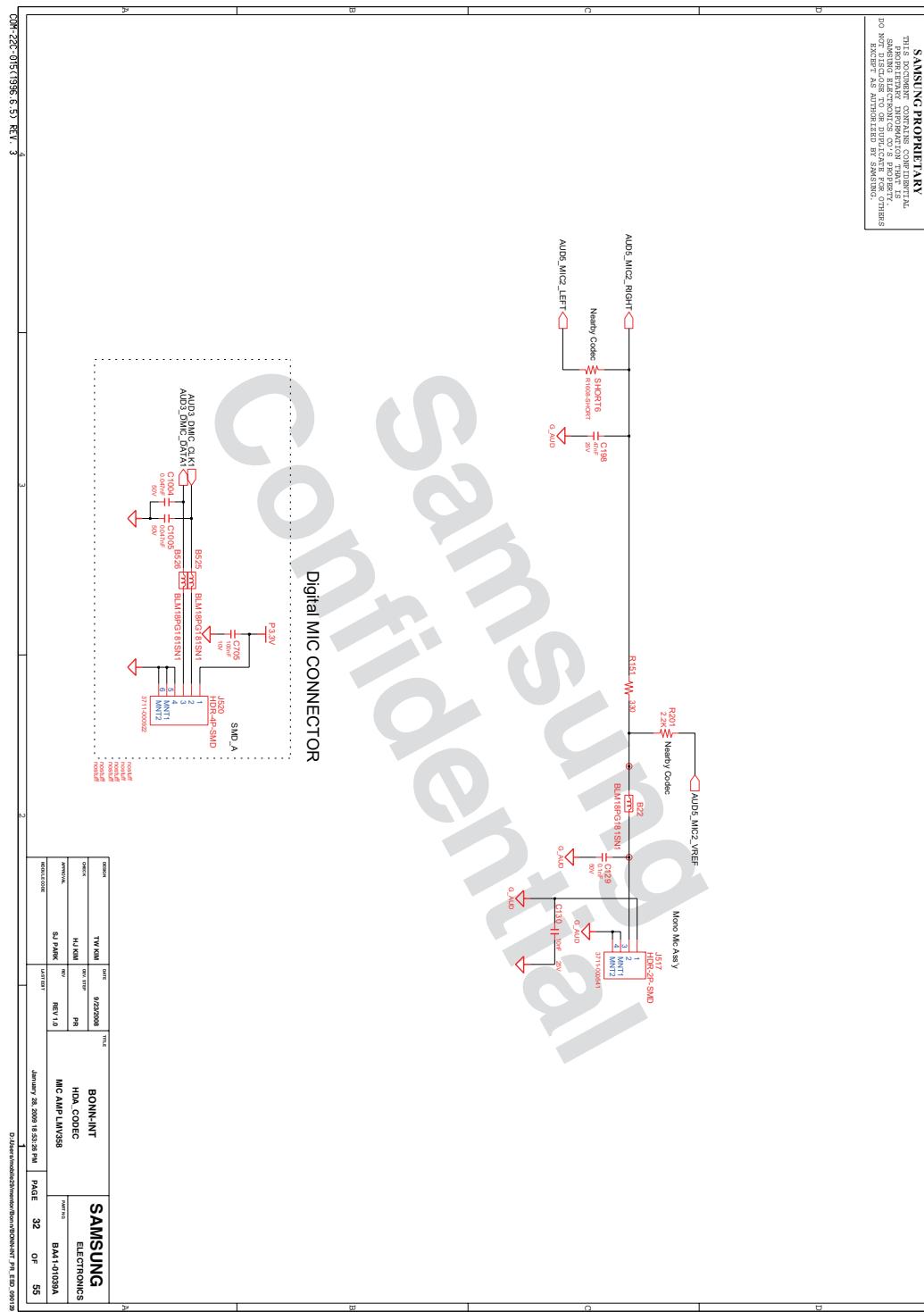
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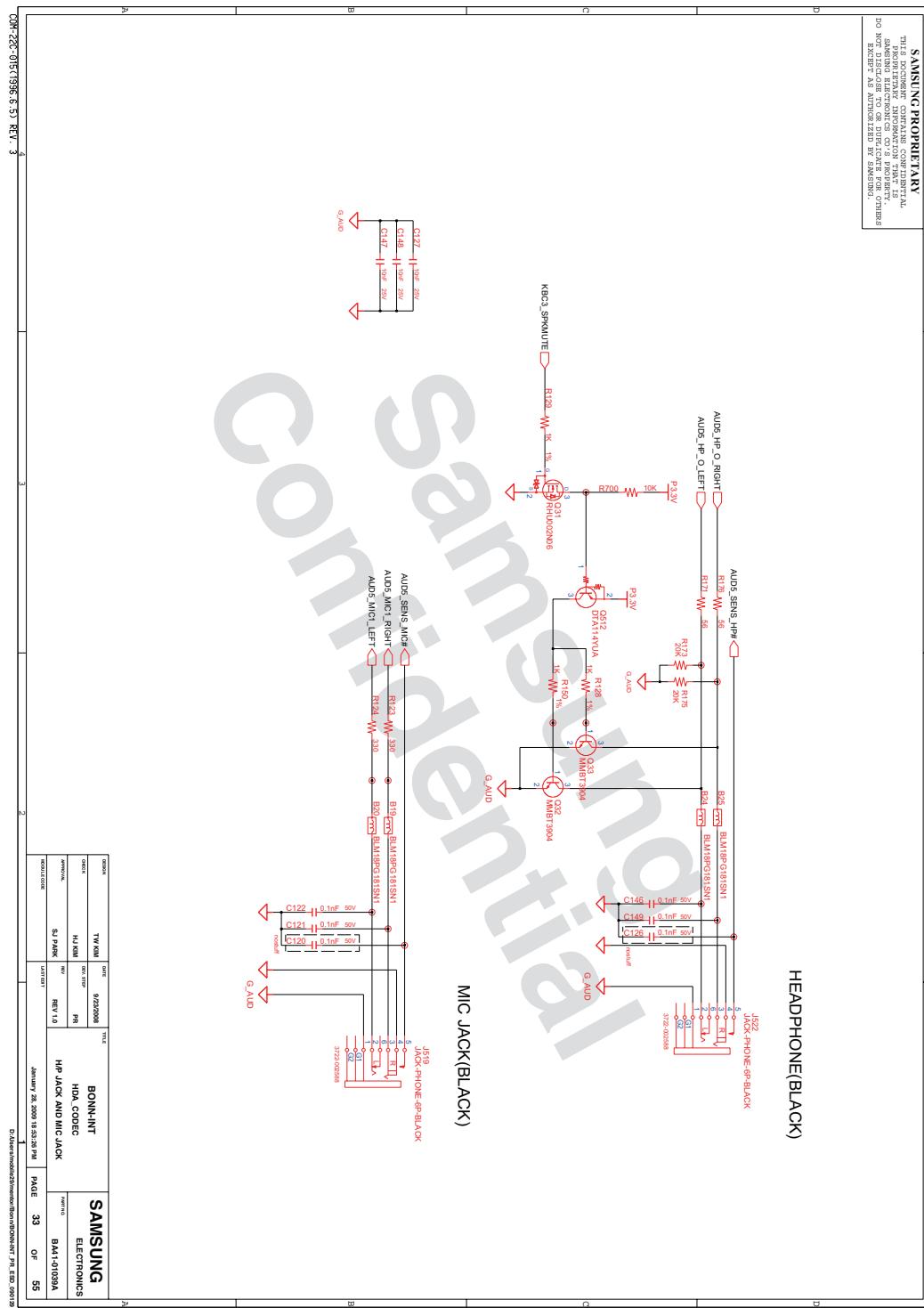
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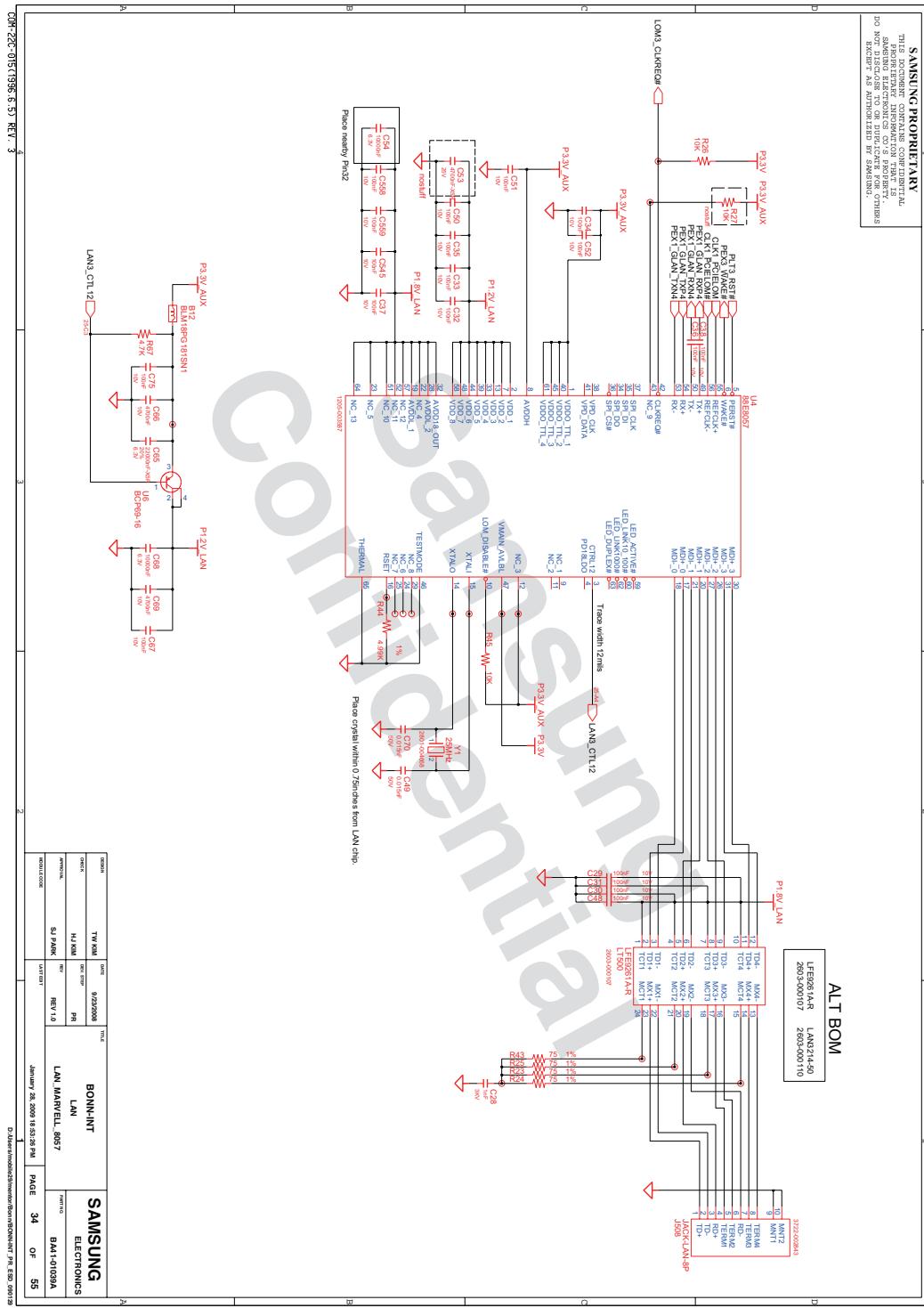
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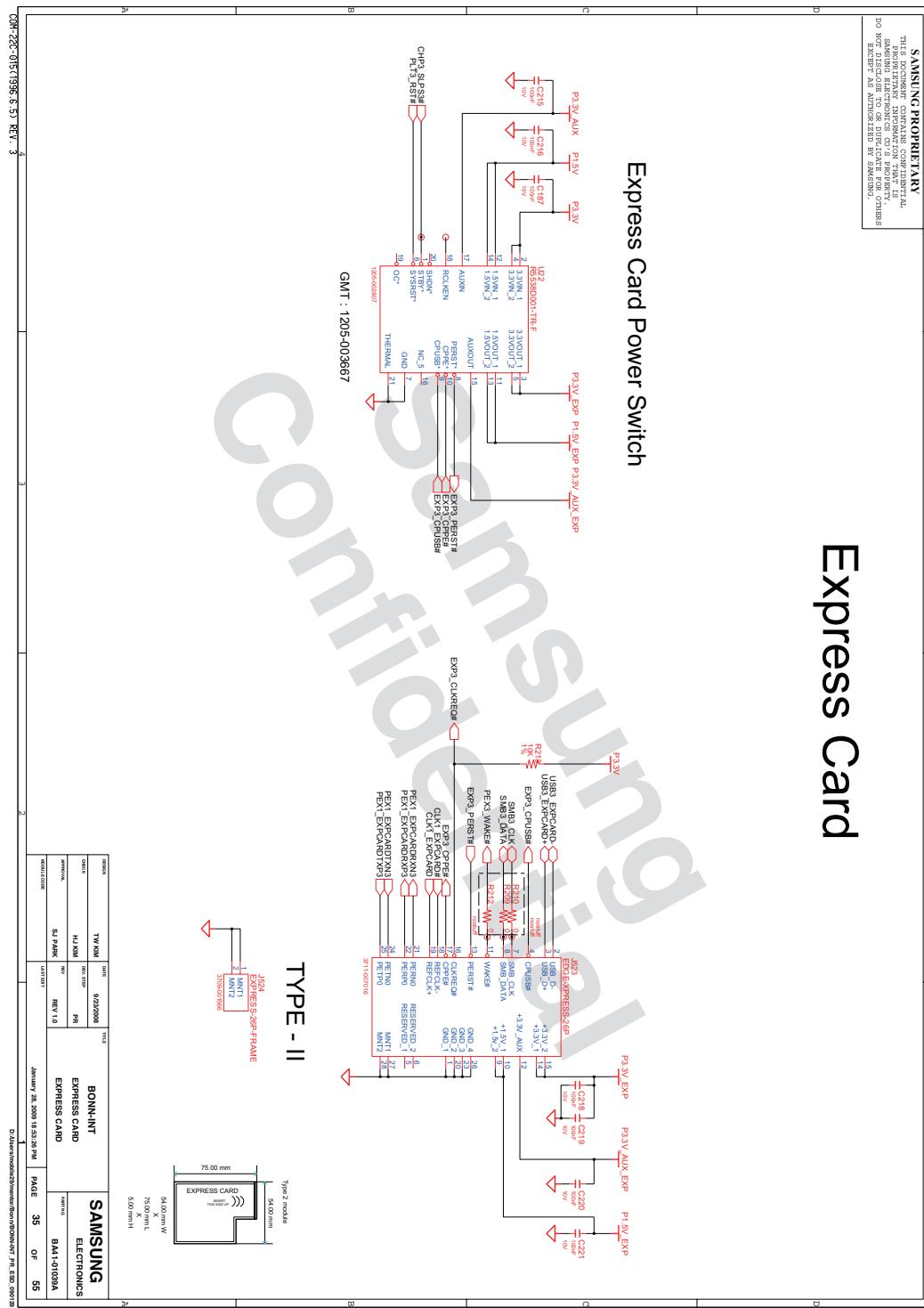
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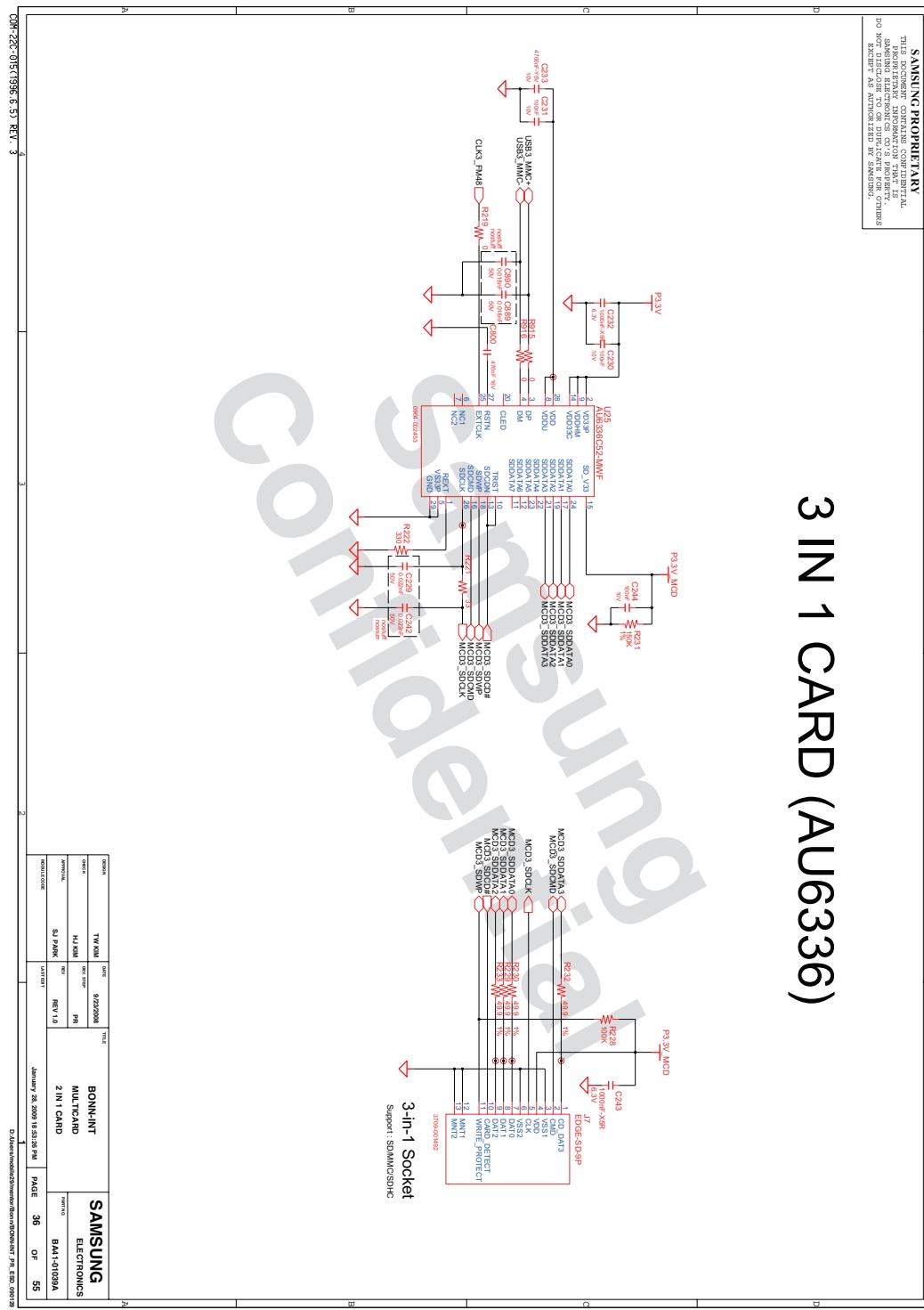
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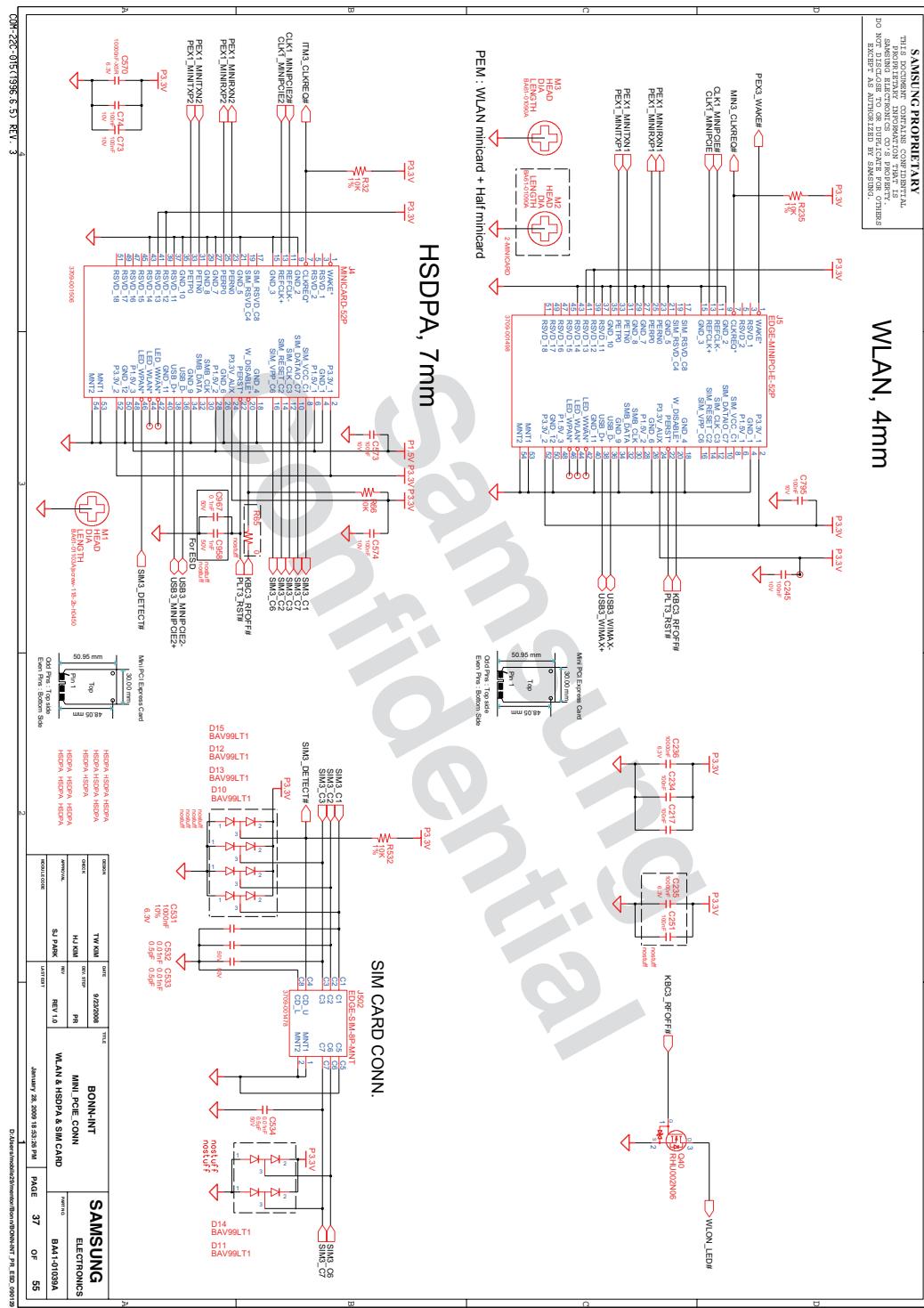
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3 IN 1 CARD (AU6336)

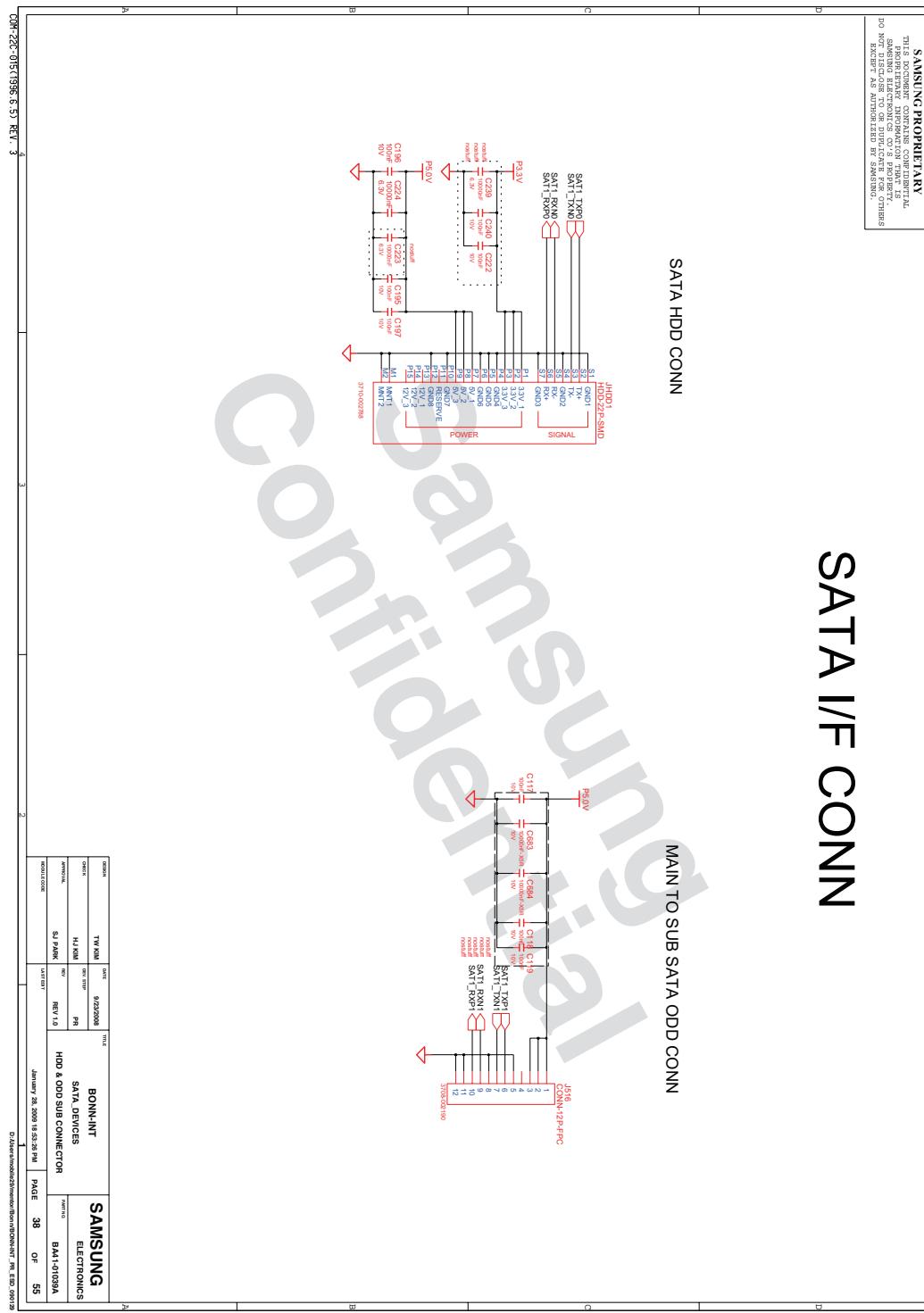
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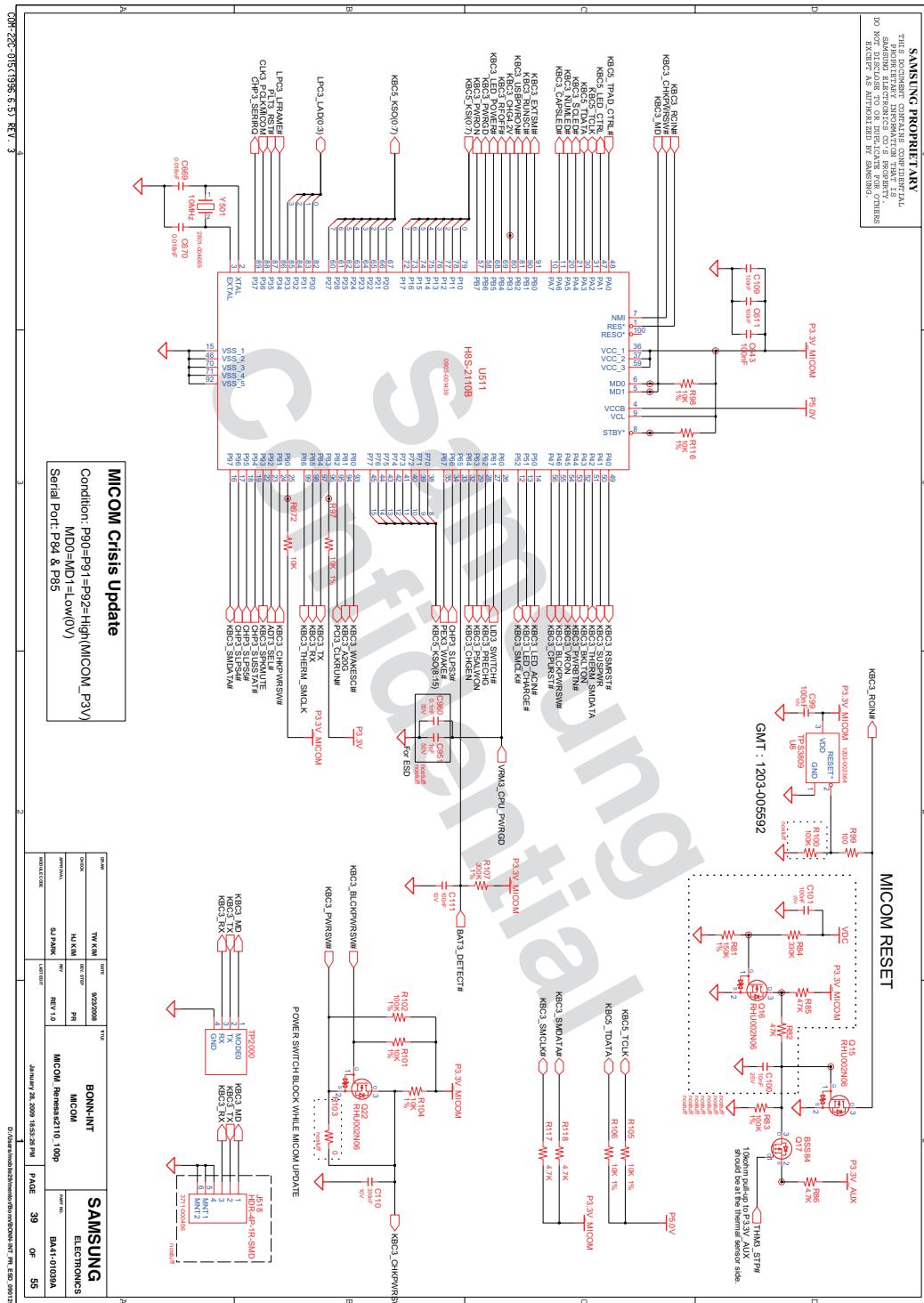
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MICOM Crisis Update

Serial Port: P84 & P85
MD0=MD1=Low(0V)

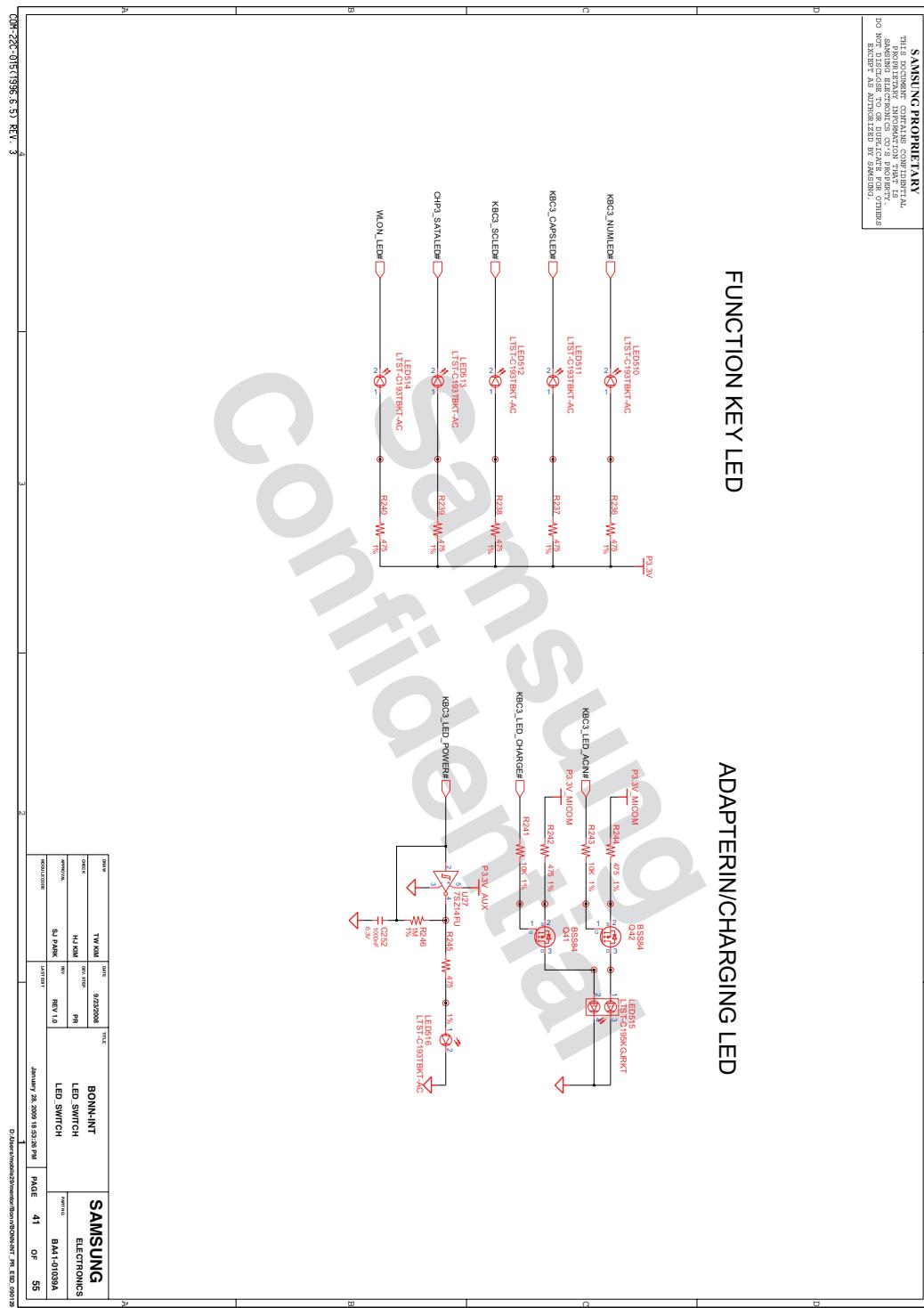
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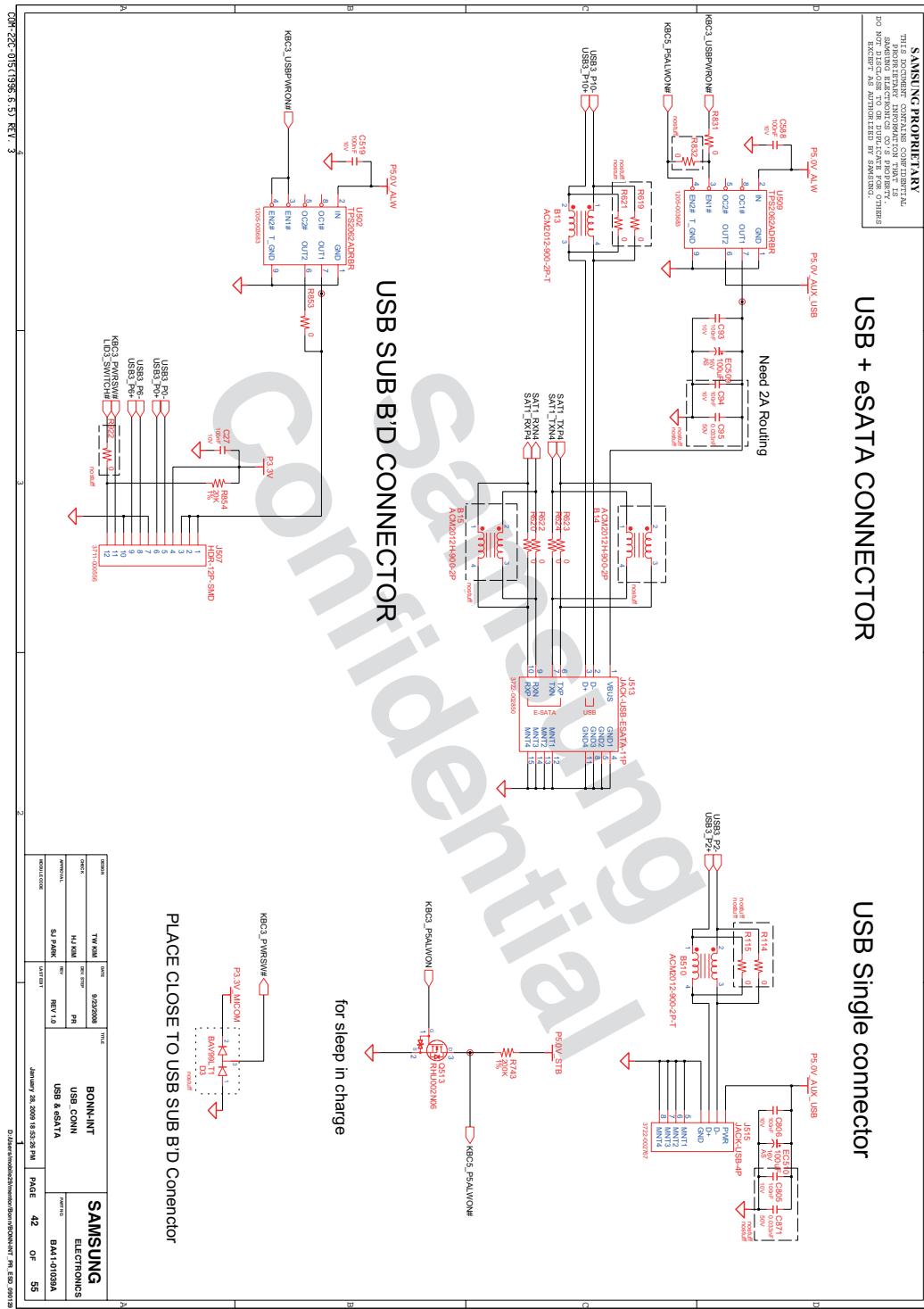
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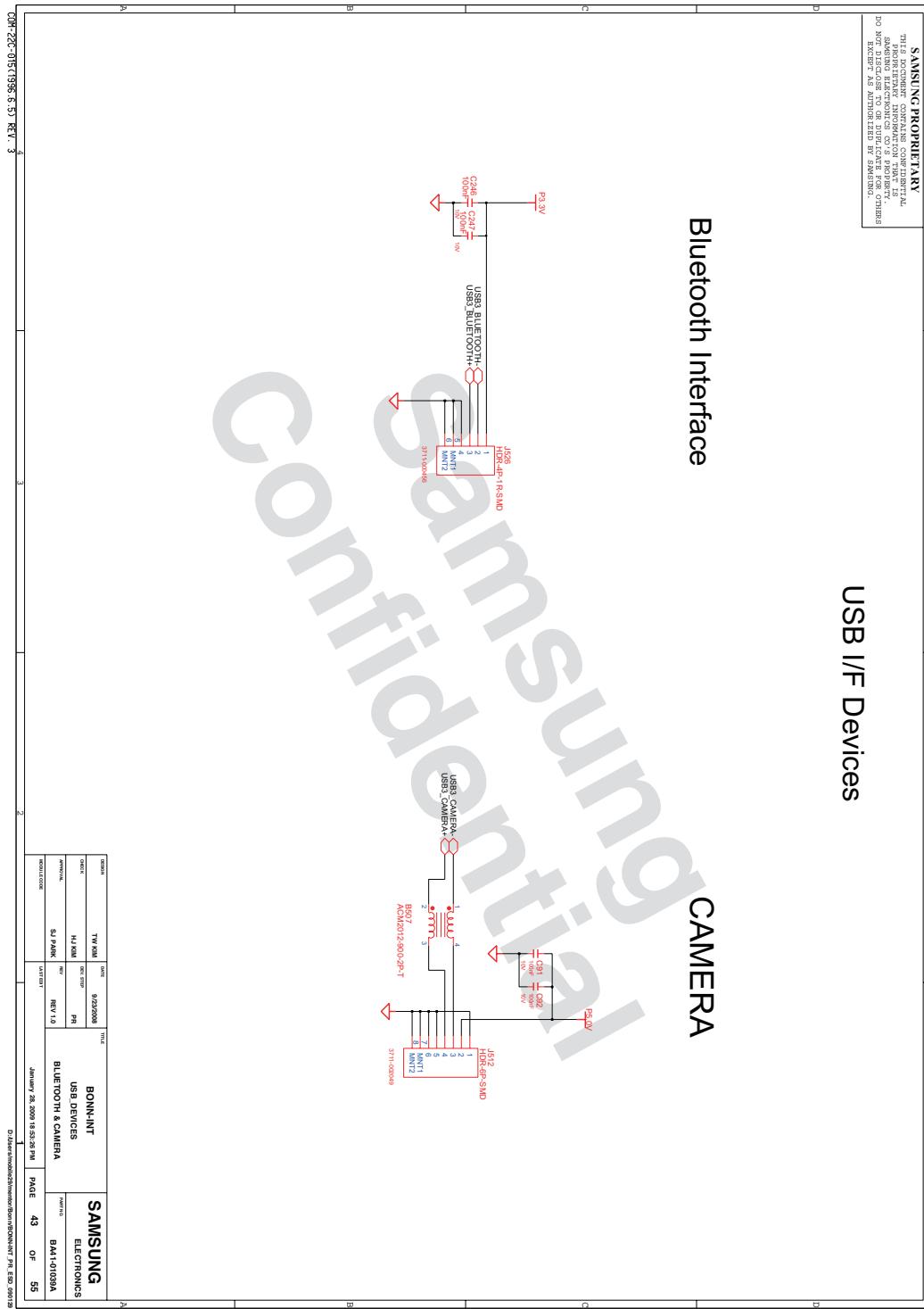


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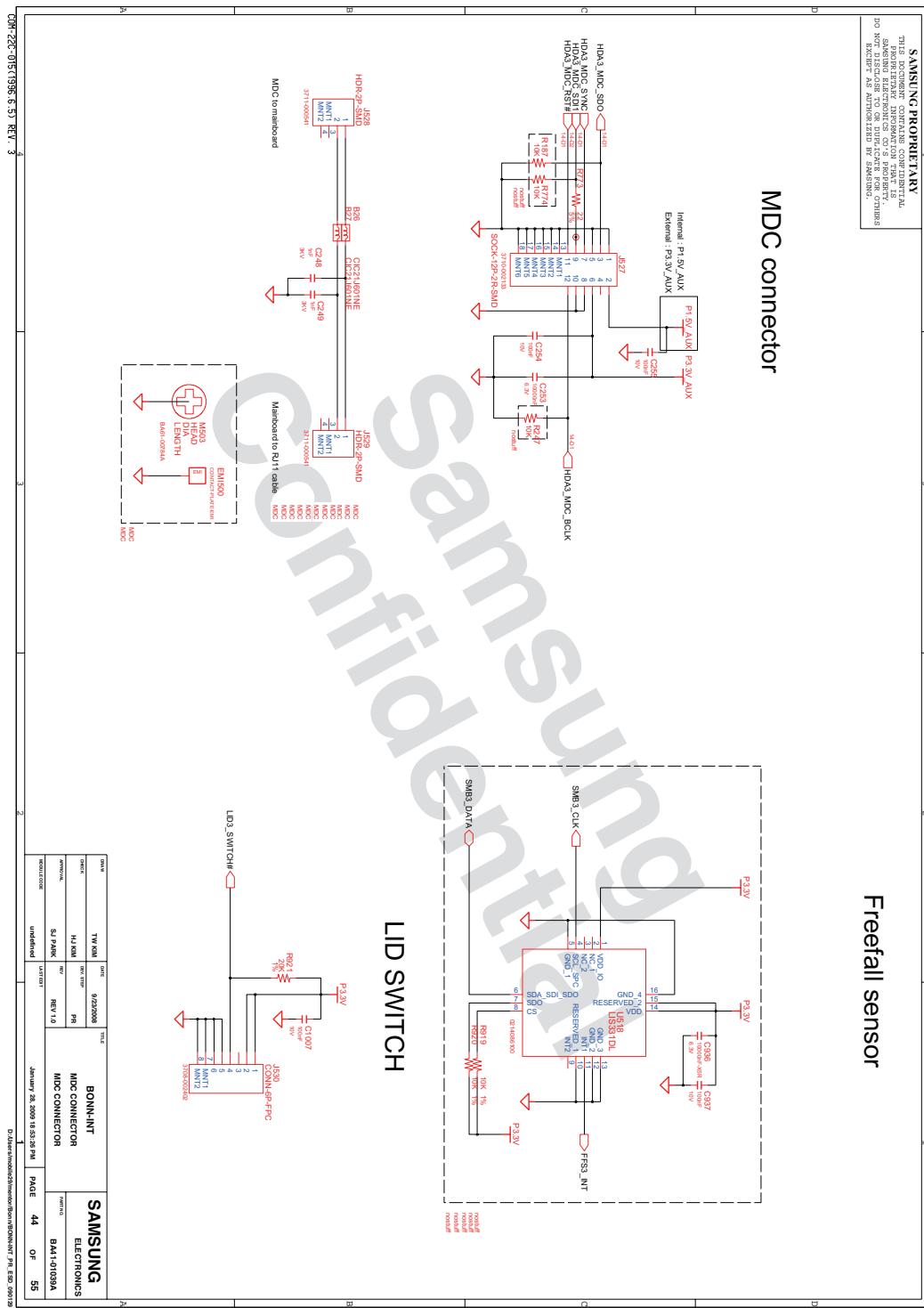
Bluetooth Interface CAMERA

USB I/F Devices



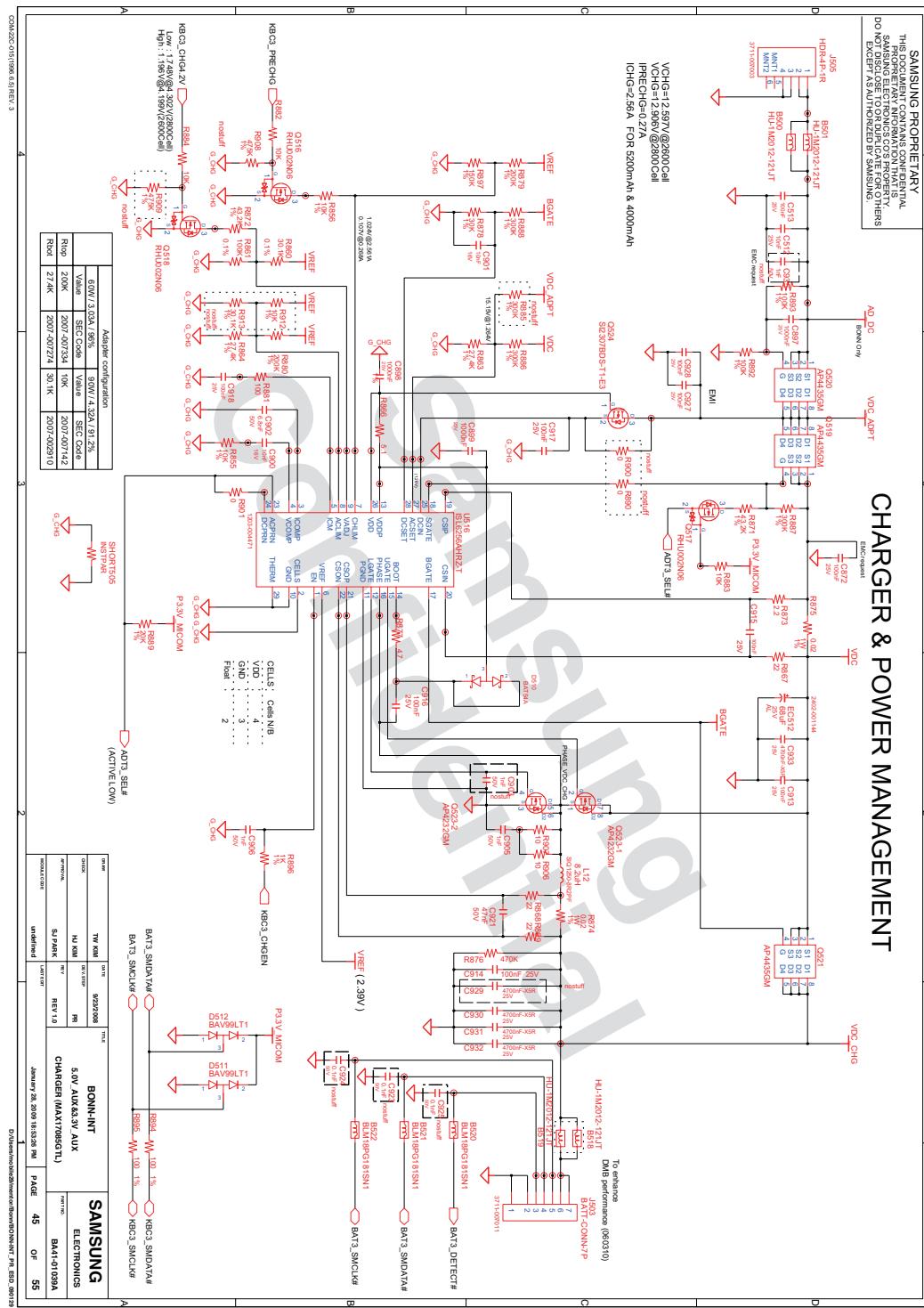
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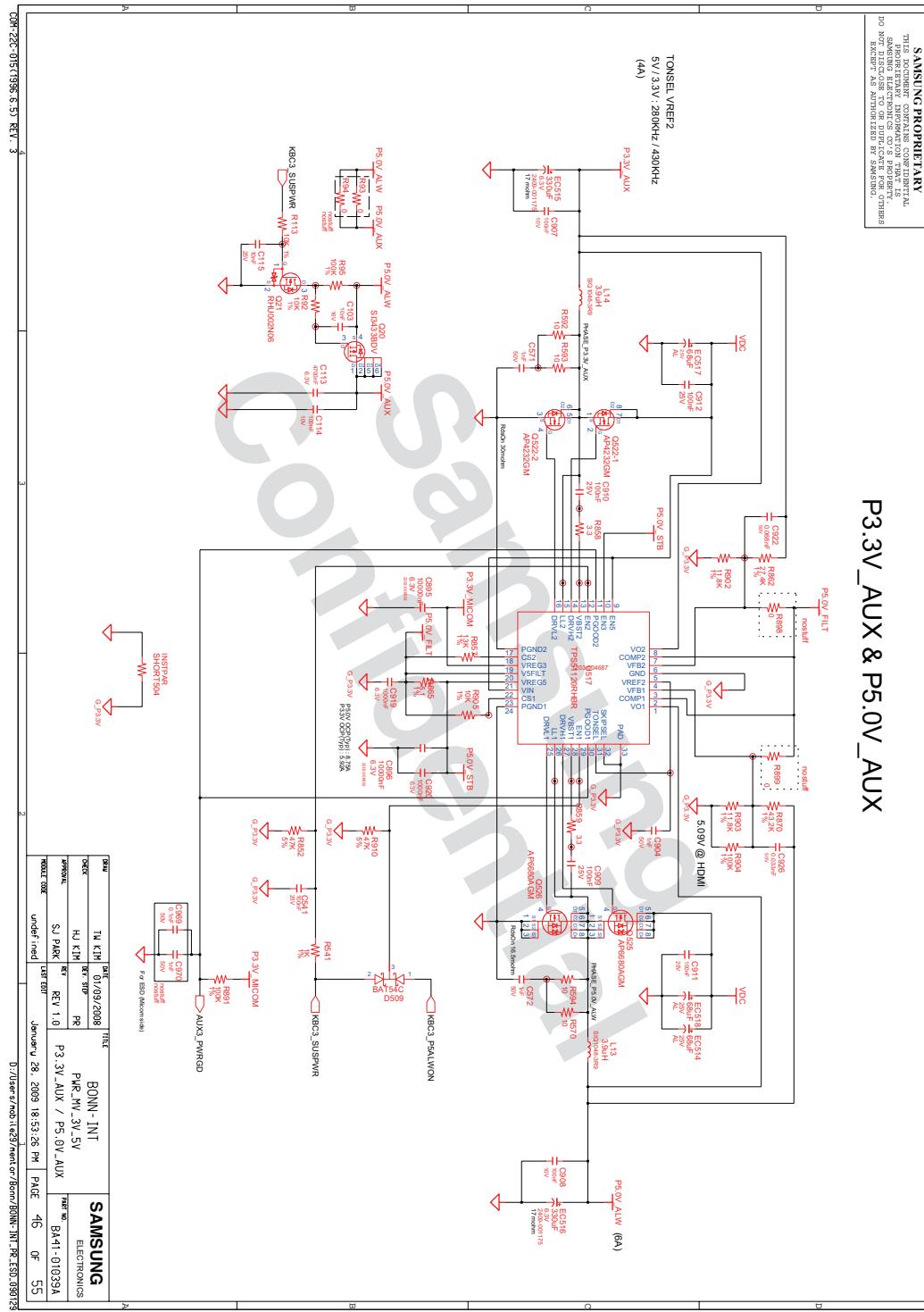
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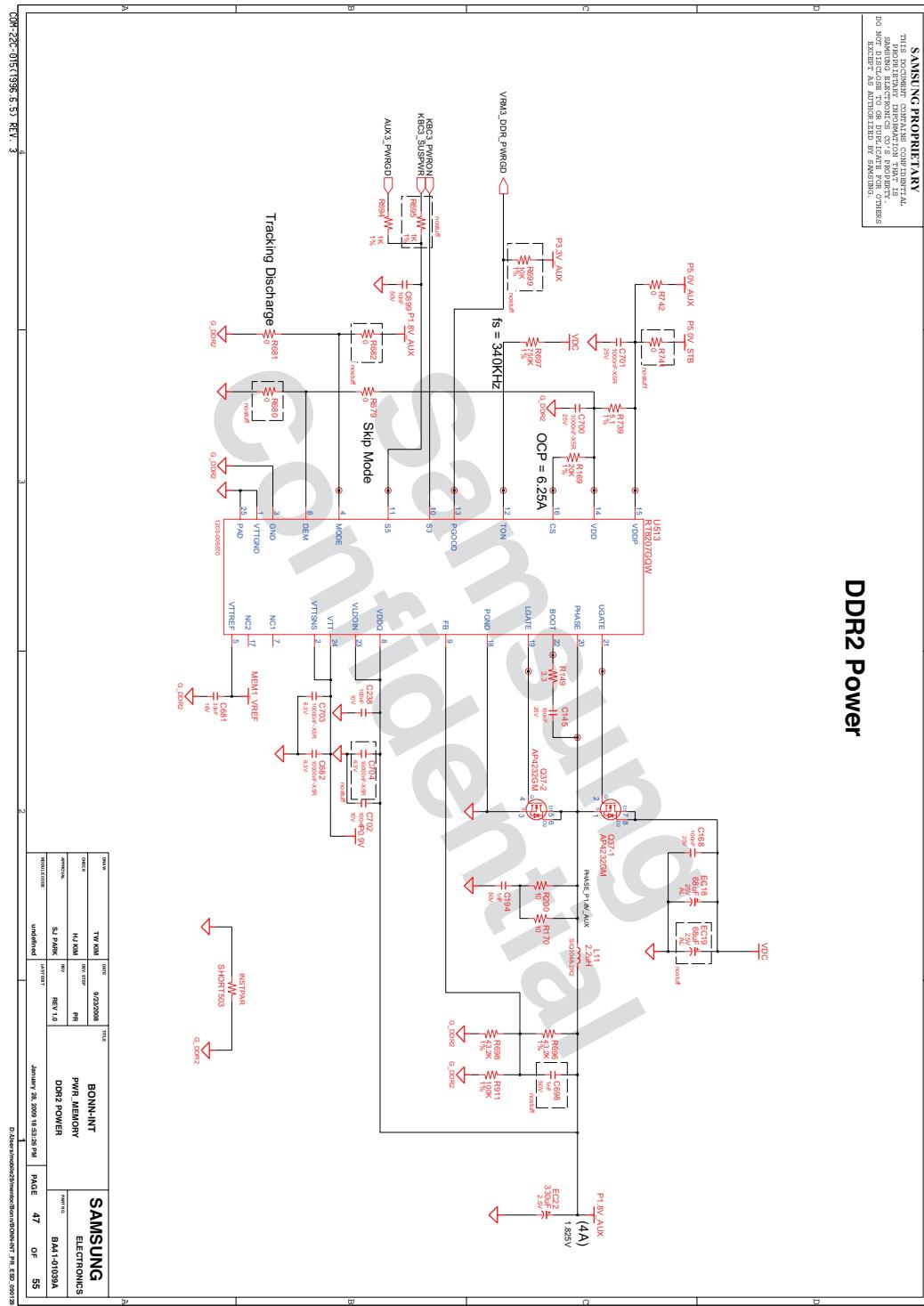
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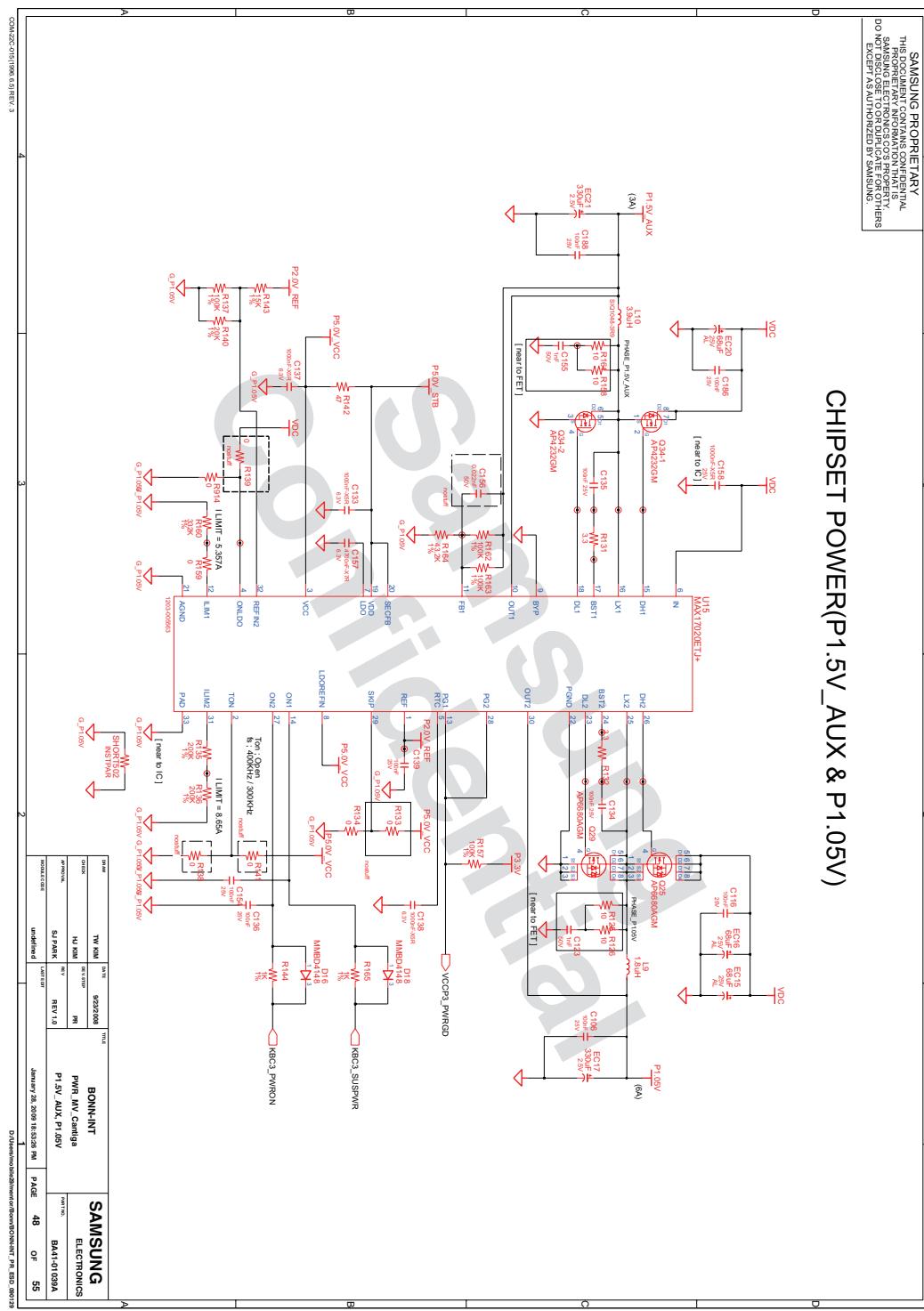
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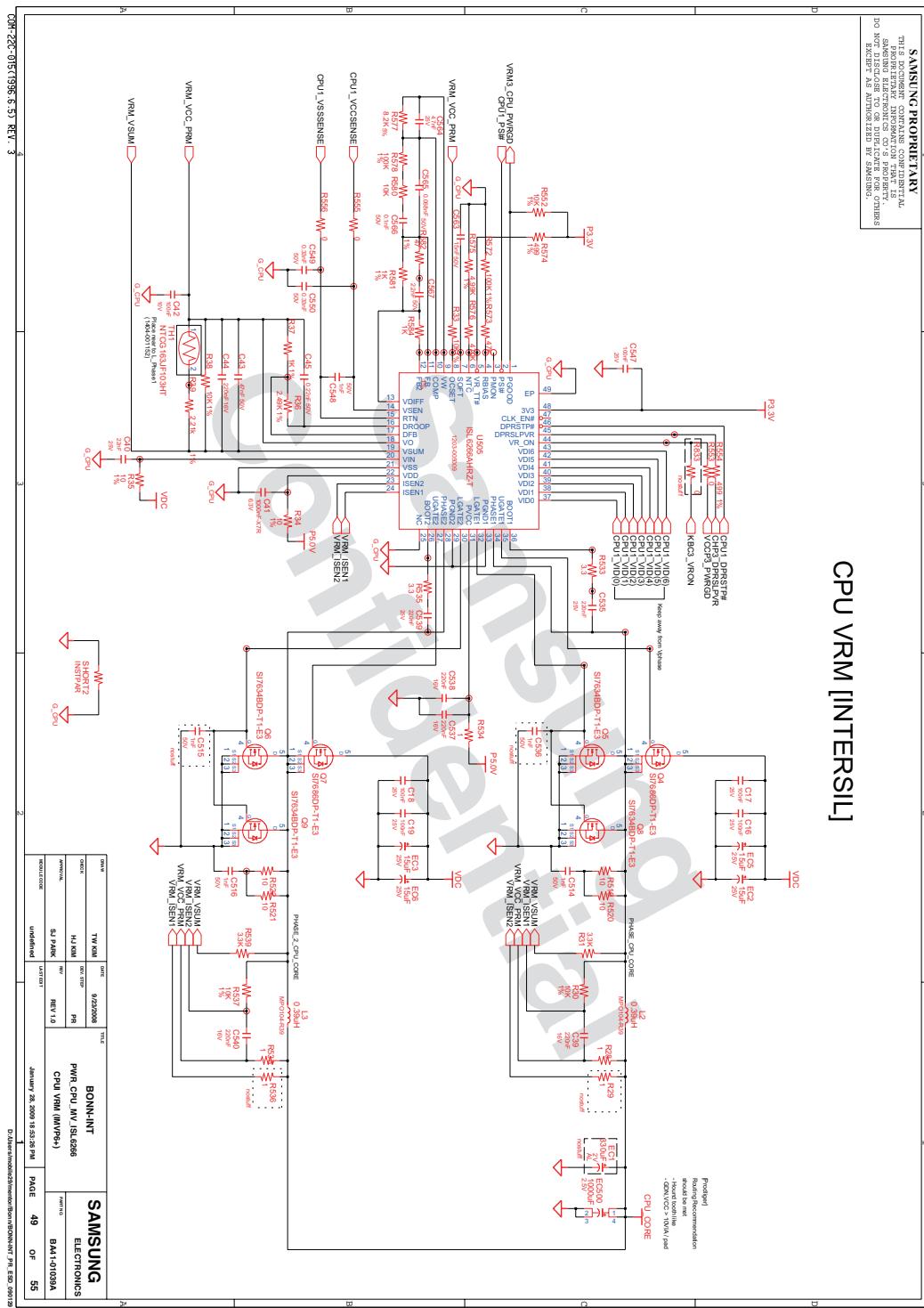
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CHIPSET POWER(P1.5V_AUX & P1.05V)



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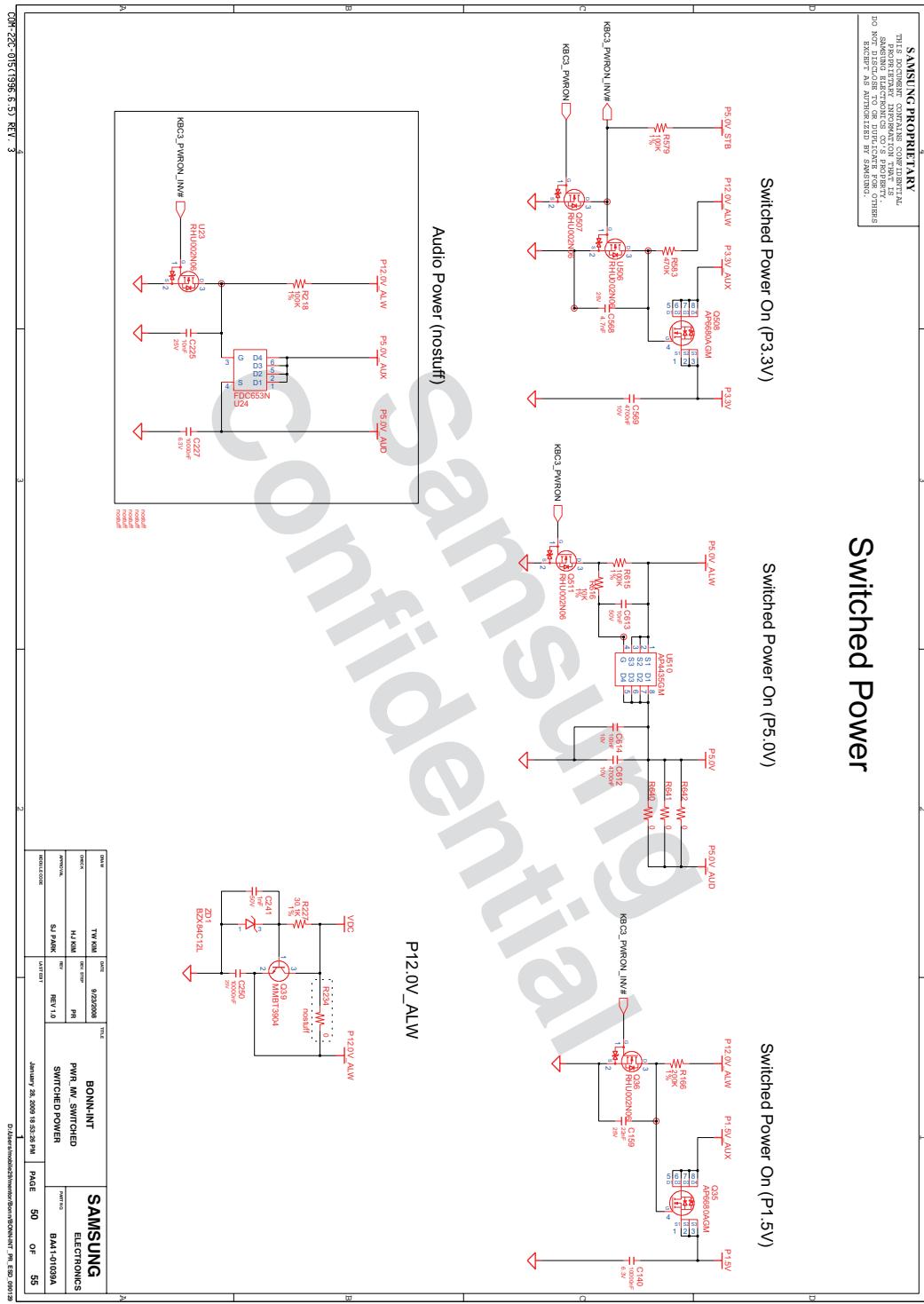


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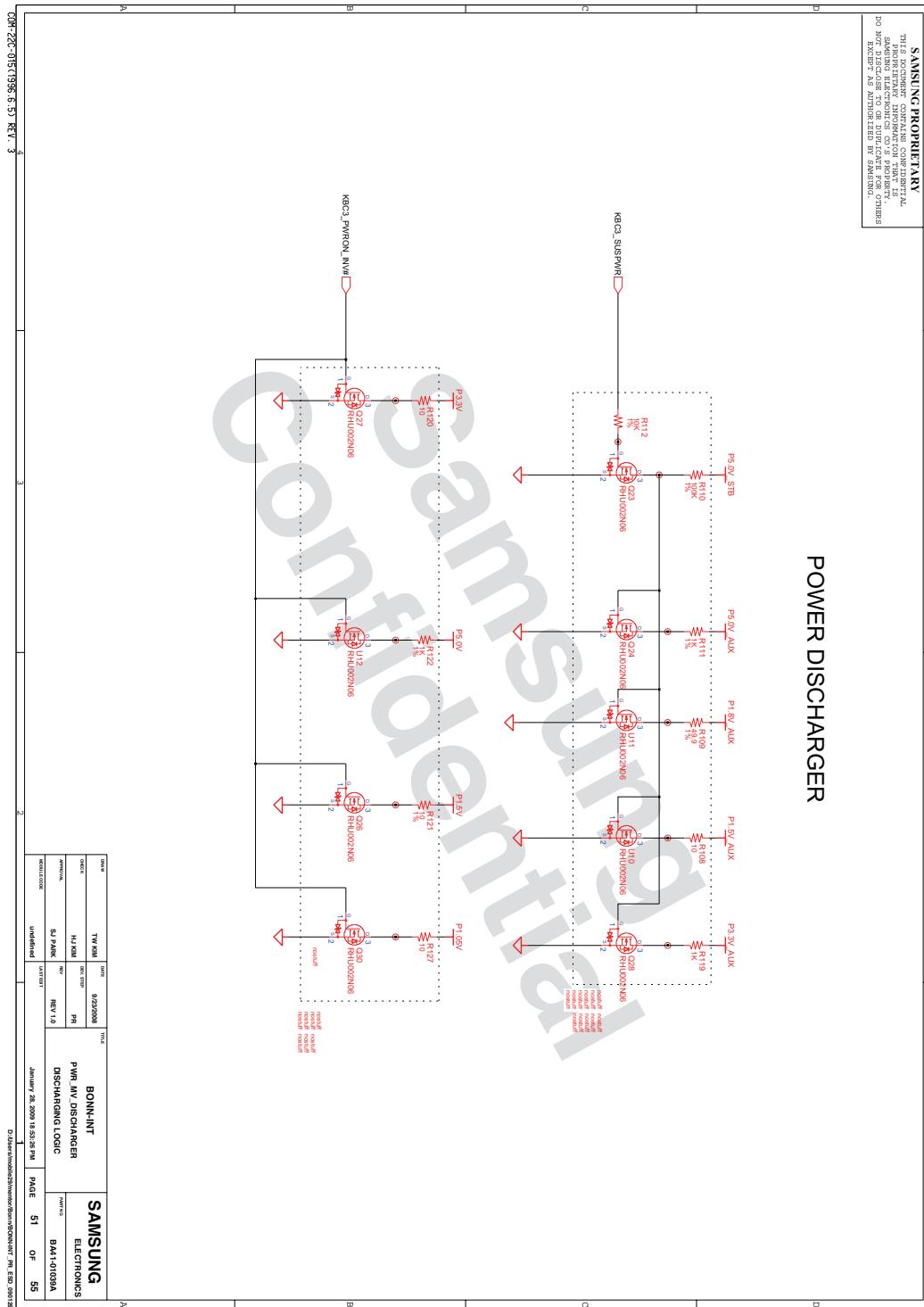
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Switched Power



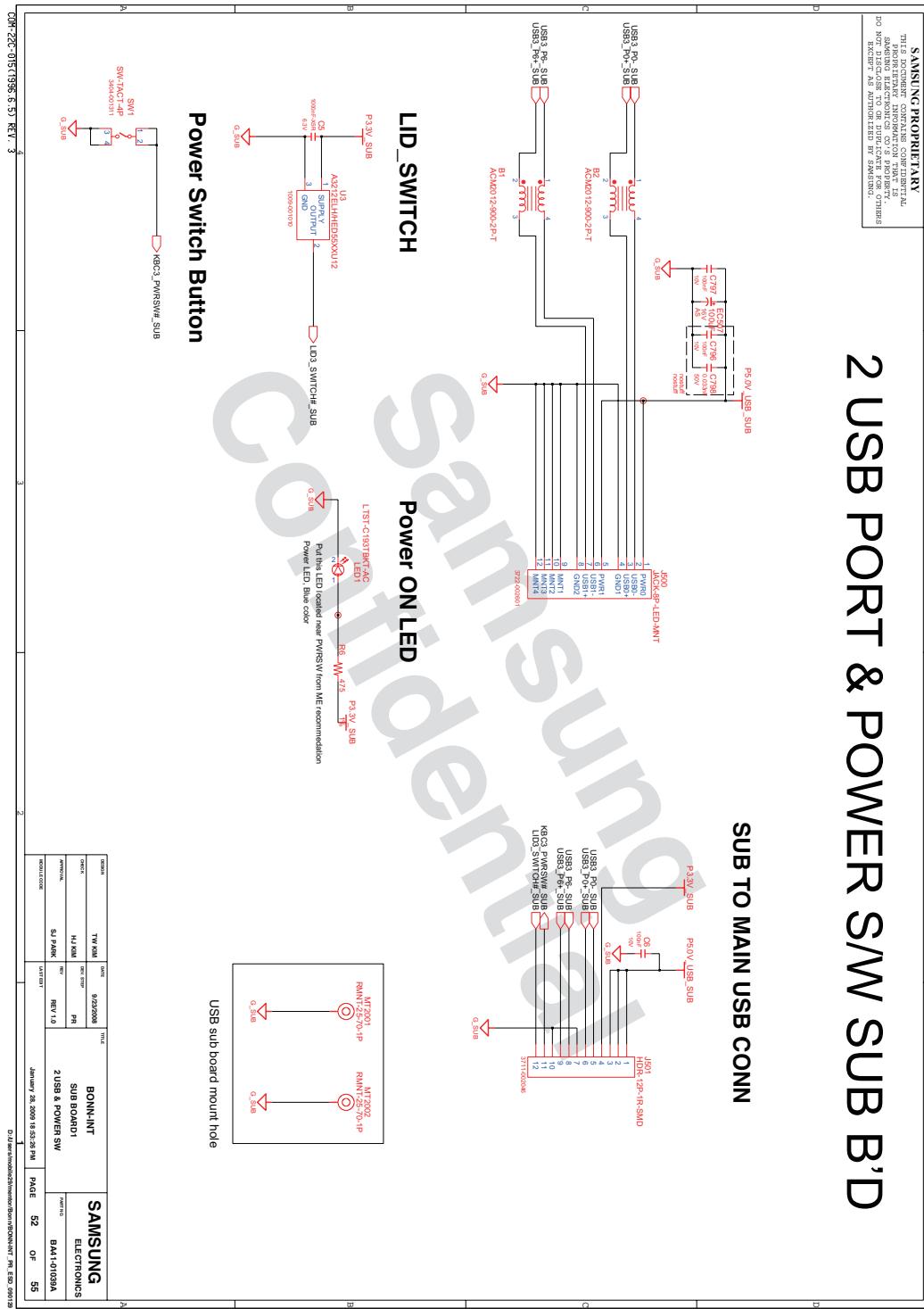
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8. Block Diagram and Schematic



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8. Block Diagram and Schematic

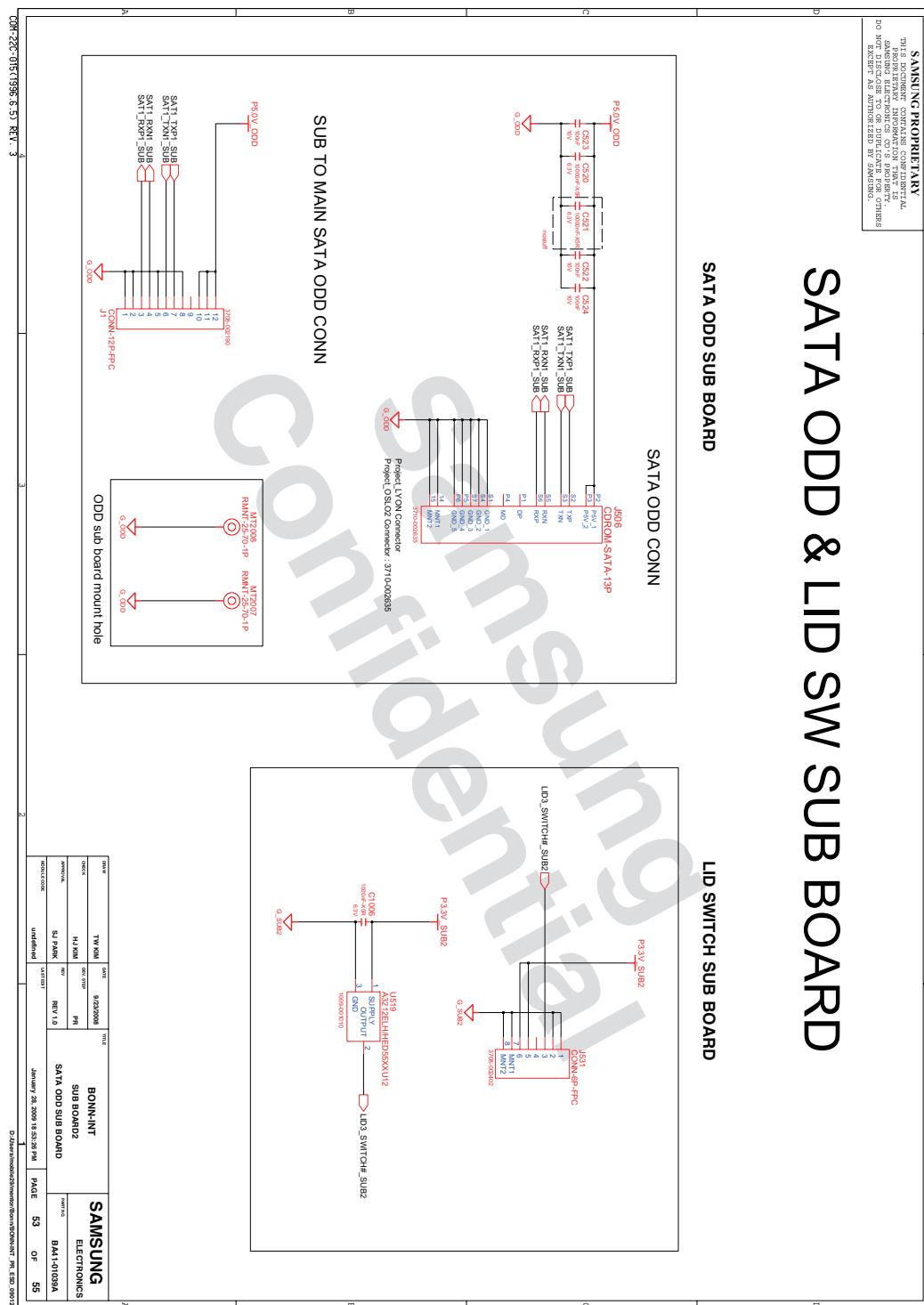


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8. Block Diagram and Schematic

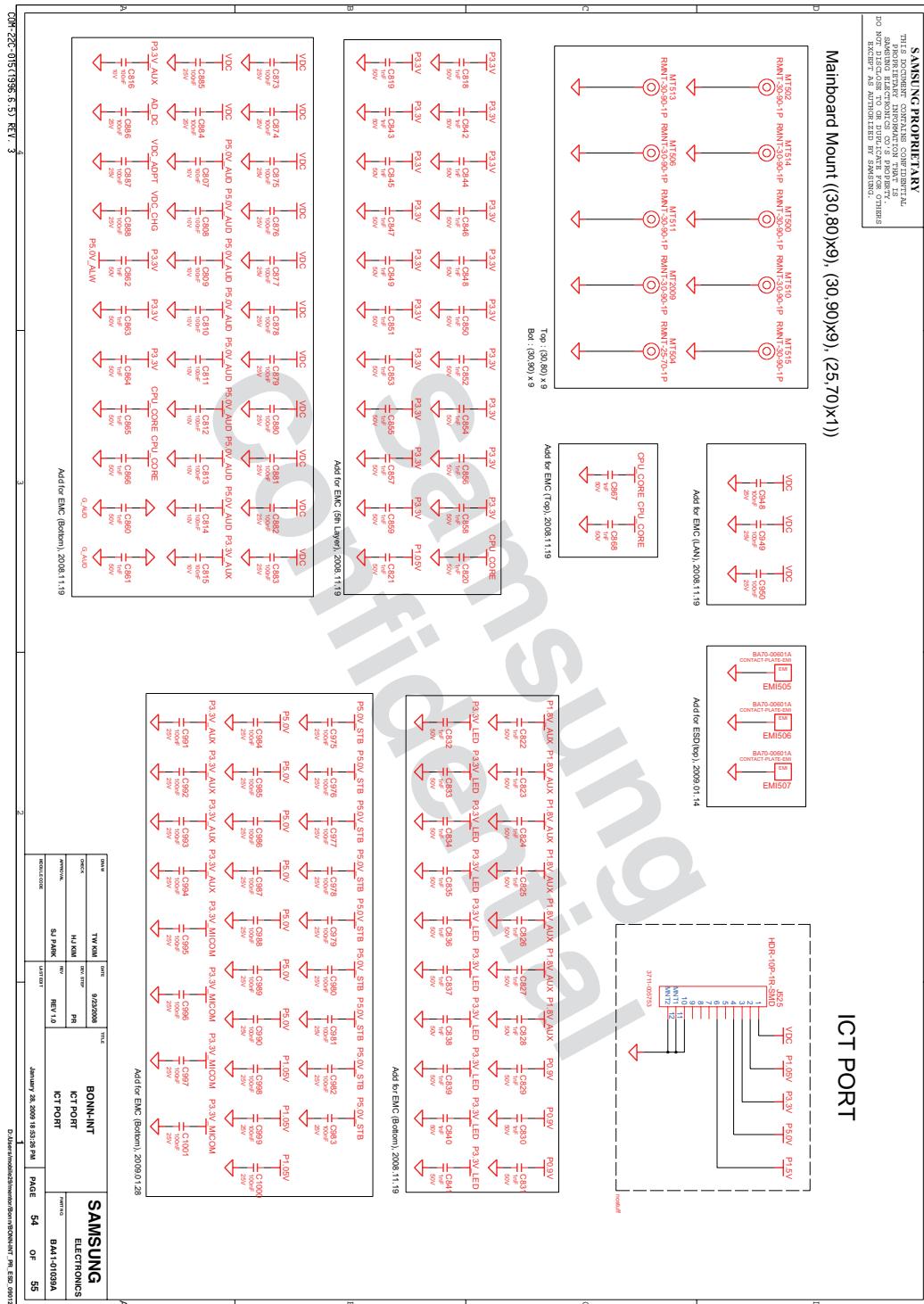
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SATA ODD & LID SW SUB BOARD



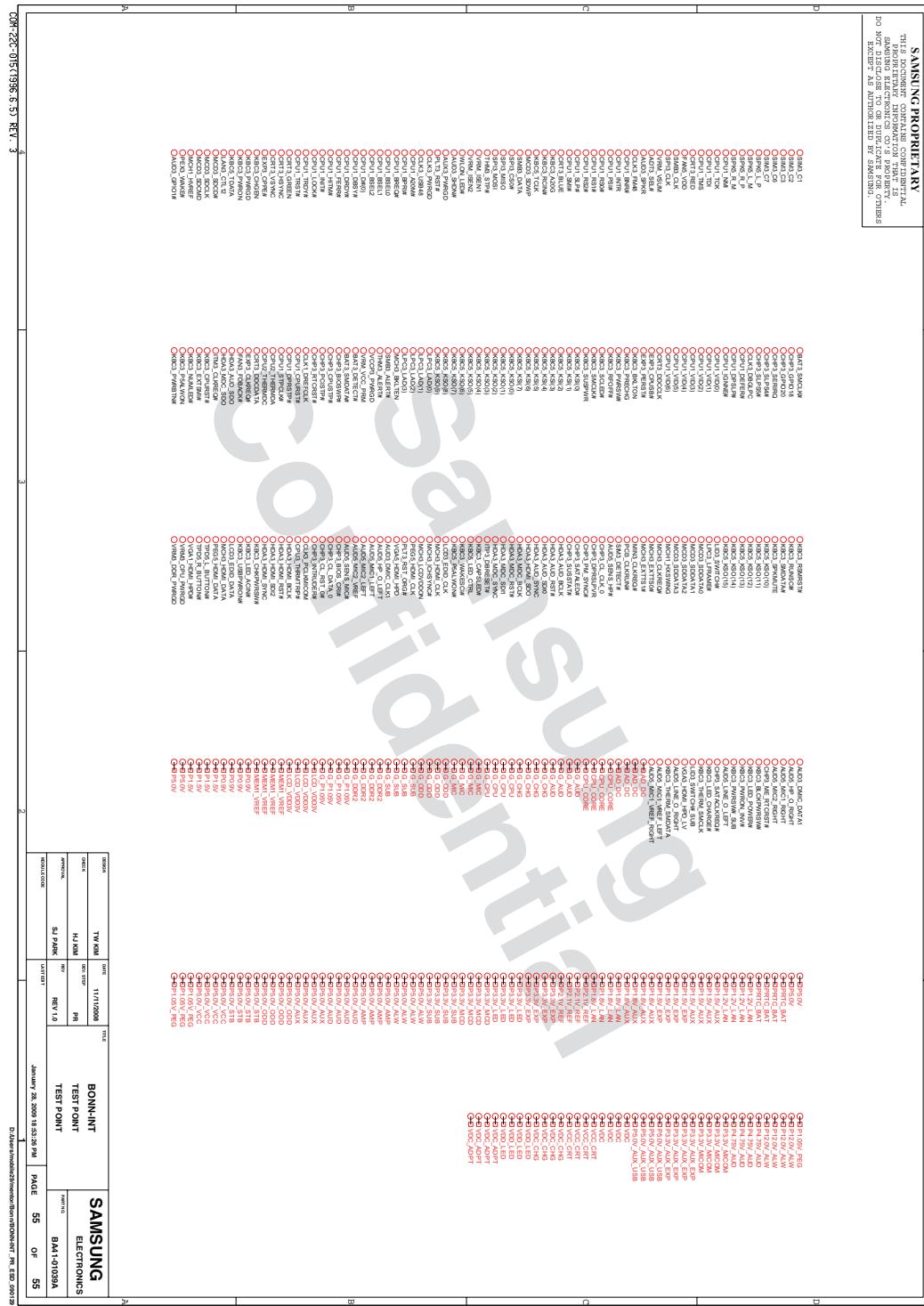
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8. Block Diagram and Schematic



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8. Block Diagram and Schematic



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8. Block Diagram and Schematic

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Part List : NP-R522-FA02CA

Ver.	Location	Part Number	Part Name & Specification	Q'ty	SA/SNA	Parent Part
0001	A0010	3903-000031	CBF-POWER CORD;DT,US,US3,IEC320 C5,125/1	1	SA	NP-R522-FA02CA
0001	A1001	BA46-10730A	S/W CD;UTILITY,BONN,-,1.0,EXPORT,DVD,-,W	1	SA	NP-R522-FA02CA
0001	B0001	BA75-02174A	UNIT-HOUSING_BOTTOM;BONN,SESC,PC+ABS,W37	1	SA	NP-R522-FA02CA
0001	B0003	BA81-06383A	DOOR-MEMORY;BONN,PC+ABS,T1.5,W118,4*L94.	1	SA	BA97-02902A
0001	B0006	BA63-00371A	GASKET-VGA;AQUILA,71TS,T0.3,W4,L20mm,NTR	1	SA	BA92-05528A
0001	B0009	BA81-06960A	RUBBER-FOOT;MIAMI,HS50,L19*W6.5*H3.9mm,S	4	SA	BA75-02174A
0001	B0010	BA81-04694A	RUBBER-FOOT_REAR;TIANJIN,DOMESTIC,BLACK,	2	SA	BA75-02174A
0001	B0013	BA81-06402A	CARD-DUMMY_EXPRESS;BONN,PC+ABS,T1.5,W69.	1	SA	BA97-02902A
0001	B0100	BA75-02172A	UNIT-DOOR_HDD;BONN,SEC,PC+ABS,W122.5*L82	1	SA	BA97-02902A
0001	B0205	BA81-06538A	CAP-MODEM;BONN,PC+ABS,T1.5,W14.26*L13mm,	1	SA	NP-R522-FA02CA
0001	B0302	BA81-06494A	LINK-BATTERY_L;BONN,POM,H5.6,L26.4*W10.8	1	SA	BA75-02174A
0001	B0303	BA81-06495A	LINK-BATTERY_R;BONN,POM,H5.6,L26.4*W10.8	1	SA	BA75-02174A
0001	B0402	BA81-06380A	KNOB-BATTERY_L;QINGDAO-D,PC+ABS,T1.2,W34	1	SA	BA75-02174A
0001	B0403	BA81-06381A	KNOB-BATTERY_R;QINGDAO-D,PC+ABS,T1.2,W34	1	SA	BA75-02174A
0001	D0001	BA96-04016A	ASSY DVD-SUPERMULTI_DL;BONN-BBY,SATA,TSS	1	SA	NP-R522-FA02CA
0001	D0001	BA96-04076A	ASSY DVD-S_MULTI_DL;BONN-BBY,SATA,TSST,T	1	SA	NP-R522-FA02CA
0001	D0001	BA96-04077A	ASSY DVD-S_MULTI_DL;BONN-BBY,SATA,PLDS,D	1	SA	NP-R522-FA02CA
0001	D0001	BA96-04078A	ASSY DVD-S_MULTI_DL;BONN-BBY,SATA,PLDS,D	1	SA	NP-R522-FA02CA
0001	D0001	BA96-04079A	ASSY DVD-S_MULTI_DL;BONN-BBY,SATA,TEAC,D	1	SA	NP-R522-FA02CA
0001	D0005	BA92-05474A	ASSY BOARD-ODD_SUB;BONN,FR-4,6L,W37.0*W1	1	SA	NP-R522-FA02CA
0001	D1002	BA59-02234B	DVD-SUPERMULTI;TS-L633A,8x,130ms,SATA,2M	1	SA	BA96-04016A
0001	D1002	BA59-02266A	DVD-SUPERMULTI;DV-W28S-R,8X,150ms,SATA,2	1	SA	BA96-04079A
0001	D1002	BA59-02383A	DVD-SUPERMULTI_PLDS;DS-8A2S,8x,130ms,SAT	1	SA	BA96-04077A
0001	D1002	BA59-02459A	DVD-SUPERMULTI;TS-L633B,8x,150ms,SATA,2M	1	SA	BA96-04076A
0001	D1002	BA59-02494A	DVD-SUPERMULTI;DS-8A3S,8X,130MS,SATA,2MB	1	SA	BA96-04078A
0001	D1006	BA41-01049A	FFC-ODD;BONN,1.0,Film,12P,T0.3mm,L40*W6.	1	SA	NP-R522-FA02CA
0001	D2000	BA81-04551A	BRACKET-ODD;XIAN,DOMESTIC,SECC,L27*W10.6	1	SA	BA97-02911A
0001	D3000	BA75-02189A	UNIT-BEZEL_ODD;BONN,PC+ABS,T0.9,W129*L15	1	SA	BA97-02911A
0001	G0003	BA59-02155A	MODULE-WLAN;DT/NP,WLL3141MOW,-,802.11BG,	1	SA	NP-R522-FA02CA
0001	G0003	BA59-02323A	MODULE-WLAN;NP/DT,T60H976.08,-,802.11BG,	1	SA	NP-R522-FA02CA
0001	I0001	0902-002419	IC-MICROPROCESSOR;AW80577GG0411MA,2.0GHZ	1	SA	NP-R522-FA02CA
0001	I0002	1105-001886	IC-DRAM MODULE;M470T2864QZ3-CF7,DDR2 SDR	1	SA	NP-R522-FA02CA
0001	I0002	1105-001900	IC-DRAM MODULE;M470T5663QZ3-CF7,DDR2 SDR	1	SA	NP-R522-FA02CA
0001	I0002	1105-001947	IC-DRAM MODULE;M470T5663RZ3-CF7,DDR2 SDR	1	SA	NP-R522-FA02CA
0001	I0002	1105-001988	IC-DRAM MODULE;M470T5663EH3-CF7,DDR2 SDR	1	SA	NP-R522-FA02CA
0001	I0003	BA59-02495A	LCD PANEL-156HD;CLAA156WA11A,15.6 HD,220	1	SA	BA96-04097A
0001	I0003	BA59-02505A	LCD PANEL-156HD;LTN156AT02-C,15.6 HD,LED	1	SA	BA96-04097A
0001	I0005	BA59-02376A	HDD;250G,MK2552GSX,S63,H16,D16385,H9.5mm	1	SA	NP-R522-FA02CA
0001	I0005	BA59-02398A	HDD;250G,WDC-WD2500BEVT-22ZCT0,S63,H16,C	1	SA	NP-R522-FA02CA
0001	I0005	BA59-02454A	HDD;250G,MHZ2250BH-FFS-G2,S63,H16,D16385	1	SA	NP-R522-FA02CA
0001	I0005	BA59-02474A	HDD;250G,ST9250315AS,S63,H16,016385,9.5m	1	SA	NP-R522-FA02CA
0001	I0006	BA59-02487S	KEYBOARD;BONN,88key,Membrane,-,CANADA,-,	1	SA	NP-R522-FA02CA
0001	I0007	BA44-00242A	ADAPTOR;0335A1960,AD-6019R,-,90-264VAC,4	1	SA	NP-R522-FA02CA
0001	I0009	BA43-00207A	BATTERY;3UR18650Y-2-SDN-26,BONN,Li-ion,2P3S,4	1	SA	NP-R522-FA02CA
0001	I0009	BA43-00208A	BATTERY;P32R04-13-H01,BONN,Li-ion,2P3S,4	1	SA	NP-R522-FA02CA
0001	I0013	BA59-02456A	MODULE-CAMERA;SCB-1700N,NCM-108F,1.3M CA	1	SA	BA96-04097A
0001	K0001	BA75-02168A	UNIT-HOUSING_LCD-BACK;BONN,SEC,PC+ABS,W3	1	SA	BA96-04097A
0001	K0002	BA75-02170A	UNIT-HOUSING_LCD_FRONT;BONN,SEC,PC+ABS,W	1	SA	BA96-04097A
0001	K100	BA81-04180C	RUBBER-FRONT;LYON,TPU RUBBER,D5.0*H2.1mm	6	SA	BA96-04097A

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Part List : NP-R522-FA02CA

Ver.	Location	Part Number	Part Name & Specification	Q'ty	SA/SNA	Parent Part
0001	K0104	BA81-04858B	RUBBER-FRONT;LYON,SILICON RUBBER,BLACK,W	4	SA	BA75-02170A
0001	K0201	BA68-04792A	LABEL-FRONT_R522;BONN,SEC,PC,T0.3,W24.8,	1	SA	NP-R522-FA02CA
0001	K1001	BA39-00812A	CBF HARNESS-LCD;BONN,WIRE,UL10064,40P,21	1	SA	BA96-04097A
0001	K1001	BA39-00813A	CBF HARNESS-LCD;BONN,WIRE,UL10064,40P,21	1	SA	BA96-04097A
0001	K1006	BA81-05509A	PROTECTOR-LCD_BACK;ISTANBUL,XY53,W349.2*	1	SA	NP-R522-FA02CA
0001	K1007	BA39-00818A	CBF HARNESS-CAMERA;BONN,Wire,UL10064,6P,	1	SA	BA96-04097A
0001	K2001	BA42-00216A	ANTENNA-WLAN;81.EHD15.004,Winchester,2.4	1	SA	BA75-02168A
0001	K2002	BA42-00235A	ANTENNA-WLAN;WDAN-M1BN1001-DF,Bonn,2.4-6	1	SA	BA75-02168A
0001	K3001	BA81-06418A	HINGE-L;BONN,SUS,T1.5,W40.7*L28.2*T1.4mm	1	SA	BA96-04097A
0001	K3001	BA81-06488A	HINGE-L;BONN,SUS,T1.5,W40.7*L28.2*T1.4mm	1	SA	BA96-04097A
0001	K3002	BA81-06419A	HINGE-R;BONN,SUS,T1.5,W37.0*L28.0*H22.8m	1	SA	BA96-04097A
0001	K3002	BA81-06489A	HINGE-R;BONN,SUS,T1.5,W37.0*L28.0*H22.8m	1	SA	BA96-04097A
0001	K4001	BA81-06390A	BRACKET-LCD_L;BONN,SECC,T0.8,W233.4*L11.	1	SA	BA96-04097A
0001	K4002	BA81-06391A	BRACKET-LCD_R;BONN,SECC,T0.8,W233.4*L11.	1	SA	BA96-04097A
0001	K4003	BA75-02186A	UNIT-BRACKET_LCD_UPPER;BONN,SECC,T0.8,W3	1	SA	BA96-04097A
0001	L1004	BA68-20039A	LABEL-PPID_E;BLADE,-,PET,-,W50.8,L12.7mm	2	SA	BA96-04097A
0001	L1004	BA68-20039A	LABEL-PPID_E;BLADE,-,PET,-,W50.8,L12.7mm	2	SA	NP-R522-FA02CA
0001	M0001	BA92-05528A	ASSY MOTHER BD-TOP;BONN,INT,-,Intel Core	1	SA	NP-R522-FA02CA
0001	M0008	BA92-05473A	ASSY BOARD-USB_SUB;BONN,FR-4,6L,W53.4*L2	1	SA	NP-R522-FA02CA
0001	M1004	2203-001683	C-CER,CHIP;0.068nF,5%,50V,NP0,1608	1	SA	BA92-05528D
0001	M1004	2203-005918	C-CER,CHIP;1000nF,10%,6.3V,X7R,1608	3	SA	BA92-05528D
0001	M1004	2203-006000	C-CER,CHIP;1nF,10%,3000V,X7R,TP,4520	1	SA	BA92-05528D
0001	M1008	3708-002190	CONNECTOR-FPC/FFC/PIC;12P,0.5mm,SMD-A,AU	1	SA	BA92-05528D
0001	M1009	3711-000456	HEADER-BOARD TO CABLE;BOX,4P,1R,1.25mm,S	1	SA	BA92-05528D
0001	M1010	3710-002788	SOCKET-INTERFACE;7+15P,1R,1.27mm,SMD-A,A	1	SA	BA92-05528D
0001	M1021	1201-002810	IC-AUDIO AMP;TPA6020A2RGWR,QFN,20P,5x5mm	1	SA	BA92-05528D
0001	M1022	0904-002453	IC-BUS CONTROLLER;AU6336,QFN,28P,5x5mm,4	1	SA	BA92-05528D
0001	M1022	1006-001427	IC-BUS TRANSCEIVER;PS8101,QFN,48P,7x7mm,	1	SA	BA92-05528C
0001	M1024	0801-003296	IC-CMOS LOGIC;7SZ14,Inverter,SC-70,5P,2.	1	SA	BA92-05528D
0001	M1025	1203-005579	IC-POSI.FIXED REG.;G916-475T1UF,SOT-23,5	1	SA	BA92-05528D
0001	M1028	3722-002601	JACK-USB;4P/2C,AUF,BLK,ANGLE-OFFSET,A TY	1	SA	BA92-05528C
0001	M1029	2007-000052	R-CHIP;10Kohm,1%,1/10W,TP,1608	2	SA	BA92-05528D
0001	M1029	2007-000072	R-CHIP;47ohm,5%,1/10W,TP,1608	1	SA	BA92-05528D
0001	M1029	2007-007617	R-CHIP;2.49Kohm,1%,1/10W,TP,1608	1	SA	BA92-05528D
0001	M1033	4301-001070	BATTERY-LI;3V,210mAH,CR2032,20x3.2mm,NO,	1	SA	BA92-05528A
0001	M1047	1203-005563	IC-DC/DC CONVERTER;MAX17020ETJ+,TQFN,32P	1	SA	BA92-05528D
0001	M1058	1203-005592	IC-RESET;G690L263T73UF,SOT-23,3P,2.9x1.6	1	SA	BA92-05528D
0001	M1059	1205-003667	IC-SWITCH;G577BSR91U,QFN,20P,4x4mm,PLAST	1	SA	BA92-05528D
0001	M2001	BA75-01937A	UNIT-BRACKET_CPU;PALAU,SEC,SPCC,W50*L40*	1	SA	BA92-05528A
0001	M3000	BA96-03953A	ASSY COOLER-CPU;BONN,0M8Y70000H,BA81-062	1	SA	NP-R522-FA02CA
0001	M3000	BA96-03964A	ASSY COOLER-CPU;BONN,000G027101,BA81-062	1	SA	NP-R522-FA02CA
0001	M9999	0403-001047	DIODE-ZENER;BZX84C12L,5%,225mW,SOT-23,TP	1	SA	BA92-05528D
0001	M9999	0801-002628	IC-CMOS LOGIC;7SZ08,2-INPUT AND GATE,SC-	1	SA	BA92-05528D
0001	M9999	0903-001439	IC-MICROCOMPUTER;HD64F2110BVTE10V,TQFP,1	1	SA	BA92-05528C
0001	M9999	0904-002378	IC-I/O CONTROLLER;AF82801IBM,mBGA,676P,3	1	SA	BA92-05528D
0001	M9999	0904-002484	IC-DRAM CONTROLLER;EB88CTGM,FCBGA,1329P,	1	SA	BA92-05528D
0001	M9999	1009-001046	IC-HALL EFFECT S/W;HED53XXU12,SOT-23,3P,	1	SA	BA92-05528D
0001	M9999	1203-004687	IC-PWM CONTROLLER;TPS51120,QFN,32P,5x5mm	1	SA	BA92-05528D
0001	M9999	1203-005009	IC-PWM CONTROLLER;ISL6266AHRZ-T,QFN,48P,	1	SA	BA92-05528C

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Part List : NP-R522-FA02CA

Ver.	Location	Part Number	Part Name & Specification	Q'ty	SA/SNA	Parent Part
0001	M9999	1203-005570	IC-PWM CONTROLLER;RT8207GQW,QFN,24P,4x4mm	1	SA	BA92-05528C
0001	M9999	1203-005849	IC-PWM CONTROLLER;ISL6255AHRZ-T,QFN,28P,	1	SA	BA92-05528C
0001	M9999	1205-002807	IC-SWITCH;R5538D001-TR-F,QFN,20P,4x4mm,P	1	SA	BA92-05528D
0001	M9999	1205-003156	IC-CLOCK GENERATOR;SLG8SP513,QFN,64P,9x9	1	SA	BA92-05528C
0001	M9999	1205-003159	IC-CLOCK GENERATOR;IDTCV179CNLG,MLF,64P,	1	SA	BA92-05528C
0001	M9999	1205-003526	IC-CODEC;ALC272-GR,LQFP,48P,7x7mm,PLASTI	1	SA	BA92-05528D
0001	M9999	1205-003533	IC-CLOCK GENERATOR;SL28541BQCT,QFN,64P,9	1	SA	BA92-05528C
0001	M9999	1205-003683	IC-SWITCH;TPS2062ADRBR,SON,8P,3x3mm,Plas	2	SA	BA92-05528C
0001	M9999	1209-001718	IC-SENSOR;EMC2102,QFN,28P,5x5mm,PLASTIC,	1	SA	BA92-05528D
0001	M9999	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	8	SA	BA92-05528D
0001	M9999	2007-007274	R-CHIP;27.4Kohm,1%,1/10W,TP,1608	1	SA	BA92-05528D
0001	M9999	2203-001201	C-CER,CHIP;0.007nF,0.5pF,50V,NP0,TP,1005	2	SA	BA92-05528D
0001	M9999	2203-002487	C-CER,CHIP;4.7nF,10%,25V,X7R,TP,1005	1	SA	BA92-05528D
0001	M9999	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,1005	53	SA	BA92-05528D
0001	M9999	2203-006090	C-CER,CHIP;10000nF,10%,6.3V,X5R,TP,2012	8	SA	BA92-05528D
0001	M9999	2203-006824	C-CER,CHIP;4700nF,10%,10V,X5R,1608	2	SA	BA92-05528C
0001	M9999	3301-001594	BEAD-SMD;90ohm,2.0*1.2*1.3mm,TP,-,-	1	SA	BA92-05528D
0001	M9999	3701-001515	CONNECTOR-DSUB;15P,3R,FEMALE,ANGLE,Au	1	SA	BA92-05528C
0001	M9999	3708-002166	CONNECTOR-FPC/FFC/PIC;25P,0.5mm,SMD-A,AU	1	SA	BA92-05528C
0001	M9999	3708-002402	CONNECTOR-FPC/FFC/PIC;6P,1.0mm,SMD-A,SnB	1	SA	BA92-05528C
0001	M9999	3709-001327	CONNECTOR-CARD EDGE;200P,0.6mm,SMD-A,AUF	1	SA	BA92-05528D
0001	M9999	3709-001492	CONNECTOR-CARD SLOT;9P,2.5mm,SMD-A,Au,2	1	SA	BA92-05528D
0001	M9999	3709-001573	CONNECTOR-CARD EDGE;200P,0.6mm,SMD-A,AU,	1	SA	BA92-05528D
0001	M9999	3710-002635	SOCKET-INTERFACE;13P,1R,1mm,ANGLE,AU,BLK	1	SA	BA92-05528C
0001	M9999	3711-000386	HEADER-BOARD TO CABLE;BOX,10P,1R,1.25MM,	1	SA	BA92-05528D
0001	M9999	3711-007011	HEADER-BATTERY;NOWALL,7P,1R,2.5mm,BATTER	1	SA	BA92-05528C
0001	M9999	3722-002588	JACK-PHONE;6P,Au,BLACK,ANGLE	2	SA	BA92-05528C
0001	M9999	3722-002767	JACK-USB;4P/1C,AU,BLK,ANGLE,A	1	SA	BA92-05528C
0001	M9999	3722-002843	JACK-MODULAR;8P/8C,STANDARD,NO,ANGLE-OFF	1	SA	BA92-05528C
0001	M9999	3722-002850	JACK-E SATA;7P+4P,AU,BLK,ANGLE,E-SATA	1	SA	BA92-05528C
0001	R0006	BA75-02214A	UNIT-BRACKET_HDD;BONN,SECC,T0.5,W107.9*L	1	SA	BA97-02902A
0001	T0001	BA75-02233A	UNIT-HOUSING_TOP;BONN,SESC,PC+ABS,W374*L	1	SA	NP-R522-FA02CA
0001	T0002	BA81-06996A	UNIT-HOUSING_TOP-SVC;BONN,PC+ABS,T1.8,W3	1	SA	BA75-02233A
0001	T0005	BA68-03765A	LABEL-LOGO_INTEL-PENTIUM_DUAL;NP ALL,-,P	1	SA	NP-R522-FA02CA
0001	T0005	BA68-04123A	LABEL-LOGO_VISTA-PREMIUM;N/P,VISTA Premi	1	SA	NP-R522-FA02CA
0001	T0101	BA59-02145A	BOARD-TOUCHPAD;ACCORDION,TM-01020-003,BO	1	SA	BA75-02233A
0001	T0302	BA41-01048A	FFC-TOUCH_PAD;BONN,1.0,Film,6P,T0.3mm,10	1	SA	BA75-02233A
0001	T2000	BA96-03966A	ASSY SPEAKER;BONN,-,160/450,RED/BLK,WHT/	1	SA	BA75-02233A
0001	T2200	BA39-00796A	CBF HARNESS-MIC;Bonn,-,-,2P,500mm,WHT/BL	1	SA	BA75-02168A
0001	T9703	BA81-05187A	INSULATOR-EXPRESS;OSLO2,PC,W58.96,L51.5,	1	SA	BA92-05528A
0001	T9803	BA81-03890A	TAPE-TOUCHPAD;ACCORDION,3M200,W65*L38*T0	1	SA	BA81-06996A
0001	W2004	1205-003587	IC-ETHERNET CONTROLLER;88E8057-A0-NNC2C0	1	SA	BA92-05528D
0001	W2004	3701-001516	CONNECTOR-HDMI;19P,2R,FEMALE,ANGLE,Au	1	SA	BA92-05528C
0001	W2004	3711-007003	HEADER-BOARD TO CABLE;3WALL,4P,1R,2mm,AN	1	SA	BA92-05528C
0001	W2004	BA81-05632A	SCREW-MACHINE;SANTORINI,SESC,SWRCH18A 3+	4	SA	BA97-02902A
0001	W3006	BA39-00810A	CBF HARNESS-USB_SUB-BOARD;BONN,WIRE,UL15	1	SA	NP-R522-FA02CA
0001	W3006	BA39-00820A	CBF HARNESS-USB_SUB-BOARD;BONN,WIRE,UL15	1	SA	NP-R522-FA02CA
0001	W3015	BA39-00816A	CBF HARNESS-DC_JACK;BONN,WIRE HAENESS,UL	1	SA	BA75-02174A
0001	W3015	BA39-00874A	CBF HARNESS-DC_JACK;BONN,WIRE HAENESS,UL	1	SA	BA75-02174A

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Part List : NP-R522-FA02CA

Ver.	Location	Part Number	Part Name & Specification	Q'ty	SA/SNA	Parent Part
0001	W4002	6001-001532	SCREW-MACHINE;CH,+,M2,L3,ZPC(BLK),SWRCH1	6	SA	BA96-04097A
0001	W4002	6001-002253	SCREW-MACHINE;CH,+,M2,L6,ZPC(BLK),SWRCH1	10	SA	BA96-04097A



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