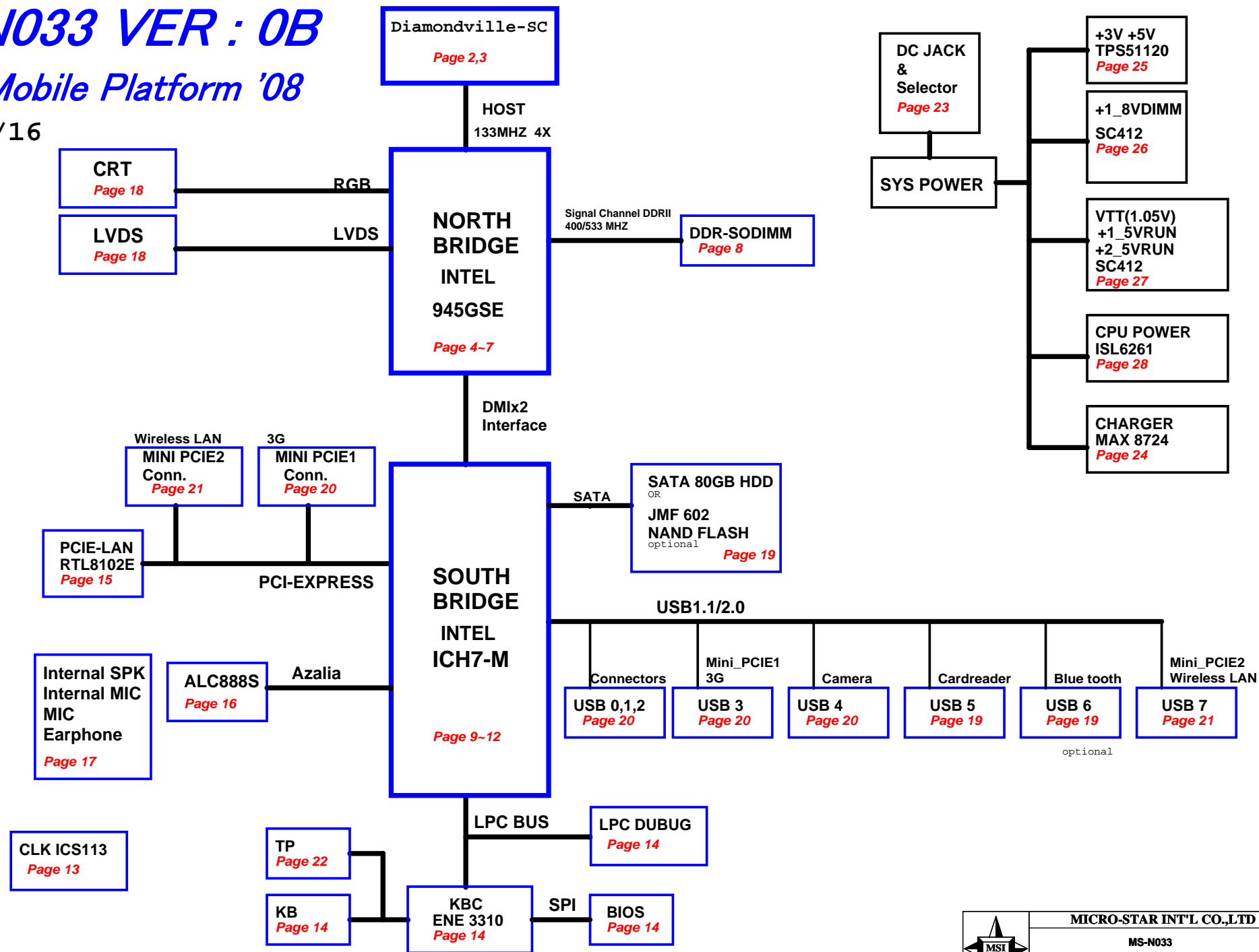


MS-N033 VER : 0B

Basic Mobile Platform '08

2008/12/16

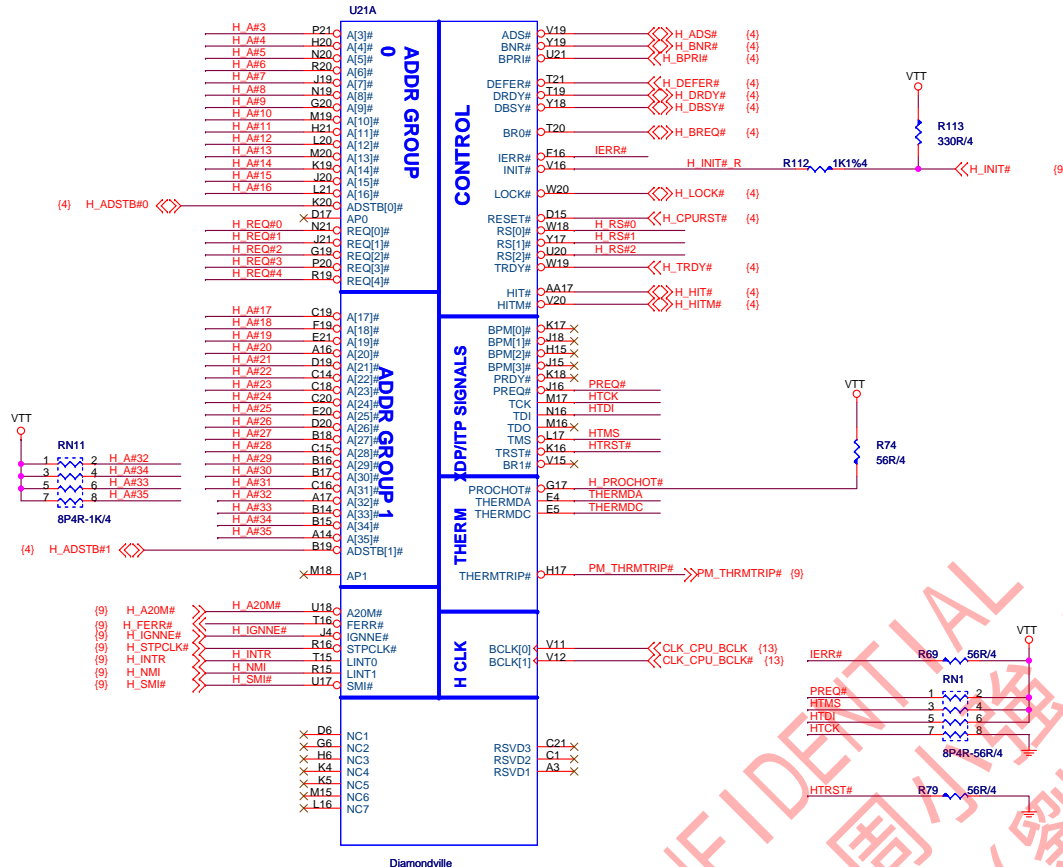


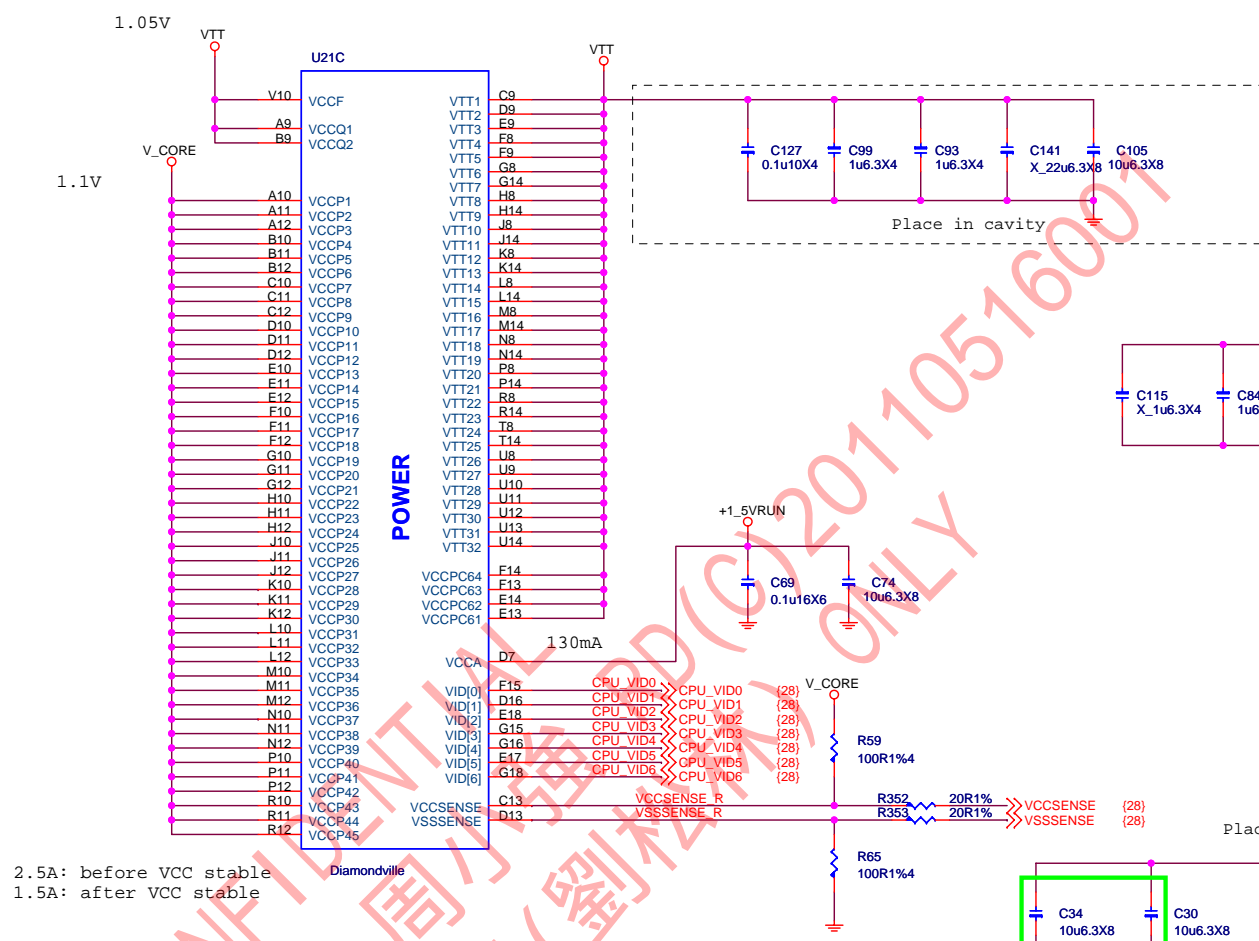
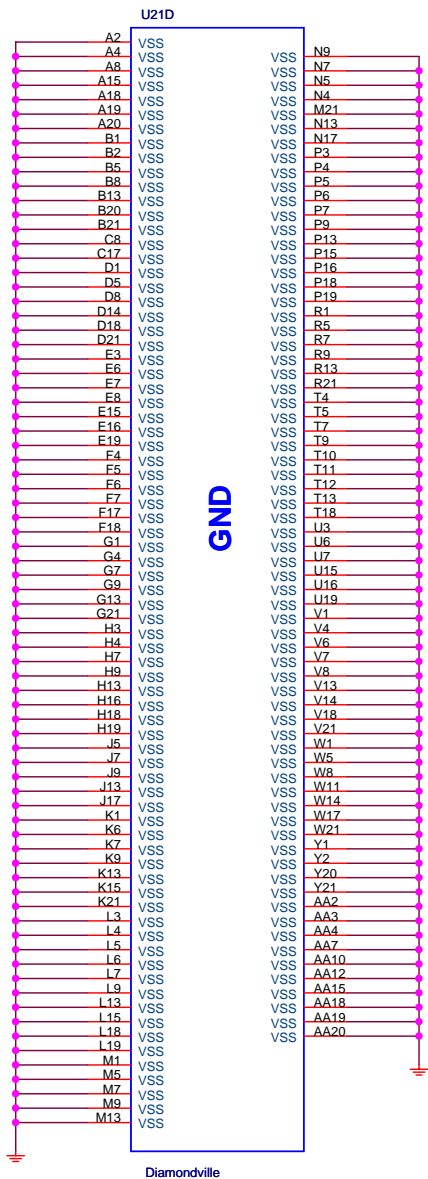
MICRO-STAR INT'L CO.,LTD

MS-N033

Size	Document Description	Rev
Custom	BLOCK DIAGRAM	0B
Date: Wednesday, December 24, 2008 Sheet 1 of 37		

(4) H_A# [31:3] <<> H_A# [31:3]
(4) H_RS# [2:0] <<> H_RS# [2:0]
(4) H_REQ# [4:0] <<> H_REQ# [4:0]

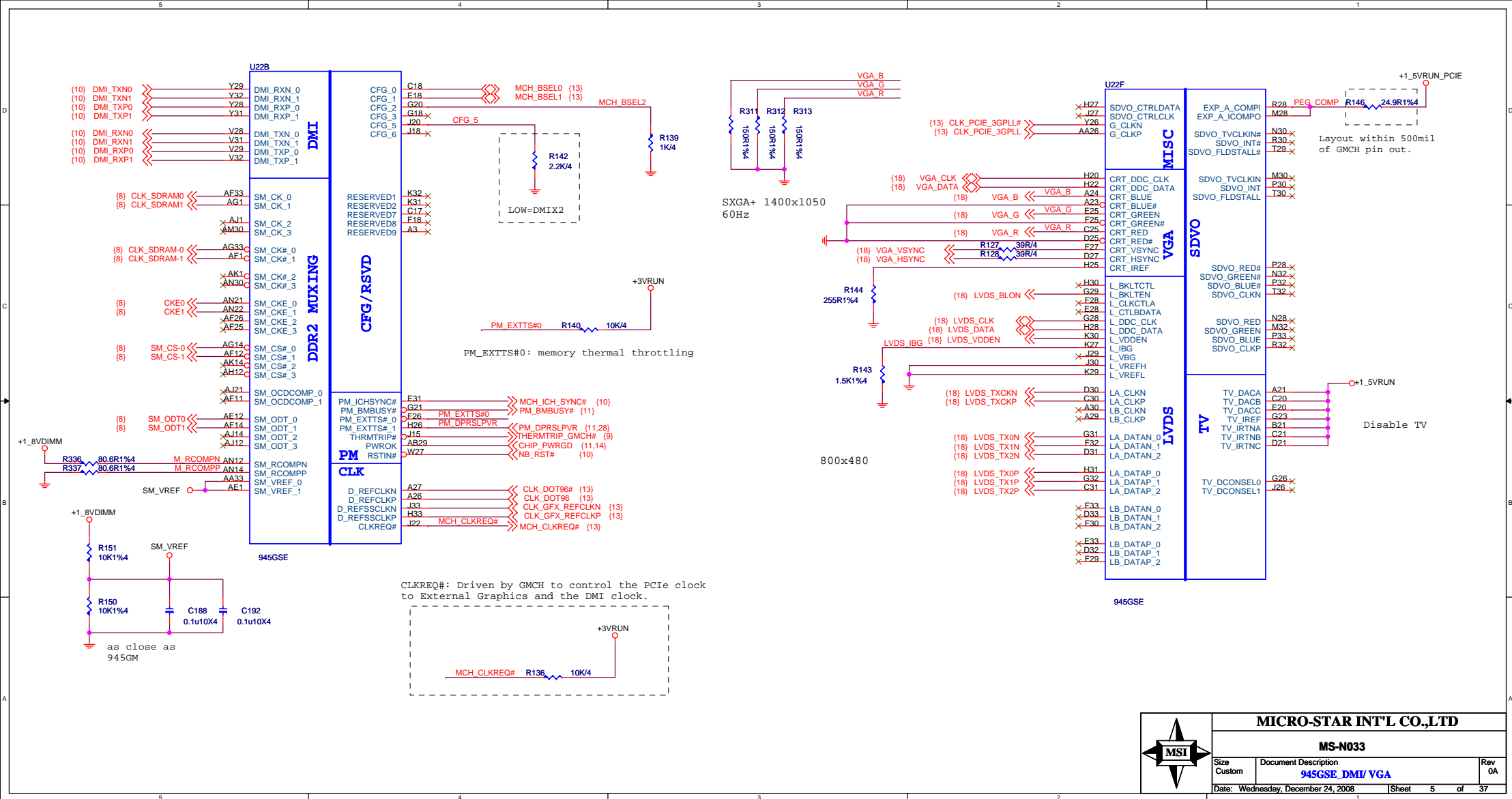


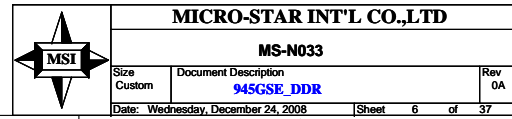


LAYOUT NOTE:
Route VCCSENSE and VSSSENSE traces at 27.4Ohms with 50 mil spacing. Place PU and PD within 1 inch of CPU.



MICRO-STAR INT'L CO.,LTD			
MS-N033			
Size Custom	Document Description		Rev 0B
	Diamondville Pown/GND		
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945 GMS Power

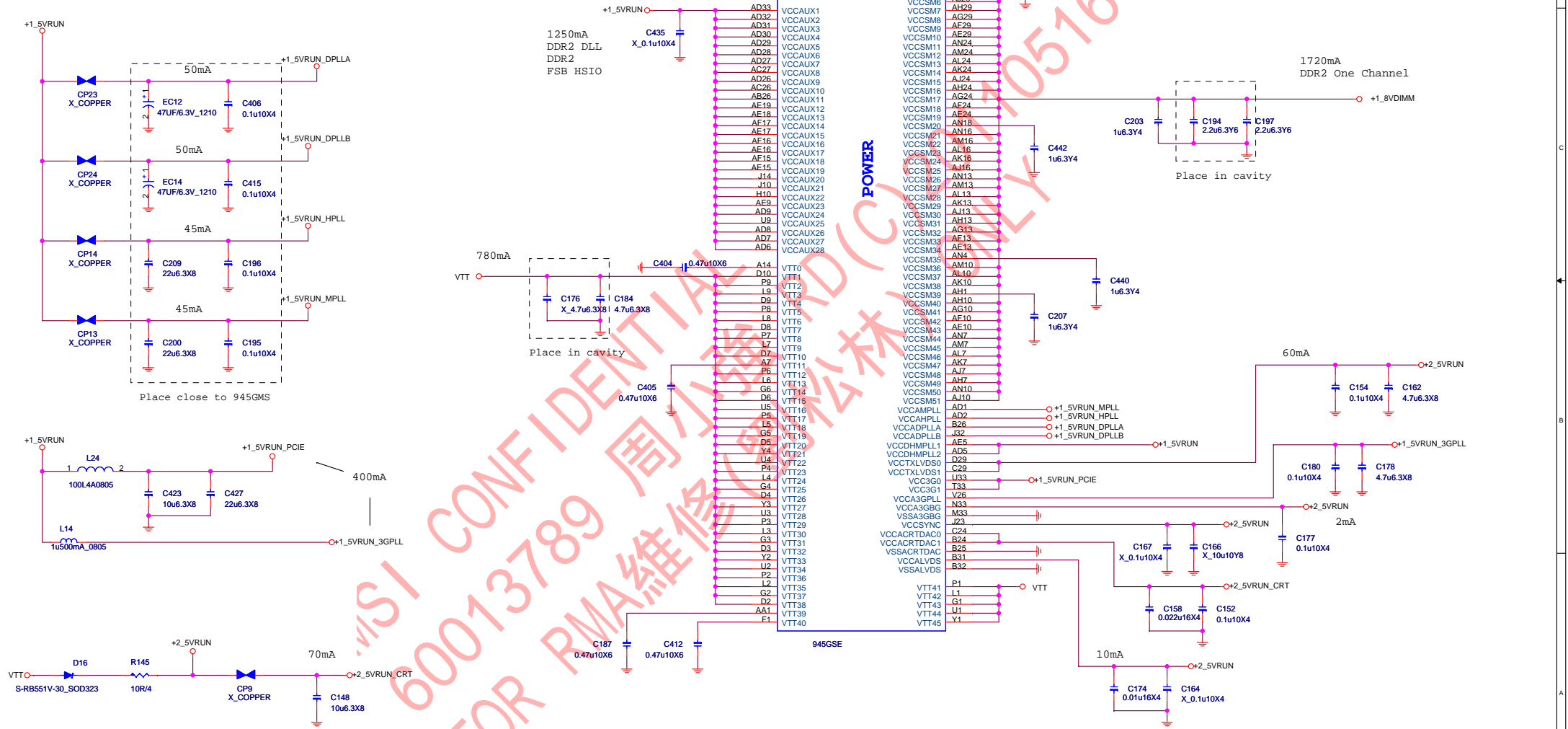
VTT=> 3.72A

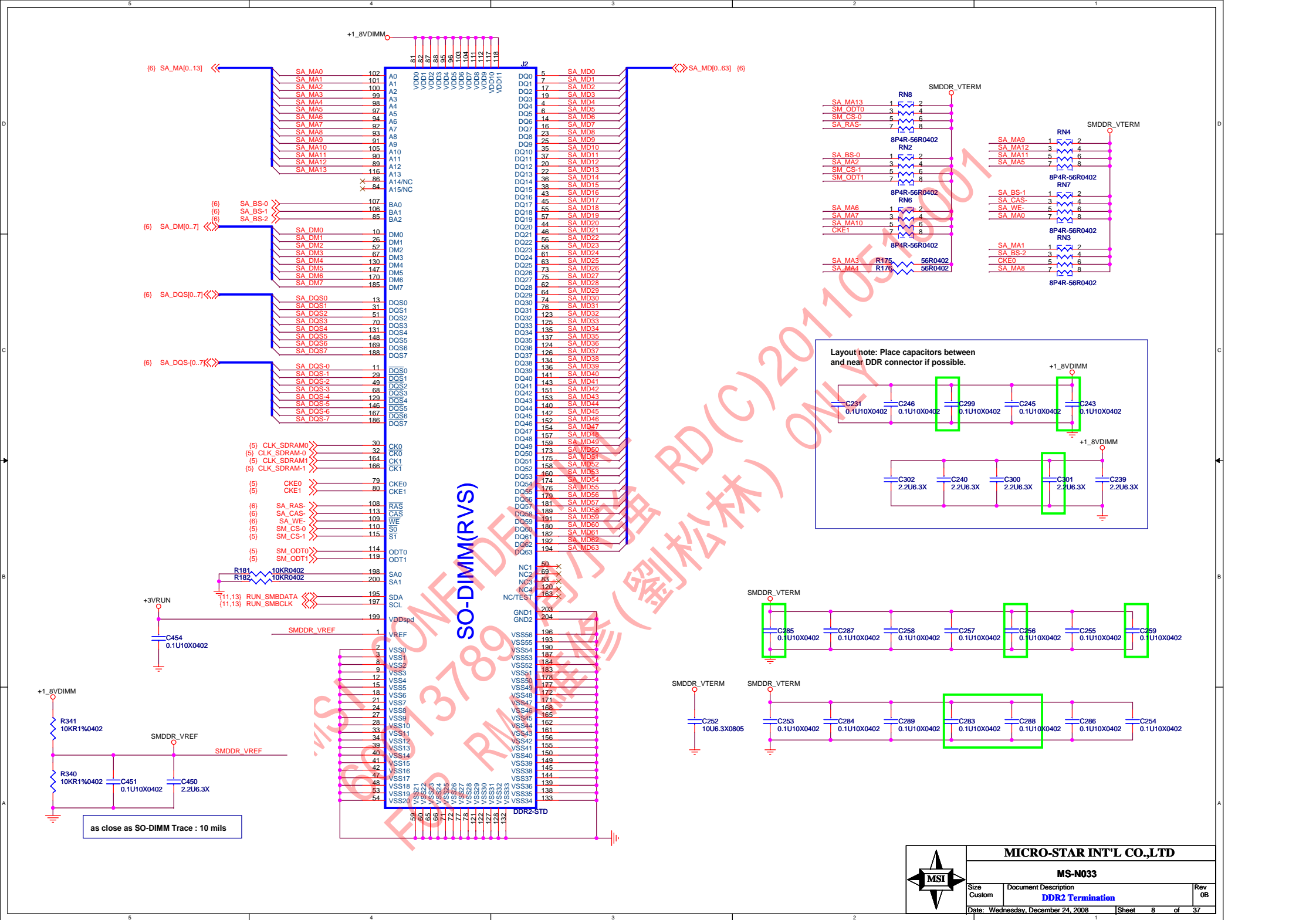
+1_5VRUN=> 1.98A

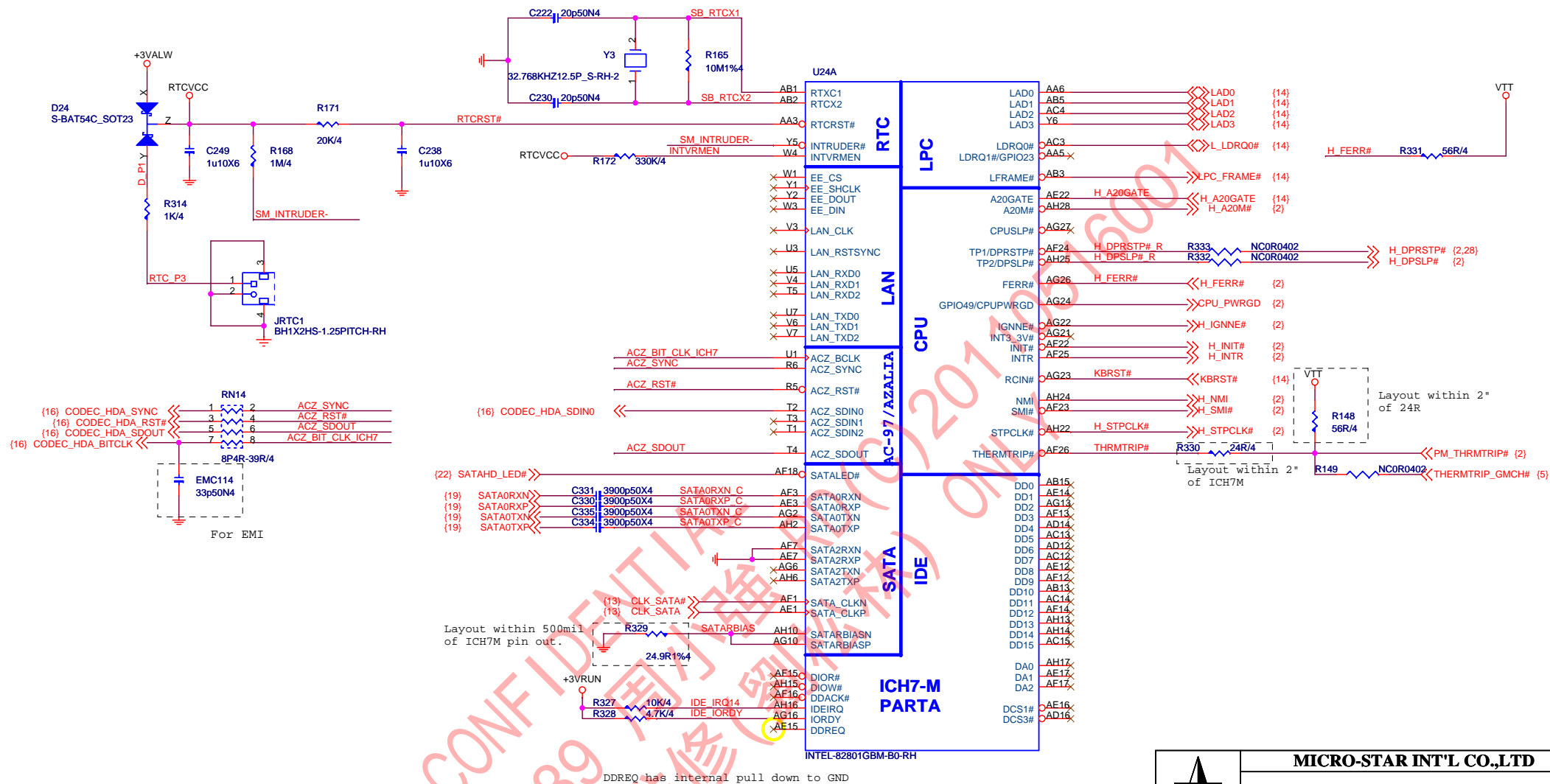
+1_8VDIMM=> 1.72A

+2_5VRUN=>142mA

+3VRUN=> 40mA



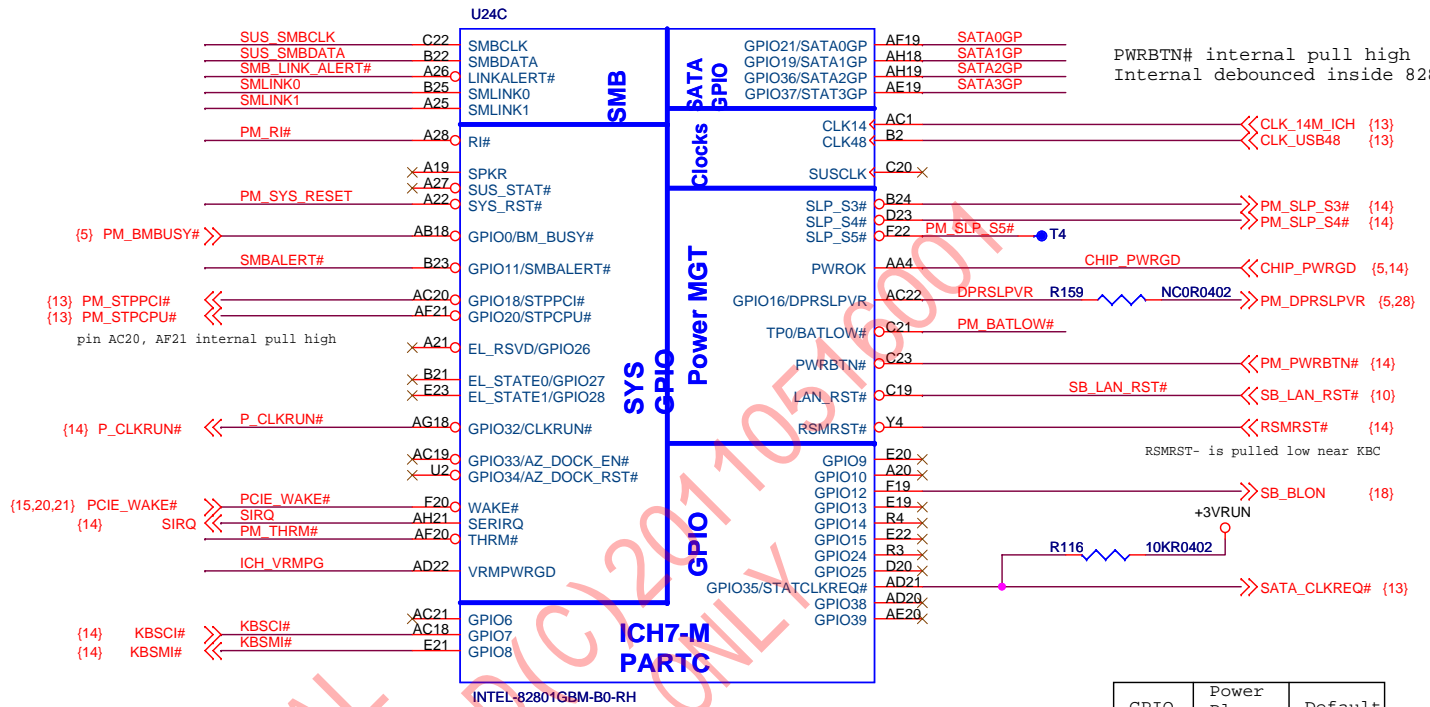
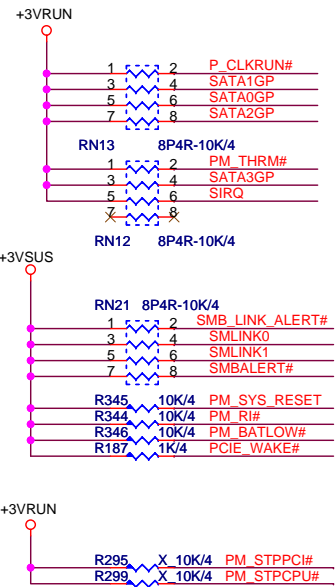




MICRO-STAR INT'L CO.,LTD

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Size Custom	Document Description ICH7M_CPU, LPC, SATA, HDA	Rev 0B
Date: Wednesday, December 24, 2008		Sheet 9 of 37



GPIO	Power Plane	Default
6,7	Core	GPI
8~10	Resume	GPI
12~15	Resume	GPI
24,25	Resume	GPO
38,39	Core	GPI

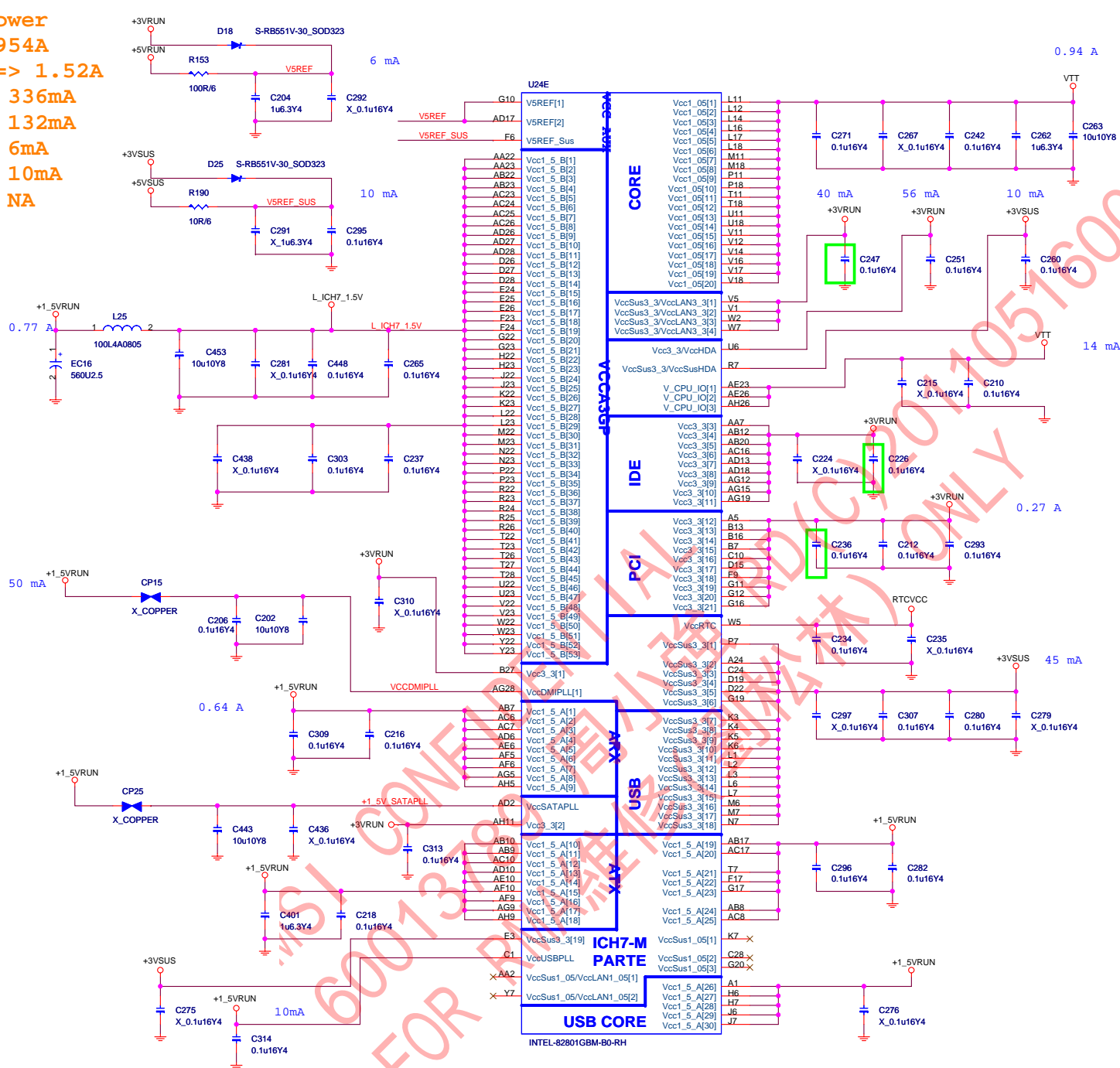


MICRO-STAR INT'L CO.,LTD

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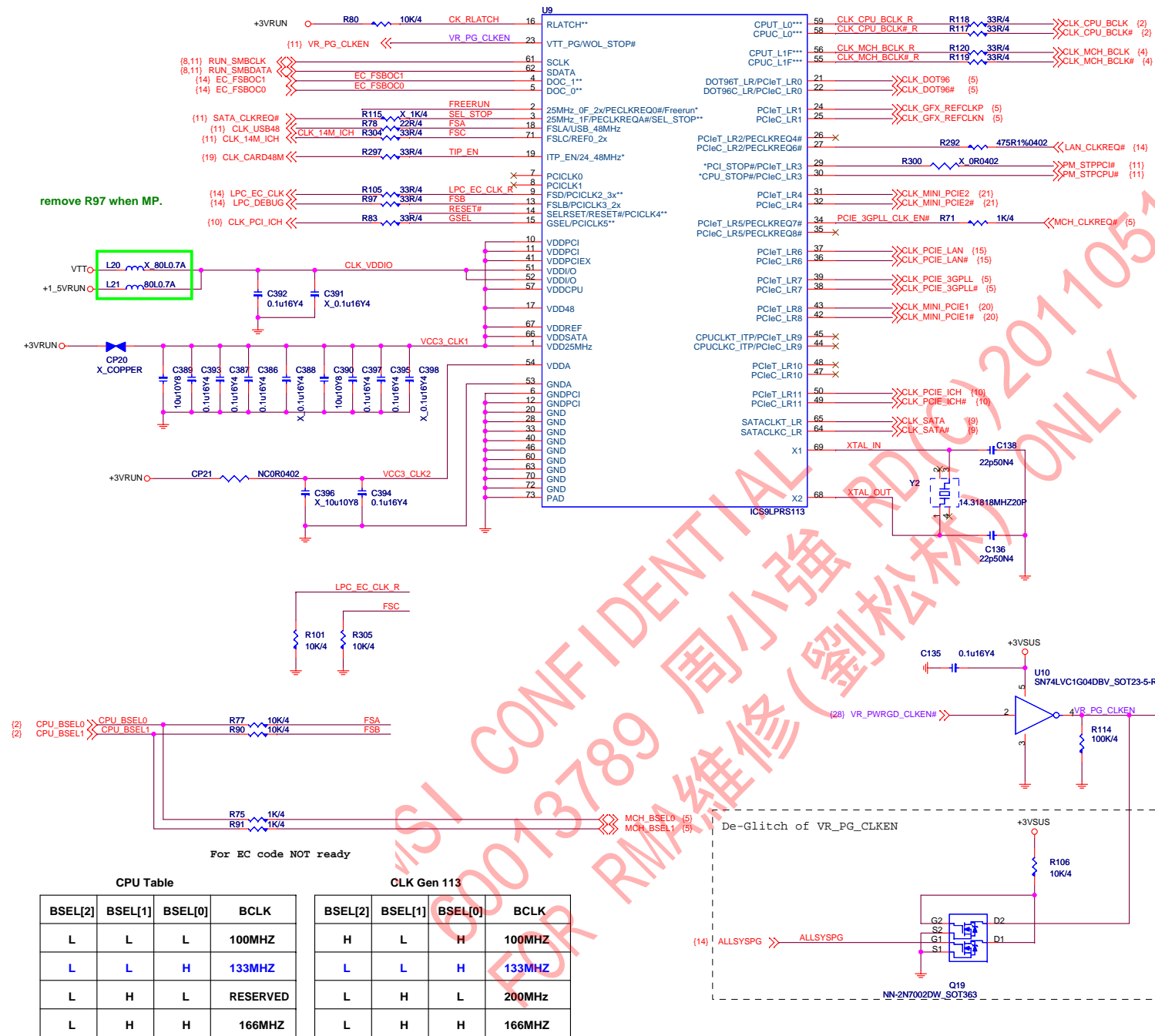
Size	Document Description	Rev
Custom	ICH7M_GPIO, CLK, SM	0B
Date: Wednesday, December 24, 2008	Sheet 11 of 37	

ICH7 M Power
VTT=> 0.954A
+1_5VRUN=> 1.52A
+3VVRUN=> 336mA
+3VSUS=> 132mA
+5VVRUN=> 6mA
+5VSUS=> 10mA
RTCVCC=> NA

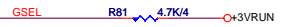


PIN AA2,Y7,K7,C28,G20 : VccSus 1.05V for RTCVCC

CLOCK GEN STRAPING



1 => Pin21/22 96MHz
0 => Pin21/22 100MHz



```
L:PCICLK4
H:RESET*
to be WDT rest=> HI
```



RS113	LPRS110
TIP_EN=0 => PCIeX9,	TIP_EN=0 => 48MHz,
TIP_EN=1 => CPU_ITP	TIP_EN=1 => 24MHz

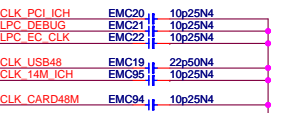


FREERUN R110 X 4.7K/4 +3VRUN

```
Selects pin 29/30
1 = PCI_STOP#/CPU_STOP#
0 =PCIEX CLK output
```



EMI



08/21 modified in V1.0

BSEL[2]	BSEL[1]	BSEL[0]	BCLK
L	L	L	100MHZ
L	L	H	133MHZ
L	H	L	RESERVED
L	H	H	166MHZ

BSEL[2]	BSEL[1]	BSEL[0]	BCLK
H	L	H	100MHZ
L	L	H	133MHZ
L	H	L	200MHz
L	H	H	166MHZ



MICRO-STAR INT'L CO.,LTD

MS-N033

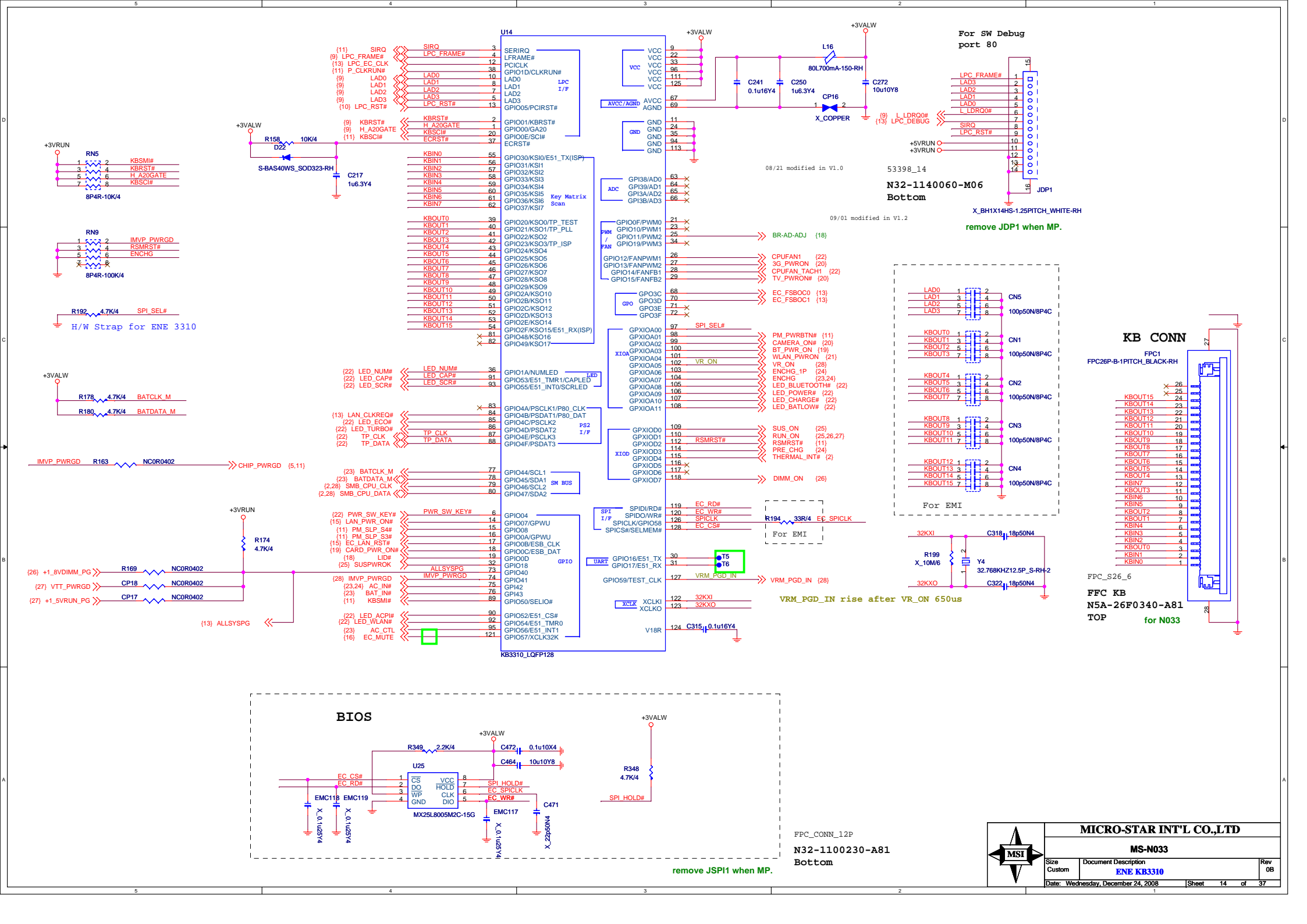
Size	Custom
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Document Description

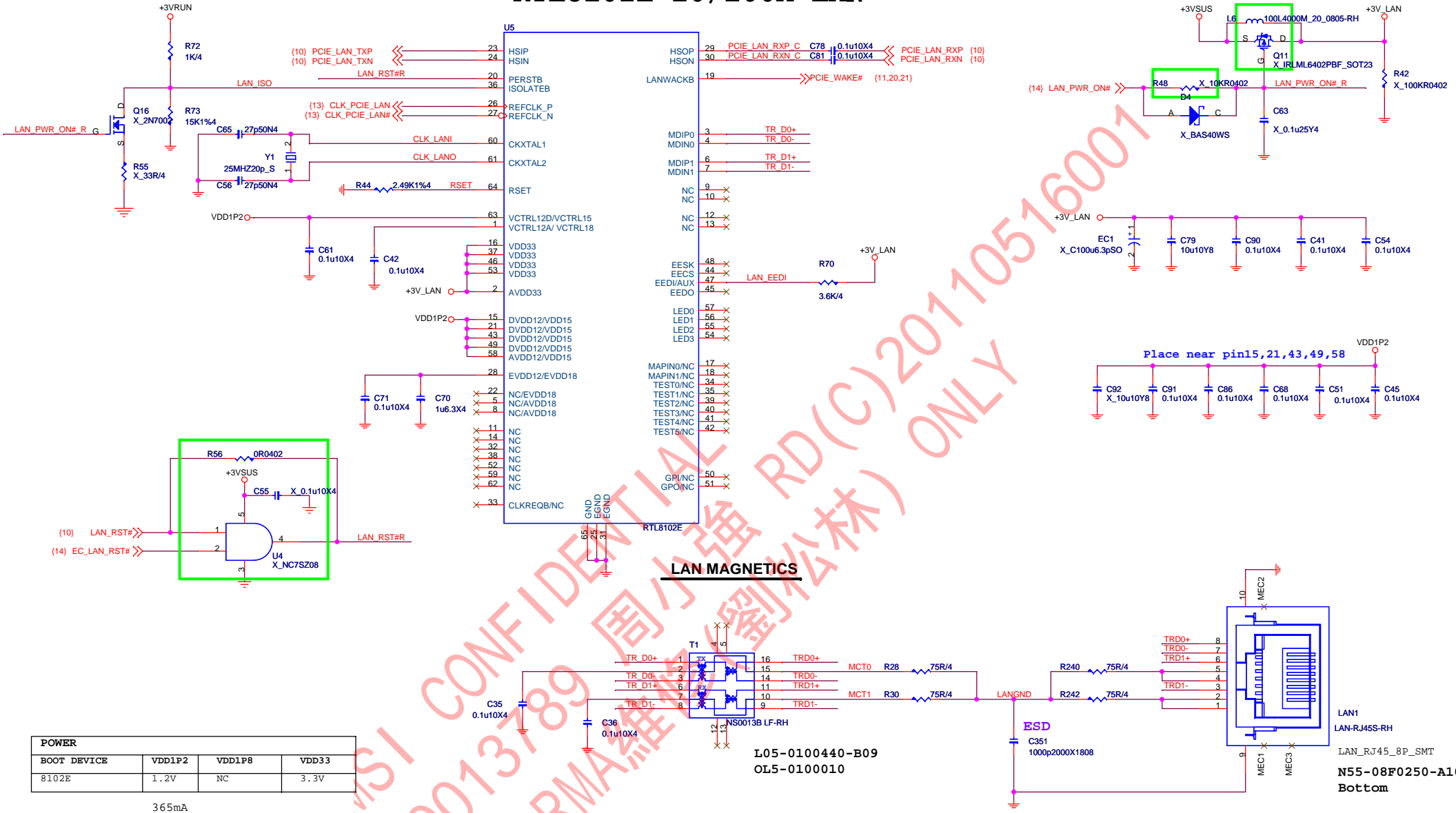
CLK GEN_113

Rev
0B

Date: Wednesday, December 24, 2008 Sheet 13 of 37



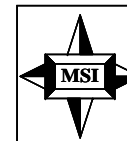
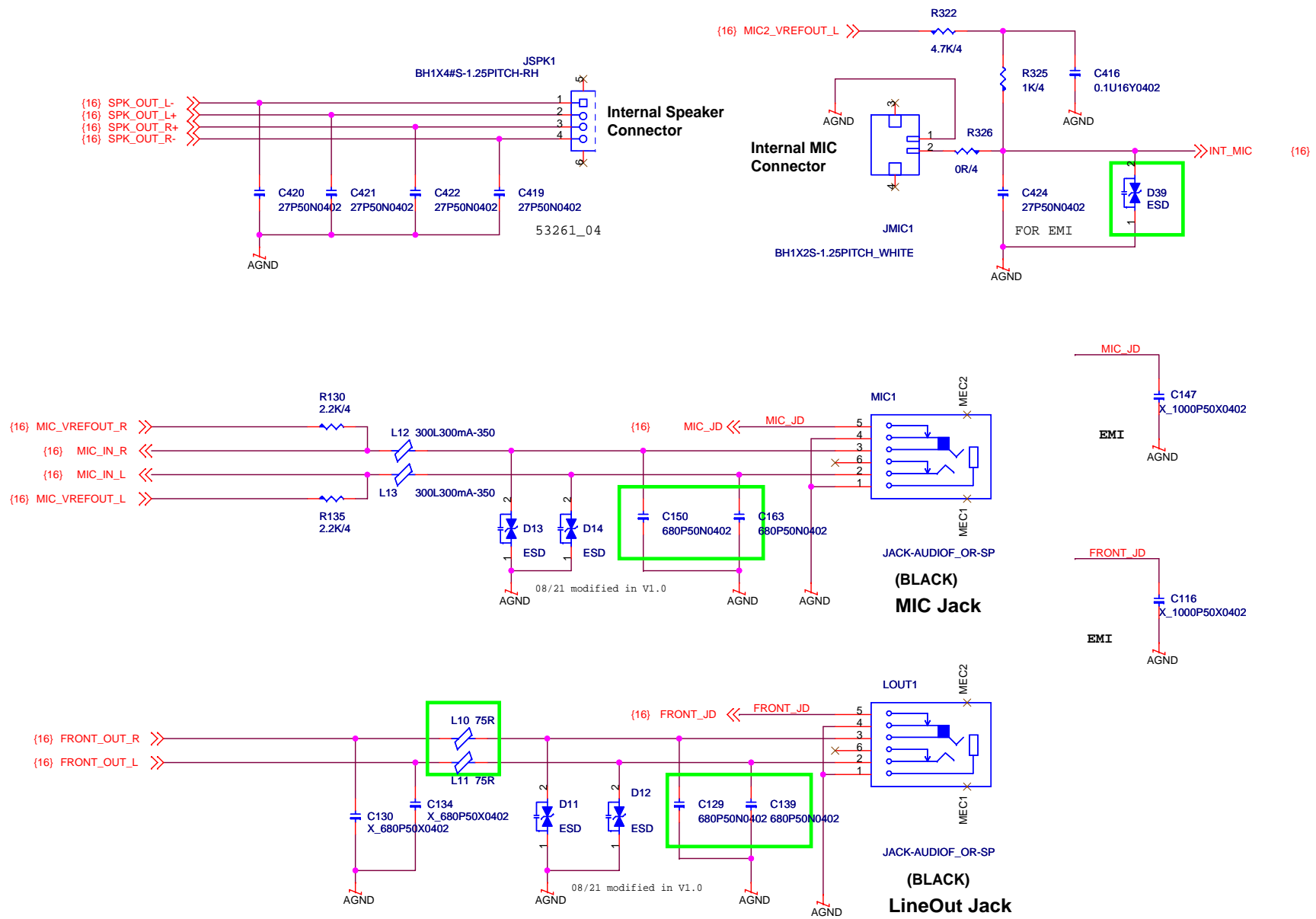
RTL8102E 10/100M LAN



MICRO-STAR INT'L CO.,LTD

MS-N033

Size	Document Description	Rev
Custom	LAN RTL8102E	0B
Date: Wednesday, December 24, 2008	Sheet 15 of 37	

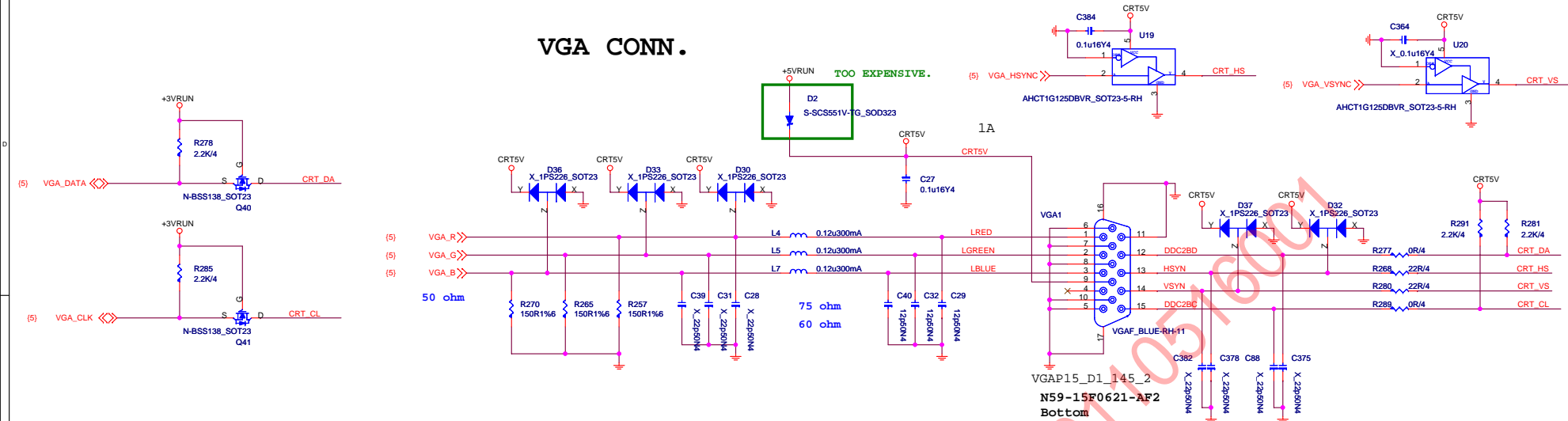


MICRO-STAR INT'L CO.,LTD

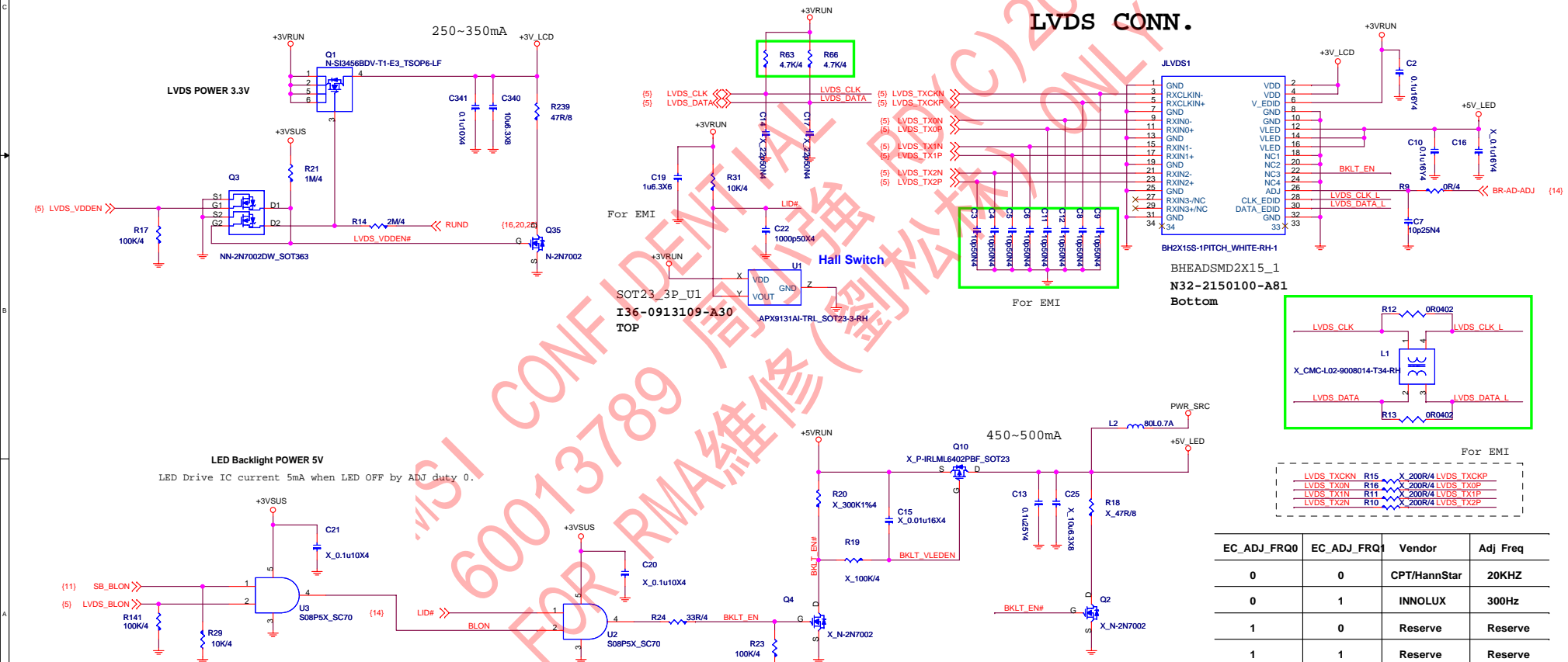
MS-N033

Size	Document Description	Rev
Custom	Audio JACKS	0B
Date: Wednesday, December 24, 2008		Sheet 17 of 37

VGA CONN.



LVDS CONN.



EC_ADJ_FRQ0	EC_ADJ_FRQ1	Vendor	Adj Freq
0	0	CPT/HannStar	20KHZ
0	1	INNOLUX	300Hz
1	0	Reserve	Reserve
1	1	Reserve	Reserve



MICRO-STAR INT'L CO.,LTD

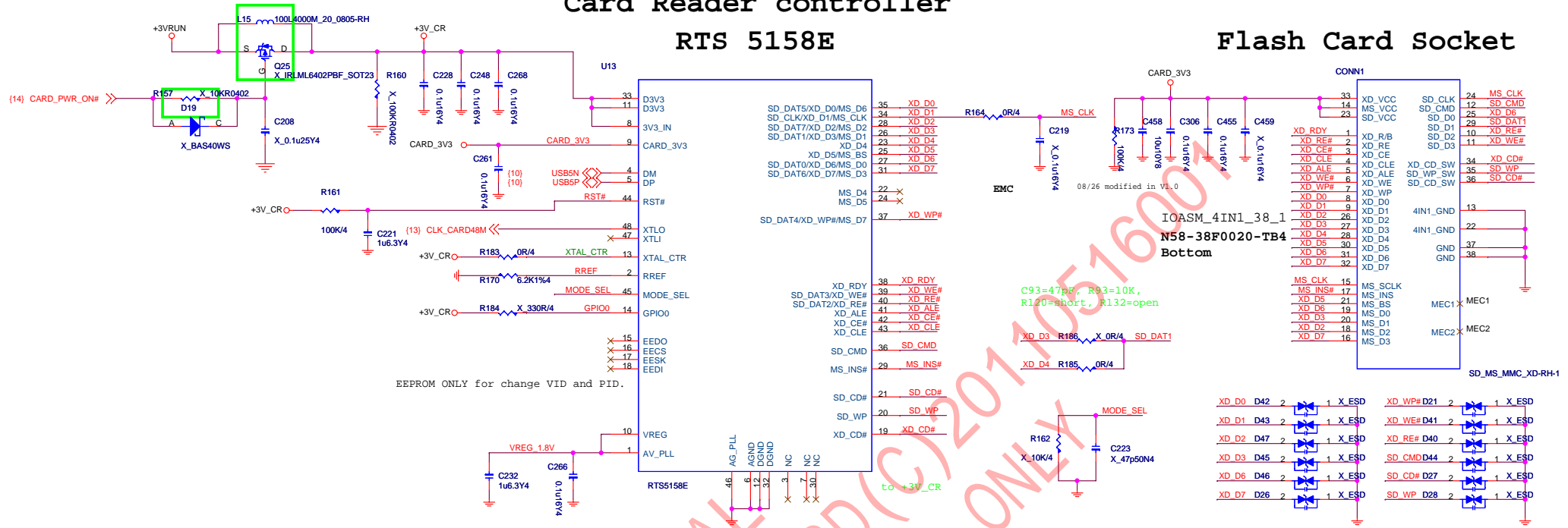
MS-N033

Size	Document Description
Custom	CRT, LVDS CONN

Rev	0B
-----	----

Card Reader controller RTS 5158E

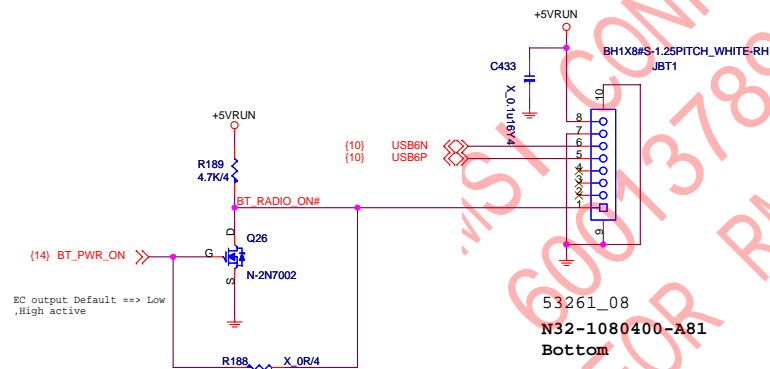
Flash Card Socket



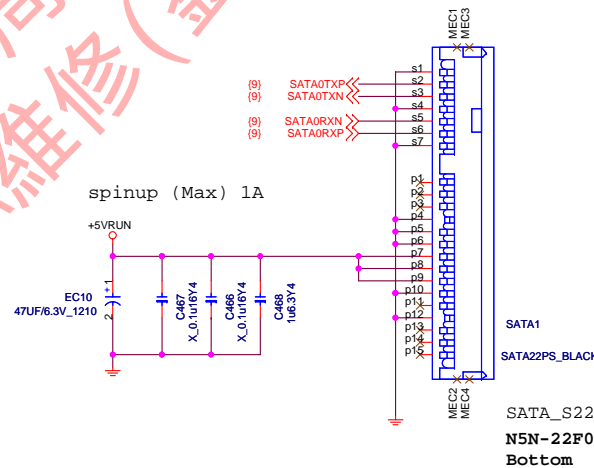
SATA HDD

SATA, 2.5 inch, 80GB, 5400RPM
WD S71-2408505-W36
Fujitsu S71-2408511-F06
Toshiba S71-2408517-T14

BLUETOOTH



SATA HDD CONN



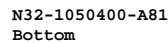
Media I/F(Chip)	SD Card	Memory Stick	xD Card
XD_RDY	X	X	XD_R/B
XD_RE#/SD_DAT2	SD_D2	X	XD_RE
XD_CE#	X	X	XD_CE
XD_CLE	X	X	XD_CLE
XD_ALE	X	X	XD_ALE
XD_WE#/SD_DAT3	SD_D3	X	XD_WE
XD_WP#/SD_DAT4/MS_D7	X	X	XD_WP
XD_D0/SD_DAT0/MS_D6	X	X	XD_D0
XD_D1/SD_CLK/MS_CLK	SD_CLK	MS_CLK	XD_D1
XD_D2/SD_DAT7/MS_D2	X	MS_D2	XD_D2
XD_D3/SD_DAT1/MS_D1	SD_D1	MS_D1	XD_D3
XD_D4	X	X	XD_D4
XD_D5/MS_BS	X	MS_BS	XD_D5
XD_D6/SD_DAT0/MS_D0	SD_D0	MS_D0	XD_D6
XD_D7/SD_DAT6/MS_D3	X	MS_D3	XD_D7
XD_CD#	X	X	XD_CD_SW
SD_CMD	SD_CMD	X	X
SD_CD#	SD_CD_SW	X	X
SD_WP	SD_WP_SW	X	X
MS_INS#	X	MS_INS	X
MS_D4	X	X	X
MS_D5	X	X	X

3G

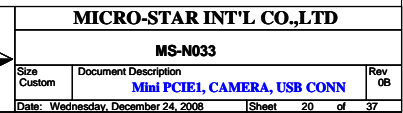
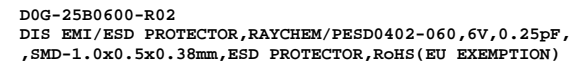


SIMCARD_S6
N5U-06F0010-TB4
Bottom

{10} USB4N <>

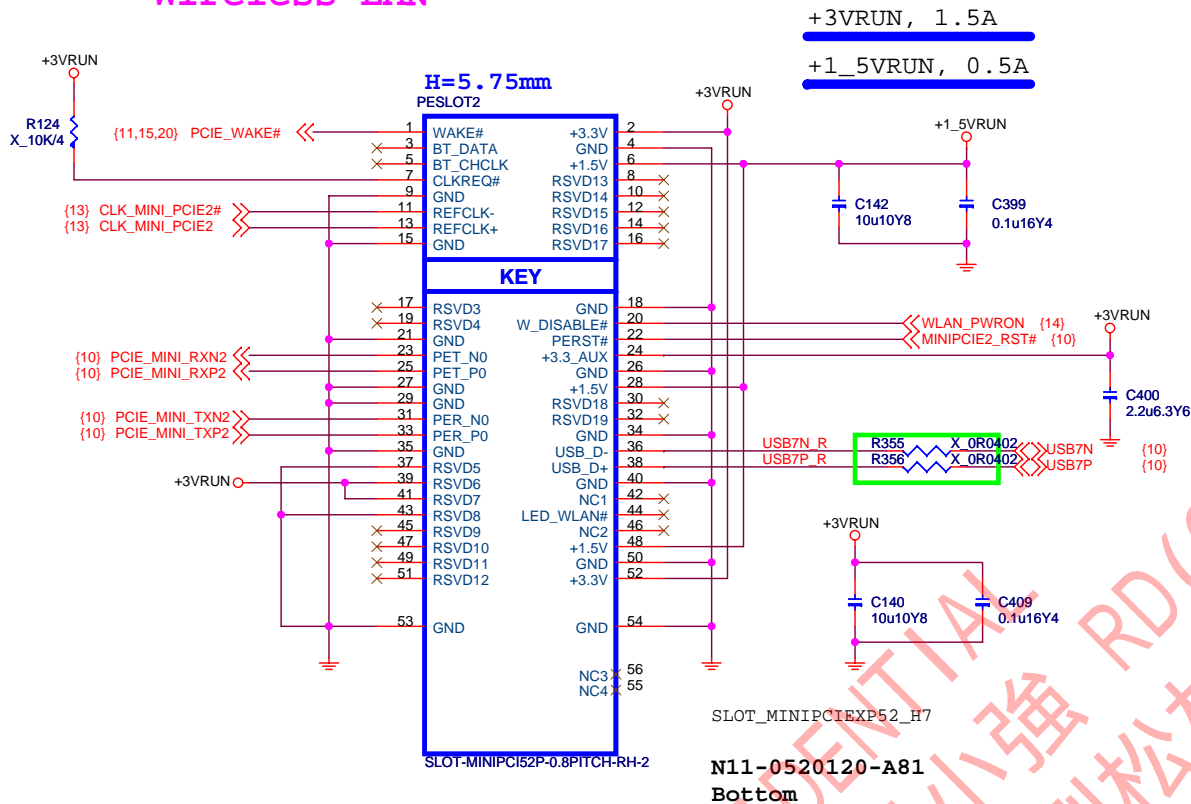


9/1 change 1.5A fuse to 2.6A for external USB ODD use.

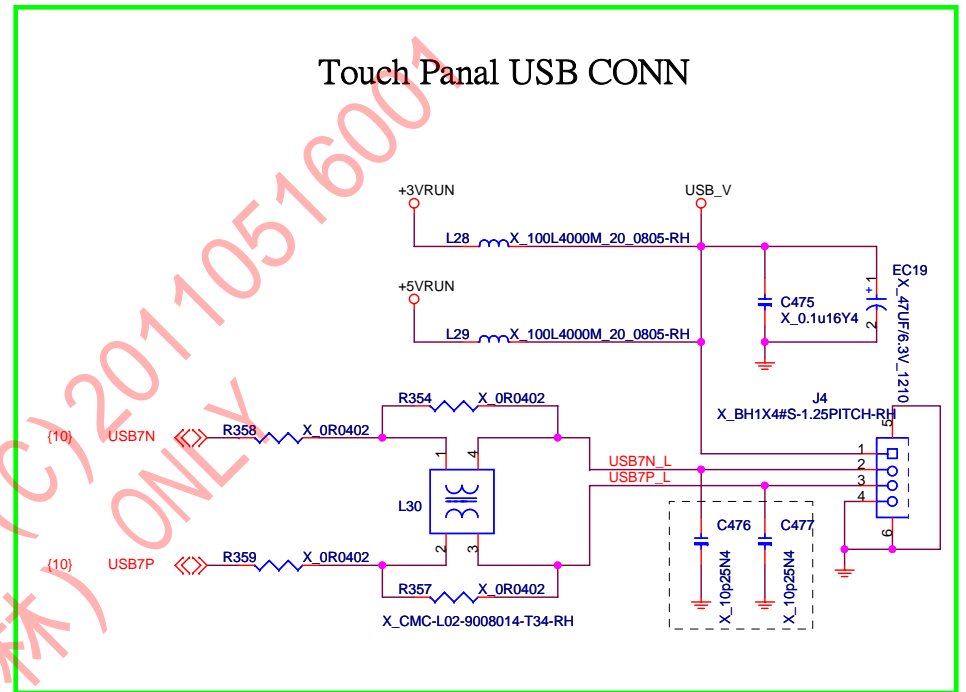


Mini PCIE Slot 2

Wireless LAN



Touch Panel USB CONN

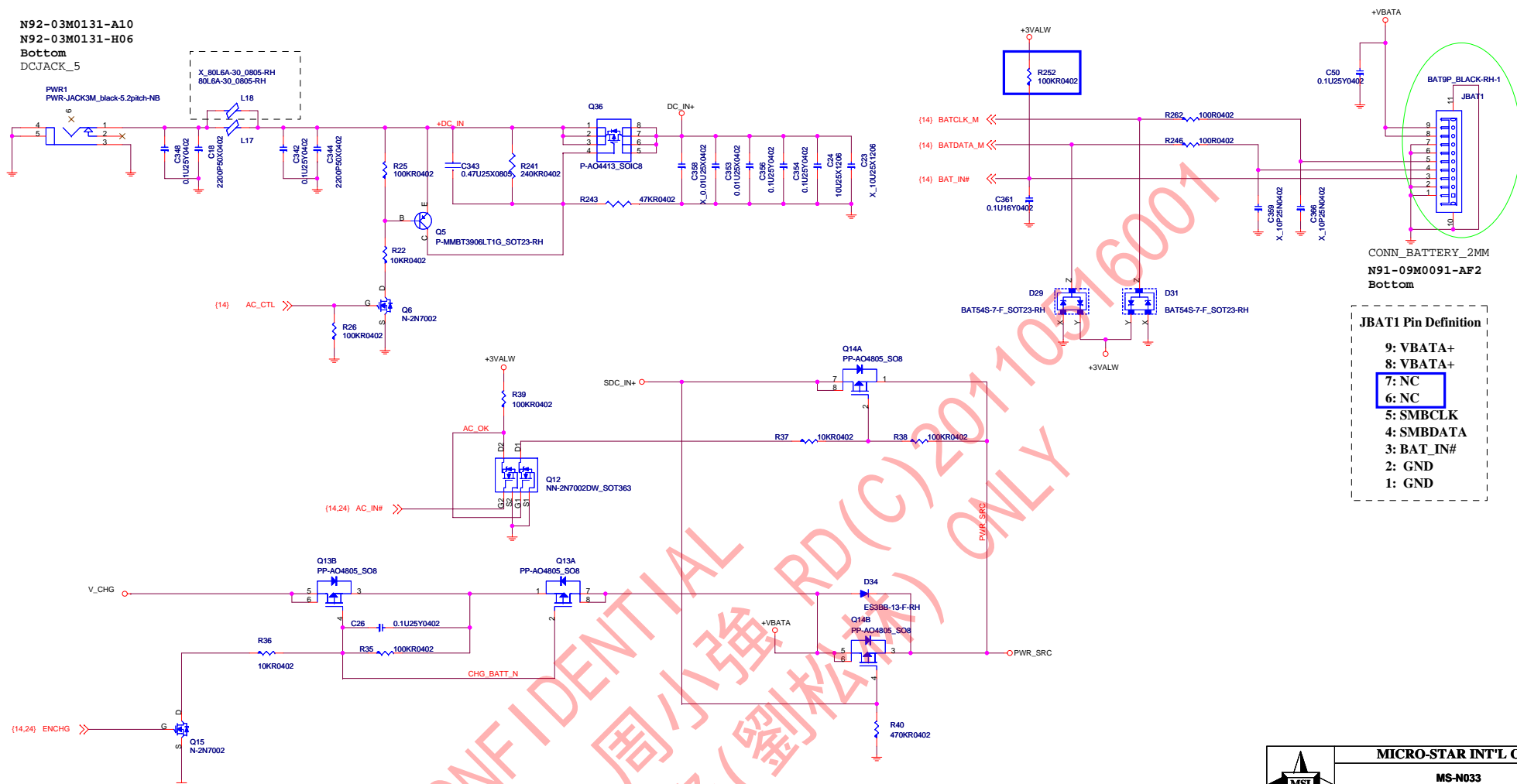


MICRO-STAR INT'L CO.,LTD

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Size	Document Description	Rev
Custom	Mini PCIE2 / Touch Panel USB CONN	0B
Date: Thursday, January 08, 2009	Sheet 21 of 37	

N92-03M0131-A10
N92-03M0131-H06
Bottom
DCJACK_5



JBAT1 Pin Definition

9: VBATA+
8: VBATA+
7: NC
6: NC
5: SMBCLK
4: SMBDATA
3: BAT_IN#
2: GND
1: GND

Adapter input voltage set 20 Voltage 2 Amps




3S battery max charge current 1540mA, $0.7C \Rightarrow 1000mA$

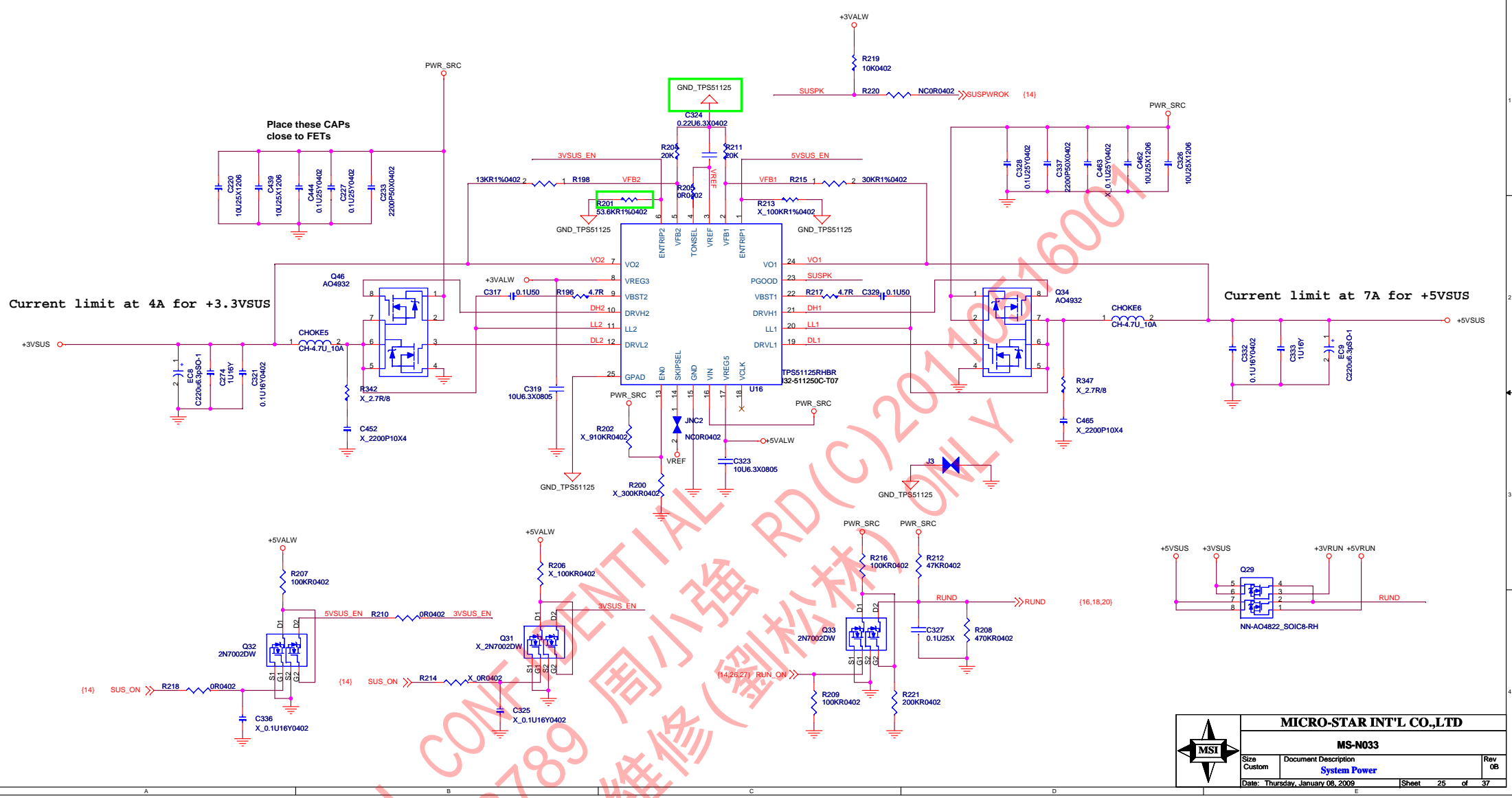
Place these CAPs close to FETs

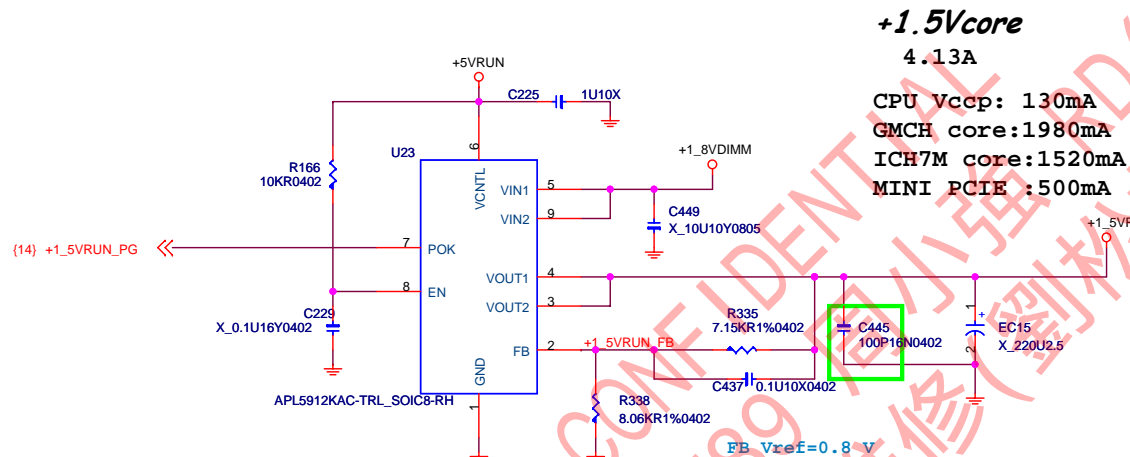
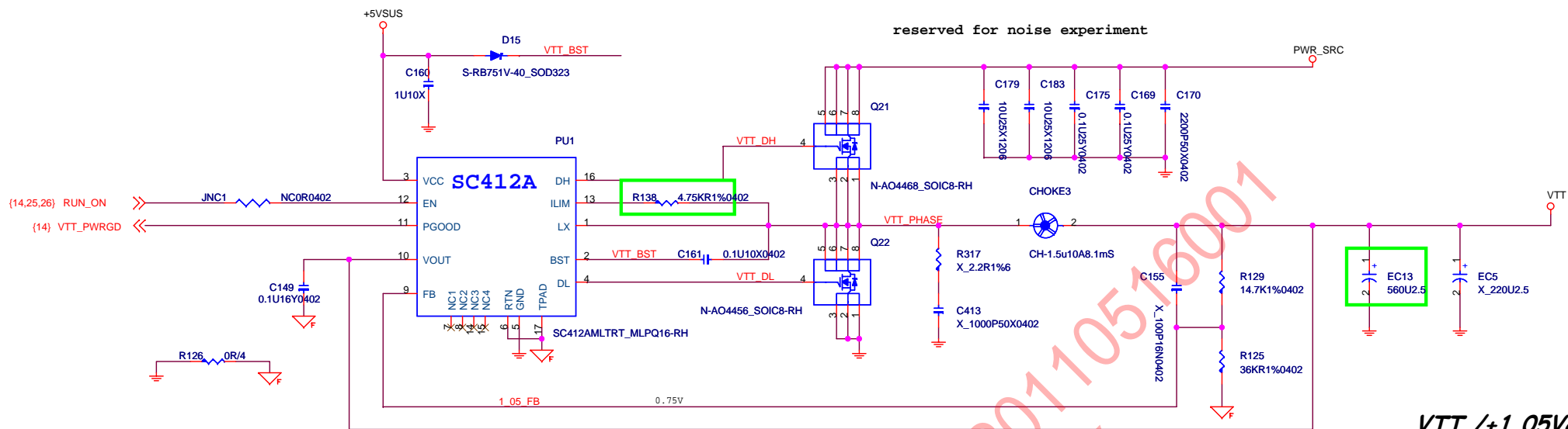
Current limit at 4A for +3.3VSUS

Current limit at 7A for +5VSUS



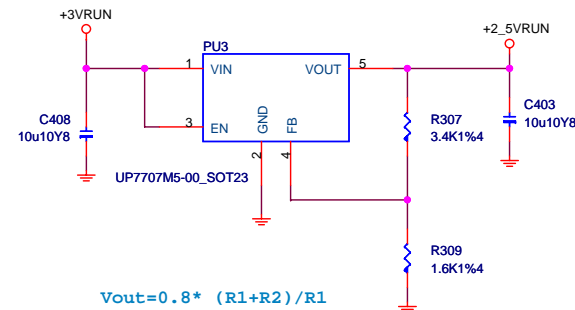
MICRO-STAR INT'L CO.,LTD		
MS-N033		
Size Custom	Document Description System Power	Rev 0B
Date: Thursday, January 08, 2009		Sheet 25 of 37





+2_5VRUN 142mA

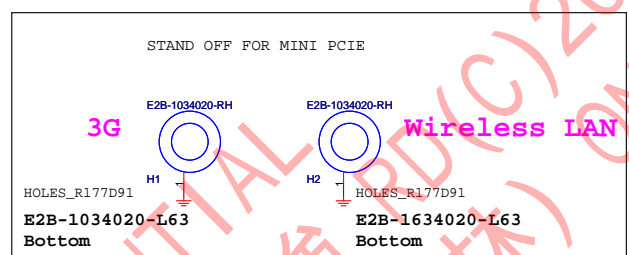
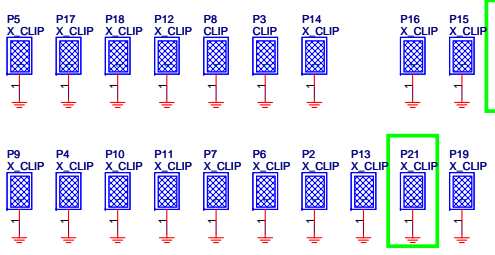
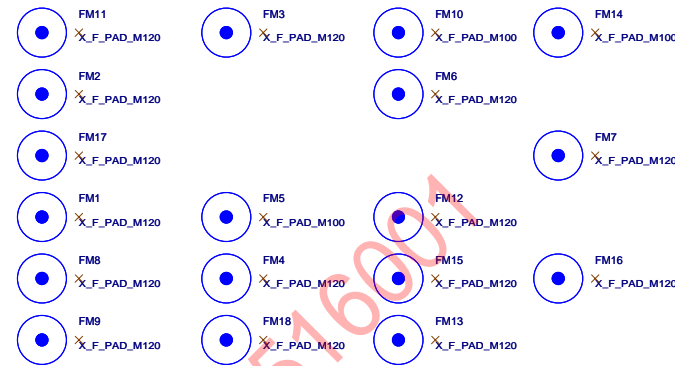
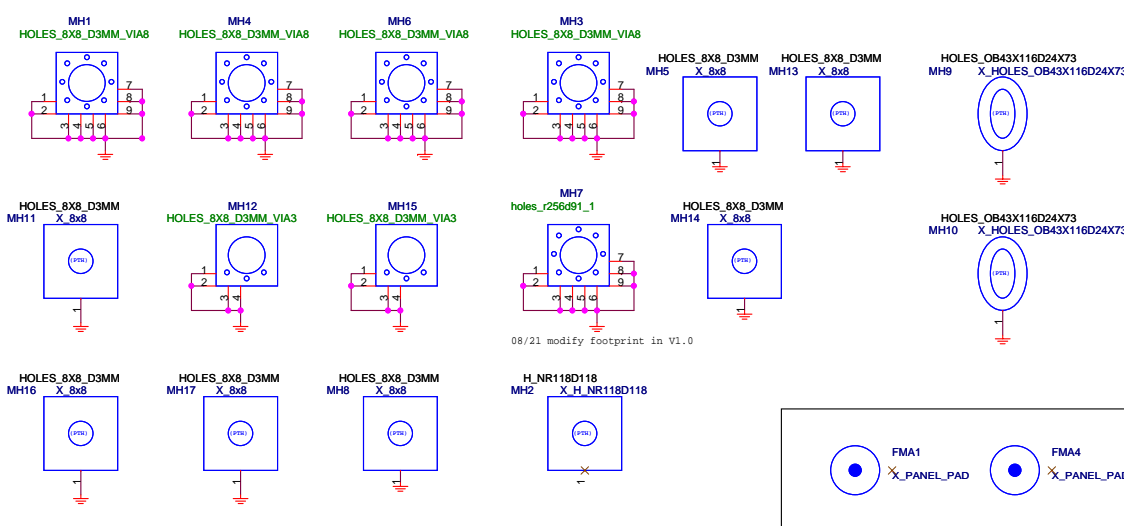
up7707: 600mA Low Dropout Linear Regulator



MICRO-STAR INT'L CO.,LTD

MS-N033

Size	Document Description	Rev
B	1.05V, 1.5V, 2.5V- POWER	0B
Date:	Wednesday, December 24, 2008	Sheet 27 of 37



Simulation

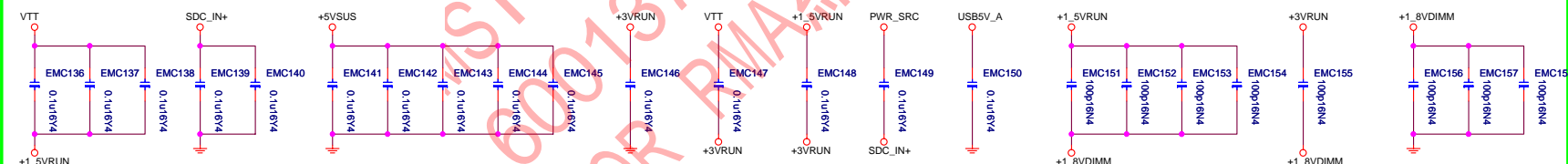
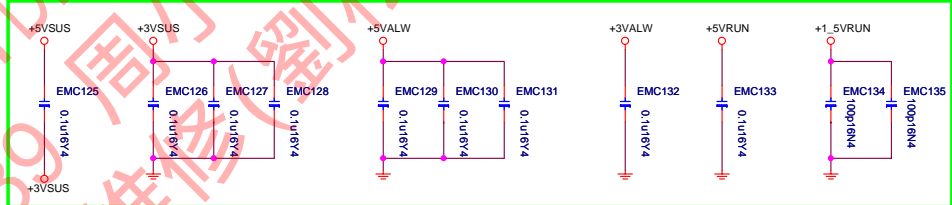
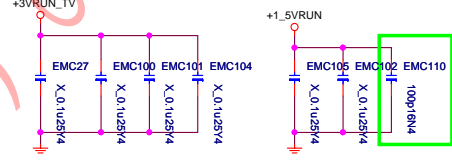
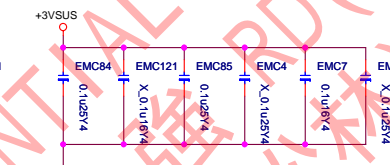
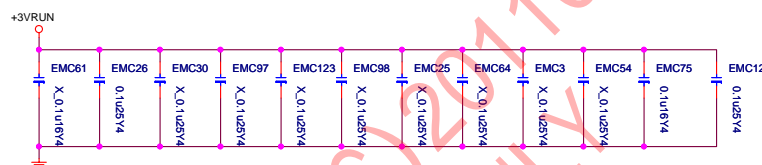
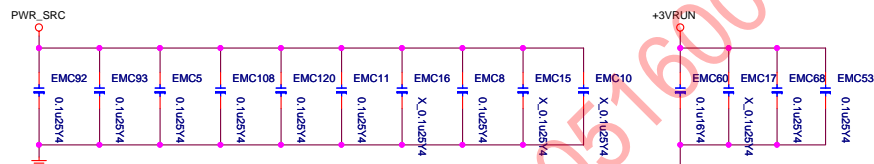
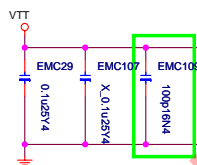
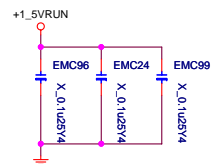
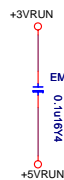
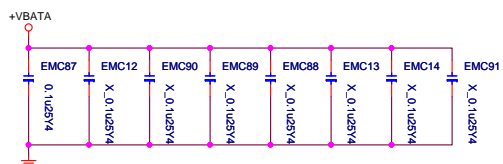




E1

**BIOS
LABEL**

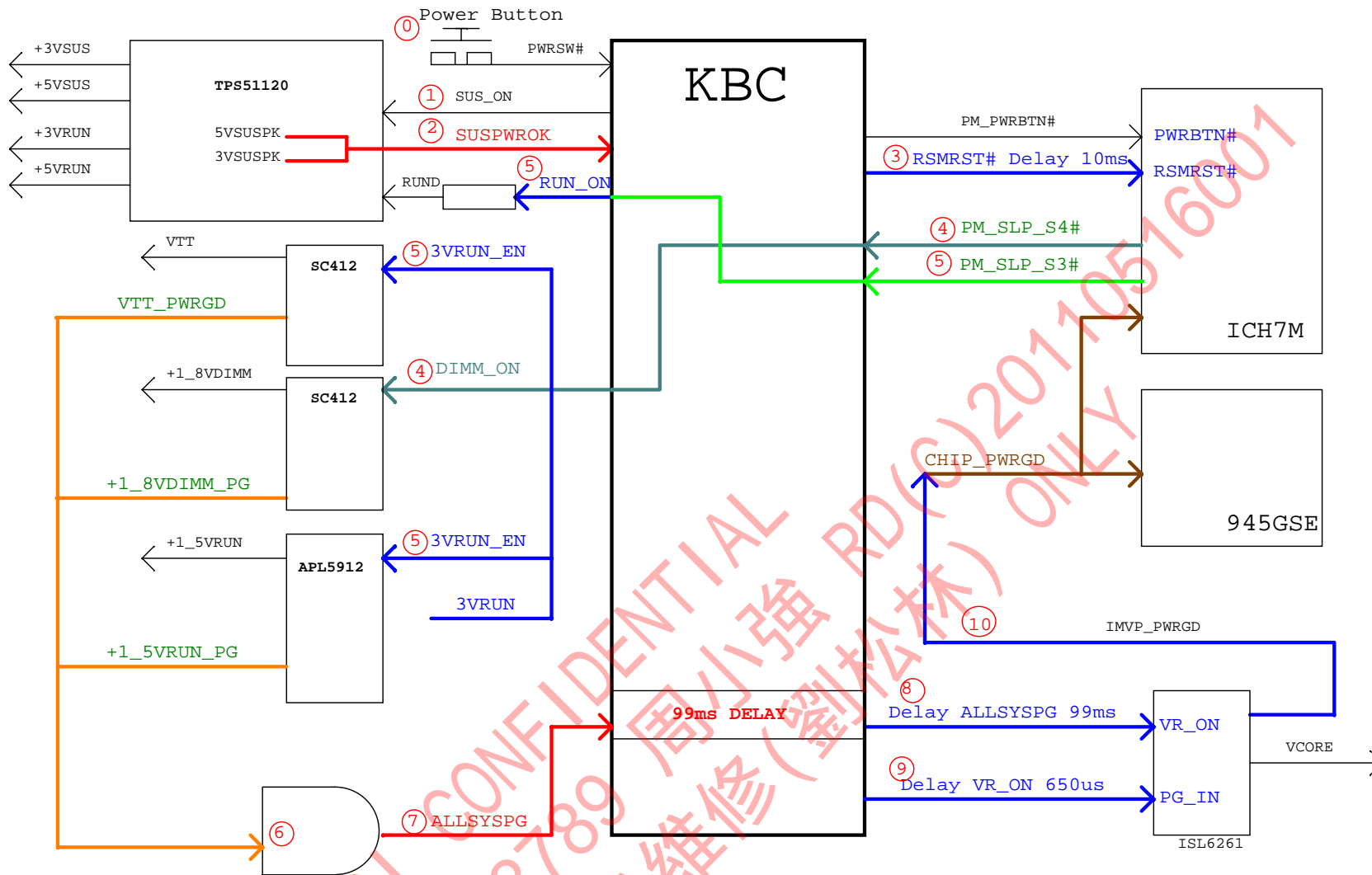
BIOS_LABEL
G51-LA01678-A09



MS-N033

Size Custom	Document Description Manual Parts
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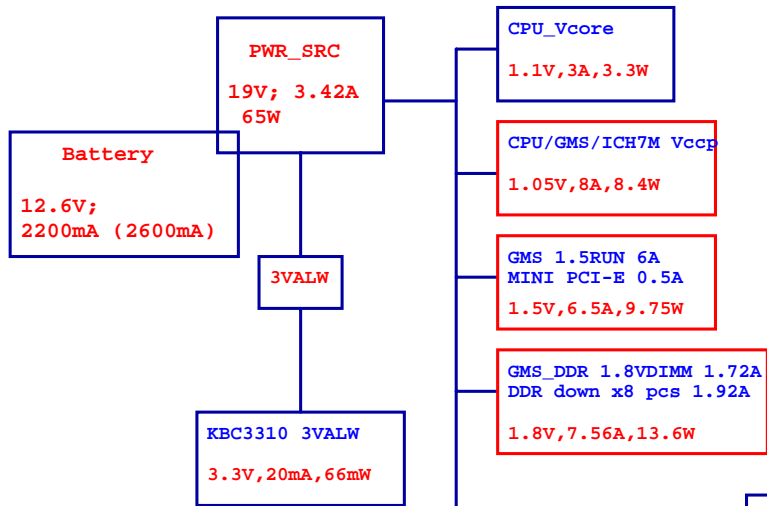
	Re
	C



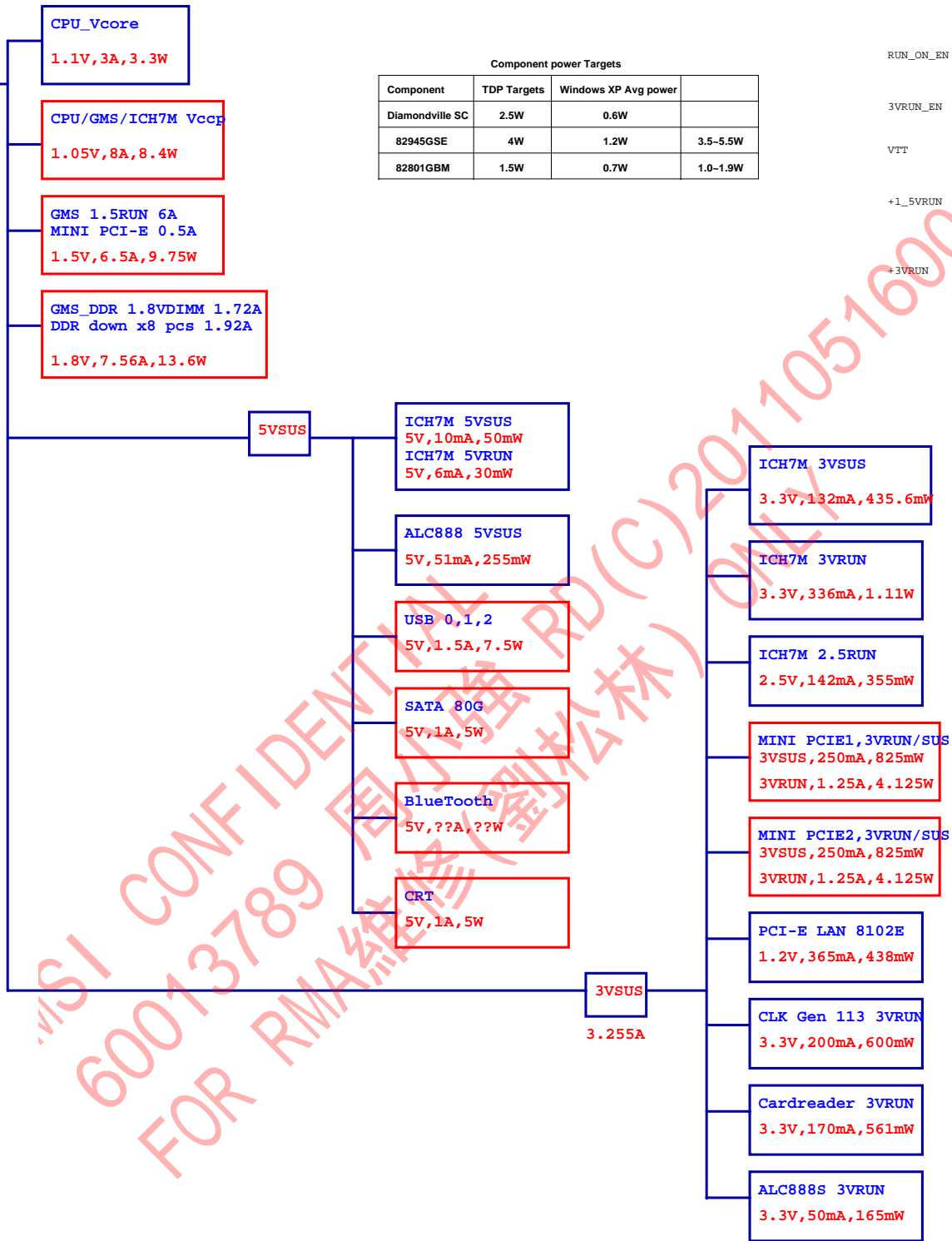
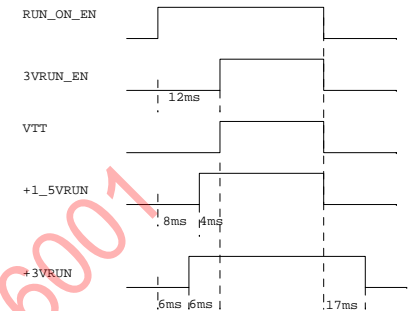
MICRO-STAR INT'L CO.,LTD

MS-N033

Size	Document Description	Rev
B	KBC_CTR_PWR_BD	0B
Date:	Wednesday, December 24, 2008	Sheet 31 of 37

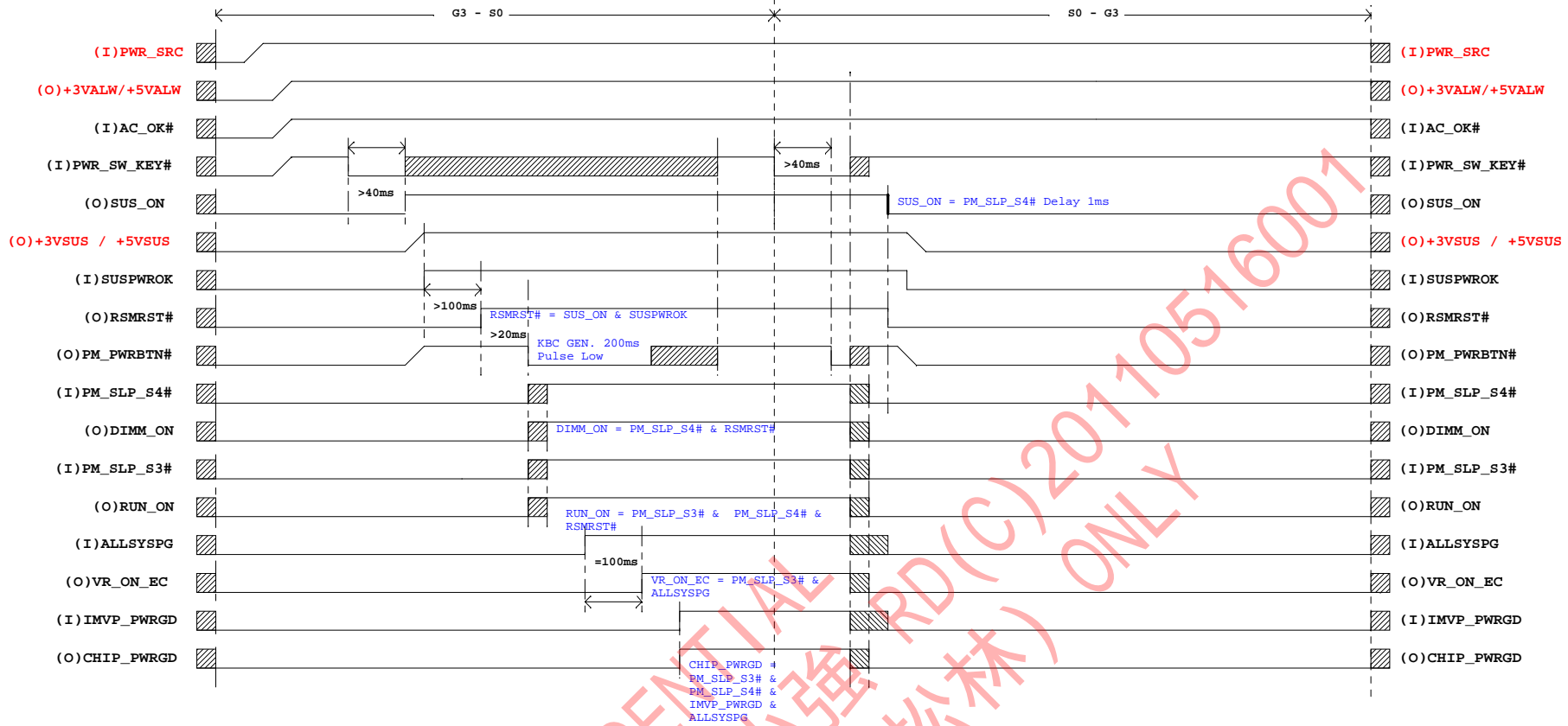


Component power Targets			
Component	TDP Targets	Windows XP Avg power	
Diamondville SC	2.5W	0.6W	
82945GSE	4W	1.2W	3.5-5.5W
82801GBM	1.5W	0.7W	1.0-1.9W



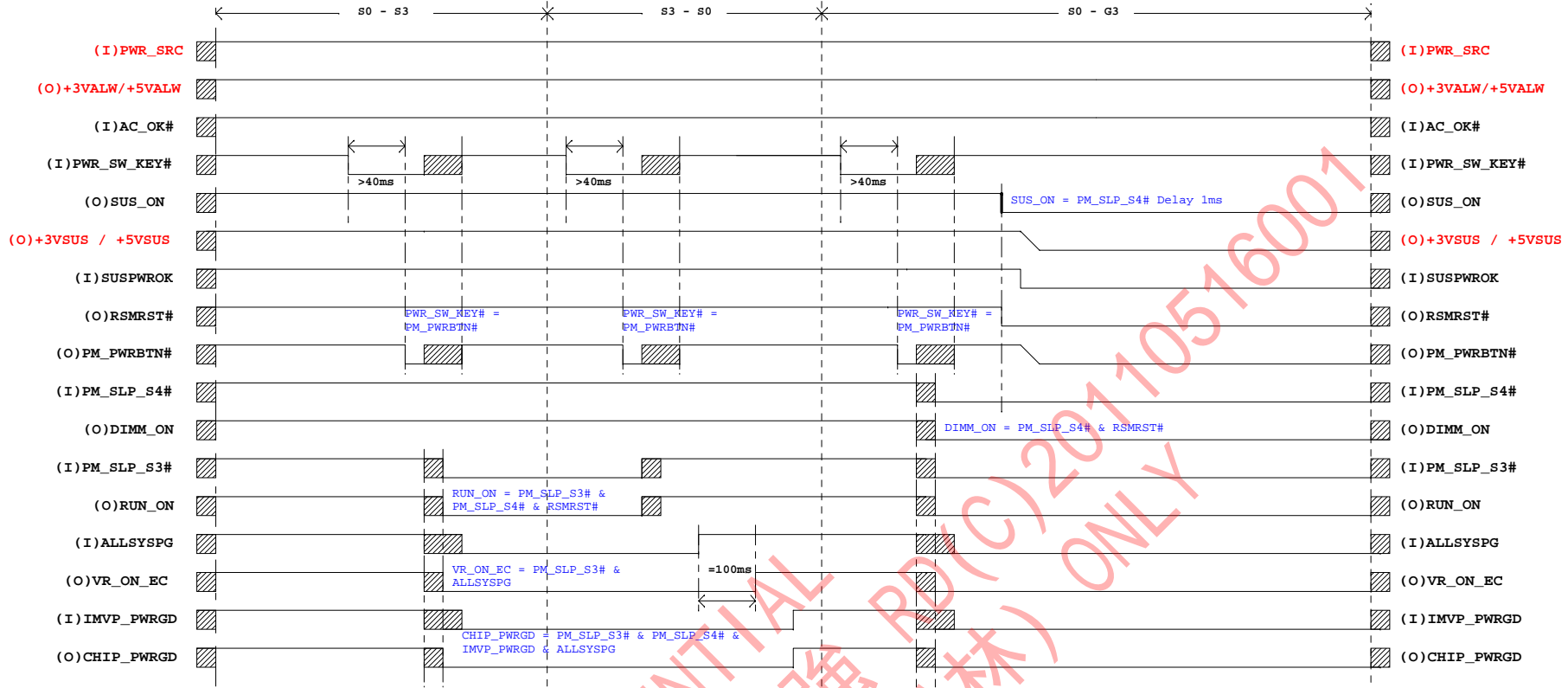
RED:POWER
BLACK:KBC

Battery Mode G3 - S0 - G3



RED:POWER
BLACK:KBC

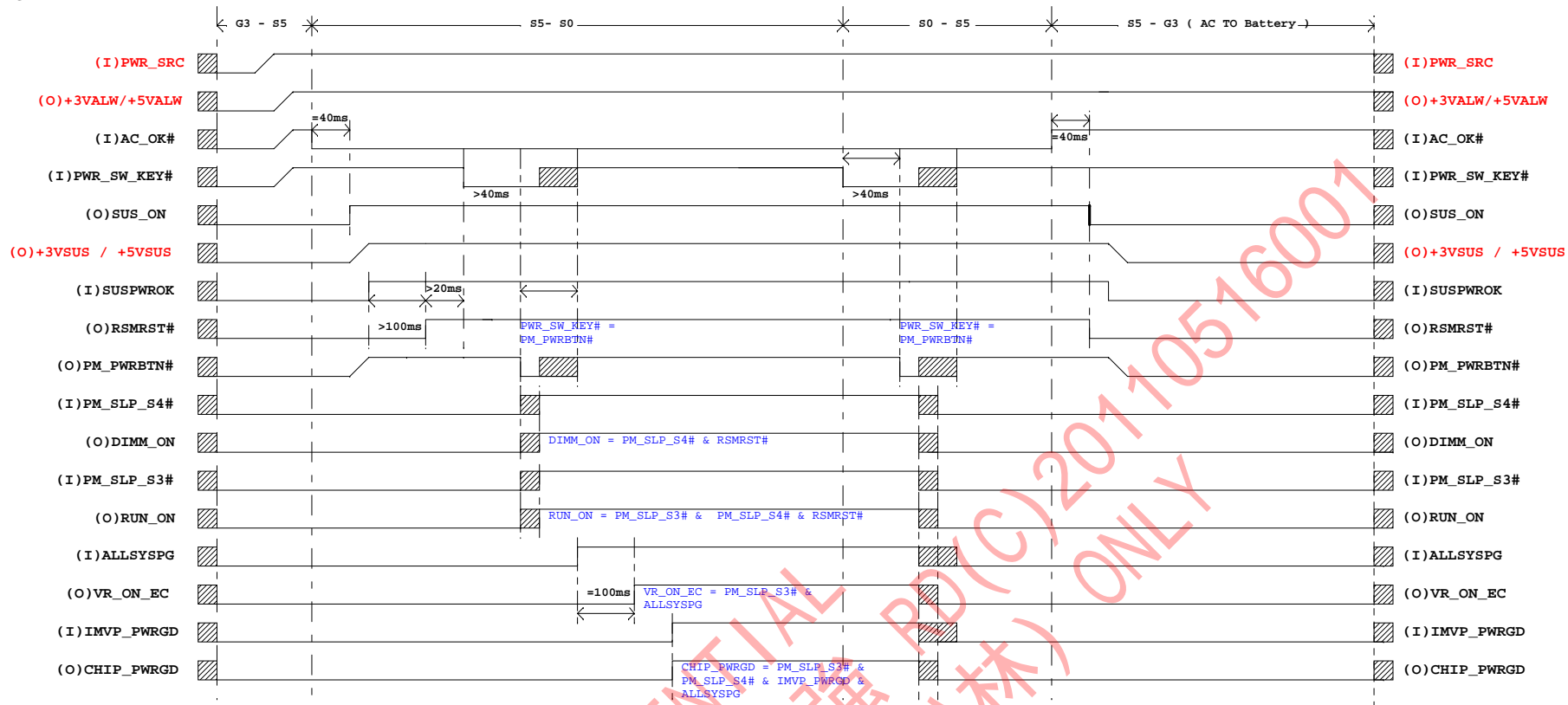
Battery Mode S0 - S3 - S0



MICRO-STAR INT'L CO.,LTD			
MS-N033			
Size Custom	Document Description timing2		Rev 0A
Date: Wednesday, December 24, 2008		Sheet 34 of 37	

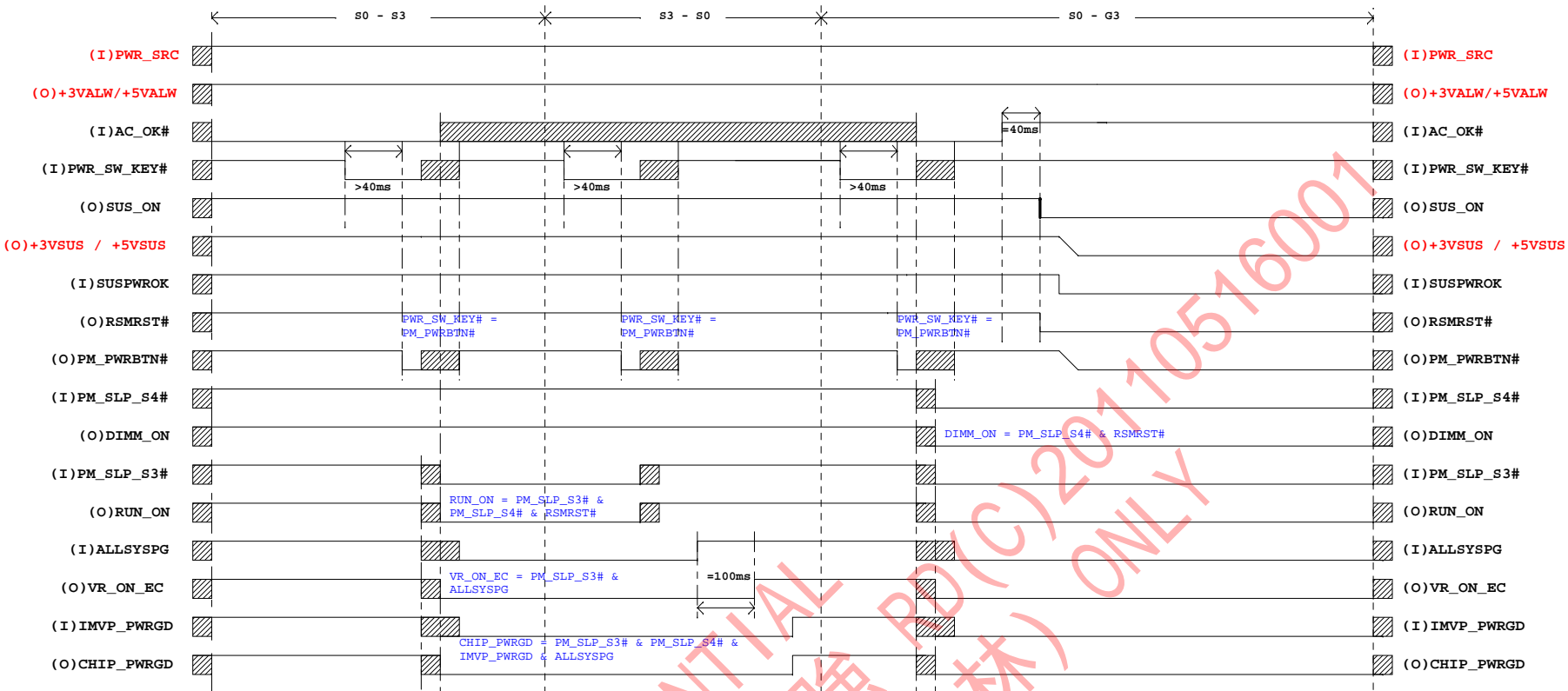
RED: POWER
BLACK: KBC

AC Mode G3 - S5 - S0 - S5 - G3



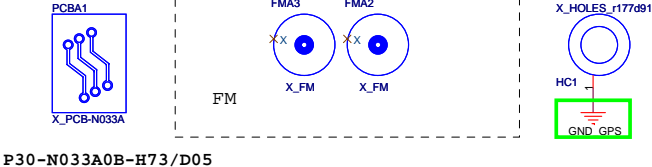
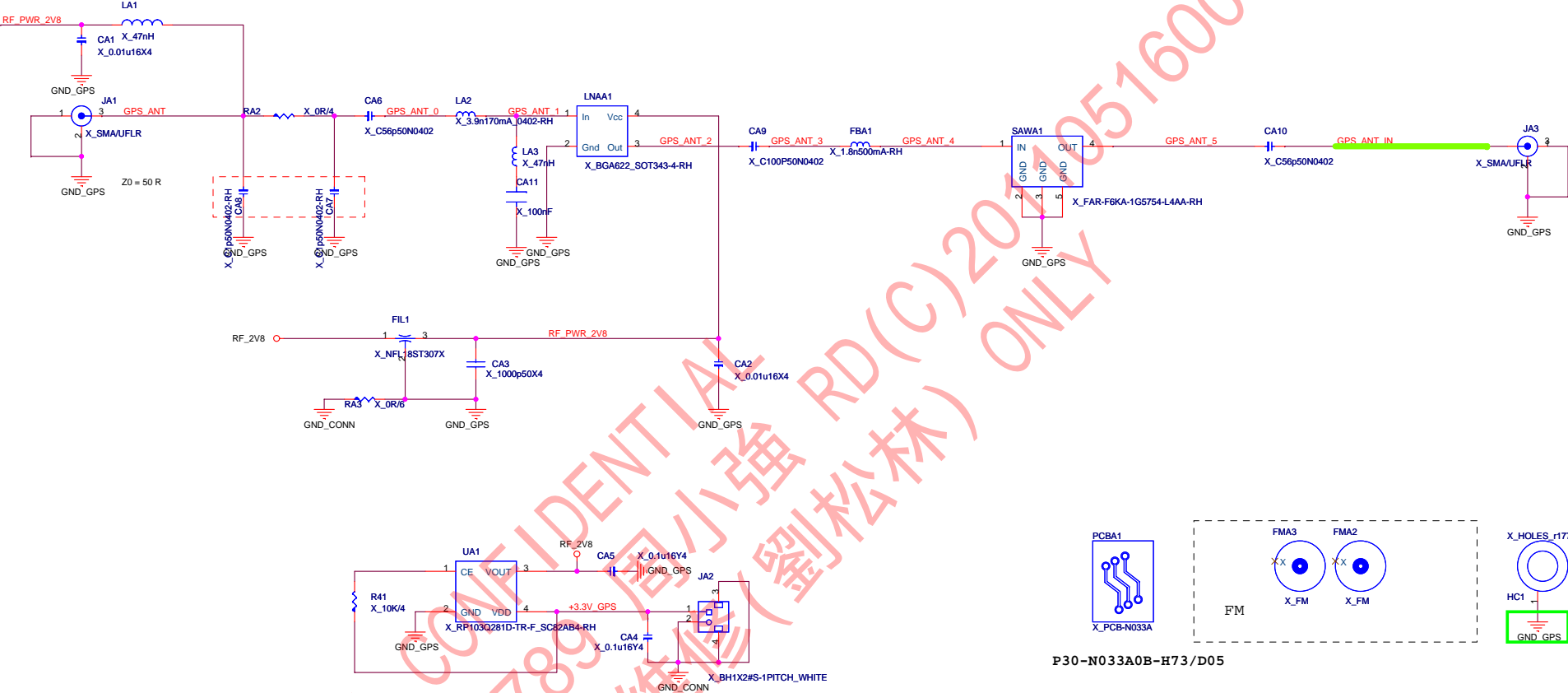
RED: POWER
BLACK: KBC

AC Mode S0 - S3 - S0



GPS LNA

CLOSE



MICRO-STAR INT'L CO.,LTD			
MS-N033			
Size	Document Description		Rev
Custom	GPS_LNA		0A
Date: Wednesday, December 24, 2008		Sheet	37 of 37