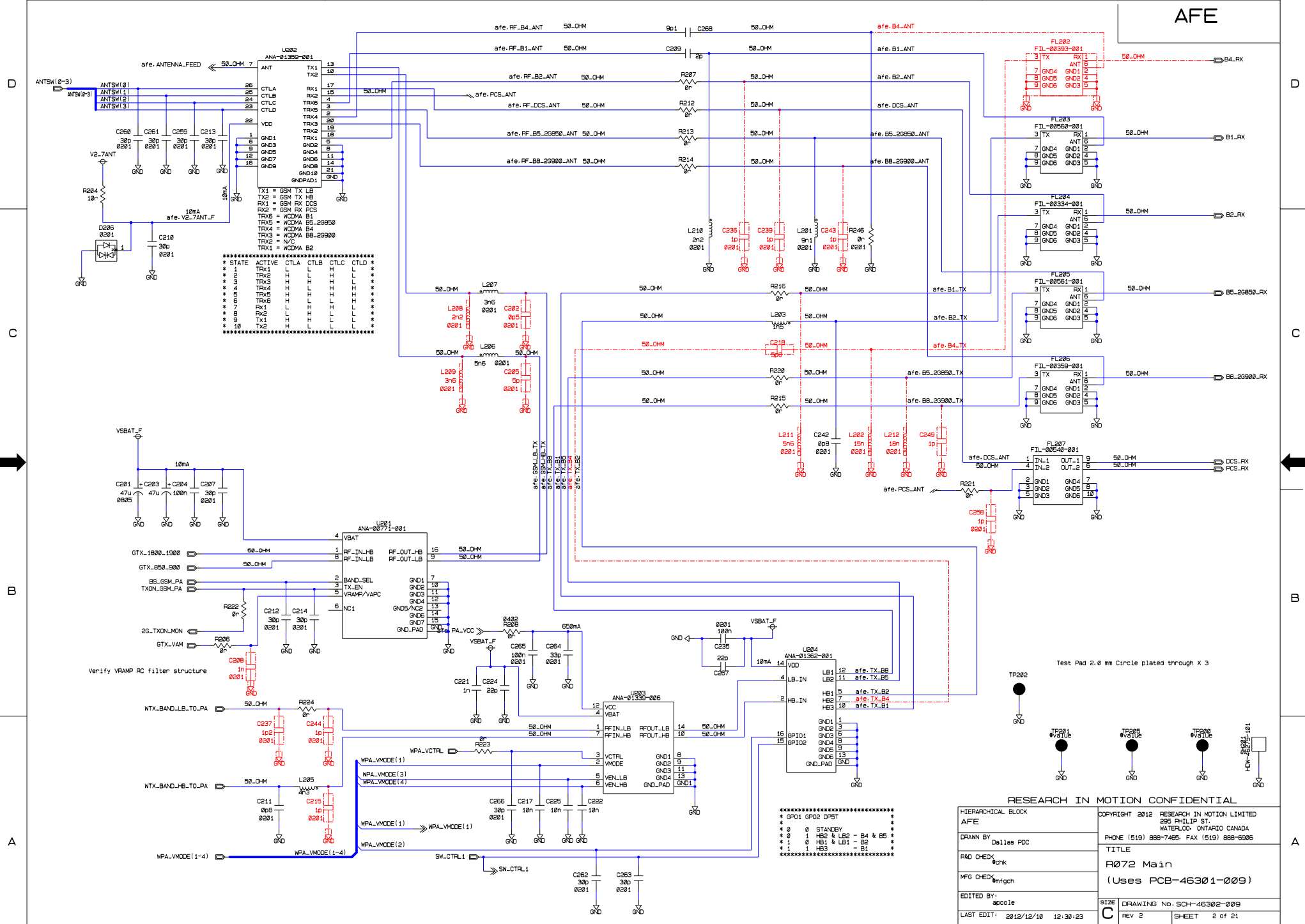


R072 Secure

RESEARCH IN MOTION CONFIDENTIAL		
HIERARCHICAL BLOCK MAIN	COPYRIGHT 2012 RESEARCH IN MOTION LIMITED 295 PHILIP ST. WATERLOO, ONTARIO CANADA	PHONE (519) 889-7465 FAX (519) 889-6986
DRAWN BY Da11ae PDC	TITLE R072 Main (Uses PCB-46301-009)	
RWD CHECK 0chk	MFG CHECK 0mfqch	
EDITED BY: bradcock	SIZE C	DRAWING No. SCH-46302-009
LAST EDIT: 2012/12/07 15:10:57	REV 2	SHEET 1 of 21



```

*****
* STATE ACTIVE CTLA CTLB CTLC CTLD *
* 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 *
* 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 *
* 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 *
* 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 *
* 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 *
* 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 *
* 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 *
* 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 *
* 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 *
* 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 *
* 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 *
*****

```

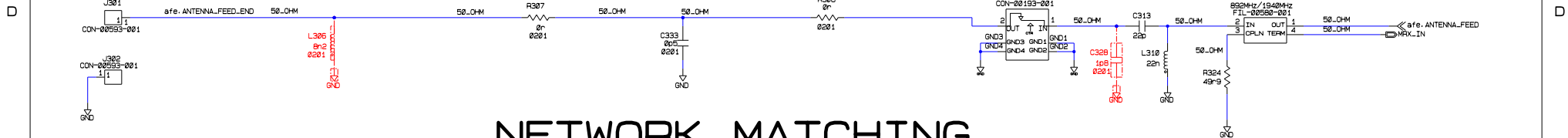
```

*****
* GP01 GP02 DPST *
* 0 0 STANDBY *
* 0 1 HES & LB2 - B4 & B5 *
* 1 0 HBI & LB1 - B2 *
* 1 1 HES - B1 *
*****

```

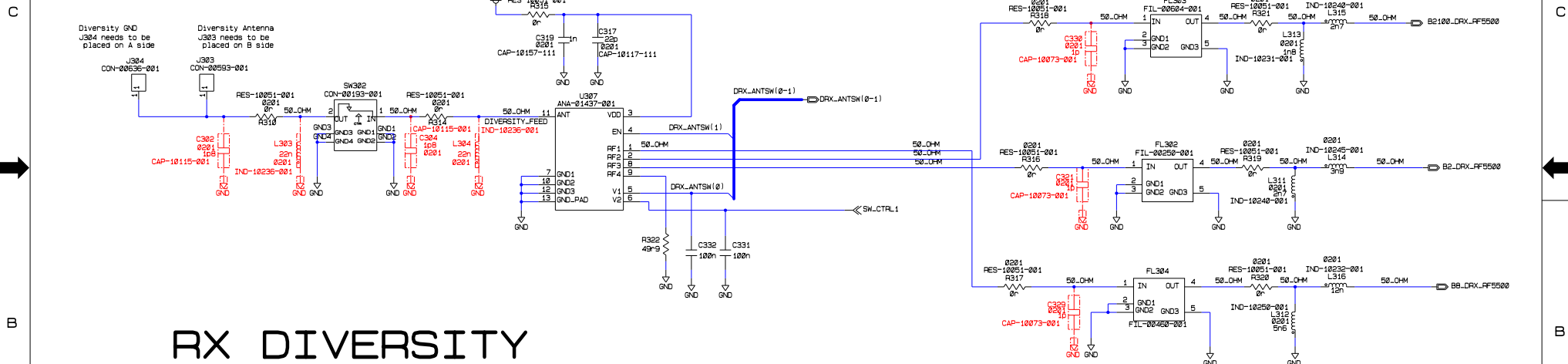
RESEARCH IN MOTION CONFIDENTIAL

HIERARCHICAL_BLOCK AFE	COPYRIGHT 2012 RESEARCH IN MOTION LIMITED 295 PHILIP ST. WATERLOO, ONTARIO CANADA
DRAWN BY Da11as PDC	PHONE (519) 889-7465 FAX (519) 889-6986
RFD CHECK chk	TITLE R072 Main (Uses PCB-46301-009)
MFG CHECK mfgch	SIZE DRAWING No. SCH-46302-009
EDITED BY apoolle	REV 2
LAST EDIT: 2012/12/10 12:30:23	SHEET 2 of 21

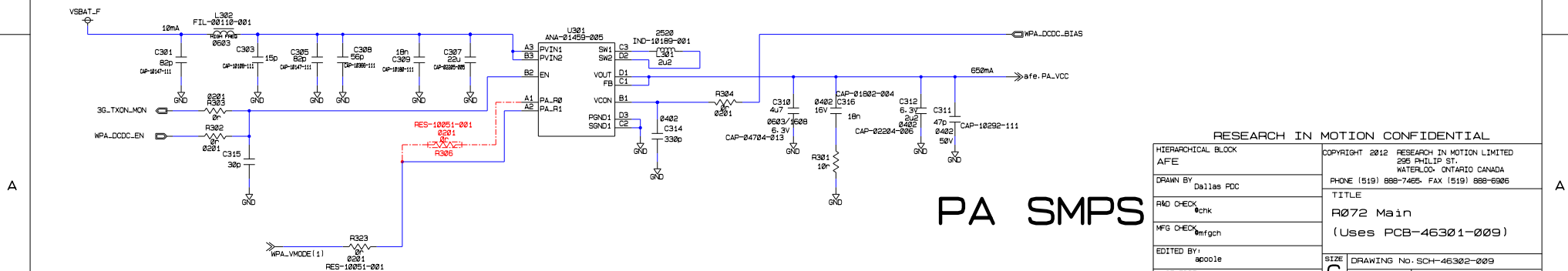


NETWORK MATCHING

ANTENNA CONTACTS



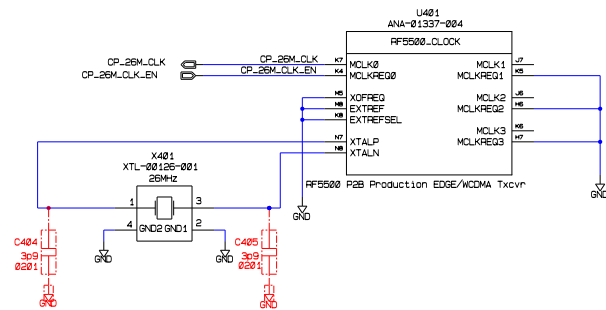
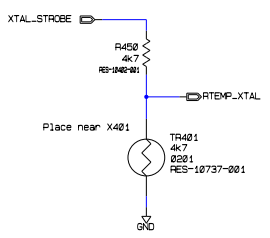
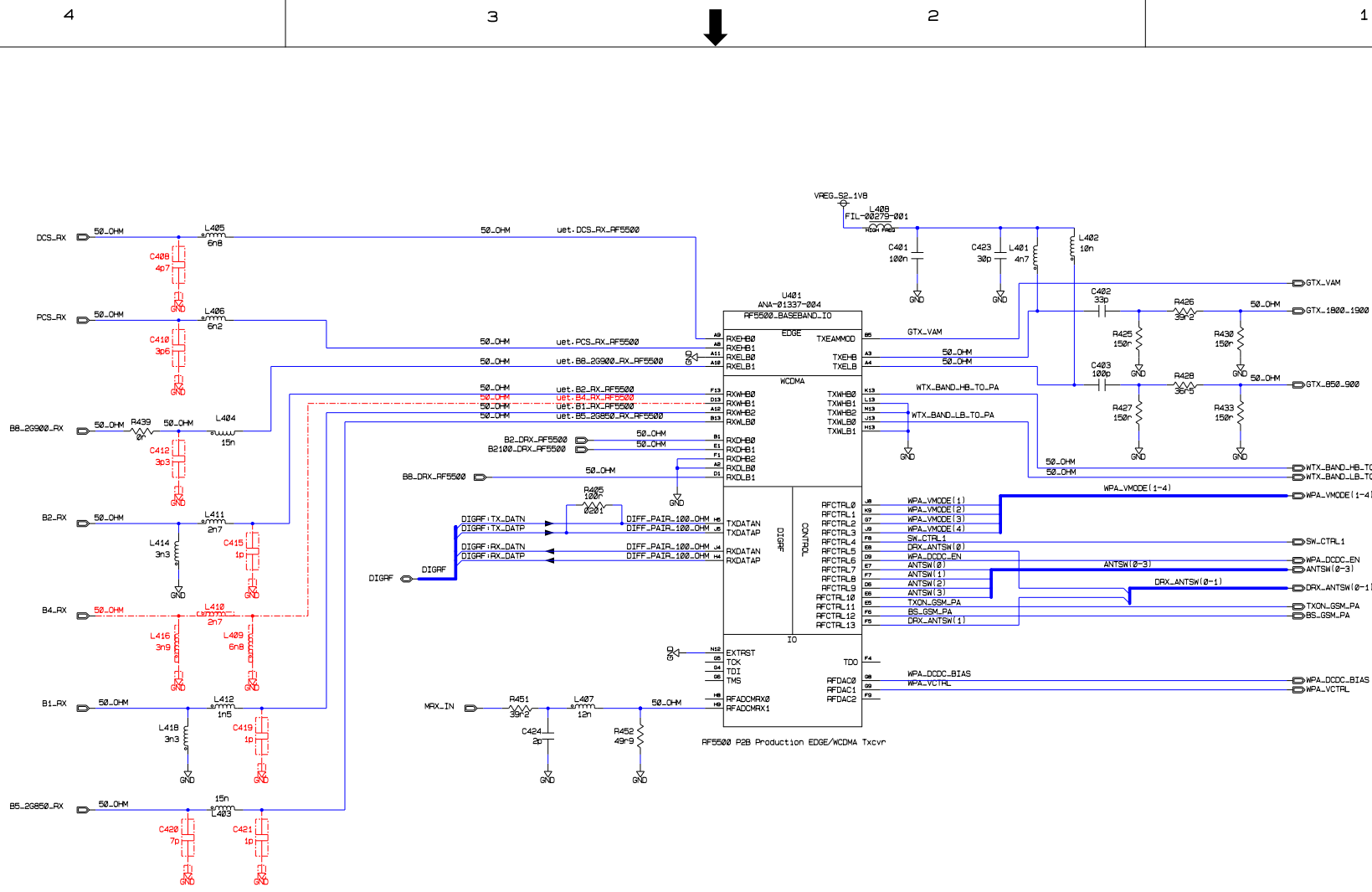
RX DIVERSITY



PA SMPS

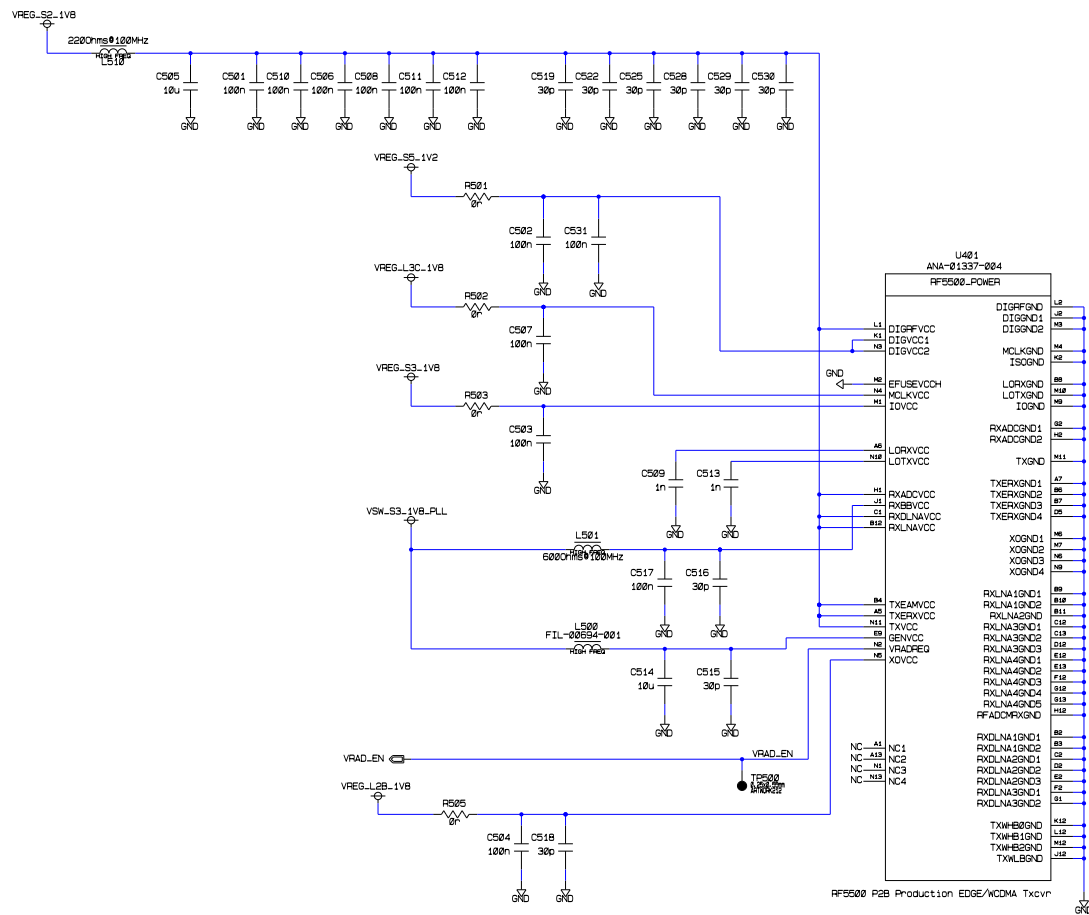
RESEARCH IN MOTION CONFIDENTIAL		
HIERARCHICAL BLOCK AFE	COPYRIGHT 2012 RESEARCH IN MOTION LIMITED 295 PHILLIP ST. WATERLOO, ONTARIO CANADA	PHONE (519) 888-7465 FAX (519) 888-6906
DRAWN BY Da11ae PDC	TITLE R072 Main (Uses PCB-46301-009)	
RWD CHECK 0chk	EDITED BY ap001e	SIZE DRAWING No. SCH-46302-009
MFG CHECK 0mfgch	LAST EDIT: 2012/12/10 12:30:23	REV 2 SHEET 3 of 21





RESEARCH IN MOTION CONFIDENTIAL

HIERARCHICAL_BLOCK	UMTS_EDGE_TXCVR	COPYRIGHT 2012 RESEARCH IN MOTION LIMITED 295 PHILIP ST. WATERLOO, ONTARIO CANADA
DRAWN BY	Da11as PDC	PHONE (519) 888-7465 FAX (519) 888-6986
RWD CHECK	0chk	TITLE
MFG CHECK	0mfgch	R072 Main
EDITED BY:	ap001e	(Uses PCB-46301-009)
LAST EDIT:	2012/12/10 12:30:24	SIZE
		DRAWING No. SCH-46302-009
		REV 2
		SHEET 4 of 21



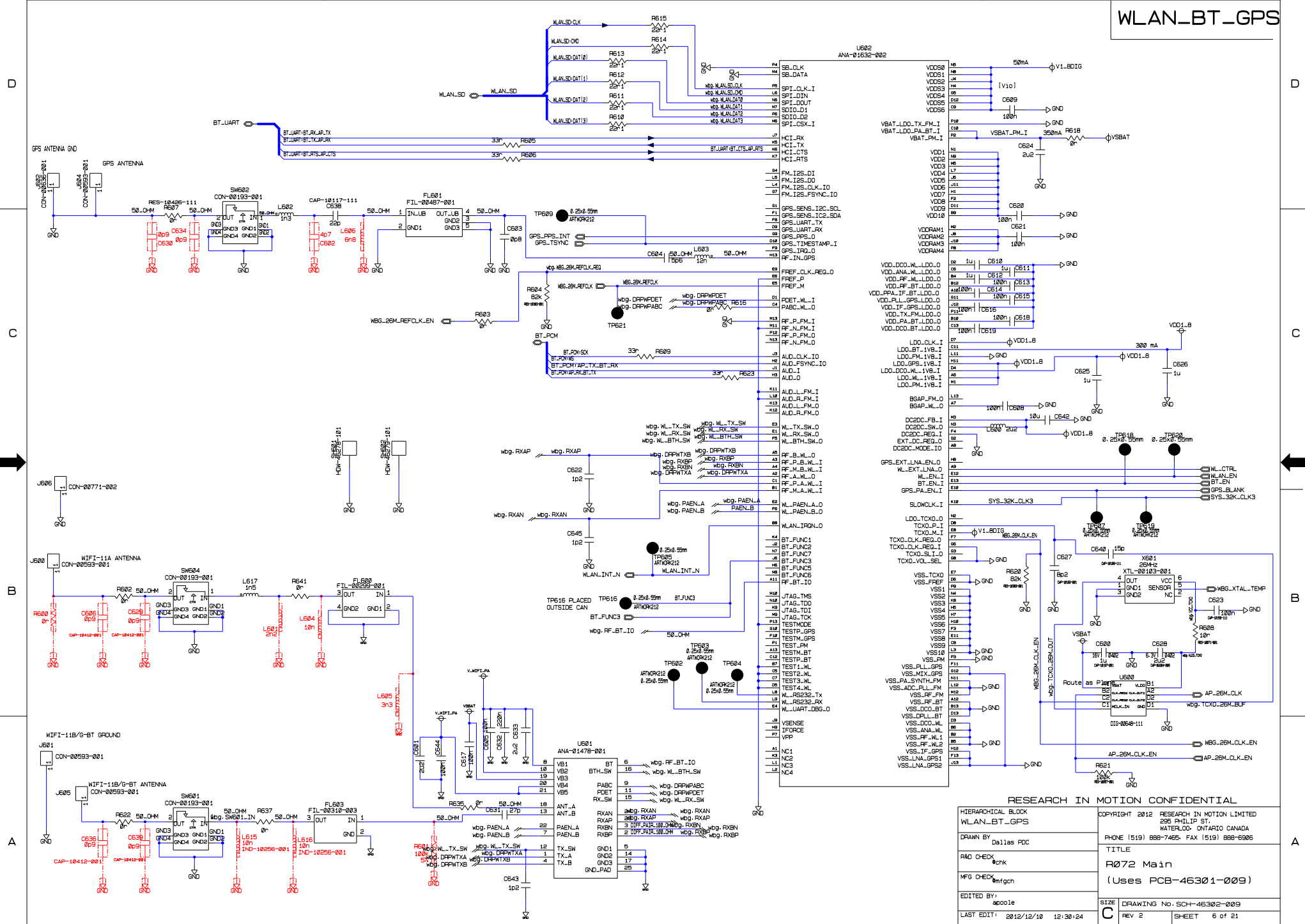
RF5500 TXCVR POWER

Zuken CR-5000 System Designer

RESEARCH IN MOTION CONFIDENTIAL

HIERARCHICAL_BLOCK	UMTS_EDGE_TXCVR	COPYRIGHT 2012 RESEARCH IN MOTION LIMITED 295 PHILIP ST. WATERLOO, ONTARIO CANADA PHONE (519) 886-7465 FAX (519) 886-6986
DRAWN BY	Da11as PDC	TITLE
RND CHECK	chk	R072 Main
MFG CHECK	mfgch	(Uses PCB-46301-009)
EDITED BY:	ap001e	SIZE
LAST EDIT:	2012/12/10 12:30:24	DRAWING No. SCH-46302-009
		REV 2 SHEET 5 of 21

WLAN_BT_GPS



RESEARCH IN MOTION CONFIDENTIAL		
HIERARCHICAL BLOCK WLAN_BT_GPS	COPYRIGHT 2012 RESEARCH IN MOTION LIMITED 295 PHILIP ST. WATERLOO, ONTARIO CANADA	
DRAWN BY Da11as PDC	PHONE (519) 888-7465 FAX (519) 888-6986	
RAD CHECK 0chk	TITLE R072 Main (Uses PCB-46301-009)	
MFG CHECK 0mfgch	SIZE DRAWING No. SCH-46302-009	
EDITED BY 80001e	REV 2	
LAST EDIT 2012/12/10 12:30:24	SHEET 6 of 21	

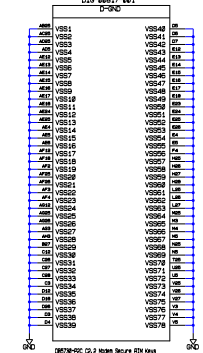
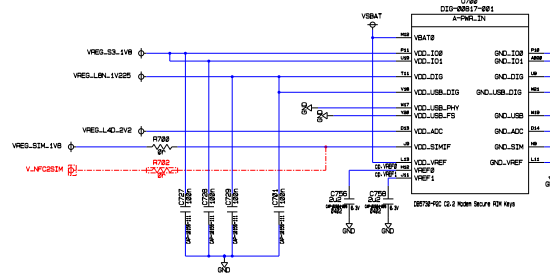
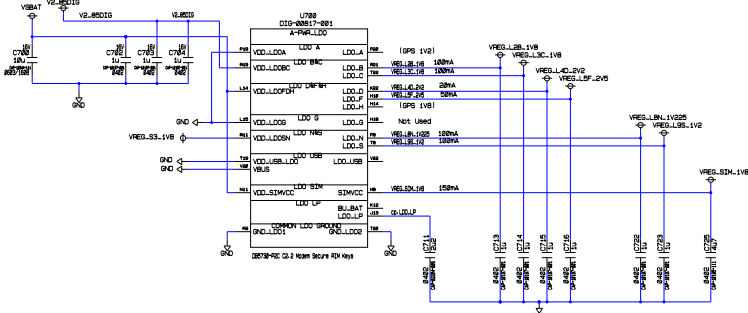
DB5730 Power & GND

COMMS PROC

Interface & ABB Supplies

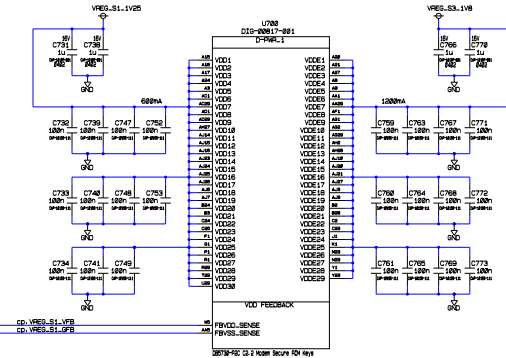
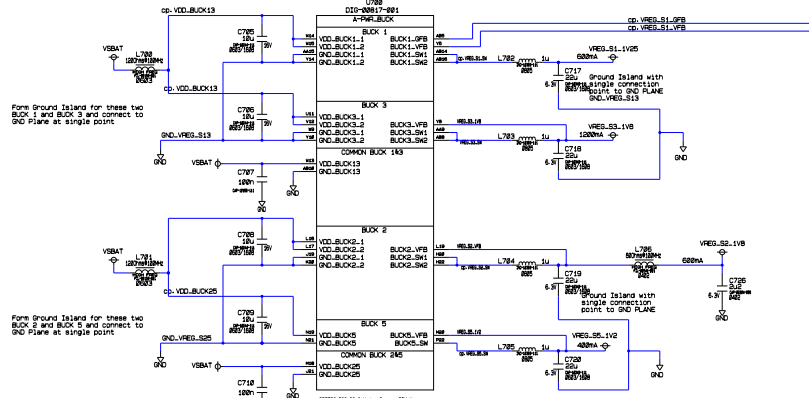
DB5730 Grounds

LDOS Regulators

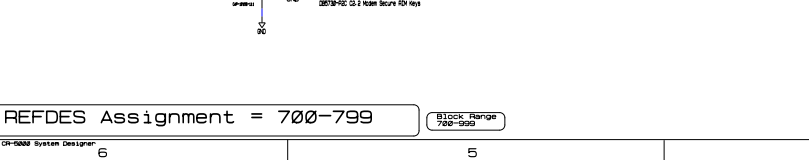


Switching Regulators

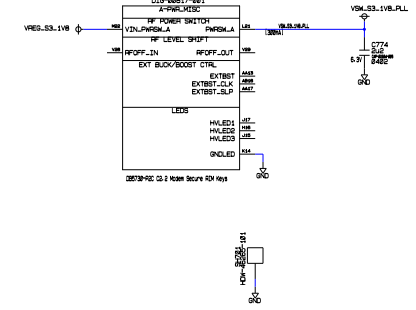
DB5730 Core & Digital



LEDs, Boost & Misc Power



PLL & DBB Supplies



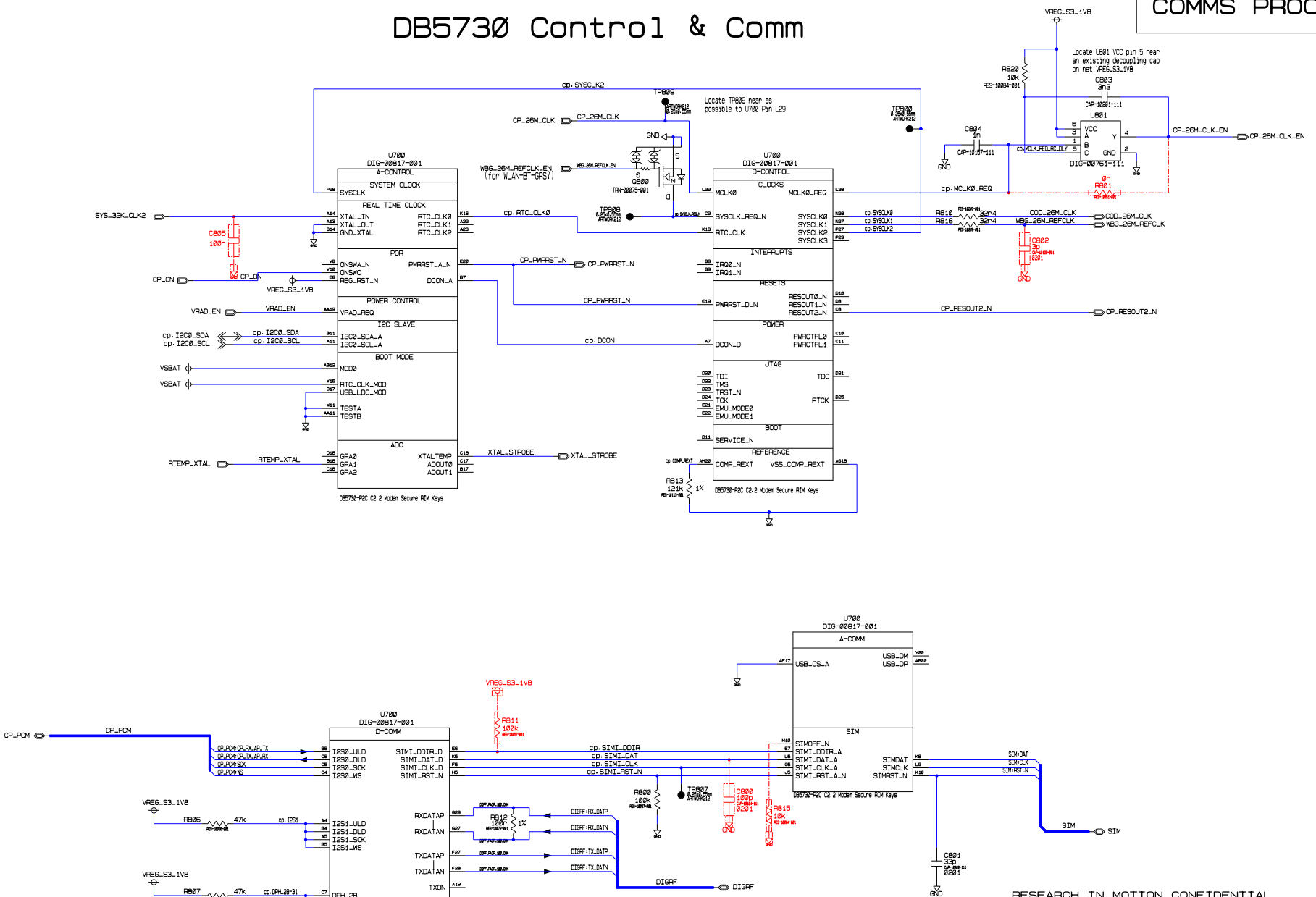
REFDES Assignment = 700-799

Block Name
700-799

RESEARCH IN MOTION CONFIDENTIAL	
HIERARCHICAL BLOCK COMMS PROCESSOR	RIGHT © 2012 RESEARCH IN MOTION LIMITED 200 PHILIP ST WATERLOO, ONTARIO CANADA
DRAWN BY: dal129 POC	PHONE (519) 800-7405 FAX (519) 800-0305
IND CHECK: brk	TITLE: R072 Main (Uses PCB-46301-009)
MFG CHECK: mfgcn	REV: 0001e
EDITED BY: m001e	DATE: [Drawing No. SCH-46301-009]
LAST EDIT: 2012/12/18 12:30:26	REV 2 SHEET 7 of 21

DB5730 Control & Comm

COMMS PROC



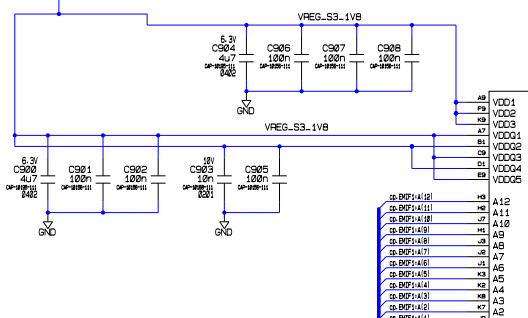
Comm Interfaces

RESEARCH IN MOTION CONFIDENTIAL		
HIERARCHICAL BLOCK COMMS PROCESSOR	COPYRIGHT 2012 RESEARCH IN MOTION LIMITED 295 PHILIP ST. WATERLOO, ONTARIO CANADA PHONE (519) 888-7465. FAX (519) 888-6986	
DRAWN BY Dallas POC	TITLE R072 Main (Uses PCB-46301-009)	
RWD CHECK *chck	SIZE A0001e	
MFG CHECK *mfgch	DRAWING No. SCH-46302-009	
EDITED BY a0001e	REV 2	
LAST EDIT 2012/12/10 12:30:26	SHEET 8 of 21	

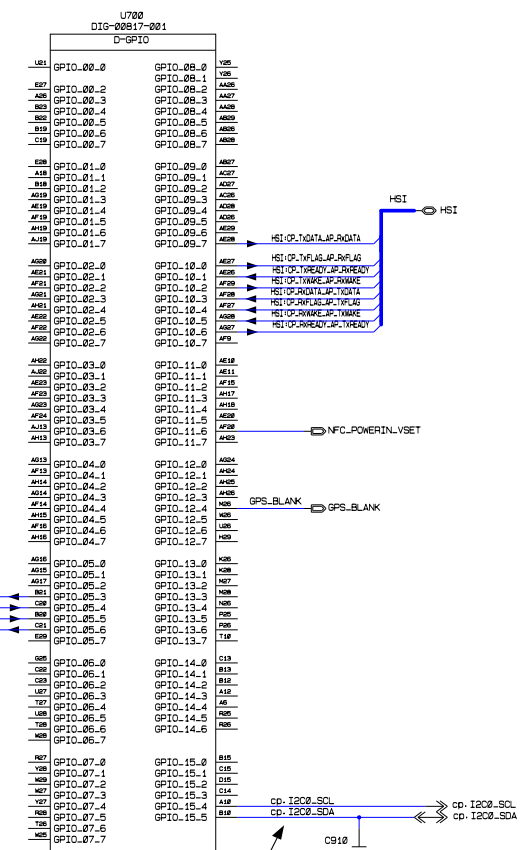
REFDES Assignment = 800-899

Block Range 700-999

256 Mb LPDDR1 x16

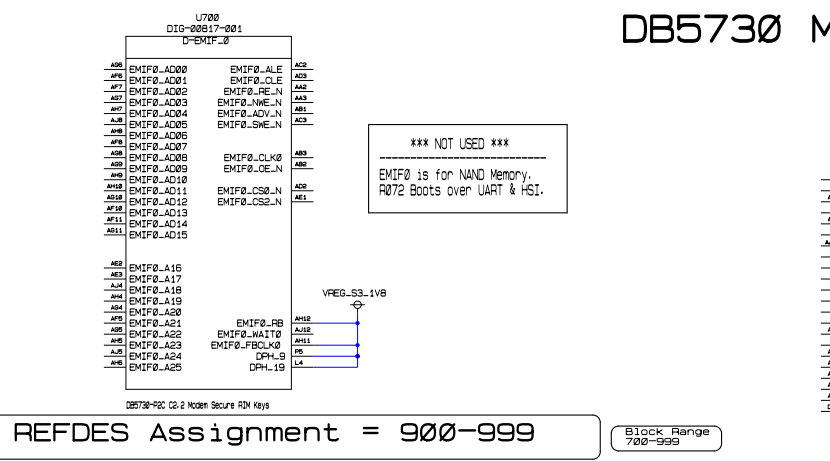
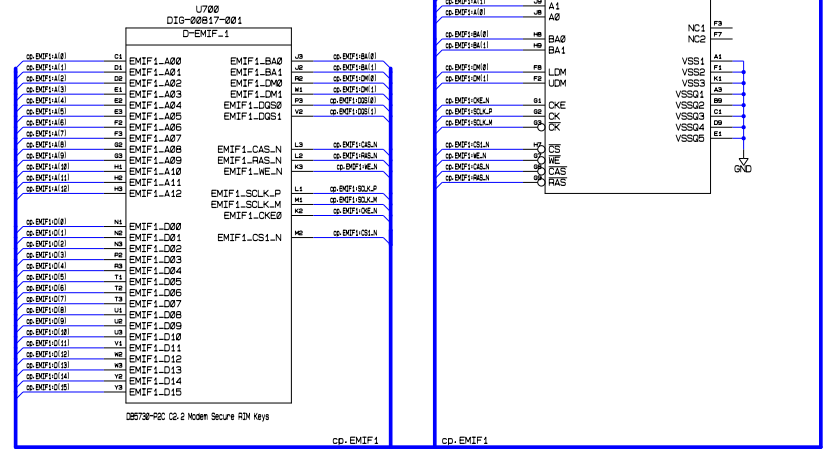


GPIOs



DB5730 Memory & GPIO

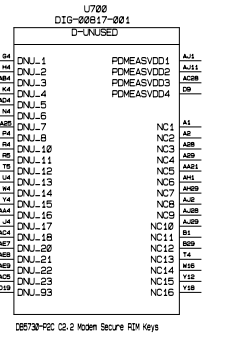
Do Not Use



*** NOT USED ***
EMIF0 is for NAND Memory.
R072 Boots over UART & HSI.

REFDES Assignment = 900-999

Block Range 700-999

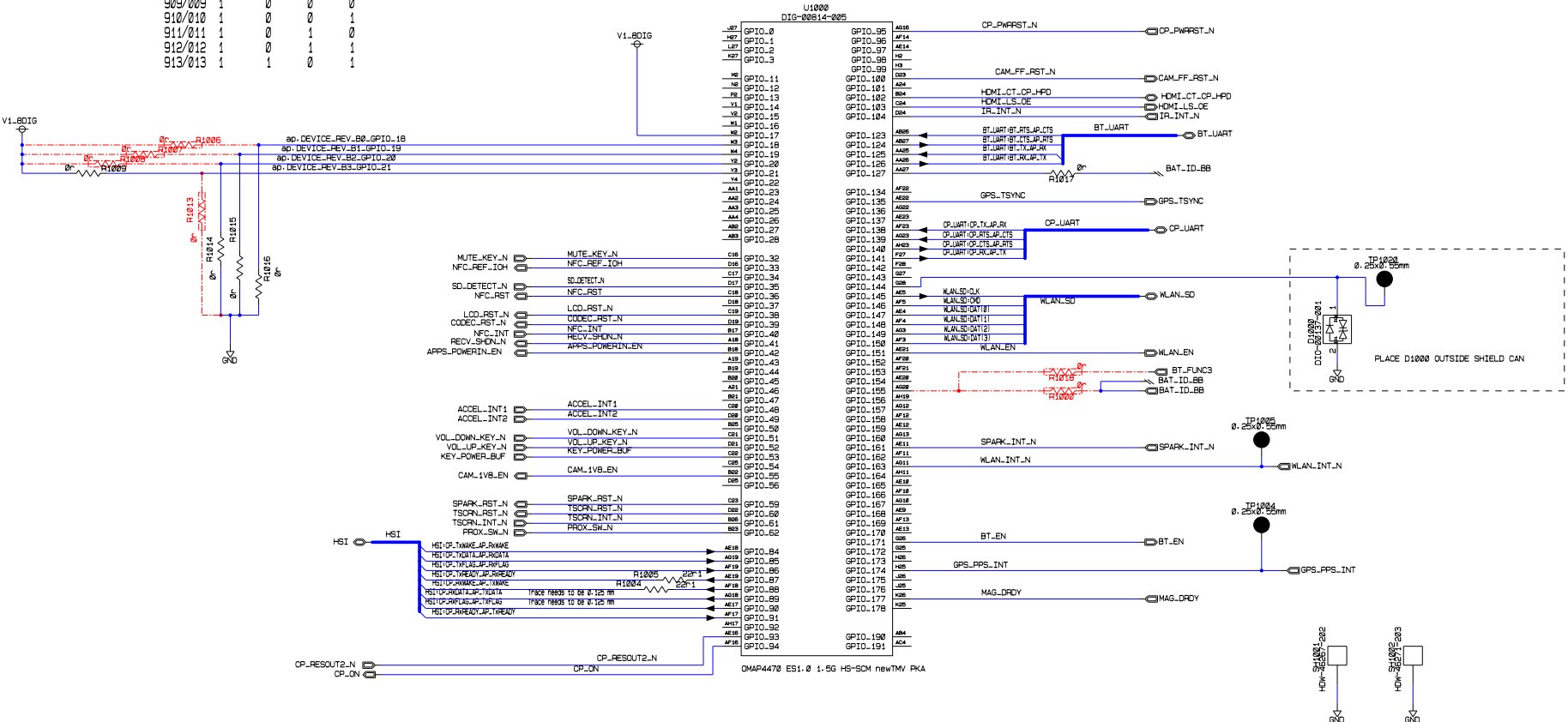


RESEARCH IN MOTION CONFIDENTIAL

HIERARCHICAL BLOCK COMMS PROCESSOR	COPYRIGHT 2012 RESEARCH IN MOTION LIMITED 295 PHILIP ST. WATERLOO, ONTARIO CANADA PHONE (519) 888-7465 FAX (519) 888-6986
DRAWN BY Da11as PDC	TITLE R072 Main (Uses PCB-46301-009)
RWD CHECK 0chk	SIZE 80001e
MFG CHECK 0mfgch	DRAWING No. SCH-46302-009
EDITED BY 80001e	REV 2 SHEET 9 of 21
LAST EDIT 2012/12/10 12:30:26	

GPIOs

Status	REV	GPI021	GPI020	GPI019	GPI018
Non Secure	901	0	0	0	0
Non Secure	902	0	0	1	1
Non Secure	903	0	0	1	0
Non Secure	904	0	0	1	1
Non Secure	905	0	1	0	0
Non Secure	906	0	1	0	1
Non Secure	907	0	1	1	0
Secure	5	1	1	0	0
Secure	7	1	1	1	0
Secure	8	1	1	1	1
909/009	1	0	0	0	1
910/010	1	0	0	1	1
911/011	1	0	1	0	1
912/012	1	0	1	1	1
913/013	1	1	0	1	1

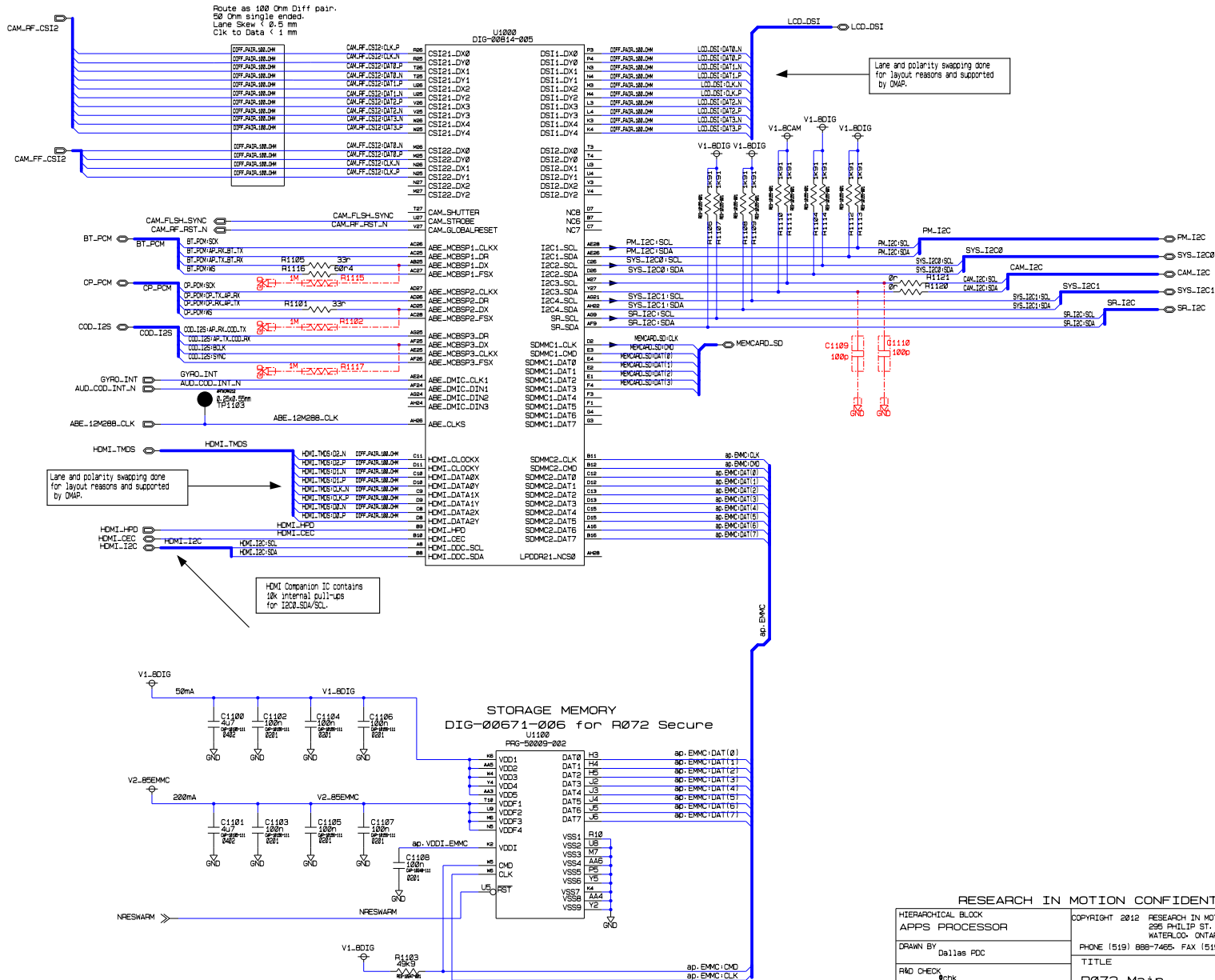


RESEARCH IN MOTION CONFIDENTIAL	
HIERARCHICAL BLOCK APPS PROCESSOR	COPYRIGHT 2012 RESEARCH IN MOTION LIMITED 295 PHILLIP ST. WATERLOO, ONTARIO CANADA
DRAWN BY Da11as PDC	PHONE (519) 888-7465 FAX (519) 888-6986
RMD CHECK 0chk	TITLE R072 Main (Uses PCB-46301-009)
MFG CHECK 0mfgch	SIZE A0001e
EDITED BY: ap001e	DRAWING No. SCH-46302-009
LAST EDIT: 2012/12/10 12:30:25	REV 2 SHEET 10 of 21

REFDES Assignment = 1000-1099

Block Range 1000-1399

Communications

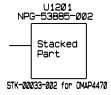


REFDES Assignment = 1100-1199

Block Range 1000-1399

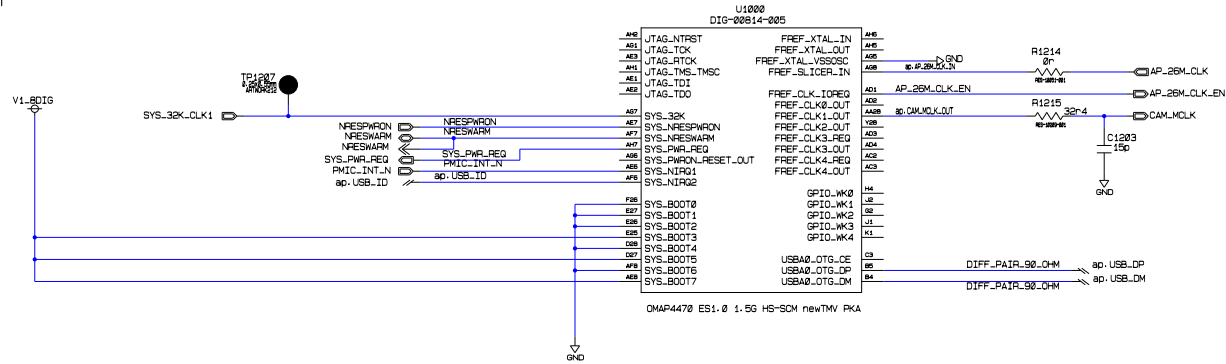
RESEARCH IN MOTION CONFIDENTIAL		
HIERARCHICAL BLOCK	APPS PROCESSOR	COPYRIGHT 2012 RESEARCH IN MOTION LIMITED 295 PHILIP ST. WATERLOO, ONTARIO CANADA
DRAWN BY	Da11ae PDC	PHONE (519) 888-7465. FAX (519) 888-6986
RWD CHECK	chk	TITLE
MFG CHECK	mfqch	R072 Main (Uses PCB-46301-009)
EDITED BY:	ap001e	SIZE
LAST EDIT:	2012/12/10 12:30:25	DRAWING No. SCH-46302-009
		REV 2
		SHEET 11 of 21

Dual DDR2 PoP for OMAP44XX

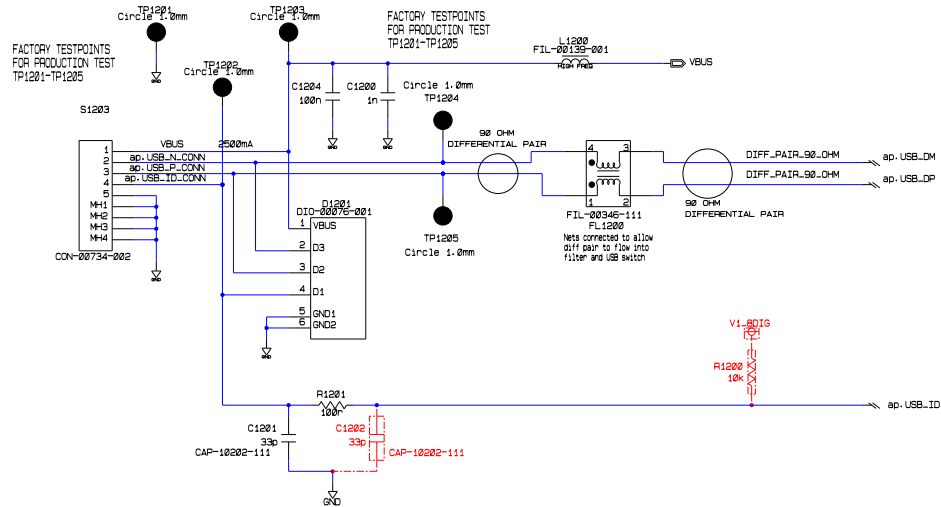


APPS PROC

OMAP Clock & Control

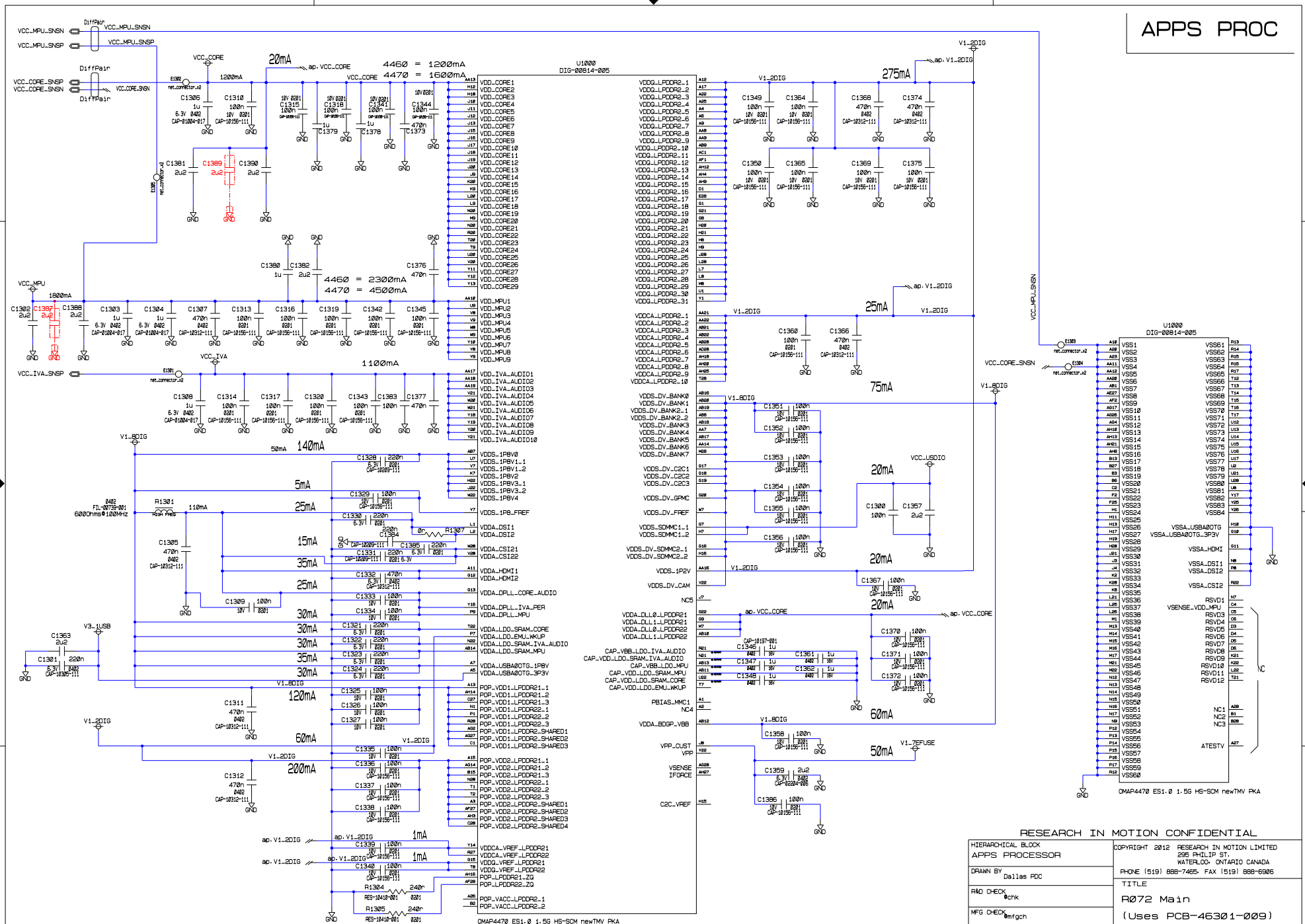


CHARGE/USB CONNECTOR



REFDES Assignment = 1200-1299

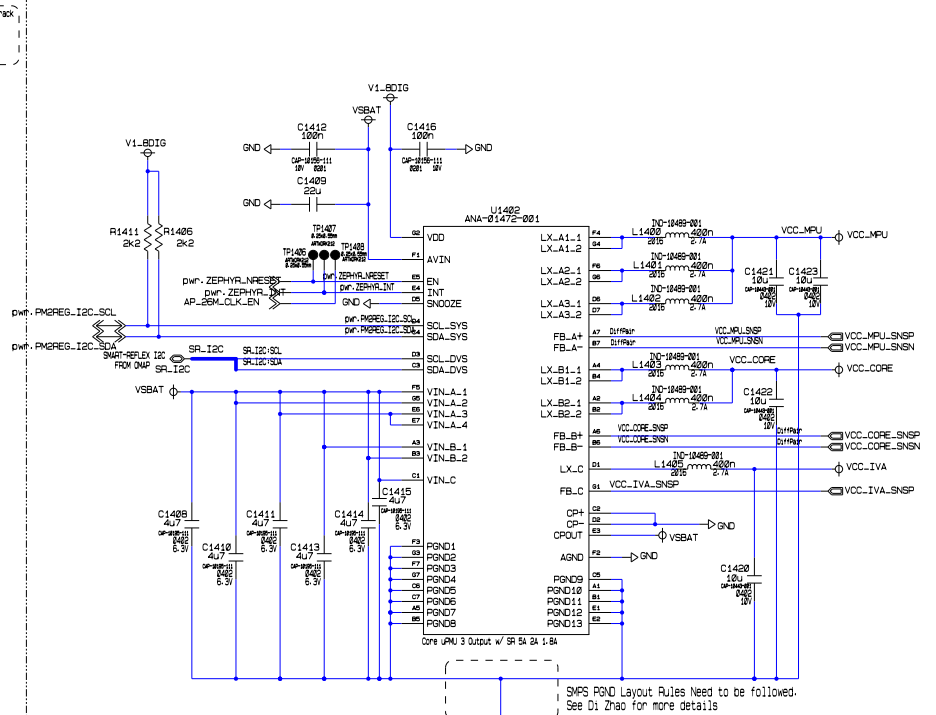
RESEARCH IN MOTION CONFIDENTIAL	
HIERARCHICAL BLOCK APPS PROCESSOR	COPYRIGHT 2012 RESEARCH IN MOTION LIMITED 295 PHILIP ST. WATERLOO, ONTARIO CANADA PHONE (519) 886-7465 FAX (519) 886-6906
DRAWN BY Dallas PDC	TITLE R072 Main (Uses PCB-46301-009)
RND CHECK chx	
MFG CHECK mfgcn	
EDITED BY: apoolle	SIZE C DRAWING NO. SCH-46302-009
LAST EDIT: 2012/12/10 12:30:25	REV 2 SHEET 12 of 21



REFDES Assignment = 1300-1399

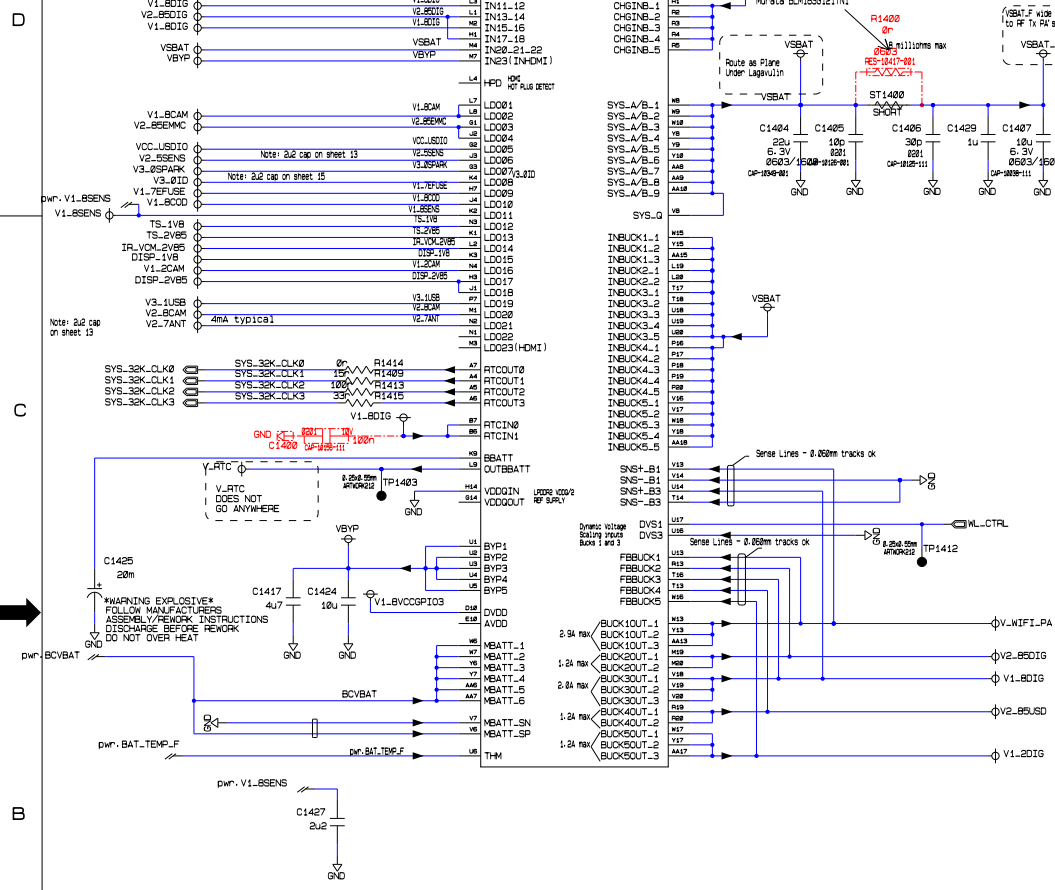
RESEARCH IN MOTION CONFIDENTIAL	
HIERARCHICAL BLOCK APPS PROCESSOR	COPYRIGHT 2012 RESEARCH IN MOTION LIMITED 295 PHILLIP ST. WATERLOO, ONTARIO CANADA
DRAWN BY Da11ae PDC	PHONE (519) 888-7465, FAX (519) 888-6986
RWD CHECK chck	TITLE R072 Main (Uses PCB-46301-009)
MFG CHECK mfgch	
EDITED BY a0001e	SIZE A0001e
LAST EDIT: 2012/12/10 12:30:26	DRAWING No. SCH-46302-009
	REV 2 SHEET 13 of 21

ZEPHYR OMAP5 MINI-PMIC



SNPS P30D Layout Rules need to be followed. See Di Zhao for more details

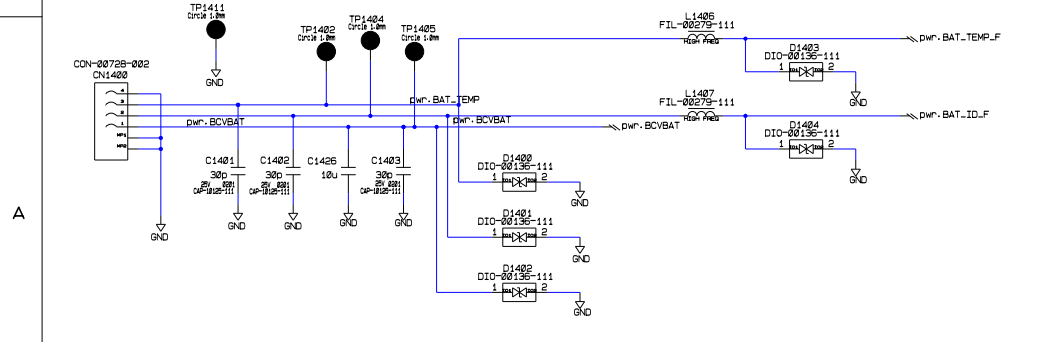
Lagavulin



BATTERY CONN AND FAULT TOLERANCE

BATTERY CONNECTOR

FACTORY TESTPOINTS FOR PRODUCTION TEST



RESEARCH IN MOTION CONFIDENTIAL		
HIERARCHICAL BLOCK POWER	COPYRIGHT 2012 RESEARCH IN MOTION LIMITED 295 PHILIP ST. WATERLOO, ONTARIO CANADA PHONE (519) 888-7465, FAX (519) 888-6986	
DRAWN BY Da11ae PDC	TITLE R072 Main (Uses PCB-46301-009)	
RWD CHECK 0chk	SIZE DRAWING No. SCH-46302-009	
MFG CHECK 0mfgch	REV 2	
EDITED BY: ap001e	SHEET 14 of 21	
LAST EDIT: 2012/12/10 12:30:26		

Lagavulin

POWER

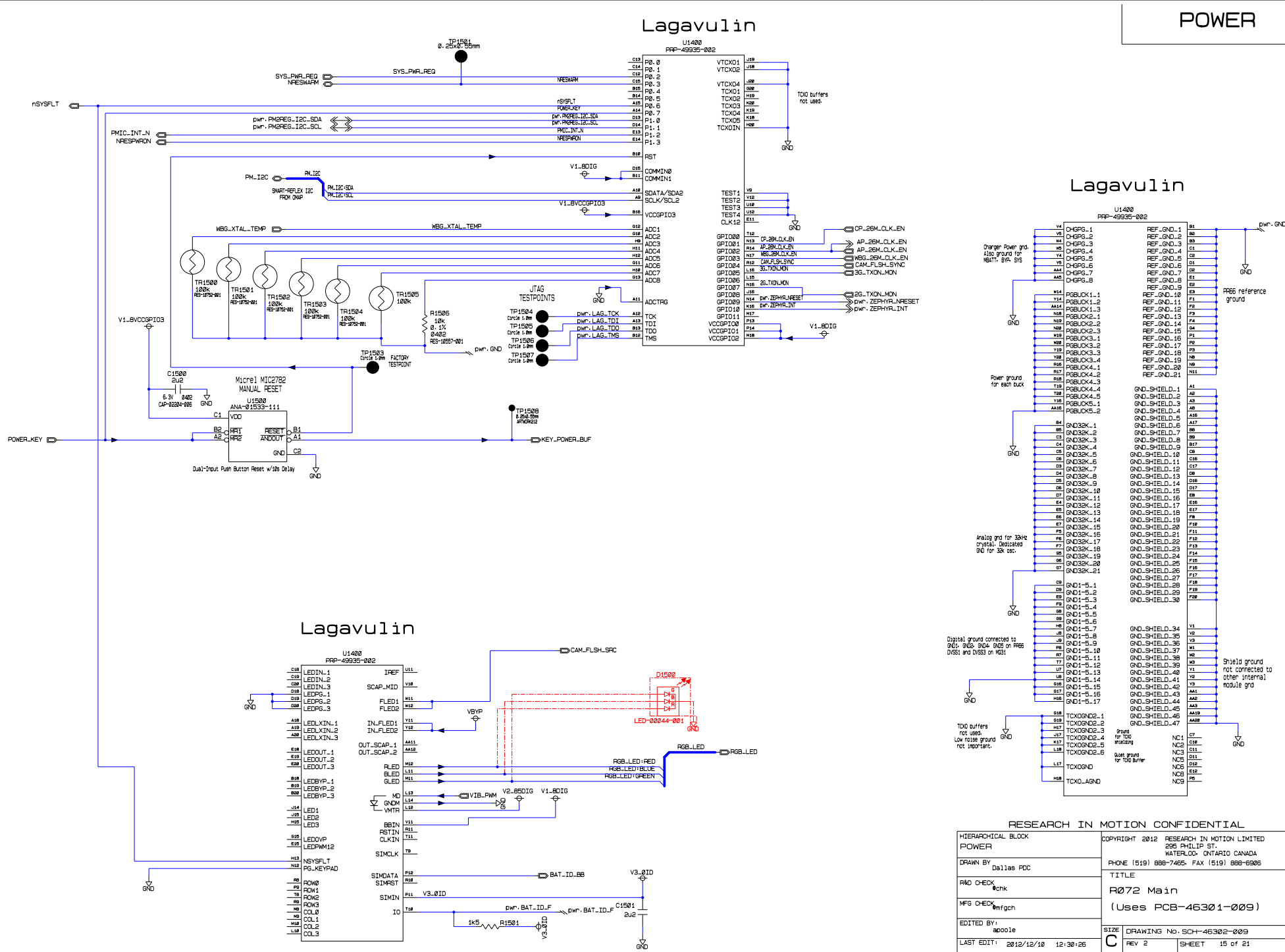
U1400
PPF-49935-002

Lagavulin

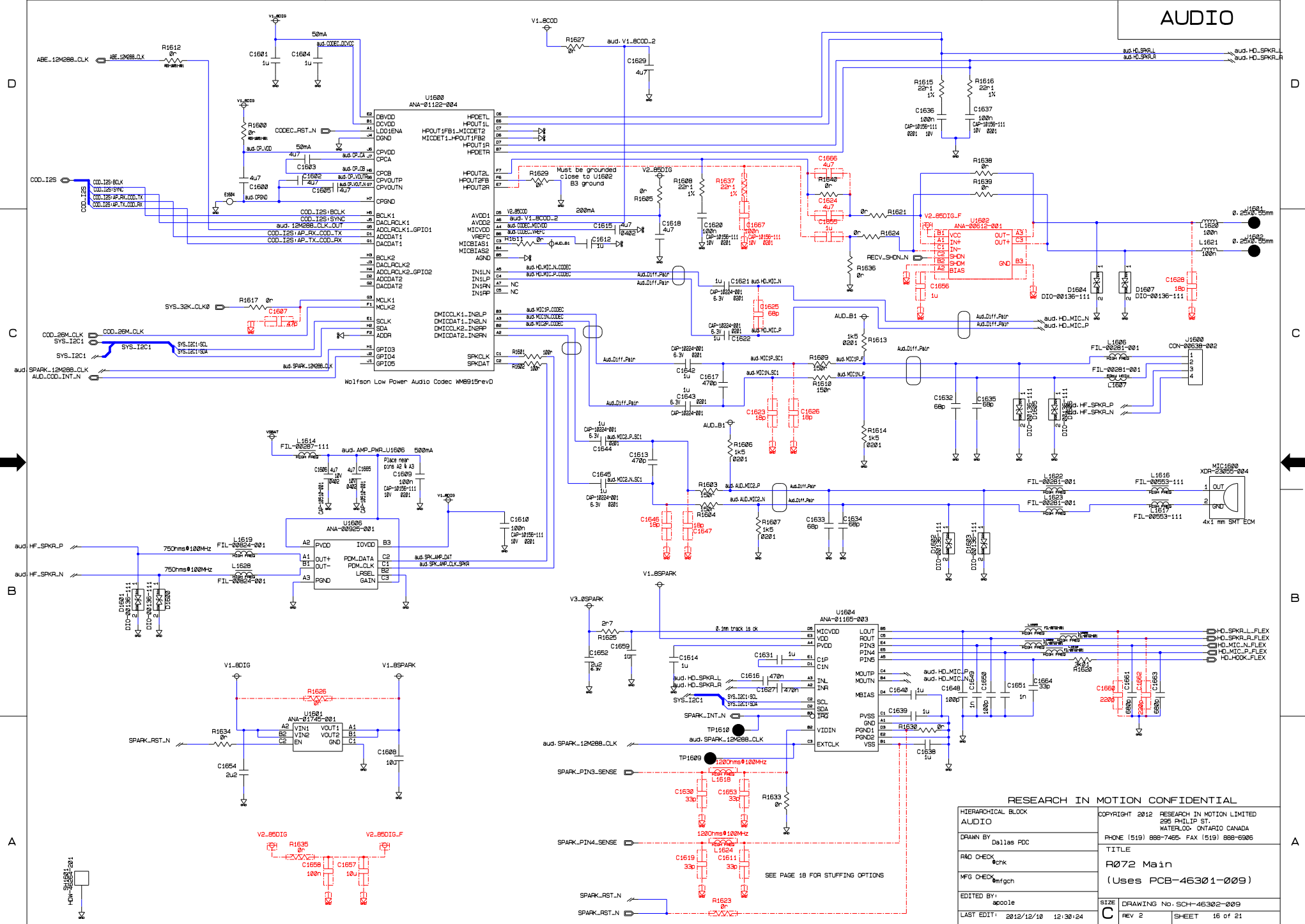
U1400
PPF-49935-002

RESEARCH IN MOTION CONFIDENTIAL

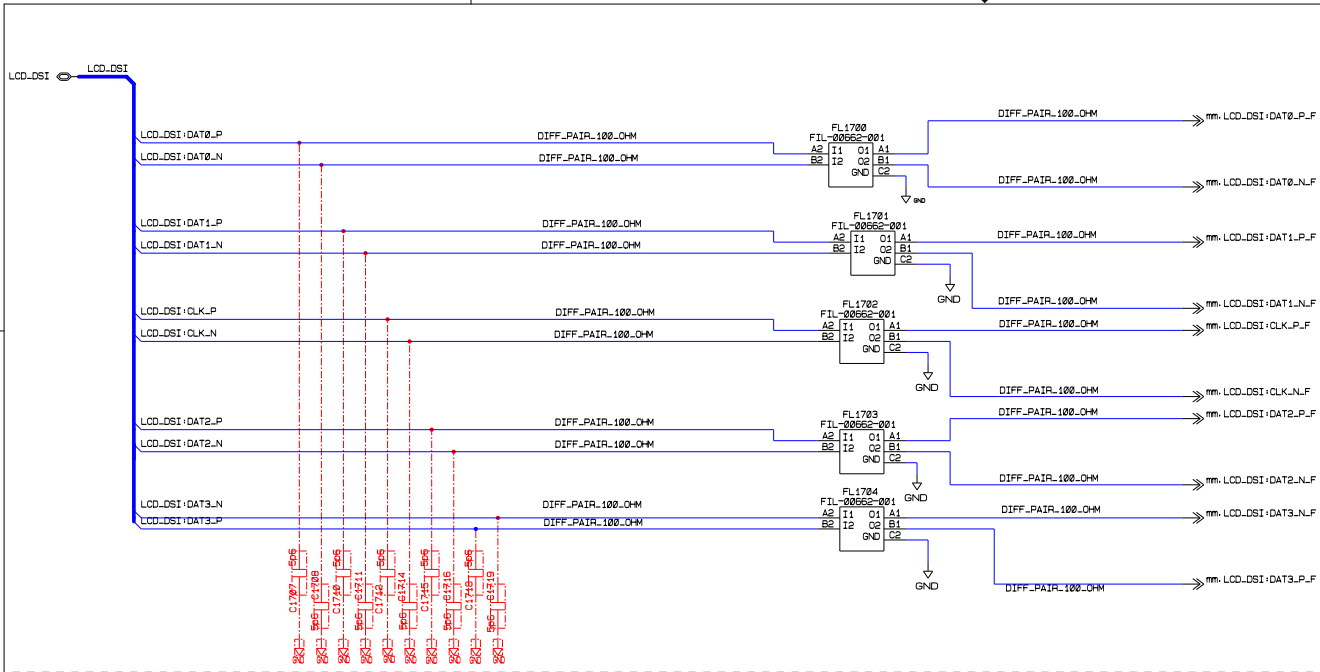
HIERARCHICAL_BLOCK POWER		COPYRIGHT 2012 RESEARCH IN MOTION LIMITED 295 PHILIP ST. WATERLOO, ONTARIO CANADA PHONE (519) 888-7465, FAX (519) 888-6906	
DRAWN BY Da11as PDC		TITLE R072 Main (Uses PCB-46301-009)	
RWD CHECK 0chk		SIZE DRAWING No. SCH-46302-009	
MFG CHECK 0mfgch		REV 2	
EDITED BY a0001e		SHEET 15 of 21	
LAST EDIT: 2012/12/10 12:30:26		REV 2	



AUDIO



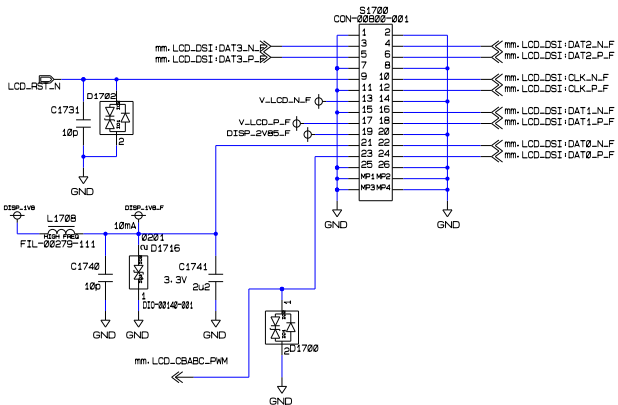
RESEARCH IN MOTION CONFIDENTIAL	
HIERARCHICAL BLOCK AUDIO	COPYRIGHT 2012 RESEARCH IN MOTION LIMITED 295 PHILIP ST. WATERLOO, ONTARIO CANADA
DRAWN BY Da11ae PDC	TITLE R072 Main (Uses PCB-46301-009)
RWD CHECK 0chk	SIZE DRAWING No. SCH-46302-009
MFG CHECK 0mfgch	REV 2
EDITED BY ap001e	SHEET 16 of 21
LAST EDIT: 2012/12/10 12:30:24	



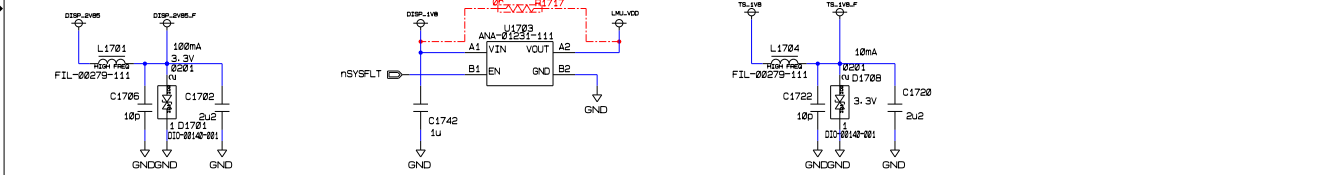
LCD

- LAYOUT NOTES:
- 1) Minimize and match lengths of DSI lines (100 Ohm).
 - 2) Place EMI/ESD filters as close to connector as possible.
 - 3) Place power LDO and LC filters as close to connector as possible.
 - 4) Shield LCD_RST-N with ground traces.

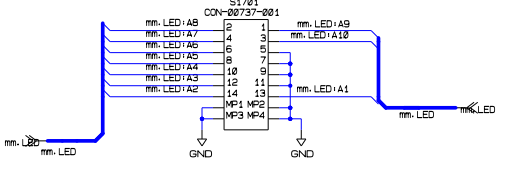
LCD CONNECTOR



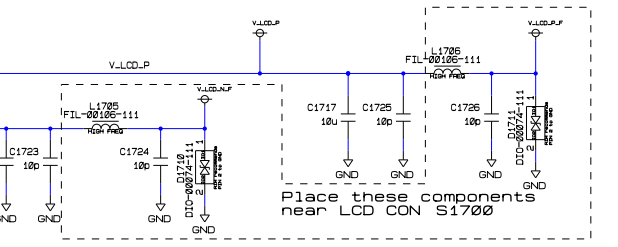
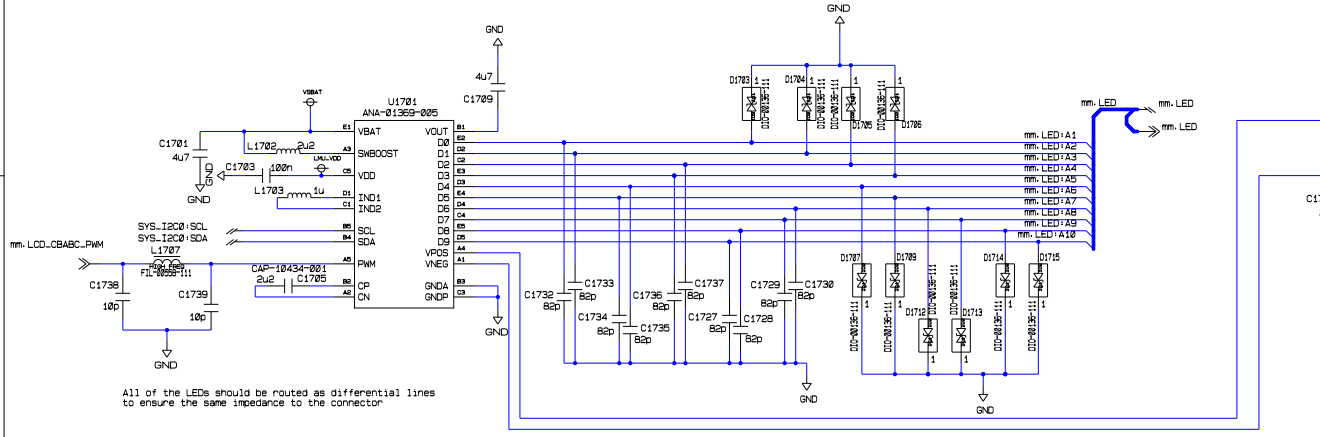
DISPLAY POWER LOAD SWITCHES



LCD BACKLIGHT CONNECTOR



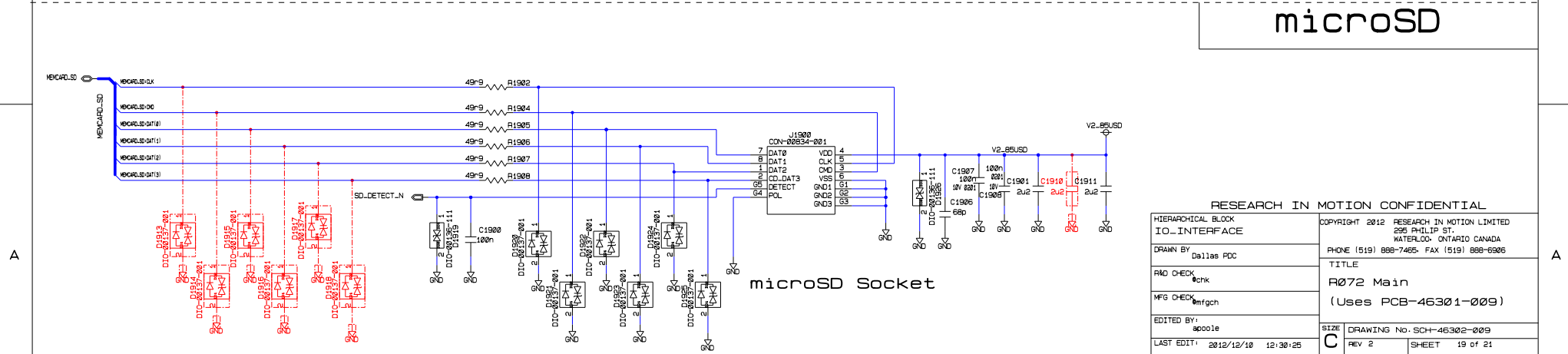
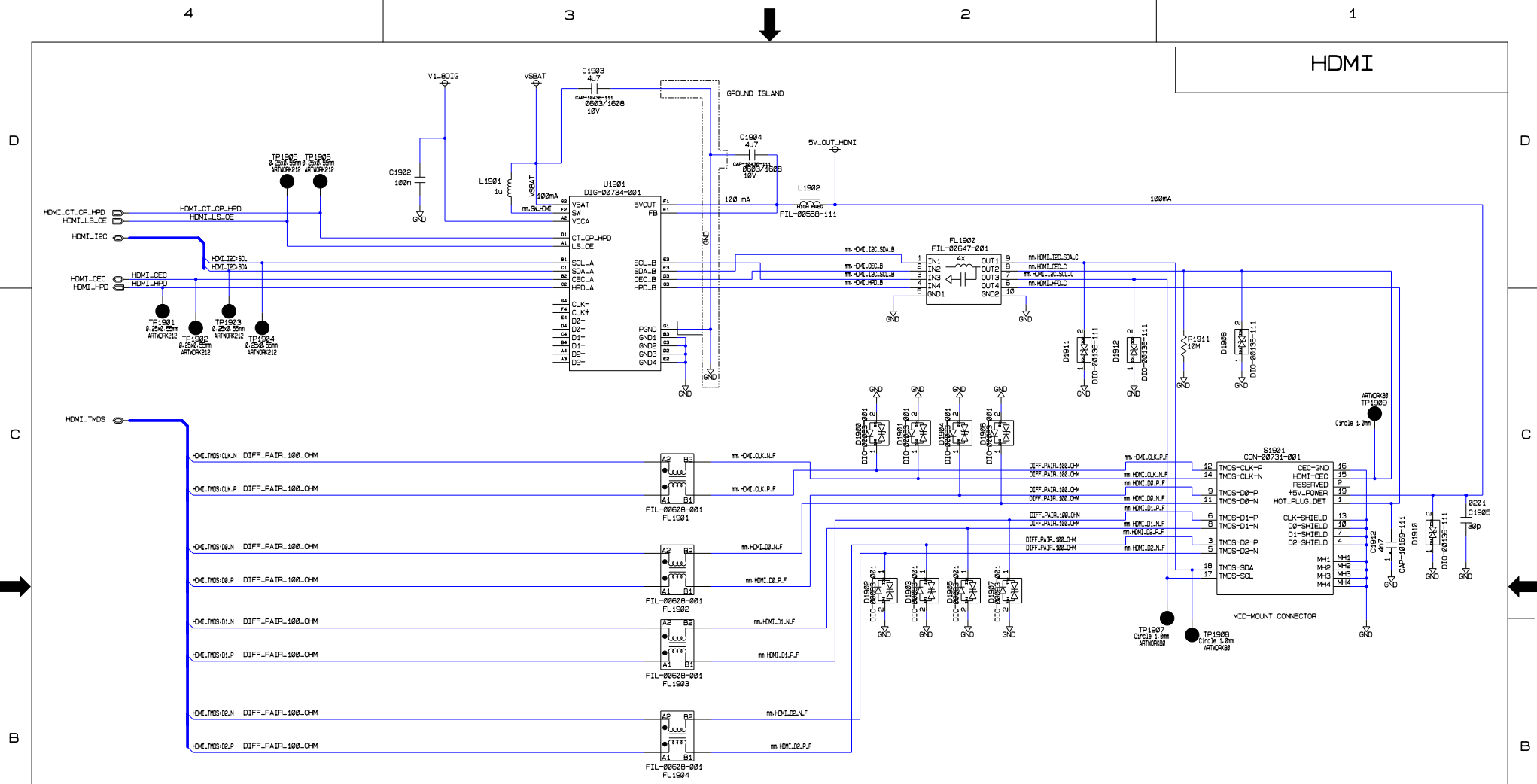
KRONENBURG BACKLIGHT LMU



All of the LEDs should be routed as differential lines to ensure the same impedance to the connector

RESEARCH IN MOTION CONFIDENTIAL

HIERARCHICAL BLOCK IO INTERFACE		COPYRIGHT 2012 RESEARCH IN MOTION LIMITED 295 PHILIP ST. WATERLOO, ONTARIO CANADA	
DRAWN BY Da11ae PDC		PHONE (519) 888-7465 FAX (519) 888-6906	
RWD CHECK 0chk		TITLE R072 Main (Uses PCB-46301-009)	
MFG CHECK 0mfgch		SIZE DRAWING No. SCH-46302-009	
EDITED BY: ap001e		REV 2	
LAST EDIT: 2012/12/10 12:30:24		SHEET 17 of 21	



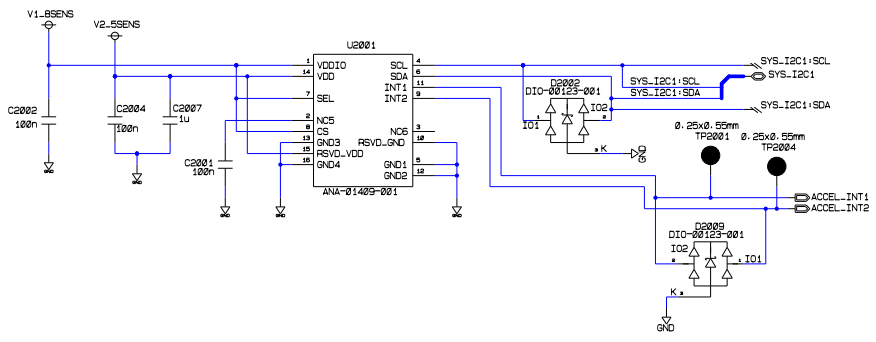
HDMI

microSD

RESEARCH IN MOTION CONFIDENTIAL	
HIERARCHICAL BLOCK IO INTERFACE	COPYRIGHT 2012 RESEARCH IN MOTION LIMITED 295 PHILIP ST. WATERLOO, ONTARIO CANADA
DRAWN BY Da11as PDC	PHONE (519) 888-7465 FAX (519) 888-6986
RFD CHECK 0chk	TITLE R072 Main (Uses PCB-46301-009)
MFG CHECK 0mfgch	SIZE A
EDITED BY: ap001e	DRAWING No. SCH-46302-009
LAST EDIT: 2012/12/10 12:30:25	REV 2 SHEET 19 of 21

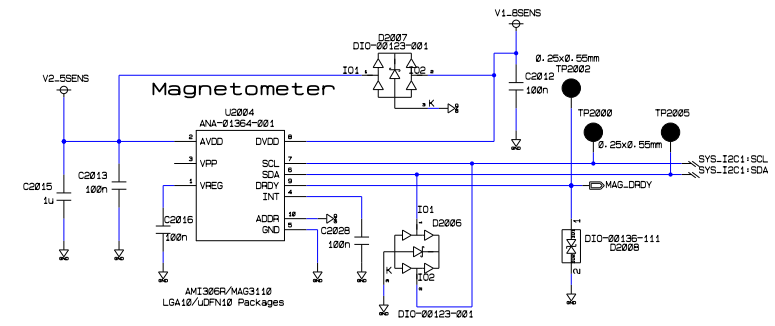
SENSORS

Tri-Axis Accelerometer



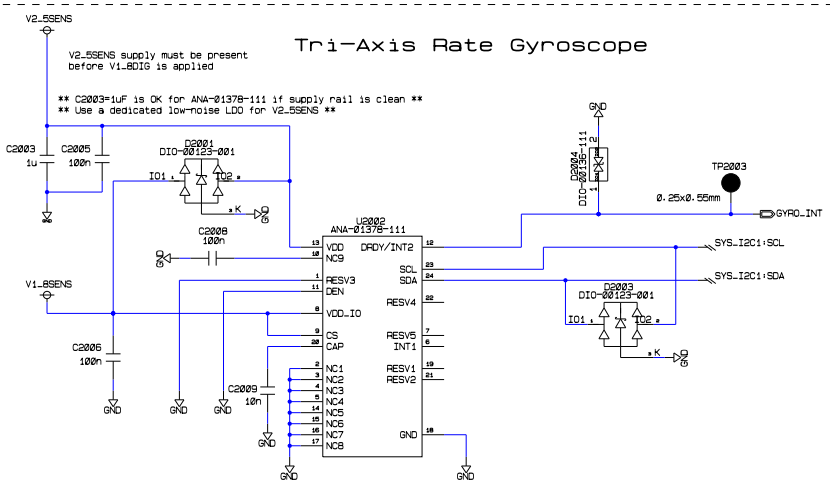
Accelerometer Notes
 ANA-01157-001 MMA8451Q I2C ADDRESS 0x1D (7-BIT)
 ANA-01409-001 LIS3DSHR I2C ADDRESS 0x1D (7-BIT)
 SEE SENSOR DFM RULES

Tri-Axis Discrete Magnetometer



Magnetometer
 ANA-01364-001 AMI306R I2C Address 0x1C (8-bit)
 ANA-01312-001 MAG3110 I2C Address 0x1C (8-bit)
 ** See Sensor DFM - DFM-NEMS-DR-01 for Layout Guidelines **
 ** Common Magnetometer RIM FN TBC **

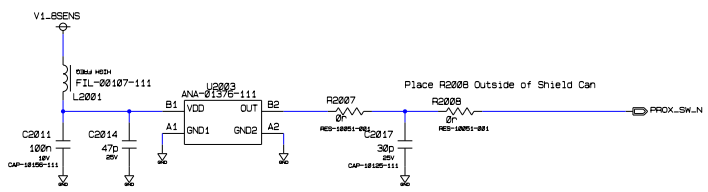
Tri-Axis Rate Gyroscope



V2_5SENS supply must be present before V1_8DIG is applied
 ** C2003=1uF is OK for ANA-01378-111 if supply rail is clean **
 ** Use a dedicated low-noise LDO for V2_5SENS **

** 5ms resonator start-up time increase for ITO-3050 with C2009=10nF **
 ** Pins 2-3-4-5-14-15-16-17 can be tied to GND and used for achieving routing symmetry and SMT self-alignment **
 ** See Sensor DFM Rules **

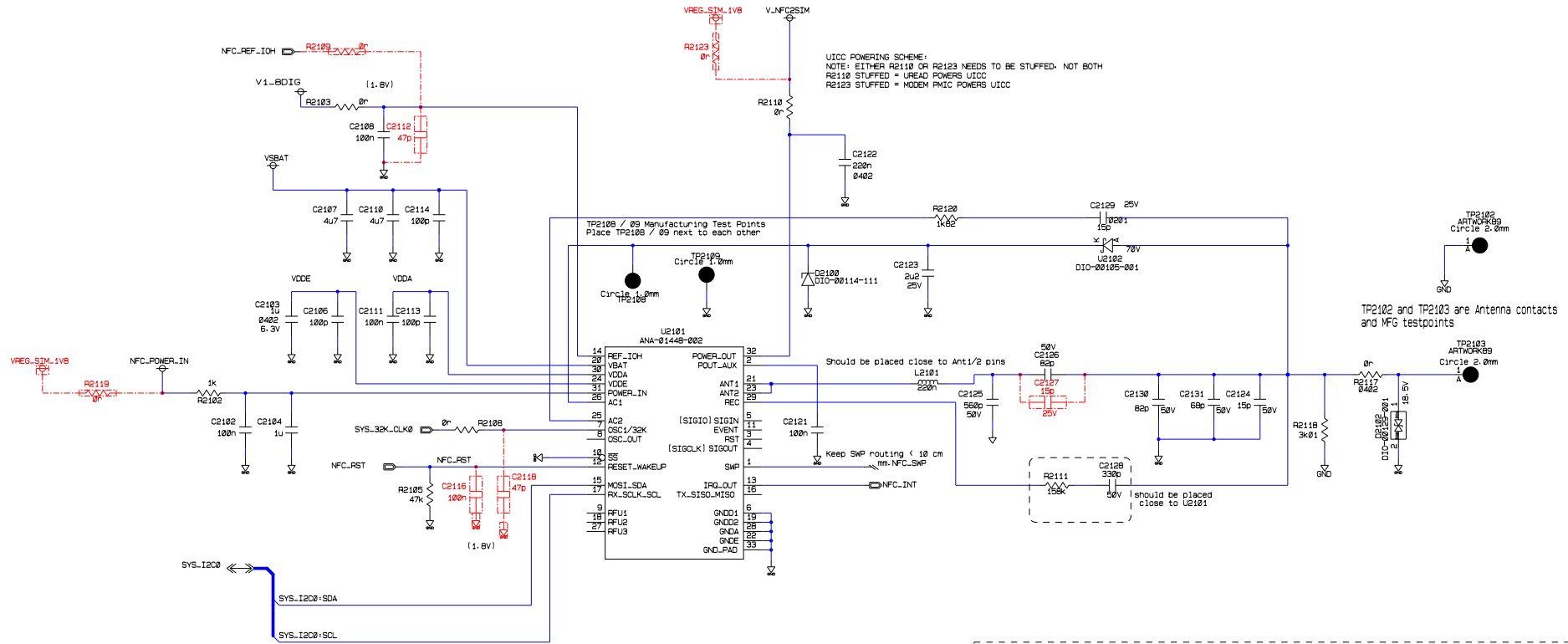
HOLSTER DETECT



RESEARCH IN MOTION CONFIDENTIAL

HIERARCHICAL BLOCK IO_INTERFACE	COPYRIGHT 2012 RESEARCH IN MOTION LIMITED 295 PHILIP ST. WATERLOO, ONTARIO CANADA PHONE (519) 886-7465, FAX (519) 886-6906
DRAWN BY Da11as PDC	TITLE R072 Main (Uses PCB-46301-009)
RND CHECK 0chk	SIZE C
MFG CHECK 0mfgch	DRAWING No. SCH-46302-009
EDITED BY: ap001e	REV 2
LAST EDIT: 2012/12/10 12:30:25	SHEET 20 of 21

NFC & SIM



D

C

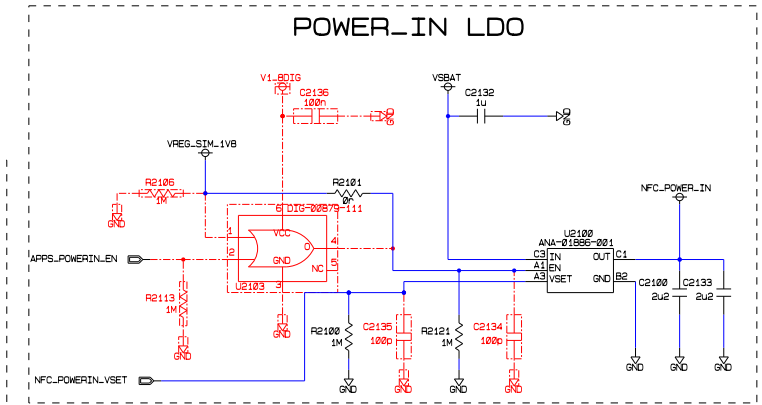
D

C

B

B

POWER_IN LDO



A

A

RESEARCH IN MOTION CONFIDENTIAL

HIERARCHICAL BLOCK IO-INTERFACE	COPYRIGHT 2012 RESEARCH IN MOTION LIMITED 295 PHILIP ST. WATERLOO, ONTARIO CANADA PHONE (519) 889-7465. FAX (519) 889-6906
DRAWN BY Da11ae PDC	TITLE R072 Main (Uses PCB-46301-009)
RWD CHECK 0chk	SIZE A0001e
MFG CHECK 0mfgch	DRAWING No. SCH-46302-009
EDITED BY: ap001e	REV 2
LAST EDIT: 2012/12/10 12:30:25	SHEET 21 of 21

USIM

