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Title	
J11 MAIN	
Size	Document Number
A3	SDM855 GPKO-1
Date:	Monday, December 23, 2019
Sheet	1 of 74

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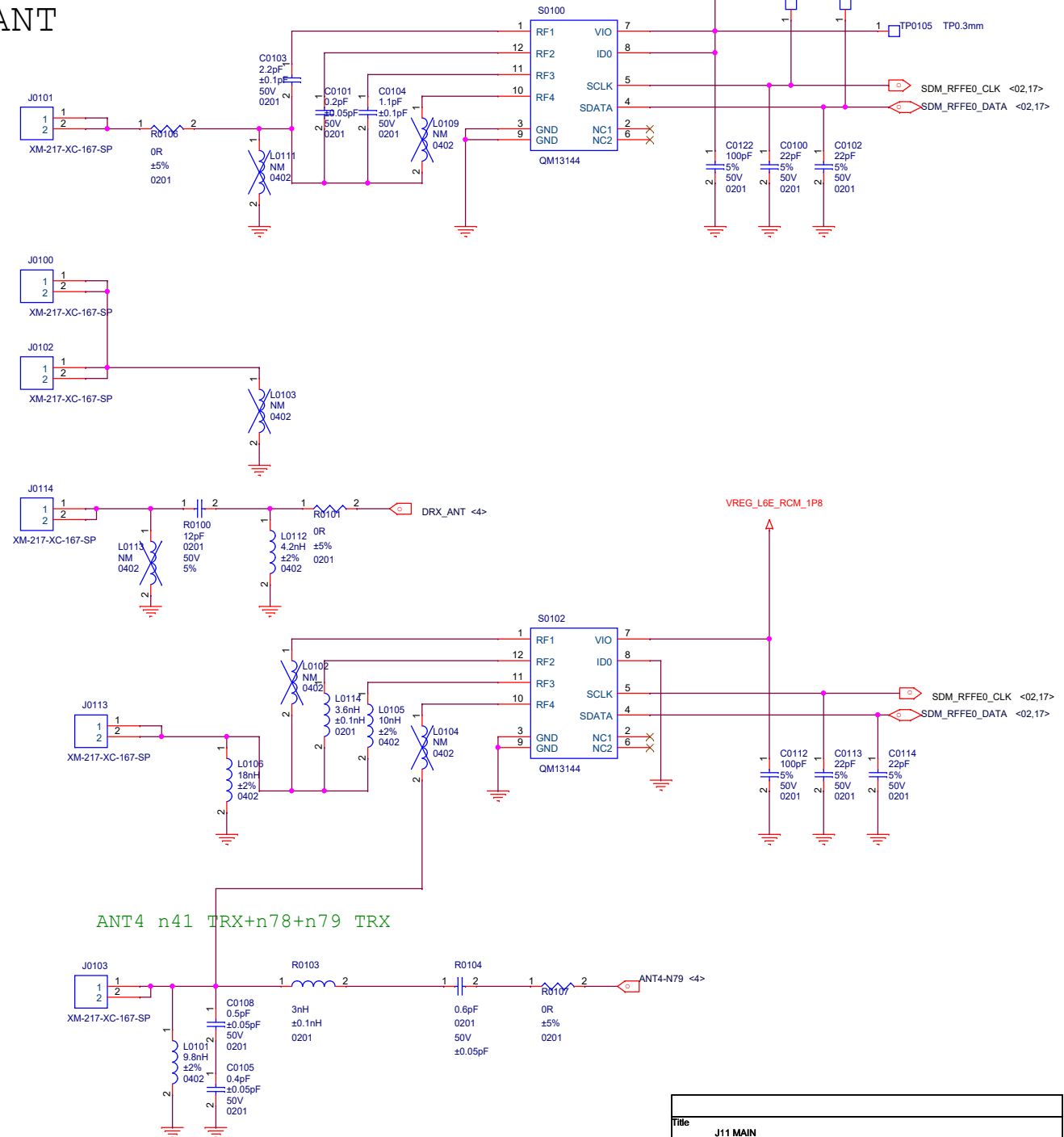
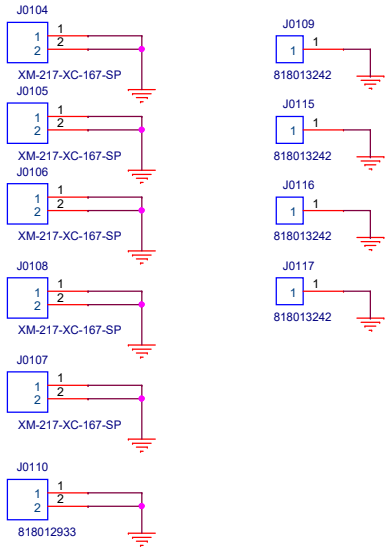
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# DRX\_ANT

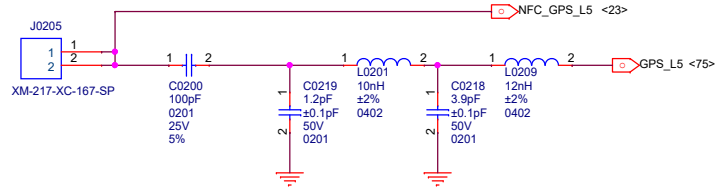
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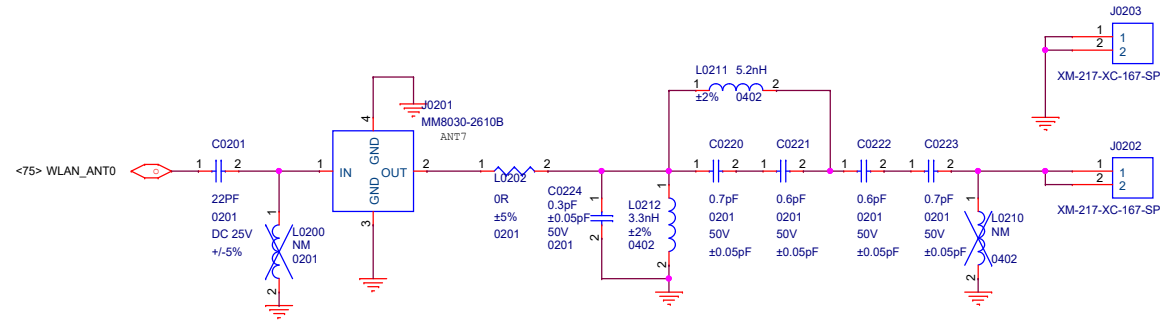
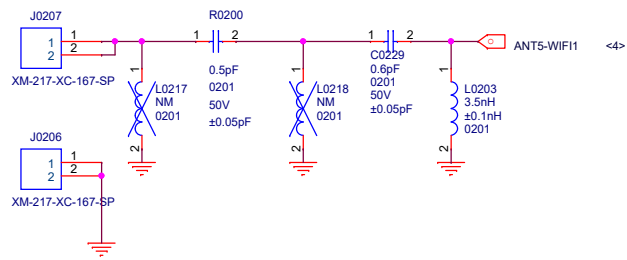
Title		J11 MAIN	
Size	A3	Document Number	<Doc>
Date:	Monday, December 23, 2019	Sheet	02 of 74

GPS L1+ WIFI2.4G CH0+WIFI 5G ANT2

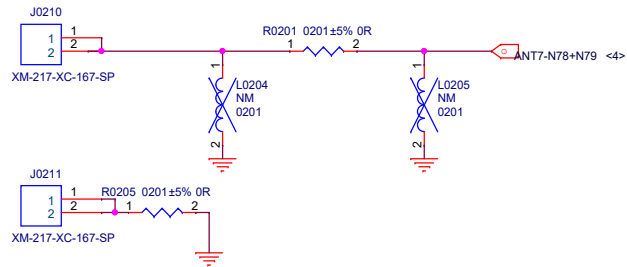
GPS L5



ANT5 WIFI2.4G+5G

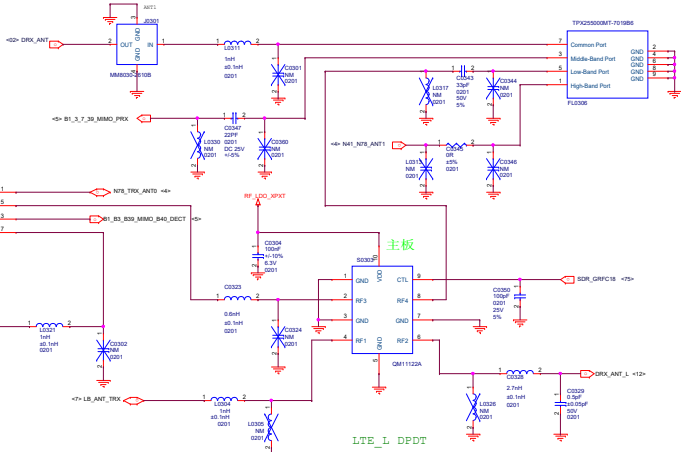


ANT7 N78+N79

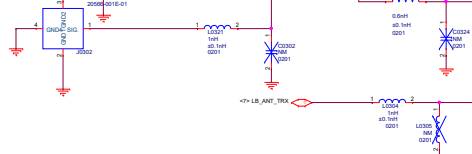


Title		
J11 MAIN		
Size	Document Number	P0
A3	<Doc>	
Date:	Monday, December 23, 2019	Sheet 3 of 74

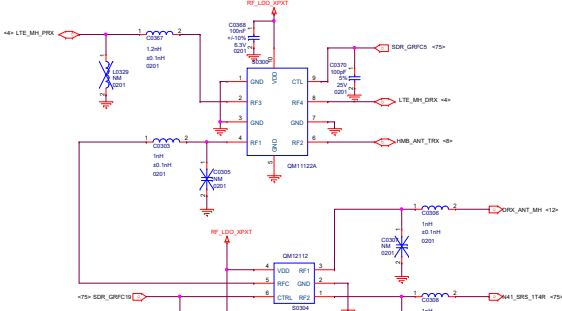
2/3/4G+n41+n79 ANT1



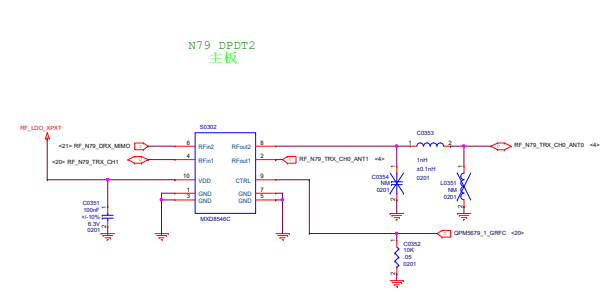
2/3/4G+n41+n79 ANT0



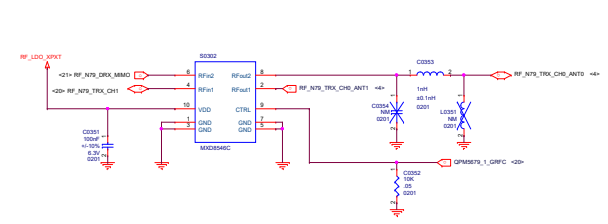
LTE\_MH DPDT 主板



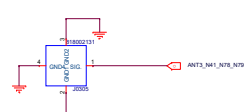
LTE\_L DPDT



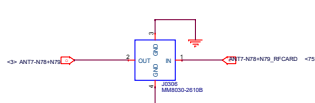
N79 DPDT2 主板



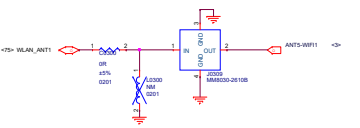
n41 TRX+n78 TRX+n79 TRX ANT3



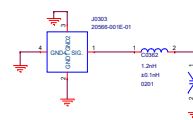
N78 N79 ANT7



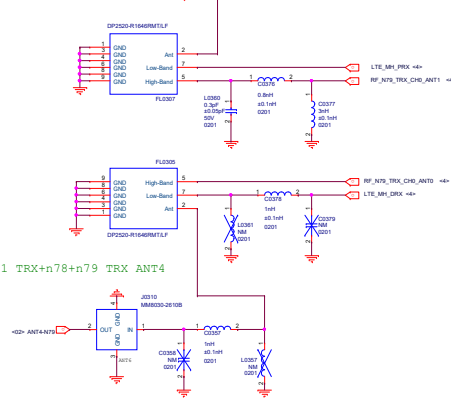
WiFi2.4G+WiFi 5G CH1 ANT5



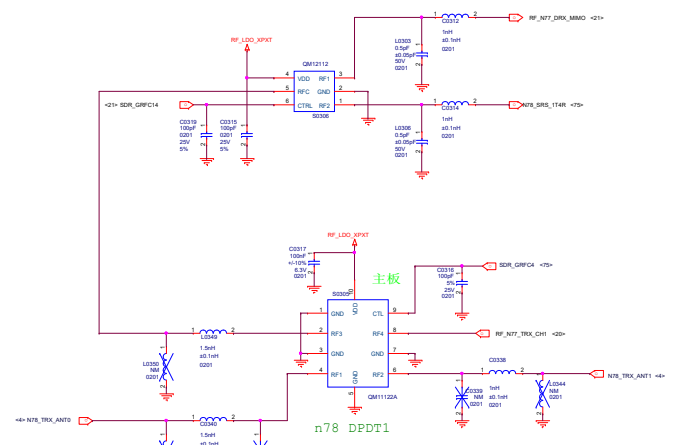
N41 TRX+n78 ANT9



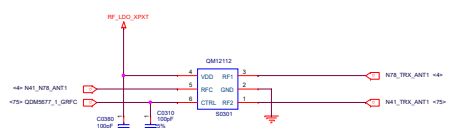
n41 TRX+n78+n79 TRX ANT4



N78 ANT8

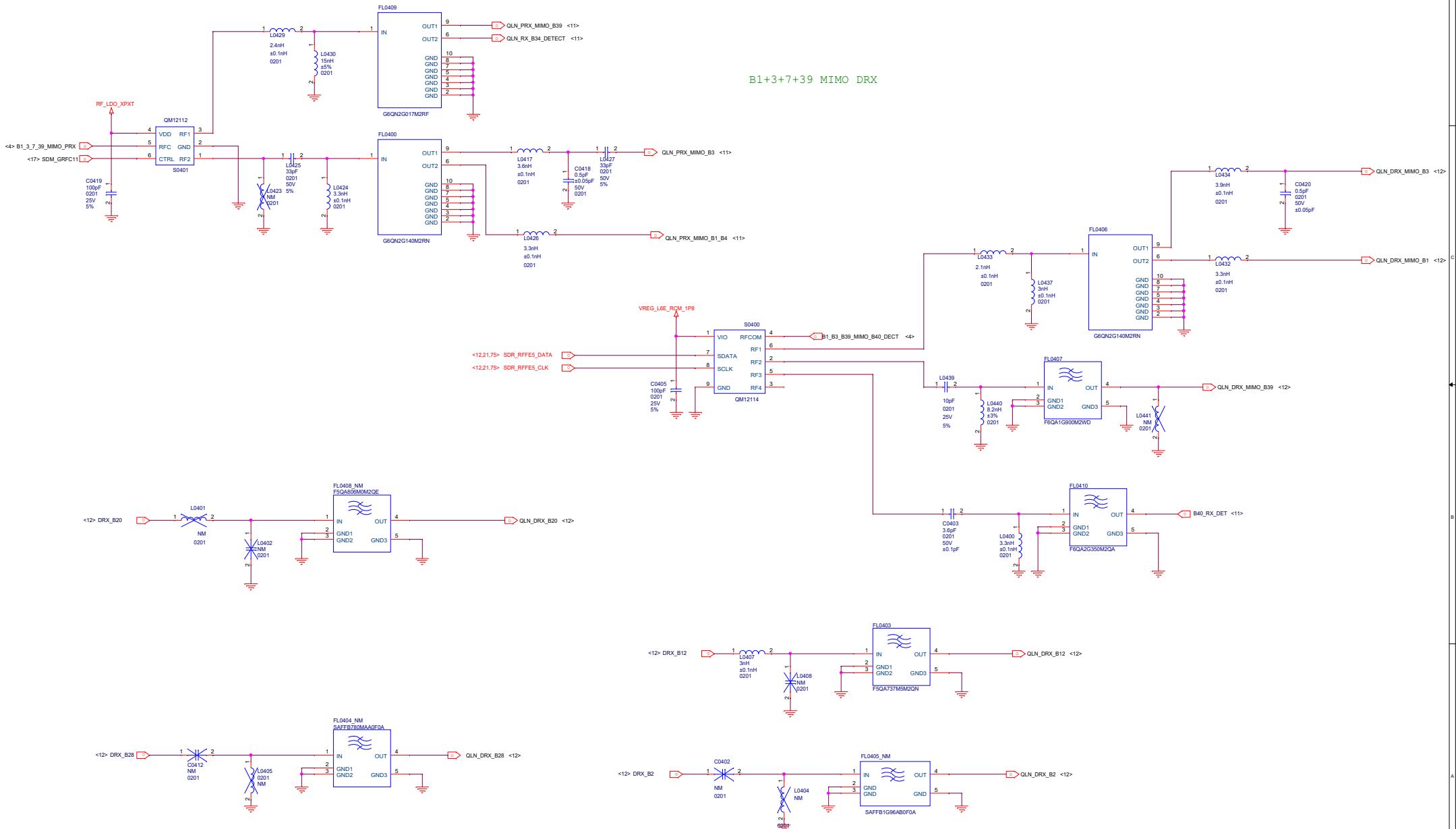


n78 DPDT1



B1+3+7+39 MIMO PRX

B1+3+7+39 MIMO DRX



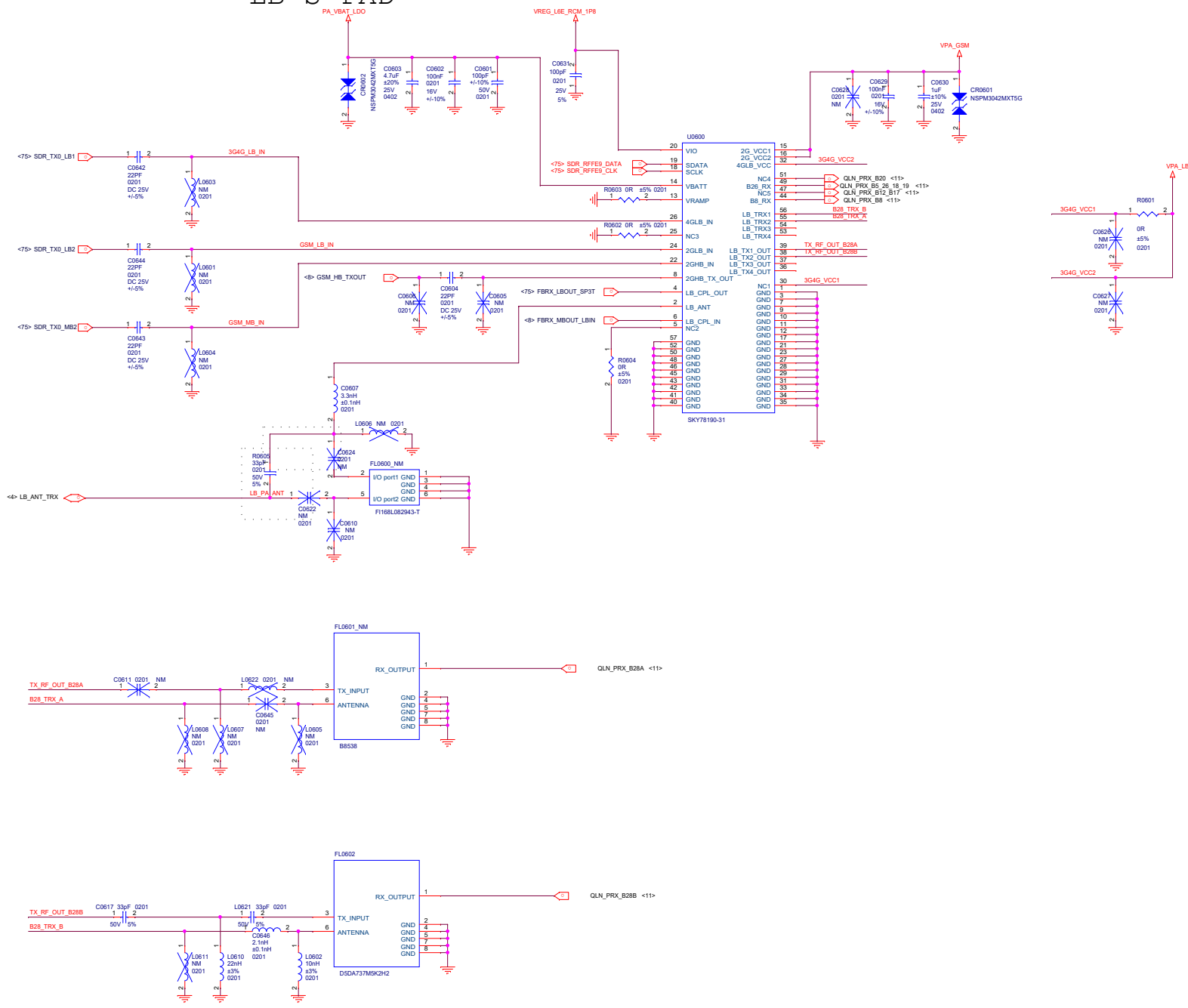
Title		J11 MAIN
Size	A2	Document Number
		<Doc>
Date	Monday, December 23, 2019	



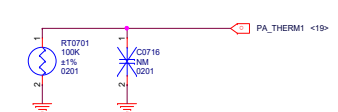
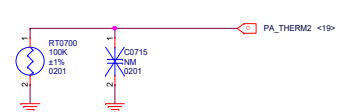
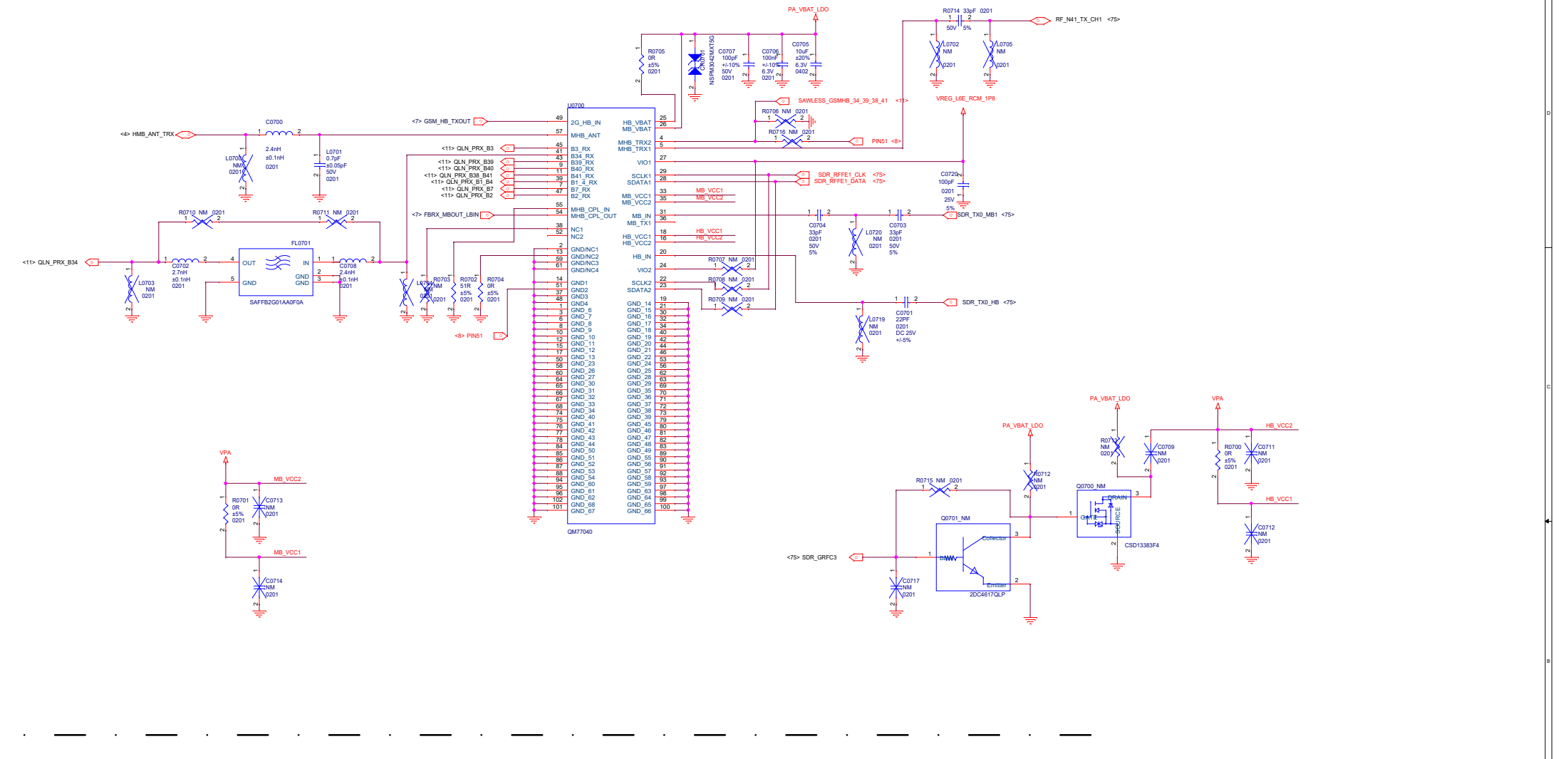
Title	
J11 MAIN	
Size	Document Number
A2	<Doc>
Date	Monday, December 23, 2019
Sheet	



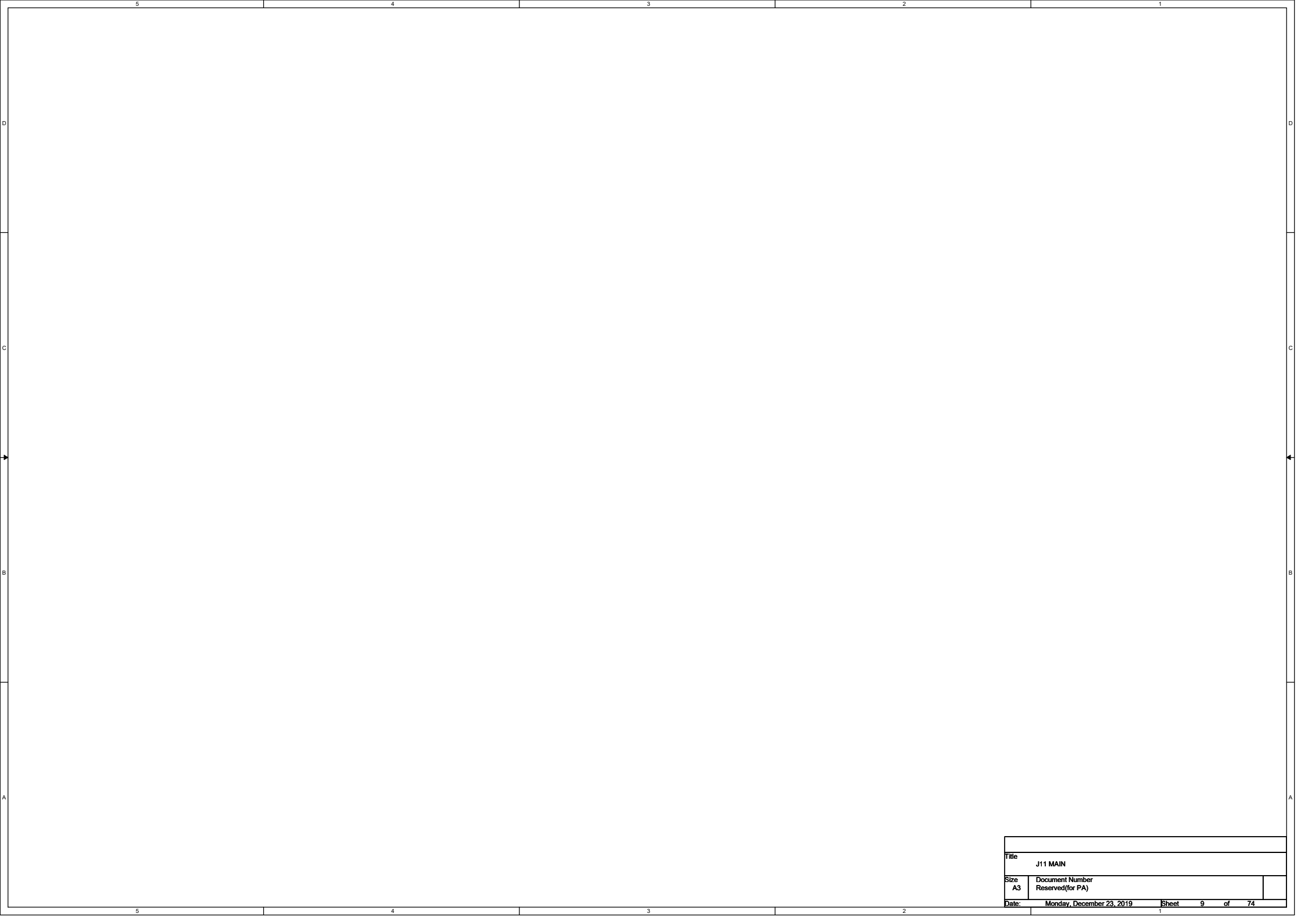
# LB S-PAD



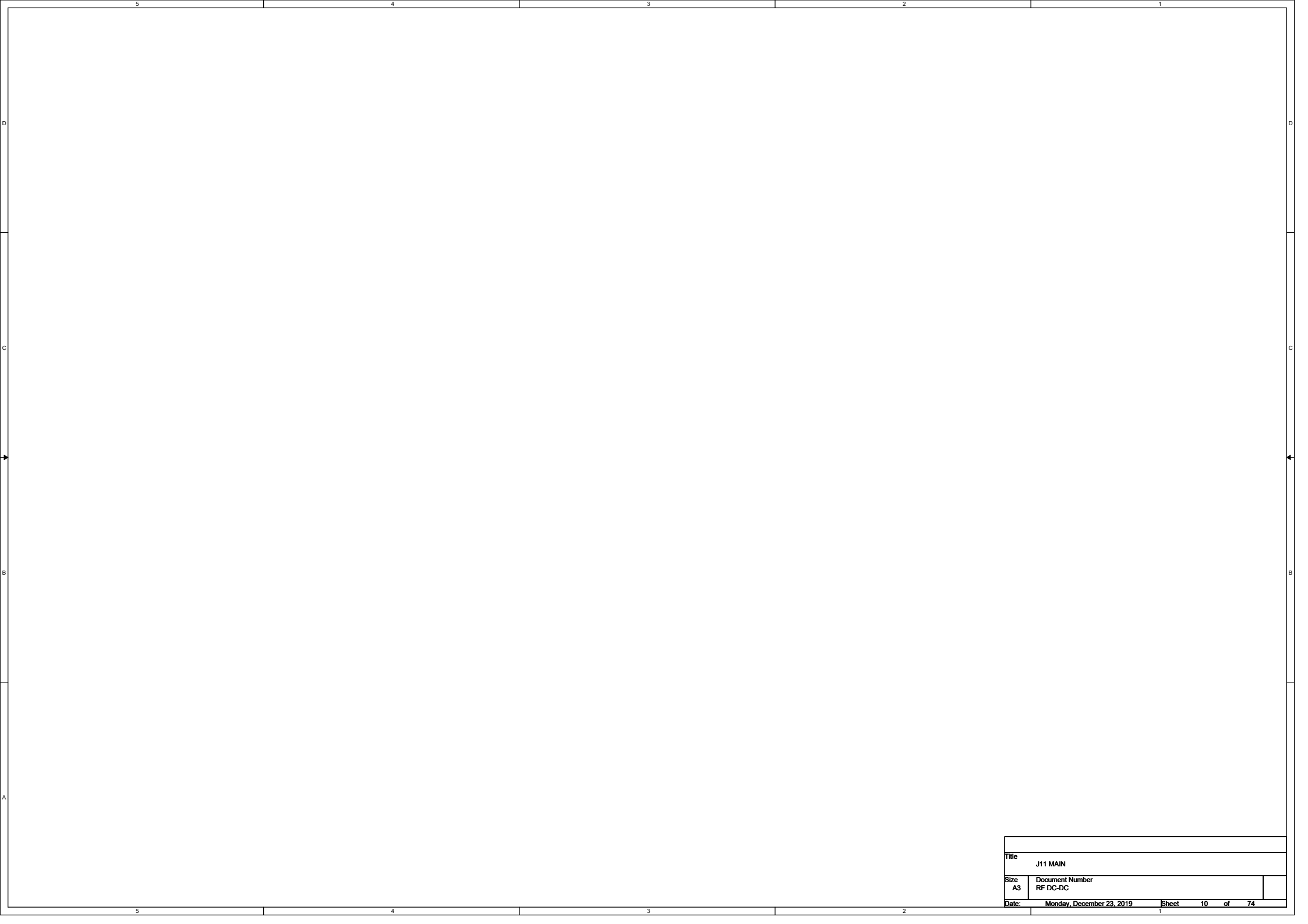
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Size	A2
Document Number	PA1
Date	Monday, December 23, 2019
Sheet	1



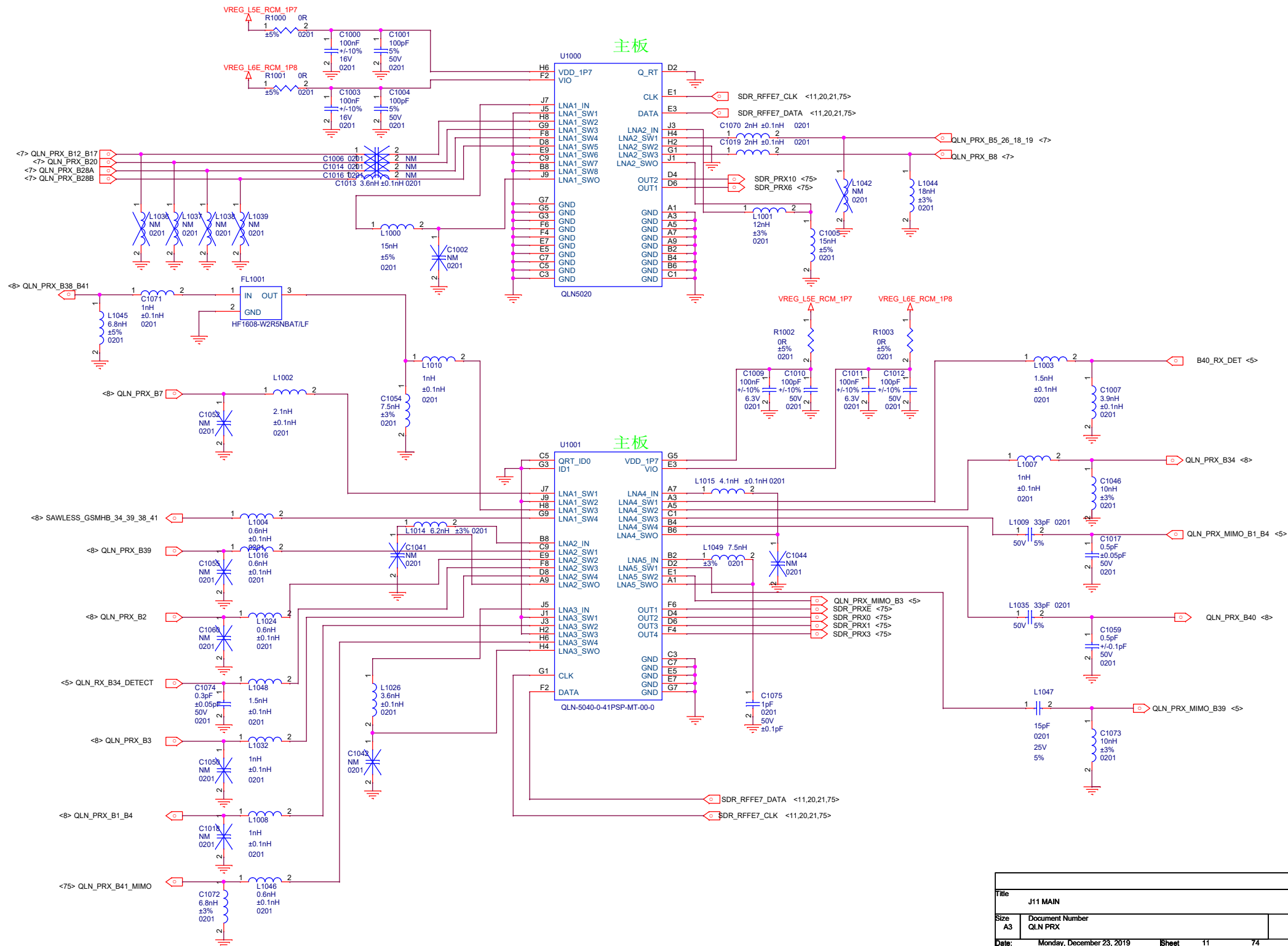
Title		J11 MAIN
Size	Document Number	PA2
Date		Monday, December 23, 2019
		Sheet



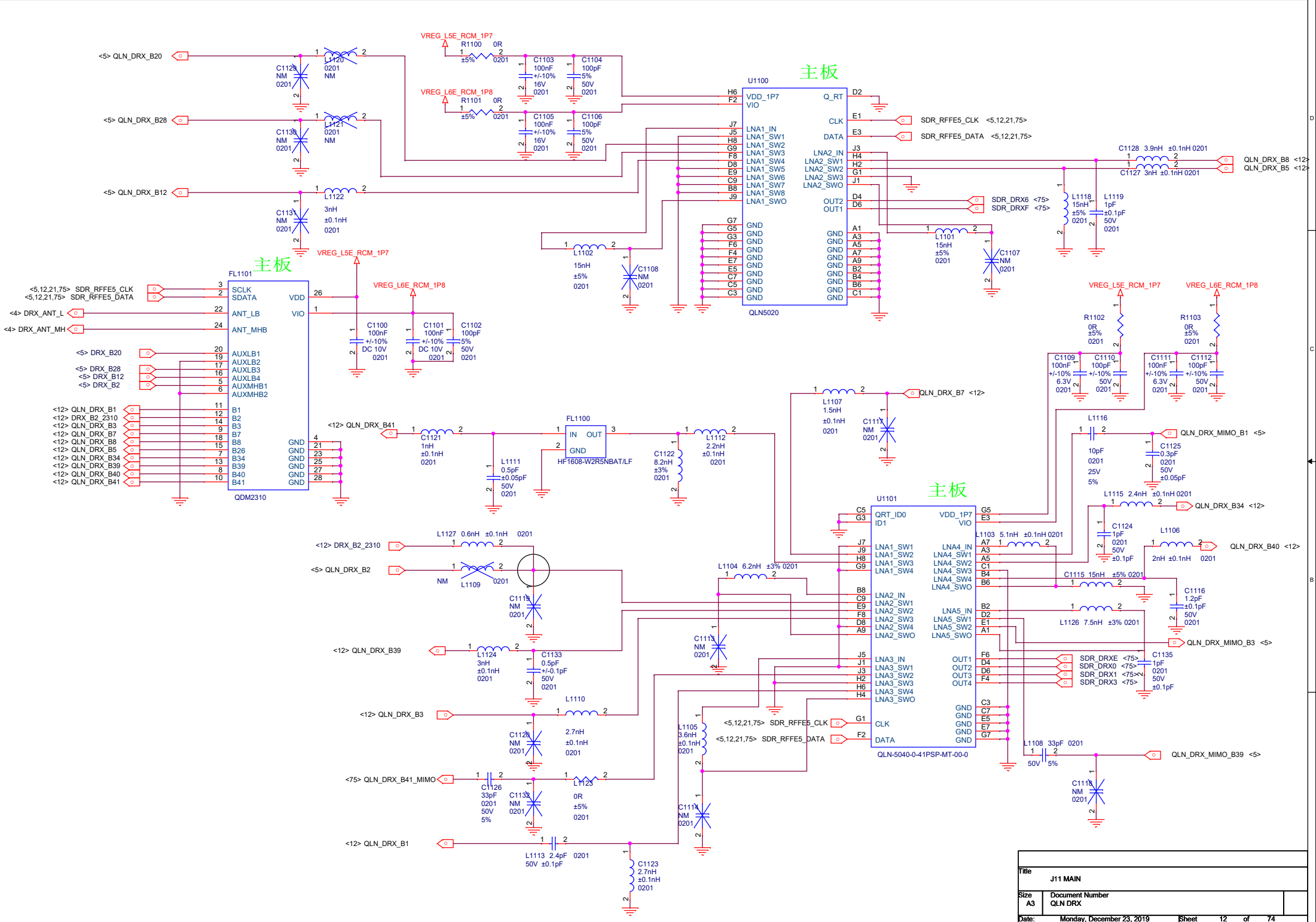
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J11 MAIN	
Size	Document Number
A3	Reserved(for PA)
Date:	Monday, December 23, 2019
Sheet	9 of 74



Title	
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Size	Document Number
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Date:	Monday, December 23, 2019
Sheet	10 of 74



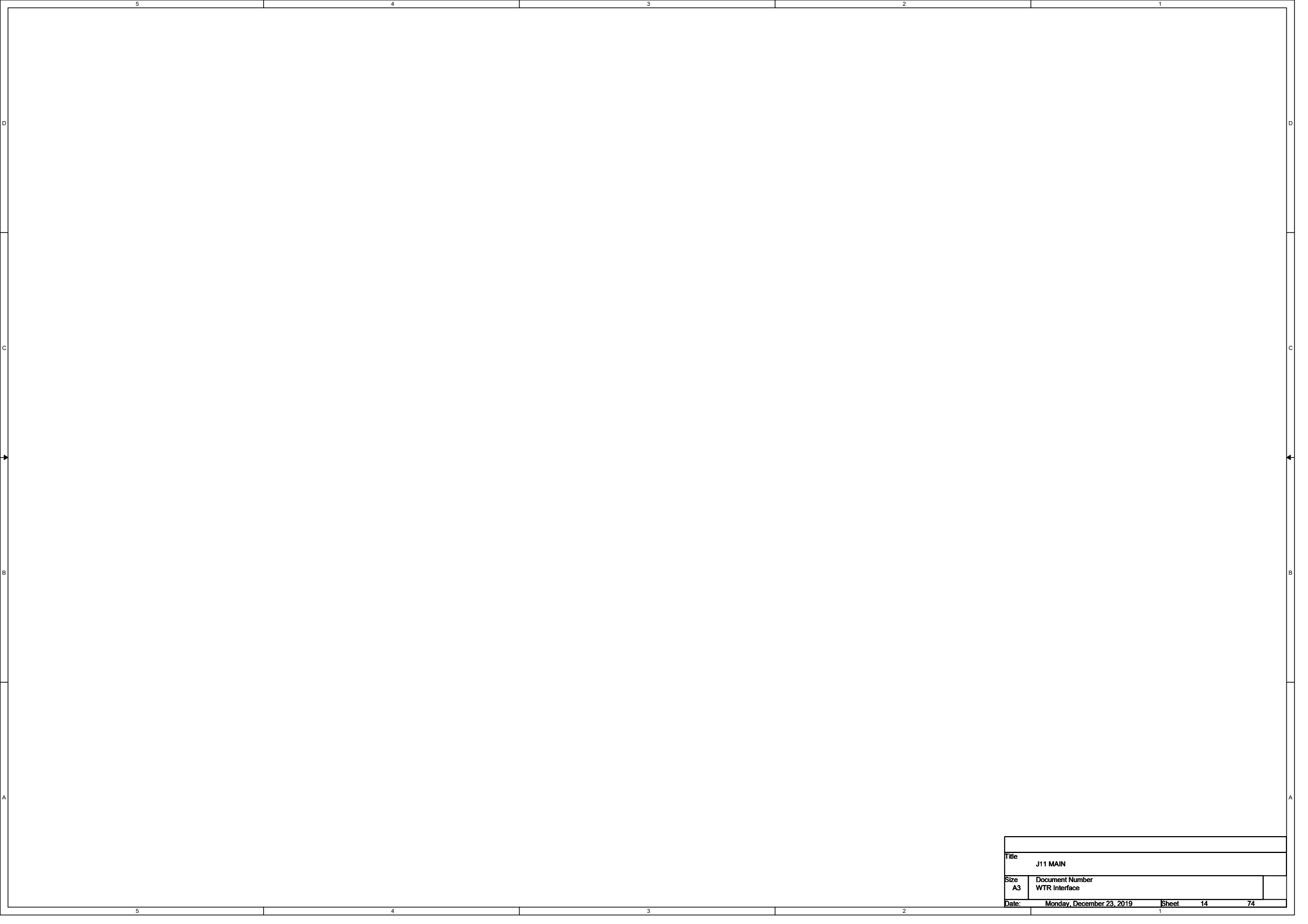
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Size	A3	Document Number	QLN PRX
Date:	Monday, December 23, 2019	Sheet	11 74



Title		J11 MAIN
Size	A3	Document Number
QLN DRX		
Date:	Monday, December 23, 2019	Sheet 12 of 74



Title	
J11 MAIN	
Size	Document Number
A2	Reserved for LNA
Date	Monday, December 23, 2019
Sheet	



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Title	
J11 MAIN	
Size	Document Number
A3	WTR Interface
Date:	Monday, December 23, 2019
Sheet	14
	74

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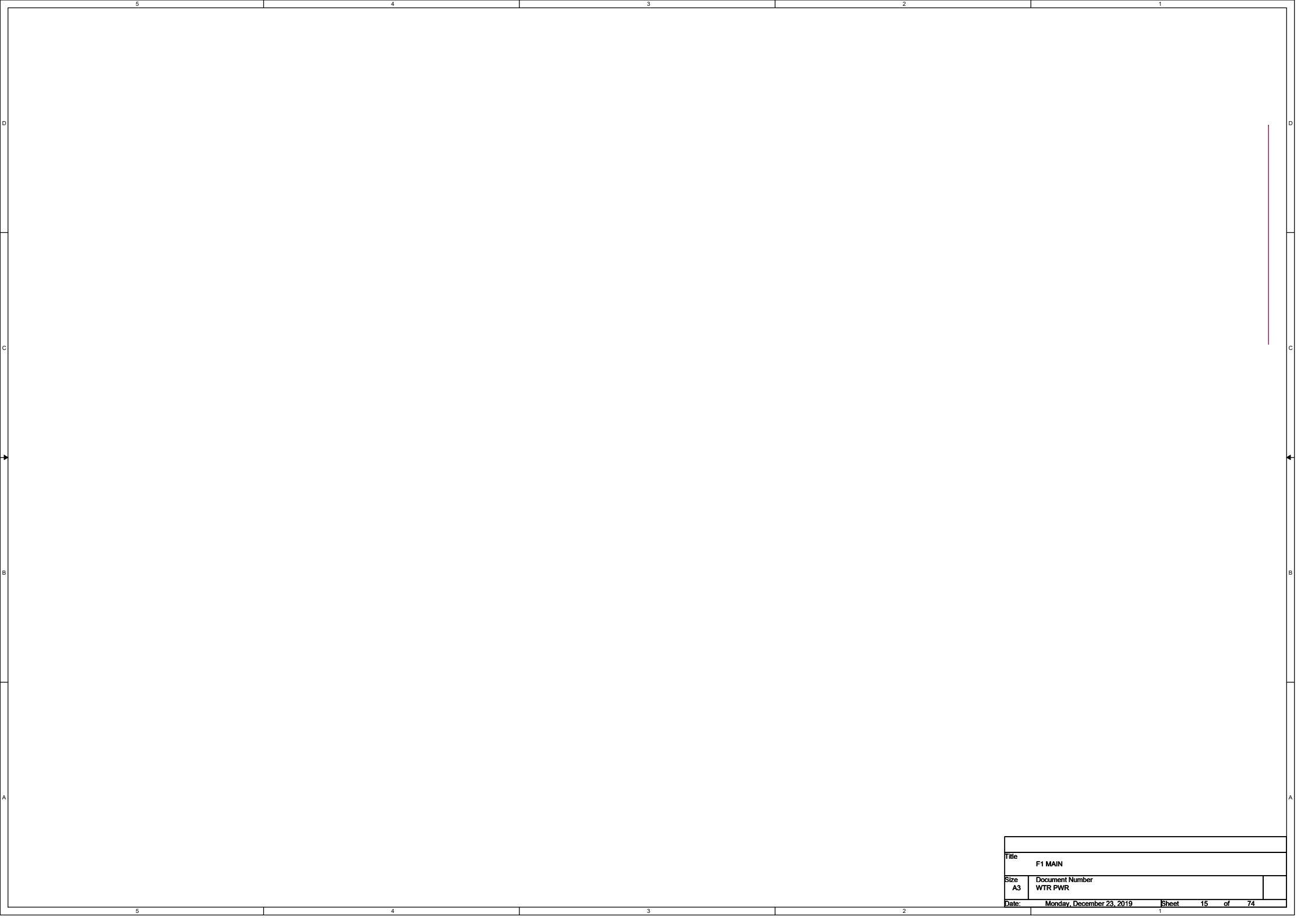
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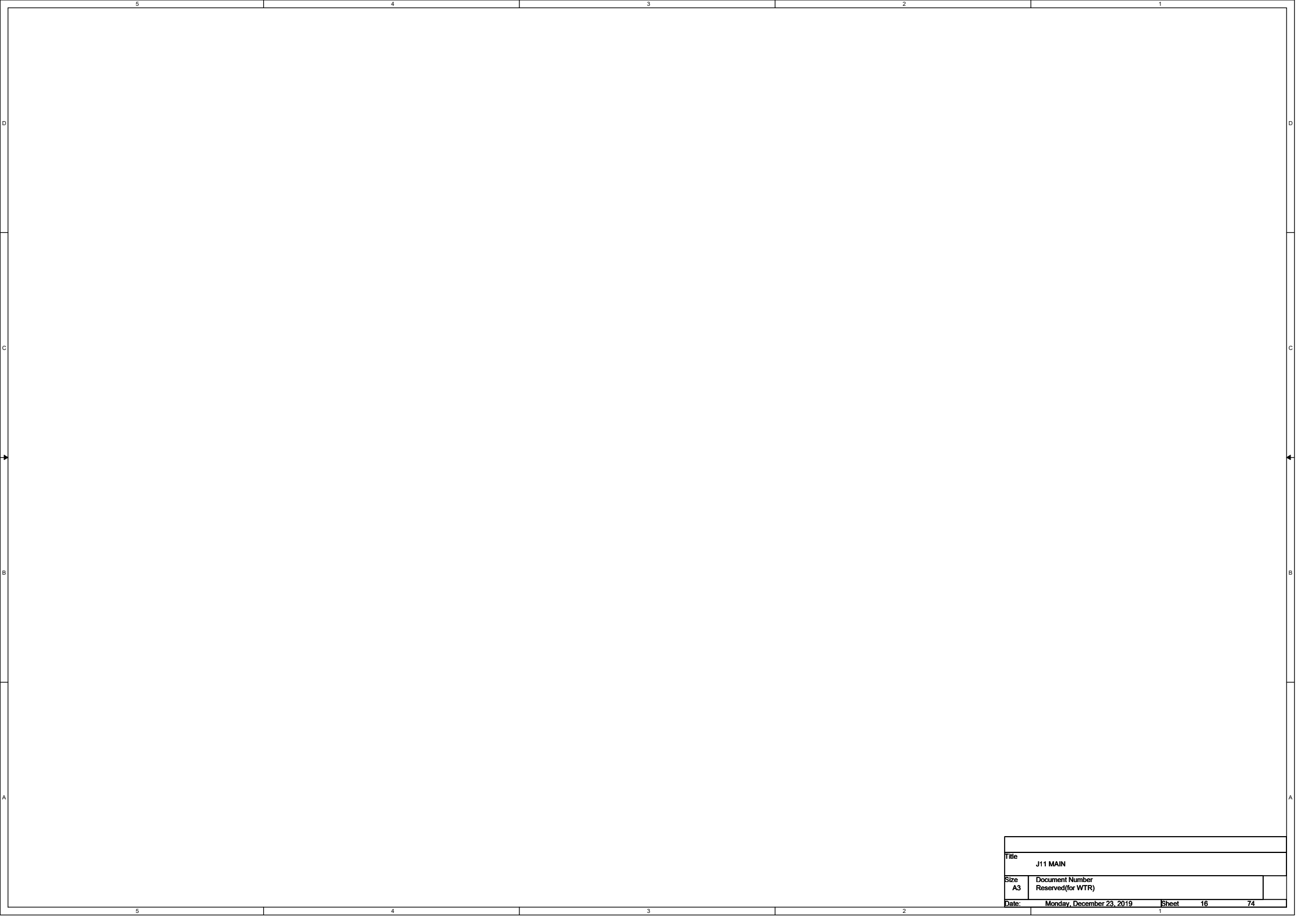
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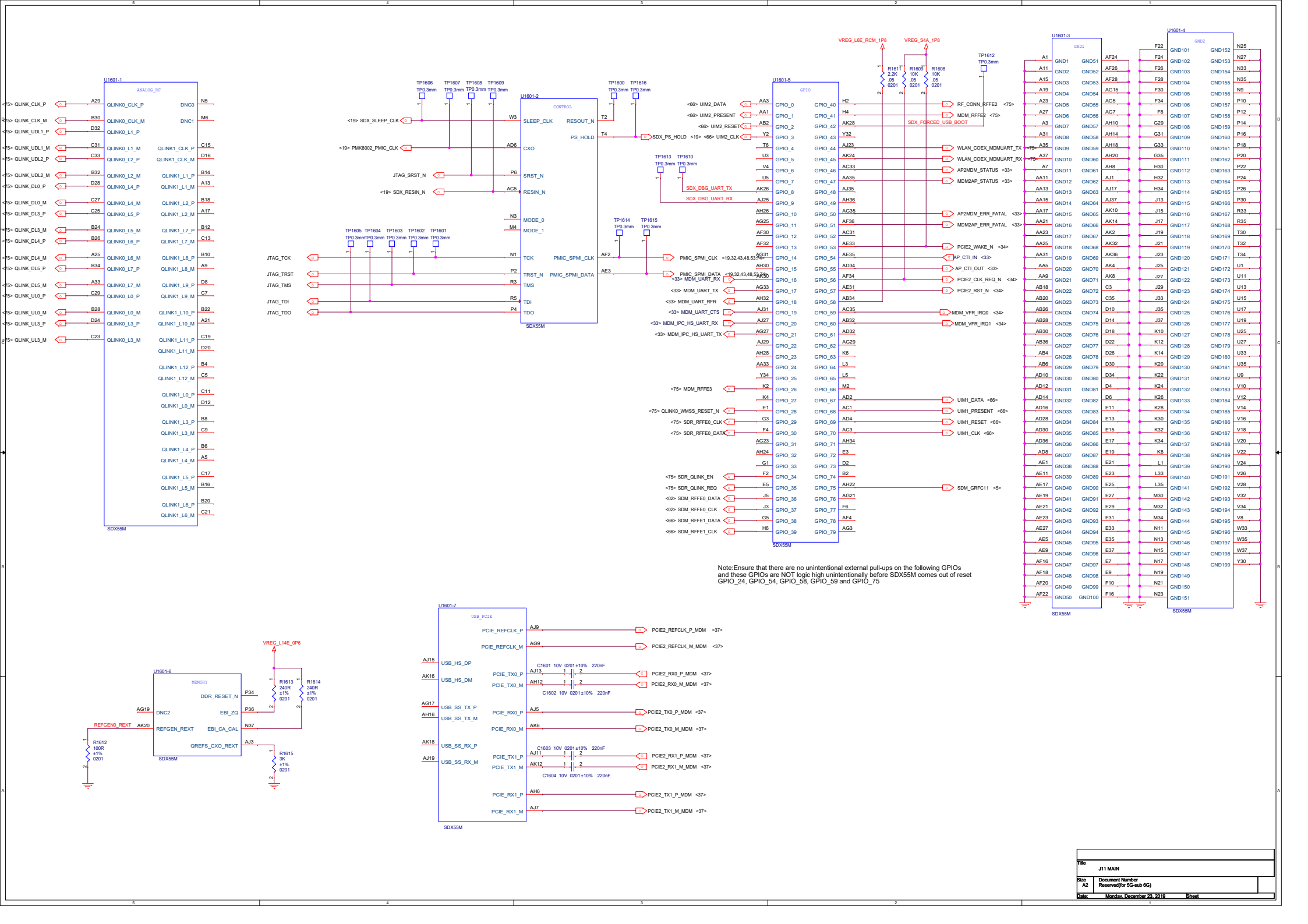


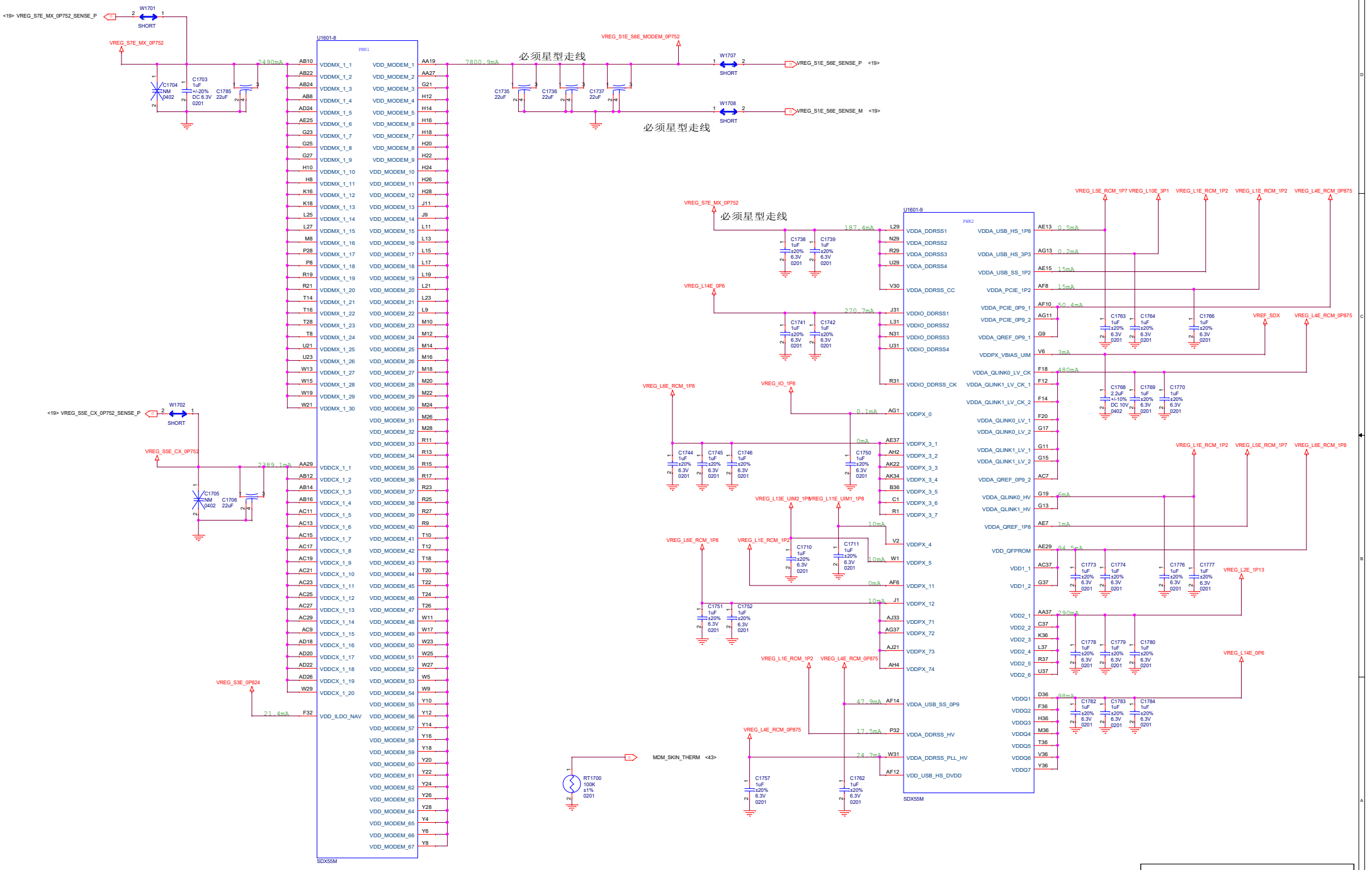


Title		F1 MAIN	
Size	Document Number		
A3	WTR PWR		
Date:	Monday, December 23, 2019	Sheet	15 of 74

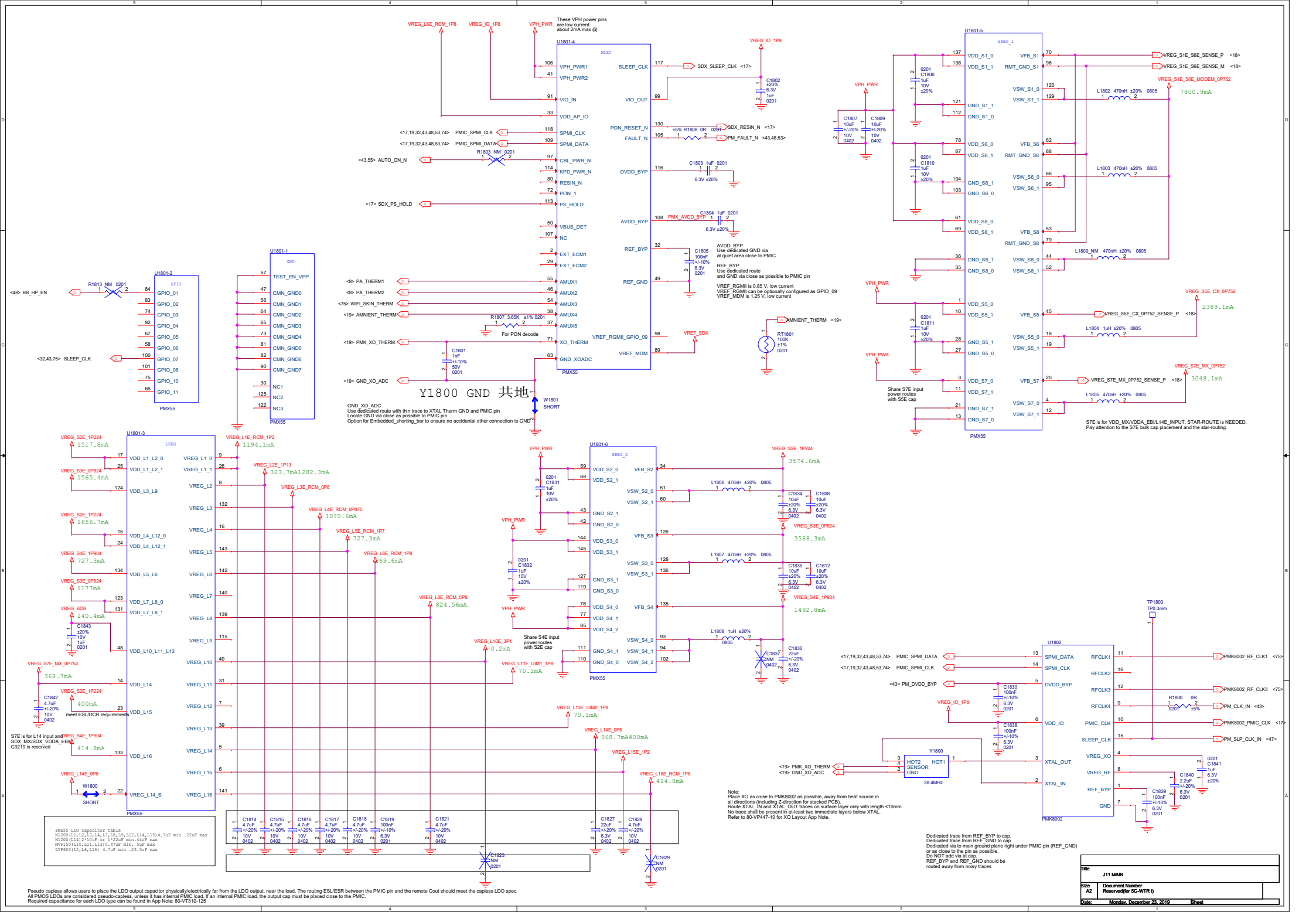


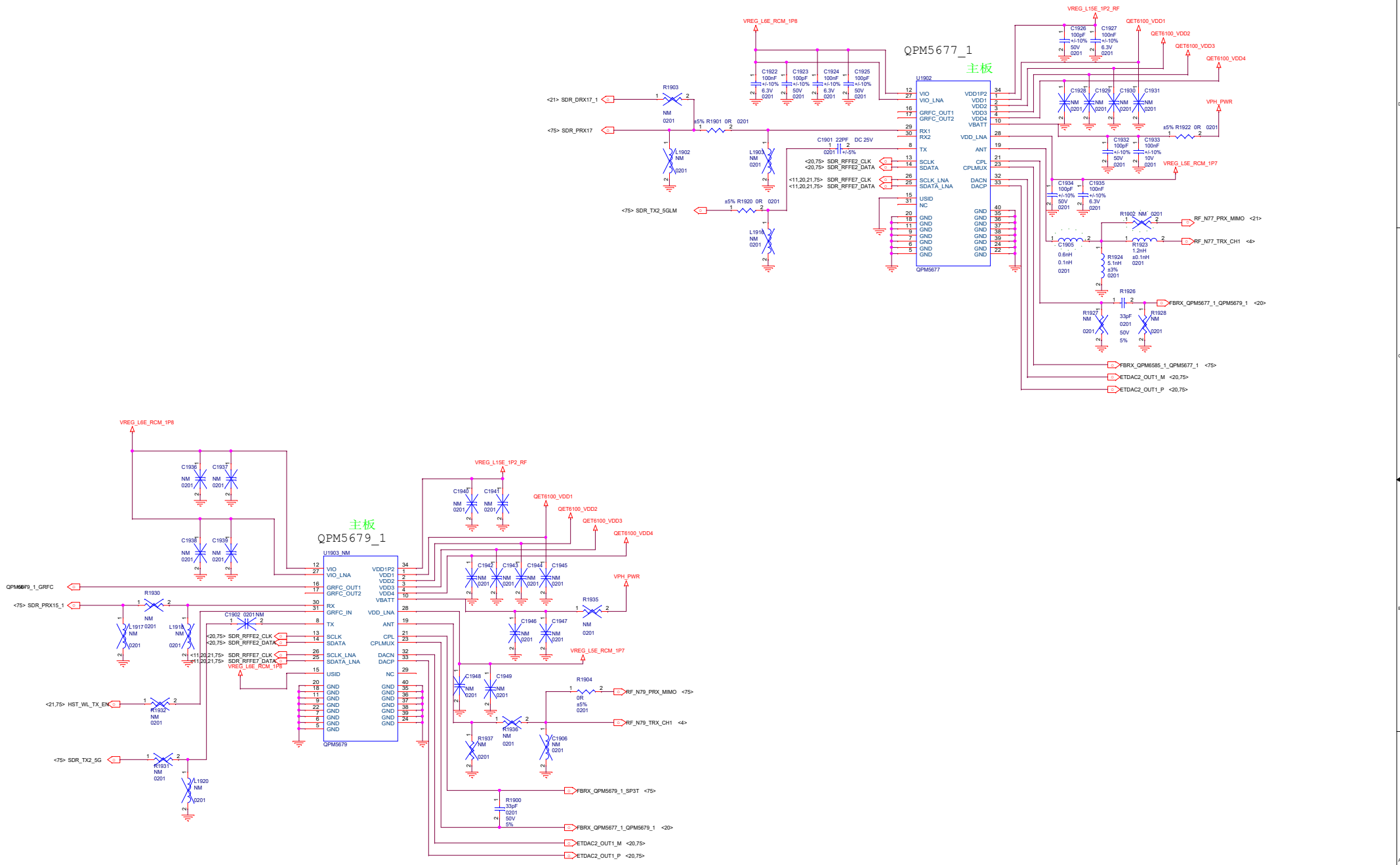
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Size	Document Number
A3	Reserved(for WTR)
Date:	Monday, December 23, 2019
Sheet	16
	74



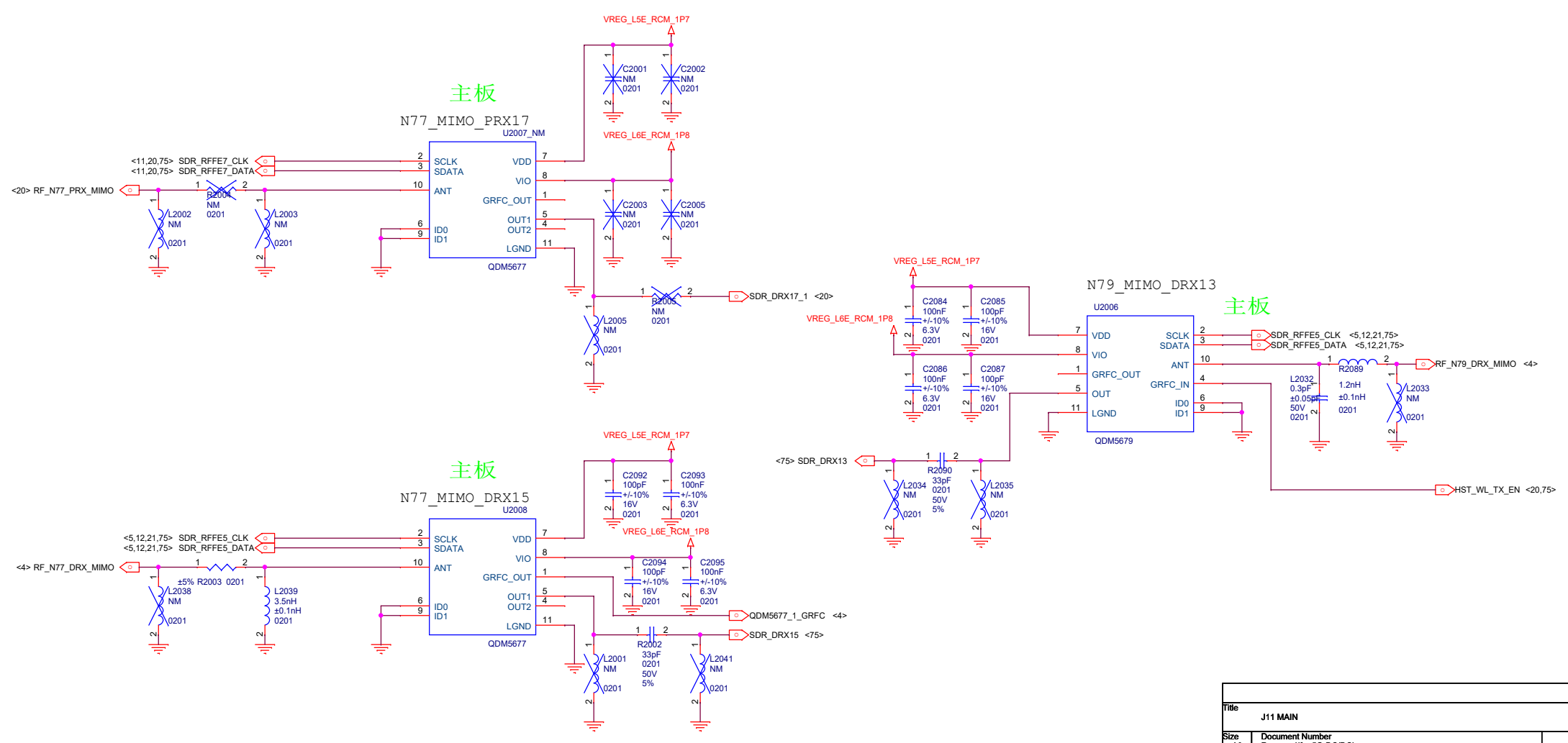


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Size	Document Number
A2	Reserved for Mfg Wave
Date	Monday, December 23, 2019
	Sheet





File	J11 MAIN
Size	Document Number
A2	Reserved for DG-WTR P)
Date	Monday, December 23, 2019
	Sheet

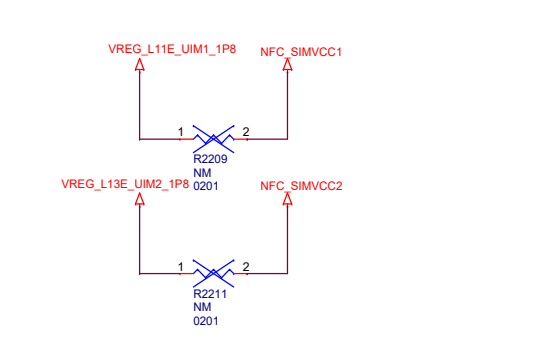
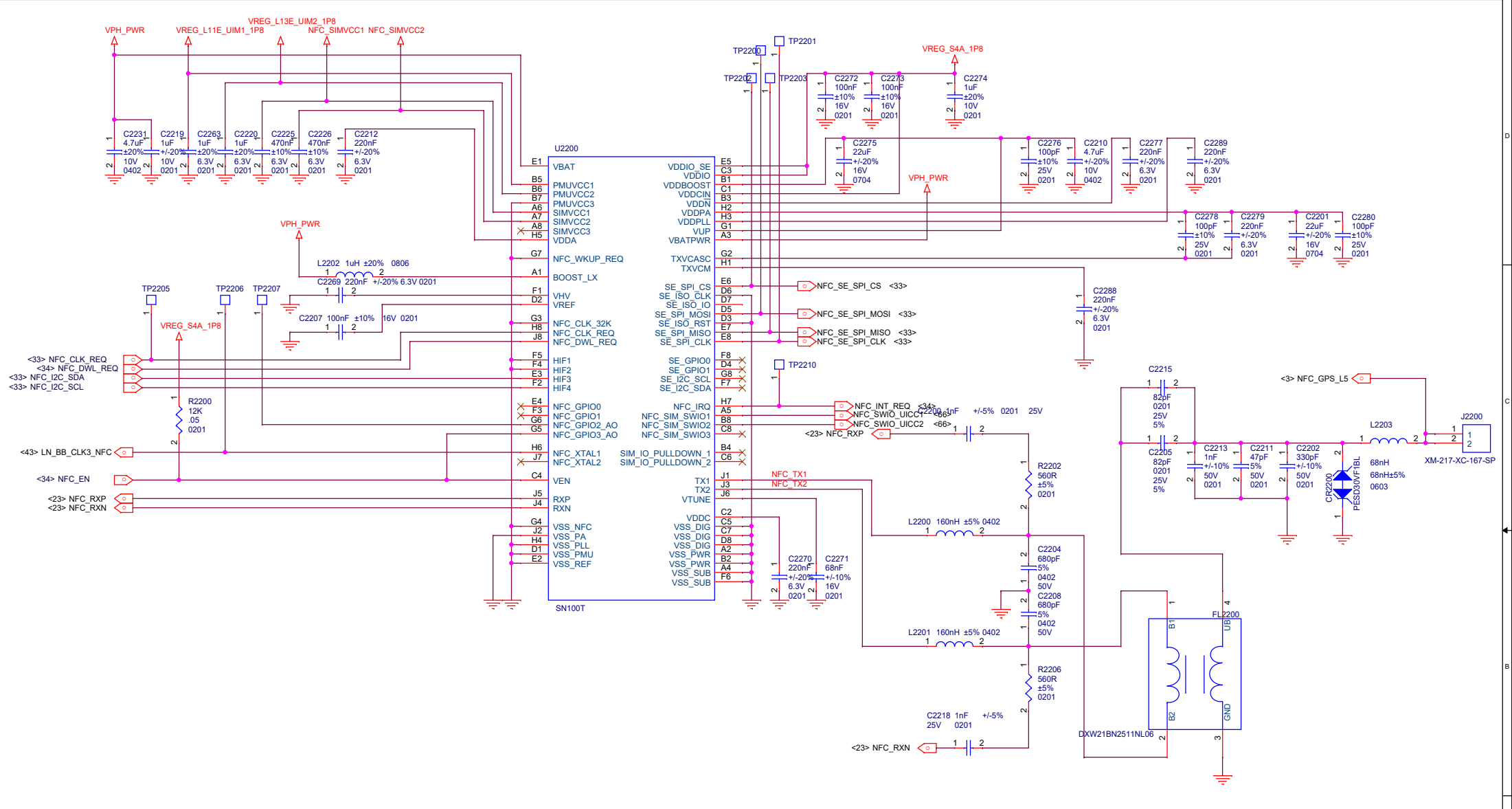


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Size	A3	Document Number	Reserved(for 5G-DC/DC)
Date:	Monday, December 23, 2019	Sheet	21 74

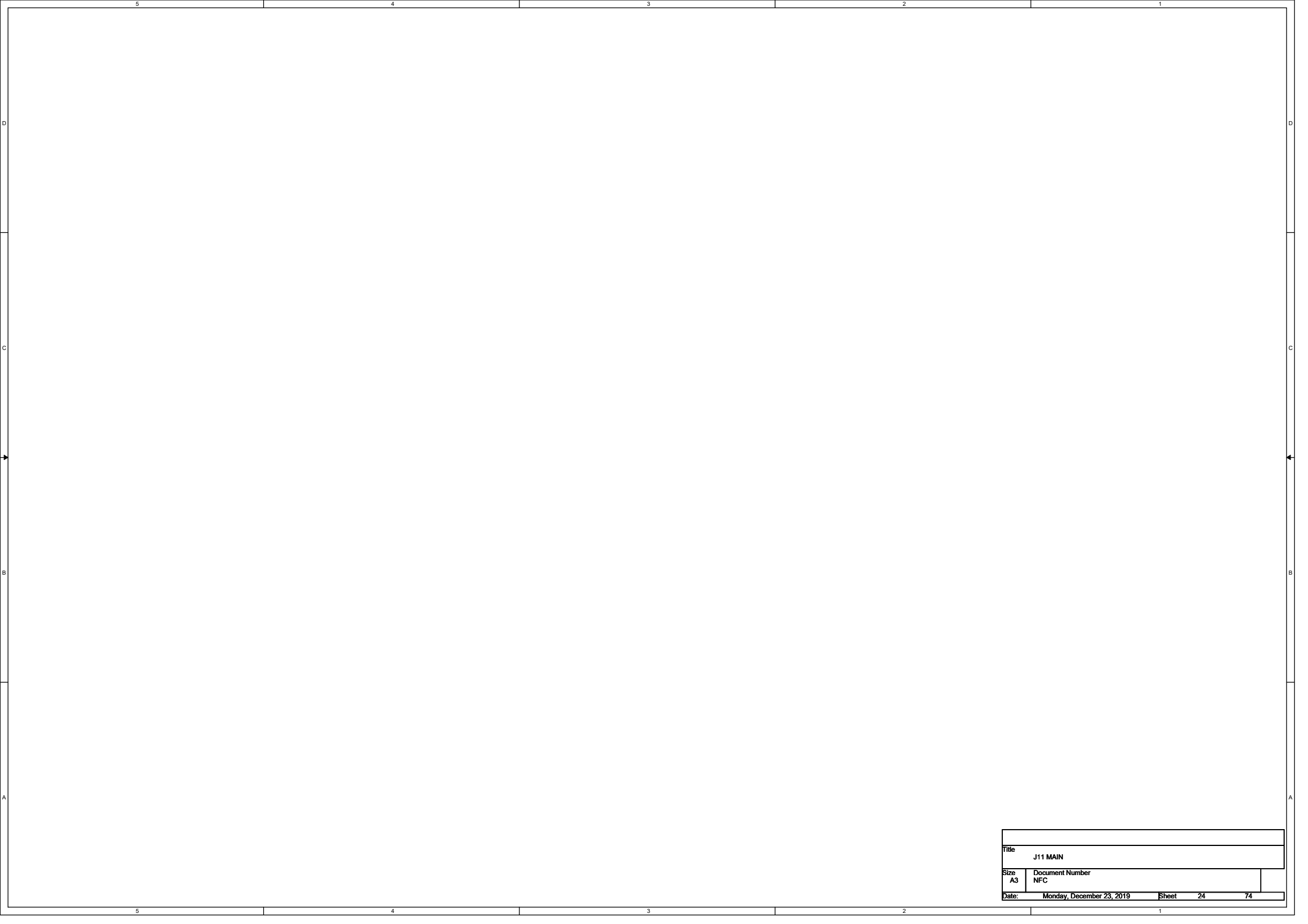


Title	
J11 MAIN	
Size	Document Number
A2	NFC
Date	Monday, December 23, 2019
Sheet	

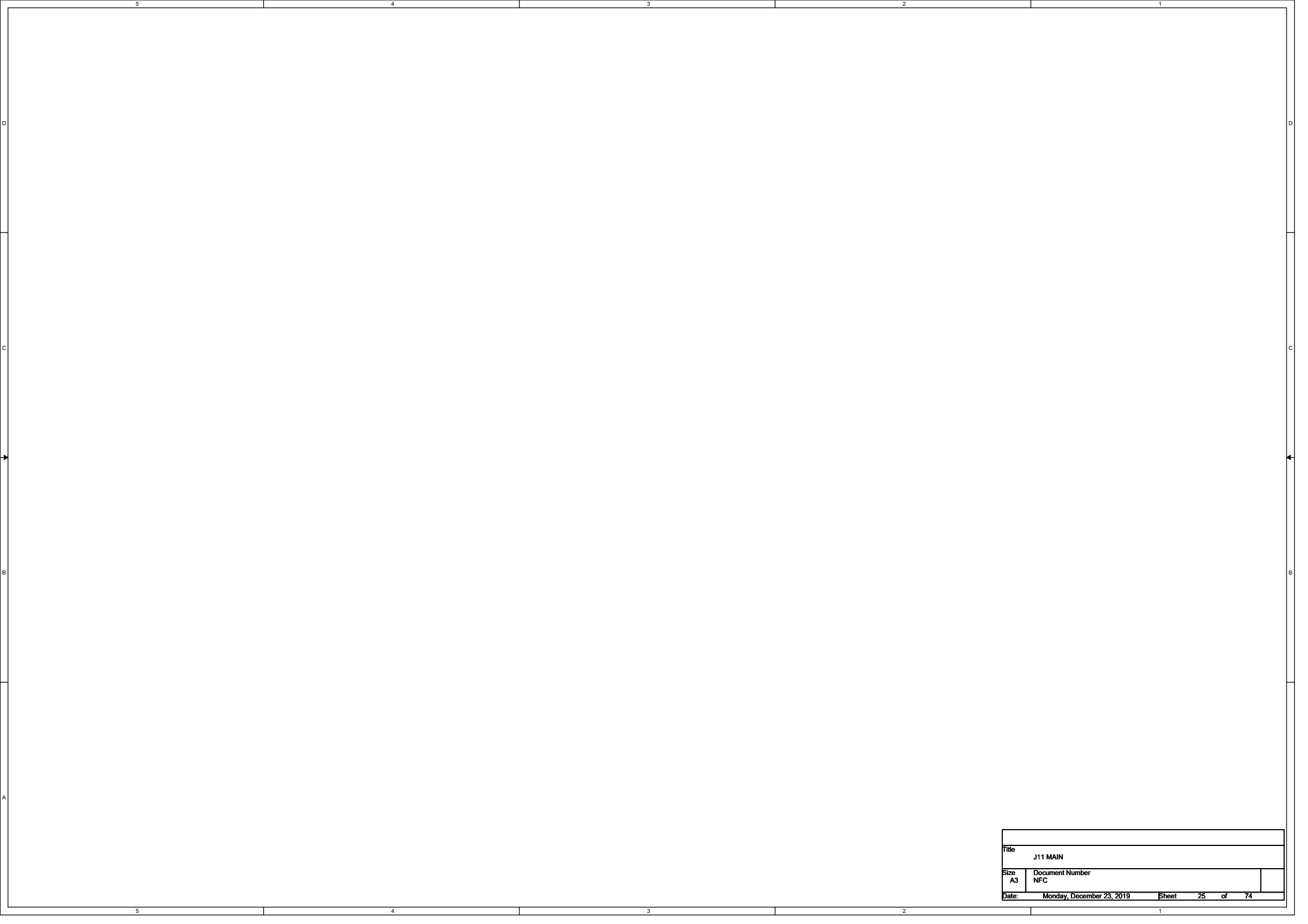




Title	J11 MAIN	
Size	A3	Document Number Reserved (for PA)
Date:	Monday, December 23, 2019	Sheet



Title	
J11 MAIN	
Size	Document Number
A3	NFC
Date:	Monday, December 23, 2019
Sheet	24
	74



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Title	
J11 MAIN	
Size	Document Number
A3	NFC
Date:	Monday, December 23, 2019
Sheet	25 of 74

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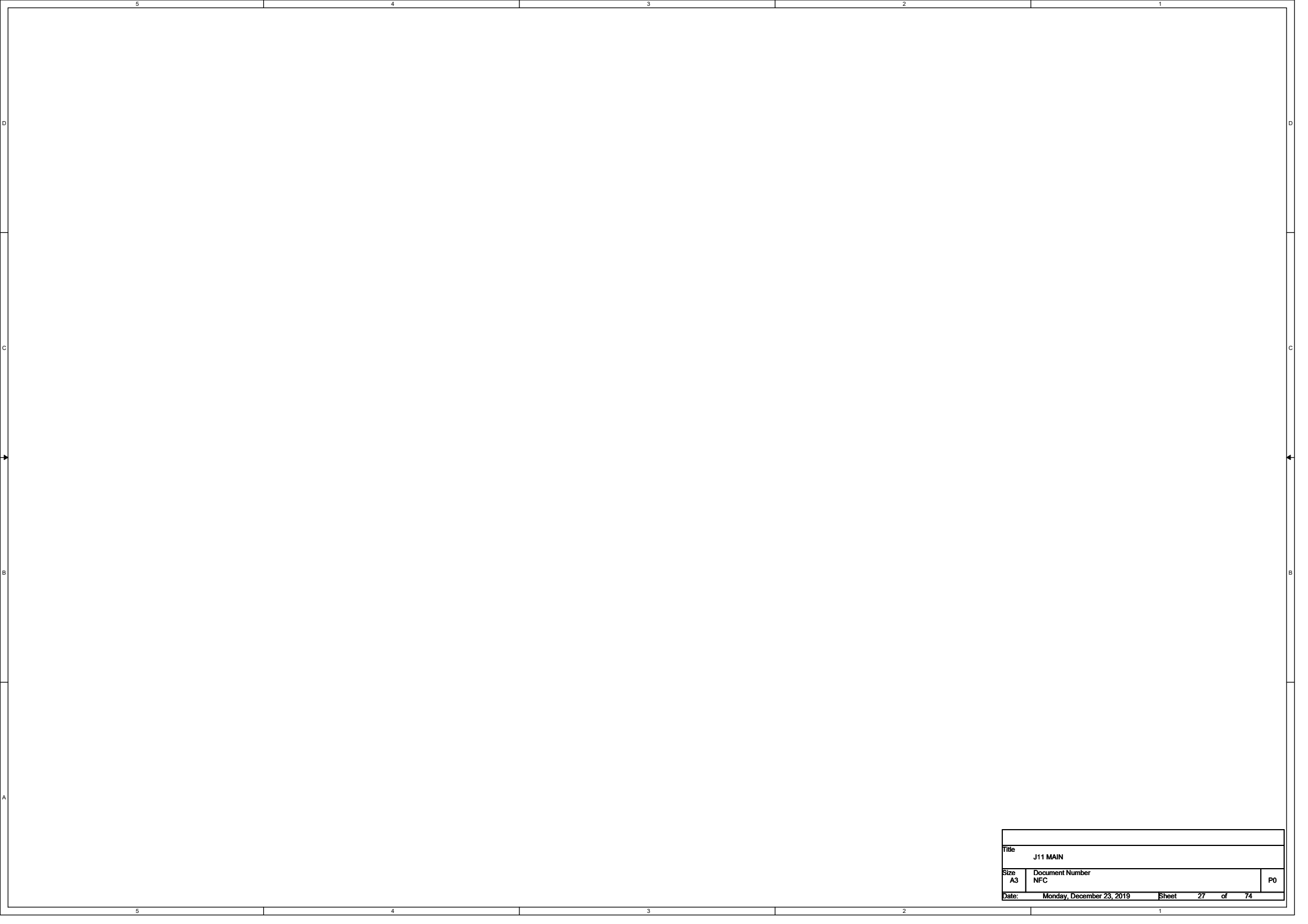
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Title		
J11 MAIN		
Size	Document Number	
A2	NFC	
Date:	Monday, December 23, 2019	Sheet



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Title		
J11 MAIN		
Size	Document Number	P0
A3	NFC	
Date: Monday, December 23, 2019		Sheet 27 of 74

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Title	
J11 MAIN	
Size	Document Number
A3	NFC
Date:	Monday, December 23, 2019
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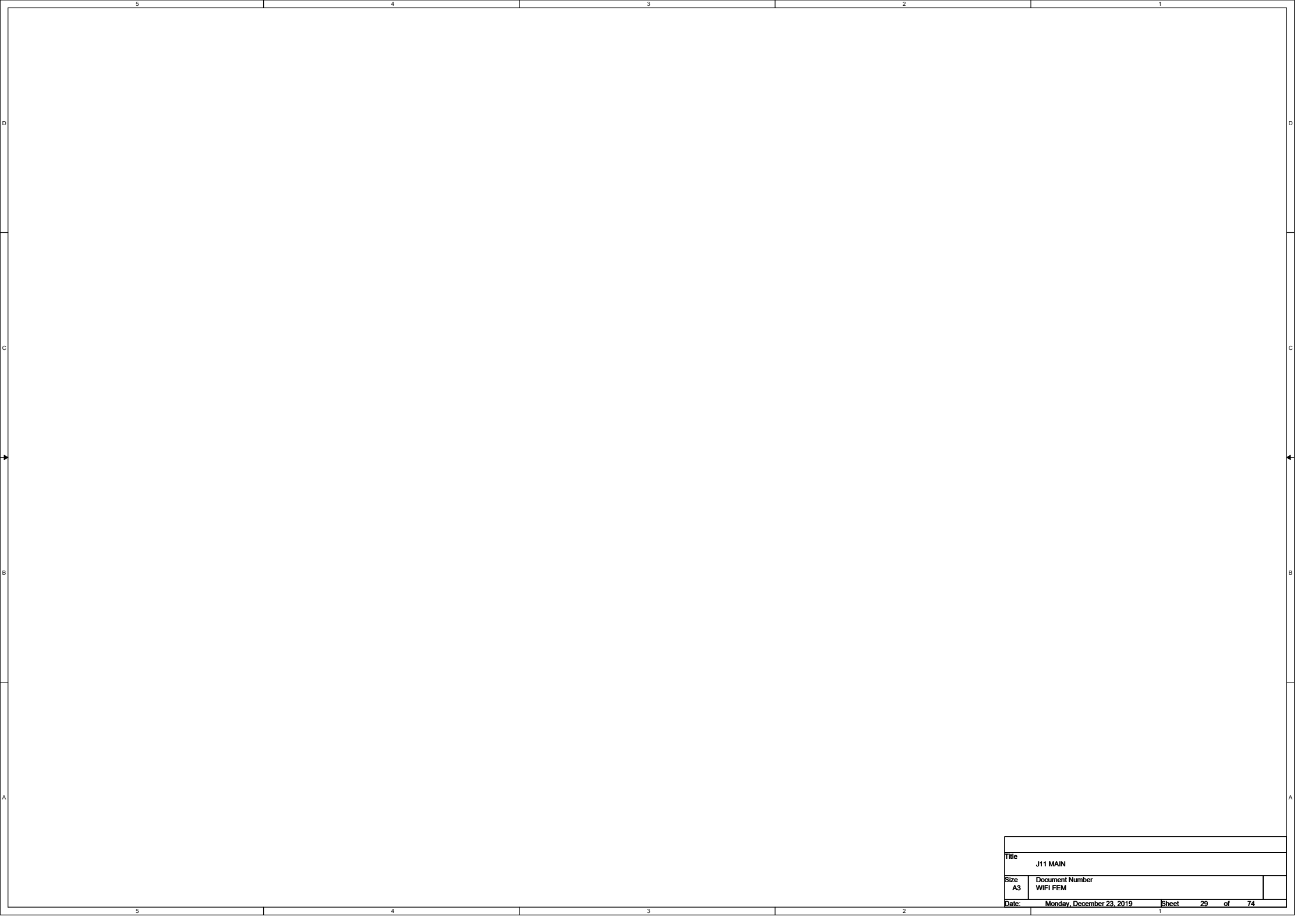
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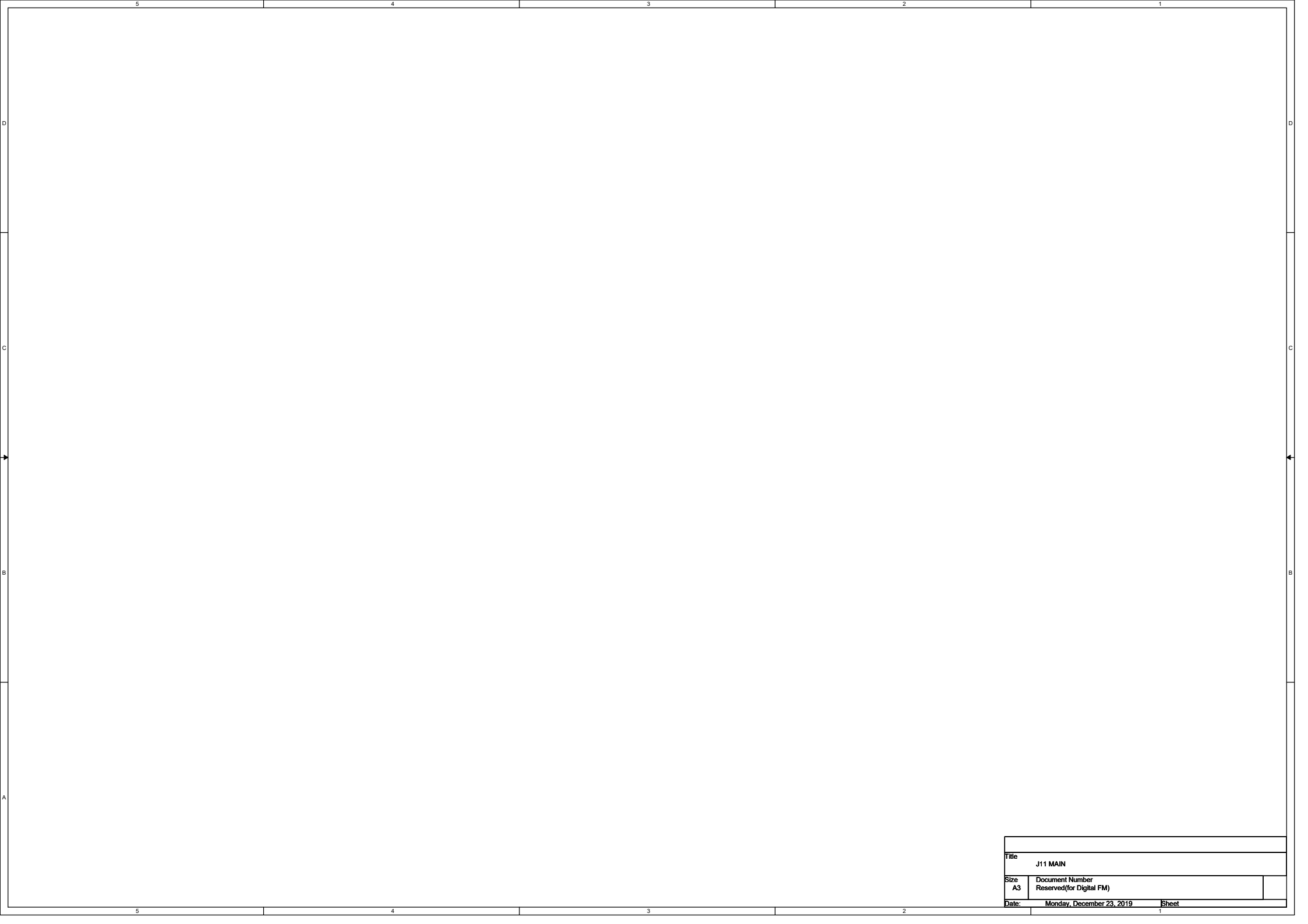
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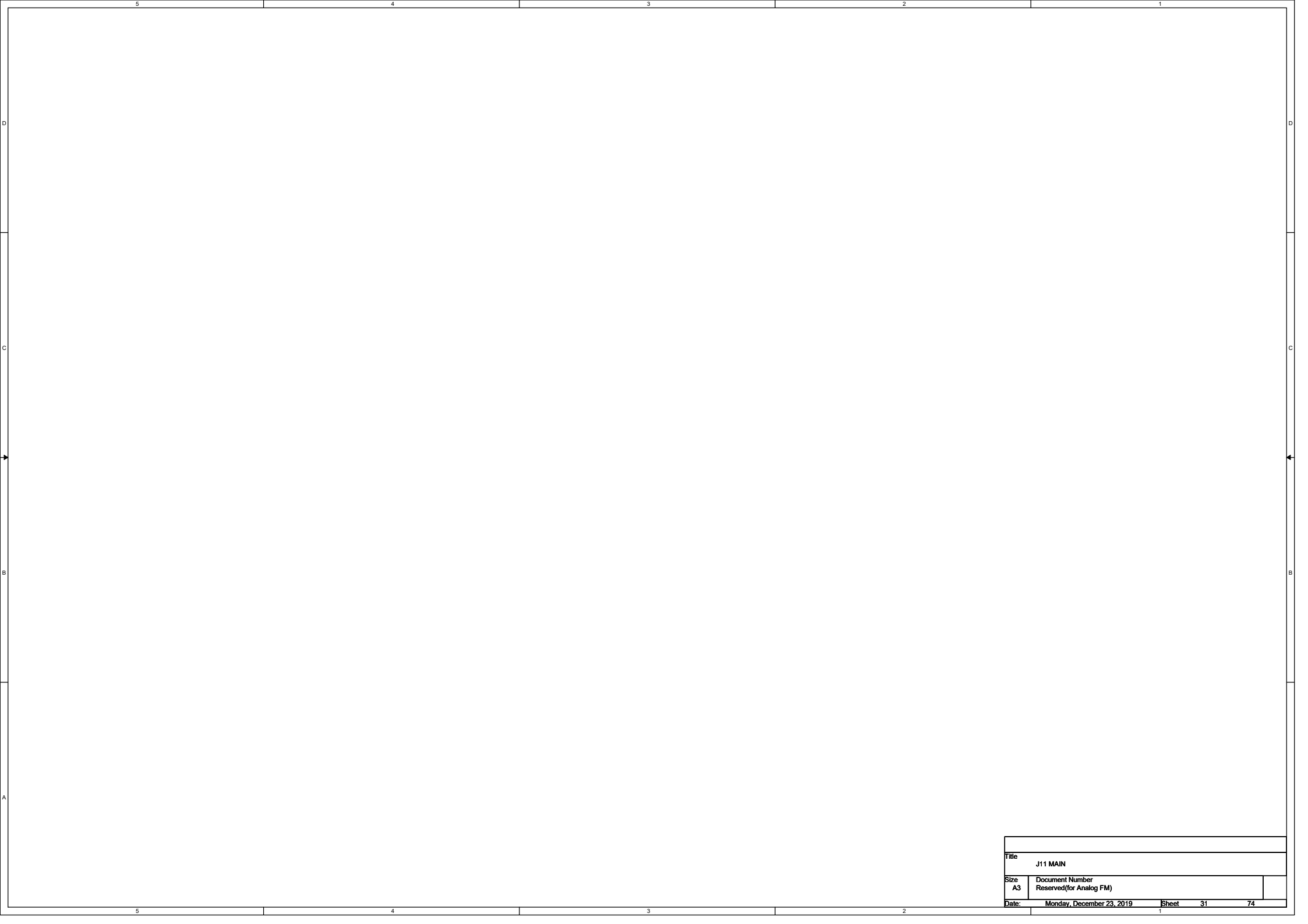


Title		J11 MAIN	
Size	A3	Document Number	WIFI FEM
Date:	Monday, December 23, 2019	Sheet	29 of 74



Title	
J11 MAIN	
Size	Document Number
A3	Reserved(for Digital FM)
Date:	Monday, December 23, 2019
Sheet	
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Title	
J11 MAIN	
Size	Document Number
A3	Reserved(for Analog FM)
Date:	Monday, December 23, 2019
Sheet	31
	74

5

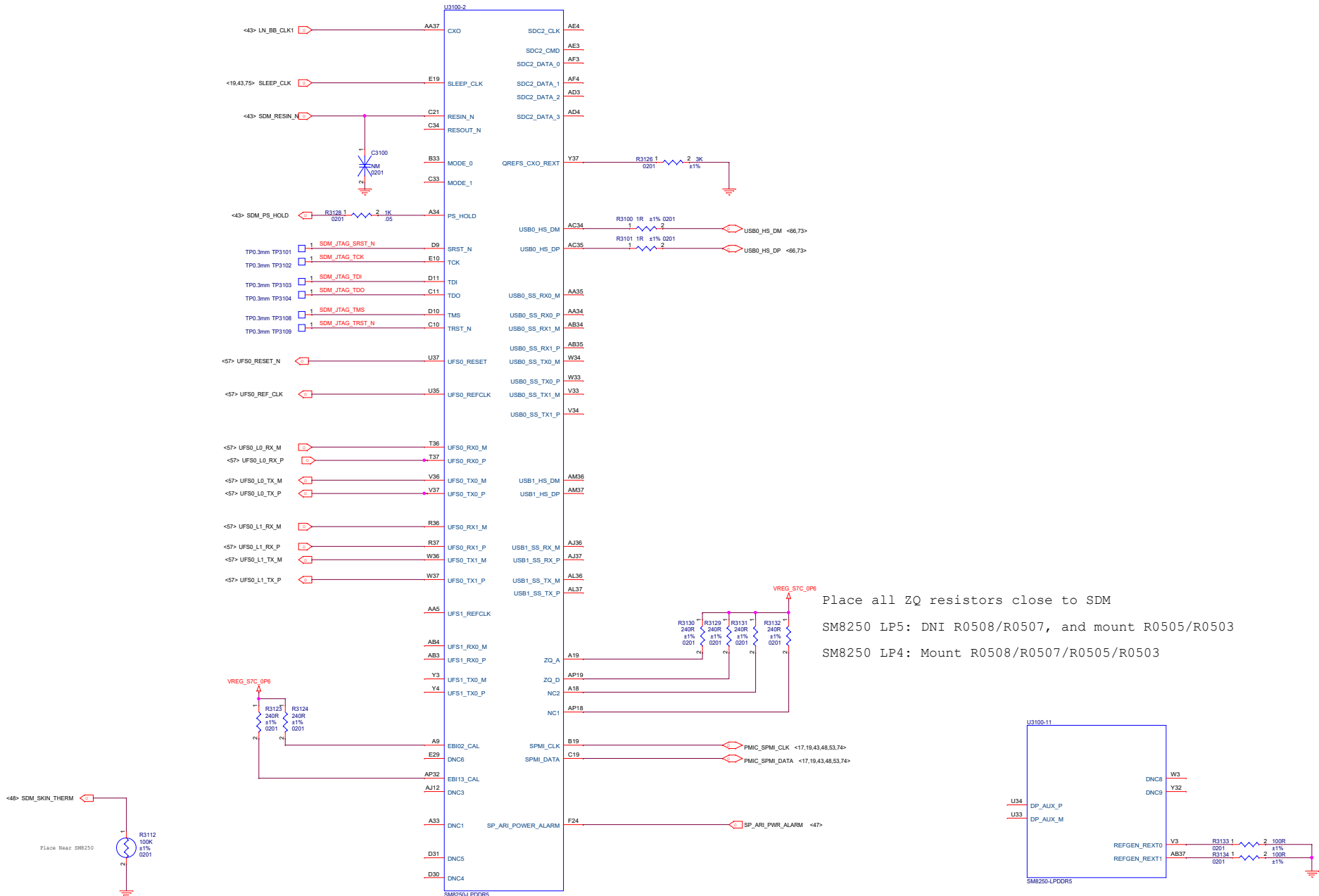
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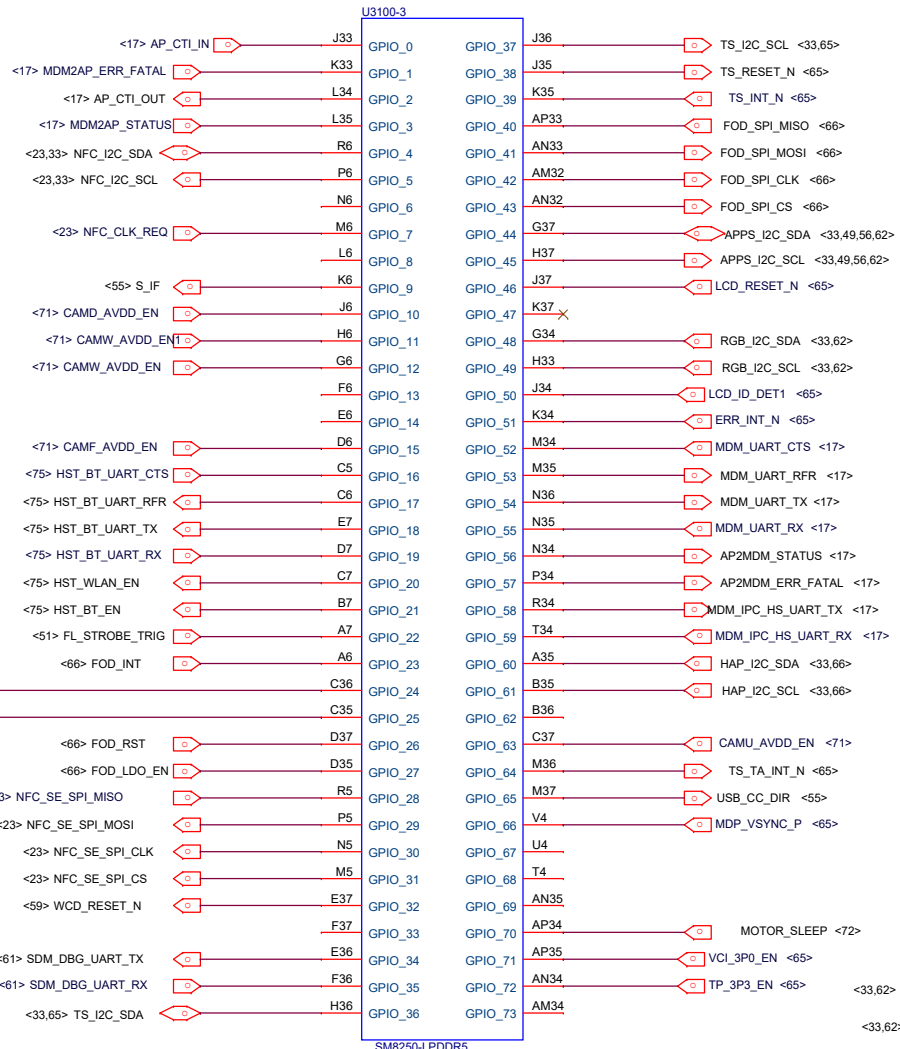
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We use current SM8250 symbol as LP5 PKG, and it can be compatible with LP4x PKG



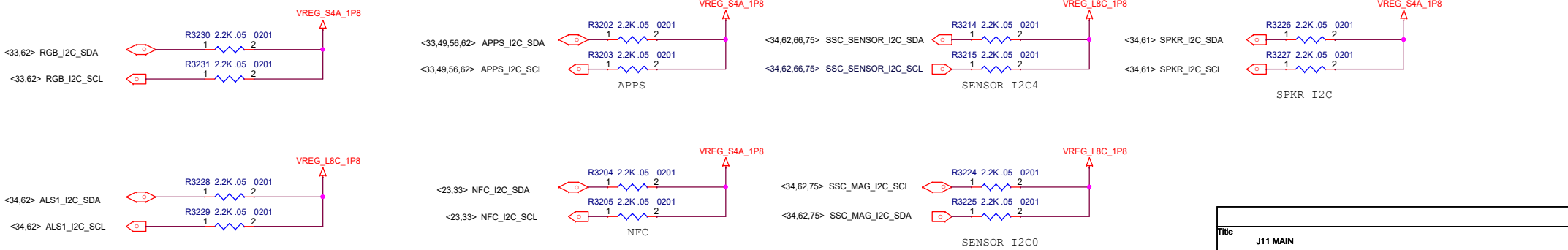
Place all ZQ resistors close to SDM  
 SM8250 LP5: DNI R0508/R0507, and mount R0505/R0503  
 SM8250 LP4: Mount R0508/R0507/R0505/R0503

Title		J11 MAIN	
Size	A2	Document Number	SCHW55 Control
Date:	Monday, December 23, 2019	Sheet	

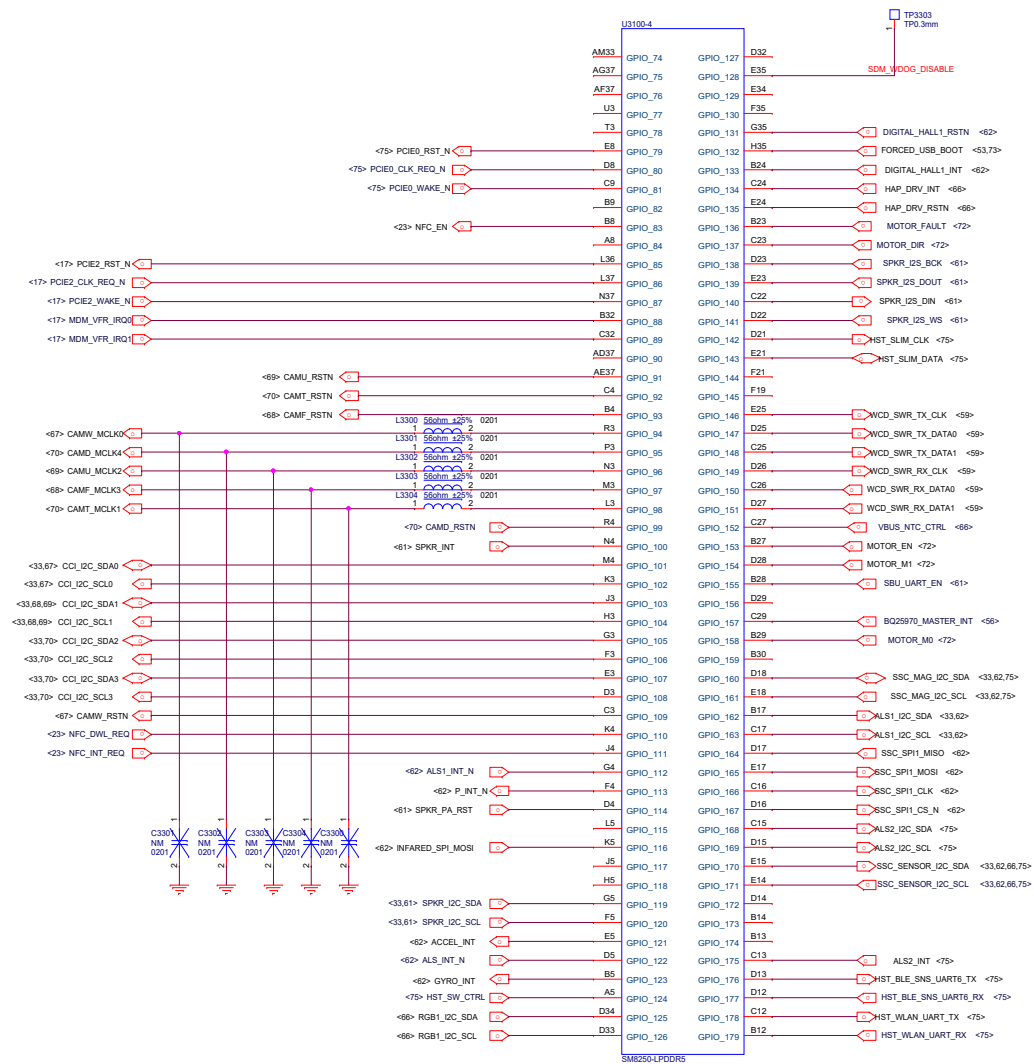


SM8250-LPDDR5

Note: External pulls or logic high on BOOT\_CONFIG [4:1] (GPIOs - 27, 47, 76 and 90) before RESOUT\_N getting asserted high can force SM8250 device to boot from an unintended boot device.



Title		J11 MAIN	
Size	A3	Document Number	SDM855 GPIO-1
Date:	Monday, December 23, 2019	Sheet	33 of 74



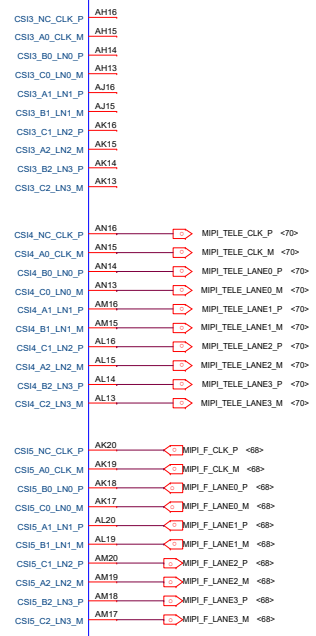
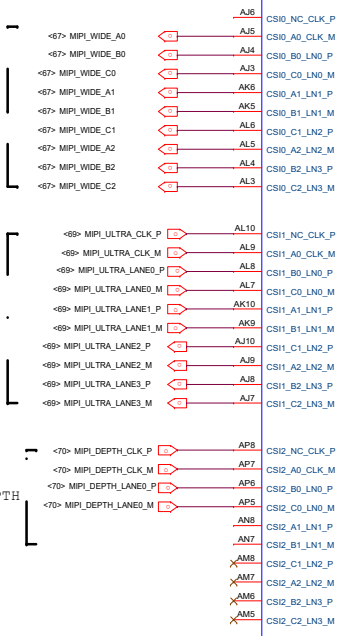
GPIO_128	BOOT_CONFIG(0)	WDOG_DISABLE
GPIO_27	BOOT_CONFIG(1)	FASTBOOT_SEL(0)
GPIO_47	BOOT_CONFIG(2)	FASTBOOT_SEL(1)
GPIO_76	BOOT_CONFIG(3)	FASTBOOT_SEL(2)
GPIO_90	BOOT_CONFIG(4)	FASTBOOT_SEL(3)
GPIO_70	BOOT_CONFIG(5)	APPS_BOOT_FROM_ROM
GPIO_132	N/A	FORCE_USB_BOOT

REAR CAMERA WIDE  
64M

REAR CAMERA ULTRA 13M

REAR CAMERA DEPTH  
2M

U3100-5



REAR CAMERA TELE  
8M

FRONT CAMERA  
20M

DISPLAY

SM6250-LPDDORS

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Title		J11 MAIN	
Size	A4	Document Number	Reserved(for MIPI)
Date:	Monday, December 23, 2019	Sheet	36 of 74

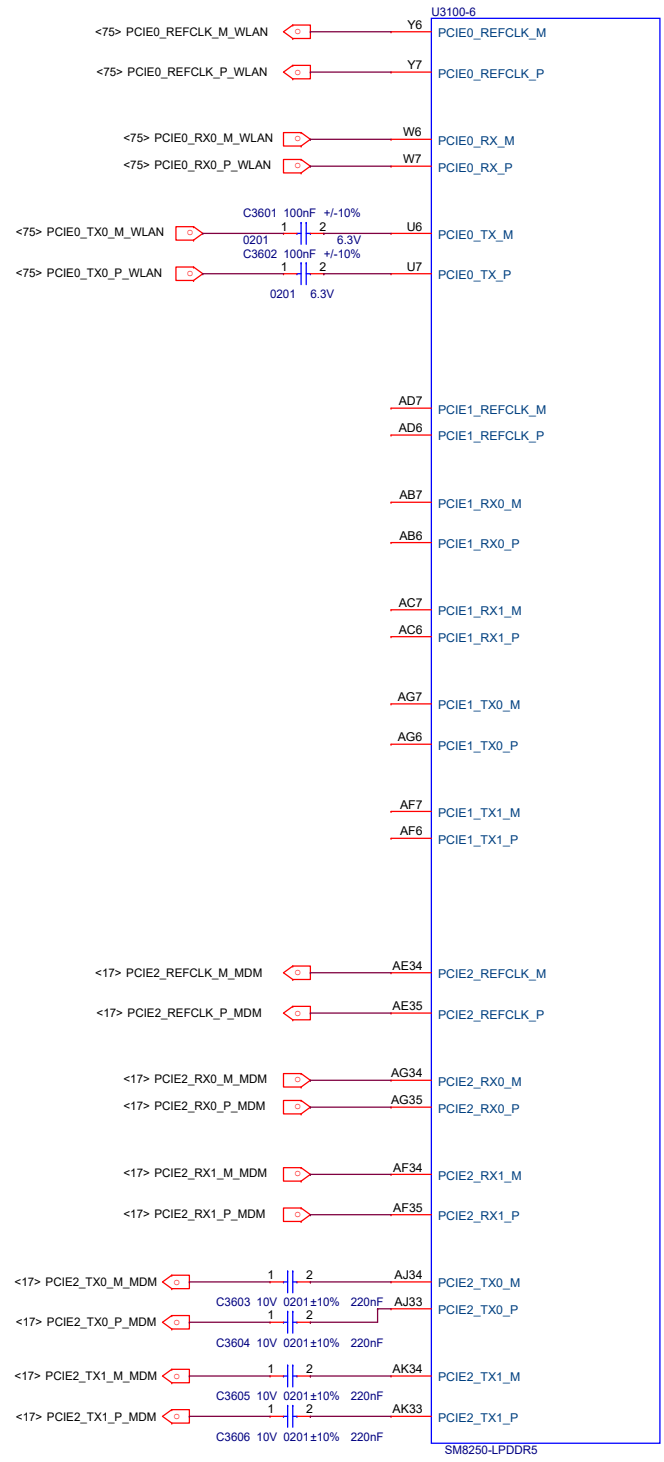
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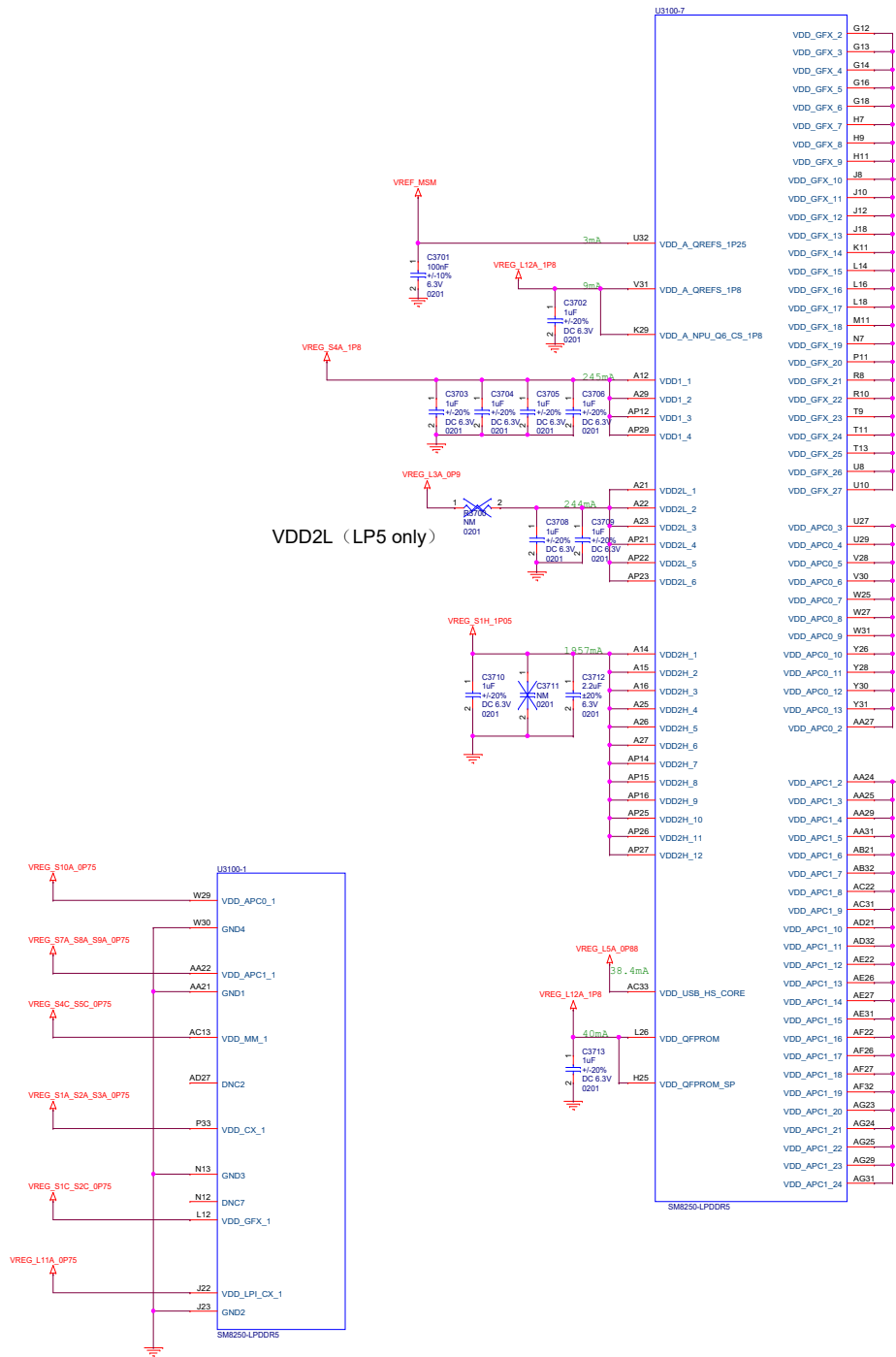
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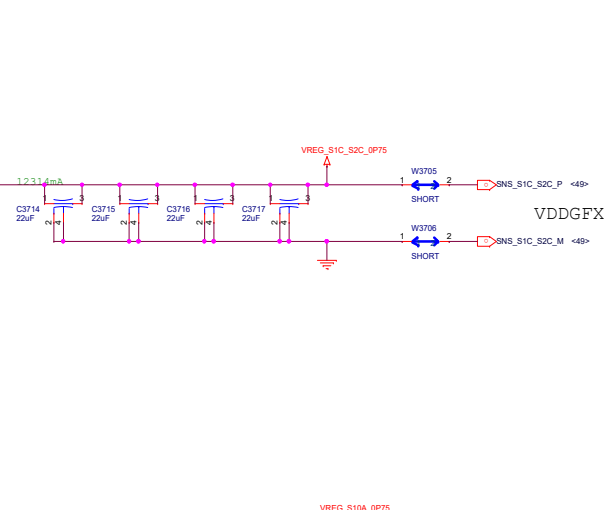


Title		J11 MAIN	
Size	A3	Document Number	SDM855 RF INTF
Date:	Monday, December 23, 2019	Sheet	37 74

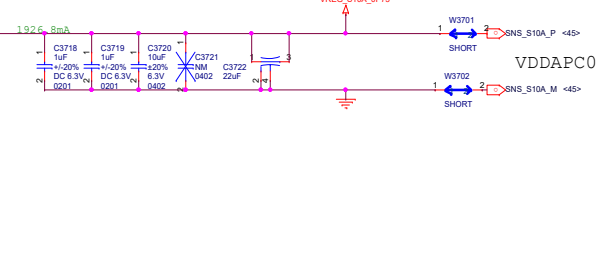
VDD2L (LP5 only)



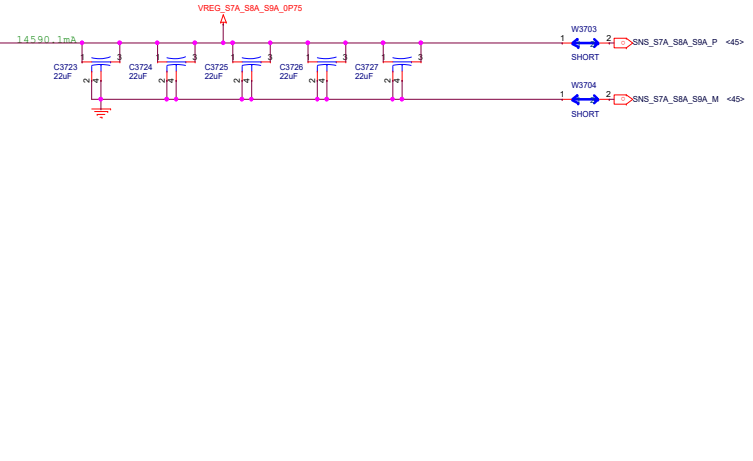
VDDGFX



VDDAPC0



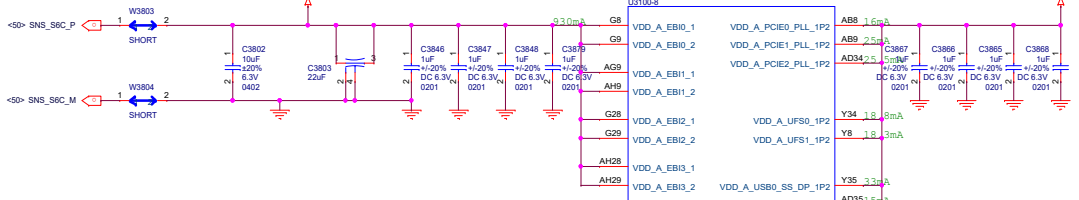
VDDAPC1



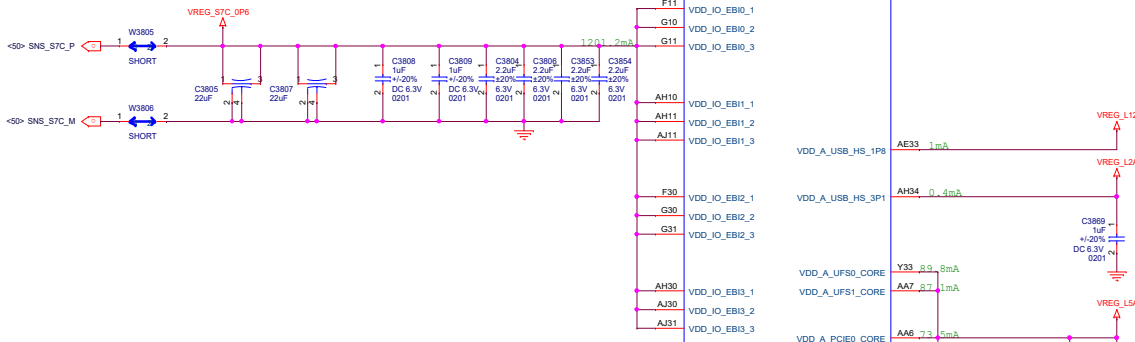
Title		J11 MAIN	
Size	A2	Document Number	SCHM55 PWR1
Date:	Monday, December 23, 2019	Sheet	



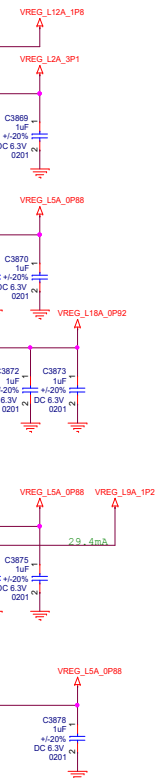
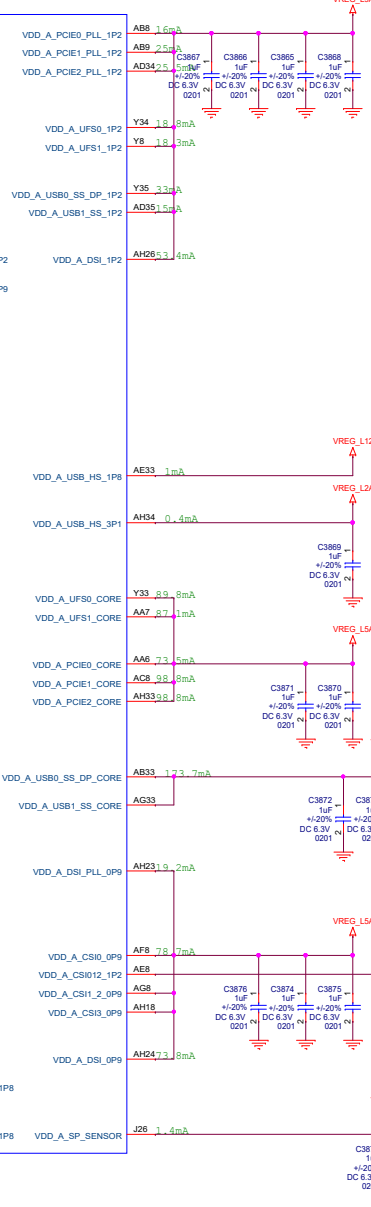
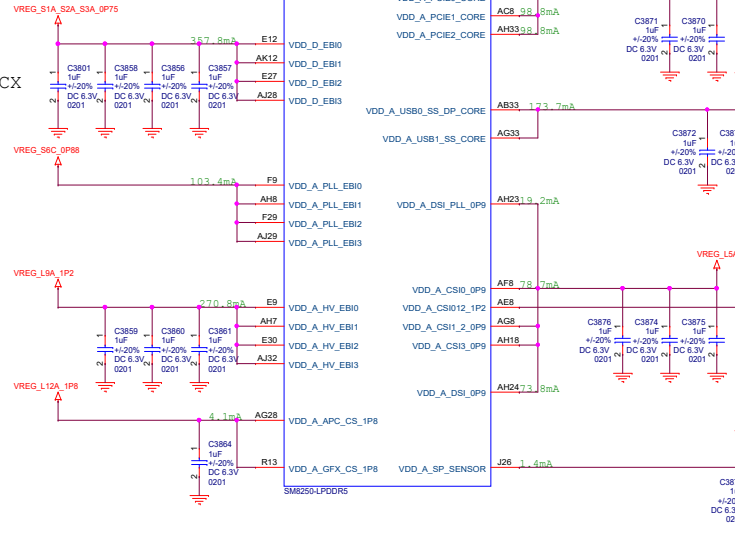
VDDA

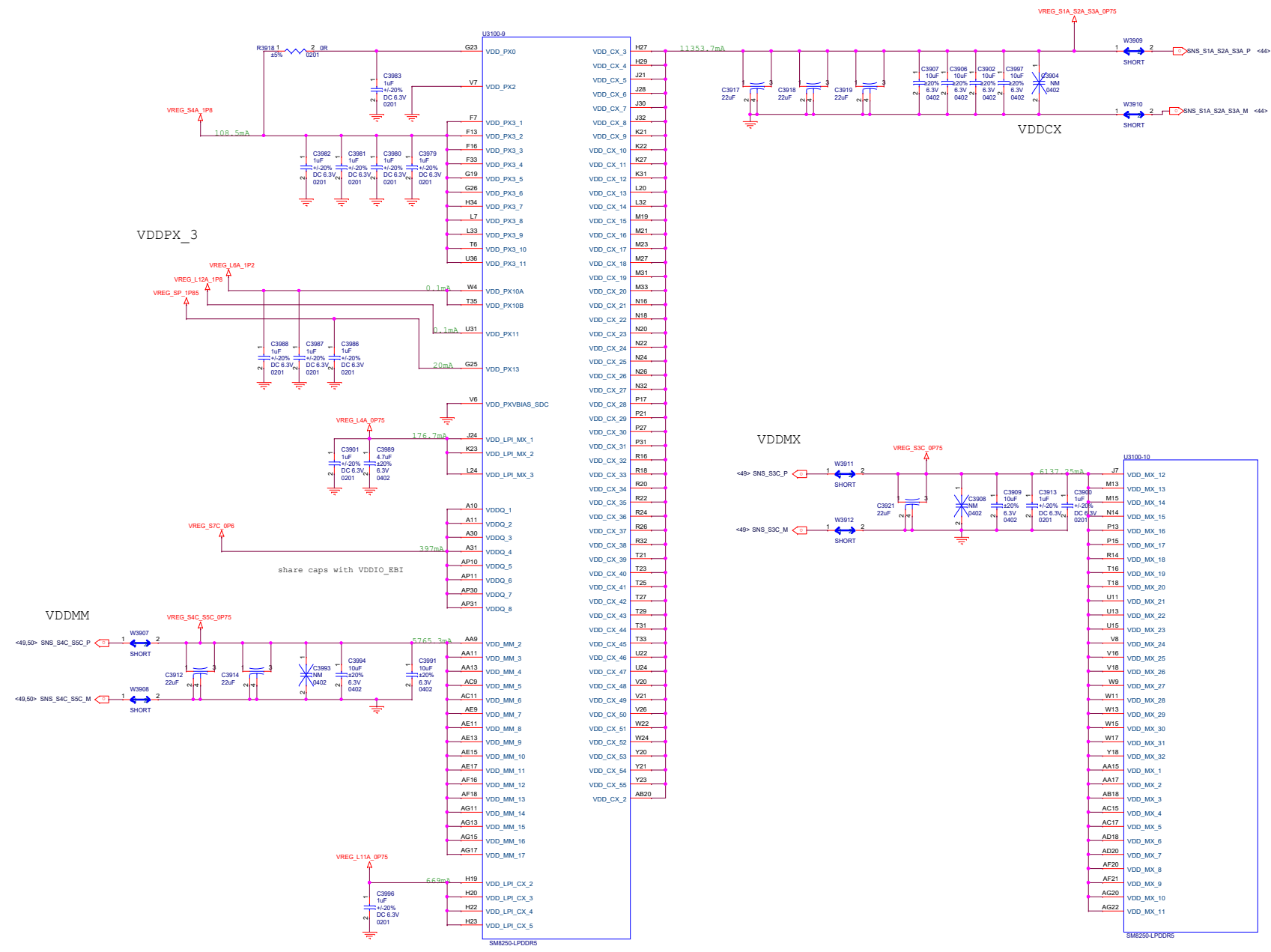


VDDQ/VDDIO\_EBI



Share caps with VDDCX





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Title		J11 MAIN	
Size	A4	Document Number	SDM855 PWR4
Date:	Monday, December 23, 2019	Sheet	41
	2		74

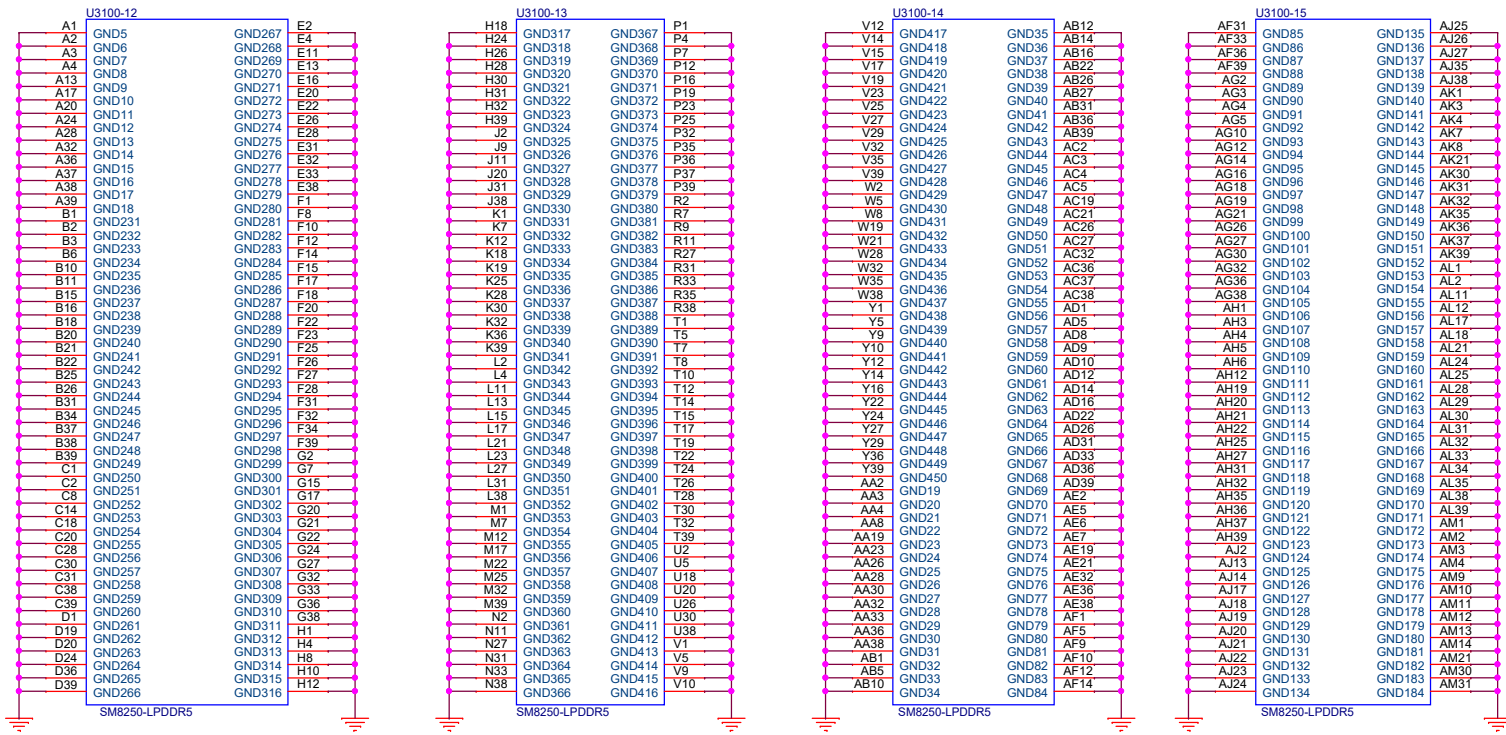
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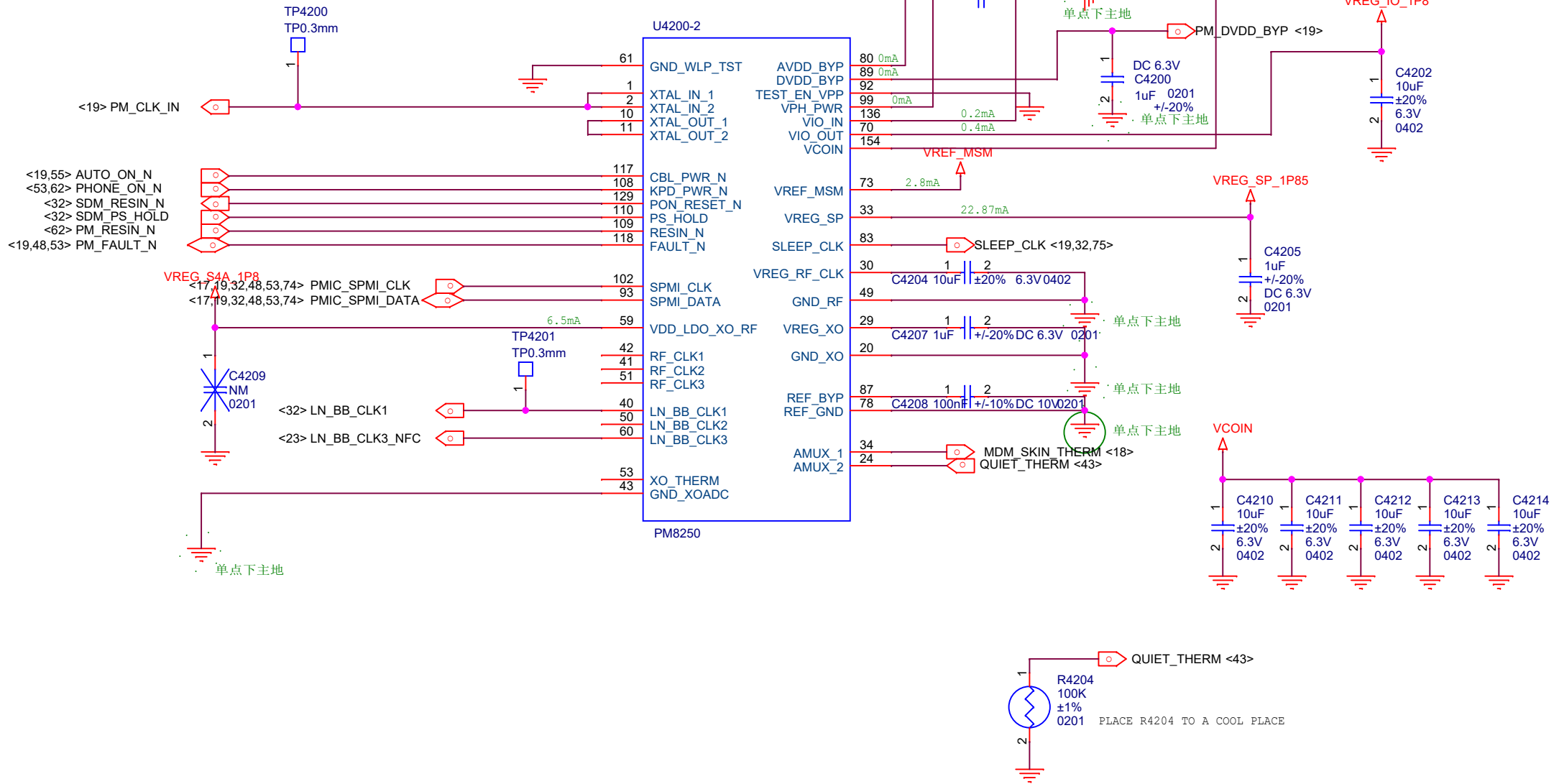


Title		J11 MAIN	
Size	A3	Document Number	SDM855 GND
Date:	Monday, December 23, 2019	Sheet	1

Note: Refer to 80-VP447-10 for XO Layout App Note.

Layout Note:

No trace shall be present in at-least two immediate layers below XTAL.  
Route XTAL\_IN and XTAL\_OUT traces on surface layer only, with length between 3mm and 10mm.



Title		J11 MAIN	
Size	A4	Document Number	PM855 XO&CTRL
Date:	Monday, December 23, 2019	Sheet	43 of 74

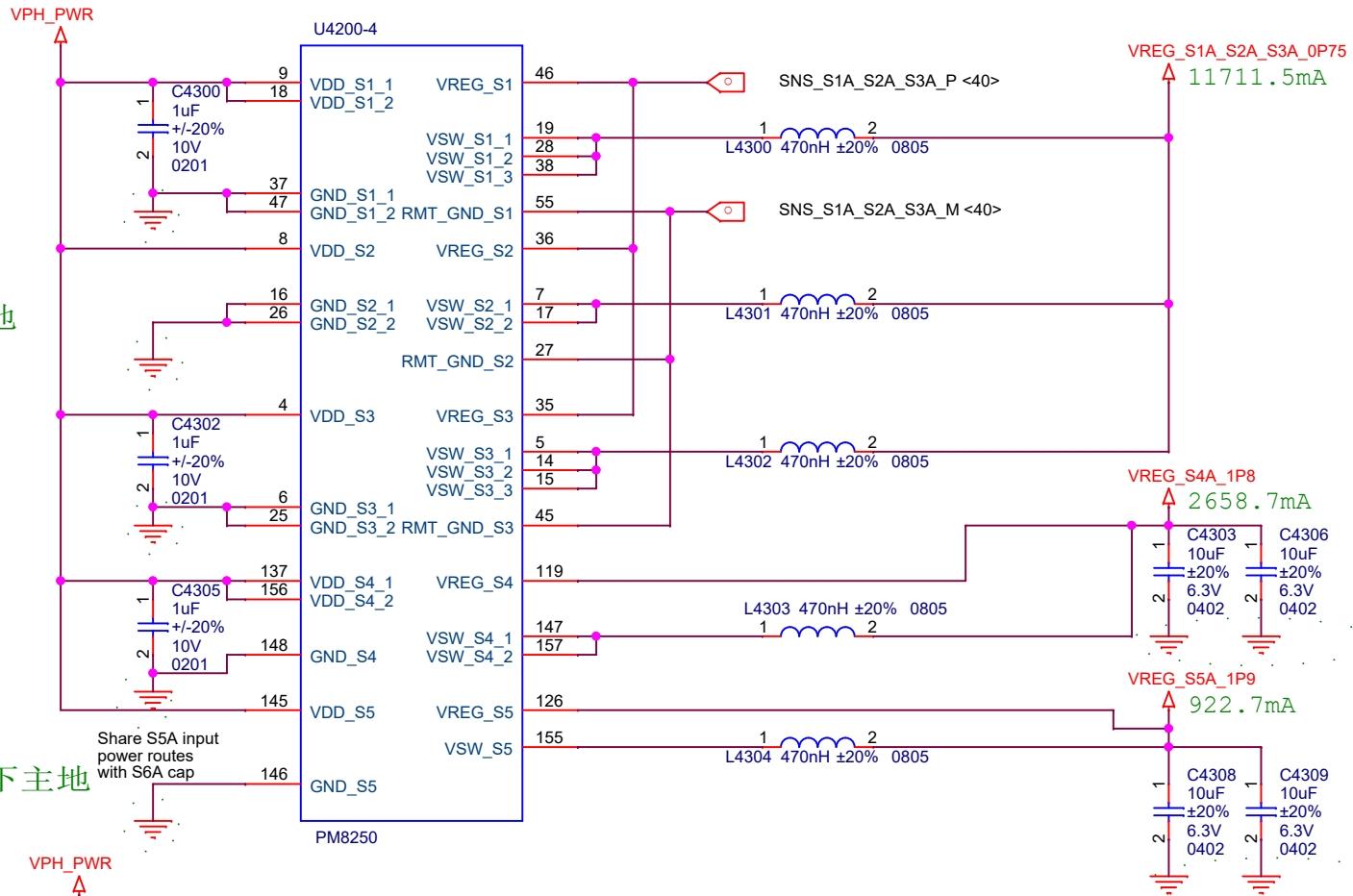
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电容下主地

电容下主地

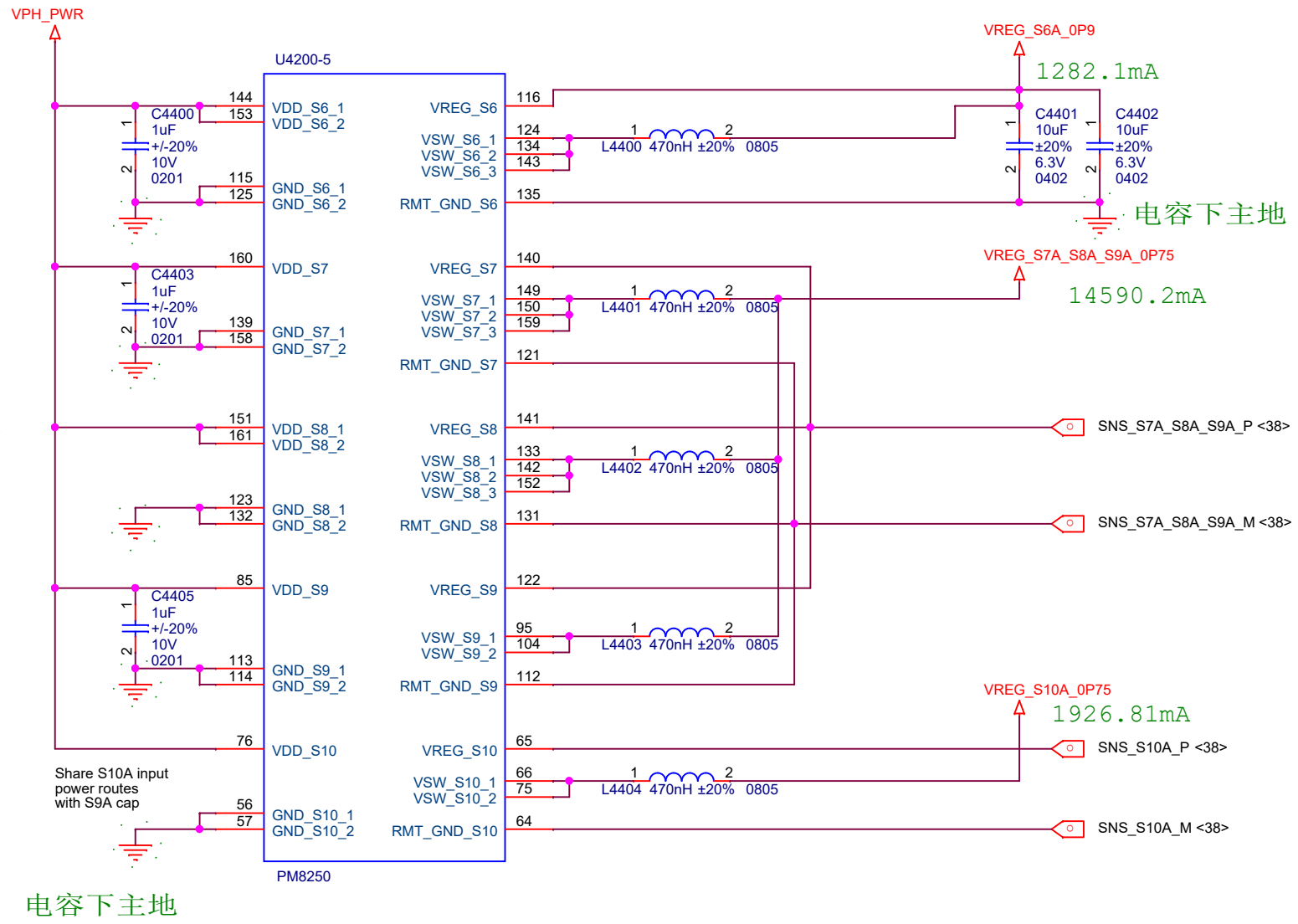
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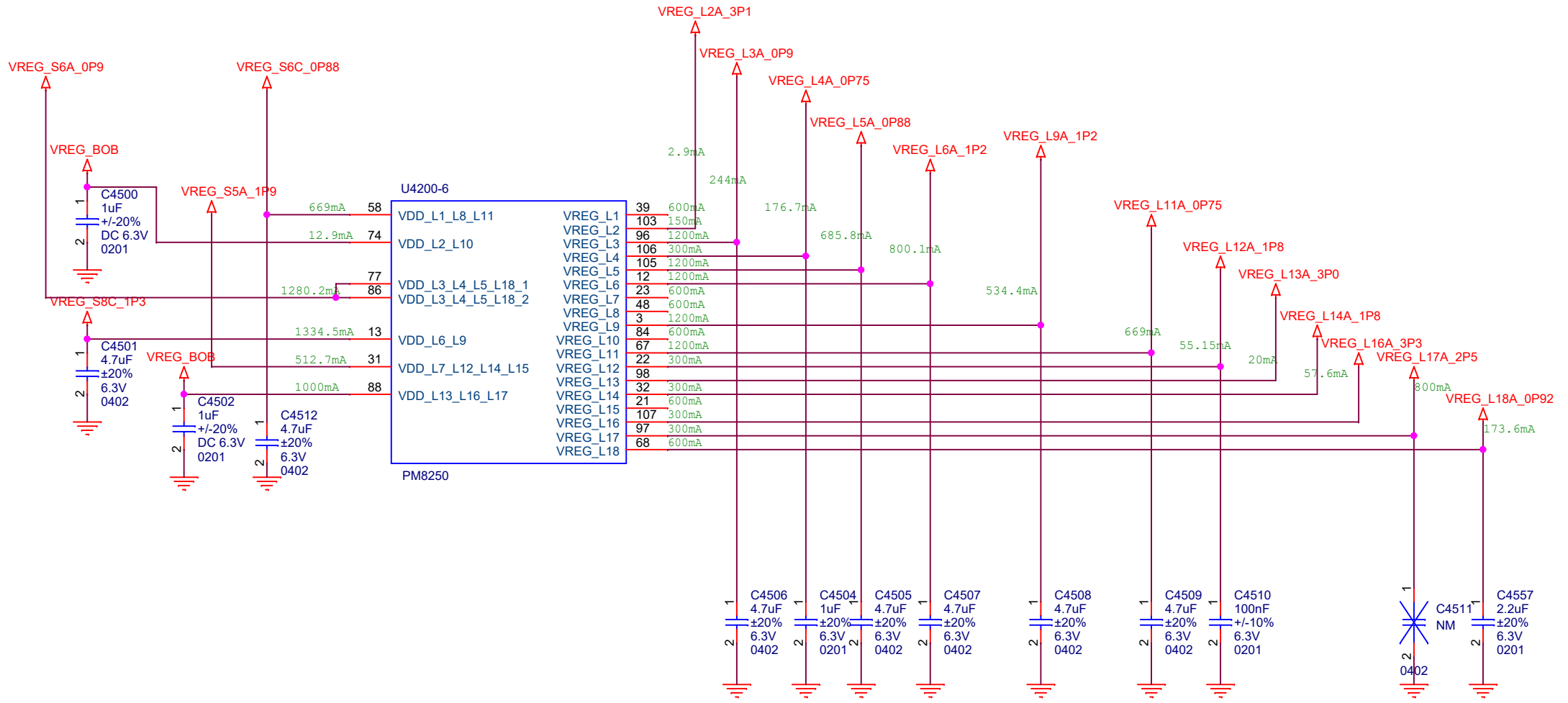
Title		J11 MAIN	
Size	A4	Document Number	PM855 BUCK CONVERTER1
Date:	Monday, December 23, 2019	Sheet	44 of

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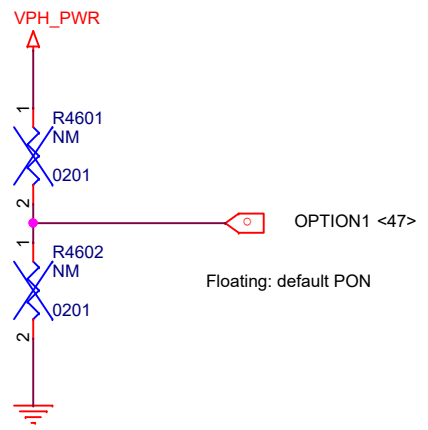
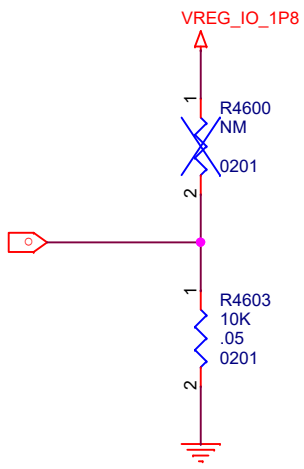
Title		
J11 MAIN		
Size	Document Number	P0
A4	PM855 BUCK CONVERTER2	
Date:	Monday, December 23, 2019	Sheet 45 of 74



Pseudo capless allows users to place the LDO output capacitor physically/electrically far from the LDO output, near the load. The routing ESL/ESR between the PMIC pin and the remote Cout should meet the capless LDO spec. All PMOS LDOs are considered pseudo-capless, unless it has internal PMIC load. If an internal PMIC load, the output cap must be placed close to the PMIC. Required capacitance for each LDO type can be found in App Note: 80-VT310-125

Title		J11 MAIN	
Size	A4	Document Number	PM855 LDOs
Date:	Monday, December 23, 2019	Sheet	46 of 74





<47,49> OPTION2

<19> PM\_SLP\_CLK\_IN

<47> OPTION1

<62> KEY\_VOLP\_N

<32> SP\_ARI\_PWR\_ALARM



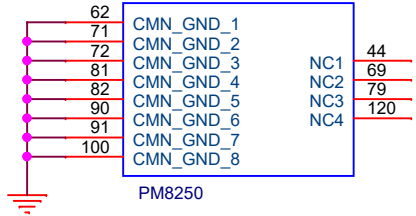
- 54 GPIO\_01
- 94 GPIO\_02
- 52 GPIO\_03
- 63 GPIO\_04
- 138 GPIO\_05
- 101 GPIO\_06
- 111 GPIO\_07
- 130 GPIO\_08
- 128 GPIO\_09
- 127 GPIO\_10

U4200-3

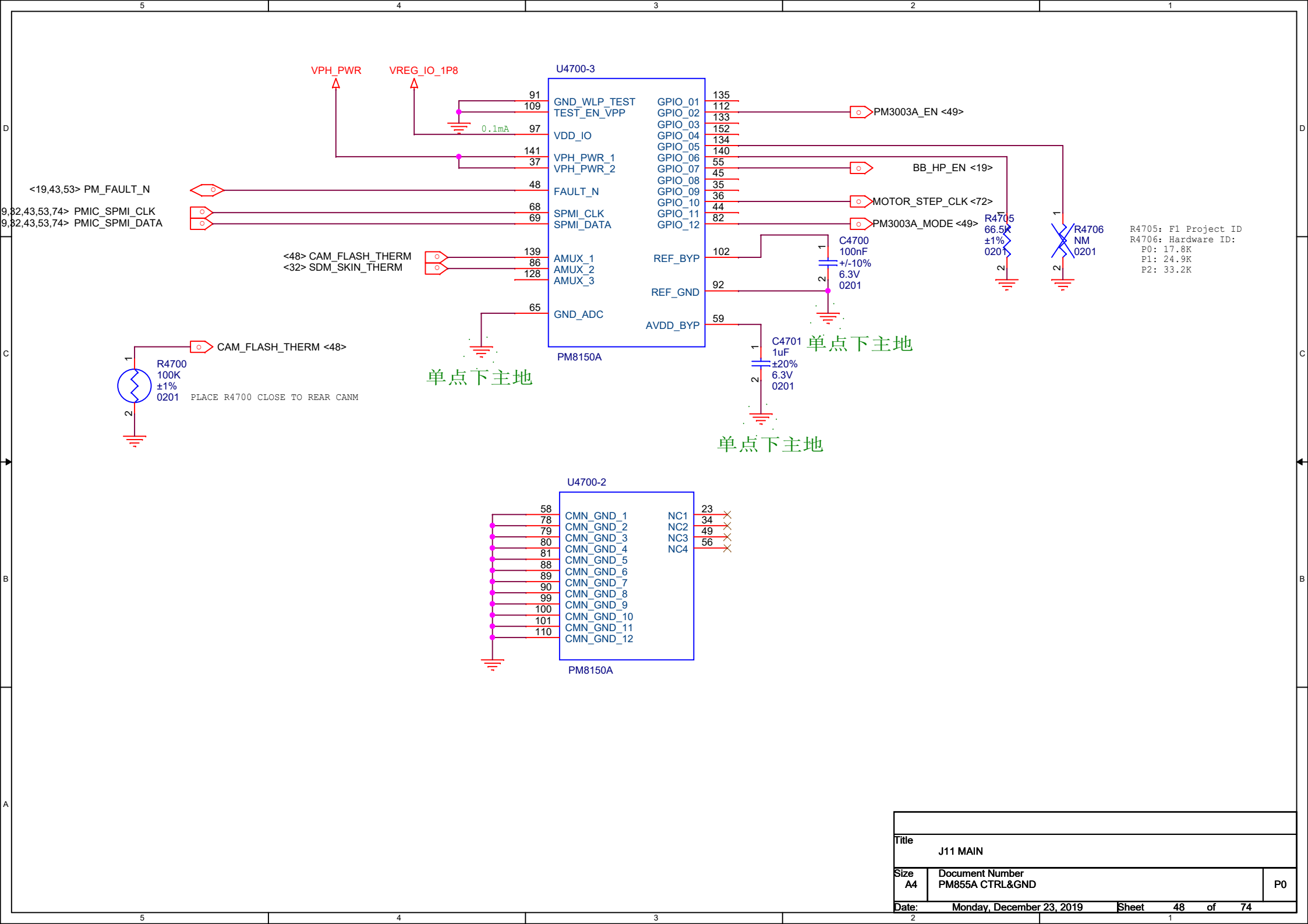
PM8250

U4200-1

PM8250



Title		J11 MAIN	
Size	A4	Document Number	PM855 GPIO&GND
Date:	Monday, December 23, 2019	Sheet	1



R4705: F1 Project ID  
 R4706: Hardware ID:  
 P0: 17.8K  
 P1: 24.9K  
 P2: 33.2K

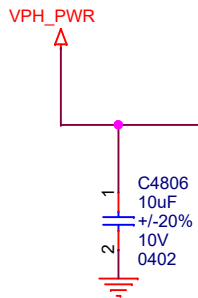
PLACE R4700 CLOSE TO REAR CANM

单点下主地

单点下主地

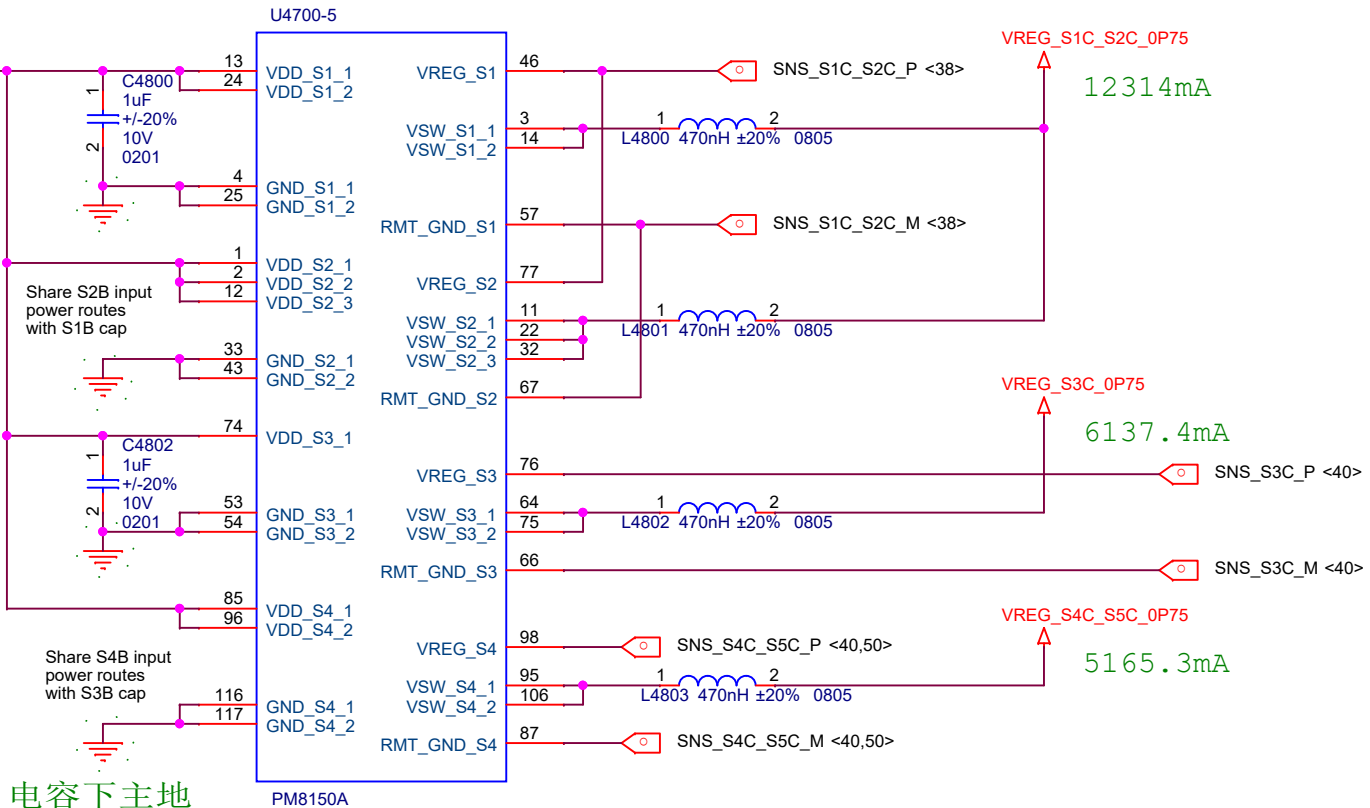
单点下主地

Title		
J11 MAIN		
Size	Document Number	P0
A4	PM855A CTRL&GND	
Date:	Monday, December 23, 2019	Sheet 48 of 74

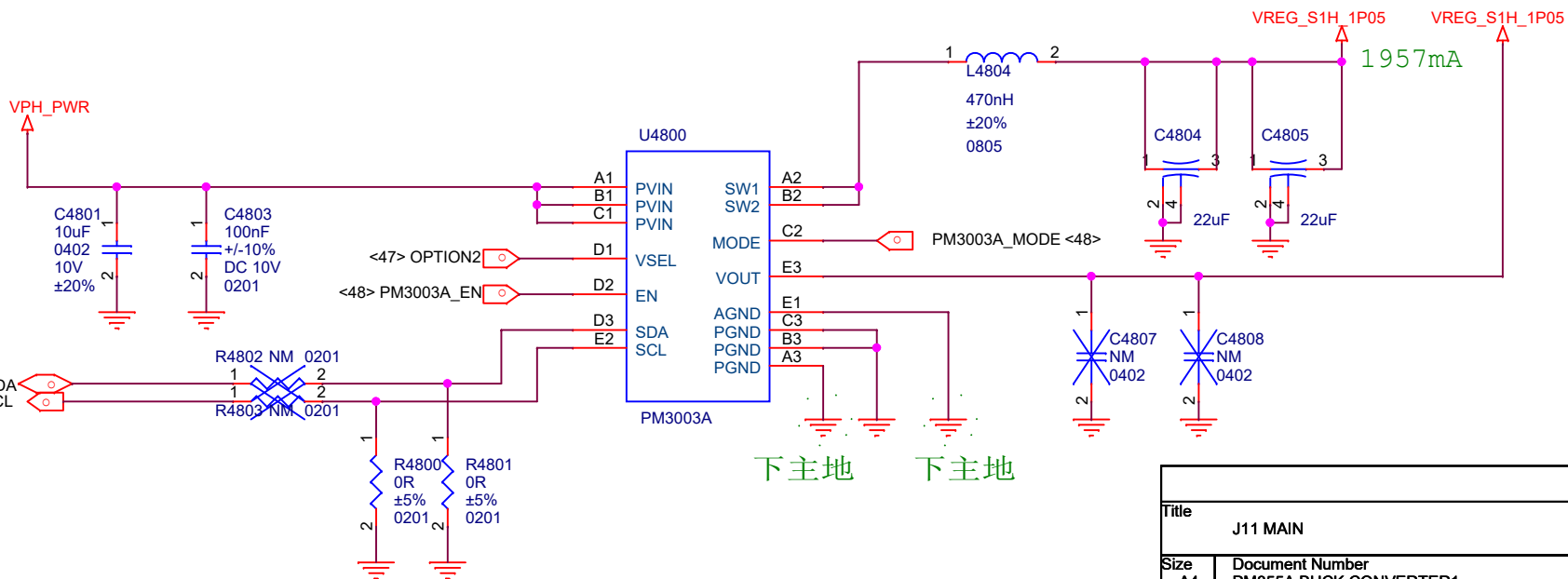


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Note: Similar to PM8250, please ensure that a minimum of three 10uF bulk capacitors are present on PM8150L/A VPH\_PWR primarily to support the SMPS buck regulators even if BoB or Lighting Modules are unused. For PM8150L, the three 10uF bulk capacitors on VPH\_PWR are fulfilled by the 10uF capacitors for BoB, WLED, and LCDB. For the PM8150A, the three 10uF bulk capacitors on VPH\_PWR are fulfilled by the 10uF caps for BoB, OLEDB, ELVDD, and ELVSS.



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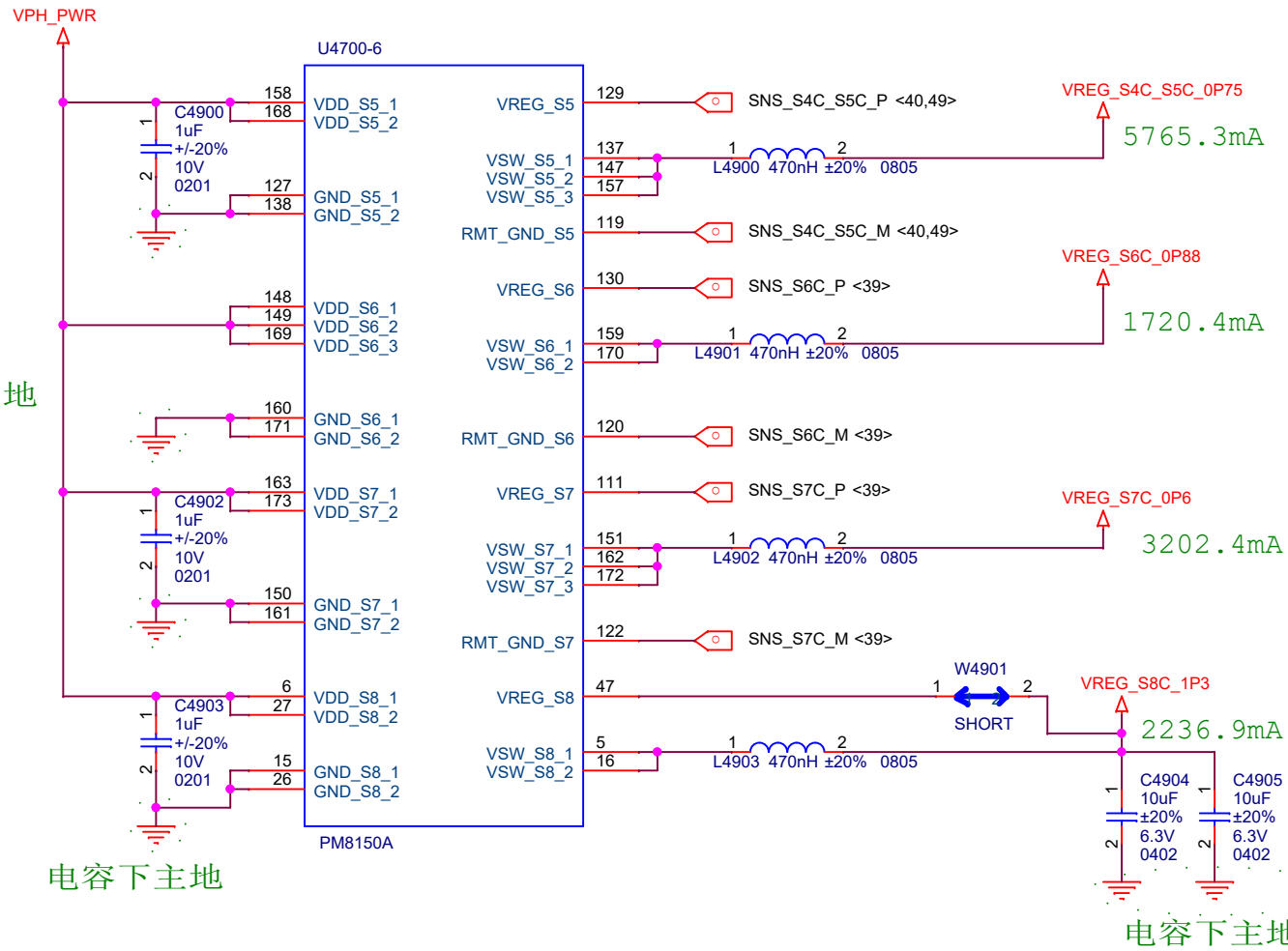
下主地 下主地

Title		J11 MAIN	
Size	A4	Document Number	PM855A BUCK CONVERTER1
Date	Monday, December 23, 2019	Sheet	49 of 74

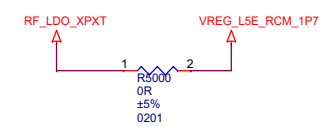
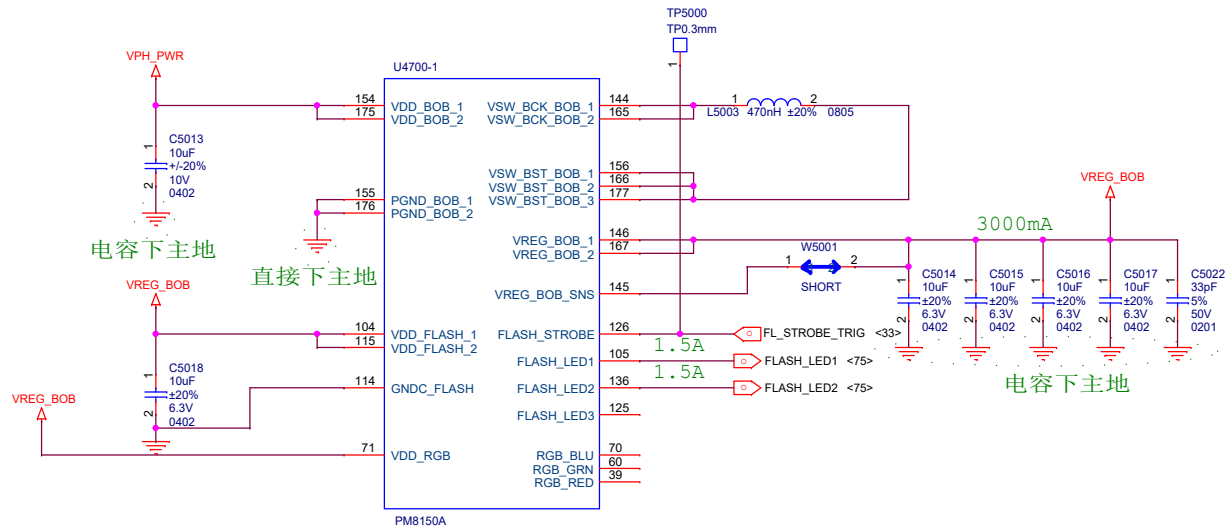
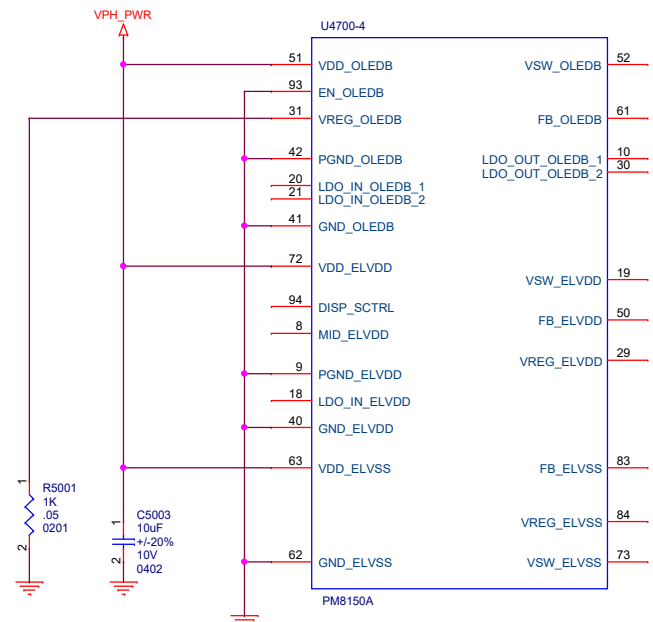
电容下主地

电容下主地

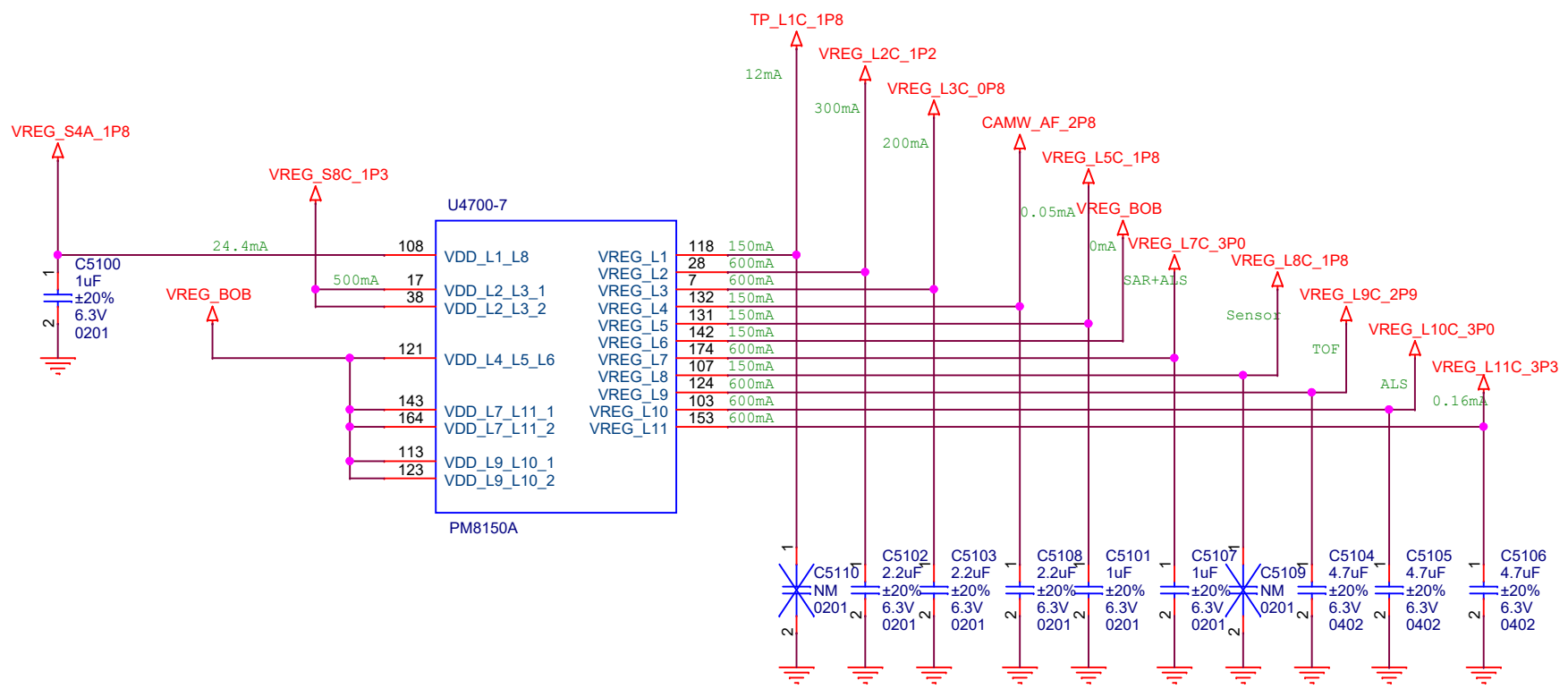
电容下主地



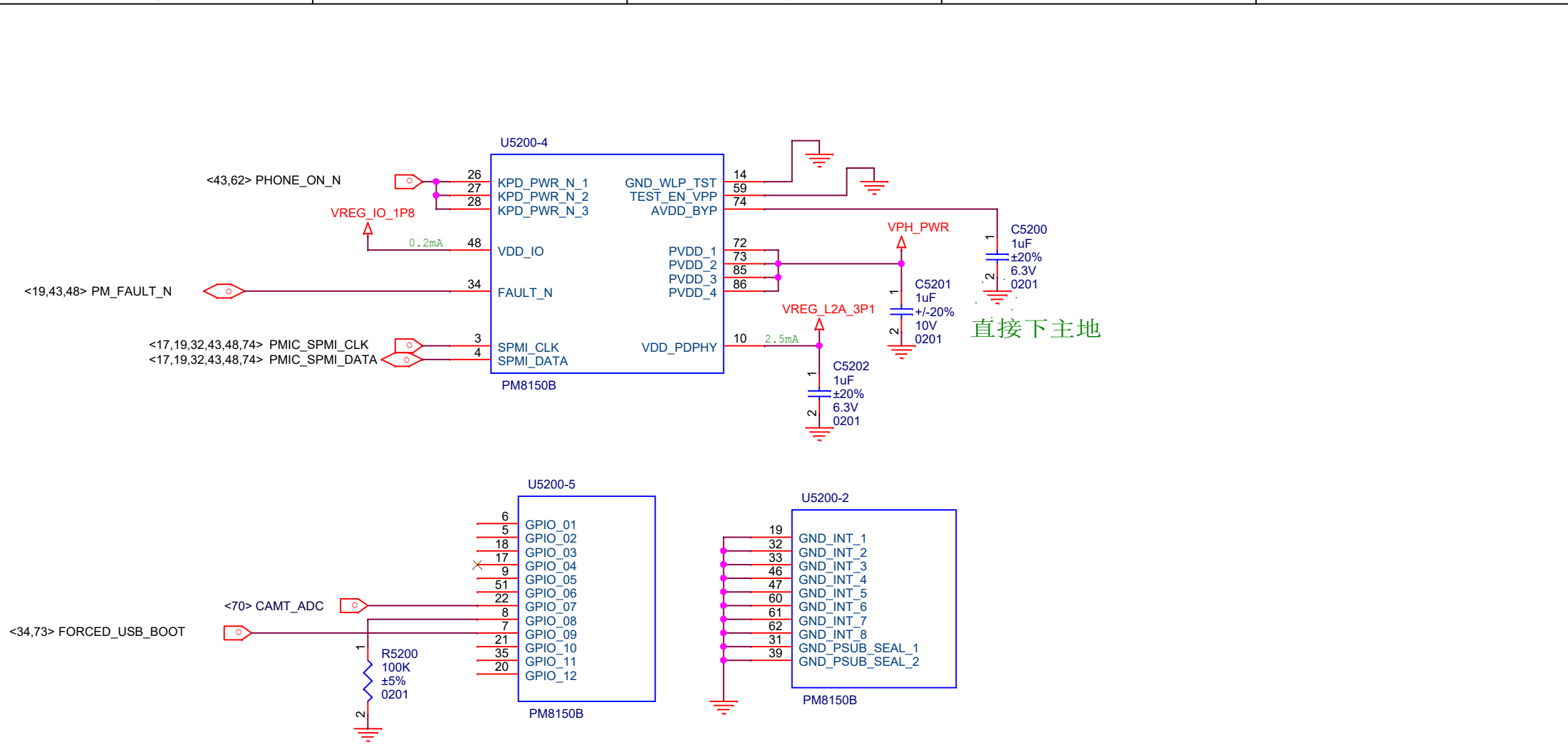
Title		
J11 MAIN		
Size	Document Number	P0
A4	PM855A BUCK CONVERTER2	
Date:	Monday, December 23, 2019	Sheet 50 of 74



Title		J11 MAIN
Size	Document Number	PM855A AMOLED&BOB&FLASH
Date:	Monday, December 23, 2019	Sheet 51 of 74

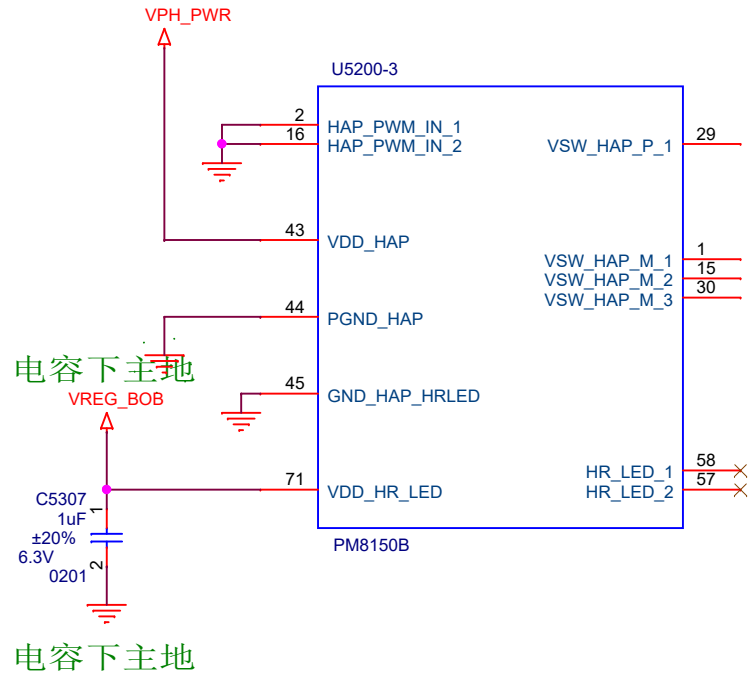


Title		J11 MAIN	
Size	A4	Document Number	PM855A LDOs
Date:	Monday, December 23, 2019	Sheet	52 of 74



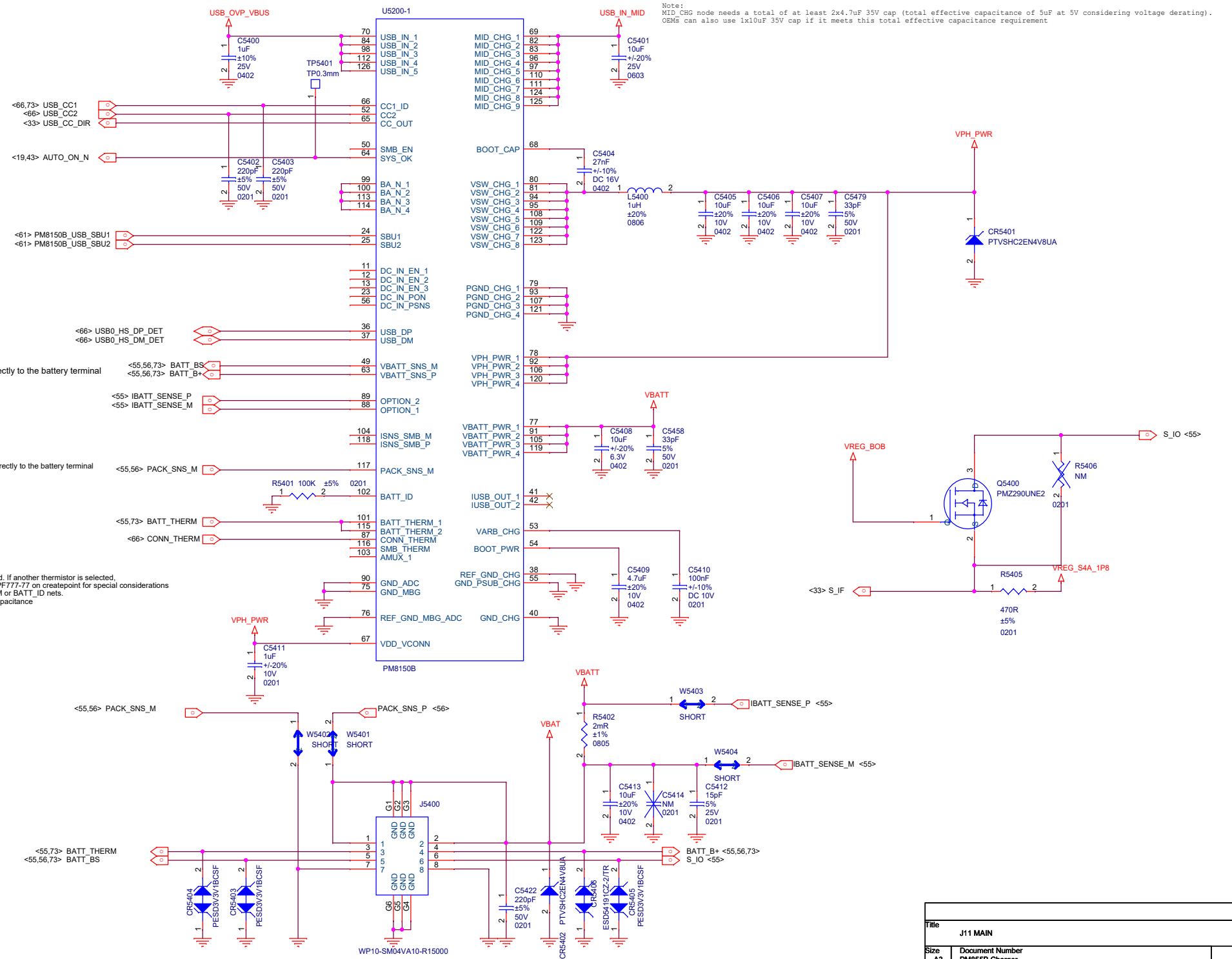
Note: GPIO\_04 and GPIO\_11 of PM8150B are for internal usage. Keep them float.  
 Keep GPIO\_03 of PM8150B float. Don't use it for other purpose.  
 GPIO\_06 of PM8150B is dedicated for SMB\_STAT. Don't use it for other purpose.

Title		J11 MAIN	
Size	A4	Document Number	PM855B CTRL&GND
Date:	Monday, December 23, 2019	Sheet	53 of 74



Title		J11 MAIN	
Size	A4	Document Number	PM855B HAPTIC
Date:	Monday, December 23, 2019	Sheet	54 of 74

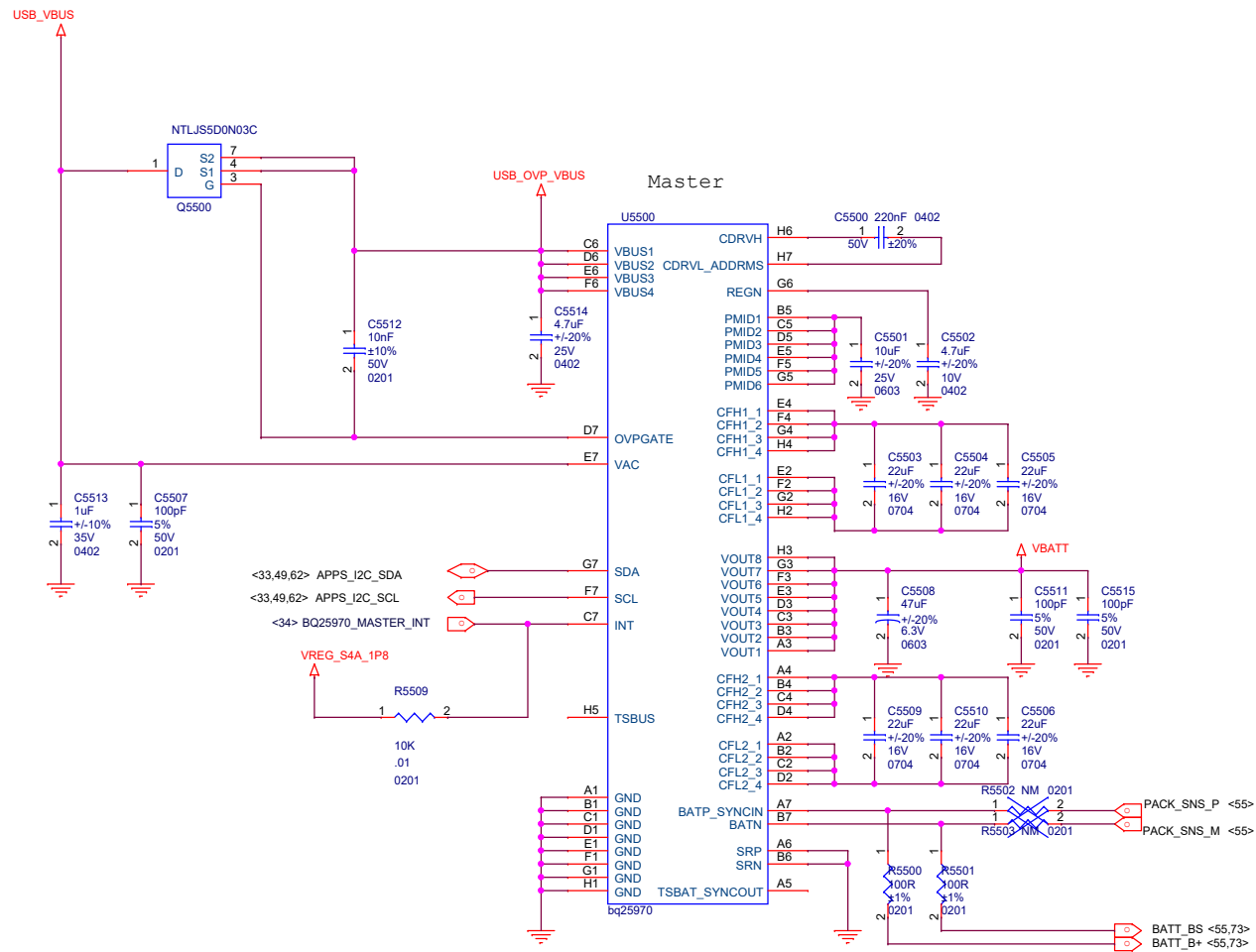




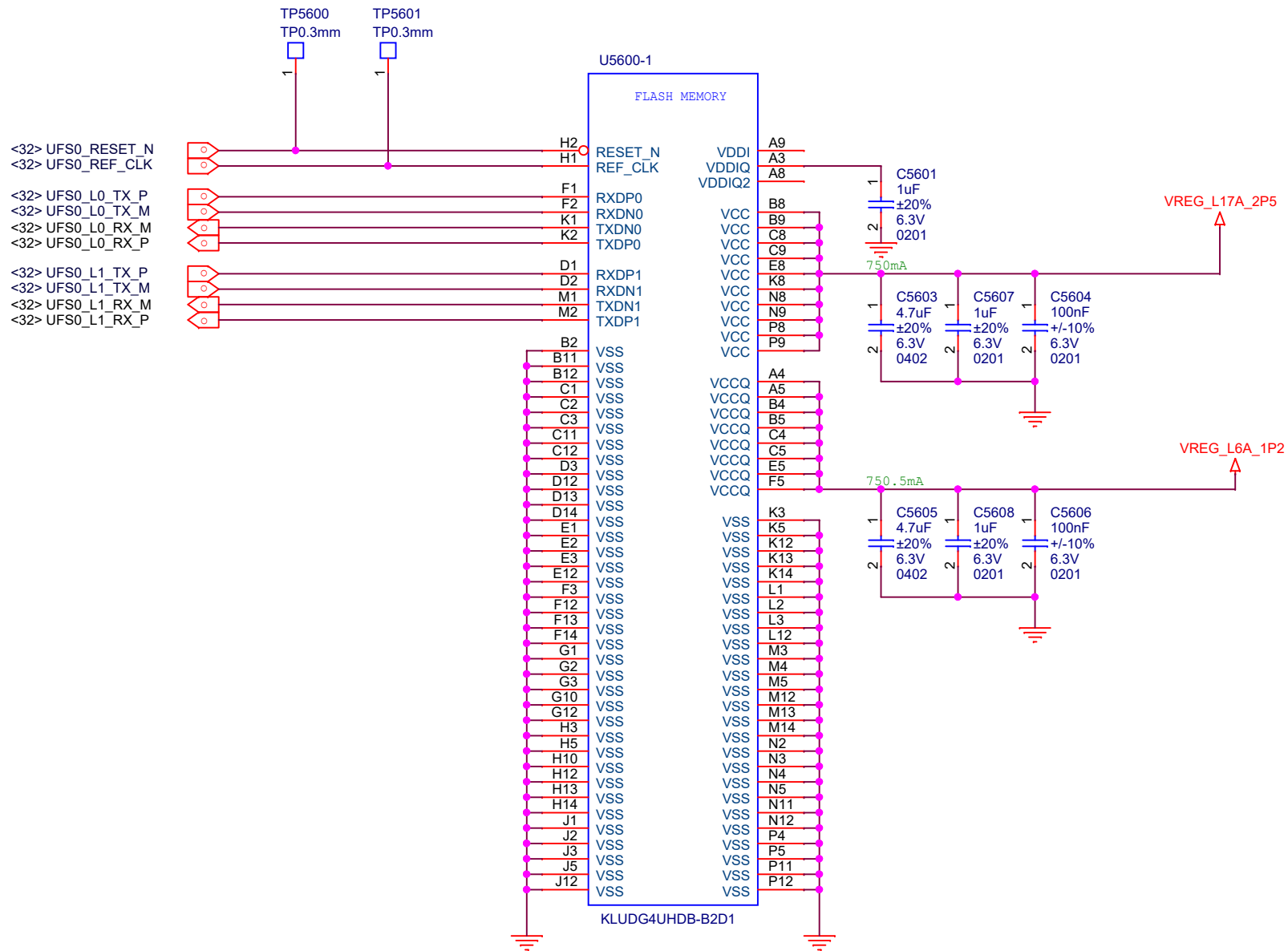
Note:  
MID\_CHG node needs a total of at least 2x4.7uF 35V cap (total effective capacitance of 5uF at 5V considering voltage derating).  
OEMs can also use 1x10uF 35V cap if it meets this total effective capacitance requirement

Note:  
1. 100k 4250B thermistor is strongly recommended. If another thermistor is selected, please see KB-180725132908 and document 80-PF777-77 on cretpepoint for special considerations  
2. Do not place any capacitance on BATT\_THERM or BATT\_ID nets.  
Ensure battery pack also does not contain ANY capacitance

Title		J11 MAIN
Size	A3	Document Number PM855B Charger
Date:	Monday, December 23, 2019	Sheet



Title		F1 MAIN
Size	Document Number	SMB1390&WL POWER
A3	Date:	Monday, December 23, 2019
Sheet		56 of 74

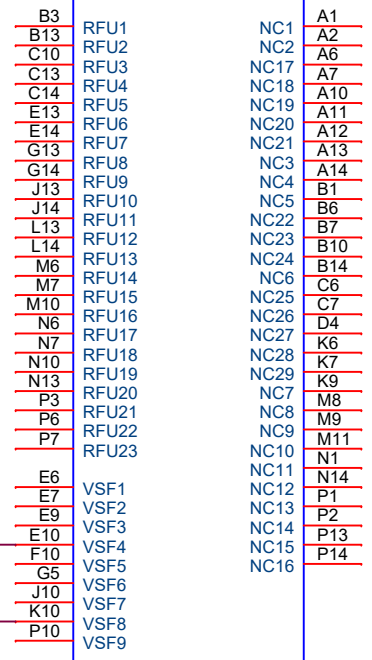


<32> UFS0\_RESET\_N  
 <32> UFS0\_REF\_CLK  
 <32> UFS0\_L0\_TX\_P  
 <32> UFS0\_L0\_TX\_M  
 <32> UFS0\_L0\_RX\_P  
 <32> UFS0\_L0\_RX\_M  
 <32> UFS0\_L1\_TX\_P  
 <32> UFS0\_L1\_TX\_M  
 <32> UFS0\_L1\_RX\_M  
 <32> UFS0\_L1\_RX\_P

Title		J11 MAIN	
Size	A4	Document Number	MEMORY
Date:	Monday, December 23, 2019	Sheet	57 of 74

U5600-2

FLASH MEMORY

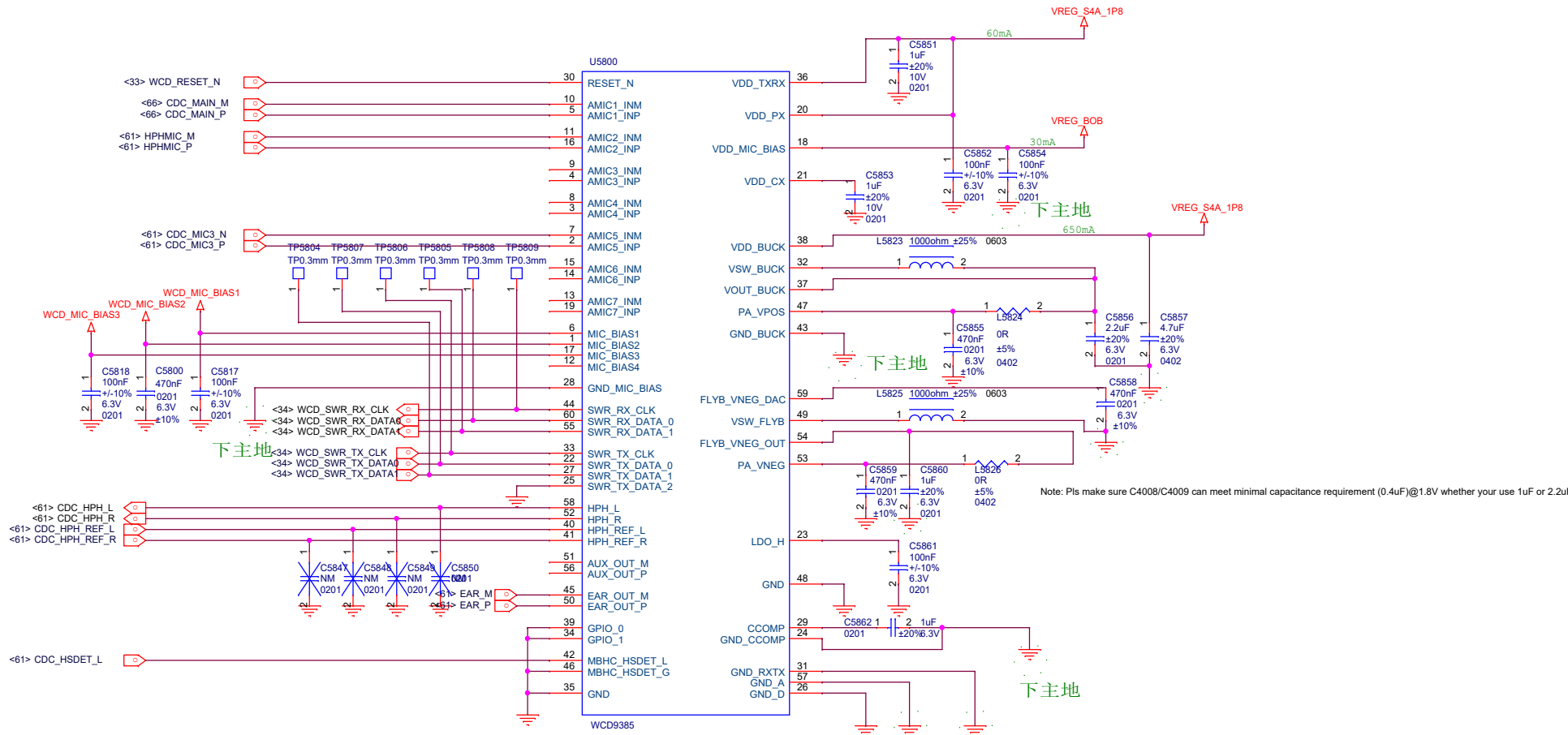


KLUDG4UHDB-B2D1

TP5701  
TP0.3mm

TP5704  
TP0.3mm

Title		J11 MAIN	
Size	A4	Document Number	MEMORY-2
Date:	Monday, December 23, 2019	Sheet	58
			74



NOTE 1: ROUTE AN ISOLATED GROUND TRACE FROM CCOMP\_REF TO THE CAP GROUND, THEN VIA TO THE MAIN GROUND PLANE  
 NOTE 2: PLACE VDD\_BUCK CAP AS CLOSE TO CHIP EDGE AS POSSIBLE AND MINIMIZE LOOP INDUCTANCE  
 NOTE 3: USE SHORT AND WIDE TRACES FOR BUCK AND FLYBACK RELATED NETS  
 NOTE 4: ANALOG MIC INPUTS SHOULD BE ISOLATED WITH GROUND FROM NOISY OR SWITCHING SIGNALS AND SUPPLIES

Note: Pls make sure C4008/C4009 can meet minimal capacitance requirement (0.4uF)@1.8V whether you use 1uF or 2.2uF

Title		J11 MAIN
Size	Document Number	
A3	WCD9340-1	
Date:	Monday, December 23, 2019	Sheet

D

D

C

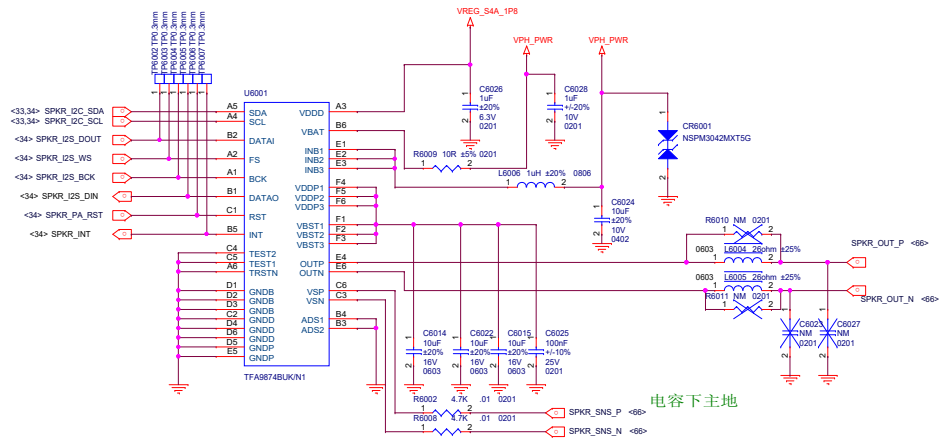
C

B

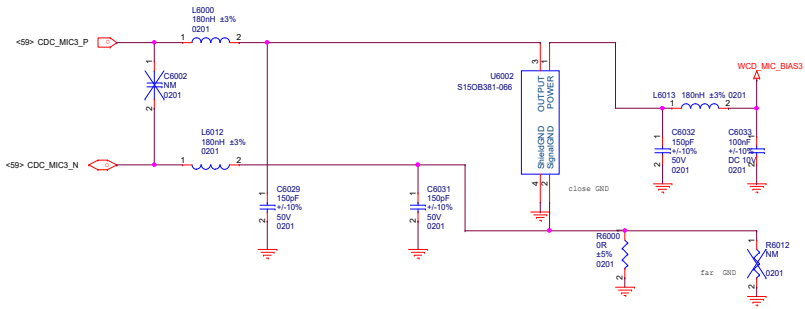
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A

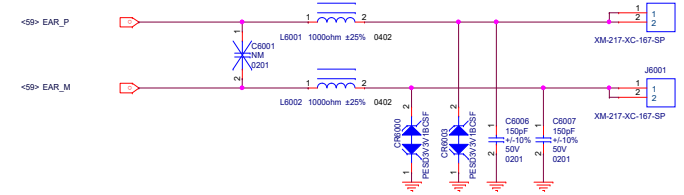
Title		J11 MAIN	
Size	A4	Document Number	WCD9340-2
Date:	Monday, December 23, 2019	Sheet	60 of 74



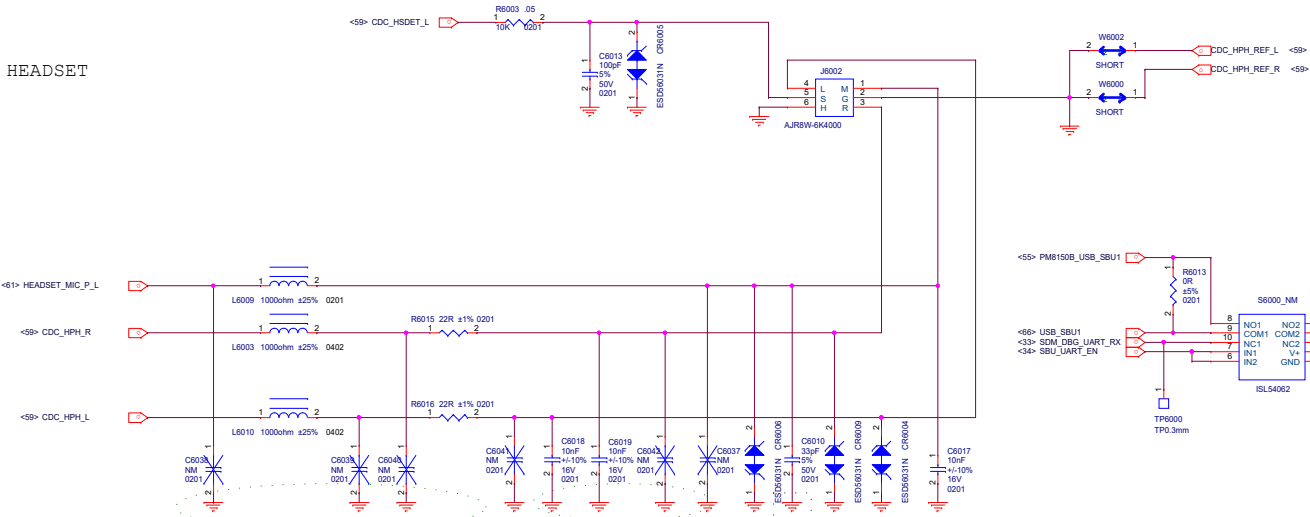
AUX MIC



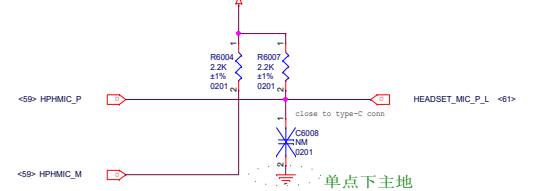
Receiver



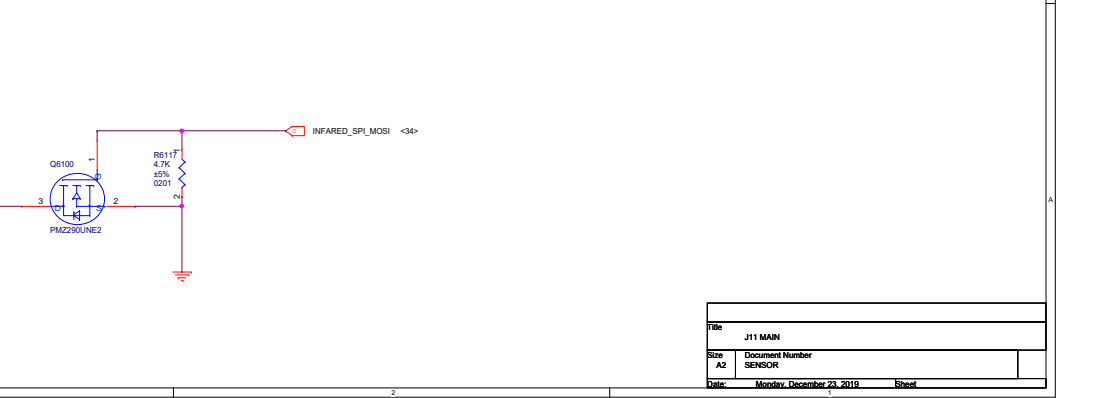
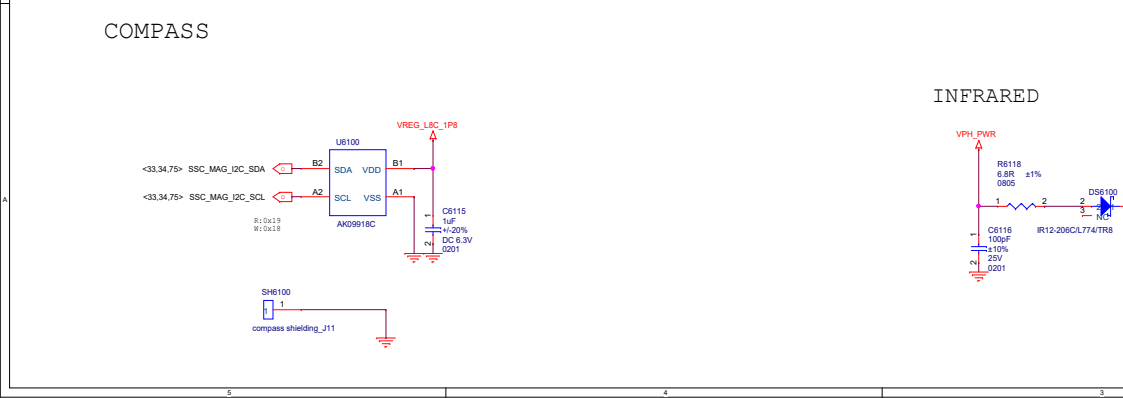
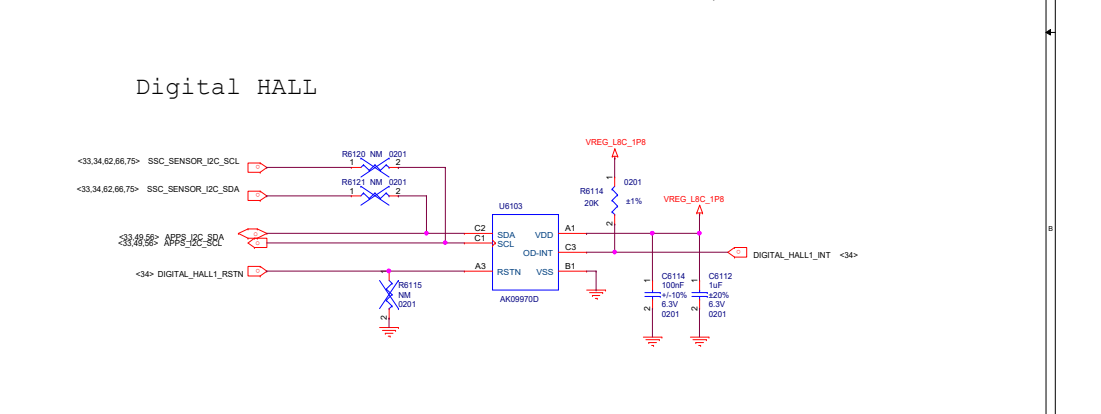
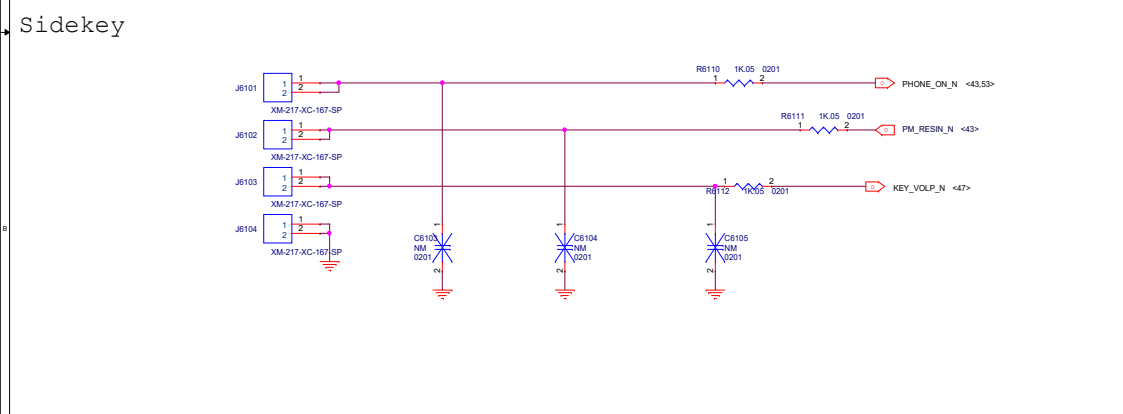
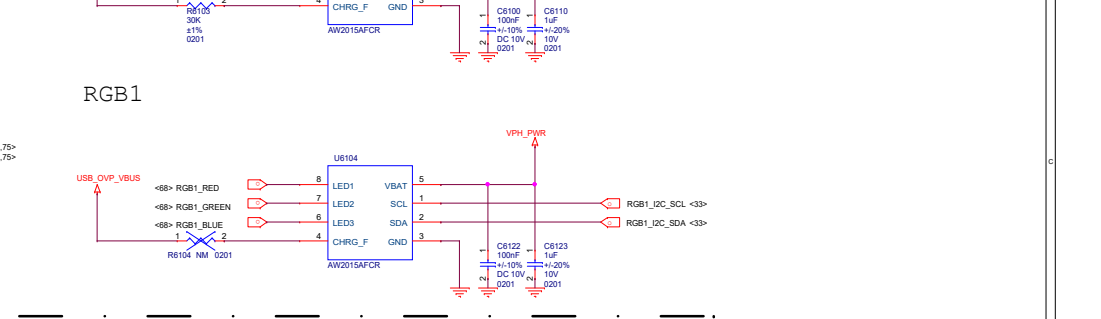
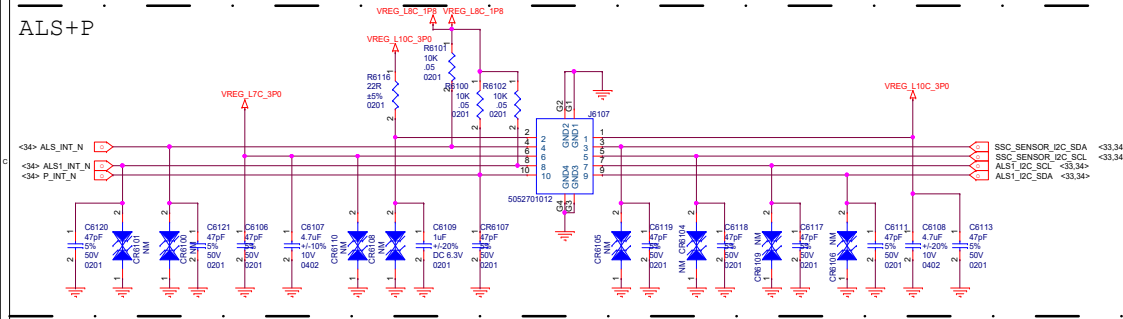
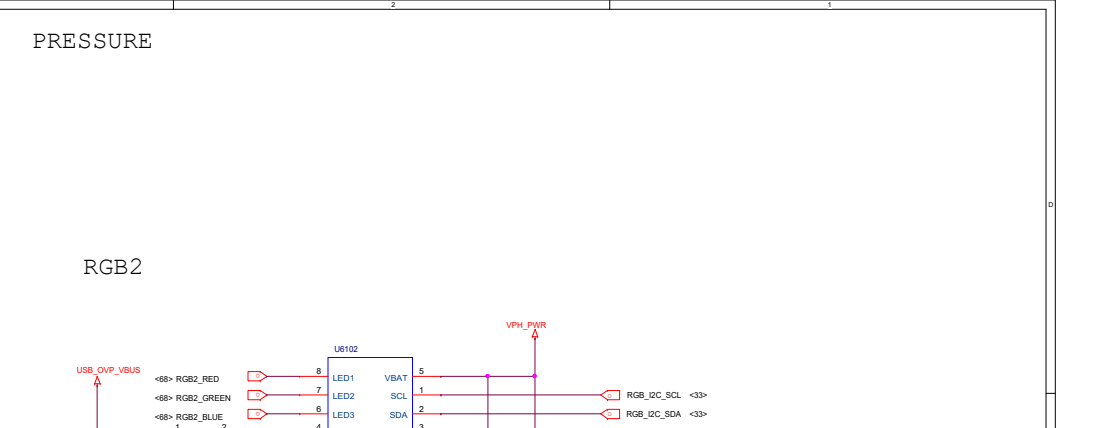
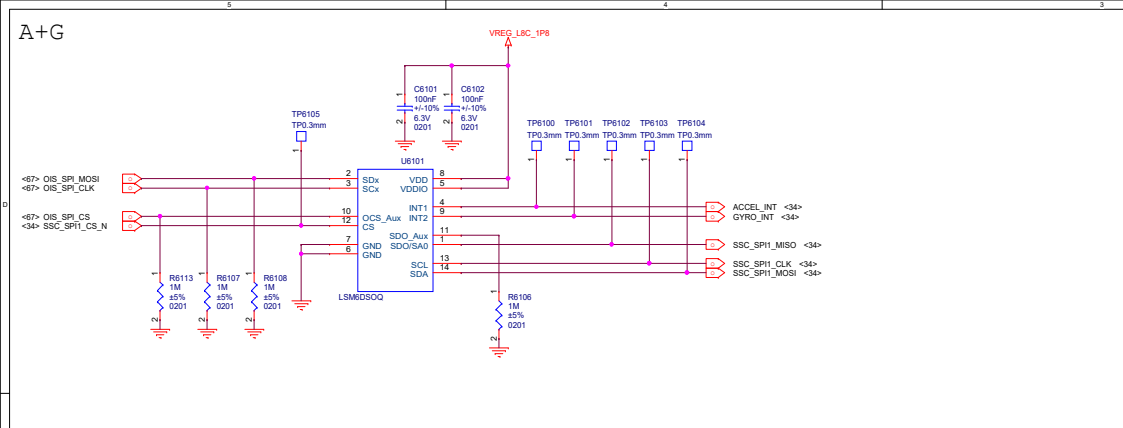
HEADSET



HEADSET



File	J11 MAIN
Size	A2
Date	Monday, December 23, 2019
Sheet	1



File	J11 MAIN
Size	Document Number
A2	SENSOR
Date	Monday, December 23, 2019
Sheet	



5

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FLICKER

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FLASH

TOF

COMPASS

D

D

C

C

B

B

A

A

Title		J11 MAIN	
Size	A3	Document Number	SENSOR-2
Date:	Monday, December 23, 2019	Sheet	1

5

4

3

2

1

D

D

C

C

B

B

A

Title		J11 MAIN	
Size	Document Number		
A4	SIM		
Date:	Monday, December 23, 2019	Sheet	64 of 74
2		1	

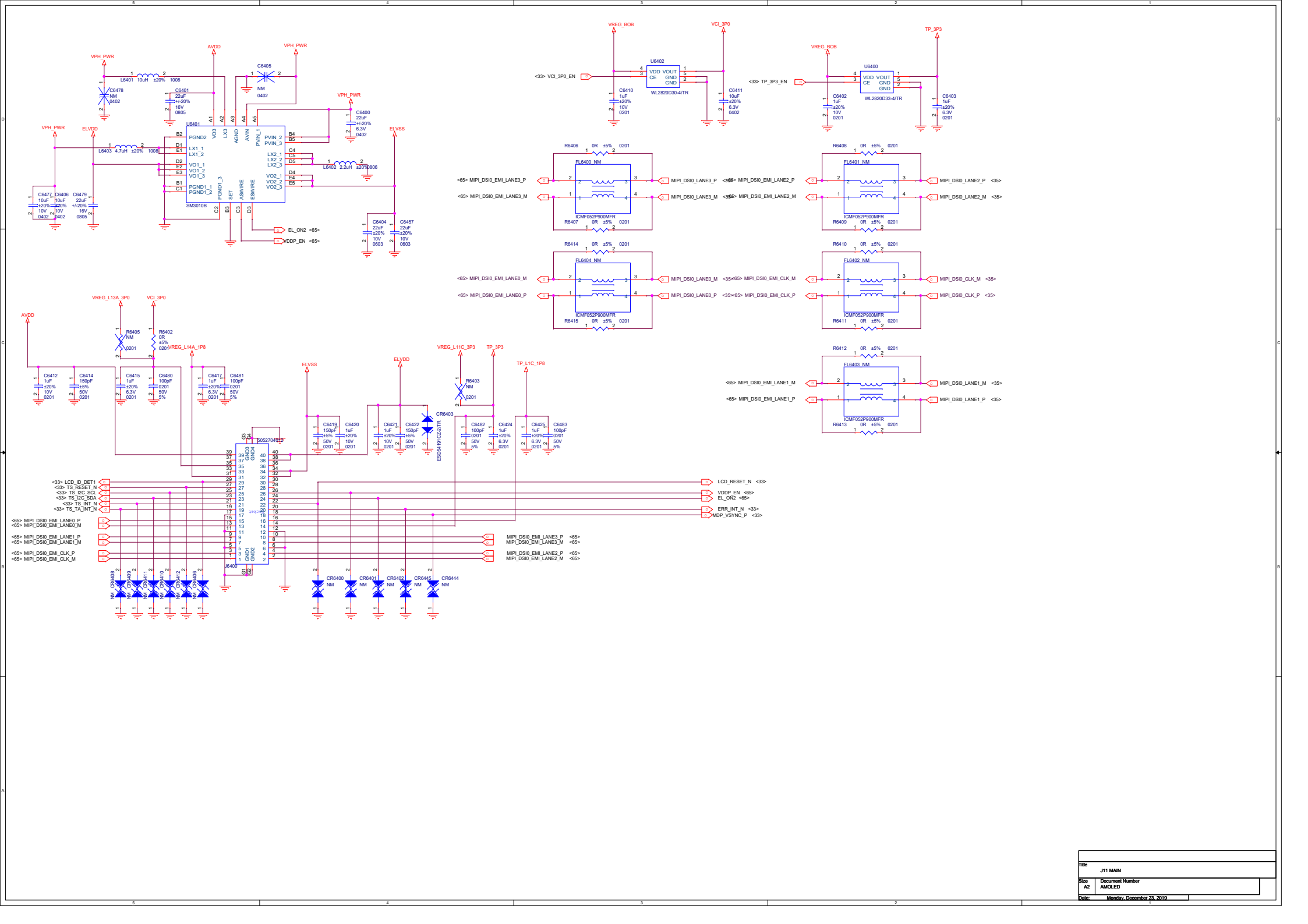
5

4

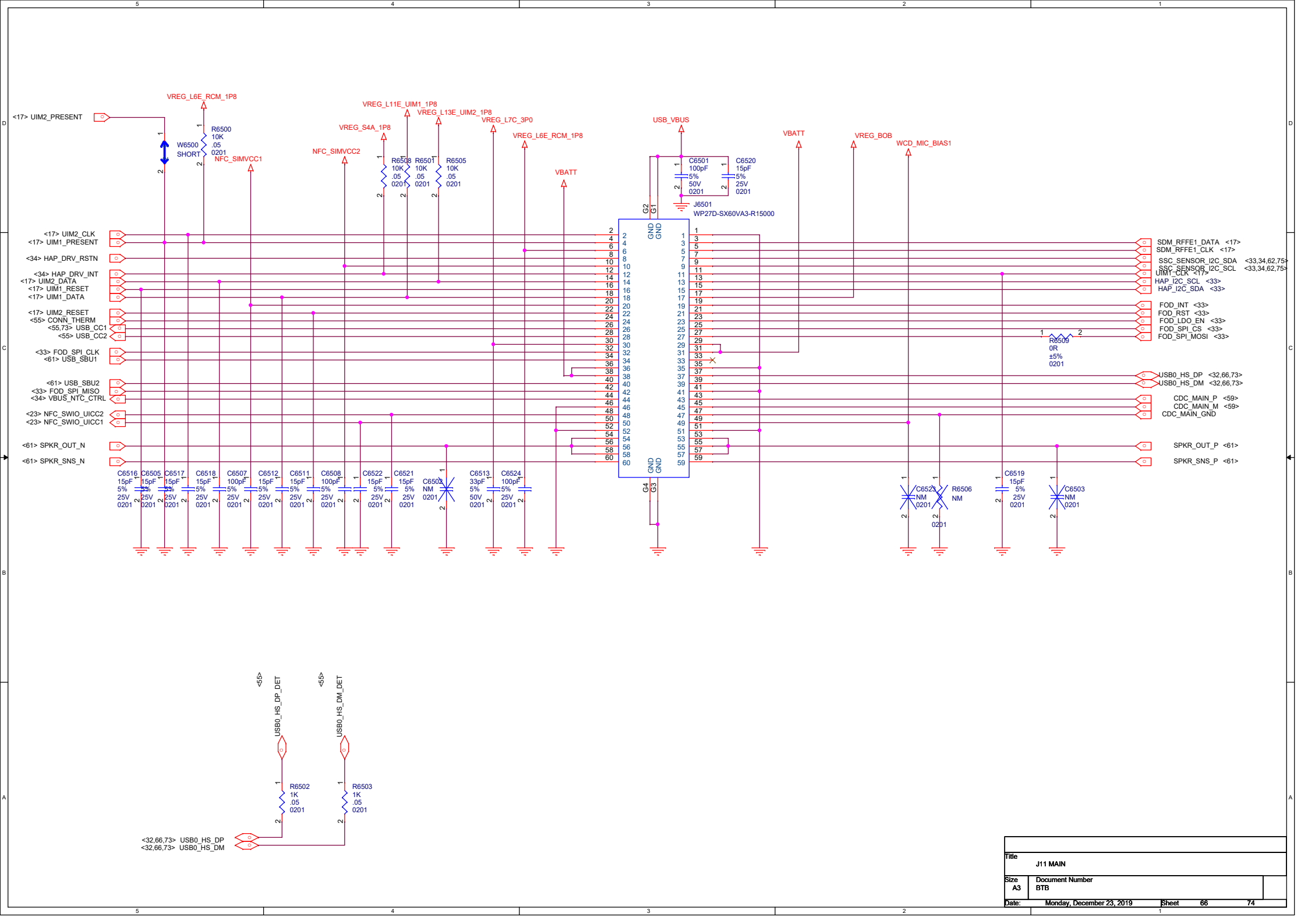
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2

1

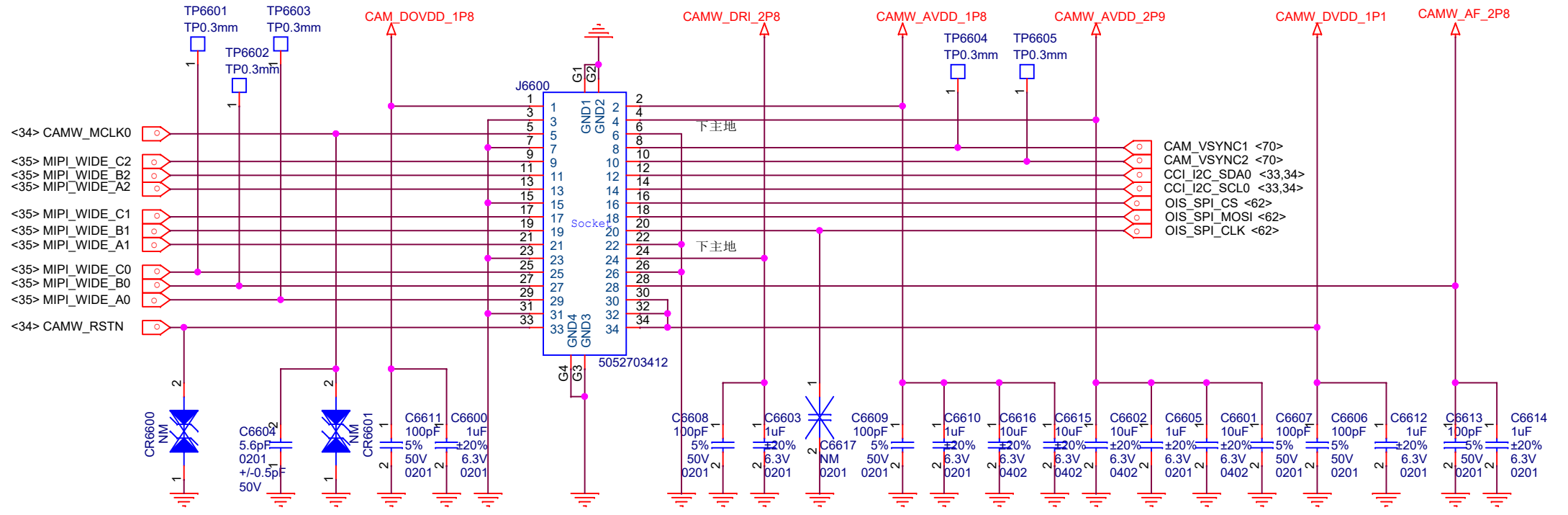


File	J11 MAIN
Size	Document Number
A2	AMOLED
Date	Monday, December 23, 2019

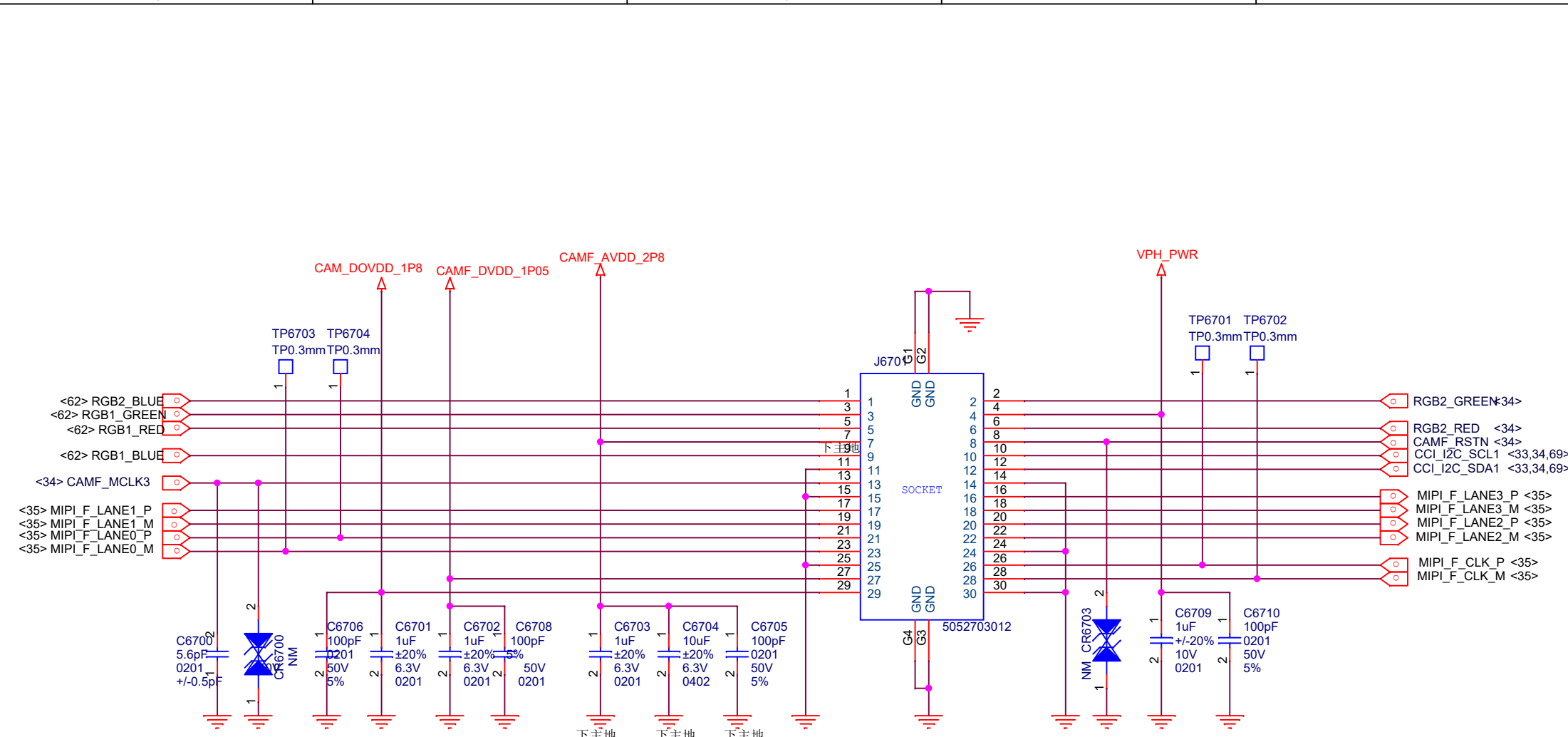


Title		J11 MAIN	
Size	A3	Document Number	BTB
Date:	Monday, December 23, 2019	Sheet	66 74

# WIDE 64M



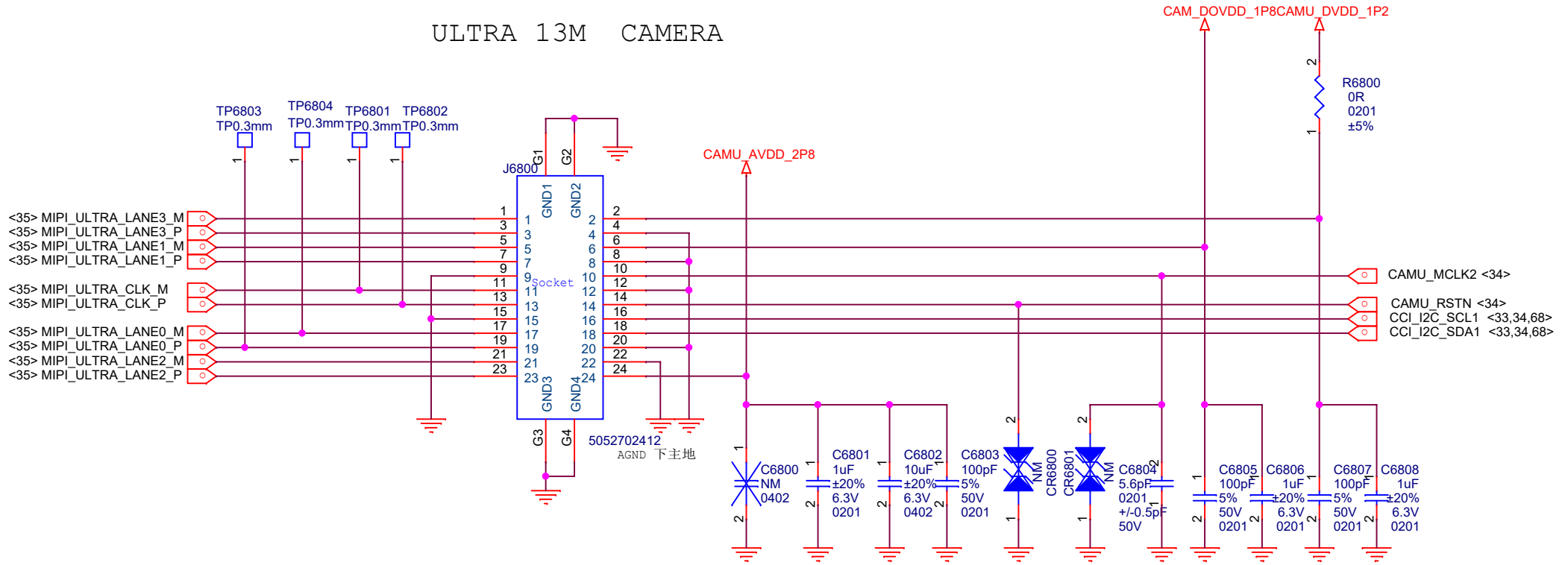
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J11 MAIN	
<b>Size</b>	Document Number
A4	WIDE&TELE CAMERA
<b>Date:</b>	Monday, December 23, 2019
<b>Sheet</b>	67
<b>74</b>	



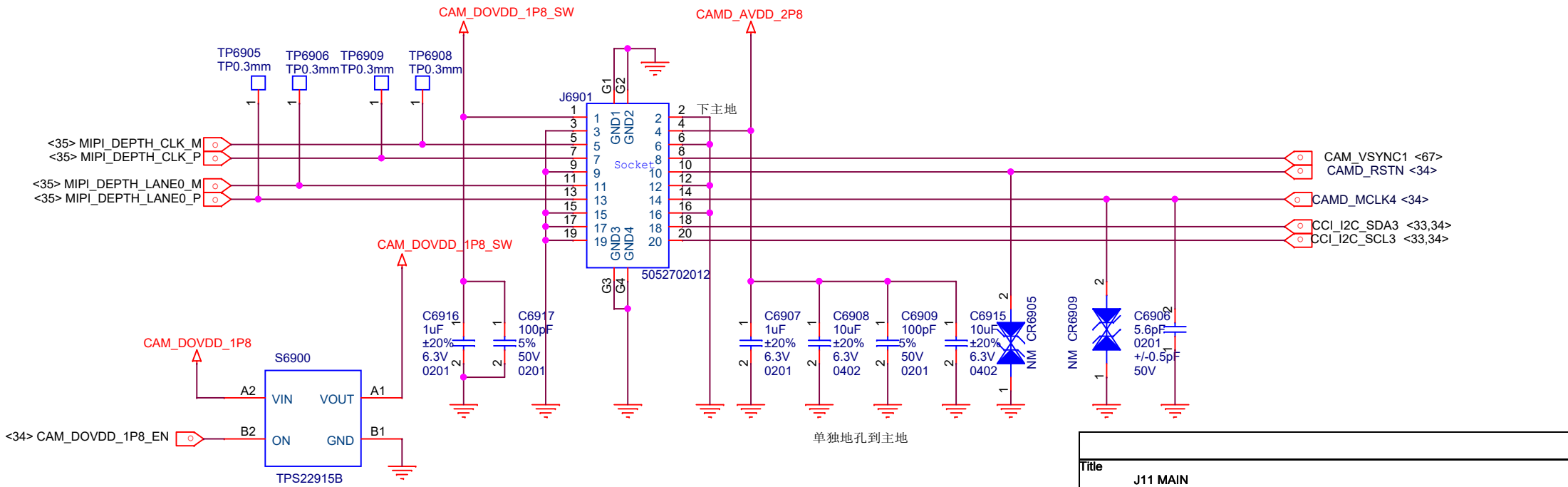
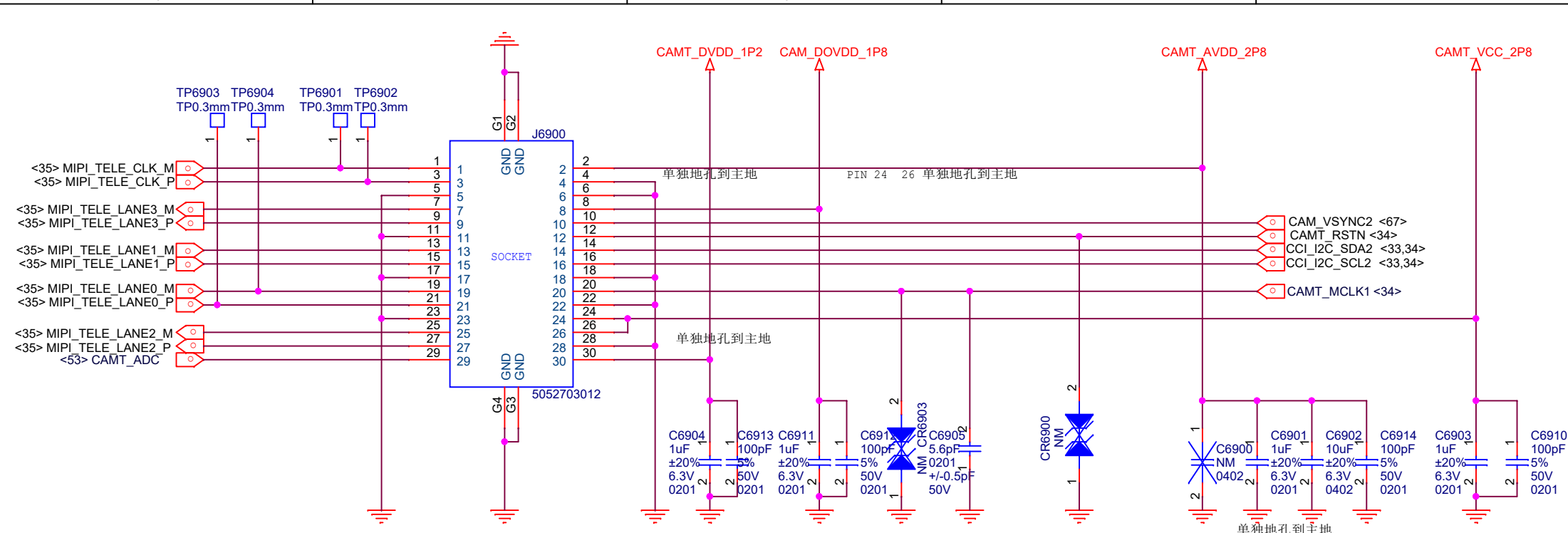
只有前摄电源上加了100pF

Title		J11 MAIN	
Size	A4	Document Number	Reserved(for Analog FM)
Date:	Monday, December 23, 2019	Sheet	68 of 74

# ULTRA 13M CAMERA



Title		J11 MAIN	
Size	A4	Document Number	ULTRA CAMERA
Date:	Monday, December 23, 2019	Sheet	69 of 74

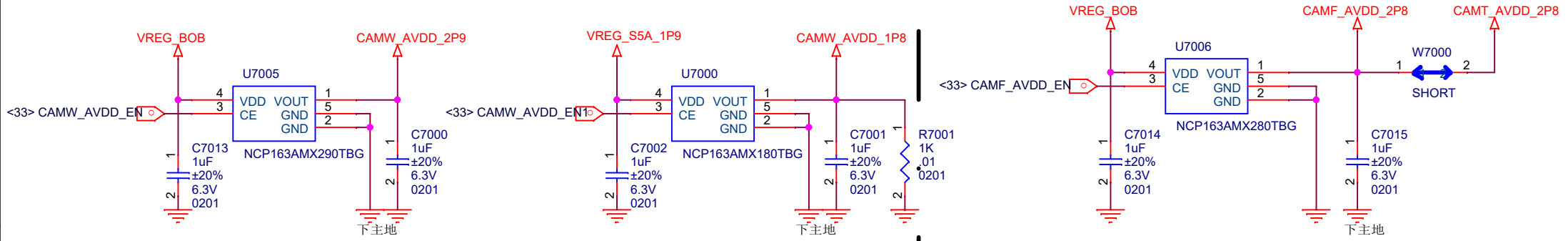


Title		J11 MAIN	
Size	A4	Document Number	ULTRA CAMERA
Date:	Monday, December 23, 2019	Sheet	70 of 74

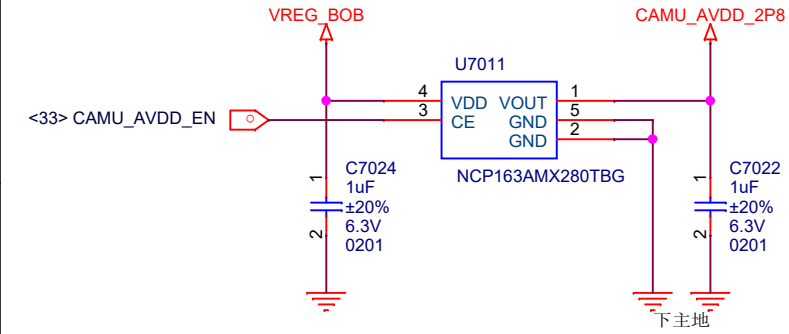


**WIDE**

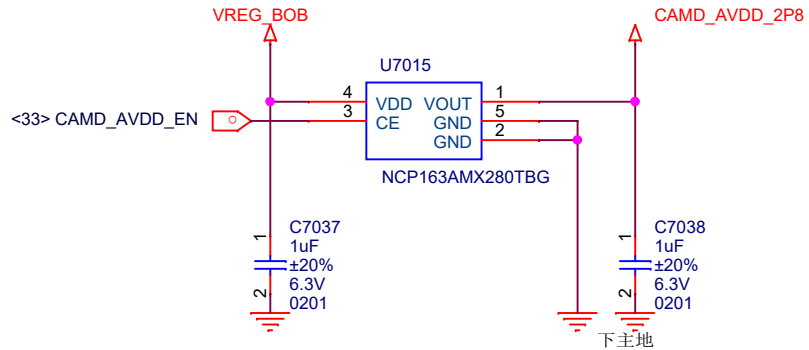
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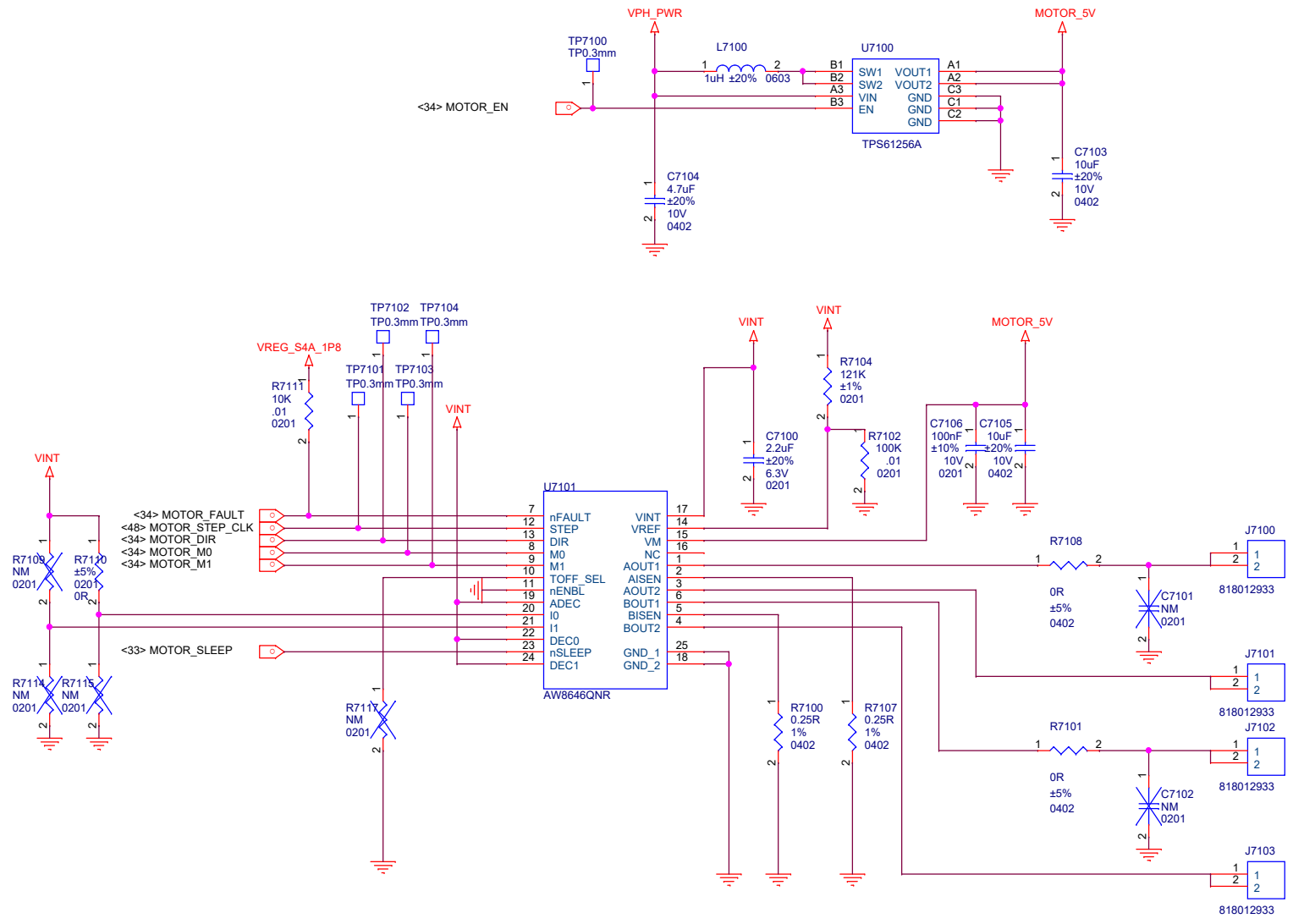
**ULTRA**



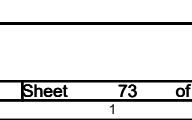
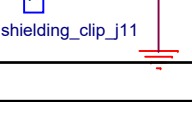
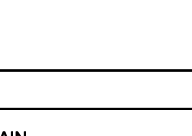
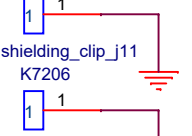
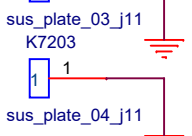
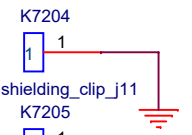
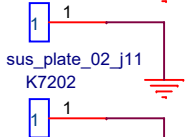
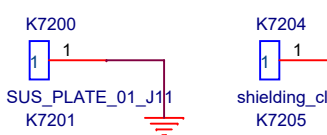
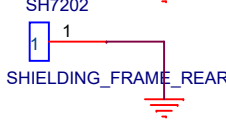
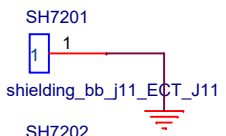
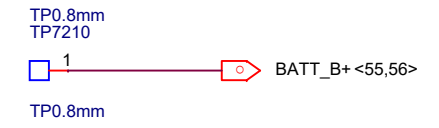
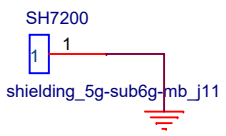
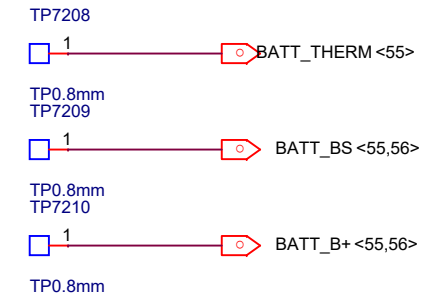
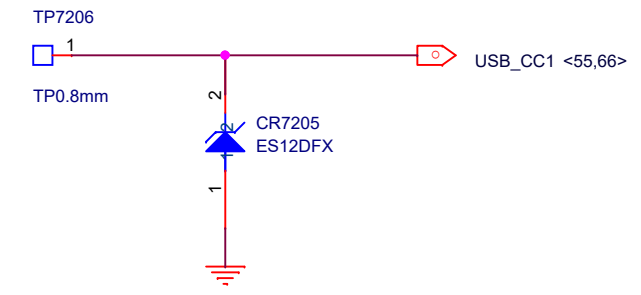
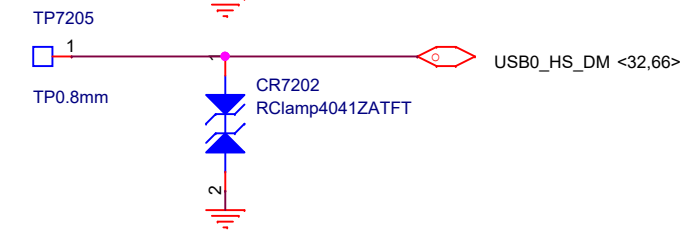
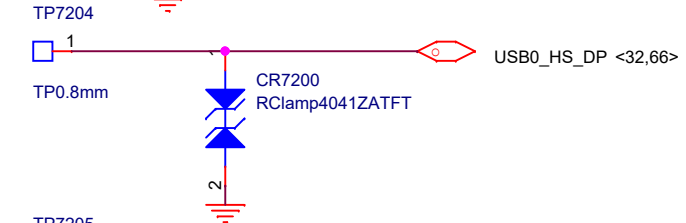
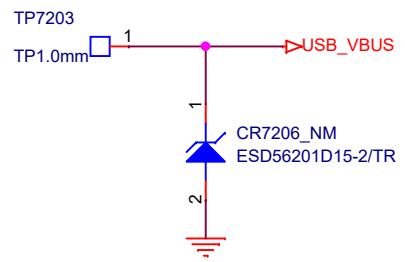
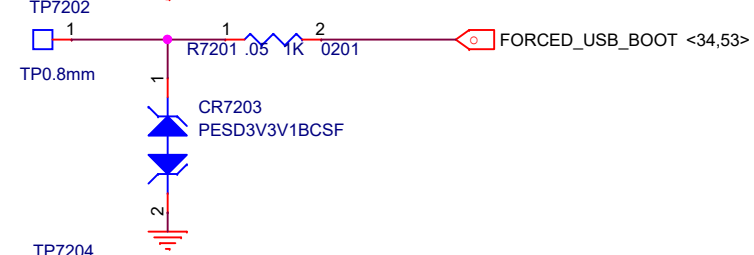
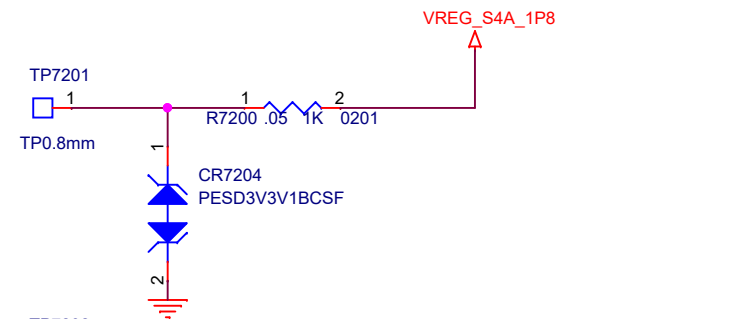
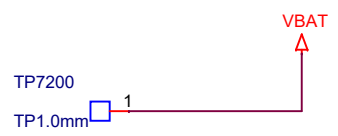
**DEPTH**



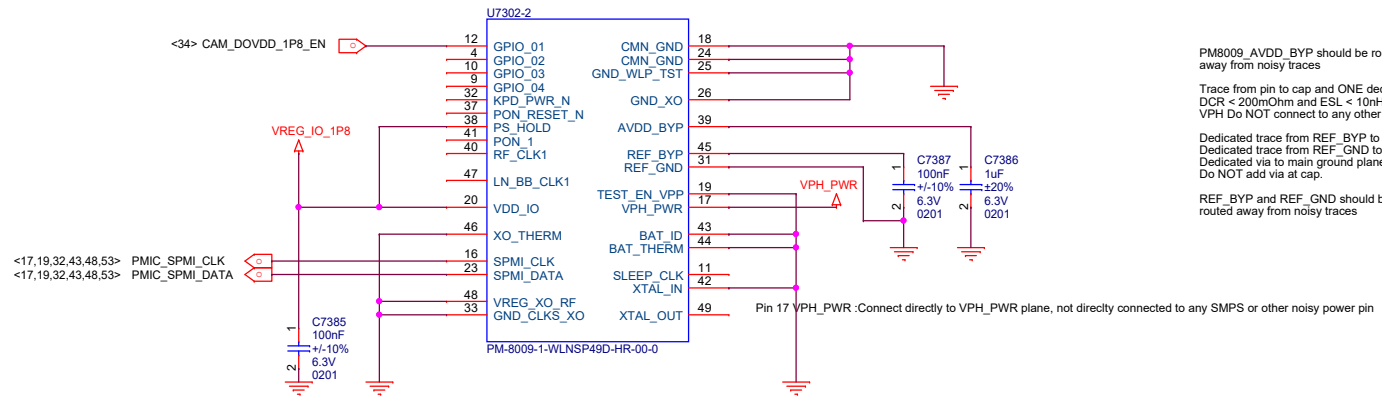
Title		
J11 MAIN		
Size	Document Number	P0
A4	CAMERA LDOS	
Date:	Monday, December 23, 2019	Sheet 71 of 74



Title		J11 MAIN	
Size	B	Document Number	SIM
Date:	Monday, December 23, 2019	Sheet	72 of 74

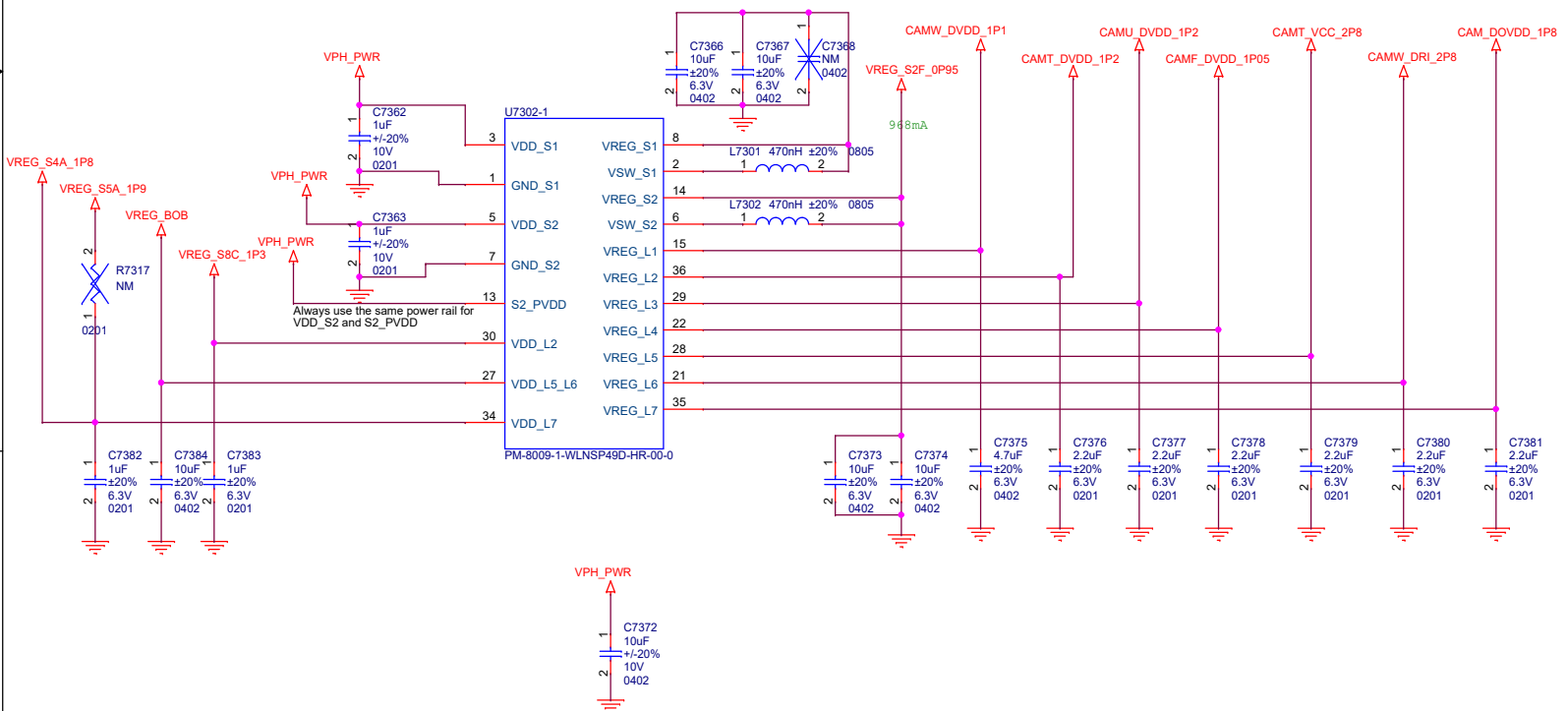


Title		J11 MAIN	
Size	A4	Document Number	IR LED
Date:	Monday, December 23, 2019	Sheet	73 of 74



PM8009 AVDD\_BYP should be routed away from noisy traces  
 Trace from pin to cap and ONE dedicated via from cap to main ground plane.  
 DCR < 200mOhm and ESL < 10nH  
 VPH Do NOT connect to any other ground.  
 Dedicated trace from REF\_BYP to cap.  
 Dedicated trace from REF\_GND to cap.  
 Dedicated via to main ground plane right under PMIC pin (REF\_GND) or as close to the pin as possible.  
 Do NOT add via at cap.  
 REF\_BYP and REF\_GND should be routed away from noisy traces

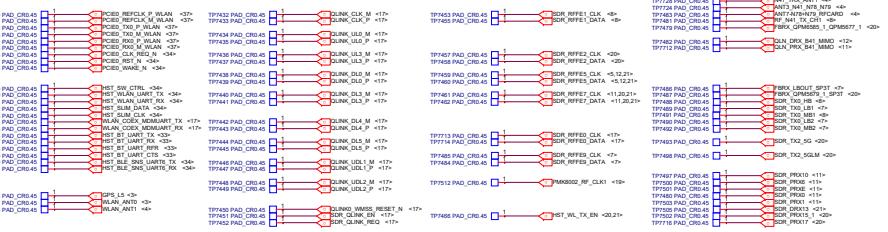
S1F will supply L1F, L4F, L3F INTERNALLY  
 Make sure VREG\_S1 is routed with thick track as it carries VIN for L1F L3F L4F



Title		F1 MAIN
Size	A3	Document Number CAMERA LDOs
Date:	Monday, December 23, 2019	Sheet 74

WIFI

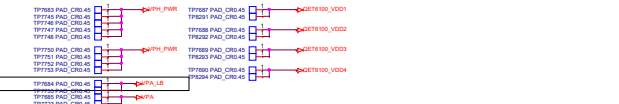
RF



jidai



RF电源



WIFI电源

