

AMD KABINI EA/EG-40/50
PX /UMA Schematics Document
AMD FT3 APU
AMD GPU SUN XT M2/64bit

EAEG50 KB UMA

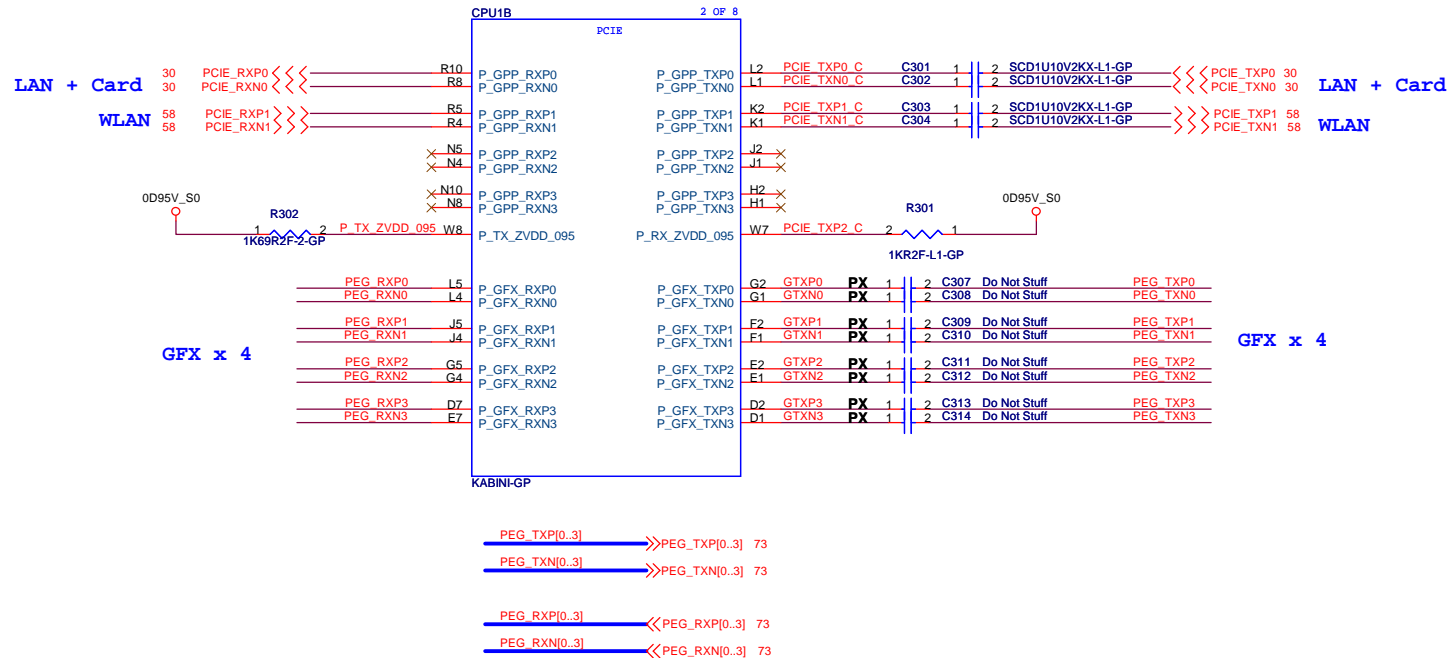
<div>緯創資通</div> <div>Wistron Corporation</div> <div>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.</div>		
Title		
Cover Page		
Size	Document Number	Rev
A4	KABINI	
Date: Wednesday, October 24, 2012		Sheet 1 of 102

EA40-KB	Project code: 91.4ZF01.001
PCB No:	code: 12247-SA
EA50-KB	Project code: 91.4YU01.001
EG50-KB	Project code: 91.4ZK01.001
PCB No:	code: 12253-SA



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Title			
Block Diagram			
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KABINI			
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PCIE Table

0	LAN + Card
1	WLAN
2	NC
3	NC

71.KABIN.B0U IC CPU Kabini 4110 1.5GHZ 15W4C FT3 ES2 BGA

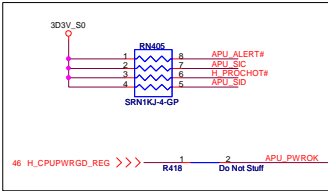
71.KABIN.C0U IC CPU Kabini 5110 2.0GHZ 25W4C FT3 ES2 BGA

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Title	
CPU PCIE	
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20120821 Follow Larne

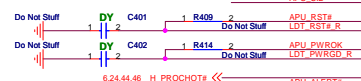
SVC	SVD	OUTPUT VOLTAGE (V)
0	0	1.1
0	1	1.0
1	0	0.9
1	1	0.8



20120820 Follow Larne

APU HDMI

APU EDP

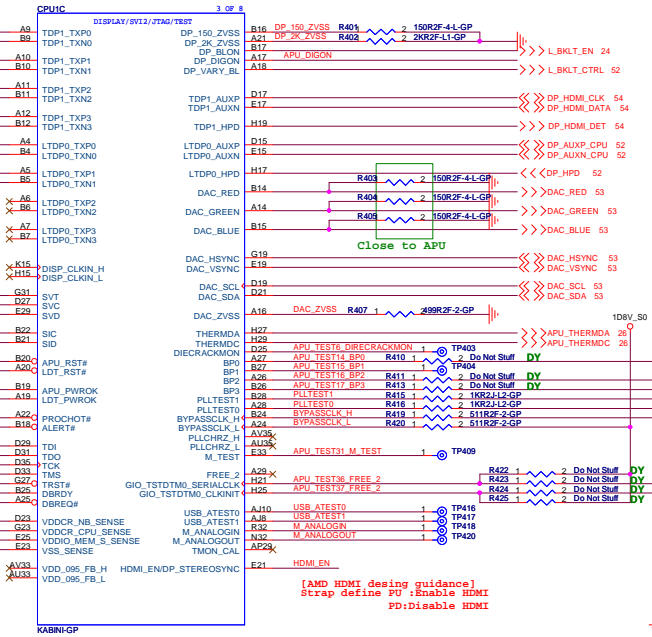
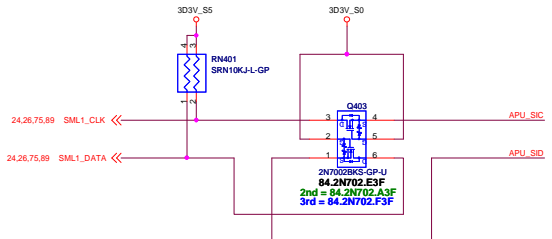


```

46 APU_VDDNB_RUN_FB_H
46 APU_VDD_RUN_FB_H
49 PWR_VDDQ_SENSE_APU
46 APU_VDD_RUN_FB_L

```

APU core control

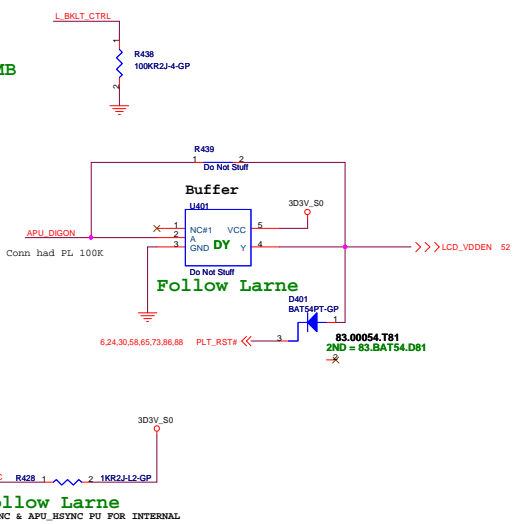
 $\geq \text{APU EDP}$

> APU HDMI SMB

> APU EDP

100%

> APU CR



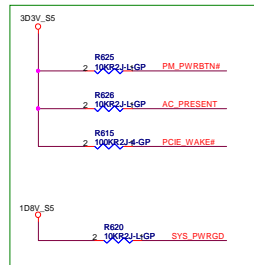
Follow Larne

OP_STEREO_SYNC & APU_HSYNC PU FOR INTERNAL

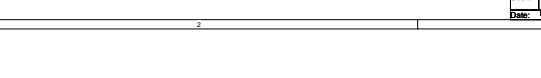
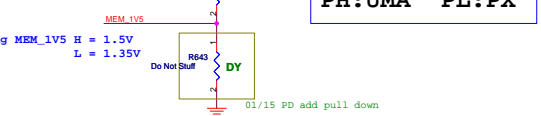
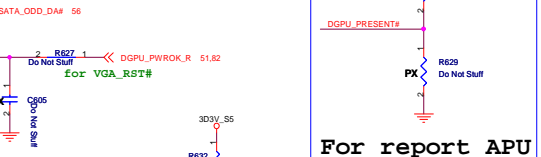
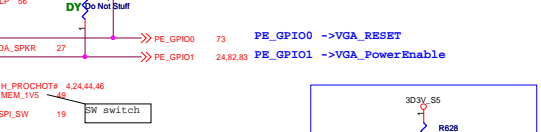
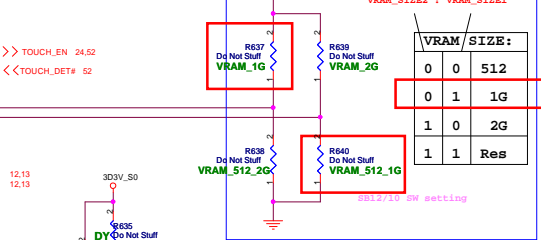
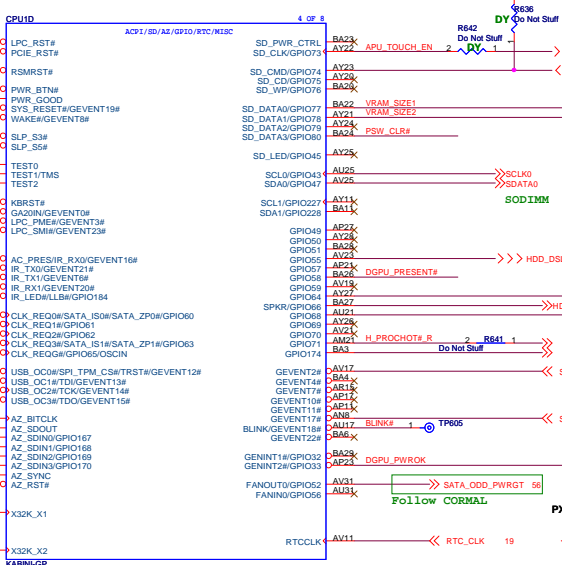
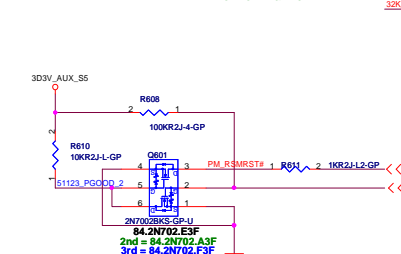
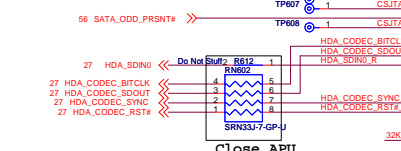
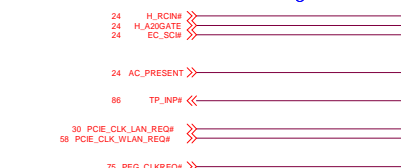
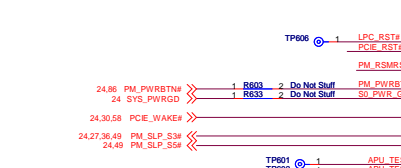
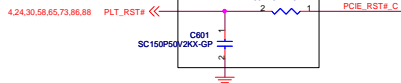
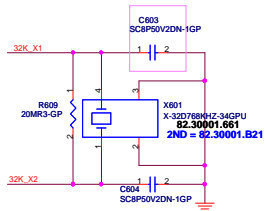
Pass Word Clear

Follow Larne

Follow Larne



SB 13/06 Vendor change to 8P



VRAM_SIZE2 : VRAM_SIZE1	
VRAM	SIZE:
0	0
0	1
1	0
1	1

SUN only 4 bank for 1G

VRAM_SIZE2 : VRAM_SIZE1	
VRAM	SIZE:
0	0
0	1
1	0
1	1

HW setting

VRAM_SIZE2 : VRAM_SIZE1	
VRAM	SIZE:
0	0
0	1
1	0
1	1

PE_GPIO0 ->VGA_RESET

PE_GPIO1 ->VGA_PowerEnable

VRAM_SIZE2 : VRAM_SIZE1	
VRAM	SIZE:
0	0
0	1
1	0
1	1

UMA

DGPU_PRESENT#

PX

Do Not Stuff

For report APU

PH:UMA PL:PX

HW setting MEM_IVS H = 1.5V

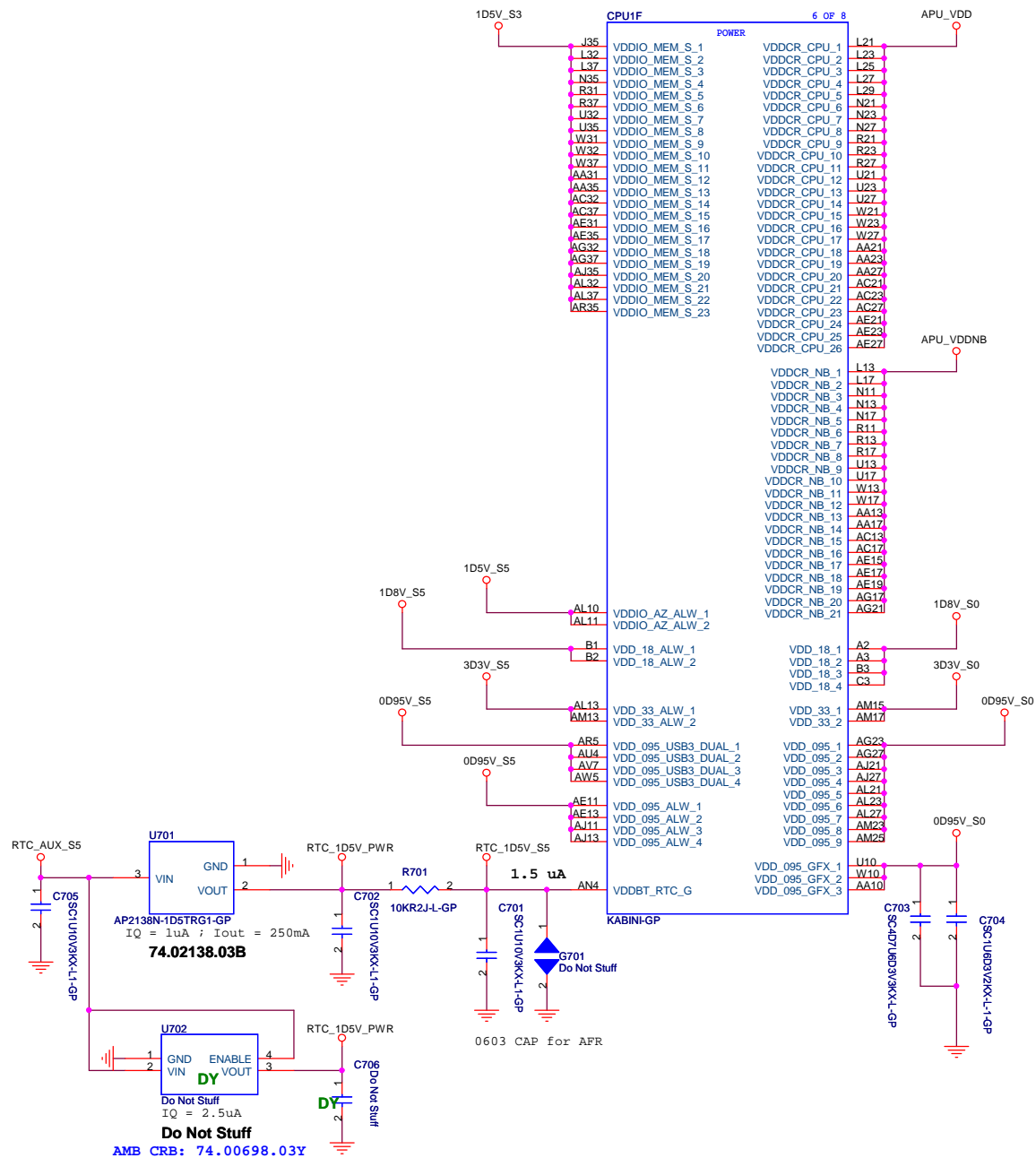
L = 1.35V

01/15 PD add pull down

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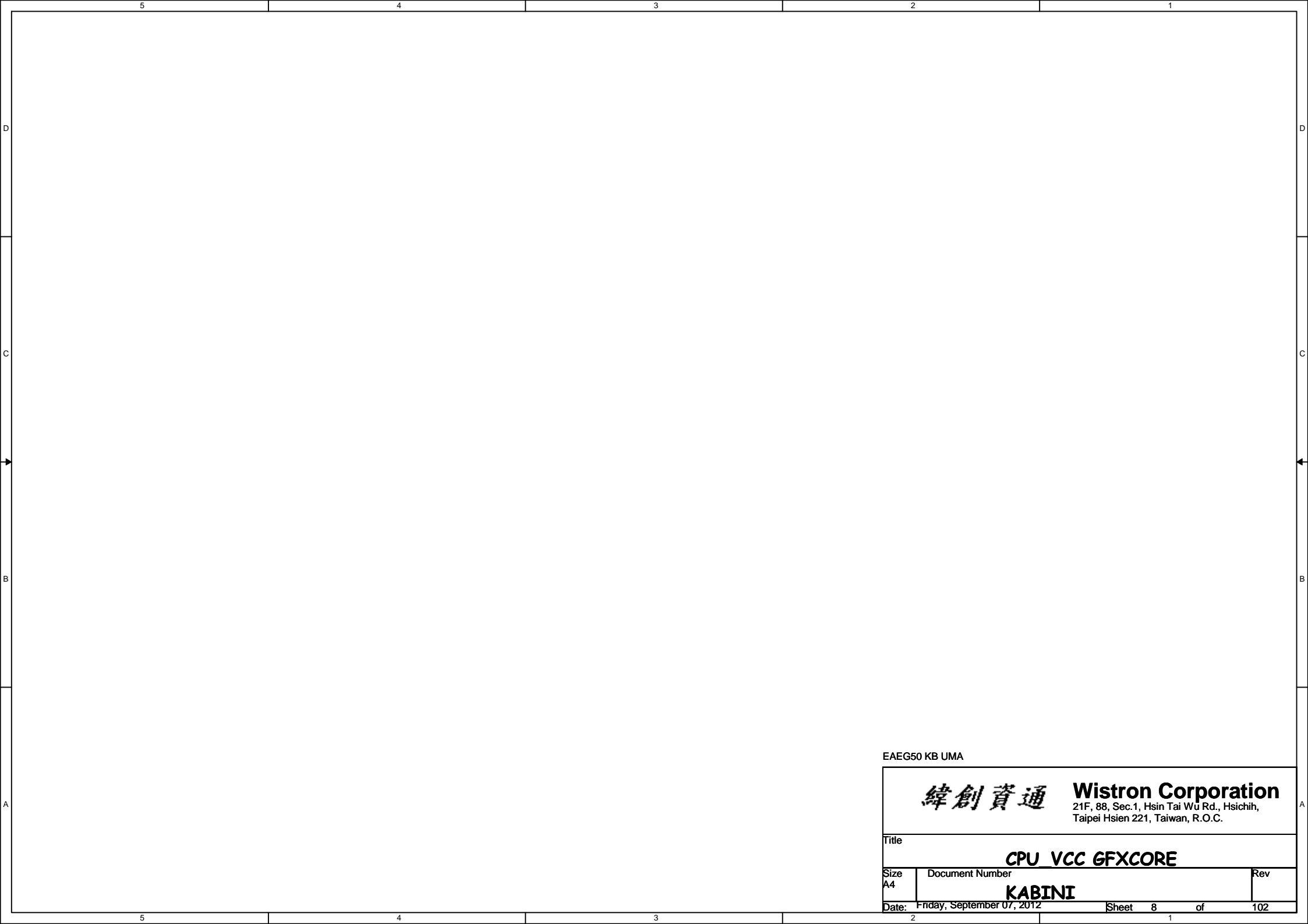
緯創資通 Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsinchu, Taiwan 300, R.O.C.

File	Document Number	Rev
CPU (ACPI/SD/AZ/GPIO/RTC)	KABINI	
Date: Tuesday, February 16, 2015	Sheet 6 of 102	



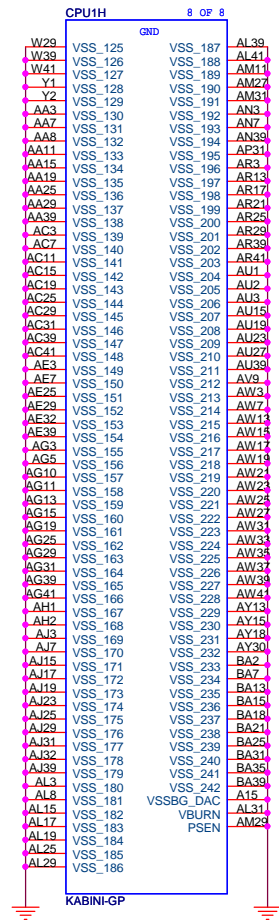
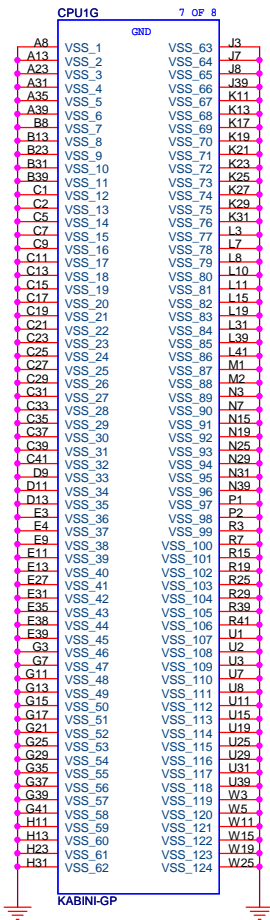
EAEG50 KB UMA

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Title		
CPU VCC CORE		
Size	Document Number	Rev
A3	KABINI	
Date:	Tuesday, January 15, 2013	Sheet 7 of 102



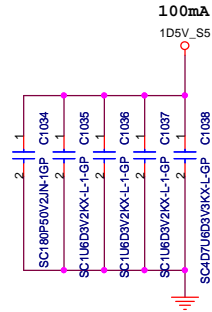
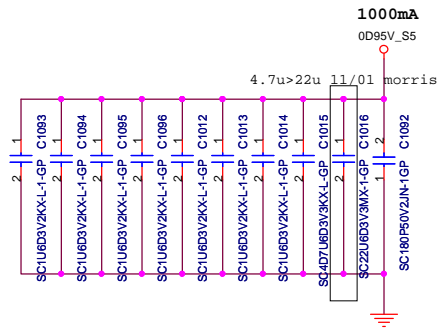
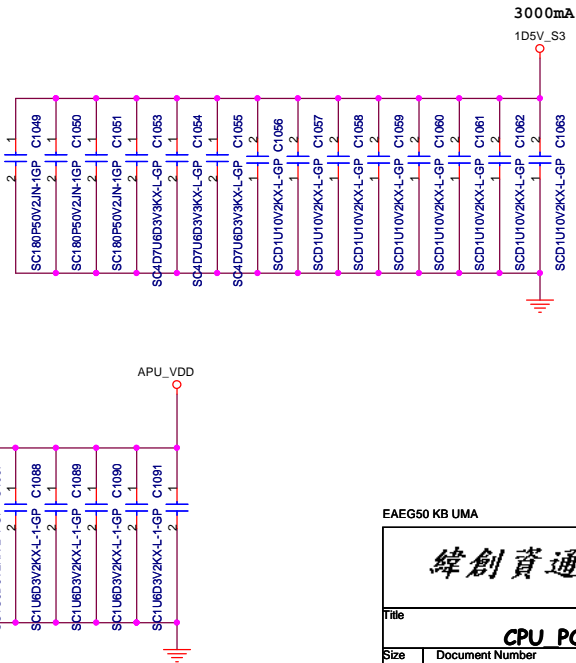
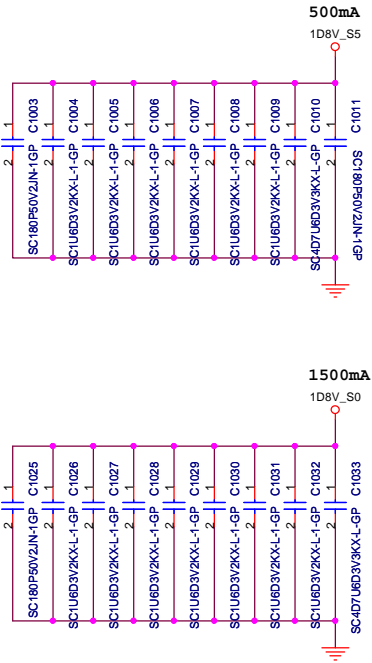
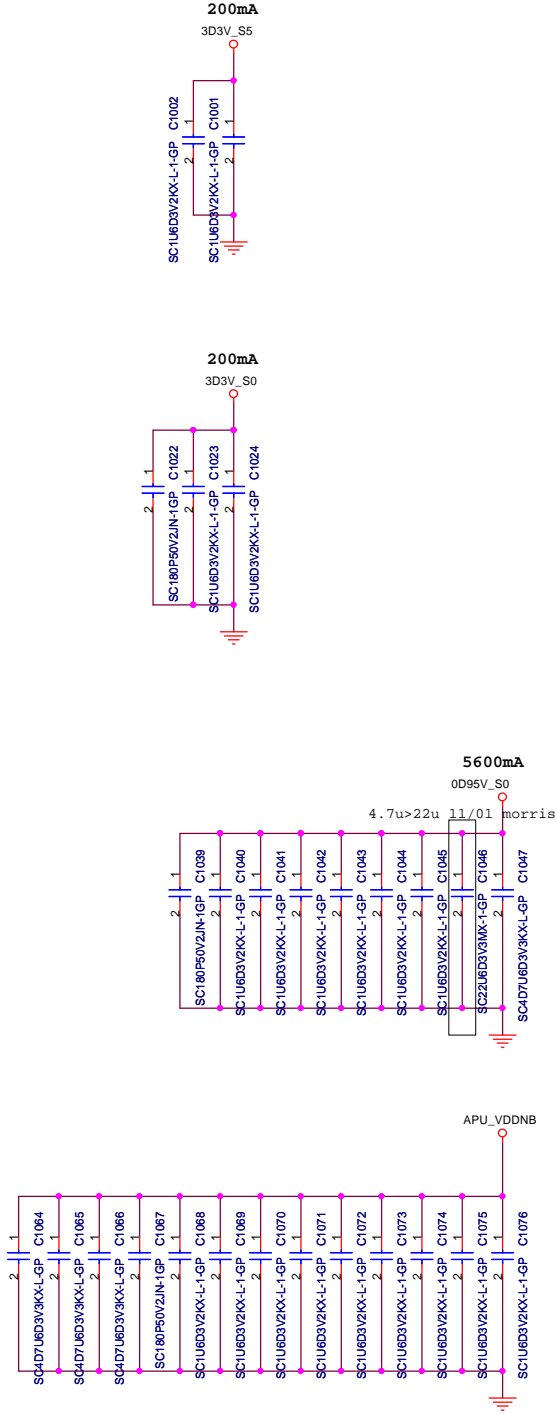
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Title	
CPU VCC GFXCORE	
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緯創資通 Wistron Corporation		
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
Title CPU VSS		
Size A3	Document Number KABINI	Rev
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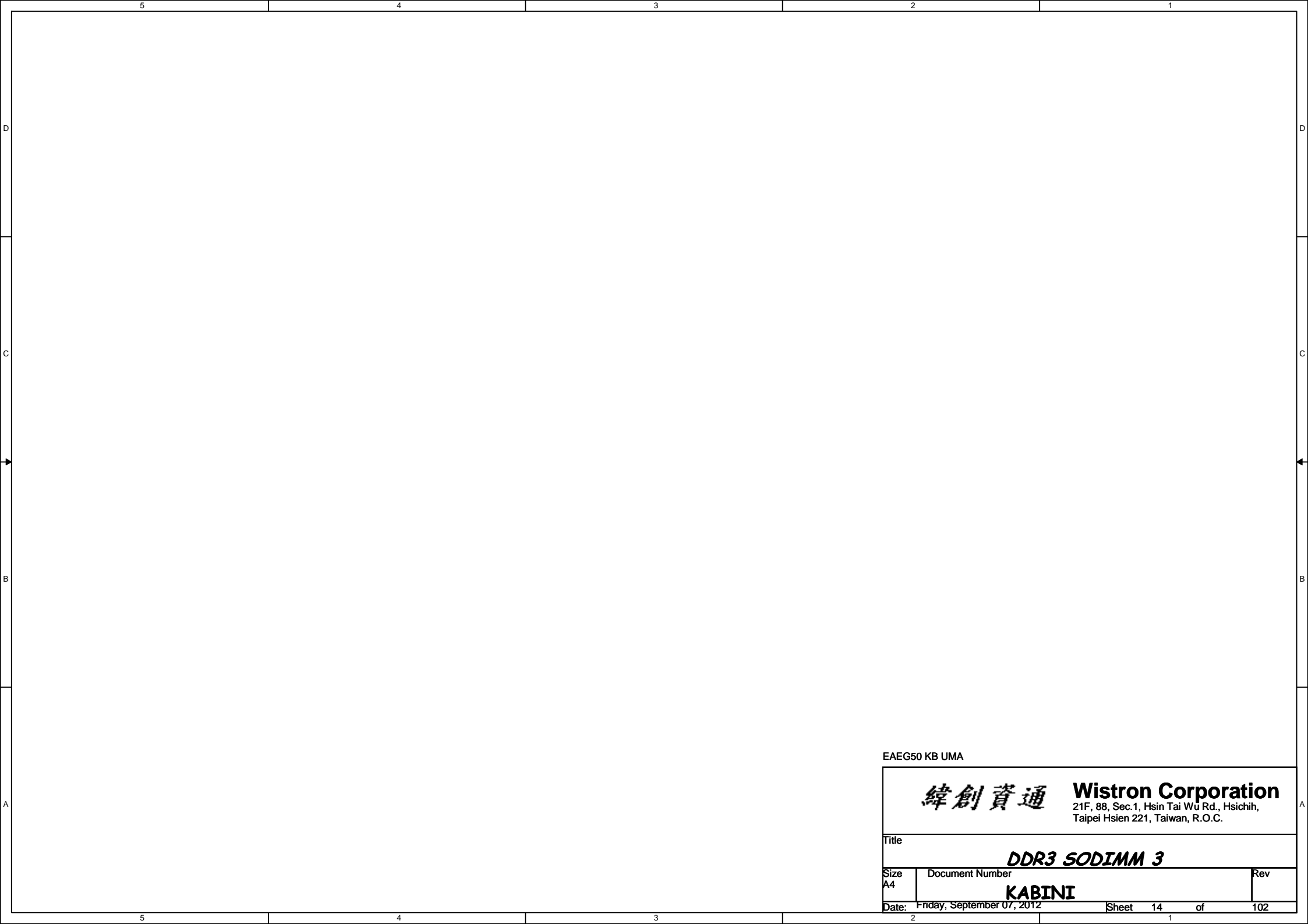
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Title		
CPU POWER CAP1		
Size	Document Number	Rev
A3	KABINI	
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緯創資通 Wistron Corporation

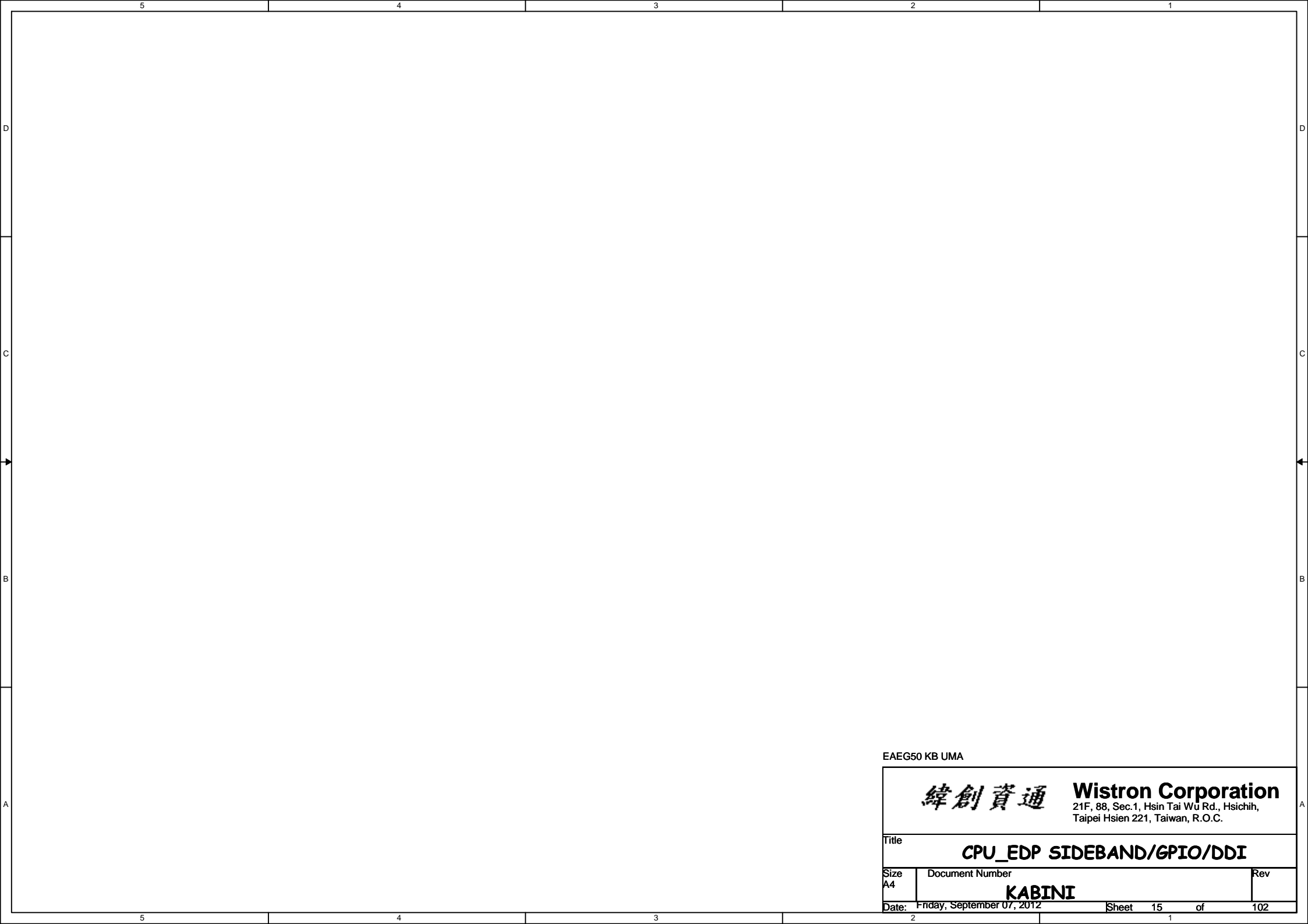
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

5	4	3	2	1
D				
C				
B				
A				
EAEG50 KB UMA				
<div><div>緯創資通</div><div>Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.</div></div>				
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CPU_POWER CAP2				
Size A	Document Number			Rev
KABINI				
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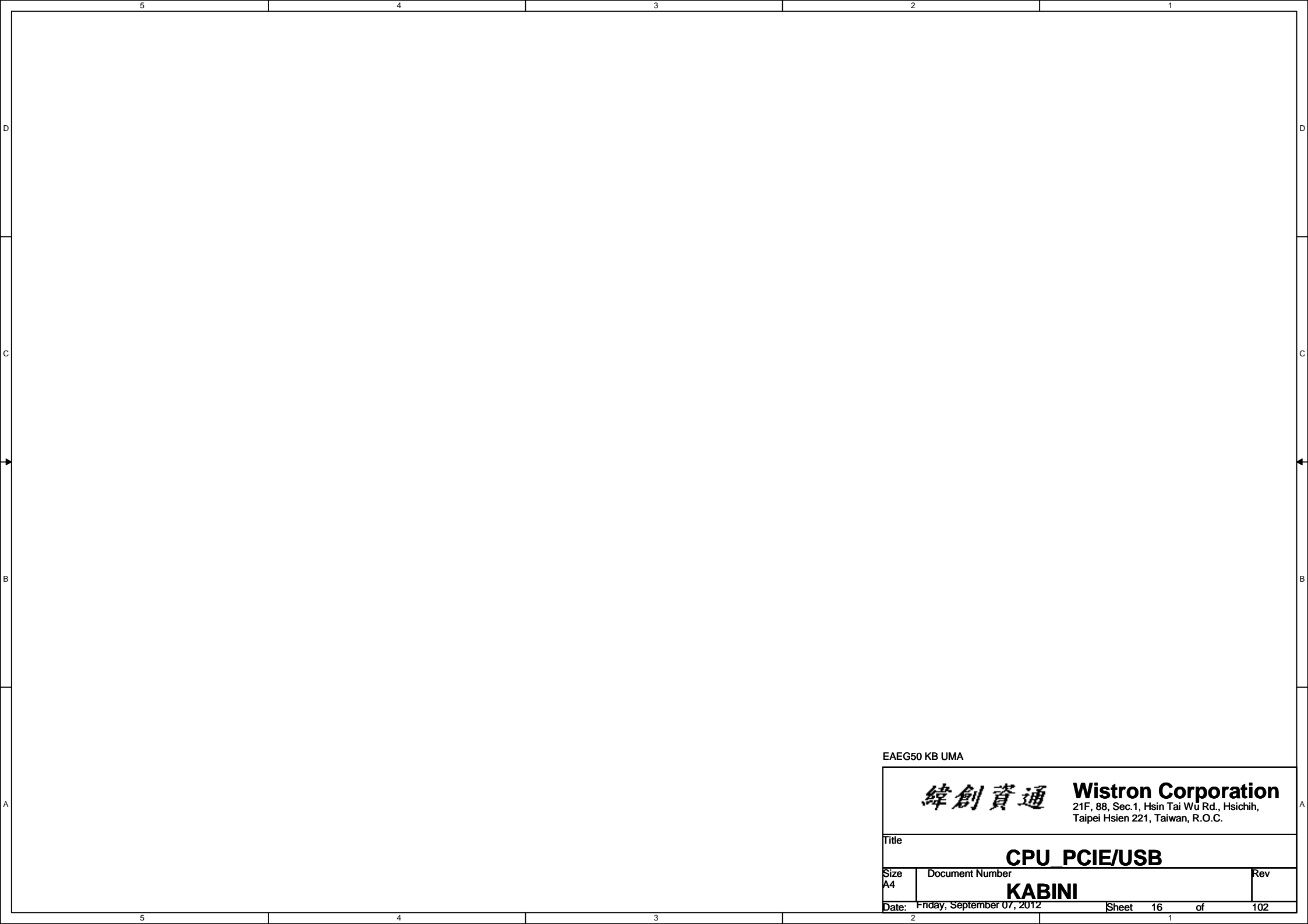
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Title <div>DDR3 SODIMM 3</div>	
Size <div>A4</div>	Document Number <div>KABINI</div>
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TitleCPU_EDP_SIDE BAND/GPIO/DDI		
SizeA4	Document NumberKABINI	Rev
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Title <div>CPU PCIE/USB</div>	
Size <div>A4</div>	Document Number <div>KABINI</div>
Date <div>Friday, September 07, 2012</div>	Rev <div></div>
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D				D
C				C
B				B
A				A
5	4	3	2	1

EAEG50 KB UMA

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Title	
CPU DMI/FDI/PM	
Size A	Document Number KABINI
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D				D
C				C
B				B
A				A
5	4	3	2	1

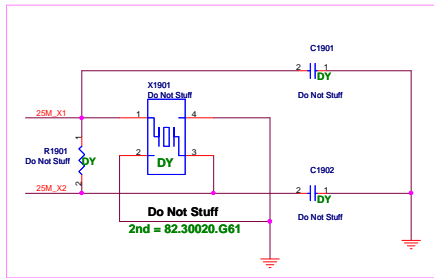
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<div><div>緯創資通</div><div>Wistron Corporation</div><div>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.</div></div>	
Title <div>CPU_PCIE/SMBUS/CLK/CL/SPI</div>	
Size <div>A</div>	Document Number <div>KABINI</div>
Date <div>Friday, September 07, 2012</div>	Rev <div>102</div>
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SATA Table

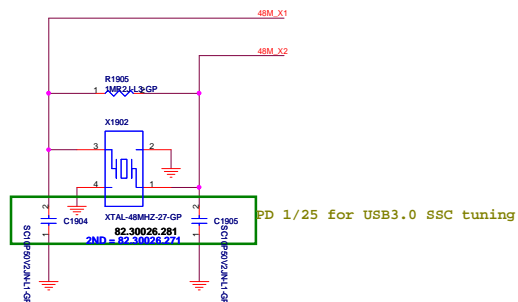
0	HDD
1	ODD

SB 11/27 25M XTAL Reserved for AMD

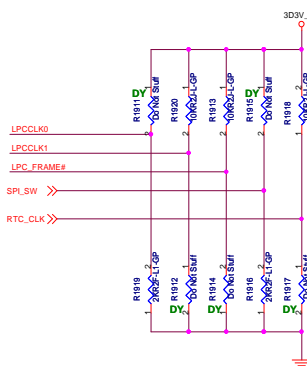


VGA 73 PCIE_CLK_VGA
73 PCIE_CLK_VGA#
Lan + Card Reader 30 PCIE_CLK_LAN
30 PCIE_CLK_LAN#
WLAN 58 PCIE_CLK_WLAN
58 PCIE_CLK_WLAN#

KBC 24.88 CLK_PCL_KBC
DBB/TPM 65.88 CLK_PCL_LPC



SYSTEM STRAPPINGS

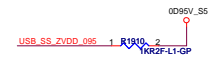


USB Table

Pair	Device
0	USB2.0 Debug (DB Conn)
1	USB2.0 (DB Conn)
2	Touch Panel
3	
4	CCD (CCD Conn)
5	WLAN + BT (Mini PCI-E)
6	
7	
0/8	USB3.0 & USB 2.0 Charger (NB)
1/9	

Xtal Table

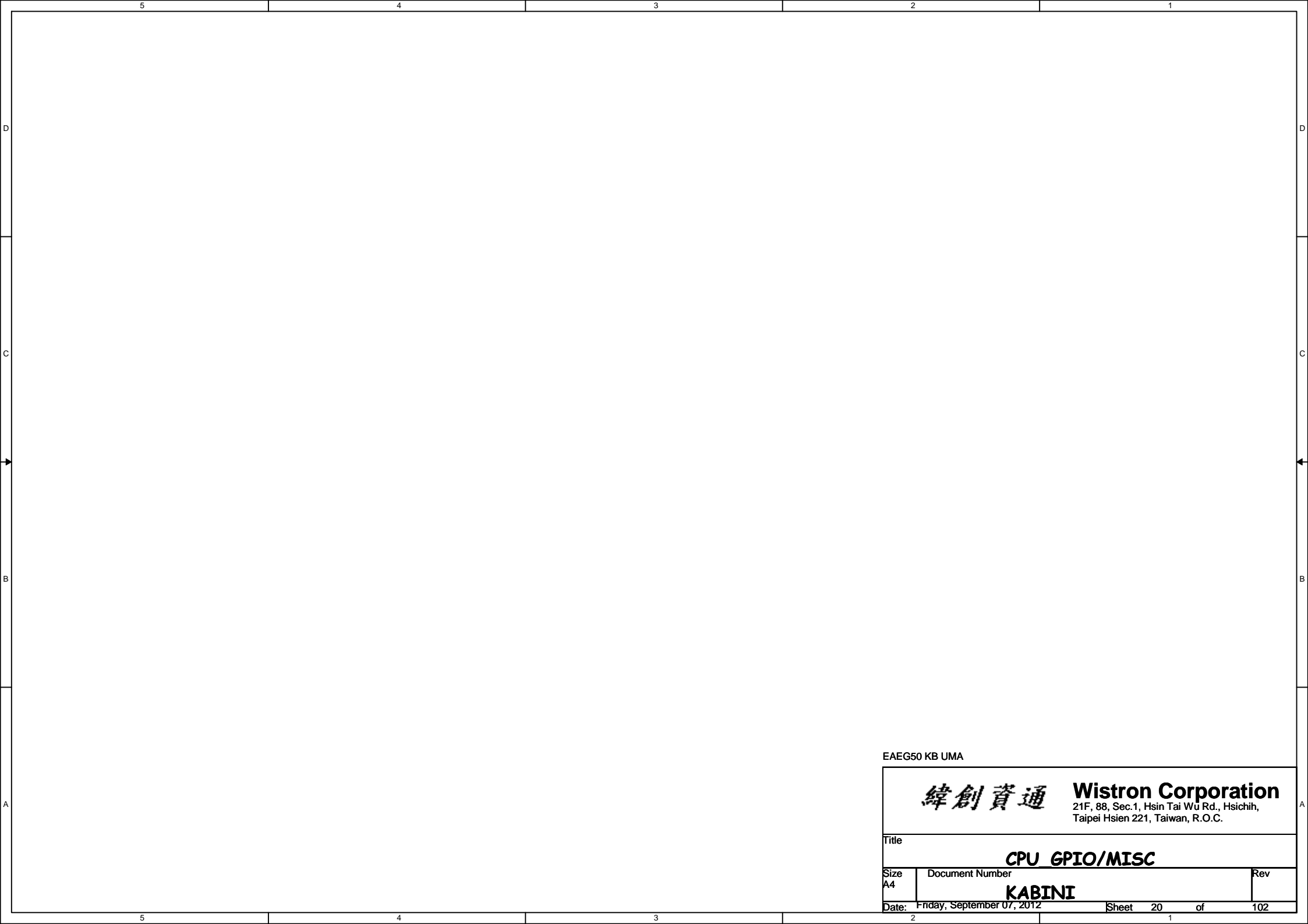
	System & USB	CLK
0	RTC	48M
1	SATA	32.768K
2	LAN	25M
3	VGA	25M
4		27M

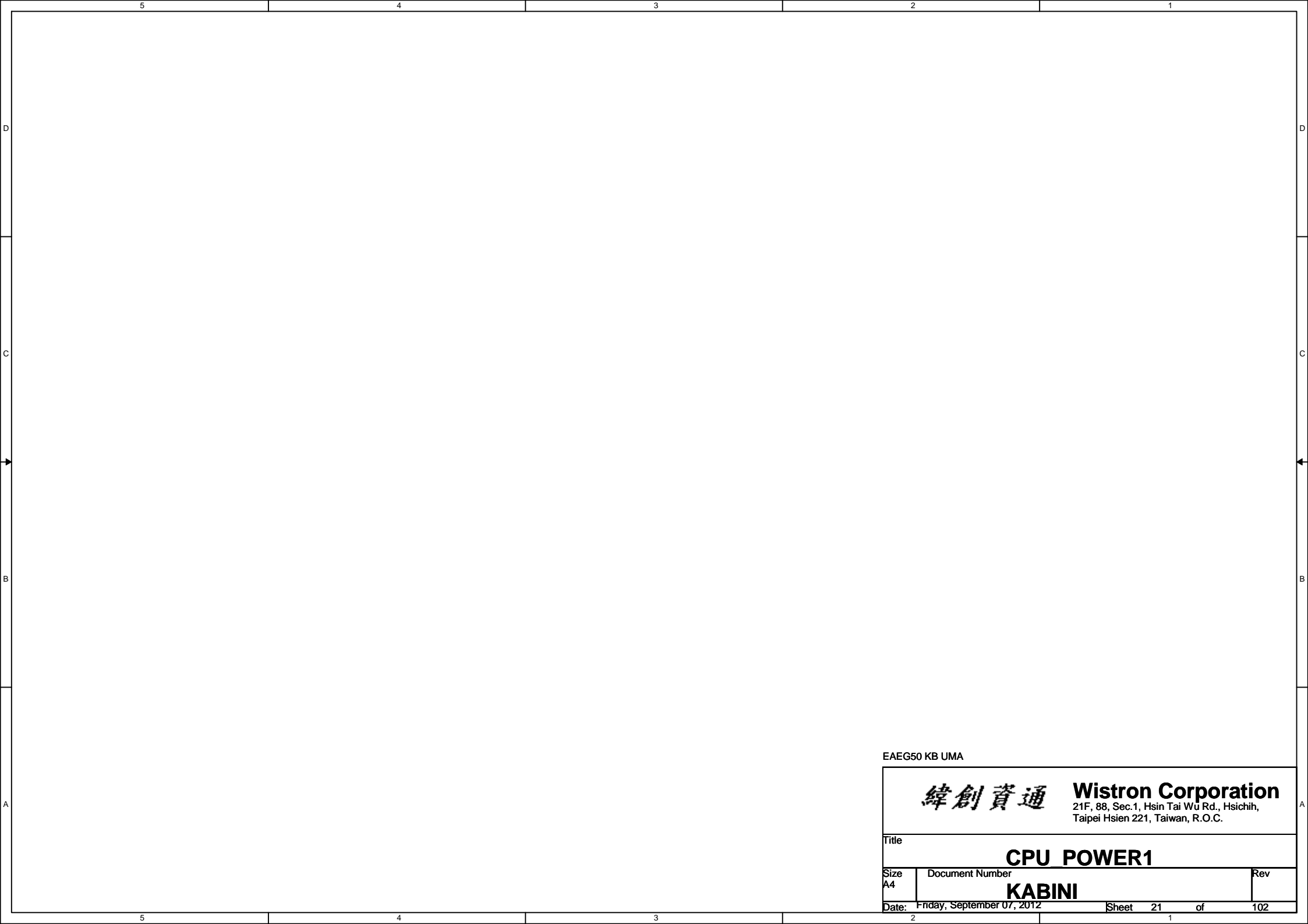


SPI SHARE ROM

	LPC_CLK0	LPC_CLK1	LFRAME#	EXPCARD_PCIE_PWREN#	RTC_CLK
FULL	BOOT FAIL TIMER ENABLED	CLNGEN ENABLED	SPI ROM	1.0V SPI ROM (DEFAULT)	NORMAL POWR UP/RESET TIMING (DEFAULT)
HIGH		CLNGEN DISABLED	TOCFAVLT		
FULL	BOOT FAIL TIMER DISABLED	CLNGEN DISABLED	LPC ROM	3.0V SPI ROM	FAST POWER UP/RESET TIMING FOR SIMULATION
LOW					

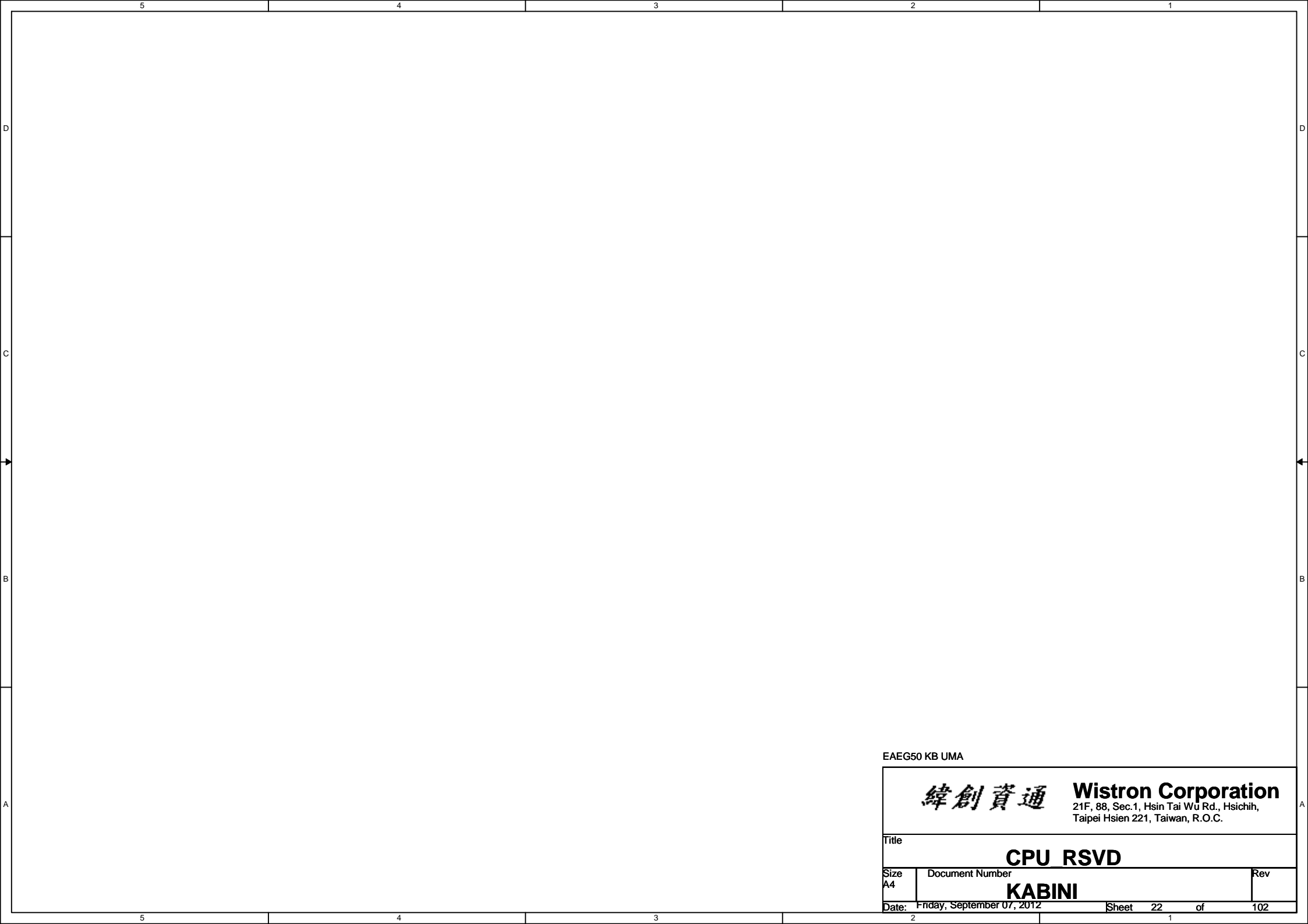
EAE650 KB UMA





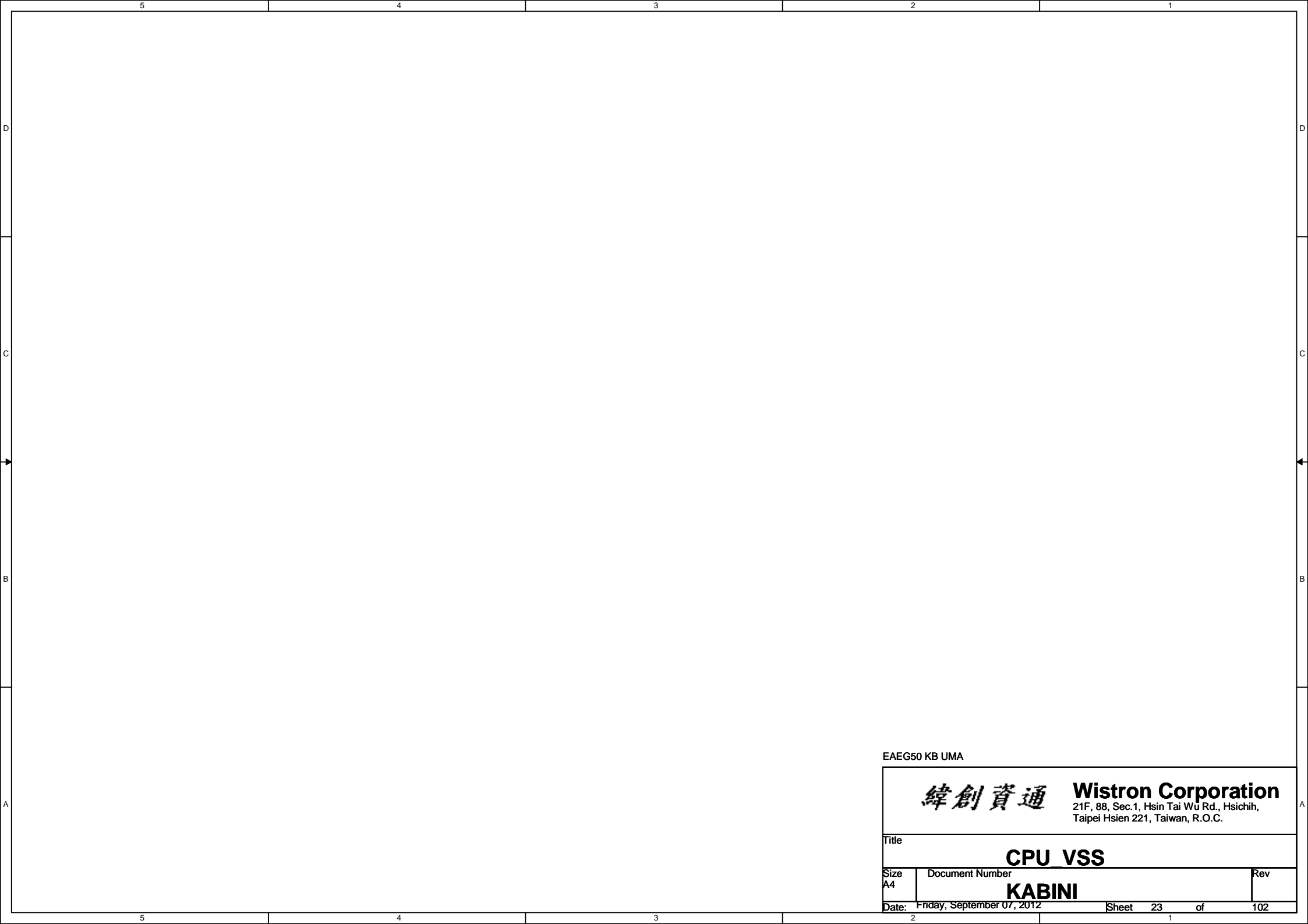
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Title					
CPU POWER1					
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Title	
CPU RSVD	
Size	Document Number
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Title	
CPU VSS	
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SSID = Flash.ROM

PD 1/28 SPI ROM : 4MB Dual IO

1st. MXIC : 72.25320.C01

2nd. WINBOND : 72.25Q32.E01

(手置件)請PCC移至DIP件



SSID = RBAT

CR2032額外備料:

1.KTS: 23.20068.001

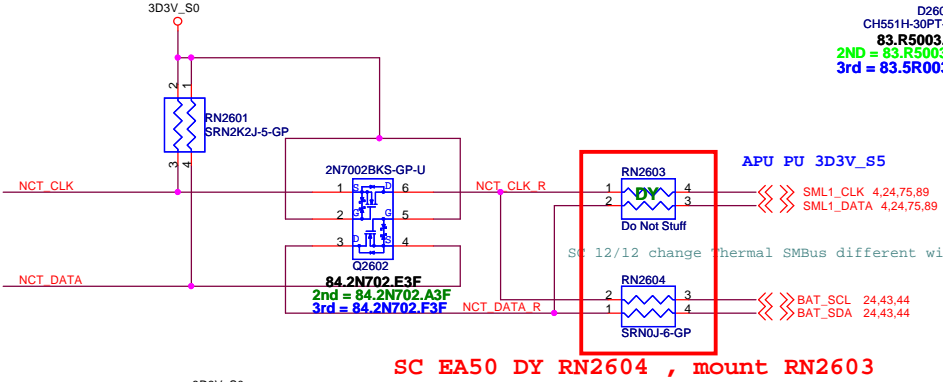
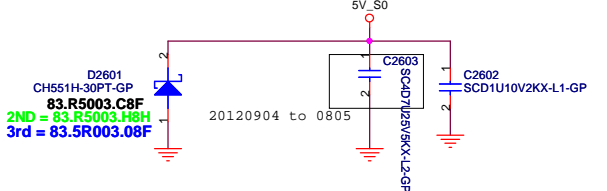
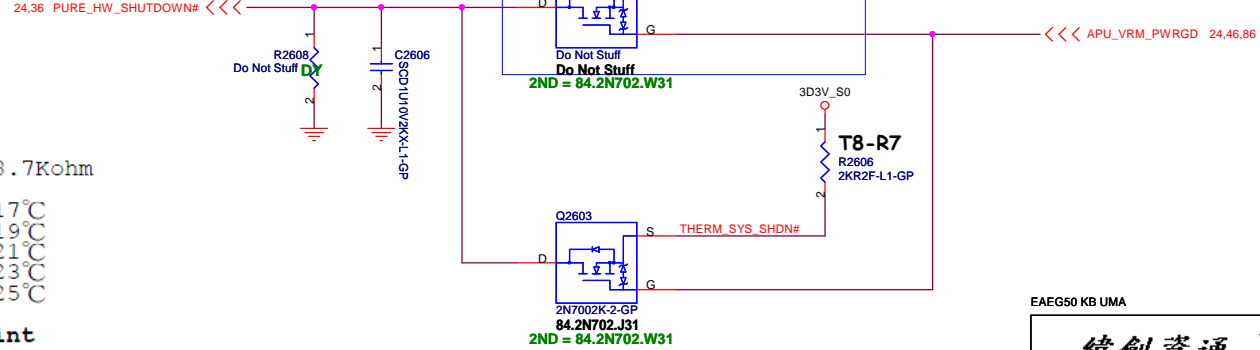
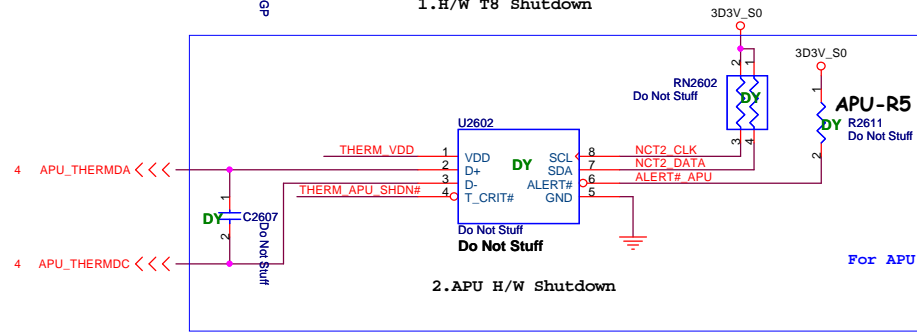
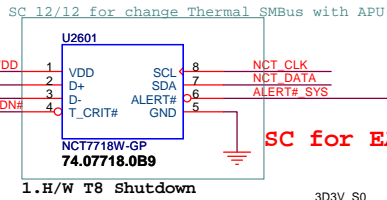
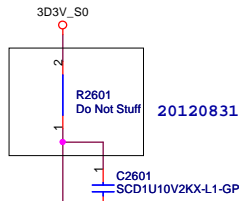
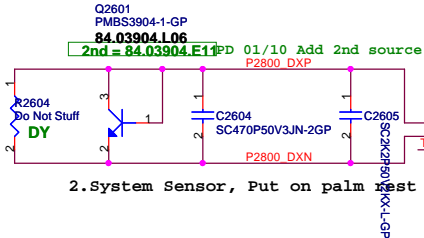
2.DBV: 23.22065.001



SSID = Thermal

Thermal sensor NCT 7718W

Layout notice :
Both DXN and DXP routing 10 mil
trace width and 10 mil spacing.



ALERT# /T CRIT#
Pull-up Resistor

R5	R7				
	2Kohm	7.5Kohm	10.5Kohm	14Kohm	18.7Kohm
2Kohm	77°C	87°C	97°C	107°C	117°C
7.5Kohm	79°C	89°C	99°C	109°C	119°C
10.5Kohm	81°C	91°C	101°C	111°C	121°C
14Kohm	83°C	93°C	103°C	113°C	123°C
18.7Kohm	85°C	95°C	105°C	115°C	125°C

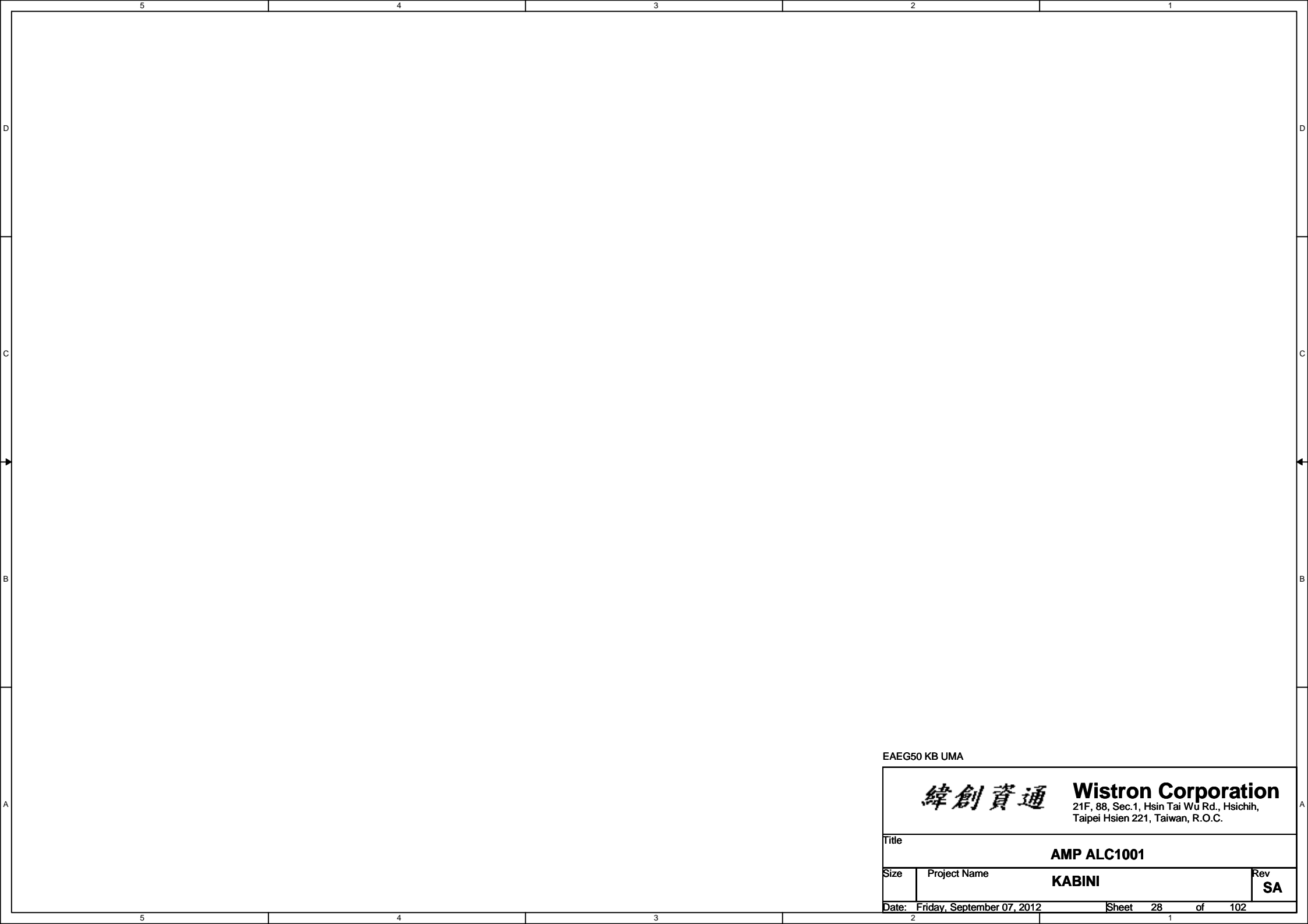
T_CRIT temperature strapping point

T8=85 degree
SYS=85 degree
APU=125 degree

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21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title			Thermal 7718/Fan Controller P2793	
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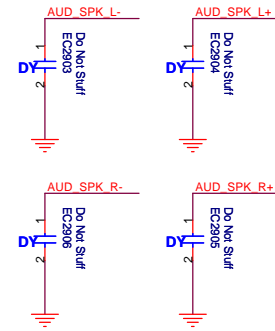
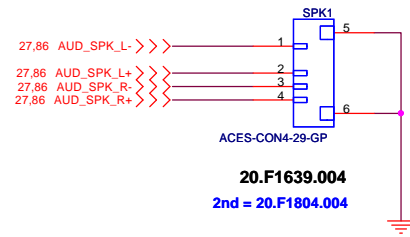
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Title AMP ALC1001		
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SSID = AUDIO

Speaker

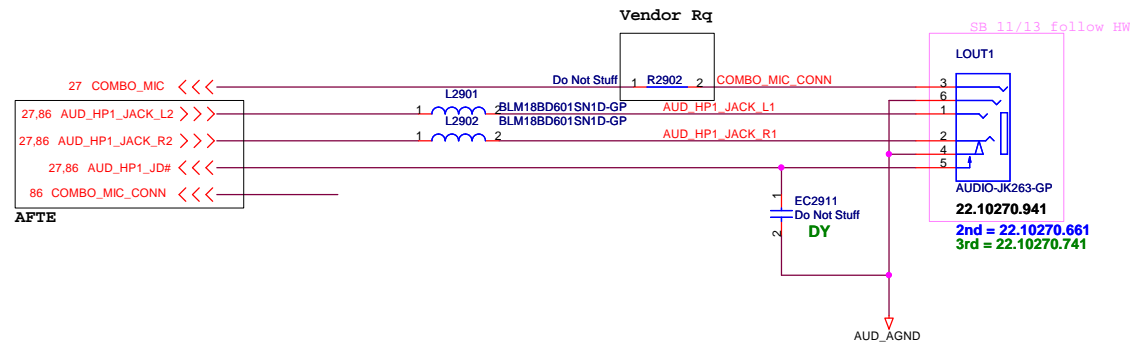
2W 4ohm X 2 speaker



Layout Note:

Trace width=40mil

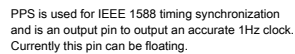
Combo Jack



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21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

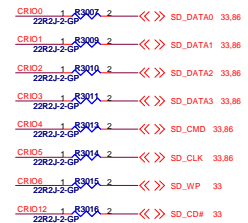
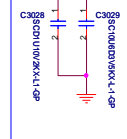
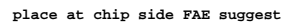
Title			
Audio Jack			
Size	Project Name		Rev
	KABINI		SA
Date:	Monday, February 04, 2013		Sheet 29 of 102



Pin	Description
LED[1]	1 Switch mode regulator (SWR) select
	0 Linear regulator (LDO) select
LED[3]	1 25MHz clock input
	0 48MHz clock input
[CRIO14, CRIO7]	10 <ul style="list-style-type: none"> 1. Support xD, not support SPI. 2. Can support PPS, PPS at LED[0] or LED[1] or LED[2] which is selected by eFuse.
	01 <ul style="list-style-type: none"> 1. Support SPI, not support SPI. 2. Can support PPS, PPS at LED[0] or LED[1] or LED[2] which is selected by eFuse.
	11 <ul style="list-style-type: none"> 1. Not support xD, not support SPI. 2. Only Support PPS, PPS always at CRIO13.



ISOLATn is active low to isolate the whole chip to place in lowest power consumption mode.

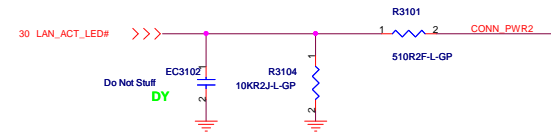
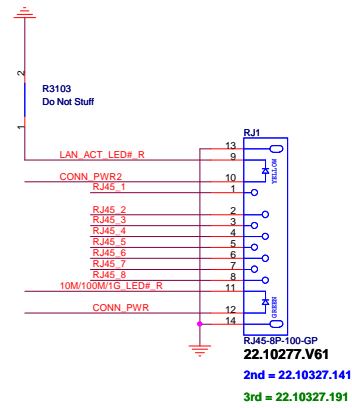
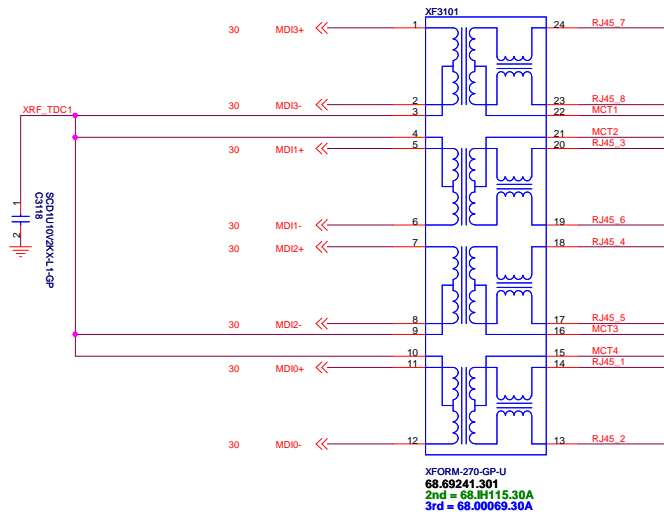


EAEG50 KB UMA

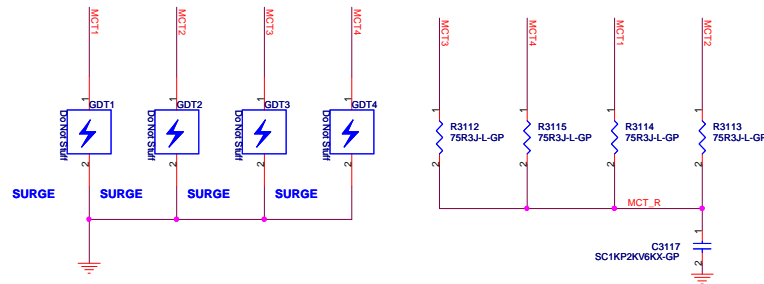
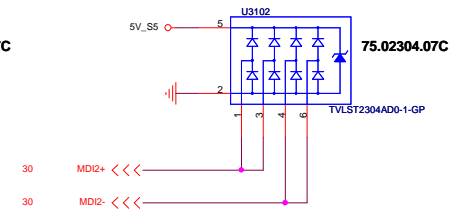
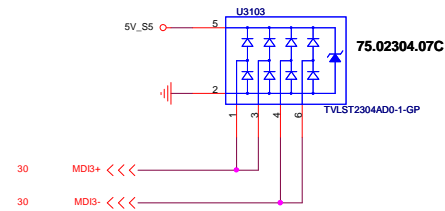
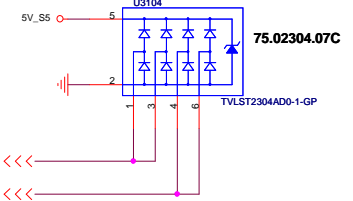
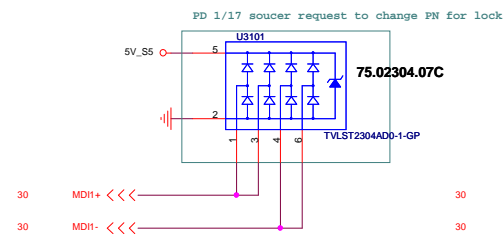
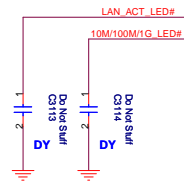
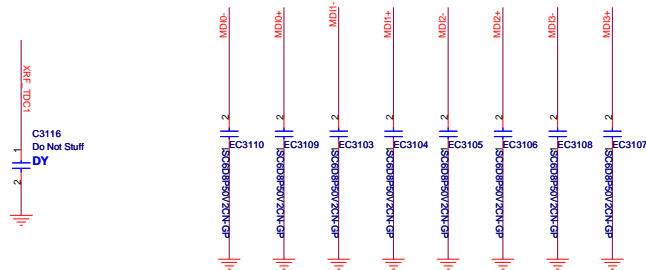
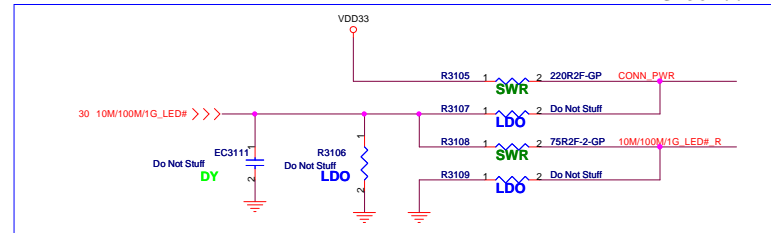
緯創資通 **Wistron Corporation**
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title			
RTL8411			
Size	Project Name		Rev
	KABINI		SA
Date:	Monday, February 04, 2013		Sheet 30 of 102

SSID = LAN



Check!!



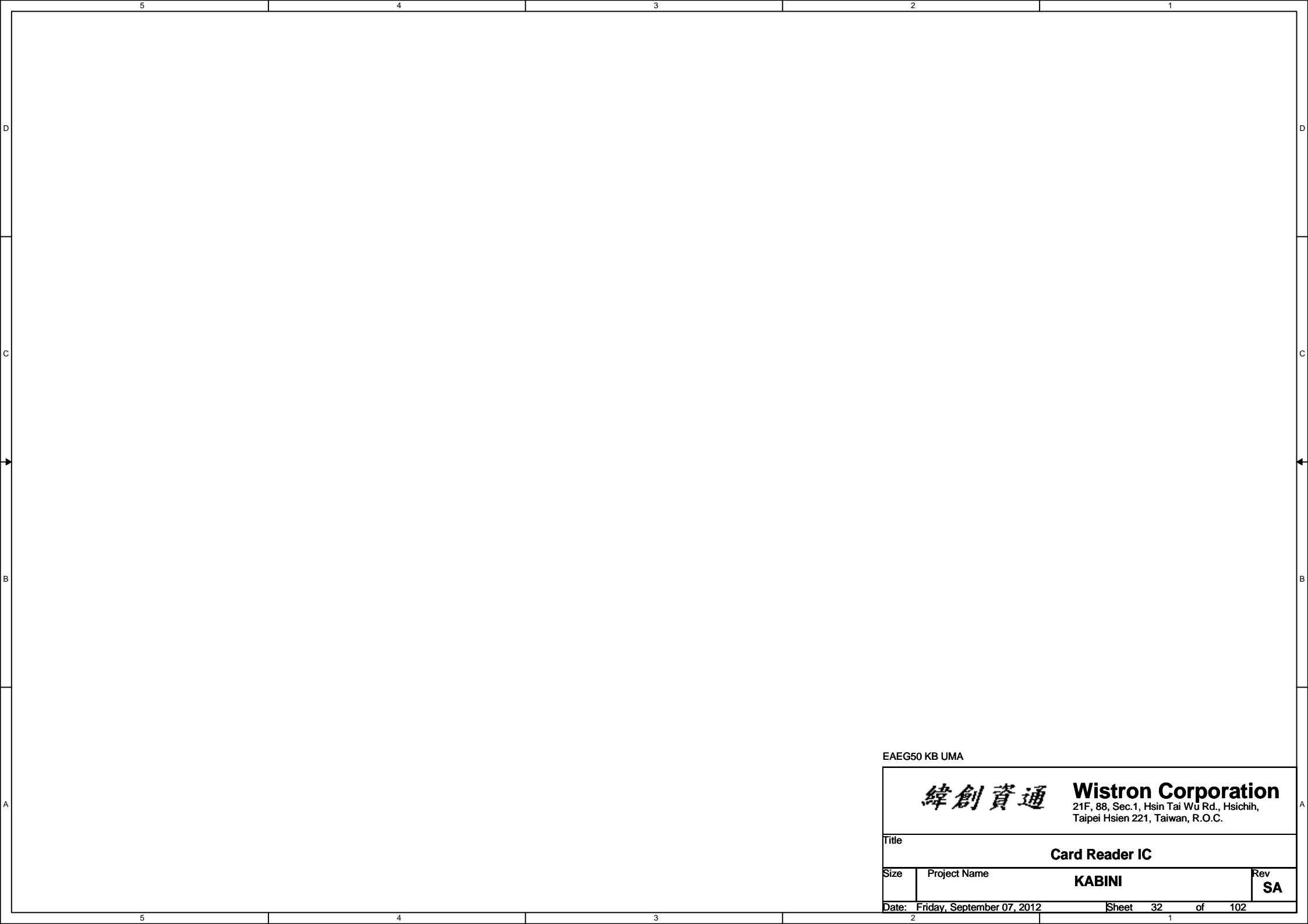
```

86 RJ45_1 >>>_____
86 RJ45_2 >>>_____
86 RJ45_3 >>>_____
86 RJ45_4 >>>_____
86 RJ45_5 >>>_____
86 RJ45_6 >>>_____
86 RJ45_7 >>>_____
86 RJ45_8 >>>_____

86 LAN_ACT_LED#R >>>_____
86 10M/100M1G_LED#R >>>_____
86 CONN_PWR >>>_____
86 CONN_PWR2 >>>_____

```

For AFTE

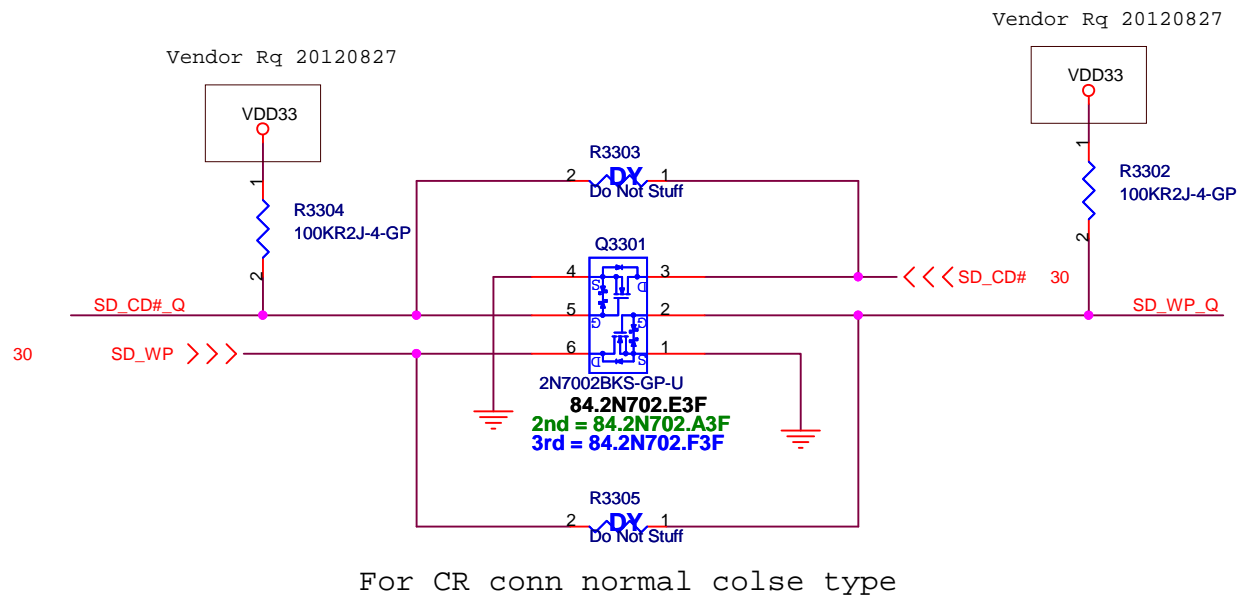
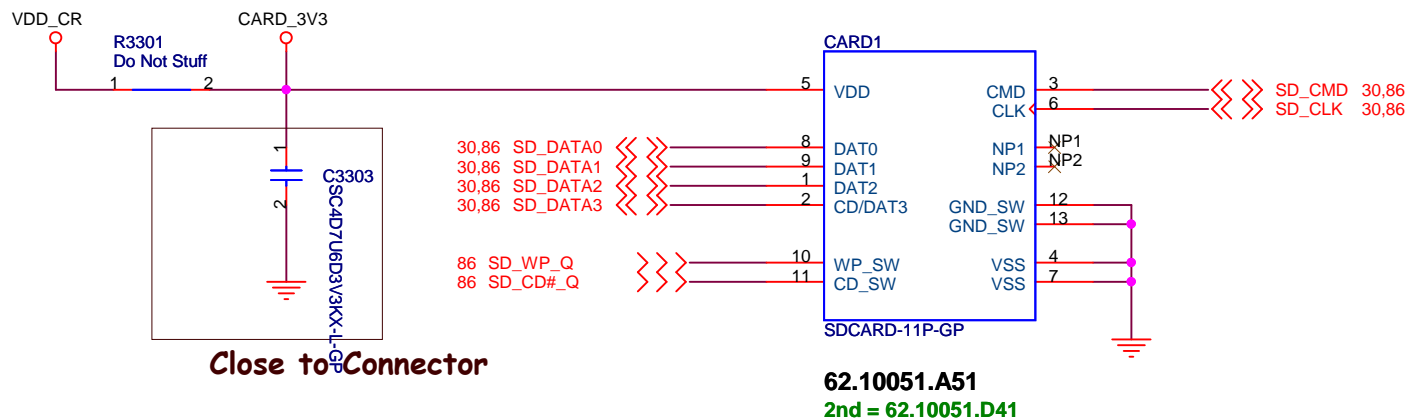


EAEG50 KB UMA

<div><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></div>	
Title <div>Card Reader IC</div>	
Size	Rev <div>SA</div>
Date: Friday, September 07, 2012	
Sheet 32 of 102	

SSID = SDIO

SD//MS Card Reader



EAEG50 KB UMA

緯創資通

Wistron Corporation

21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title

CARD Reader CONN

Size

Project Name

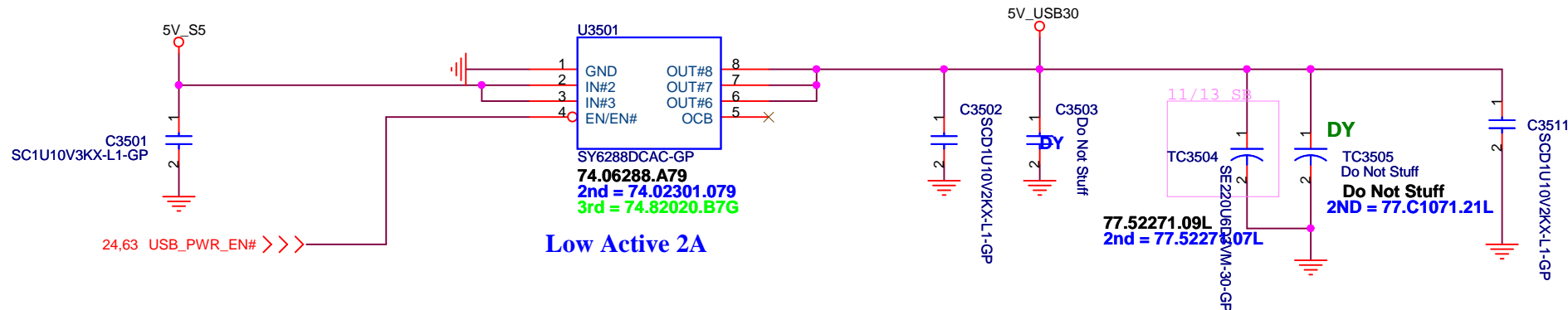
KABINI

Rev

SA

Date: Monday, February 04, 2013

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EAEG50 KB UMA

緯創資通

Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title

USB_Charger

Size

Project Name

KABINI

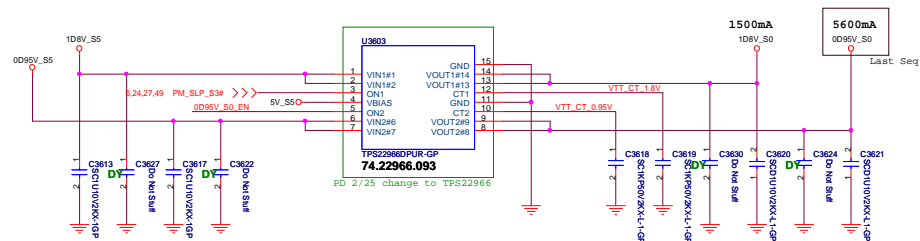
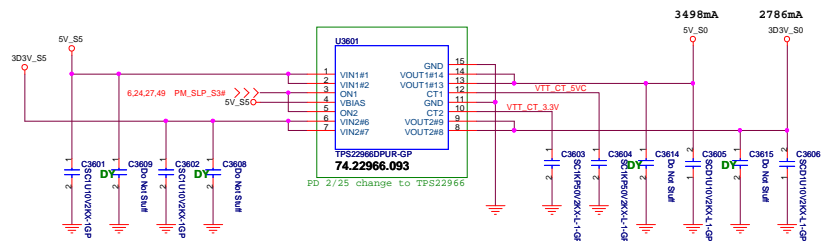
Rev

SA

Date: Monday, February 04, 2013

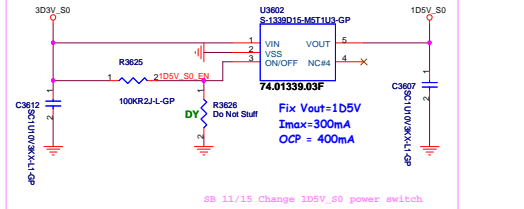
Sheet 35 of 102

Power Sequence

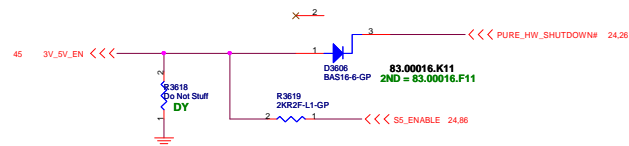
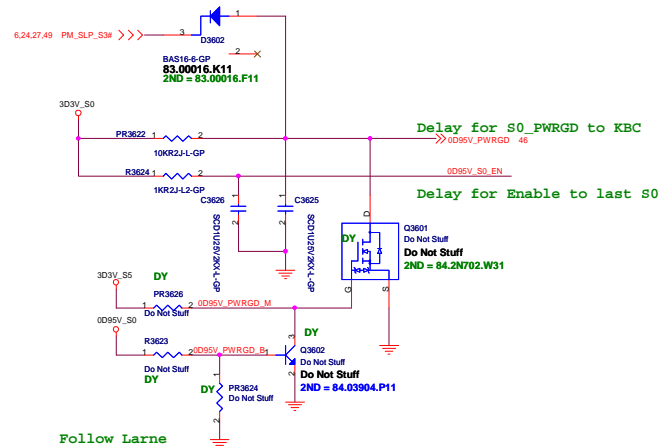


LDO for 1D5V_S0 (SB 11/15)

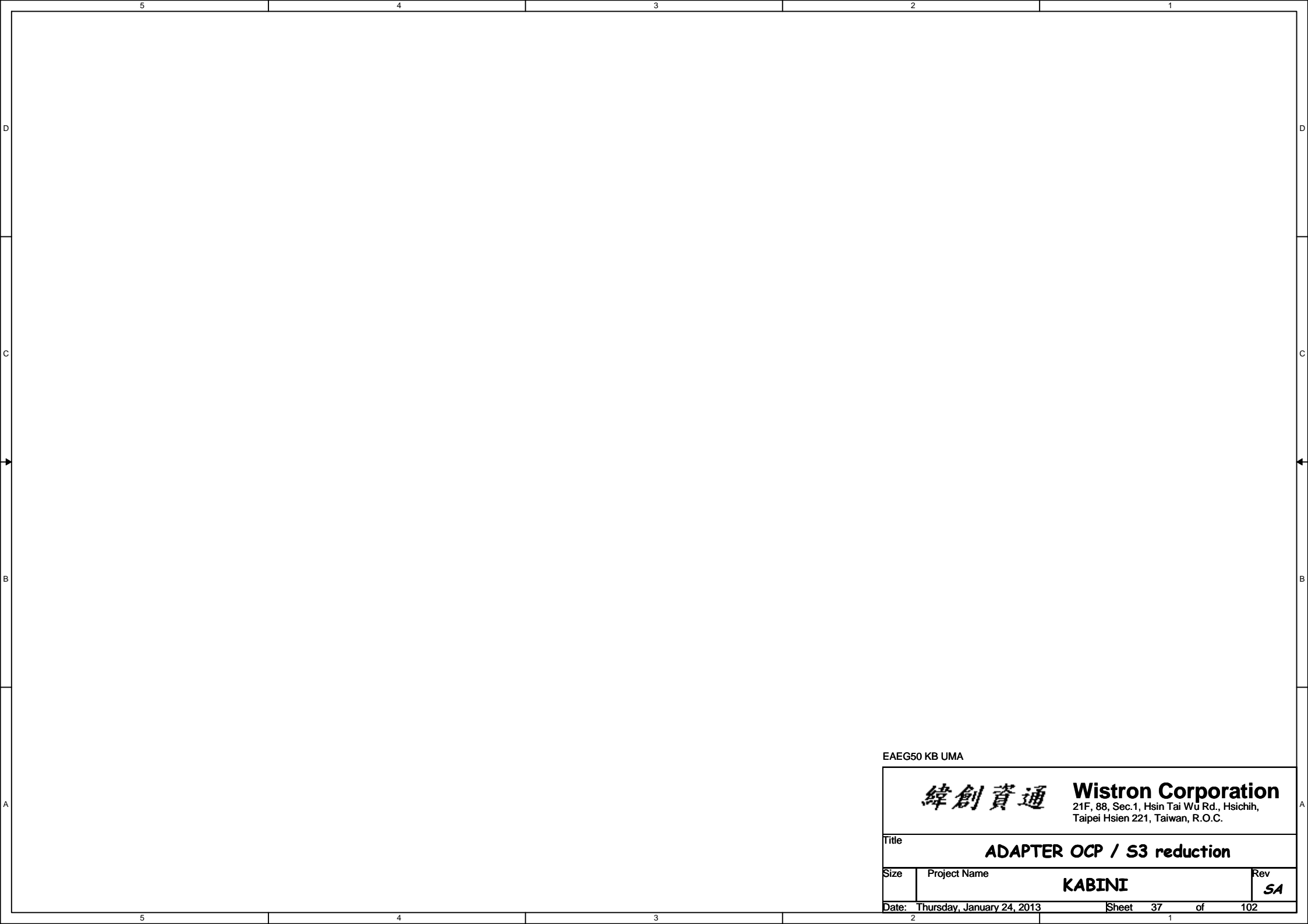
100mA for Audio chipset



48 0095V_S5_PWRGD >>> 1PR3625 2 >>> 1D5V_S5_PWRGD 2450
Do Not Stuff
S5_PWRGD to KBC

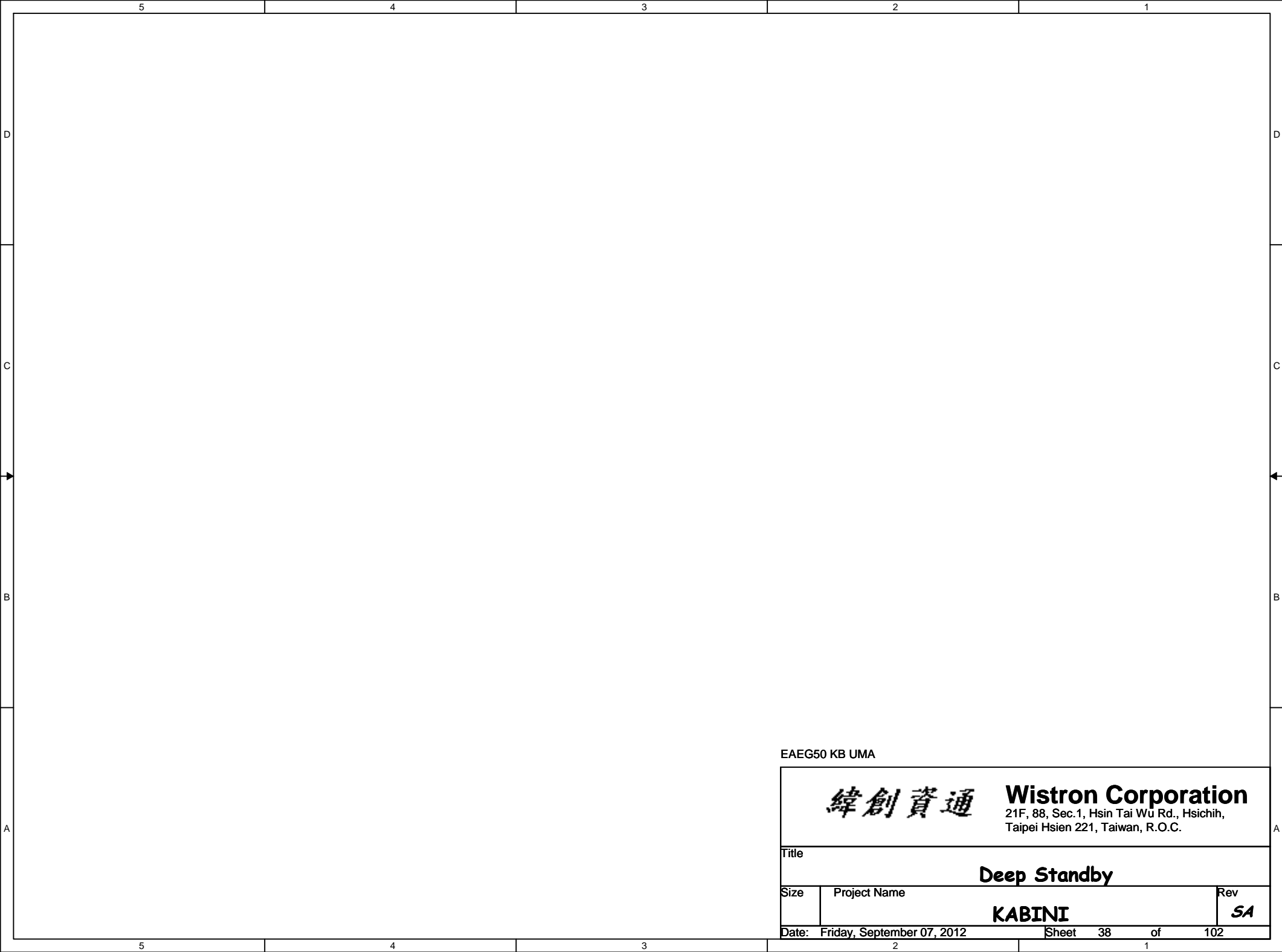


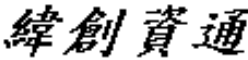
EAEG50 KB UMA

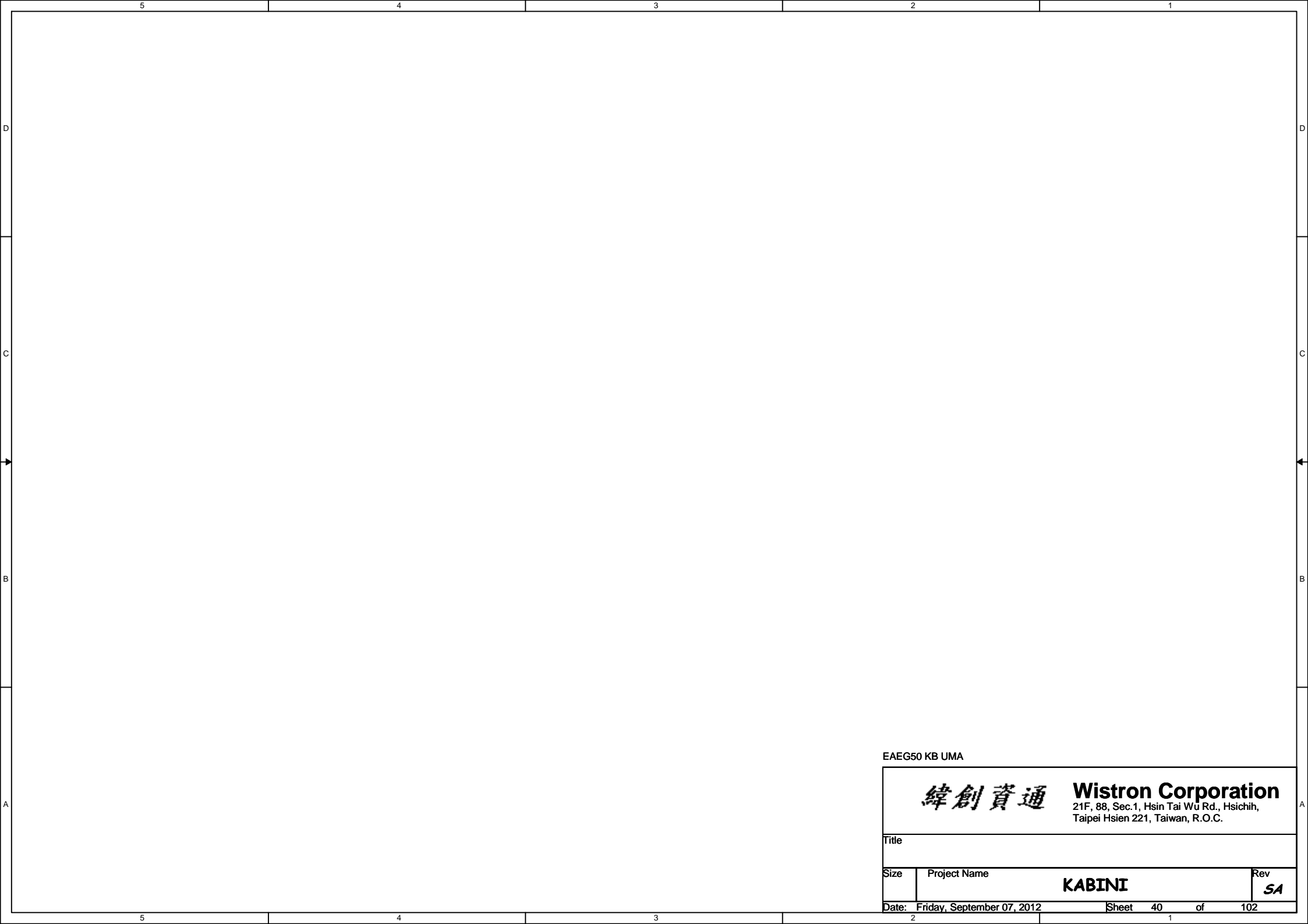


EAEG50 KB UMA

<div><div>緯創資通</div><div>Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.</div></div>		
Title <div>ADAPTER OCP / S3 reduction</div>		
Size	Project Name <div>KABINI</div>	Rev <div>SA</div>
Date: Thursday, January 24, 2013		Sheet 37 of 102

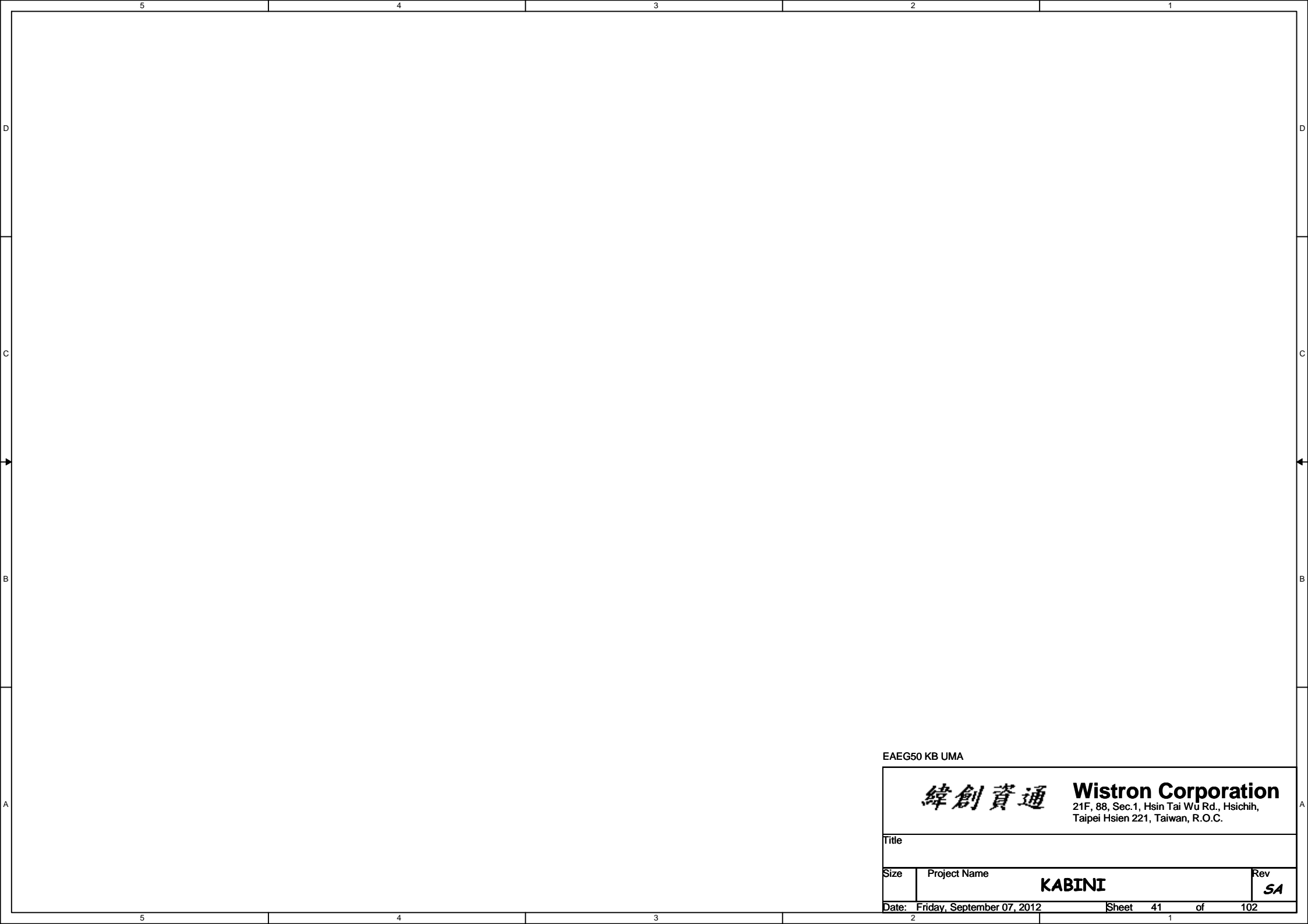


	5	4	3	2	1
D					D
C					C
B					B
A				EAEG50 KB UMA <div> <div>  <div> Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C. </div> </div> <div> <div>Title</div> <div>1D05_M</div> <div> <div>Size</div> <div>Project Name</div> <div>Rev</div> </div> <div> KABINI <div>SA</div> </div> </div> <div> Date: Friday, September 07, 2012 Sheet 39 of 102 </div> </div>	A
	5	4	3	2	1



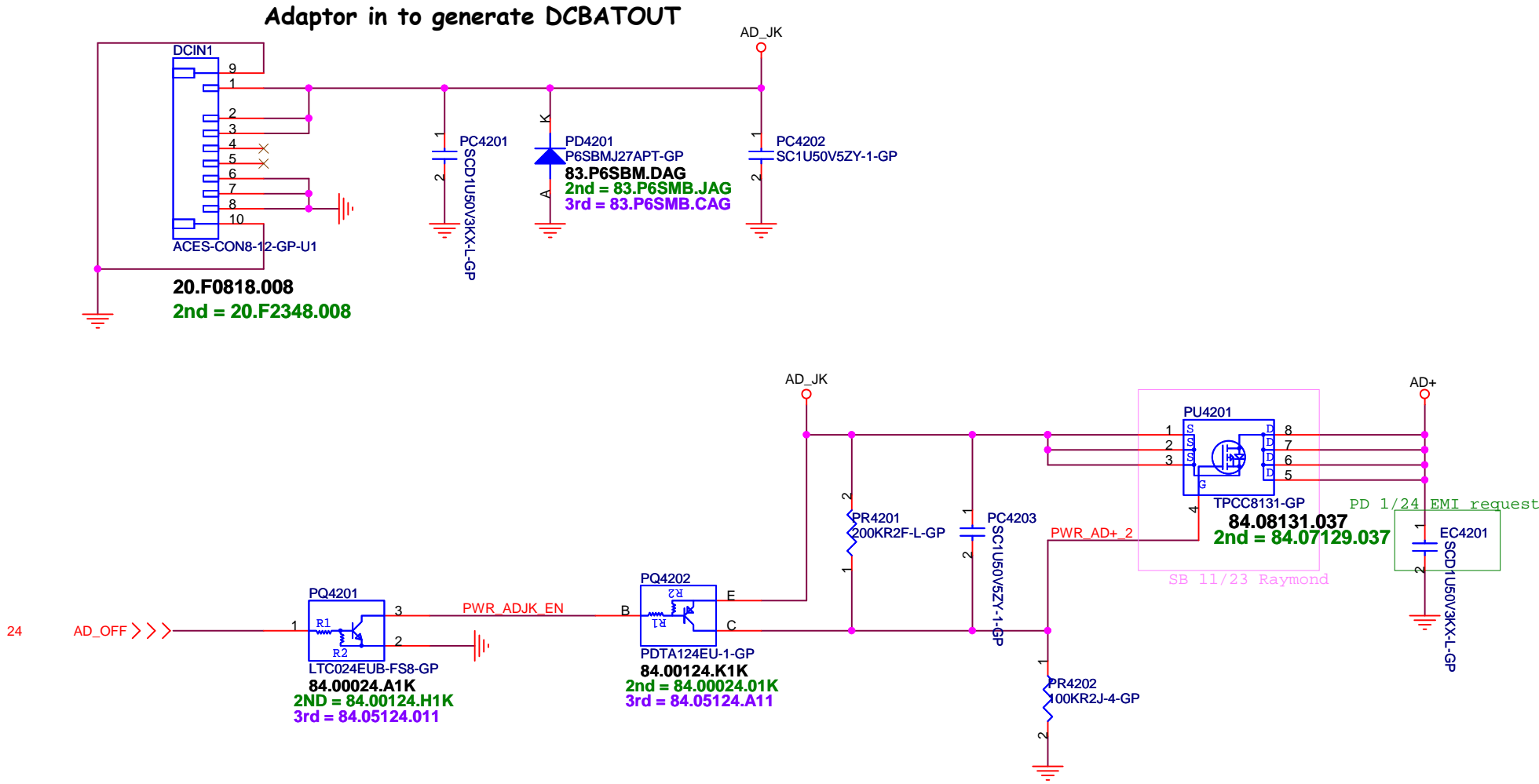
EAEG50 KB UMA

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
Size	Project Name		Rev
	KABINI		SA
Date: Friday, September 07, 2012		Sheet	40 of 102



EAEG50 KB UMA

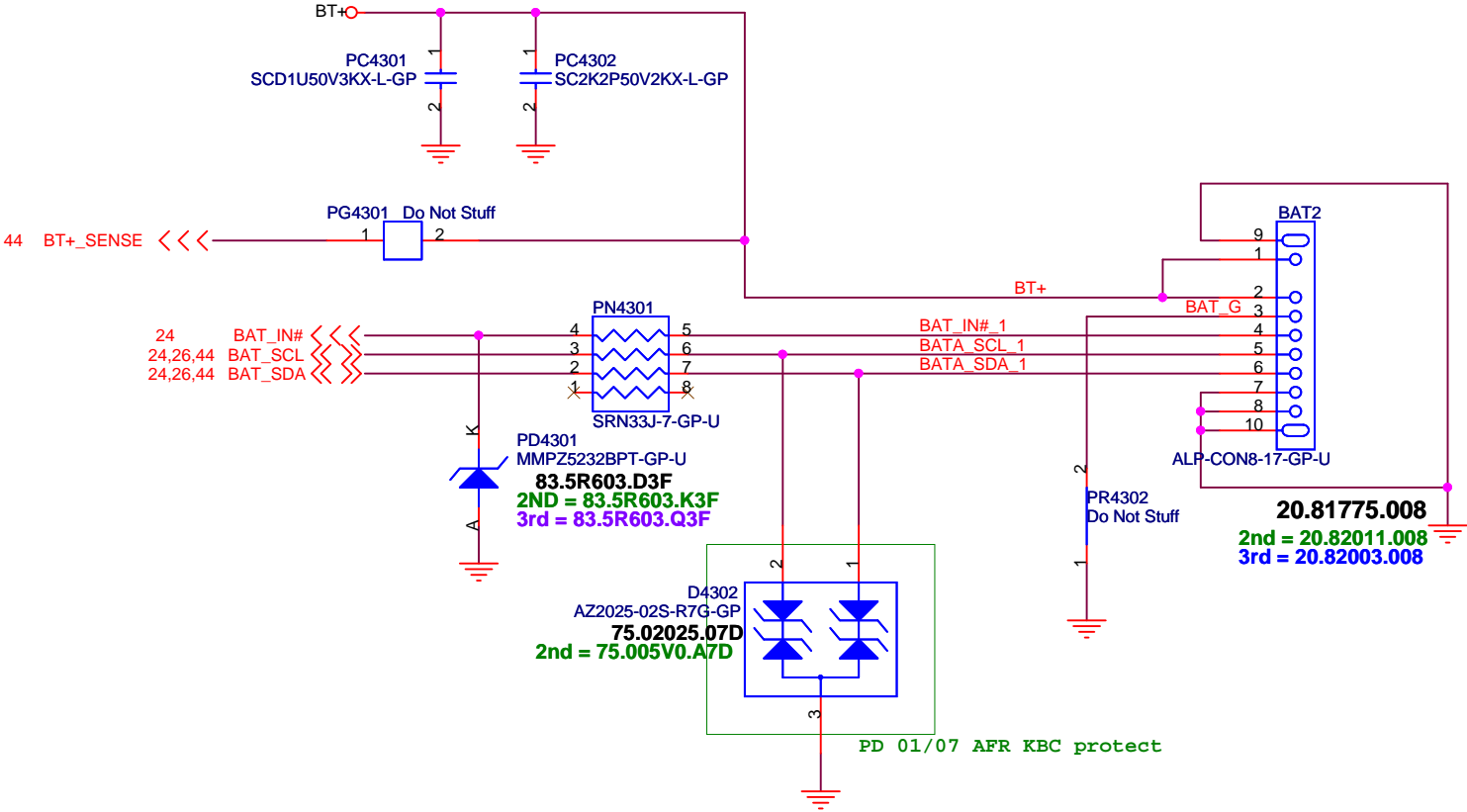
<div><div>緯創資通</div><div>Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.</div></div>		
Title		
Size	Project Name	Rev
	KABINI	SA
Date: Friday, September 07, 2012		Sheet 41 of 102



BATTERY CONNECTOR

86	BATA_SDA_1	>>>	_____
86	BATA_SCL_1	>>>	_____
86	BAT_IN#_1	>>>	_____
86	BAT_G	>>>	_____

For AFTE



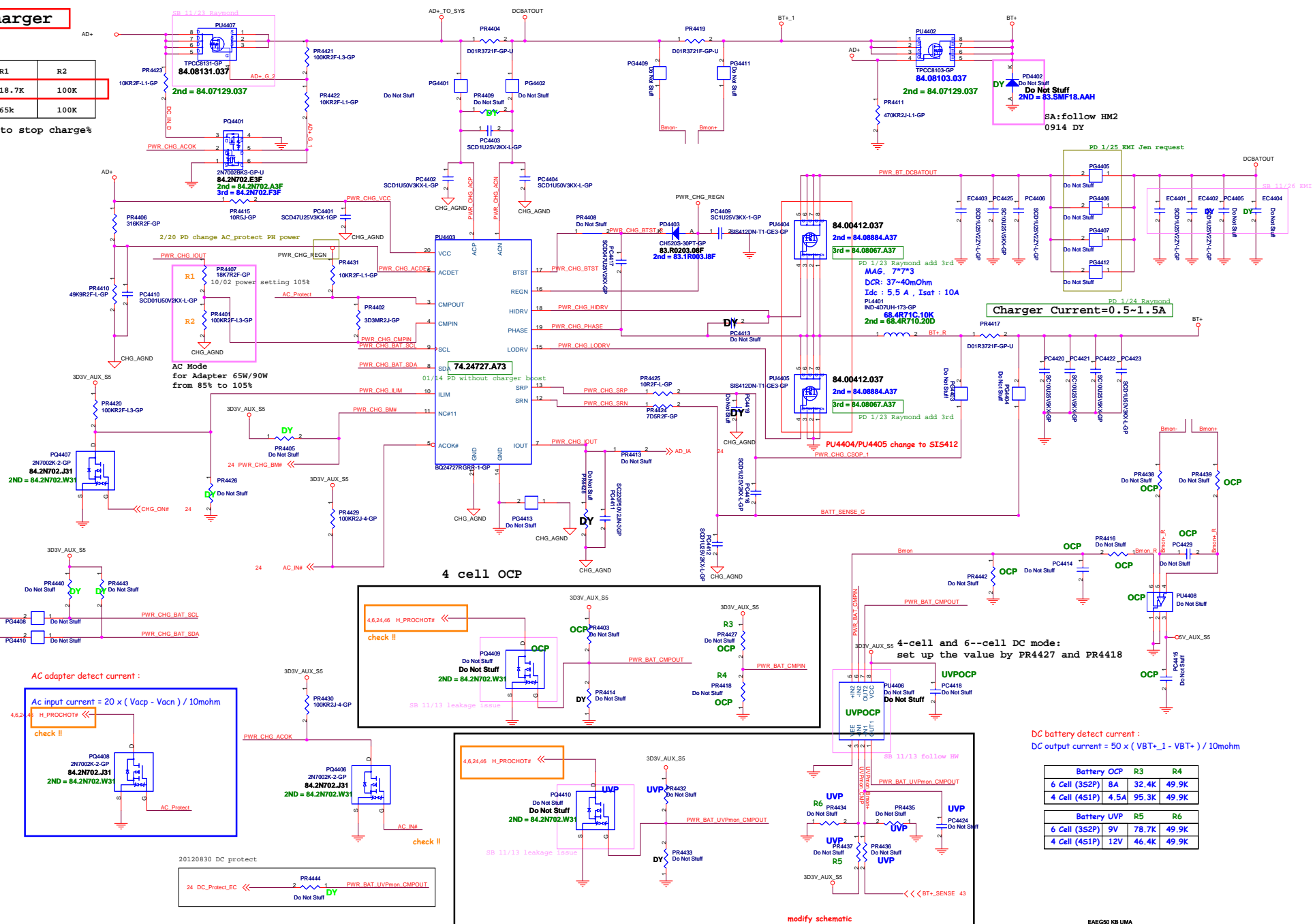
EAEG50 KB UMA

緯創資通		Wistron Corporation	
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.			
Title			
BATT CONN			
Size	Project Name		Rev
	KABINI		SA
Date: Wednesday, February 20, 2013		Sheet 43	of 102

PR4407,PR4401

AD+ total power	R1	R2
65w 105%	18.7K	100K
90w	65k	100K

Change the table to stop charge%



EAEG50 KB UMA

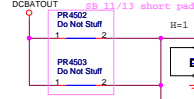
SSID = PWR.Plane.Regulator_3p3v5v

Cut off itself

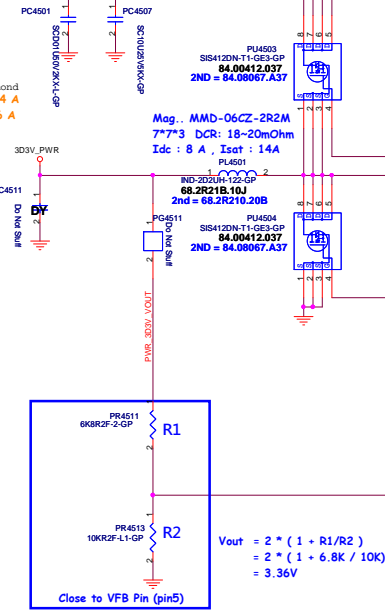
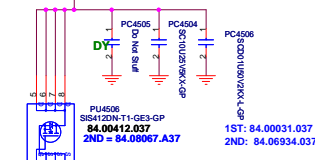
check (UVP)

check (DCBATOUT)

check (DCBATOUT)



check (DCBATOUT)



Mag.: MMD-06CZ-2R2M
7773 DCR: 18-20mOhm
Idc : 8 A , Isot : 14A
2ND = 84.00412.037
2ND = 84.08067.A37

$V_{out} = 2 * (1 + R1/R2)$
 $= 2 * (1 + 6.8K / 10K)$
 $= 3.36V$

3D3V OCP
PR4514
150KR2F-L-GP

5V OCP
PR4517
140KR2F-L-GP

77.52271.09L

77.C2271.45L
2nd = 77.22271.39L

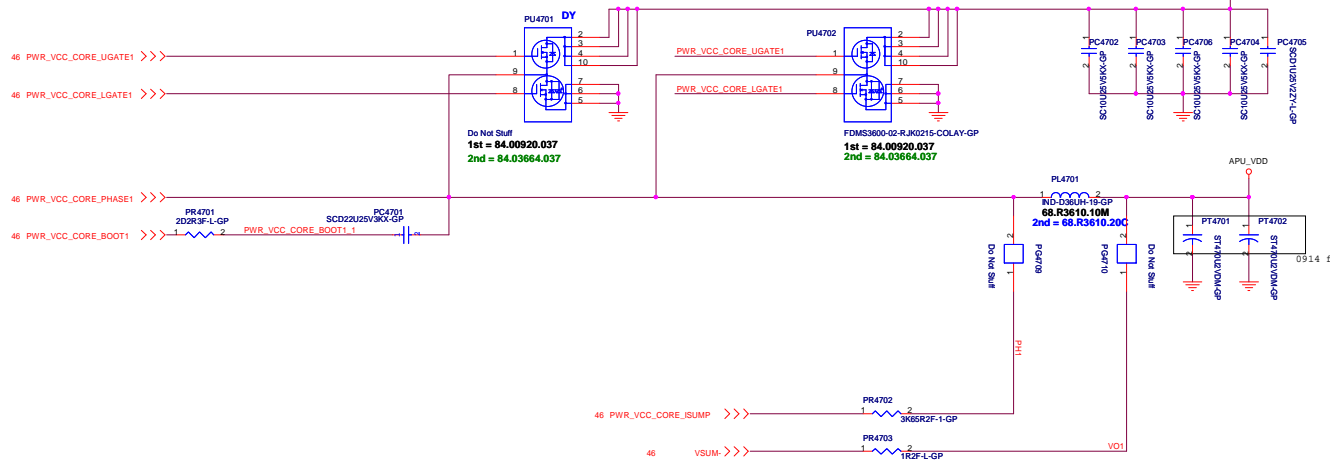
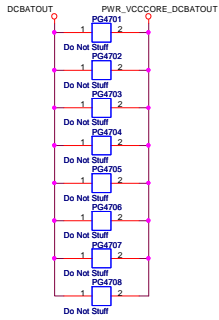
11/13 SB: EA40 & EG50 => OSCON

12/4 SB: EA40 & EG50 => POSCAP

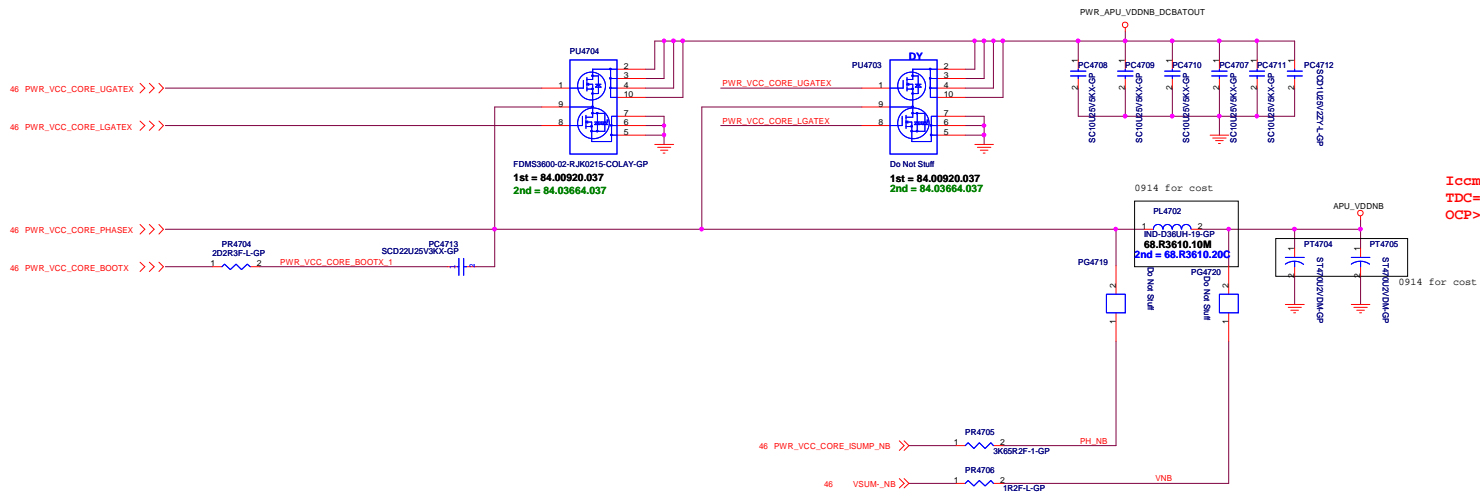
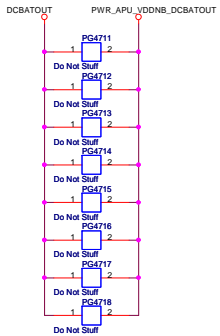
EAE650 KB UMA

緯創資通 Wistron Corporation
21F, 8B, Sec.1, Hsin Tai Wu Rd., Hsueh,
Taipei Hsien 221, Taiwan, R.O.C.

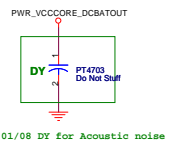
TPS51225 5V/3D3V		
Size	Document Number	Rev
A2	KABINI	1
Date: Monday, February 04, 2013		



Iccmax=21A
TDC=16.8A
OCP>26.3A



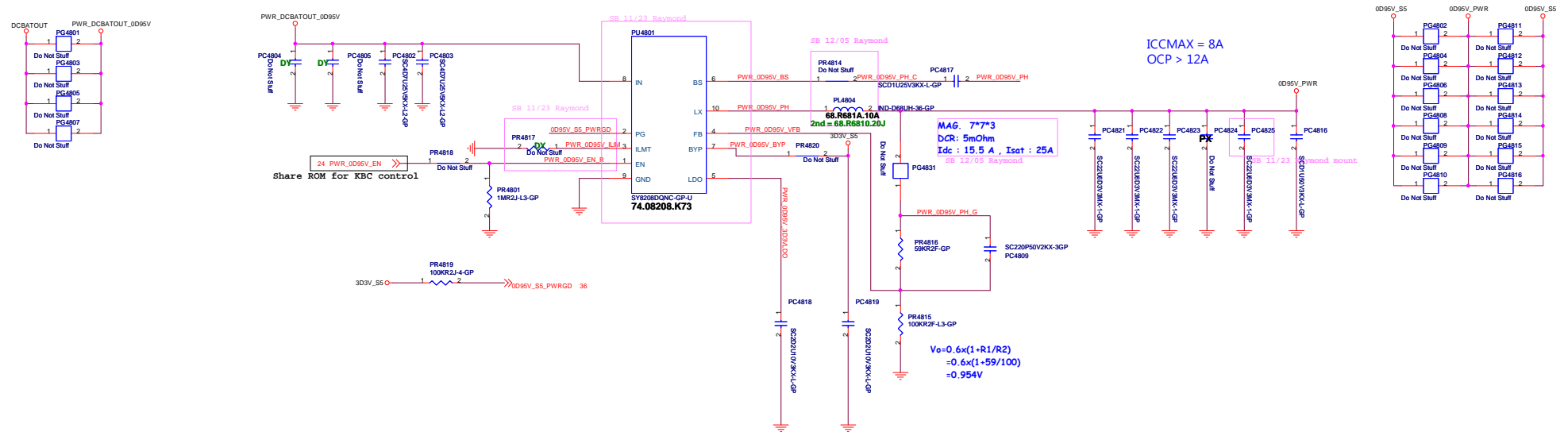
Iccmax=17A
TDC=13.6A
OCP>21.3A

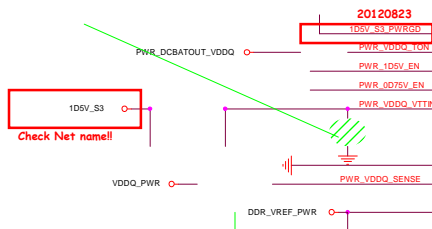
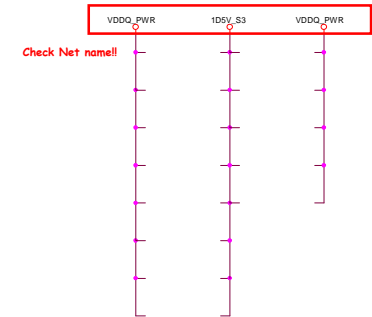
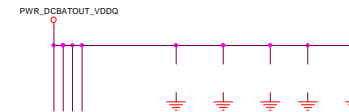
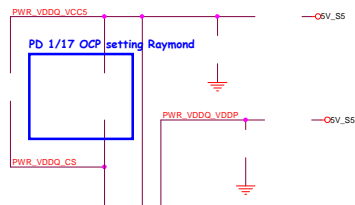
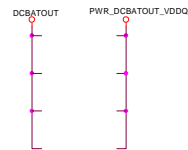


PD 01/08 DY for Acoustic noise

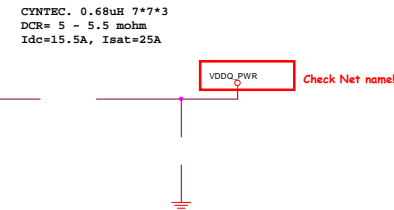
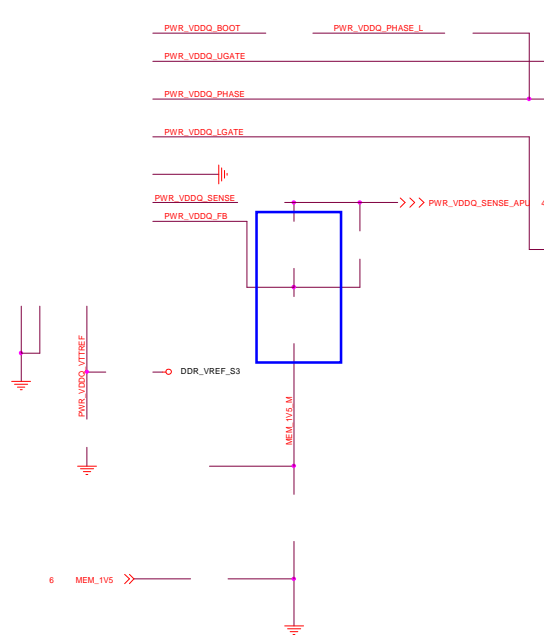
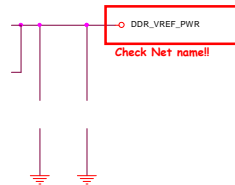
EAE650 KB UMA

緯創資通		Wistron Corporation	
21F, 8B, Sec. 1, Hsin Tai Wu Rd., Hsuehshien, Taipei Hsien 221, Taiwan, R.O.C.			
Title		TPS51631 CPUCORE(2/2)	
Size		A2	
Document Number		KABINI	
Date		Monday, February 04, 2013	
Sheet		47 of 102	

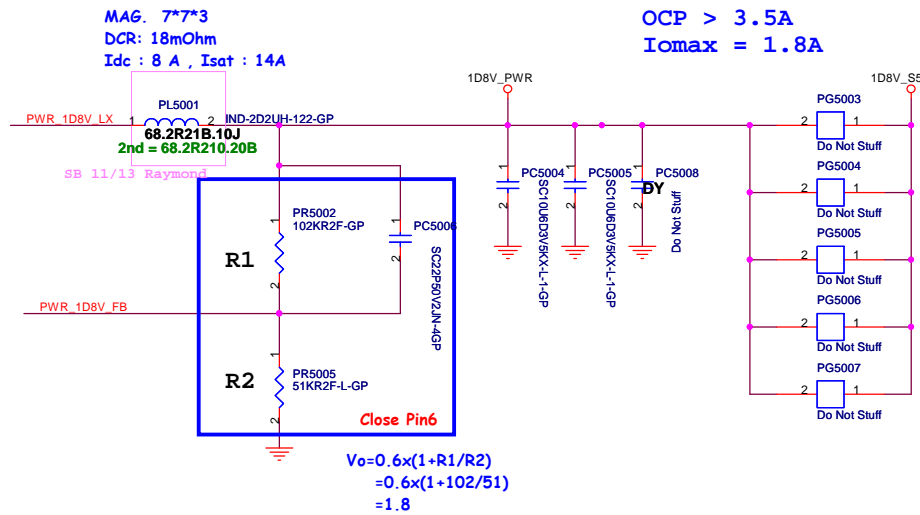
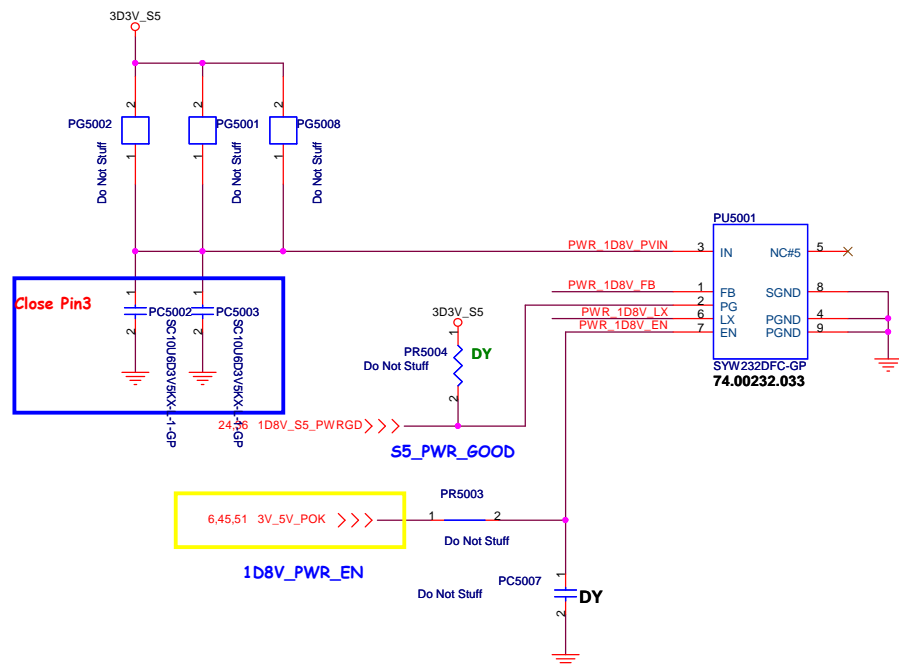
SY8208D for 0D95V



Iomax=1A
OCP>1.5A
Close to output cap pin1, not
inside of the output cap



```
SSID = PWR.Plane.Regulator_1p8v
```



EAEG50 KB UMA

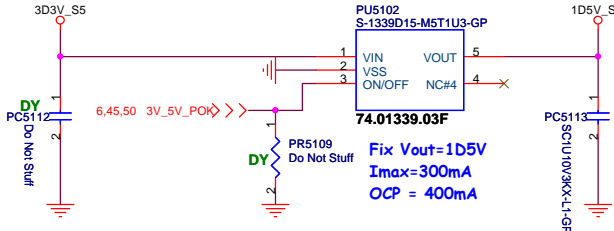
緯創資通 **Wistron Corporation**
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title	1D8V_S0 SYW232
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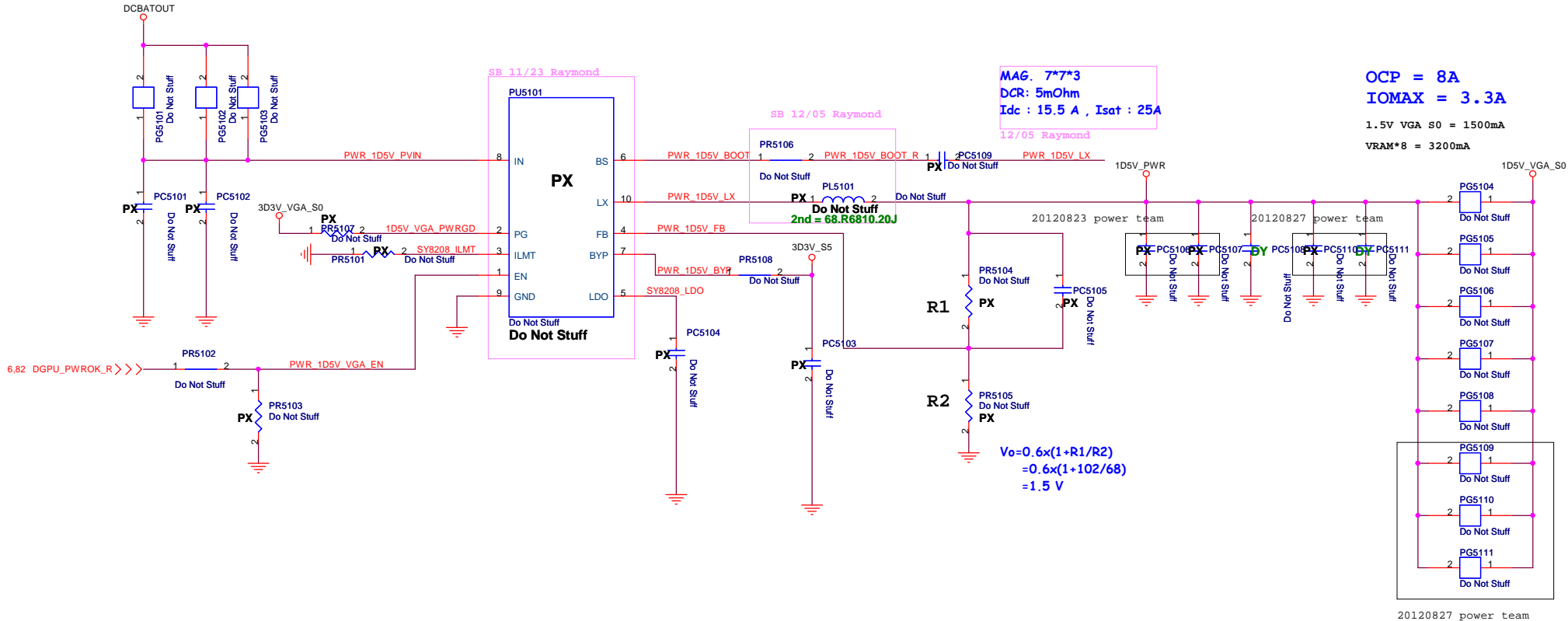
Size A3	Document Number KABINI	Rev
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Date: Monday, February 04, 2013 Sheet 50 of 102

LDO for 1D5V_S5 (SB 11/13)

$$1.5V \text{ S0} = 100mA(VDDIO_AZ) + 100mA(Audio) + 600mA(Minicard \text{ DY}) = 200mA$$


SY8208D for 1D5V_VGA_S0 (SB 11/13)



20120827 power team

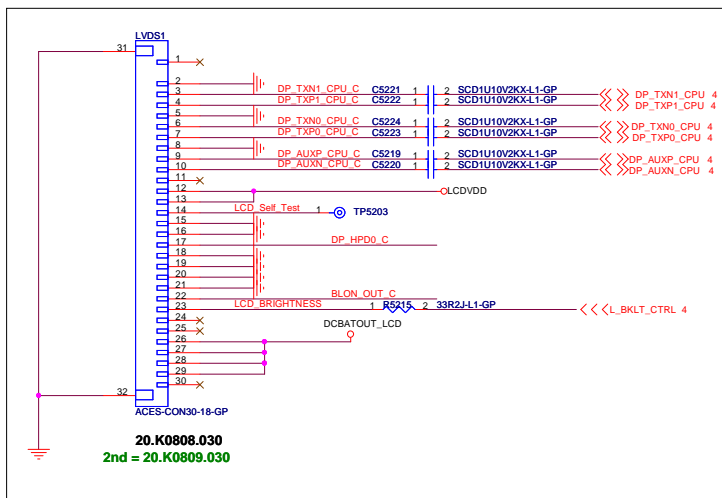
EAEG50 KB UMA

緯創資通 **Wistron Corporation**
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title				1D5V_S5 SY8208D			
Size	Document Number					Rev	
A3	KABINI						
Date:	Tuesday, February 19, 2013			Sheet	51	of	102

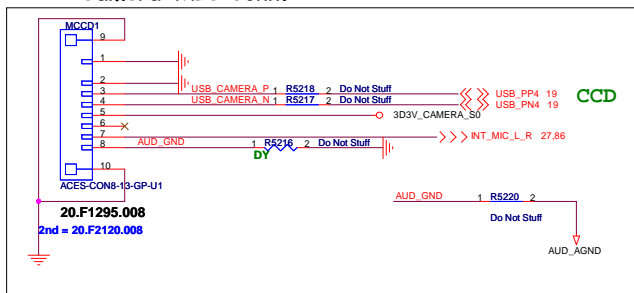
SSID = VIDEO

eDP Conn.



10/04 change to 20.K0808.030 for ME request

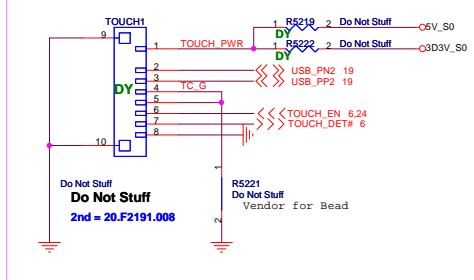
Camera+MIC Conn.



10/03 change to 8pin for del DMIC

10/15 change to 20.F1295.008 follow HW

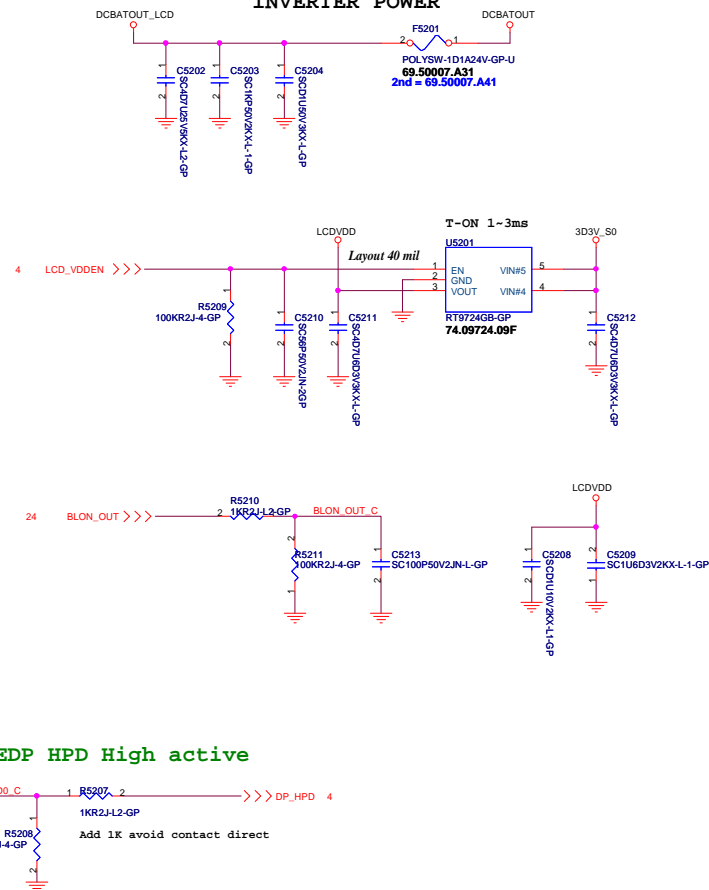
Touch Conn.



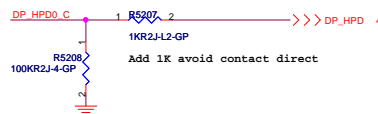
SB 12/12 DUMMY for ME issue

SC NO support

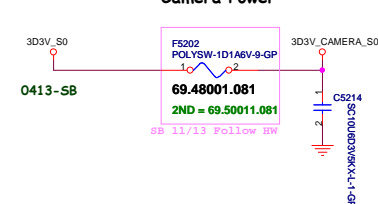
INVERTER POWER



EDP HPD High active

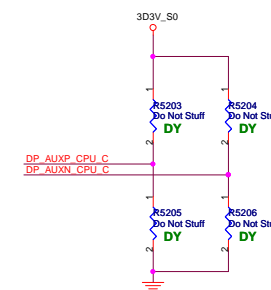


Camera Power



86 AUD_GND <<<
86 DP_HP00_C >>>
86 BLON_OUT_C >>>
86 LCD_BRIGHTNESS >>>
86 DP_TXN1_CPU_C >>>
86 DP_TXP1_CPU_C >>>
86 DP_TXN0_CPU_C >>>
86 DP_TXP0_CPU_C >>>
86 DP_AUXN_CPU_C <<<
86 DP_AUXN_CPU_C <<<

For AFTE

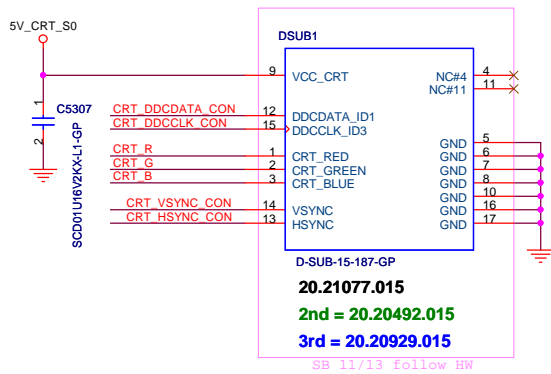


EAEG50 KB UMA

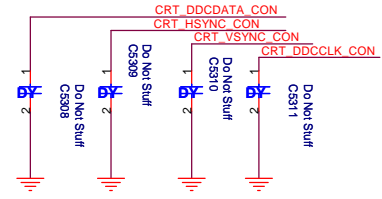
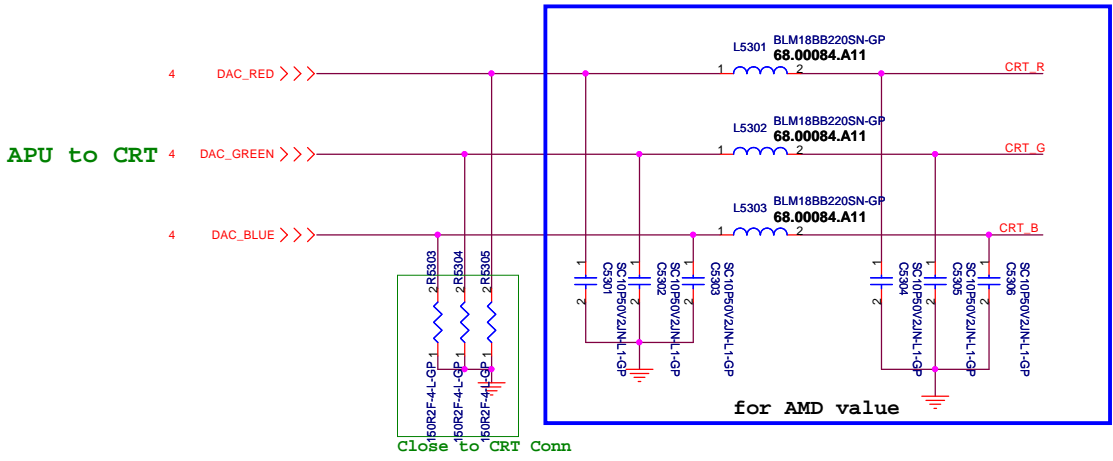
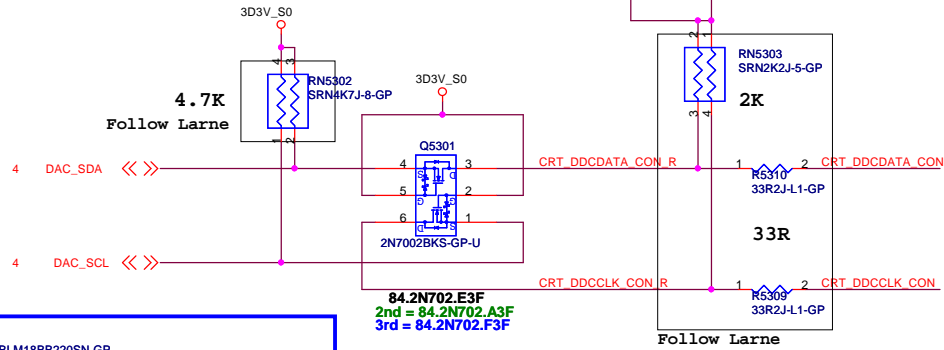
緯創資通

Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichin,
Taipei Hsien 221, Taiwan, R.O.C.

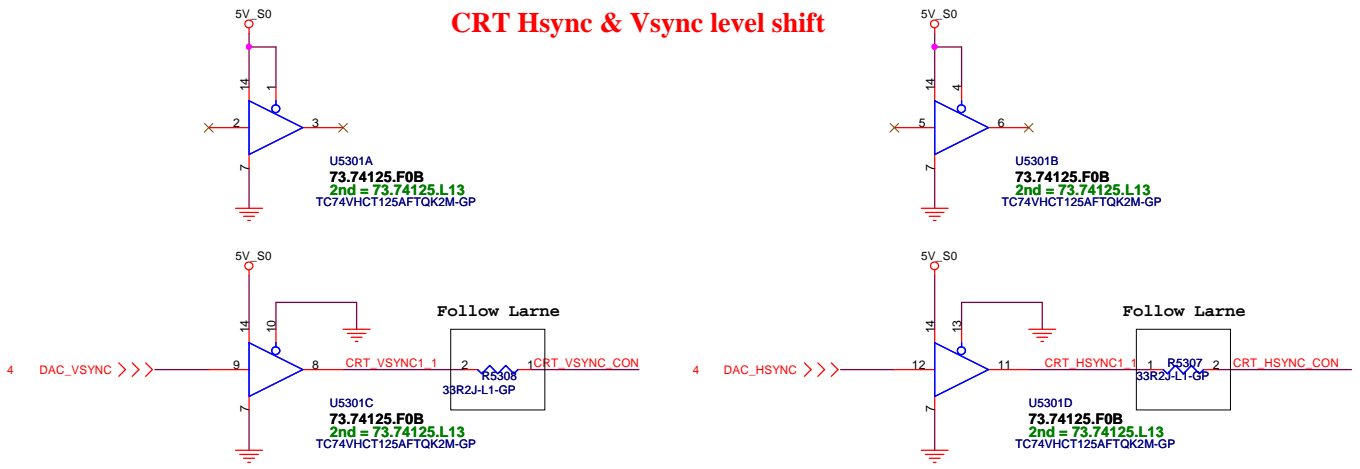
Title		
LCD Connector		
Size	Project Name	Rev
	KABINI	SA
Date: Monday, February 25, 2013		
Sheet 52 of 102		



CRT DDCDATA & DDCCLK level shift

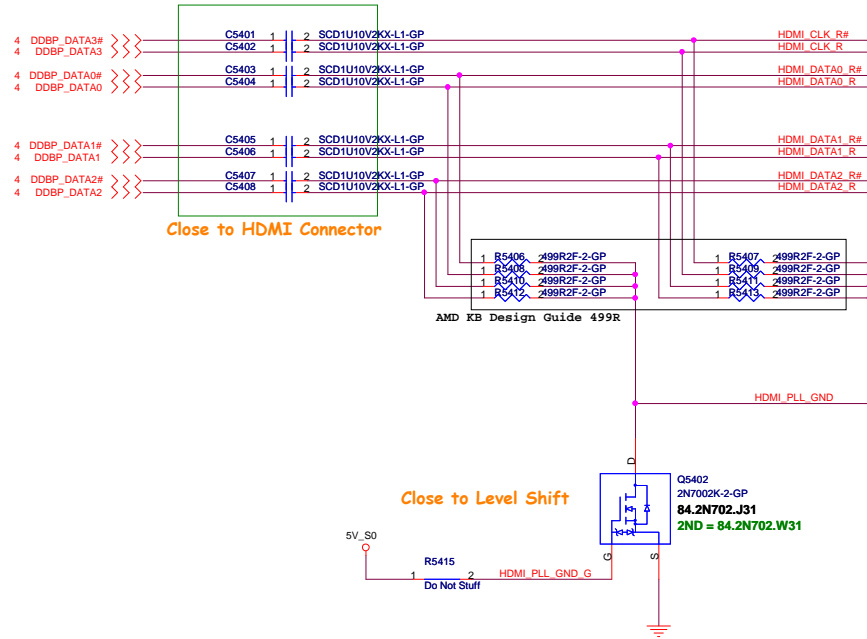


CRT Hsync & Vsync level shift

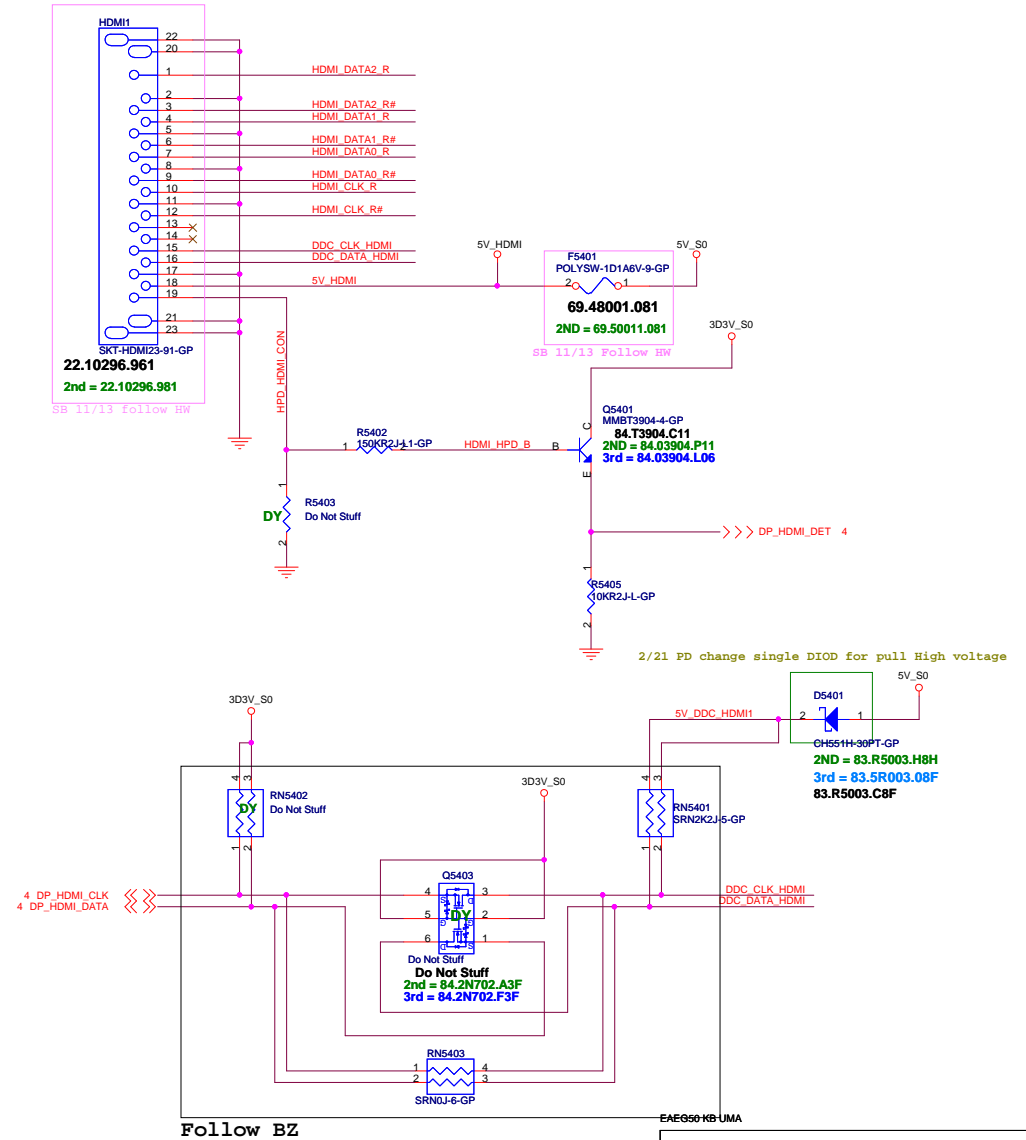


SSID = VIDEO

HDMI Level Shifter & CONNECTOR



HDMI CONN



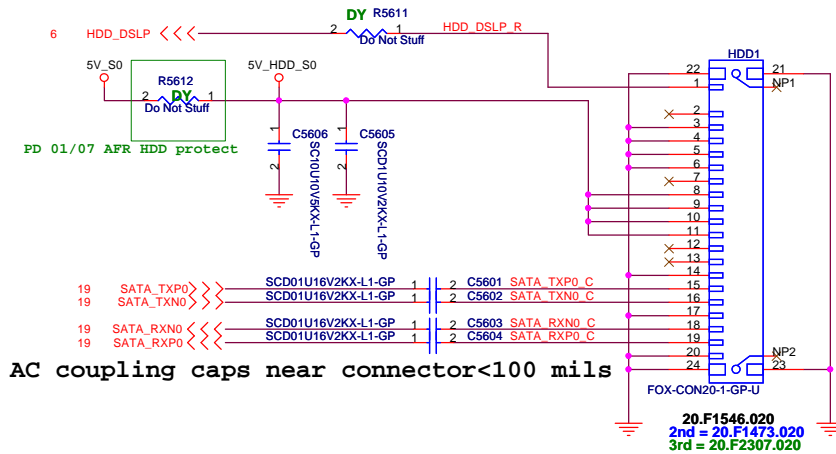
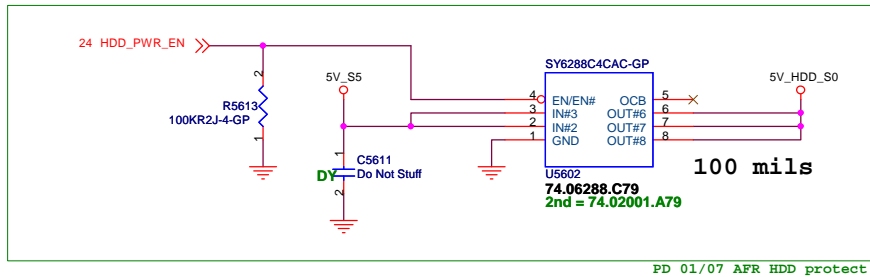
緯創資通 Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

HDMI Level Shifter/Connector			
Size	Project Name	KABINI	Rev SA
Date: Thursday, February 21, 2013	Sheet	54	of 102

5					4					3					2					1								
D																												
C																												
B																												
A																												
EAEG50 KB UMA																												
<div><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></div>																												
Title																												
Reserved																												
Size		Project Name																Rev		SA								
Date:		Friday, September 07, 2012																Sheet		55		of		102				
2																		1										

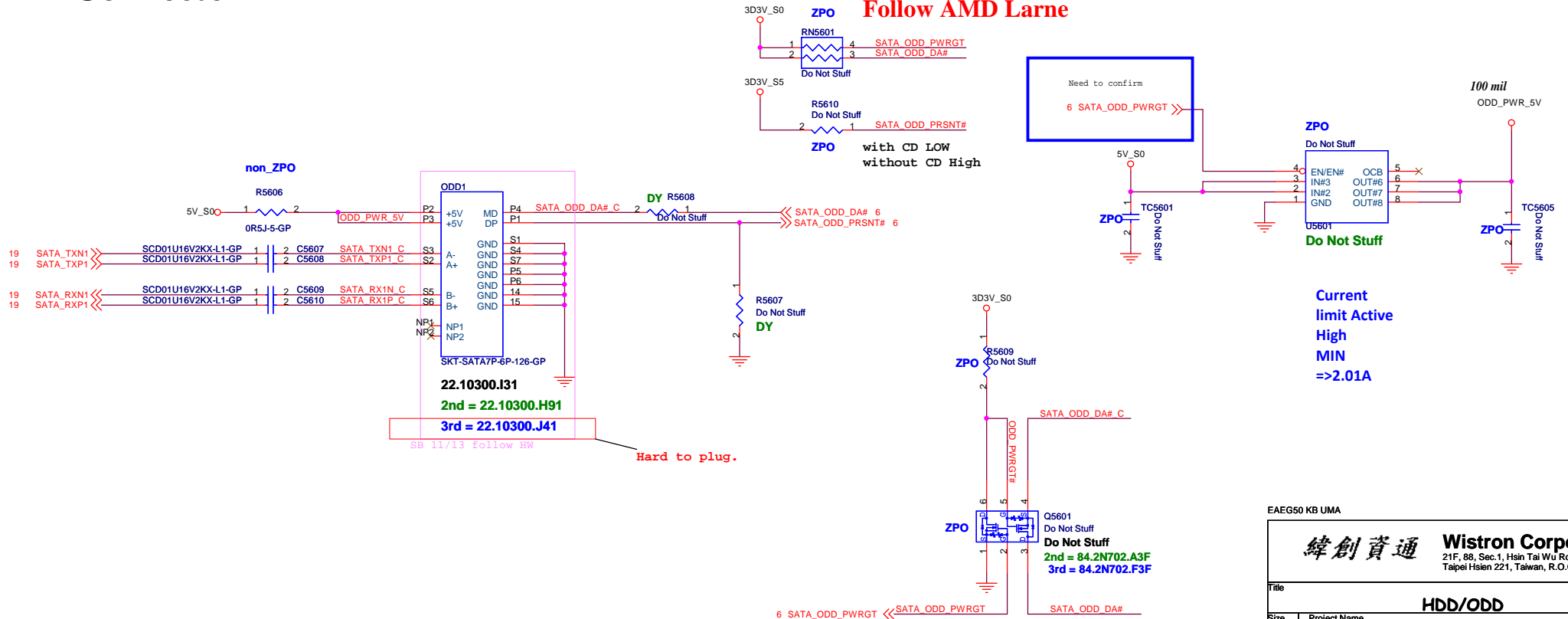
SSID = SATA

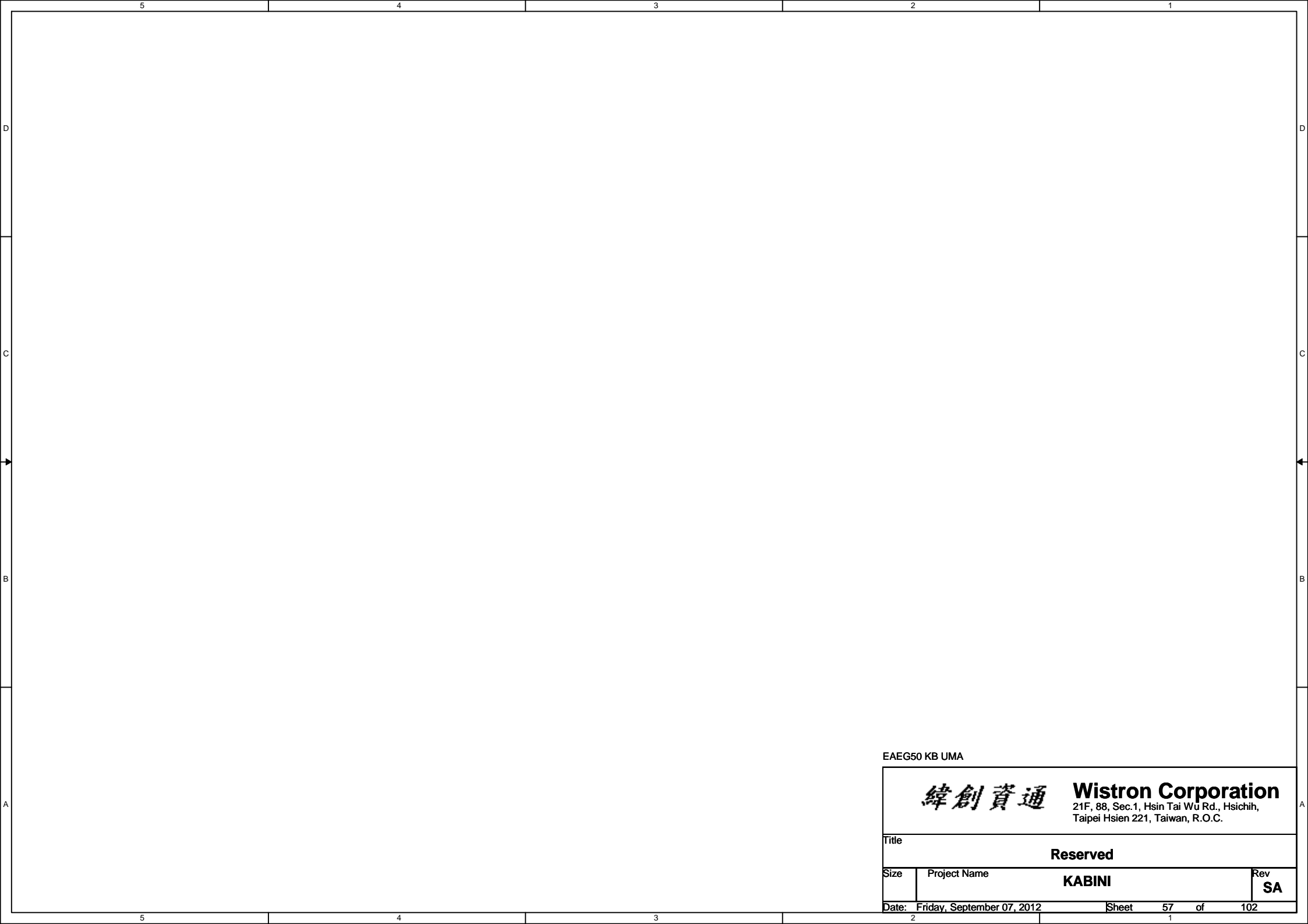
SATA HDD Connector



ODD Connector

SATA Zero Power ODD Follow AMD Larne





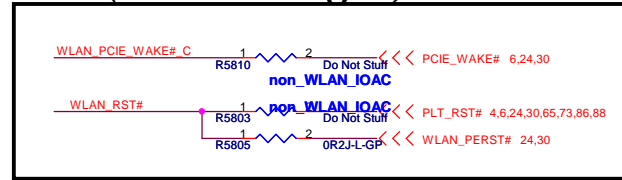
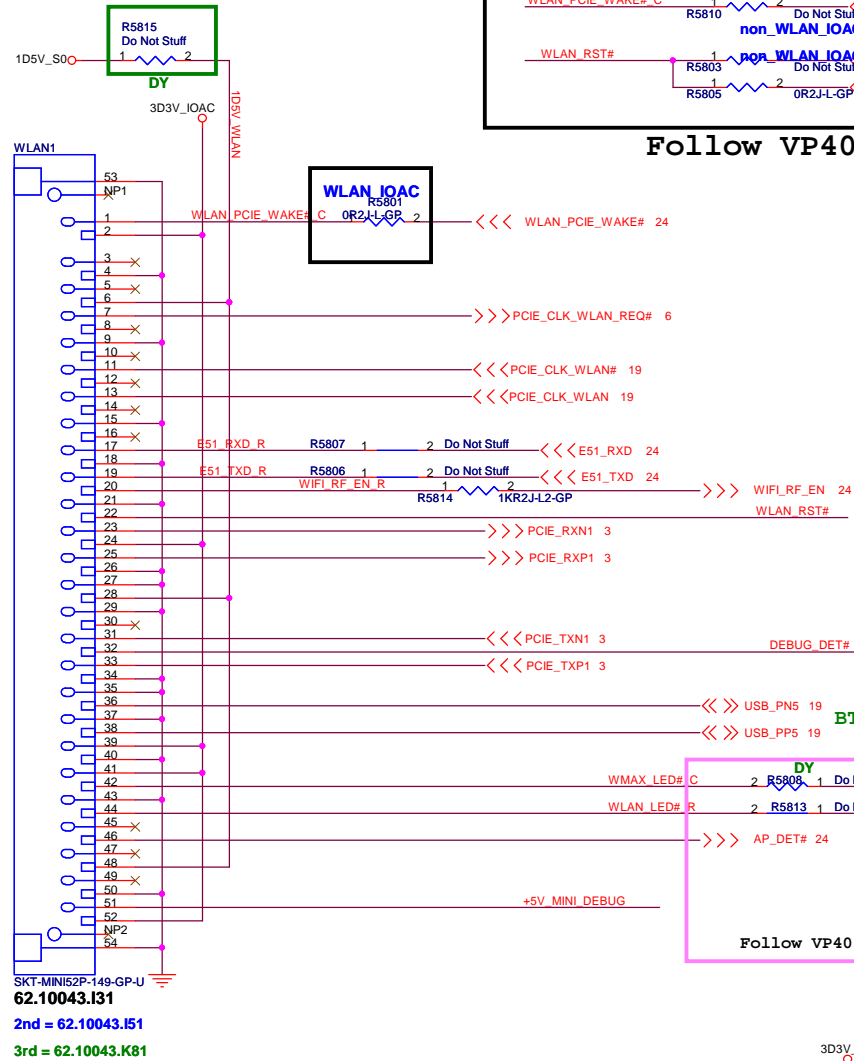
EAEG50 KB UMA

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
Reserved			
Size	Project Name		Rev
	KABINI		SA
Date: Friday, September 07, 2012		Sheet	57 of 102

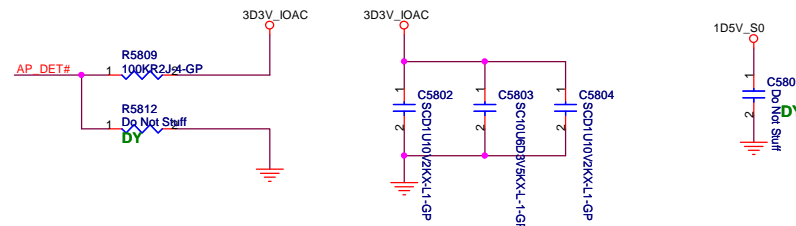
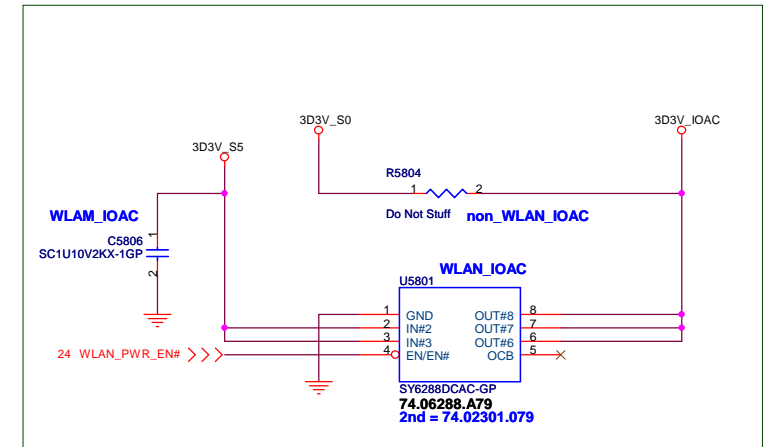
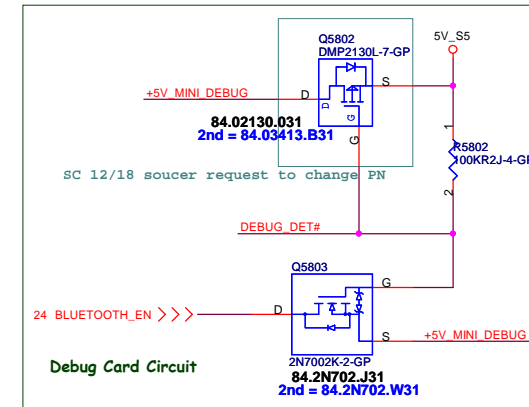
SSID = Wireless

Mini Card Connector(802.11a/b/g/n)

10/15 follow EA40-HW



Follow VP40



EAEG50 KB UMA

SSID = Wireless

Mini Card Connector(WWAN)

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緯創資通

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

Title

WWAN CONN

Size

Project Name

KABINI

Rev

SA

Date: Friday, September 07, 2012

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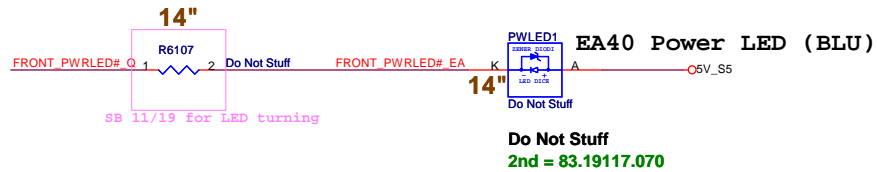
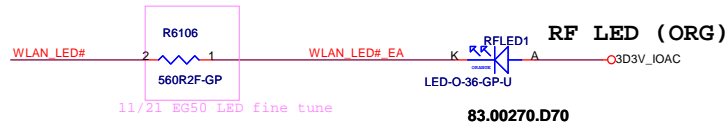
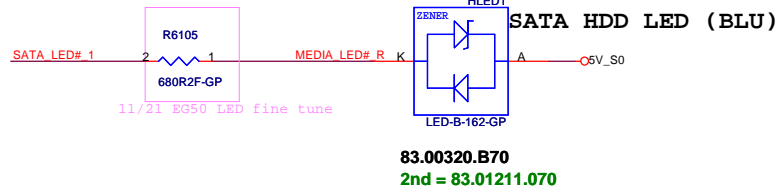
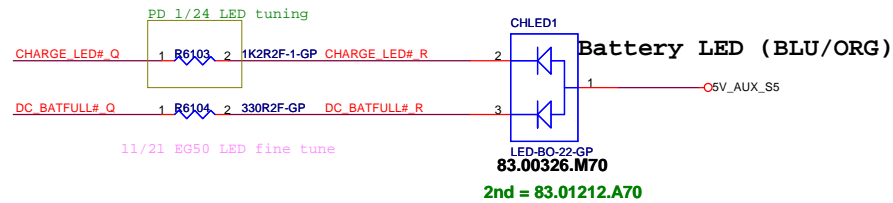
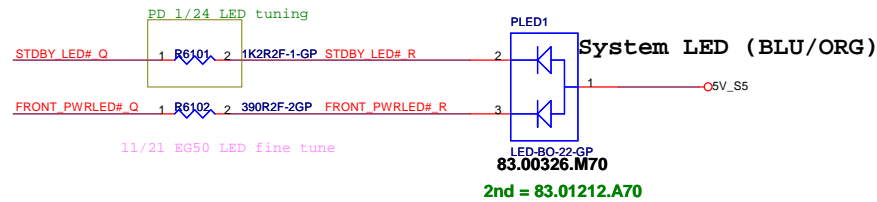
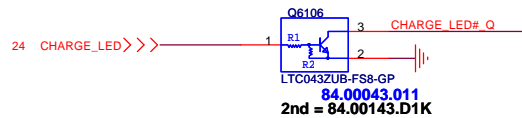
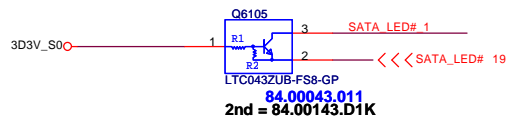
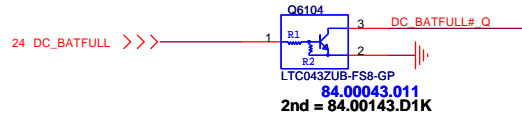
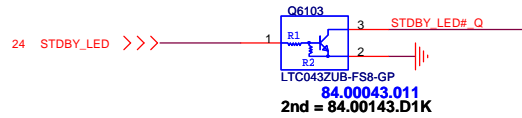
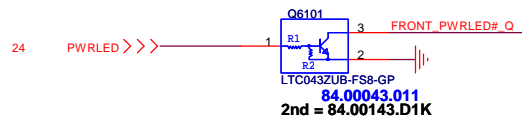
SSID = mSATA

Mini Card Connector(mSATA)

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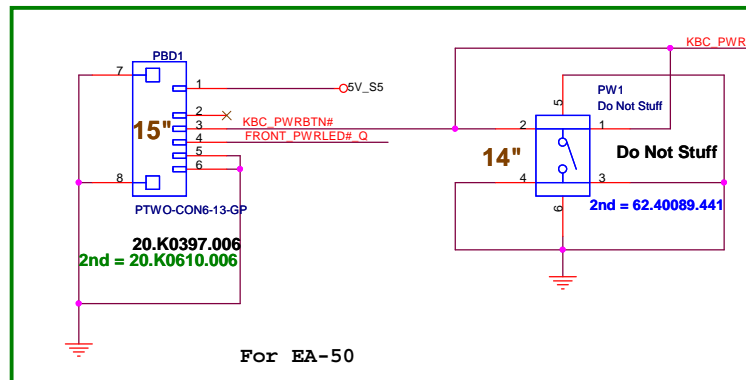
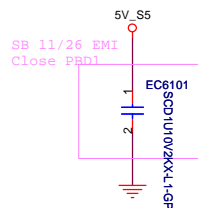
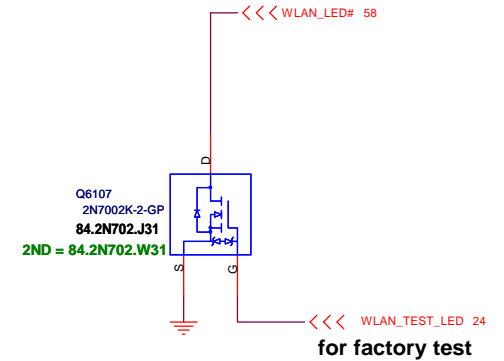
<div>緯創資通Wistron Corporation</div> <div>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.</div>		
TitlemSATA Connector		
Size	Project NameKABINI	RevSA
Date: Friday, September 07, 2012		Sheet 60 of 102

SSID = User.Interface



WLAN_LED

From module



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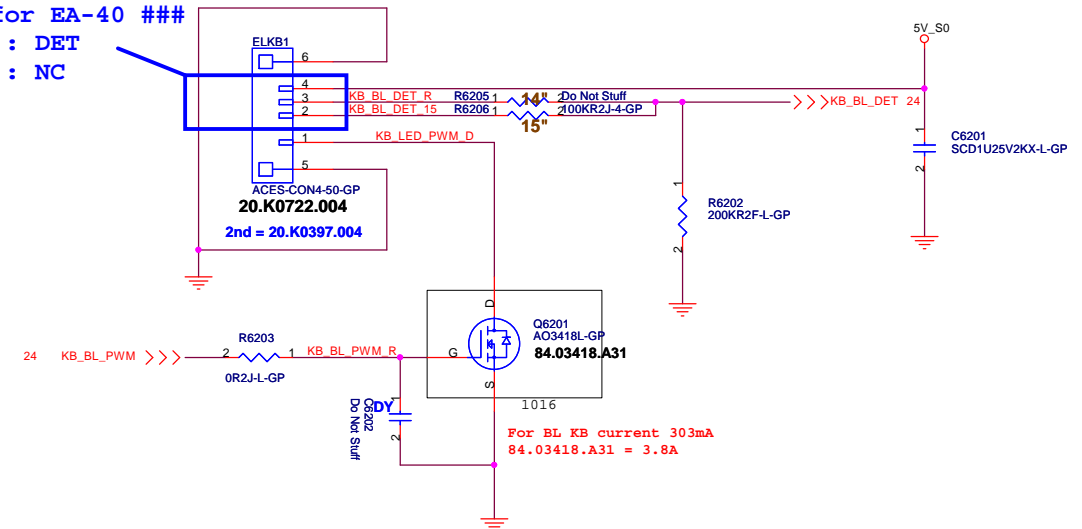
緯創資通 Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title			
LED Bard/Power Button			
Size	Project Name		Rev
	KABINI		SA
Date: Monday, February 04, 2013		Sheet 61 of 102	

Internal KeyBoard Connector

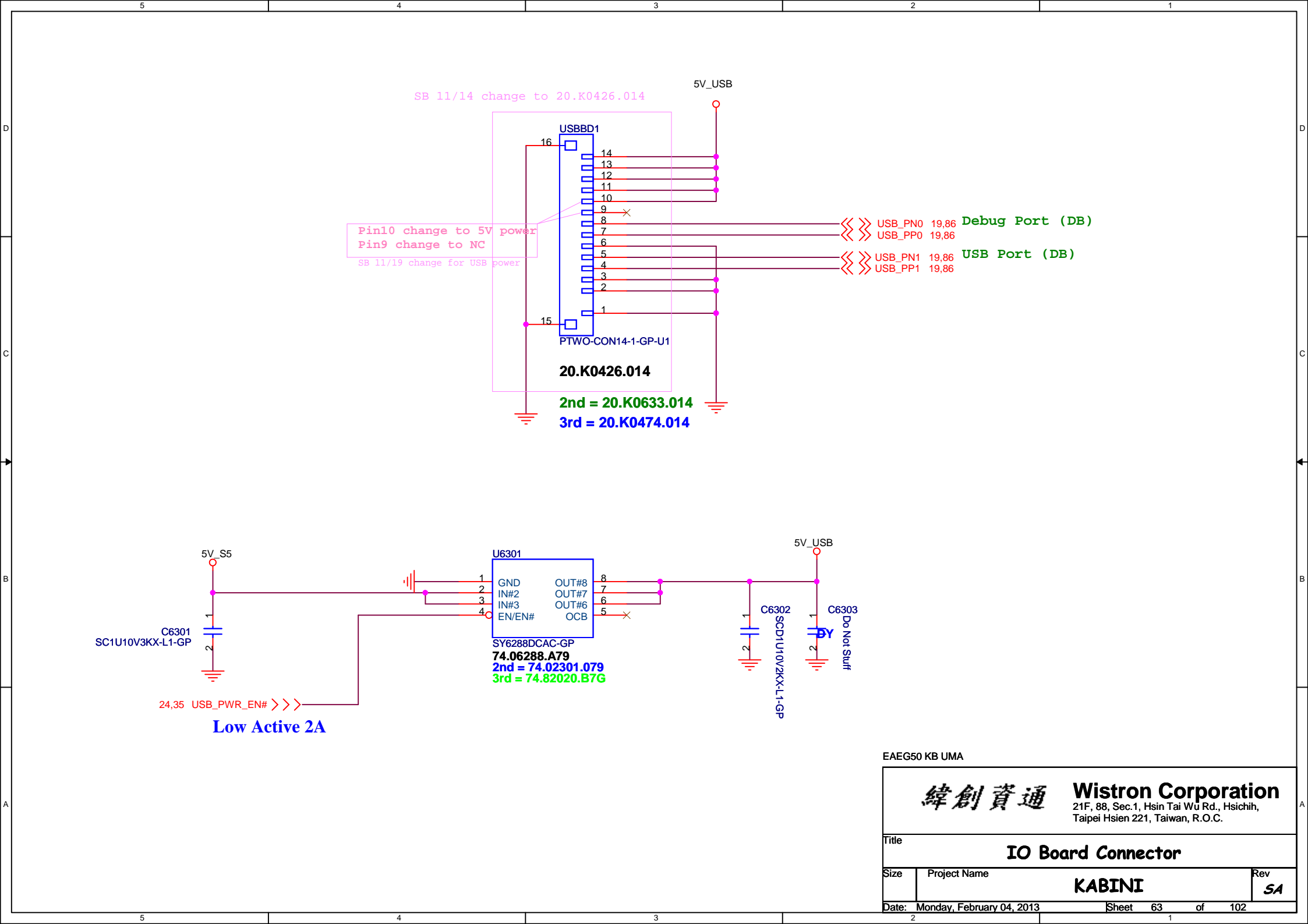


14" & 15" use the same KB



緯創資通 **Wistron Corporation**
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title			
Key Board/Touch Pad			
Size	Project Name		Rev
	KABINI		SA
Date:	Tuesday, February 19, 2013	Sheet 62 of 102	



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緯創資通

Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title

IO Board Connector

Size

Project Name

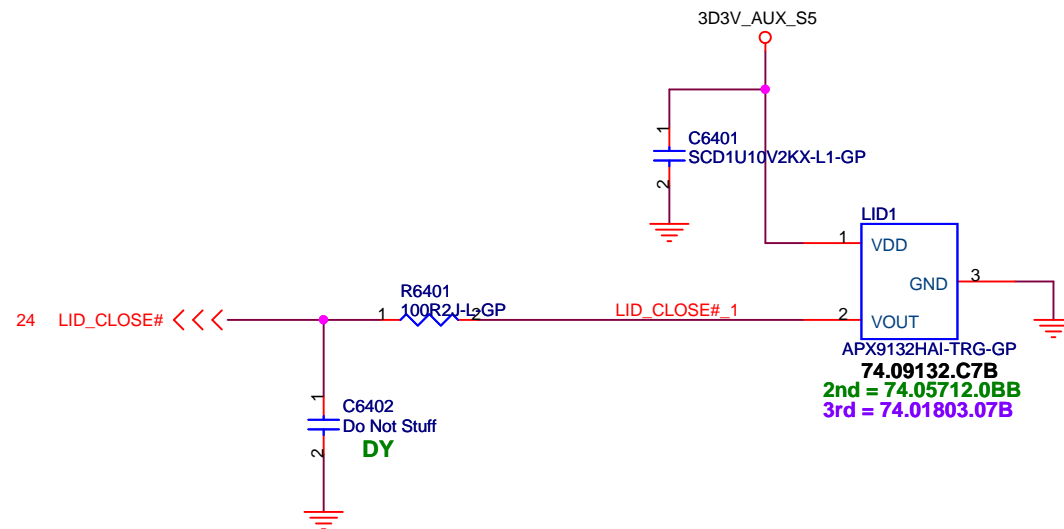
KABINI

Rev

SA

Date: Monday, February 04, 2013

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EAEG50 KB UMA

緯創資通

Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title

Hall Sensor

Size

Project Name

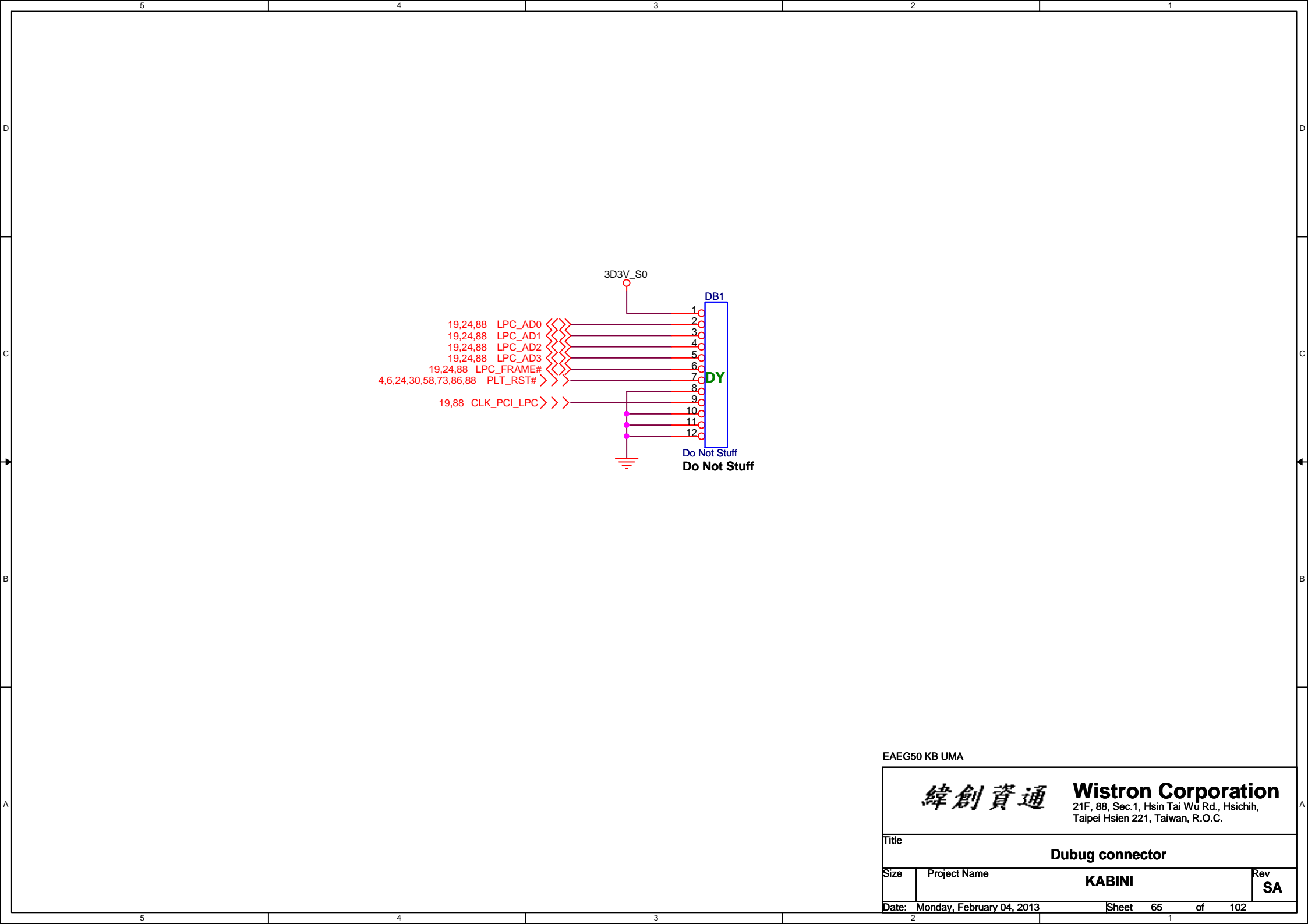
KABINI

Rev



SA

Date: Monday, February 04, 2013

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EAEG50 KB UMA

			
		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
Dubug connector			
Size	Project Name		Rev
	KABINI		SA
Date:	Monday, February 04, 2013	Sheet	65 of 102

(Blanking)

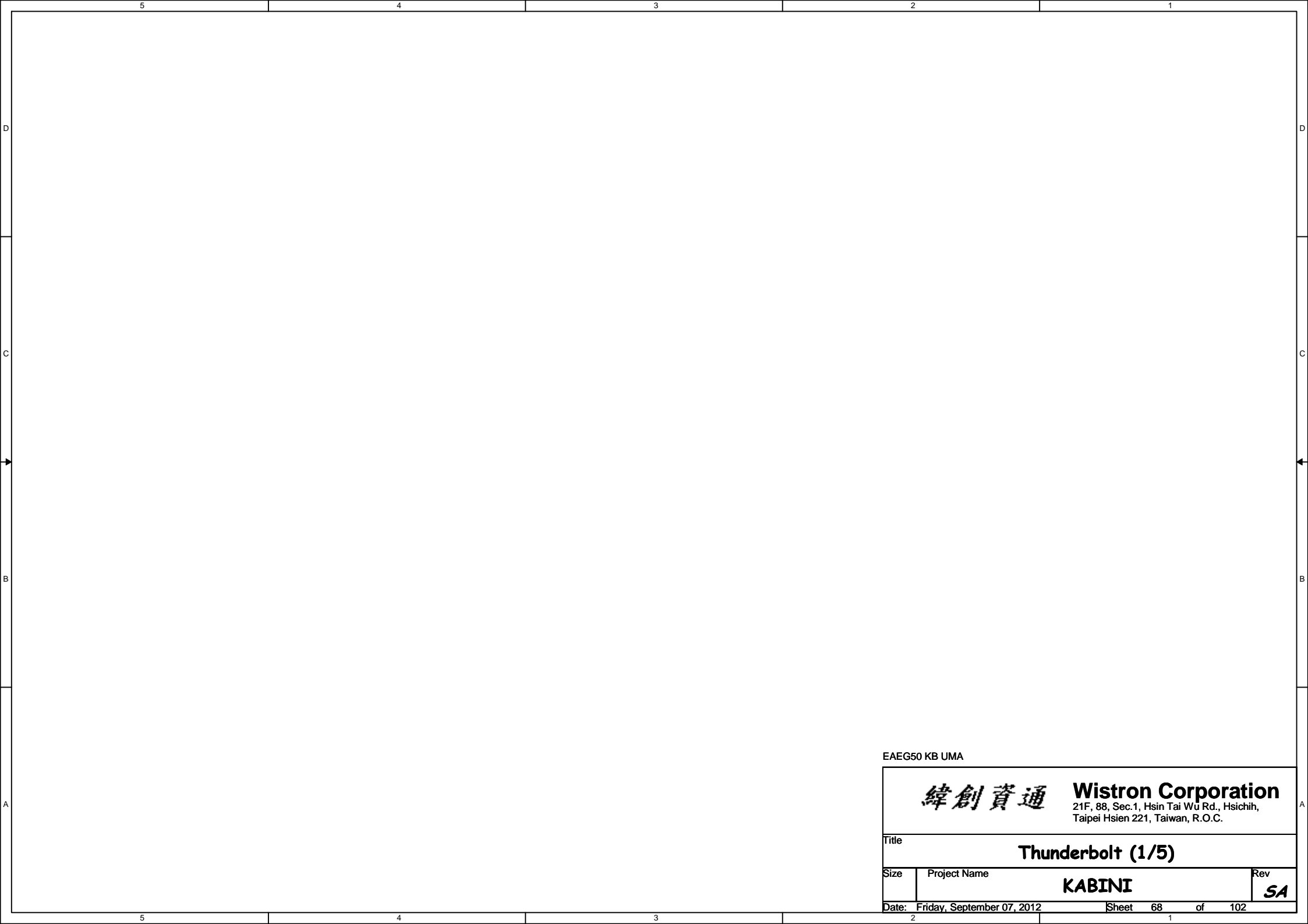
EAEG50 KB UMA

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
Reserved			
Size	Project Name		Rev
	KABINI		SA
Date: Friday, September 07, 2012		Sheet 66 of 102	


SSID = User.Interface

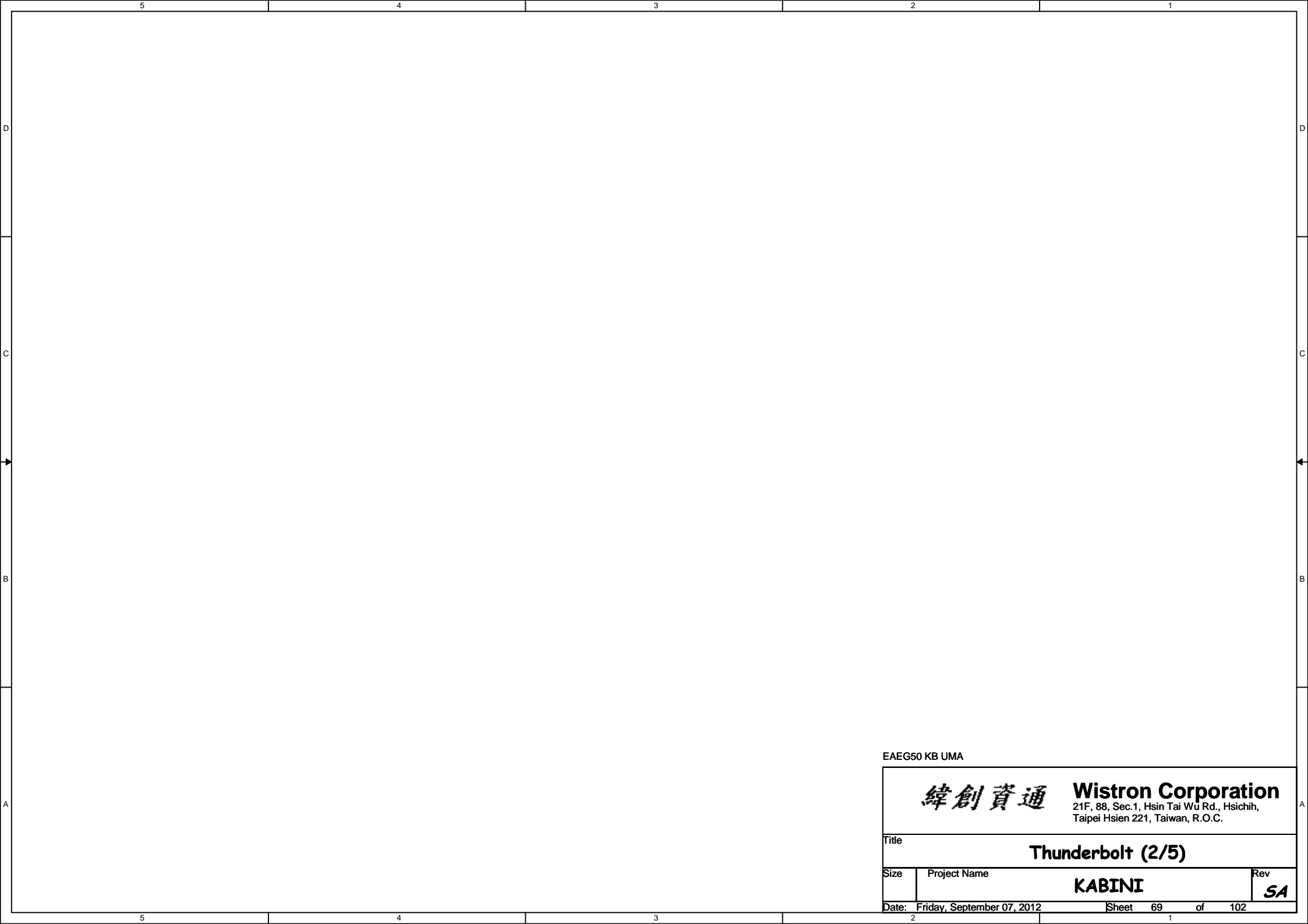
EAEG50 KB UMA

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
G Sensor			
Size	Project Name		Rev
	KABINI		SA
Date: Friday, September 07, 2012		Sheet	67 of 102



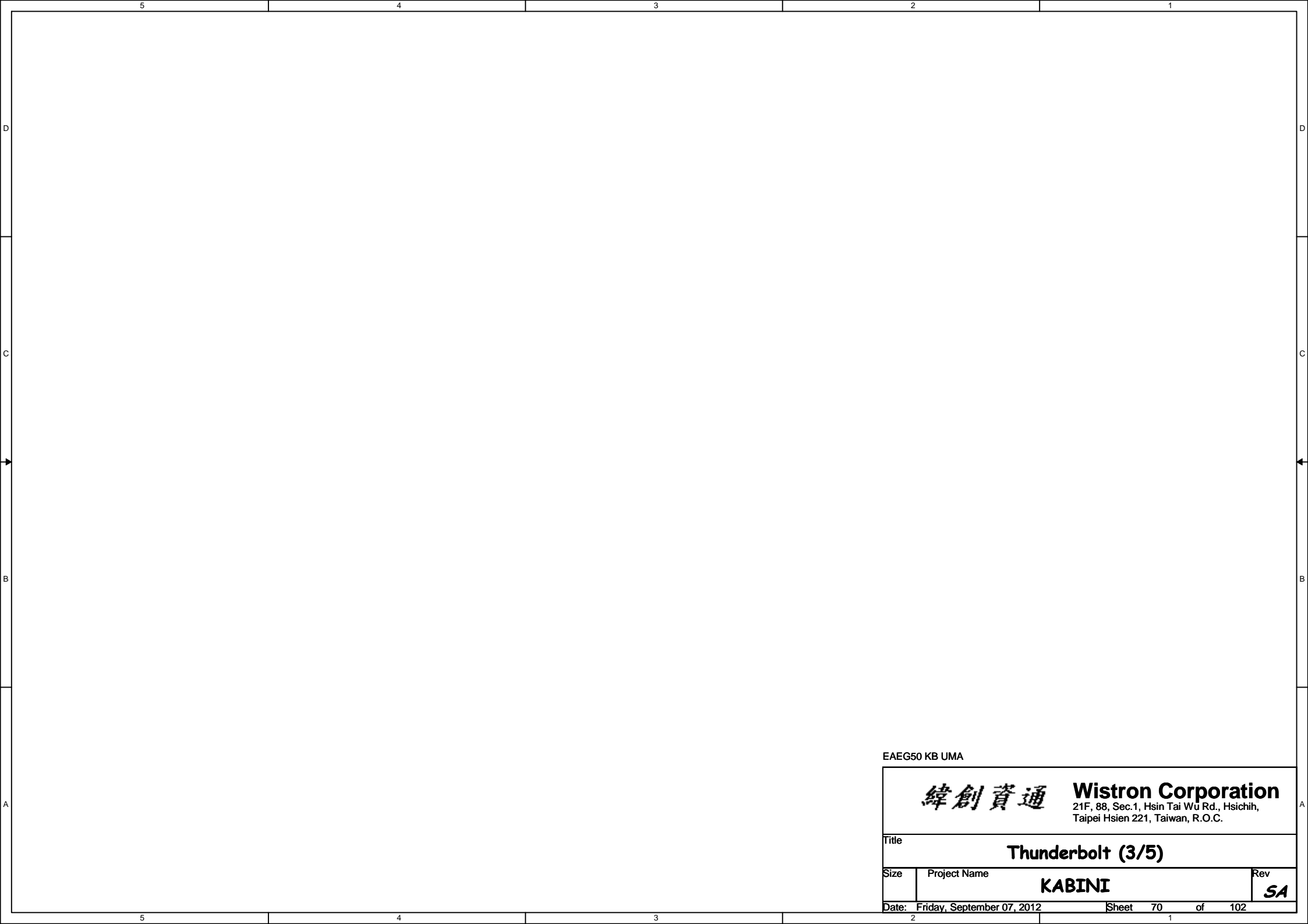
EAEG50 KB UMA

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title Thunderbolt (1/5)		
Size	Project Name KABINI	Rev SA
Date: Friday, September 07, 2012		Sheet 68 of 102



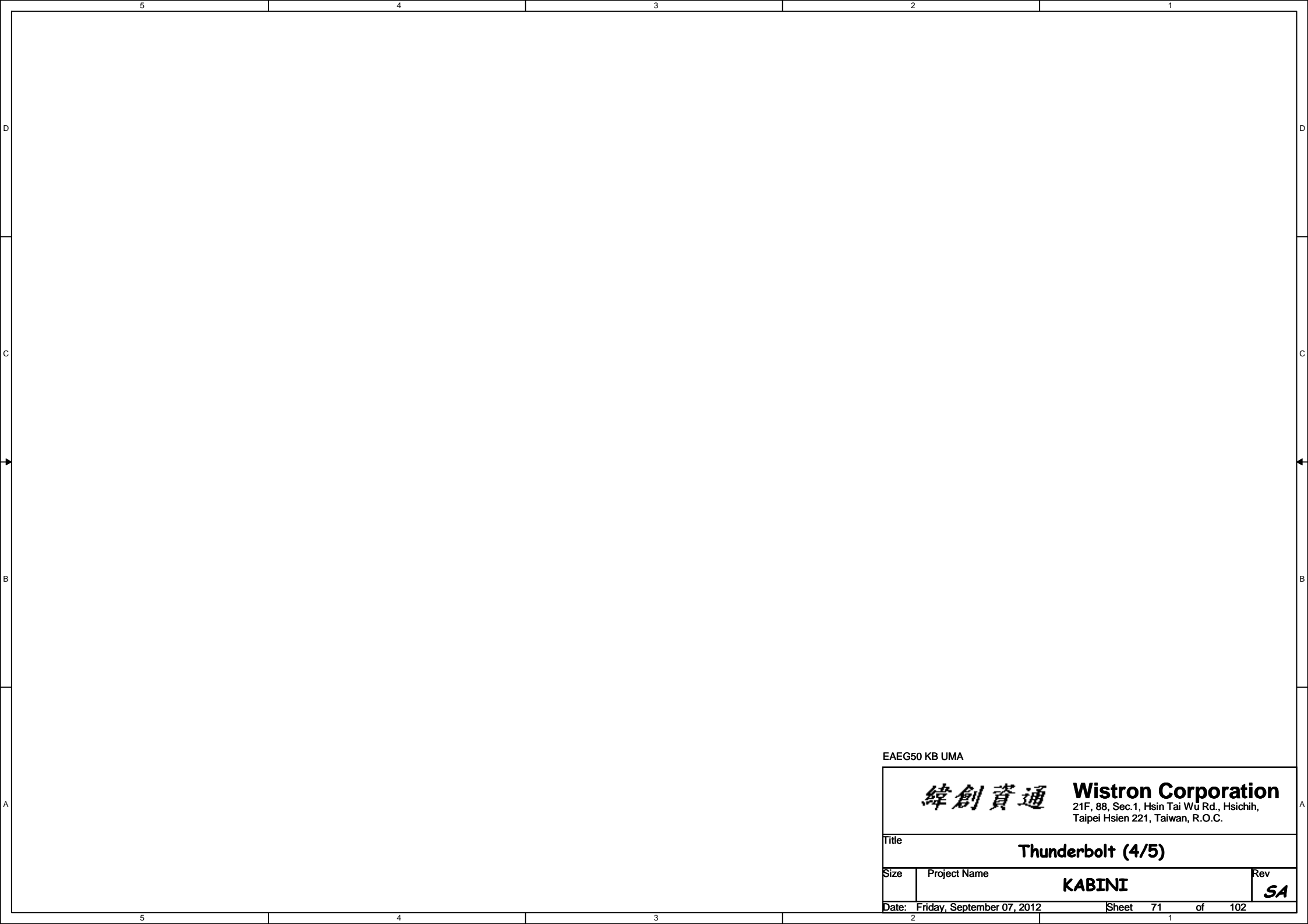
EAEG50 KB UMA

<div><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></div>	
TitleThunderbolt (2/5)	
Size	Project NameKABINI
Date: Friday, September 07, 2012	RevSA
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EAEG50 KB UMA

<div><div>緯創資通</div><div>Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.</div></div>		
Title <div>Thunderbolt (3/5)</div>		
Size	Project Name <div>KABINI</div>	Rev <div>SA</div>
Date: Friday, September 07, 2012		Sheet 70 of 102



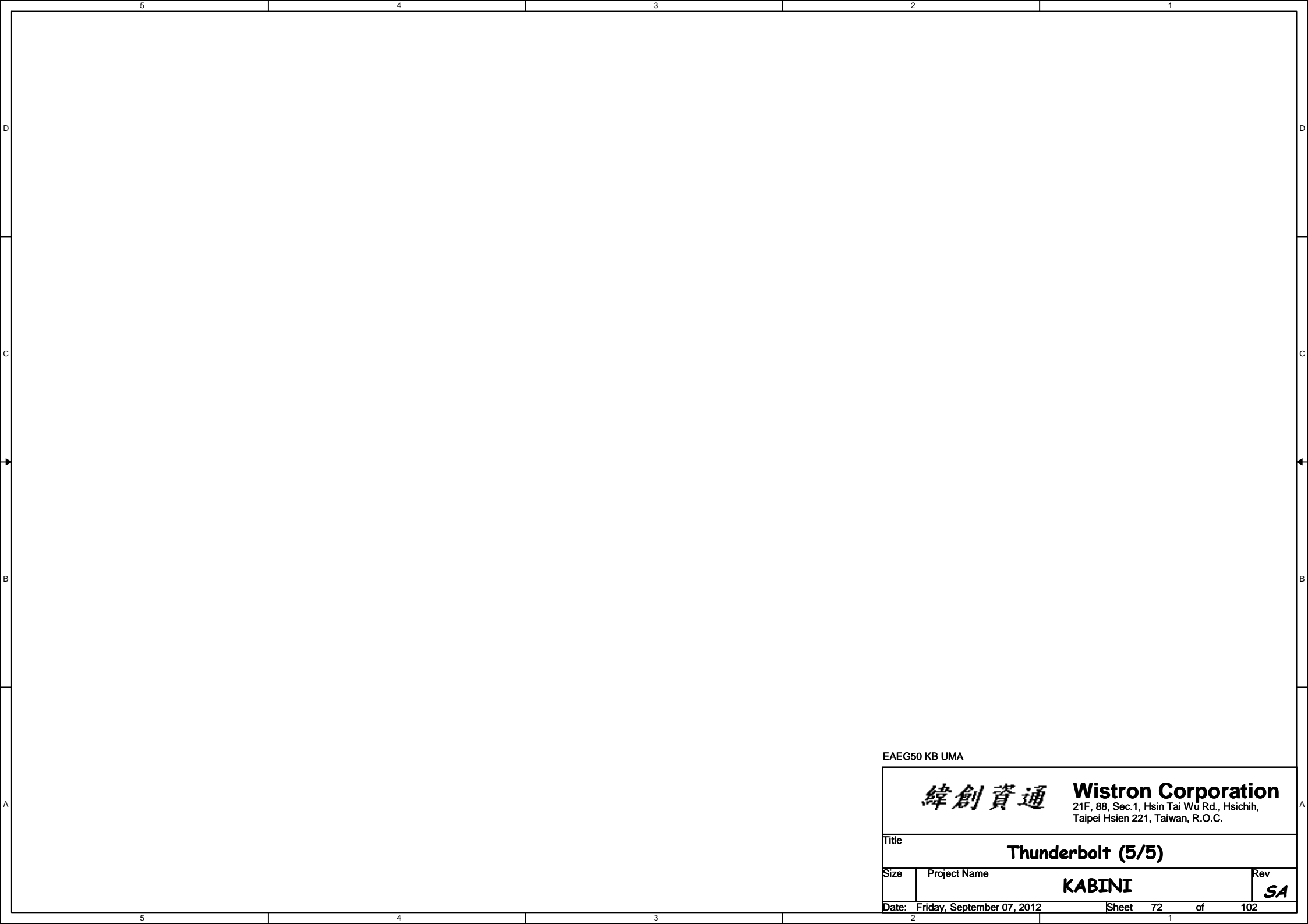
EAEG50 KB UMA



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

Title **Thunderbolt (4/5)**

Size	Project Name	Rev
	KABINI	SA



EAEG50 KB UMA

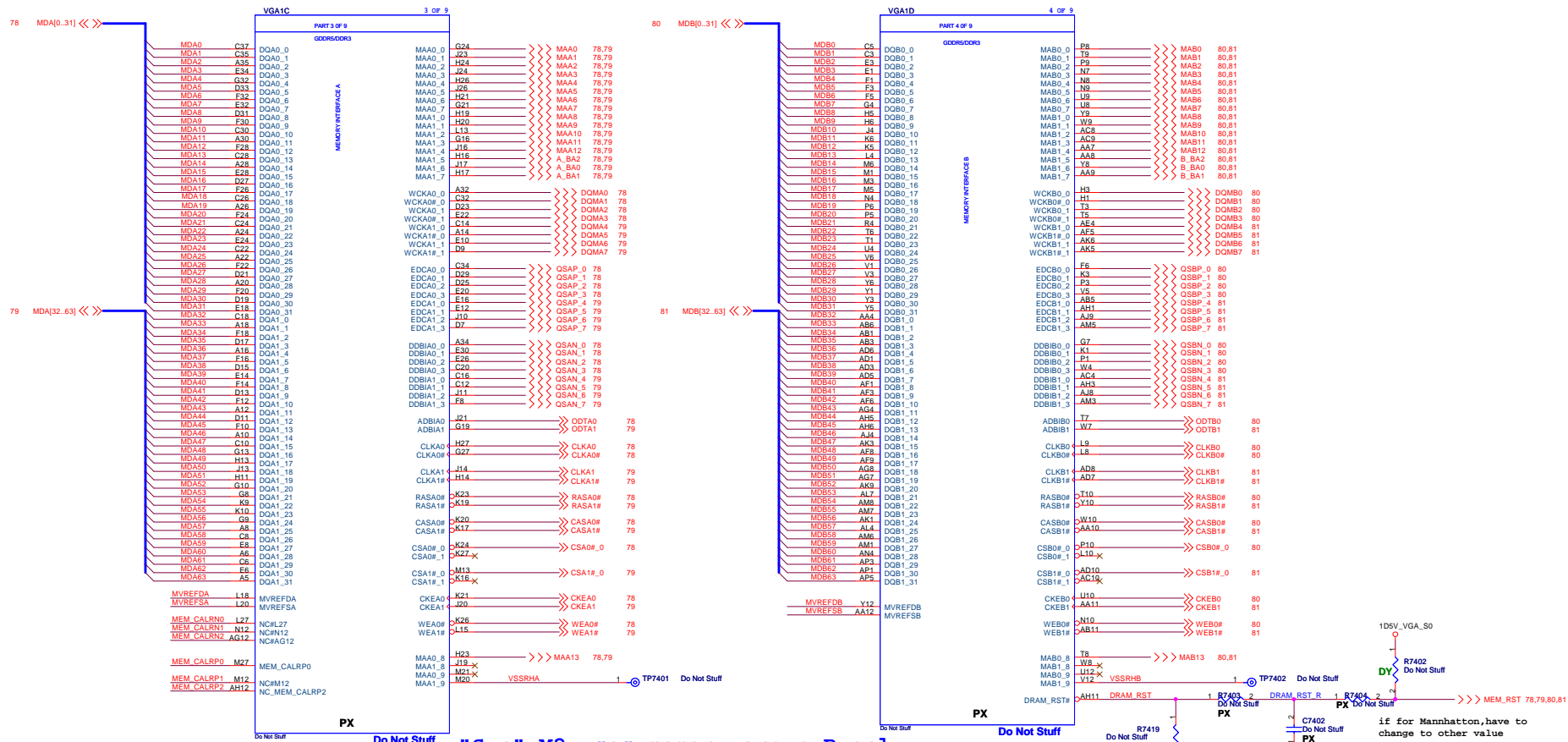
緯創資通

Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title

Thunderbolt (5/5)

Size	Project Name	Rev
	KABINI	SA



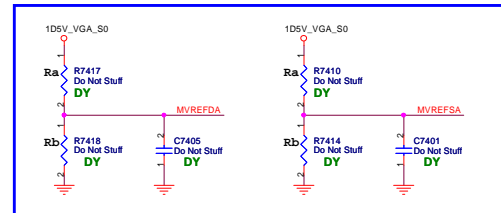
"Sun"-M2 uses memory group B only,
while "Sun"-S3 uses memory group A only

This basic topology should be used for DRAM_RAT for DDR3/GDDR5

DDR3/GDDR3 Memory Stuff Option(Mad/Park)

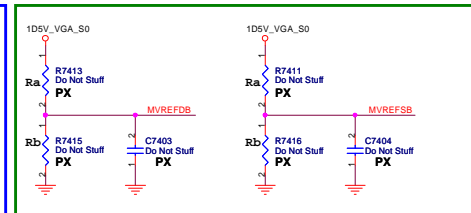
	DDR3	GDDR3	GDDR5	MEM_VDDQ
VDDQ	1.5V	1.8V/1.5V	1.5V	
Ra	40.2R	40.2R	40.2R	
Rb	100R	100R	100R	

SUN S3 package



PLACE MVREF DIVIDERS AND CAPS CLOSE TO ASIC

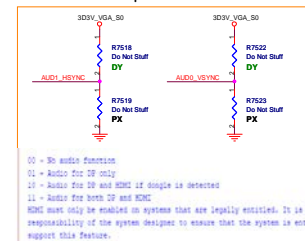
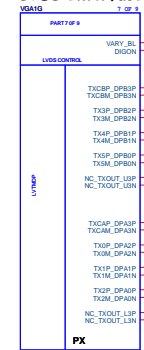
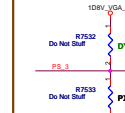
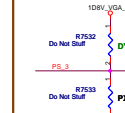
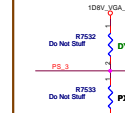
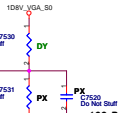
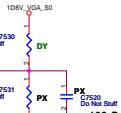
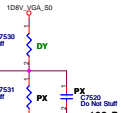
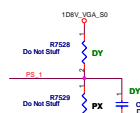
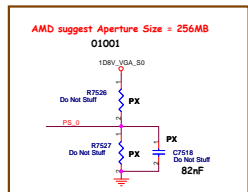
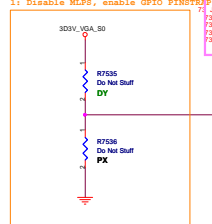
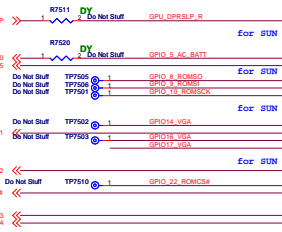
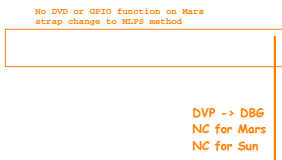
SUN M2 package



MEM_CALRN0	Whistler/Thames: Connect to VDDR1 through a 240Ω (40.5%) resistor. Prefered resistor tolerance is 0.5%, but 1% is acceptable. Seymour: NC Heathrow/Chelsea: NC	MEM_CALRP0	Whistler/Thames: need a 240Ω (1%) termination to ground. Seymour: NC Heathrow/Chelsea: Need a 120Ω (1%) termination to ground.
MEM_CALRN1	Whistler/Thames: NC Seymour: Connect to VDDR1 through a 240Ω (40.5%) resistor. Heathrow/Chelsea: NC	MEM_CALRP1	Whistler/Thames: NC Seymour: MEM_CALRP1—need a 240Ω (1%) termination to ground.
MEM_CALRN2	Whistler/Thames: Connect to VDDR1 through a 240Ω (40.5%) resistor. Seymour: NC Heathrow/Chelsea: NC	MEM_CALRP2	Whistler/Thames: MEM_CALRP2—need a 240Ω (1%) termination to ground. Seymour: NC Heathrow/Chelsea: Need a 120Ω (1%) termination to ground.

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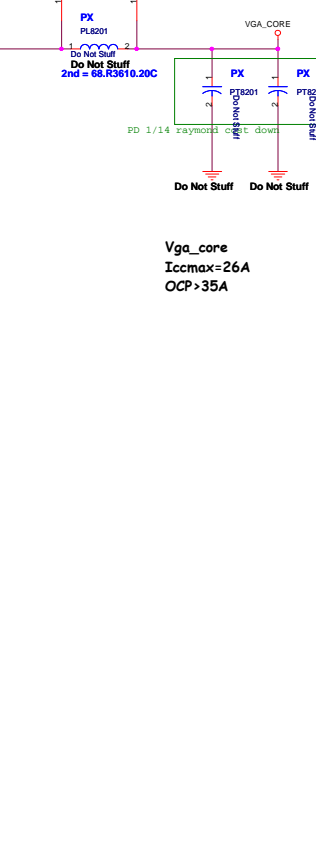
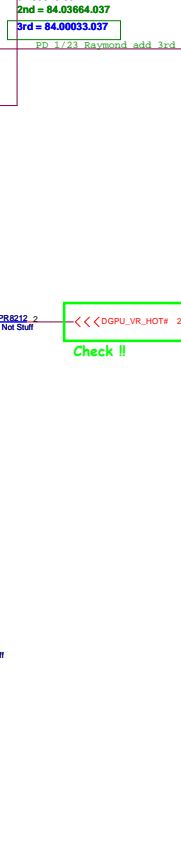
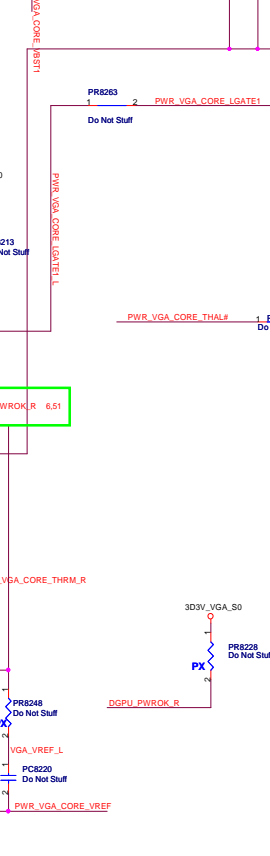
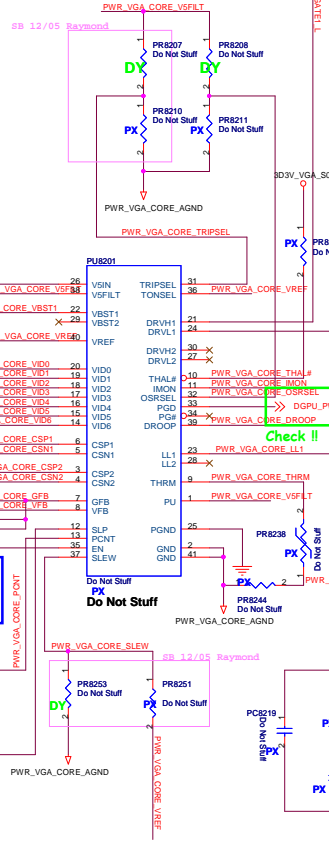
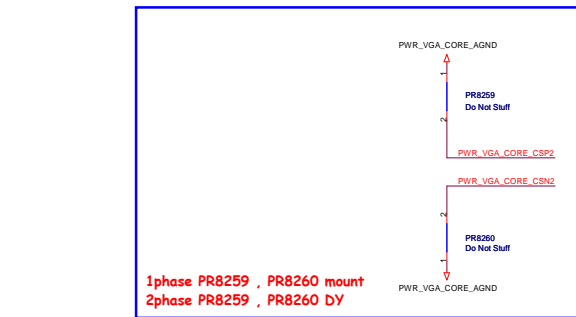
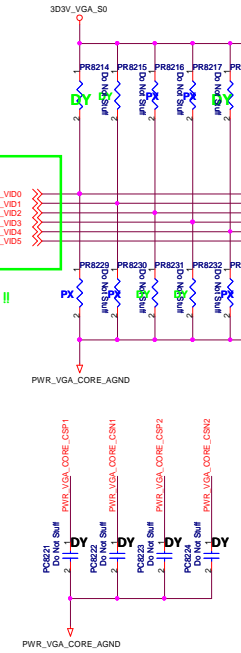
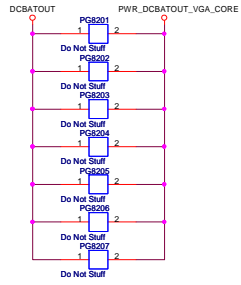
緯創資通 Wistron Corporation		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsinchu, Taipei Hsien 221, Taiwan, R.O.C.	
Title		GPU_Digitalout	
Size	Project Name	KABINI	Rev 54
Date: Monday, February 04, 2013	Sheet 74	of 102	



MILES			Recommended
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Note: AUD[1] (on HSYNC) and AUD[0] (on VSYNC) still need to be properly pin strapped even in a MIPS-based design.

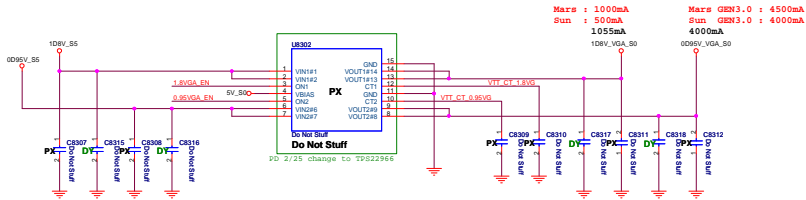
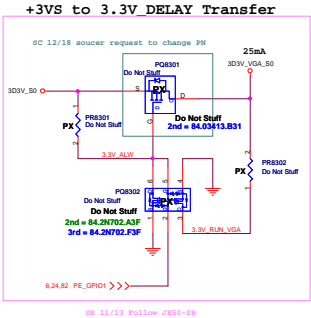
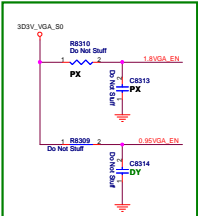
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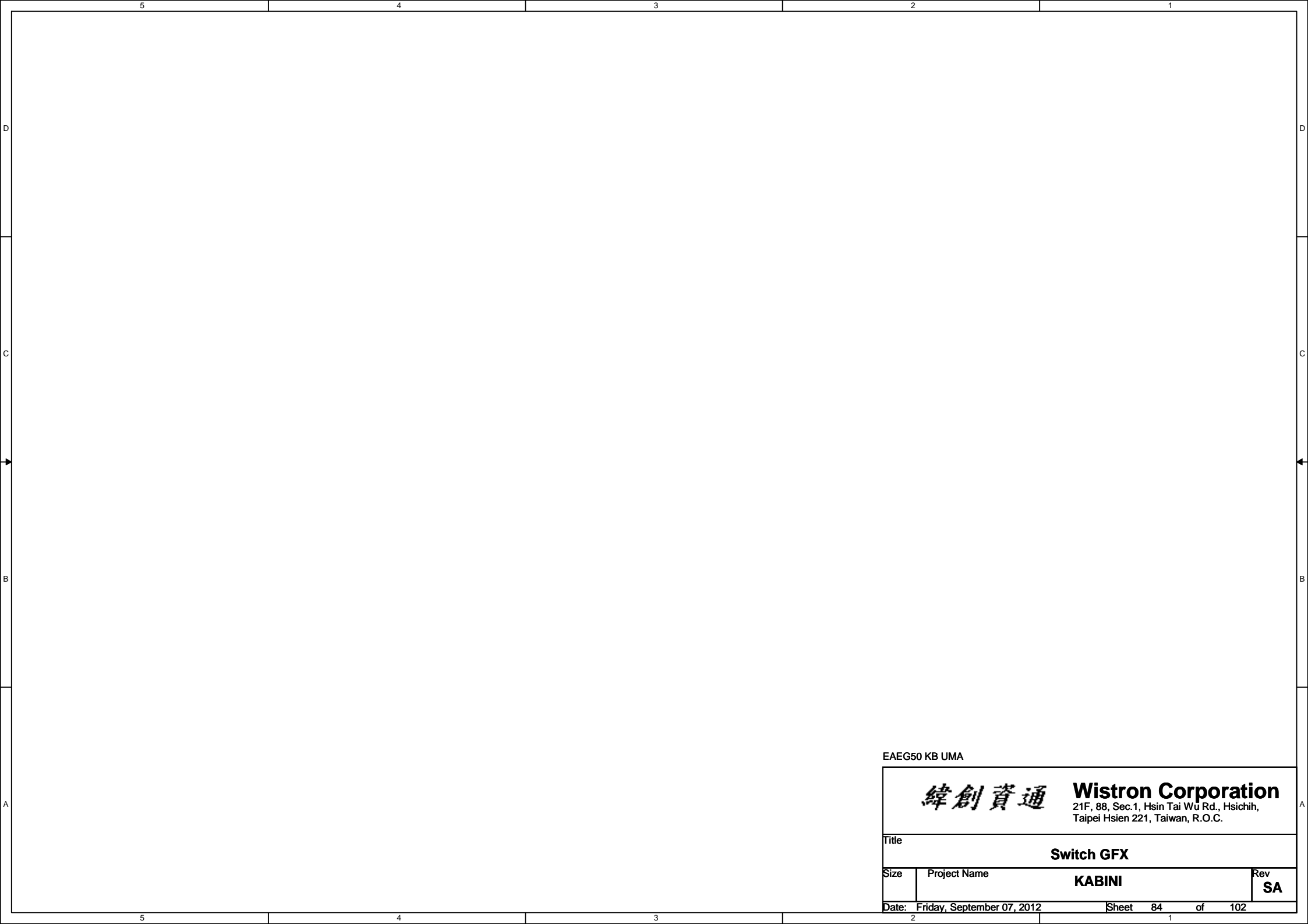


Vga_core
Iccmax=26A
OCP>35A

APL3523 for VGA_Power

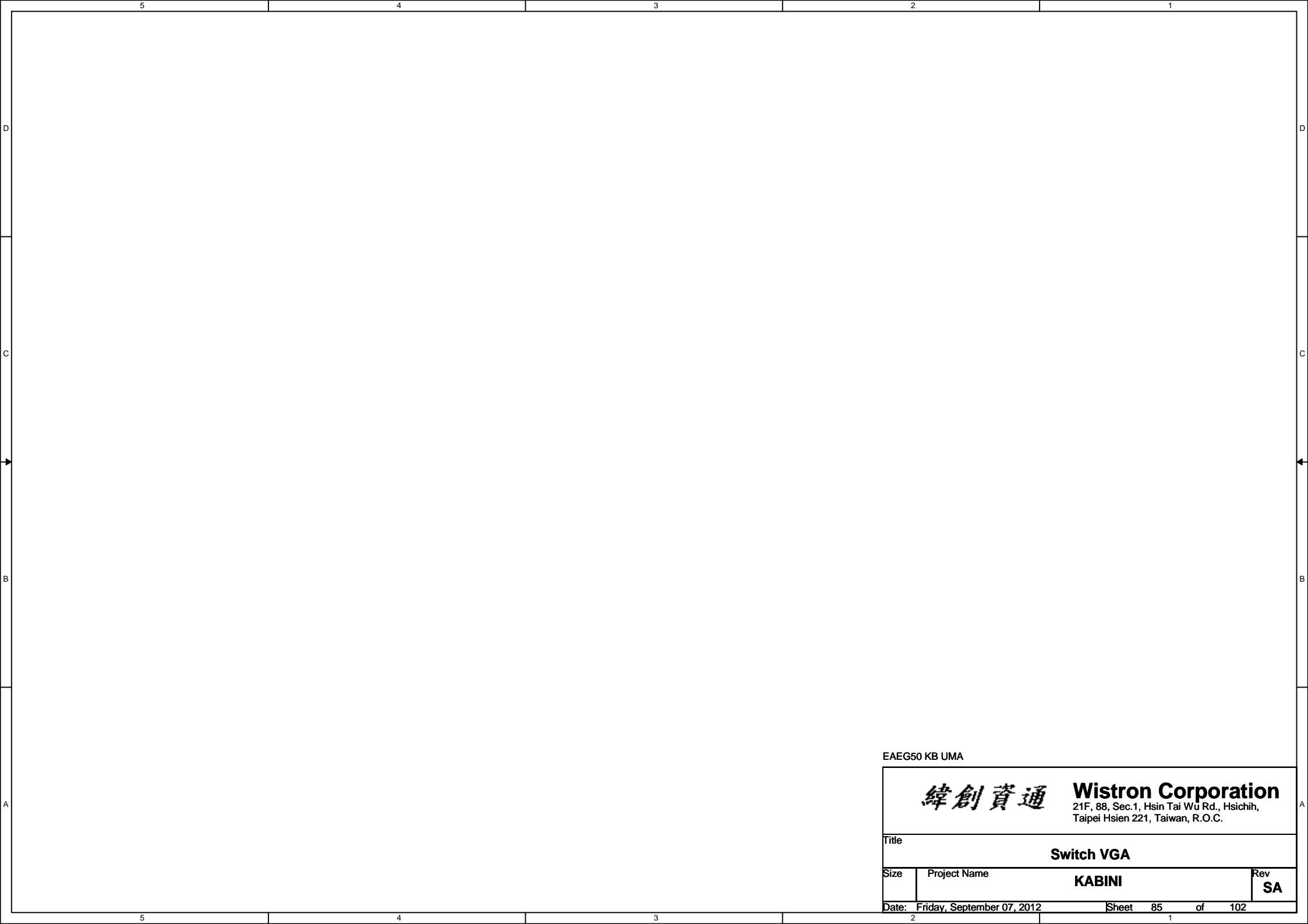
	FE_GP100	FE_GP101
dGPU mode	H	H
IGPU	L	L
IGPU with BACO	H	H



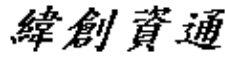


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<div><div>緯創資通</div><div>Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.</div></div>		
Title Switch GFX		
Size	Project Name KABINI	Rev SA
Date: Friday, September 07, 2012		Sheet 84 of 102

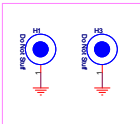


EAEG50 KB UMA

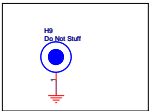
		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
Switch VGA			
Size	Project Name		Rev
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ZZ.00PAD.2N1

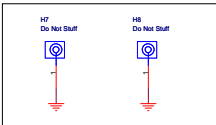
SB 11/14 follow BW for factory issue



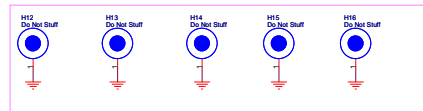
ZZ.00PAD.D01



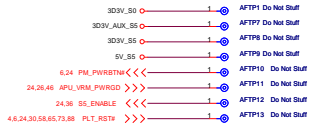
ZZ.00PAD.E01



SB 11/20 ZZ.00pad.2T1 for change BKT size



Check test point

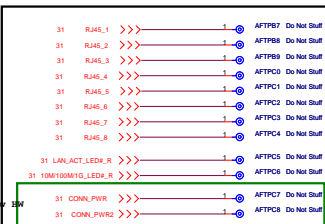


Test Point放在Dimm Door打開可量測處

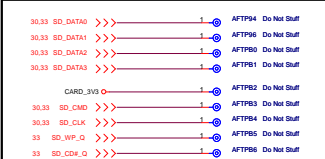
10/15 follow BW 24.27.81.90_KBC_PWBSTN >>> 1 AFTP91 Do Not Stuff



EDP + MIC connector



LAN_RJ45 connector

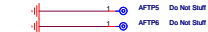


Card reader connector



USBBD connector

DC IN connector



Battery connector



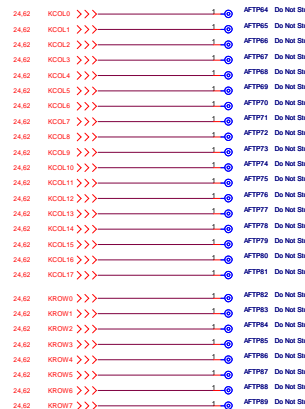
Speaker connector



HP connector



FAN connector



Normal KB connector



Touch Pad connector

EAE090 KB UAA

緯創資通 Wistron Corporation
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Taipei Hsien 321, Taiwan, R.O.C.

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UNUSED PARTS/EMI Capacitors

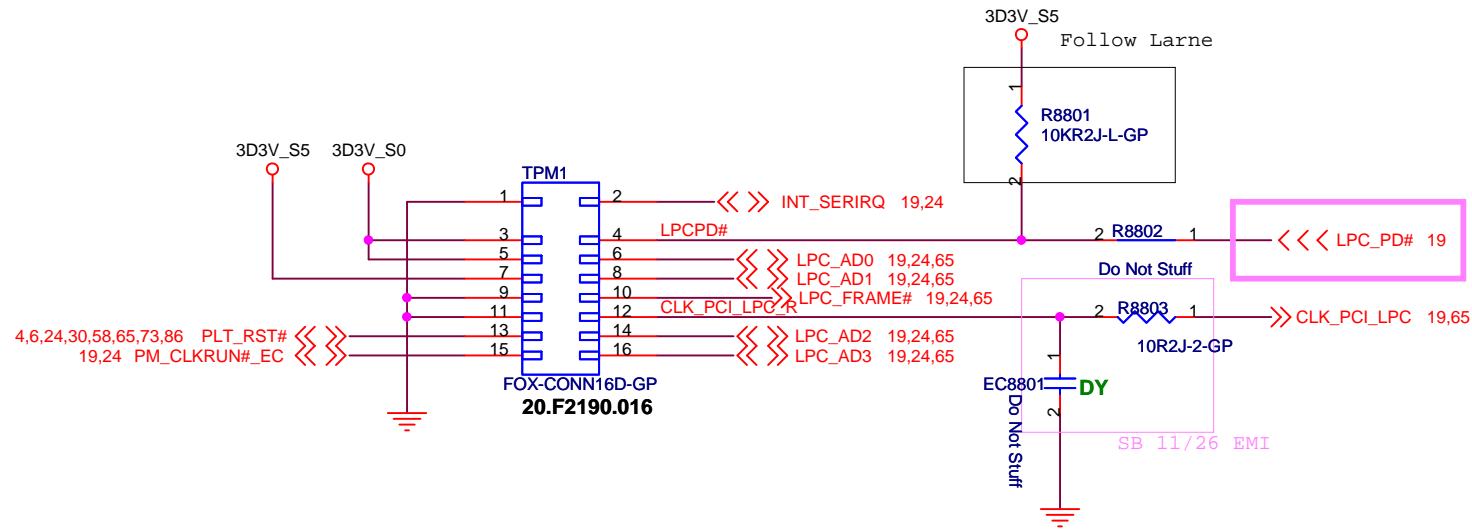
KABINI

Rev. 1

5	4	3	2	1
D				D
C				C
B				B
A				A
5	4	3	2	1

EAEG50 KB UMA

		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
NFC			
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	KABINI		SA
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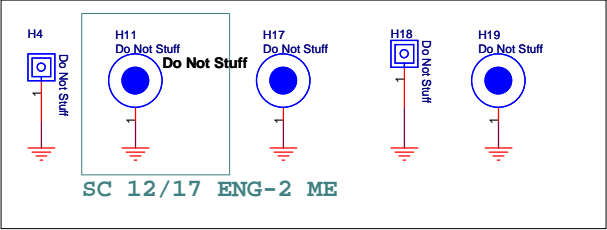
EAEG50 KB UMA

緯創資通

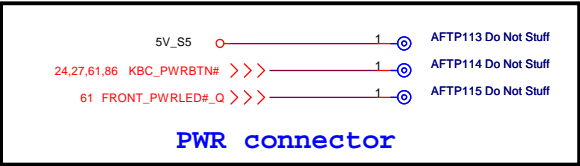
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title			TPM		
Size	Project Name				Rev
	KABINI				SA
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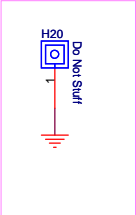
H4 & H11 & H17 & H18 & H19 for EG50



PWRBD AFTP for EG50

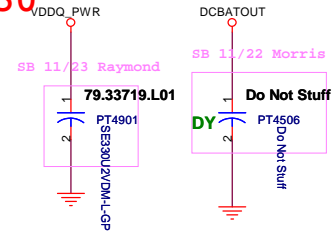
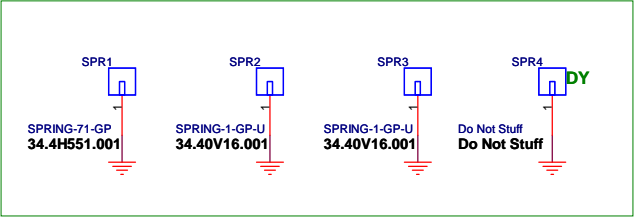


ZZ.00PAD.571



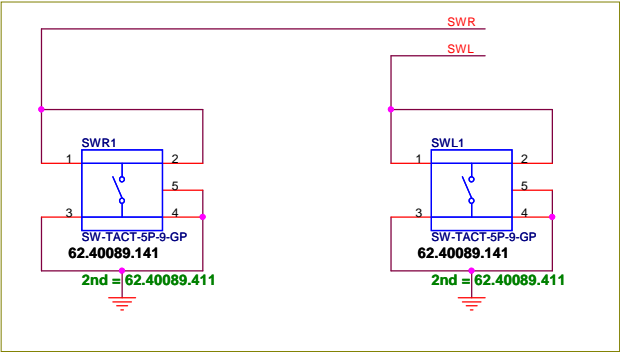
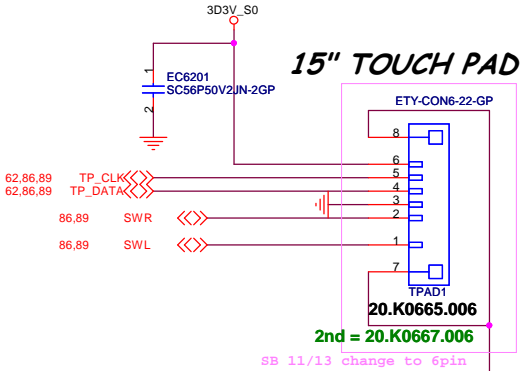
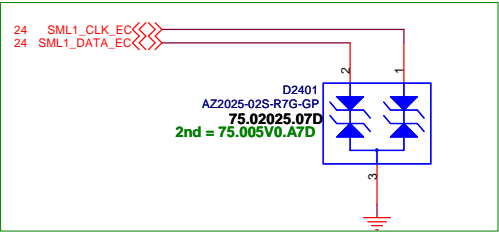
SB 11/20 location same with 14" H2

PD 1/23 EMI Jen



SB 11/23 3mm high limit in EG50

PD 01/31 Different Net name in 14" & 15" for placement

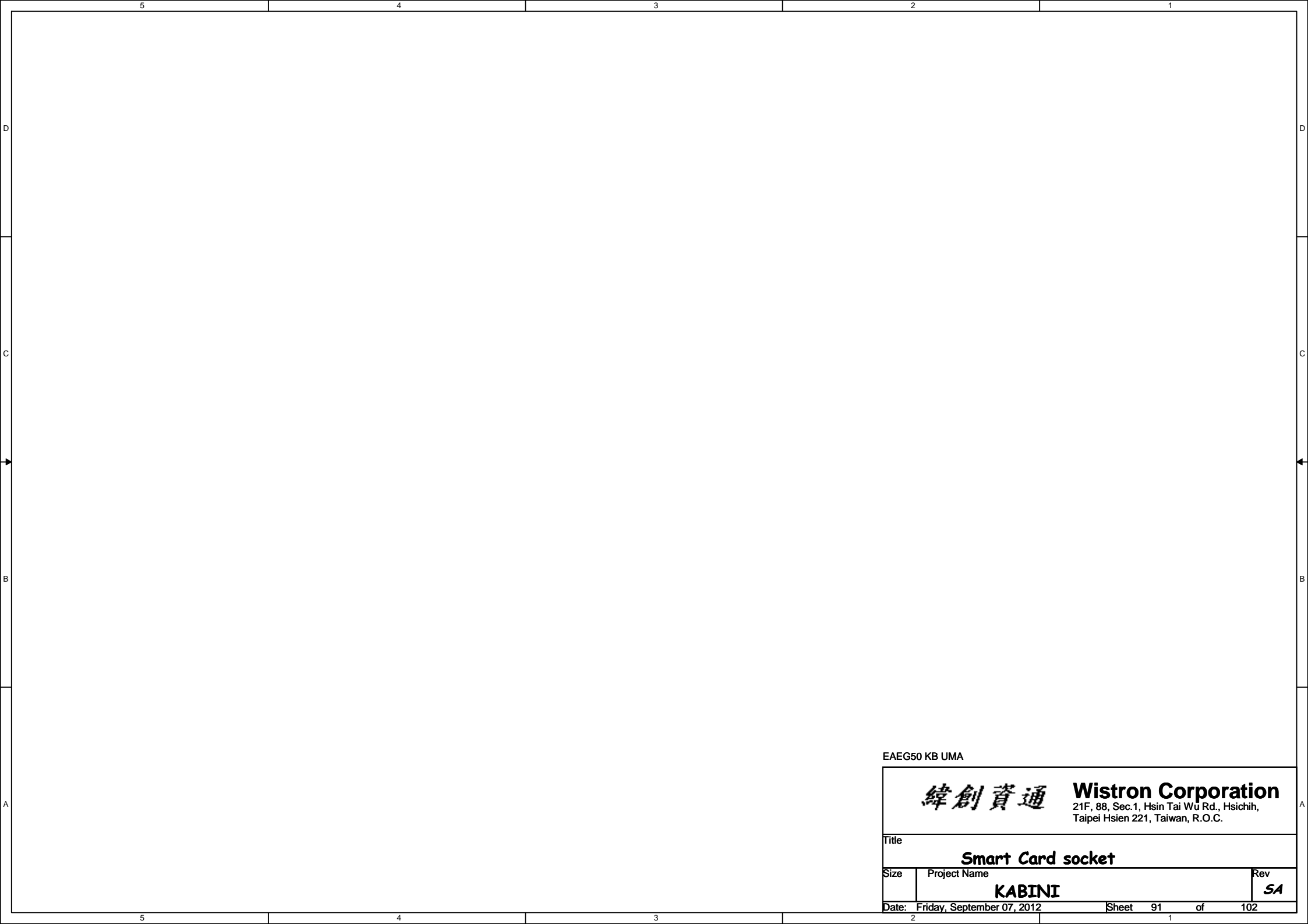


PD 1/21
SWL1 / SWR1 1st change to 62.40089.141, 2nd change to 62.40089.411 ,
because 160kg change to 100kg.

24,62,86	KCOL0	>>>
24,62,86	KCOL1	>>>
24,62,86	KCOL2	>>>
24,62,86	KCOL3	>>>
24,62,86	KCOL4	>>>
24,62,86	KCOL5	>>>
24,62,86	KCOL6	>>>
24,62,86	KCOL7	>>>
24,62,86	KCOL8	>>>
24,62,86	KCOL9	>>>
24,62,86	KCOL10	>>>
24,62,86	KCOL11	>>>
24,62,86	KCOL12	>>>
24,62,86	KCOL13	>>>
24,62,86	KCOL14	>>>
24,62,86	KCOL15	>>>
24,62,86	KCOL16	>>>
24,62,86	KCOL17	>>>
24,62,86	KROW0	>>>
24,62,86	KROW1	>>>
24,62,86	KROW2	>>>
24,62,86	KROW3	>>>
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24,62,86	KROW5	>>>
24,62,86	KROW6	>>>
24,62,86	KROW7	>>>

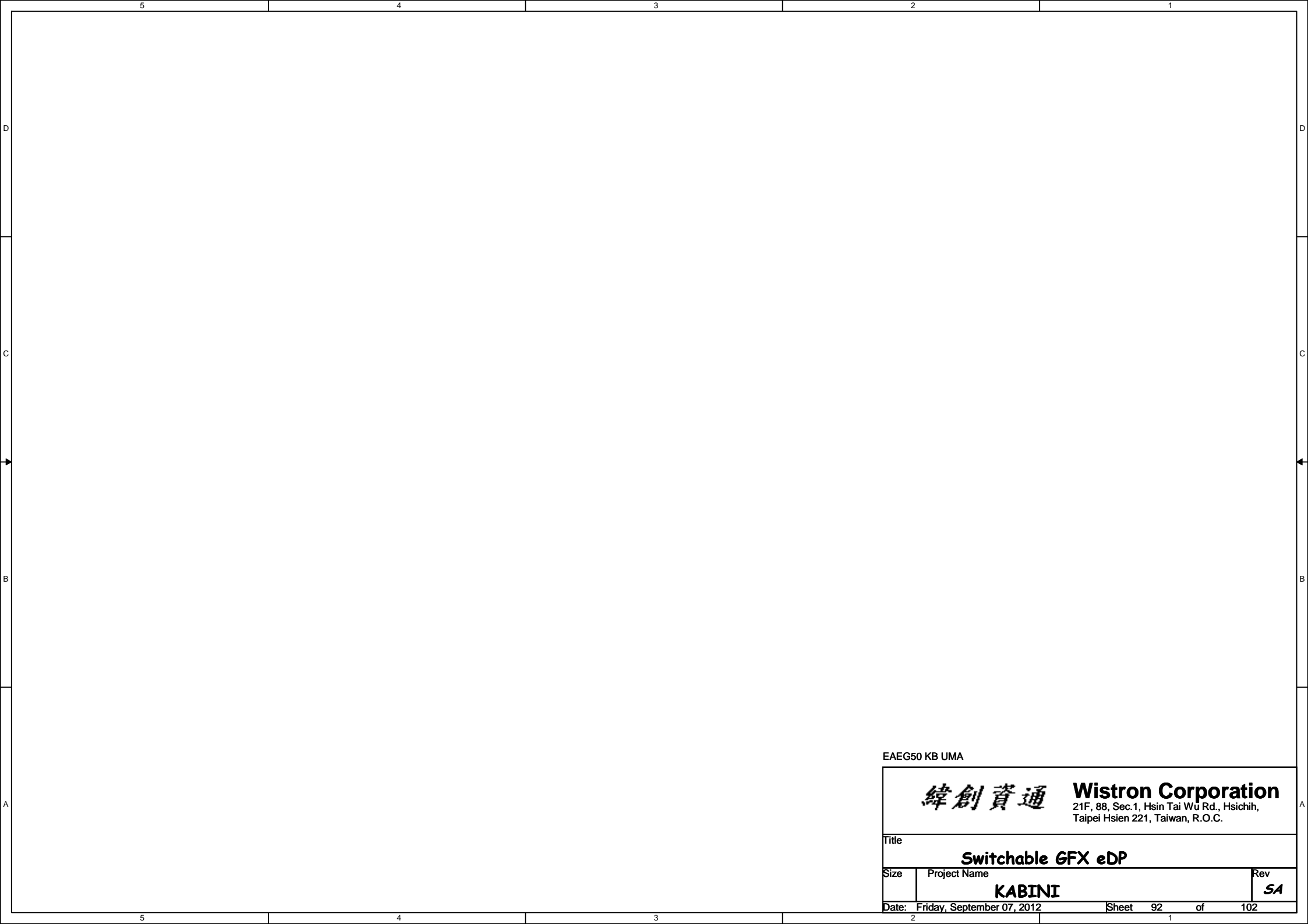
For AFTE

EAEG50 KB UMA



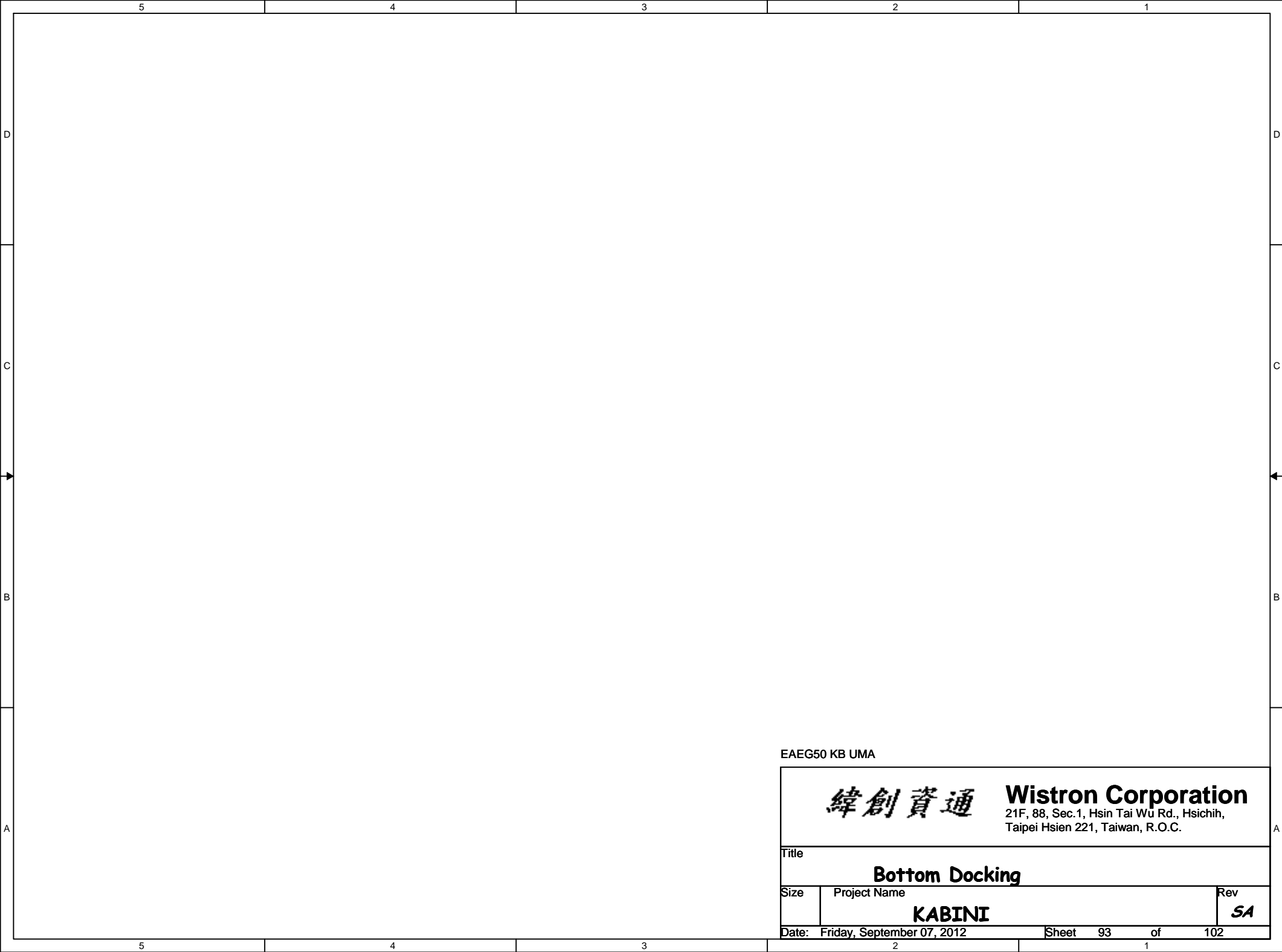
EAEG50 KB UMA

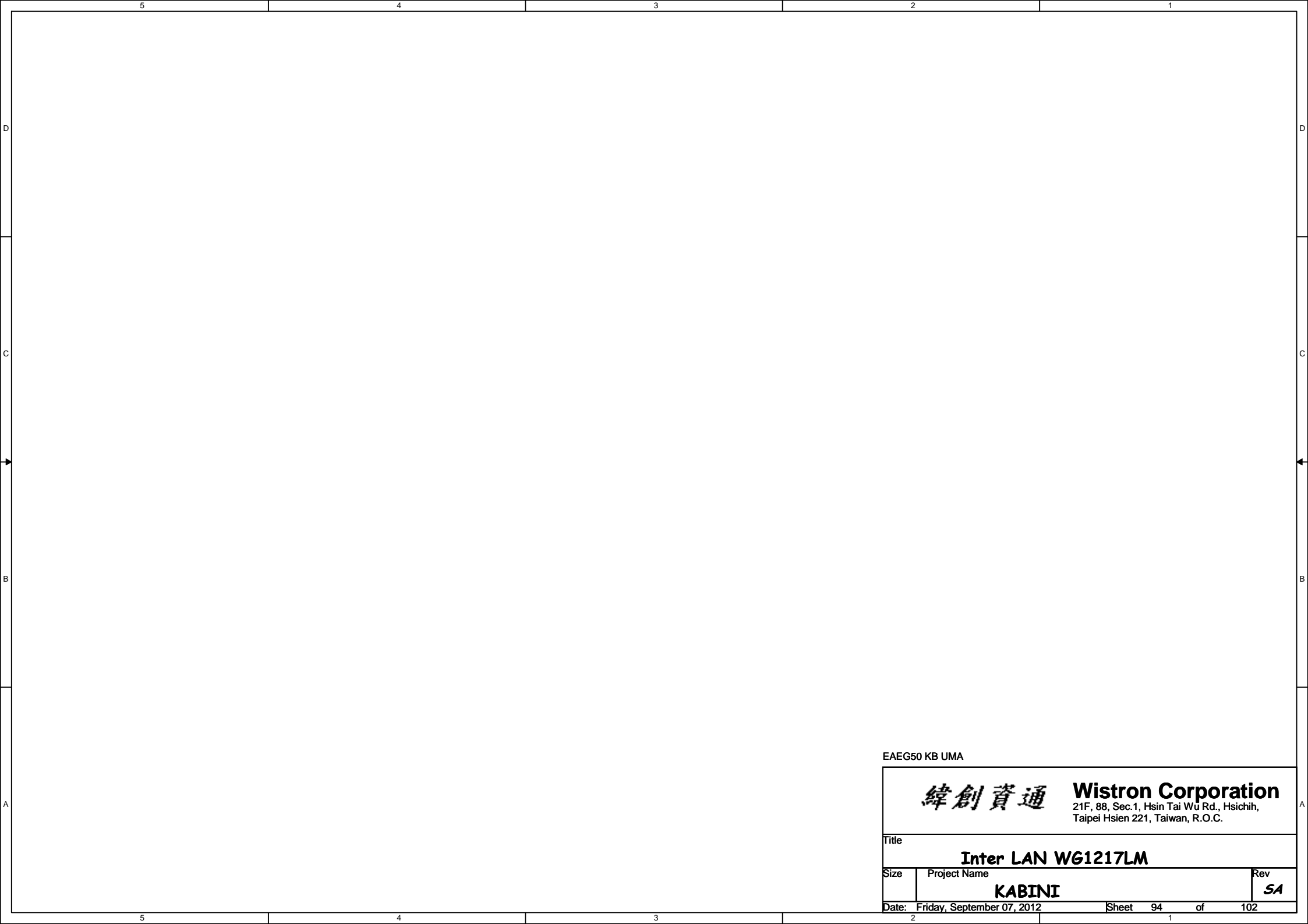
		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
Smart Card socket			
Size	Project Name		Rev
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EAEG50 KB UMA

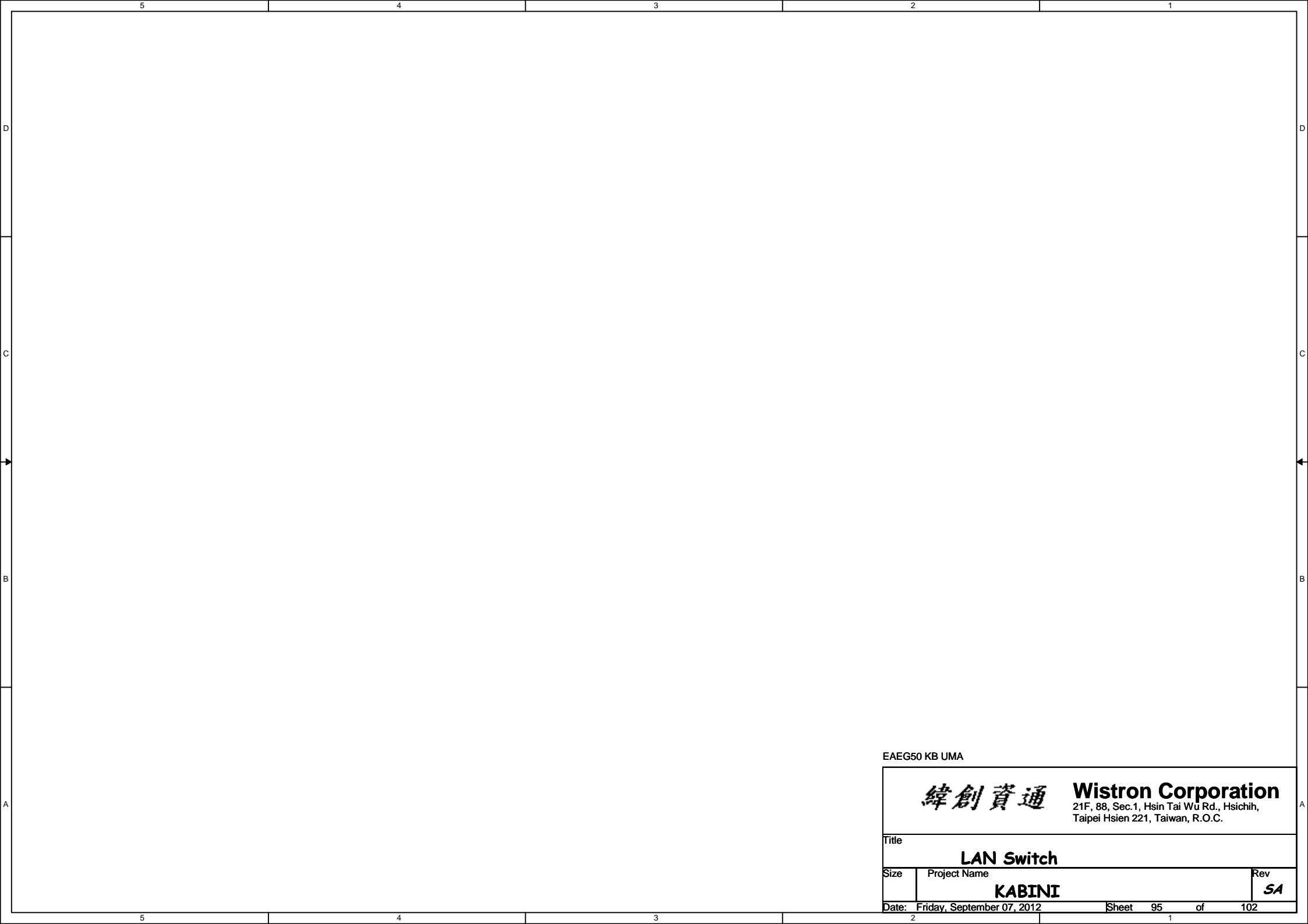
		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
Switchable GFX eDP			
Size	Project Name		Rev
	KABINI		SA
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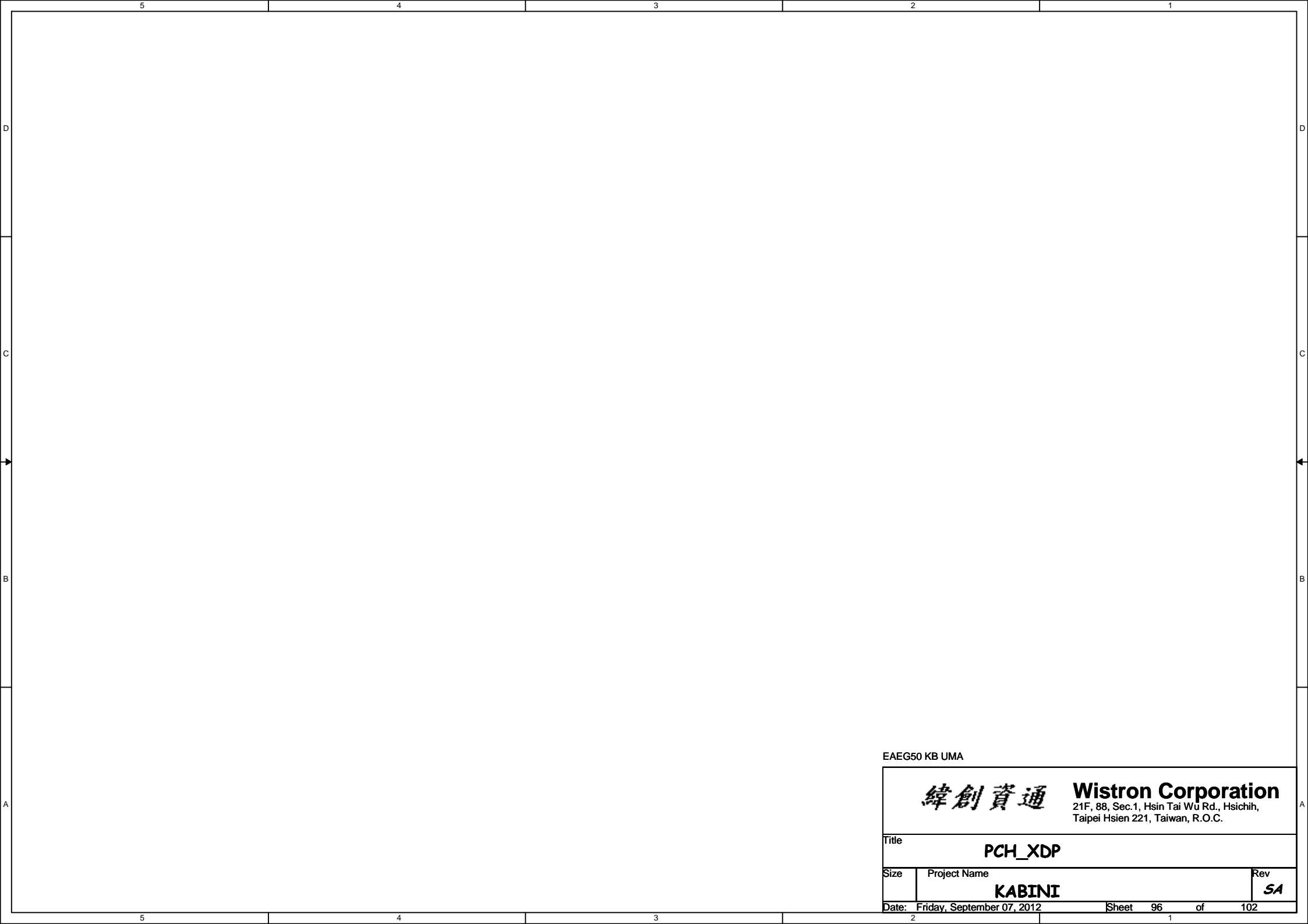
EAEG50 KB UMA

<div><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></div>		
Title		
Inter LAN WG1217LM		
Size	Project Name	Rev
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		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
LAN Switch			
Size	Project Name		Rev
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EAEG50 KB UMA

緯創資通

Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title

PCH_XDP

Size

Project Name

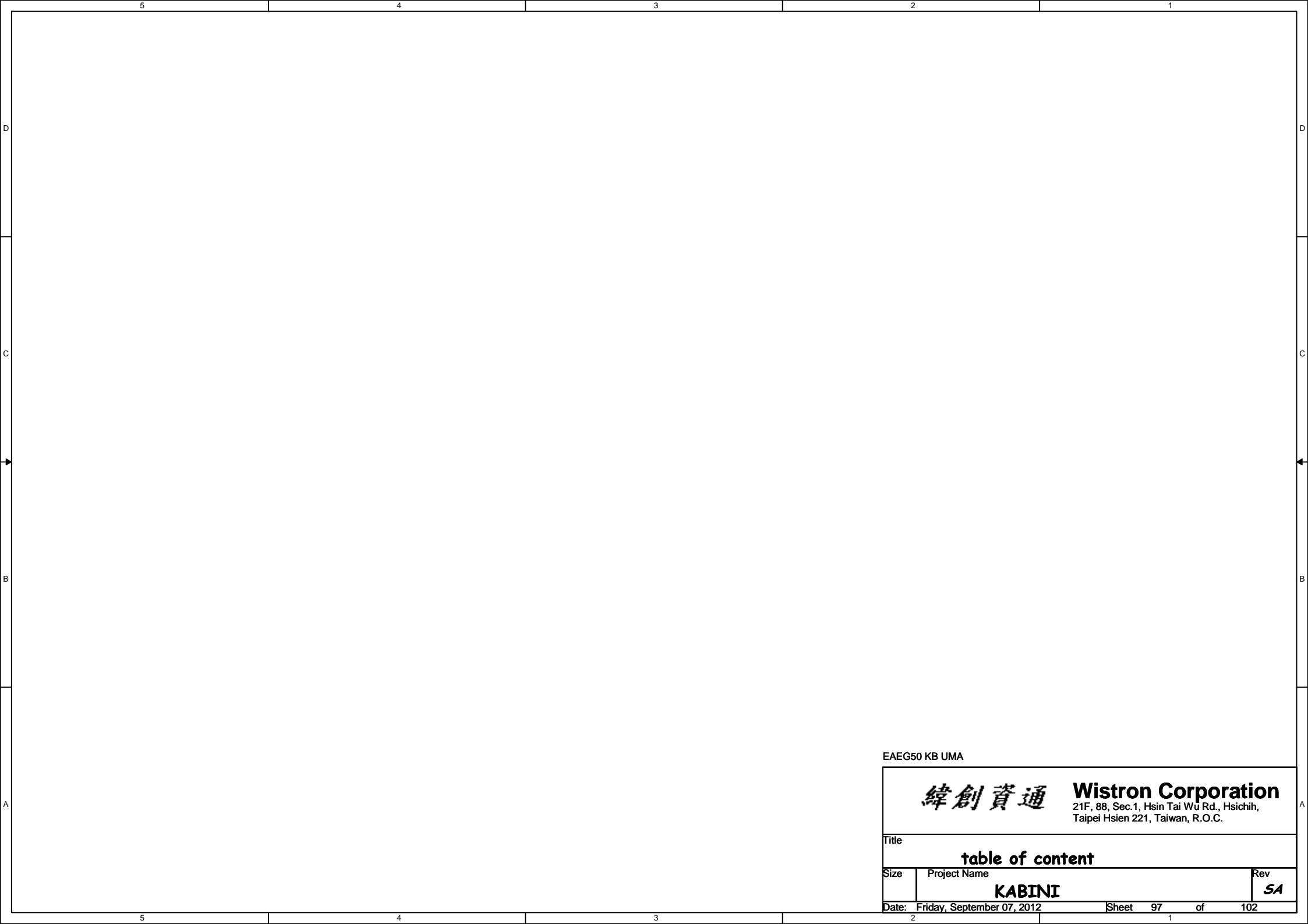
Rev

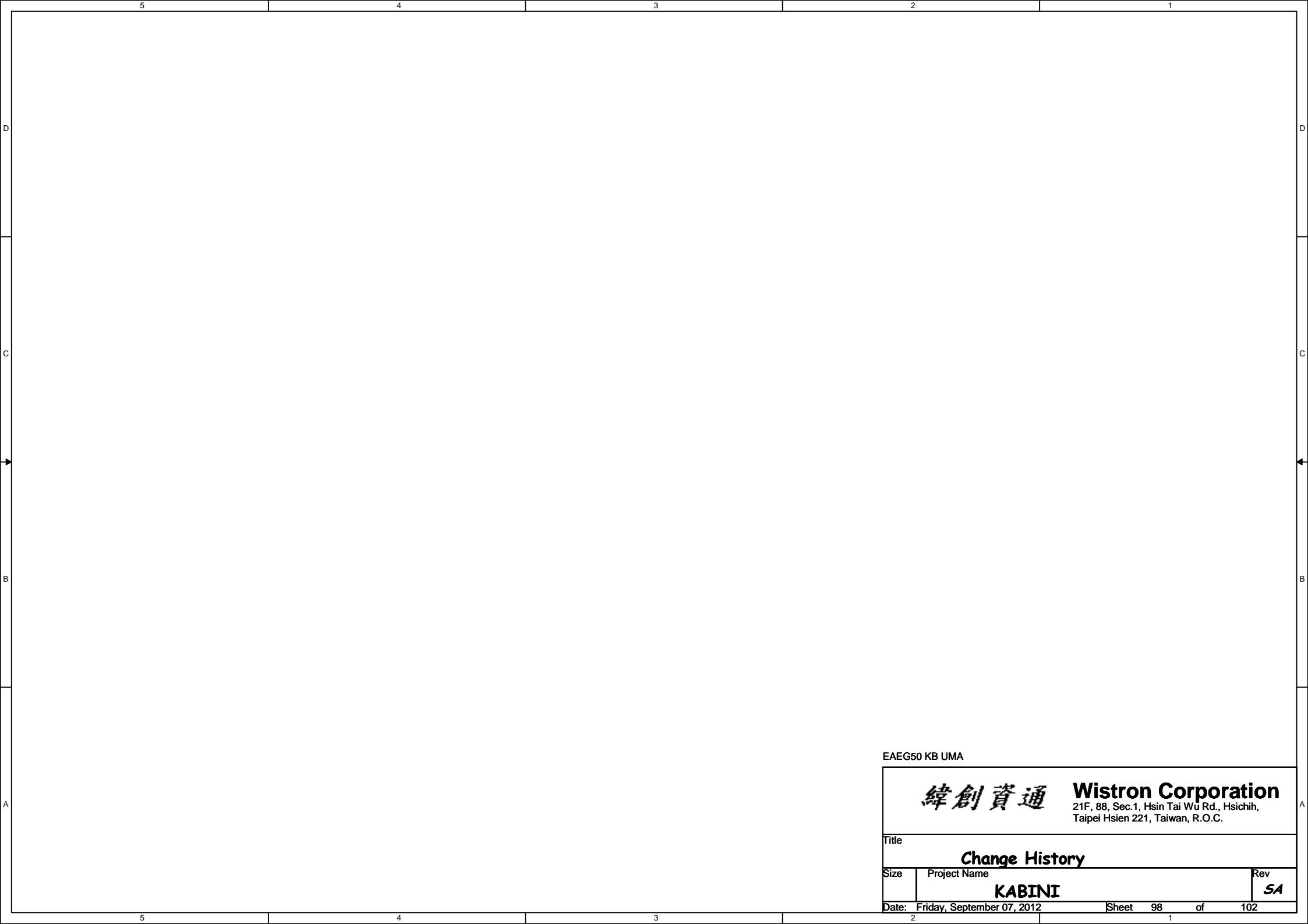
KABINI

SA

Date: Friday, September 07, 2012

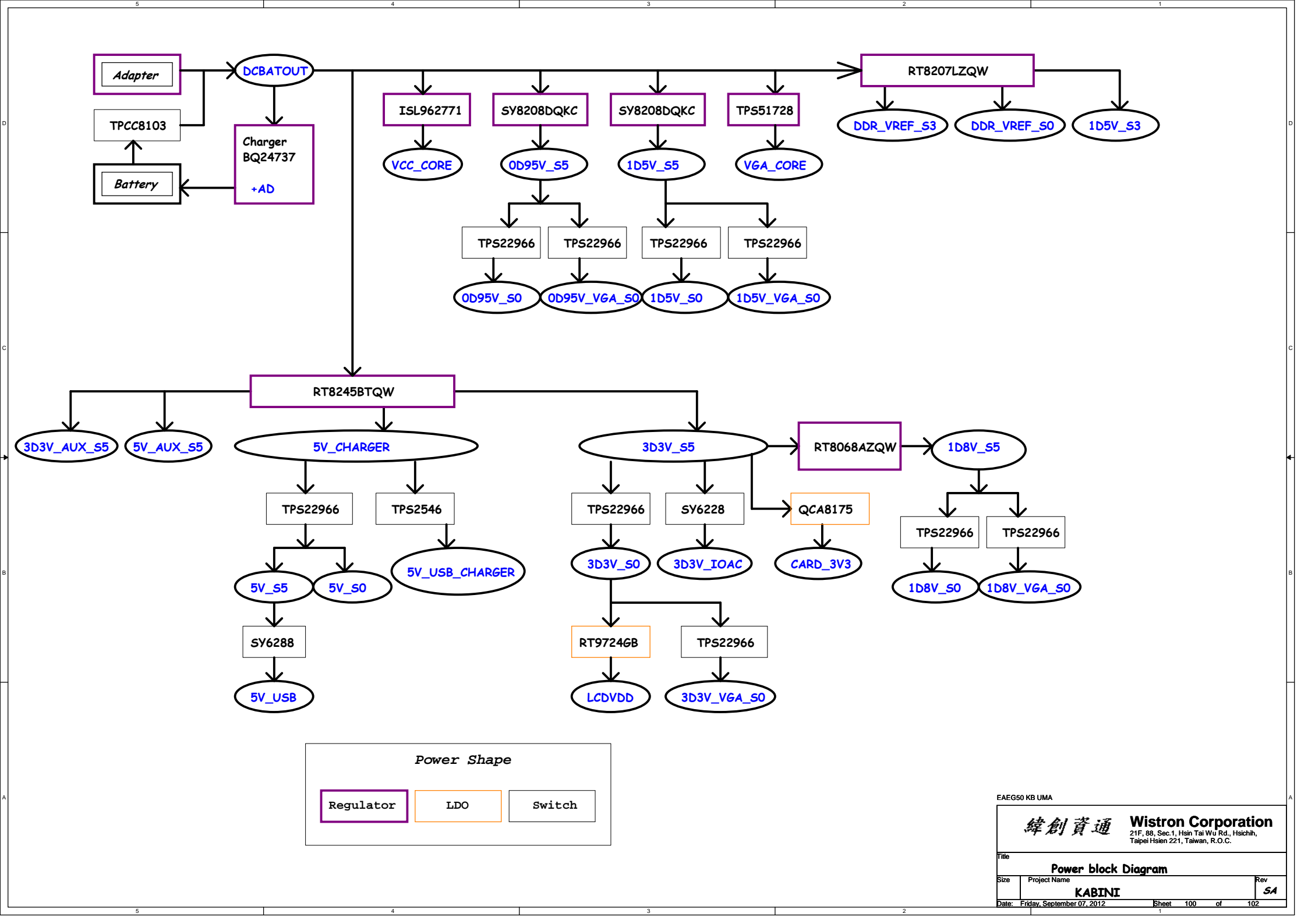
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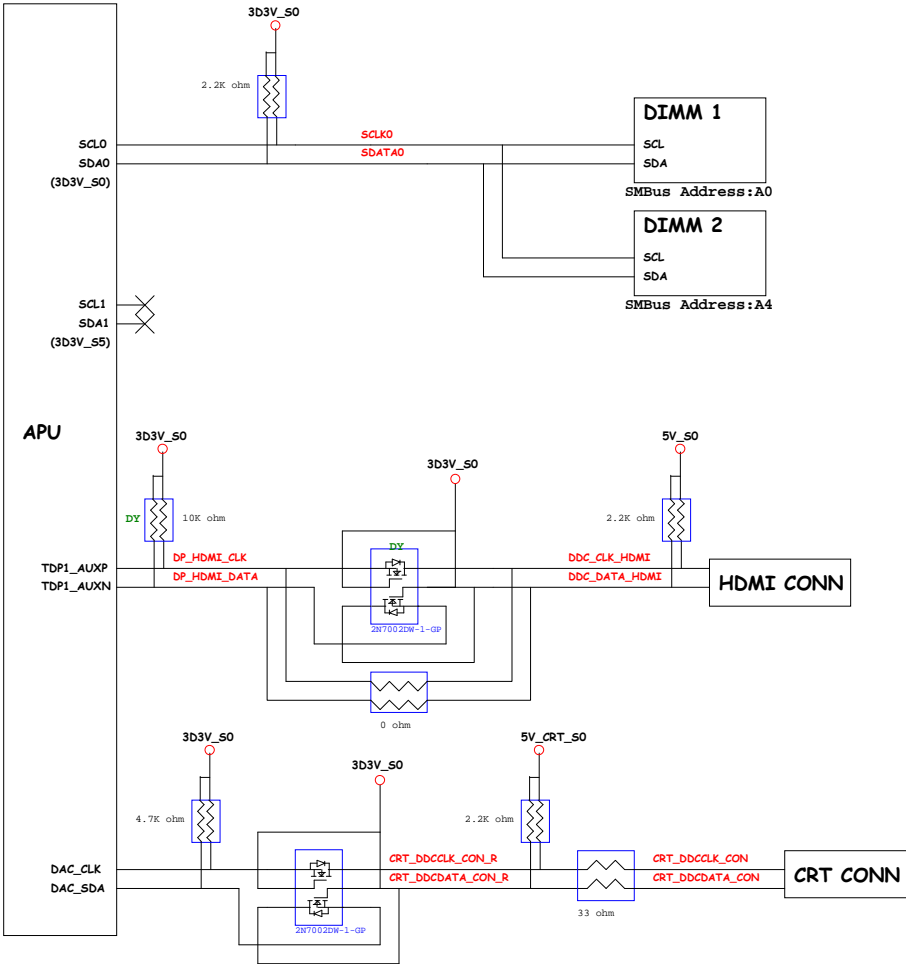


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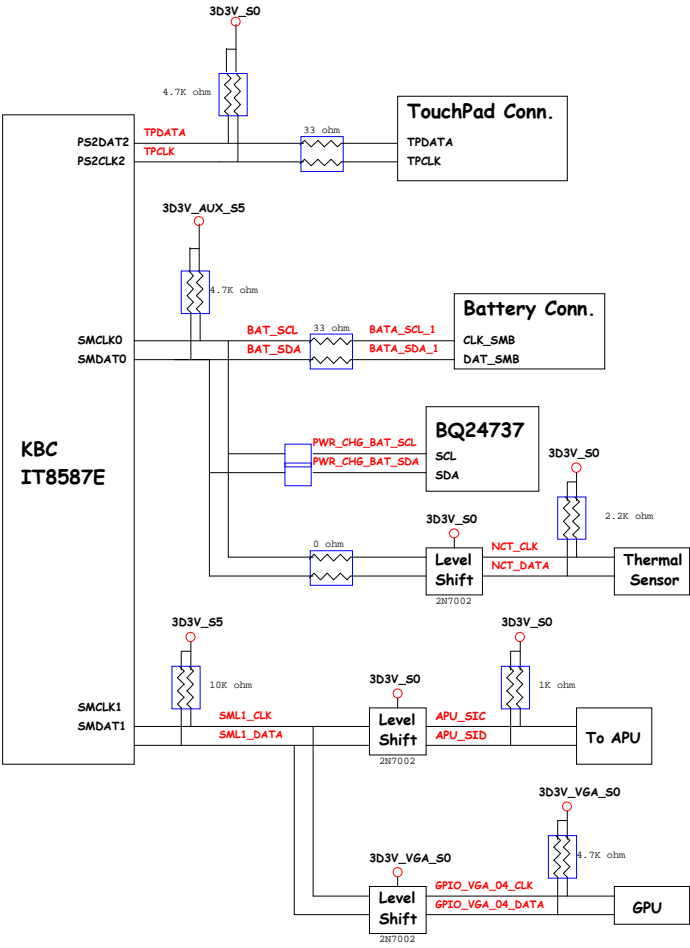
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Title	
Change History	
Size	Rev
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KABINI	
SA	
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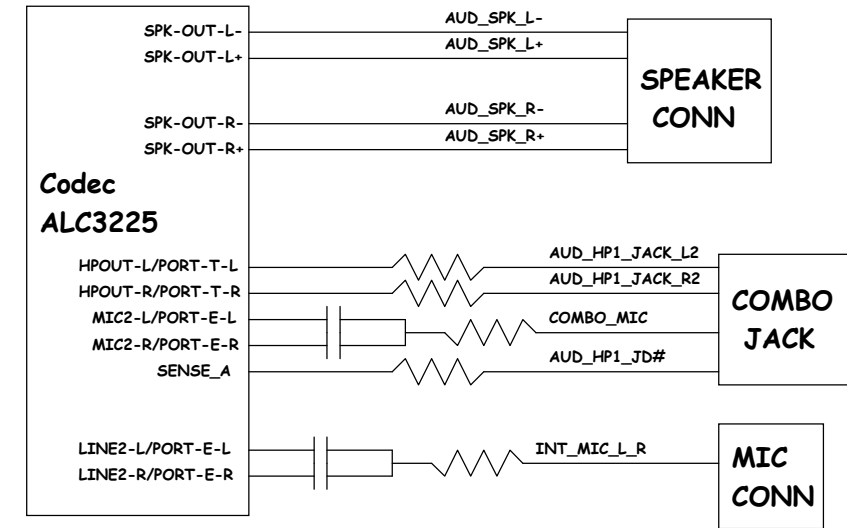
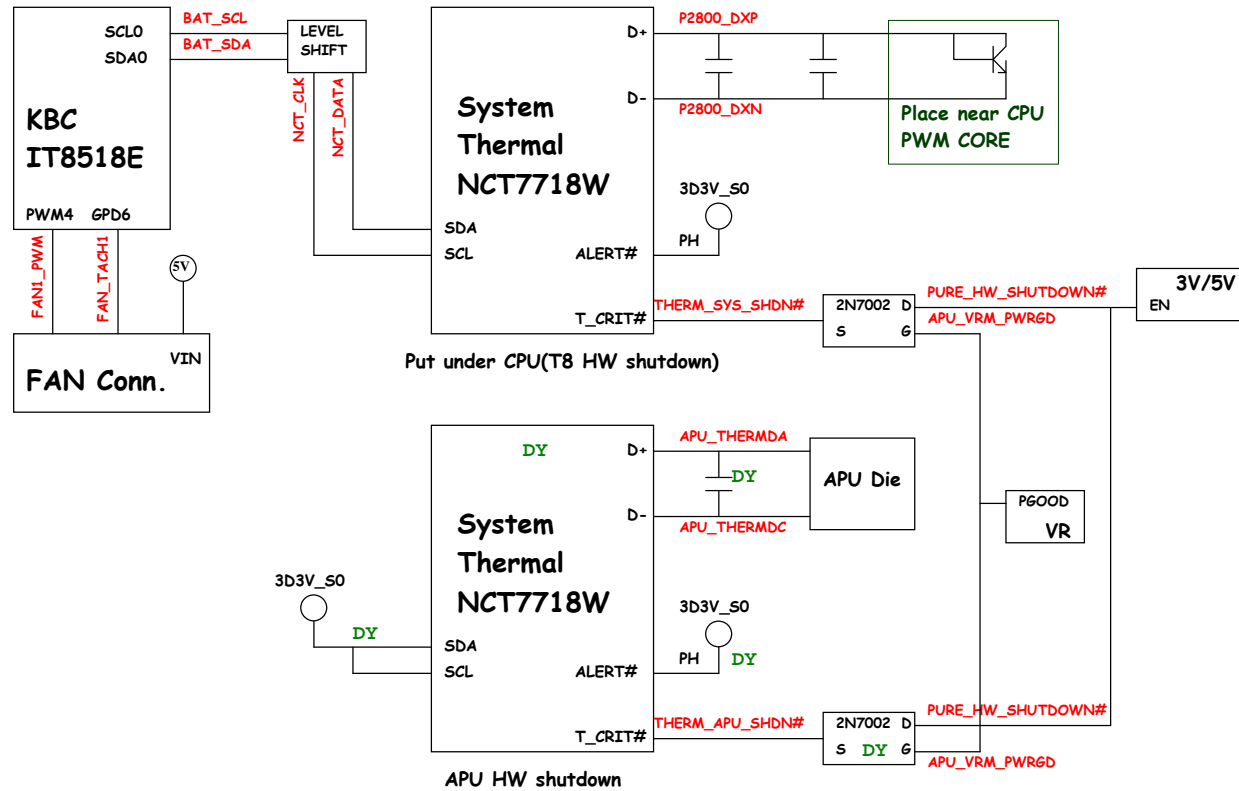
SMBus Block Diagram



KBC SMBus Block Diagram



Audio Block Diagram



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