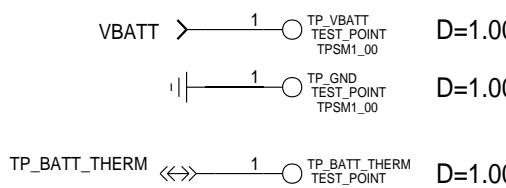


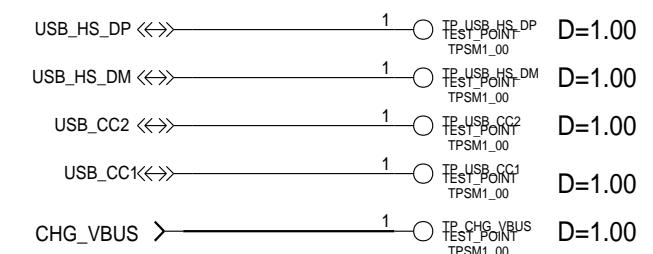
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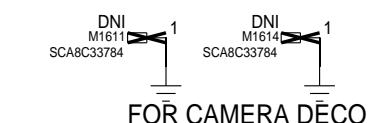
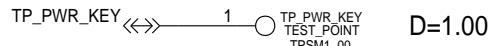
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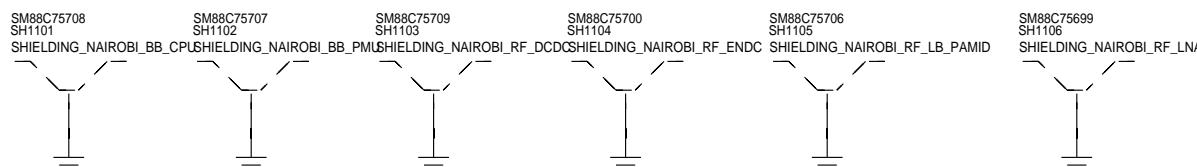


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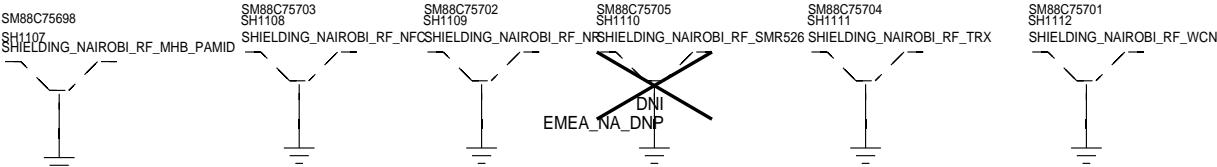


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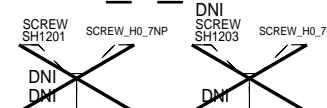
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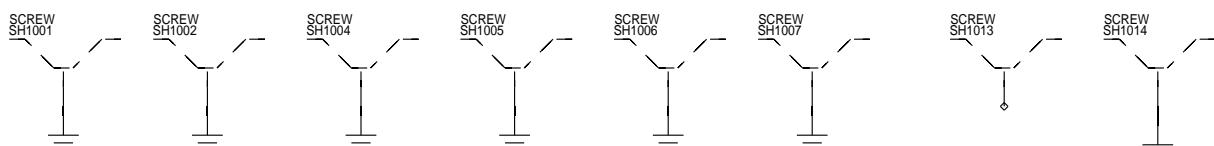
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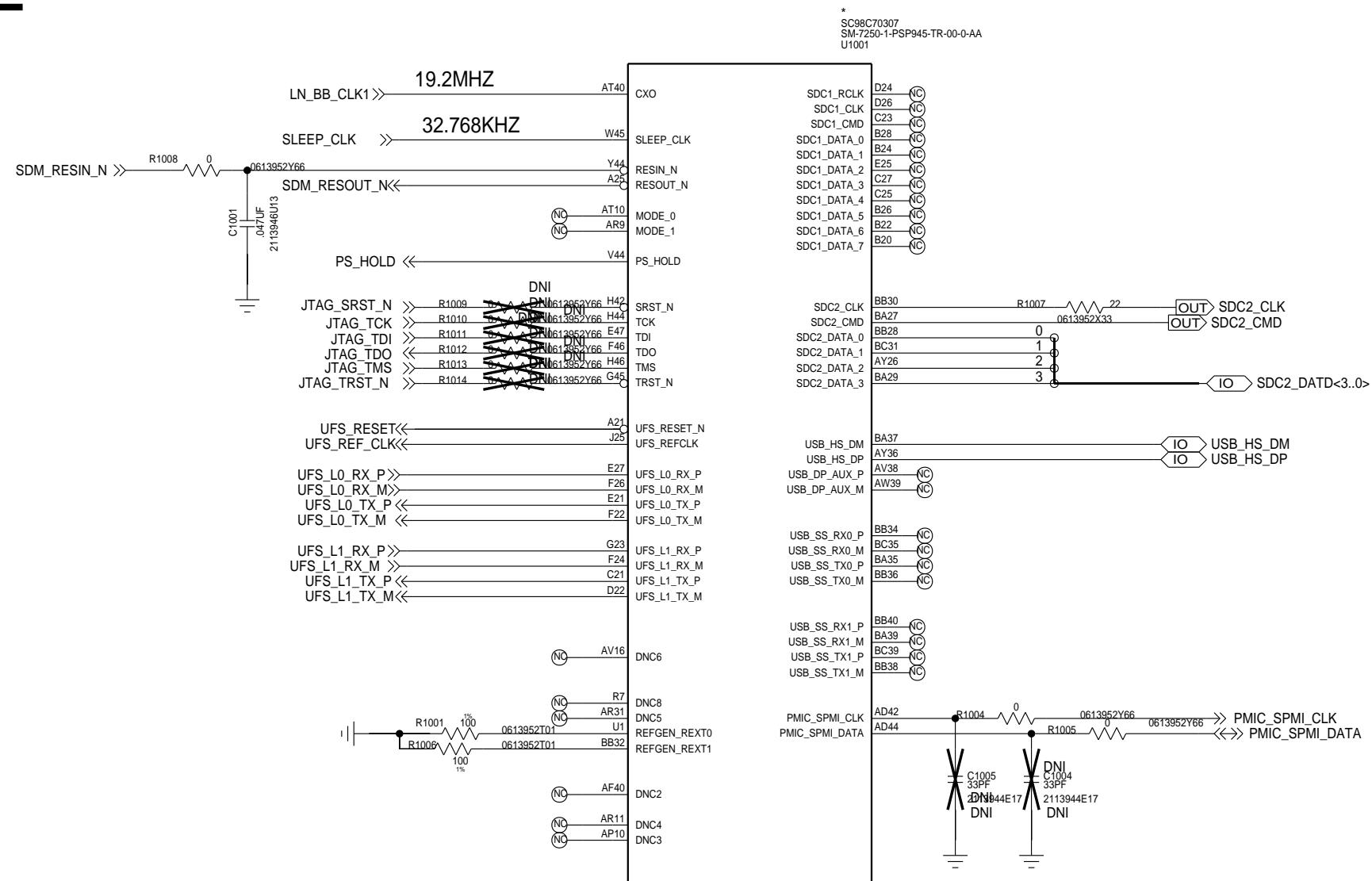


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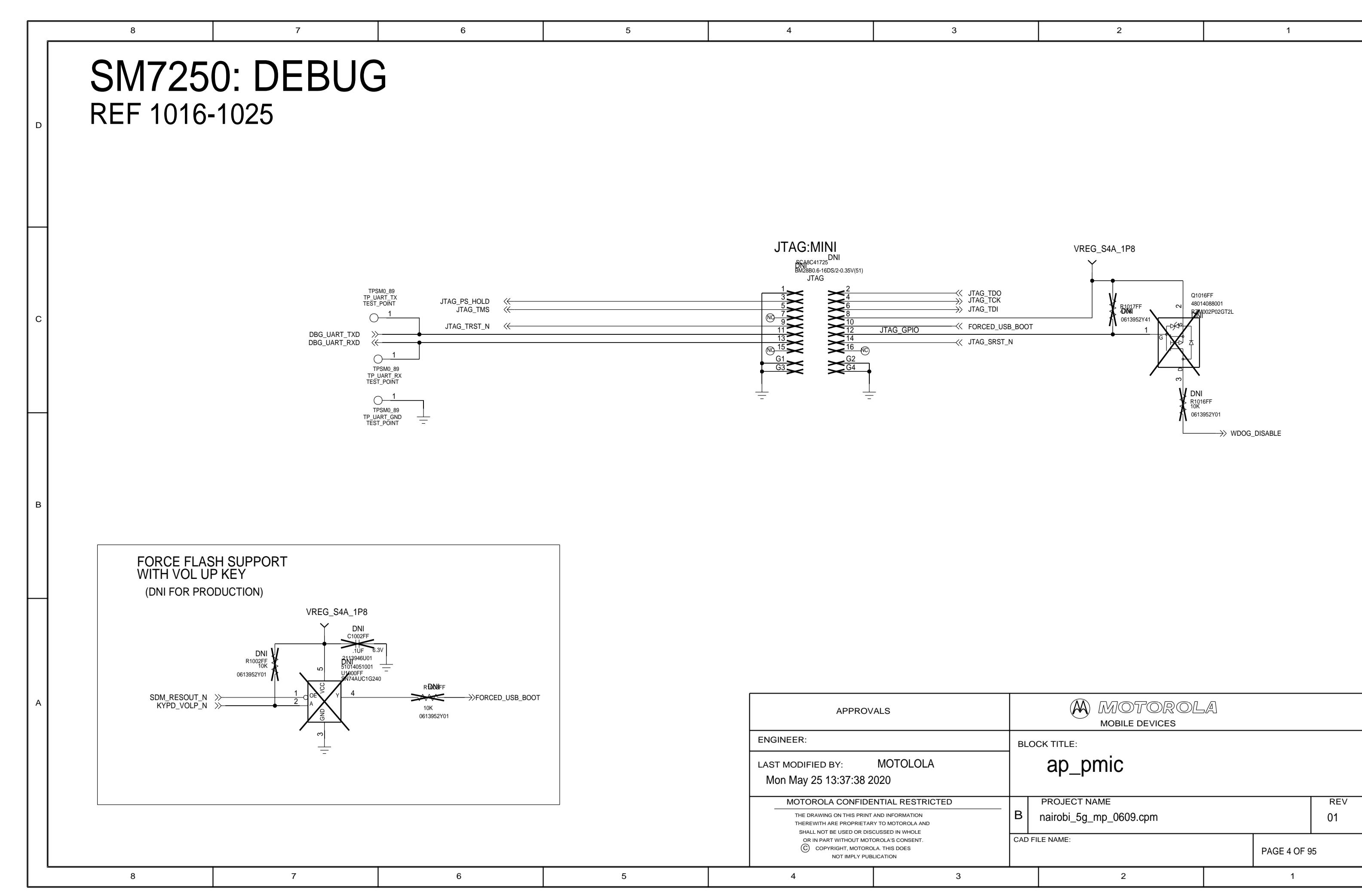
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| CAD FILE NAME: | | PAGE 2 OF 95 | |

SM7250: CTRL

REF 1000-1015

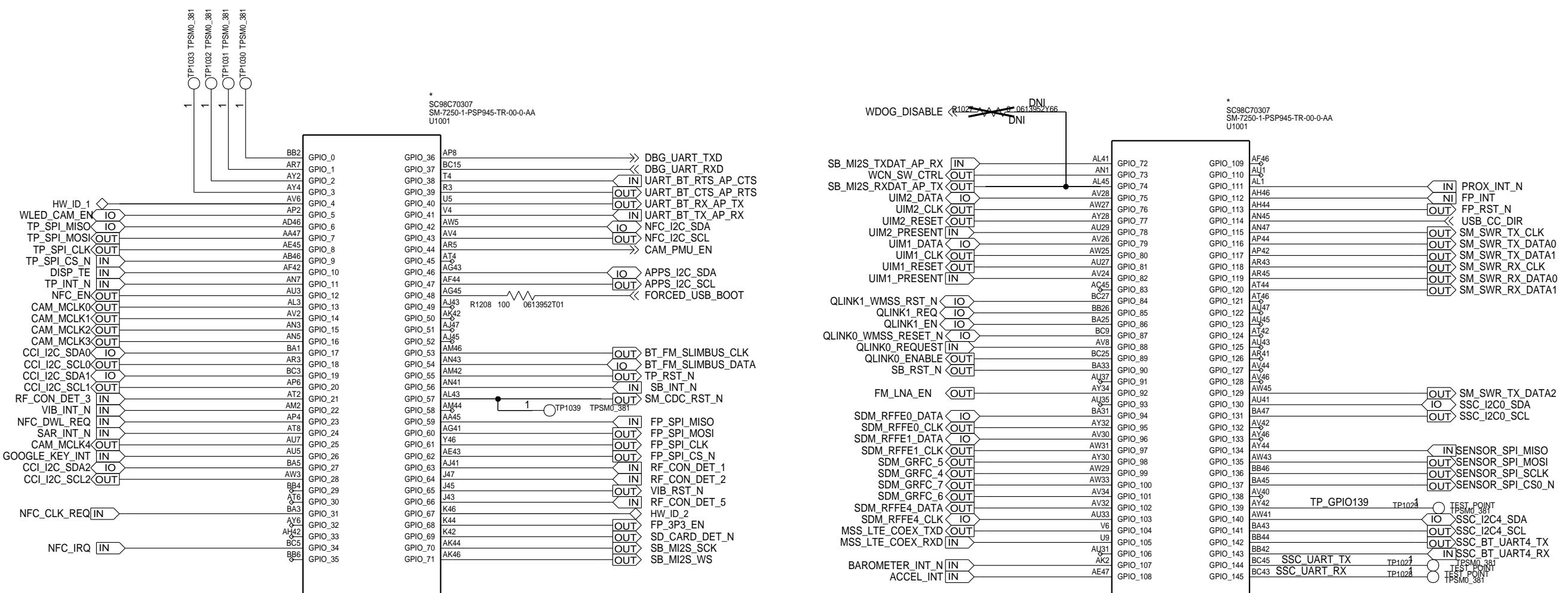


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| CAD FILE NAME: | | PAGE 3 OF 95 |



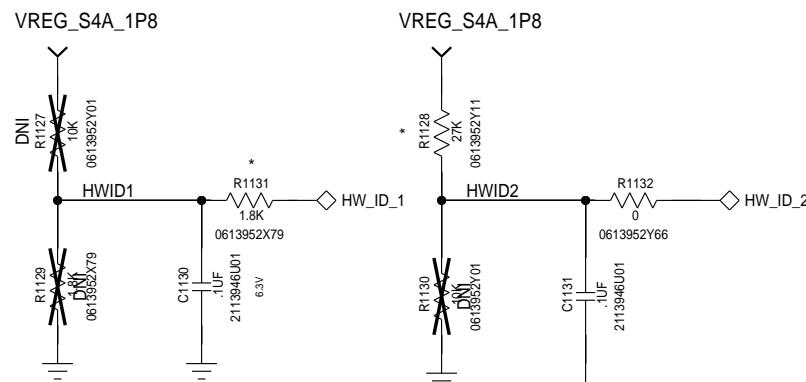
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REF 1027-1040



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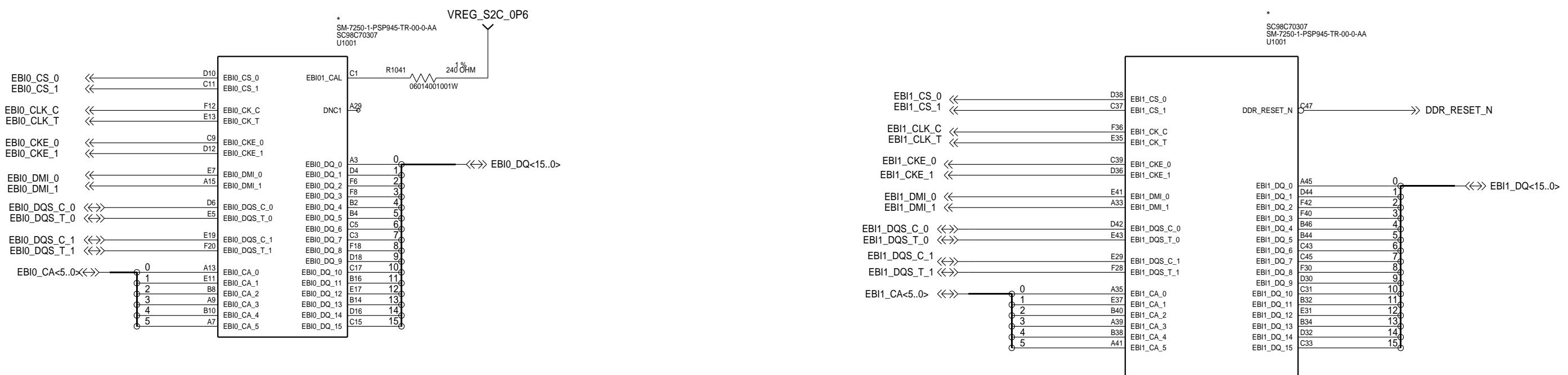
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SM7250: EBI0_1

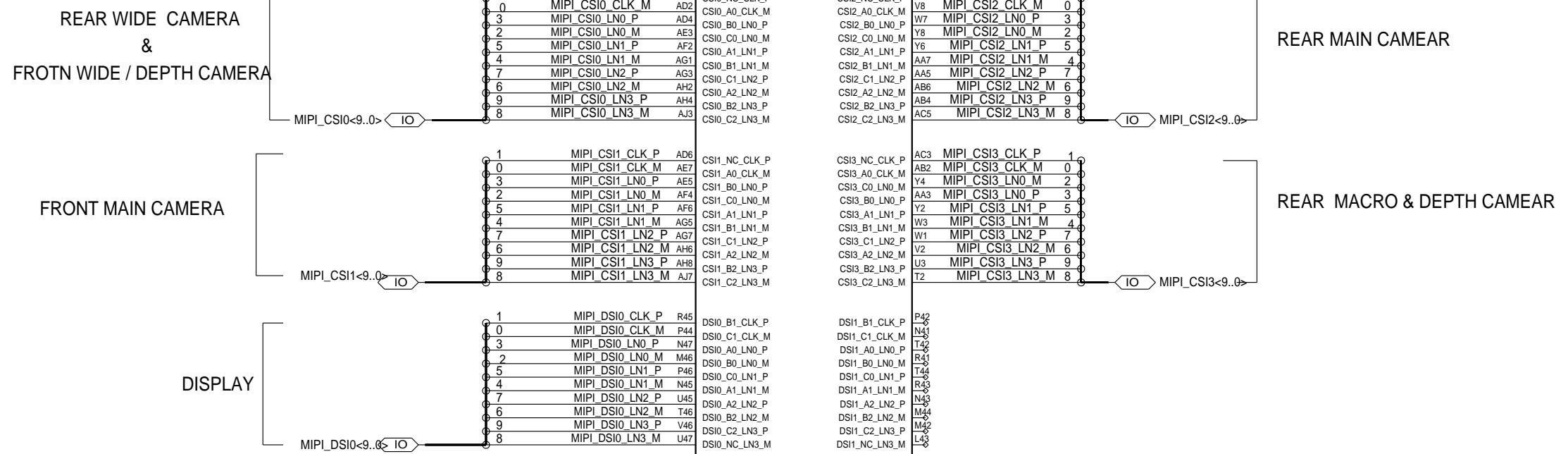
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SM7250: MIPI

REF 1051-1060

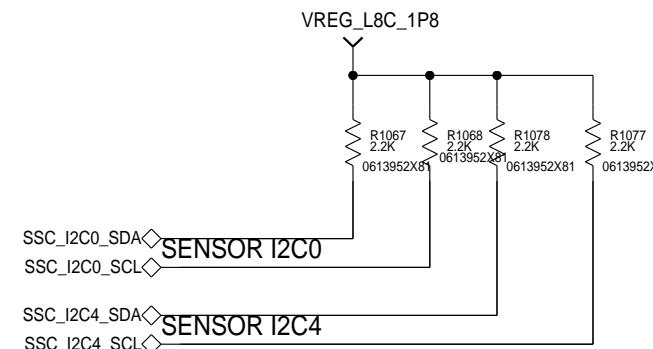
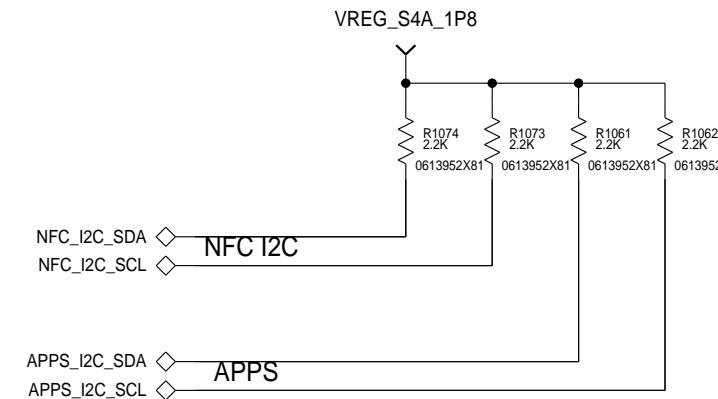
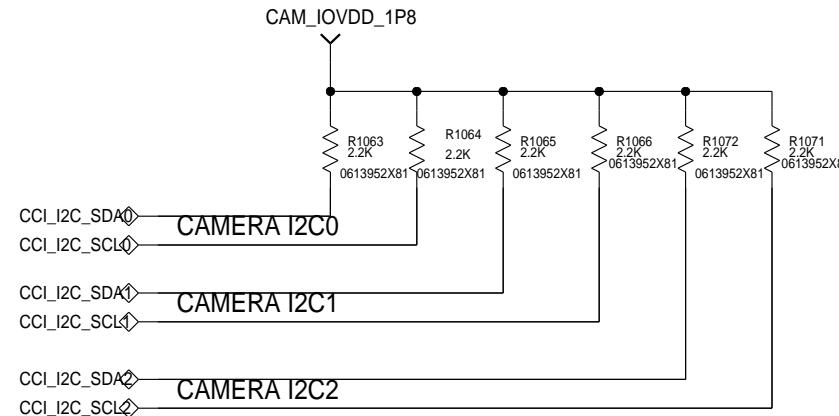


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SM7250: I2C RESISTORS

REF: 1061-1090

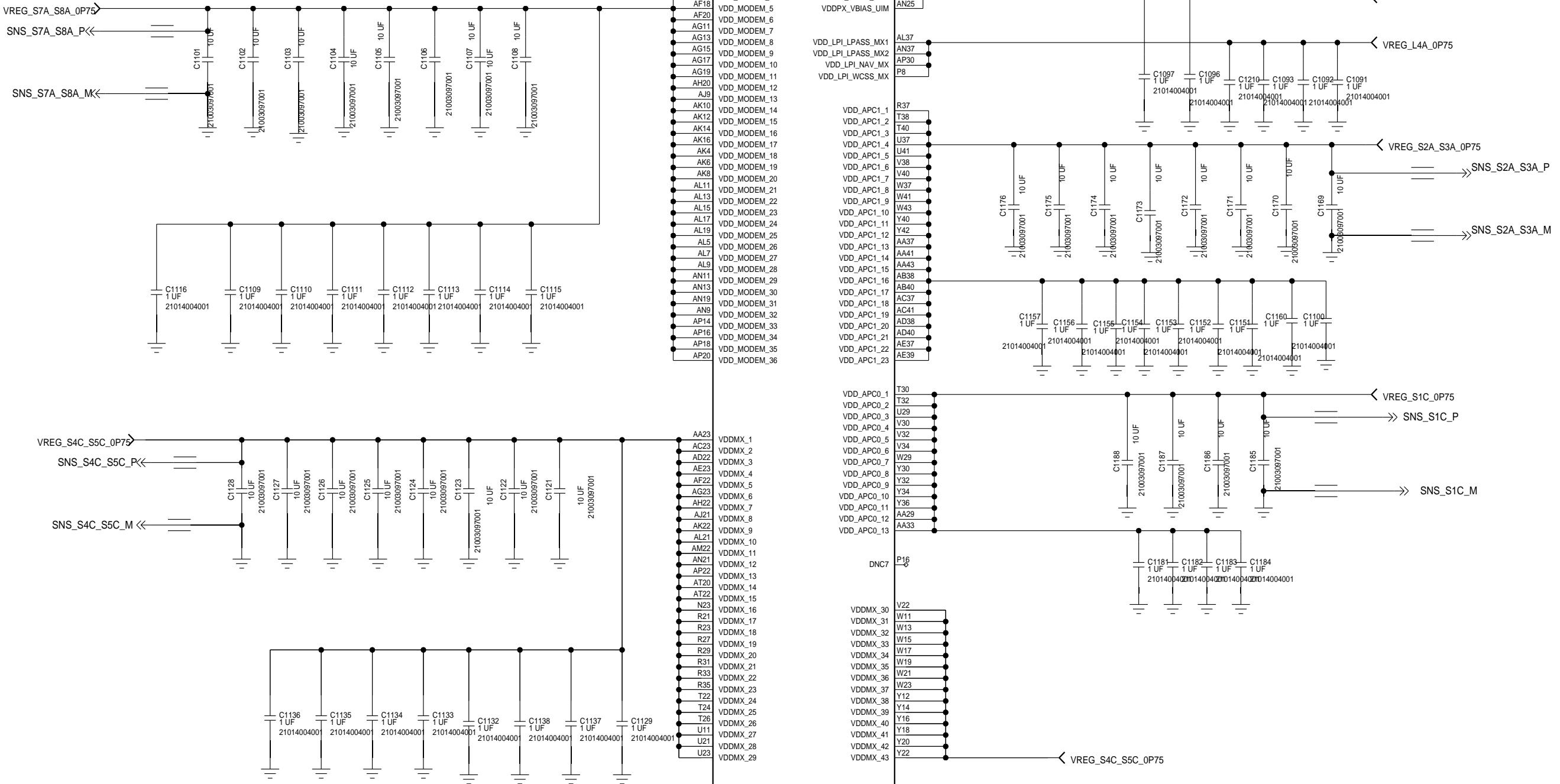
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SM7250: POWER1

REF 1091-1190



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ENGINEER:

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SM7250: POWER2

REF 1191-1300

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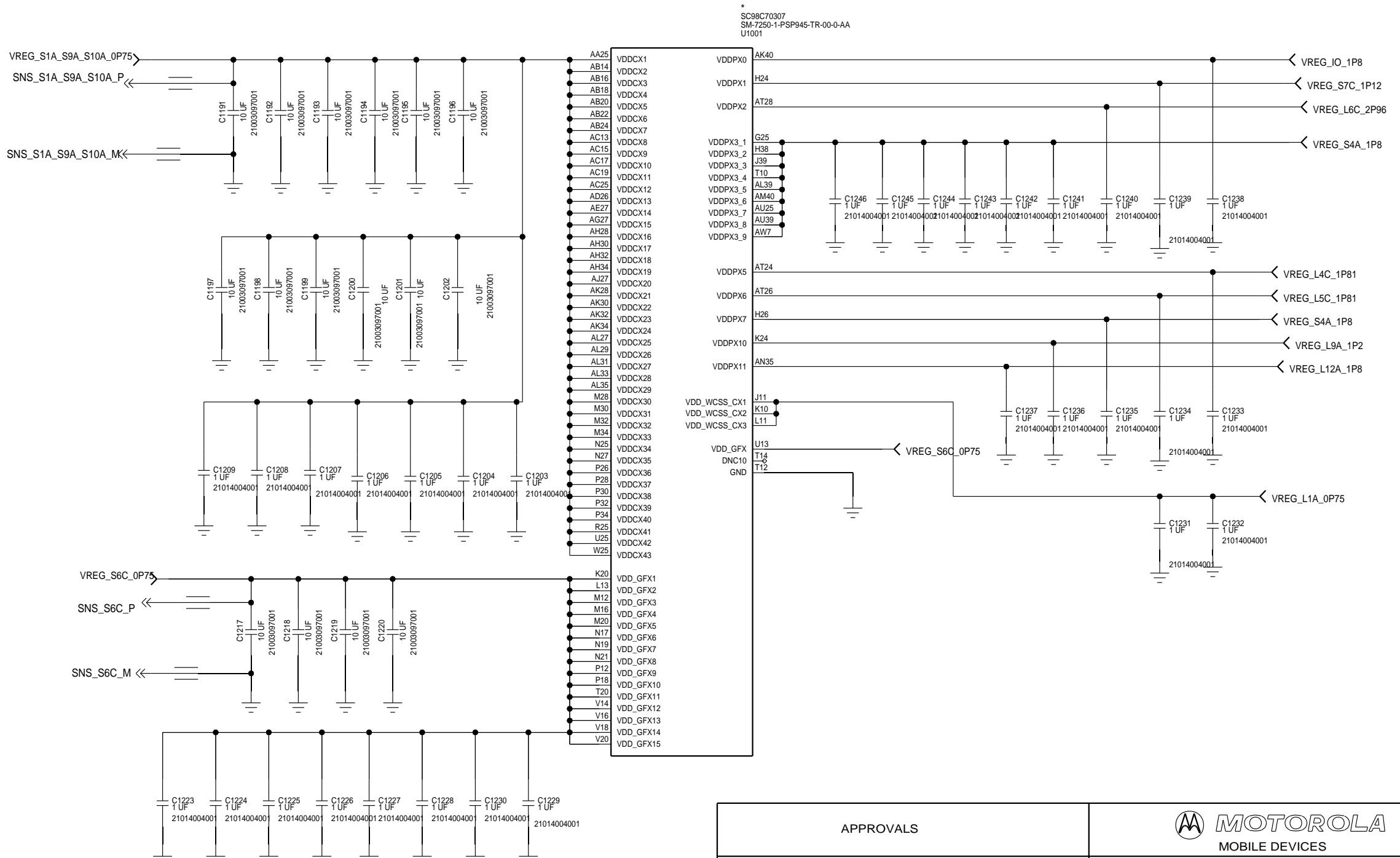
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| ENGINEER: | |

MOTOROLA
MOBILE DEVICES

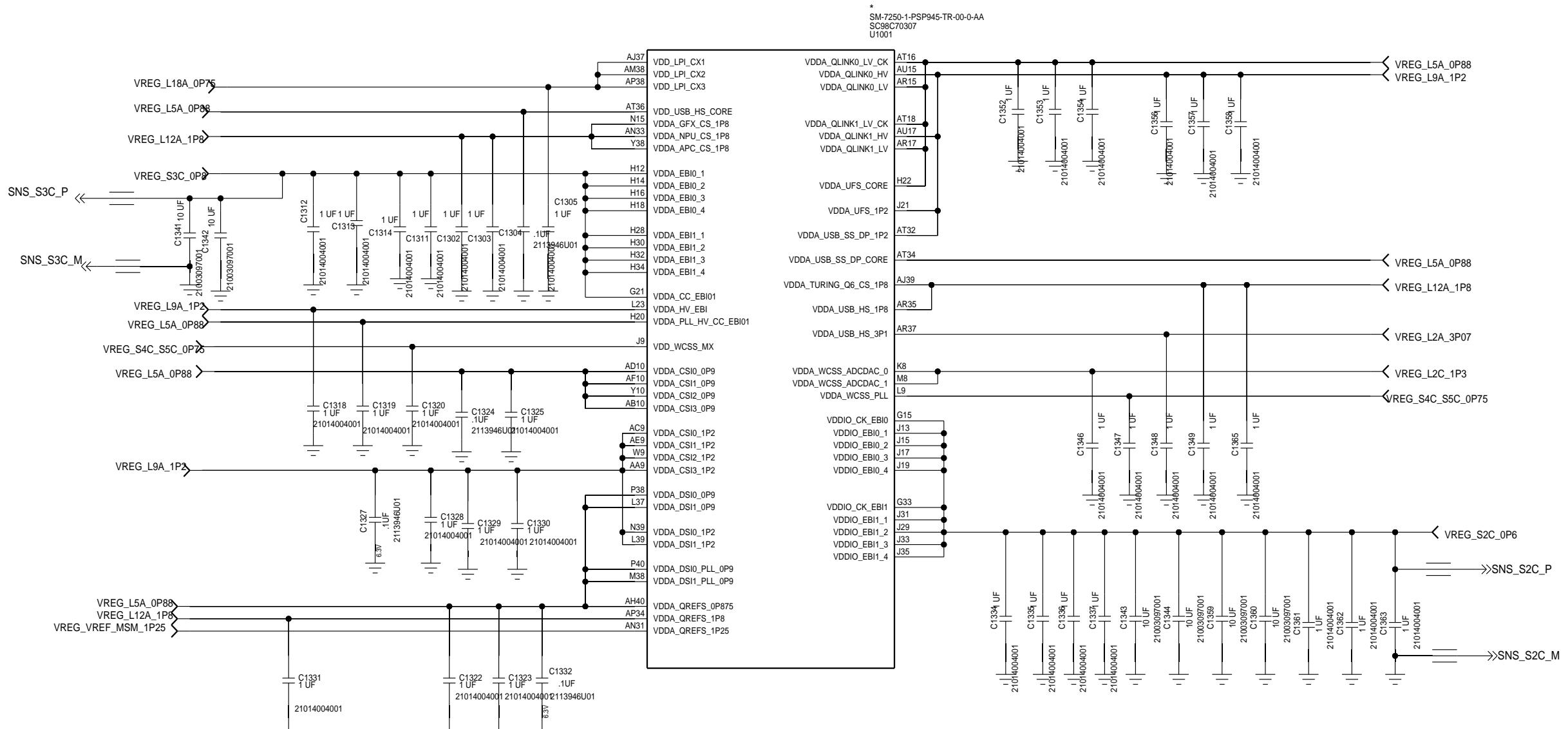
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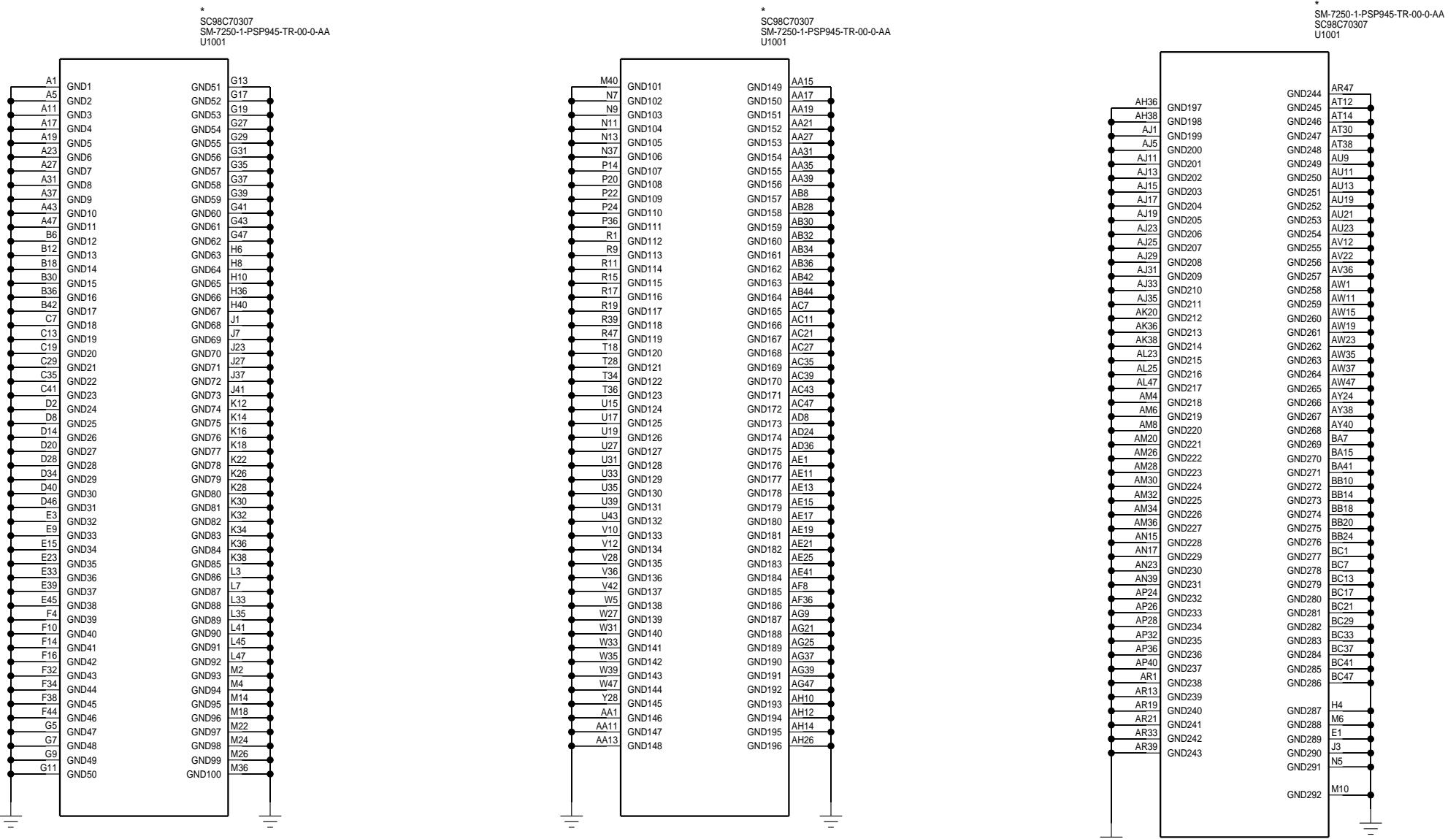
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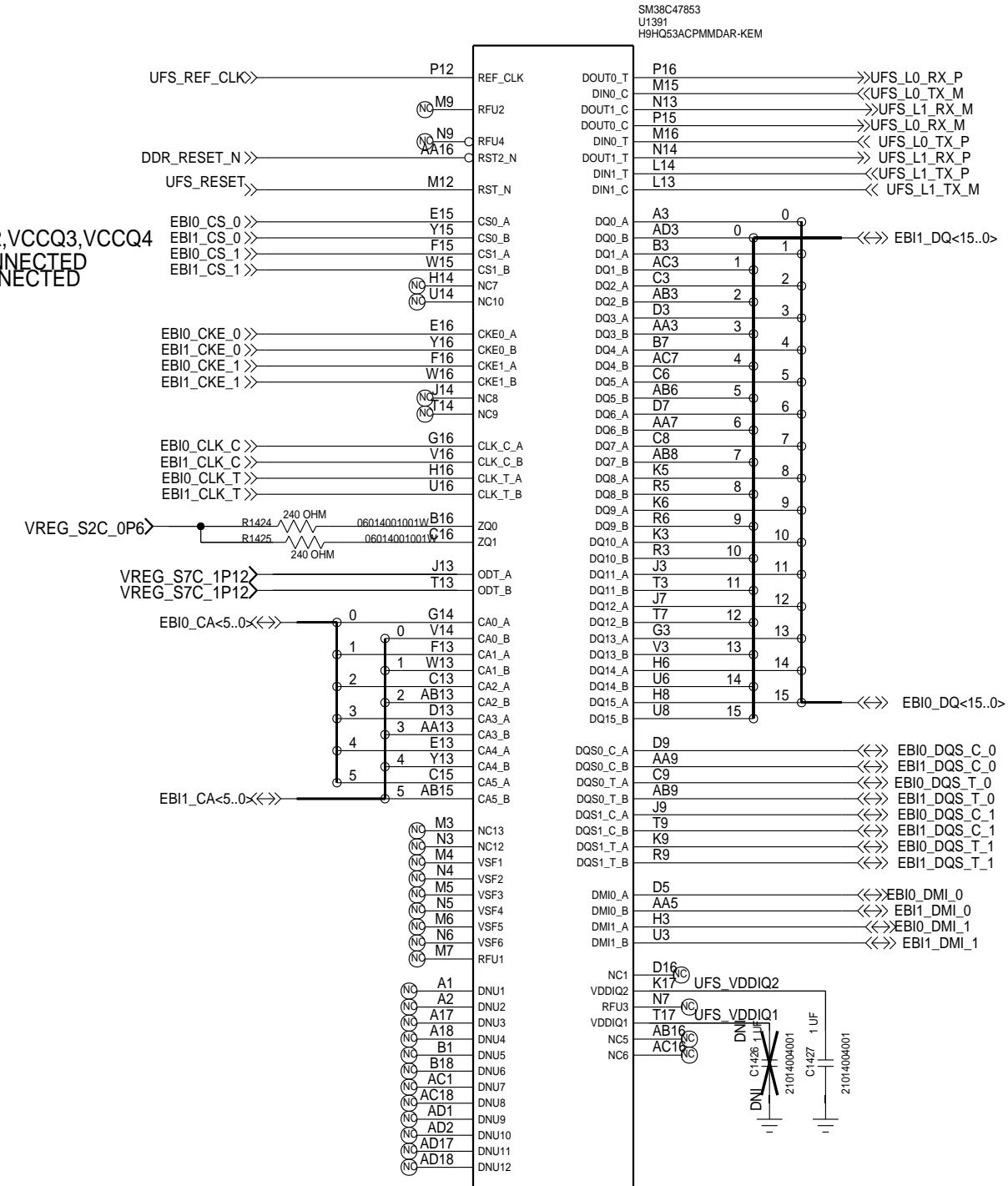
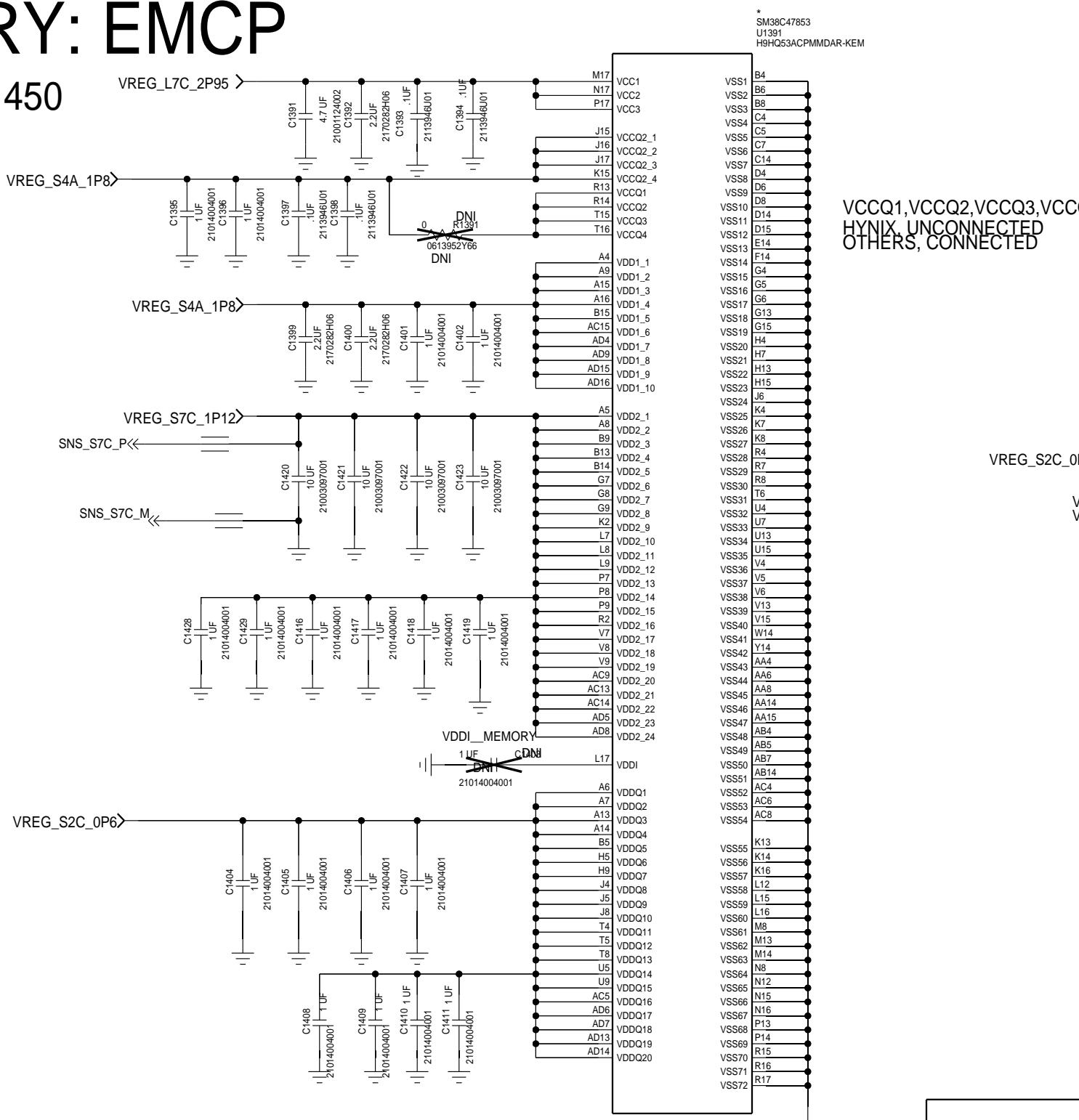
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MEMORY: EMCP

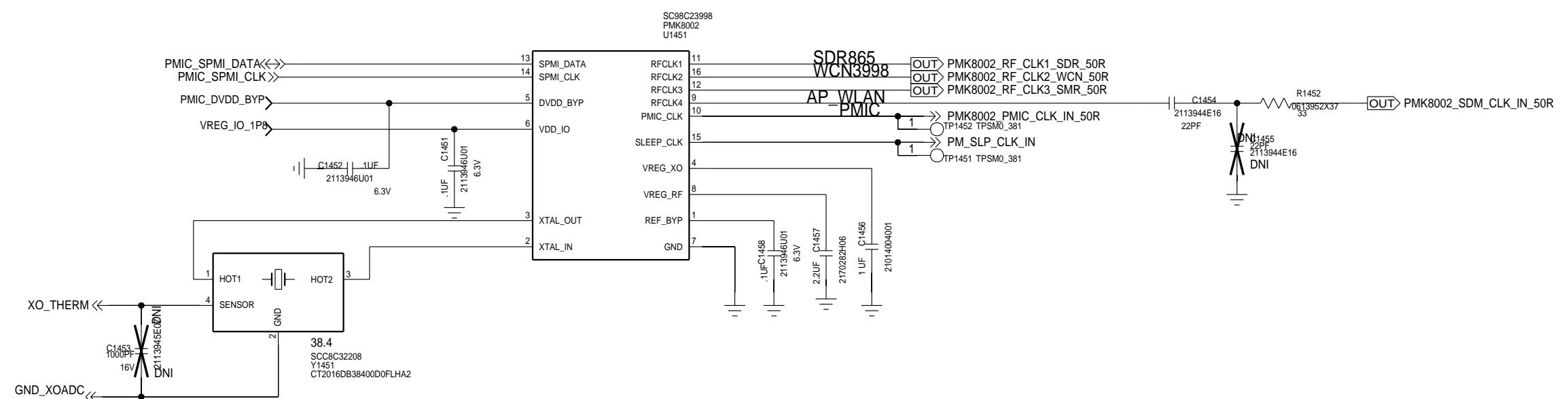
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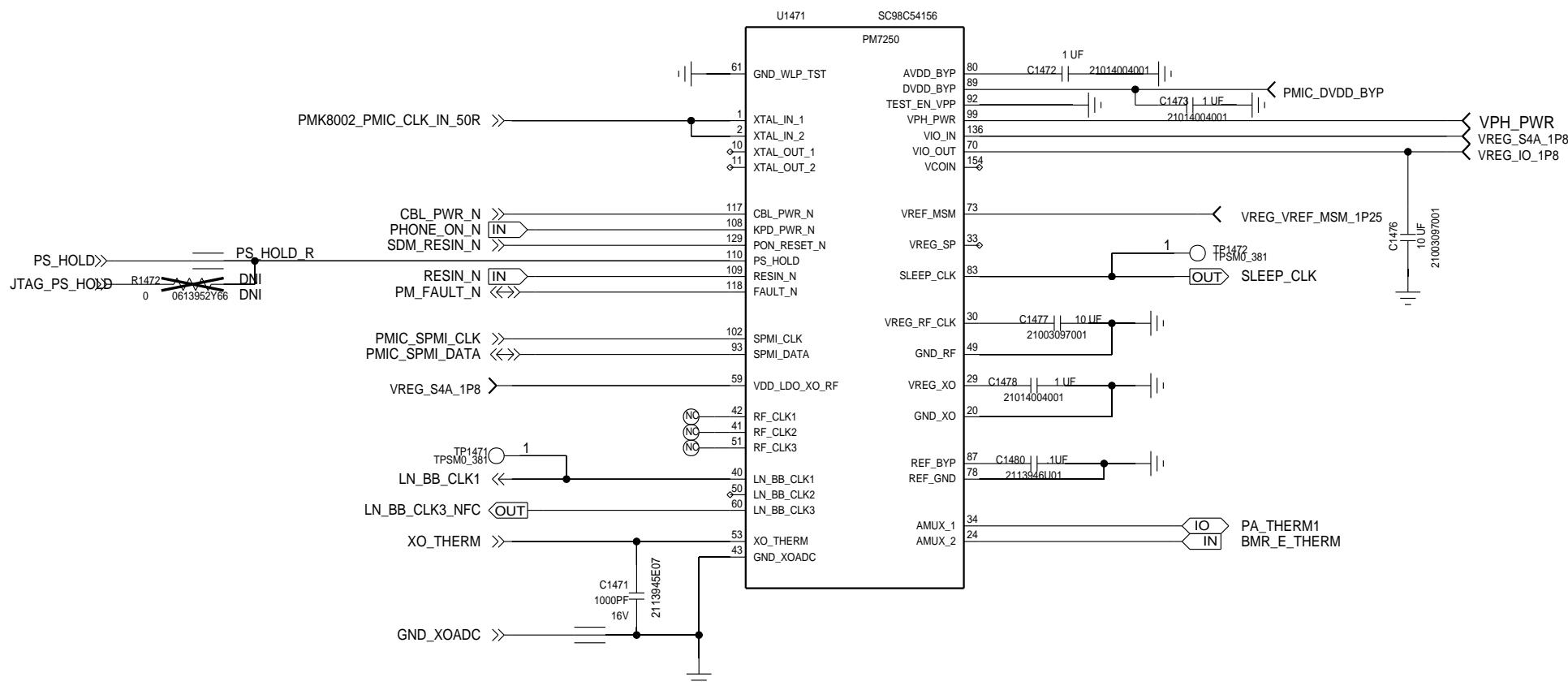
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| | | PAGE 14 OF 95 |

PM7250: HK

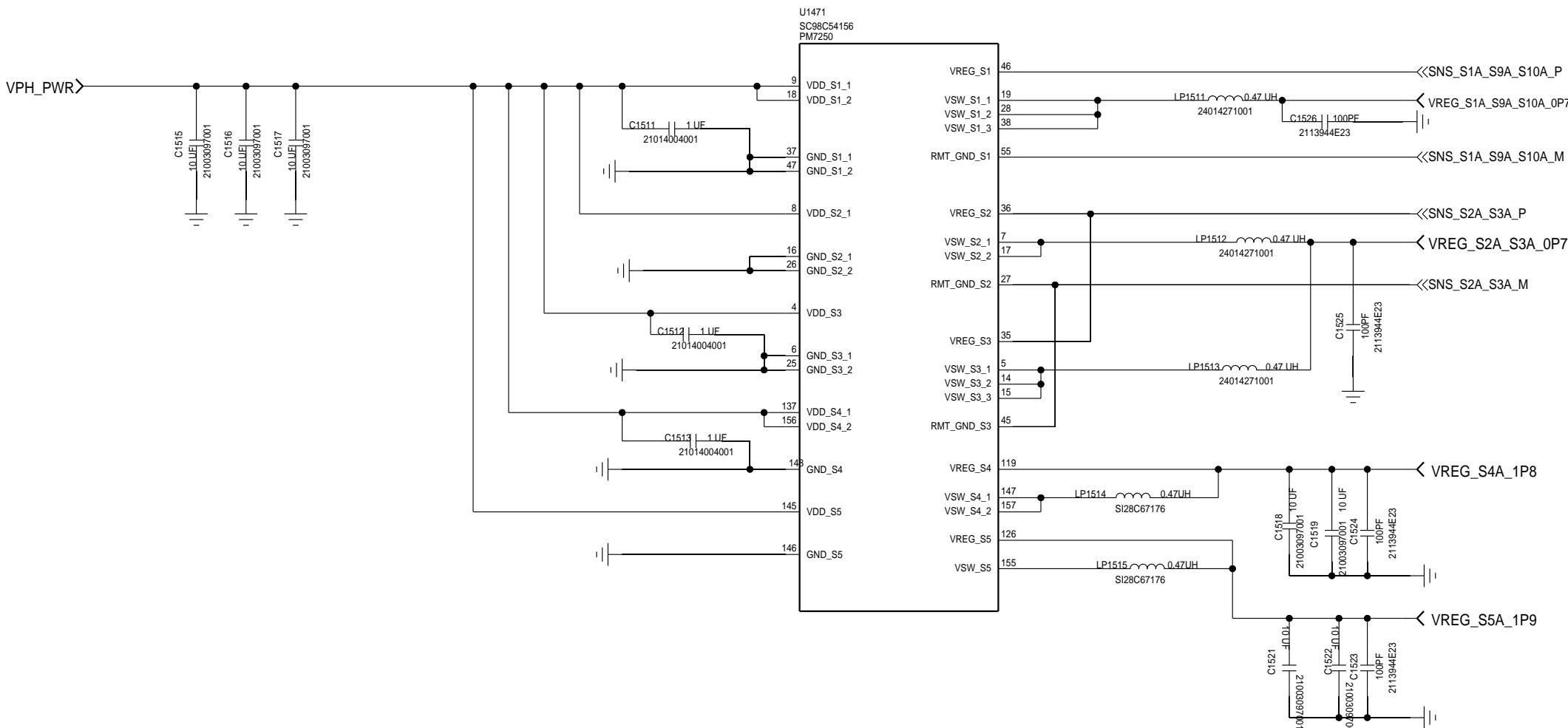
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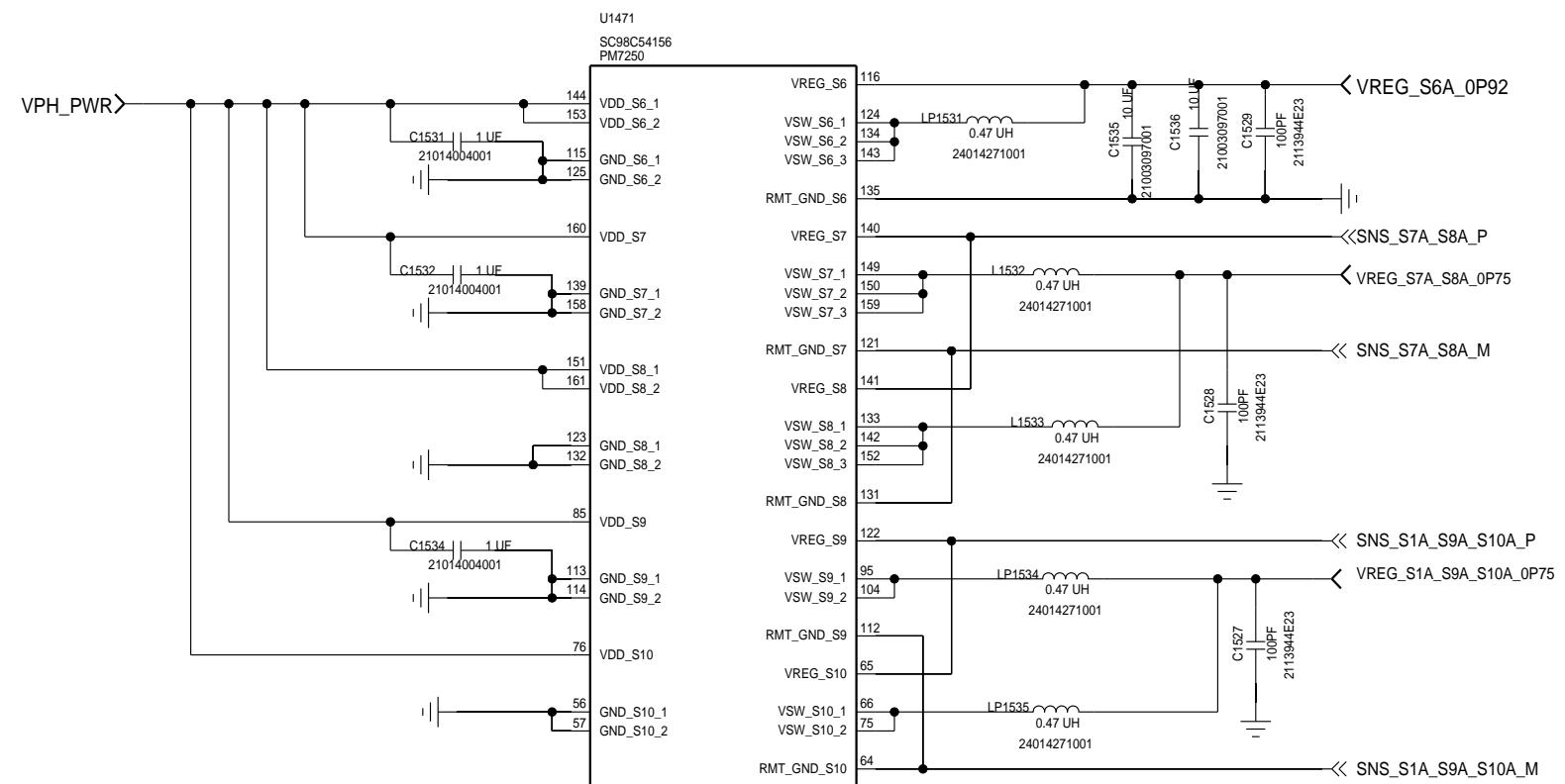
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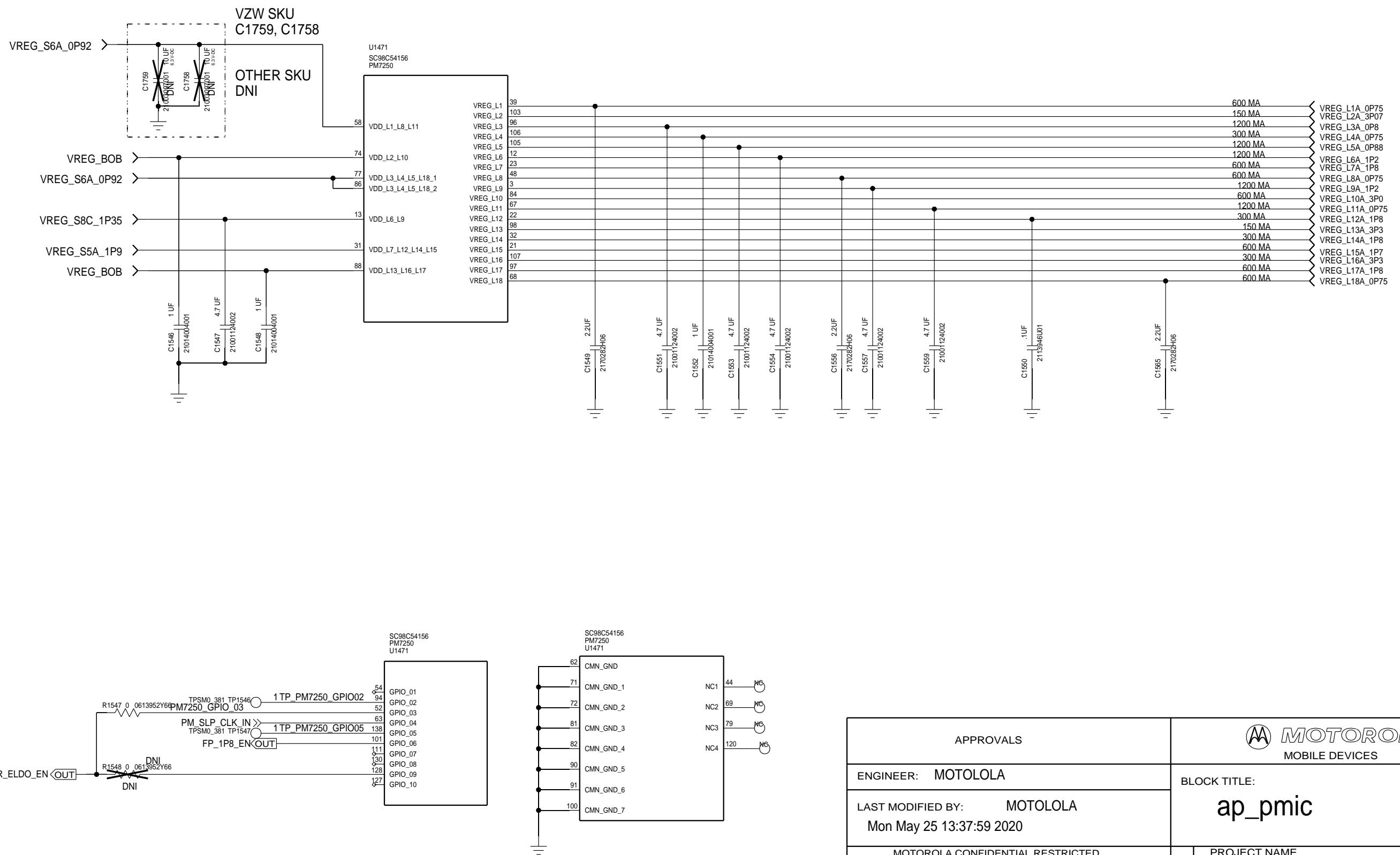
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PM7250: LDO

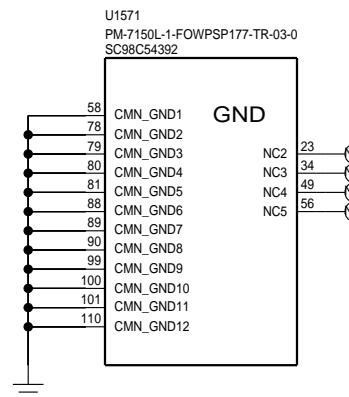
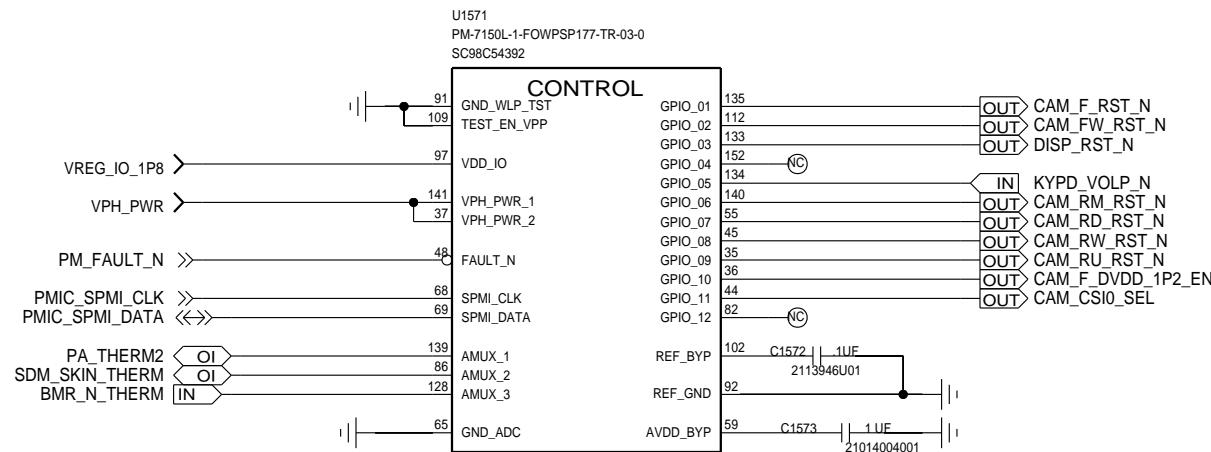
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PM7150L: CONTROL

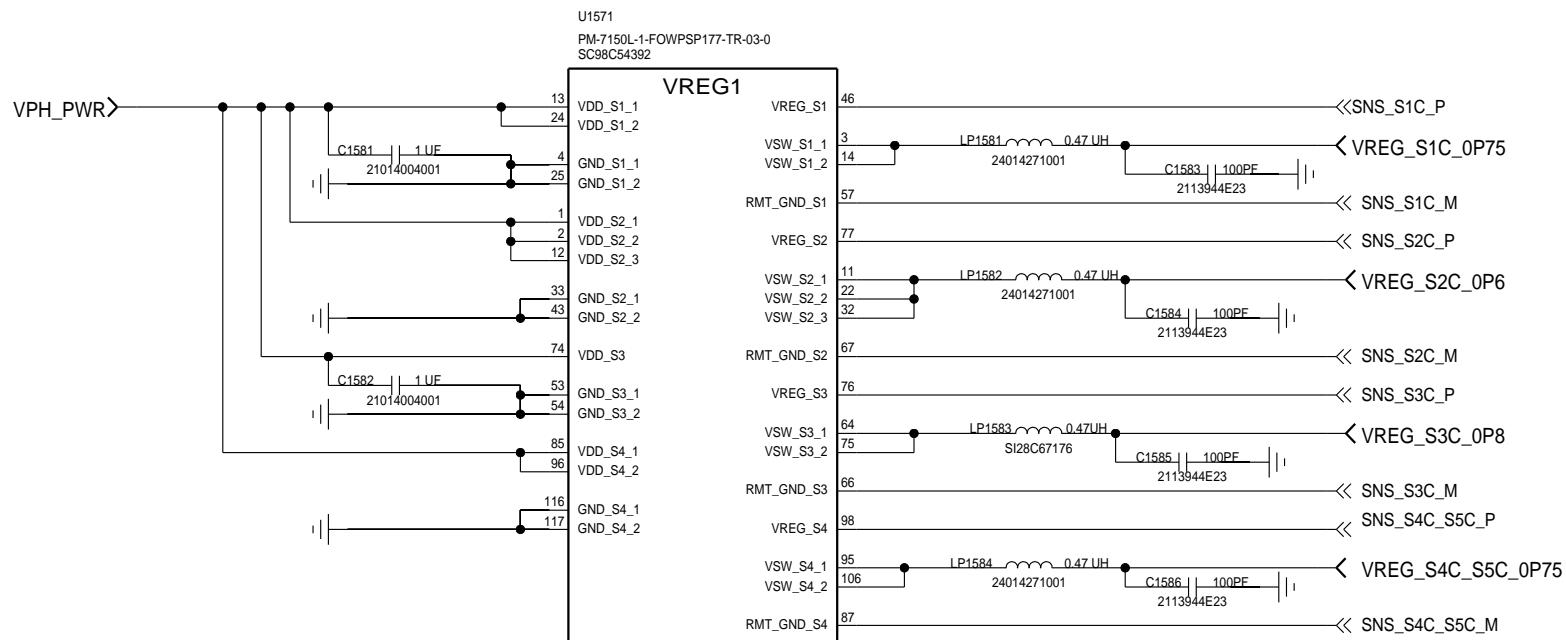
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PM7150L:SMPS

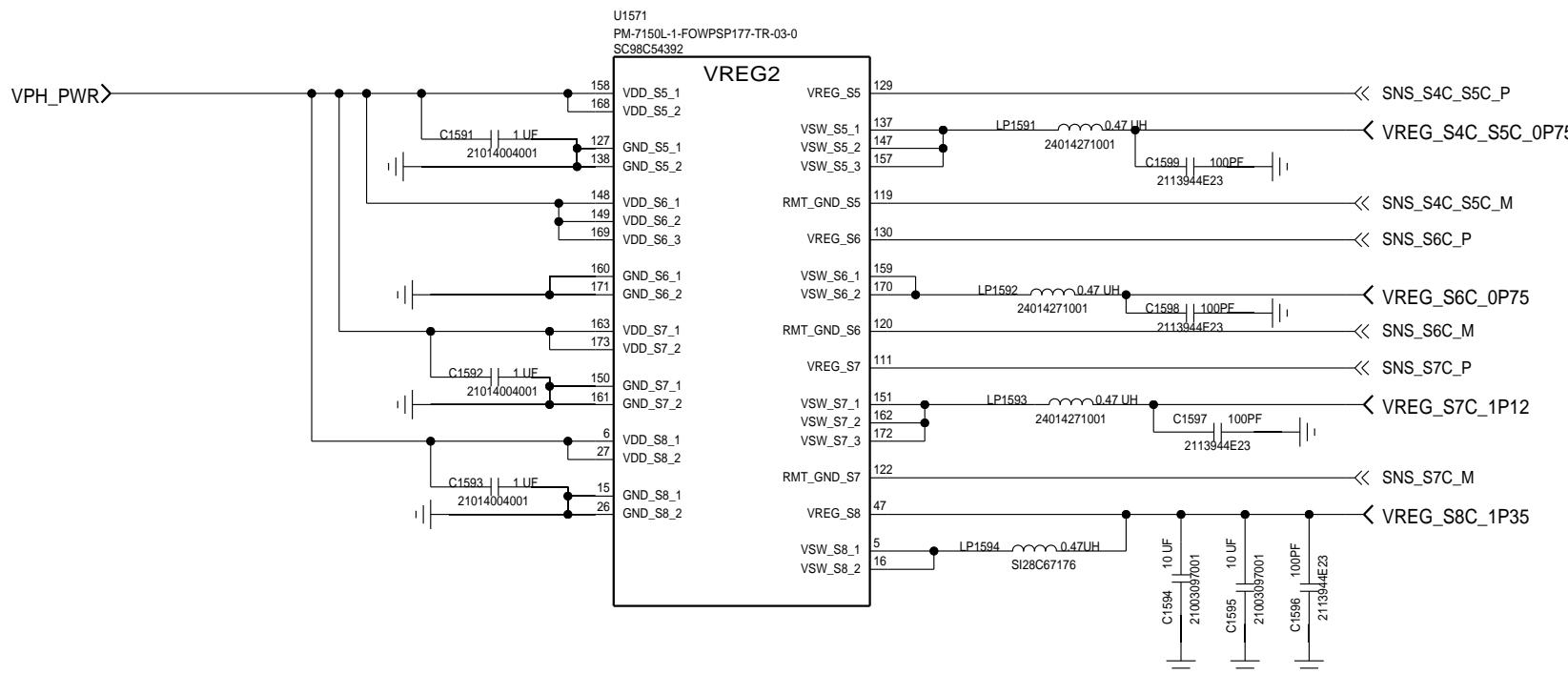
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PM7150L: SMPS

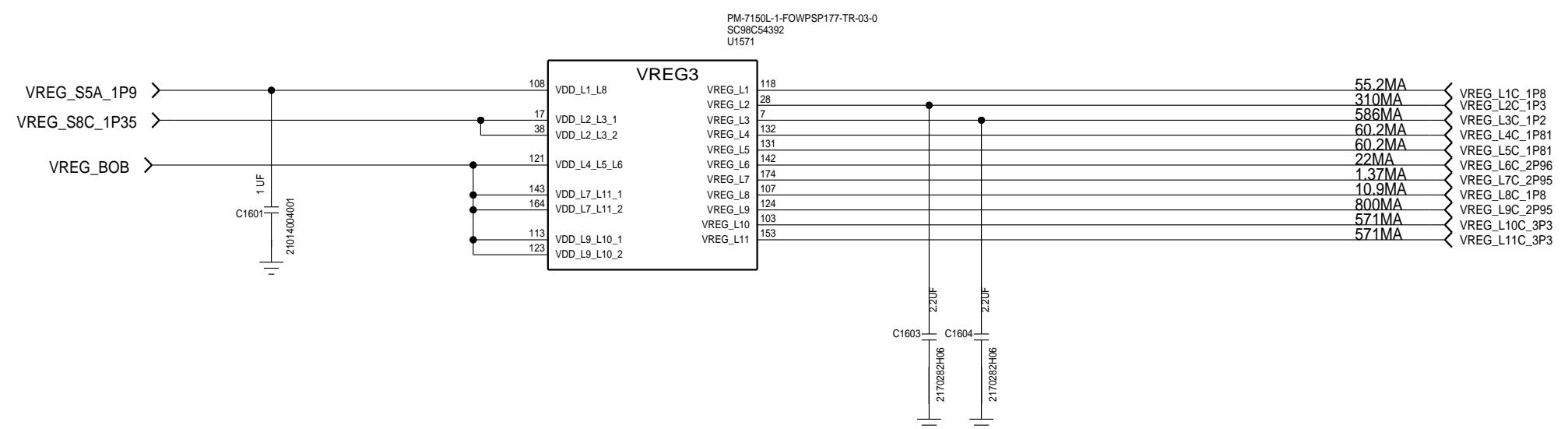
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PM7150L: LDO

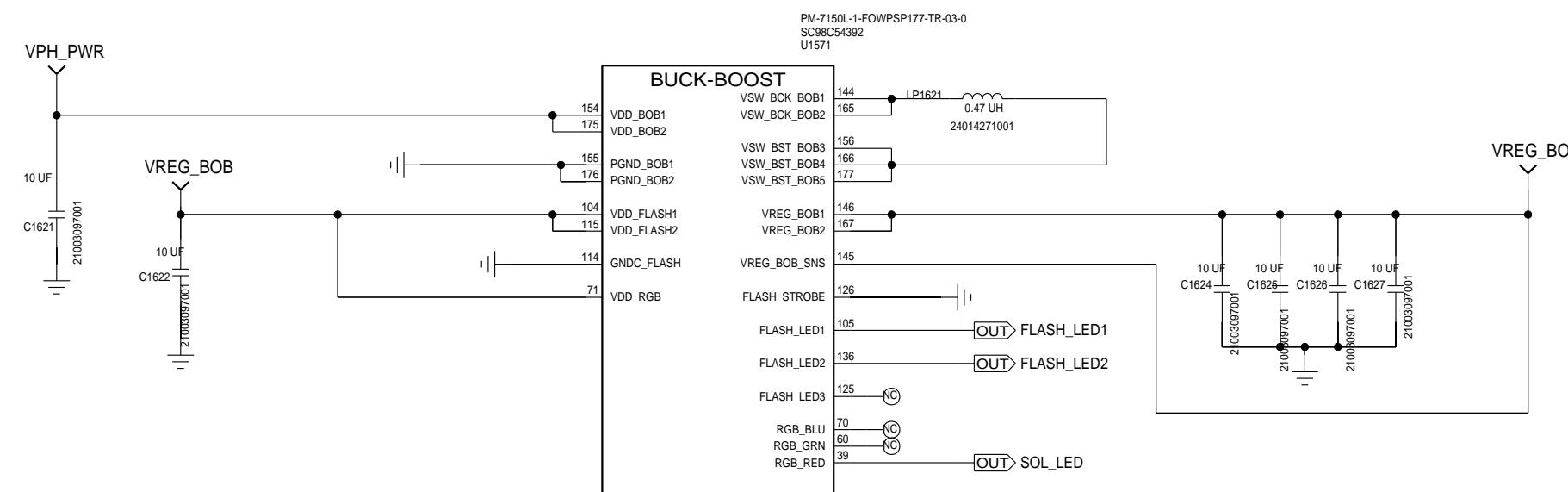
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PM7150L:BOOST

REF: 1621-1630



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MOBILE DEVICES

ENGINEER: MOTOLOLA

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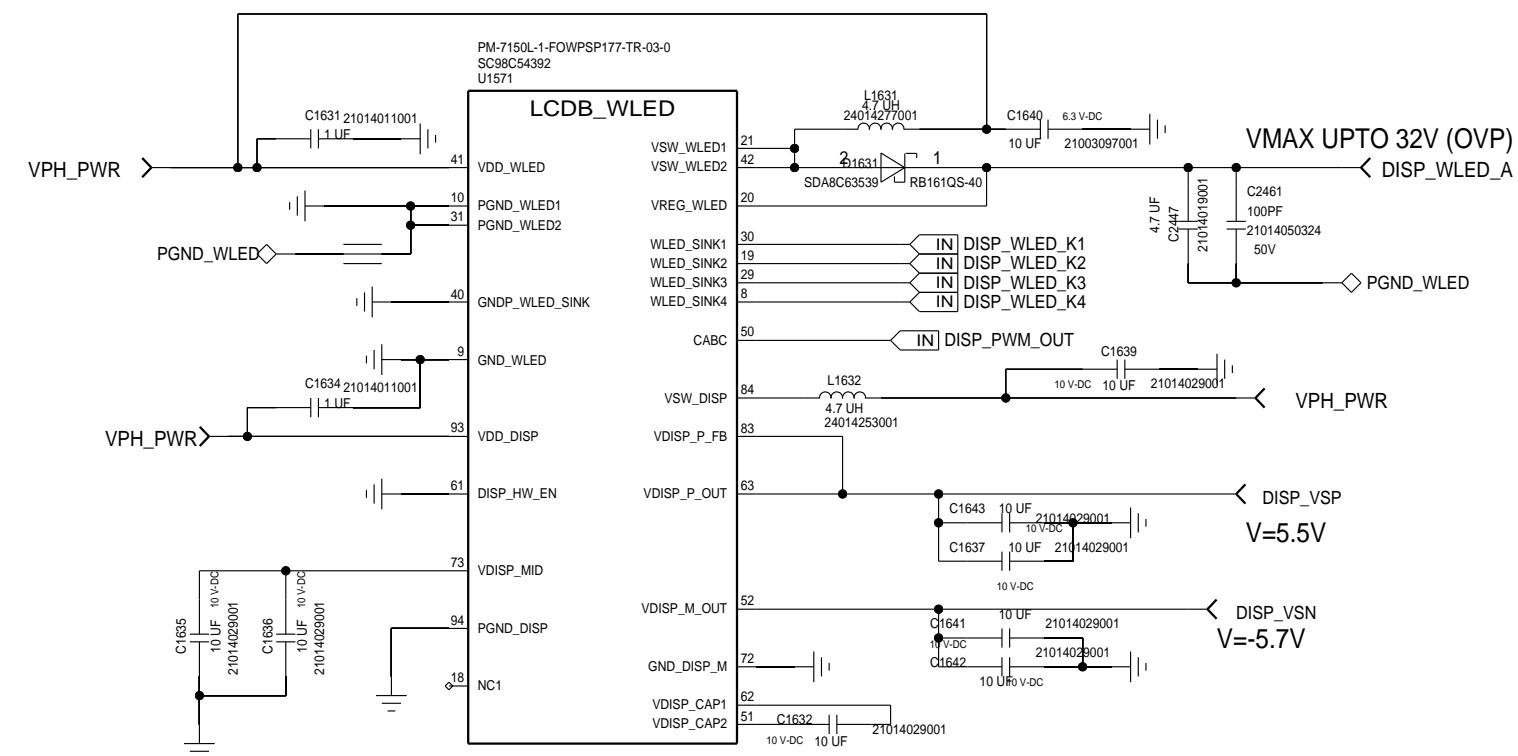
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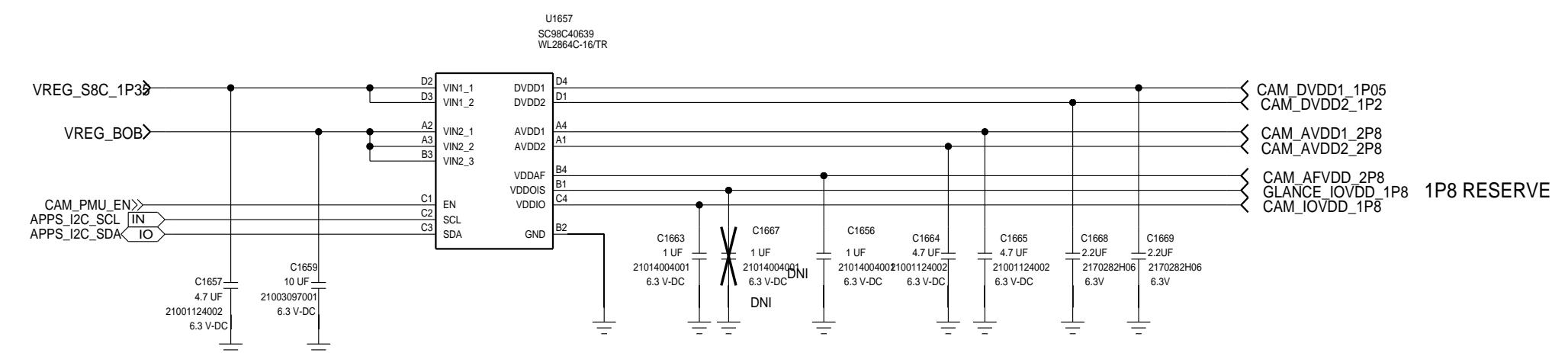
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PM3003A

REF: 1756-1770

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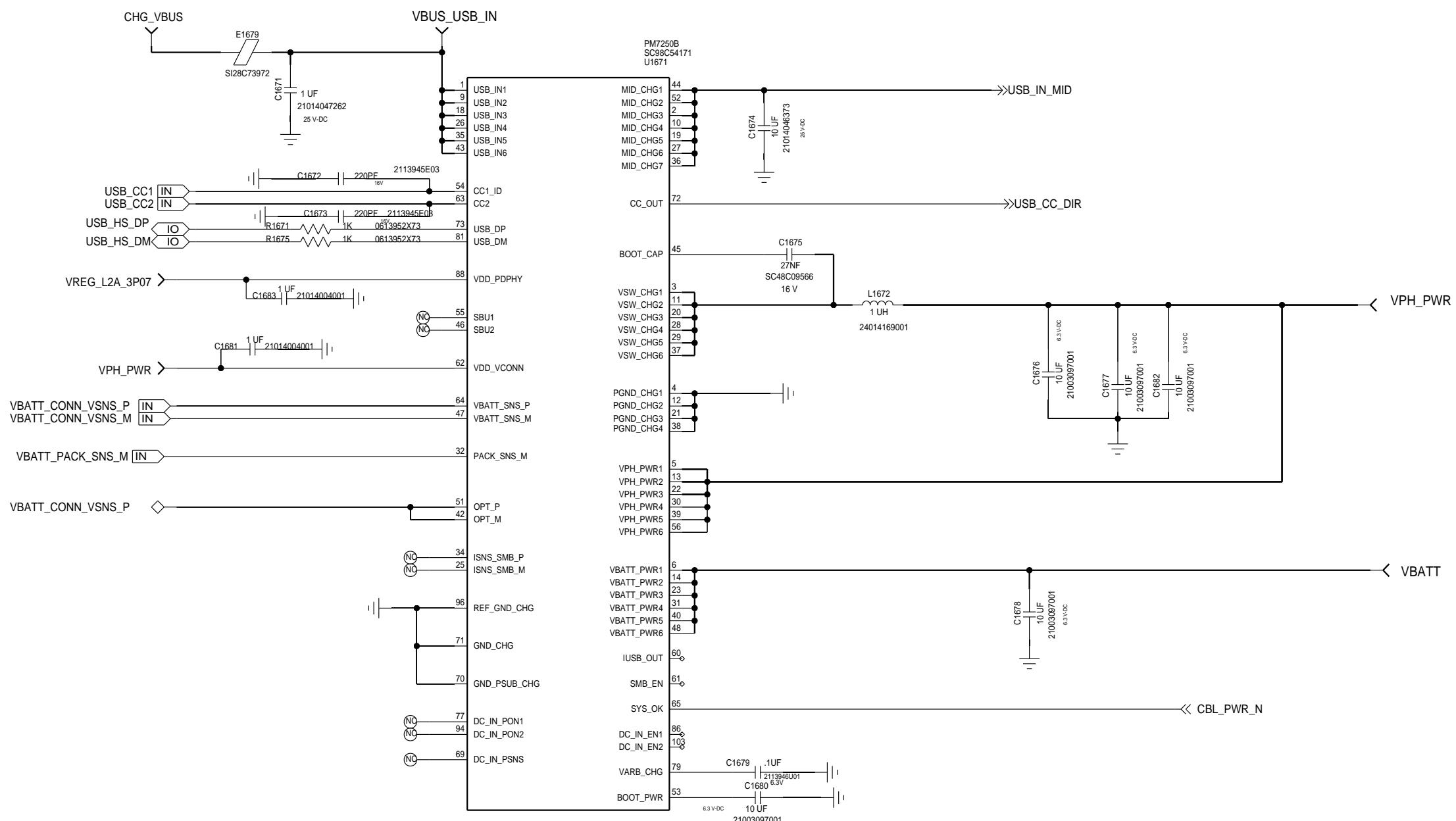
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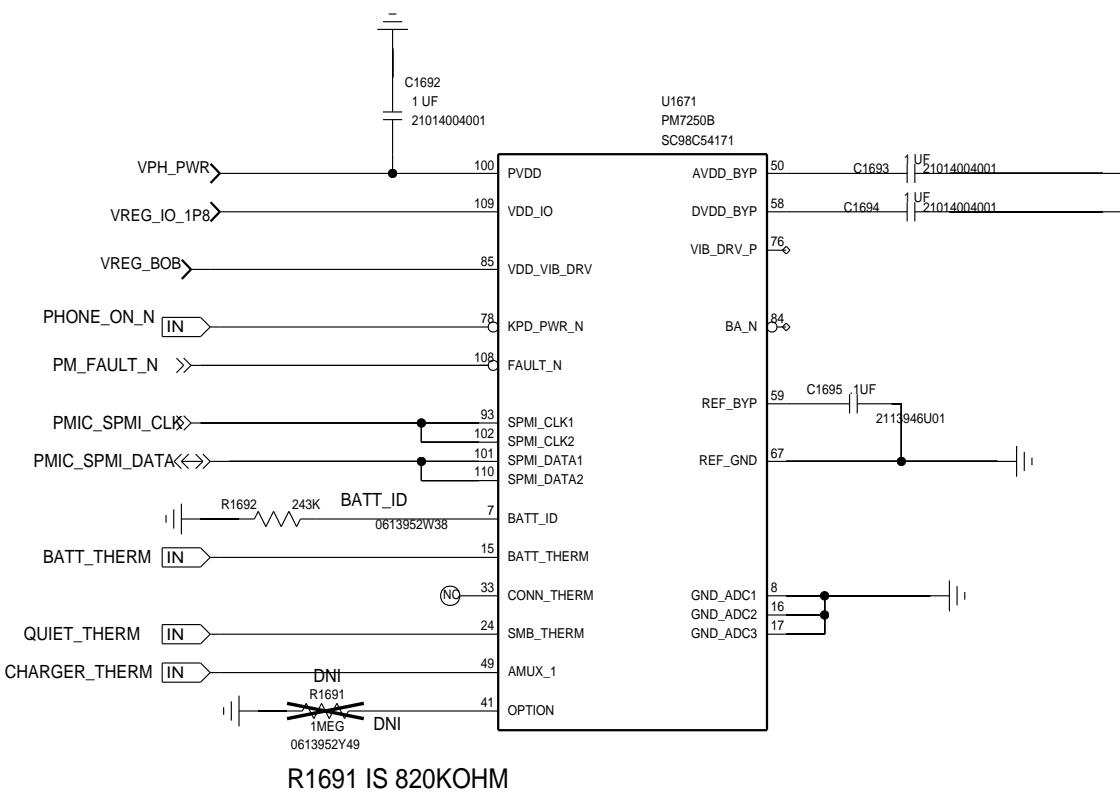
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| MOTOROLA CONFIDENTIAL RESTRICTED <small>THE DRAWING ON THIS PRINT AND INFORMATION THEREWITH ARE PROPRIETARY TO MOTOROLA AND SHALL NOT BE USED OR DISCUSSED IN WHOLE OR IN PART WITHOUT MOTOROLA'S CONSENT. © COPYRIGHT, MOTOROLA. THIS DOES NOT IMPLY PUBLICATION</small> | PROJECT NAME B nairobi_5g_mp_0609.cpm | REV 01 |
| | CAD FILE NAME: PAGE 26 OF 95 | PAGE 26 OF 95 |

PM7250B:CHG
REF: 1671-1690

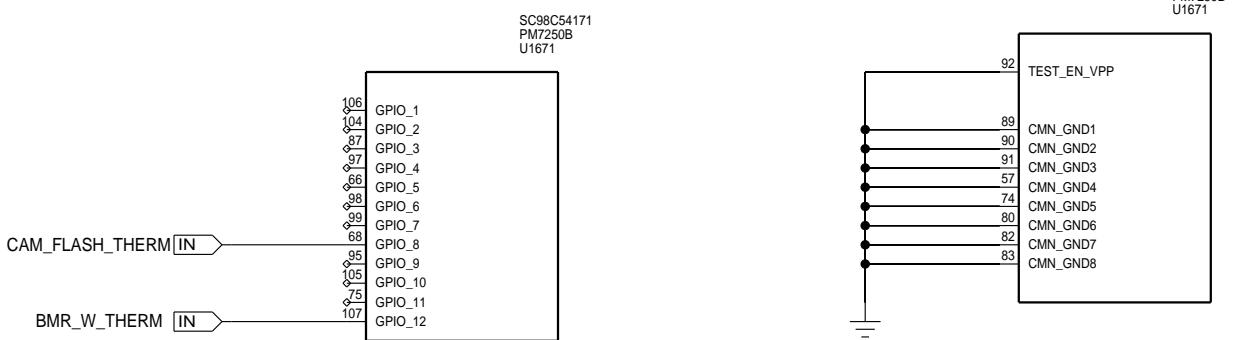


PM7250B:HK&GPIO

REF: 1691-1710



R1691 IS 820KOHM



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| APPROVALS | MOTOROLA MOBILE DEVICES | |
| ENGINEER: MOTOLOLA | BLOCK TITLE: | |
| LAST MODIFIED BY: MOTOLOLA | ap_pmic | |
| Mon May 25 13:38:11 2020 | | |
| MOTOROLA CONFIDENTIAL RESTRICTED | PROJECT NAME | REV |
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| CAD FILE NAME: | nairobi_5g_mp_0609.cpm | |
| PAGE 28 OF 95 | | |

PWR: GAUGE&FC

REF:2581 - 2630

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| APPROVALS |  MOTOROLA MOBILE DEVICES | |
| ENGINEER: MOTOLOLA | BLOCK TITLE: power | |
| LAST MODIFIED BY: MOTOLOLA Tue Oct 22 16:55:55 2019 | | |
| 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 nairobi_5g_mp_0609.cpm | REV 01 |
| | CAD FILE NAME: | PAGE 29 OF 95 |

PWR: USB-PD

REF:2550 - 2570

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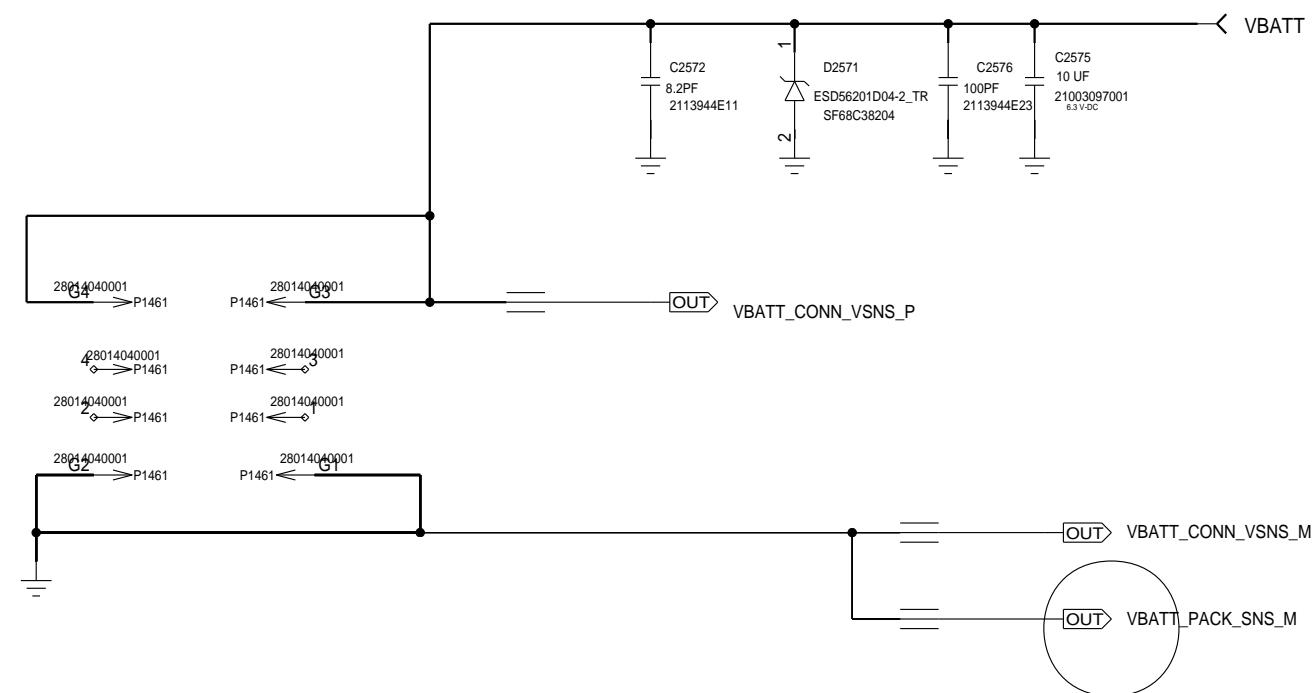
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| LAST MODIFIED BY: MOTOLOLA Sat Apr 27 15:31:51 2019 | | |
| MOTOROLA CONFIDENTIAL RESTRICTED <small>THE DRAWING ON THIS PRINT AND INFORMATION THEREWITH ARE PROPRIETARY TO MOTOROLA AND SHALL NOT BE USED OR DISCUSSED IN WHOLE OR IN PART WITHOUT MOTOROLA'S CONSENT. © COPYRIGHT, MOTOROLA. THIS DOES NOT IMPLY PUBLICATION</small> | PROJECT NAME B nairobi_5g_mp_0609.cpm | REV 01 |
| | CAD FILE NAME: | PAGE 30 OF 95 |

PWR: VBATT CONN

REF:2571 - 2580



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|--|---|---------------|
| APPROVALS |  MOTOROLA MOBILE DEVICES | |
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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 nairobi_5g_mp_0609.cpm | REV 01 |
| CAD FILE NAME: | | PAGE 31 OF 95 |

XMCS: FPS CONNECTOR

REF: 6100-6199

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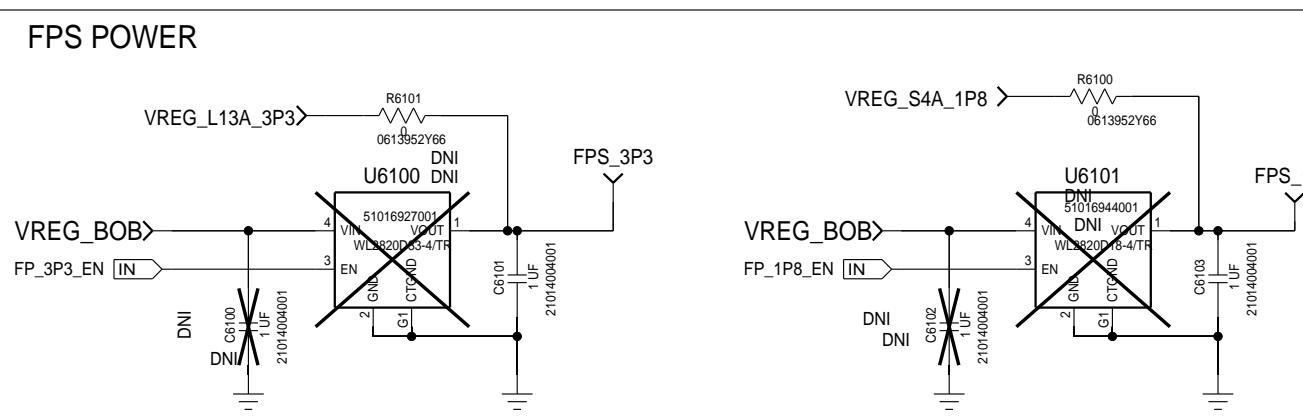
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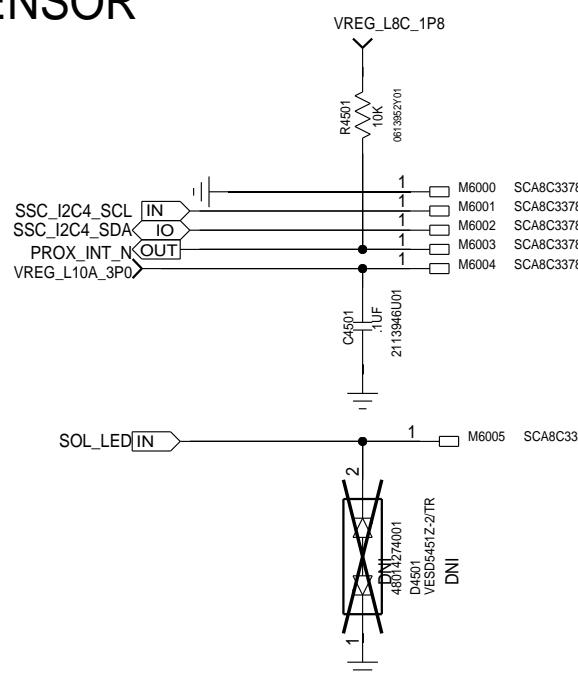


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| APPROVALS | MOTOROLA MOBILE DEVICES | |
| ENGINEER: MOTOROLA | BLOCK TITLE: | |
| LAST MODIFIED BY: MOTOROLA | XMCS | |
| Mon May 25 13:37:11 2020 | | |
| MOTOROLA CONFIDENTIAL RESTRICTED <small>THE DRAWING ON THIS PRINT AND INFORMATION THEREWITH 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 nairobi_5g_mp_0609.cpm | REV 01 |
| CAD FILE NAME: | PAGE 32 OF 95 | |

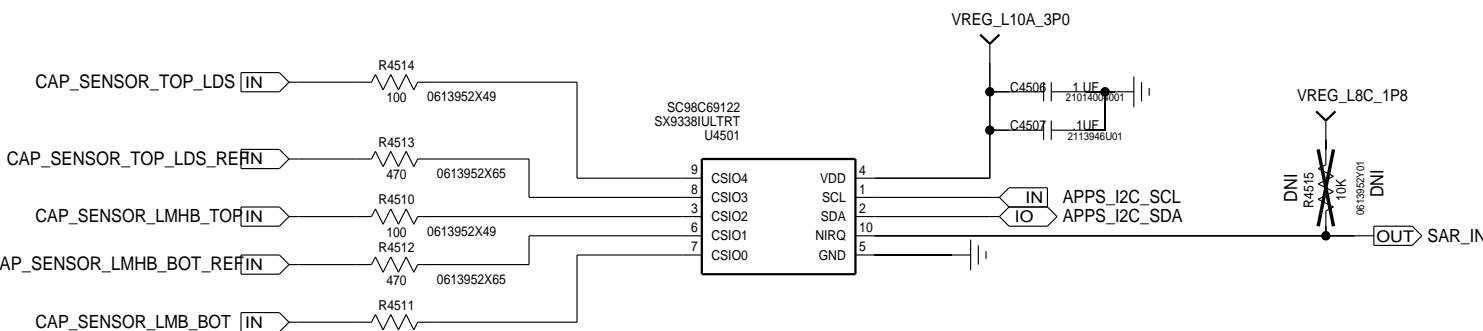
XMCS: SENSORS

REF: 4501-4550

P-SENSOR

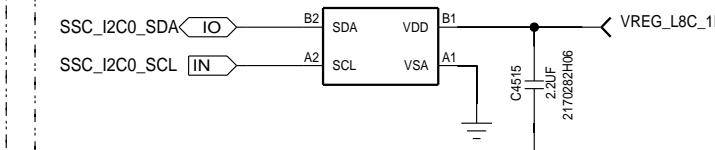


CAP SENSOR



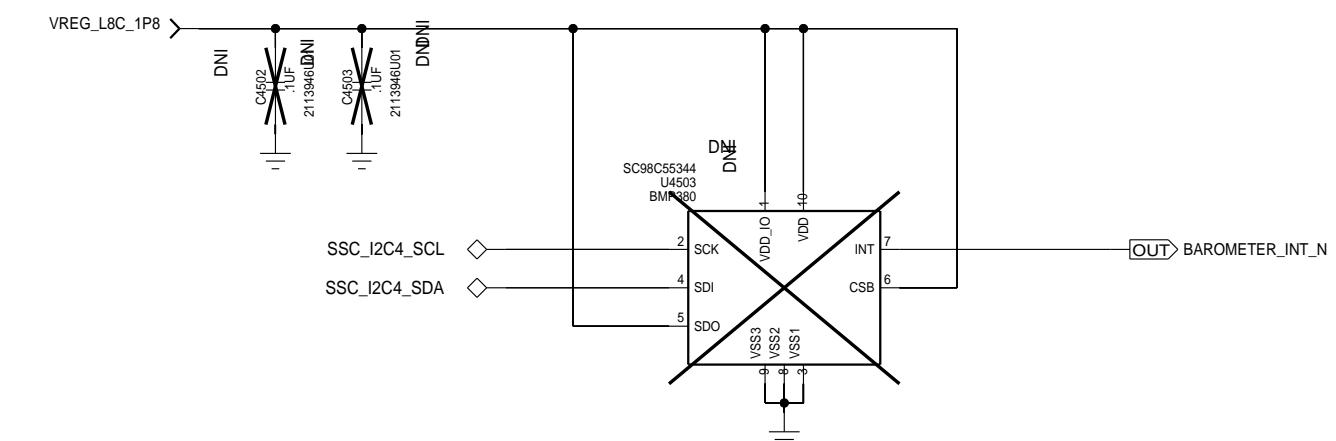
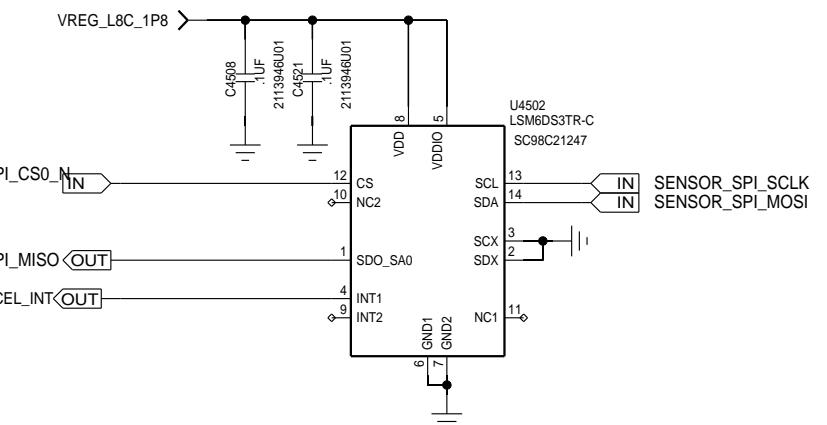
MAGNETOMETER

MMC5603NJ I2C SLAVE ADDRESS B0110000



ACCELEROMETER+GYRO

ICM42605 I2C SLAVE ADDRESS B1101000



APPROVALS

MOTOROLA
MOBILE DEVICES

ENGINEER: MOTOLOLA

BLOCK TITLE:

LAST MODIFIED BY: MOTOLOLA
Mon May 25 13:37:12 2020**Xmcs**

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B nairobi_5g_mp_0609.cpmREV
01

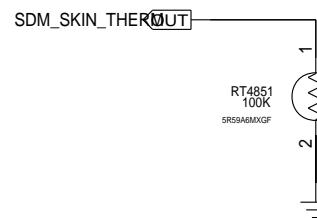
CAD FILE NAME:

PAGE 33 OF 95

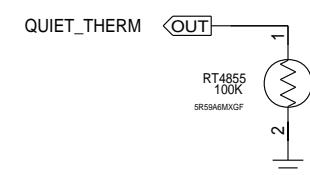
XMCS: SENSOR NTC

REF: 4851-4900

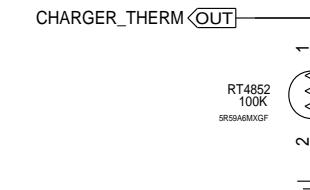
FOR SDM SENSOR



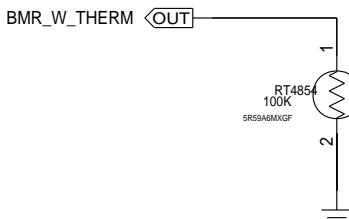
BOARD TEMP SENSOR



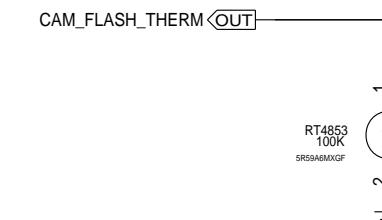
CHRG TEMP SENSOR



FOR MMWAVE THERMAL



CAM_FLASH TEMP SENSOR



APPROVALS

MOTOROLA
MOBILE DEVICES

ENGINEER: MOTOLOLA

BLOCK TITLE:

LAST MODIFIED BY: MOTOLOLA
Mon May 25 13:37:14 2020

xmcs

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B nairobi_5g_mp_0609.cpm

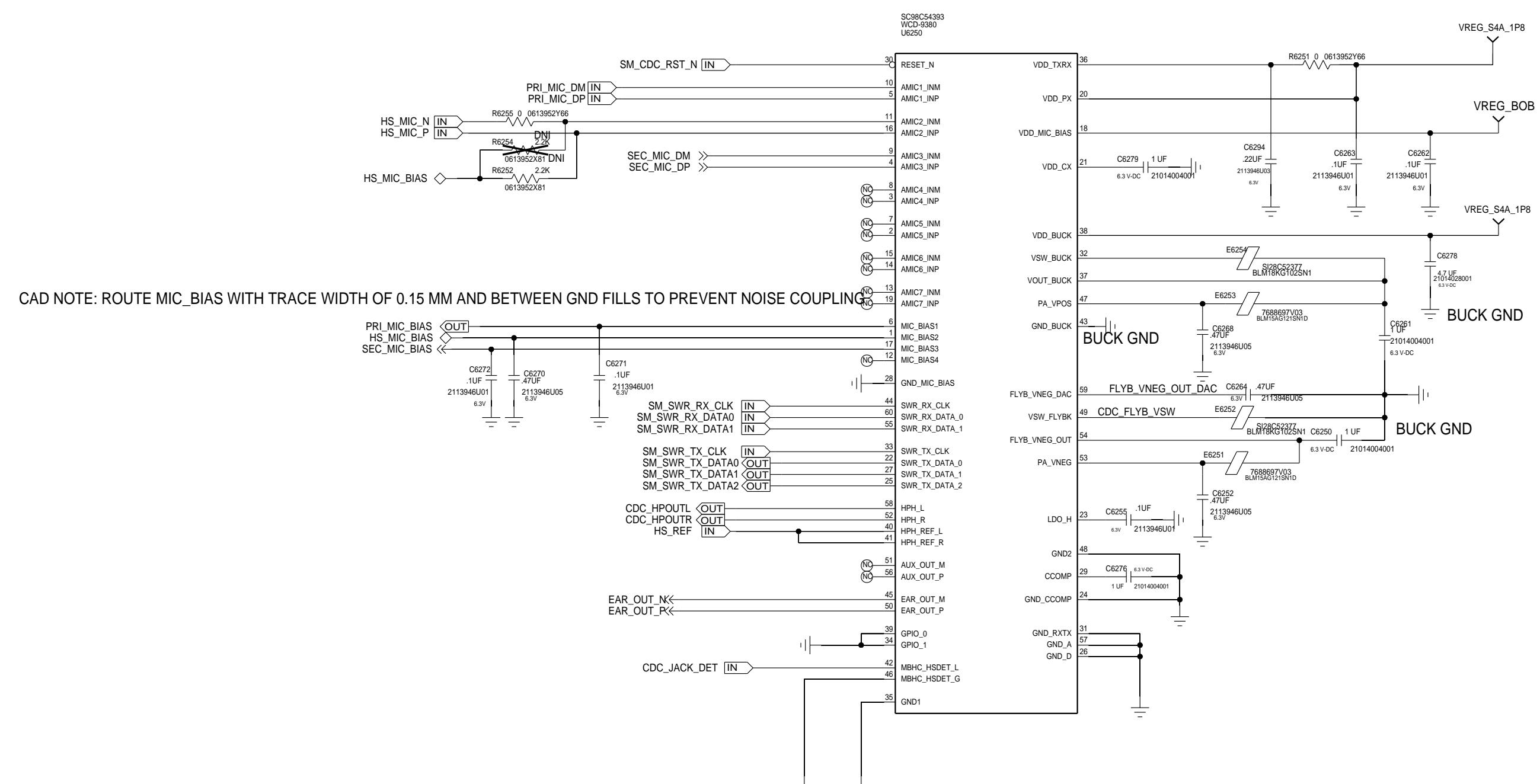
REV
01

CAD FILE NAME:

PAGE 34 OF 95

XMCS:AUDIO CODEC

REF: 6250-6299

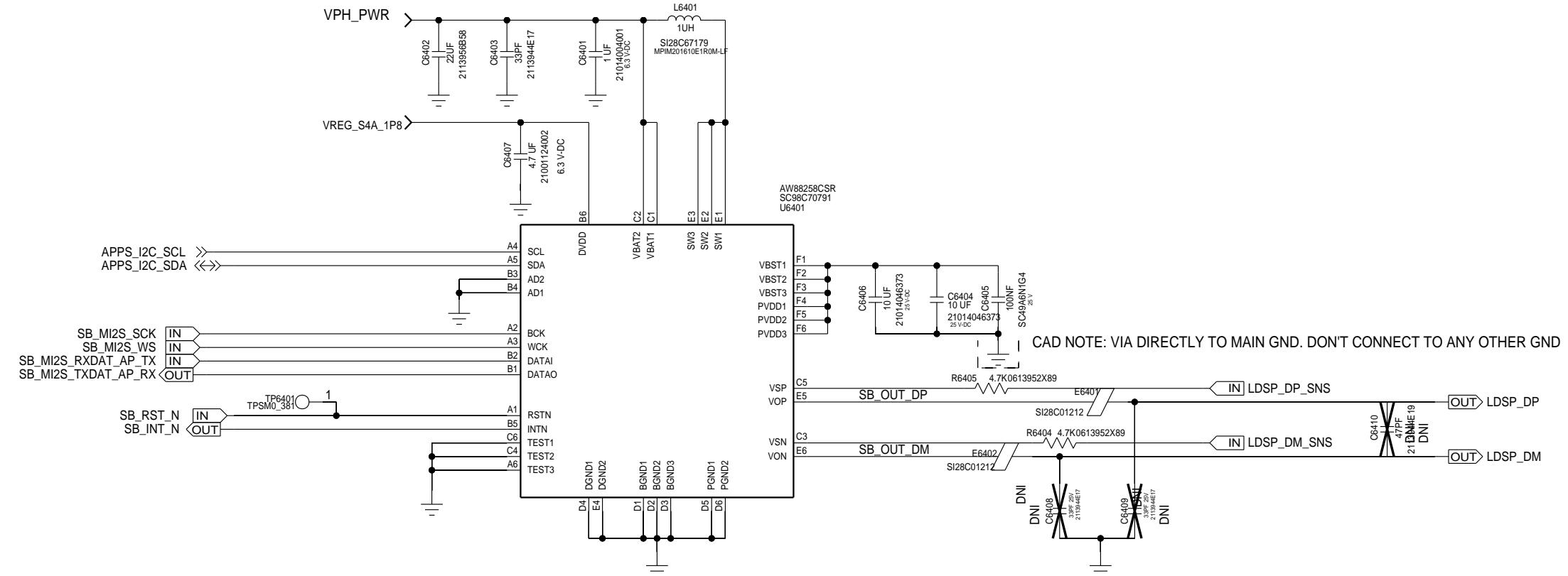


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| LAST MODIFIED BY: MOTOROLA Mon May 25 13:37:15 2020 | | |
| MOTOROLA CONFIDENTIAL RESTRICTED <hr/> THE DRAWING ON THIS PRINT AND INFORMATION THEREWITH ARE PROPRIETARY TO MOTOROLA AND SHALL NOT BE USED OR DISCUSSED IN WHOLE OR IN PART WITHOUT MOTOROLA'S CONSENT. © COPYRIGHT, MOTOROLA. THIS DOES NOT IMPLY PUBLICATION | | |
| C | PROJECT NAME nairobi_5g_mp_0609.cpm | REV 01 |
| CAD FILE NAME: | | PAGE 35 of 95 |

XMCS: SMART BOOST

REF: 6401--6450

*** BOOST IC I2C ADD. 0X80



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| APPROVALS | | MOTOROLA MOBILE DEVICES | |
| ENGINEER: MOTOROLA | | BLOCK TITLE: xmcs | |
| LAST MODIFIED BY: MOTOROLA Mon May 25 13:37:16 2020 | | | |
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| CAD FILE NAME: | | | PAGE 36 OF 95 |

AFE: SPEAKERS/VIBRATOR

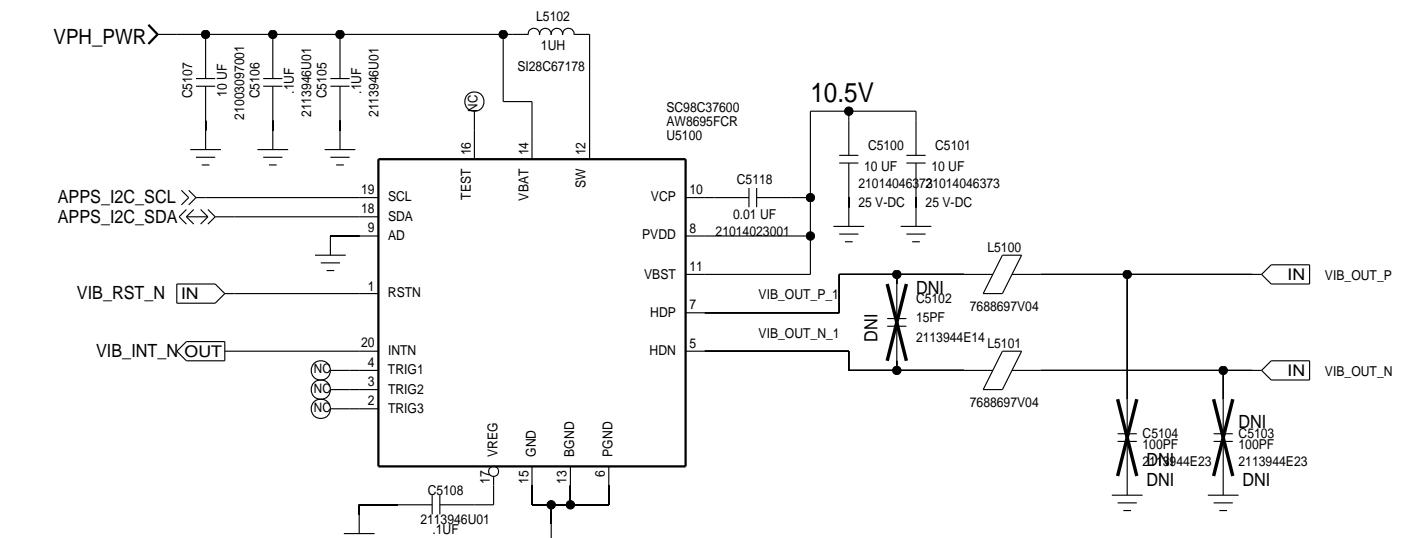
LOUDSPEAKER

REF:5780-5789

LINEAR VIBRATOR

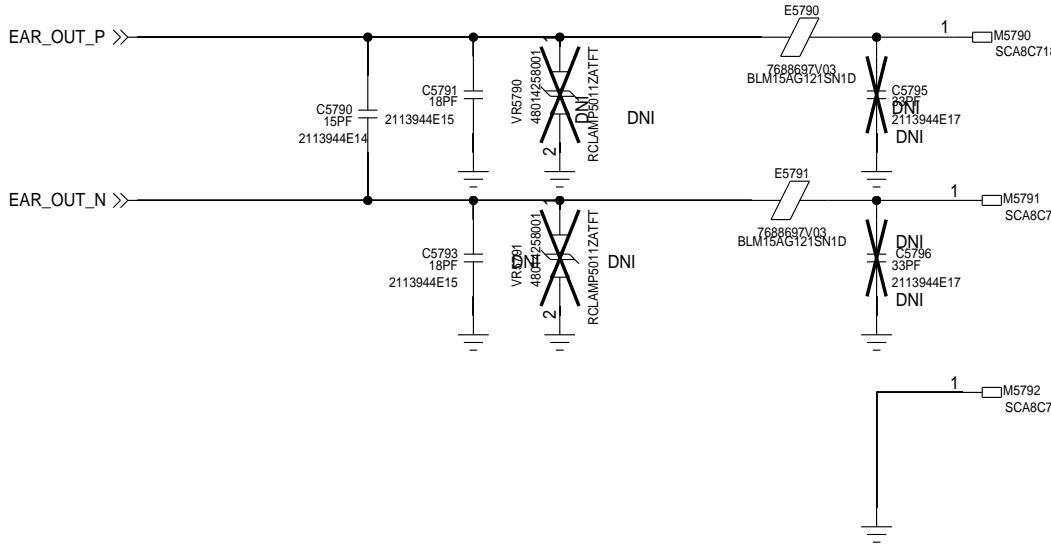
REF 5100-5119

BASE I2C ADDR: 0X5A, WRITE 0XB4, READ 0XB5



EAR PIECE

REF:5790-5799



APPROVALS

MOTOROLA
MOBILE DEVICES

ENGINEER: MOTOROLA

BLOCK TITLE:

LAST MODIFIED BY: MOTOROLA
Mon May 25 13:37:17 2020

xmcs

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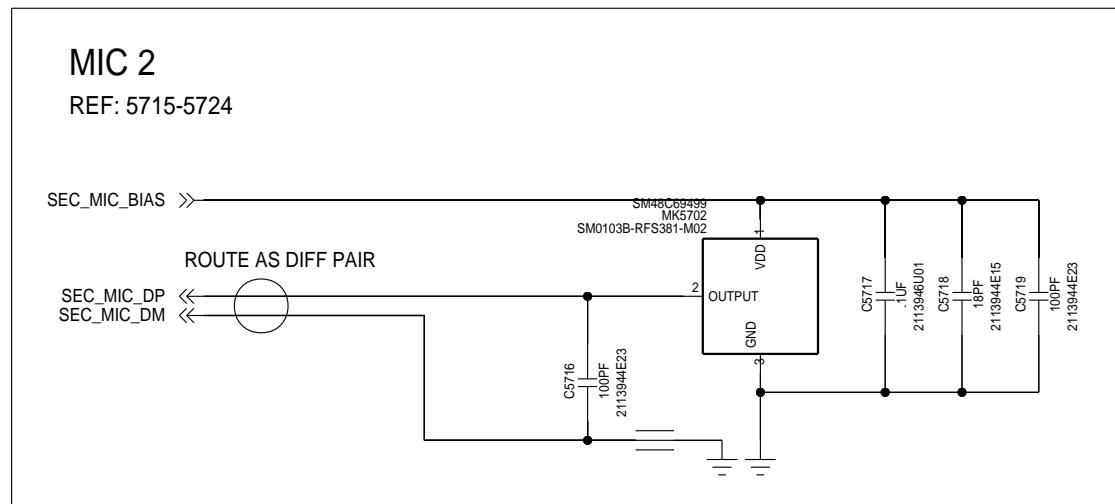
REV
01

CAD FILE NAME:

PAGE 37 OF 95

AFE :MIC/EARPHONE JACK

REF: 5700-5799



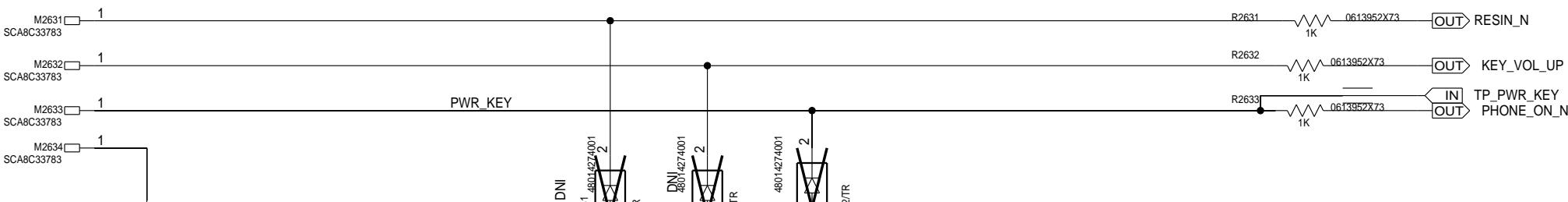
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| LAST MODIFIED BY: MOTOROLA Mon May 25 13:37:18 2020 | | | |
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| | | CAD FILE NAME: | PAGE 38 of 95 |

UI: SIDE KEY

REF:2631 - 2640

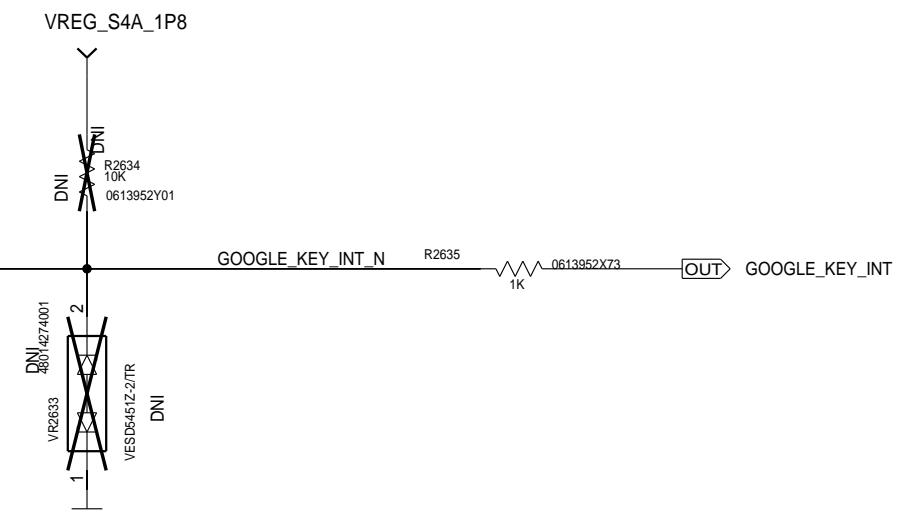
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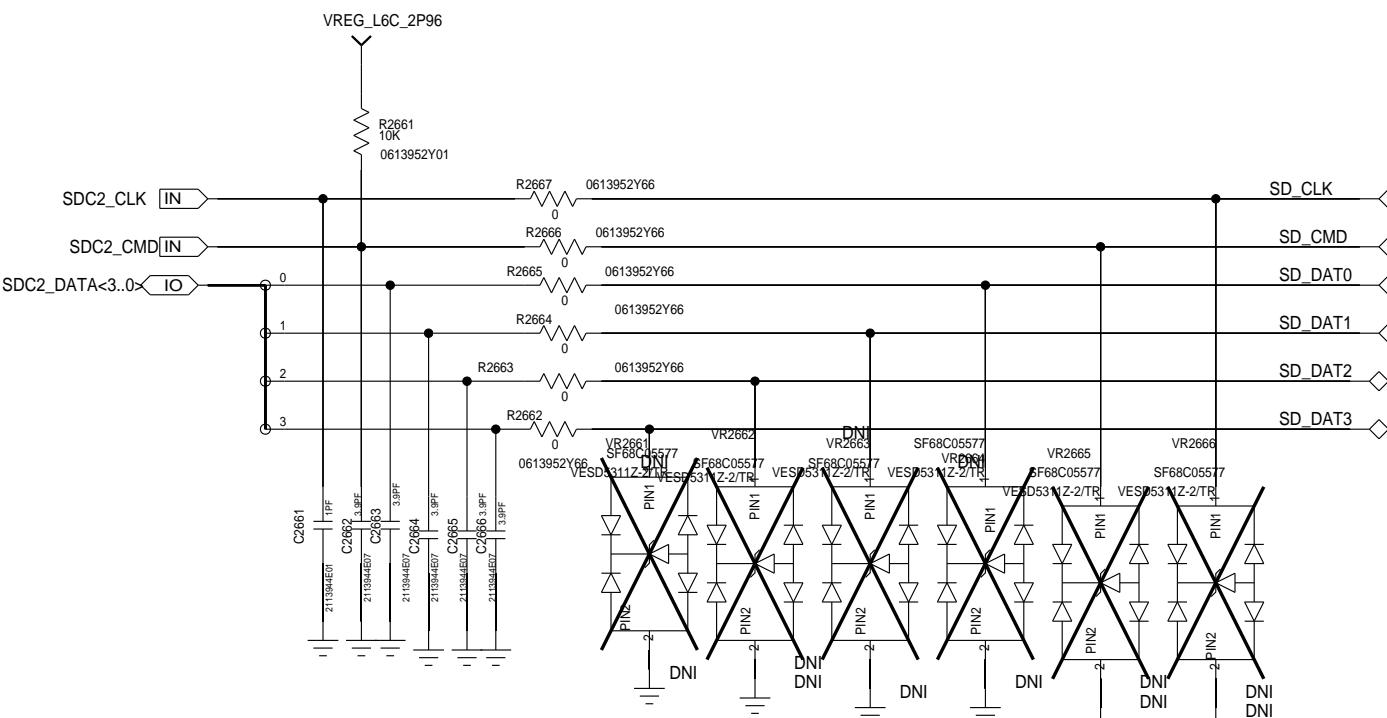
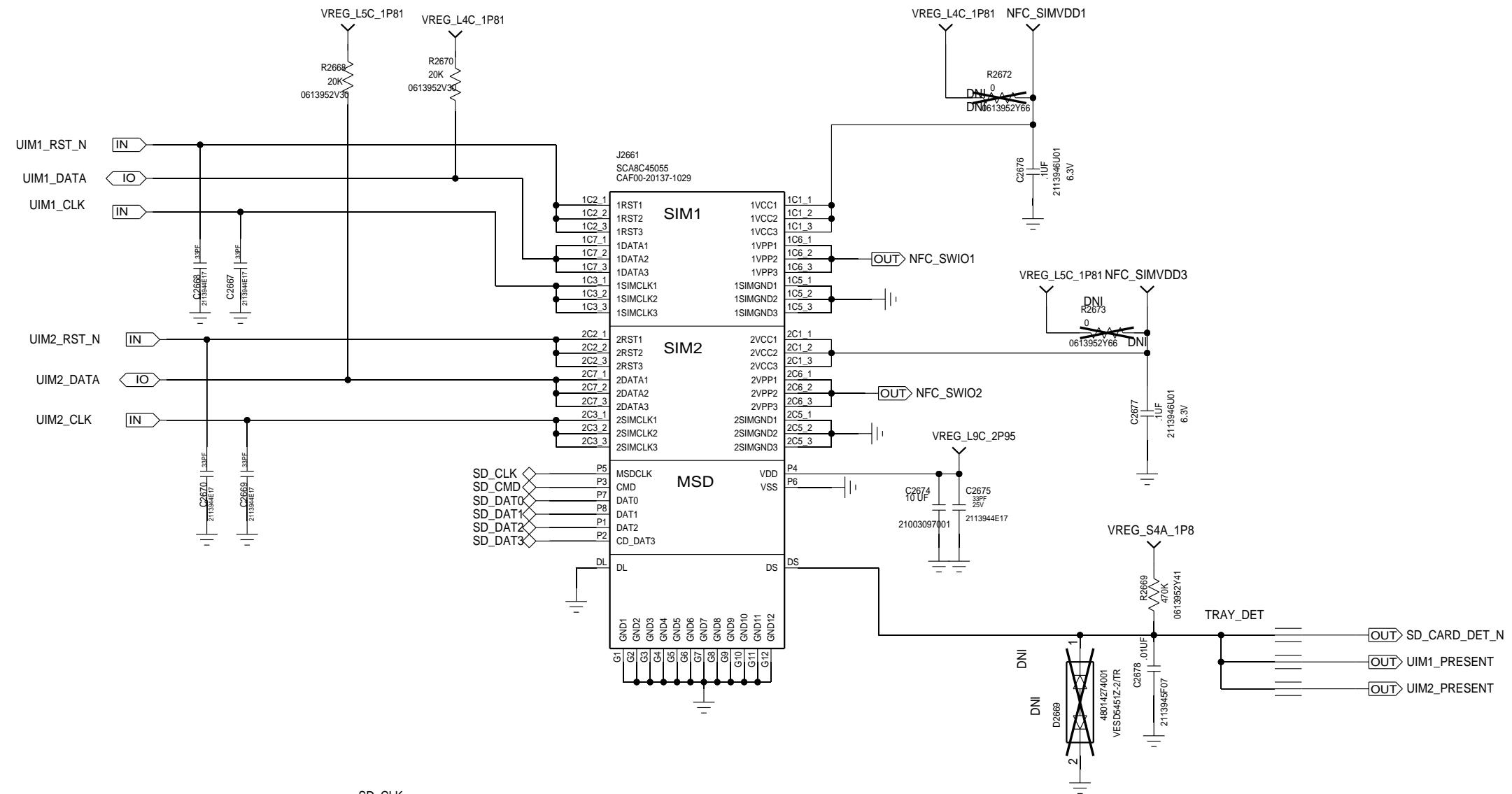
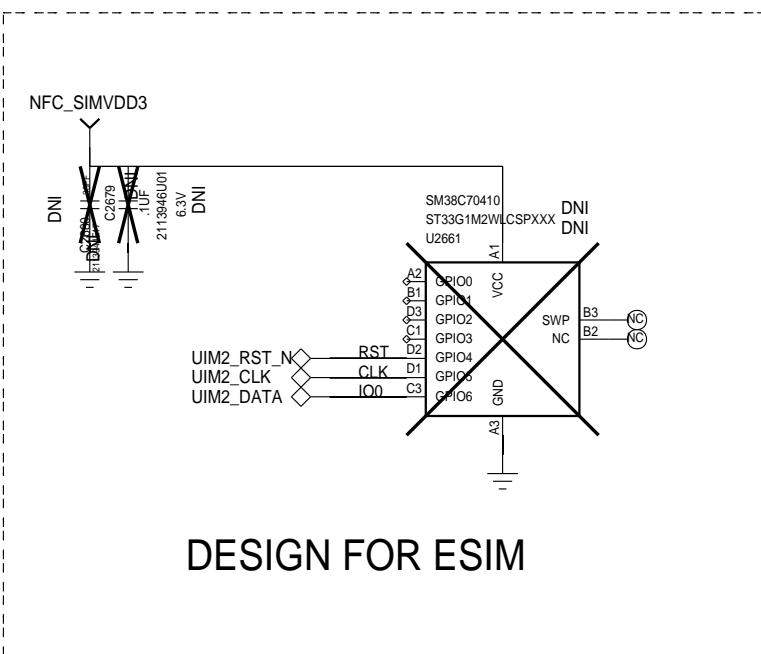
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| APPROVALS | | MOTOROLA MOBILE DEVICES | |
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| LAST MODIFIED BY: MOTOROLA Mon May 25 13:37:07 2020 | | ui | |
| MOTOROLA CONFIDENTIAL RESTRICTED <small>THE DRAWING ON THIS PRINT AND INFORMATION THEREWITH 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 nairobi_5g_mp_0609.cpm | REV 01 |
| CAD FILE NAME: | | PAGE 39 OF 95 | |

UI: SIM CARD

REF:2661-2690

NOTE 1: USE 24.9K PULL-UP TO SUPPORT HOT SWAP WITH FREEZE-IO FEATURE.
 NOTE 2: UIM_PWR BYPASS OF 0.33UF RECOMMENDED BY NFC IC SUPPLIER, PLACE NEAR CONNECTOR.



| APPROVALS | |
|--|--|
| MOTOROLA MOBILITY CONFIDENTIAL RESTRICTED-MDB TRACKED TRACKED AND BLOCKED | |
| ENGINEER: | MOTOROLA |
| LAST MODIFIED BY: | MOTOROLA Mon May 25 13:37:08 2020 |
| MOTOROLA CONFIDENTIAL RESTRICTED | PROJECT NAME B nairobi_5g_mp_0609.cpm |
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| CAD FILE NAME: | PAGE 40 OF 95 |

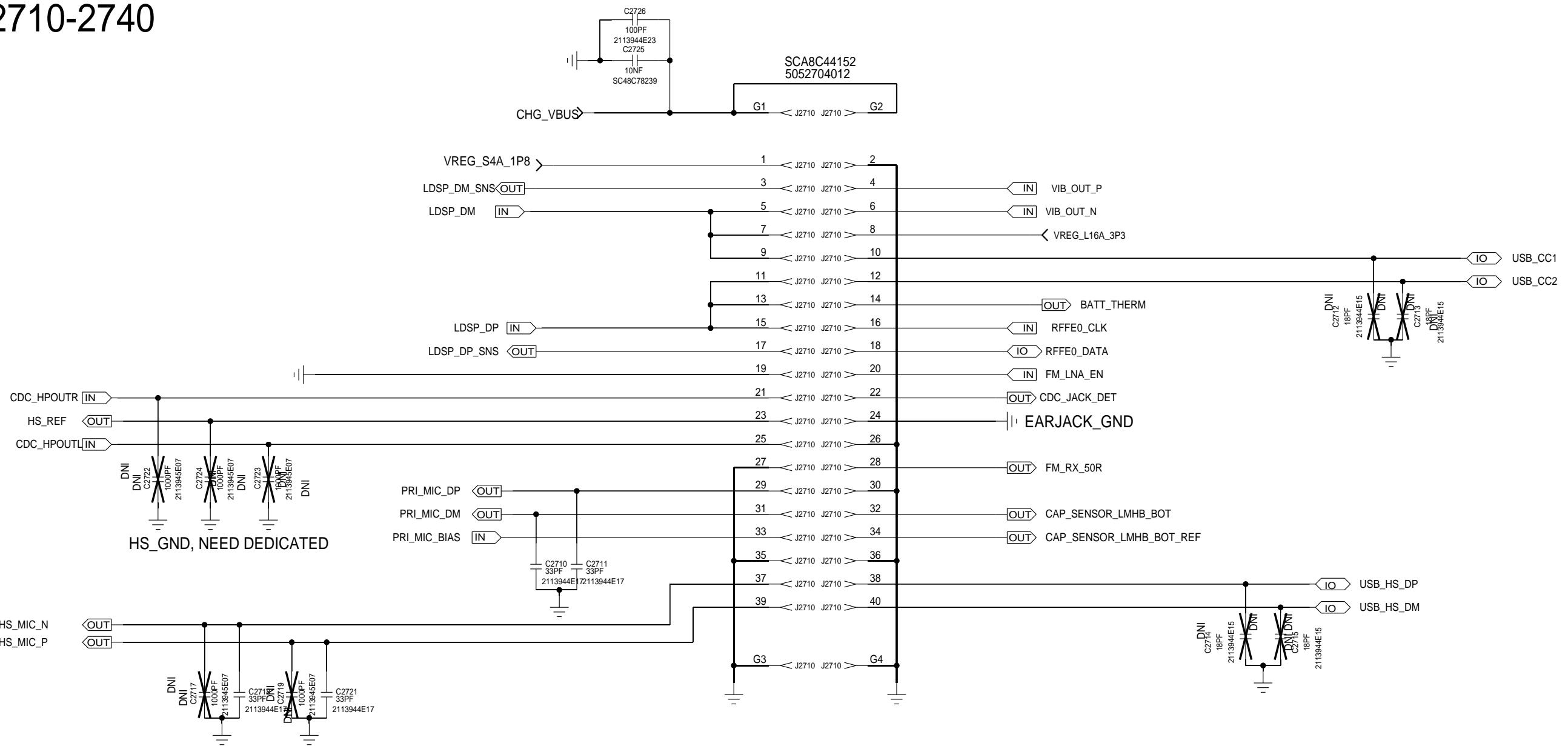
MOTOROLA
MOBILE DEVICES

BLOCK TITLE:

ui

UI: MAIN CONN

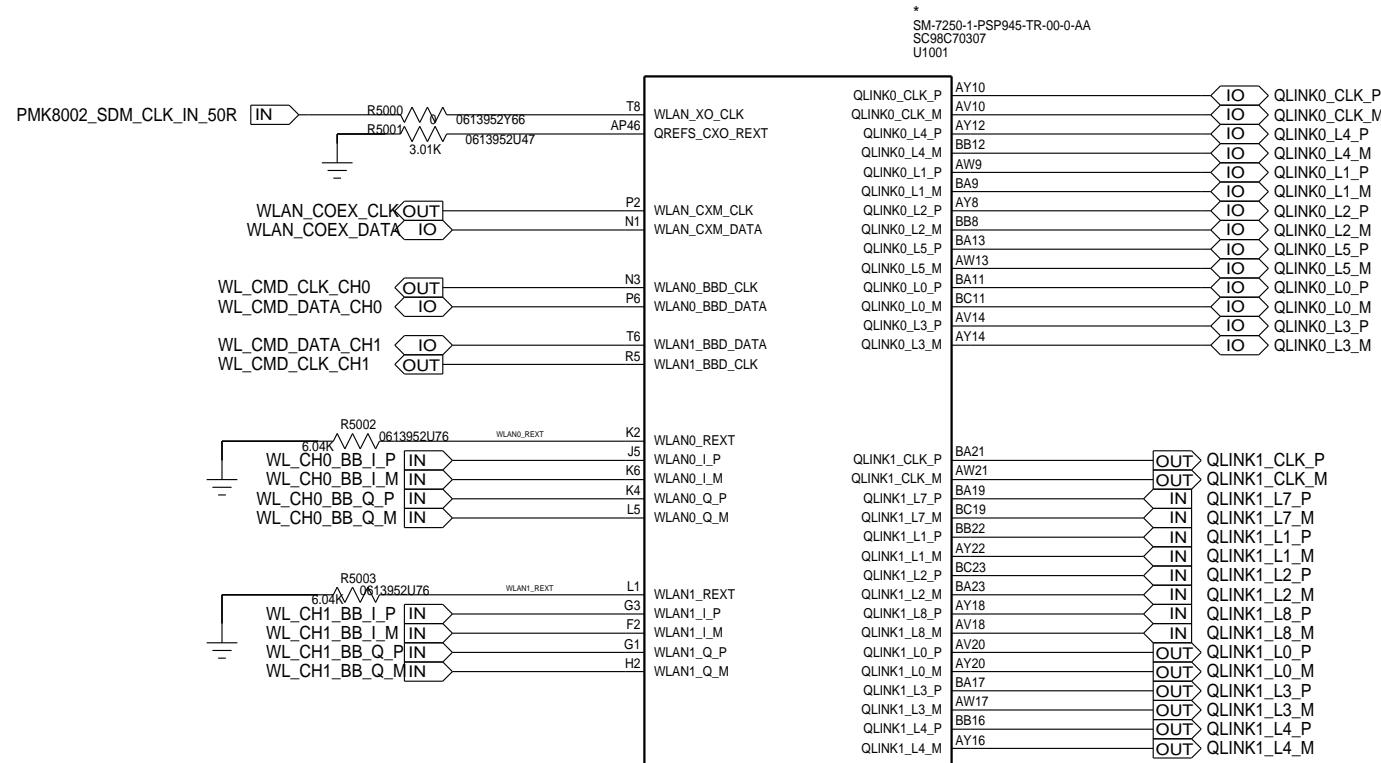
REF:2710-2740



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|--|-----------------------------------|--|
| APPROVALS | MOTOROLA MOBILE DEVICES | |
| ENGINEER: MOTOROLA | BLOCK TITLE: ui | |
| LAST MODIFIED BY: MOTOROLA | Mon May 25 13:37:09 2020 | |
| MOTOROLA CONFIDENTIAL RESTRICTED | B | PROJECT NAME nairobi_5g_mp_0609.cpm |
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| CAD FILE NAME: | PAGE 41 OF 95 | |

RF INTERFACE

REF 5000-5099



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|--|---|---------------|
| APPROVALS |  MOTOROLA MOBILE DEVICES | |
| ENGINEER: | BLOCK TITLE: | |
| LAST MODIFIED BY: MOTOROLA Mon May 25 13:37:05 2020 | sdm_rf_interface | |
| MOTOROLA CONFIDENTIAL RESTRICTED | PROJECT NAME | REV |
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| | CAD FILE NAME: | PAGE 42 OF 95 |

ANT: PORTS

REFDES: 000 - 499

D

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C

C

B

B

A

A

SUPPLIES

VREG_S4A_1P8 → TUNER_VIO

VERIFY POWER SUPPLIES TP PMIC

INPUTS /OUTPUTS - RF_CON_DET

OUT RFCONN_DET_1
OUT RFCONN_DET_2
OUT RFCONN_DET_3
OUT RFCONN_DET_4

CAP_SENSE

OUT CAP_SENSOR_LMHB_TOP
OUT CAP_SENSOR_LDS_TOP_REF
OUT CAP_SENSOR_LDS_TOP

INTERFACE MIPI

IO RFFE1_CLK
IO RFFE1_DATA

APPROVALS



ENGINEER: MOTOROLA

BLOCK TITLE:

LAST MODIFIED BY: MOTOROLA
Mon May 25 13:58:14 2020

antennas

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PROJECT NAME
B nairobi_5g_mp_0609.cpm

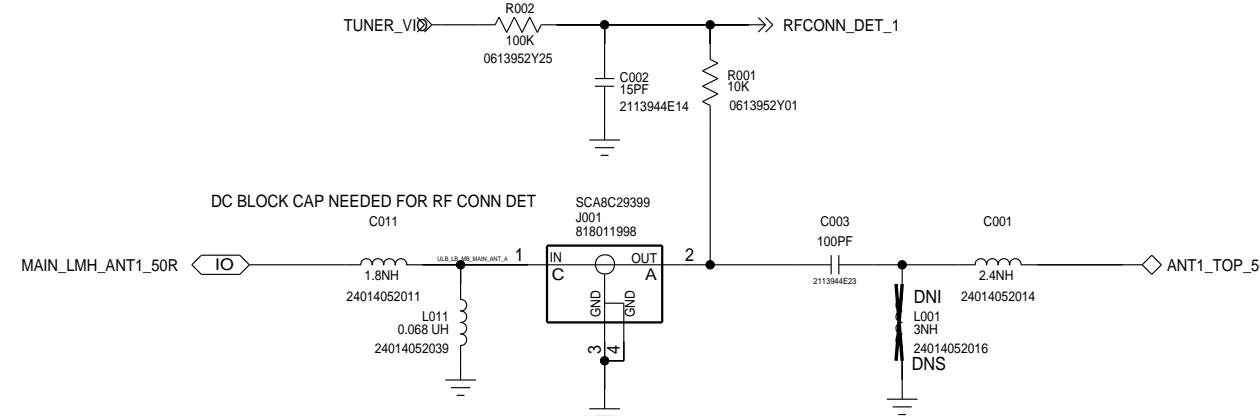
REV
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CAD FILE NAME:

PAGE 43 OF 95

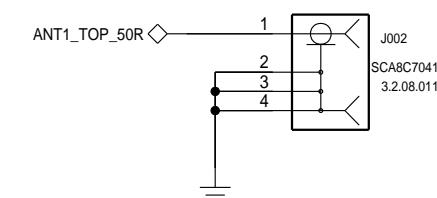
ANT1: LB+MB+HB TRX0 MAIN

REFDES: 001-099



ANT1 COAX

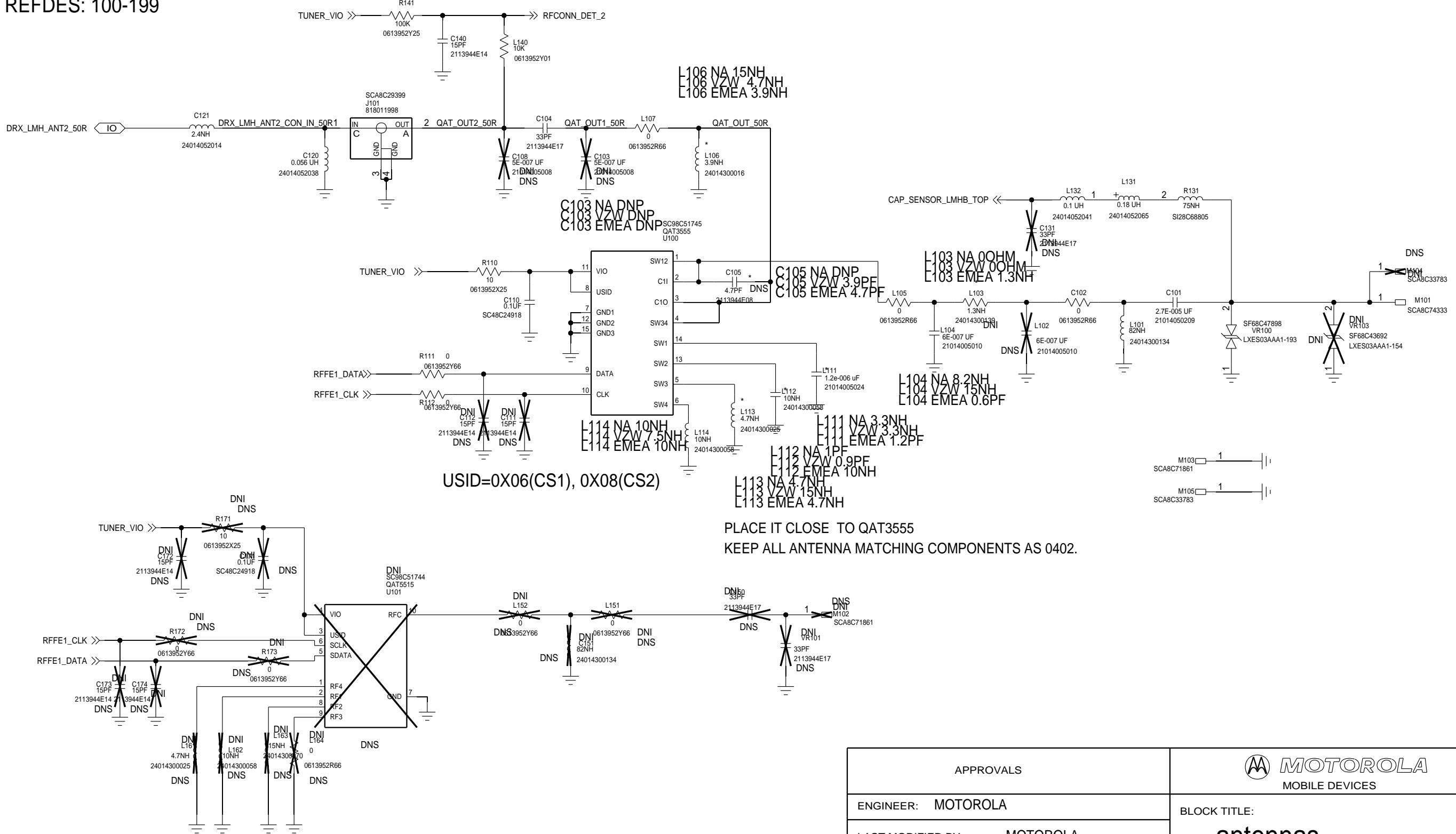
TOP PCB



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|--|--|---------------|
| APPROVALS | MOTOROLA MOBILE DEVICES | |
| ENGINEER: MOTOROLA | BLOCK TITLE: | |
| LAST MODIFIED BY: MOTOROLA Mon May 25 13:58:16 2020 | antennas | |
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| CAD FILE NAME: | | PAGE 44 OF 95 |

ANT2: LB+MB+HB TRX1 DIV

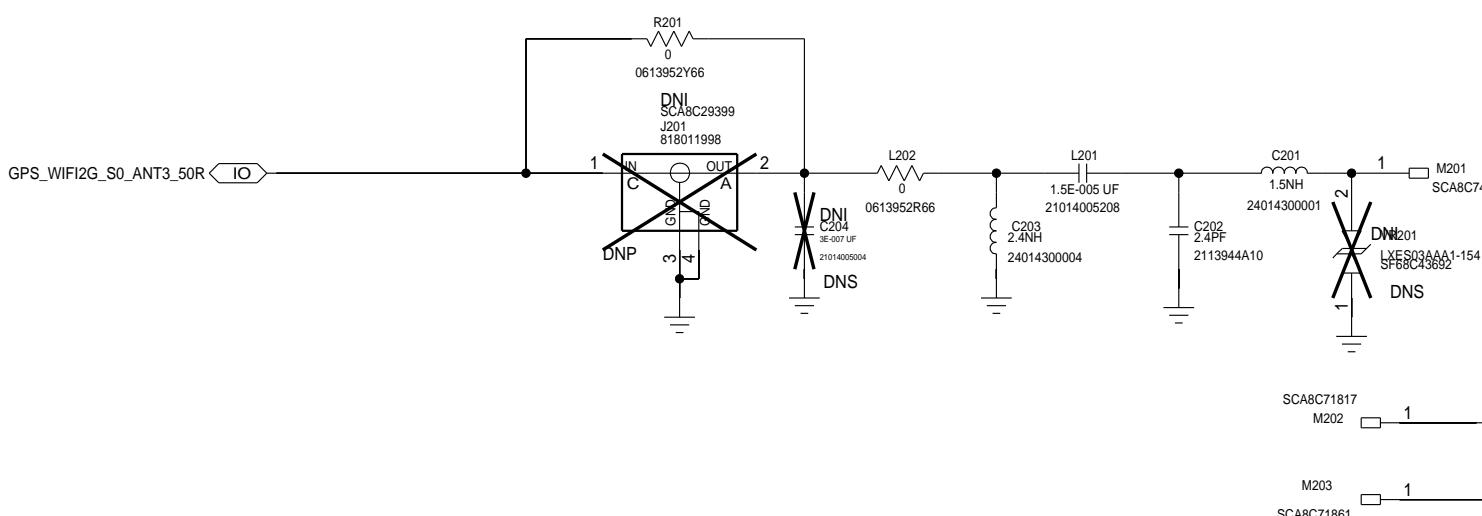
REFDES: 100-199



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| LAST MODIFIED BY: MOTOROLA Mon May 25 14:26:30 2020 | antennas | |
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| B | PROJECT NAME nairobi_5g_mp_0609.cpm | REV 01 |
| CAD FILE NAME: | | PAGE 45 OF 95 |

ANT3: GPS+WIFI 2.4GHZ

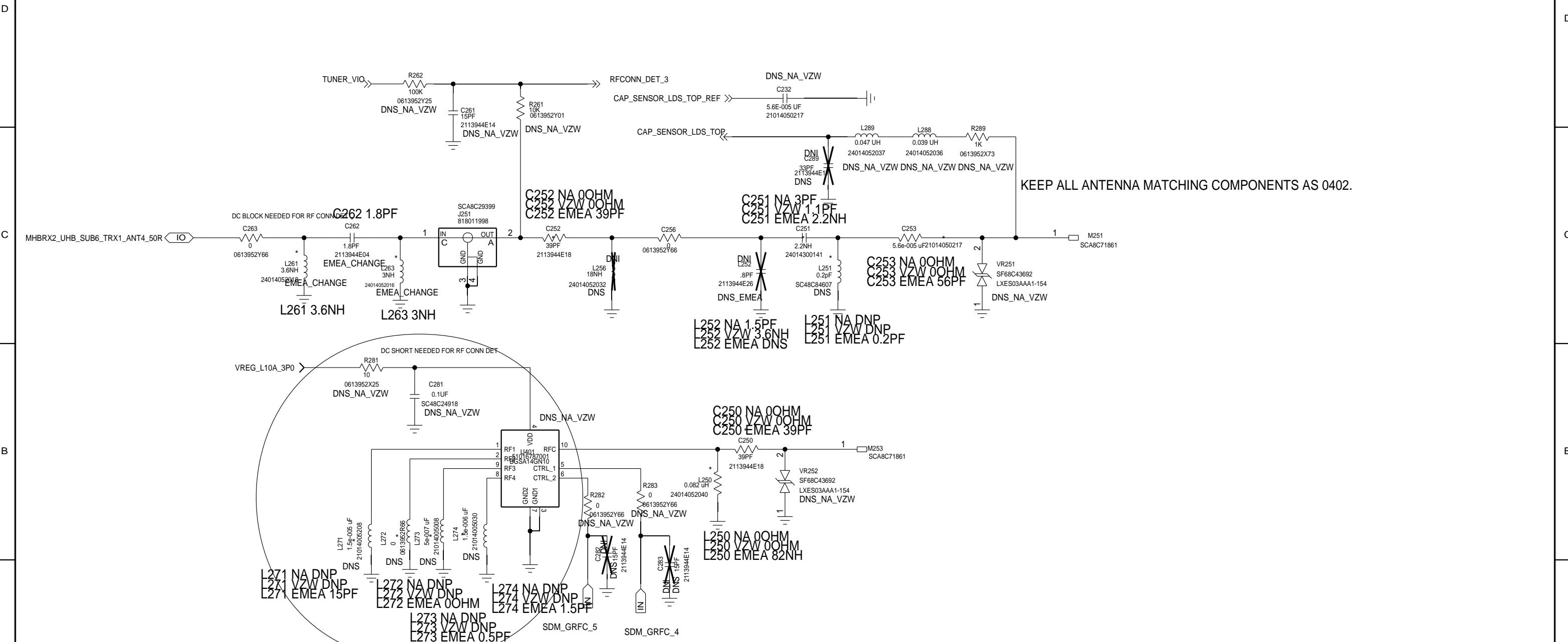
REFDES : 200-249



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| LAST MODIFIED BY: MOTOROLA Wed Jun 10 10:29:05 2020 | | |
| 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 nairobi_5g_mp_0609.cpm | REV 01 |
| CAD FILE NAME: | | PAGE 46 OF 95 |

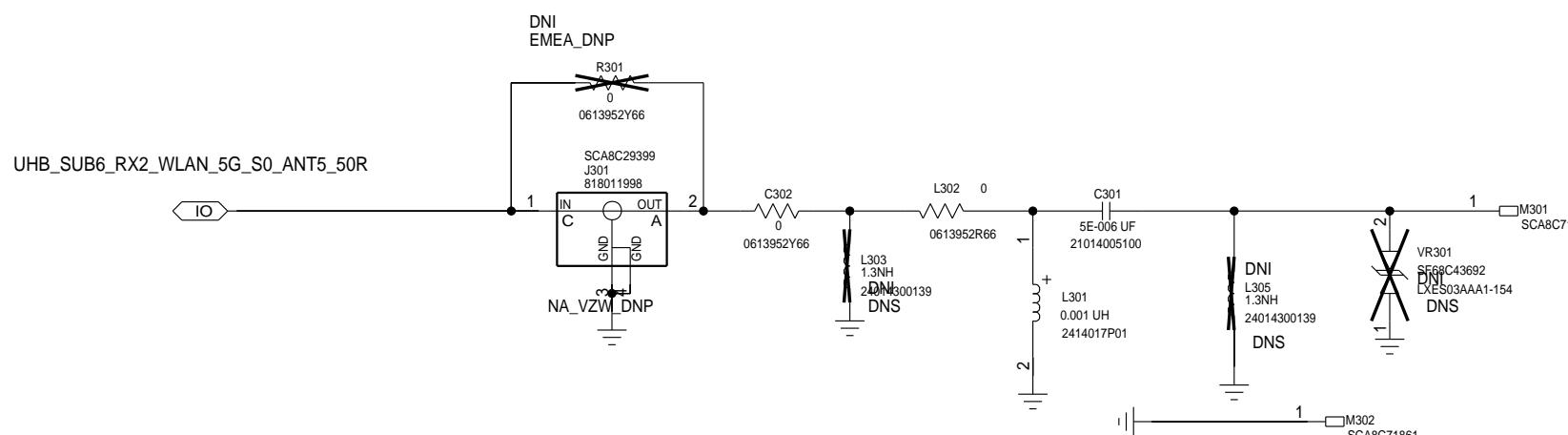
ANT4:M/HB RX2_UHB_SUB6_TRX1

REFDES: 250-299



ANT5: UHB_SUB6_RX2_WIFI 5G

REFDES: 300-349

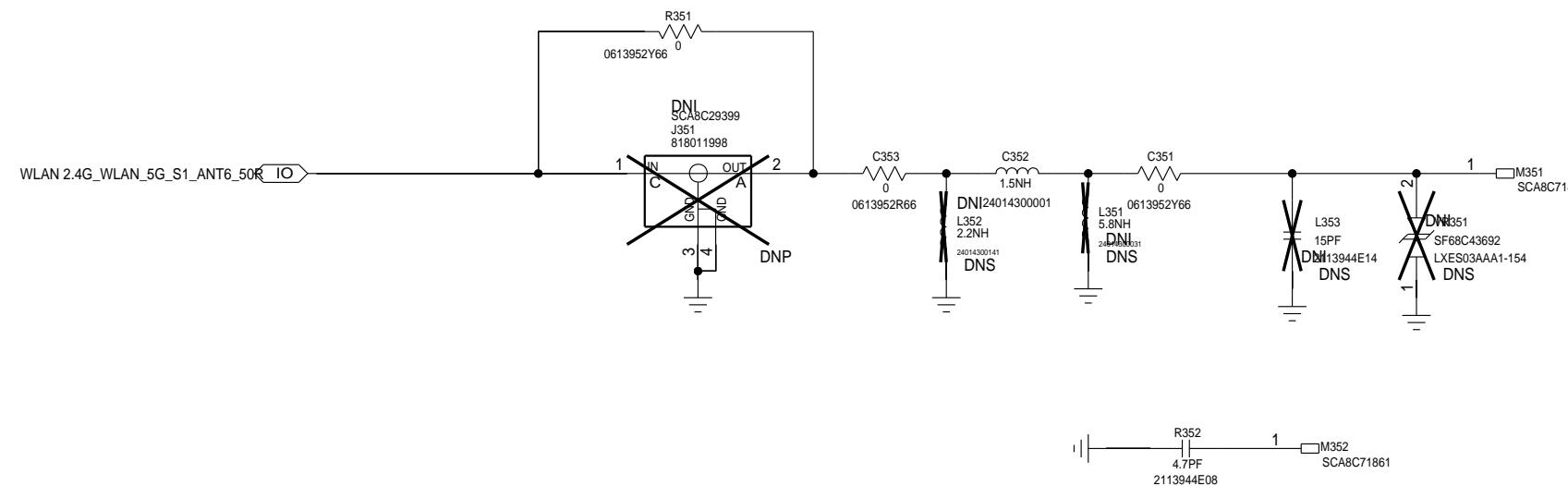


KEEP ALL ANTENNA MATCHING COMPONENTS AS 0402.

| | | |
|--|--|---------------|
| APPROVALS | MOTOROLA MOBILE DEVICES | |
| ENGINEER: MOTOROLA | BLOCK TITLE: antennas | |
| LAST MODIFIED BY: MOTOROLA Wed Jun 10 10:31:09 2020 | | |
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| CAD FILE NAME: | | PAGE 48 OF 95 |

ANT6: BT/WIFI S0+ 5G WIFI S1

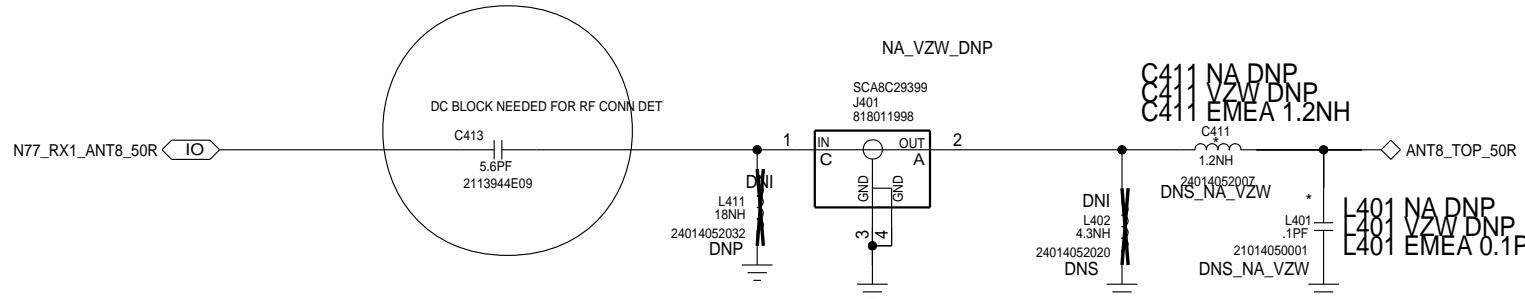
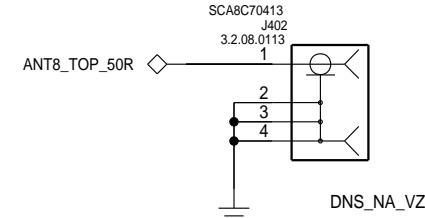
REFDES: 350-399



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| CAD FILE NAME: | | PAGE 49 OF 95 |

ANT8: UHB_SUB6_TRX0 + LAA

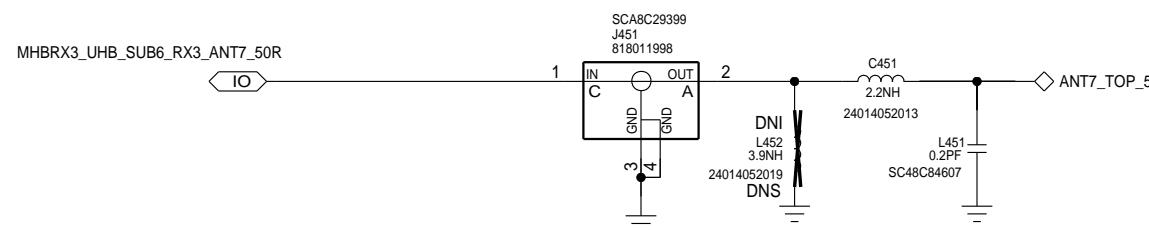
REFDES: 400-449


ANT8 COAX
TOP PCB


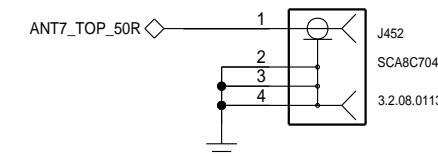
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| | CAD FILE NAME: | PAGE 50 OF 95 |

ANT7: M_HB_RX3_UHB_SUB6_RX3

REFDES: 450-499



ANT7 COAX
TOP PCB



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| APPROVALS | MOTOROLA MOBILE DEVICES | |
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| CAD FILE NAME: | | PAGE 51 OF 95 |

ANT9:UHB RX3_SUB6 RX3_LAA_RX1

REFDES: 400-449

D

D

C

C

B

B

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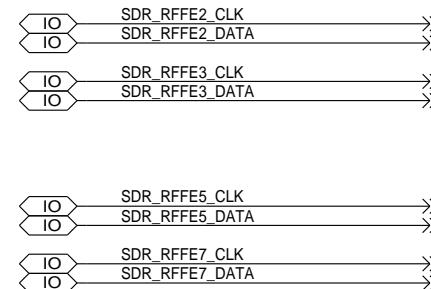
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| | CAD FILE NAME: PAGE 52 OF 95 | PAGE 52 OF 95 |

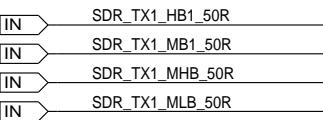
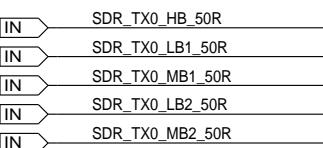
RFFE: PORTS

REFDES: 7000-8199

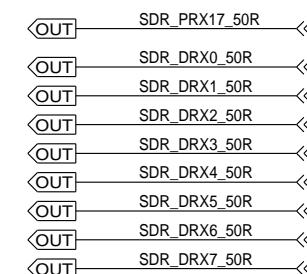
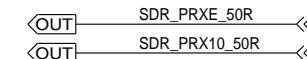
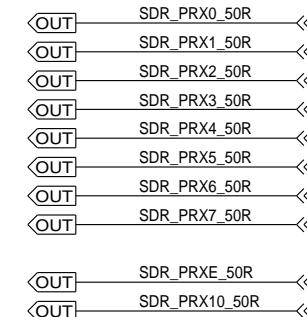
D INTERFACES - RFFE MIPI



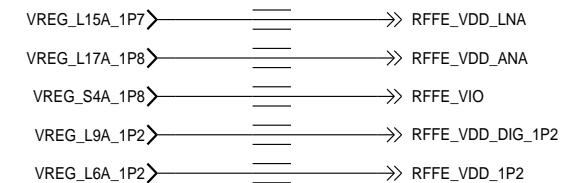
TRANSMITTER - RF



RECEIVER - RF



POWER



QUALCOMM RECOMMENDS PLACING BOTH THERMISTORS
FOR FUTURE SW IMPLEMENTATION THEY ARE WORKING ON

A APPROVALS



ENGINEER: MOTOROLA

LAST MODIFIED BY: MOTOROLA
Mon May 25 13:36:13 2020

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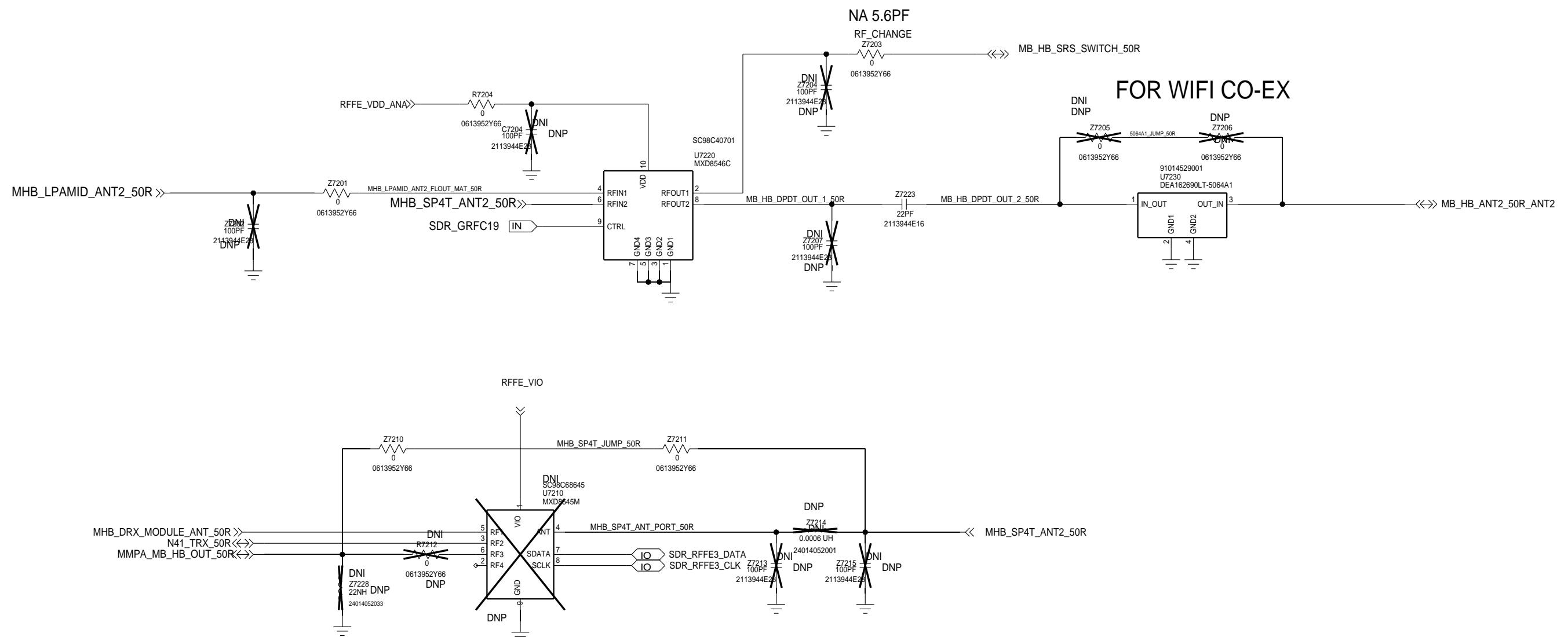
REV
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CAD FILE NAME:

PAGE 53 OF 95

RFFE: SRS SWITCH

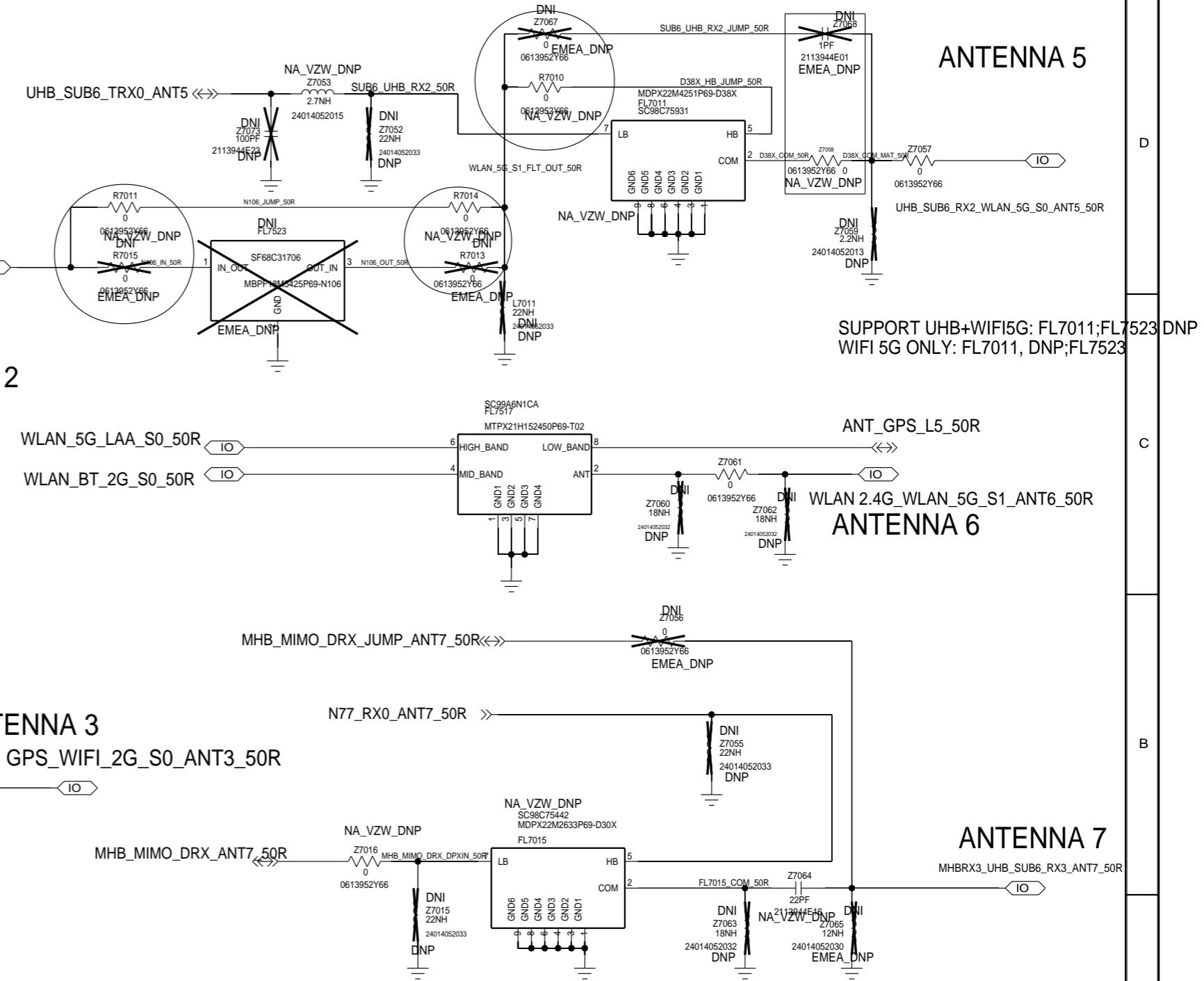
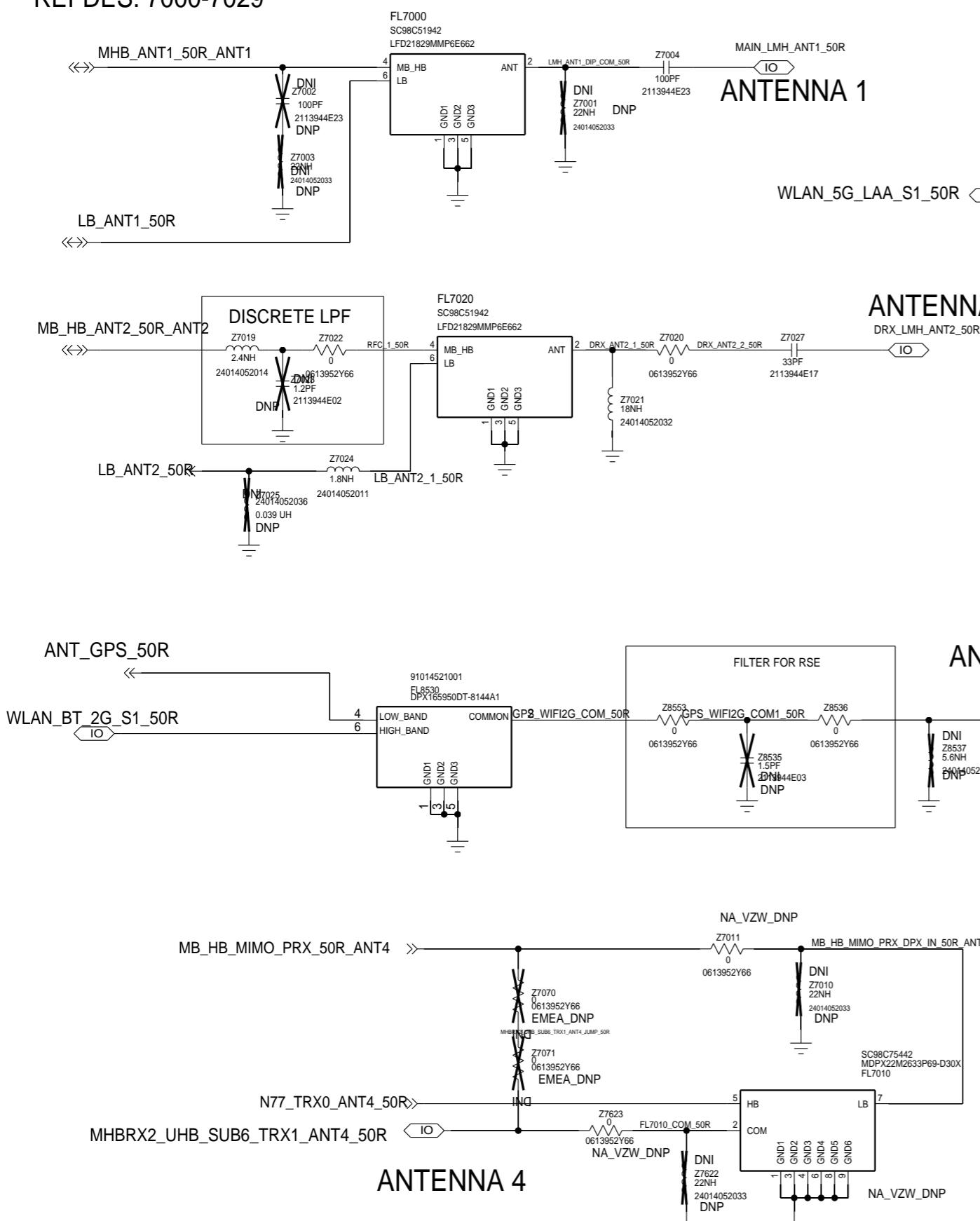
REFDES: 7200-7050



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| CAD FILE NAME: | | | PAGE 54 OF 95 |

RFFE: ANTENNA DIPELXER

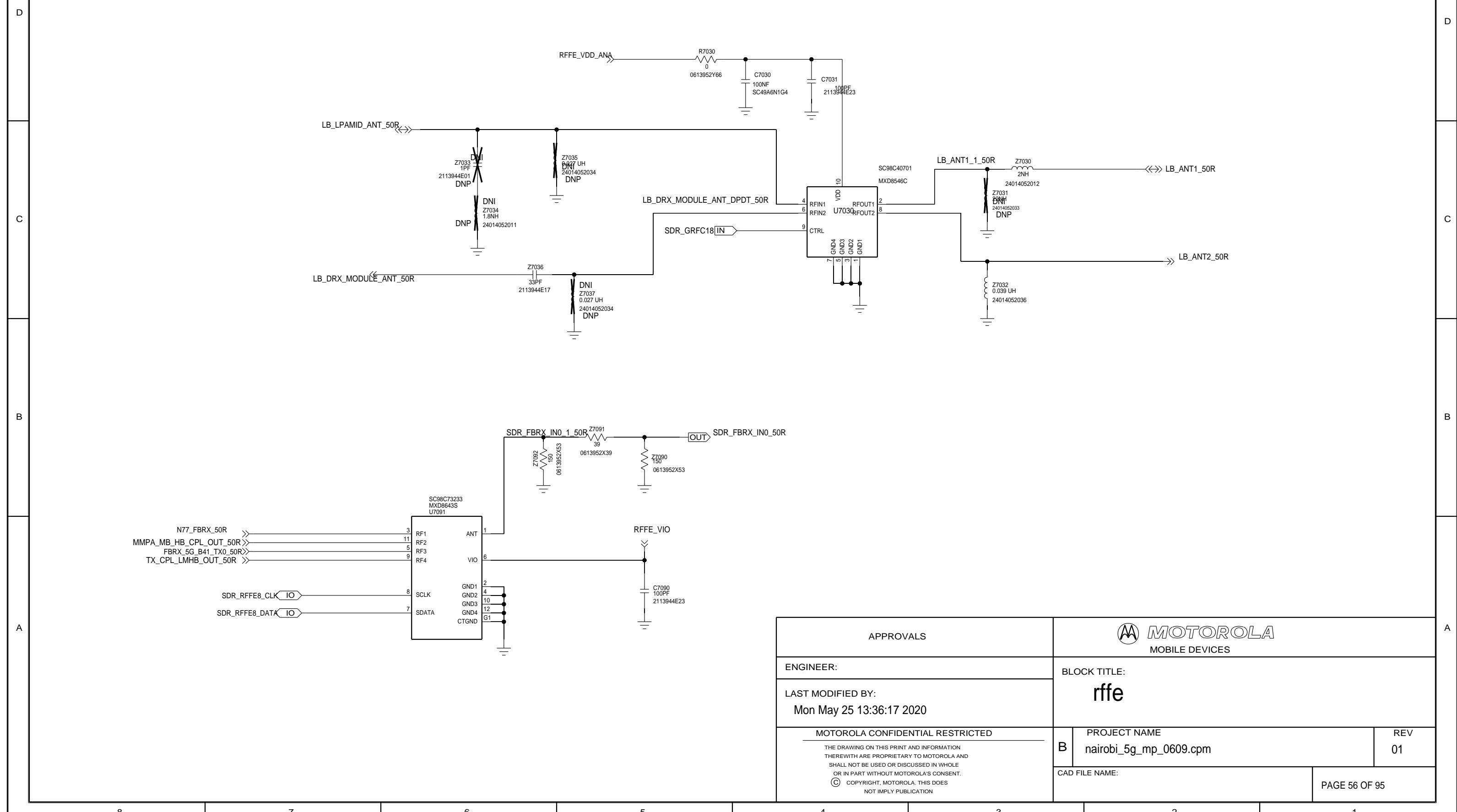
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| | CAD FILE NAME: | | PAGE 55 OF 95 |

RFFE: DPDT & FBRX SPDT

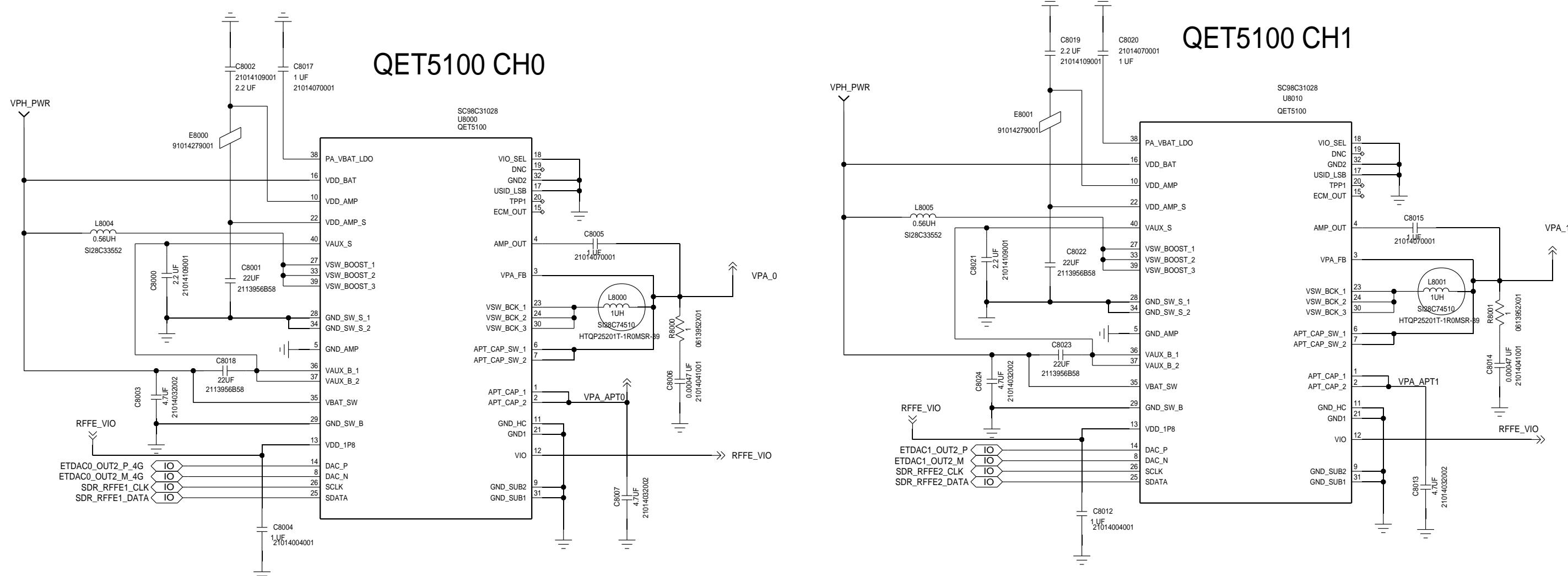
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| CAD FILE NAME: | REV 01 |
| | PAGE 56 OF 95 |

RFFE: QET5100 CH0/CH1

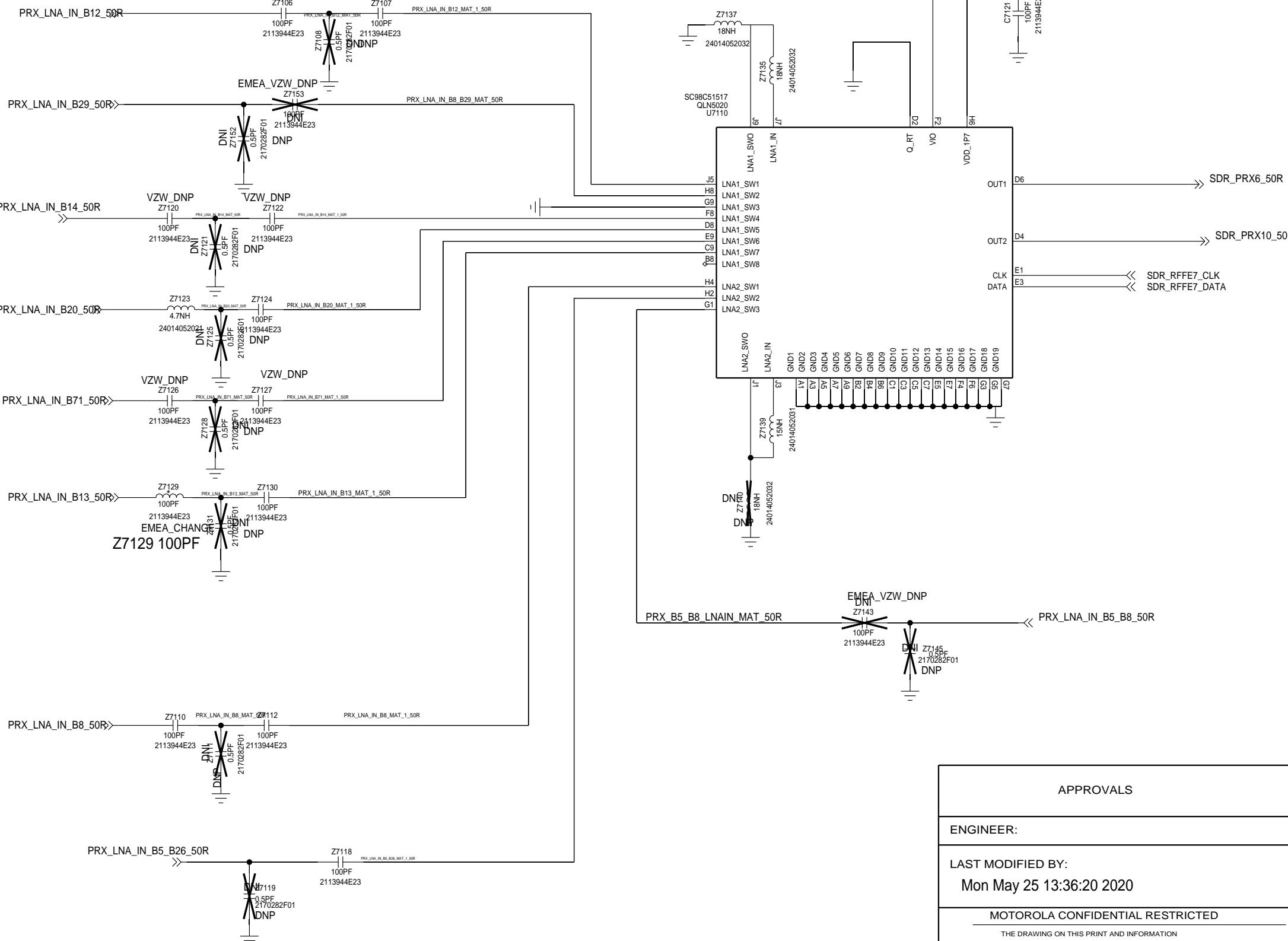
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| CAD FILE NAME: | | PAGE 57 OF 95 | |

RFFE: LB_PRX_QLN5020

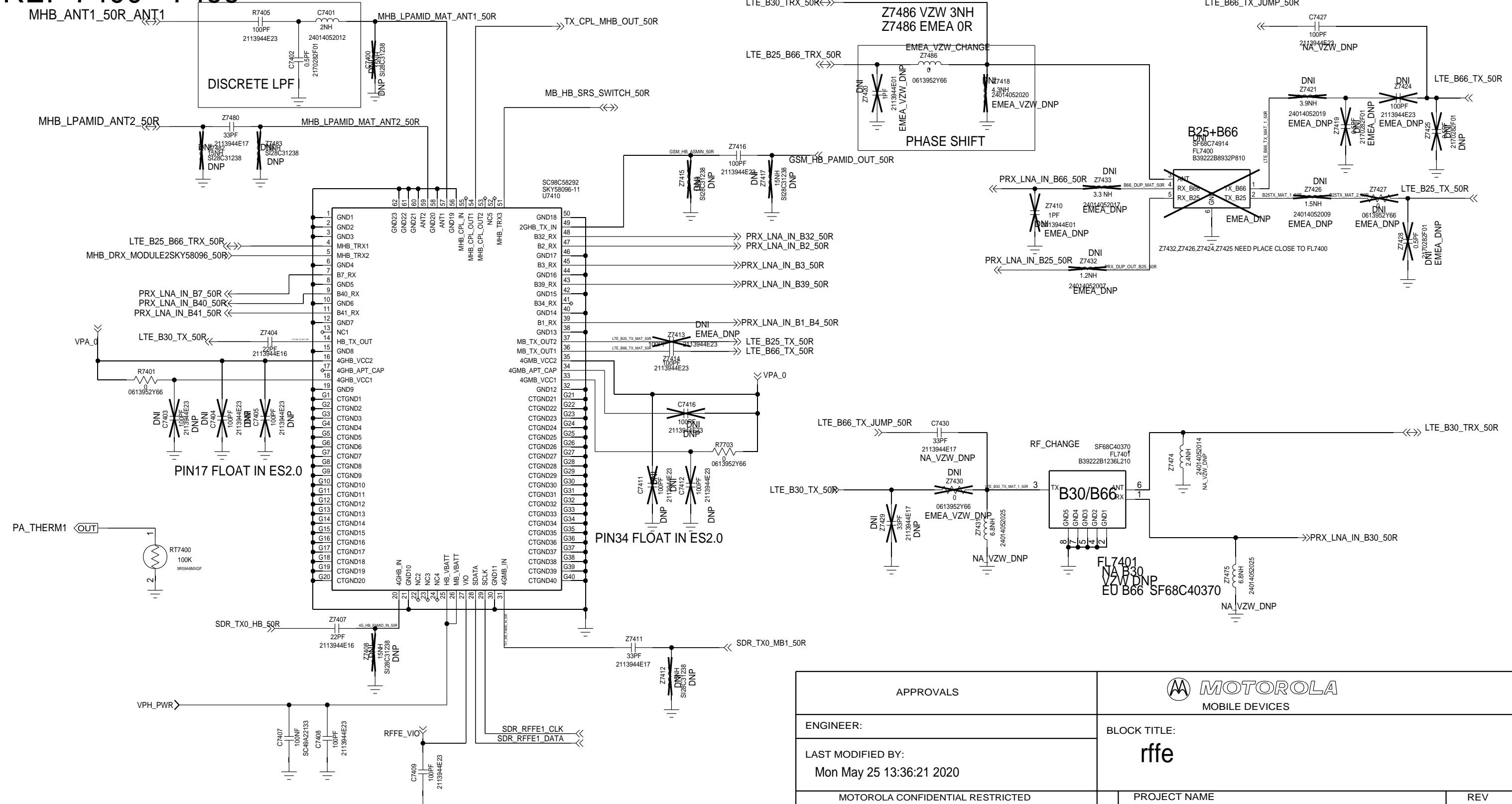
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| CAD FILE NAME: | | PAGE 58 OF 95 | |

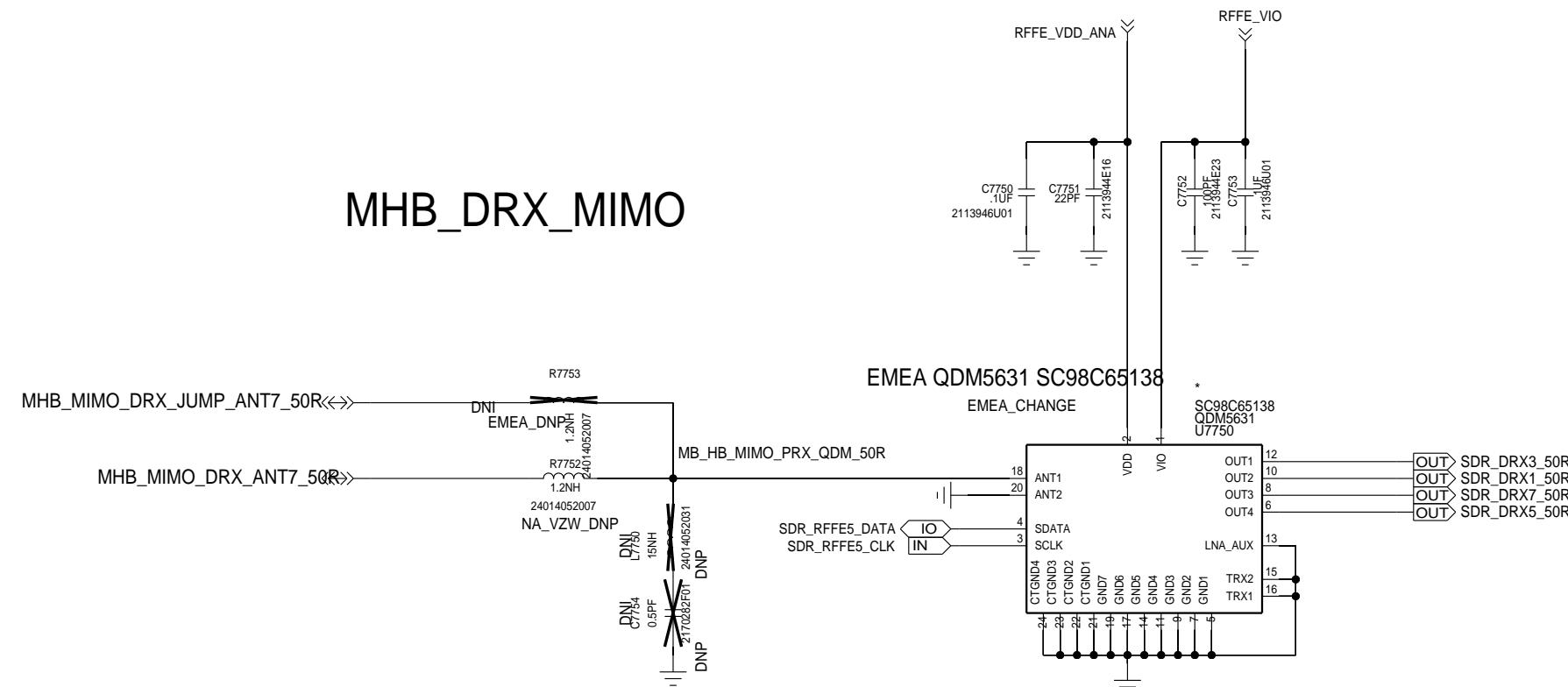
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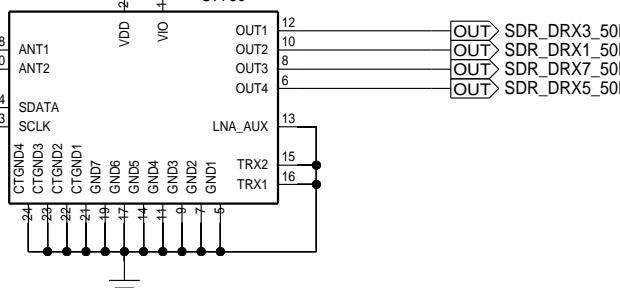
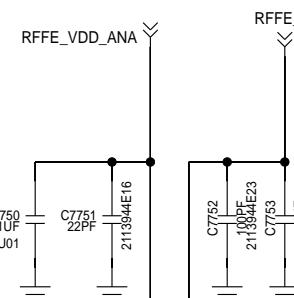


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| B | nairobi_5g_mp_0609.cpm | 01 | |
| CAD FILE NAME: | | PAGE 59 OF 95 | |

RFFE: MHB_DRX2_QDM5630#0



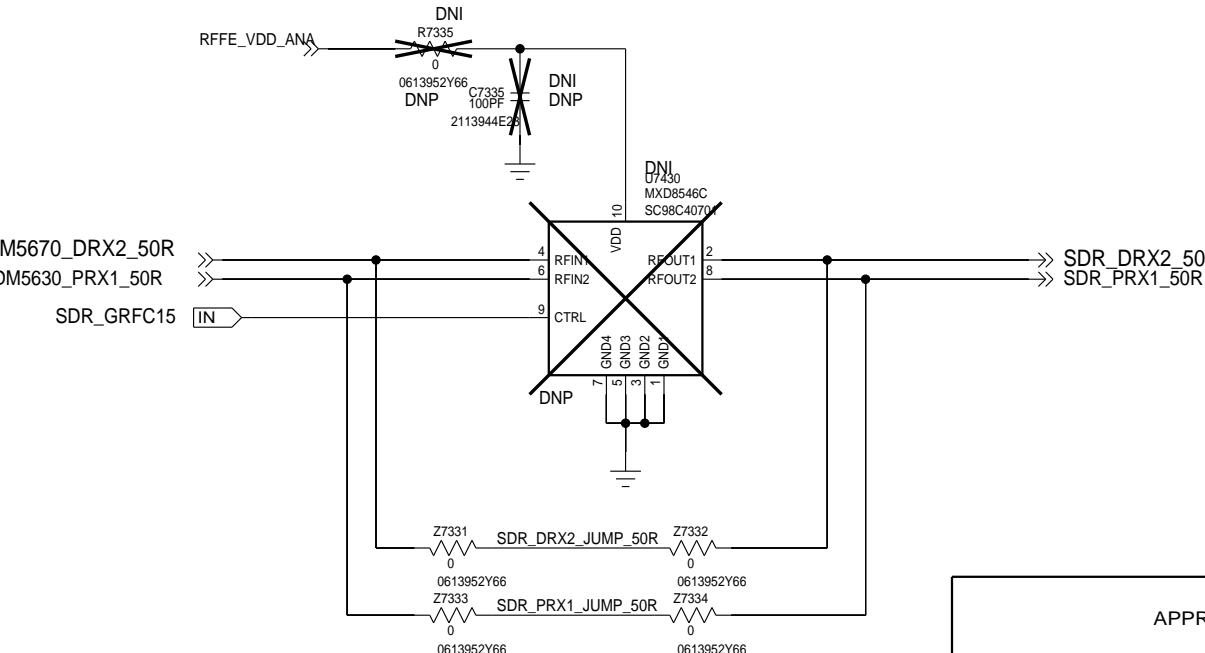
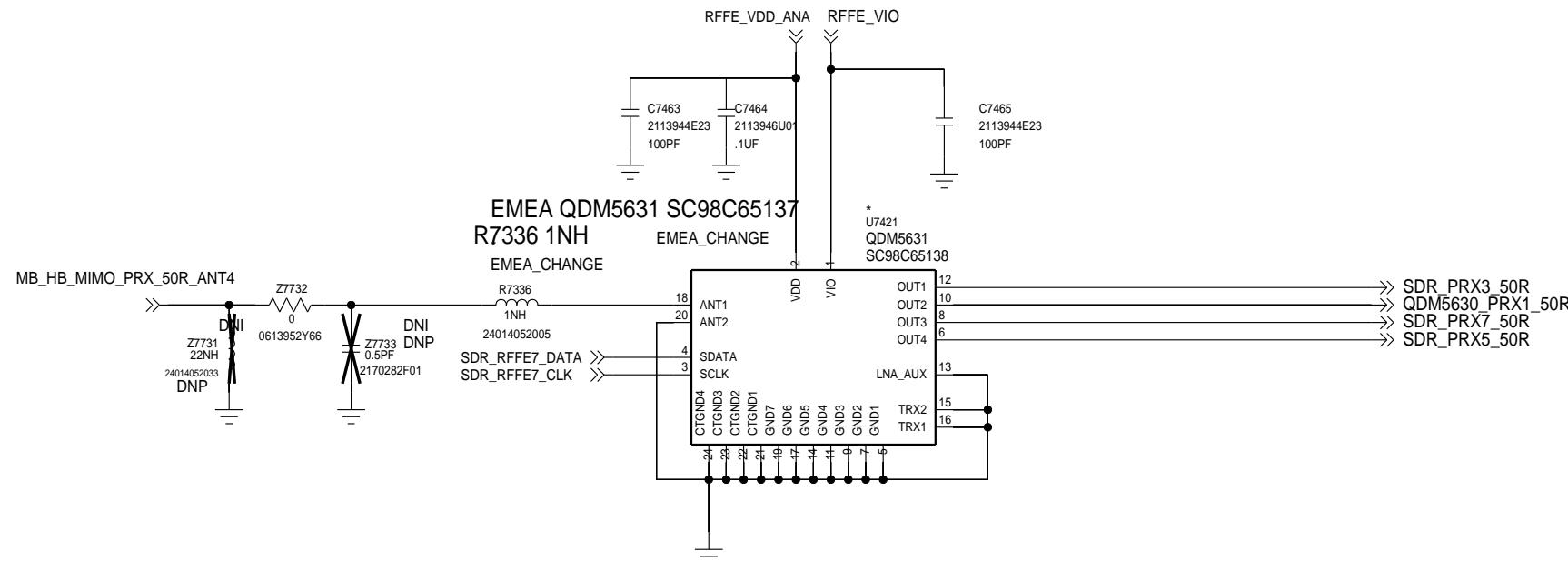
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| CAD FILE NAME: | PAGE 60 OF 95 | |

RFFE: MHB_DRX_QDM5630#1

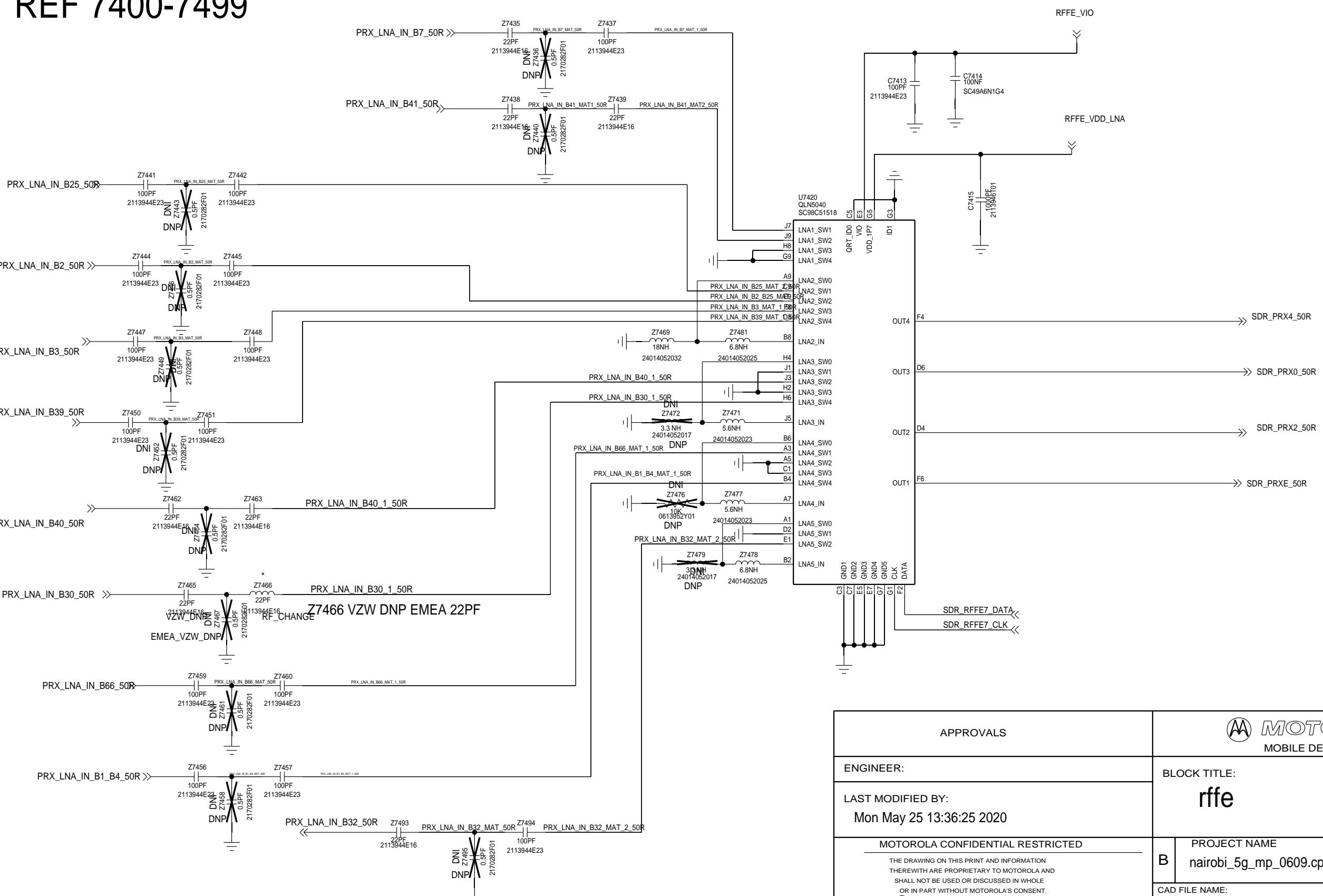
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RFFE: MHB_PRX_QLN5040

REF 7400-7499



APPROVALS

MOTOROLA
MOBILE DEVICES

ENGINEER:

BLOCK TITLE:

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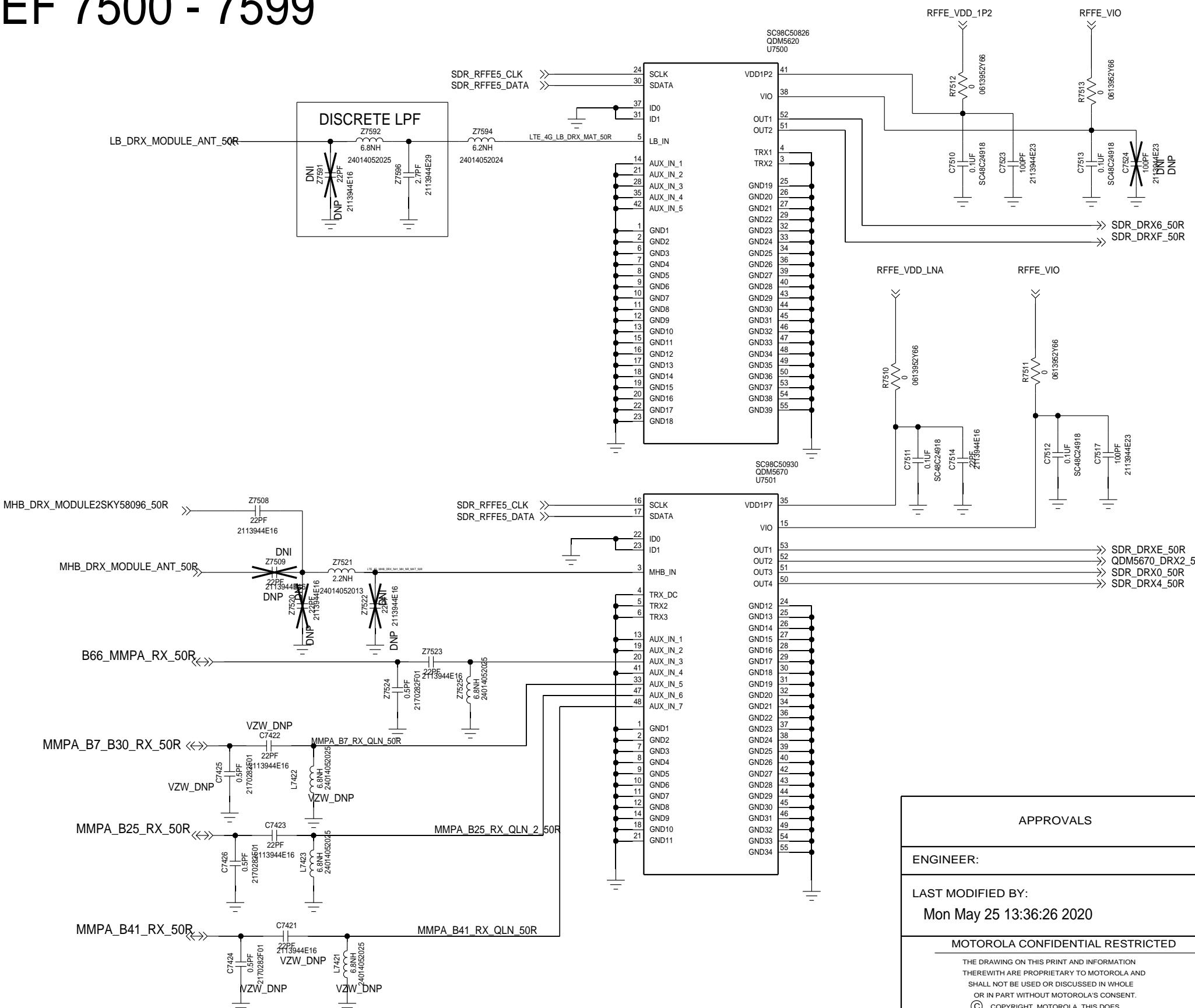
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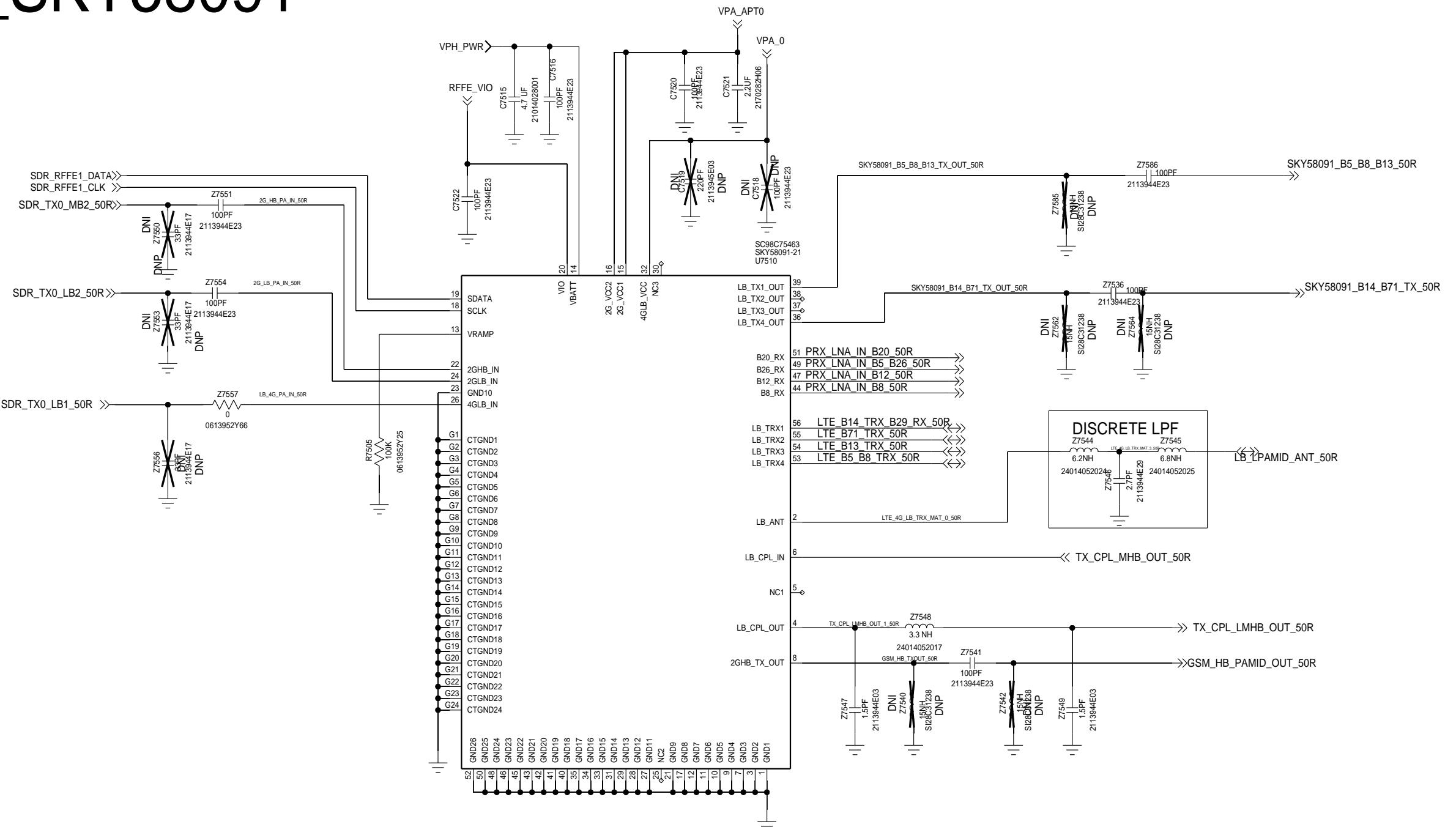
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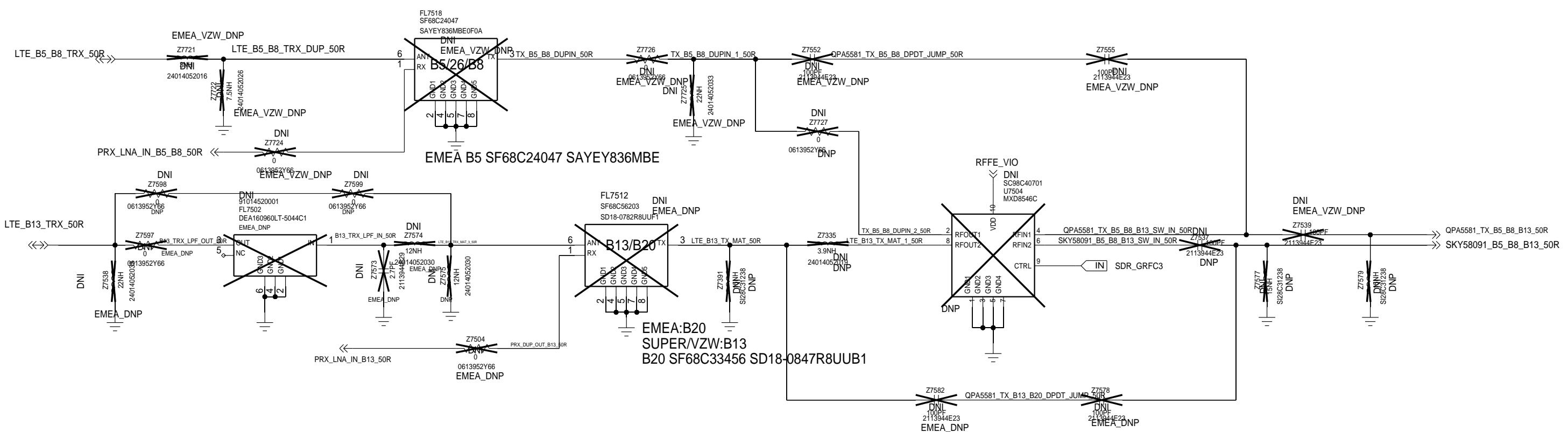
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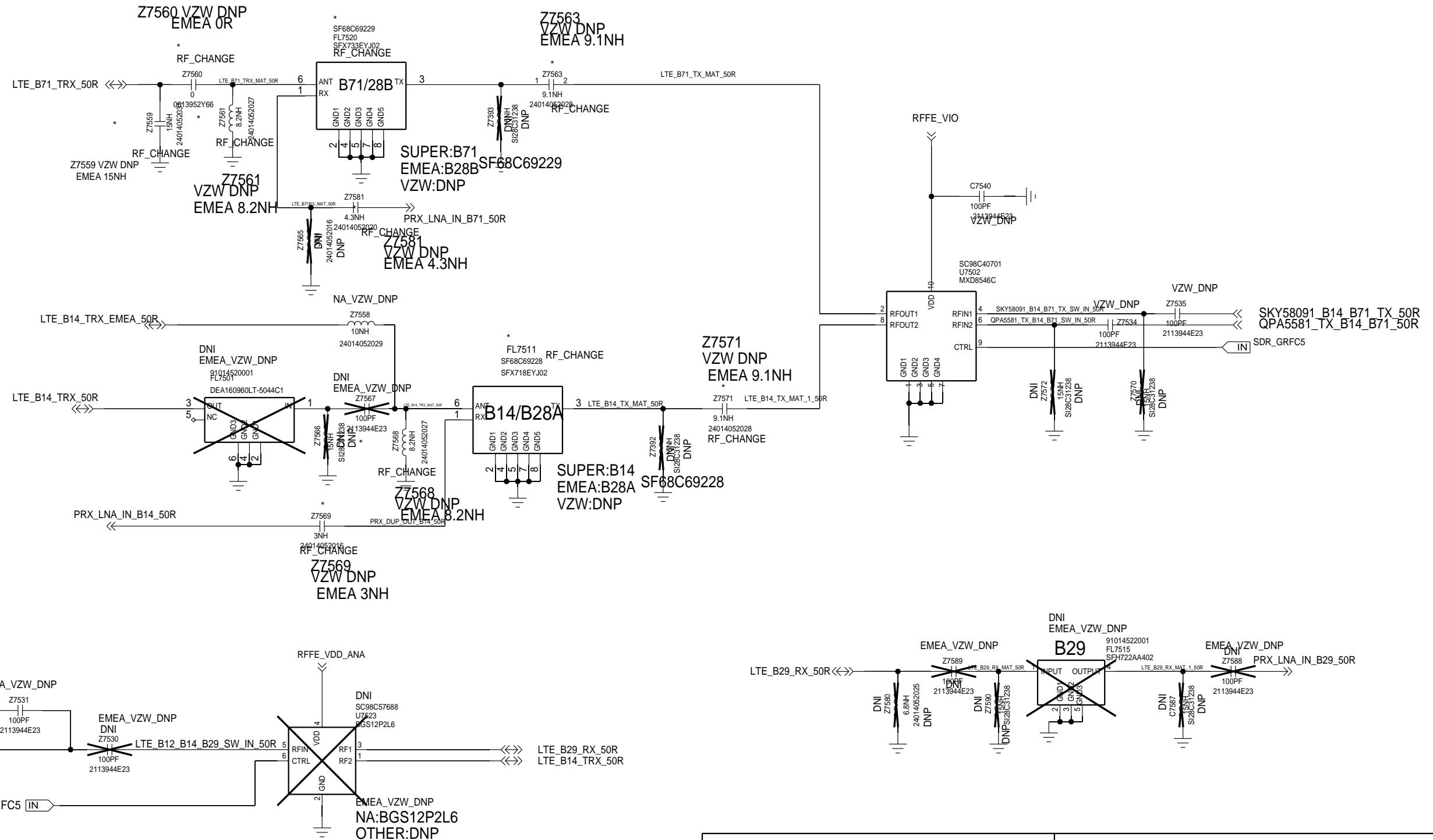
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RFFE: LB_B14_B28_B29_B71

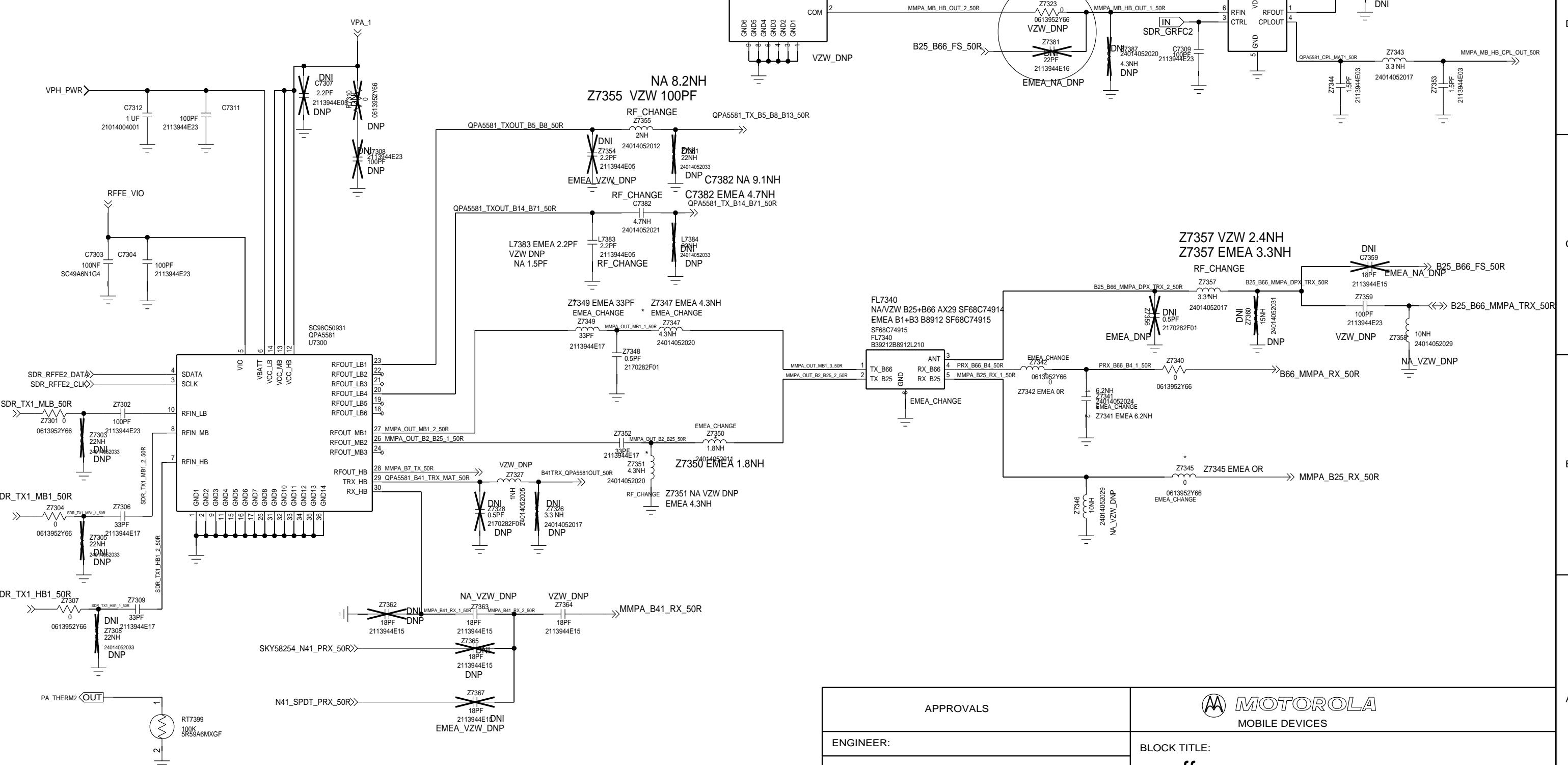
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RFFE: TX1_MMPA_QPA5581

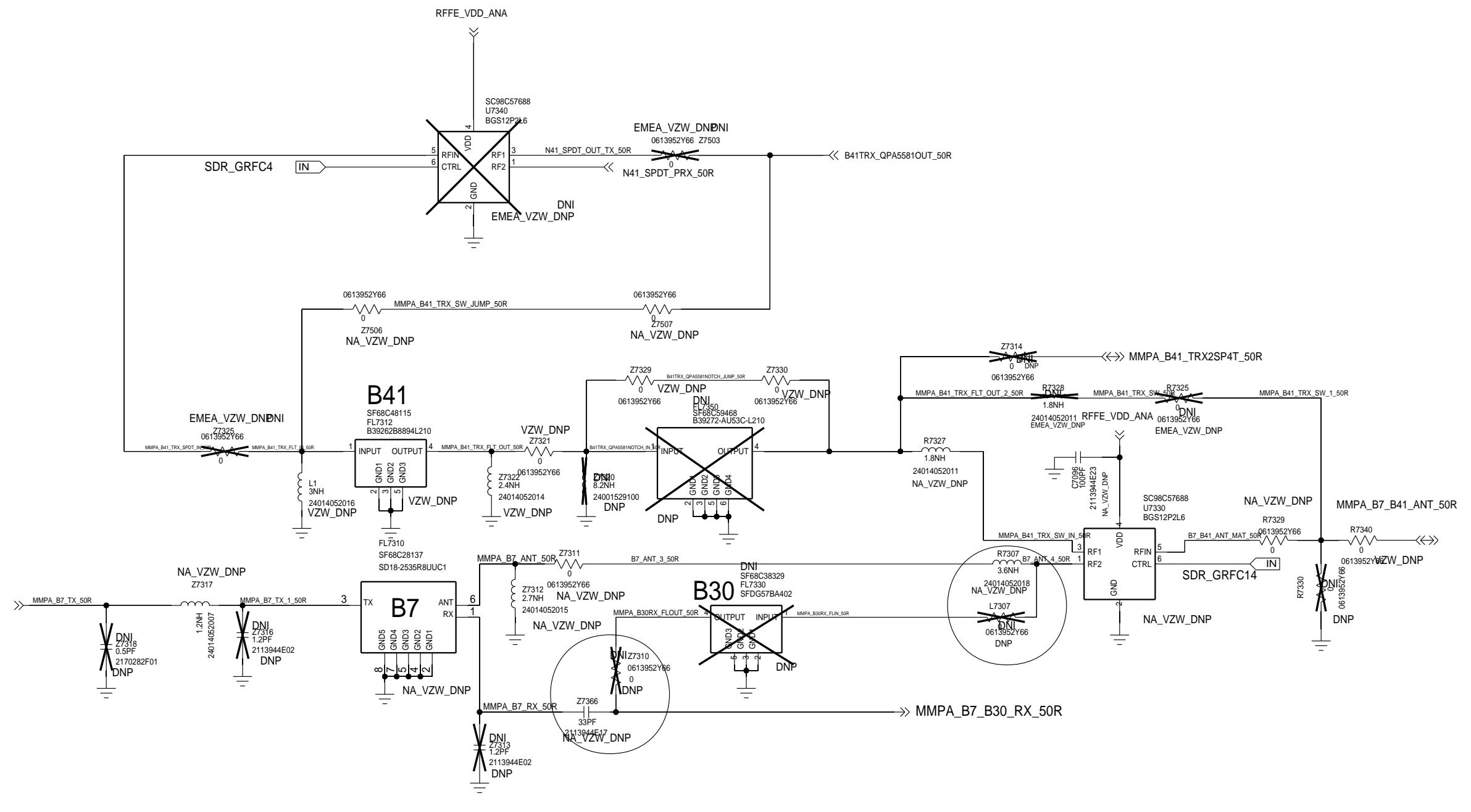
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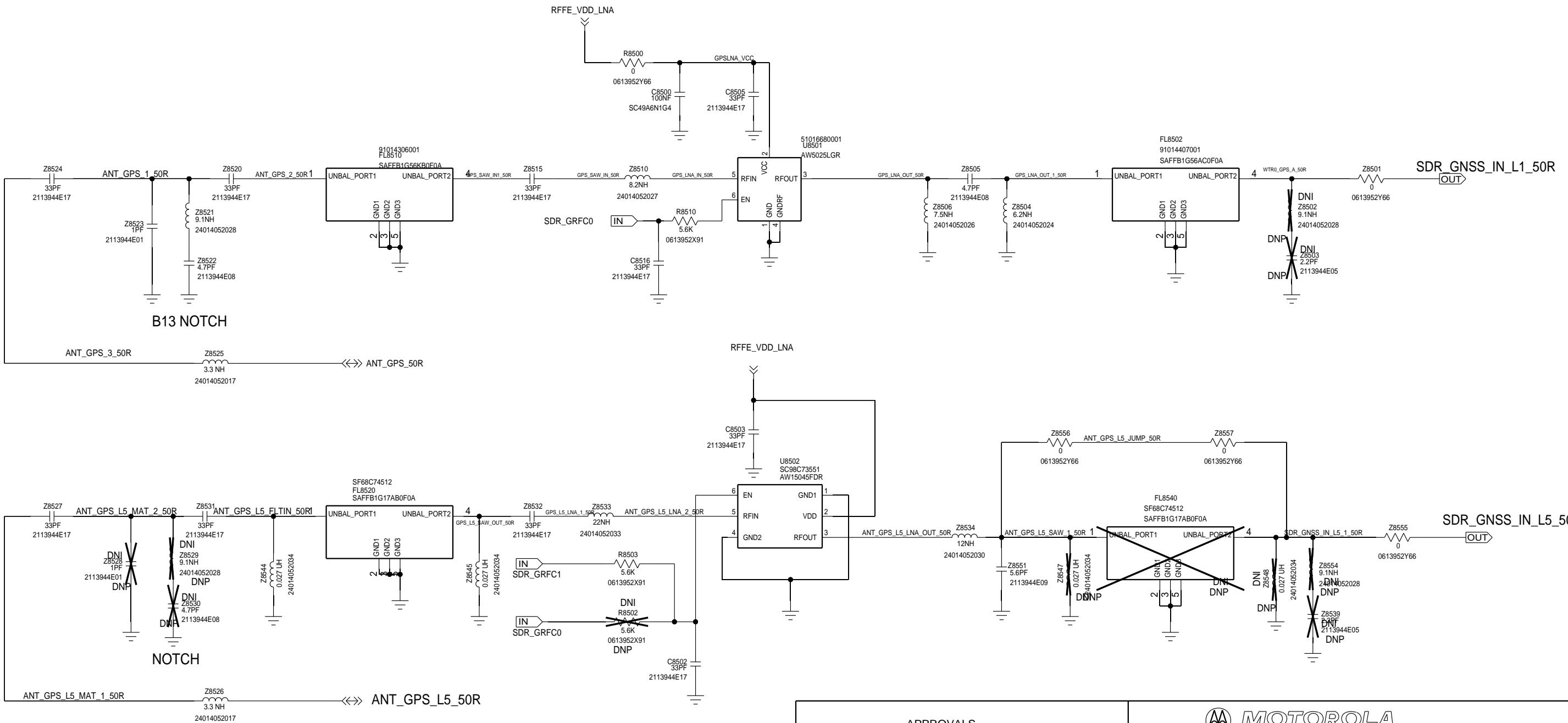
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| CAD FILE NAME: | PAGE 68 OF 95 | |

RFFE: GPS

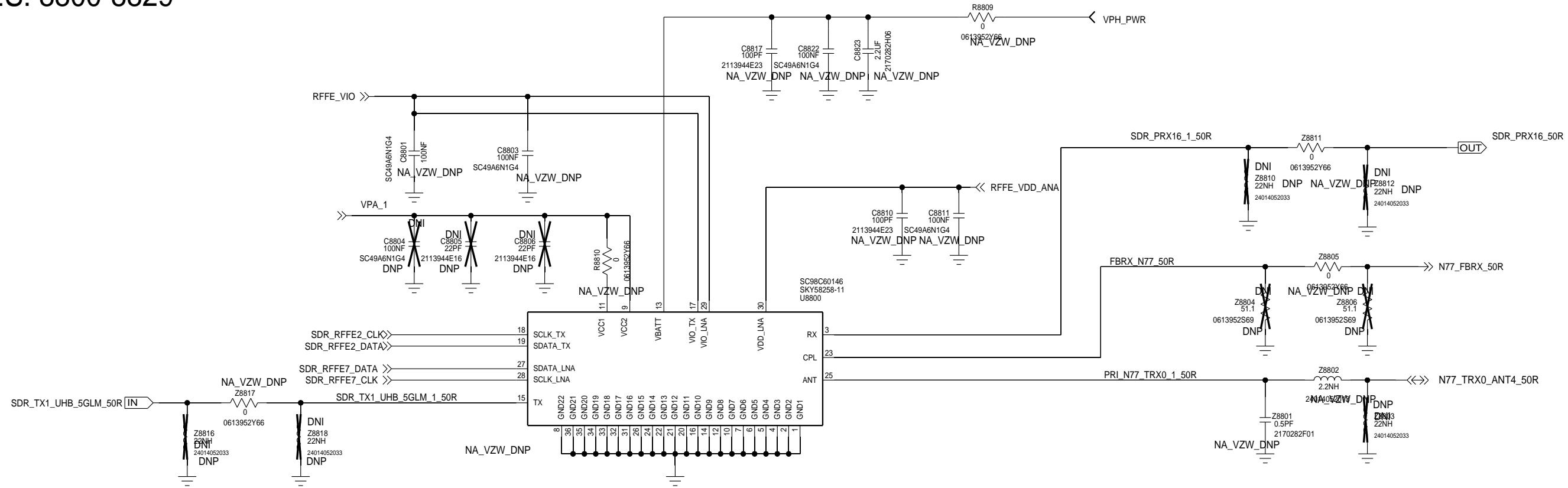
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| | CAD FILE NAME: | | PAGE 69 OF 95 |

RFFE: SUB6 SKY58258-11

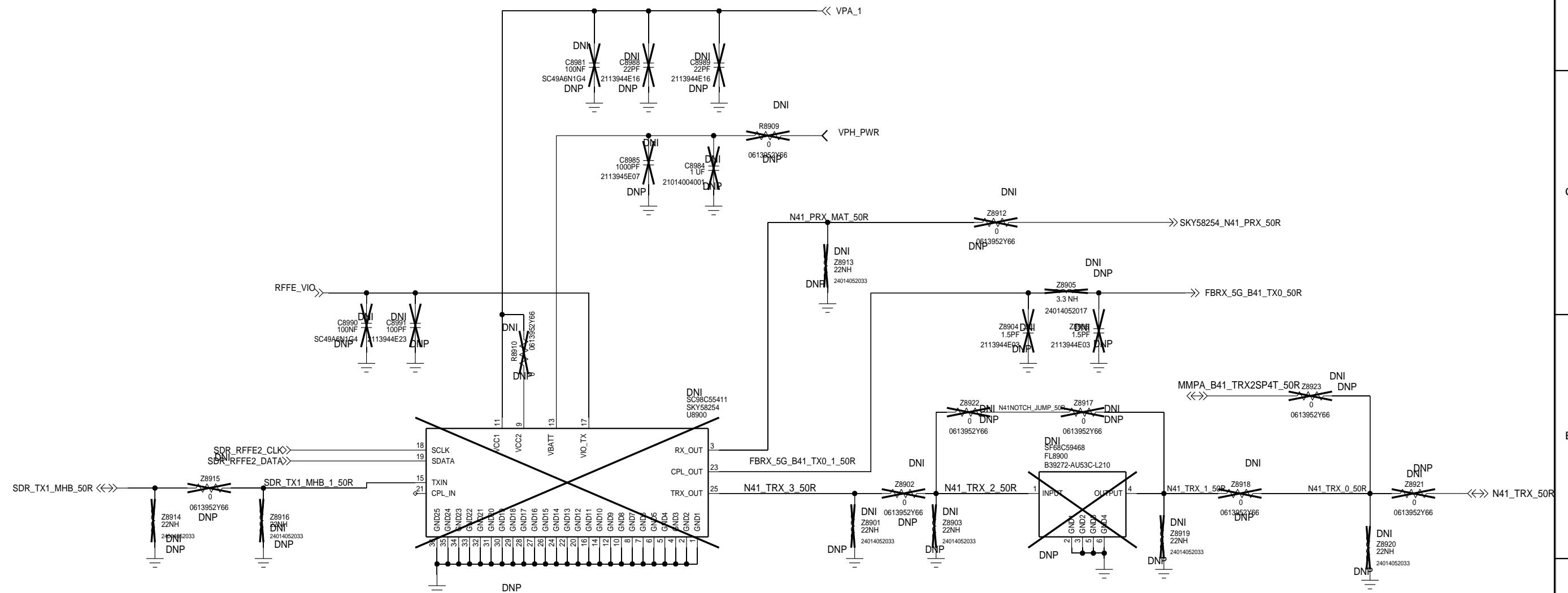
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| CAD FILE NAME: | | PAGE 70 OF 95 | |

RFFE: SUB6 SKY58254

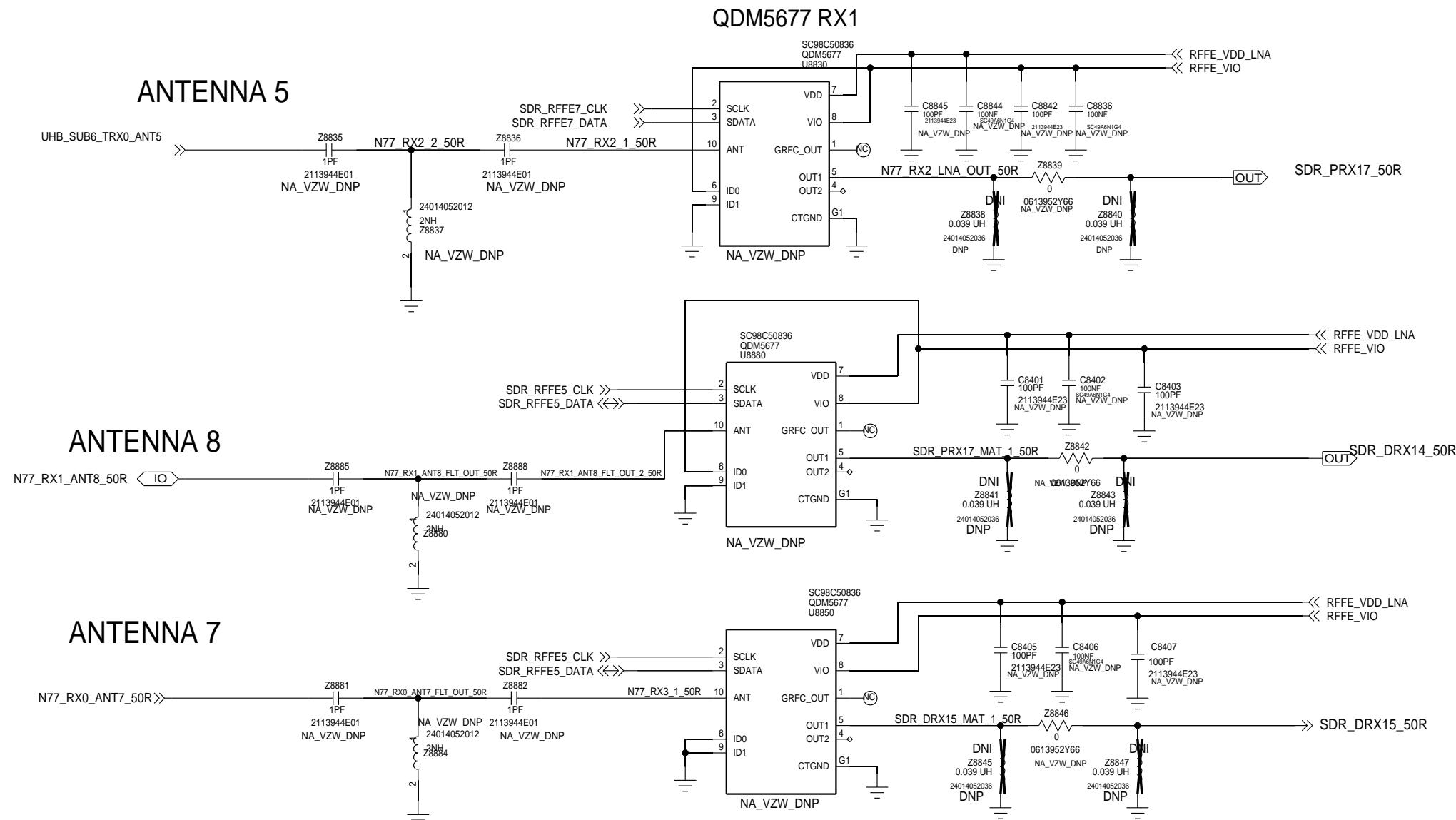
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| CAD FILE NAME: | | | PAGE 71 OF 95 |

RFFE: SUB6 QDM5677

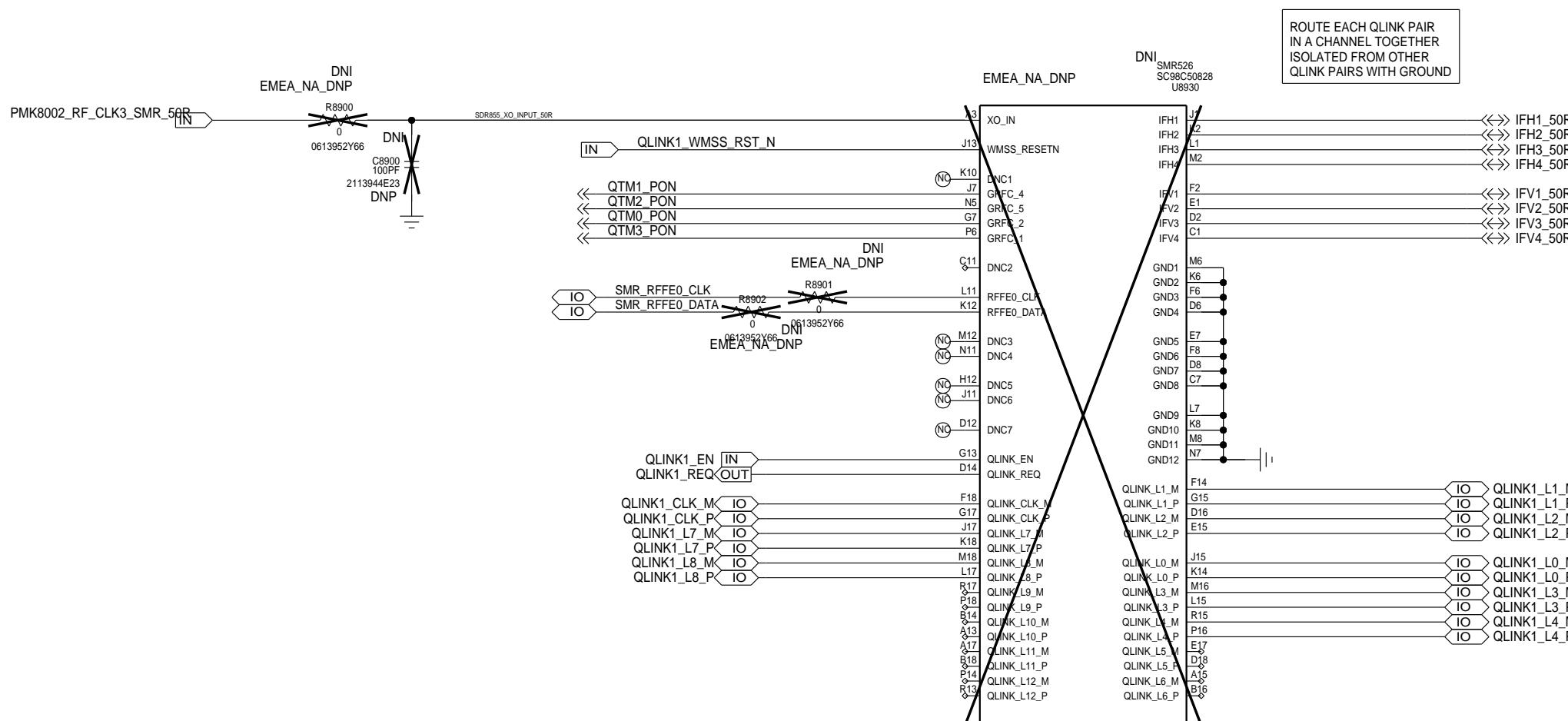
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| APPROVALS | | MOTOROLA MOBILE DEVICES | |
| ENGINEER: MOTOROLA | | BLOCK TITLE: rffe | |
| LAST MODIFIED BY: MOTOROLA Mon May 25 13:36:41 2020 | | | |
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| CAD FILE NAME: | | | PAGE 72 OF 95 |

SMR526: CTRL

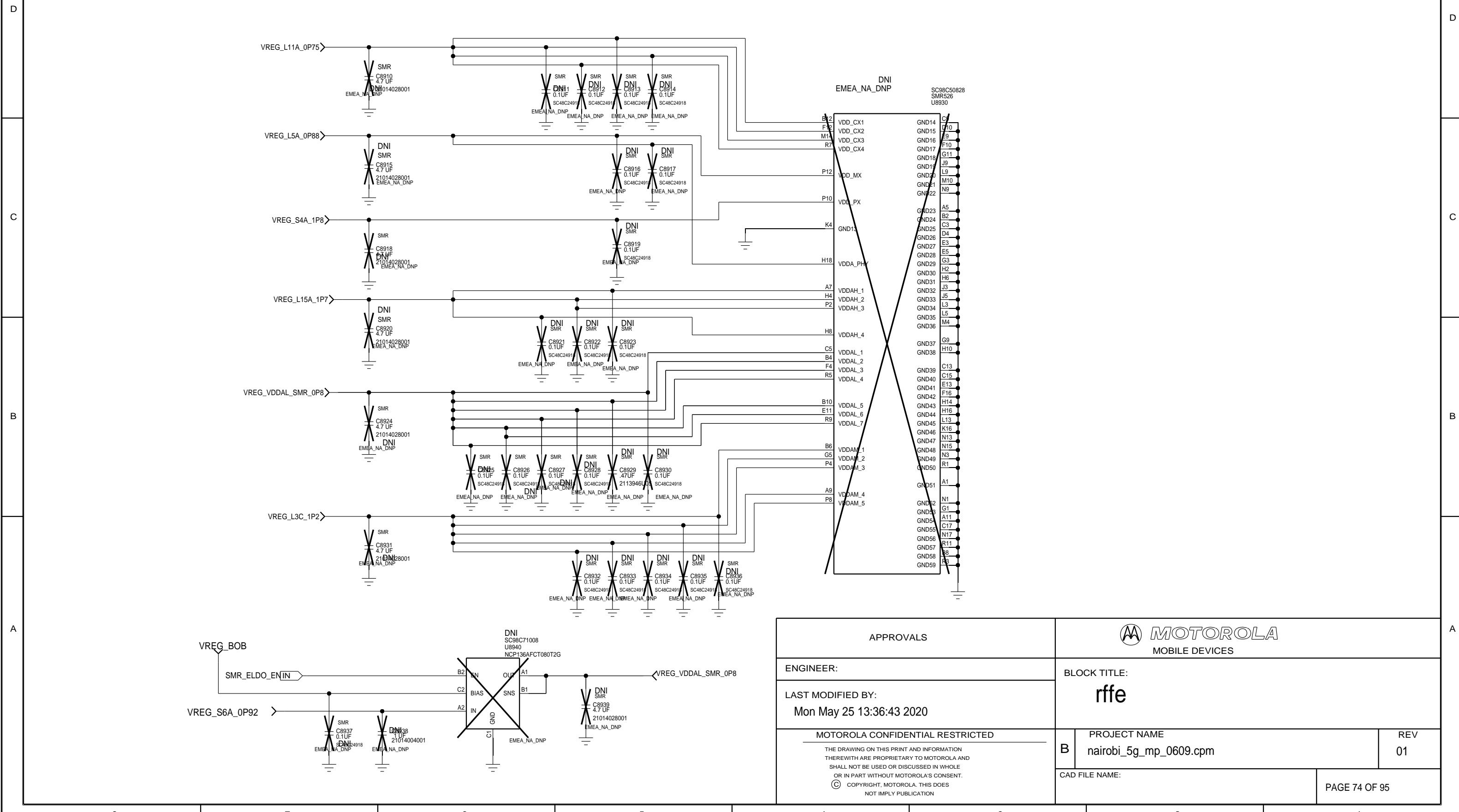
REFDES: 8900-8910



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| APPROVALS | MOTOROLA MOBILE DEVICES | |
| ENGINEER: | BLOCK TITLE: rffe | |
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| CAD FILE NAME: | PAGE 73 OF 95 | |

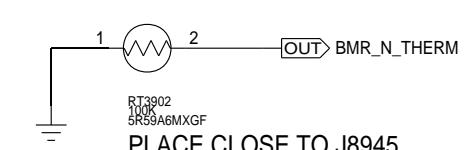
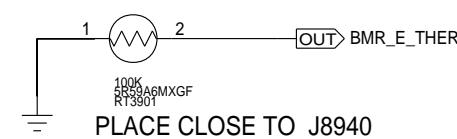
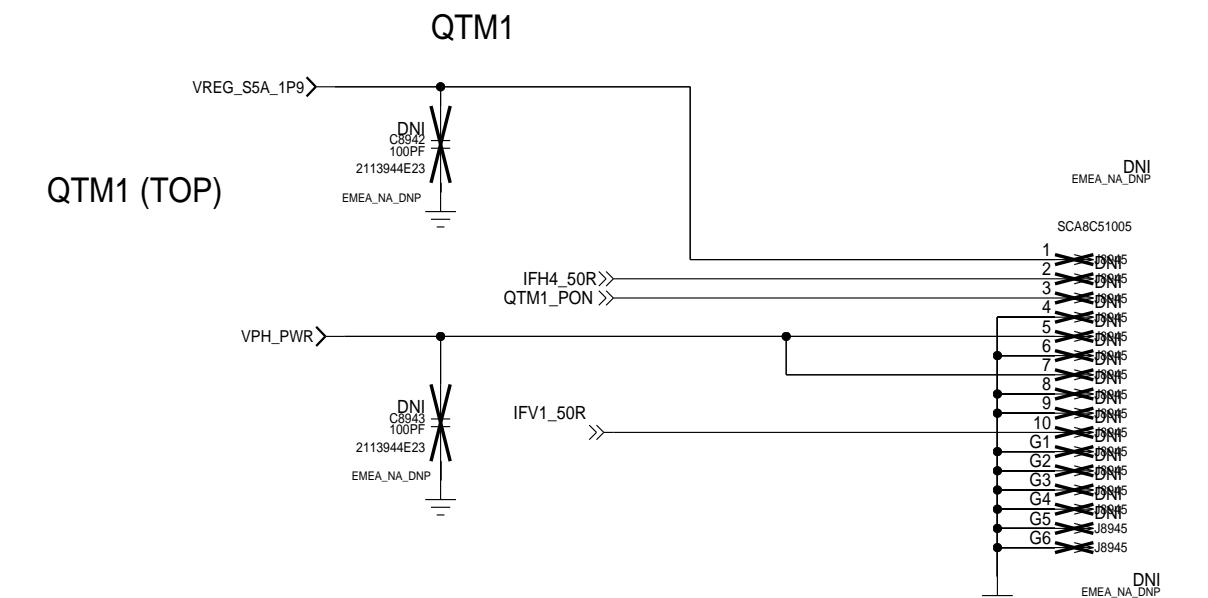
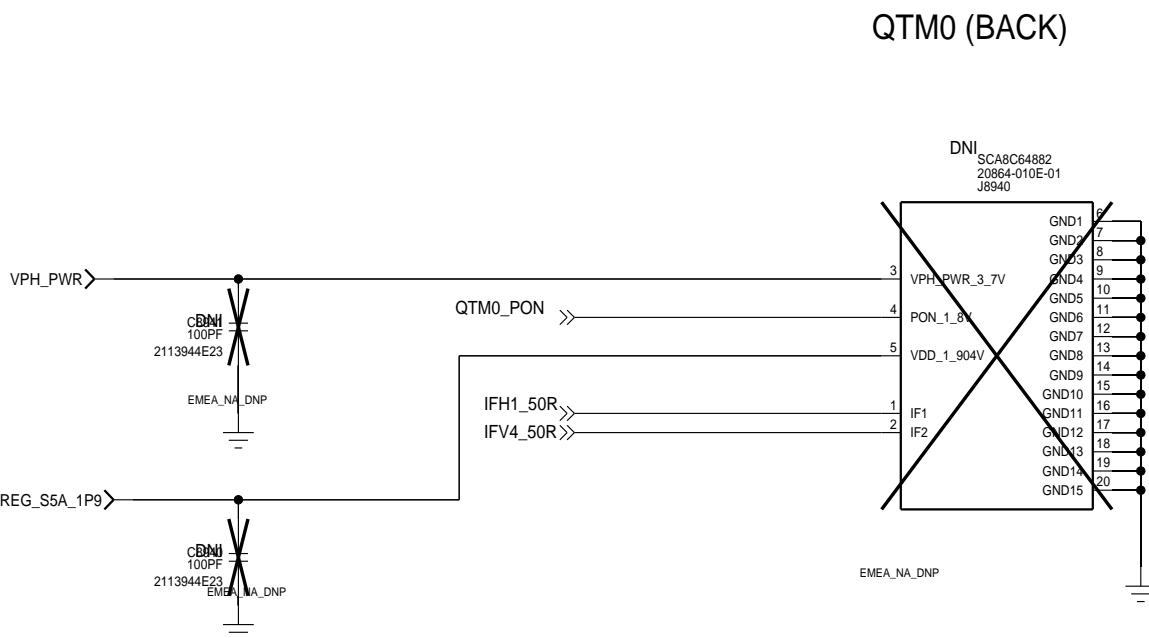
SMR526: PWR

REFDES: 8910-8940



QTM525: CONNECTORS

REFDES: 8940-8950



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| APPROVALS | MOTOROLA MOBILE DEVICES | |
| ENGINEER: | BLOCK TITLE: | |
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| CAD FILE NAME: | PAGE 75 OF 95 | |

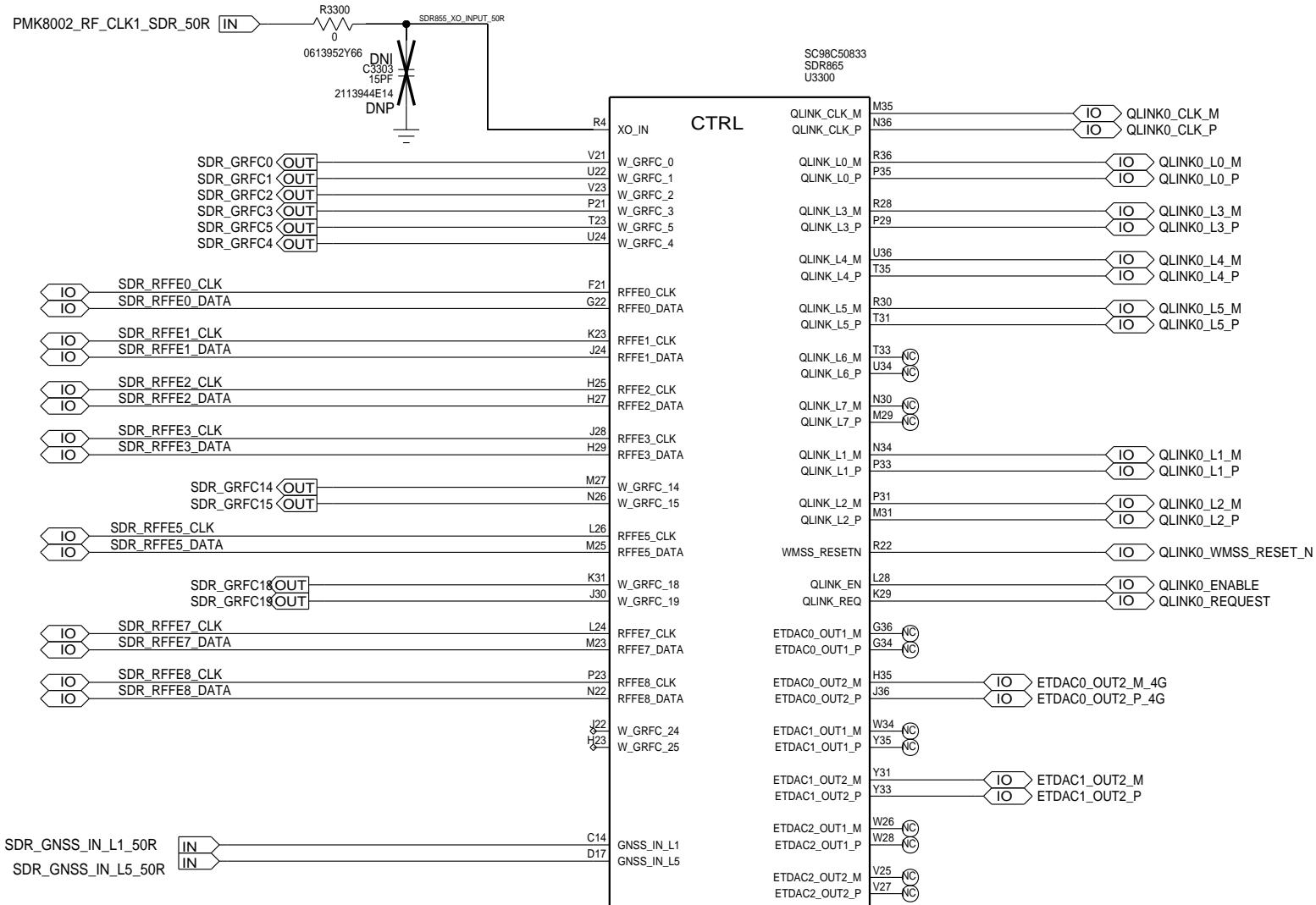
SDR865: CTRL / QLINK

REFDES: 3300-3399

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.

ROUTE EACH QLINK PAIR
IN A CHANNEL TOGETHER
ISOLATED FROM OTHER
QLINK PAIRS WITH GROUND



APPROVALS

MOTOROLA
MOBILE DEVICES

ENGINEER: MOTOROLA

LAST MODIFIED BY: MOTOROLA
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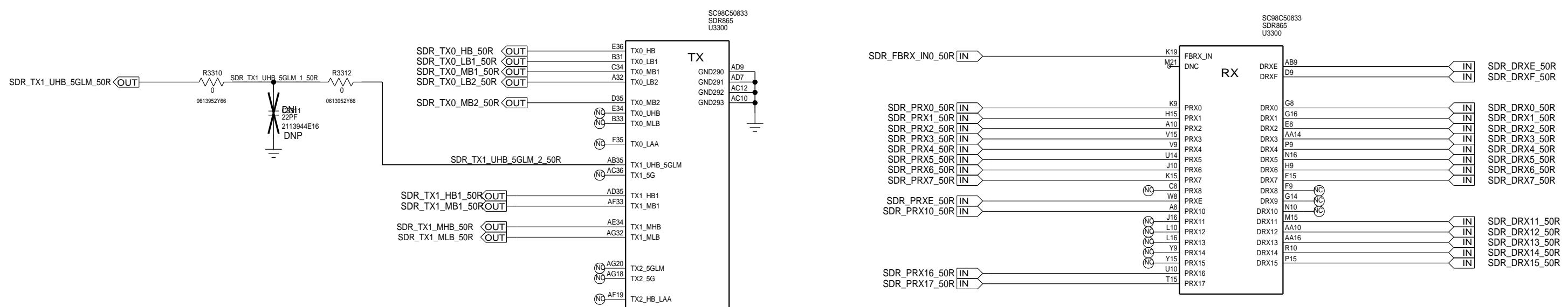
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CAD FILE NAME:

PAGE 76 OF 95

SDR865: TX & RX

REFDES: 3300-3399



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| APPROVALS | MOTOROLA MOBILE DEVICES | |
| ENGINEER: MOTOROLA | BLOCK TITLE: | |
| LAST MODIFIED BY: MOTOROLA Mon May 25 13:36:06 2020 | rf_sdr865 | |
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| CAD FILE NAME: | | PAGE 77 OF 95 |

SDR865: Max current ratings

| Supply name | SDR865 pin | Max current (mA) |
|----------------|--------------|------------------|
| VDD_0P8_ANA_L3 | VDDAL_RX5 | 22 |
| | VDDAL_RX6 | 90 |
| | VDDAL_RXL00 | 27 |
| | VDDAL_RXL04 | 27 |
| | VDDAL_RXL05 | 27 |
| | VDDAL_RXL07 | 27 |
| | VDDAL_TP0 | 30 |
| | VDDAL_TP1 | 30 |
| | VDDAL_TX0 | 20 |
| | VDDAL_TX1 | 20 |
| | VDDAL_TX2 | 20 |
| | VDDAL_XO | 18 |
| | Total | 1296 |

| Supply name | SDR865 pin | Max current (mA) |
|----------------|----------------|------------------|
| VDD_1P2_ANA_L1 | VDDAM_BBRX_BOT | 215 |
| | VDDAM_BBRX_TOP | 97 |
| | VDDAM_RP0 | 57 |
| | VDDAM_RP1 | 57 |
| | VDDAM_RP2 | 57 |
| | VDDAM_RP3 | 57 |
| | VDDAM_RP4 | 57 |
| | VDDAM_RP5 | 30 |
| | VDDAM_RXD | 171 |
| | VDDAM_RX5 | 138 |
| | VDDAM_TP0 | 30 |
| | VDDAM_TP1 | 30 |
| | VDDAM_TX0 | 40 |
| | VDDAM_TX1 | 40 |
| | VDDAM_TX2 | 40 |
| | Total | 1116 |
| VDD_0P875_L4 | VDD_MX0 | 23 |
| | VDD_MX1 | 95 |
| | VDD_PHY | 100 |
| | Total | 219 |
| VDD_1P8_DIG_L6 | VDD_PX | 20 |
| | VDD_PXM | 20 |
| | Total | 40 |

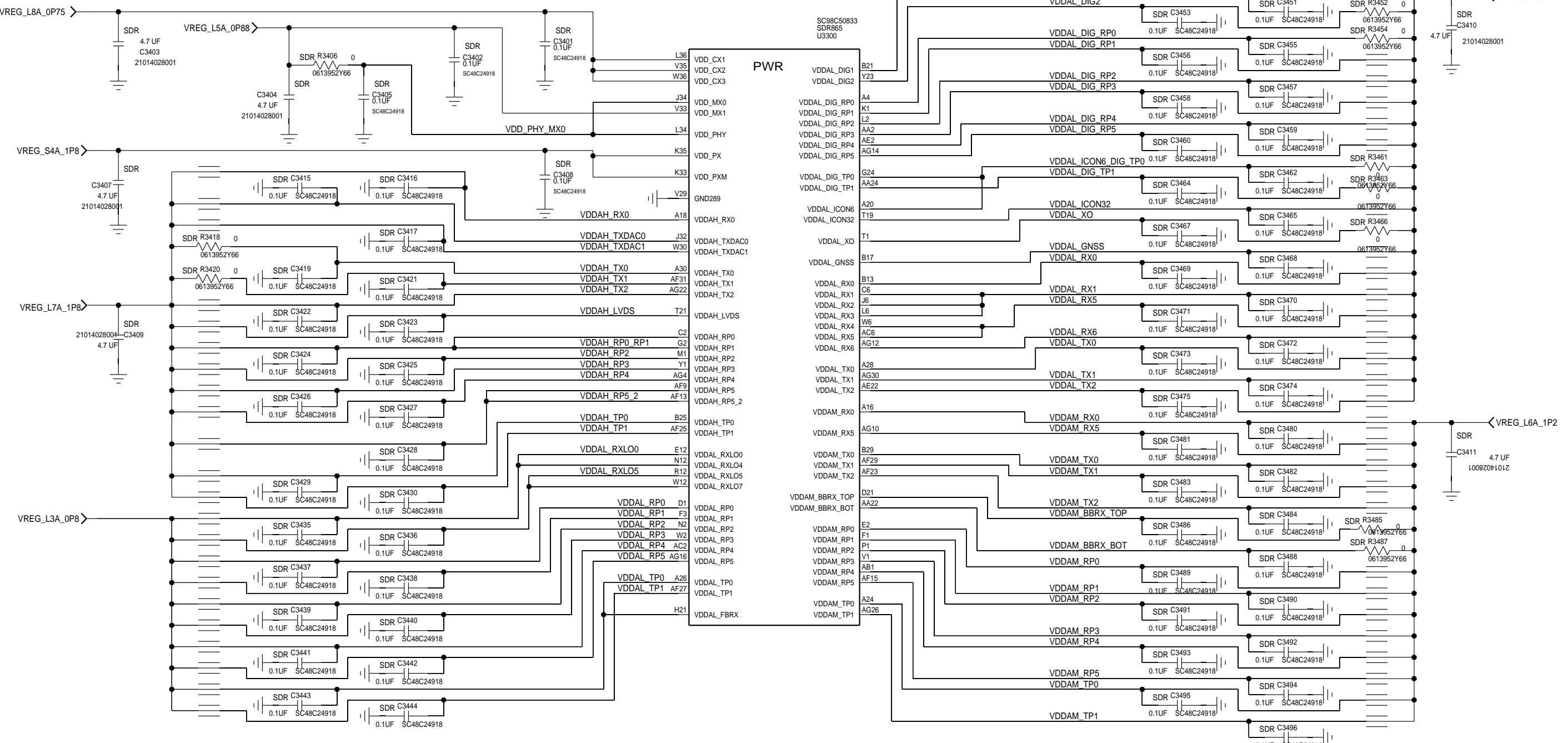
| Supply name | SDR865 pin | Max current (mA) |
|----------------|---------------|------------------|
| VDD_0P8_ANA_L3 | VDDAL_DIG_RP0 | 6 |
| | VDDAL_DIG_RP1 | 6 |
| | VDDAL_DIG_RP2 | 6 |
| | VDDAL_DIG_RP3 | 6 |
| | VDDAL_DIG_RP4 | 6 |
| | VDDAL_DIG_RP5 | 6 |
| | VDDAL_DIG_TP0 | 10 |
| | VDDAL_DIG_TP1 | 10 |
| | VDDAL_DIG1 | 171 |
| | VDDAL_DIG2 | 124 |
| | VDDAL_FBRX | 20 |
| | VDDAL_GNSS | 40 |
| | VDDAL_ICON32 | 25 |
| | VDDAL_ICON6 | 5 |
| | VDDAL_RP0 | 57 |
| | VDDAL_RP1 | 57 |
| | VDDAL_RP2 | 57 |
| | VDDAL_RP3 | 57 |
| | VDDAL_RP4 | 57 |
| | VDDAL_RP5 | 57 |
| | VDDAL_RX0 | 67 |
| | VDDAL_RX1 | 22 |
| | VDDAL_RX2 | 22 |
| | VDDAL_RX3 | 22 |
| | VDDAL_RX4 | 22 |

| Supply name | SDR865 pin | Max current (mA) |
|-----------------|--------------|------------------|
| VDD_1P7_ANA_L16 | VDDAH_LVDS | 12 |
| | VDDAH_RP0 | 5 |
| | VDDAH_RP1 | 5 |
| | VDDAH_RP2 | 35 |
| | VDDAH_RP3 | 35 |
| | VDDAH_RP4 | 35 |
| | VDDAH_RP5 | 5 |
| | VDDAH_RP5_2 | 30 |
| | VDDAH_RX0 | 10 |
| | VDDAH_TP0 | 35 |
| | VDDAH_TP1 | 35 |
| | VDDAH_TX0 | 40 |
| | VDDAH_TX1 | 40 |
| | VDDAH_TX2 | 40 |
| | VDDAH_TXDAC0 | 13 |
| | VDDAH_TXDAC1 | 26 |
| | Total | 401 |
| VDD_0P8_DIG_L8 | VDD_CX | 300 |
| | VDD_CX | 300 |
| | VDD_CX | 300 |
| | Total | 900 |

| | | | |
|--|--|---|--|
| APPROVALS | | MOTOROLA MOBILE DEVICES | |
| ENGINEER: MOTOROLA | | BLOCK TITLE: rf_sdr865 | |
| LAST MODIFIED BY: MOTOROLA Thu Sep 26 15:12:14 2019 | | PROJECT NAME B 8874kip5y_mp_0609.cpm | |
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SDR865: PWR

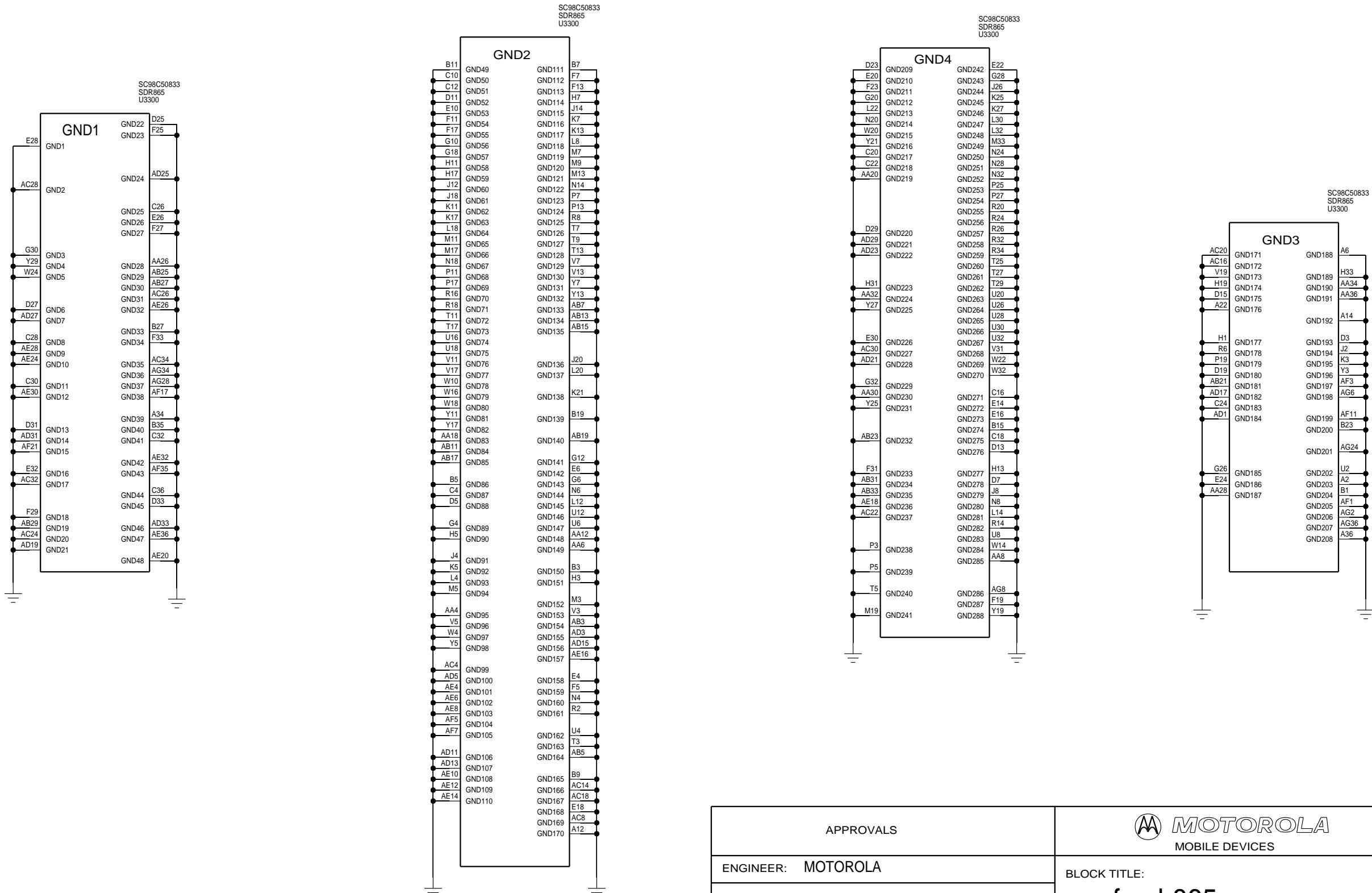
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| APPROVALS |  MOTOROLA MOBILE DEVICES | |
| ENGINEER: MOTOROLA | BLOCK TITLE: | |
| LAST MODIFIED BY: MOTOROLA Mon May 25 13:36:10 2020 | rf_sdr865 | |
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| | CAD FILE NAME: | PAGE 79 OF 95 |

SDR865: GND

REFDES: 3300-3399



APPROVALS

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MOBILE DEVICES

ENGINEER: MOTOROLA

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BLOCK TITLE:

rf_sdr865

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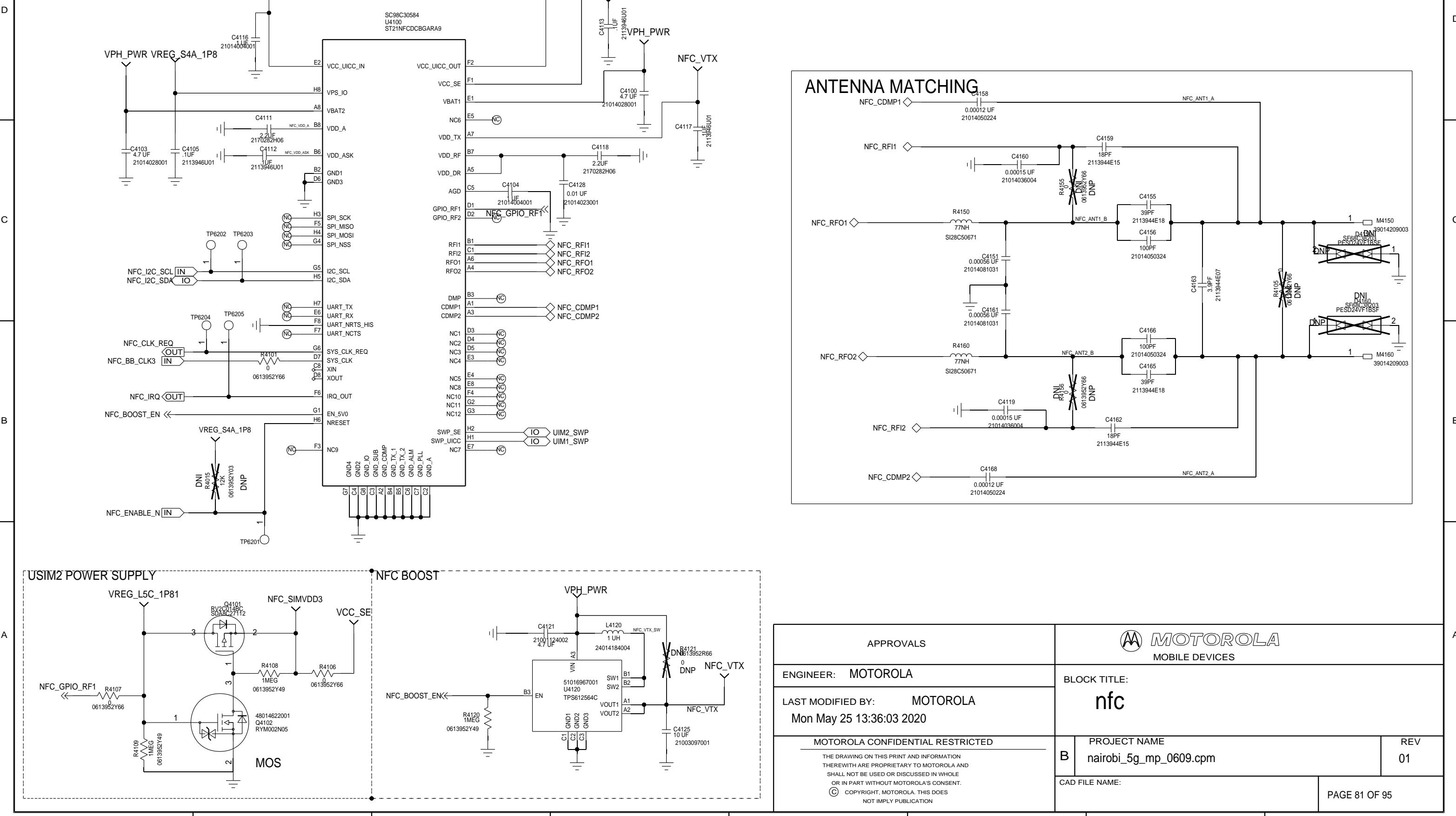
PROJECT NAME
B 8874mp5g_mp_0609.cpm REV
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CAD FILE NAME:

PAGE 80 OF 95

CONN: ST21NFCD NFC

REF 4100-4199



CONN: PORTS/POWER

REF 4000-4499

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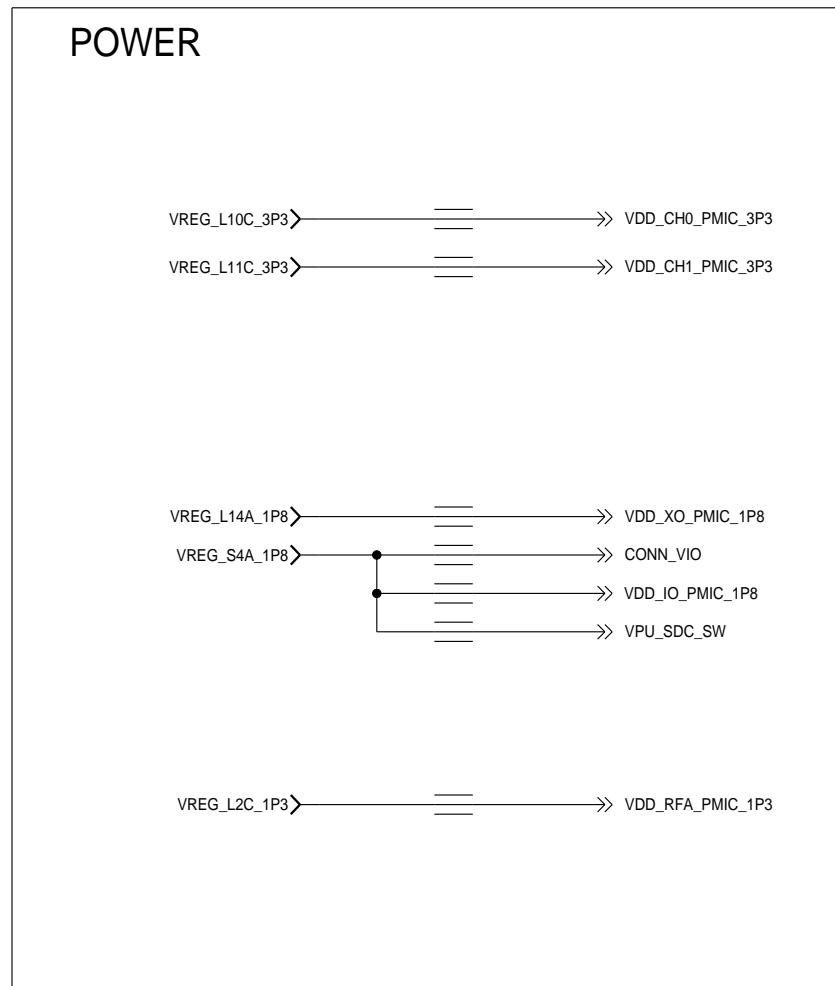
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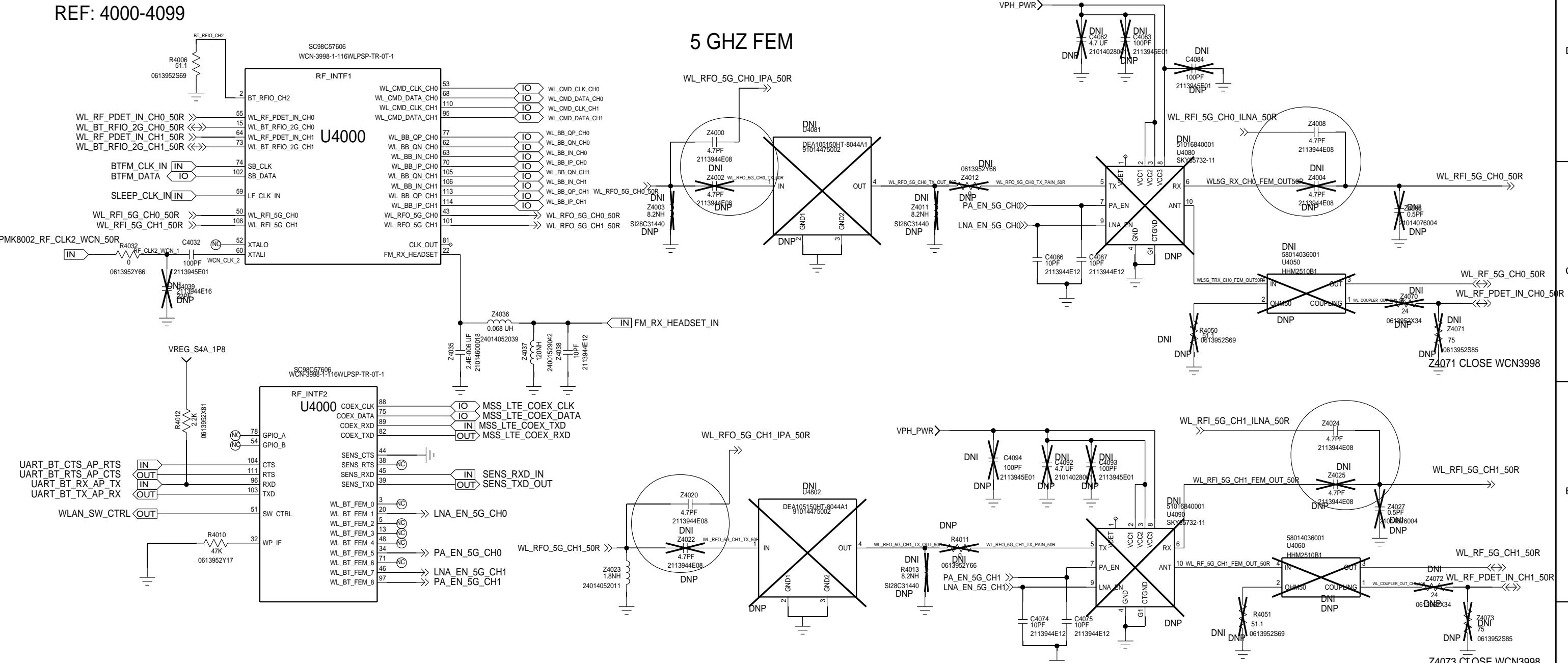
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| APPROVALS |  MOTOROLA MOBILE DEVICES | |
| ENGINEER: MOTOROLA | BLOCK TITLE: connectivity | |
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| | CAD FILE NAME: | PAGE 82 OF 95 |

CONN: WCN3998 RF/INTERFACES

REF: 4000-4099



BASED ON 80-WL020-41 REV. B

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MOBILE DEVICES

ENGINEER: MOTOROLA

BLOCK TITLE:

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Mon May 25 13:36:48 2020**connectivity**

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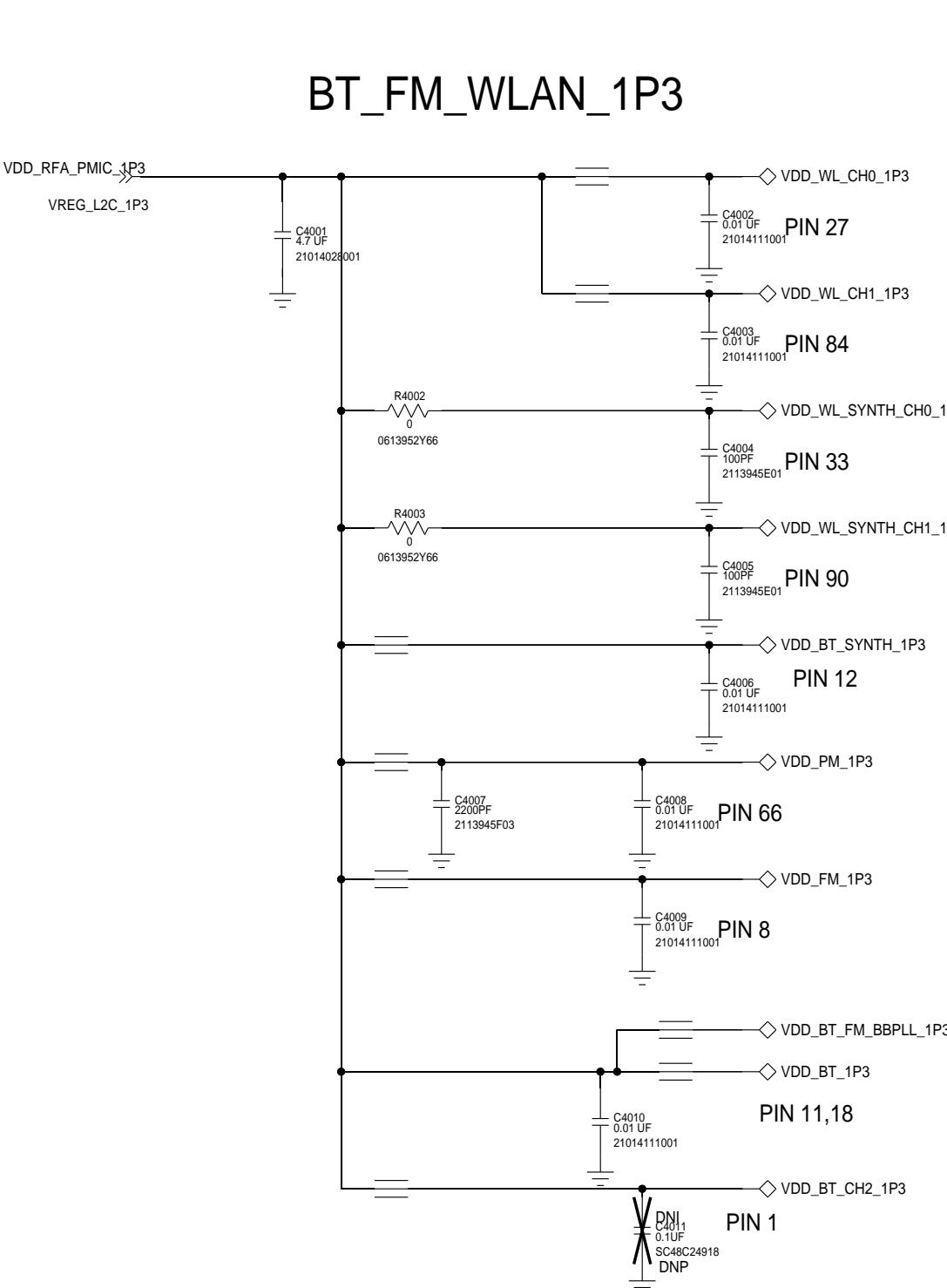
PROJECT NAME
B nairobi_5g_mp_0609.cpmREV
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CAD FILE NAME:

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**CONN: WCN3998 POWER/GND
REF 4000-4029**

BT FM WLAN 1P3



1.8V

VDD_IO_PMIC_1P8 >> VREG_S4A_1P8

C4028
4.7 UF
21014028001

C4013
.47UF
2113946U05

PIN 94

Circuit diagram for PIN 40 and PIN 91:

- PIN 40:** VDD_XO_PMIC_1P8 connects to ground through C4014 (2.2UF, 21014071001). It also connects to VDD_XTAL_1P8 and VDD_VCO_CH1_1 through a switch node.
- PIN 91:** VDD_XO_PMIC_1P8 connects to ground through C4016 (47UF, 2112046105). It also connects to VDD_XTAL_1P8 and VDD_VCO_CH1_1 through a switch node.
- Switch Node:** A common switch node is connected to VDD_XTAL_1P8 and VDD_VCO_CH1_1. This node is controlled by C4015 (47UF, 2113946U05).

VDD_CH1_PMIC_3P3 >>
VREG_L11C_3P3

C4031 10 UF
21003097001

C4018 4.7 UF
21014028001

C4019 0.01 UF
21014111001

PIN 86

C4020 0.01 UF
21014111001

PIN 92

VDD_WL_CH1_3P3

VDD_WL_5GPA_DRV_CH1_3P3

Circuit diagram for PIN 29:

- Power Rail:** 3.3V_CH0
- Components:**
 - VDD_CH0_PMIC_3P3
 - VREG_L10C_3P3
 - C4021 (10 UF, 21003097001)
 - C4022 (4.7 UF, 21014028001)
 - C4023 (0.01 UF, 21014111001)
 - VDD_WL_CH0_3P3
- Ground Connections:** Three vertical lines representing ground connections.

SC9857606
WCN-3998-1-116WLSP-TR-0T-1

The diagram illustrates the power distribution and ground connection network for the U4000 chip. It shows various power supply pins (VDD) and ground pins (GND) connected to internal nodes labeled PWR_GND and GND_SEALRING1 through GND_SEALRING5. Key power supplies include VDD11D_PM, VDD_WL_SYNTH_CH1_1P3, VDD_WL_SYNTH_CH0_1P3, VDD_BT_SYNTH_1P3, VDD_BT_FM_BBPLL_1P3, VDD_BT_CH2_1P3, VDD_IO_1P8, VDD_XTAL_1P8, VDD_VCO_CH1_1P8, VDD_WL_5GPA_DRV_CH0_3P3, VDD_WL_DLDO_3P3, VDD_WL_CH0_3P3, VDD_WL_BT_DRV_CH0_3P3, VDD_WL_5GPA_DRV_CH1_3P3, VDD_WL_CH1_3P3, VDD_BT_PA_CH2_3P3, and VDD_FEM_3P3. Ground connections include GND_ESD_1, GND_ESD_0, GND_WL_5G_RXFE_CH1, GND_WL_5G_DRV_CH1, GND_WL_5G_PA_CH1, GND_WL_2G_DRV_CH1, GND_WL_BB_CH1, GND_WL_BALUN_CH1, GND_WL_2G_PA_CH1, GND_WL_SYNTH_CH1, GND_WL_BB_CH0, GND_WL_5G_RXFE_CH0, GND_WL_5G_DRV_CH0, GND_WL_5G_PA_CH0, GND_WL_BALUN_CH0, GND_WL_2G_PA_CH0, GND_WL_BT_DRV_CH0, GND_WL_BT_RXFE_CH0, GND_DIG, GND_ISO, GND_IO, GND_PM, GND_XTAL, GND_ISO_WL, GND_DPD_CH0, GND_BT_SYNTH, GND_BT_BB, GND_BT_CH2, GND_BT_FM_BBPLL_A, GND_BT_FM_BBPLL_B, GND_WL_2G_RXFE_CH1, GND_FM_RXFE, GND_FM_VCO, GND_WL_PDET_FE, and GND_WL_PDET_BE.

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ENGINEER: MOTORC

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PAGE 84 OF 95

BASED ON 80-WL020-41 REV. B

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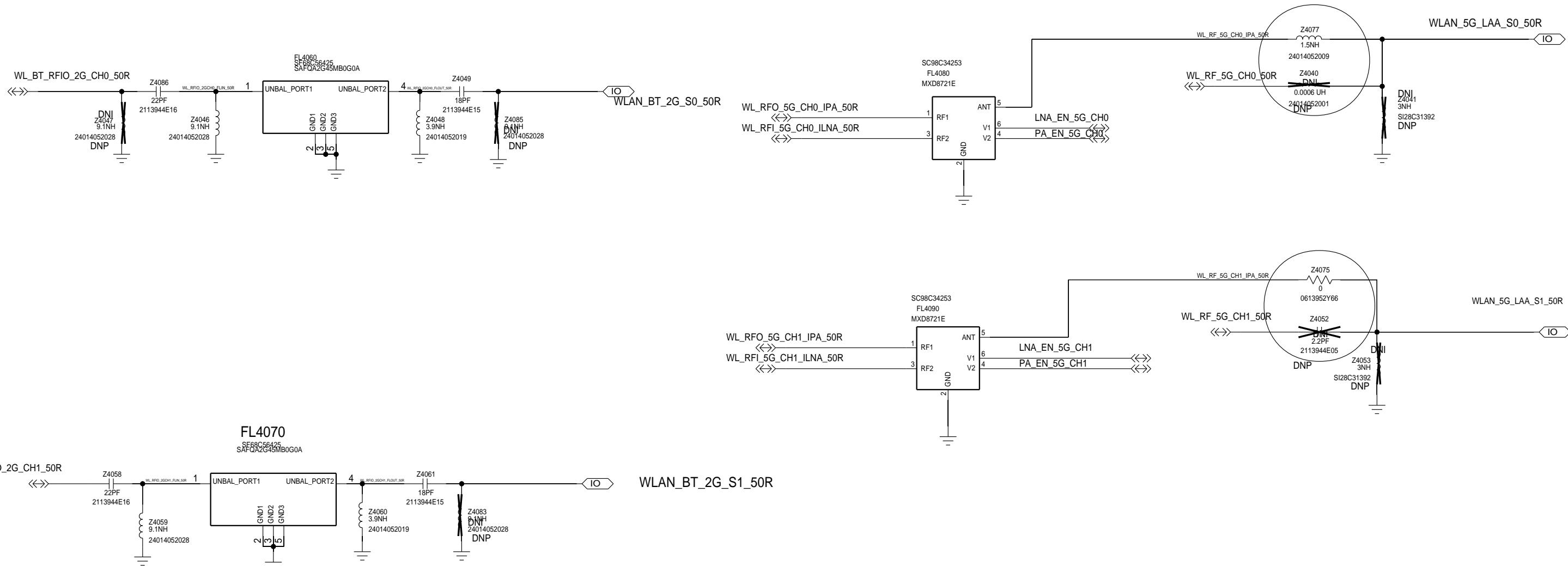
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CONN: WCN3998 RADIO

REF 4040-4099

WIFI 5G S0 / WIFI2 4G S0

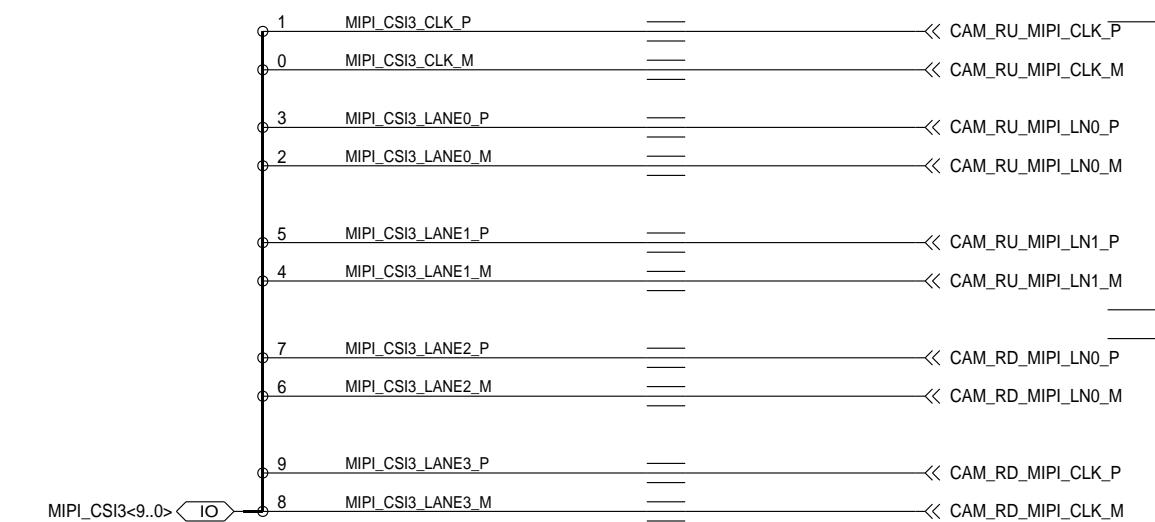
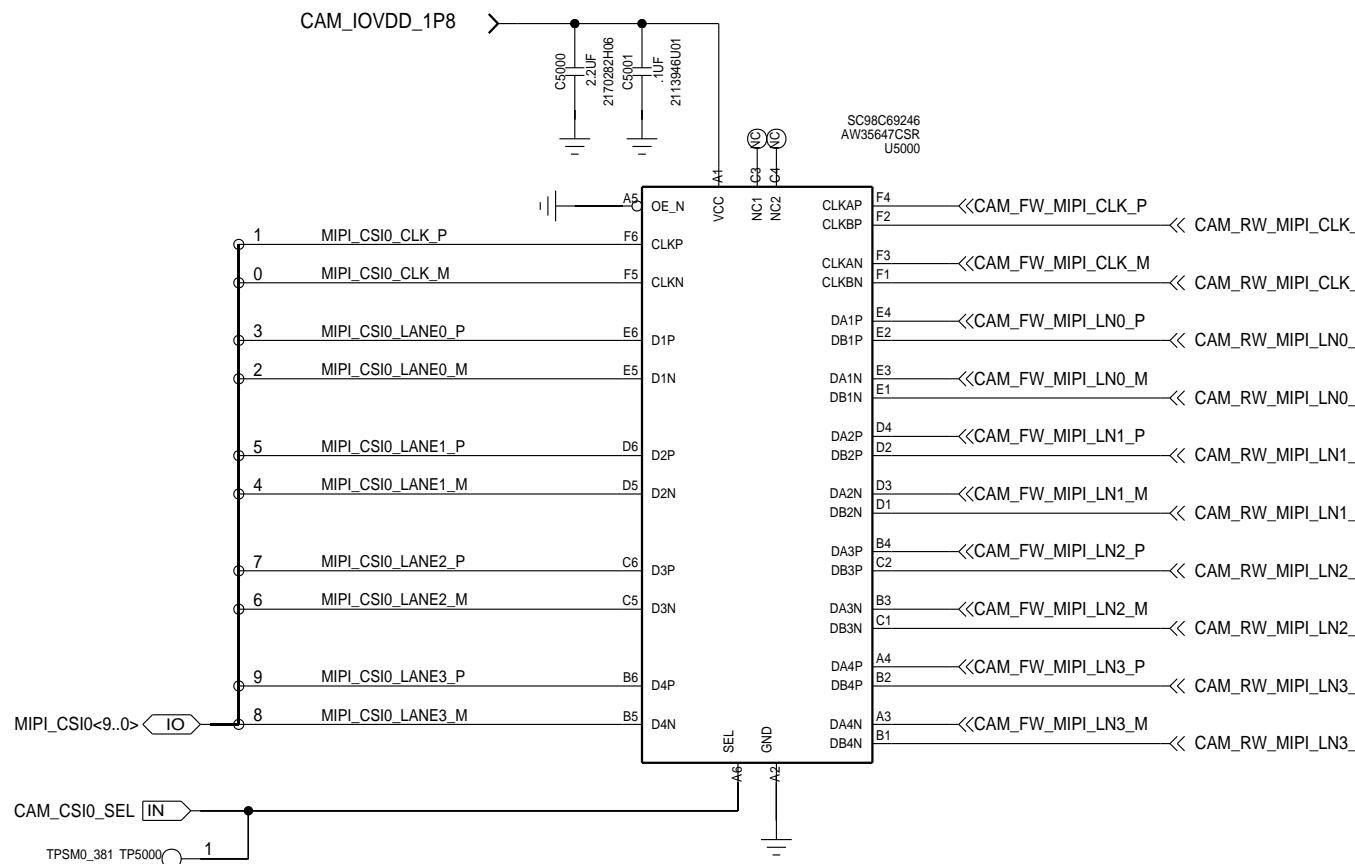


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| | | CAD FILE NAME: | PAGE 85 OF 95 |

CAM: MIPI MUX

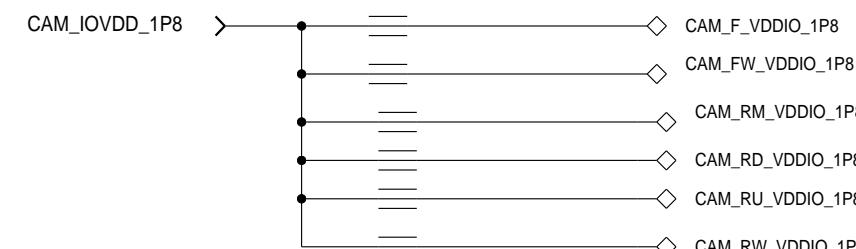
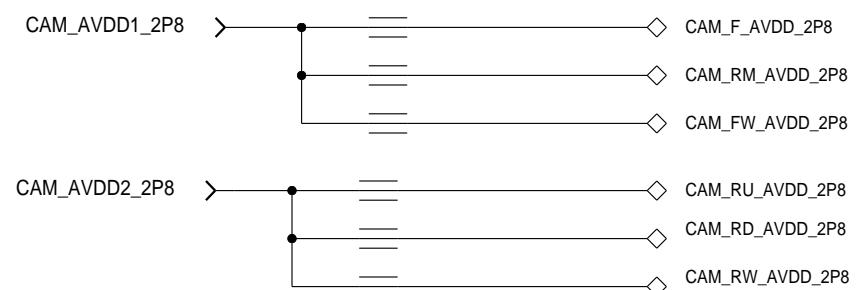
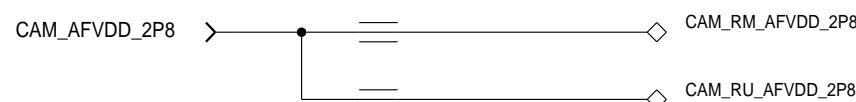
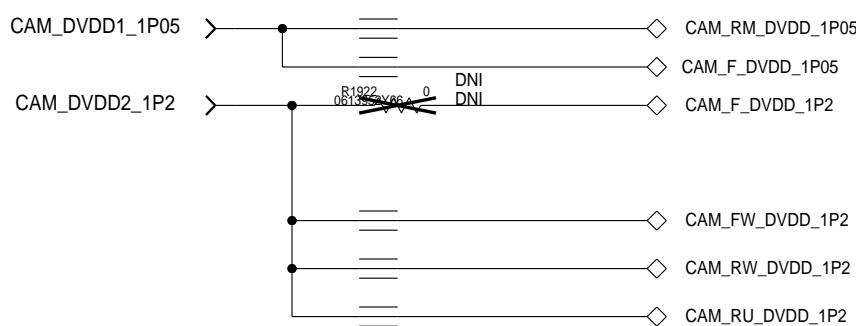
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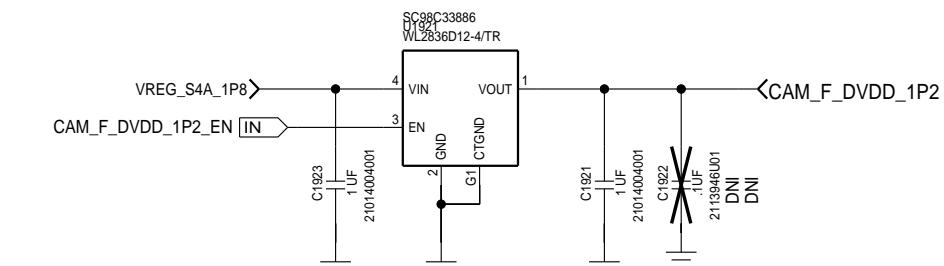
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| ENGINEER: MOTOROLA | BLOCK TITLE: multimedia | |
| LAST MODIFIED BY: MOTOROLA Mon May 25 13:37:24 2020 | | |
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| CAD FILE NAME: | | PAGE 86 OF 95 |

CAM: POWER

REF: 1921-1950



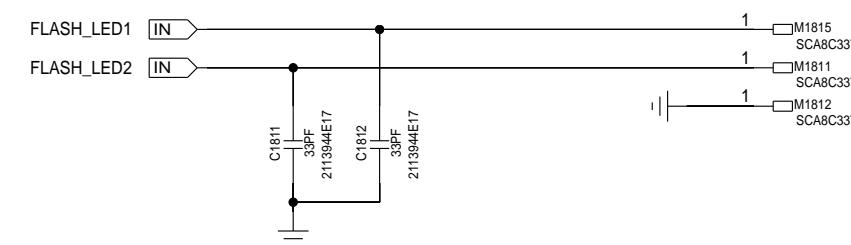
| CAMERA | SENSOR | AVDD | DVDD | IOVDD | AFVDD |
|-------------|--------|--------------|--------------------------|--------------|------------|
| MAIN | GM1 | 2.7~2.8~2.9V | 0.95~1.05~1.15V 190mA | 1.7~1.8~1.9V | 2.3 ~ 3.3V |
| MAIN* | GW1 | 2.7~2.8~2.9V | 0.95~1.05~1.15V | 1.7~1.8~1.9V | 2.3 ~ 3.3V |
| DEPTH | OV2180 | 2.6~2.8~3.0V | N.A. | 1.7~1.8~1.9V | N.A. |
| WIDE | 4H7 | 2.7~2.8~2.9V | 1.14~1.2~1.26V | 1.7~1.8~1.9V | N.A. |
| MACRO | 5E9 | 2.7~2.8~2.9V | 1.14~1.2~1.26V | 1.7~1.8~1.9V | N.A. |
| FRONT MAIN | 16A1Q | 2.7~2.8~2.9V | 1.14~1.2~1.26V | 1.7~1.8~1.9V | N.A. |
| FRONT MAIN* | 2X5 | 2.7~2.8~2.9V | 0.95~1.05~1.15V | 1.7~1.8~1.9V | N.A. |
| FRONT WIDE | 4H7 | 2.7~2.8~2.9V | 1.14~1.2~1.26V | 1.7~1.8~1.9V | N.A. |



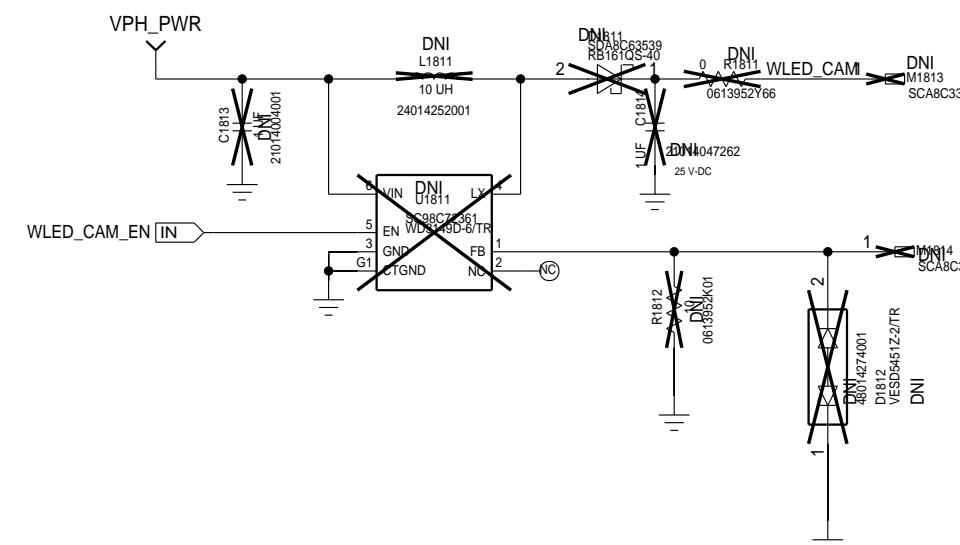
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| APPROVALS | | MOTOROLA MOBILE DEVICES | |
| ENGINEER: HANLEI | | BLOCK TITLE: multimedia | |
| LAST MODIFIED BY: ZHOHU Mon May 25 13:37:25 2020 | | | |
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| | | REV 01 | |
| | | CAD FILE NAME: | |
| | | PAGE 87 OF 95 | |

CAM: FLASH LED

REF: 1811---1830



FLASH LED ON THE SUB FPC



| | | |
|--|--|---------------|
| APPROVALS | MOTOROLA MOBILE DEVICES | |
| ENGINEER: HANLEI | BLOCK TITLE: multimedia | |
| LAST MODIFIED BY: ZHOHU Mon May 25 13:37:27 2020 | | |
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| | CAD FILE NAME: | PAGE 88 OF 95 |

CAM: FRONT MAIN

REF 1831-1850

D

D

C

C

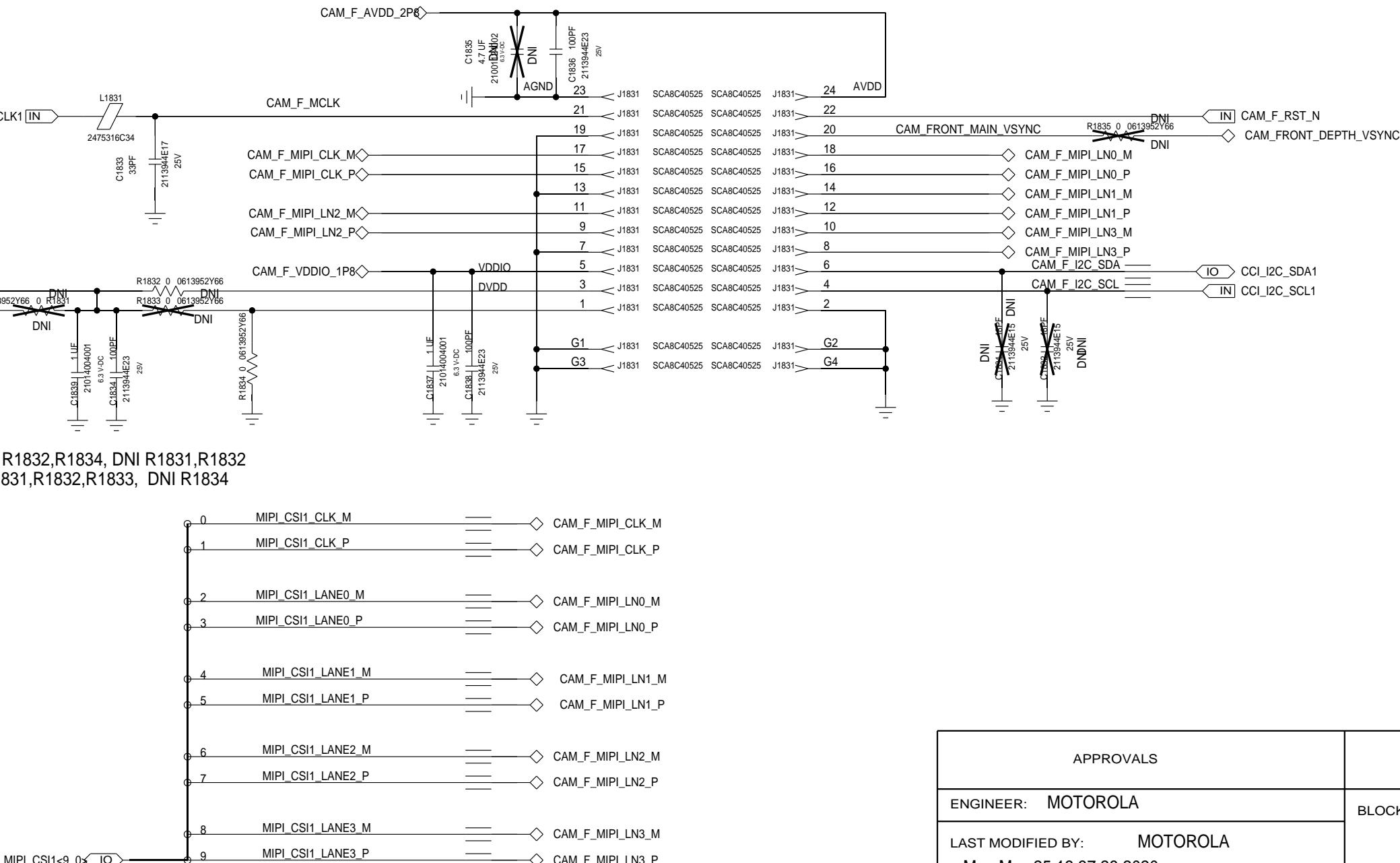
B

B

A

A

16A1Q, MOUNT R1832,R1834, DNI R1831,R1832
2X5, MOUNT R1831,R1832,R1833, DNI R1834



APPROVALS

MOTOROLA
MOBILE DEVICES

ENGINEER: MOTOROLA

BLOCK TITLE:

LAST MODIFIED BY: MOTOROLA
Mon May 25 13:37:28 2020

multimedia

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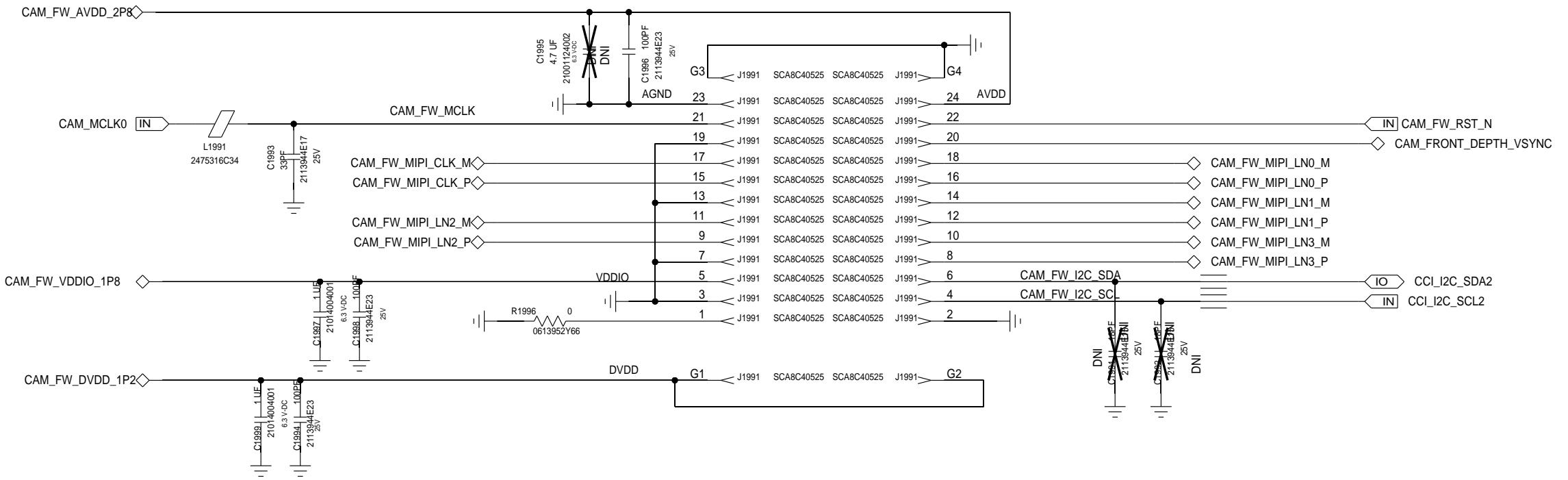
PROJECT NAME
B nairobi_5g_mp_0609.cpm REV
01

CAD FILE NAME:

PAGE 89 OF 95

CAM: FRON WIDE

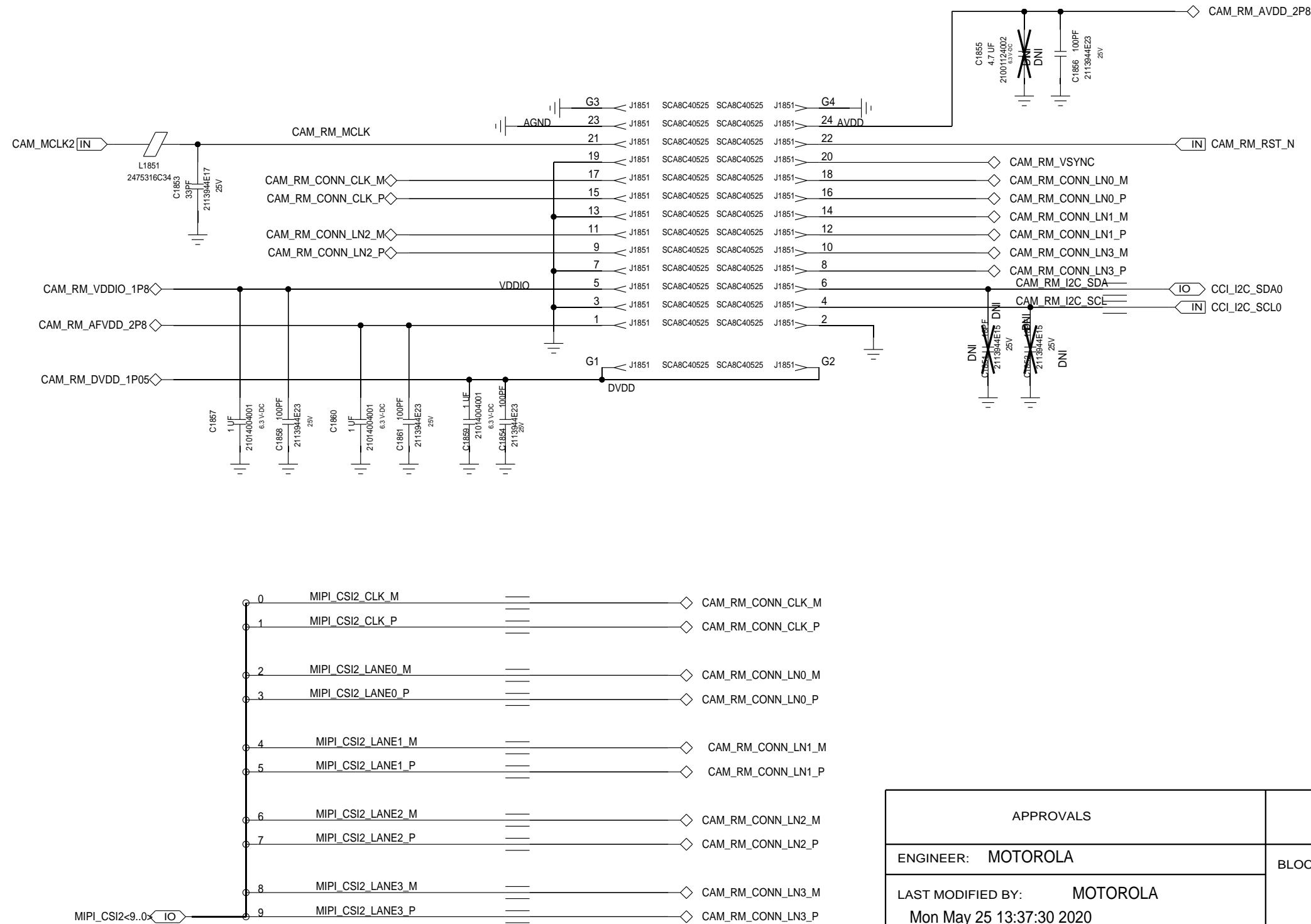
REF:1986--2010



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| APPROVALS | MOTOROLA MOBILE DEVICES | |
| ENGINEER: MOTOROLA | BLOCK TITLE: multimedia | |
| LAST MODIFIED BY: Mon May 25 13:37:29 2020 | | |
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| CAD FILE NAME: | | PAGE 90 OF 95 |

CAM: REAR MAIN

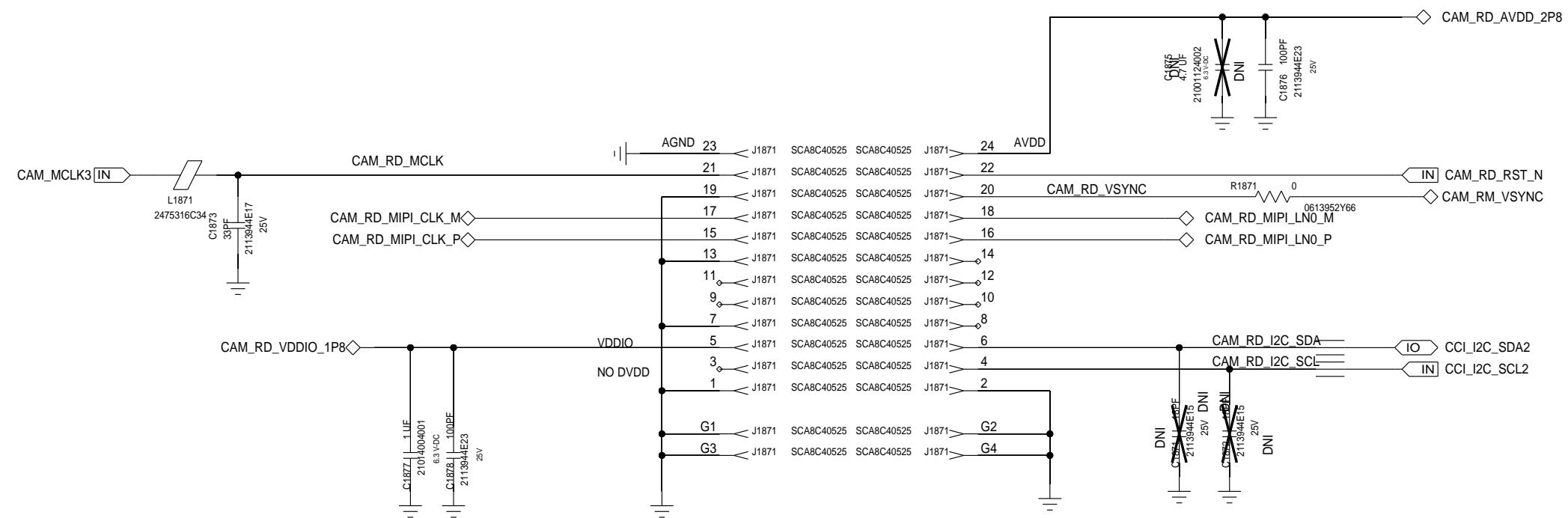
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| APPROVALS | MOTOROLA MOBILE DEVICES | |
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| LAST MODIFIED BY: MOTOROLA Mon May 25 13:37:30 2020 | | |
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| | CAD FILE NAME: | PAGE 91 OF 95 |

CAM: REAR DEPTH

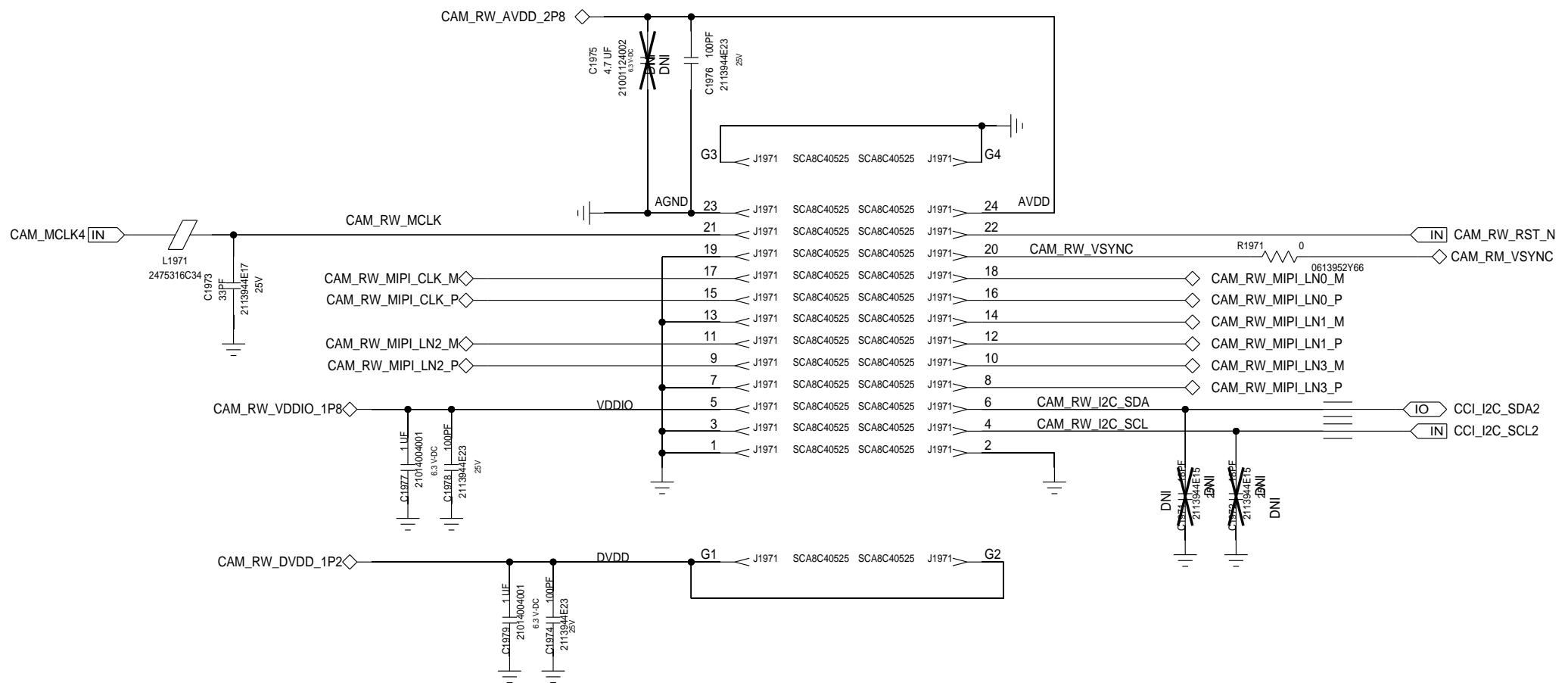
REF 1871-1890



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| APPROVALS | MOTOROLA MOBILE DEVICES | |
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| LAST MODIFIED BY: MOTOROLA Mon May 25 13:37:32 2020 | | |
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| CAD FILE NAME: | | PAGE 92 OF 95 |

CAM: REAR WIDE

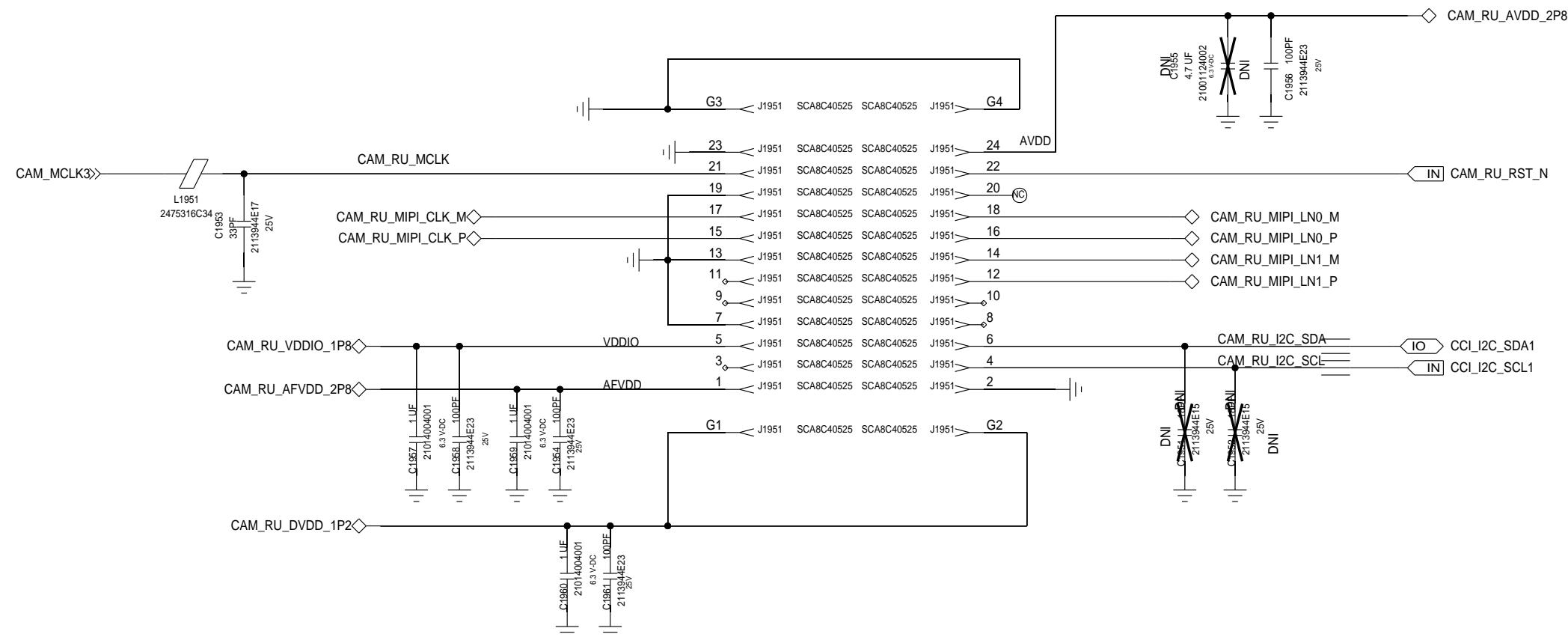
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| LAST MODIFIED BY: Mon May 25 13:37:33 2020 | multimedia | |
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| B | PROJECT NAME nairobi_5g_mp_0609.cpm | 01 |
| CAD FILE NAME: | | PAGE 93 OF 95 |

CAM: REAR MACRO

REF:1951--1970



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|--|--|---------------|
| APPROVALS | MOTOROLA MOBILE DEVICES | |
| ENGINEER: MOTOROLA | BLOCK TITLE: multimedia | |
| LAST MODIFIED BY: Mon May 25 13:37:34 2020 | | |
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| CAD FILE NAME: | | PAGE 94 OF 95 |

DISP: CONNECTOR

REF:1886--1920

