

MENTOR

RESEARCH IN MOTION CONFIDENTIAL

HIERARCHICAL BLOCK MAIN		COPYRIGHT 2008, RESEARCH IN MOTION LIMITED 295 PHILLIP ST. WATERLOO, ONTARIO, CANADA PHONE: (519) 888-7465, FAX (519) 888-6306	
DRAWN BY Steve Wellington	R&D CHECK	TITLE Thunder	
IFG CHECK	SIZE (Units: PCB-17073-006)		
Ed: Led Bu: swjllington	DRAWING No. SCH-17075-006		
Level Ed: 1 Aug 11, 2008, 12:44:52 pm	C	REV 1B	SHEET 1 OF 20

D

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C

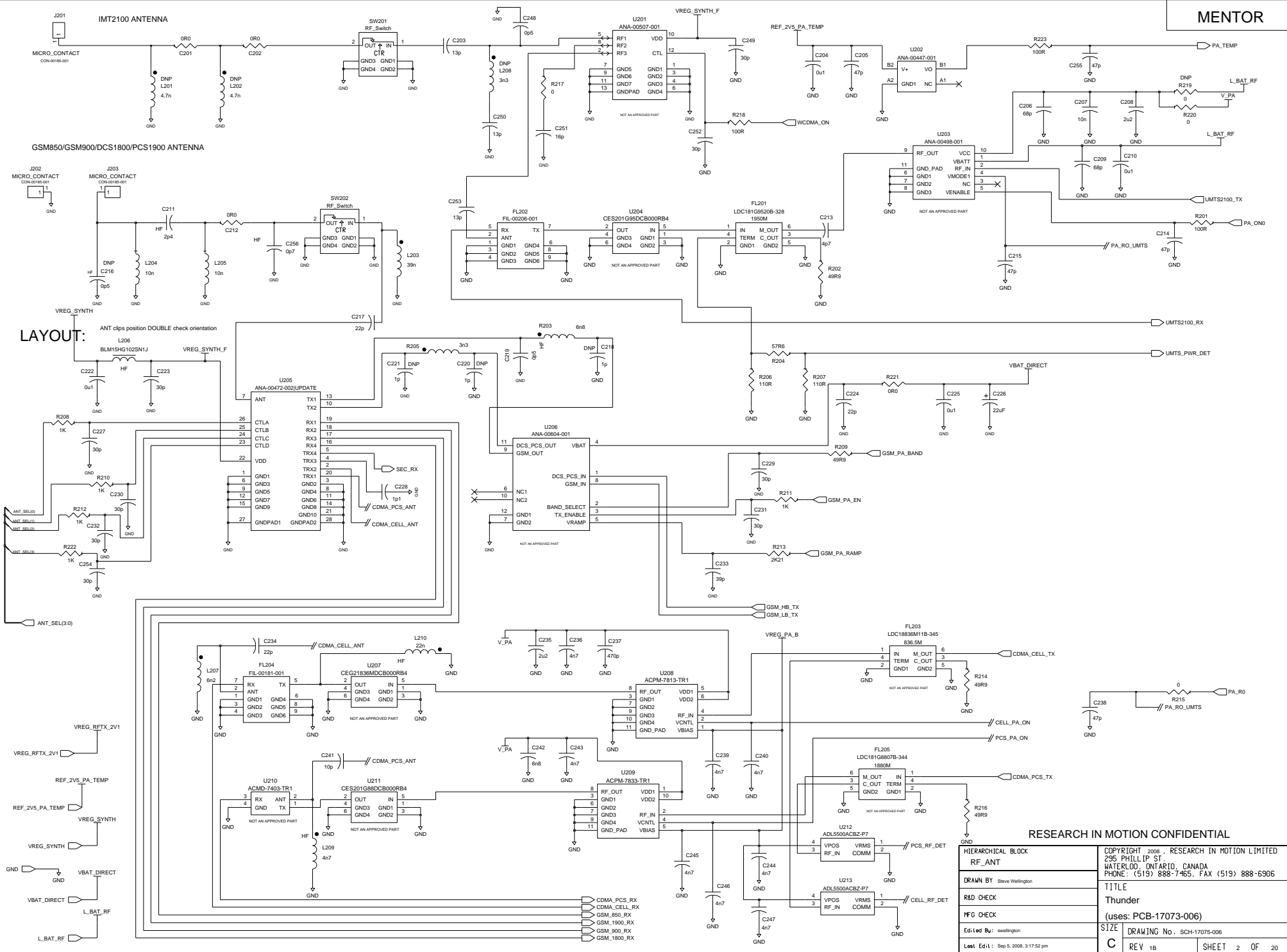
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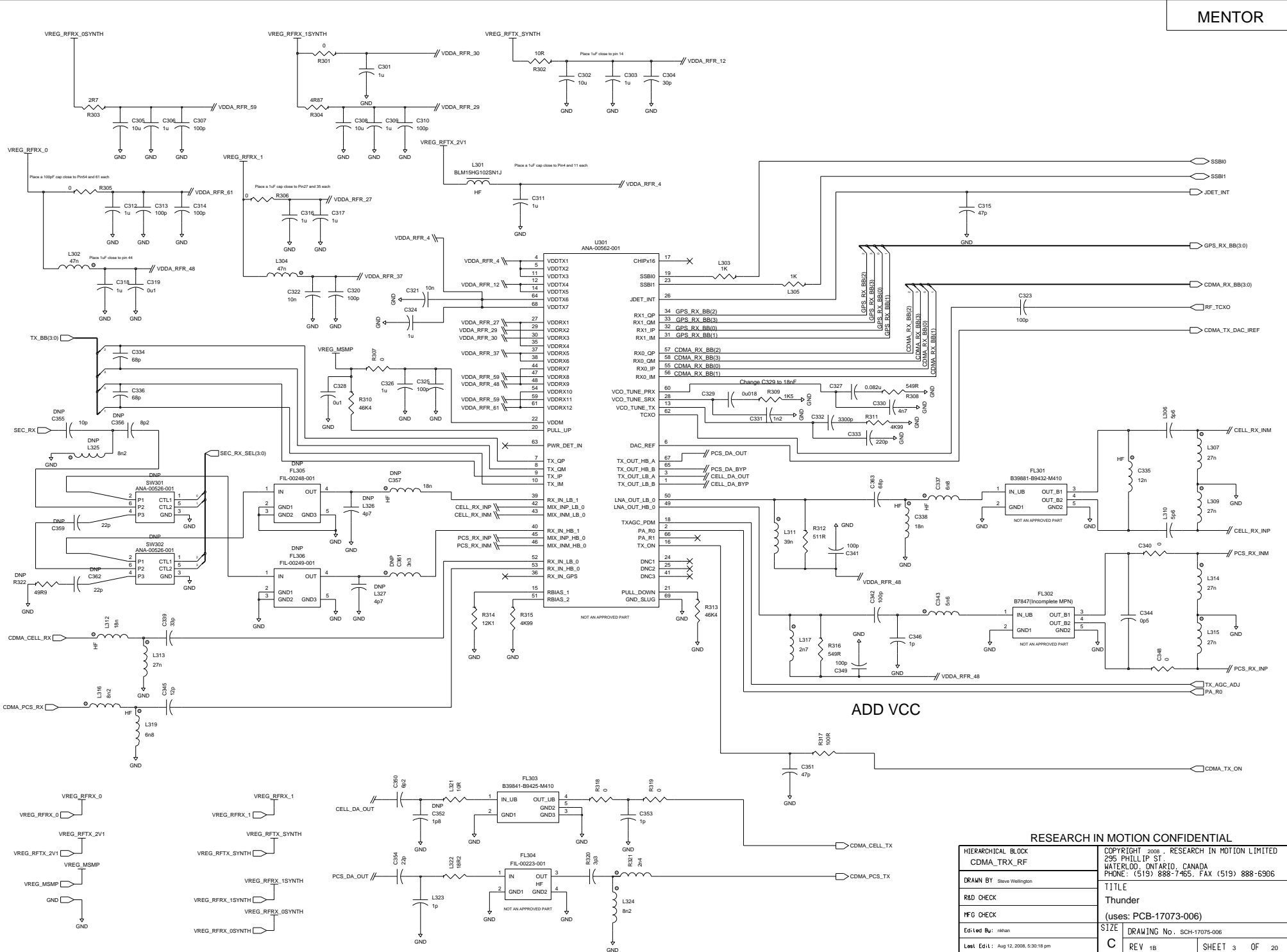
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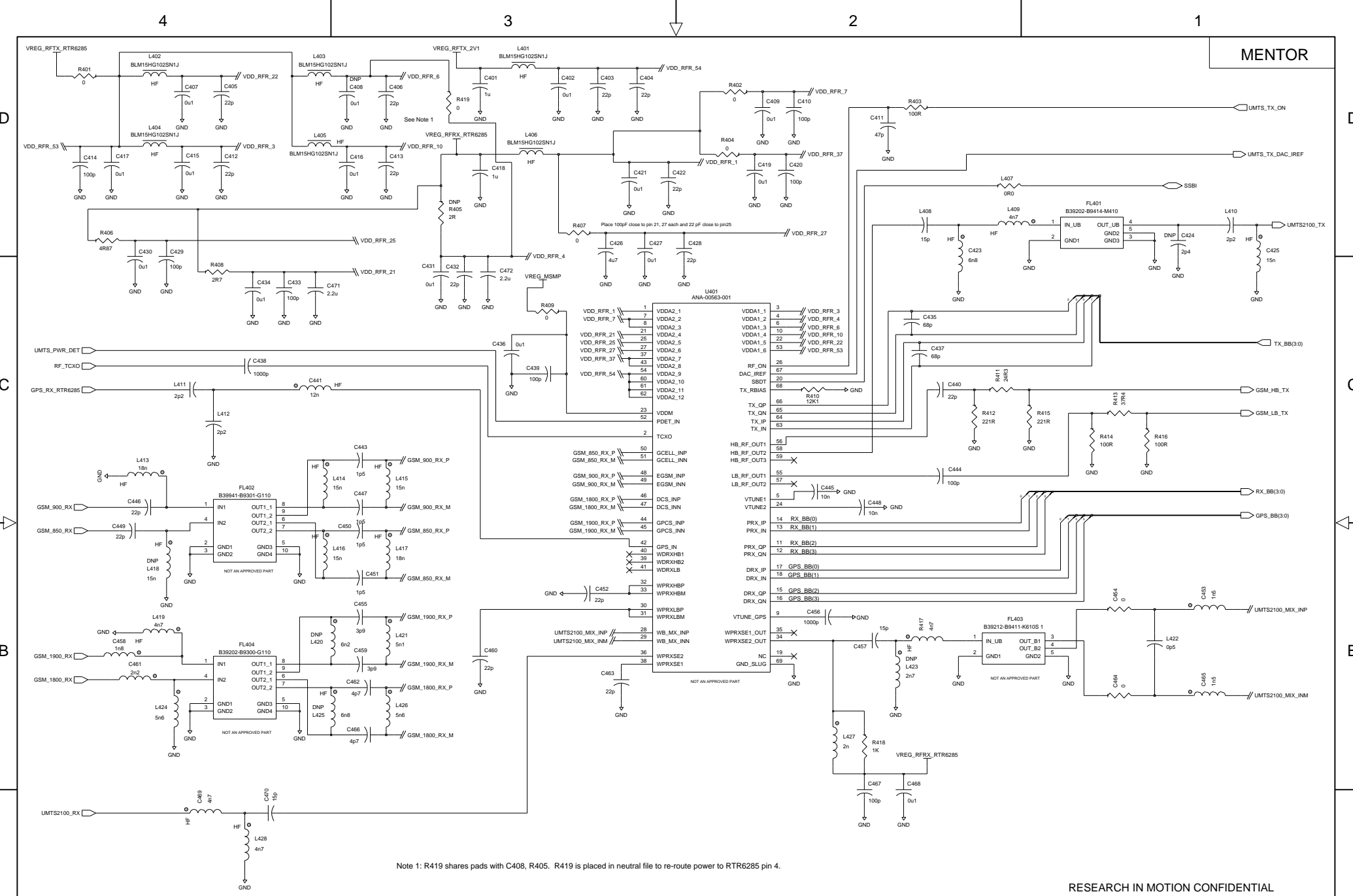
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HIERARCHICAL BLOCK		COPYRIGHT 2008, RESEARCH IN MOTION LIMITED 295 PHILLIP ST. WATERLOO, ONTARIO, CANADA PHONE: (519) 888-7465, FAX (519) 888-6306	
RF_ANT		TITLE	
DRAWN BY Steve Wellington		Thunder	
R&D CHECK		IFG CHECK	
Edi Led Bu: swellington		SIZE	
Lestl Ed1: Sep 6, 2008, 3:17:52 pm		DRAWING No. SCH-17075-006	
REV 1B		SHEET 2 OF 20	

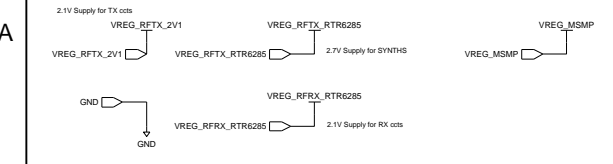


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HIERARCHICAL BLOCK CDMA_TRX_RF		COPYRIGHT 2008, RESEARCH IN MOTION LIMITED 295 PHILLIP ST. WATERLOO, ONTARIO, CANADA PHONE: (519) 888-7465, FAX (519) 888-6306	
DRAWN BY Steve Wellington		TITLE Thunder	
R&D CHECK		(uses: PCB-17073-006)	
MFG CHECK		SIZE DRAWING No. SCH-17075-006	
Edi Led By: rphan		C	
Last Ed: Aug 12, 2008, 5:30:18 pm		REV 1B	SHEET 3 OF 20



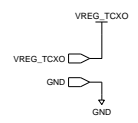
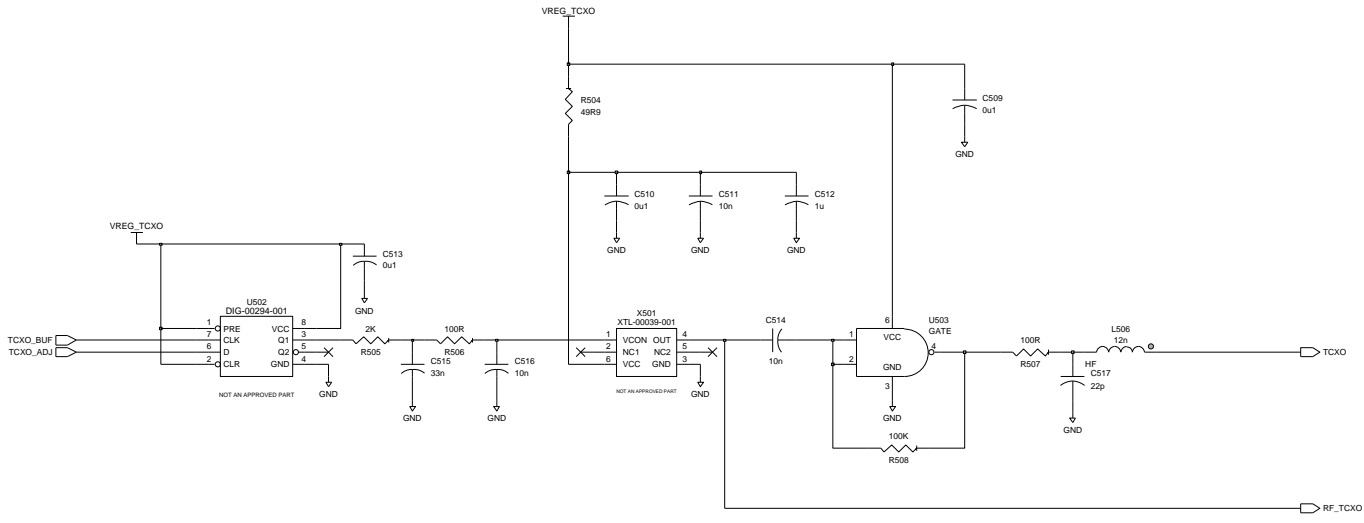
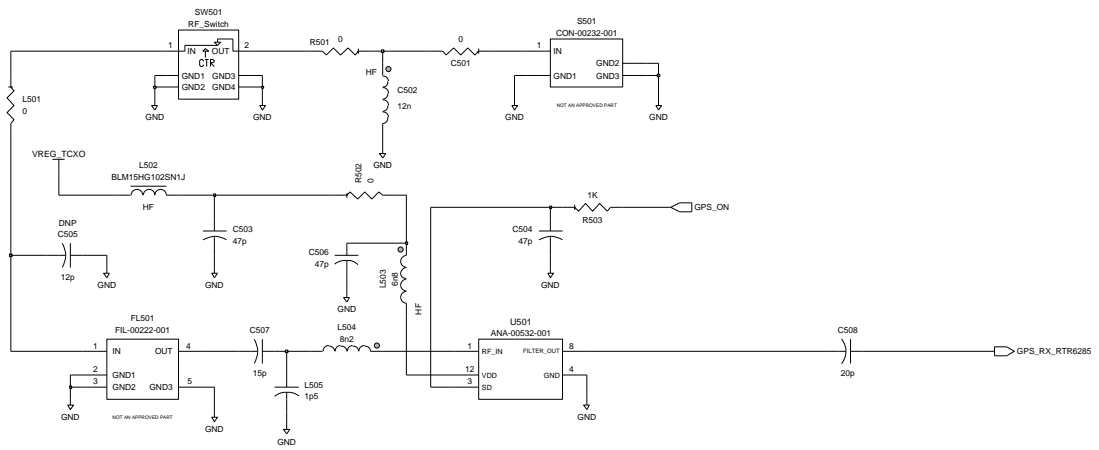
Note 1: R419 shares pads with C408, R405. R419 is placed in neutral file to re-route power to RTR6285 pin 4.



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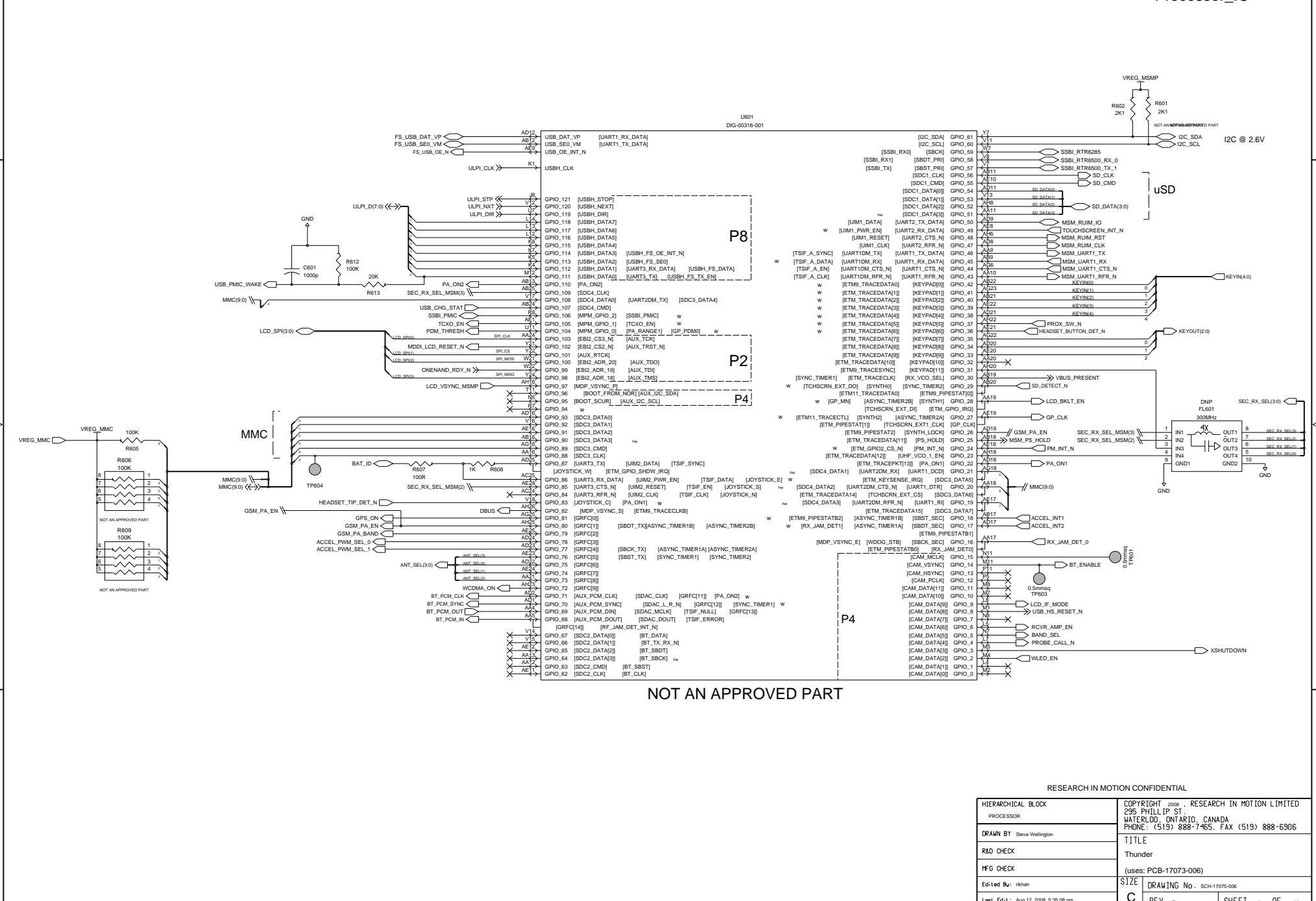
HIERARCHICAL BLOCK		COPYRIGHT 2008, RESEARCH IN MOTION LIMITED	
UMTS_EDGE_TRX_RF		295 PHILLIP ST.	
DRAWN BY Steve Wellington		WATERLOO, ONTARIO, CANADA	
R&D CHECK		PHONE: (519) 888-7465, FAX (519) 888-6306	
MFG CHECK		TITLE	
Edi Led Bu: swellington		Thunder	
Last Ed: Oct 24, 2008, 2:03:39 pm		(uses: PCB-17073-006)	
C		SIZE	DRAWING No. SCH-17075-006
REV 1B		SHEET 4 OF 20	

GPS ANTENNA CONNECTOR



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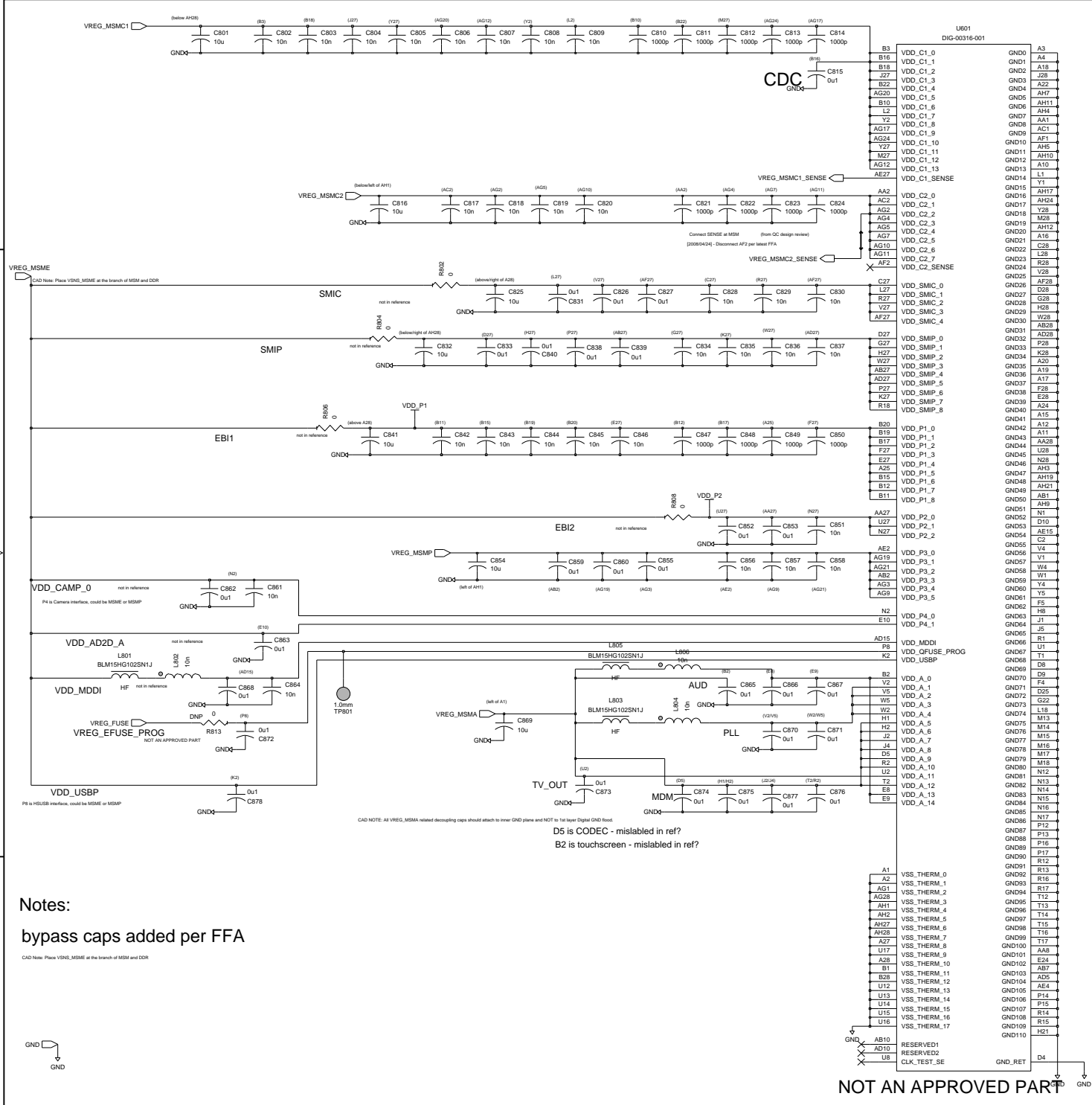
HIERARCHICAL BLOCK GPS_SYNTH	COPYRIGHT 2008, RESEARCH IN MOTION LIMITED 295 PHILLIP ST. WATERLOO, ONTARIO, CANADA PHONE: (519) 888-7465, FAX (519) 888-6306
DRAWN BY Steve Wellington	TITLE Thunder (uses: PCB-17073-006)
R&D CHECK	SIZE DRAWING No. SCH-17073-006
MFG CHECK	C REV 1B SHEET 5 OF 20
Edi Led By: swellington	
Level: Ed1:1 Jun 26, 2008, 12:41:07 pm	



NOT AN APPROVED PART

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HIERARCHICAL BLOCK PROCESSOR		COPYRIGHT 2008, RESEARCH IN MOTION LIMITED 295 PHILLIP ST. WATERLOO, ONTARIO, CANADA PHONE: (519) 888-7465, FAX (519) 888-6306	
DRAWN BY Steve Wallington		TITLE Thunder	
R&D CHECK		(uses: PCB-17073-006)	
MFG CHECK		SIZE DRAWING No. SCH-17075-006	
Edi Led Bu: rkhani		C REV 18 SHEET 6 OF 20	
Last Edt1: Aug 12, 2008, 5:36:08 pm			



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
A28	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
RESERVED1	
RESERVED2	
CLK_TEST_SE	
GND	
AD10	
U8	

A3	GND0
A4	GND1
A18	GND2
A28	GND3
A22	GND4
AH7	GND5
AH11	GND6
AH4	GND7
AA1	GND8
AC1	GND9
AH1	GND10
AH10	GND11
AH12	GND12
A10	GND13
L1	GND14
Y1	GND15
AH17	GND16
AH24	GND17
Y28	GND18
N28	GND19
AH12	GND20
A16	GND21
C28	GND22
R28	GND23
L28	GND24
V28	GND25
AF28	GND26
G28	GND27
H28	GND28
V28	GND29
AF28	GND30
A28	GND31
P28	GND32
K28	GND33
A28	GND34
A19	GND35
A17	GND36
F28	GND37
A24	GND38
A15	GND39
A12	GND40
AA28	GND41
U28	GND42
N28	GND43
AH19	GND44
AH21	GND45
AB1	GND46
AH9	GND47
N1	GND48
D10	GND49
AE15	GND50
C2	GND51
V4	GND52
V1	GND53
V4	GND54
W1	GND55
Y4	GND56
Y5	GND57
F5	GND58
J1	GND59
J5	GND60
R1	GND61
U1	GND62
T1	GND63
D8	GND64
D9	GND65
F4	GND66
D25	GND67
G22	GND68
L18	GND69
M14	GND70
M15	GND71
M16	GND72
M17	GND73
M18	GND74
M18	GND75
N12	GND76
N13	GND77
N15	GND78
N15	GND79
N16	GND80
N17	GND81
N17	GND82
P13	GND83
P16	GND84
P17	GND85
R12	GND86
R13	GND87
R16	GND88
R17	GND89
T12	GND90
T13	GND91
T14	GND92
T15	GND93
T16	GND94
T17	GND95
AA8	GND96
E24	GND97
AB7	GND98
AD5	GND99
AE4	GND100
P14	GND101
R15	GND102
R14	GND103
R15	GND104
H21	GND105
H21	GND106
D4	GND107
D4	GND108
D4	GND109
D4	GND110

Notes:
bypass caps added per FFA

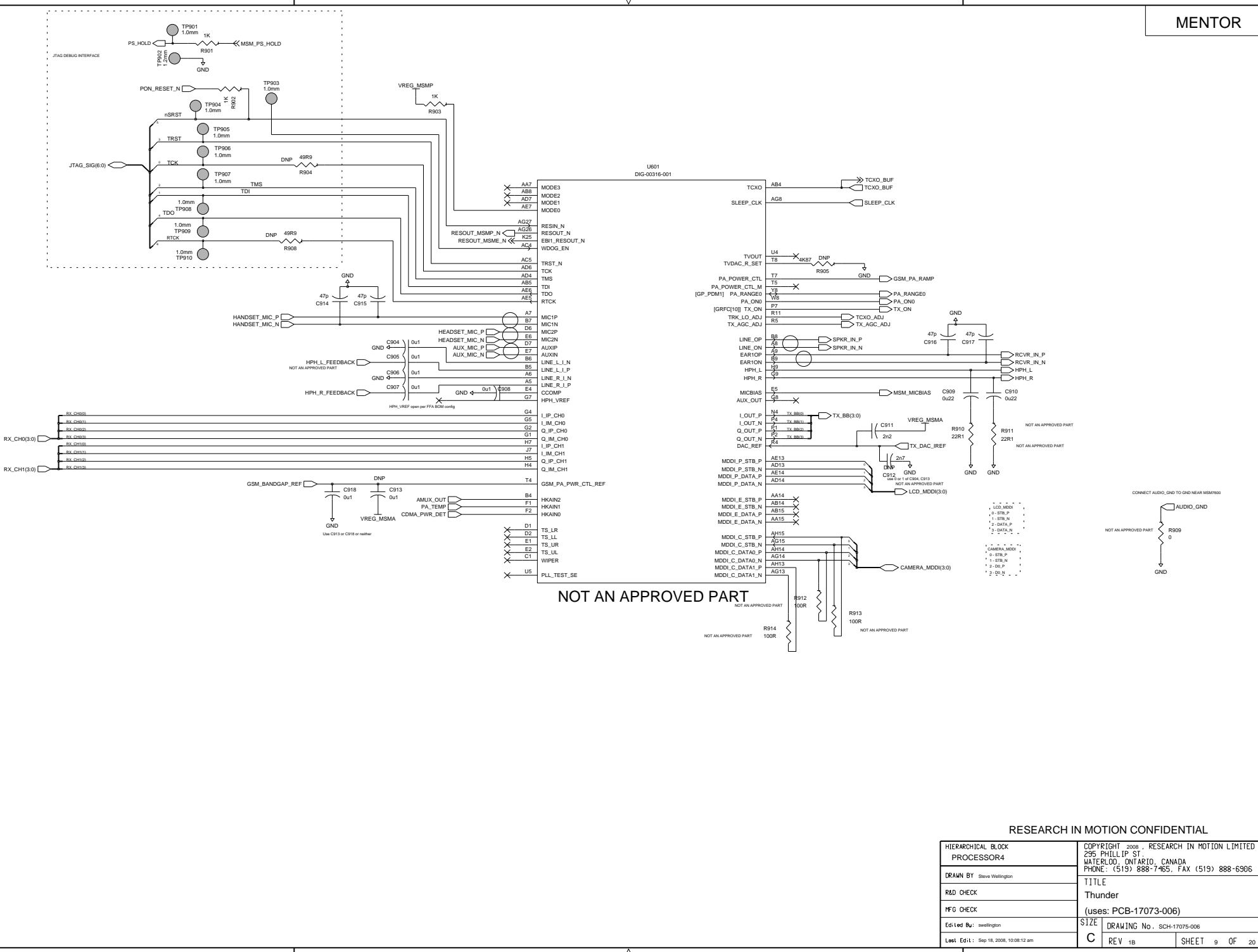
CAD Note: Place VSS_MSMC1 at the branch of MSM and DDR

D5 is CODEC - mislabeled in ref?
B2 is touchscreen - mislabeled in ref?

NOT AN APPROVED PART

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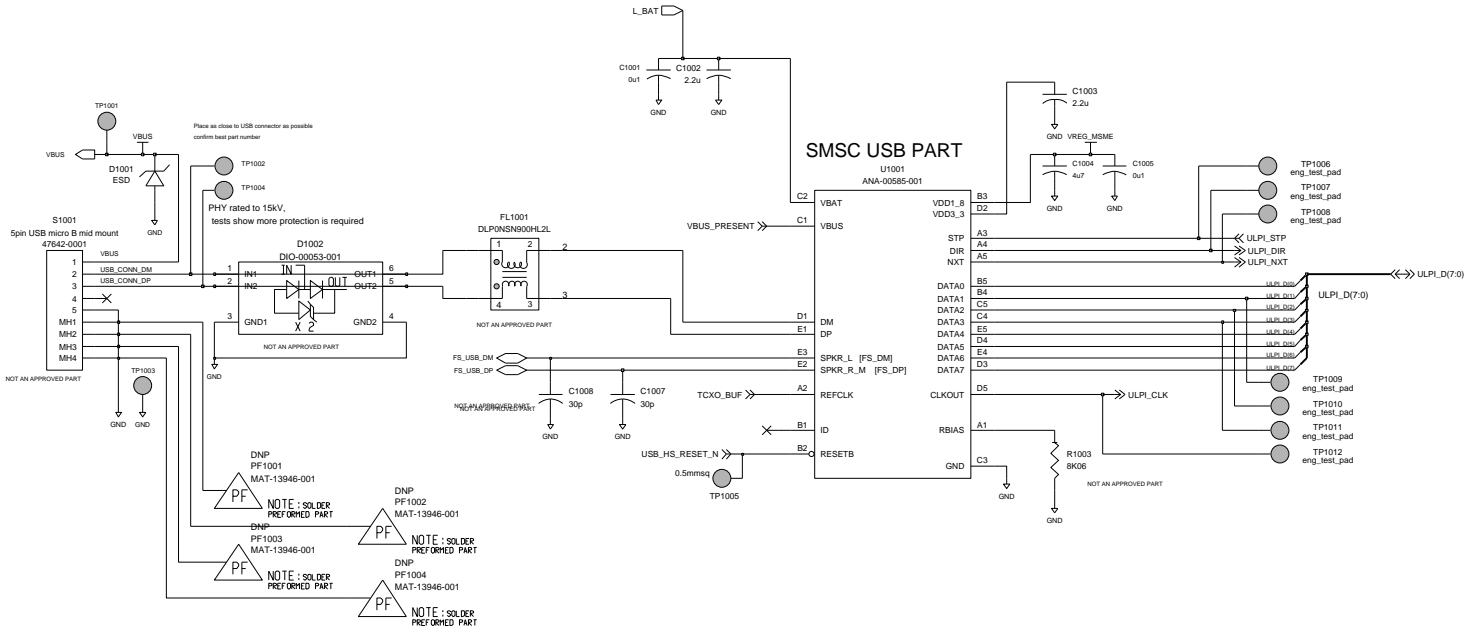
HIERARCHICAL BLOCK PROCESSOR3		COPYRIGHT 2008, RESEARCH IN MOTION LIMITED 295 PHILLIP ST. WATERLOO, ONTARIO, CANADA PHONE: (519) 888-7465, FAX (519) 888-6306	
DRAWN BY Steve Wellington		TITLE Thunder	
R&D CHECK		(uses: PCB-17073-006)	
MFG CHECK		SIZE DRAWING No. SCH-17075-006	
Edi Led By: pcorbell		REV 1B	
Last Edt: Jun 23, 2008, 5:46:37 pm		SHEET 8 OF 20	



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HIERARCHICAL BLOCK PROCESSOR4		COPYRIGHT 2008, RESEARCH IN MOTION LIMITED 295 PHILLIP ST. WATERLOO, ONTARIO, CANADA PHONE: (519) 888-7465, FAX (519) 888-6306	
DRAWN BY Steve Wellington		TITLE Thunder	
R&D CHECK		(uses: PCB-17073-006)	
MFG CHECK		SIZE DRAWING No. SCH-17075-006	
Edi Led Bu: swellington		C	
Last Ed: 1: Sep 18, 2008, 10:08:12 am		REV 1B SHEET 9 OF 20	

CHARGE/USB CONNECTOR

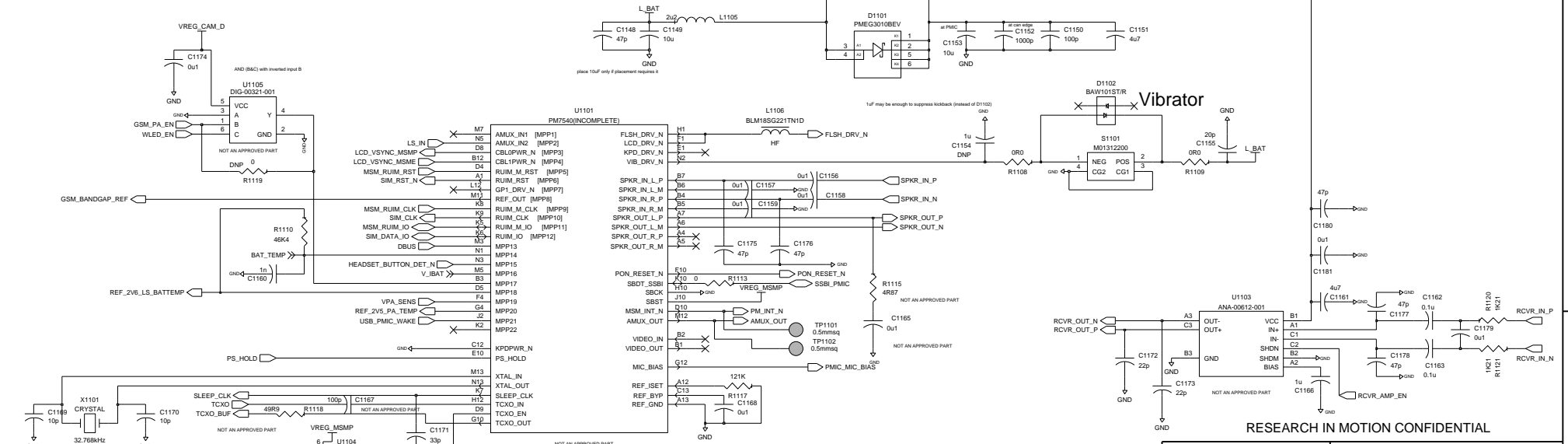
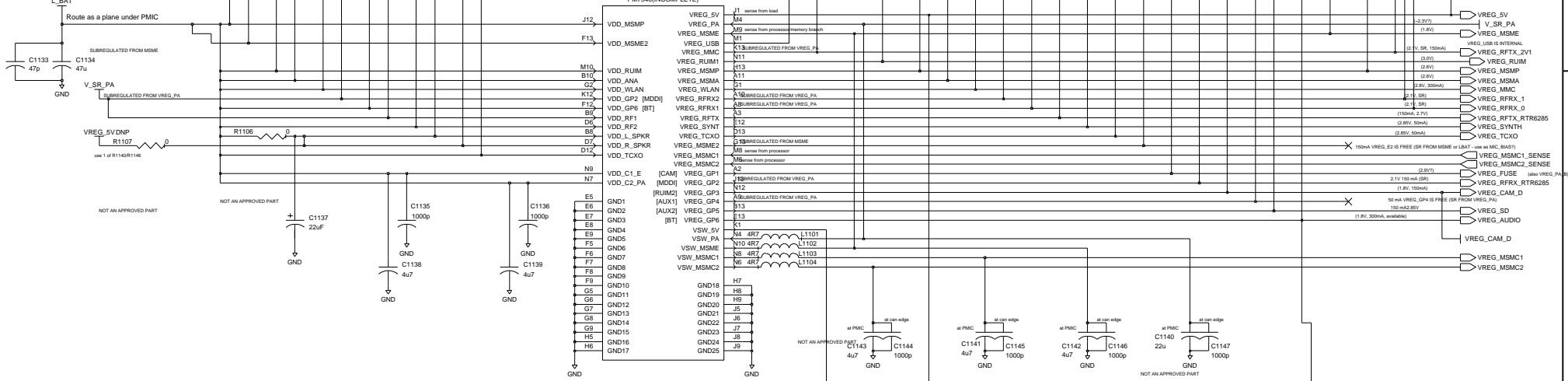


RESEARCH IN MOTION CONFIDENTIAL

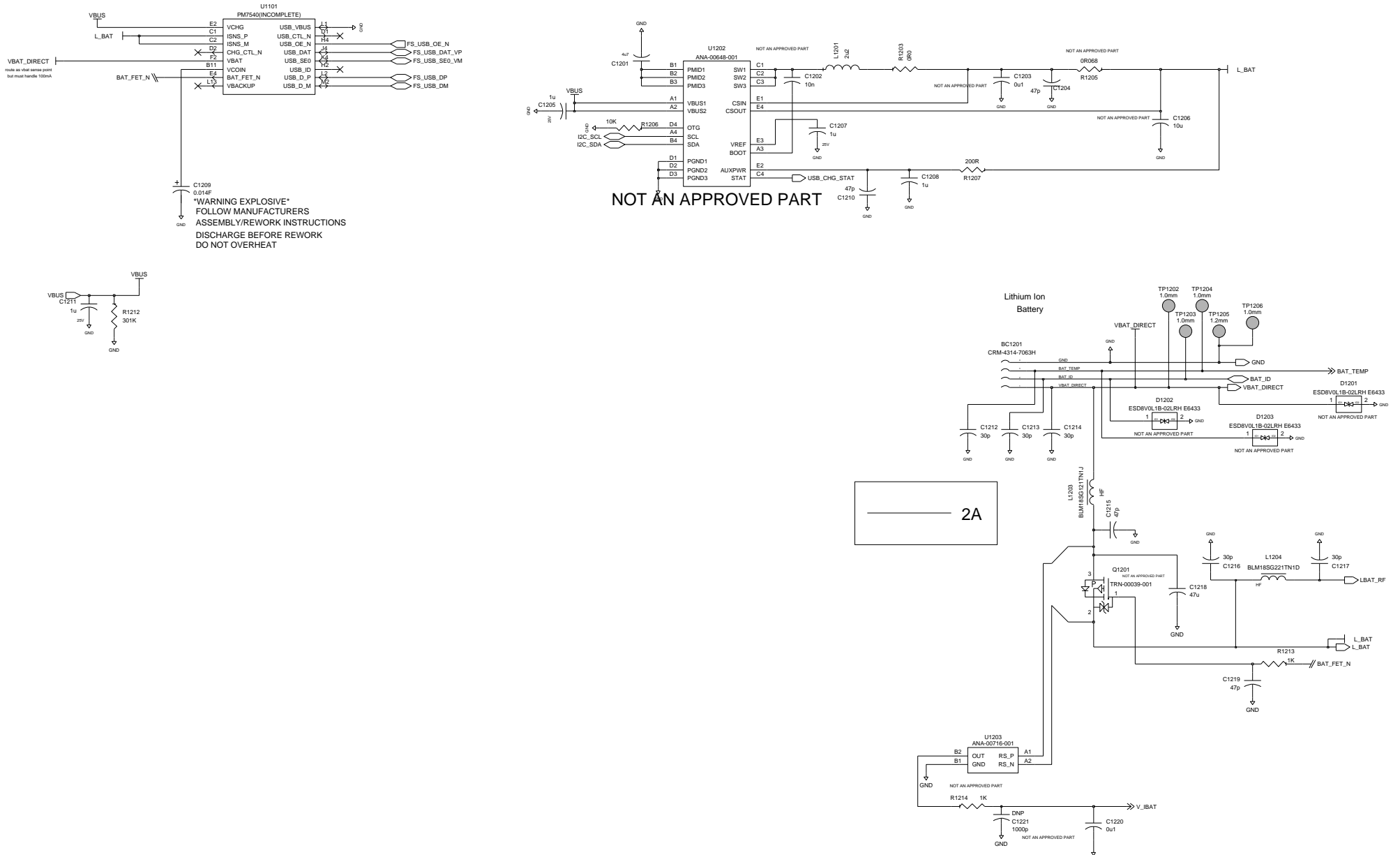
HIERARCHICAL BLOCK PROCESSORS	COPYRIGHT 2008, RESEARCH IN MOTION LIMITED 295 PHILLIP ST. WATERLOO, ONTARIO, CANADA PHONE: (519) 888-7465, FAX (519) 888-6306
DRAWN BY Steve Wellington	TITLE Thunder
R&D CHECK	(uses: PCB-17073-006)
MFG CHECK	SIZE DRAWING No. SCH-17075-006
Ed: Led Bu: swellington	C REV 1B SHEET 10 OF 20
Level: Ed:1: Oct 24, 2008, 2:09:50 pm	

Route VREG_MSME as series from where trunk branches to processor and memory
recheck inductor current ratings based on MSM7600 loads

—	2A
—	500mA
—	300mA
—	150mA
—	50mA



<p>F02 samples available in 12.5uF lead cap OK for PM7540 - could check</p>	HIERARCHICAL BLOCK	<p>COPYRIGHT 2008, RESEARCH IN MOTION LIMITED 295 PHILLIP ST. WATERLOO, ONTARIO, CANADA PHONE: (519) 888-7465, FAX (519) 888-6306</p>
	POWER2	
	TITLE	
	Thunder	
DRAWN BY	Steve Wellington	<p>(uses: PCB-17073-006)</p>
R&D CHECK		
IFG CHECK		<p>SIZE</p>
Edi Led Bu:	swellington	
Label Ed1:	Oct 9, 2008, 1:54:12 pm	<p>C</p>
		<p>DRAWING No. SCH-17075-006</p>
		<p>REV 1B SHEET 11 OF 20</p>



WARNING EXPLOSIVE
 FOLLOW MANUFACTURERS
 ASSEMBLY/REWORK INSTRUCTIONS
 DISCHARGE BEFORE REWORK
 DO NOT OVERHEAT

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HIERARCHICAL BLOCK POWER22		COPYRIGHT 2008, RESEARCH IN MOTION LIMITED 295 PHILLIP ST. WATERLOO, ONTARIO, CANADA PHONE: (519) 888-7465, FAX (519) 888-6306	
DRAWN BY Steve Wellington		TITLE Thunder	
R&D CHECK		(uses: PCB-17073-006)	
MFG CHECK		SIZE DRAWING No. SCH-17075-006	
Ed: Led By: swellington		C	
Level: Ed: 1: Oct 24, 2008, 2:06:09 pm		REV 1B	SHEET 12 OF 20

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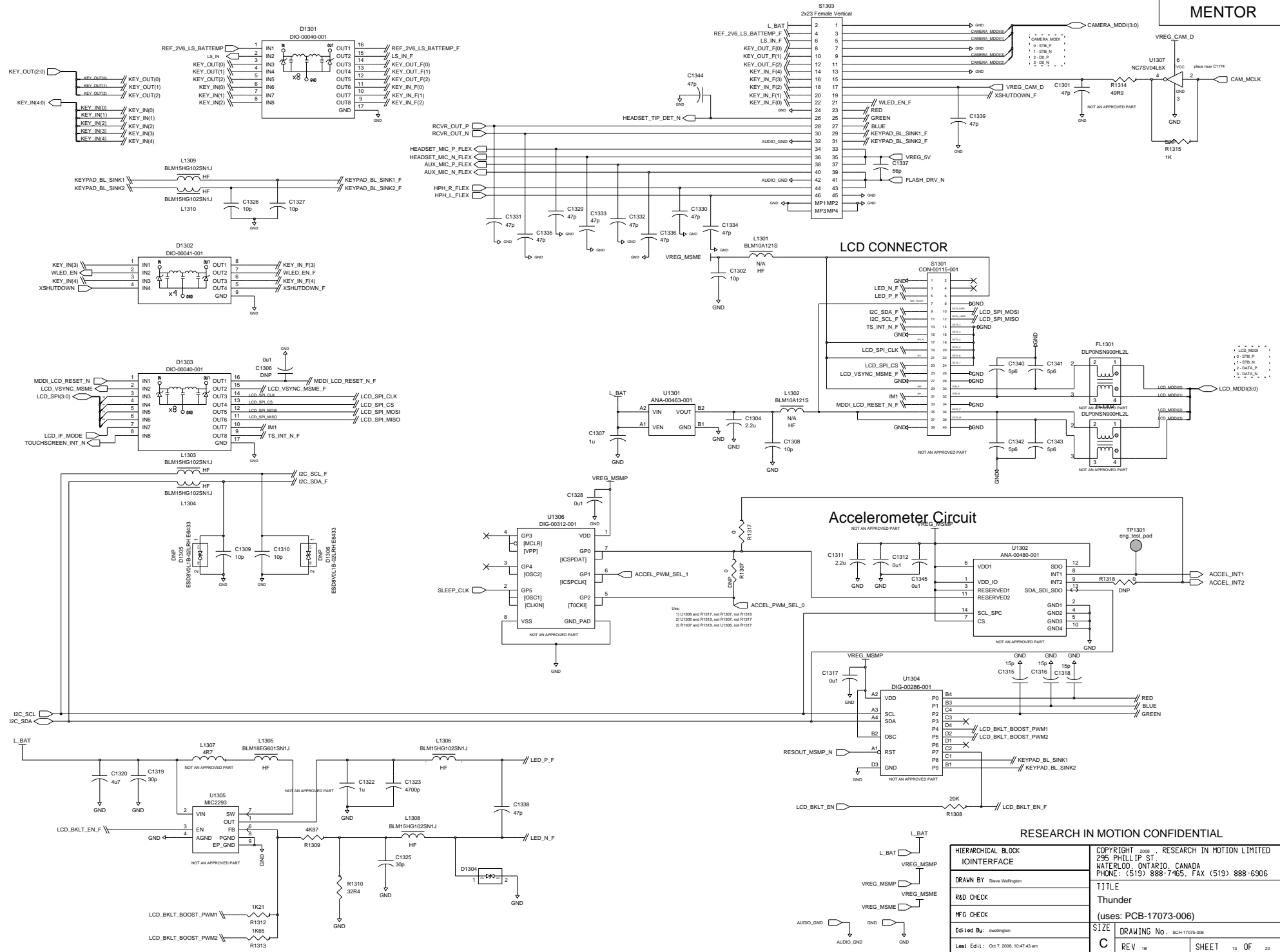
A

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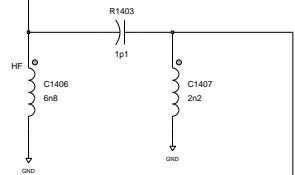
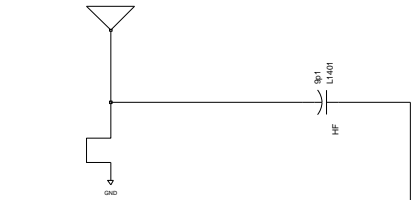
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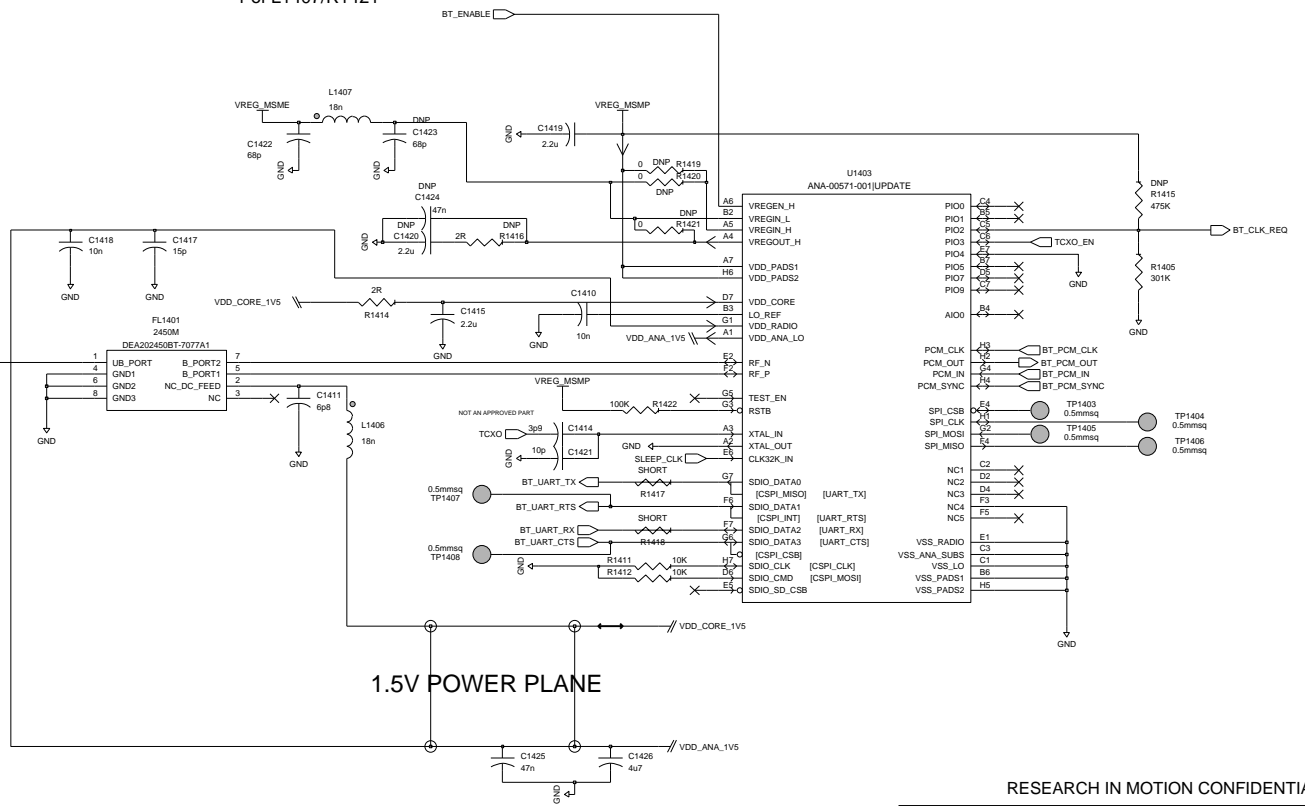
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HIERARCHICAL BLOCK JOINTERFACE	COPYRIGHT © 2008, RESEARCH IN MOTION LIMITED 295 PHILLIP ST. WATERLOO, ONTARIO, CANADA PHONE: (519) 888-7465, FAX (519) 888-6306
	TITLE Thunder (uses: PCB-17073-006)
DRAWN BY Steve Wellington	SIZE DRAWING No. BCH-17075-006
R&D CHECK	Edi Led Bu: swillington
IFG CHECK	Level Ed1: Oct 7, 2008, 10:47:43 am
REV 18	SHEET 13 OF 20

BLUETOOTH ANTENNA



1 of L1407/R1421



1.5V POWER PLANE

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HIERARCHICAL BLOCK BT_WLAN_XCVR		COPYRIGHT 2008, RESEARCH IN MOTION LIMITED 295 PHILLIP ST. WATERLOO, ONTARIO, CANADA PHONE: (519) 888-7465, FAX (519) 888-6306	
DRAWN BY Steve Wellington		TITLE Thunder (uses: PCB-17073-006)	
R&D CHECK		SIZE DRAWING No. SCH-17075-006	
MFG CHECK		C REV 1B SHEET 14 OF 20	
Edi Led By: rnhan		Last Ed14: Aug 27, 2008, 5:11:51 pm	

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RESEARCH IN MOTION CONFIDENTIAL

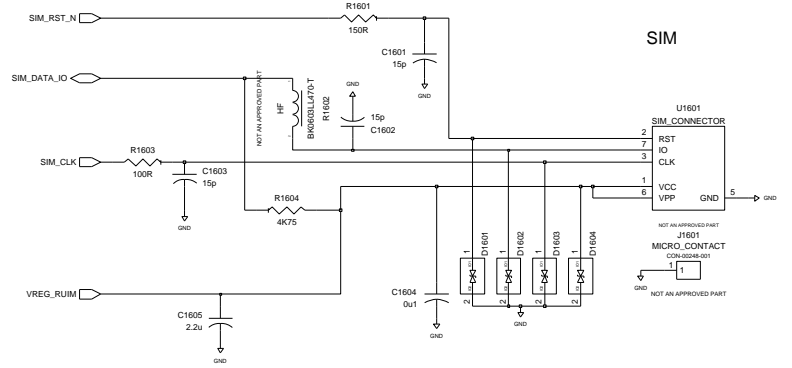
HIERARCHICAL BLOCK CDMA_TRX_RF2		COPYRIGHT 2007, RESEARCH IN MOTION LIMITED 295 PHILLIP ST. WATERLOO, ONTARIO, CANADA PHONE: (519) 888-7465, FAX (519) 888-6306	
DRAWN BY: Steve Wellington		TITLE Thunder (uses: PCB-17073-006)	
R&D CHECK		SIZE	
MFG CHECK		C	
Ed: Led By: swellington		DRAWING No. SCH-17075-006	
Last Ed: 11 Nov 25, 2007, 2:07:14 am		REV 1B	SHEET 15 OF 20

4

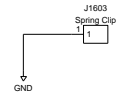
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GPS COAX CLIP



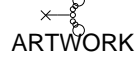
2.05_SINGLE_OFFSET_REDUCED



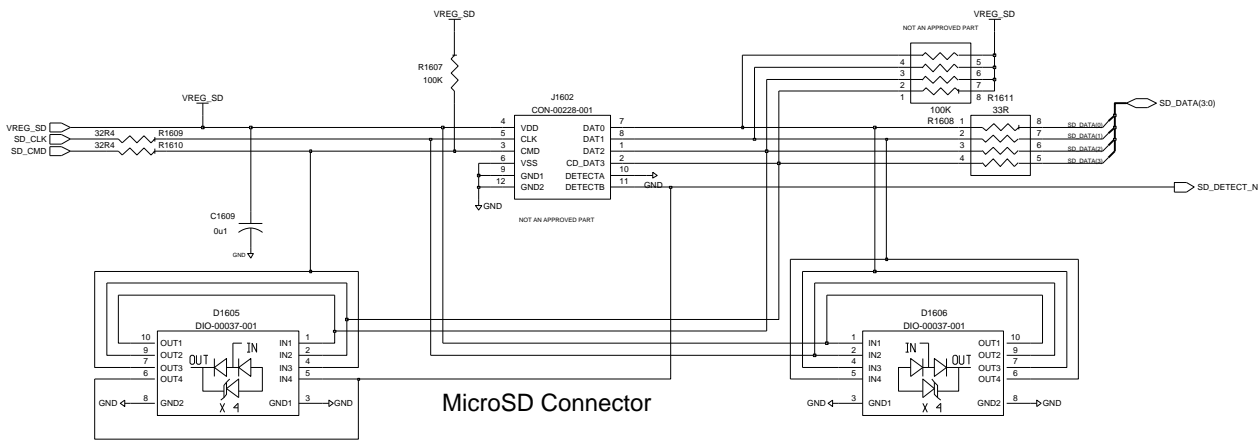
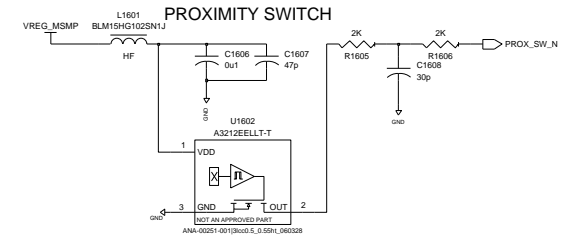
2.05_SINGLE_OFFSET_REDUCED



2.05_SINGLE_OFFSET_REDUCED



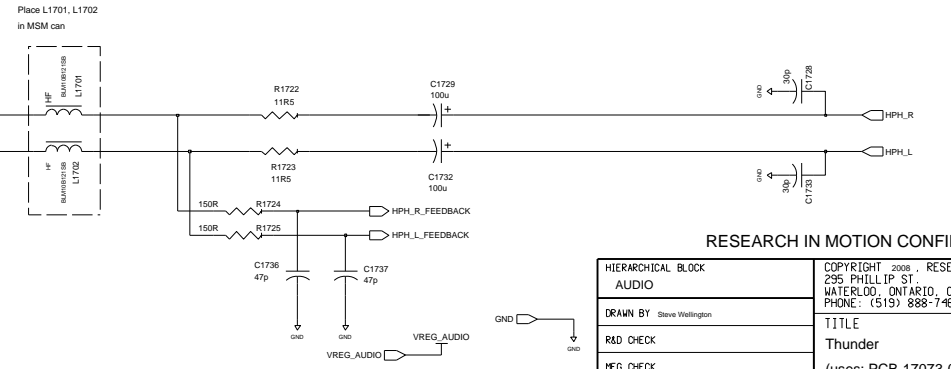
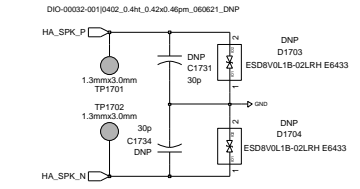
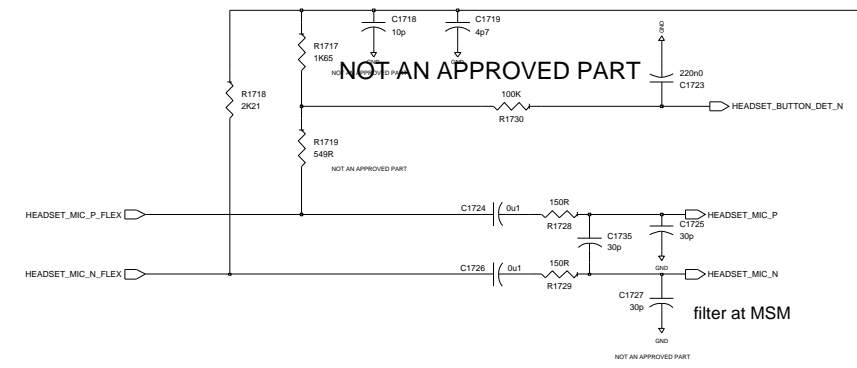
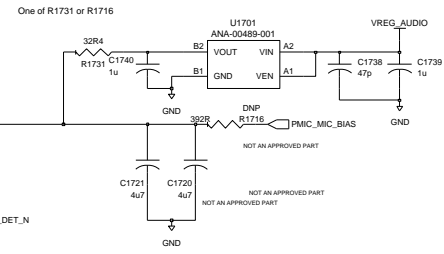
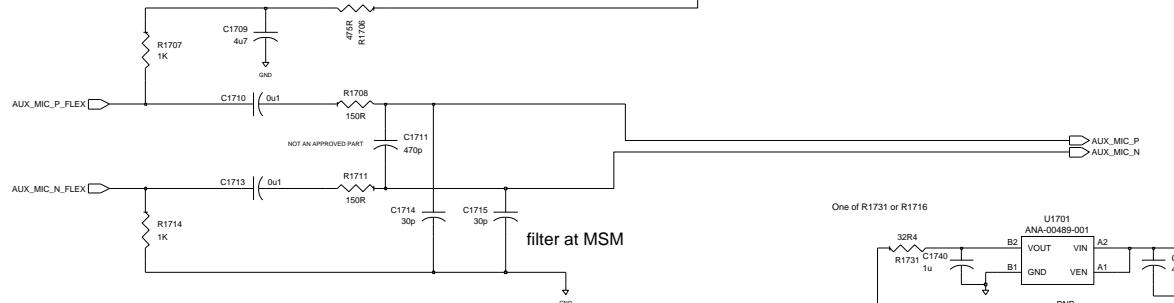
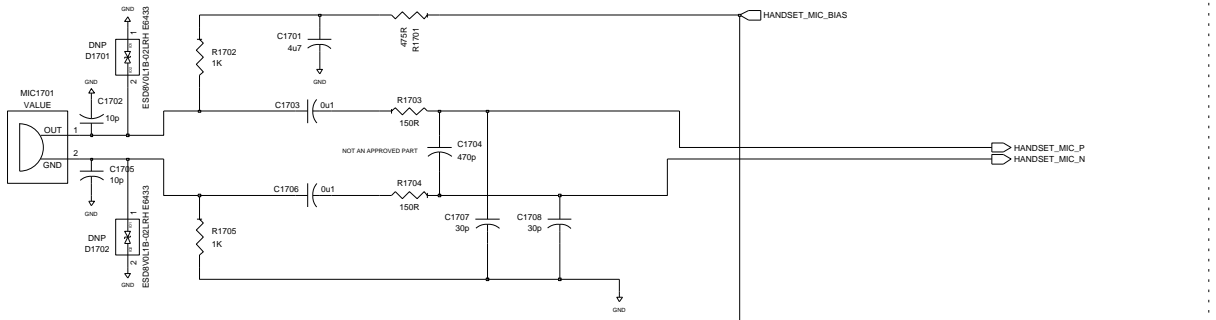
2.05_SINGLE_OFFSET_REDUCED



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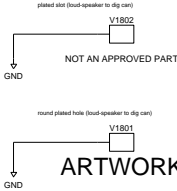
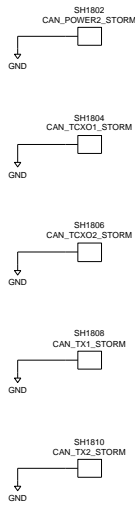
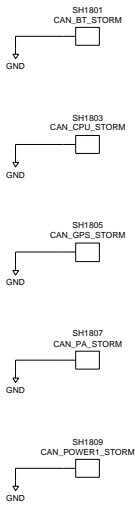
HIERARCHICAL BLOCK KEYBRD		COPYRIGHT 2008, RESEARCH IN MOTION LIMITED 295 PHILLIP ST. WATERLOO, ONTARIO, CANADA PHONE: (519) 888-7465, FAX (519) 888-6306	
DRAWN BY Steve Wellington		TITLE Thunder	
R&D CHECK		(uses: PCB-17073-006)	
MFG CHECK		SIZE DRAWING No. SCH-17075-006	
Edi Led Bu: swellington		C REV 1B SHEET 16 OF 20	
Last Ed 1: Sep 18, 2008, 10:05:43 am			

HANDSET MIC



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HIERARCHICAL BLOCK AUDIO		COPYRIGHT 2008, RESEARCH IN MOTION LIMITED 295 PHILLIP ST. WATERLOO, ONTARIO, CANADA PHONE: (519) 888-7465, FAX (519) 888-6306	
DRAWN BY: Steve Wellington		TITLE Thunder (uses: PCB-17073-006)	
R&D CHECK		SIZE DRAWING No. SCH-17075-006	
MFG CHECK		C REV 1B SHEET 17 OF 20	
Edi Led By: swellington			
Last Edt: Sep 23, 2008, 4:40:57 pm			



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HIERARCHICAL BLOCK JOINTERFACE2		COPYRIGHT 2008, RESEARCH IN MOTION LIMITED 295 PHILLIP ST. WATERLOO, ONTARIO, CANADA PHONE: (519) 888-7465, FAX (519) 888-6306	
DRAWN BY: Steve Wellington		TITLE Thunder	
R&D CHECK		(uses: PCB-17073-006)	
MFG CHECK		SIZE DRAWING No. SCH-17075-006	
Edi Led Bu: swellington		C	
Level: Edi L: Jul 29, 2008, 1:40:15 pm		REV 1B	SHEET 18 OF 20

4

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MENTOR

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C

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A

A

RESEARCH IN MOTION CONFIDENTIAL

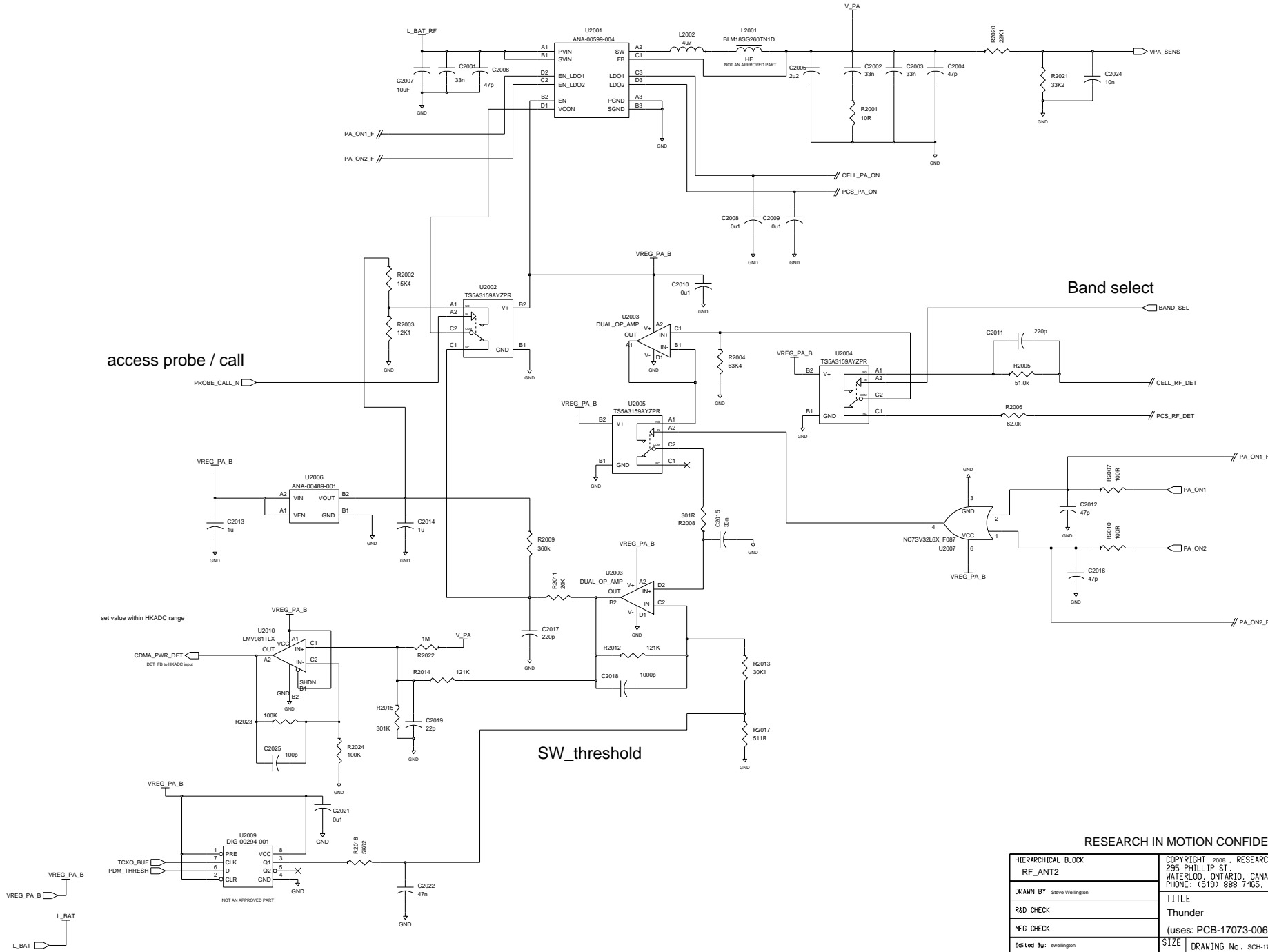
HIERARCHICAL BLOCK BT_XCVR2		COPYRIGHT 2007, RESEARCH IN MOTION LIMITED 295 PHILLIP ST. WATERLOO, ONTARIO, CANADA PHONE: (519) 888-7465, FAX (519) 888-6306	
DRAWN BY: Steve Wellington		TITLE Thunder (uses: PCB-17073-006)	
R&D CHECK		SIZE	
MFG CHECK		DRAWING No. SCH-17075-006	
Ed: Led By: swellington		C	
Last Ed: 1: Oct 29, 2007, 11:40:20 am		REV 1B SHEET 19 OF 20	

4

3

2

1



access probe / call

Band select

SW_threshold

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HIERARCHICAL BLOCK RF_ANT2		COPYRIGHT 2008, RESEARCH IN MOTION LIMITED 295 PHILLIP ST. WATERLOO, ONTARIO, CANADA PHONE: (519) 888-7465, FAX (519) 888-6306	
DRAWN BY Steve Wellington		TITLE Thunder	
R&D CHECK		(uses: PCB-17073-006)	
MFG CHECK		SIZE DRAWING No. SCH-17075-006	
Edi Led By: swellington		C	
Level: Ed1: Sep 18, 2008, 9:50:32 am		REV 1B	SHEET 20 OF 20