

Dasher-2 Block Diagram

LDB-2 91.4RA01.001

Mar. 09, 2012

PCB Layer Stackup

L1:Component
L2:GND
L3:Signal 1
L4:VCC
L5:Signal 2
L6:Signal 3
L7:GND
L8:Component

Battery Charger/Selector

BQ24760 74
INPUTS OUTPUTS
DOCK_PWR20 CHARGER_OUT12

System DC/DC
TPS51220ARSN 78
VINT20 VCC5M
VCC3M

CPU DC/DC
VT1318M/VT1324S 79
VCC5M_OUT VCCPUCORE

GMCH GFX CORE
VT1324S 80
VCC5M_OUT VCCGFXCORE

VCC1R5A
VT357FCX 85
VCC5M_OUT VCC1R5A

VCC0R75B
TPS51200DRCR 86
VCC1R5A VCC0R75B

VCC1R8B
BD9139 89
VCC5M_OUT VCC1R8B

VCC1R05AMT
VT356FCX 84
VCC5M_OUT VCC1R05LAN

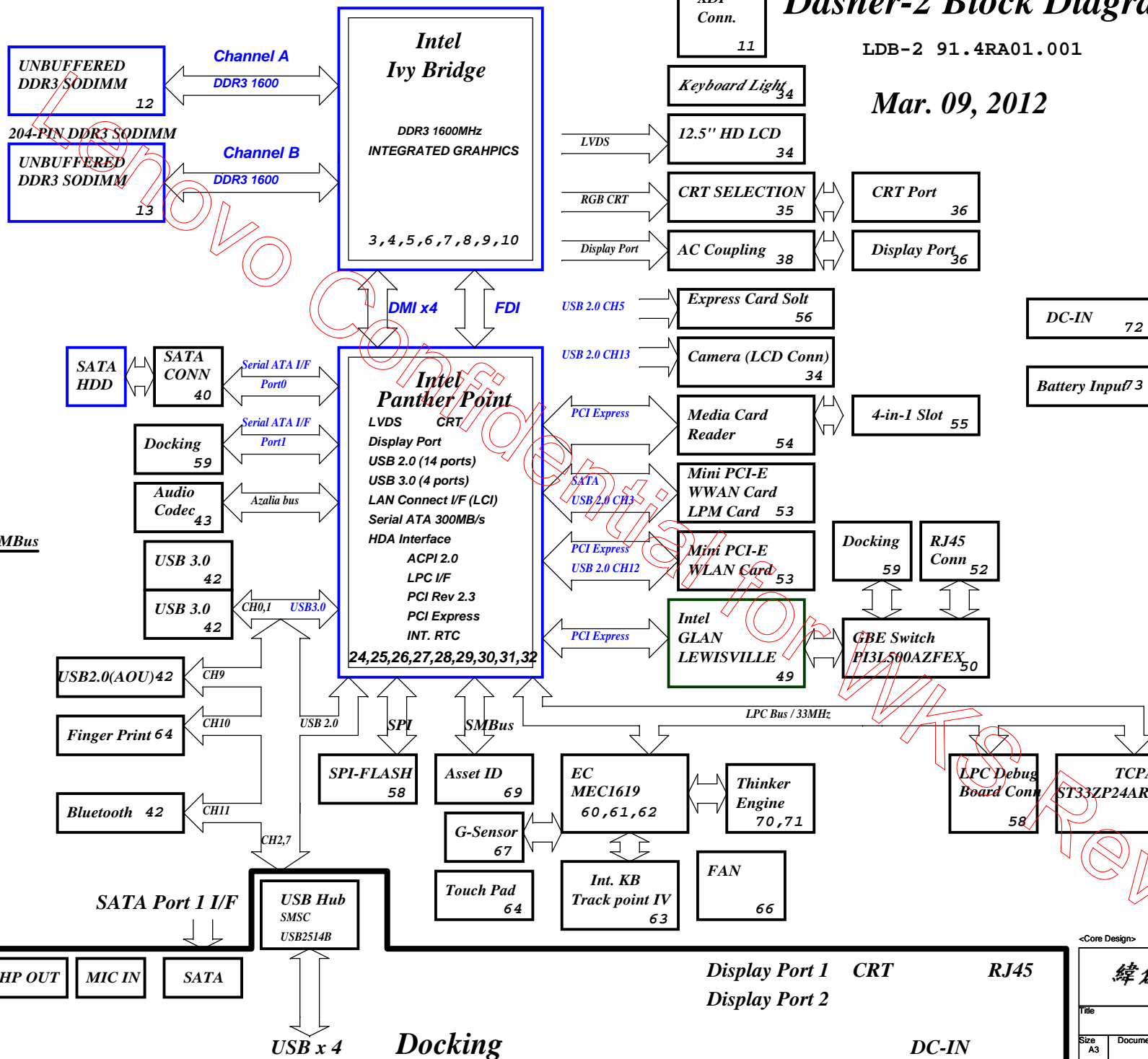
VCC1R05B_VTT
VT356 83
VCC5M_OUT VCC1R05B_VTT

VCCSA
VT370 90
VCC5M_OUT VCCSA

<Core Design>

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File
Block Diagram
Size A3 Document Number Dasher-2 Rev -1
Date: Friday, March 09, 2012 Sheet 1 of 101

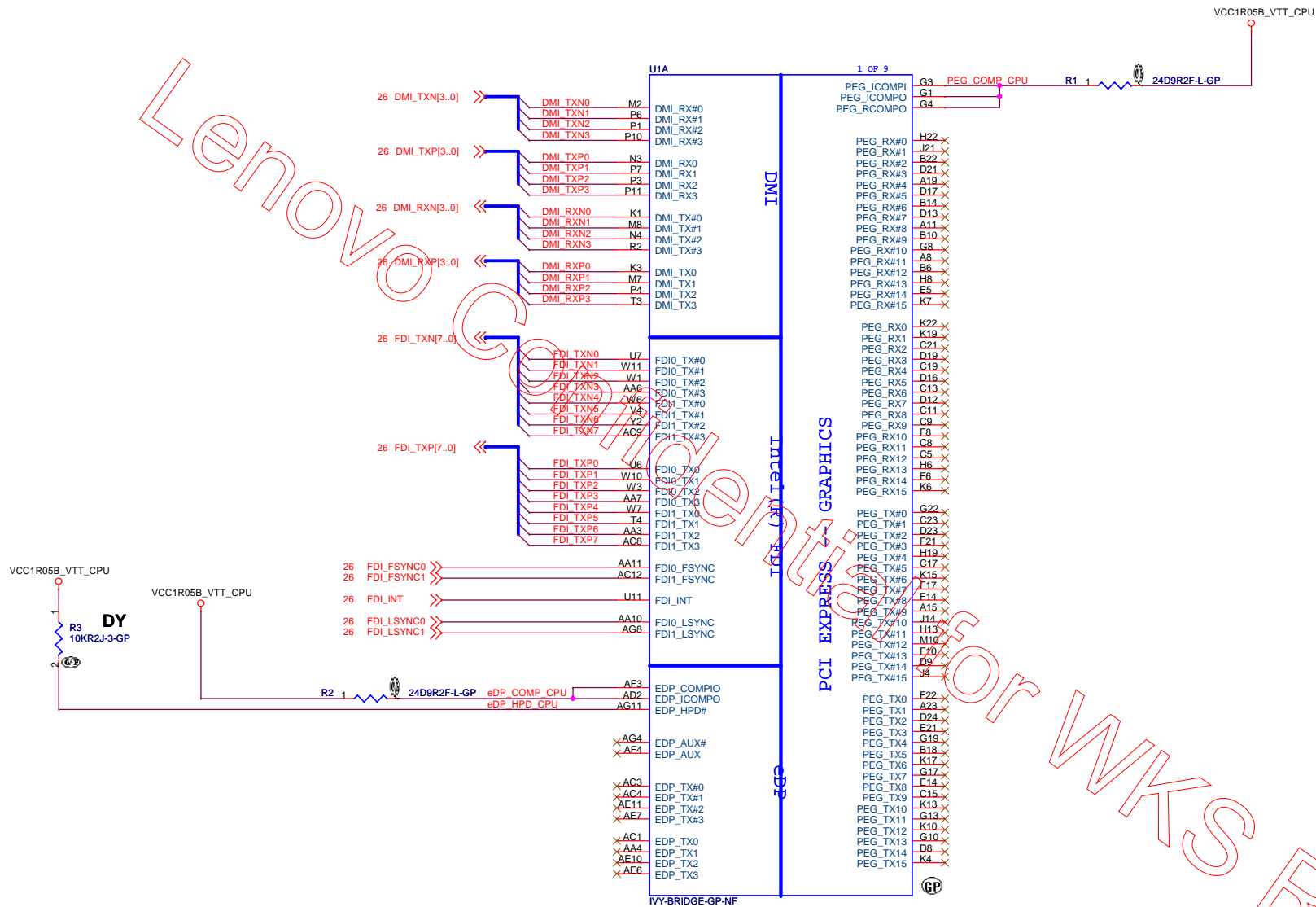


Symbol name	Value	Tolerance (J: 5%, F: 1%, D: 0.5%, B: 0.1 %)	Rating 0402=> 1/16W, 25V 0603 => 1/16W, 75V 0805 => 1/10W, 100V	Size 2=>0402, 3=>0603, 5=>0805, 6=>1206, 0=>1210

Symbol name	Value	Tolerance (M: +/-20, K: +/-10, Z: +80/-20)	Rating	Size 2=>0402, 3=>0603, 5=>0805, 6=>1206, 0=>1210

IBEXPEAK-M	39	38	48	49	Planar ID Version	Planar PCB Version
PLANAR_IDn	3	2	1	0		
	0	0	0	0	Dasher-2 initial	N/A
	0	0	0	1	Dasher-2 PreDV	SA
	0	0	1	0	Dasher-2 SDV	SA
	0	0	1	1	Dasher-2 FVT	SB
	0	1	0	0	Dasher-2 PreSIT	SC
	0	1	0	1	Dasher-2 SIT	SD
	0	1	1	0	Dasher-2 SVT	-1
	0	1	1	1		
	1	0	0	0		
	1	0	0	1		
	1	0	1	0		

[illegible]



Sandy Bridge	High
Ivy Bridge	Low



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Size A3	Document Number
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12 M_A_BS0
12 M_A_BS1
12 M_A_BS2

12 -M_A_CAS
12 -M_A_RAS
12 -M_A_WE

M_A_DQ0	AG6	SA_DQ0
M_A_DQ1	AJ6	SA_DQ1
M_A_DQ2	AP11	SA_DQ2
M_A_DQ3	AL6	SA_DQ3
M_A_DQ4	AJ10	SA_DQ4
M_A_DQ5	AJ8	SA_DQ5
M_A_DQ6	AL8	SA_DQ6
M_A_DQ7	AL7	SA_DQ7
M_A_DQ8	AR11	SA_DQ8
M_A_DQ9	AP6	SA_DQ9
M_A_DQ10	AJ6	SA_DQ10
M_A_DQ11	AV9	SA_DQ11
M_A_DQ12	AR6	SA_DQ12
M_A_DQ13	AP8	SA_DQ13
M_A_DQ14	AT13	SA_DQ14
M_A_DQ15	AU13	SA_DQ15
M_A_DQ16	BC7	SA_DQ16
M_A_DQ17	BB37	SA_DQ17
M_A_DQ18	BA13	SA_DQ18
M_A_DQ19	BB11	SA_DQ19
M_A_DQ20	BA7	SA_DQ20
M_A_DQ21	BA9	SA_DQ21
M_A_DQ22	BB9	SA_DQ22
M_A_DQ23	AV13	SA_DQ23
M_A_DQ24	AV14	SA_DQ24
M_A_DQ25	AR14	SA_DQ25
M_A_DQ26	AY17	SA_DQ26
M_A_DQ27	AR19	SA_DQ27
M_A_DQ28	BA14	SA_DQ28
M_A_DQ29	AU14	SA_DQ29
M_A_DQ30	BB17	SA_DQ30
M_A_DQ31	BB17	SA_DQ31
M_A_DQ32	BA45	SA_DQ32
M_A_DQ33	AR37	SA_DQ33
M_A_DQ34	AW48	SA_DQ34
M_A_DQ35	BC48	SA_DQ35
M_A_DQ36	BC45	SA_DQ36
M_A_DQ37	AR45	SA_DQ37
M_A_DQ38	AT48	SA_DQ38
M_A_DQ39	AY48	SA_DQ39
M_A_DQ40	BA49	SA_DQ40
M_A_DQ41	AV49	SA_DQ41
M_A_DQ42	BB51	SA_DQ42
M_A_DQ43	AY53	SA_DQ43
M_A_DQ44	BB49	SA_DQ44
M_A_DQ45	AU49	SA_DQ45
M_A_DQ46	BA53	SA_DQ46
M_A_DQ47	BB55	SA_DQ47
M_A_DQ48	BA55	SA_DQ48
M_A_DQ49	AV56	SA_DQ49
M_A_DQ50	AP50	SA_DQ50
M_A_DQ51	AP53	SA_DQ51
M_A_DQ52	AV54	SA_DQ52
M_A_DQ53	AT54	SA_DQ53
M_A_DQ54	AP56	SA_DQ54
M_A_DQ55	AP52	SA_DQ55
M_A_DQ56	AN57	SA_DQ56
M_A_DQ57	AN53	SA_DQ57
M_A_DQ58	AG56	SA_DQ58
M_A_DQ59	AG53	SA_DQ59
M_A_DQ60	AN55	SA_DQ60
M_A_DQ61	AN52	SA_DQ61
M_A_DQ62	AG55	SA_DQ62
M_A_DQ63	AK56	SA_DQ63

SA_DQ0	SA_DQ1	SA_DQ2	SA_DQ3	SA_DQ4	SA_DQ5	SA_DQ6	SA_DQ7	SA_DQ8	SA_DQ9	SA_DQ10	SA_DQ11	SA_DQ12	SA_DQ13	SA_DQ14	SA_DQ15	SA_DQ16	SA_DQ17	SA_DQ18	SA_DQ19	SA_DQ20	SA_DQ21	SA_DQ22	SA_DQ23	SA_DQ24	SA_DQ25	SA_DQ26	SA_DQ27	SA_DQ28	SA_DQ29	SA_DQ30	SA_DQ31	SA_DQ32	SA_DQ33	SA_DQ34	SA_DQ35	SA_DQ36	SA_DQ37	SA_DQ38	SA_DQ39	SA_DQ40	SA_DQ41	SA_DQ42	SA_DQ43	SA_DQ44	SA_DQ45	SA_DQ46	SA_DQ47	SA_DQ48	SA_DQ49	SA_DQ50	SA_DQ51	SA_DQ52	SA_DQ53	SA_DQ54	SA_DQ55	SA_DQ56	SA_DQ57	SA_DQ58	SA_DQ59	SA_DQ60	SA_DQ61	SA_DQ62	SA_DQ63
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DDR SYSTEM MEMORY A

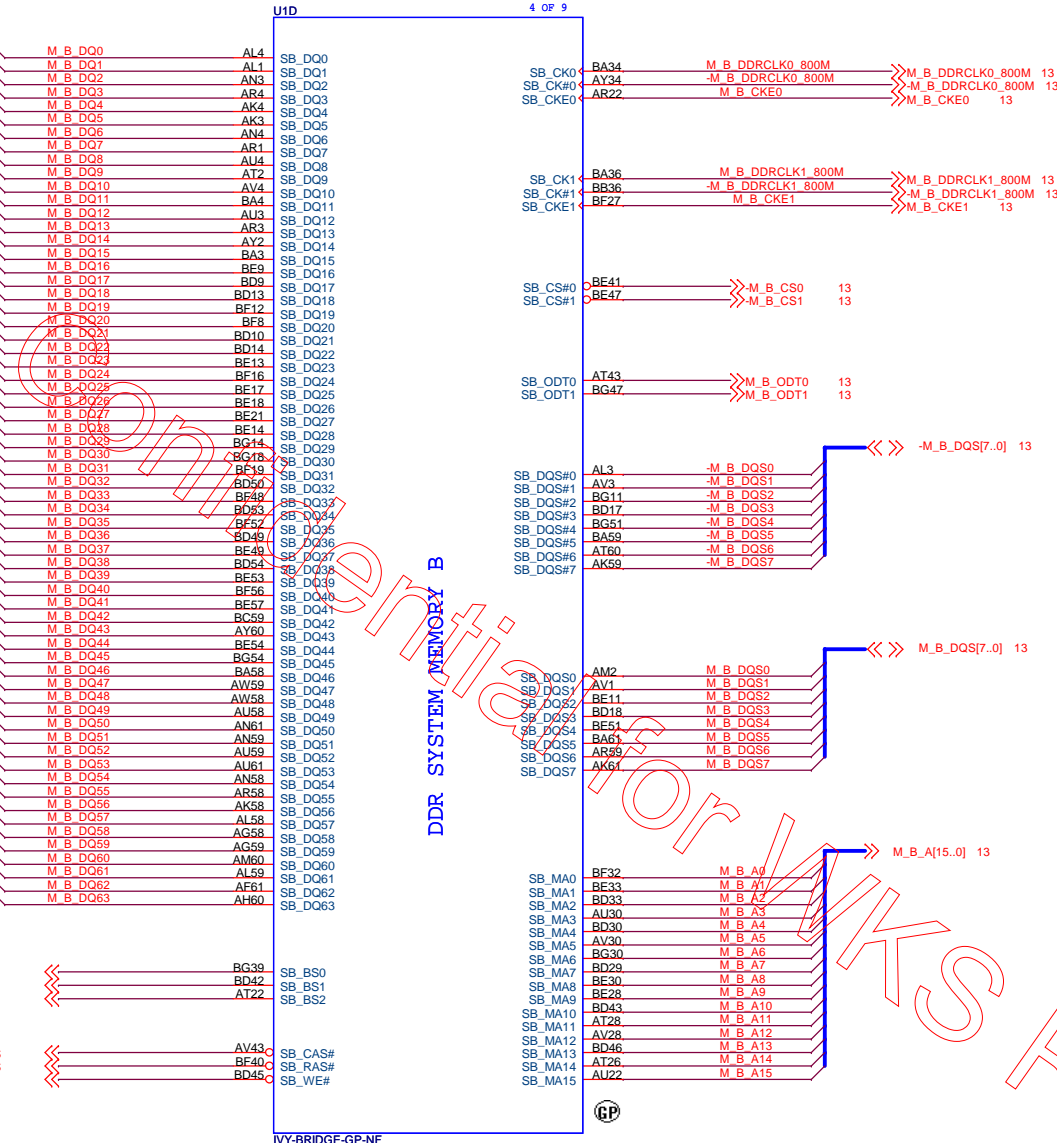
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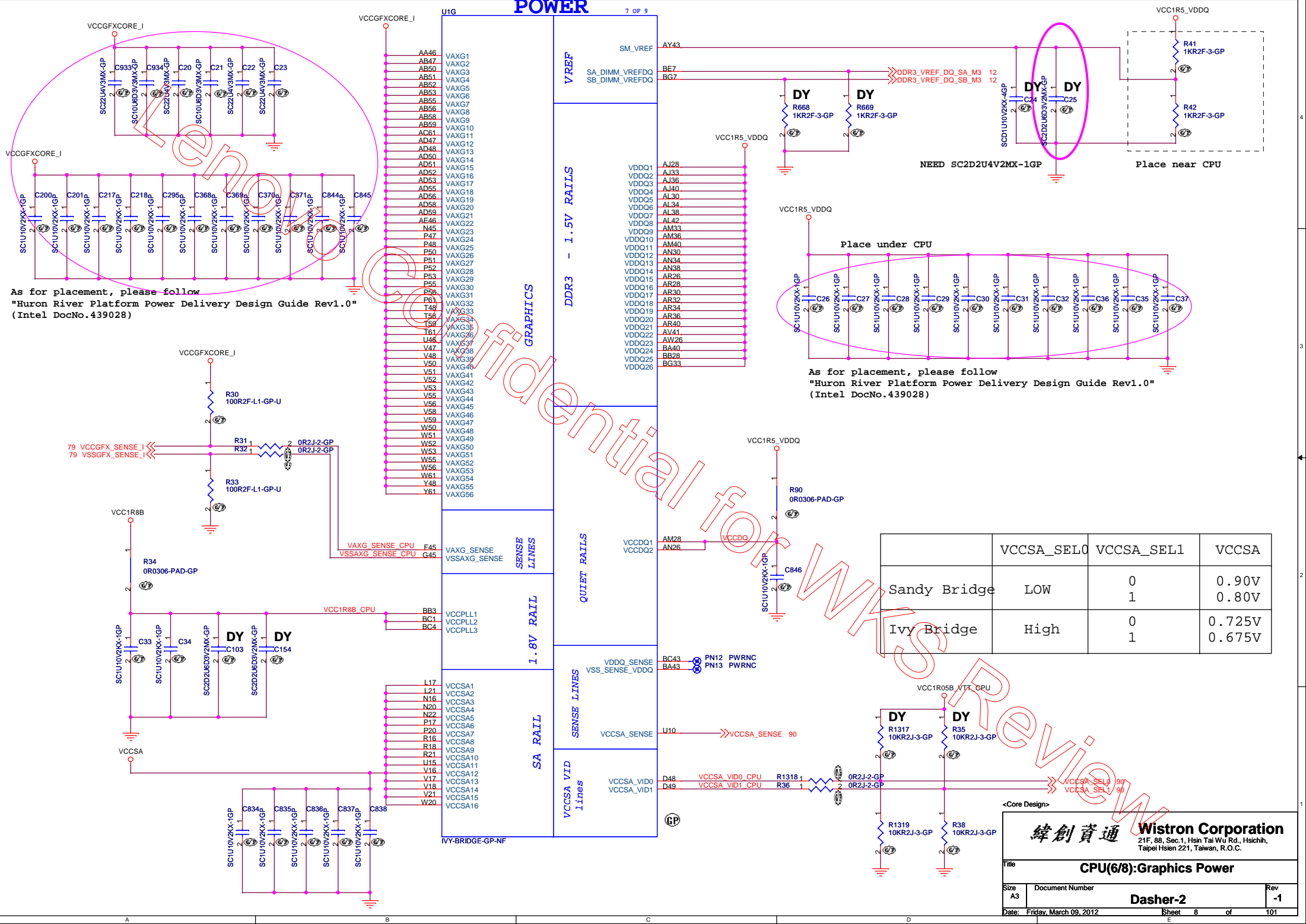
3 OF 9

SA_CK0	AU36	M_A_DDRCLK0_800M	M_A_DDRCLK0_800M	12
SA_CK#0	AV36	-M_A_DDRCLK0_800M	M_A_DDRCLK0_800M	12
SA_CKE0	AY26	M_A_CKE0	M_A_CKE0	12
SA_CK1	AT40	M_A_DDRCLK1_800M	M_A_DDRCLK1_800M	12
SA_CK#1	AU40	-M_A_DDRCLK1_800M	M_A_DDRCLK1_800M	12
SA_CKE1	BB26	M_A_CKE1	M_A_CKE1	12
SA_CS#0	BB40	-M_A_CS0	M_A_CS0	12
SA_CS#1	BC41	-M_A_CS1	M_A_CS1	12
SA_ODT0	AY40	M_A_ODT0	M_A_ODT0	12
SA_ODT1	BA41	M_A_ODT1	M_A_ODT1	12
SA_DQS#0	AL11	-M_A_DQS0	-M_A_DQS[7..0]	12
SA_DQS#1	AR8	-M_A_DQS1		
SA_DQS#2	AV11	-M_A_DQS2		
SA_DQS#3	AT17	-M_A_DQS3		
SA_DQS#4	AV45	-M_A_DQS4		
SA_DQS#5	AY51	-M_A_DQS5		
SA_DQS#6	AT55	-M_A_DQS6		
SA_DQS#7	AK55	-M_A_DQS7		
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SA_DQS1	AR10	M_A_DQS1		
SA_DQS2	AY11	M_A_DQS2		
SA_DQS3	AJ17	M_A_DQS3		
SA_DQS4	AW45	M_A_DQS4		
SA_DQS5	AV51	M_A_DQS5		
SA_DQS6	AT55	M_A_DQS6		
SA_DQS7	AK54	M_A_DQS7		
SA_MA0	BG35	M_A_A0	M_A_A[15..0]	12
SA_MA1	BB34	M_A_A1		
SA_MA2	BE35	M_A_A2		
SA_MA3	BD35	M_A_A3		
SA_MA4	AT34	M_A_A4		
SA_MA5	AU34	M_A_A5		
SA_MA6	BB32	M_A_A6		
SA_MA7	AT32	M_A_A7		
SA_MA8	AY32	M_A_A8		
SA_MA9	BE37	M_A_A9		
SA_MA10	BA30	M_A_A10		
SA_MA11	BC30	M_A_A11		
SA_MA12	AW41	M_A_A12		
SA_MA13	AY28	M_A_A13		
SA_MA14	AU26	M_A_A14		
SA_MA15		M_A_A15		



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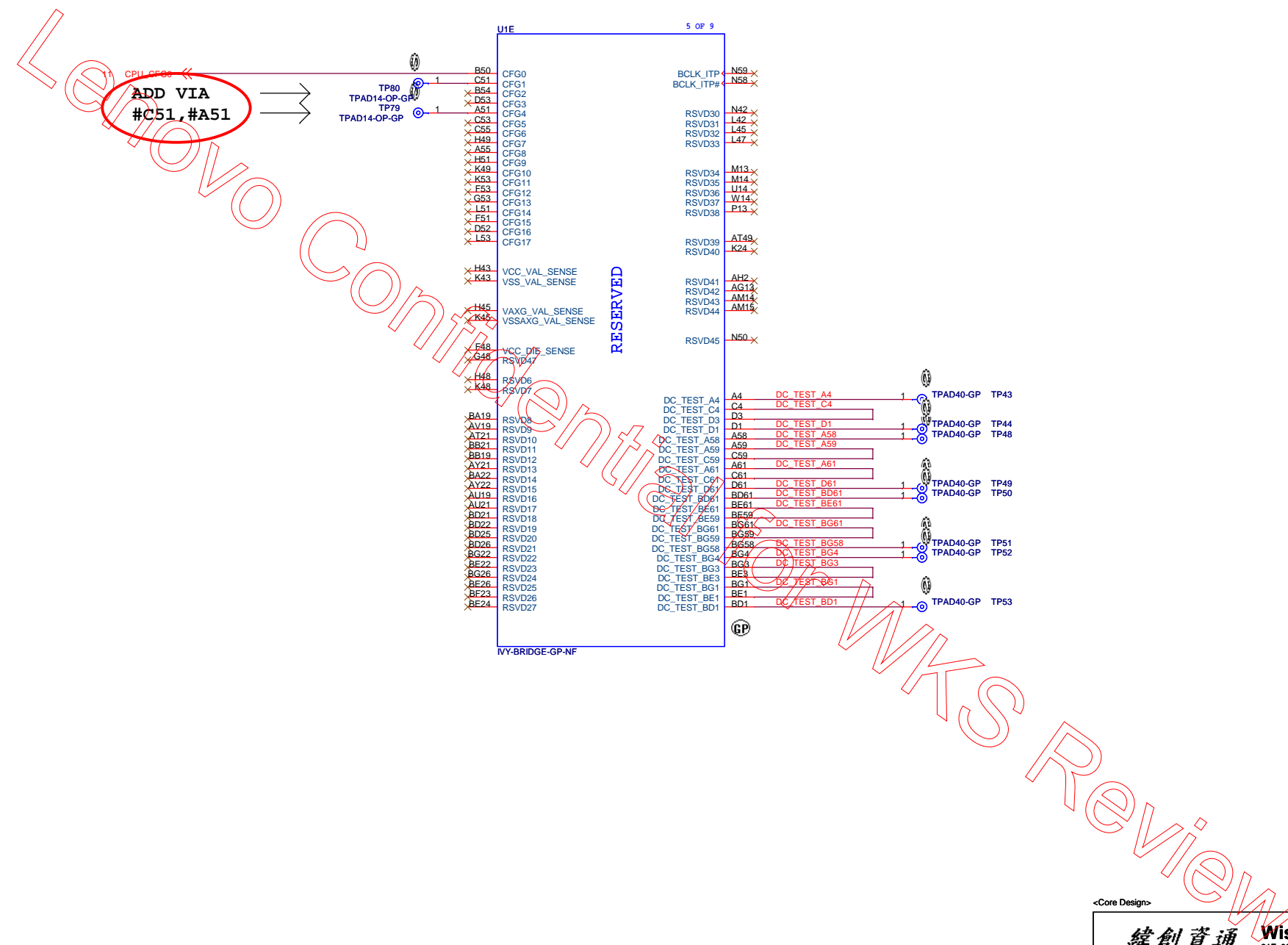


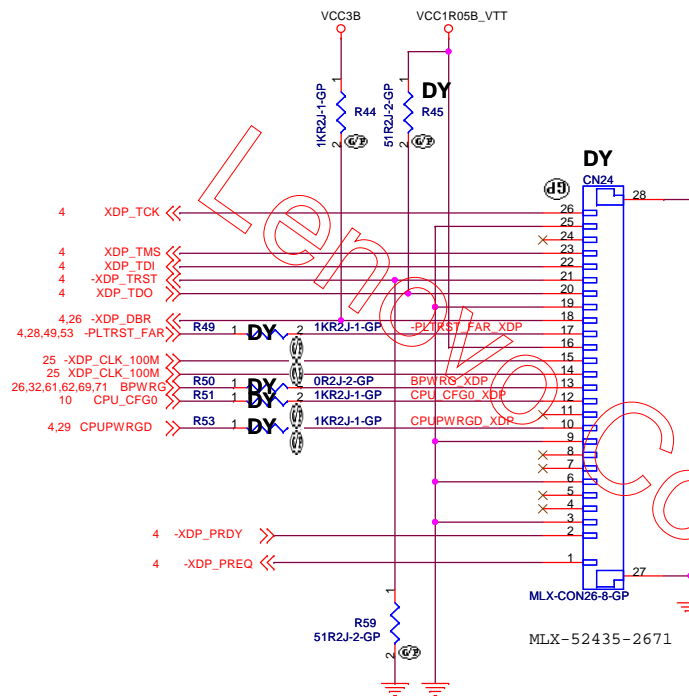


As for placement, please follow
"Huron River Platform Power Delivery Design Guide Rev1.0"
(Intel DocNo.439028)

As for placement, please follow
"Huron River Platform Power Delivery Design Guide Rev1.0"
(Intel DocNo.439028)

	VCCSA_SEL0	VCCSA_SEL1	VCCSA
Sandy Bridge	LOW	0 1	0.90V 0.80V
Ivy Bridge	High	0 1	0.725V 0.675V



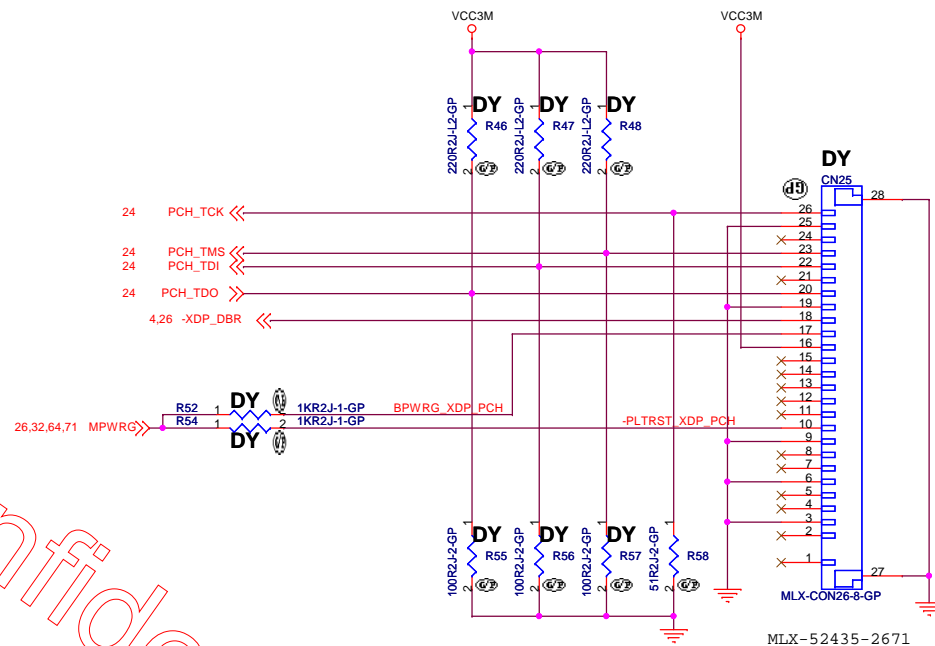


DEBUG Interface for Processor.

XDP1 NOTE:"ASM" FOR PDV/SDV ONLY

		ENABLE	DISABLE
TDO	R45	ASM	DY
TRST#	R59	ASM	ASM
DBRST#	R44	ASM	ASM
RESET#	R49	ASM	DY
CFG0	R51	ASM	DY
PWRGD	R53	ASM	DY
BPWRG	R50	ASM	DY
	CN24	ASM	DY

FVT Logic



DEBUG Interface for PCH.

XDP2 NOTE:"ASM" FOR PDV/SDV ONLY

		ENABLE	DISABLE
TDO	R46	220	DY
TRST#	R55	100	DY
TMS	R48	220	DY
TDI	R47	220	DY
TDO	R57	100	DY
TCK	R58	51	51
MPWRG	R52	ASM	DY
	R54	ASM	DY
	CN25	ASM	DY

FVT Logic

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Title

XDP Connector

Size

Document Number

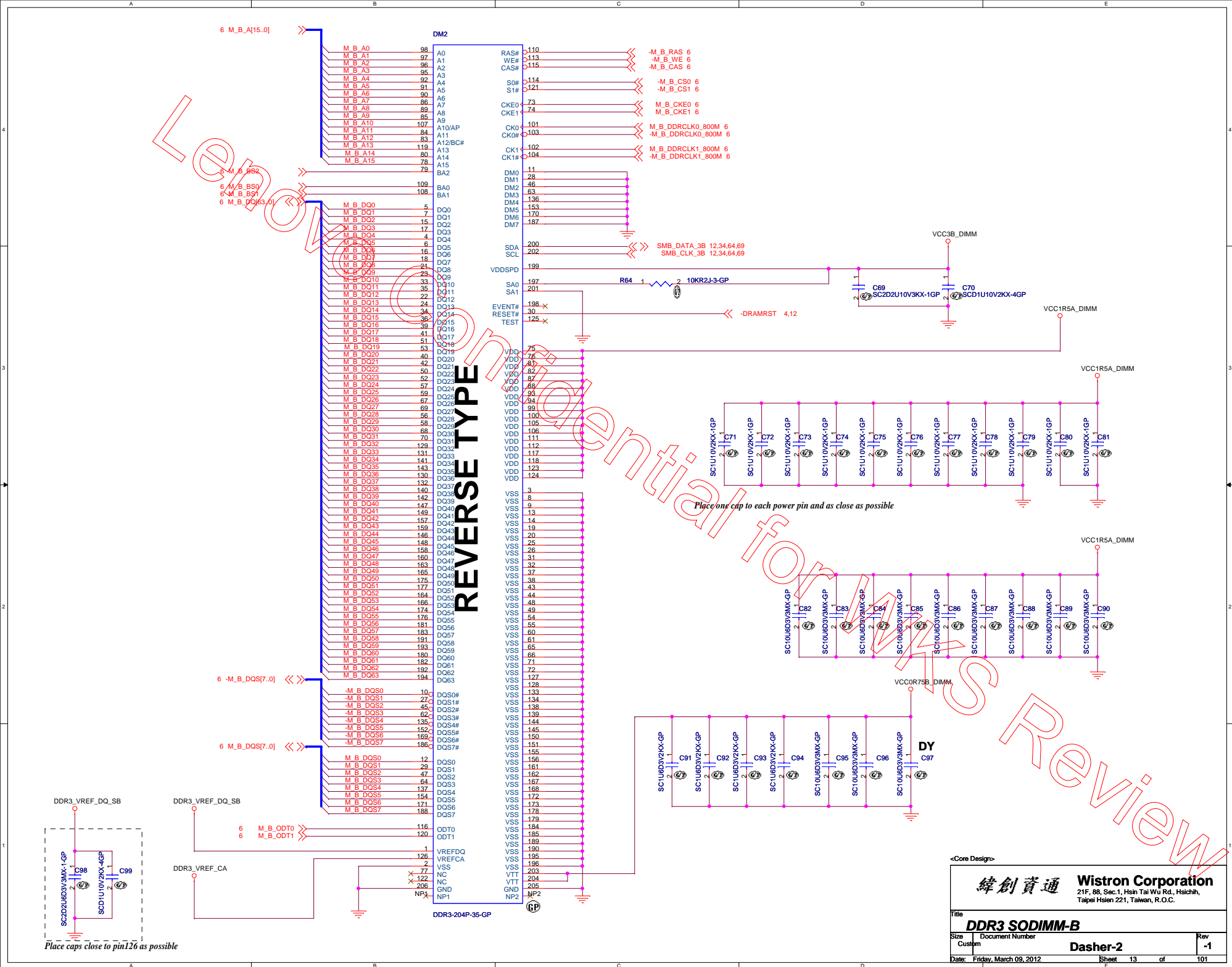
Dasher-2

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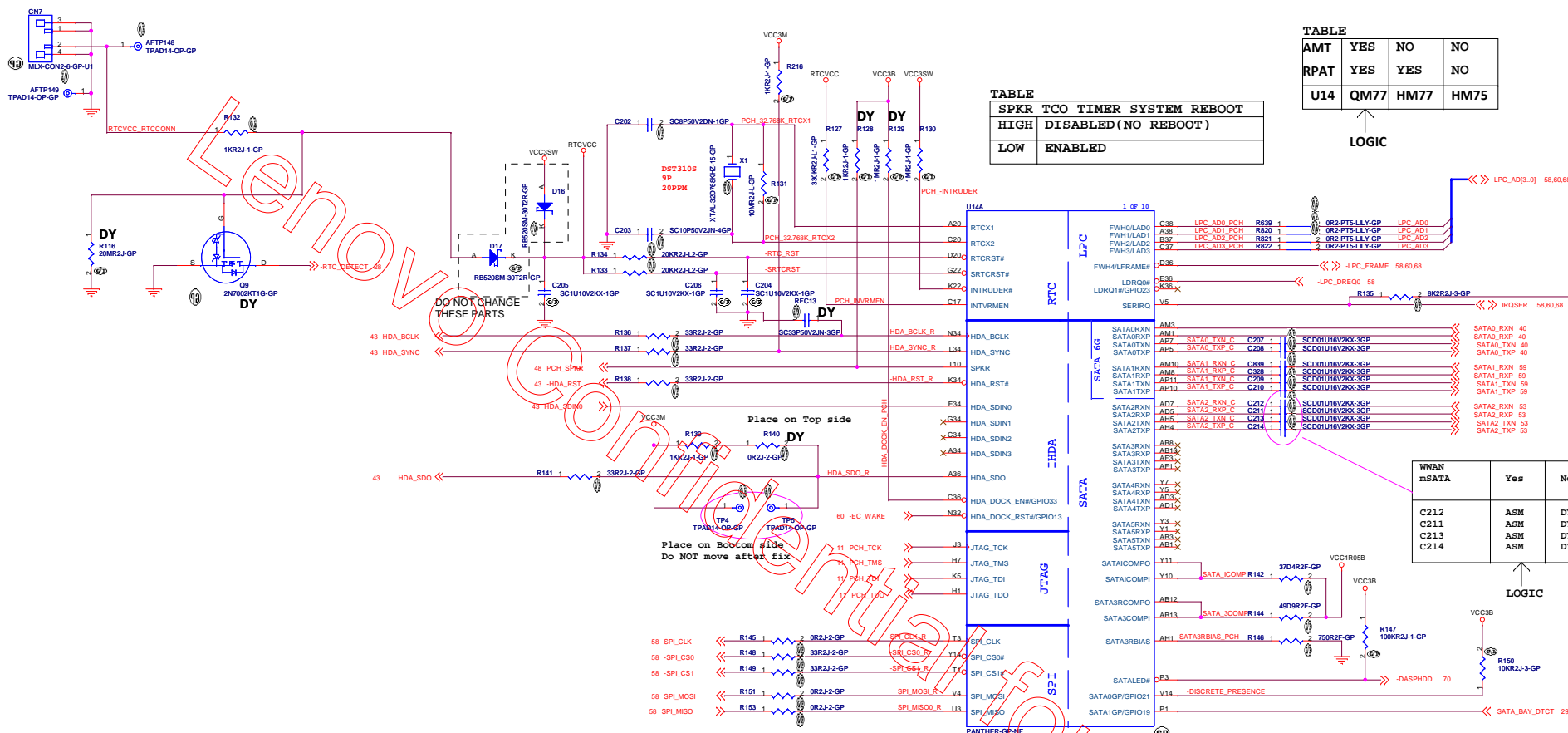


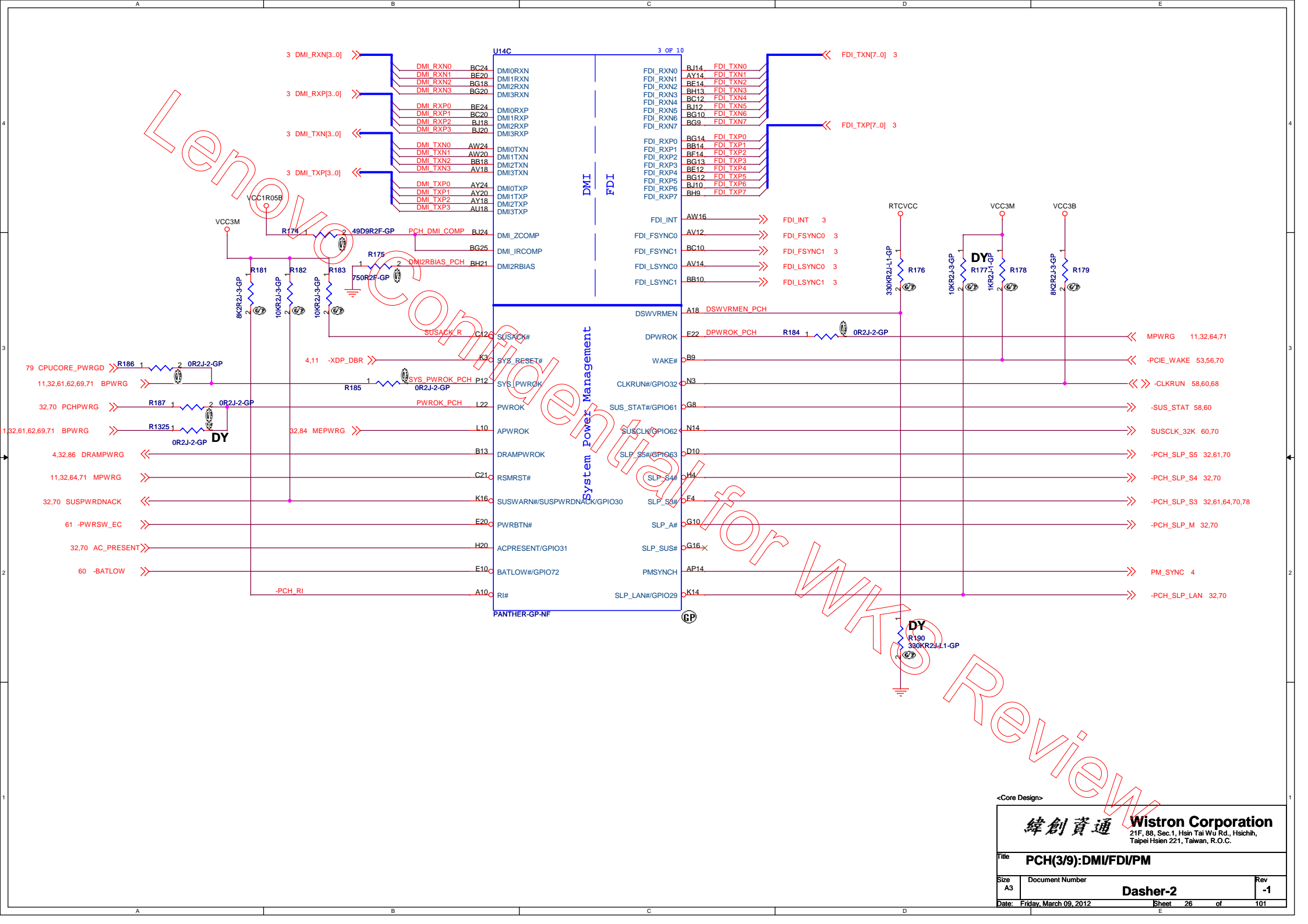
TABLE	
SPKR TCO TIMER SYSTEM REBOOT	
HIGH	DISABLED(NO REBOOT)
LOW	ENABLED

TABLE			
AMT	YES	NO	NO
RPAT	YES	YES	NO
U14	QM77	HM77	HM75

LOGIC

WWAN		
mSATA	Yes	No
C212	ASM	DY
C211	ASM	DY
C213	ASM	DY
C214	ASM	DY

LOGIC



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Taipei Hsien 221, Taiwan, R.O.C.

Title PCH(3/9):DMI/FDI/PM

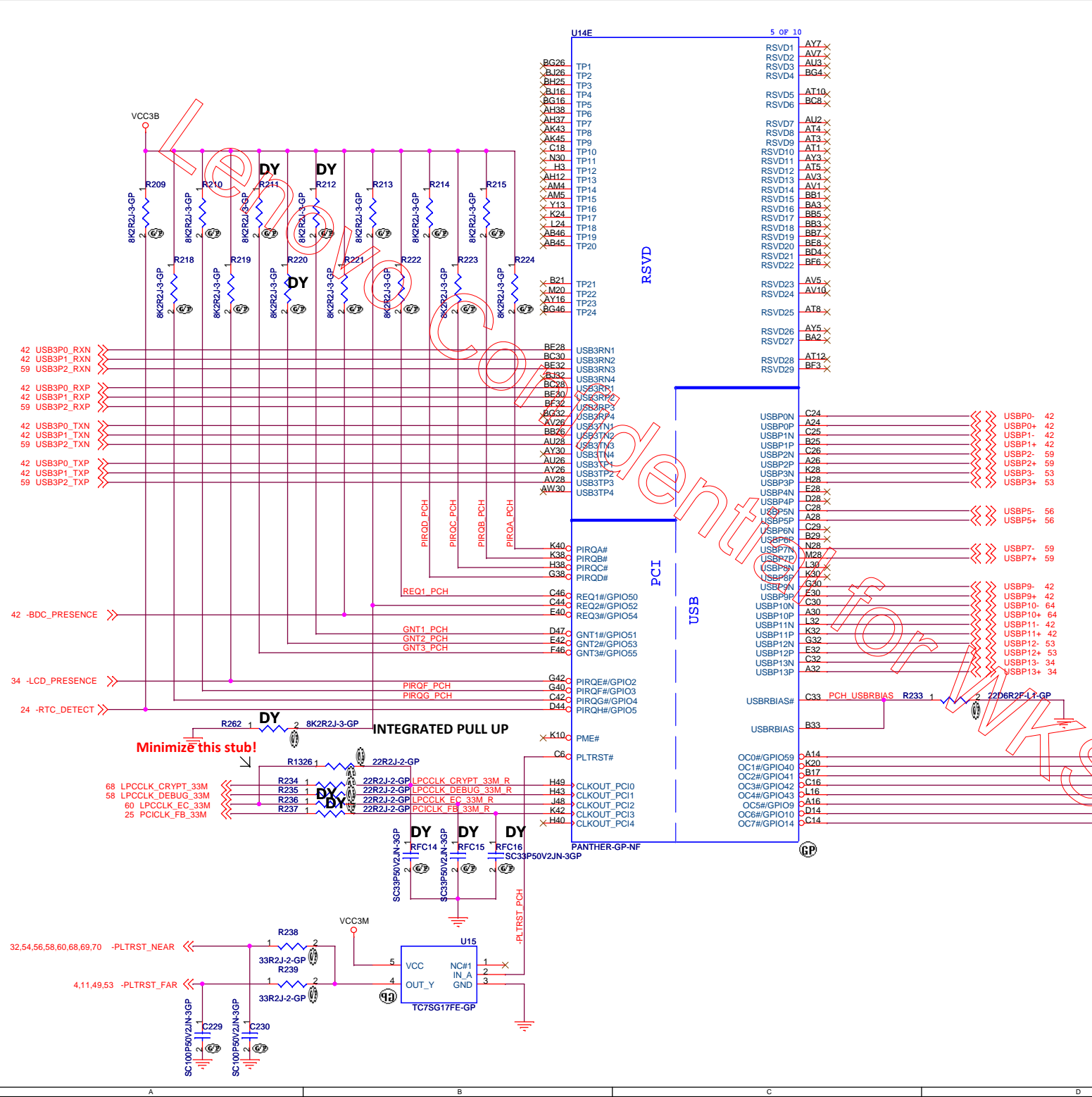
Size A3 Document Number

Dasher-2

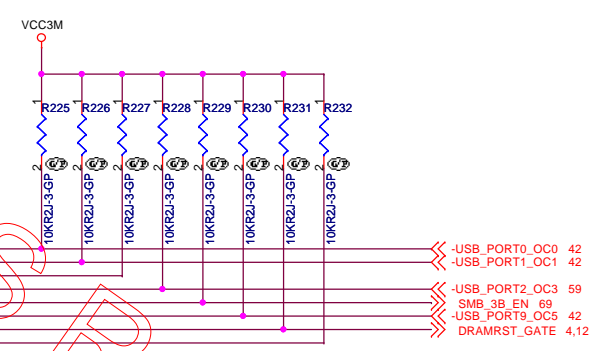
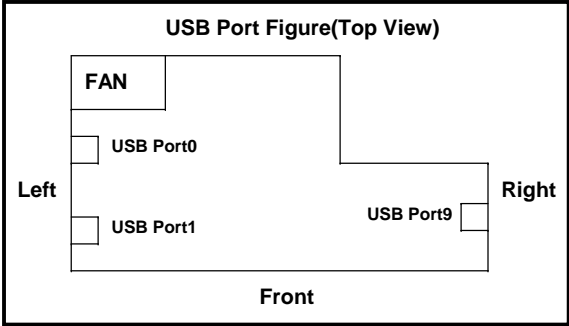
Rev
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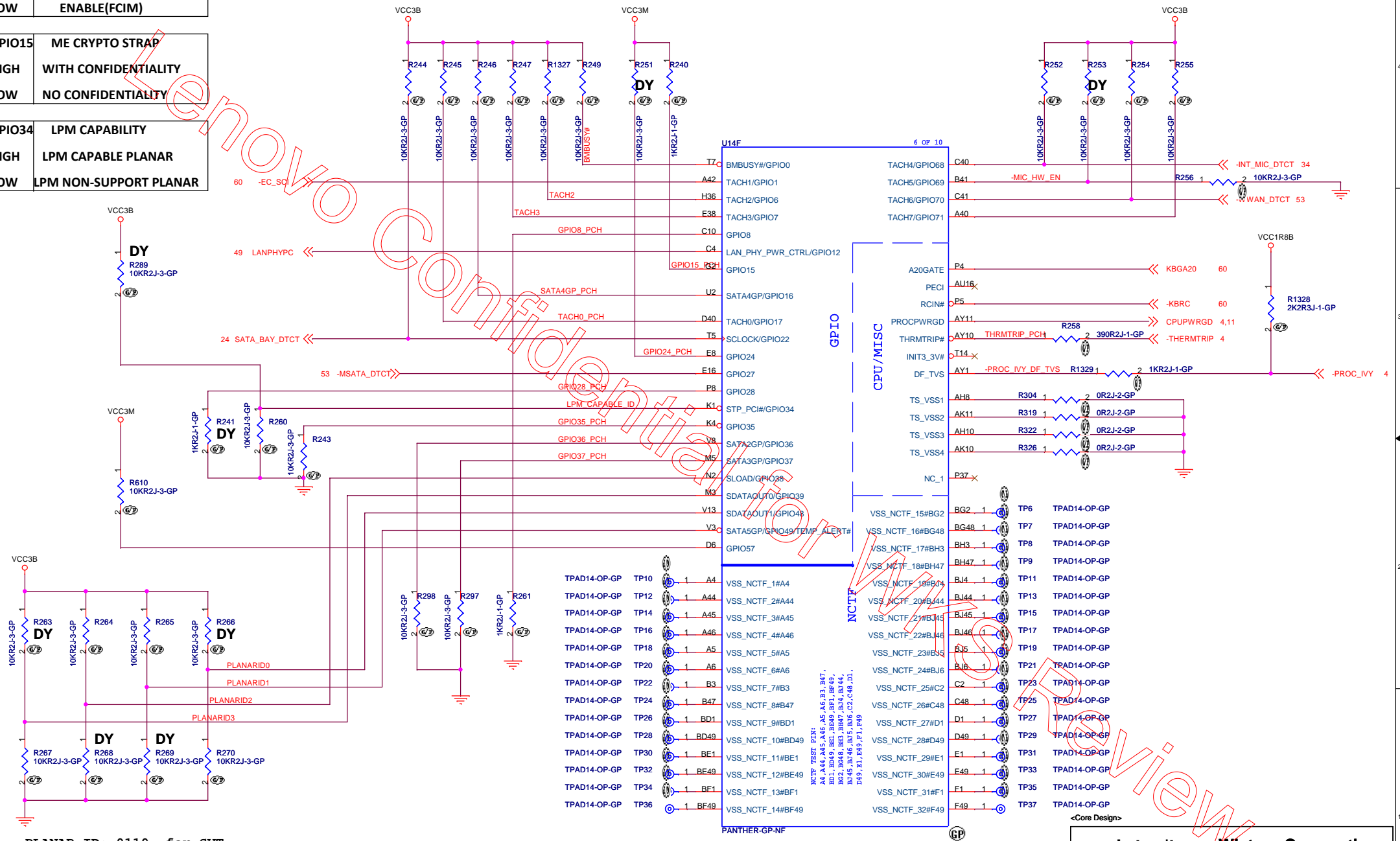
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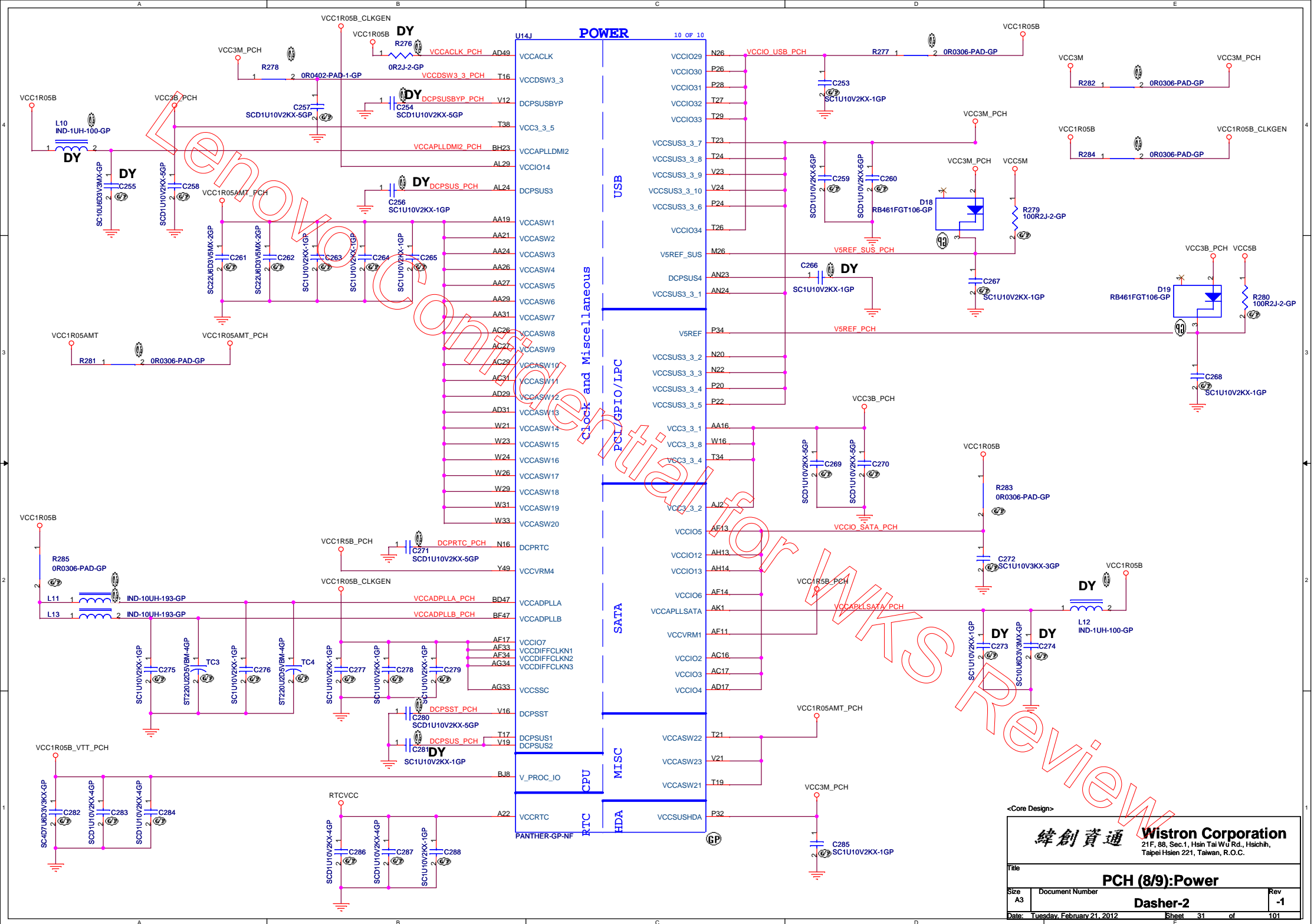
Dasher2	
USB0	System Port 0 (USB3.0)
USB1	System Port 1 (USB3.0)
USB2	since Dock USB3.0
USB3	WWAN
USB4	Reserved
USB5	Express Card
USB6	Reserved
USB7	USB2.0 DOCKING
USB8	Reserved
USB9	System Port 9 (iPod)
USB10	FPR/TOUCH PAD
USB11	Bluetooth
USB12	WLAN
USB13	Camera



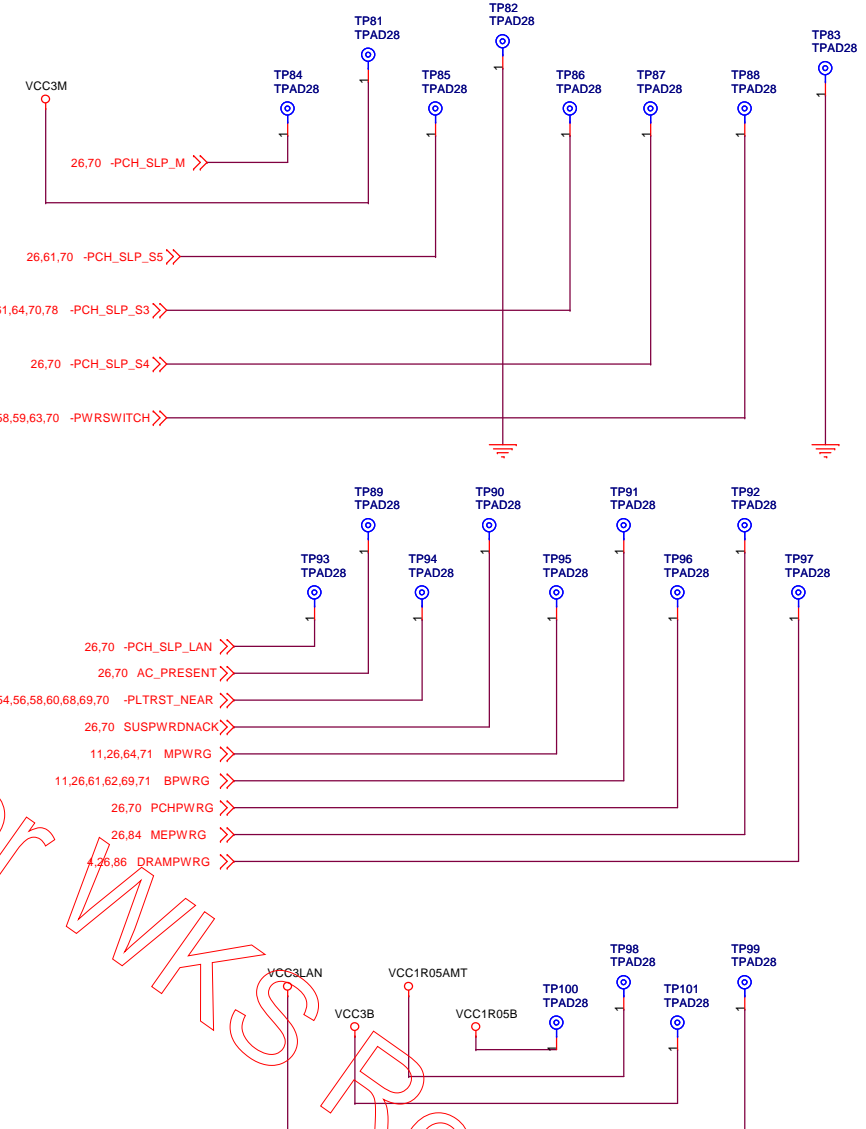
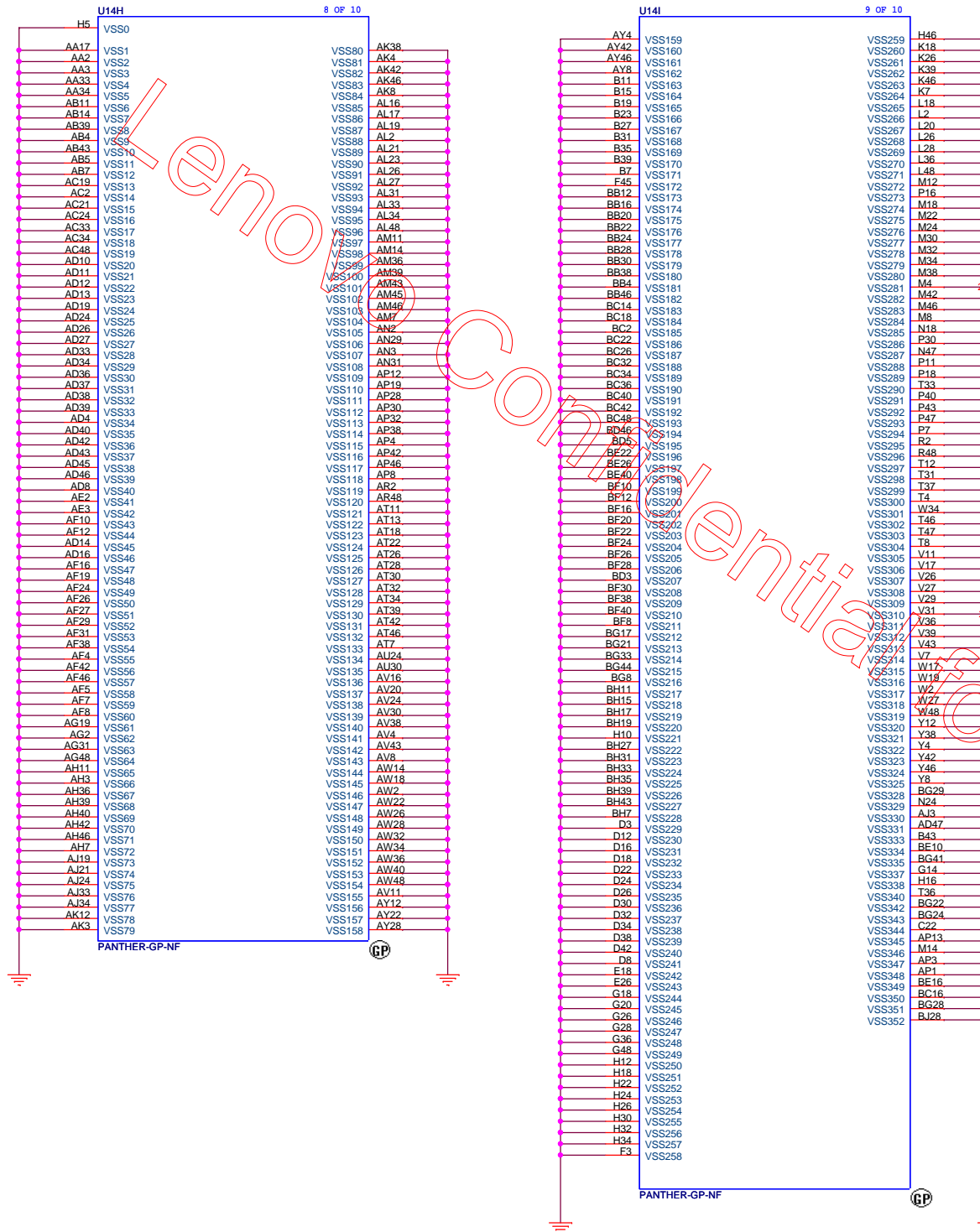
GPI034	LPM CAPABILITY
HIGH	LPM CAPABLE PLANAR
LOW	LPM NON-SUPPORT PLANAR



PLANAR ID: 0110 for SVT



TEST PAD FOR METS/APS



<Core Design>

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Taipei Hsien 221, Taiwan, R.O.C.

Title

PCH (9/9):GND

Size

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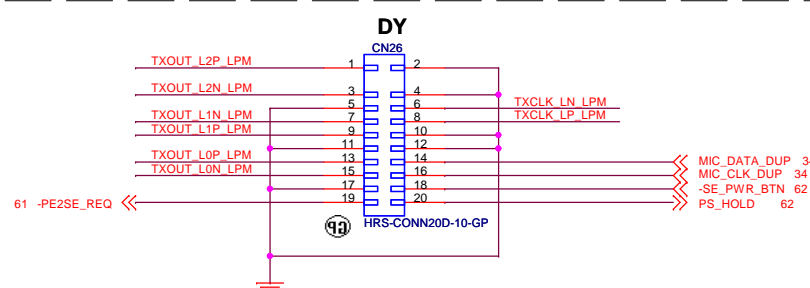
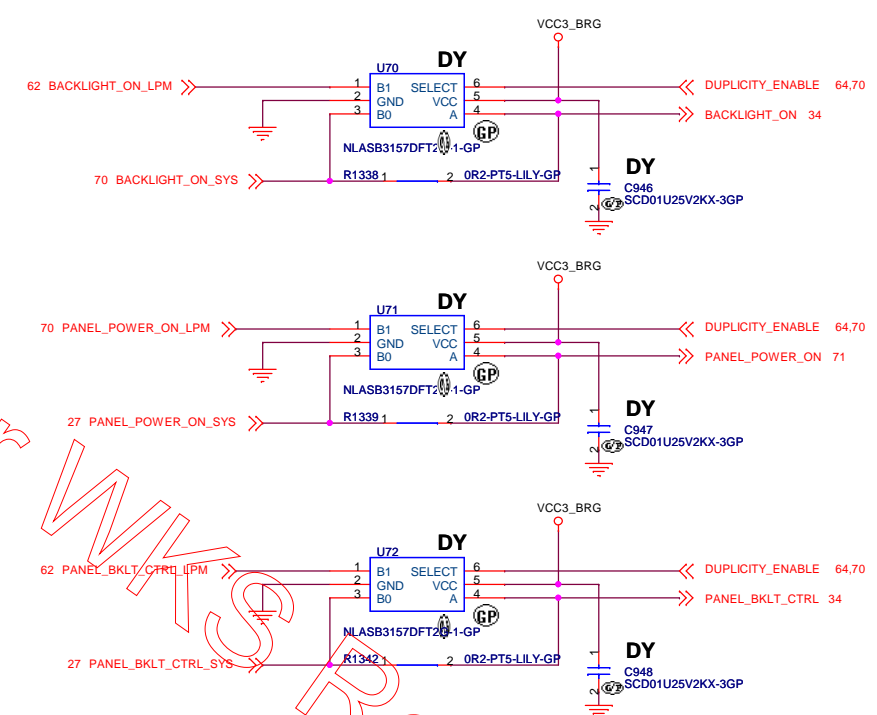
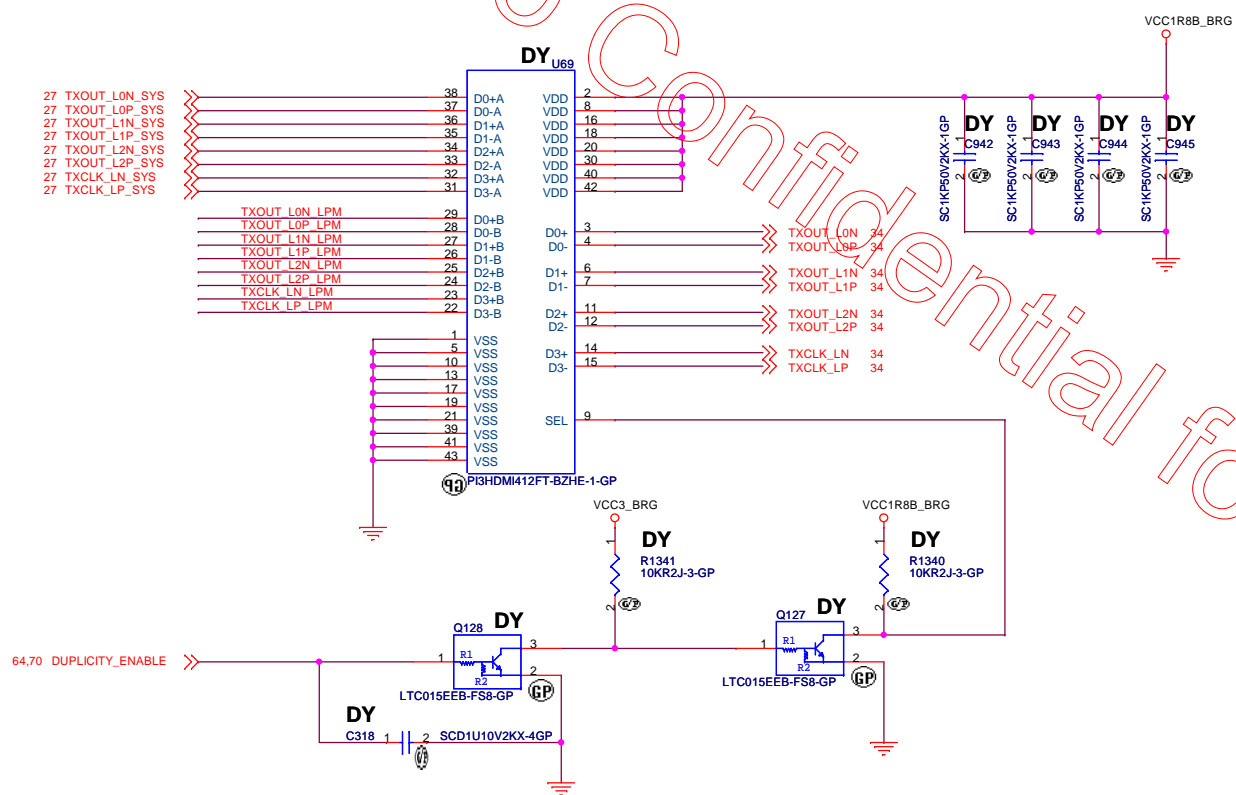
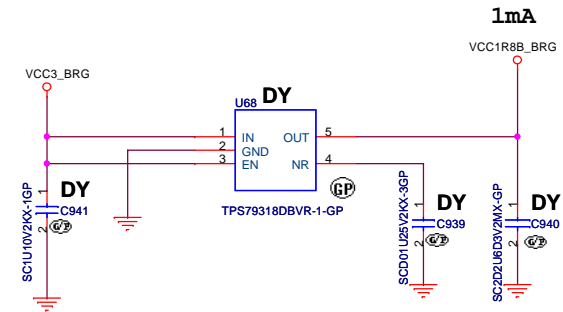
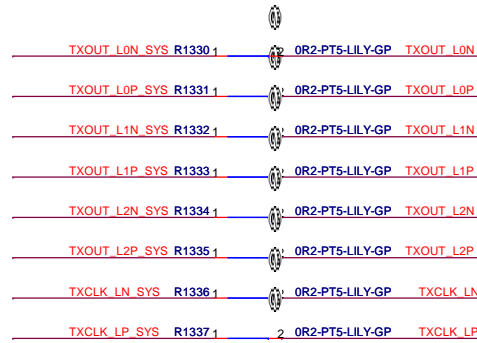
Dasher-2

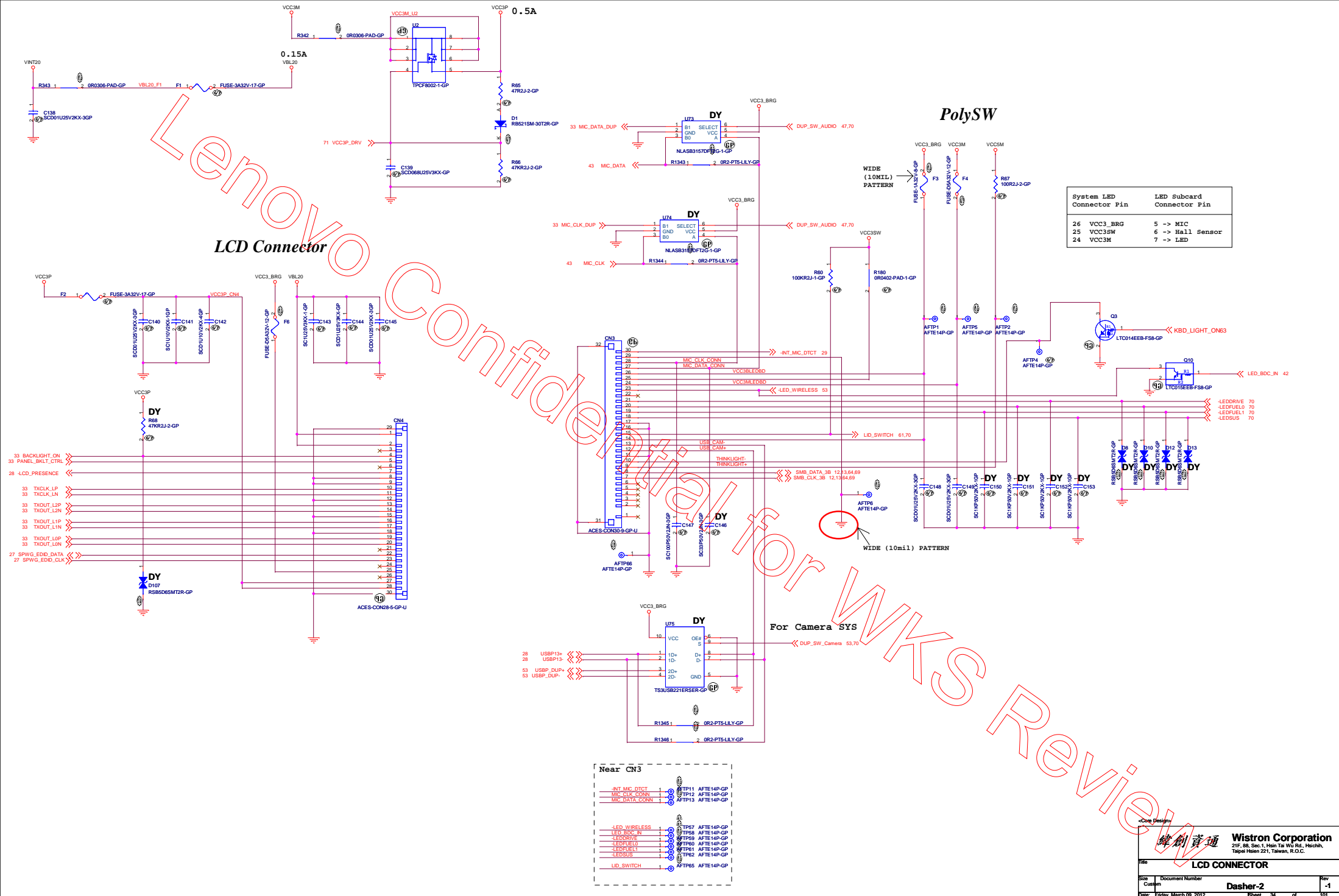
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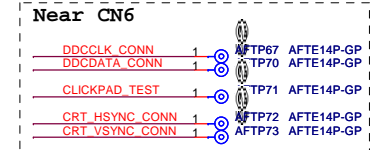
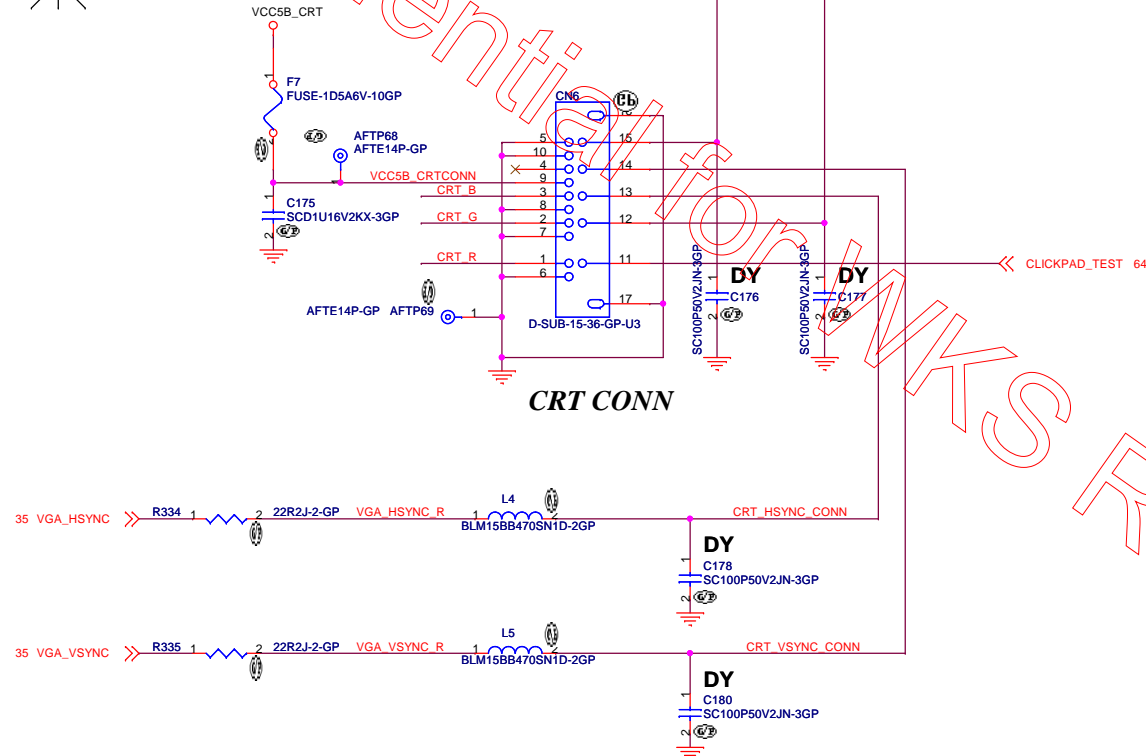
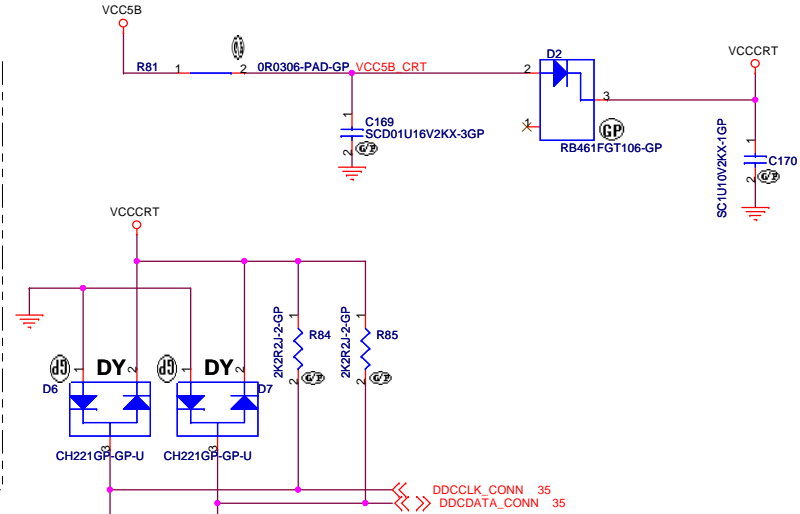
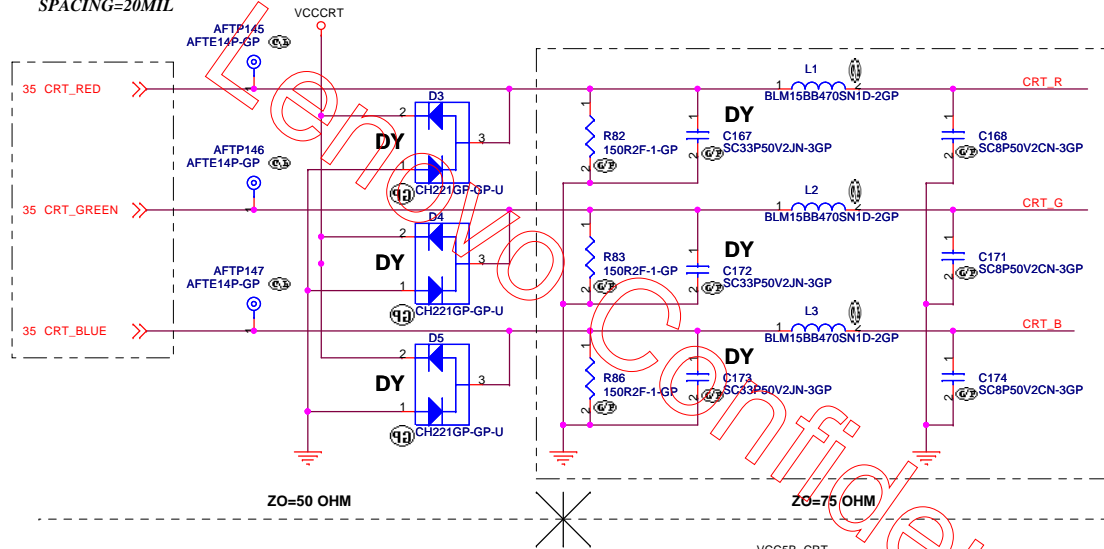




GND GUARDING

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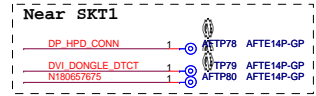
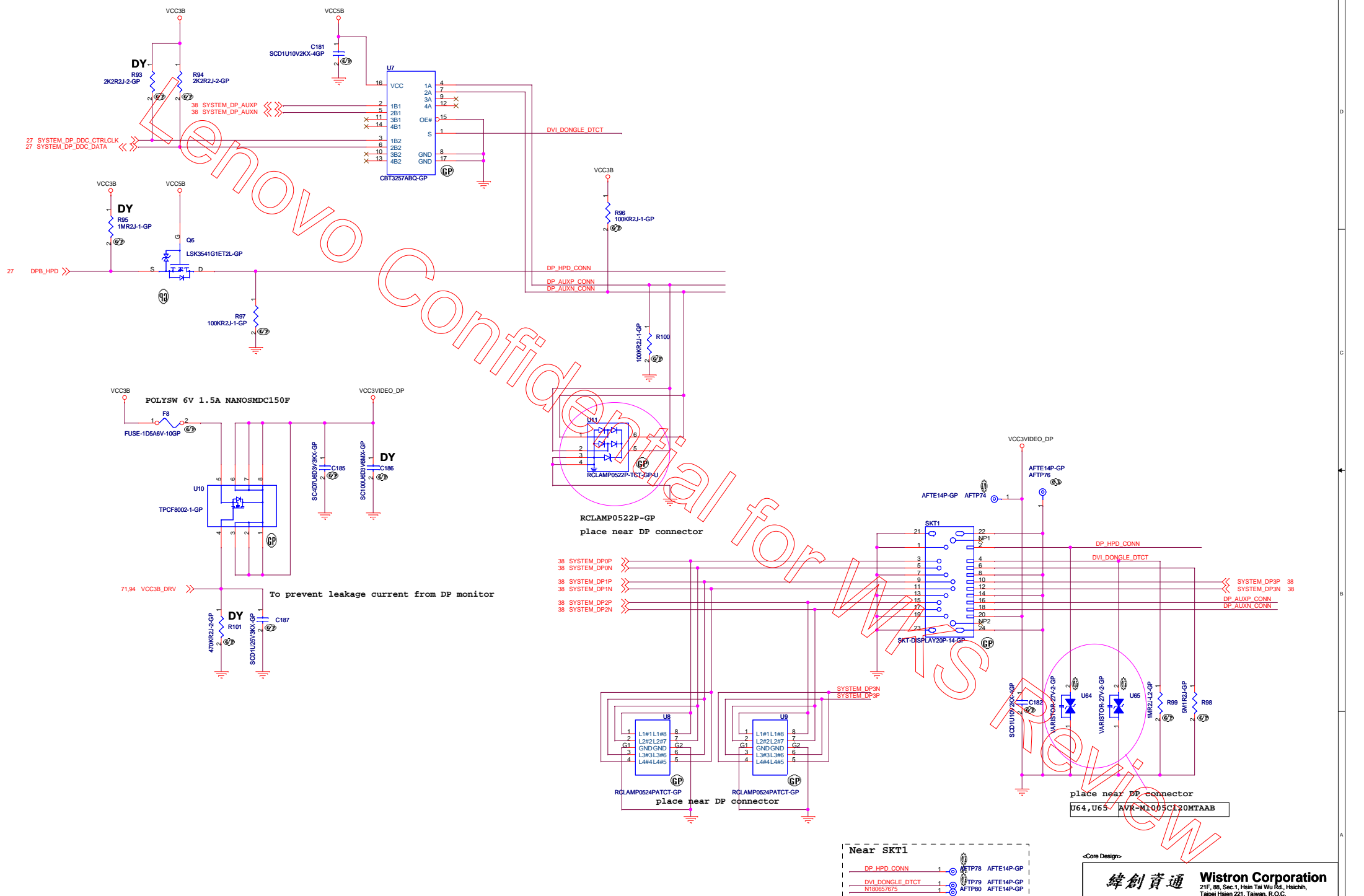
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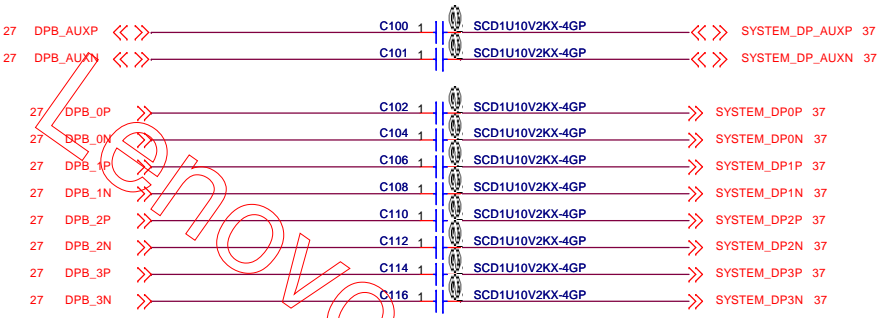
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緯創資通 Wistron Corporation
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Taipei Hsien 221, Taiwan, R.O.C.

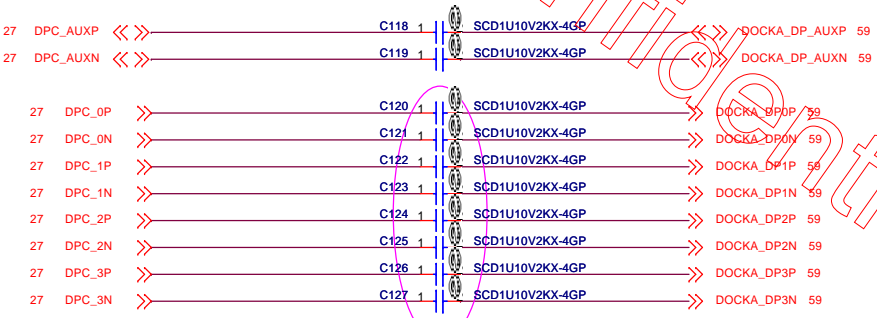
Title			
Ext CRT Interface			
Size A3	Document Number Dasher-2	Rev -1	
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System DP Connector

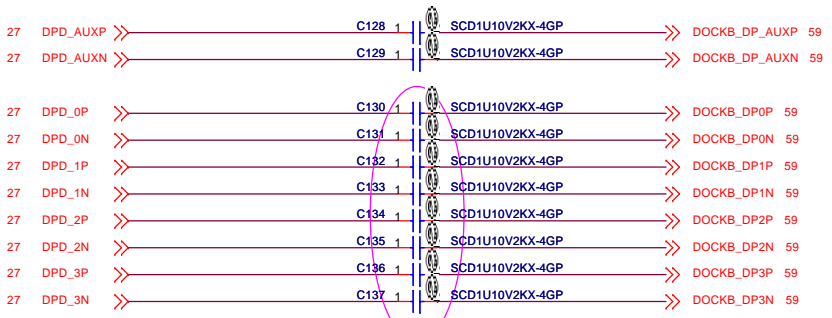


Docking DP Connector A



Place Near Docking Connector

Docking DP Connector B

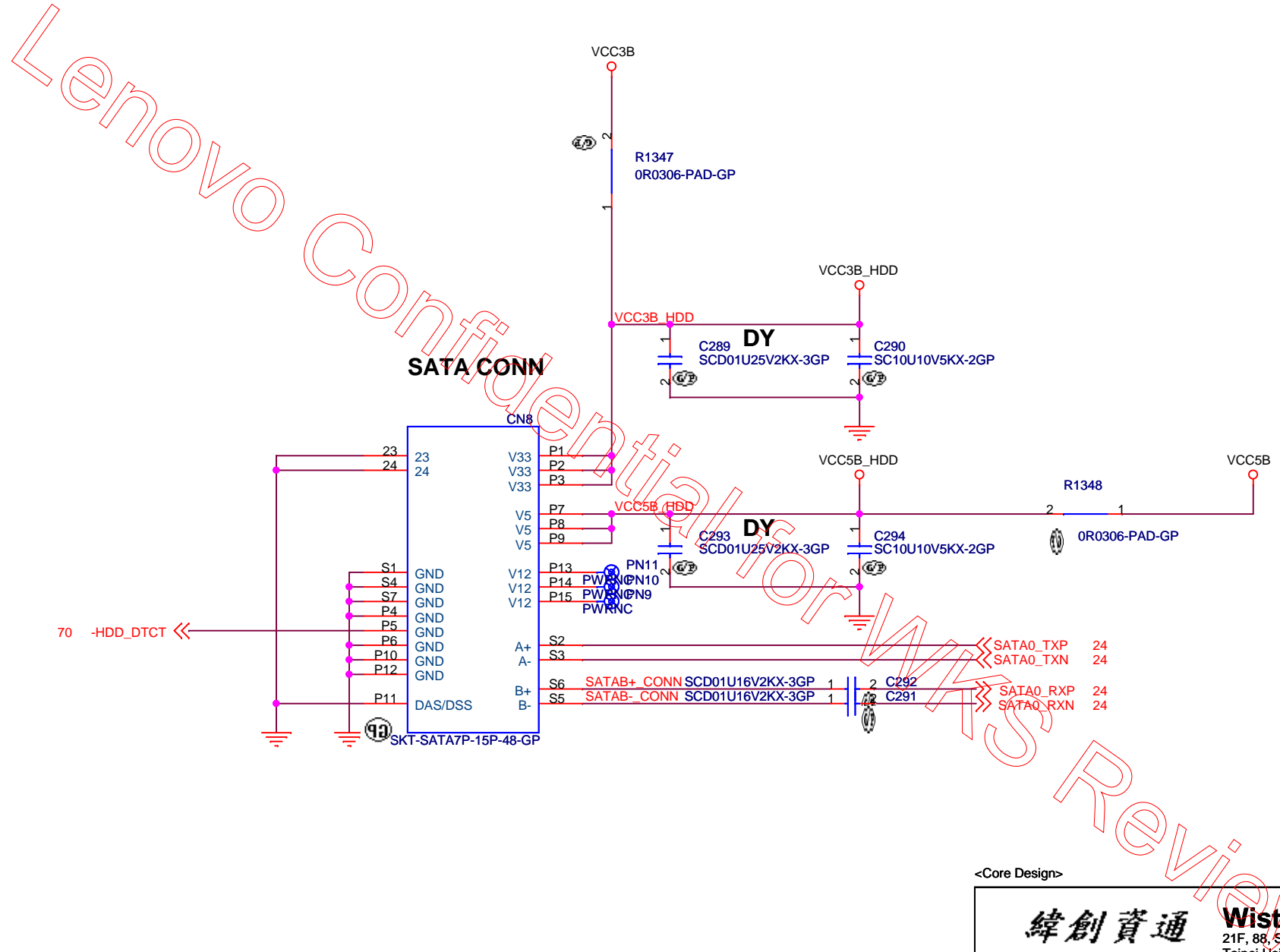


Place Near Docking Connector

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Title		
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Size	Document Number	Rev
A3	Dasher-2	-1
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Title

SATA Connector

Size
A4

Document Number

Dasher-2

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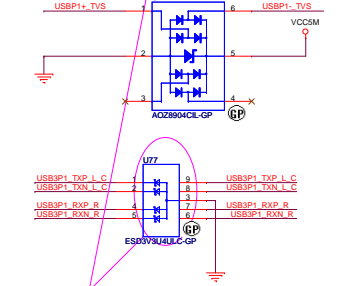
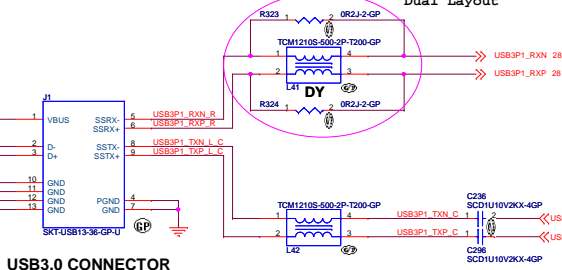
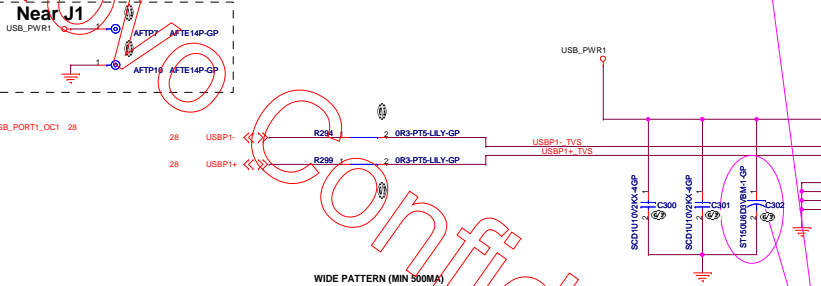
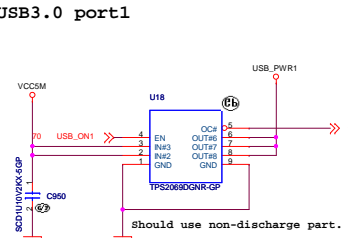
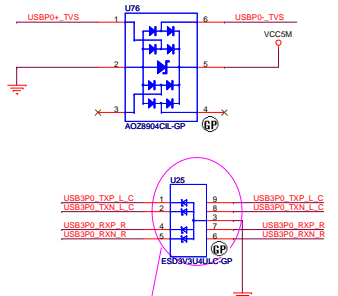
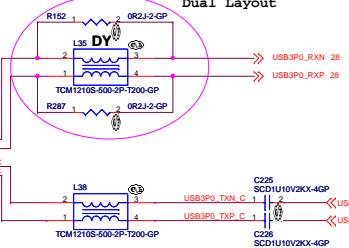
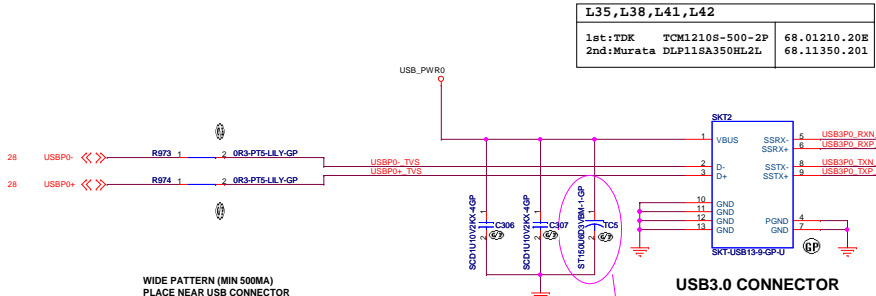
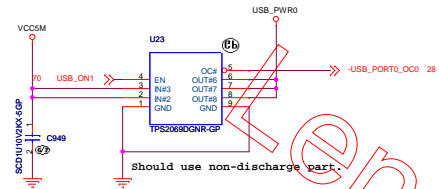
**B
L
A
N
K**

<Core Design>		
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Title BLANK		
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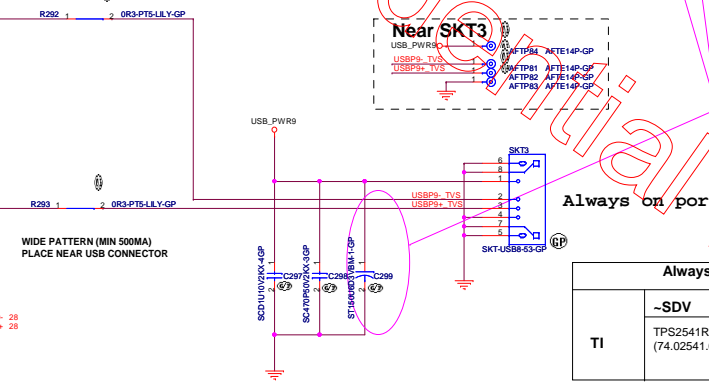
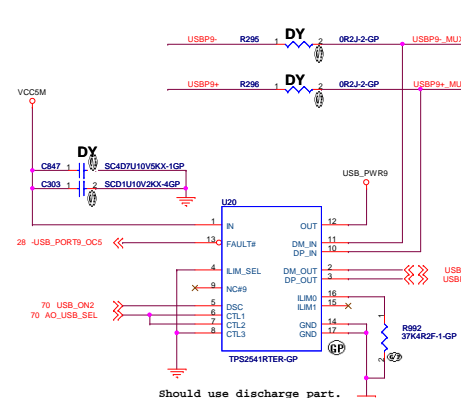
USB3.0 port0

U23,U18

USB3.0 Enable	TI	TPS2069DGN	74.02069.079
	GMT	G548A1F51U	74.00548.A79



USB port9(Always On USB)



C299, C303, TC5

1st	NBC Tokin	TEPSLB20J157M	77.C1571.09L
2nd	SANYO	6TPE150MA2B	77.21571.111

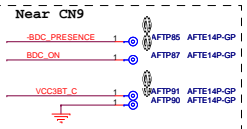
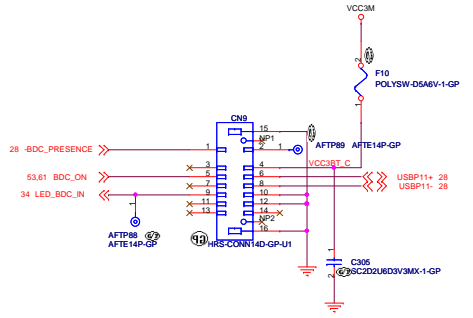
Always On USB Part List (U20)

	~SDV	FVT
TI	TPS2541RTER (74.02541.073)	TPS2541RTER(74.02541.073)
		TPS2541A(74.02541.A73)

PSIT Config.

	PSIT-1	PSIT-2	PSIT-3	PSIT-4	PSIT-5	PSIT-6
L35,L41	No ASM	No ASM	No ASM	No ASM	No ASM	No ASM
L38,L42	TDK	No ASM	No ASM	TDK	No ASM	Murata
U25,U77	Infineon	NXP	AMC	NXP	Infineon	AMC
R152,287,323,324	ASM	ASM	ASM	ASM	ASM	ASM
R320,321,325,328	No ASM	ASM	ASM	No ASM	ASM	No ASM

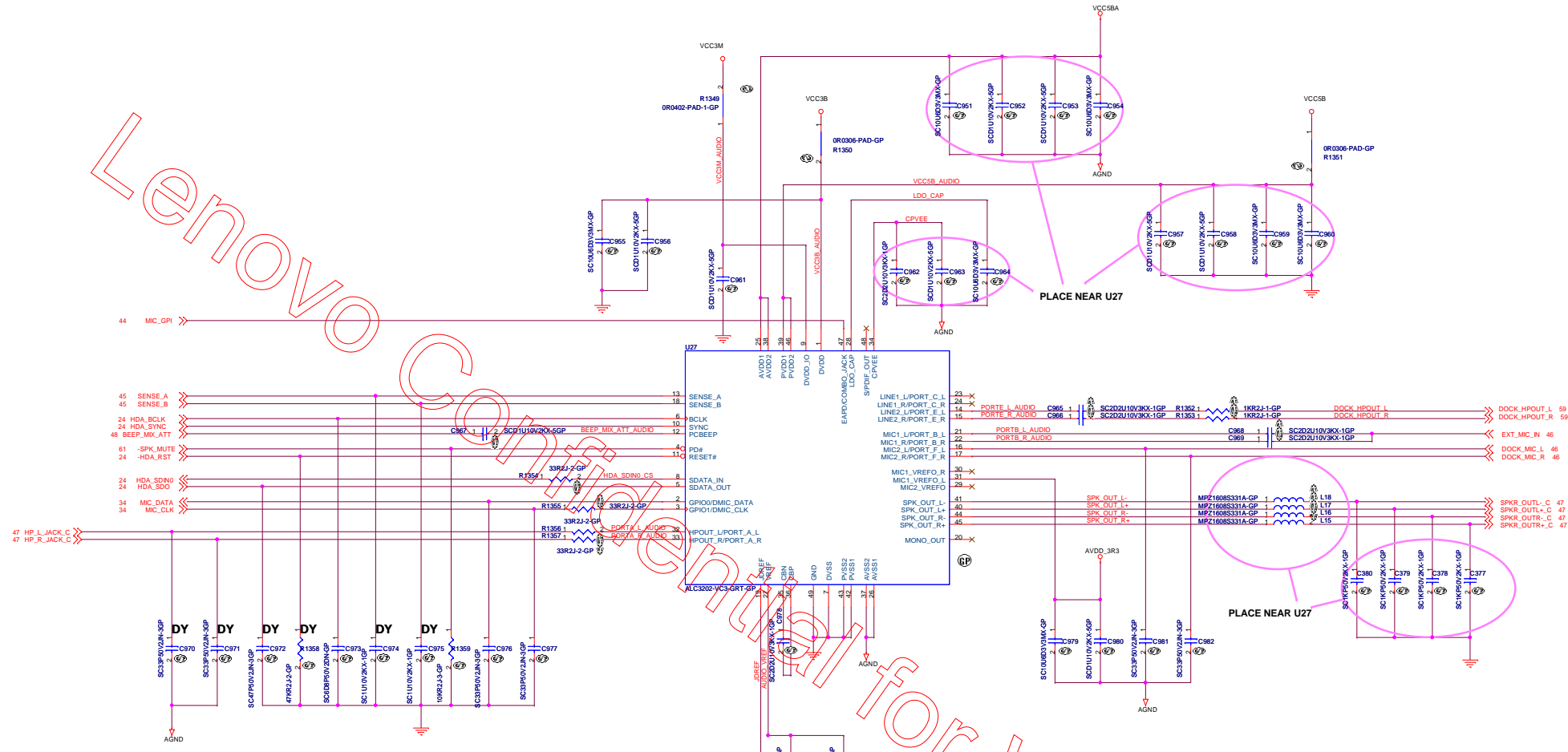
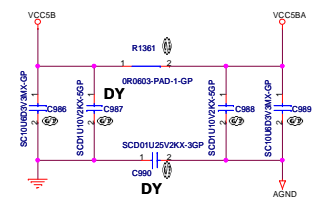
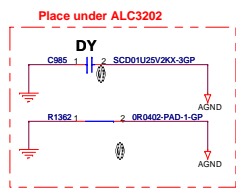
Bluetooth Module



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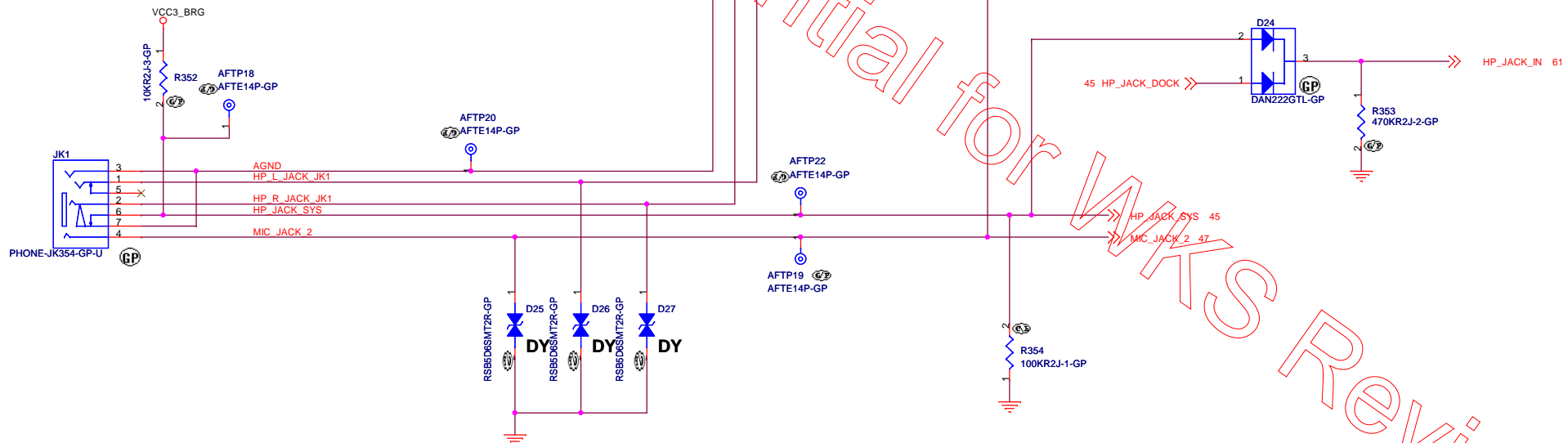
Review



NEAR HEADPHONE CONN

WIDE PATTERN

WIDE AND SHORT PATTERN

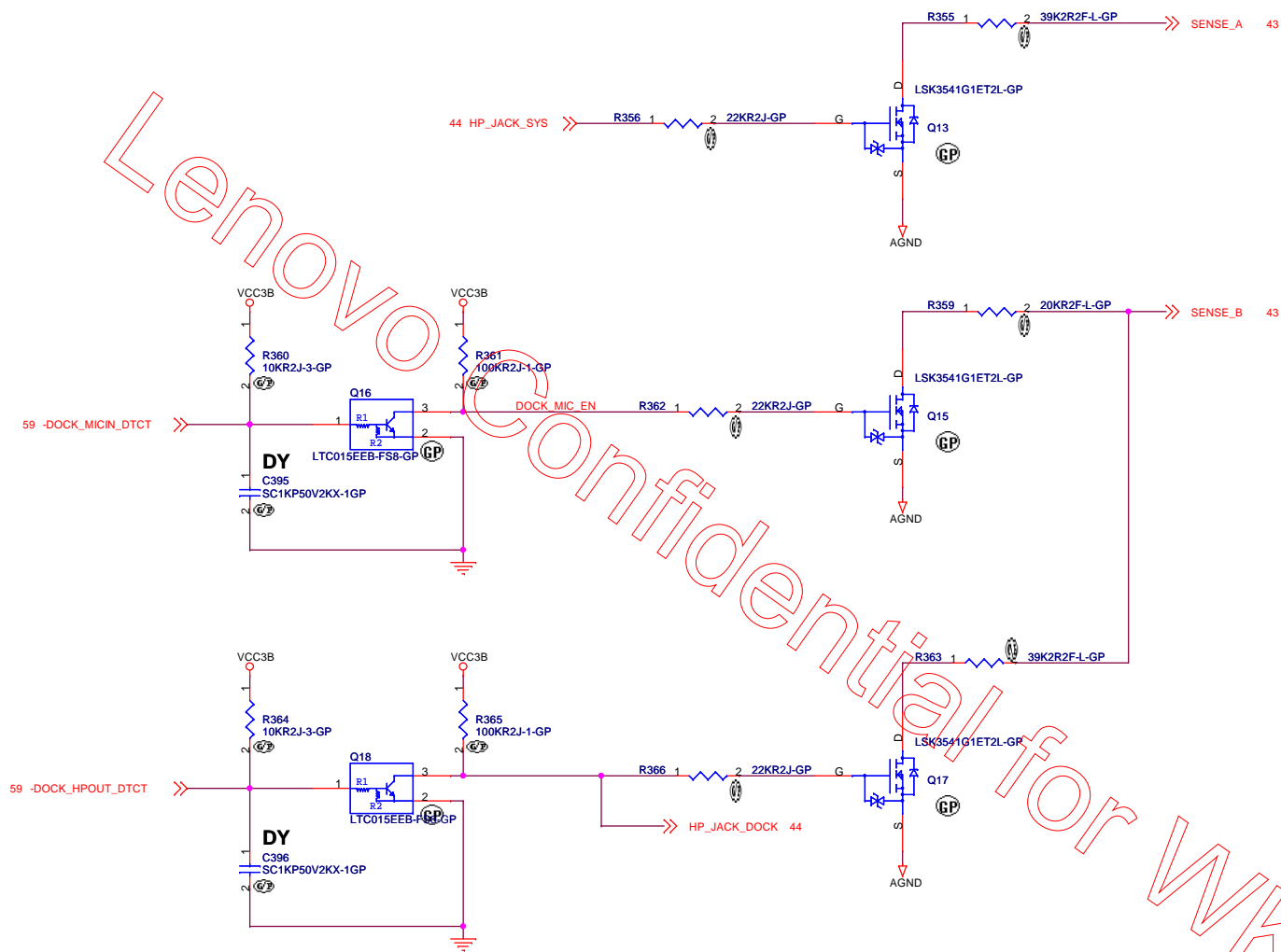


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Title Audio Connector

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Title

Audio Jack Sense

Size

Document Number

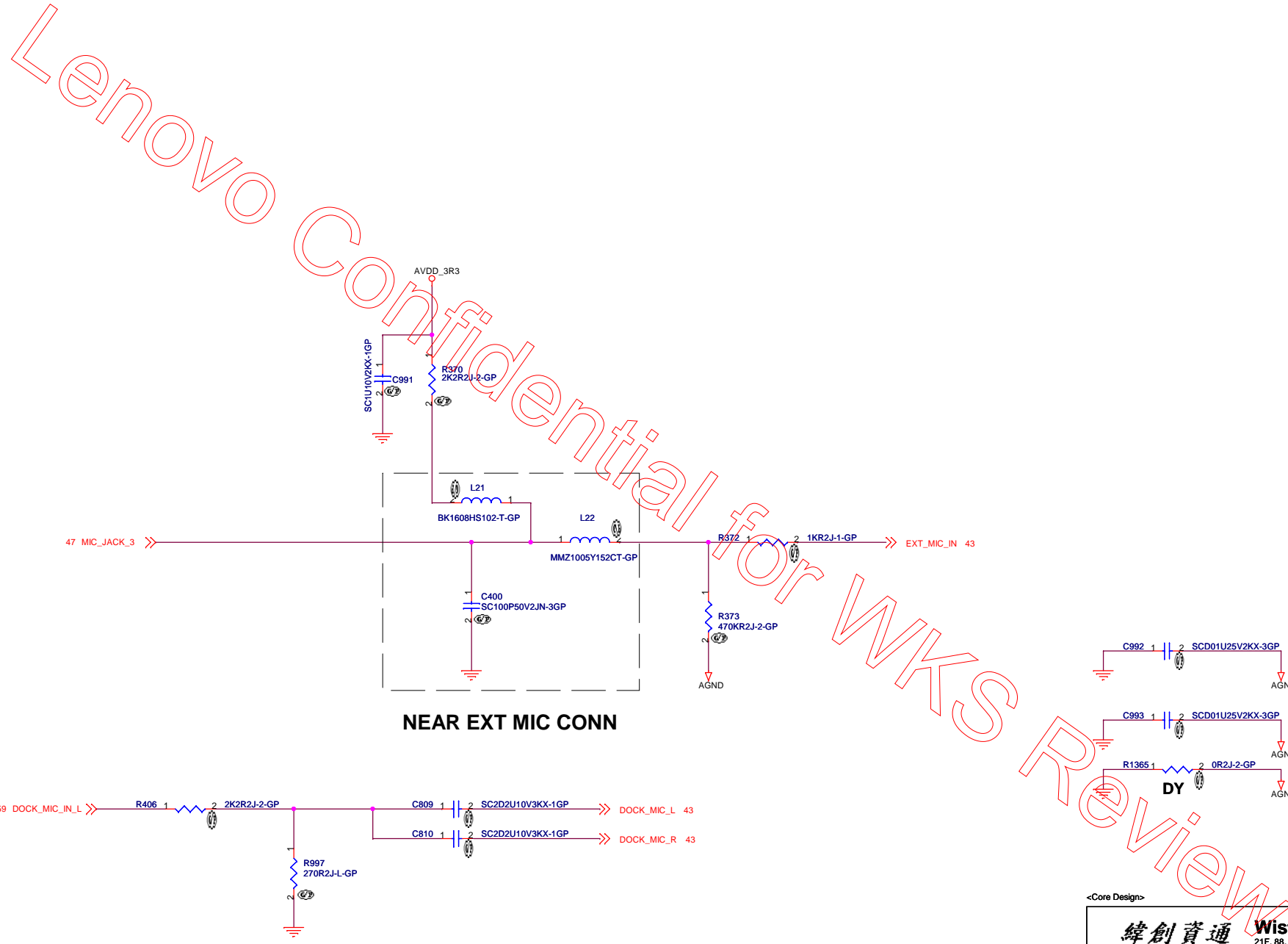
Dasher-2

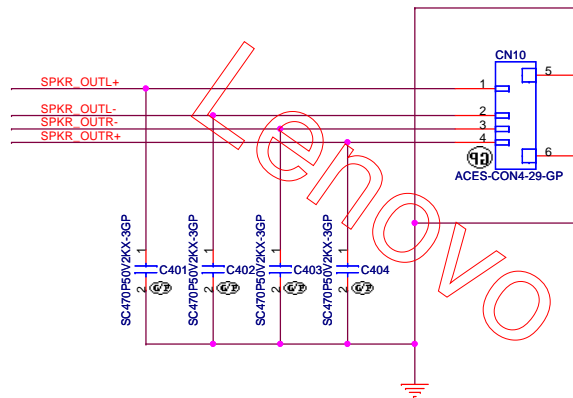
Rev

-1

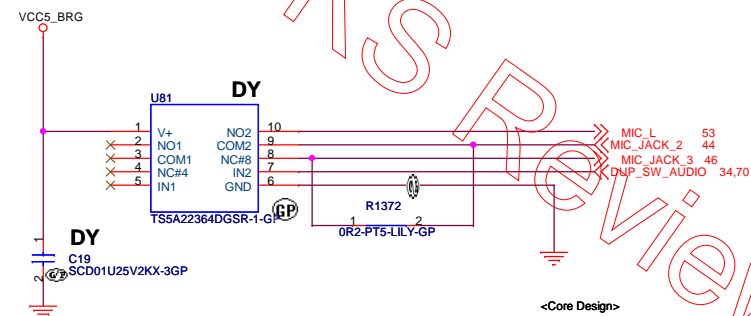
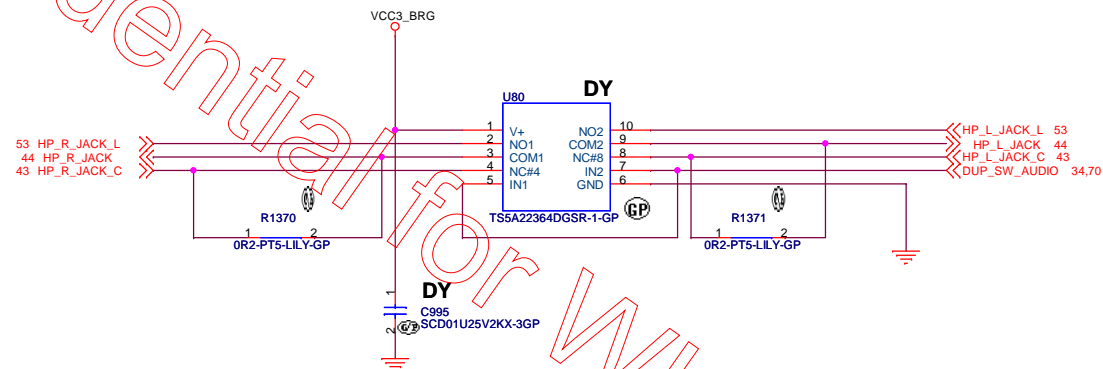
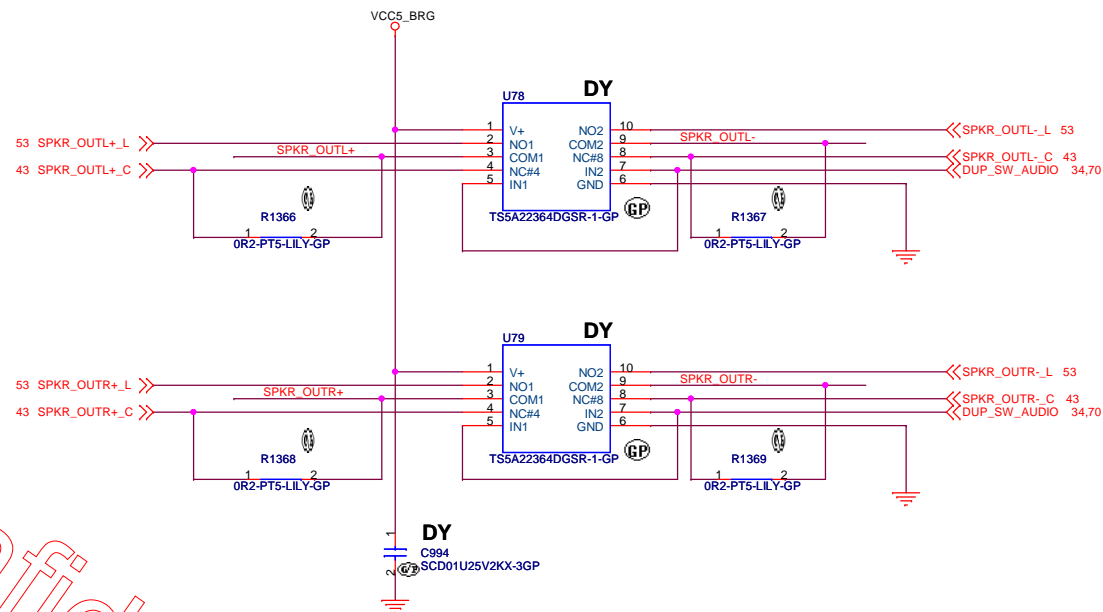
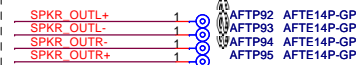
Date: Friday, March 09, 2012

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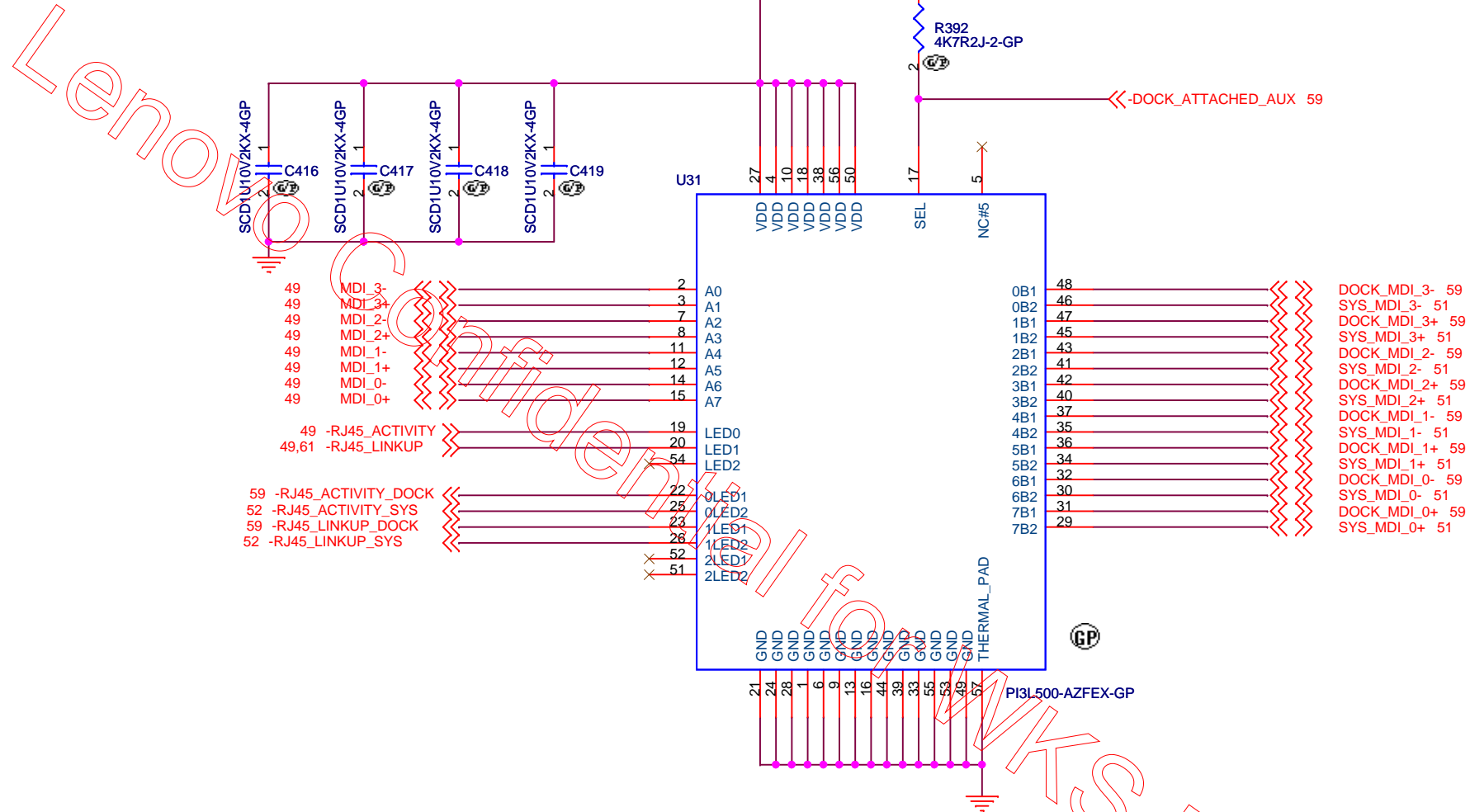
Near CN10



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Title			AUDIO SPEAKER	
Size	Document Number	Dasher-2		Rev
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		Vendor P/N	Wistron P/N
1st	Pericom	PI3L500AZFEX	73.3L500.003
2nd	TI	TS3L500AERHUR	73.3L500.A0V
3rd	ST	STMUX1800LQTR	73.01800.003

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Title

GBE LAN Switch

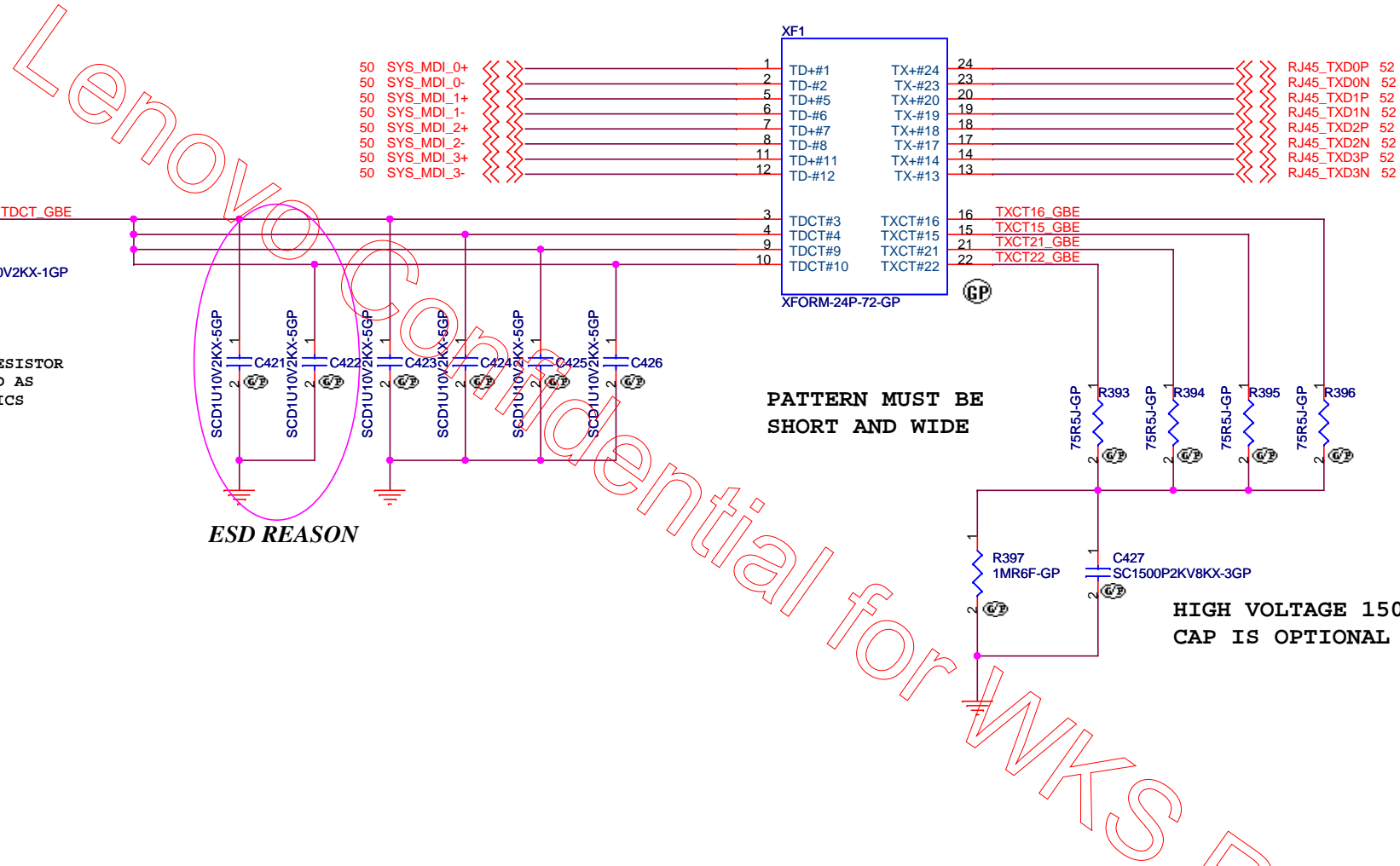
Size
A4

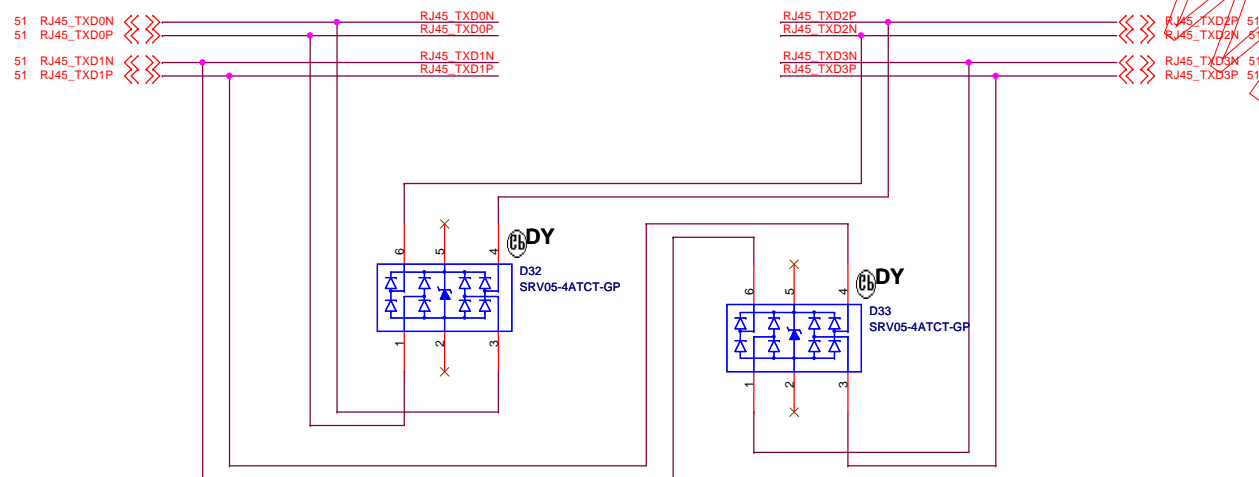
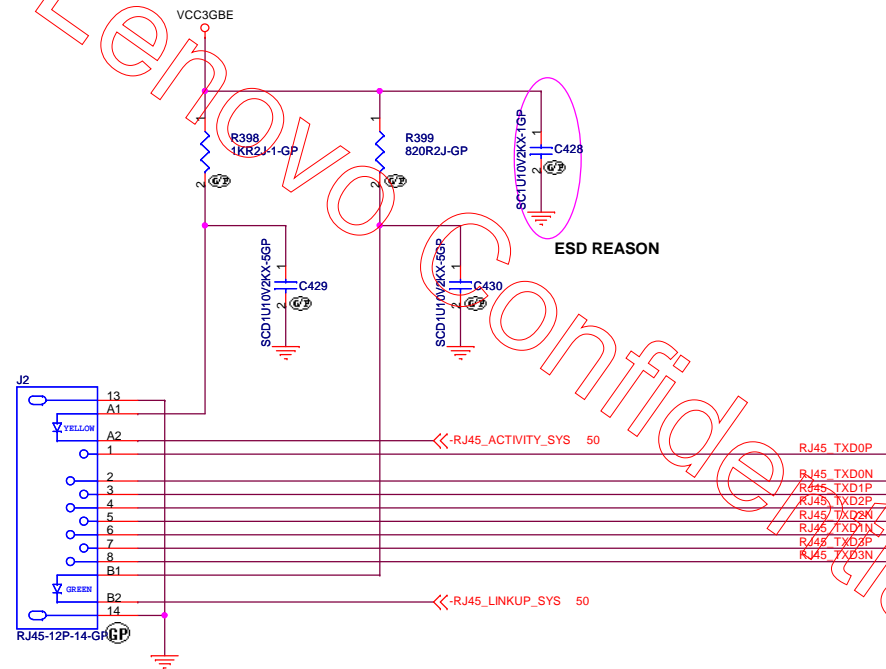
Document Number
Dasher-2

Rev
-1

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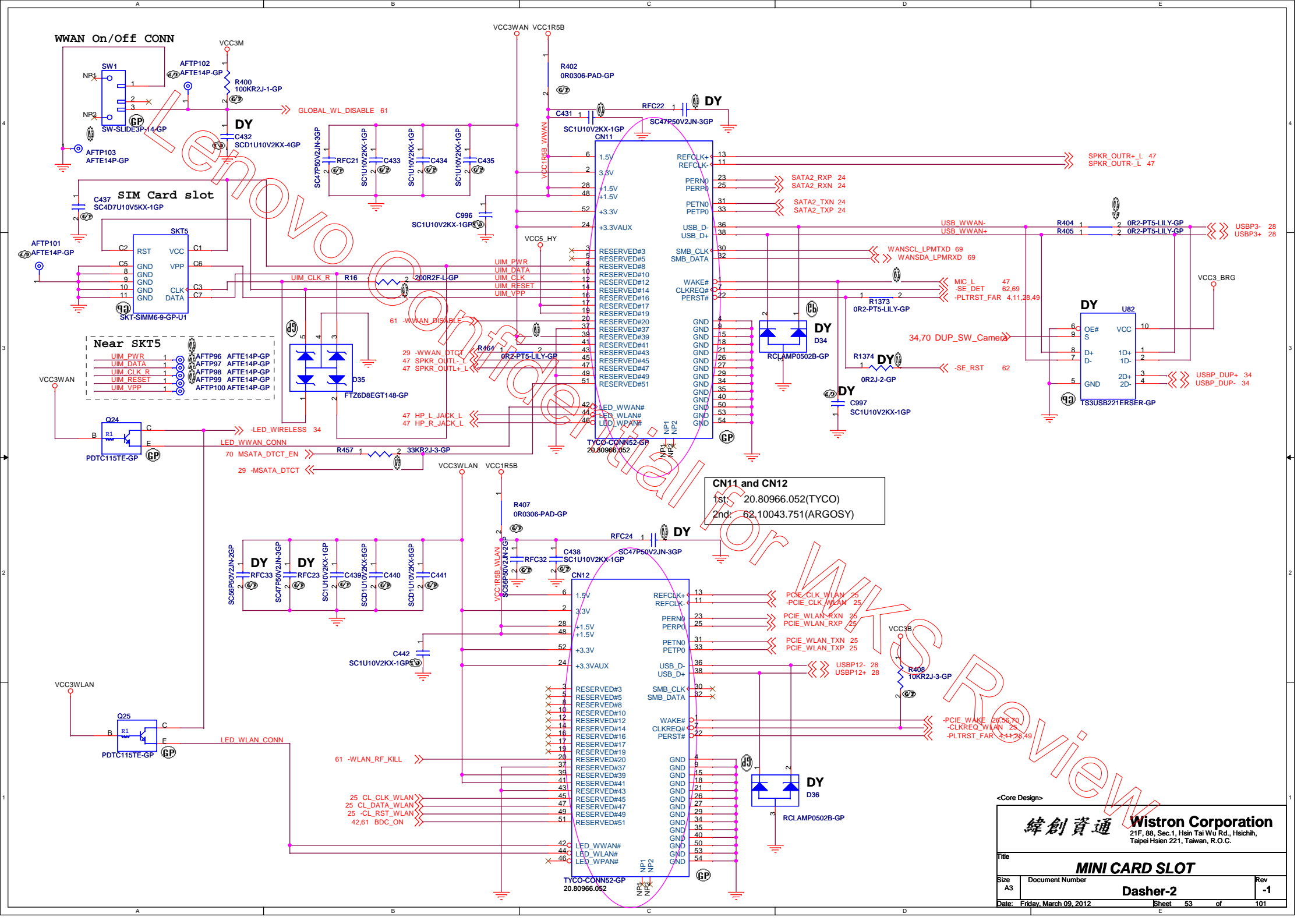


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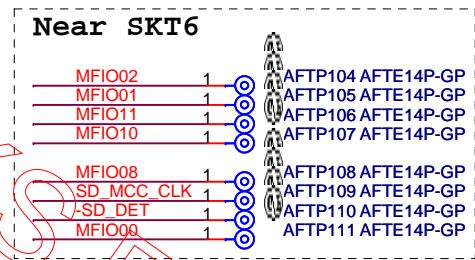
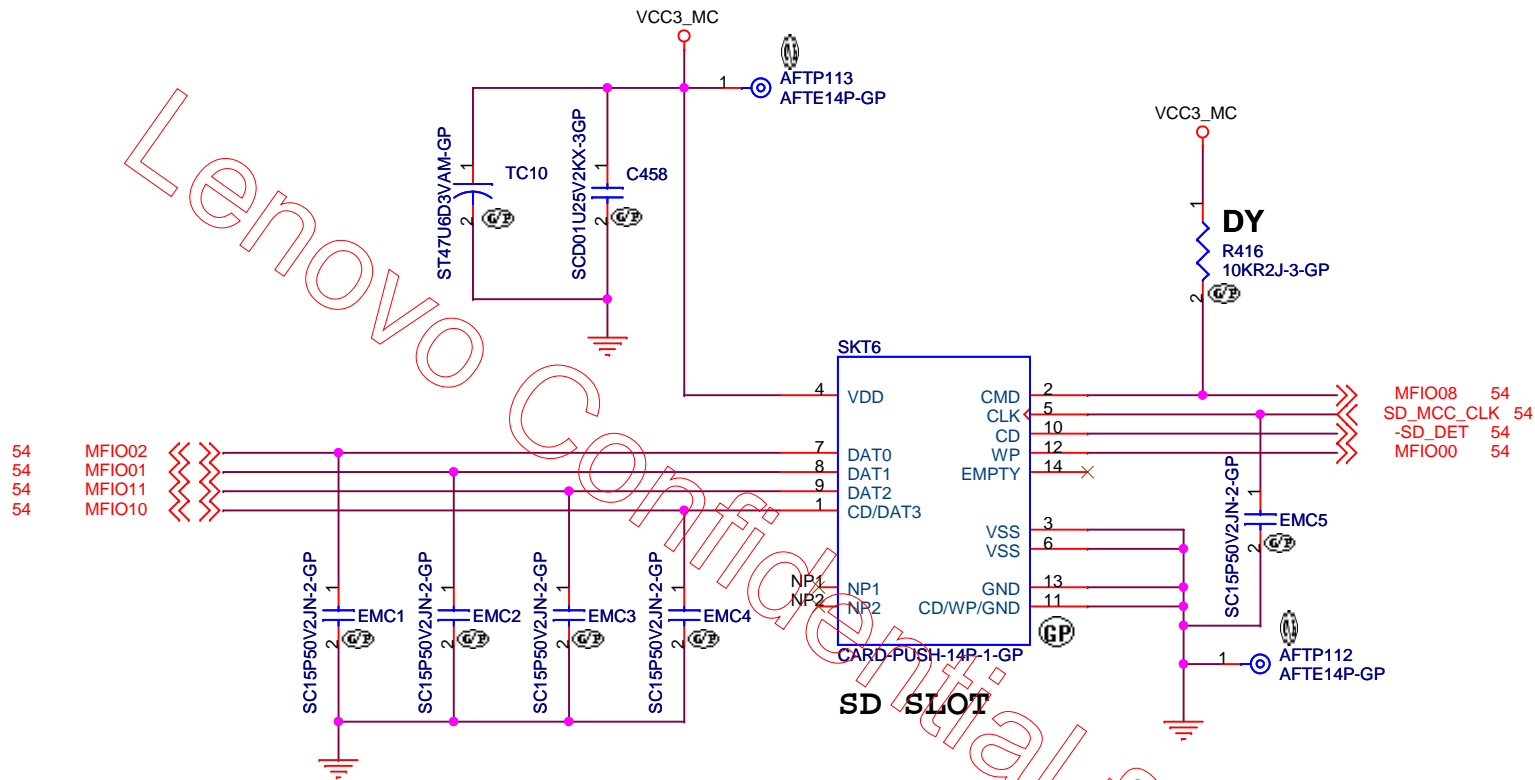
緯創資通

Wistron Corporation
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Taipei Hsien 221, Taiwan, R.O.C.

Title		
RJ45 CONNECTOR		
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1st: 20.80966.052(TYCO)
2nd: 62.10043.751(ARGOSY)



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Title

Media Card Slot

Size
A4

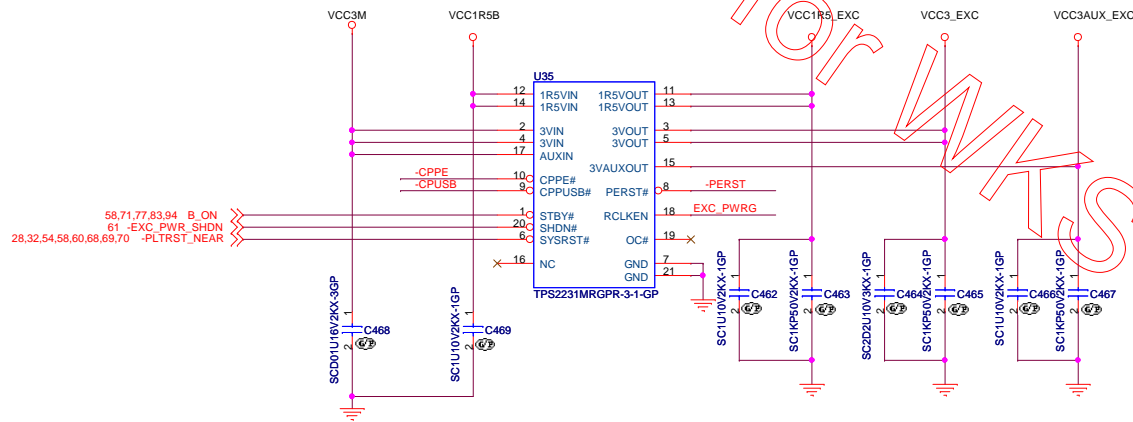
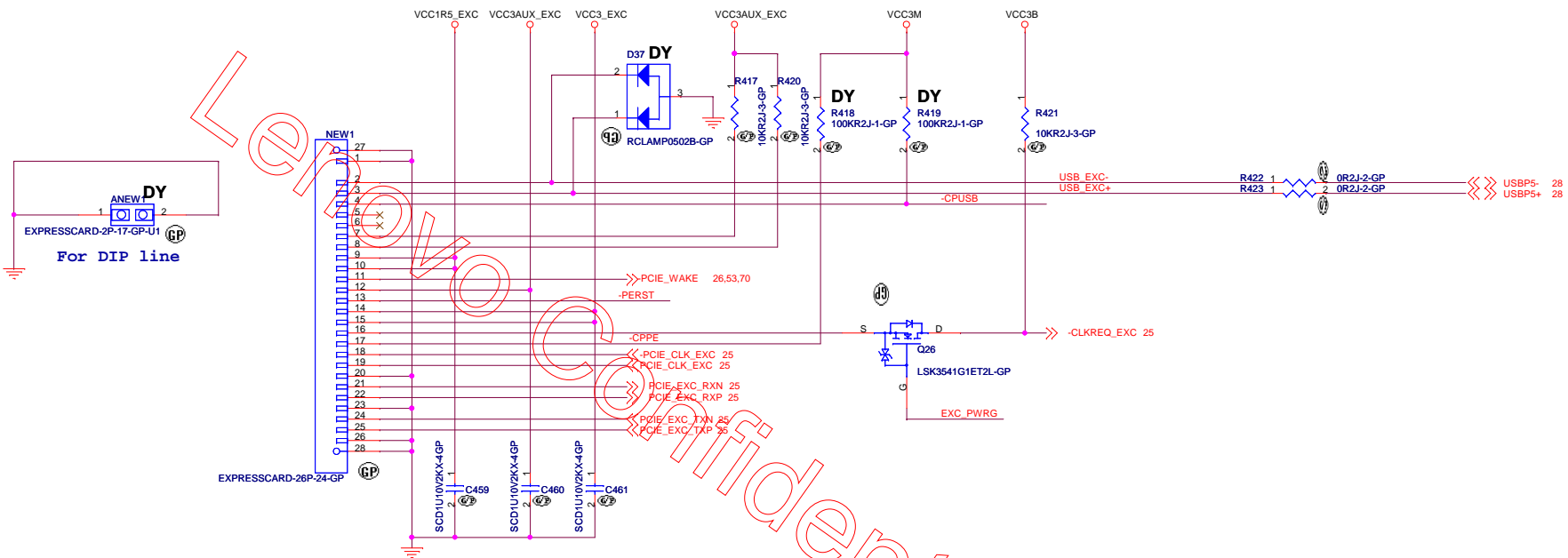
Document Number

Dasher-2

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-1

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U35	TI	TPS2231MRGP-3	45K0234BA
	Rohm	BD4156MUV-GTR	74.04156.A73
	Rohm	BD4157MUV-GE2	74.04157.A73

<Core Design>

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Title **Express Card Connector**

Size	Document Number	Rev
Custom	Dasher-2	-1
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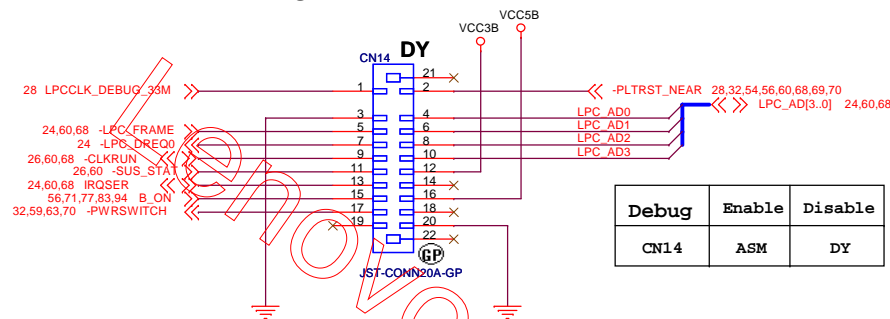
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<Core Design>

<div>緯創資通</div> <div>Wistron Corporation</div> <div>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.</div>		
Title		
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Size	Document Number	Rev
A	Dasher-2	-1
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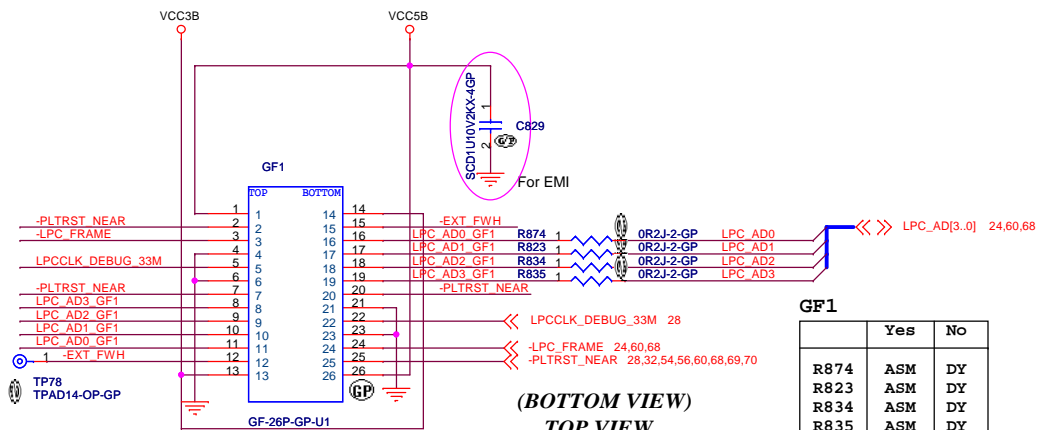
Debug card connector



Put "easy-to-access" place

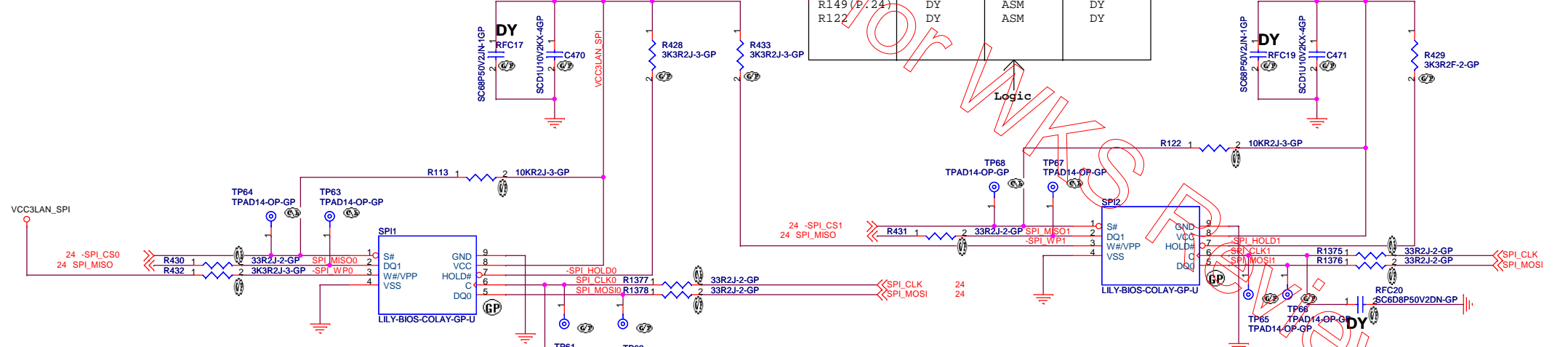
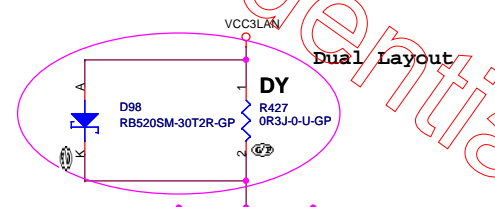
4MB				
SO8	Marconix	MX25L3206EM2I-12G	72.25320.C01	
	Winbond	W25Q032BVSSIG	72.25Q32.A01	
	Eon	EN25QH32-104HIP	72.02532.B01	
	Numonyx	N25Q032A13ESEC0	72.25Q32.C01	
8MB				
SO8	Marconix	MX25L6406EM2I-12G	72.25640.D01	
	Winbond	W25Q064CVSSIG	72.25Q64.B01	
	Eon	EN25QH64-104HIP	72.02564.001	
	Numonyx	N25Q064A13ESEC0	72.25Q64.G01	
	Winbond	W25Q64FVSSIG	72.25Q64.F01	

Golden Finger for Debug Board

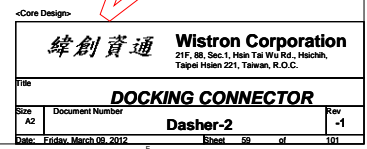
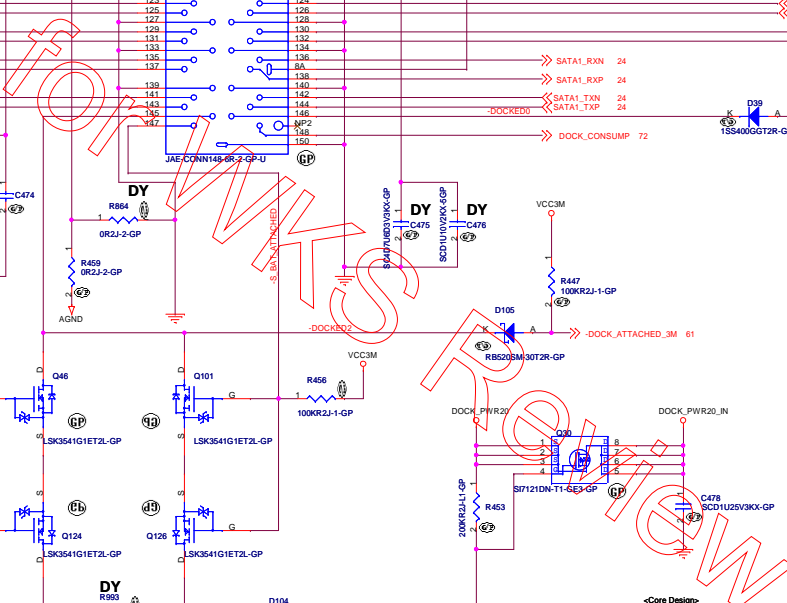


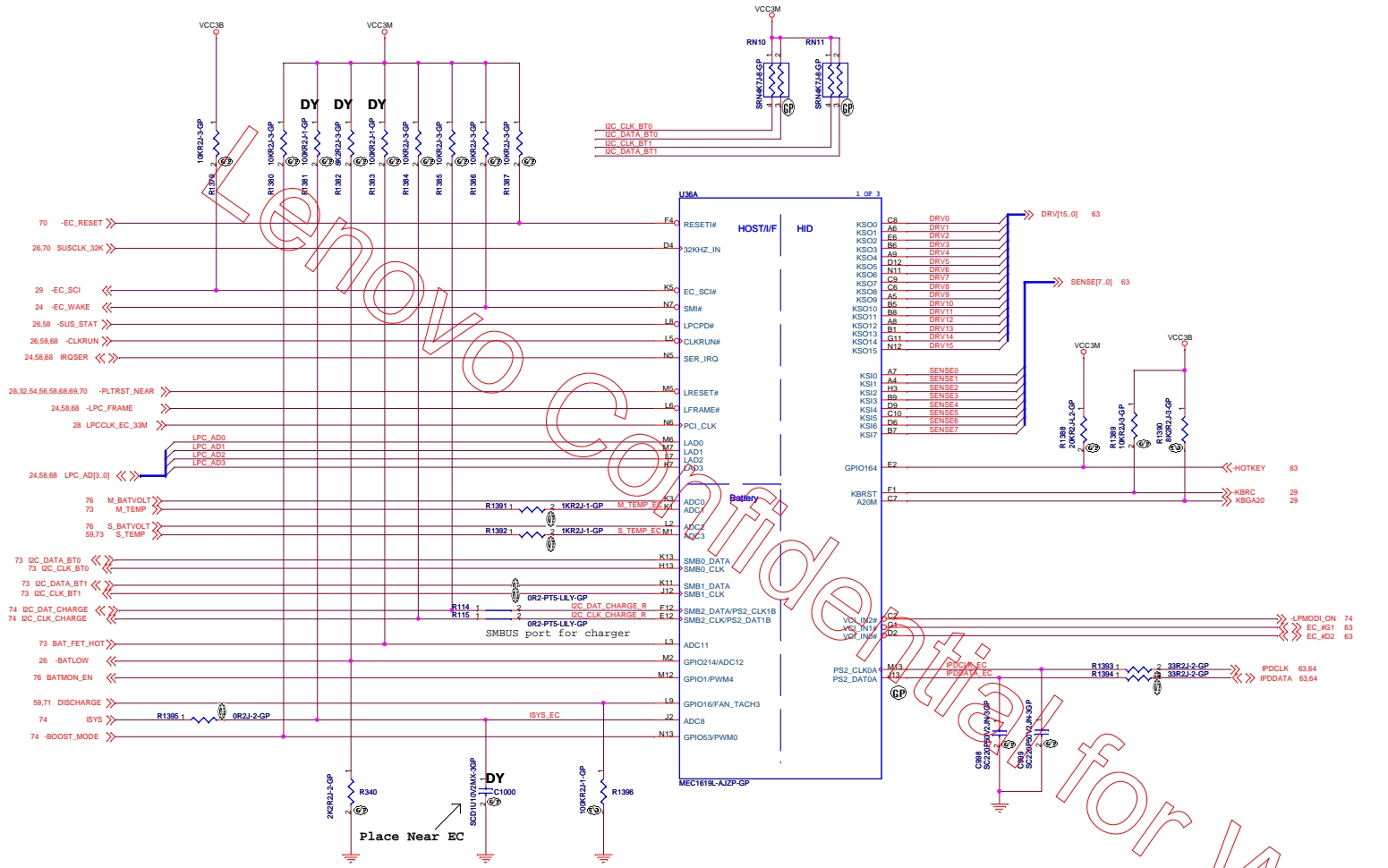
Configuration Table

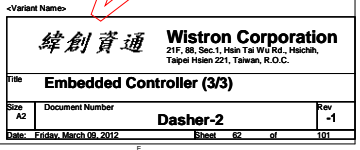
	CONFIG-1 16MB	CONFIG-2 12MB	CONFIG-3 8MB
SPI1	16MB	8MB	8MB
SPI2	DY	4MB	DY
R429	DY	ASM	DY
R431	DY	ASM	DY
R433	DY	ASM	DY
R1375	DY	ASM	DY
R1376	DY	ASM	DY
C471	DY	ASM	DY
R149 (P.24)	DY	ASM	DY
R122	DY	ASM	DY



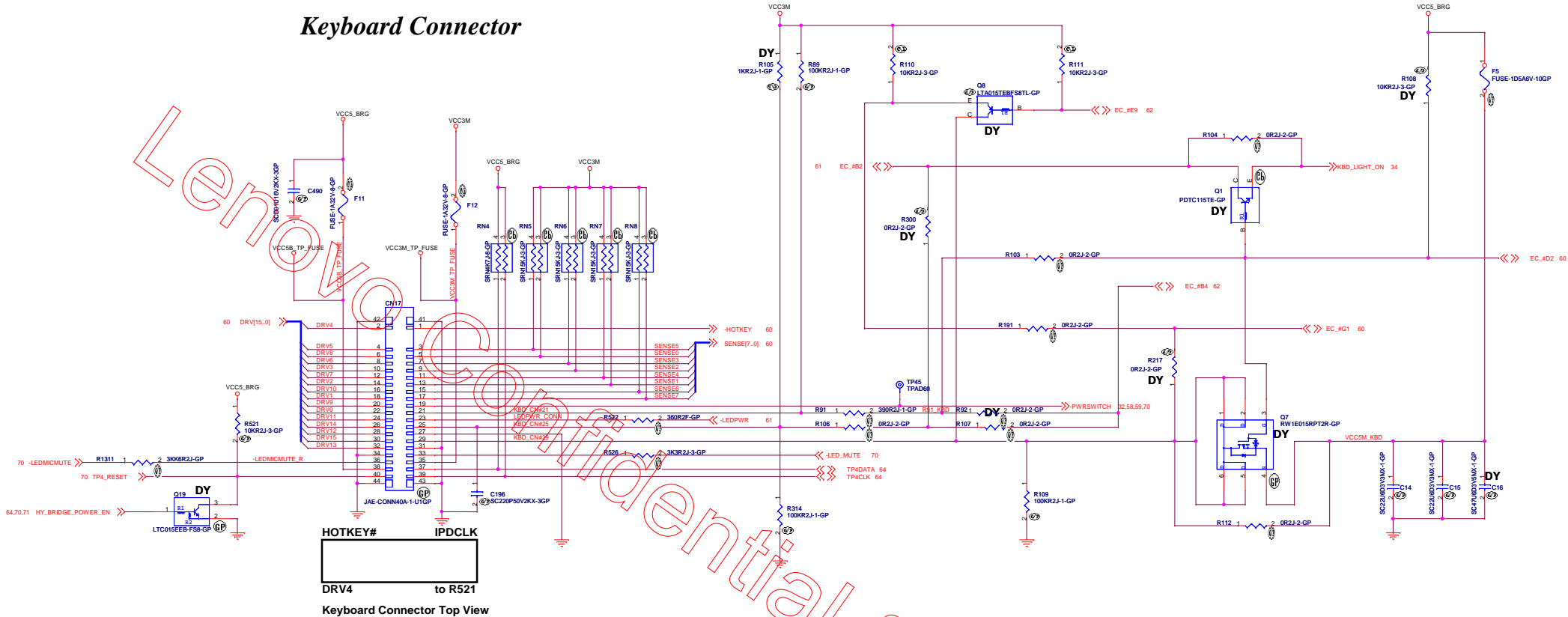
SO8 and WSON8 are both supported!





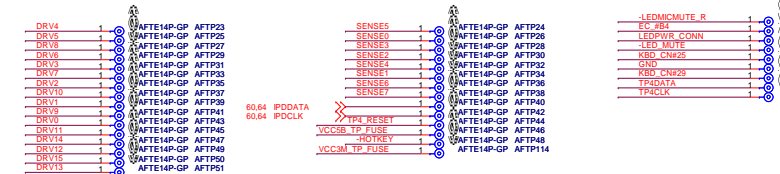


Keyboard Connector



HOTKEY#
IPDCLK
DRV4 to R521
Keyboard Connector Top View

Near CN17



KBD Table1

		case1	case2	case3	case4
CS12 KBD w/o BL		v	v	v	
CS12 KBD w BL			v	v	
CS09				v	v
Parts#	parts	case1	case2	case3	case4
R108	10k_5%_0402	DY	DY	ASM	ASM
R104	0.5%_0402	ASM	ASM	DY	DY
R89	100k_5%_0402	ASM	ASM	ASM	ASM
R105	1k_5%_0402	ASM	DY	ASM	ASM
R111	10k_5%_0402	ASM	ASM	ASM	ASM
R110	10k_5%_0402	DY	ASM	ASM	ASM
R92	0.5%_0402	DY	DY	ASM	ASM
R91	390_5%_0402	DY	ASM	ASM	ASM
R107	0.5%_0402	DY	ASM	DY	DY
R103	0.5%_0402	ASM	ASM	DY	DY
R106	0.5%_0402	DY	ASM	ASM	ASM
R112	0.5%_0402	DY	ASM	DY	DY
R109	100k_5%_0402	DY	ASM	ASM	DY
R191	0.5%_0402	ASM	ASM	DY	ASM
R217	0.5%_0402	DY	DY	ASM	DY
R300	0.5%_0402	DY	DY	ASM	ASM
C16	47uF_6.3V_0805	DY	DY	DY	DY
C15	10uF_6.3V_0603	DY	ASM	ASM	DY
C14	10uF_6.3V_0603	DY	ASM	ASM	DY
Q1	LTC015TE	DY	DY	ASM	ASM
Q8	LTA015TE	DY	DY	ASM	DY
Q7	RW1E015RP	DY	DY	ASM	DY
F5	1.5A/6A Fuse	DY	ASM	DY	DY
	1.5A/6V PolySW	DY	DY	ASM	DY
R314	100K_5%_0402	DY	ASM	DY	DY

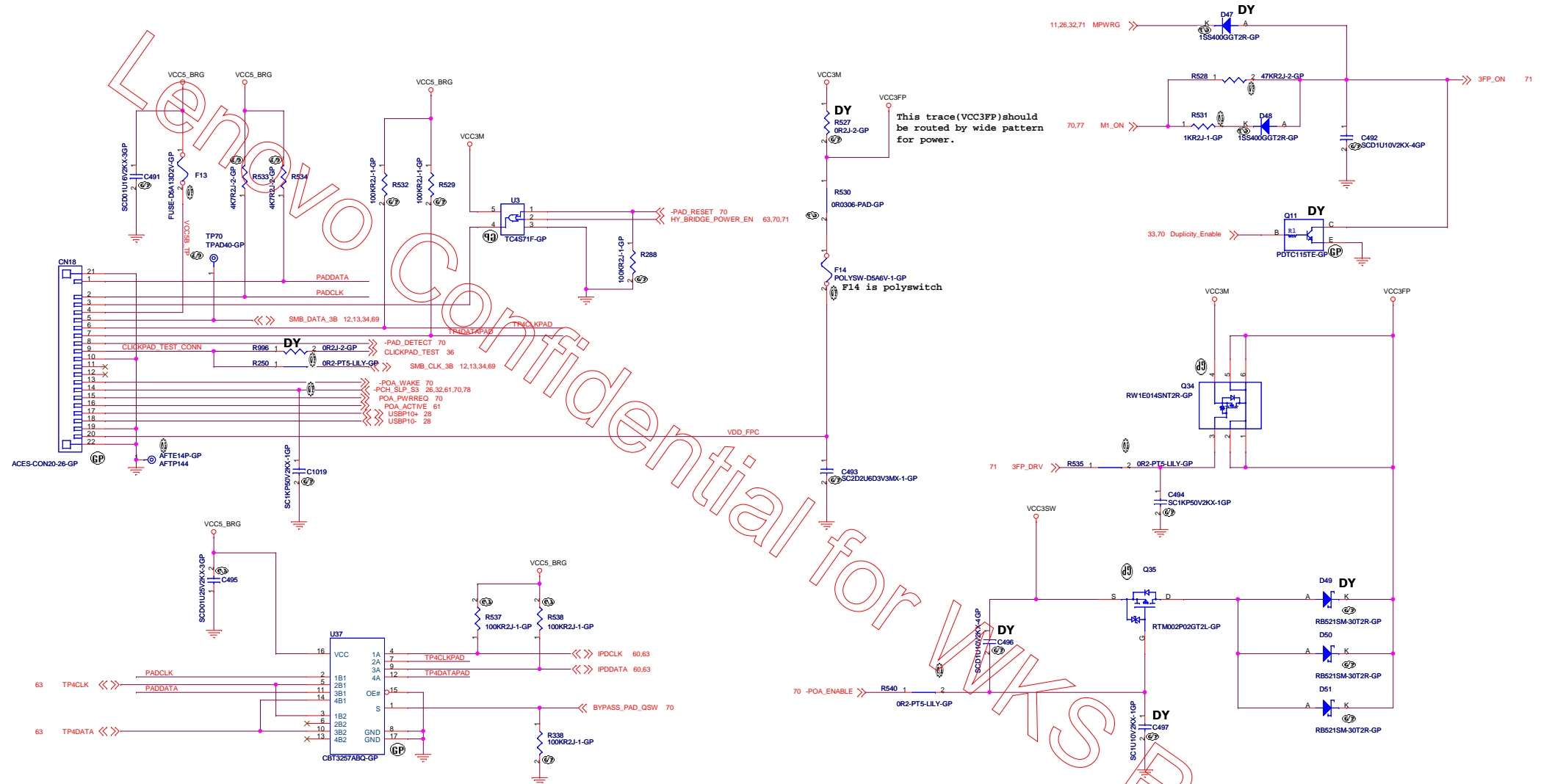
KBD Table2

Pre-DV	case4
SDV	case2
FVT	case2
PreSIT	case2
SIT	case2

← Logic

Core Design

Fingerprint Reader / Touch PAD



Near CN18			
PADDATA	1	AFTE14P-GP	AFPT124
PADCLK	1	AFTE14P-GP	AFPT125
-PAD RESET	1	AFTE14P-GP	AFPT126
TPCLK_P	1	AFTE14P-GP	AFPT127
TPCLKPAD	1	AFTE14P-GP	AFPT128
TP40ADATAP	1	AFTE14P-GP	AFPT129
-PAD DETECT	1	AFTE14P-GP	AFPT130
CLICKPAD TEST_CONN	1	AFTE14P-GP	AFPT131
-POA WAKE	1	AFTE14P-GP	AFPT132
-PCH_SLP_S3	1	AFTE14P-GP	AFPT133
POA_PRRREQ	1	AFTE14P-GP	AFPT134
POA_ACTIVE	1	AFTE14P-GP	AFPT135
VDD_FPC	1	AFTE14P-GP	AFPT136

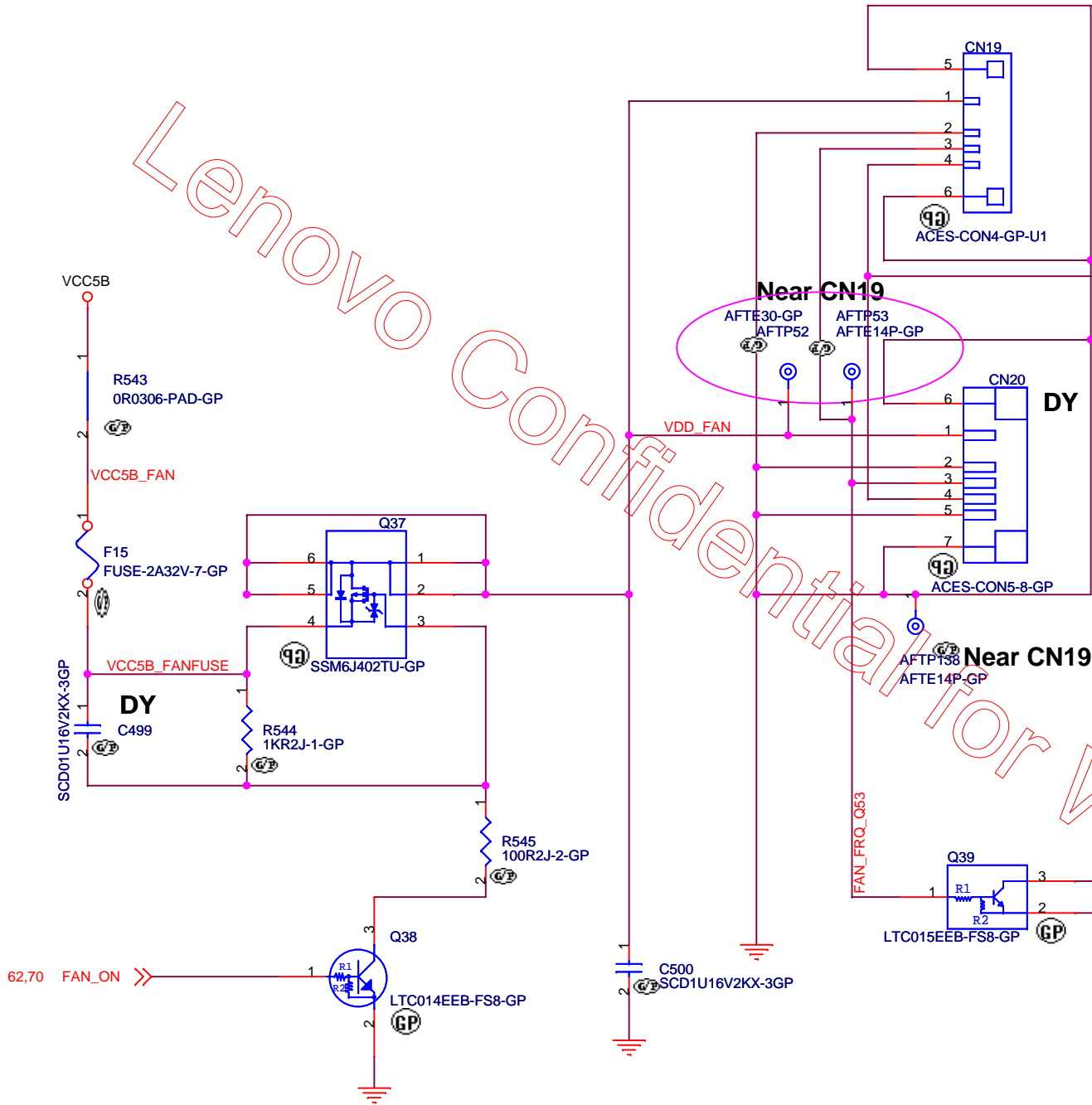
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Title <div>BLANK</div>		
Size <div>A</div>	Document Number <div>Dasher-2</div>	Rev <div>-1</div>
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For SV/LV

AFTP137
AFTE30-GP

Near CN19

FAN_ID 62

SV

FAN_ID	Thermal module
1	DELTA or Toshiba
0	AVC

For ULV

ULV

FAN_ID	Thermal module
1	Toshiba
0	AVC or DELTA

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Title

FAN Control

Size
A4

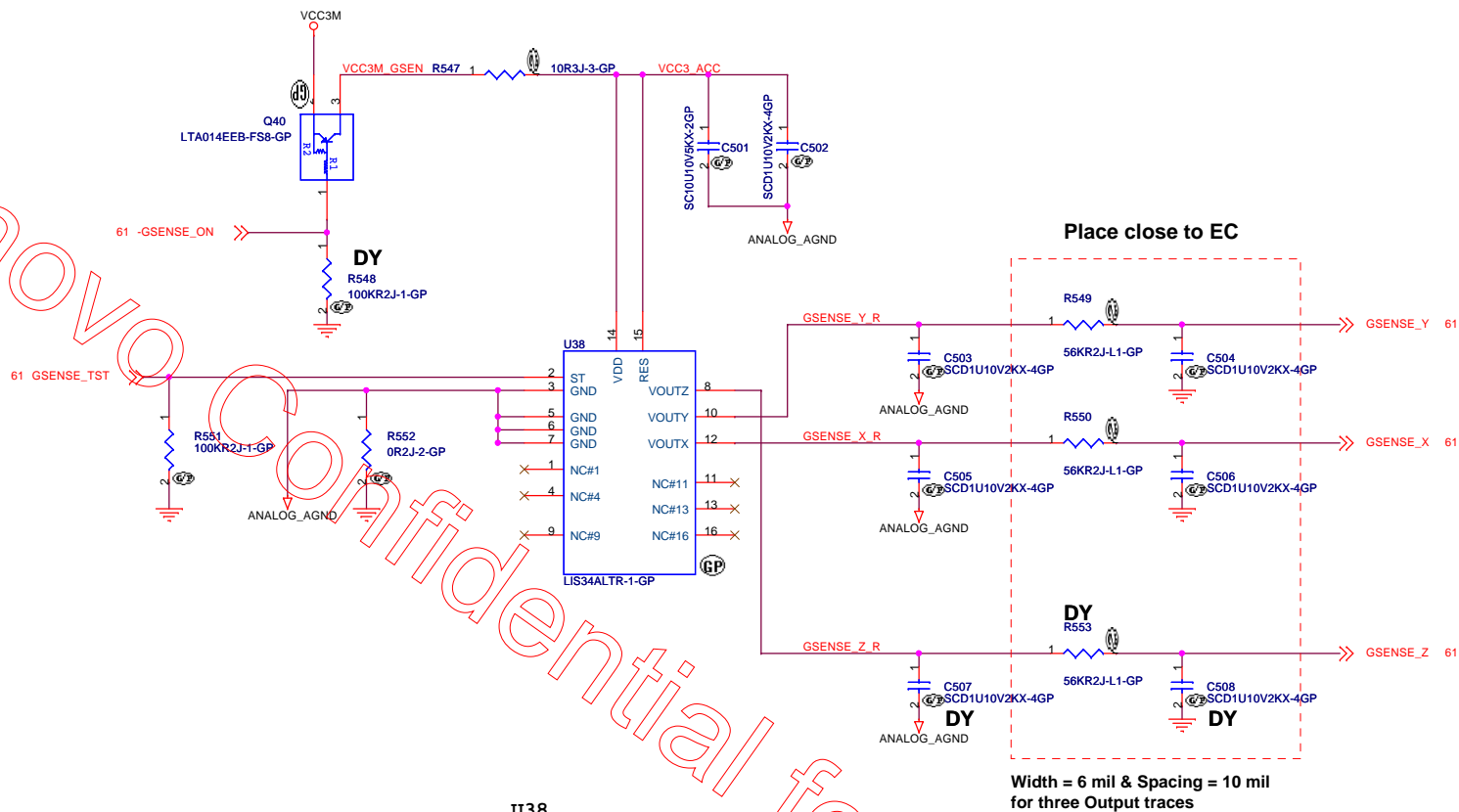
Document Number

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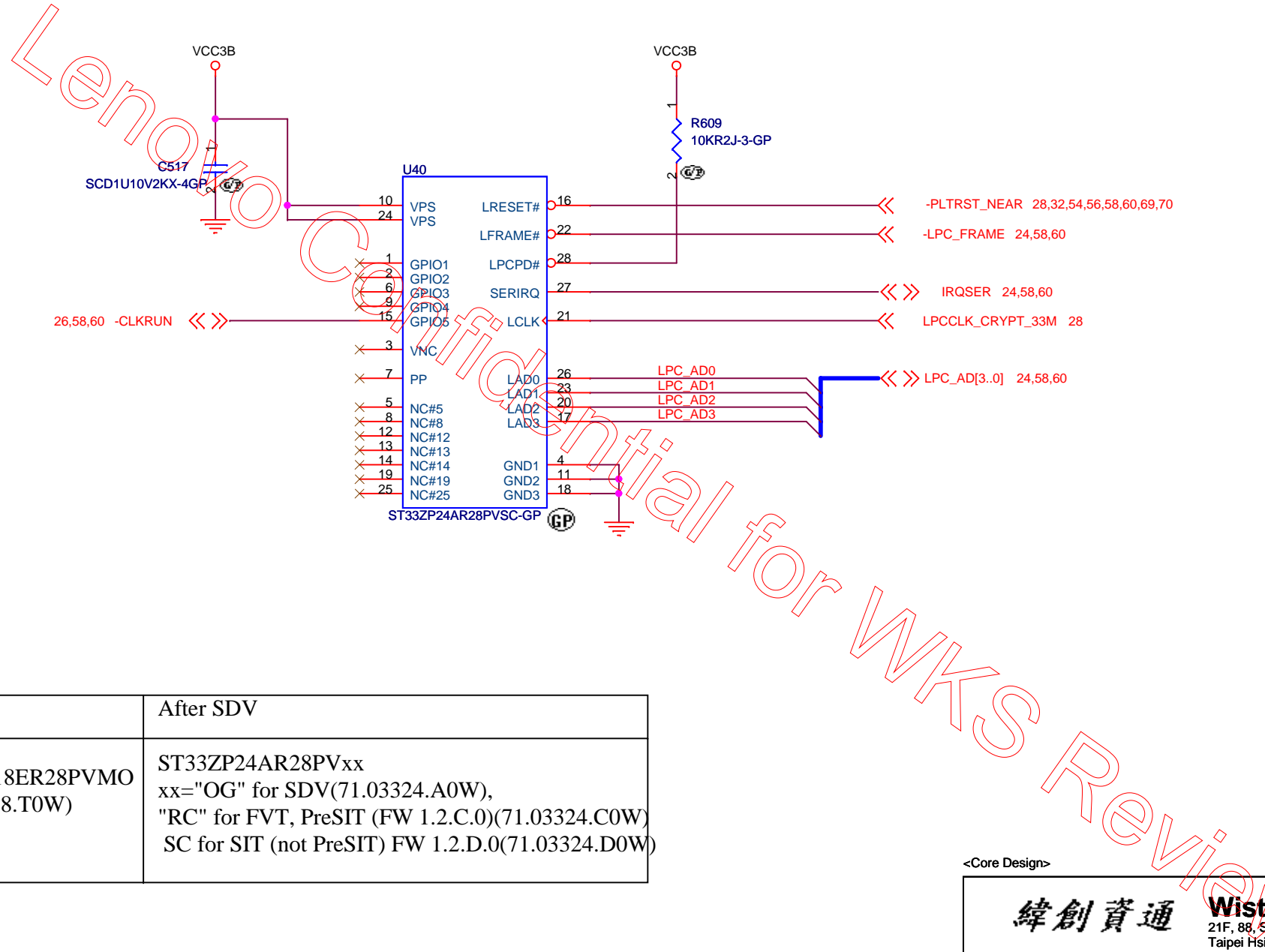
Primary	STMicro LIS34AL	41R0828AA
Second	Kionix KXTC8-2850	74.KXTC8.0BZ
Third		

Layout Comment :

- (1) Avoid routing under DCDC switching area.

<Core Design>

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Title	
G-SENSOR	
Size	Document Number
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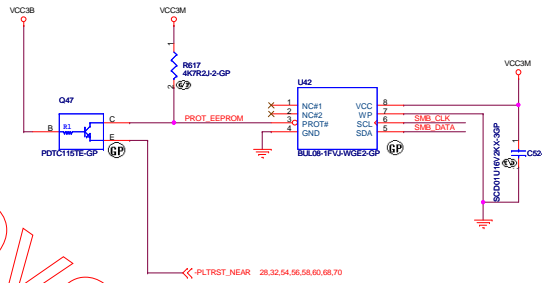


BU	After SDV
ST19NP18ER28PVMO (71.19N18.T0W)	ST33ZP24AR28PVxx xx="OG" for SDV(71.03324.A0W), "RC" for FVT, PreSIT (FW 1.2.C.0)(71.03324.C0W) SC for SIT (not PreSIT) FW 1.2.D.0(71.03324.D0W)

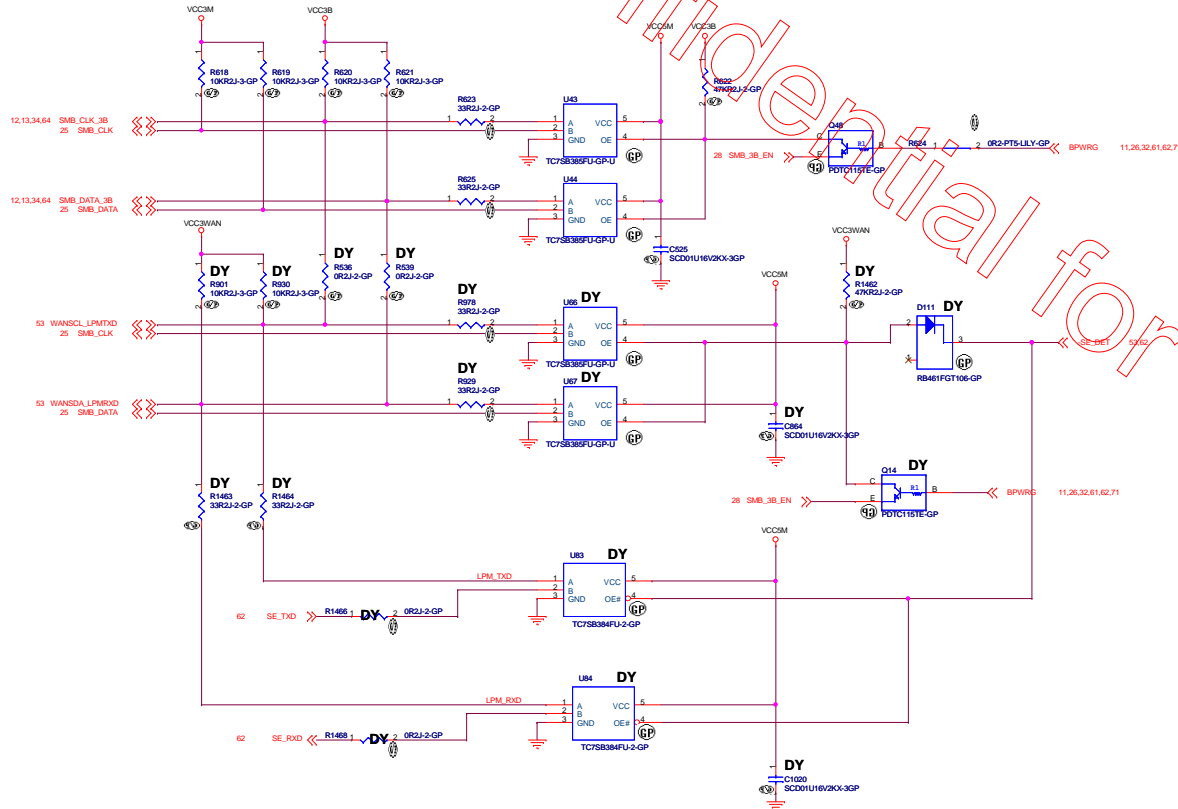
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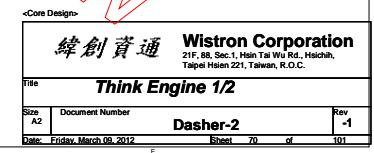
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Title			
TPM			
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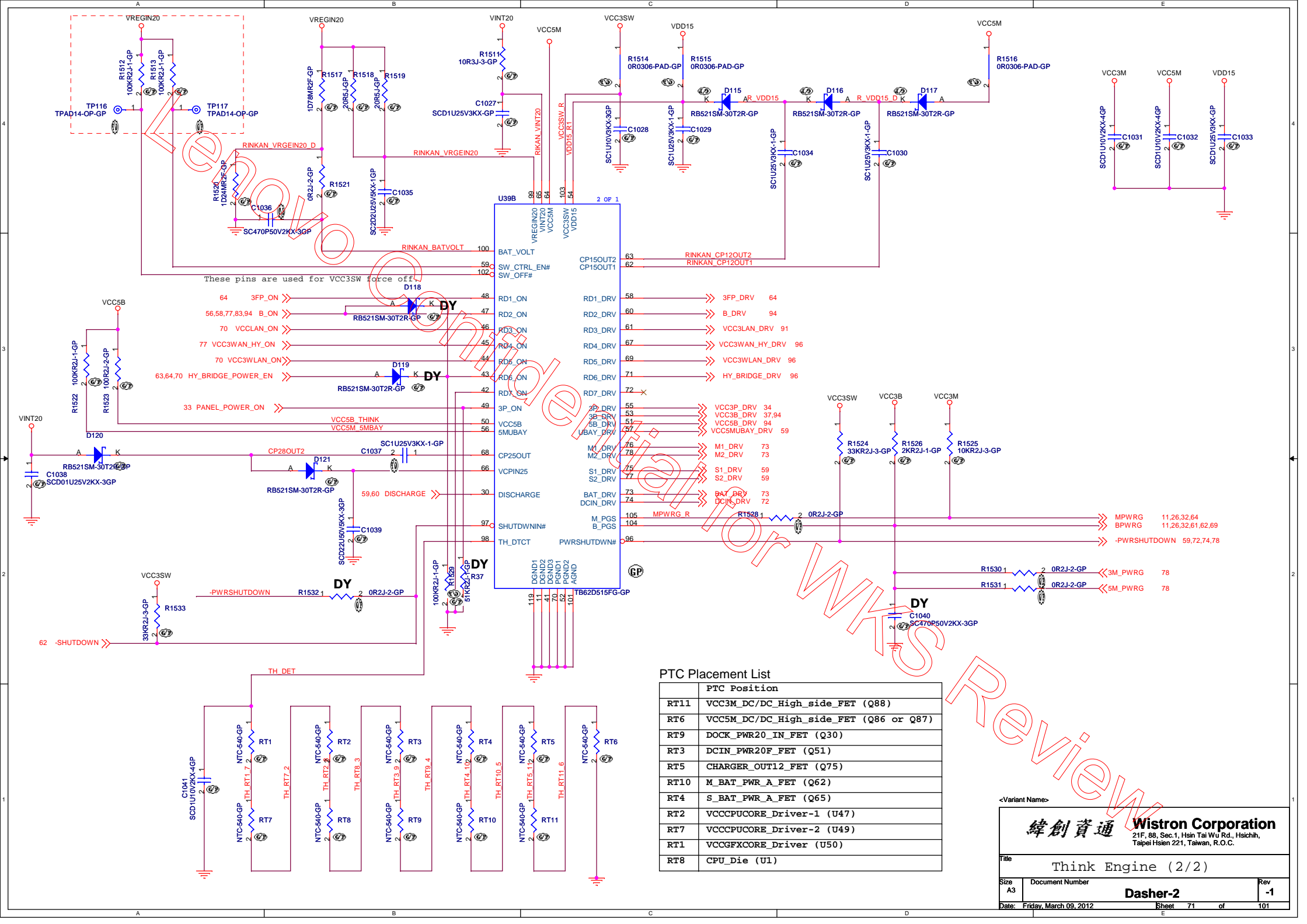
EEPROM



Vendor	U42	Part Number
1st	ROHM	BUL08-1FVJ-W
2nd	NXP	PCA24S08ADP
3rd	Sanyo	LE26CAP08TT
		72.BUL08.A0Q
		72.24S08.A0Q
		72.26C08.00R

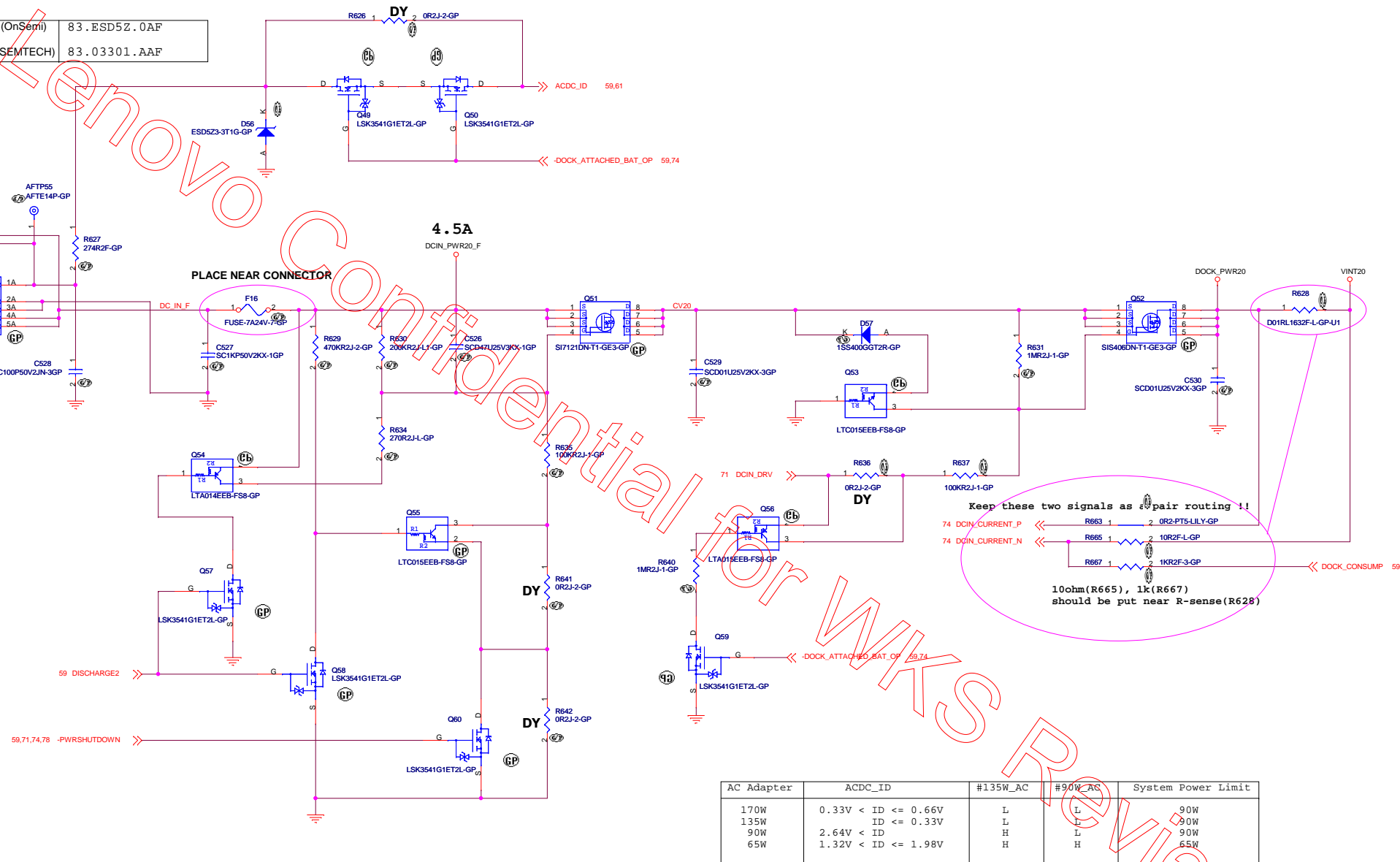






D56

ESD5Z3.3T1G(OnSemi) 83.ESD5Z.0AF
uClamp3301H(SEMTECH) 83.03301.AAF

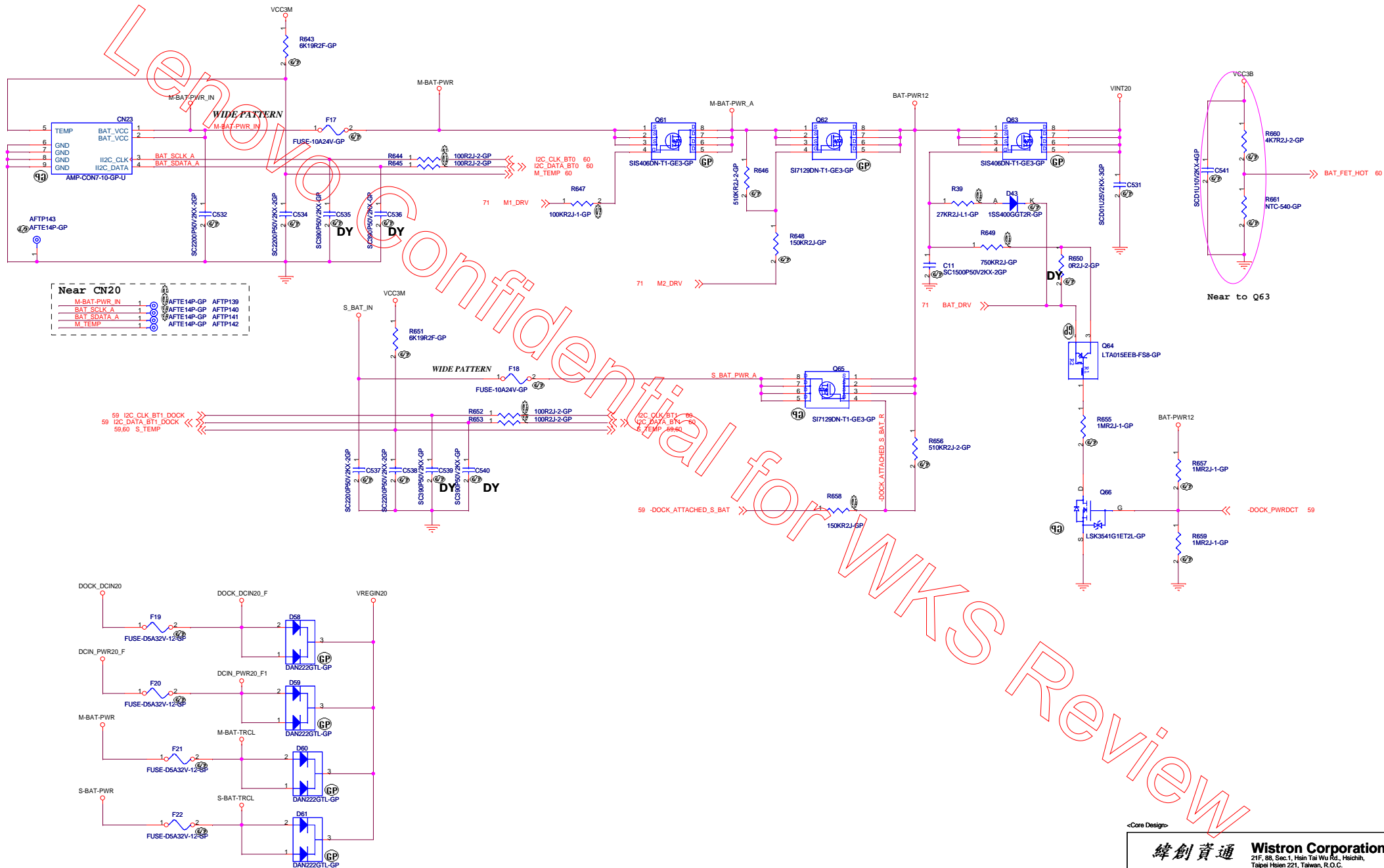


PEAK SHIFT	YES	NO
R641	NO-ASM	ASM
R629	ASM	NO-ASM
Q58	ASM	NO-ASM
Q55	ASM	NO-ASM

Logic

<Core Design>

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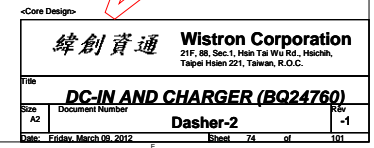


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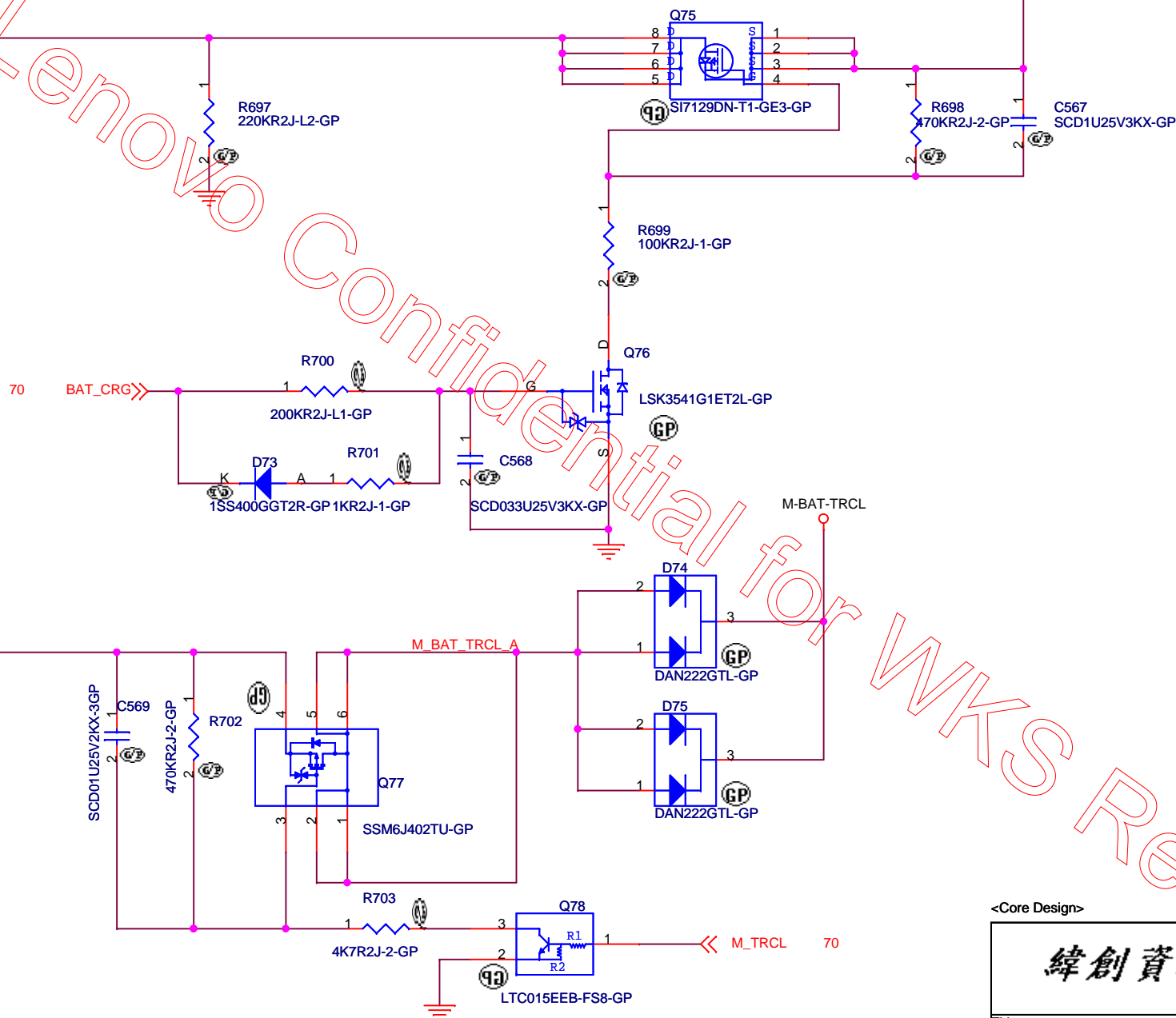
Wistron Corporation
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Title				
BATTERY INPUT				
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CHARGER_OUT12

BAT-PWR12



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Title

CHARGER SELECT

Size
A4

Document Number

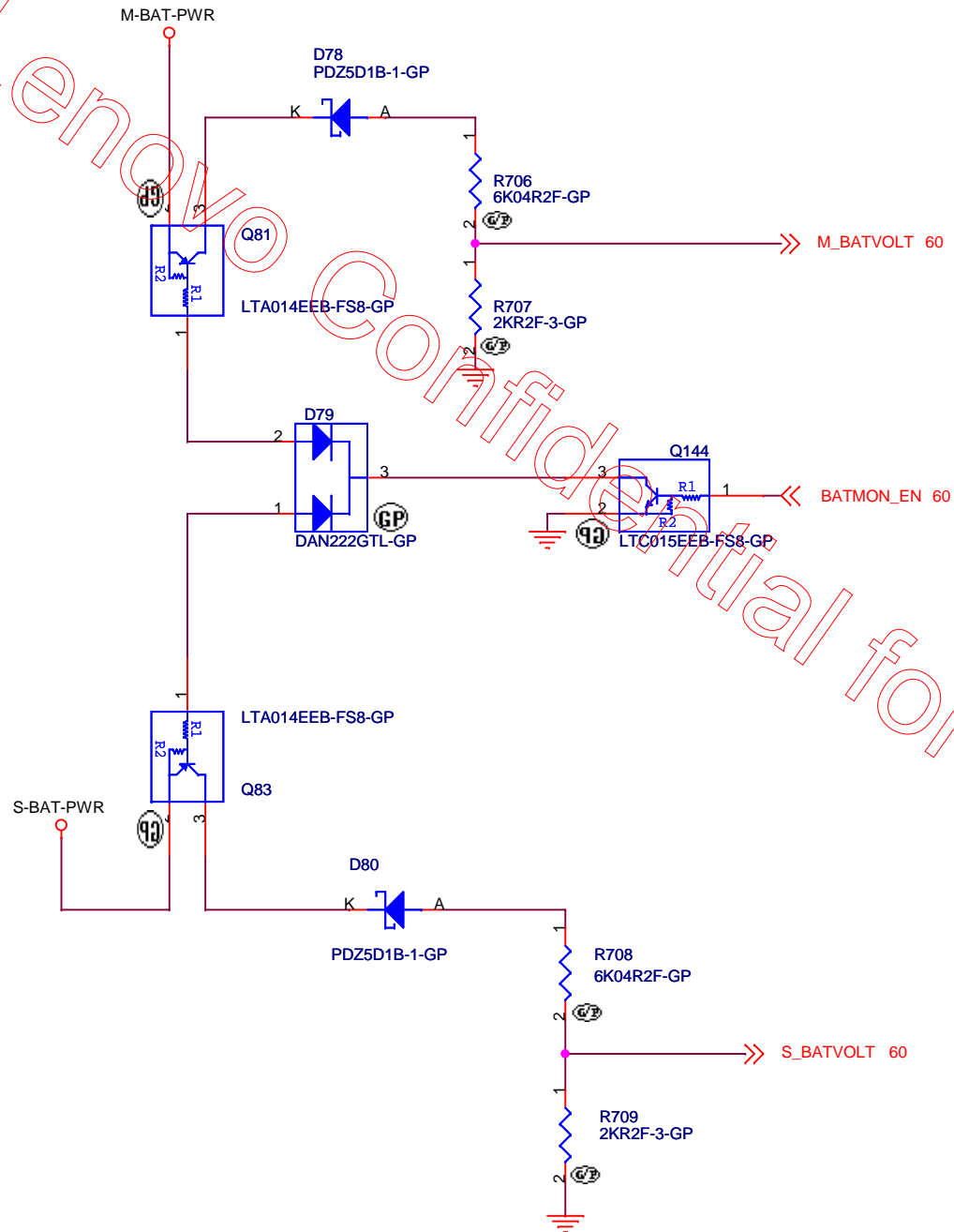
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-1

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$$V_{OUT} = 0.249 (V_{BAT} - 5)$$



<Core Design>

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Title

BATTERY MONITOR

Size
A4

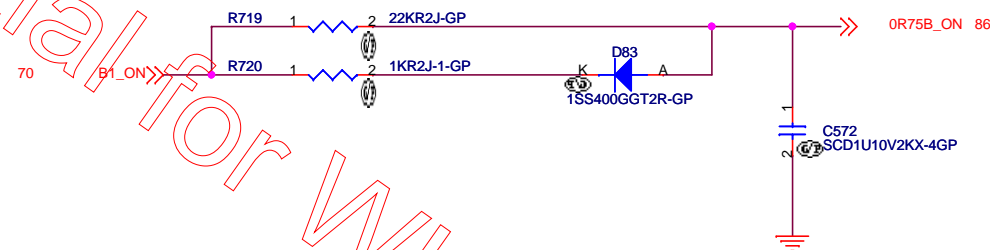
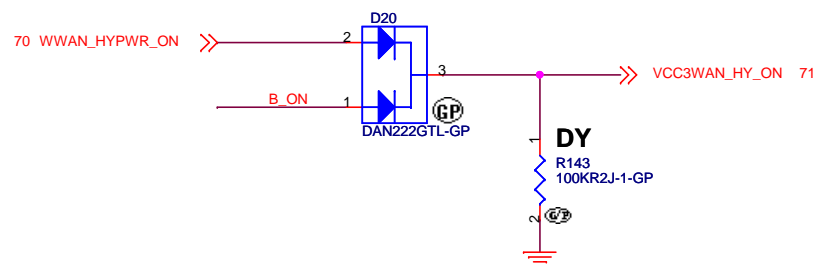
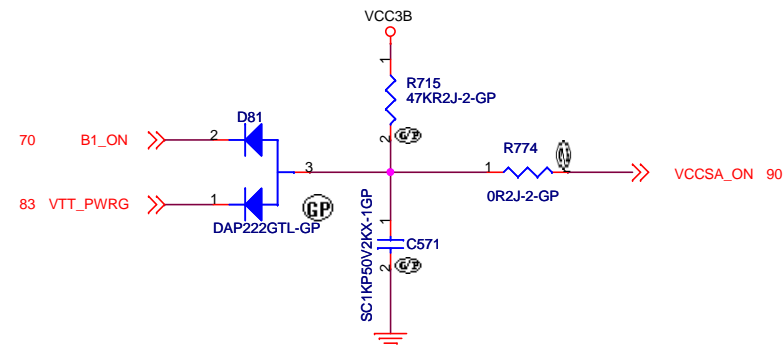
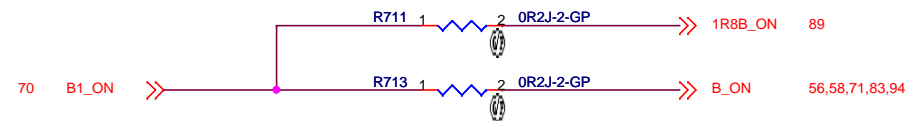
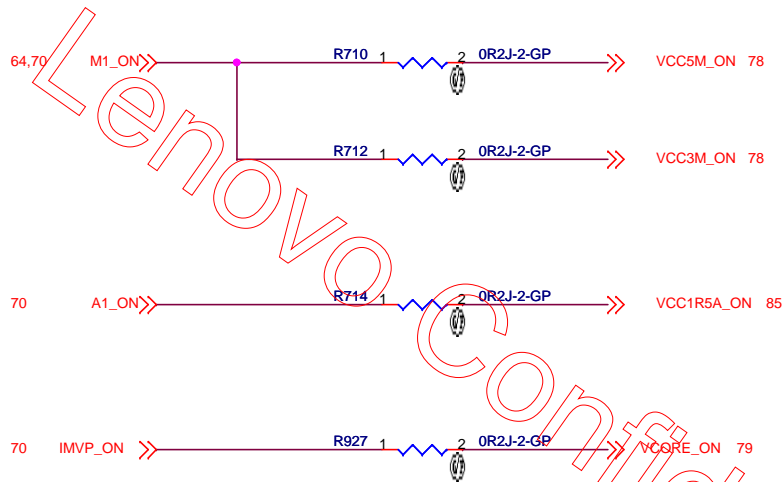
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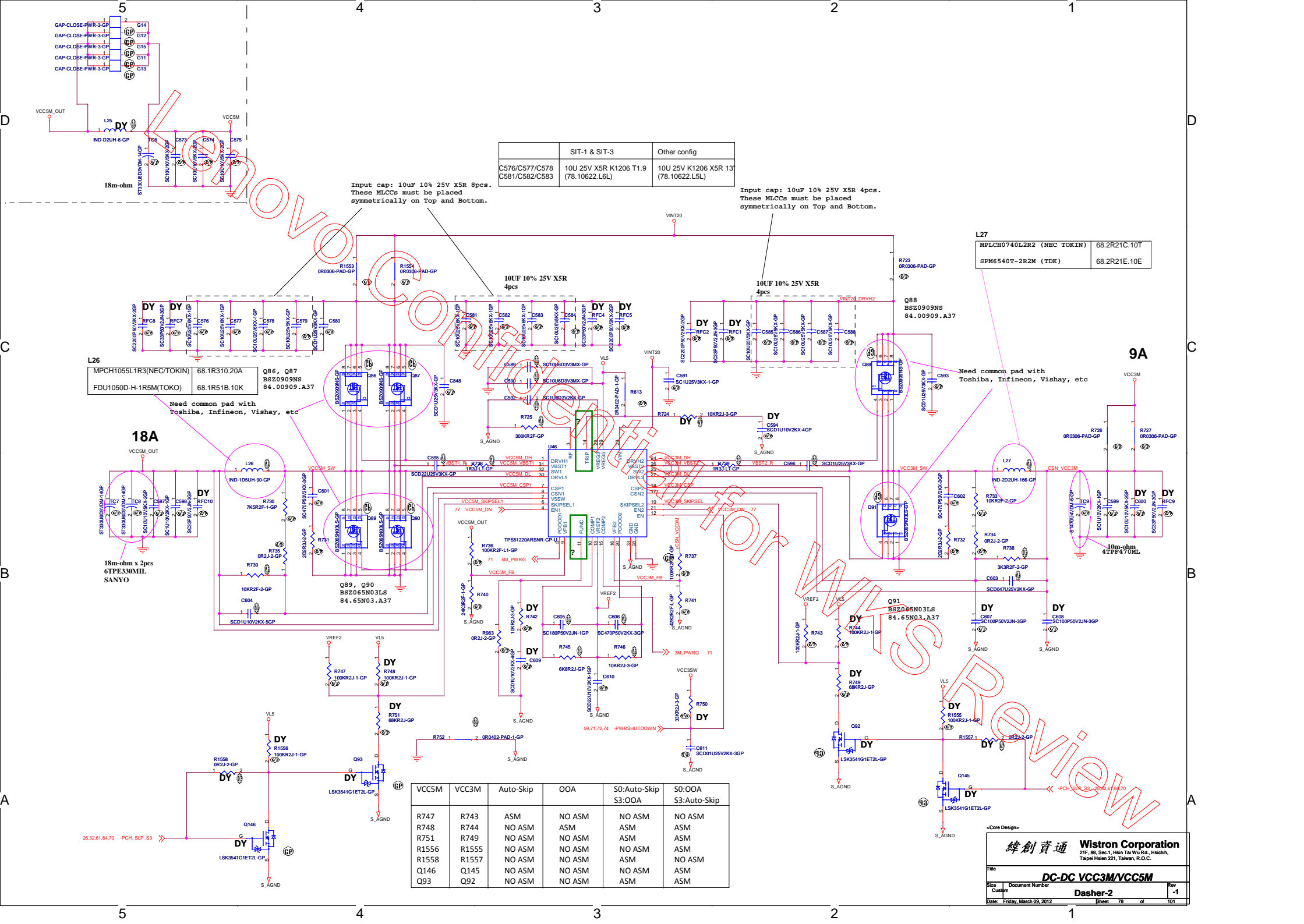


AOAC Duplicity	YES YES	YES NO	NO YES	NO NO
D20 R143	ASM DY	ASM DY	ASM DY	DY ASM

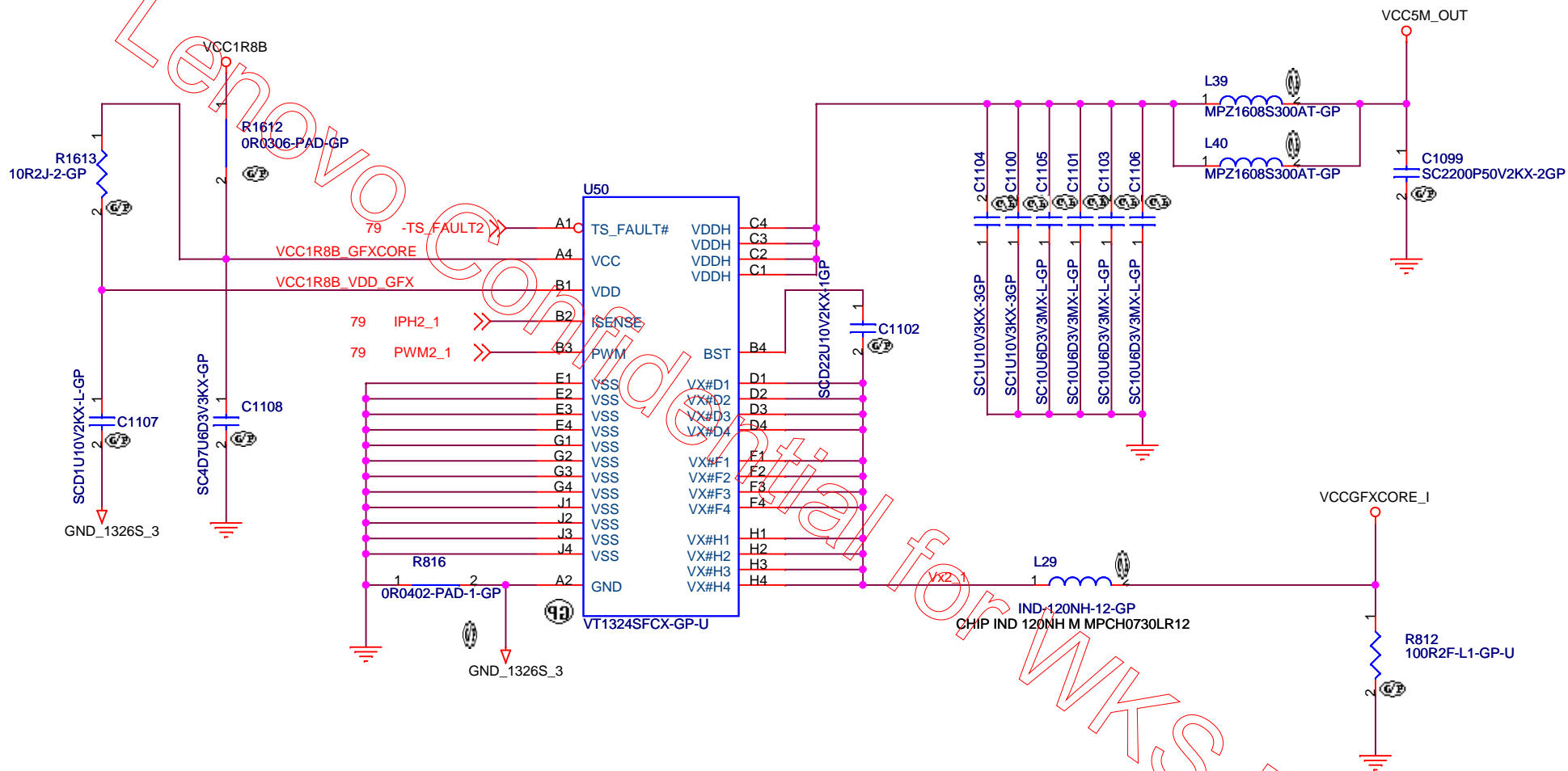
Logic

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Title	
POWER SEQUENCE	
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Title
VCCGFXCORE

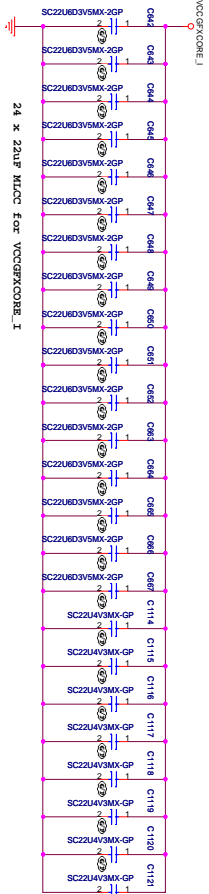
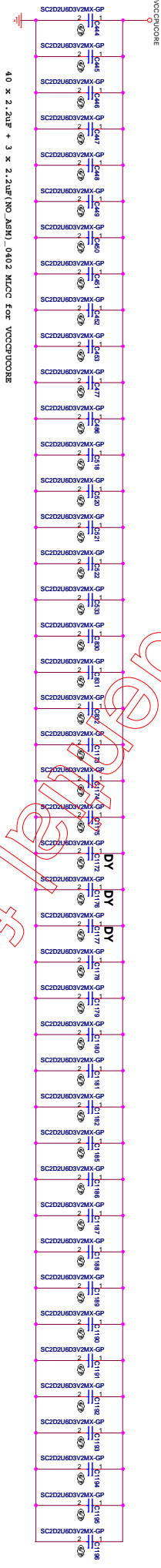
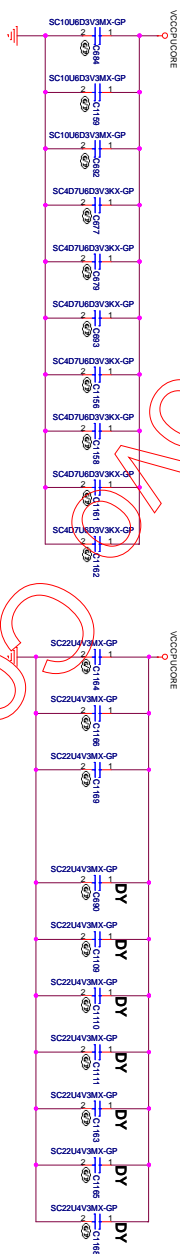
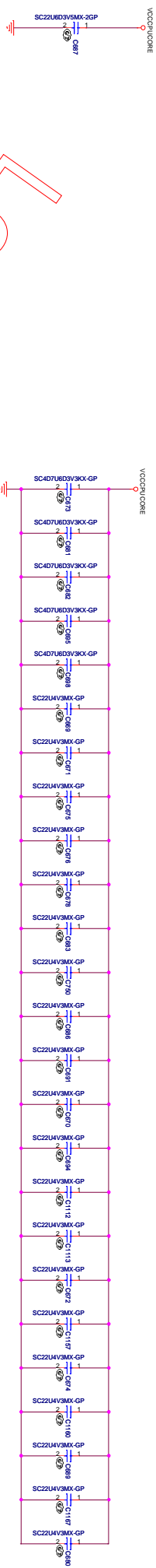
Size
A4 Document Number

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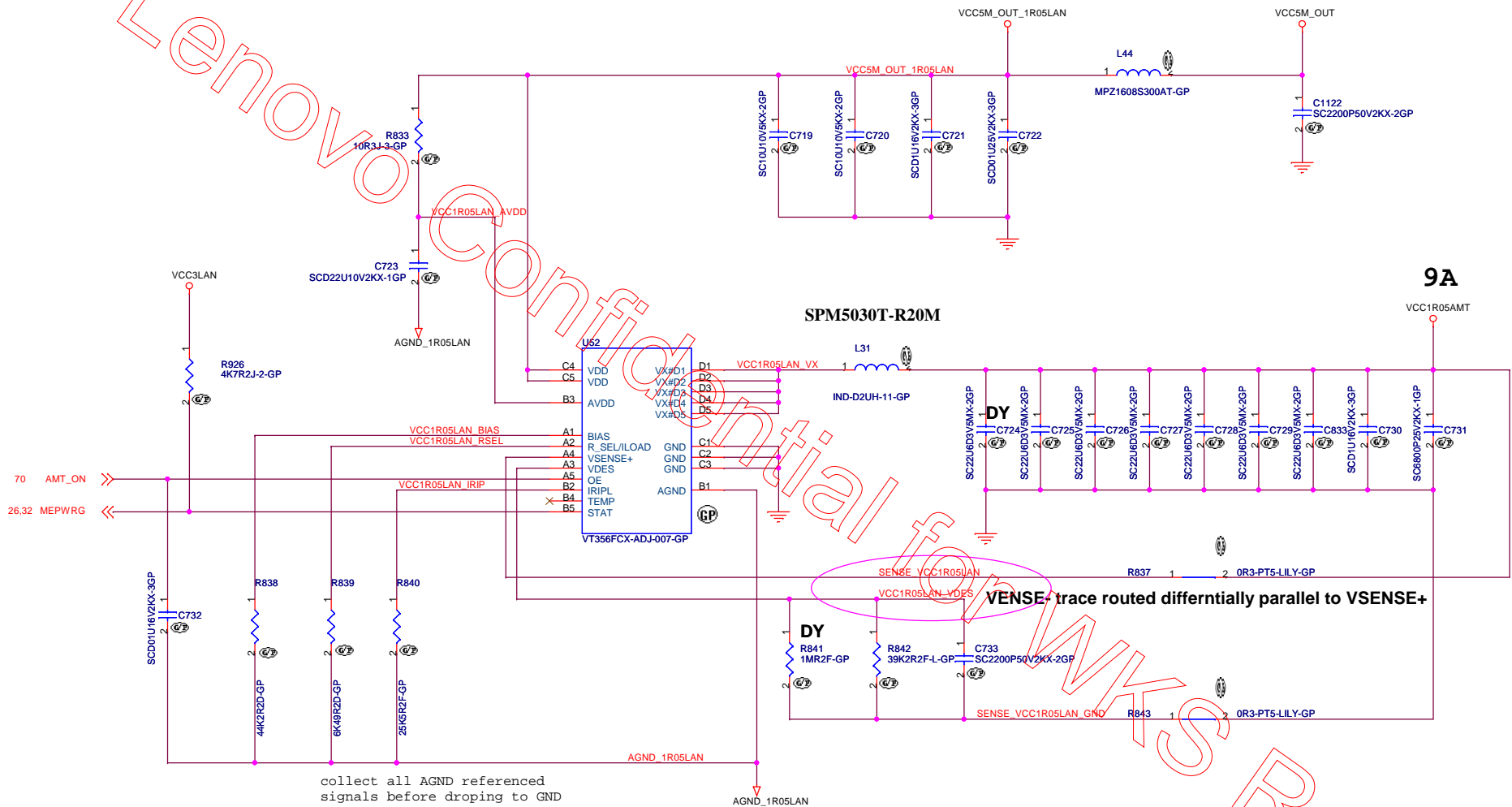


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Title

DC-DC VCC1R05AMT

Size

A3 Document Number

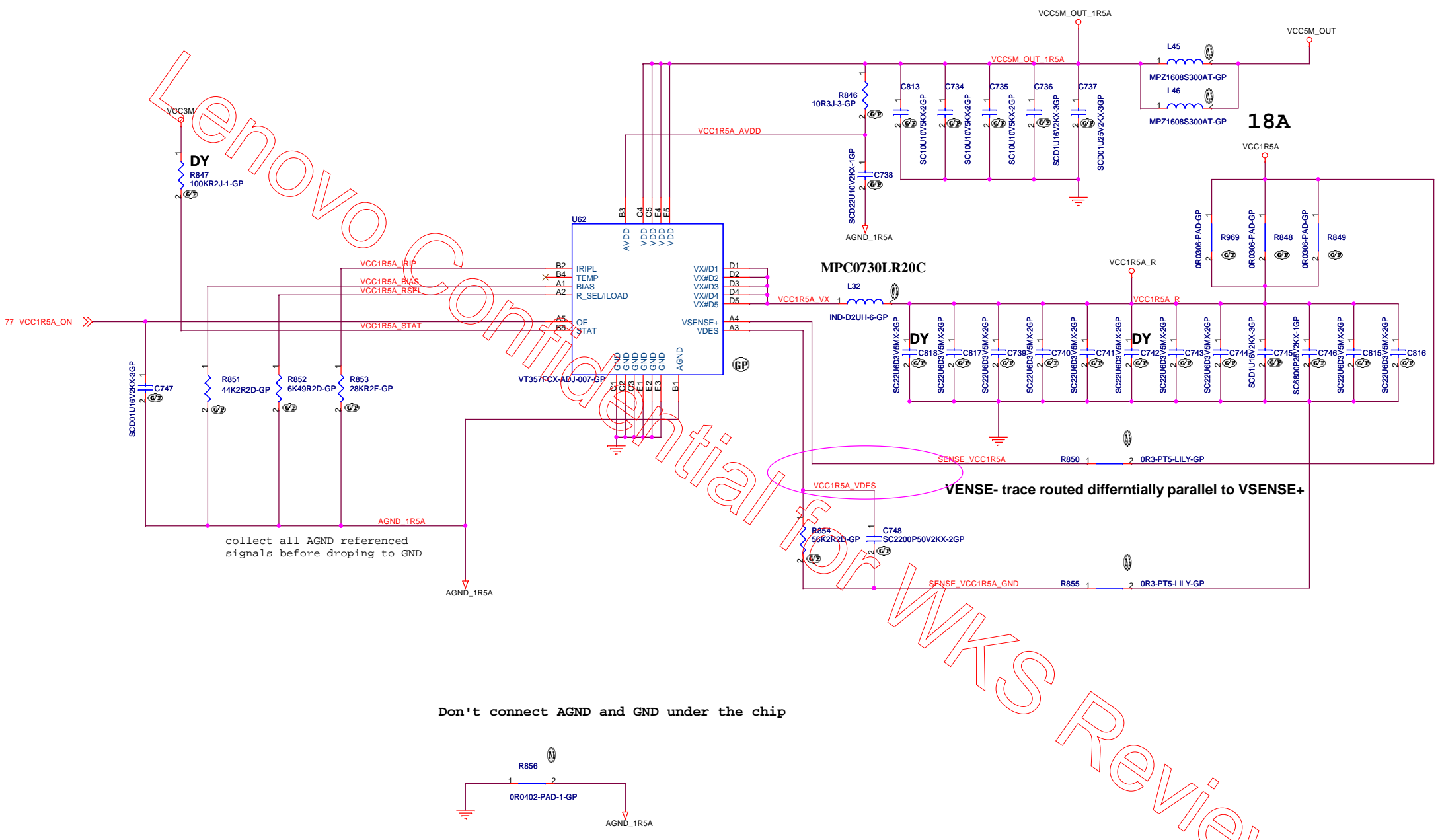
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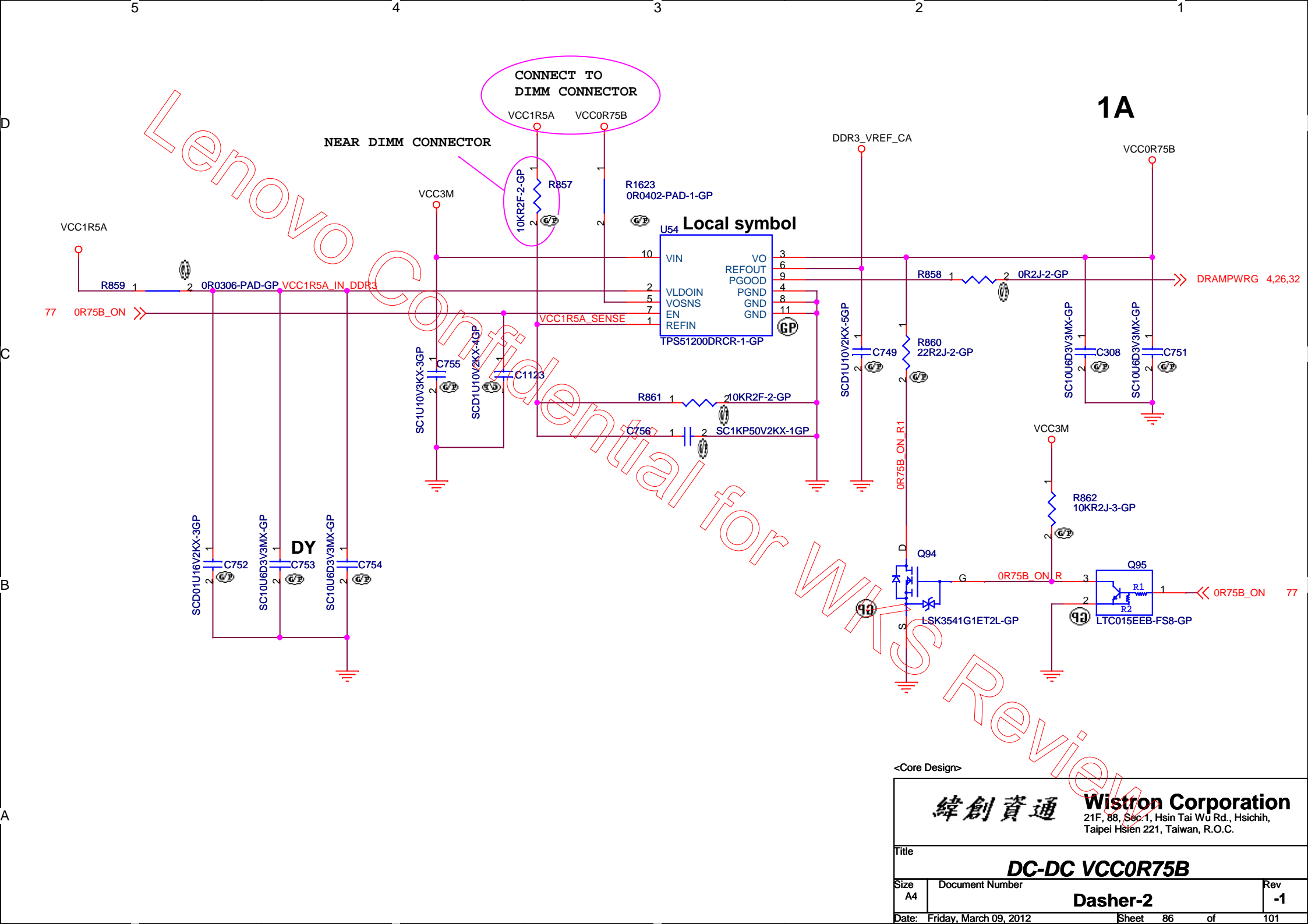
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C

B

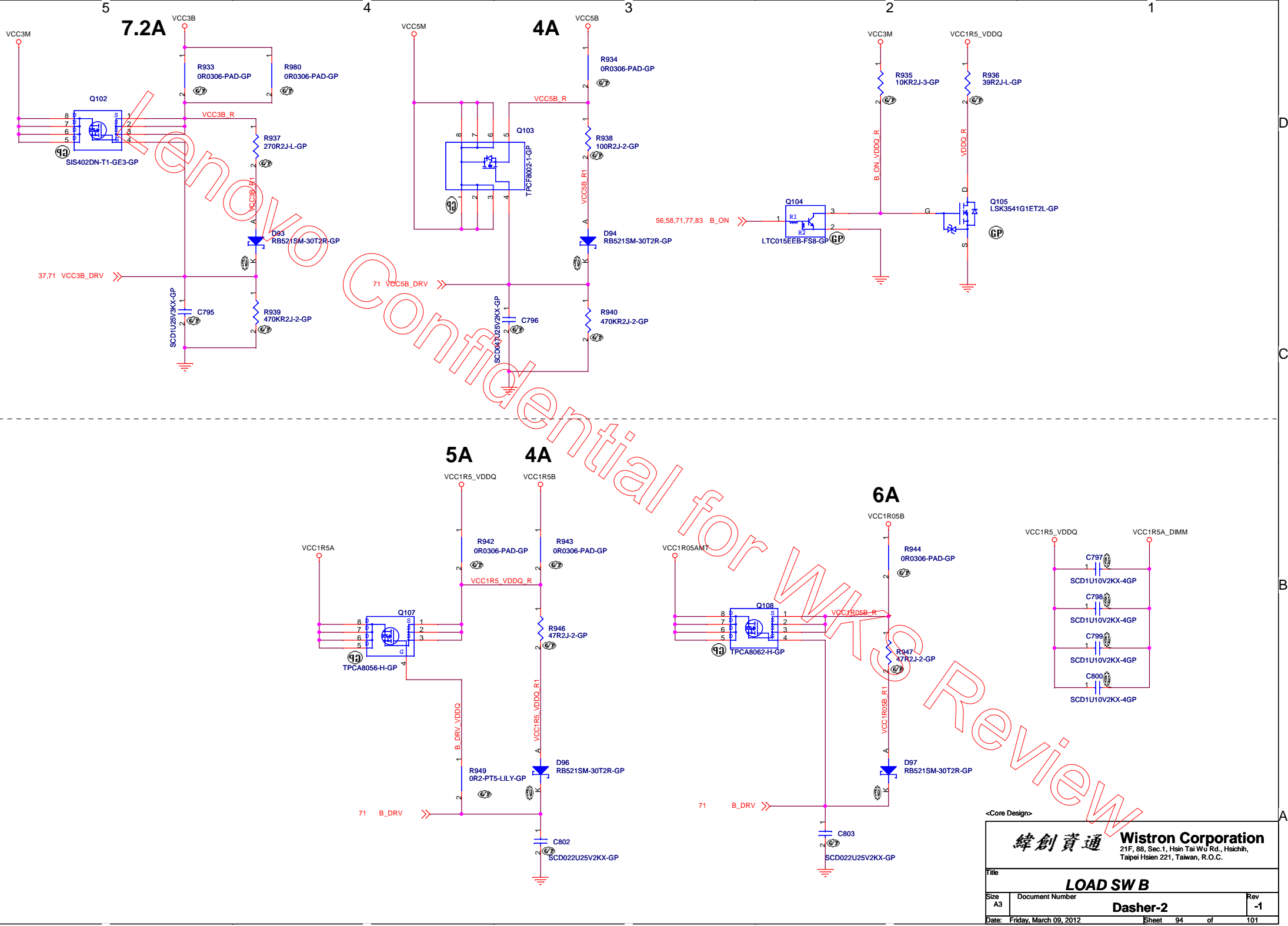
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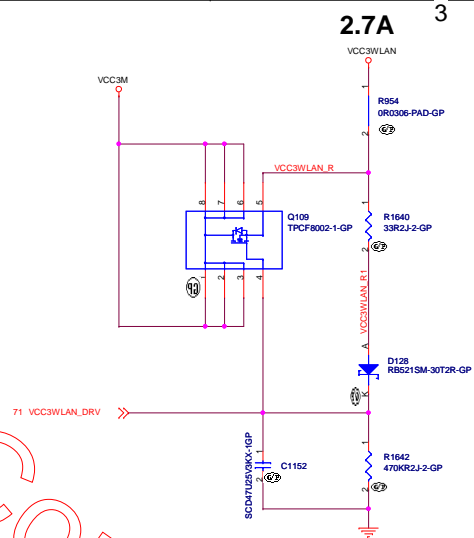
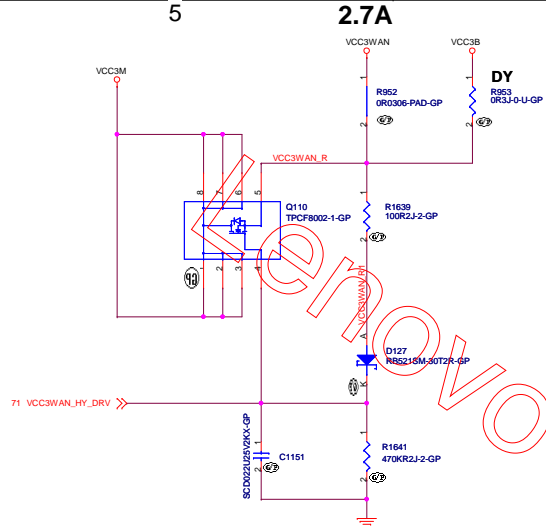
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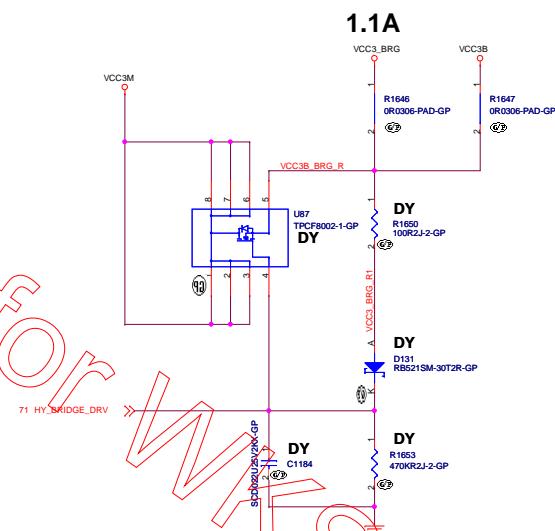
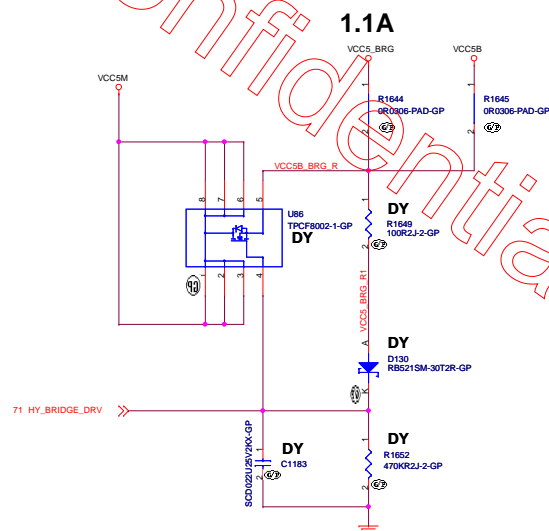
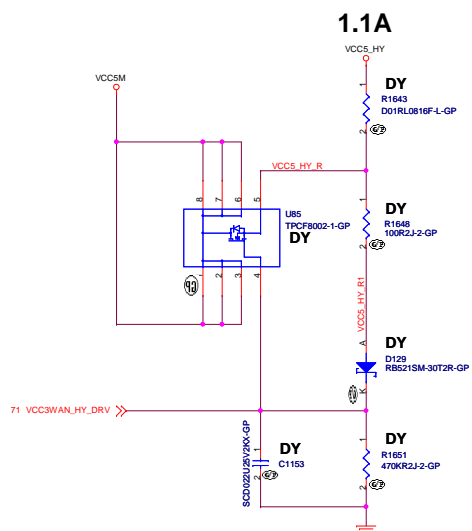
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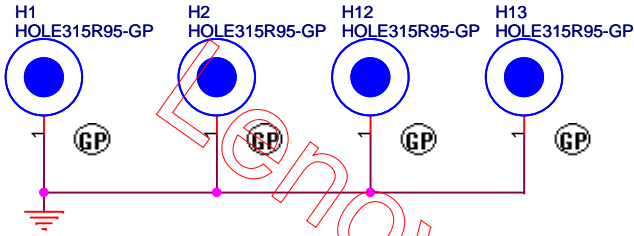


AOAC Duplicity	YES YES	YES No	No YES	No No
Q110	ASM	ASM	ASM	DY
D127	ASM	ASM	ASM	DY
R1639	ASM	ASM	ASM	DY
R1641	ASM	ASM	ASM	DY
C1151	ASM	ASM	ASM	DY
R953	DY	DY	DY	ASM

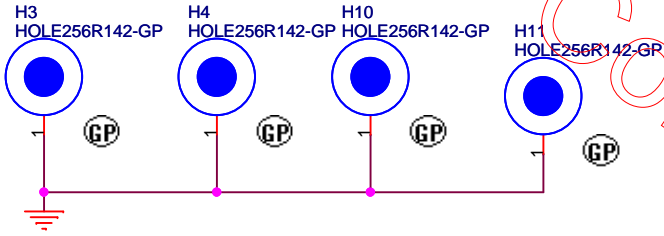
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Logic



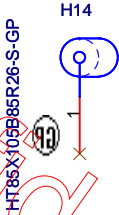
ZZ.00PAD.911



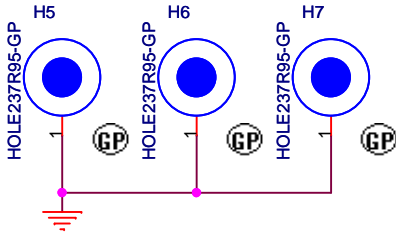
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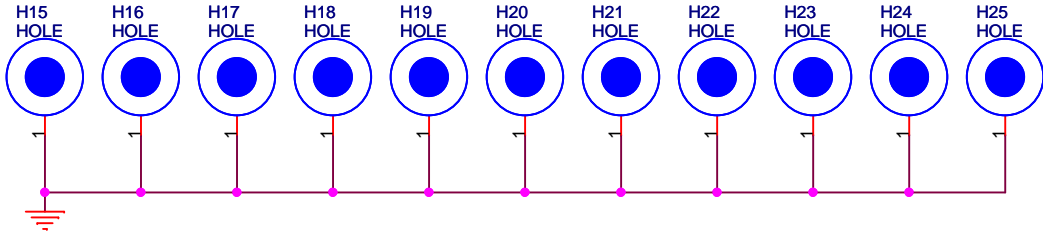
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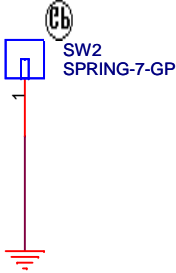
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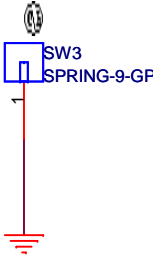
ZZ.0HOLE.XXX



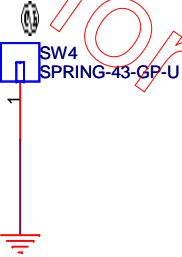
34.49U26.001
GND pad for docking connector



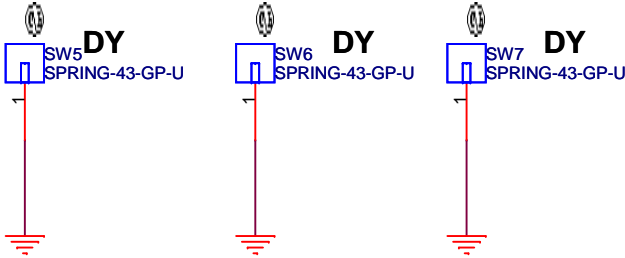
34.49U23.001
GND pad for docking connector



34.15J03.001
spring for EMI



34.15J03.001
spring for RF (SW5~SW7)



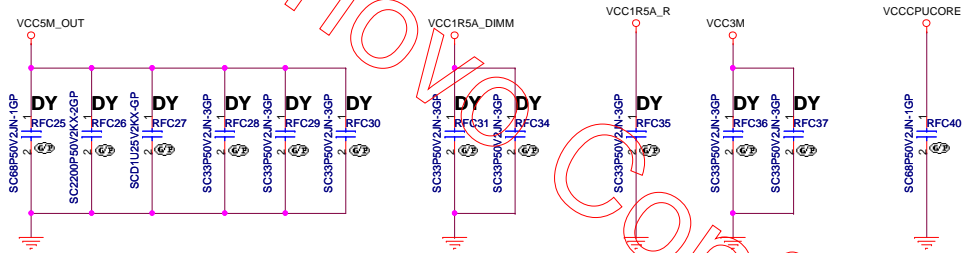
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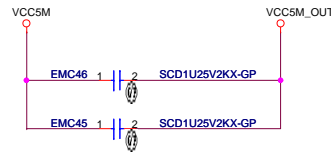
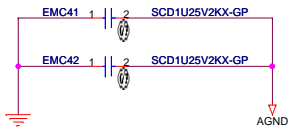
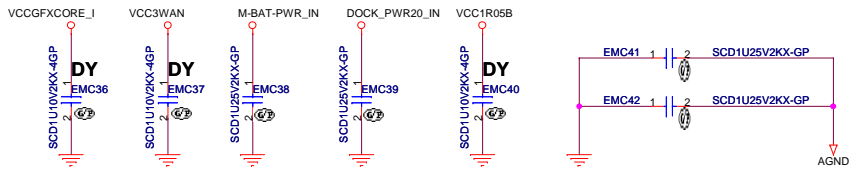
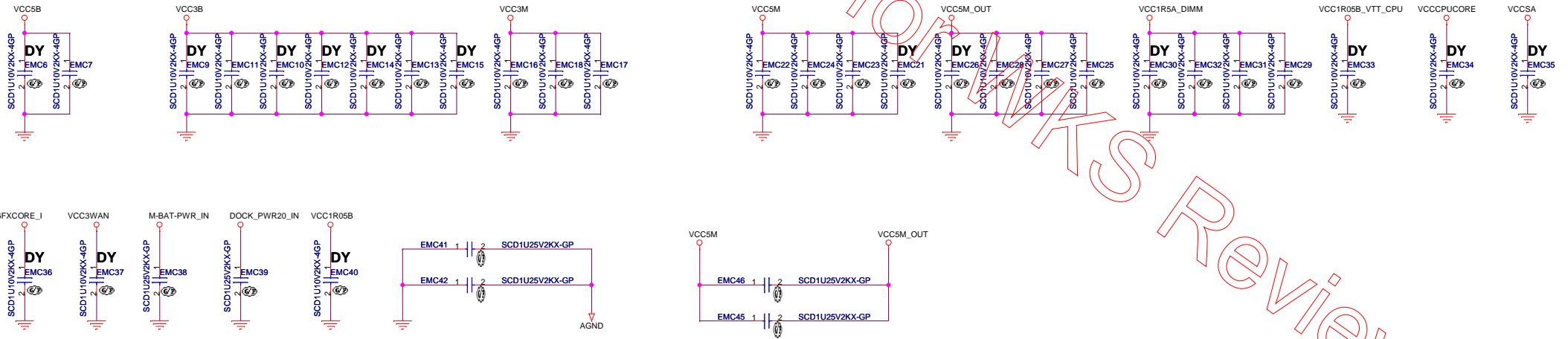
Title		
HOLES/GND/PADS		
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RF decoupling caps

named as RFCxxx



Long power trace EMI decoupling caps



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Title
EMI DECOUPLING

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		SV		ULV	
Master IC		U48	VT1318M	VT1318M	
# of slave for CPU Slave for CPU	U47		VT1324S	VT1324S	
	U49		VT1324S	no stuff	
	L28		BFW10040	no stuff	
	L14		no stuff	MPCH0730LR12	
# of slave for GPU Slave for GPU Inductor for GPU	U50		VT1324S	VT1324S	
	L29		MPCH0730LR12	MPCH0730LR12	

		SV		ULV		
R_SEL[0]	pin 38	R1574	715	0.5%	280	1.0%
R_SEL[1]	pin 37	R1575	887	0.5%	825	0.5%
R_SEL[2]	pin 36	R1576	0	5.0%	0	5.0%
R_SEL[3]	pin 35	R1577	196	0.5%	196	0.5%
R_SEL[4]	pin 44	R1571	825	0.5%	825	0.5%
R_SEL[5]	pin 32	R1579	475	1.0%	402	0.5%
R_SEL[6]	pin 48	R1567	21.5	1.0%	21.5	1.0%
R_REF	pin 34	R1578	20K	0.5%	20K	0.5%
ROSC	pin 39	R1572	75K	1.0%	61.9K	1.0%

			SV			ULV		
LL_R1_CPU	pin 15	- pin 16	R1599	10K	0.5%	10K	0.5%	
LL_R2_CPU	pin 16	- pin 17	R1600	20K	0.5%	7.5K	0.5%	
	pin 16	- pin 17	R1601	787	1.0%	453	1.0%	
LL_C1_CPU	pin 15	- pin 16	C1086	56pF		33pF		
LL_C2_CPU	pin 16	- pin 17	C1087	22pF		22pF		
LL_READ_CPU	pin 15	- pin 16	R1595	30.1K	1.0%	15K	1.0%	
LL_CLEAD_CPU	pin 15	- pin 16	C1091	220pF		680pF		
LL_RLAG_CPU	pin 16	- pin 17	R1596	no stuff		no stuff		
LL_CLAG_CPU	pin 16	- pin 17	C1092	no stuff		no stuff		
RDES_CPU	pin 17	- pin 18	R1592	845	0.5%	487	0.5%	
RINT_CPU	pin 18	- pin 19	R1593	1.3K	1.0%	2.74K	1.0%	
CINT_CPU	pin 18	- pin 19	C1088	4700PF		3300pF		
RP11	IPH1_1	- pin 18	R1598	499	1.0%	750	1.0%	
RP12	IPH1_2	- pin 18	R1594	499	1.0%	no stuff	1.0%	
IPHF11_R	pin 11		R1582	1.96K	1.0%	1.96K	1.0%	
IPHF11_C	pin 11		C1076	10pF		no stuff	1.0%	
IPHF12_R	pin 10		R1581	1.96K	1.0%	no stuff	1.0%	
IPHF12_C	pin 10		C1075	10pF		no stuff	1.0%	
R_MRAMP1	pin 12		R1584	15.8K	1.0%	13K	1.0%	
R_MRAMP1_PU	pin 12		R1587	60.4K	1.0%	43.2K	1.0%	
R_PWM2	Pin 6		R4	no stuff		0	5.0%	
LL_R1_GPU	pin 24	- pin 23	R1609	10K	0.5%	10K	0.5%	
LL_R2_GPU	pin 23	- pin 22	R1610	7.5K	0.5%	7.87K	0.5%	
	pin 23	- pin 22	R1611	237	1.0%	0	5.0%	
LL_C1_GPU	pin 24	- pin 23	C1094	22pF		22pF		
LL_C2_GPU	pin 23	- pin 22	C1095	22pF		22pF		
LL_READ_GPU	pin 24	- pin 23	R1606	30K	1.0%	30K	1.0%	
LL_CLEAD_GPU	pin 24	- pin 23	C1097	1200pF		1000pF		
LL_RLAG_GPU	pin 23	- pin 22	R1607	no stuff		no stuff		
LL_CLAG_GPU	pin 23	- pin 22	C1098	no stuff		no stuff		
RDES_GPU	pin 22	- pin 21	R1604	665	0.5%	665	0.5%	
RINT_GPU	pin 21	- pin 20	R1605	3.24K	1.0%	3.24K	1.0%	
CINT_GPU	pin 21	- pin 20	C1096	10nF		10nF		
RP21	IPH2_1	- pin 21	R1608	1K	1.0%	1K	1.0%	
IPHF21_R	pin 28		R1580	1.96K	1.0%	1.96K	1.0%	
IPHF21_C	pin 28		C1077	no stuff		no stuff	1.0%	
R_MRAMP2	pin 27		R1586	15.4K	1.0%	15.4K	1.0%	
R_MRAMP2_PU	pin 27		R1590	56.2K	1.0%	56.2K	1.0%	

		SV		ULV	
		C1090	4.7uF	no stuff	
		R1589	10 1.0%	no stuff	
		C1089	0.1uF	no stuff	
		C1082	0.22uF	no stuff	
		C1083	1uF	no stuff	
		C1084	1uF	no stuff	
		C1079	10uF	no stuff	
		C1081	10uF	no stuff	
		C1085	10uF	no stuff	
		L50	MP21608S300A	no stuff	
		L51	MP21608S300A	no stuff	
		C1078	2200pF	no stuff	

Vcore Coutput

		SV		ULV	
C687	22uF	0805	22uF	0805	
C669	22uF	0603	22uF	0603	
C671	22uF	0603	22uF	0603	
C673	4.7uF	0603	22uF	0603	
C675	22uF	0603	22uF	0603	
C676	22uF	0603	22uF	0603	
C678	22uF	0603	22uF	0603	
C695	4.7uF	0603	22uF	0603	
C681	4.7uF	0603	22uF	0603	
C682	4.7uF	0603	22uF	0603	
C683	22uF	0603	22uF	0603	
C750	22uF	0603	22uF	0603	
C686	22uF	0603	22uF	0603	
C691	22uF	0603	22uF	0603	
C670	22uF	0603	22uF	0603	
C694	22uF	0603	22uF	0603	
C698	4.7uF	0603	22uF	0603	
C1112	22uF	0603	22uF	0603	
C1113	22uF	0603	22uF	0603	
C672	22uF	0603	22uF	0603	
C1157	22uF	0603	22uF	0603	
C674	22uF	0603	22uF	0603	
C1160	22uF	0603	22uF	0603	
C689	22uF	0603	22uF	0603	
C1167	22uF	0603	22uF	0603	
C680	22uF	0603	22uF	0603	
C679	4.7uF	0603	10uF	0603	
C677	4.7uF	0603	10uF	0603	
C1156	4.7uF	0603	10uF	0603	
C684	10uF	0603	10uF	0603	
C693	4.7uF	0603	10uF	0603	
C1159	10uF	0603	10uF	0603	
C692	10uF	0603	10uF	0603	
C1158	4.7uF	0603	10uF	0603	
C1161	4.7uF	0603	10uF	0603	
C1162	4.7uF	0603	10uF	0603	
C690	N/A	0603	N/A	0603	
C1109	N/A	0603	N/A	0603	
C1110	N/A	0603	N/A	0603	
C1111	N/A	0603	N/A	0603	
C1163	N/A	0603	N/A	0603	
C1164	22uF	0603	N/A	0603	
C1165	N/A	0603	N/A	0603	
C1166	22uF	0603	N/A	0603	
C1168	N/A	0603	N/A	0603	
C1169	22uF	0603	N/A	0603	
C444	2.2uF	0402	2.2uF	0402	
C445	2.2uF	0402	2.2uF	0402	
C446	2.2uF	0402	2.2uF	0402	
C447	2.2uF	0402	2.2uF	0402	
C448	2.2uF	0402	2.2uF	0402	
C449	2.2uF	0402	2.2uF	0402	
C450	2.2uF	0402	N/A	0402	
C451	2.2uF	0402	2.2uF	0402	
C452	2.2uF	0402	2.2uF	0402	
C453	2.2uF	0402	2.2uF	0402	

		SV		ULV	
C477	2.2uF	0402	2.2uF	0402	
C486	2.2uF	0402	2.2uF	0402	
C518	2.2uF	0402	2.2uF	0402	
C520	2.2uF	0402	2.2uF	0402	
C521	2.2uF	0402	2.2uF	0402	
C522	2.2uF	0402	N/A	0402	
C533	2.2uF	0402	2.2uF	0402	
C830	2.2uF	0402	2.2uF	0402	
C831	2.2uF	0402	2.2uF	0402	
C832	2.2uF	0402	2.2uF	0402	
C1172	N/A	0402	N/A	0402	
C1173	2.2uF	0402	N/A	0402	
C1174	2.2uF	0402	N/A	0402	
C1175	2.2uF	0402	N/A	0402	
C1176	N/A	0402	N/A	0402	
C1177	N/A	0402	N/A	0402	
C1178	2.2uF	0402	2.2uF	0402	
C1179	2.2uF	0402	2.2uF	0402	
C1180	2.2uF	0402	2.2uF	0402	
C1181	2.2uF	0402	2.2uF	0402	
C1182	2.2uF	0402	2.2uF	0402	
C1185	2.2uF	0402	2.2uF	0402	
C1186	2.2uF	0402	2.2uF	0402	
C1187	2.2uF	0402	2.2uF	0402	
C1188	2.2uF	0402	2.2uF	0402	
C1189	2.2uF	0402	2.2uF	0402	
C1190	2.2uF	0402	2.2uF	0402	
C1191	2.2uF	0402	2.2uF	0402	
C1192	2.2uF	0402	2.2uF	0402	
C1193	2.2uF	0402	2.2uF	0402	
C1194	2.2uF	0402	2.2uF	0402	
C1195	2.2uF	0402	2.2uF	0402	
C1196	2.2uF	0402	2.2uF	0402	

<Core Design>

緯創資通		Wistron Corporation	
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Title		VT1318M TABLE	
Size	Document Number	Dasher-2	Rev
A2			-1
Date: Tuesday, March 06, 2012		Issue: 100	of 101

Lenovo

Capability												
Config	1	2	3	4	5	6	7	8	9	10	11	12
AOAC	Yes	Yes	Yes	Yes	No	No	No	No	Yes	No	Yes	No
Anti-Theft	Yes	Yes	No	No	Yes	Yes	No	No	Yes	Yes	No	No
External EEPROM	Yes	No	Yes	No	Yes	No	Yes	No	Yes	Yes	Yes	Yes
Duplicity	No	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes
U66	ASM	ASM	DY	DY	DY	DY	DY	DY	ASM	ASM	DY	DY
U67	ASM	ASM	DY	DY	DY	DY	DY	DY	ASM	ASM	DY	DY
C864	ASM	ASM	DY	DY	DY	DY	DY	DY	ASM	ASM	DY	DY
R978	ASM	ASM	DY	DY	DY	DY	DY	DY	ASM	ASM	DY	DY
R929	ASM	ASM	DY	DY	DY	DY	DY	DY	ASM	ASM	DY	DY
R901	ASM	ASM	DY	DY	DY	DY	DY	DY	ASM	ASM	DY	DY
R930	ASM	ASM	DY	DY	DY	DY	DY	DY	ASM	ASM	DY	DY
R1462	ASM	ASM	DY	DY	DY	DY	DY	DY	ASM	ASM	DY	DY
Q14	ASM	DY	DY	DY	DY	DY	DY	DY	ASM	ASM	DY	DY
Q48	ASM	DY	ASM	DY	ASM	DY	ASM	DY	ASM	ASM	ASM	ASM
R624	ASM	DY	ASM	DY	ASM	DY	ASM	DY	ASM	ASM	ASM	ASM
R536	DY	DY	DY	DY	ASM	ASM	DY	DY	DY	DY	DY	DY
R539	DY	DY	DY	DY	ASM	ASM	DY	DY	DY	DY	DY	DY
U42	ASM	DY	ASM	DY	ASM	DY	ASM	DY	ASM	ASM	ASM	ASM
Q47	ASM	DY	ASM	DY	ASM	DY	ASM	DY	ASM	ASM	ASM	ASM
R617	ASM	DY	ASM	DY	ASM	DY	ASM	DY	ASM	ASM	ASM	ASM
C524	ASM	DY	ASM	DY	ASM	DY	ASM	DY	ASM	ASM	ASM	ASM
D111	DY	DY	DY	DY	DY	DY	DY	DY	ASM	ASM	DY	DY
R1463	DY	DY	DY	DY	DY	DY	DY	DY	ASM	ASM	ASM	ASM
R1464	DY	DY	DY	DY	DY	DY	DY	DY	ASM	ASM	ASM	ASM
U83	DY	DY	DY	DY	DY	DY	DY	DY	ASM	ASM	ASM	ASM
U84	DY	DY	DY	DY	DY	DY	DY	DY	ASM	ASM	ASM	ASM
C1020	DY	DY	DY	DY	DY	DY	DY	DY	ASM	ASM	ASM	ASM
R1466	DY	DY	DY	DY	DY	DY	DY	DY	ASM	ASM	ASM	ASM
R1468	DY	DY	DY	DY	DY	DY	DY	DY	ASM	ASM	ASM	ASM

Logic

Duplicity	Y	Y	N	N
Battery Authentication	Y	N	Y	N
--> External EEPROM	Y	Y	Y	N

Logic

WKS Review