

1 2 3 4 5 6 7 8

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Zidane-UMA (PGA)

MV Build

2010/03/15

DATE	CHANGE NO.	REV

EE	DATE	POWER	DATE	INVENTEC			
DRAWER	Chou Leo	10/01/05	Ho Wen-Pin	TITLE			
DESIGN	Wu Bruce	10/01/05		MR133I-UMA			
CHECK	Wu Bruce	10/01/05		Project Name			
RESPONSIBLE				SIZE	CODE	DOC. NUMBER	REV
				A3	CS	1310A23512-0-MTR	A03
				SHEET	1	OF	48

<http://laptop-motherboard-schematic.blogspot.com/>

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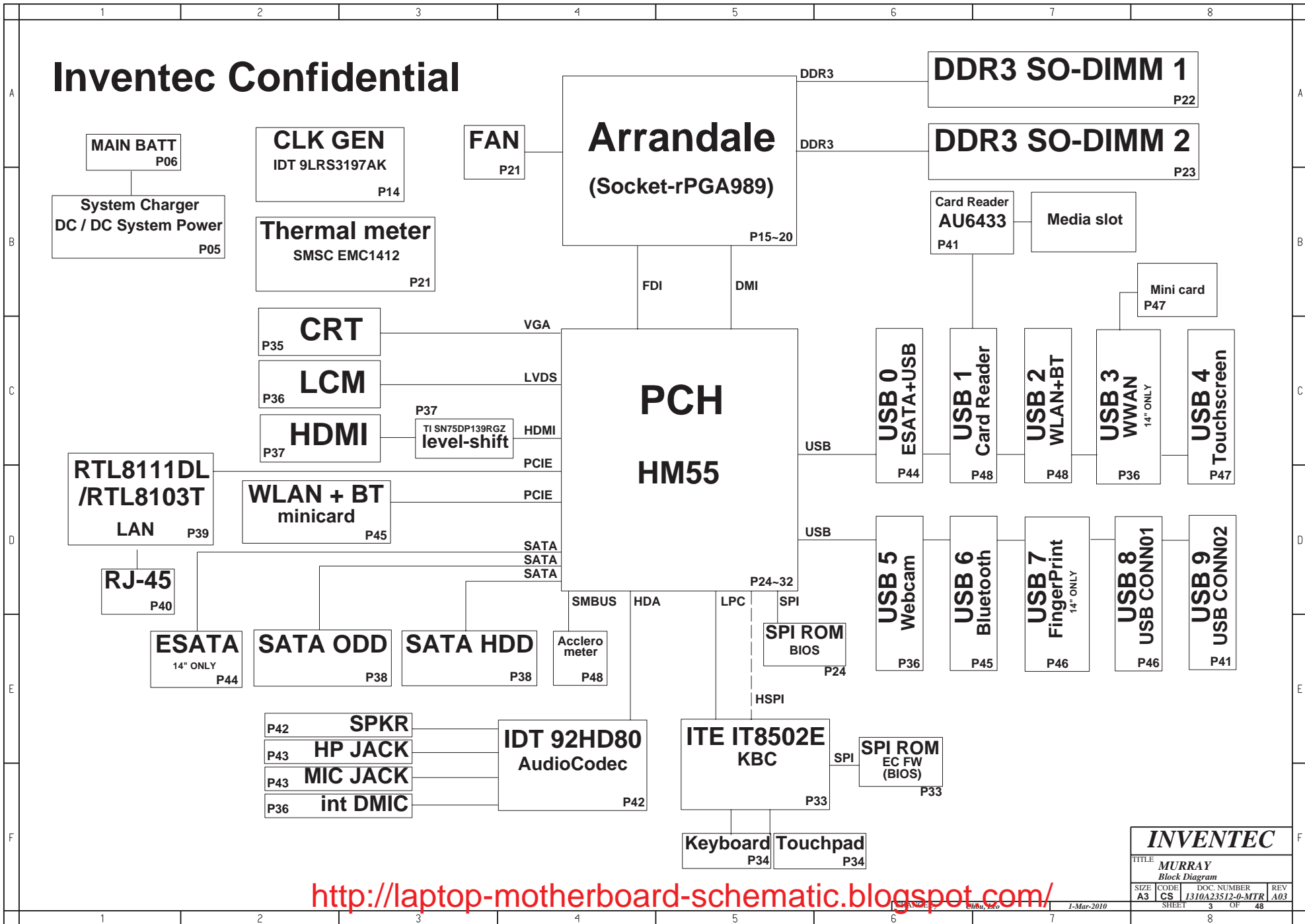
- 01. PROJECT NAME
- 02. INDEX
- 03. Block Diagram
- 04. POWER Procedure
- 05. DC & CHARGE Circuit
- 06. Battery CONN
- 07. +V3A & +V5A
- 08. +V1.5 & +V0.75
- 09. +V1.8S & +V1.05S
- 10. +VCC_CORE
- 11. +VGFX_CORE
- 12. VTT & VPCIE & VDDC_GPU
- 13. +V5S & +V3S
- 14. CLK GEN
- 15. CPU-1
- 16. CPU-2
- 17. CPU-3
- 18. CPU-4
- 19. CPU-5
- 20. CPU-6
- 21. Thermal, Fan & XDP
- 22. DDR3-1
- 23. DDR3-2
- 24. PCH-1
- 25. PCH-2
- 26. PCH-3
- 27. PCH-4
- 28. PCH-5
- 29. PCH-6
- 30. PCH-7

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- 31. PCH-8
- 32. PCH-9
- 33. KBC
- 34. Keyboard & TouchPad
- 35. CRT CONN
- 36. LCM CONN
- 37. HDMI CONN
- 38. SATA HDD & ODD
- 39. LAN
- 40. RJ-45
- 41. Card Reader
- 42. Audio Codec
- 43. HP JACK & MIC JACK
- 44. ESATA, SCREW
- 45. WLAN & BlueTooth
- 46. USB, PowerButton(DB)
- 47. WWAN(Optional)
- 48. FP & HD LOCK(Optional)

INVENTEC			
TITLE: MURRAY			
Index			
SIZE A3	CODE CS	DOC. NUMBER 1310A23512-0-MTR	REV A03
SHEET		2	OF 48

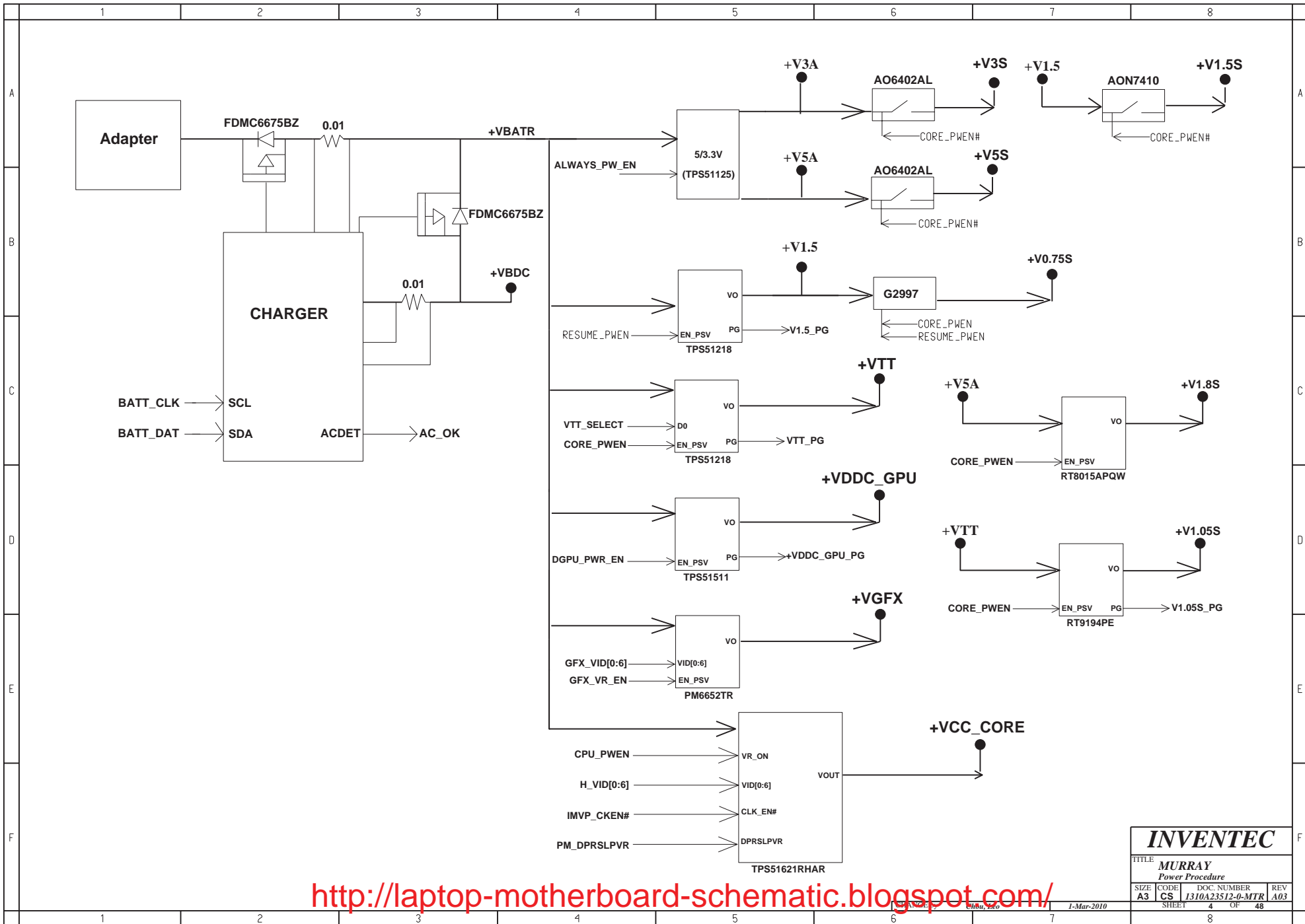
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INVENTEC			
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Block Diagram			
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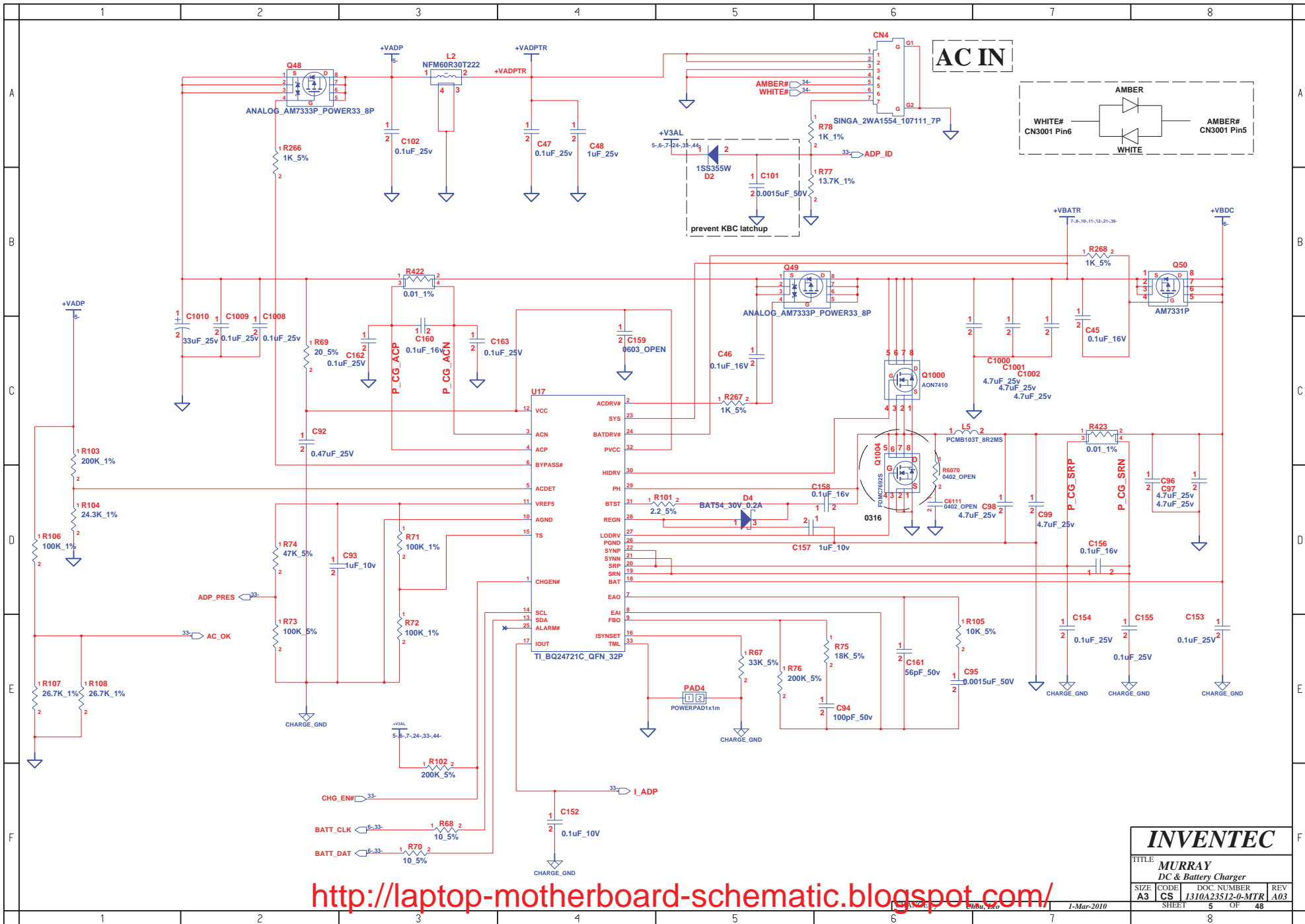
1-Mar-2010



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Power Procedure			
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SHEET		4	OF 48

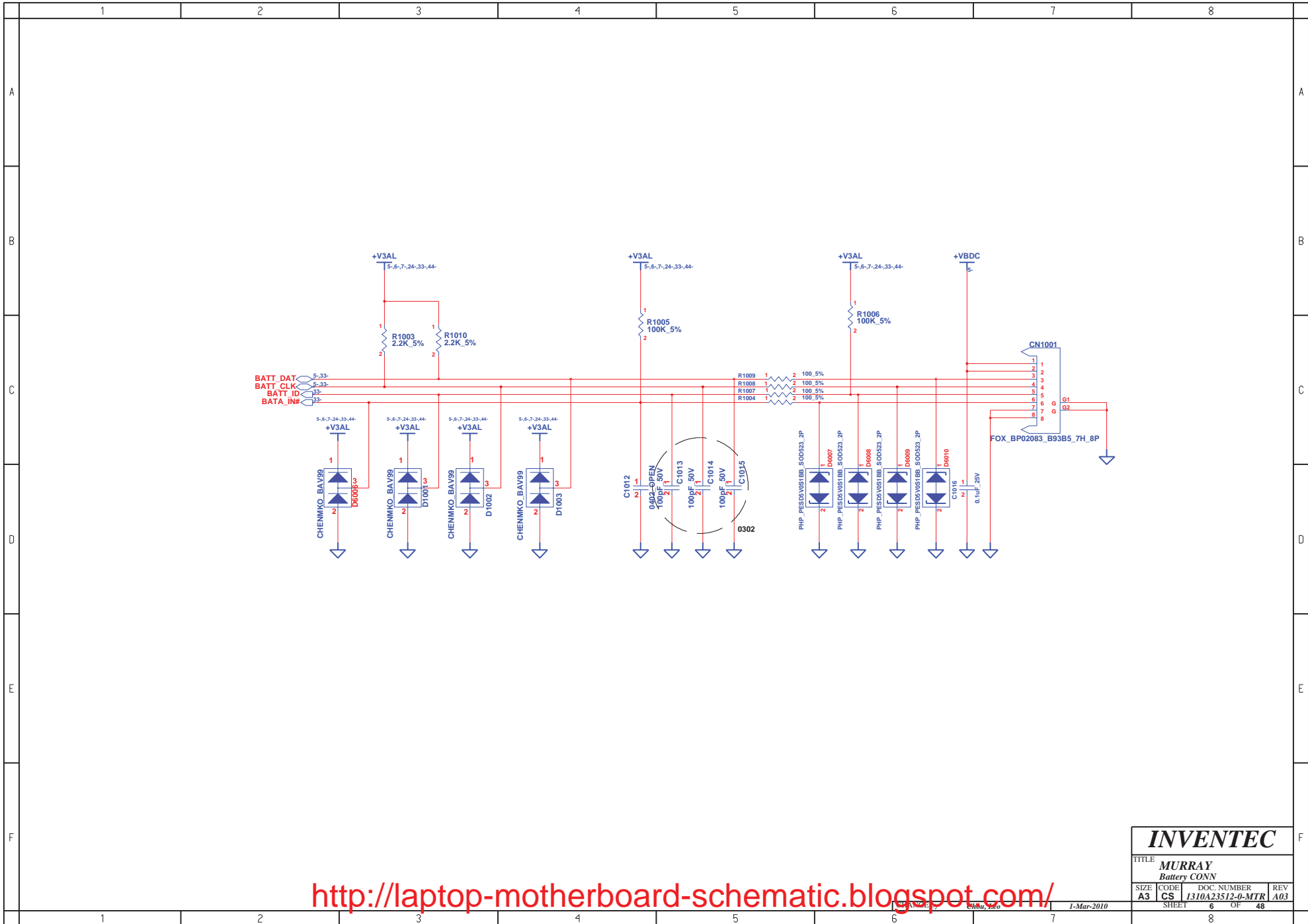
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INVENTEC			
TITLE: MURRAY			
DC & Battery Charger			
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SHEET		5 OF 48	

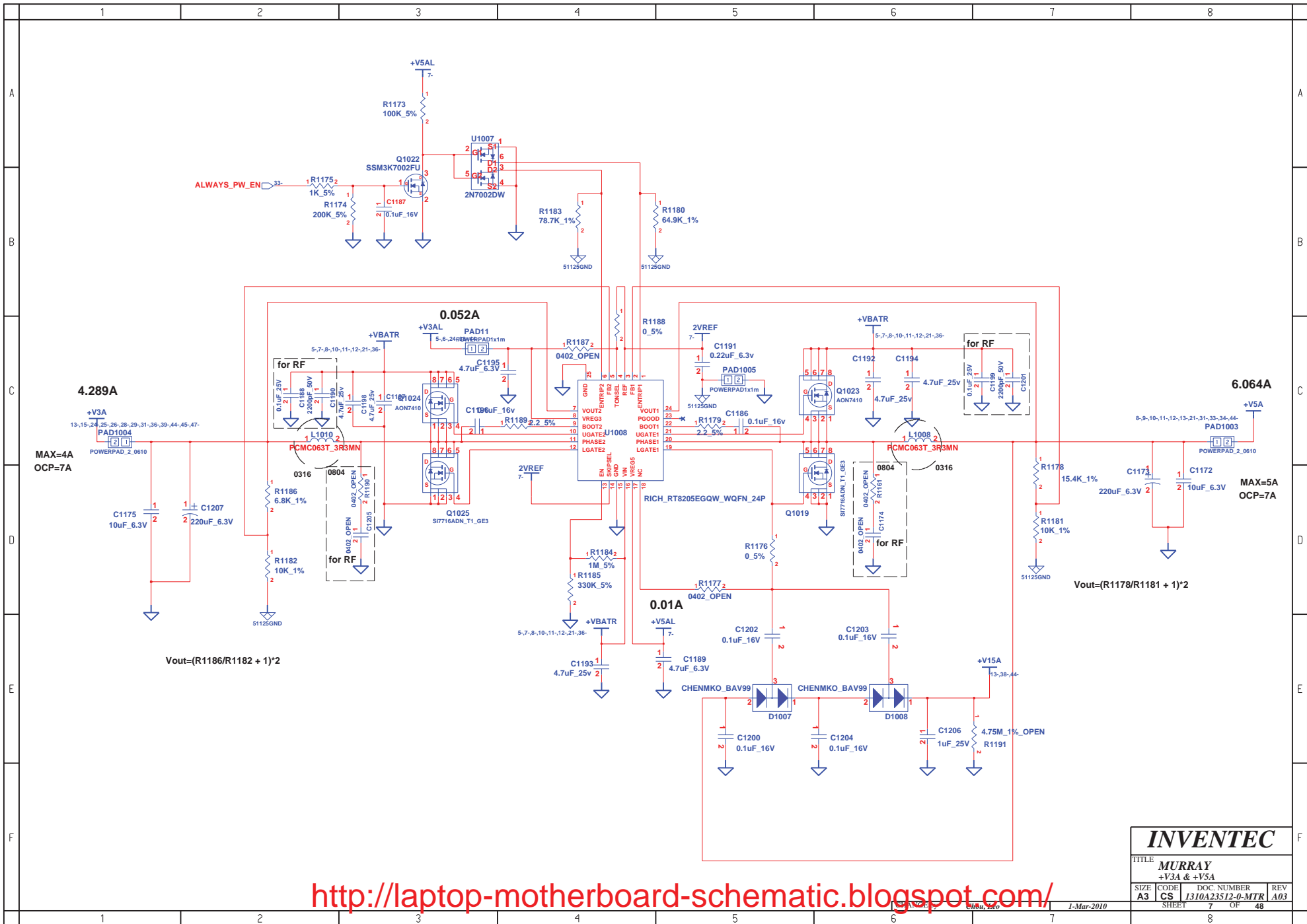
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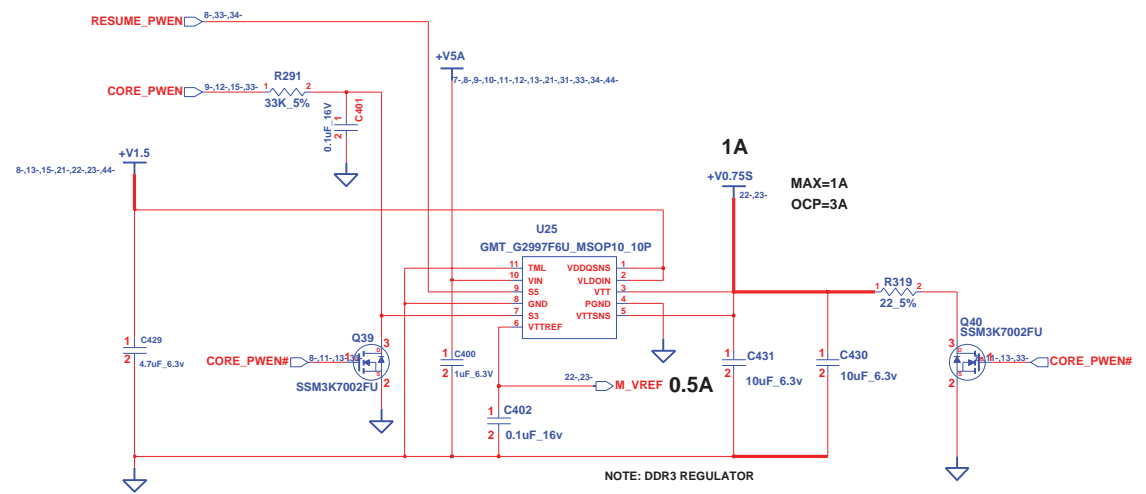
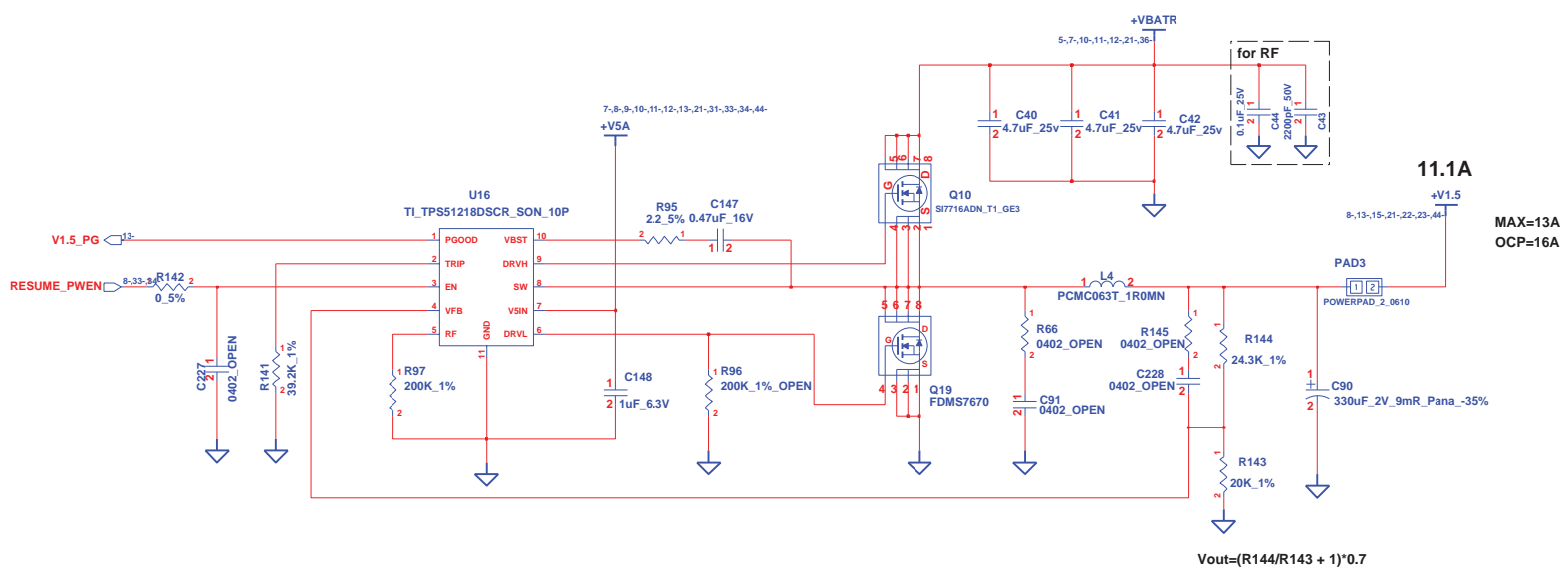
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TITLE: MURRAY Battery CONN			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A23512-0-MTR	A03
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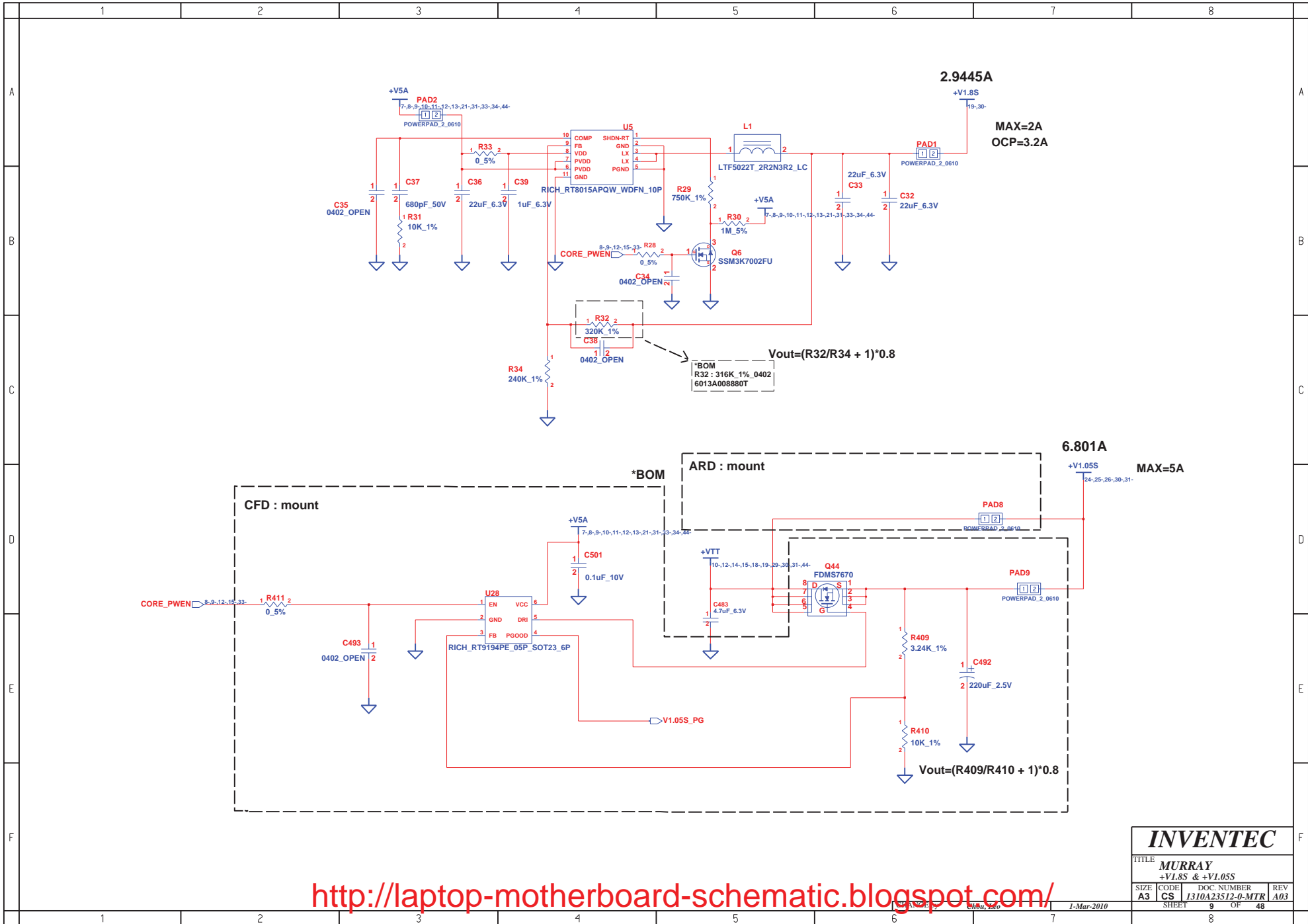
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INVENTEC			
TITLE: MURRAY			
+V3A & +V5A			
SIZE: A3	CODE: CS	DOC. NUMBER: I310A23512-0-MTR	REV: A03
SHEET: 7		OF: 48	

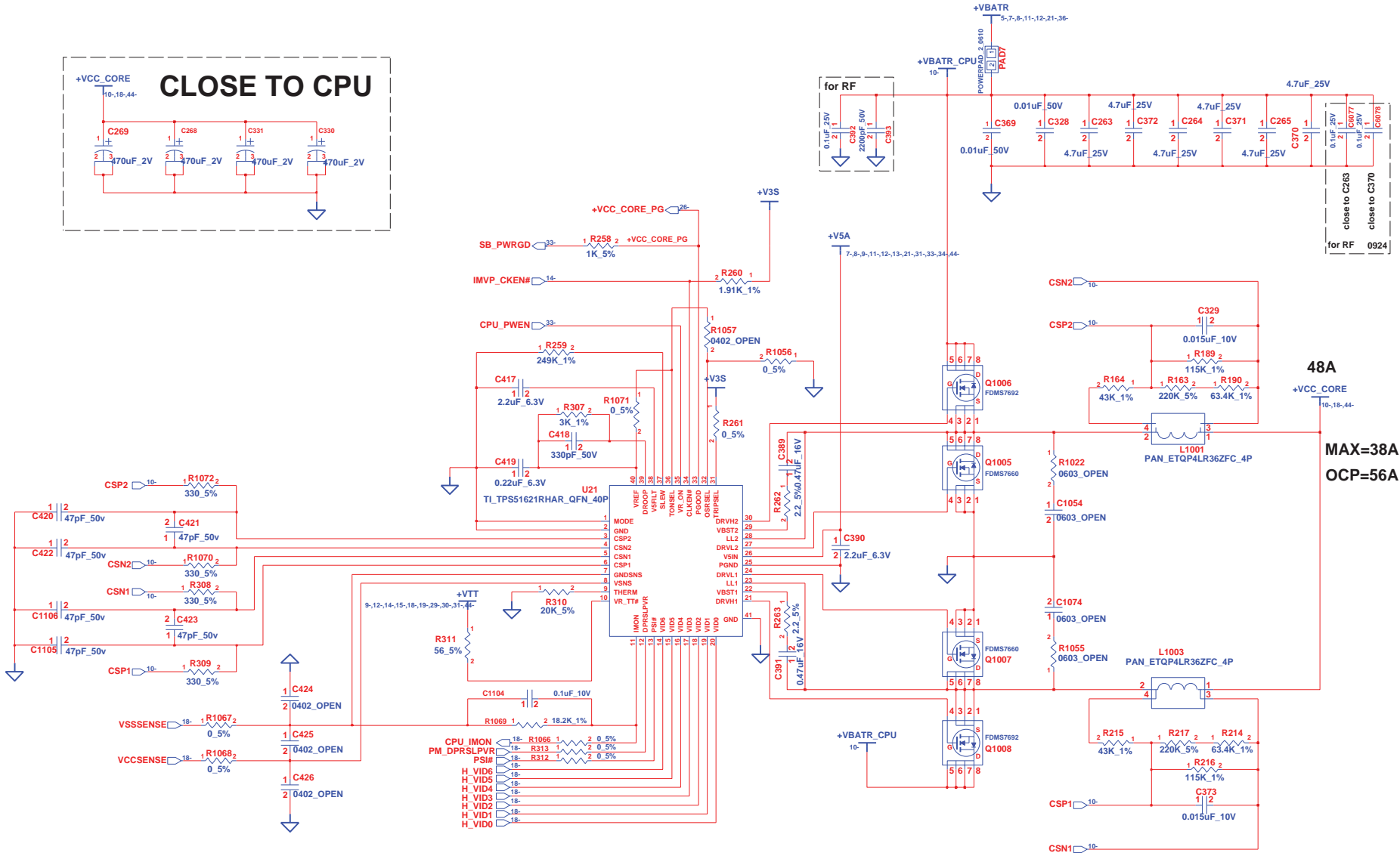
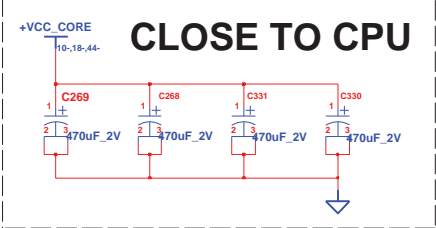


INVENTEC			
TITLE: MURRAY			
+V1.5 & +V0.75			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A23512-0-MTR	A03
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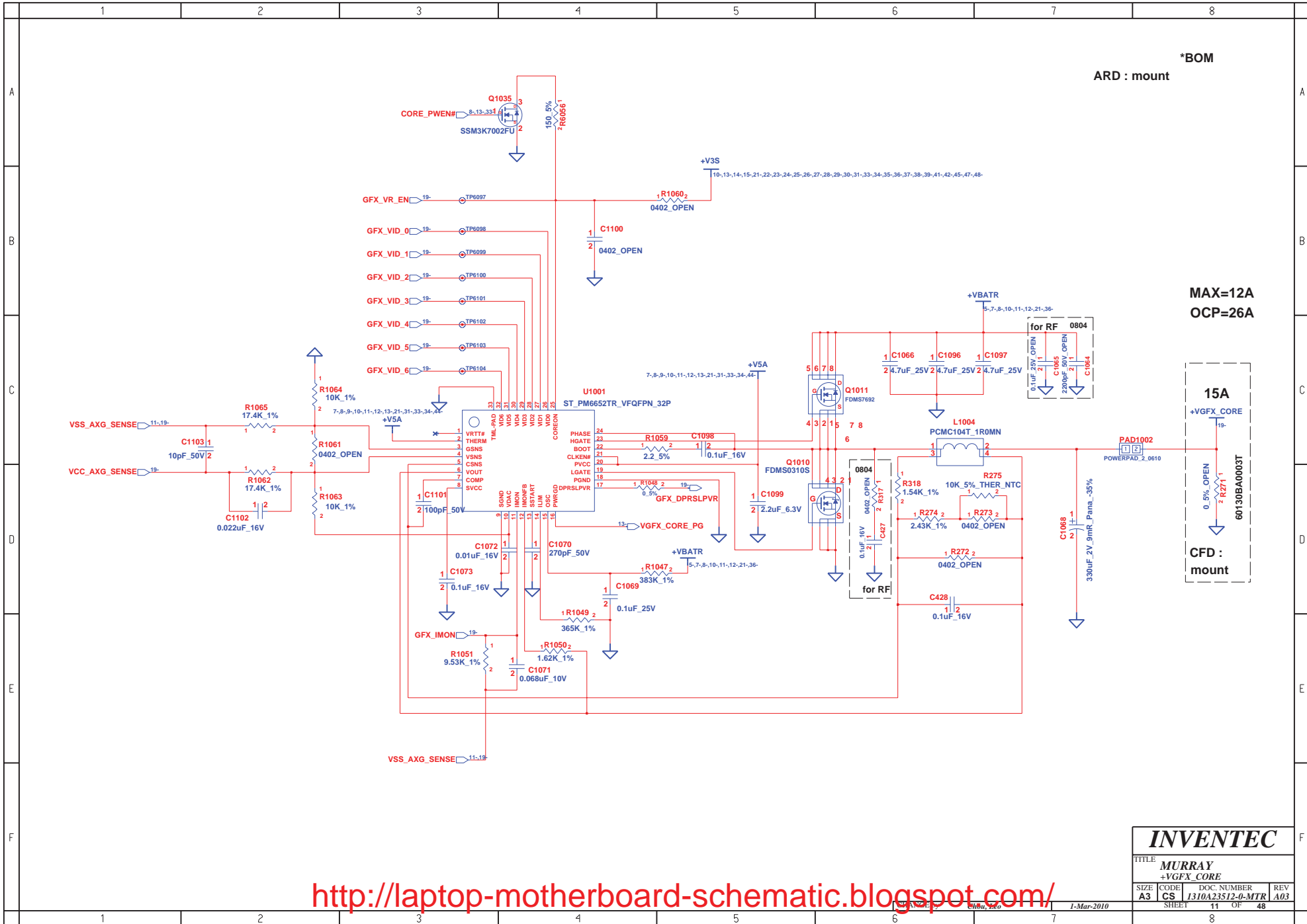


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TITLE: MURRAY +VCC_CORE			
SIZE: A3	CODE: CS	DOC NUMBER: I310A23512-0-MTR	REV: A03
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*BOM
ARD : mount

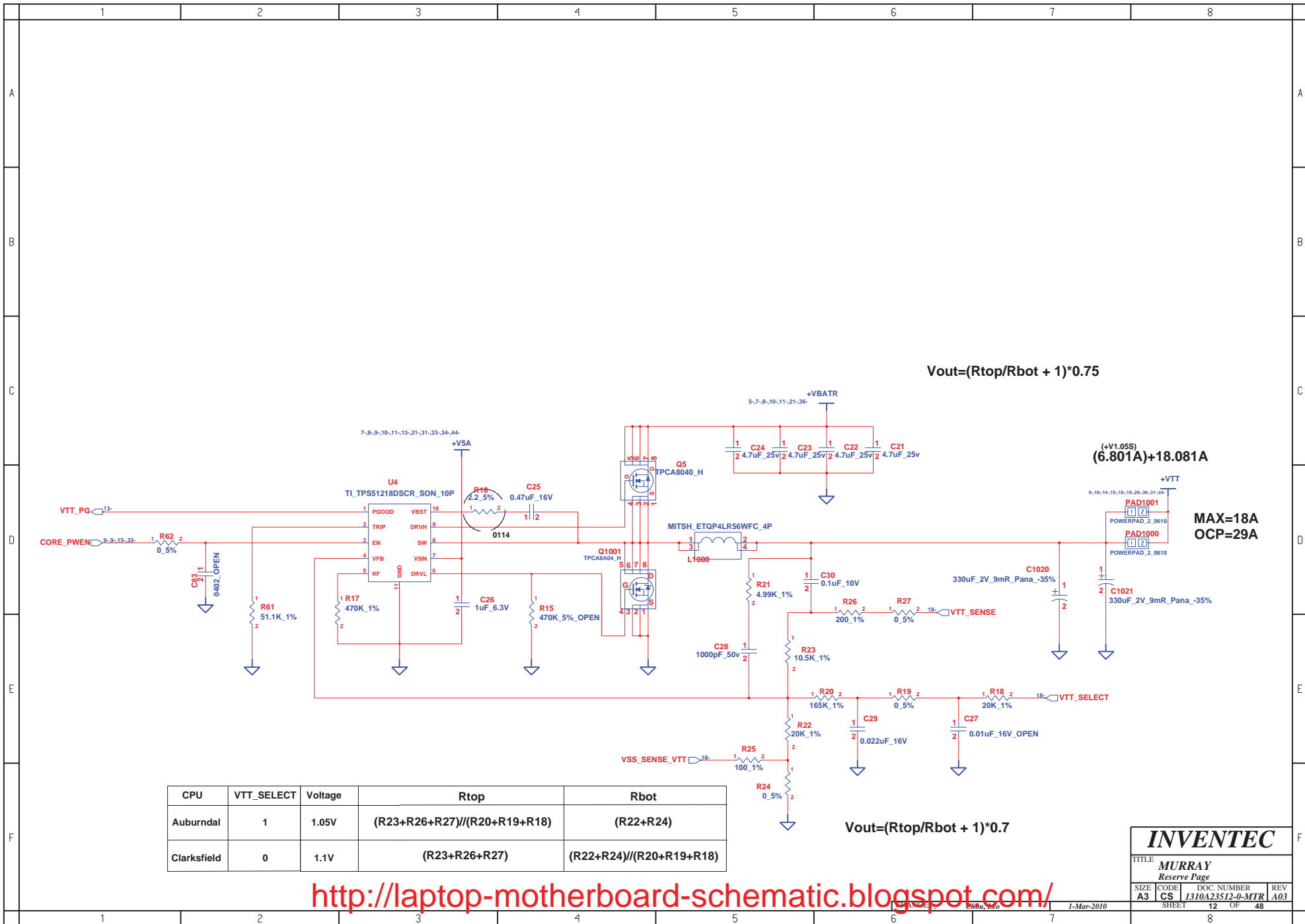
MAX=12A
OCP=26A

15A
+VGFX_CORE
0.5% OPEN
R271
60130BA0003T
CFD :
mount

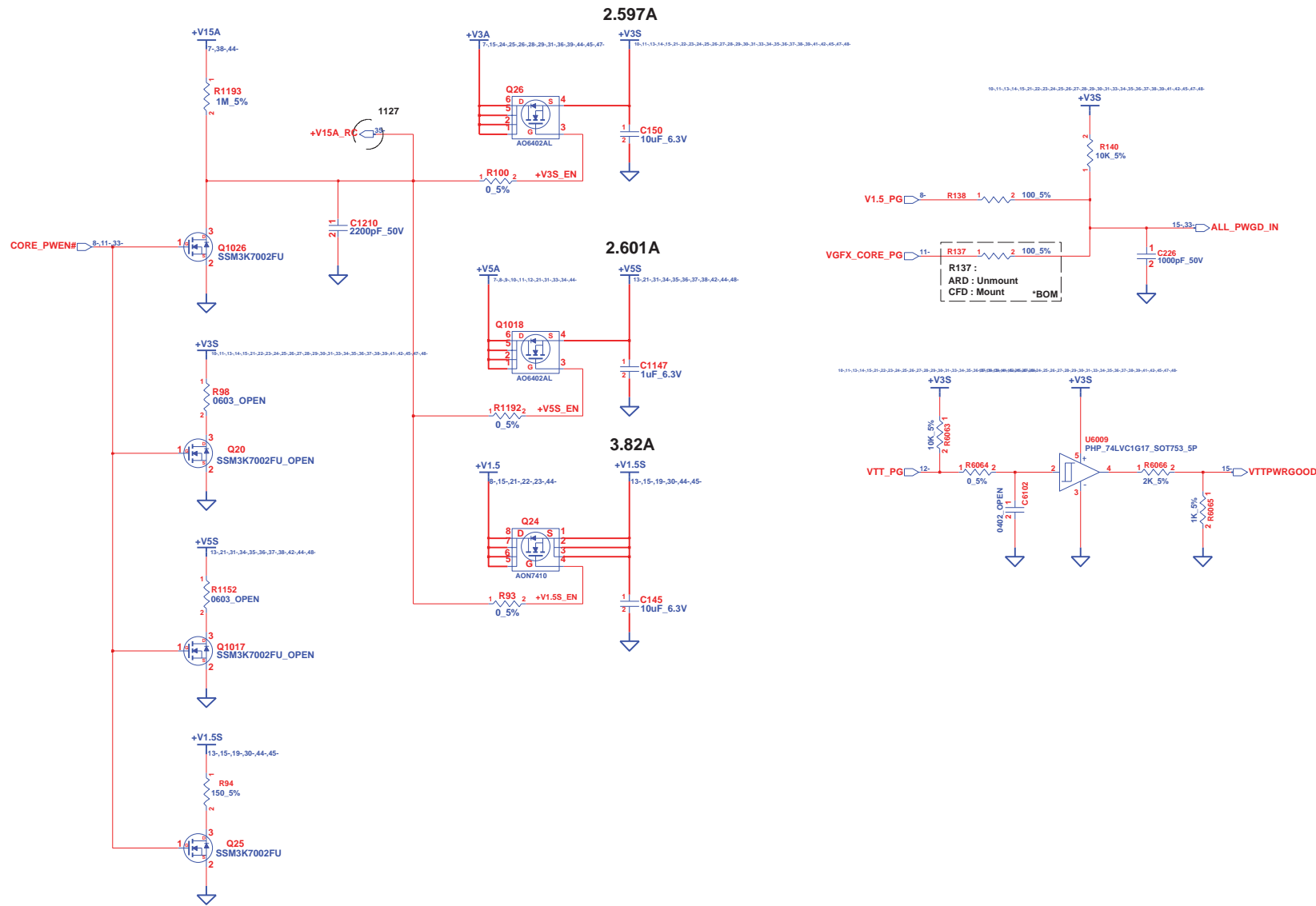
<http://laptop-motherboard-schematic.blogspot.com/>

INVENTEC			
TITLE: MURRAY +VGFX_CORE			
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A3	CS	I310A23512-0-MTR	A03
SHEET		11	OF 48

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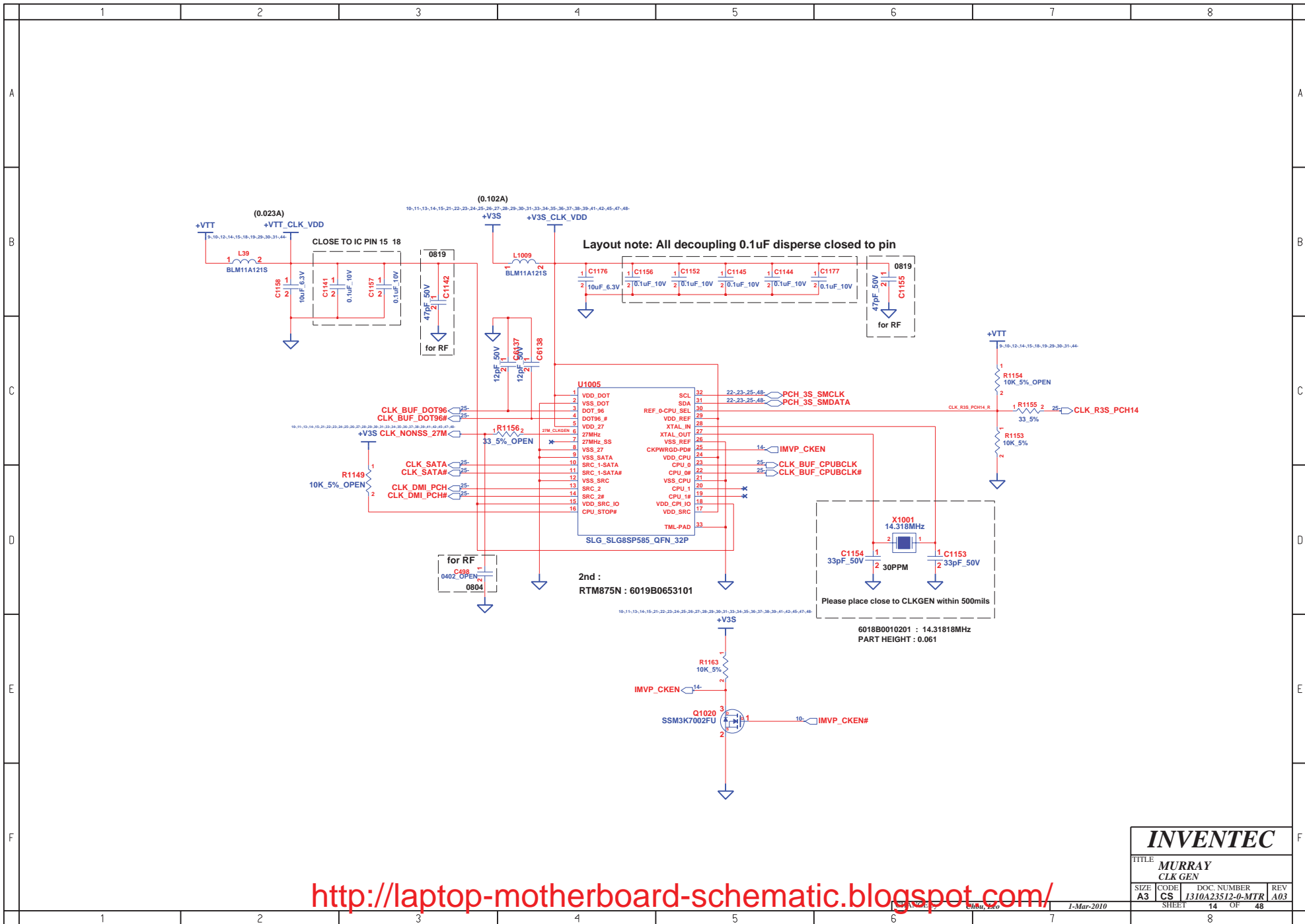
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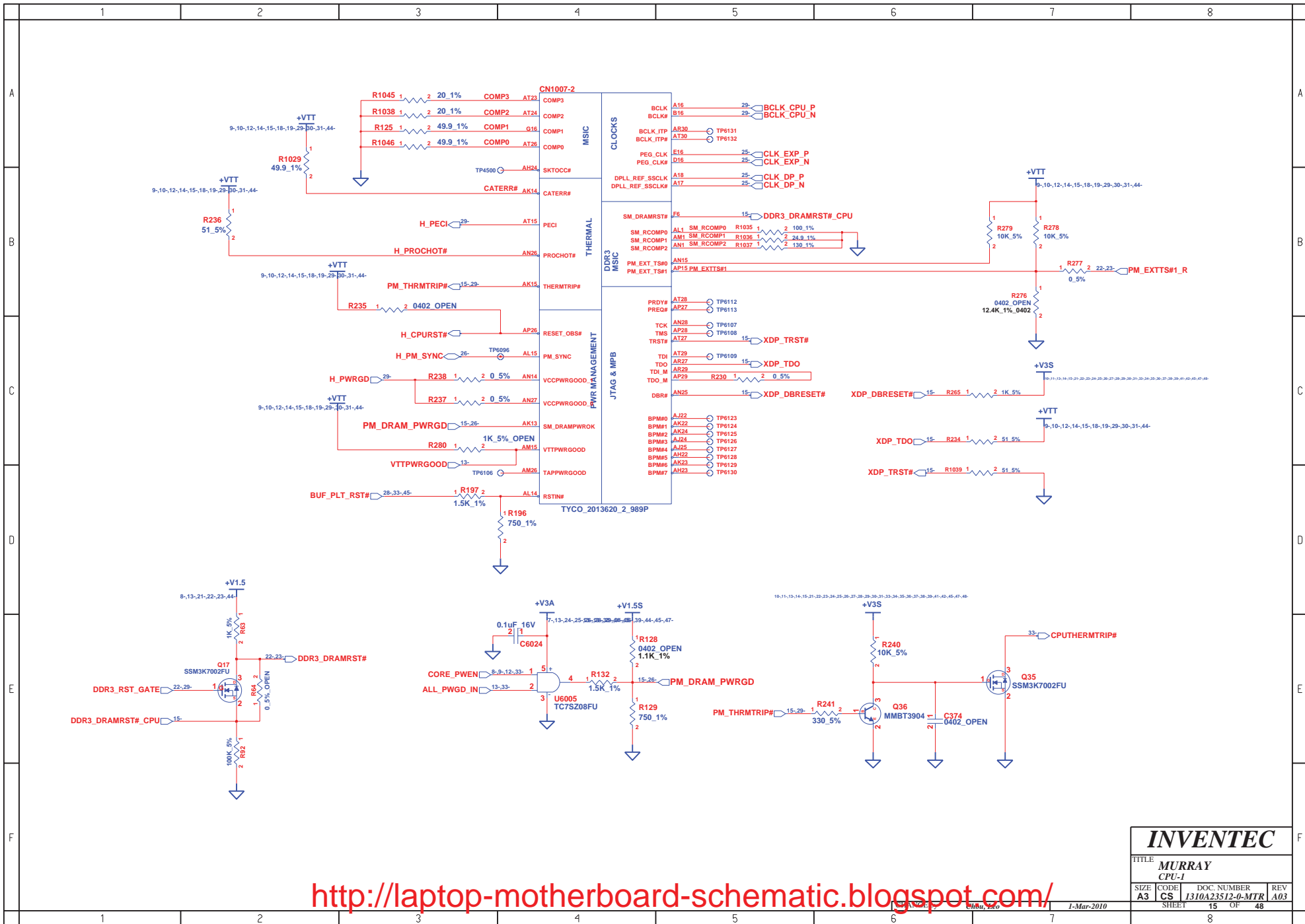
INVENTEC			
TITLE: MURRAY			
+V5S & +V3S			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	I310A23512-0-MTR	A03
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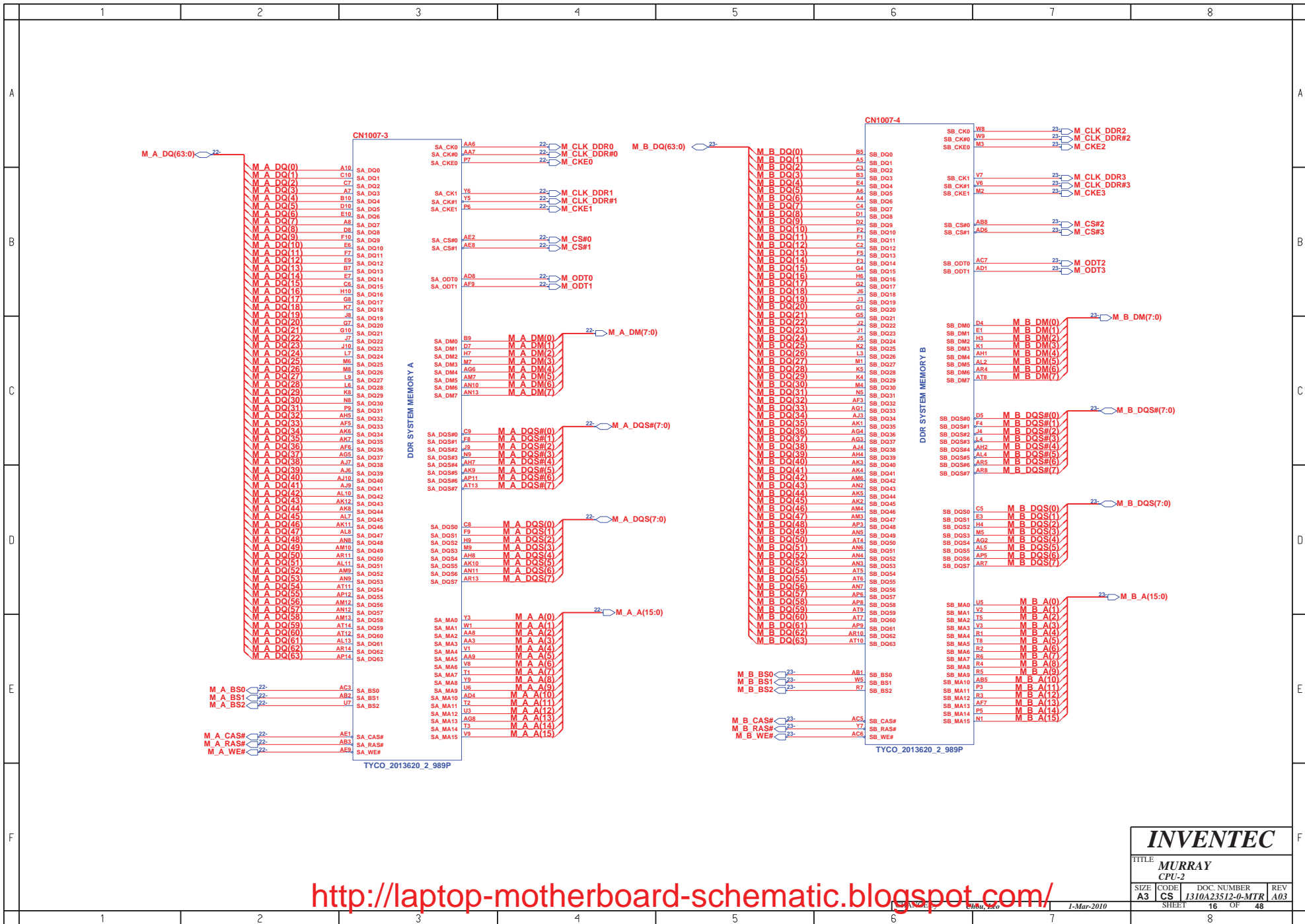
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INVENTEC			
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SIZE	CODE	DOC. NUMBER	REV
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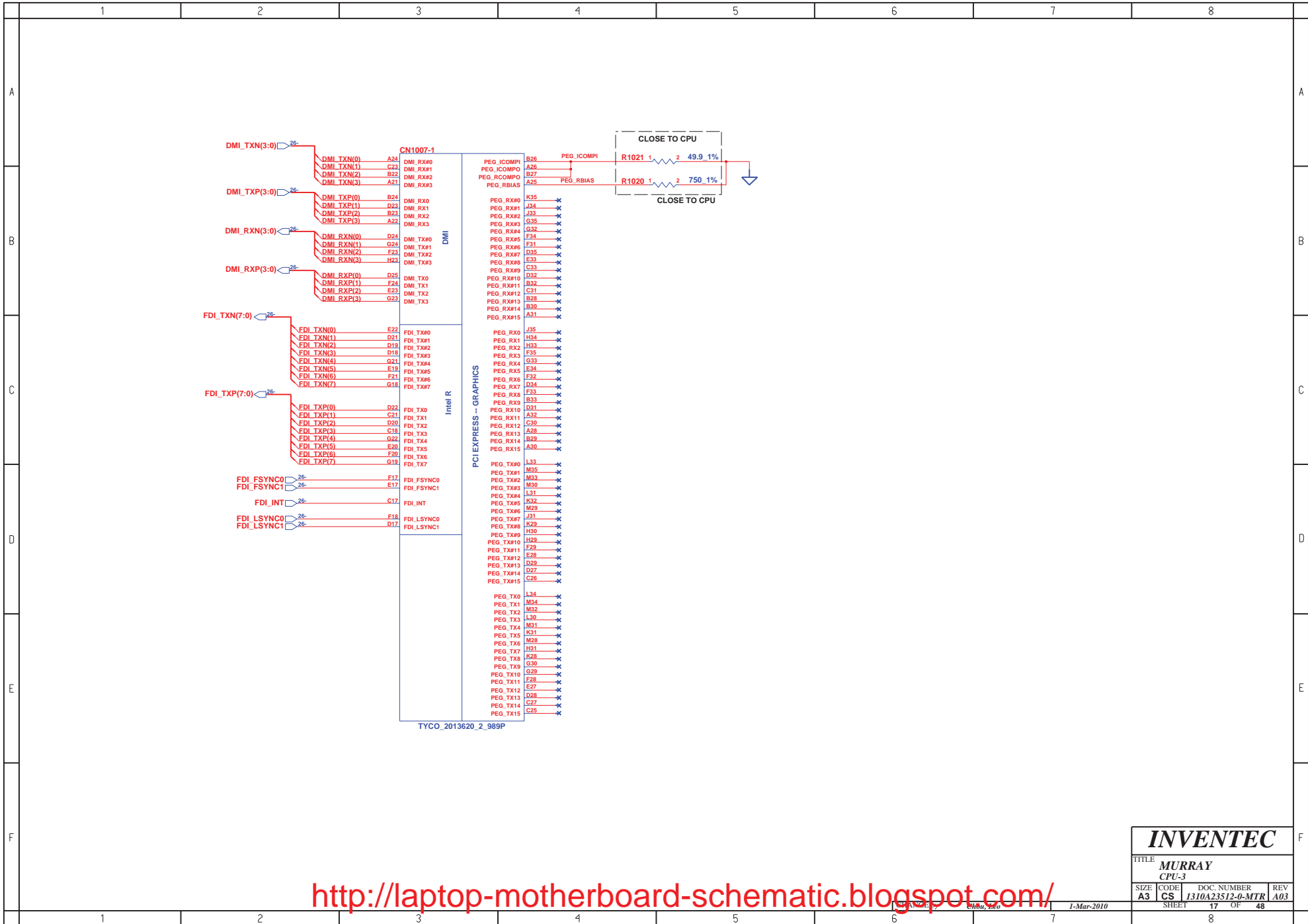
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INVENTEC			
TITLE: MURRAY CPU-1			
SIZE: A3	CODE: CS	DOC. NUMBER: 1310A23512-0-MTR	REV: A03
SHEET: 15		OF: 48	



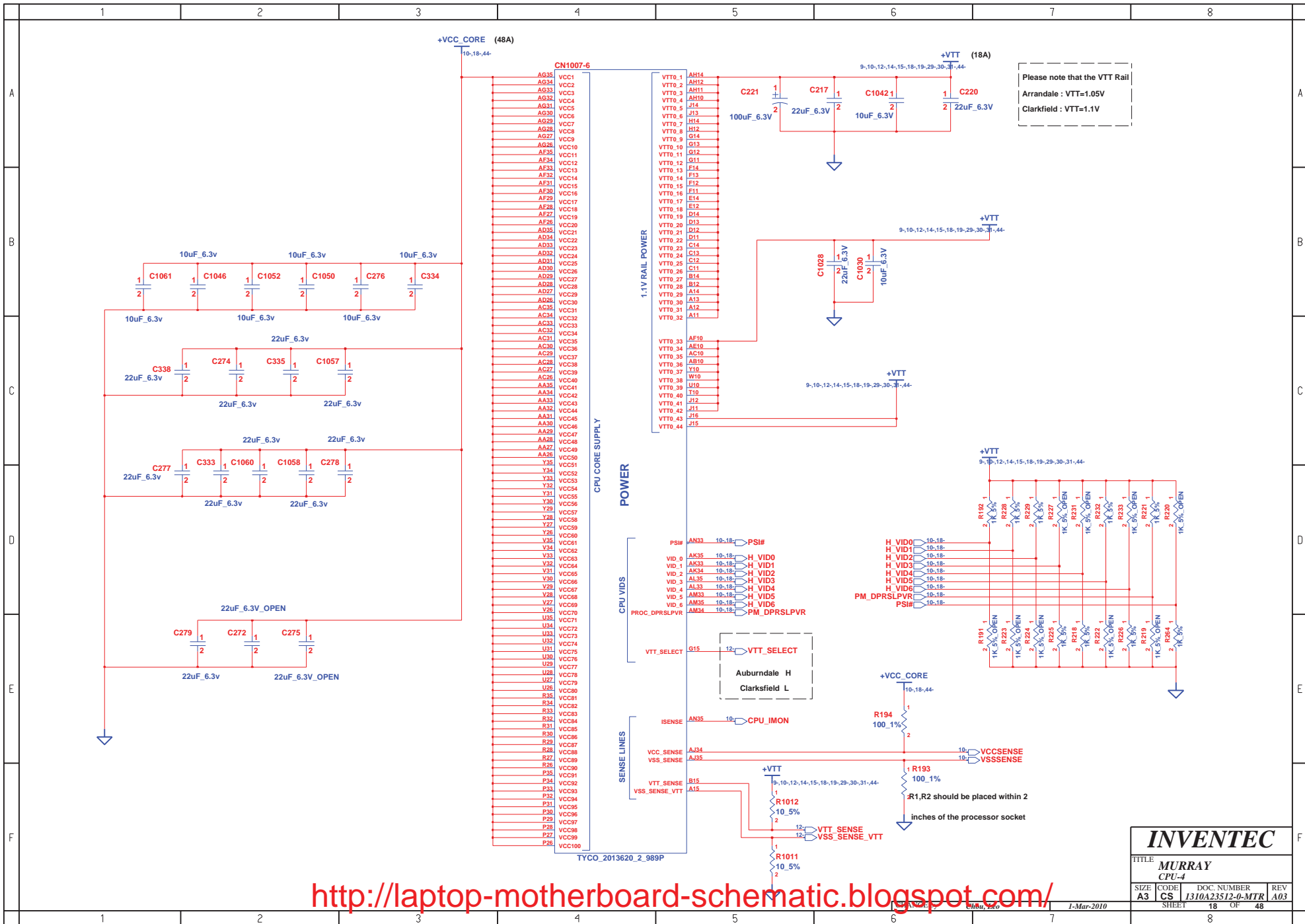
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INVENTEC			
TITLE: MURRAY CPU-2			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A23512-0-MTR	A03
SHEET		16	OF 48

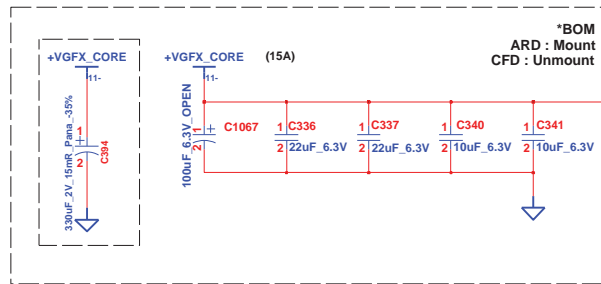


<http://laptop-motherboard-schematic.blogspot.com/>

INVENTEC			
TITLE: MURRAY			
CPU-3			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A23512-0-MTR	A03
SHEET		17	OF 48



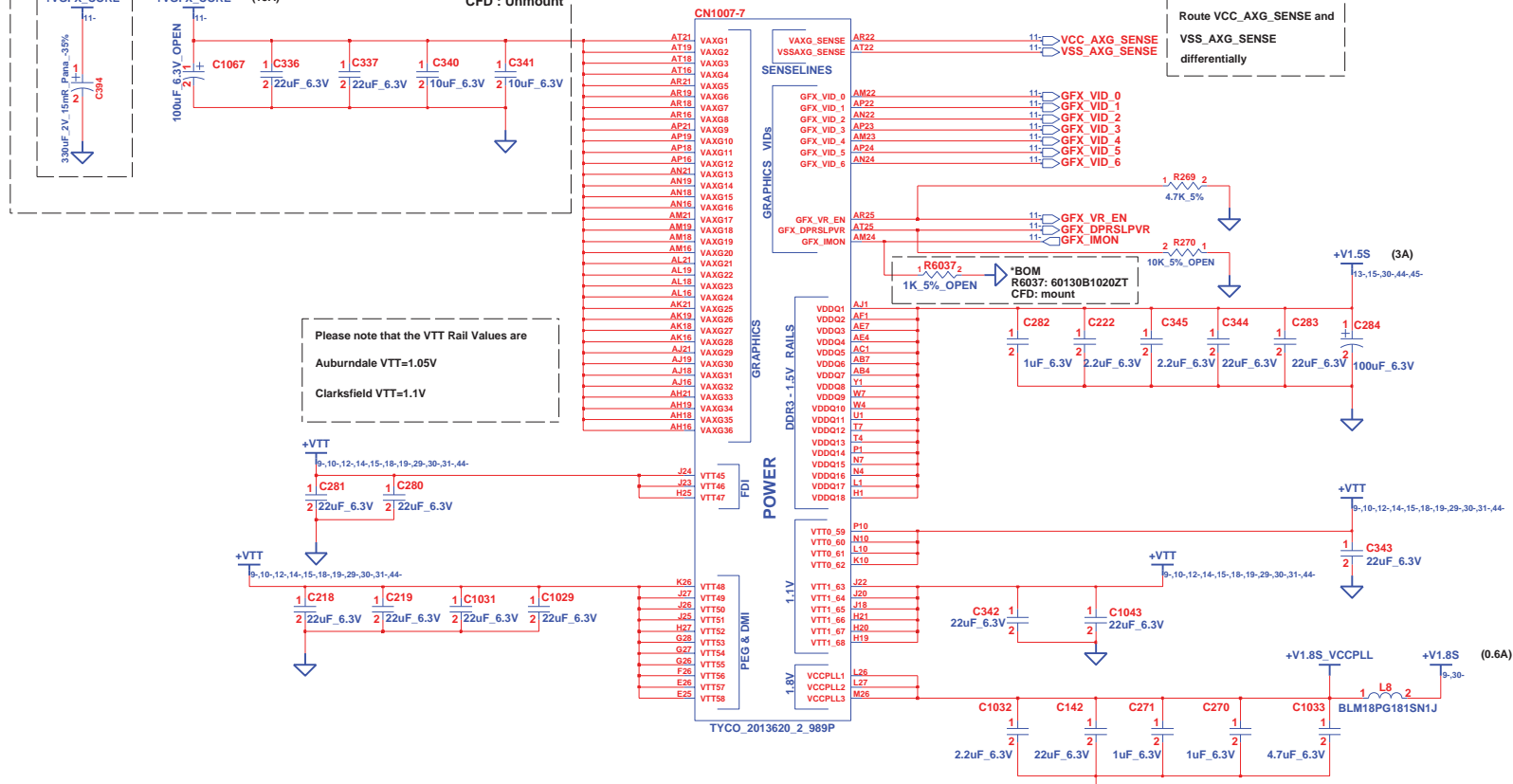
<http://laptop-motherboard-schematic.blogspot.com/>



*BOM
ARD : Mount
CFD : Unmount

Route VCC_AXG_SENSE and
VSS_AXG_SENSE
differentially

Please note that the VTT Rail Values are
Auburndale VTT=1.05V
Clarksfield VTT=1.1V



- AT21 VAXG1
- AT19 VAXG2
- AT18 VAXG3
- AT16 VAXG4
- VAXG5
- VAXG6
- AR19 VAXG7
- AR18 VAXG8
- AR16 VAXG9
- AP21 VAXG10
- AP19 VAXG11
- AP16 VAXG12
- VAXG13
- AN21 VAXG14
- AN19 VAXG15
- AN18 VAXG16
- VAXG17
- AM21 VAXG18
- AM19 VAXG19
- AM18 VAXG20
- AL21 VAXG22
- AL19 VAXG23
- AL18 VAXG24
- AK18 VAXG25
- AK19 VAXG26
- AK18 VAXG27
- AK16 VAXG28
- VAXG29
- AJ19 VAXG30
- AJ18 VAXG31
- AH16 VAXG32
- AH21 VAXG33
- AH19 VAXG34
- AH18 VAXG35
- AH16 VAXG36

- VDDQ1
- VDDQ2
- VDDQ3
- VDDQ4
- VDDQ5
- VDDQ6
- VDDQ7
- Y1
- W7
- VDDQ10
- W4
- VDDQ11
- U1
- VDDQ12
- T7
- VDDQ13
- T4
- P1
- VDDQ14
- N7
- VDDQ15
- N4
- VDDQ16
- L1
- VDDQ17
- L1
- VDDQ18
- H1

- VTT0_59
- VTT0_60
- VTT0_61
- VTT0_62
- VTT1_63
- VTT1_64
- VTT1_65
- VTT1_66
- VTT1_67
- VTT1_68
- VTT1_69

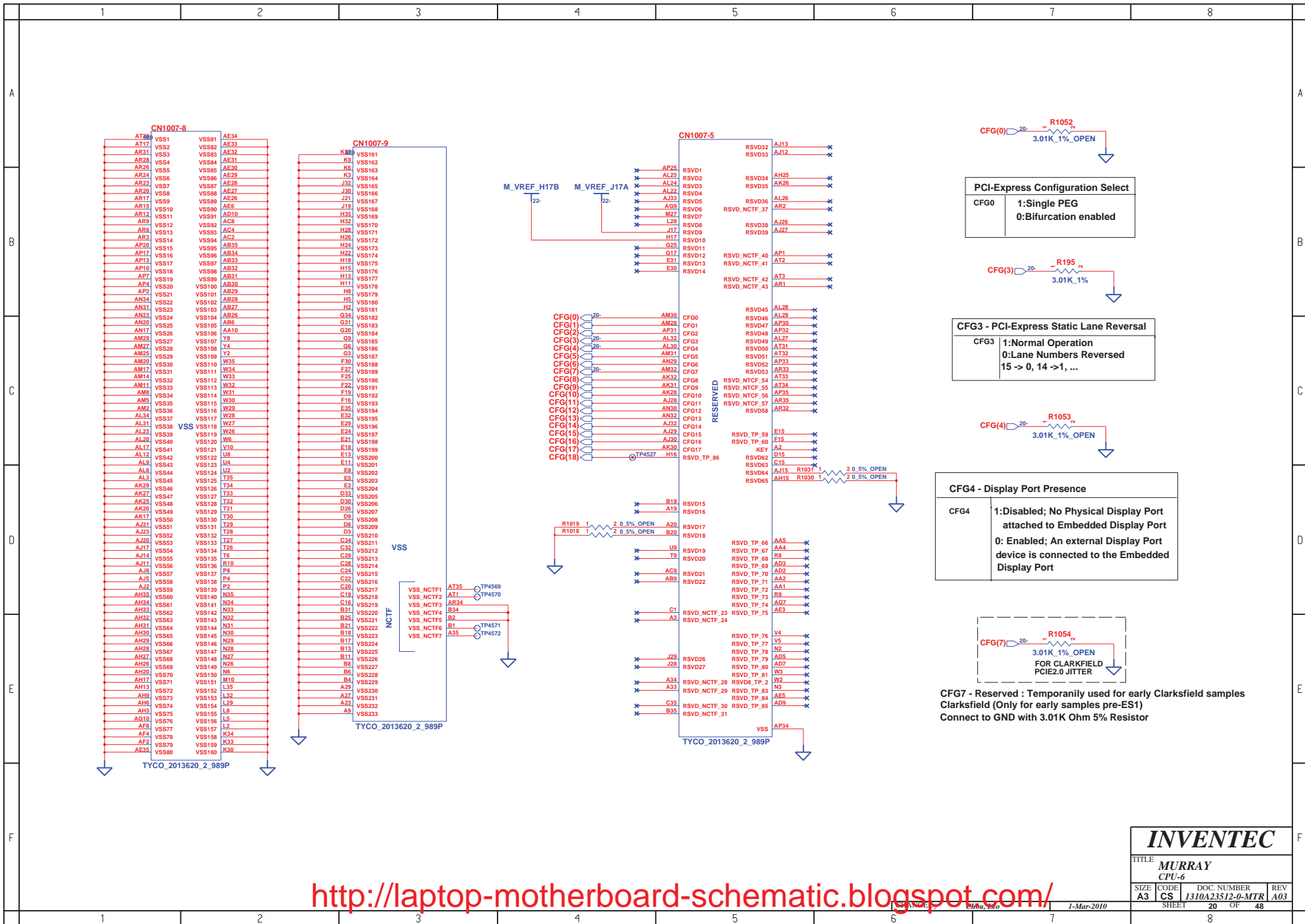
- VCCPLL1
- VCCPLL2
- VCCPLL3

TYCO_2013620_2_989P

INVENTEC			
TITLE: MURRAY CPU-5			
SIZE: A3	CODE: CS	DOC. NUMBER: 1310A23512-0-MTR	REV: A03
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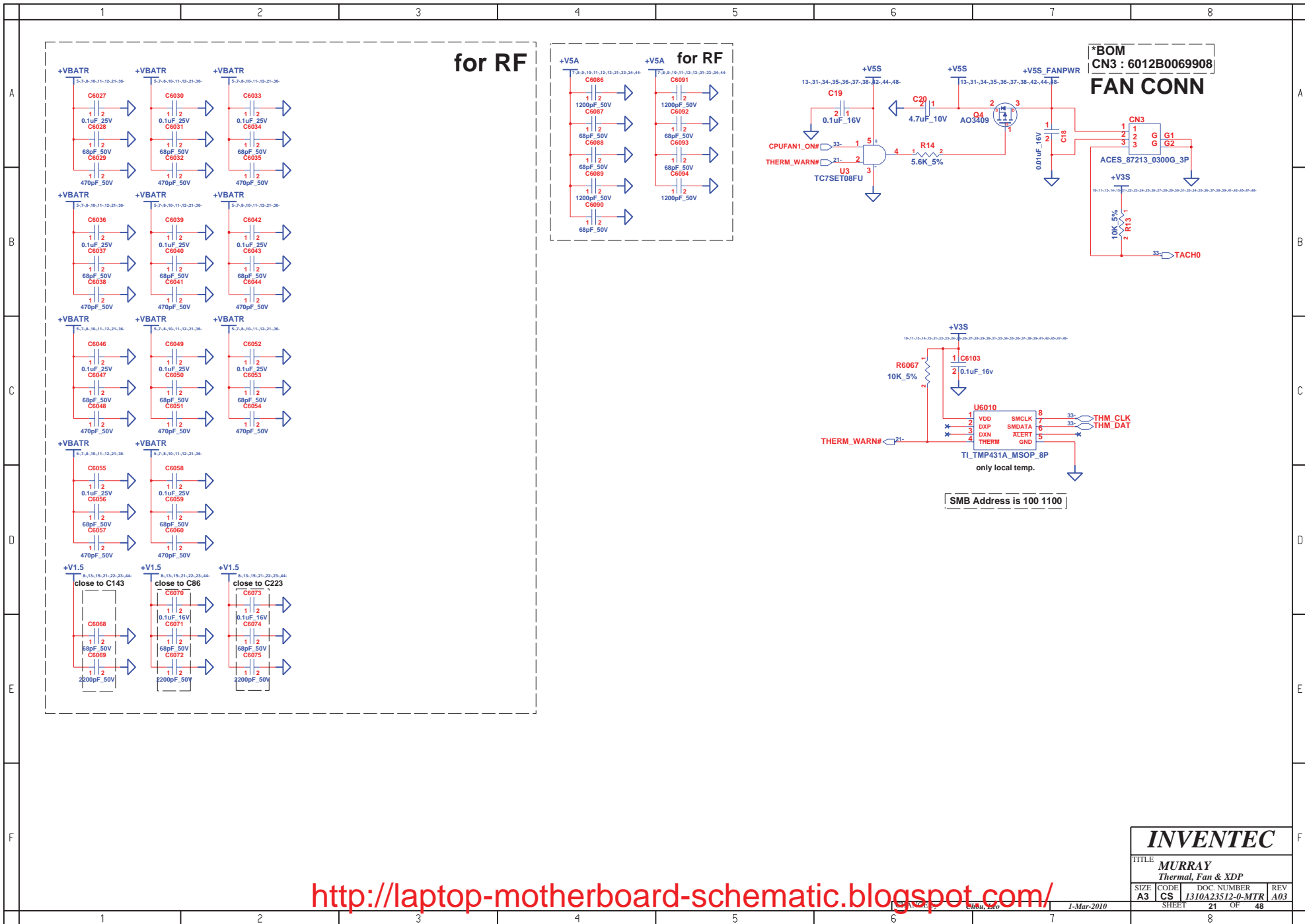
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INVENTEC			
TITLE: MURRAY CPU-6			
SIZE: A3	CODE: CS	DOC. NUMBER: 1310A23512-0-MTR	REV: A03
SHEET: 20		OF: 48	



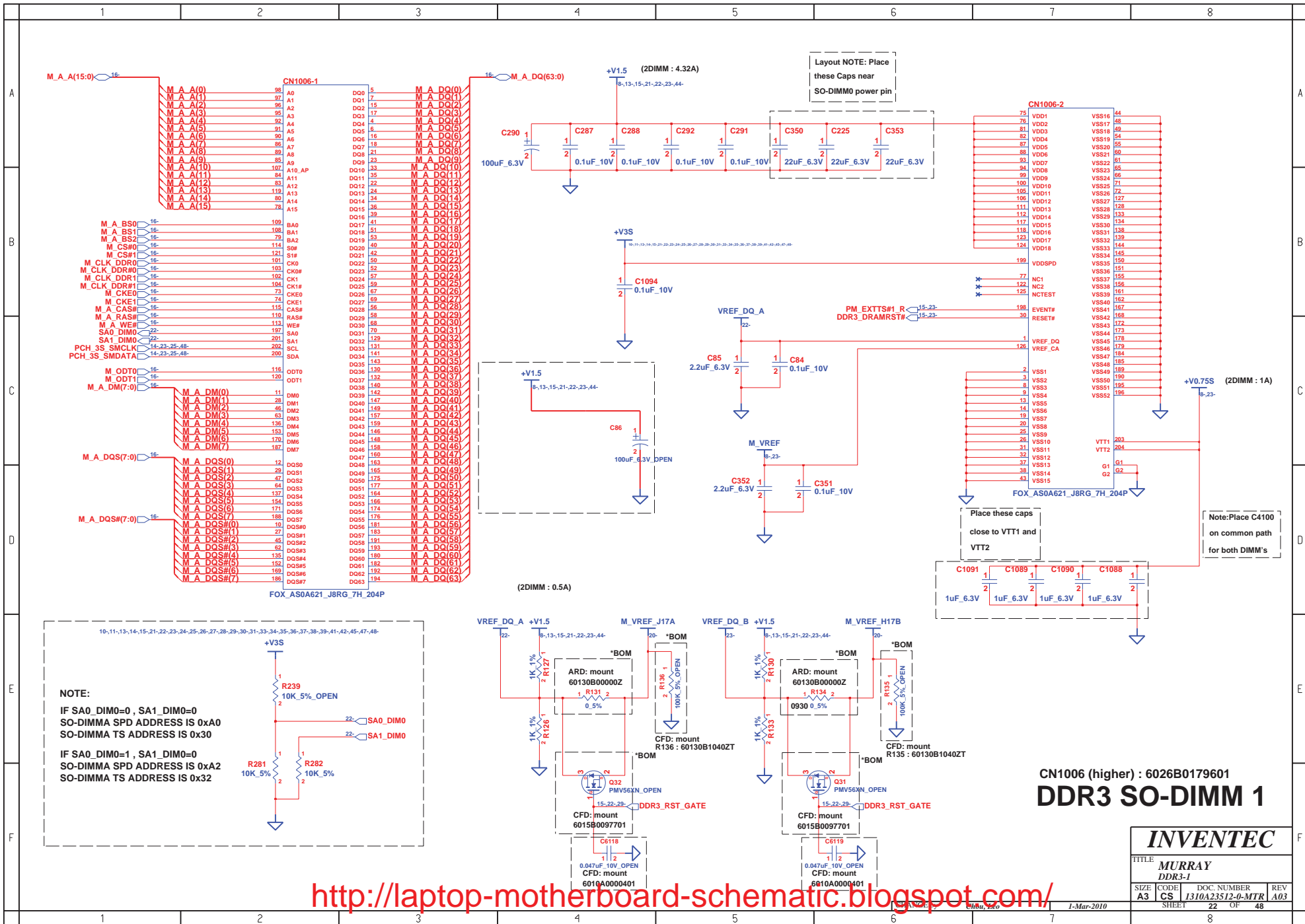
for RF

*BOM
CN3 : 6012B0069908
FAN CONN

SMB Address is 100 1100

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INVENTEC			
TITLE: MURRAY			
Thermal, Fan & XDP			
SIZE	CODE	DOC NUMBER	REV
A3	CS	I310A23512-0-MTR	A03
SHEET		21	OF 48



Layout NOTE: Place these Caps near SO-DIMMO power pin

Place these caps close to VTT1 and VTT2

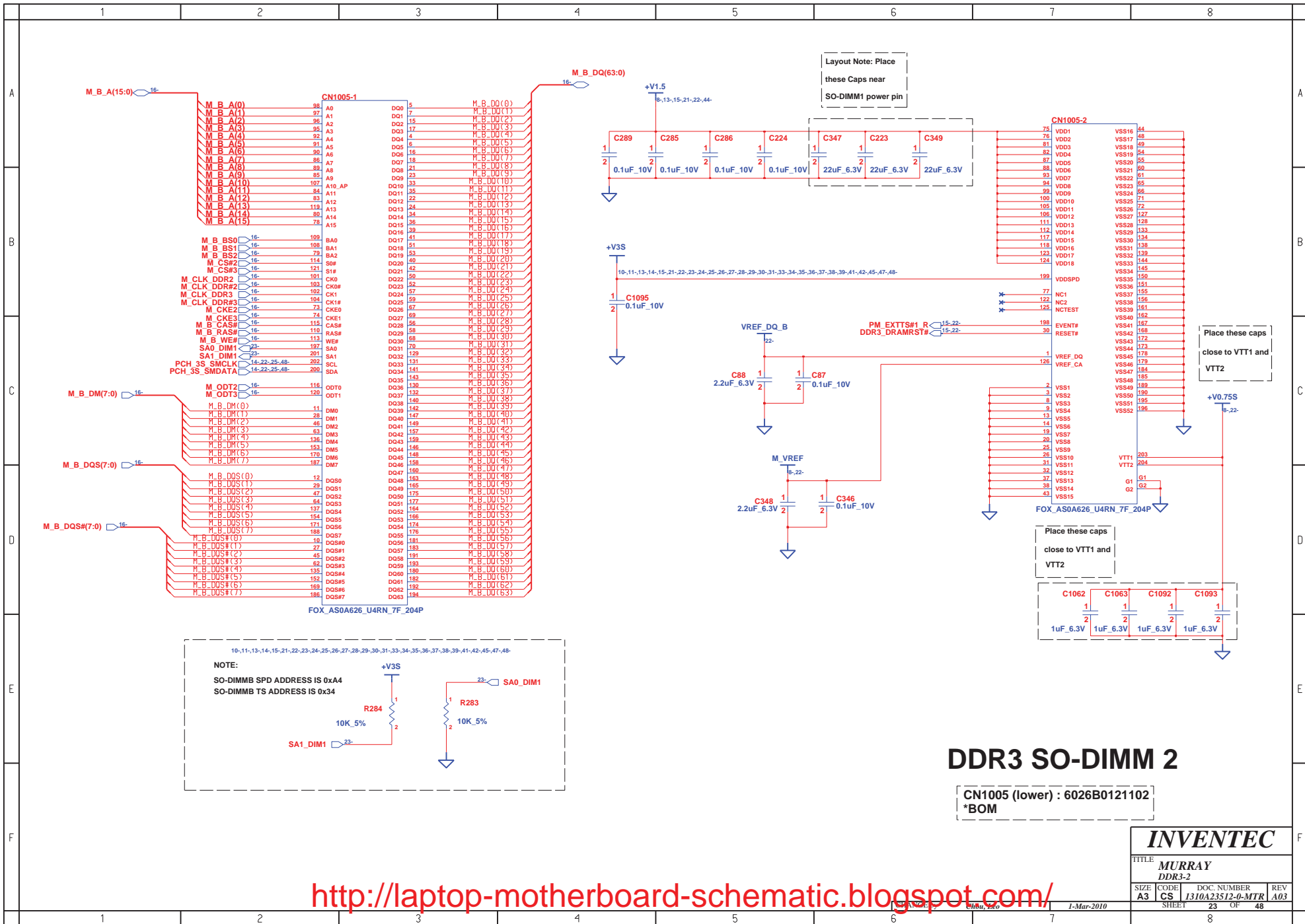
Note: Place C4100 on common path for both DIMM's

NOTE:
 IF SA0_DIM0=0, SA1_DIM0=0
 SO-DIMMA SPD ADDRESS IS 0xA0
 SO-DIMMA TS ADDRESS IS 0x30
 IF SA0_DIM0=1, SA1_DIM0=0
 SO-DIMMA SPD ADDRESS IS 0xA2
 SO-DIMMA TS ADDRESS IS 0x32

CN1006 (higher) : 6026B0179601
DDR3 SO-DIMM 1

INVENTEC			
TITLE: MURRAY DDR3-1			
SIZE: A3	CODE: CS	DOC. NUMBER: 1310A23512-0-MTR	REV: A03
SHEET: 22		OF: 48	

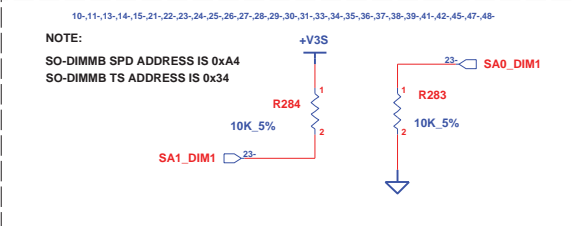
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Layout Note: Place these Caps near SO-DIMM1 power pin

Place these caps close to VTT1 and VTT2

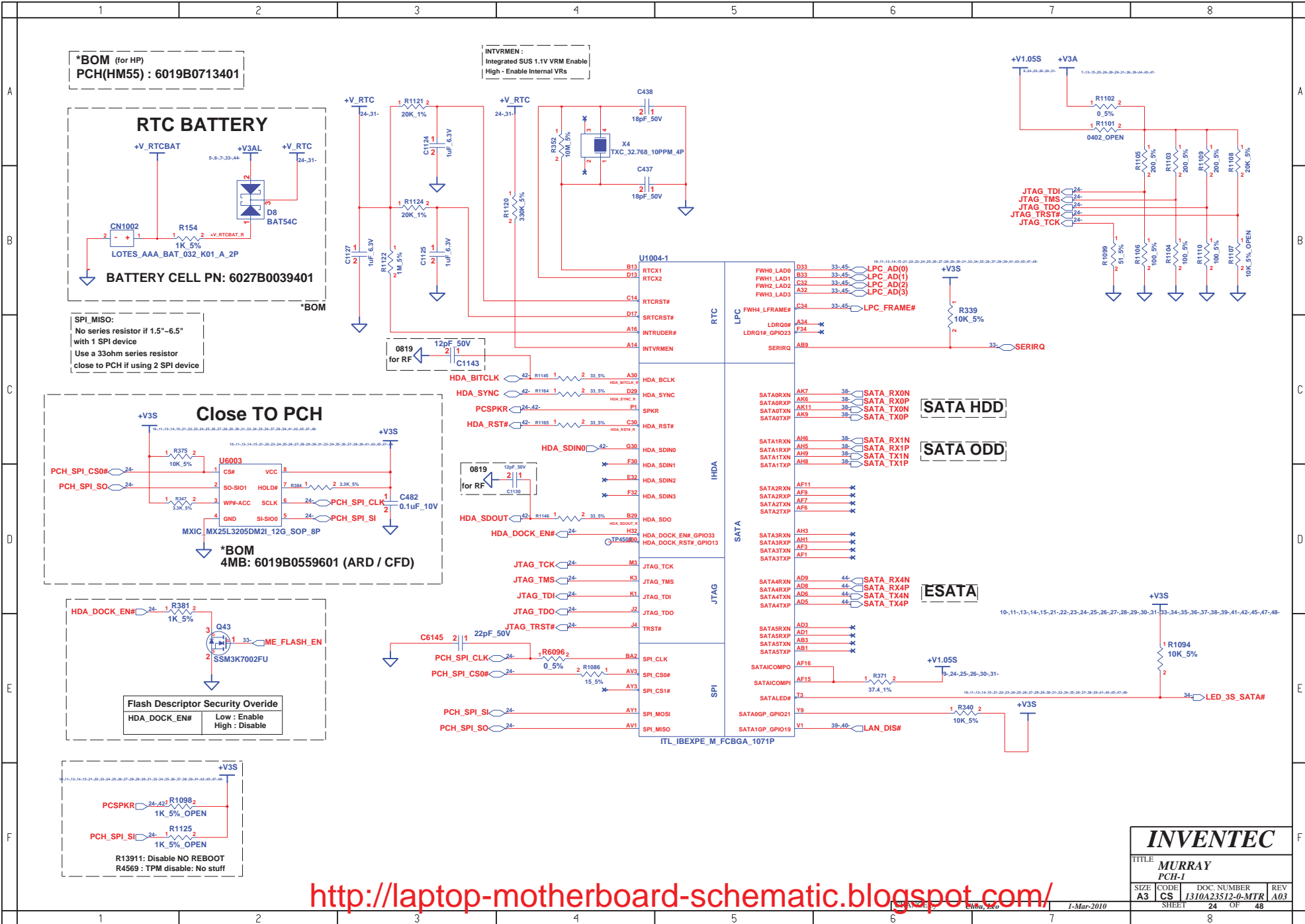
Place these caps close to VTT1 and VTT2



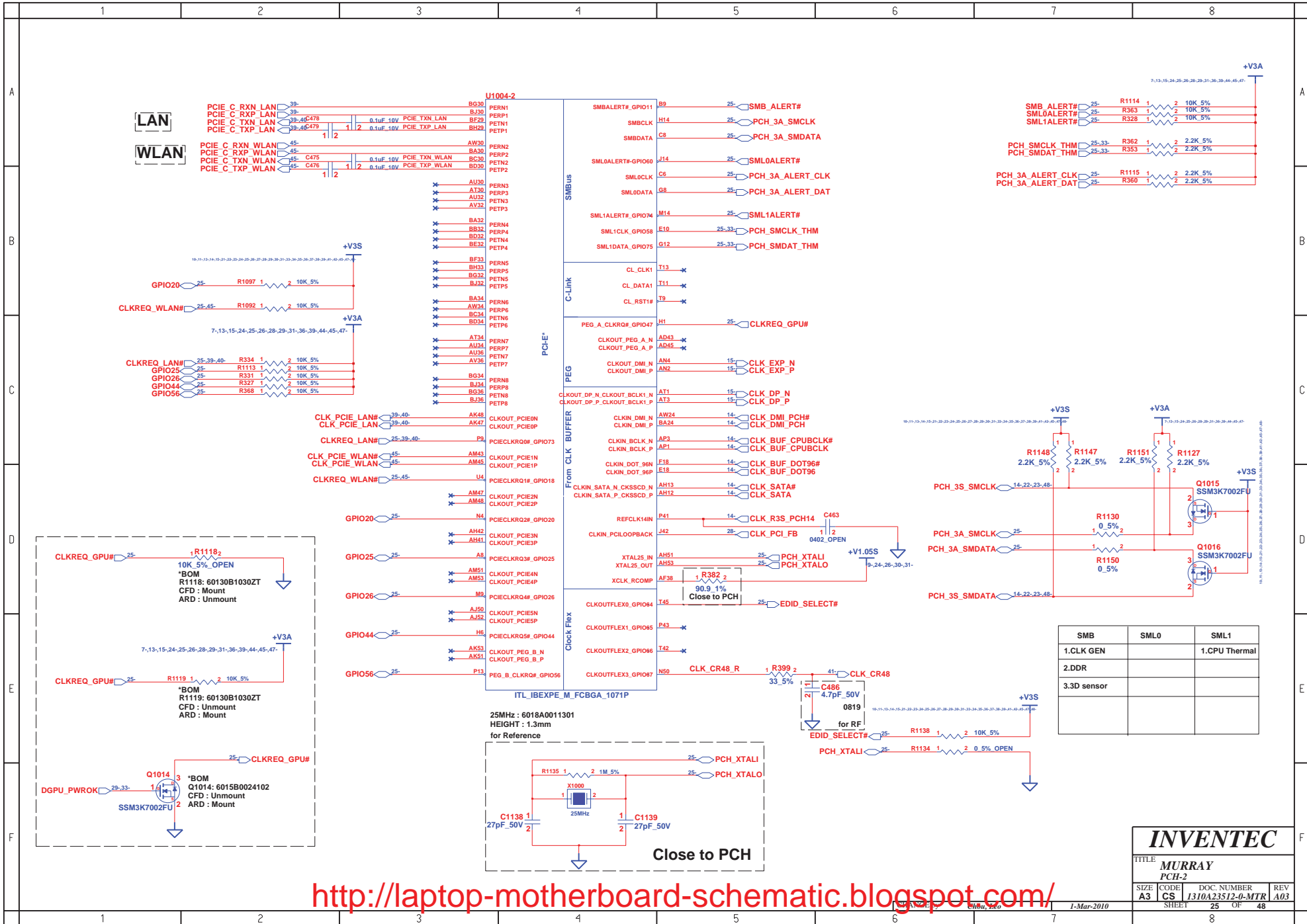
DDR3 SO-DIMM 2

CN1005 (lower) : 6026B0121102 *BOM

INVENTEC			
TITLE: MURRAY DDR3-2			
SIZE: A3	CODE: CS	DOC. NUMBER: 1310A23512-0-MTR	REV: A03
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INVENTEC			
TITLE: MURRAY PCH-1			
SIZE	CODE	DOC NUMBER	REV
A3	CS	1310A23512-0-MTR	A03
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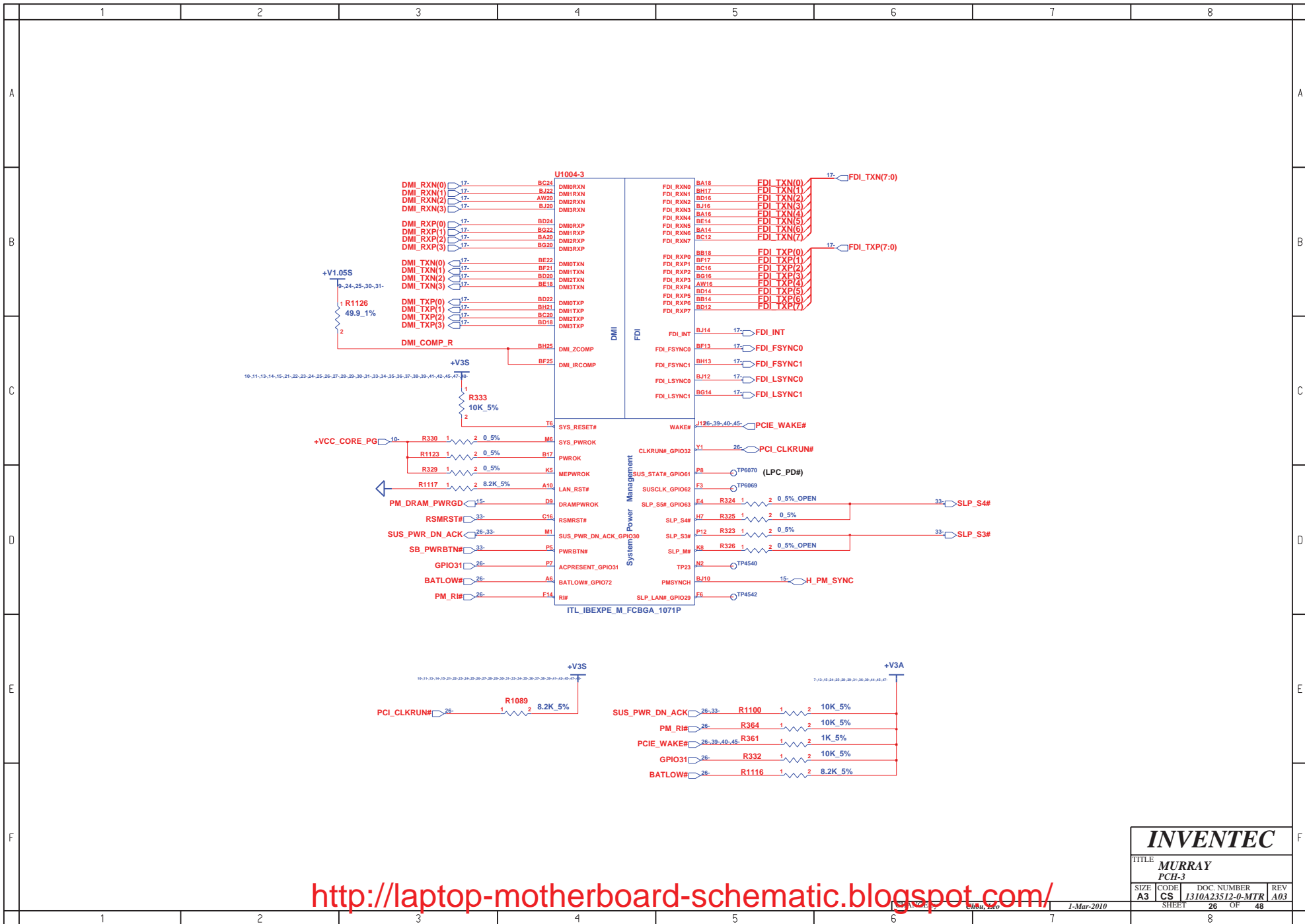
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TITLE: **MURRAY PCH-2**

SIZE	CODE	DOC. NUMBER	REV
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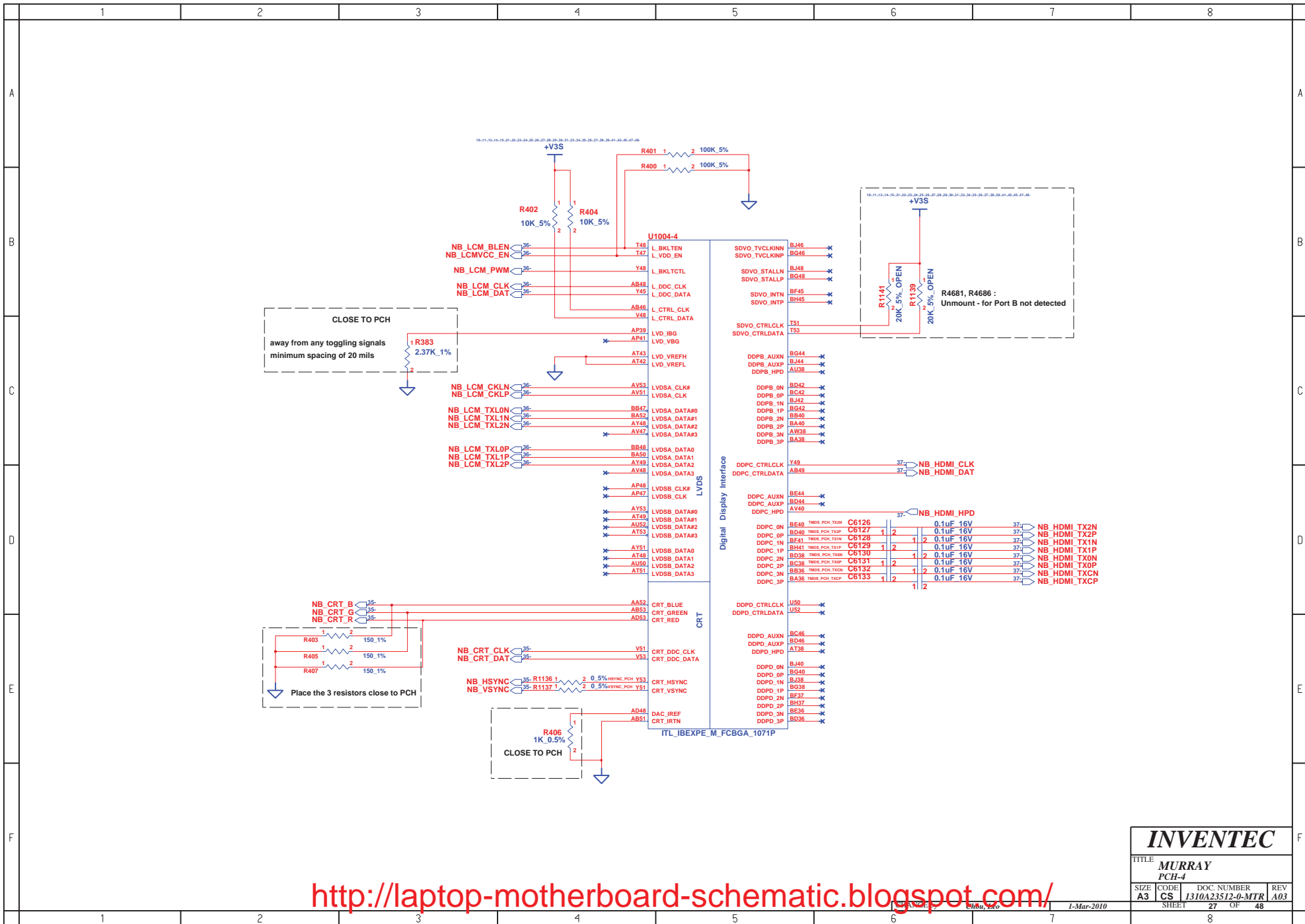
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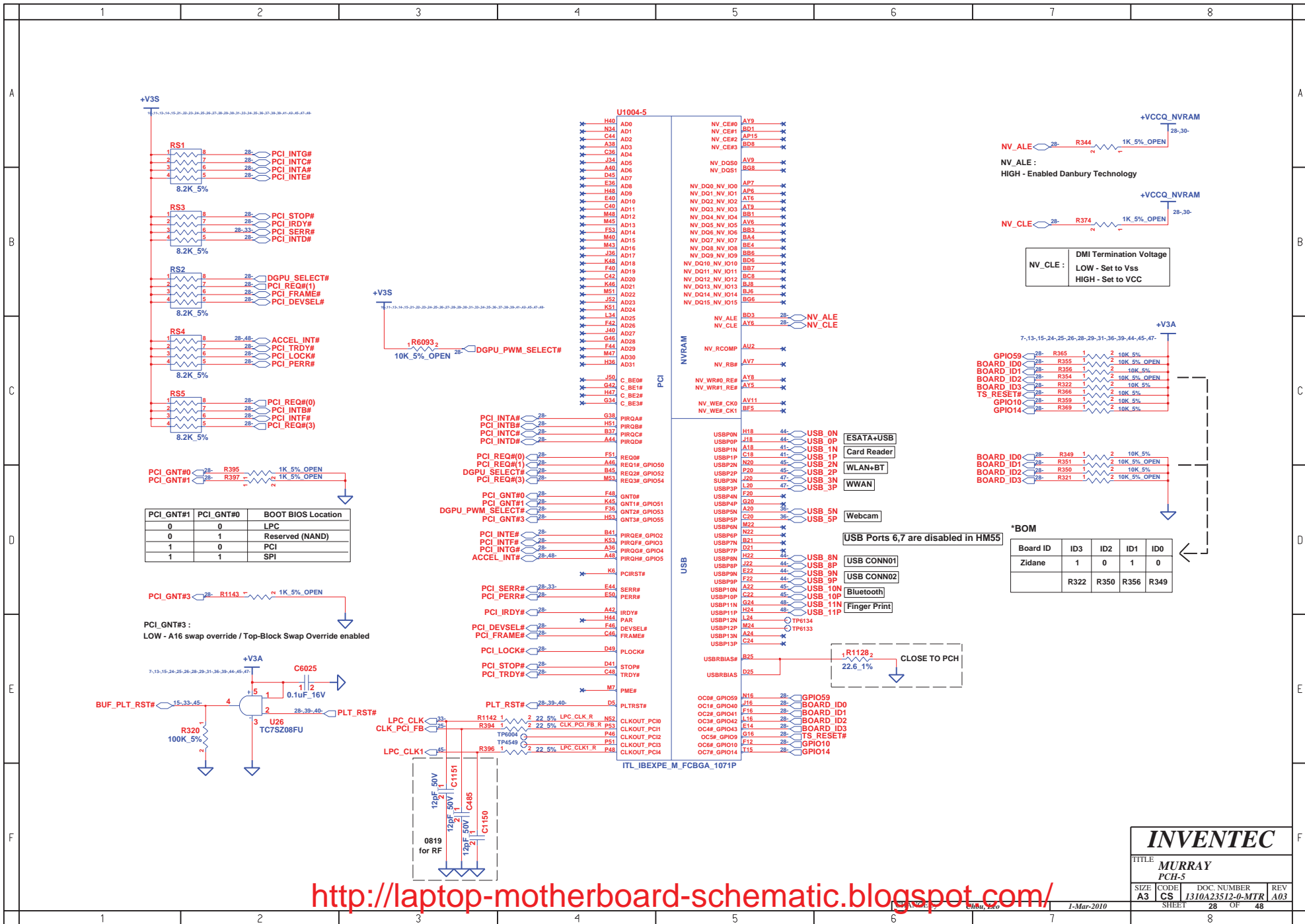
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TITLE: MURRAY PCH-3			
SIZE: A3	CODE: CS	DOC. NUMBER: 1310A23512-0-MTR	REV: A03
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INVENTEC			
TITLE: MURRAY PCH-4			
SIZE: A3	CODE: CS	DOC. NUMBER: 1310A23512-0-MTR	REV: A03
SHEET: 27		OF: 48	



PCI_GNT#1	PCI_GNT#0	BOOT BIOS Location
0	0	LPC
1	0	Reserved (NAND)
1	1	PCI
1	1	SPI

*BOM

Board ID	ID3	ID2	ID1	ID0
Zidane	1	0	1	0
	R322	R350	R356	R349

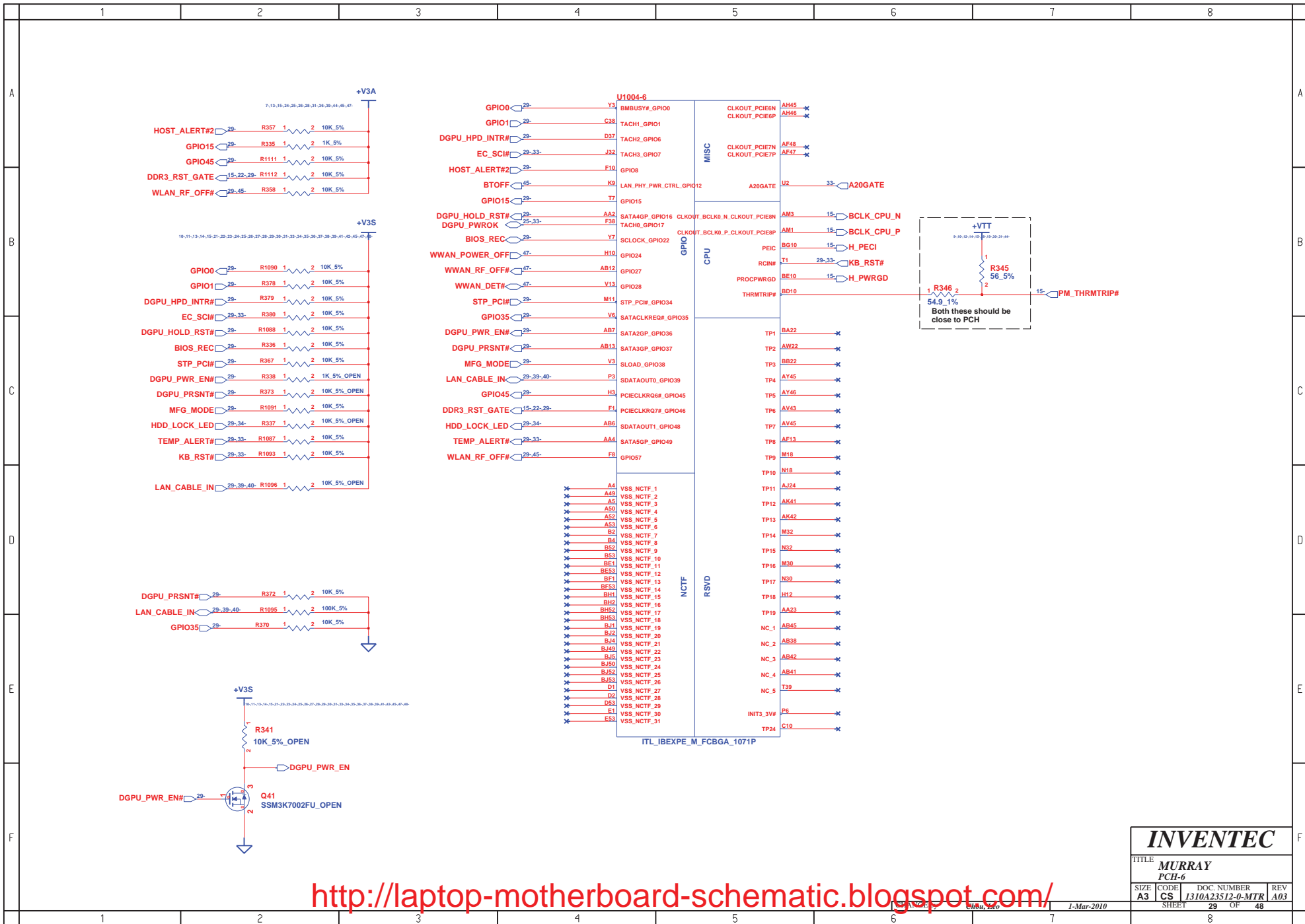
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INVENTEC

TITLE: **MURRAY PCH-5**

SIZE: A3	CODE: CS	DOC. NUMBER: 1310A23512-0-MTR	REV: A03
SHEET: 28		OF: 48	

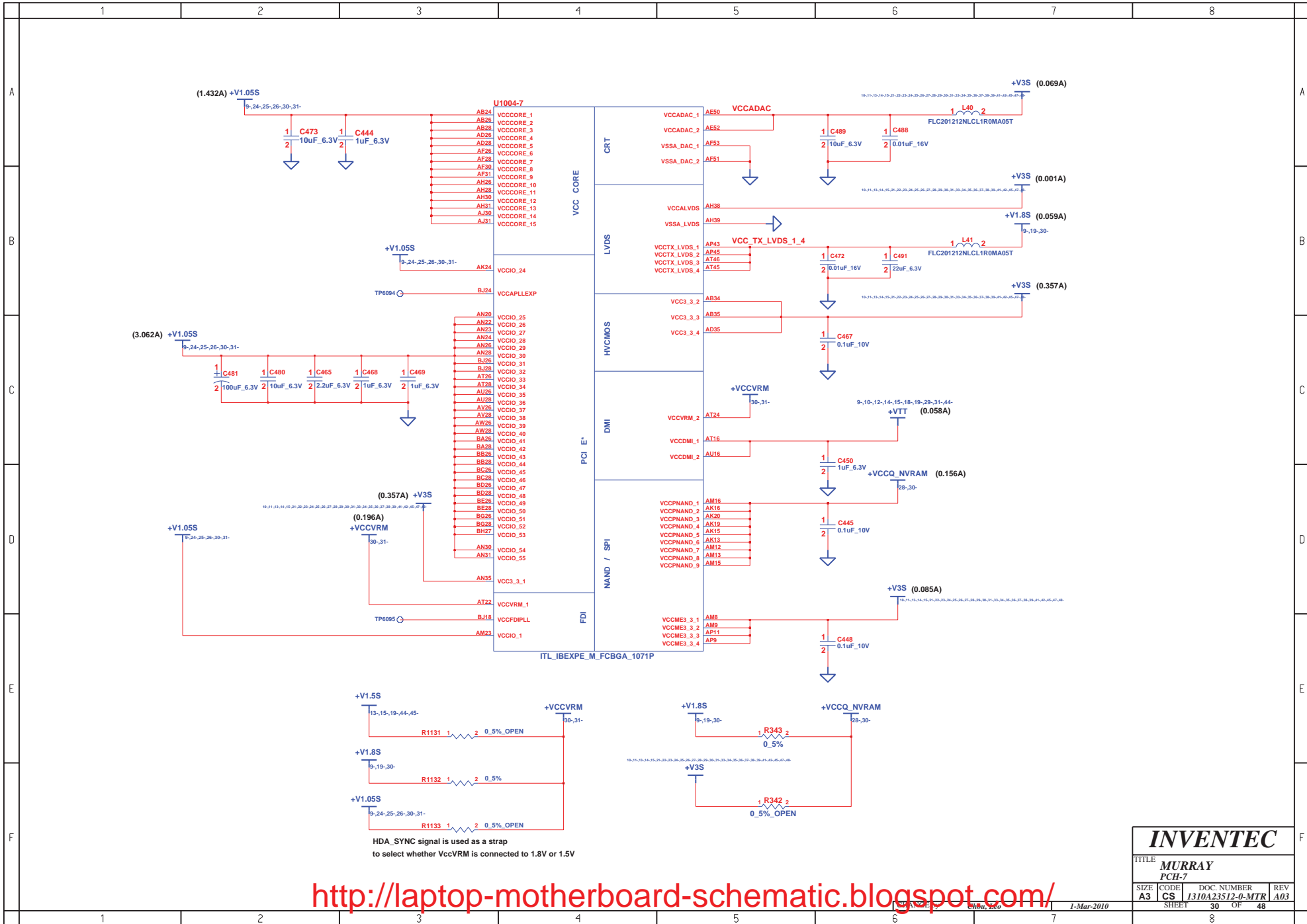
DATE: 1-Mar-2010



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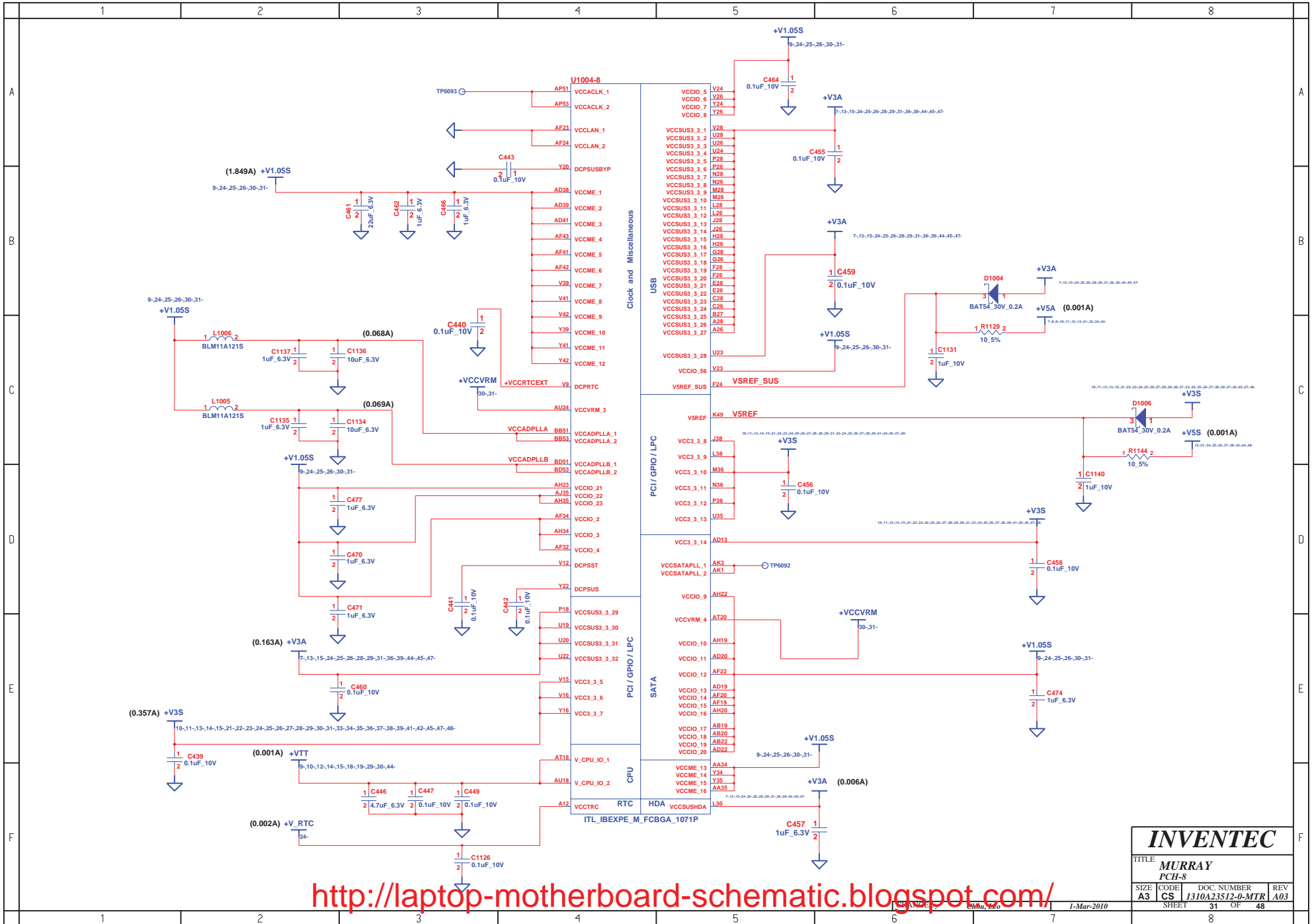
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TITLE: MURRAY PCH-6			
SIZE: A3	CODE: CS	DOC. NUMBER: 1310A23512-0-MTR	REV: A03
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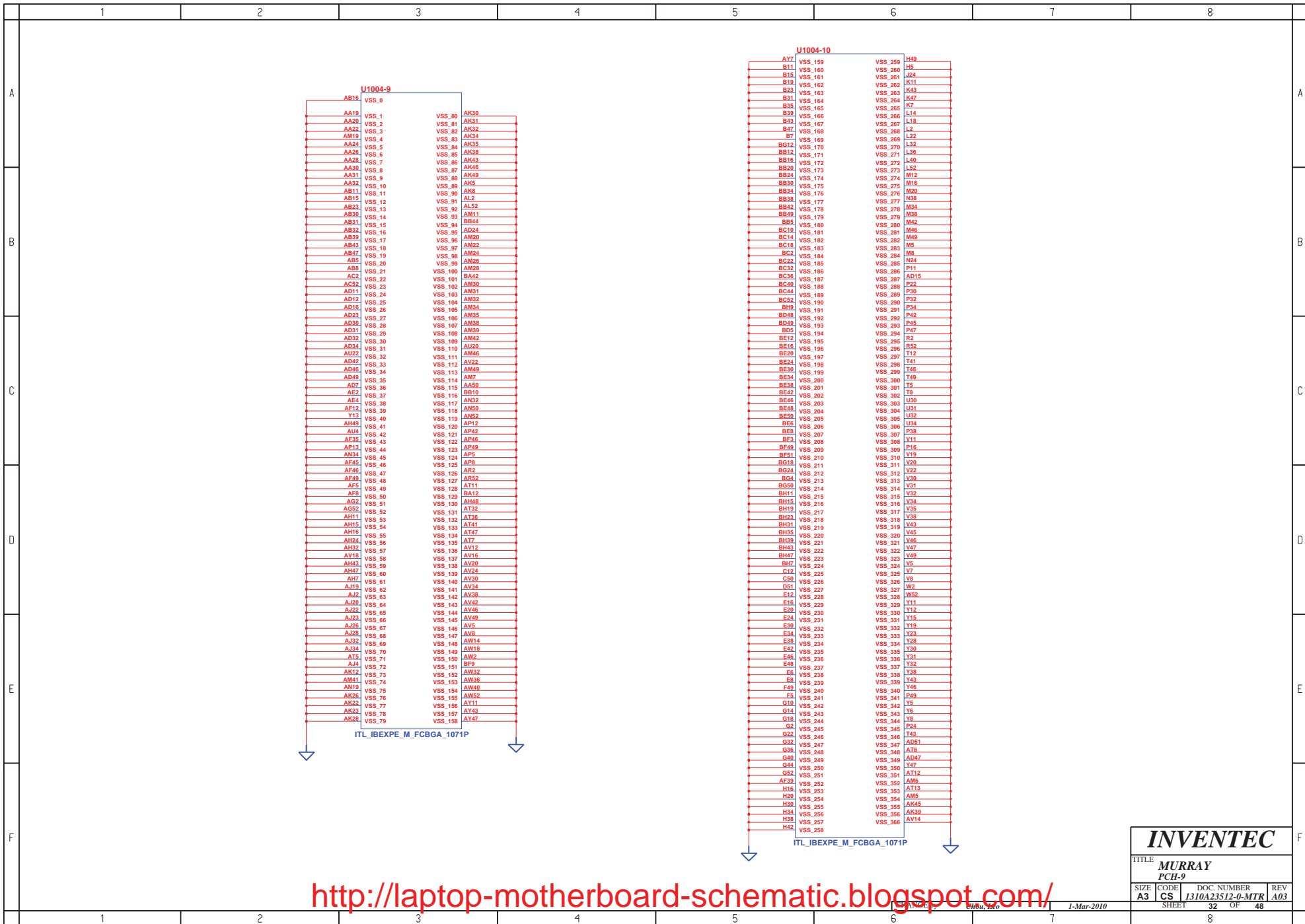
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TITLE: MURRAY PCH-7			
SIZE: A3	CODE: CS	DOC. NUMBER: 1310A23512-0-MTR	REV: A03
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INVENTEC			
TITLE: MURRAY PCH-8			
SIZE: A3	CODE: CS	DOC. NUMBER: I310A23512-0-MTR	REV: A03
SHEET: 31		OF: 48	

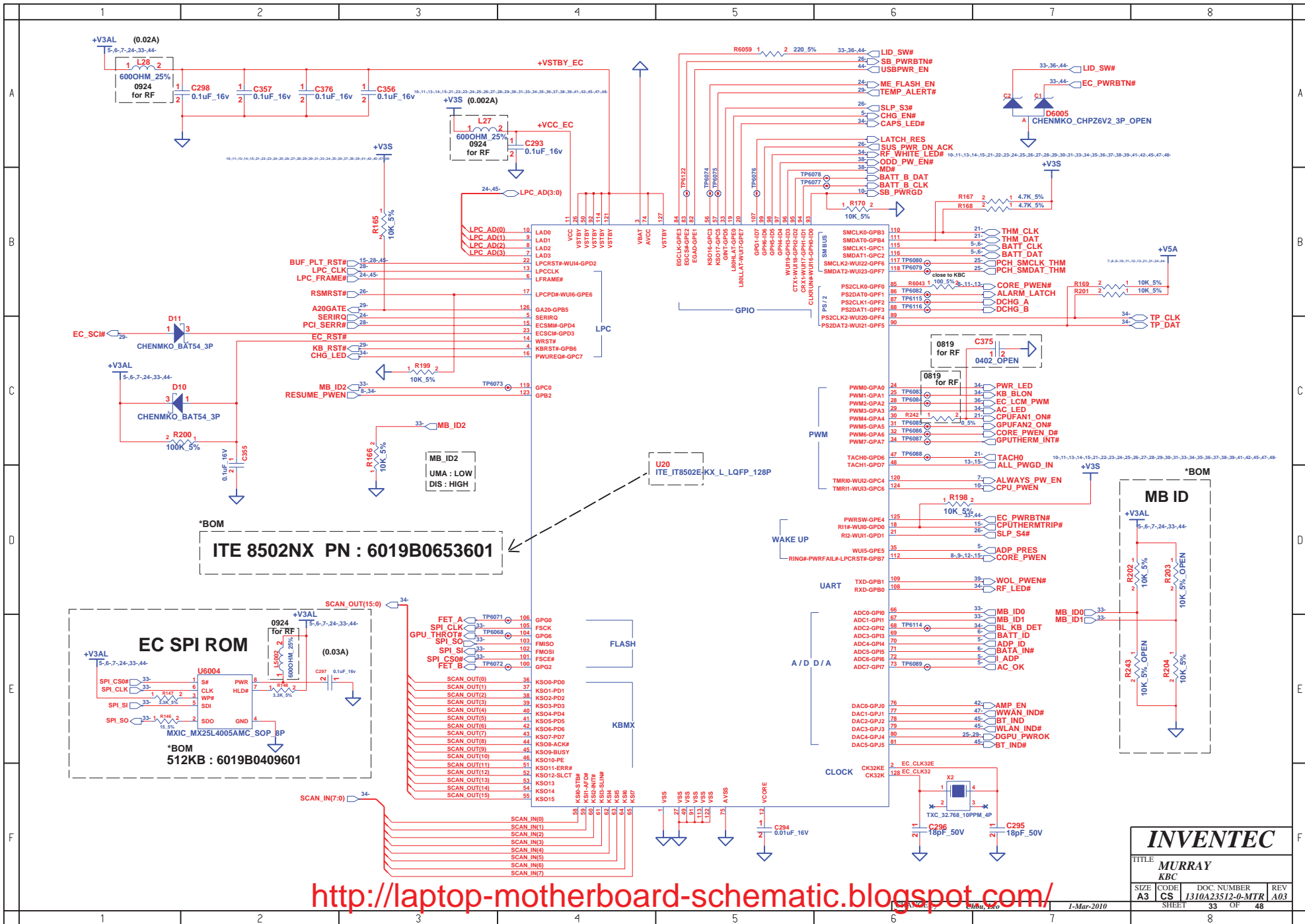
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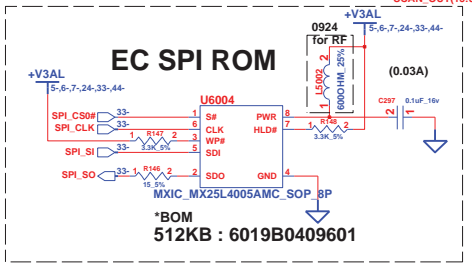
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INVENTEC			
TITLE: MURRAY PCH-9			
SIZE: A3	CODE: CS	DOC. NUMBER: 1310A23512-0-MTR	REV: A03
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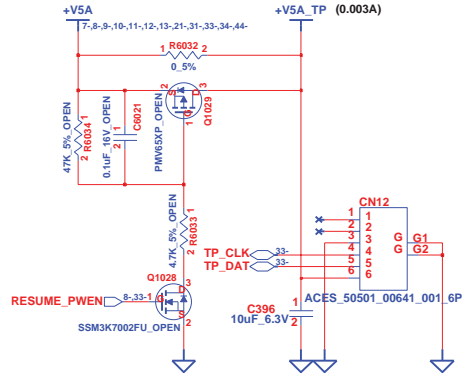
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ITE 8502NX PN : 6019B0653601



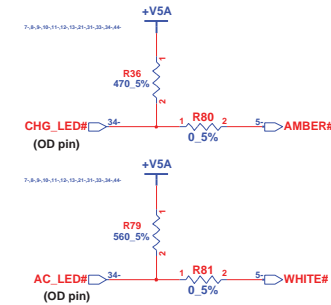
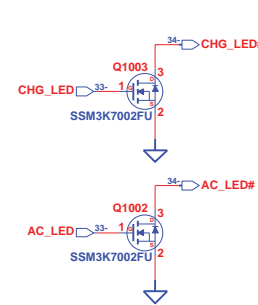
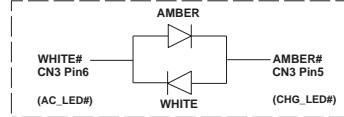
INVENTEC			
TITLE: MURRAY			
KBC			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A23512-0-MTR	A03
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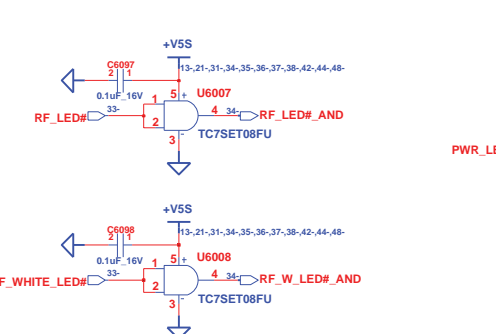
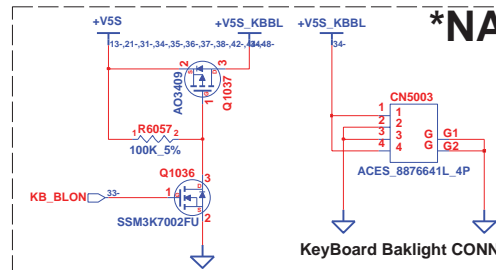
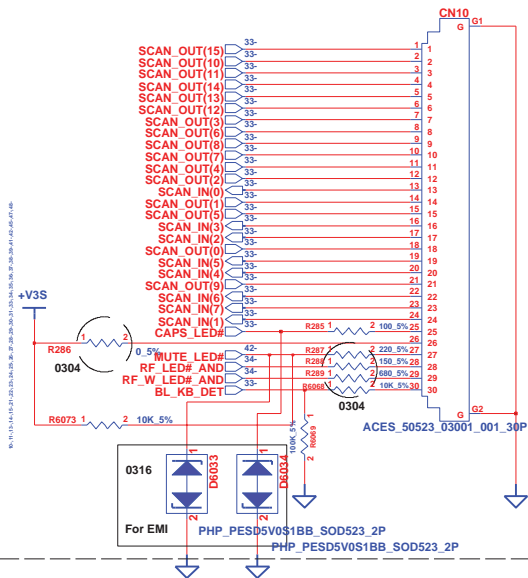
TouchPad Module CONN



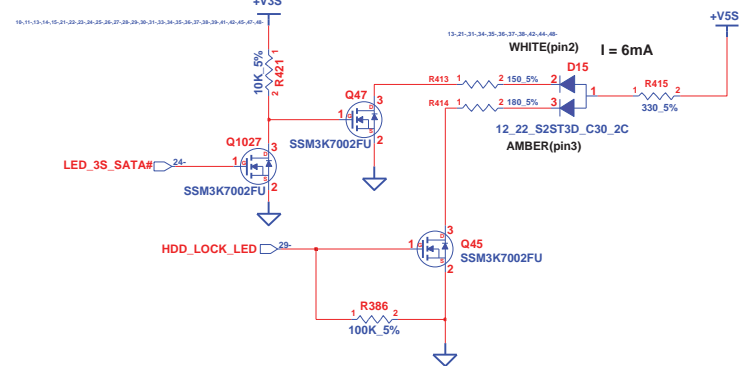
DC-JACK LED



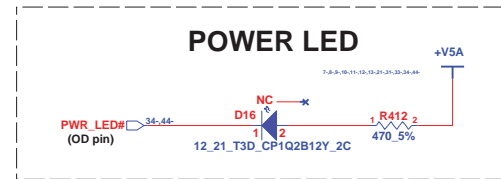
KeyBoard CONN (30 pin)



SATA LED & HDD-HALTED LED



POWER LED

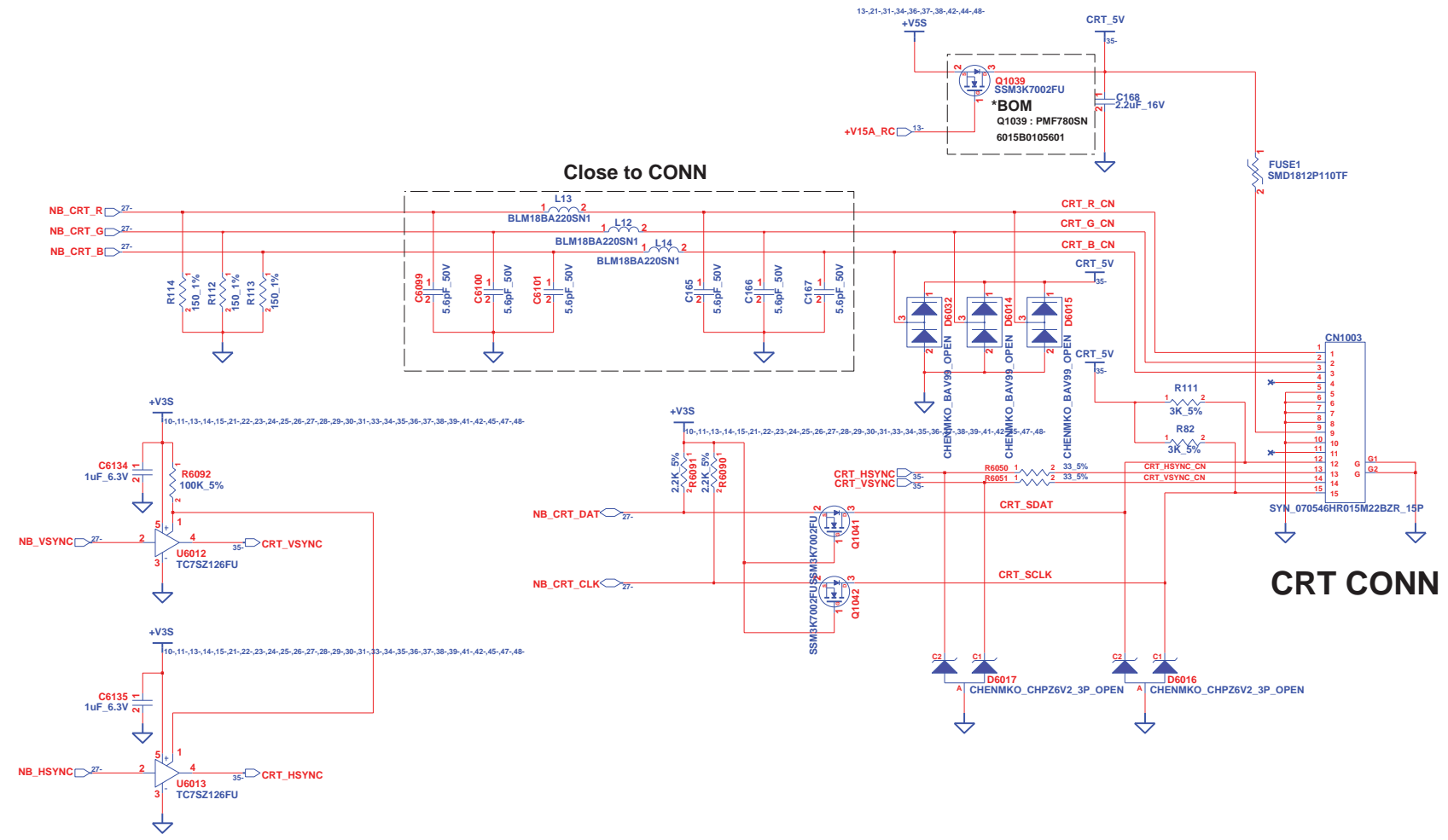


<http://laptop-motherboard-schematic.blogspot.com/>

INVENTEC

TITLE: MURRAY			
Keyboard & TouchPad			
SIZE: A3	CODE: CS	DOC NUMBER: I310A23512-0-MTR	REV: A03
SHEET: 34		OF: 48	

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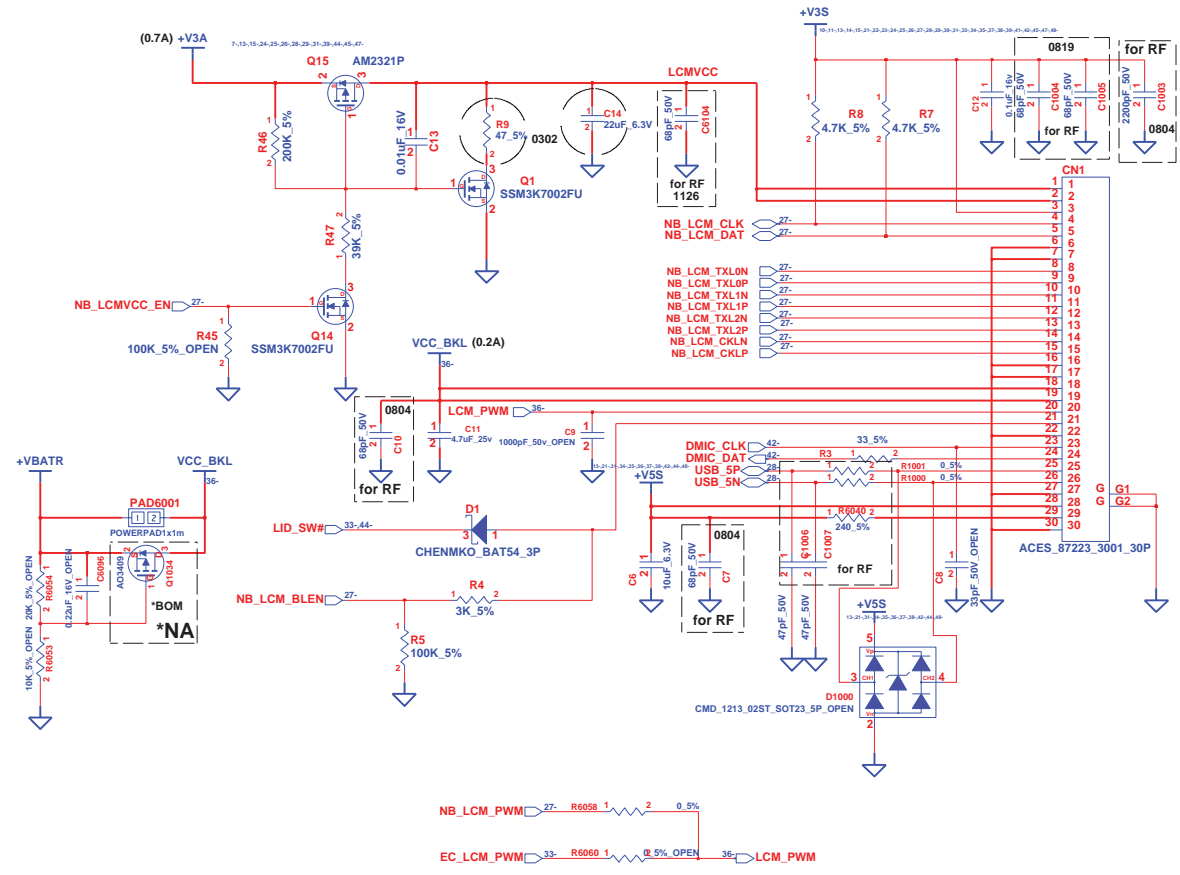
CRT CONN

<http://laptop-motherboard-schematic.blogspot.com/>

INVENTEC			
TITLE: MURRAY CRT			
SIZE: A3	CODE: CS	DOC NUMBER: 1310A23512-0-MTR	REV: A03
SHEET: 35		OF: 48	

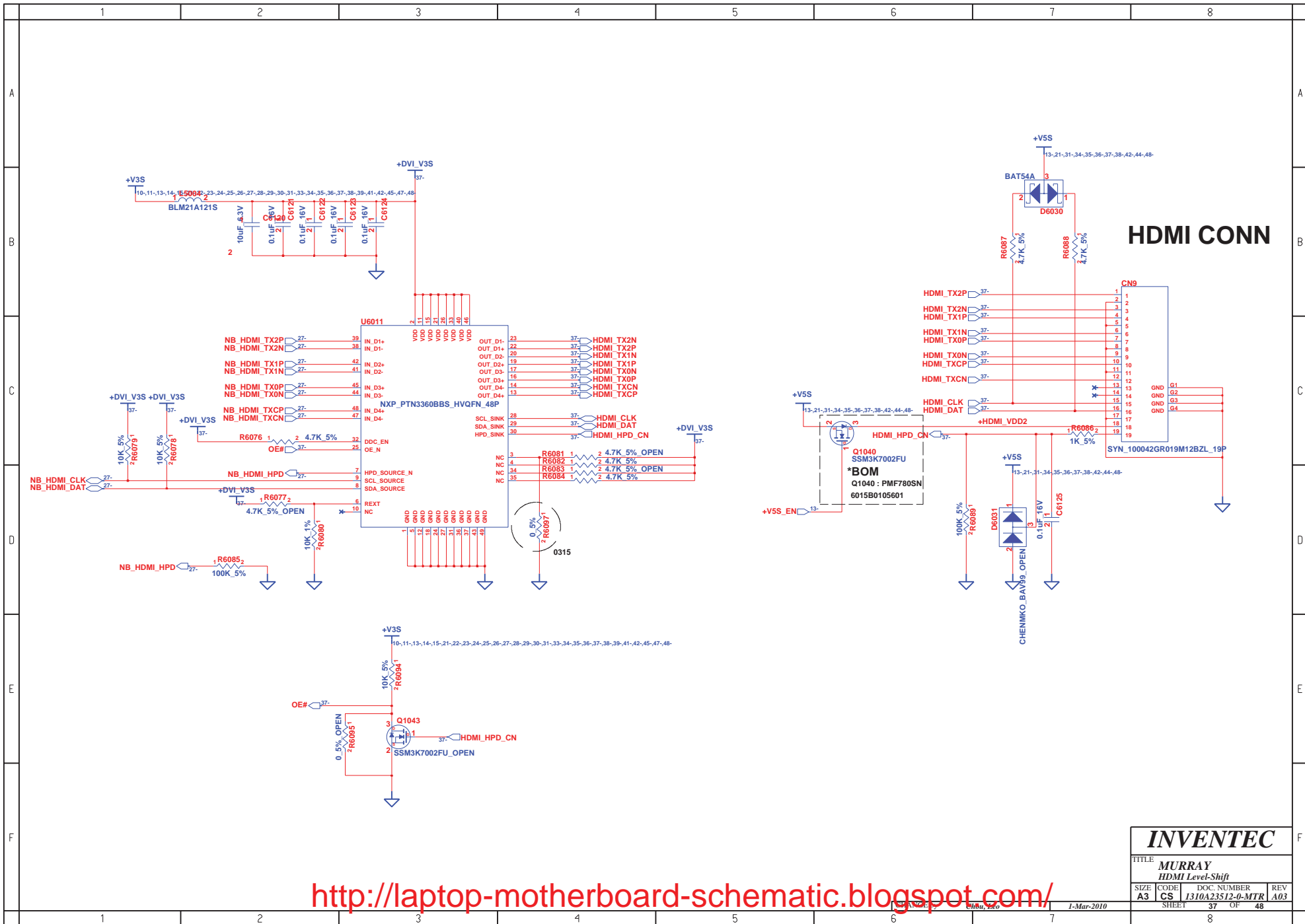
LCM CONN (30pin)

(6012B0348301)
*BOM



INVENTEC			
TITLE: MURRAY			
LCM			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A23512-0-MTR	A03
SHEET		OF	
36		48	

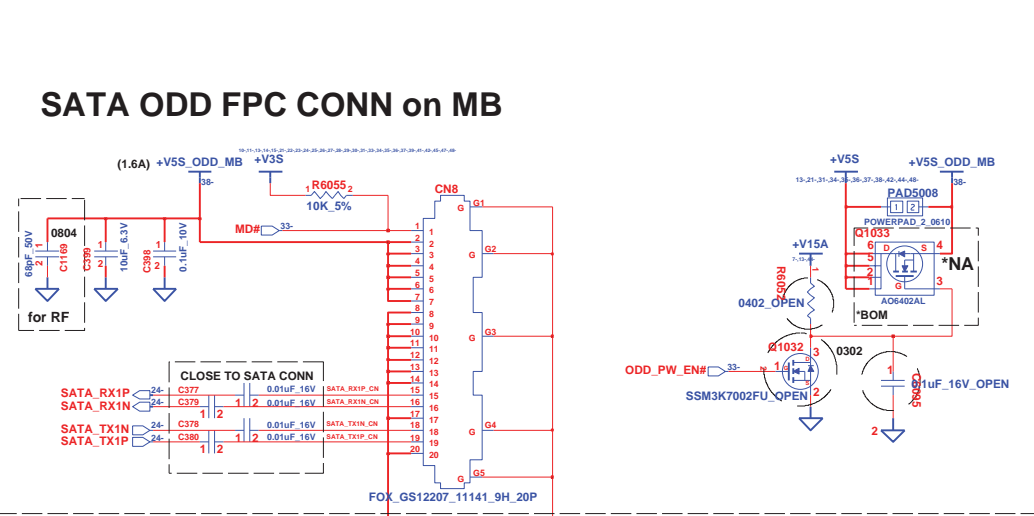
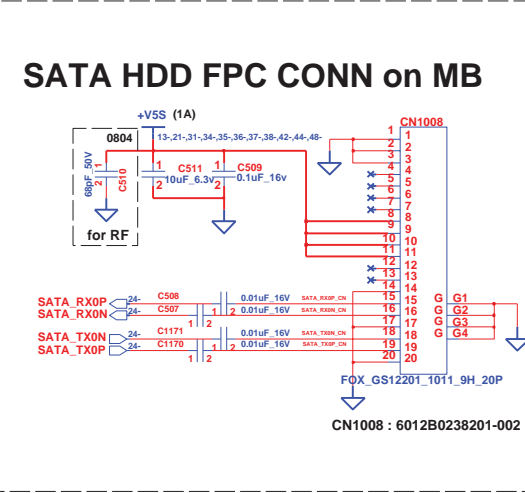
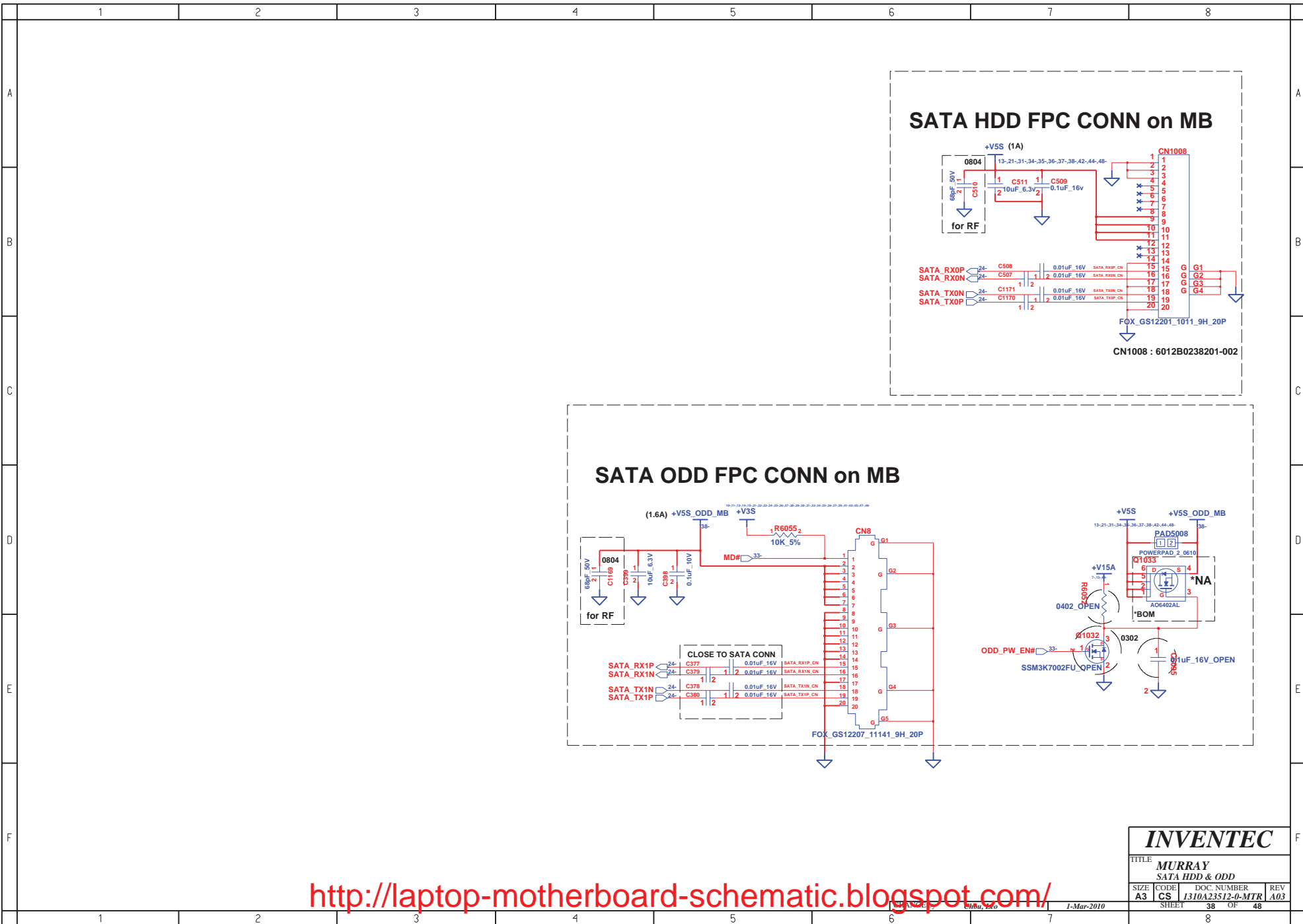
<http://laptop-motherboard-schematic.blogspot.com/>



<http://laptop-motherboard-schematic.blogspot.com/>

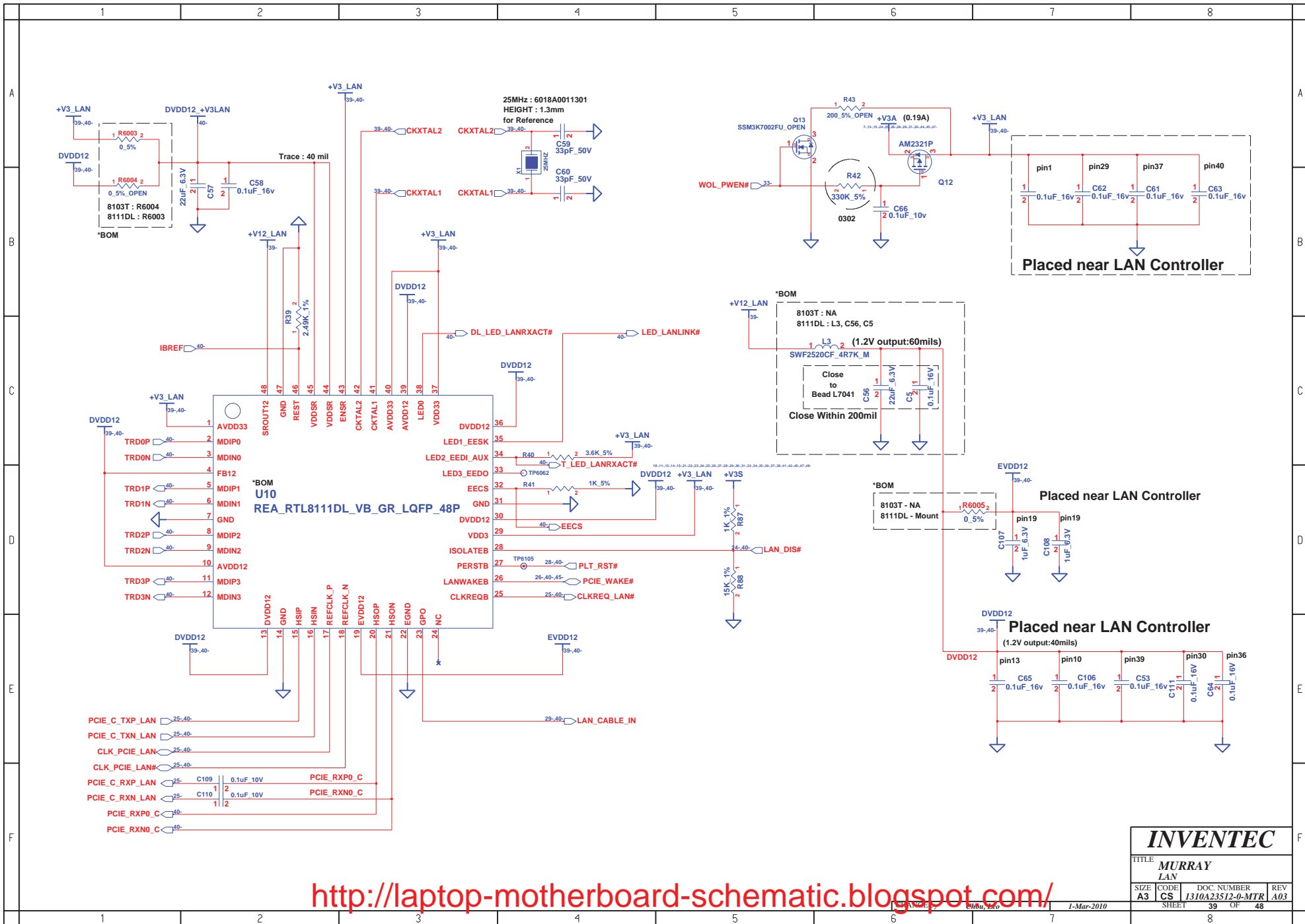
INVENTEC			
TITLE: MURRAY HDMI Level-Shift			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	I310A23512-0-MTR	A03
SHEET		OF	
37		48	

1-Mar-2010



INVENTEC			
TITLE MURRAY SATA HDD & ODD			
SIZE A3	CODE CS	DOC. NUMBER I310A23512-0-MTR	REV A03
SHEET 38		OF 48	

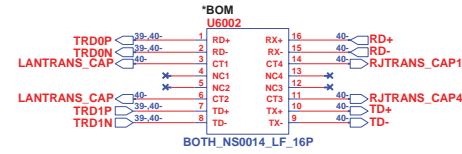
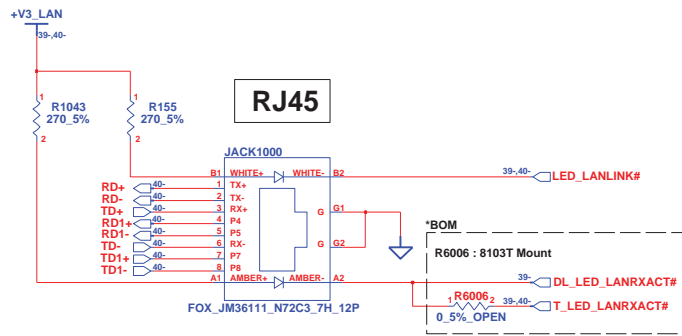
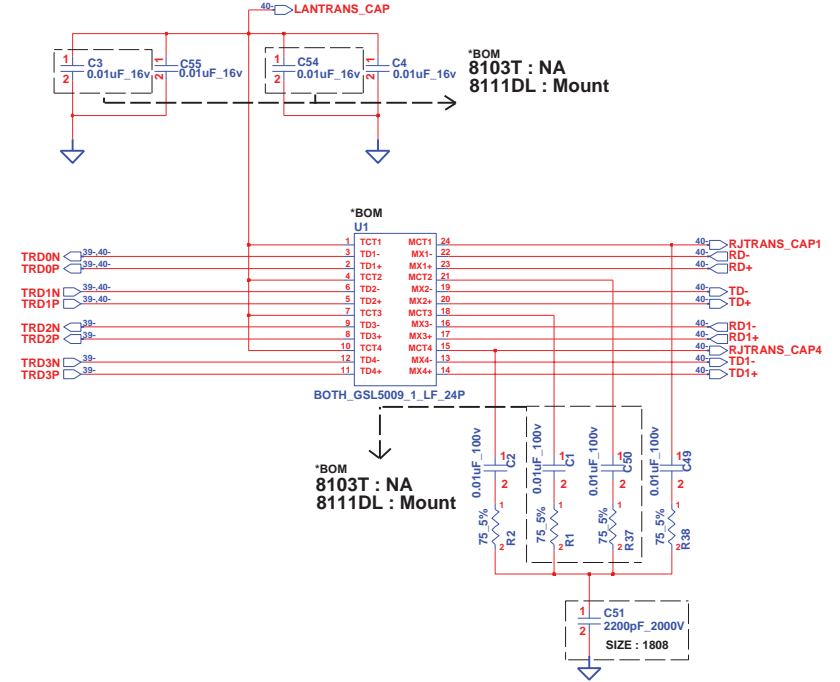
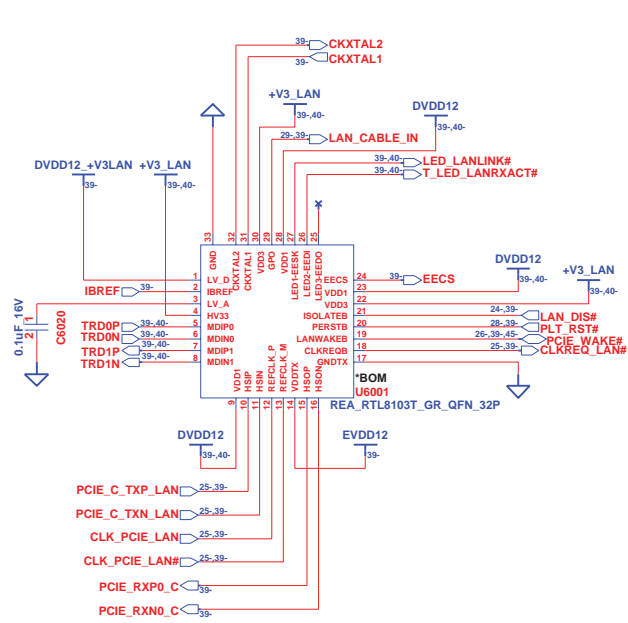
<http://laptop-motherboard-schematic.blogspot.com/>



<http://laptop-motherboard-schematic.blogspot.com/>

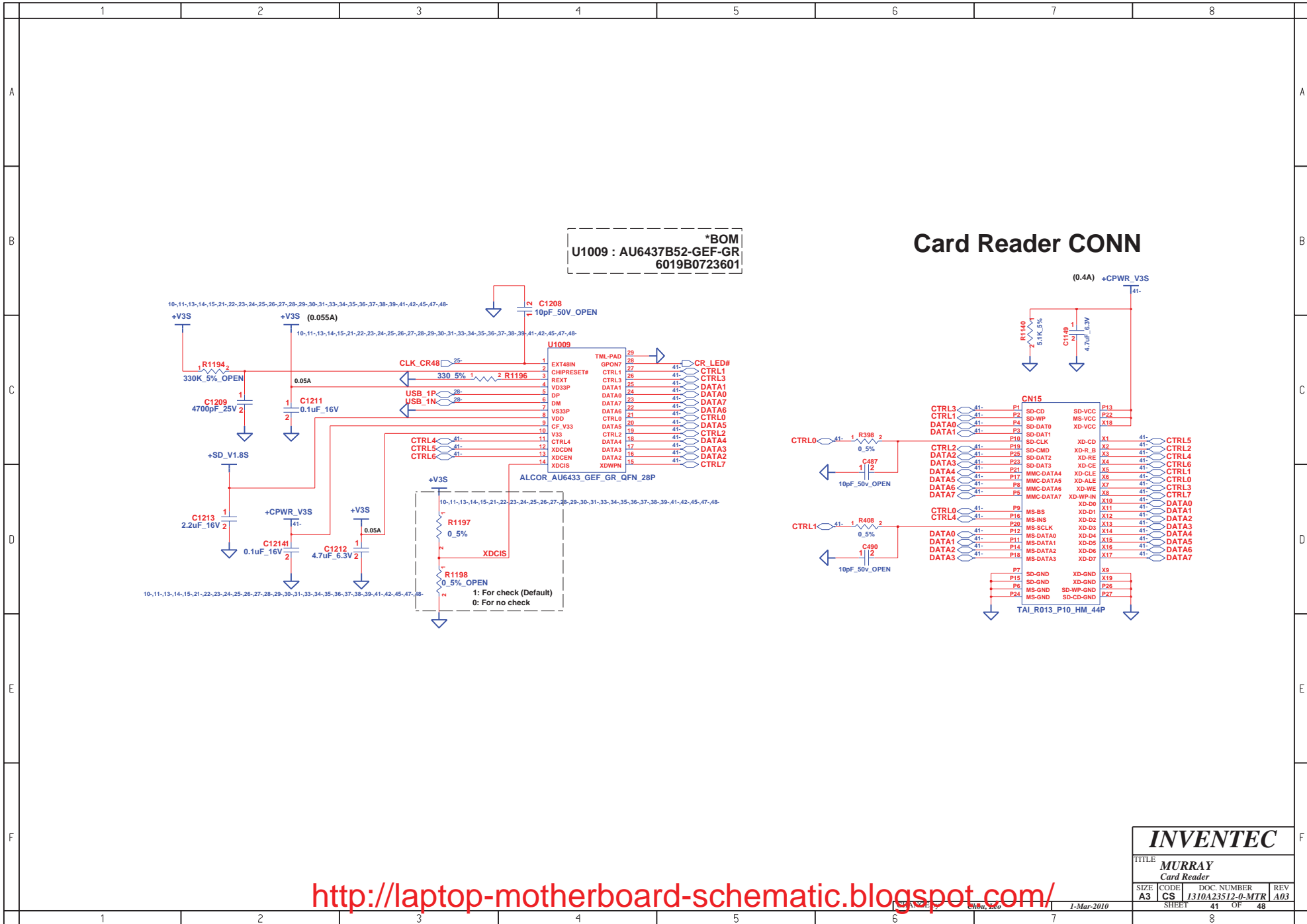
INVENTEC			
TITLE: MURRAY LAN			
SIZE: A3	CODE: CS	DOC. NUMBER: I310A23512-0-MTR	REV: A03
SHEET: 39		OF: 48	

LAYOUT NOTE : Place termination resistors and caps as close to LAN controller as possible

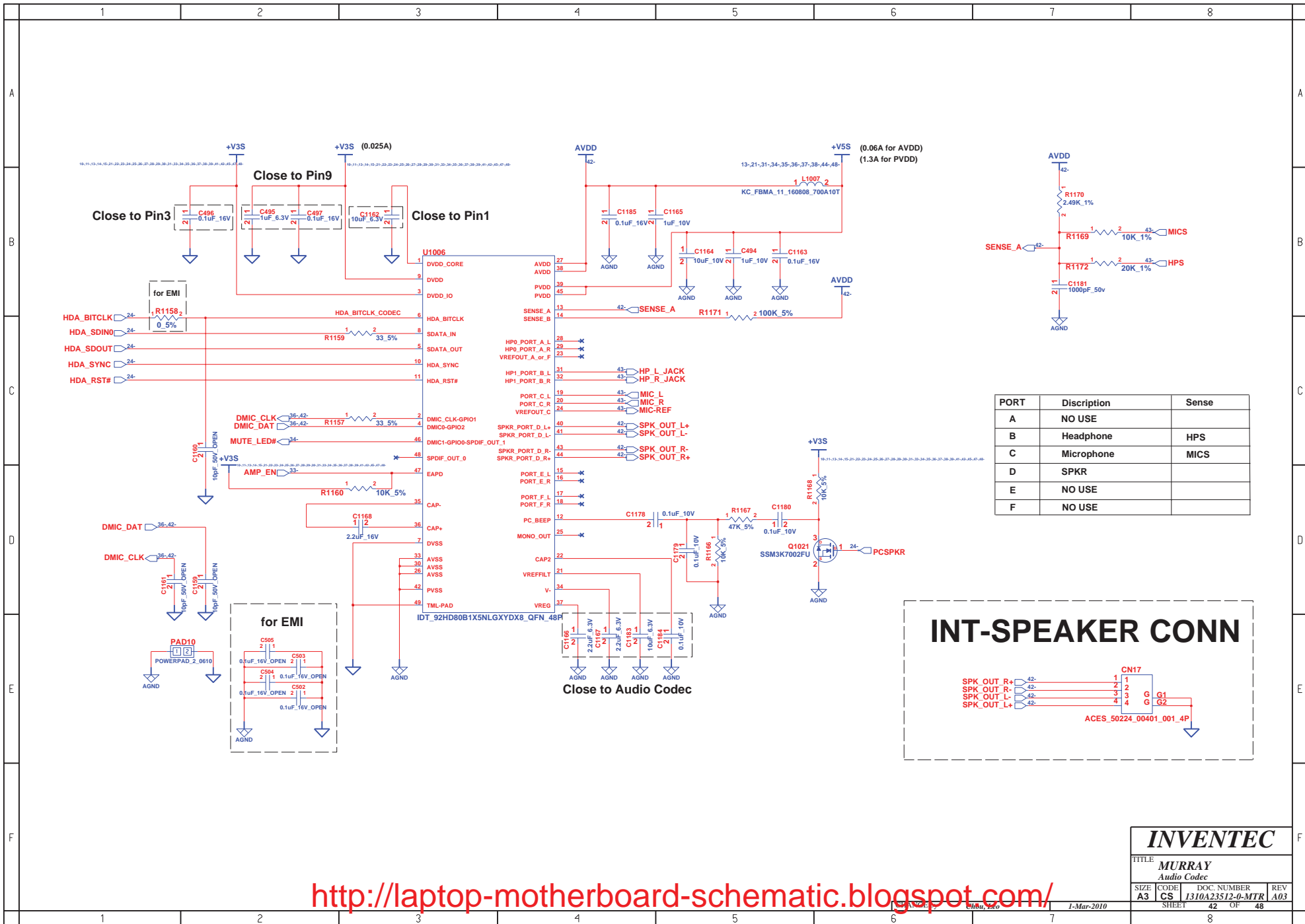


<http://laptop-motherboard-schematic.blogspot.com/>

INVENTEC			
TITLE: MURRAY			
RJ-45			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A23512-0-MTR	A03
SHEET		40	OF 48



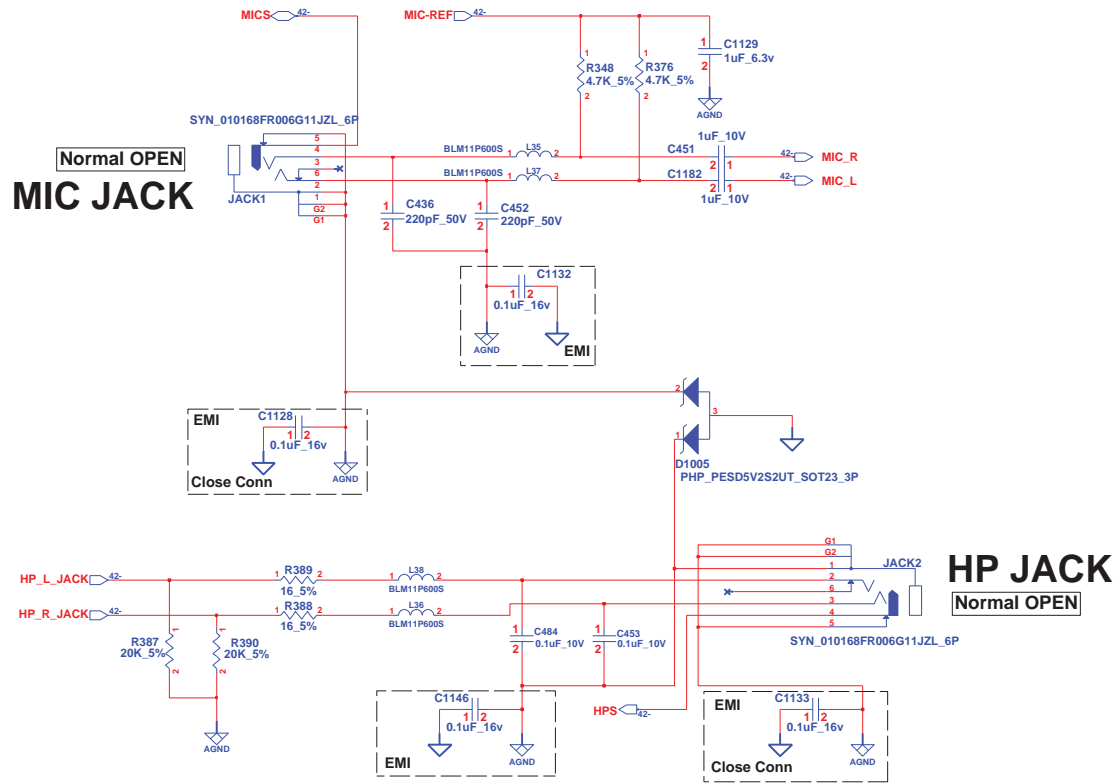
<http://laptop-motherboard-schematic.blogspot.com/>



<http://laptop-motherboard-schematic.blogspot.com/>

INVENTEC

TITLE			
MURRAY			
Audio Codec			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A23512-0-MTR	A03
SHEET		42	OF 48

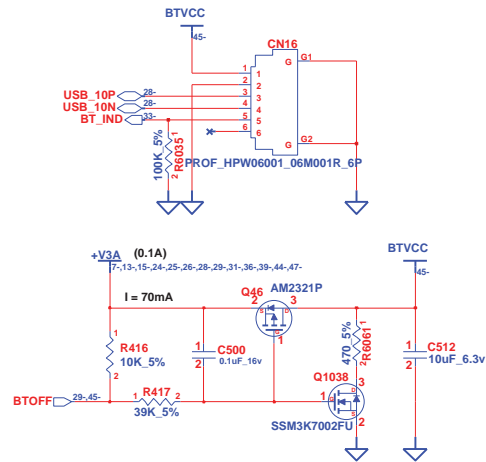


<http://laptop-motherboard-schematic.blogspot.com/>

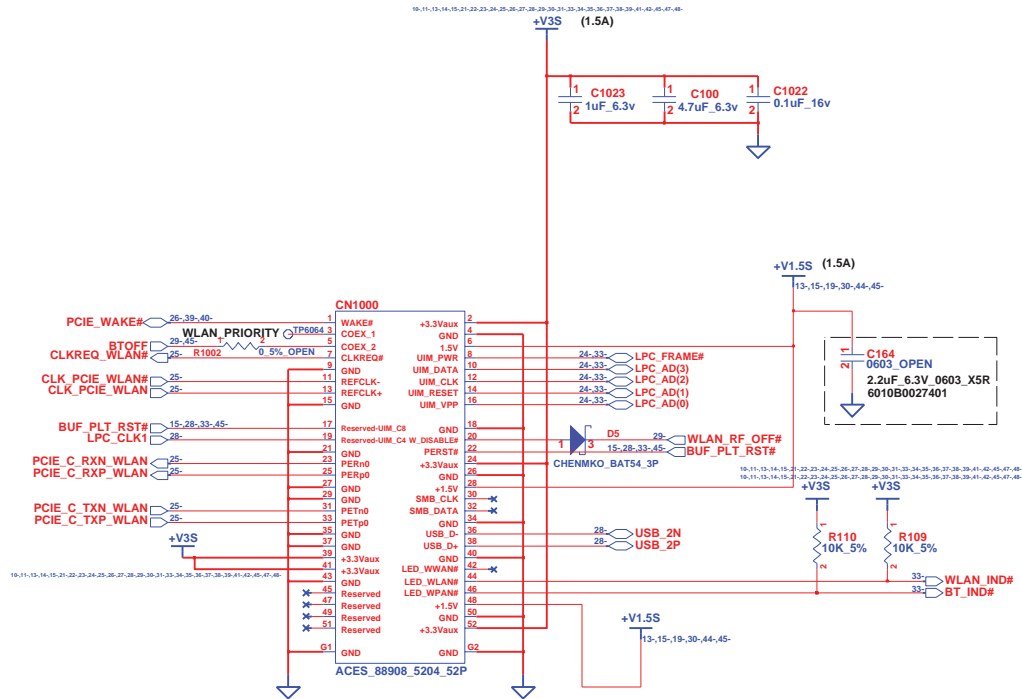
INVENTEC			
TITLE: MURRAY			
HP JACK & MIC JACK			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	I310A23512-0-MTR	A03
SHEET		43	OF 48

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BLUETOOTH CONN



WLAN CONN (MINICARD)

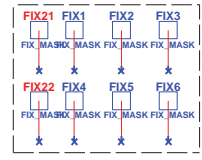
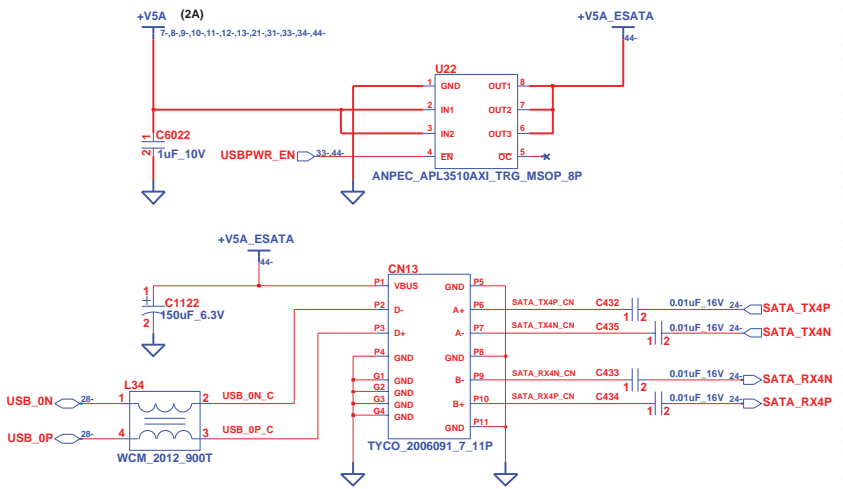


***BOM**
CN1000 : 6026B0184301

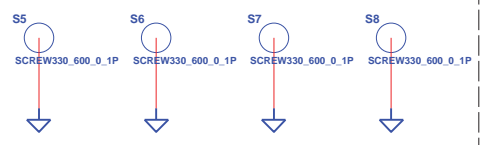
INVENTEC			
TITLE: MURRAY			
WLAN, BT & WebCAM			
SIZE: A3	CODE: CS	DOC. NUMBER: I310A23512-0-MTR	REV: A03
SHEET: 45		OF: 48	

<http://laptop-motherboard-schematic.blogspot.com/>

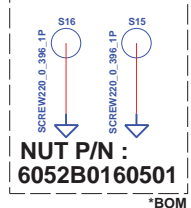
ESATA CONN (without Re-Driver chip)



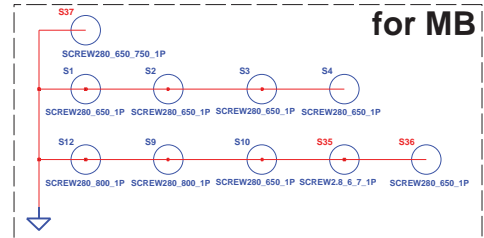
CPU's screws



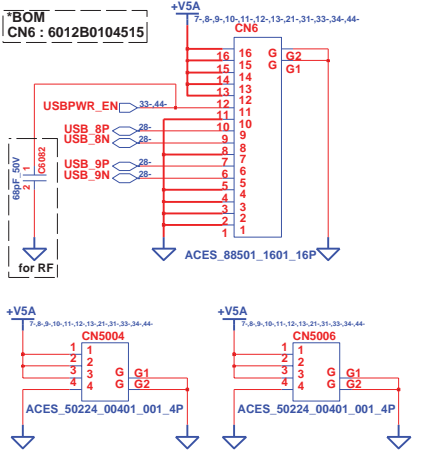
for PCH



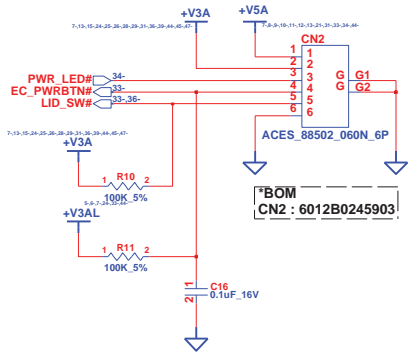
for MB



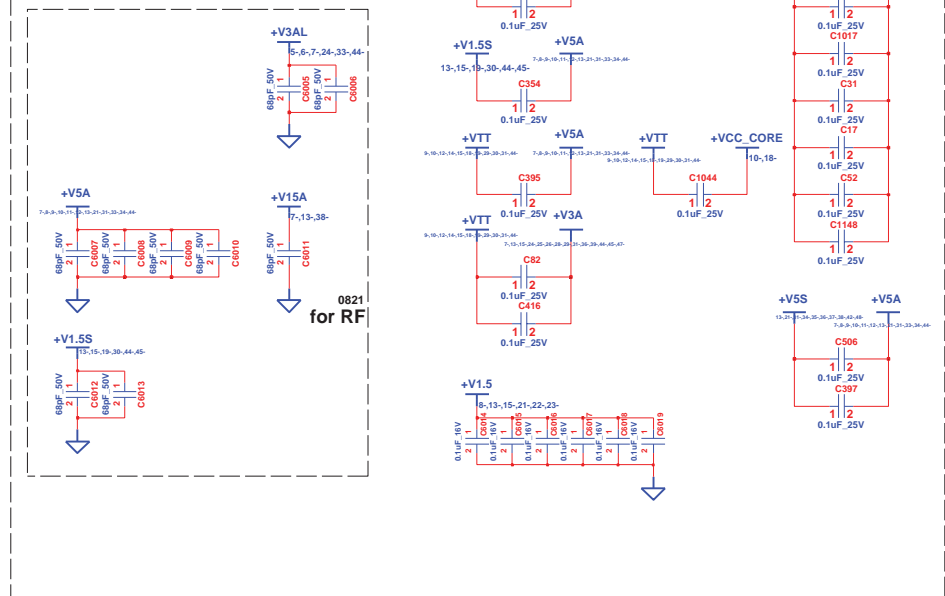
USB BOARD Cable on MB



PBN Cable CN on MB



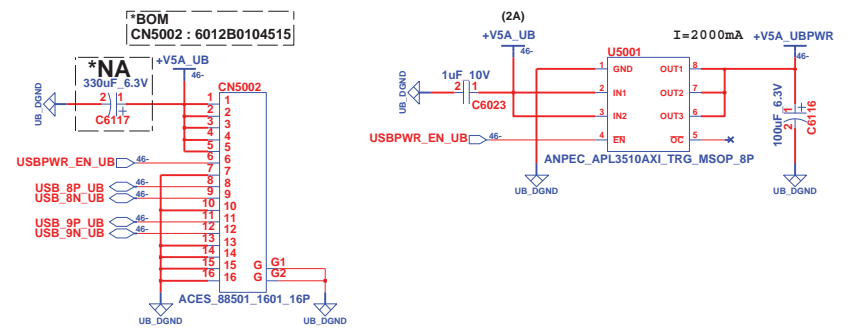
EMI CAPS



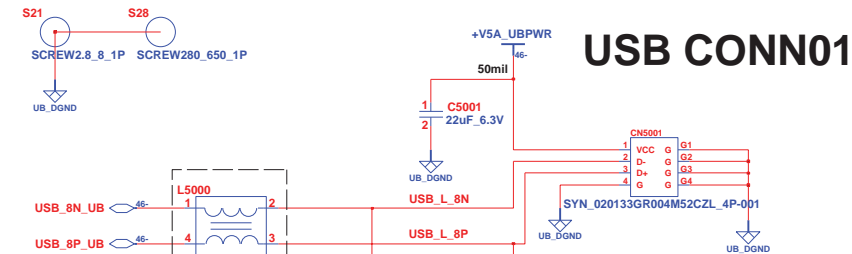
CN5004 : for 13.3" (Near SIM Card CONN)
CN5006 : for 14"

INVENTEC			
TITLE: MURRAY ESATA, SCREW & LID			
SIZE: A3	CODE: CS	DOC NUMBER: I310A23512-0-MTR	REV: A03
SHEET: 44		OF: 48	

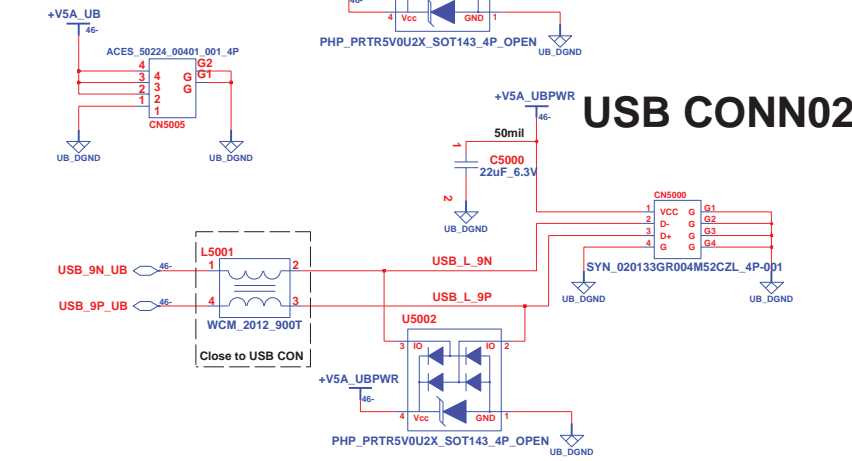
USB BOARD



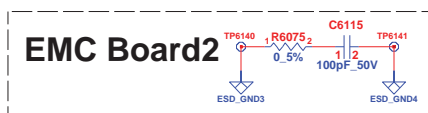
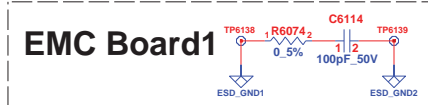
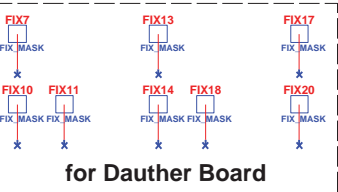
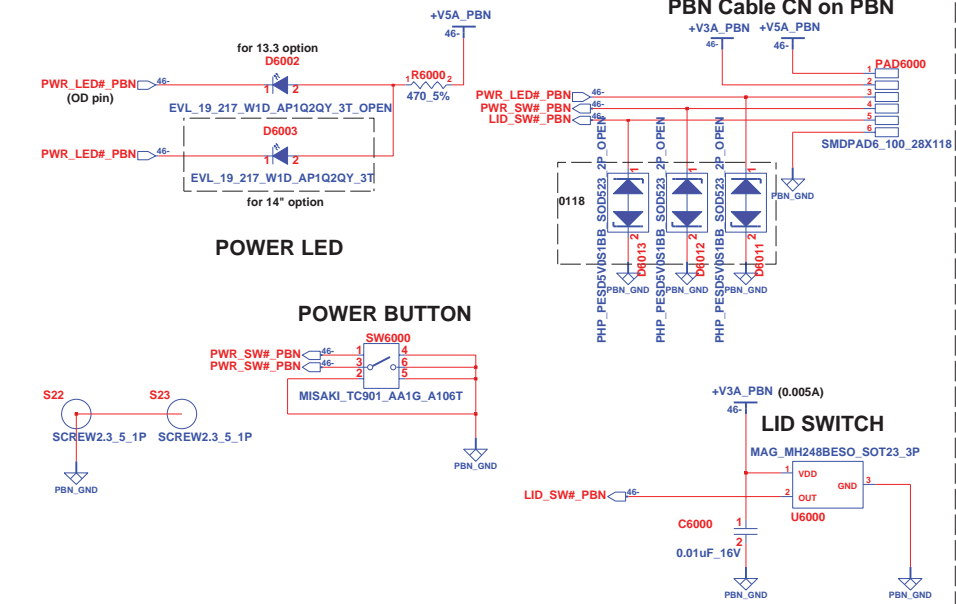
USB CONN01



USB CONN02



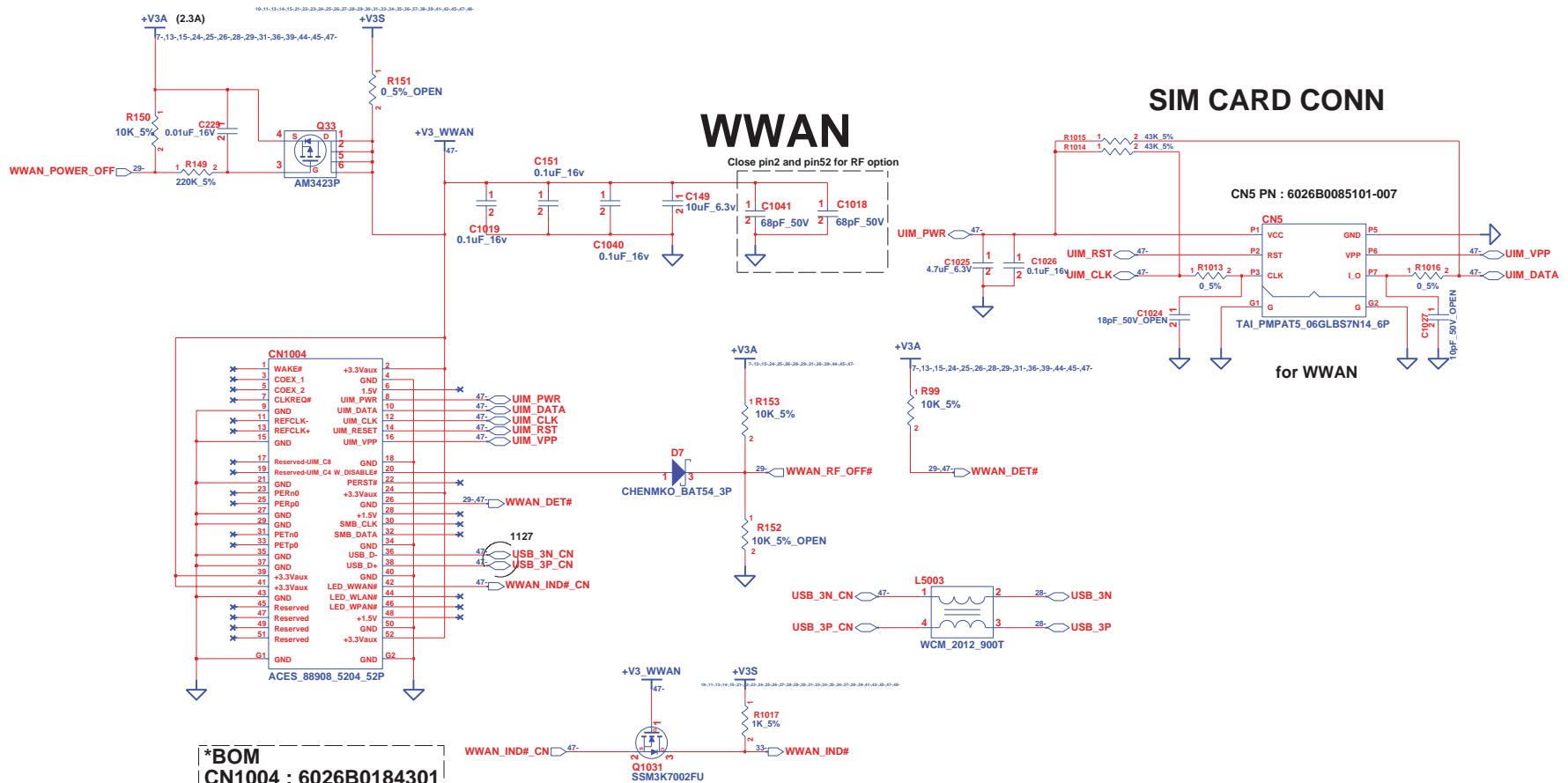
Power Button Board



<http://laptop-motherboard-schematic.blogspot.com/>

INVENTEC			
TITLE: MURRAY			
USB, PowerButton (DB)			
SIZE	CODE	DOC NUMBER	REV
A3	CS	I310A23512-0-MTR	A03
SHEET		46	OF 48

OPTION PART



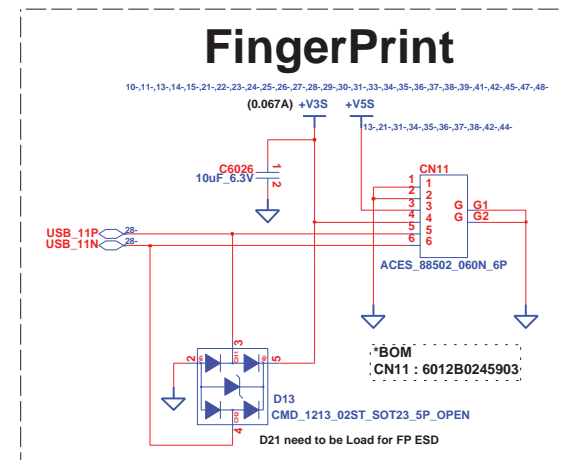
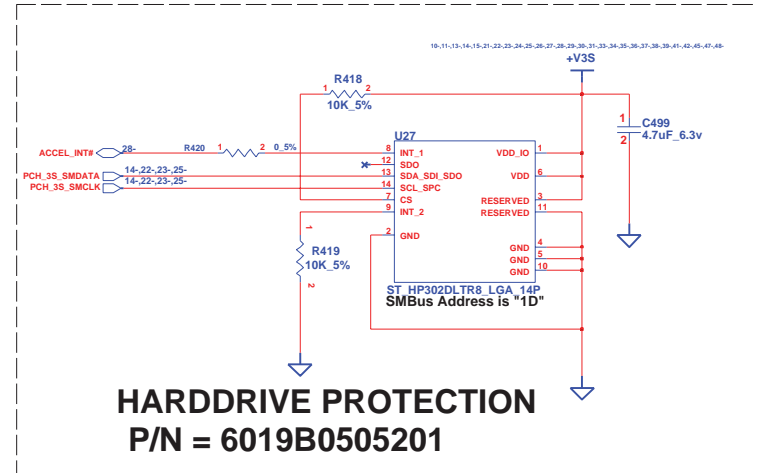
<http://laptop-motherboard-schematic.blogspot.com/>

INVENTEC

TITLE: MURRAY			
WWAN(Option)			
SIZE: A3	CODE: CS	DOC NUMBER: 1310A23512-0-MTR	REV: A03
SHEET: 47		OF: 48	

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OPTION PART



<http://laptop-motherboard-schematic.blogspot.com/>

INVENTEC			
TITLE: MURRAY			
Touchscreen, FP & HD LOCK (Option)			
SIZE: A3	CODE: CS	DOC. NUMBER: I310A23512-0-MTR	REV: A03
SHEET: 48		OF: 48	