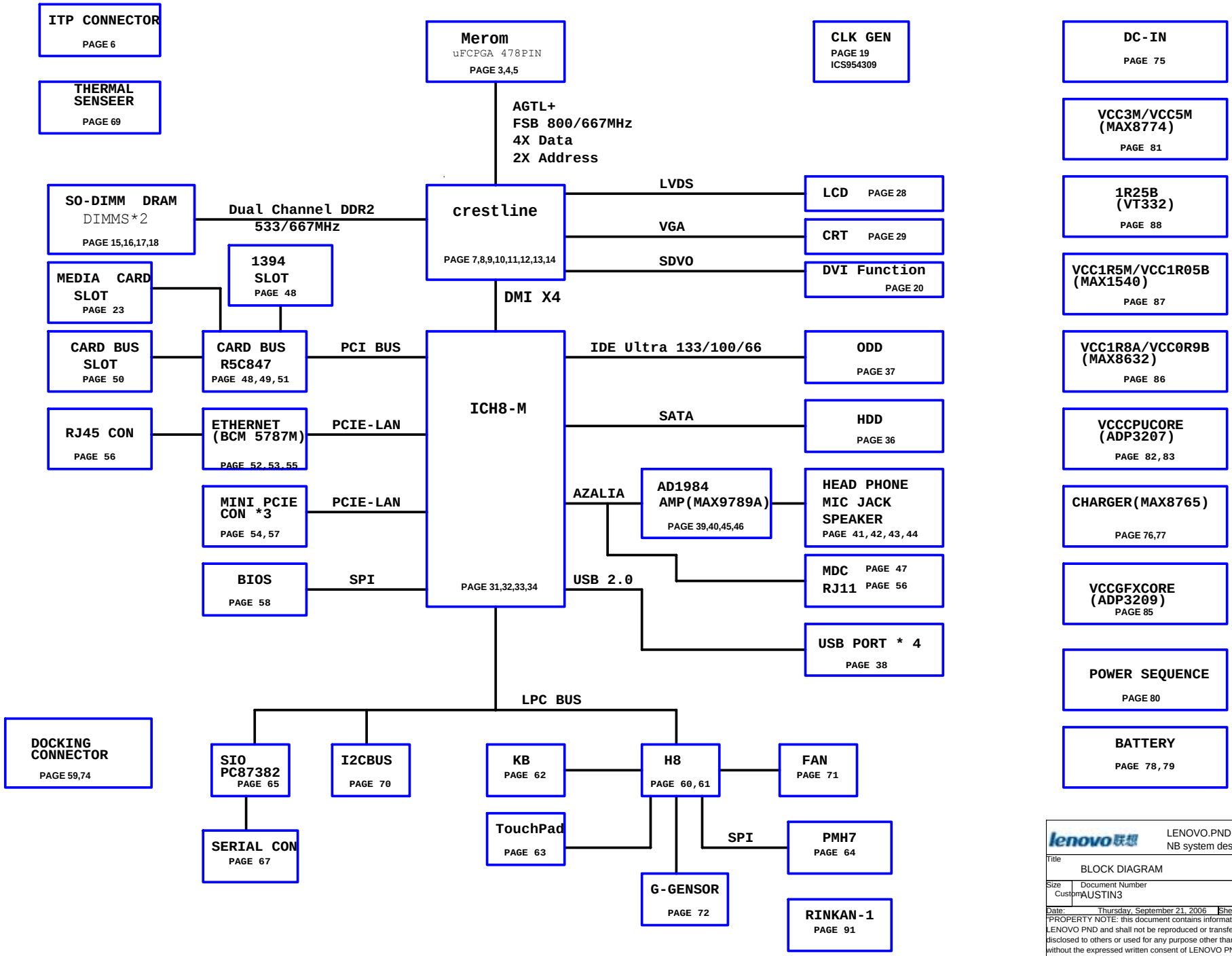


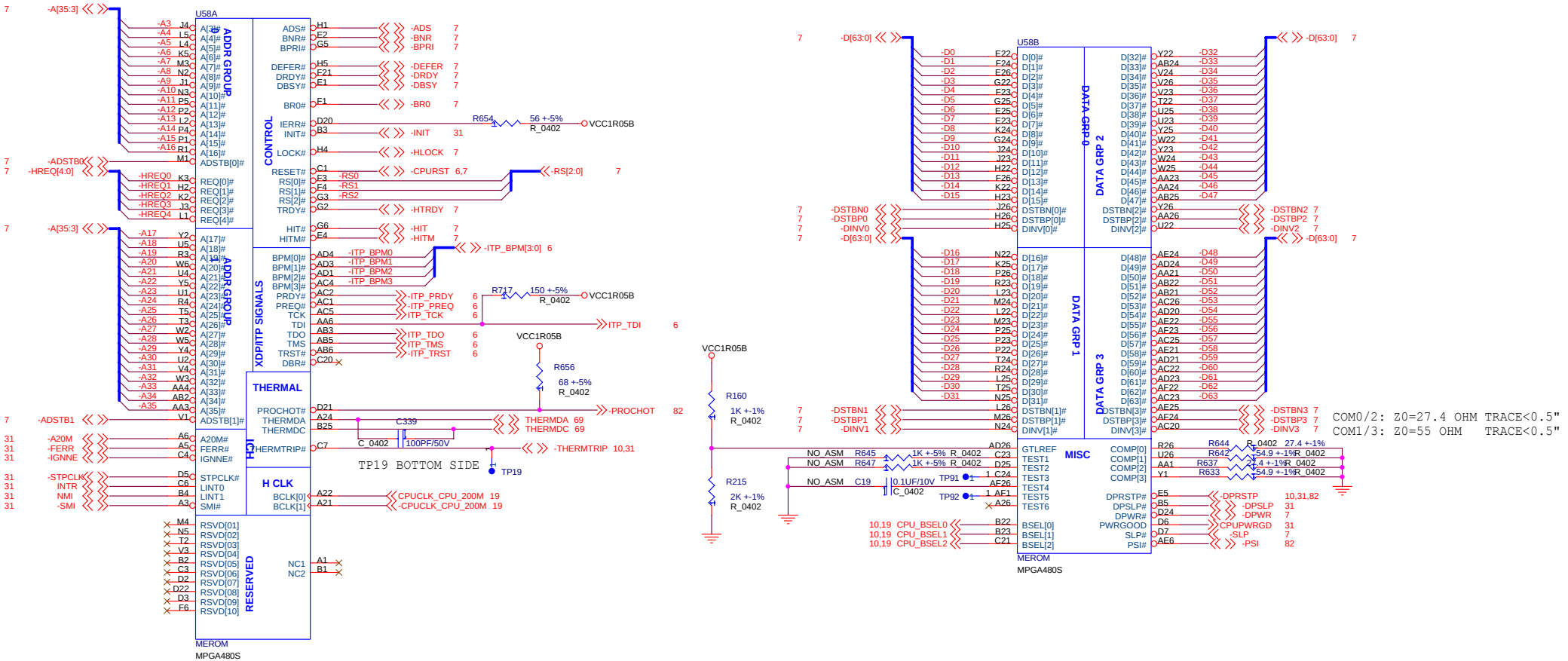
LENOVO.PND
NB system design section

Title: BLOCK DIAGRAM

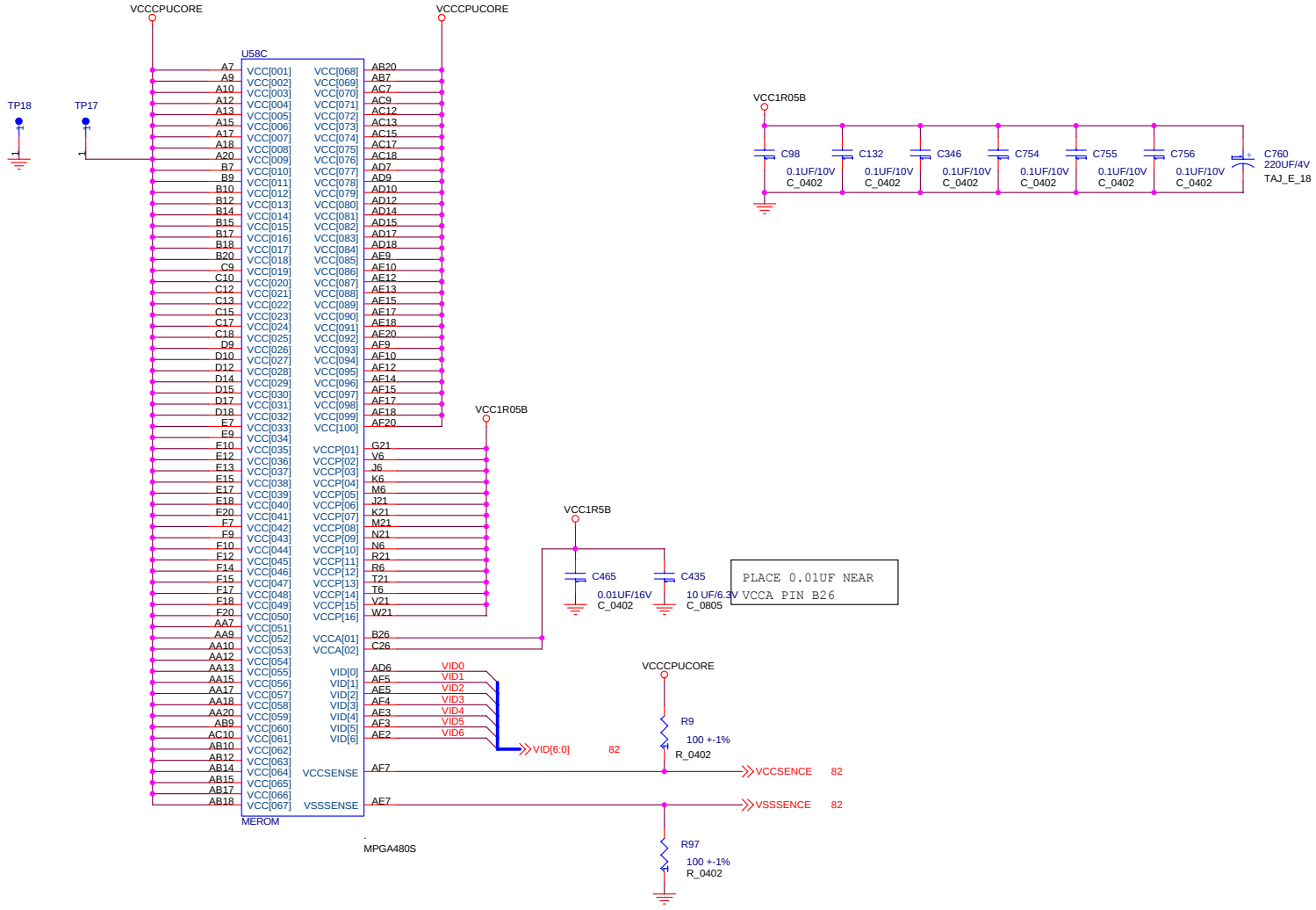
Size: Custom | Document Number: AUSTIN3 | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 1 of 99

BLACK PAGE



	LENOVO.PND
	NB system design section
Title	CPU MEROM-1 (HOST,BUS)
Size	Custom
Document Number	WAIKIKI
Rev	s1.2
Date:	Thursday, September 21, 2006
Sheet	3 of 99

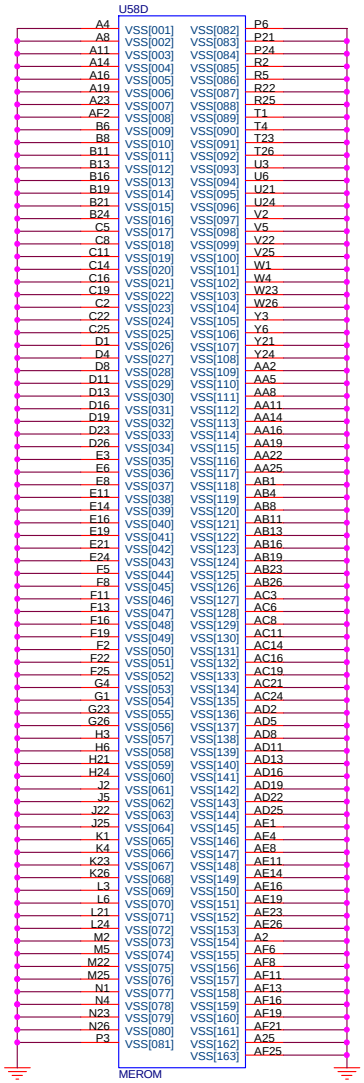


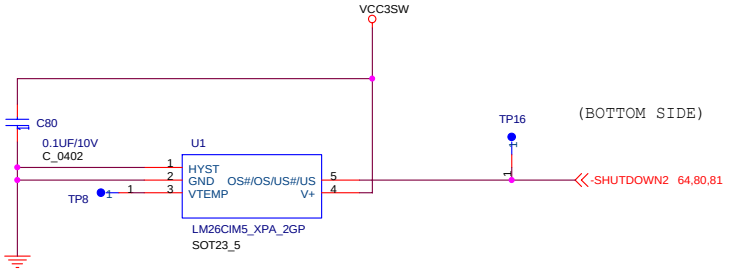
LENOVO.PND
NB system design section

Title: CPU MEROM-2(POWER,GND)

Size: Custom | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 4 of 99





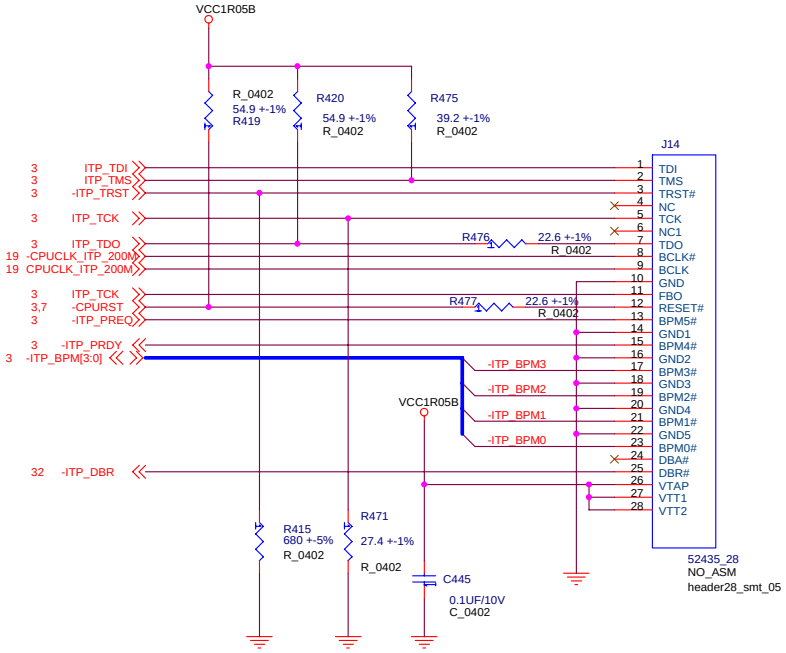
lenovo联想

LENOVO.PND
NB system design section

Title
CPU-3

Size	Document Number	Rev
Custom	WAIKIKI	s1.1

Date: Thursday, September 21, 2006 Sheet 5 of 99



(*1) TCK SIGNAL IS BRANCHED AT YONAH PIN
(*2) -CPURST SIGNAL IS BRANCHED AT CRESTLINE PIN

REF DES	FOR ITP700FLEX	FOR ITP-->XDP
J4	NO_ASM---->ASM	NO_ASM---->ASM
C445	ASM---->ASM	ASM---->ASM
R717	ASM(NO CHANGE)	ASM---->51 5% ASM
R476	ASM---->ASM	ASM---->ASM
R477	ASM---->ASM	ASM---->1K 5% ASM
R415	ASM(NO CHANGE)	ASM(NO CHANGE)
R419	ASM(NO CHANGE)	ASM-->NO ASM
R420	ASM(NO CHANGE)	ASM(NO CHANGE)
R471	ASM(NO CHANGE)	ASM---->51 5% ASM
R475	ASM(NO CHANGE)	ASM---->51 5% ASM

NOTE: C445,R476 AND R477 "ASM" BEFORE SIT, "NO_ASM" FROM SIT.

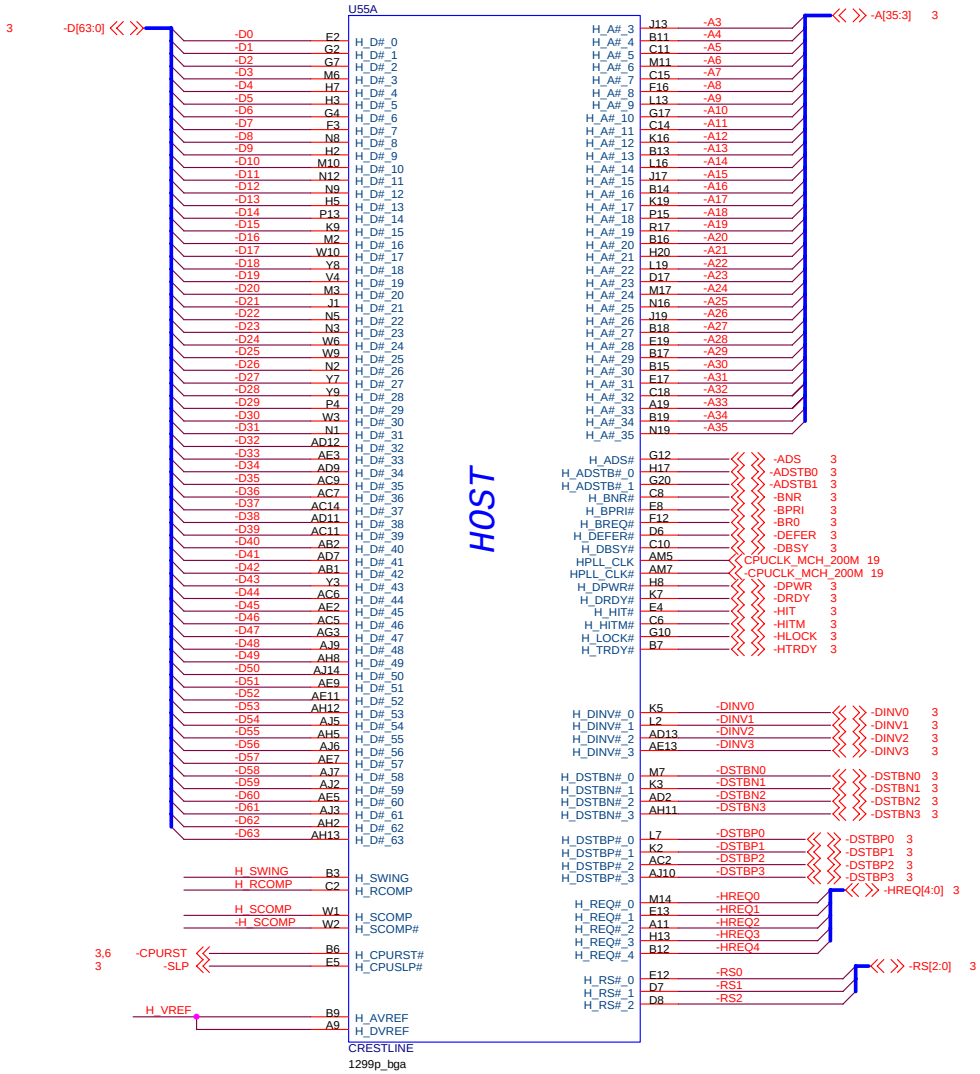
lenovo联想

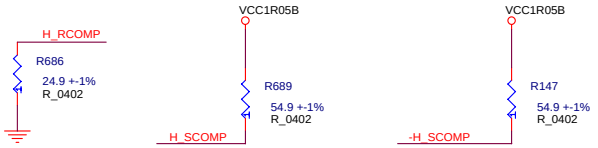
LENOVO.PND
NB system design section

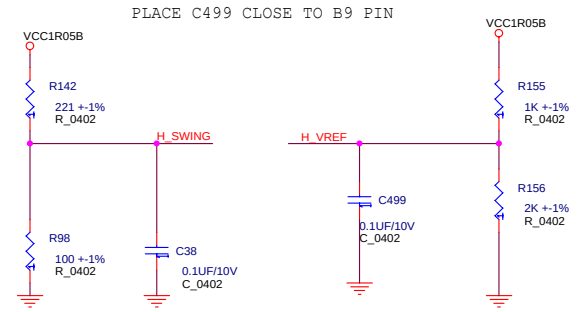
Title: ITP CONN

Size: Custom | Document Number: WAIKIKI | Rev: s1.1

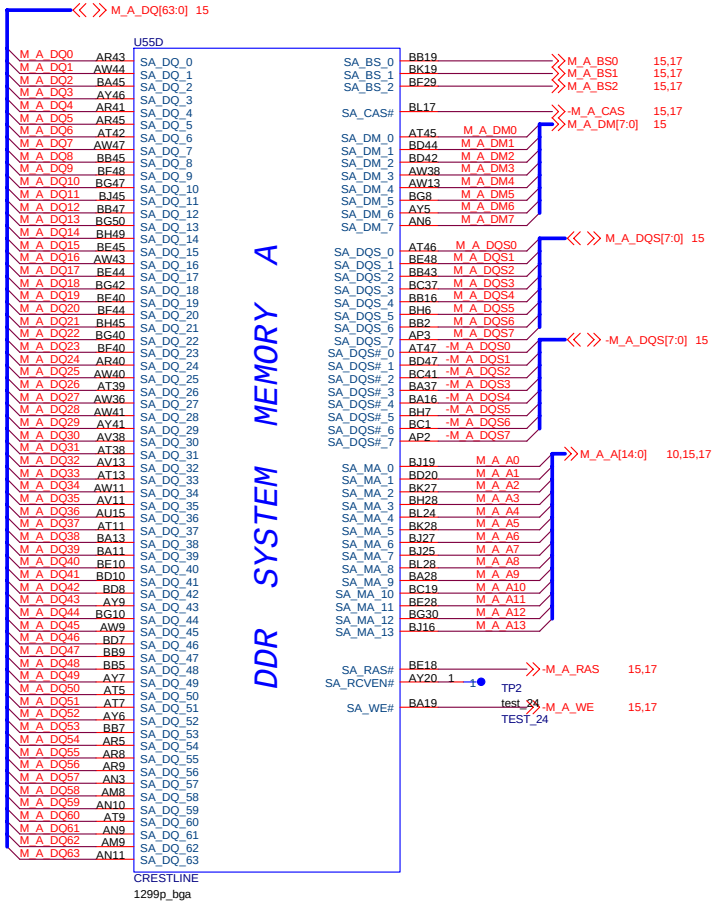
Date: Thursday, September 21, 2006 | Sheet 6 of 99







lenovo联想	LENOVO.PND NB system design section
Title	NB 965GM-1(HOST CFG)
Size: Custom	Document Number: WAIKIKI
Rev	s1.1
Date: Thursday, September 21, 2006	Sheet 7 of 99

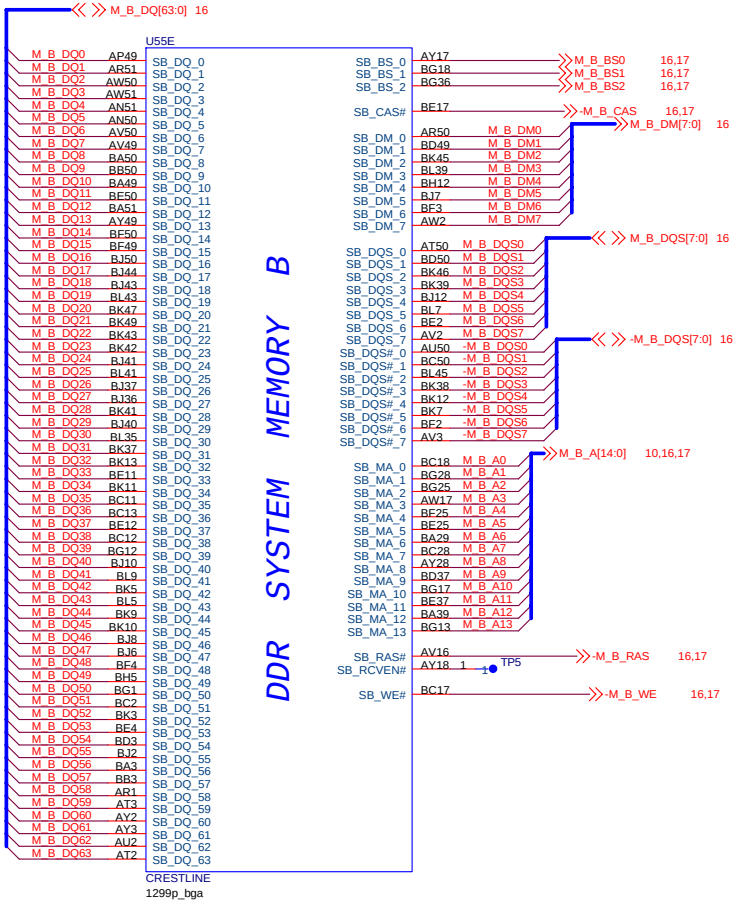


LENOVO.PND
NB system design section

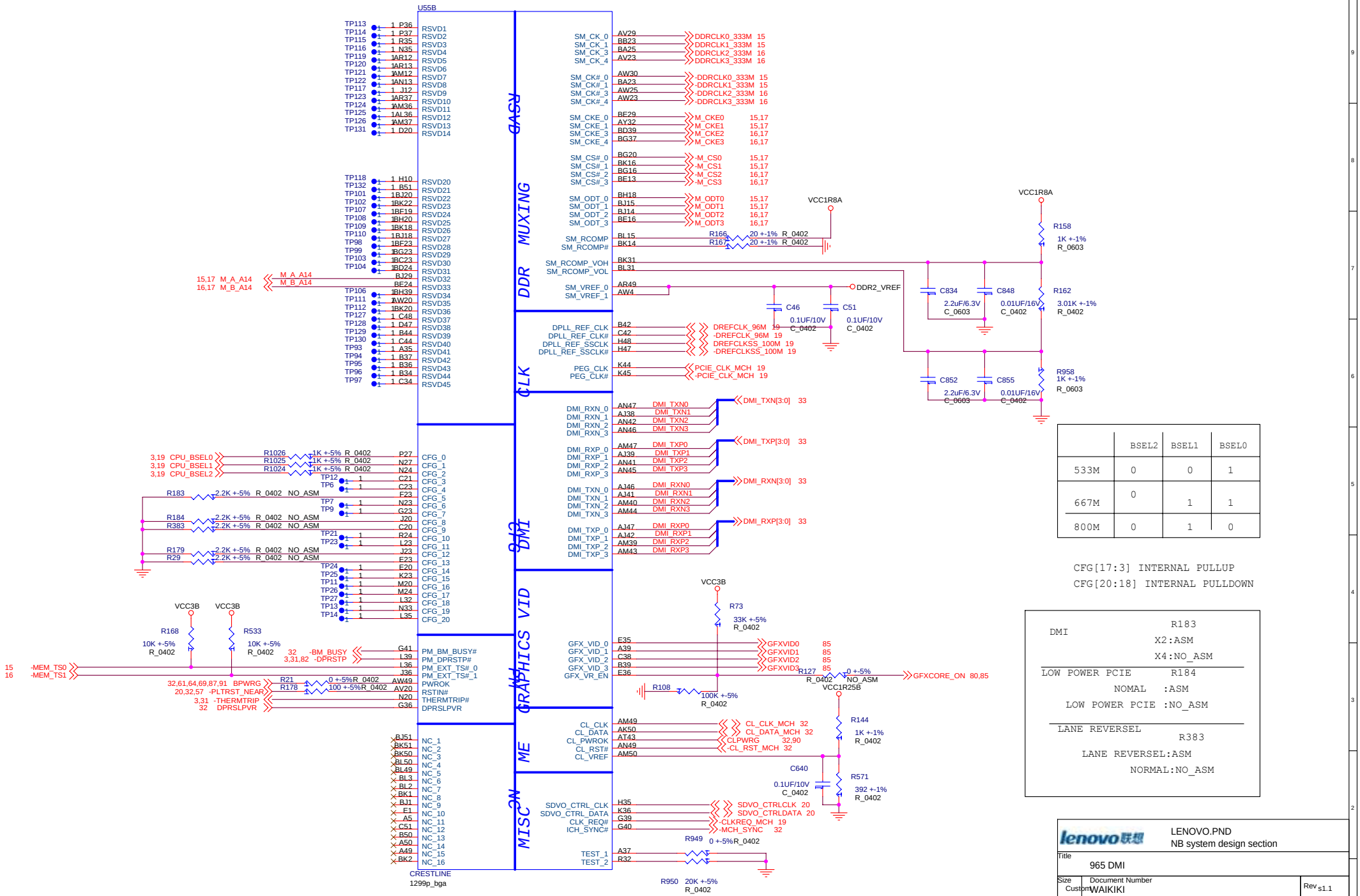
Title: 965 DDR2-A

Size: Custom | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 8 of 99



lenovo联想	LENOVO.PND NB system design section	
Title	NB 965 DDR2-B	
Size: Custom	Document Number: WAIKIKI	Rev: s1.1
Date: Thursday, September 21, 2006	Sheet 9 of 99	



	BSEL2	BSEL1	BSEL0
533M	0	0	1
667M	0	1	1
800M	0	1	0

CFG[17:3] INTERNAL PULLUP
CFG[20:18] INTERNAL PULLDOWN

DMI
R183
X2:ASM
X4:NO_ASM

LOW POWER PCIE
R184
NOMAL :ASM
LOW POWER PCIE :NO_ASM

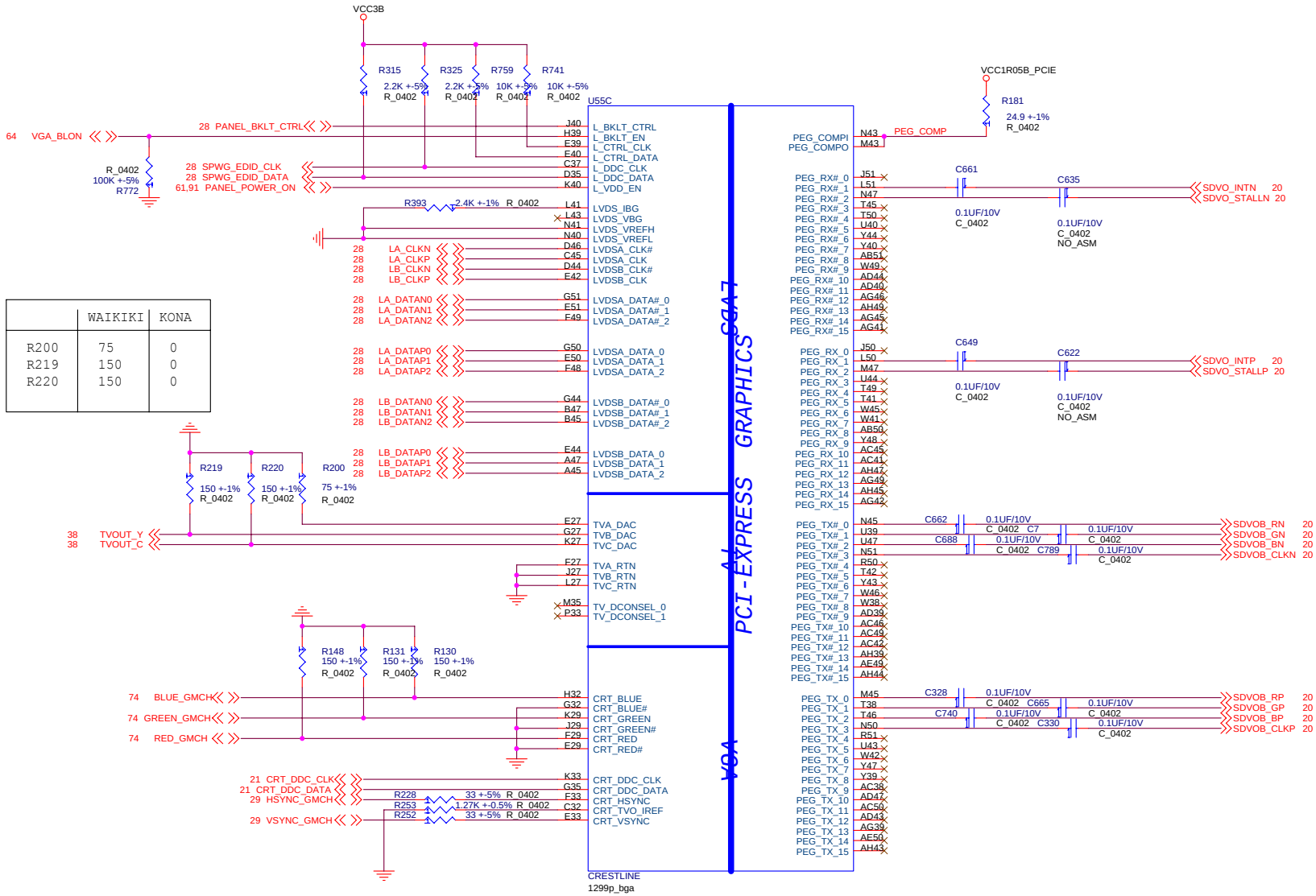
LANE REVERSEL
R383
LANE REVERSEL:ASM
NORMAL:NO_ASM

lenovo联想
LENOVO.PND
NB system design section

Title: 965 DMI

Size: Custom | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 10 of 99



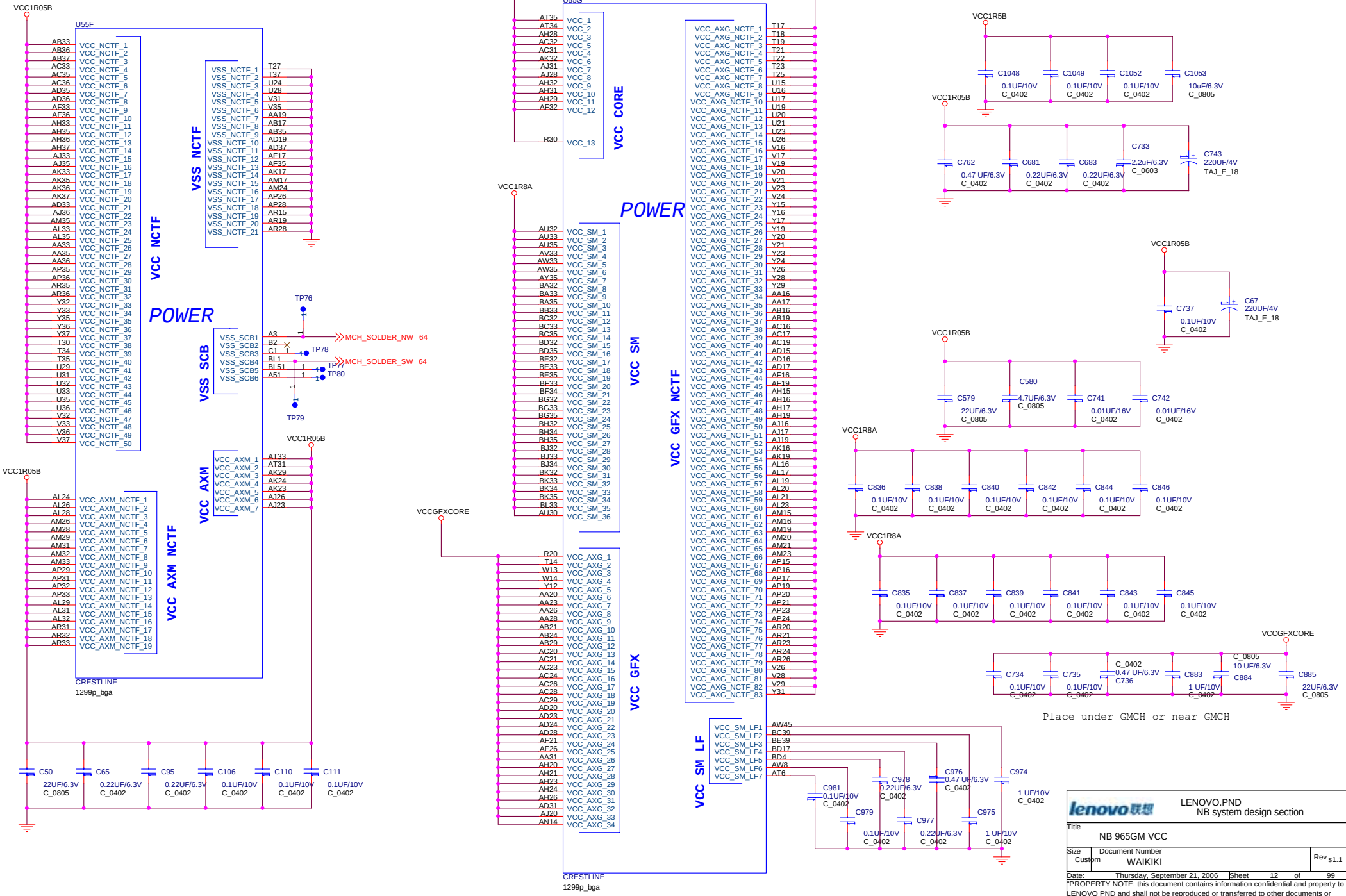
	WAIKIKI	KONA
R200	75	0
R219	150	0
R220	150	0

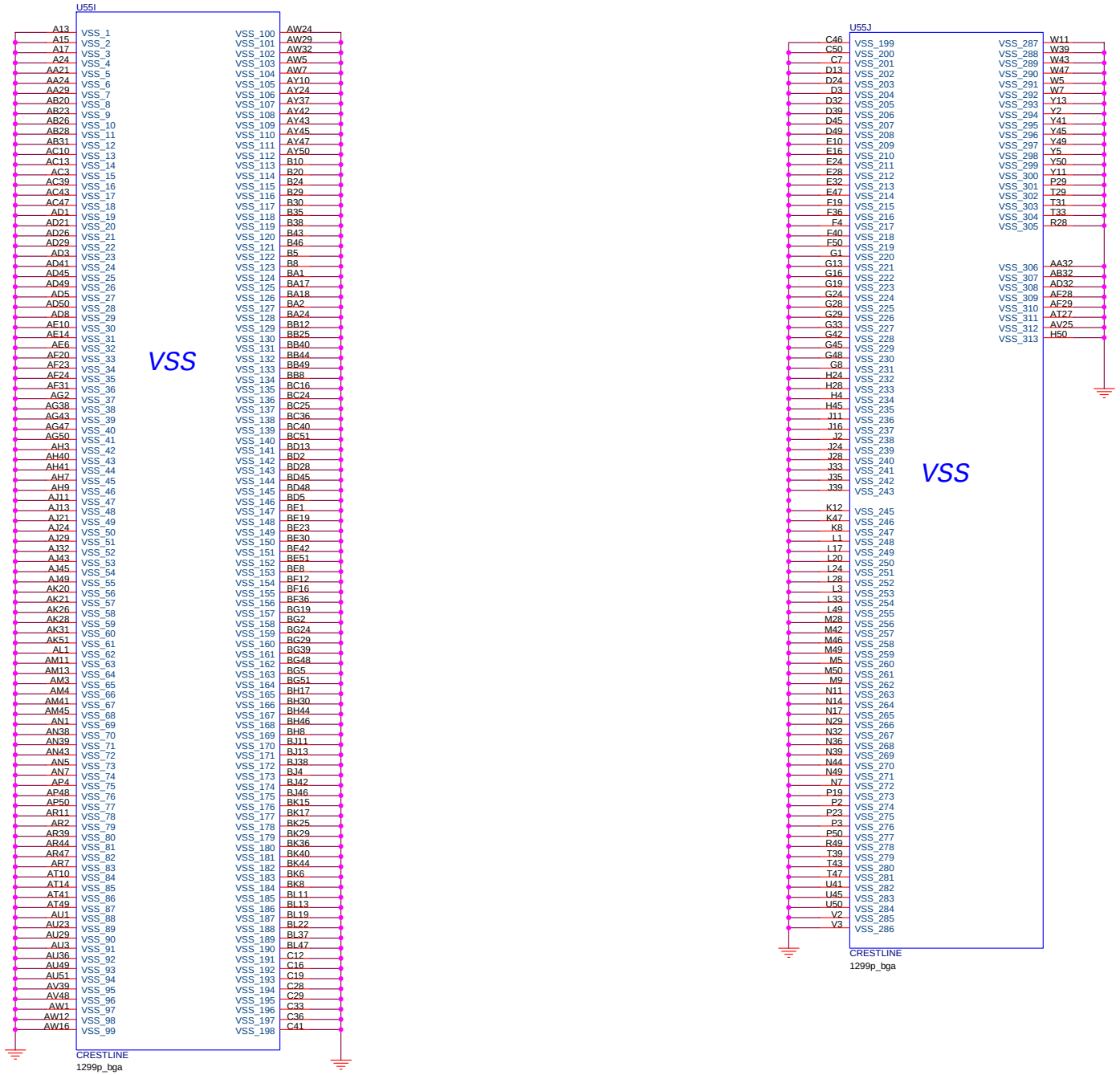
LENOVO.PND
NB system design section

Title: GRAPHICS

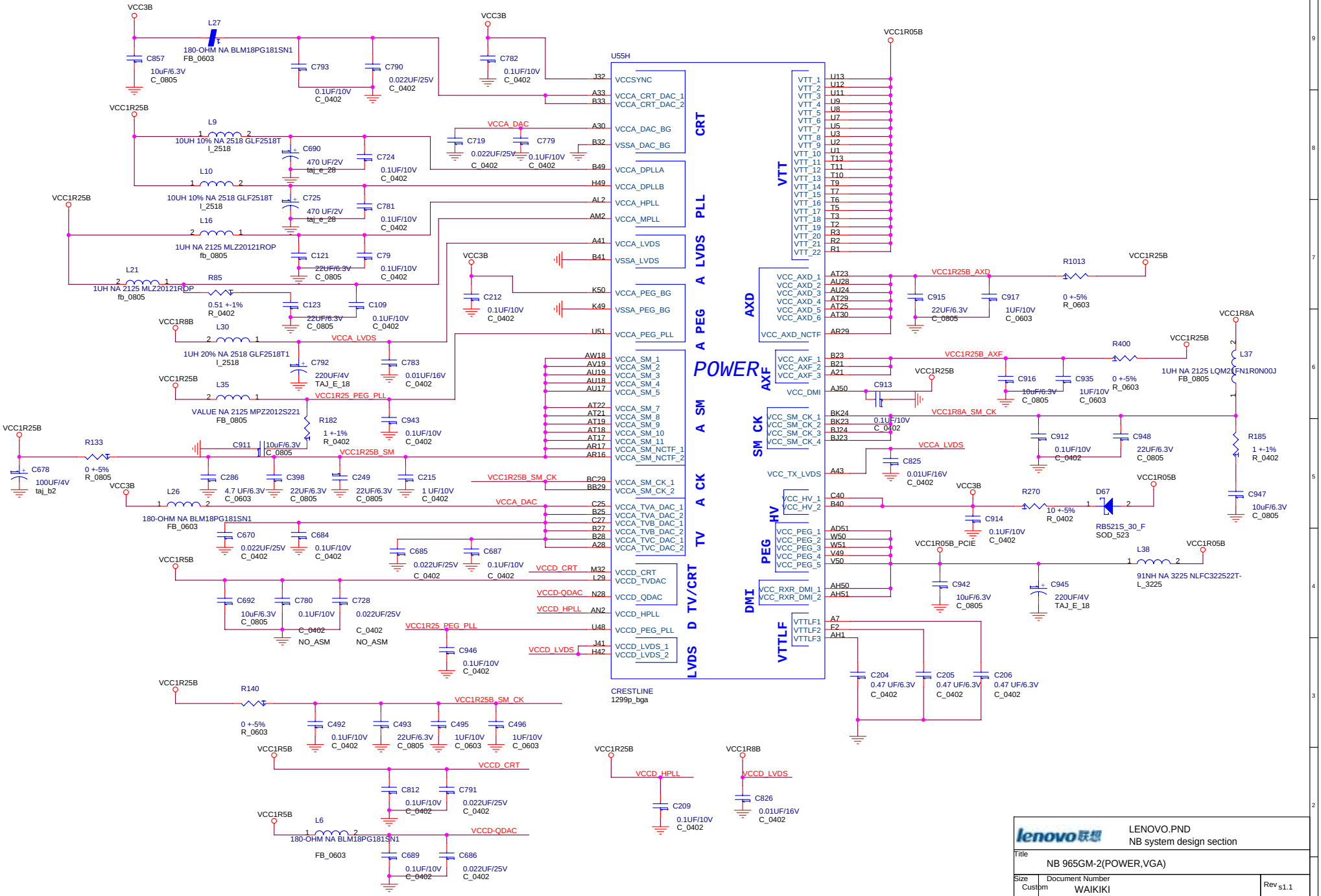
Size: Custom | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 11 of 99

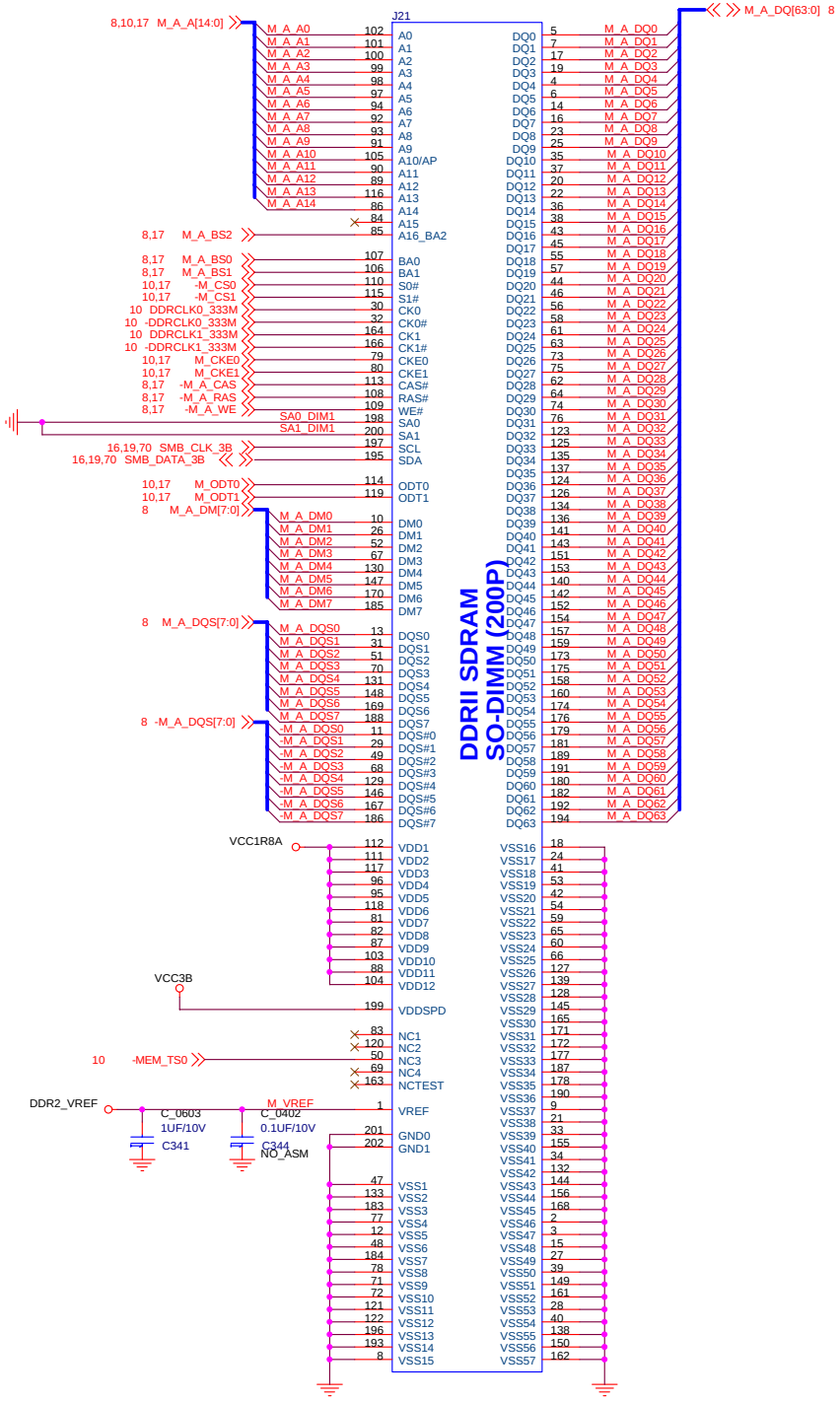

U55F
VCC_NCTF_1
VCC_NCTF_2
VCC_NCTF_3
VCC_NCTF_4
VCC_NCTF_5
VCC_NCTF_6
VCC_NCTF_7
VCC_NCTF_8
VCC_NCTF_9
VCC_NCTF_10
VCC_NCTF_11
VCC_NCTF_12
VCC_NCTF_13
VCC_NCTF_14
VCC_NCTF_15
VCC_NCTF_16
VCC_NCTF_17
VCC_NCTF_18
VCC_NCTF_19
VCC_NCTF_20
VCC_NCTF_21
VCC_NCTF_22
VCC_NCTF_23
VCC_NCTF_24
VCC_NCTF_25
VCC_NCTF_26
VCC_NCTF_27
VCC_NCTF_28
VCC_NCTF_29
VCC_NCTF_30
VCC_NCTF_31
VCC_NCTF_32
VCC_NCTF_33
VCC_NCTF_34
VCC_NCTF_35
VCC_NCTF_36
VCC_NCTF_37
VCC_NCTF_38
VCC_NCTF_39
VCC_NCTF_40
VCC_NCTF_41
VCC_NCTF_42
VCC_NCTF_43
VCC_NCTF_44
VCC_NCTF_45
VCC_NCTF_46
VCC_NCTF_47
VCC_NCTF_48
VCC_NCTF_49
VCC_NCTF_50
VCC NCTF
VSS_NCTF_1
VSS_NCTF_2
VSS_NCTF_3
VSS_NCTF_4
VSS_NCTF_5
VSS_NCTF_6
VSS_NCTF_7
VSS_NCTF_8
VSS_NCTF_9
VSS_NCTF_10
VSS_NCTF_11
VSS_NCTF_12
VSS_NCTF_13
VSS_NCTF_14
VSS_NCTF_15
VSS_NCTF_16
VSS_NCTF_17
VSS_NCTF_18
VSS_NCTF_19
VSS_NCTF_20
VSS_NCTF_21
VSS NCTF
POWER
VSS_SCB1
VSS_SCB2
VSS_SCB3
VSS_SCB4
VSS_SCB5
VSS_SCB6
VSS SCB
TP76
TP78
TP77
TP80
TP79
MCH_SOLDER_NW 64
MCH_SOLDER_SW 64
VCC_AXM_1
VCC_AXM_2
VCC_AXM_3
VCC_AXM_4
VCC_AXM_5
VCC_AXM_6
VCC_AXM_7
VCC AXM
VCC_AXM_NCTF_1
VCC_AXM_NCTF_2
VCC_AXM_NCTF_3
VCC_AXM_NCTF_4
VCC_AXM_NCTF_5
VCC_AXM_NCTF_6
VCC_AXM_NCTF_7
VCC_AXM_NCTF_8
VCC_AXM_NCTF_9
VCC_AXM_NCTF_10
VCC_AXM_NCTF_11
VCC_AXM_NCTF_12
VCC_AXM_NCTF_13
VCC_AXM_NCTF_14
VCC_AXM_NCTF_15
VCC_AXM_NCTF_16
VCC_AXM_NCTF_17
VCC_AXM_NCTF_18
VCC_AXM_NCTF_19
VCC AXM NCTF
CRESTLINE
1299p_bga
C50 22UF/6.3V C_0805
C65 0.22UF/6.3V C_0402
C95 0.22UF/6.3V C_0402
C106 0.1UF/10V C_0402
C110 0.1UF/10V C_0402
C111 0.1UF/10V C_0402
U55G
VCC_1
VCC_2
VCC_3
VCC_5
VCC_4
VCC_6
VCC_7
VCC_8
VCC_9
VCC_10
VCC_11
VCC_12
VCC_13
VCC CORE
POWER
VCC_SM_1
VCC_SM_2
VCC_SM_3
VCC_SM_4
VCC_SM_5
VCC_SM_6
VCC_SM_7
VCC_SM_8
VCC_SM_9
VCC_SM_10
VCC_SM_11
VCC_SM_12
VCC_SM_13
VCC_SM_14
VCC_SM_15
VCC_SM_16
VCC_SM_17
VCC_SM_18
VCC_SM_19
VCC_SM_20
VCC_SM_21
VCC_SM_22
VCC_SM_23
VCC_SM_24
VCC_SM_25
VCC_SM_26
VCC_SM_27
VCC_SM_28
VCC_SM_29
VCC_SM_30
VCC_SM_31
VCC_SM_32
VCC_SM_33
VCC_SM_34
VCC_SM_35
VCC_SM_36
VCC SM
VCC_AXG_1
VCC_AXG_2
VCC_AXG_3
VCC_AXG_4
VCC_AXG_5
VCC_AXG_6
VCC_AXG_7
VCC_AXG_8
VCC_AXG_9
VCC_AXG_10
VCC_AXG_11
VCC_AXG_12
VCC_AXG_13
VCC_AXG_14
VCC_AXG_15
VCC_AXG_16
VCC_AXG_17
VCC_AXG_18
VCC_AXG_19
VCC_AXG_20
VCC_AXG_21
VCC_AXG_22
VCC_AXG_23
VCC_AXG_24
VCC_AXG_25
VCC_AXG_26
VCC_AXG_27
VCC_AXG_28
VCC_AXG_29
VCC_AXG_30
VCC_AXG_31
VCC_AXG_32
VCC_AXG_33
VCC_AXG_34
VCC GFX
VCC_AXG_NCTF_1
VCC_AXG_NCTF_2
VCC_AXG_NCTF_3
VCC_AXG_NCTF_4
VCC_AXG_NCTF_5
VCC_AXG_NCTF_6
VCC_AXG_NCTF_7
VCC_AXG_NCTF_8
VCC_AXG_NCTF_9
VCC_AXG_NCTF_10
VCC_AXG_NCTF_11
VCC_AXG_NCTF_12
VCC_AXG_NCTF_13
VCC_AXG_NCTF_14
VCC_AXG_NCTF_15
VCC_AXG_NCTF_16
VCC_AXG_NCTF_17
VCC_AXG_NCTF_18
VCC_AXG_NCTF_19
VCC_AXG_NCTF_20
VCC_AXG_NCTF_21
VCC_AXG_NCTF_22
VCC_AXG_NCTF_23
VCC_AXG_NCTF_24
VCC_AXG_NCTF_25
VCC_AXG_NCTF_26
VCC_AXG_NCTF_27
VCC_AXG_NCTF_28
VCC_AXG_NCTF_29
VCC_AXG_NCTF_30
VCC_AXG_NCTF_31
VCC_AXG_NCTF_32
VCC_AXG_NCTF_33
VCC_AXG_NCTF_34
VCC_AXG_NCTF_35
VCC_AXG_NCTF_36
VCC_AXG_NCTF_37
VCC_AXG_NCTF_38
VCC_AXG_NCTF_39
VCC_AXG_NCTF_40
VCC_AXG_NCTF_41
VCC_AXG_NCTF_42
VCC_AXG_NCTF_43
VCC_AXG_NCTF_44
VCC_AXG_NCTF_45
VCC_AXG_NCTF_46
VCC_AXG_NCTF_47
VCC_AXG_NCTF_48
VCC_AXG_NCTF_49
VCC_AXG_NCTF_50
VCC_AXG_NCTF_51
VCC_AXG_NCTF_52
VCC_AXG_NCTF_53
VCC_AXG_NCTF_54
VCC_AXG_NCTF_55
VCC_AXG_NCTF_56
VCC_AXG_NCTF_57
VCC_AXG_NCTF_58
VCC_AXG_NCTF_59
VCC_AXG_NCTF_60
VCC_AXG_NCTF_61
VCC_AXG_NCTF_62
VCC_AXG_NCTF_63
VCC_AXG_NCTF_64
VCC_AXG_NCTF_65
VCC_AXG_NCTF_66
VCC_AXG_NCTF_67
VCC_AXG_NCTF_68
VCC_AXG_NCTF_69
VCC_AXG_NCTF_70
VCC_AXG_NCTF_71
VCC_AXG_NCTF_72
VCC_AXG_NCTF_73
VCC_AXG_NCTF_74
VCC_AXG_NCTF_75
VCC_AXG_NCTF_76
VCC_AXG_NCTF_77
VCC_AXG_NCTF_78
VCC_AXG_NCTF_79
VCC_AXG_NCTF_80
VCC_AXG_NCTF_81
VCC_AXG_NCTF_82
VCC_AXG_NCTF_83
VCC GFX NCTF
VCC_SM_LF1
VCC_SM_LF2
VCC_SM_LF3
VCC_SM_LF4
VCC_SM_LF5
VCC_SM_LF6
VCC_SM_LF7
VCC SM LF
C981 0.1UF/10V C_0402
C978 0.22UF/6.3V C_0402
C976 0.47 UF/6.3V C_0402
C974 1 UF/10V C_0402
C979 0.1UF/10V C_0402
C977 0.22UF/6.3V C_0402
C975 1 UF/10V C_0402
C1048 0.1UF/10V C_0402
C1049 0.1UF/10V C_0402
C1052 0.1UF/10V C_0402
C1053 10uF/6.3V C_0805
C762 0.47 UF/6.3V C_0402
C681 0.22UF/6.3V C_0402
C683 0.22UF/6.3V C_0402
C733 2.2uF/6.3V C_0603
C743 220UF/4V TAJ_E_18
C737 0.1UF/10V C_0402
C67 220UF/4V TAJ_E_18
C579 22UF/6.3V C_0805
C580 4.7UF/6.3V C_0805
C741 0.01UF/16V C_0402
C742 0.01UF/16V C_0402
C836 0.1UF/10V C_0402
C838 0.1UF/10V C_0402
C840 0.1UF/10V C_0402
C842 0.1UF/10V C_0402
C844 0.1UF/10V C_0402
C846 0.1UF/10V C_0402
C835 0.1UF/10V C_0402
C837 0.1UF/10V C_0402
C839 0.1UF/10V C_0402
C841 0.1UF/10V C_0402
C843 0.1UF/10V C_0402
C845 0.1UF/10V C_0402
C734 0.1UF/10V C_0402
C735 0.1UF/10V C_0402
C_0402 0.47 UF/6.3V C736
C883 1 UF/10V C_0402
C_0805 10 UF/6.3V C884
C885 22UF/6.3V C_0805
Place under GMCH or near GMCH
VCC1R05B
VCCGFXCORE
VCC1R8A
LENOVO.PND
NB system design section
NB 965GM VCC
Custom
WAIKIKI
Rev s1.1
Date: Thursday, September 21, 2006
Sheet 12 of 99
"PROPERTY NOTE: this document contains information confidential and property to LENOVO PND and shall not be reproduced or transferred to other documents or disclosed to others or used for any purpose other than that for which it was obtained without the expressed written consent of LENOVO PND."

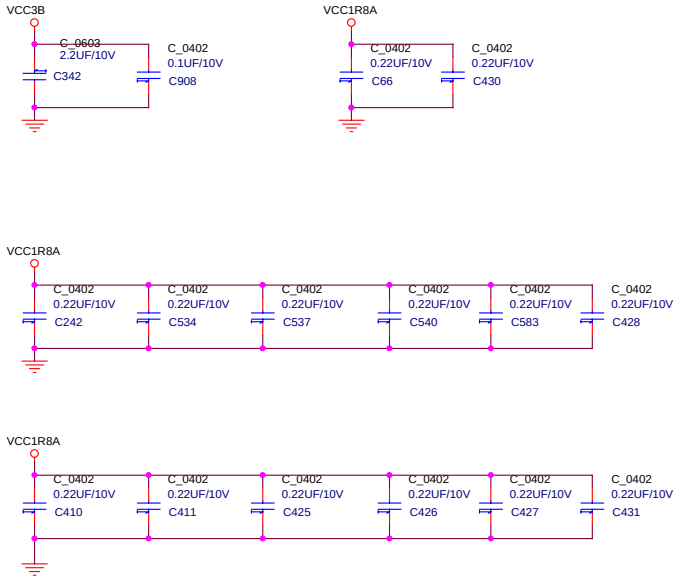


lenovo联想	LENOVO.PND NB system design section	
Title	GND	
Size: Custom	Document Number: WAIKIKI	Rev: s1.1
Date: Thursday, September 21, 2006	Sheet 13 of 99	



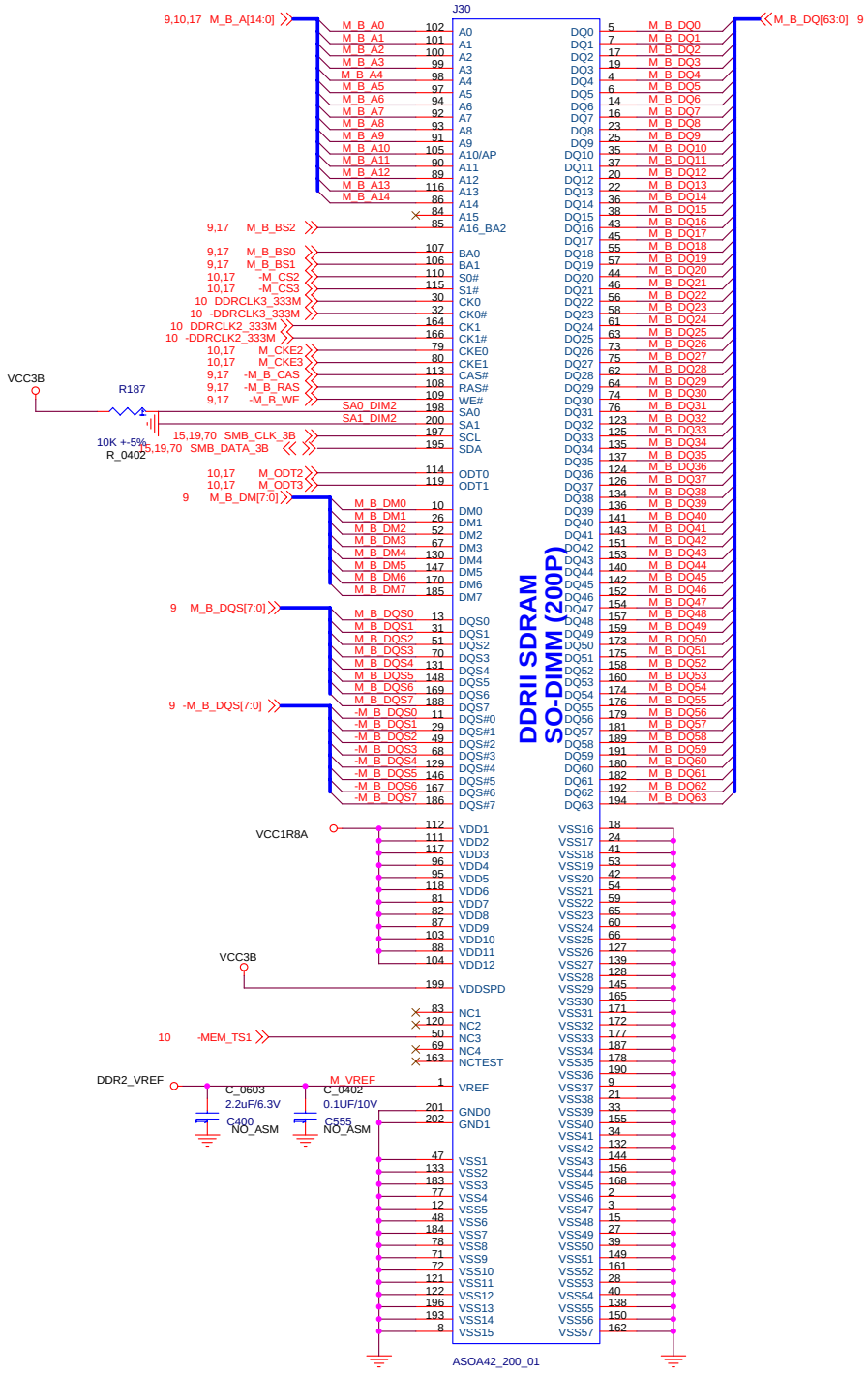
	LENOVO.PND NB system design section
Title	NB 965GM-2(POWER,VGA)
Size: Custom	Document Number: WAIKIKI
Rev	s1.1
Date:	Thursday, September 21, 2006
Sheet	14 of 99

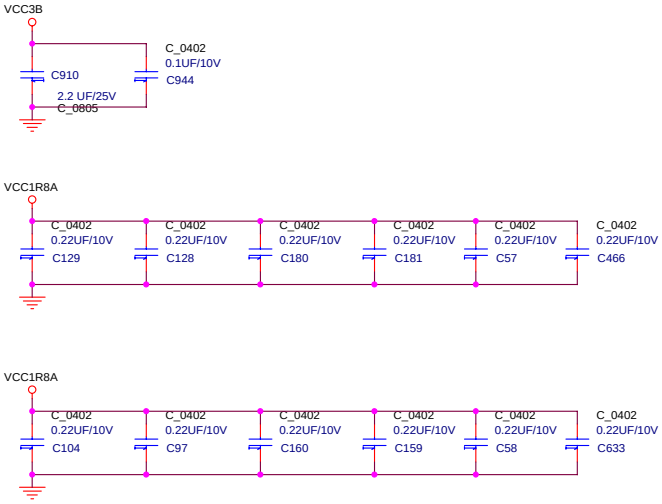




Add two more 0.22uf/10v for VCC1R8A at J21

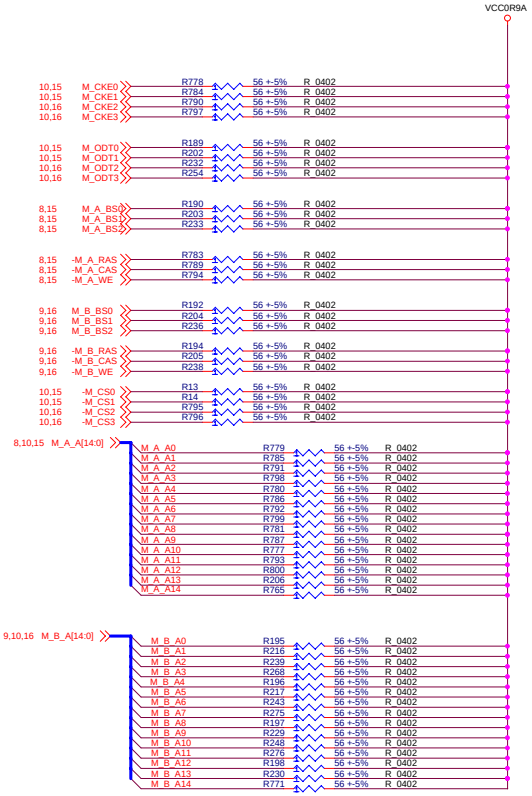
lenovo联想	LENOVO.PND NB system design section	
Title: DDRII SO-DIMM		
Size: Custom	Document Number: WAIKIKI	Rev: s1.1
Date: Thursday, September 21, 2006	Sheet 15 of 99	





Add two more 0.22uf/10v for VCC1R8A at J30

lenovo联想	LENOVO.PND NB system design section	
Title	DDRII 2	
Size: Custom	Document Number: WAIKIKI	Rev: s1.1
Date: Thursday, September 21, 2006	Sheet 16 of 99	



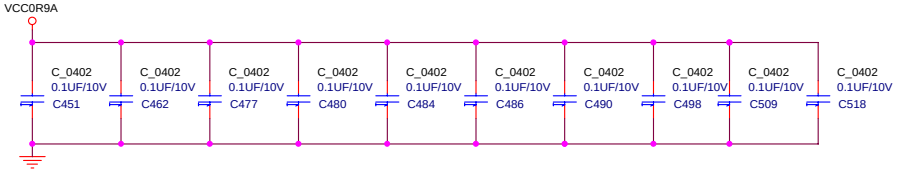
LENOVO.PND
NB system design section

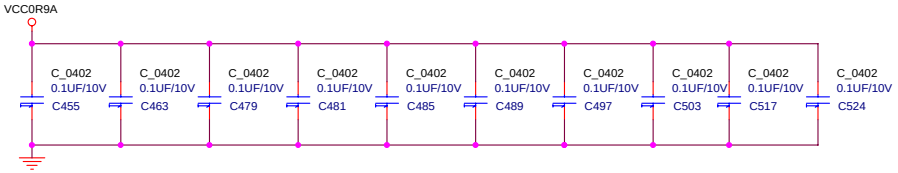
Title: DDR2 TERMINATION

Size: C | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 17 of 99

PLACE 1 CAP FOR EVERY 2 BITS TERMINATED TO VCC0R9B.





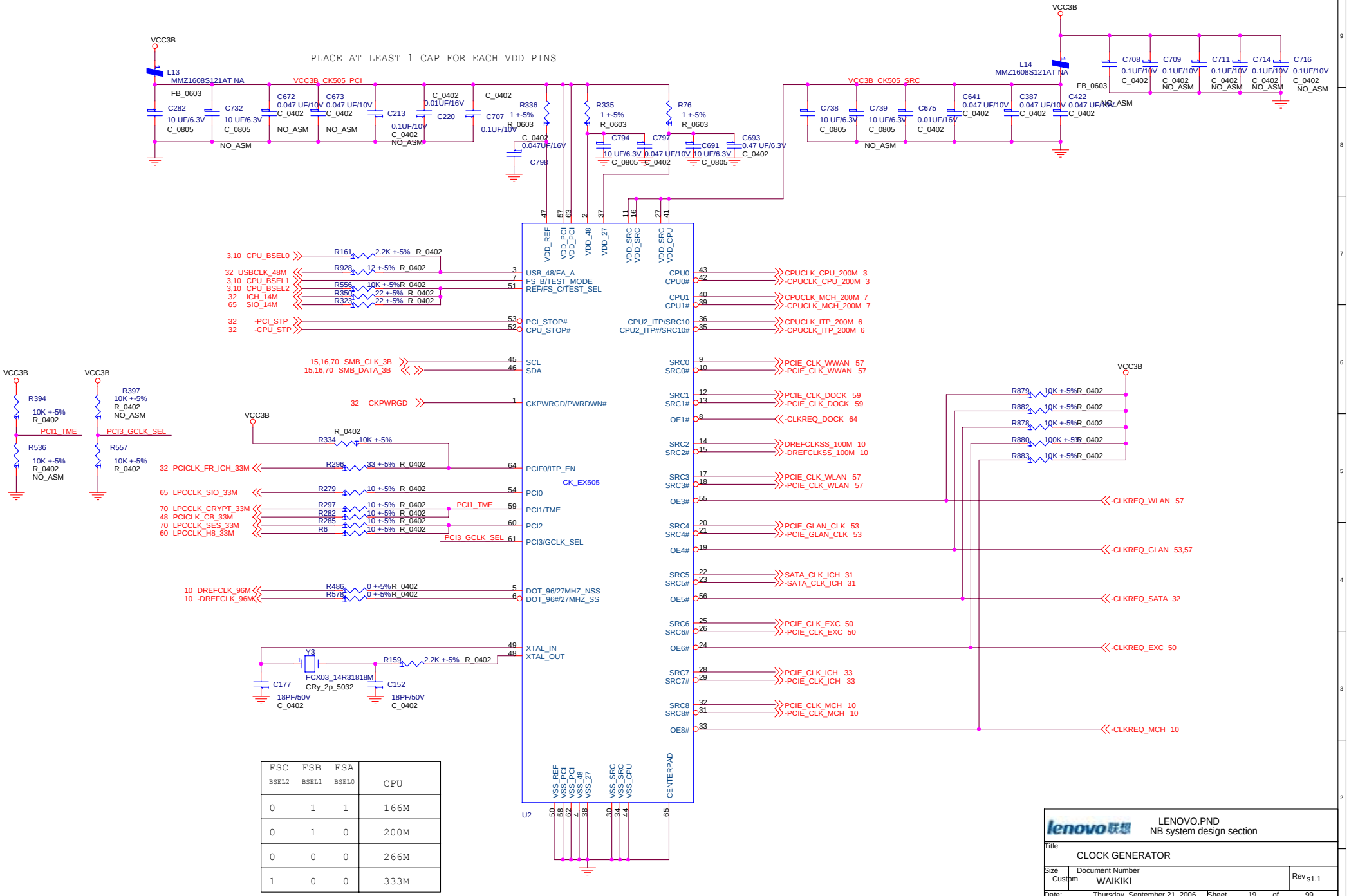
lenovo联想

LENOVO.PND
NB system design section

Title
DDR2 DECOUPLING

Size	Document Number	Rev
Custom	WAIKIKI	s1.1

Date: Thursday, September 21, 2006 Sheet 18 of 99



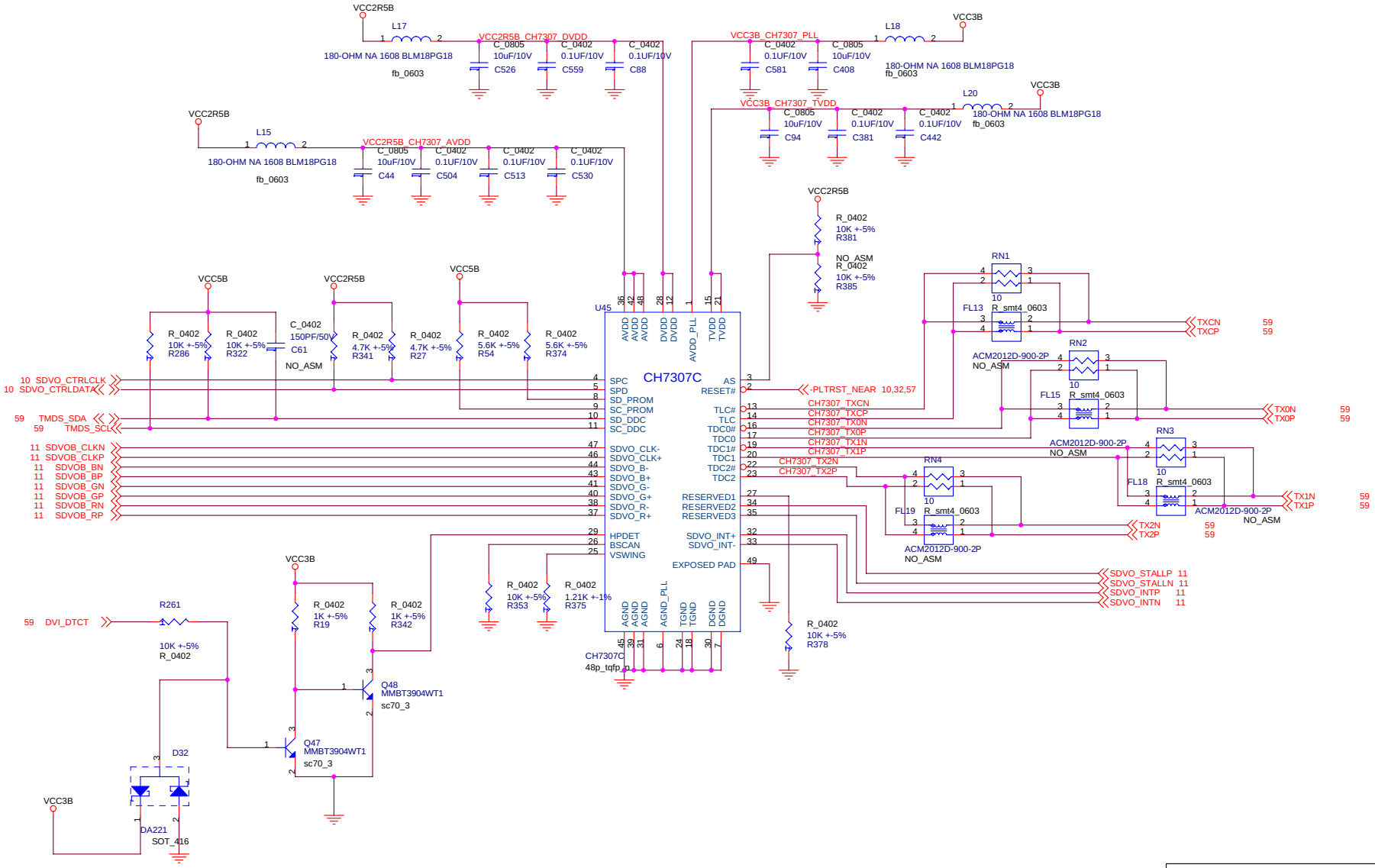
FSC BSEL2	FSB BSEL1	FSA BSEL0	CPU
0	1	1	166M
0	1	0	200M
0	0	0	266M
1	0	0	333M

LENOVO.PND
NB system design section

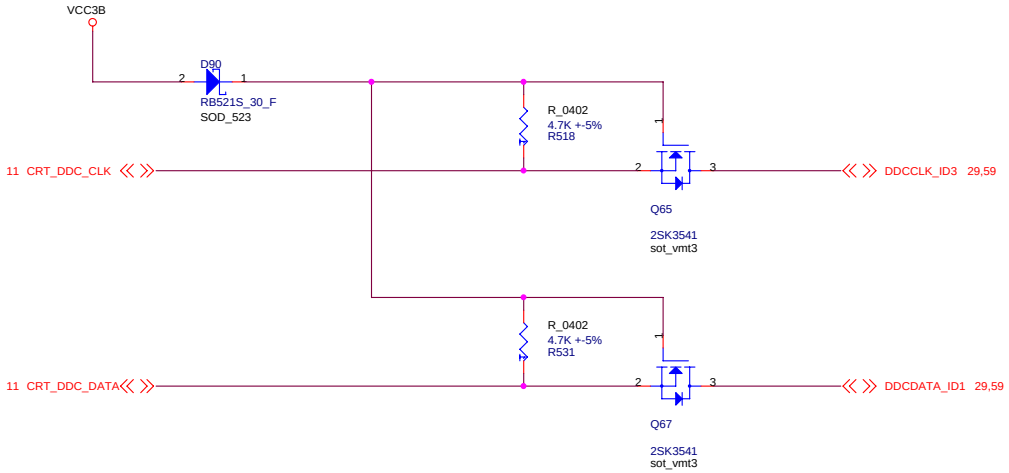
Title: CLOCK GENERATOR

Size: Custom | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 19 of 99



lenovo联想	LENOVO.PND NB system design section
Title	DVI
Size: Custom	Document Number: WAIKIKI
Rev	s1.1
Date:	Thursday, September 21, 2006
Sheet	20 of 99

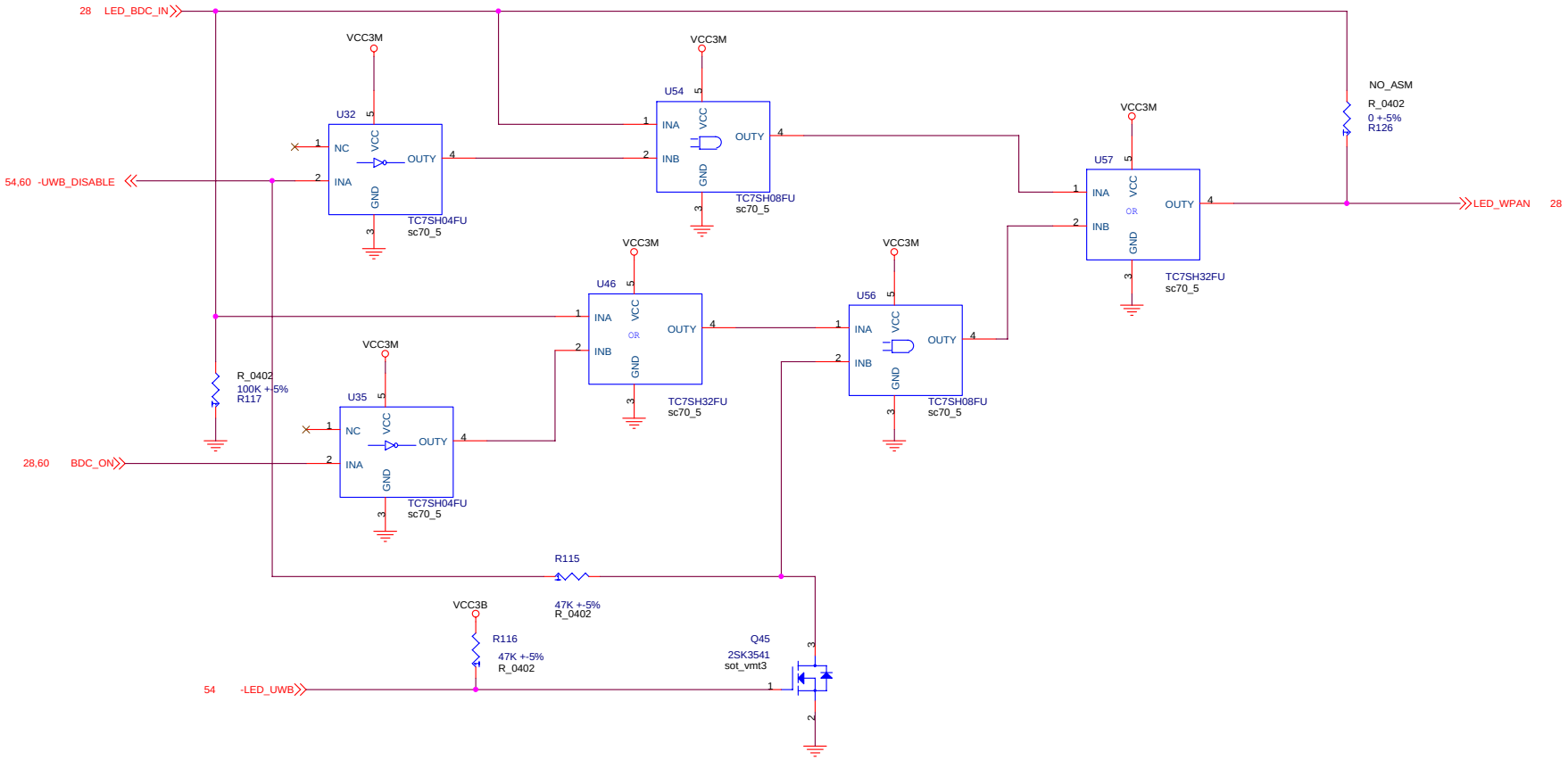


LENOVO.PND
NB system design section

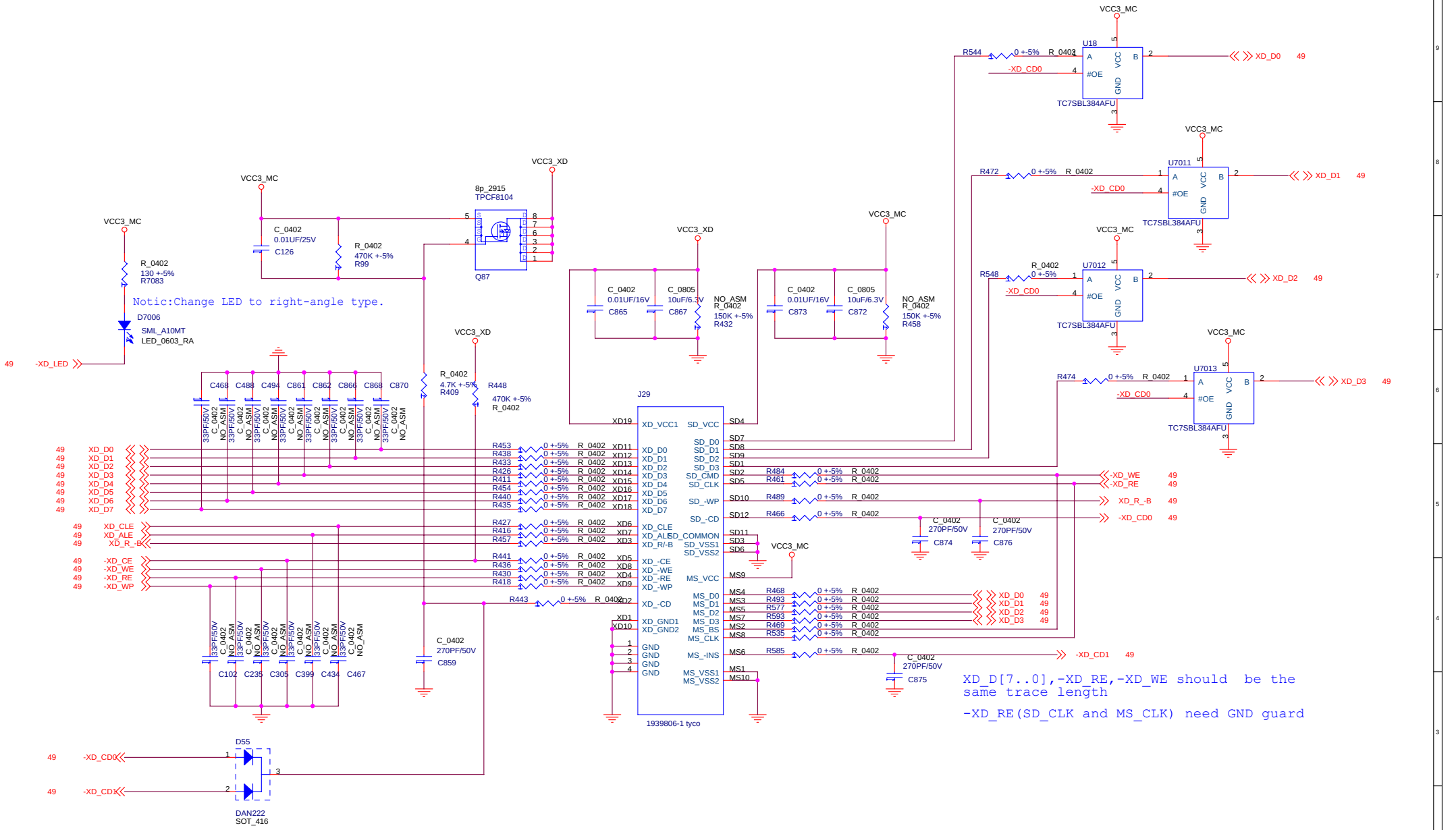
Title: CRT DDC CLK/DATA

Size: Custom | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 21 of 99



lenovo联想	LENOVO.PND NB system design section	
Title	WPAN LED CONTROL	
Size: Custom	Document Number: WAIKIKI	Rev: s1.1
Date: Thursday, September 21, 2006	Sheet 22 of 99	



lenovo联想	LENOVO.PND
	NB system design section
Title	DAV3_INTEG_SIV_W
Size: Custom	Document Number: WAIKIKI
Rev	s1.1
Date:	Thursday, September 21, 2006
Sheet	23 of 99

BLACK PAGE

lenovo联想	LENOVO.PND NB system design section
Title	BLANK
Size: Custom	Document Number: WAIKIKI
Rev	s1.1
Date:	Thursday, September 21, 2006
Sheet	24 of 99

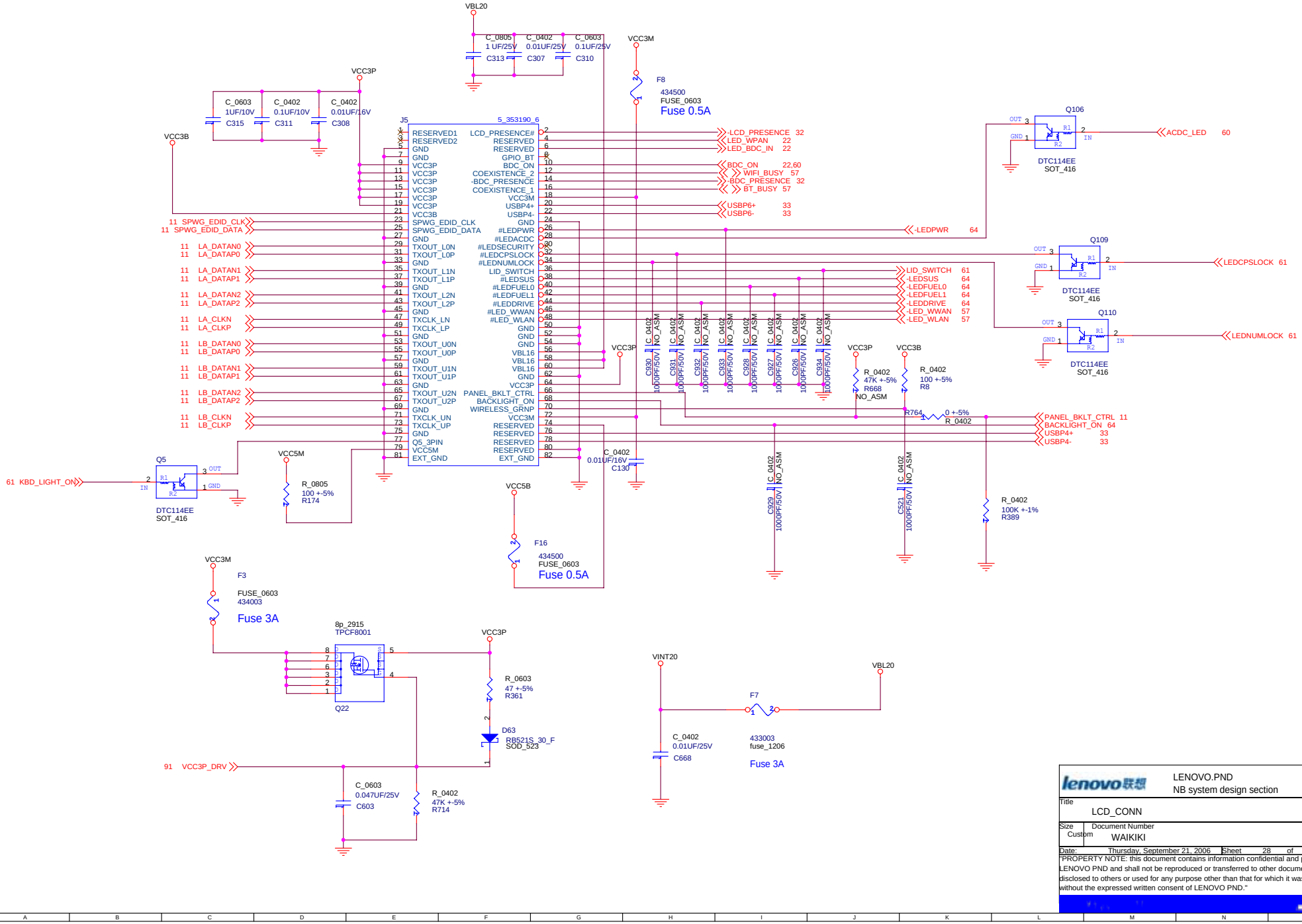
BLACK PAGE

lenovo联想	LENOVO.PND NB system design section
Title	BLANK
Size: Custom	Document Number: WAIKIKI
Rev	s1.1
Date:	Thursday, September 21, 2006
Sheet	25 of 99

BLACK PAGE

lenovo联想	LENOVO.PND NB system design section	
Title: BLANK		
Size: Custom	Document Number: WAIKIKI	Rev: s1.1
Date: Thursday, September 21, 2006	Sheet 26 of 99	

BLACK PAGE



lenovo联想

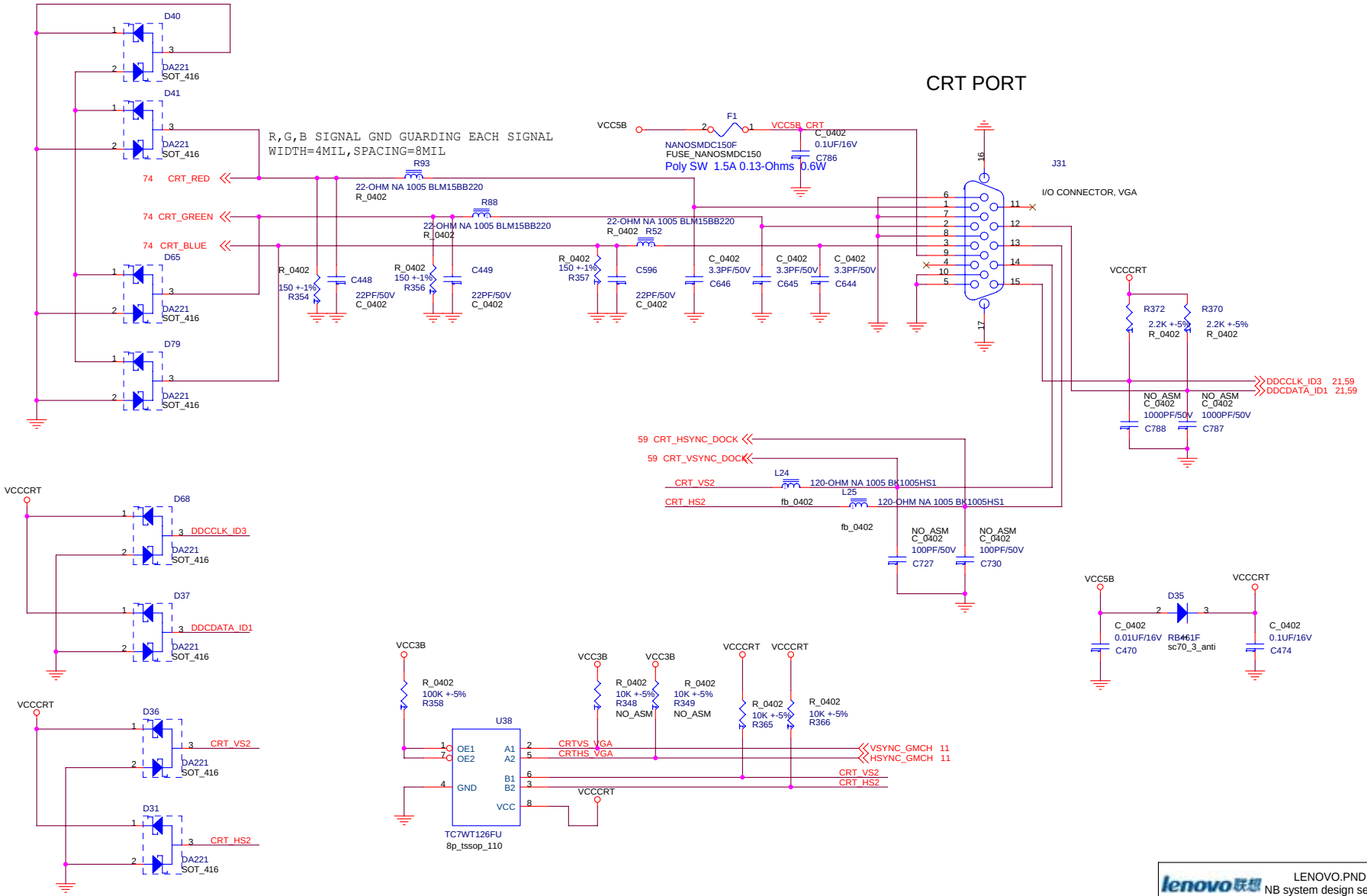
LENOVO.PND
NB system design section

Title
LCD_CONN

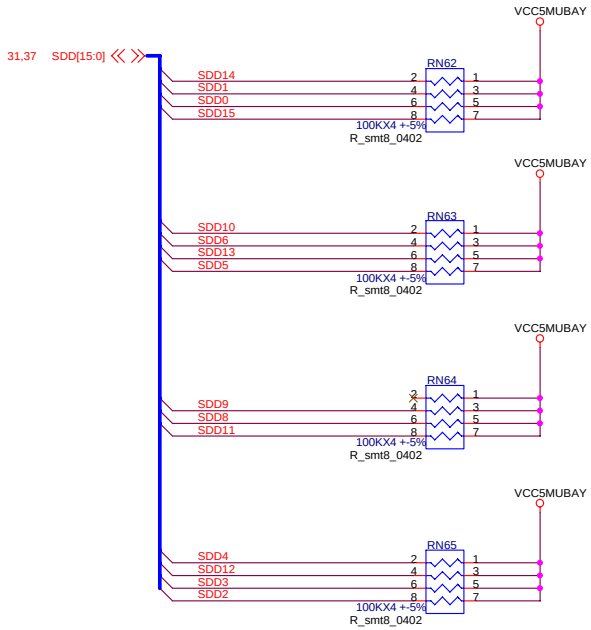
Size Custom | Document Number WAIKIKI | Rev s1.1

Date: Thursday, September 21, 2006 | Sheet 28 of 99

CRT PORT



lenovo联想	LENOVO.PND NB system design section		
Title	VGA_CONN		
Size Custom	Document Number WAIKIKI		Rev s1.1
Date: Thursday, September 21, 2006	Sheet 29 of 99		

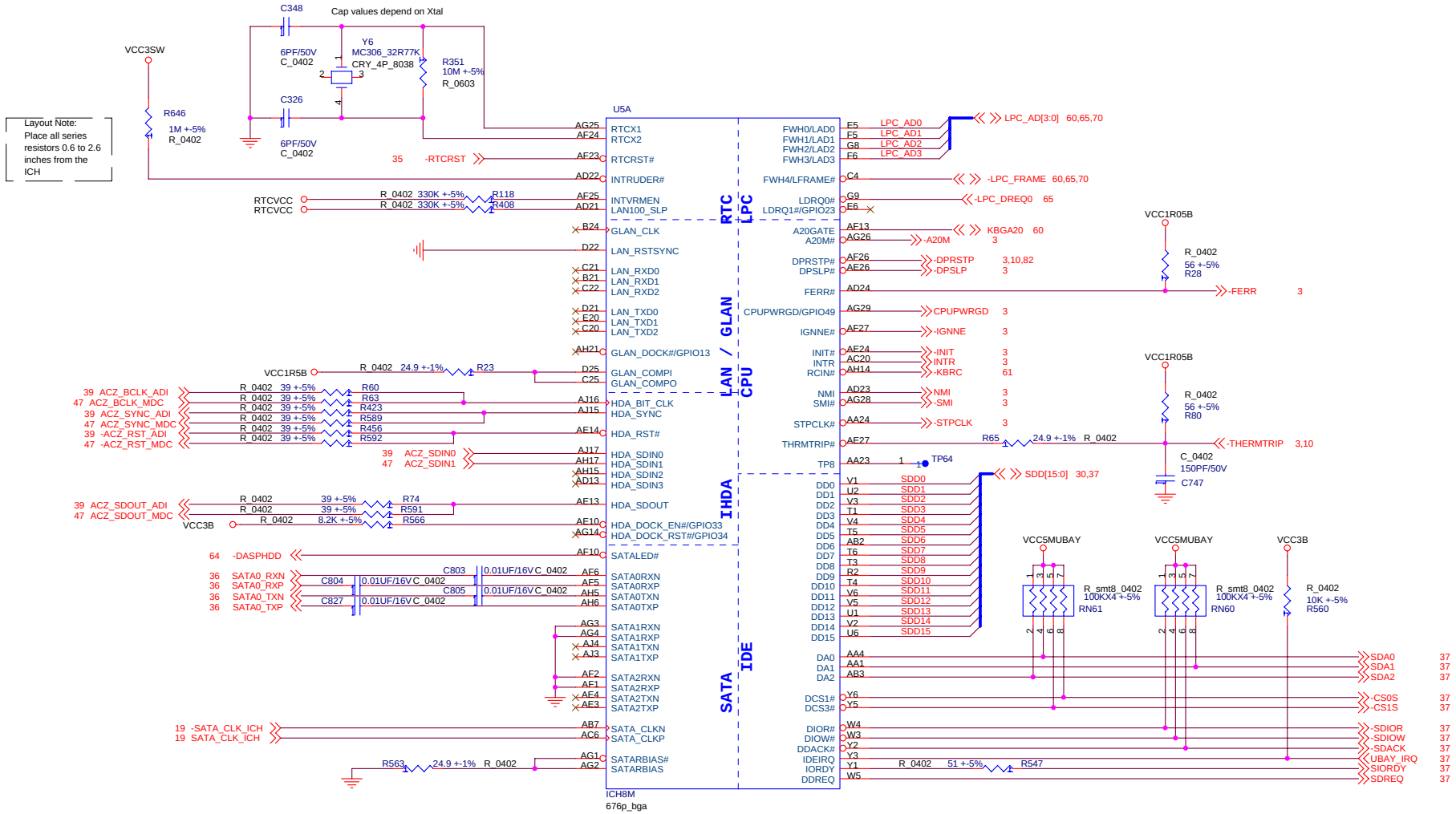


LENOVO.PND
NB system design section

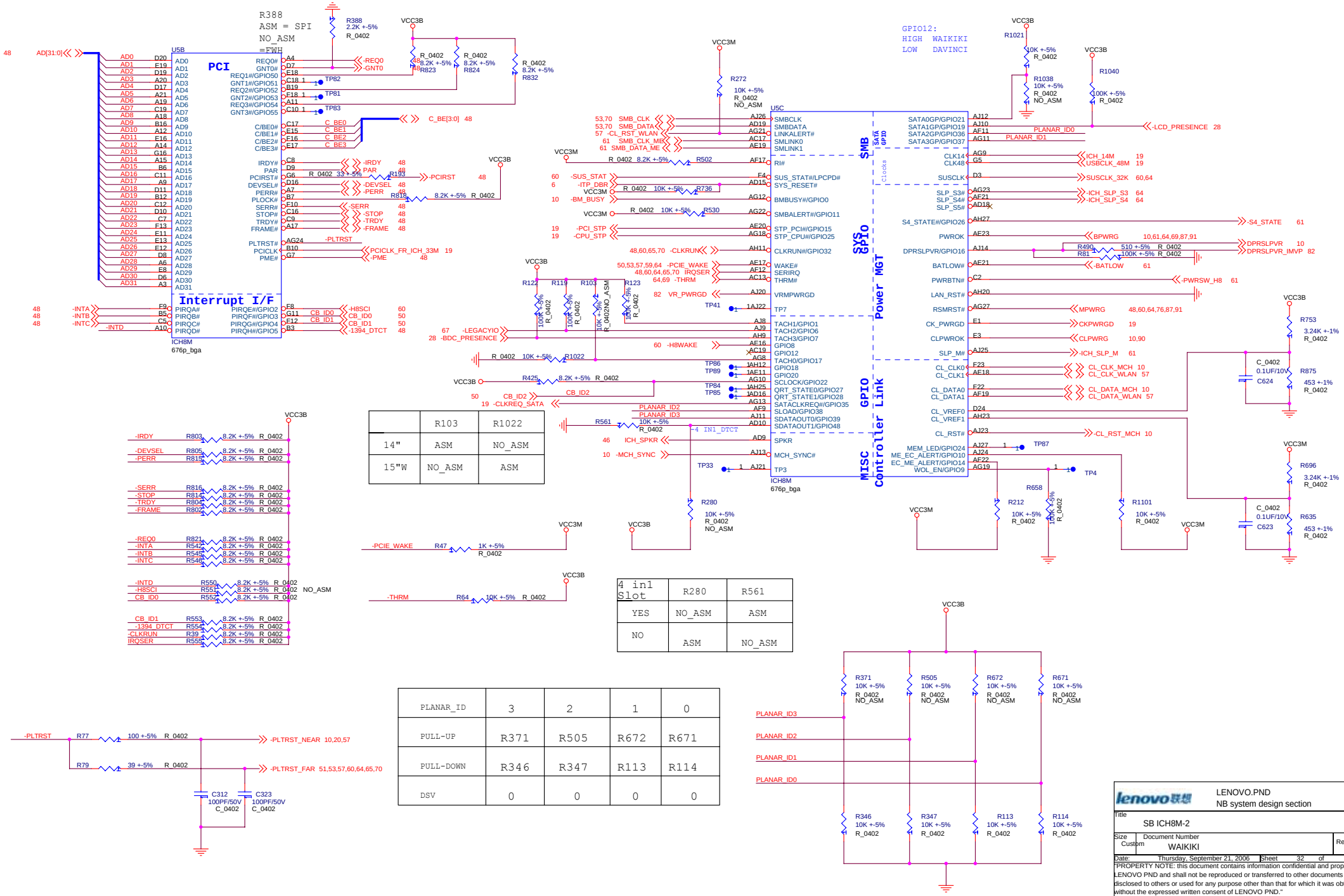
Title: PATA I/F PU

Size: Custom | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 30 of 99



Company	LENOVO.PND
	NB system design section
Title	SB ICH8M-1
Size	Custom
Document Number	WAIKIKI
Rev	s1.1
Date:	Thursday, September 21, 2006
Sheet	31 of 99



	R103	R1022
14"	ASM	NO_ASM
15"W	NO_ASM	ASM

4 in1 Slot	R280	R561
YES	NO_ASM	ASM
NO	ASM	NO_ASM

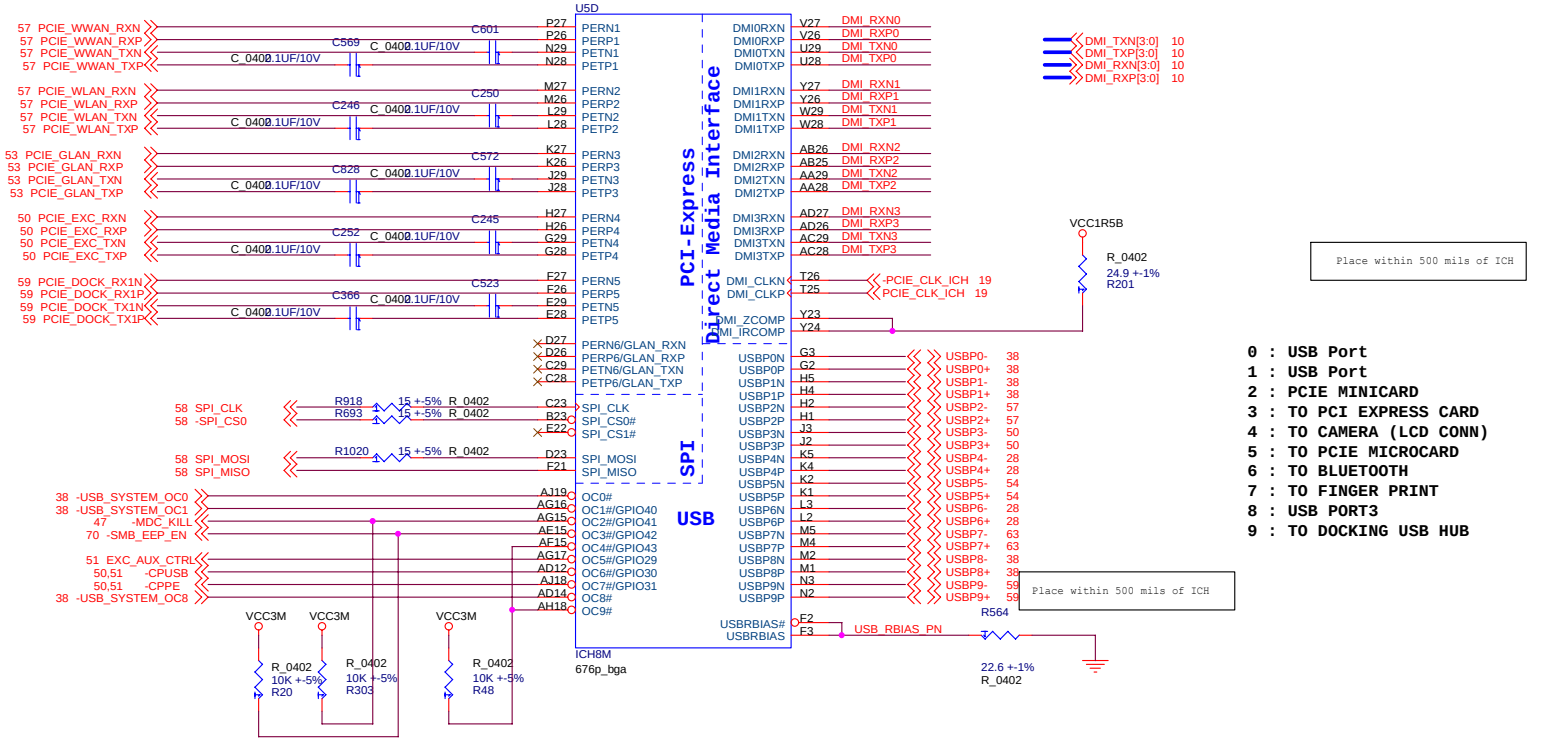
PLANAR_ID	3	2	1	0
PULL-UP	R371	R505	R672	R671
PULL-DOWN	R346	R347	R113	R114
DSV	0	0	0	0

LENOVO.PND
NB system design section

Title: SB ICH8M-2

Size: Custom | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 32 of 99

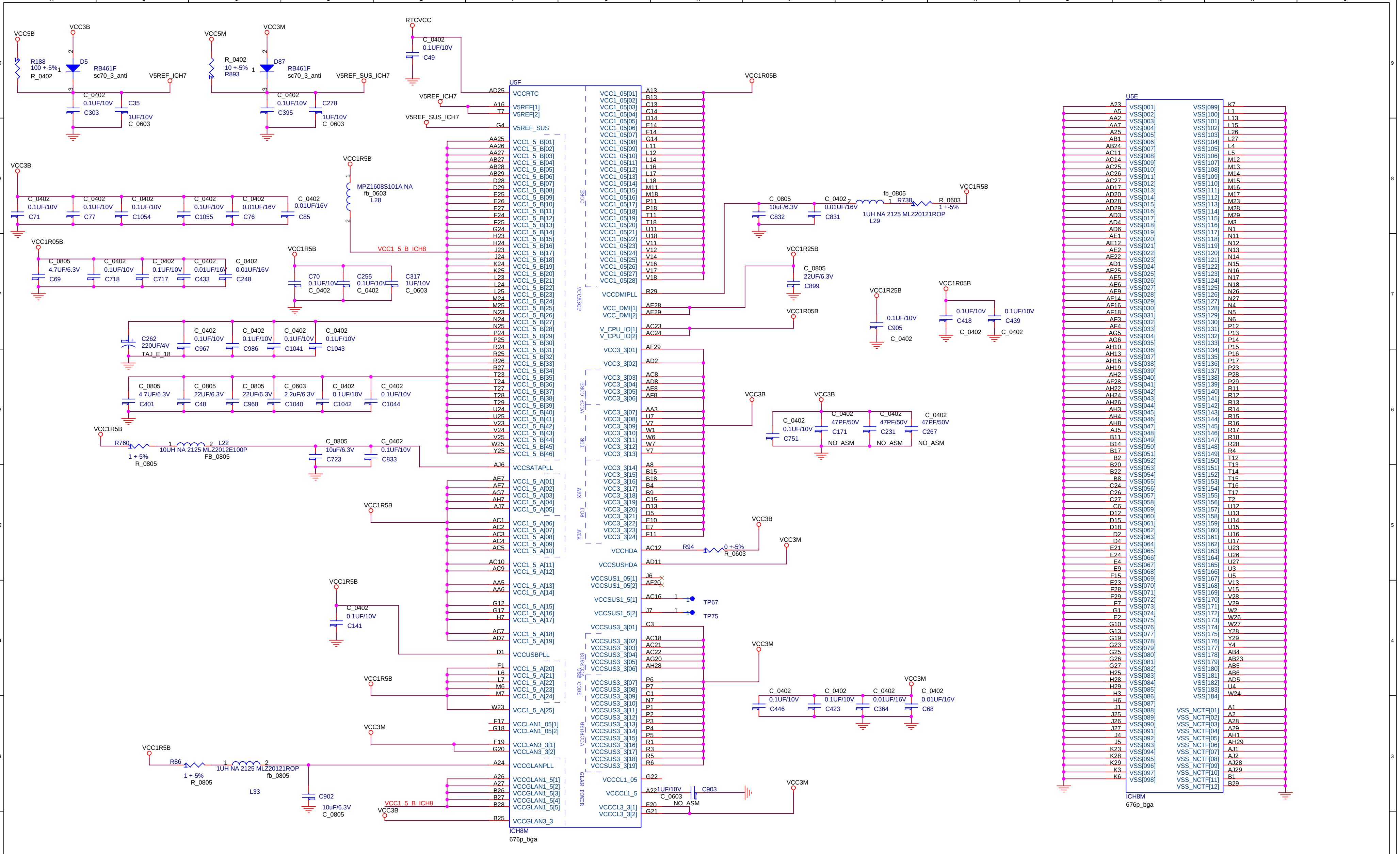


LENOVO.PND
NB system design section

Title: ICH8-3

Size: Custom | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 33 of 99

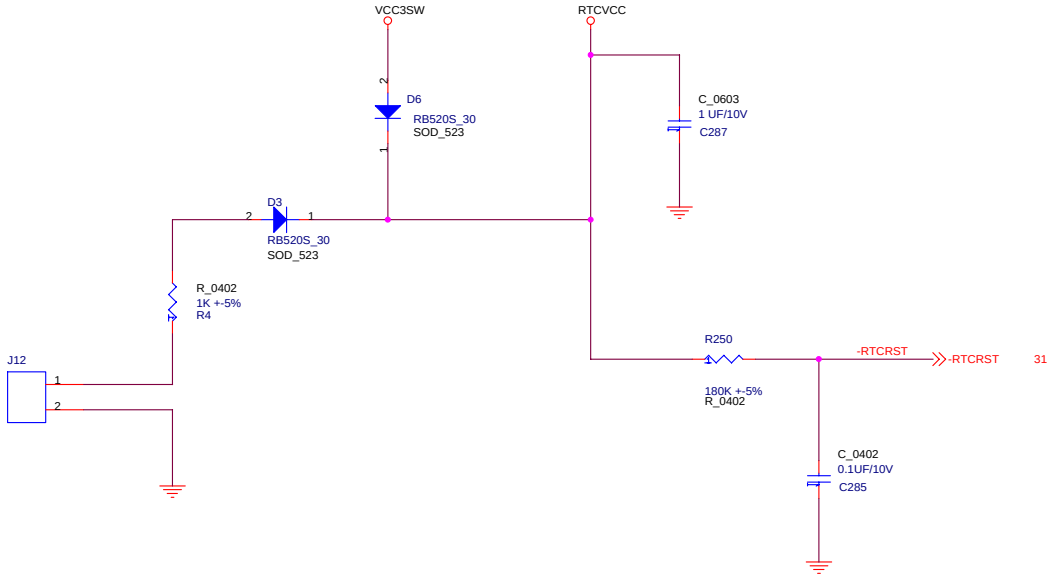


LENOVO.PND
NB system design section

Title: ICH8-4

Size	Document Number	Rev
C	WAIKIKI	s1.1

Date: Thursday, September 21, 2006 Sheet 34 of 99



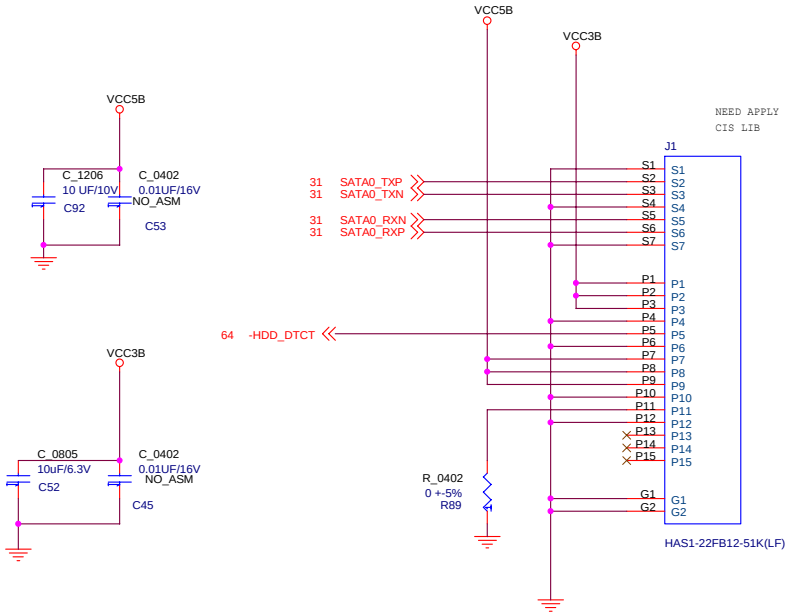
lenovo联想

LENOVO.PND
NB system design section

Title
FWH,RTC BATTERY

Size	Document Number	Rev
Custom	WAIKIKI	s1.1

Date: Thursday, September 21, 2006 Sheet 35 of 99



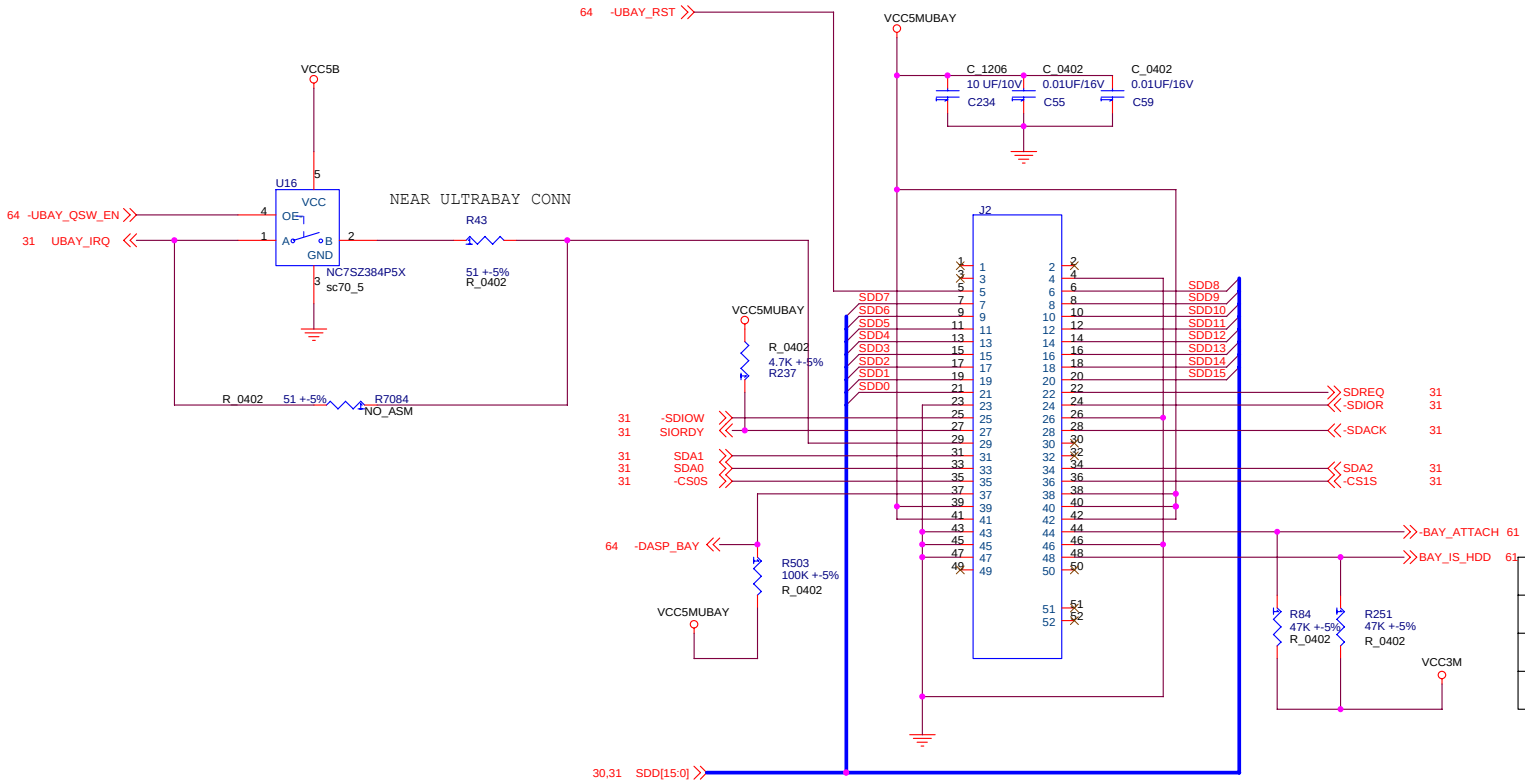
lenovo联想

LENOVO.PND
NB system design section

Title
SATA HDD CONN

Size	Document Number	Rev
Custom	WAIKIKI	s1.1

Date: Thursday, September 21, 2006 Sheet 36 of 99



	SWAP BAY	FIXED BAY
U16	ASM	NO_ASM
R43	ASM	NO_ASM
R7084	NO_ASM	ASM

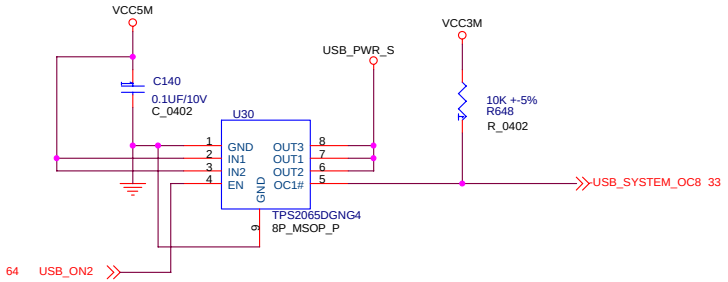
	-BAY_ATTACH	BAY_IS_HDD
NO DEVICE	H	DON'T CARE
OPTICAL	L	L
HDD	L	H

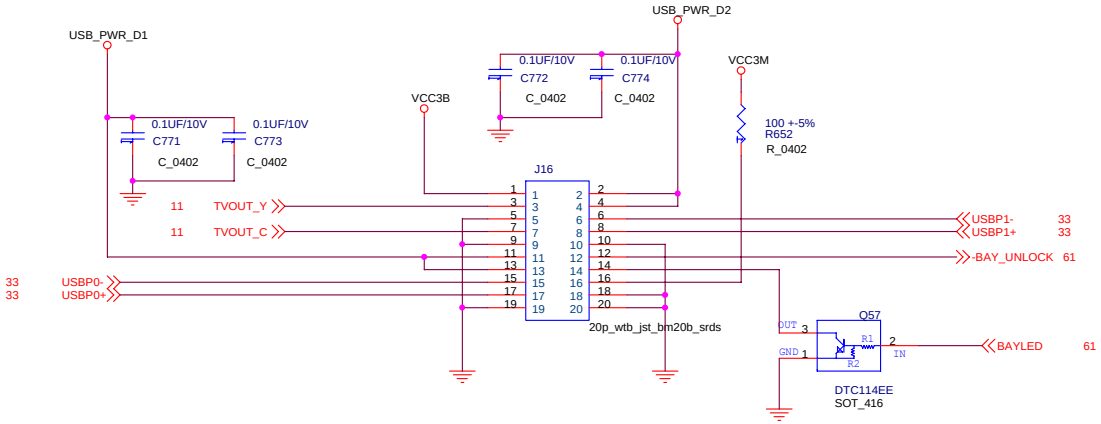
LENOVO.PND
NB system design section

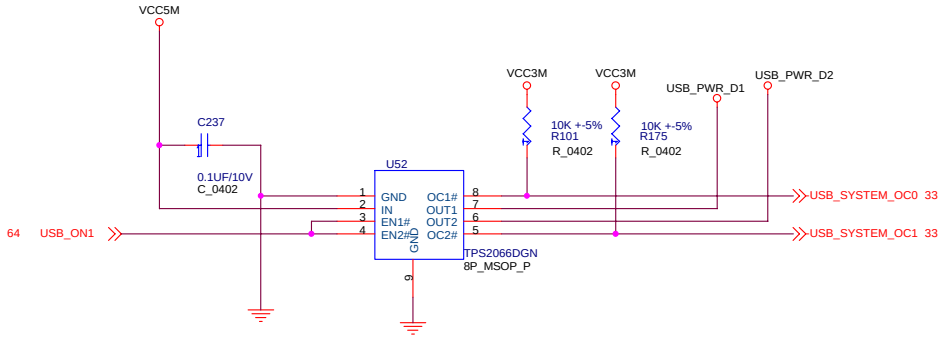
Title: BAY I/F CONN

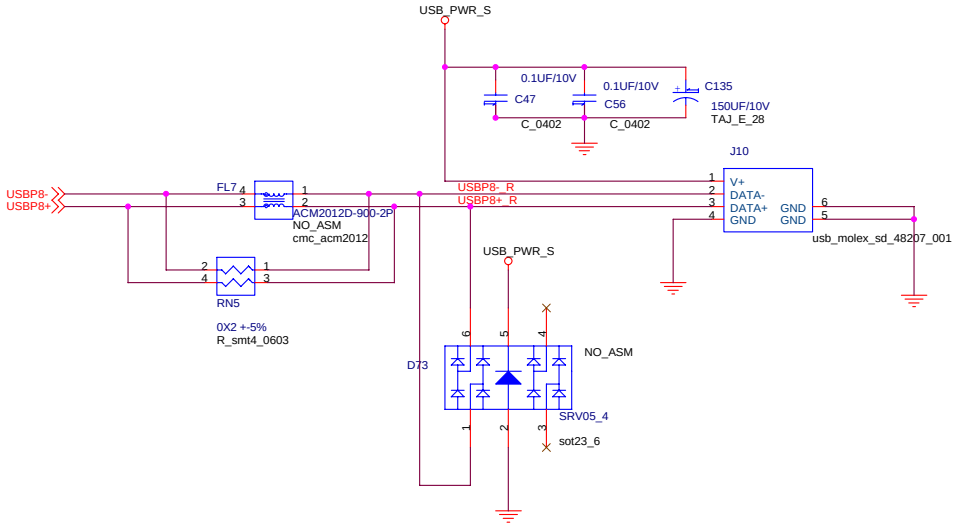
Size: Custom | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 37 of 99









lenovo联想

LENOVO.PND
NB system design section

Title
USB PWR/CONN

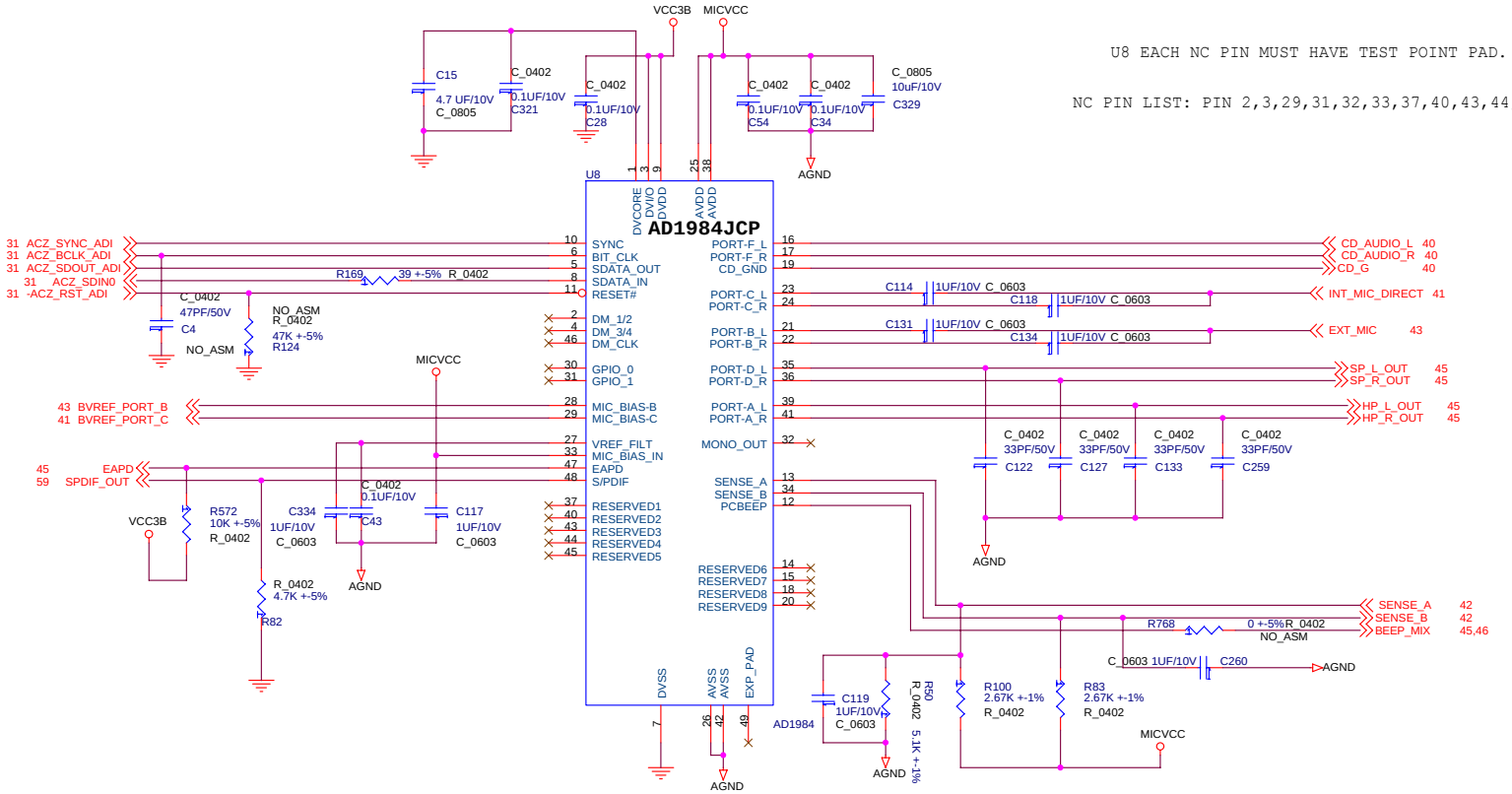
Size	Document Number	Rev
Custom	WAIKIKI	s1.1

Date: Thursday, September 21, 2006 Sheet 38 of 99

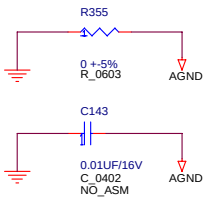
PLACE 0.1UF CAPS NEAR PIN 3

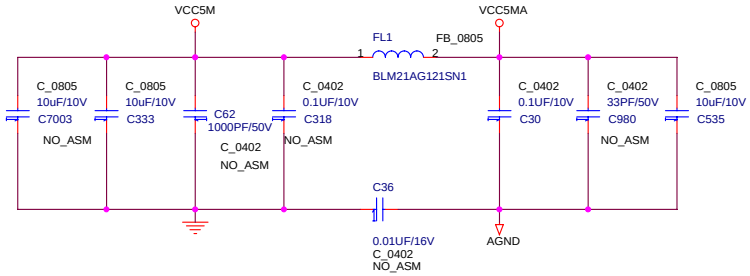
U8 EACH NC PIN MUST HAVE TEST POINT PAD.

NC PIN LIST: PIN 2,3,29,31,32,33,37,40,43,44,45,46



PLACE UNDER AD1984HD





LENOVO.PND
NB system design section

Title: AUDIO CODEC AD1984

Size: Custom | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 39 of 99

CONTACT NEAR DOCKING CONN

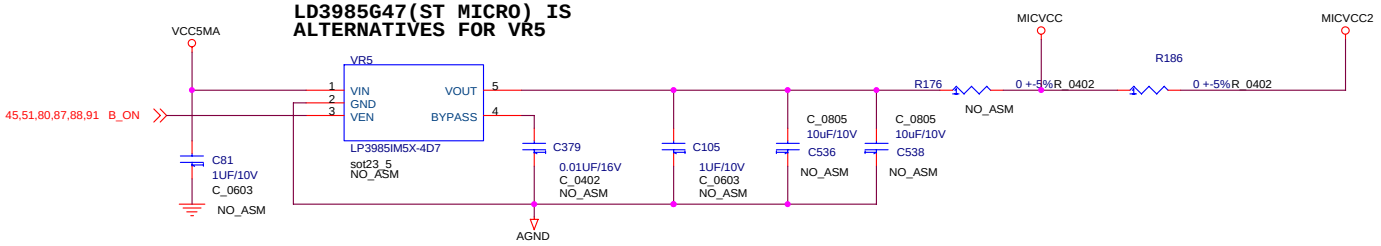
LENOVO.PND
NB system design section

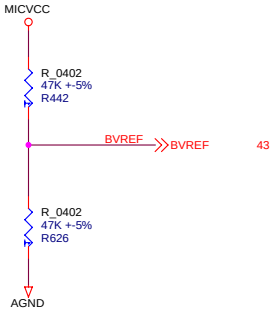
Title
AUDIO MISC

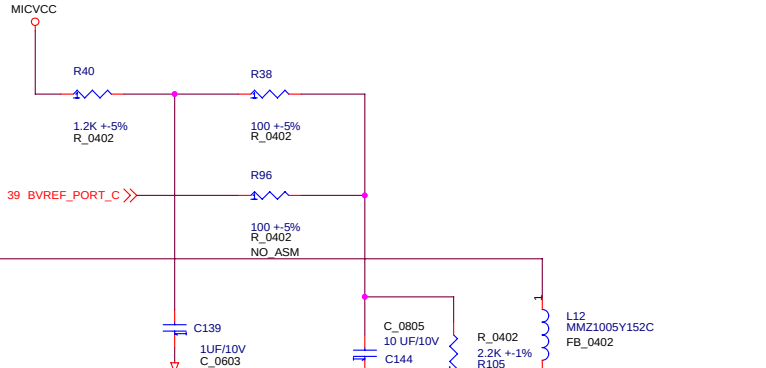
Size: Custom | Document Number: WAIKIKI | Rev: s1.1

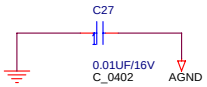
Date: Thursday, September 21, 2006 | Sheet 40 of 99

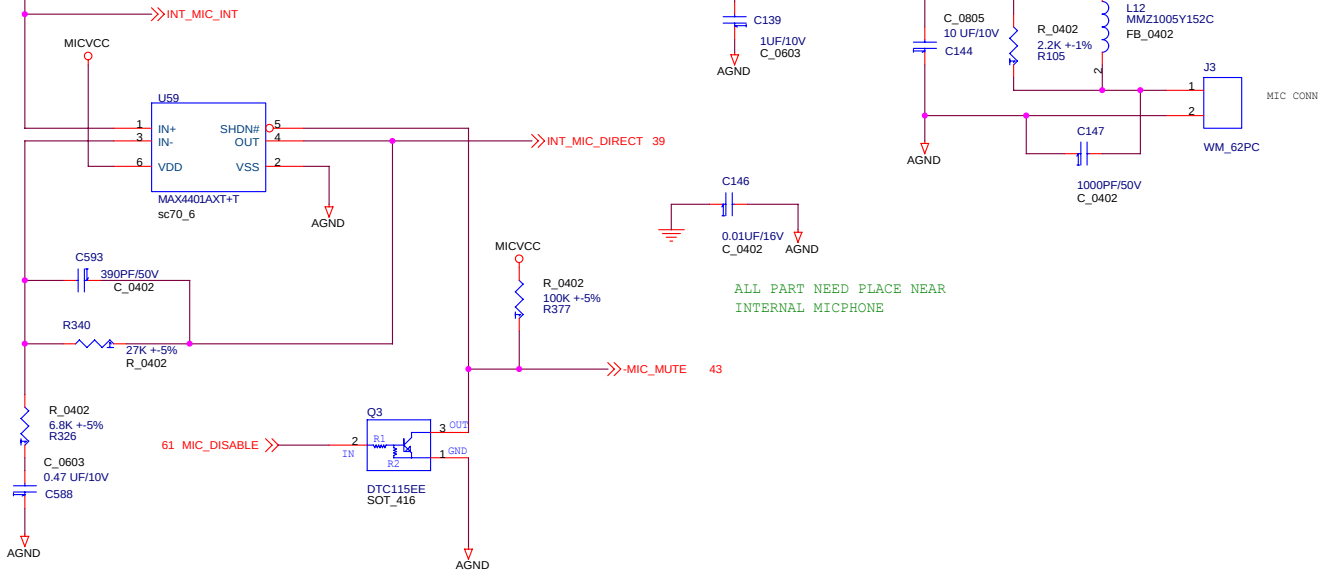
LD3985G47(ST MICRO) IS ALTERNATIVES FOR VR5











lenovo联想	LENOVO.PND NB system design section
Title	AUDIO INT MIC
Size: Custom	Document Number: WAIKIKI
Rev	s1.1
Date:	Thursday, September 21, 2006
Sheet	41 of 99

NEAR HEADPHONE CONN

C_0402
1000PF/50V
C120

FL2
BK1608HM102
FB_0603

AGND

VCC5MA

R_0402
10K +-5%
R1019

R36
0 +-5%
R_0402

HP_JACK_IN 61

45 HP_L_JACK
45 HP_R_JACK

FL3 MMZ1005Y152C FB_0402
FL5 MMZ1005Y152C FB_0402

R_0402
2.2K +-5%
R742

R_0402
2.2K +-5%
R743

C_0402
1000PF/50V
C13

C_0402
1000PF/50V
C197

R_0402
10K +-5%
R744

FL4 MMZ1005Y152C FB_0402

Q99
DTC115EE
SOT_416

R319
39.2K +-1%
R_0402

SENSE_A 39

Q50
2SK3541
sot_vmt3

R257
22K +-5%
R_0402

J18A
MIC
HEADPHONE
1827808-1 REV.C

M3 MIC_JACK_5 43
M1 MIC_JACK_2 43
M2
M4
M5 R872 0 +-5% R_0402 MIC_JACK_3 43
M6
H3
H1
H2
H4
H5
H6
G1

FL11 MMZ1005Y152C FB_0402

R199
10K +-5%
R_0402

-DOCK_HPOUT_DTCT 59

R428
20K +-1%
R_0402

Q55
2SK3541
sot_vmt3

R295
22K +-5%
R_0402

C162
0.01UF/16V
C_0402

MICVCC

R_0402
10K +-5%
R606

R_0402
100K +-5%
R608

59 -DOCK_MICIN_DTCT

Q89
DTC115EE
SOT_416

DOCK_MIC_EN

R225
22K +-5%
R_0402

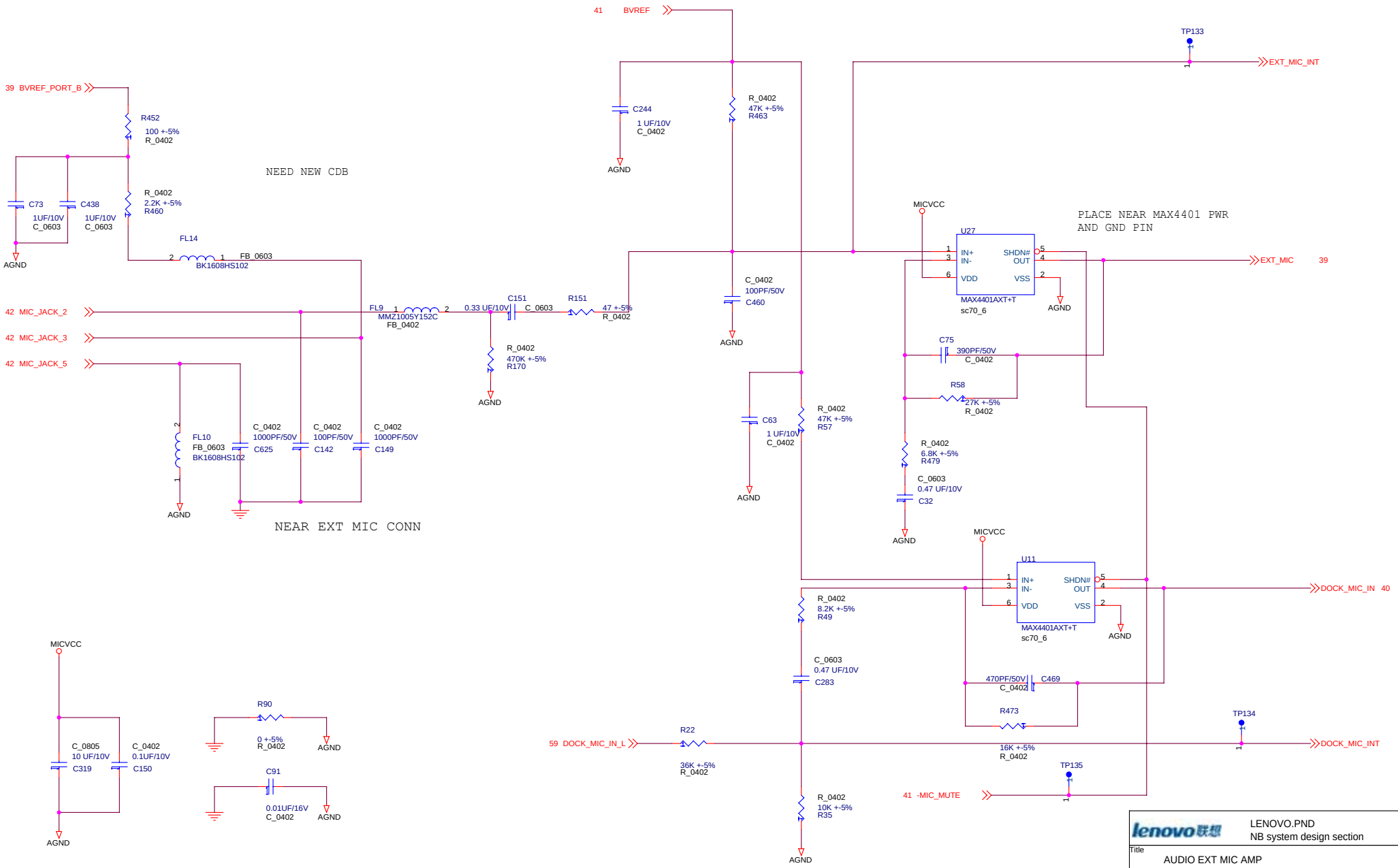
R290
20K +-1%
R_0402

SENSE_B 39

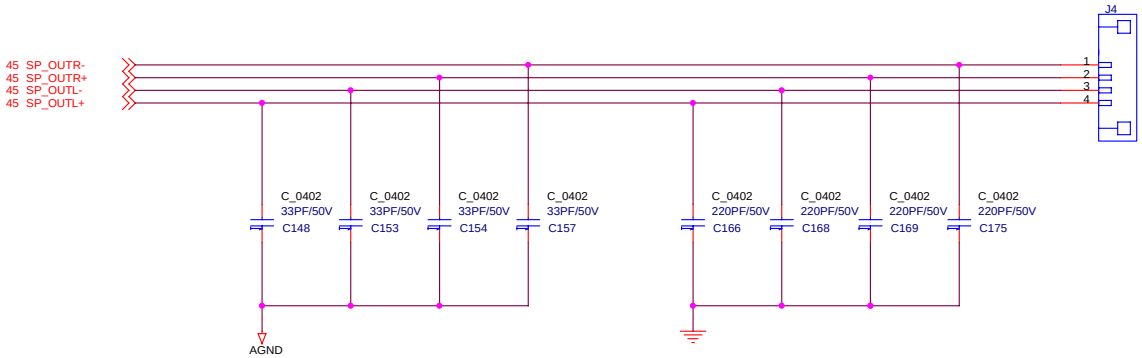
Q30
2SK3541
sot_vmt3

C666
1000PF/50V
C_0402
NO_ASM

lenovo联想	LENOVO.PND NB system design section
Title	EXT MIC JACK
Size: Custom	Document Number: WAIKIKI
Rev	s1.1
Date:	Thursday, September 21, 2006
Sheet	42 of 99



lenovo联想	LENOVO.PND NB system design section
Title	AUDIO EXT MIC AMP
Size: Custom	Document Number: WAIKIKI
Rev	s1.1
Date:	Thursday, September 21, 2006
Sheet	43 of 99



PLACE NEAR SPEAKER AMPLIFIER

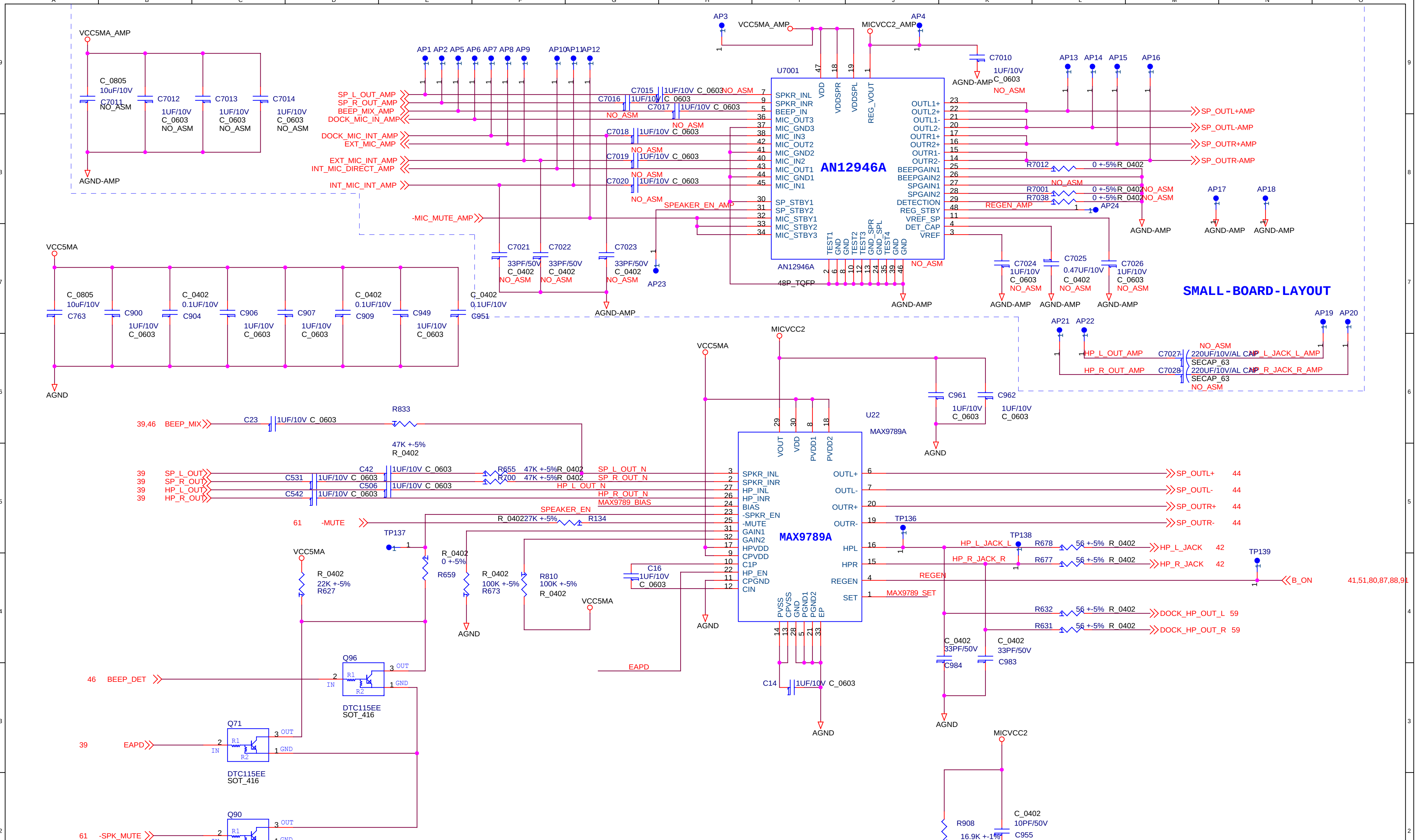
PLACE NEAR SPEAKER CONNECTOR

LENOVO.PND
NB system design section

Title: AUDIO SPEAKER

Size: Custom | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 44 of 99


A B C D E F G H I J K L M N O
VCC5MA_AMP
C_0805
10uF/10V
C7011
NO_ASM
C7012
1UF/10V
C_0603
NO_ASM
C7013
1UF/10V
C_0603
NO_ASM
C7014
1UF/10V
C_0603
NO_ASM
AGND-AMP
AP1 AP2 AP5 AP6 AP7 AP8 AP9
AP10 AP11 AP12
AP3
AP4
VCC5MA_AMP
MICVCC2_AMP
U7001
C7010
1UF/10V
C_0603
NO_ASM
AGND-AMP
SP_L_OUT_AMP
SP_R_OUT_AMP
BEEP_MIX_AMP
DOCK_MIC_IN_AMP
DOCK_MIC_INT_AMP
EXT_MIC_AMP
EXT_MIC_INT_AMP
INT_MIC_DIRECT_AMP
INT_MIC_INT_AMP
-MIC_MUTE_AMP
C7015 1UF/10V C_0603
C7016 1UF/10V C_0603
C7017 1UF/10V C_0603
C7018 1UF/10V C_0603
C7019 1UF/10V C_0603
C7020 1UF/10V C_0603
NO_ASM
SPEAKER_EN_AMP
AN12946A
SPKR_INL
SPKR_INR
BEEP_IN
MIC_OUT3
MIC_GND3
MIC_IN3
MIC_OUT2
MIC_GND2
MIC_IN2
MIC_OUT1
MIC_GND1
MIC_IN1
SP_STBY1
SP_STBY2
MIC_STBY1
MIC_STBY2
MIC_STBY3
VDD
VDDSPR
VDDSPL
REG_VOUT
OUTL1+
OUTL2+
OUTL1-
OUTL2-
OUTR1+
OUTR2+
OUTR1-
OUTR2-
BEEPGAIN1
BEEPGAIN2
SPGAIN1
SPGAIN2
DETECTION
REG_STBY
VREF_SP
DET_CAP
VREF
TEST1 GND GND TEST2 TEST3 GND_SPR GND_SPL TEST4 GND GND
AN12946A
48P_TQFP
AP13 AP14 AP15 AP16
SP_OUTL+AMP
SP_OUTL-AMP
SP_OUTR+AMP
SP_OUTR-AMP
R7012 0 +-5% R_0402
R7001 0 +-5% R_0402 NO_ASM
R7038 0 +-5% R_0402 NO_ASM
REGEN_AMP
AP24
AP17 AP18
AGND-AMP
C7021 33PF/50V C_0402 NO_ASM
C7022 33PF/50V C_0402 NO_ASM
C7023 33PF/50V C_0402 NO_ASM
AP23
AGND-AMP
C7024 1UF/10V C_0603 NO_ASM
C7025 0.47UF/10V C_0402 NO_ASM
C7026 1UF/10V C_0603 NO_ASM
SMALL-BOARD-LAYOUT
AP19 AP20 AP21 AP22
HP_L_OUT_AMP
HP_R_OUT_AMP
C7027 220UF/10V/AL CAP
C7028 220UF/10V/AL CAP
SECAP_63
NO_ASM
HP_L_JACK_L_AMP
HP_R_JACK_R_AMP
VCC5MA
C_0805 10uF/10V C763
C900 1UF/10V C_0603
C_0402 0.1UF/10V C904
C906 1UF/10V C_0603
C907 1UF/10V C_0603
C_0402 0.1UF/10V C909
C949 1UF/10V C_0603
C_0402 0.1UF/10V C951
AGND
MICVCC2
VCC5MA
C961 1UF/10V C_0603
C962 1UF/10V C_0603
U22
MAX9789A
39,46 BEEP_MIX
C23 1UF/10V C_0603
R833 47K +-5% R_0402
39 SP_L_OUT
39 SP_R_OUT
39 HP_L_OUT
39 HP_R_OUT
C42 1UF/10V C_0603
C531 1UF/10V C_0603
C506 1UF/10V C_0603
C542 1UF/10V C_0603
R655 47K +-5% R_0402
R700 47K +-5% R_0402
SP_L_OUT_N
SP_R_OUT_N
HP_L_OUT_N
HP_R_OUT_N
MAX9789_BIAS
SPEAKER_EN
61 -MUTE
R_0402 27K +-5% R134
TP137
VCC5MA
R_0402 0 +-5% R659
R_0402 22K +-5% R627
R_0402 100K +-5% R673
R810 100K +-5% R_0402
VCC5MA
C16 1UF/10V C_0603
SPKR_INL
SPKR_INR
HP_INL
HP_INR
BIAS
-SPKR_EN
-MUTE
GAIN1
GAIN2
HPVDD
CPVDD
C1P
HP_EN
CPGND
CIN
VOUT VDD PVDD1 PVDD2
MAX9789A
OUTL+
OUTL-
OUTR+
OUTR-
HPL
HPR
REGEN
SET
PVSS CPVSS GND PGND1 PGND2 EP
SP_OUTL+ 44
SP_OUTL- 44
SP_OUTR+ 44
SP_OUTR- 44
TP136
TP138
HP_L_JACK_L
HP_R_JACK_R
R678 56 +-5% R_0402
R677 56 +-5% R_0402
HP_L_JACK 42
HP_R_JACK 42
TP139
REGEN
B_ON 41,51,80,87,88,91
MAX9789_SET
R632 56 +-5% R_0402
R631 56 +-5% R_0402
DOCK_HP_OUT_L 59
DOCK_HP_OUT_R 59
C_0402 33PF/50V C984
C_0402 33PF/50V C983
AGND
C14 1UF/10V C_0603
AGND
EAPD
46 BEEP_DET
Q96
DTC115EE
SOT_416
39 EAPD
Q71
DTC115EE
SOT_416
61 -SPK_MUTE
Q90
DTC115EE
SOT_416
AGND
MAX9789_BIAS
C_0402 33PF/50V C982
C901 1UF/10V C_0603
AGND
MICVCC2
R908 16.9K +-1% R_0402
C_0402 10PF/50V C955
MAX9789_SET
R941 10K +-1% R_0402
AGND

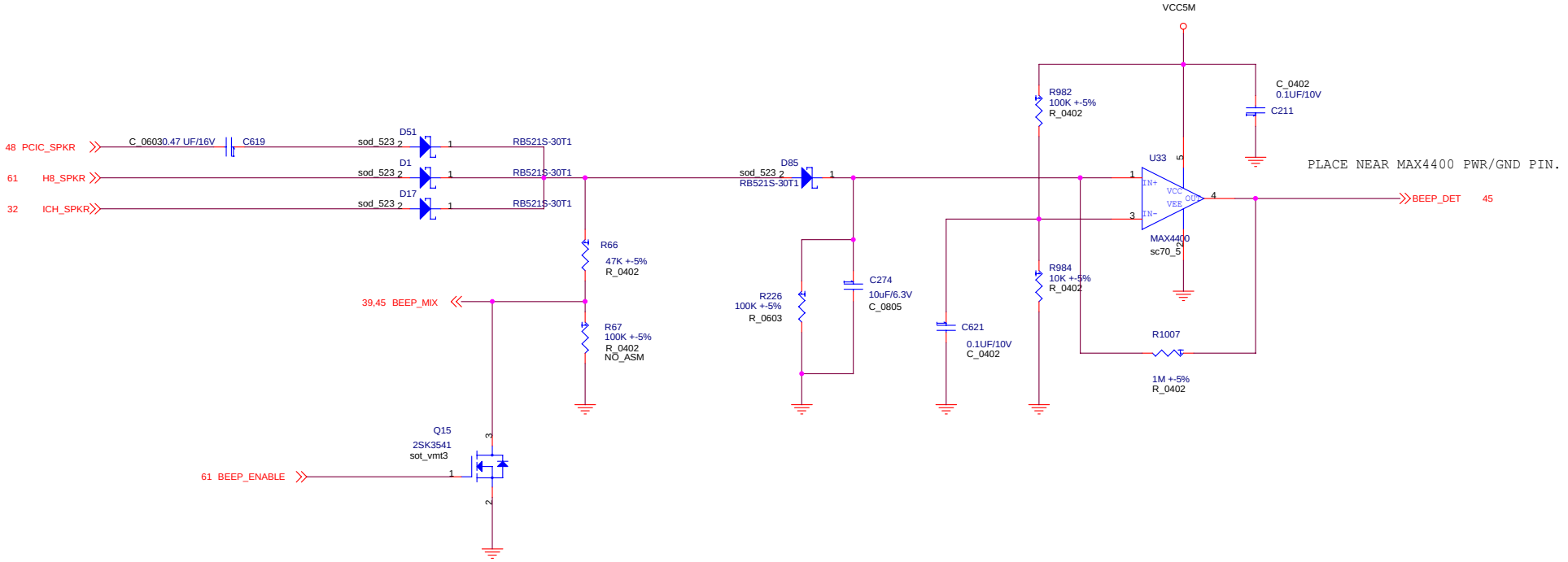
lenovo联想

LENOVO.PND
NB system design section

Title: AUDIO HDP AMP

Size	Document Number	Rev
Custom	WAIKIKI	s1.1

Date: Thursday, September 21, 2006 Sheet 45 of 99



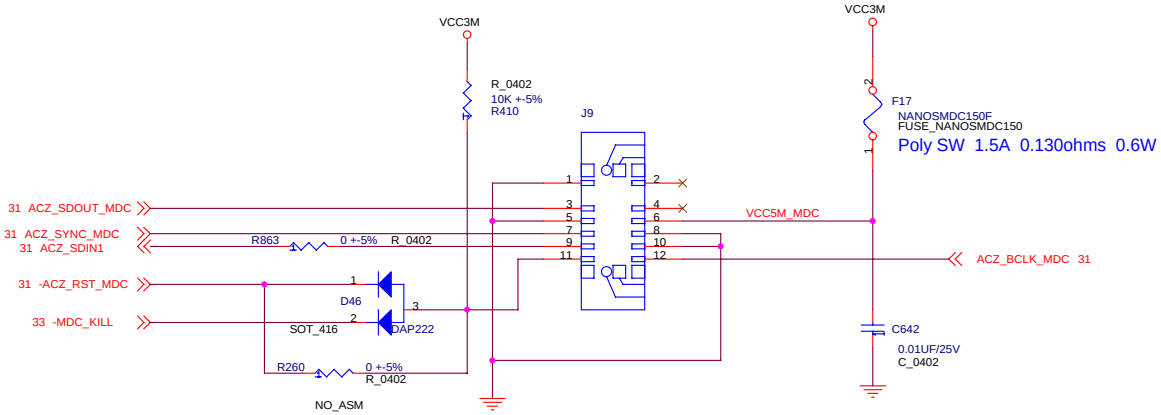
lenovo联想

LENOVO.PND
NB system design section

Title: AUDIO HDP BEEP

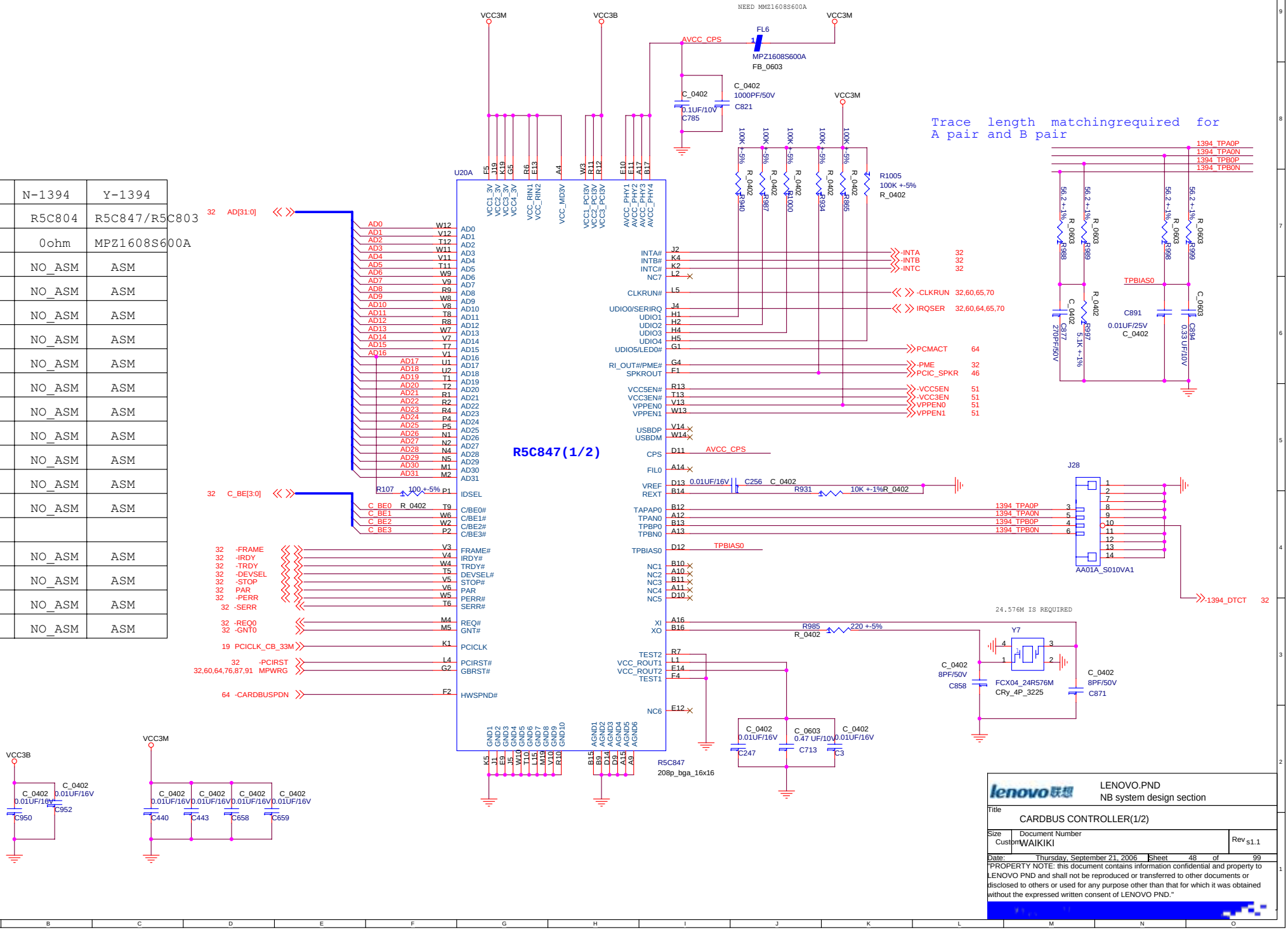
Size: Custom | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 46 of 99



lenovo联想	LENOVO.PND NB system design section	
Title	MDC CONN	
Size: Custom	Document Number: WAIKIKI	Rev: s1.1
Date: Thursday, September 21, 2006	Sheet 47 of 99	

	N-1394	Y-1394
U20	R5C804	R5C847/R5C803
FL6	0ohm	MPZ1608S600A
R931	NO_ASM	ASM
C256	NO_ASM	ASM
R988	NO_ASM	ASM
R989	NO_ASM	ASM
R998	NO_ASM	ASM
R999	NO_ASM	ASM
C877	NO_ASM	ASM
R997	NO_ASM	ASM
C891	NO_ASM	ASM
C894	NO_ASM	ASM
J28	NO_ASM	ASM
R985	NO_ASM	ASM
Y7	NO_ASM	ASM
C858	NO_ASM	ASM
C871	NO_ASM	ASM

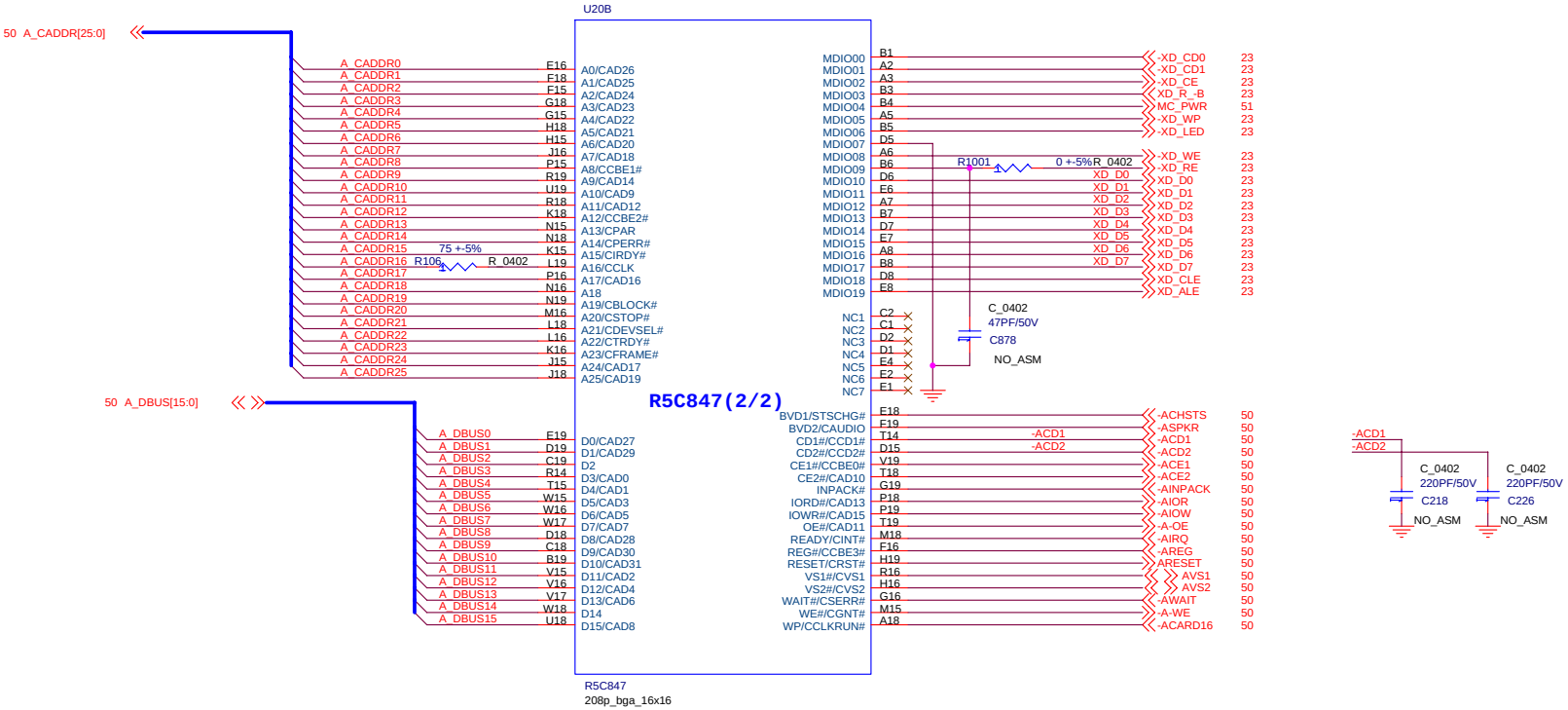


LENOVO.PND
NB system design section

Title: CARDBUS CONTROLLER(1/2)

Size: Custom | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 48 of 99

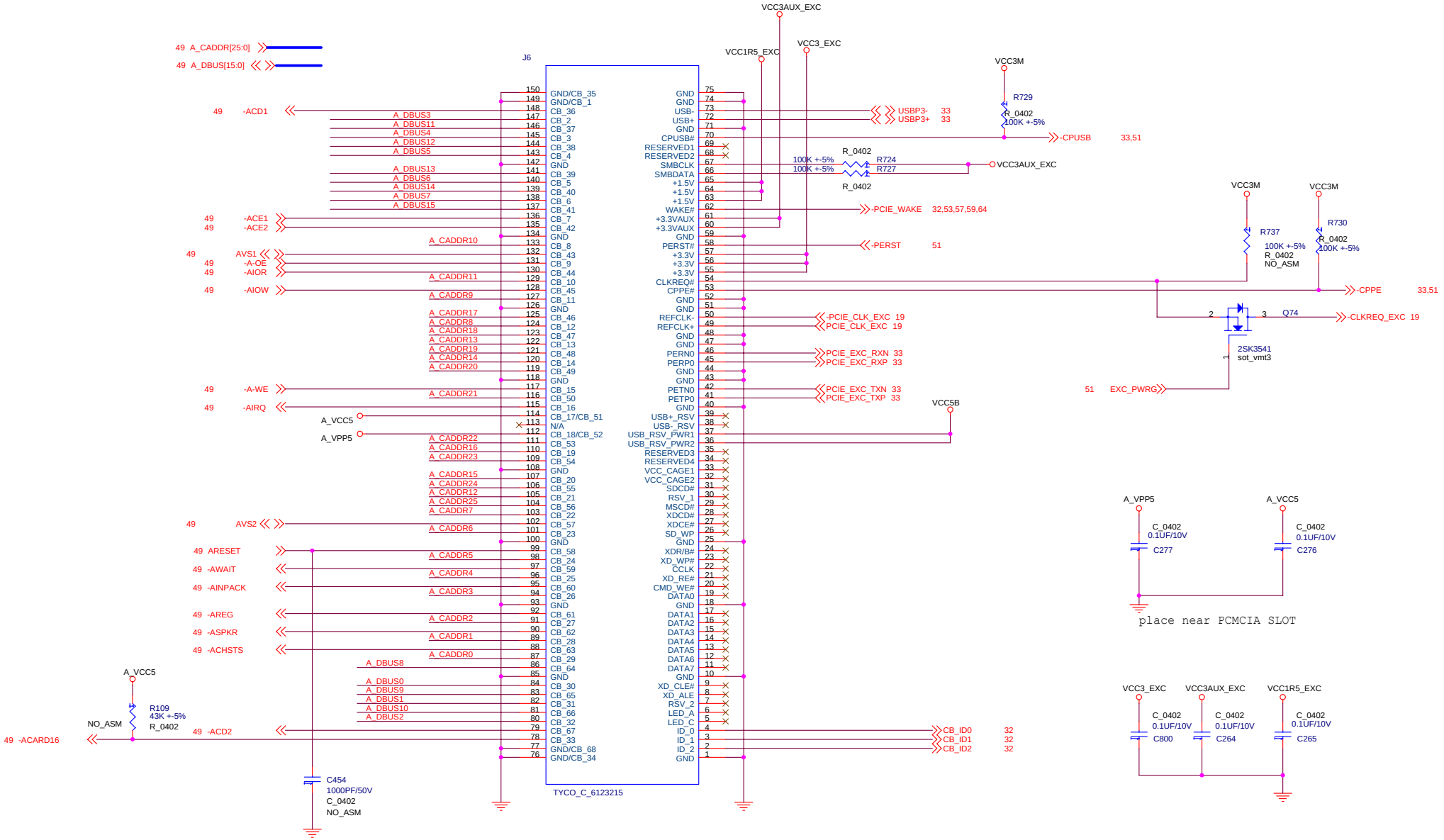


LENOVO.PND
NB system design section

Title: CARD BUS CONTROLLER(2/2)

Size: Custom | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 49 of 99

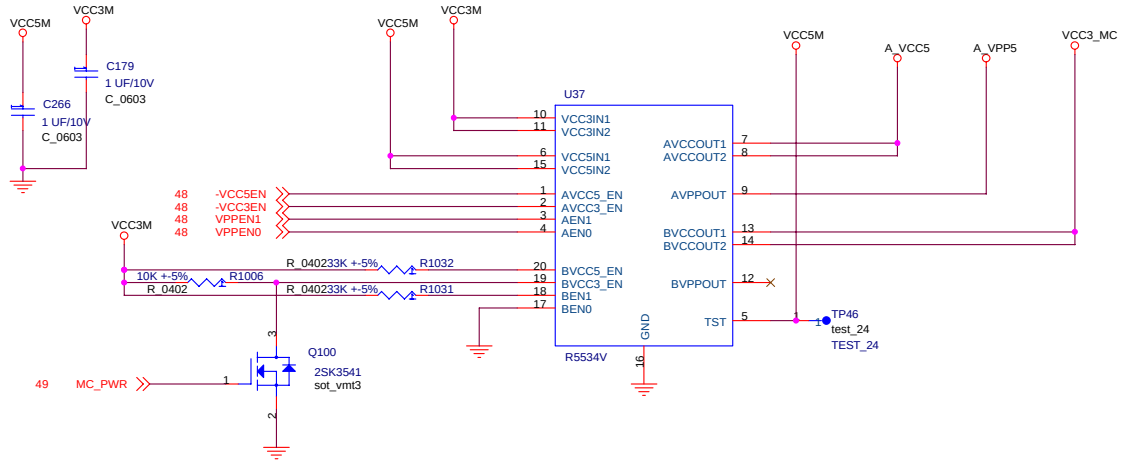


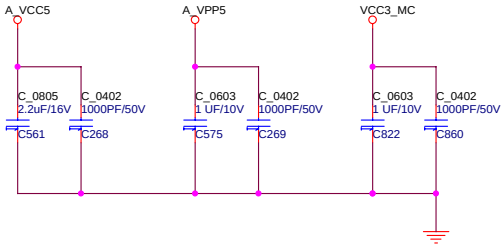
LENOVO.PND
NB system design section

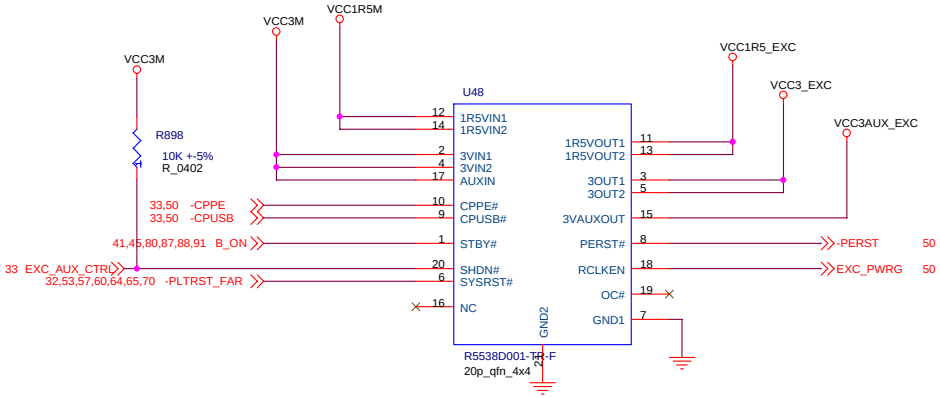
Title: CARDBUS SLOT

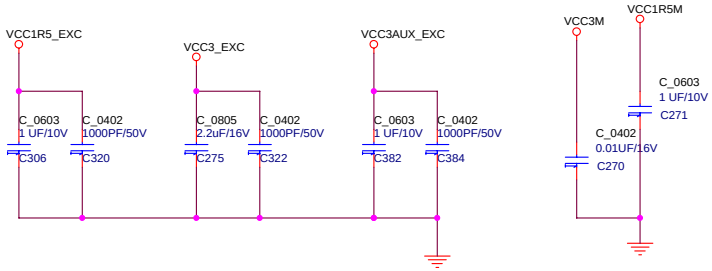
Size: Custom | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 50 of 99









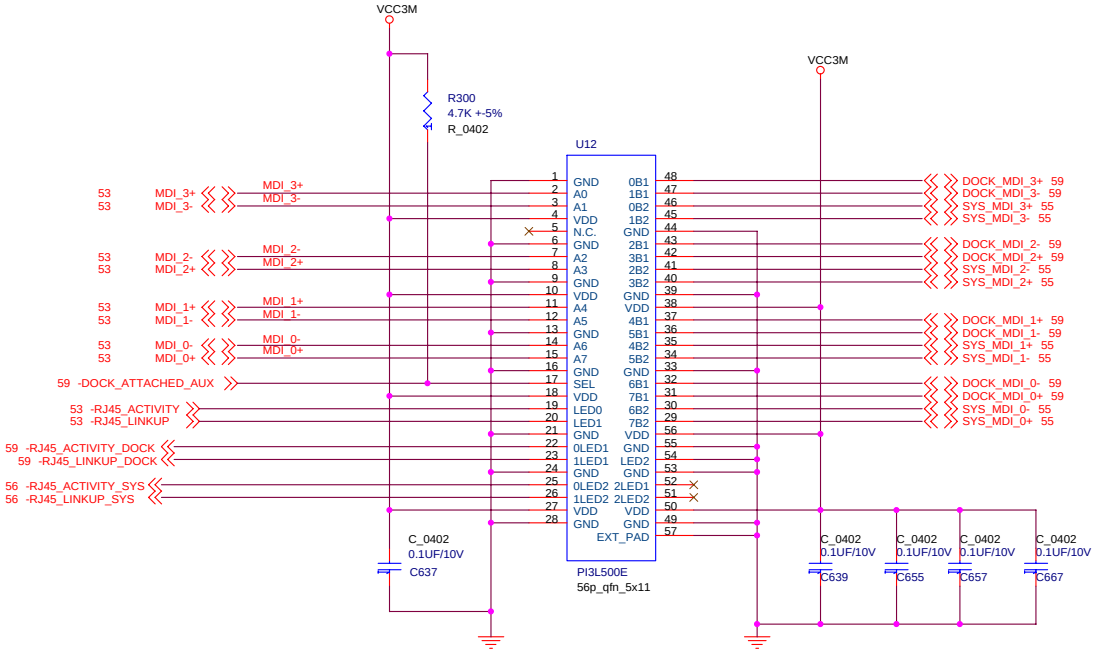
lenovo联想

LENOVO.PND
NB system design section

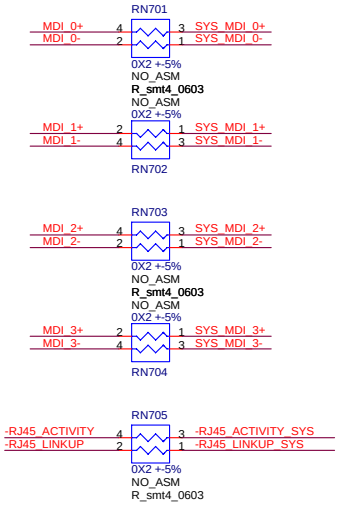
Title: CARDBUS PWR CONTROL

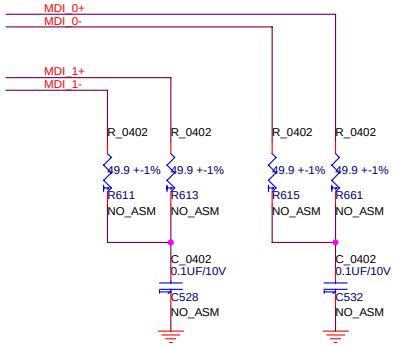
Size	Document Number	Rev
Custom	WAIKIKI	s1.1

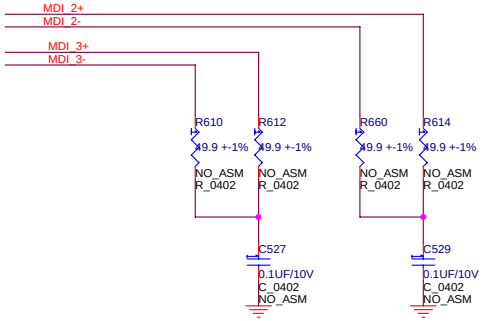
Date: Thursday, September 21, 2006 Sheet 51 of 99



	DOCK	NO_DOCK
U12	ASM	NO_ASM
C639	ASM	NO_ASM
C655	ASM	NO_ASM
C657	ASM	NO_ASM
C667	ASM	NO_ASM
R300	ASM	NO_ASM
RN701	NO_ASM	ASM
RN702	NO_ASM	ASM
RN703	NO_ASM	ASM
RN704	NO_ASM	ASM
RN705	NO_ASM	ASM
C637	ASM	NO_ASM







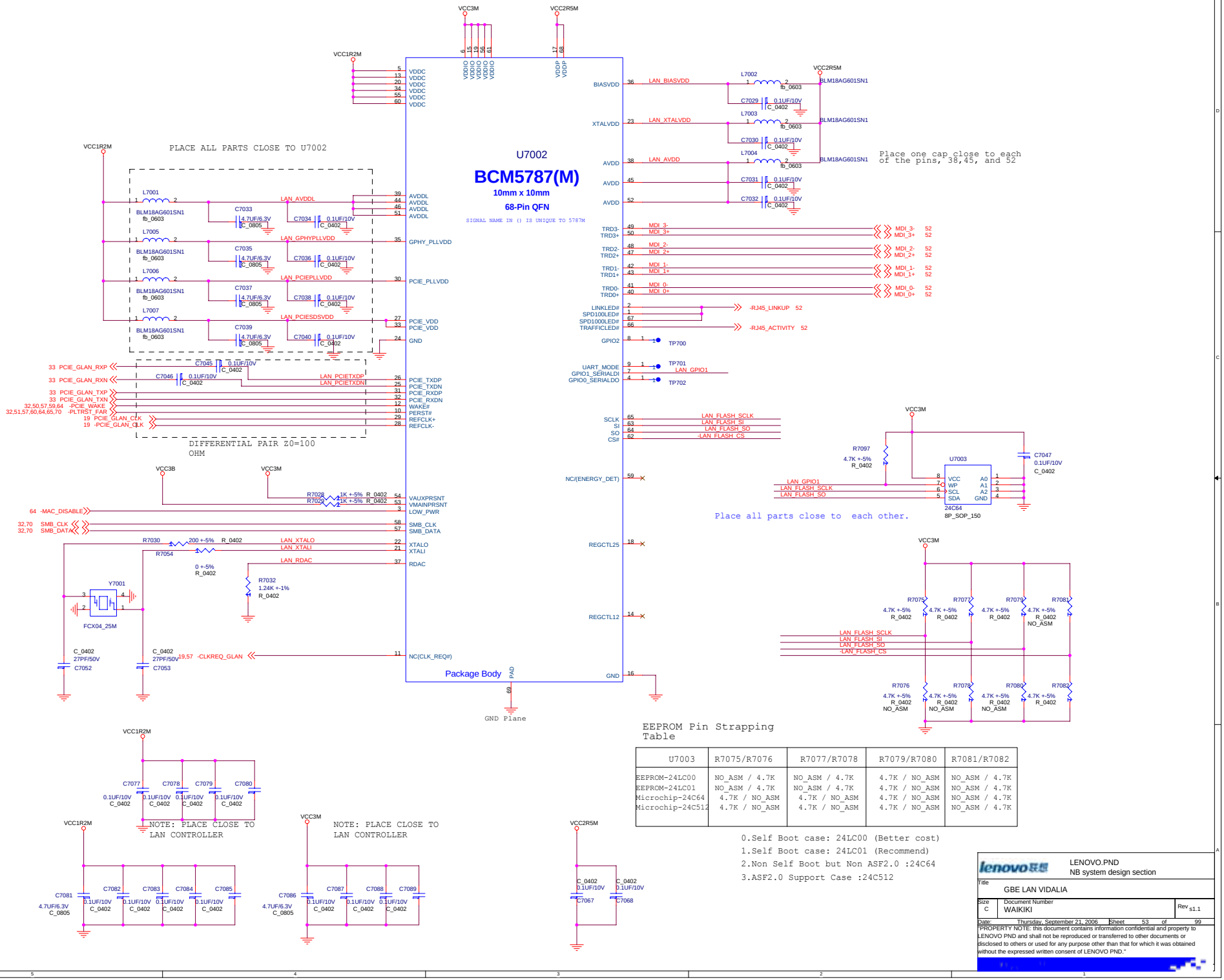
Place all parts close to U7002.
Trace very shortly so that the
termination can be NO_ASM.
Do not install RC as
the 5787(M) has on-chip RC terminations.

LENOVO.PND
NB system design section

Title: GBE LAN SW

Size: Custom | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 52 of 99



EEPROM Pin Strapping Table

U7003	R7075/R7076	R7077/R7078	R7079/R7080	R7081/R7082
EEPROM-24LC00	NO_ASM / 4.7K	NO_ASM / 4.7K	4.7K / NO_ASM	NO_ASM / 4.7K
EEPROM-24LC01	NO_ASM / 4.7K	NO_ASM / 4.7K	4.7K / NO_ASM	NO_ASM / 4.7K
Microchip-24C64	4.7K / NO_ASM	4.7K / NO_ASM	4.7K / NO_ASM	NO_ASM / 4.7K
Microchip-24C512	4.7K / NO_ASM	4.7K / NO_ASM	4.7K / NO_ASM	NO_ASM / 4.7K

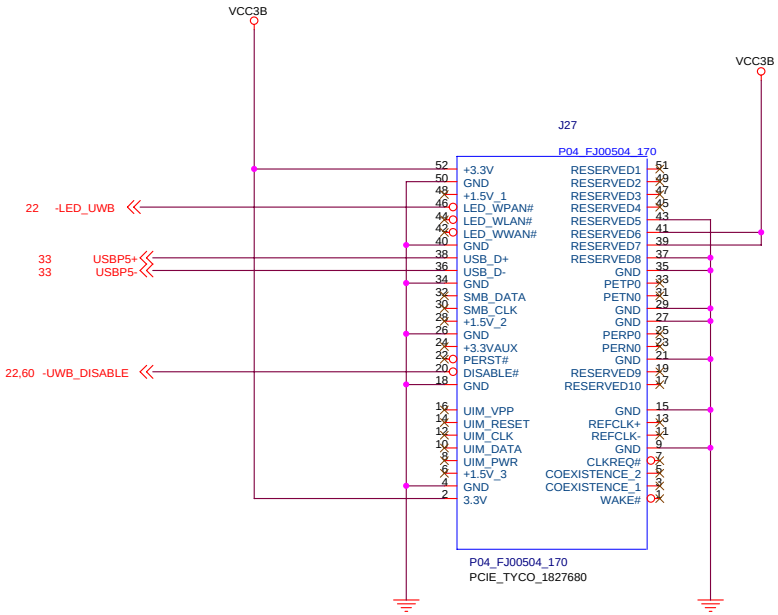
0.Self Boot case: 24LC00 (Better cost)
1.Self Boot case: 24LC01 (Recommend)
2.Non Self Boot but Non ASF2.0 :24C64
3.ASF2.0 Support Case :24C512

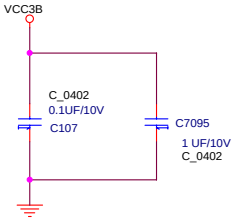
LENOVO.PND
NB system design section

Title: GBE LAN VIDALIA

Size: C | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 53 of 99





CLOSE TO J27

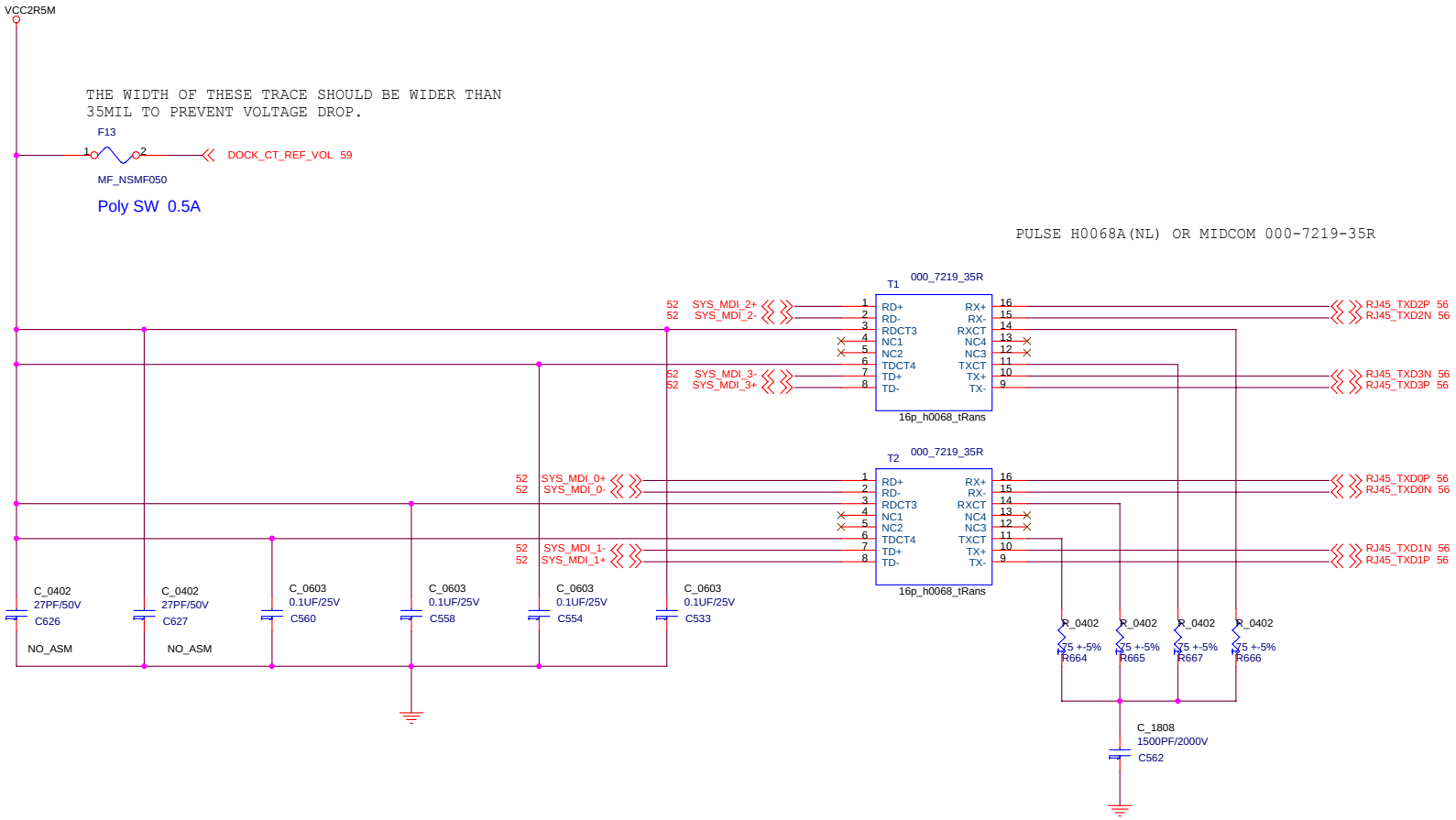
lenovo联想

LENOVO.PND
NB system design section

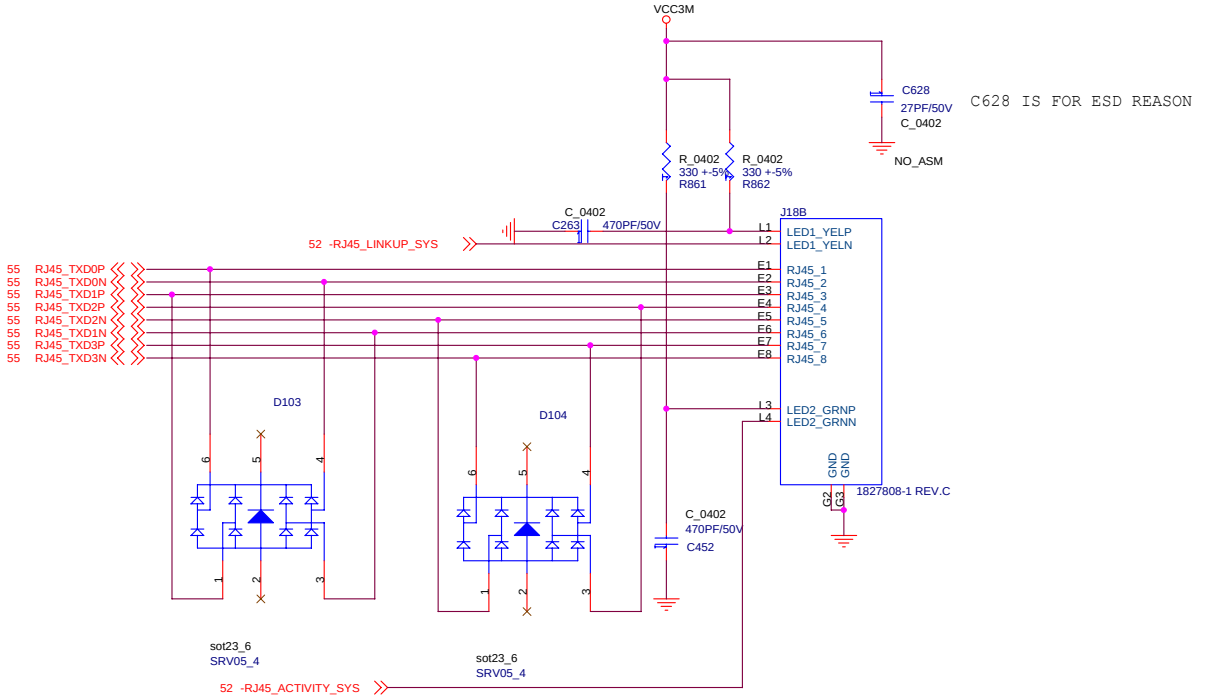
Title
MICRO PCIE CONN

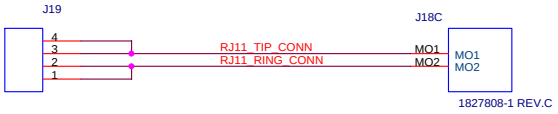
Size	Document Number	Rev
Custom	WAIKIKI	s1.1

Date: Thursday, September 21, 2006 Sheet 54 of 99



lenovo联想	LENOVO.PND NB system design section	
Title	GBE MAGNETICS	
Size: Custom	Document Number: WAIKIKI	Rev: s1.1
Date: Thursday, September 21, 2006	Sheet 55 of 99	





	DOCK	NO DOCK
J11	ASM	NO_ASM

LENOVO.PND
NB system design section

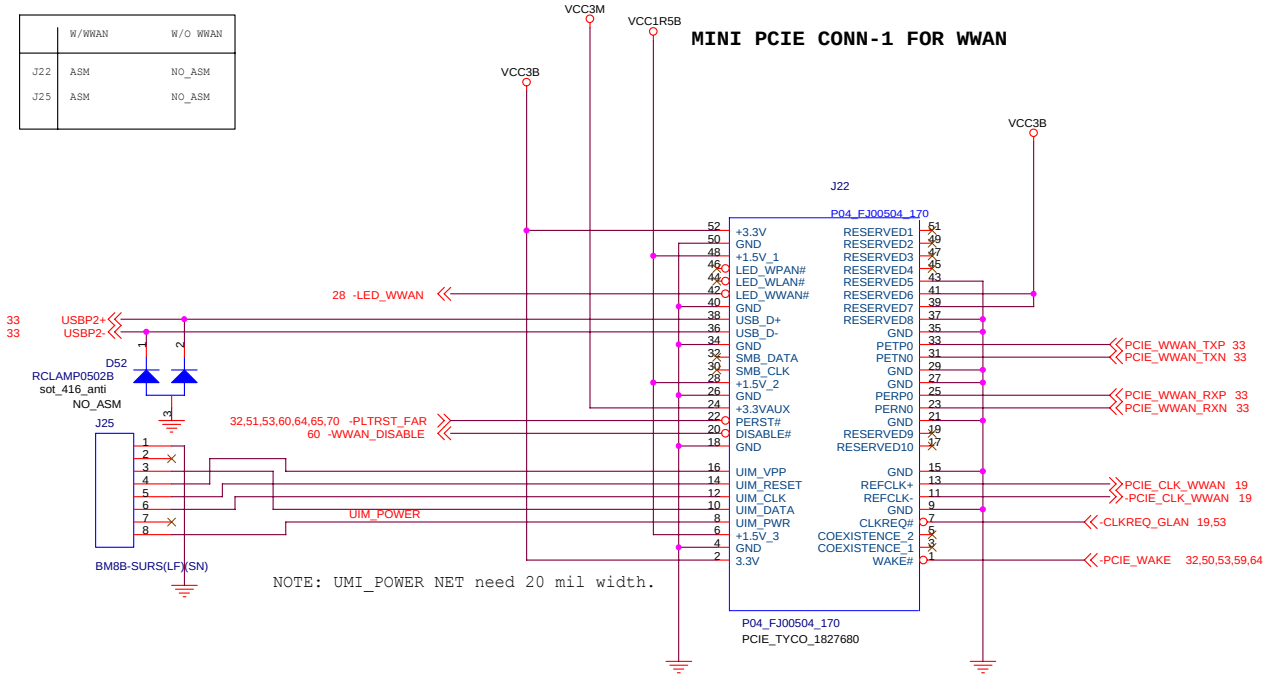
Title: RJ45 CONN

Size: Custom | Document Number: WAIKIKI | Rev: s1.1

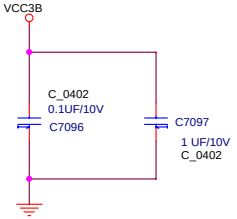
Date: Thursday, September 21, 2006 | Sheet 56 of 99

	W/WWAN	W/O WWAN
J22	ASM	NO_ASM
J25	ASM	NO_ASM

MINI PCIE CONN-1 FOR WWAN

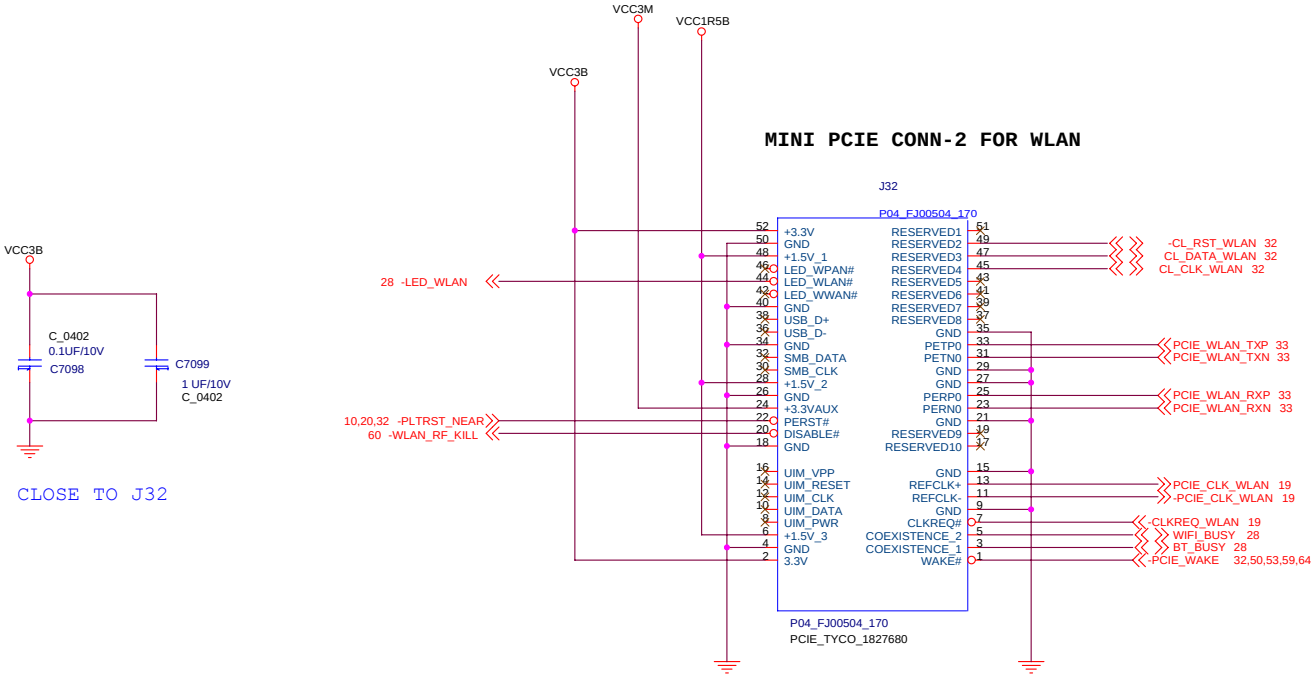


NOTE: UMI_POWER NET need 20 mil width.



CLOSE TO J22

MINI PCIE CONN-2 FOR WLAN



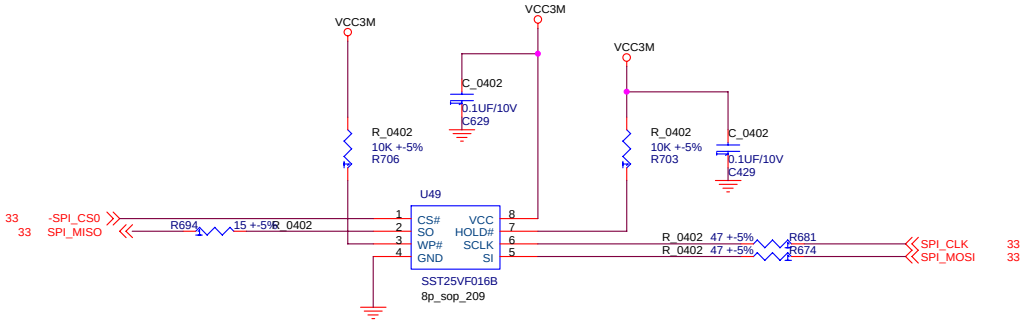
CLOSE TO J32

LENOVO.PND
NB system design section

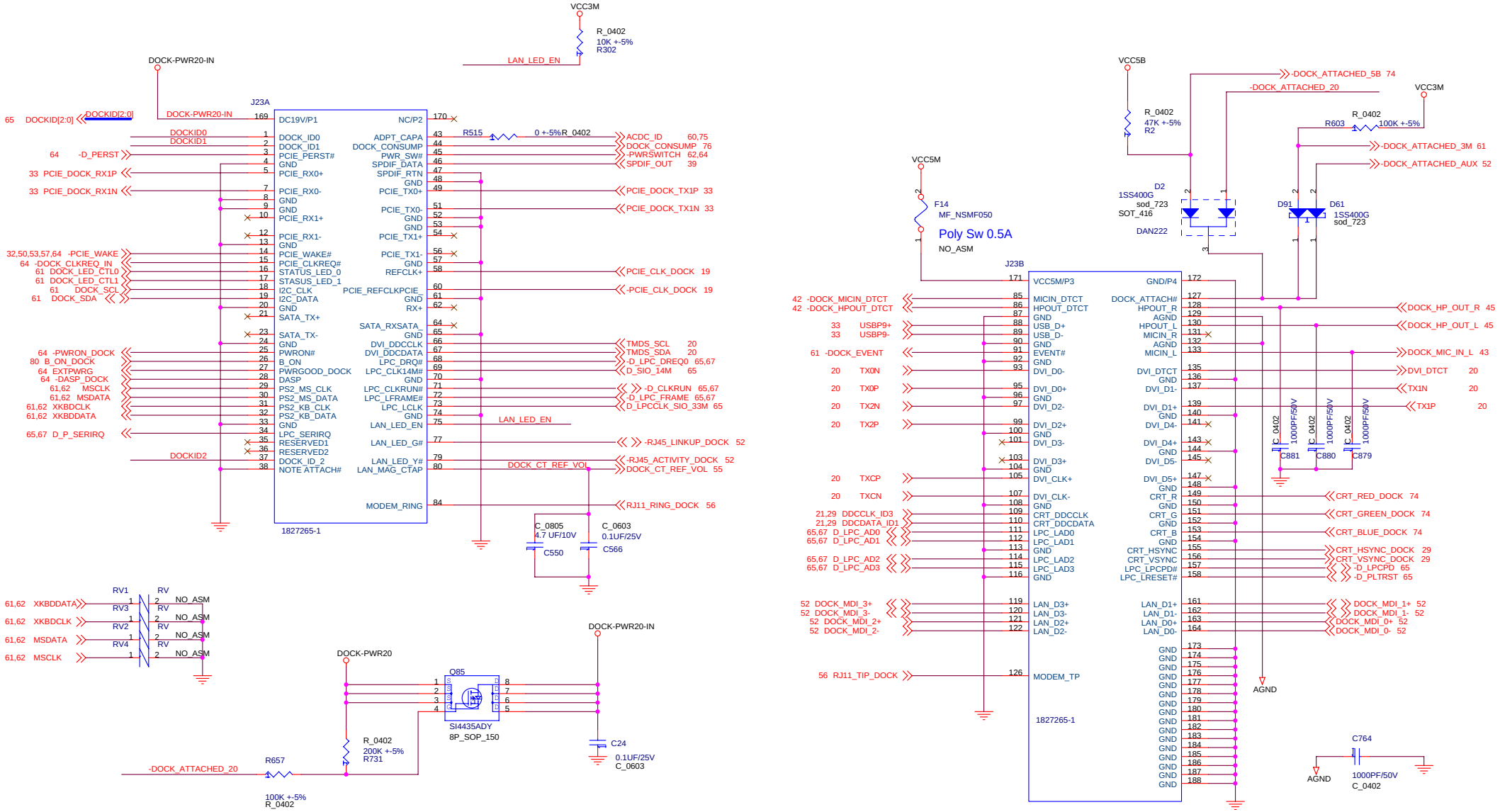
Title: MINI PCIE SLOT(WWAN/WLAN)

Size: Custom | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 57 of 99



lenovo联想	LENOVO.PND NB system design section	
Title	EEPROM/FLASH/SHARED	
Size: Custom	Document Number: WAIKIKI	Rev: s1.1
Date: Thursday, September 21, 2006	Sheet 58 of 99	



NO DOCKING SUPPORT:

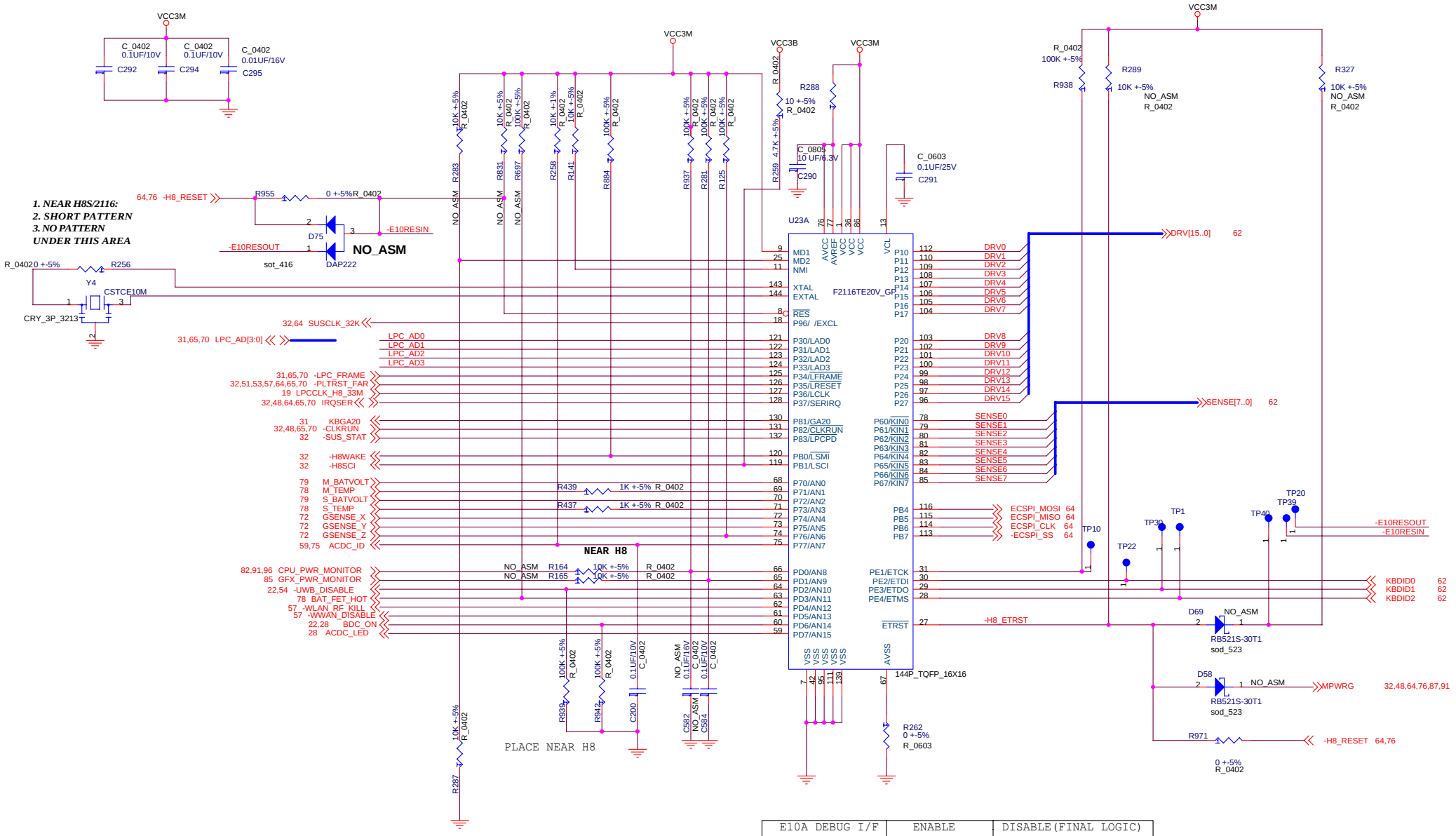
No ASM in this page except R2 and R603.

LENOVO.PND
NB system design section

Title: DOCK CONN

Size: Custom | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 59 of 99



E10A DEBUG I/F	ENABLE	DISABLE(FINAL LOGIC)
R955	NO_ASM	ASM
R971	NO_ASM	ASM
D58	ASM	NO_ASM
D69	ASM	NO_ASM
R289	ASM	NO_ASM
D75	ASM	NO_ASM
R831	ASM	NO_ASM
R327	ASM	NO_ASM

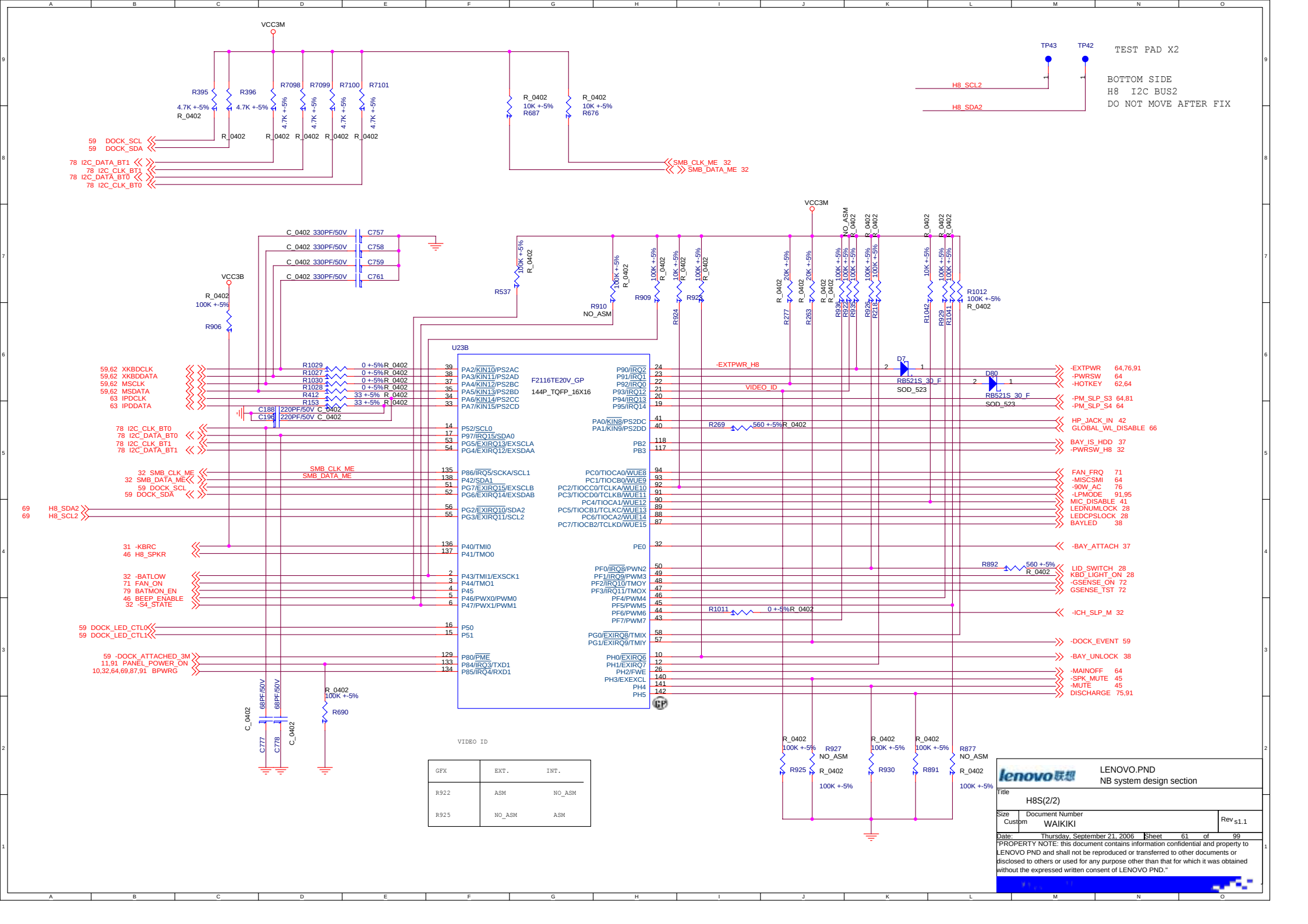
lenovo联想

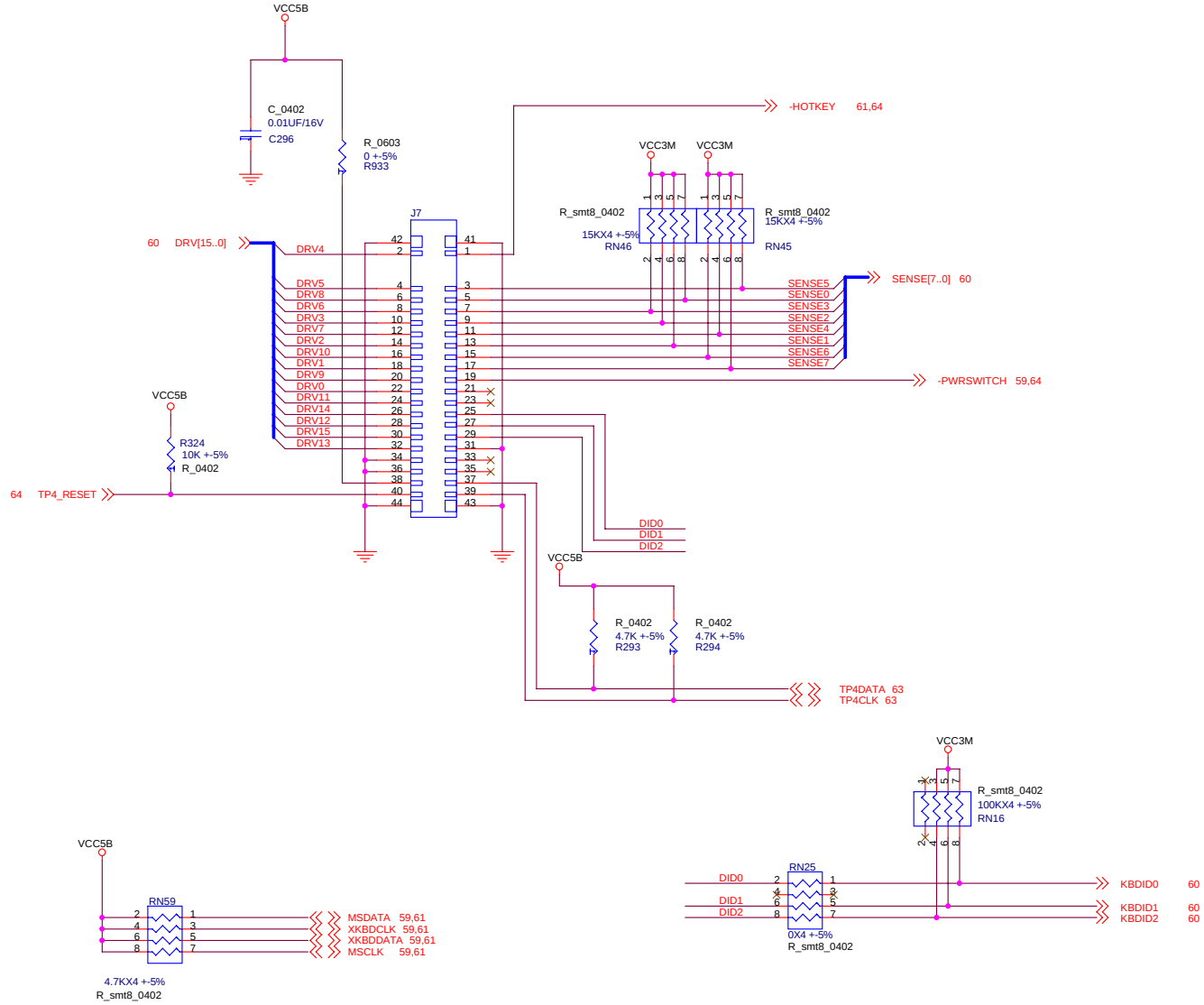
LENOVO.PND
NB system design section

Title: H8S(1/2)

Size: Custom | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 60 of 99

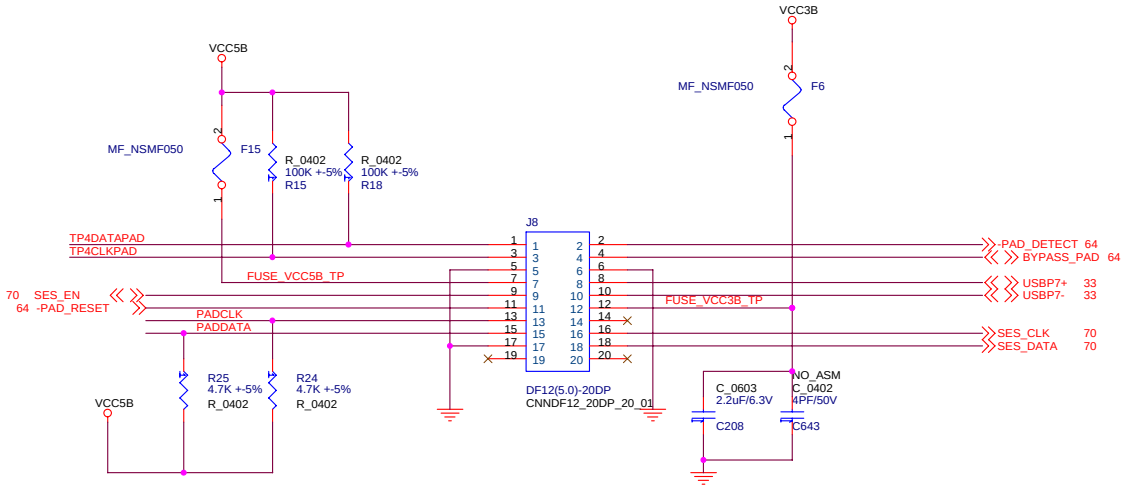


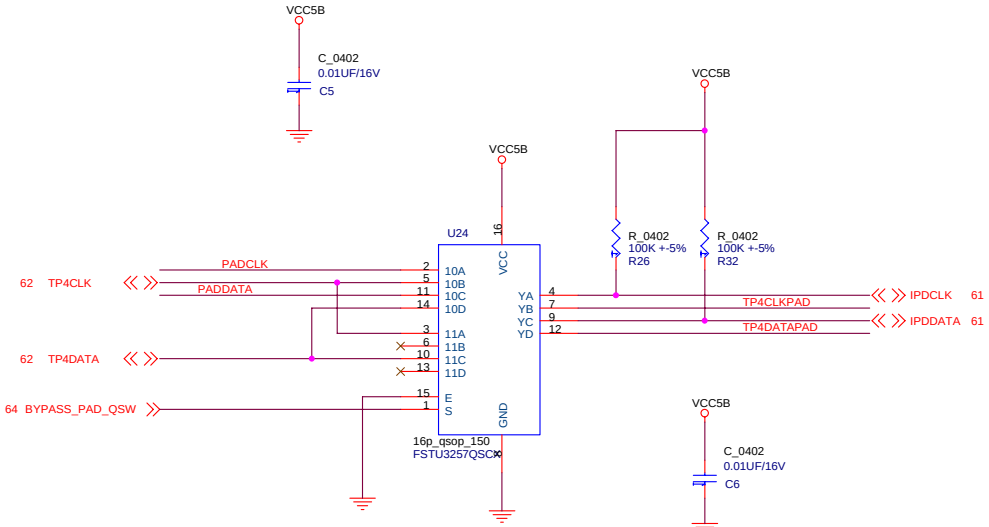


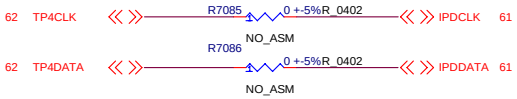
lenovo联想	LENOVO.PND NB system design section
Title	KB CONN
Size: Custom	Document Number: WAIKIKI
Rev	s1.1
Date:	Thursday, September 21, 2006
Sheet	62 of 99

TouchPad/FingerPrint Support

	SUPPORT	NO SUPPORT
F15	ASM	NO-ASM
R15	ASM	NO-ASM
R18	ASM	NO-ASM
R24	ASM	NO-ASM
R25	ASM	NO-ASM
J8	ASM	NO-ASM
F6	ASM	NO-ASM
C208	ASM	NO-ASM
C643	NO-ASM	NO-ASM
~~C636~~	~~NO-ASM~~	~~NO-ASM~~
~~C631~~	~~NO-ASM~~	~~NO-ASM~~
C5	ASM	NO-ASM
C6	ASM	NO-ASM
U24	ASM	NO-ASM
R26	ASM	ASM
R32	ASM	ASM
R7085	NO-ASM	ASM
R7086	NO-ASM	ASM







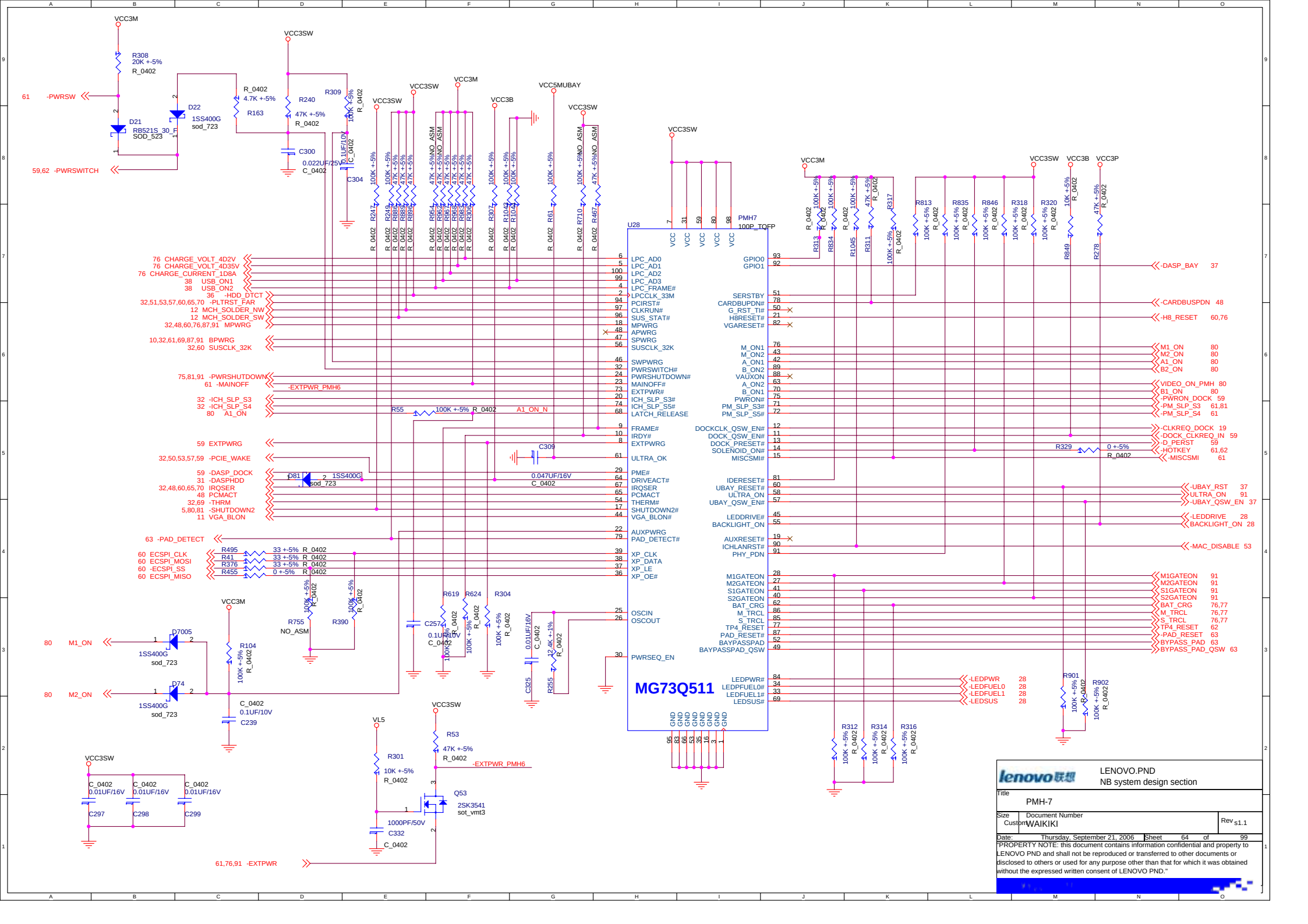
lenovo联想

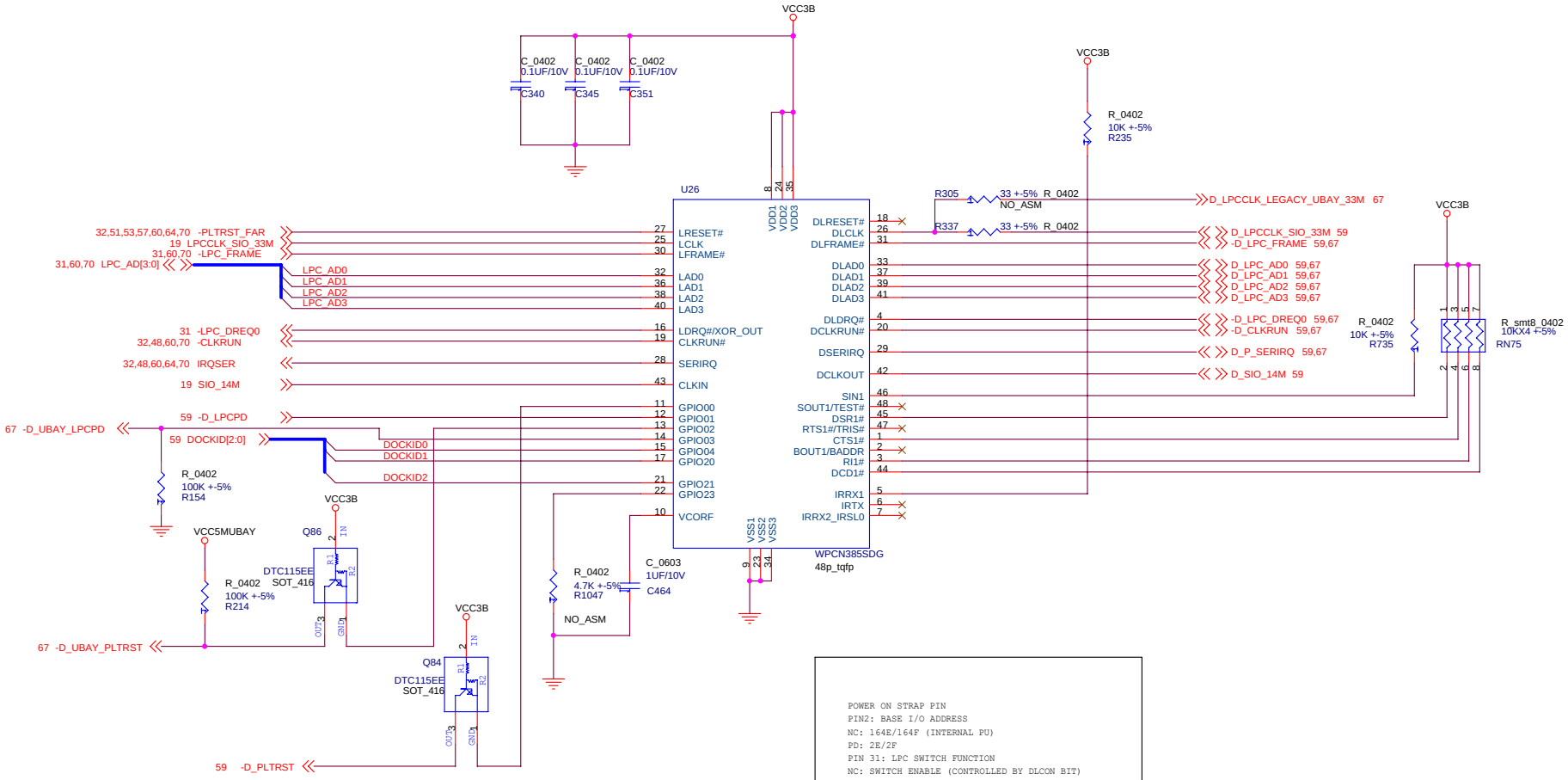
LENOVO.PND
NB system design section

Title: TP CONN

Size: Custom | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 63 of 99


MG73Q511
U28
PMH7
100P_TQFP
VCC3M
VCC3SW
VCC3B
VCC3P
VCC5MUBAY
-PWRSW
-PWRSWITCH
-EXTPWR_PMH6
-EXTPWR
-DASP_BAY
-CARDBUSPDN
-H8_RESET
-MAC_DISABLE
-LEDPWR
-LEDFUEL0
-LEDFUEL1
-LEDSUS
LENOVO.PND
NB system design section
Title
PMH-7
Size
Custom
Document Number
WAIKIKI
Rev
s1.1
Date:
Thursday, September 21, 2006
Sheet
64
of
99



NO DOCKING SUPPORT:
All parts in this page are NO_ASM

```
POWER ON STRAP PIN
PIN2: BASE I/O ADDRESS
NC: 164E/164F (INTERNAL PU)
PD: 2E/2F
PIN 31: LPC SWITCH FUNCTION
NC: SWITCH ENABLE (CONTROLLED BY DLCON BIT)
PD: SWITCH DISABLE (FORCED TO BE DISCONNECTED)
PIN 47: TRISTATE
NC: NORMAL OPERATION
PD: ALL PINS FLOATING
PIN 48: TEST
NC: NORMAL OPERATION
PD: TEST MODE
```

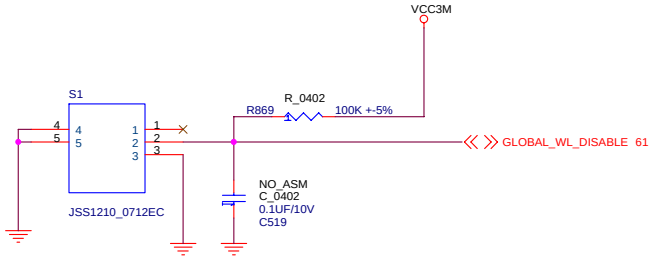
```
GPIO23: RESERVED (INTERNAL PULLUP ENABLE)
GPIO03: LPC POWER DOWN FOR LEGACY IO BAY
GPIO02: LPC RESET# FOR LEGACY IO BAY
GPIO01: LPC POWER DOWN FOR DOCKING LPC DEVICE
GPIO00: LPC RESET# FOR DOCKING LPC DEVICE
GPIO ASSIGNMENT LIST
GPIO21: DOCK ID 2
GPIO20: DOCK ID 1
GPIO04: DOCK ID 0
```

LENOVO.PND
NB system design section

Title: SIO WPCN385SDG

Size: Custom | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 65 of 99

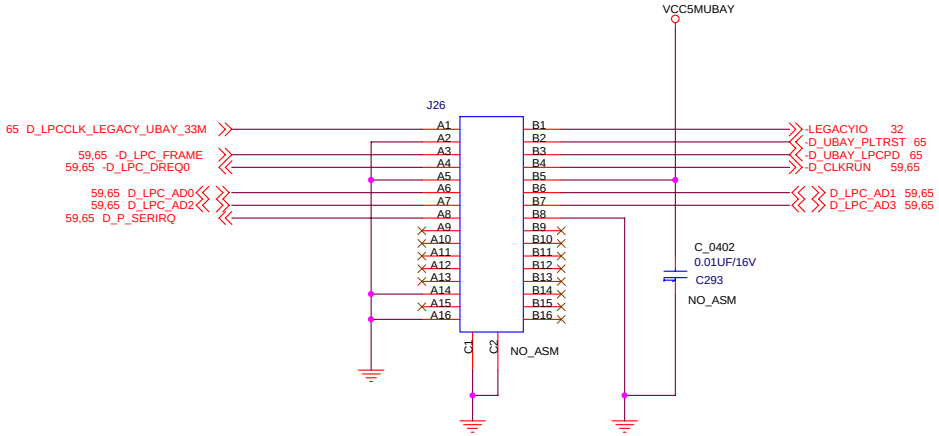


LENOVO.PND
NB system design section

Title: WIRELESS DISABLE SW

Size: Custom | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 66 of 99



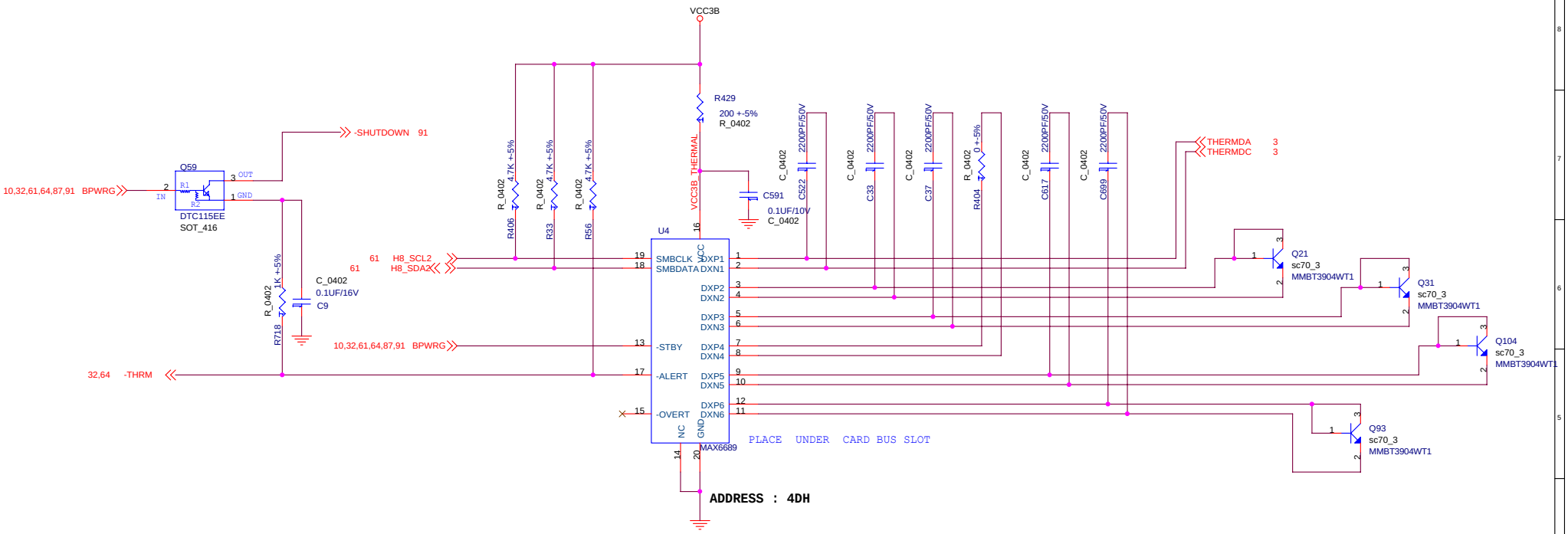
LENOVO.PND
NB system design section

Title
SERIAL INTERFACE

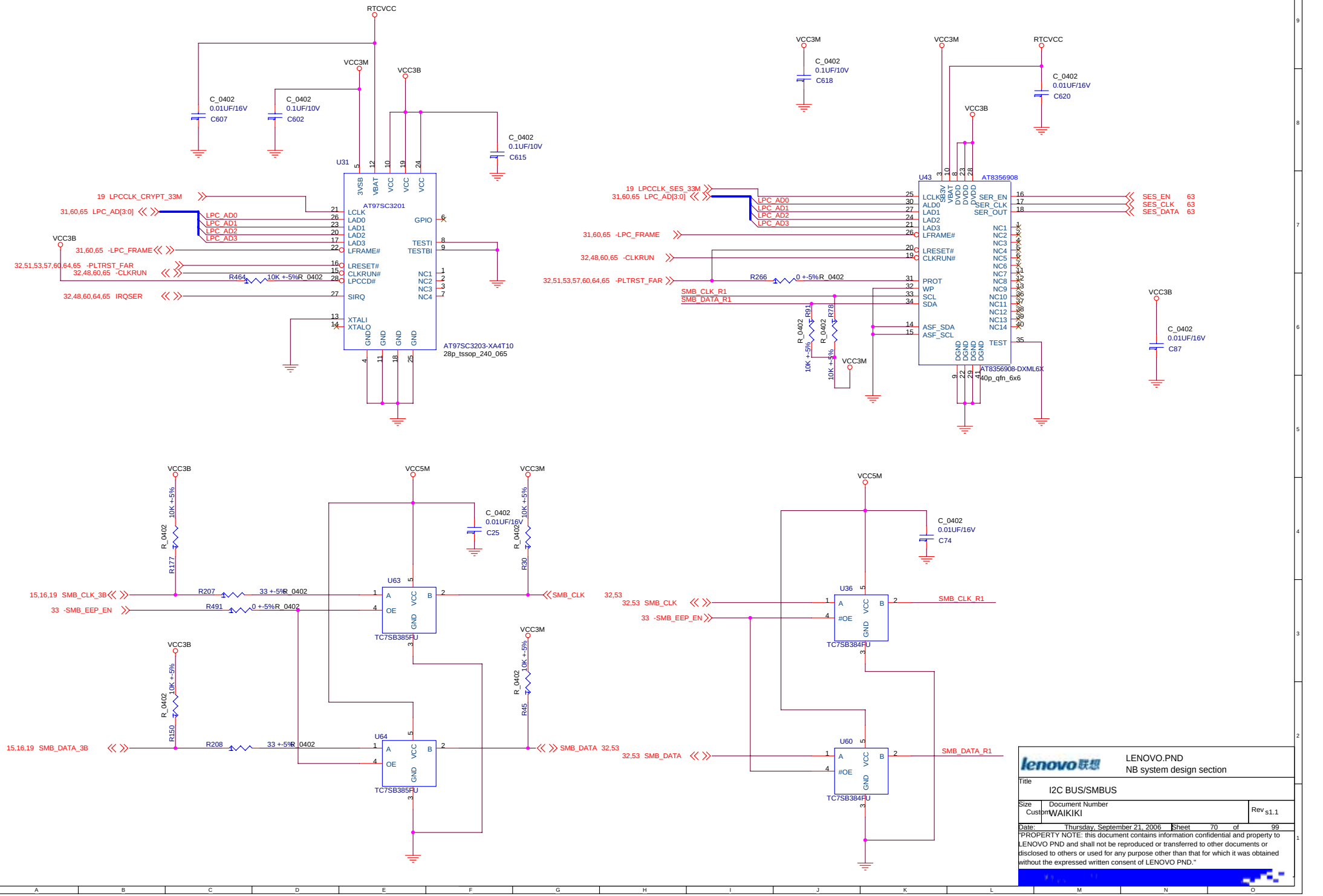
Size	Document Number	Rev
Custom	WAIKIKI	s1.1

Date: Thursday, September 21, 2006 Sheet 67 of 99

BLACK PAGE



lenovo联想	LENOVO.PND NB system design section	
Title	THERMAL SENSOR	
Size: Custom	Document Number: WAIKIKI	Rev: s1.1
Date: Thursday, September 21, 2006	Sheet 69 of 99	



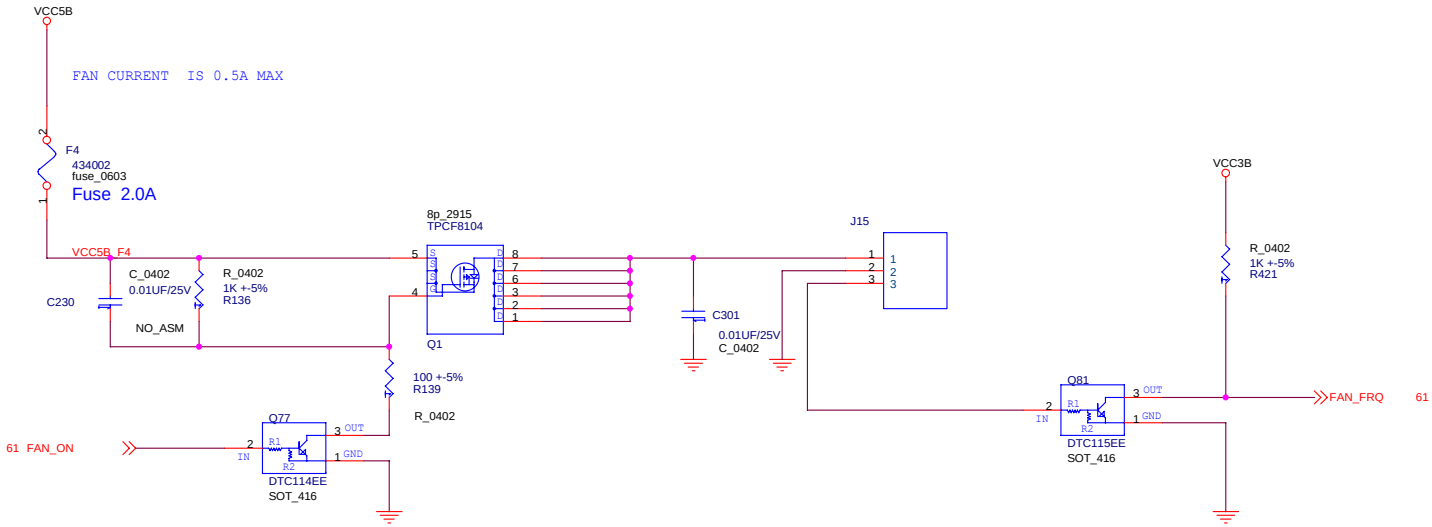
lenovo联想

LENOVO.PND
NB system design section

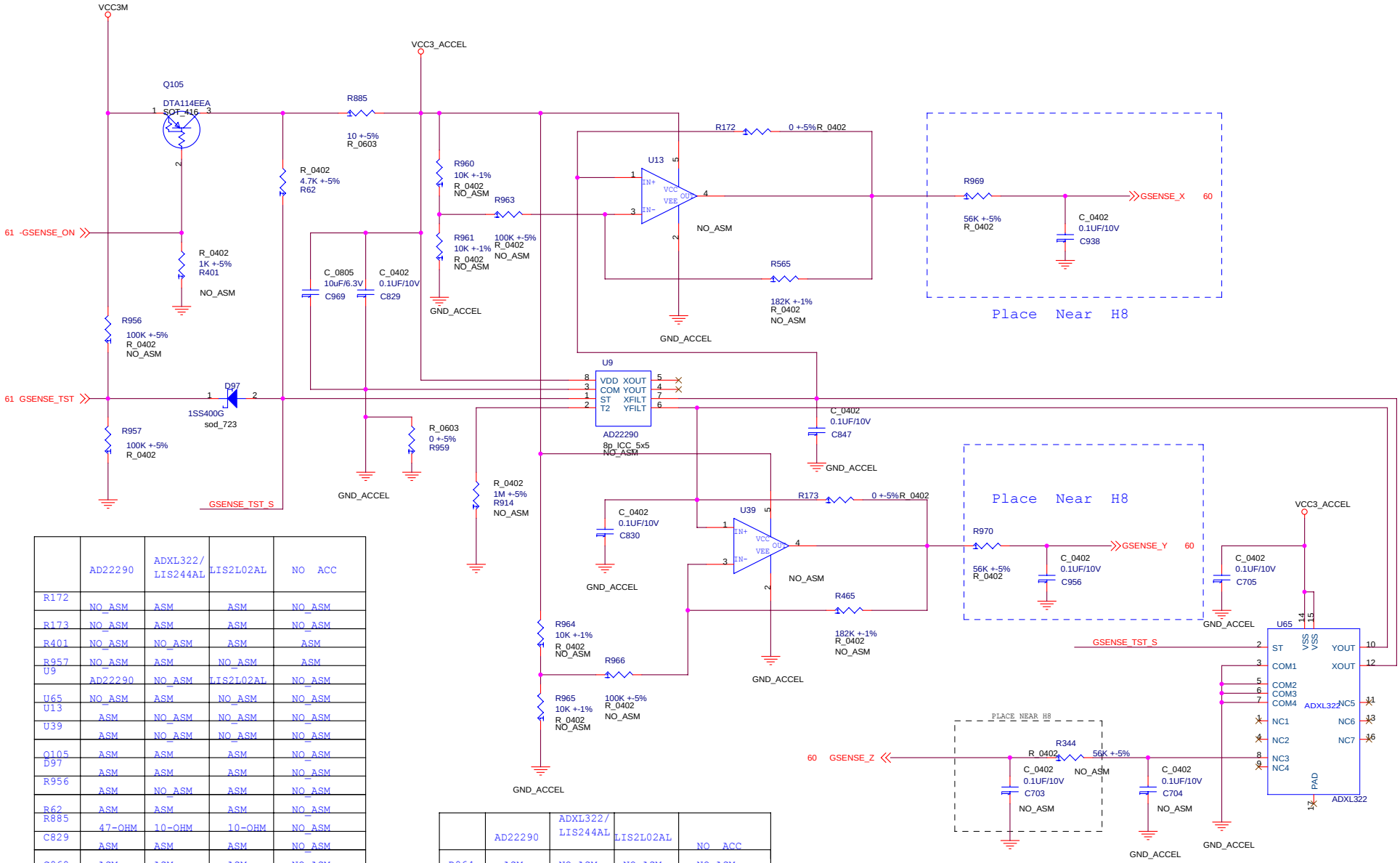
Title
I2C BUS/SMBUS

Size	Document Number	Rev
Custom	WAIKIKI	s1.1

Date: Thursday, September 21, 2006 Sheet 70 of 99



lenovo联想	LENOVO.PND NB system design section	
Title: FAN CONN		
Size: Custom	Document Number: WAIKIKI	Rev: s1.1
Date: Thursday, September 21, 2006	Sheet 71 of 99	



	AD22290	ADXL322/ LIS244AL	LIS2L02AL	NO ACC
R172	NO_ASM	ASM	ASM	NO_ASM
R173	NO_ASM	ASM	ASM	NO_ASM
R401	NO_ASM	NO_ASM	ASM	ASM
R957	NO_ASM	ASM	NO_ASM	ASM
U9	AD22290	NO_ASM	LIS2L02AL	NO_ASM
U65	NO_ASM	ASM	NO_ASM	NO_ASM
U13	ASM	NO_ASM	NO_ASM	NO_ASM
U39	ASM	NO_ASM	NO_ASM	NO_ASM
Q105	ASM	ASM	ASM	NO_ASM
D97	ASM	ASM	ASM	NO_ASM
R956	ASM	NO_ASM	ASM	NO_ASM
R62	ASM	ASM	ASM	NO_ASM
R885	47-OHM	10-OHM	10-OHM	NO_ASM
C829	ASM	ASM	ASM	NO_ASM
C969	ASM	ASM	ASM	NO_ASM
R914	ASM	NO_ASM	NO_ASM	NO_ASM
R959	ASM	ASM	ASM	NO_ASM
C830	0.1UF	0.1UF	0.033UF	NO_ASM
C847	0.1UF	0.1UF	0.033UF	NO_ASM
R960	ASM	NO_ASM	NO_ASM	NO_ASM
R961	ASM	NO_ASM	NO_ASM	NO_ASM
R963	ASM	NO_ASM	NO_ASM	NO_ASM
R565	ASM	NO_ASM	NO_ASM	NO_ASM

	AD22290	ADXL322/ LIS244AL	LIS2L02AL	NO ACC
R964	ASM	NO_ASM	NO_ASM	NO_ASM
R965	ASM	NO_ASM	NO_ASM	NO_ASM
R966	ASM	NO_ASM	NO_ASM	NO_ASM
R465	ASM	NO_ASM	NO_ASM	NO_ASM
R969	56K	56K	56K	NO_ASM
C938	ASM	ASM	NO_ASM	NO_ASM
R970	56K	56K	56K	NO_ASM
C956	ASM	ASM	ASM	NO_ASM

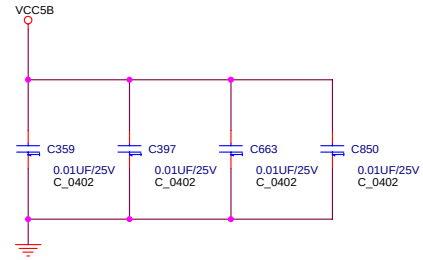
lenovo联想

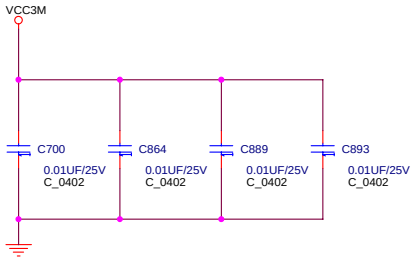
LENOVO.PND
NB system design section

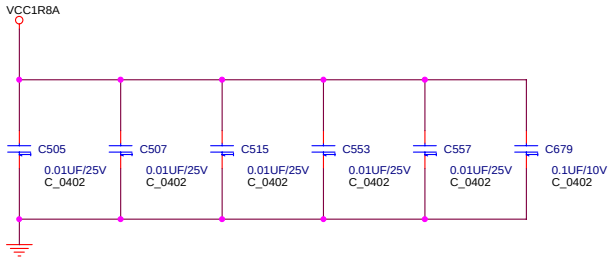
Title: G-GENSOR

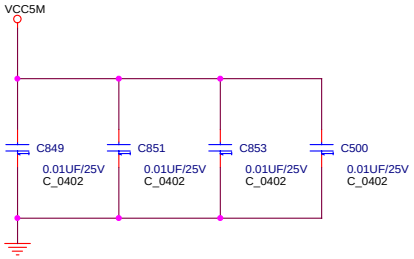
Size: Custom | Document Number: WAIKIKI | Rev: s1.1

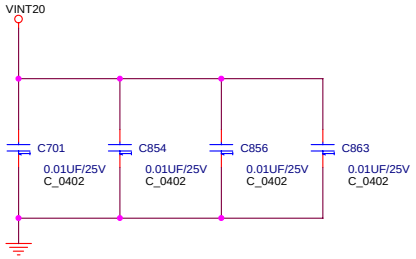
Date: Thursday, September 21, 2006 | Sheet 72 of 99

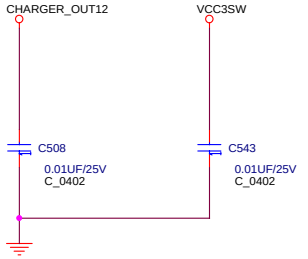


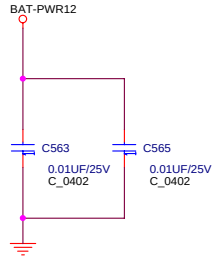


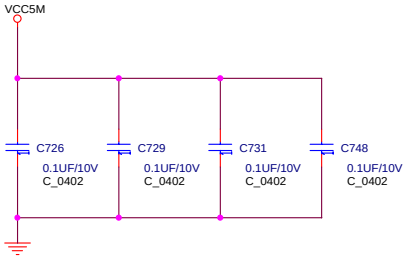


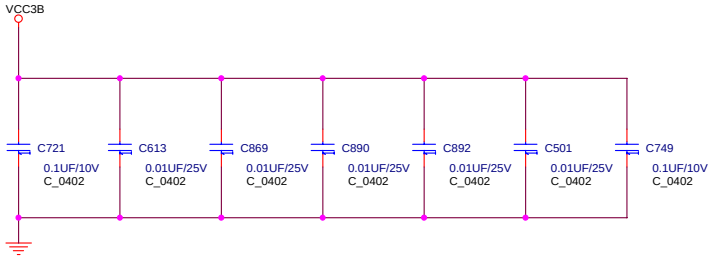


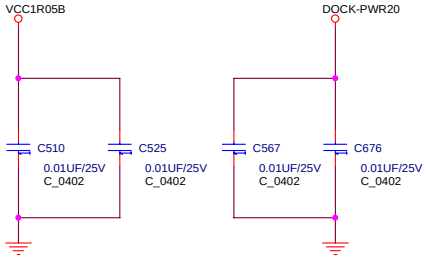










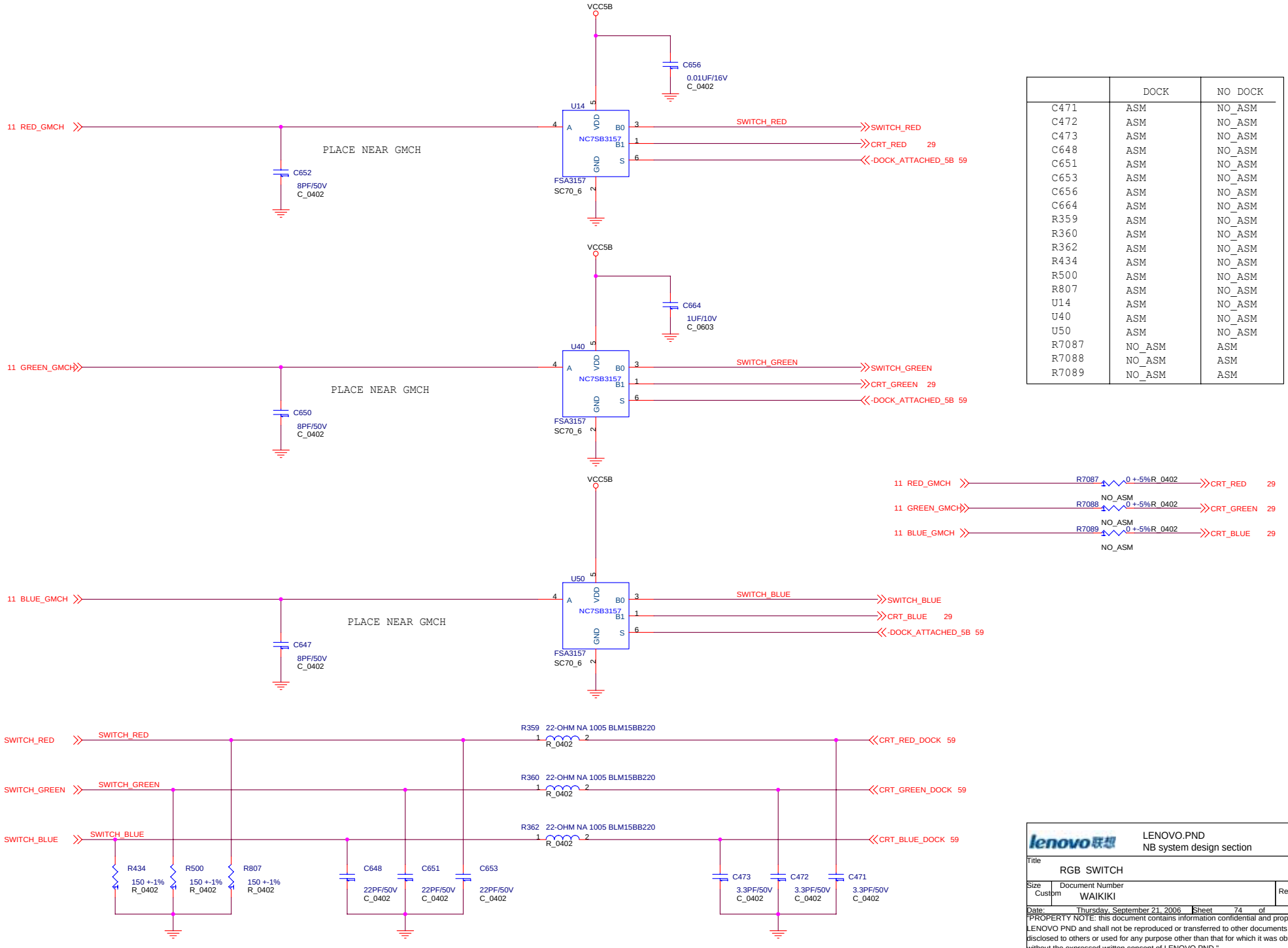


LENOVO.PND
NB system design section

Title
EMC DECOUPLING

Size	Document Number	Rev
Custom	WAIKIKI	s1.1

Date: Thursday, September 21, 2006 Sheet 73 of 99



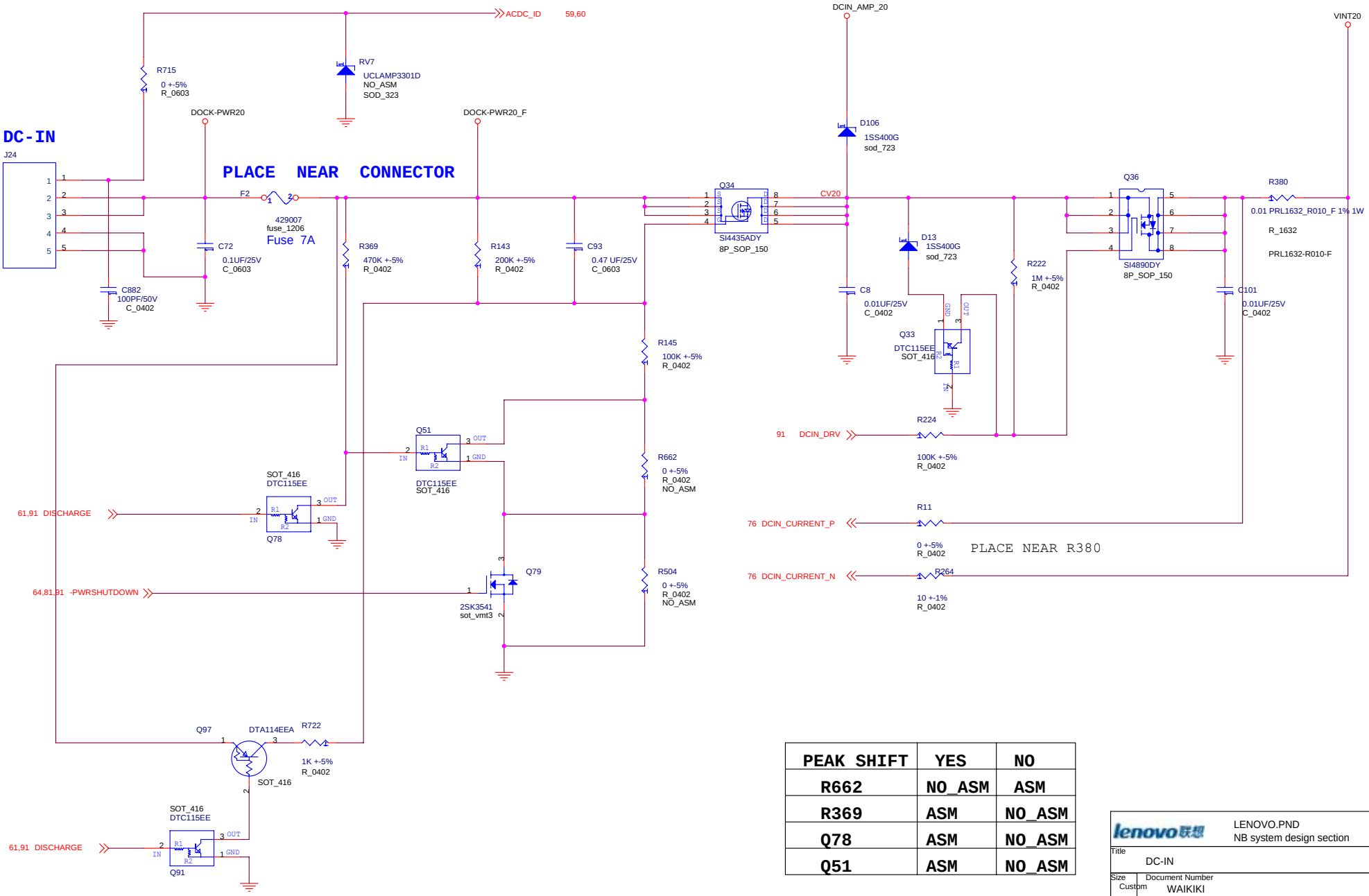
	DOCK	NO DOCK
C471	ASM	NO_ASM
C472	ASM	NO_ASM
C473	ASM	NO_ASM
C648	ASM	NO_ASM
C651	ASM	NO_ASM
C653	ASM	NO_ASM
C656	ASM	NO_ASM
C664	ASM	NO_ASM
R359	ASM	NO_ASM
R360	ASM	NO_ASM
R362	ASM	NO_ASM
R434	ASM	NO_ASM
R500	ASM	NO_ASM
R807	ASM	NO_ASM
U14	ASM	NO_ASM
U40	ASM	NO_ASM
U50	ASM	NO_ASM
R7087	NO_ASM	ASM
R7088	NO_ASM	ASM
R7089	NO_ASM	ASM

LENOVO.PND
NB system design section

Title: RGB SWITCH

Size: Custom | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 74 of 99



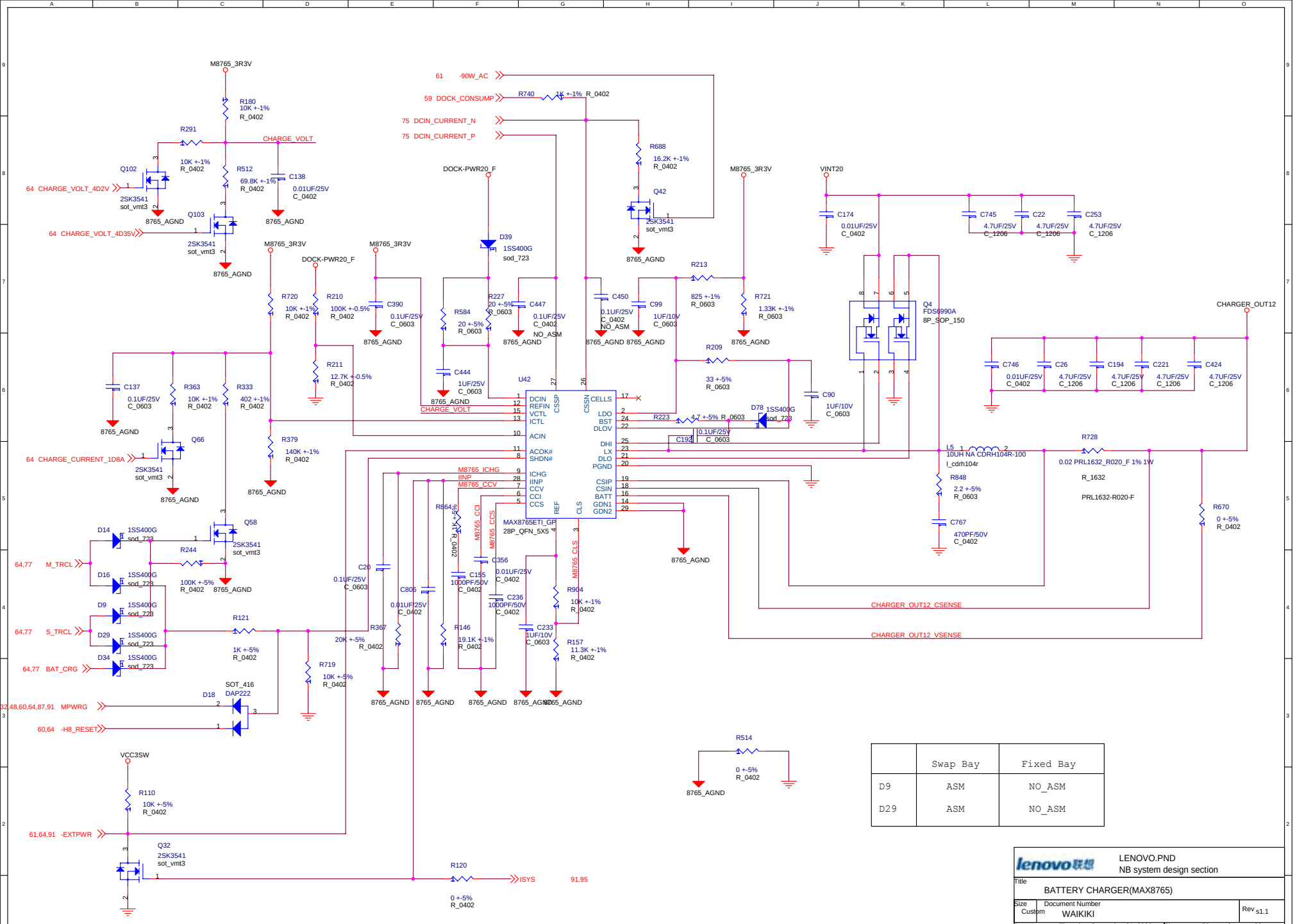
PEAK SHIFT	YES	NO
R662	NO_ASM	ASM
R369	ASM	NO_ASM
Q78	ASM	NO_ASM
Q51	ASM	NO_ASM

LENOVO.PND
NB system design section

Title: DC-IN

Size: Custom | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 75 of 99



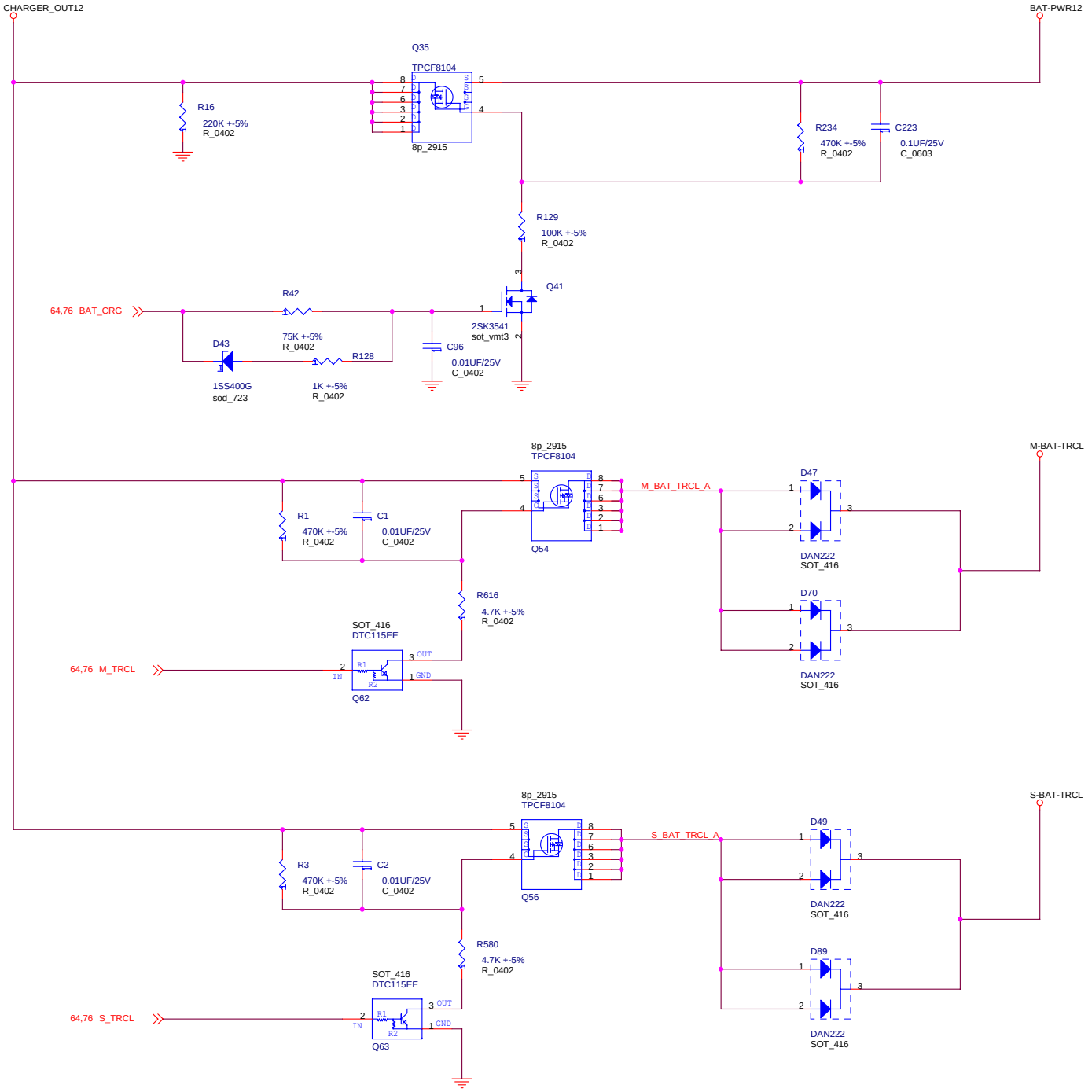
	Swap Bay	Fixed Bay
D9	ASM	NO_ASM
D29	ASM	NO_ASM

LENOVO.PND
NB system design section

Title: BATTERY CHARGER(MAX8765)

Size: Custom | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 76 of 99



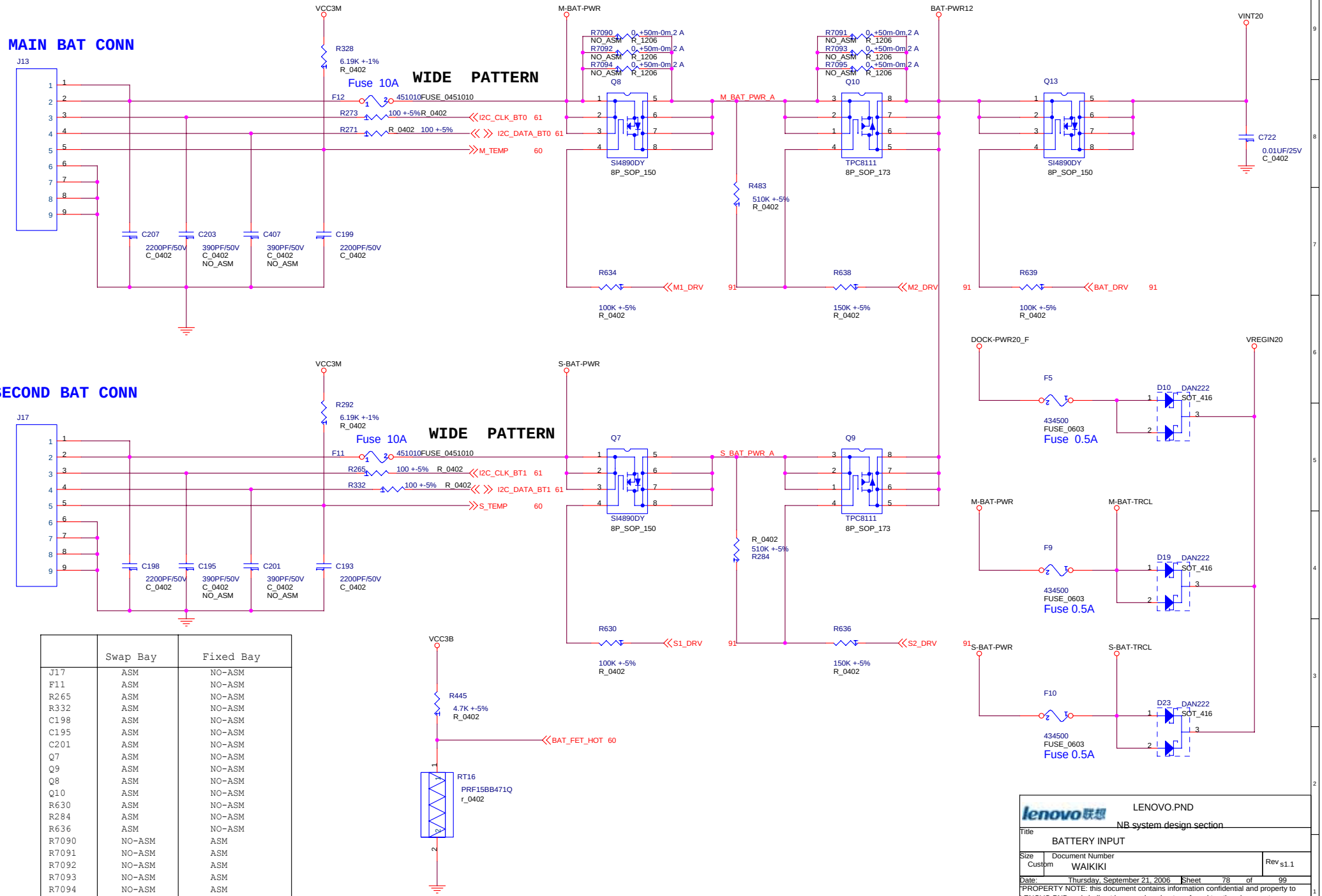
	Swap Bay	Fixed Bay
R3	ASM	NO-ASM
C2	ASM	NO-ASM
Q56	ASM	NO-ASM
Q63	ASM	NO-ASM
R580	ASM	NO-ASM
D49	ASM	NO-ASM
D89	ASM	NO-ASM

LENOVO.PND
NB system design section

Title: CHARGE SELECTOR

Size: Custom | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 77 of 99



	Swap Bay	Fixed Bay
J17	ASM	NO-ASM
F11	ASM	NO-ASM
R265	ASM	NO-ASM
R332	ASM	NO-ASM
C198	ASM	NO-ASM
C195	ASM	NO-ASM
C201	ASM	NO-ASM
Q7	ASM	NO-ASM
Q9	ASM	NO-ASM
Q8	ASM	NO-ASM
Q10	ASM	NO-ASM
R630	ASM	NO-ASM
R284	ASM	NO-ASM
R636	ASM	NO-ASM
R7090	NO-ASM	ASM
R7091	NO-ASM	ASM
R7092	NO-ASM	ASM
R7093	NO-ASM	ASM
R7094	NO-ASM	ASM
R7095	NO-ASM	ASM
F10	ASM	NO-ASM
D23	ASM	NO-ASM

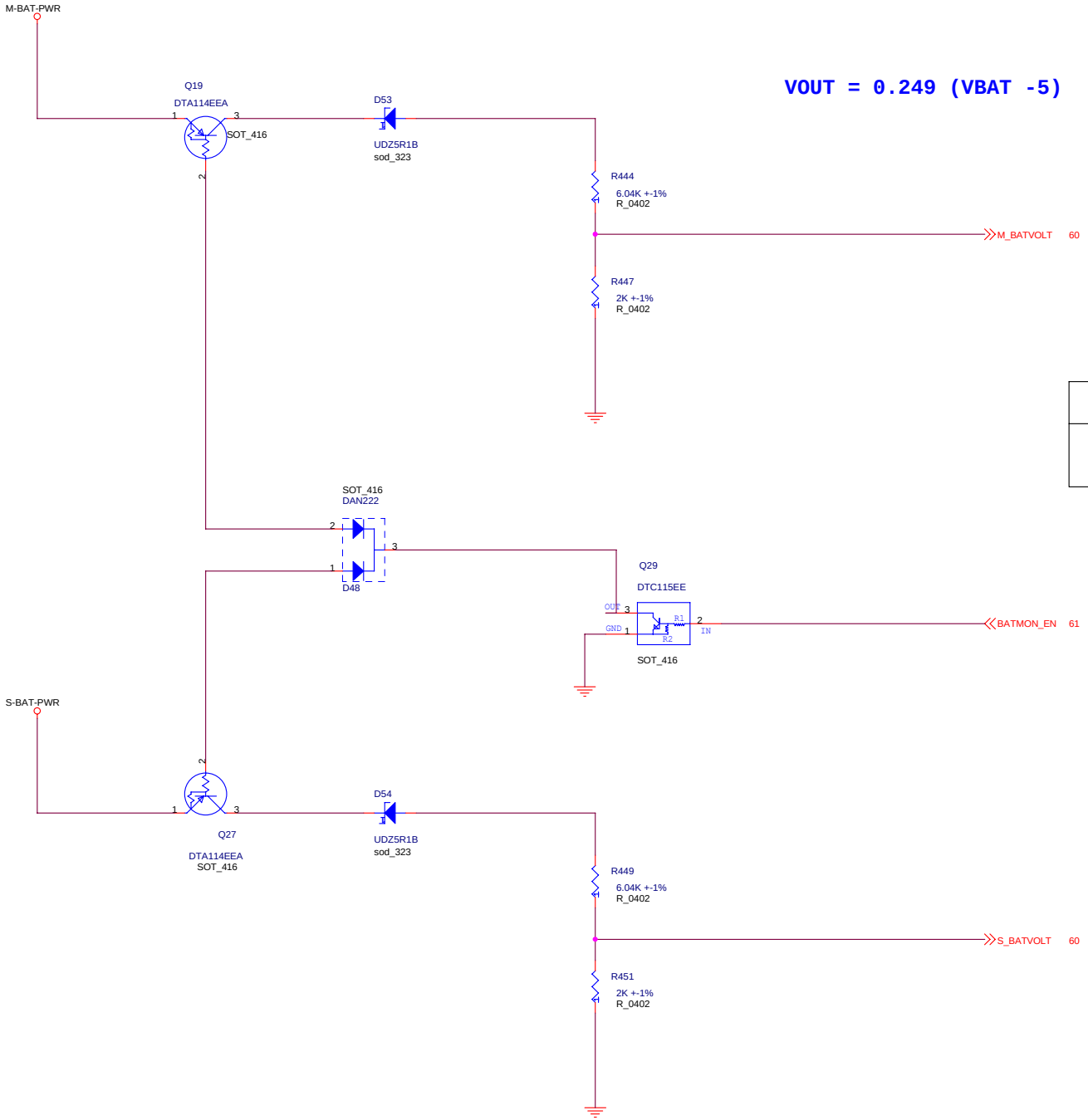
LENOVO.PND

NB system design section

Title: BATTERY INPUT

Size: Custom | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 78 of 99



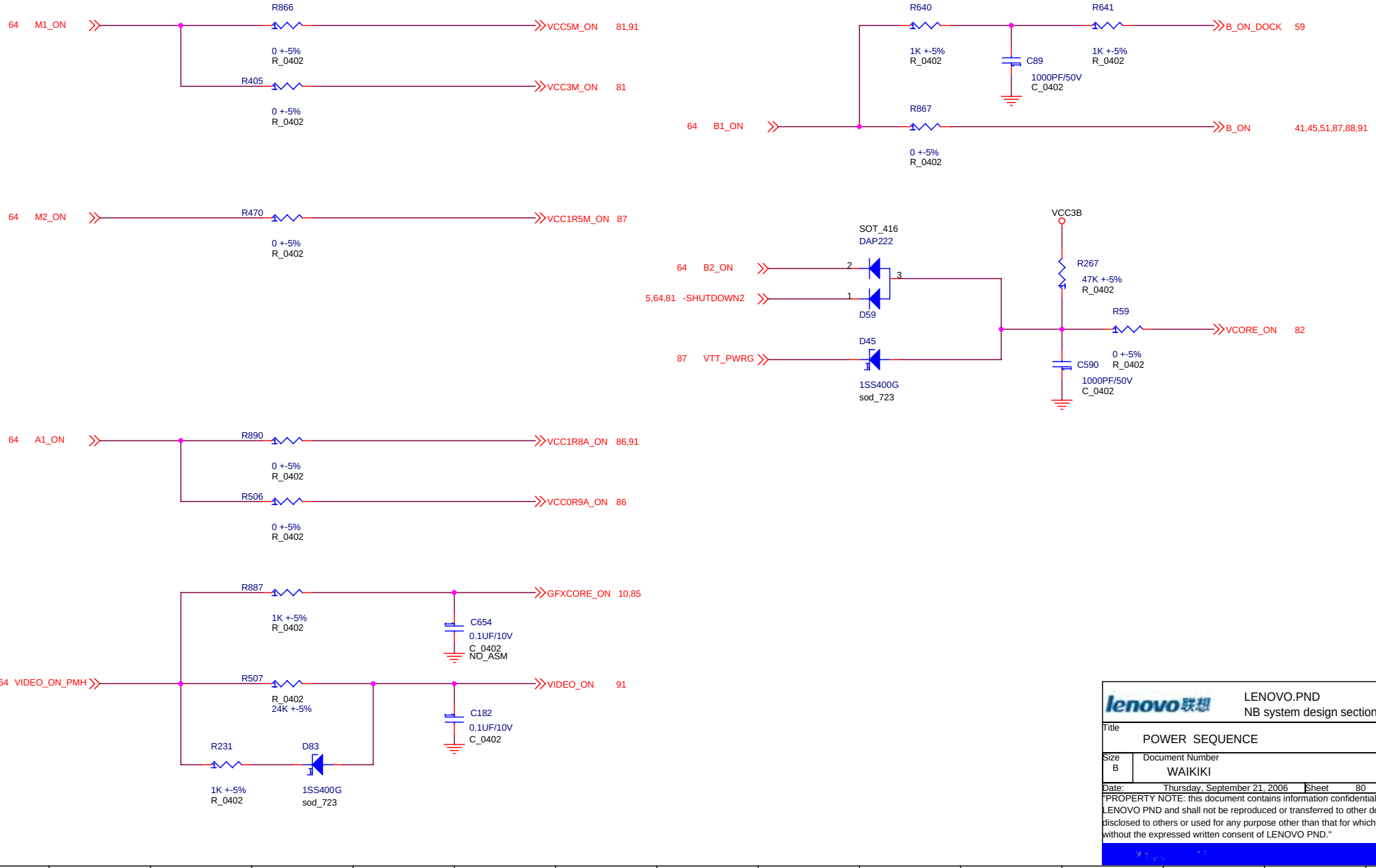
	Swap Bay	Fixed Bay
Q27	ASM	NO-ASM
D54	ASM	NO-ASM
R449	ASM	NO-ASM

LENOVO.PND
NB system design section

Title: BATTERY MONITOR

Size: Custom | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 79 of 99

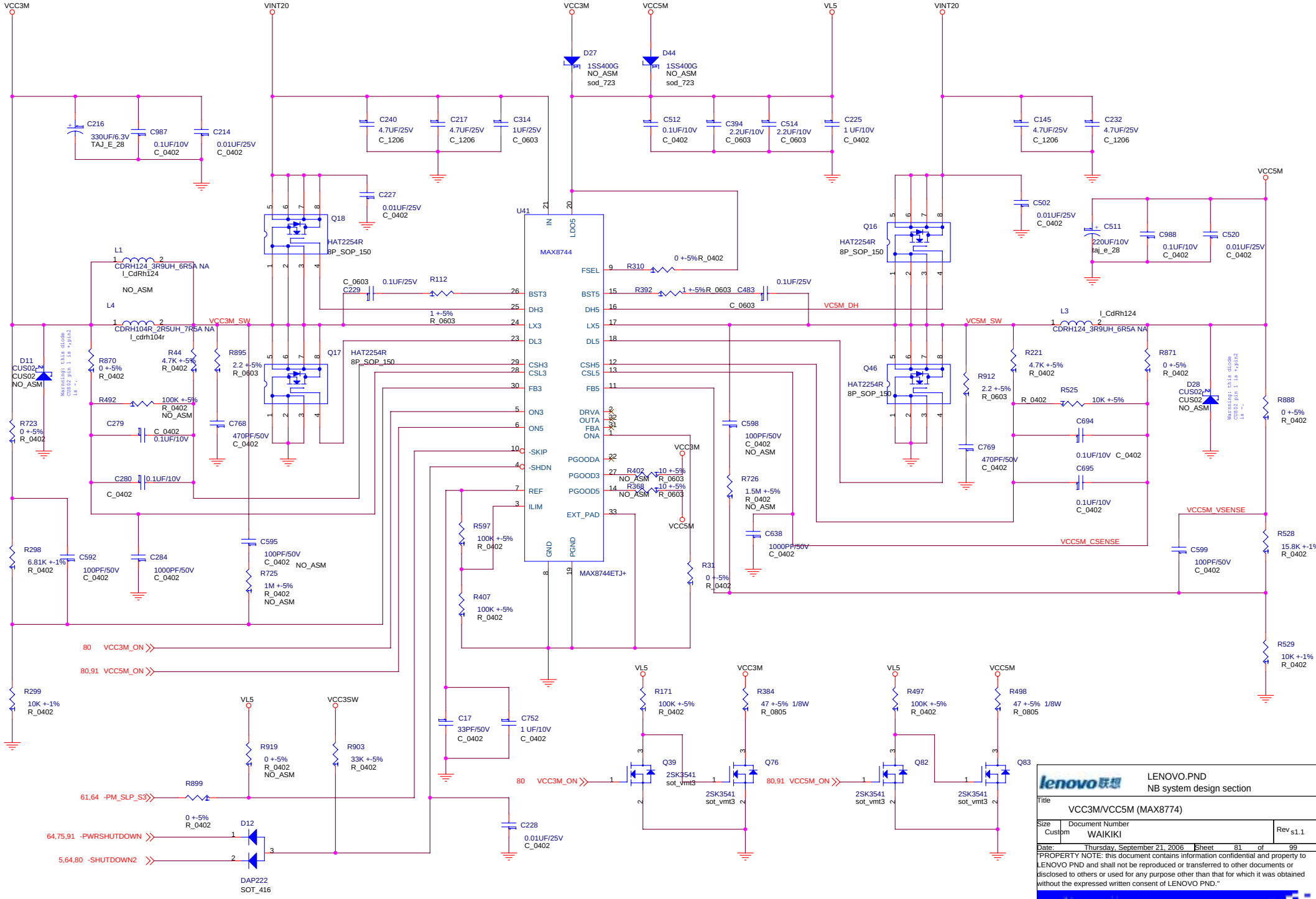


LENOVO.PND
NB system design section

Title
POWER SEQUENCE

Size	Document Number	Rev
B	WAIKIKI	s1.1

Date: Thursday, September 21, 2006 Sheet 80 of 99



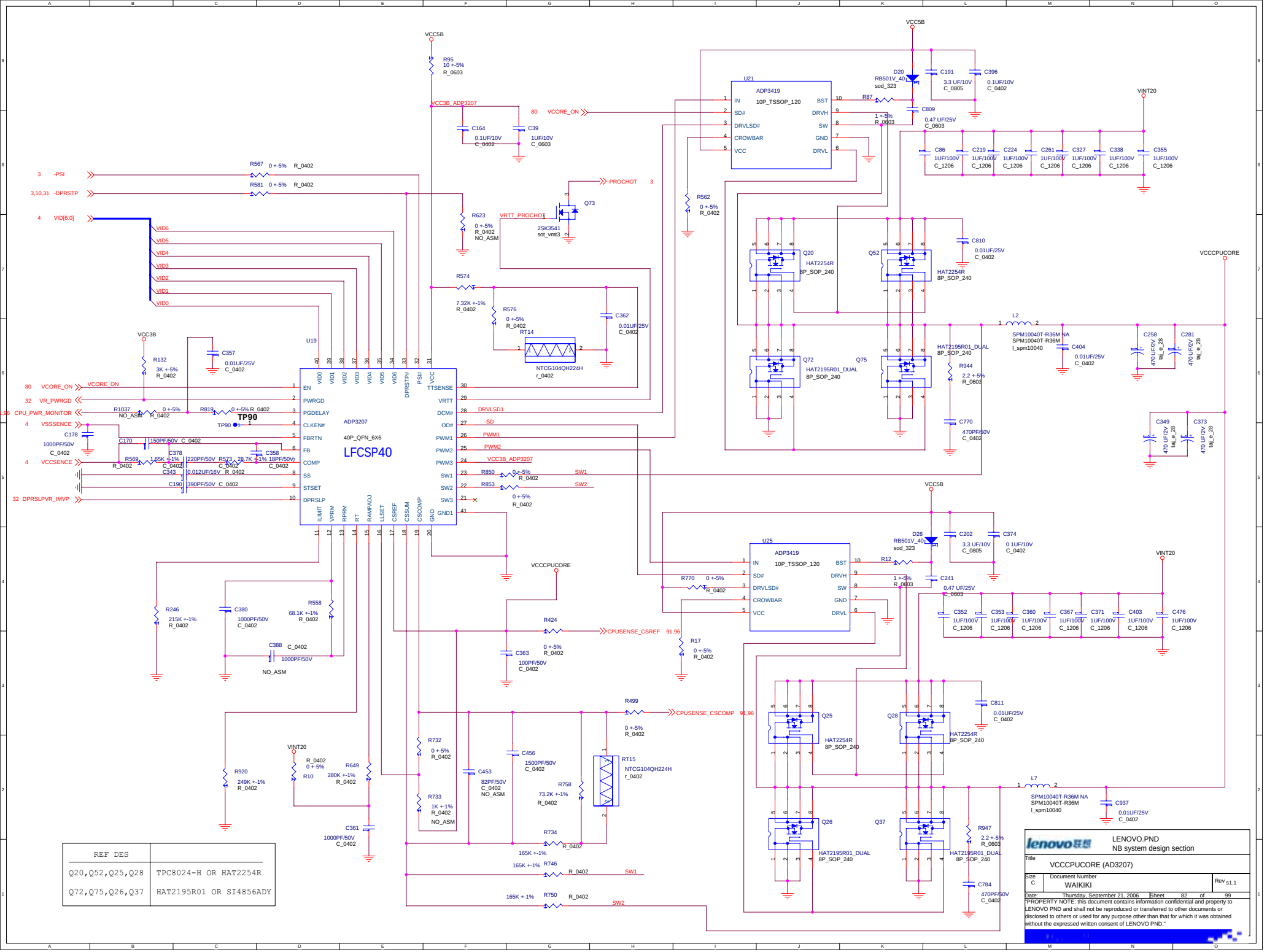
lenovo联想

LENOVO.PND
NB system design section

Title: VCC3M/VCC5M (MAX8774)

Size	Document Number	Rev
Custom	WAIKIKI	s1.1

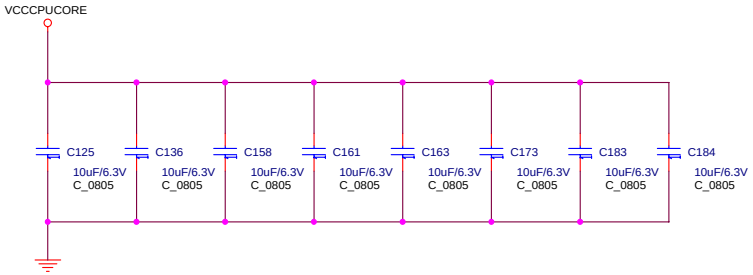
Date: Thursday, September 21, 2006 | Sheet 81 of 99

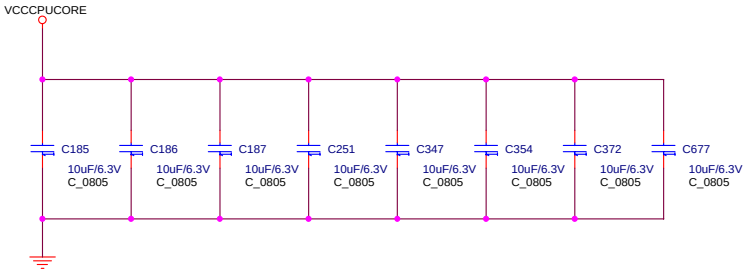


REF DES	
Q20,Q52,Q25,Q28	TPC8024-H OR HAT2254R
Q72,Q75,Q26,Q37	HAT2195R01 OR SI4856ADY

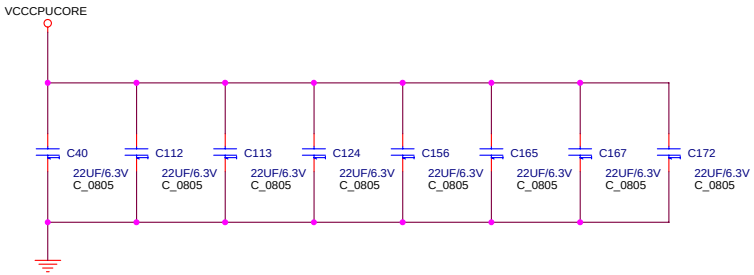
Title	VCCCPUCORE (AD3207)
Size	C
Document Number	WAIKIKI
Rev	s1.1
Date	Thursday, September 21, 2006
Sheet	82 of 99

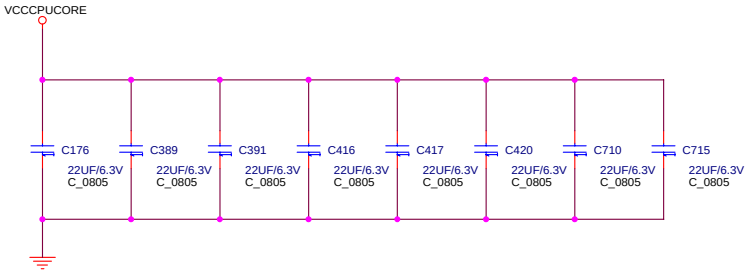
LENOVO.PND
NB system design section





10UF 6.3V X5R 0805 1/16W X 16PCS





22UF 6.3V X5R 0805 1/16W X 16PCS

lenovo联想

LENOVO.PND
NB system design section

Title
VCCCPUCORE DECOUPLING

Size	Document Number	Rev
Custom	WAIKIKI	s1.1

Date: Thursday, September 21, 2006 Sheet 83 of 99

BLACK PAGE

lenovo联想	LENOVO.PND NB system design section
Title	VCC1R5M
Size: Custom	Document Number: WAIKIKI
Rev	s1.1
Date:	Thursday, September 21, 2006
Sheet	84 of 99

INTEG VCCGFXCORE VOLTAGE
1.NORMAL;1.05V
2.GRAPHICS RENDER STANDBY MODE;0.75V
VID<4..0>
01000 =1.05V

VCC5M
VCC3M
VINT20
VCCGFXCORE
VCC5M_ADP3209

R494 22K +-5% R_0402
R609 0 +-5% R_0402 NO_ASM
R621 10K +-5% R_0402
R570 10 +-5% R_0603
D50 1SS400CS sod_723
C375 3.3 UF/10V C_0805

C383 4.7UF/25V C_1206
C589 4.7UF/25V C_1206
C608 4.7UF/25V C_1206
C697 4.7UF/25V C_1206
C712 4.7UF/25V C_1206

10 GFXVID3 R501 0 +-5% R_0402 3209_VID4
10 GFXVID2 R541 0 +-5% R_0402 3209_VID3
10 GFXVID1 R519 0 +-5% R_0402 3209_VID2
10 GFXVID0 R549 0 +-5% R_0402 3209_VID1
R520 0 +-5% R_0402 3209_VID0
10,80 GFXCORE_ON

R7070 22K +-5% R_0402
R135 22K +-5% R_0402
R245 22K +-5% R_0402
R7102 0 +-5% R_0402
AGND_ADP3209

C337 1UF/10V C_0603
C376 0.47 UF/25V C_0603

Q40 HAT2254R 8P_SOP_240 NO_ASM
Q69 HAT2254R 8P_SOP_240

C491 330UF/2.5V taj_e_18
C605 330UF/2.5V taj_e_18
C660 330UF/2.5V taj_e_18 NO_ASM

U17
ADP3209
ADP3209 X5

FBRTN 1
FB 2
COMP 3
SS 4
ST 5
PMON 6
PMONFS 7
CLIM 8
VARFREQ 32
PWRGD 31
EN 30
VID0 29
VID1 28
VID2 27
VID3 26
VID4 25
VCC 24
BST 23
DRVH 22
SW 21
PVCC 20
DRVL 19
PGND 18
GND 17
LLINE 9
CSCOMP 10
CSREF 11
CSFB 12
RAMP 13
VRPM 14
RPM 15
RT 16
EXTPAD 33

R462 33.2K +-1% R_0402
C414 22PF/50V C_0402
C331 100PF/50V C_0402
R398 1K +-1% R_0402
C368 470PF/50V C_0402
R524 20K +-1% R_0402
R575 1 +-5% R_0603

L23 SPM10040T-R56M150 0.56uH l_spm10040

Q95 HAT2195R01_DUAL 8P_SOP_240
Q94 HAT2195R01_DUAL 8P_SOP_240 NO_ASM
R757 2.2 +-5% R_0603
R905 59K +-1% R_0402
C766 470PF/50V C_0402
C386 0.01UF/25V C_0402

C437 0.012UF/16V C_0402
C478 680PF/50V C_0402
R539 3K +-5% R_0402
R534 200K +-1% R_0402
60 GFX_PWR_MONITOR

R691 357K +-1% R_0603
R622 200K +-1% R_0402
C992 1000PF/50V C_0402
R698 1K +-1% R_0402
C896 100PF/50V C_0402

R588 187K +-1% R_0402
R595 140K +-1% R_0402
C377 2.2UF/10V C_0603

R695 340K +-1% R_0402
R762 0 +-5% R_0402
R399 0 +-5% R_0402

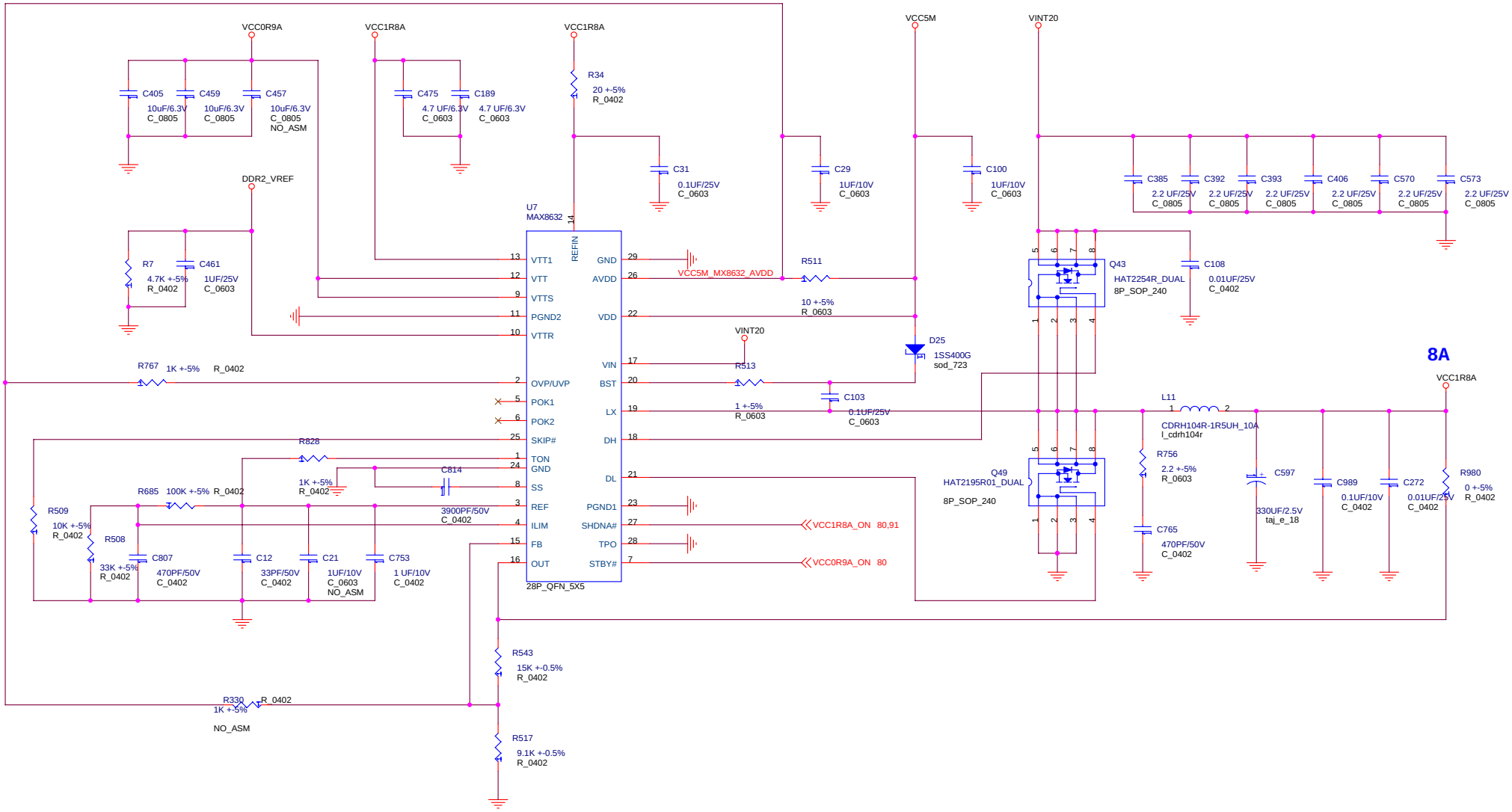
CONNECT TO GFXCORE

VGFX_CORE_RTN
R913 0 +-5% R_0402
C335 1000PF/50V C_0402
R921 0 +-5% R_0402

R617 0 +-5% R_0402 NO_ASM
R620 R_0402 0 +-5%
C744 C_0402 100PF/50V
C895 1800PF/50V C_0402
R713 76.8K +-1% R_0402
R716 R_0603 140K +-1%
RT17 NTCG104QH224H r_0402
C612 1000PF/50V C_0402

AGND_ADP3209

lenovo联想	LENOVO.PND NB system design section
Title	VCCGFXCORE(MAX1993)
Size: Custom	Document Number: WAIKIKI
Rev	s1.1
Date: Thursday, September 21, 2006	Sheet 85 of 99

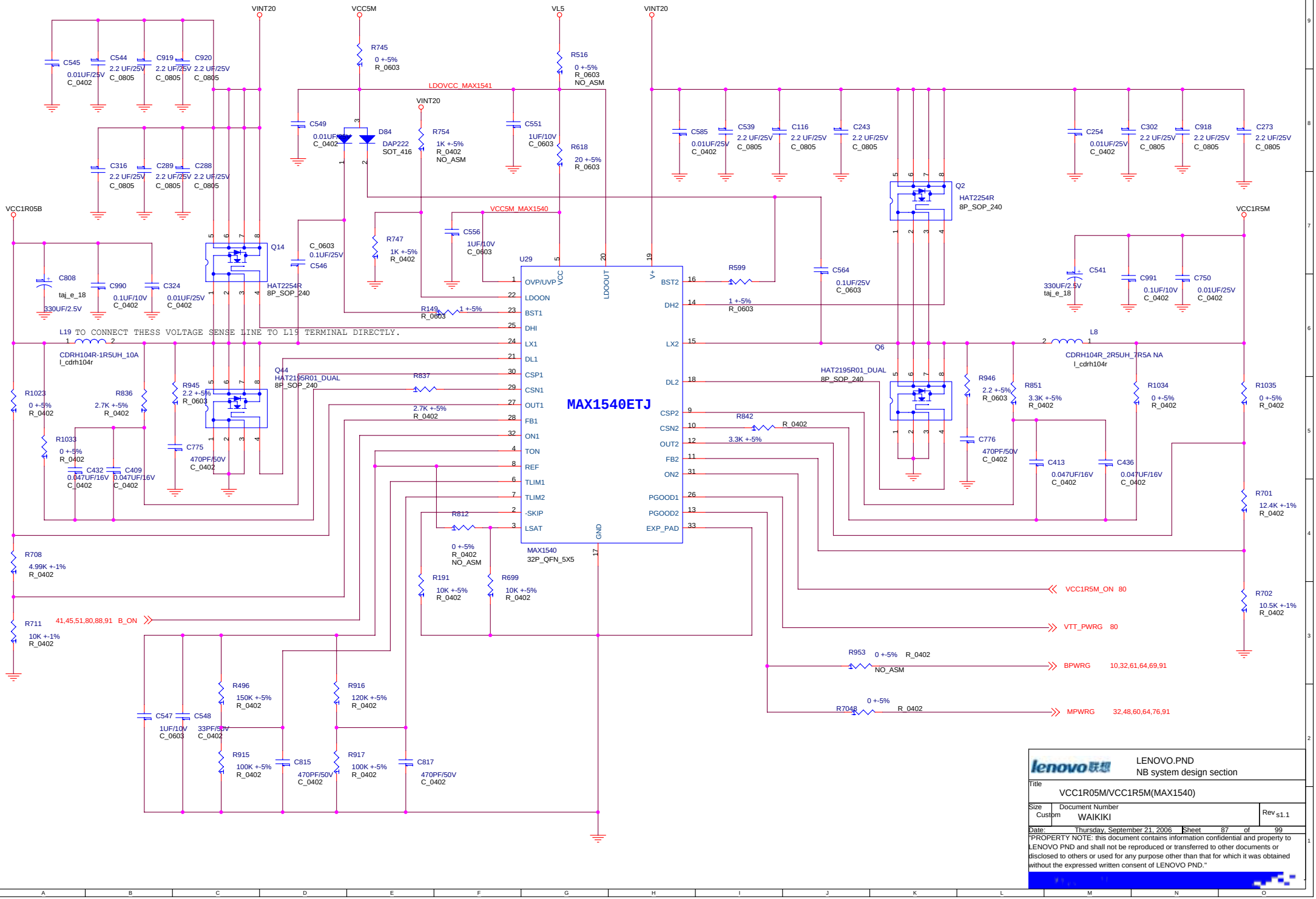


LENOVO.PND
NB system design section

Title: VCC1R8A/VCC09RA(MAX8632)

Size: Custom | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 86 of 99



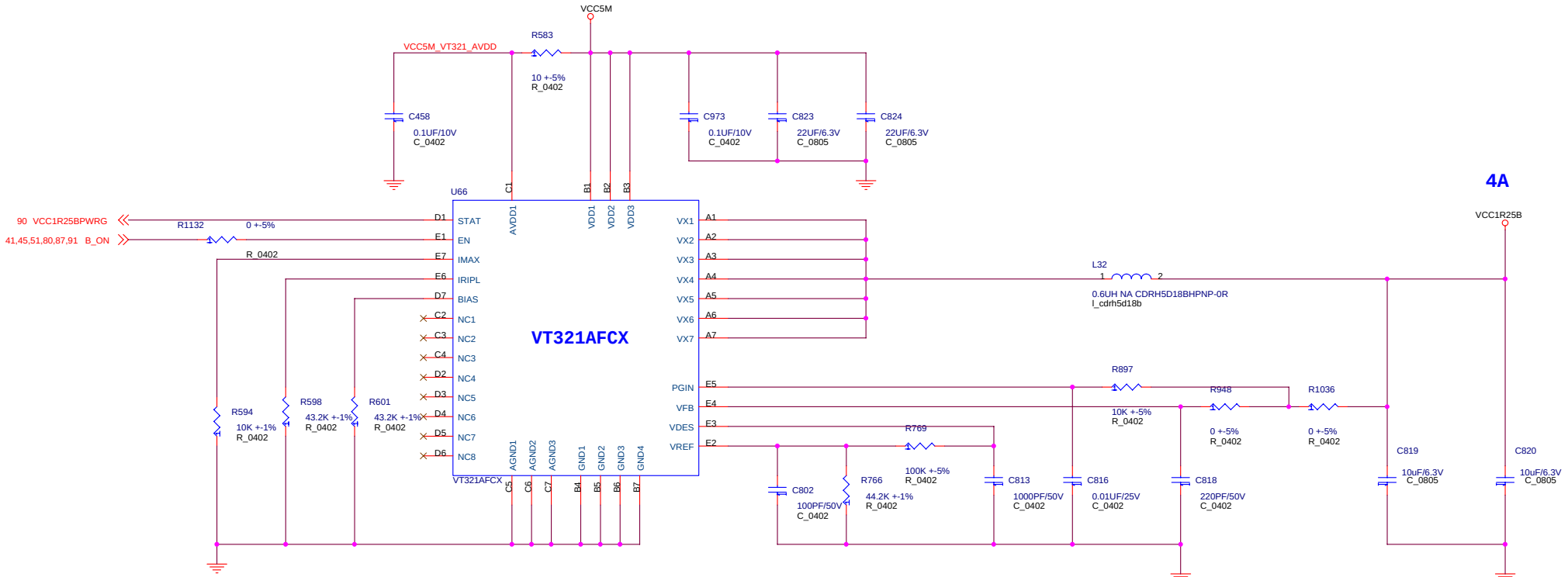
lenovo联想

LENOVO.PND
NB system design section

Title
VCC1R05M/VCC1R5M(MAX1540)

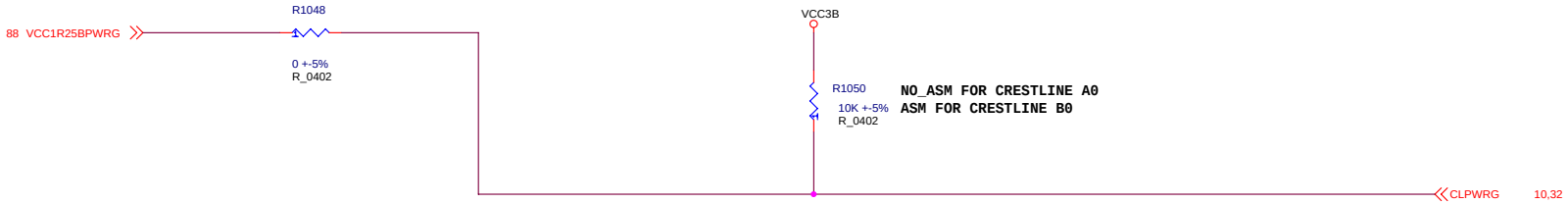
Size	Document Number	Rev
Custom	WAIKIKI	s1.1

Date: Thursday, September 21, 2006 Sheet 87 of 99



lenovo联想	LENOVO.PND NB system design section
Title	VCC1R25B(VT322)
Size: Custom	Document Number: WAIKIKI
Rev	s1.1
Date: Thursday, September 21, 2006	Sheet 88 of 99

BLACK PAGE

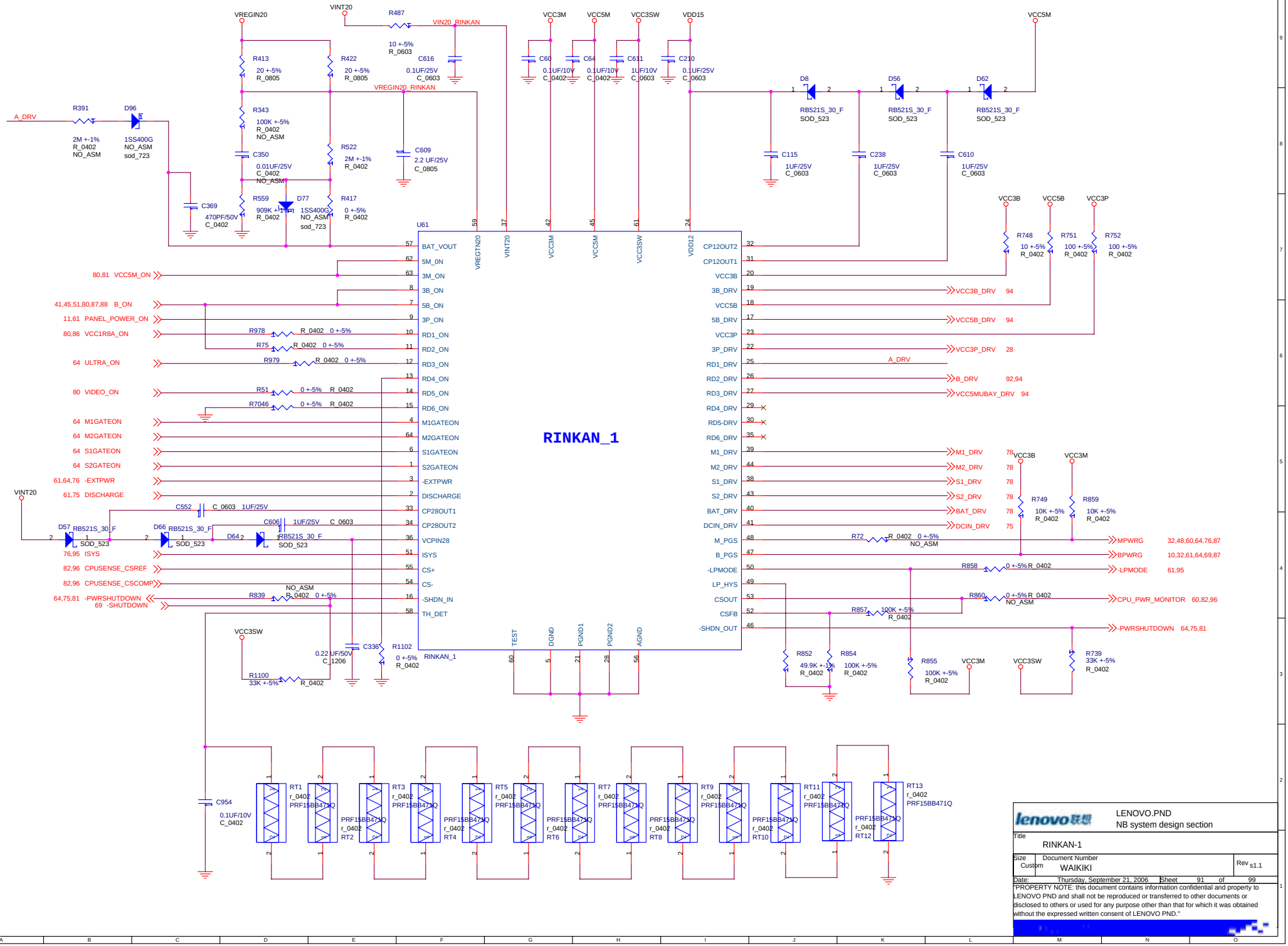


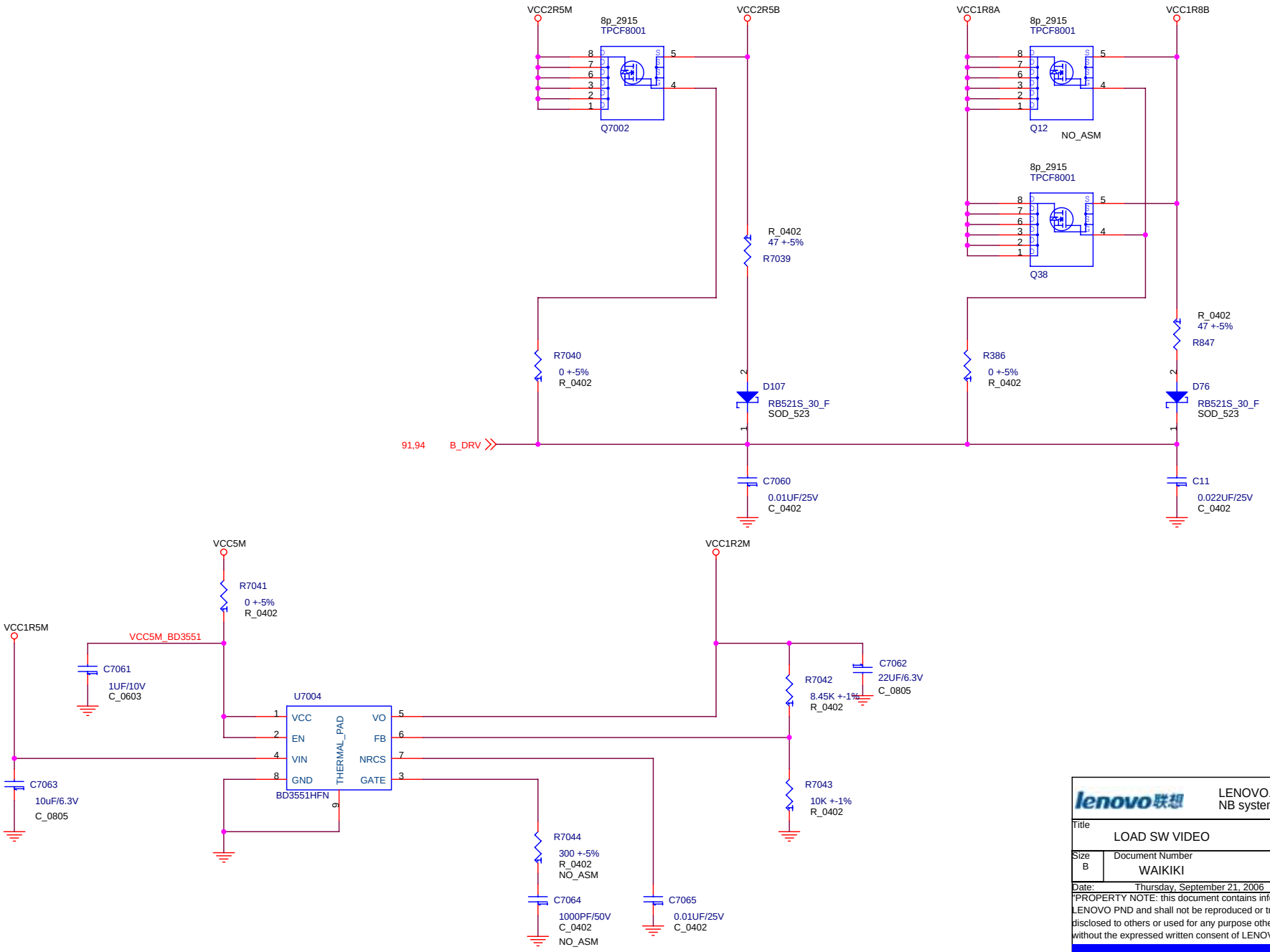
LENOVO.PND
NB system design section

Title: PWRG

Size: Custom | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 90 of 99


RINKAN_1
U61
VREGIN20
VINT20
VIN20_RINKAN
VREGIN20_RINKAN
R487
10 +-5%
R_0603
R413
20 +-5%
R_0805
R422
20 +-5%
R_0805
C616
0.1UF/25V
C_0603
R343
100K +-5%
R_0402
NO_ASM
C350
0.01UF/25V
C_0402
NO_ASM
R522
2M +-1%
R_0402
C609
2.2 UF/25V
C_0805
R391
2M +-1%
R_0402
NO_ASM
D96
1SS400G
NO_ASM
sod_723
A_DRV
C369
470PF/50V
C_0402
R559
909K +-1%
R_0402
D77
1SS400G
NO_ASM
sod_723
R417
0 +-5%
R_0402
VCC3M
VCC5M
VCC3SW
VDD15
C60
0.1UF/10V
C_0402
C64
0.1UF/10V
C_0402
C611
1UF/10V
C_0603
C210
0.1UF/25V
C_0603
D8
RB521S_30_F
SOD_523
D56
RB521S_30_F
SOD_523
D62
RB521S_30_F
SOD_523
C115
1UF/25V
C_0603
C238
1UF/25V
C_0603
C610
1UF/25V
C_0603
VCC3B
VCC5B
VCC3P
R748
10 +-5%
R_0402
R751
100 +-5%
R_0402
R752
100 +-5%
R_0402
VCC3B_DRV 94
VCC5B_DRV 94
VCC3P_DRV 28
A_DRV
B_DRV 92,94
VCC5MUBAY_DRV 94
M1_DRV 78
M2_DRV 78
S1_DRV 78
S2_DRV 78
BAT_DRV 78
DCIN_DRV 75
R749
10K +-5%
R_0402
R859
10K +-5%
R_0402
R72
R_0402 0 +-5%
NO_ASM
MPWRG 32,48,60,64,76,87
BPWRG 10,32,61,64,69,87
R858
0 +-5% R_0402
-LPMODE 61,95
R860
0 +-5% R_0402
NO_ASM
CPU_PWR_MONITOR 60,82,96
R857
100K +-5%
R_0402
-PWRSHUTDOWN 64,75,81
R852
49.9K +-1%
R_0402
R854
100K +-5%
R_0402
R855
100K +-5%
R_0402
R739
33K +-5%
R_0402
80,81 VCC5M_ON
41,45,51,80,87,88 B_ON
11,61 PANEL_POWER_ON
80,86 VCC1R8A_ON
R978
R_0402 0 +-5%
R75
R_0402 0 +-5%
64 ULTRA_ON
R979
R_0402 0 +-5%
80 VIDEO_ON
R51
0 +-5% R_0402
R7046
0 +-5% R_0402
64 M1GATEON
64 M2GATEON
64 S1GATEON
64 S2GATEON
61,64,76 -EXTPWR
61,75 DISCHARGE
C552
C_0603 1UF/25V
C606
1UF/25V C_0603
D57
RB521S_30_F
SOD_523
D66
RB521S_30_F
SOD_523
D64
RB521S_30_F
SOD_523
76,95 ISYS
82,96 CPUSENSE_CSREF
82,96 CPUSENSE_CSCOMP
64,75,81 -PWRSHUTDOWN
69 -SHUTDOWN
R839
NO_ASM
R_0402 0 +-5%
C336
0.22 UF/50V
C_1206
R1102
0 +-5%
R_0402
R1100
33K +-5%
R_0402
C954
0.1UF/10V
C_0402
RT1
r_0402
PRF15BB471Q
RT2
RT3
RT4
RT5
RT6
RT7
RT8
RT9
RT10
RT11
RT12
RT13
BAT_VOUT
5M_ON
3M_ON
3B_ON
5B_ON
3P_ON
RD1_ON
RD2_ON
RD3_ON
RD4_ON
RD5_ON
RD6_ON
M1GATEON
M2GATEON
S1GATEON
S2GATEON
-EXTPWR
DISCHARGE
CP28OUT1
CP28OUT2
VCPIN28
ISYS
CS+
CS-
-SHDN_IN
TH_DET
CP12OUT2
CP12OUT1
VCC3B
3B_DRV
VCC5B
5B_DRV
VCC3P
3P_DRV
RD1_DRV
RD2_DRV
RD3_DRV
RD4_DRV
RD5-DRV
RD6_DRV
M1_DRV
M2_DRV
S1_DRV
S2_DRV
BAT_DRV
DCIN_DRV
M_PGS
B_PGS
-LPMODE
LP_HYS
CSOUT
CSFB
-SHDN_OUT
TEST
DGND
PGND1
PGND2
AGND
LENOVO.PND
NB system design section
Title
RINKAN-1
Size
Custom
Document Number
WAIKIKI
Rev s1.1
Date: Thursday, September 21, 2006
Sheet 91 of 99
"PROPERTY NOTE: this document contains information confidential and property to LENOVO PND and shall not be reproduced or transferred to other documents or disclosed to others or used for any purpose other than that for which it was obtained without the expressed written consent of LENOVO PND."

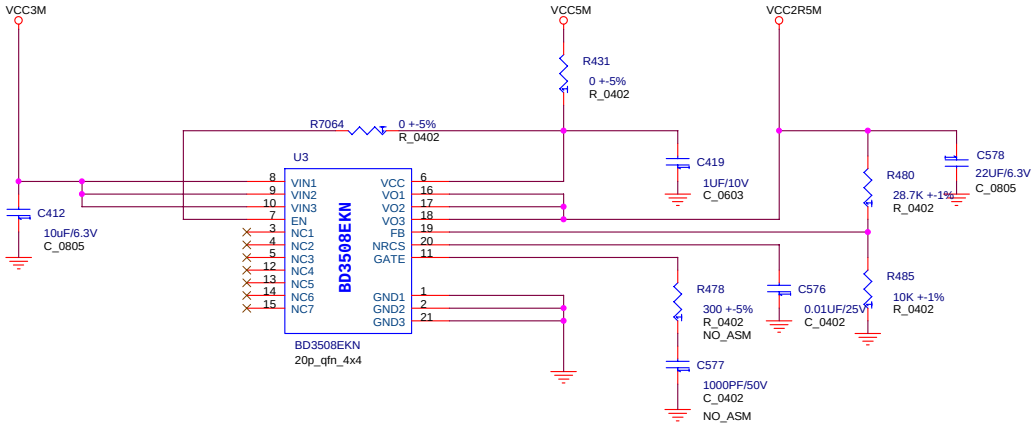


LENOVO.PND
NB system design section

Title: LOAD SW VIDEO

Size: B | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 92 of 99



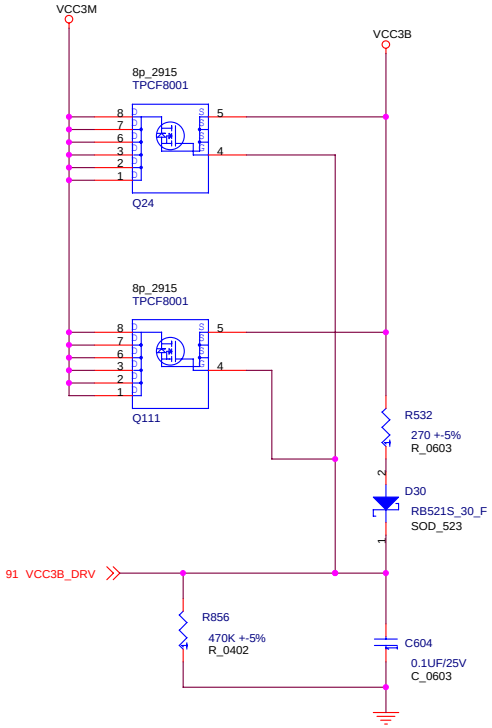
LENOVO.PND
NB system design section

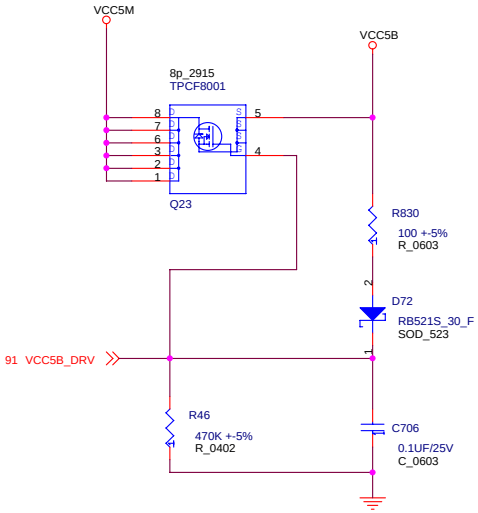
Title: LOAD SW AUX1 AUX2

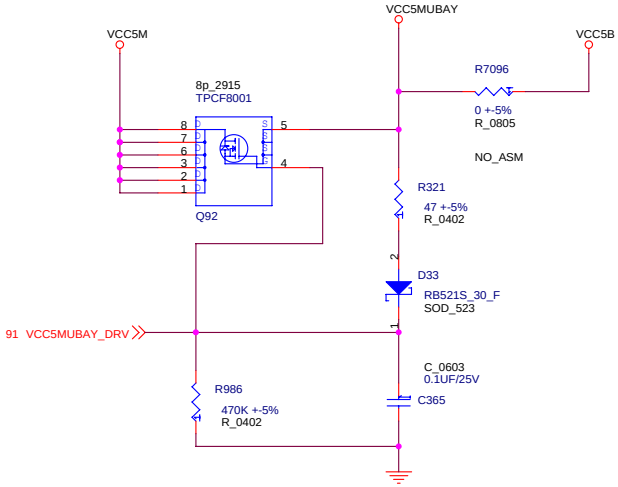
Size: Custom | Document Number: WAIKIKI | Rev: s1.1

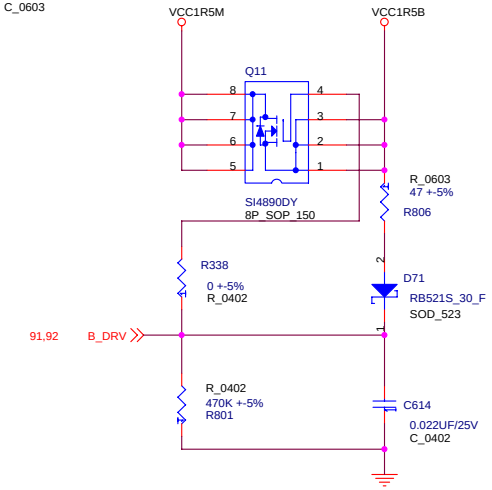
Date: Thursday, September 21, 2006 | Sheet 93 of 99

	SWAP BAY	FIXED BAY
Q92	ASM	NO_ASM
R986	ASM	NO_ASM
R321	ASM	NO_ASM
D33	ASM	NO_ASM
C365	ASM	NO_ASM
R7096	NO_ASM	ASM







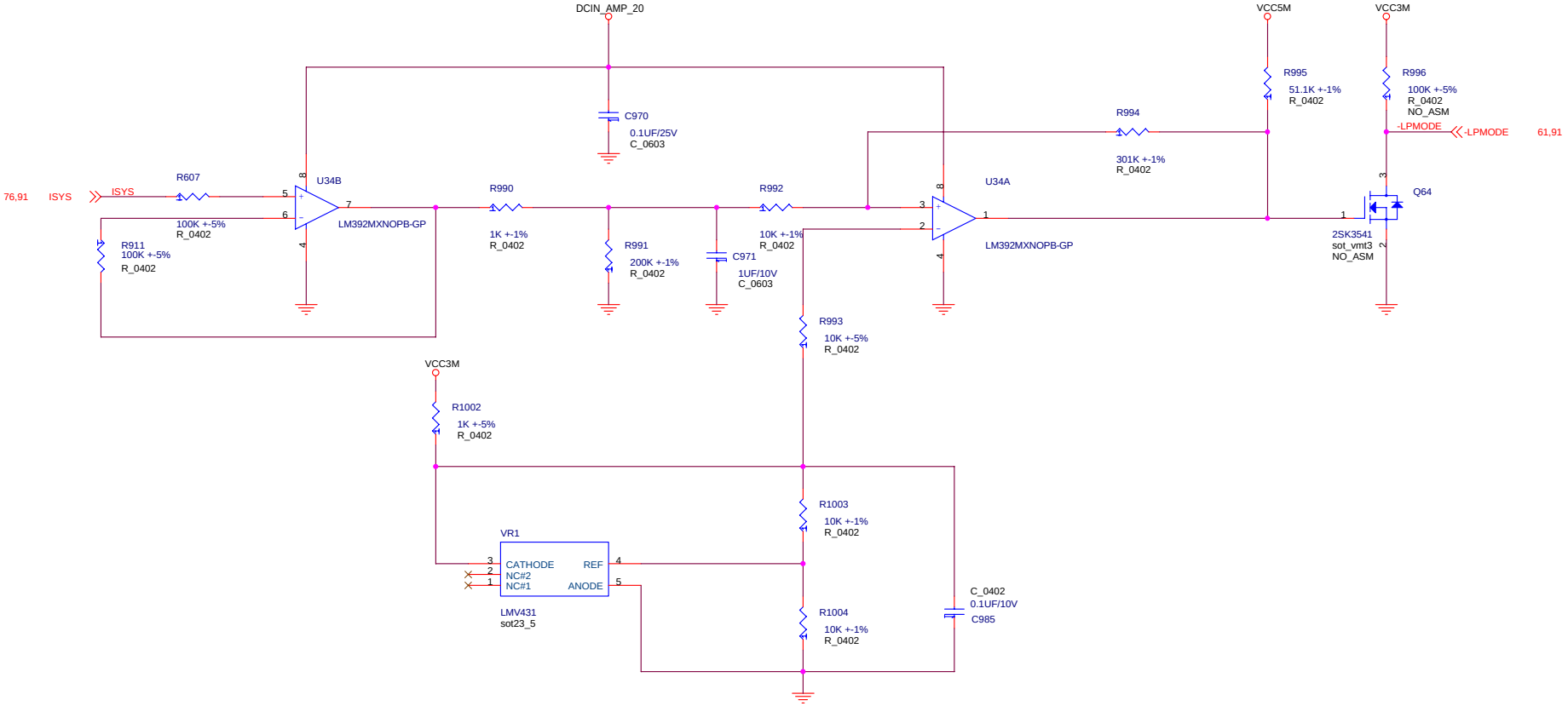


LENOVO.PND
NB system design section

Title: LOAD SW B&UBAY

Size: Custom | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 94 of 99



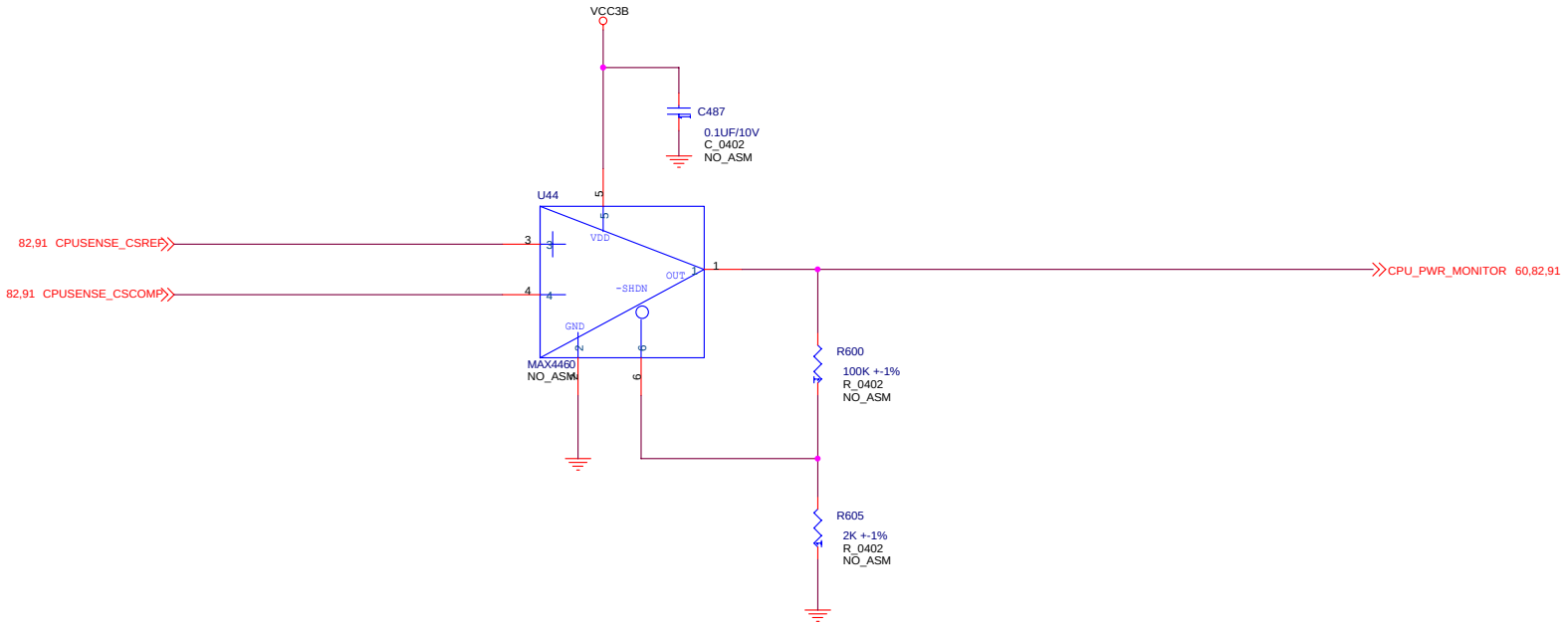
lenovo联想

LENOVO.PND
NB system design section

Title
MAX POWER CTRL

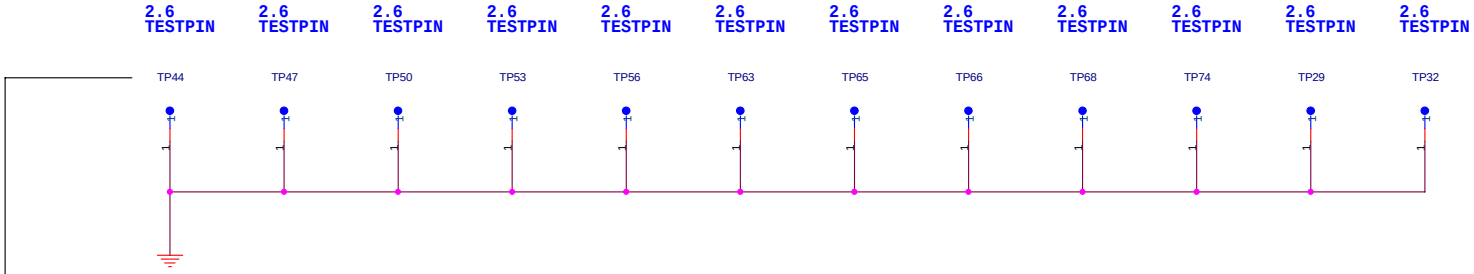
Size	Document Number	Rev
Custom	WAIKIKI	s1.1

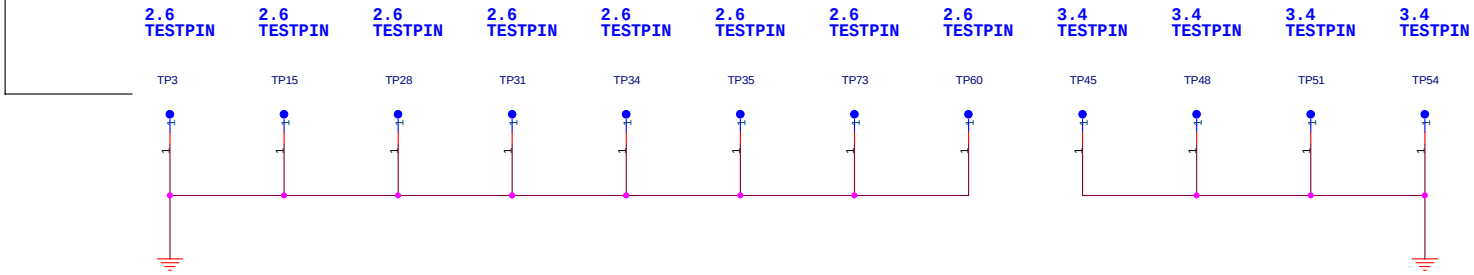
Date: Thursday, September 21, 2006 Sheet 95 of 99

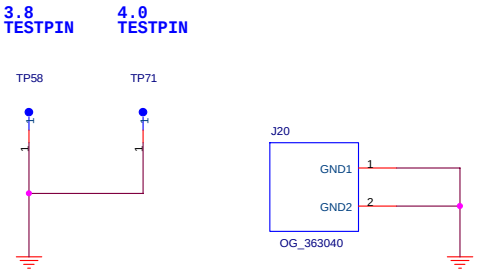


lenovo联想	LENOVO.PND NB system design section	
Title	POWER MONITOR	
Size: Custom	Document Number: WAIKIKI	Rev: s1.1
Date: Thursday, September 21, 2006	Sheet 96 of 99	

PTH FOR SCREW HOLE







lenovo联想	LENOVO.PND NB system design section	
Title: PTH SCREW HOLES		
Size: Custom	Document Number: WAIKIKI	Rev: s1.1
Date: Thursday, September 21, 2006	Sheet 97 of 99	

EC History List

EC#	PAGE	Description
WK_SDV_EC001	20	R341 & R27 : 2.2K => 4.7K for DVI ID read fail W /A EC; SDVO_CTRL_DATA/CLK Pullup value change,
WK_SDV_EC002	88	R598 : 47K 5% => 43.2K 1%,C819 & C820 : 22UF => 10UF/6.3V/10%/2125,to correct value of VCC 1R25AMT
WK_SDV_EC003	10	R184 : ASM=>NO ASM,to set default to LOW POWER PCIE (same as DaV -1-Integ/Disc、DaV-3-Disc)
WK_SDV_EC004	12	C762 : 0.1UF => 0.47UF/6.3V/10%/1005,C681, C683 : 0.1UF => 0.22UF/6.3V/10%/1005, C733 : 0.1UF => 2.2UF/6.3V/10%/1608, C579 : 10UF +> 22UF/6.3V/20%/2125, C580 : 10UF +> 4.7UF/6.3V/10%/2125, to meet Intel Design Review results
WK_SDV_EC005	84	R829 : 6.19K 1% 1005 to adjust voltage of VCC 1R05M
WK_SDV_EC006	48	Change R1005 from pull down to pull up in order to support MS card
WK_SDV_EC007	60	R939 ASM(100kΩ) -> No ASM
WK_SDV_EC008	63	R690 : NOASM => 100K ASM,Add 100Kohm pulldown to PANEL _POWER_ON (to meet Intel D.G)
WK_SDV_EC009	45	R908 : 27K => 16.2K/1%/1005,to change MICVCC from 4.7V to 3.3V for AD1984
WK_SDV_EC010	32	R345 ASM -> NO_ASM (0ohm),R1009 NO_ASM -> ASM (0ohm, 83G3823) to enable GbE Disabling from BIOS Setup Menu
WK_SDV_EC012	28	Romove Q108 and nets to remove Security LED Completely
WK_SDV_EC013	22	Q45 : Change NchMOSFET from 2SK3019 to 2SK3541
WK_SDV_EC014	11	Add R772 100K/1% pulldown resistor to VGA_BLON (to meet Intel D.G)
WK_SDV_EC015	59	Add C764,C879,C880,C881,(1000pF x 4) at audio lines near the Dock connector.
WK_SDV_EC016	75	Add C882 100pF at ACDC_ID near the DC connector(J24)
WK_SDV_EC017	75	Add Q91,Q97,R773 to prevent inrush current from AC adapter to Battery
WK_SDV_EC018	75	Change placement note of R11 and R264 in order to prevent connection with VINT 20
WK_SDV_EC019	85	Remove Q15,R403,R425,R429,R521,R537,R538,R540,R579,R586,R587,R590,R602,r73 change R494 to 22K 5%, ASM, Change R501,R541,R519,R549,R520 from No_ASM to ASM, for GFX_VID PULLUP W/A until BIOS start for Crestline ES1, ES2(Parmanent EC)
WK_SDV_EC020	44	Delete R1014,R1015, R1017, R1018, This resiser prevent to on these FET due to low voltage level
WK_SDV_EC022	61	Add R943 100K 5% pullup
WK_SDV_EC023	14	Change Cap. Parameter C204,C205,C205 from 10V 10% TO 6.3V, 10%
WK_SDV_EC024	12	ADD C883,C884,C885,C886,C887,C888, AND Remove C734,C735,C736, FOR Add de-cap to VCCGFXCORE
WK_SDV_EC025	19	Change C732,C672,C673,C213,C739,C708,C716 to NO_ASM, and change R335,R336,R76 to 1 Ohm to follow supplier 's recommendation
WK_SDV_EC026	28	Change R668 to NO_ASM and R764 to ASM, because GMCH PWM problem was fixed by BIOS correction
WK_SDV_EC027	88	add five 0 ohm resistors: R1053,R1054,R403,R425,R429 in order to follow AMT NON Support
WK_SDV_EC028	26,27	Insert two blank pages between Page 26 and Page27.
WK_SDV_EC029	52,56,59,74	Add Docking BOM Option Tables
WK_SDV_EC030	63	Add R540,R579, 0 Ohm NO_ASM for no Touch Pad support
WK_SDV_EC031	65,67	Change R305,C293,J26 to NO_ASM for no legacy IO
WK_SDV_EC032	37,94	Add R586,R587, and add FixedBay or SwapBay BOM Option tables
WK_SDV_EC033	73	Change Q97 from DTC115EE to DTC114EE.
WK_SDV_EC034	19	Change C672 C213 to NO_ASM
WK_SDV_EC035	69,91	Change Q59.3PIN from PWRSHUTDOWN to -SHUTDOWN,add net -SHUTDOWN on U61.16PIN for to divide -pwrshutdown signal into IN and OUT
WK_SDV_EC036	28,32,61	Del GPIO_BT signal and add -S4_STATE signal between H8 and ICH8 for detect S4 state.
WK_SDV_EC037	94	Change Q11 from HAT2195R01 to Si4890DY for cost reduction
WK_SDV_EC038	29,74	Change RGB signal CAP C448, C449, C596,C648, C651, C653 from 10pF to 22pF.
WK_SDV_EC039	32	Change R79 from 100ohm 5% to 39ohm 5% to improve waveform of -PLTRST_FAR
WK_SDV_EC040	85	Change R462 =>ASM,R595 100K=>200K,C744=>ASM,C895 2200PF=>1800PF,R905 59K=>43.2K,C660 =>NO_ASM,L23 0.88uh=>0.56uh for meet INTEL GMCH SPEC.
WK_SDV_EC041	78,81	CHANGE C722 0.01uF 25V 1005 10%,C214 C520 C386 C272 C324 C549 C750: 0.01uF 25V 1005 10% in order to reflect cap.
WK_SDV_EC042	86	Change R330 =>NO_ASM,R685 150K=>100K,Q43,Q49 =>HAT2195R01_DUAL in order to raise OCP point and output voltage of VCC 1R8M for DDR2
WK_SDV_EC043		Delete AMT support circuit,Include change AMT power rail to B power rail,modify AMT signal,detail information please see EC_FOR_AMT_DISABLE_2.PDF
WK_SDV_EC044	63	ADD TouchPad/FingerPrint Support information.
WK_SDV_EC045	78,79,80	ADD SWAP BAY/FIXED BAY BATTERY option information when built bom
WK_SDV_EC046	11,14	Add ASM/NOASM table for S -Video support when built bom.
WK_SDV_EC047	11	change R253 from 1.3K to 1.27K, 0.5%
WK_SDV_EC048	80	change R507 from 12K to 24K,and change R507 to R7035
WK_SDV_EC049	91	R855 change to NO_ASM, R852 chang to 49.9K 1%, change R855 to R9036
WK_SDV_EC050	32	Add Cardbus ID
WK_SDV_EC051	53,71	Add R7034, 200ohm, chang C591(C7051) to 0.1UF, 1V, 10%, change C301(C7059) to 0.01UF, 25V, 10%
WK_SDV_EC052	61	Change H8 pin assign of S4_STATE#
WK_SDV_EC053	72	Change default APS logic for ADXL322.
WK_SDV_EC054	32	Change to Wailiki ID from Davinci ID, R1021 NO_ASM to ASM, and R1038 ASM to NO_ASM
WK_SDV_EC055	32	Planar ID 0000b for SDV, R113 NO_ASM to ASM, and R672 ASM to NO_ASM
WK_SDV_EC056	45	Co-Layout Headphone amplifier AN12946A
WK_SDV_EC057	45	Replace Ethernet from Nineveh to BCM 5787M (U7002)
WK_SDV_EC058	46	Change system speaker function with BEEP.
WK_SDV_EC059		Add comments for rating of power components.
WK_SDV_EC060	42	C7002 : should be 4.7uF 10V X5R,Q99 : 2SK3541 -> DTC115
WK_SDV_EC061	61,32	Delete 0ohm jumpers and connect directly of H8,and Delete NETDETECT signal.
WK_SDV_EC062	70	Change from D1 to R7052 0ohm and Delete R212.
WK_SDV_EC063	48	To remove hook for R5C584,and circuit for 2nd port of IEEE1394 termination and non-internal regulator
WK_SDV_EC064	48	To update ASM option for IEEE1394 support case(R5C847, R5C803) and non support case (R5C804)
WK_SDV_EC065	32	Pull-up R272 for CL_RST_WLAN# -> NO_ASM : Intel's recommendation
WK_SDV_EC066	31	Add 4in1 Slot Presence Detection ID.
WK_SDV_EC067	48	To implement feedback of Circuit review by Ricoh
WK_SDV_EC068	60	ADD RC circuit for fix G-sensor noise problem

lenovo联想

LENOVO.PND
NB system design section

Title
PTH SCREW HOLES

Size	Document Number	Rev
Custom	WAIKIKI	s1.1
Date: Thursday, September 21, 2006	Sheet 98 of 99	

EC History List 2

EC#	PAGE	Description
WK_SDV_EC069	70	DEL C41 to remove stub of LPCCLK for TATER
WK_SDV_EC070	81	ADD R7051 R7052 in order to support MAX17003 for Discharge function of VCC3M and VCC5M
WK_SDV_EC071	91	ADD R7045 DEL R868,R820,R876,R900 for change RINKAN-1 circuit for correction.
WK_SDV_EC072	70	Change TC7WB125FK to TC7SB384FU,TC7WB126FK to TC7SB385FU due to cost reduction
WK_SDV_EC073	55	Change C626,C627 to 0402.
WK_SDV_EC074	59,61	Change F14 : ASM -> NOASM,C7073,C7074,C7075,C7076 from 470pf to 330pf.
WK_SDV_EC075	76	Change C99,C90,C233 from 1uF/16V -> 1uF/10V in order to reflect cap.
WK_SDV_EC076	86	U7.5 add MPWRG signal workaround for backup
WK_SDV_EC077	55	Remove MDI_DETECT circuit and Change the power source of Magnetics from VCC1R8AUX to VCC2R5M.
WK_SDV_EC078	53	Modify NVRAM strapping and Connect ENERGY_DET to MDI_DETECT.
WK_SDV_EC079	53	Change BCM power source and add some decoupling Cap.
WK_SDV_EC080	53	VMAINPRSNT connects VCC3B through R7029,LOW_PWR connects -GBE_DISABLE,Add 0ohm on LAN_XTALI.
WK_SDV_EC081	92	Add VCC1R2M Logic for Broadcom BCM5787M support
WK_SDV_EC082	93	Add VCC2R5M Logic for Broadcom BCM5787M support
WK_SDV_EC083	86,87,91,93	Delete VCC1R8AUX and VCC1R8M,ADD VCC1R8A.
WK_SDV_EC084	72	Make device option for G-SENSOR.
WK_SDV_EC085	32	Follow EC043 correct some singnal.
WK_SDV_EC086	92	Del Q86 for del VCC3VIDEO power.
WK_SDV_EC087	32,64	ADD -PHY_PD_ICH signal then use it and -GBE_DISABLE to generate AUX_ON.
WK_SDV_EC088	7	Del R135,R387.
WK_SDV_EC089	64	Change SPI interface signal jumper resistor from 0 ohm to 33 ohm.
WK_SDV_EC090	85	Add pull-down resistor on Gfx_VID signal.
WK_SDV_EC091	11	change R772 to 100k +-5%,change R7071/R7072 to 33 +-5% for cost reduce.
WK_SDV_EC092	38	change FL7 to ACM2012-900-2P,R650/651 to 0 ohm 0603.
WK_SDV_EC093	10	Add R7073/R7074 on GFXCORE_ON signal for INTEL comment.
WK_SDV_EC094	50	Change PCMCIA Slot to new one.
WK_SDV_EC095	80,93	Change Q12.1 to VCC1R8A,add R7064 0ohm between U3.7 to U3.6,del R373 and VCC1R8M_ON signal.
WK_SDV_EC096	53	Correct the broadcom lan circuit,like change Ferrite bead to bigger type.
WK_SDV_EC097	31,32,64	Terminate opened pin and unused pin on ICH8M,and del -GBE_DISABLE net.
WK_SDV_EC098	84	Delete of VCC1R05M power rail.
WK_SDV_EC099	84	Change assignment of PC card slot connector.
WK_SDV_EC0100	19,33,54	Modify PCIE interface of BCM5787M,remove Robson interface.
WK_SDV_EC0101	63	Del C631 and C636 on the FPR USB lines.
WK_SDV_EC0102	54,57	Add bypass capacitors for VCC3B at miniPCIe slots.
WK_SDV_EC0103	32	Change R7006 from NO_ASM to ASM.
WK_SDV_EC0104	52,53,54,57	Change MID* netname to MDI* ,correct PCIE slot connect,add Lan eeprom table.
WK_SDV_EC0105	37	Del CD_IN function on ODD.
WK_SDV_EC0106	23	Change R7083 to 130 ohm,D7006 to SML_A10MT.TC7WB125AFK to TC7SBL384AFU.
WK_SDV_EC0108	32	Correct 4_in_1 slot ID.
WK_SDV_EC0109	91	Enable Rinkan_1 -LPMORE function.
WK_SDV_EC0110	53	Follow WK_SDV_EC096. Add strap option for Broadcom.
WK_SDV_EC0111	50	Delete VCC3_MC at PC card slot.
WK_SDV_EC0112	23	Add comments for xd function route.
WK_SDV_EC0113		Location ID to be consistent to DaVinci-3.Only change Location IDs . NO CHANGE in connection in schematics.
WK_SDV_EC0114	86	Change L11 to CDRH104R_1R5UH_10A follow DV3.
WK_SDV_EC0115	31,53	Connect LAN_RSTSYNC on ICH8 to GND,and modify LAN strapping table.
WK_SDV_EC0116	45,46,61	Add beep enable circuit and correct connection.
WK_SDV_EC0117	53	Add pull-up resistor R7097 for EEPROM WP signal.
WK_SDV_EC0118	23	Change J29 to Tyco from FOXCONN.
WK_SDV_EC0119	85	Correct discription.
WK_SDV_EC0120	85	Change R7062 rename to R212.
WK_SDV_EC0121	86	Del R17 and not connect MPWRG on U7.5 PIN
WK_SDV_EC0122	23	Correct slot pin.
WK_SDV_EC0123	38	R650/R651 marge to 1 network resistor RN5.
WK_SDV_EC0124	52,53,55	Change pin definition of T1/T2/U12.
WK_SDV_EC0125	61	Change RN54 to discrete resistor .
WK_SDV_EC0126		Parameter change and Error Correction.
WK_SDV_EC0127	84	R598,R601,C819,C820 Part value change.
WK_SDV_EC0128	58	DEL U53,U6 function for Live SPI rom one chip only.
WK_SDV_EC0129	95	No_asm R996,Q64 change LPMODE EC.
WK_SDV_EC0130	52	ADD C637 ASSEMBLE STATION ON TABLE.
WK_SDV_EC0131	45	Move Panasonicamplifier from planar layout to dummy subcard.
WK_SDV_EC0132	36	BOM change,J1 change to HAS1-2DFB12-51K.
WK_SDV_EC0133	81	BOM change,ADP3209 update to X5 version.
WK_SDV_EC0134	81	Change C482 to R1072 for use ADP3209 X5.
WK_SDV_EC0135	61	Change R1042 to 10K 5%.
WK_SDV_EC0136	91	Change C609 1U 0603 to 2.2U 0805 for prevent power shutdown when AC Adapter attached.
WK_SDV_EC0137	41	Disconnect U8 centerpad from AGND.
WK_SDV_EC0138	53	Add test point to U8 pin4,8,9.
WK_SDV_EC0139	52	RC termination should be NO_ASM.R611, R613, R615, R661, R610, R612, R660, R614, C528, C532, C527, C529 -> NO_ASM
WK_SDV_EC0140	56	Please stuff the TVS diode D103,D104 of Ethernet.
WK_SDV_EC0141	53	Change U7003 to 24C64 for the evaluation on DV4.After the evaluation without any issue, we plan to use 24L01 for Volume production to reduce the cost.stuff R7075 R7077,no asm R7076 R7078.
WK_SDV_EC0142	45	Change R655,R833,R700,R66 to 47K 5%,R67 No_asm.
WK_SDV_EC0143	85	Change ADP3209 X5 P/N to #DV3190.
WK_SDV_EC0144	72	Update logic table to support new G_sensor ST Micro LIS244AL.
WK_SDV_EC0145	85	Update L23 to #DV3127 SPM10040T-R56M150
WK_SDV_EC0146	85	Update L11 to #DV3014
WK_SDV_EC0147		Update #DV3123 description to CHIP 0.6UH +-20% 8.2A SMT 2PIN .
WK_SDV_EC0148		Just correct/update description of schematic.
WK_SDV_EC0149	23	Change J29 P/N to 42W3121.
WK_SDV_EC0150		BOM correction /update
WK_SDV_EC0151		BOM correction /update
WK_SDV_EC0152		Correction of Schematics description
WK_SDV_EC0153		Change C11 from 0.01uF to 0.022uF for Capacitance of B _DRV being 0.05uF
WK_SDV_EC0154		to change Integ GFXCORE DC-DC in order to meet Intel GMCH spec.
WK_SDV_EC0155	91	Change R72 to NO_ASM to prevent power shutdown problem when AC is attached.
WK_SDV_EC0156	46	Change R984 to 10k 5%.

LENOVO.PND
NB system design section

Title: PTH SCREW HOLES

Size: Custom | Document Number: WAIKIKI | Rev: s1.1

Date: Thursday, September 21, 2006 | Sheet 99 of 99