

1 2 3 4 5 6 7 8

A

A

B

B

C

C

D

D

E

E

F

F

VAIL

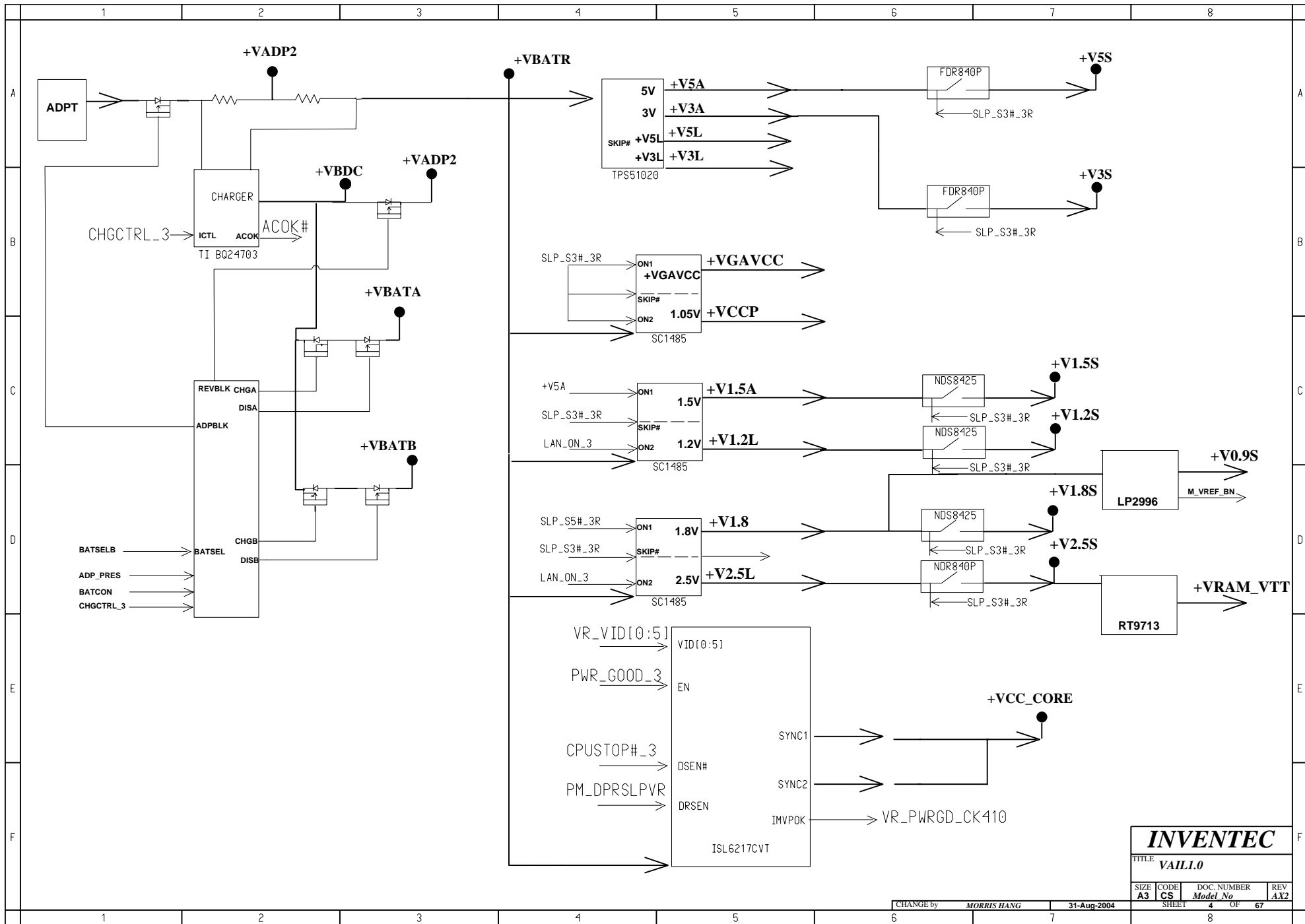
SI2-BUILD-FINAL

2004.08.31

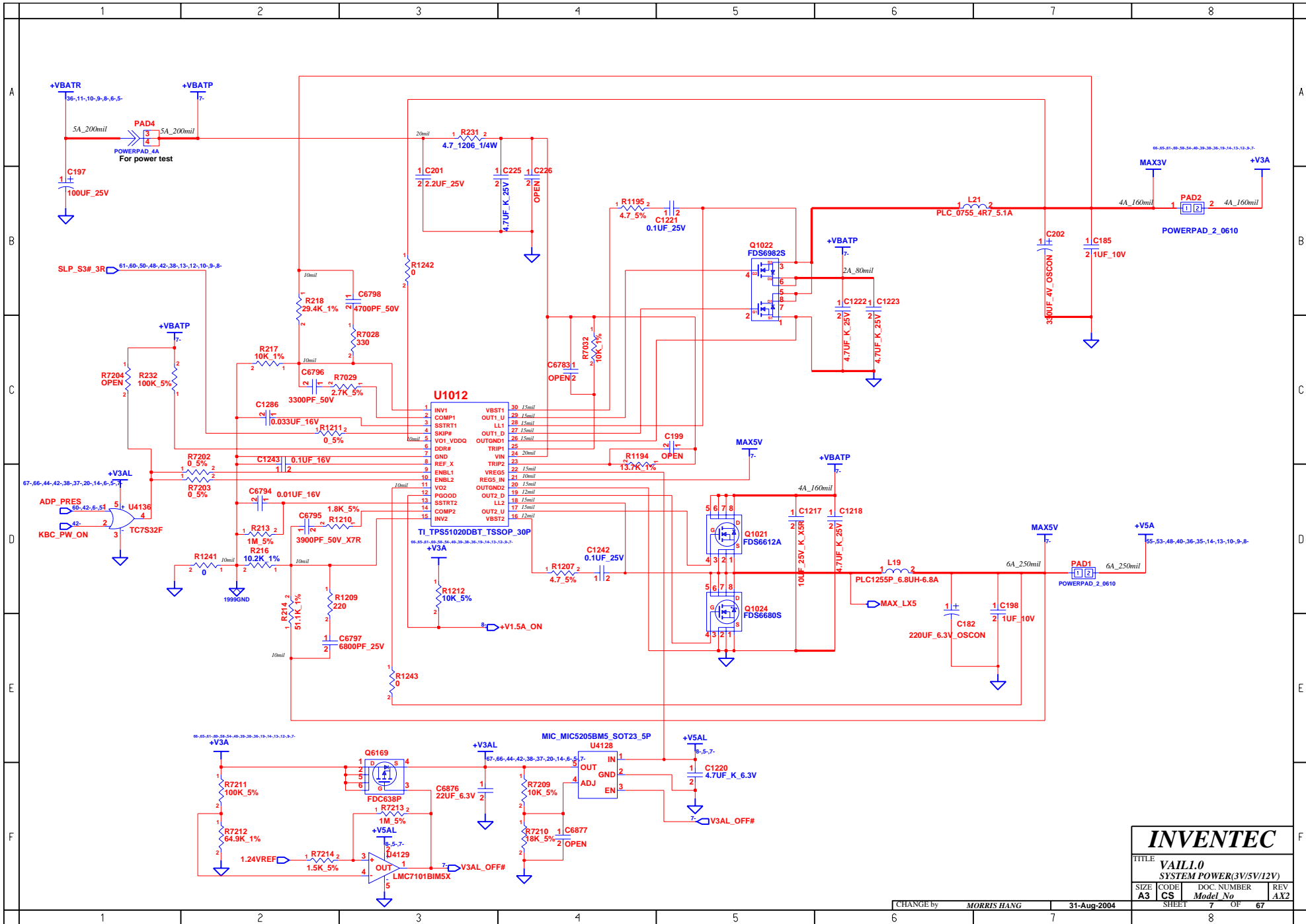
DATE	CHANGE NO.	REV

DRAWER	EE	DATE	POWER	DATE	INVENTEC			
DESIGN								
CHECK								
RESPONSIBLE								
TITLE					VAIL1.0			
SIZE =	3	VER :						
FILE NAME :	XXXX-XXXXXX-XX				SIZE	CODE	DOC. NUMBER	REV
P/N	XXXXXXXXXXXX				A3	CS	Model No	AX2
					SHEET	1	OF	67

1 2 3 4 5 6 7 8

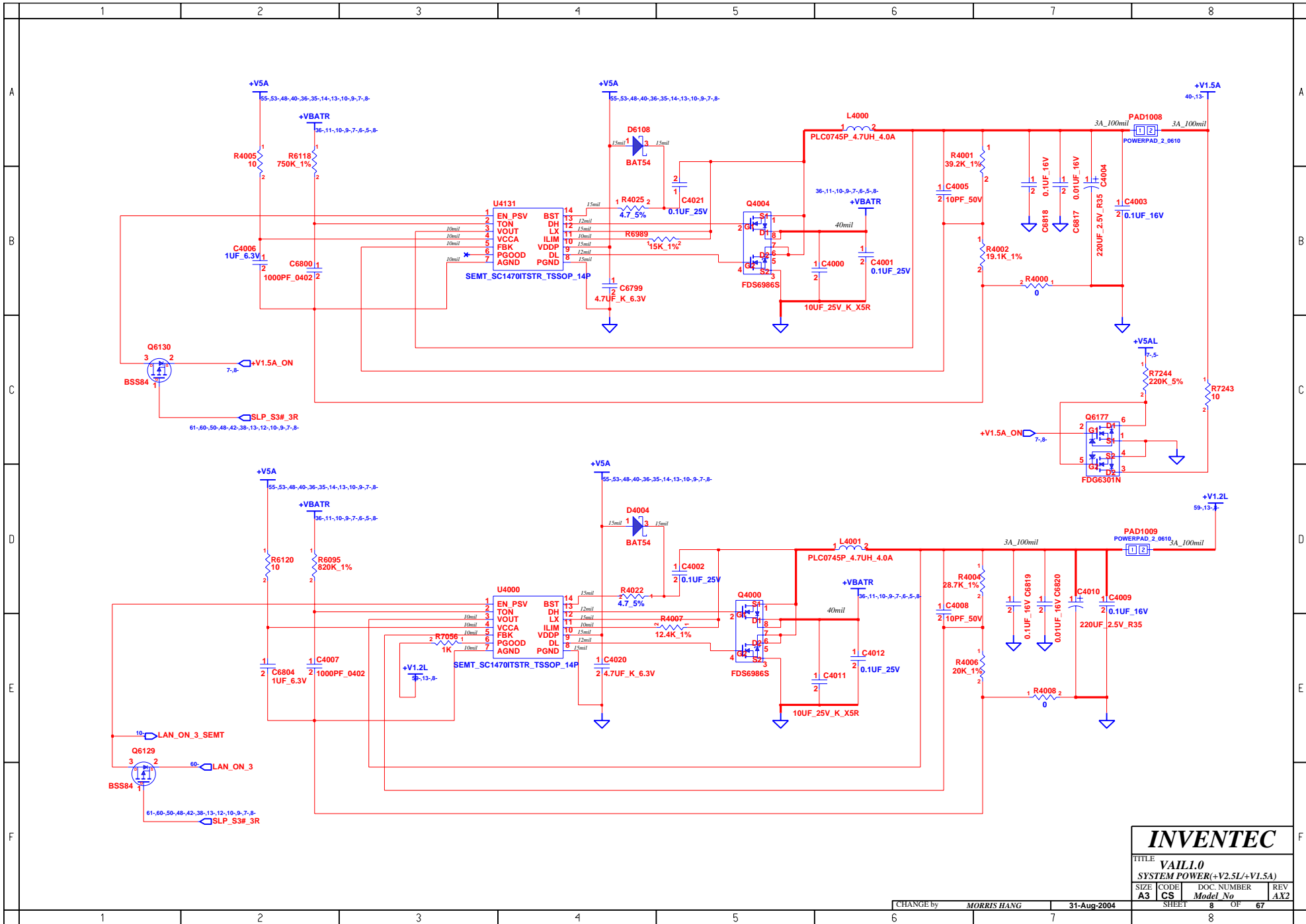


INVENTEC			
TITLE VAIL1.0			
SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV AX2
CHANGE by MORRIS HANG		31-Aug-2004	
SHEET 4 OF 67		8	

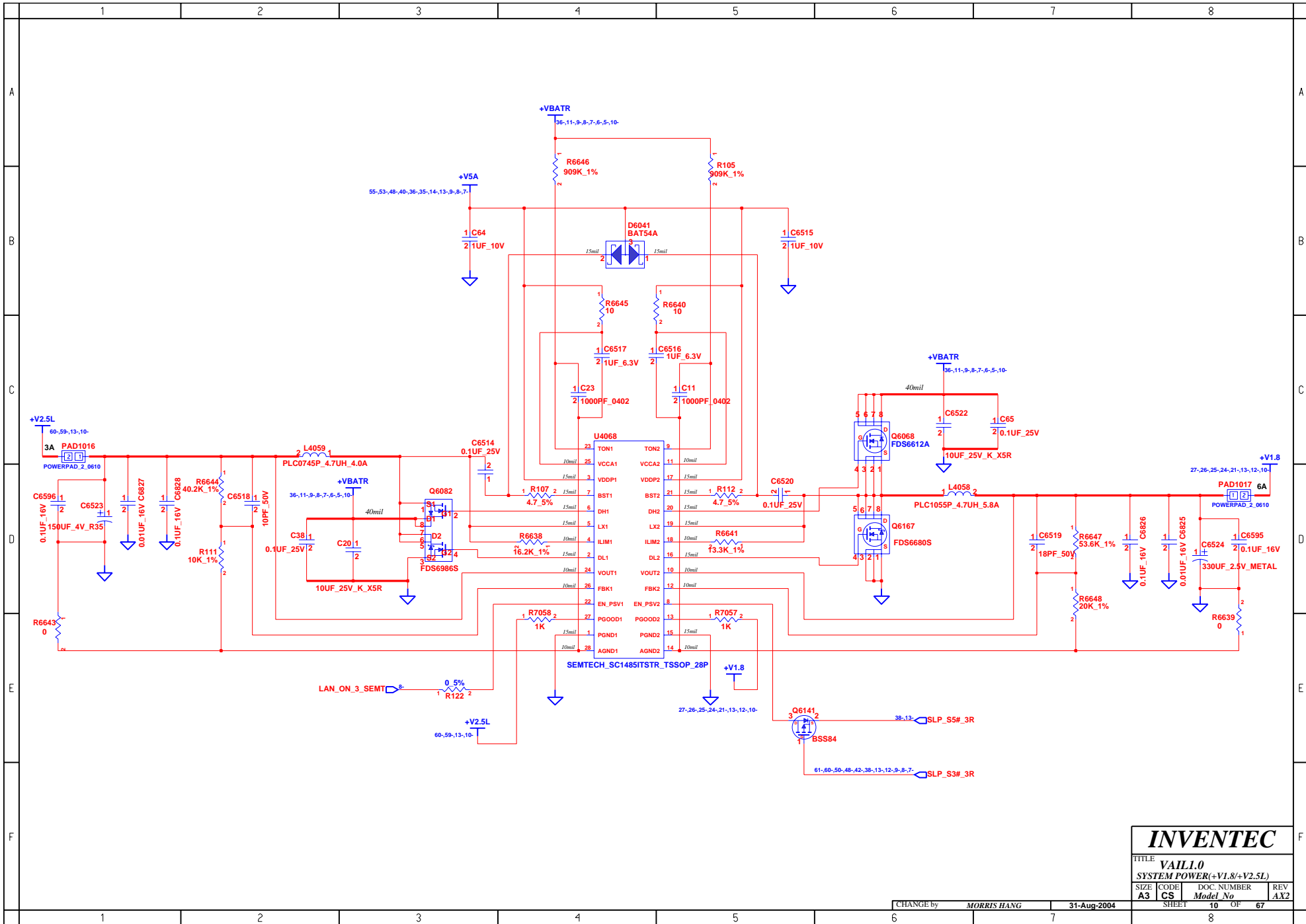


INVENTEC			
TITLE VAIL1.0			
SYSTEM POWER(3V/5V/12V)			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	AX2
CHANGE by		SHEET	OF
MORRIS HANG		7	67

31-Aug-2004



INVENTEC			
TITLE VAIL1.0			
SYSTEM POWER(+V2.5L/+V1.5A)			
SIZE A3	CODE CS	DOC. NUMBER Model No	REV AX2
CHANGE by MORRIS HANG		31-Aug-2004	SHEET 8 OF 67

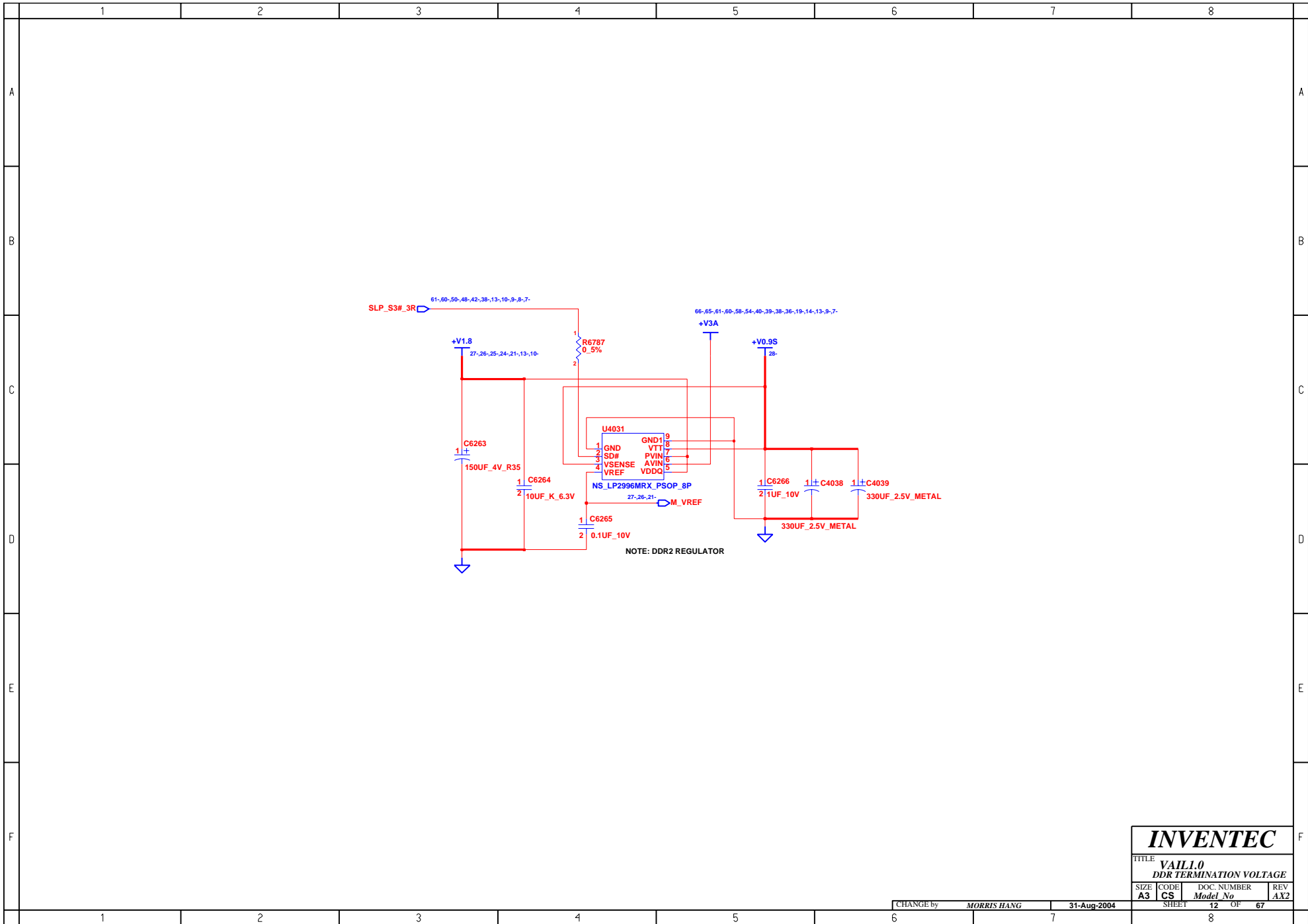


INVENTEC

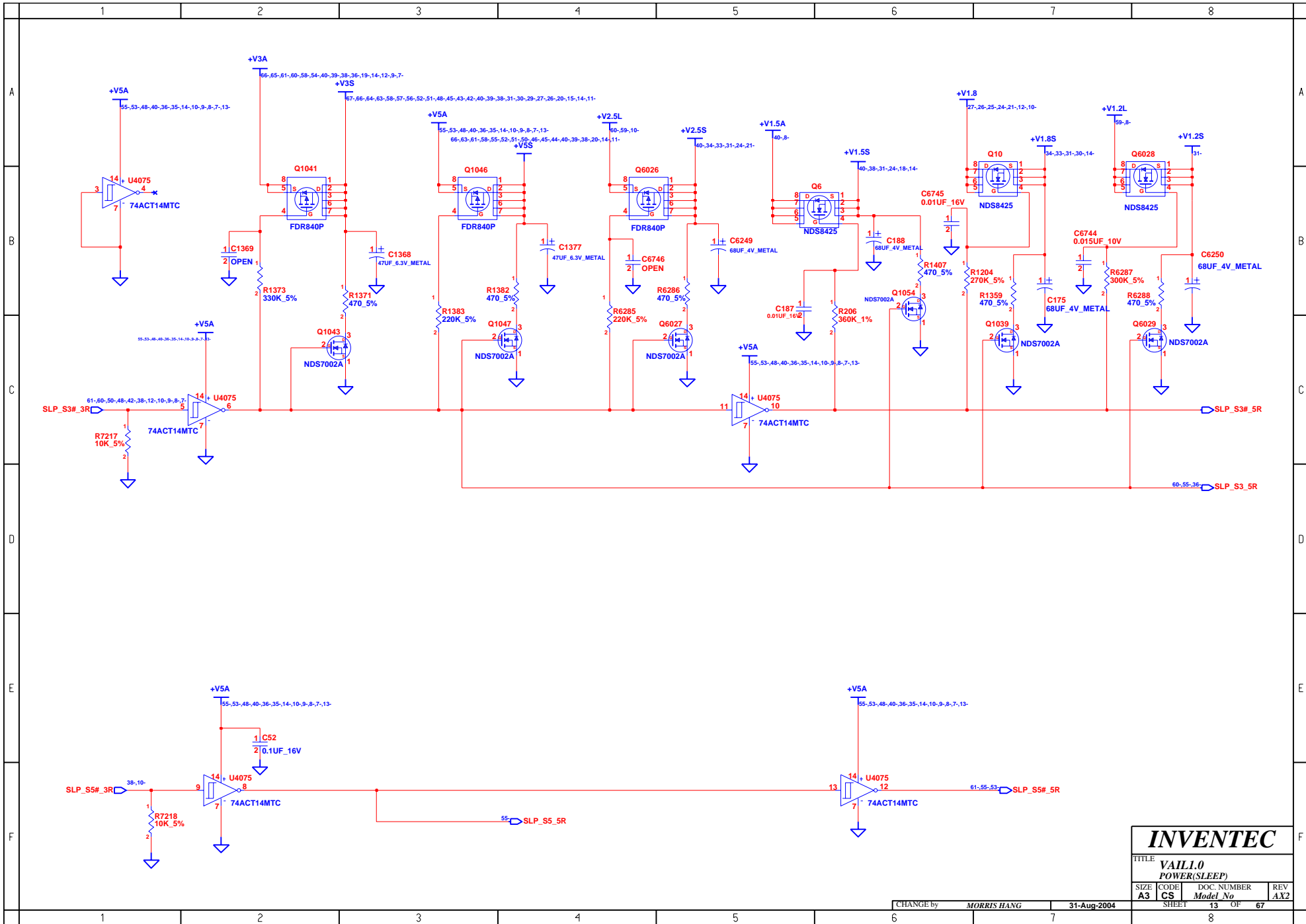
TITLE **VAIL1.0**
SYSTEM POWER(+V1.8/+V2.5L)

SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV AX2
-------------------	-------------------	--------------------------------	-------------------

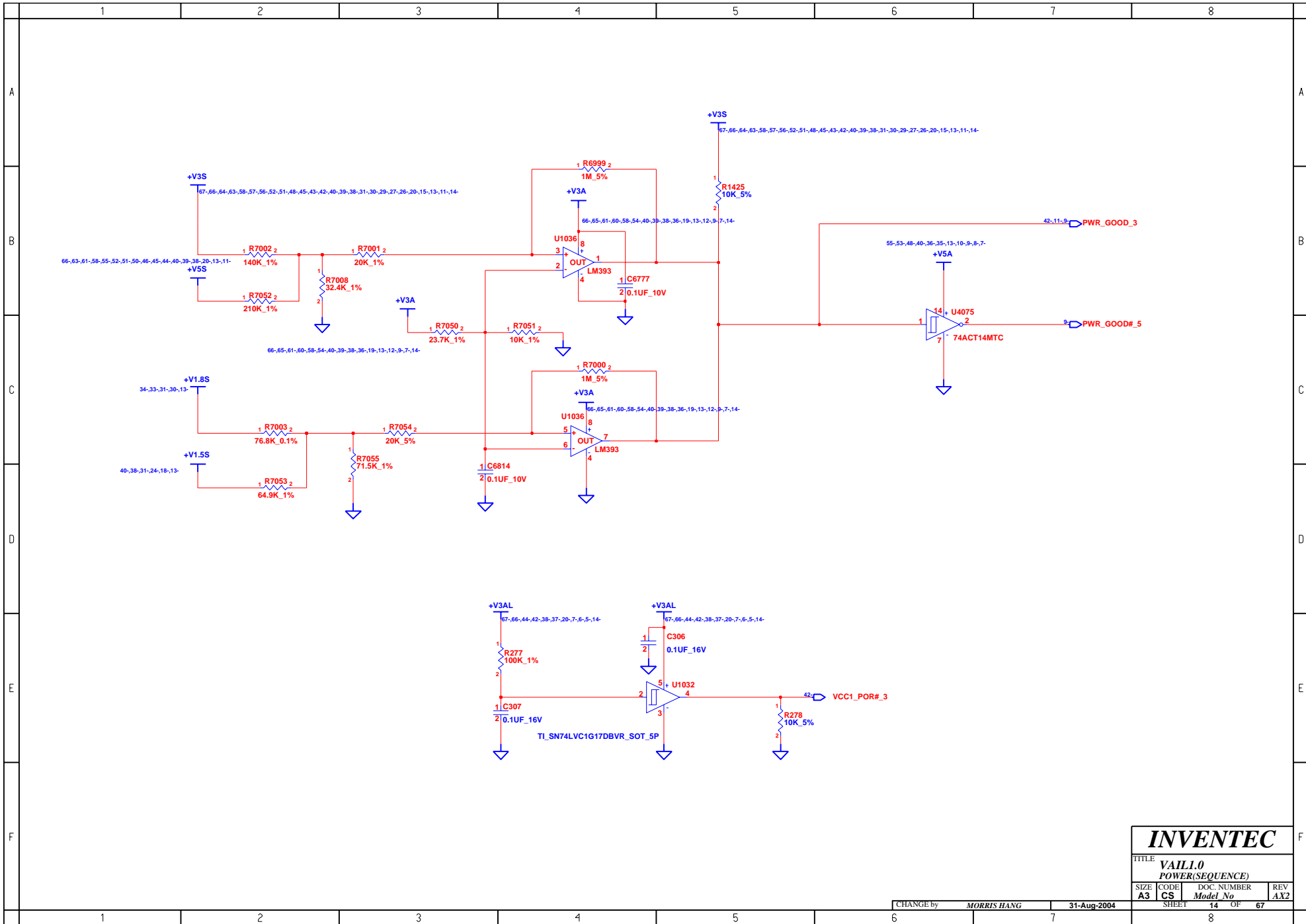
CHANGE by	<i>MORRIS HANG</i>	31-Aug-2004
SHEET	10	OF 67



INVENTEC			
TITLE VAIL1.0			
DDR TERMINATION VOLTAGE			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	AX2
CHANGE by		SHEET	
MORRIS HANG		12 OF 67	
31-Aug-2004		8	



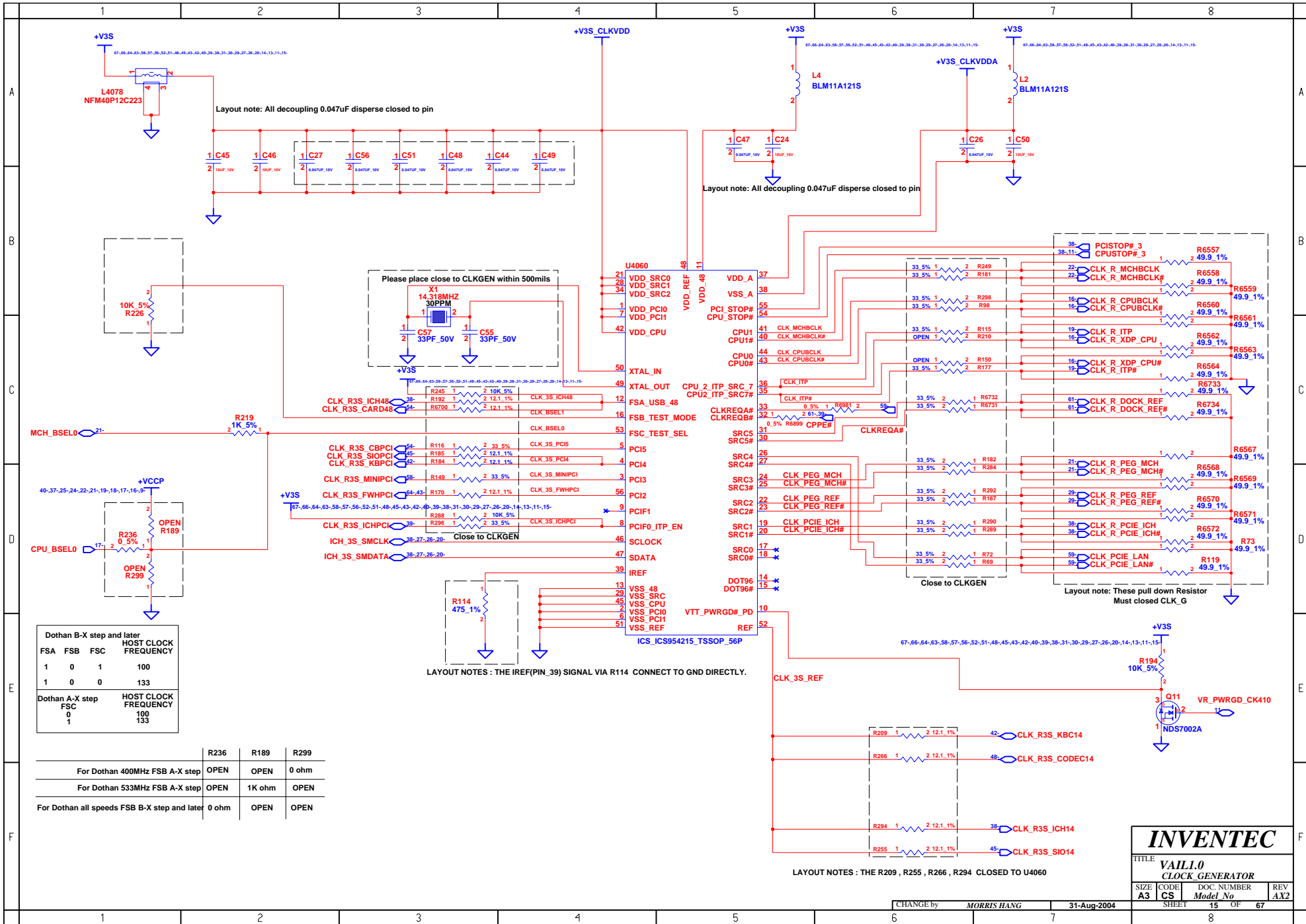
INVENTEC			
TITLE VAIL1.0 POWER(SLEEP)			
SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV AX2
CHANGE by <i>MORRIS HANG</i>		31-Aug-2004	
SHEET 13		OF 67	

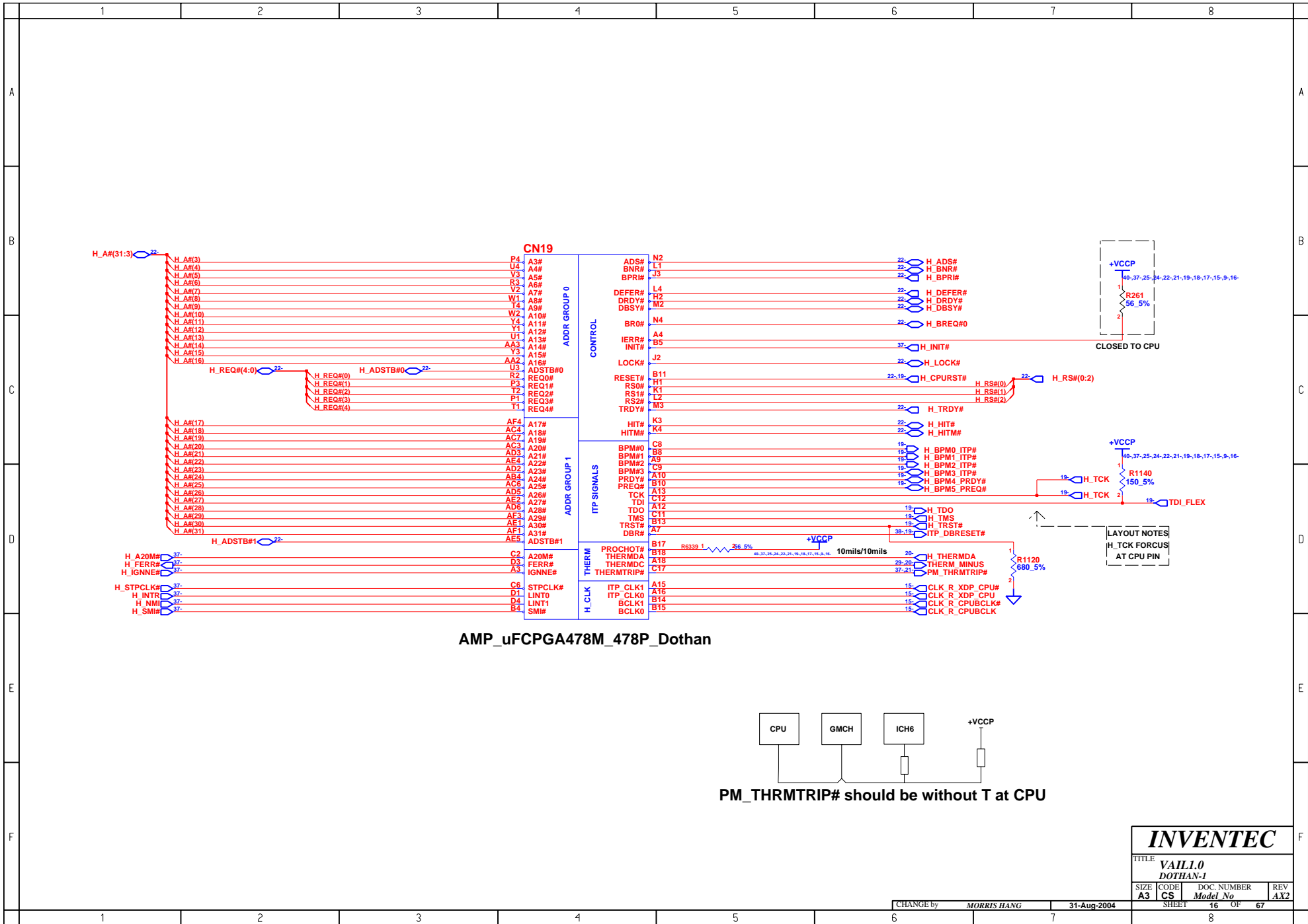


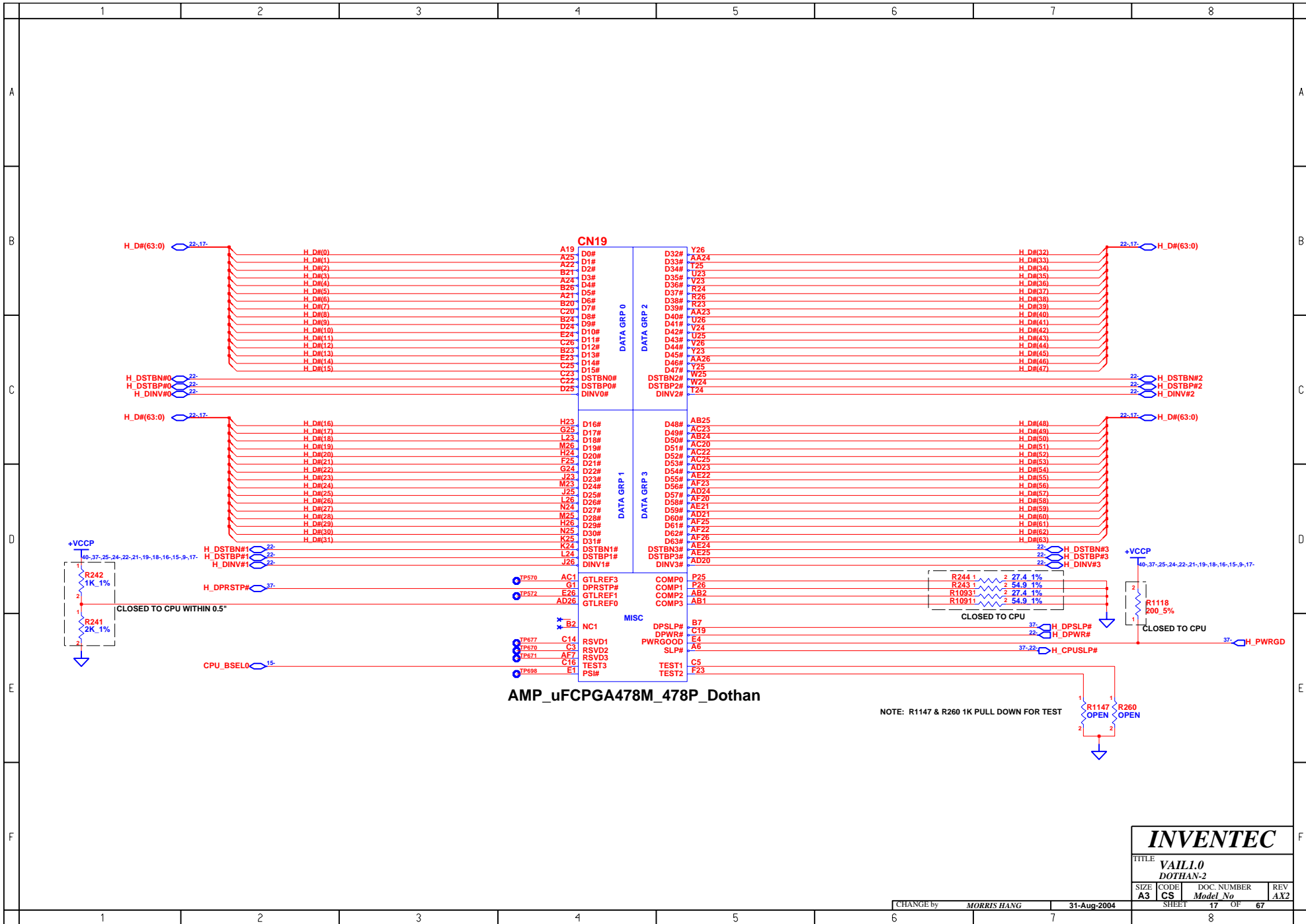
INVENTEC

TITLE			
VAIL1.0			
POWER(SEQUENCE)			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	AX2
CHANGE by		SHEET	
MORRIS HANG		14 OF 67	

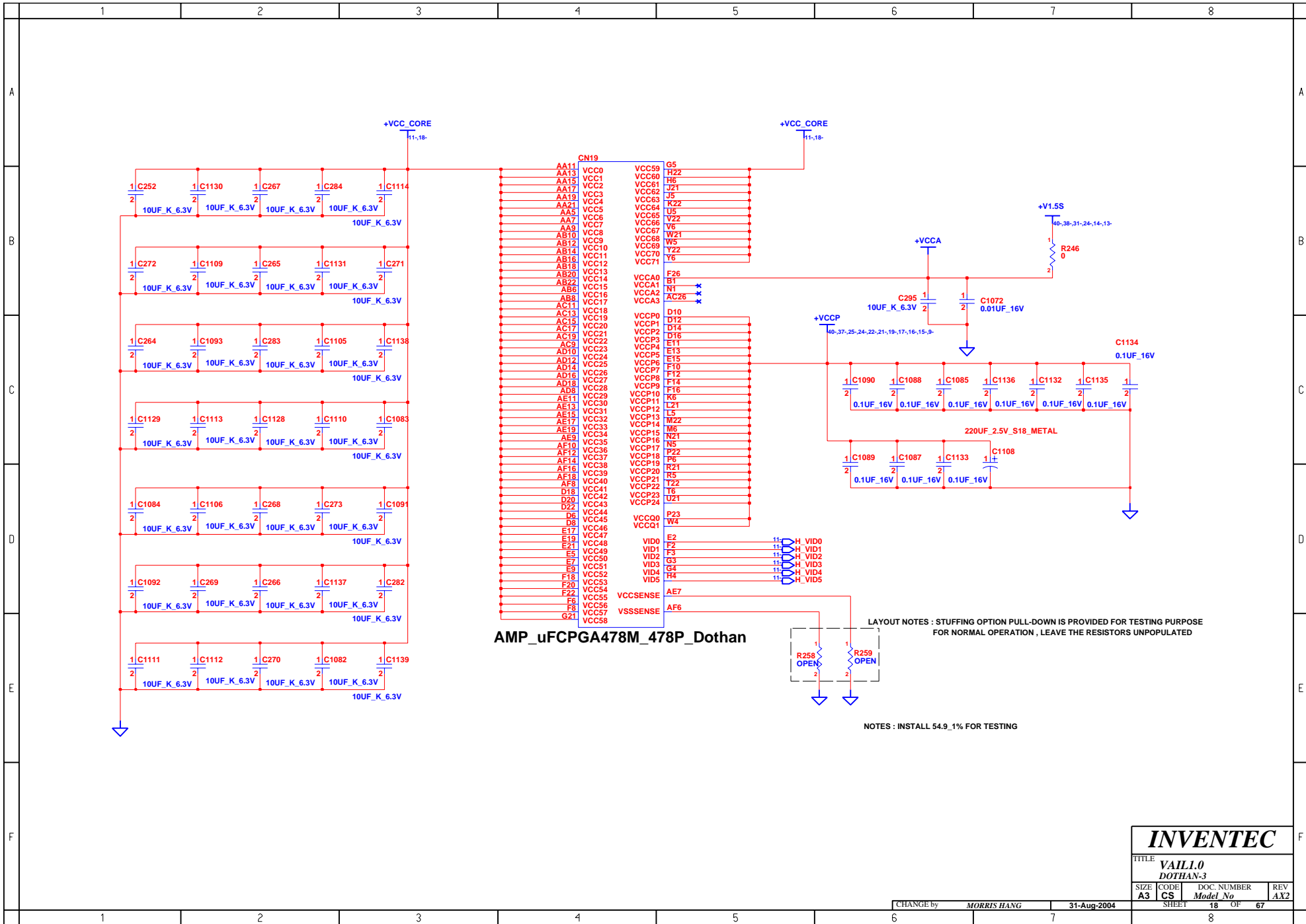
31-Aug-2004





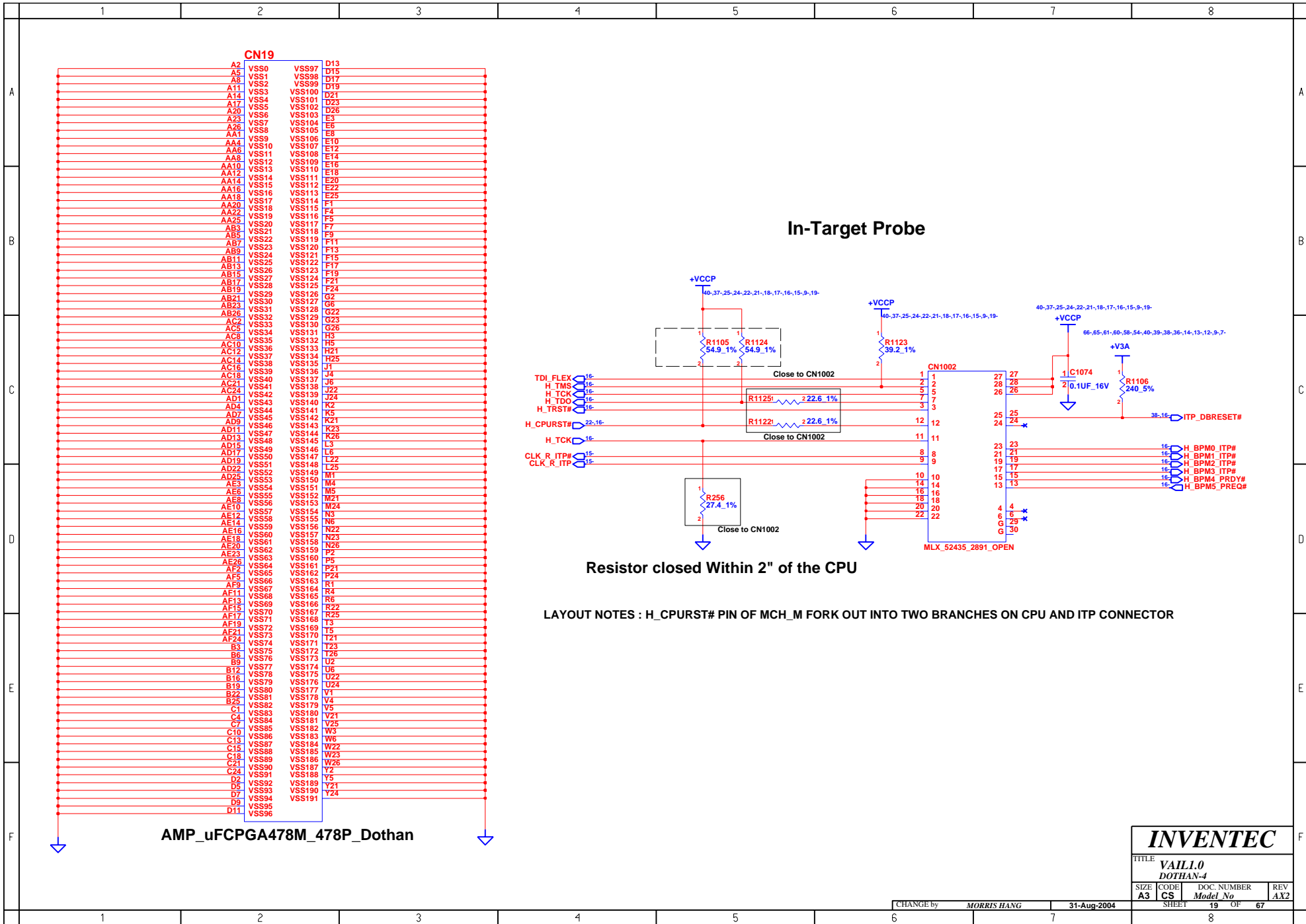


INVENTEC			
TITLE VAIL1.0 DOTHAN-2			
SIZE A3	CODE CS	DOC. NUMBER Model No	REV AX2
CHANGE by MORRIS HANG		31-Aug-2004	SHEET 17 OF 67



AMP_uFCPGA478M_478P_Dothan

INVENTEC			
TITLE VAIL1.0 DOTHAN-3			
SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV AX2
CHANGE by <i>MORRIS HANG</i>		31-Aug-2004	
SHEET 18		OF 67	



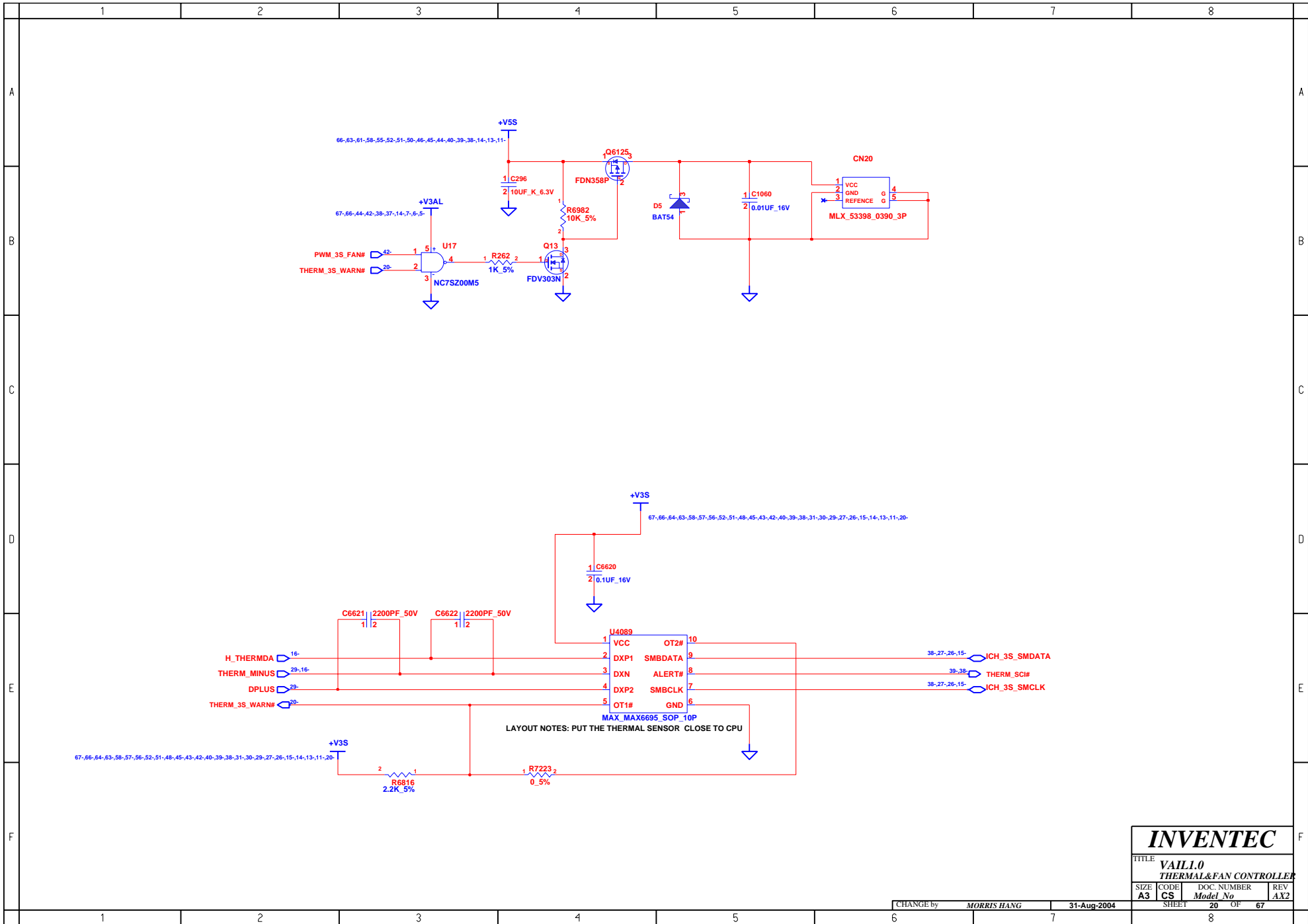
AMP_uFCPGA478M_478P_Dothan

In-Target Probe

Resistor closed Within 2" of the CPU

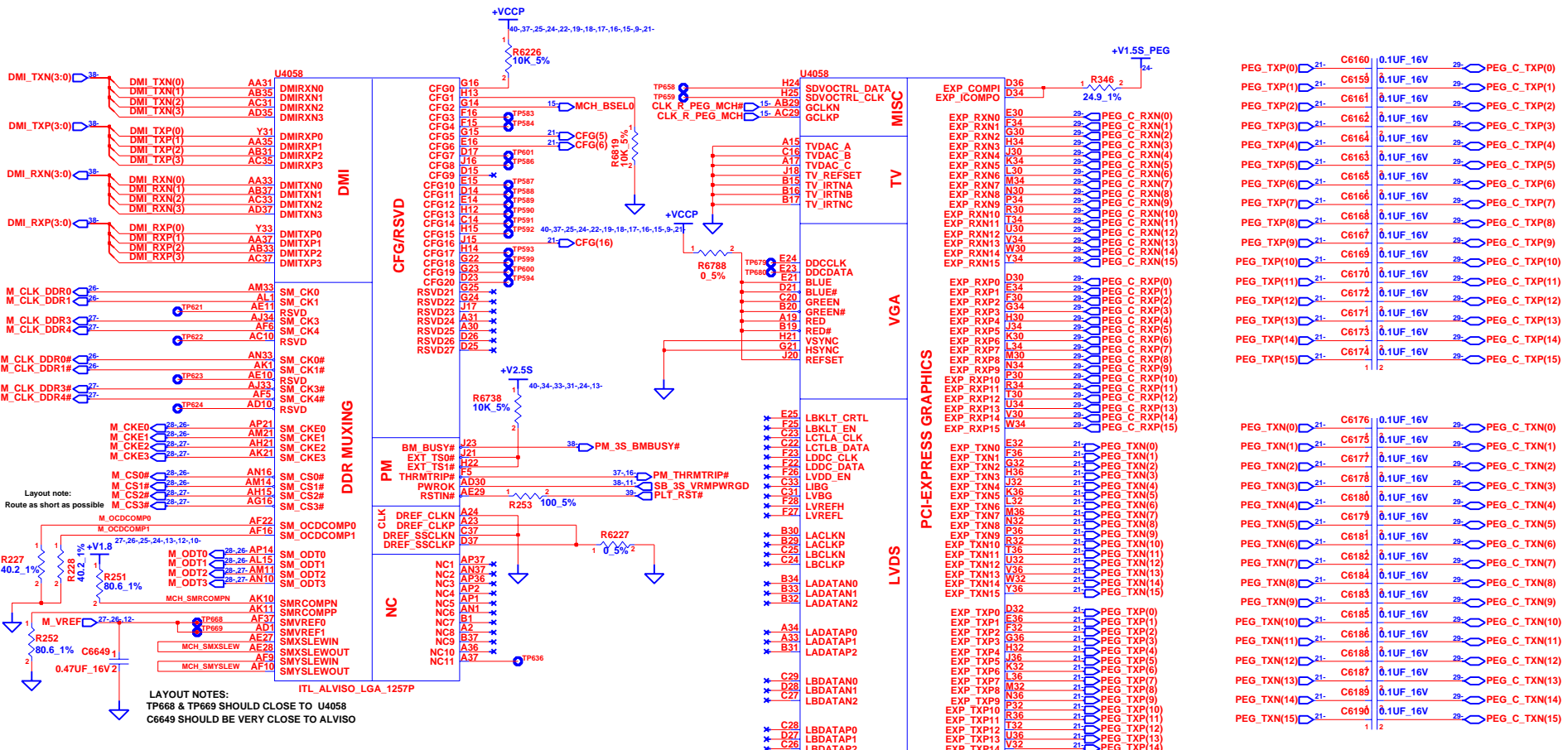
LAYOUT NOTES : H_CPURST# PIN OF MCH_M FORK OUT INTO TWO BRANCHES ON CPU AND ITP CONNECTOR

INVENTEC			
TITLE VAIL1.0 DOTHAN-4			
SIZE A3	CODE CS	DOC. NUMBER Model No	REV AX2
CHANGE by MORRIS HANG		31-Aug-2004	SHEET 19 OF 67



INVENTEC			
TITLE VAIL1.0			
THERMAL&FAN CONTROLLER			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	AX2
CHANGE by		31-Aug-2004	
MORRIS HANG		SHEET 20 OF 67	

NOTE: CFG[2:0] STRP : 001b : 533 MT/S
101b : 400 MT/S



PEG_TXP(0)	21-	C6160	0.1UF_16V	29-	PEG_C_TXP(0)
PEG_TXP(1)	21-	C6159	0.1UF_16V	29-	PEG_C_TXP(1)
PEG_TXP(2)	21-	C6161	0.1UF_16V	29-	PEG_C_TXP(2)
PEG_TXP(3)	21-	C6162	0.1UF_16V	29-	PEG_C_TXP(3)
PEG_TXP(4)	21-	C6164	0.1UF_16V	29-	PEG_C_TXP(4)
PEG_TXP(5)	21-	C6163	0.1UF_16V	29-	PEG_C_TXP(5)
PEG_TXP(6)	21-	C6168	0.1UF_16V	29-	PEG_C_TXP(6)
PEG_TXP(7)	21-	C6166	0.1UF_16V	29-	PEG_C_TXP(7)
PEG_TXP(8)	21-	C6168	0.1UF_16V	29-	PEG_C_TXP(8)
PEG_TXP(9)	21-	C6167	0.1UF_16V	29-	PEG_C_TXP(9)
PEG_TXP(10)	21-	C6169	0.1UF_16V	29-	PEG_C_TXP(10)
PEG_TXP(11)	21-	C6170	0.1UF_16V	29-	PEG_C_TXP(11)
PEG_TXP(12)	21-	C6172	0.1UF_16V	29-	PEG_C_TXP(12)
PEG_TXP(13)	21-	C6171	0.1UF_16V	29-	PEG_C_TXP(13)
PEG_TXP(14)	21-	C6173	0.1UF_16V	29-	PEG_C_TXP(14)
PEG_TXP(15)	21-	C6174	0.1UF_16V	29-	PEG_C_TXP(15)
PEG_TXN(0)	21-	C6176	0.1UF_16V	29-	PEG_C_TXN(0)
PEG_TXN(1)	21-	C6175	0.1UF_16V	29-	PEG_C_TXN(1)
PEG_TXN(2)	21-	C6177	0.1UF_16V	29-	PEG_C_TXN(2)
PEG_TXN(3)	21-	C6178	0.1UF_16V	29-	PEG_C_TXN(3)
PEG_TXN(4)	21-	C6180	0.1UF_16V	29-	PEG_C_TXN(4)
PEG_TXN(5)	21-	C6179	0.1UF_16V	29-	PEG_C_TXN(5)
PEG_TXN(6)	21-	C6181	0.1UF_16V	29-	PEG_C_TXN(6)
PEG_TXN(7)	21-	C6182	0.1UF_16V	29-	PEG_C_TXN(7)
PEG_TXN(8)	21-	C6184	0.1UF_16V	29-	PEG_C_TXN(8)
PEG_TXN(9)	21-	C6183	0.1UF_16V	29-	PEG_C_TXN(9)
PEG_TXN(10)	21-	C6185	0.1UF_16V	29-	PEG_C_TXN(10)
PEG_TXN(11)	21-	C6186	0.1UF_16V	29-	PEG_C_TXN(11)
PEG_TXN(12)	21-	C6188	0.1UF_16V	29-	PEG_C_TXN(12)
PEG_TXN(13)	21-	C6187	0.1UF_16V	29-	PEG_C_TXN(13)
PEG_TXN(14)	21-	C6189	0.1UF_16V	29-	PEG_C_TXN(14)
PEG_TXN(15)	21-	C6190	0.1UF_16V	29-	PEG_C_TXN(15)

LAYOUT NOTES:
TP668 & TP669 SHOULD CLOSE TO U4058
C6649 SHOULD BE VERY CLOSE TO ALVISO

ITL_ALVISO_LGA_1257P

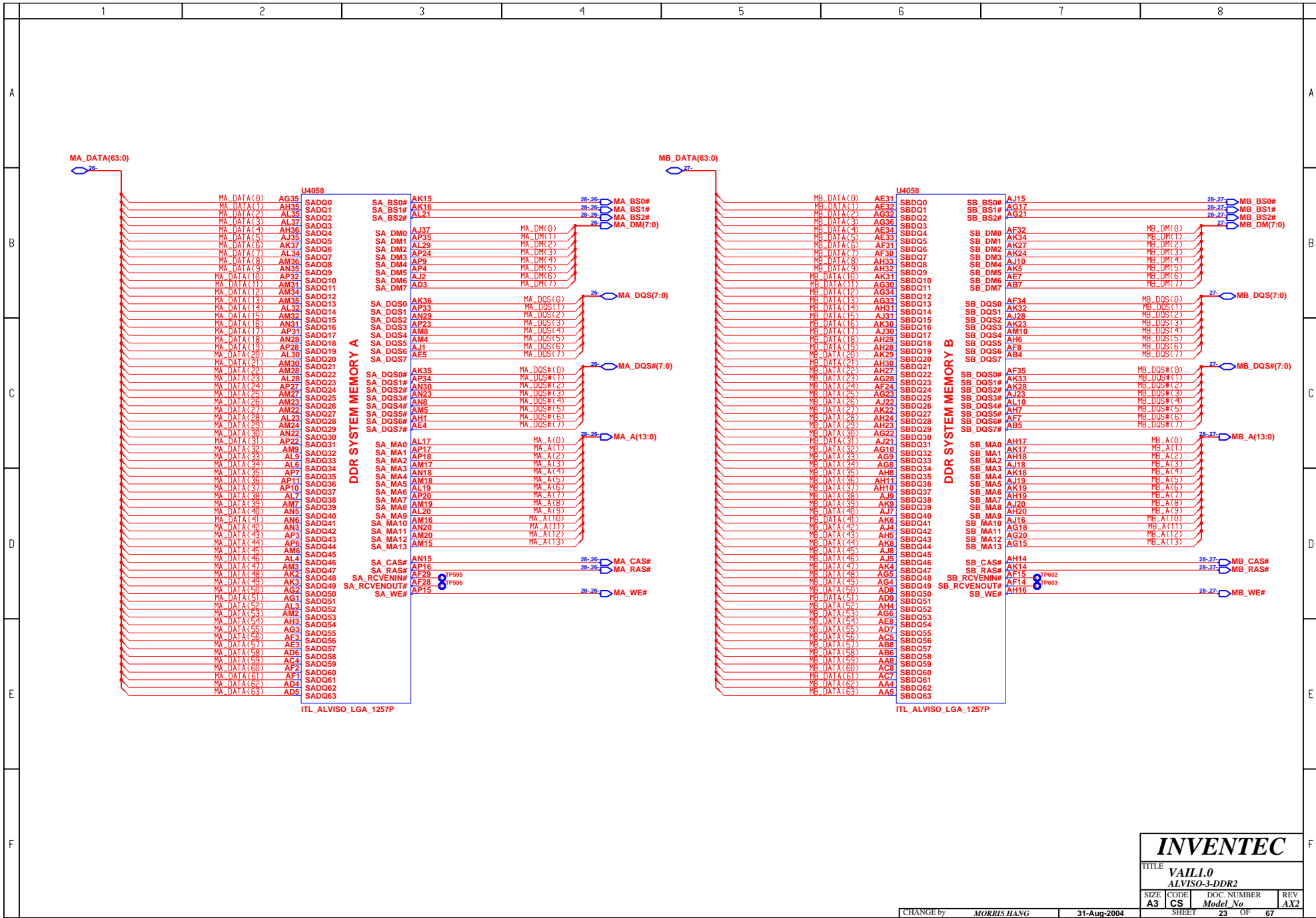
DMI
Low: DMI*2
High: DMI*4

DDR
Low: DDR2
High: DDR

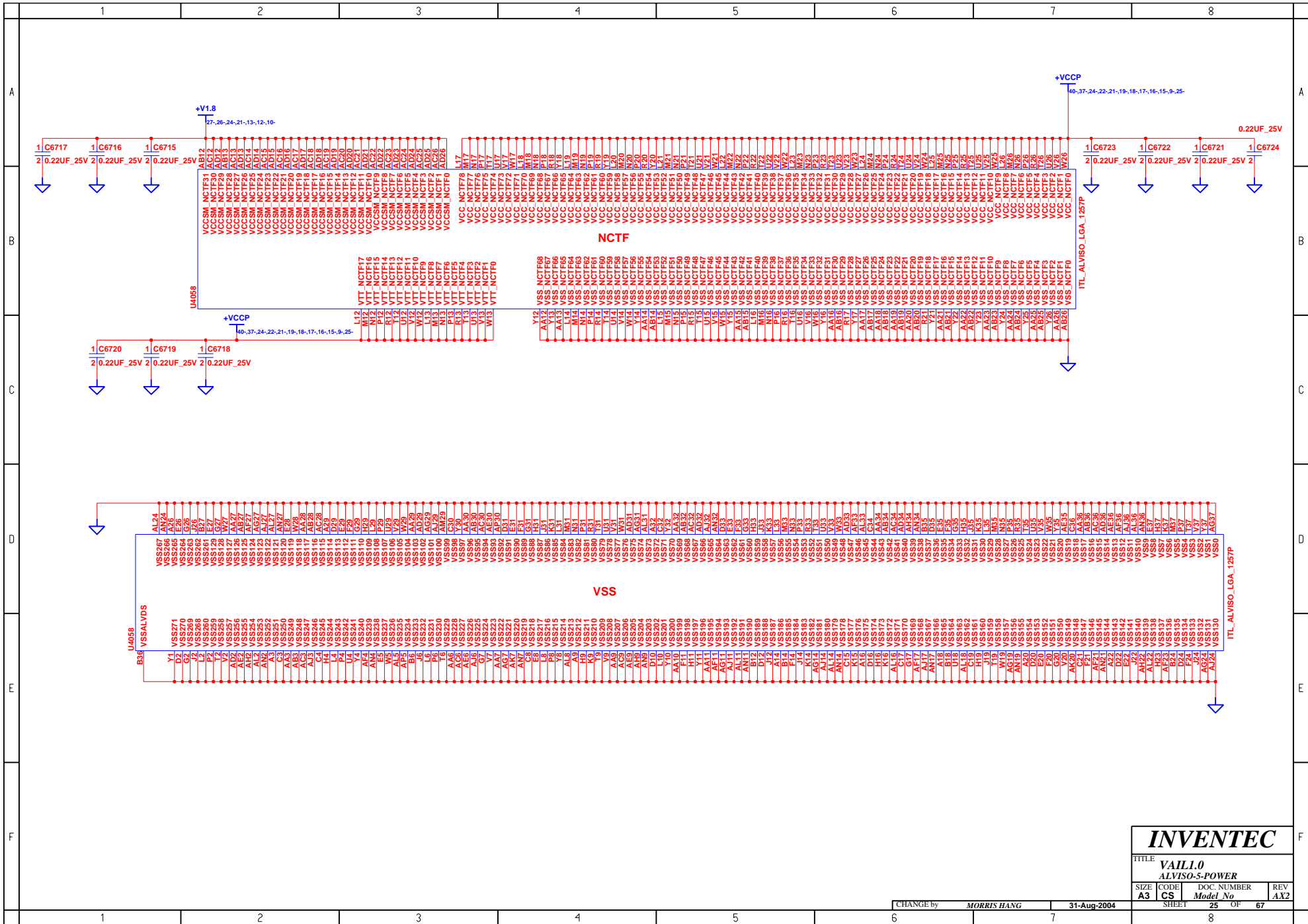
FSB dynamic ODT
Low: dynamic ODT disable
High: dynamic ODT enable

Place to near NB

INVENTEC			
TITLE VAILI.0 ALVISO-1			
SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV Ax2
CHANGE by <i>MORRIS HANG</i>		31-Aug-2004	
SHEET 21		OF 67	



INVENTEC			
TITLE VAILI.0 ALVISO-3-DDR2			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	AX2
SHEET 23		OF 67	

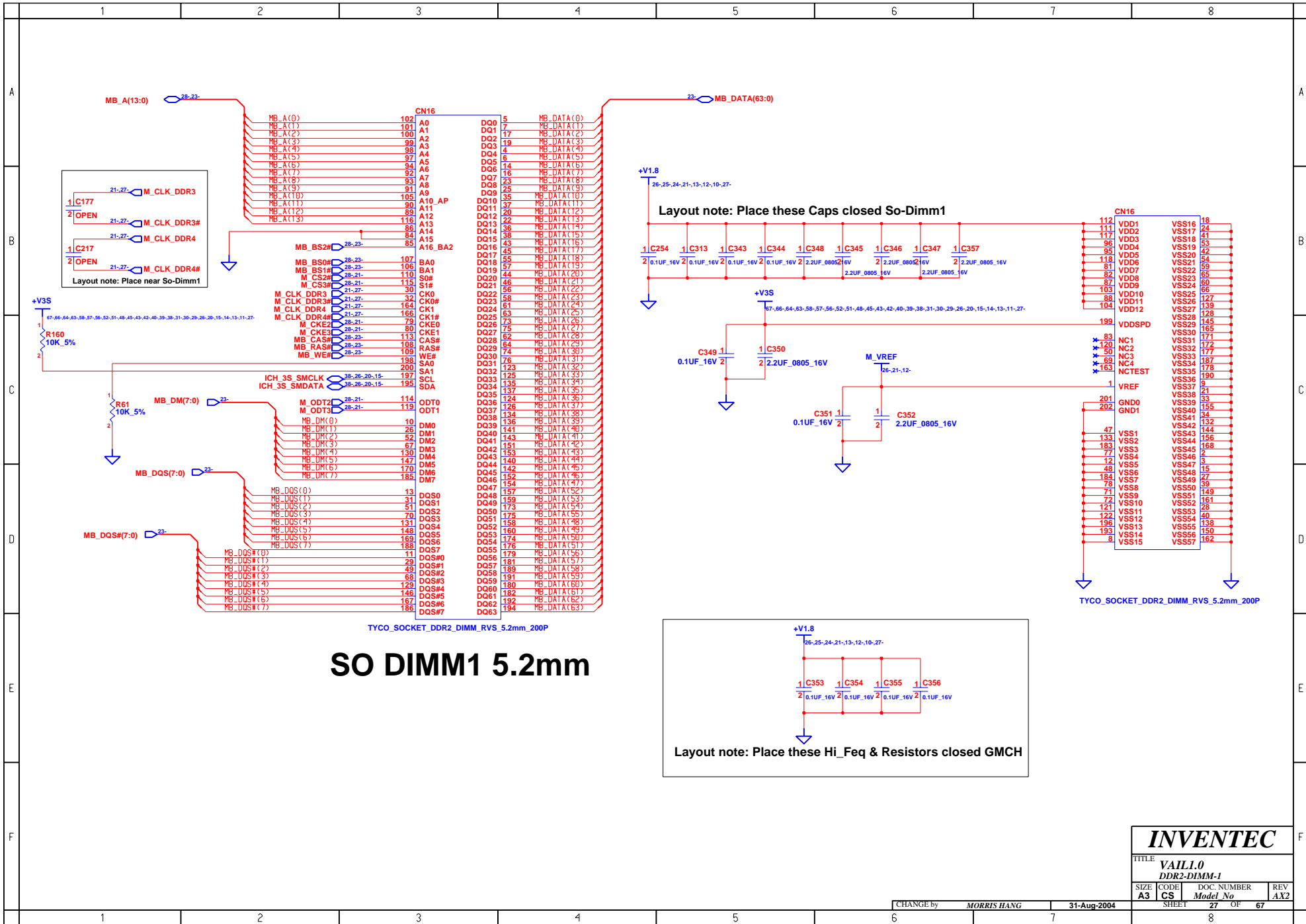


INVENTEC

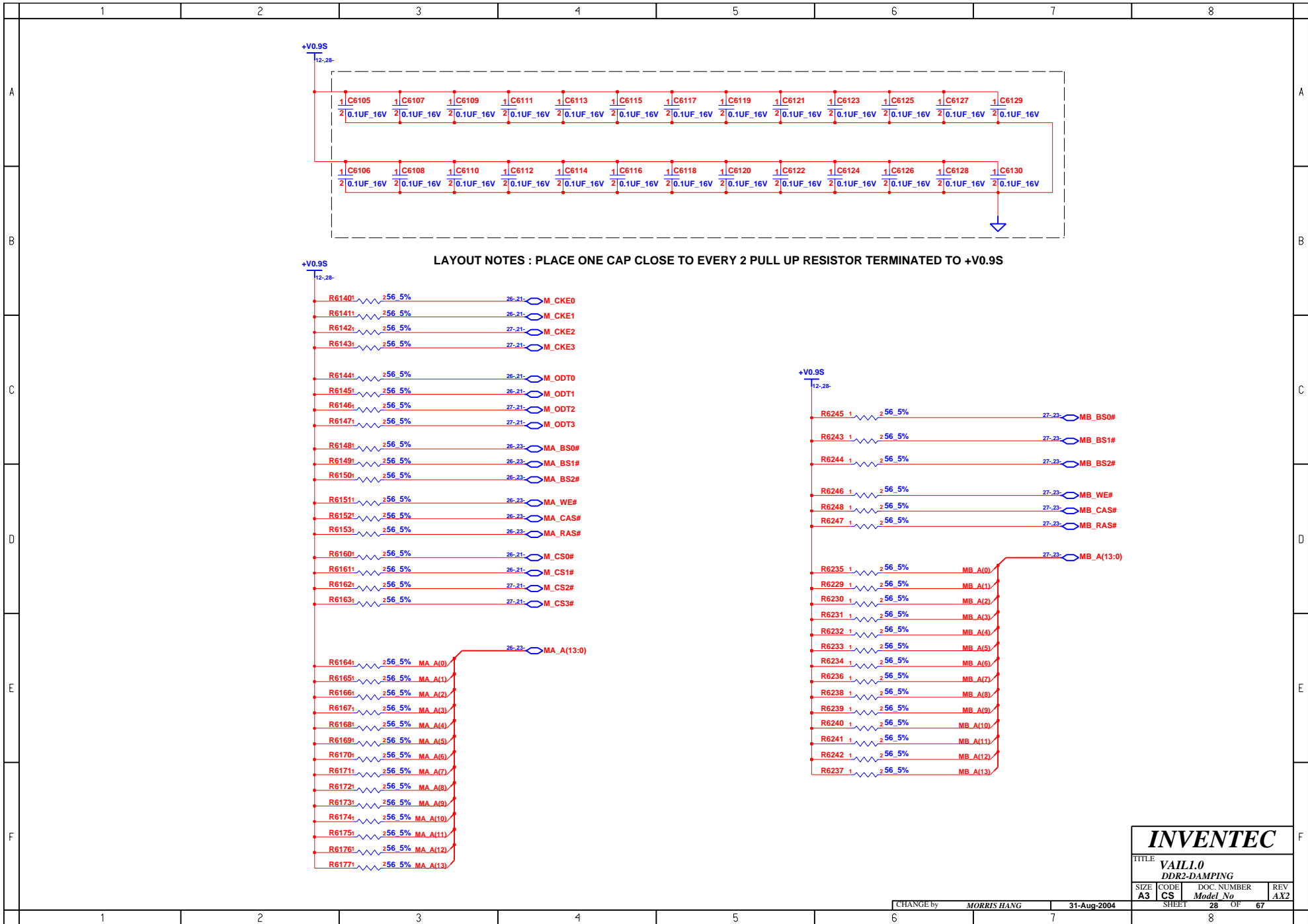
TITLE
VAILI.0
ALVISO-5-POWER

SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	AX2

SHEET 25 OF 67

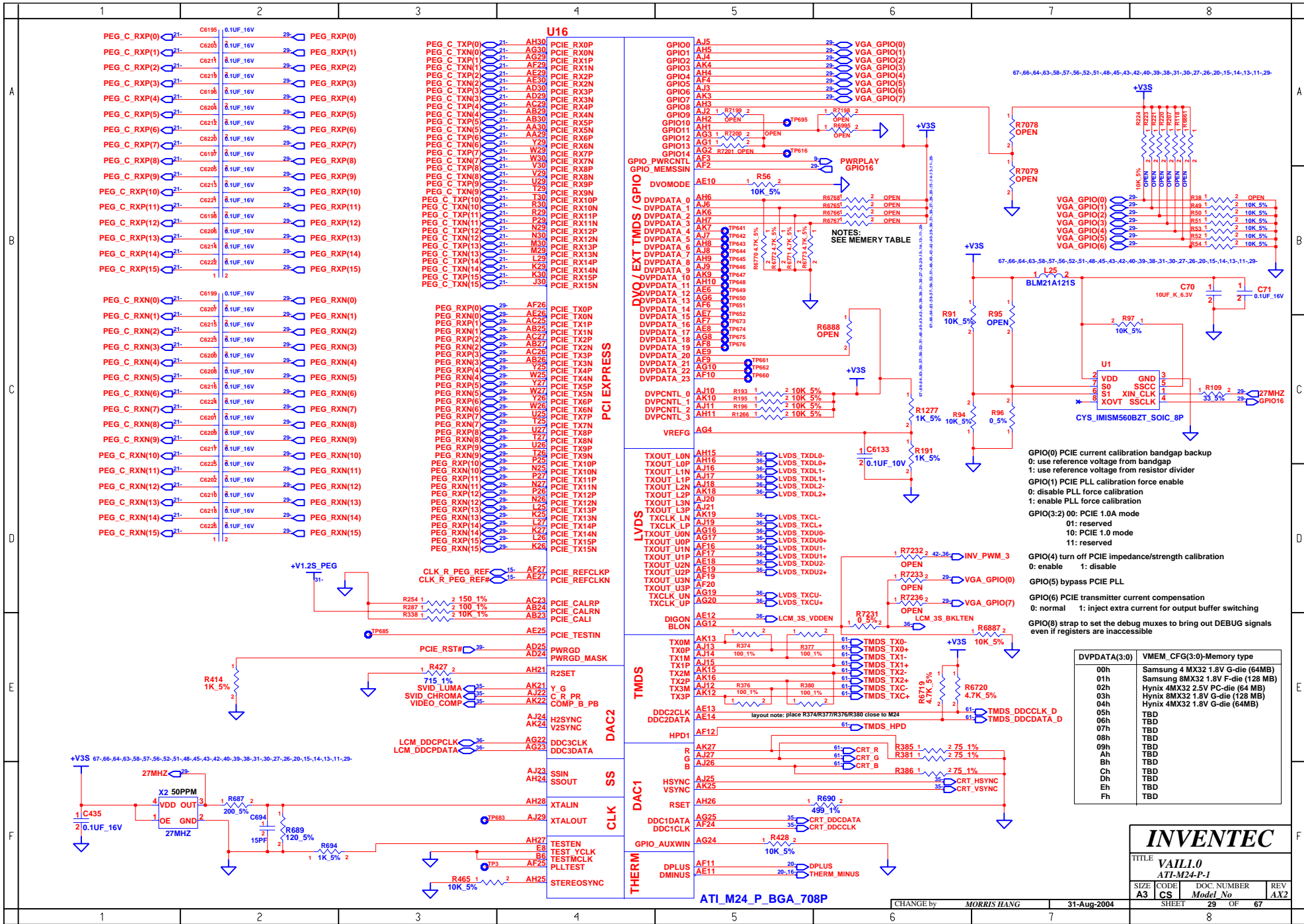


INVENTEC			
TITLE VAIL1.0			
DDR2-DIMM-1			
SIZE A3	CODE CS	DOC. NUMBER	REV AX2
CHANGE by MORRIS HANG		31-Aug-2004	
SHEET 27		OF 67	



LAYOUT NOTES : PLACE ONE CAP CLOSE TO EVERY 2 PULL UP RESISTOR TERMINATED TO +V0.9S

INVENTEC			
TITLE VAIL1.0			
DDR2-DAMPING			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	AX2
CHANGE by		MORRIS HANG	31-Aug-2004
SHEET		28	OF 67



67-66-64-63-58-57-56-52-51-48-45-43-42-40-39-38-31-30-27-26-20-15-14-13-11-29

67-66-64-63-58-57-56-52-51-48-45-43-42-40-39-38-31-30-27-26-20-15-14-13-11-29

- GPIO(0) PCIe current calibration bandgap backup
 - 0: use reference voltage from bandgap
 - 1: use reference voltage from resistor divider
- GPIO(1) PCIe PLL calibration force enable
 - 0: disable PLL force calibration
 - 1: enable PLL force calibration
- GPIO(3:2) 00: PCIe 1.0A mode
 - 01: reserved
 - 10: PCIe 1.0 mode
 - 11: reserved
- GPIO(4) turn off PCIe impedance/strength calibration
 - 0: enable
 - 1: disable
- GPIO(5) bypass PCIe PLL
- GPIO(6) PCIe transmitter current compensation
 - 0: normal
 - 1: inject extra current for output buffer switching
- GPIO(8) strap to set the debug muxes to bring out DEBUG signals even if registers are inaccessible

DVPPDATA(3:0)	VMEM_CFG(3:0)-Memory type
00h	Samsung 4 MX32 1.8V G-die (64MB)
01h	Samsung 8MX32 1.8V F-die (128 MB)
02h	Hynix 4MX32 2.5V PC-die (64 MB)
03h	Hynix 8MX32 1.8V G-die (126 MB)
04h	Hynix 4MX32 1.8V G-die (64MB)
05h	TBD
06h	TBD
07h	TBD
08h	TBD
09h	TBD
Ah	TBD
Bh	TBD
Ch	TBD
Dh	TBD
Eh	TBD
Fh	TBD

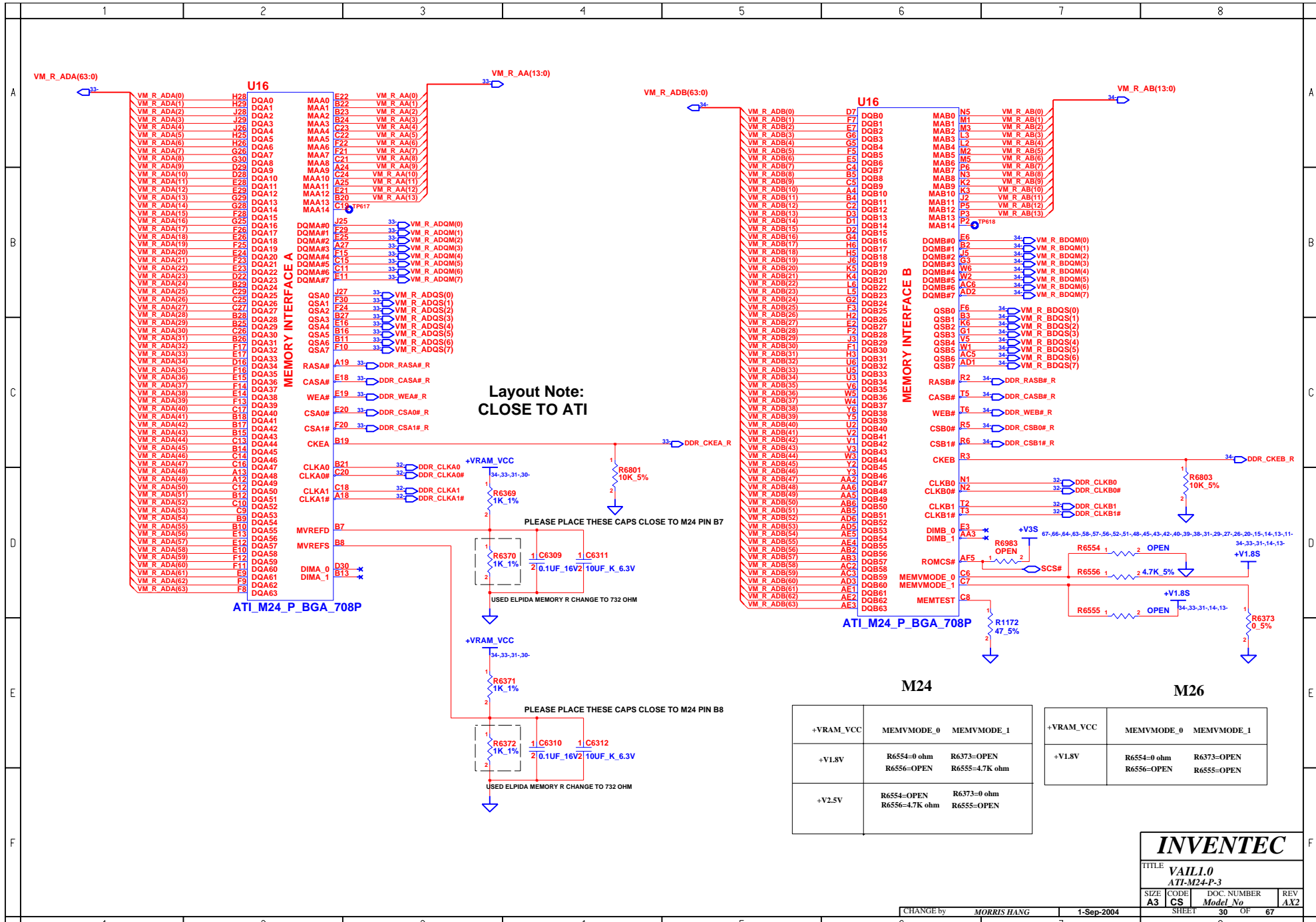
INVENTEC

TITLE **VAILLO**
ATI-M24-P-1

SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model_No	AX2

SHEET 29 OF 67

ATI_M24_P_BGA_708P



**Layout Note:
CLOSE TO ATI**

PLEASE PLACE THESE CAPS CLOSE TO M24 PIN B7

PLEASE PLACE THESE CAPS CLOSE TO M24 PIN B8

USED ELPIDA MEMORY R CHANGE TO 732 OHM

USED ELPIDA MEMORY R CHANGE TO 732 OHM

+VRAM_VCC	MEMVMODE_0	MEMVMODE_1
+V1.8V	R6554=0 ohm R6556=OPEN	R6373=OPEN R6555=4.7K ohm
+V2.5V	R6554=OPEN R6556=4.7K ohm	R6373=0 ohm R6555=OPEN

+VRAM_VCC	MEMVMODE_0	MEMVMODE_1
+V1.8V	R6554=0 ohm R6556=OPEN	R6373=OPEN R6555=OPEN

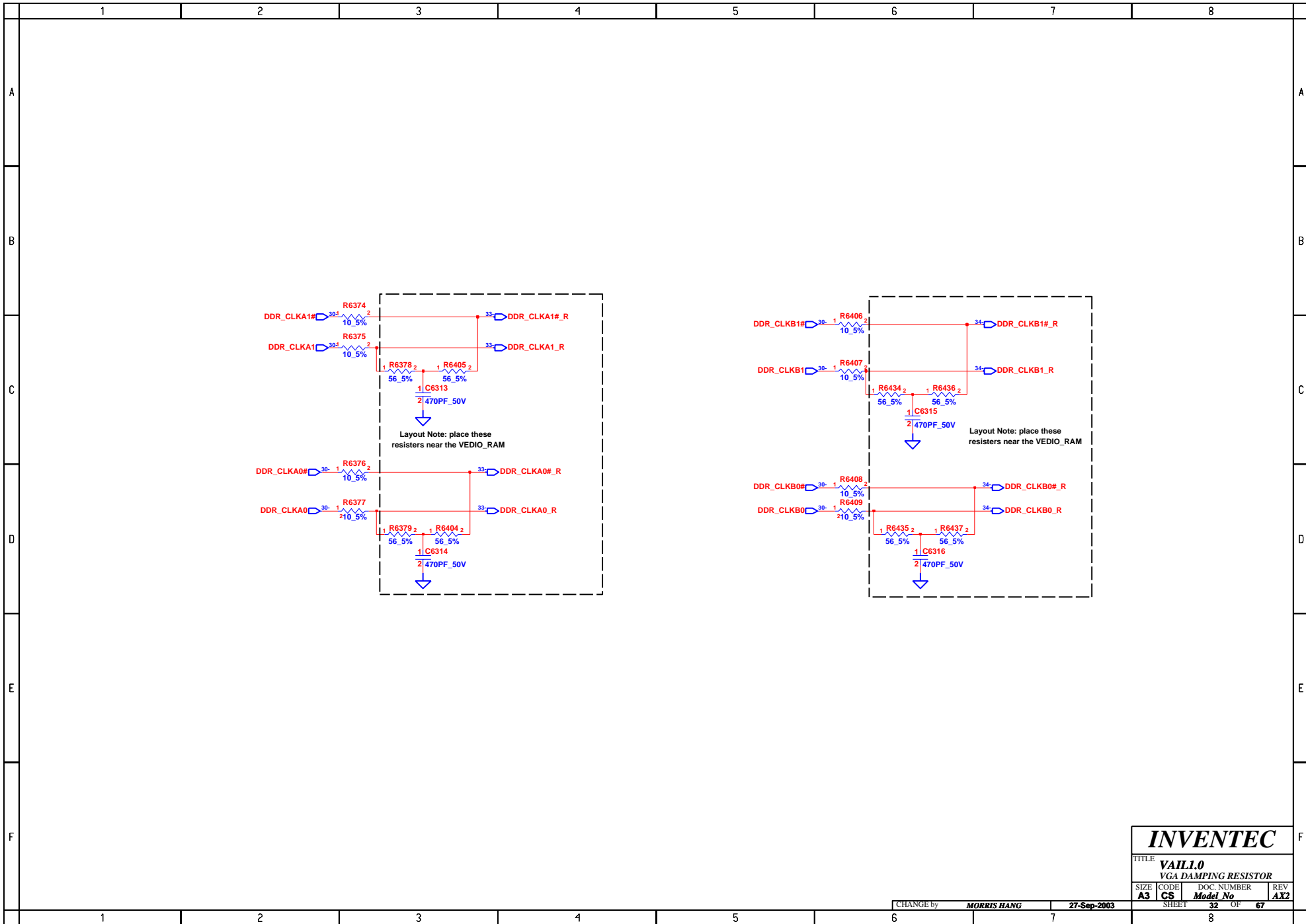
INVENTEC

TITLE
VAIL1.0
ATI-M24-P-3

SIZE A3	CODE CS	DOC. NUMBER Model No	REV AX2
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CHANGE by MORRIS HANG 1-Sep-2004

SHEET 30 OF 67

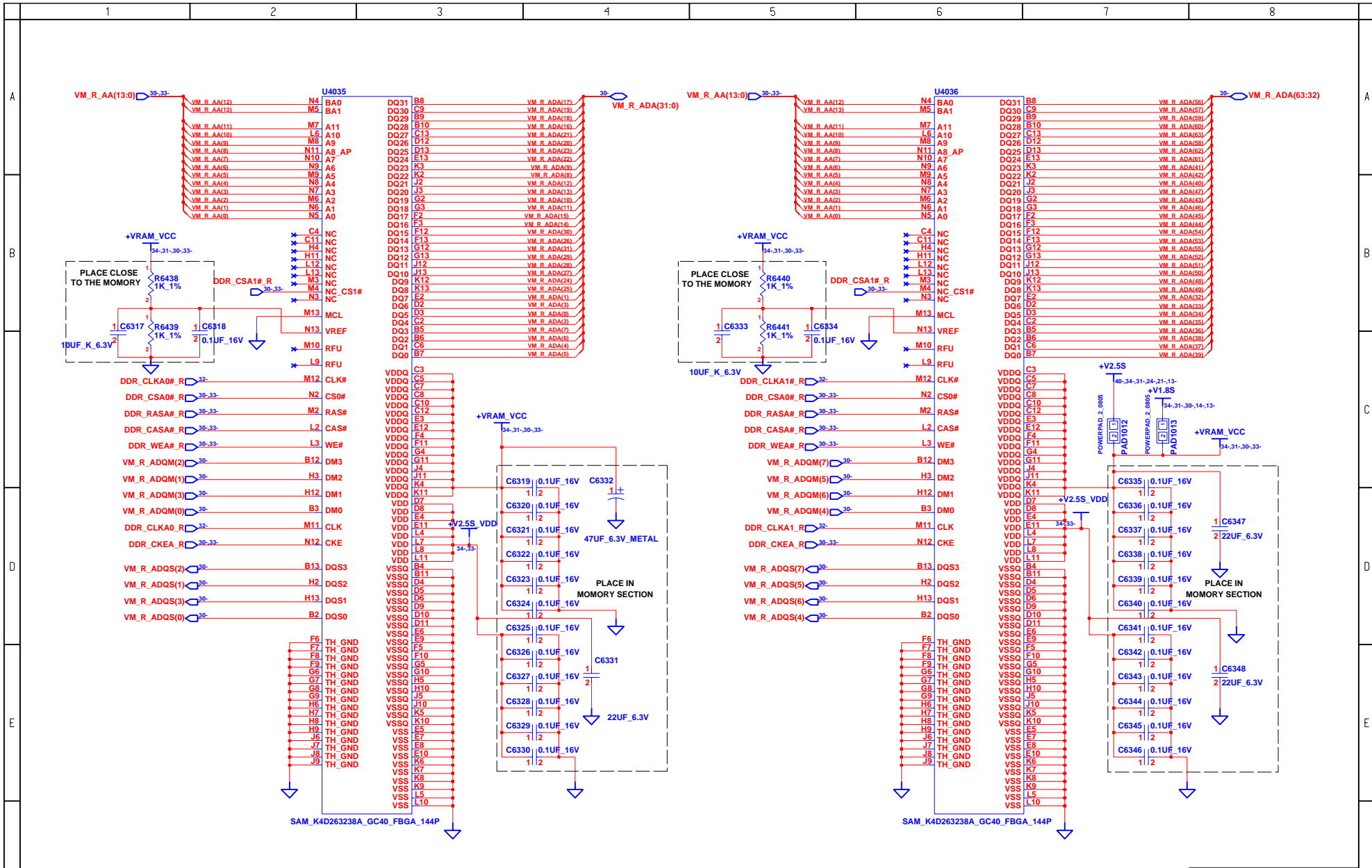


INVENTEC

TITLE
VAIL1.0
 VGA DAMPING RESISTOR

SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV AX2
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CHANGE by **MORRIS HANG** 27-Sep-2003 SHEET 32 OF 67

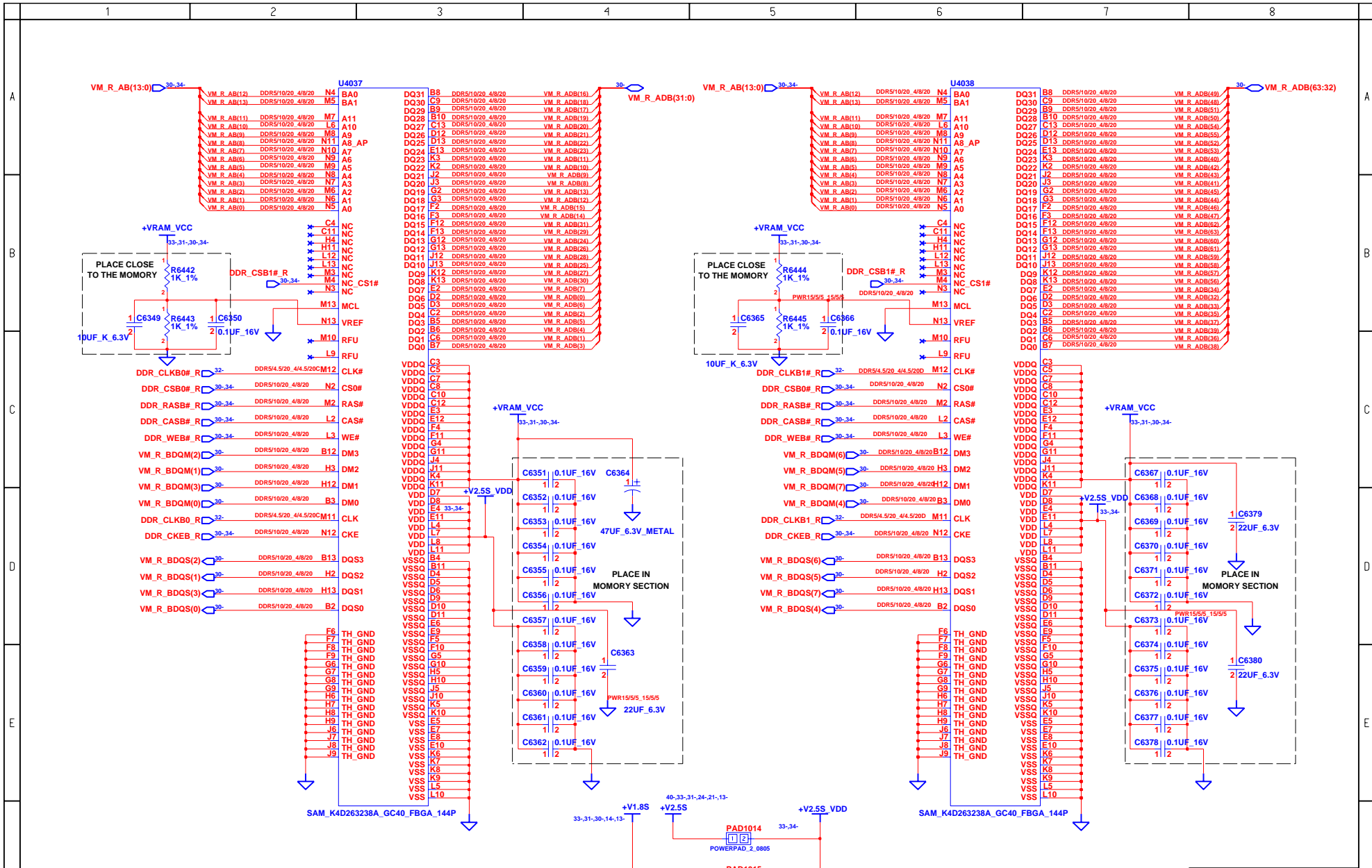


INVENTEC

TITLE **VAIL1.0**
VIDEO RAM-1

SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	AX2

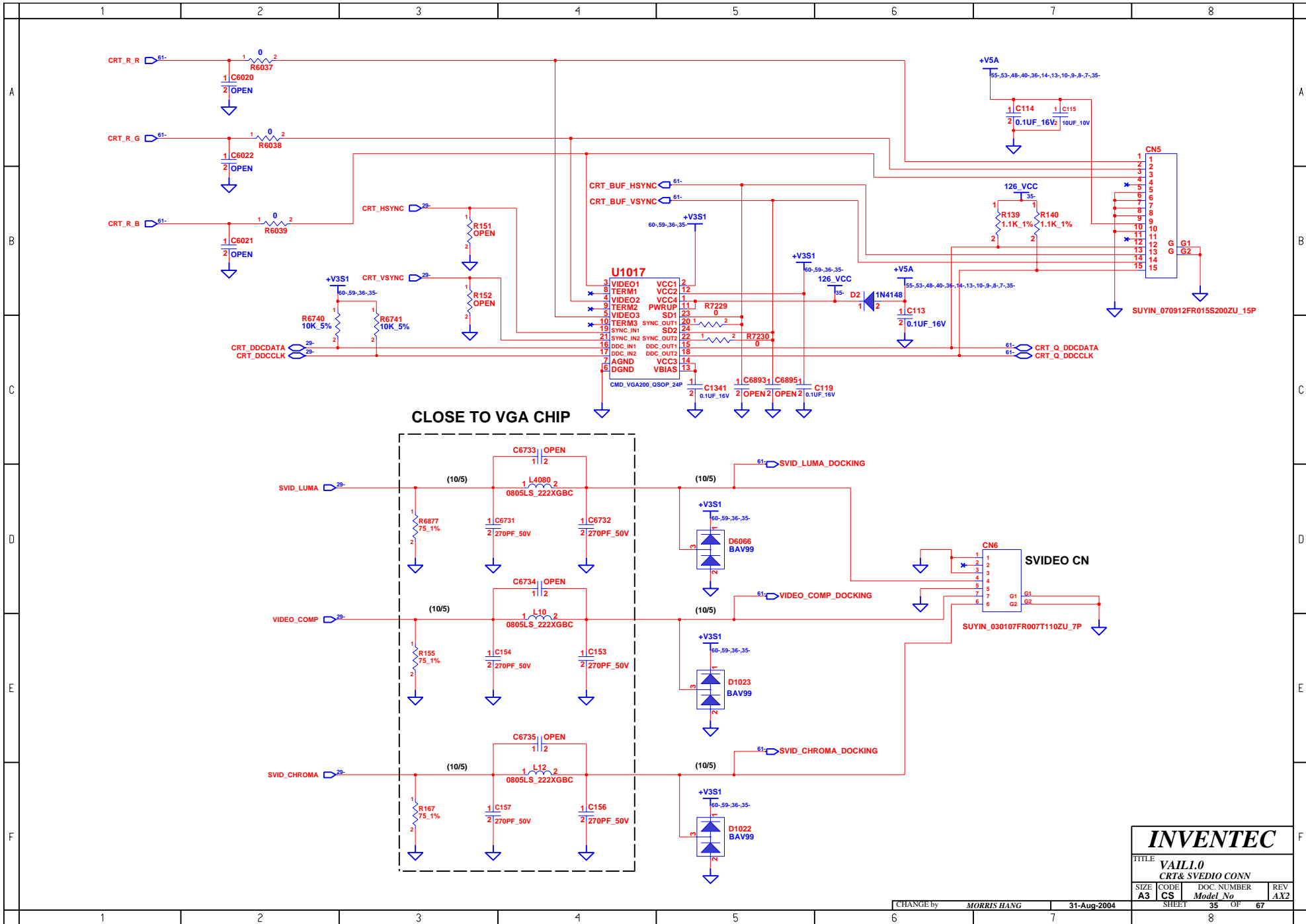
CHANGE by **MORRIS HANG** 31-Aug-2004
 SHEET 33 OF 67



INVENTEC

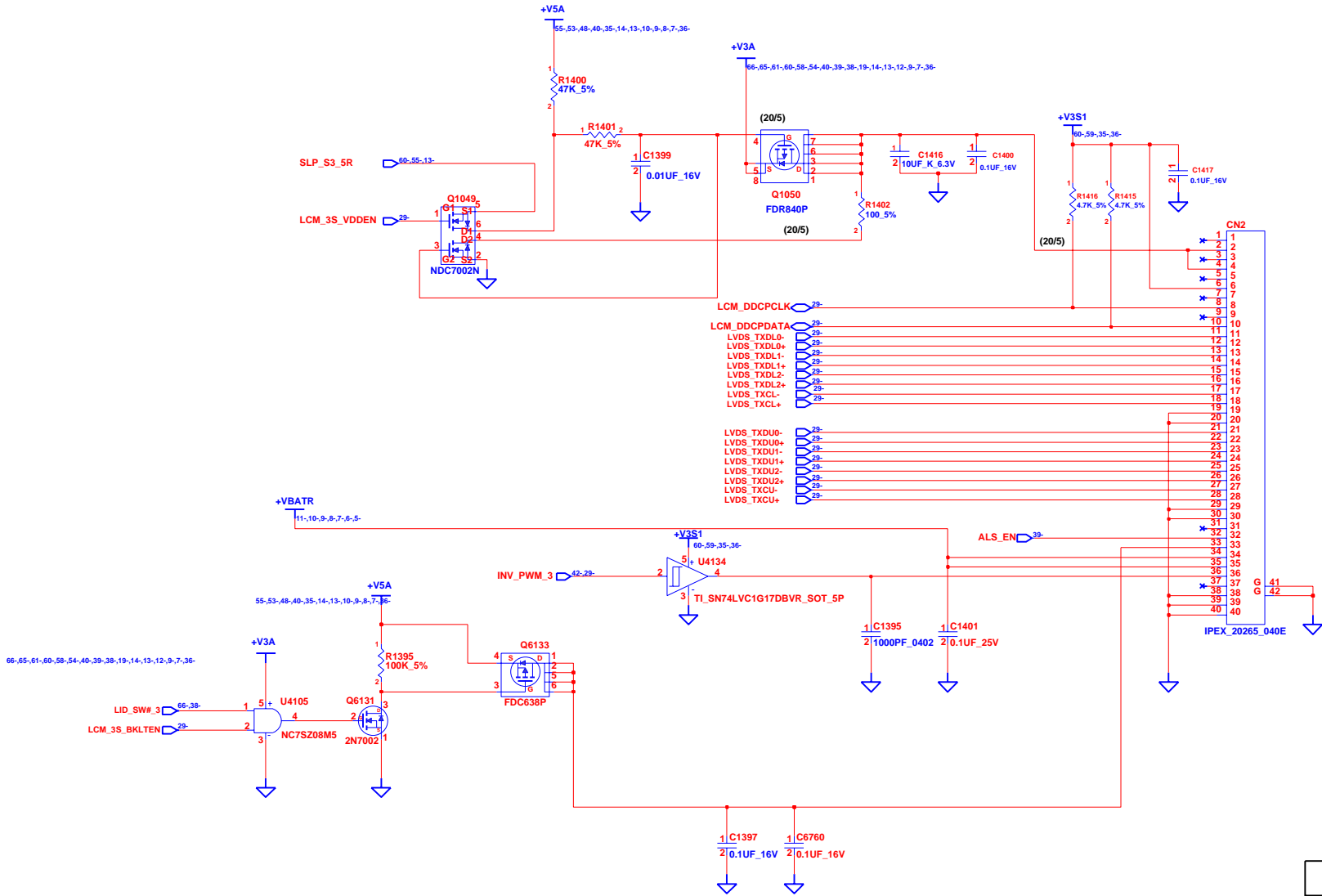
TITLE **VAIL1.0 VIDEO RAM-2**

SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	AX2



INVENTEC			
TITLE VAIL1.0 CRT & SVIDEO CONN			
SIZE A3	CODE CS	DOC. NUMBER Model No	REV AX2
CHANGE by MORRIS HANG		31-Aug-2004	
SHEET 35		OF 67	

Place closed to connector

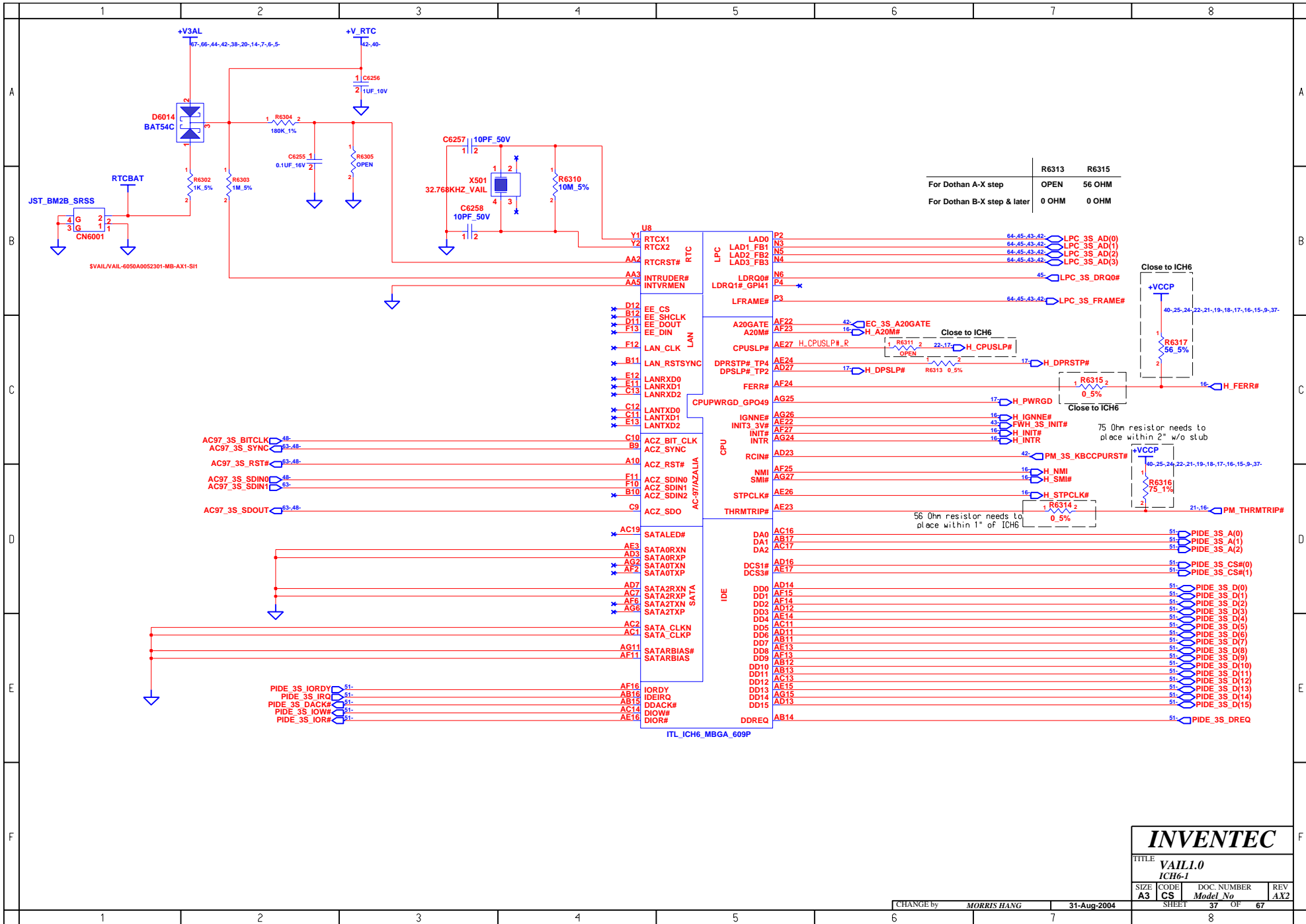


INVENTEC

TITLE			
VAIL1.0			
LCD CONN			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	AX2

CHANGE by MORRIS HANG 31-Aug-2004

SHEET 36 OF 67



	R6313	R6315
For Dothan A-X step	OPEN	56 OHM
For Dothan B-X step & later	0 OHM	0 OHM

INVENTEC

TITLE
VAIL1.0
ICH6-1

SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	AX2

CHANGE by MORRIS HANG 31-Aug-2004 SHEET 37 OF 67

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

U8

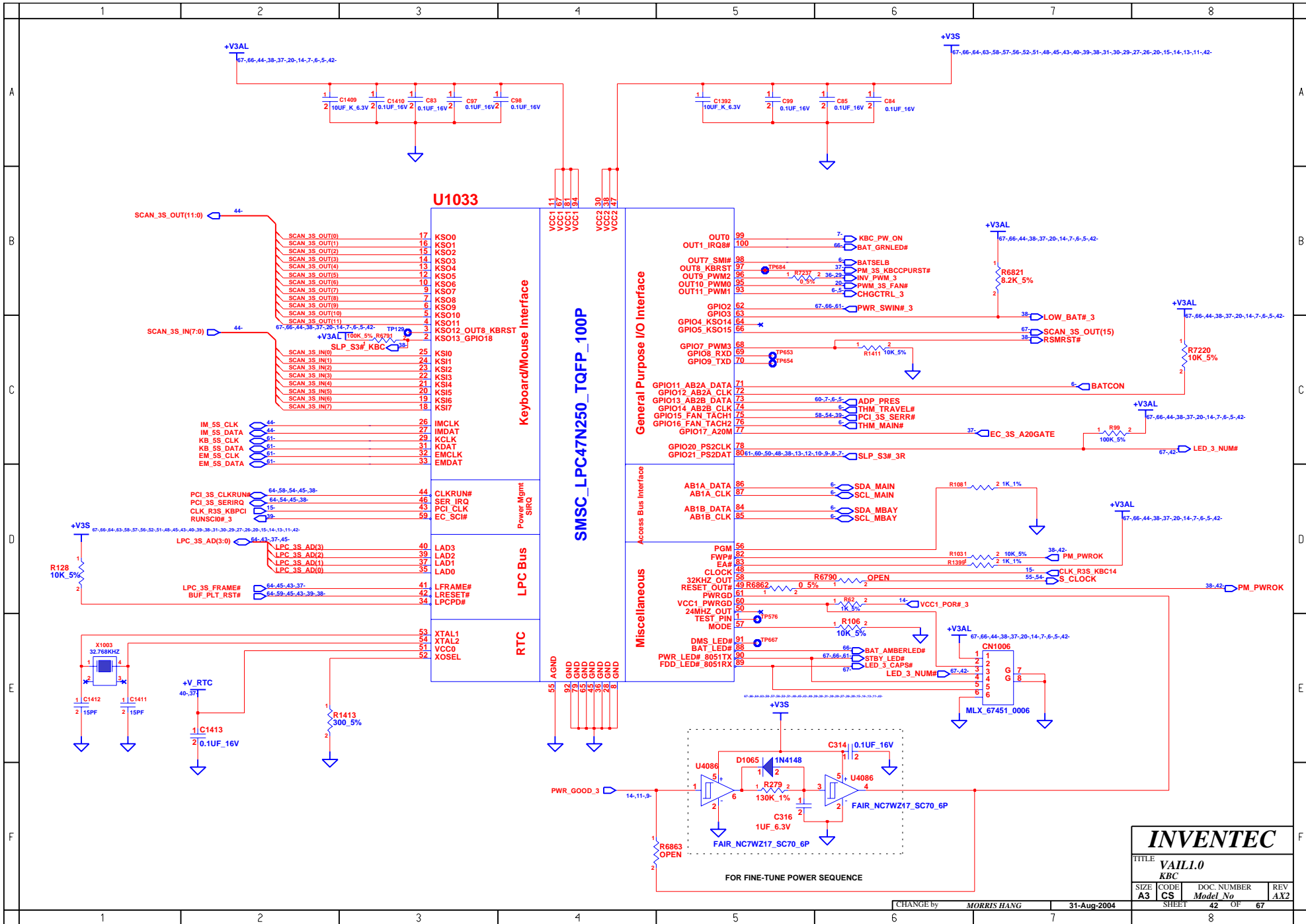
E27	VSS172	VSS86	F4
Y6	VSS171	VSS85	F22
Y27	VSS170	VSS84	F19
Y26	VSS169	VSS83	F17
Y23	VSS168	VSS82	E25
W7	VSS167	VSS81	E19
W25	VSS166	VSS80	E18
W24	VSS165	VSS79	E15
W23	VSS164	VSS78	E14
W4	VSS163	VSS77	D22
V27	VSS162	VSS76	D20
V26	VSS161	VSS75	D18
V23	VSS160	VSS74	D14
U25	VSS159	VSS73	D13
U24	VSS158	VSS72	D10
U23	VSS157	VSS71	D1
U15	VSS156	VSS70	C3
U13	VSS155	VSS69	C22
T7	VSS154	VSS68	C20
T27	VSS153	VSS67	C19
T26	VSS152	VSS66	C18
T23	VSS151	VSS65	B25
T16	VSS149	VSS63	B24
T14	VSS148	VSS62	B21
T13	VSS147	VSS61	B19
T12	VSS146	VSS60	B15
R4	VSS145	VSS59	B13
R25	VSS144	VSS58	AG7
R24	VSS143	VSS57	AG3
R23	VSS142	VSS56	AG22
R22	VSS141	VSS55	AG20
R17	VSS140	VSS54	AG1
R16	VSS139	VSS53	AG14
R15	VSS138	VSS52	AG12
R14	VSS137	VSS51	AG1
R13	VSS136	VSS50	AF7
R12	VSS135	VSS49	AF3
P22	VSS134	VSS48	AF28
P16	VSS133	VSS47	AF12
P15	VSS132	VSS46	AF10
P14	VSS131	VSS45	AF1
P13	VSS129	VSS43	AE7
P12	VSS128	VSS42	AE6
N7	VSS127	VSS41	AE25
N17	VSS126	VSS40	AE21
N16	VSS125	VSS39	AE12
N15	VSS124	VSS38	AE11
N14	VSS123	VSS37	AE10
N13	VSS122	VSS36	AD6
N12	VSS121	VSS35	AD24
N11	VSS120	VSS34	AD2
M4	VSS119	VSS33	AD18
M27	VSS118	VSS32	AD15
M26	VSS117	VSS31	AD10
M23	VSS116	VSS30	AD1
M16	VSS115	VSS29	AC3
M15	VSS114	VSS28	AC6
M14	VSS113	VSS27	AC26
M13	VSS112	VSS26	AC24
M12	VSS111	VSS25	AC23
L27	VSS110	VSS24	AC22
L26	VSS109	VSS23	AC12
L24	VSS108	VSS22	AC10
L23	VSS107	VSS21	AB9
L15	VSS106	VSS20	AB9
L13	VSS105	VSS19	AB2
K7	VSS104	VSS18	AB19
K27	VSS103	VSS17	AB19
K26	VSS102	VSS16	AB10
K23	VSS101	VSS15	AB1
K1	VSS100	VSS14	AA4
J4	VSS99	VSS13	AA16
J26	VSS98	VSS12	AA13
J24	VSS97	VSS11	AA11
J23	VSS96	VSS10	A9
H27	VSS95	VSS9	A7
H26	VSS94	VSS8	A4
H23	VSS93	VSS7	A26
G9	VSS92	VSS6	A23
G7	VSS91	VSS5	A21
G21	VSS90	VSS4	A19
G12	VSS89	VSS3	A15
G1	VSS88	VSS2	A12
	VSS87	VSS1	A1

ITL_ICH6_MBGGA_609P

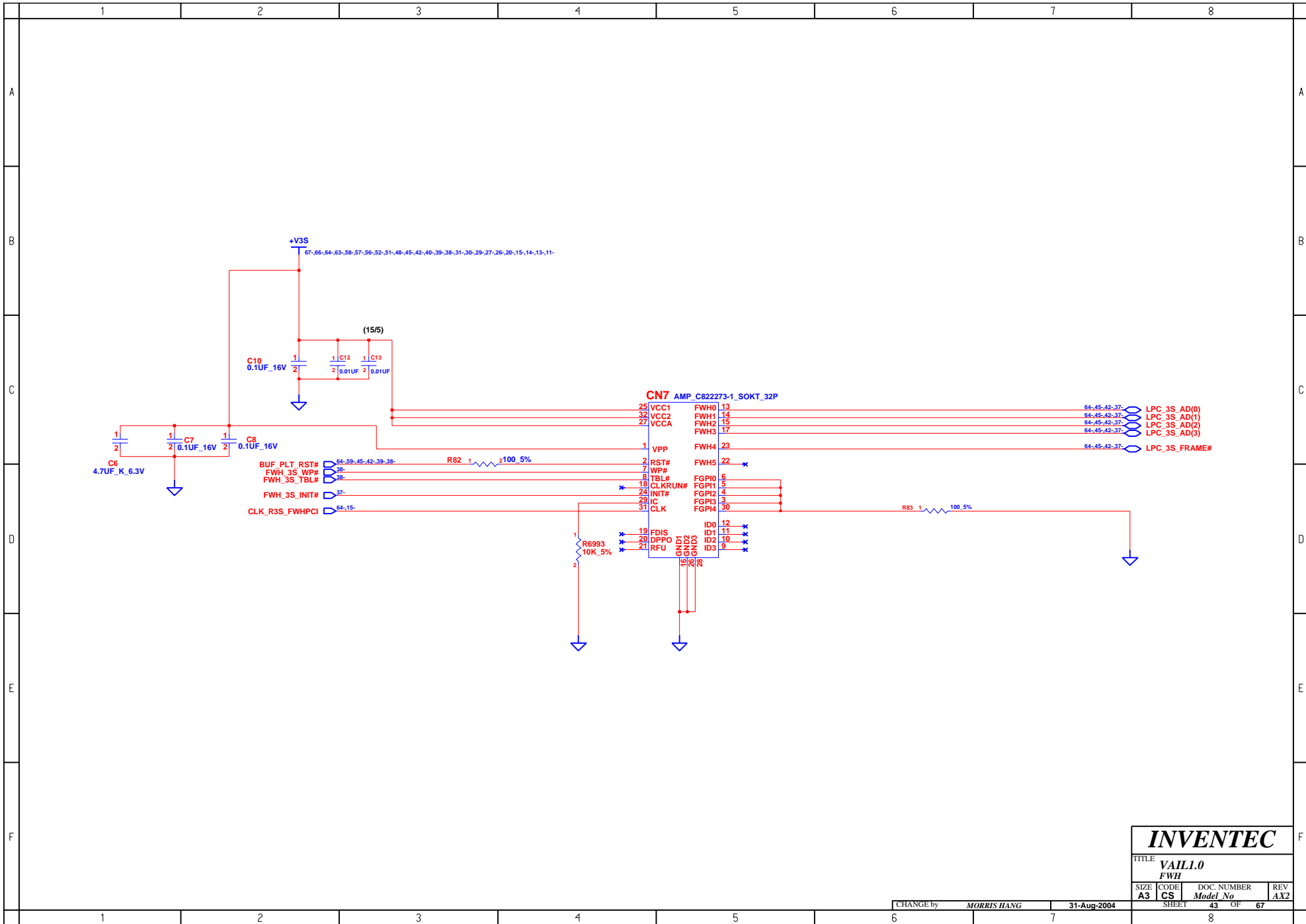


INVENTEC			
TITLE VAIL1.0			
ICH6-5			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	<i>Model No</i>	AX2
SHEET		41 OF	67

CHANGE by **MORRIS HANG** 31-Aug-2004



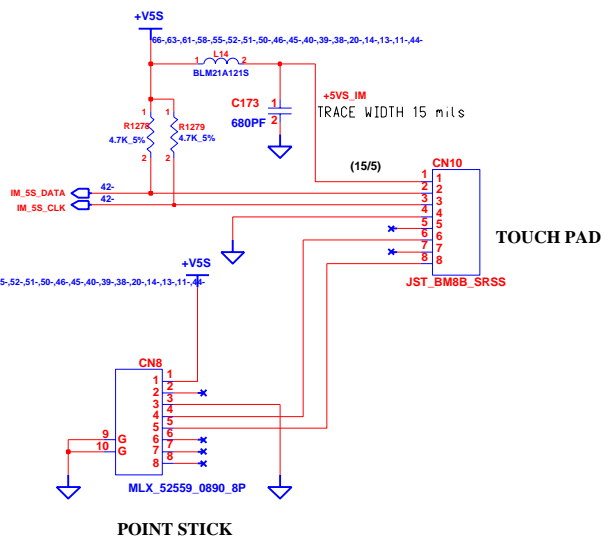
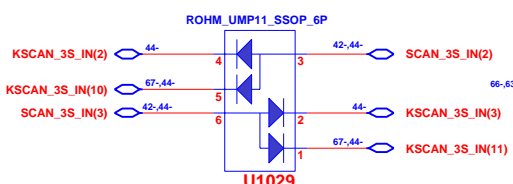
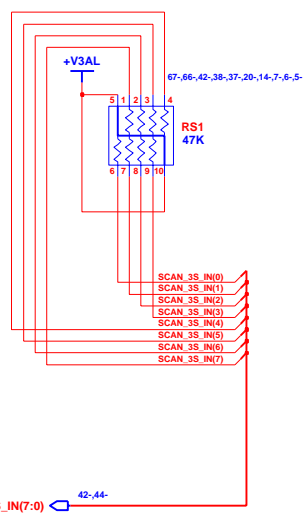
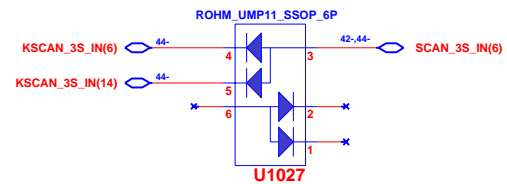
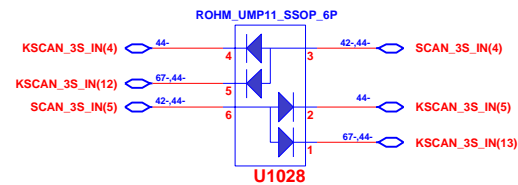
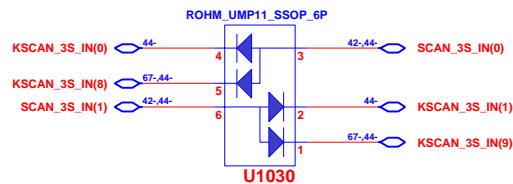
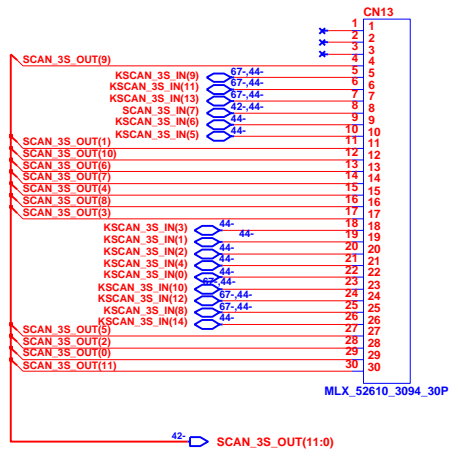
INVENTEC			
TITLE VAIL1.0			
KBC			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	AX2
CHANGE by		MORRIS HANG	31-Aug-2004
SHEET		42	OF 67



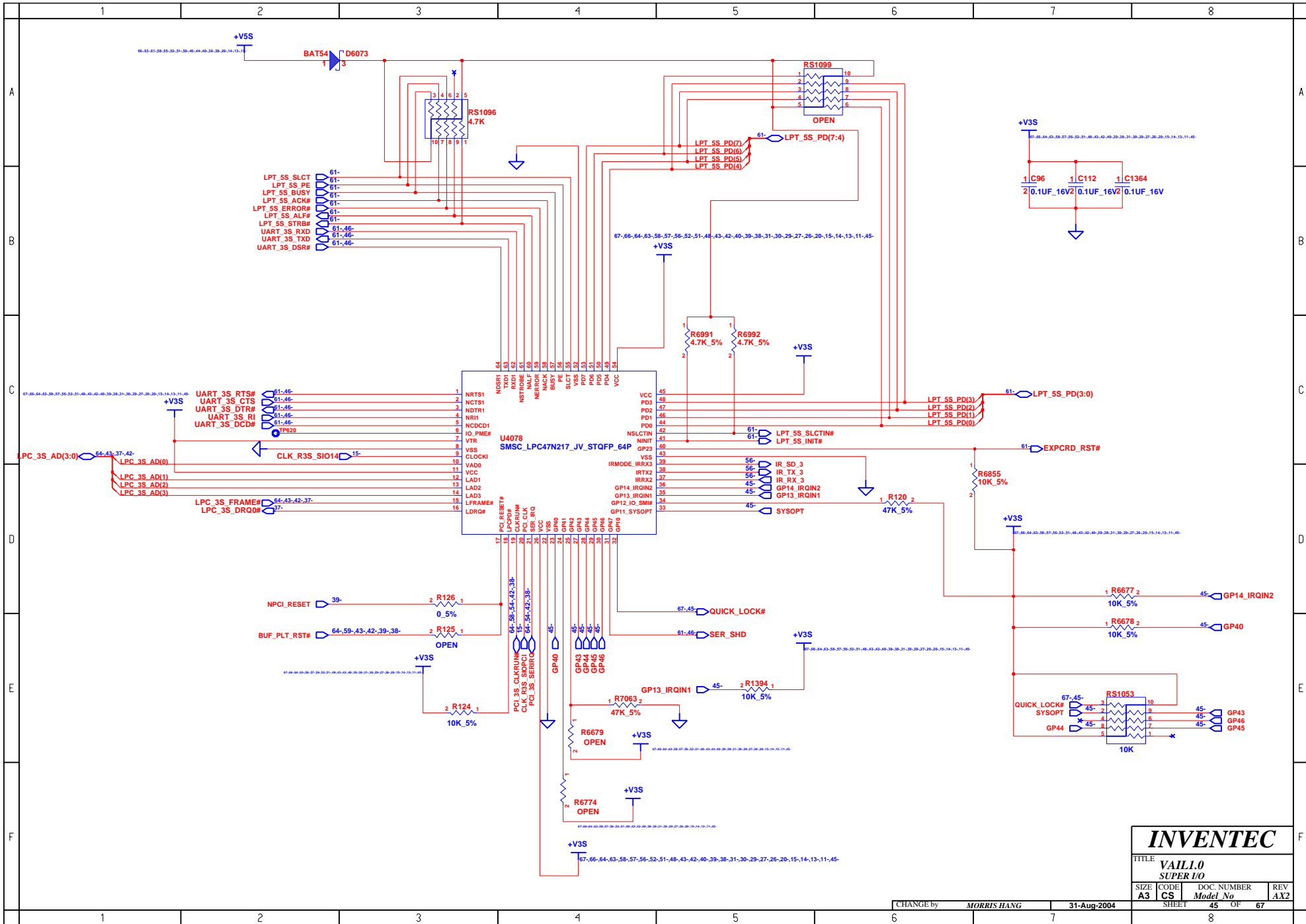
INVENTEC

TITLE			
VAIL1.0			
FWH			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	AX2
SHEET		OF	
43		67	

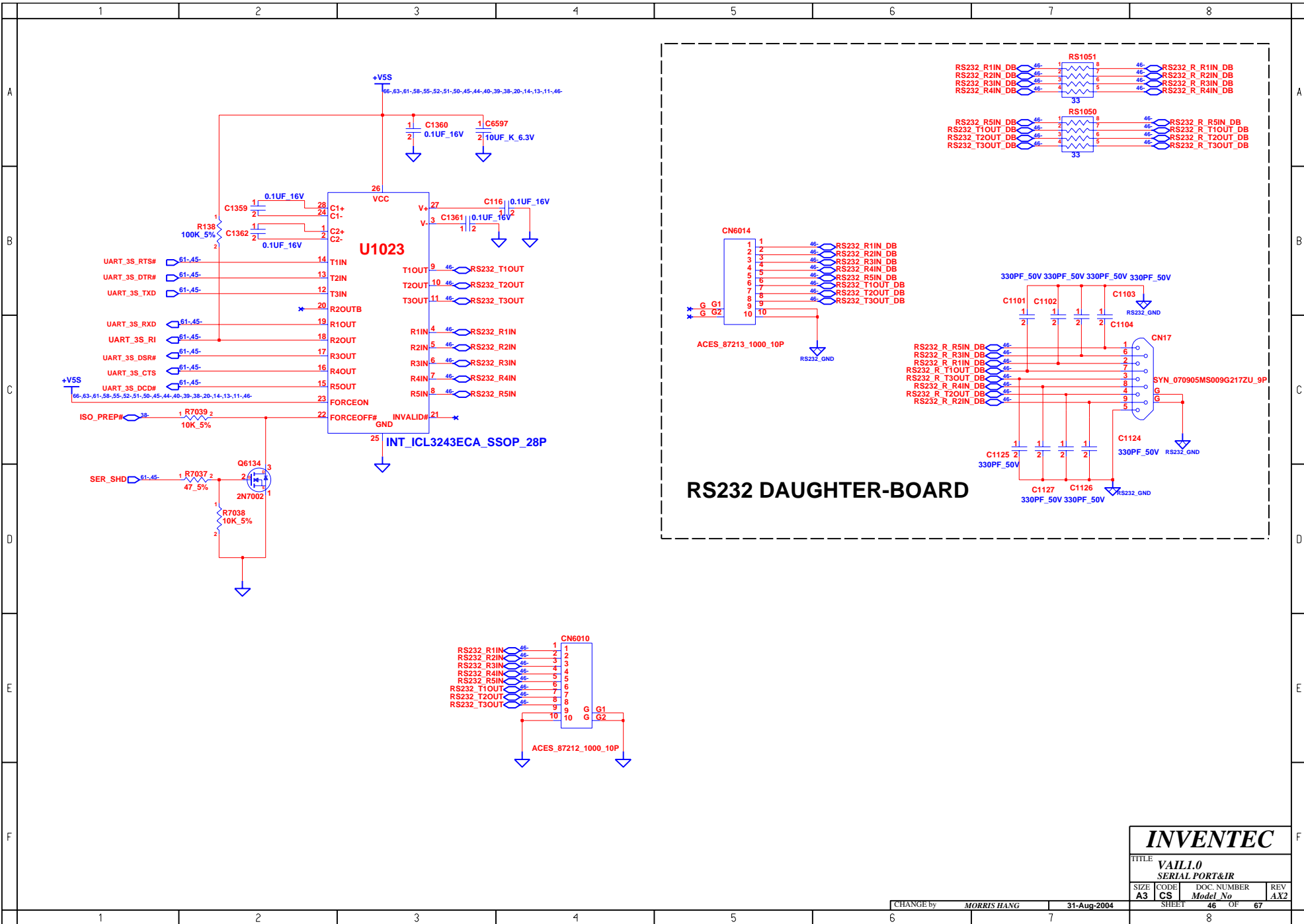
CHANGE by MORRIS HANG 31-Aug-2004



INVENTEC			
TITLE VAIL1.0			
INT.KBC/POINT DEVICES			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	AX2



INVENTEC			
TITLE VAIL1.0 SUPER I/O			
SIZE A3	CODE CS	DOC. NUMBER Model No	REV AX2
CHANGE by MORRIS HANG		31-Aug-2004	SHEET 45 OF 67

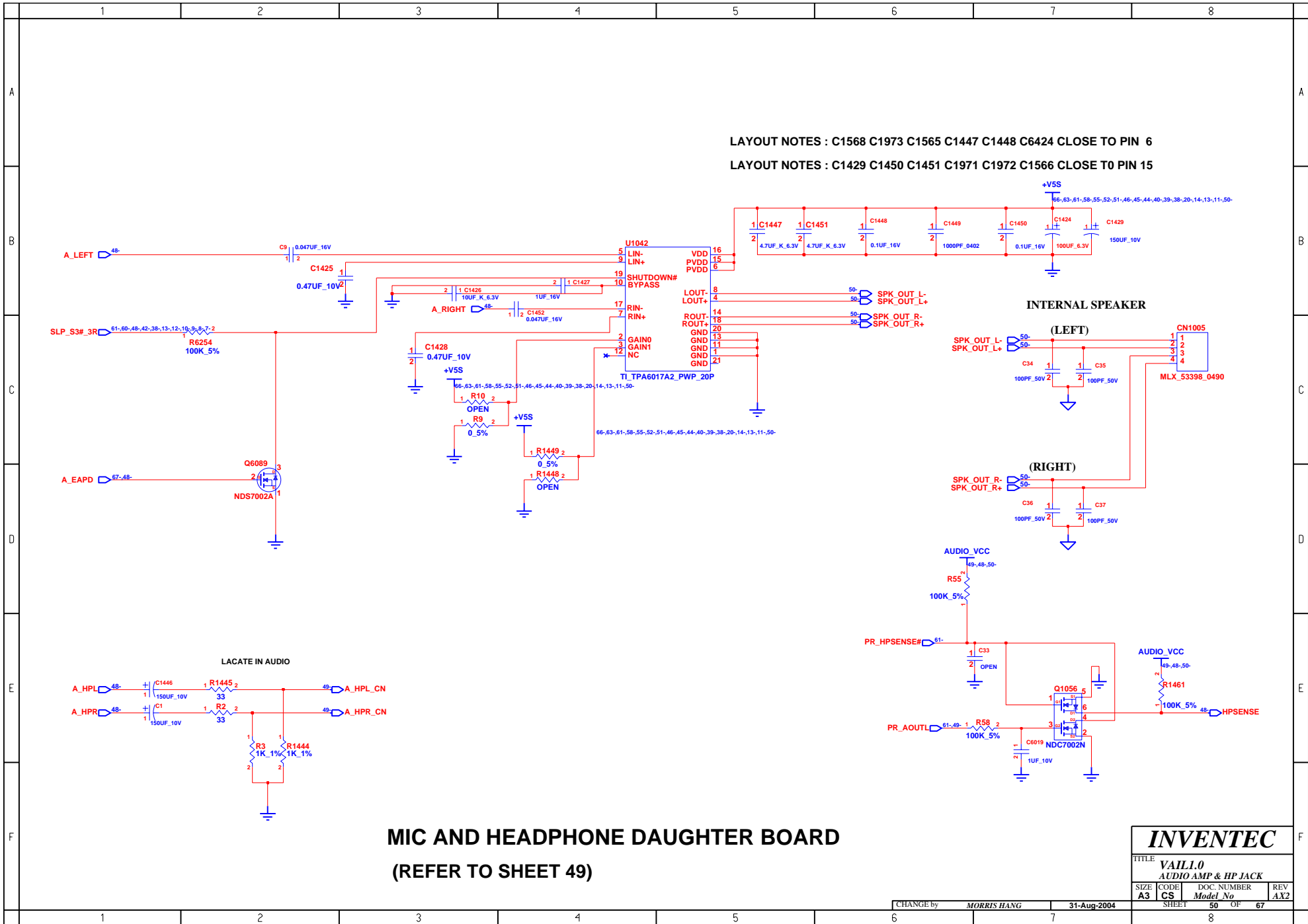


RS232 DAUGHTER-BOARD

INVENTEC			
TITLE VAIL1.0			
SERIAL PORT&IR			
SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV AX2
CHANGE by <i>MORRIS HANG</i>		31-Aug-2004	
SHEET 46		OF 67	

BLANK

INVENTEC			
TITLE <i>VAILLO PARALLER PORT</i>			
SIZE A3	CODE CS	DOC. NUMBER <i>Model No.</i>	REV AX2
CHANGE by <i>MORRIS HANG</i>		31-Aug-2004	
SHEET 47		OF 67	



LAYOUT NOTES : C1568 C1973 C1565 C1447 C1448 C6424 CLOSE TO PIN 6

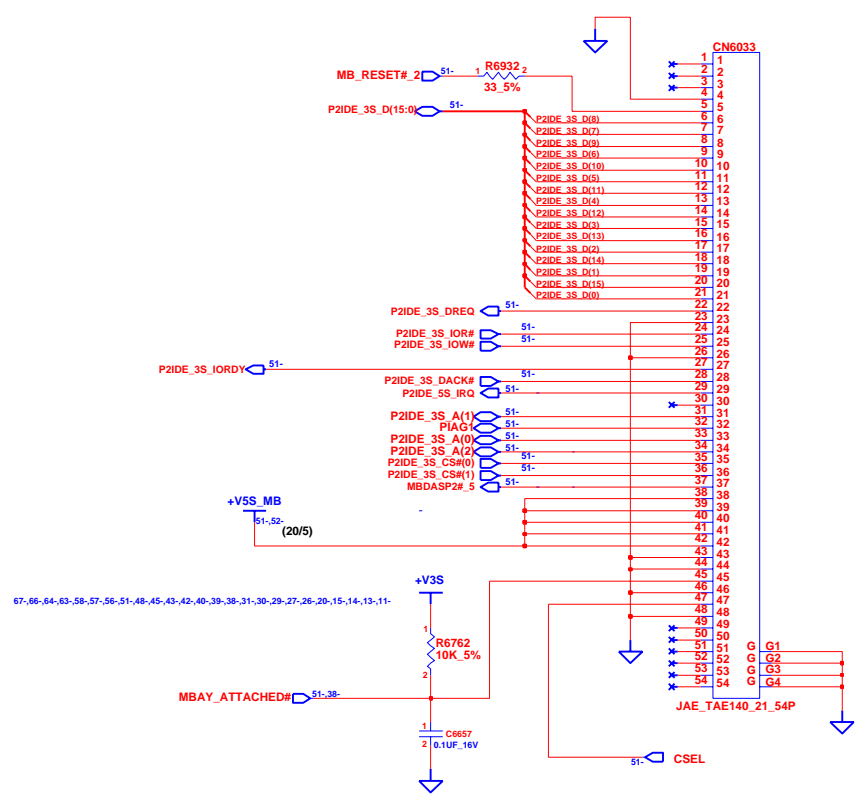
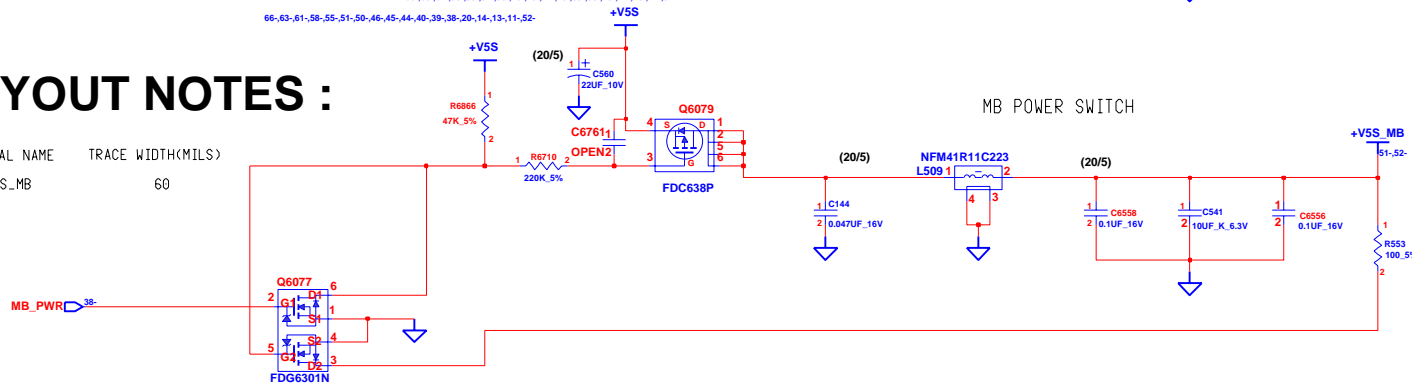
LAYOUT NOTES : C1429 C1450 C1451 C1971 C1972 C1566 CLOSE TO PIN 15

**MIC AND HEADPHONE DAUGHTER BOARD
(REFER TO SHEET 49)**

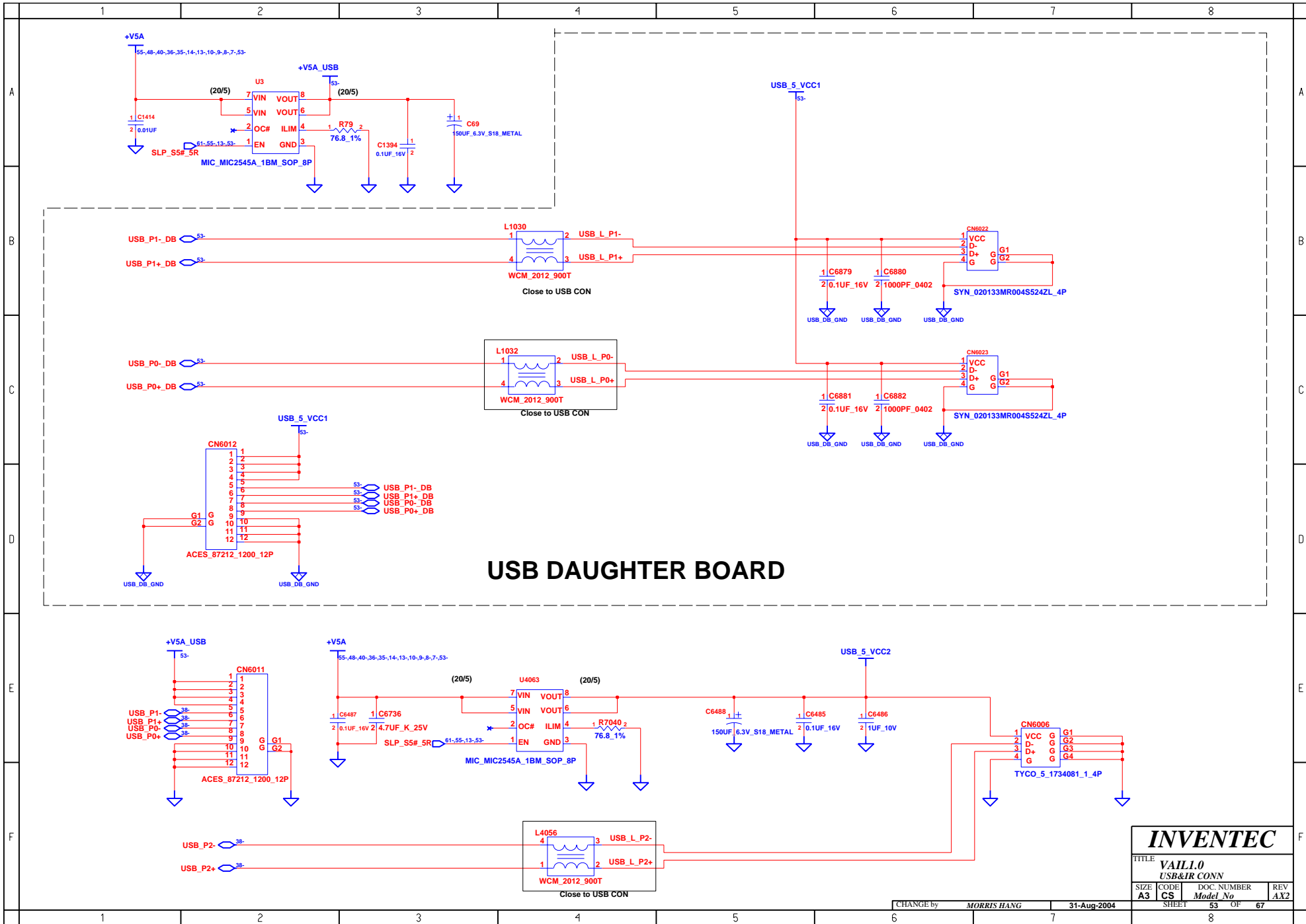
INVENTEC			
TITLE VAILI.0 AUDIO AMP & HP JACK			
SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV AX2
CHANGE by <i>MORRIS HANG</i>		31-Aug-2004	
SHEET 50		OF 67	

LAYOUT NOTES :

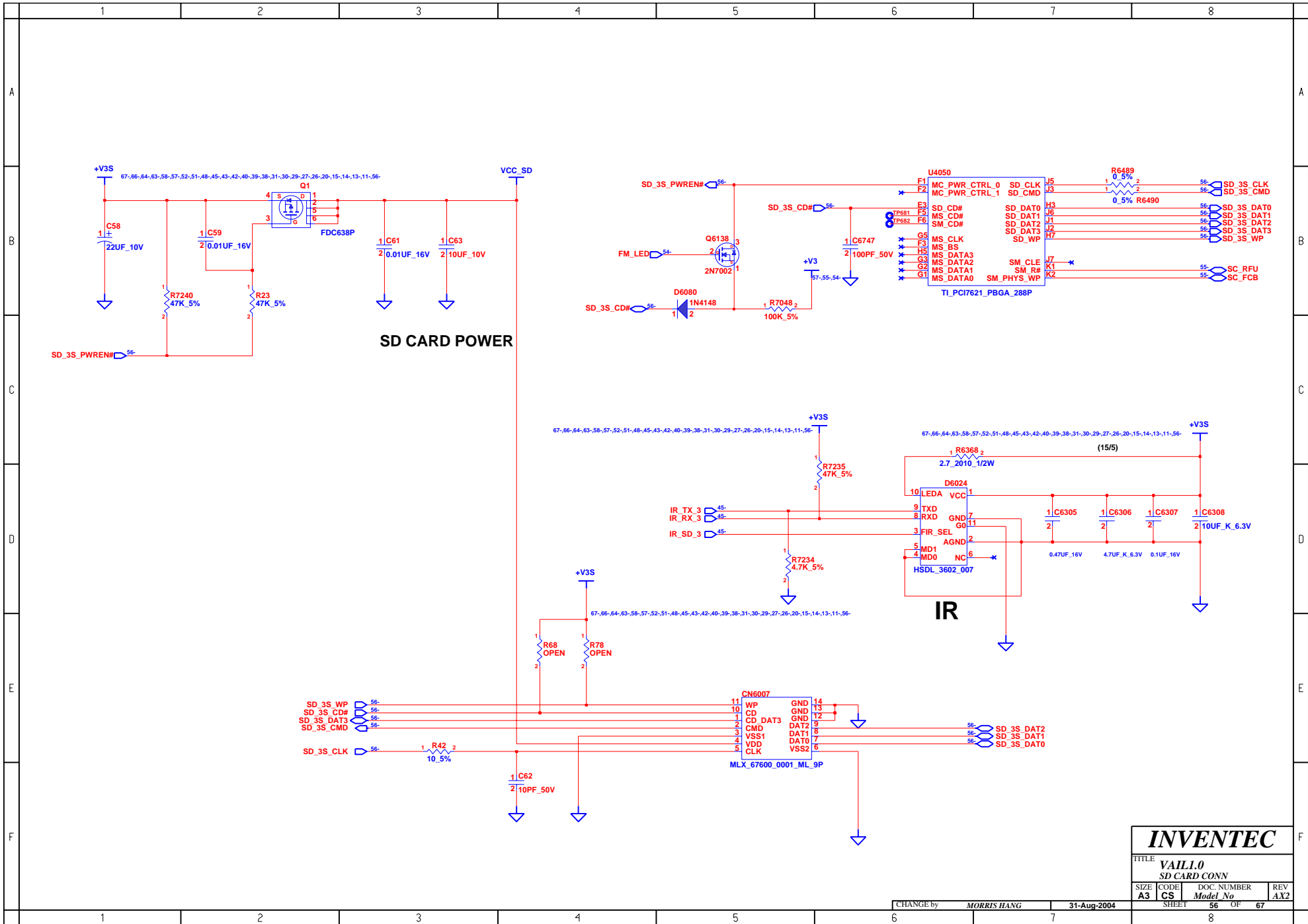
SIGNAL NAME	TRACE WIDTH(MILS)
+VSS_MB	60



INVENTEC			
TITLE VAIL1.0 MULTIBAY CONN			
SIZE A3	CODE CS	DOC. NUMBER Model No	REV AX2
CHANGE by MORRIS HANG		31-Aug-2004	
SHEET		52 OF 67	



INVENTEC			
TITLE VAIL1.0 USB&IR CONN			
SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV AX2
CHANGE by <i>MORRIS HANG</i>		31-Aug-2004	
SHEET 53		OF 67	



SD CARD POWER

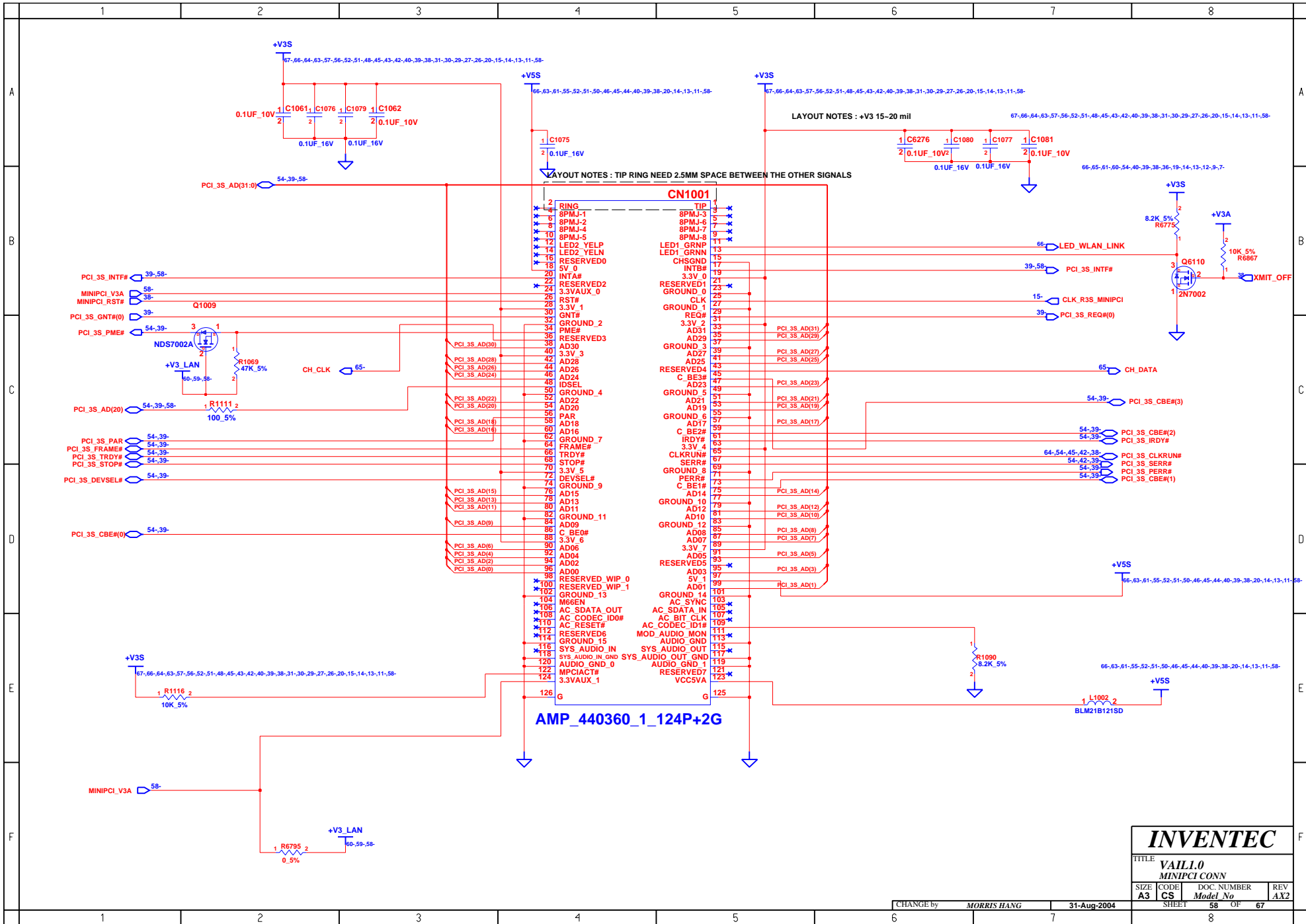
IR

INVENTEC

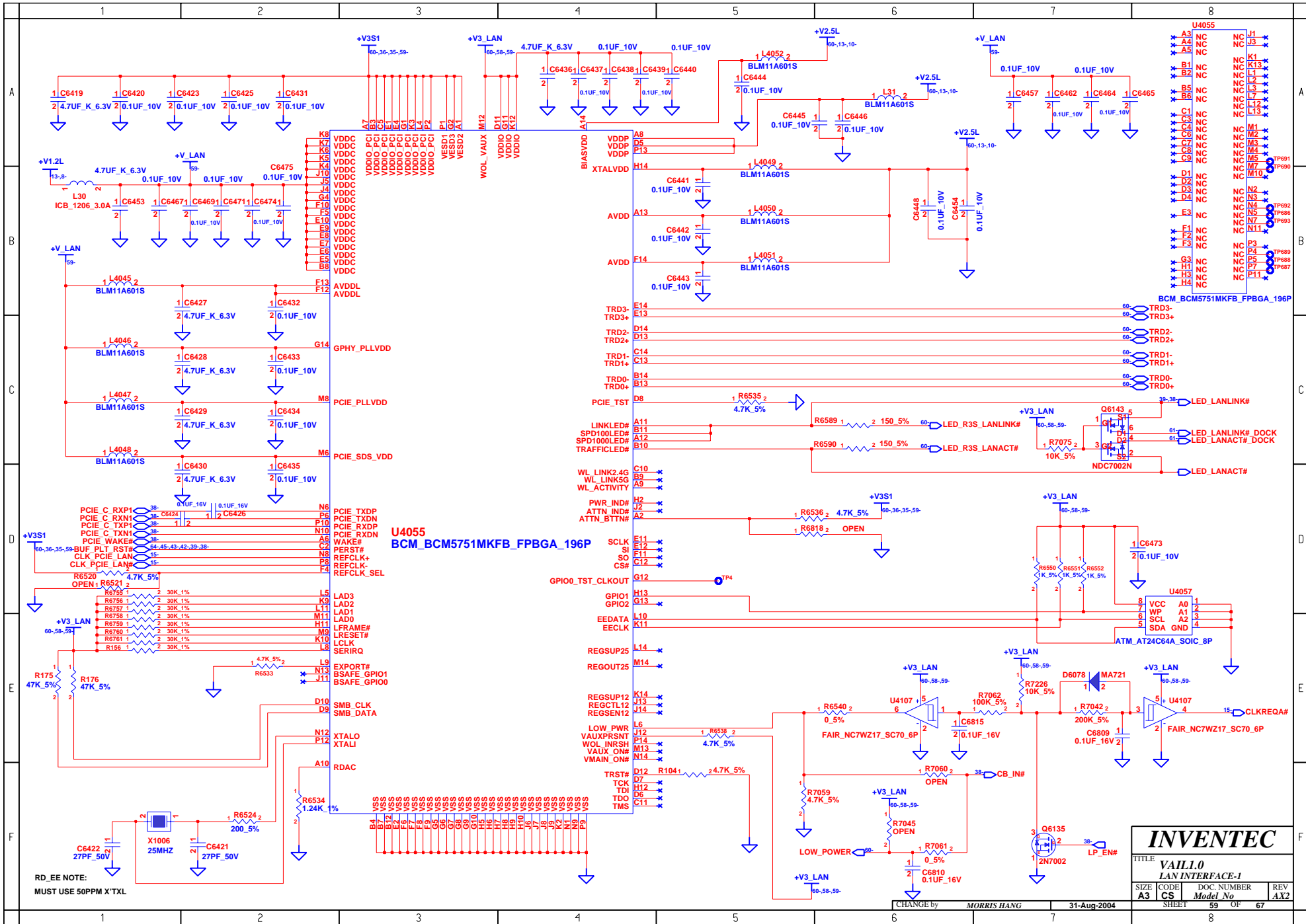
TITLE			
VAIL1.0			
SD CARD CONN			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	Model No	AX2

CHANGE by MORRIS HANG 31-Aug-2004

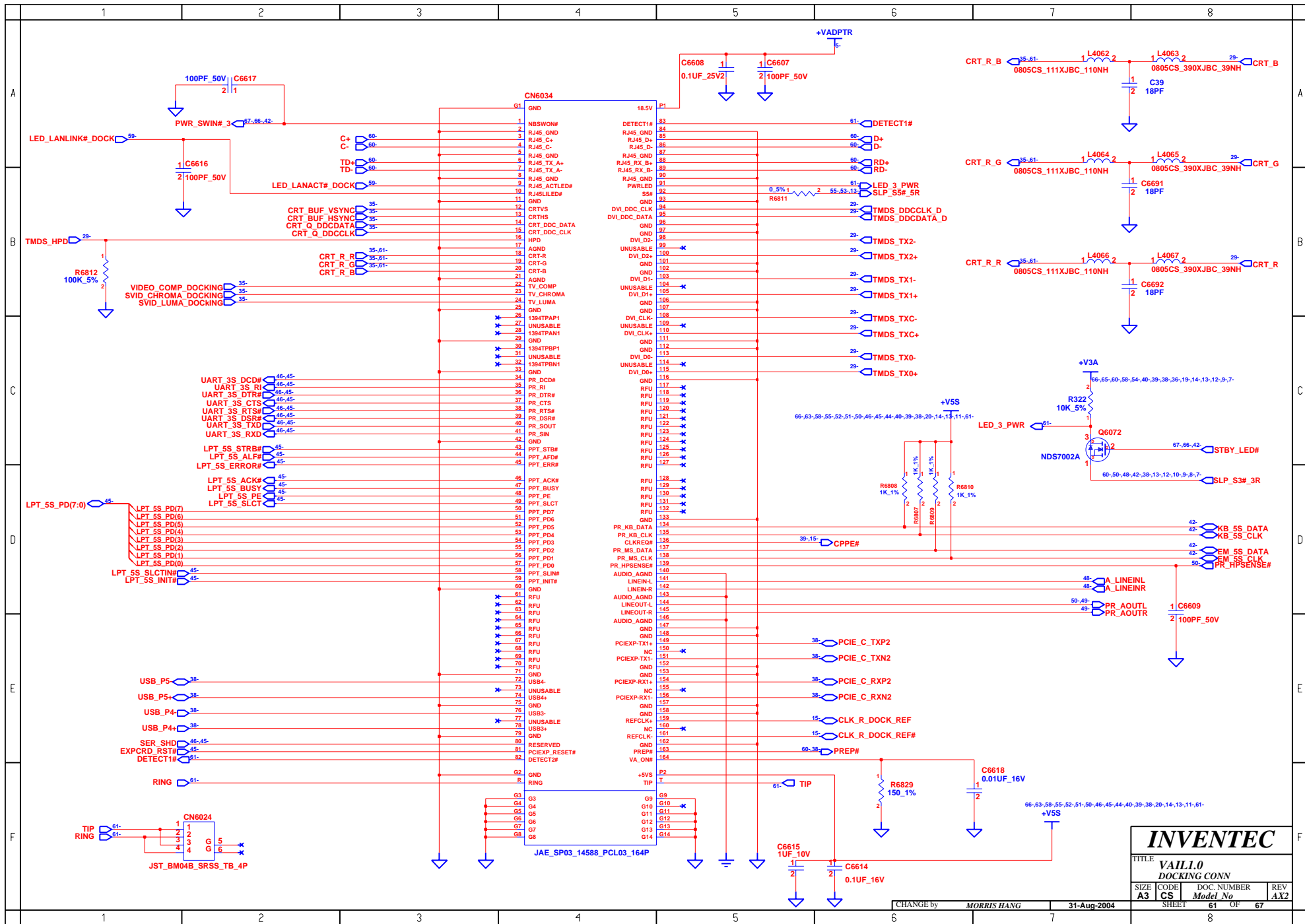
SHEET 56 OF 67



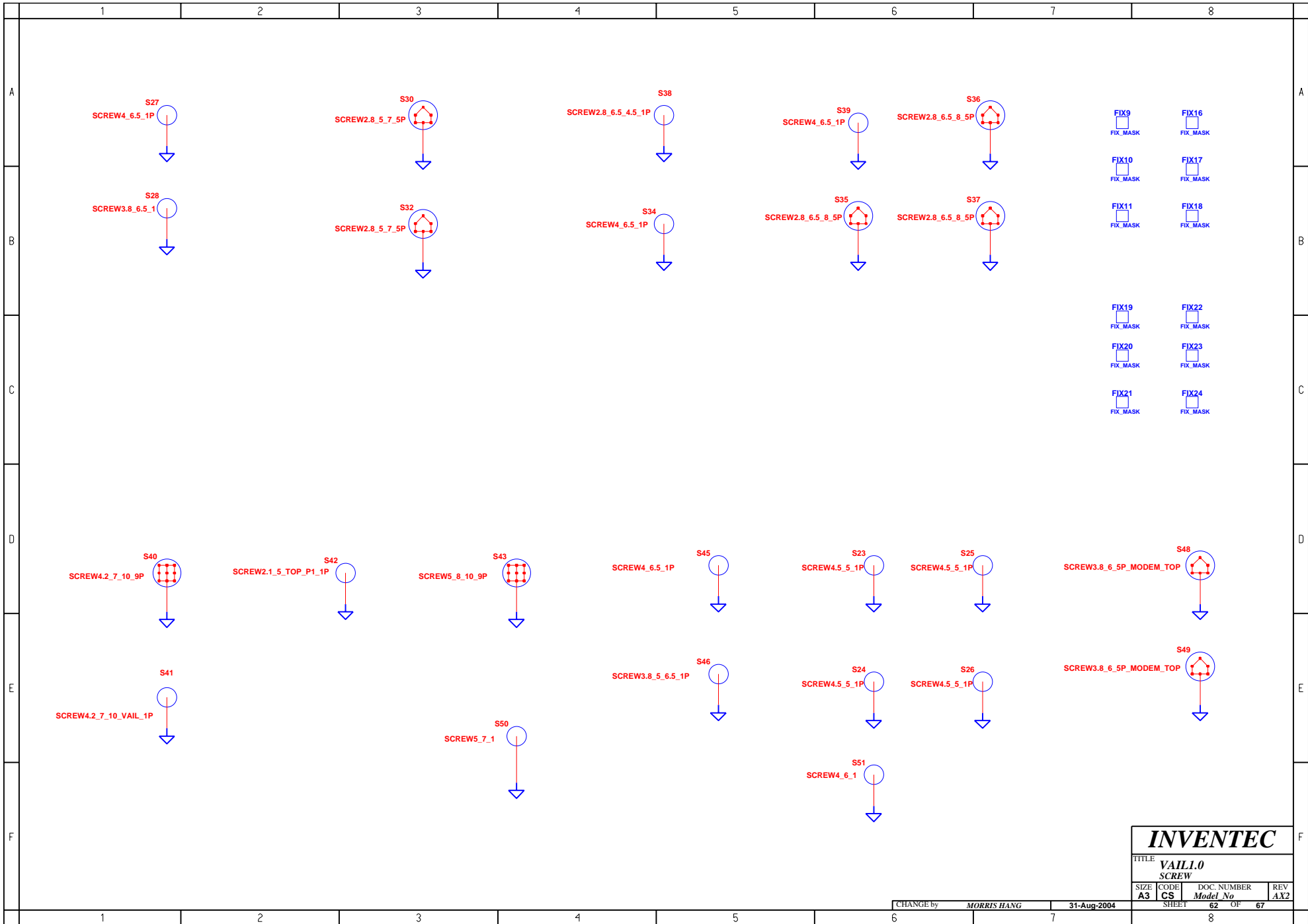
INVENTEC			
TITLE VAIL1.0 MINIPCI CONN			
SIZE A3	CODE CS	DOC. NUMBER Model No	REV AX2
CHANGE by MORRIS HANG		31-Aug-2004	SHEET 58 OF 67



INVENTEC			
TITLE VAILL0 LAN INTERFACE-1			
SIZE A3	CODE CS	DOC NUMBER Model No	REV AX2
CHANGE by MORRIS HANG		31-Aug-2004	SHEET 59 OF 67



INVENTEC			
TITLE VAILI.0 DOCKING CONN			
SIZE A3	CODE CS	DOC NUMBER Model No	REV AX2
CHANGE by MORRIS HANG		31-Aug-2004	SHEET 61 OF 67

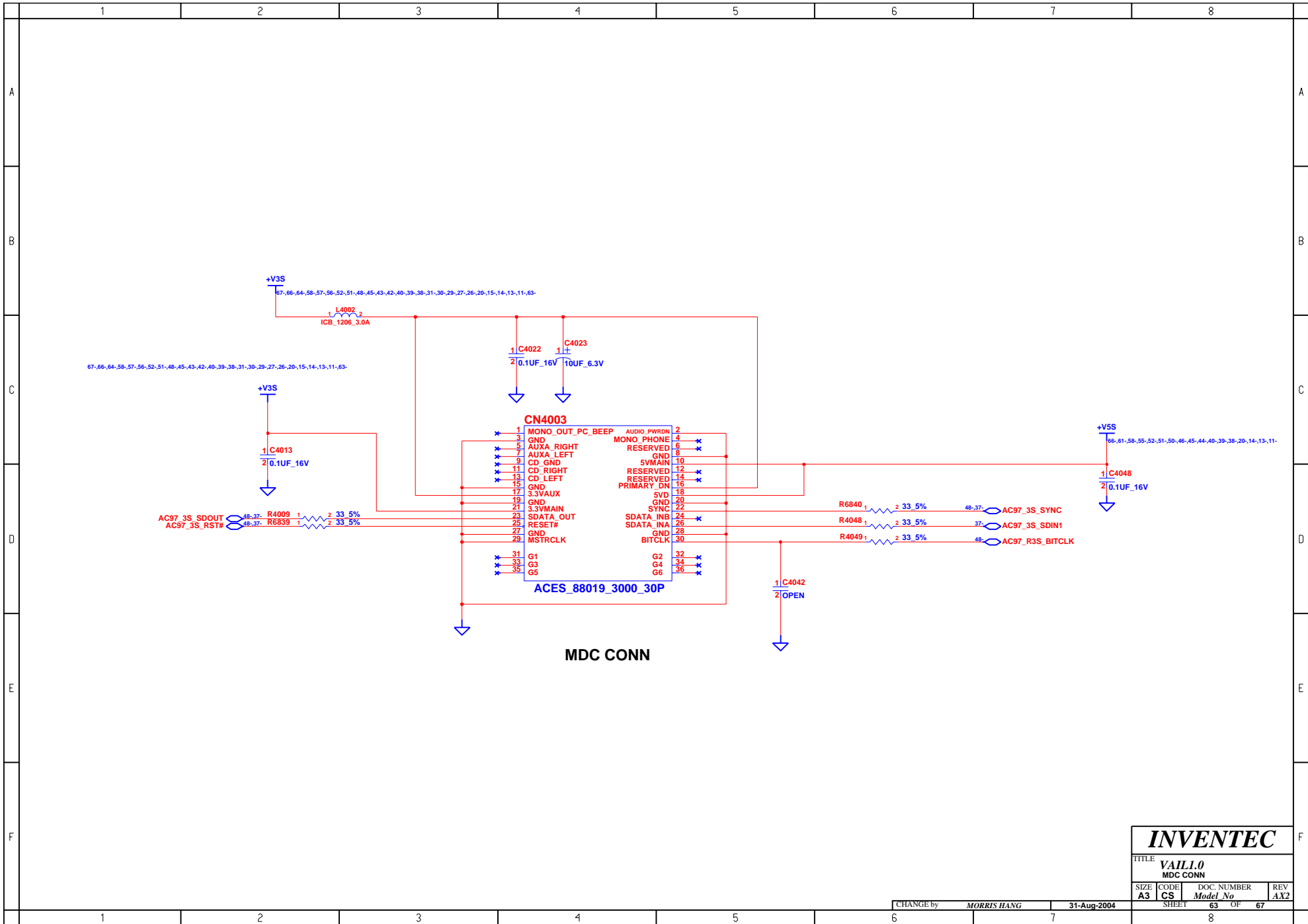


INVENTEC

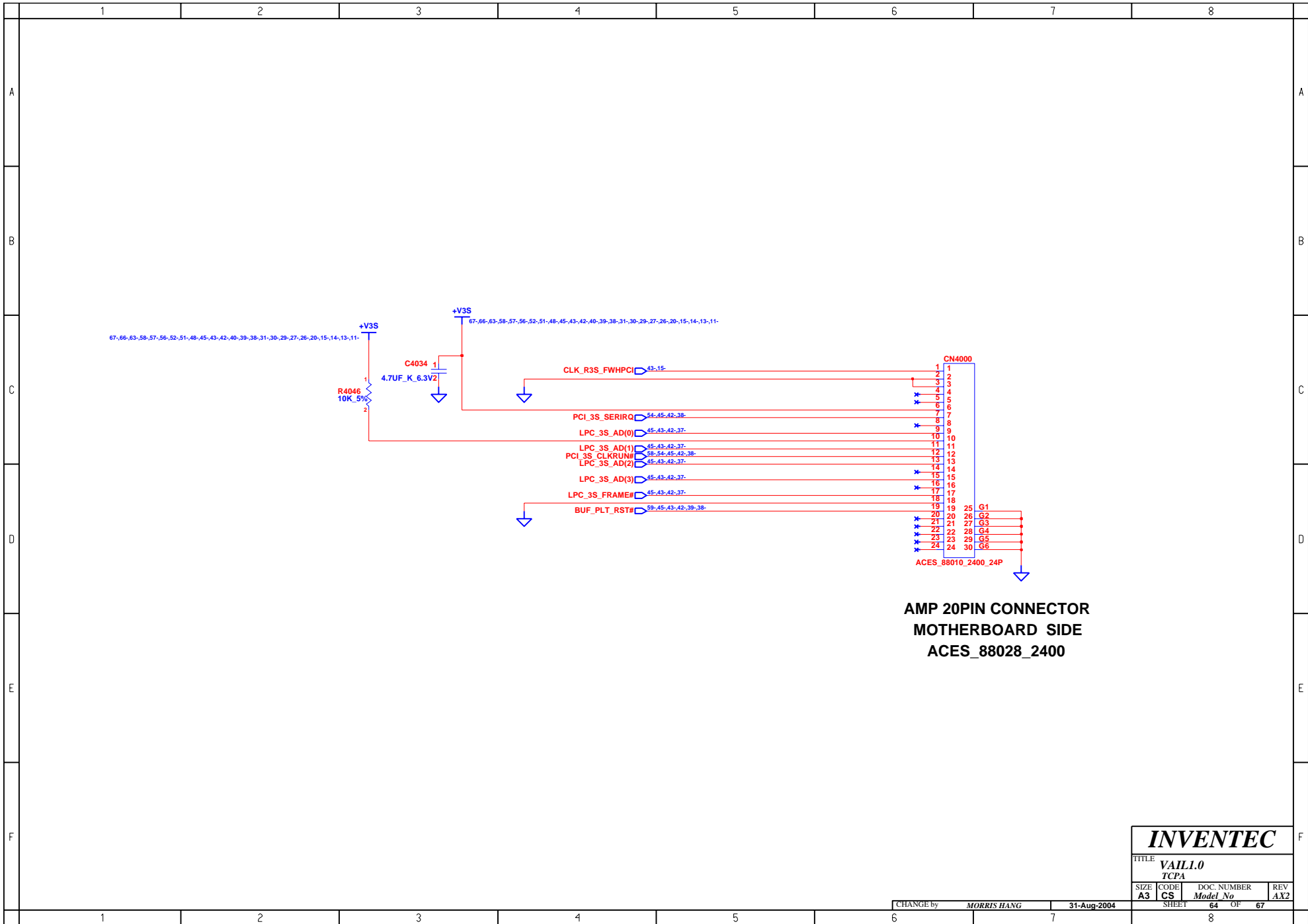
TITLE **VAIL1.0**
SCREW

SIZE A3	CODE CS	DOC. NUMBER <i>Model No.</i>	REV AX2
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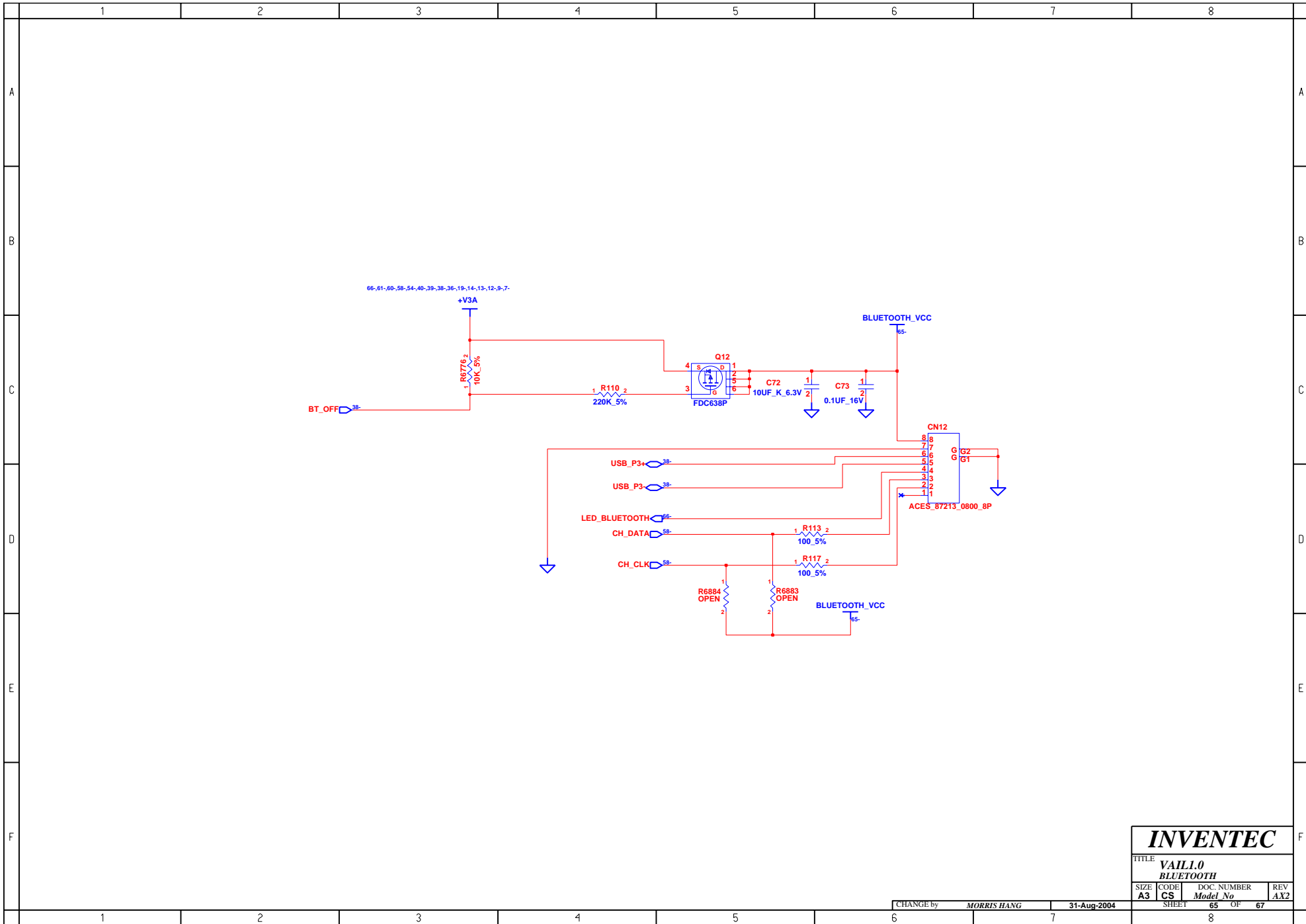
CHANGE by *MORRIS HANG* 31-Aug-2004 SHEET 62 OF 67



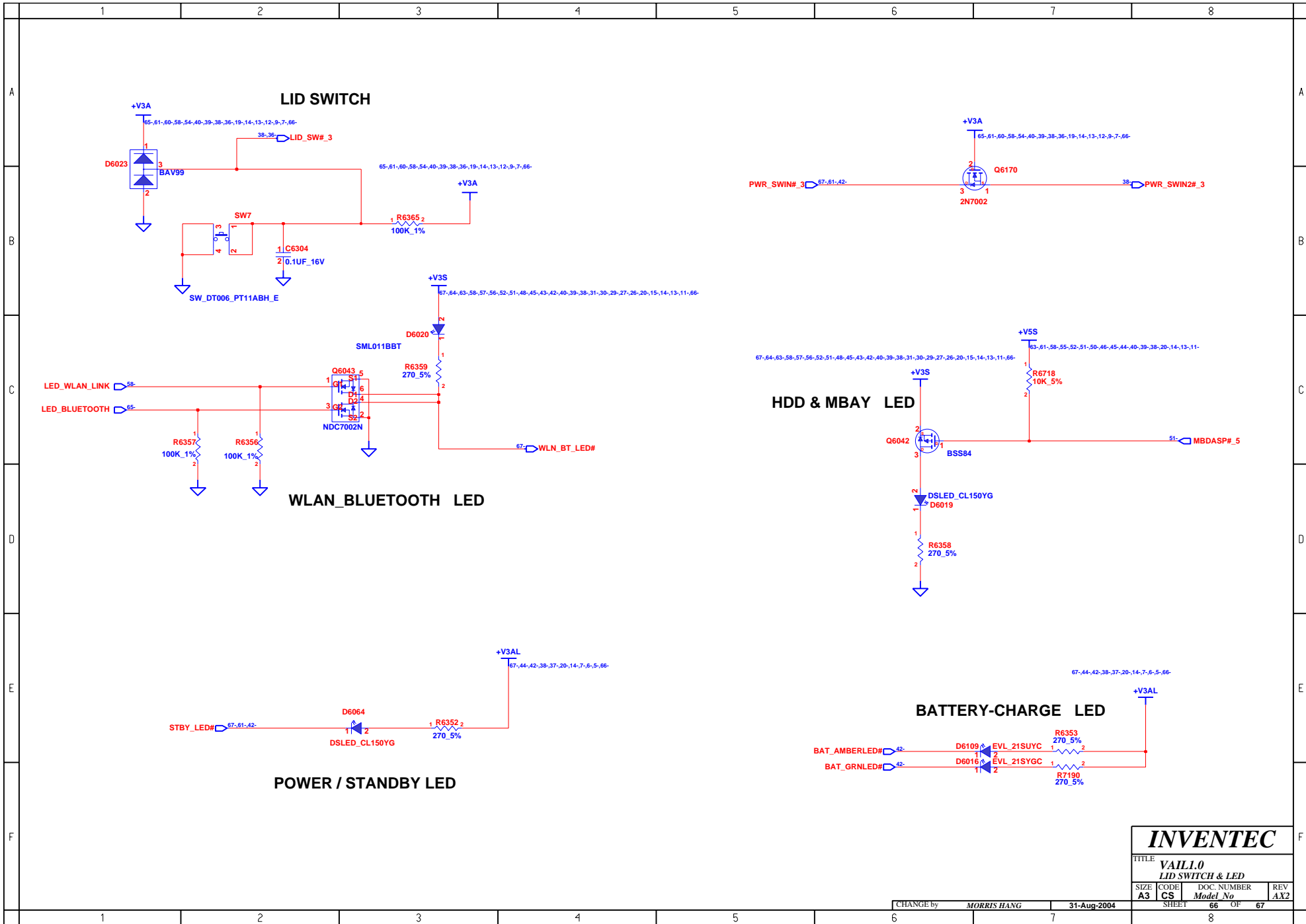
INVENTEC			
TITLE VAIL1.0			
MDC CONN			
SIZE A3	CODE CS	DOC. NUMBER Model No	REV AX2
CHANGE by MORRIS HANG		31-Aug-2004	SHEET 63 OF 67



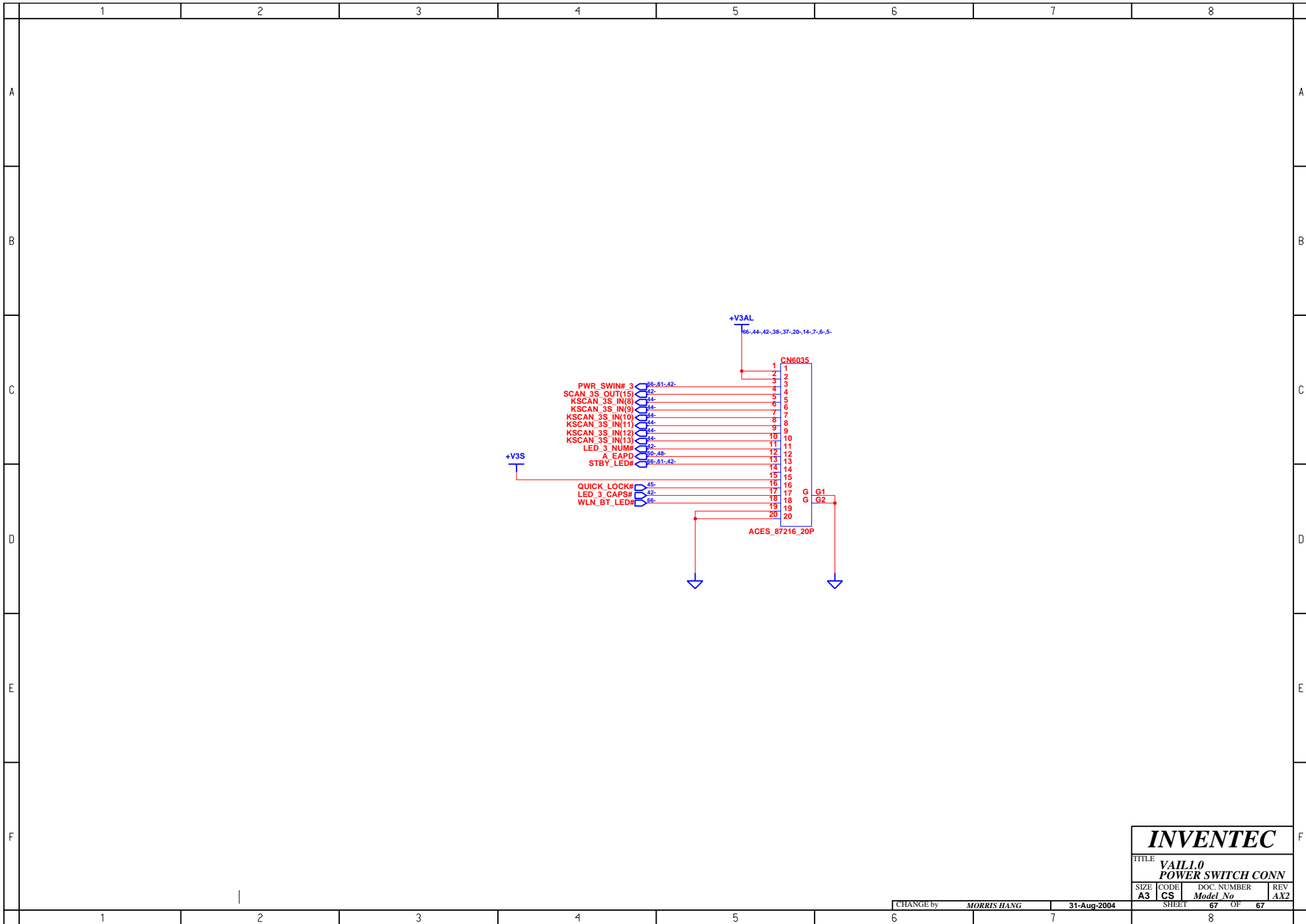
INVENTEC			
TITLE VAIL1.0			
TCPA			
SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV AX2
CHANGE by MORRIS HANG		31-Aug-2004	SHEET 64 OF 67



INVENTEC			
TITLE VAIL1.0 BLUETOOTH			
SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV AX2
CHANGE by MORRIS HANG		31-Aug-2004	SHEET 65 OF 67



INVENTEC			
TITLE VAIL1.0 LID SWITCH & LED			
SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV AX2
CHANGE by MORRIS HANG		31-Aug-2004	
SHEET 66		OF 67	



INVENTEC

TITLE **VAIL1.0
POWER SWITCH CONN**

SIZE A3	CODE CS	DOC. NUMBER <i>Model No</i>	REV AX2
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CHANGE by **MORRIS HANG** 31-Aug-2004

SHEET 67 OF 67