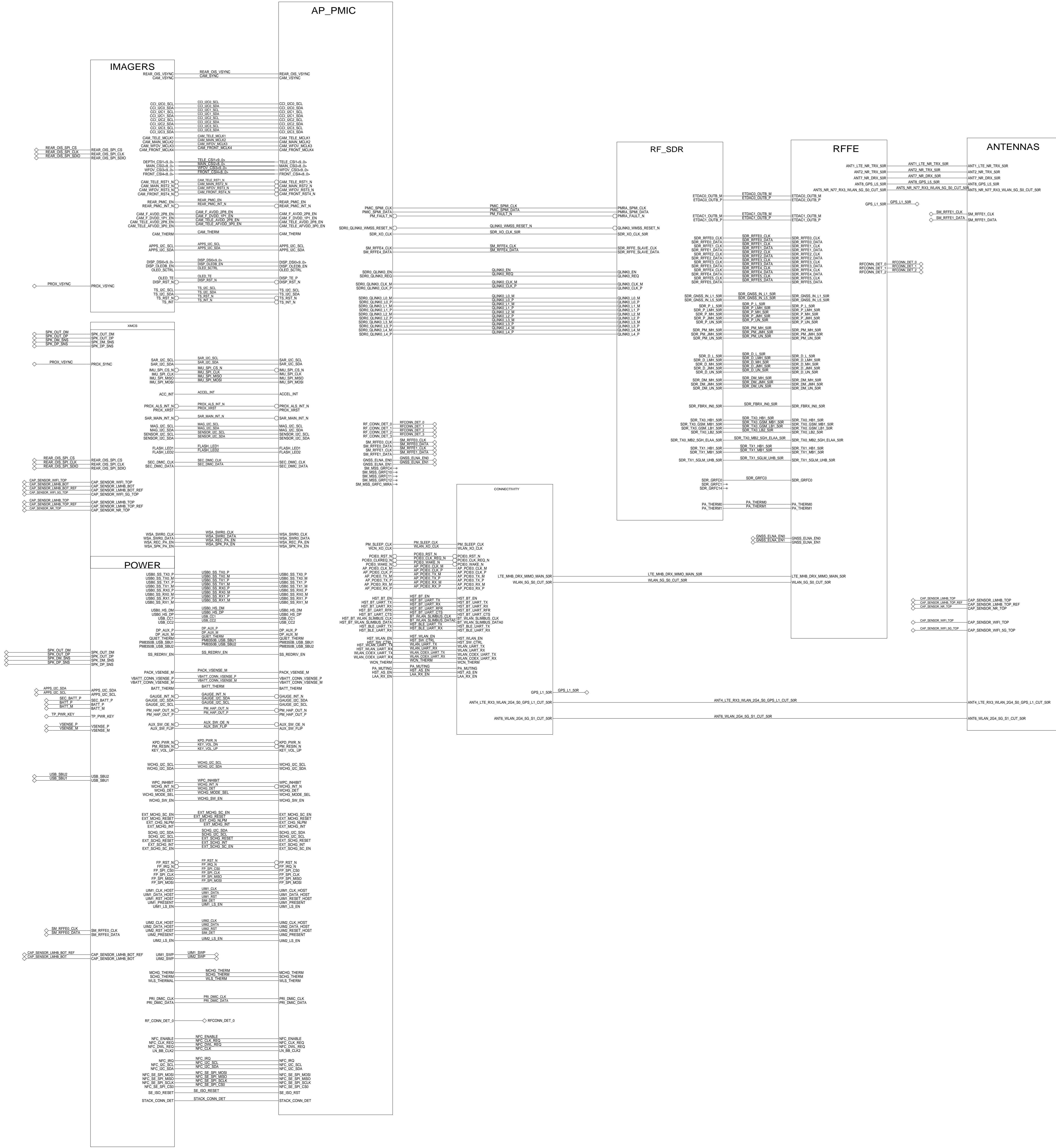


FRONTIER_SM8475

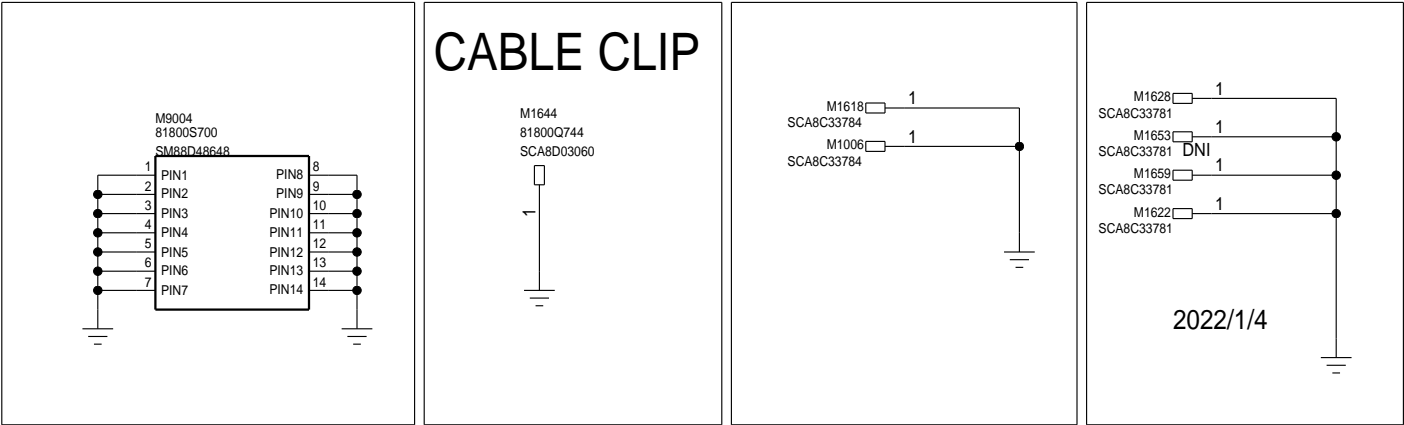


APPROVALS		REVISIONS	
ENGINEER:	MOTOROLA	ZONE	LTR
LAST MODIFIED BY:	MOTOROLA	DESCRIPTION	DATE
Fr May 06 15:19:32 2022			APPR.
MOTOROLA CONFIDENTIAL RESTRICTED		PROJECT NAME	
THE DRAWING ON THIS PRINT AND INFORMATION THEREON ARE PROPRIETARY AND UNCLASSIFIED AND SHALL NOT BE USED OR DISCLOSED IN ANY MANNER WITHOUT EXPRESS WRITTEN PERMISSION OF MOTOROLA CORPORATION.		frontier_sm8475.pgm	
CAD FILE NAME:		PAGE 1 OF 77	

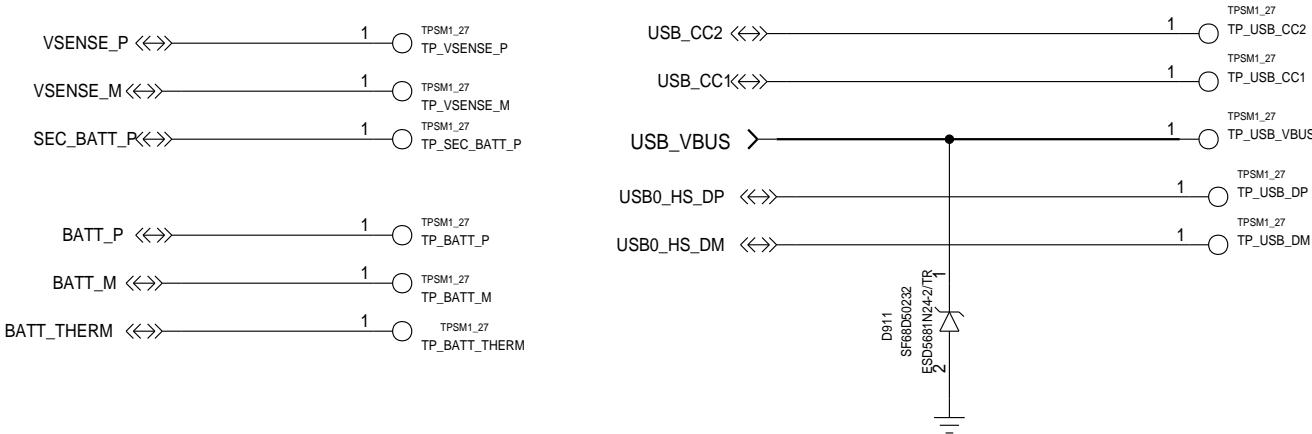
PCB SHIELD



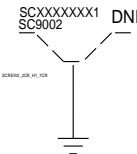
GROUND CONTACTS




TEST POINT FOR FACTORY



SCREW



APPROVALS		 MOBILE DEVICES	
ENGINEER: MOTOROLA		BLOCK TITLE:	
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:48 2022		frontier_sm8475	
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CAD FILE NAME:		PAGE 2 OF 77	

SM8475: CONTROL

REFDES: 1000-1099

D

C

B

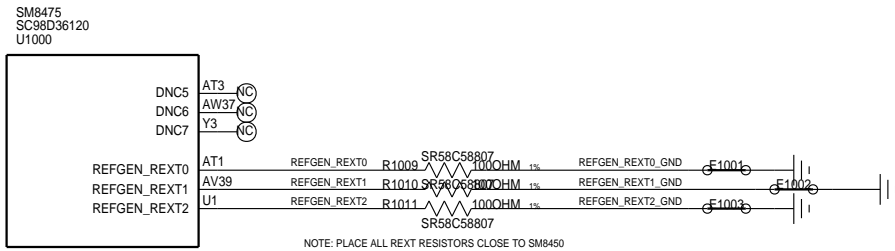
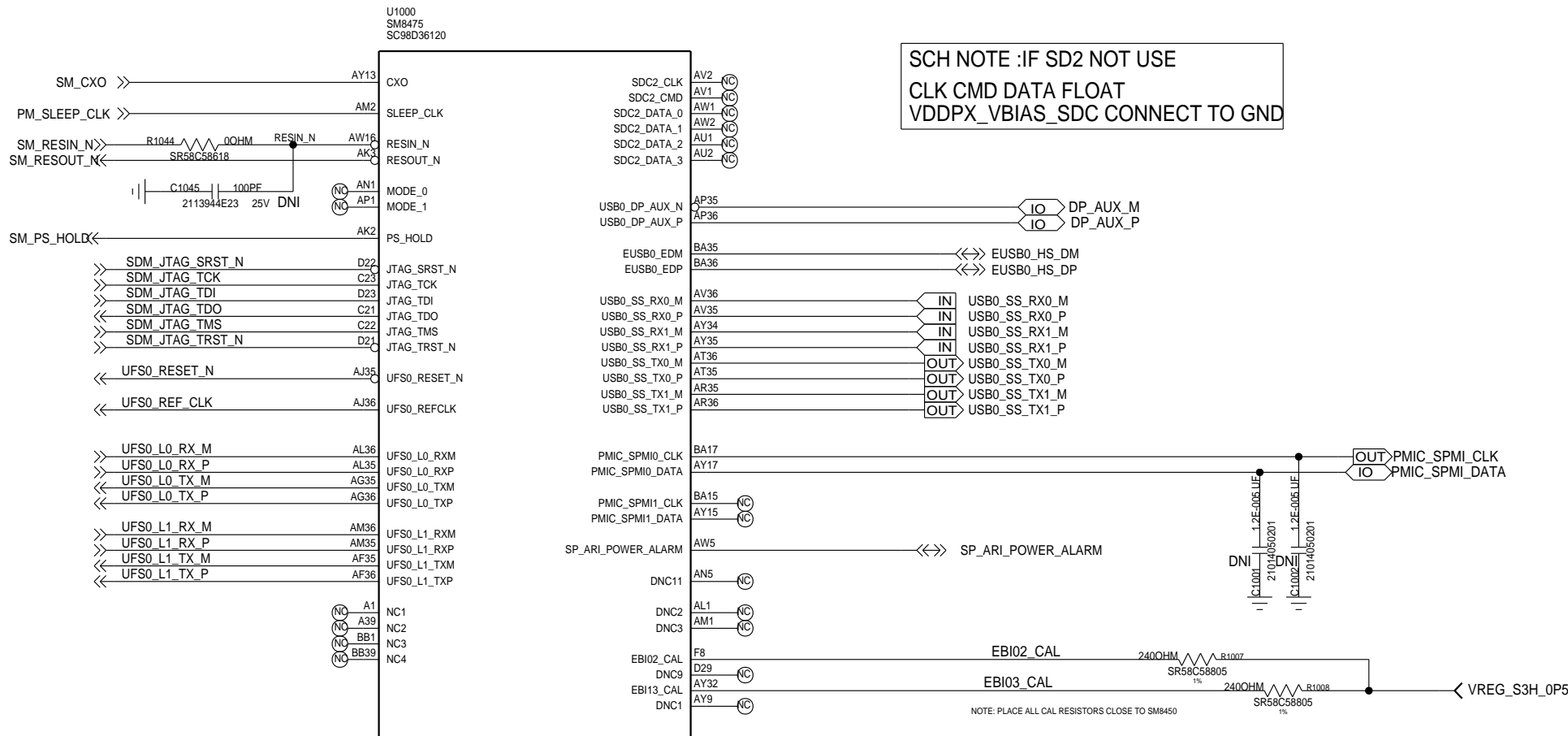
A

D

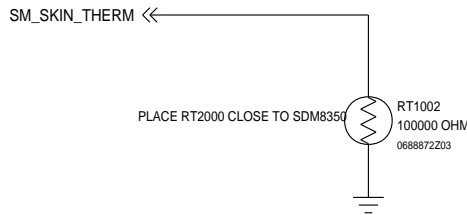
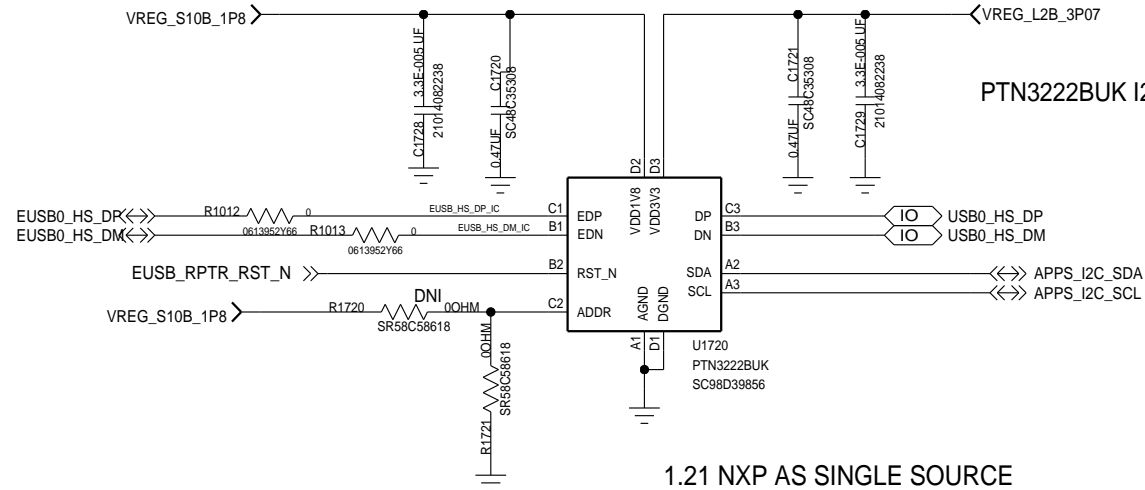
C


B

A



USB_REPEATER 1720-1749




APPROVALS		 MOBILE DEVICES	
ENGINEER: MOTOROLA		BLOCK TITLE: ap_pmic	
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:52 2022		PROJECT NAME frontier_sm8475.cpm	
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		PAGE 3 OF 77	

REFDES: 1000-1099



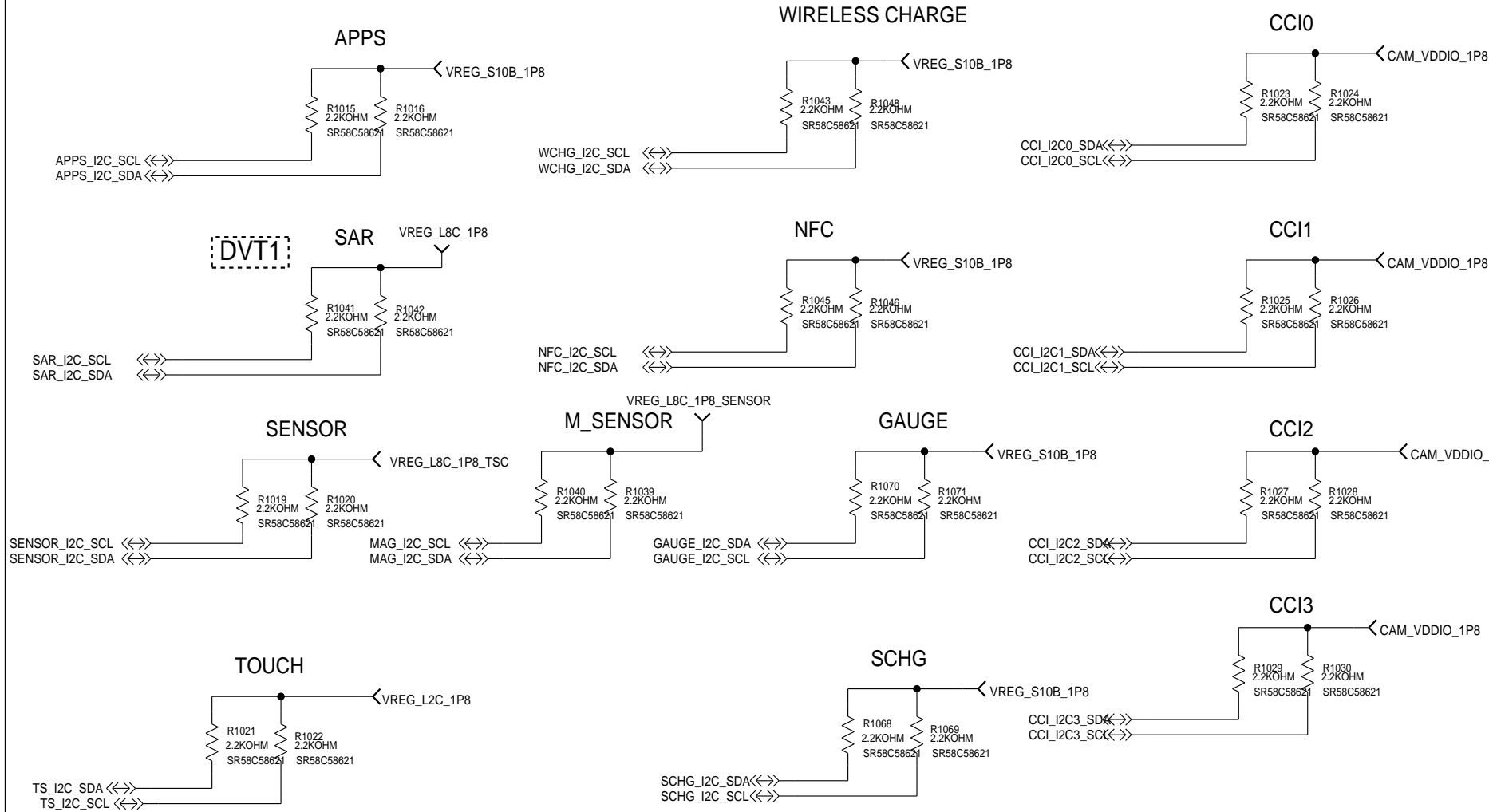
BOOT CONFIG GPIO 47 59 67 149 158 161 164

APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA	BLOCK TITLE: <div>ap_pmic</div>		
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:50 2022			
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		CAD FILE NAME:	PAGE 4 OF 77

SM8475: SUPPORT

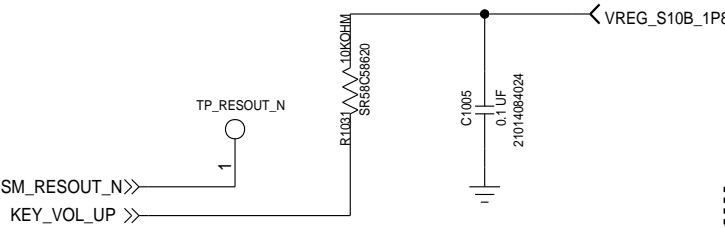
REFDES: 1000-1099

I2C PULL-UP RESISTORS



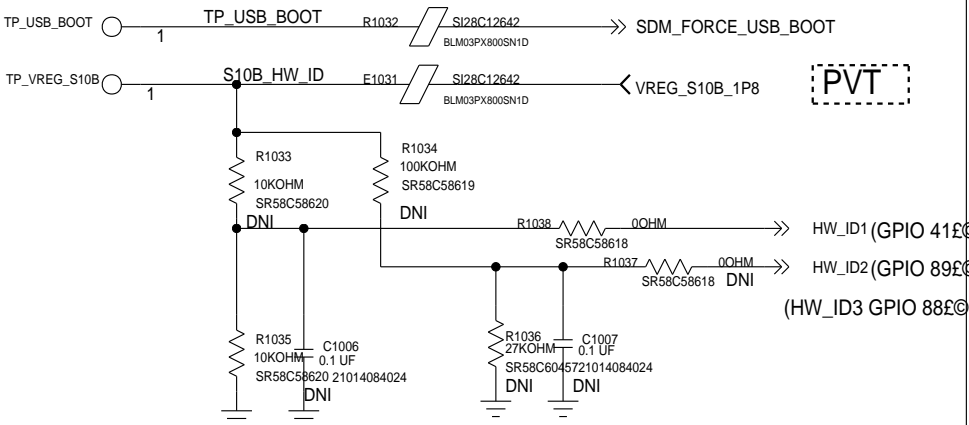
(DNI FOR PRODUCTION AND LAB ENTRY)

FORCE FLASH SUPPORT WITH VOL UP KEY

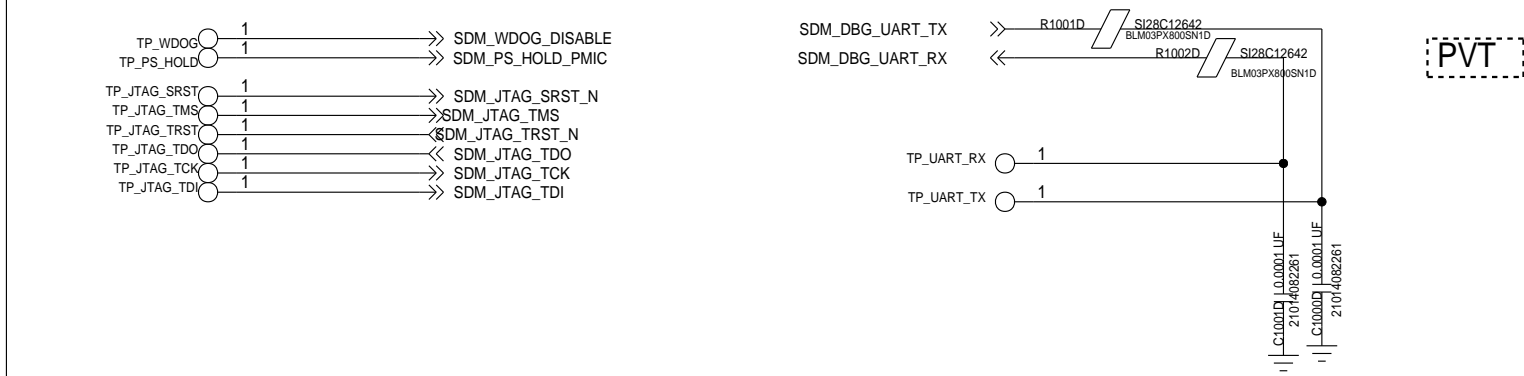


PRODUCT HW ID

THESE 2 SIGNALS ARE USED TO IDENTIFY
THE REVISION OF THE BOARD
FOR RUNTIME REVISION INFORMATION, REFER TO:



JTAG CONNECTOR



(DNI FOR PRODUCTION)

APPROVALS		MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA		BLOCK TITLE:	
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:50 2022		ap_pmic	
MOTOROLA CONFIDENTIAL RESTRICTED		PROJECT NAME	
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CAD FILE NAME:		REV 01	
		PAGE 5 OF 77	

D

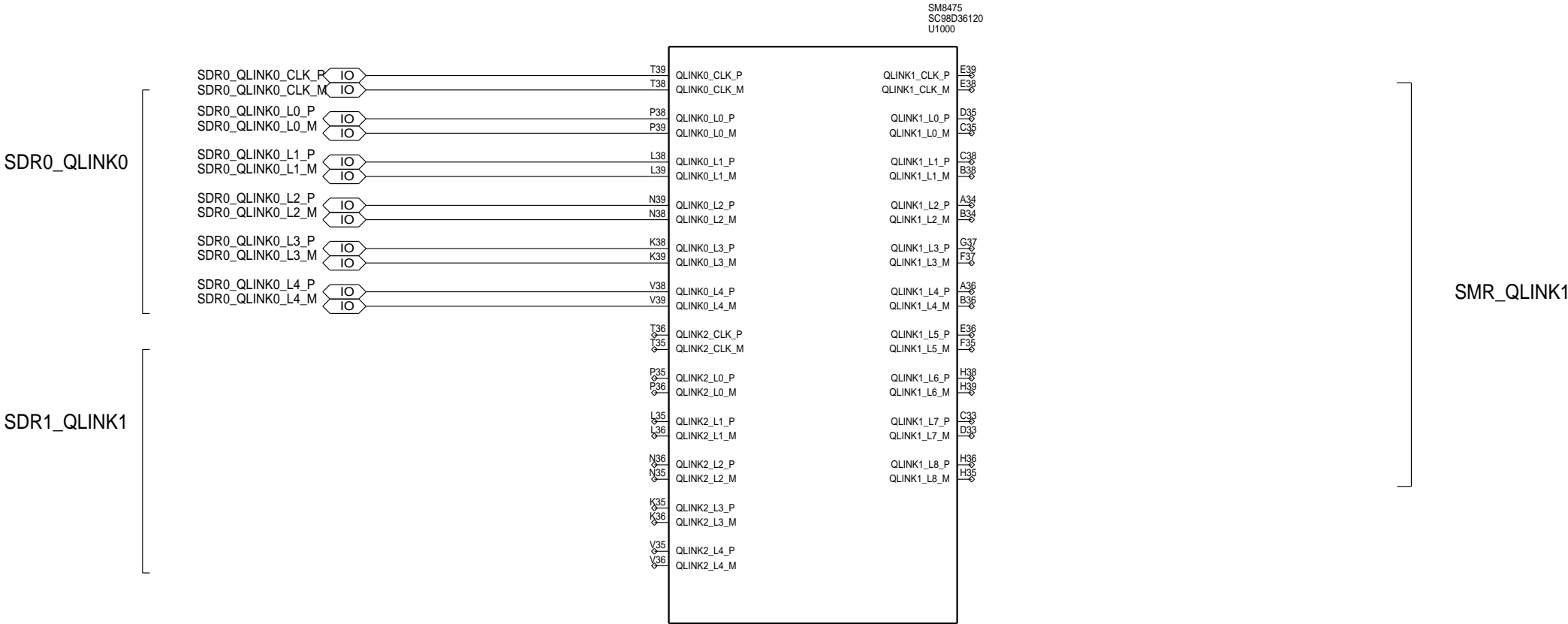
C

B

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SM8475: QLINK

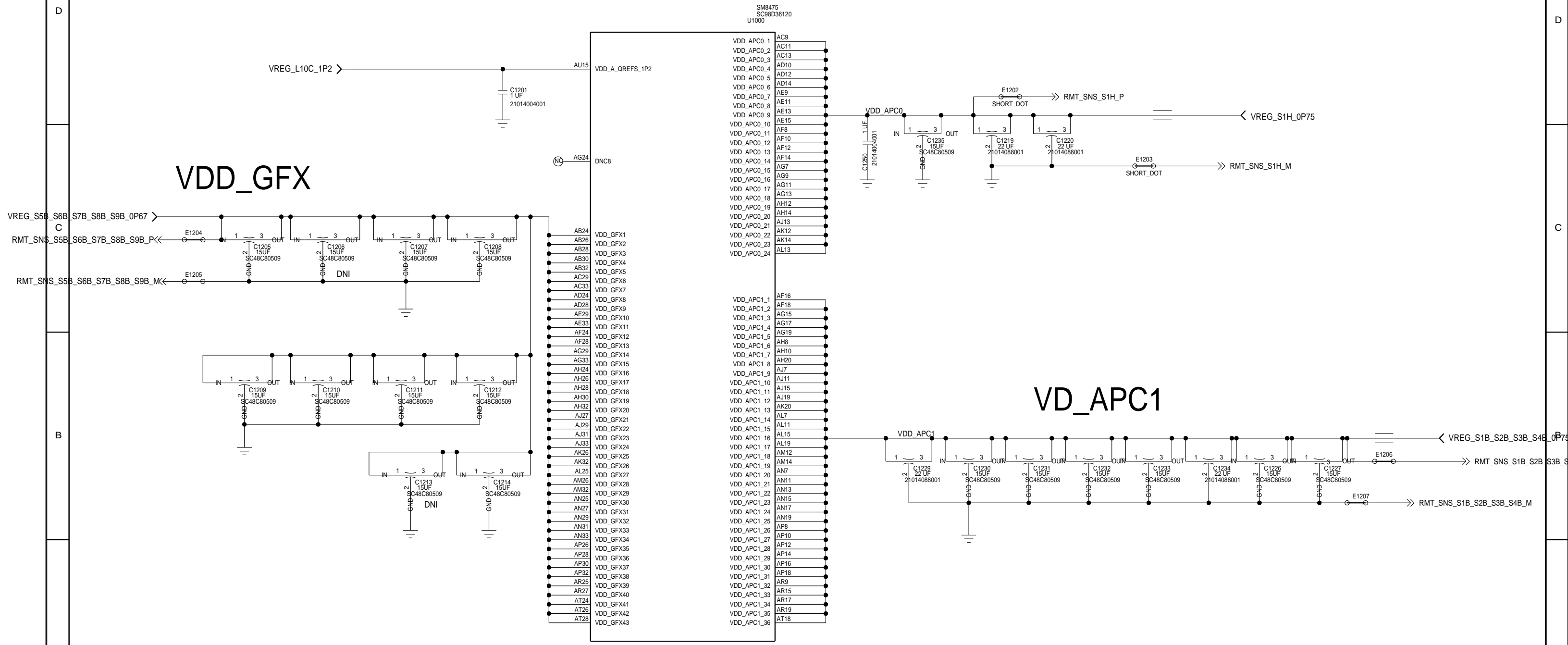
REFDES: 1100-1199




APPROVALS		MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA		BLOCK TITLE:	
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:54 2022		ap_pmic	
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		frontier_sm8475.cpm	
		REV 01	
		CAD FILE NAME:	
		PAGE 7 OF 77	

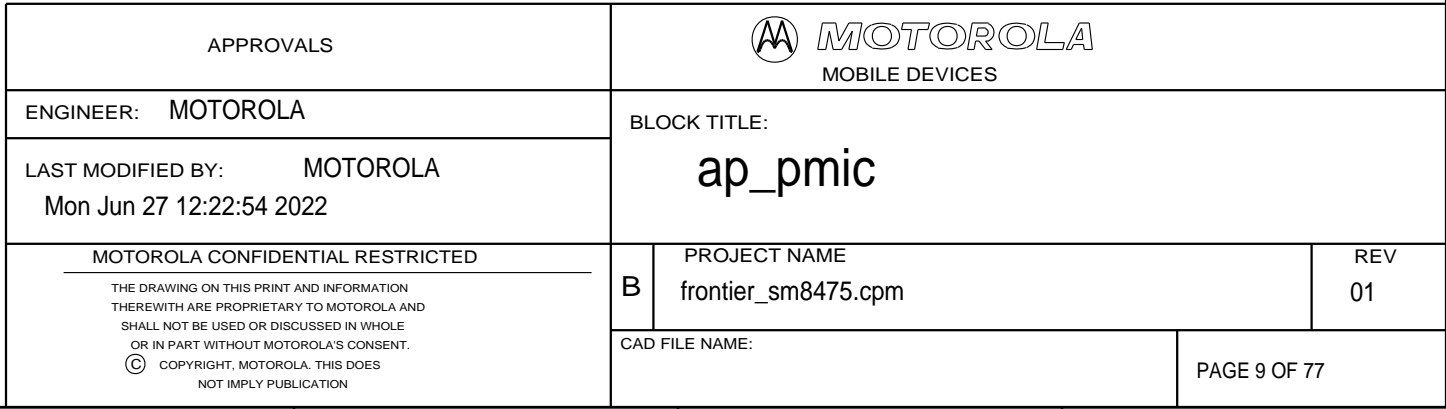
SM8475: PWR 1

REFDES: 1200-1249

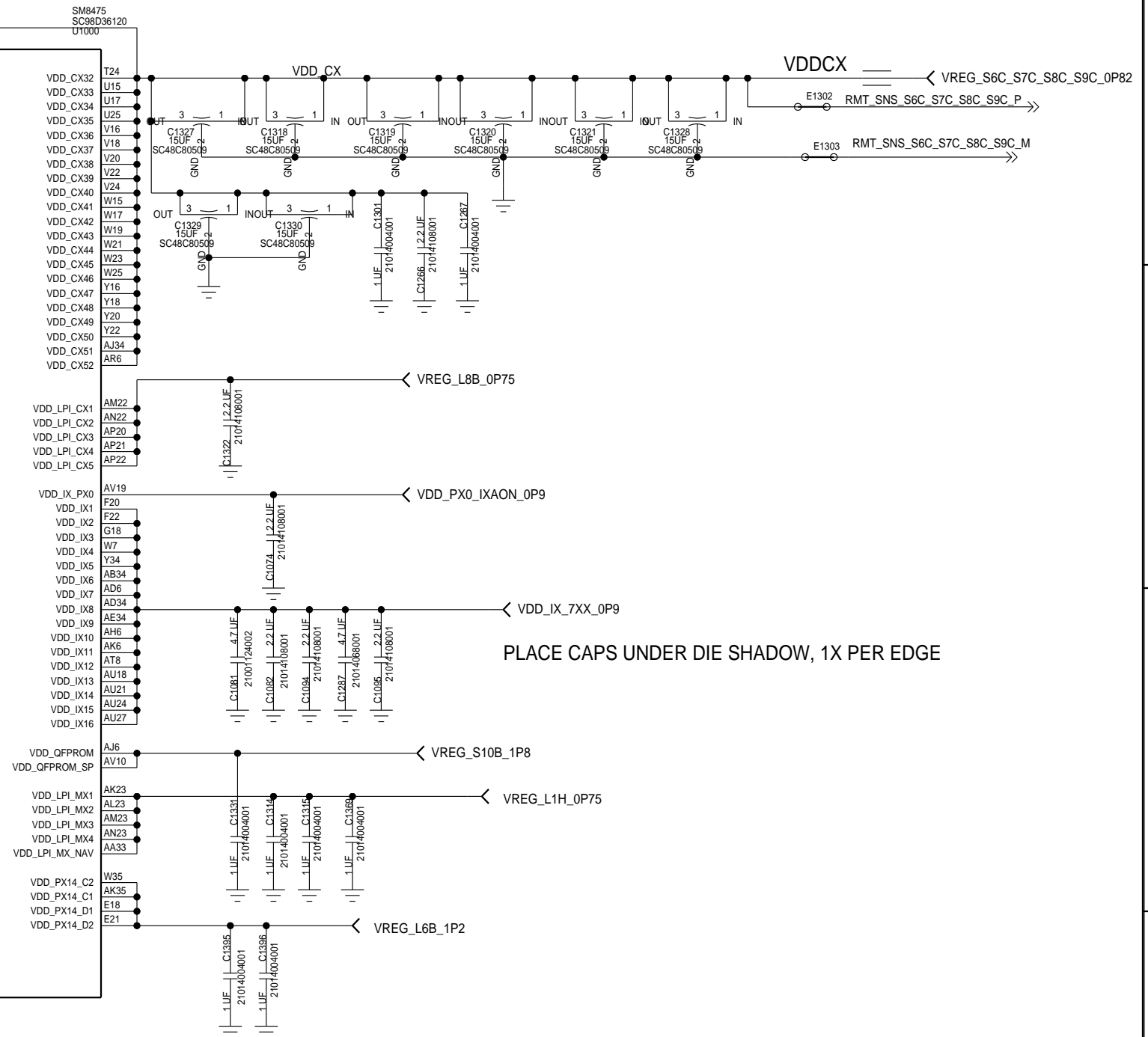



APPROVALS		 MOBILE DEVICES	
ENGINEER: MOTOROLA		BLOCK TITLE:	
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:53 2022		ap_pmic	
MOTOROLA CONFIDENTIAL RESTRICTED		PROJECT NAME	
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		REV	
		01	
		PAGE 8 OF 77	

REFDES: 1250-1299



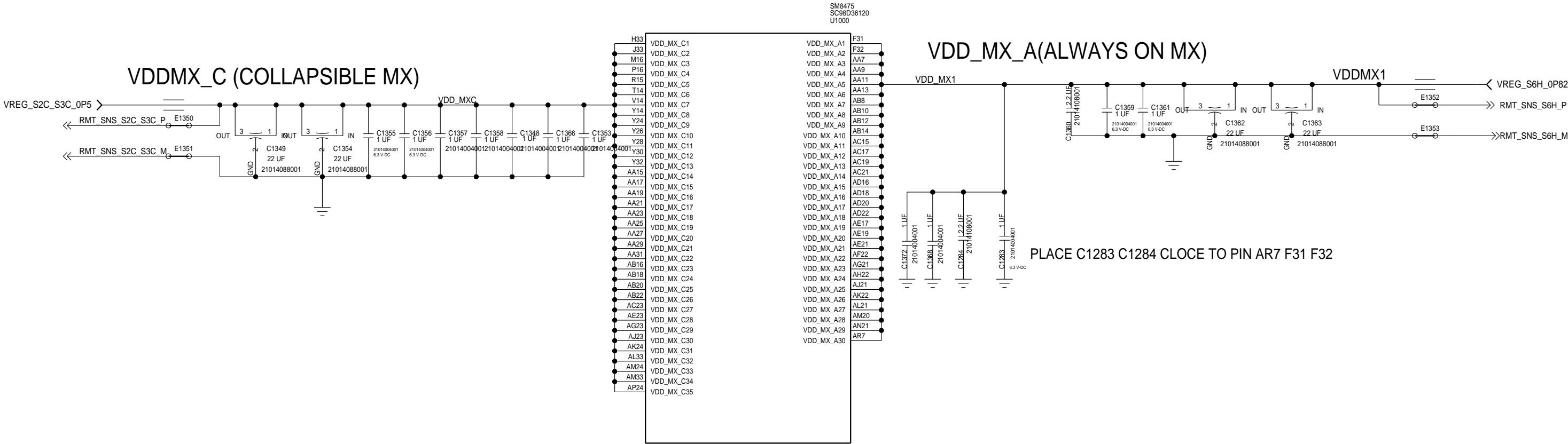
REFDES: 1300-1349

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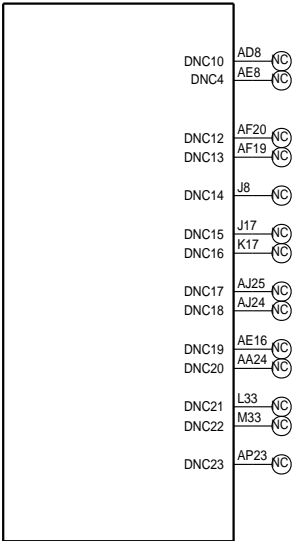
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ENGINEER: MOTOROLA	BLOCK TITLE: <div>ap_pmic</div>		
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:54 2022			
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	CAD FILE NAME:		PAGE 10 OF 77


SM8475: PWR 4

REFDES: 1350-1399



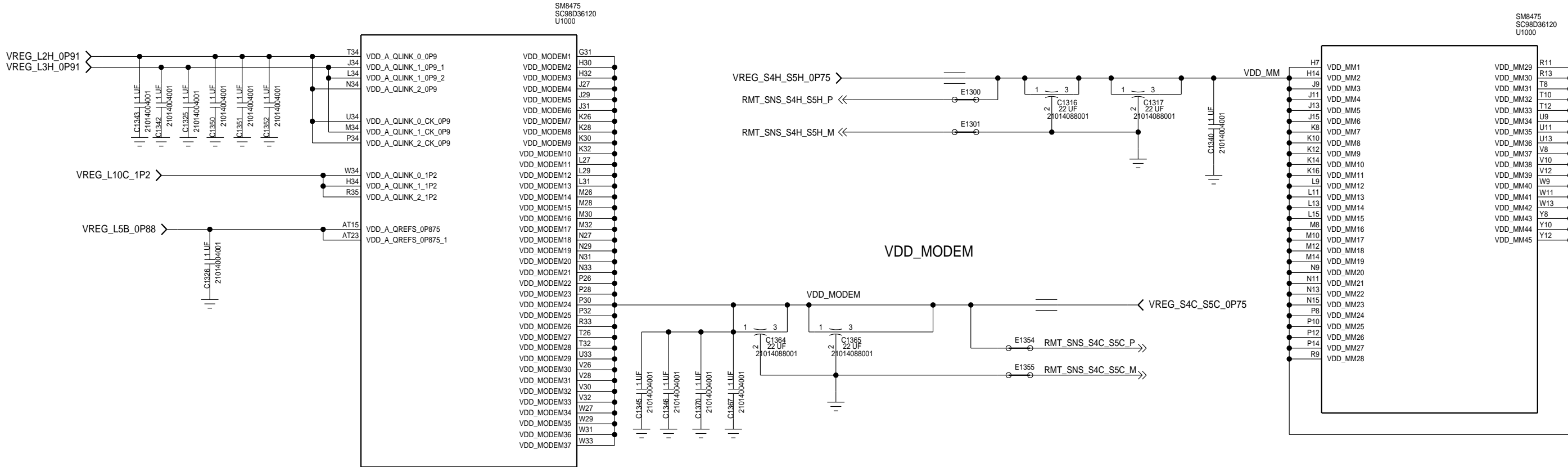
SM8475
SC98D36120
U1000




APPROVALS		<div> MOTOROLA</div> <div>MOBILE DEVICES</div>		
ENGINEER: MOTOROLA		BLOCK TITLE: ap_pmic		
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:53 2022				
<div>MOTOROLA CONFIDENTIAL RESTRICTED</div> <div>THE DRAWING ON THIS PRINT AND INFORMATION THEREWITH ARE PROPRIETARY TO MOTOROLA AND SHALL NOT BE USED OR DISCUSSED IN WHOLE OR IN PART WITHOUT MOTOROLA'S CONSENT. © COPYRIGHT, MOTOROLA. THIS DOES NOT IMPLY PUBLICATION</div>		B	PROJECT NAME frontier_sm8475.cpm	REV 01
		CAD FILE NAME:		PAGE 11 OF 77

SM8475: PWR 5

REFDES: 1350-1399

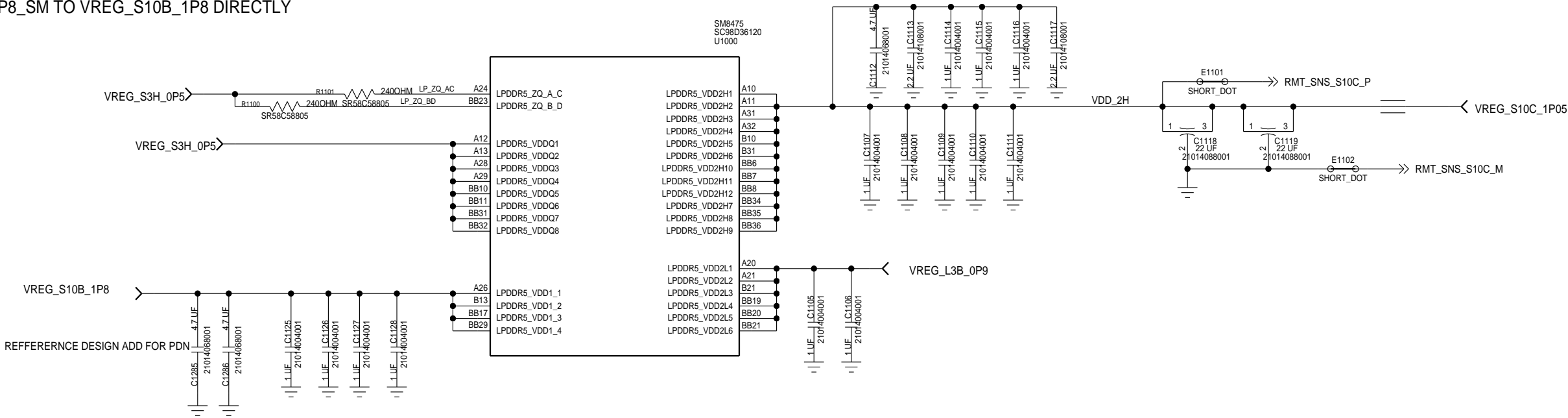



APPROVALS		 MOTOROLA MOBILE DEVICES	
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LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:54 2022		ap_pmic	
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		frontier_sm8475.cpm	
		REV 01	
		PAGE 12 OF 77	

SM8475: PWR_LPDDR5

REFDES: 1100-1199

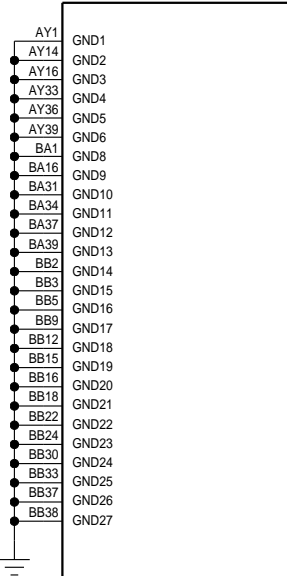
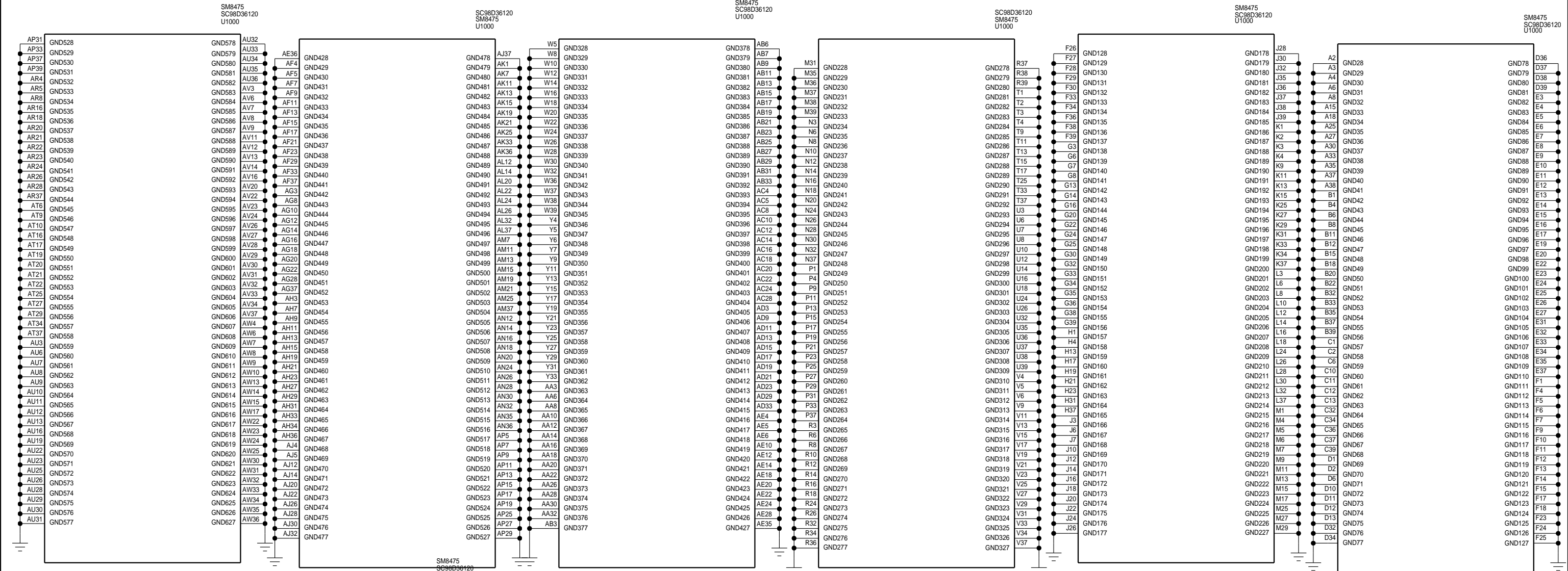
CONNECT VREG_S10B_1P8_SM TO VREG_S10B_1P8 DIRECTLY




APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA		BLOCK TITLE:	
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:54 2022		ap_pmic	
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		B frontier_sm8475.cpm	
		REV 01	
		PAGE 13 OF 77	

SM8475: GND

REFDES: 1100-1199

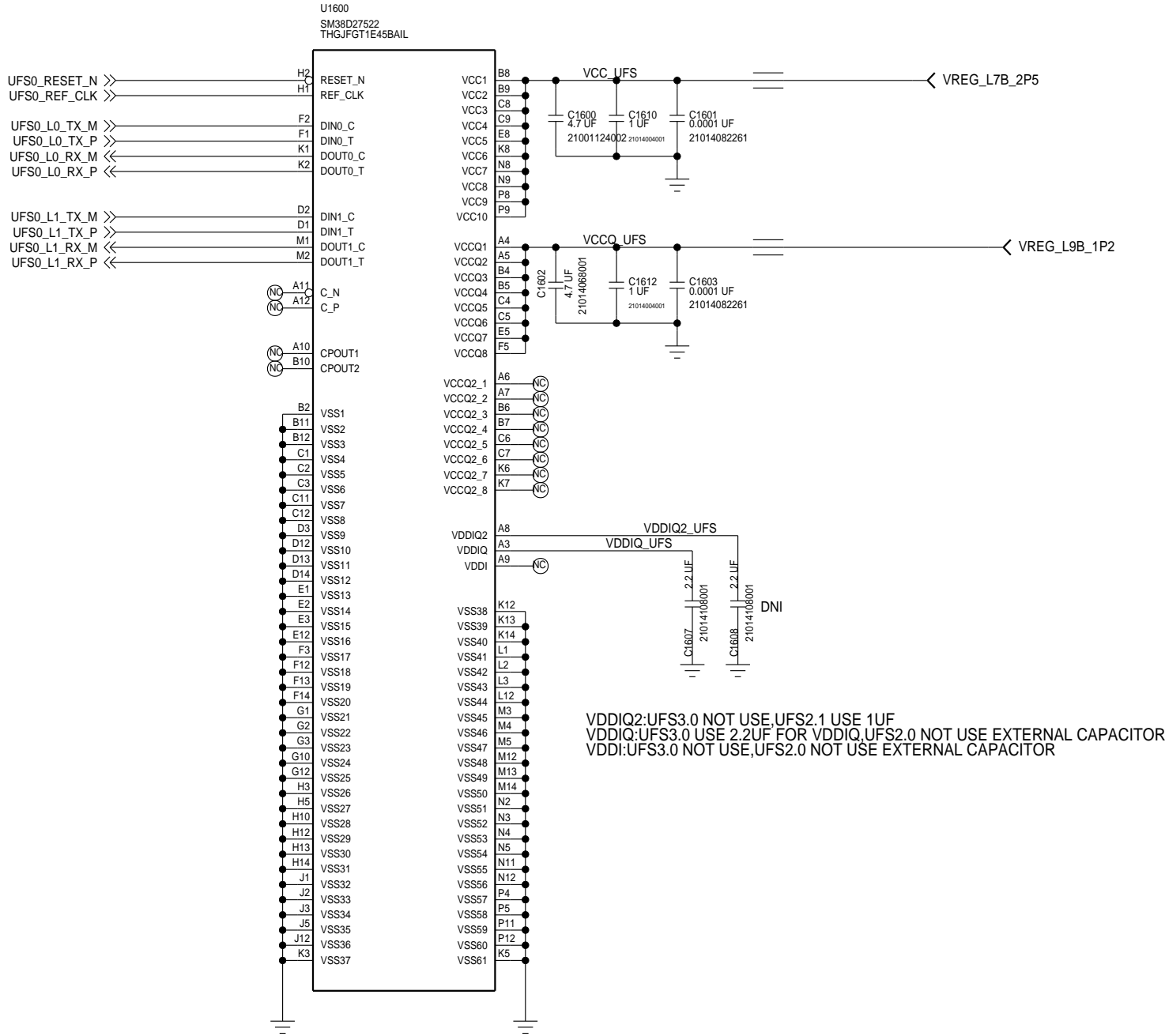
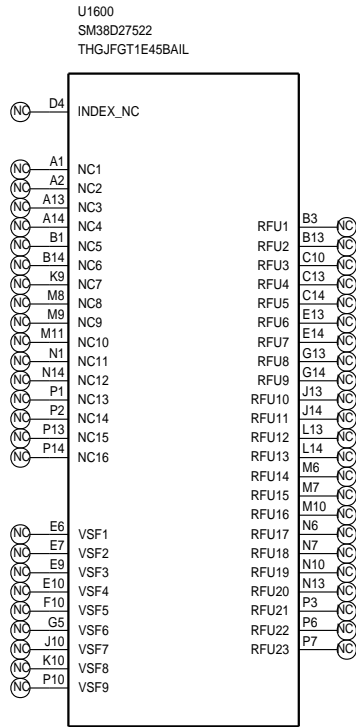
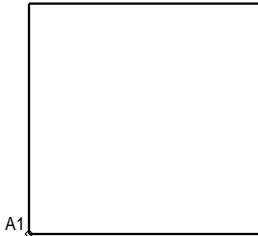


APPROVALS		<div> MOTOROLA</div> <div>MOBILE DEVICES</div>		
ENGINEER: MOTOROLA		BLOCK TITLE: <div>ap_pmic</div>		
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:55 2022				
<div>MOTOROLA CONFIDENTIAL RESTRICTED</div> <div>THE DRAWING ON THIS PRINT AND INFORMATION THEREWITH ARE PROPRIETARY TO MOTOROLA AND SHALL NOT BE USED OR DISCUSSED IN WHOLE OR IN PART WITHOUT MOTOROLA'S CONSENT. © COPYRIGHT, MOTOROLA. THIS DOES NOT IMPLY PUBLICATION</div>		PROJECT NAME		REV
		B frontier_sm8475.cpm		01
		CAD FILE NAME:		PAGE 14 OF 77


MEMORY: UFS3.1/POP LPDDR5X

REFDES: 1600-1699

U1001
SM38C85832
K3LK4K40CM

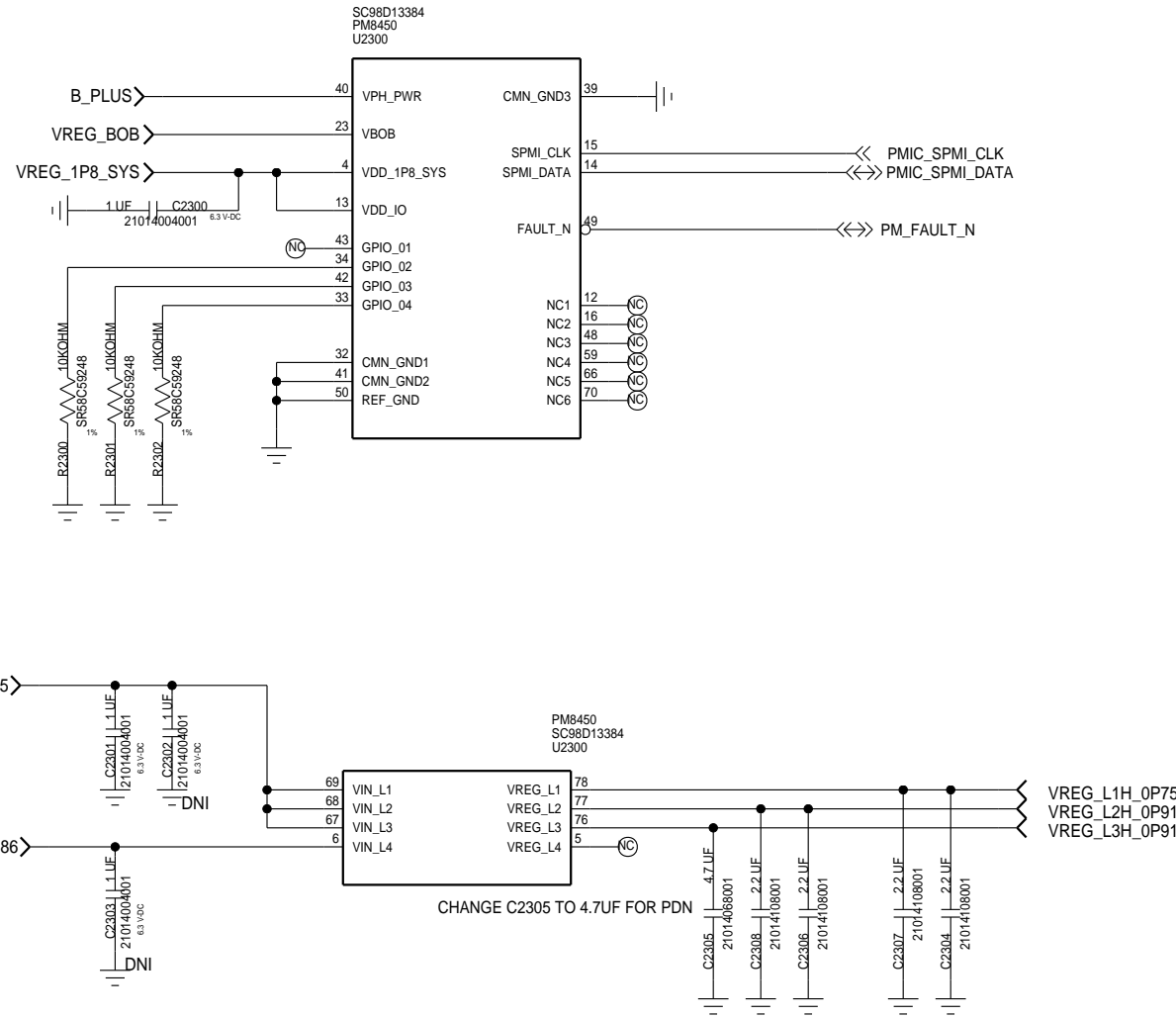



VDDIQ2:UFS3.0 NOT USE,UFS2.1 USE 1UF
VDDIQ:UFS3.0 USE 2.2UF FOR VDDIQ,UFS2.0 NOT USE EXTERNAL CAPACITOR
VDDI:UFS3.0 NOT USE,UFS2.0 NOT USE EXTERNAL CAPACITOR

APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA		BLOCK TITLE: ap_pmic	
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:52 2022			
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		CAD FILE NAME: PAGE 15 OF 77	

PM8450: CTRL/LDOS

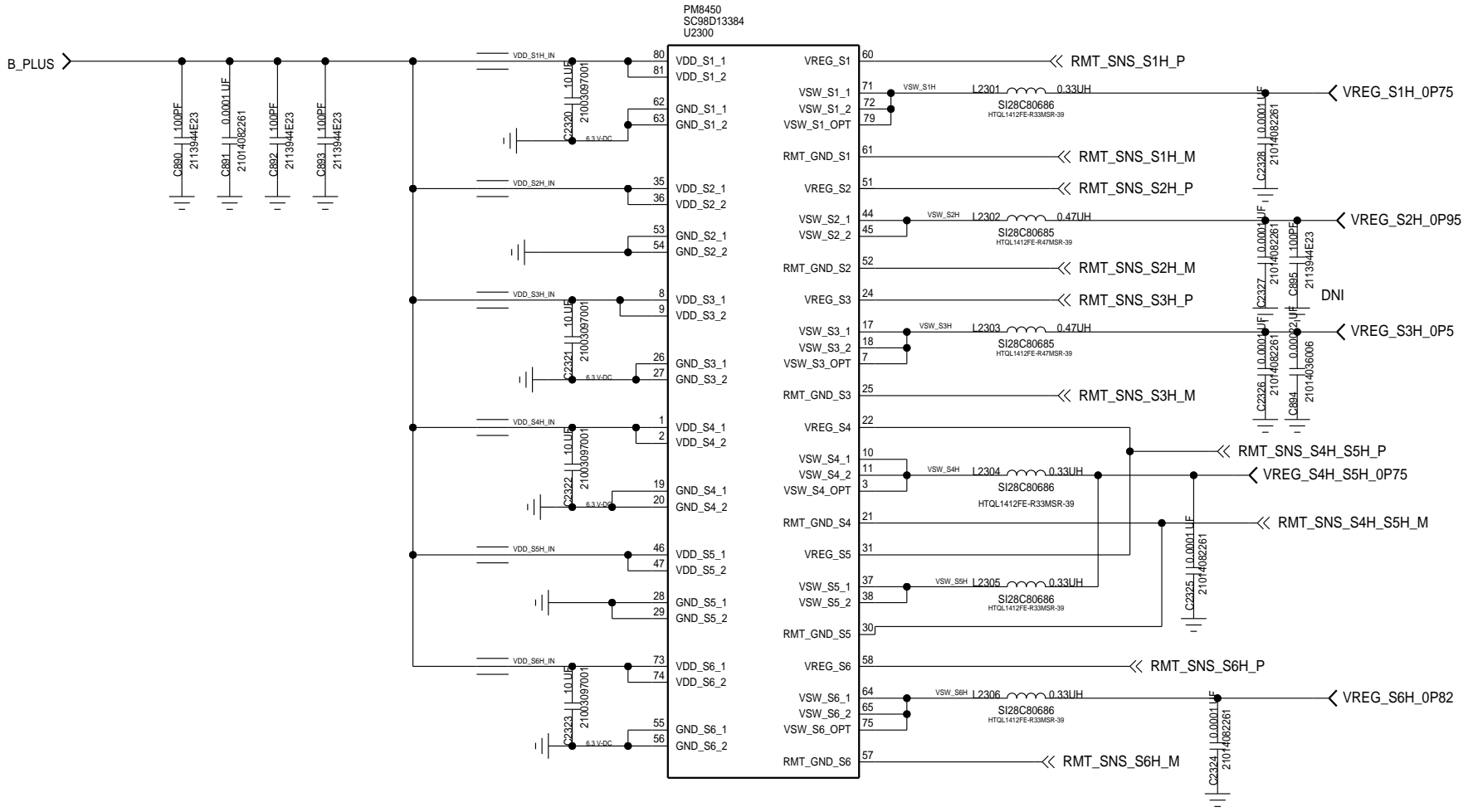
REFDES: 2300-2399




APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA		BLOCK TITLE:	
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:51 2022		ap_pmic	
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		B frontier_sm8475.cpm	
		REV 01	
		CAD FILE NAME:	
		PAGE 16 OF 77	

PM8450: BUCKS

REFDES: 2300-2399



APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA		BLOCK TITLE:	
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:53 2022		ap_pmic	
MOTOROLA CONFIDENTIAL RESTRICTED <small>THE DRAWING ON THIS PRINT AND INFORMATION THERWITH ARE PROPRIETARY TO MOTOROLA AND SHALL NOT BE USED OR DISCUSSED IN WHOLE OR IN PART WITHOUT MOTOROLA'S CONSENT. © COPYRIGHT, MOTOROLA. THIS DOES NOT IMPLY PUBLICATION</small>		PROJECT NAME	
		B frontier_sm8475.cpm	
		REV 01	
		CAD FILE NAME:	
		PAGE 17 OF 77	

D

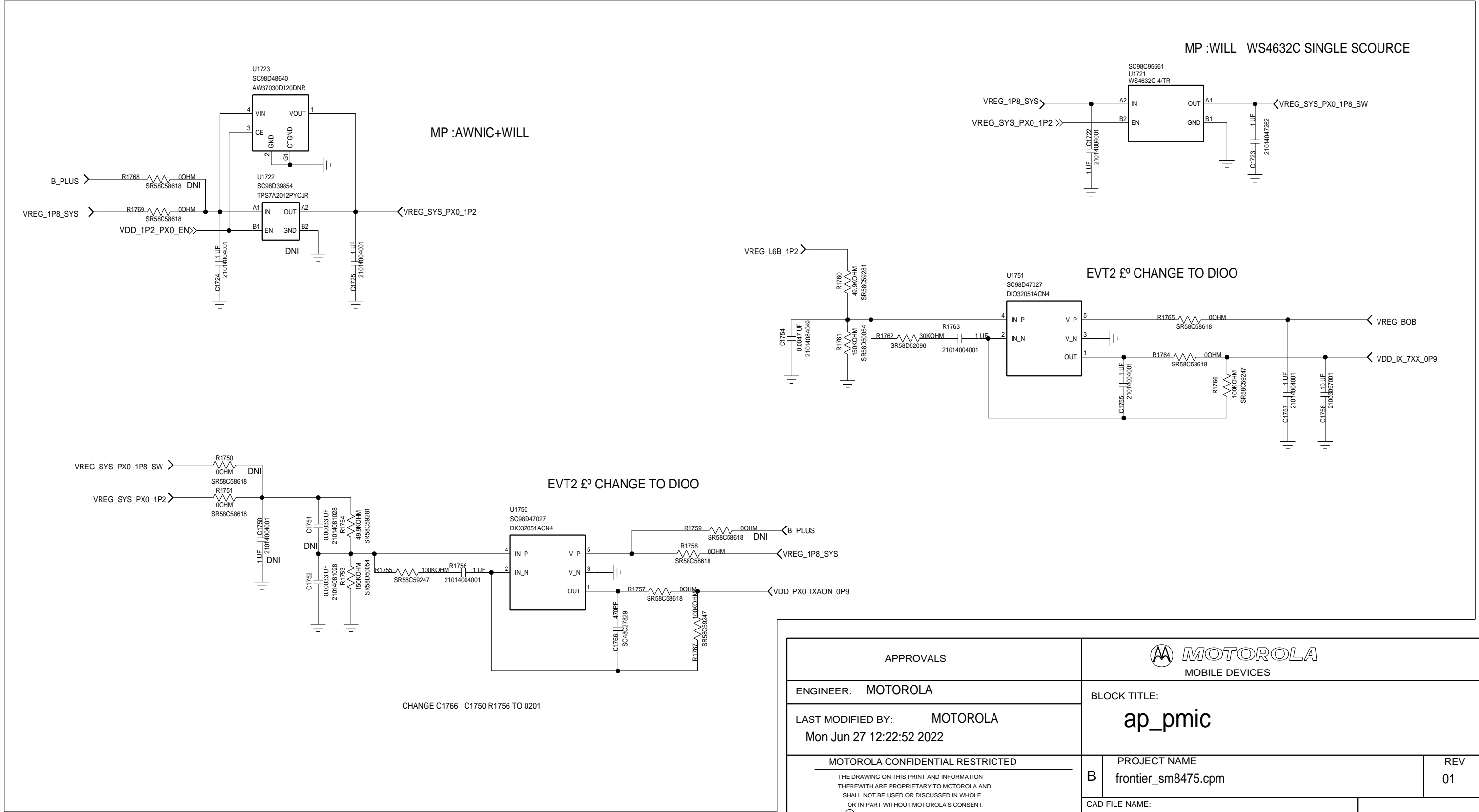


B

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EXT_PART_OPA

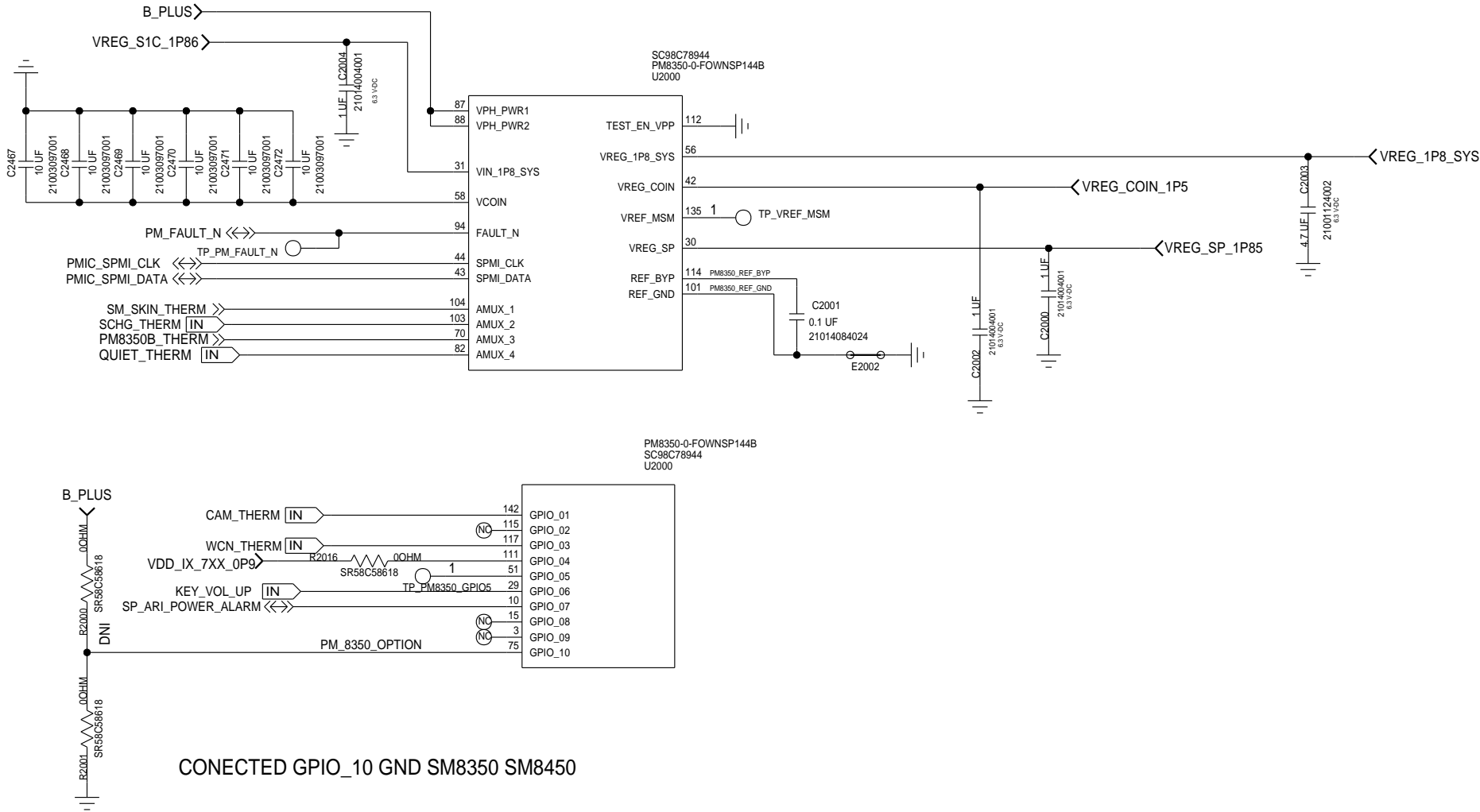
REFDES: 1700-1799



APPROVALS		MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA		BLOCK TITLE:	
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:52 2022		ap_pmic	
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		B frontier_sm8475.cpm	REV 01
CAD FILE NAME:			PAGE 19 OF 77

PM8350: CTRL/GPIO/AMUX

REFDES: 2000-2099



DEDICATED TRACE FROM REF_BYP TO CAP.
DEDICATED TRACE FROM REF_GND TO CAP.
DEDICATED VIA TO MAIN GROUND PLANE RIGHT UNDER REF_GND PIN
OR AS CLOSE TO THE PIN AS POSSIBLE.
DO NOT ADD VIA AT C117



REF_BYP AND REF_GND SHOULD BE
ROUTED AWAY FROM NOISY TRACES

CRITICAL LAYOUT GUIDELINES FOR CLOCKS
COUPLING TO ANY RFCLK OR LNBCLK OUTPUT FROM EACH AGGRESSOR SHOULD BE < 50 FF.
1. SMPS COMPONENTS (BUCK, BOOST, CHARGER)
2. VSW_SX TRACES (BUCK, BOOST, CHARGER)
3. ALL OTHER RFCLK, LNBCLK
4. ANY HIGH SPEED DIGITAL SIGNAL
5. ANY OTHER NOISY SIGNALS

CRITICAL LAYOUT GUIDELINES FOR VREF_RF (GO/PMICLAYOUTCHECKLIST)
PREFERRED: SHORT, DEDICATED ROUTE TO VREG_RF CAP.
AWAY FROM NOISY SIGNALS AND DEDICATED VIA TO MAIN GROUND PLANE AT CAP OR PMIC PIN.
ACCEPTABLE: DEDICATED VIA DIRECTLY TO MAIN GROUND PLANE AT THE GND_CLKSXO PIN
AND AT VREG_RF CAP (WITHOUT ROUTING TO CAP).
DO NOT CONNECT TO ANY OTHER GROUND.
LOOP DCR MUST BE <1000 M?.
LOOP INDUCTANCE MUST BE <3 NH

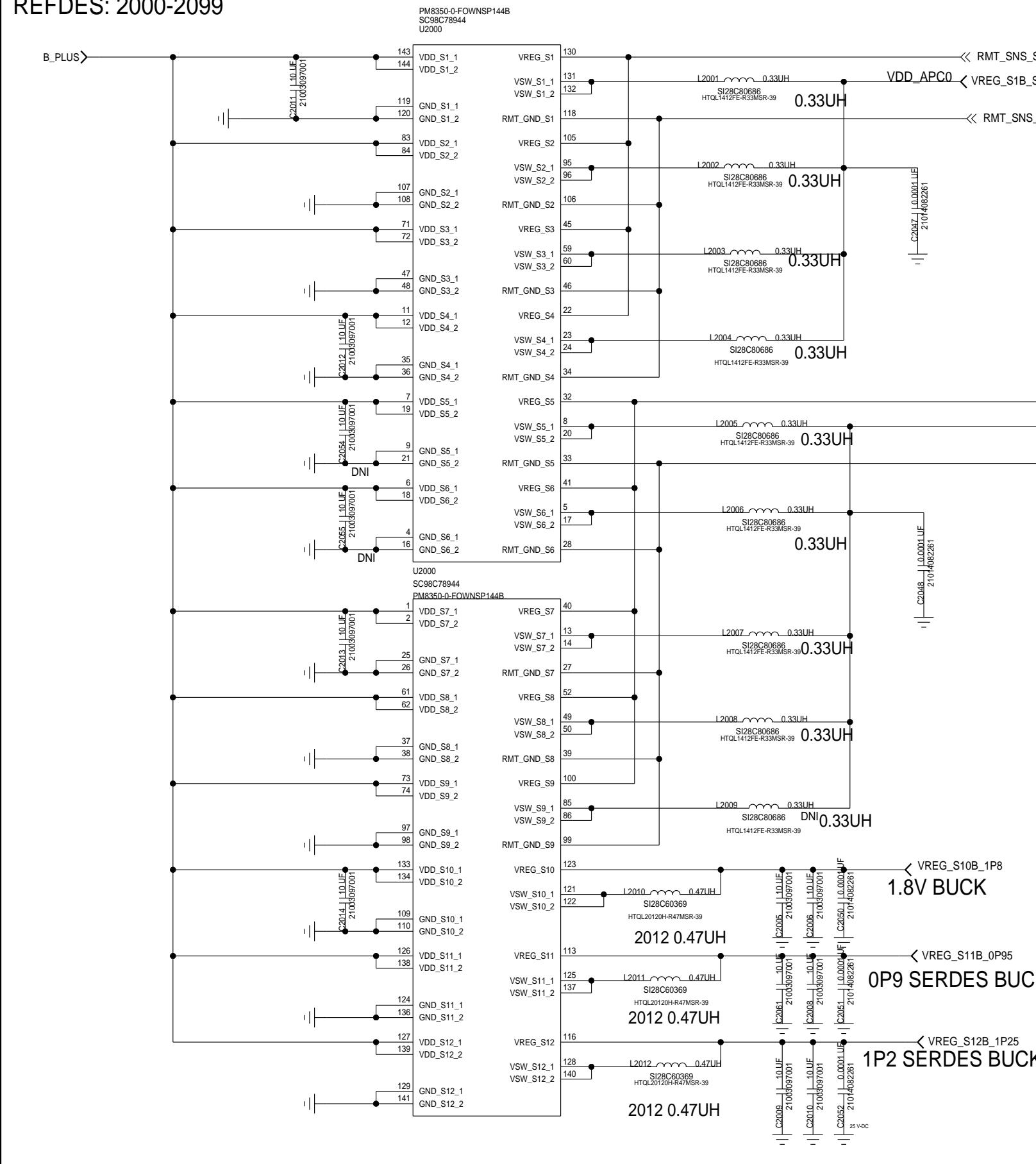
GND_XOADC
SKINNY TRACE TO XTAL COMPONENTS GROUND.
ONE DEDICATED VIA TO MAIN GROUND PLACE AS CLOSE TO PMIC PIN AS POSSIBLE


CRITICAL LAYOUT GUIDELINES FOR VREG_XO
SHORT, DEDICATED ROUTE TO VREG_XO CAP,
AWAY FROM NOISY SIGNALS AND DEDICATED VIA TO MAIN GROUND PLANE AT CAP.
DO NOT CONNECT TO ANY OTHER GROUND EXCEPT THE MAIN GND PLANE.

APPROVALS		<div> MOTOROLA</div> <div>MOBILE DEVICES</div>	
ENGINEER: MOTOROLA		<div>BLOCK TITLE:</div> <div>ap_pmic</div>	
LAST MODIFIED BY: MOTOROLA <div>Mon Jun 27 12:22:51 2022</div>			
<div>MOTOROLA CONFIDENTIAL RESTRICTED</div> <div>THE DRAWING ON THIS PRINT AND INFORMATION THEREWITH ARE PROPRIETARY TO MOTOROLA AND SHALL NOT BE USED OR DISCUSSED IN WHOLE OR IN PART WITHOUT MOTOROLA'S CONSENT.</div> <div> COPYRIGHT, MOTOROLA. THIS DOES NOT IMPLY PUBLICATION</div>		<div><div>B</div><div>PROJECT NAME</div><div>frontier_sm8475.cpm</div></div> <div>REV</div> <div>01</div>	
		<div>CAD FILE NAME:</div> <div>PAGE 20 OF 77</div>	

PM8350: BUCKS

REFDES: 2000-2099



APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA		BLOCK TITLE:	
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:51 2022		ap_pmic	
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		frontier_sm8475.cpm	
		REV	01
CAD FILE NAME:		PAGE 21 OF 77	

D

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B

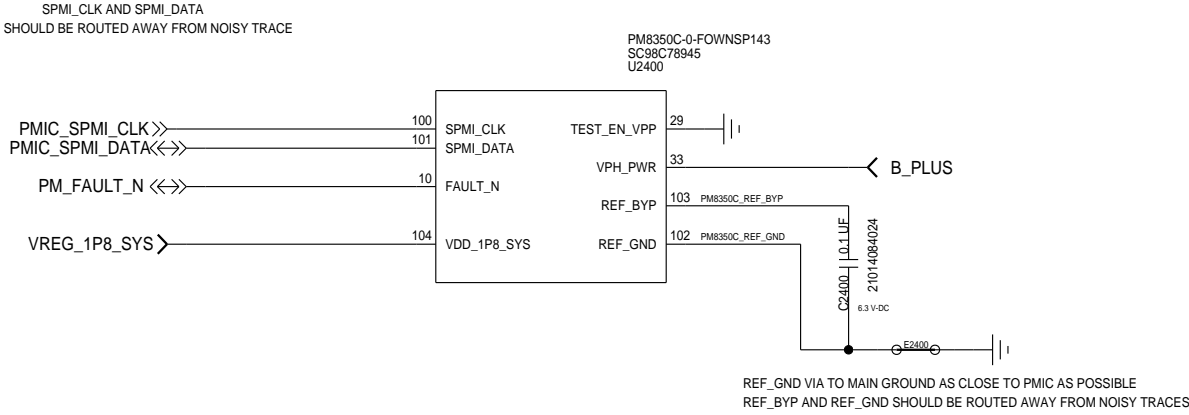
A


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A

PM8350C: CTRL/GPIO

REFDES: 2400-2499



APPROVALS		<div> MOTOROLA</div> <div>MOBILE DEVICES</div>	
ENGINEER: MOTOROLA		BLOCK TITLE: ap_pmic	
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:53 2022			
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		CAD FILE NAME:	PAGE 23 OF 77


REFDES: 2400-2499



VDD_MXC

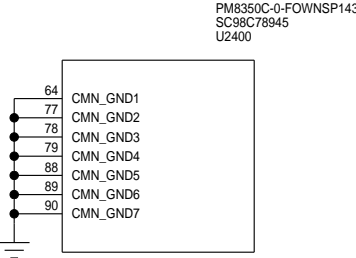
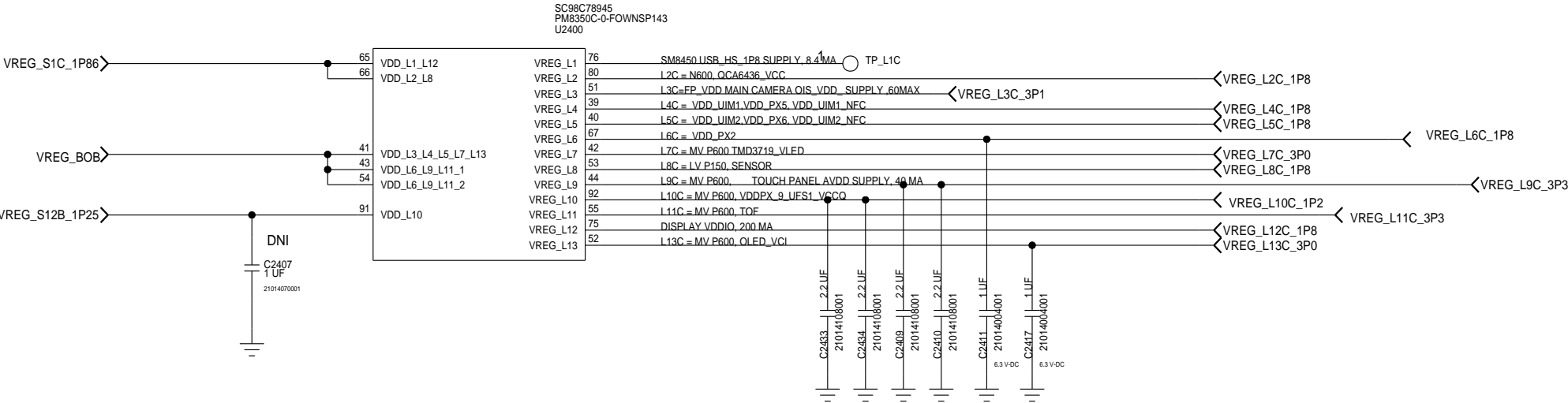
VDD_MODEM (DUAL PHASE BUCK)


TRI PHASE , VDD_CX

APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA	BLOCK TITLE: <div>ap_pmic</div>		
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:53 2022			
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		CAD FILE NAME:	PAGE 24 OF 77

PM8350C: LDOS/GND

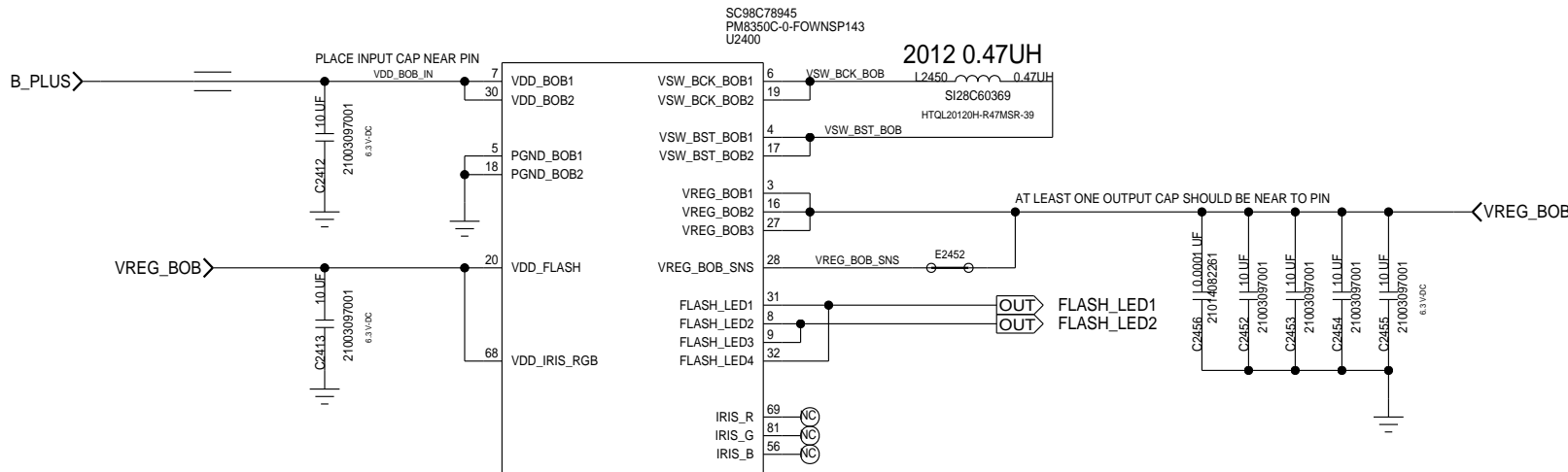
REFDES: 2400-2499




APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA		BLOCK TITLE: ap_pmic	
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:52 2022			
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		CAD FILE NAME: PAGE 25 OF 77	

PM8350C: BOB/FLASH

REFDES:2400-2499

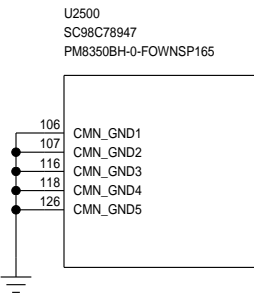
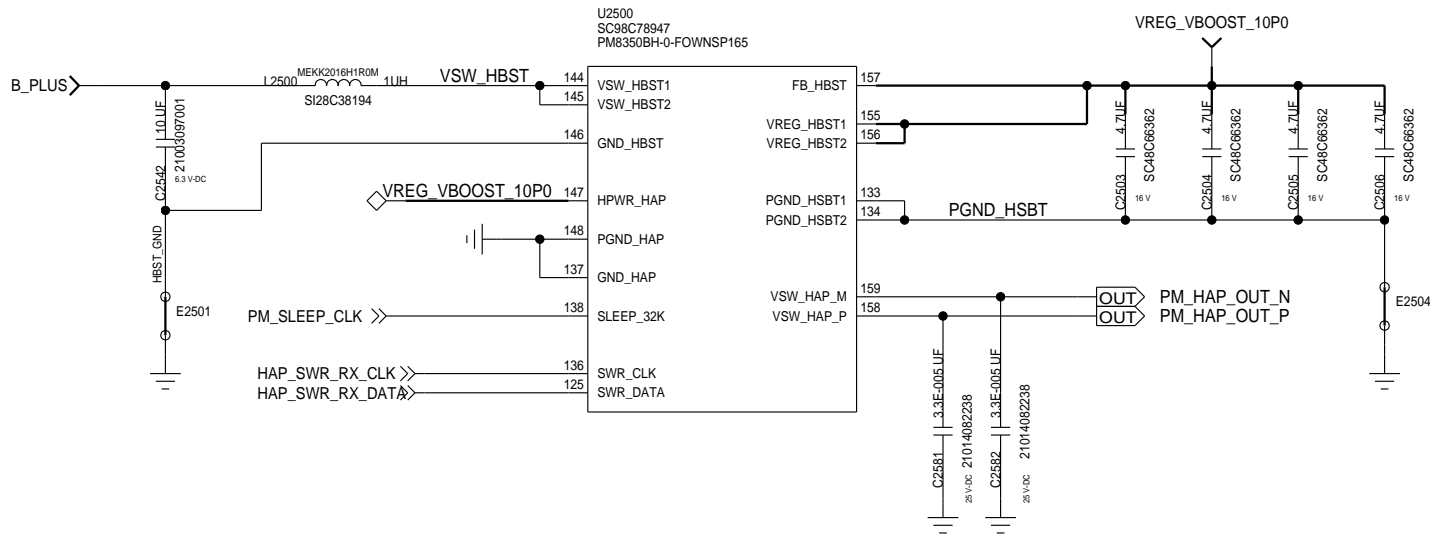
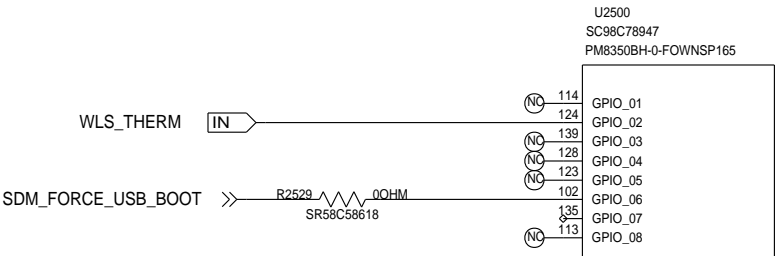
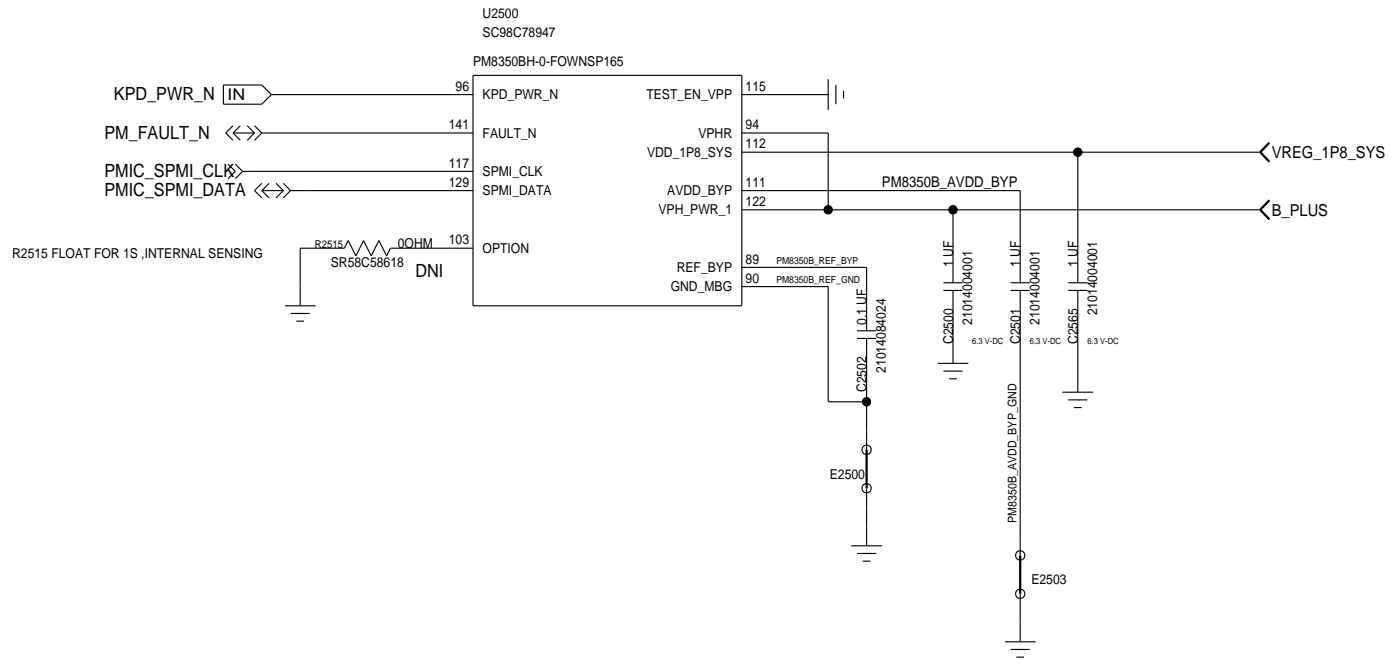



APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA		BLOCK TITLE:	
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:53 2022		ap_pmic	
MOTOROLA CONFIDENTIAL RESTRICTED <small>THE DRAWING ON THIS PRINT AND INFORMATION THEREWITH ARE PROPRIETARY TO MOTOROLA AND SHALL NOT BE USED OR DISCUSSED IN WHOLE OR IN PART WITHOUT MOTOROLA'S CONSENT. © COPYRIGHT, MOTOROLA. THIS DOES NOT IMPLY PUBLICATION</small>		PROJECT NAME	
		B frontier_sm8475.cpm	REV 01
		CAD FILE NAME:	
		PAGE 26 OF 77	

PM8350BH: CTRL/HAPTICS

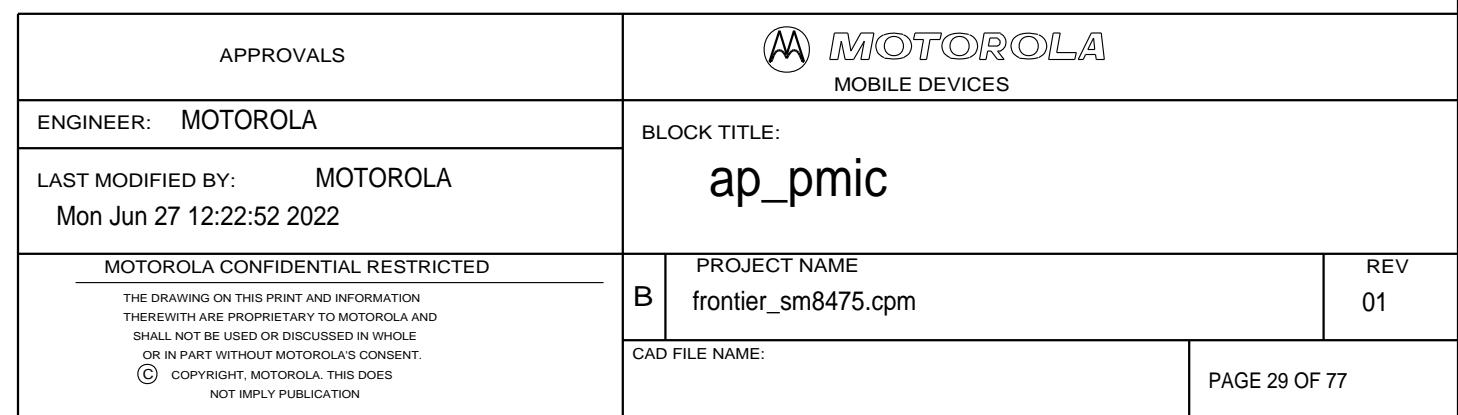
REFDES: 2500-2599

REV A: ADD 00HM R3234 RESISTOR FROM PM8350B GPIO_06 TO SM8350 GPIO_43 TO PROVIDE THE ABILITY TO DRIVE GPIO_06 HIGH WHEN FACTORY MODE CABLE IS ATTACHED. THIS WILL ALLOW THE HANDSET TO ENTER EDL MODE




APPROVALS		<div> MOTOROLA</div> <div>MOBILE DEVICES</div>		
ENGINEER: MOTOROLA		BLOCK TITLE: ap_pmic		
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:51 2022				
<div>MOTOROLA CONFIDENTIAL RESTRICTED</div> <div>THE DRAWING ON THIS PRINT AND INFORMATION THEREWITH ARE PROPRIETARY TO MOTOROLA AND SHALL NOT BE USED OR DISCUSSED IN WHOLE OR IN PART WITHOUT MOTOROLA'S CONSENT. © COPYRIGHT, MOTOROLA. THIS DOES NOT IMPLY PUBLICATION</div>		B	PROJECT NAME frontier_sm8475.cpm	REV 01
		CAD FILE NAME:		PAGE 27 OF 77

REFDES: 4900-4999




SMB1393: 68W CHARGING

REFDES: 2700-2799

APPROVALS		<div> MOTOROLA</div> <div>MOBILE DEVICES</div>		
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LAST MODIFIED BY: MOTOROLA Thu Jan 20 13:56:07 2022				
<div>MOTOROLA CONFIDENTIAL RESTRICTED</div> <div>THE DRAWING ON THIS PRINT AND INFORMATION THEREWITH ARE PROPRIETARY TO MOTOROLA AND SHALL NOT BE USED OR DISCUSSED IN WHOLE OR IN PART WITHOUT MOTOROLA'S CONSENT. © COPYRIGHT, MOTOROLA. THIS DOES NOT IMPLY PUBLICATION</div>		B	PROJECT NAME frontier_sm8475.cpm	REV 01
		CAD FILE NAME:		PAGE 30 OF 77


AUDIO: QUALCOMM CODEC

REFDES: 4650-4699

APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA		BLOCK TITLE:	
LAST MODIFIED BY: MOTOROLA Thu Feb 10 10:52:58 2022		xmcs	
<div>MOTOROLA CONFIDENTIAL RESTRICTED</div> <div>THE DRAWING ON THIS PRINT AND INFORMATION THEREWITH ARE PROPRIETARY TO MOTOROLA AND SHALL NOT BE USED OR DISCUSSED IN WHOLE OR IN PART WITHOUT MOTOROLA'S CONSENT. © COPYRIGHT, MOTOROLA. THIS DOES NOT IMPLY PUBLICATION</div>	B	PROJECT NAME frontier_sm8475.cpm	REV 01
	CAD FILE NAME:		PAGE 31 OF 77

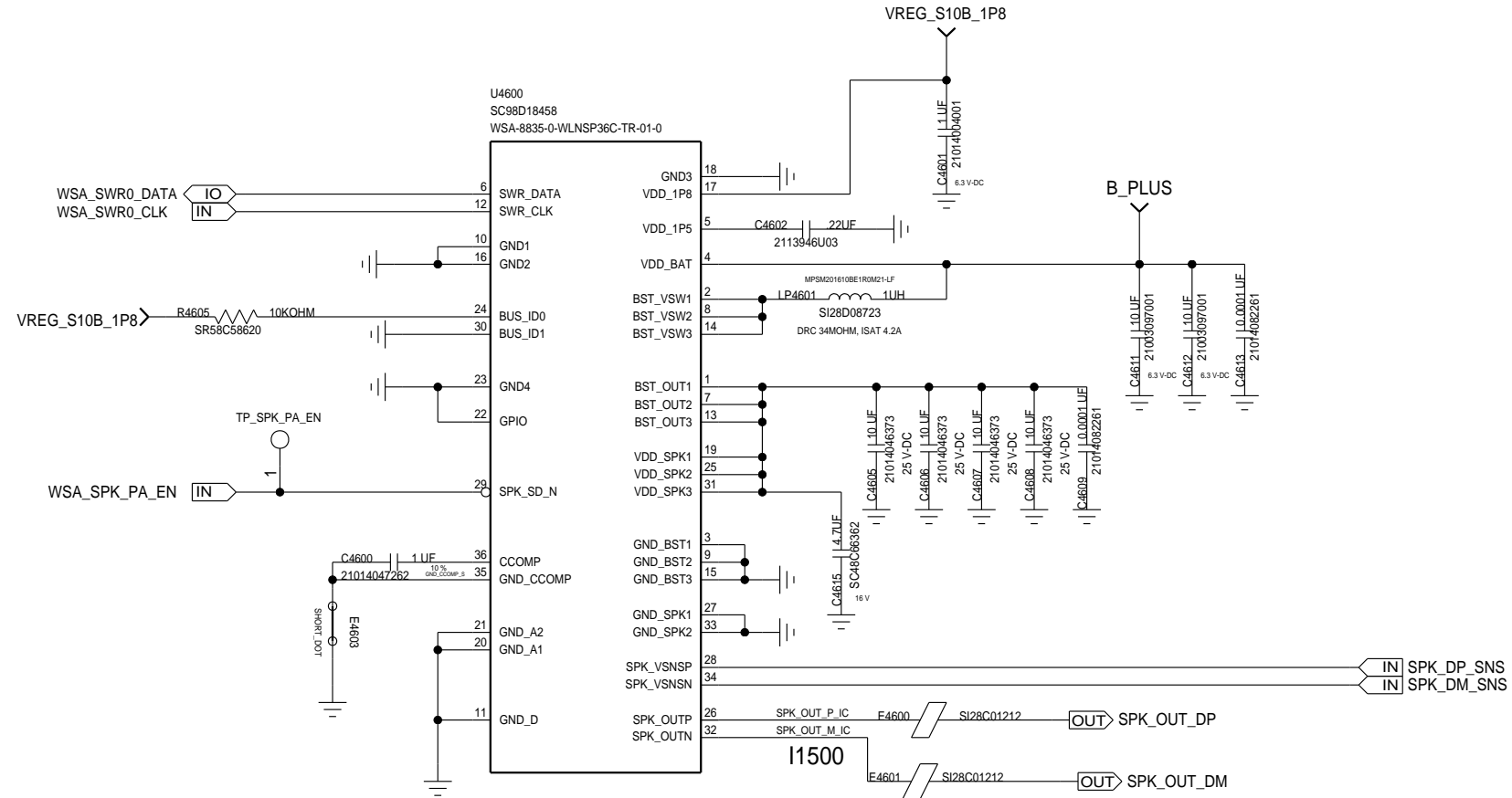
AUDIO: QUALCOMM SMART BOOST

REFDES: 4600-4649

ENGINEER: MOTOROLA	 MOTOROLA		
DRAWN BY: MOTOROLA			
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DOC CTRL CHK:	<div><DESIGN_NAME></div> <div>SHEET TITLE</div>		
MFG CTRL CHK:			
QA CTRL CHK:	REV: 01	DWG Number:	PAGE 32 OF 77
LAST MODIFIED BY:		MOTOROLA	
Mon Jun 27 12:22:56 2022			

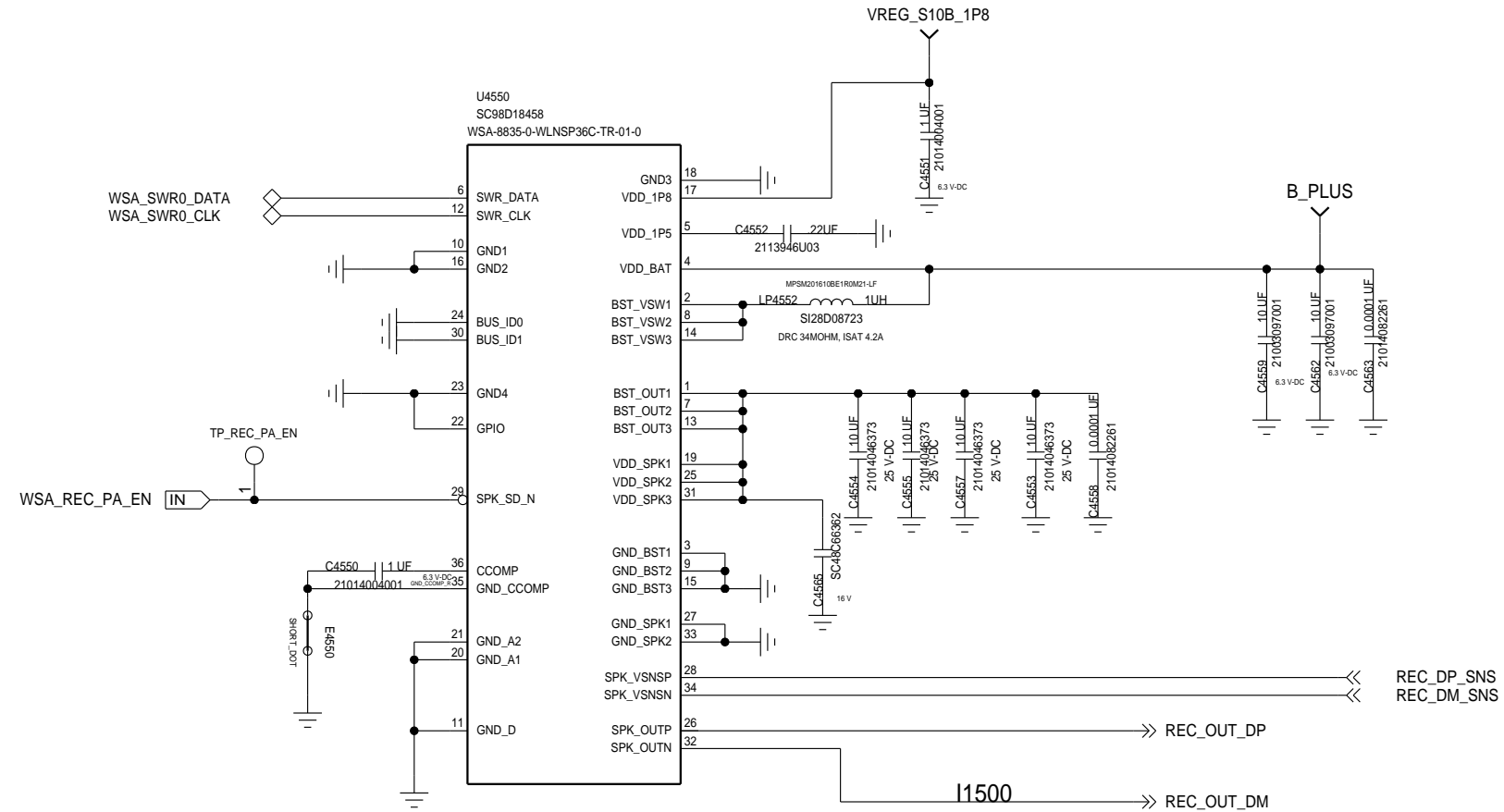
SPEAKER SMART PA

REFDES: 4600-4699




RECEIVER SMART PA

REFDES: 4550-4599




AUDIO: AUDIO SWITCH

REFDES: 4650-4699

ENGINEER: MOTOROLA			
DRAWN BY: MOTOROLA			
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MFG CTRL CHK:			
QA CTRL CHK:	REV: 01	DWG Number:	PAGE 33 OF 77
LAST MODIFIED BY: MOTOROLA Thu Feb 10 10:53:10 2022			

8		7		6		5		4		3		2		1	
AUDIO: HAPTICS															
REFDES: 4900-4999															

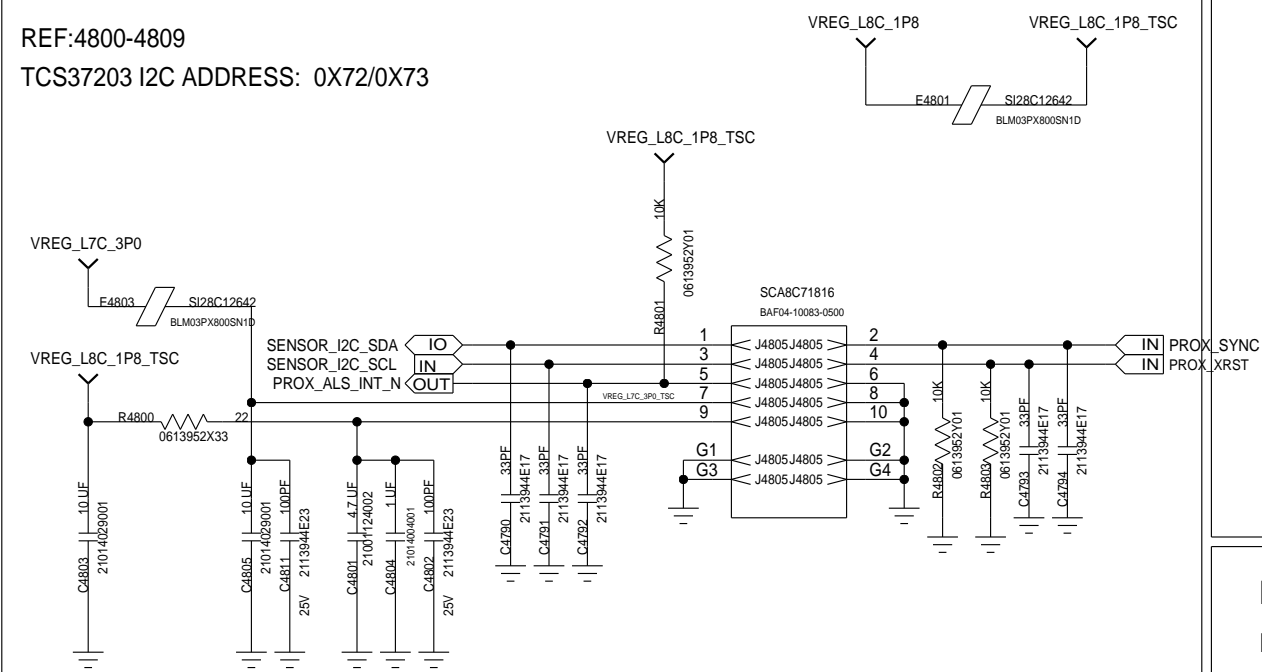
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ENGINEER: MOTOROLA		BLOCK TITLE: xmcs	
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:56 2022			
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		CAD FILE NAME:	PAGE 35 OF 77

SENSOR: MOTIONS

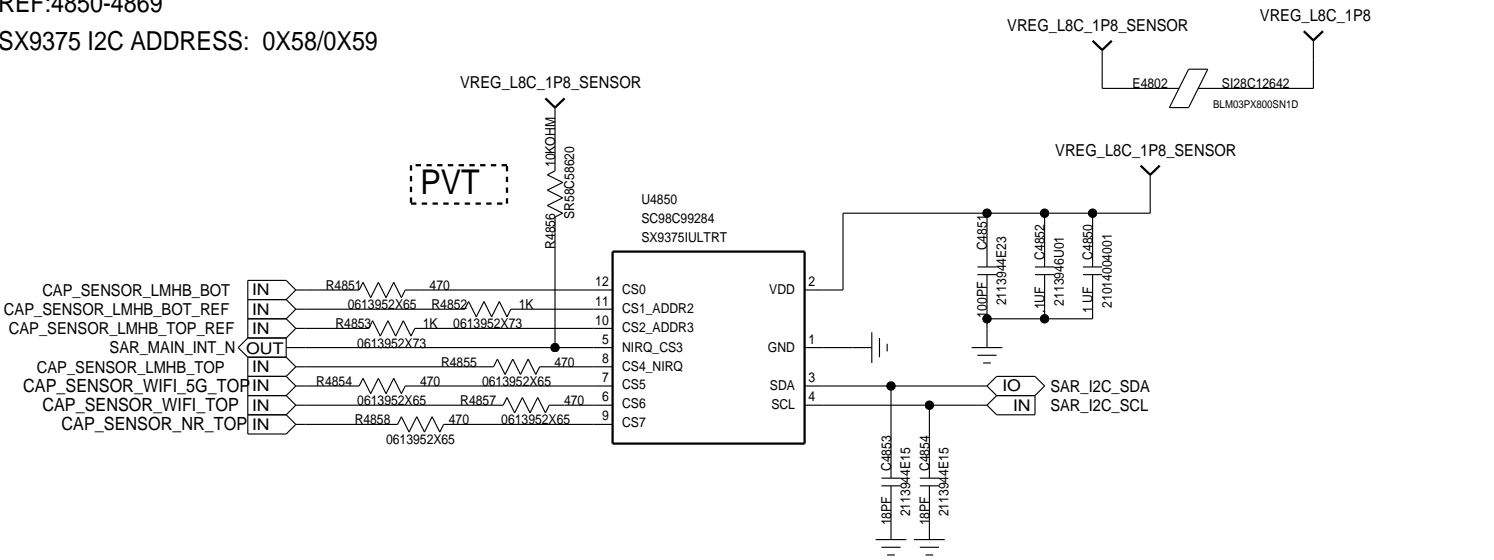
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PROXIMITY / AMBIENT LIGHT

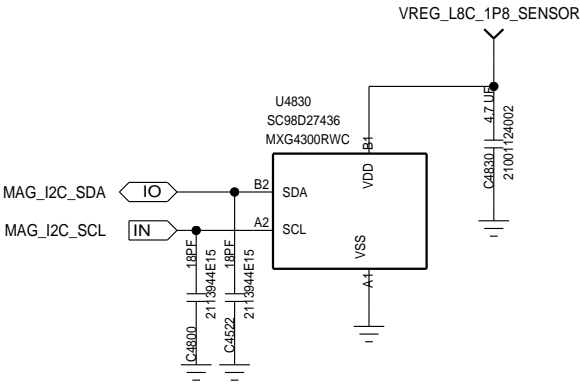
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TCS37203 I2C ADDRESS: 0X72/0X73



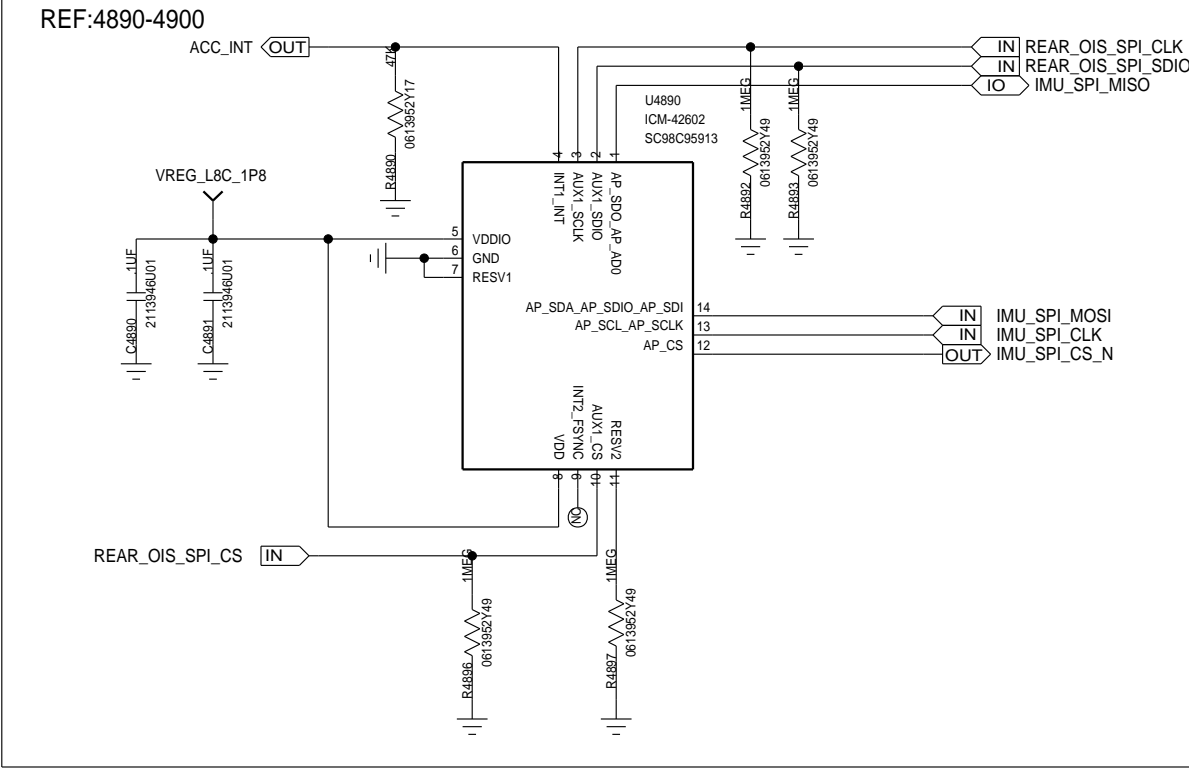
SAR SENSOR
REF:4850-4869
SX9375 I2C ADDRESS: 0X58/0X59




MAGNETOMETER
REF:4830-4839
MXG4300RWC I2C ADDRESSD: 0X18/0X19
QMC6308 I2C ADDRESS: 0X58/0X59



ACCELEROMETER/GYROSCOPE

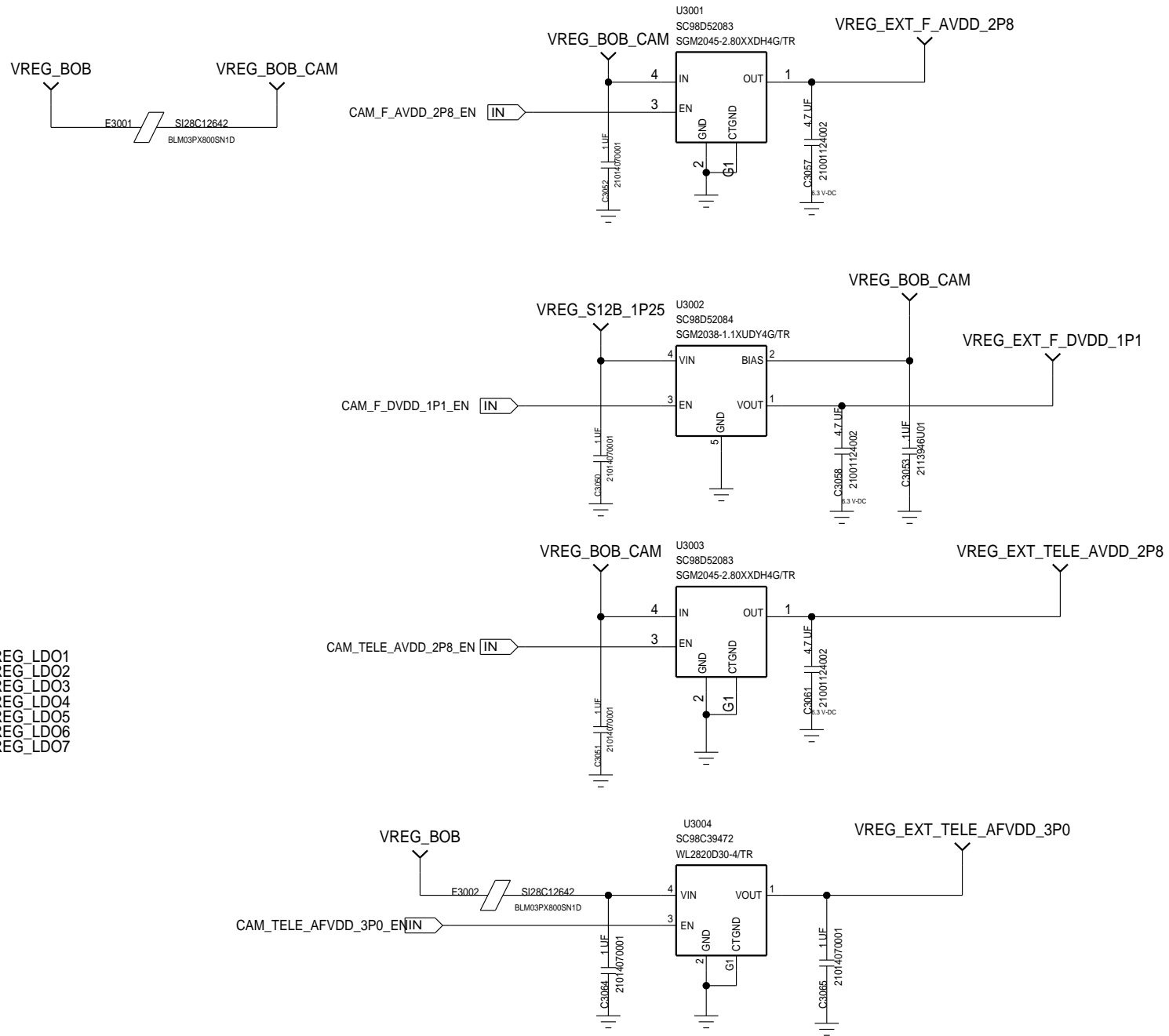
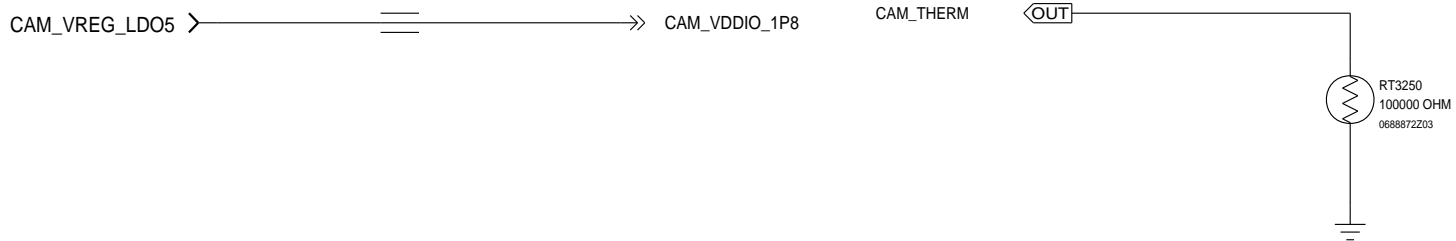
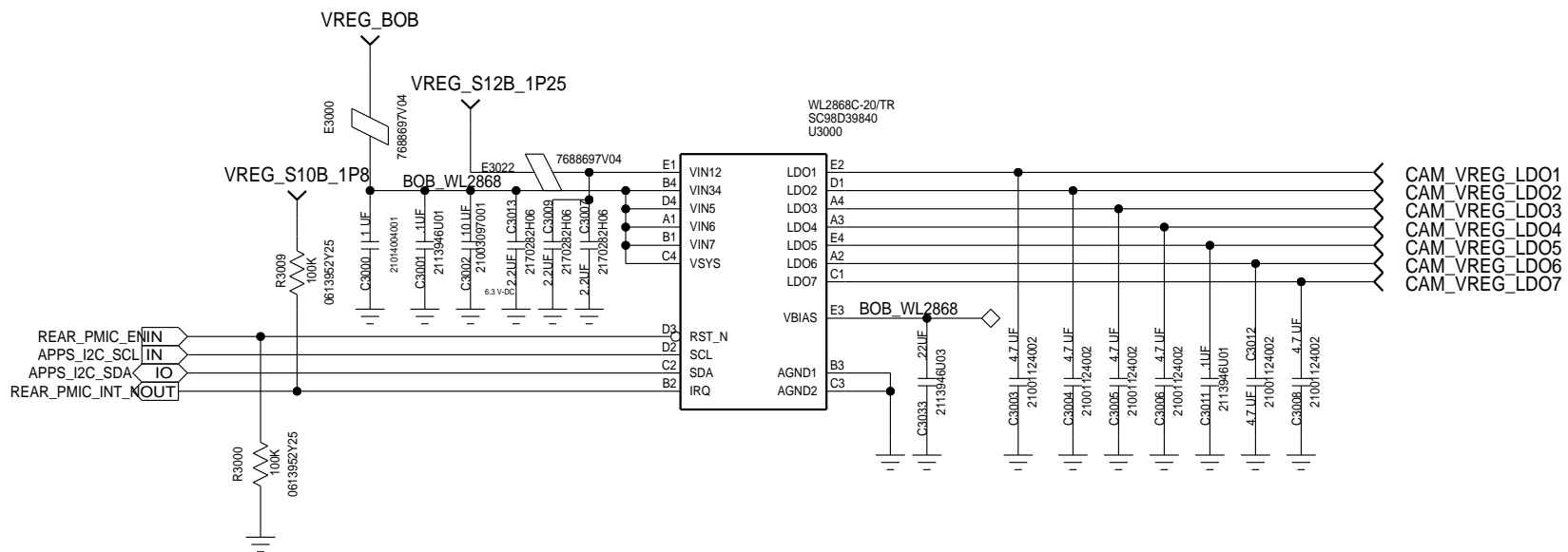
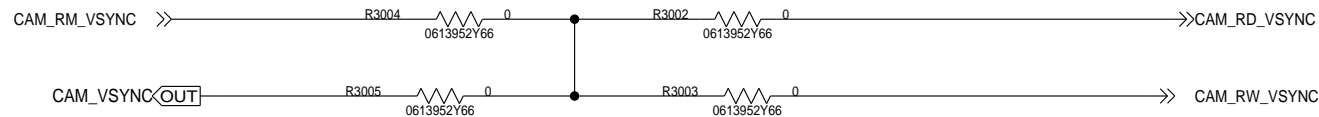



APPROVALS		 MOBILE DEVICES	
ENGINEER: MOTOROLA		BLOCK TITLE:	
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:56 2022		xmcs	
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		CAD FILE NAME:	
		REV 01	
		PAGE 36 OF 77	

IMG: POWER MANAGEMENT

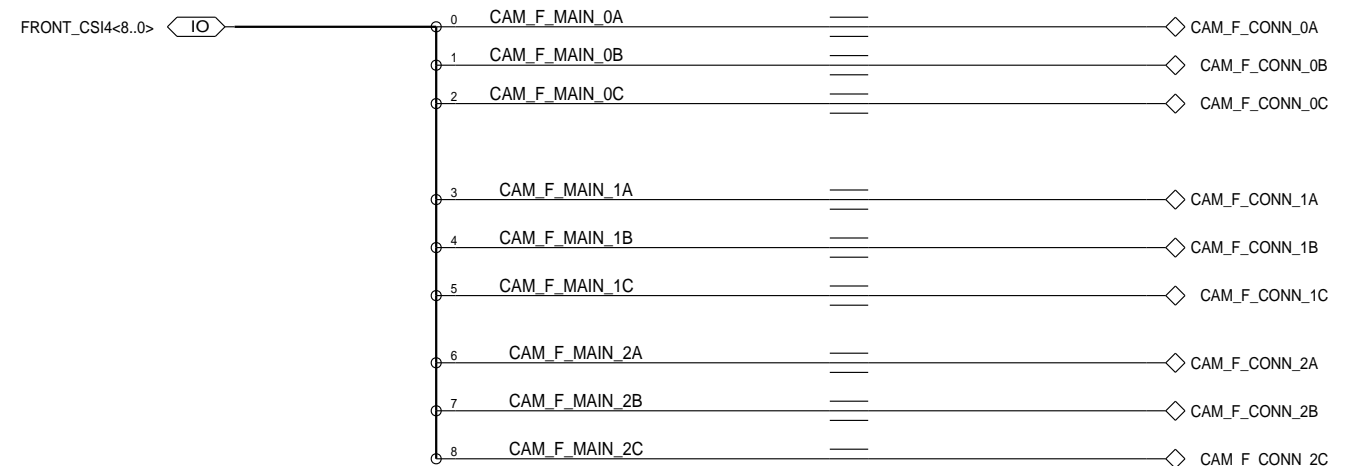
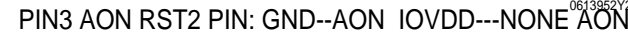
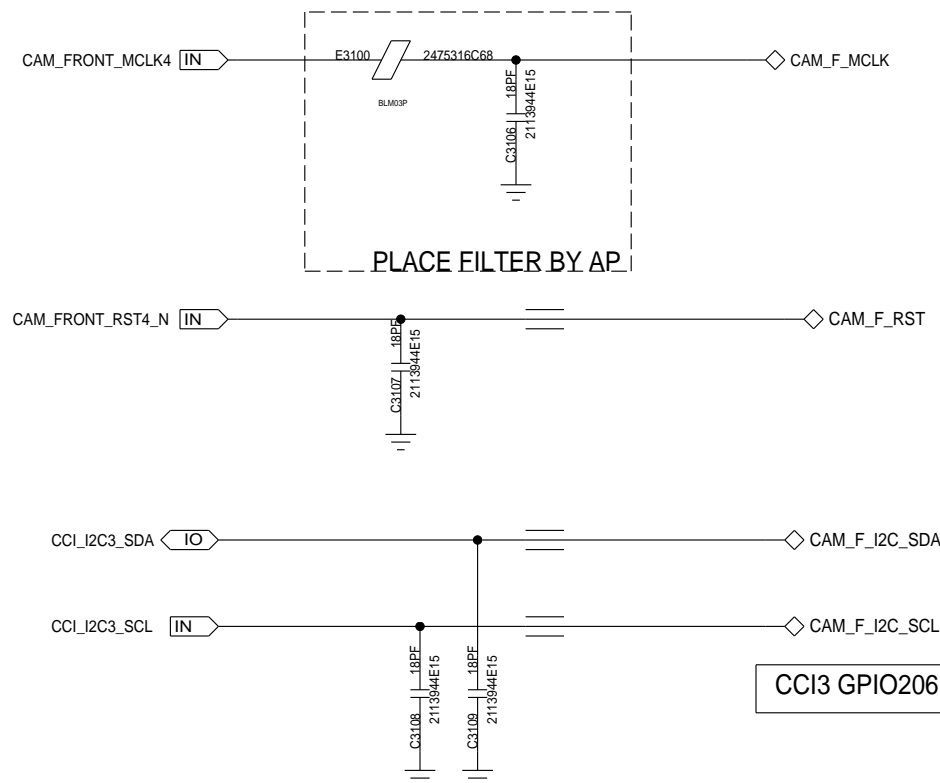
REFDES: 3000-3099


SLG5BM43670 I2C ADDRESS: 0XEA/0XEB



APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA	BLOCK TITLE: <h1 style="text-align: center;">multimedia</h1>		
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:59 2022			
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		CAD FILE NAME:	PAGE 37 OF 77

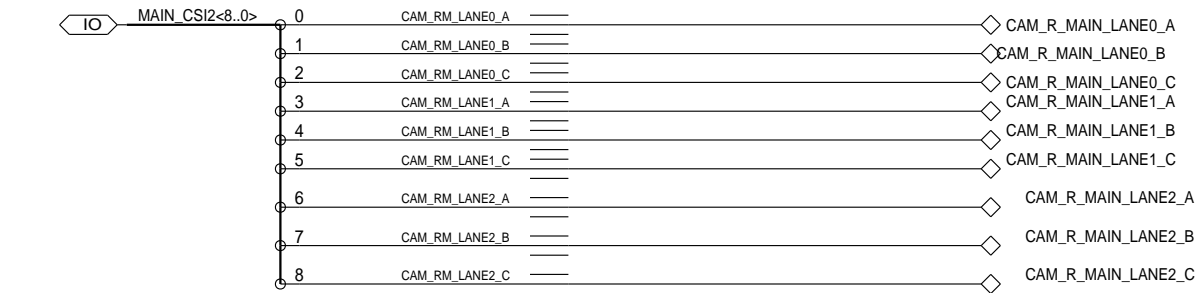
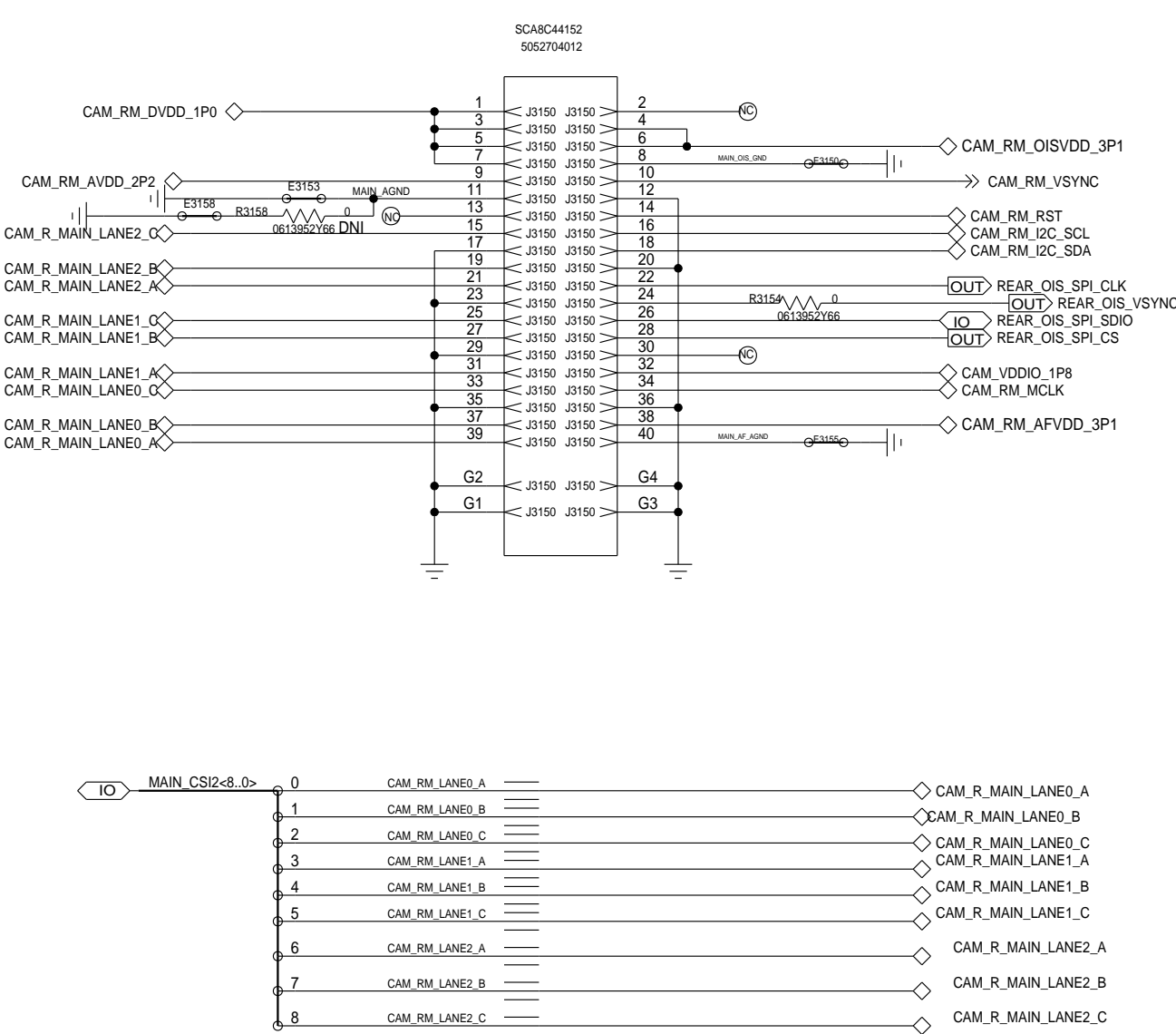
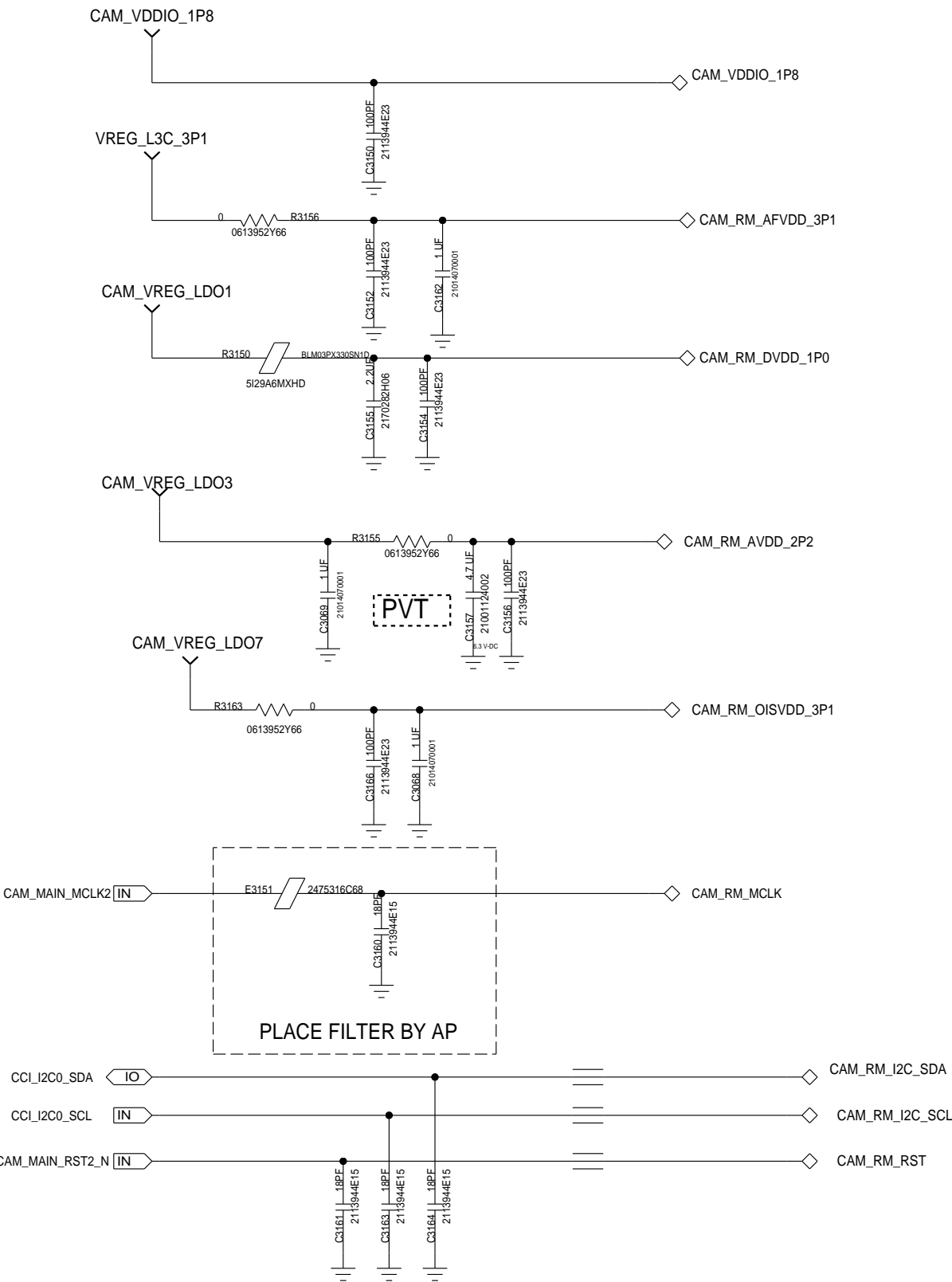
REFDES: 3150-3199




APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA	BLOCK TITLE: <h1 style="text-align: center;">multimedia</h1>		
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:58 2022			
ONLY	MOTOROLA CONFIDENTIAL RESTRICTED	PROJECT NAME B frontier_sm8475.cpm	REV 01
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IMG: REAR MAIN CONNECTOR

REFDES: 3150-3199

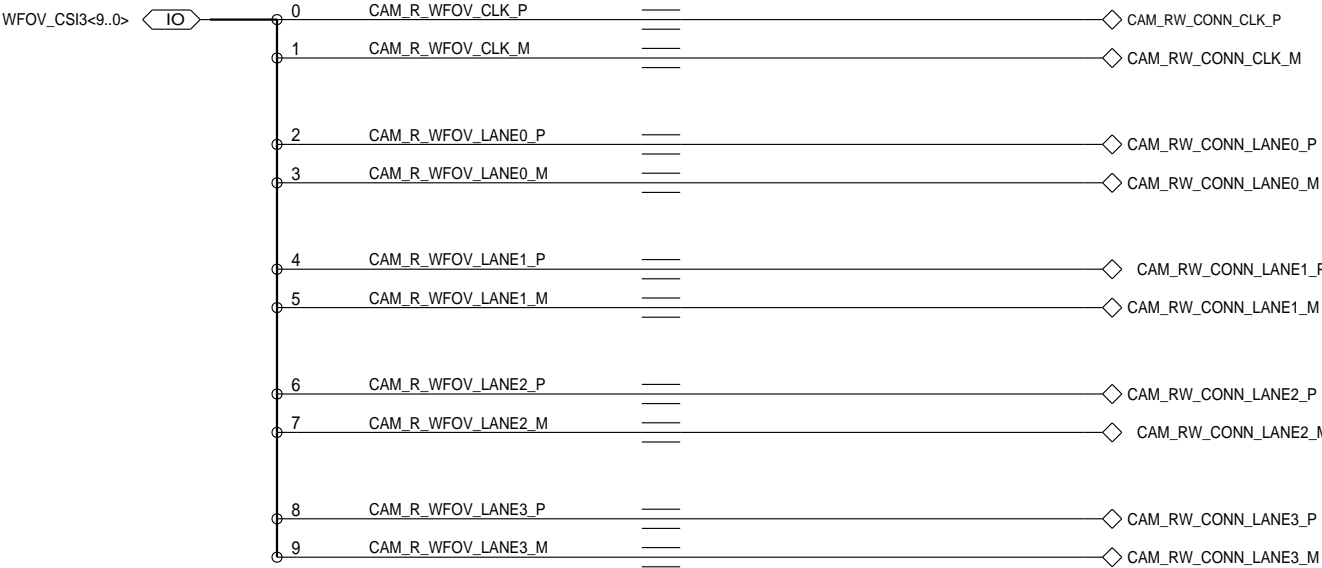
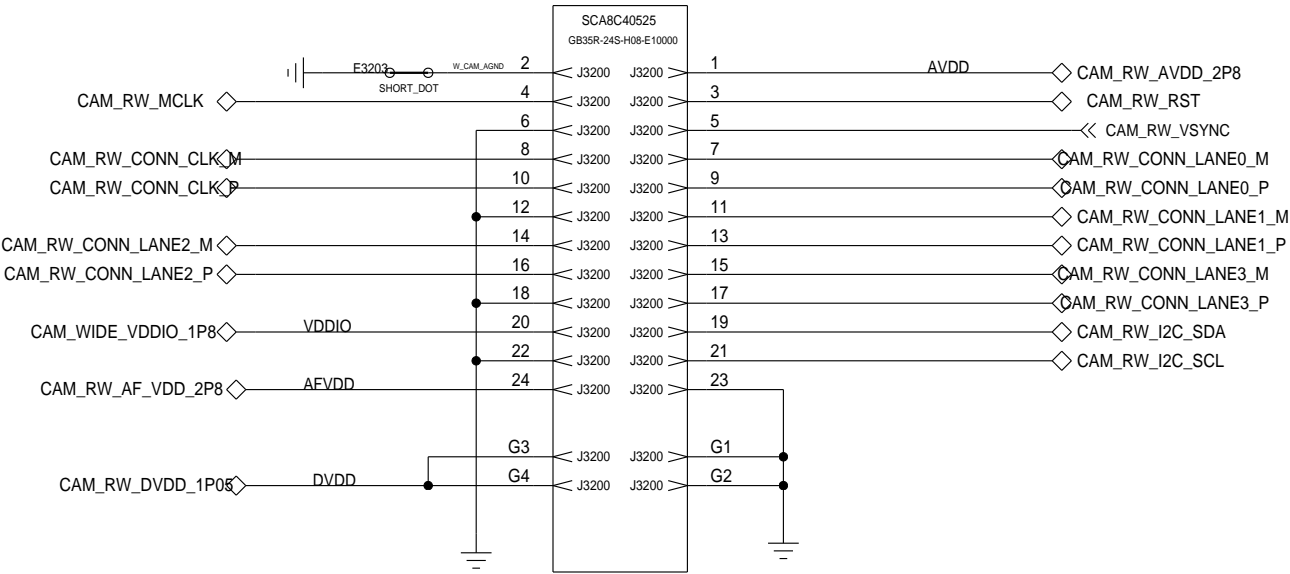
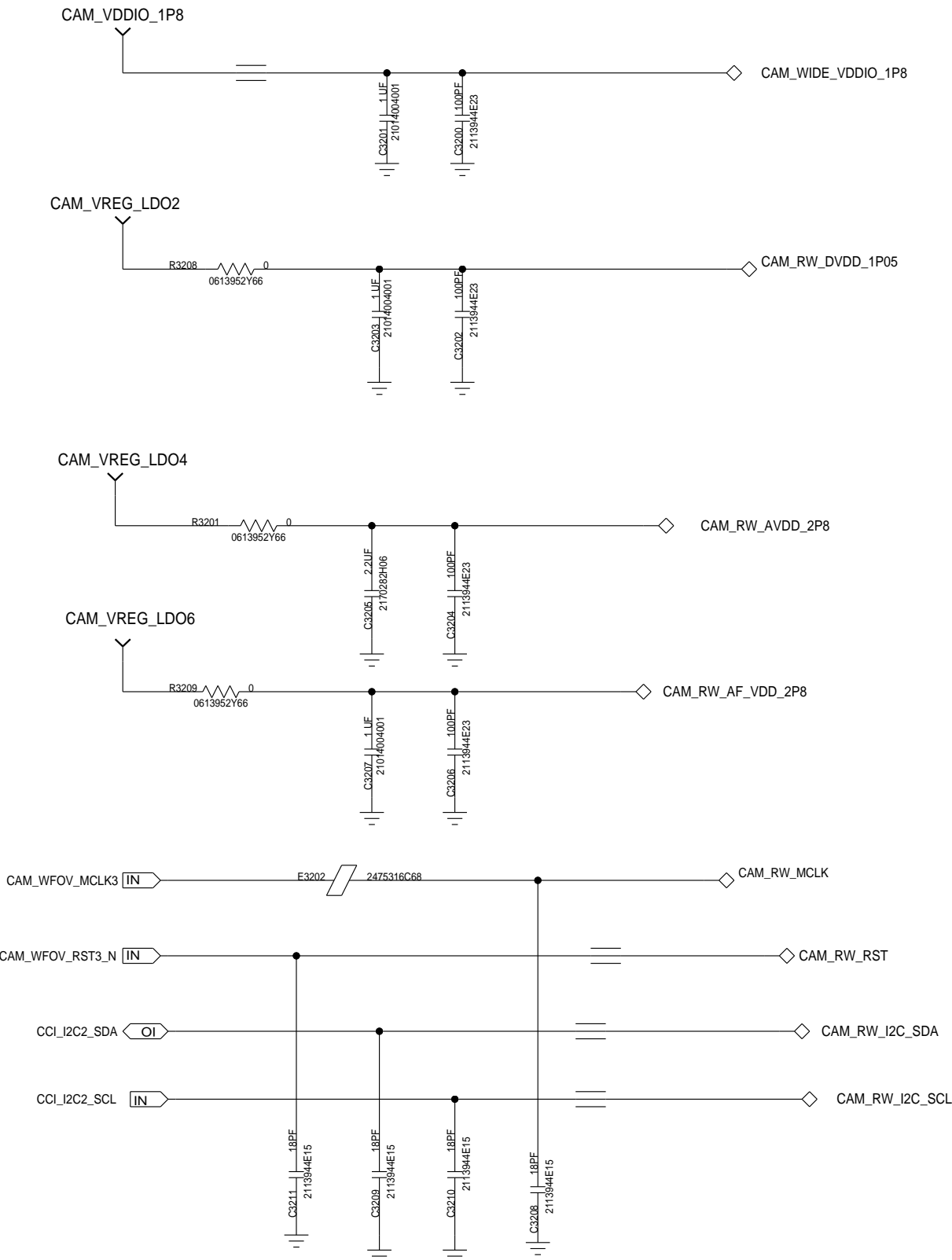



APPROVALS		 MOBILE DEVICES	
ENGINEER: MOTOROLA		BLOCK TITLE:	
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:59 2022		multimedia	
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CAD FILE NAME:		PAGE 39 OF 77	

IMG: REAR WIDE 50M CONNECTOR

REFDES: 3200-3249

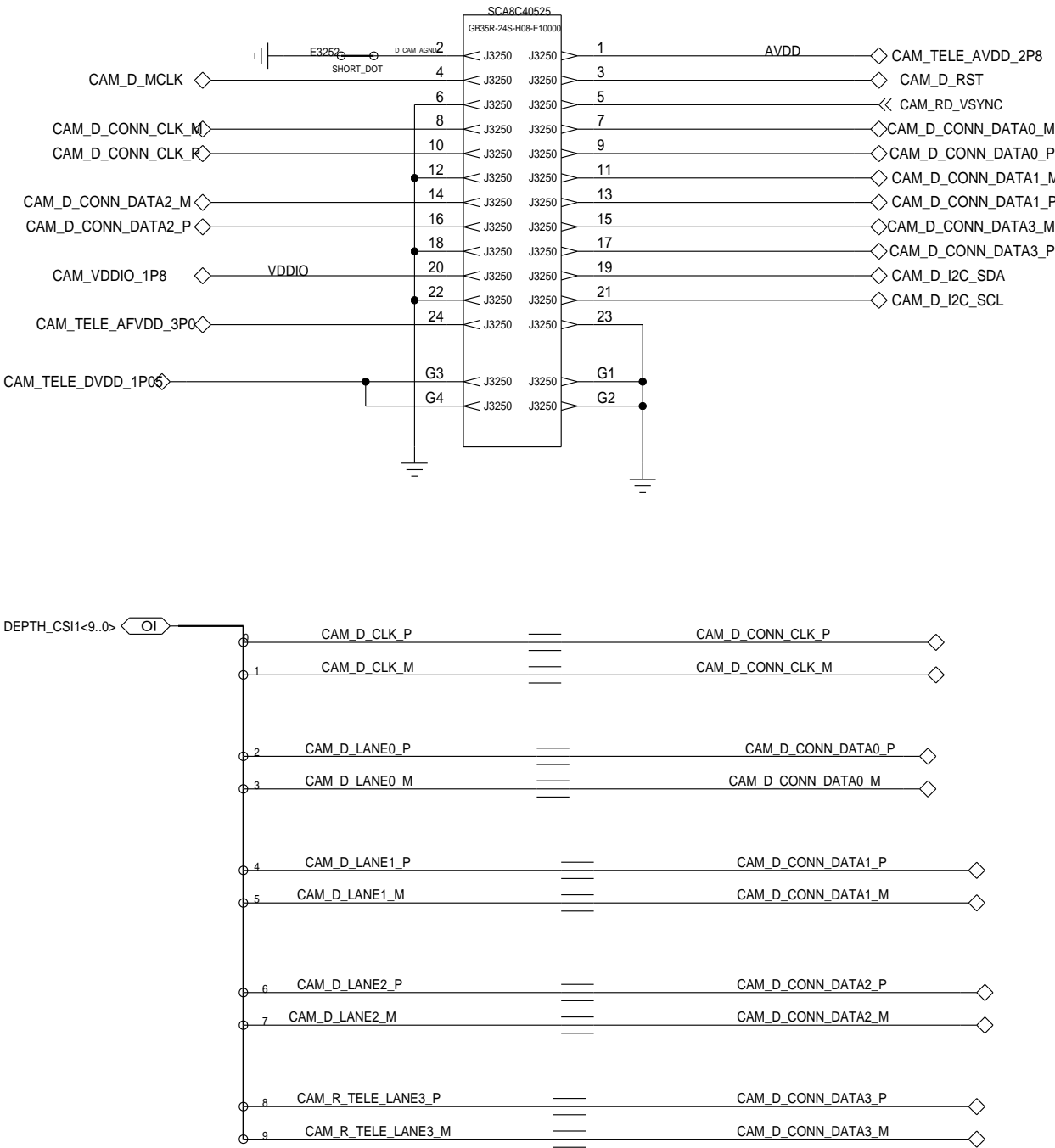
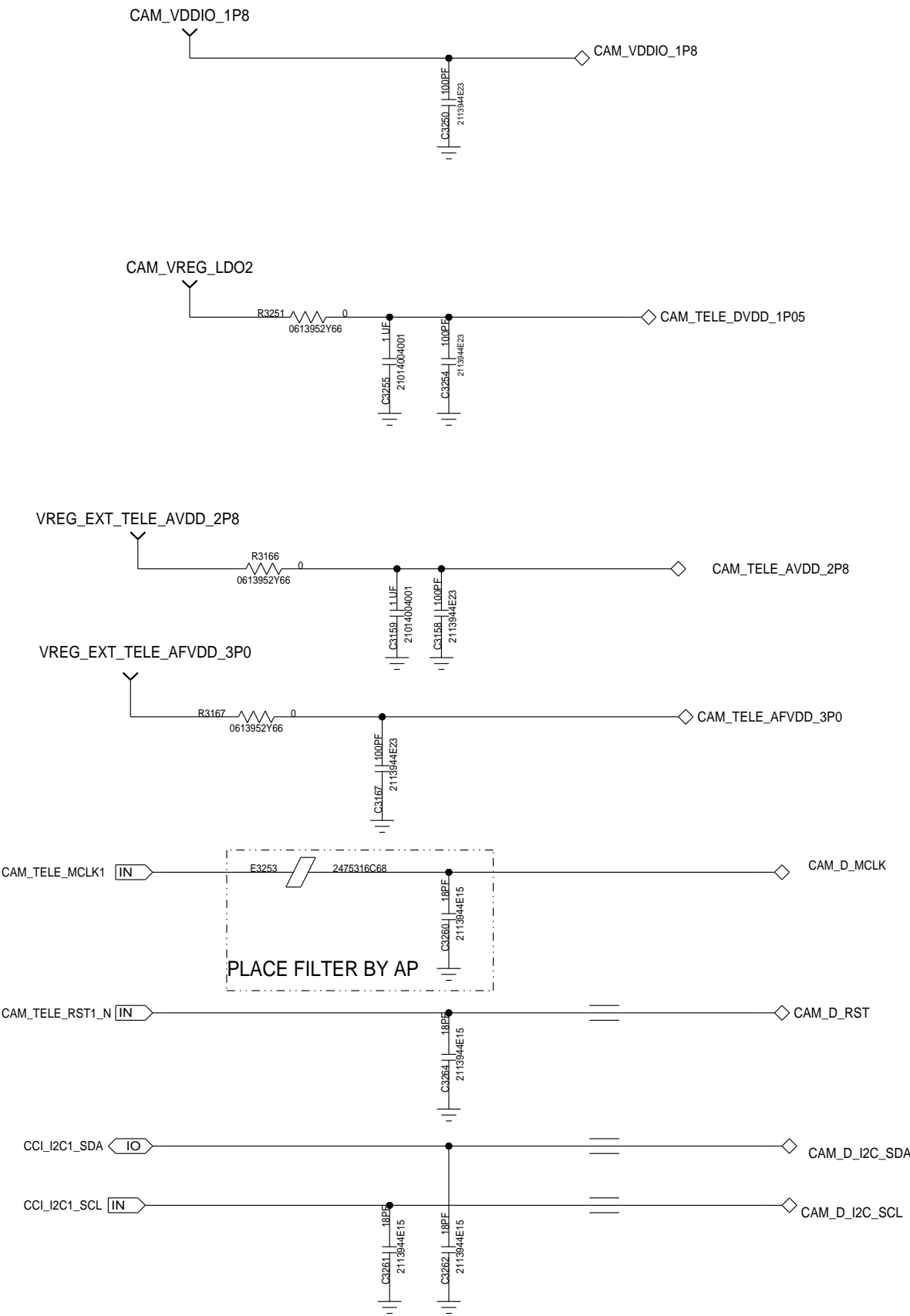
BERLIN FRONT PIN MAP L32BF00



APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA		BLOCK TITLE:	
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:59 2022		multimedia	
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		frontier_sm8475.cpm	
		REV	
		01	
		PAGE 40 OF 77	

IMG: REAR TELE 12M CONNECTOR


REFDES: 3250-3299



APPROVALS		MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA		BLOCK TITLE:	
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:59 2022		multimedia	
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		frontier_sm8475.cpm	
		REV 01	
		PAGE 41 OF 77	

IMG: CAMERA FLASH

REFDES: 3300-3349

APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA		BLOCK TITLE:	
LAST MODIFIED BY: MOTOROLA Fri Feb 05 17:15:34 2021		multimedia	
<div>MOTOROLA CONFIDENTIAL RESTRICTED</div> <div>THE DRAWING ON THIS PRINT AND INFORMATION THEREWITH ARE PROPRIETARY TO MOTOROLA AND SHALL NOT BE USED OR DISCUSSED IN WHOLE OR IN PART WITHOUT MOTOROLA'S CONSENT. © COPYRIGHT, MOTOROLA. THIS DOES NOT IMPLY PUBLICATION</div>		B	PROJECT NAME frontier_sm8475.cpm
		REV 01	
		CAD FILE NAME:	
		PAGE 42 OF 77	

IMG: REAR TELE2 CONNECTOR

REFDES: 3350-3499

PIN MAP BASED ON 6/30 4X

8

7

6


5

4

3

2

1

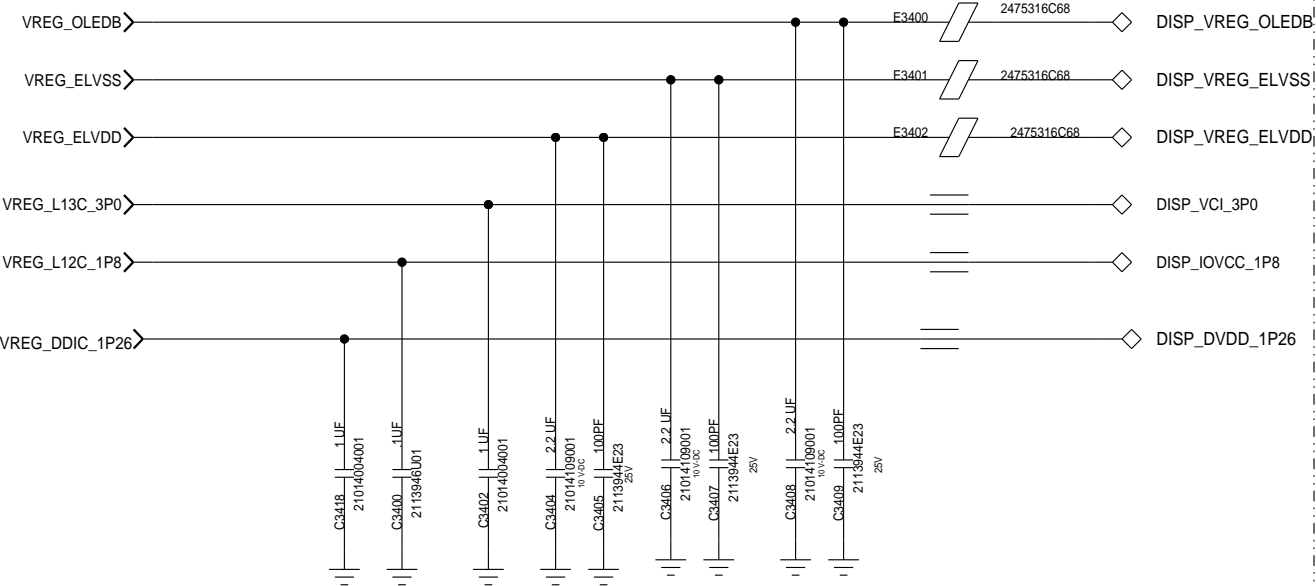
APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA	BLOCK TITLE: <h1 style="text-align: center;">multimedia</h1>		
LAST MODIFIED BY: MOTOROLA Tue Mar 22 15:57:40 2022			
MOTOROLA CONFIDENTIAL RESTRICTED <hr/> <small> THE DRAWING ON THIS PRINT AND INFORMATION THERWITH ARE PROPRIETARY TO MOTOROLA AND SHALL NOT BE USED OR DISCUSSED IN WHOLE OR IN PART WITHOUT MOTOROLA'S CONSENT. © COPYRIGHT, MOTOROLA. THIS DOES NOT IMPLY PUBLICATION </small>		B PROJECT NAME frontier_sm8475.cpm	REV 01
		CAD FILE NAME:	PAGE 43 OF 77

DISP: OLED CONNECTOR

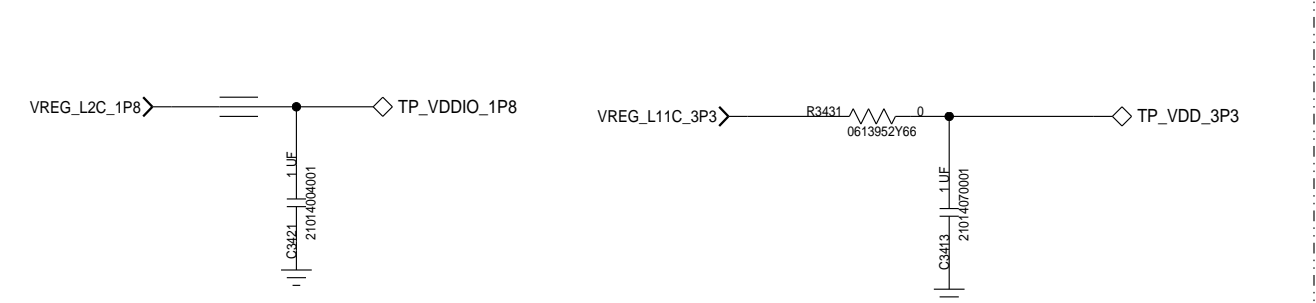
REFDES: 3400-3499

BERLIN SLIM PIN MAP

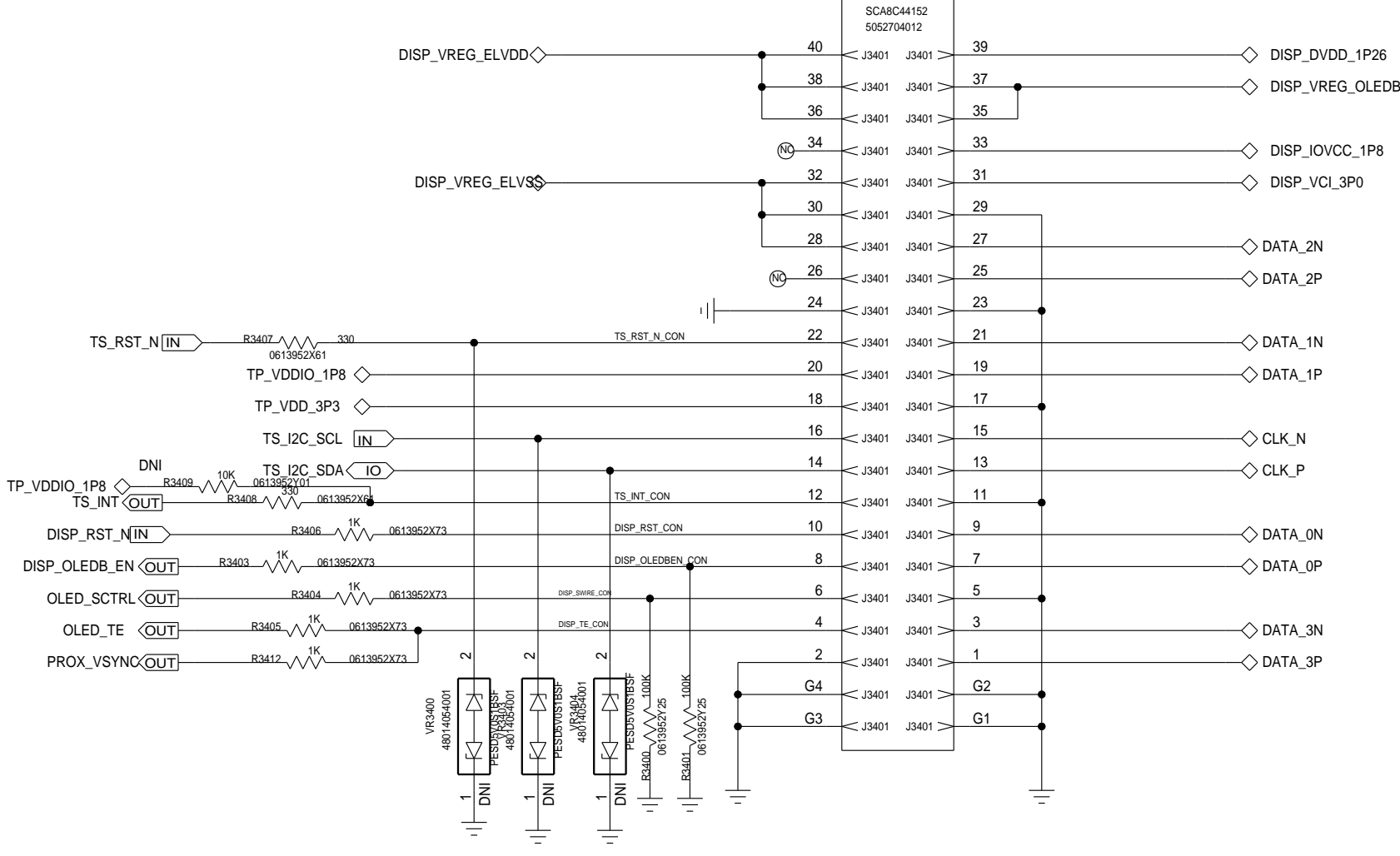
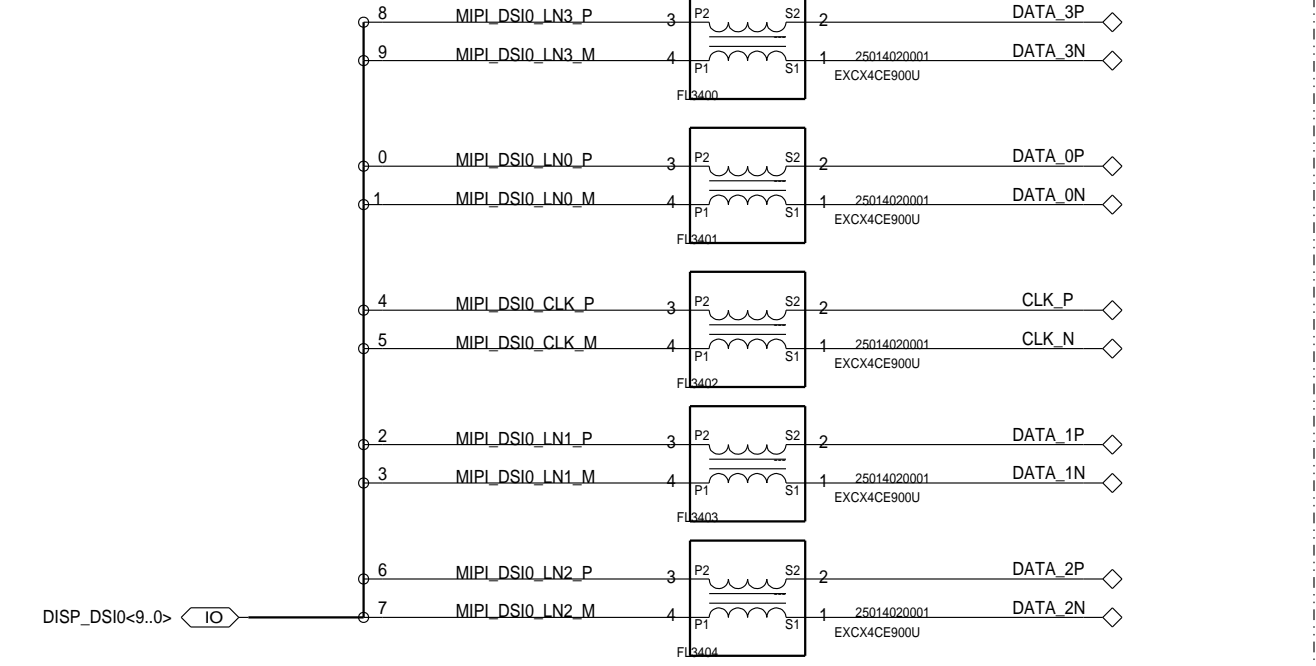
POWER_SUPPLY FOR OLED PLACE CLOSE TO CONNECTOR




POWER_SUPPLY FOR TOUCH SCREEN



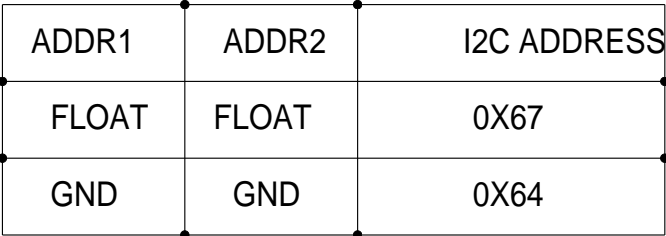
COMMON FILTER



APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA		BLOCK TITLE:	
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:59 2022		multimedia	
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		CAD FILE NAME: PAGE 44 OF 77	

REFDES:2950-2999

REFDES:2900-2949



D

C

B


A



C

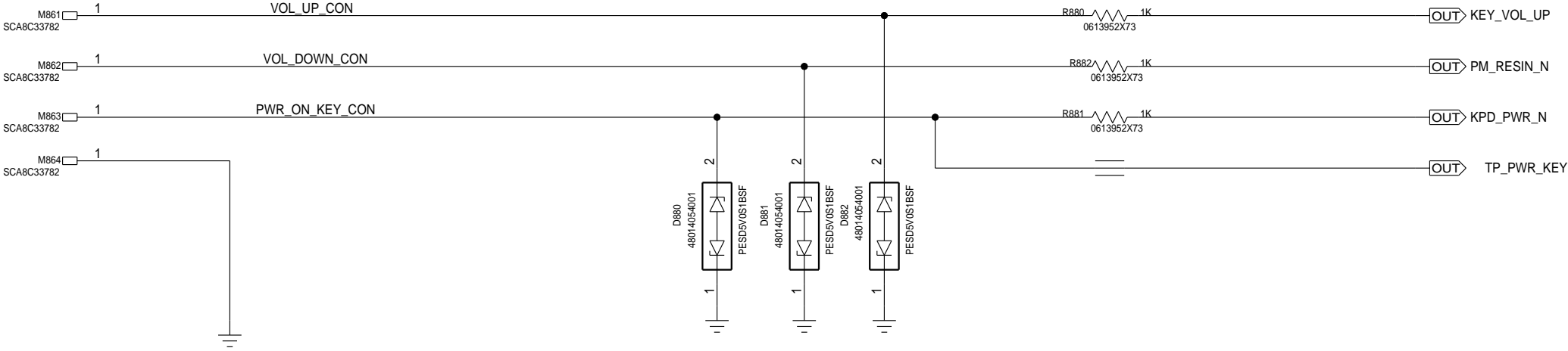
B


A

APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA	BLOCK TITLE: <h1>power</h1>		
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:48 2022			
MOTOROLA CONFIDENTIAL RESTRICTED <hr/> <small> THE DRAWING ON THIS PRINT AND INFORMATION THEREWITH ARE PROPRIETARY TO MOTOROLA AND SHALL NOT BE USED OR DISCUSSED IN WHOLE OR IN PART WITHOUT MOTOROLA'S CONSENT. © COPYRIGHT, MOTOROLA. THIS DOES NOT IMPLY PUBLICATION </small>		PROJECT NAME B frontier_sm8475.cpm	REV 01
		CAD FILE NAME:	PAGE 46 OF 77

PWR: SIDEKEYS

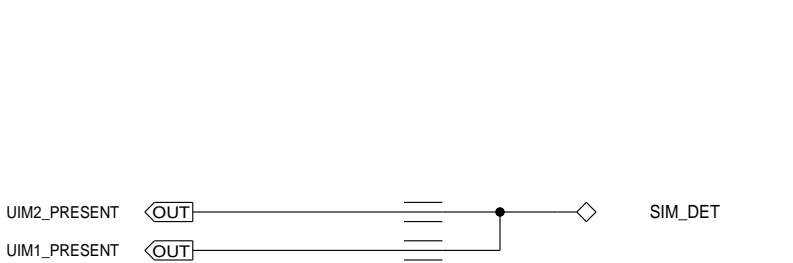
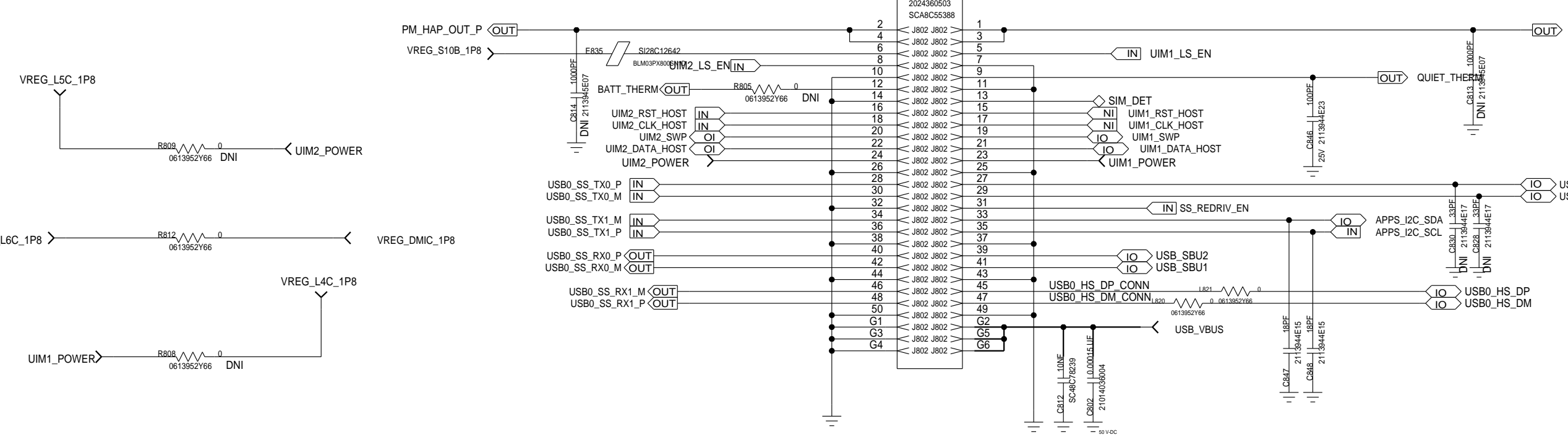
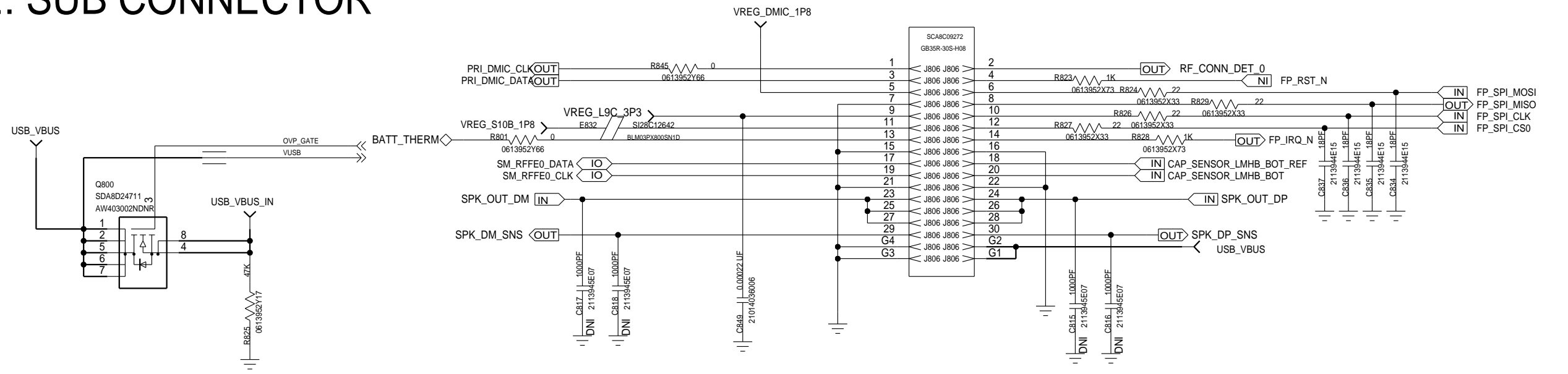
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MOTOROLA CONFIDENTIAL RESTRICTED <small>THE DRAWING ON THIS PRINT AND INFORMATION THEREWITH ARE PROPRIETARY TO MOTOROLA AND SHALL NOT BE USED OR DISCUSSED IN WHOLE OR IN PART WITHOUT MOTOROLA'S CONSENT. © COPYRIGHT, MOTOROLA. THIS DOES NOT IMPLY PUBLICATION</small>		PROJECT NAME	
		B frontier_sm8475.cpm	
		REV 01	
		CAD FILE NAME:	
		PAGE 47 OF 77	

BRIDGE: SUB CONNECTOR

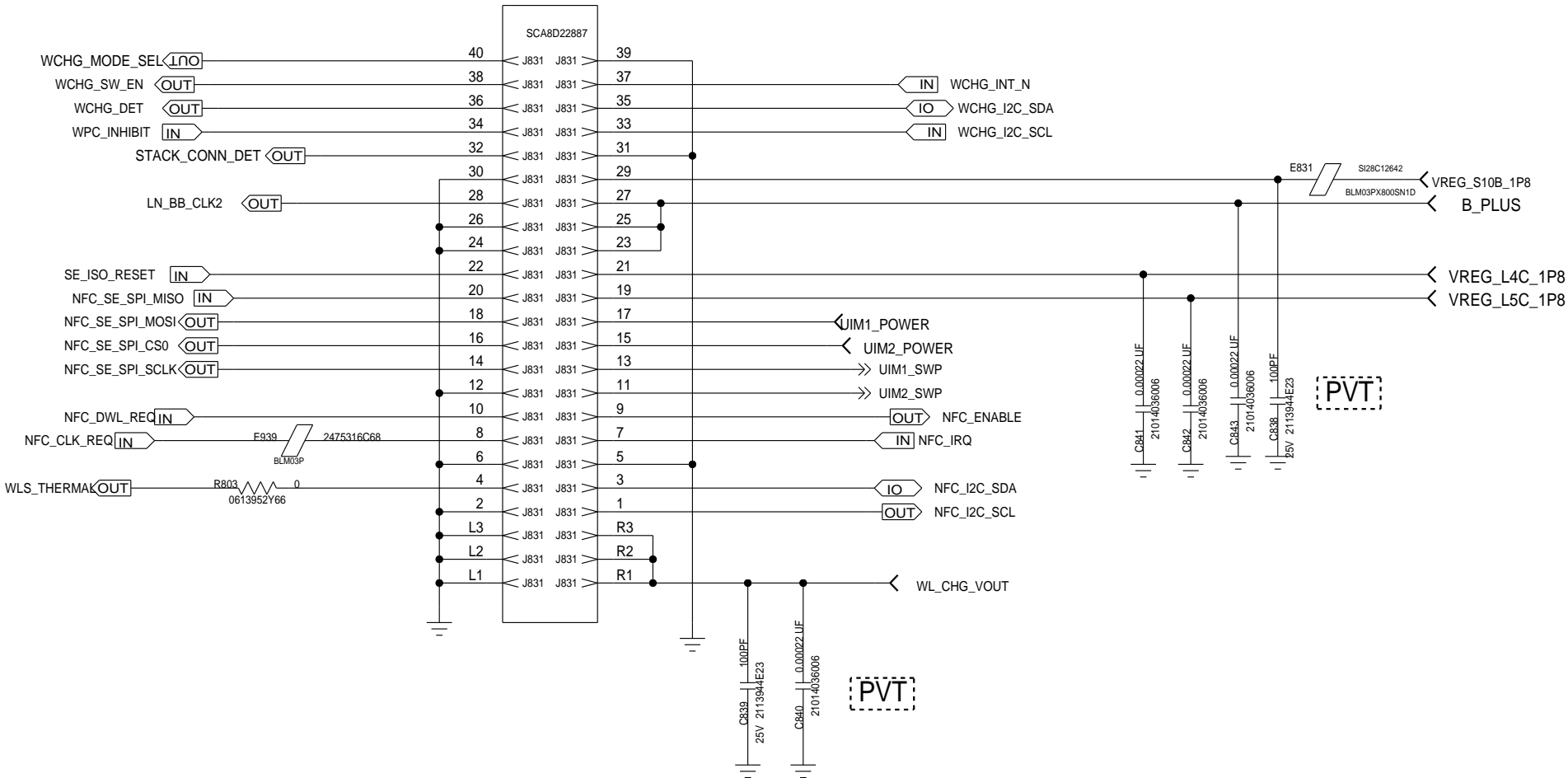
REF: 800-839




APPROVALS		MOTOROLA MOBILE DEVICES	
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LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:49 2022		power	
MOTOROLA CONFIDENTIAL RESTRICTED <small>THE DRAWING ON THIS PRINT AND INFORMATION THEREWITH ARE PROPRIETARY TO MOTOROLA AND SHALL NOT BE USED OR DISCUSSED IN WHOLE OR IN PART WITHOUT MOTOROLA'S CONSENT. © COPYRIGHT, MOTOROLA. THIS DOES NOT IMPLY PUBLICATION</small>		PROJECT NAME	REV
		B frontier_sm8475.cpm	01
CAD FILE NAME:			PAGE 48 OF 77

BRIDGE: STACK BOARD CONN

REFDES: 831-839




APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA		BLOCK TITLE:	
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:49 2022		power	
MOTOROLA CONFIDENTIAL RESTRICTED <small>THE DRAWING ON THIS PRINT AND INFORMATION THEREWITH ARE PROPRIETARY TO MOTOROLA AND SHALL NOT BE USED OR DISCUSSED IN WHOLE OR IN PART WITHOUT MOTOROLA'S CONSENT. © COPYRIGHT, MOTOROLA. THIS DOES NOT IMPLY PUBLICATION</small>		PROJECT NAME	
		B frontier_sm8475.cpm	
		REV 01	
		CAD FILE NAME:	
		PAGE 49 OF 77	

PWR:WIRELESS CHARGE 50W


REFDES: 900-999

WIRELESS CHARGE BQ25968 I2C ADDRESS: 0X76/0X77

APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA	BLOCK TITLE: <div style="font-size: 24pt; font-weight: bold;">power</div>		
LAST MODIFIED BY: MOTOROLA Wed Jan 12 17:21:36 2022			
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		CAD FILE NAME:	PAGE 50 OF 77

NFC: NXP SN110U

REF 6000-6299

APPROVALS		 MOTOROLA MOBILE DEVICES	
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LAST MODIFIED BY: YANZELIANG Wed Jan 12 17:33:56 2022		power	
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	CAD FILE NAME:		PAGE 51 OF 77

D

C

B



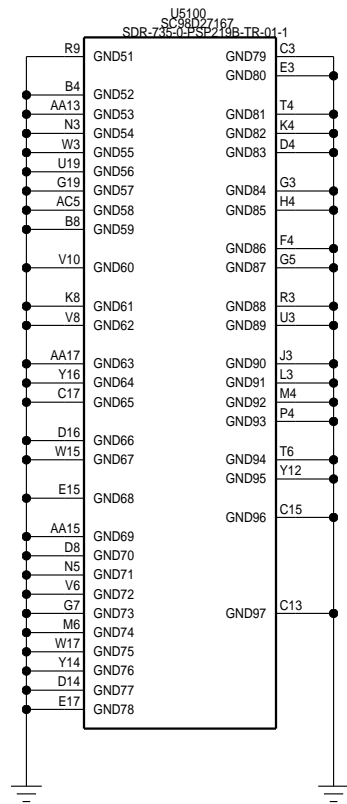
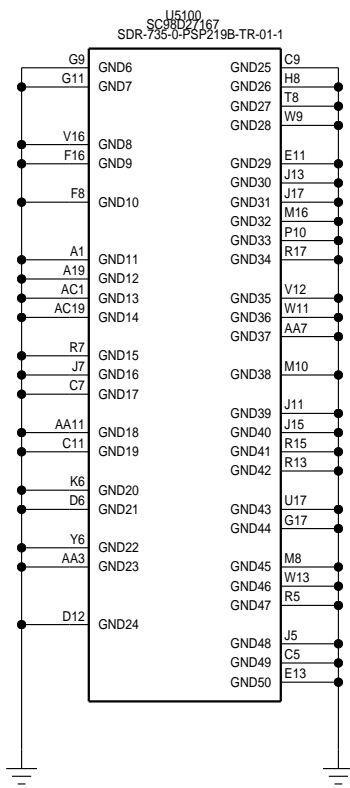
1


D

A

SDR735#1: GND

REF 5200-5299

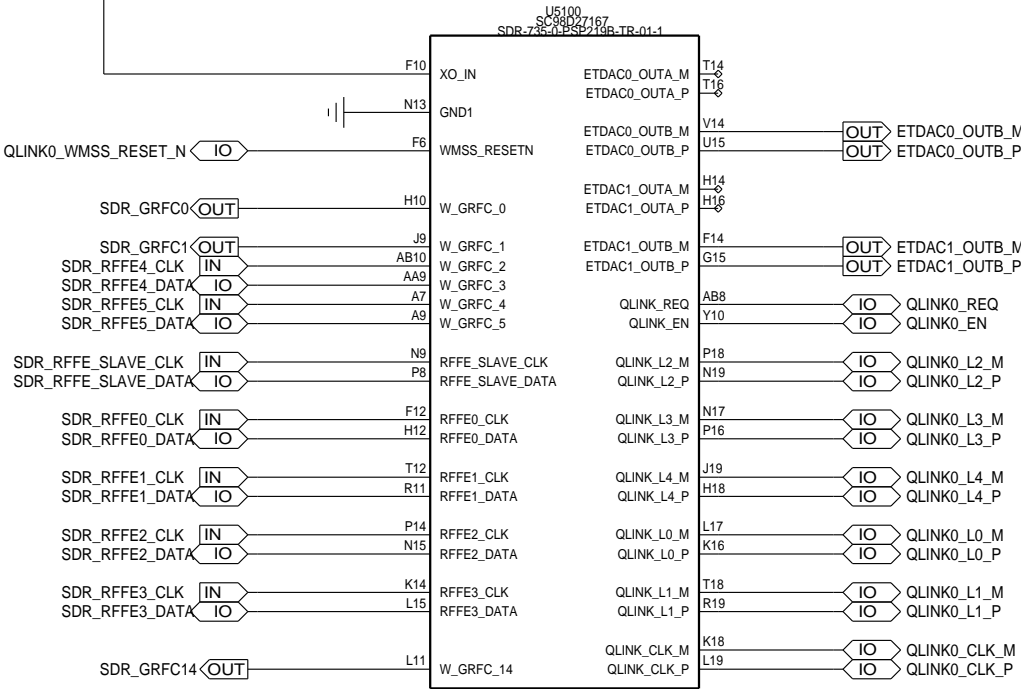
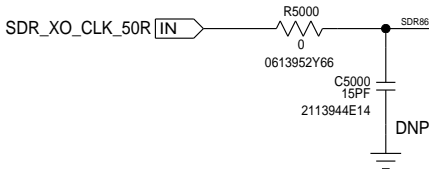



APPROVALS		<div> MOTOROLA</div> <div>MOBILE DEVICES</div>		
ENGINEER: MOTOROLA		BLOCK TITLE: rf_sdr		
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:23:00 2022				
<div>MOTOROLA CONFIDENTIAL RESTRICTED</div> <div>THE DRAWING ON THIS PRINT AND INFORMATION THEREWITH ARE PROPRIETARY TO MOTOROLA AND SHALL NOT BE USED OR DISCUSSED IN WHOLE OR IN PART WITHOUT MOTOROLA'S CONSENT. © COPYRIGHT, MOTOROLA. THIS DOES NOT IMPLY PUBLICATION</div>		B	PROJECT NAME frontier_sm8475.cpm	REV 01
		CAD FILE NAME:		PAGE 54 OF 77

SDR735#1: CTRL/QLINK

REF 5000-5099

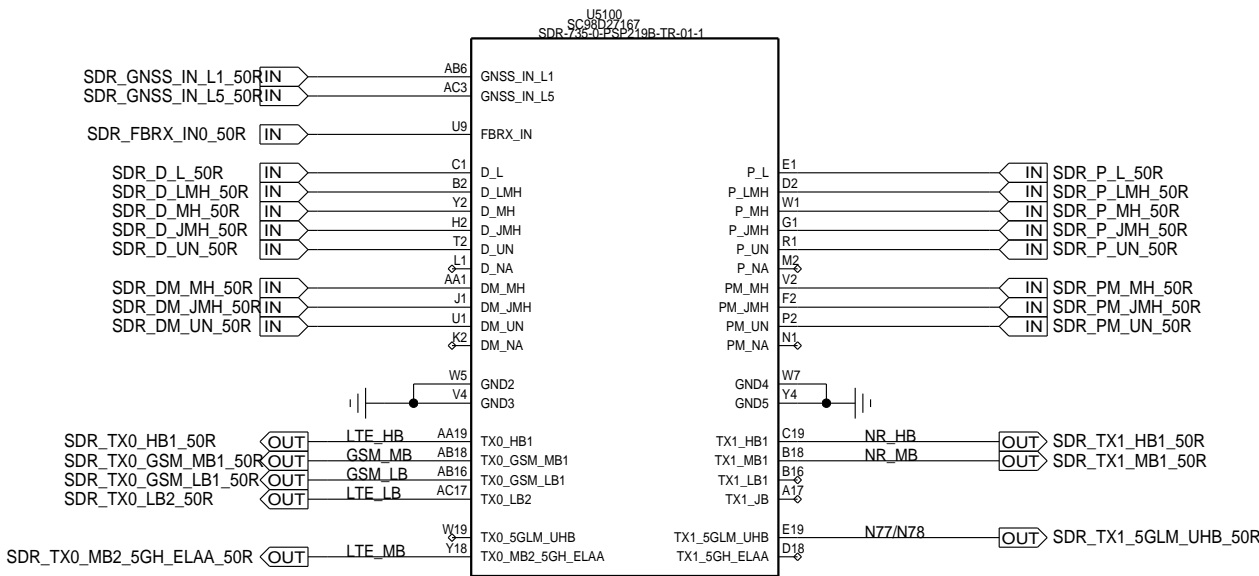
NOTE: CONTROLLED IMPEDANCE FOR XO LINE MUST BE BETWEEN 30 OHM AND 50OHM
LOW IMPEDANCE IS PREFERRED.
THE SERIES PLACEHOLDER MUST BE A 0 OHM RESISTOR SINCE THE XO SIGNAL CARRIES A DC BIAS TO THE XO_IN INPUT.
DO NOT SHUNT THE CAPACITOR ON THE XO_IN TRACE




APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA		BLOCK TITLE: rf_sdr	
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:23:00 2022			
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		REV 01	
		CAD FILE NAME:	
		PAGE 55 OF 77	

SDR735#1: TX/RX

REF 5100-5199



APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA		BLOCK TITLE: rf_sdr	
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:23:00 2022			
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		CAD FILE NAME: PAGE 56 OF 77	

D



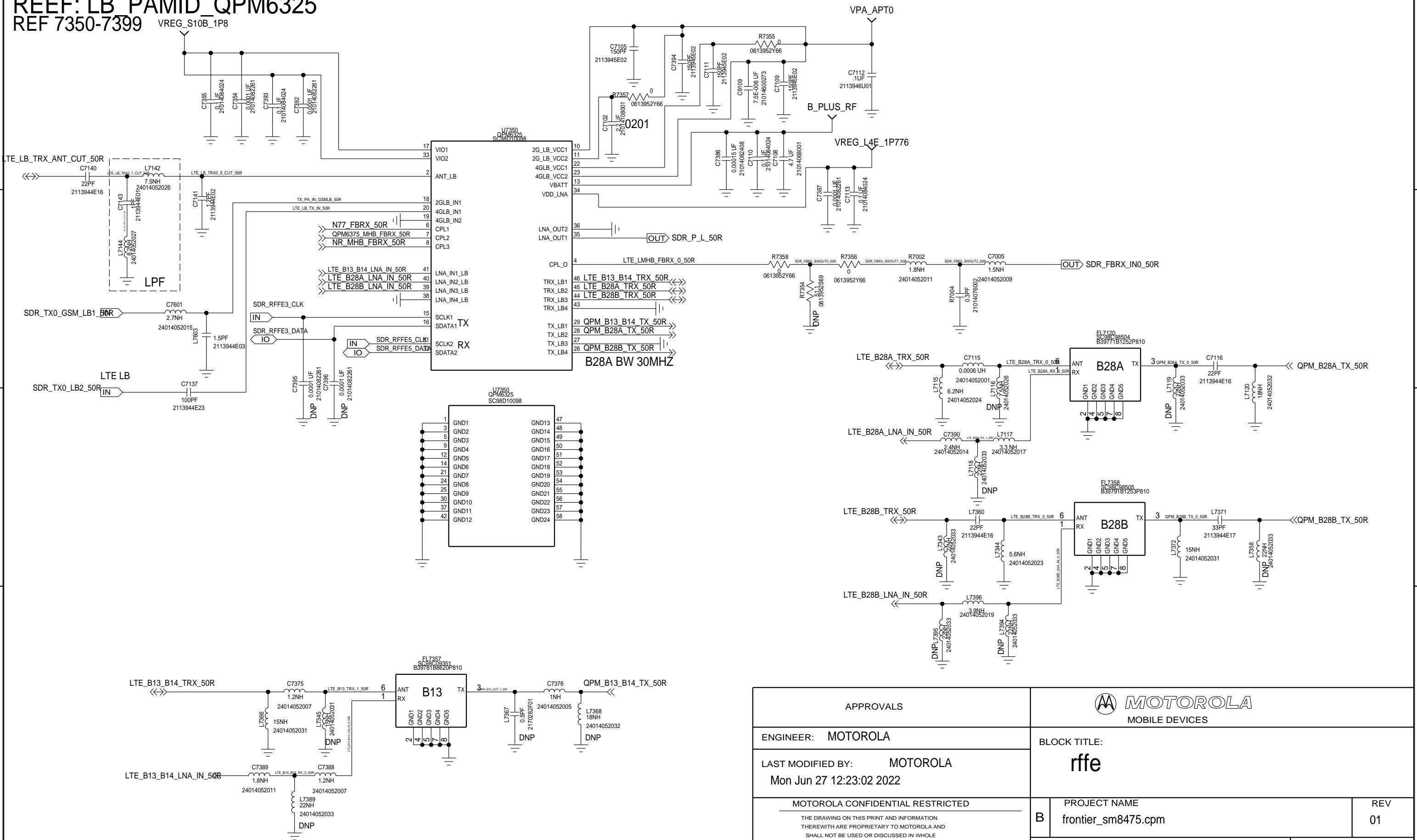
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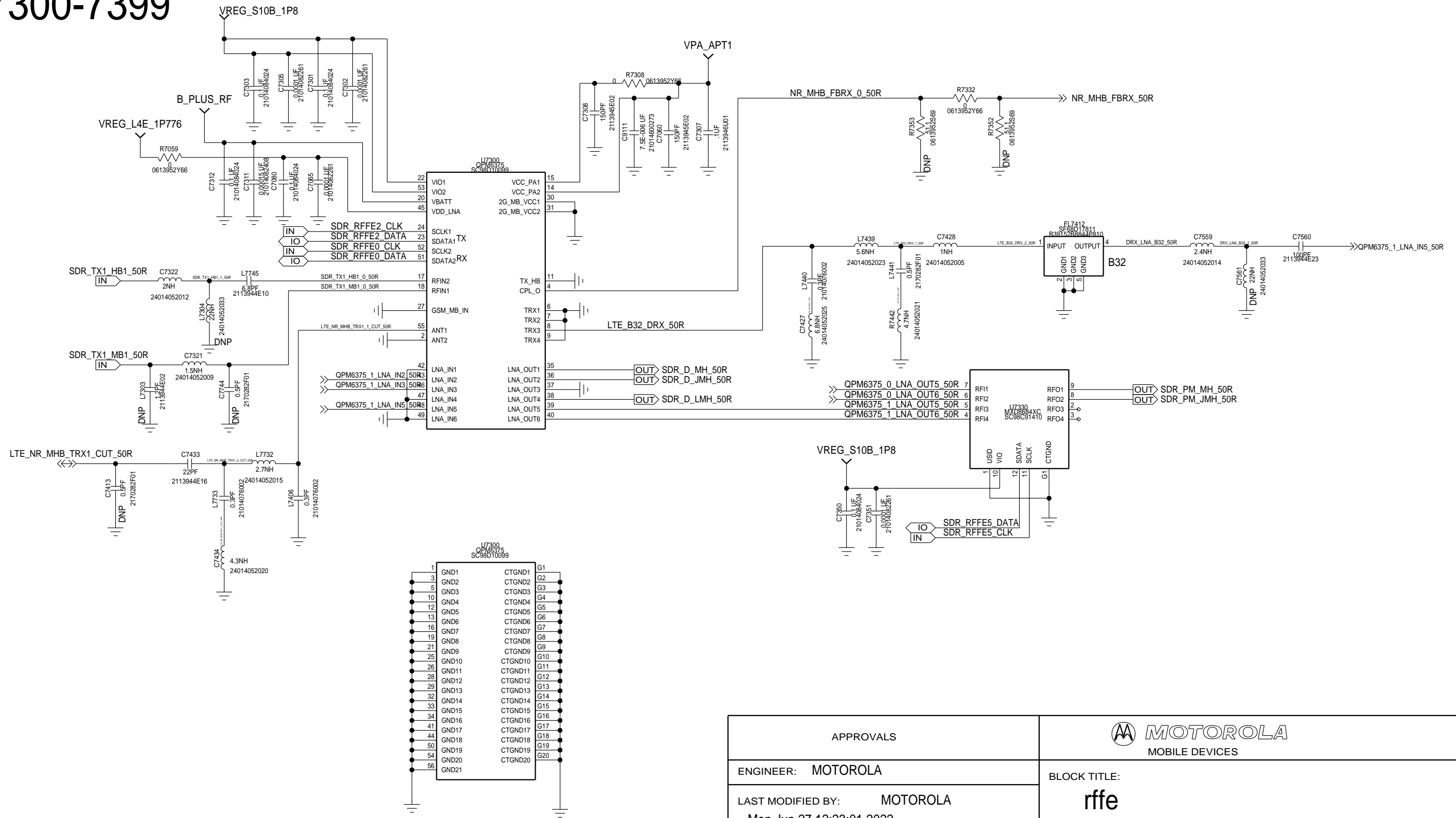
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RFFE: MHB_PAMID-QPM6375_#0
REF 7200-7299

REEF: LB_PAMID_QPM6325
REF 7350-7399 VREG_S10B_1P8



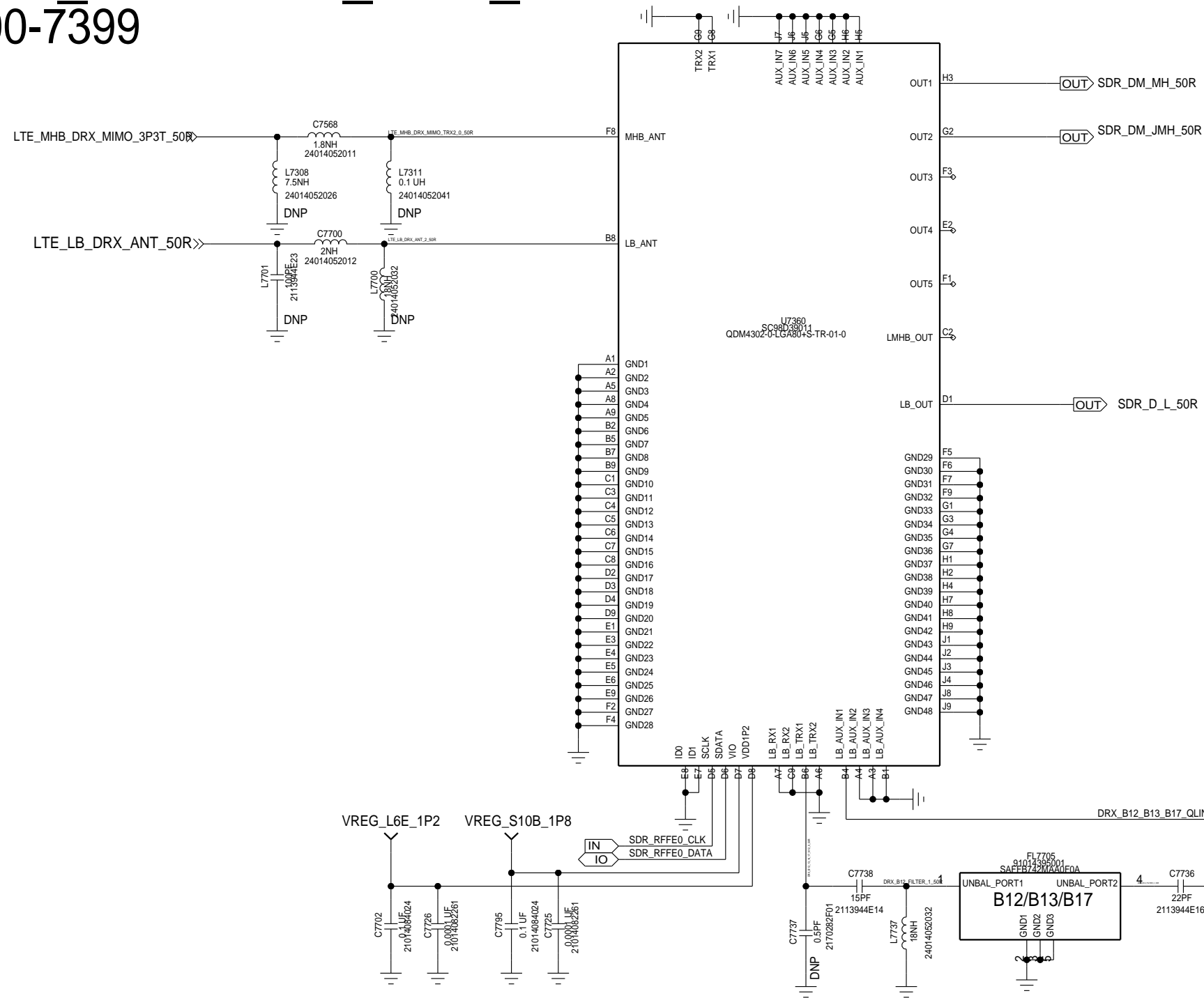
RFFE: MHB_PAMID-QPM6375_#1
REF 7300-7399




APPROVALS		<div> MOTOROLA</div> <div>MOBILE DEVICES</div>		
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LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:23:01 2022				
MOTOROLA CONFIDENTIAL RESTRICTED		B	PROJECT NAME 8074.cpm8475.cpm	REV 01
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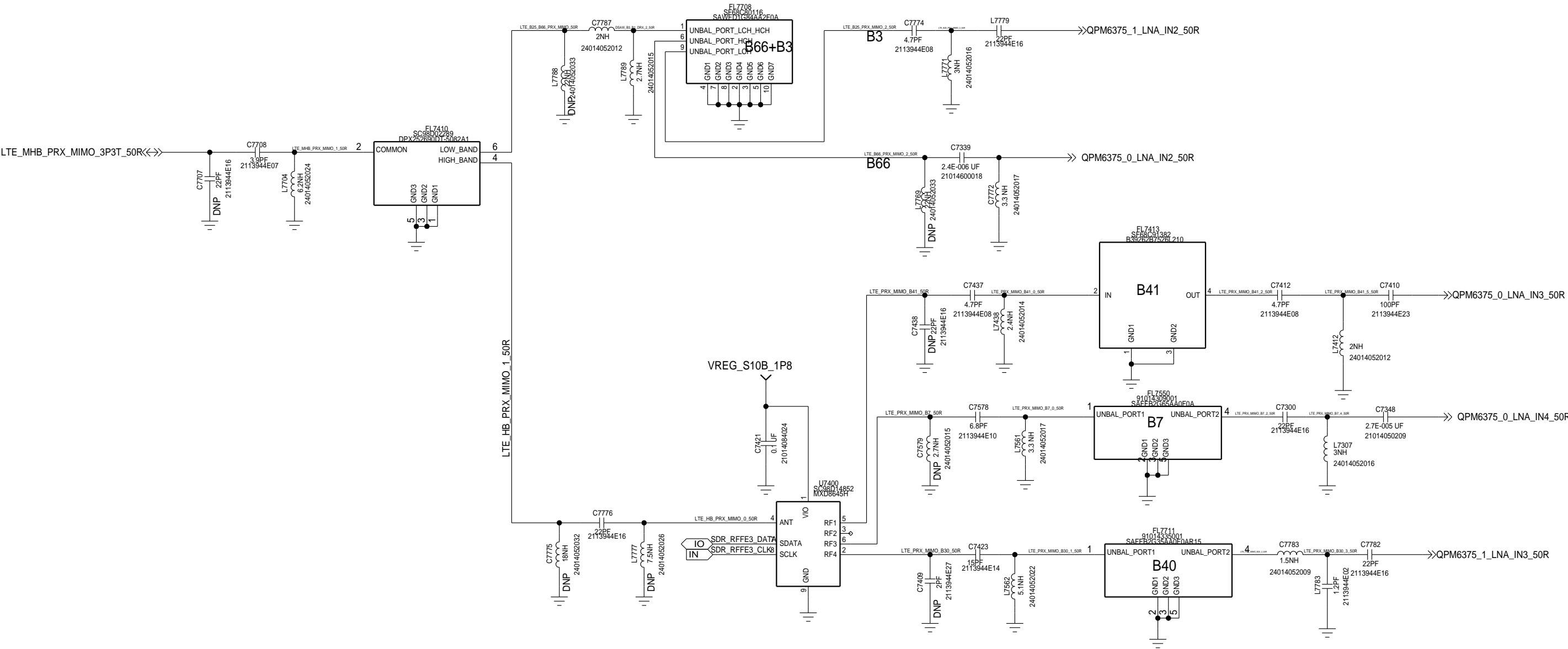
RFFE: LB_DRX/MHB_DRX_MIMO-QDM4302


REF 7300-7399



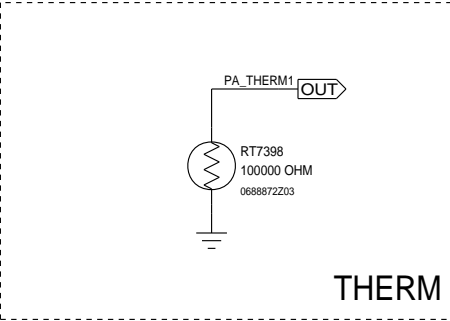
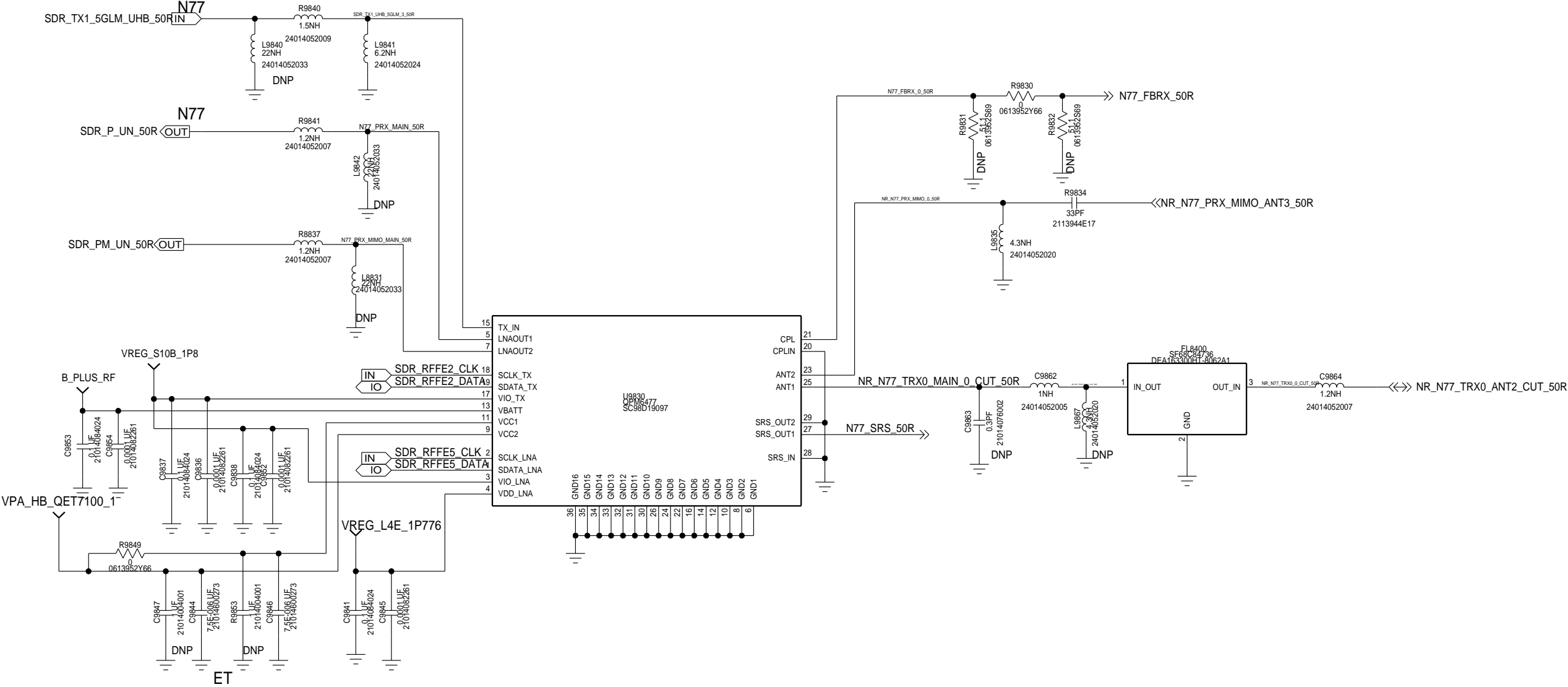
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LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:23:03 2022		PROJECT NAME frontier_sm8475.cpm	
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		PAGE 62 OF 77	


RFFE: MHB-PRX_MIMO_DISCRETE
REF 7300-7399



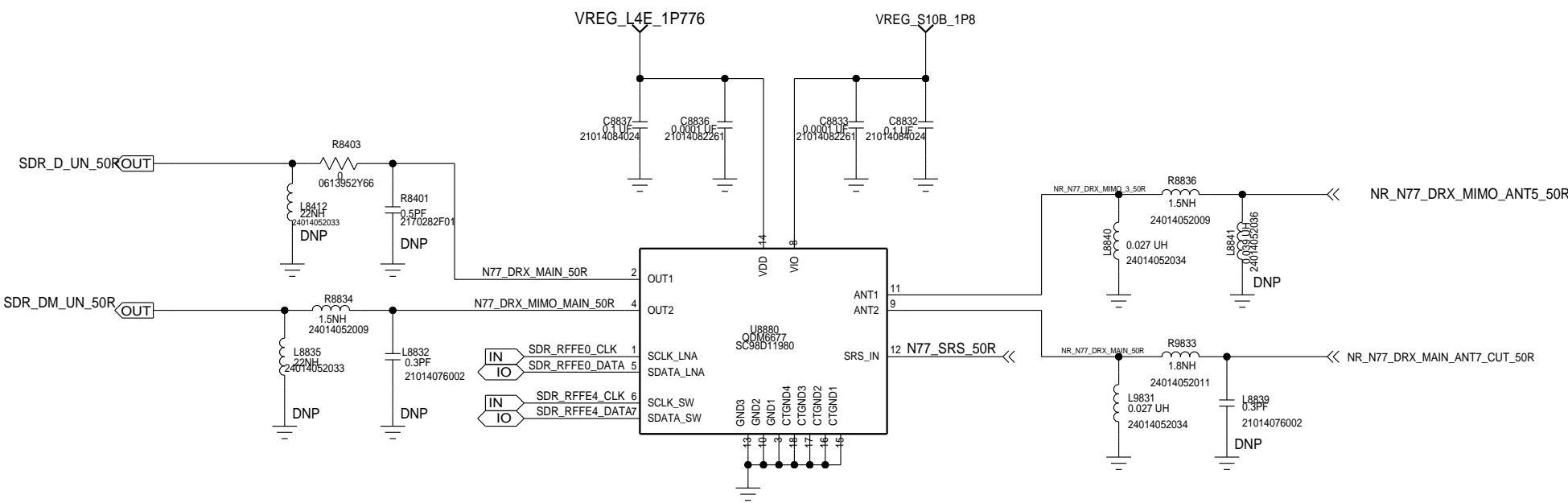
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LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:23:03 2022		rffe	
MOTOROLA CONFIDENTIAL RESTRICTED <small>THE DRAWING ON THIS PRINT AND INFORMATION THEREWITH ARE PROPRIETARY TO MOTOROLA AND SHALL NOT BE USED OR DISCUSSED IN WHOLE OR IN PART WITHOUT MOTOROLA'S CONSENT. © COPYRIGHT, MOTOROLA. THIS DOES NOT IMPLY PUBLICATION</small>		PROJECT NAME	
		B frontier_sm8475.cpm	
		REV 01	
		CAD FILE NAME:	
		PAGE 63 OF 77	


RFFE: UHB/SUB6-QPM6477_TRX0_RX1
REF 9830-9859



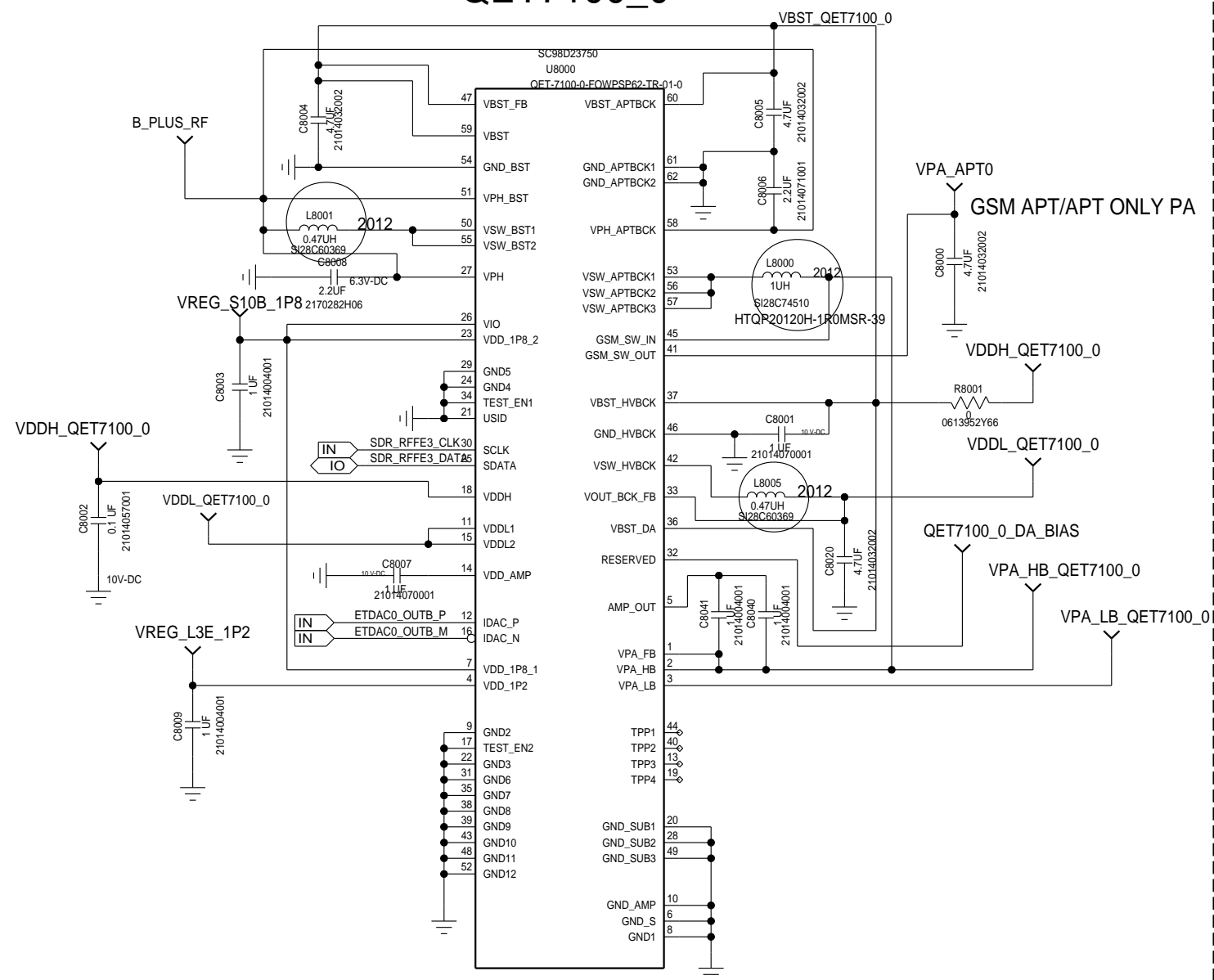
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		PAGE 64 OF 77	

REF: UHB/SUB6-QDM6677_RX2_RX3
REF 8830-8899

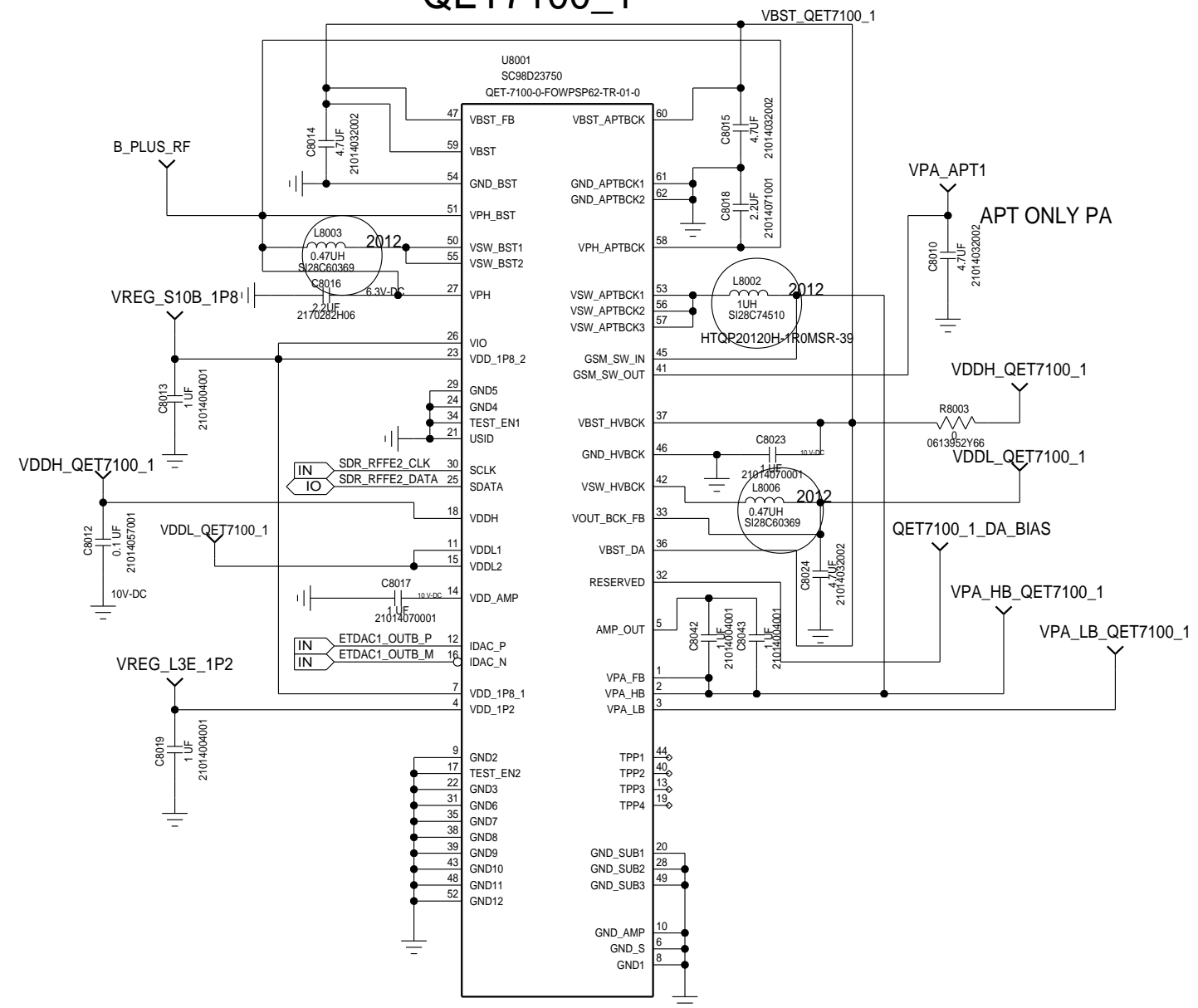



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ENGINEER: MOTOROLA		BLOCK TITLE: rffe	
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:23:03 2022		PROJECT NAME 8874cpm8475.cpm	
MOTOROLA CONFIDENTIAL RESTRICTED <small>THE DRAWING ON THIS PRINT AND INFORMATION THEREWITH ARE PROPRIETARY TO MOTOROLA AND SHALL NOT BE USED OR DISCUSSED IN WHOLE OR IN PART WITHOUT MOTOROLA'S CONSENT. © COPYRIGHT, MOTOROLA. THIS DOES NOT IMPLY PUBLICATION</small>		REV 01	
		CAD FILE NAME:	
		PAGE 65 OF 77	

A



1

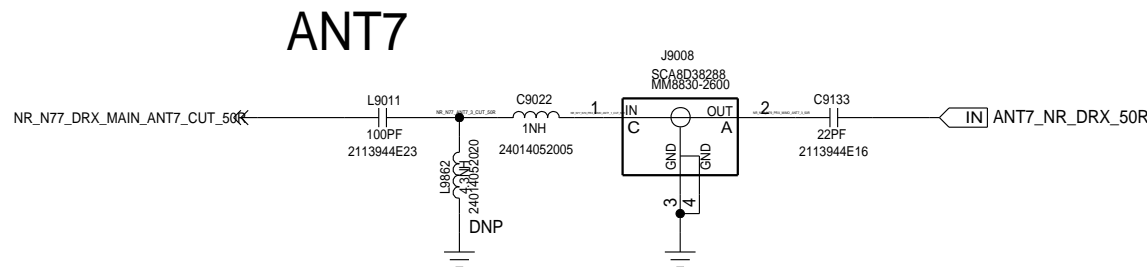
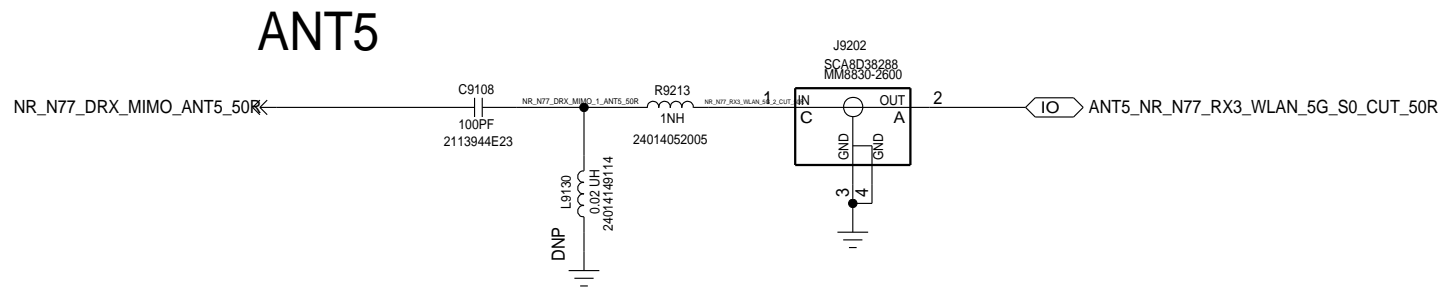
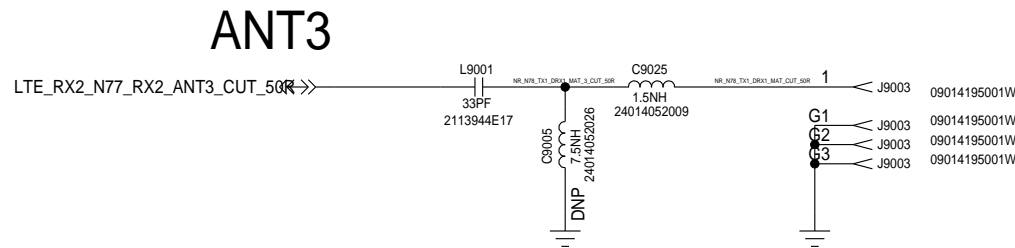
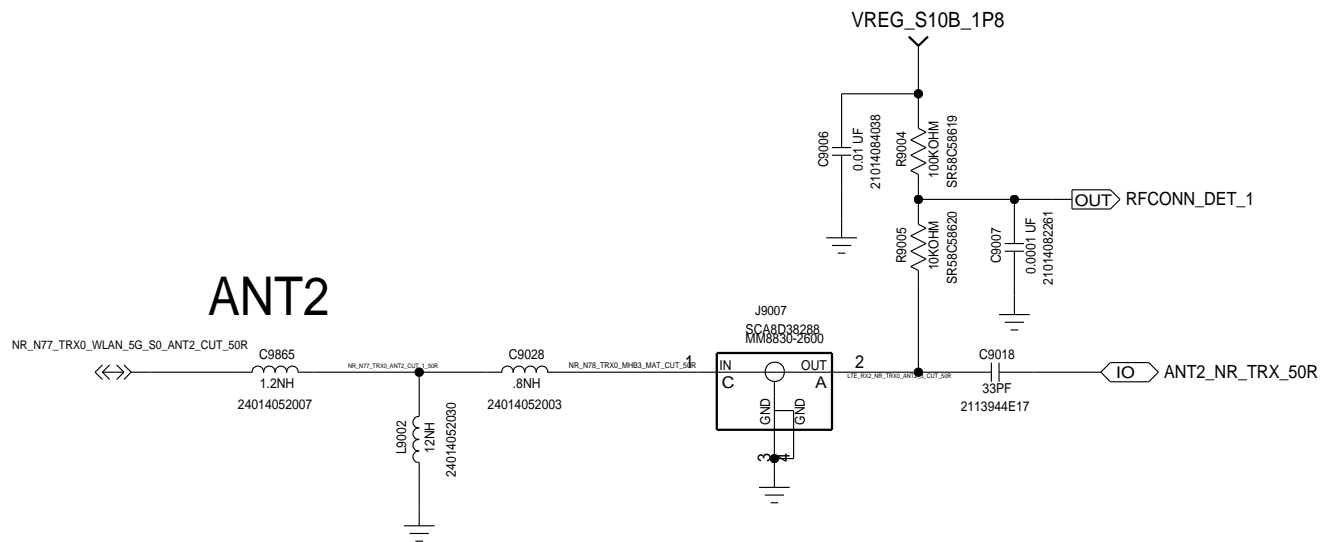
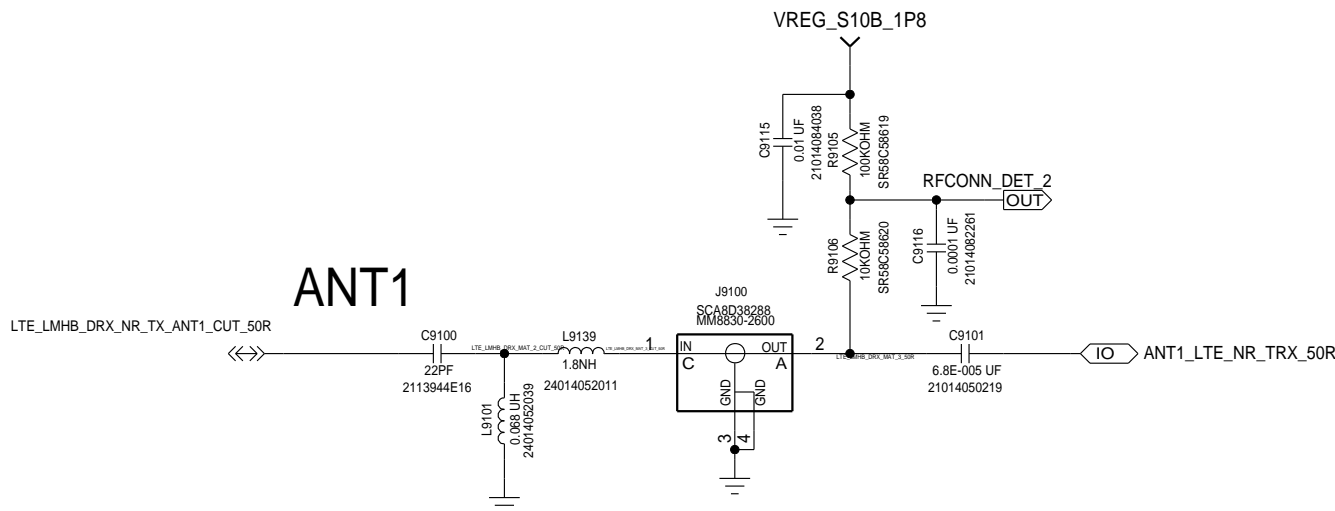
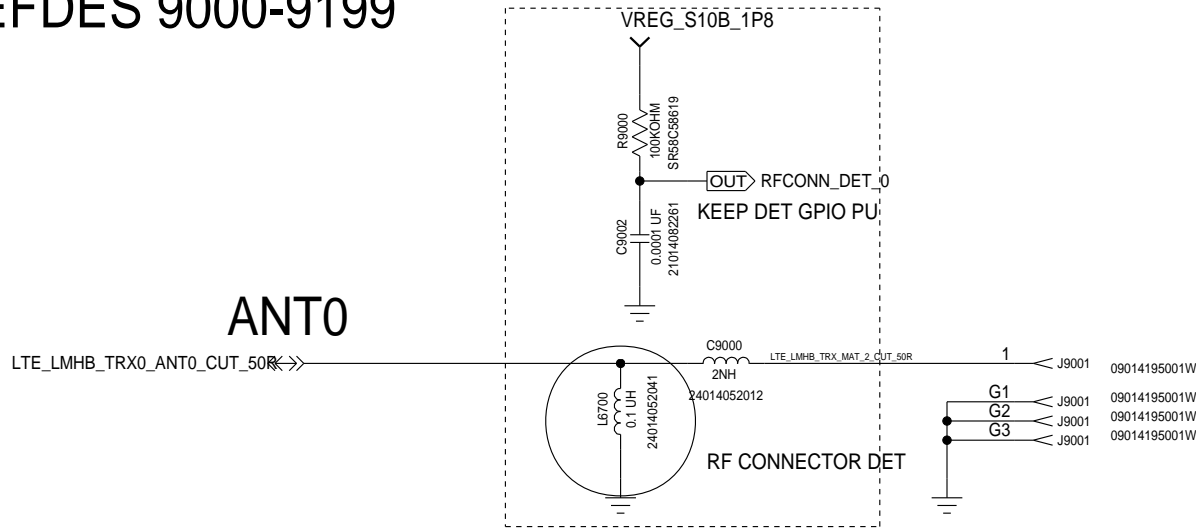



APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA	BLOCK TITLE: <div style="font-size: 24pt; font-weight: bold;">rffe</div>		
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:23:02 2022			
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		CAD FILE NAME:	PAGE 66 OF 77

RFFE: GPS

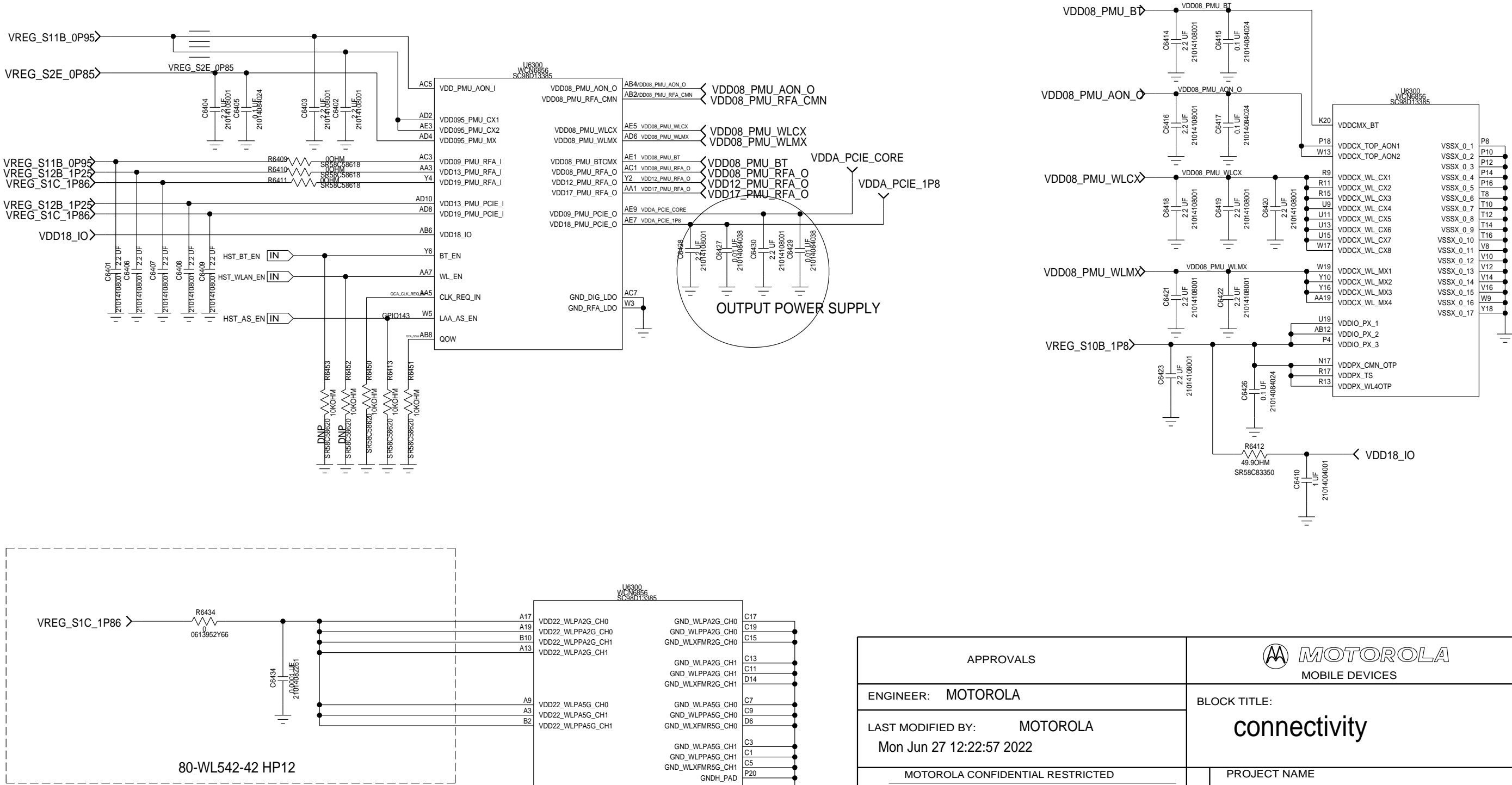
RFFE: RF_CONNECTOR


REFDES 9000-9199



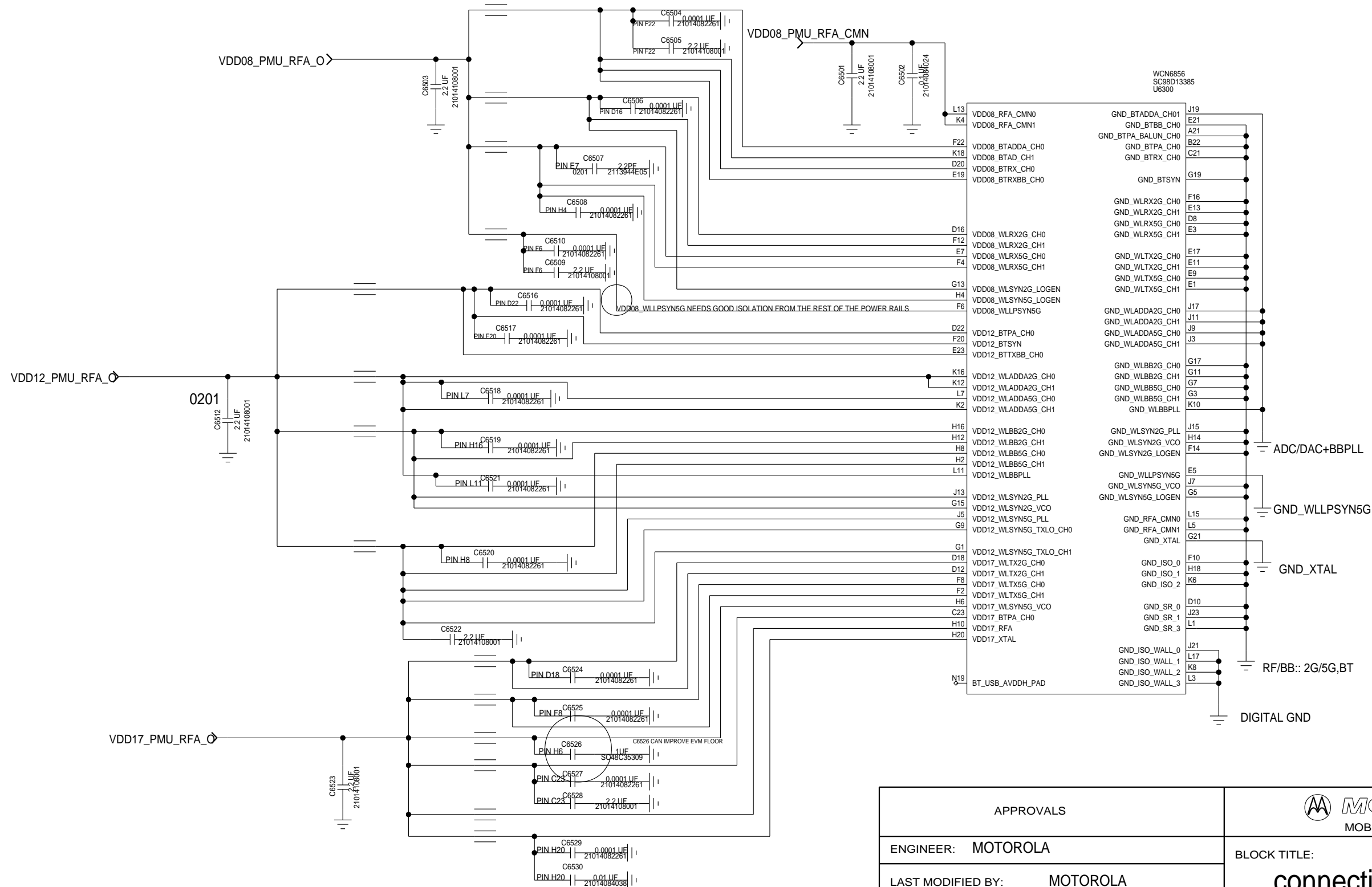
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ENGINEER: MOTOROLA		BLOCK TITLE: rffe	
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:23:02 2022		PROJECT NAME B frontier_sm8475.cpm	
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		CAD FILE NAME: PAGE 68 OF 77	

CONN: WCN6856 PWR/GND1
REF 6300-6999




APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA		BLOCK TITLE:	
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:57 2022		connectivity	
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CAD FILE NAME:			PAGE 69 OF 77

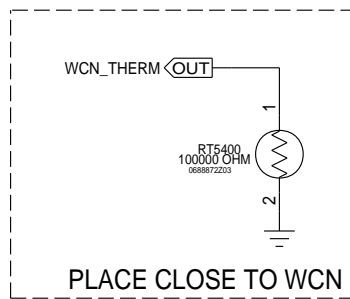
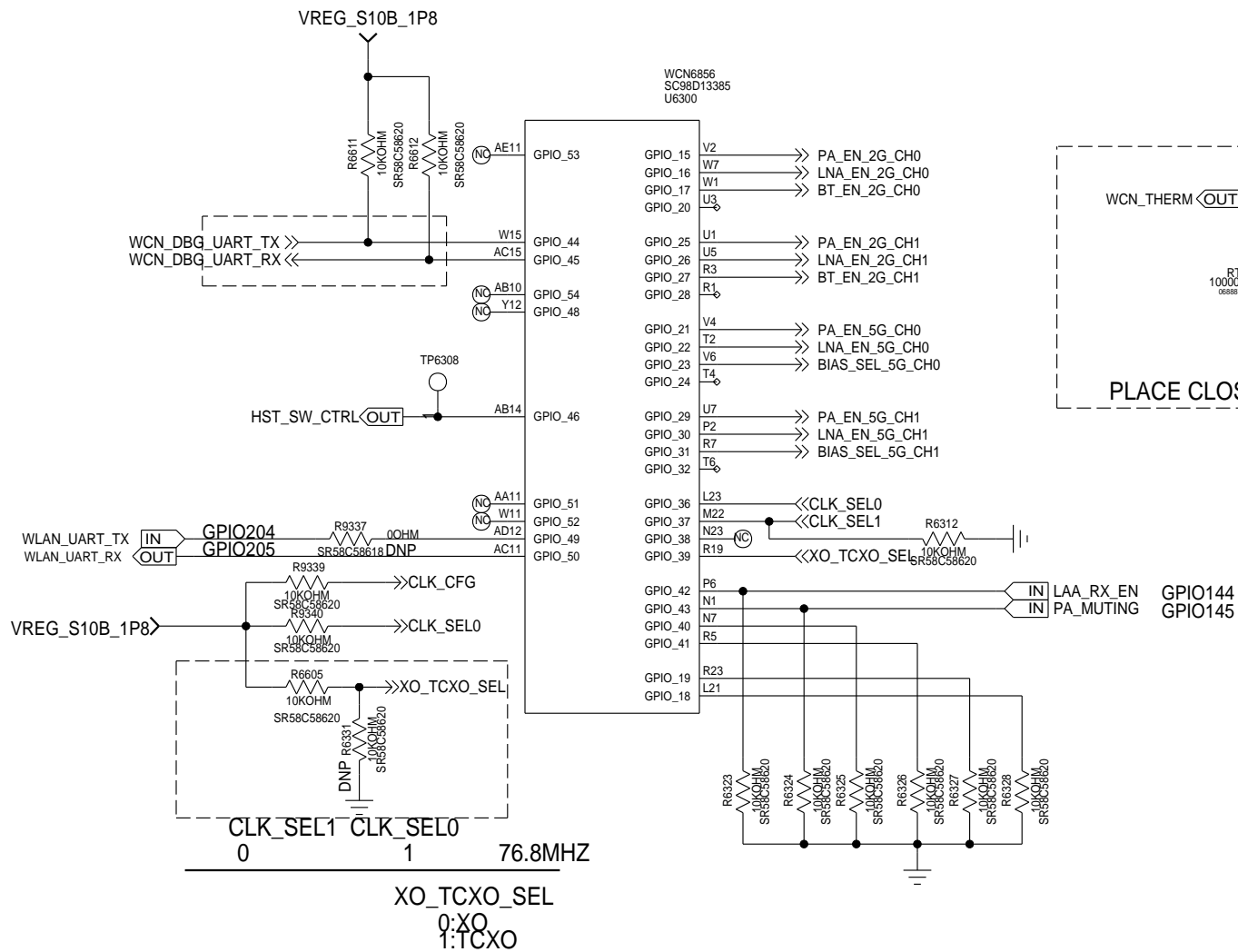
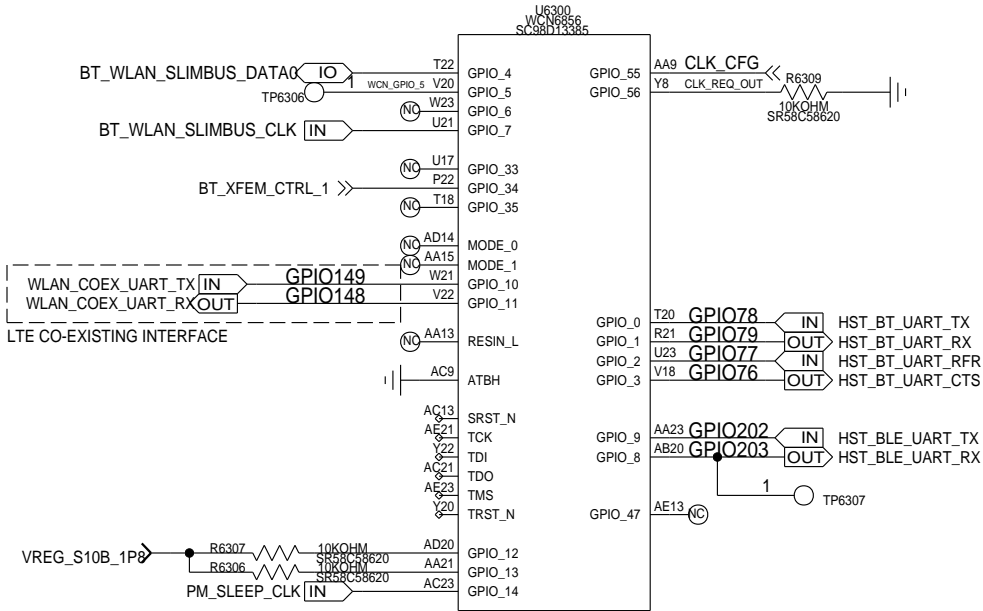
CONN: WCN6856 PWR/GND2
REF 6300-6999



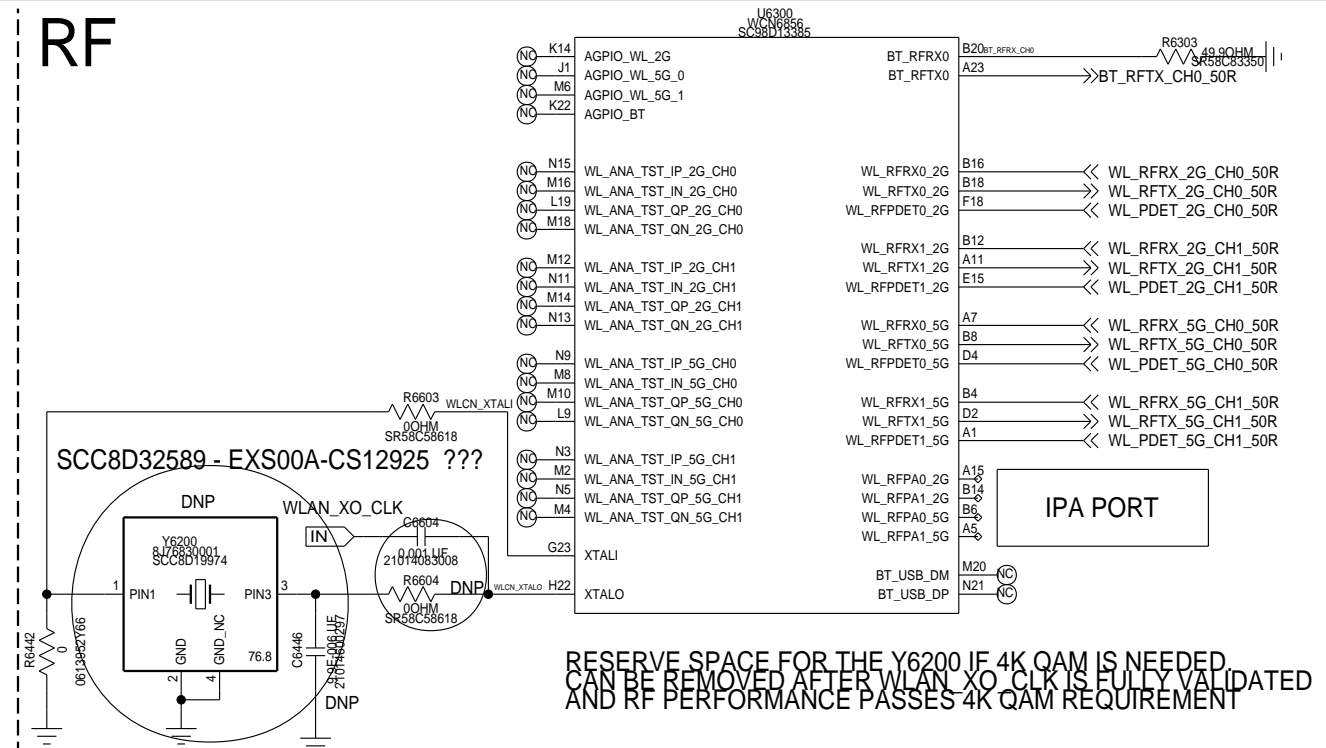
VDD17_WLSYN5G_VCO NEEDS GOOD ISOLATION FROM THE REST OF THE POWER RAILS
VDD12_WLBBPLL NEEDS GOOD ISOLATION FROM BB(1.2V), VCO/BTPA(1.7V), AND RX(0.8V)

APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA	BLOCK TITLE: <h1>connectivity</h1>		
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:57 2022			
MOTOROLA CONFIDENTIAL RESTRICTED <hr/> <small> THE DRAWING ON THIS PRINT AND INFORMATION THEREWITH ARE PROPRIETARY TO MOTOROLA AND SHALL NOT BE USED OR DISCUSSED IN WHOLE OR IN PART WITHOUT MOTOROLA'S CONSENT. © COPYRIGHT, MOTOROLA. THIS DOES NOT IMPLY PUBLICATION </small>		PROJECT NAME B frontier_sm8475.cpm	REV 01
		CAD FILE NAME:	PAGE 70 OF 77

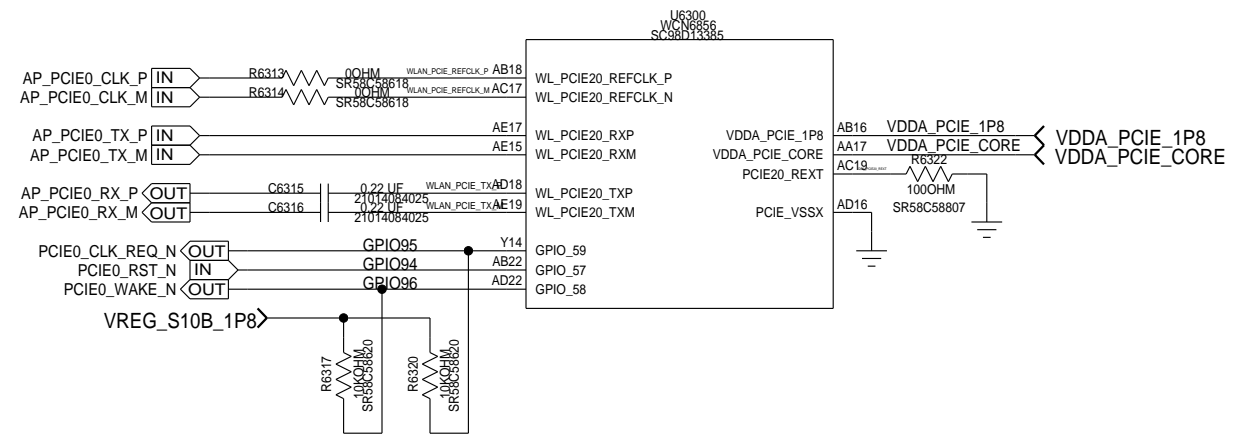
CTRL




RF



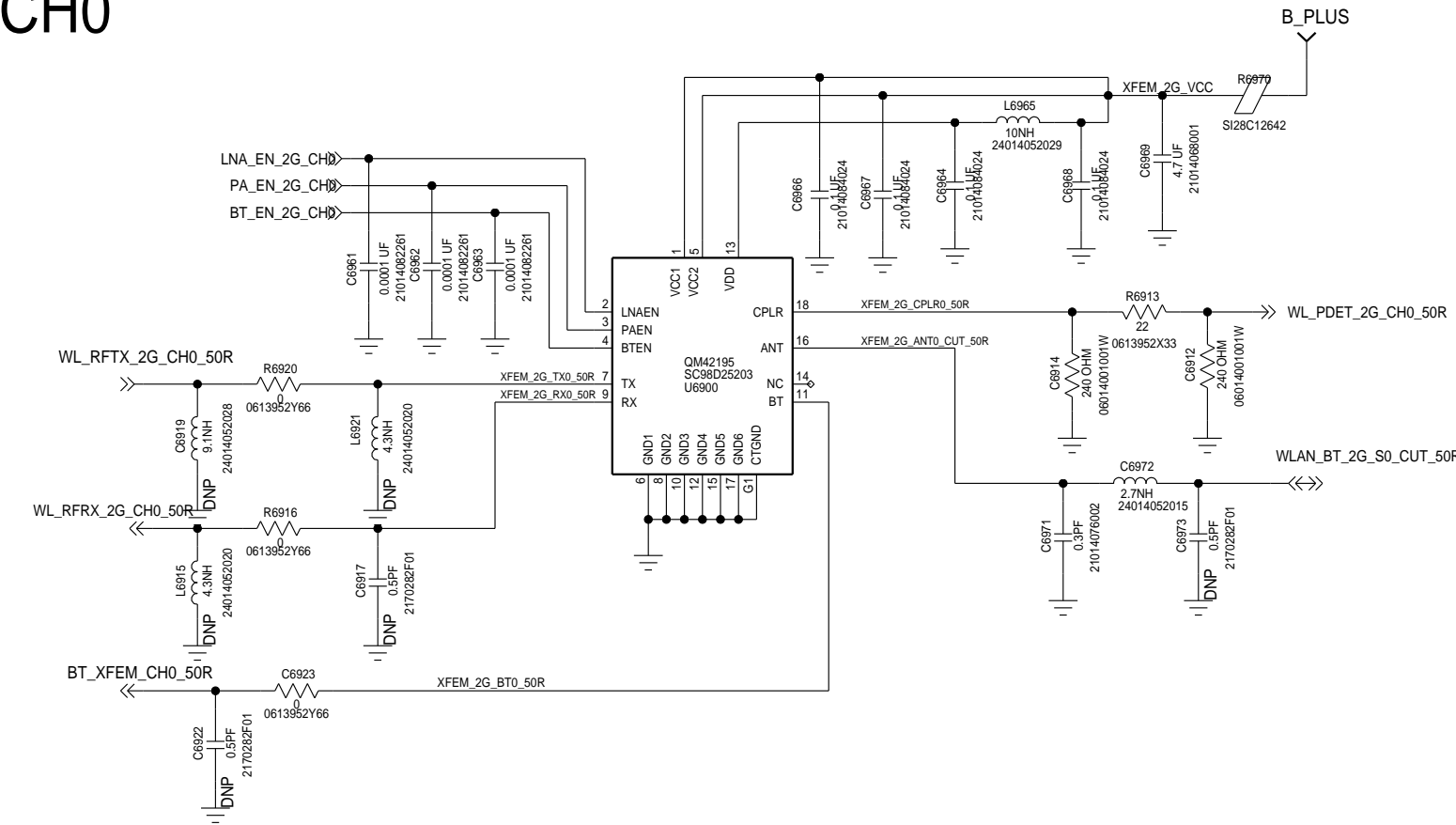
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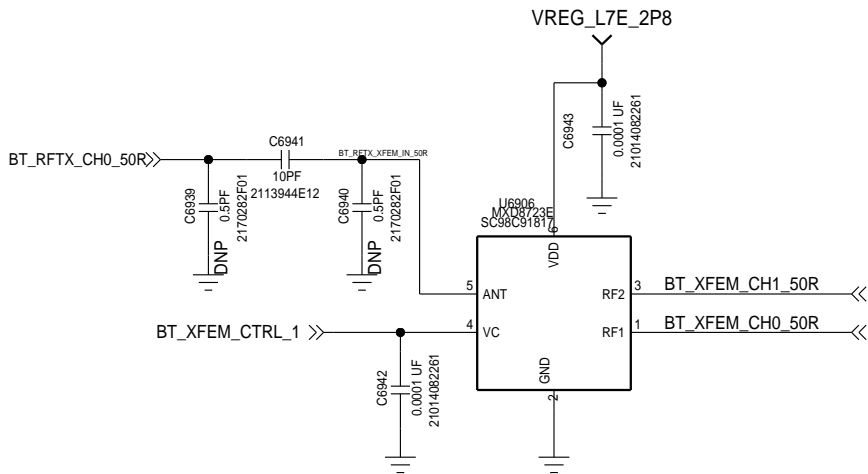
APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA	BLOCK TITLE: <h1>connectivity</h1>		
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:57 2022			
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		CAD FILE NAME:	PAGE 71 OF 77

CONN: WCN6856 2G4 XFEM
REF 6300-6999

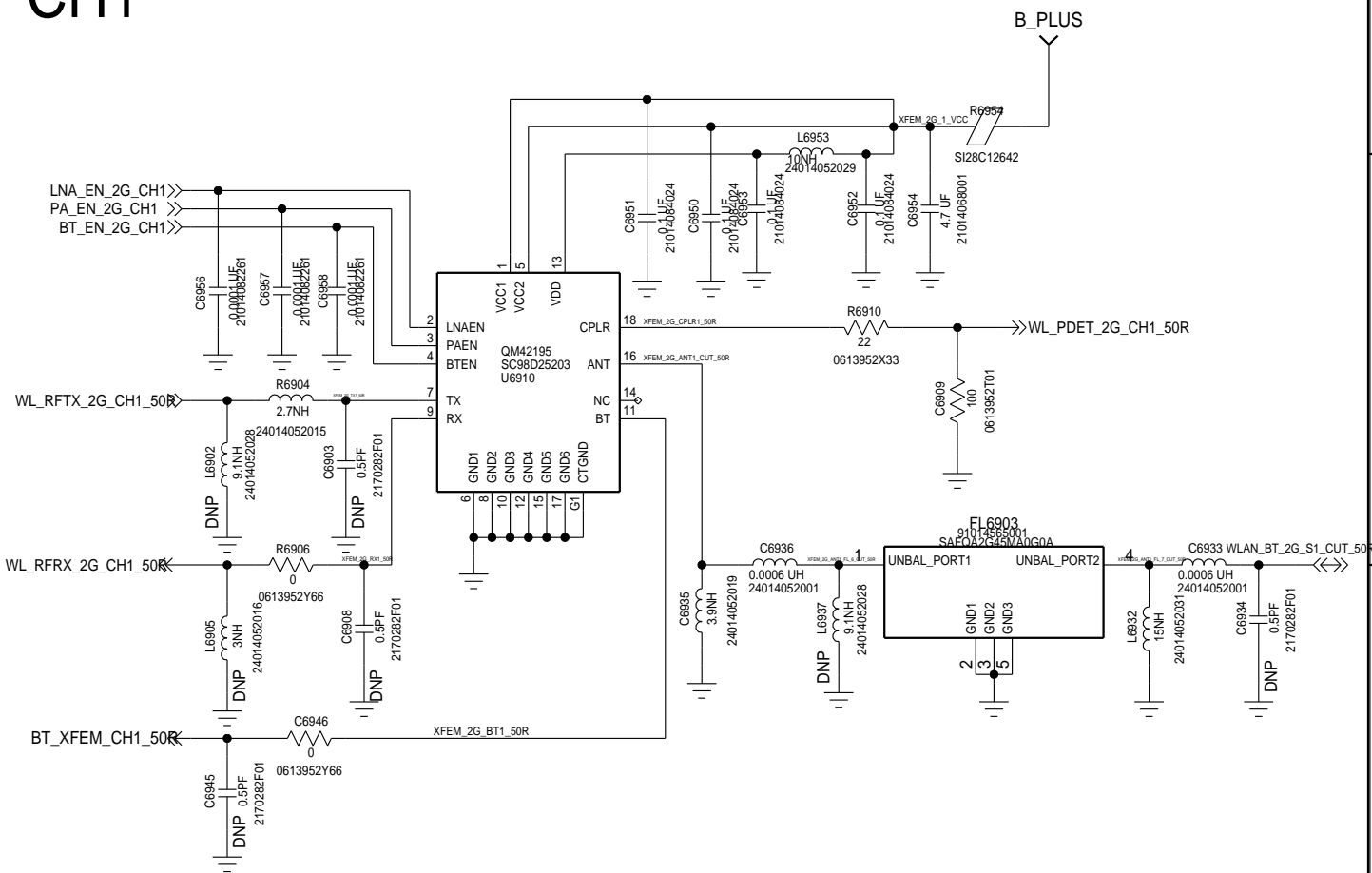
CH0




BT



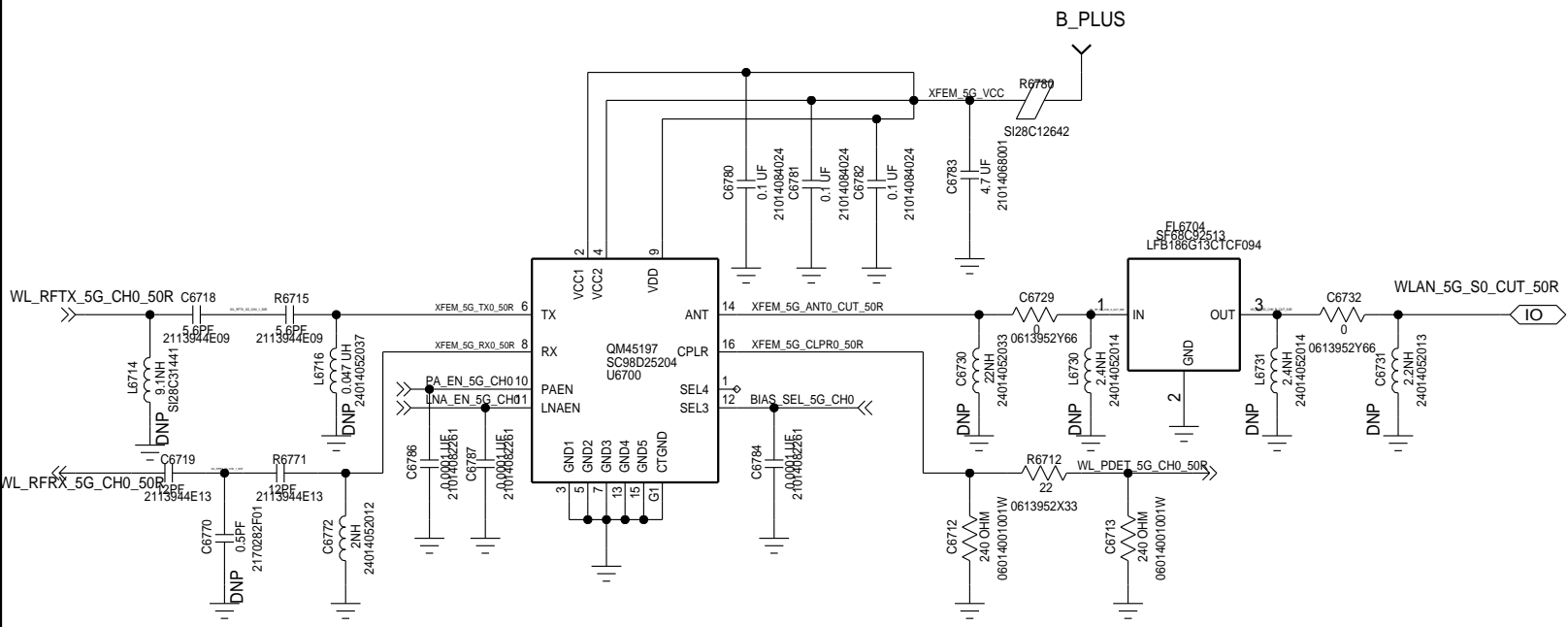
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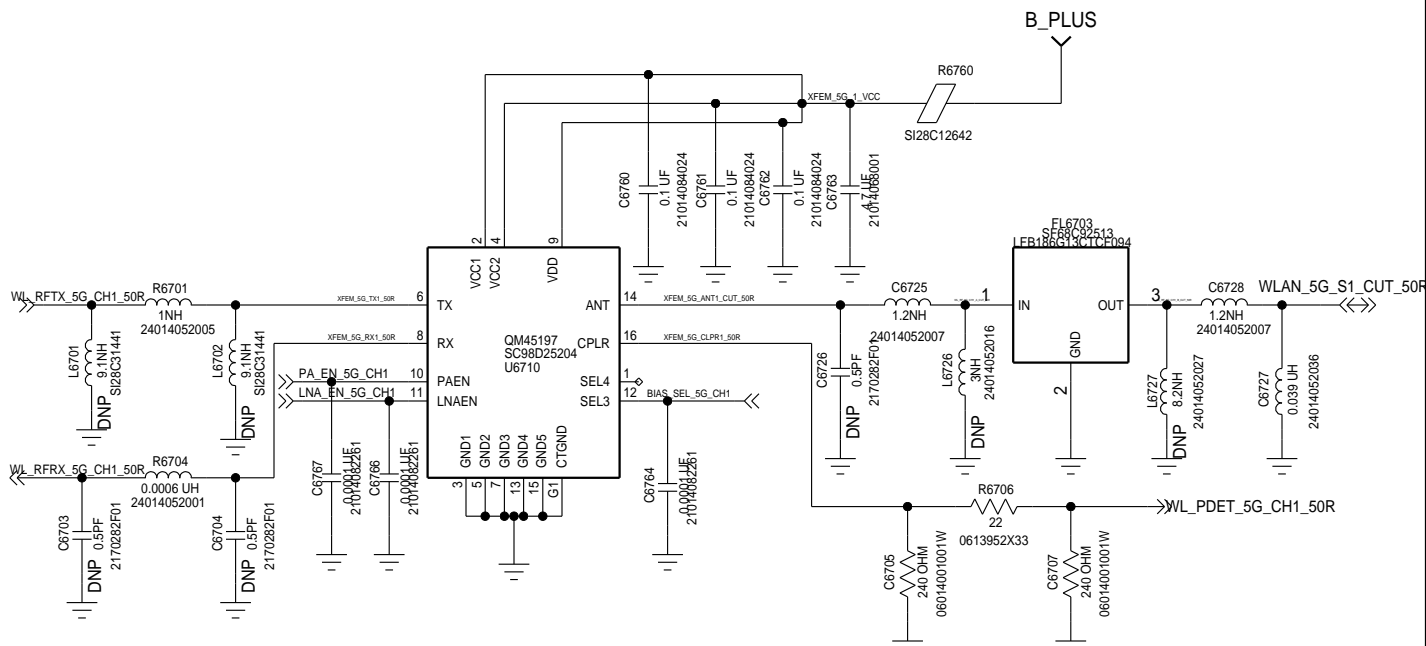
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ENGINEER: MOTOROLA		BLOCK TITLE:	
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:57 2022		connectivity	
MOTOROLA CONFIDENTIAL RESTRICTED <small>THE DRAWING ON THIS PRINT AND INFORMATION THERWITH ARE PROPRIETARY TO MOTOROLA AND SHALL NOT BE USED OR DISCUSSED IN WHOLE OR IN PART WITHOUT MOTOROLA'S CONSENT. © COPYRIGHT, MOTOROLA. THIS DOES NOT IMPLY PUBLICATION</small>		PROJECT NAME	
		B frontier_sm8475.cpm	
CAD FILE NAME:		REV 01	
		PAGE 72 OF 77	


CONN: WCN6856 5G XFEM
REF 6300-6999

CH0



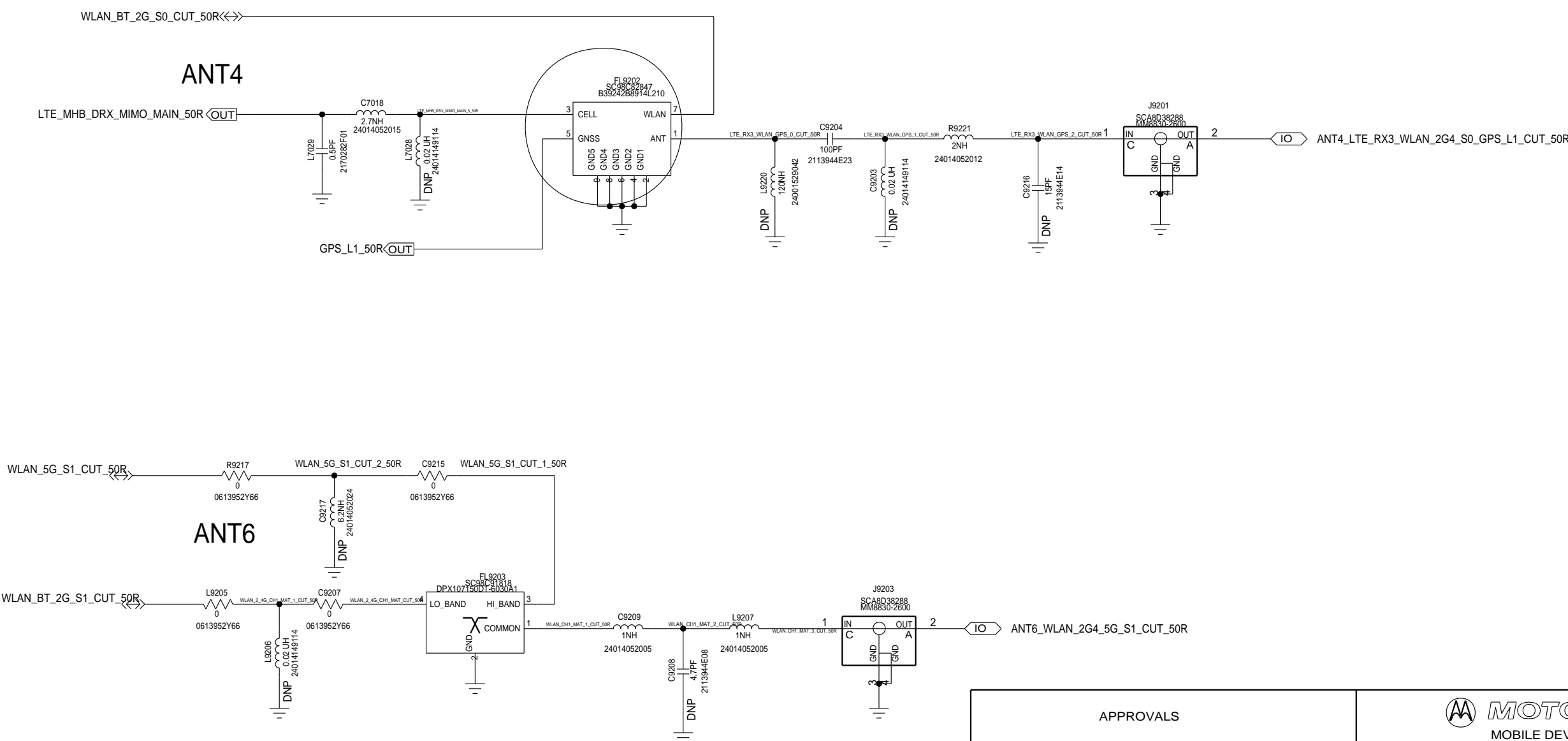
CH1




APPROVALS		 MOTOROLA MOBILE DEVICES	
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LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:22:58 2022		connectivity	
MOTOROLA CONFIDENTIAL RESTRICTED <small>THE DRAWING ON THIS PRINT AND INFORMATION THEREWITH ARE PROPRIETARY TO MOTOROLA AND SHALL NOT BE USED OR DISCUSSED IN WHOLE OR IN PART WITHOUT MOTOROLA'S CONSENT. © COPYRIGHT, MOTOROLA. THIS DOES NOT IMPLY PUBLICATION</small>		PROJECT NAME	
		B frontier_sm8475.cpm	
		REV 01	
		CAD FILE NAME:	
		PAGE 73 OF 77	

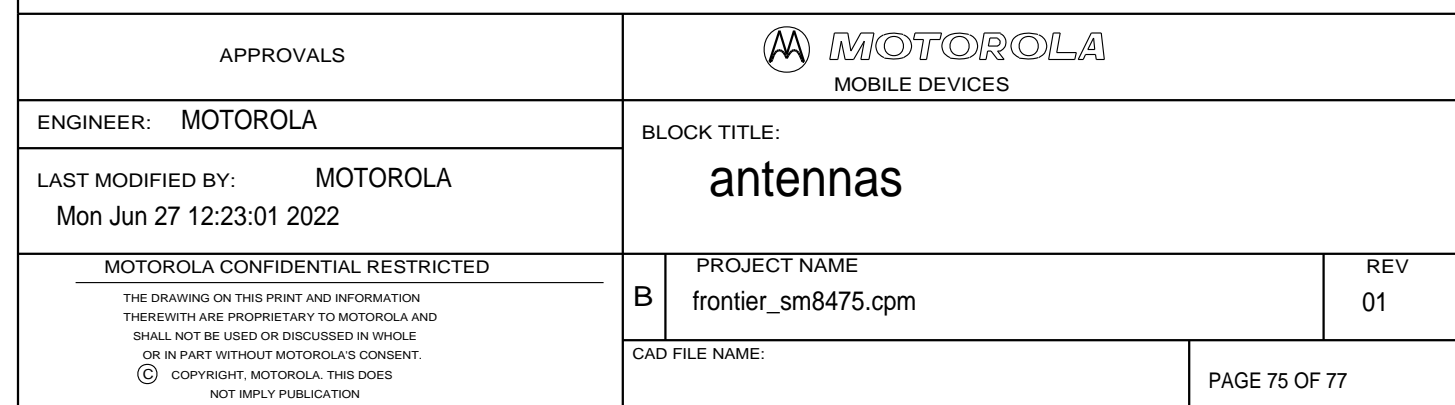
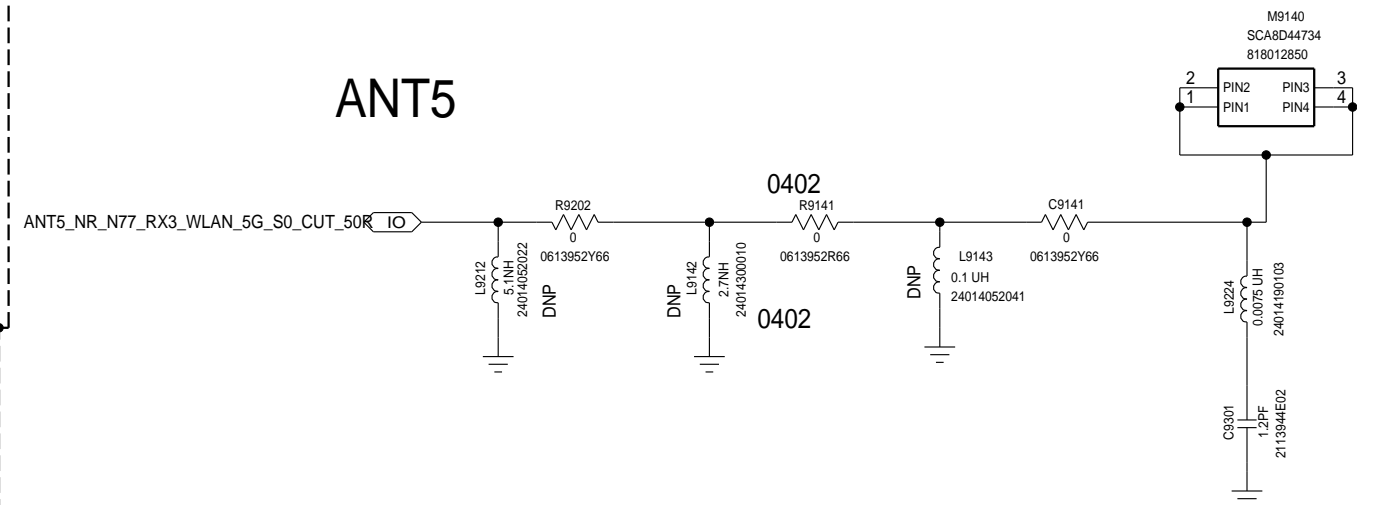
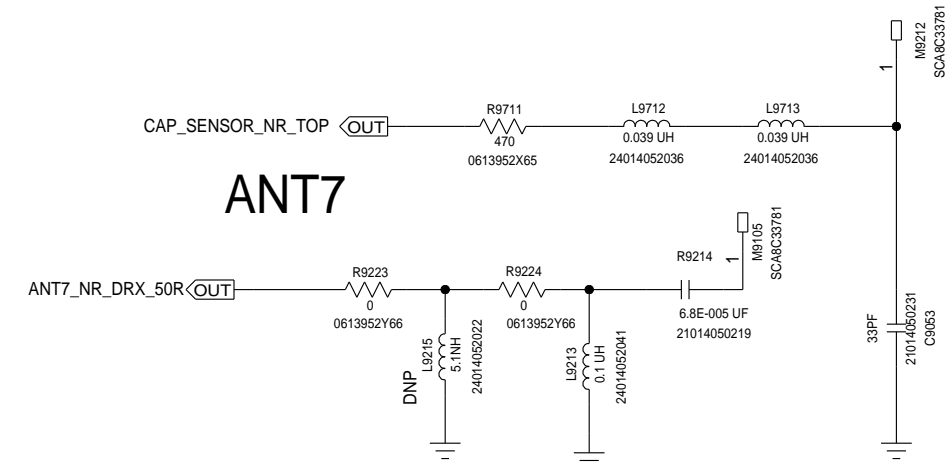
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REF 9200-9299



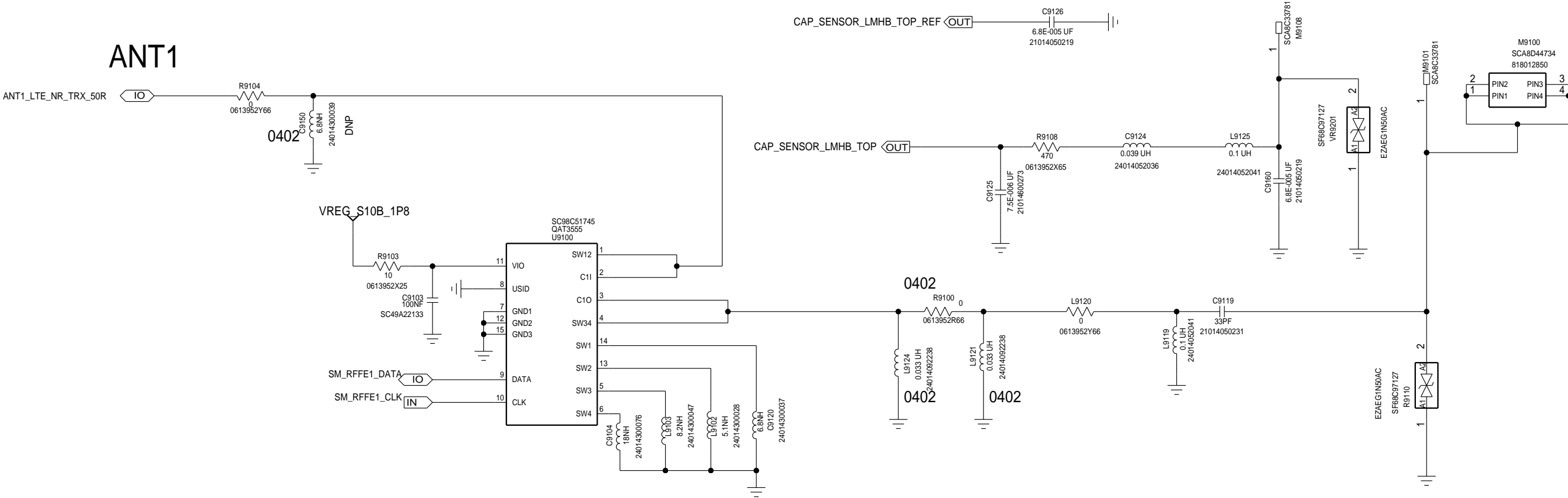
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		B frontier_sm8475.cpm	
		REV 01	
		CAD FILE NAME:	
		PAGE 74 OF 77	


REFDES: 9000-9999



WWAN_TOP_ANT_TUNER

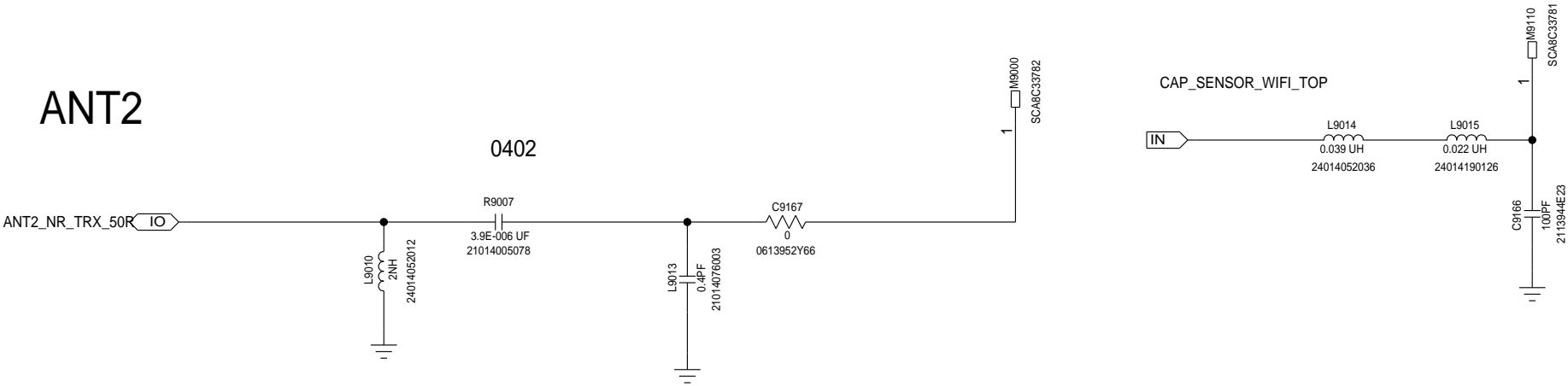
REFDES: 9000-9999




APPROVALS		 MOTOROLA MOBILE DEVICES	
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LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:23:01 2022		antennas	
<div>MOTOROLA CONFIDENTIAL RESTRICTED</div> <div>THE DRAWING ON THIS PRINT AND INFORMATION THEREWITH ARE PROPRIETARY TO MOTOROLA AND SHALL NOT BE USED OR DISCUSSED IN WHOLE OR IN PART WITHOUT MOTOROLA'S CONSENT. © COPYRIGHT, MOTOROLA. THIS DOES NOT IMPLY PUBLICATION</div>		PROJECT NAME	
		B frontier_sm8475.cpm	
		REV	
		01	
		PAGE 76 OF 77	

WWAN_TOP_ANT_TUNER

REFDES : 9000-9999



APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA		BLOCK TITLE:	
LAST MODIFIED BY: MOTOROLA Mon Jun 27 12:23:01 2022		antennas	
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		B frontier_sm8475.cpm	
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		01	
		CAD FILE NAME:	
		PAGE 77 OF 77	