

<b>HIERARCHICAL BLOCK</b> MAIN		COPYRIGHT 2010, RESEARCH IN MOTION LIMITED WATERLOO, ONTARIO, CANADA PHONE: (519) 888-7465, FAX (519) 888-6306	
<b>DRAWN BY</b> RIM_OTTAWA	<b>TITLE</b> ESSEX		
<b>R&amp;D CHECK</b>	(uses: PCB-24295-004)		
<b>IFG CHECK</b>	<b>SIZE</b> Ed1 Led Bu: andrew	<b>DRAWING No.</b> SCH-27613-004	
<b>Level</b> Ed1:1 New 9, 2010, 3:46:50 pm	<b>REV</b> 3	<b>SHEET</b> 1 OF 16	

RESEARCH IN MOTION CONFIDENTIAL

SHEET(S) 11 12

SHEET(S) 6 7 8 9 10

SHEET(S) 5

SHEET(S) 16

SHEET(S) 13

SHEET(S) 15

SHEET(S) 4

SHEET(S) 2

SHEET(S) 3

SHEET(S) 5

SHEET(S) 16

D

D

C

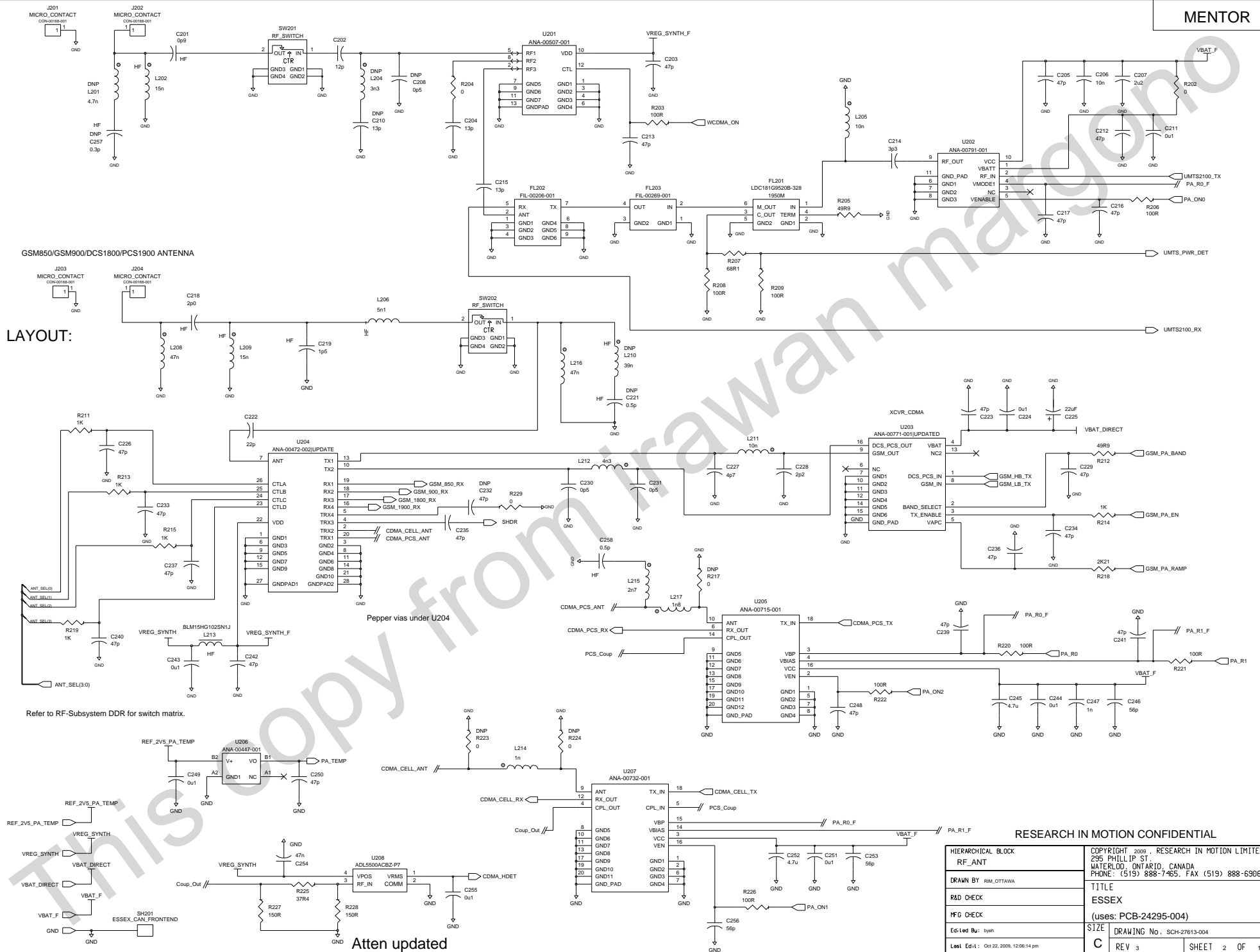
C

B

B

A

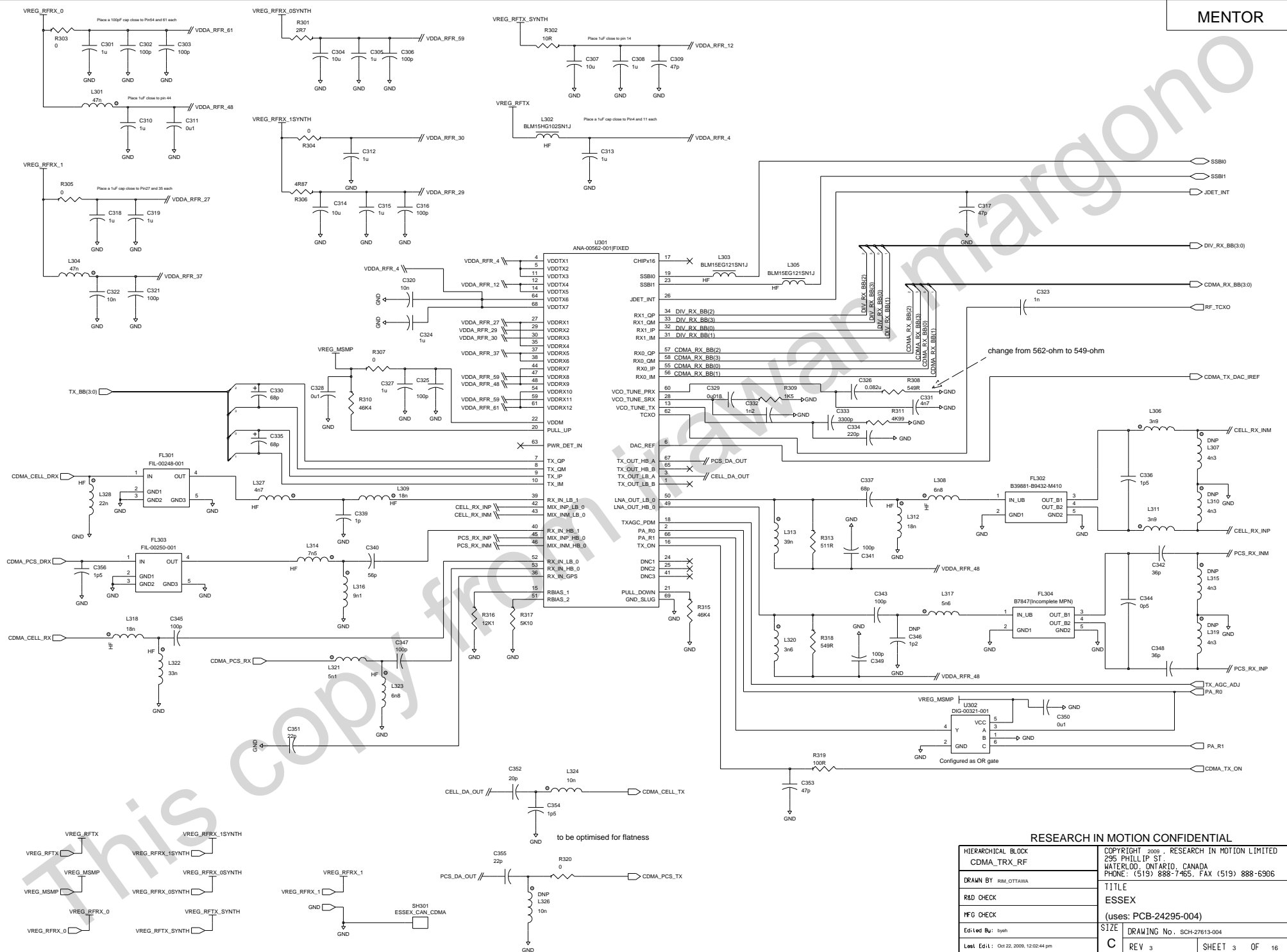
A



LAYOUT:

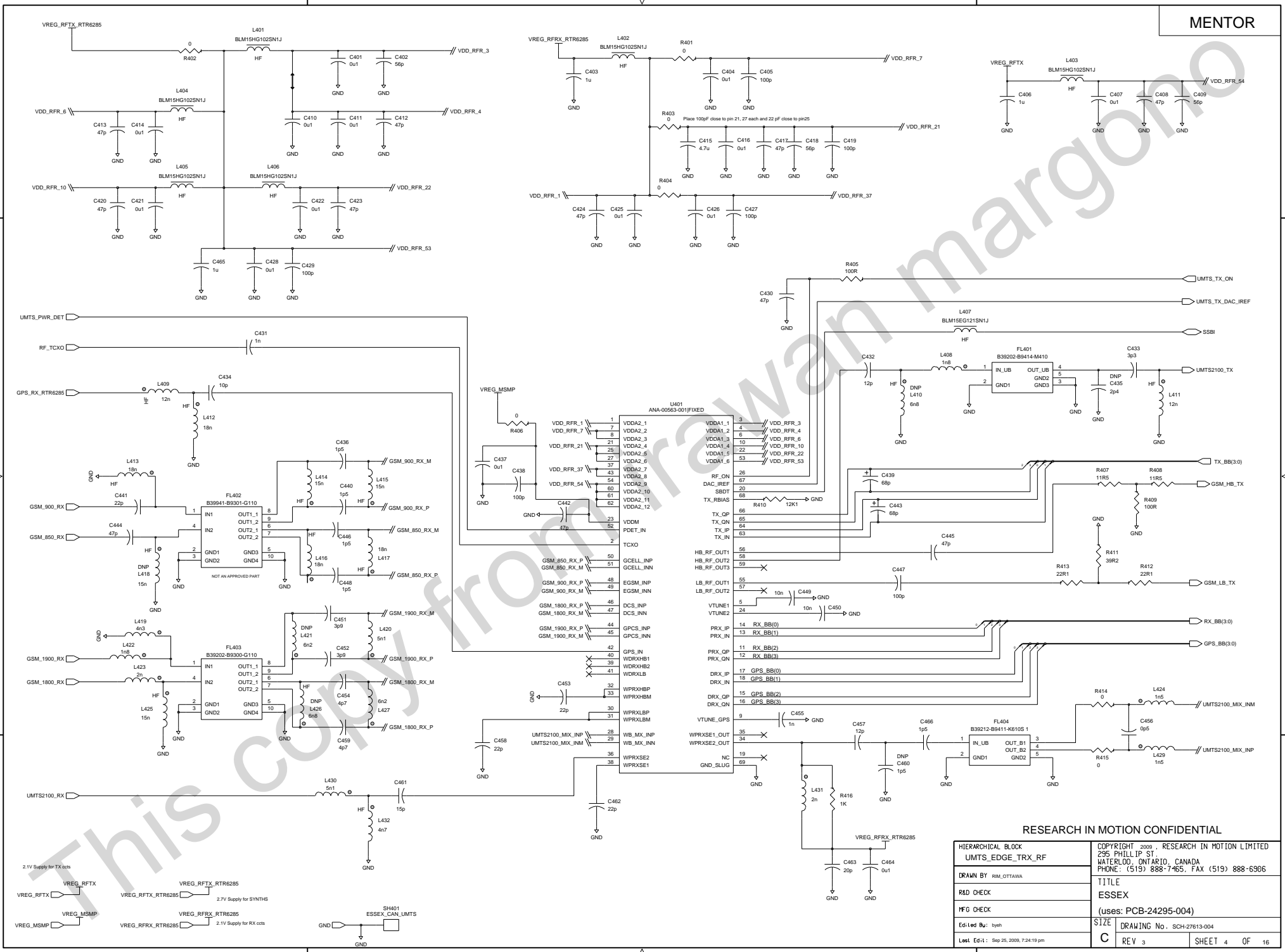
RESEARCH IN MOTION CONFIDENTIAL

HIERARCHICAL BLOCK RF_ANT		COPYRIGHT 2009, RESEARCH IN MOTION LIMITED 295 PHILLIP ST. WATERLOO, ONTARIO, CANADA PHONE: (519) 888-7465, FAX (519) 888-6306	
DRAWN BY: RIM.OTTAWA		TITLE ESSEX	
R&D CHECK		(uses: PCB-24295-004)	
MFG CHECK		SIZE DRAWING No. SCH-27613-004	
Edi Led Bu: bysh		C	
Level: Ed1: Oct 22, 2009, 12:06:14 pm		REV 3 SHEET 2 OF 16	



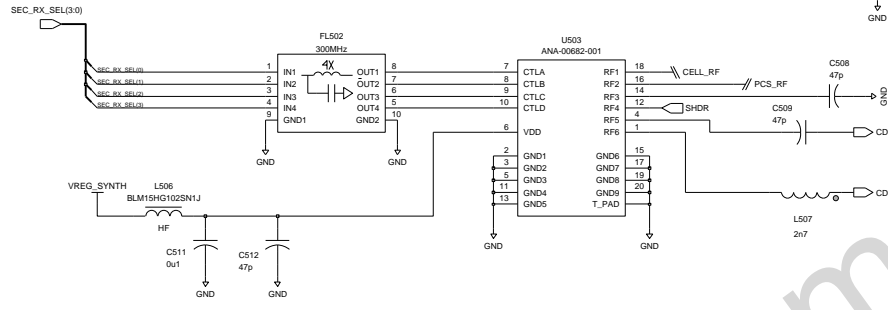
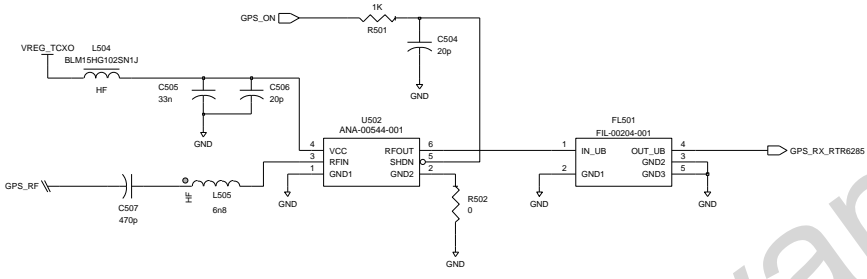
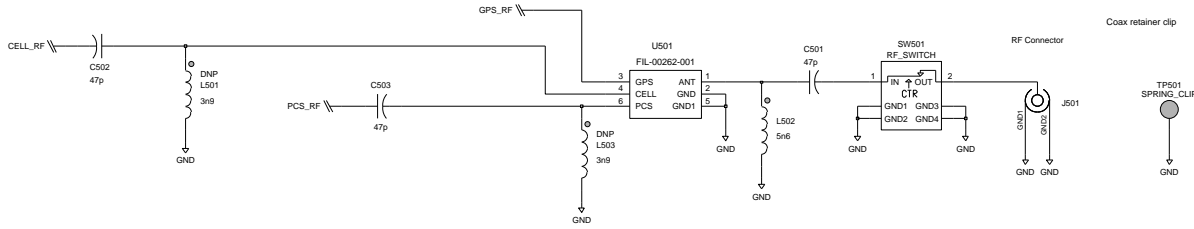
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HIERARCHICAL BLOCK CDMA_TRX_RF		COPYRIGHT 2009, RESEARCH IN MOTION LIMITED 295 PHILLIP ST. WATERLOO, ONTARIO, CANADA PHONE: (519) 888-7465, FAX (519) 888-6306	
DRAWN BY: RIM_OTTAWA		TITLE ESSEX	
R&D CHECK		(uses: PCB-24295-004)	
MFG CHECK		SIZE DRAWING No. SCH-27613-004	
Edi Led Bu: bysh		C	
Level: Ed1: Oct 22, 2009, 12:02:44 pm		REV 3 SHEET 3 OF 16	

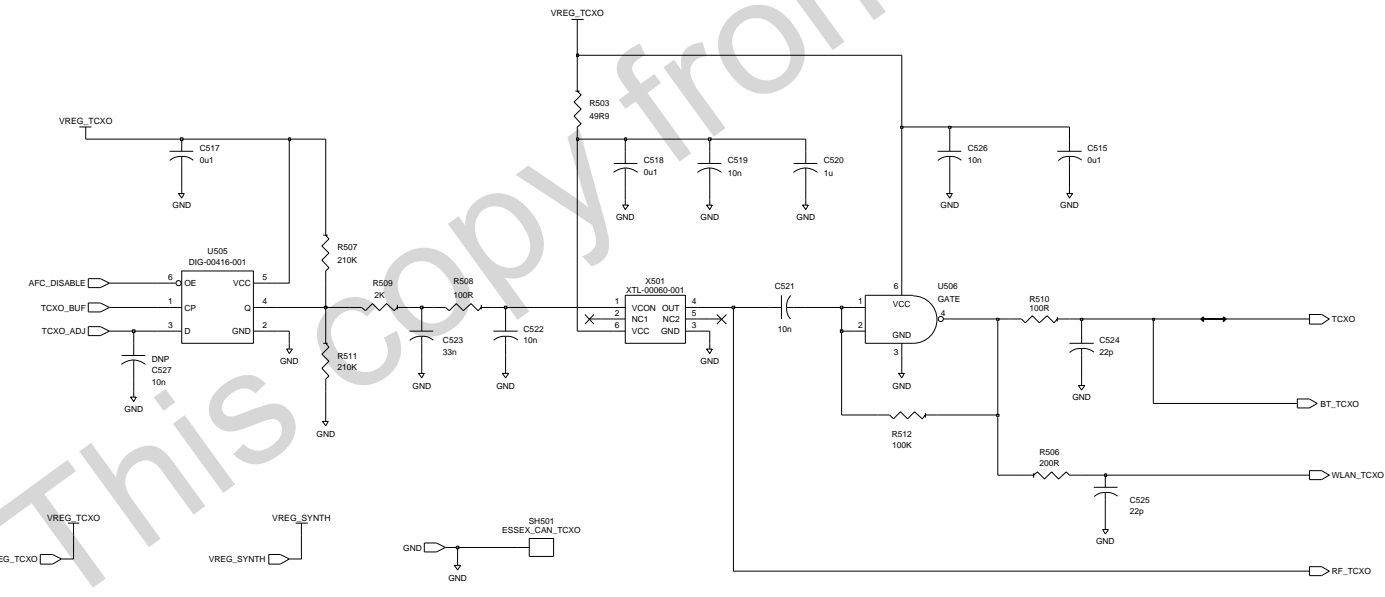


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HIERARCHICAL BLOCK UMTS_EDGE_TRX_RF		COPYRIGHT 2009, RESEARCH IN MOTION LIMITED 295 PHILLIP ST. WATERLOO, ONTARIO, CANADA PHONE: (519) 888-7465, FAX (519) 888-6306	
DRAWN BY RIM_OTTAWA		TITLE ESSEX	
R&D CHECK		IFG CHECK (uses: PCB-24295-004)	
Edi Led Bu: bysh		SIZE DRAWING No. SCH-27613-004	
Last Ed: 1 Sep 25, 2009, 7:24:19 pm		C REV 3 SHEET 4 OF 16	



Div antenna terminated to gnd to prevent secondary rx LNA from being turned on by GSM tx.

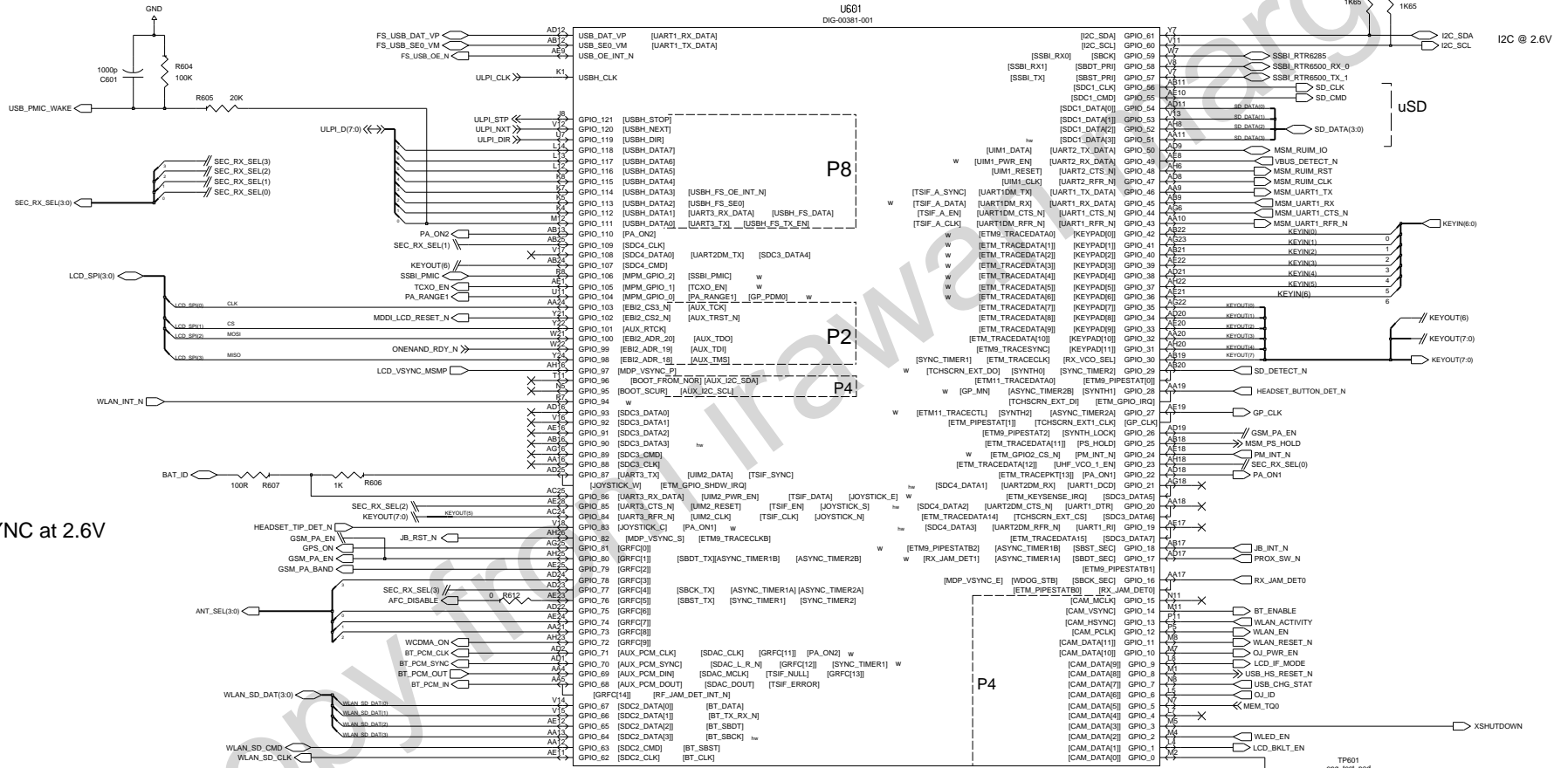


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HIERARCHICAL BLOCK GPS_SYNTH		COPYRIGHT 2009, RESEARCH IN MOTION LIMITED 295 PHILLIP ST. WATERLOO, ONTARIO, CANADA PHONE: (519) 888-7465, FAX (519) 888-6306	
DRAWN BY: RIM_OTTAWA		TITLE ESSEX	
R&D CHECK		(uses: PCB-24295-004)	
MFG CHECK		SIZE DRAWING No. SCH-27613-004	
Ed: Led Bu: bysh		C	
Last Ed: 1: Oct 22, 2009, 12:14:41 pm		REV 3 SHEET 5 OF 16	

MSM7600 32MB TURBO

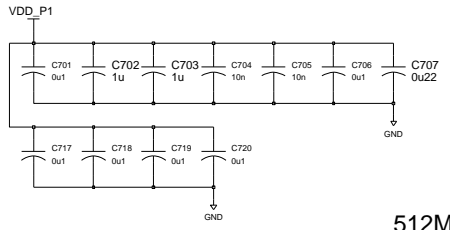
U601  
DIG-00381-001



Note: VSYNC at 2.6V

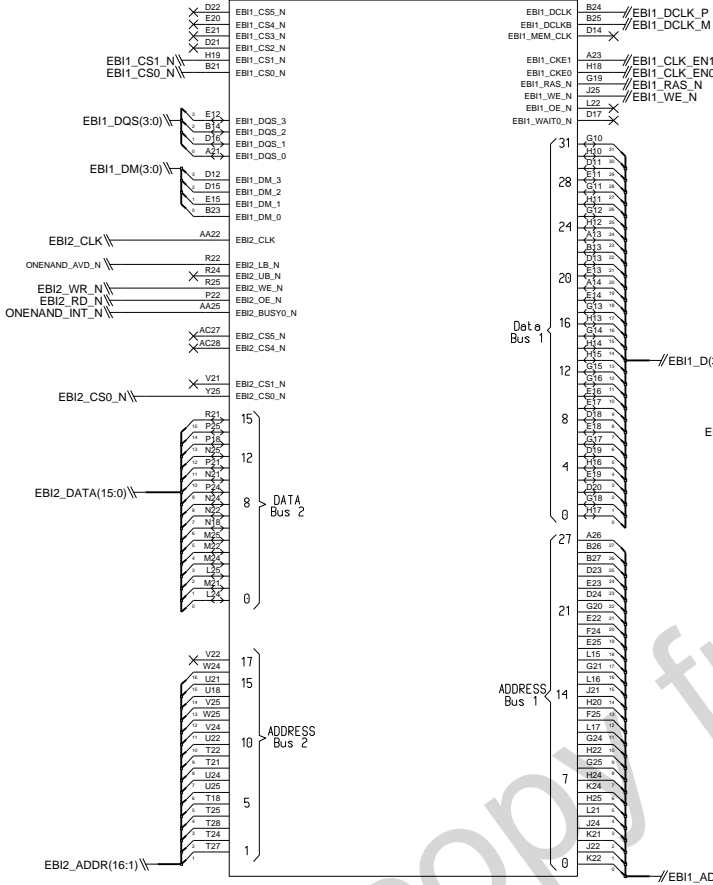
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HIERARCHICAL BLOCK PROCESSOR		COPYRIGHT 2010, RESEARCH IN MOTION LIMITED 295 PHILLIP ST. WATERLOO, ONTARIO, CANADA PHONE: (519) 888-7465, FAX (519) 888-6306	
DRAWN BY RIM_OTTAWA		TITLE ESSEX	
R&D CHECK		MFG CHECK	
Edi Led Bu: jhalse		SIZE DRAWING No.: SCH-27613-004	
Last Ed: Feb 10, 2010, 9:42:24 am		REV 3 SHEET 6 OF 16	

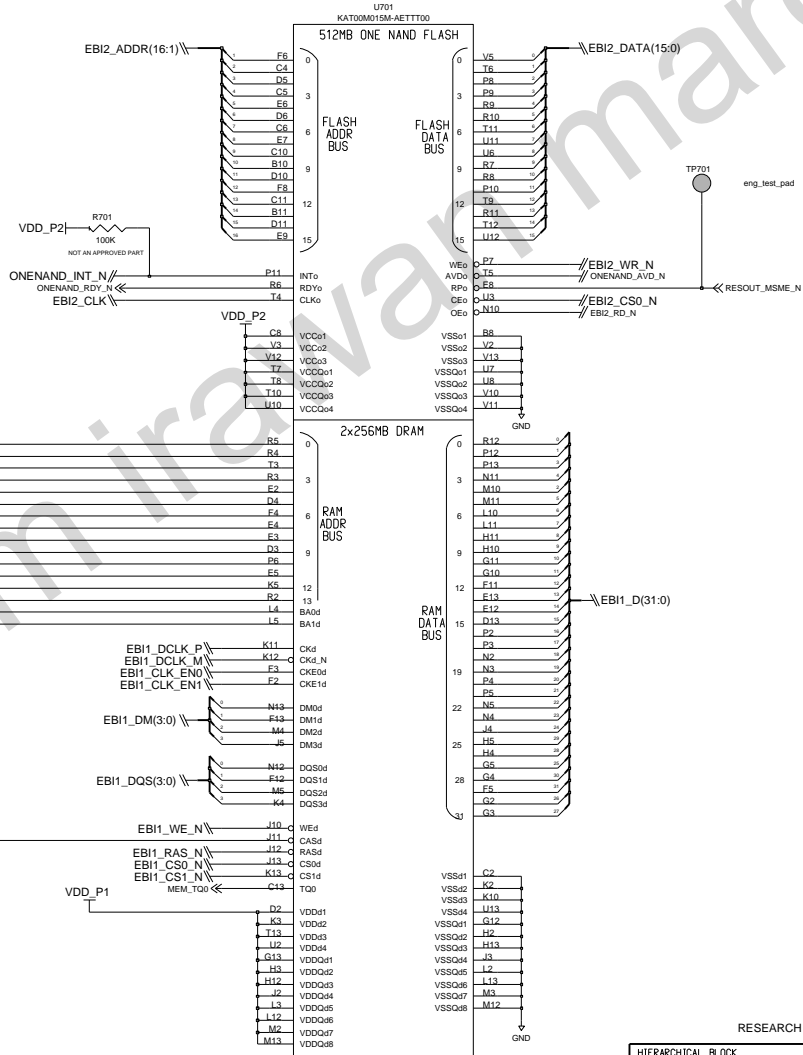


### MSM7600 32MB TURBO

U601  
DIG-00381-001



### 512MB/512MB

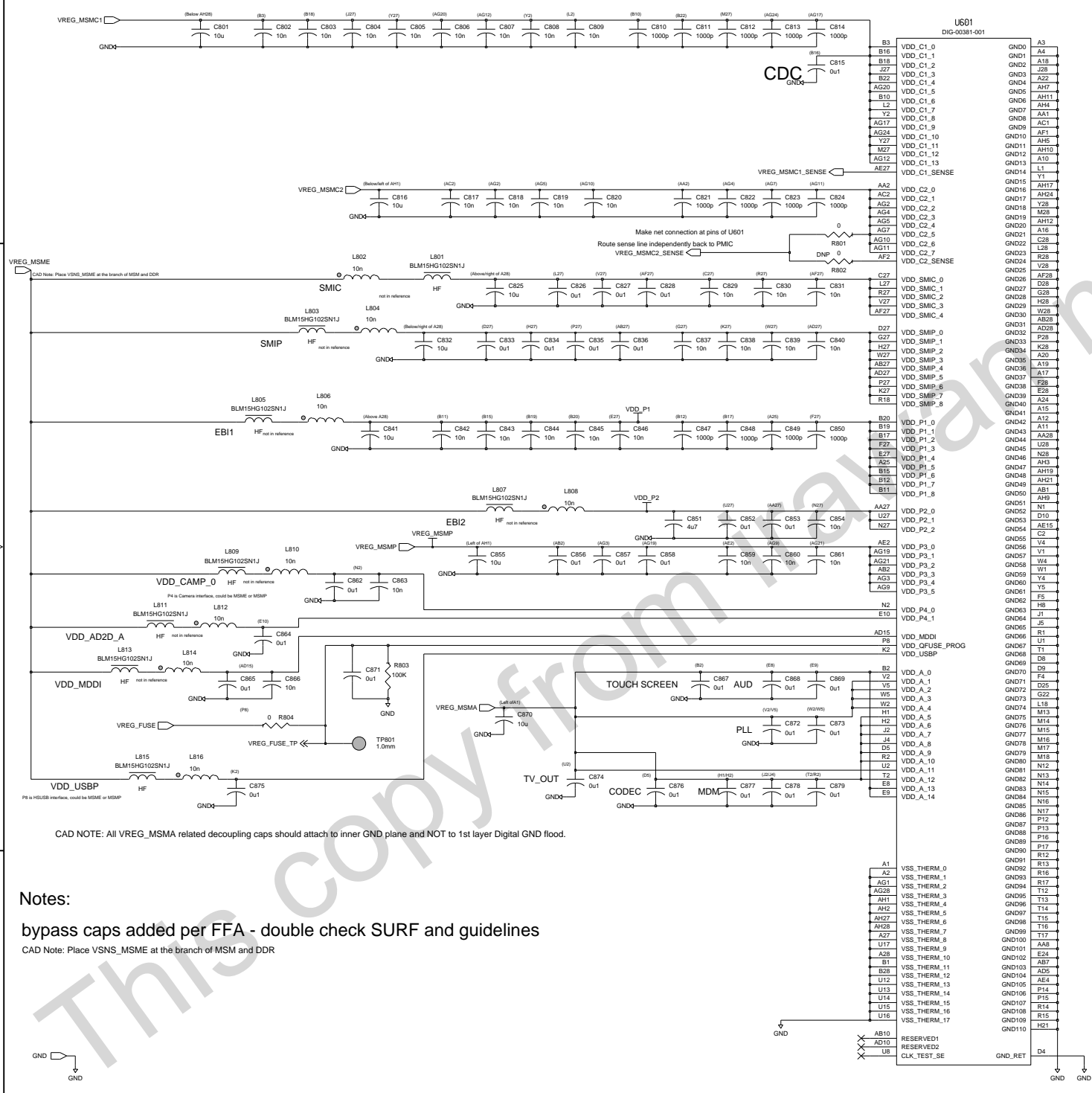


NOT AN APPROVED PART

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HIERARCHICAL BLOCK PROCESSOR2	COPYRIGHT 2010, RESEARCH IN MOTION LIMITED 295 PHILLIP ST. WATERLOO, ONTARIO, CANADA PHONE: (519) 888-7465, FAX (519) 888-6306
DRAWN BY RIM_OTTAWA	TITLE ESSEX
R&D CHECK	(uses: PCB-24295-004)
FIG CHECK	SIZE DRAWING No. SCH-27613-004
Edi Led By: andrstew	C REV 3 SHEET 7 OF 16
Last Edti: Nov 9, 2010, 2:13:27 pm	

MSM7600 32MB TURBO



- A1 VSS\_THERM\_0
- A2 VSS\_THERM\_1
- AG1 VSS\_THERM\_2
- AG28 VSS\_THERM\_3
- AH1 VSS\_THERM\_4
- AH2 VSS\_THERM\_5
- AH27 VSS\_THERM\_6
- AH28 VSS\_THERM\_7
- A27 VSS\_THERM\_8
- U17 VSS\_THERM\_9
- U18 VSS\_THERM\_10
- B1 VSS\_THERM\_11
- B28 VSS\_THERM\_12
- U12 VSS\_THERM\_13
- U13 VSS\_THERM\_14
- U14 VSS\_THERM\_15
- U15 VSS\_THERM\_16
- U16 VSS\_THERM\_17

- AB10 RESERVED1
- AD10 RESERVED2
- UB CLK\_TEST\_SE

- GND0
- A3
- A4
- A18
- GND2
- A22
- GND3
- A27
- GND4
- AH7
- GND5
- AH11
- GND6
- AH4
- GND7
- AA1
- GND8
- AC1
- GND9
- AH10
- GND10
- AH5
- GND11
- AH10
- GND12
- A10
- GND13
- L1
- GND14
- L1
- GND15
- AH17
- GND16
- AH24
- GND17
- Y28
- GND18
- N28
- GND19
- AH12
- GND20
- A16
- GND21
- C28
- GND22
- L28
- GND23
- R28
- GND24
- V28
- GND25
- V28
- GND26
- AF28
- GND27
- G28
- GND28
- H28
- GND29
- V28
- GND30
- AF28
- GND31
- AD28
- GND32
- P28
- GND33
- K28
- GND34
- A28
- GND35
- A19
- GND36
- A17
- GND37
- F28
- GND38
- F28
- GND39
- A24
- GND40
- A15
- GND41
- A12
- GND42
- A12
- GND43
- AA28
- GND44
- U28
- GND45
- N28
- GND46
- AH19
- GND47
- AH21
- GND48
- AB1
- GND49
- AH9
- GND50
- N1
- GND51
- D10
- GND52
- AE15
- GND53
- C2
- GND54
- V4
- GND55
- V1
- GND56
- V4
- GND57
- W1
- GND58
- Y4
- GND59
- Y4
- GND60
- Y5
- GND61
- F5
- GND62
- F5
- GND63
- J1
- GND64
- J5
- GND65
- R1
- GND66
- T1
- GND67
- T1
- GND68
- D8
- GND69
- D9
- GND70
- F4
- GND71
- D25
- GND72
- G22
- GND73
- L18
- GND74
- M14
- GND75
- M15
- GND76
- M16
- GND77
- M18
- GND78
- M17
- GND79
- M18
- GND80
- N12
- GND81
- N13
- GND82
- N14
- GND83
- N15
- GND84
- N16
- GND85
- N17
- GND86
- P12
- GND87
- P13
- GND88
- P16
- GND89
- P17
- GND90
- R12
- GND91
- R13
- GND92
- R16
- GND93
- R17
- GND94
- T12
- GND95
- T13
- GND96
- T14
- GND97
- T15
- GND98
- T16
- GND99
- T17
- GND100
- AA8
- GND101
- E24
- GND102
- AB7
- GND103
- AD5
- GND104
- AE4
- GND105
- P14
- GND106
- P15
- GND107
- R14
- GND108
- R15
- GND109
- H21
- GND110
- D4

CAD NOTE: All VREG\_MSMA related decoupling caps should attach to inner GND plane and NOT to 1st layer Digital GND flood.

Notes: bypass caps added per FFA - double check SURF and guidelines

CAD Note: Place VSNS\_MSME at the branch of MSM and DDR

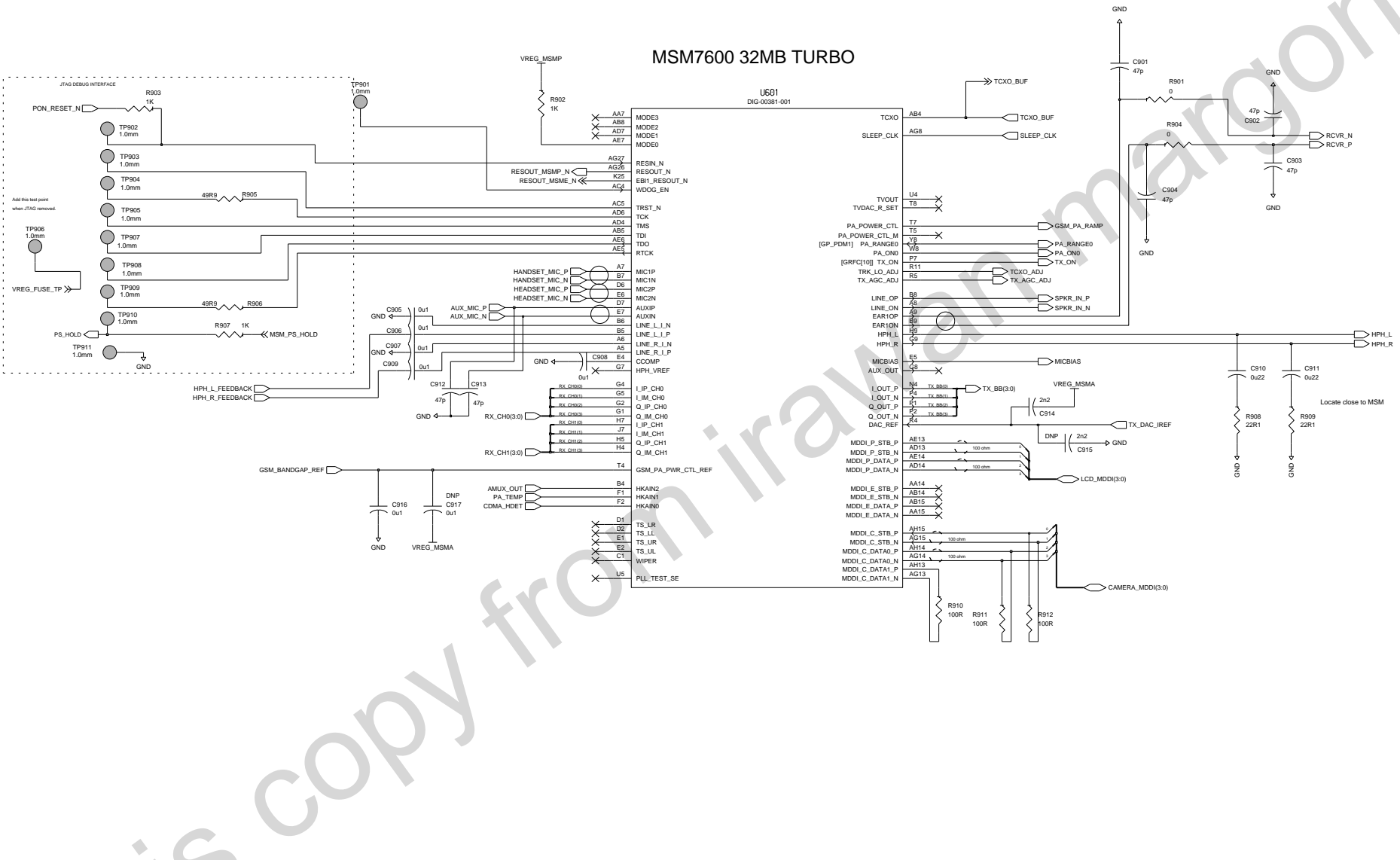
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HIERARCHICAL BLOCK PROCESSOR3		COPYRIGHT 2009, RESEARCH IN MOTION LIMITED 295 PHILLIP ST. WATERLOO, ONTARIO, CANADA PHONE: (519) 888-7465, FAX (519) 888-6306	
DRAWN BY RIM_OTTAWA		TITLE ESSEX	
R&D CHECK		(uses: PCB-24295-004)	
MFG CHECK		SIZE DRAWING No. SCH-27613-004	
Edi Led Bu: byeh		c	
Last Ed1: Aug 27, 2009, 9:31:34 am		REV 3 SHEET 8 OF 16	



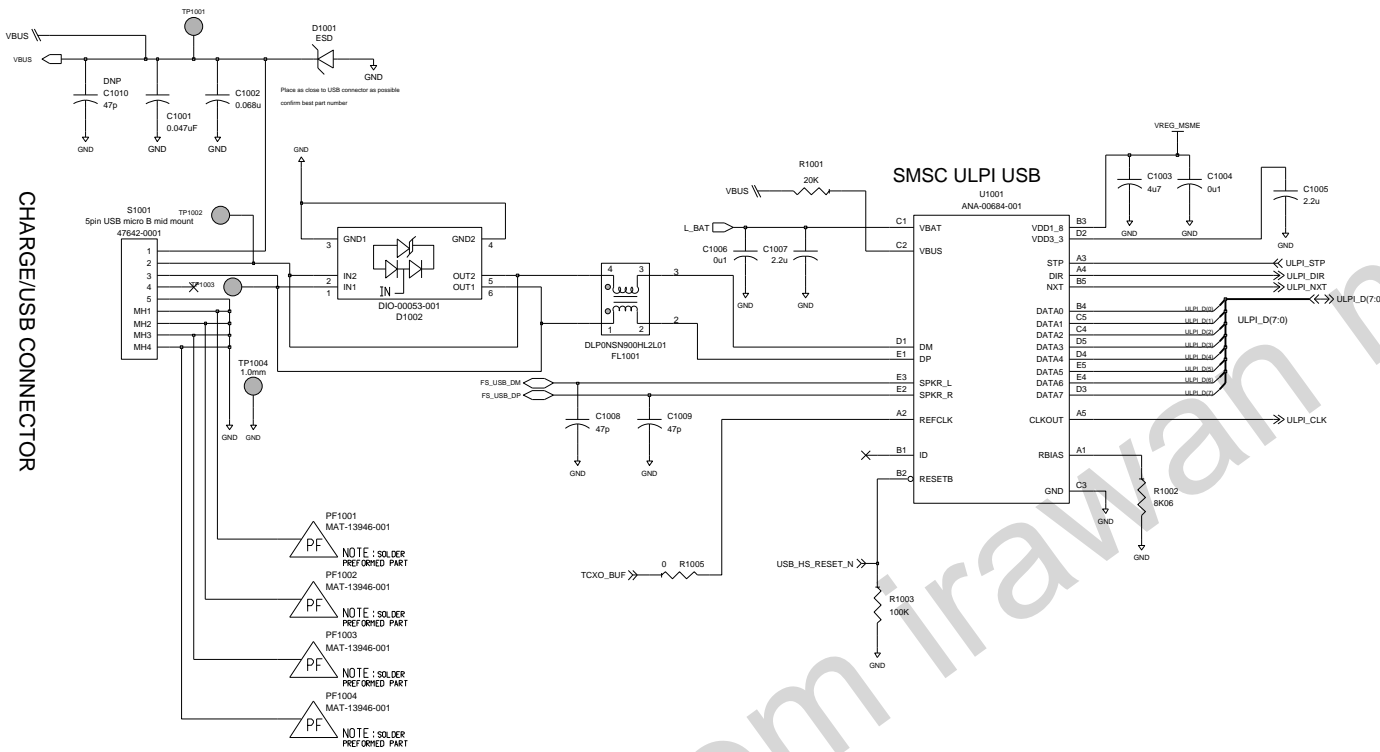
MSM7600 32MB TURBO

U601  
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DRAWN BY RIM_OTTAWA		TITLE ESSEX	
R&D CHECK		(uses: PCB-24295-004)	
MFG CHECK		SIZE DRAWING No. SCH-27813-004	
Edi Led Bu: bysh		C	
Level Ed1: May 8, 2009, 7:29:50 pm		REV 3 SHEET 9 OF 16	



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DRAWN BY: RIM_OTTAWA		TITLE ESSEX	
R&D CHECK		(uses: PCB-24295-004)	
MFG CHECK		SIZE DRAWING No. SCH-27613-004	
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D

D

C

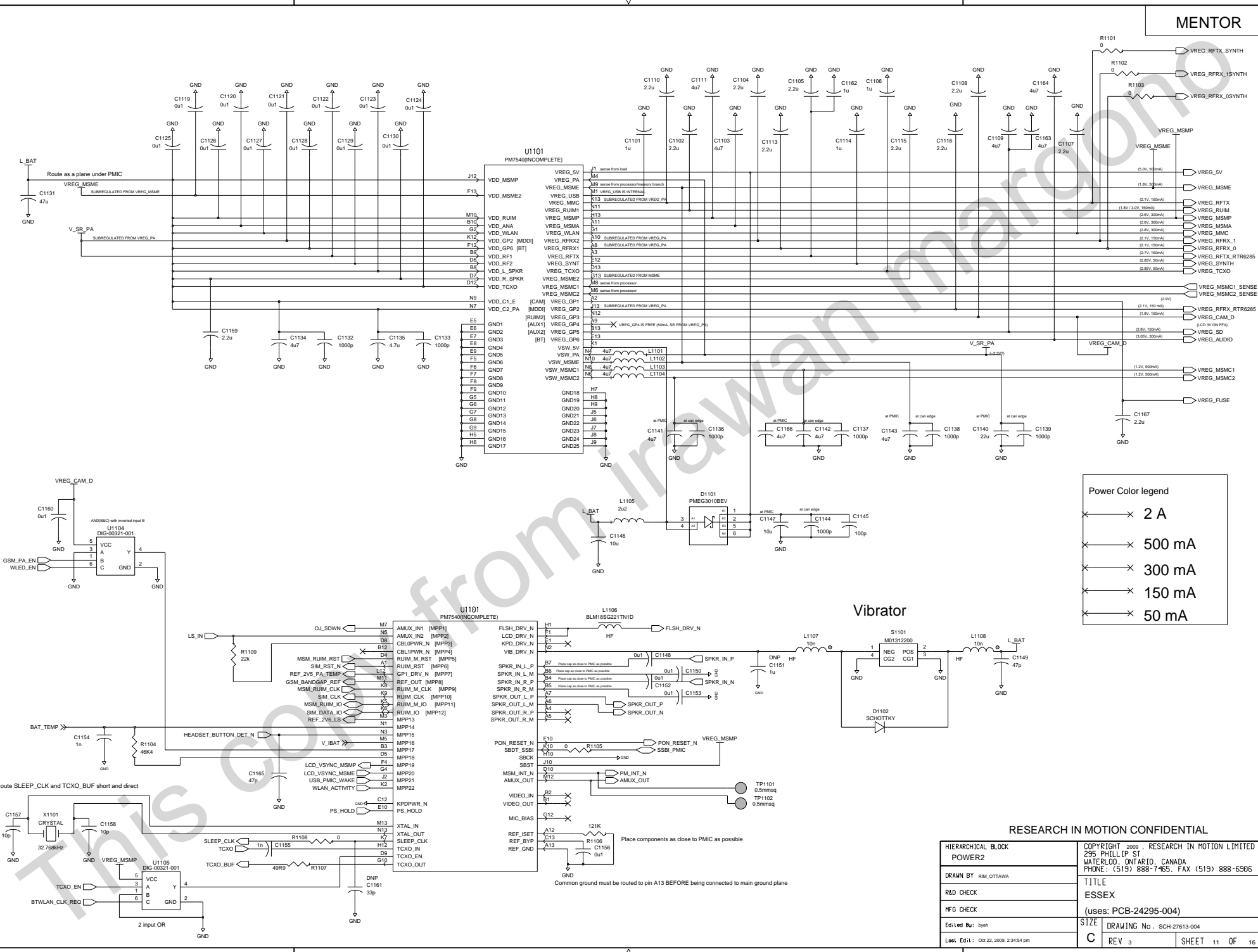
C

B

B

A

A



Power Color legend

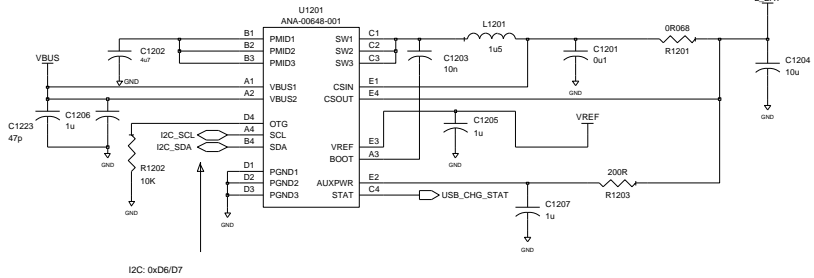
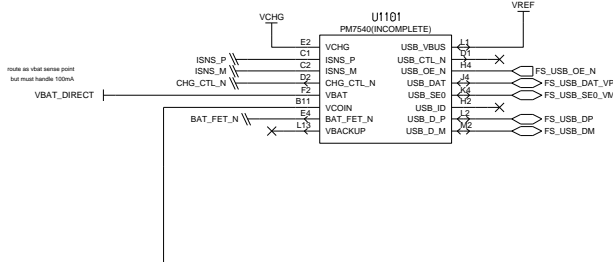
- × × × 2 A
- × × × 500 mA
- × × × 300 mA
- × × × 150 mA
- × × × 50 mA

Vibrator

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HIERARCHICAL BLOCK	POWER2	COPYRIGHT 2009, RESEARCH IN MOTION LIMITED
DRAWN BY	RIM.OTTAWA	295 PHILLIP ST.
R&D CHECK		WATERLOO, ONTARIO, CANADA
MFG CHECK		PHONE: (519) 888-7465, FAX (519) 888-6306
Edi Led Bu: bysh		TITLE
Label Ed1: Oct 22, 2009, 2:34:54 pm		ESSEX
		(uses: PCB-24295-004)
		SIZE
		DRAWING No. SCH-27613-004
		REV 3
		SHEET 11 OF 16

USB\_VBUS OPTIONS

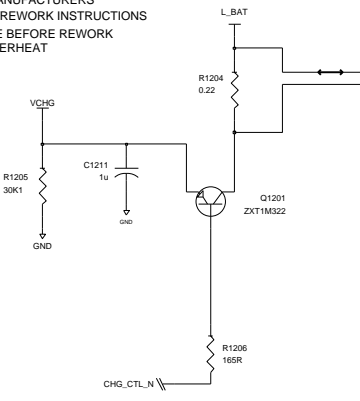


**Power Color Legend**

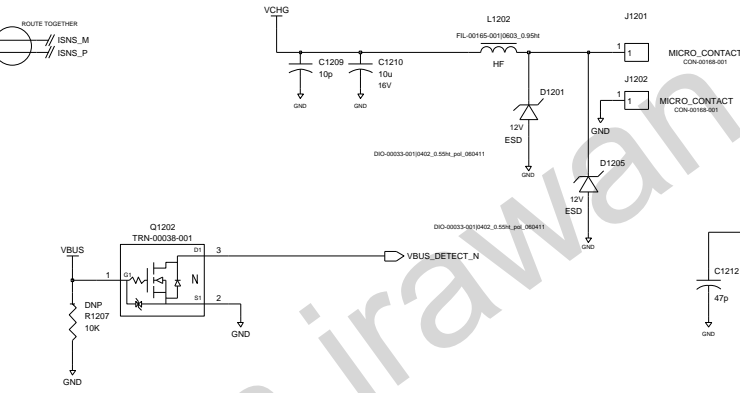
✕ — ✕

HI\_CURRENT(2A)

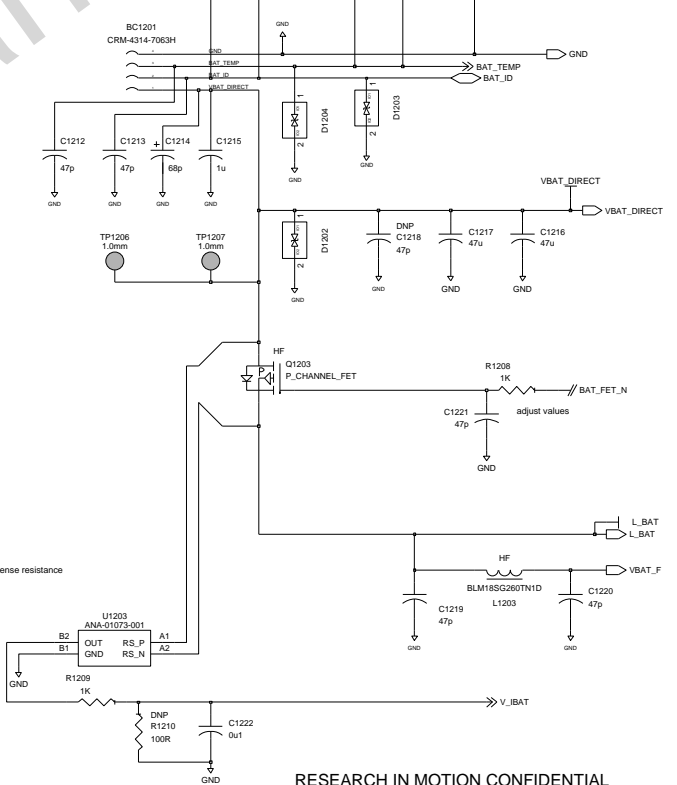
C1208  
0.014F  
"WARNING EXPLOSIVE"  
FOLLOW MANUFACTURERS  
ASSEMBLY/REWORK INSTRUCTIONS  
DISCHARGE BEFORE REWORK  
DO NOT OVERHEAT



Charging Contacts

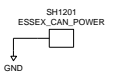


Lithium Ion Battery



adjust gain for 20-37mOhm sense resistance

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HIERARCHICAL BLOCK POWER22		COPYRIGHT 2010, RESEARCH IN MOTION LIMITED 295 PHILLIP ST. WATERLOO, ONTARIO, CANADA PHONE: (519) 888-7465, FAX (519) 888-6306	
DRAWN BY RIM_OTTAWA		TITLE ESSEX	
R&D CHECK		(uses: PCB-24295-004)	
MFG CHECK		SIZE DRAWING No. SCH-27613-004	
Edi Led Bu: andrjew		C	
Level Ed1: Nov 11, 2010, 4:10:18 pm		REV 3 SHEET 12 OF 16	

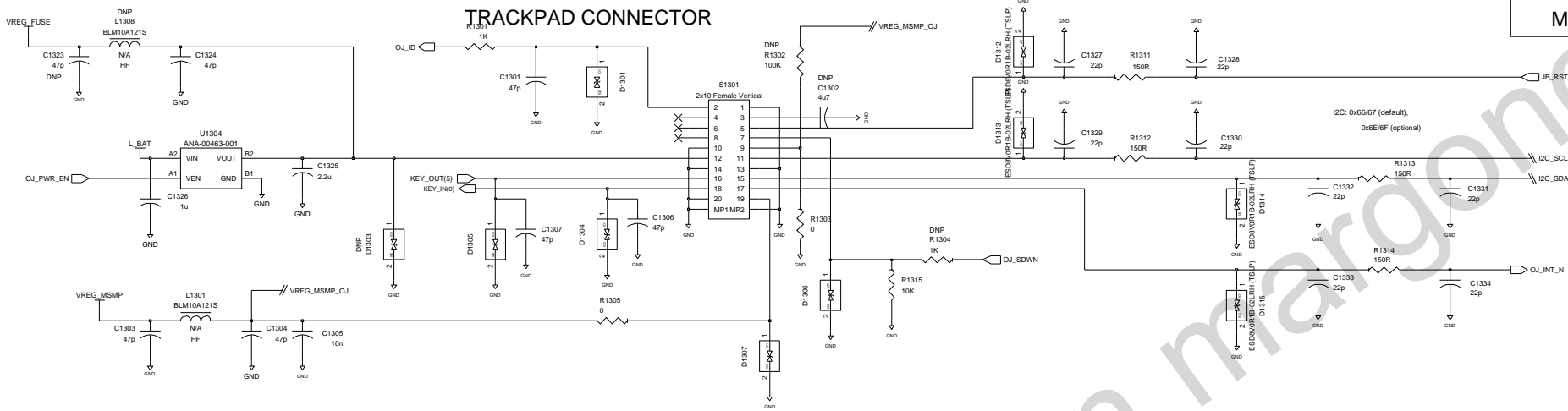
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3

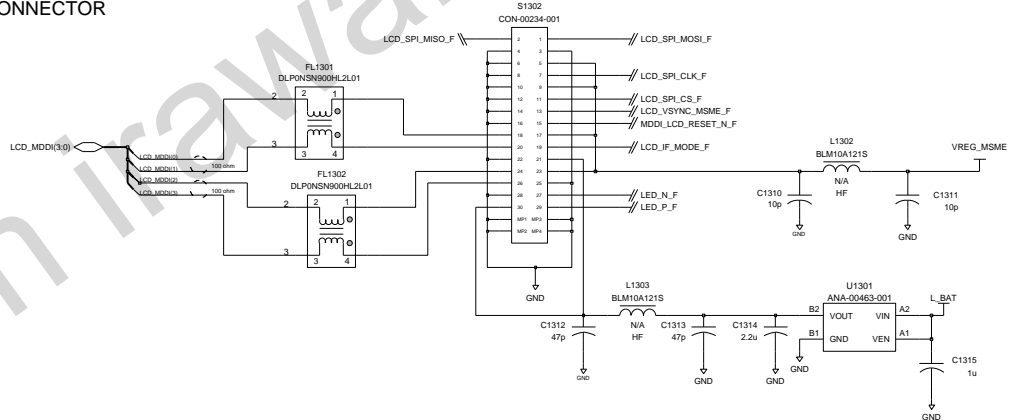
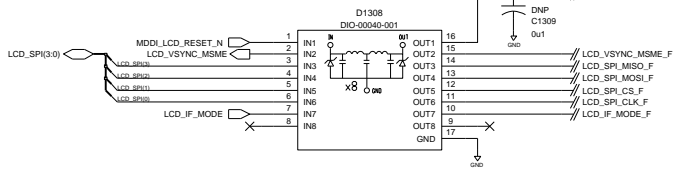
2

1

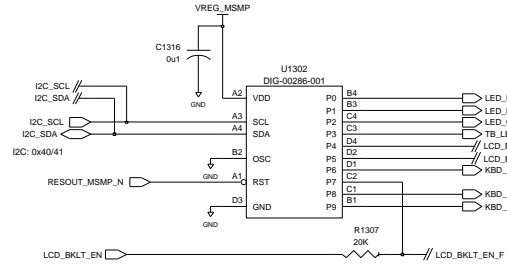
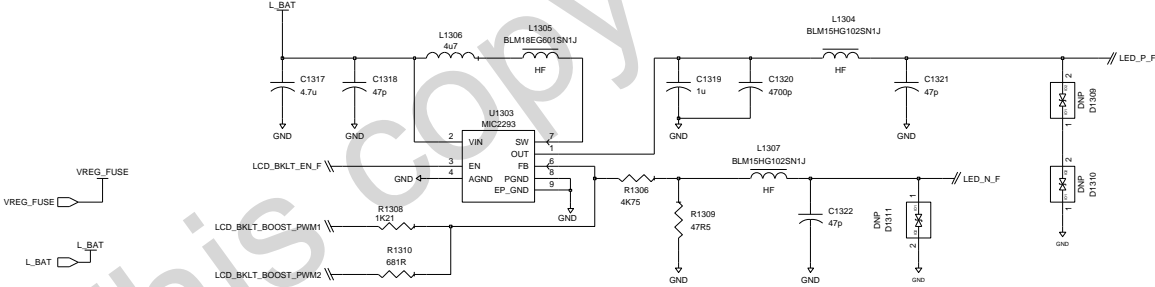
MENTOR



LCD CONNECTOR



BACK-LIGHT/TRI-COLOR LED



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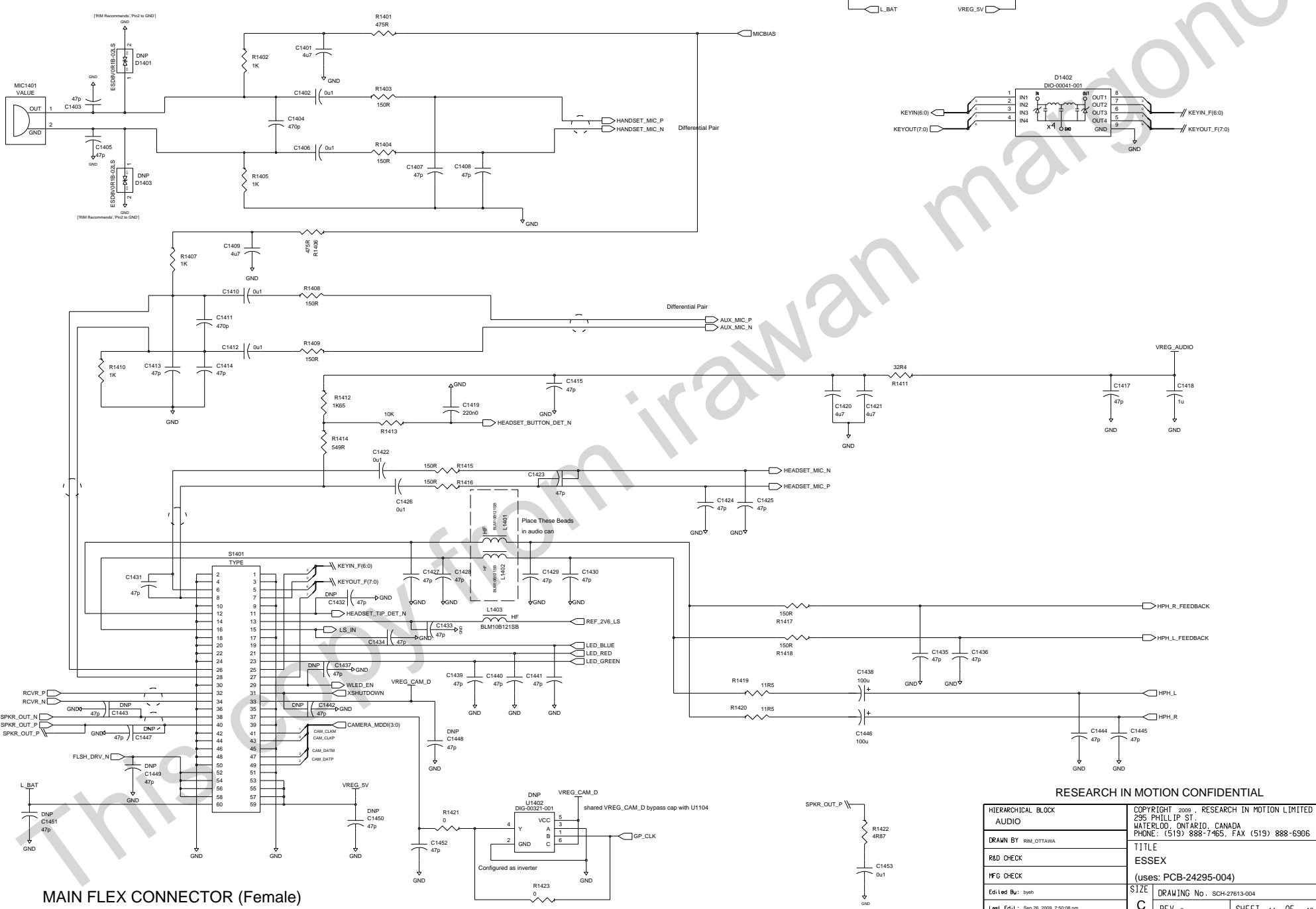
HIERARCHICAL BLOCK JOINTERFACE		COPYRIGHT 2010, RESEARCH IN MOTION LIMITED 295 PHILLIP ST. WATERLOO, ONTARIO, CANADA PHONE: (519) 888-7465, FAX (519) 888-6306	
DRAWN BY: RIM_GTTAWA		TITLE ESSEX	
R&D CHECK		(uses: PCB-24295-004)	
MFG CHECK		SIZE DRAWING No. BCH-27613-004	
Edi Led Bu: andrew		C	
Level: Ed1: Sep 30, 2010, 7:11:26 pm		REV 3 SHEET 13 OF 16	

4

3

2

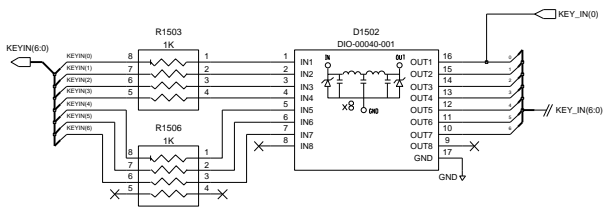
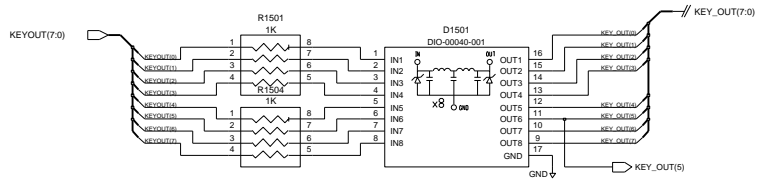
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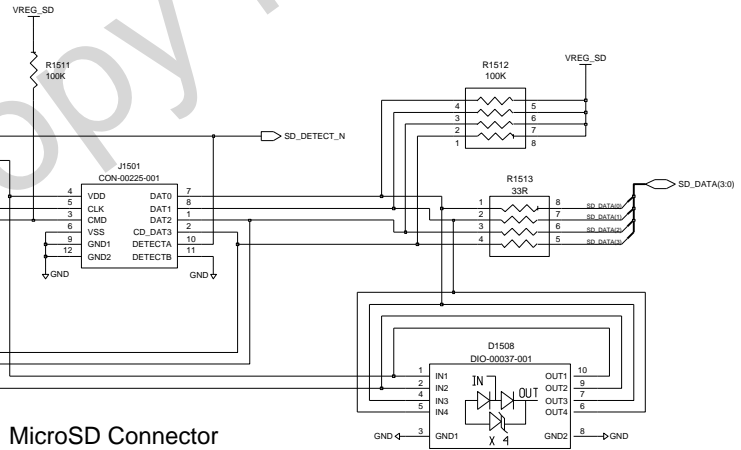
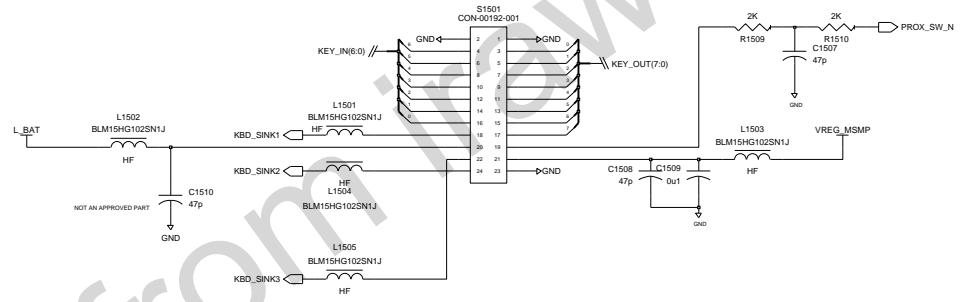
MAIN FLEX CONNECTOR (Female)

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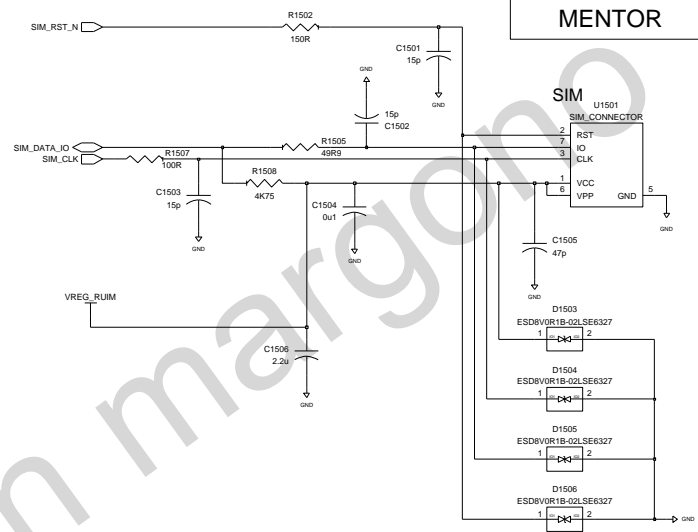
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DRAWN BY RIM.OTTAWA		TITLE ESSEX	
R&D CHECK		(uses: PCB-24295-004)	
MFG CHECK		SIZE DRAWING No. SCH-27613-004	
Ed: Led Bu: bysh		C	
Last Ed: 1 Sep 26, 2009, 7:50:08 pm		REV 3 SHEET 14 OF 16	



Keyboard Connector



MicroSD Connector



MENTOR

SIM

SIM CONNECTOR

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HIERARCHICAL BLOCK KEYBRD		COPYRIGHT 2010, RESEARCH IN MOTION LIMITED 295 PHILLIP ST. WATERLOO, ONTARIO, CANADA PHONE: (519) 888-7465, FAX (519) 888-6306	
DRAWN BY: RIM_OTTAWA		TITLE ESSEX	
R&D CHECK		(uses: PCB-24295-004)	
MFG CHECK		SIZE DRAWING No. SCH-27613-004	
Edi Led Bu: andrew		C REV 3 SHEET 15 OF 16	
Level: Ed1: Oct 1, 2010, 8:28:00 am			

D

D

C

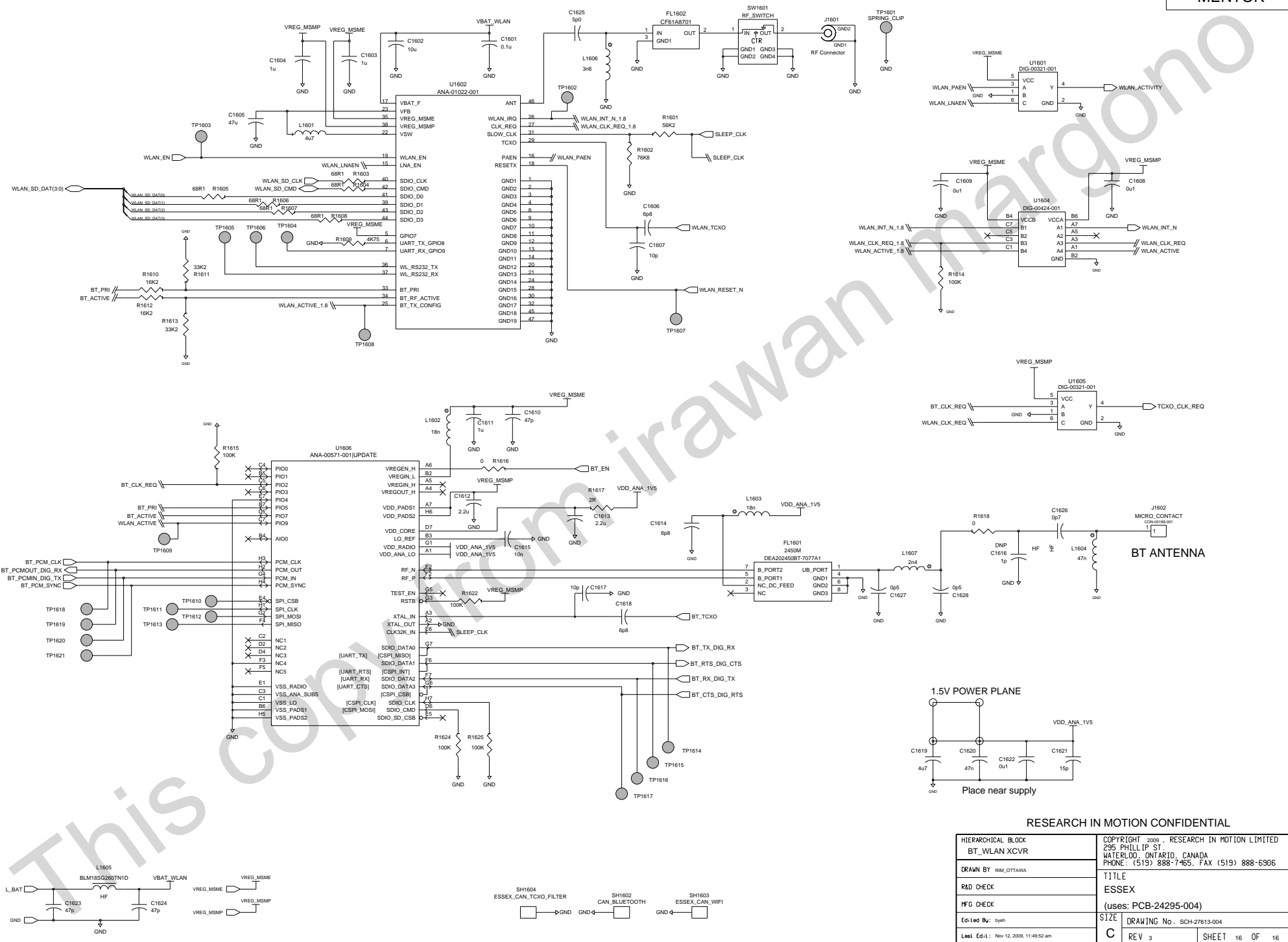
C

B

B

A

A



RESEARCH IN MOTION CONFIDENTIAL

HIERARCHICAL BLOCK BT_WLAN_XCVR		COPYRIGHT 2009, RESEARCH IN MOTION LIMITED 295 PHILLIP ST. WATERLOO, ONTARIO, CANADA PHONE: (519) 888-7465, FAX (519) 888-6306	
DRAWN BY RIM_OTTAWA		TITLE ESSEX	
R&D CHECK		(uses: PCB-24295-004)	
MFG CHECK		SIZE DRAWING No. SCH-27613-004	
Edi Led Bu: bysh		C REV 3 SHEET 16 OF 16	
Last Ed1: Nov 12, 2009, 11:49:52 am			