

LS1511D AMD DALI

AMD DALI

19877-1

<Core Design>

緯創資通

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

Title

Cover Page

Size
A4

Document Number

LS1511D

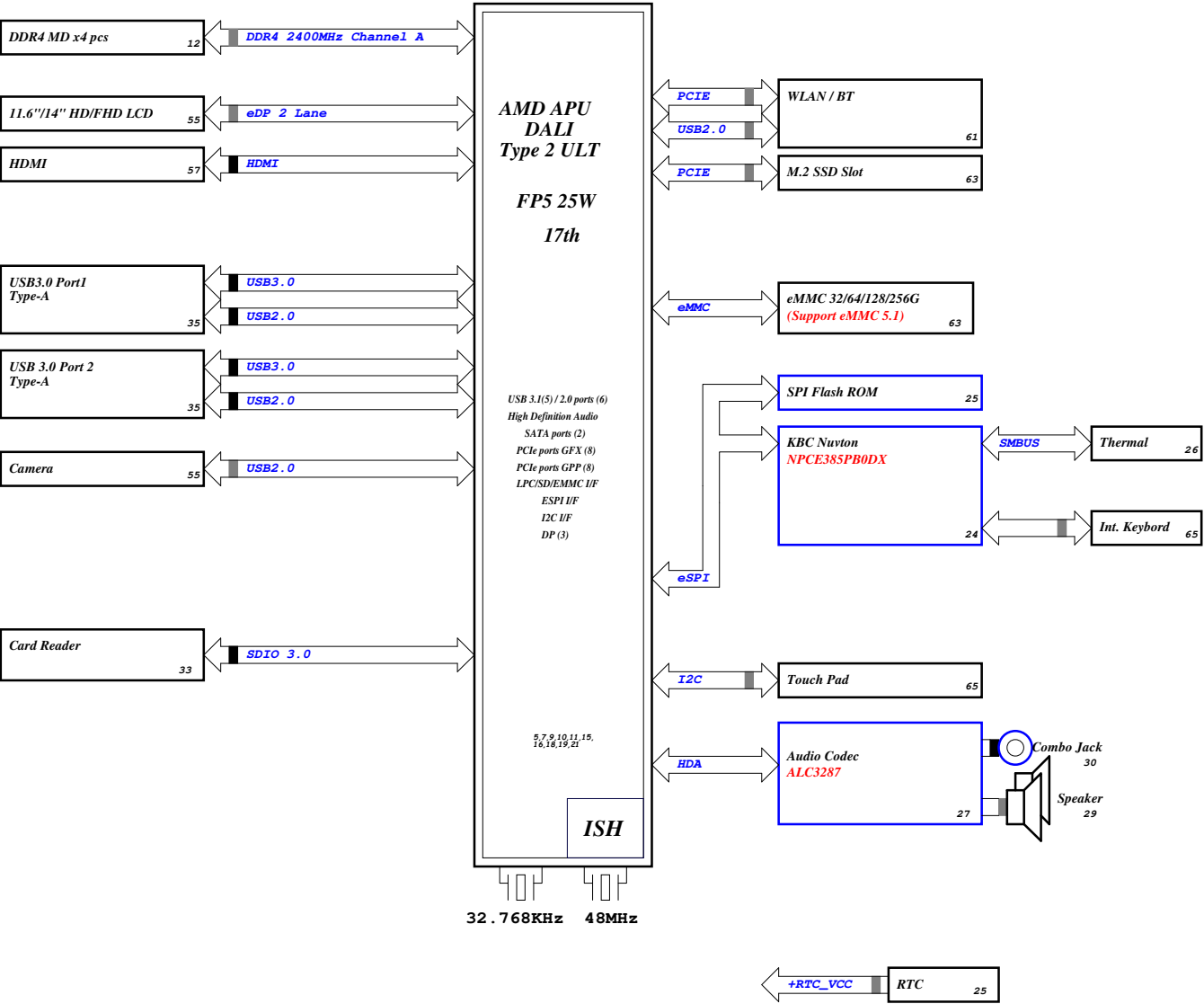
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Date: Monday, September 14, 2020

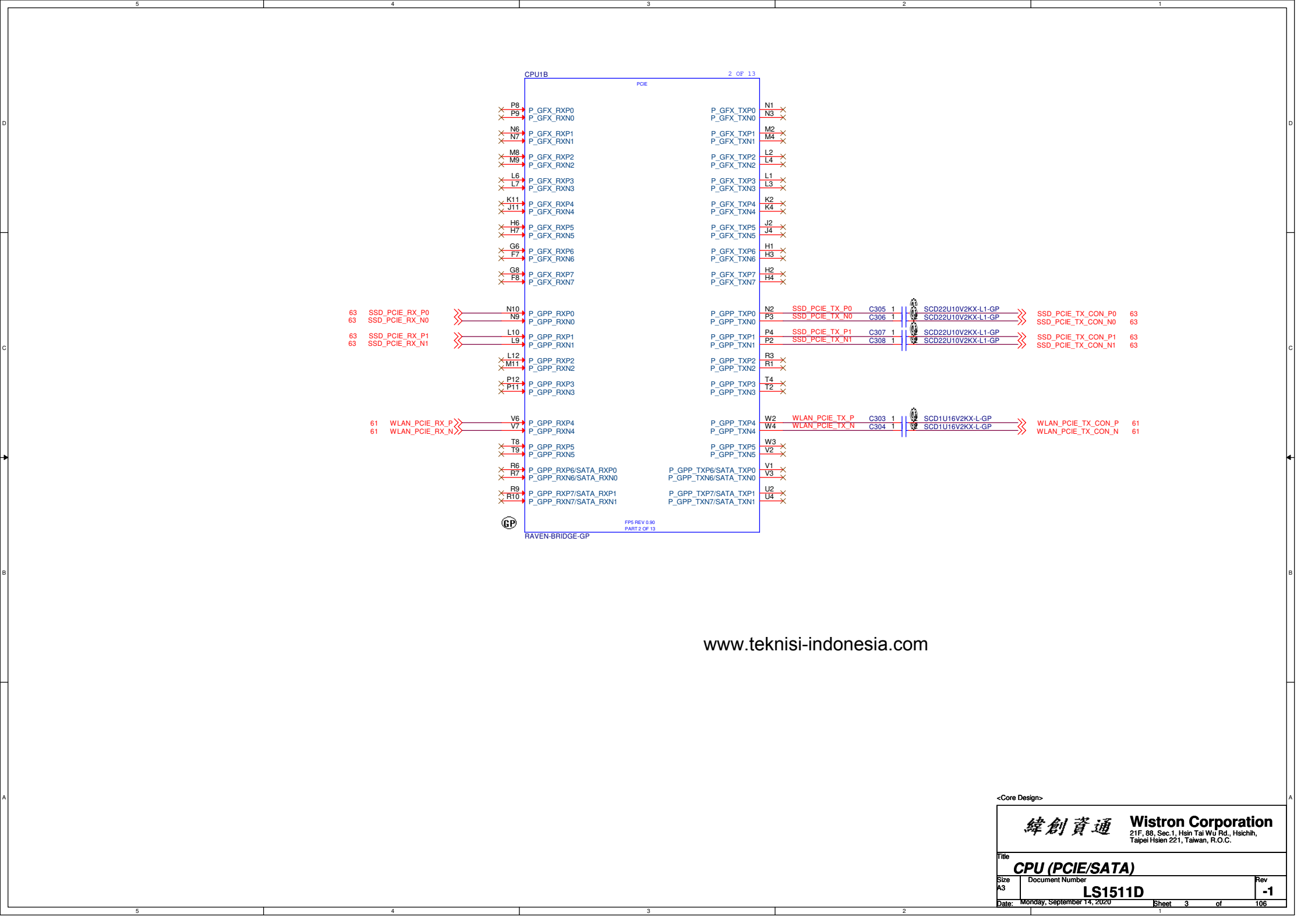
Sheet 1 of 106

S150 AMD DALI
FP5 TYPE 2 ULT

Project code : 4PD0J2010001
PCB P/N : 19877
Revision : -1



CHARGER BQ24780S		44
INPUTS	OUTPUTS	
AD+ BT+	19V_DCBATOUT	
SYSTEM DC/DC SY8386BRHC (3D3V) SY8388CRHC (5V)		45
INPUTS	OUTPUTS	
19V_DCBATOUT	3D3V_SS 3D3V_AUX_SS 5V_SS	5V_AUX_SS
CPU DC/DC RT3662AMGQW		46~50
INPUTS	OUTPUTS	
19V_DCBATOUT	1V_CPU_CORE 1D2V_CPU_VDDNB	
SYSTEM DC/DC G5416QS1U (1D2V / 2D5V / 0D6V)		51
INPUTS	OUTPUTS	
3D3V_SS	1D2V_S3	
SYSTEM LDO RT9078 (1D5V_VDDBT_RTC)		25
INPUTS	OUTPUTS	
3D3V_RTC_AUX	1D5V_VDDBT_RTC	
SYSTEM LDO SY8386RHC (1D8V_S5)		54
INPUTS	OUTPUTS	
19V_DCBATOUT	1D8V_S5	
Load Switches G2898KD1U (3D3V/5V) G2898KD1U (1D8V) G5027CRD1D (0D9V)		40
INPUTS	OUTPUTS	
5V_SS 3D3V_SS 1D8V_SS 0D9V_SS	5V_S0 3D3V_S0 1D8V_S0 0D9V_S0	
PCB LAYER		
L1 : TOP L2 : VCC/GND L3 : Signal L4 : Signal L5 : GND L6 : BOTTOM		



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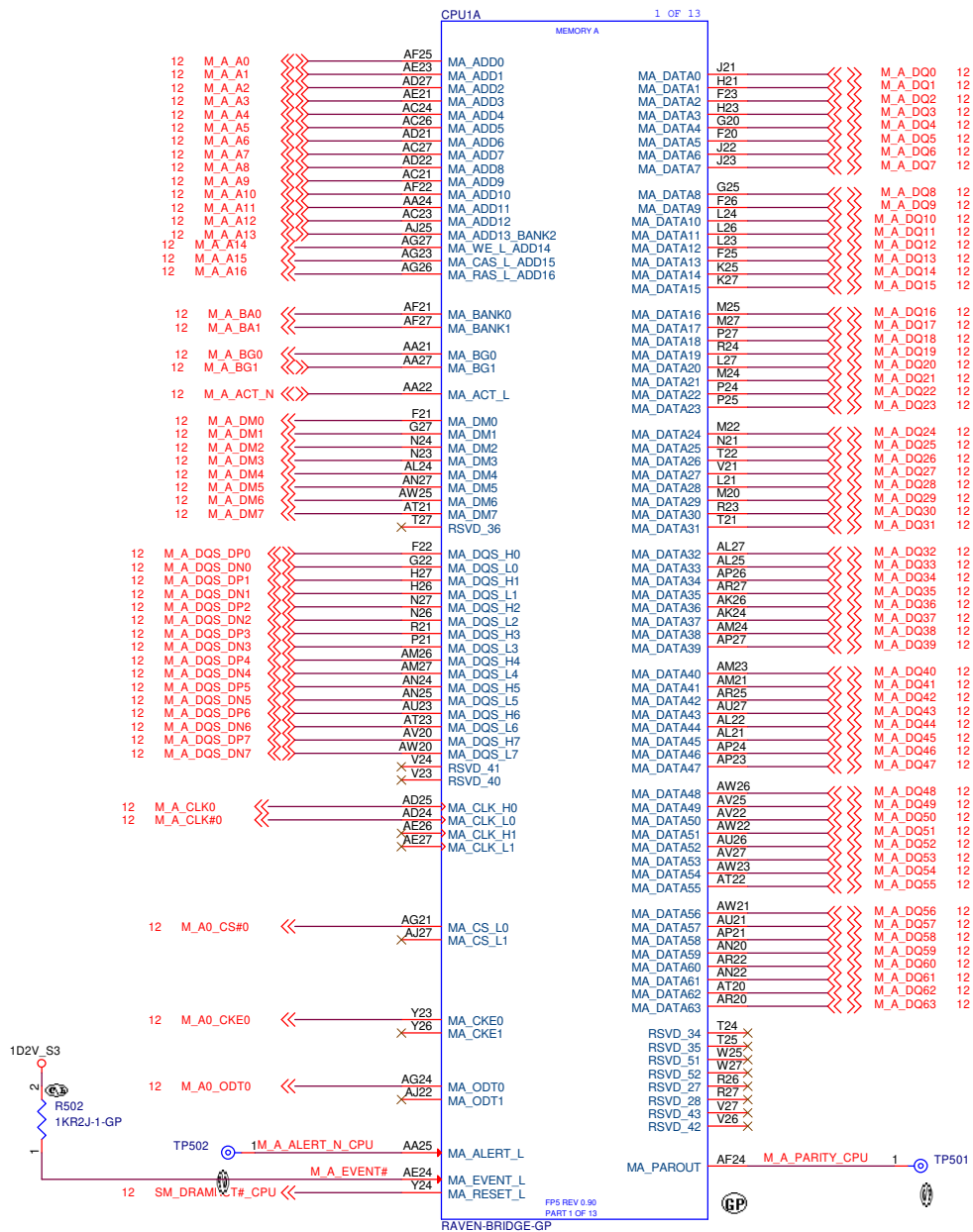
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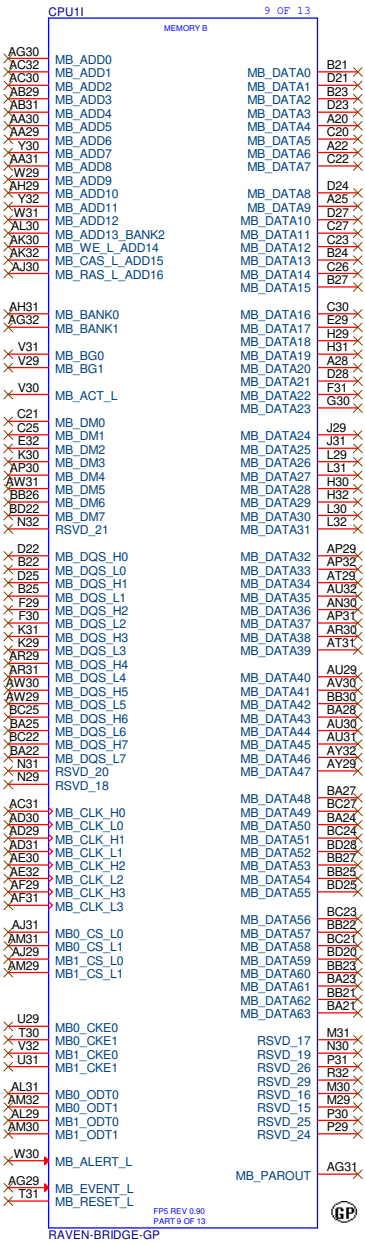
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Size	Document Number	Rev
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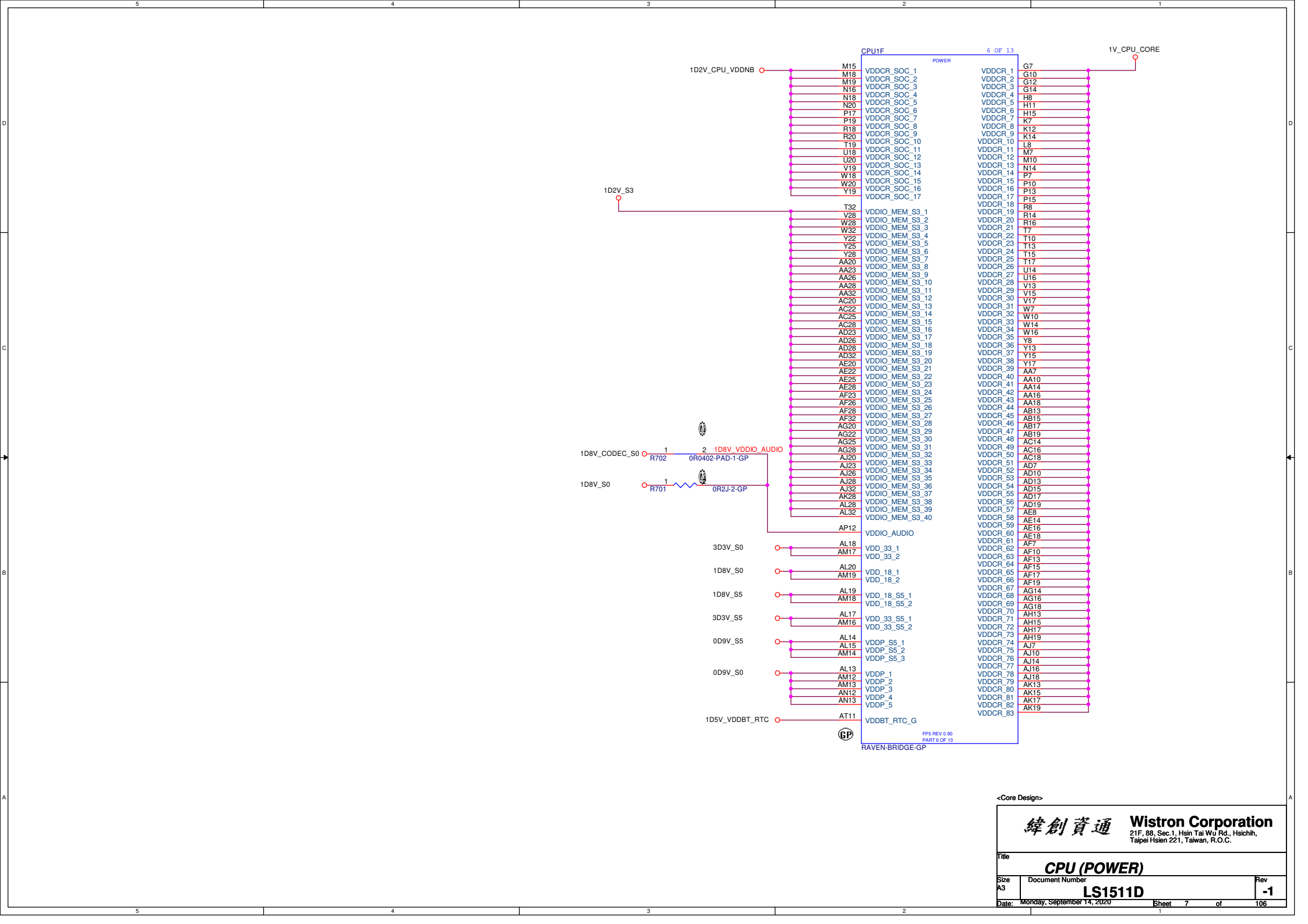


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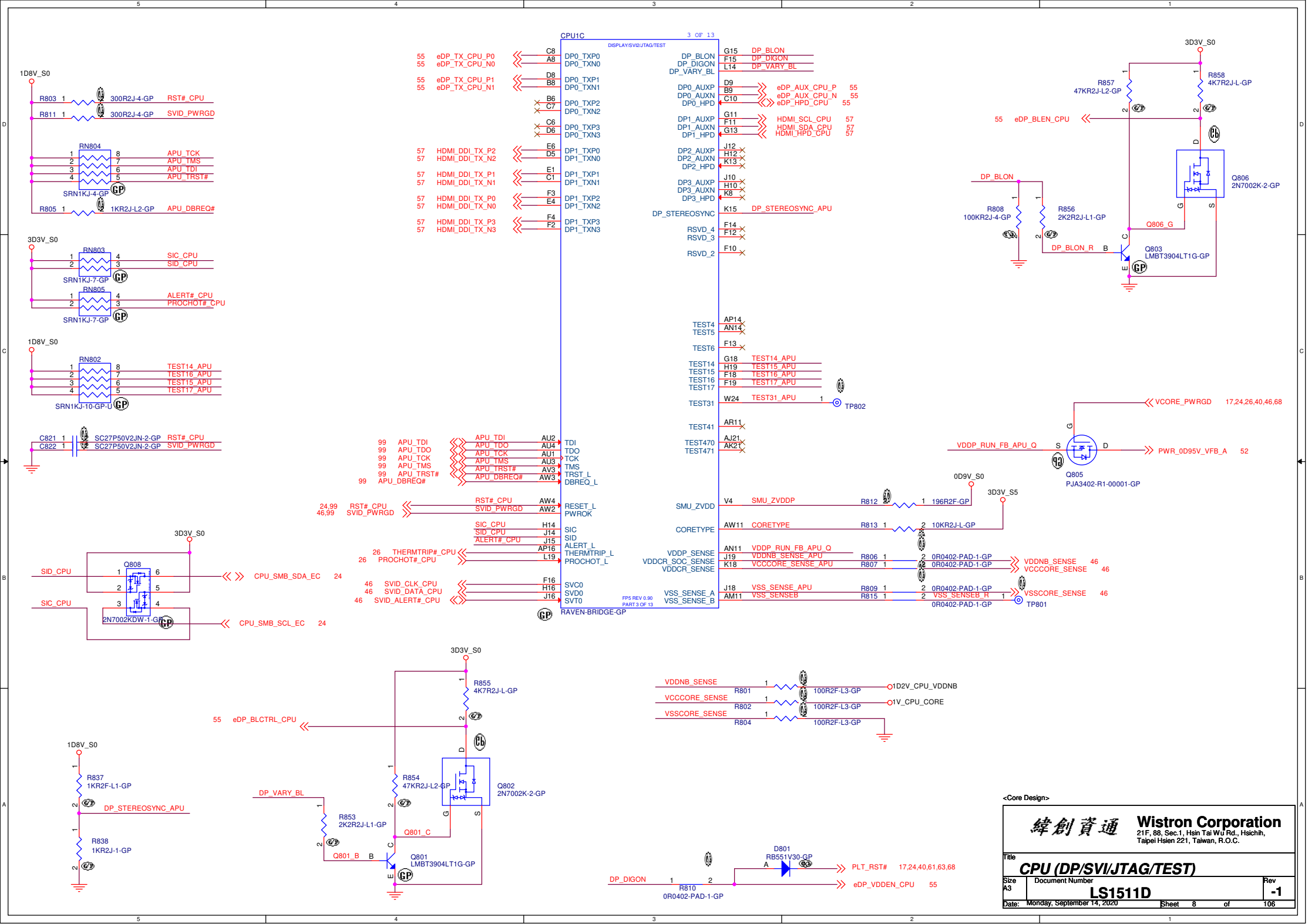
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CPU (DDR4 CHA)
Size A3 Document Number
LS1511D Rev
-1
Date: Monday, September 14, 2020 Sheet 5 of 106

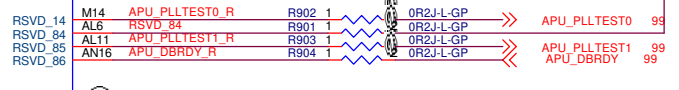
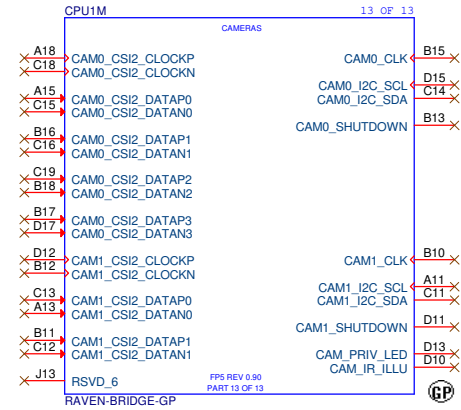
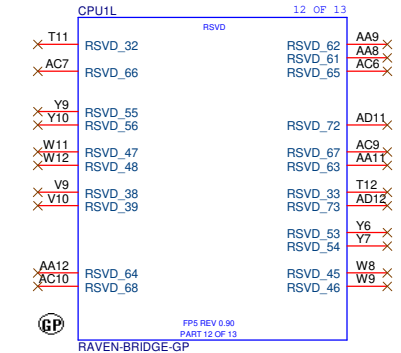
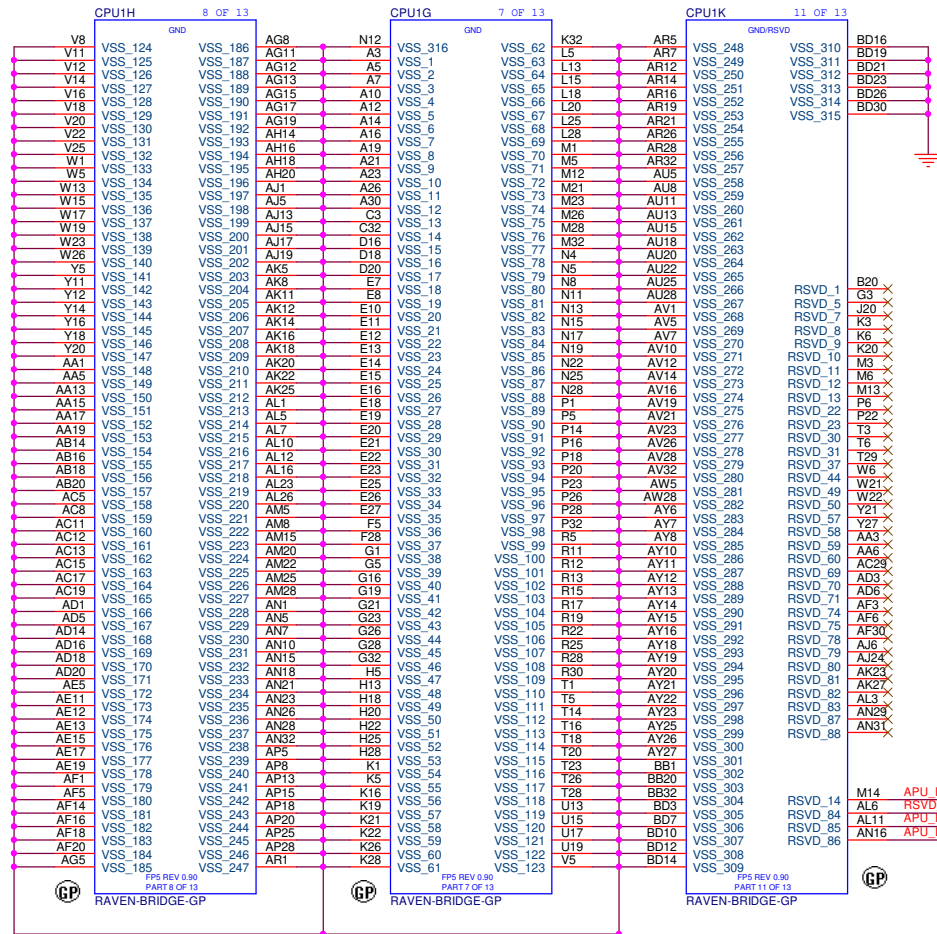




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Size	Document Number	Rev
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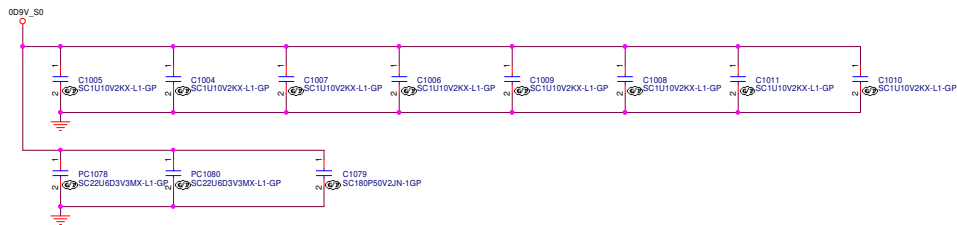
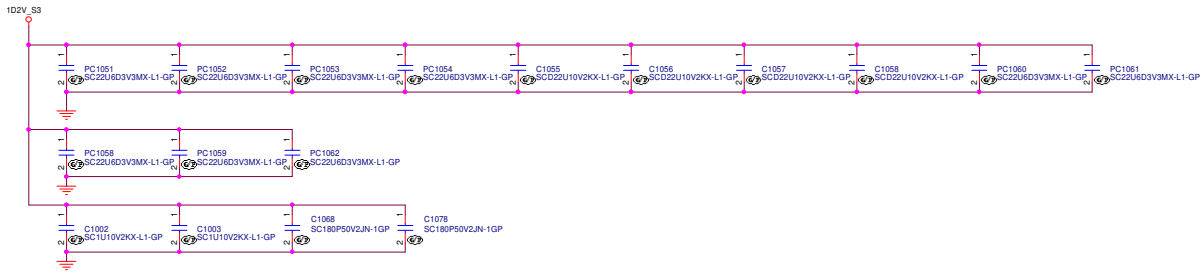
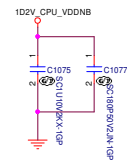
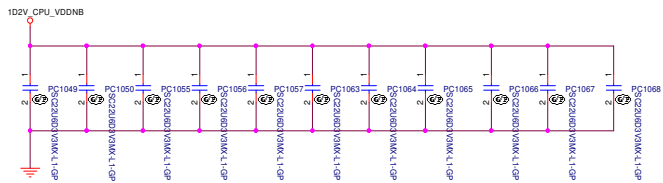
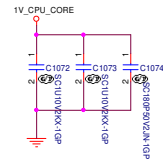
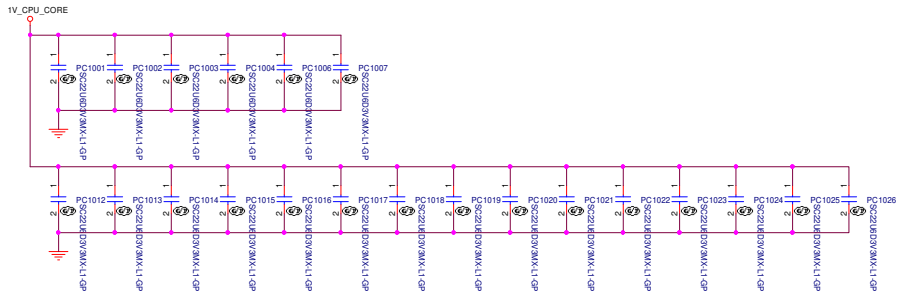




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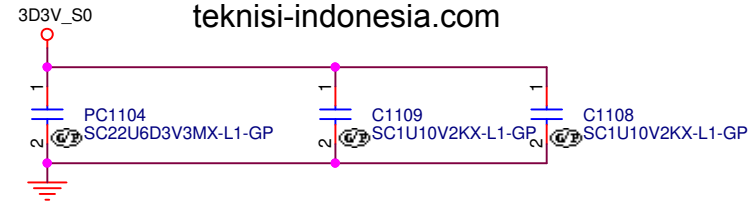
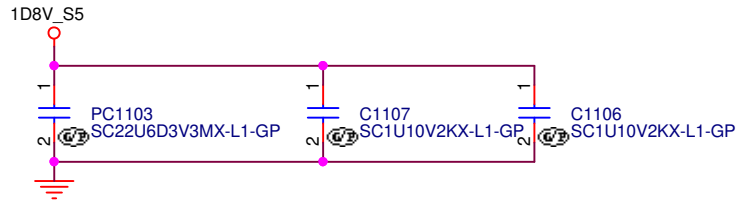
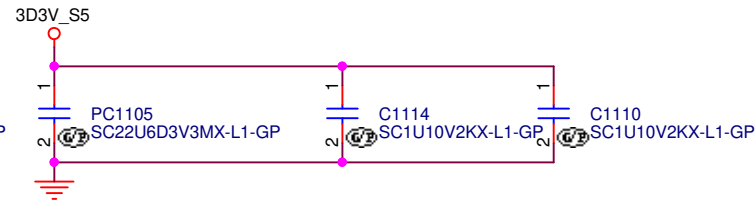
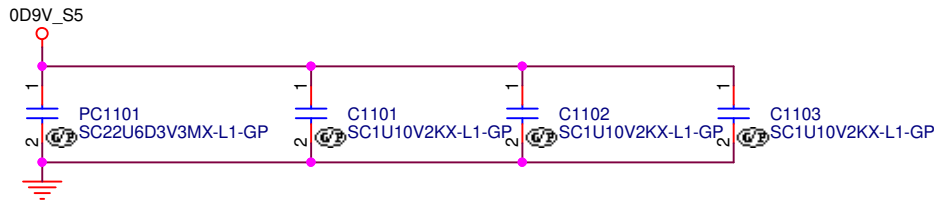
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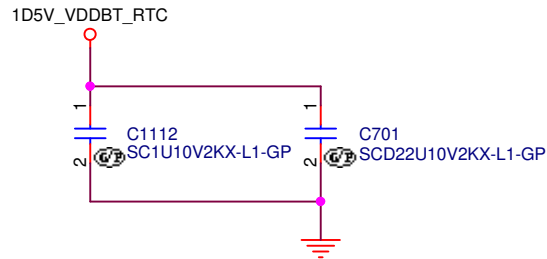
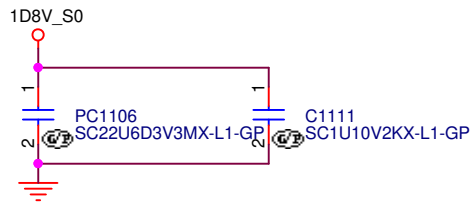
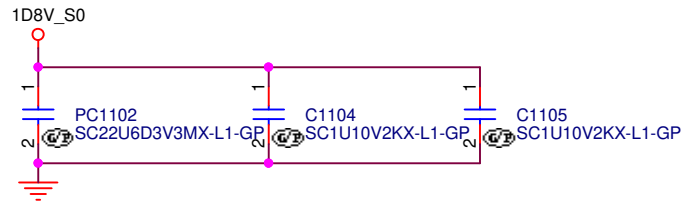
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CPU (POWER CAP1)		
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Title

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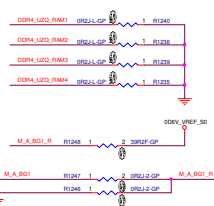
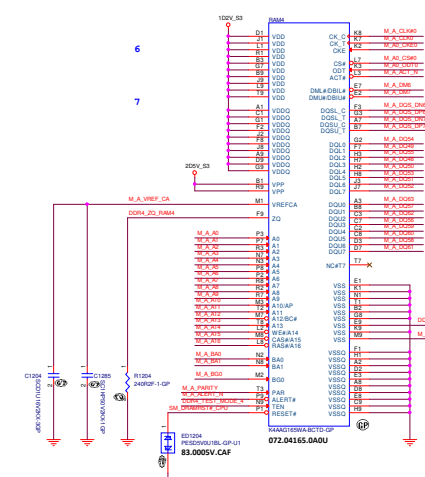
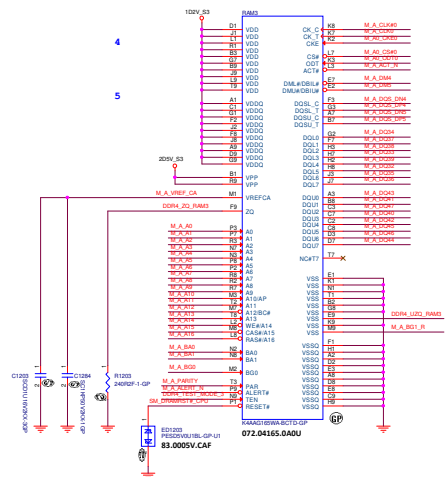
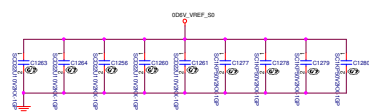
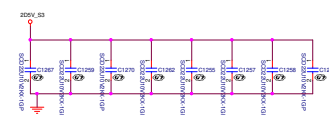
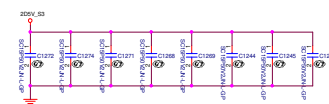
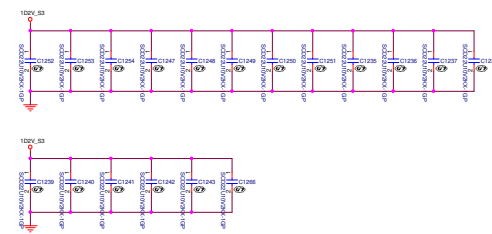
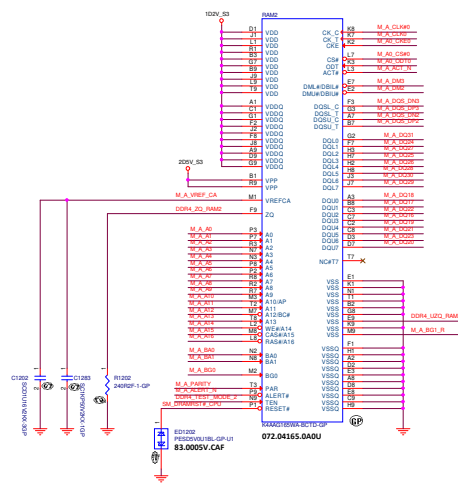
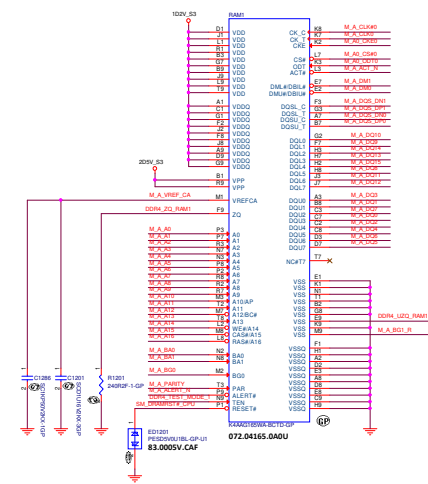
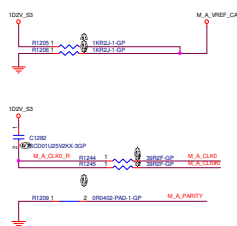
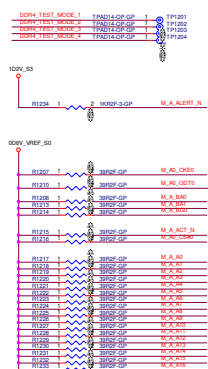
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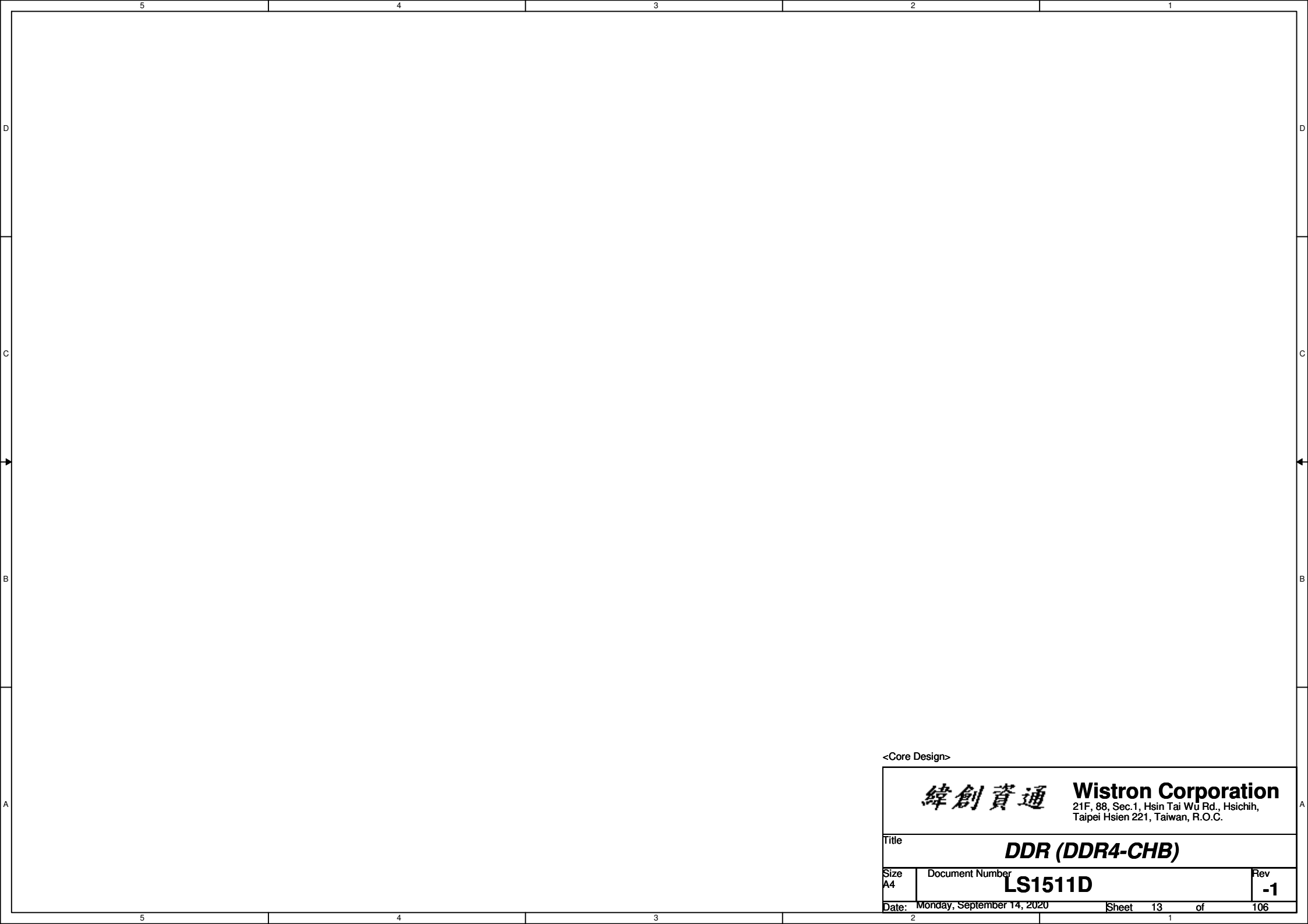
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Title

DDR (DDR4-CHB)

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Title	Author	Year	Journal	Volume	Issue	Page
1. The Effect of Temperature on the Rate of Reaction	John Doe	2018	Journal of Chemical Education	95	3	456-462
2. Kinetics of the Reaction Between Hydrogen Peroxide and Potassium Iodide	Jane Smith	2017	Journal of Chemical Education	94	2	321-328
3. The Effect of Concentration on the Rate of Reaction	Michael Brown	2016	Journal of Chemical Education	93	1	123-130
4. The Effect of Surface Area on the Rate of Reaction	Sarah White	2015	Journal of Chemical Education	92	4	567-574
5. The Effect of Catalyst on the Rate of Reaction	David Green	2014	Journal of Chemical Education	91	5	678-685

DDR (RSVD)

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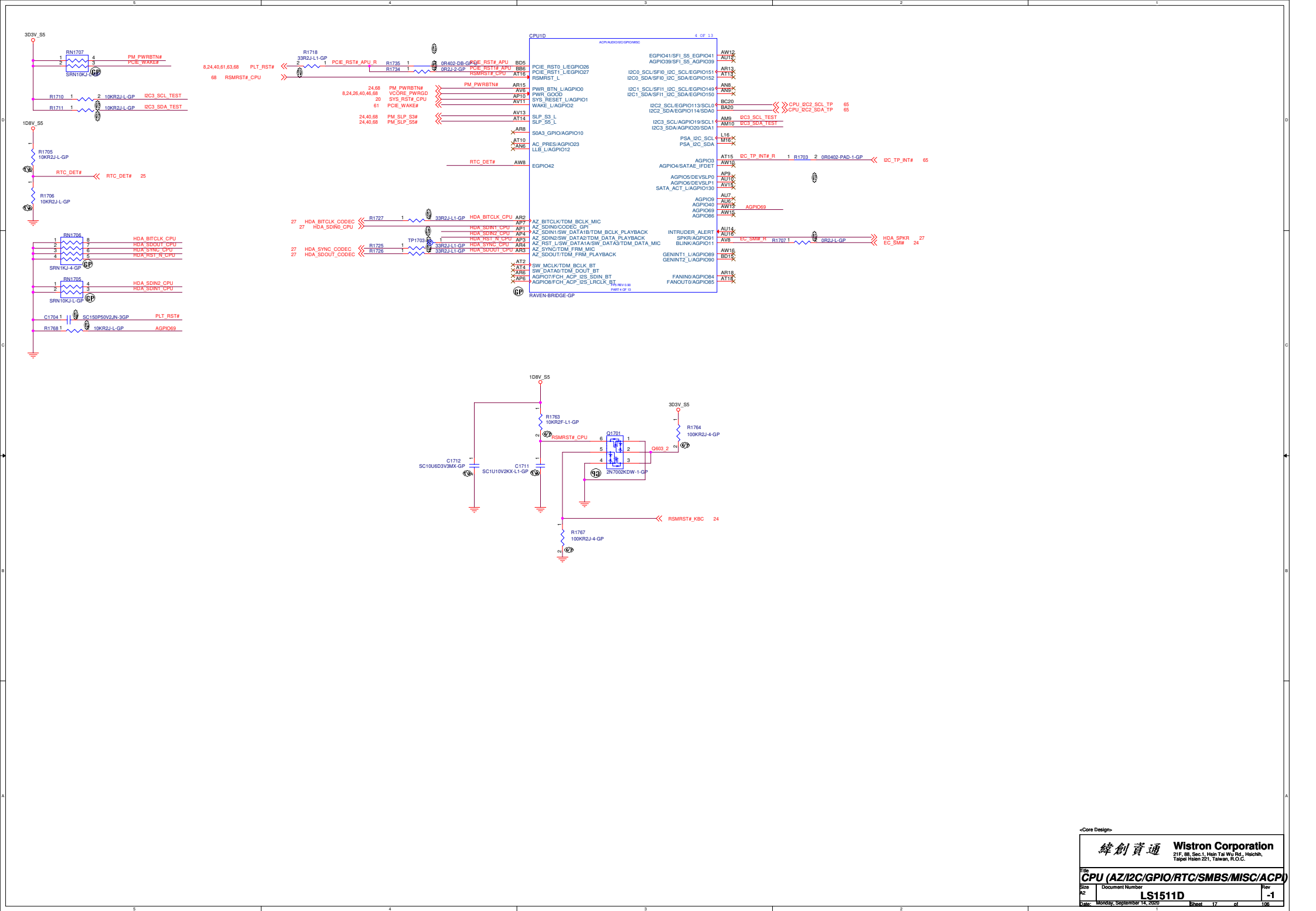
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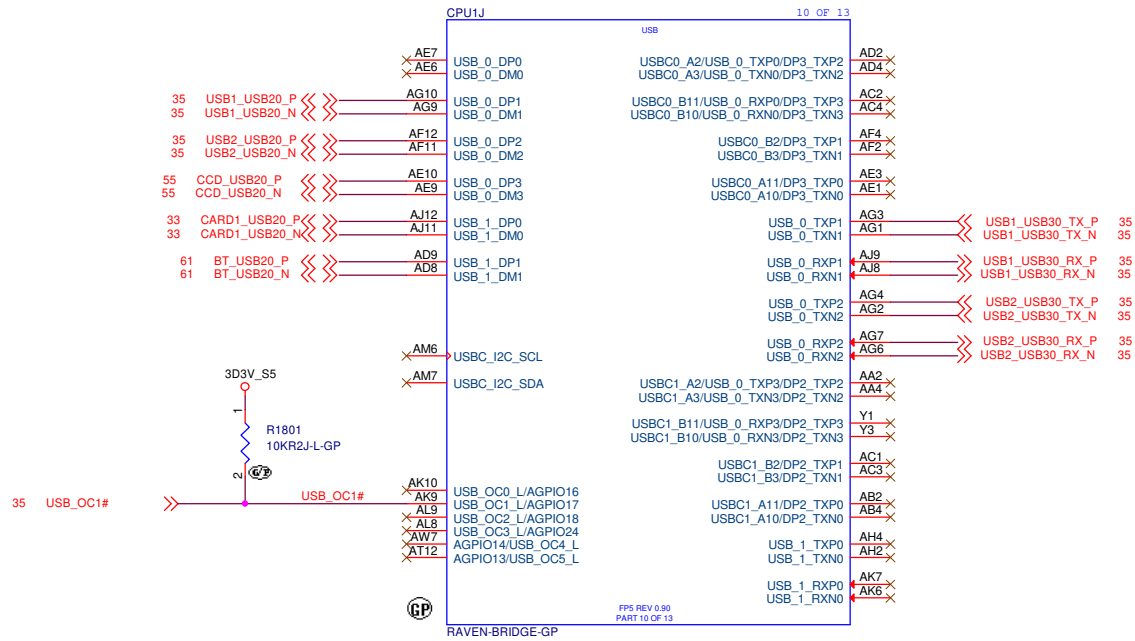
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Title DDR (RSVD)		
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緯創資通 Wistron Corporation
21F, 8B, Sec.1, Hsin Tai Wu Rd., Hsuehshui,
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Title CPU (AZ/I2C/GPIO/RTC/SMBUS/MISC/ACPI)
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Taipei Hsien 221, Taiwan, R.O.C.

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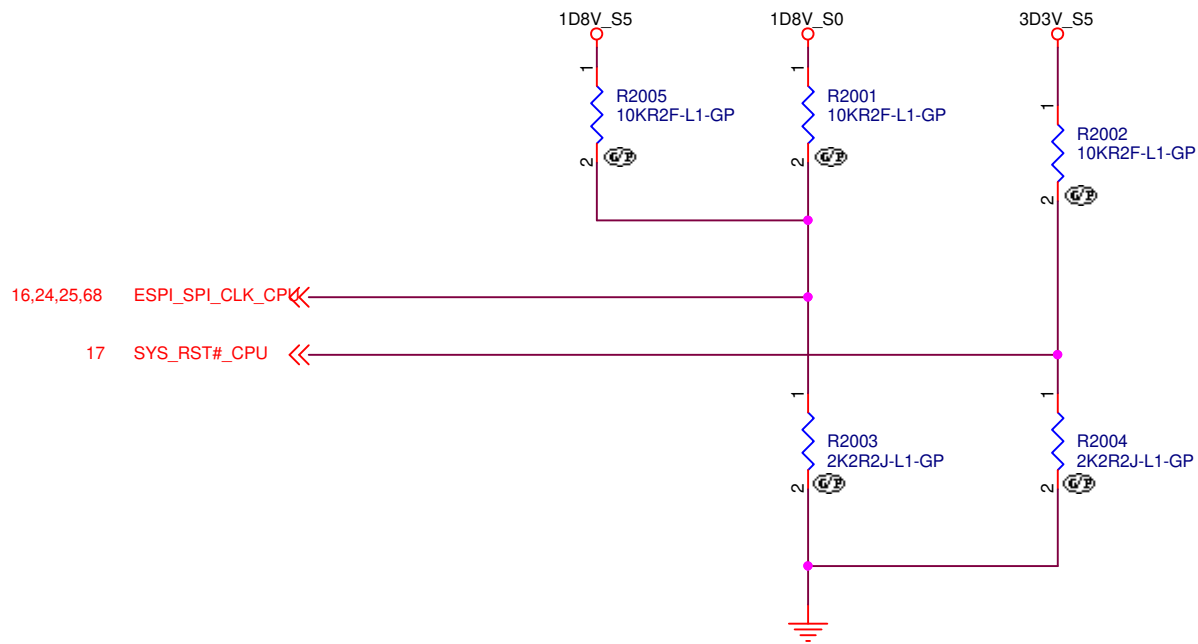
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21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
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Title

CPU (Strappings)

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21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
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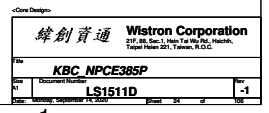
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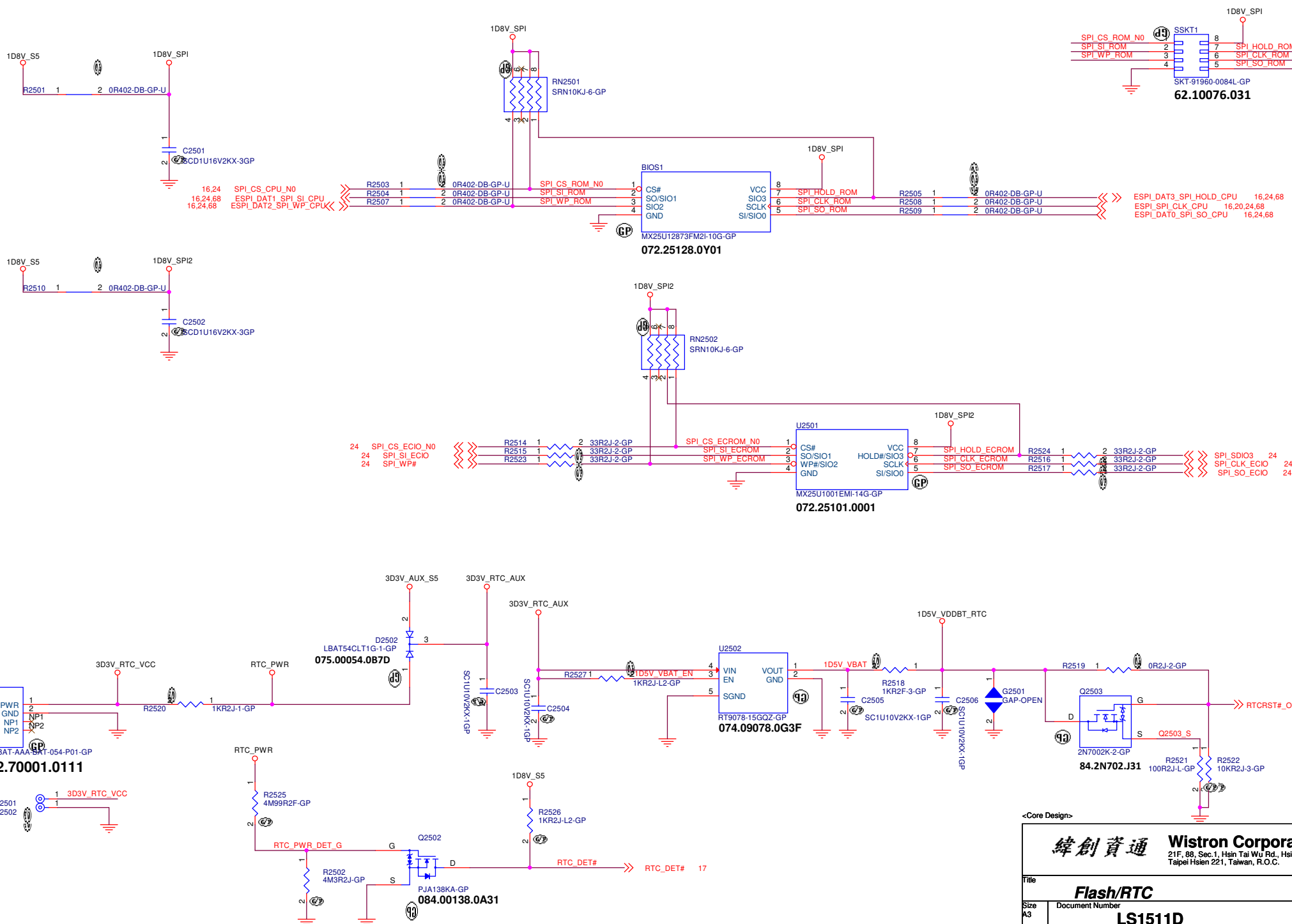
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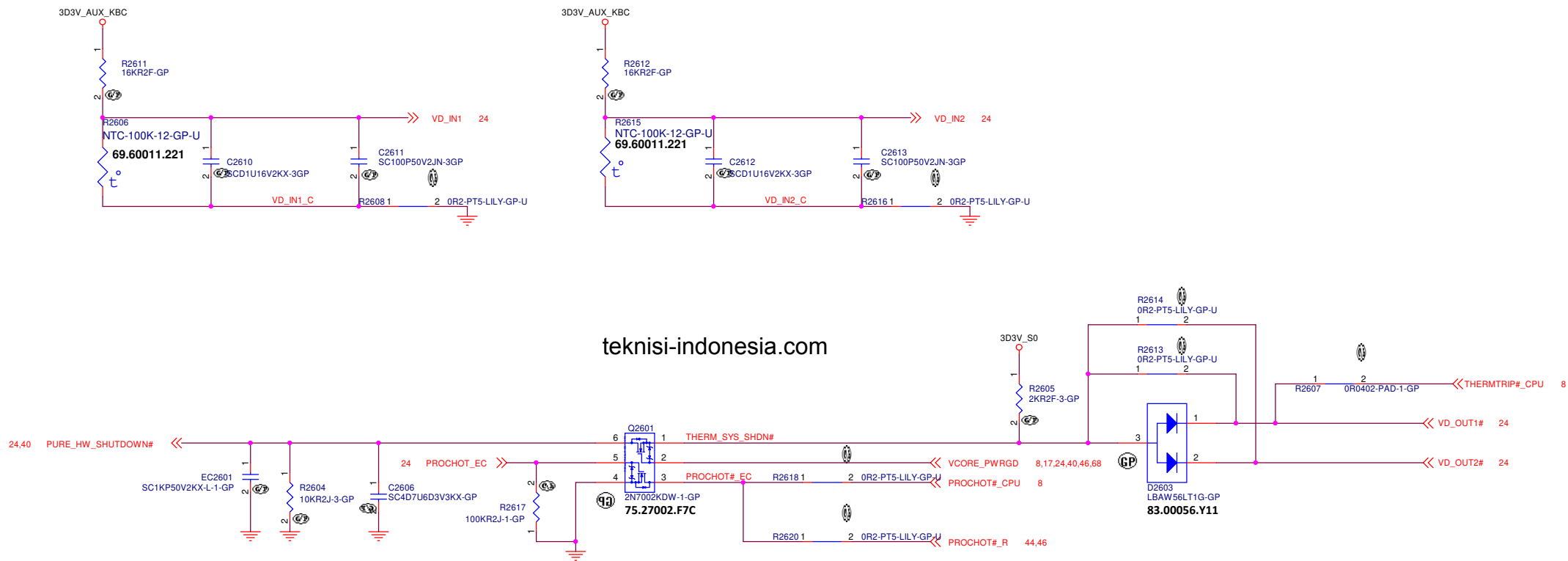
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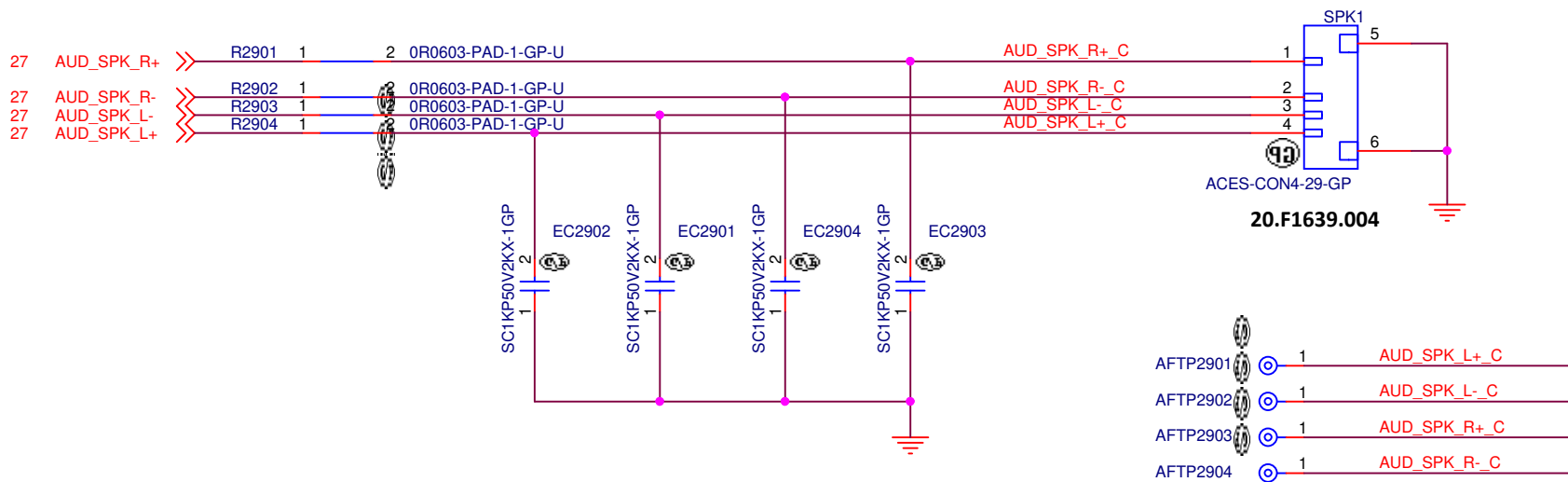




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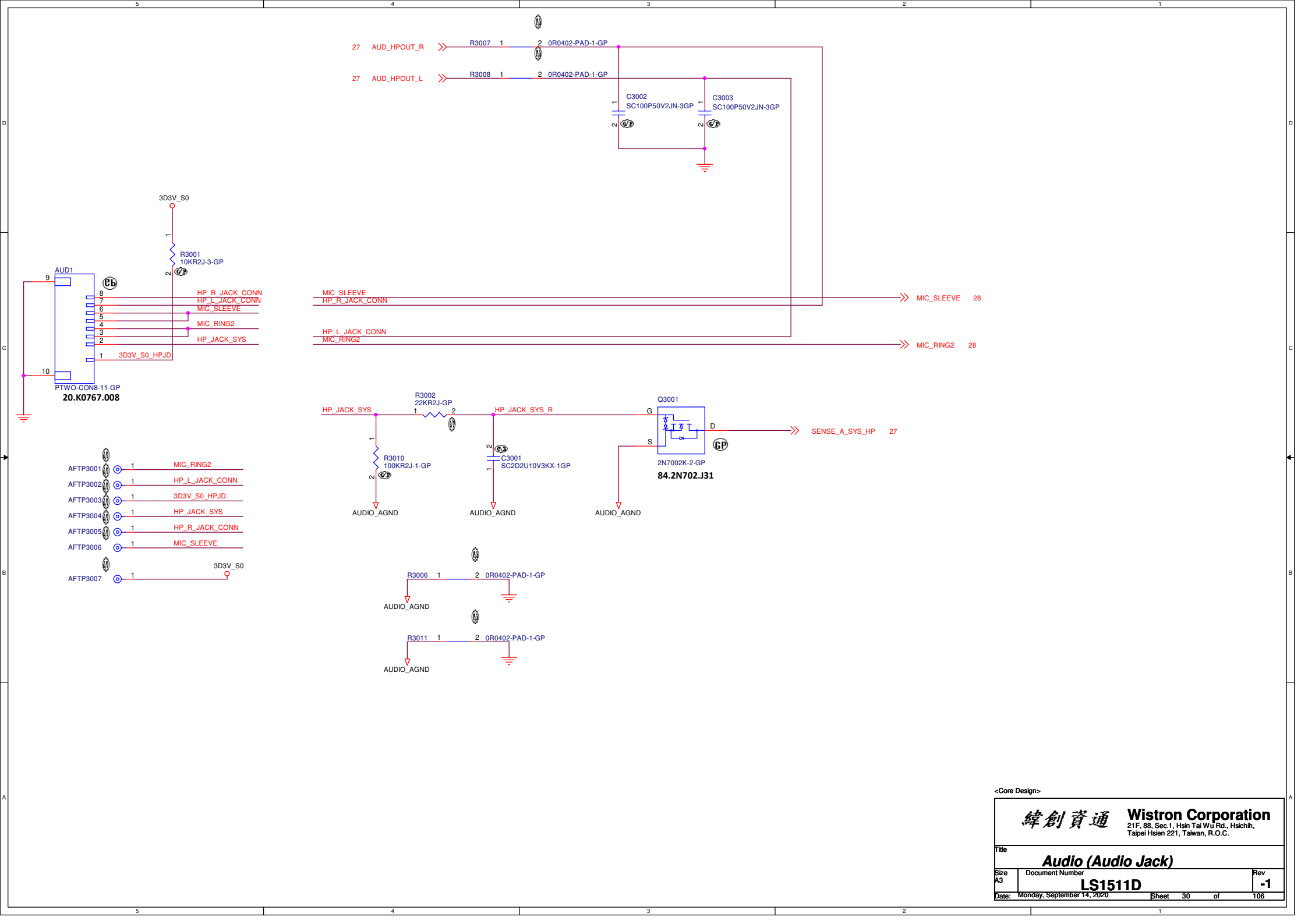
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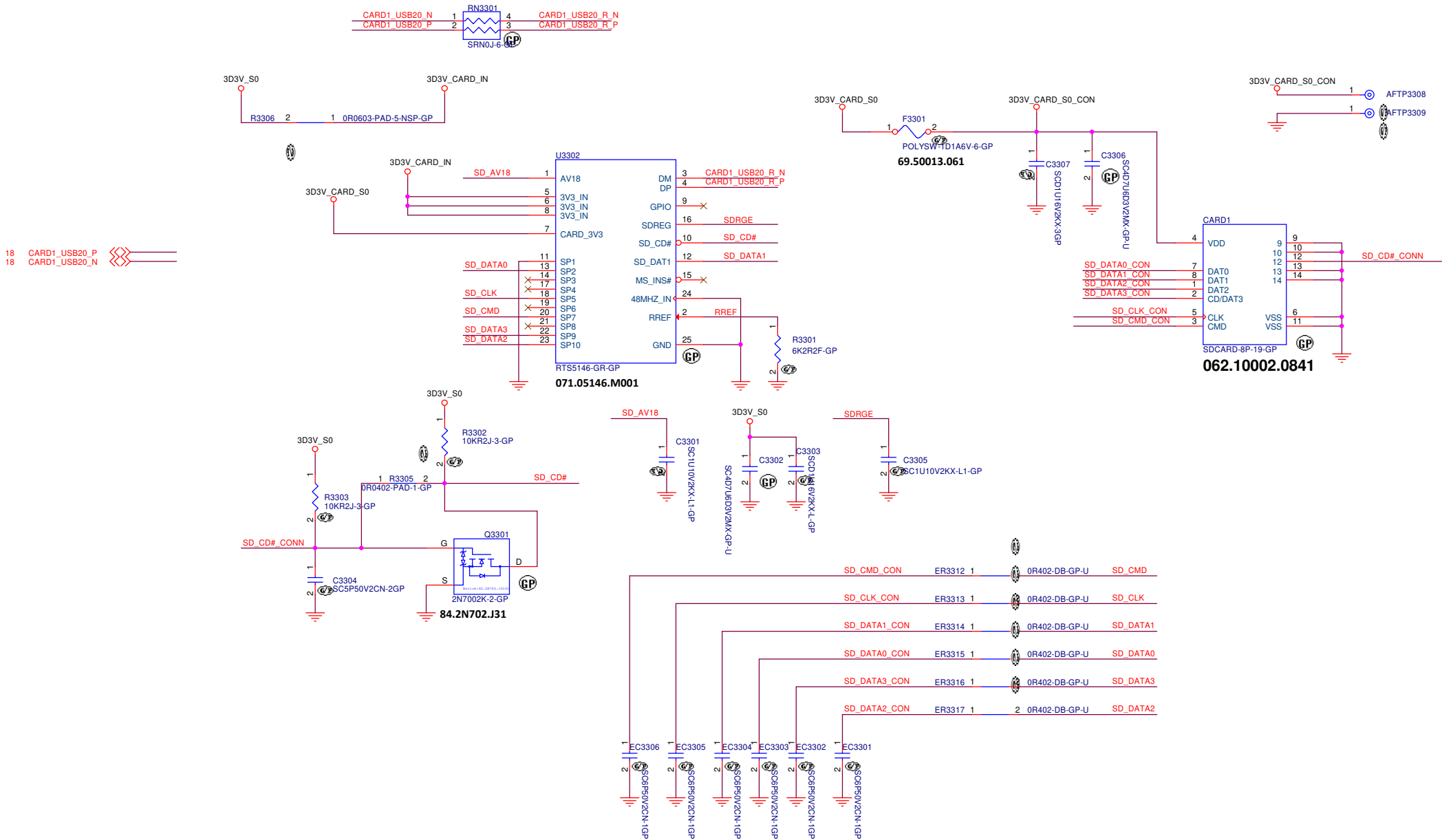
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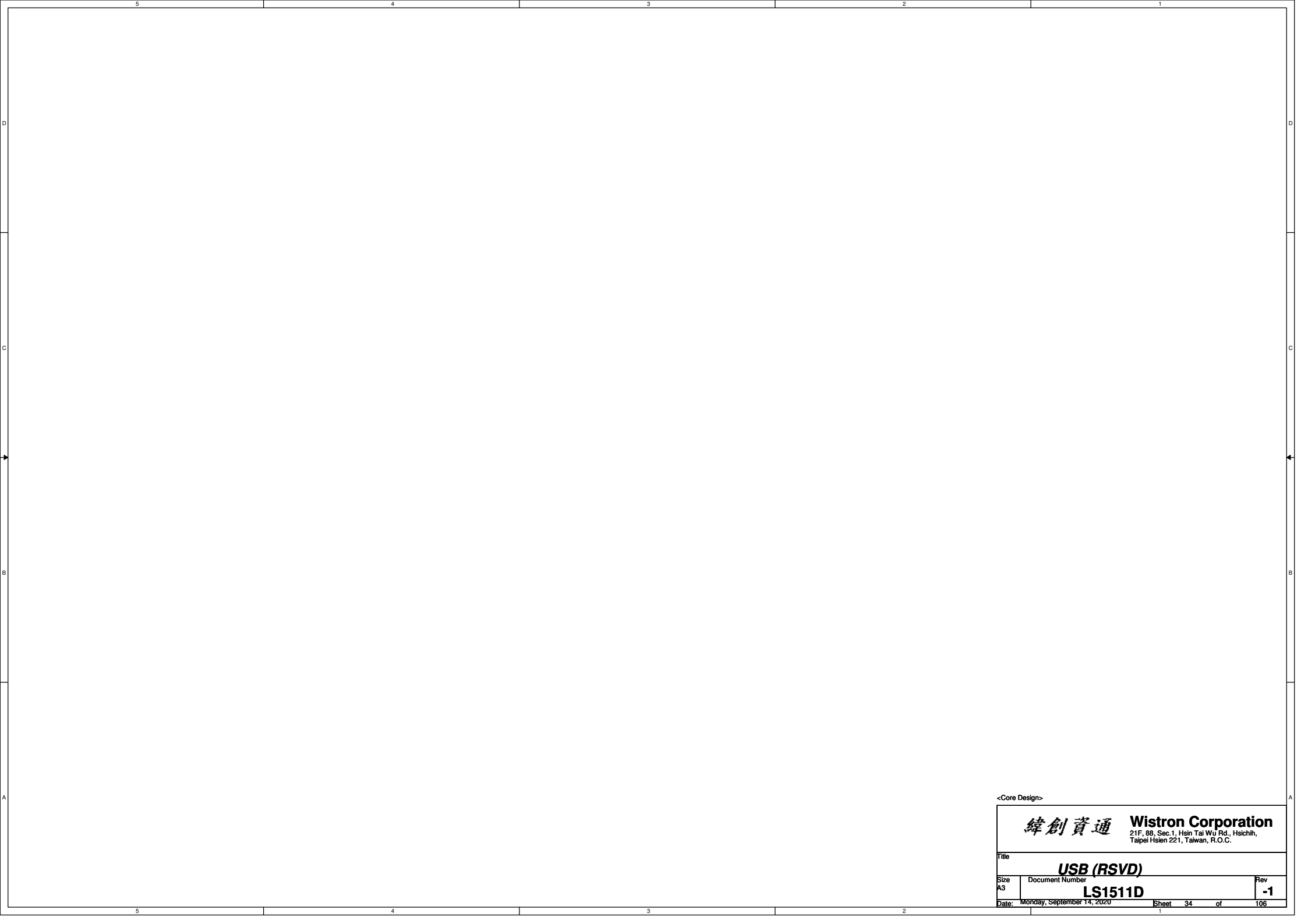
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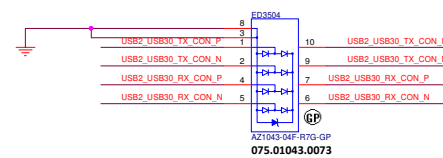
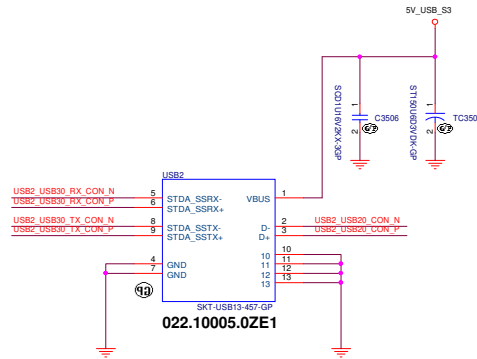
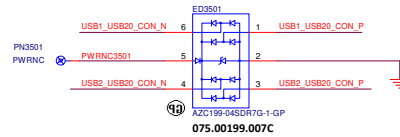
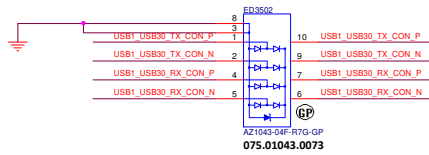
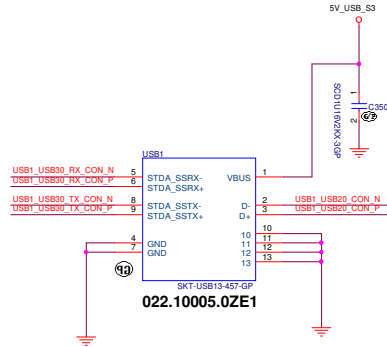
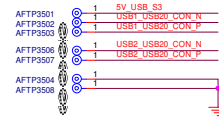
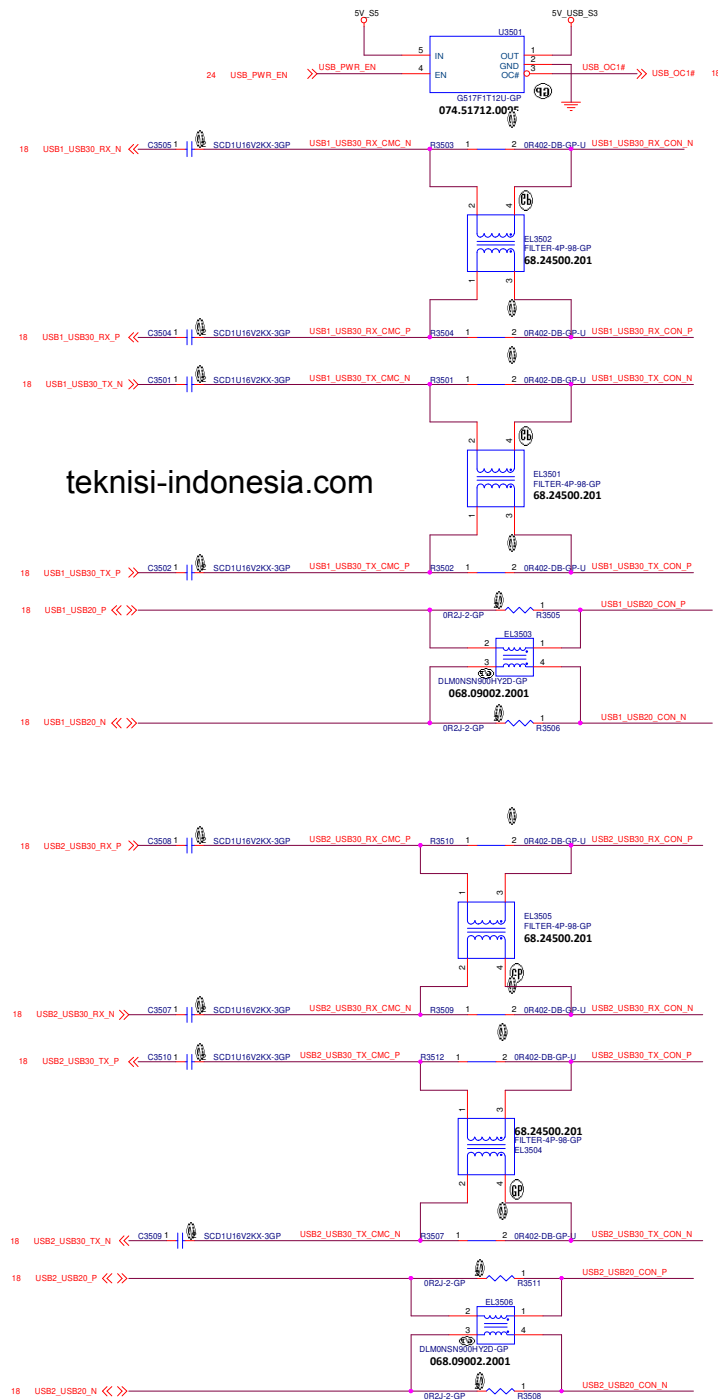
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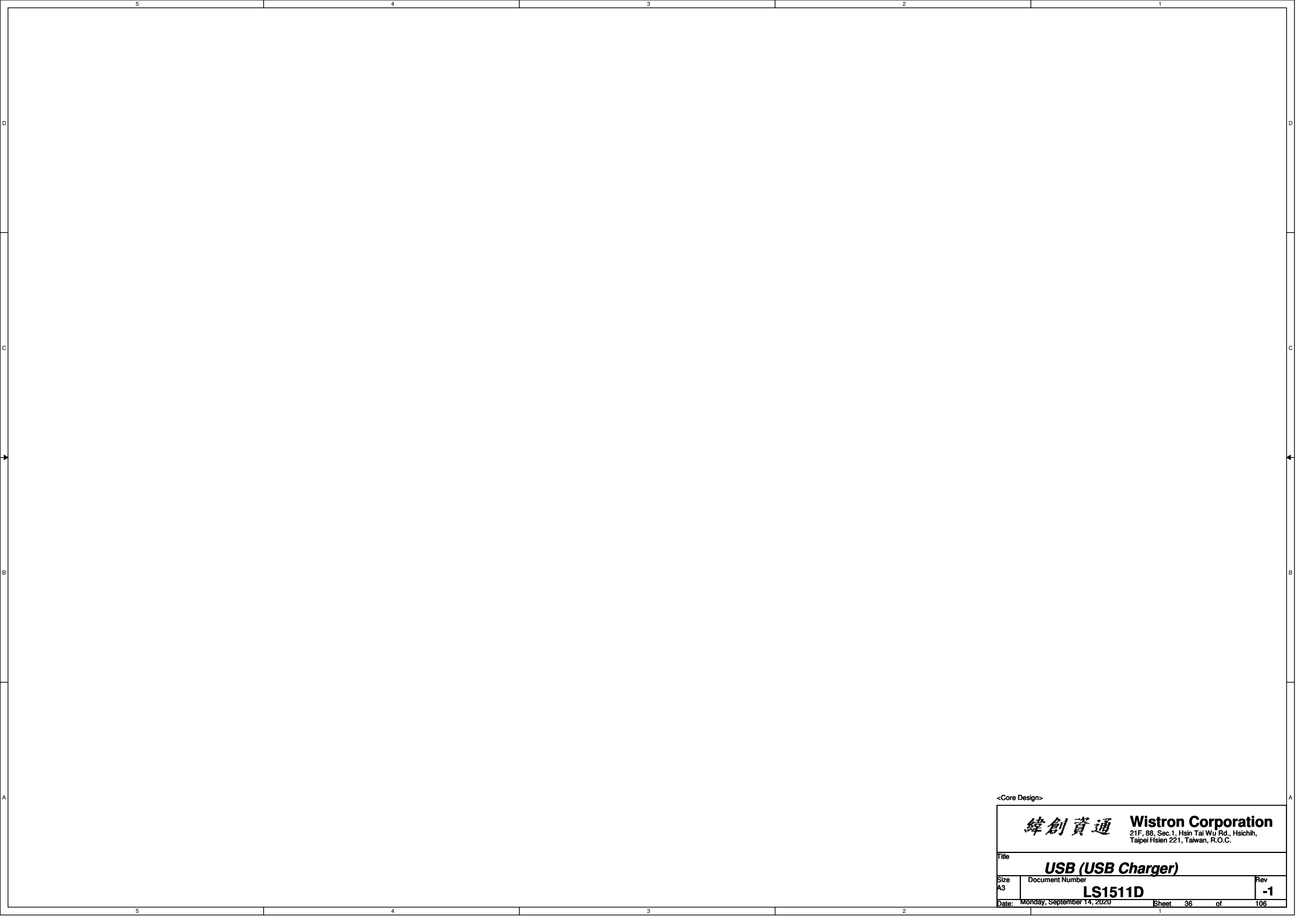


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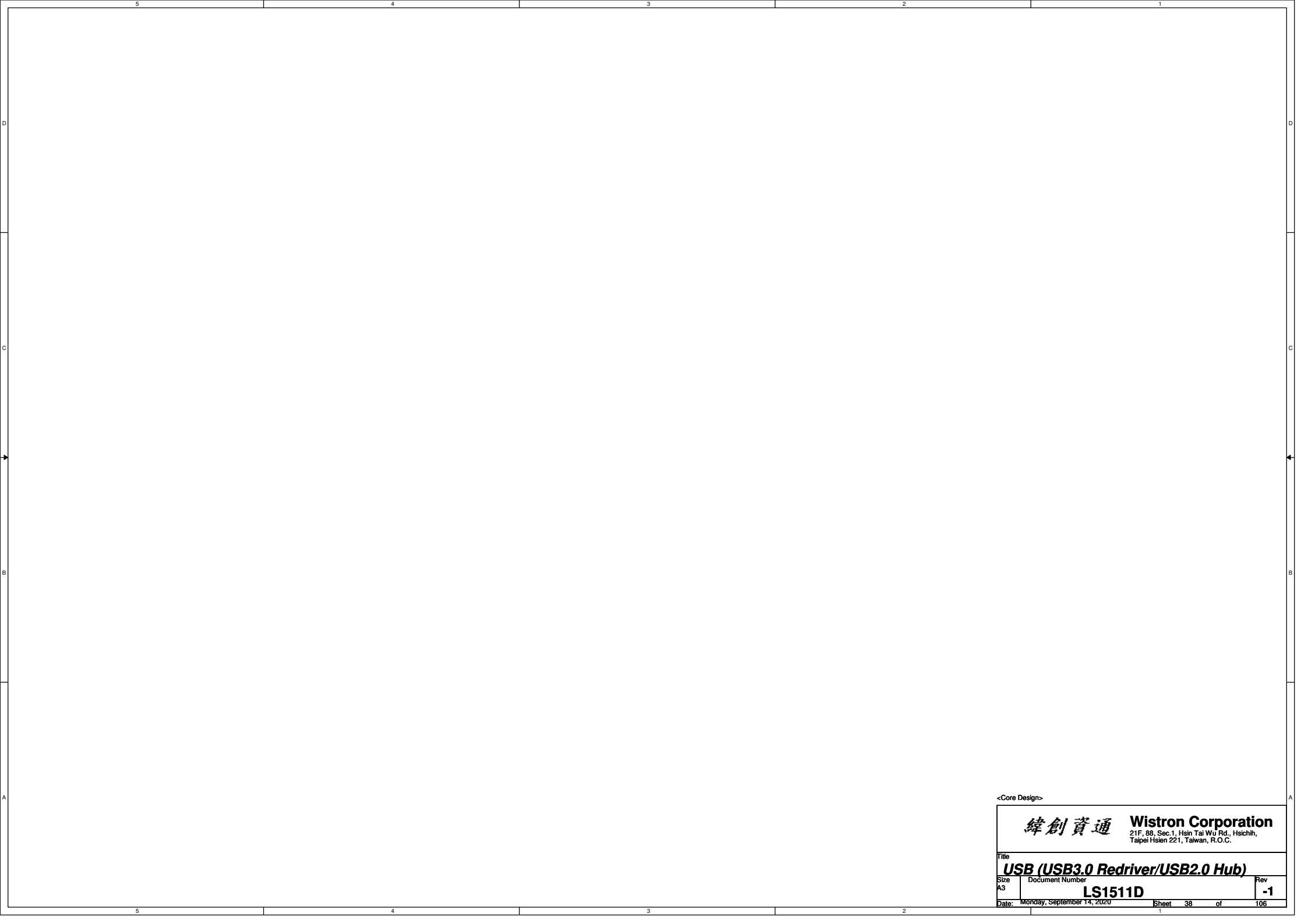
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USB (USB Charger)			
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USB (USB3.0 Redriver/USB2.0 Hub)			
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緯創資通

Wistron Corporation

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

Title

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A3

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-1

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<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		
Sequence (RSVD)		
Size	Document Number	Rev
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<Core Design>

緯創資通

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

Title

INT IO (RSVD)

Size
A4

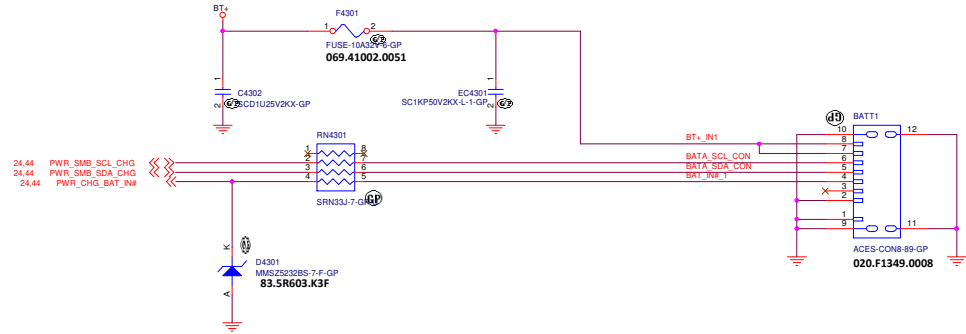
Document Number

LS1511D

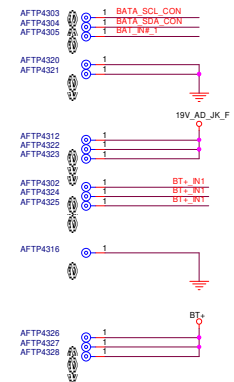
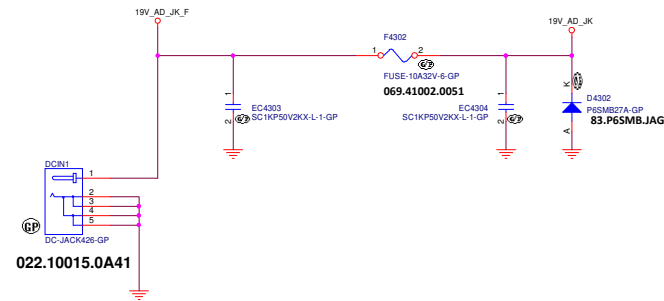
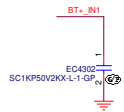
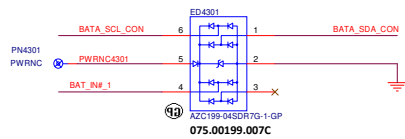
Rev
-1

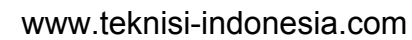
Date: Monday, September 14, 2020

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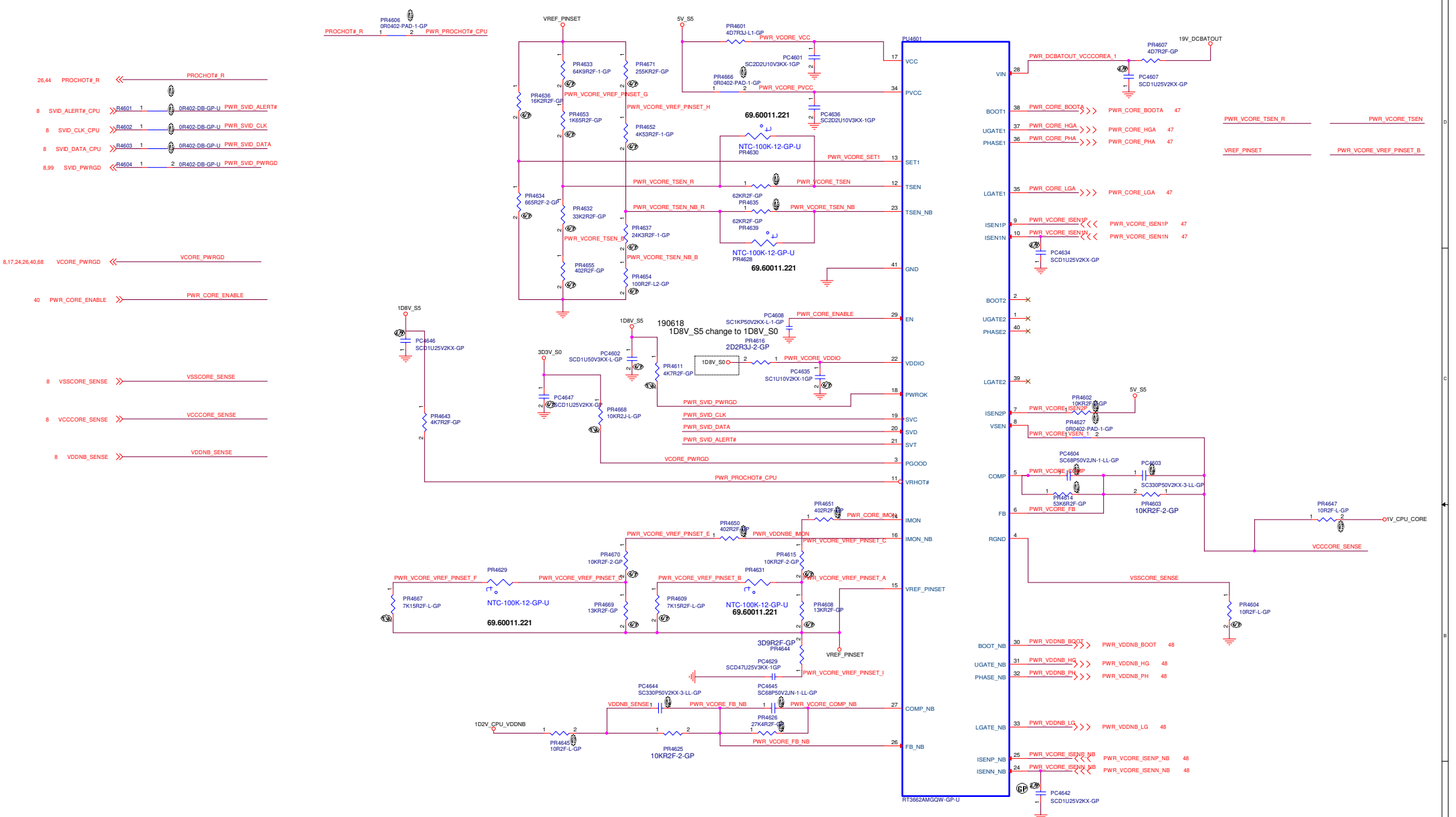


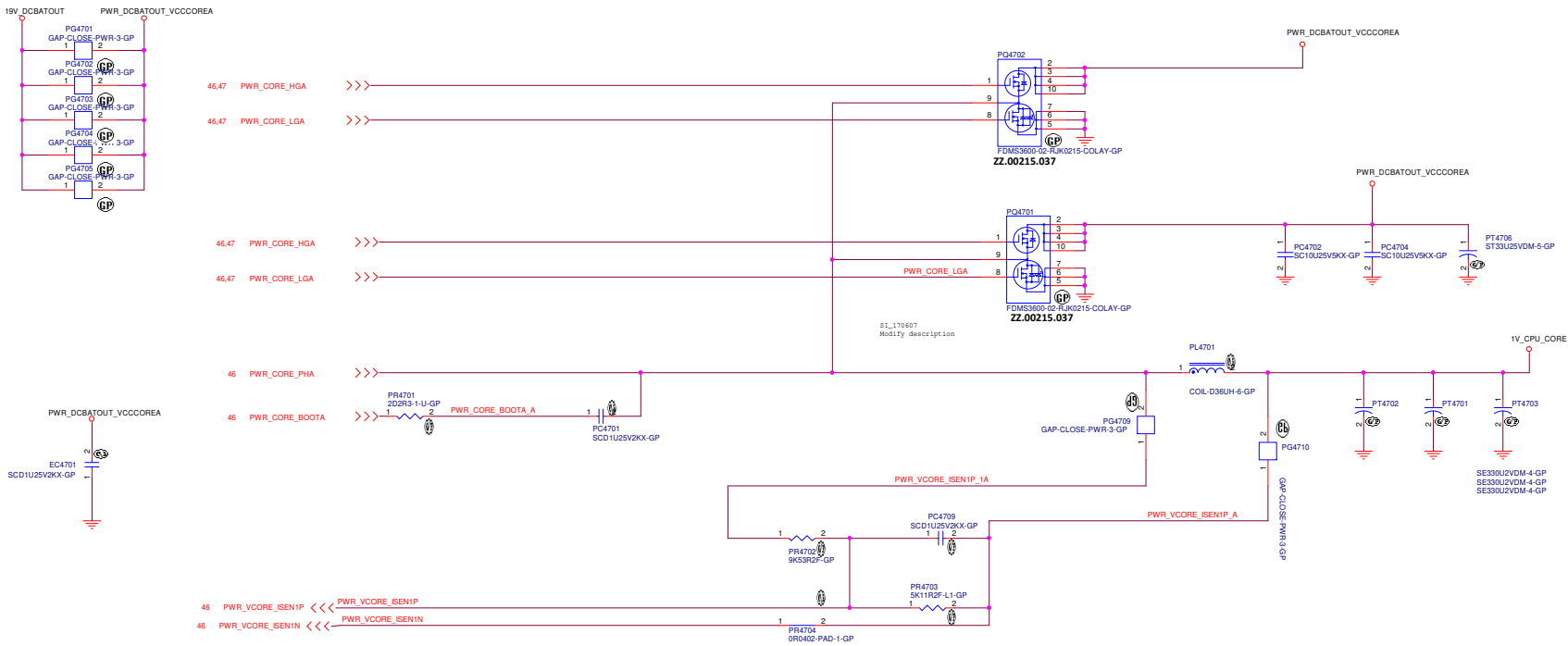
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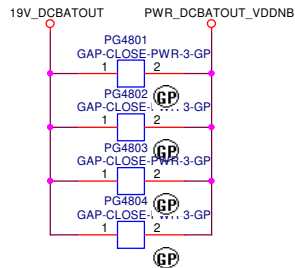




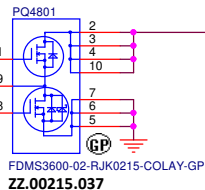




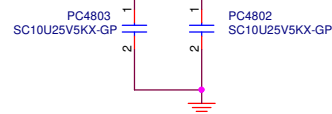




SB1101.2Ray:Add PQ4801 2ND



PWR_DCBATOUT_VDDNB



46 PWR_VDDNB_HG >>>

46 PWR_VDDNB_LG >>>

46 PWR_VDDNB_PH >>>

46 PWR_VDDNB_BOOT >>>



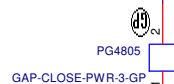
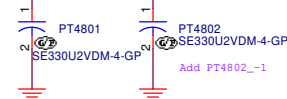
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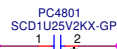
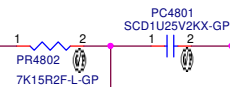
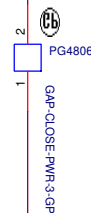
170911
Follow power team request
PL4801 change part number



1D2V_CPU_VDDNB



PWR_VCORE_ISENPN_NB_A



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46 PWR_VCORE_ISENN_NB <<< PWR_VCORE_ISENN_NB

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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.

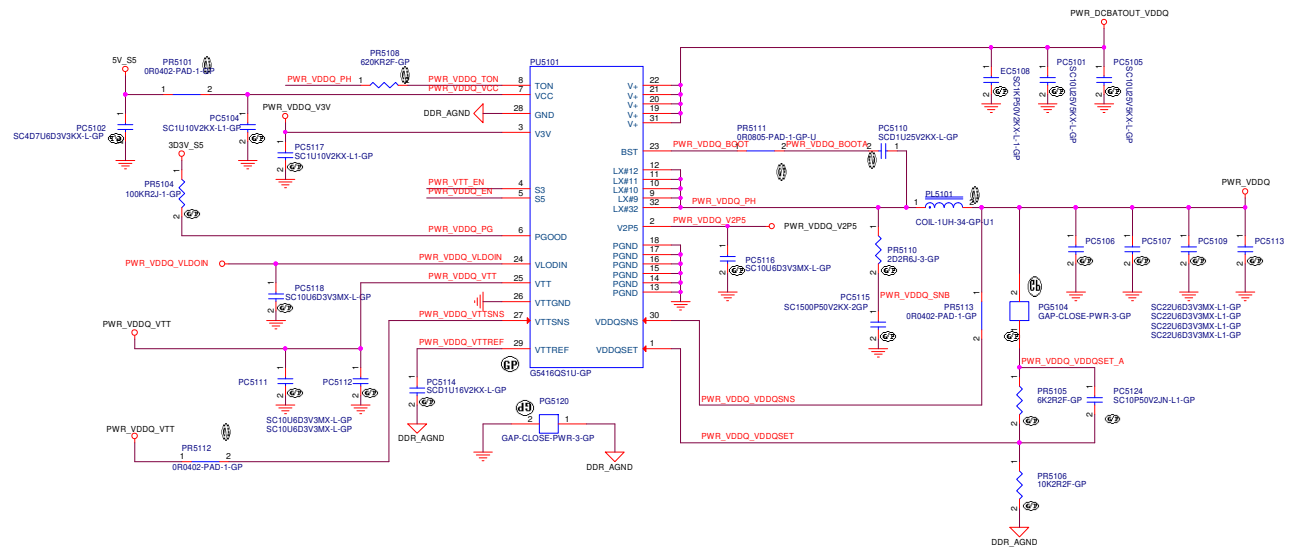
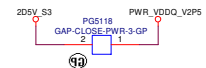
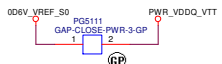
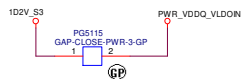
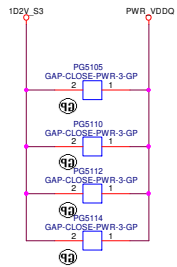
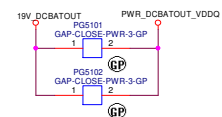
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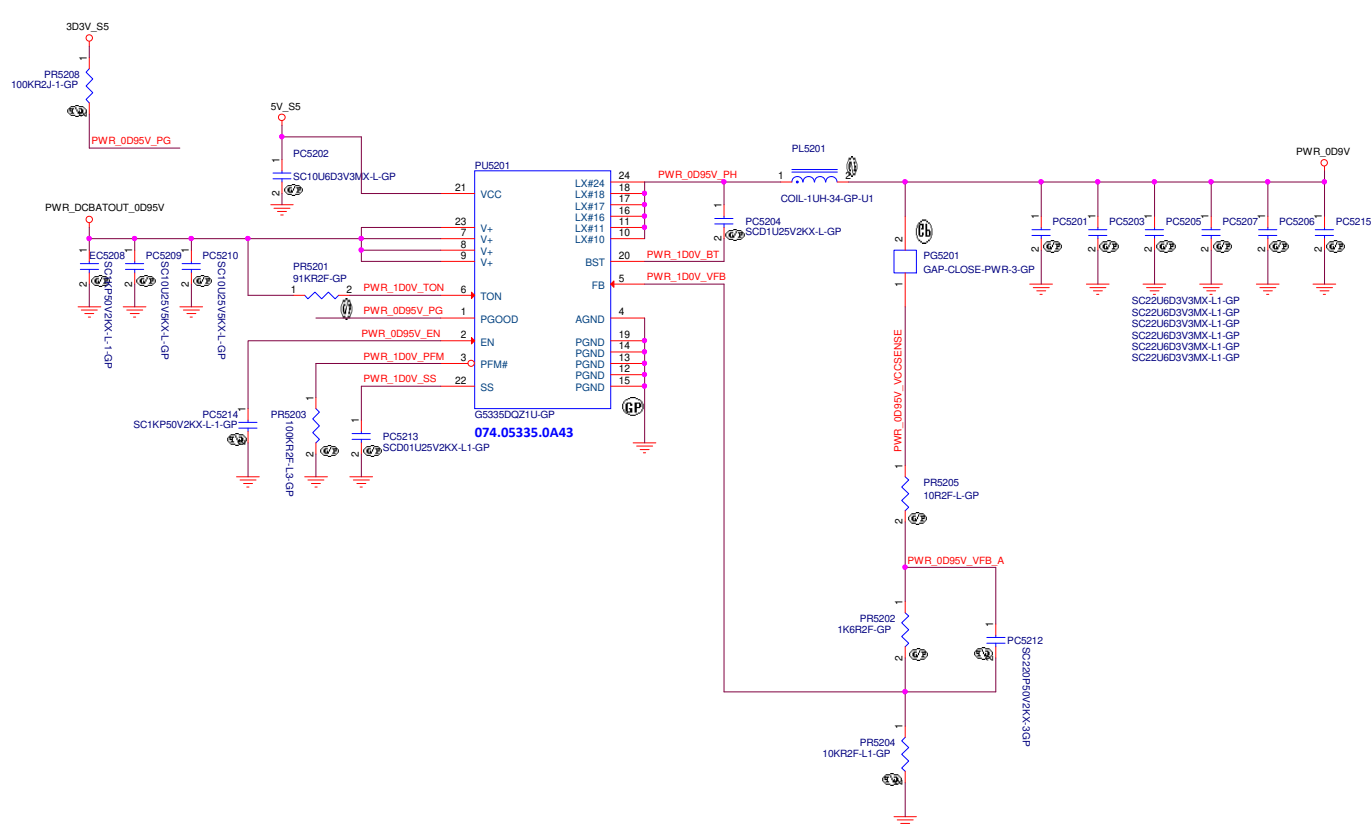
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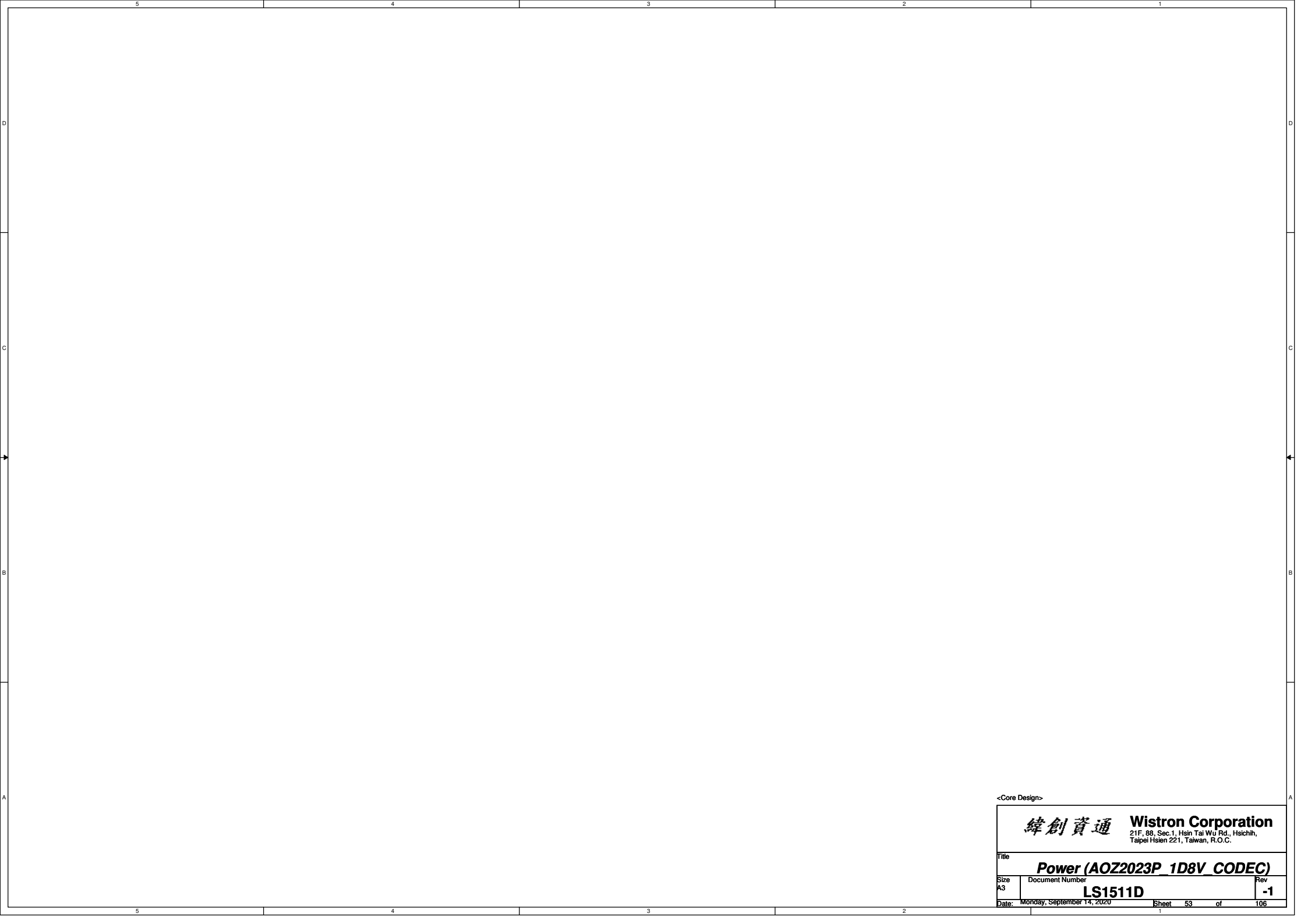
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緯創資通		Wistron Corporation	
		21F, 8th, Sec. 1, Hsin Tsai Yung Rd., Hsichia, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
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Size	Document Number		Rev
A2	LS1511D		-1
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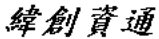
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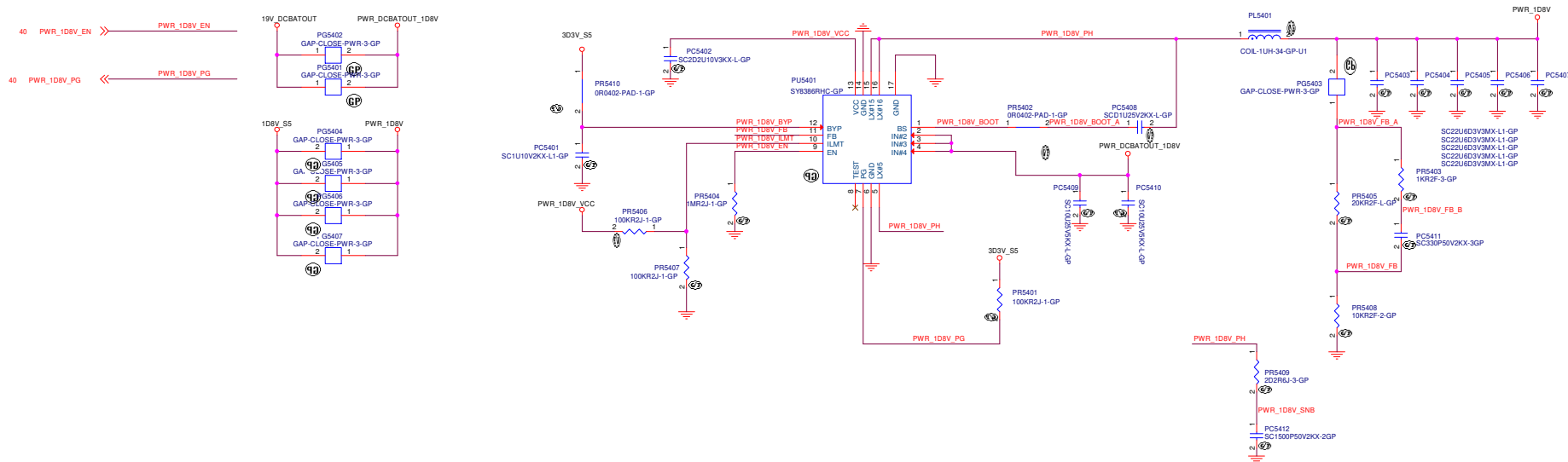






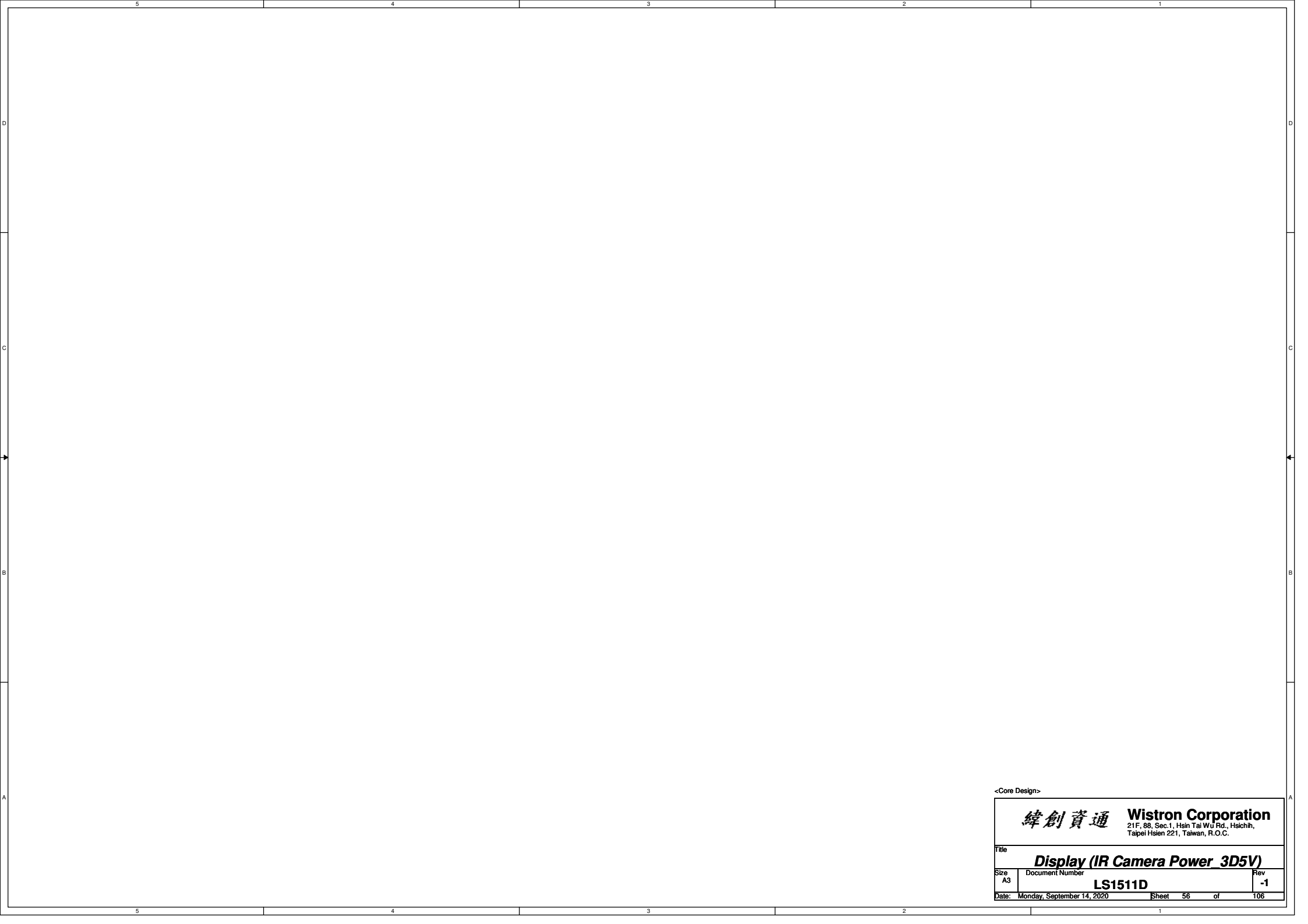
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		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
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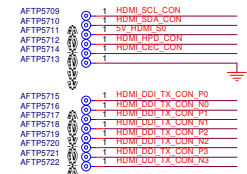
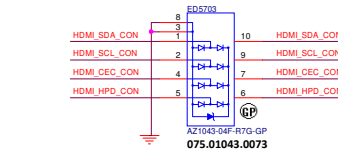
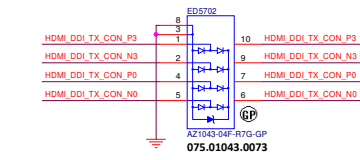
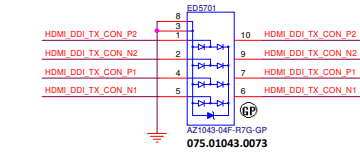
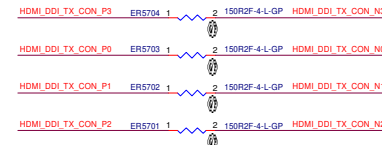
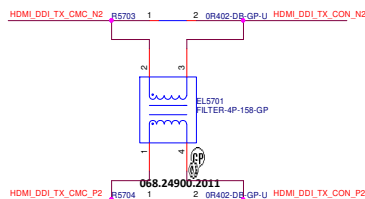
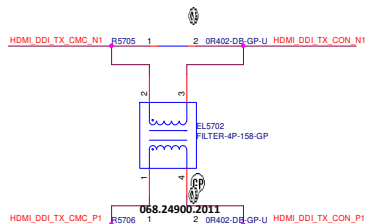
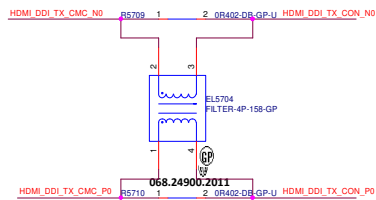
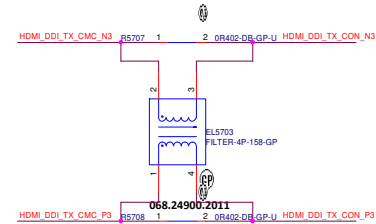
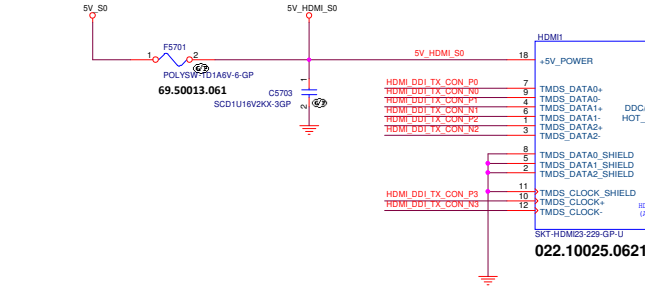
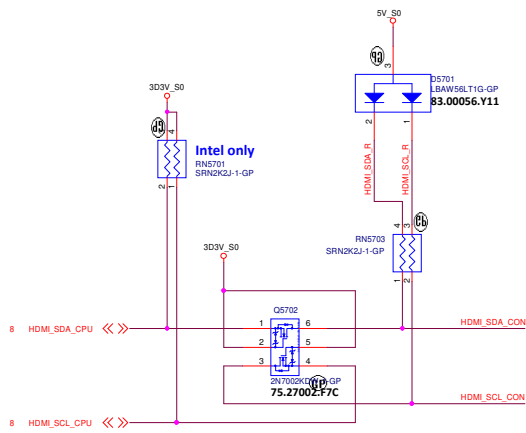
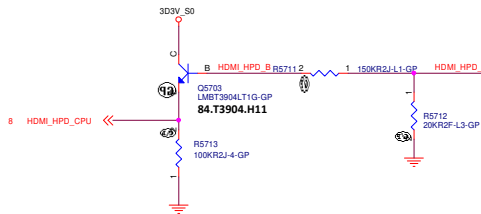
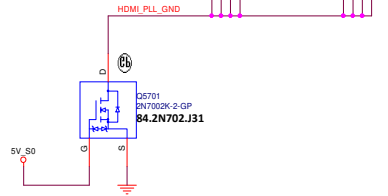
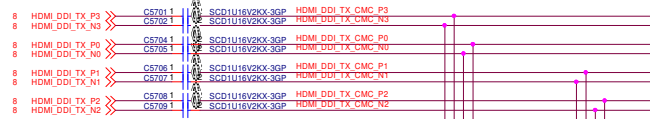
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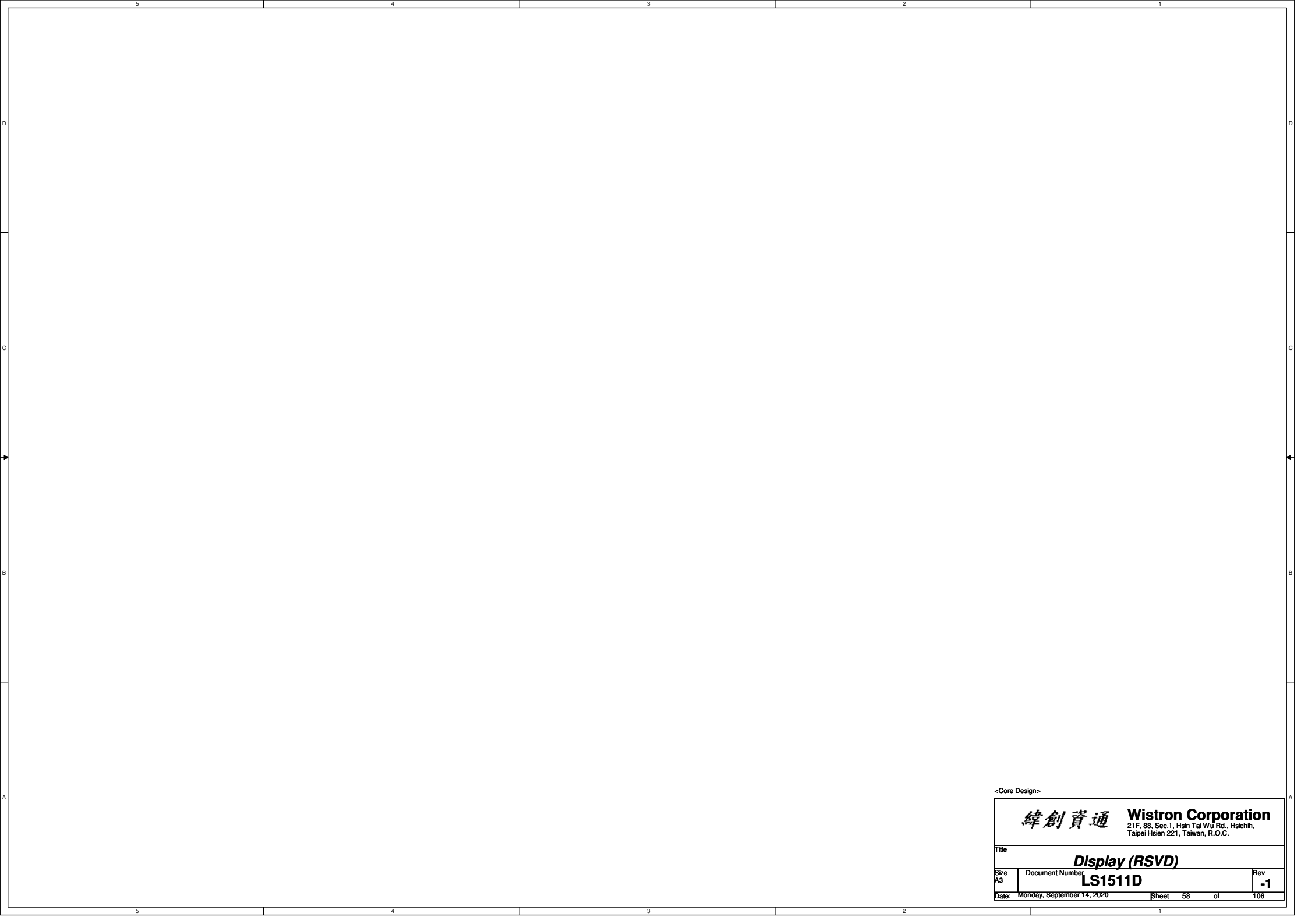




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		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
Display (IR Camera Power 3D5V)			
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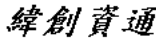


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緯創資通		Wistron Corporation	
		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
Display (RSVD)			
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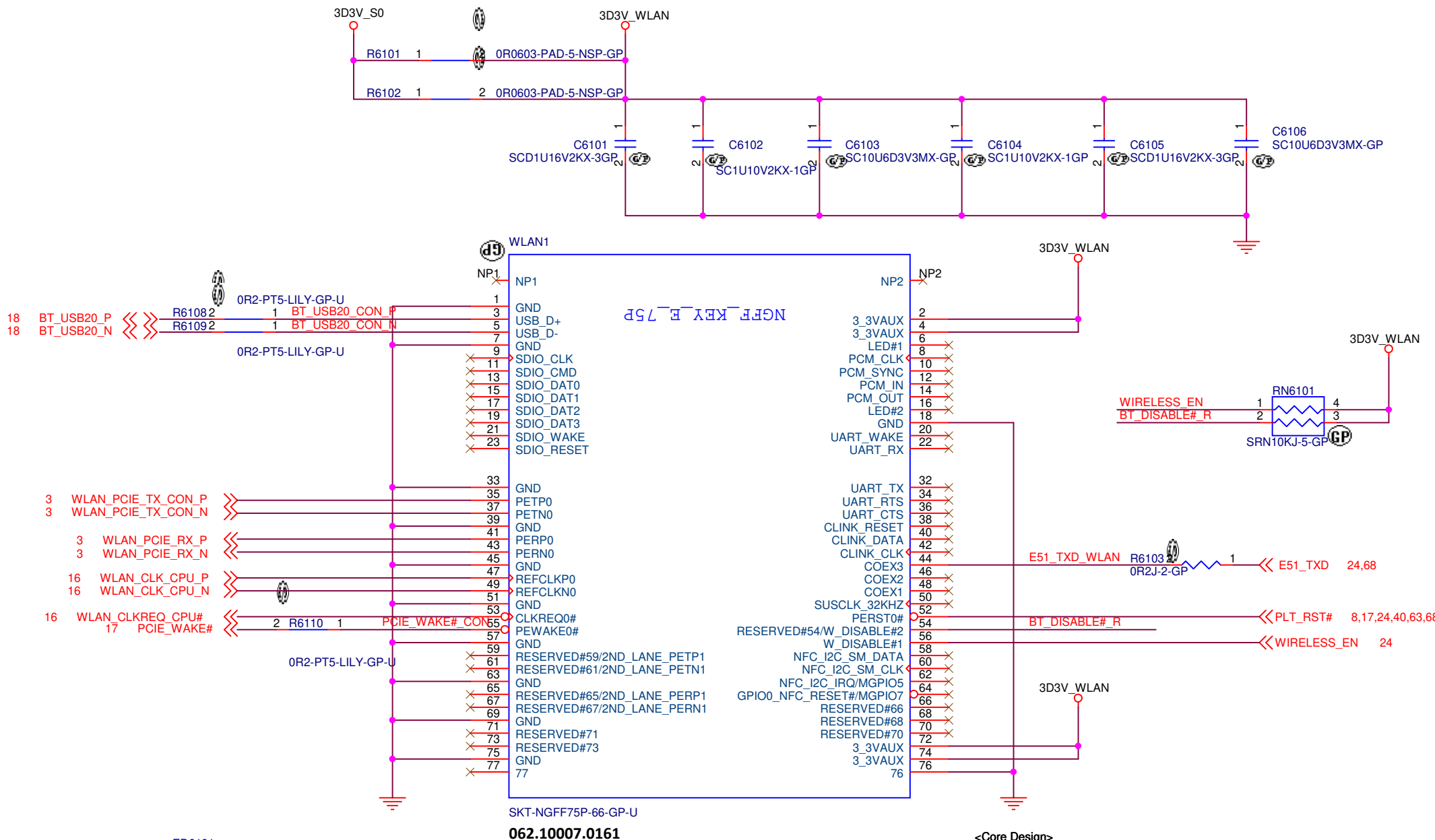
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		Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
Display (RSVD)			
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SSID = SATA

<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		
INT IO (HDD/ODD)		
Size	Document Number	Rev
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Wistron Corporation

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

Title

INT IO (WLAN M.2)

Size

A4

Document Number

LS1511D

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-1

Date: Monday, September 14, 2020

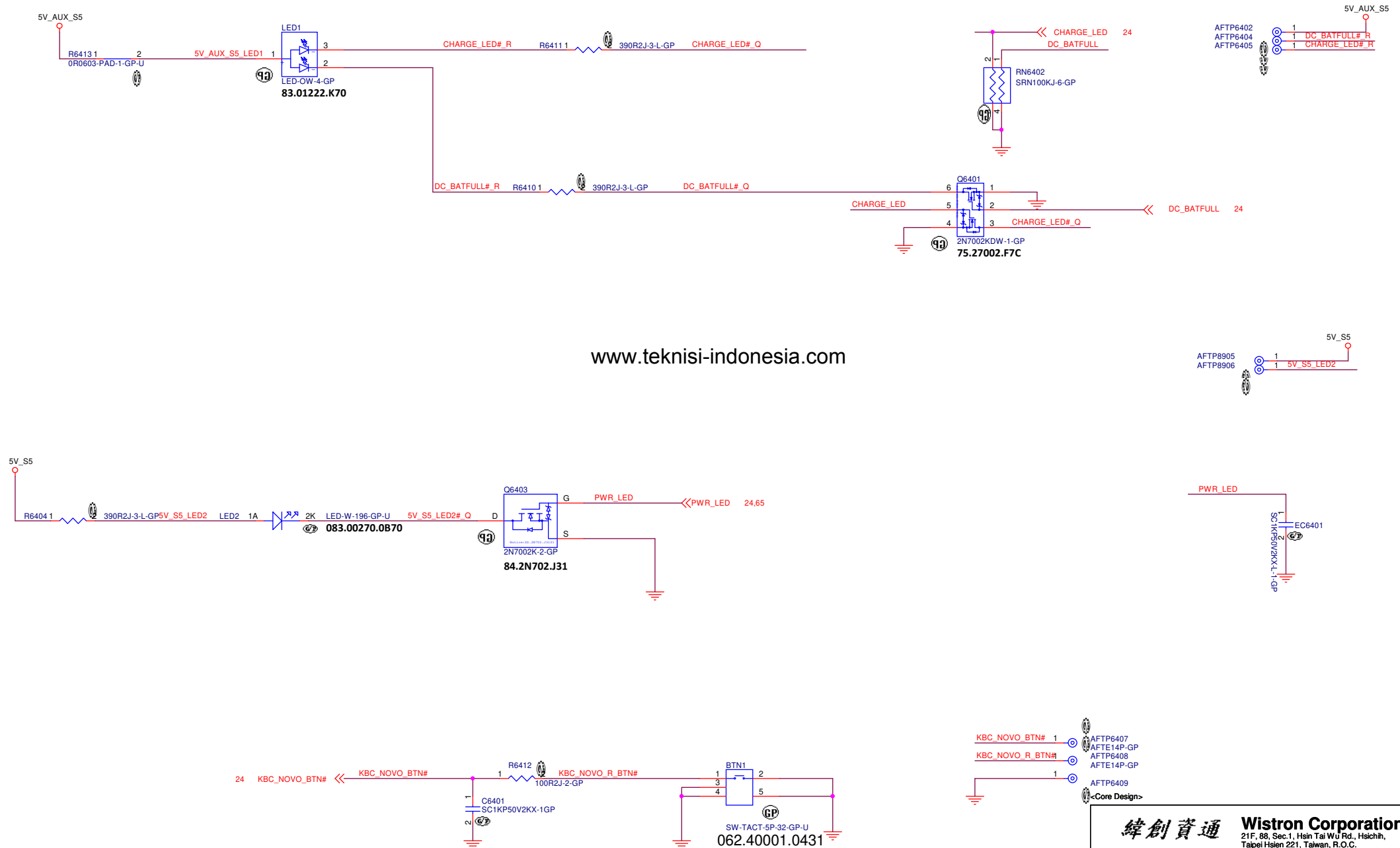
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<div>緯創資通</div> <div>Wistron Corporation</div> <div>21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.</div>		
Title		
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Size	Document Number	Rev
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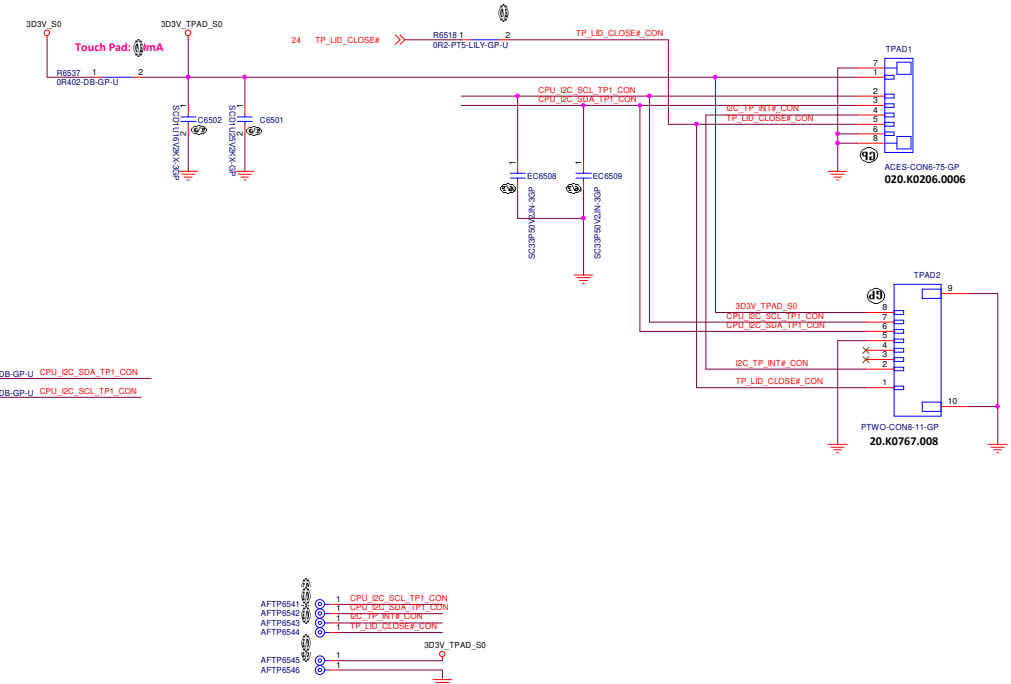
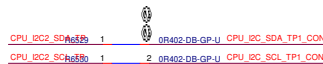
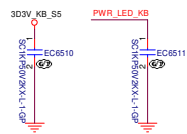
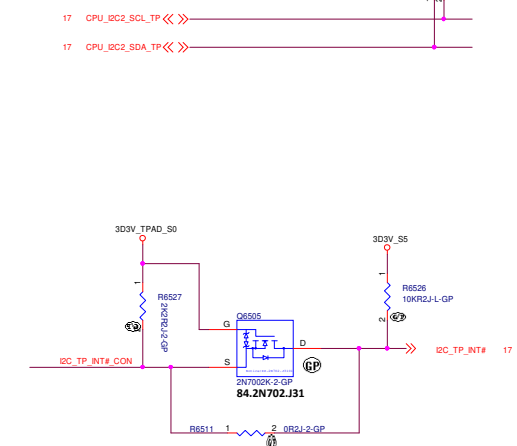
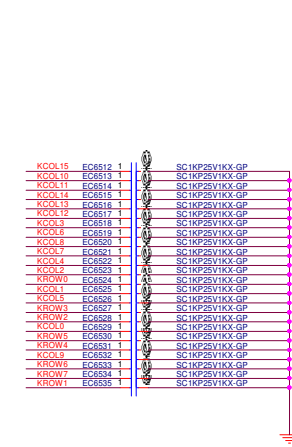
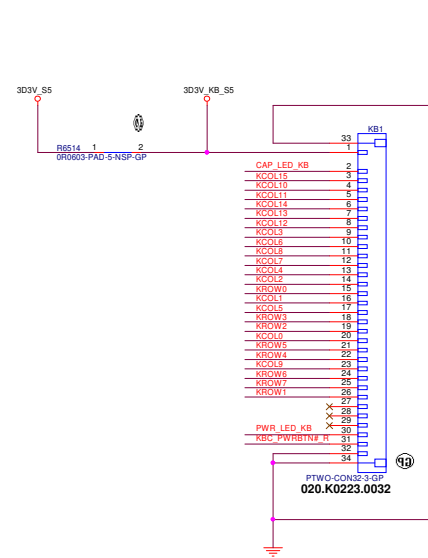
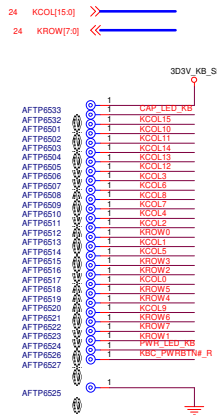
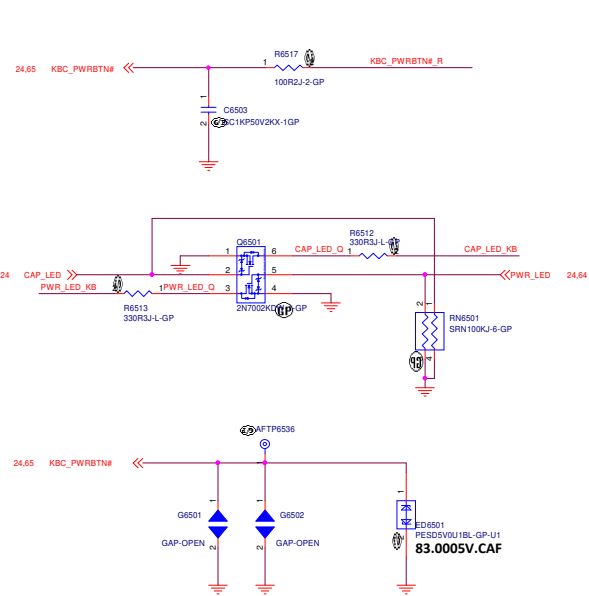


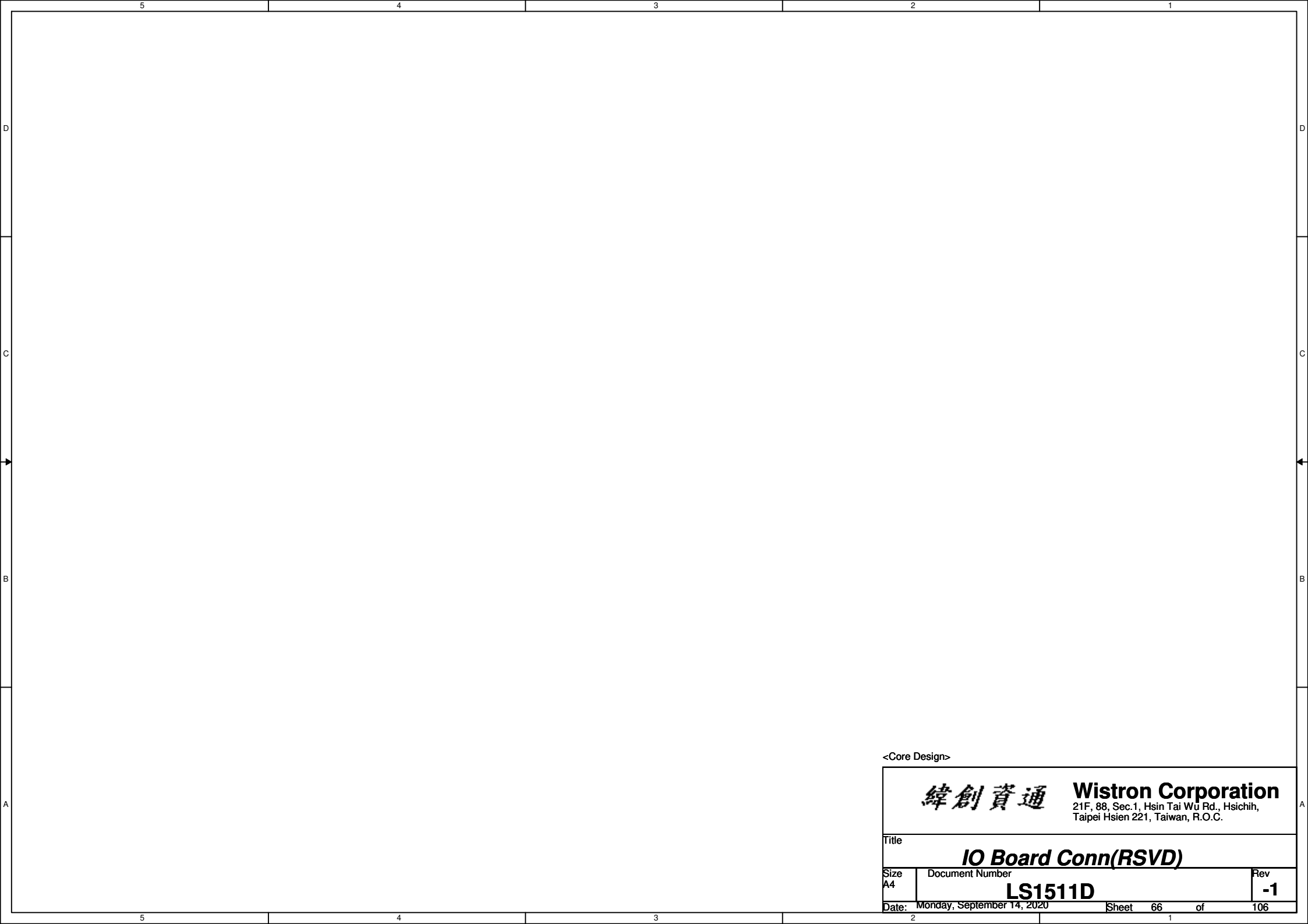
Wistron Corporation
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

LED / Button / Power Button

Size A3 Document Number Rev -1

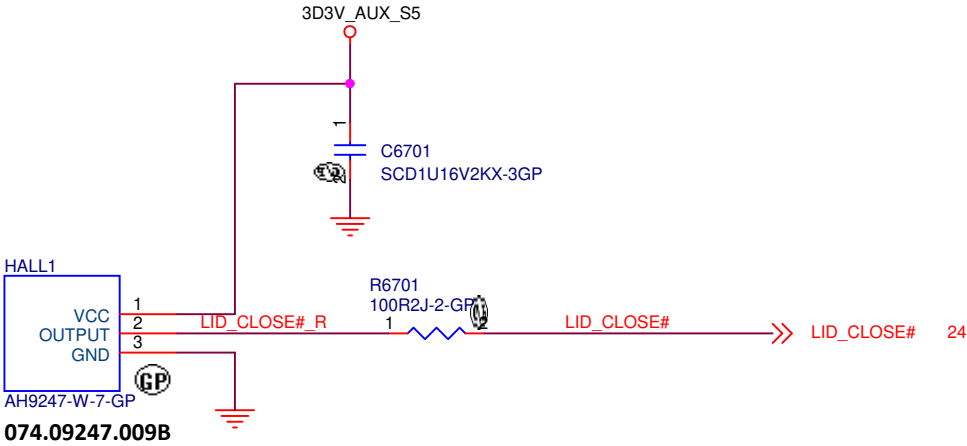
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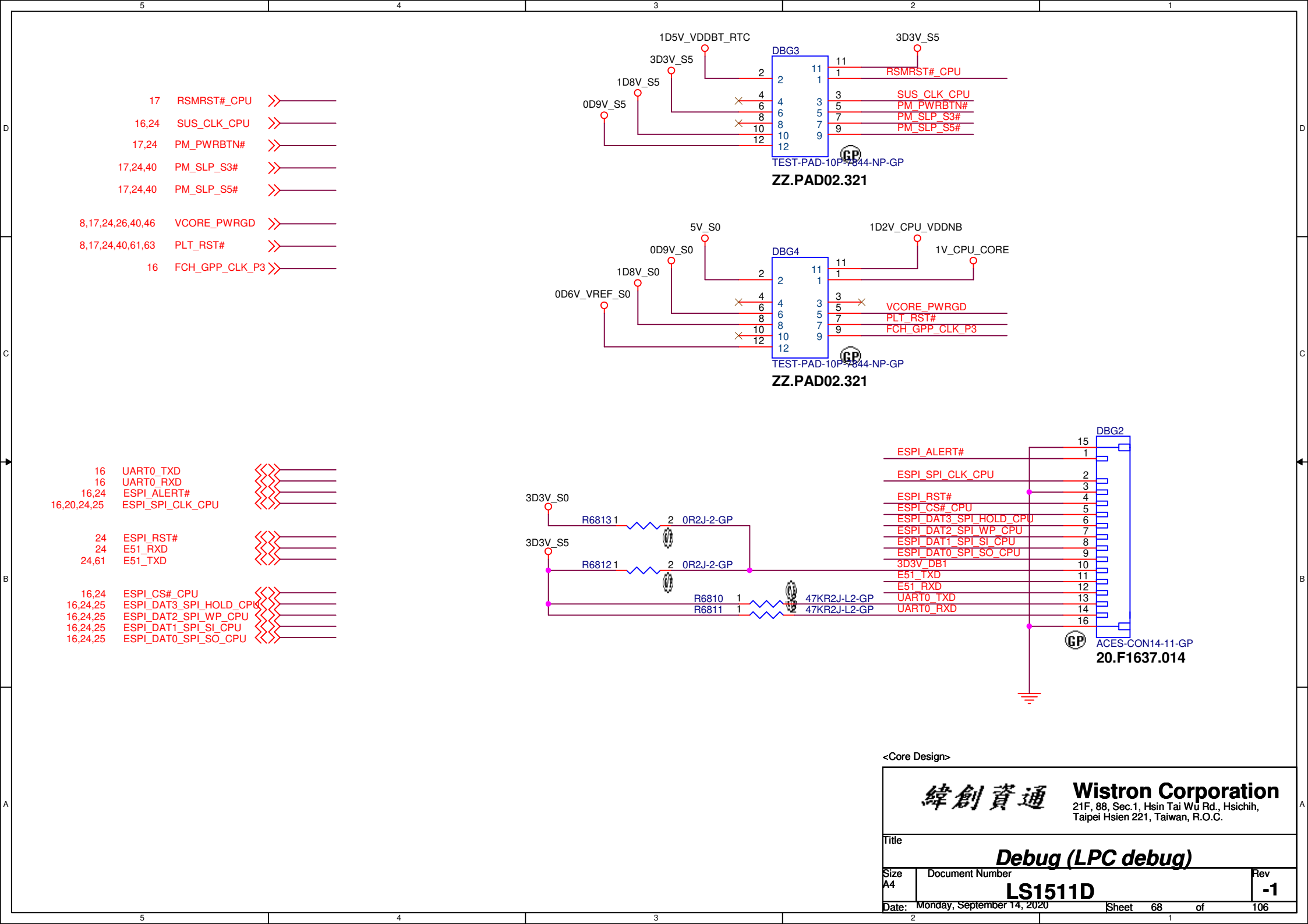
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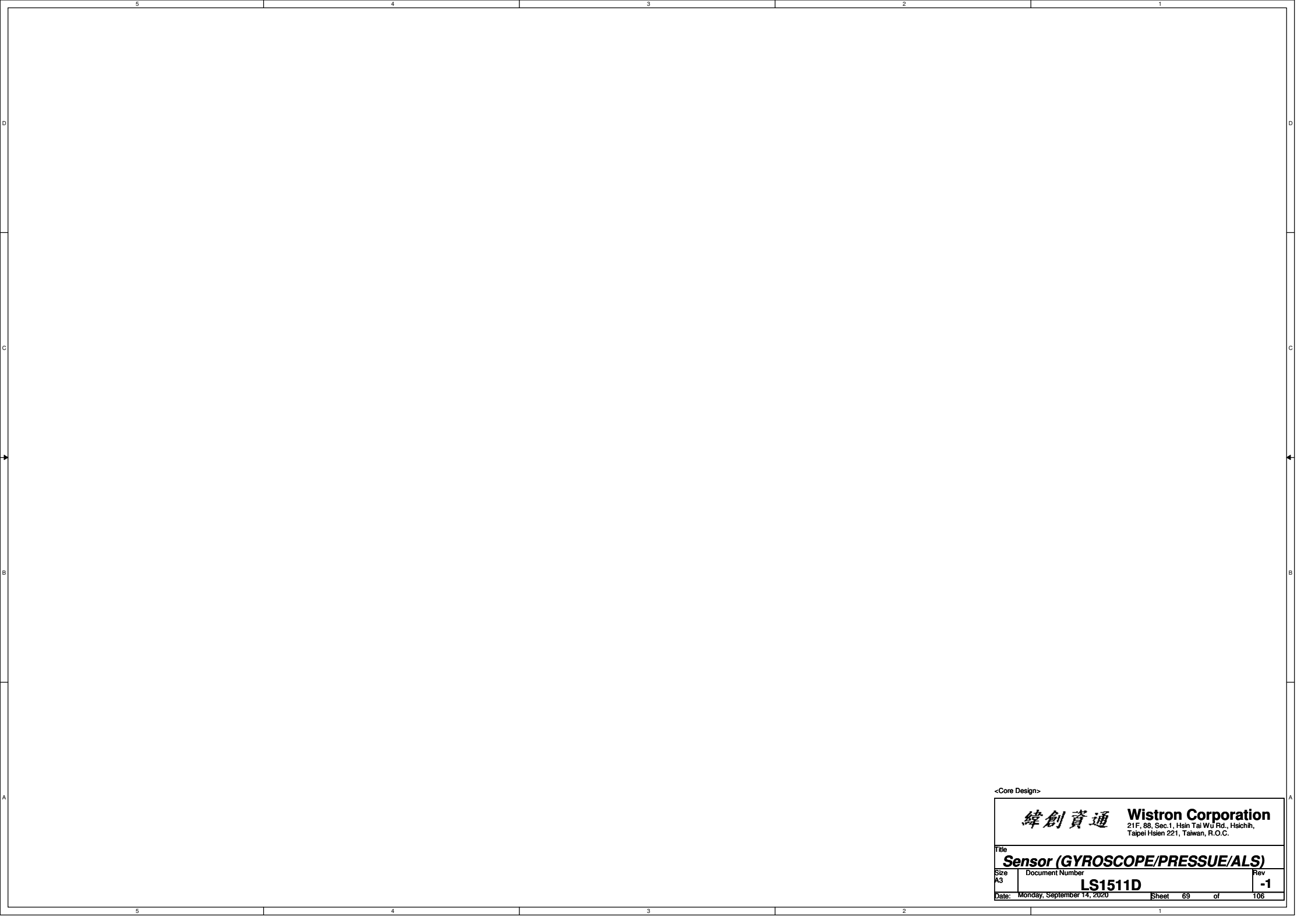
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Title <div>IO Board Conn(RSVD)</div>		
Size <div>A4</div>	Document Number <div>LS1511D</div>	Rev <div>-1</div>
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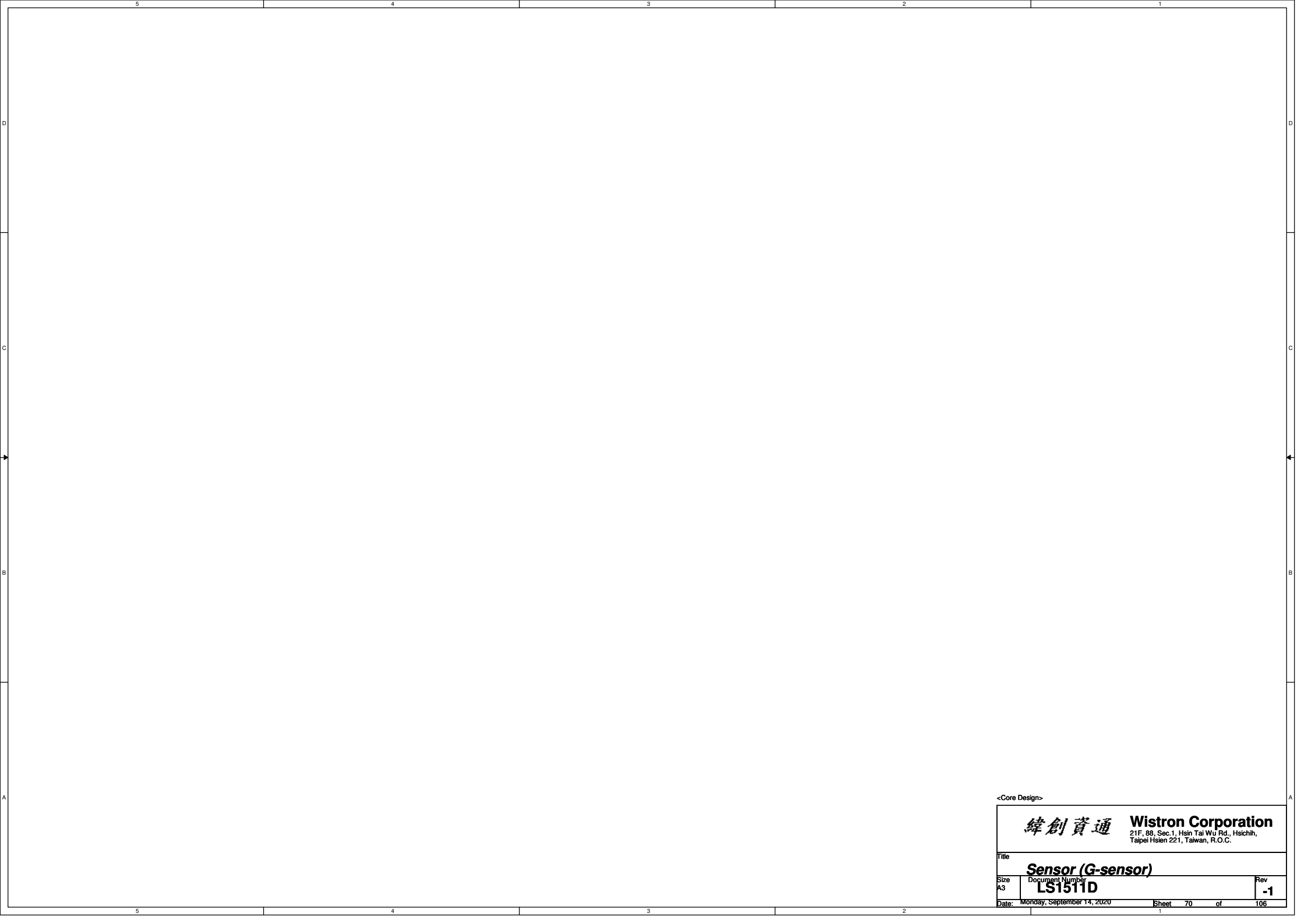
緯創資通		Wistron Corporation	
		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
Sensor (Hall-Sensor)			
Size A4	Document Number LS1511D		Rev -1
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		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
Sensor (GYROSCOPE/PRESSUE/ALS)			
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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			
Sensor (G-sensor)			
Size	Document Number	Rev	
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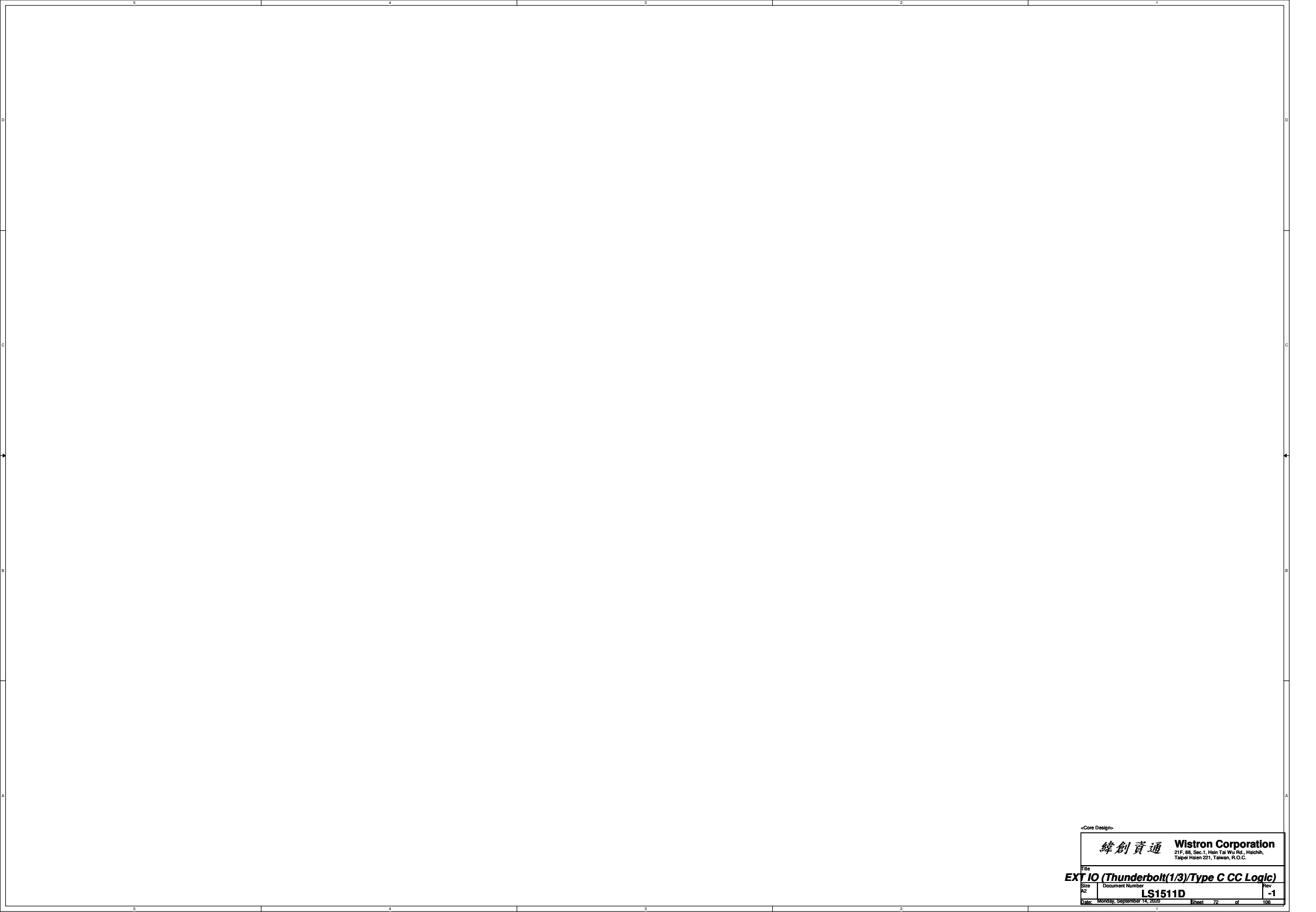
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緯創資通

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21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
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Title		
EXT IO (Thunderbolt(1/3)/Type C Re-driver)		
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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

EXT IO (Thunderbolt(1/3)/Type C CC Logic)

Size

KS

Document Number

LS1511D

Rev

-1

Date

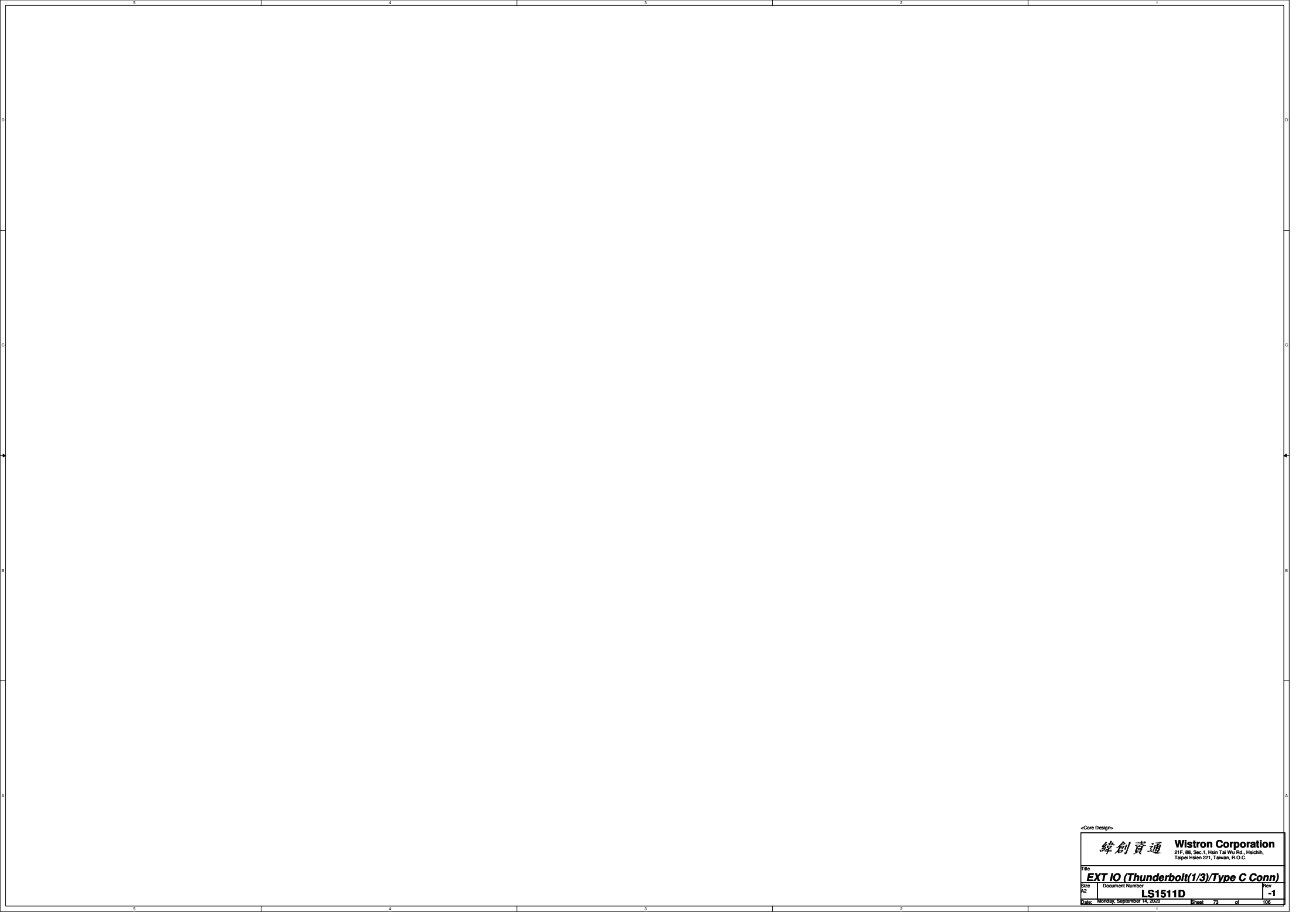
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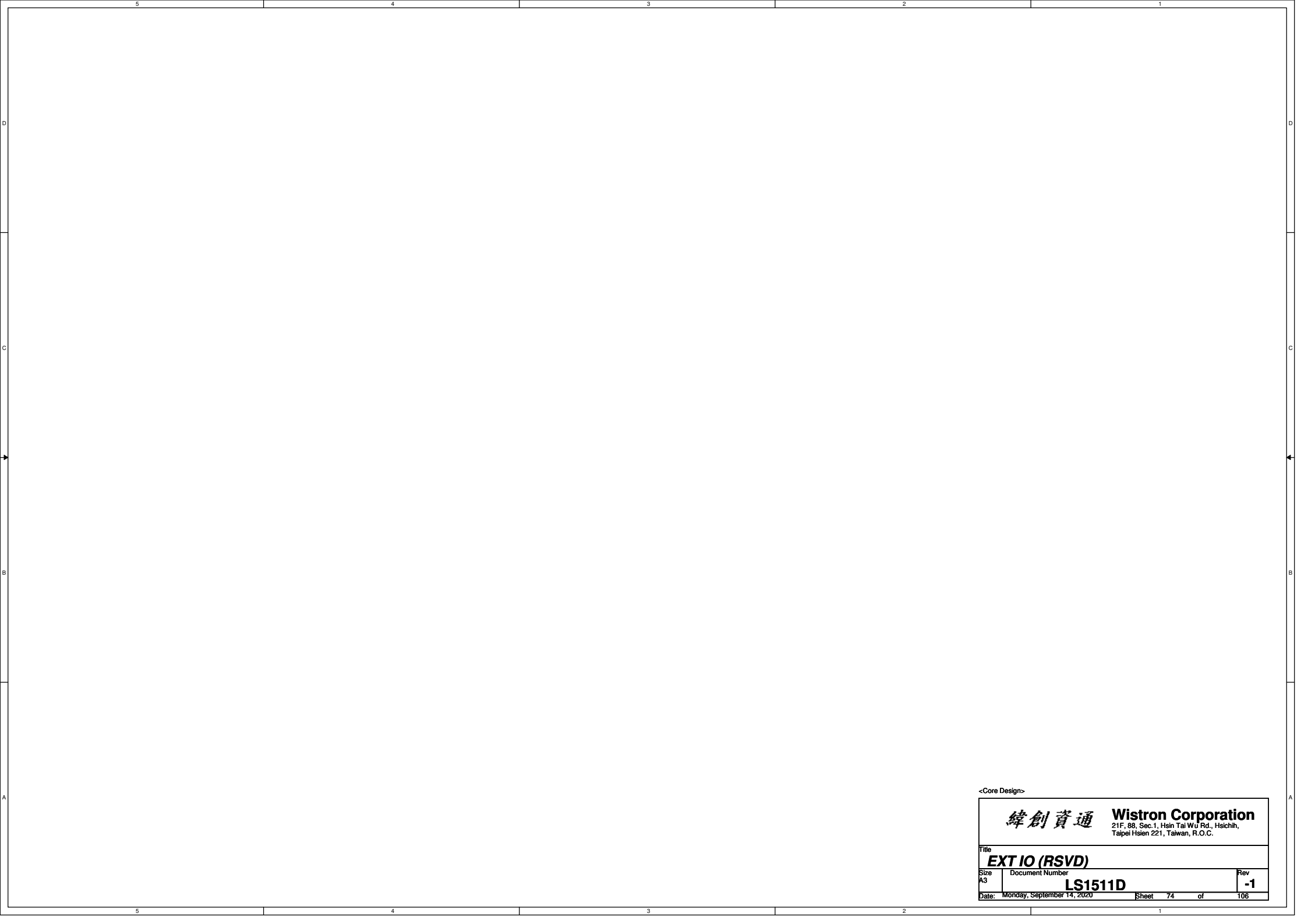
Sheet

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of

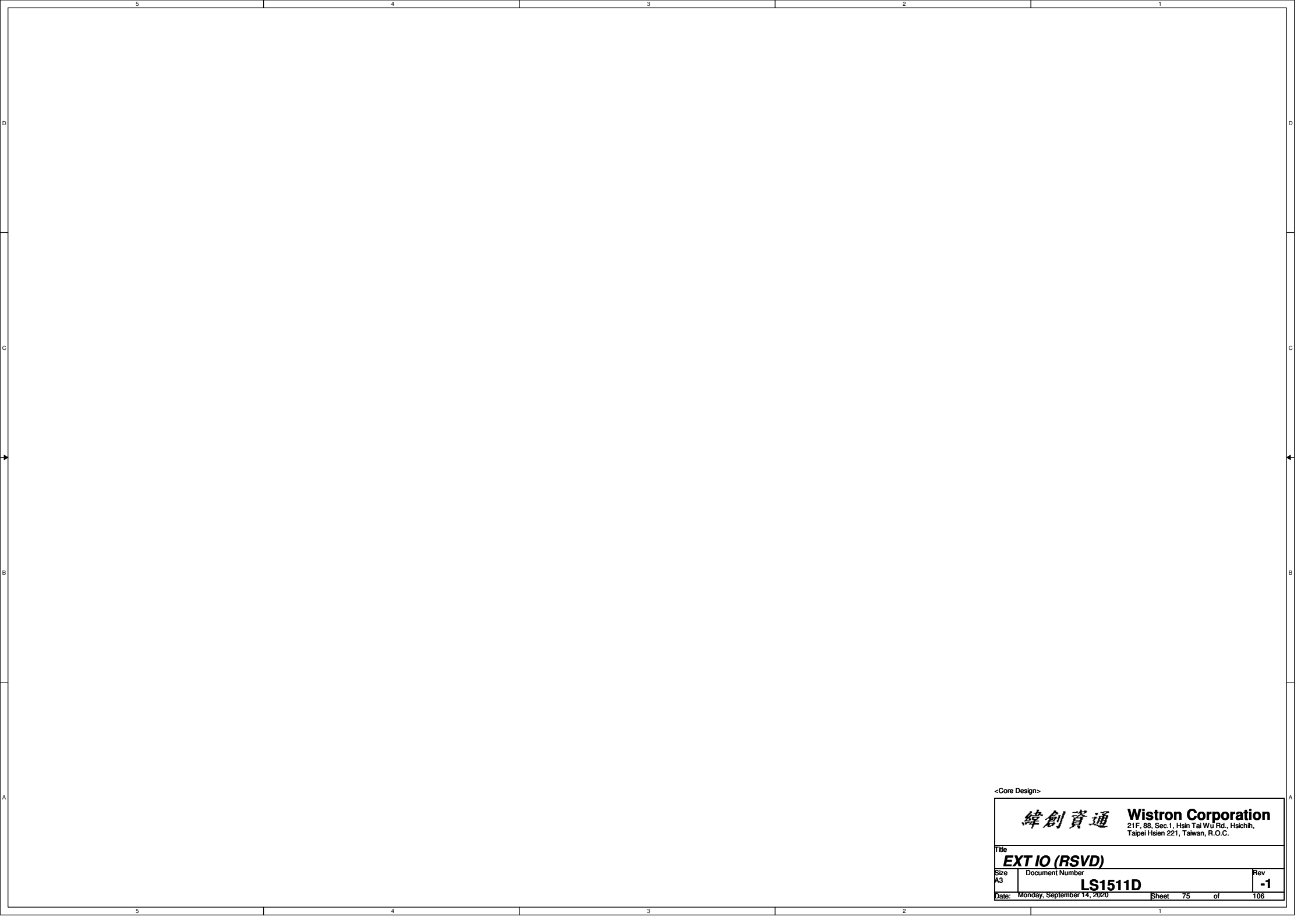
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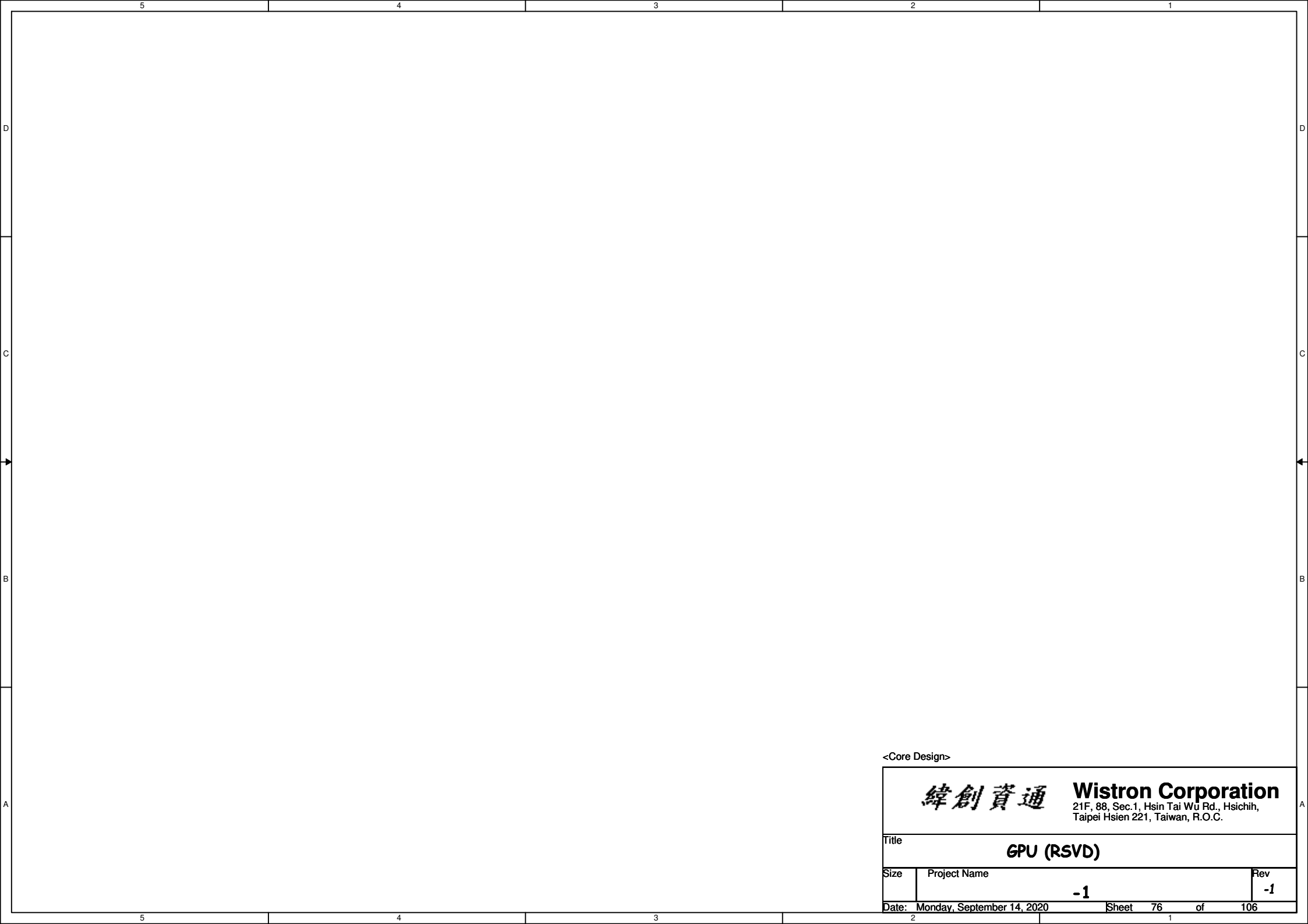
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		Wistron Corporation 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
EXT IO (RSVD)			
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		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
EXT IO (RSVD)			
Size	Document Number		Rev
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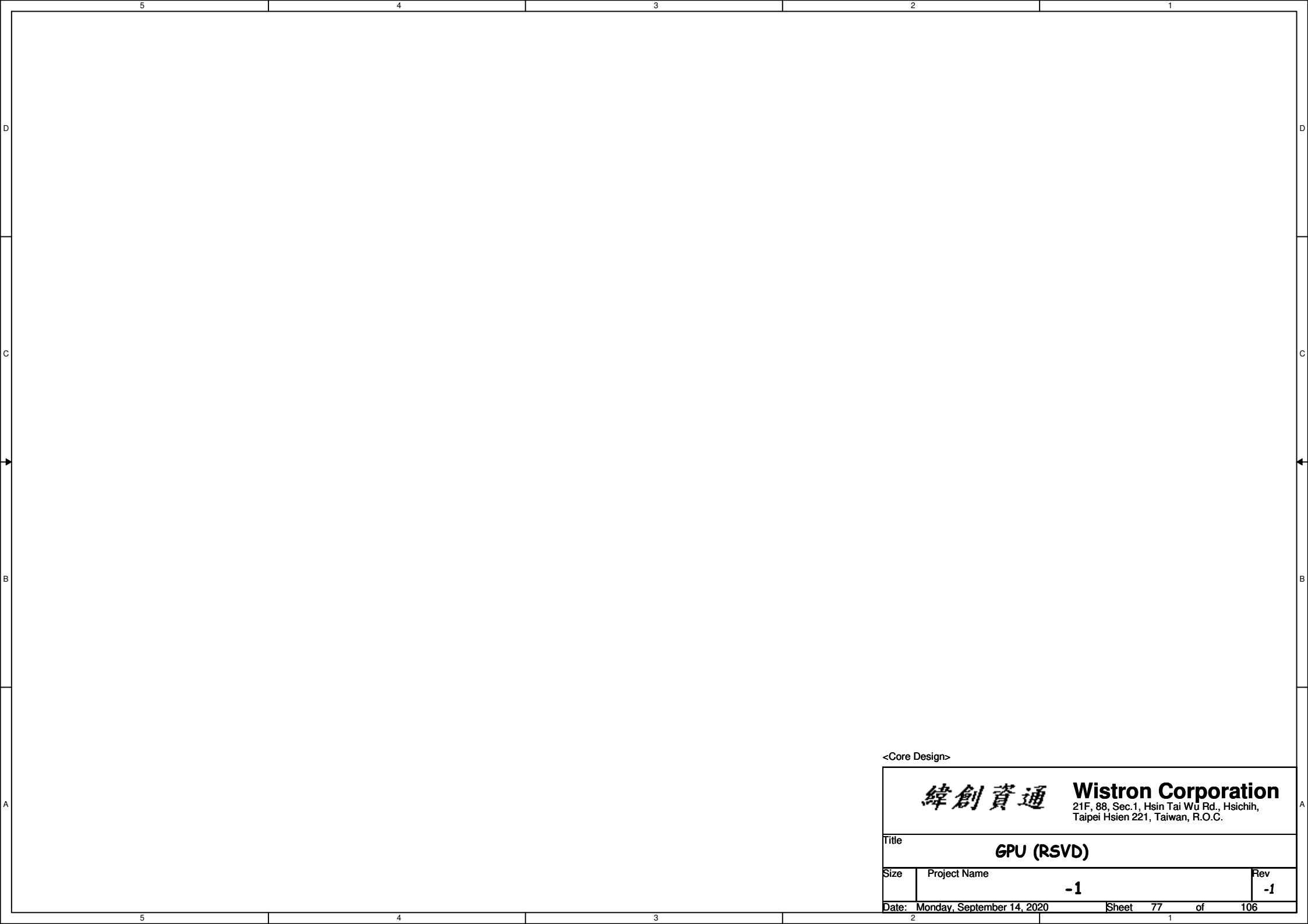
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21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title

GPU (RSVD)

Size	Project Name	Rev
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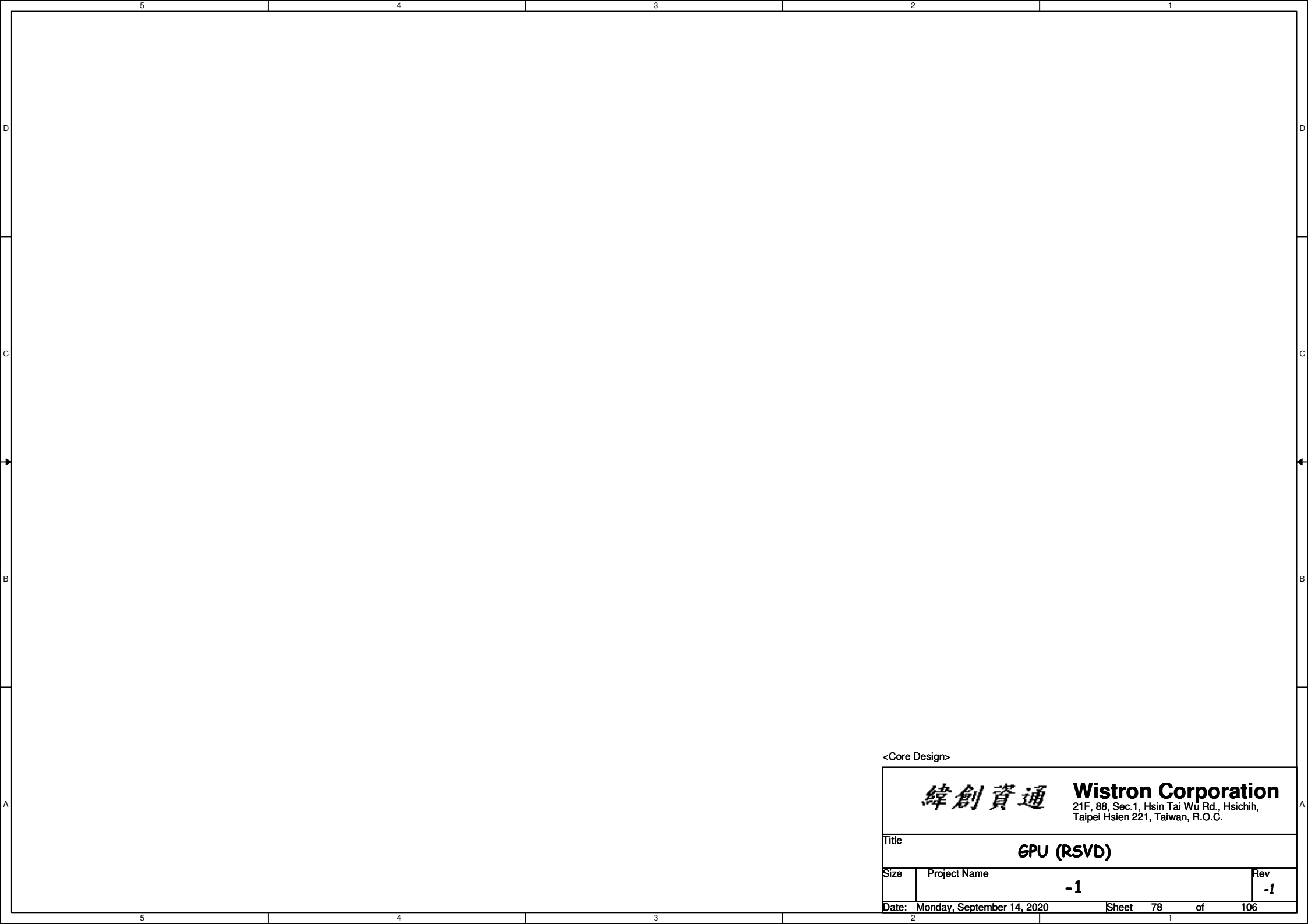
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Title

GPU (RSVD)

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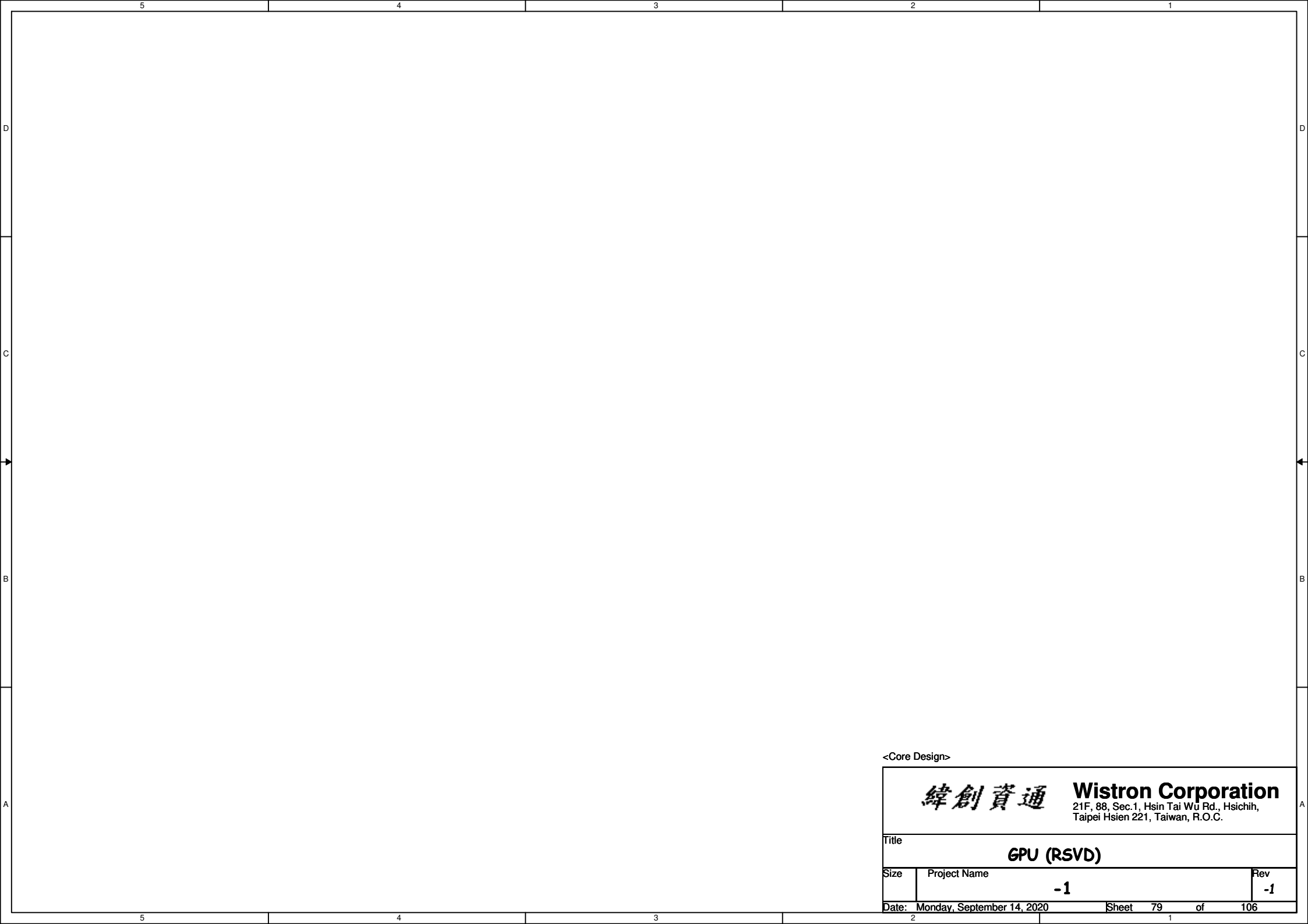
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21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,
Taipei Hsien 221, Taiwan, R.O.C.

Title

GPU (RSVD)

Size	Project Name	Rev
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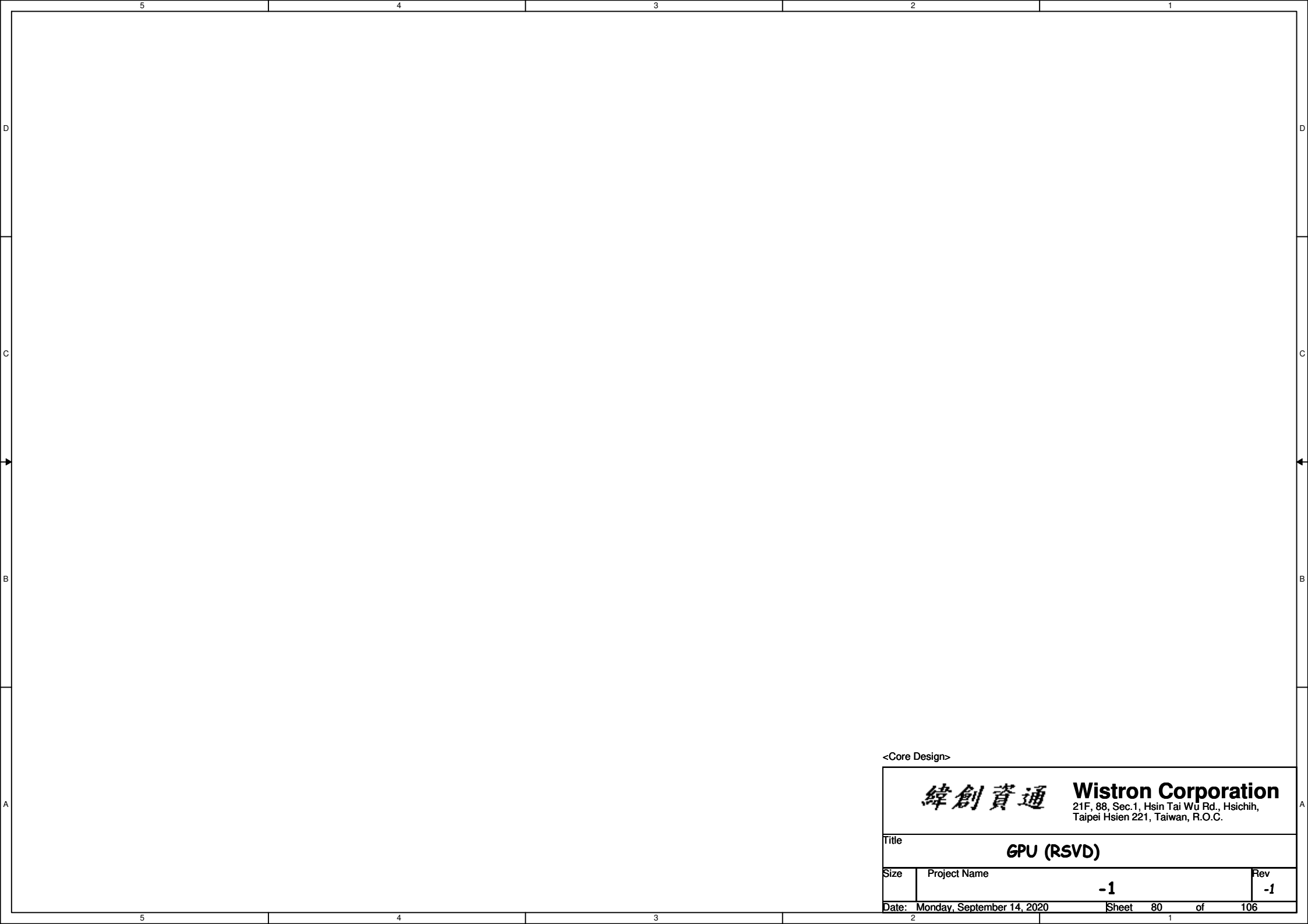
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Title

GPU (RSVD)

Size	Project Name	Rev
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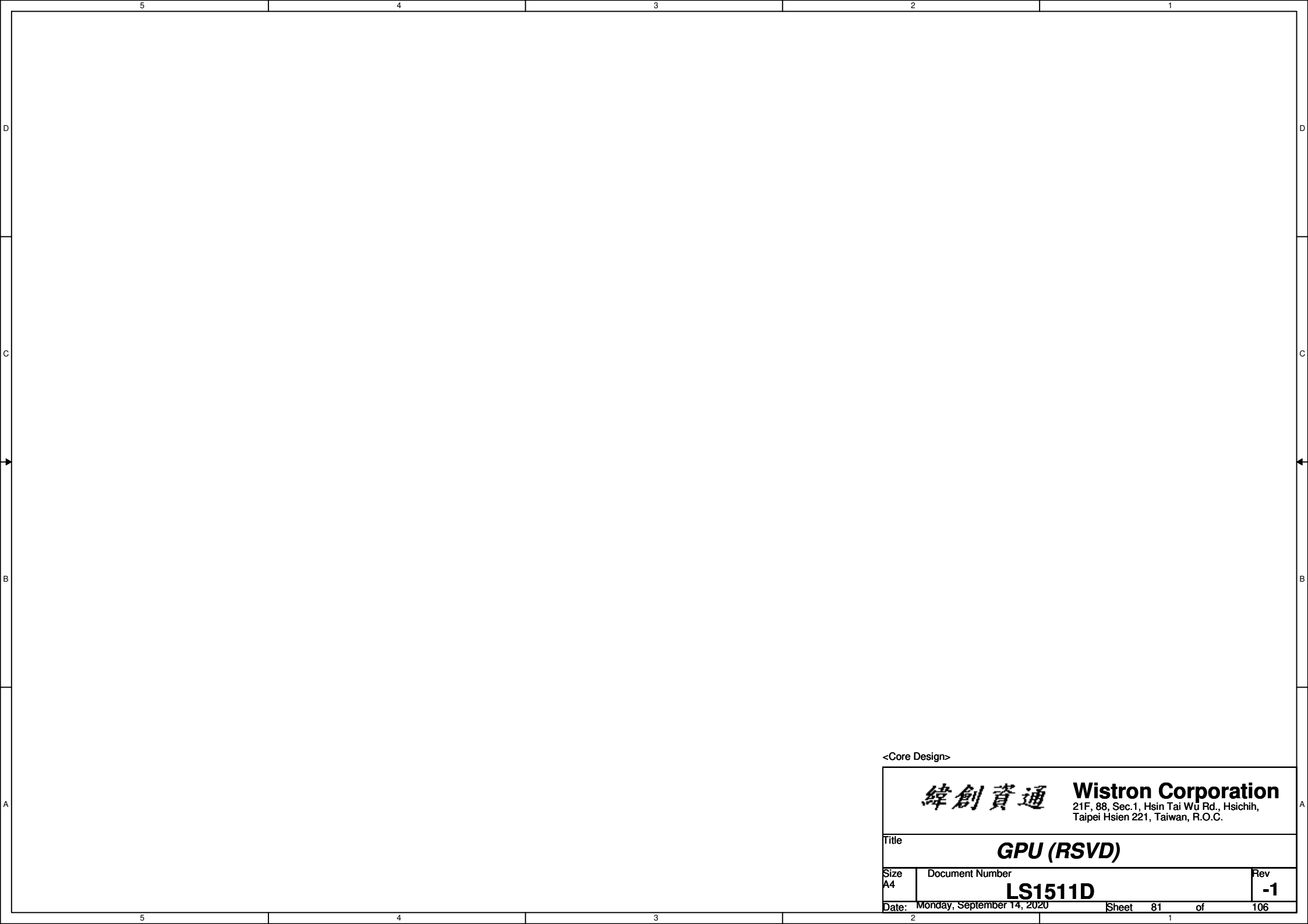
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Title GPU (RSVD)

Size	Project Name	Rev
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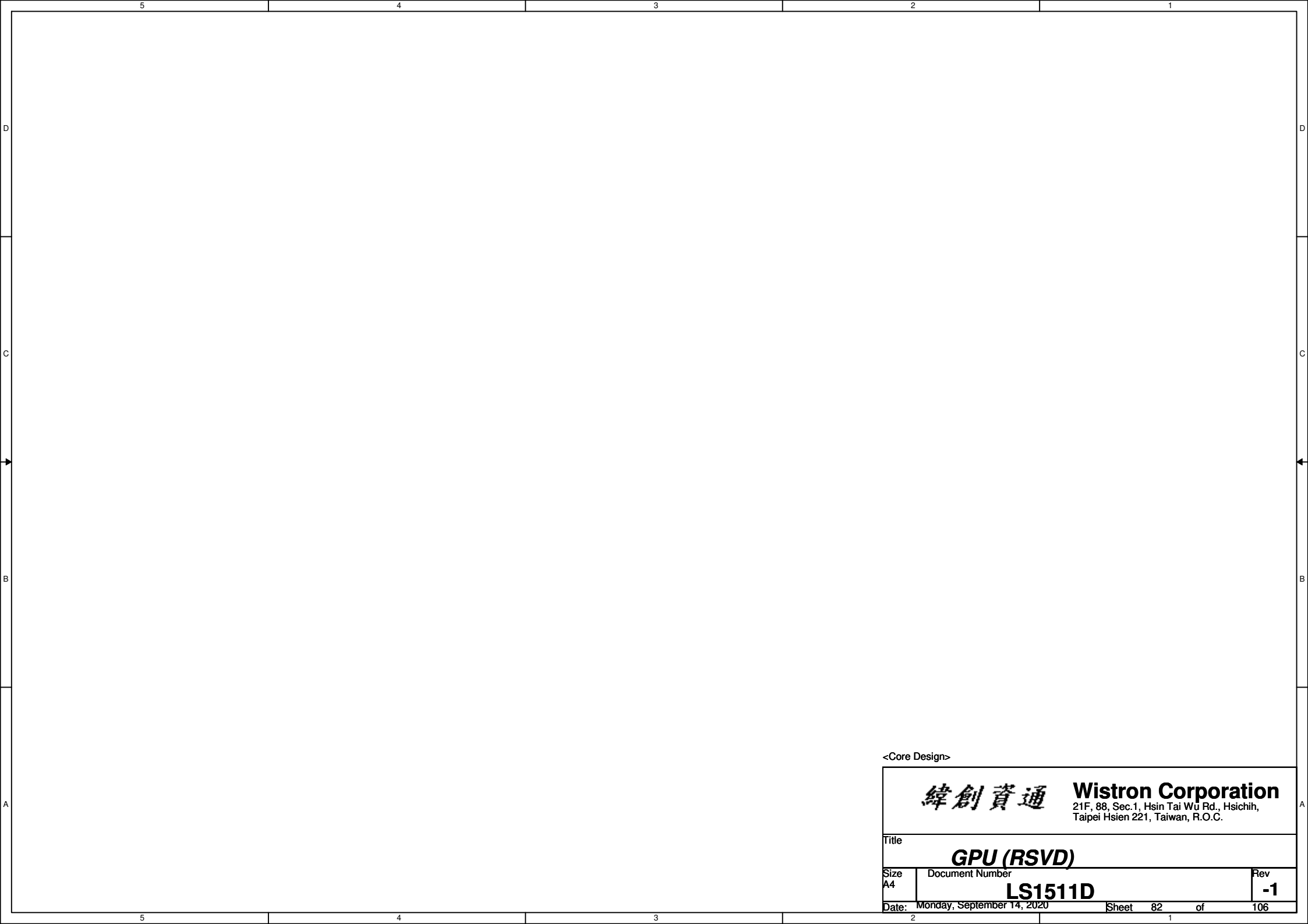
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Title

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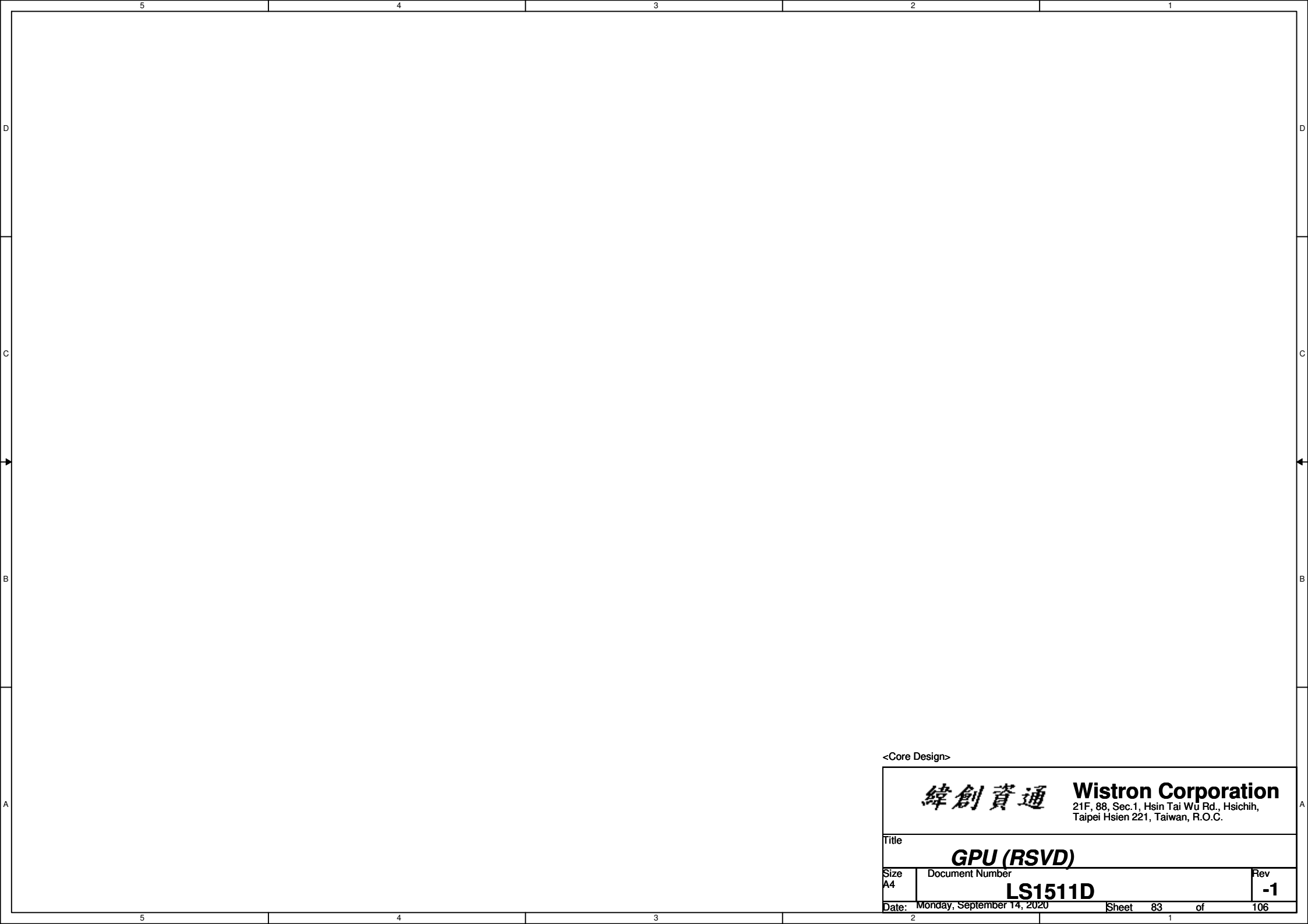
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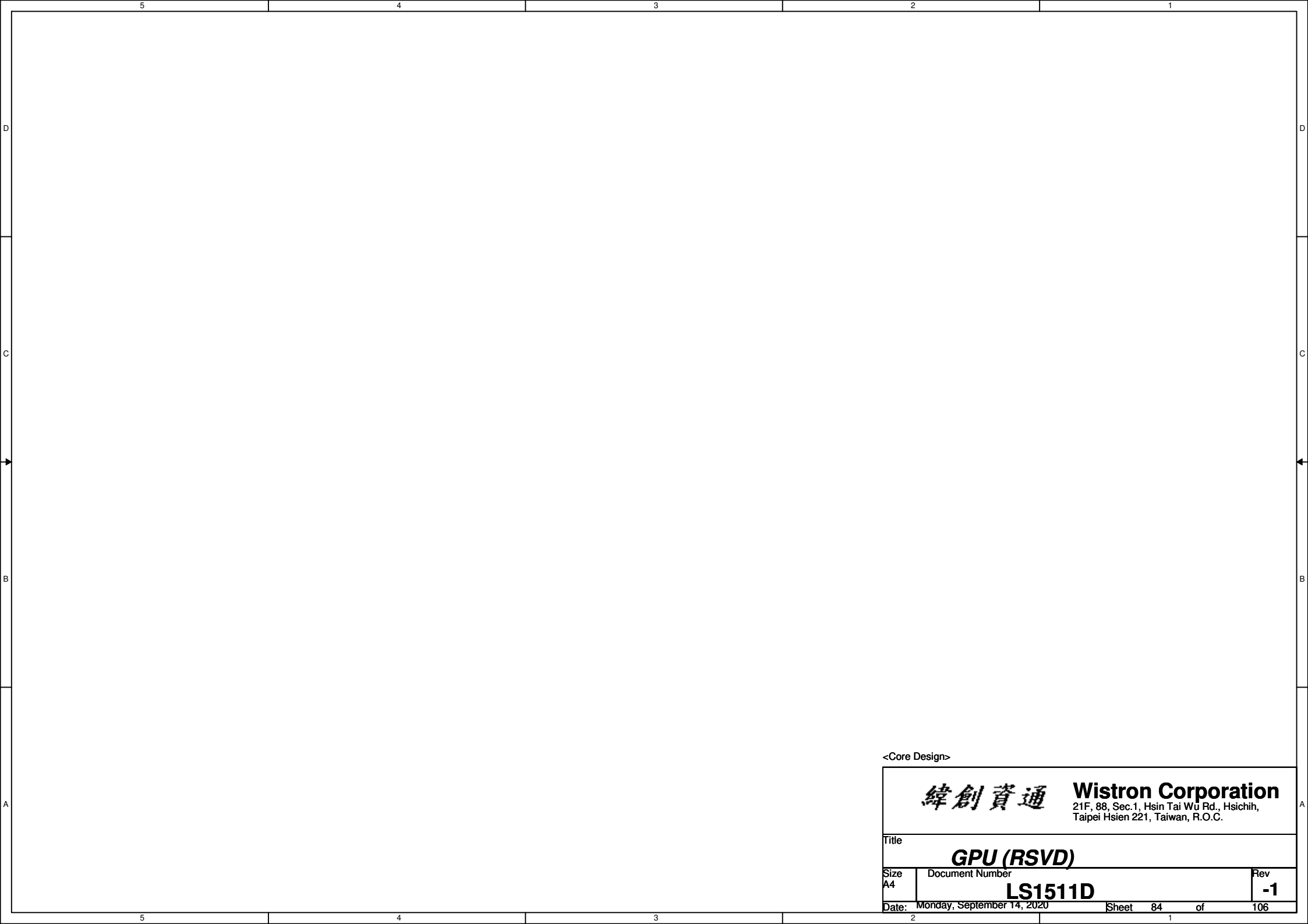
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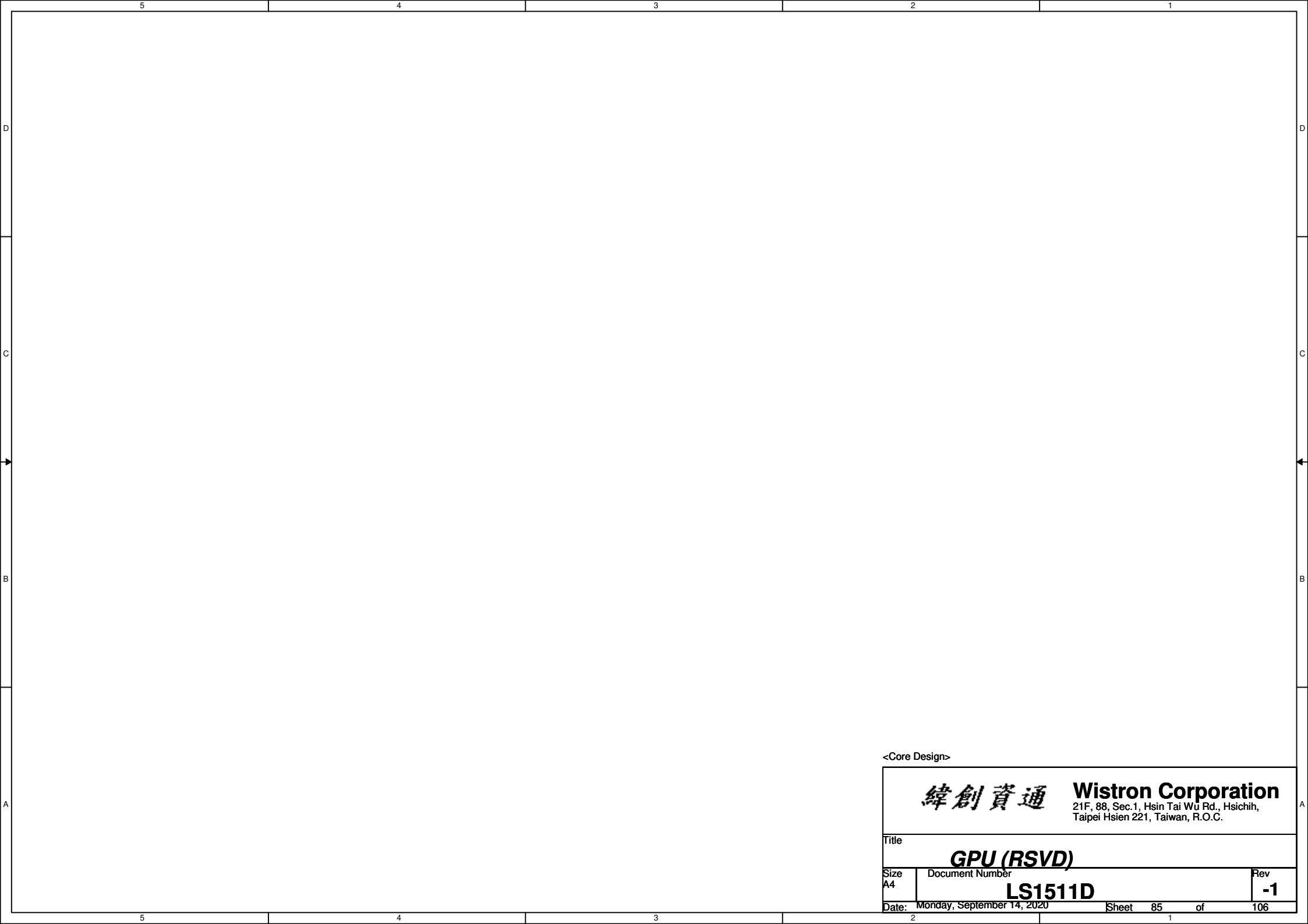
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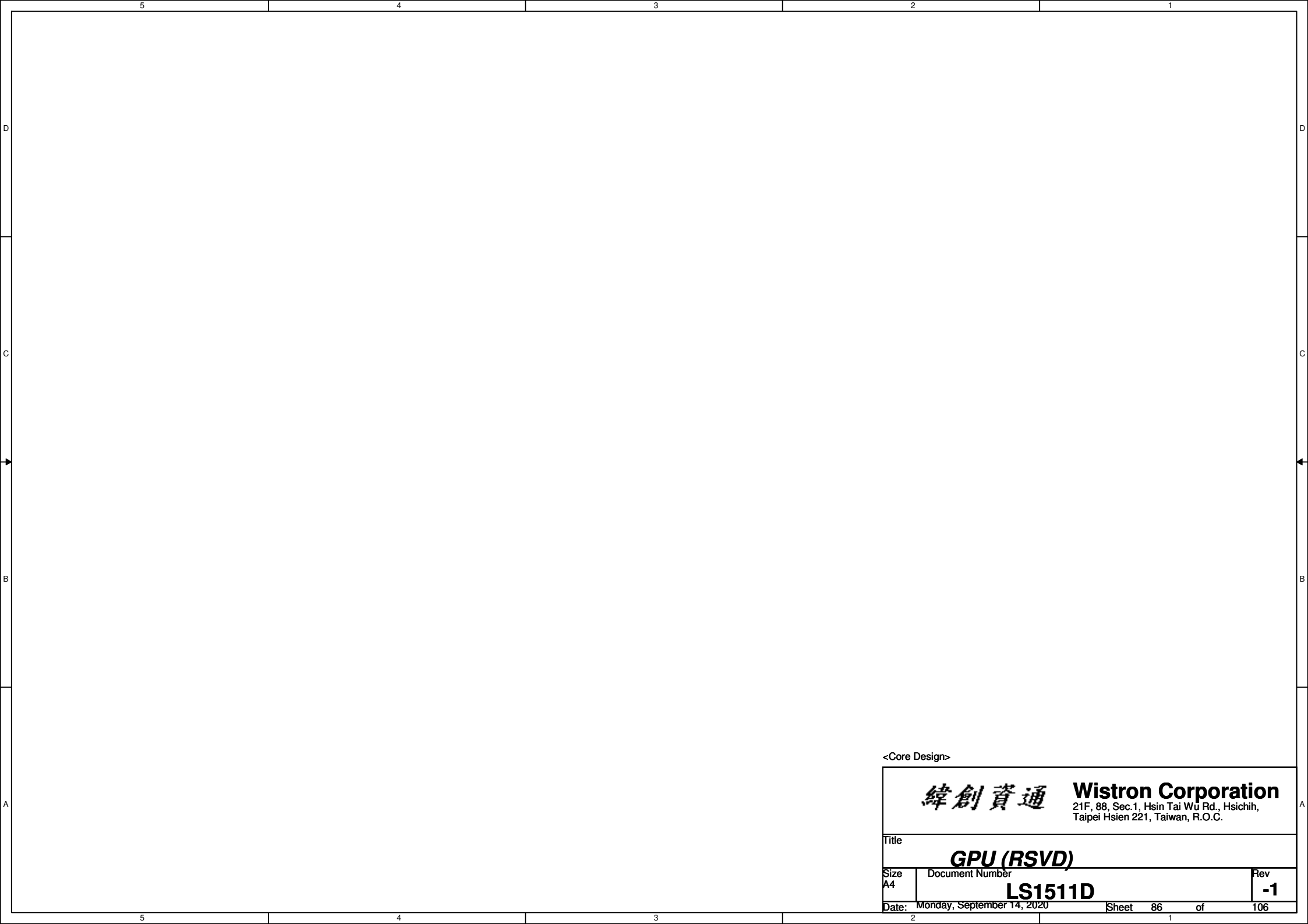
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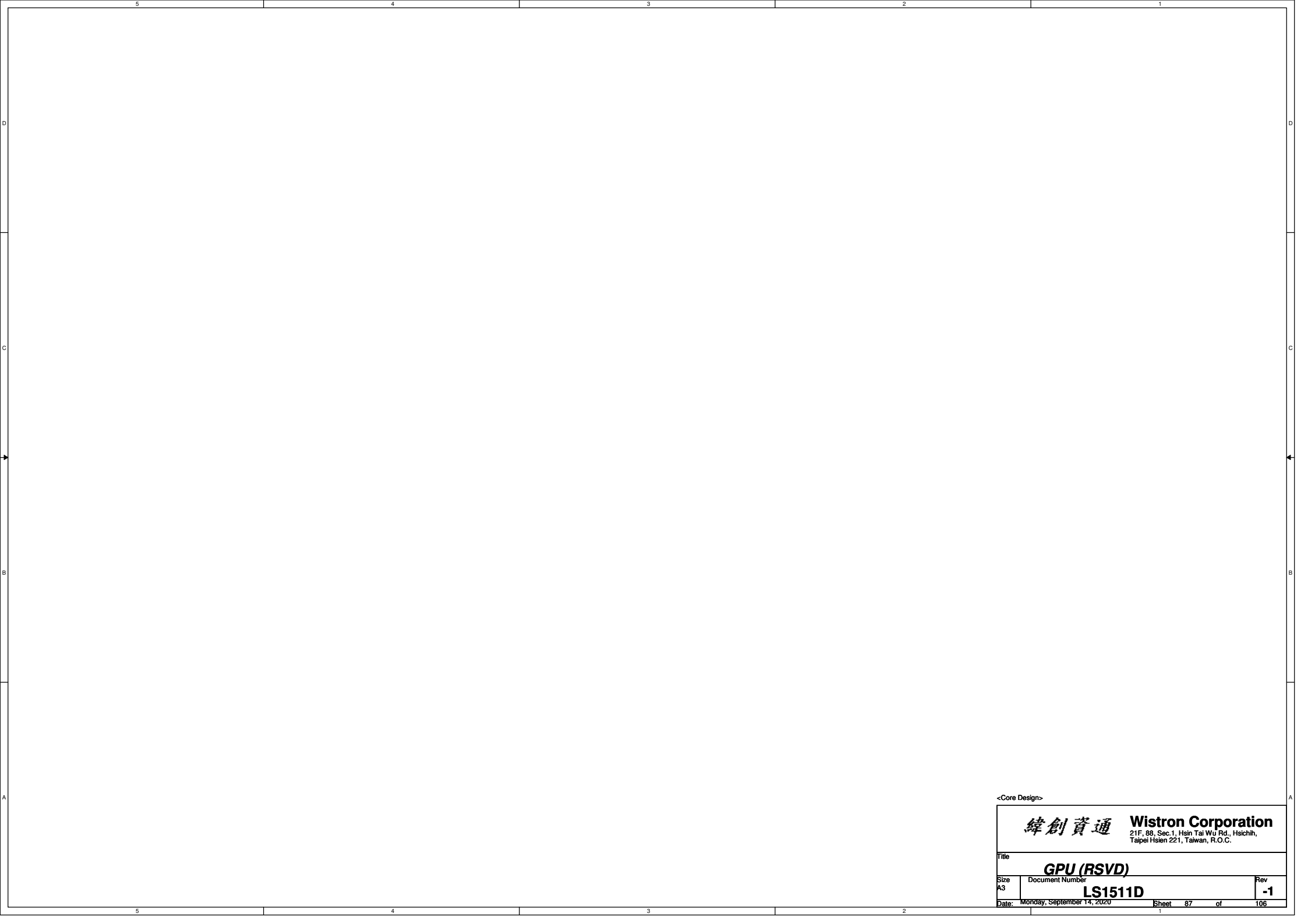
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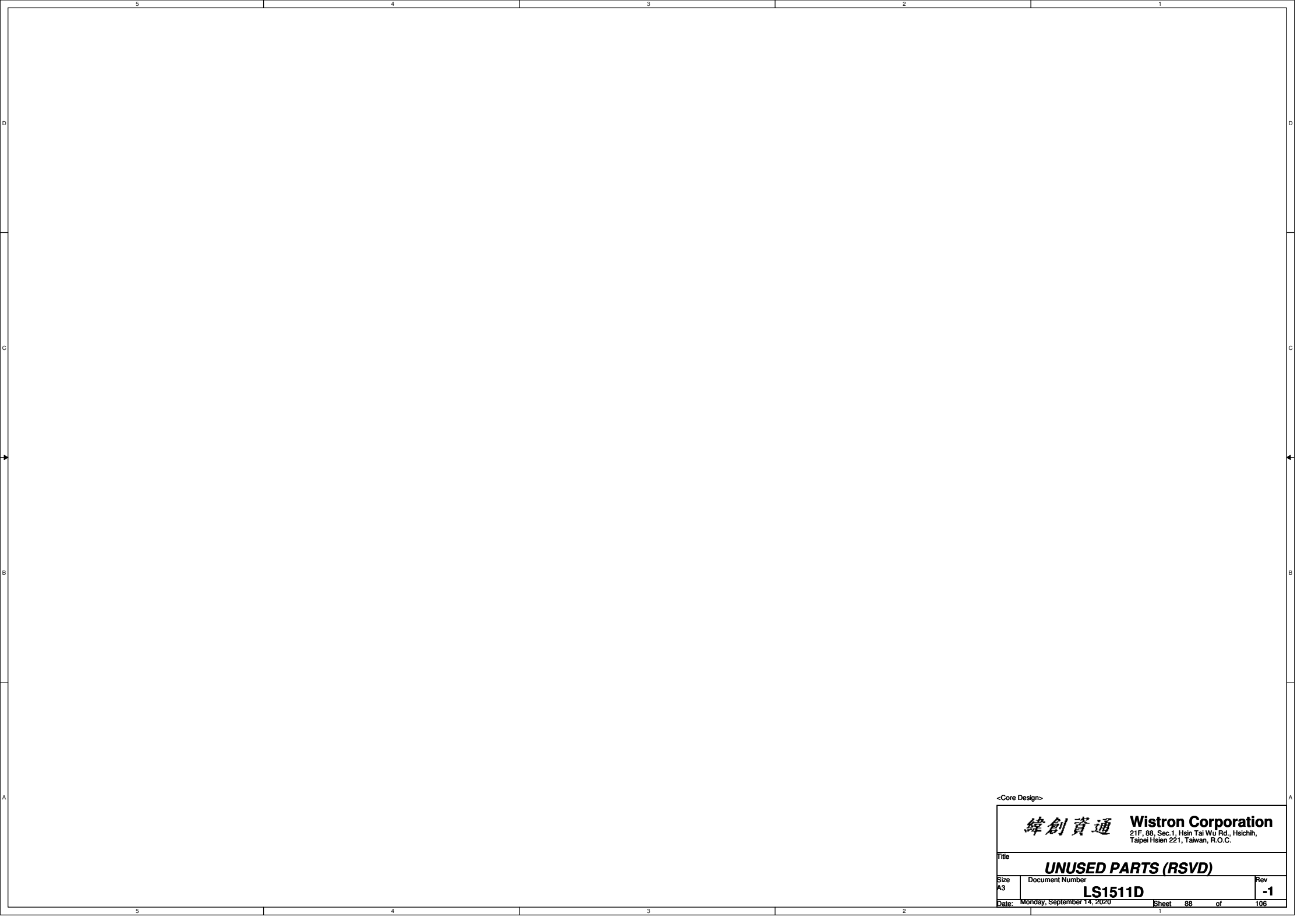
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UNUSED PARTS (RSVD)

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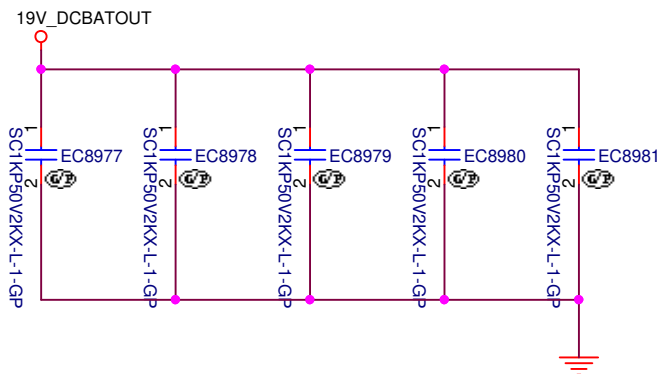
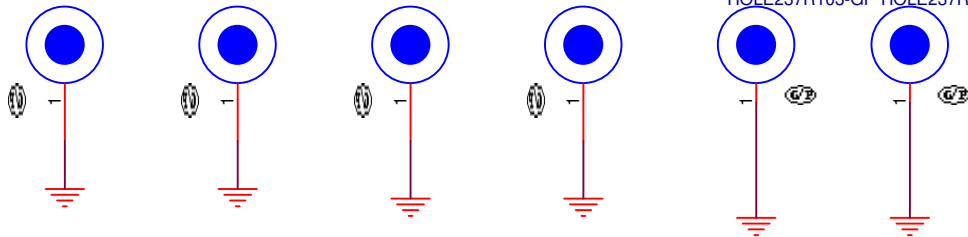
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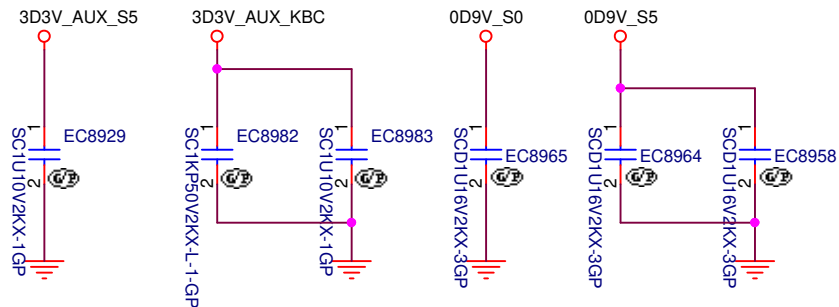
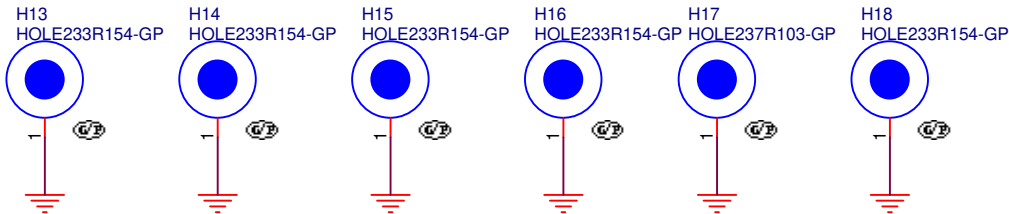
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HS1 HS2 HS3 HS4 H2 H3
STF237R128H34-4-GP STF237R128H34-4-GP STF237R128H34-4-GP STF237R128H34-4-GP HOLE237R103-GP HOLE237R103-GP



ZZ.SCREW.W91 ZZ.SCREW.W91 ZZ.SCREW.W91 ZZ.SCREW.W91 ZZ.00PAD.EJ1 ZZ.SCREW.W91
H13 H14 H15 H16 H17 H18
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UNUSED PARTS (RF/EMI Capacitors)

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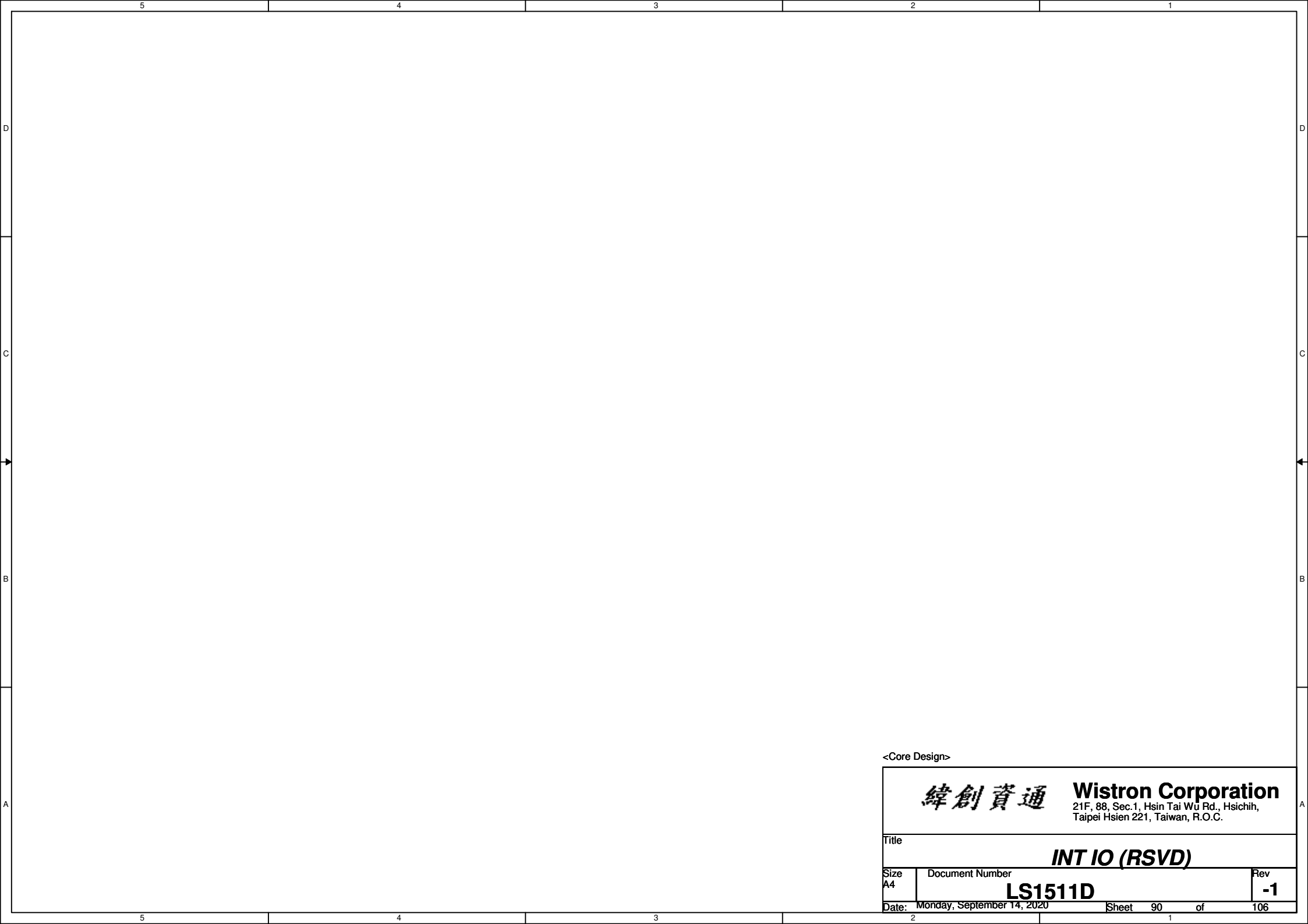
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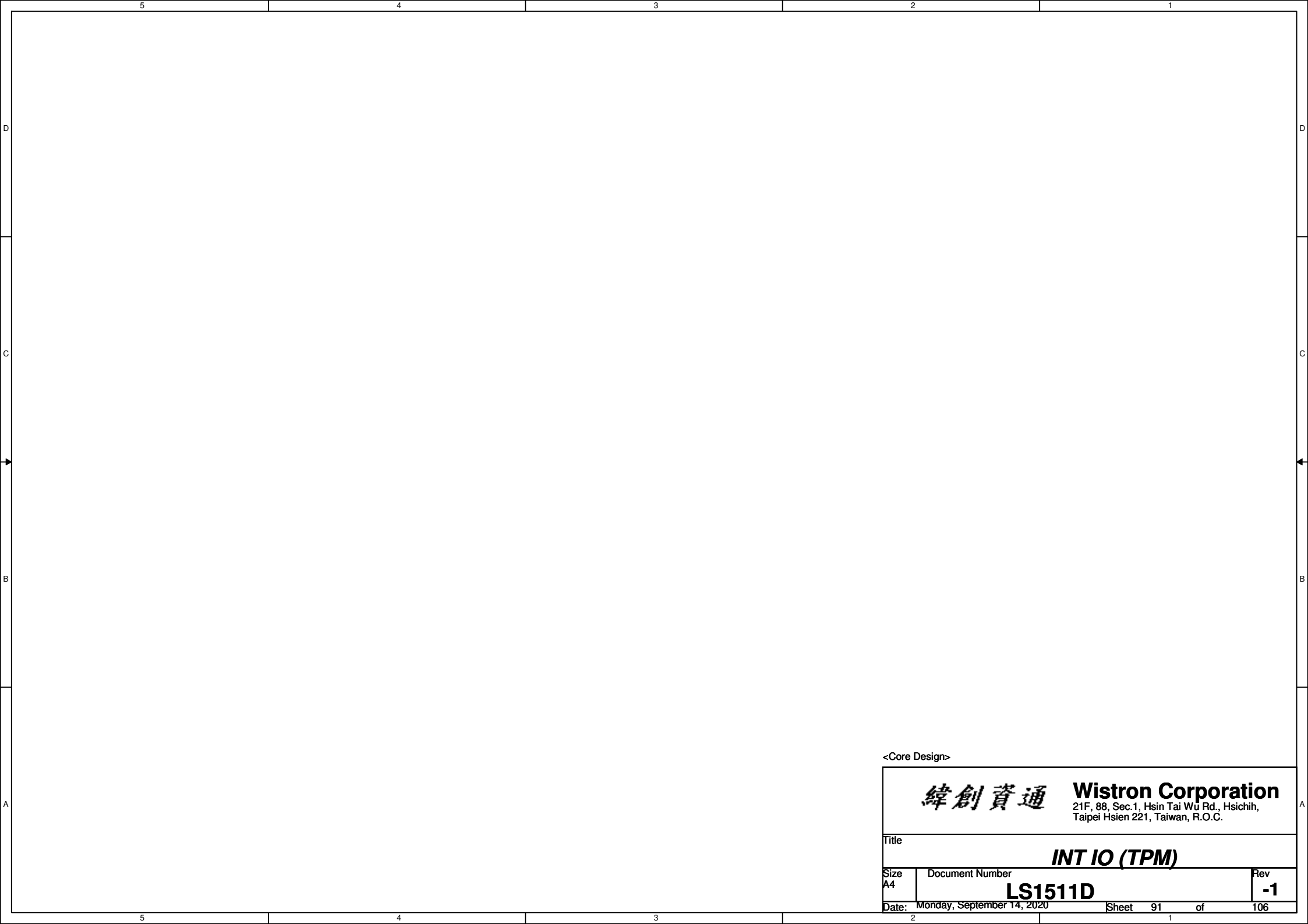
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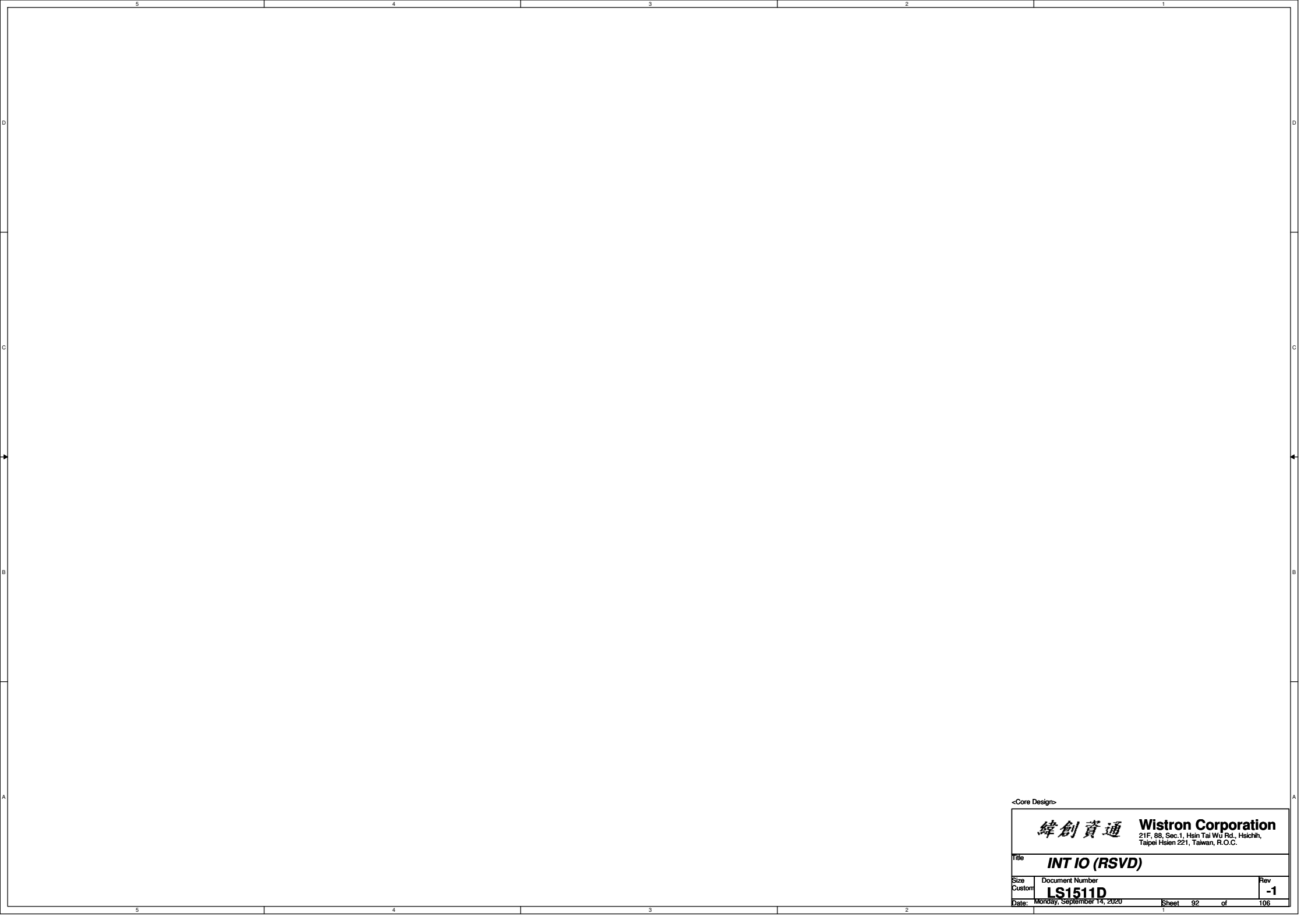
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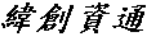
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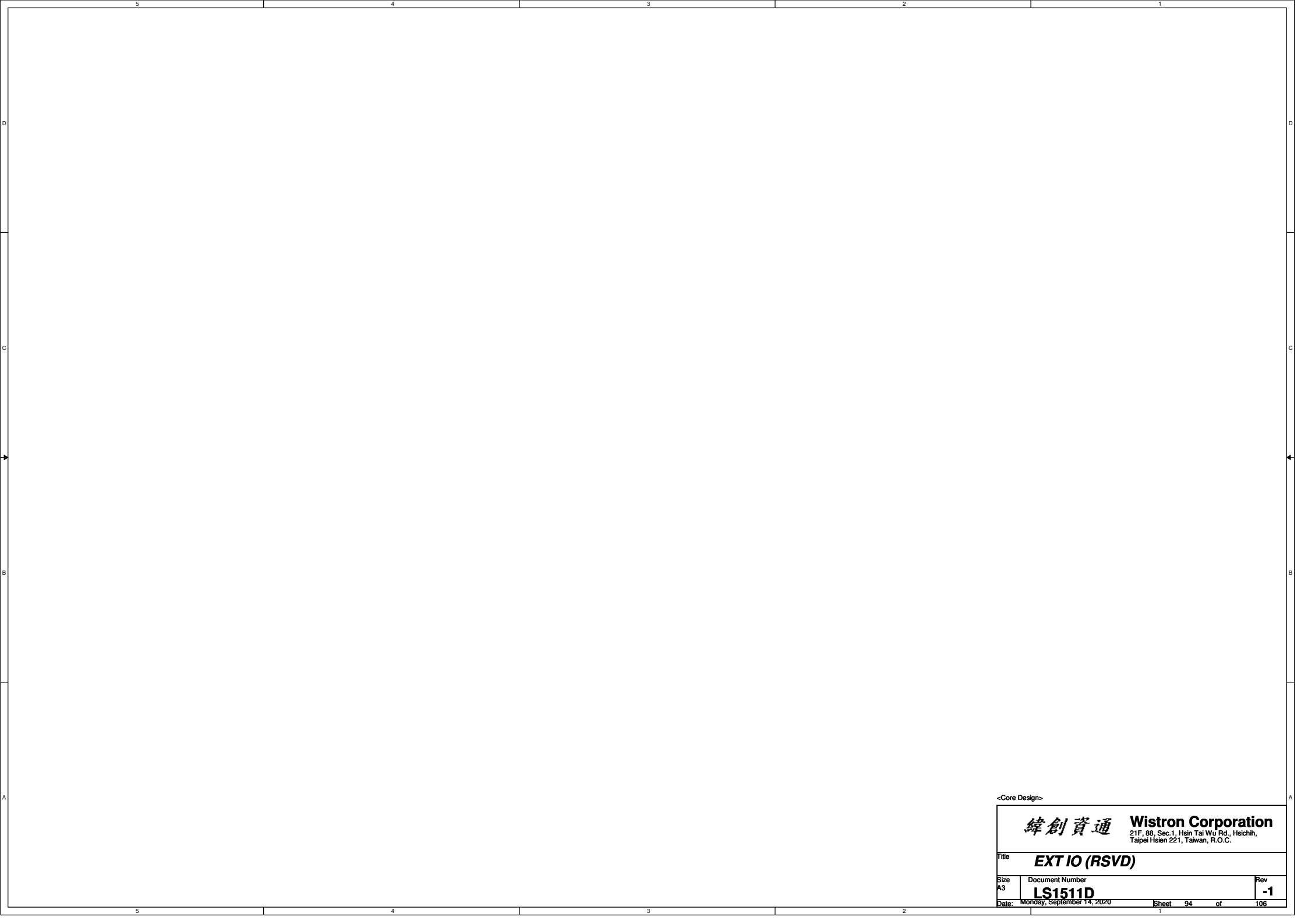
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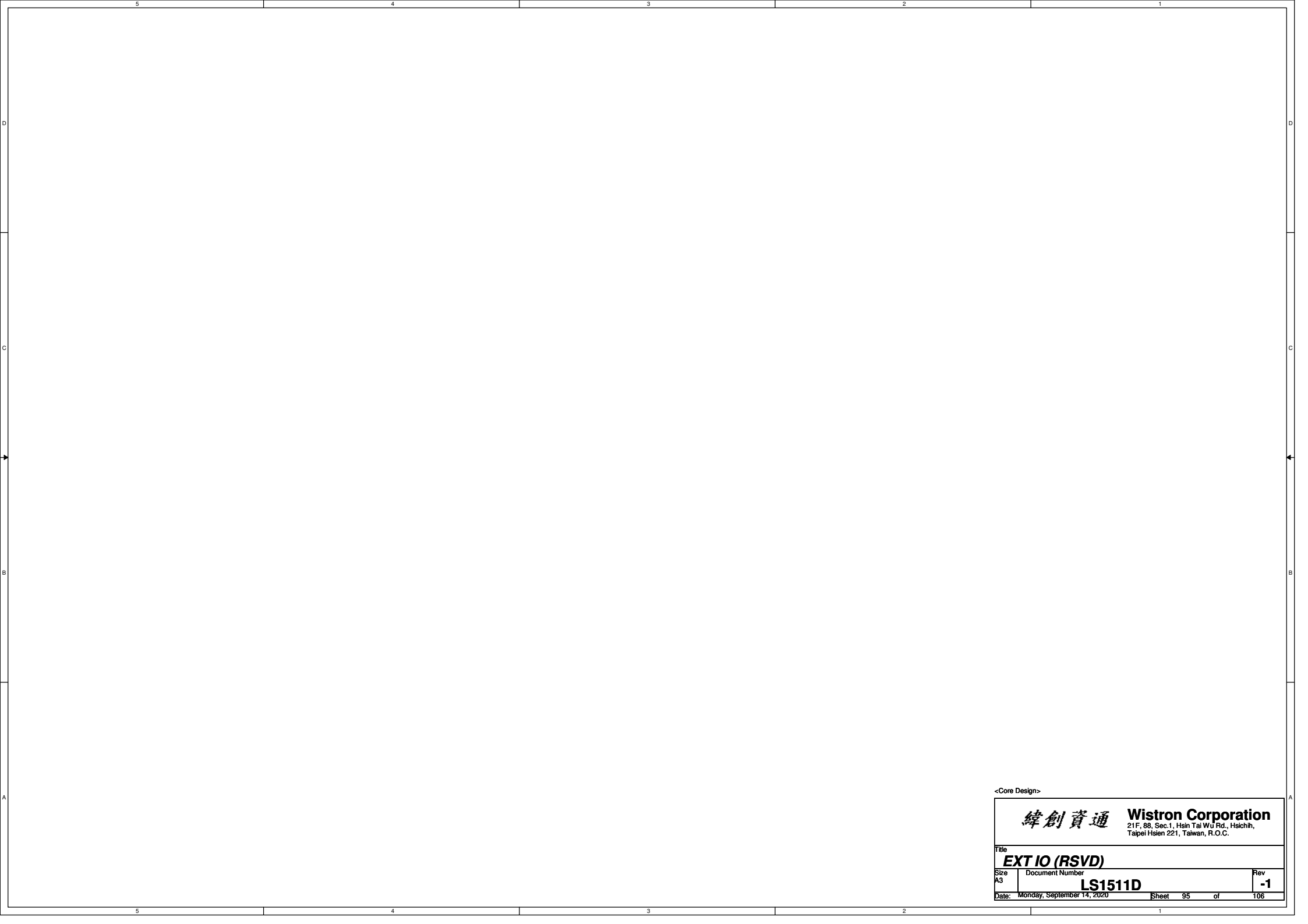
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Consumer (RSVD)

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A3

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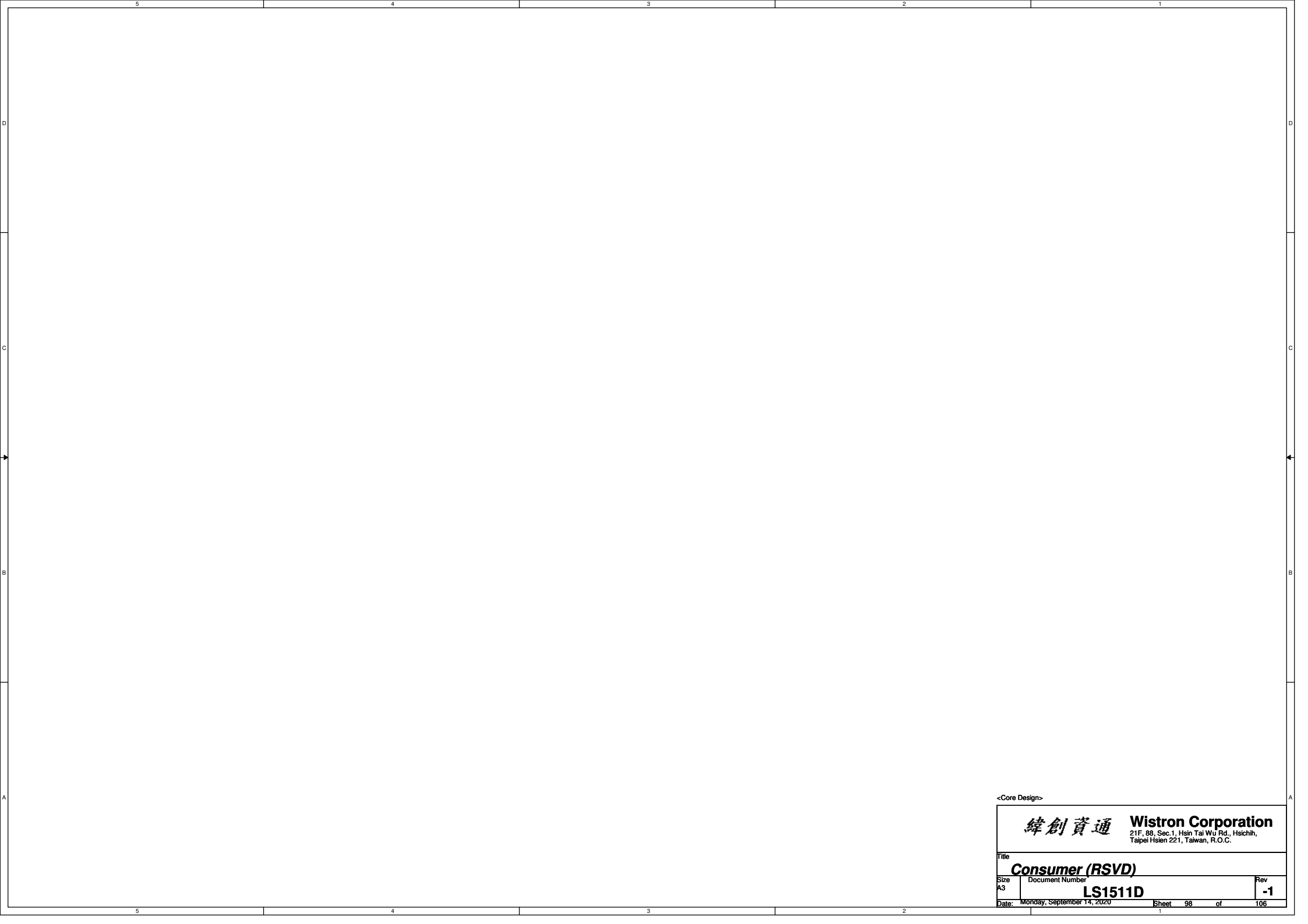
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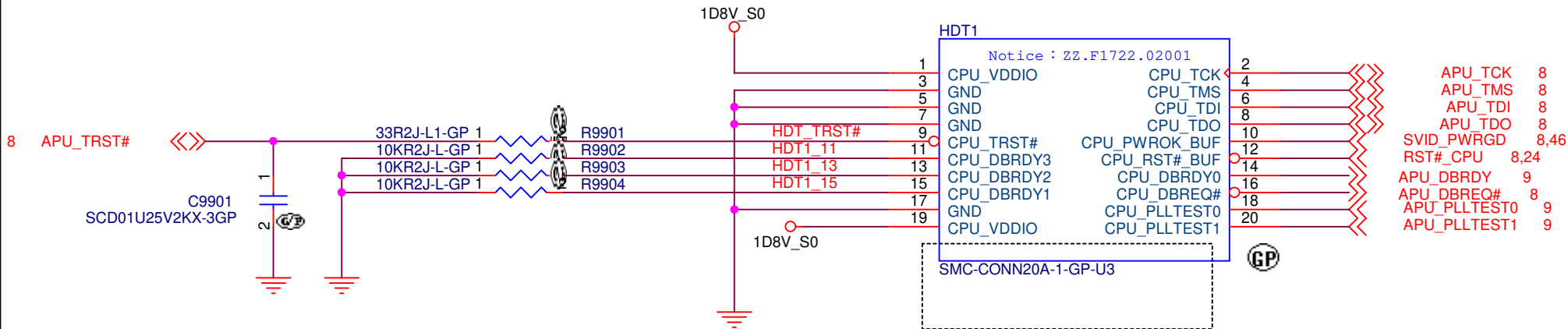
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HDT CONN



- PV_170707
Change to solder mask
- PV_170711
Canel solder mask for AMD debug
- MV_170805_2
Change to solder mask
- MV_170819
Change connector symbol

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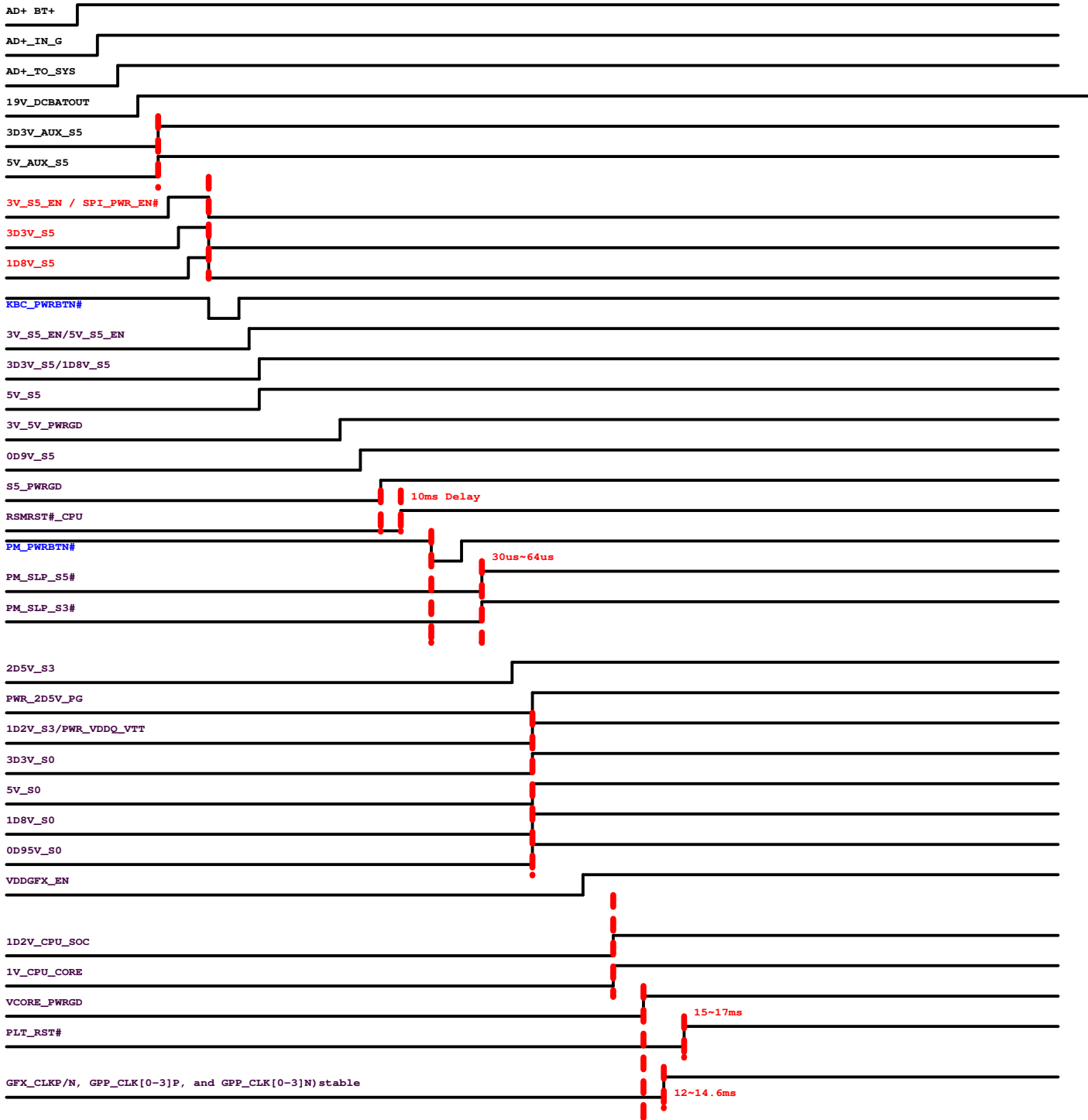
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Power Sequence			
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Power Sequence Block Diagram

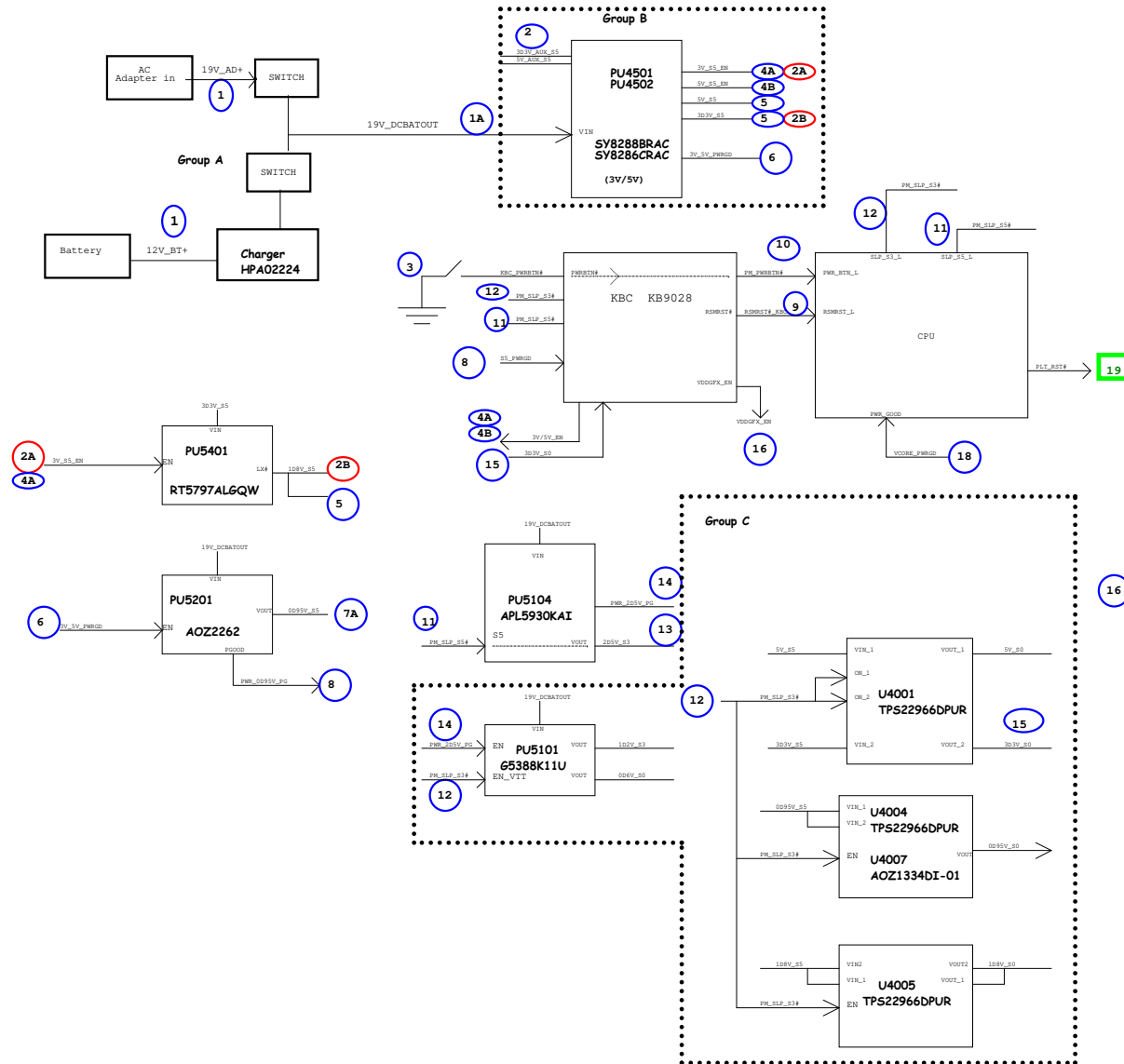
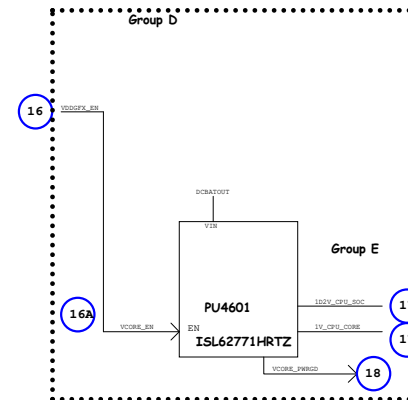


Table 34. Power Sequencing Group Definitions with coin cell battery

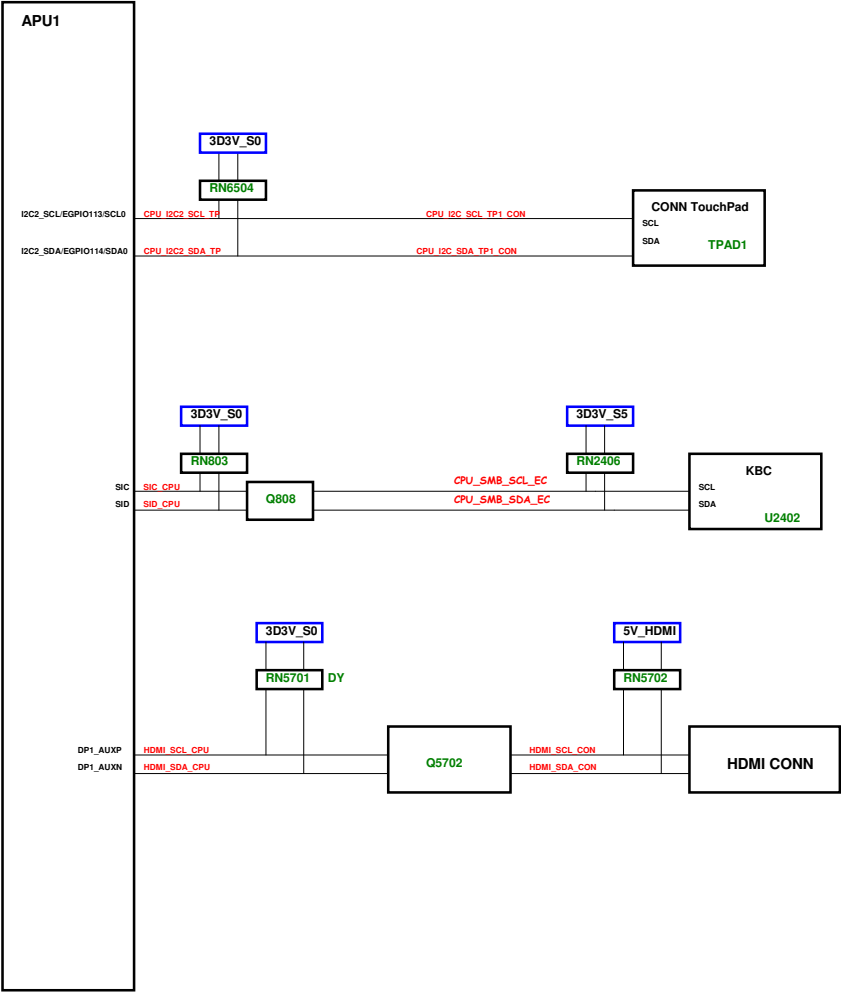
Group	System Power Domain	Voltages
Group A	G3	VDDBT_RTC_G
Group B	S5	VDD_33_S5, VDD_18_S5, VDDIO_AUDIO, VDDP_S5, VDDCR_SOC_S5

Table 34. Power Sequencing Group Definitions with coin cell battery (Continued)

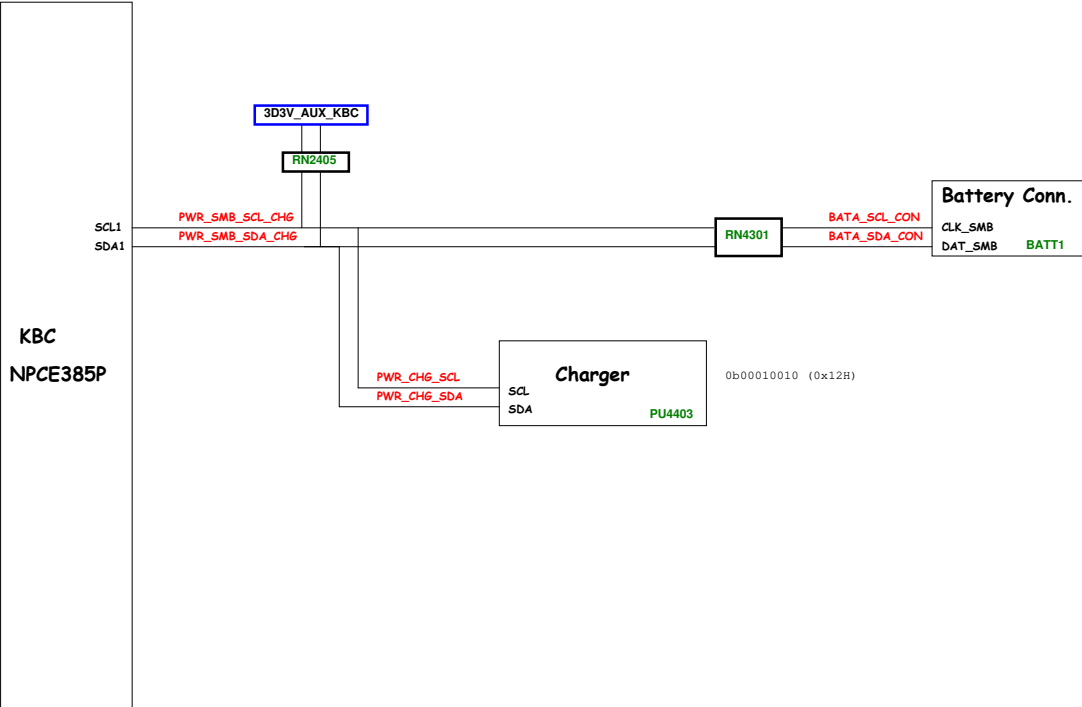
Group C	S3	VDDIO_MEM_S3
	S0	VDD_33, VDD_18, VDDP
Group D	S0	VDDCR_SOC, VDDCR_CPU (AM only), VDDCR (FP4 only)



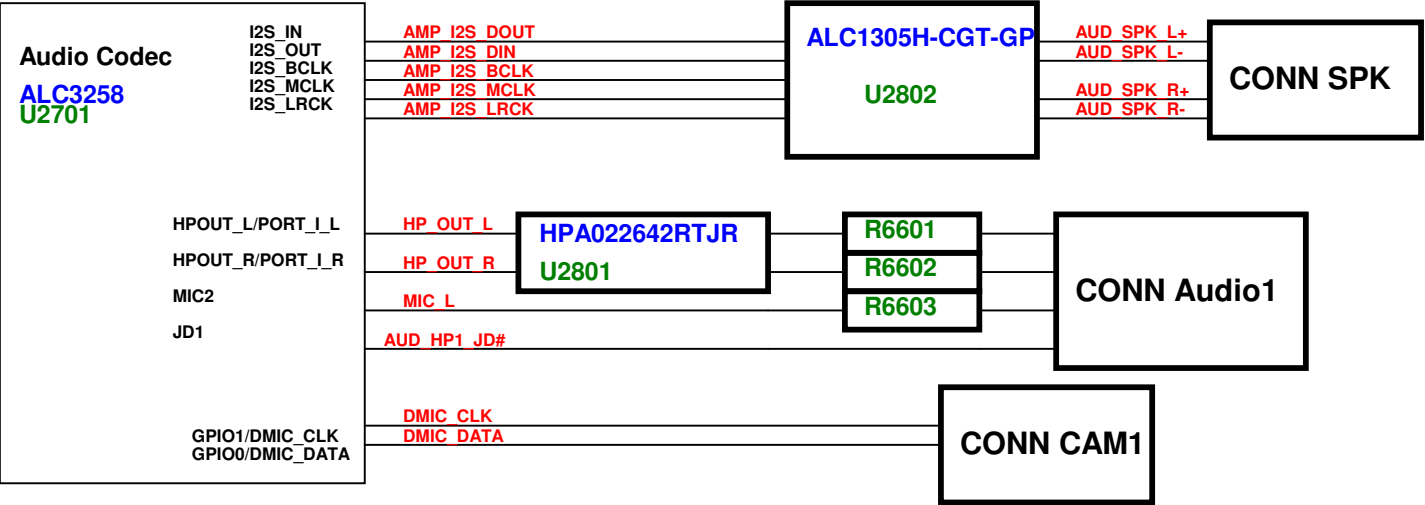
APU SMBus Block Diagram



KBC SMBus Block Diagram



Audio Block Diagram



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Title: THERMAL/AUDIO BLOCK DIAGRAM					
Size: A4	Document Number: LS1511D				Rev: -1
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