

1 2 3 4 5 6 7 8

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HSF Property : **RoHS**

V13TL MB

CS BUILD

2009.0917

DATE	CHANGE NO.	REV

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DRAWER	EE	DATE	POWER
DESIGN		DATE	
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RESPONSIBLE			
SIZE =	3	VER :	
FILE NAME :	XXXX-XXXXXX-XX	SIZE	A3
P/N	XXXXXXXXXXXX	CODE	CS
		DOC. NUMBER	1310A22966-0-MTR
		REV	A01
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TITLE **V13TL**

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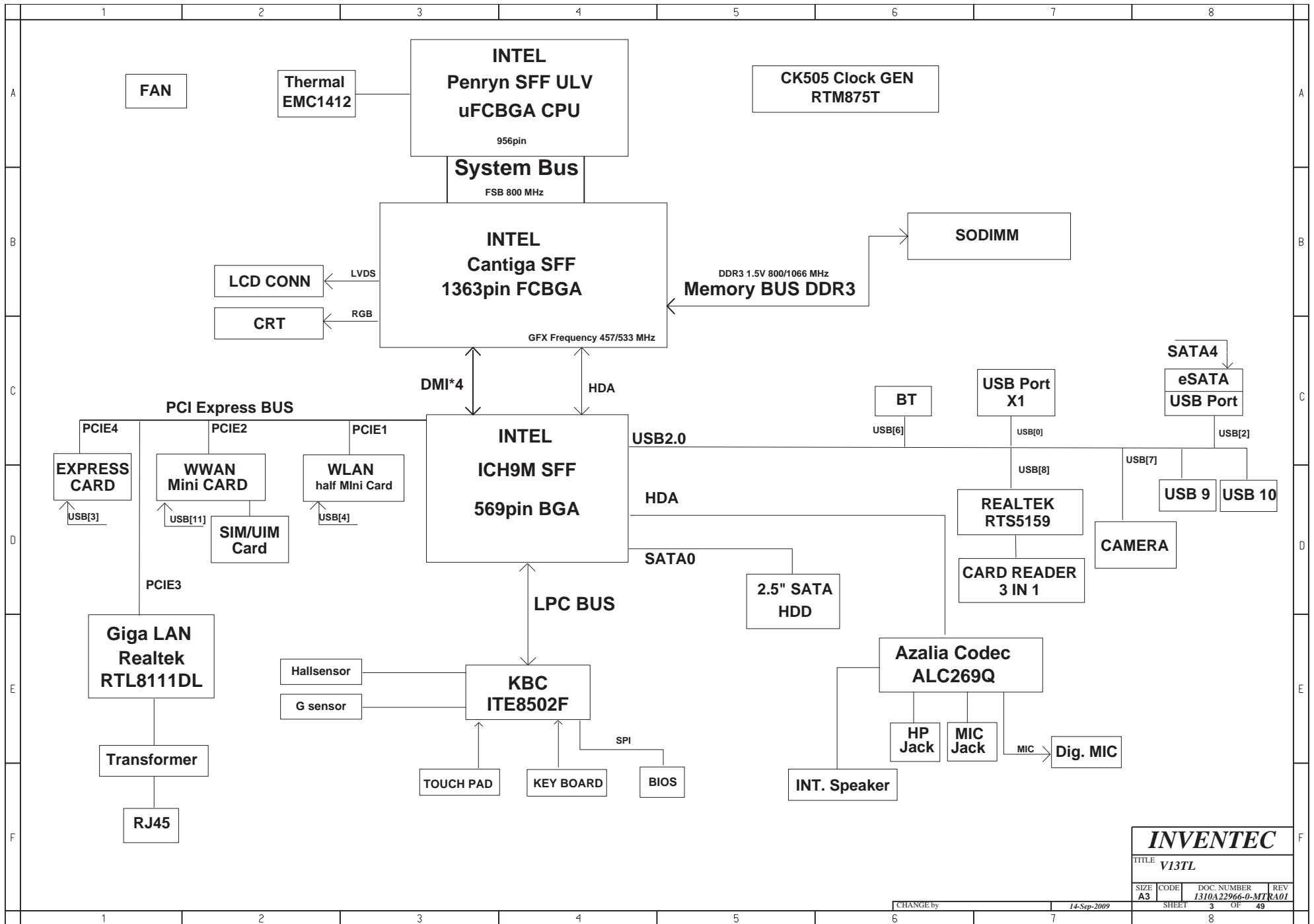
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TITLE *VI3TL*

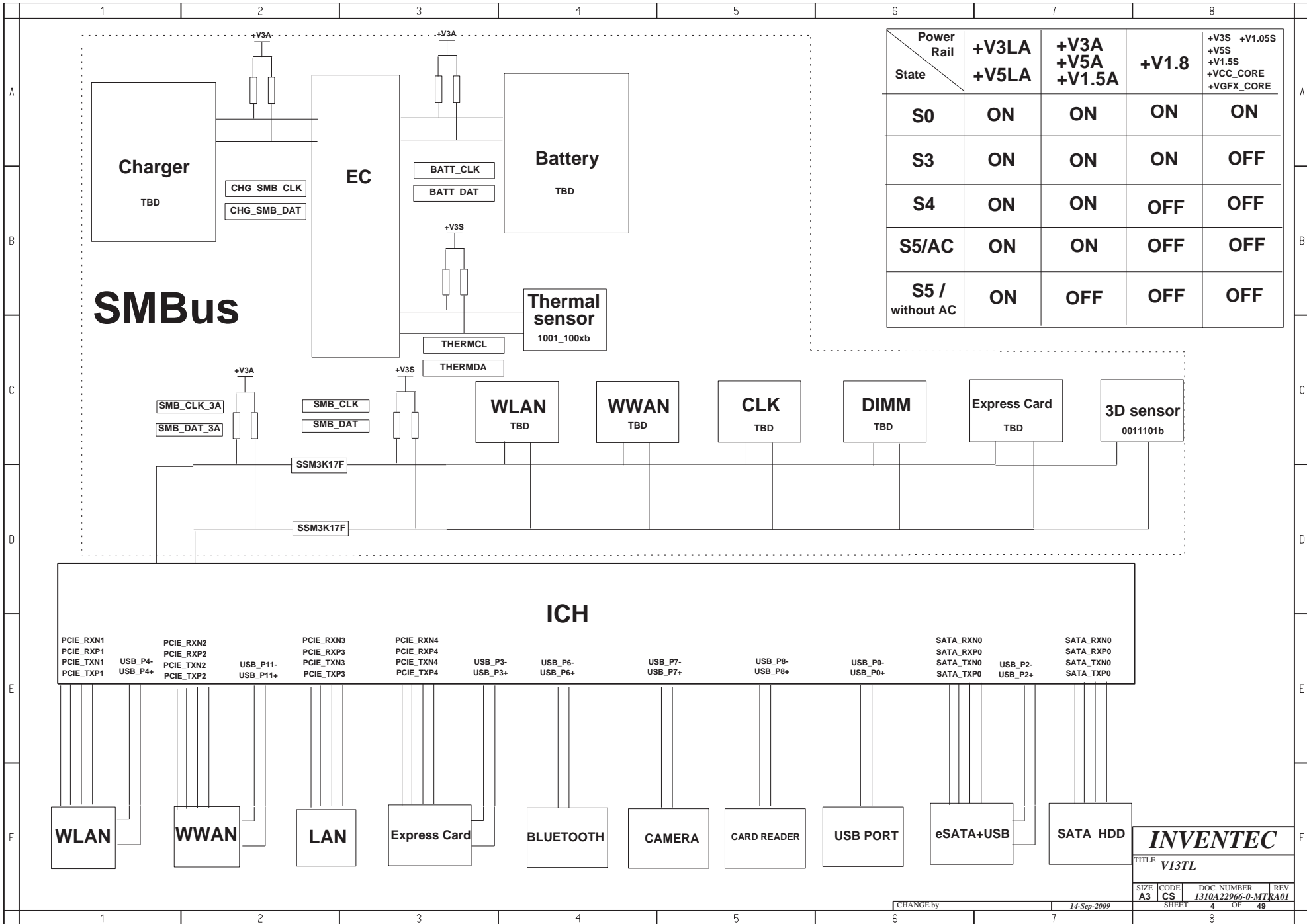
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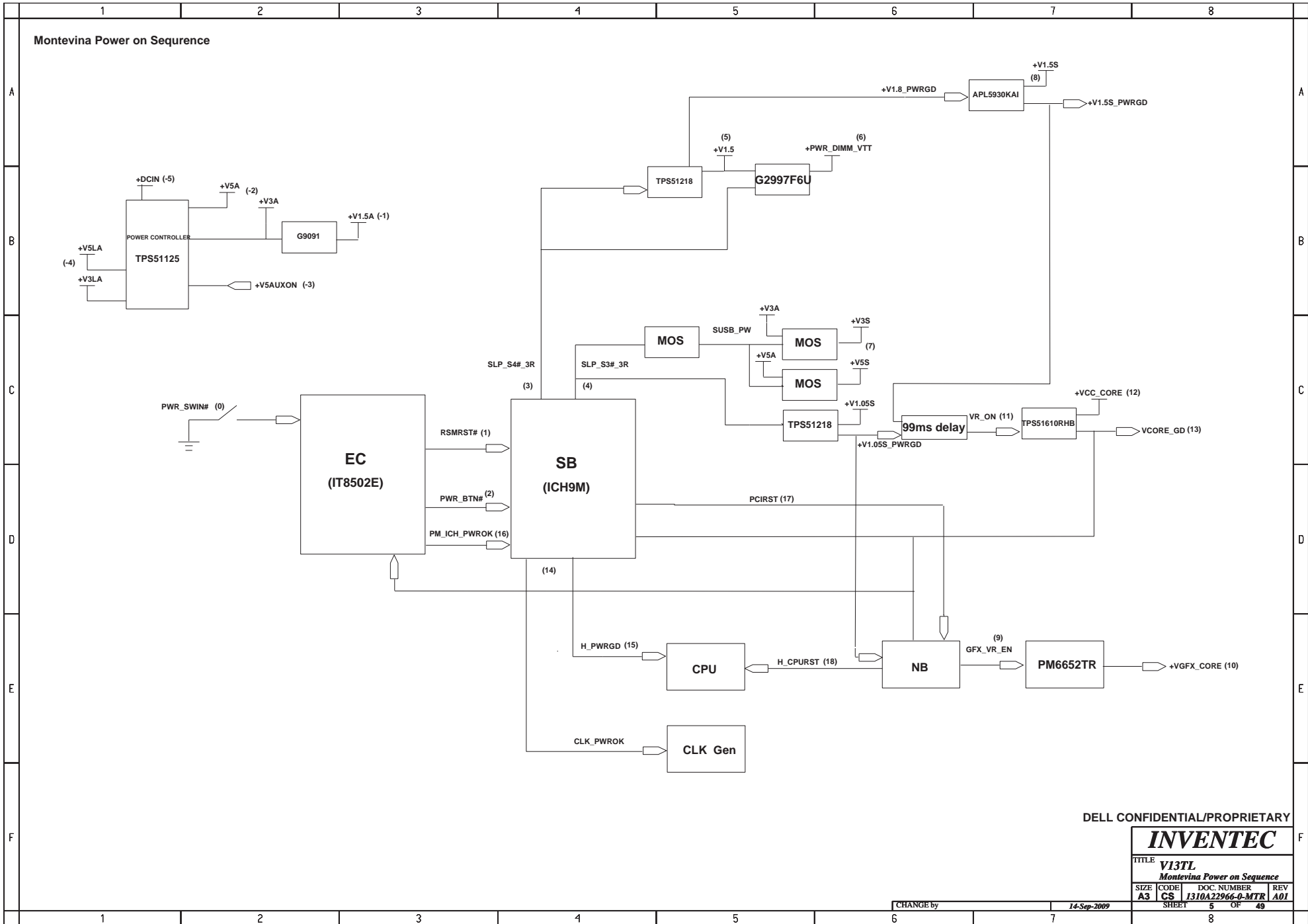
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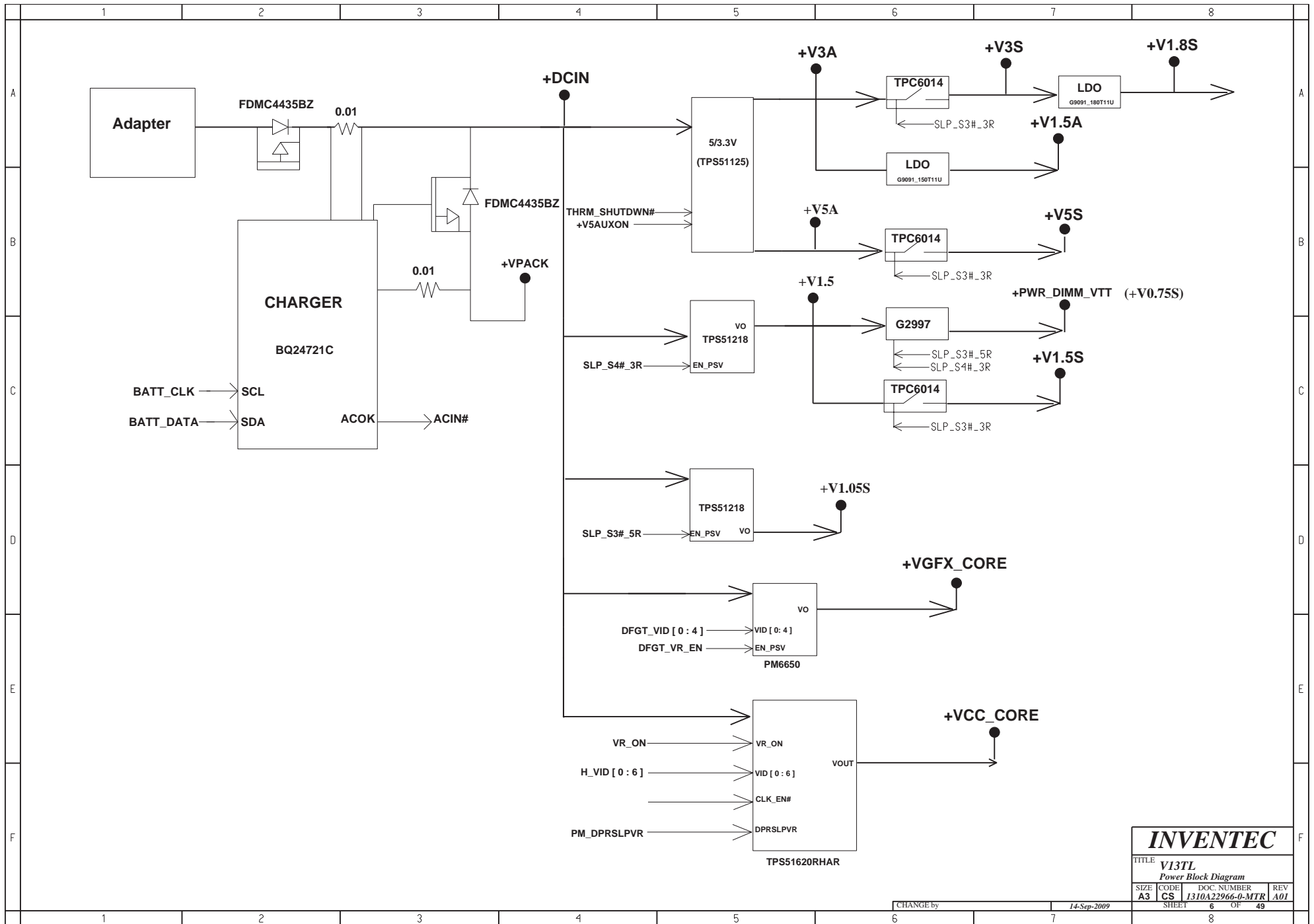
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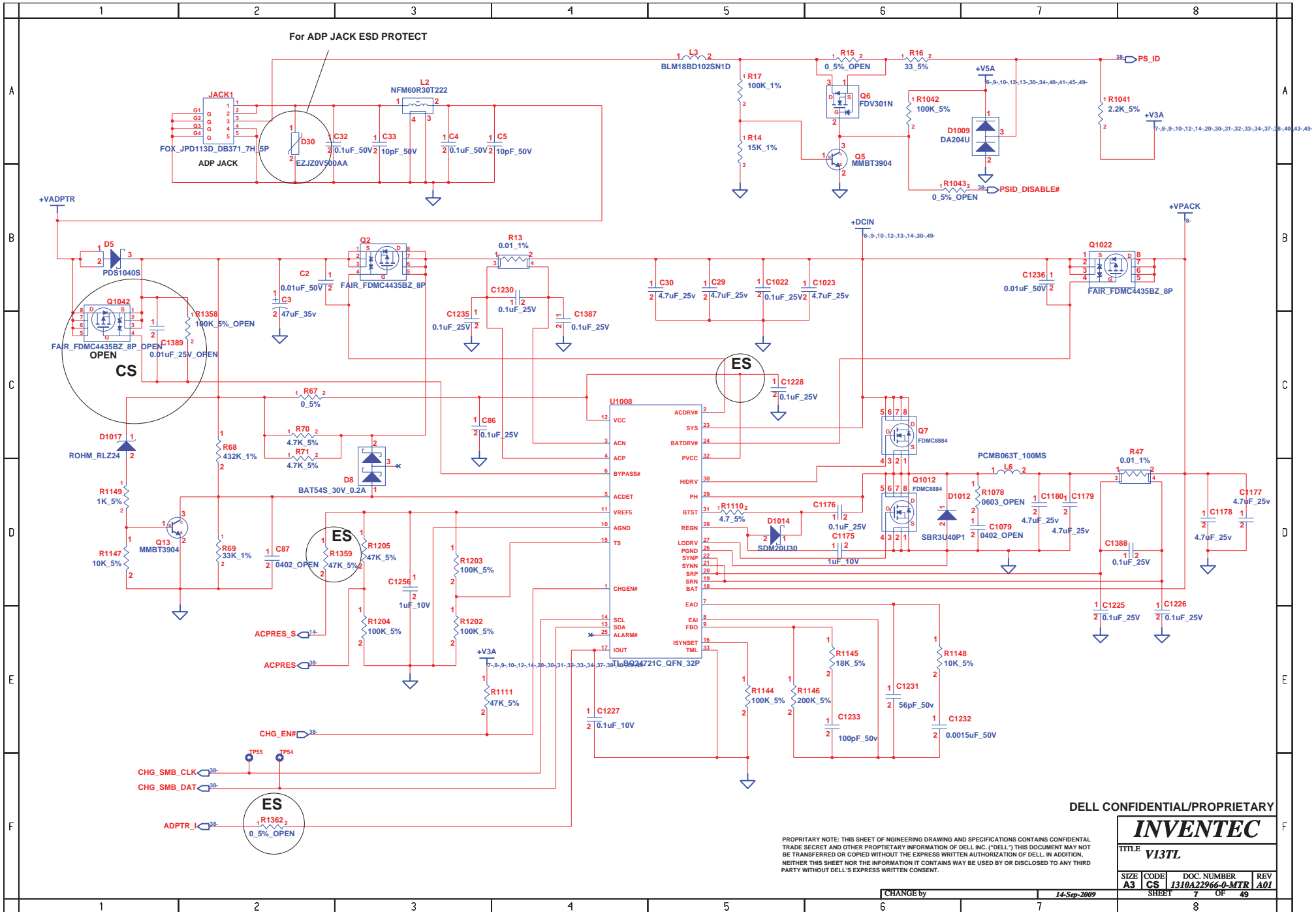
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Power Block Diagram			
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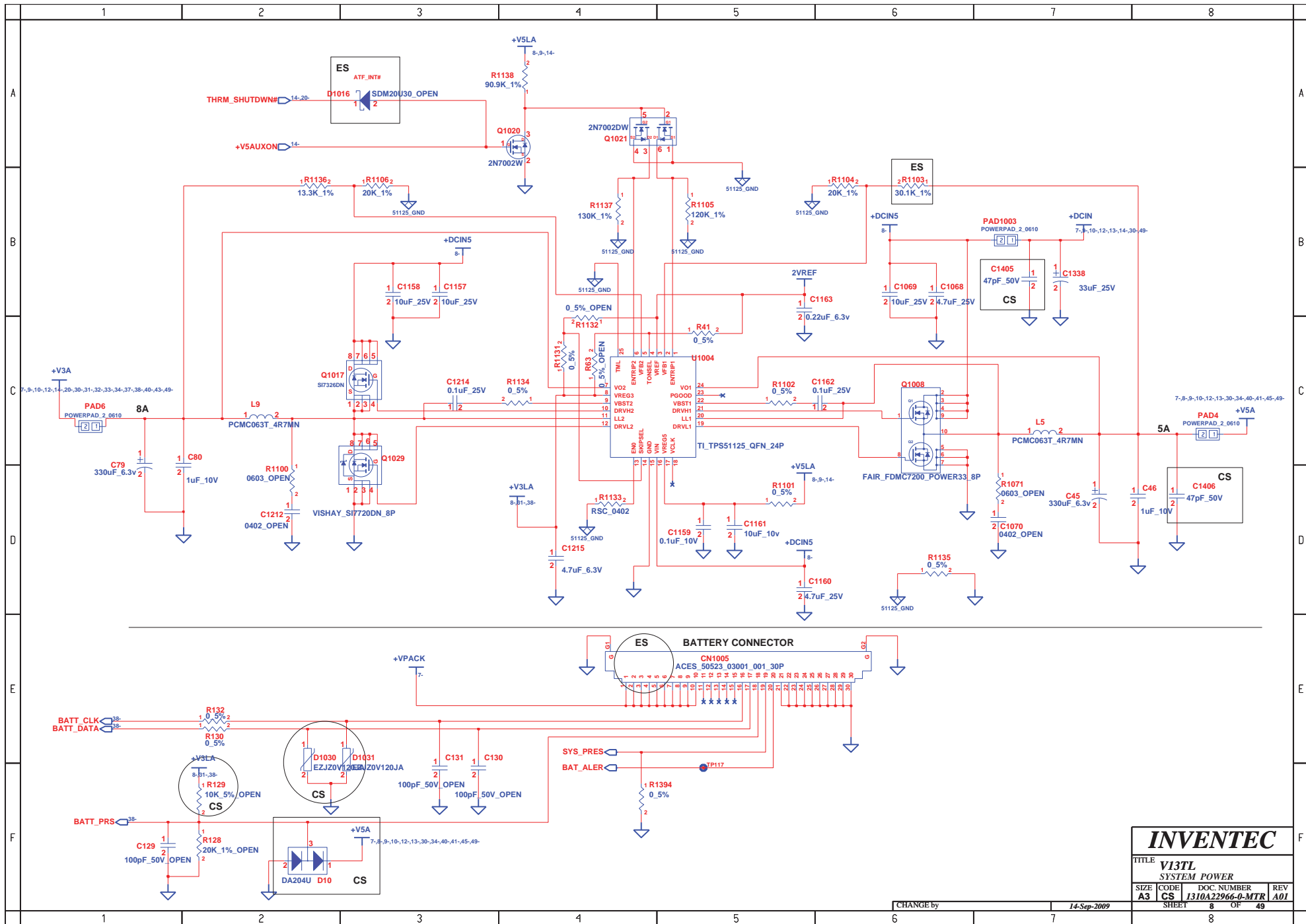
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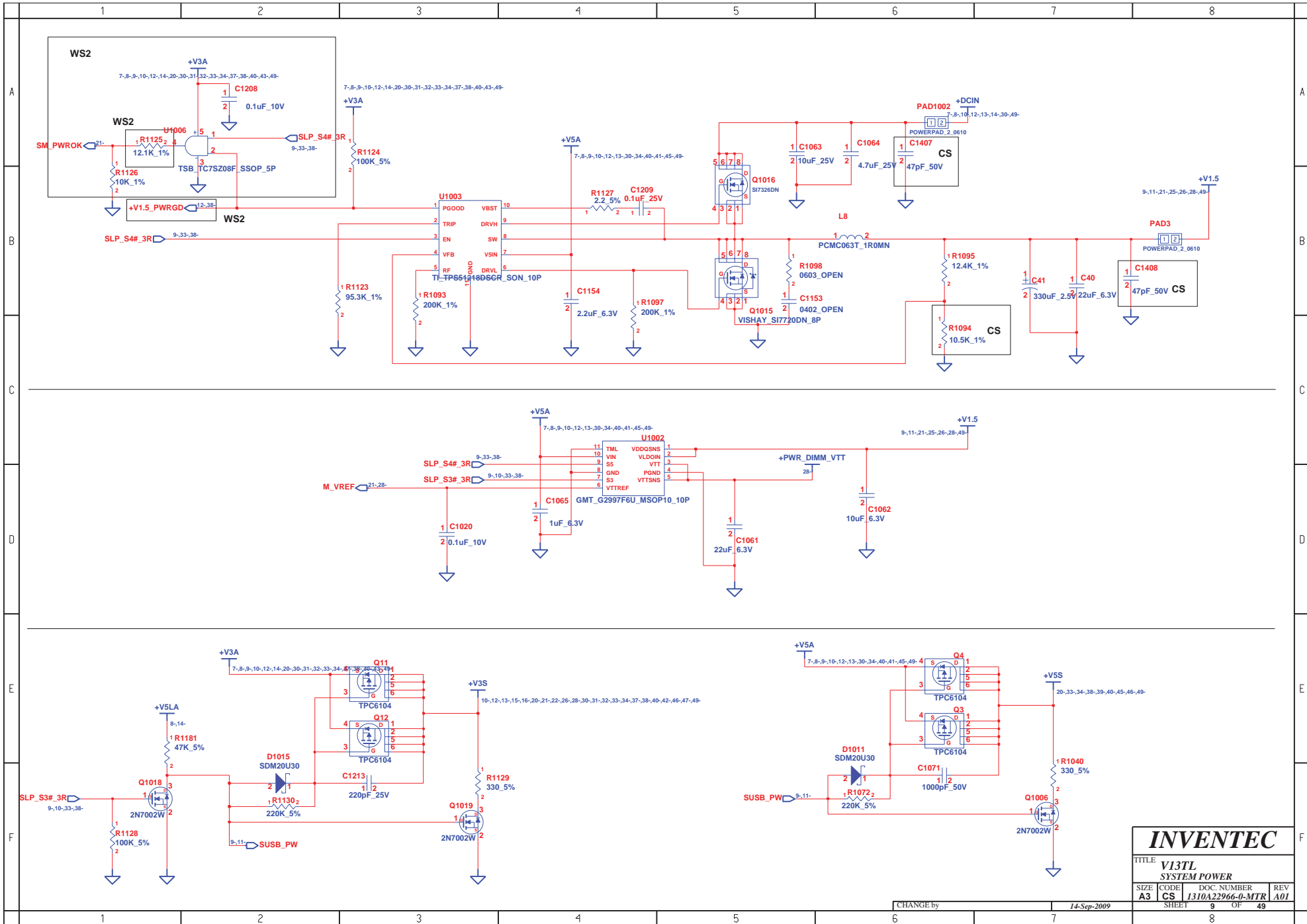
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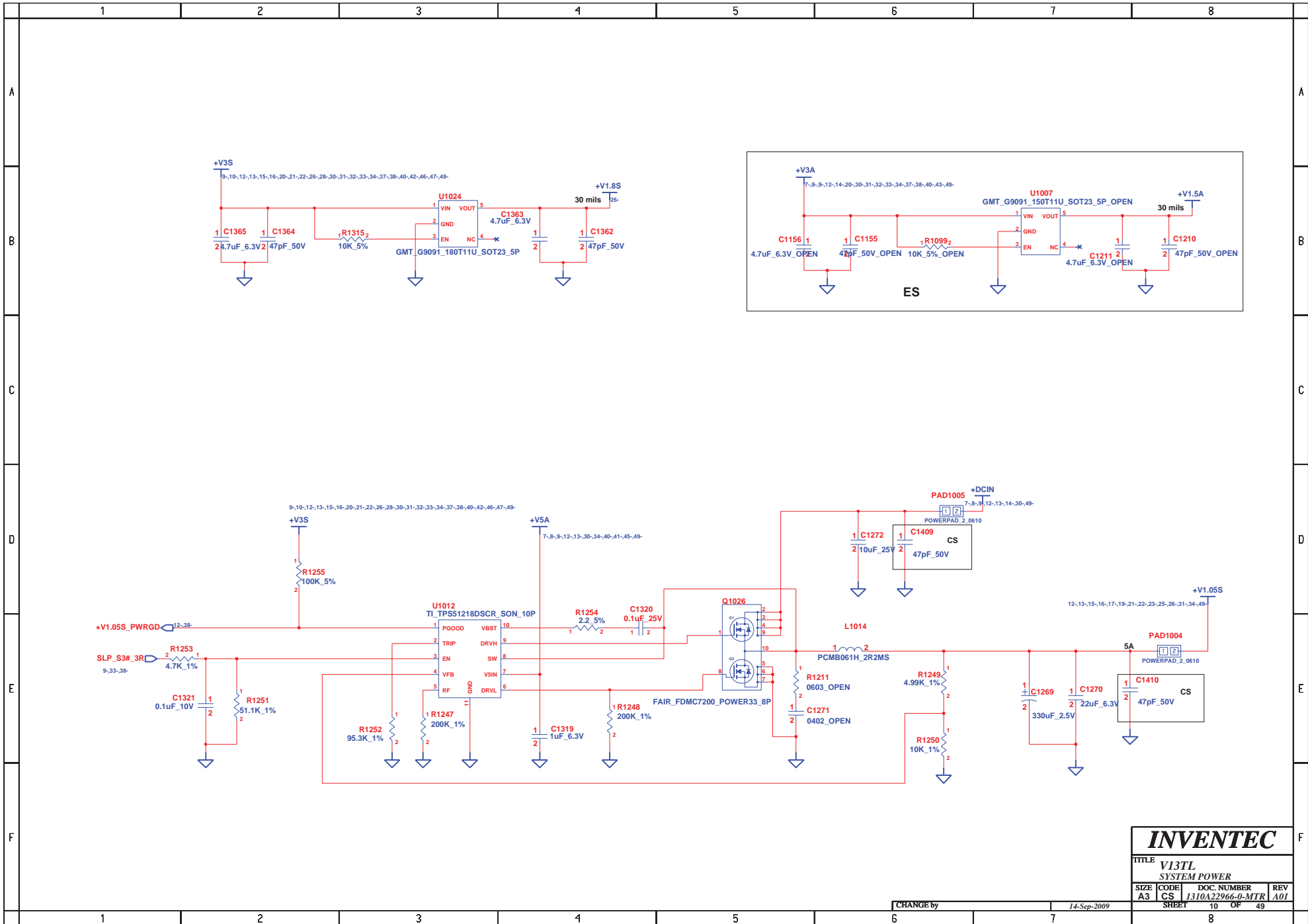


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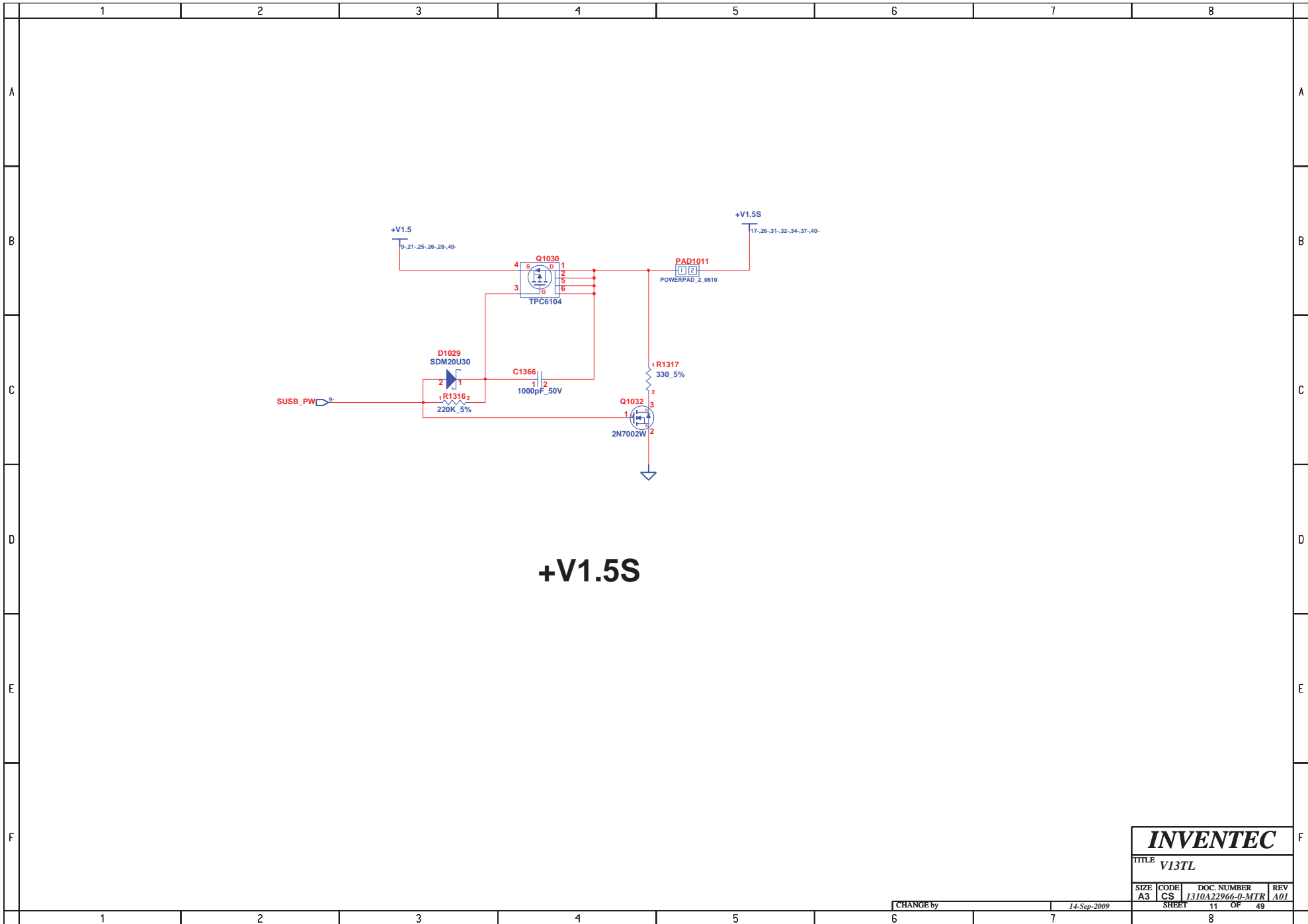
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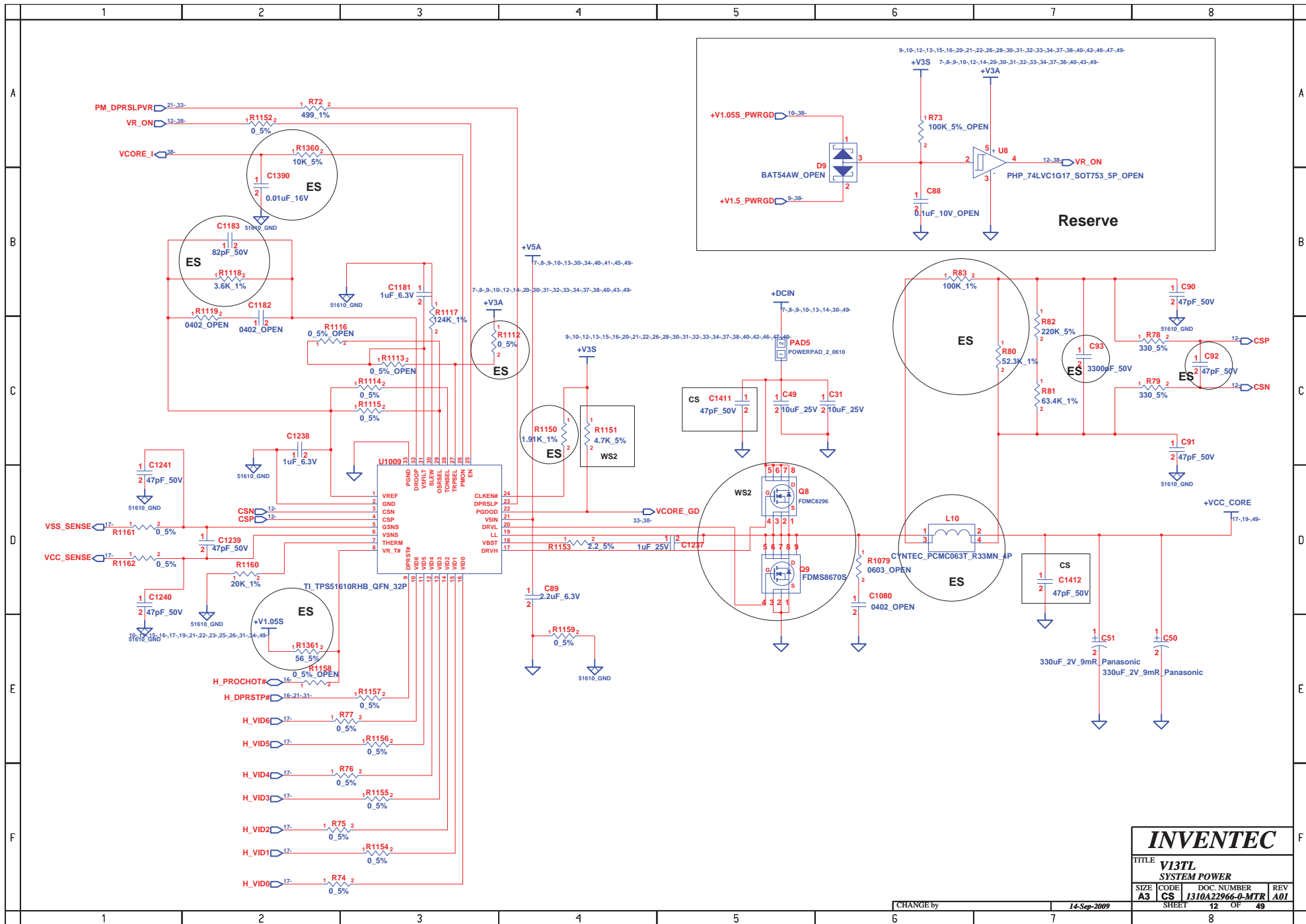
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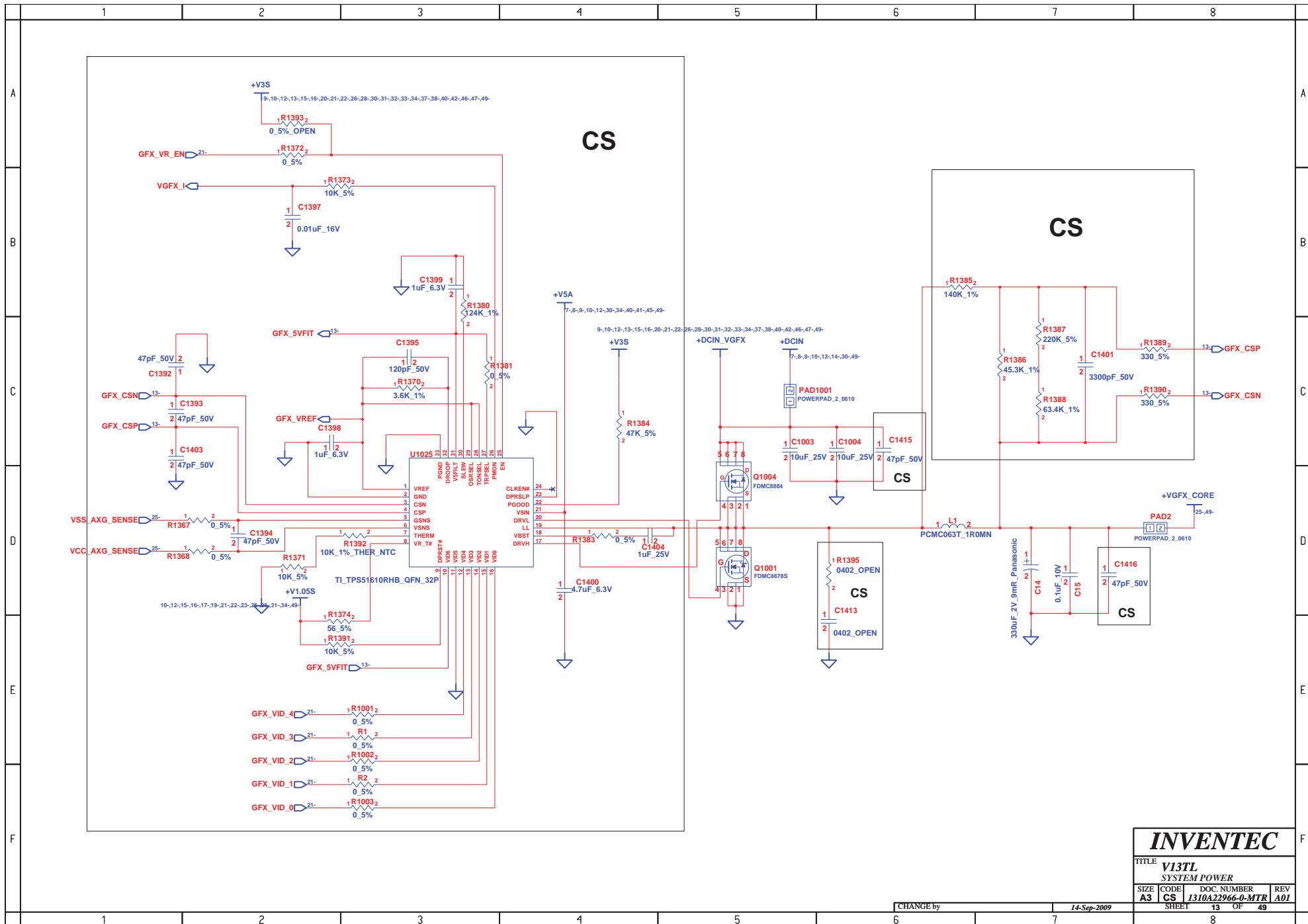


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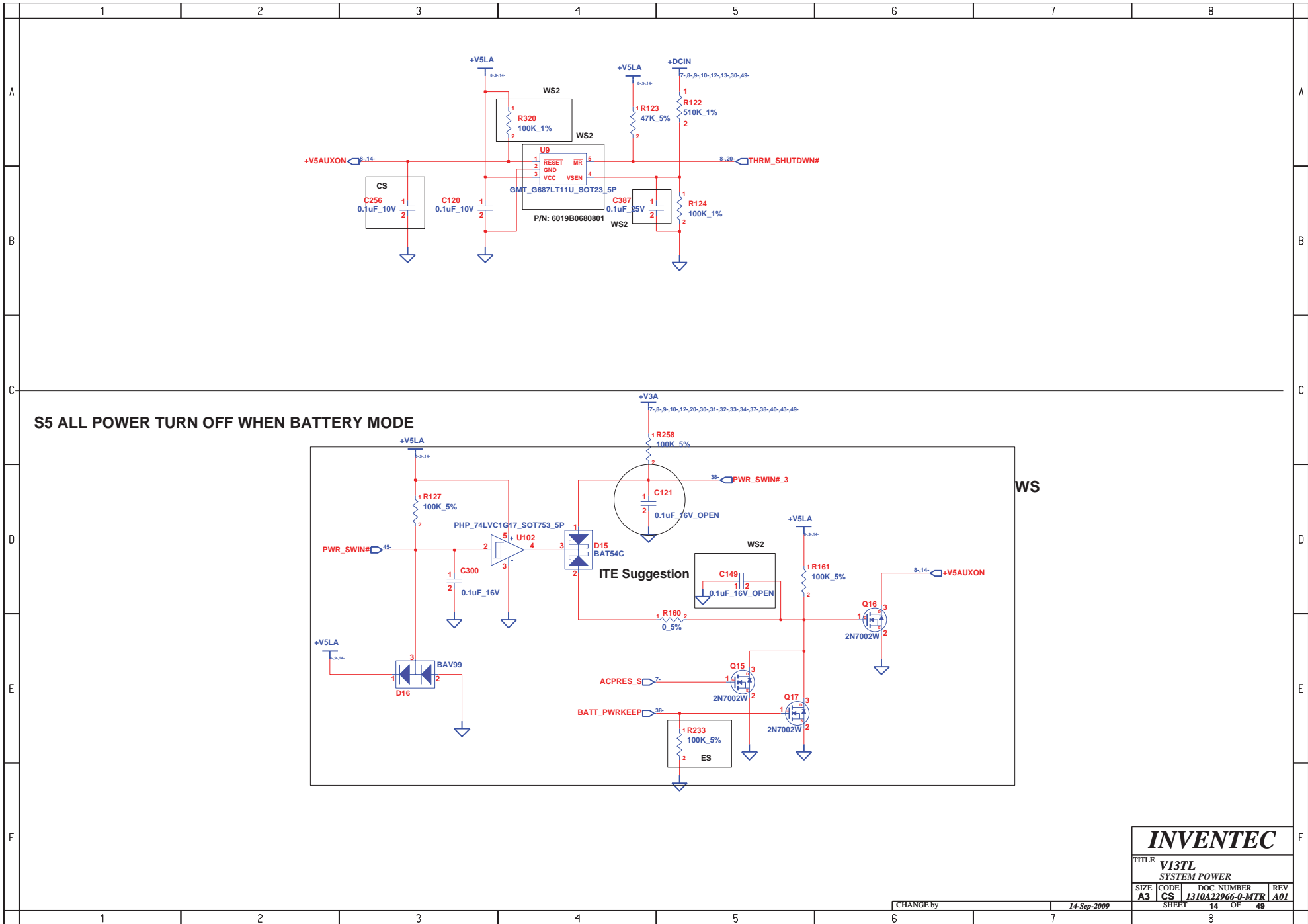
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<http://laptop-motherboard-schematic.blogspot.com/>



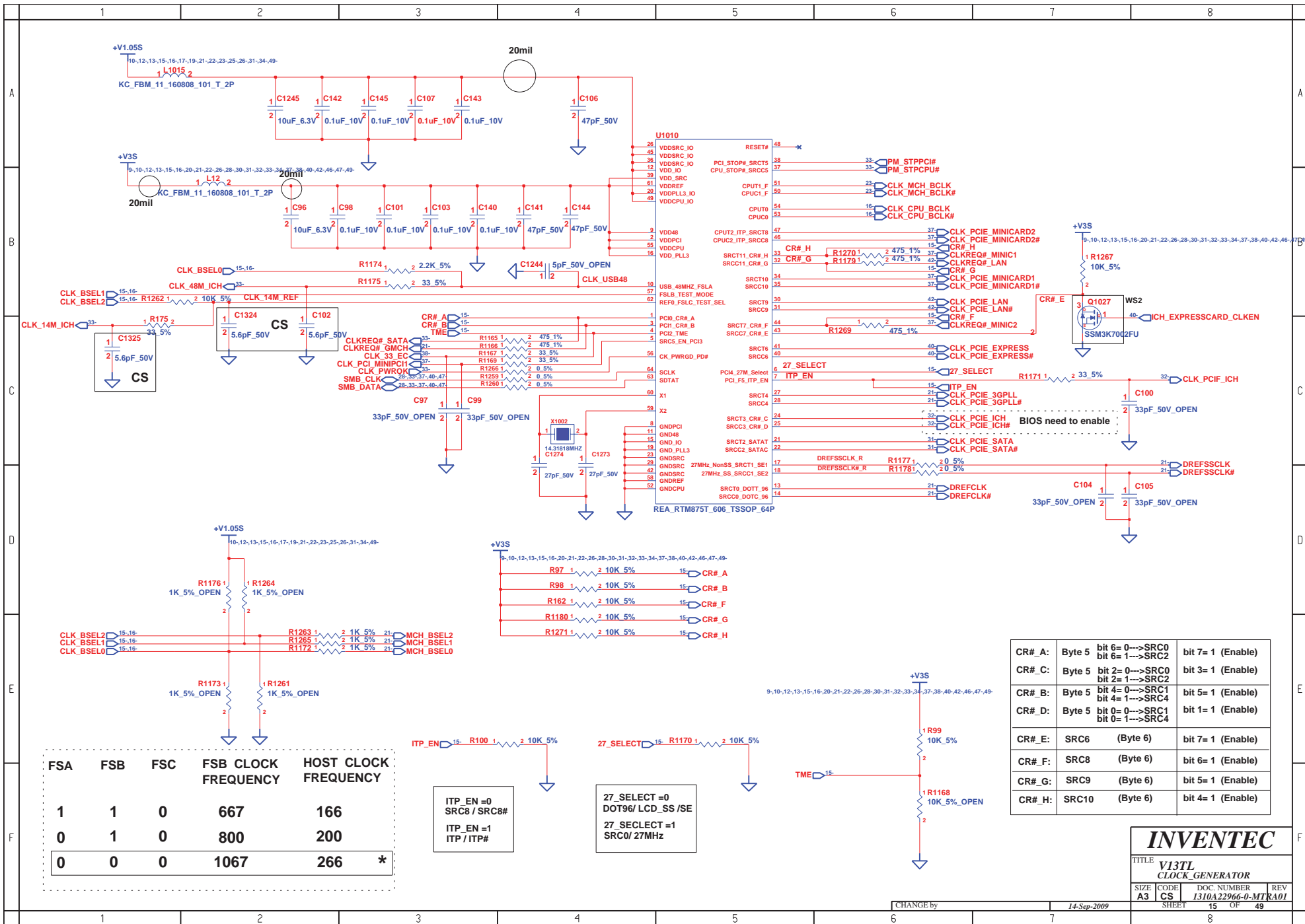
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S5 ALL POWER TURN OFF WHEN BATTERY MODE

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FSA	FSB	FSC	FSB CLOCK FREQUENCY	HOST CLOCK FREQUENCY
1	1	0	667	166
0	1	0	800	200
0	0	0	1067	266 *

ITP_EN =0 SRC8 / SRC8#
ITP_EN =1 ITP / ITP#

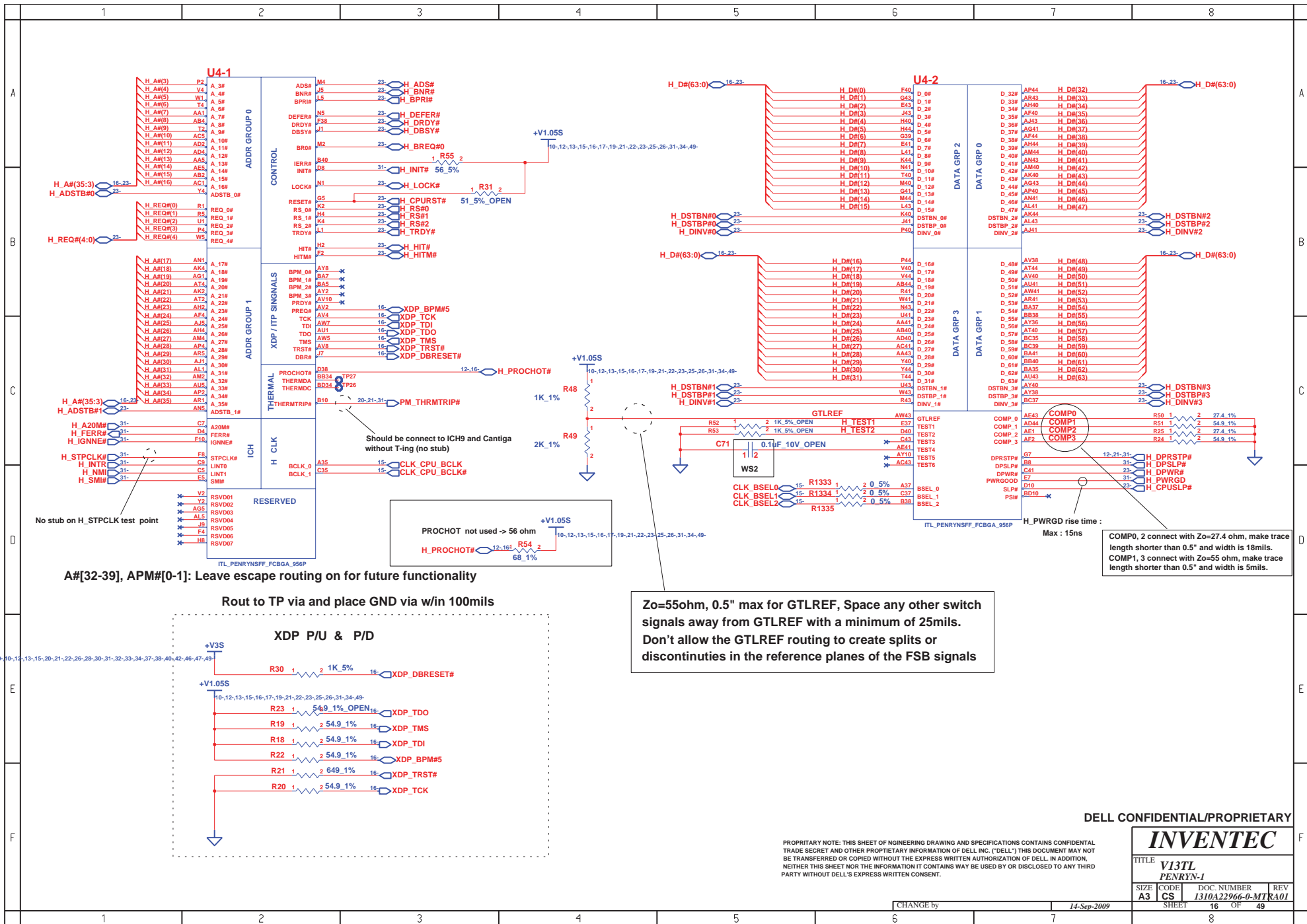
27_SELECT =0 DOT96/ LCD_SS / SE
27_SELECT =1 SRC0/ 27MHz

CR#_A:	Byte 5 bit 6 = 0	---SRC0	bit 7 = 1 (Enable)
CR#_C:	Byte 5 bit 2 = 0	---SRC2	bit 3 = 1 (Enable)
CR#_B:	Byte 5 bit 4 = 0	---SRC1	bit 5 = 1 (Enable)
CR#_D:	Byte 5 bit 0 = 0	---SRC4	bit 1 = 1 (Enable)
CR#_E:	SRC6	(Byte 6)	bit 7 = 1 (Enable)
CR#_F:	SRC8	(Byte 6)	bit 6 = 1 (Enable)
CR#_G:	SRC9	(Byte 6)	bit 5 = 1 (Enable)
CR#_H:	SRC10	(Byte 6)	bit 4 = 1 (Enable)

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TITLE: V13TL CLOCK GENERATOR

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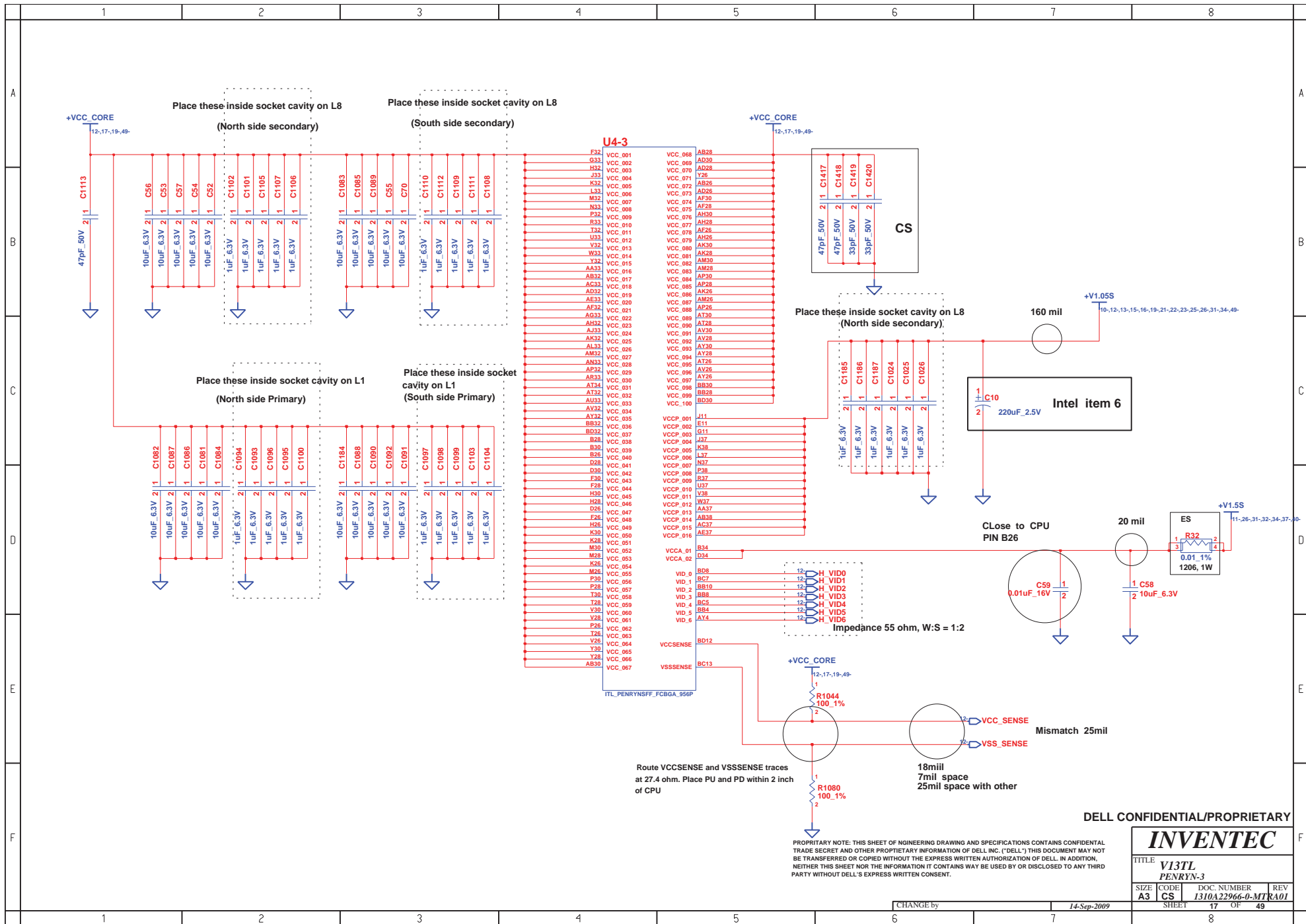
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TITLE V13TL PENRYN-1			
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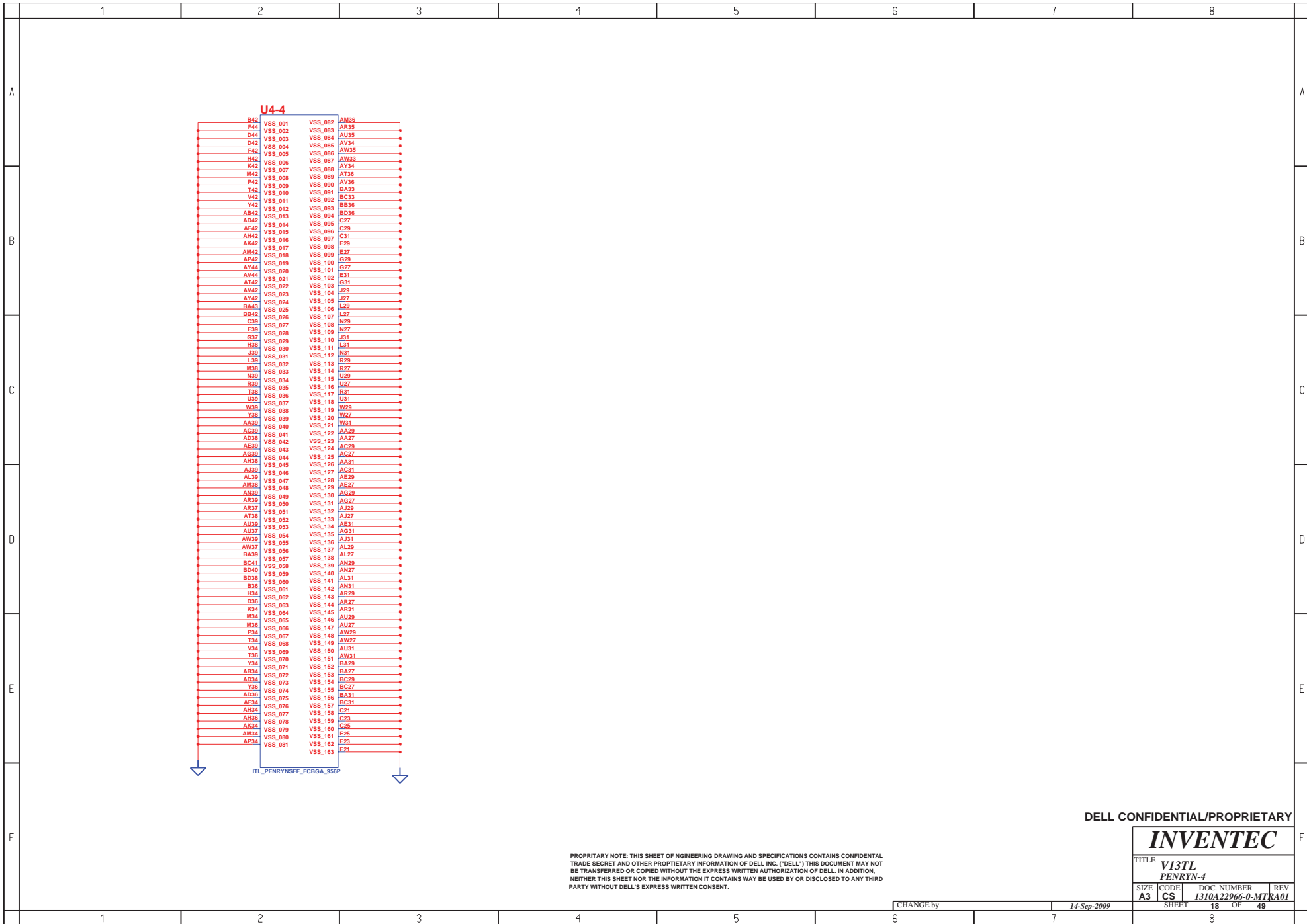
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TITLE V13TL PENRYN-3			
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U4-4

- B42 VSS_001 VSS_082 AM36
- F44 VSS_002 VSS_083 AR35
- D44 VSS_003 VSS_084 AU35
- D42 VSS_004 VSS_085 AV34
- F42 VSS_005 VSS_086 AW35
- H42 VSS_006 VSS_087 AX33
- K42 VSS_007 VSS_088 AY34
- M42 VSS_008 VSS_089 AT36
- P42 VSS_009 VSS_090 AV35
- T42 VSS_010 VSS_091 BA33
- V42 VSS_011 VSS_092 BC33
- Y42 VSS_012 VSS_093 BB36
- AB42 VSS_013 VSS_094 BD36
- AD42 VSS_014 VSS_095 C27
- AF42 VSS_015 VSS_096 C29
- AH42 VSS_016 VSS_097 C31
- AK42 VSS_017 VSS_098 E29
- AM42 VSS_018 VSS_099 E27
- AP42 VSS_019 VSS_100 G29
- AY44 VSS_020 VSS_101 G27
- AI44 VSS_021 VSS_102 E31
- AT42 VSS_022 VSS_103 R31
- AV42 VSS_023 VSS_104 J29
- AY42 VSS_024 VSS_105 J27
- BA43 VSS_025 VSS_106 L29
- BB42 VSS_026 VSS_107 L27
- C39 VSS_027 VSS_108 N29
- E39 VSS_028 VSS_109 N27
- G37 VSS_029 VSS_110 J31
- H38 VSS_030 VSS_111 L31
- J39 VSS_031 VSS_112 N31
- L39 VSS_032 VSS_113 R29
- M38 VSS_033 VSS_114 R27
- N39 VSS_034 VSS_115 U29
- R39 VSS_035 VSS_116 U27
- T38 VSS_036 VSS_117 R31
- U39 VSS_037 VSS_118 U31
- W39 VSS_038 VSS_119 W29
- Y38 VSS_039 VSS_120 W27
- AA39 VSS_040 VSS_121 W31
- AC39 VSS_041 VSS_122 AA29
- AD38 VSS_042 VSS_123 AA27
- AE39 VSS_043 VSS_124 AC29
- AG39 VSS_044 VSS_125 AC27
- AH38 VSS_045 VSS_126 AA31
- AJ39 VSS_046 VSS_127 AC31
- AL39 VSS_047 VSS_128 AE29
- AM38 VSS_048 VSS_129 AE27
- AN39 VSS_049 VSS_130 AG29
- AR39 VSS_050 VSS_131 AG27
- AR37 VSS_051 VSS_132 AJ29
- AT38 VSS_052 VSS_133 AJ27
- AU39 VSS_053 VSS_134 AE31
- AU37 VSS_054 VSS_135 AG31
- AW39 VSS_055 VSS_136 AJ31
- AW37 VSS_056 VSS_137 AL29
- BA30 VSS_057 VSS_138 AL27
- BC41 VSS_058 VSS_139 AN29
- BD40 VSS_059 VSS_140 AN27
- BD38 VSS_060 VSS_141 AL31
- B36 VSS_061 VSS_142 AN31
- H34 VSS_062 VSS_143 AR29
- D36 VSS_063 VSS_144 AR27
- K34 VSS_064 VSS_145 AR31
- M34 VSS_065 VSS_146 AU29
- M36 VSS_066 VSS_147 AU27
- P34 VSS_067 VSS_148 AR29
- T34 VSS_068 VSS_149 AW27
- V34 VSS_069 VSS_150 AU31
- T36 VSS_070 VSS_151 AW31
- T34 VSS_071 VSS_152 BA29
- AB34 VSS_072 VSS_153 BA27
- AD34 VSS_073 VSS_154 BC29
- Y36 VSS_074 VSS_155 BC27
- AD36 VSS_075 VSS_156 BA31
- AF34 VSS_076 VSS_157 BC31
- AH34 VSS_077 VSS_158 C21
- AH36 VSS_078 VSS_159 C23
- AI34 VSS_079 VSS_160 C25
- AM34 VSS_080 VSS_161 E25
- AP34 VSS_081 VSS_162 E23
- VSS_163 E21

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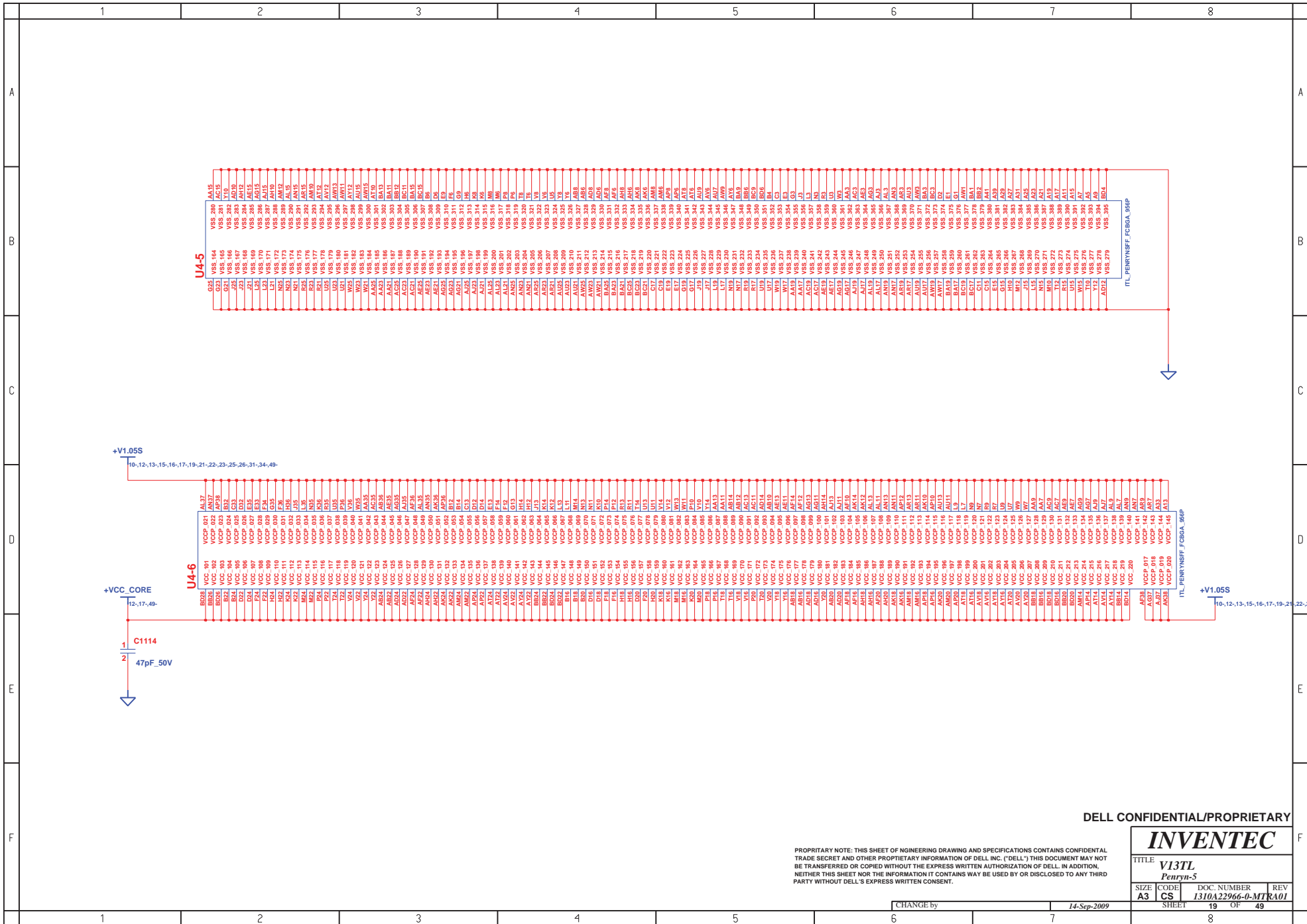
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PENRYN-4			
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V13TL
Penryn-5

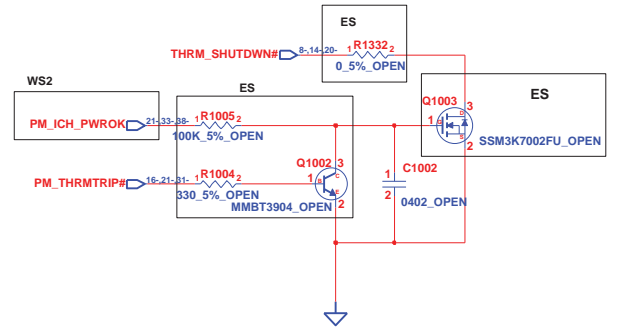
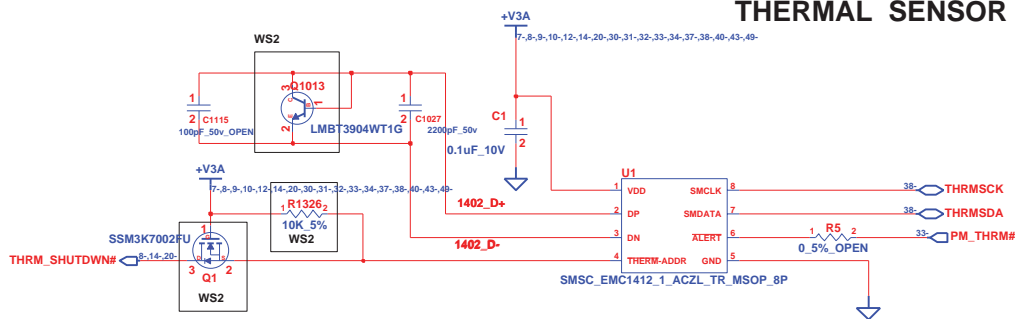
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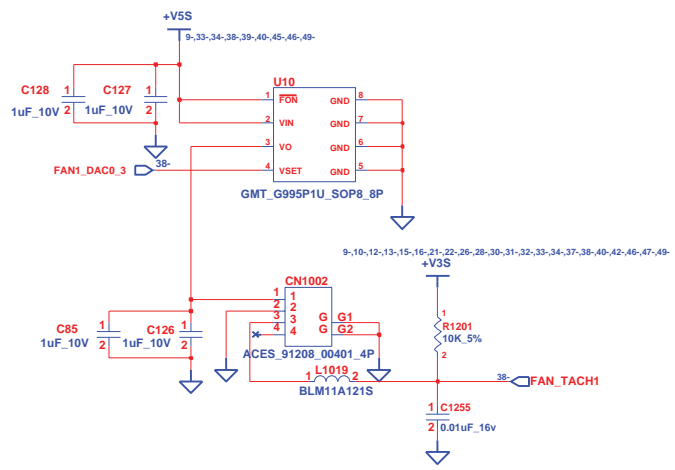
THERMAL SENSOR



6/10 Change to EMC1412
6019B0643301

- GND _____
- MB_THERMDC _____ 10mil
- MB_THERMDA _____ 10mil
- GND _____ 10mil

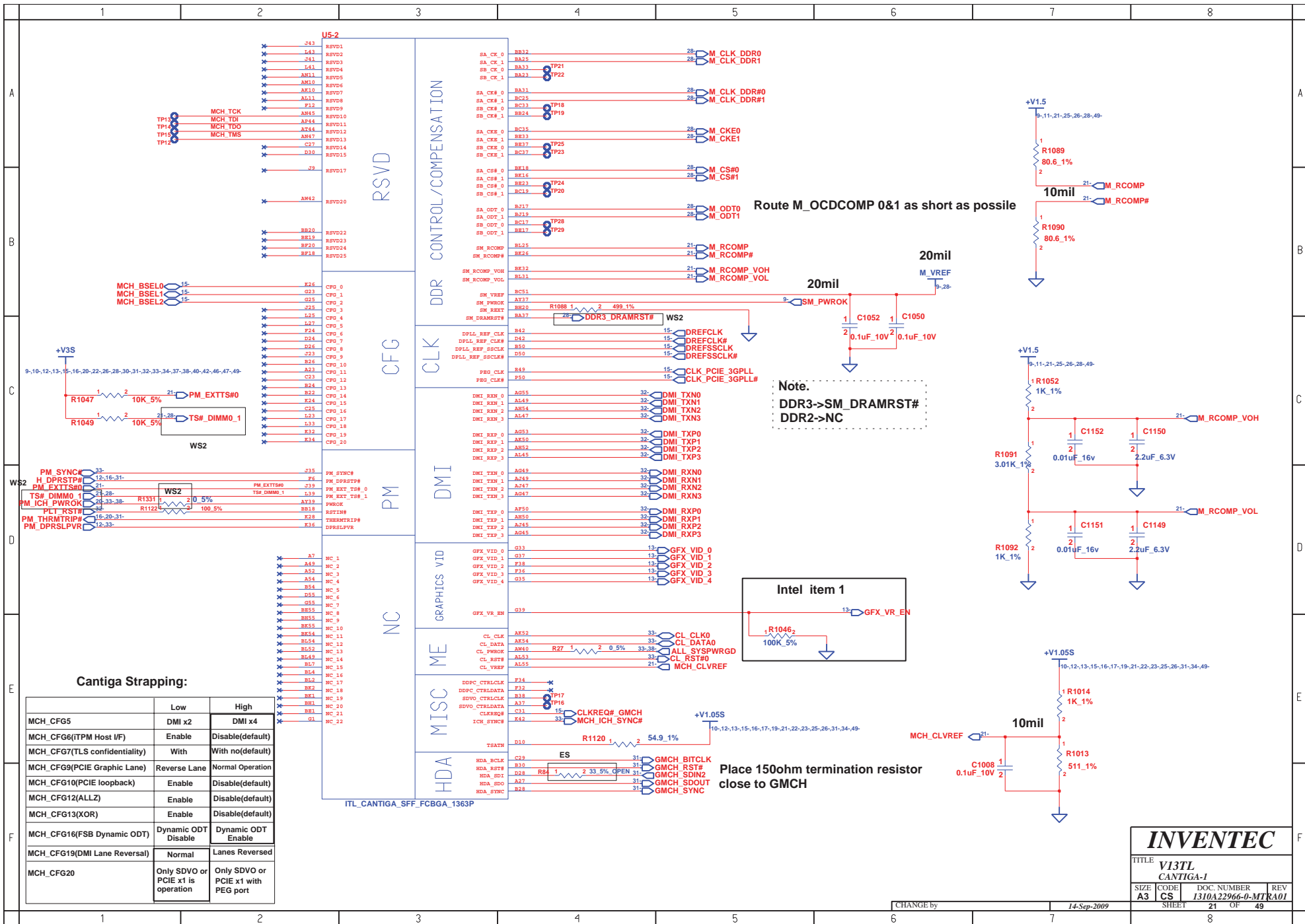
Fan control



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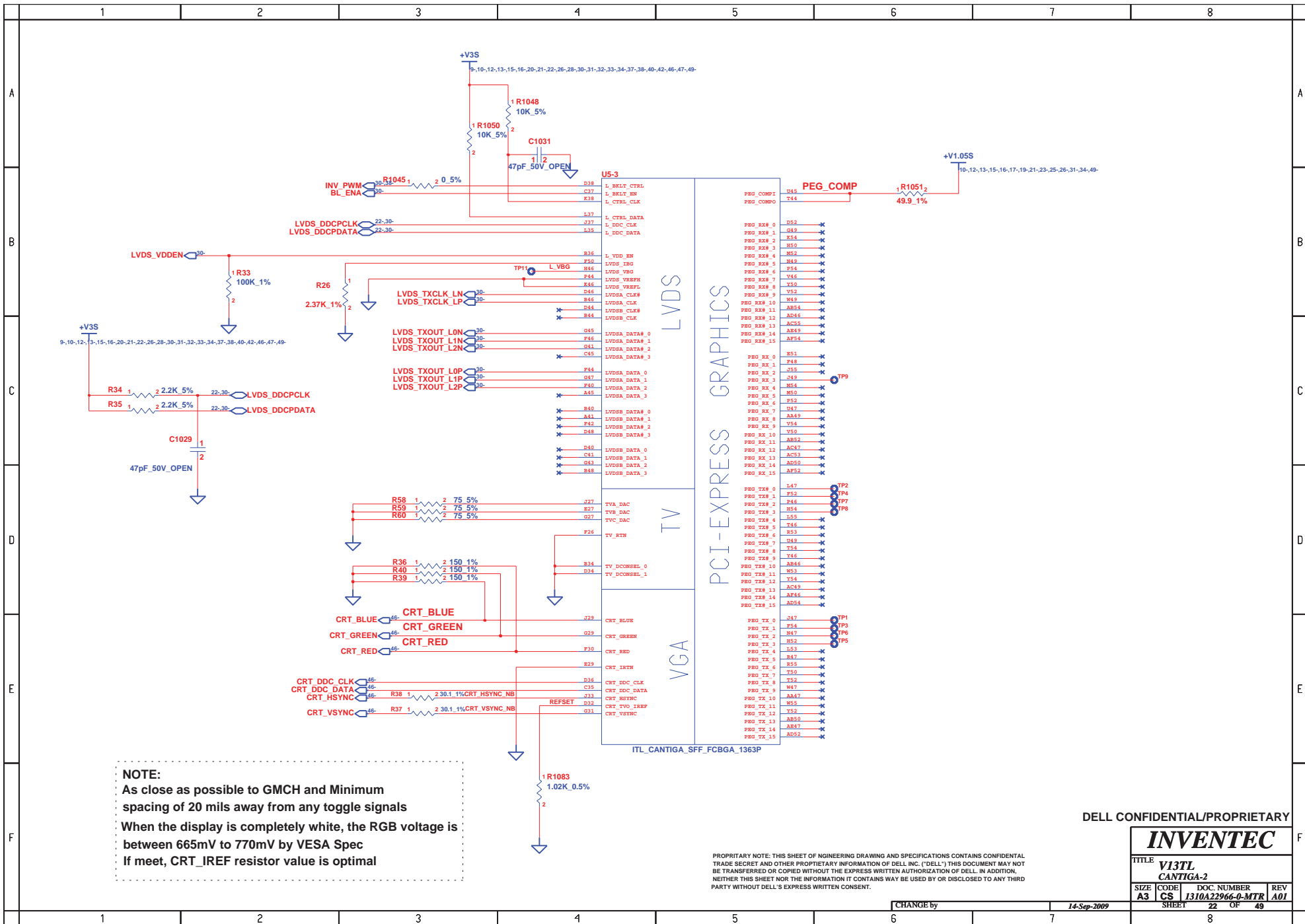
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V13TL
CANTIGA-1

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NOTE:
 As close as possible to GMCH and Minimum spacing of 20 mils away from any toggle signals
 When the display is completely white, the RGB voltage is between 665mV to 770mV by VESA Spec
 If meet, CRT_IREF resistor value is optimal

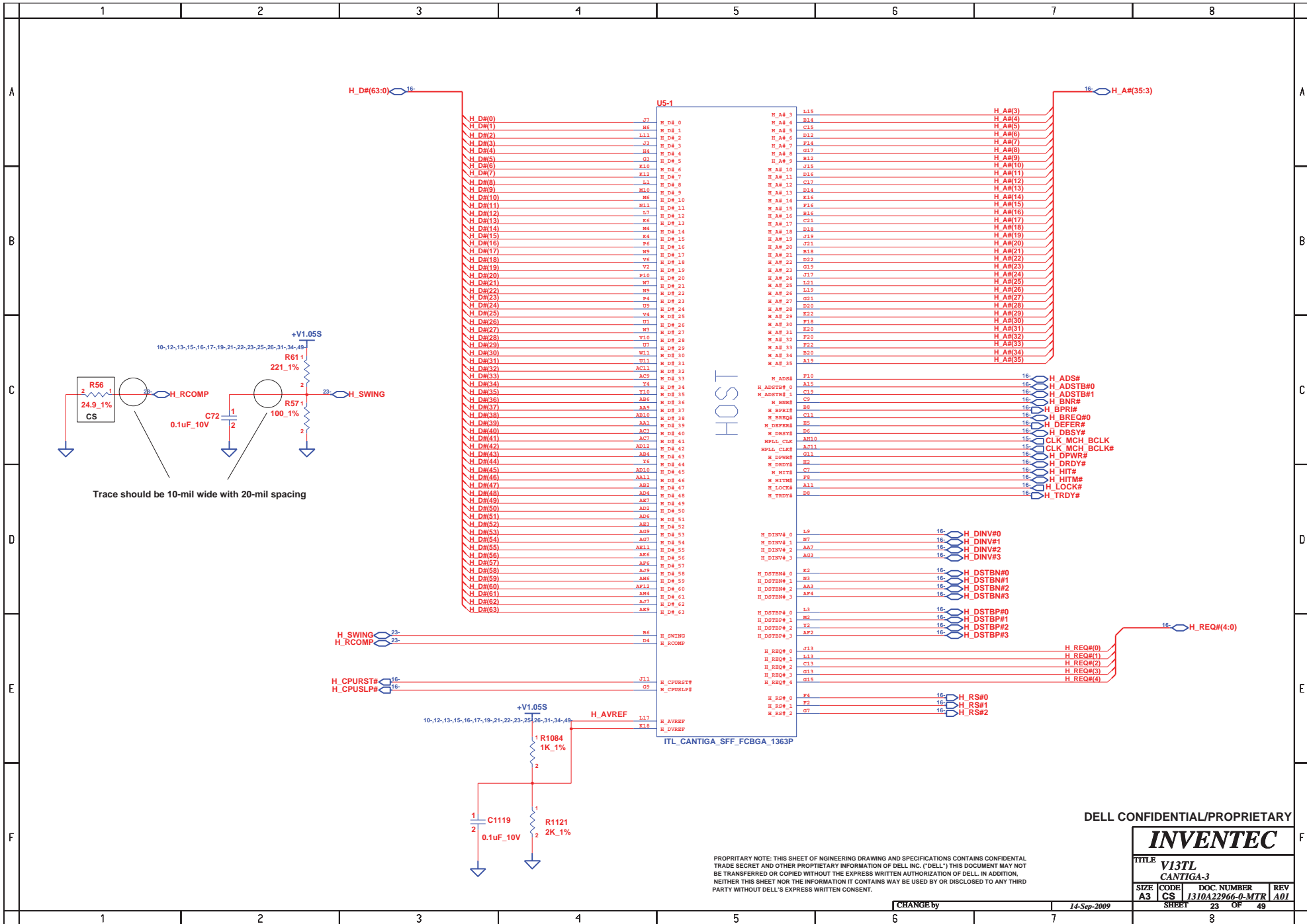
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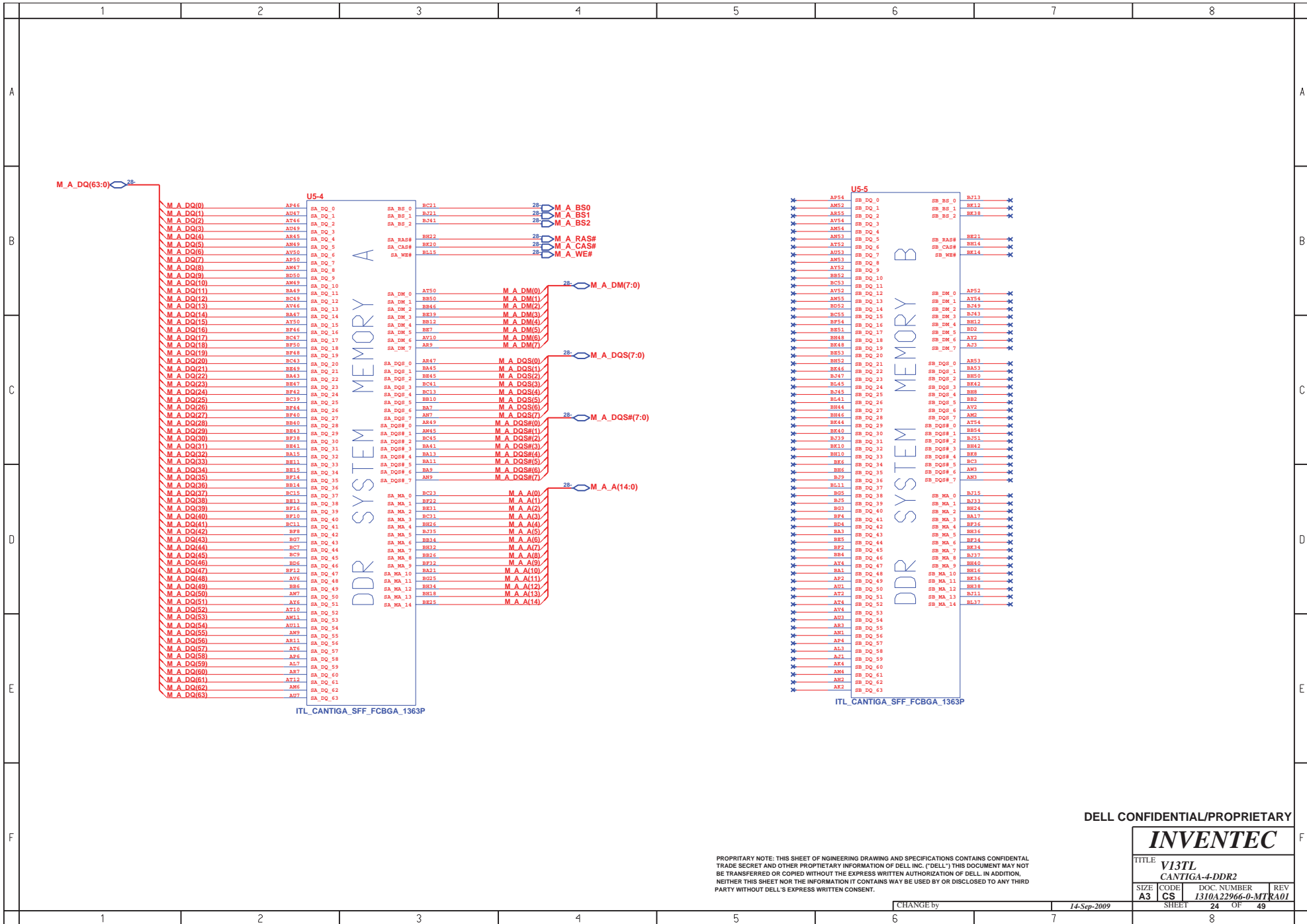
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TITLE
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CANTIGA-3

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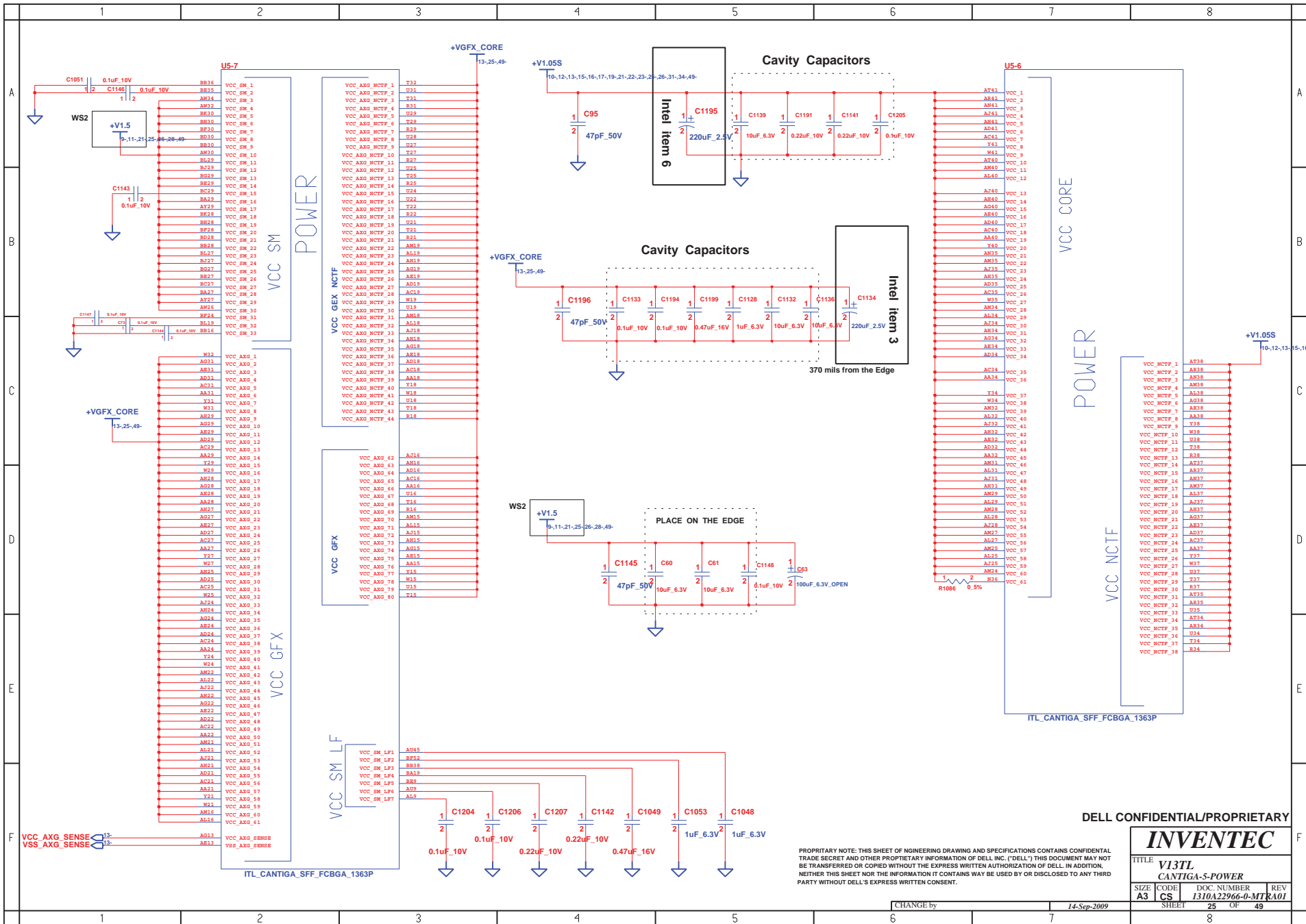
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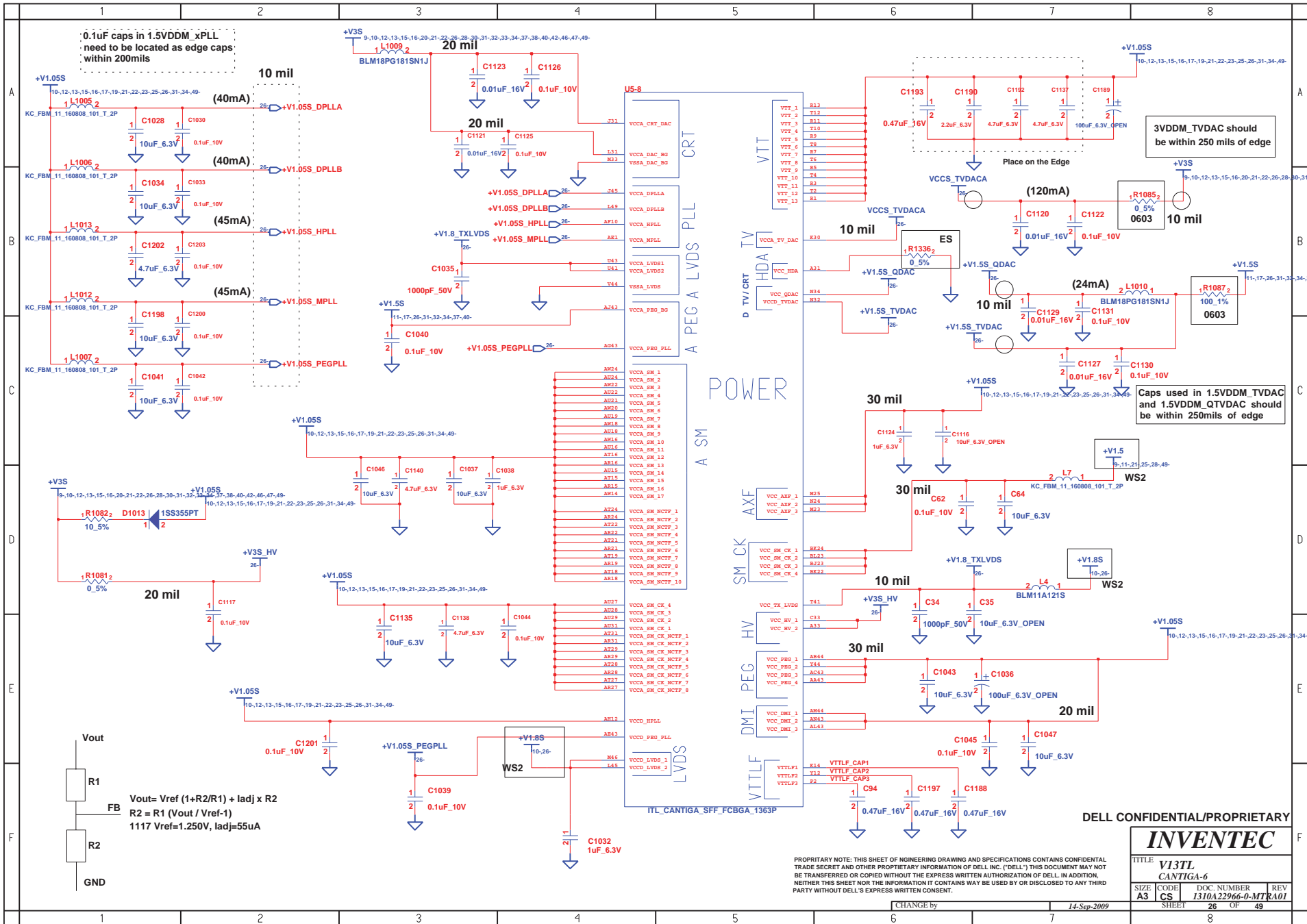
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TITLE: V13TL
CANTIGA-5-POWER

SIZE	CODE	DOC. NUMBER	REV
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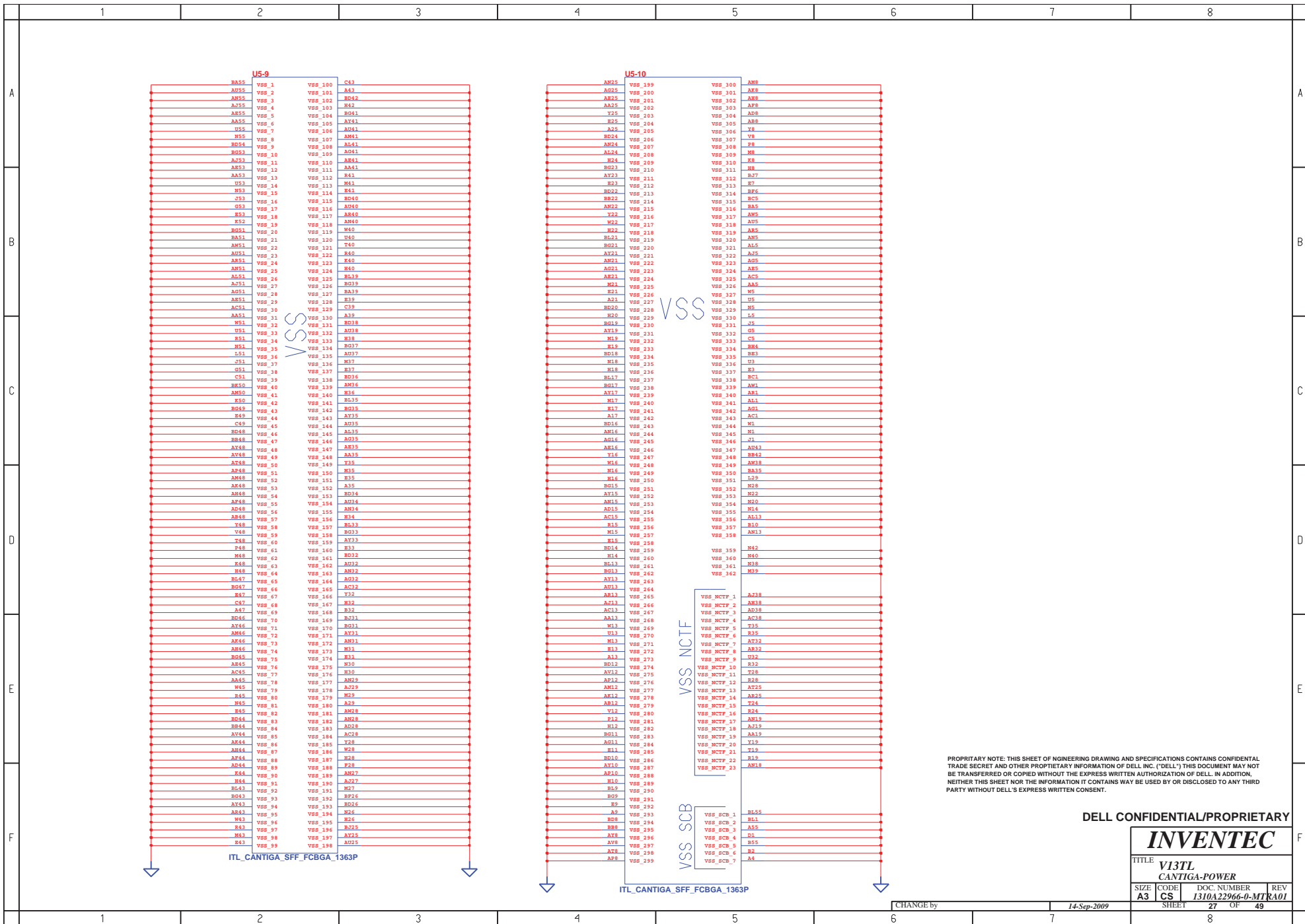


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TITLE **V13TL**
CANTIGA-6

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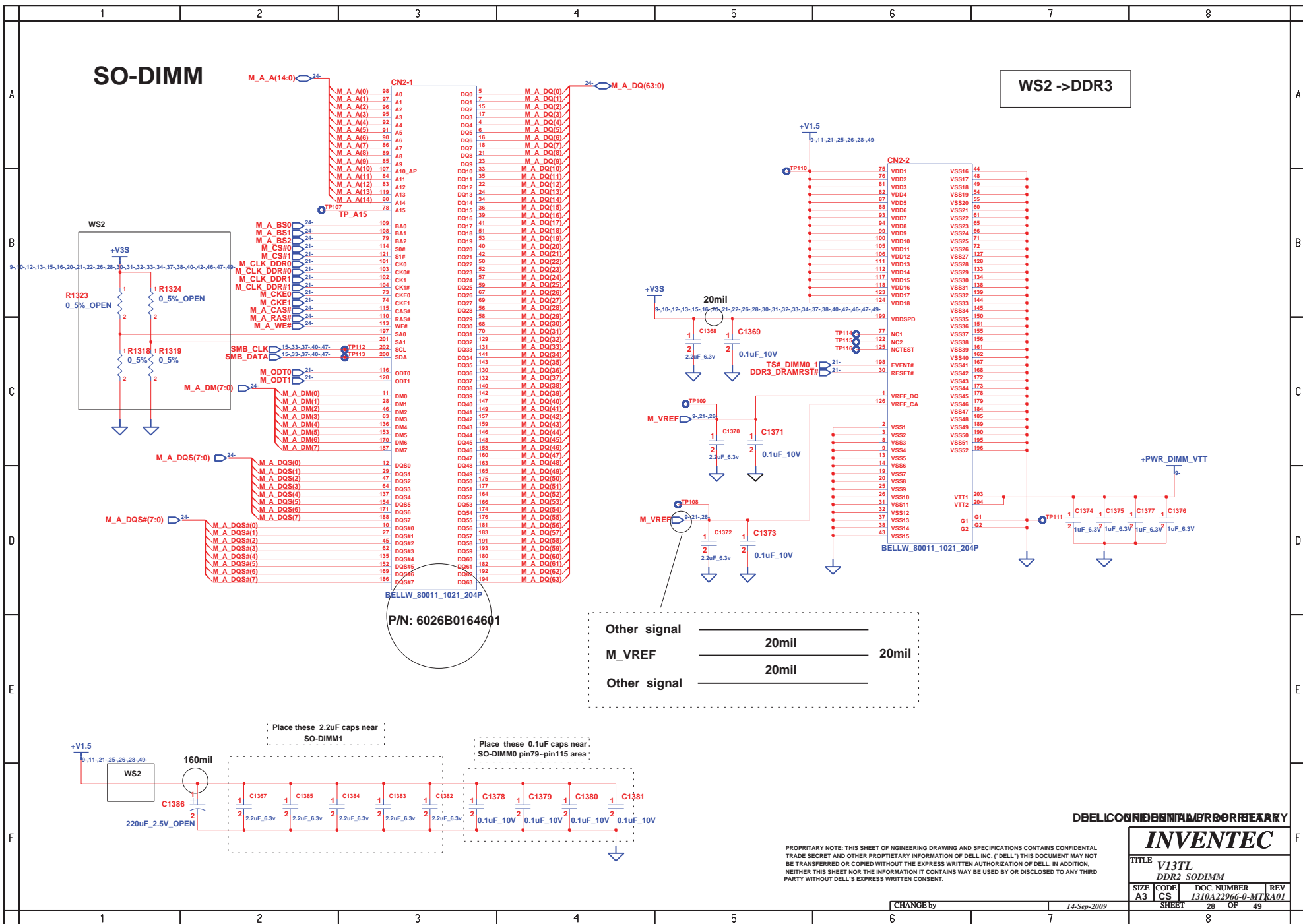


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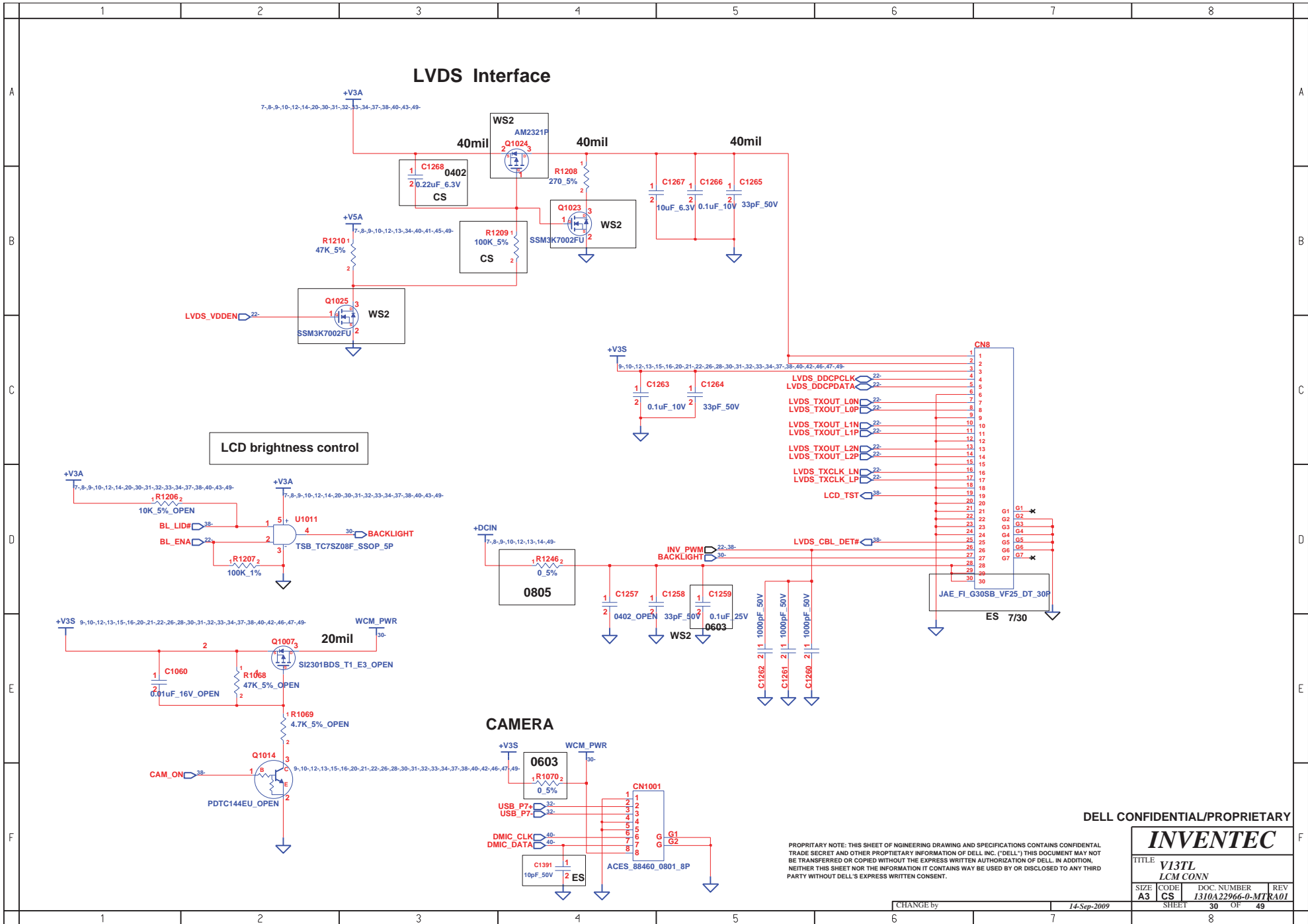
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SIZE A3	CODE CS	DOC. NUMBER I310A22966-0-MTR	REV A01
SHEET 27		OF 49	



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B									B
C									C
D									D
E									E
F									F
	1	2	3	4	5	6	7	8	

INVENTEC			
TITLE			
V13TL DDR DAMPING			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A22966-0-MTR	A01
SHEET		29	OF 49

CHANGE by 14-Sep-2009



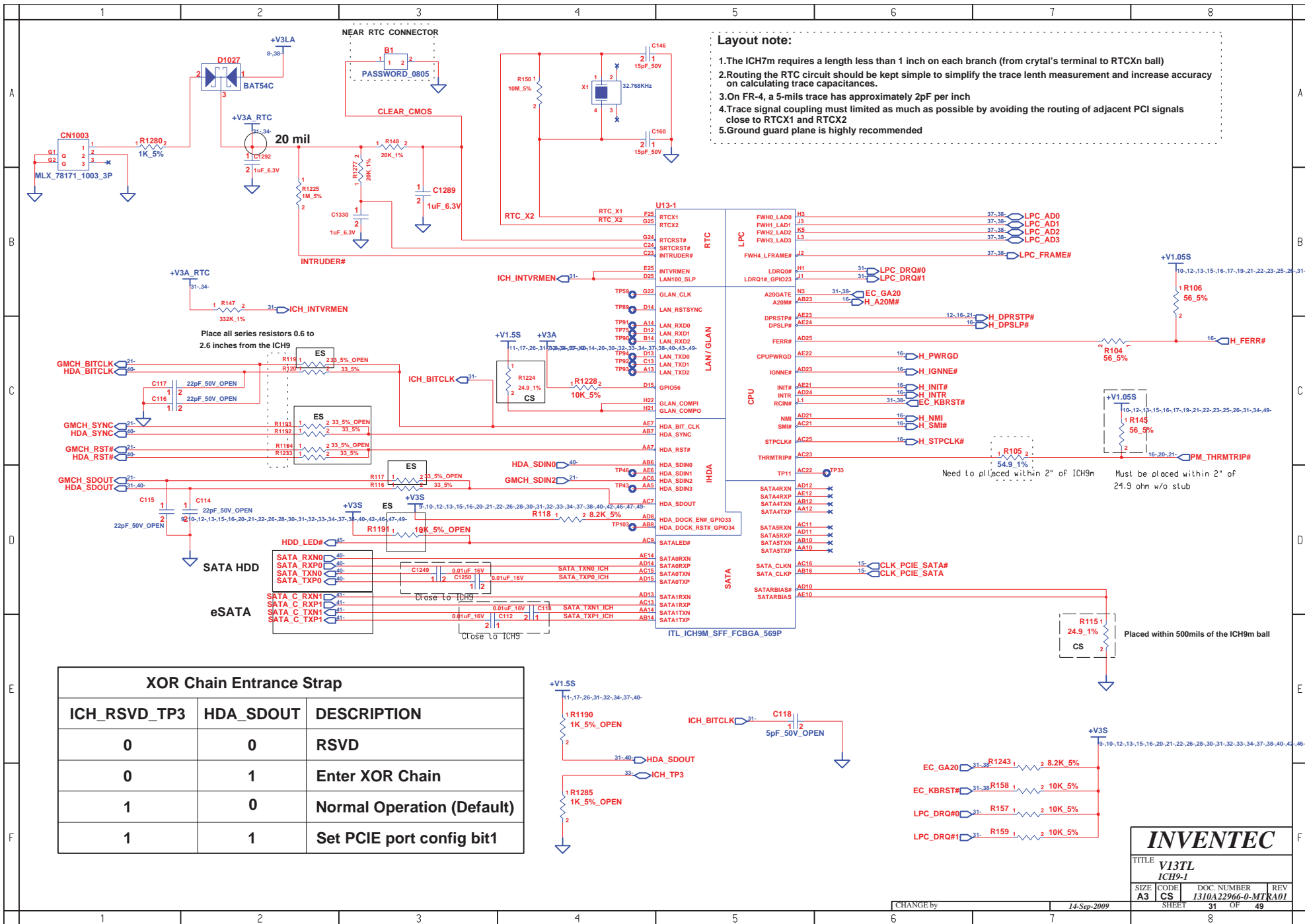
DELL CONFIDENTIAL/PROPRIETARY

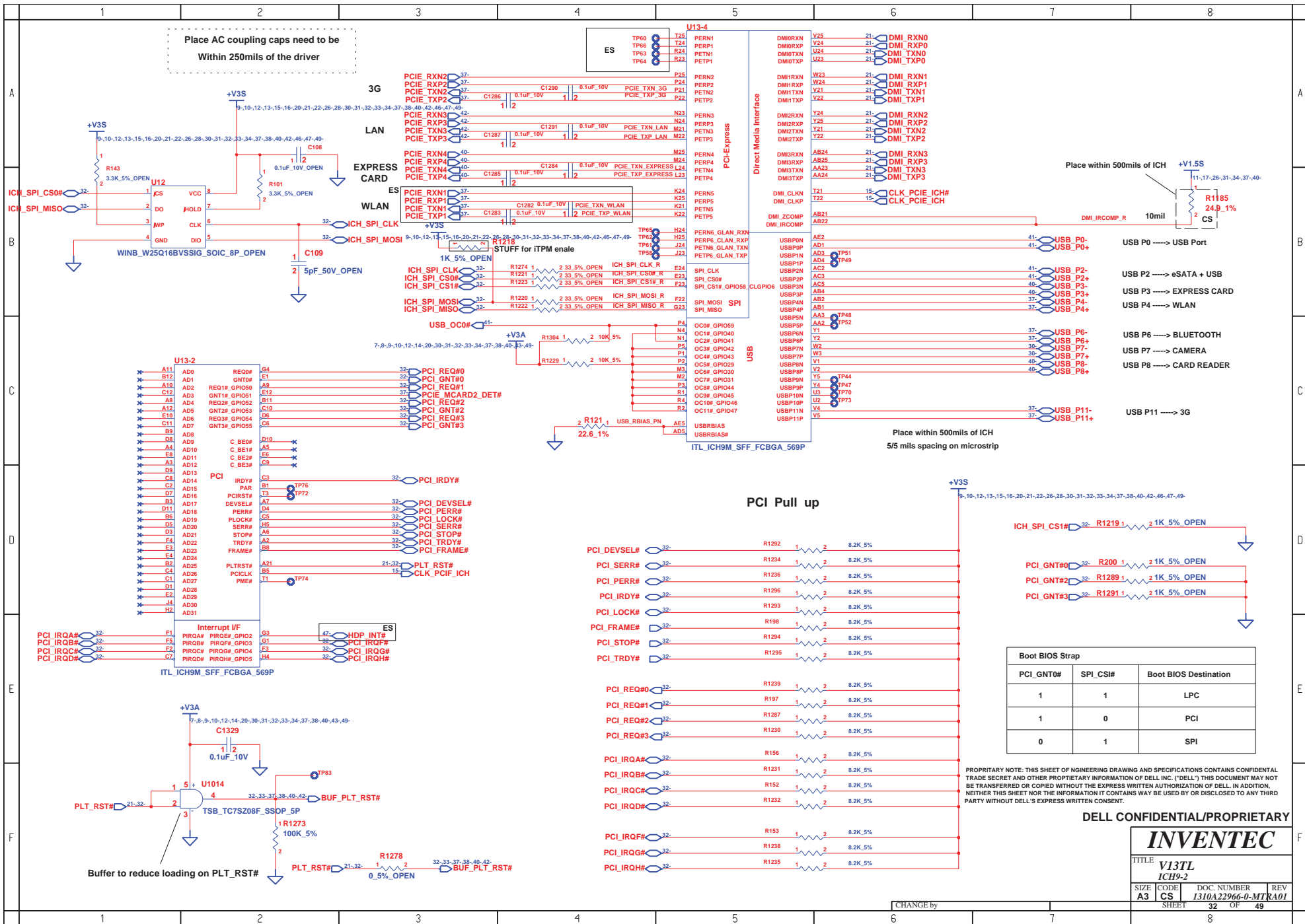
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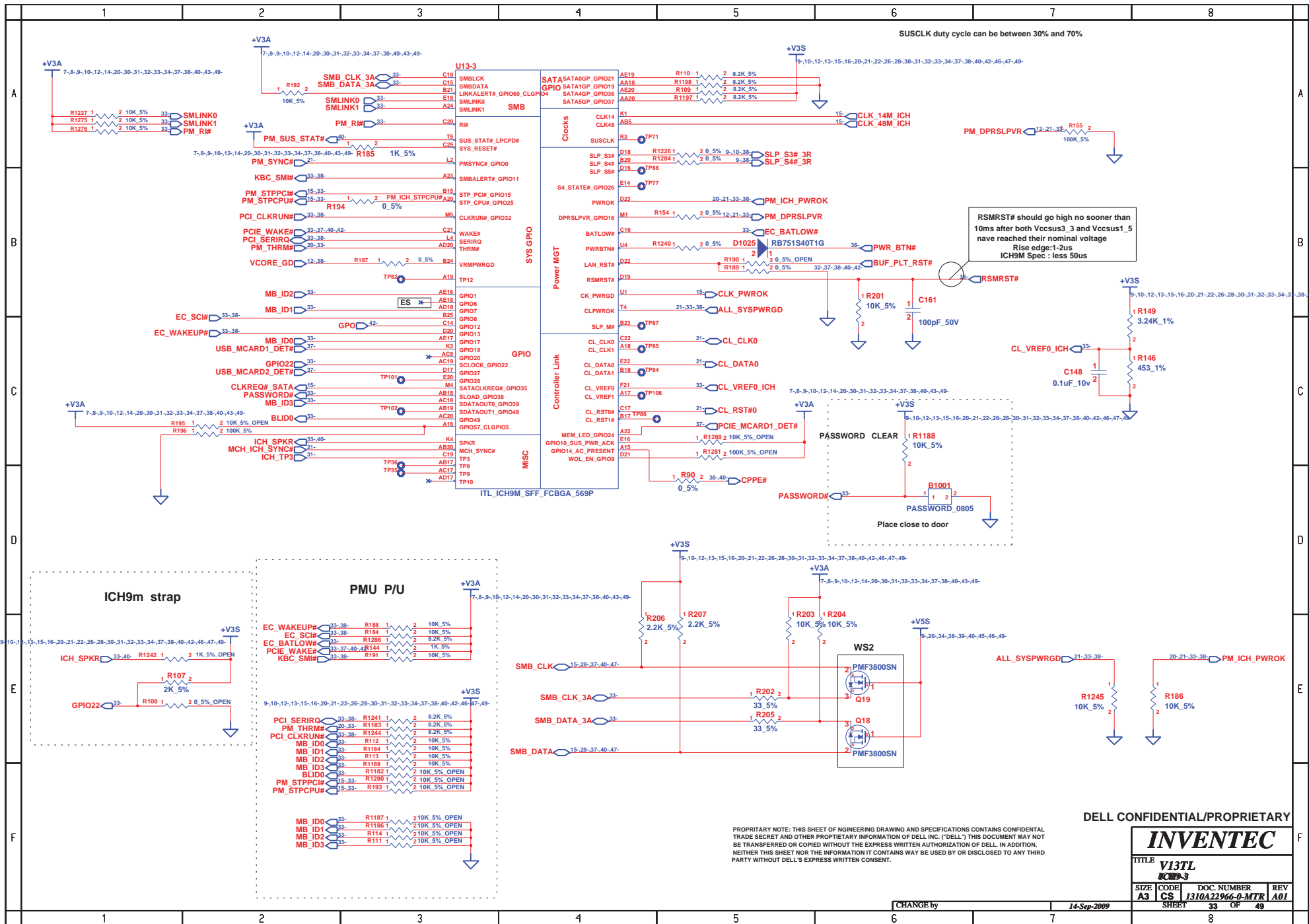
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SIZE A3	CODE CS	DOC. NUMBER 1310A22966-0-MTR A01	REV 49
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30		49	

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CHANGE by 14-Sep-2009





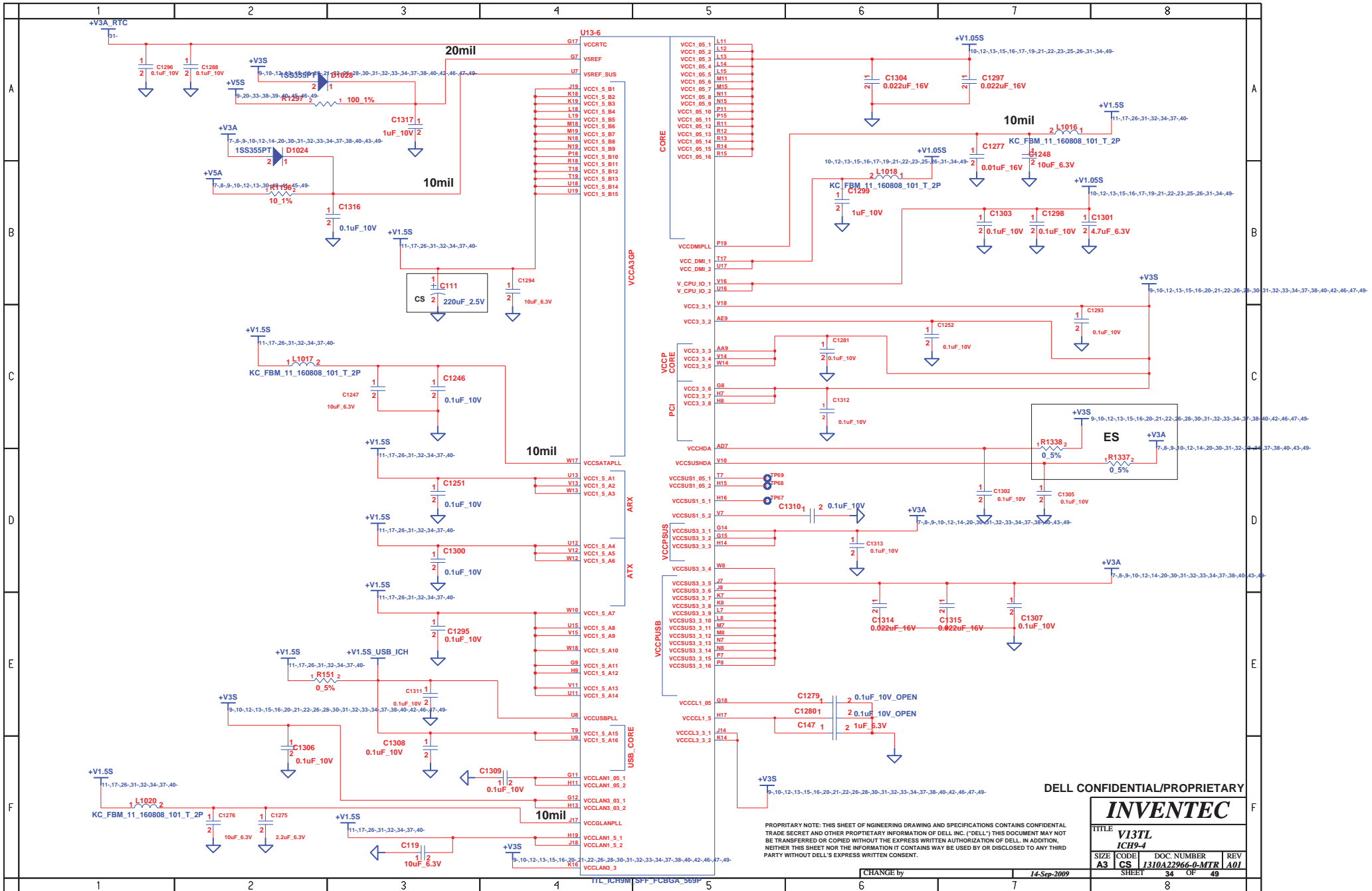


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INVENTEC			
TITLE: V13TL			
ICM9-3			
SIZE: A3	CODE: CS	DOC. NUMBER: 1310A22966-0-MTR	REV: A01
SHEET: 33		OF: 49	

CHANGE by: 14-Sep-2009



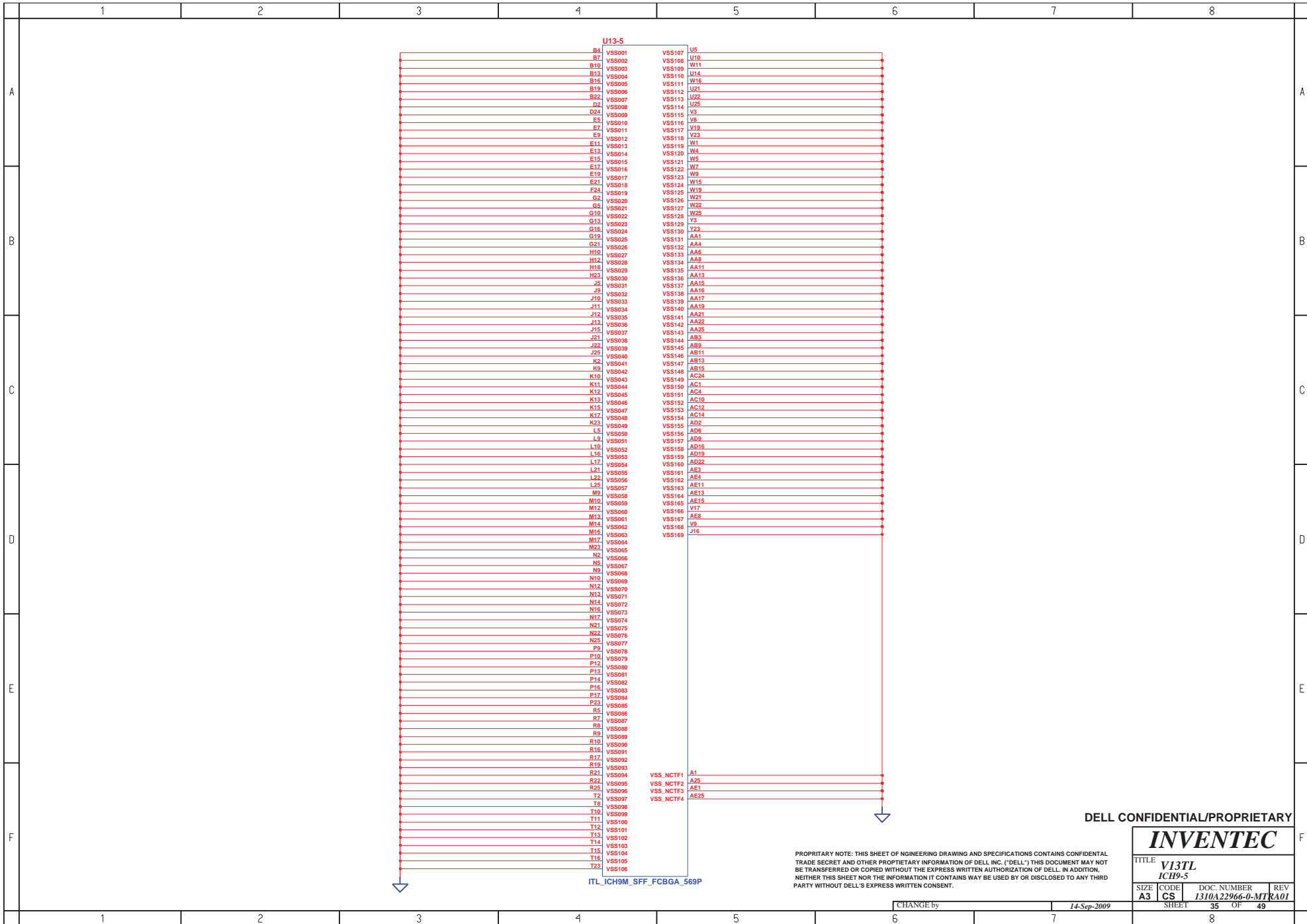
DELL CONFIDENTIAL/PROPRIETARY

INVENTEC

TITLE			
V31TL			
ICH9-4			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A22966-0-MTR	A01
SHEET		8 OF 49	

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INVENTEC

TITLE V13TL ICH9-5			
SIZE A3	CODE CS	DOC. NUMBER 1310A22966-0-MTR A01	REV 49
SHEET		OF	
35		49	

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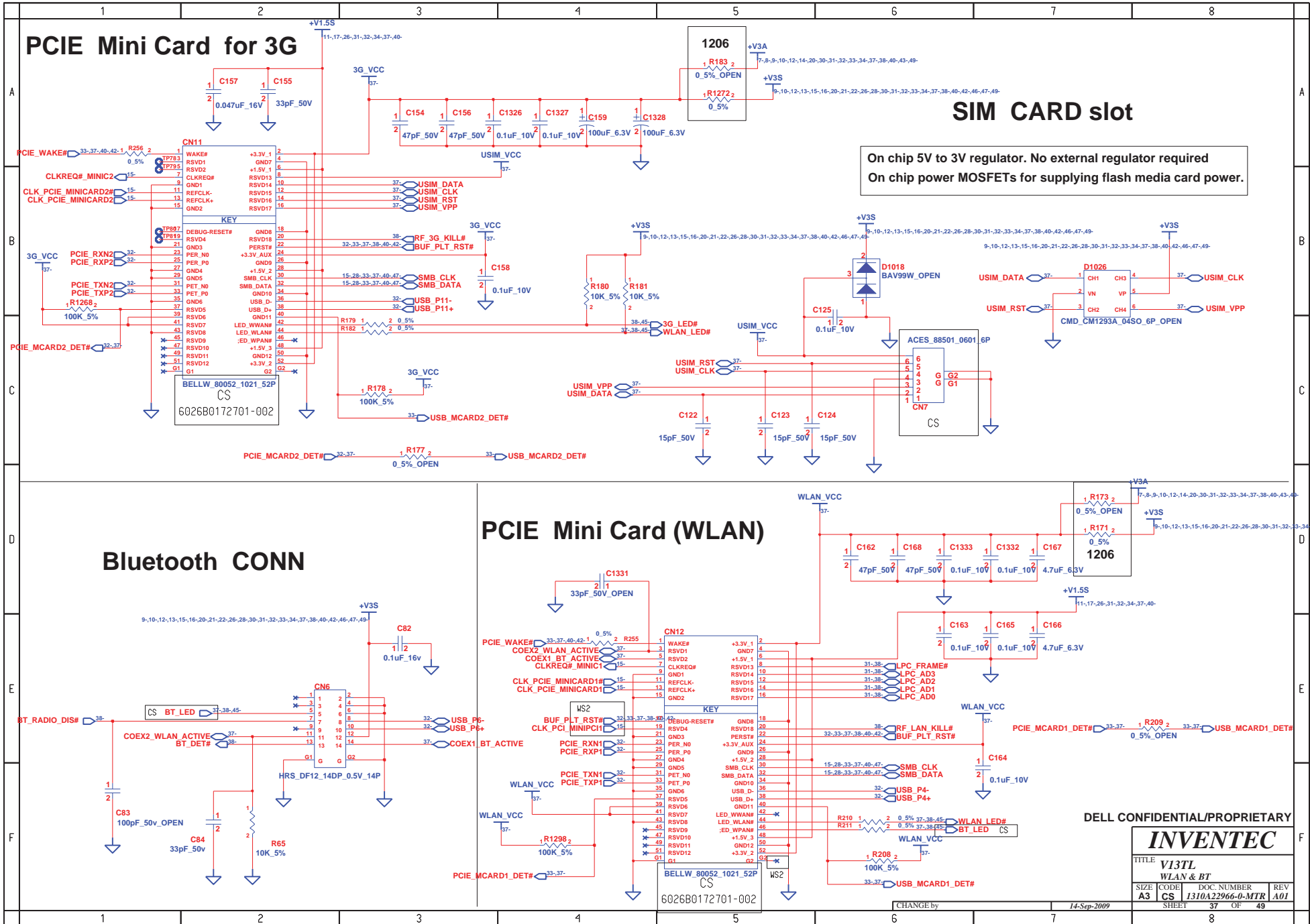
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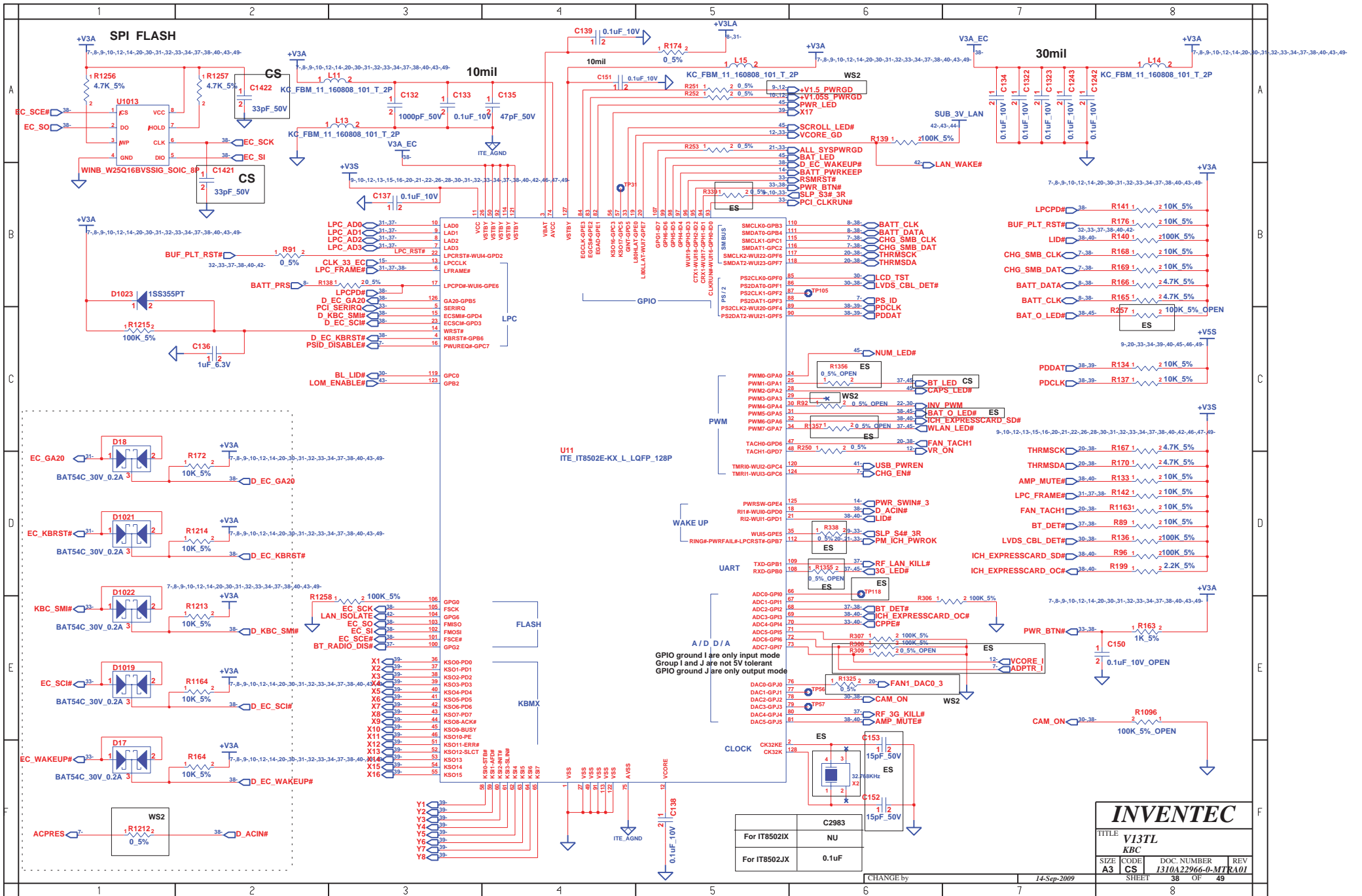
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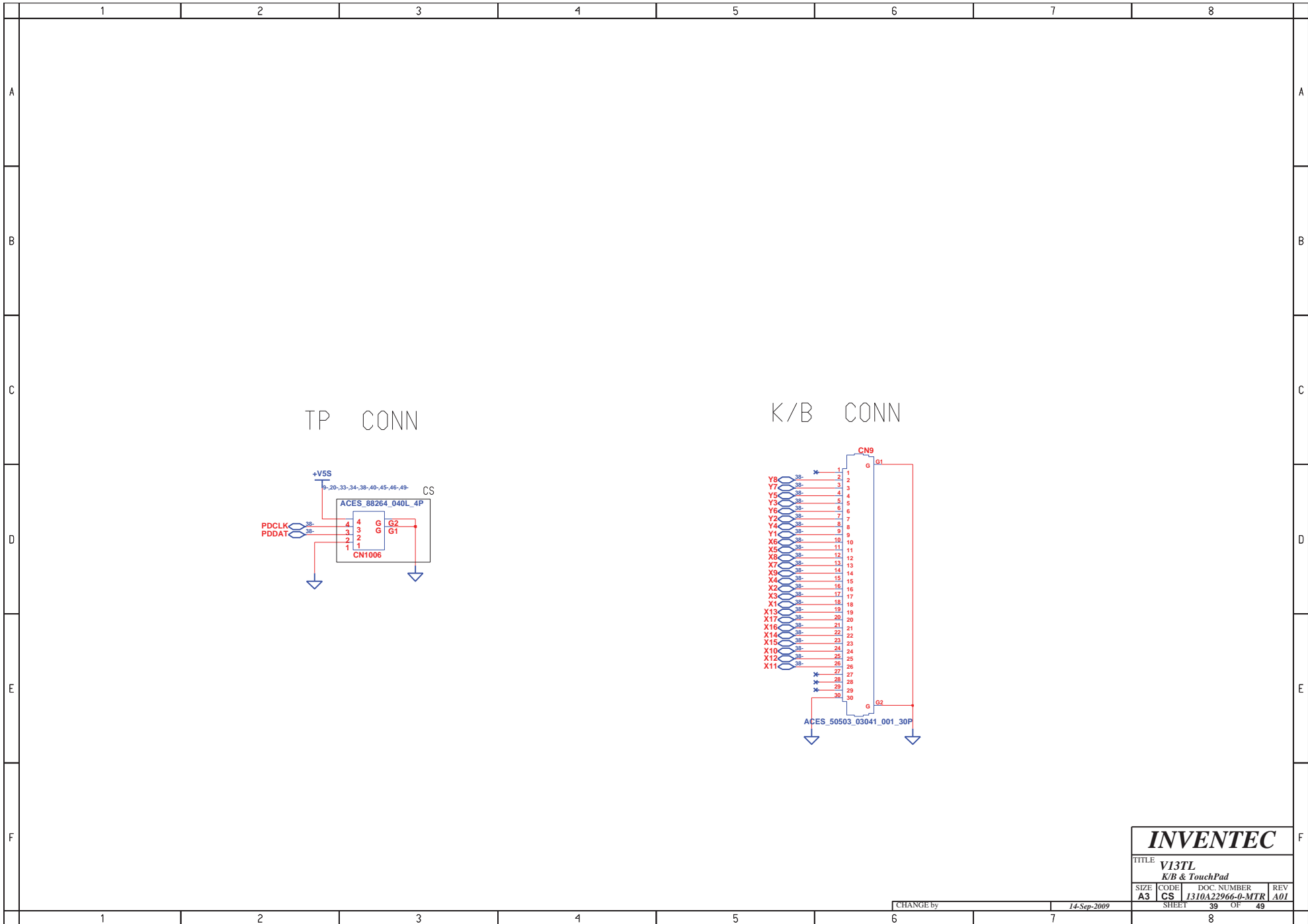
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A3	CS	1310A22966-0-MTR	A01

CHANGE by 14-Sep-2009

SHEET 36 OF 49







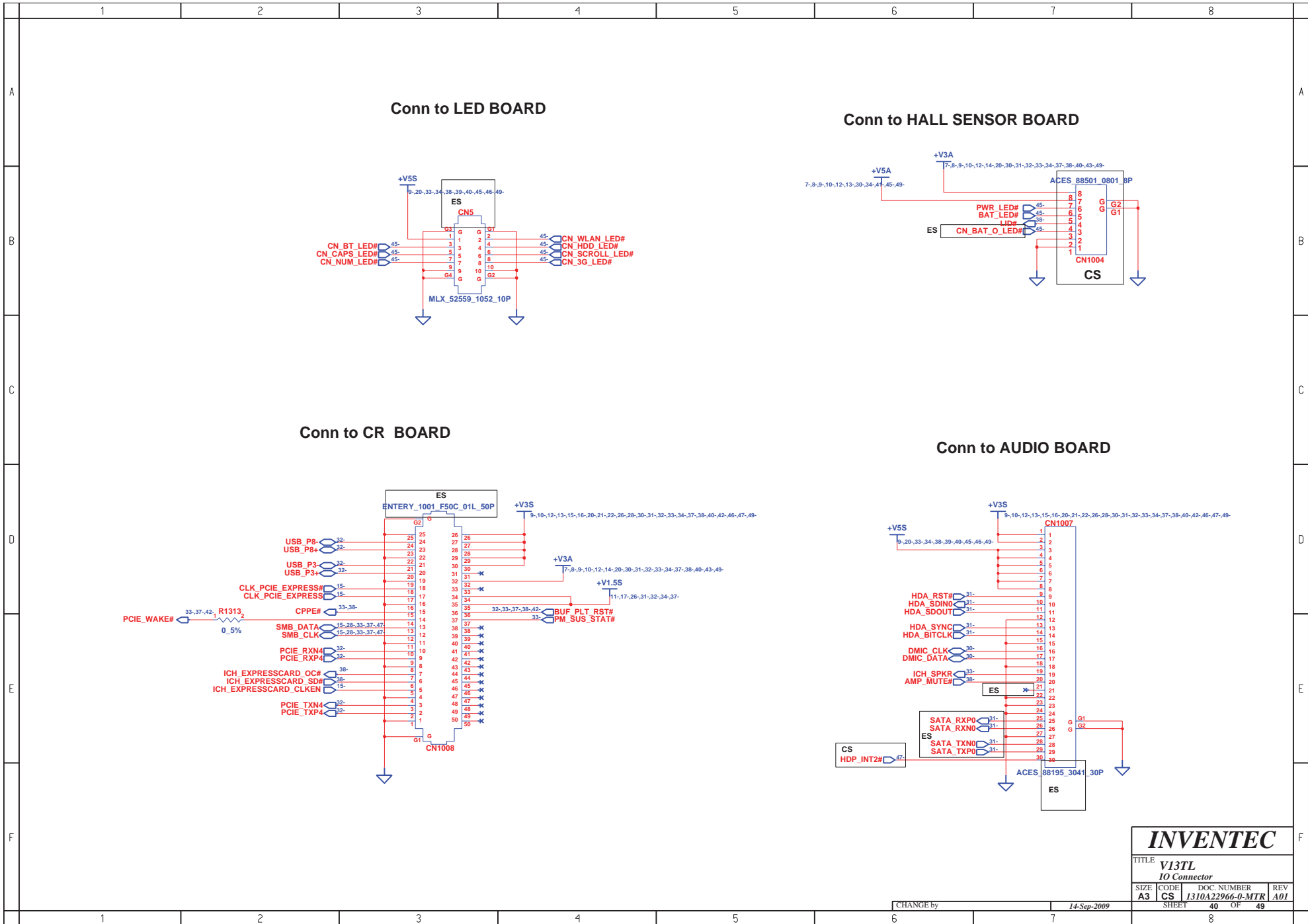
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TITLE
V13TL
K/B & TouchPad

SIZE A3	CODE CS	DOC. NUMBER 1310A22966-0-MTR	REV A01
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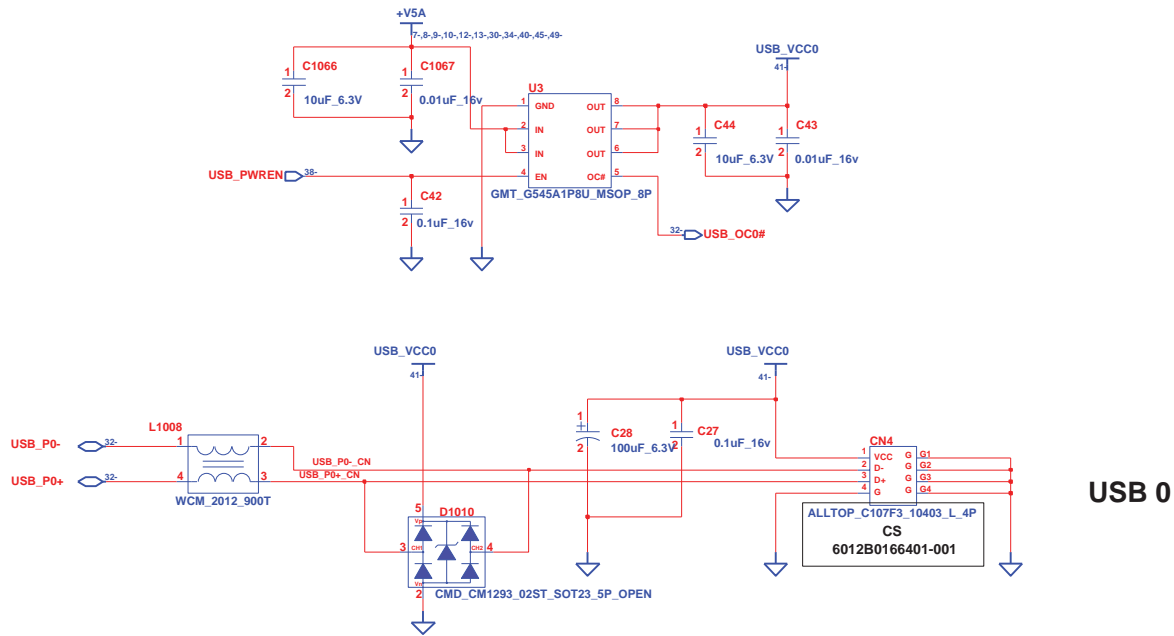
CHANGE by 14-Sep-2009

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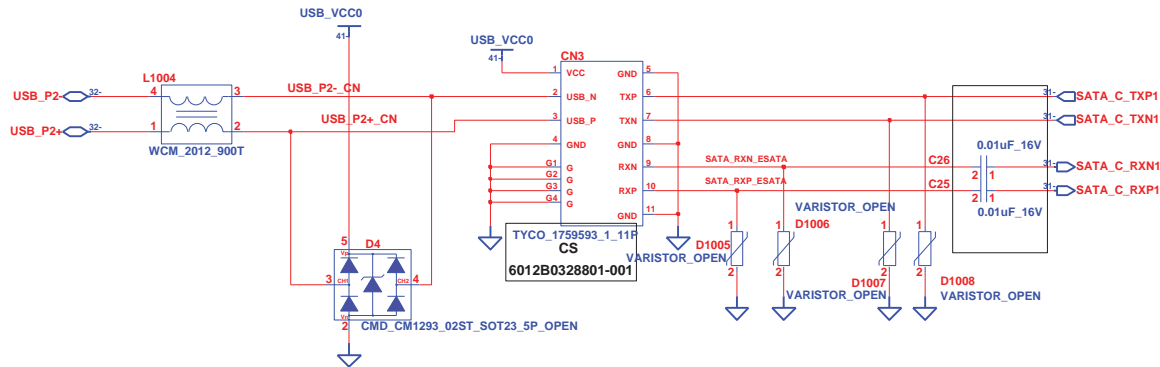
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SIZE A3	CODE CS	DOC NUMBER 1310A22966-0-MTR	REV A01
CHANGE by		14-Sep-2009	
SHEET		40 OF 49	

USB & eSATA



USB 0

eSATA & USB combo

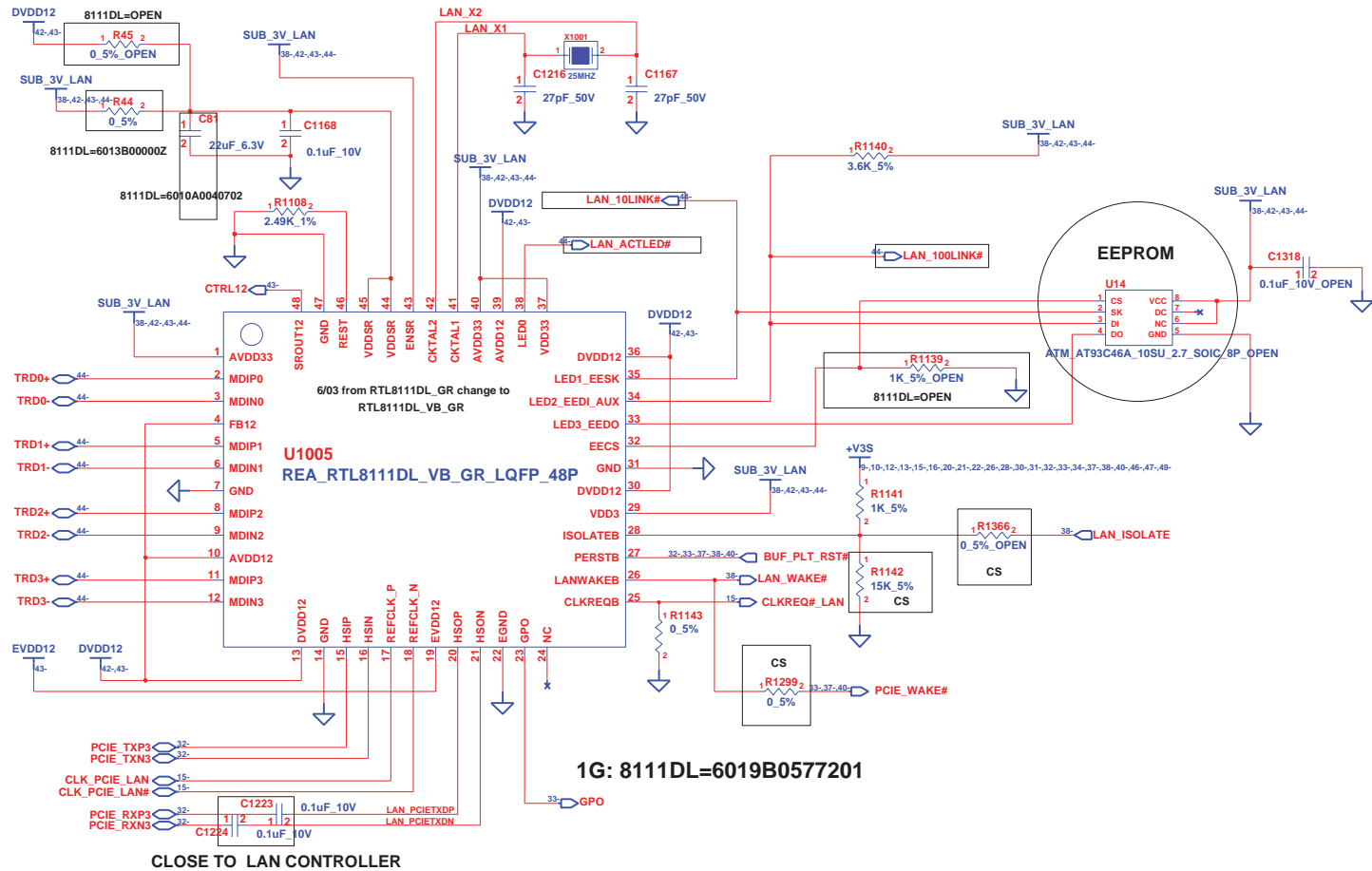


INVENTEC

TITLE			
V13TL			
USB & eSATA			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1310A22966-0-MTR	A01
SHEET		41	OF 49

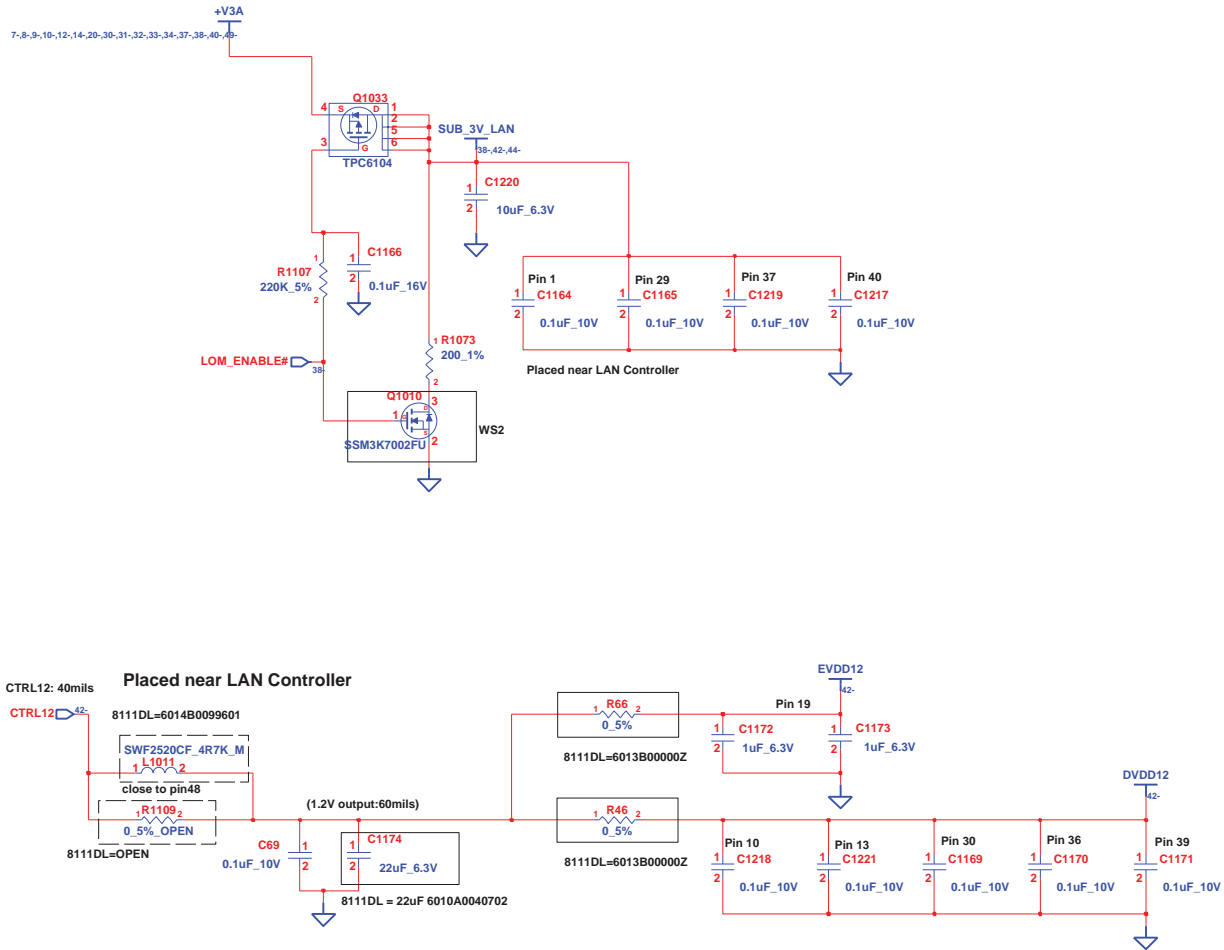
CHANGE by 14-Sep-2009

LAN CONTROLLER



INVENTEC			
TITLE V13TL LAN PHY			
SIZE A3	CODE CS	DOC NUMBER I310A22966-0-MTR	REV A01
CHANGE by		14-Sep-2009	
SHEET		42 OF 49	

LAN POWER

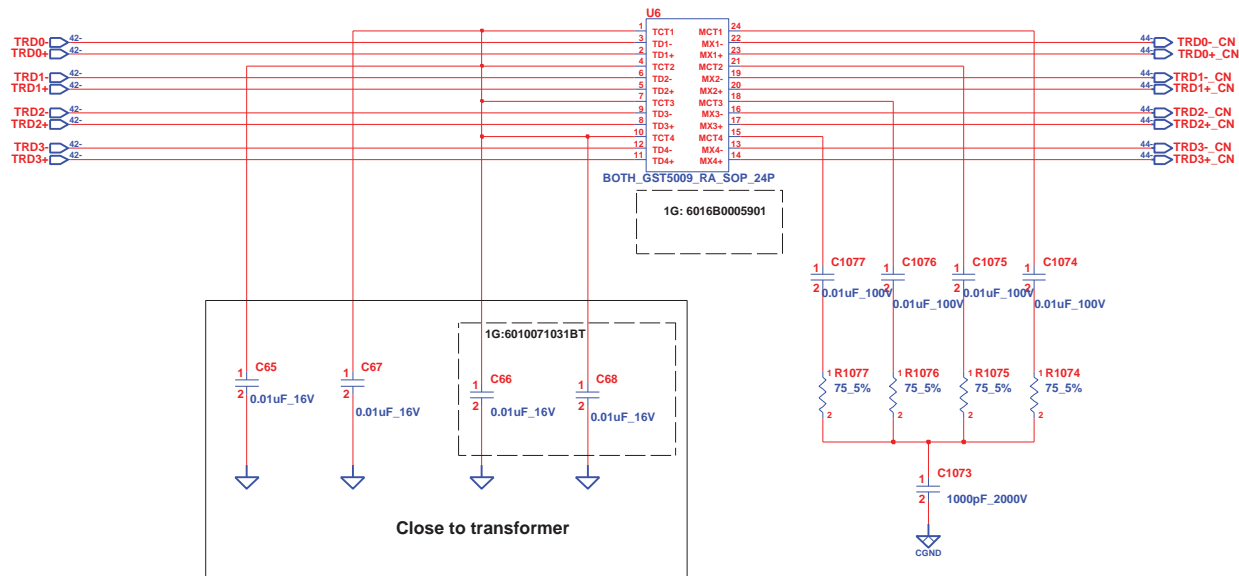
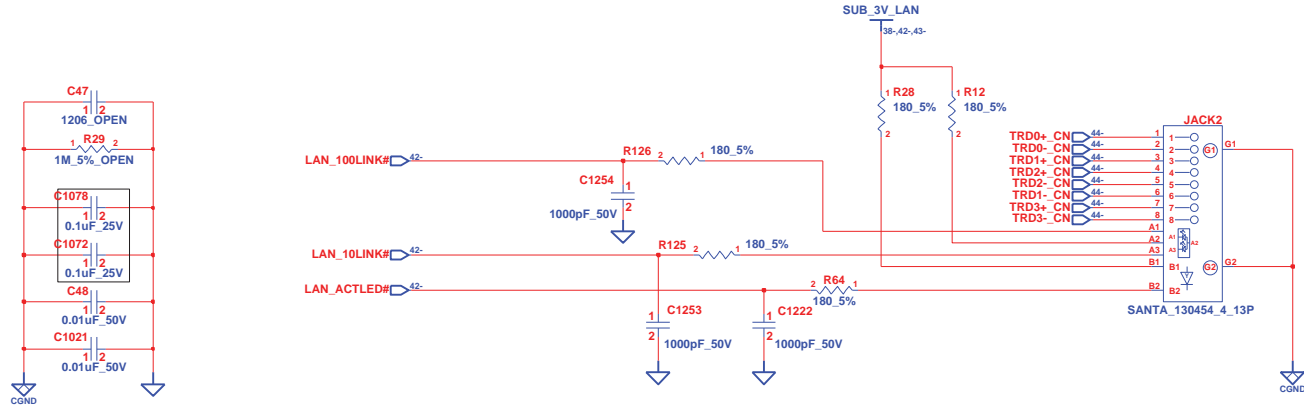


INVENTEC

TITLE			
V13TL LAN POWER			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	I310A22966-0-MTR	A01
SHEET		OF	
43		49	

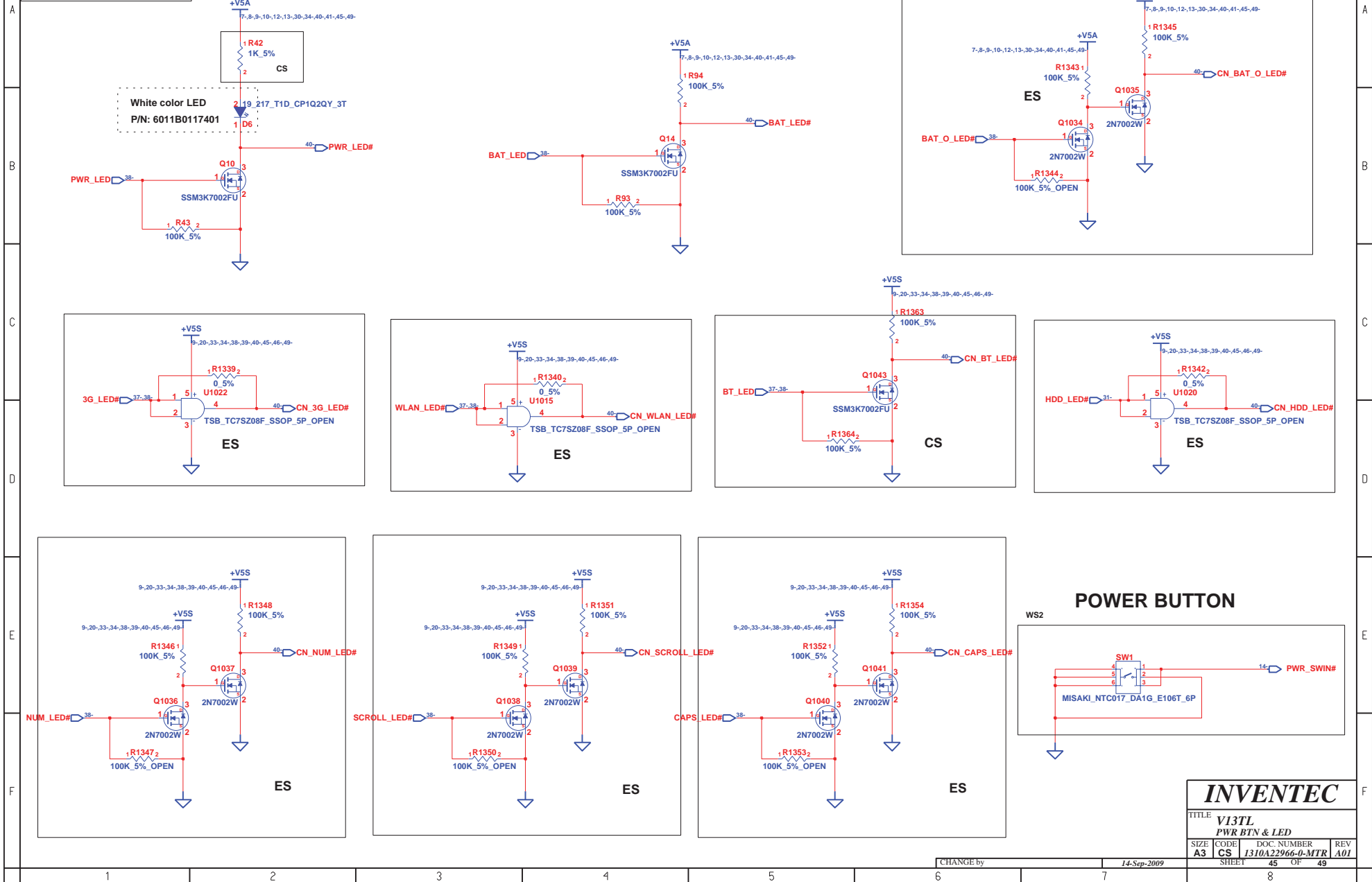
CHANGE by 14-Sep-2009

RJ45

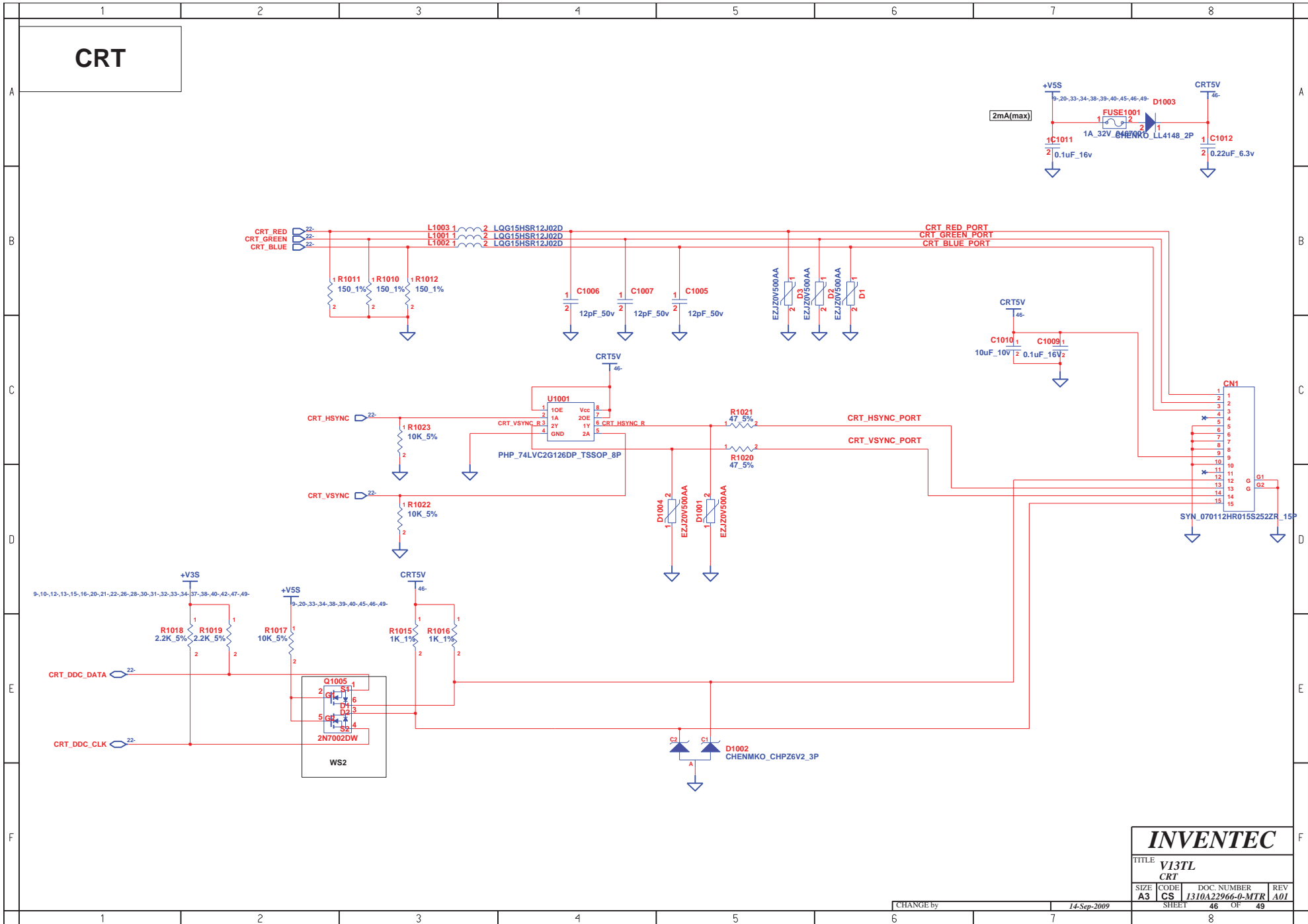


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CHANGE by		14-Sep-2009	
SHEET		44 OF 49	

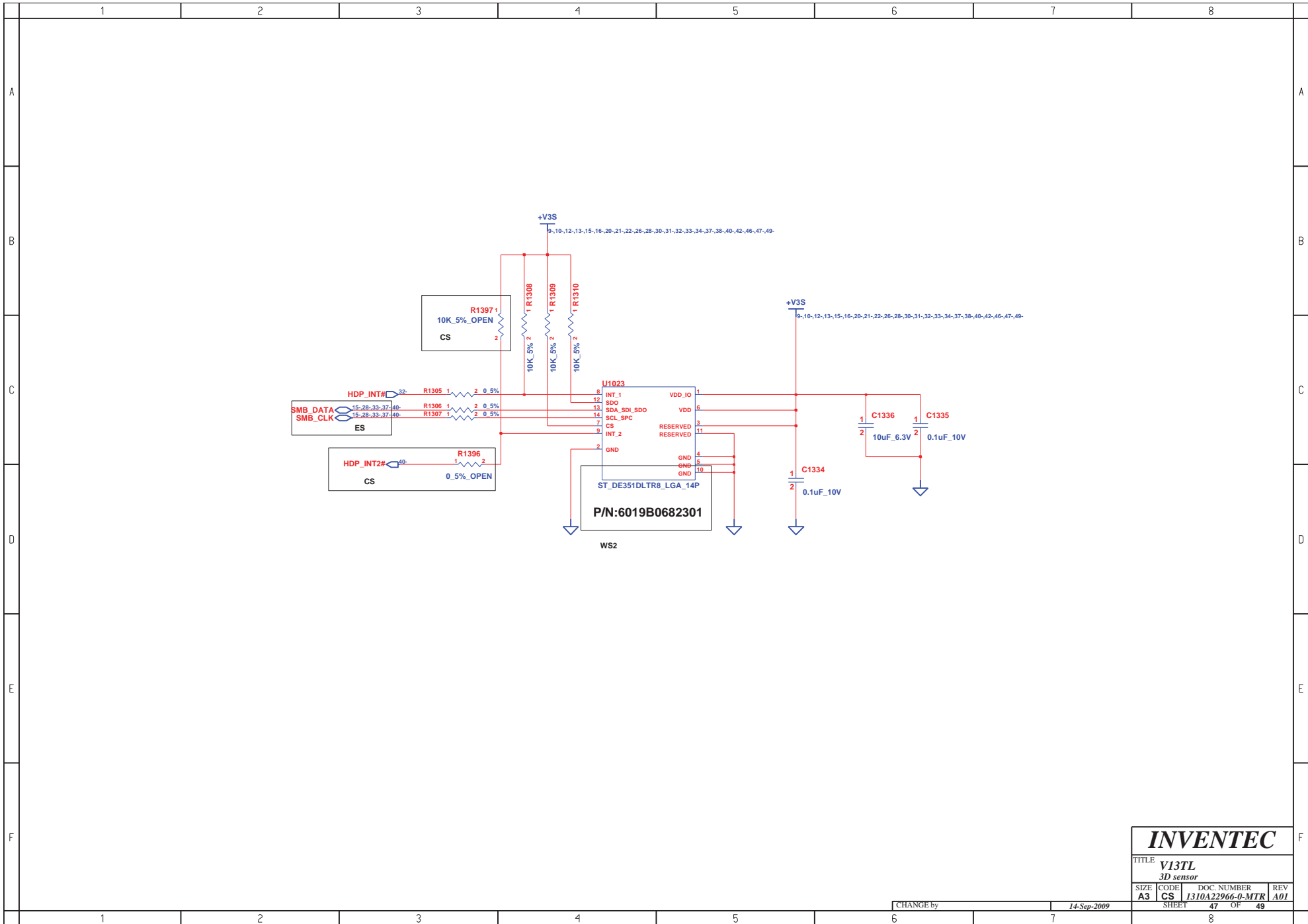
PWR BTN & LED



INVENTEC			
TITLE: V13TL PWR BTN & LED			
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CHANGE by		14-Sep-2009	SHEET 45 OF 49



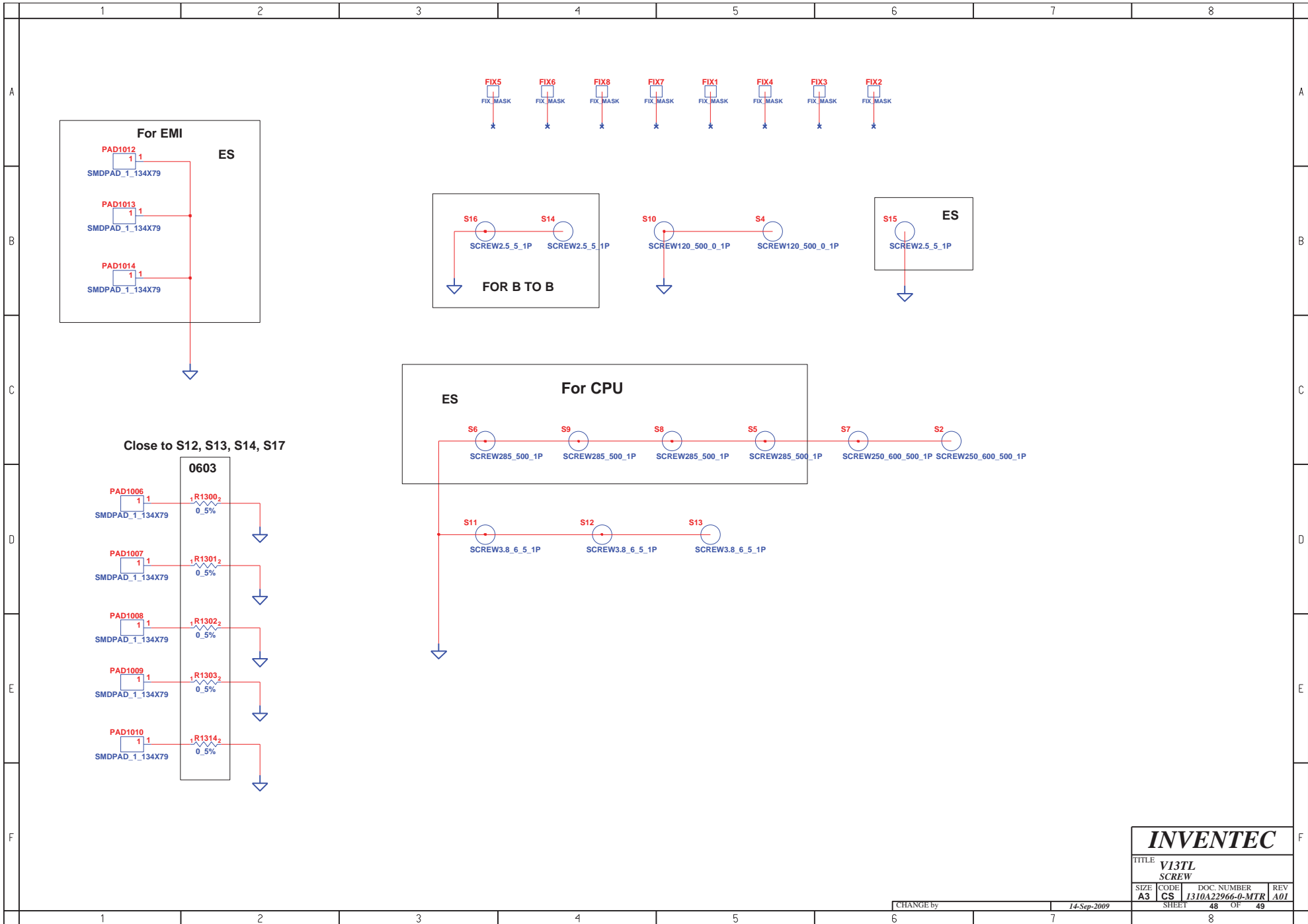
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SIZE A3	CODE CS	DOC NUMBER I310A22966-0-MTR	REV A01
CHANGE by		14-Sep-2009	SHEET 46 OF 49

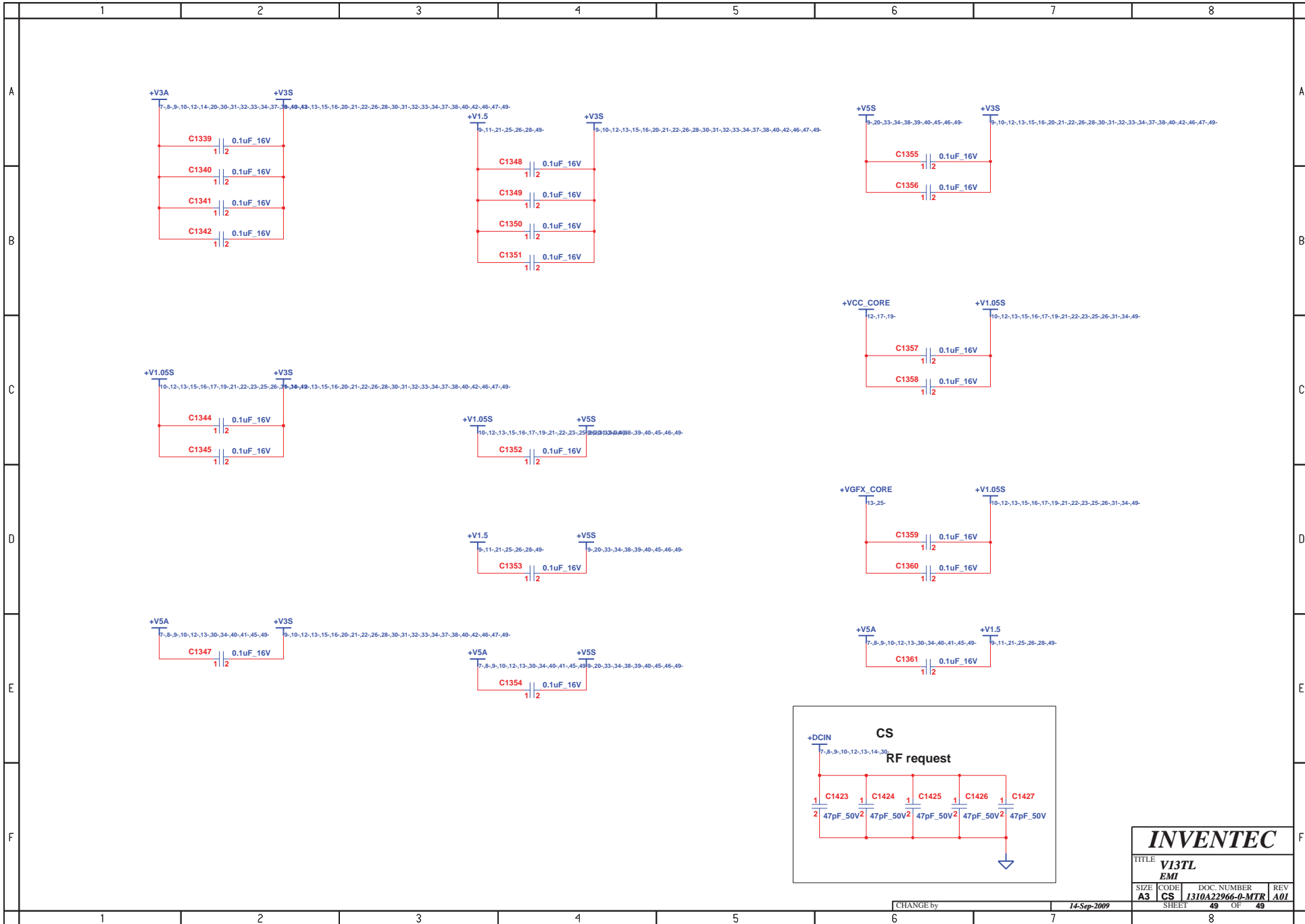


INVENTEC

TITLE			
V13TL			
3D sensor			
SIZE	CODE	DOC. NUMBER	REV
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SHEET		OF	
47		49	

CHANGE by 14-Sep-2009





INVENTEC			
TITLE V13TL			
EMI			
SIZE A3	CODE CS	DOC. NUMBER I310A22966-0-MTR	REV A01
CHANGE by		14-Sep-2009	
SHEET		8 OF 49	