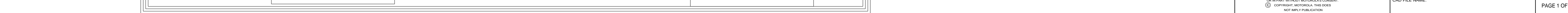


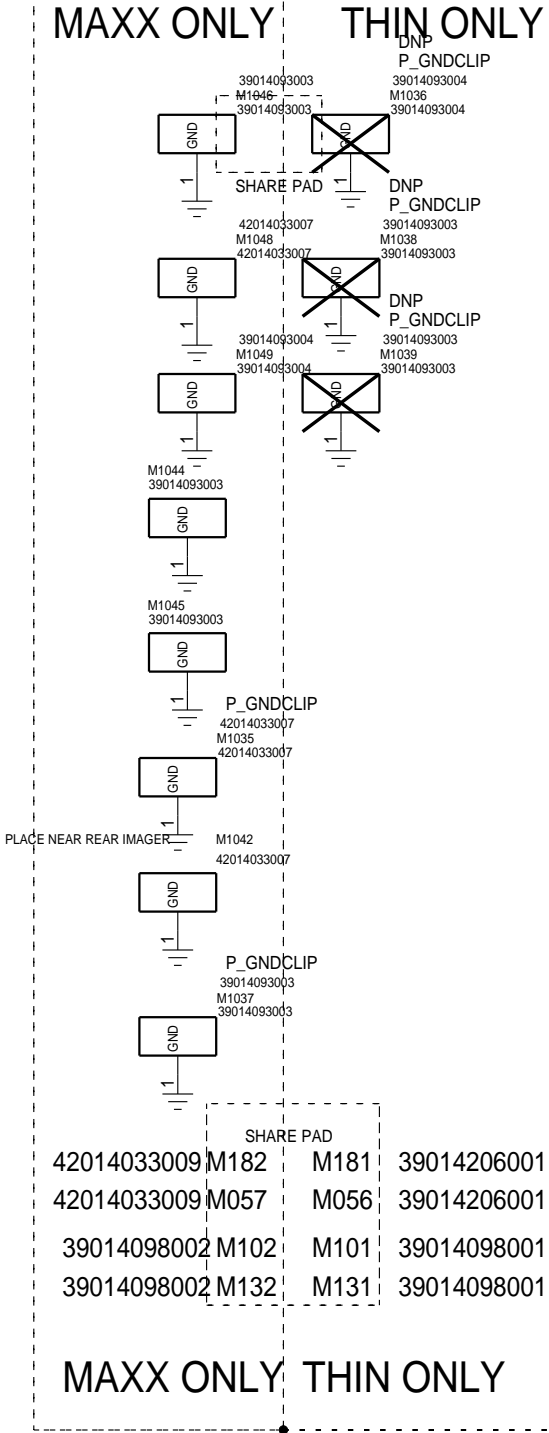
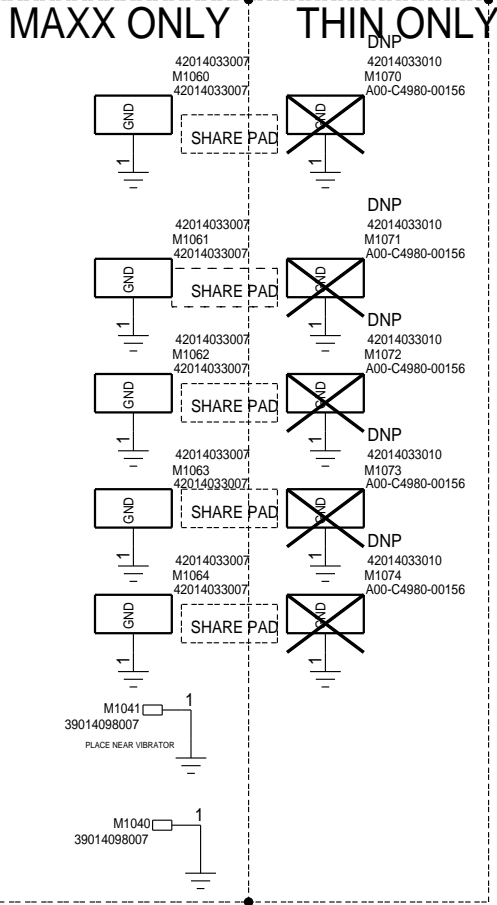
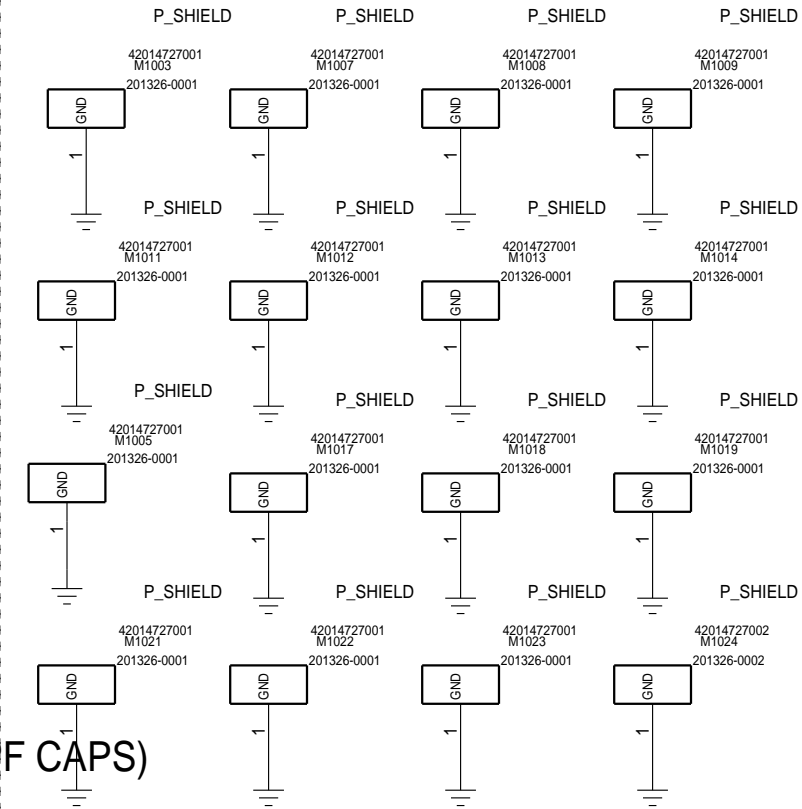
COPIED FROM SYSTEM 5 ON 2-23-2015
SEPARATED FROM PRINCETON ON 4-21-2015
RIPPED WING PARTS ON 4-28-2015
RESYNC PRINCETON P0 GPIOS ON 6-11-2015
MOVED FROM FL36 TO IL93 ON 8-11-2015

[illegible]

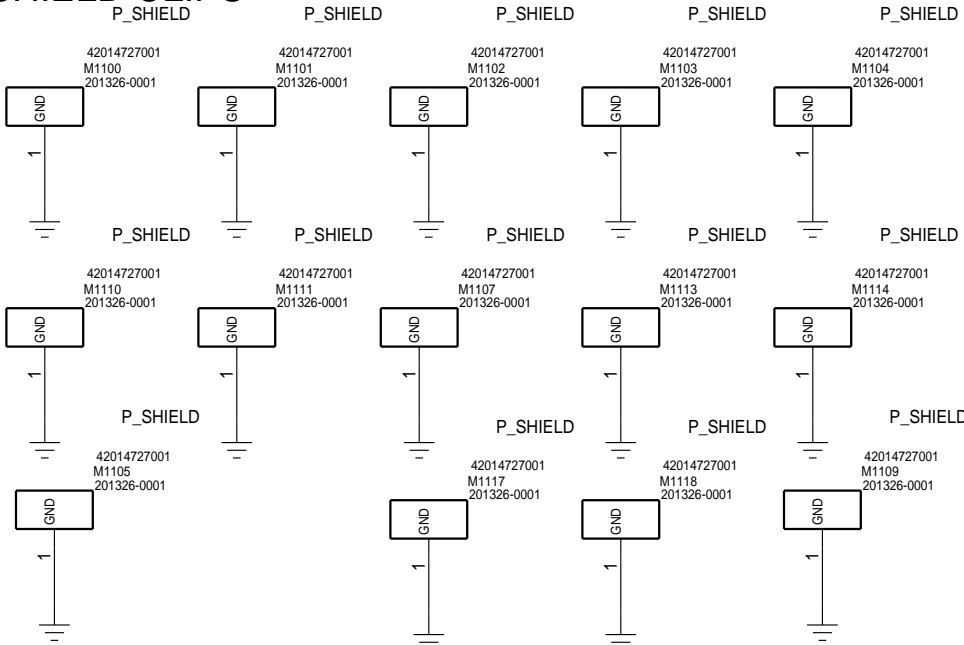
VECTOR THIN ME/SHIELDS
REFERENCE DESIGNATOR RANGES BY BLOCK

- 000 - 499: ANTENNA
- 500 - 599: USER INPUT
- 600 - 799: POWER
- 1000-2999: APQ8084 + PMA8084
- 3000-3199: WFR1620 + WTR1605
- 3200-3999: MDM9625 + PM8019
- 4000-4499: CONNECTIVITY
- 4500-4999: AUDIO FE
- 5000-5499: DISPLAY
- 5500-5999: CAMERA
- 6000-6999: XMCS
- 7000-8999: RFFE
- 9000-9999: PRODUCT-SPECIFIC (FILTERING, 100PF CAPS)

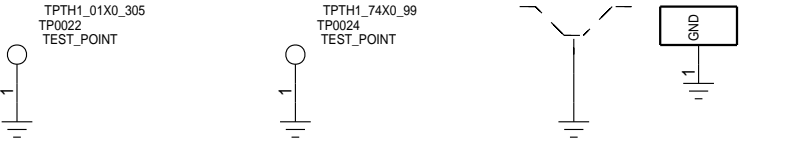
COMMON
SHIELD CLIPS:



SHIELD CLIPS



PLATED THRU-HOLE CONTACTS



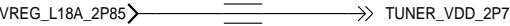
MOTOROLA MOBILITY CONFIDENTIAL RESTRICTED-MDB TRACKED TRACKEDANDBLOCKED

APPROVALS		MOTOROLA MOBILE DEVICES	
ENGINEER:		BLOCK TITLE:	
LAST MODIFIED BY: Thu Mar 10 10:33:07 2016		84016517001_10	
MOTOROLA CONFIDENTIAL RESTRICTED 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		PROJECT NAME B 84016517001_10.cpm	REV 01
		PAGE 2 OF 88	

ANT: PORTS

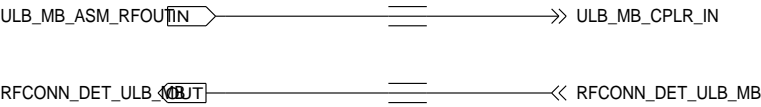
REFDES: 000 - 499

SUPPLIES

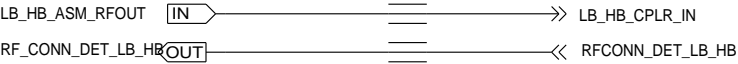


VERIFY POWER SUPPLIES TP PMIC

TRX ULTRA LOW/MID BAND ANTENNA



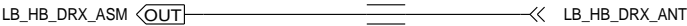
TRX LOW/HIGH BAND ANTENNA



DRX MID BAND ANTENNA



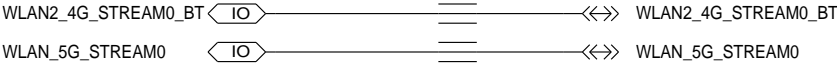
DRX LOW BAND/HIGH BAND ANTENNA



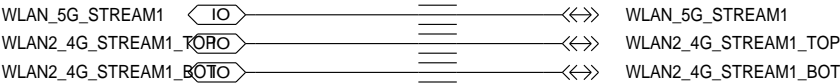
GPS ANTENNA



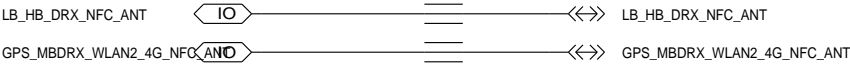
BT/WLAN ANTENNA



WLAN ANTENNA 2 (FOR 2X2 MIMO SUPPORT)



NFC ANTENNA



INTERFACES



COUPLER PORTS



APPROVALS

ENGINEER: NATE CONNELL

LAST MODIFIED BY: NATE CONNELL
Thu Mar 03 15:17:27 2016

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BLOCK TITLE:

antennas

PROJECT NAME
84016517001_10.cpm

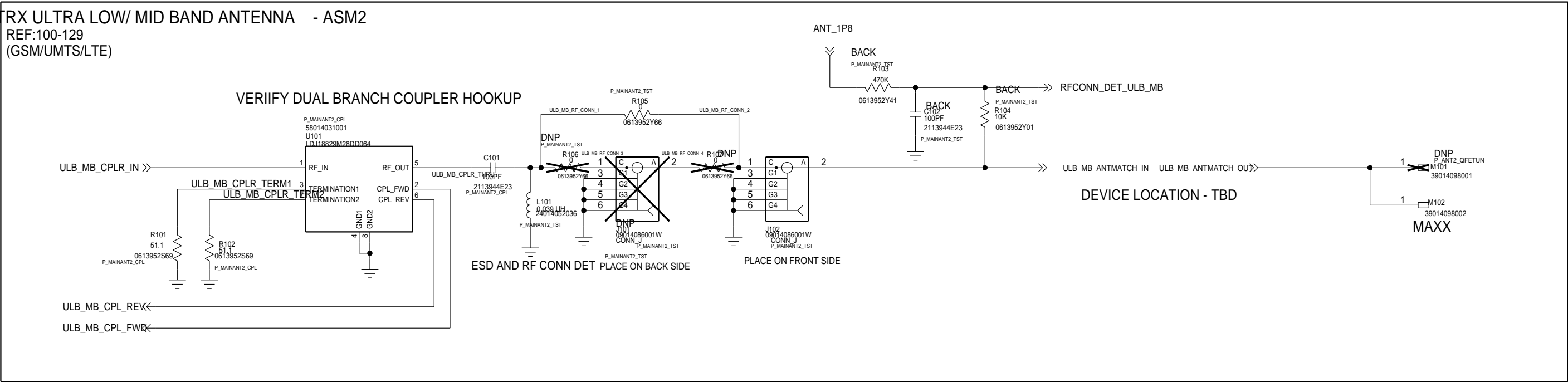
REV
01

CAD FILE NAME:

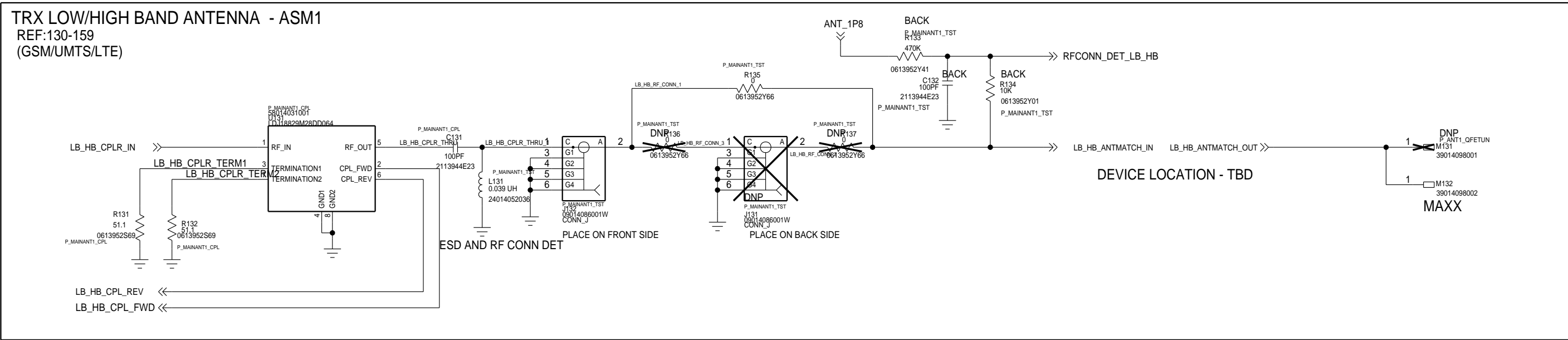
ANT: MAIN ANTENNAS

REFDES: 100 - 199


TRX ULTRA LOW/ MID BAND ANTENNA - ASM2
REF:100-129
(GSM/UMTS/LTE)



TRX LOW/HIGH BAND ANTENNA - ASM1
REF:130-159
(GSM/UMTS/LTE)



MOTOROLA MOBILITY CONFIDENTIAL RESTRICTED-MDB TRACKED TRACKEDANDBLOCKED

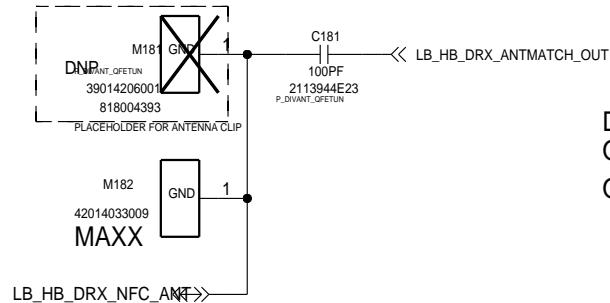
APPROVALS		 MOBILE DEVICES	
ENGINEER: MOTOROLA		BLOCK TITLE:	
LAST MODIFIED BY: MOTOROLA Thu Mar 03 15:17:28 2016		antennas	
MOTOROLA CONFIDENTIAL RESTRICTED THE DRAWING ON THIS PRINT AND INFORMATION THEREWITH ARE PROPRIETARY TO MOTOROLA AND SHALL NOT BE USED OR DISCUSSED IN WHOLE OR IN PART WITHOUT MOTOROLA'S CONSENT. © COPYRIGHT, MOTOROLA. THIS DOES NOT IMPLY PUBLICATION		B	PROJECT NAME 84016517001_10.cpm CAD FILE NAME:
		REV 01 PAGE 4 OF 88	

ANT: DIV ANTENNAS

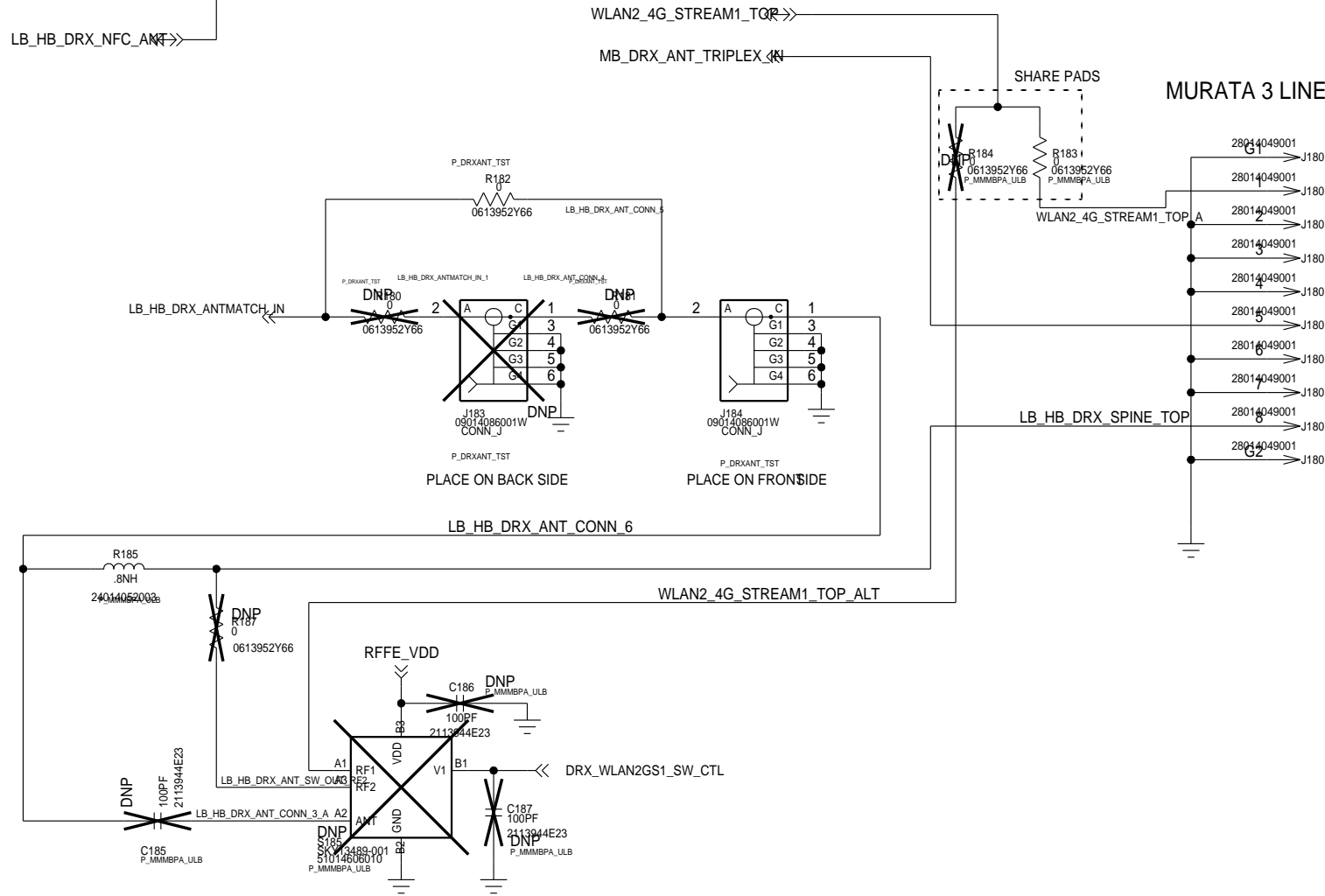
REFDES: 100 - 199

DRX MID BAND ANTENNA
REF:190-199

DRX LOW BAND / HIGH BAND ANTENNA
REF:180-189
(GSM/UMTS/LTE)



DEPENDING ON FINAL POR EITHER J185, J186
OR J183, J184 SHOULD BE PLACED
ONE OF THE SETS SHOULD BE REMOVED FROM THE DESIGN



BACKUP DRX+2.4G WLAN MIMO SIWTH
NON-POR FOR NOW

TOP
OF SPINE

BOTTOM
OF SPINE

MURATA 3 LINE RF CONN

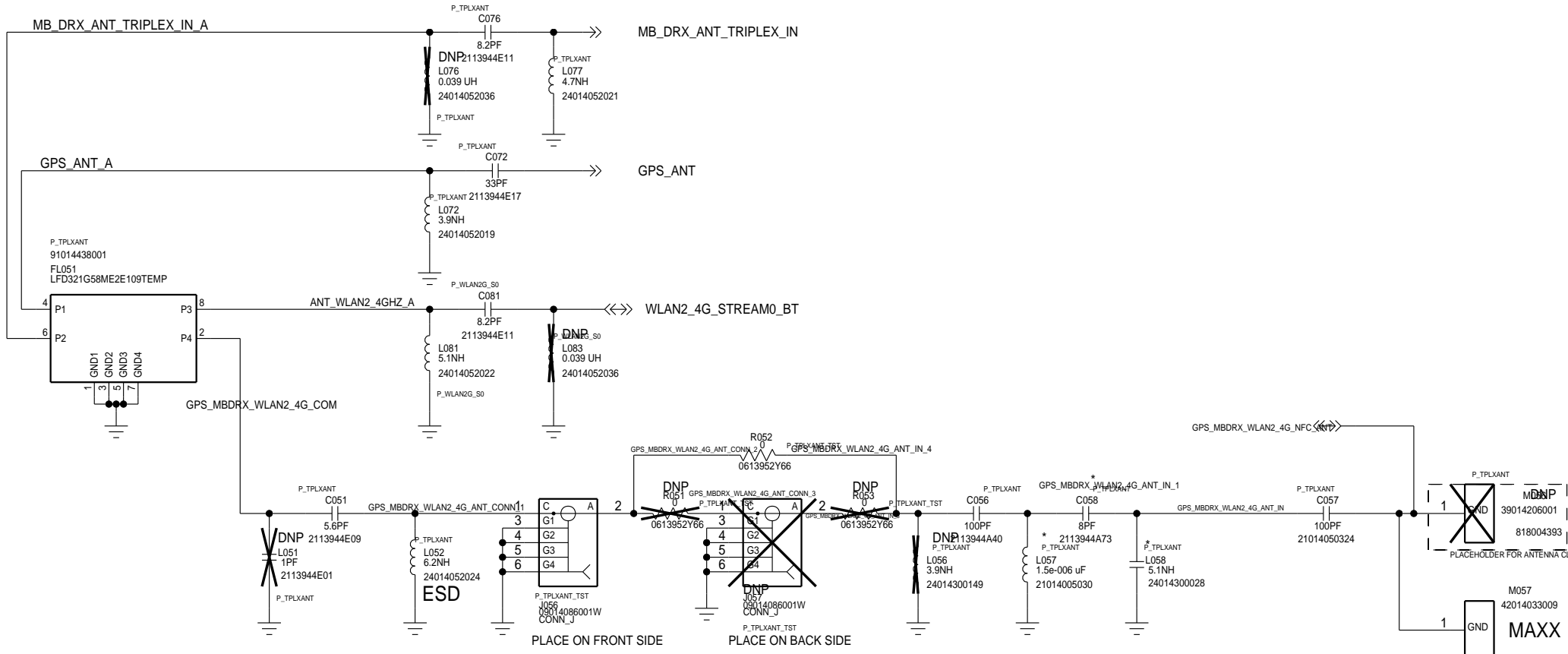
MURATA 3 LINE RF CONN

MOTOROLA MOBILITY CONFIDENTIAL RESTRICTED-MDB TRACKED TRACKEDANDBLOCKED

APPROVALS		MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA		BLOCK TITLE: antennas	
LAST MODIFIED BY: MOTOROLA Thu Mar 03 15:17:28 2016		PROJECT NAME 84016517001_10.cpm	
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		PAGE 5 OF 88	

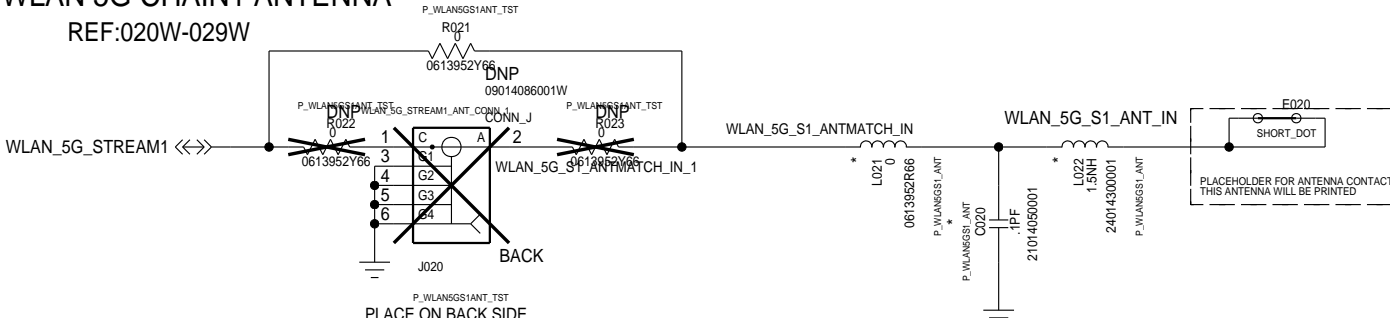
ANT: GPS/WLAN ANTENNAS

GPS/DIV MB/WLAN 2.4GHZ S0 ANTENNA



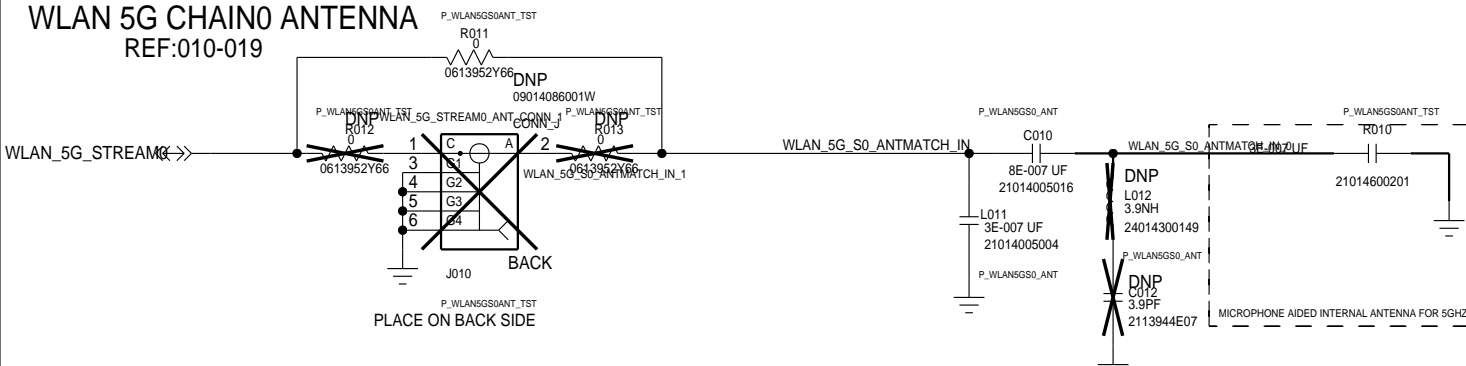
WLAN 5G CHAIN1 ANTENNA

REF:020W-029W




WLAN 5G CHAIN0 ANTENNA

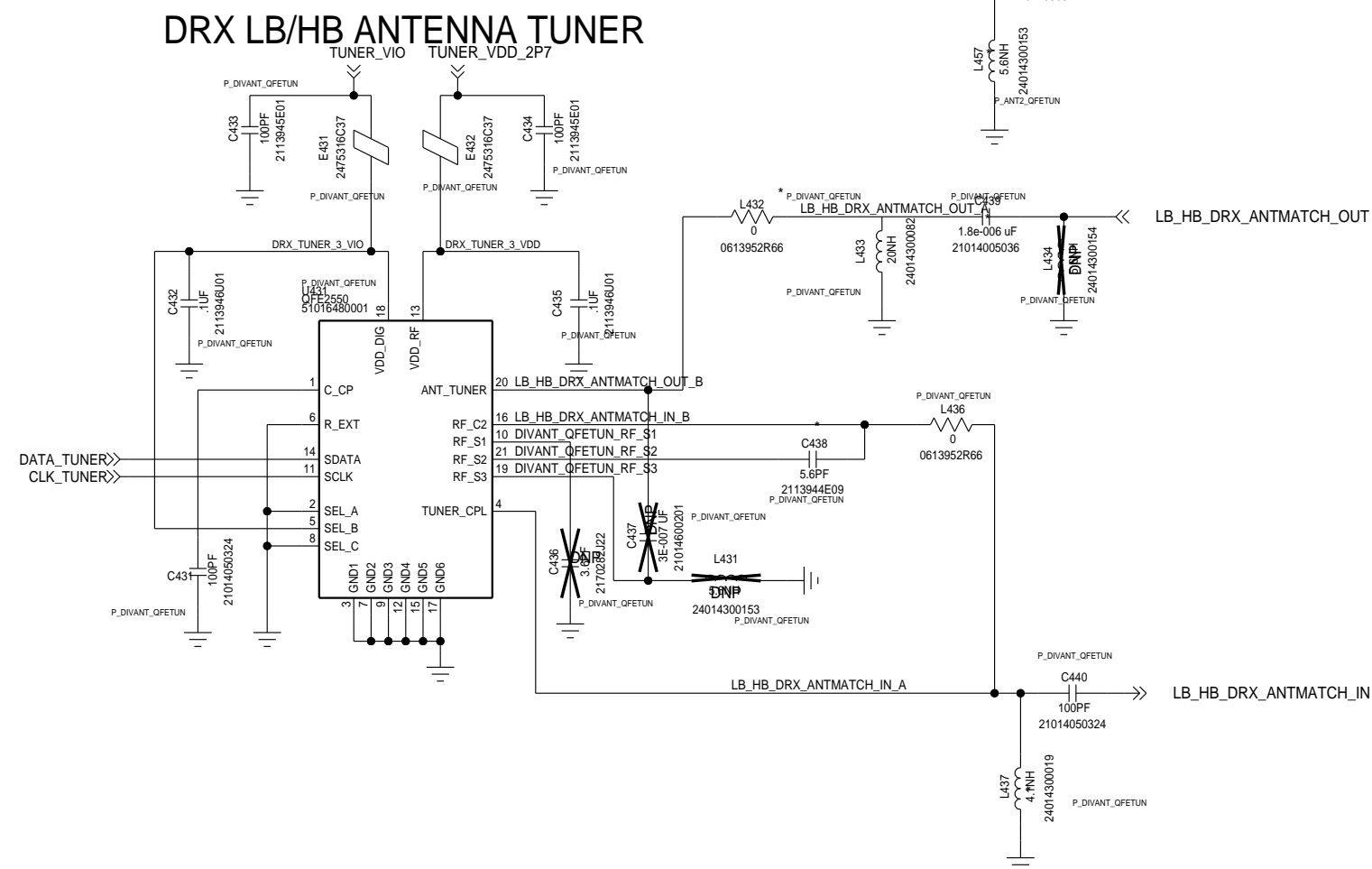
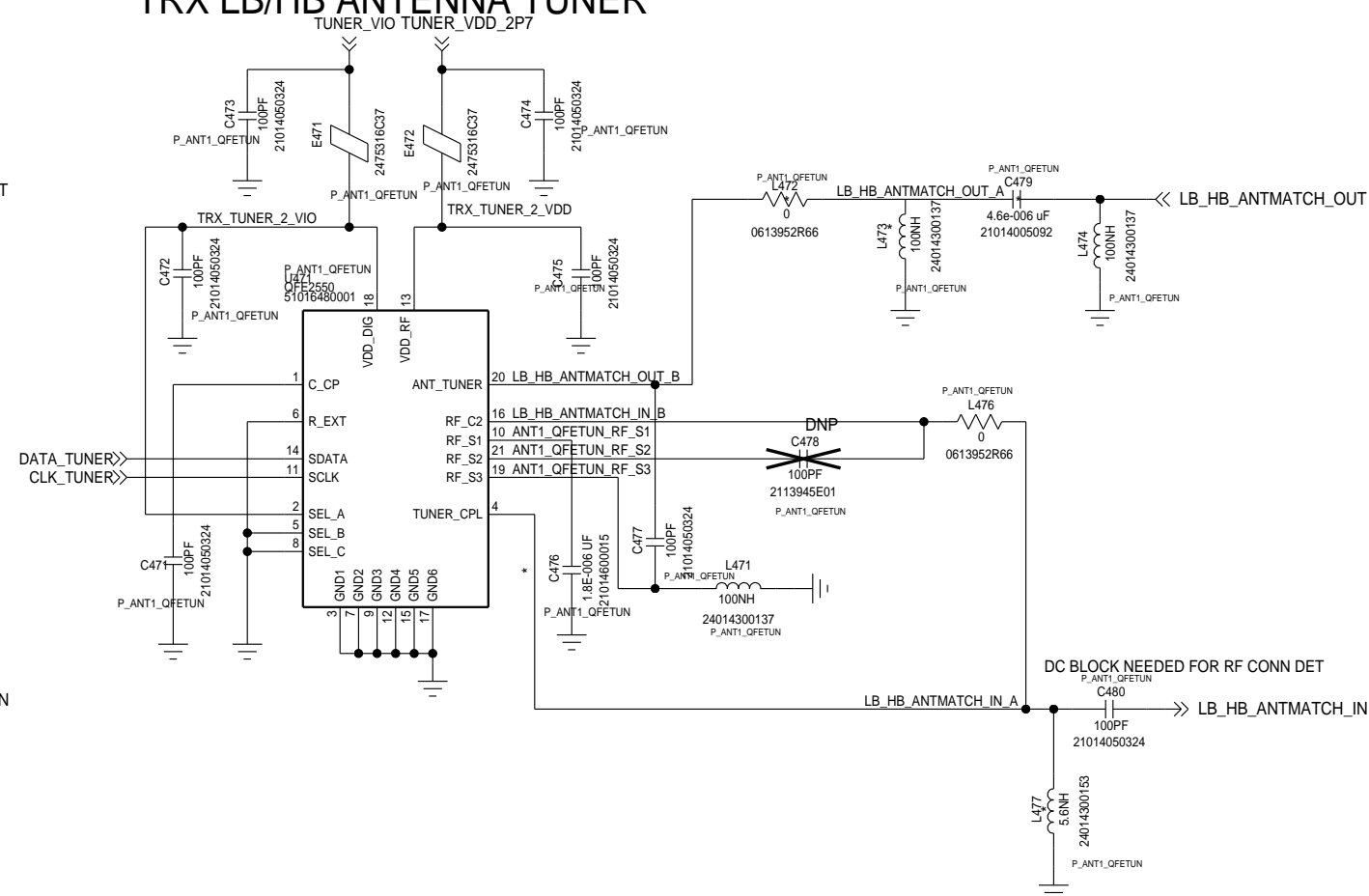
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MOTOROLA MOBILITY CONFIDENTIAL RESTRICTED-MDB TRACKED TRACKEDANDBLOCKED

APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA	BLOCK TITLE: <div style="font-size: 24pt; text-align: center;">antennas</div>		
LAST MODIFIED BY: MOTOROLA Wed Mar 16 16:38:57 2016			
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 84016517001_10.cpm	REV 01
		CAD FILE NAME:	PAGE 6 OF 88

TRX LB/HB ANTENNA TUNER

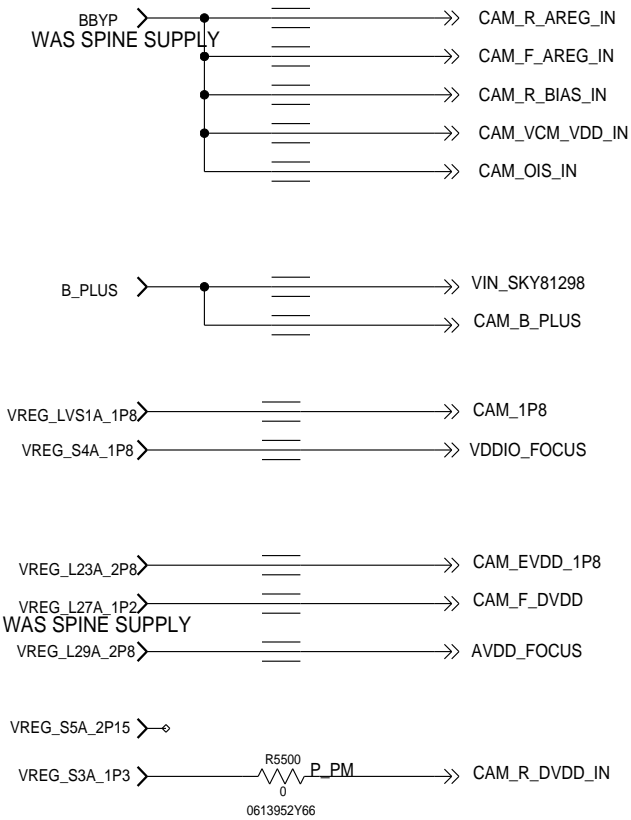


APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA	BLOCK TITLE: <h1>antennas</h1>		
LAST MODIFIED BY: MOTOROLA Wed Mar 16 16:38:53 2016			
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		CAD FILE NAME:	PAGE 7 OF 88

CAM: PORTS

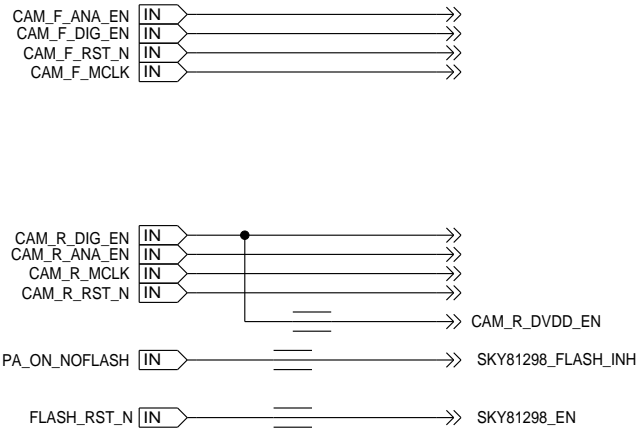
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SUPPLIES

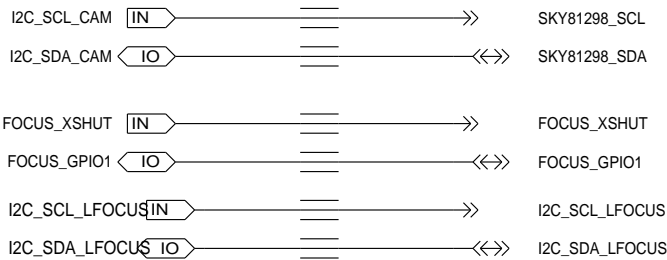


NOTE: PLACE R5500 & R5501 NEAR PM TO GET ONLY ONE SPINE ROUTE.

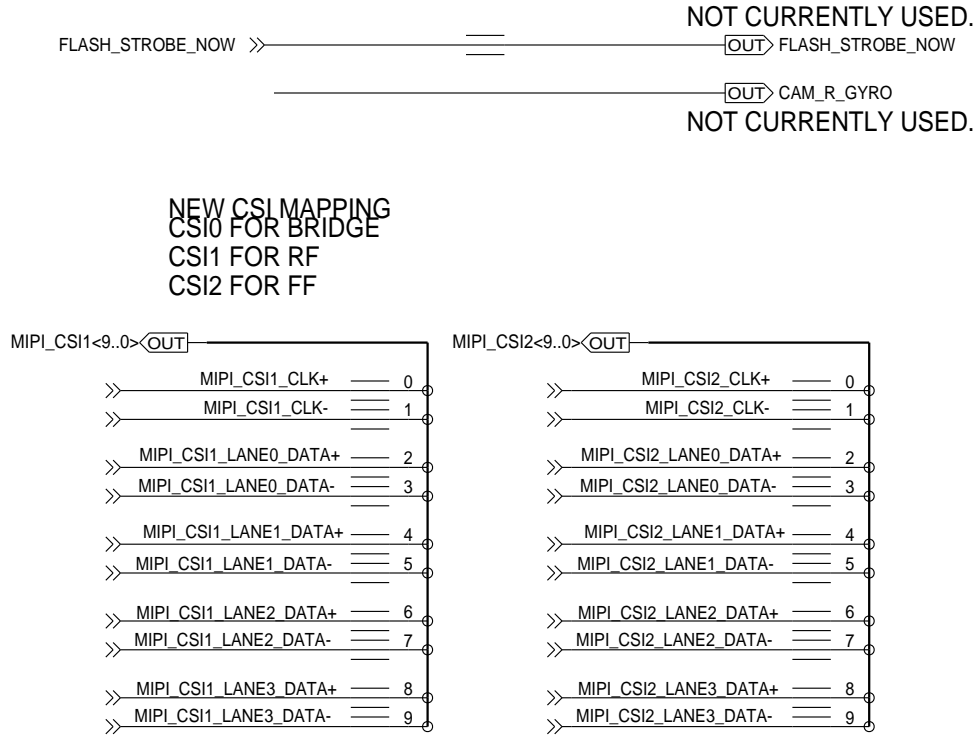
INPUTS



INTERFACES



OUTPUTS



APPROVALS

ENGINEER: NATE CONNELL

LAST MODIFIED BY: NATE CONNELL
Thu Mar 03 15:17:24 2016

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MOTOROLA
MOBILE DEVICES

BLOCK TITLE:

imagers

B

PROJECT NAME
84016517001_10.cpm

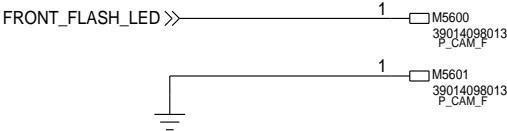
REV
01

CAD FILE NAME:

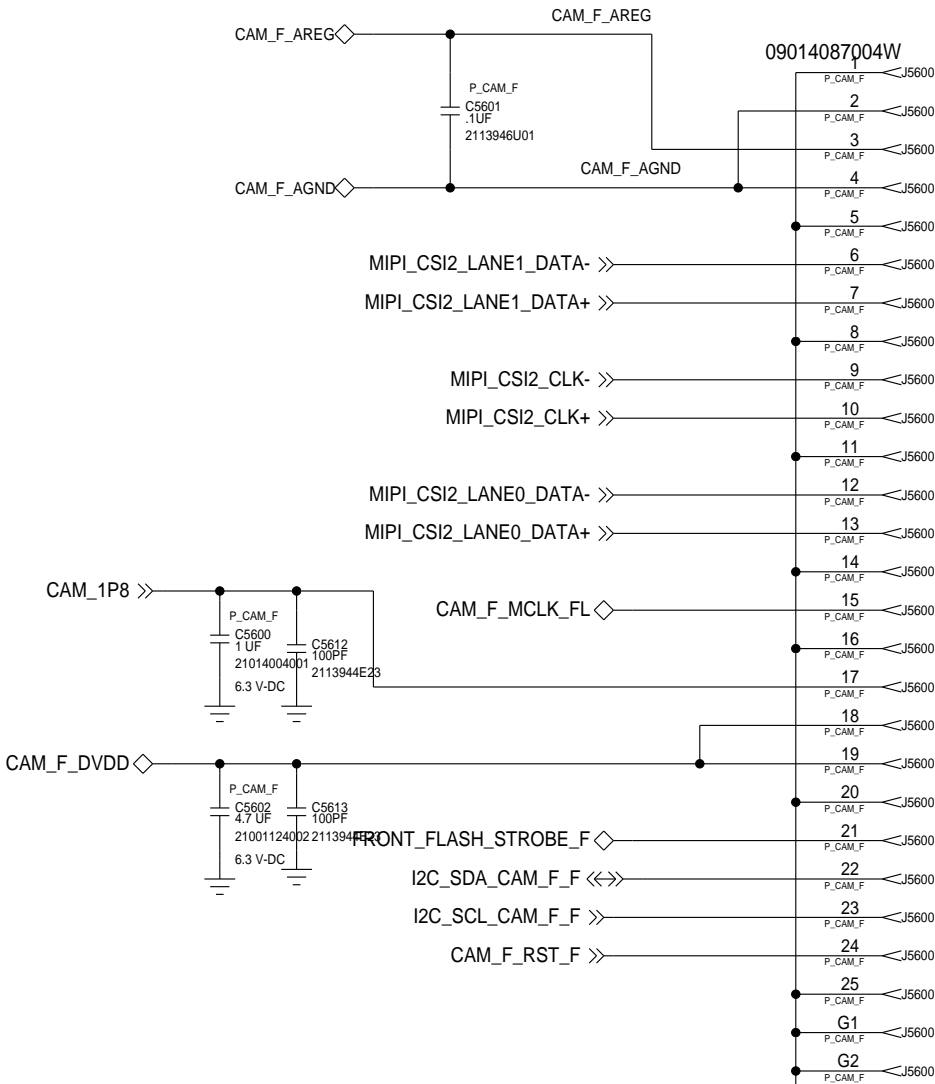
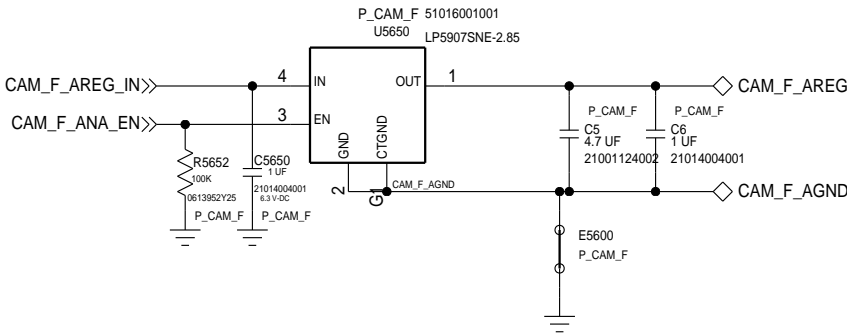
PAGE 8 OF 88

CAM: FRONT
REF 5600-5699

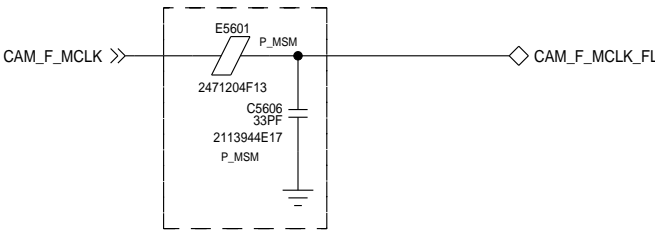
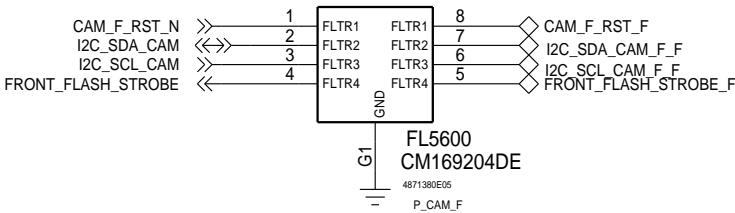
FRONT CAMERA FLASH LED



ANALOG REGULATOR




EMI/ESD FILTER



PLACE MCLK FILTER BY MSM, BUT ZENER AT CAM CONNECTOR

MOTOROLA MOBILITY CONFIDENTIAL RESTRICTED-MDB TRACKED TRACKEDANDBLOCKED

APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: JOHN KRAMER		BLOCK TITLE: imagers	
LAST MODIFIED BY: UID ELRAN Thu Mar 03 15:17:24 2016		PROJECT NAME B 84016517001_10.cpm	
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		CAD FILE NAME: PAGE 9 OF 88	

D

C

B



REF:5750-5799



1.1V FOR VECTOR THIN& MAXX



D



B



CAM_OIS_IN >>

CAM_OIS_EN >>

~~P_CAM
R5532
100K
0613952Y25~~

P_CAM
C5535
.1UF
21014004001
6.3 V-DC

P_CAM
C5536
100PF
2113944E23

4 IN

3 EN

2 GND

1 OUT

CTGND

G1

P_CAM
C5537
.1UF
2113944U01

P_CAM
C5538
4.7UF
21014028001

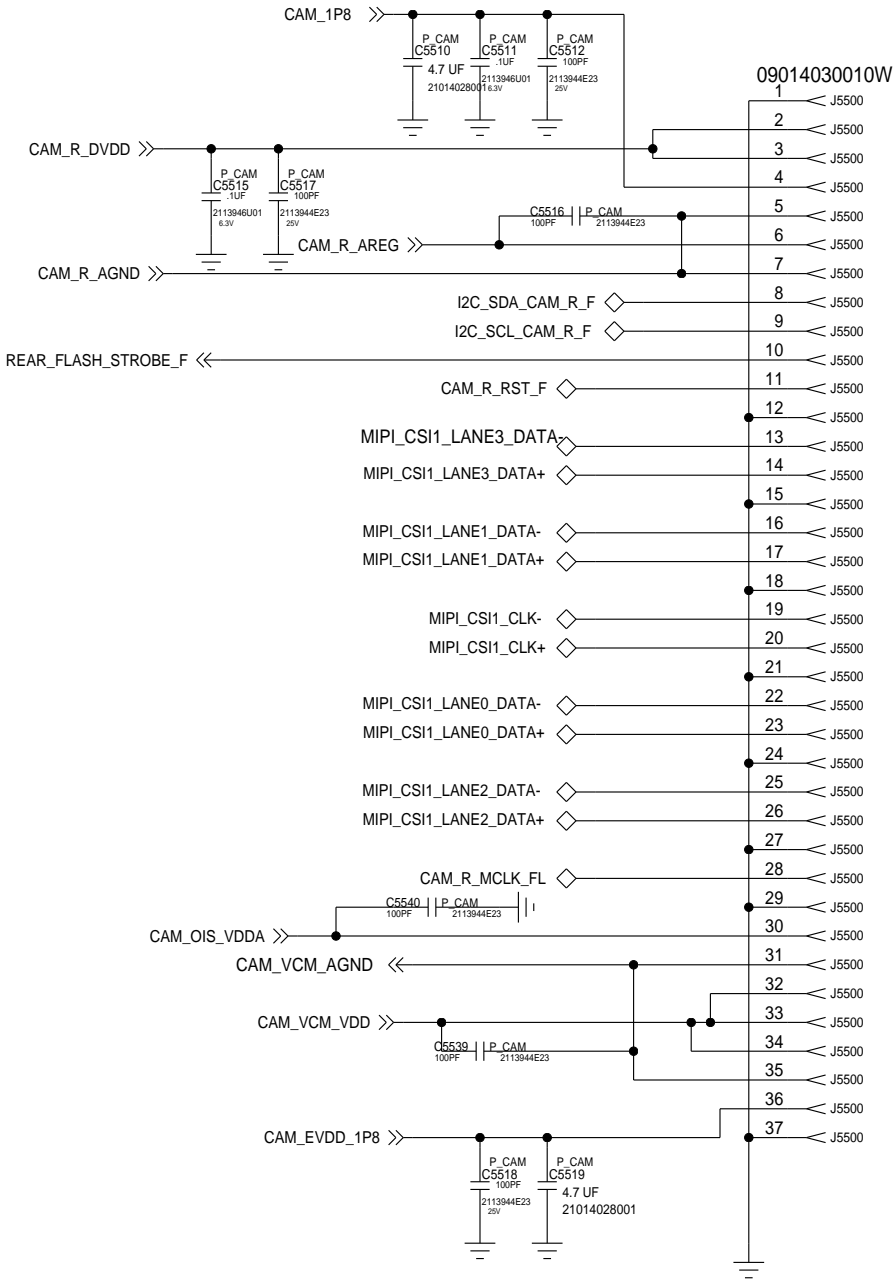
OIS_VDDA_GND

P_CAM
E5532
SHORT_DOT

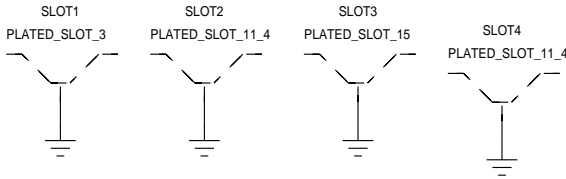
>>> CAM_OIS_VDDA


CAM: REAR CONN

REF:5500-5599 CAM



PLATED THRU SLOTS FOR EDGE PLATING



APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA		BLOCK TITLE:	
LAST MODIFIED BY: MOTOROLA Thu Mar 03 15:17:26 2016		imagers	
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		B 84016517001_10.cpm	
		REV 01	
		CAD FILE NAME:	
		PAGE 11 OF 88	

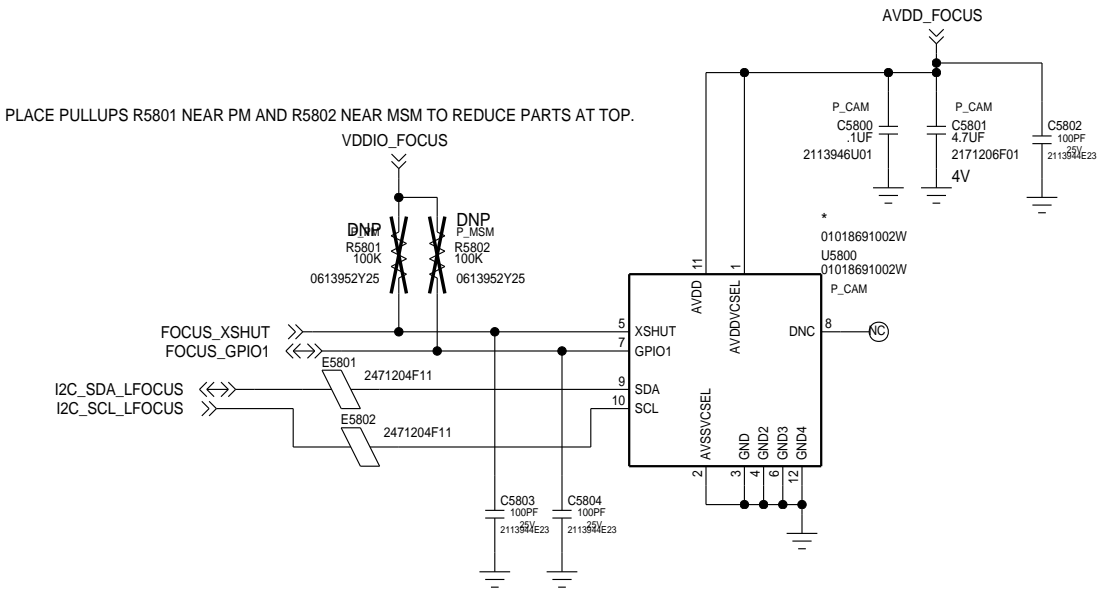
CAM: FOCUS


REF:5800-5899

LASER FOCUS MODULE

REF:5800-5899

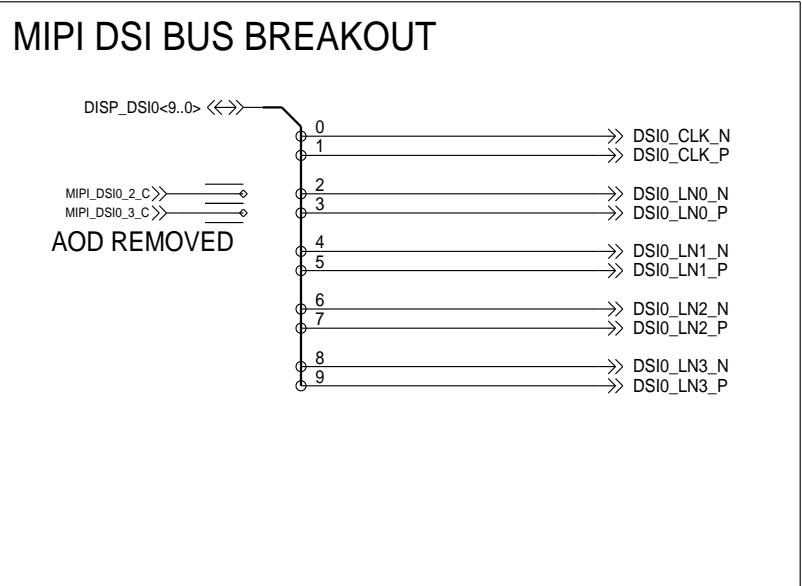
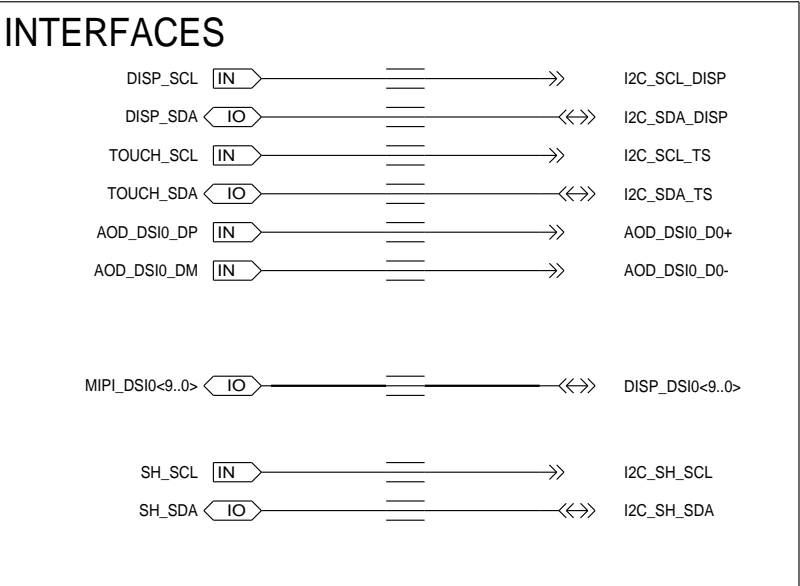
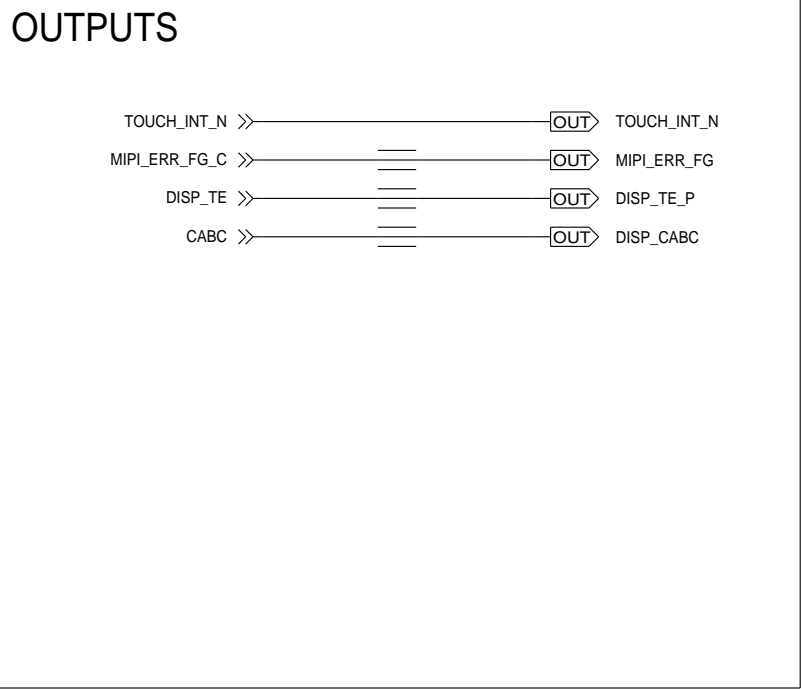
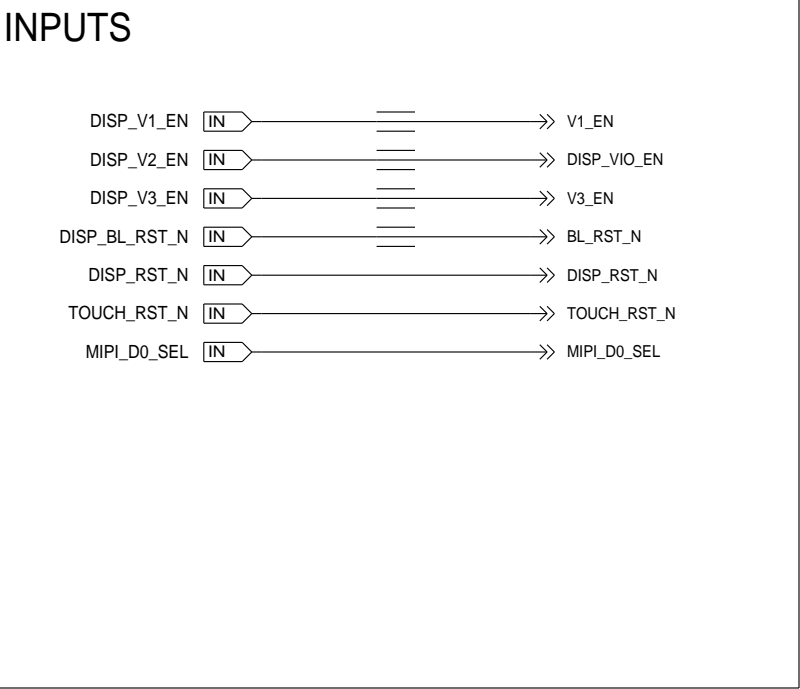
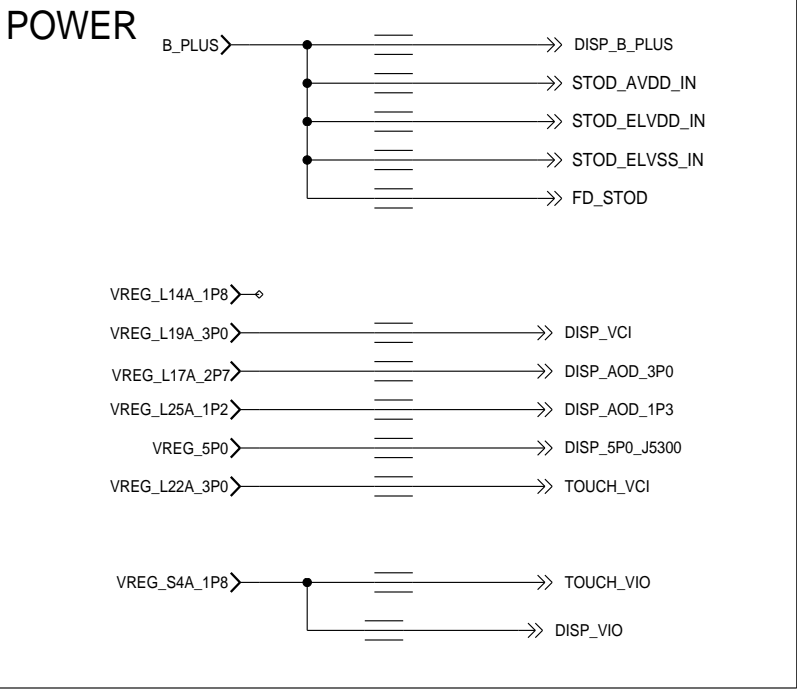
I2C ADDR: 0X52 ???




APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA		BLOCK TITLE:	
LAST MODIFIED BY: MOTOROLA Thu Mar 03 15:17:26 2016		imagers	
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		REV 01	
		CAD FILE NAME:	
		PAGE 12 OF 88	

DISP: PORTS

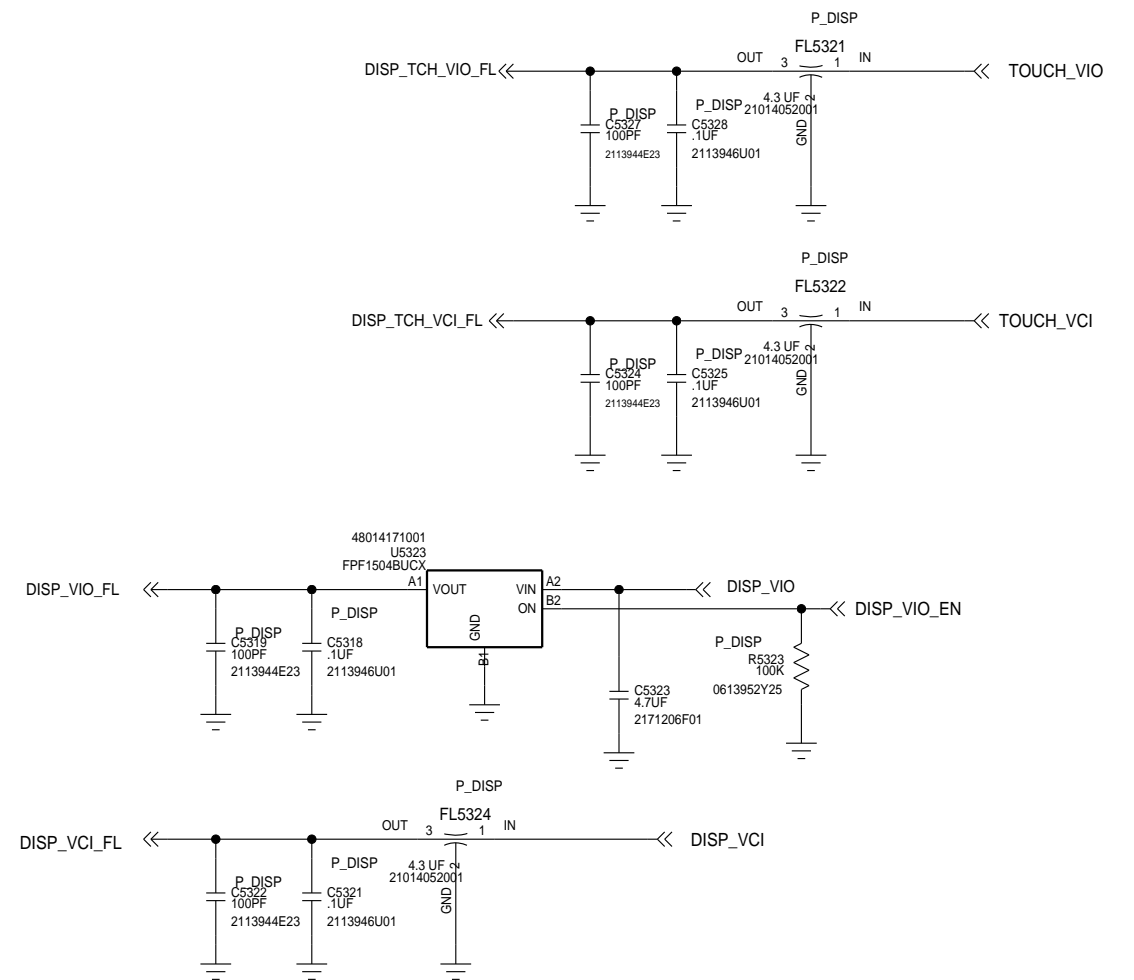
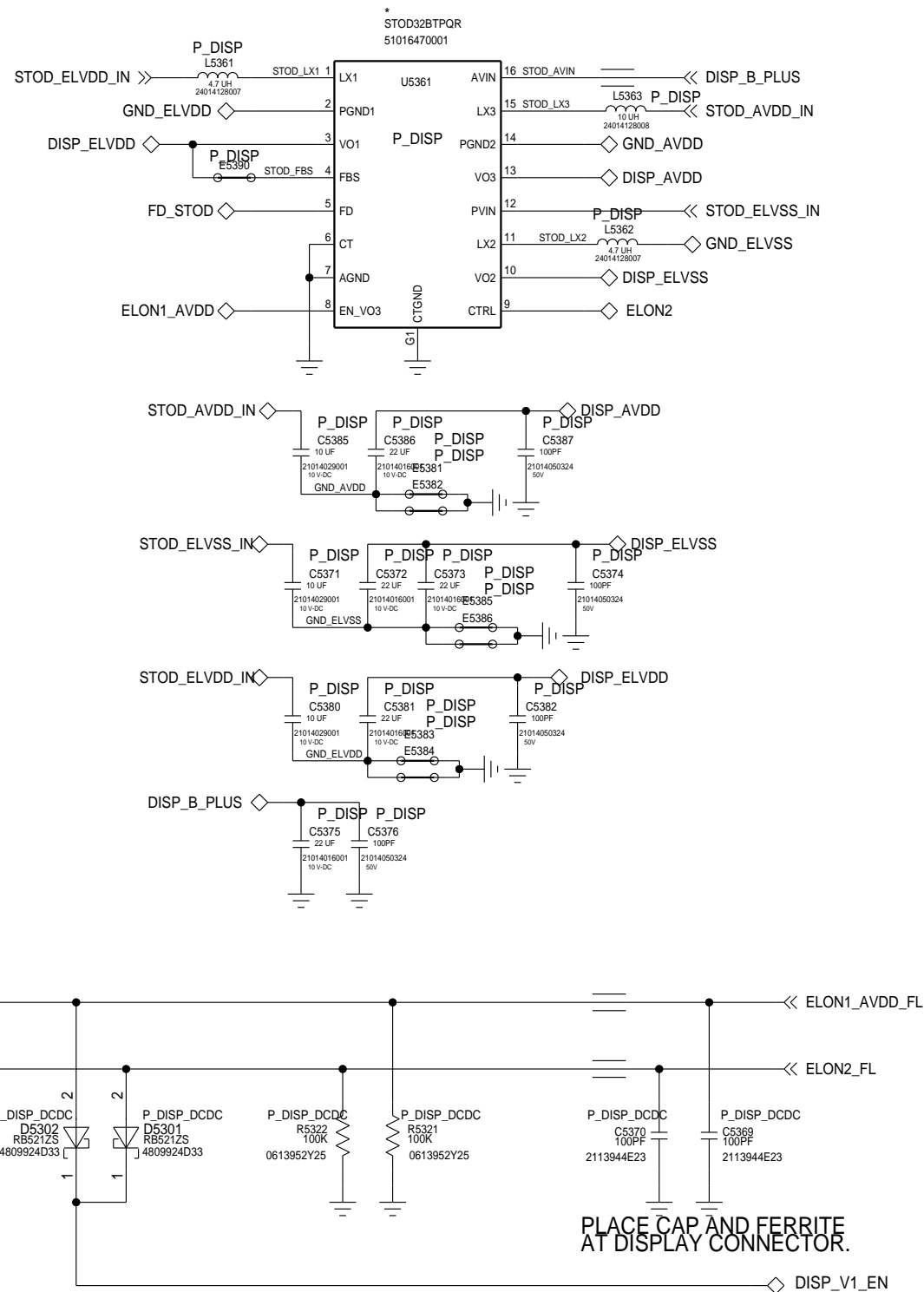
REF 5000-5499



APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: NATE CONNELL		BLOCK TITLE:	
LAST MODIFIED BY: NATE CONNELL Thu Mar 03 15:17:22 2016		display	
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>		B	PROJECT NAME 84016517001_10.cpm
		REV 01	
		CAD FILE NAME:	
		PAGE 13 OF 88	

DISP: POWER

REF 5300-5399



APPROVALS

ENGINEER: NATE CONNELL

LAST MODIFIED BY: NATE CONNELL
Thu Mar 03 15:17:23 2016

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BLOCK TITLE:

display

PROJECT NAME

B 84016517001_10.cpm

REV

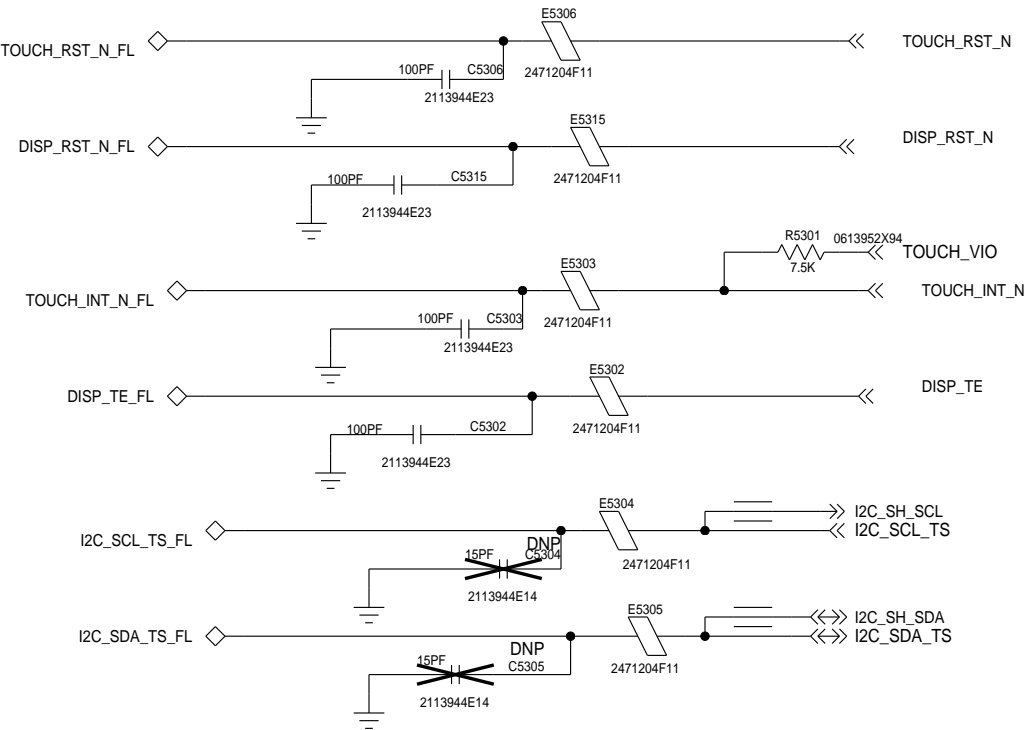
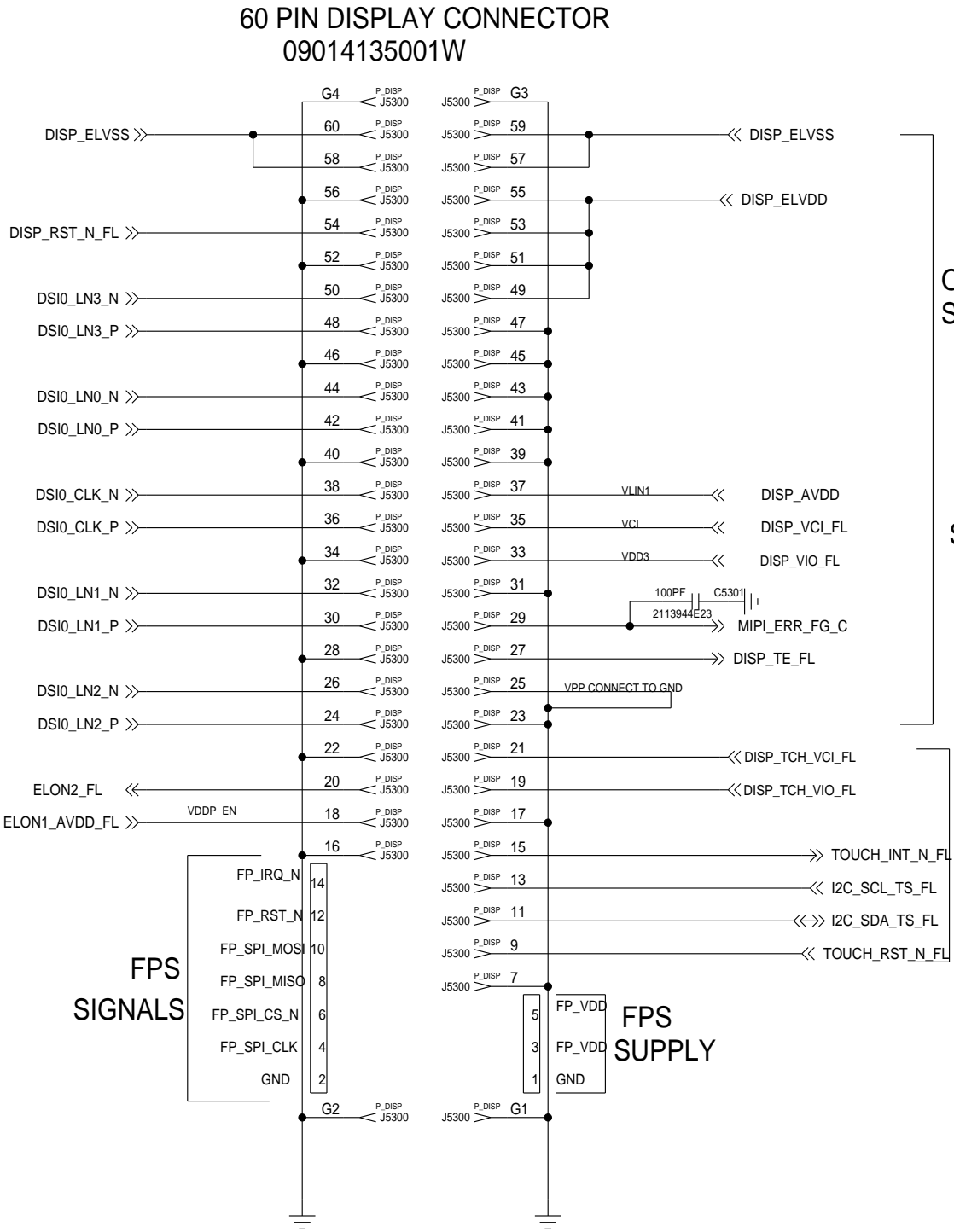
01

CAD FILE NAME:

PAGE 14 OF 88


DISP: CONNECTOR

REF 5300-5349



NOTE: SOME DISPLAY CONNECTOR PINS ARE ON THE "USR: FPC" PAGE.

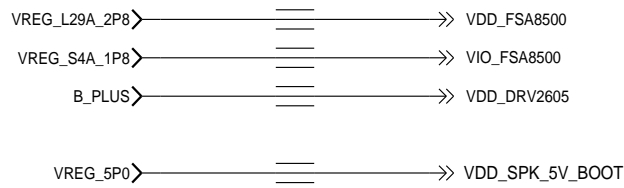
MOTOROLA MOBILITY CONFIDENTIAL RESTRICTED-MDB TRACKED TRACKEDANDBLOCKED

APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: NATE CONNELL		BLOCK TITLE:	
LAST MODIFIED BY: NATE CONNELL Thu Mar 03 15:17:23 2016		display	
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		B 84016517001_10.cpm	
		REV 01	
		CAD FILE NAME:	
		PAGE 15 OF 88	

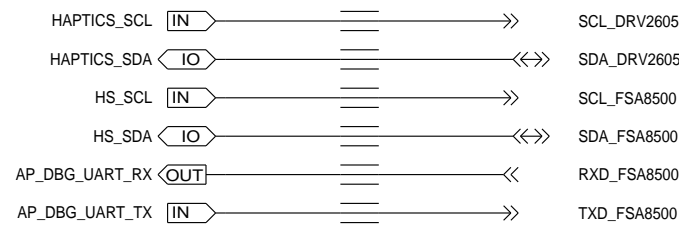
AFE: PORTS

REF 4500-4999

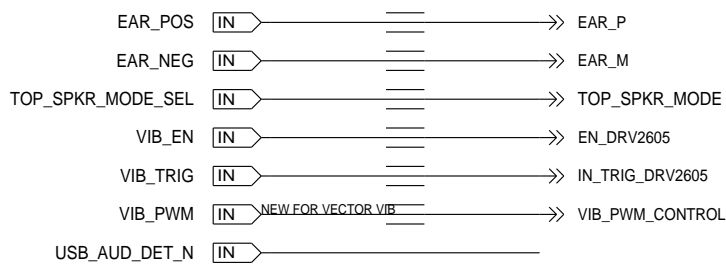
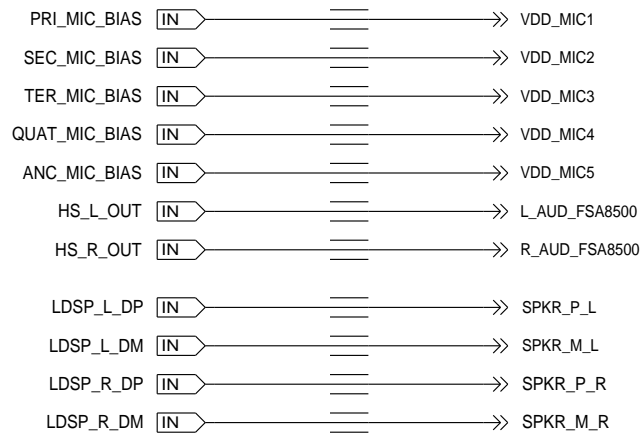
POWER



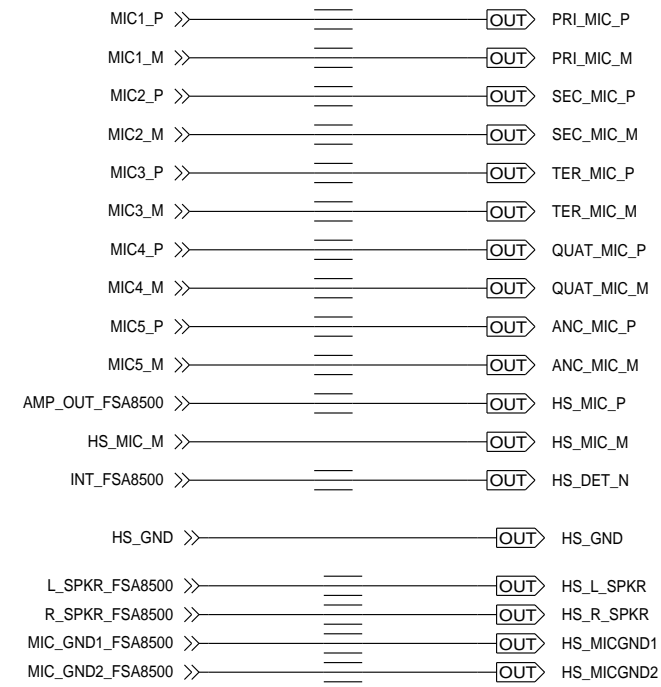
INTERFACES



INPUTS



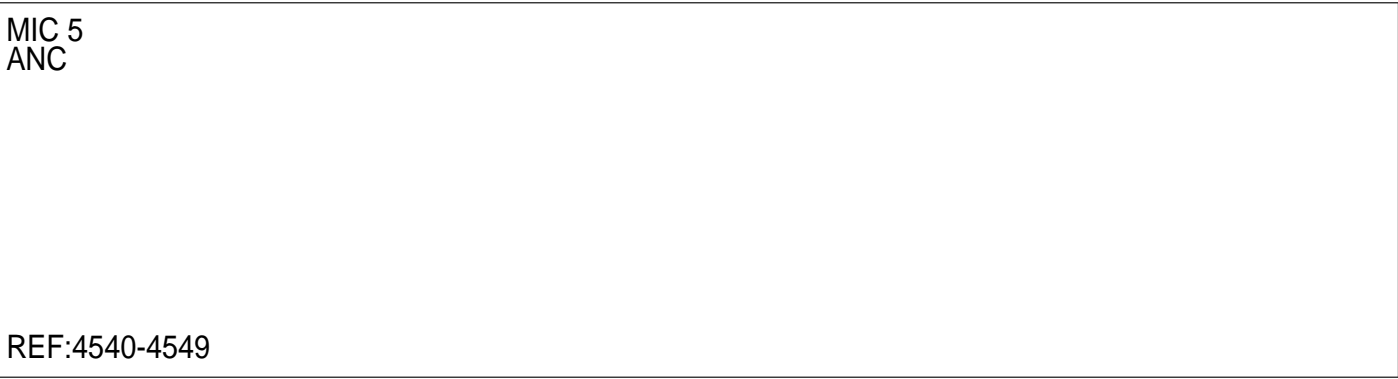
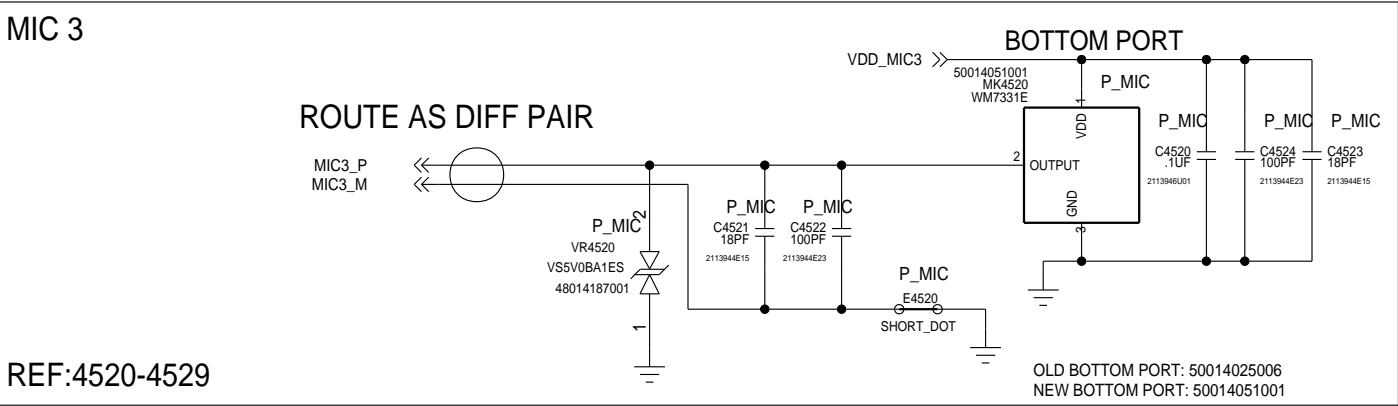
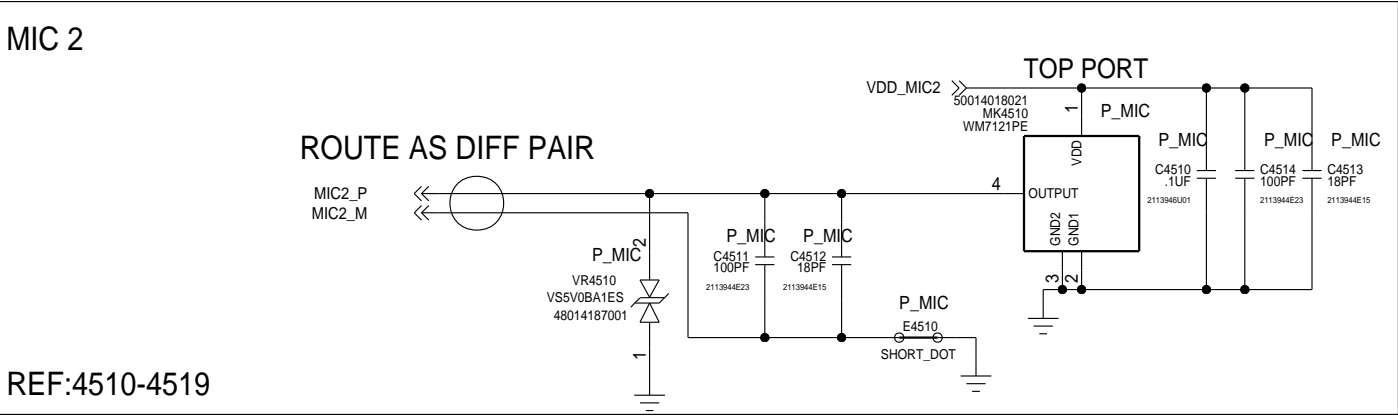
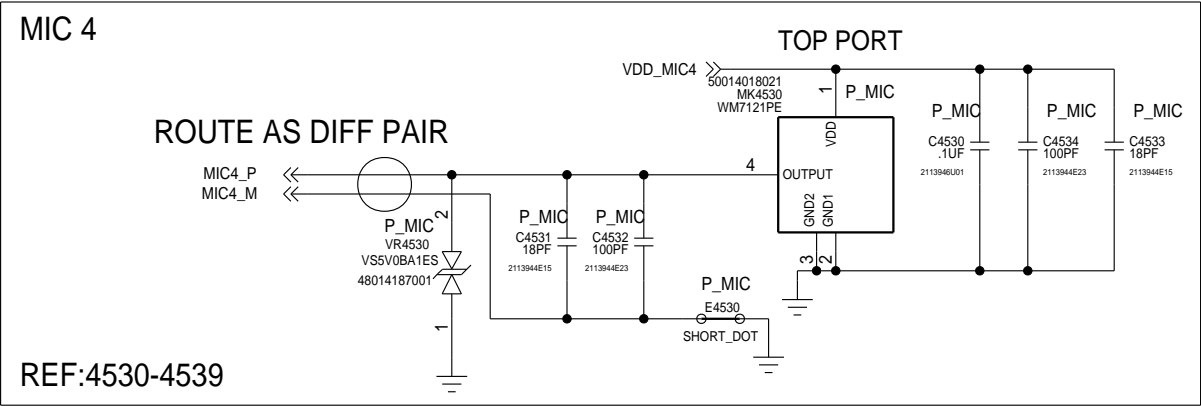
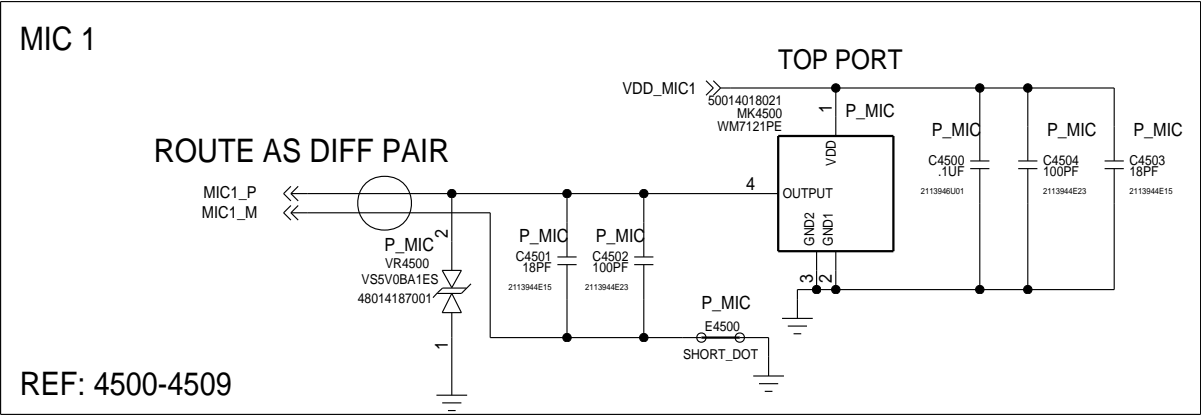
OUTPUTS




WING

APPROVALS		MOTOROLA MOBILE DEVICES	
ENGINEER: NATE CONNELL		BLOCK TITLE:	
LAST MODIFIED BY: NATE CONNELL Thu Mar 03 15:17:20 2016		audio_fe	
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 84016517001_10.cpm	REV 01
		CAD FILE NAME:	
		PAGE 16 OF 88	

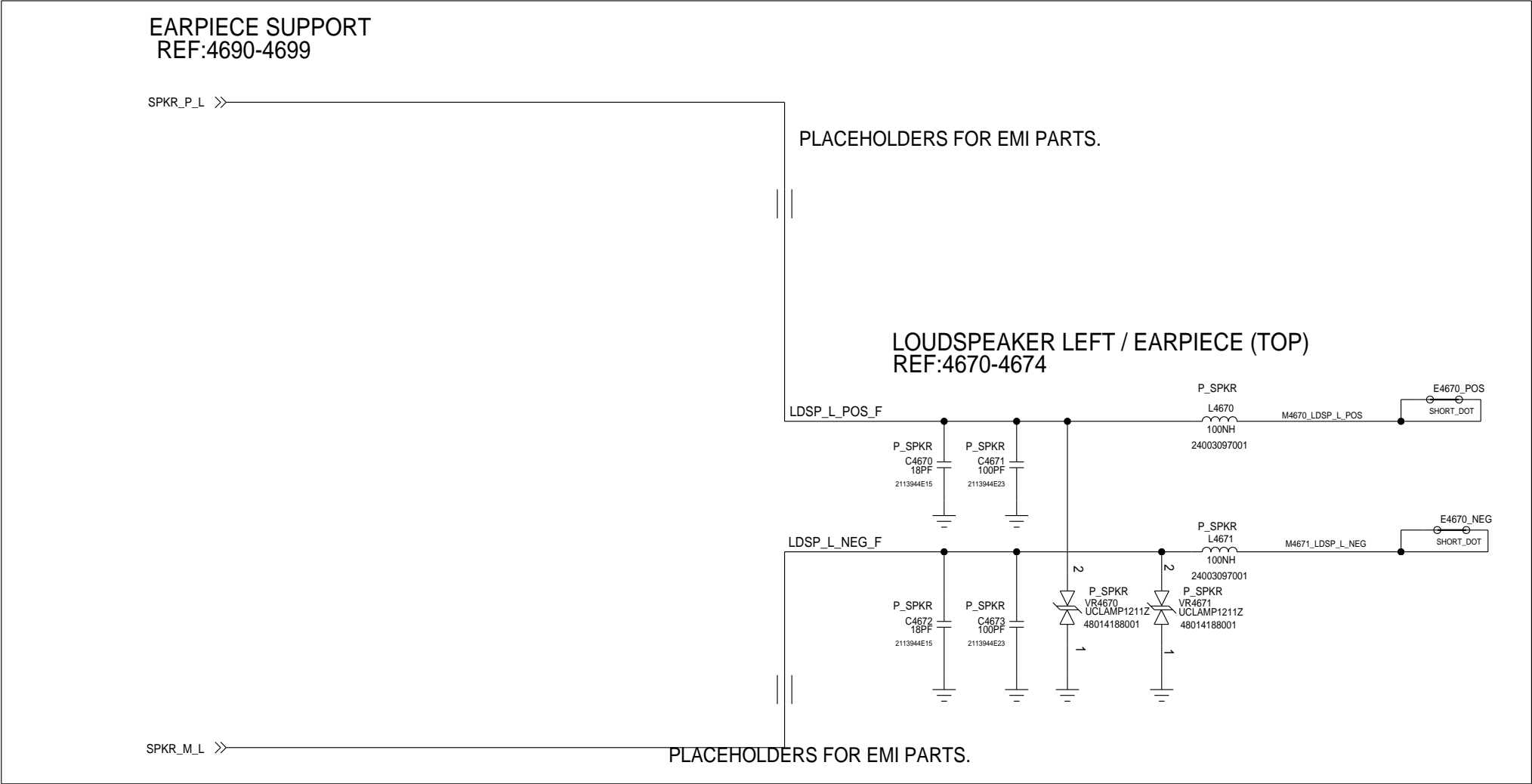
AFE: MICS
REF: 4500-4599



APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA		BLOCK TITLE: audio_fe	
LAST MODIFIED BY: MOTOROLA Thu Mar 03 15:17:21 2016		PROJECT NAME B 84016517001_10.cpm	
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		REV 01	
		PAGE 17 OF 88	

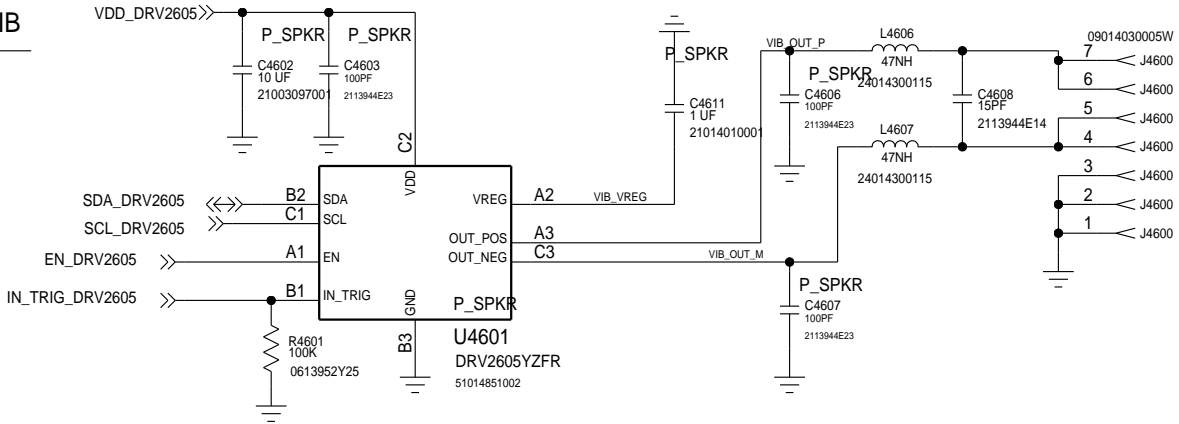
AFE: SPEAKERS


REF: 4600-4699



LINEAR VIBRATOR
REF DES 4600-4619

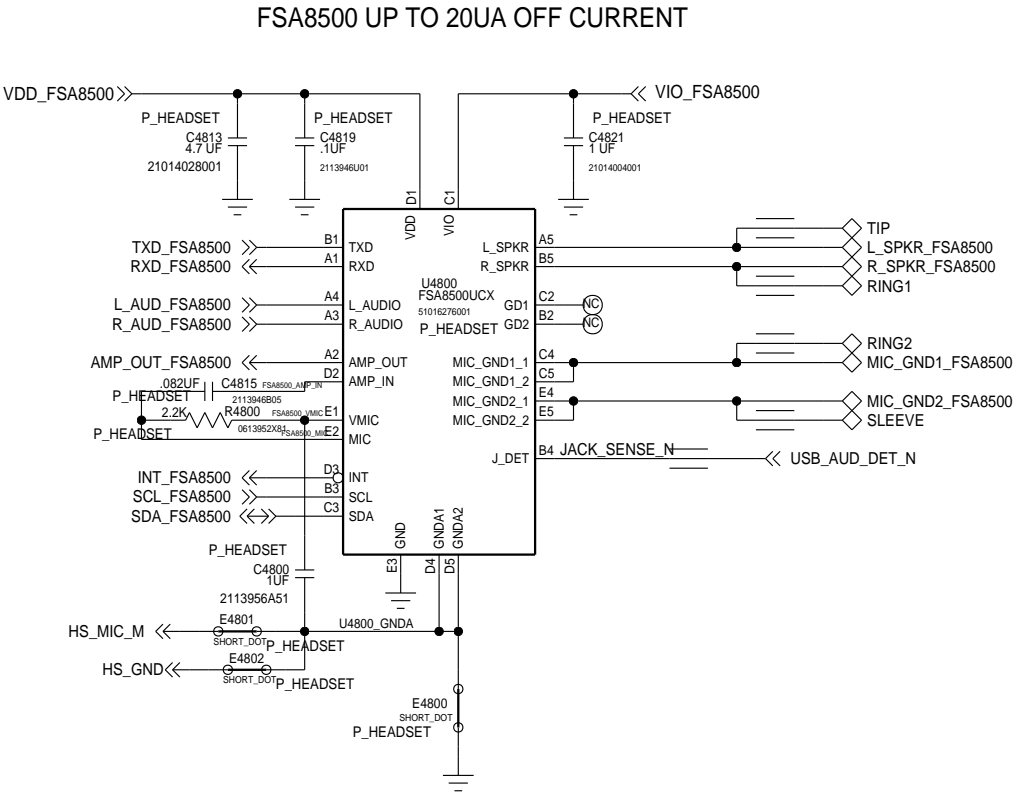
NOT USING COIN VIB
VIB_PWM_CONTROL >>



APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA		BLOCK TITLE: audio_fe	
LAST MODIFIED BY: MOTOROLA Thu Mar 03 15:17:21 2016		PROJECT NAME 84016517001_10.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>		B	REV 01
		CAD FILE NAME: PAGE 18 OF 88	

AFE: 3.5MM HEADSET

AUDIO JACK DETECTION
REF:4800-4849




3.5MM HSJ
REF:4900-4949

USB TYPE C AUDIO ADAPTER SUPPORT

AFTER AUDIO ACCESSORY CABLE IS DETECTED VIA USB CC
THE APPS PROCESSOR WILL CLOSE THIS SWITCH
TO INITIATE AUDIO JACK IDENTIFICATION AND CONFIGURATION

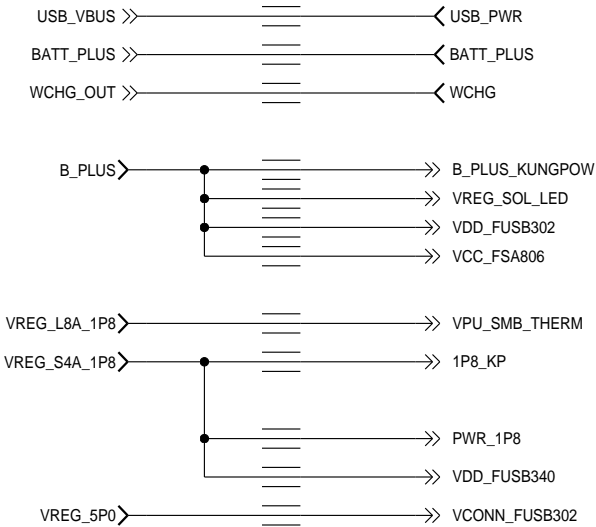
DELETED, NO NEED

APPROVALS		<div> MOTOROLA</div> <div>MOBILE DEVICES</div>		
ENGINEER: MATT MOTTIER		BLOCK TITLE: audio_fe		
LAST MODIFIED BY: NATE CONNELL Thu Mar 03 15:17:22 2016				
<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 84016517001_10.cpm		01
		CAD FILE NAME:		PAGE 19 OF 88

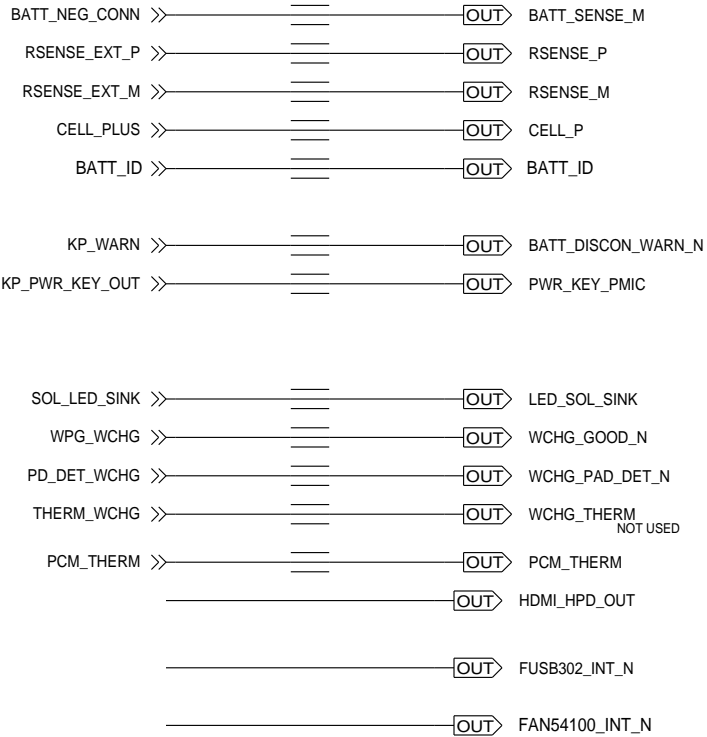
PWR: PORTS

REF 500-799

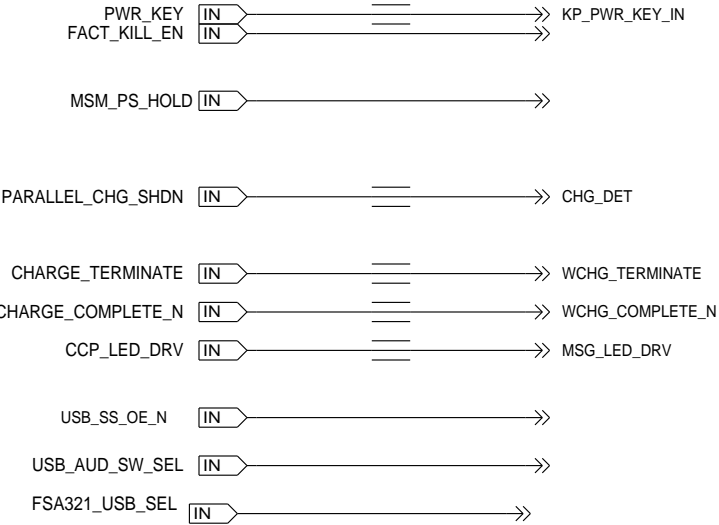
POWER



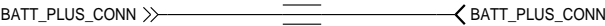
OUTPUTS



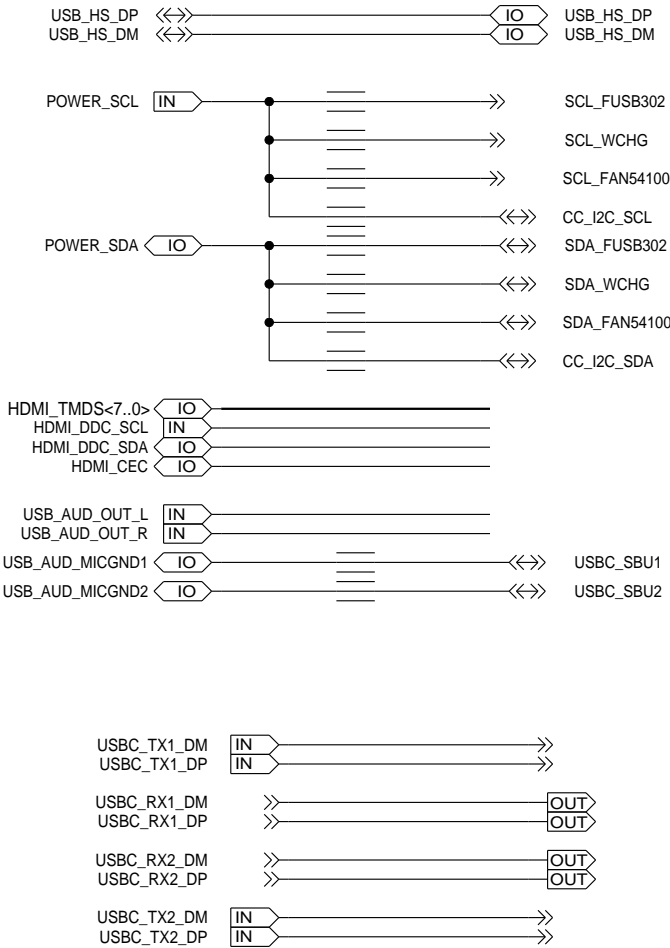
INPUTS



WING



INTERFACES



APPROVALS

ENGINEER: NATE CONNELL

LAST MODIFIED BY: NATE CONNELL
Thu Mar 03 15:17:17 2016

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BLOCK TITLE:

power

PROJECT NAME
B 84016517001_10.cpm

REV
01

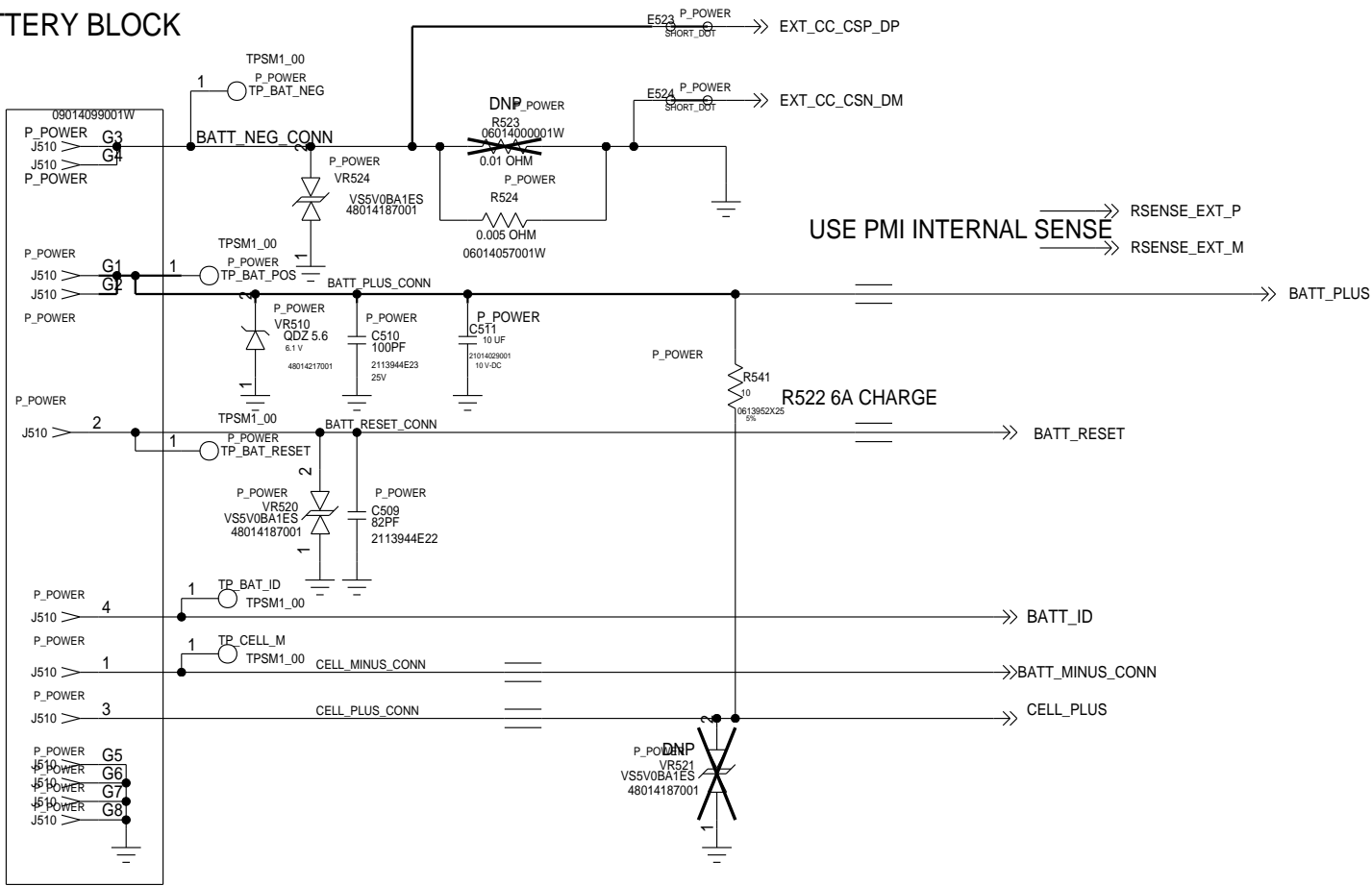
CAD FILE NAME:

PAGE 20 OF 88

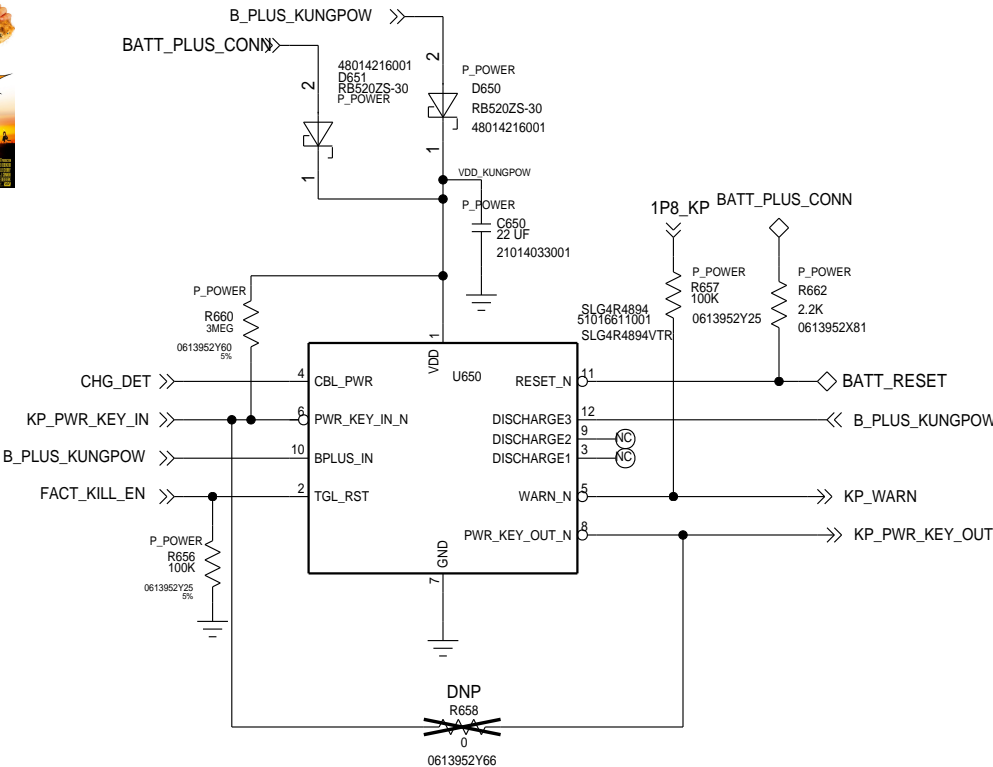
PWR: BATT

REF: 510-530

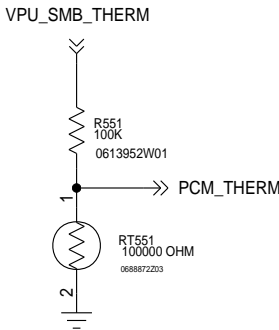
BATTERY BLOCK




KUNG KOW BATTERY DISCONNECT



PLACEHOLDER FOR VECTOR BATTERY THERMISTOR

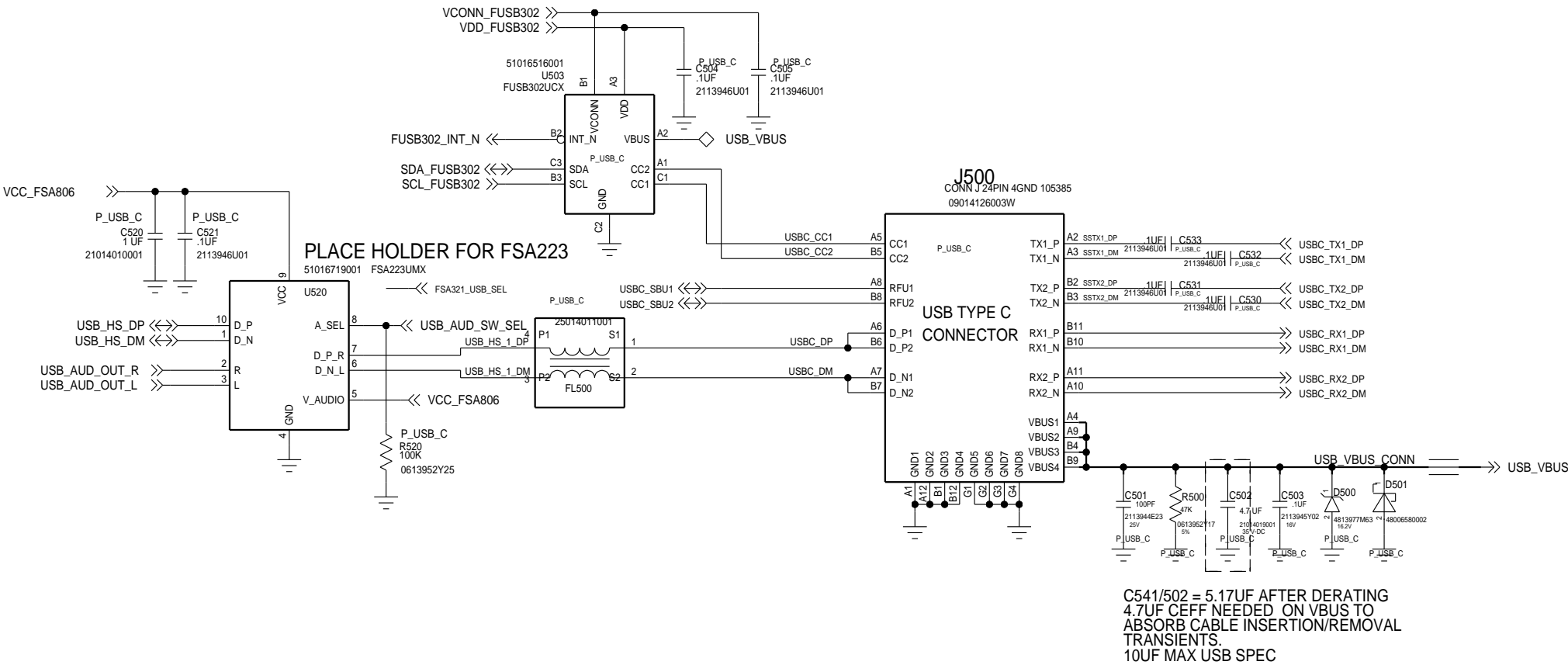


MOTOROLA MOBILITY CONFIDENTIAL RESTRICTED-MDB TRACKED TRACKEDANDBLOCKED

APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: RICH NG		BLOCK TITLE: power	
LAST MODIFIED BY: UDI ELRAN Thu Mar 03 15:17:17 2016		PROJECT NAME 84016517001_10.cpm	
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		PAGE 21 OF 88	

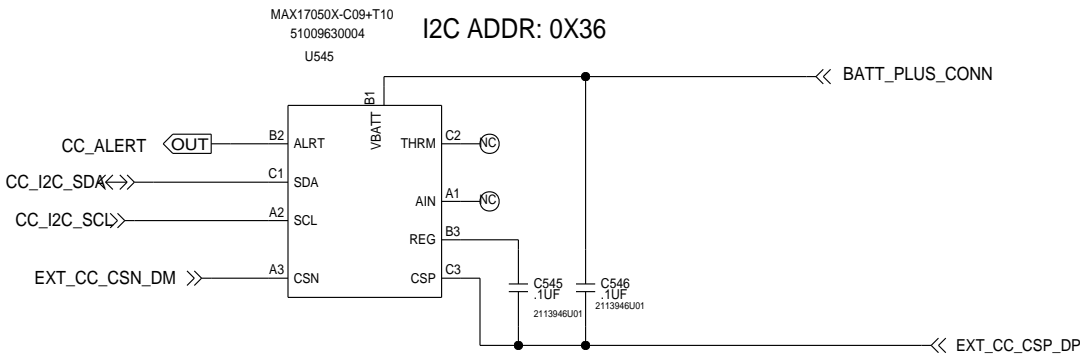
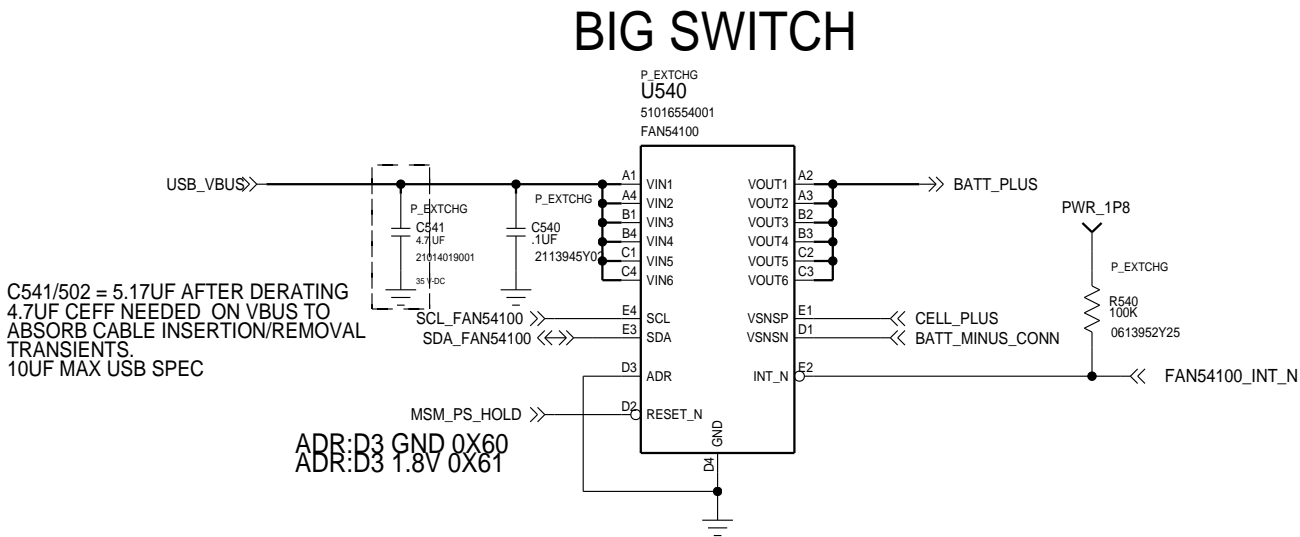
PWR: USB C


REF: 500-509, 520-539



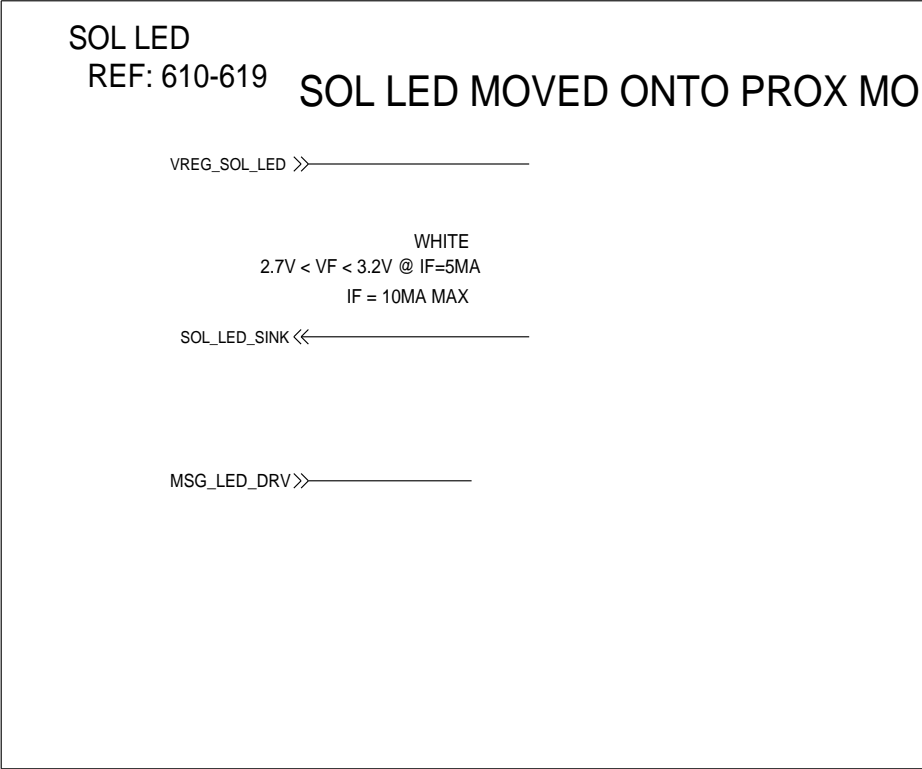
APPROVALS		MOTOROLA MOBILE DEVICES	
ENGINEER: MMI		BLOCK TITLE: power	
LAST MODIFIED BY: MMI Thu Mar 03 15:17:18 2016		PROJECT NAME 84016517001_10.cpm	
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		PAGE 22 OF 88	

PWR: EXT CHG
REF: 540-549




APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MMI		BLOCK TITLE:	
LAST MODIFIED BY: MMI Thu Mar 03 15:17:19 2016		power	
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		B 84016517001_10.cpm	REV 01
		CAD FILE NAME:	
		PAGE 23 OF 88	

PWR: LIGHTING

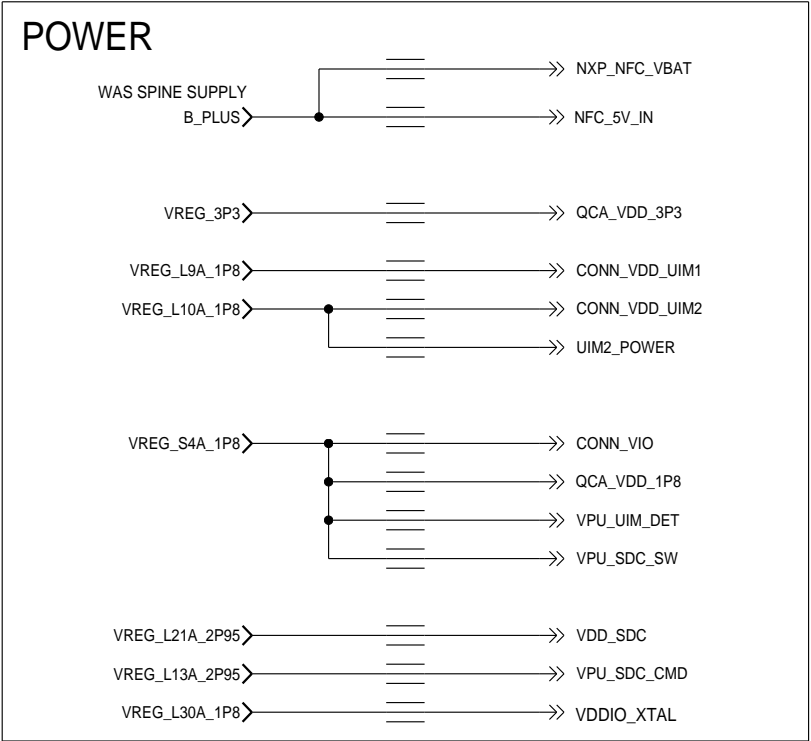



MOTOROLA MOBILITY CONFIDENTIAL RESTRICTED-MDB TRACKED TRACKEDANDBLOCKED

APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER:		BLOCK TITLE:	
LAST MODIFIED BY: TIM MILLER Wed Feb 10 10:23:34 2016		power	
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		REV 01	
		CAD FILE NAME:	
		PAGE 24 OF 88	

CONN: POWER

REF 4490-4499



APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: FROEHLING		BLOCK TITLE:	
LAST MODIFIED BY: FROEHLING Thu Mar 03 15:17:12 2016		connectivity	
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		B 84016517001_10.cpm	REV 01
		CAD FILE NAME:	
		PAGE 25 OF 88	

CONN: PORTS

REF 4000-4499

BT/WLAN SYSTEM

QCA61X4_CLK_REQ_OUT<OUT>====<< QCA61X4_CLK_REQ_OUT
BT_WLAN_32KHZ_CLK_IN<IN>====>> QCA61X4_32KHZ_CLK_IN

WLAN

WLAN_ENABLE<IN>====>> QCA61X4_WL_EN
QCA61X4_DBG_UART_TX<OUT>====<< QCA61X4_DBG_UART_TXD
QCA61X4_DBG_UART_RXD<IN>====>> QCA61X4_DBG_UART_RXD

PCIE

PCIE_CLK_REQ_OUT_N<OUT>====<< QCA61X4_PCIE_CLKREQ_N
PCIE_CLKIN_DP<IN>====>> QCA61X4_PCIE_REFCLKP
PCIE_CLKIN_DM<IN>====>> QCA61X4_PCIE_REFCLKN
PCIE_RX_DP<IN>====>> QCA61X4_PCIE_RXP
PCIE_RX_DM<IN>====>> QCA61X4_PCIE_RXN
PCIE_TX_DP<OUT>====<< QCA61X4_PCIE_TXP
PCIE_TX_DM<OUT>====<< QCA61X4_PCIE_TXN
PCIE_RST_IN_N<IN>====>> QCA61X4_PCIE_RST_N
PCIE_HOST_WAKE_OUT_N<OUT>====<< QCA61X4_PCIE_WAKE_N

BT CONTROLS AND INTERFACES

BT_ENABLE<IN>====>> QCA61X4_BT_EN

BT_PCM_IN<IN>====>> QCA61X4_PCM_IN
BT_PCM_OUT<OUT>====<< QCA61X4_PCM_OUT
BT_PCM_CLK<IN>====>> QCA61X4_PCM_CLK
BT_PCM_SYNC<IO>====<<=> QCA61X4_PCM_SYNC

BT_UART_TX<OUT>====<< QCA61X4_UART_TXD
BT_UART_RX<IN>====>> QCA61X4_UART_RXD
BT_UART_CTS_N<IN>====>> QCA61X4_UART_CTS_N
BT_UART_RTS_N<OUT>====<< QCA61X4_UART_RTS_N

CELLULAR MODEM/GPS COEXISTENCE

MODEM_LTE_SYNC_UART_RXD<IN>====>> QCA61X4_LTE_SYNC
MODEM_LTE_ACTIVE<IN>====>> QCA61X4_LTE_ACTIVE
WLAN_LTE_PRI_UART_TXD<OUT>====<< QCA61X4_LTE_PRI

NFC

NFC_ENABLE_IN<IN>====>> NXP_NFC_ENABLE_IN
NFC_IRQ_OUT<OUT>====<< NXP_NFC_IRQ_OUT
NFC_SCL<IN>====>> NXP_NFC_SCL
NFC_SDA<IO>====<<=> NXP_NFC_SDA
NFC_POWER_ON<IN>====>> NXP_NFC_PWR_ON
NFC_DL_REQ_IN<IN>====>> NXP_NFC_DL_REQ_IN (PN548 ONLY)

SDCARD

SDC_CLK<IN>====>> SDC_CLK
SDC_DET_N<OUT>====<< SDC_SW
SDC_CMD<IN>====>> SDC_CMD
SDC_DATA<3..0><IO>====<<=> SDC_DATA<3..0>

UIM1

UIM1_DATA<IO>====<<=> UIM1_DATA
UIM1_CLK<IN>====>> UIM1_CLK
UIM1_RST<IN>====>> UIM1_RST
UIM1_DET<OUT>====<< UIM1_DET

UIM2

UIM2_DATA<IO>====<<=> UIM2_DATA
UIM2_CLK<IN>====>> UIM2_CLK
UIM2_RST<IN>====>> UIM2_RST
UIM2_DET<OUT>====<< UIM2_DET

ANTENNA

WLAN2_4G_STREAM0_BT<IO>====<<=> BT_WLAN2_4G_S0
WLAN2_4G_STREAM1<IO>====<<=> WLAN2_4G_S1
WLAN2_4G_STREAM1_TOP<IO>====<<=> WL_RFIO_LO_S1_TOP
WLAN2_4G_STREAM1_BOT<IO>====<<=> WL_RFIO_LO_S1_BOT
WLAN_5G_STREAM0<IO>====<<=> WLAN_5G_S0
WLAN_5G_STREAM1<IO>====<<=> WLAN_5G_S1
LB_HB_DRX_NFC_ANT<IO>====<<=> LB_HB_DRX_NFC_ANT
GPS_MBDRX_WLAN2_4G_NFC_ANT<IO>====<<=> GPS_MBDRX_WLAN2_4G_NFC_ANT

APPROVALS

ENGINEER: FROEHLING

LAST MODIFIED BY: FROEHLING
Tue Feb 09 09:20:54 2016

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MOTOROLA

MOBILE DEVICES

BLOCK TITLE:

connectivity

PROJECT NAME

B 84016517001_10.cpm

REV

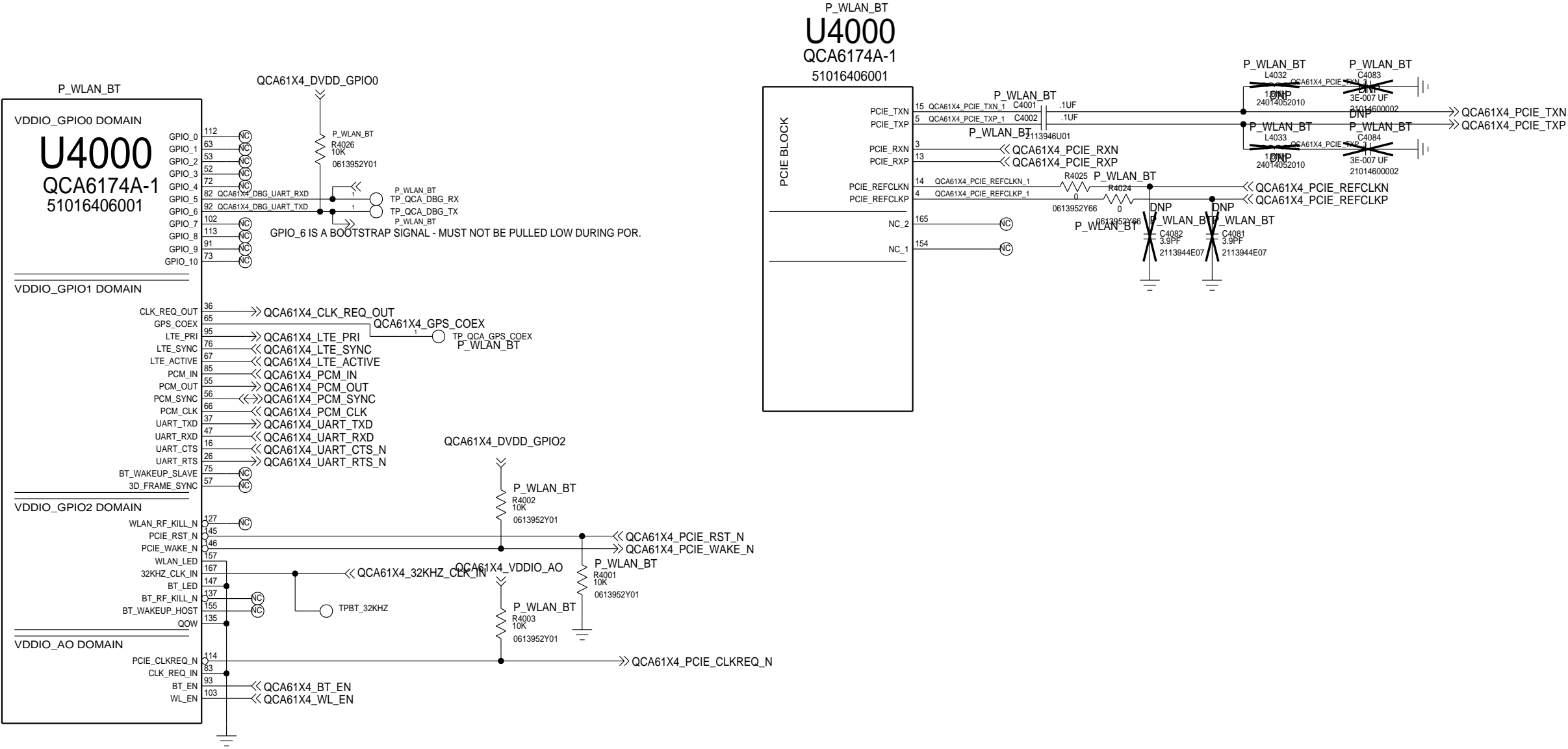
01

CAD FILE NAME:


PAGE 26 OF 88

CONN: QCA61X4A HOST I/F

REF: 4000-4099



MOTOROLA MOBILITY CONFIDENTIAL RESTRICTED-MDB TRACKED TRACKEDANDBLOCKED

APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: FROEHLING		BLOCK TITLE:	
LAST MODIFIED BY: FROEHLING Thu Mar 03 15:17:13 2016		connectivity	
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		B 84016517001_10.cpm	
		REV 01	
		CAD FILE NAME:	
		PAGE 27 OF 88	

BASED ON 80-WL420-42 REV. D

D



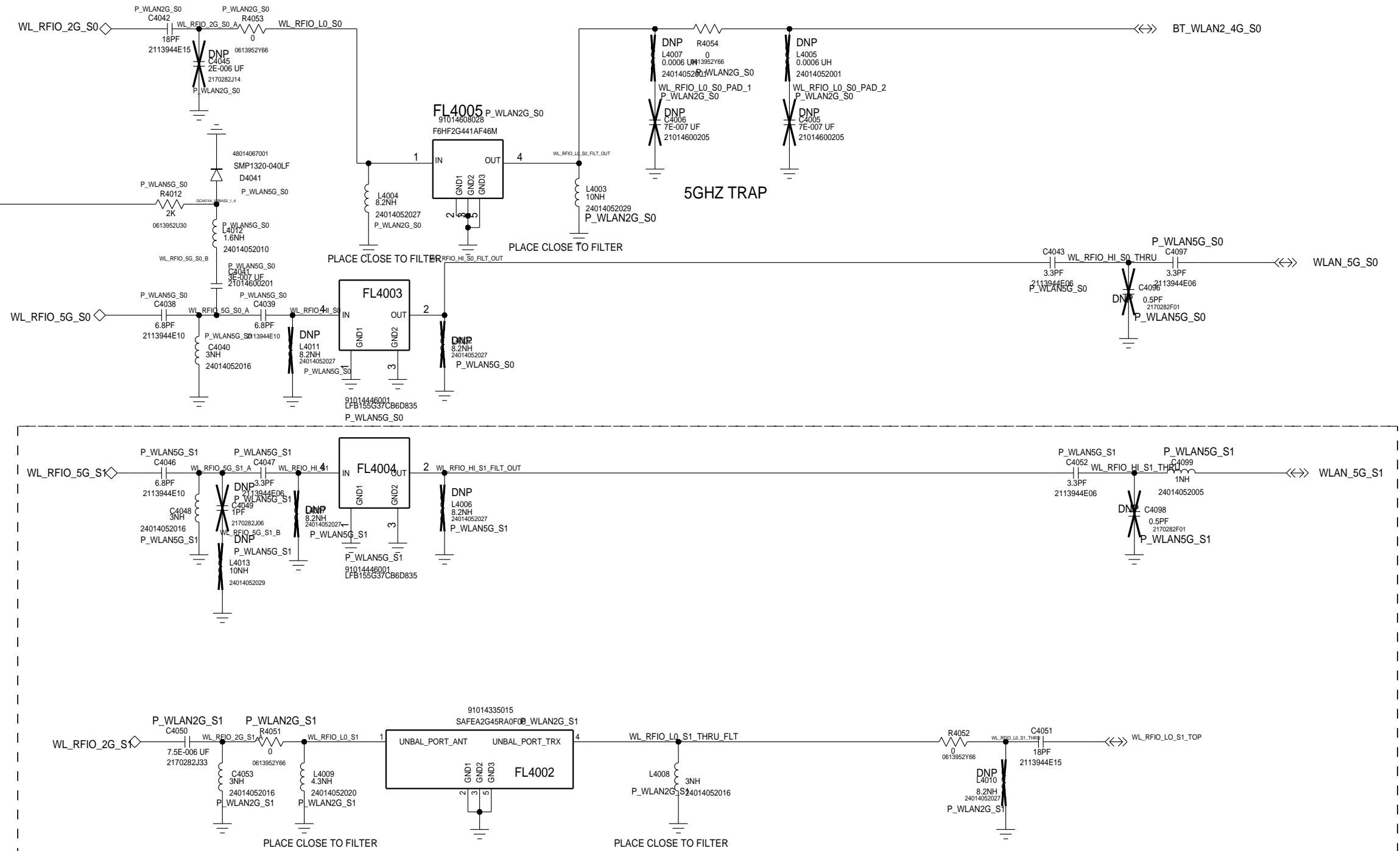
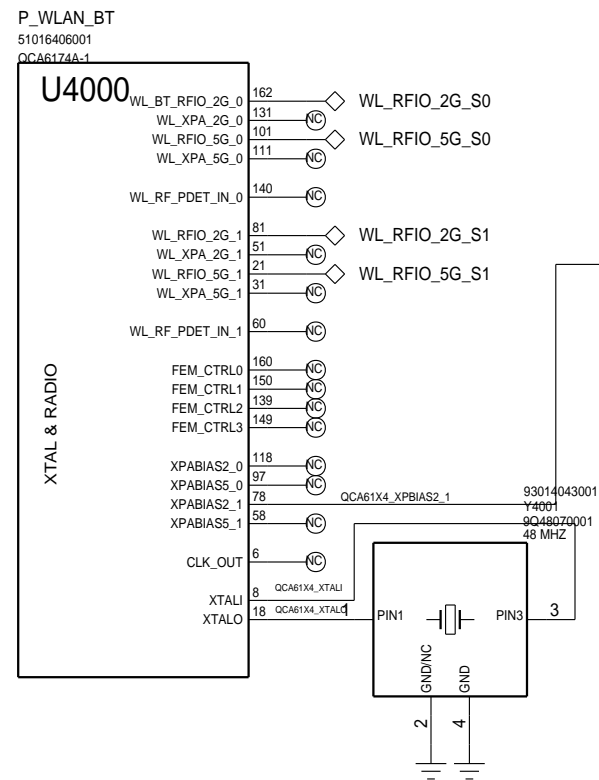
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A

CONN: QCA61X4A RADIO/XTAL
REF 4000-4099



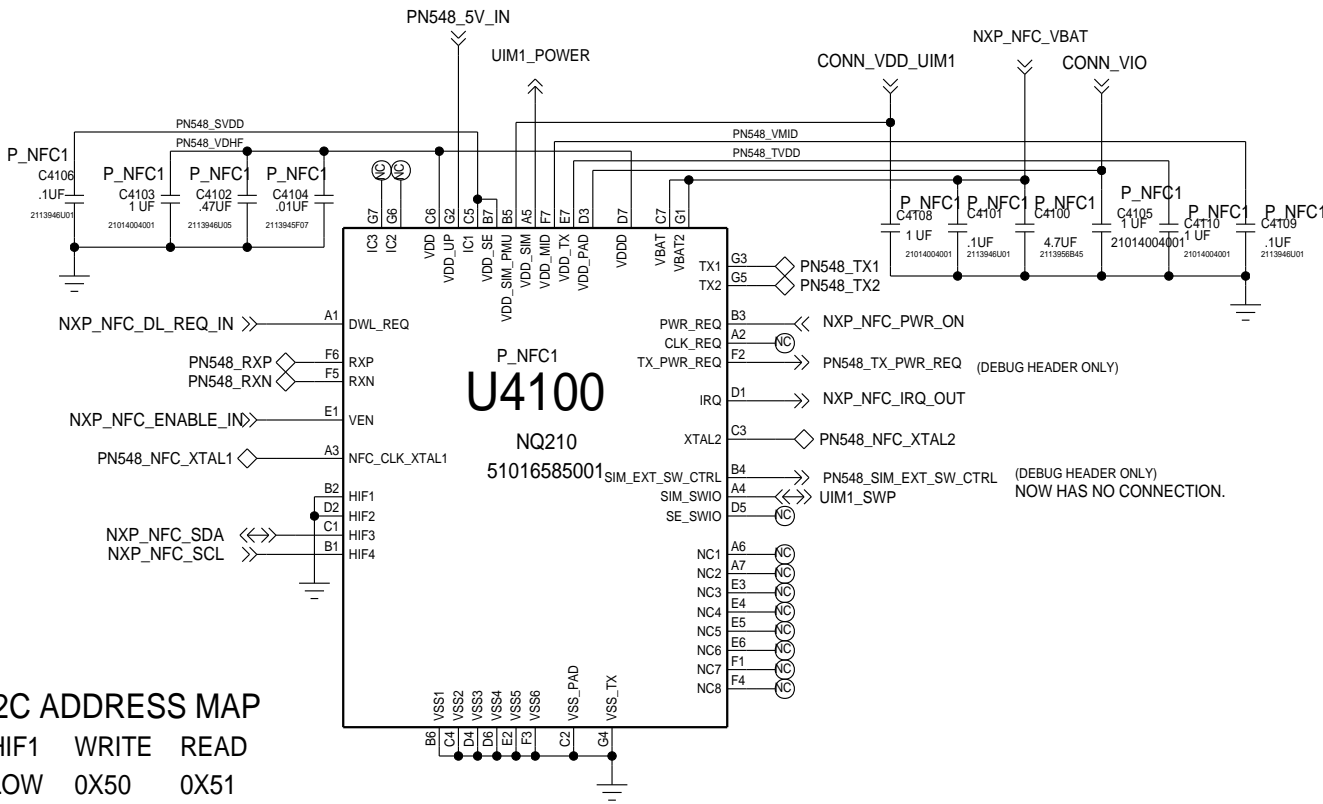
SECOND CHAIN SUPPORT FOR QCA6174A ONLY

BASED ON 80-WL420-42 REV. C / 80-WL420-43 REV. E

MOTOROLA MOBILITY CONFIDENTIAL RESTRICTED-MDB TRACKED TRACKEDANDBLOCKED			
APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: FROEHLING		BLOCK TITLE: <h1>connectivity</h1>	
LAST MODIFIED BY: FROEHLING Wed Mar 16 16:40:21 2016			
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		CAD FILE NAME:	PAGE 29 OF 88

CONN: NXP NFC

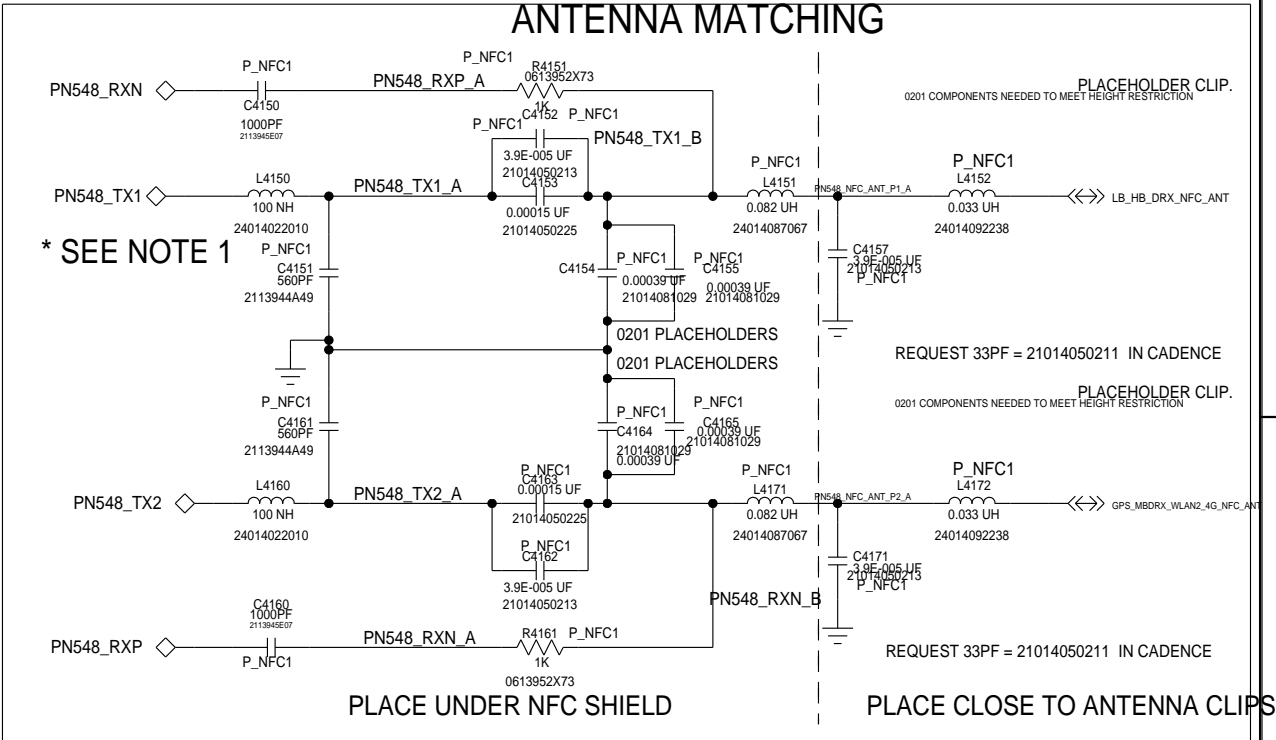
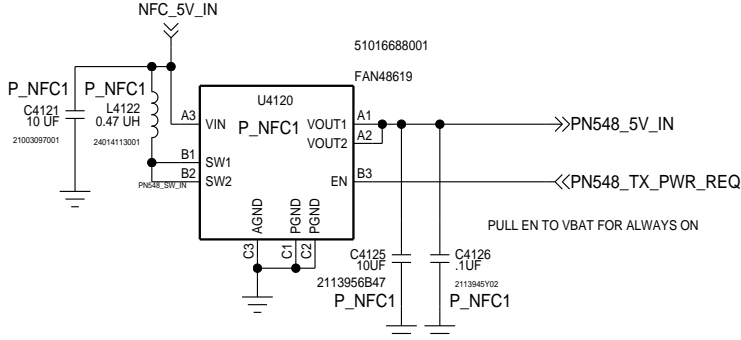
REF: 4100-4199



PN548 I2C ADDRESS MAP

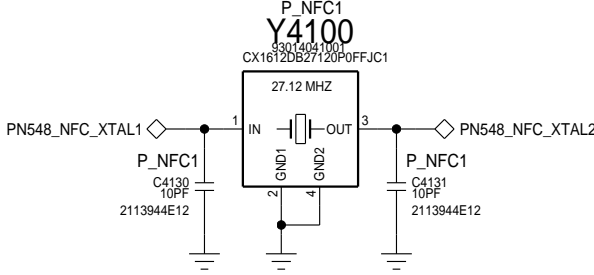
HIF2	HIF1	WRITE	READ
LOW	LOW	0X50	0X51
LOW	HIGH	0X52	0X53
HIGH	LOW	0X54	0X55
HIGH	HIGH	0X56	0X57

ALL ADDRESSES OK VS BUNKER HILL M2




REFERENCE DESIGNATOR 27.12 MHZ CRYSTAL OSCILLATOR 19.2 MHZ EXTERNAL CLOCK

C4130	PLACE	DNI
C4131	PLACE	DNI
C4190	DNI	PLACE
Y4100	PLACE	DNI

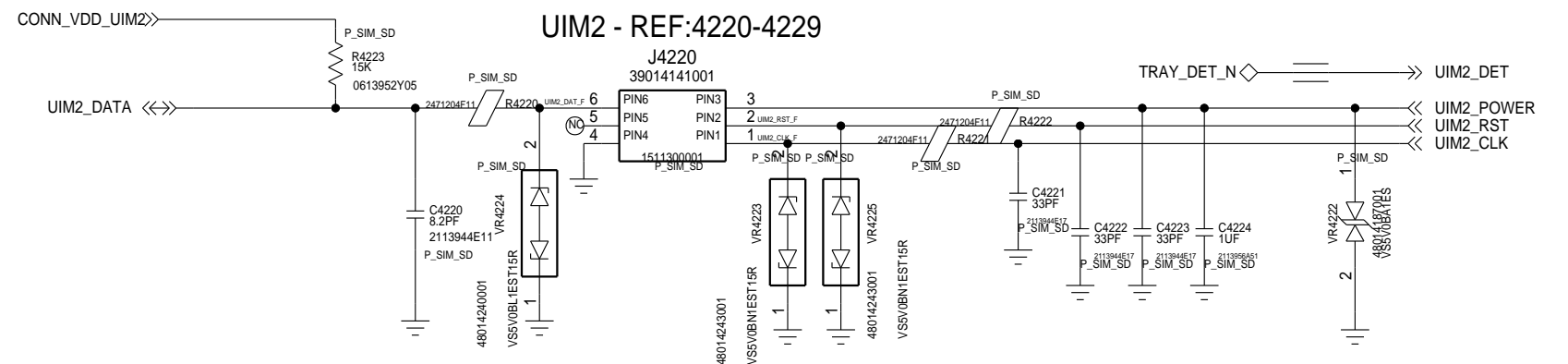
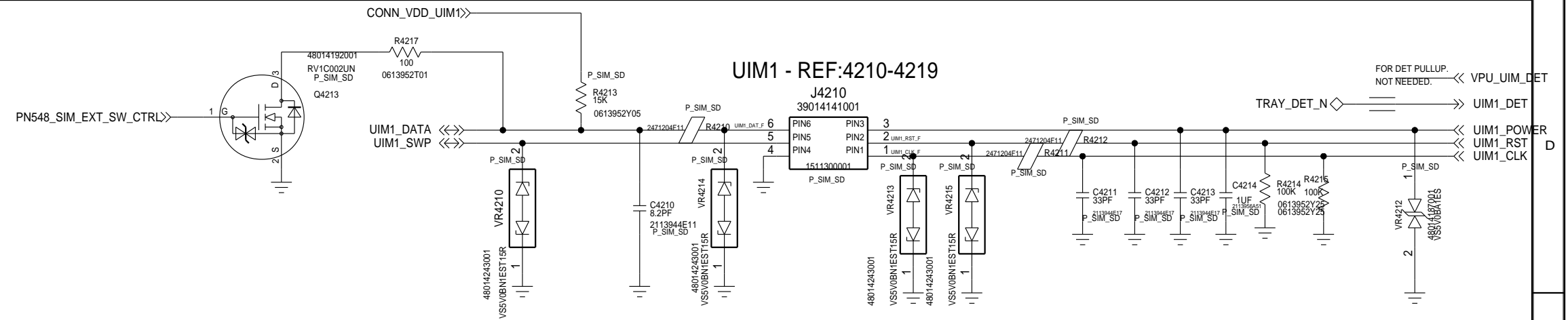


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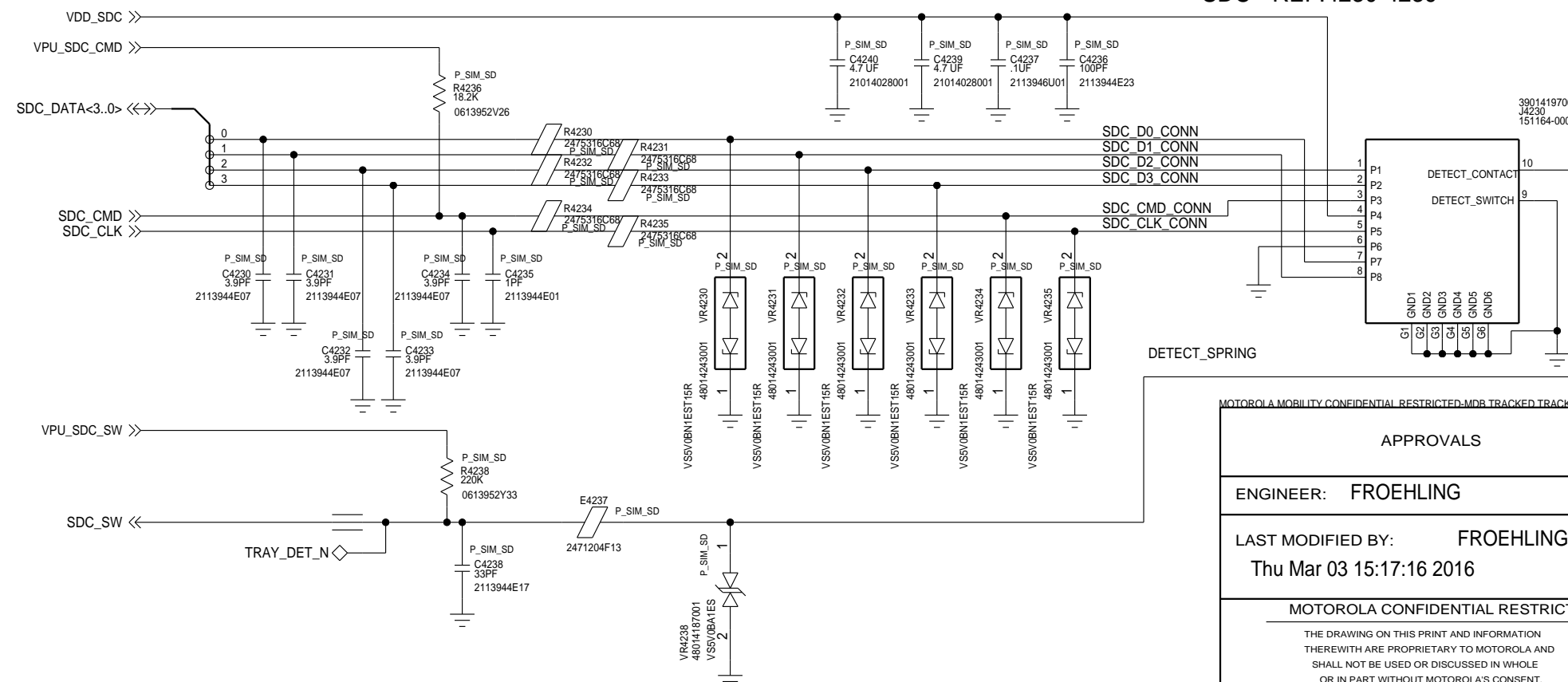
1. L4150W AND L4160W PLACEMENT MUST MINIMIZE MUTUAL INDUCTIVE COUPLING, OR CIRCUIT'S WIRELESS FUNCTION WILL BE SEVERELY IMPAIRED.

APPROVALS		<div> MOTOROLA</div> <div>MOBILE DEVICES</div>		
ENGINEER: FROEHLING		BLOCK TITLE: connectivity		
FULLY IMPAIRED. LAST MODIFIED BY: FROEHLING Thu Mar 03 15:17:15 2016				
MOTOROLA CONFIDENTIAL RESTRICTED				
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		CAD FILE NAME:		PAGE 30 OF 88


CONN: UIM1 / UIM2 / SD
REF:4200-4299



SDC - REF:4230-4239



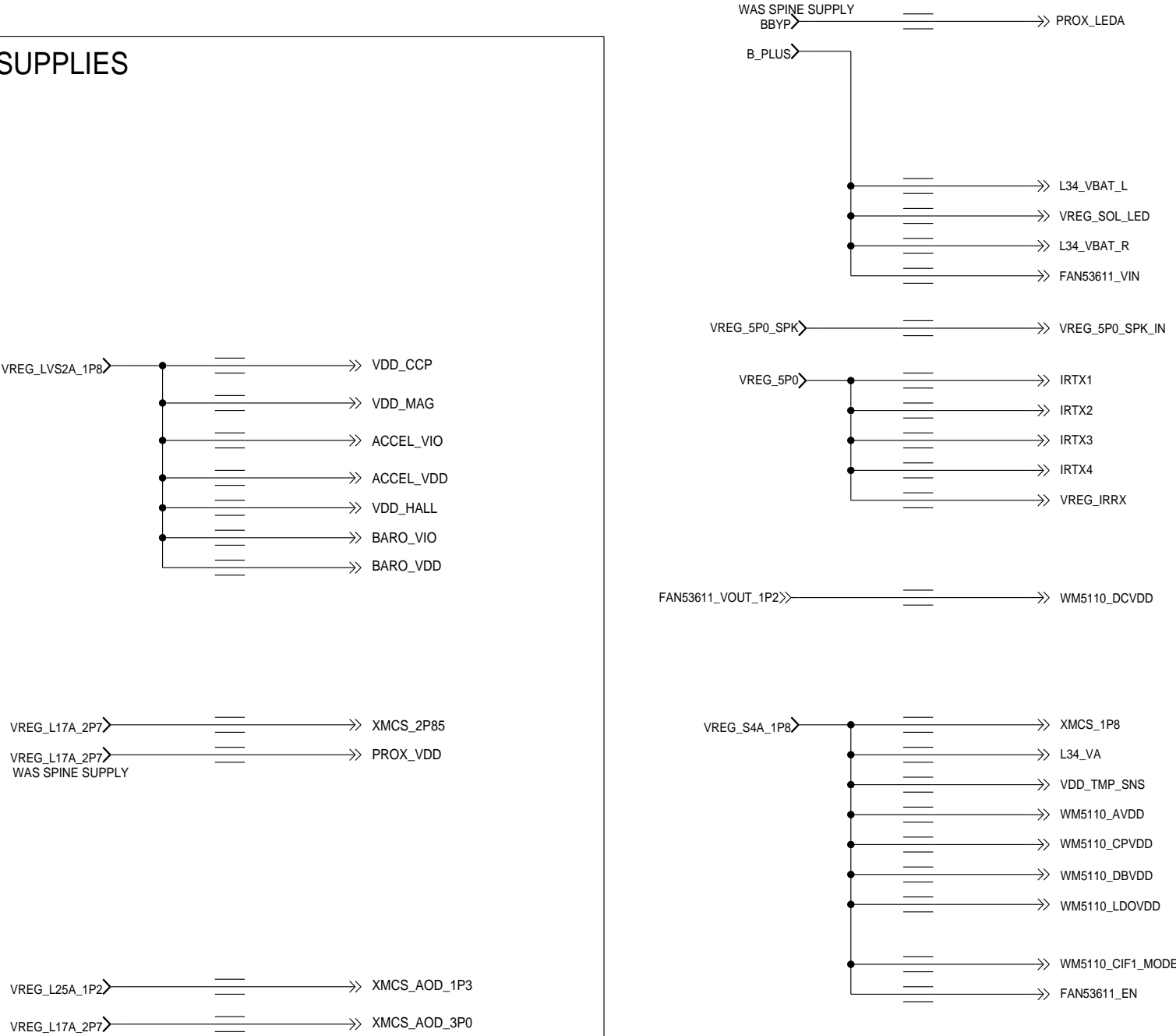
TRAY INSERTED = SWITCH CLOSE = LOGIC L
TRAY REMOVED = SWITCH OPEN = LOGIC H


APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: FROEHLING		BLOCK TITLE: <h1>connectivity</h1>	
LAST MODIFIED BY: FROEHLING Thu Mar 03 15:17:16 2016			
MOTOROLA CONFIDENTIAL RESTRICTED		PROJECT NAME B 84016517001_10.cpm	REV 01
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XMCS: POWER

REF 6000-6999

SUPPLIES

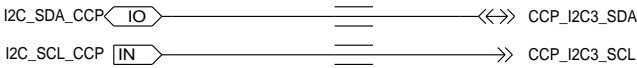
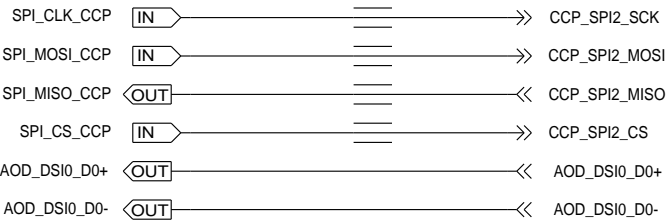
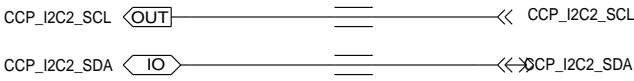
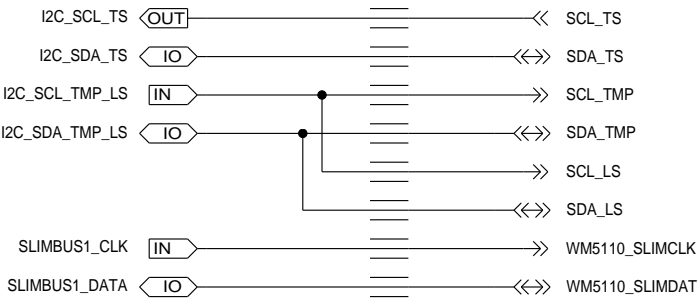


APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: NATE CONNELL		BLOCK TITLE:	
LAST MODIFIED BY: NATE CONNELL Thu Mar 03 15:17:08 2016		xmcs	
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		REV 01	
		CAD FILE NAME:	
		PAGE 32 OF 88	

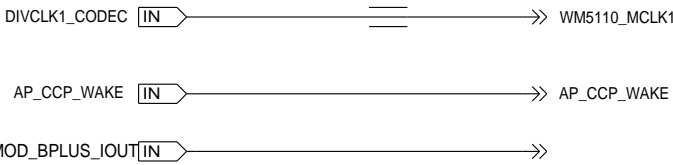
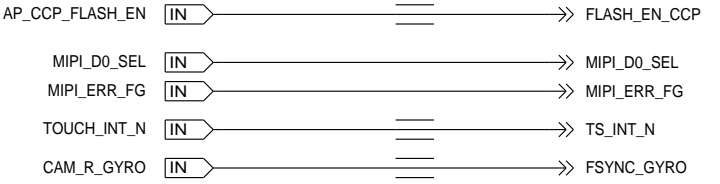
XMCS: PORTS

REF 6000-6999

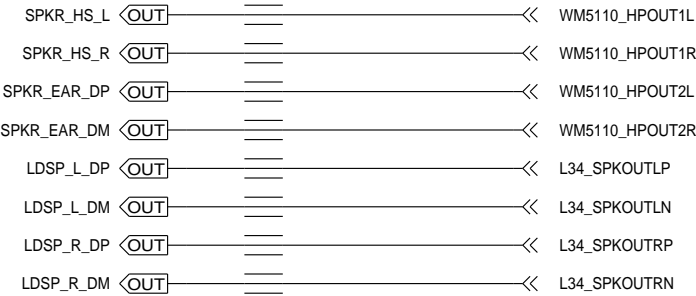
INTERFACES



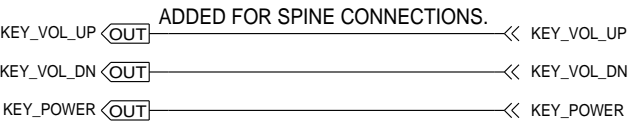
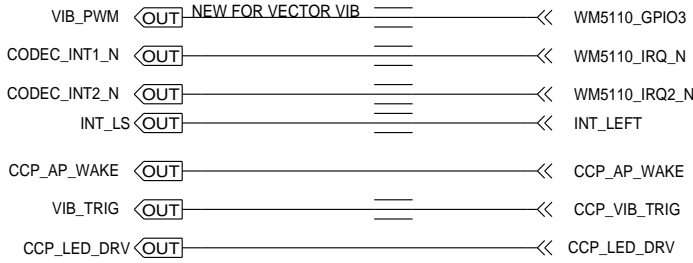
INPUTS



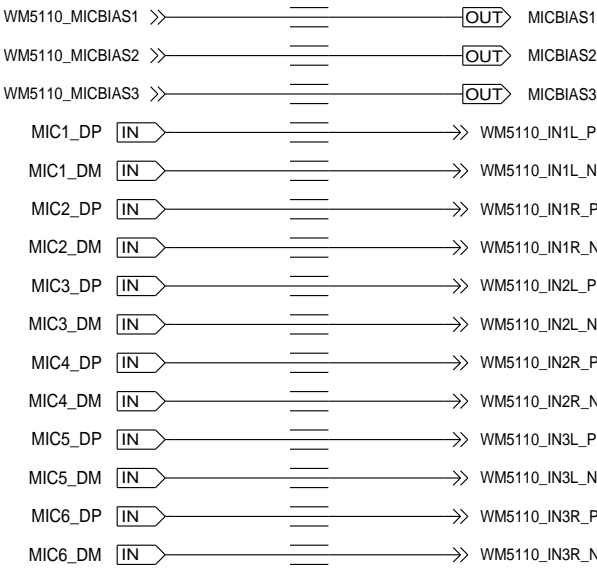
SPEAKER PATHS



OUTPUTS



MICROPHONES



APPROVALS

ENGINEER: NATE CONNELL

LAST MODIFIED BY: NATE CONNELL
Wed Feb 10 10:09:03 2016

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BLOCK TITLE:

xmcs

PROJECT NAME
B 84016517001_10.cpm

CAD FILE NAME:

REV
01

REF: 6000-6049



TPS DELETED FOR PORTABLE. ADD BACK FOR WING.

AP SPI

PAGE 34 OF 88

REF: 6100-6199

I2C ADDR:0X39

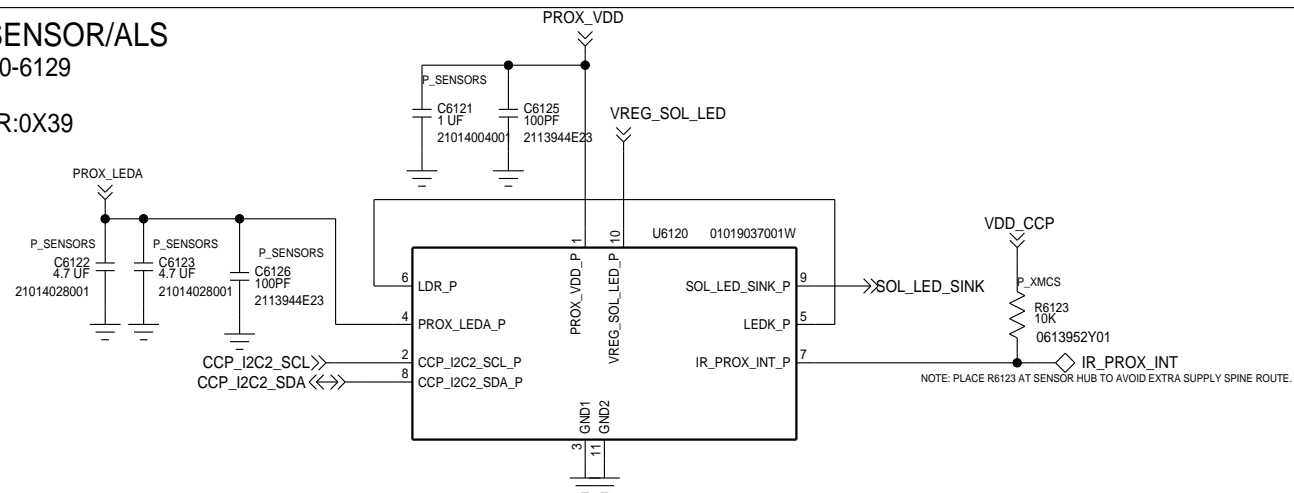
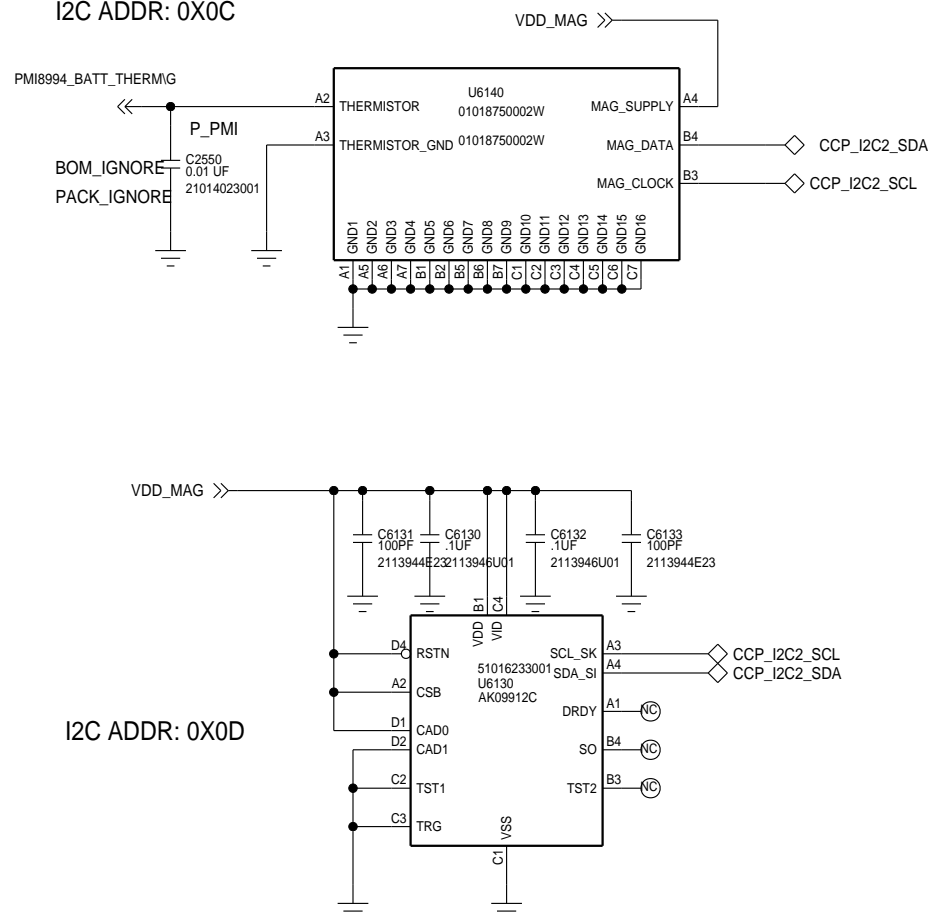
[illegible]

Diagram illustrating the connection of the U6160 P_Sensors module to the system. The module is connected to the VDD_TMP_SNS supply and the P_SENSORS signal line. The module's pins are labeled A0, A1, A2, B0, B1, B2, C0, and C1. The module is identified as U6160 and TMP108.

I2C ADDR: 0X0C



ACCEL_VDD >> << ACCEL_VIO

P_SENSORS

C6153 100PF

2113944E23

C6151 .1UF

2113946U01

P_SENSORS

C6152 .1UF

2113946U01

C6154 100PF

2113944E23

51016138002

U8150

BM150

P_SENSORS

VDD 8

VDDIO 5

CSB 12

OCSB 10

SDO 1

OSDO 11

INT1 4

INT2 9

GND 7

GNDIO 6

ASCSX 3

SCX 2

AUX_CL

AUX_DA

CCP_I2C2_SCL 13

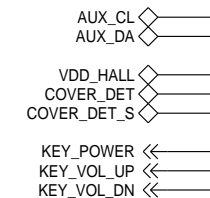
CCP_I2C2_SDA 14

ACCEL_INT


FSYNC_GYRO

NOTE: SPINE BRD DELETED

U9999 (01018645001W) XMCS BLK DELETED



REF:6110-6119 DELETED

MOTOROLA MOBILITY CONFIDENTIAL RESTRICTED-MDB TRACKED TRACKEDANDBLOCKED		
JOHN GORSICA/NATE CONNELL APPROVALS	 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA	BLOCK TITLE: xmcs	
LAST MODIFIED BY: MOTOROLA Fri Mar 04 10:10:47 2016		
MOTOROLA CONFIDENTIAL RESTRICTED	PROJECT NAME B 84016517001_10.cpm BUNKER HILL REV 01	
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XMCS: IR GESTURES

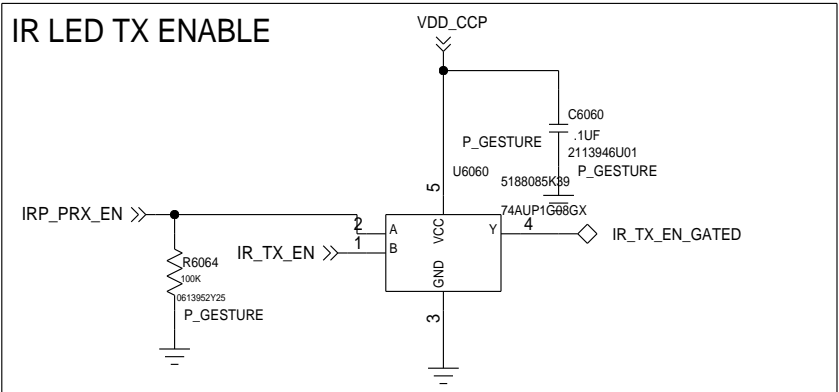
REF 6500-6549

IR TX 3
LOWER LEFT

IR TX 2
LOWER RIGHT

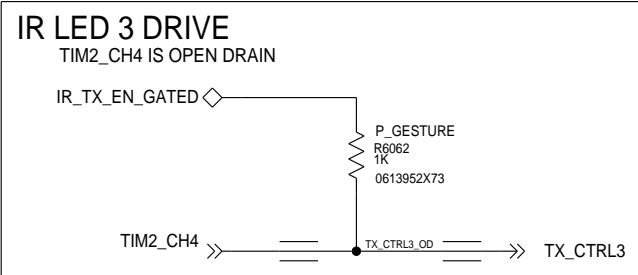
IR TX 1
UPPER LEFT

IR LED TX ENABLE



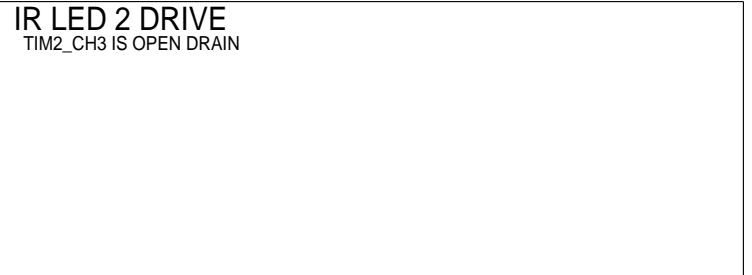
IR LED 3 DRIVE

TIM2_CH4 IS OPEN DRAIN



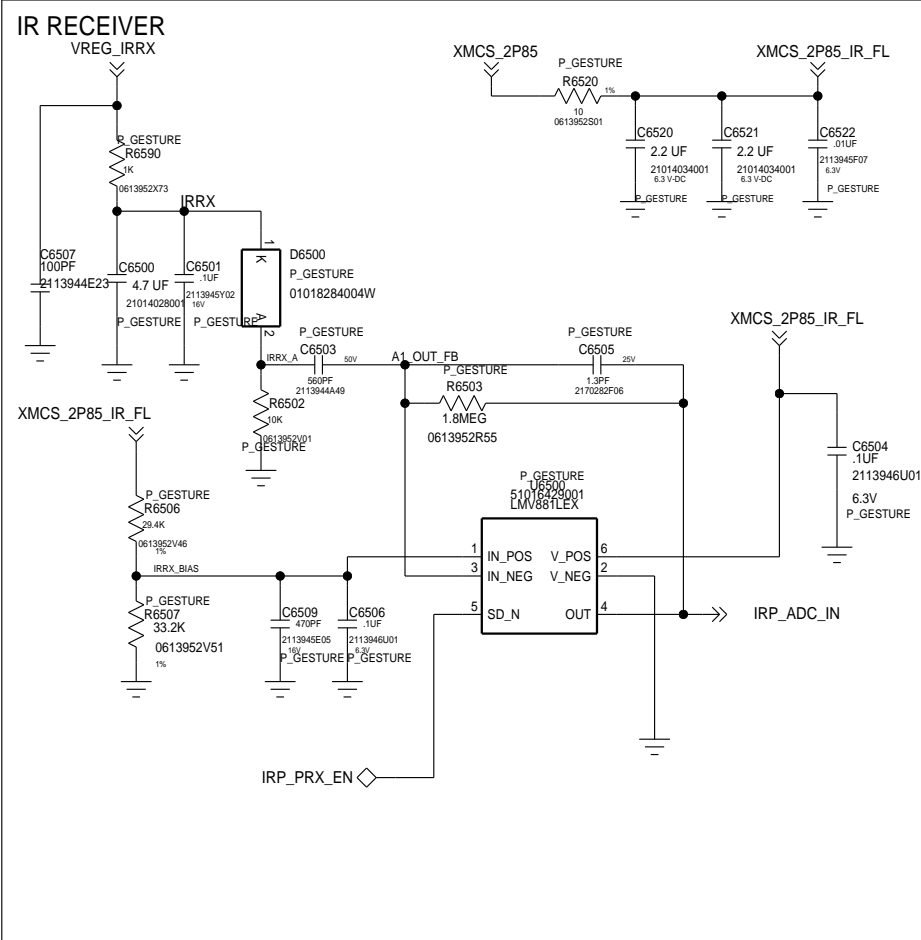
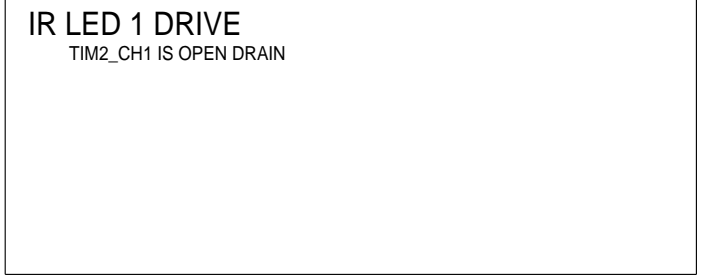
IR LED 2 DRIVE

TIM2_CH3 IS OPEN DRAIN



IR LED 1 DRIVE

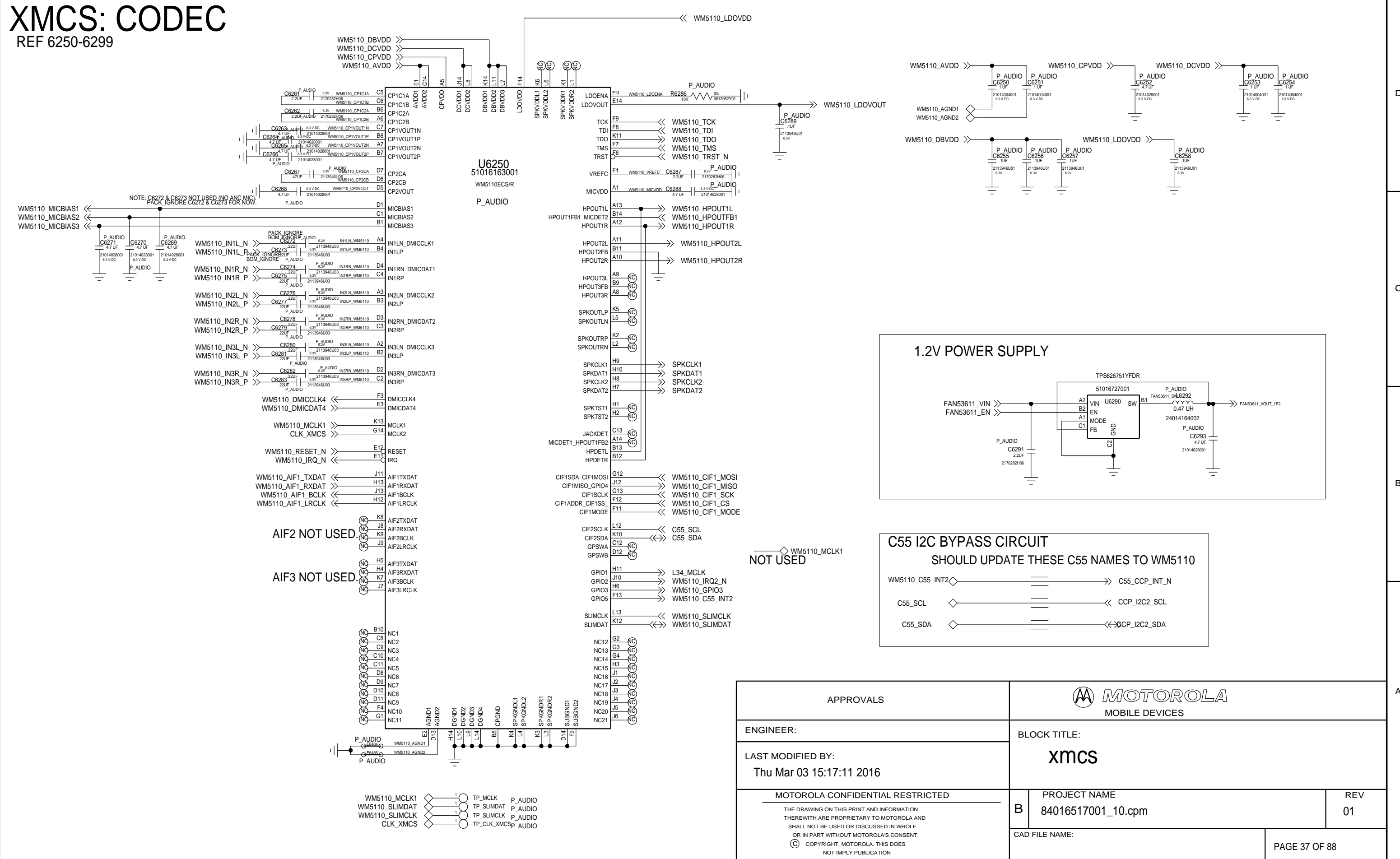
TIM2_CH1 IS OPEN DRAIN




NOTE: CAUSE TX1 TO FIRE FOR TX3 AS WELL.

MOTOROLA MOBILITY CONFIDENTIAL RESTRICTED-MDB TRACKED TRACKEDANDBLOCKED		MOTOROLA MOBILE DEVICES	
APPROVALS		BLOCK TITLE:	
ENGINEER: MATT MOTTIER		xmcs	
LAST MODIFIED BY: UDI ELRAN Thu Mar 03 15:17:10 2016		PROJECT NAME	
MOTOROLA CONFIDENTIAL RESTRICTED		REV	
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CAD FILE NAME:		PAGE 36 OF 88	

XMCS: CODEC



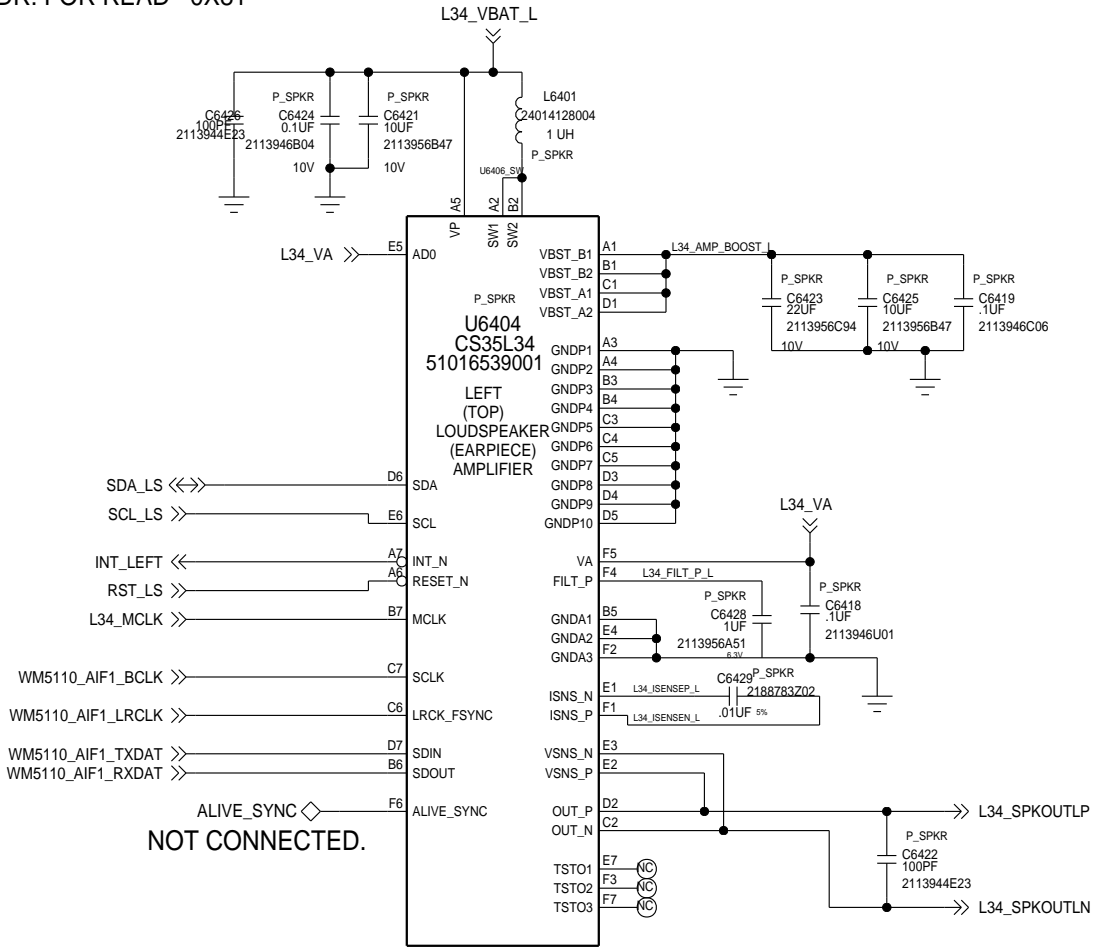
APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER:		BLOCK TITLE: <h1>xmcs</h1>	
LAST MODIFIED BY: Thu Mar 03 15:17:11 2016			
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		CAD FILE NAME:	PAGE 37 OF 88

XMCS: LOUD SPEAKER

REF 6400-6499

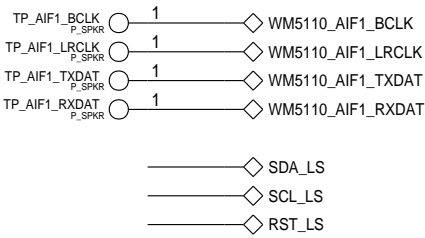
CIRRUS_LEFT (TOP) SPEAKER AMP

I2C ADDR: FOR WRITE 0X80
I2C ADDR: FOR READ 0X81




CIRRUS_RIGHT SPEAKER AMP

I2C ADDR: FOR WRITE 0X82
I2C ADDR: FOR READ 0X83



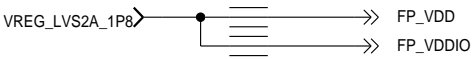
MOTOROLA MOBILITY CONFIDENTIAL RESTRICTED-MDB TRACKED TRACKEDANDBLOCKED

APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER:		BLOCK TITLE:	
LAST MODIFIED BY: Thu Mar 03 15:17:11 2016		xmcs	
MOTOROLA CONFIDENTIAL RESTRICTED 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		B PROJECT NAME 84016517001_10.cpm	REV 01
		CAD FILE NAME:	
		PAGE 38 OF 88	

USR: PORTS

REF: 800-999

SUPPLIES




INTERFACES



GPIO - INPUT

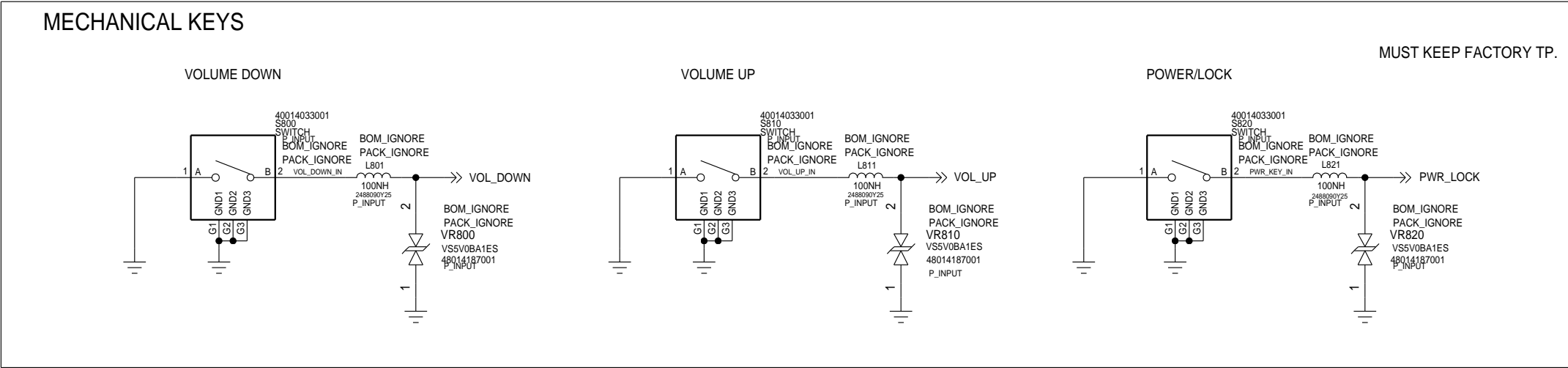
GPIO - OUTPUT



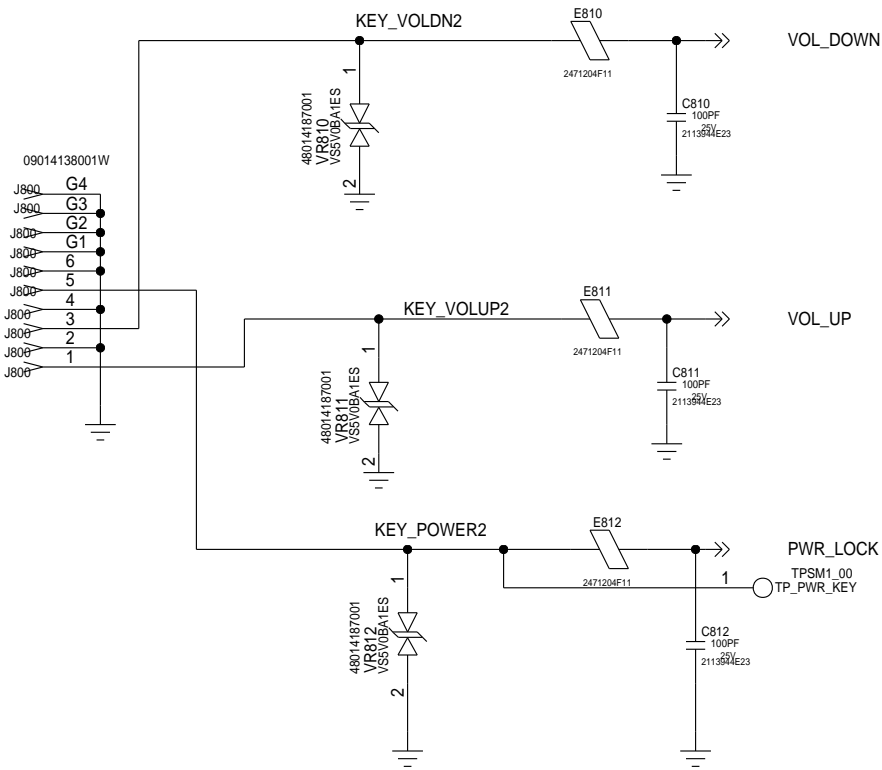
APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: NATE CONNELL		BLOCK TITLE: user_input	
LAST MODIFIED BY: NATE CONNELL Thu Mar 03 15:17:06 2016			
<div>MOTOROLA CONFIDENTIAL RESTRICTED</div> <div>THE DRAWING ON THIS PRINT AND INFORMATION THEREWITH ARE PROPRIETARY TO MOTOROLA AND SHALL NOT BE USED OR DISCUSSED IN WHOLE OR IN PART WITHOUT MOTOROLA'S CONSENT. © COPYRIGHT, MOTOROLA. THIS DOES NOT IMPLY PUBLICATION</div>		PROJECT NAME B 84016517001_10.cpm	REV 01
		CAD FILE NAME: <div></div>	PAGE 39 OF 88


USR: INPUT

REF: 800-899



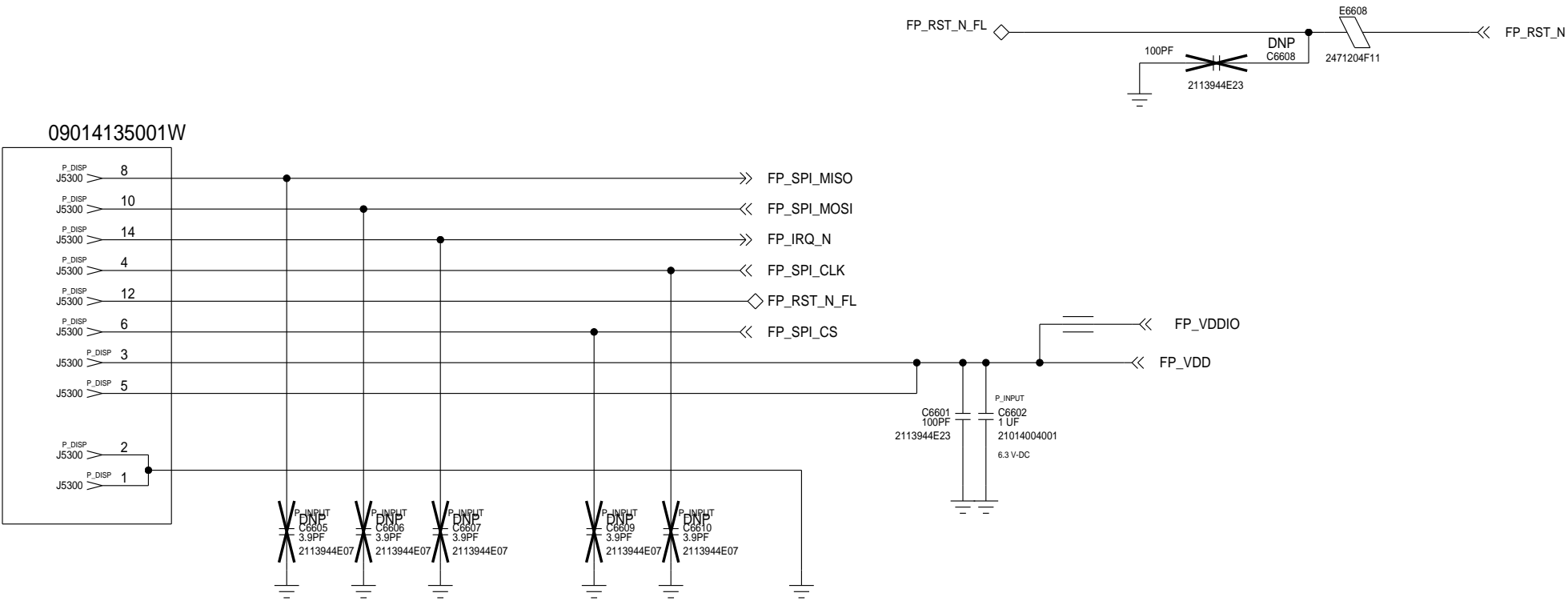
SIDEKEY FLEX CONN



APPROVALS		<div></div> <div>MOTOROLA</div> <div>MOBILE DEVICES</div>	
ENGINEER: NATE CONNELL		BLOCK TITLE: user_input	
LAST MODIFIED BY: NATE CONNELL Thu Mar 03 15:17:07 2016			
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		<div>CAD FILE NAME:</div> <div>PAGE 40 OF 88</div>	

USR: FPC

REF: 6600 - 6699



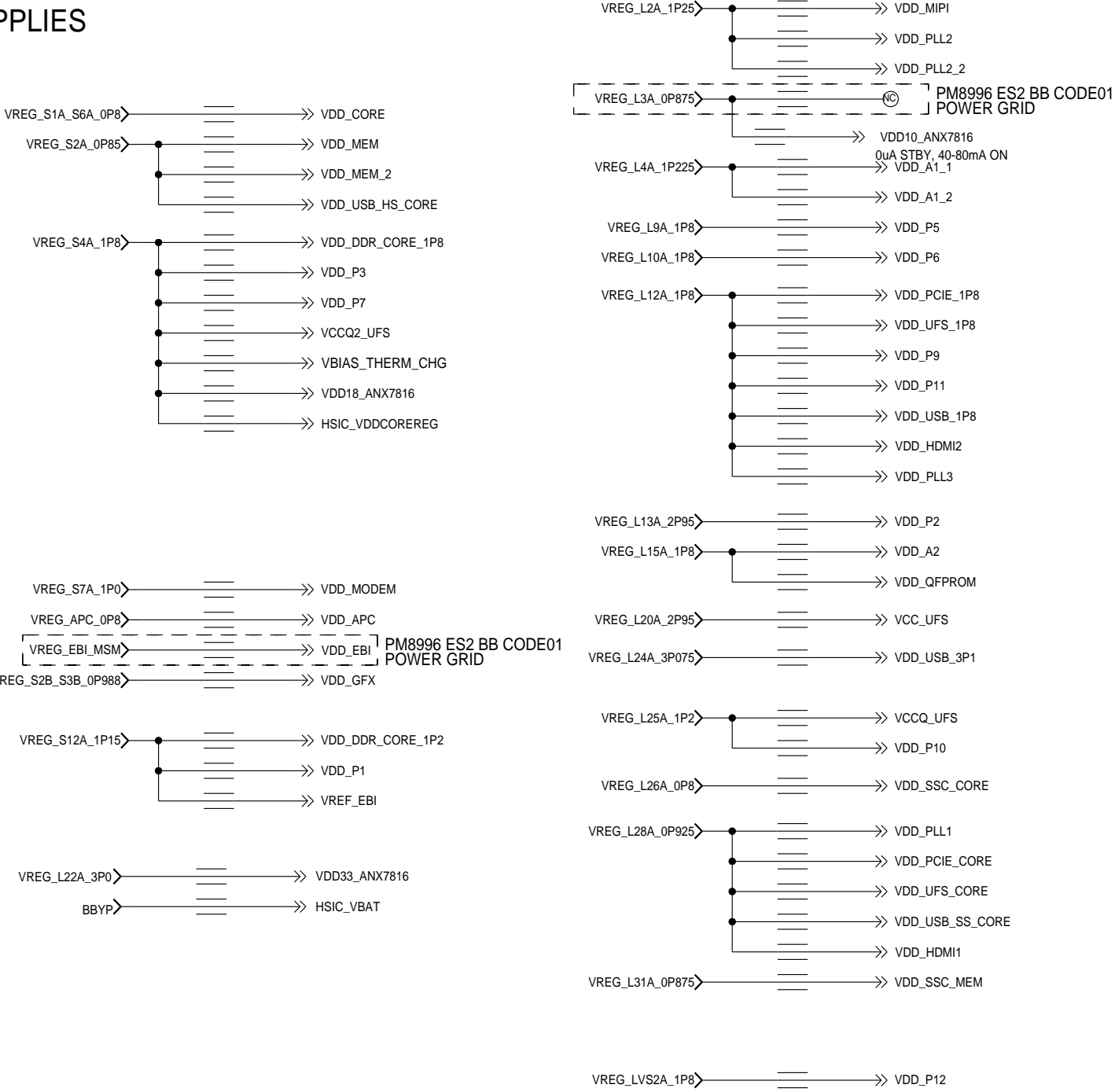
NOTE: FPC CONNECTOR USES PINS FROM THE DISPLAY CONNECTOR.
SEE THE "DISP: CONNECTOR" PAGE FOR THE REMAINING PINS.


APPROVALS		MOTOROLA MOBILE DEVICES	
ENGINEER: NATE CONNELL		BLOCK TITLE:	
LAST MODIFIED BY: NATE CONNELL Thu Mar 03 15:17:07 2016		user_input	
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		B 84016517001_10.cpm	REV 01
		CAD FILE NAME:	
		PAGE 41 OF 88	

MSM8996: POWER

REFDES: 1200-1299

SUPPLIES



APPROVALS		<div> MOTOROLA</div> <div>MOBILE DEVICES</div>	
ENGINEER: NATE CONNELL		BLOCK TITLE: ap_pmic	
LAST MODIFIED BY: NATE CONNELL Thu Mar 03 15:16:51 2016			
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		CAD FILE NAME:	PAGE 42 OF 88

REFDES: 1000-1099

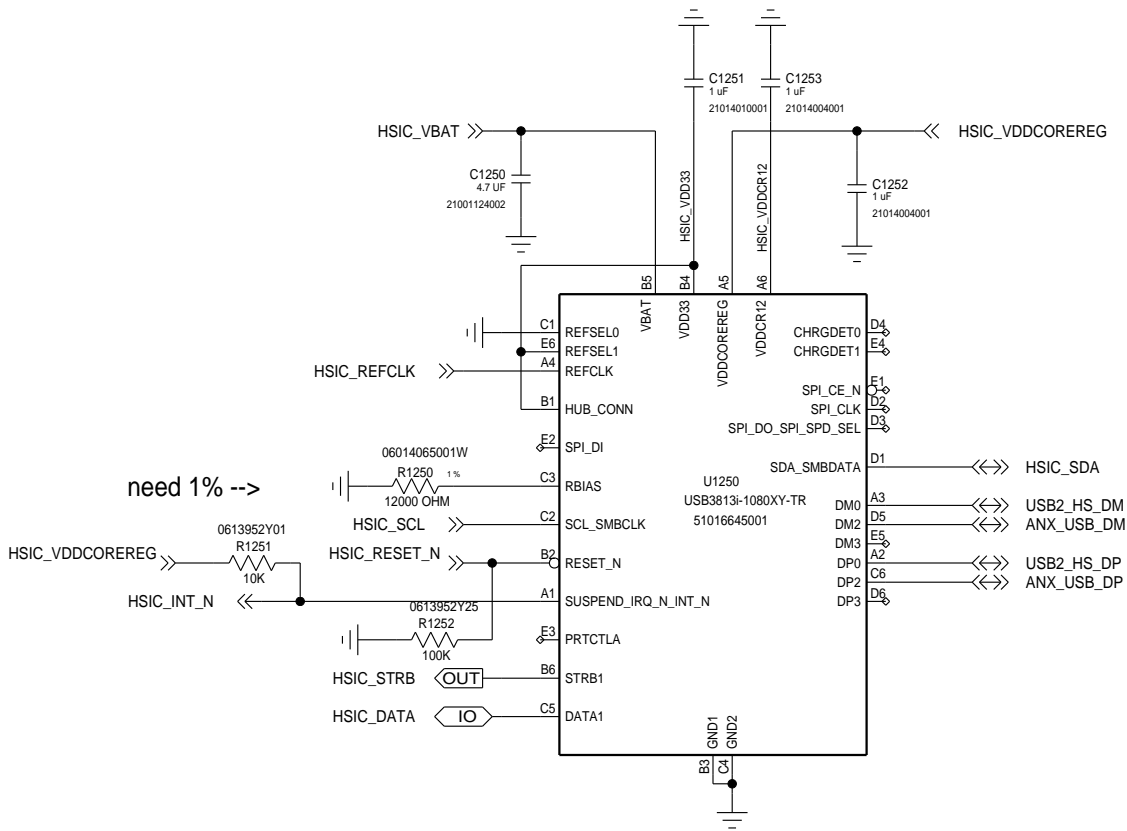



REFDES: 1030-1039

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MSM8996: HSIC

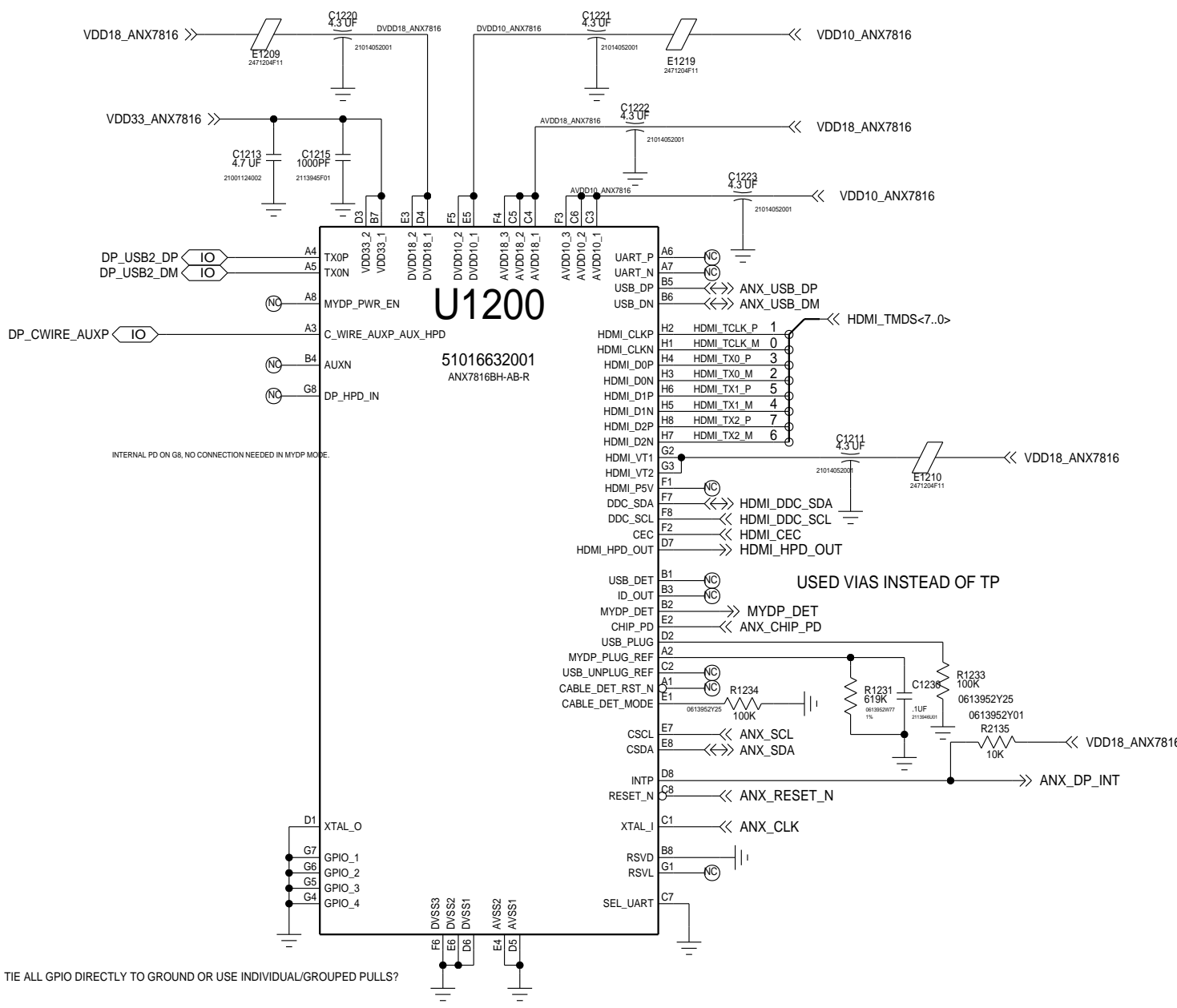
REFDES: 1200-1239



APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: Froehling		BLOCK TITLE:	
LAST MODIFIED BY: Thu Mar 03 15:16:54 2016		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 84016517001_10.cpm	REV 01
		CAD FILE NAME:	
		PAGE 45 OF 88	

MSM8996: HDMI->DP INTERFACE

REFDES: 1200-1239
7-BIT I2C ADDR: 0x50



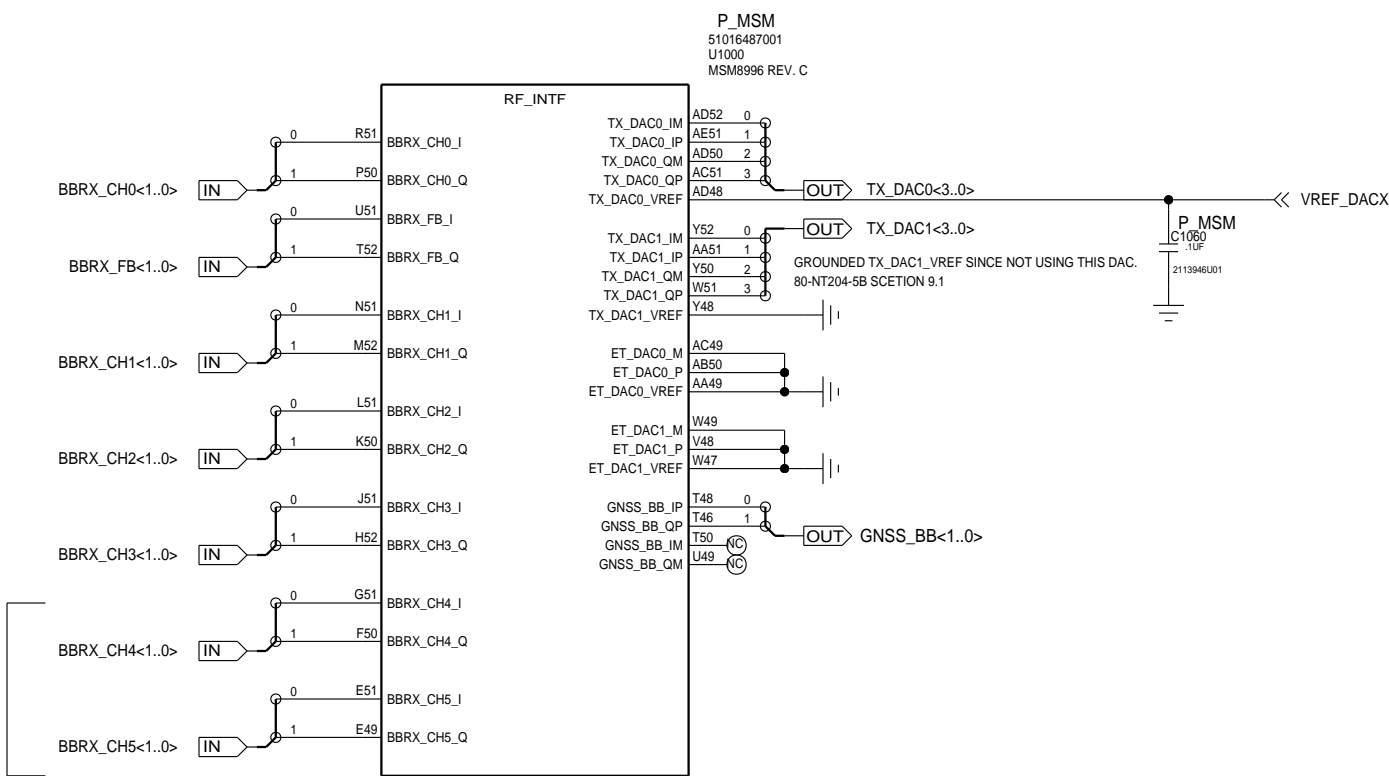
Resolution	Pixel Clock Freq. (MHz)	Power Consumption					
		Typical Values					
		AVDD33_IN (mAmps)	AVDD18 (mAmps)	DVDD18 (mAmps)	AVDD10 (mAmps)	DVDD10 (mAmps)	Power (mWatts)
Standby	N/A	10.63 ¹	0.9 ¹	0.3 ¹	0	0	42 ¹
480p60	27	2.5	40	0	25	15	125
720p60	74.25	2.5	45	0	30	20	145
1080p60	148.5	2.5	50	0	35	30	165
1080p60 30bpp	185.6	2.5	50	0	40	35	175
4K2K	297	2.5	55	0	45	40	200
6.75G							

1. Standby power consumption values are μ Amps (μ A) and μ Watts (μ W).

APPROVALS		MOTOROLA MOBILE DEVICES	
ENGINEER: Froehling		BLOCK TITLE:	
LAST MODIFIED BY: Thu Mar 03 15:16:54 2016		ap_pmic	
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		REV 01	
		CAD FILE NAME:	
		PAGE 46 OF 88	


MSM8996: RF INTERFACE

REFDES: 1040-1049

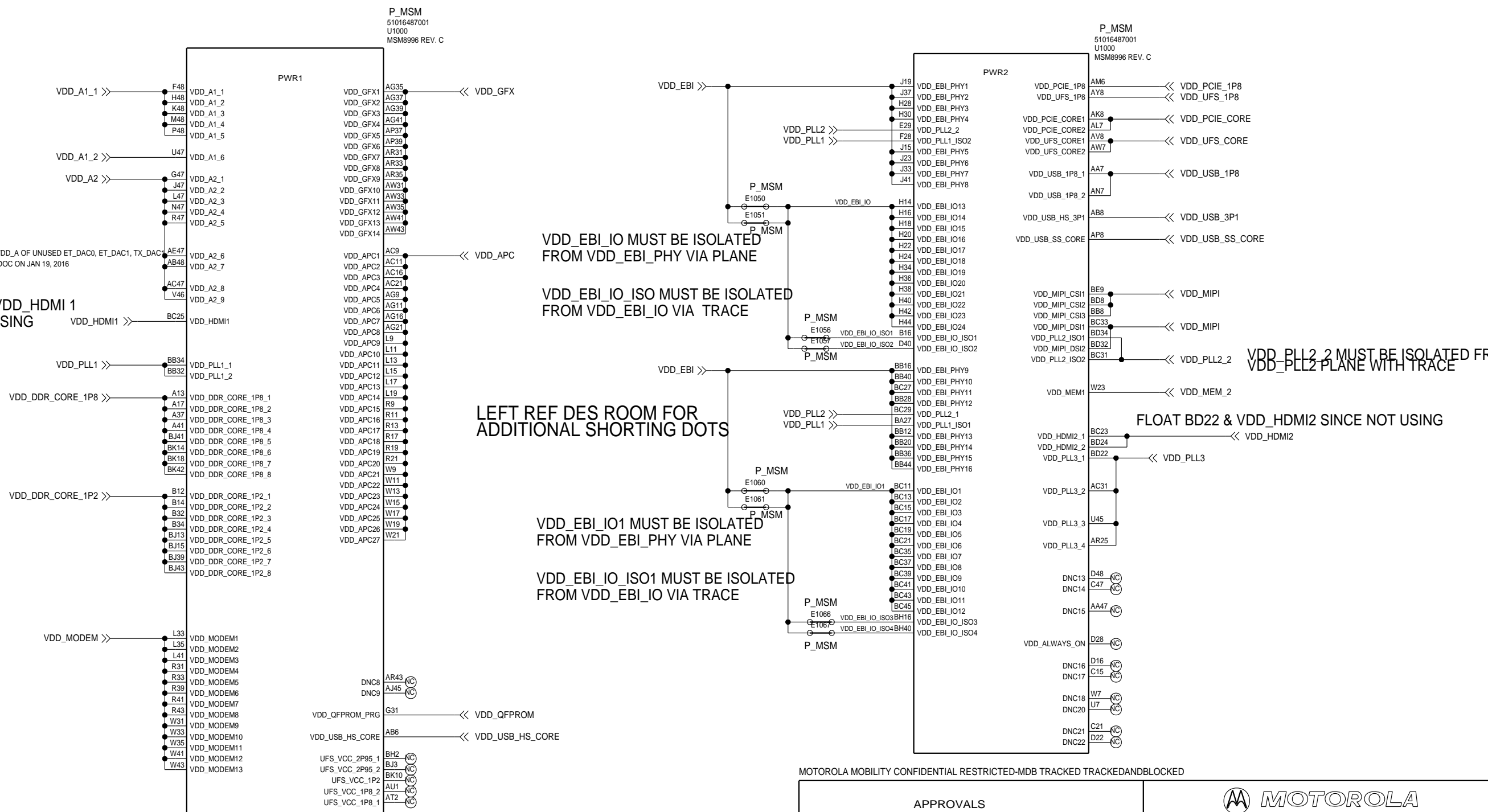


BASED ON 80-NT204-41 REV. B

MOTOROLA MOBILITY CONFIDENTIAL RESTRICTED-MDB TRACKED TRACKEDANDBLOCKED


APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER:		BLOCK TITLE:	
LAST MODIFIED BY: Thu Mar 03 15:16:55 2016		ap_pmic	
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		B 84016517001_10.cpm	REV 01
		CAD FILE NAME:	
		PAGE 47 OF 88	

MSM8996: POWER 1

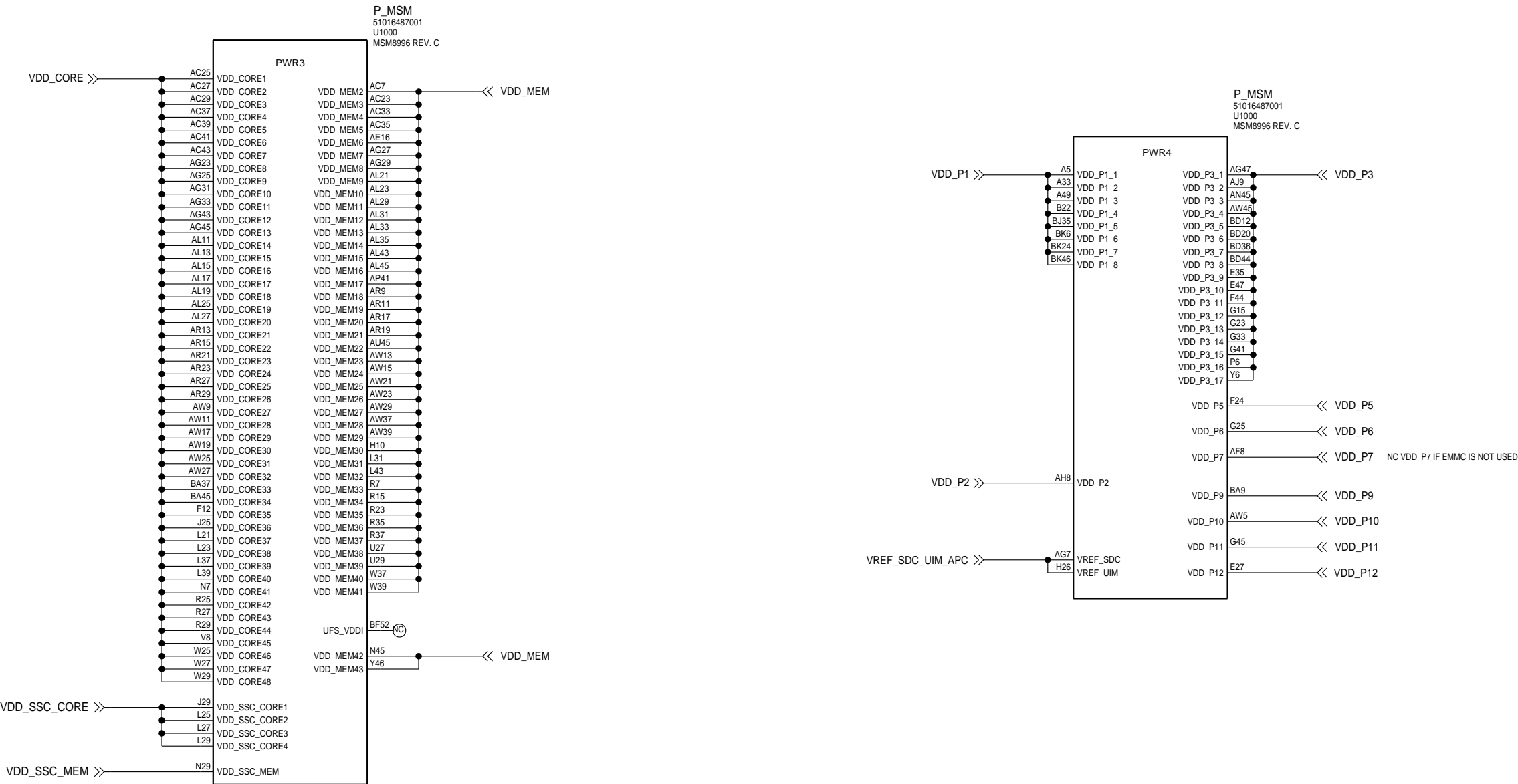


BASED ON 80-NT204-41 REV. B

MOTOROLA MOBILITY CONFIDENTIAL RESTRICTED-MDB TRACKED TRACKEDANDBLOCKED


APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA		BLOCK TITLE:	
LAST MODIFIED BY: MOTOROLA Thu Jan 21 16:45:54 2016		ap_pmic	
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		84016517001_10.cpm	
		REV 01	
		CAD FILE NAME:	
		PAGE 48 OF 88	

MSM8996: POWER 2




BASED ON 80-NT204-41 REV. B

MOTOROLA MOBILITY CONFIDENTIAL RESTRICTED-MDB TRACKED TRACKEDANDBLOCKED

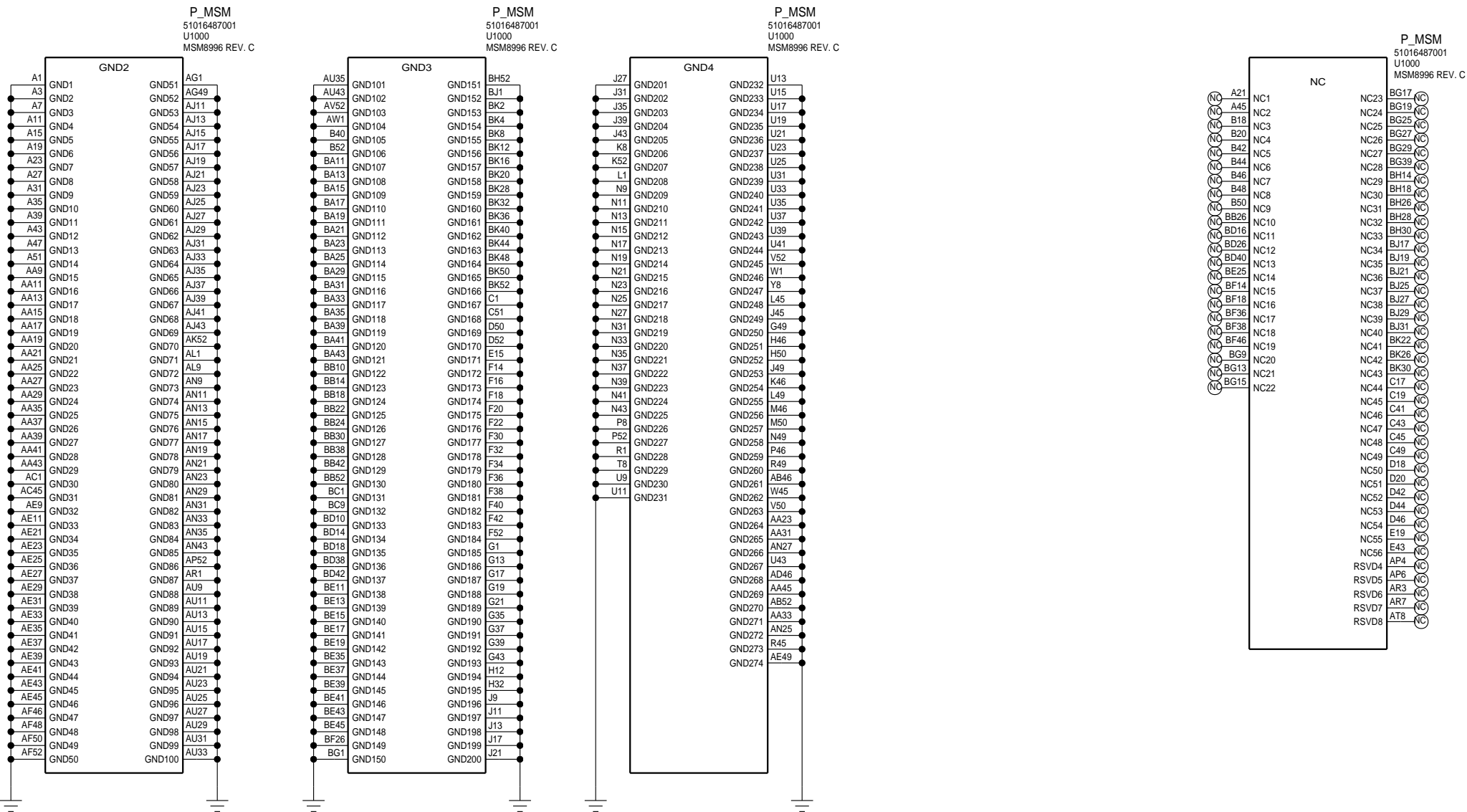
APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MOTOROLA		BLOCK TITLE:	
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MOTOROLA CONFIDENTIAL RESTRICTED <small>THE DRAWING ON THIS PRINT AND INFORMATION THEREWITH ARE PROPRIETARY TO MOTOROLA AND SHALL NOT BE USED OR DISCUSSED IN WHOLE OR IN PART WITHOUT MOTOROLA'S CONSENT. © COPYRIGHT, MOTOROLA. THIS DOES NOT IMPLY PUBLICATION</small>		PROJECT NAME	
		84016517001_10.cpm	
		REV 01	
		CAD FILE NAME:	
		PAGE 49 OF 88	

REFDES: 1300-1599

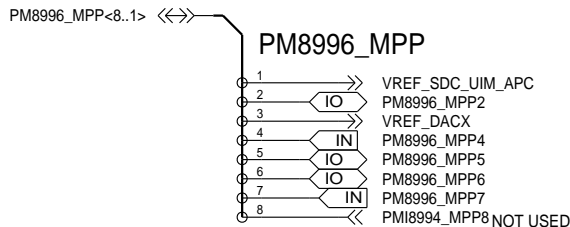
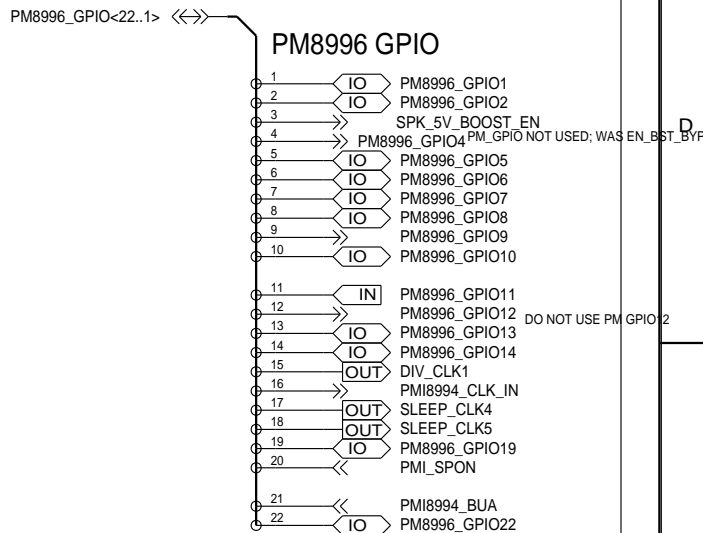
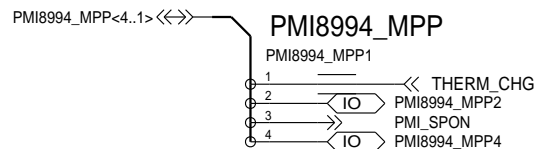
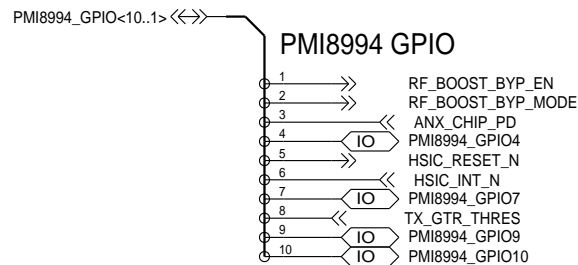
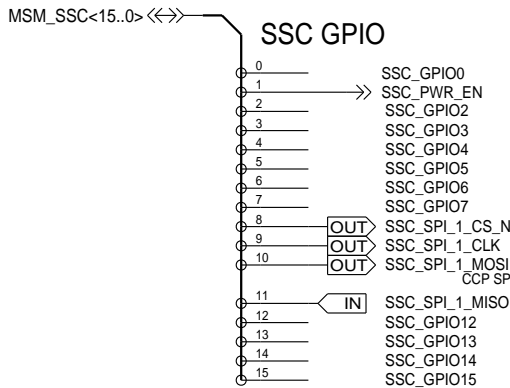


MOTOROLA MOBILITY CONFIDENTIAL RESTRICTED-MDB TRACKED TRACKEDANDBLOCKED			
APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER:		BLOCK TITLE: <div>ap_pmic</div>	
LAST MODIFIED BY: Thu Mar 03 15:16:57 2016			
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		CAD FILE NAME: <div></div>	
		PAGE 50 OF 88	

MSM8996: GND/NC



REFDES: 1100-1199



CONFIGURATION PINS

MSM_GPIO<149..0> <<>>

WDOG_DISABLE 1 TP_WDOG_DISABLE

GPIO39
ALL_USE_SERIAL_NUM

GPIO91
MSA_PK_HASH_IN_FUSE

GPIO92
MSA_AUTH_EN

ANX_RESET_N
AP_PK_HASH_IN_FUSE

GPIO96
AP_AUTH_EN

GRFC2
FORCE_MSA_AUTH_EN

GPIO57
FORCED_USB_BOOT


GRFC4
WDOG_DISABLE

GRFC5
BOOT_CONFIG1

BOOT_CONFIG2

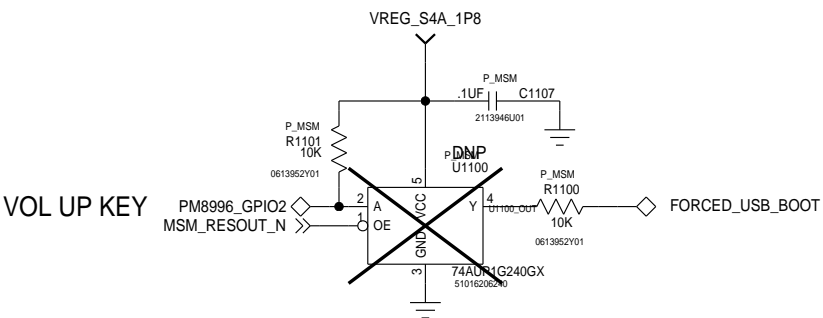
GRFC7
BOOT_CONFIG3

GRFC8
BOOT_CONFIG4

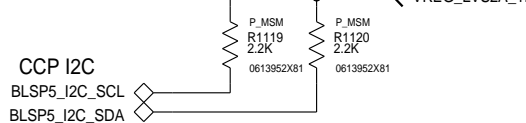
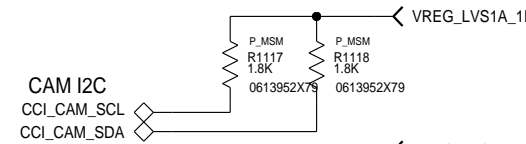
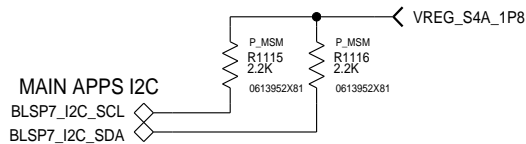
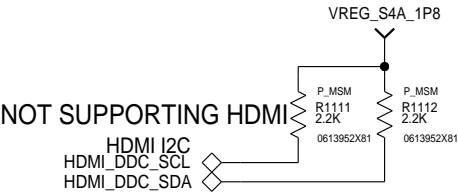
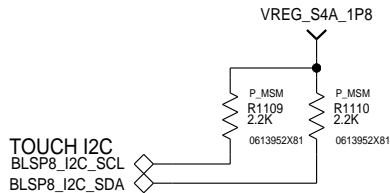
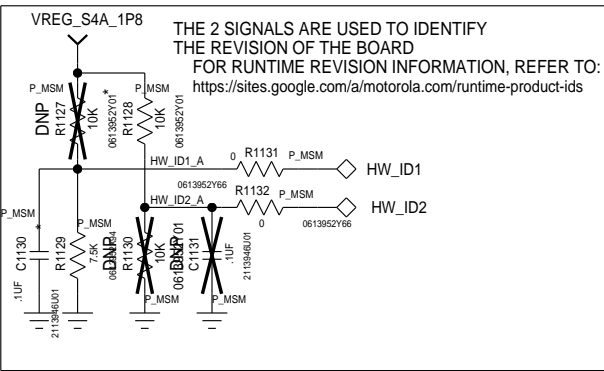
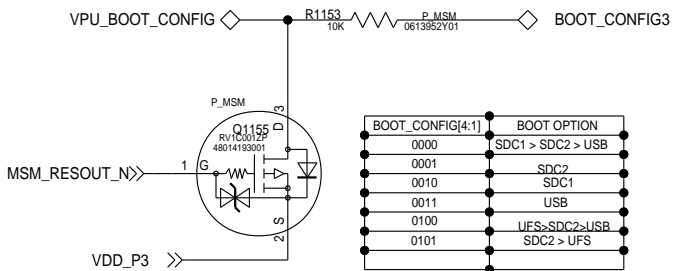
APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER:		BLOCK TITLE: <div>ap_pmic</div>	
LAST MODIFIED BY: TIM MILLER Thu Mar 03 15:16:58 2016			
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		CAD FILE NAME:	PAGE 52 OF 88

MSM8996: SUPPORT

REFDES: 1100-1199



BOOT OPTIONS



APPROVALS

ENGINEER:

LAST MODIFIED BY: TIM MILLER
Thu Mar 03 15:16:59 2016

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BLOCK TITLE:

ap_pmic

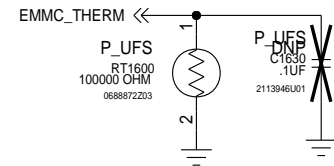
PROJECT NAME
84016517001_10.cpm

CAD FILE NAME:

REV
01

PAGE 53 OF 88

REFDES: 1600-1699

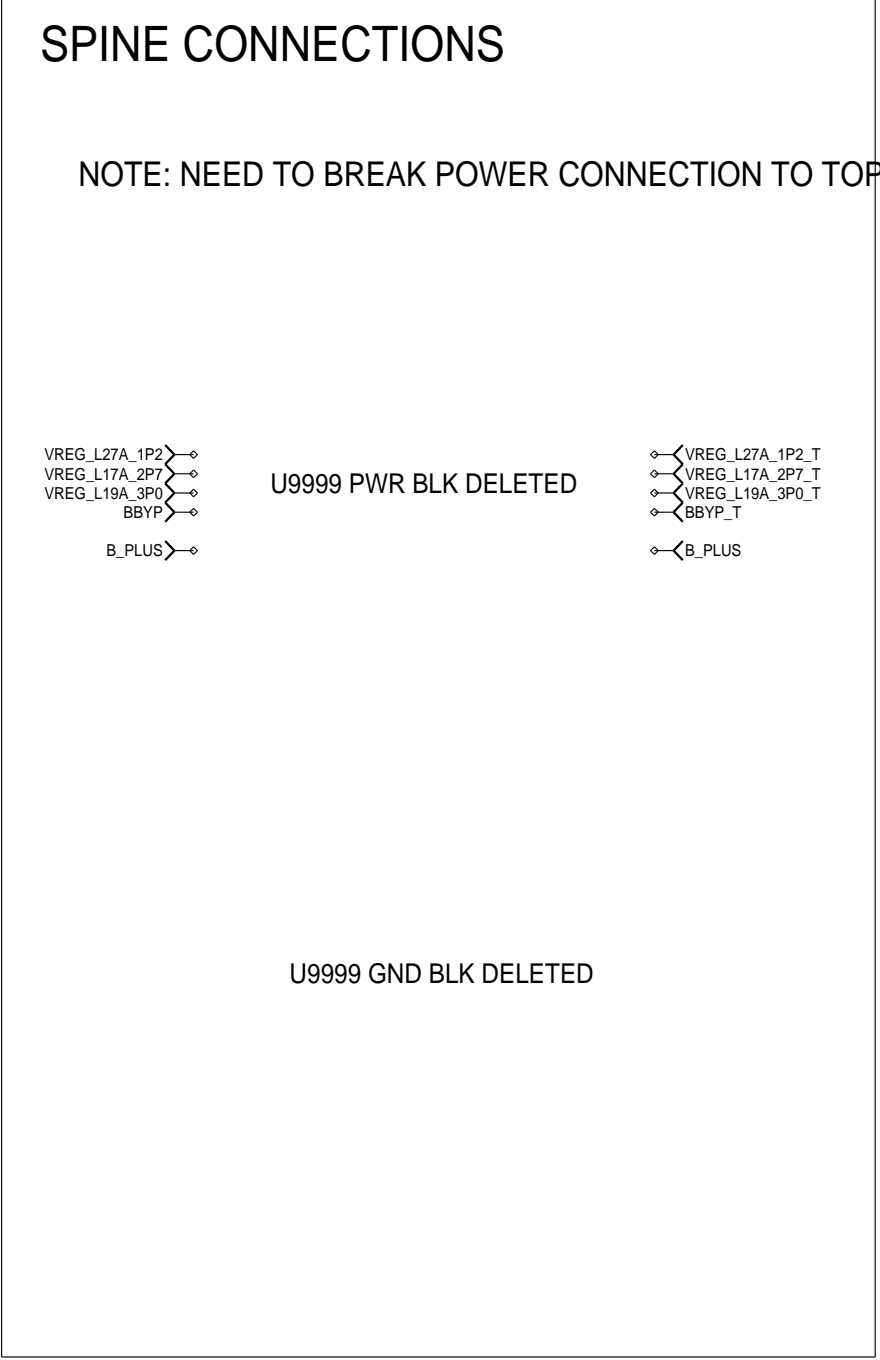
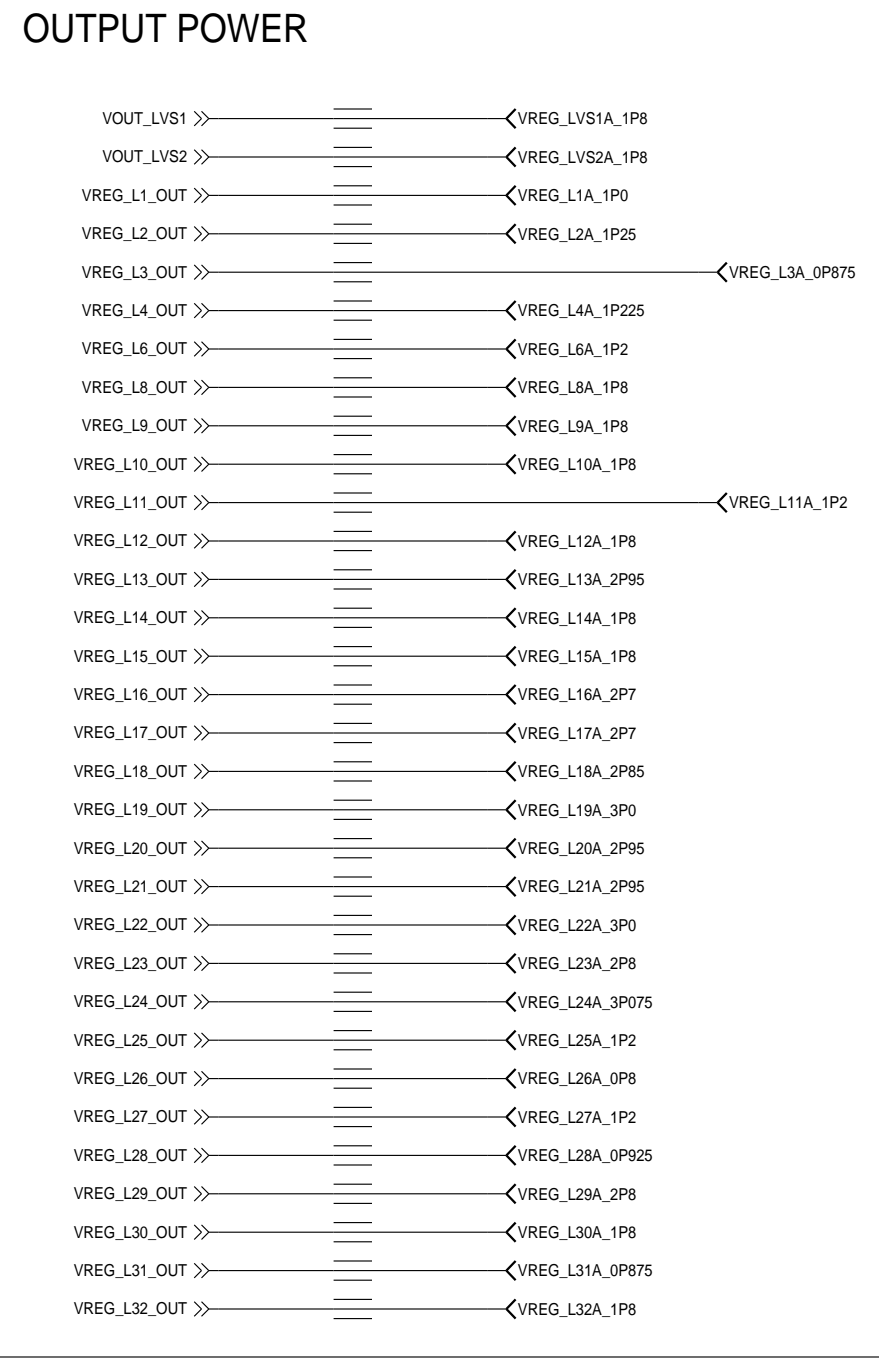
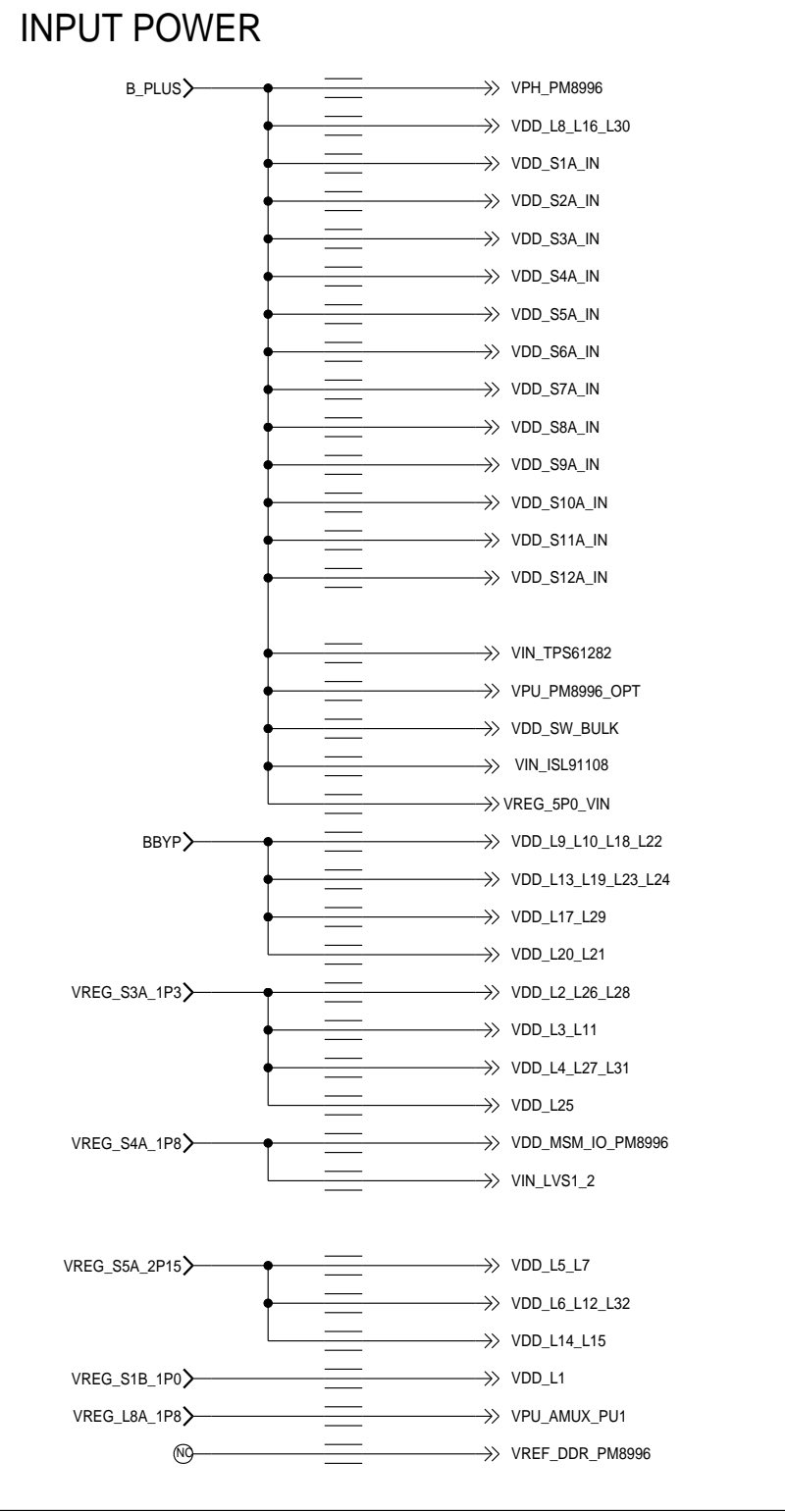



MOTOROLA MOBILITY CONFIDENTIAL RESTRICTED-MDB TRACKED TRACKEDANDBLOCKED

PAGE 54 OF 88

PM8996: POWER

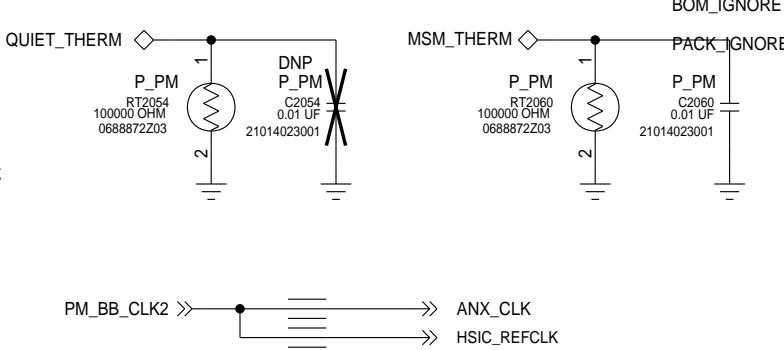
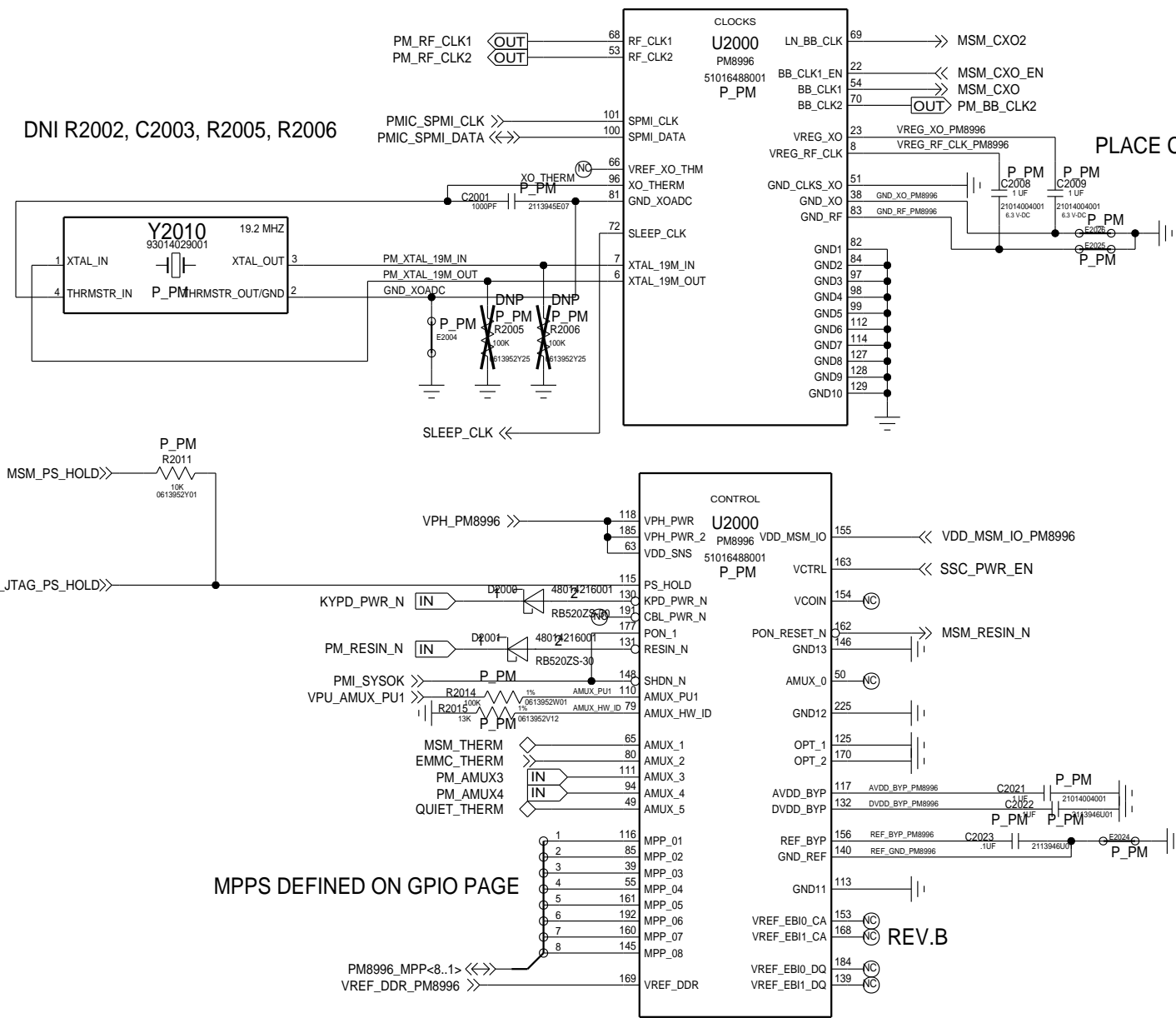
REFDES: 2300-2399



APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: NATE CONNELL		BLOCK TITLE: ap_pmic	
LAST MODIFIED BY: NATE CONNELL Thu Mar 03 15:17:00 2016		PROJECT NAME 84016517001_10.cpm	
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		PAGE 55 OF 88	

PM8996: CLK/CTRL/GPIO

REFDES: 2000-2099



FOLLOW CRYSTAL OSCILLATOR PLACEMENT/LAYOUT INSTRUCTIONS IN QCOM DOCUMENT 80-N5423-5 (P. 221 IN REV G)


*19.2MHZ CRYSTAL+THERMISTOR OPTIONS

PACKAGE PART NUMBER
2520 93014012001
2016 93014029001

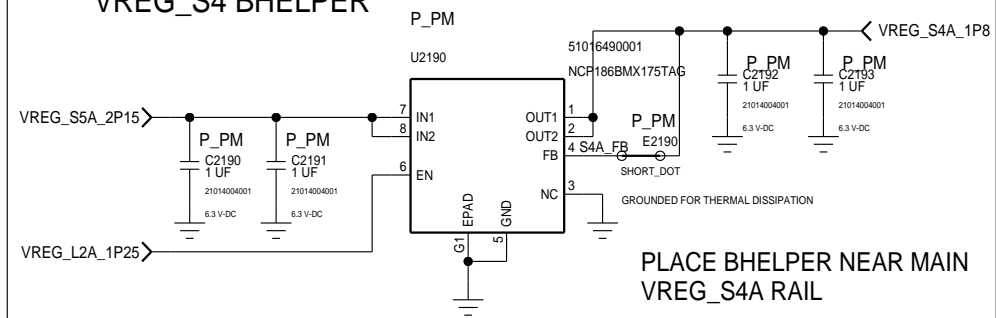
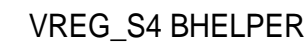
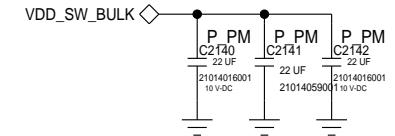
PM GPIOs DEFINED ON MSM GPIO PAGE

BASED ON 80-NJ051-41 REV. B

MOTOROLA MOBILITY CONFIDENTIAL RESTRICTED-MDB TRACKED TRACKEDANDBLOCKED

APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER:		BLOCK TITLE:	
LAST MODIFIED BY: Thu Mar 03 15:17:00 2016		ap_pmic	
MOTOROLA CONFIDENTIAL RESTRICTED		PROJECT NAME	REV
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		CAD FILE NAME:	
		PAGE 56 OF 88	

REFDES: 2100-2199



PLACE BHELPER NEAR MAIN
VREG_S4A RAIL

MOTOROLA MOBILITY CONFIDENTIAL RESTRICTED-MDB TRACKED TRACKEDANDBLOCKED

APPROVALS



MOTOROLA
MOBILE DEVICES

ENGINEER:

BLOCK TITLE:

LAST MODIFIED BY:

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B

PROJECT NAME

84016517001 10.cpm

REV

01

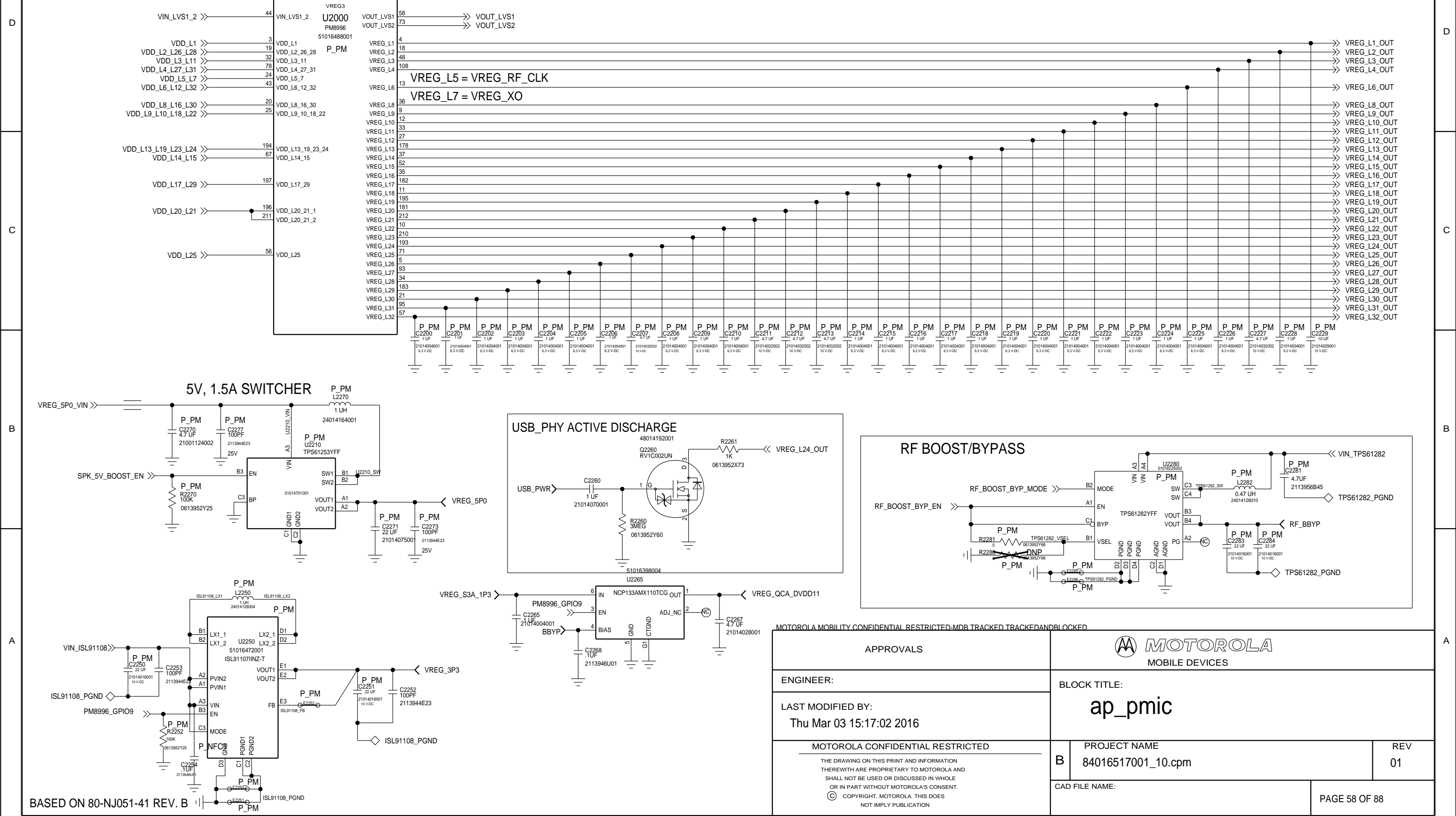
CAD FILE NAME:

PAGE 57 OF 88

BASED ON 80-NJ051-41 REV. B

PM8996: VREGS

REFDES: 2200-2299



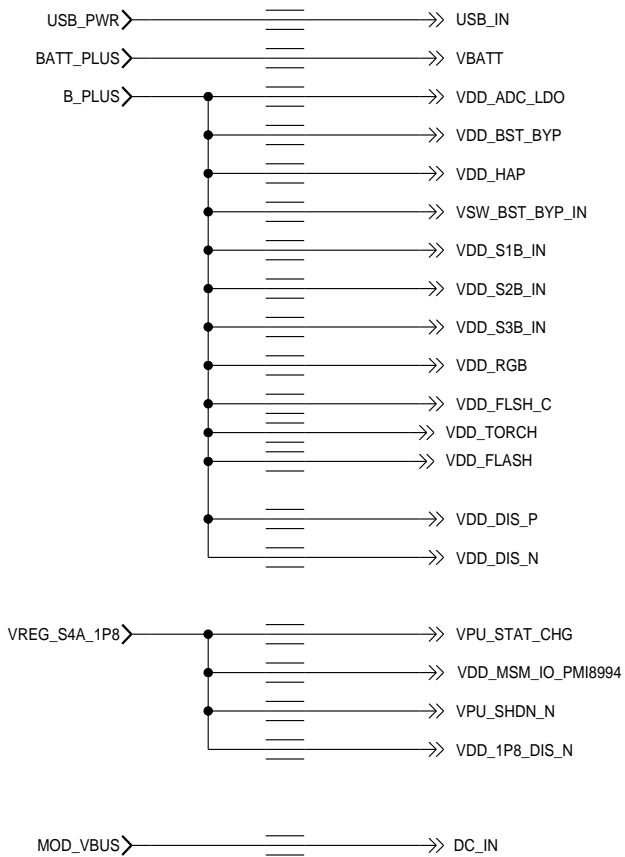
BASED ON 80-NJ051-41 REV. B

APPROVALS		MOTOROLA MOBILE DEVICES	
ENGINEER:		BLOCK TITLE: ap_pmic	
LAST MODIFIED BY: Thu Mar 03 15:17:02 2016		PROJECT NAME 84016517001_10.cpm	
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			PAGE 58 OF 88

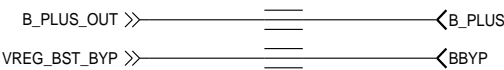
PMI8996: POWER


REFDES: 2400-2499

INPUT POWER



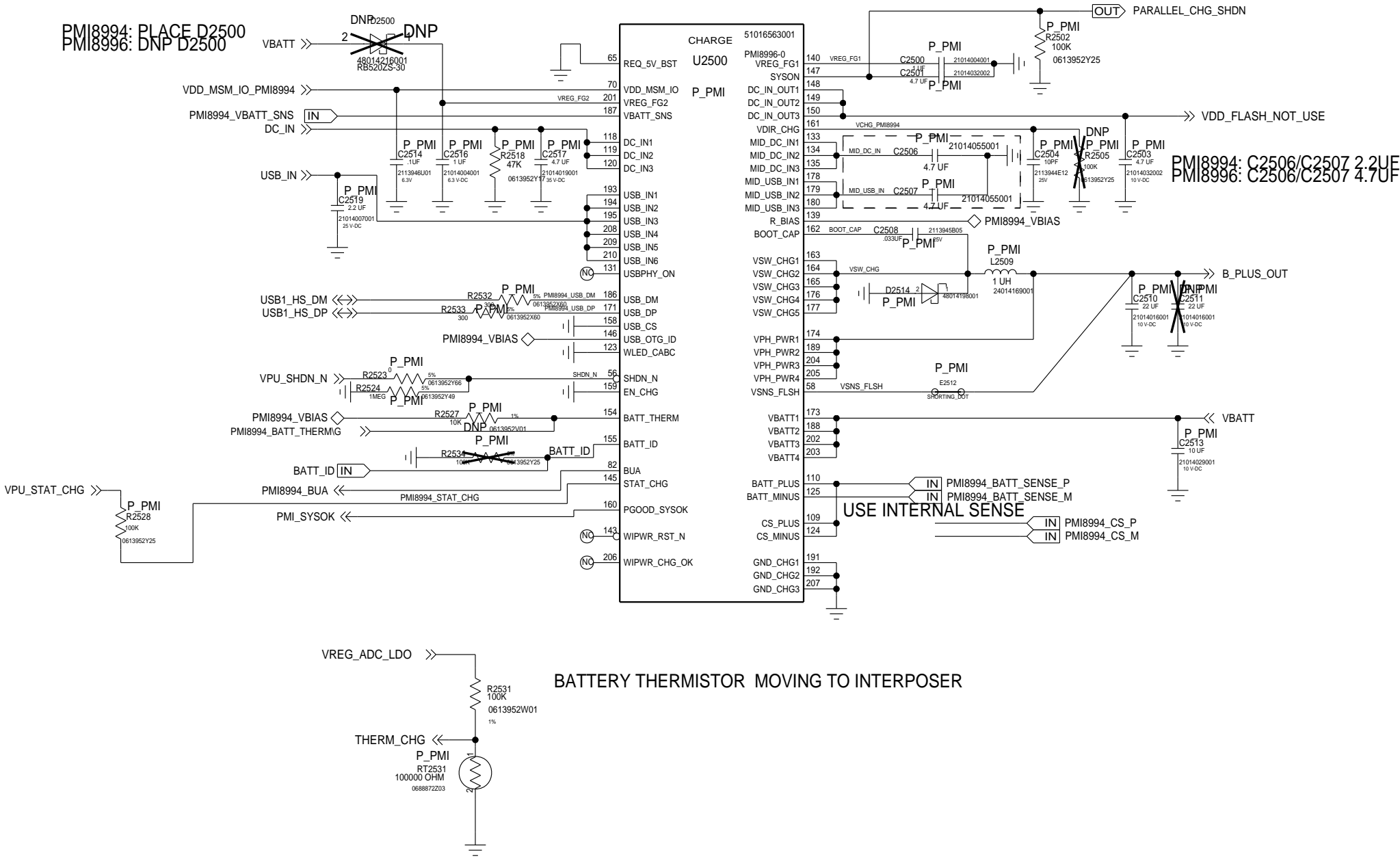
OUTPUT POWER



APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: NATE CONNELL		BLOCK TITLE: ap_pmic	
LAST MODIFIED BY: NATE CONNELL Thu Mar 03 15:17:02 2016			
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		CAD FILE NAME: <div></div>	PAGE 59 OF 88

PMI8996: CHG/USB

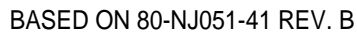
REFDES: 2500-2599



BATTERY THERMISTOR MOVING TO INTERPOSER

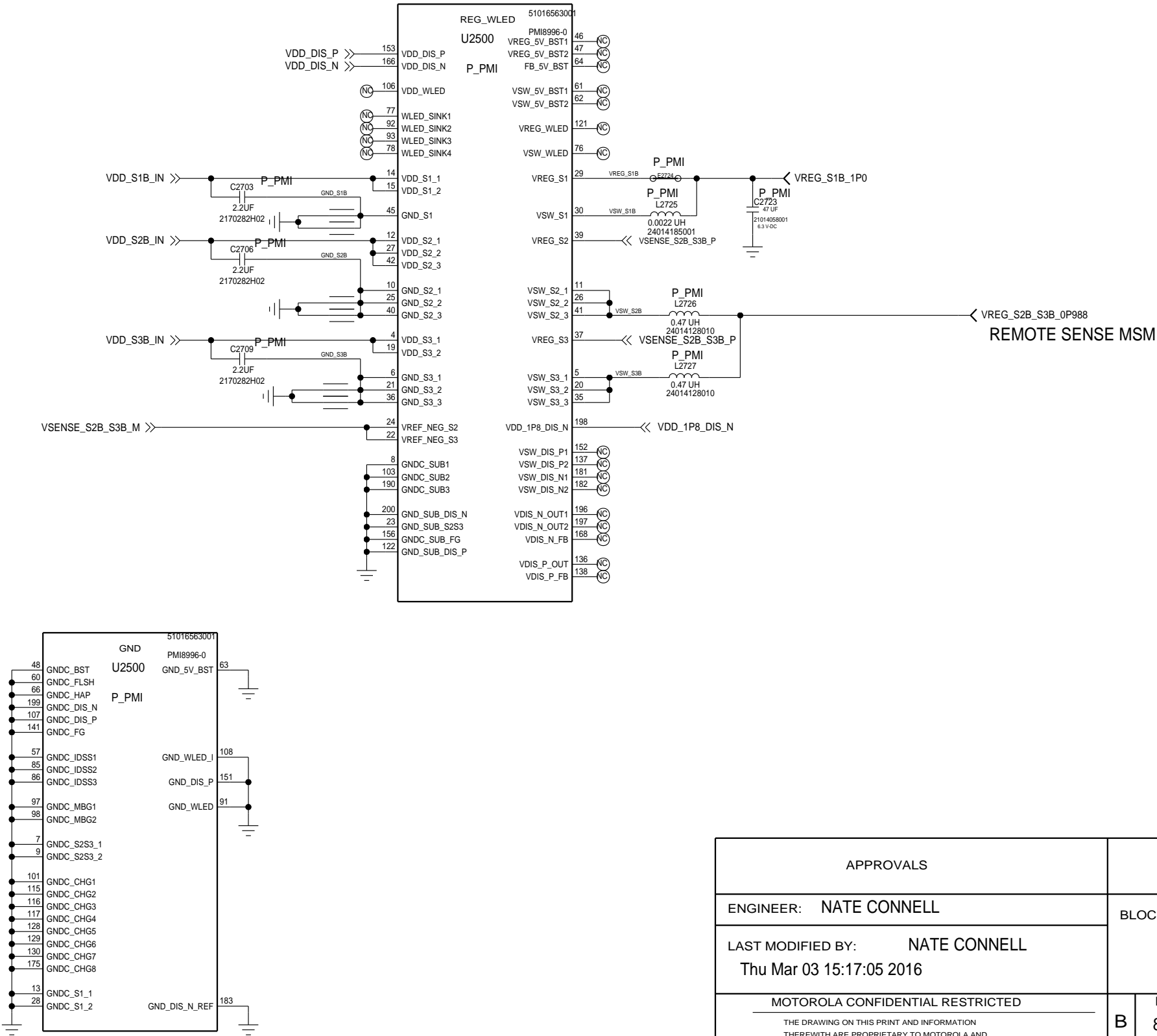
APPROVALS		MOTOROLA MOBILE DEVICES	
ENGINEER: NATE CONNELL		BLOCK TITLE:	
LAST MODIFIED BY: NATE CONNELL Thu Mar 03 15:17:03 2016		ap_pmic	
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		B 84016517001_10.cpm	REV 01
		CAD FILE NAME:	
		PAGE 60 OF 88	

REFDES: 2600-2699


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PMI8996: REF/WLED/GND

REFDES: 2700-2799



BASED ON 80-NJ051-41 REV. B

APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: NATE CONNELL		BLOCK TITLE: ap_pmic	
LAST MODIFIED BY: NATE CONNELL Thu Mar 03 15:17:05 2016			
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		CAD FILE NAME: PAGE 62 OF 88	

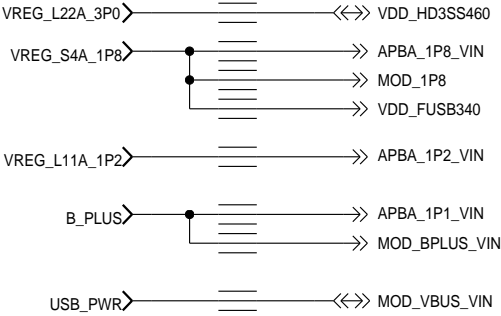
87654321

MODS: PORTS

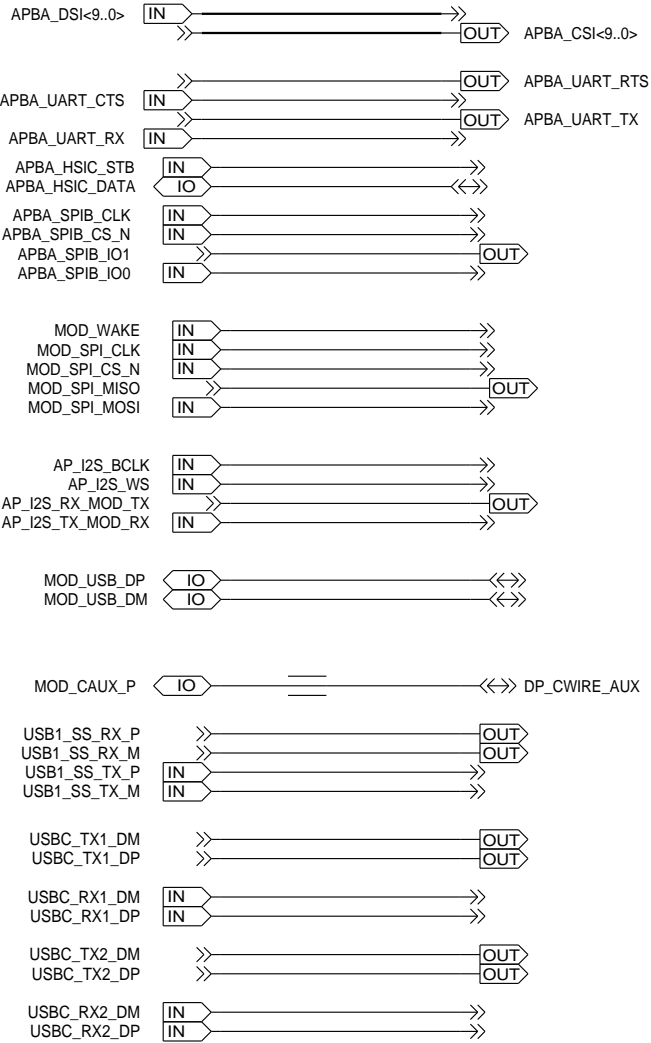
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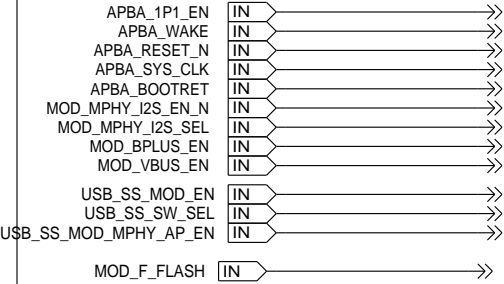
SUPPLIES



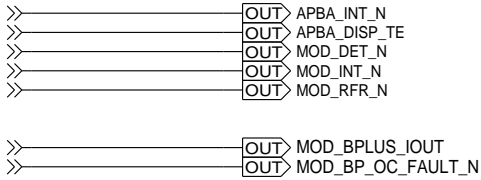
INTERFACES



GPIO - INPUT



GPIO - OUTPUT



APPROVALS

ENGINEER: NATE CONNELL

LAST MODIFIED BY: NATE CONNELL
Thu Mar 03 15:16:48 2016

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BLOCK TITLE:

slice_if

PROJECT NAME
84016517001_10.cpm

REV
01

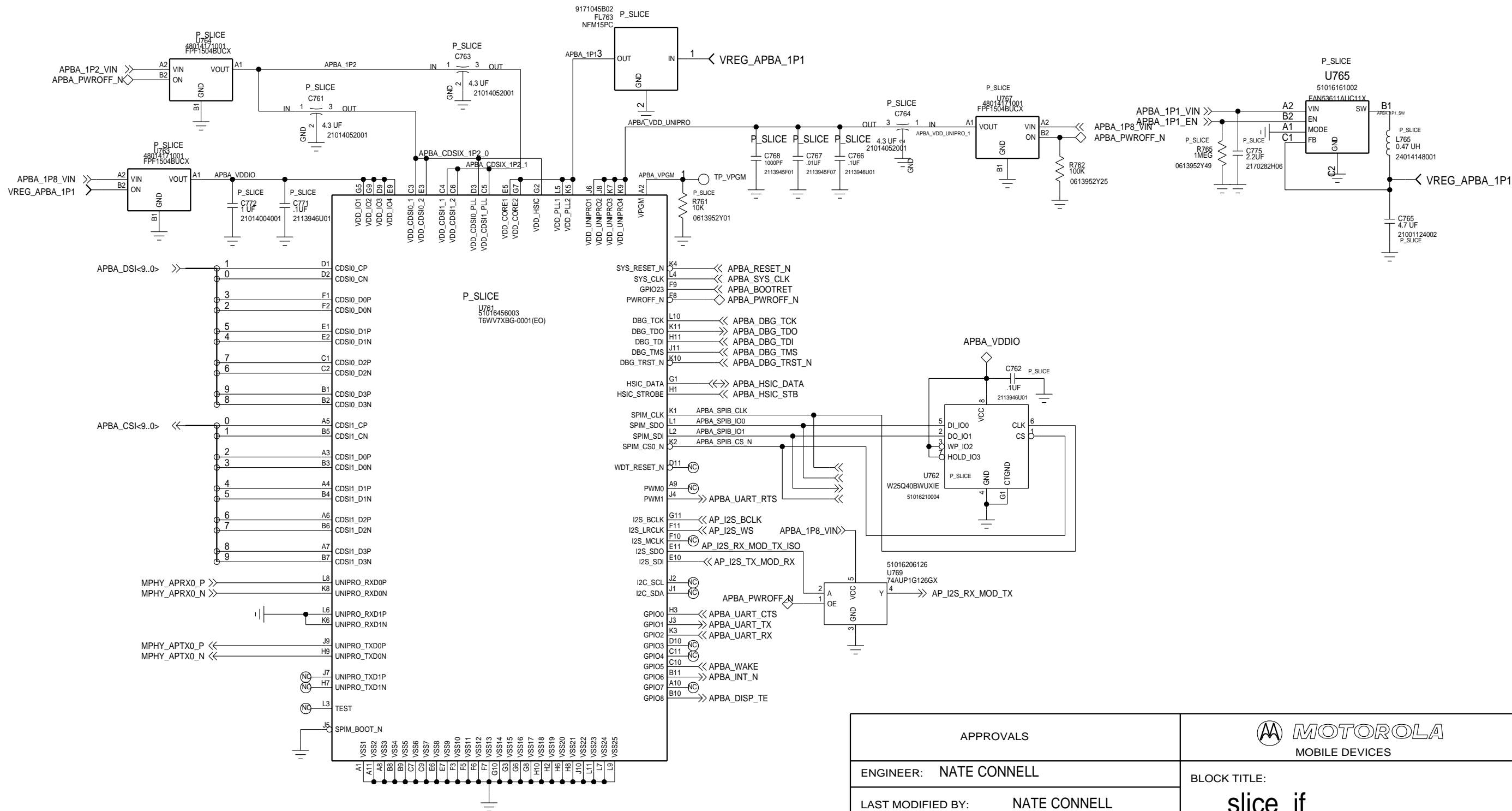
CAD FILE NAME:


PAGE 63 OF 88

87654321

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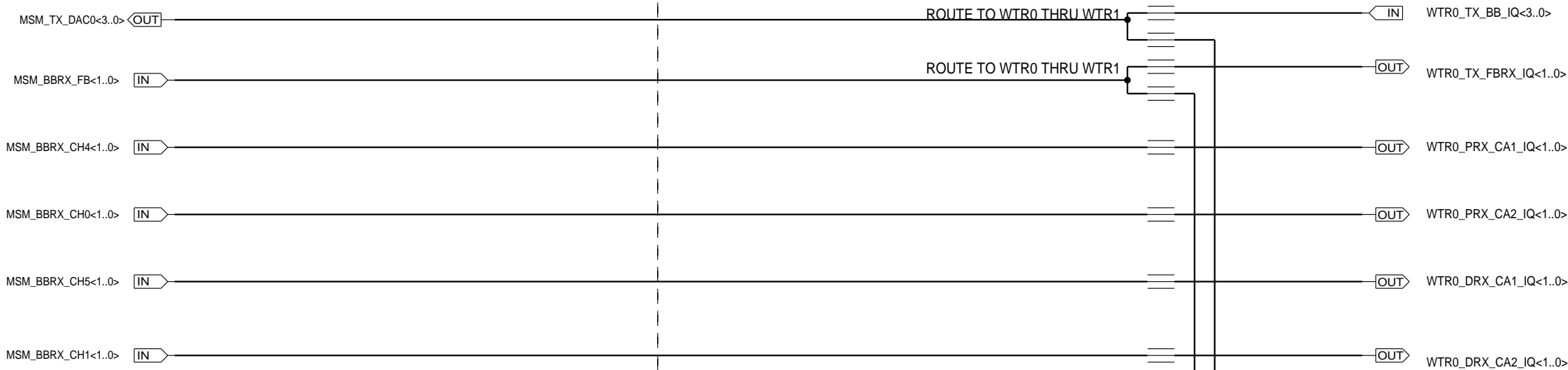
MODS: BRIDGE



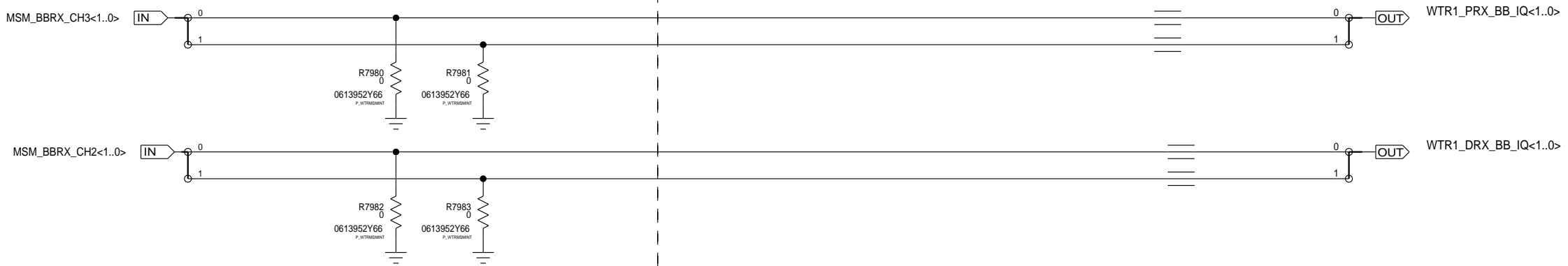
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ENGINEER: NATE CONNELL		BLOCK TITLE: slice_if	
LAST MODIFIED BY: NATE CONNELL Thu Mar 03 15:16:50 2016		PROJECT NAME B 84016517001_10.cpm	
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		CAD FILE NAME: PAGE 65 OF 88	

MODEMIQ: PORTS

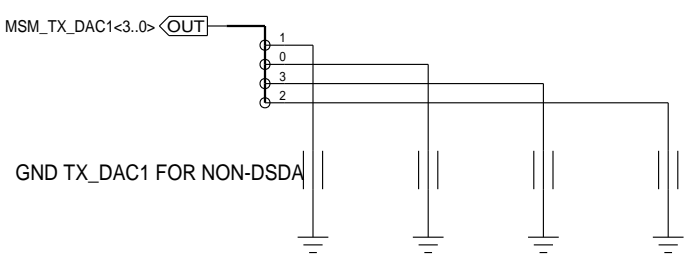
REFDES: 7950-7999



WTR39X5_WTR0




WTR4905_WTR1

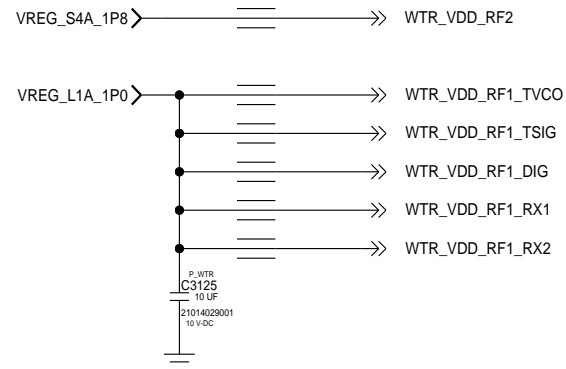


	797X	798X
2CA	DNP	PLACE
3CA	PLACE	DNP

NEED TO CLEAN UP RESISTOR OPTIONS
DO NOT NEED ALL THE OPTIONS

APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MMI		BLOCK TITLE: blk_modem_iq_int	
LAST MODIFIED BY: MMI Thu Mar 03 15:16:48 2016			
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		CAD FILE NAME: PAGE 66 OF 88	

REF 3120-3199

[illegible]
MOTOROLA
 MOBILE DEVICES

BLOCK TITLE:

blk_wtr3925

PROJECT NAME

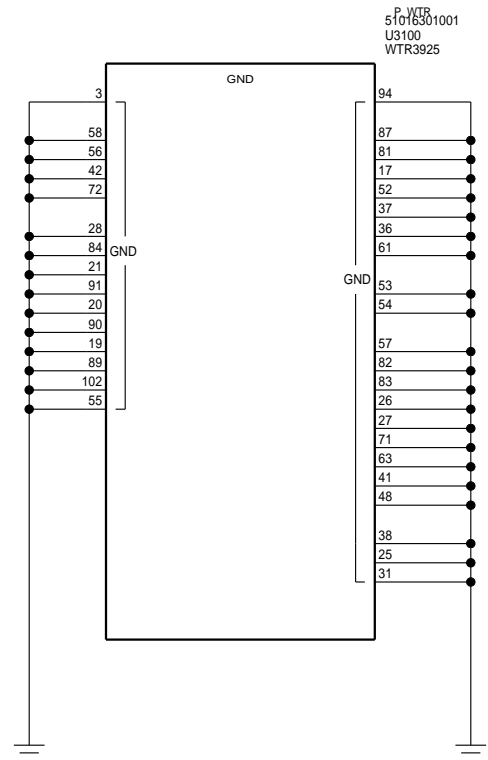
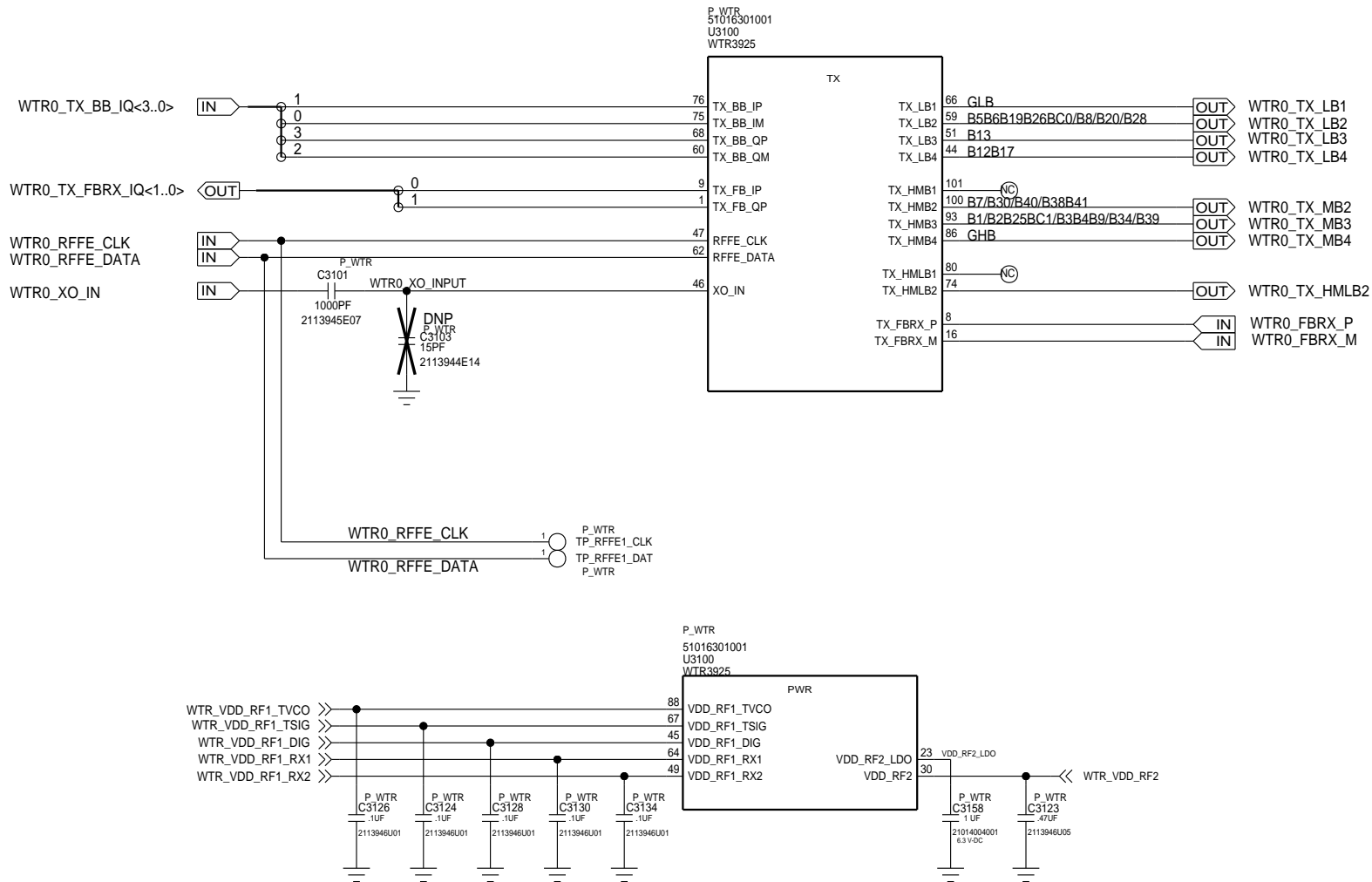
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CAD FILE NAME:

PAGE 67 OF 88

WTR3925: TX/PWR/GROUND

REF 3100-3109



APPROVALS

ENGINEER:

LAST MODIFIED BY:

Thu Mar 03 15:16:47 2016

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MOBILE DEVICES

BLOCK TITLE:

blk_wtr3925

PROJECT NAME

80746517001_10.cpm

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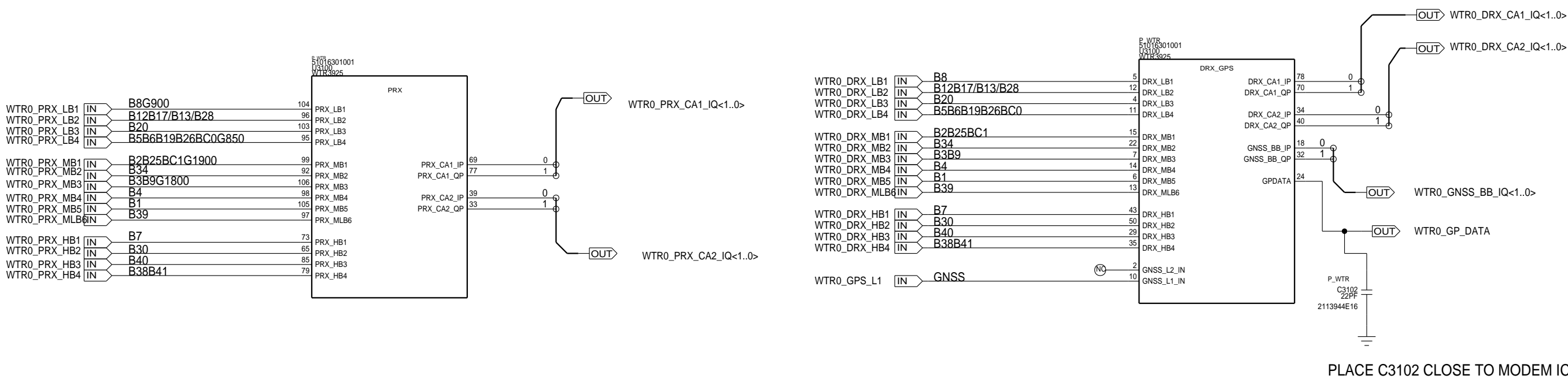
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CAD FILE NAME:

PAGE 68 OF 88

WTR3925: PRX/DRX/GPS

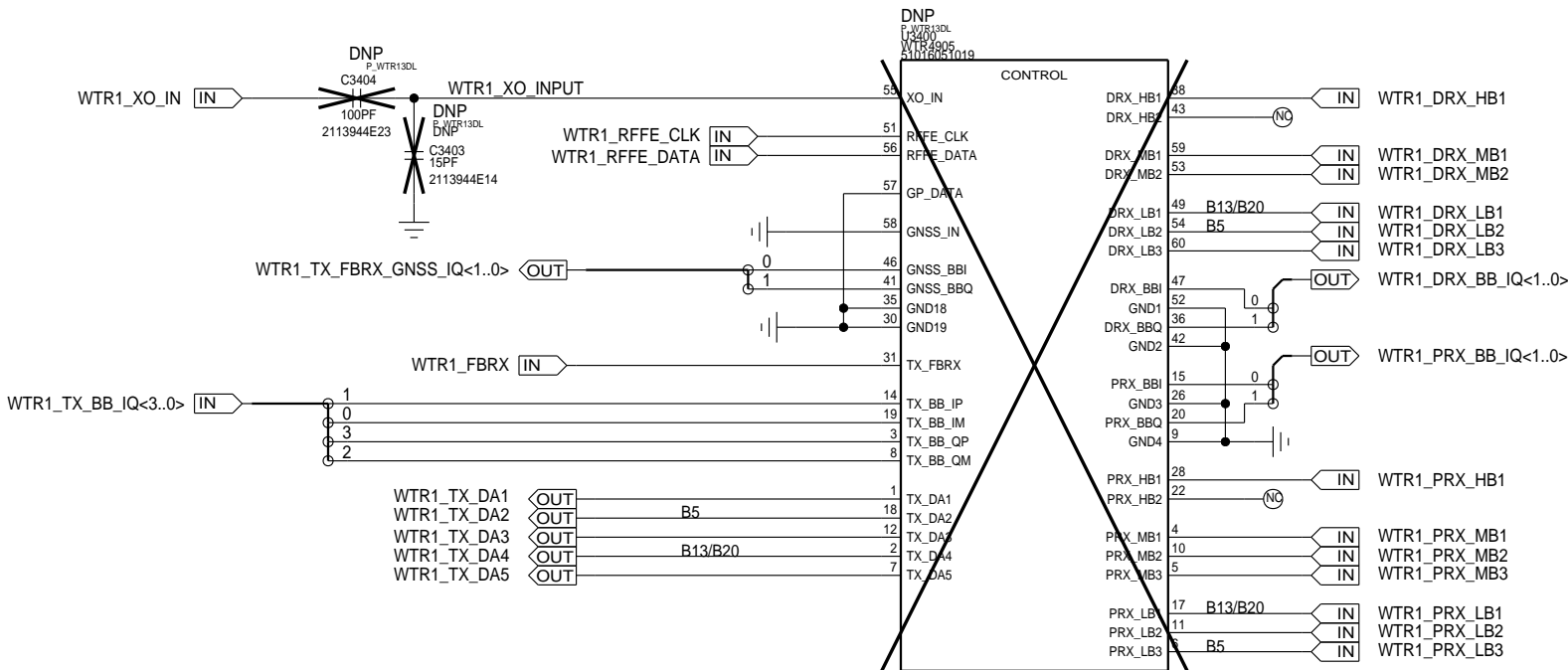
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LAST MODIFIED BY:		blk_wtr3925	
MOTOROLA CONFIDENTIAL RESTRICTED		PROJECT NAME	REV
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		CAD FILE NAME:	PAGE 69 OF 88


WTR4905 BB RF

REF 3400-3499



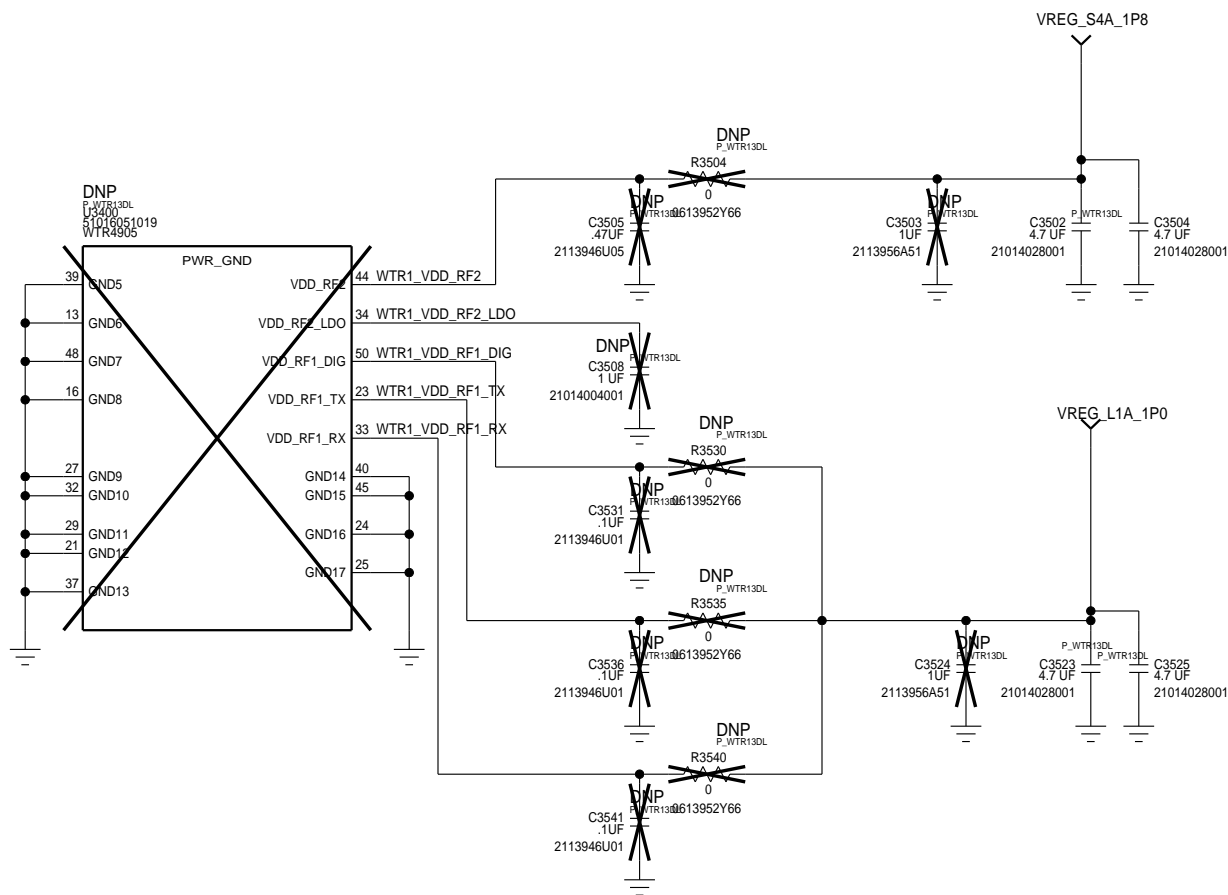
BASED ON 80-NL713-44 REV. A


MOTOROLA MOBILITY CONFIDENTIAL RESTRICTED-MDB TRACKED TRACKEDANDBLOCKED

APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MMI		BLOCK TITLE:	
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		REV 01 PAGE 70 OF 88	


WTR4905: POWER

REF 3500-3599



APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER:		BLOCK TITLE:	
LAST MODIFIED BY: Thu Mar 03 15:16:45 2016		blk_wtr4905	
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		B 80746517001_10.cpm	01
CAD FILE NAME:			PAGE 71 OF 88

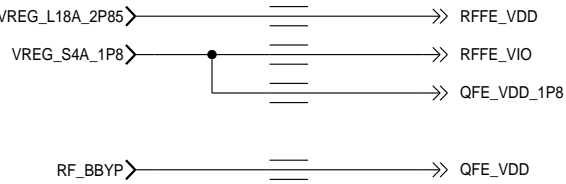
8	7	6	5	4	3	2	1
<div>RFFE: BLOCK DIAGRAM</div> <div>REFDES: 7000-8999</div>							
D							D
C							C
B							B
A							A
8	7	6	5	4	3	2	1

APPROVALS		 MOTOROLA MOBILE DEVICES		
ENGINEER: MMI		BLOCK TITLE: blk_rffe_3ca		
LAST MODIFIED BY: MMI Thu Mar 26 15:36:06 2015				
<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 84016517001_10.cpm	REV 01
		CAD FILE NAME:		PAGE 72 OF 88

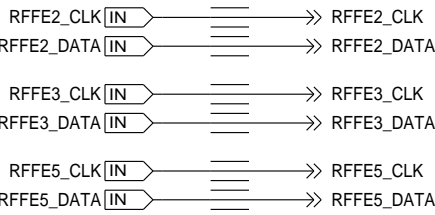
RFFE: PORTS

REFDES: 7000-8999

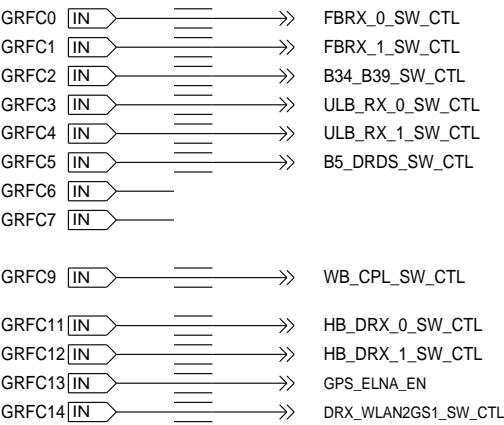
POWER



INTERFACES - RFFE MIPI



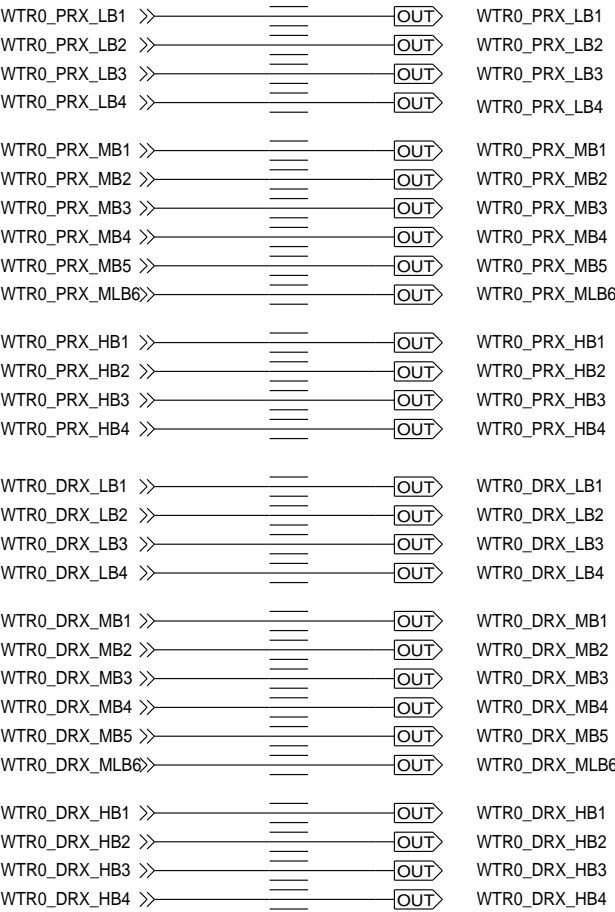
INTERFACES - RFFE GPIO/GRFC



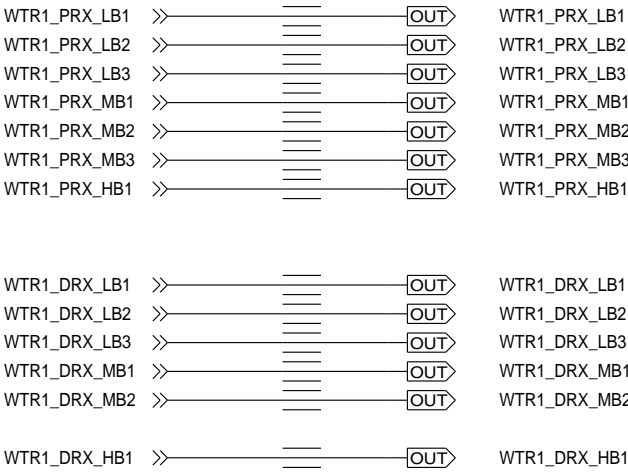
GRFC ASSIGNMENTS MIGHT CHANGE

NOTE: GRFC7 SHOULD NOT BE ASSIGNED TO RF
IT IS RESERVED AS BOOT_CONFIG CONTROL GPIO

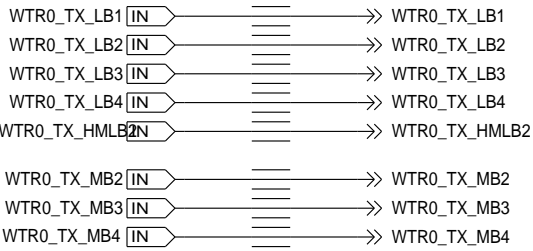
OUTPUTS - RF RECEIVER - WTR0



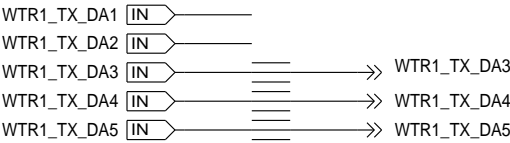
OUTPUTS - RF RECEIVER - WTR1 (3DL/DSDA)



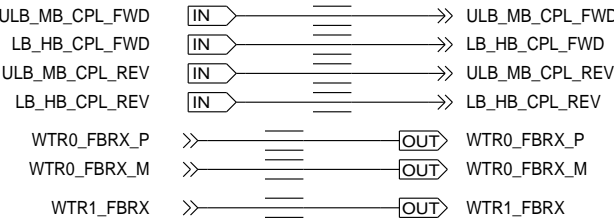
INPUTS - RF DRIVER - WTR0



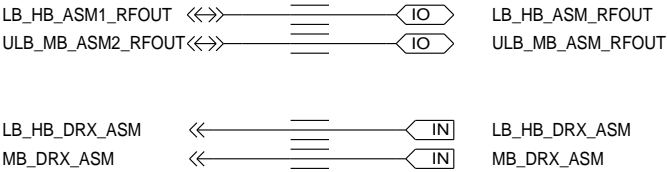
INPUTS - RF DRIVER - WTR1 (3DL/DSDA)



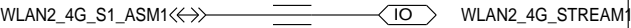
INPUTS /OUTPUTS - DETECTORS



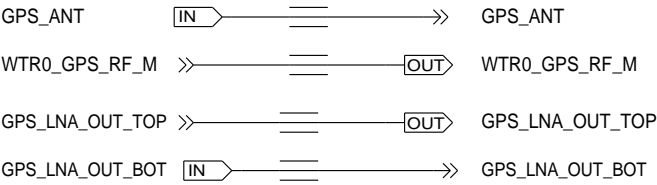
OUTPUTS - RF ANTENNA CONNECTORS



WLAN 2.4GHZ STREAM-1



GPS



THERMISTORS



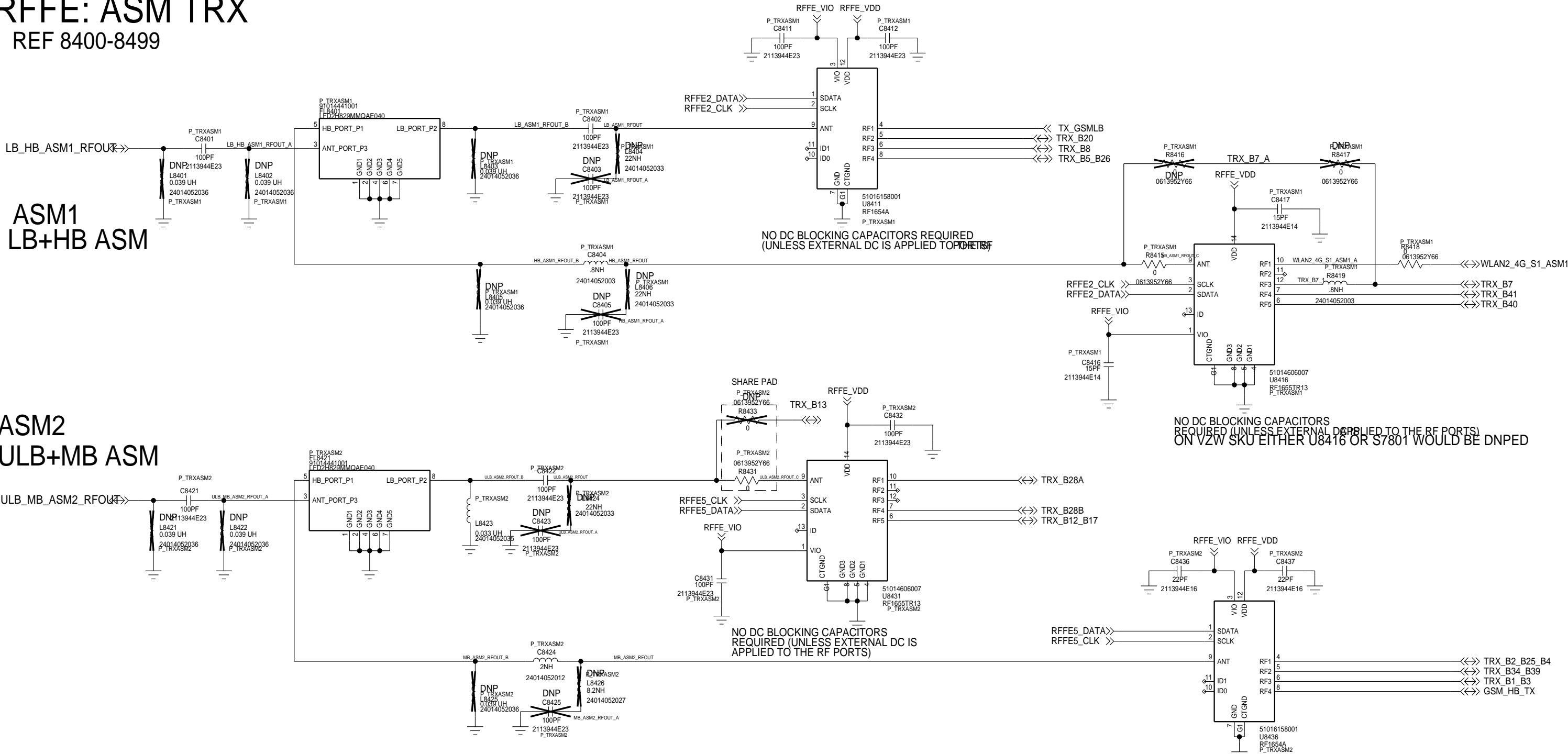
QUALCOMM RECOMMENDS PLACING BOTH THERMISTORS
FOR FUTURE SW IMPLEMENTATION THEY ARE WORKING ON


APPROVALS		MOTOROLA MOBILE DEVICES		
ENGINEER: MMI		BLOCK TITLE:		
LAST MODIFIED BY: MMI Thu Mar 03 15:16:35 2016		blk_rffe_3ca		
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		B 84016517001_10.cpm		01
		CAD FILE NAME:		PAGE 73 OF 88

RFFE: ASM TRX
REF 8400-8499

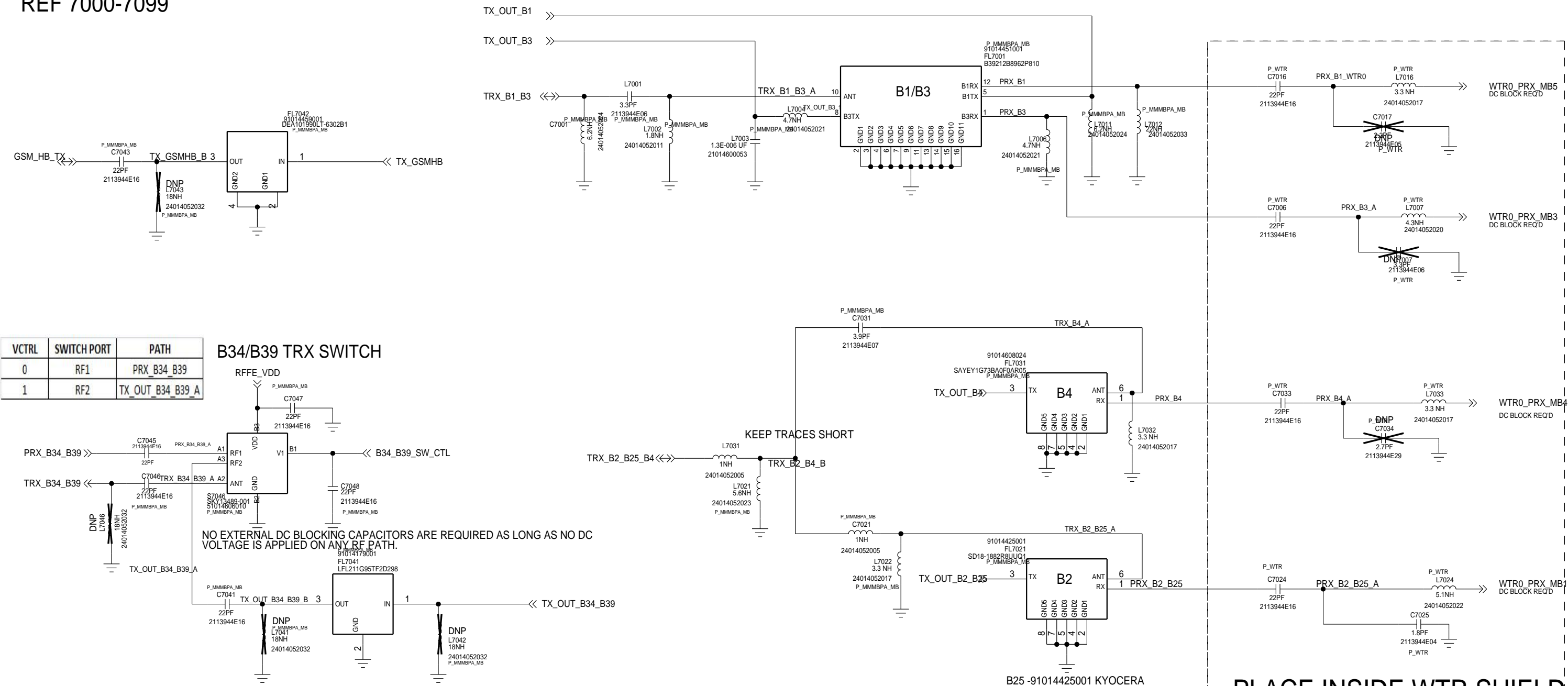
ASM1
LB+HB ASM

ASM2
ULB+MB ASM



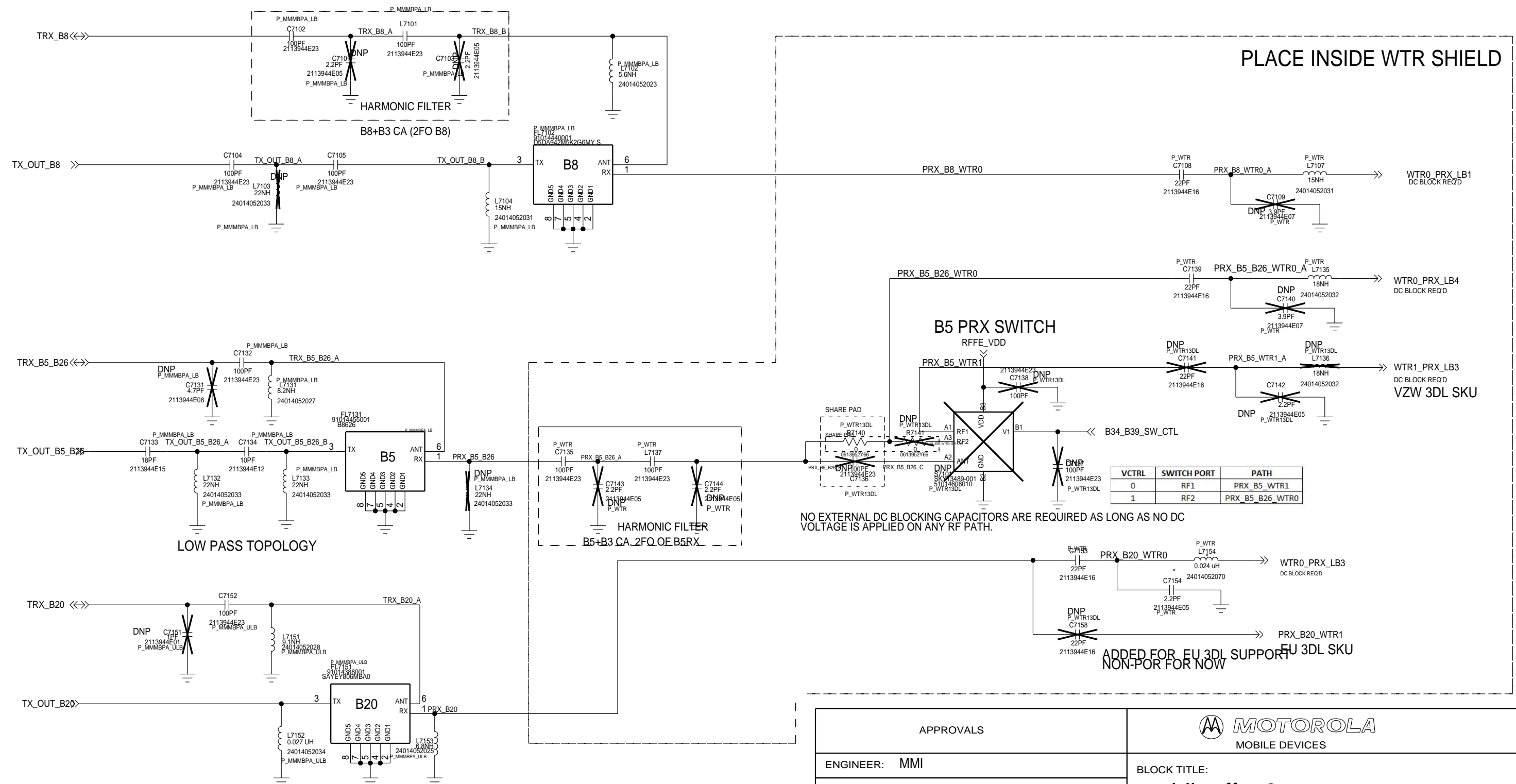
APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MMI		BLOCK TITLE:	
LAST MODIFIED BY: MMI Thu Mar 03 15:16:35 2016		blk_rfe_3ca	
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		B 84016517001_10.cpm	01
CAD FILE NAME:		PAGE 74 OF 88	


RFFE: TRX MB
REF 7000-7099



APPROVALS		MOTOROLA MOBILE DEVICES	
ENGINEER: MMI		BLOCK TITLE:	
LAST MODIFIED BY: MMI Thu Mar 03 15:16:36 2016		blk_rfe_3ca	
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		REV 01	
		PAGE 75 OF 88	

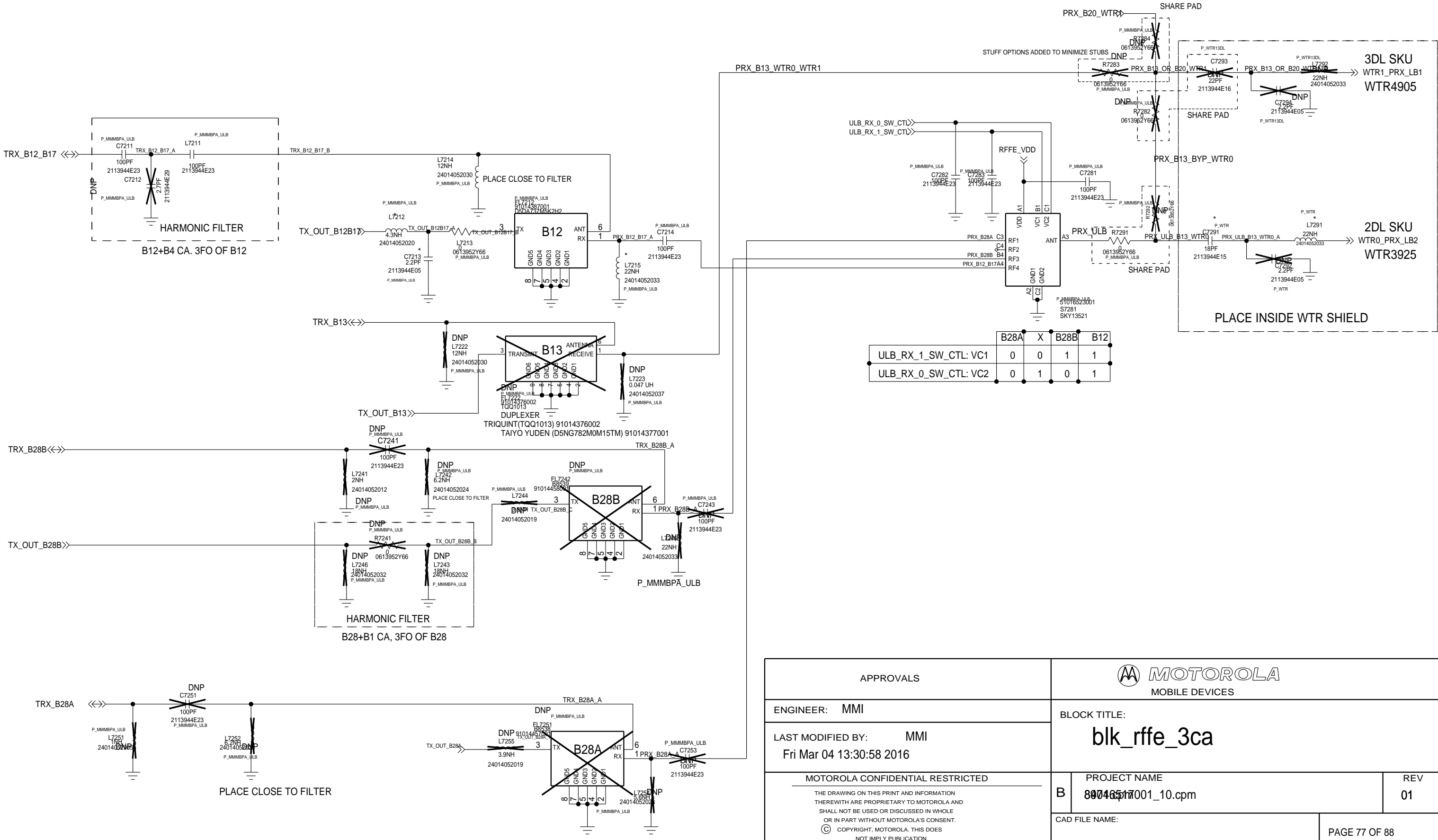
RFFE: TRX LB
REF 7100-7199




APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MMI	BLOCK TITLE: <div style="font-size: 24pt; font-weight: bold;">blk_rffe_3ca</div>		
LAST MODIFIED BY: Thu Mar 31 11:03:51 2016			
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		CAD FILE NAME:	PAGE 76 OF 88

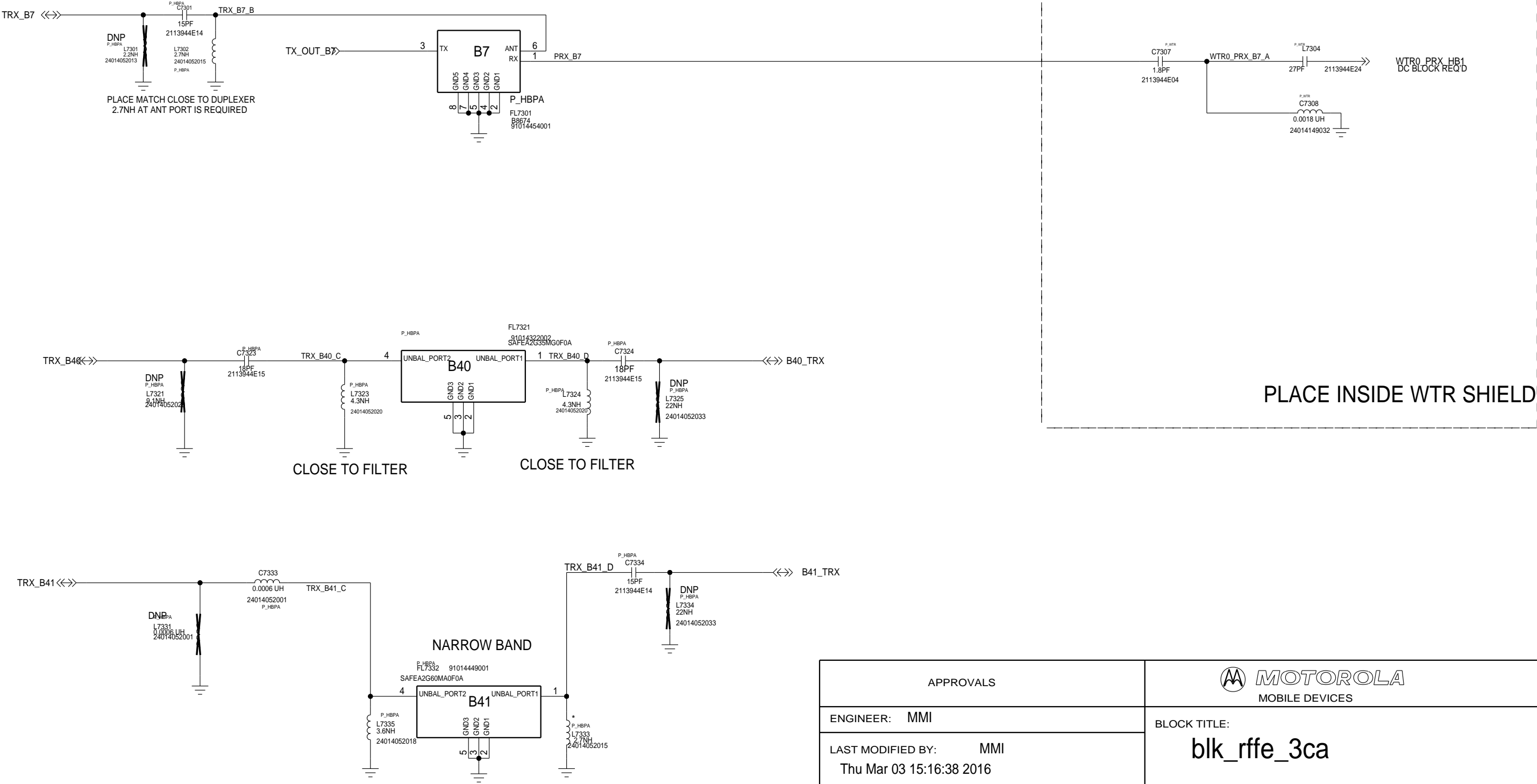
RFFE: TRX ULB

REF 7200-7299



APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MMI		BLOCK TITLE:	
LAST MODIFIED BY: MMI Fri Mar 04 13:30:58 2016		blk_rfe_3ca	
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		B 80140517001_10.cpm	01
CAD FILE NAME:			PAGE 77 OF 88

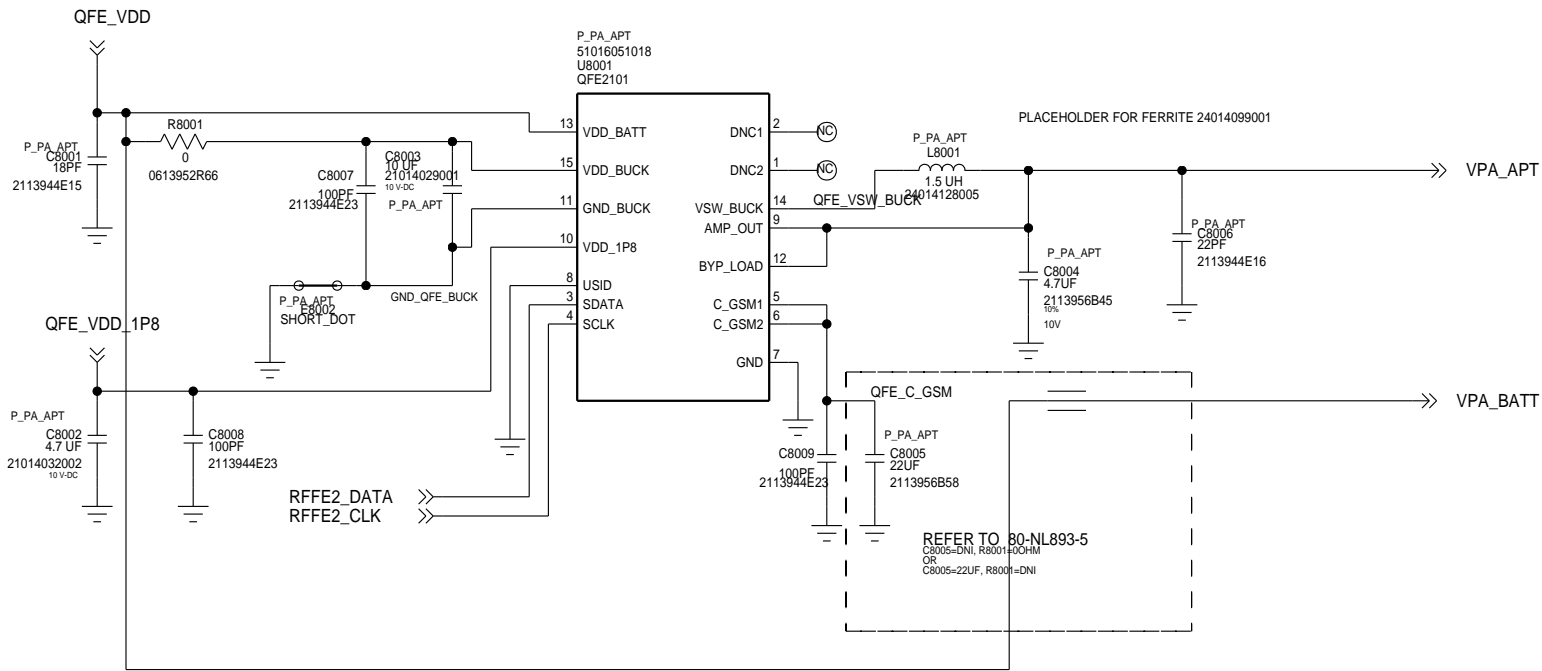
RFFE: TRX HB
REF 7300-7399





APPROVALS		MOTOROLA MOBILE DEVICES	
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LAST MODIFIED BY: MMI Thu Mar 03 15:16:38 2016		PROJECT NAME 84016517001_10.cpm	
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		PAGE 78 OF 88	

RFFE: APT

REF 8000-8099

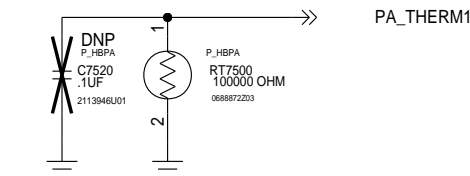



APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER:		BLOCK TITLE:	
LAST MODIFIED BY: Thu Mar 31 11:01:56 2016			
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		B 8000-8099_10.cpm	01
CAD FILE NAME:			PAGE 79 OF 88

REF 7400-7499

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REF 7500-7599




APPROVALS		 MOTOROLA MOBILE DEVICES		
ENGINEER: MMI	BLOCK TITLE: <div>blk_rffe_3ca</div>			
LAST MODIFIED BY: Thu Mar 03 15:16:40 2016				
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		CAD FILE NAME:		PAGE 81 OF 88

REF 7600-7649

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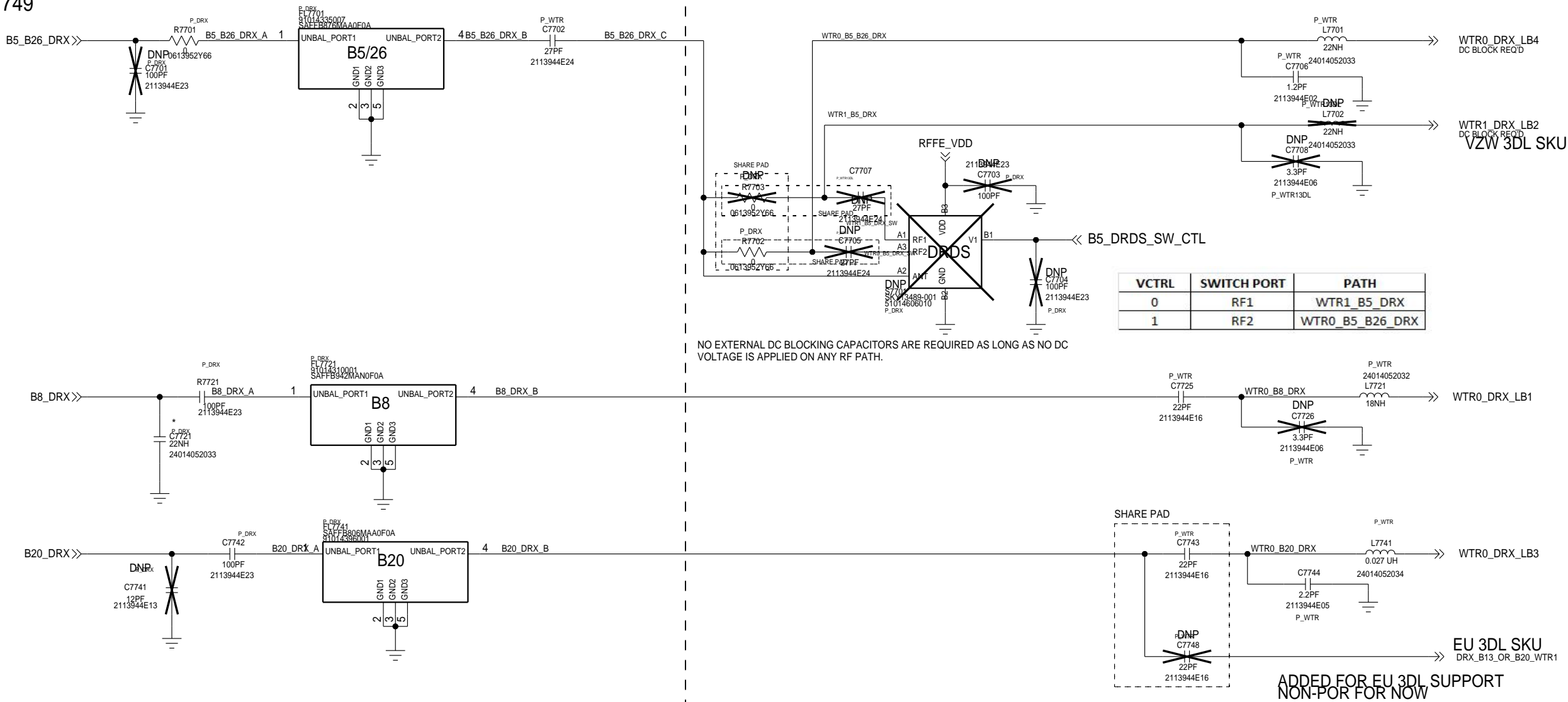
REF : 7650-7699




APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MMI	BLOCK TITLE: <div>blk_rffe_3ca</div>		
LAST MODIFIED BY: MMI Thu Mar 03 15:16:41 2016			
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		CAD FILE NAME:	PAGE 83 OF 88

RFFE: DRX LB

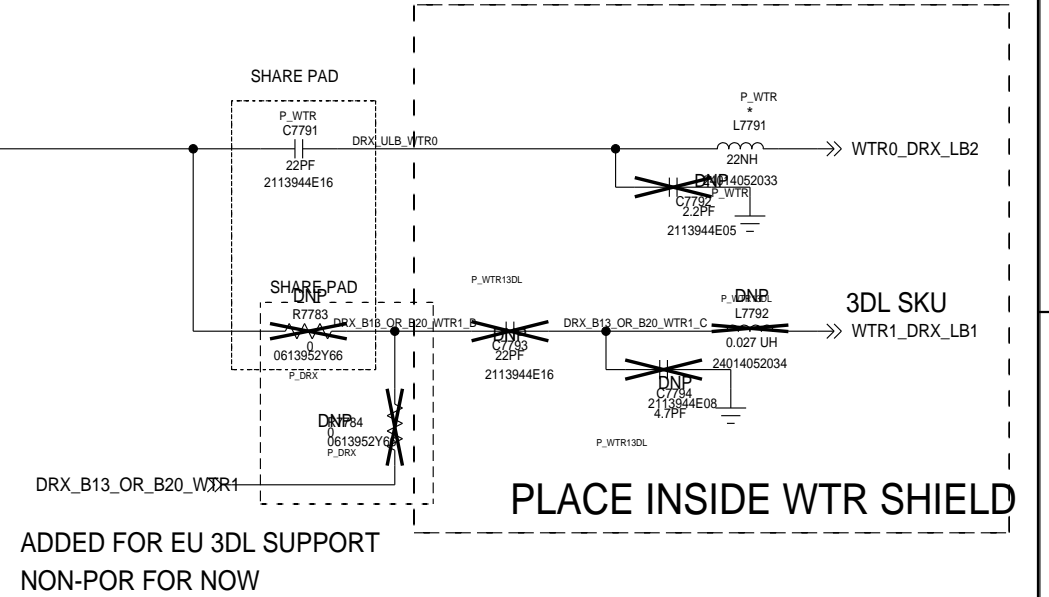
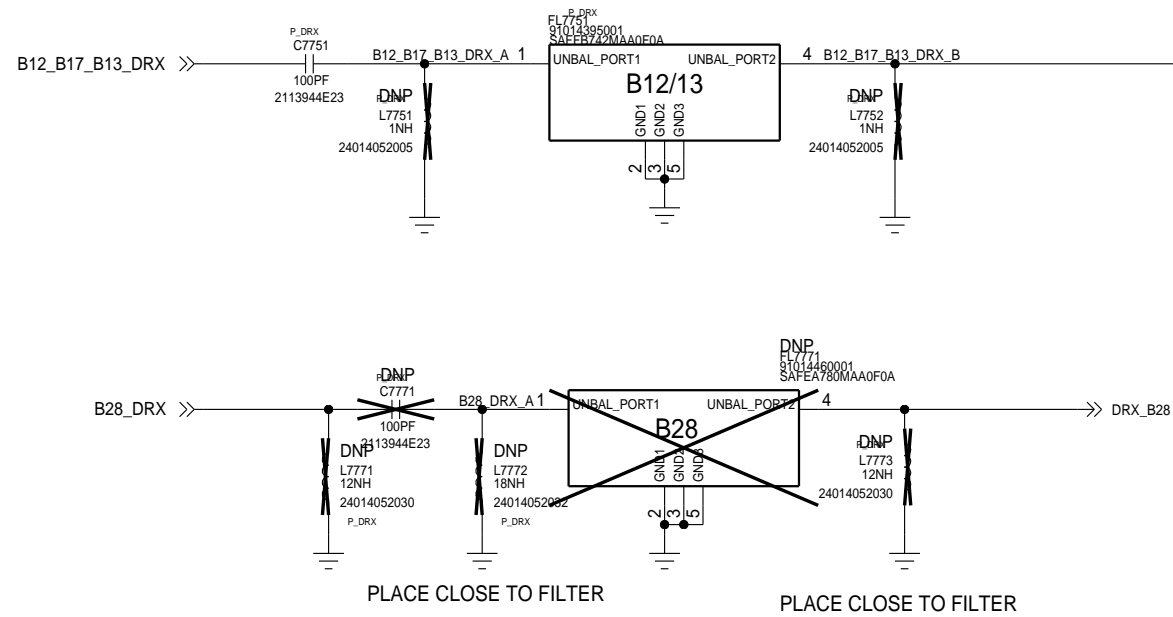
REF : 7700-7749




APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MMI		BLOCK TITLE:	
LAST MODIFIED BY: MMI Thu Mar 03 15:16:41 2016		blk_rfe_3ca	
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		B 80746517001_10.cpm	
		REV 01	
		CAD FILE NAME:	
		PAGE 84 OF 88	

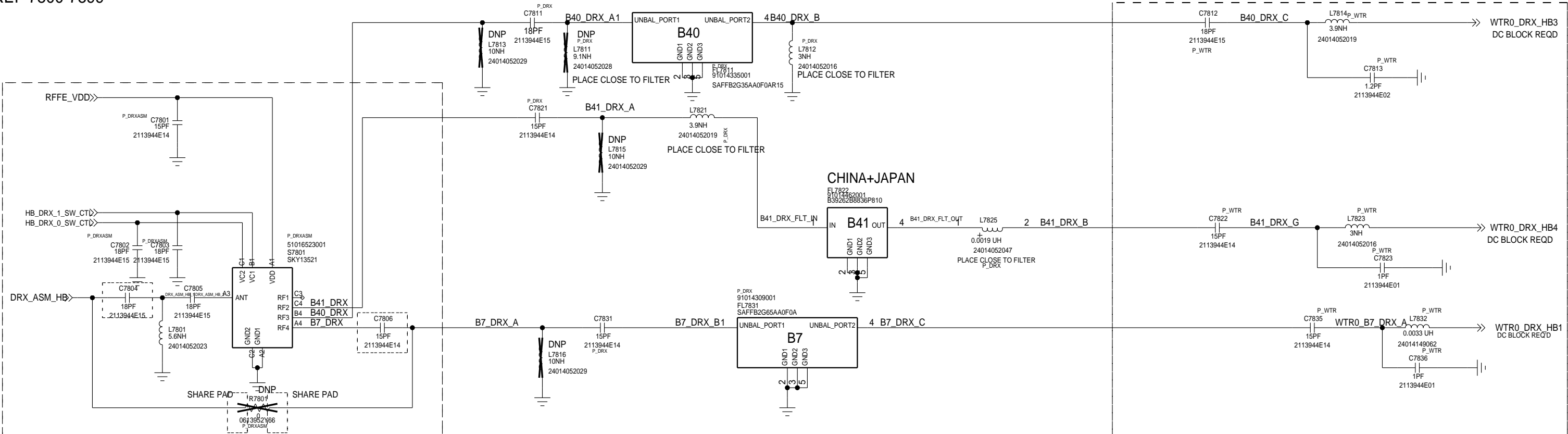
RFFE: DRX ULB

REF: 7750-7799



APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MMI	BLOCK TITLE: <div>blk_rffe_3ca</div>		
LAST MODIFIED BY: MMI Thu Mar 03 15:16:42 2016			
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		CAD FILE NAME:	PAGE 85 OF 88

RFFE: DRX HB
REF 7800-7899




NO EXTERNAL DC BLOCKING CAPACITORS ARE REQUIRED AS LONG AS VOLTAGE IS APPLIED ON ANY RF PATH.

		B41	B40	B7
HB_DRX_1_SW_CTL: VC1		0	1	1
HB_DRX_0_SW_CTL: VC2		1	0	1

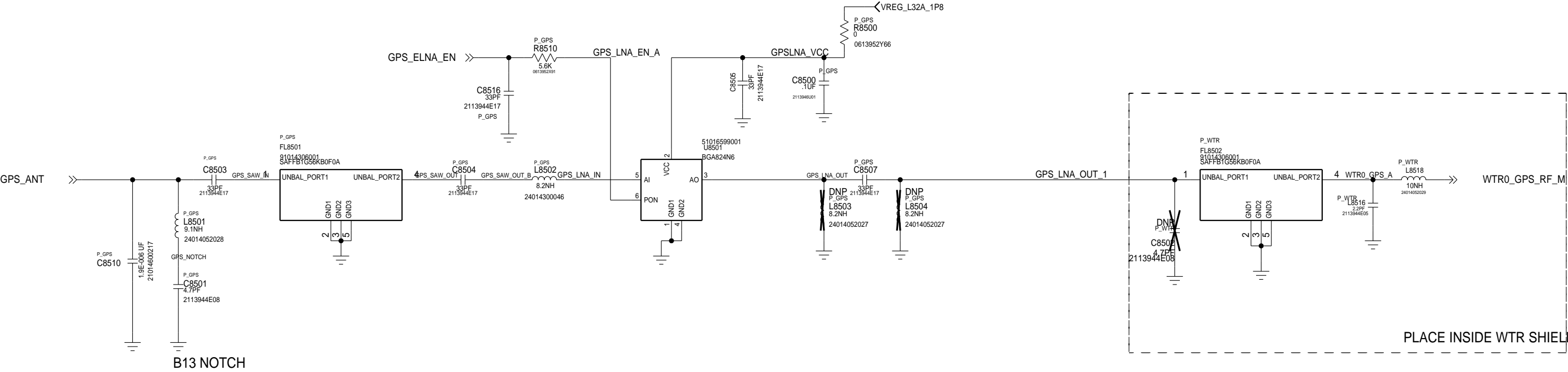
PLACE NEXT TO U7601


PLACE INSIDE WTR SHIELD

APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MMI		BLOCK TITLE:	
LAST MODIFIED BY: MMI Mon Mar 07 14:17:41 2016		blk_rffe_3ca	
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		CAD FILE NAME: PAGE 86 OF 88	

RFFE: GPS

REF : 8500-8549



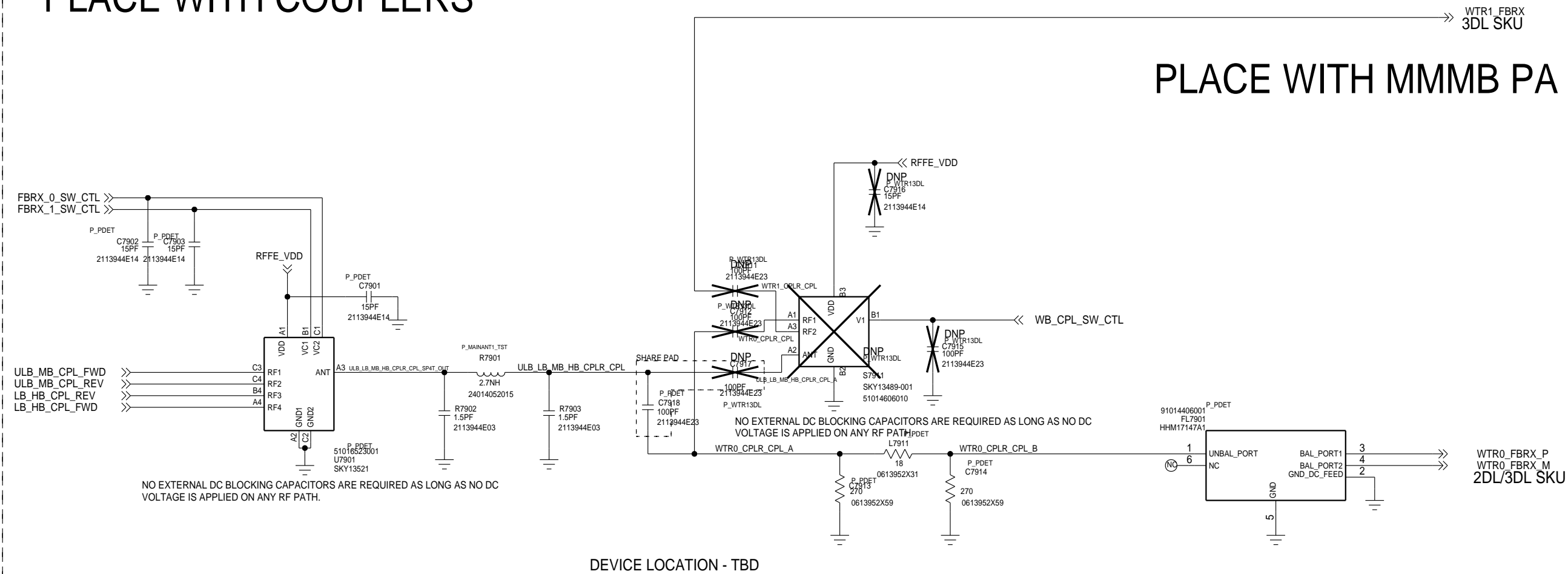
APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER:		BLOCK TITLE:	
LAST MODIFIED BY: Wed Mar 16 16:42:10 2016		blk_rfe_3ca	
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		B 80746517001_10.cpm	01
CAD FILE NAME:			PAGE 87 OF 88


RFFE: PDET

REF : 7900-7949

PLACE WITH COUPLERS

PLACE WITH MMMB PA



APPROVALS		 MOTOROLA MOBILE DEVICES	
ENGINEER: MMI		BLOCK TITLE:	
LAST MODIFIED BY: MMI Fri Mar 04 10:59:13 2016		blk_rfe_3ca	
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		80746517001_10.cpm	
		CAD FILE NAME:	
		PAGE 88 OF 88	