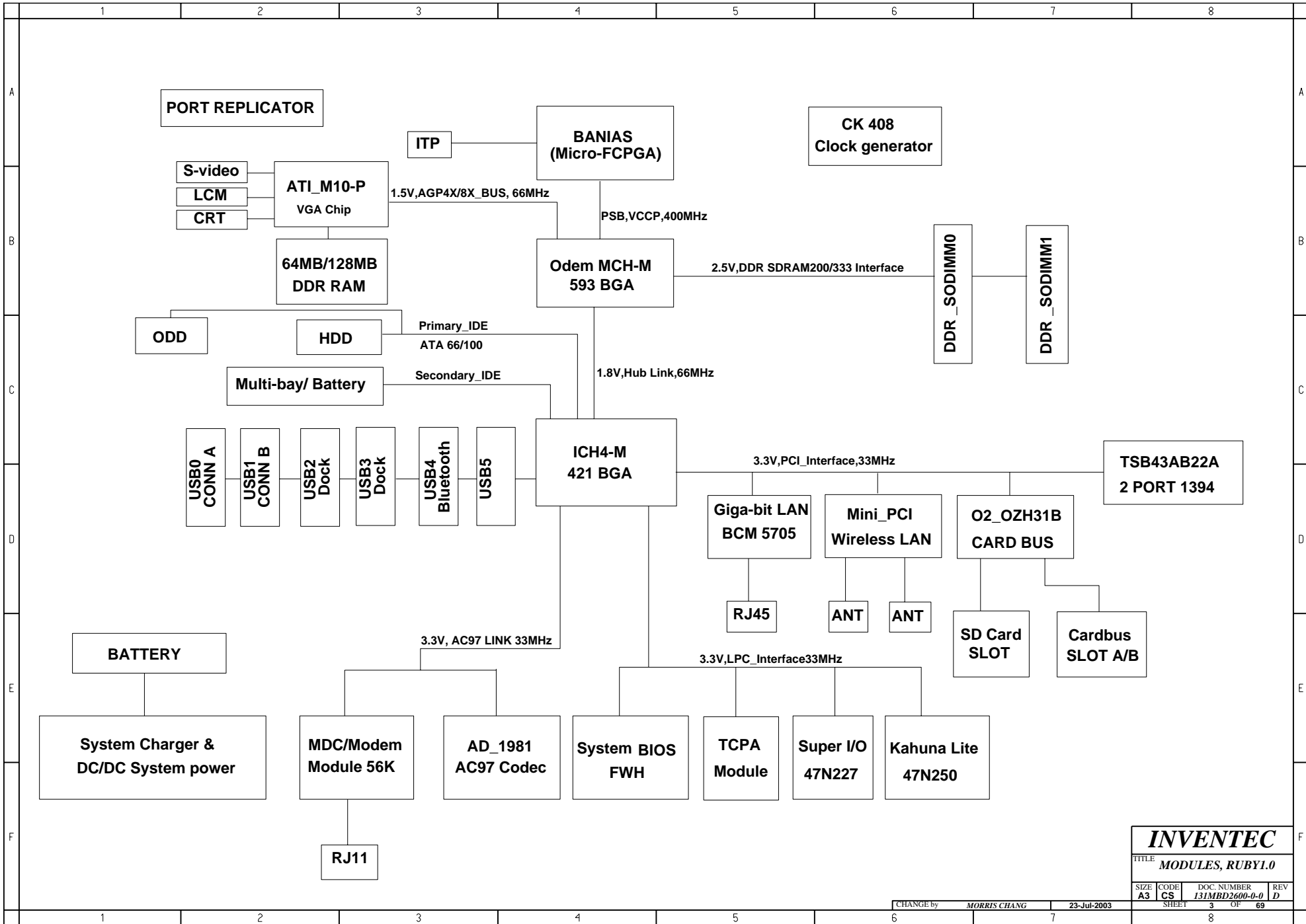


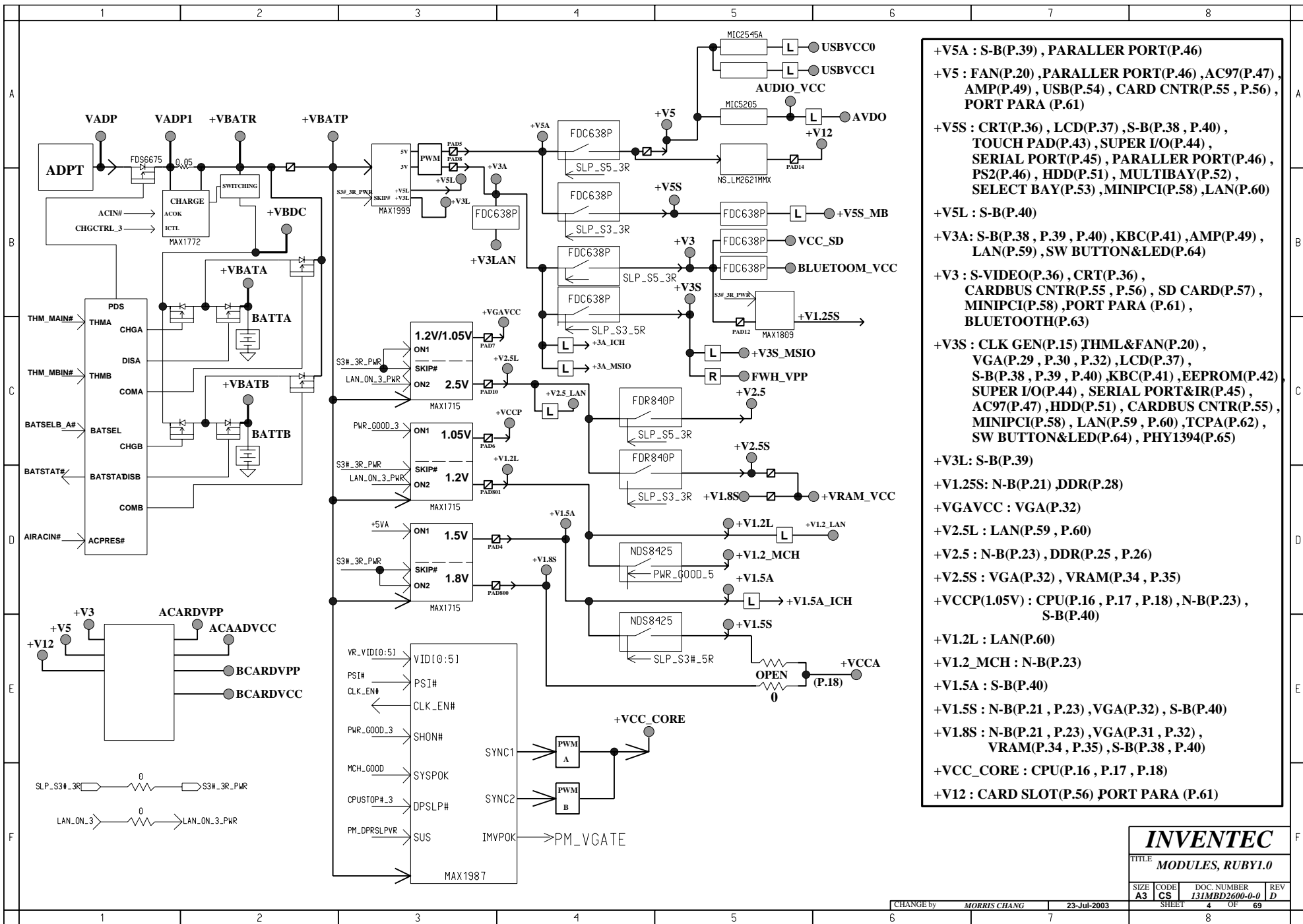


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8- SYSTEM POWER(1.5V/1.8V)	30- ATI-M10-P-2	51- HDD CONN
9- SYSTEM POWER(VCCP/1.2V)	31- ATI-M10-P-3	52- MULTIBAY CONN
10- SYSTEM POWER(2.5V/1.25V)	32- ATI-M10-P-4	53- SELECT BAY I/F
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12- VGA POWER(VDD_CORE)	34- VIDEO RAM-1	55- CARDBUS CONN
13- POWER(SLEEP)	35- VIDEO RAM-2	56- PC CARD SLOT
14- POWER(SEQUENCE)	36- CRT& SVEDIO CONN	57- SD CARD CONN
15- CLOCK_GENEATOR	37- LCD CONN	58- MINIPCI CONN
16- BANIAS-1	38- ICH4-1	59- LAN INTERFACE-1
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23- ODEM-3	45- SERIAL PORT	66- SCREW
24- ODEM-4	46- PARALLER PORT	67- BATTERY-2
25- DDR-SDRAM-1	47- AC97 CODEC	
26- DDR-SDRAM-2		

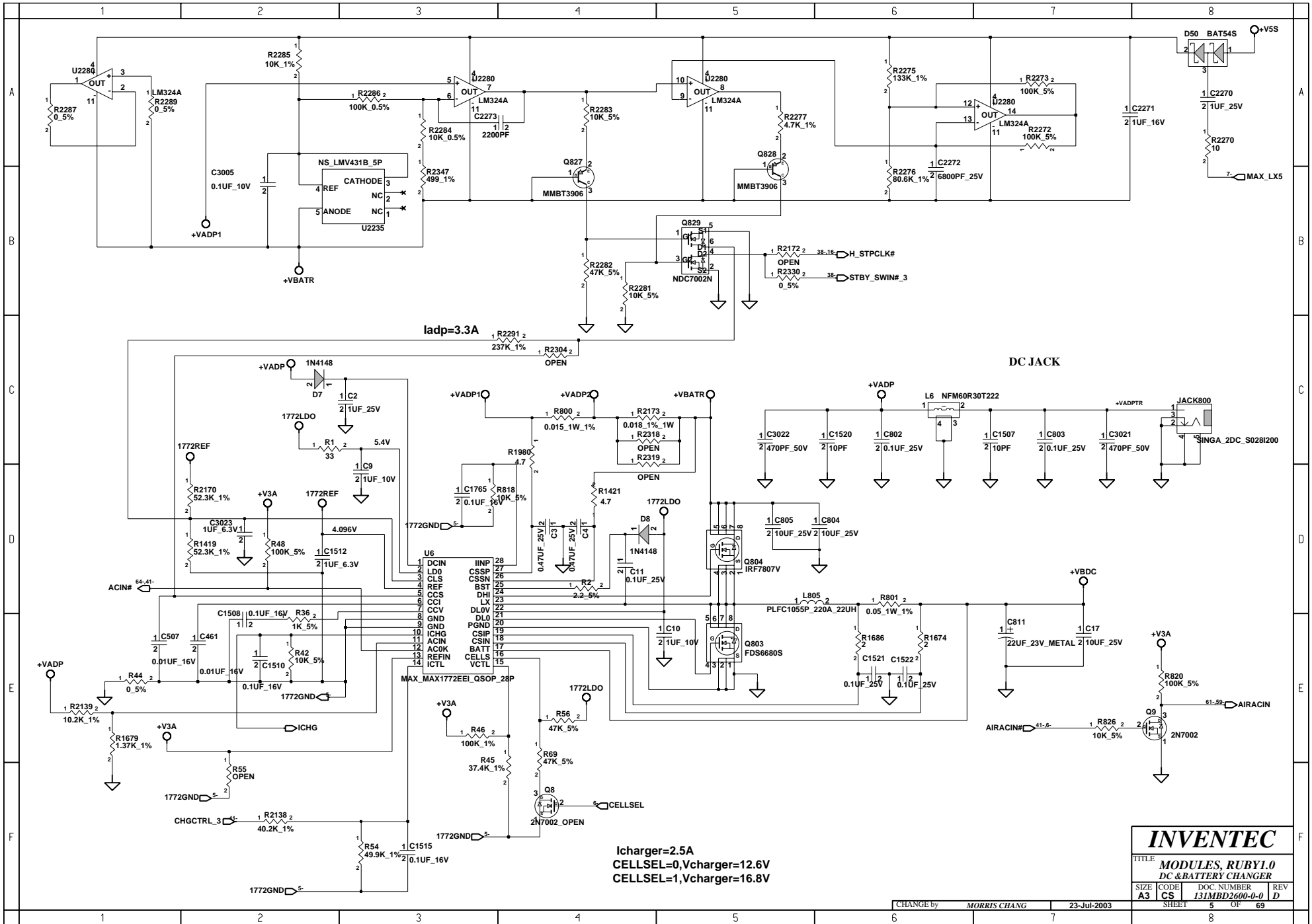
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TITLE <b>MODULES, RUBY1.0</b>			
SIZE <b>A3</b>	CODE <b>CS</b>	DOC. NUMBER <b>I31MBD2600-0-0</b>	REV <b>D</b>
CHANGE by <b>MORRIS CHIANG</b>		23-Jul-2003	SHEET <b>2</b> OF <b>69</b>

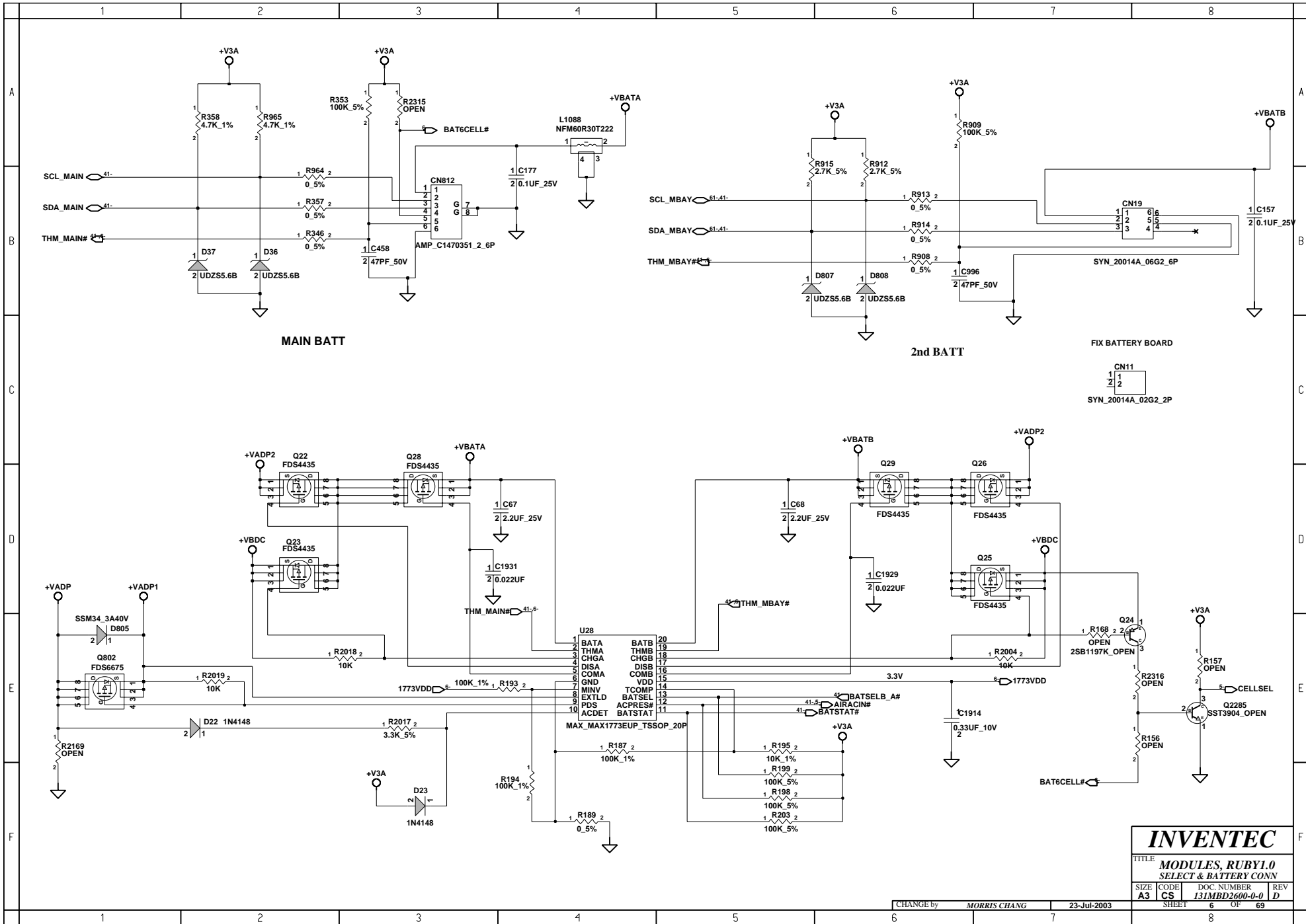




- +V5A** : S-B(P.39) , PARALLER PORT(P.46)
- +V5** : FAN(P.20) ,PARALLER PORT(P.46) ,AC97(P.47) , AMP(P.49) , USB(P.54) , CARD CNTR(P.55 , P.56) , PORT PARA (P.61)
- +V5S** : CRT(P.36) , LCD(P.37) ,S-B(P.38 , P.40) , TOUCH PAD(P.43) , SUPER I/O(P.44) , SERIAL PORT(P.45) , PARALLER PORT(P.46) , PS2(P.46) , HDD(P.51) , MULTIBAY(P.52) , SELECT BAY(P.53) ,MINIPCI(P.58) ,LAN(P.60)
- +V5L** : S-B(P.40)
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- +V1.25S** : N-B(P.21) ,DDR(P.28)
- +VAVCC** : VGA(P.32)
- +V2.5L** : LAN(P.59 , P.60)
- +V2.5** : N-B(P.23) , DDR(P.25 , P.26)
- +V2.5S** : VGA(P.32) , VRAM(P.34 , P.35)
- +VCCP(1.05V)** : CPU(P.16 , P.17 , P.18) , N-B(P.23) , S-B(P.40)
- +V1.2L** : LAN(P.60)
- +V1.2\_MCH** : N-B(P.23)
- +V1.5A** : S-B(P.40)
- +V1.5S** : N-B(P.21 , P.23) ,VGA(P.32) , S-B(P.40)
- +V1.8S** : N-B(P.21 , P.23) ,VGA(P.31 , P.32) , VRAM(P.34 , P.35) , S-B(P.38 , P.40)
- +VCC CORE** : CPU(P.16 , P.17 , P.18)
- +V12** : CARD SLOT(P.56) ,PORT PARA (P.61)

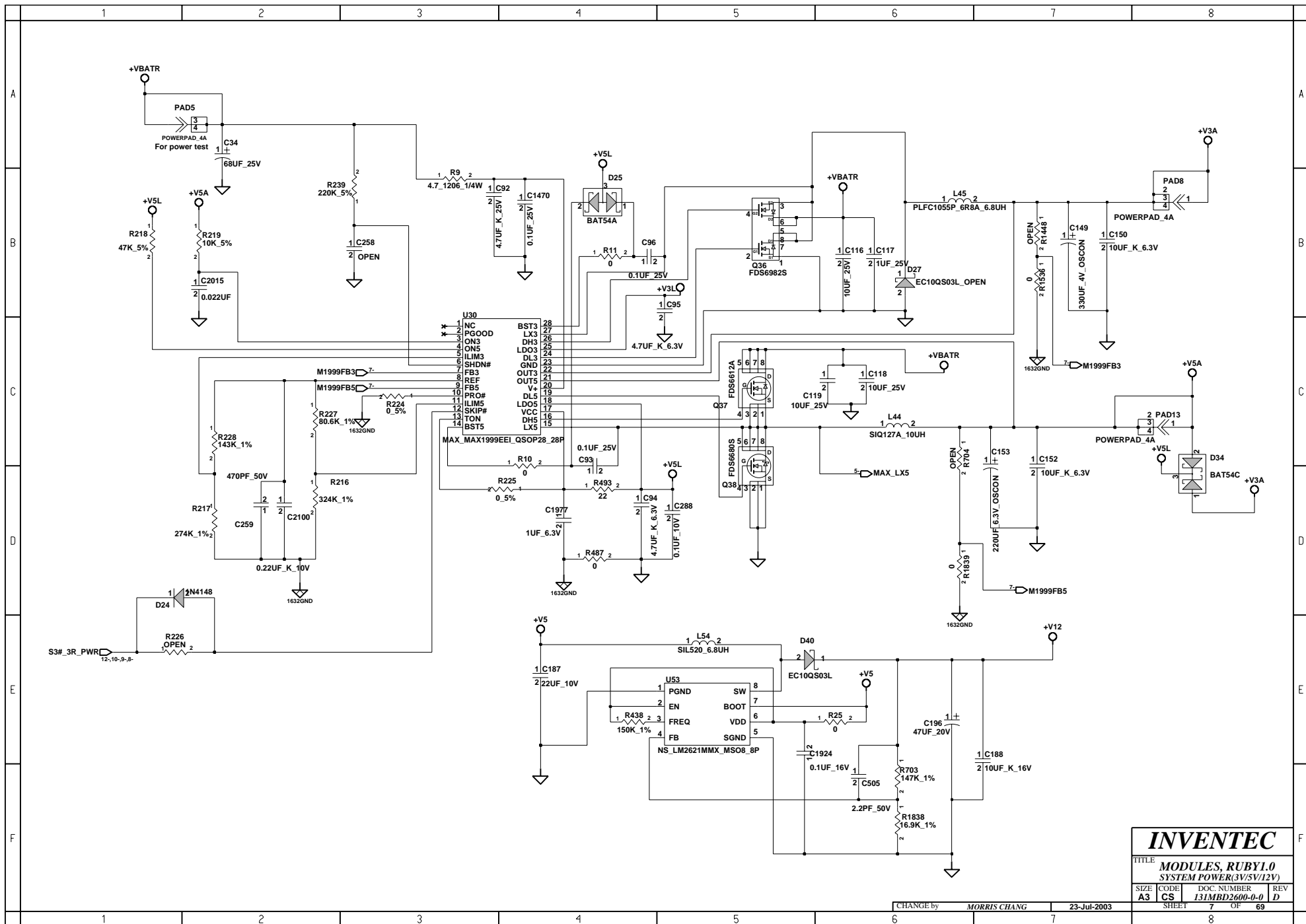
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TITLE <b>MODULES, RUBY1.0</b>			
SIZE <b>A3</b>	CODE <b>CS</b>	DOC NUMBER <b>I31MBD2600-0-0</b>	REV <b>D</b>
CHANGE by <b>MORRIS CHIANG</b>		23-Jul-2003	
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**INVENTEC**  
 TITLE: **MODULES, RUBY1.0  
 SELECT & BATTERY CONN**

SIZE	CODE	DOC NUMBER	REV
A3	CS	131MBD2600-0-0	D



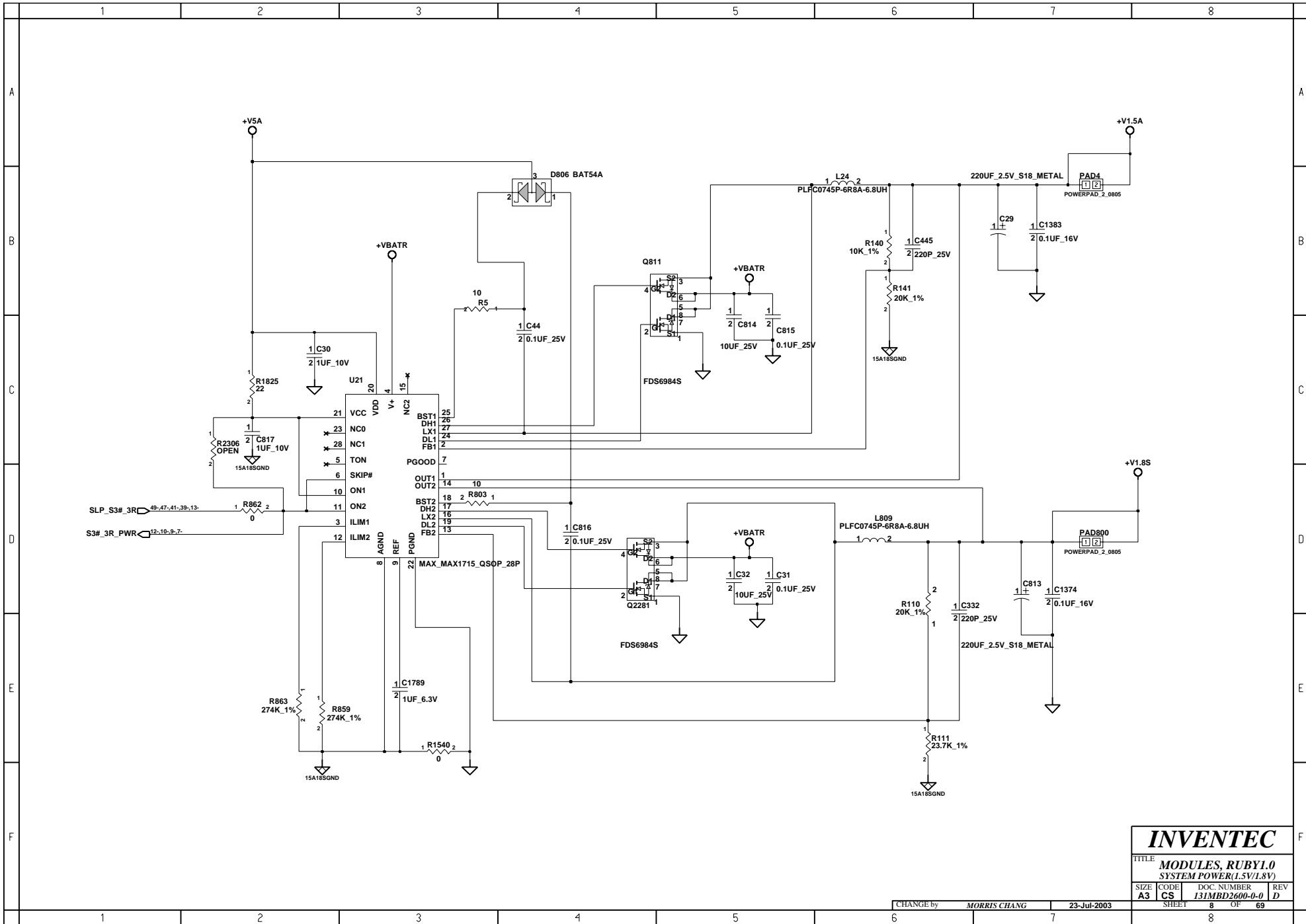
# INVENTEC

TITLE  
MODULES, RUBY1.0  
SYSTEM POWER(3V/5V/12V)

SIZE A3	CODE CS	DOC NUMBER I31MBD2600-0-0	REV D
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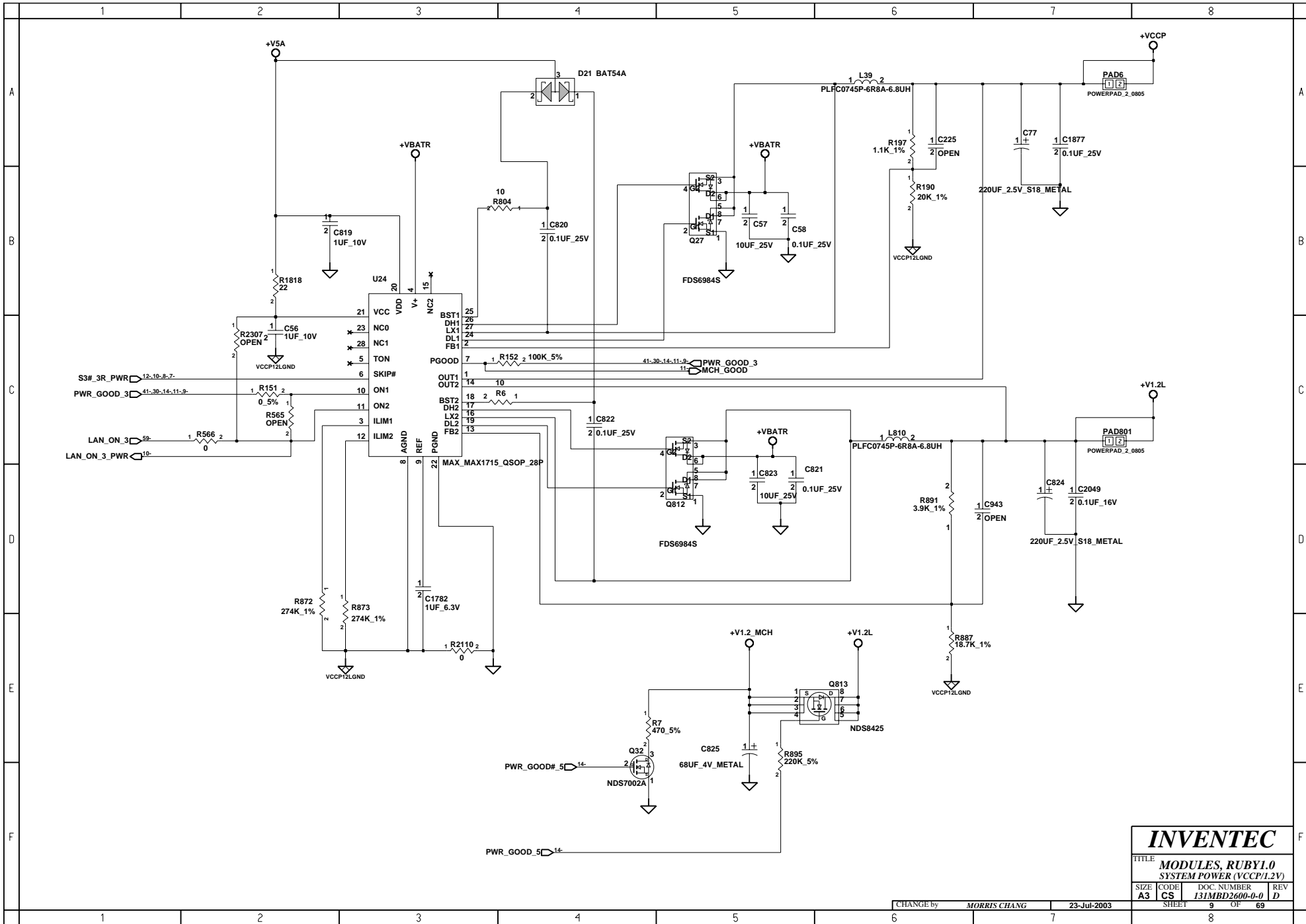
CHANGE by MORRIS CHIANG 23-Jul-2003

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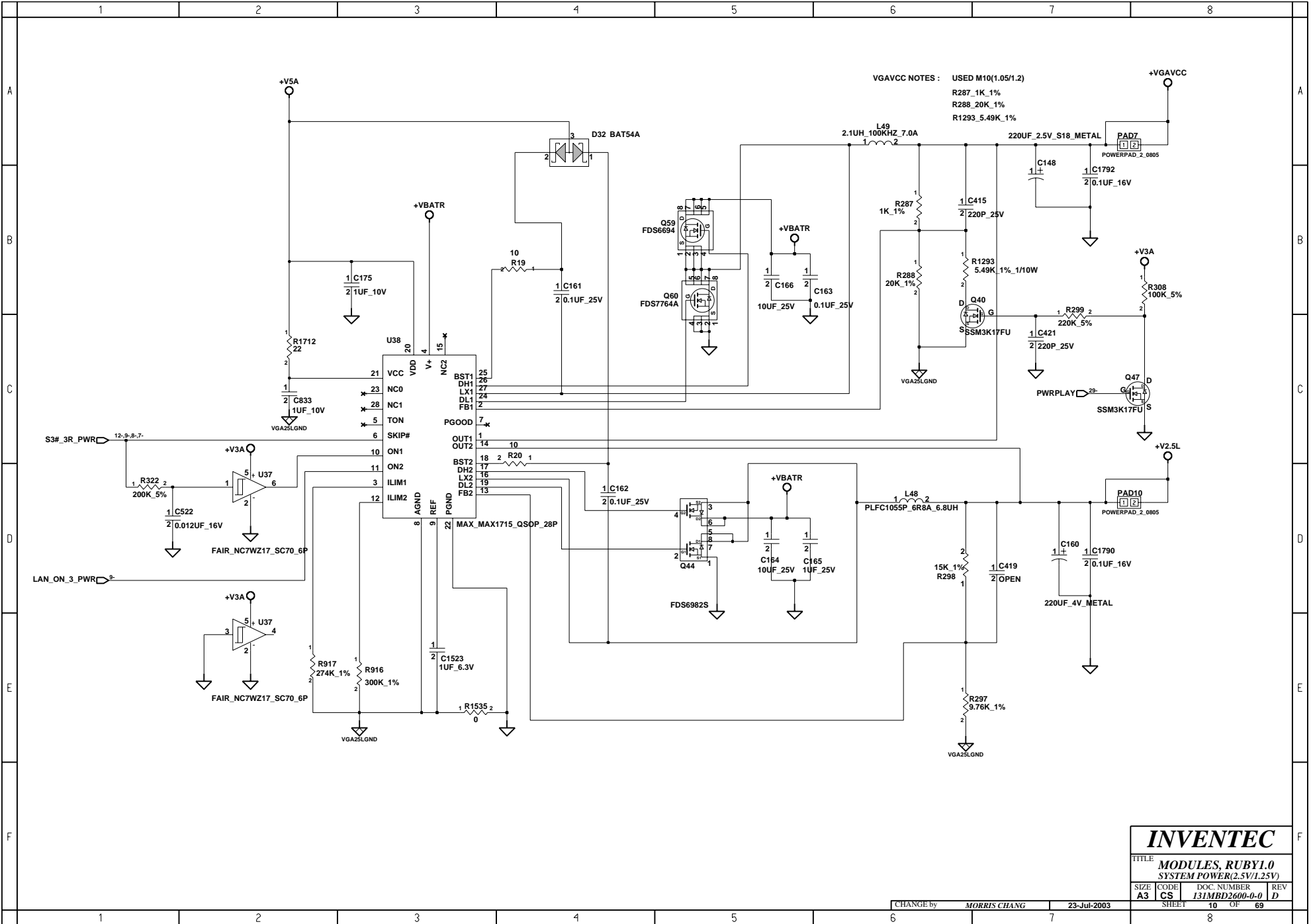


<b>INVENTEC</b>			
TITLE <b>MODULES, RUBY1.0</b>			
SYSTEM POWER(1.5V/1.8V)			
SIZE	CODE	DOC NUMBER	REV
A3	CS	I31MBD2600-0-0	D
CHANGE by		MORRIS CHIANG	23-Jul-2003
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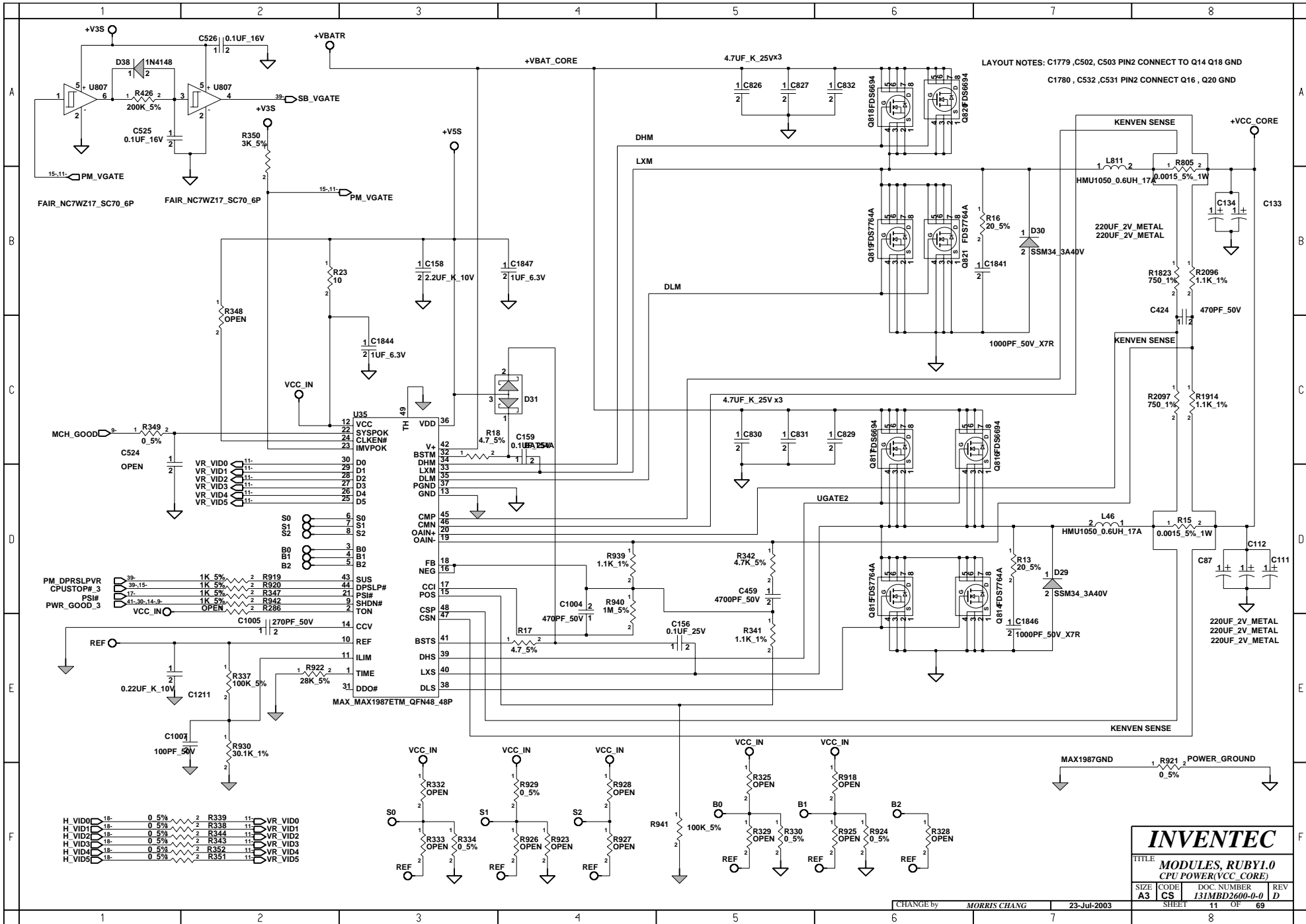


<b>INVENTEC</b>			
TITLE: <b>MODULES, RUBY1.0</b>			
SYSTEM POWER (VCCP/1.2V)			
SIZE	CODE	DOC NUMBER	REV
A3	CS	131MBD2600-0-0	D
CHANGE by		DATE	SHEET
MORRIS CHIANG		23-Jul-2003	9 OF 69

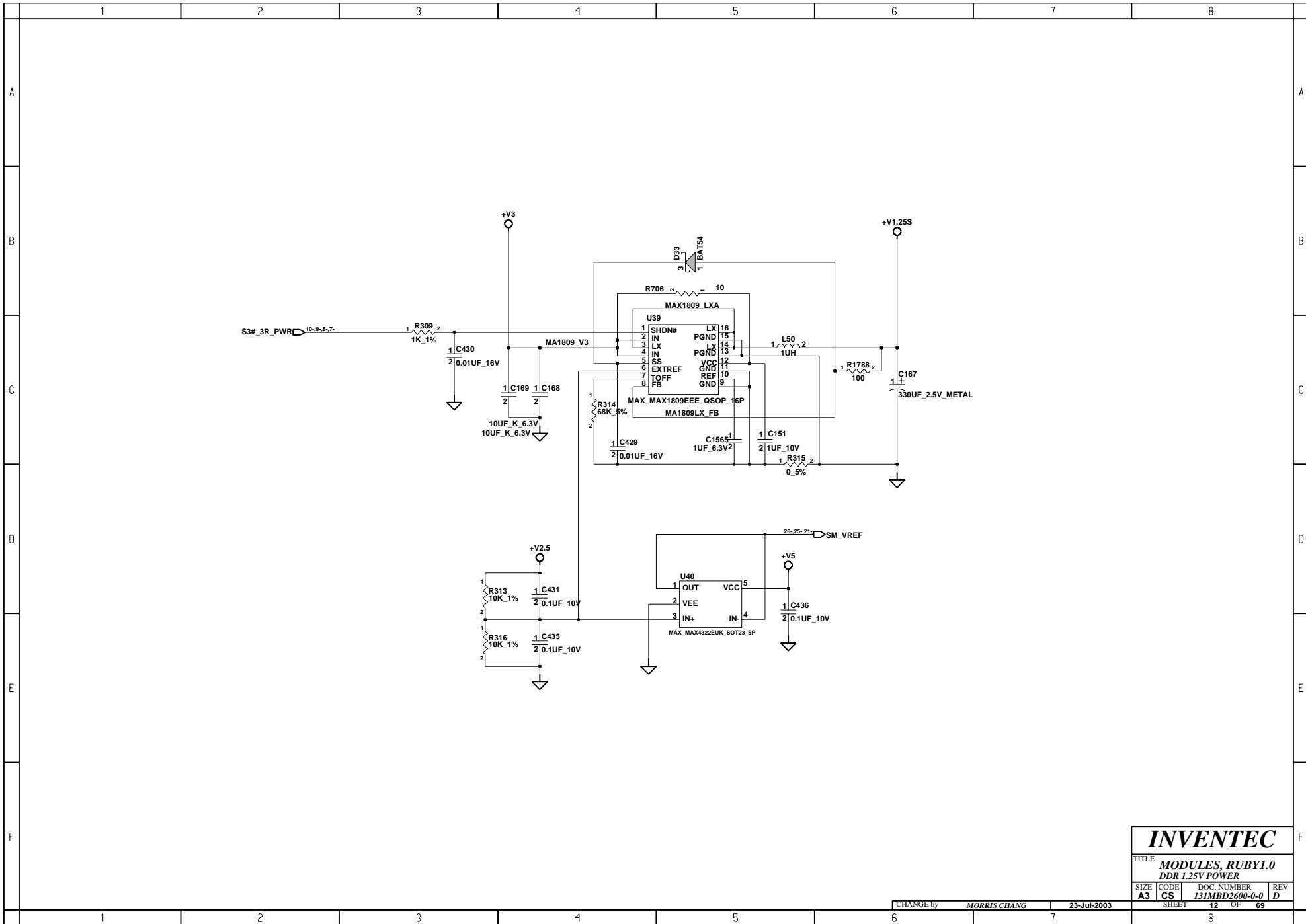


V\_GAVCC NOTES : USED M10(1.05/1.2)  
 R287\_1K\_1%  
 R288\_20K\_1%  
 R1293\_5.49K\_1%

<b>INVENTEC</b>			
TITLE: <b>MODULES, RUBY1.0</b>			
SYSTEM POWER(2.5V/1.25V)			
SIZE: <b>A3</b>	CODE: <b>CS</b>	DOC NUMBER: <b>I31MBD2600-0-0</b>	REV: <b>D</b>
CHANGE by: <b>MORRIS CHIANG</b>	DATE: <b>23-Jul-2003</b>	SHEET: <b>10</b>	OF: <b>69</b>



<b>INVENTEC</b>			
TITLE: <b>MODULES, RUBY1.0 CPU POWER(VCC_CORE)</b>			
SIZE: <b>A3</b>	CODE: <b>CS</b>	DOC NUMBER: <b>131MBD2600-0-0</b>	REV: <b>D</b>
CHANGE by: <b>MORRIS CHIANG</b>		23-Jul-2003	
SHEET: <b>11</b>		OF: <b>69</b>	



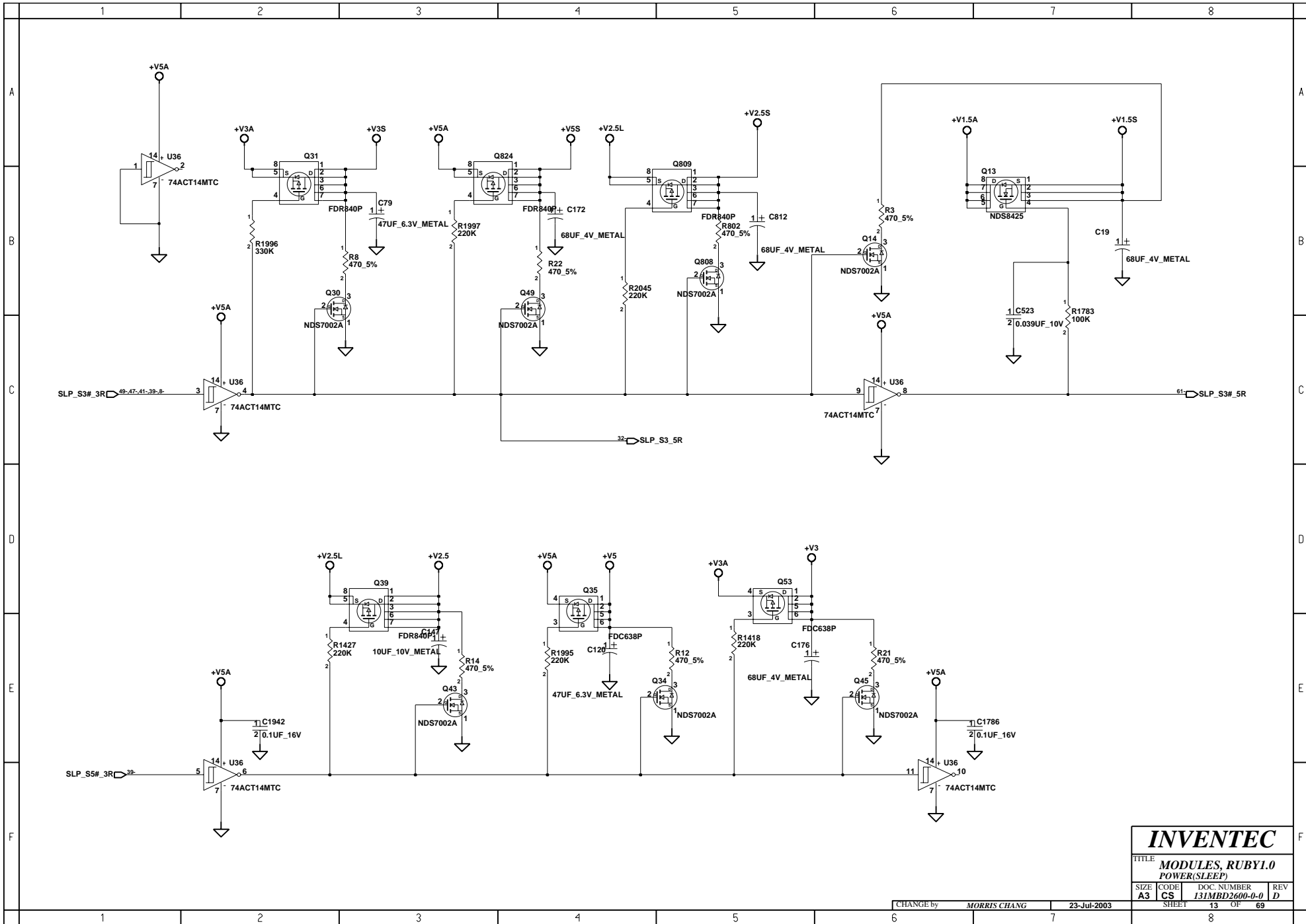
**INVENTEC**

TITLE **MODULES, RUBY1.0  
DDR 1.25V POWER**

SIZE	CODE	DOC NUMBER	REV
A3	CS	I31MBD2600-0-0	D

CHANGE by *MORRIS CHIANG* 23-Jul-2003

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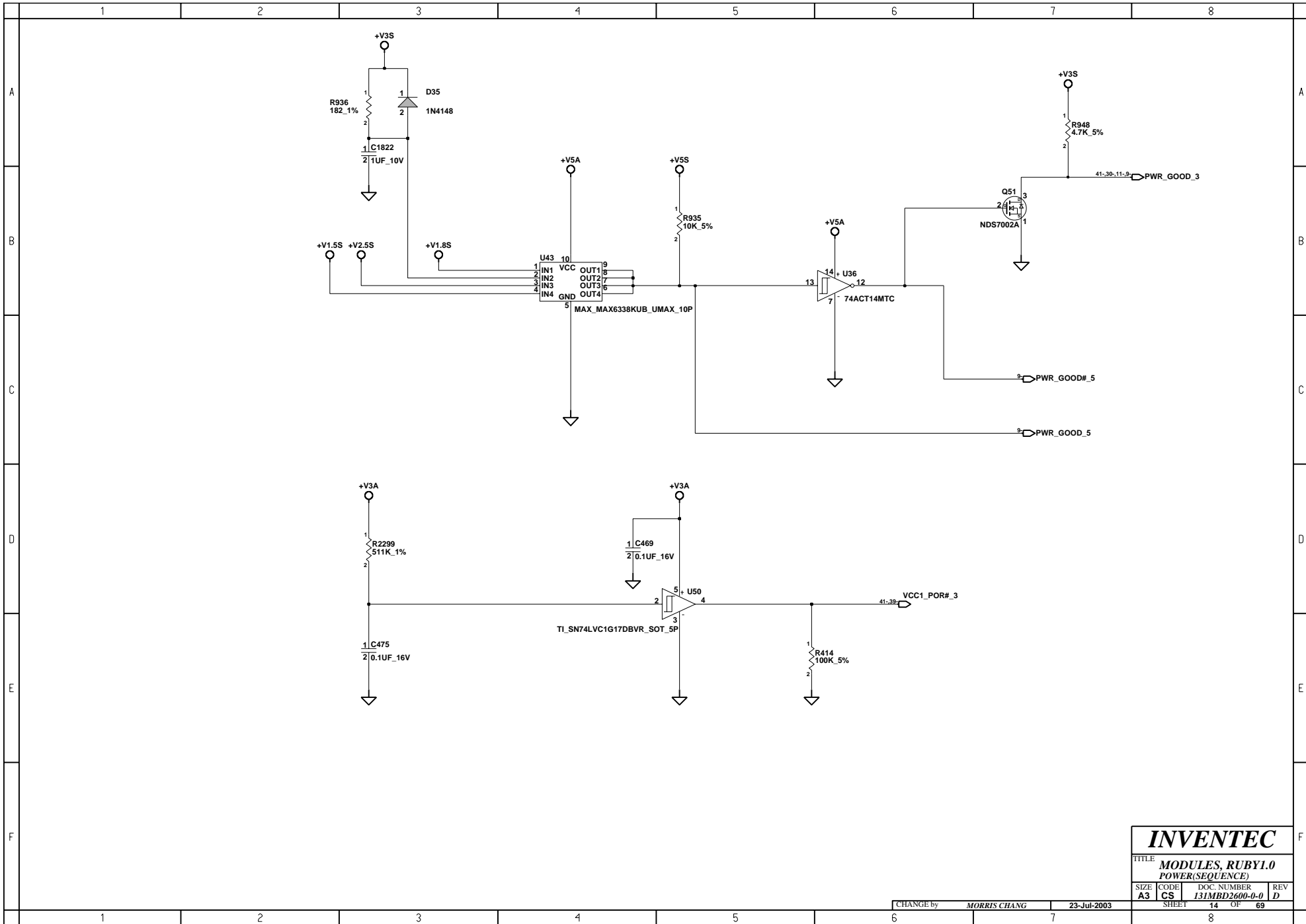
**INVENTEC**

TITLE **MODULES, RUBY1.0  
POWER(SLEEP)**

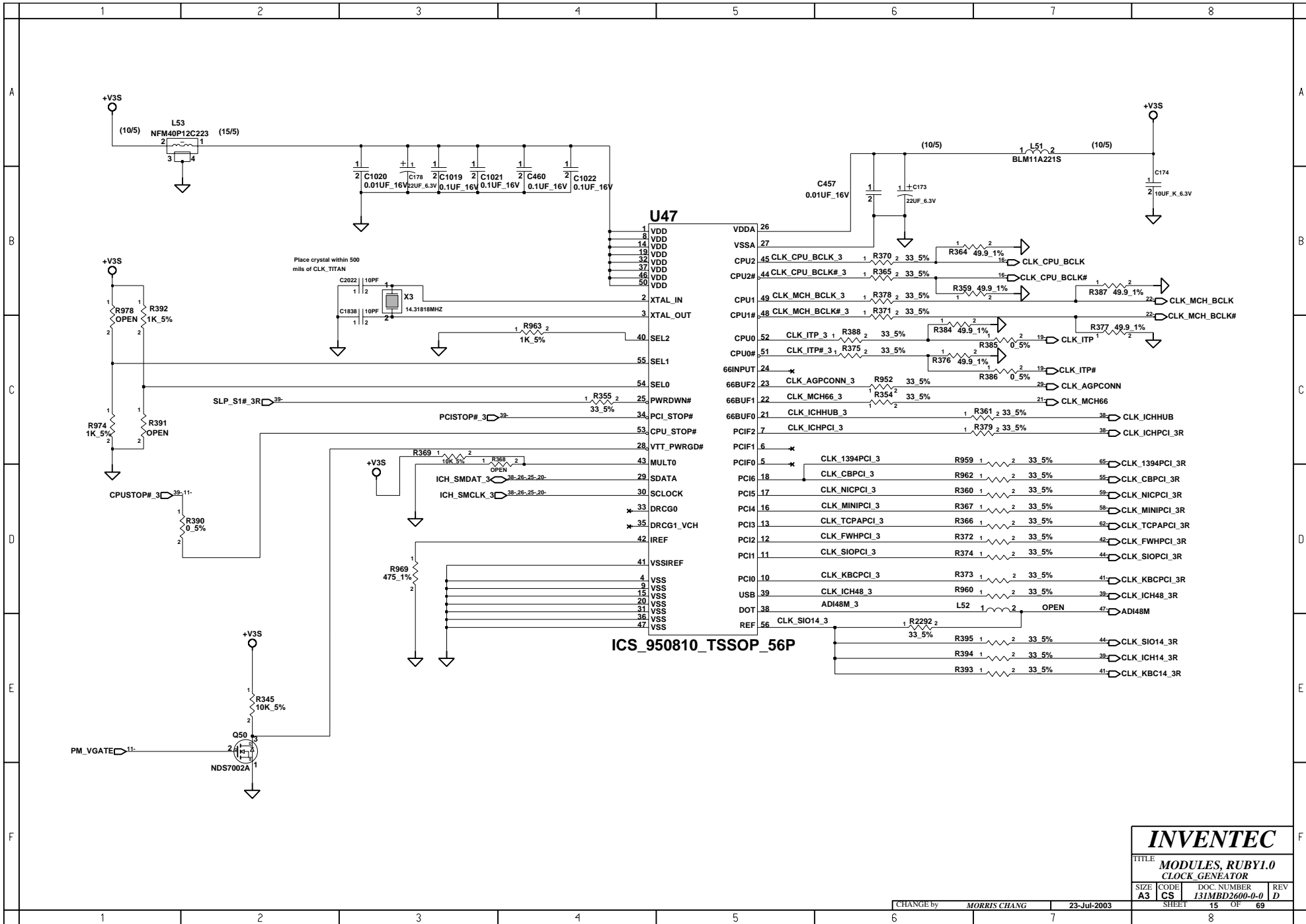
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A3	CS	I31MBD2600-0-0	D

CHANGE by **MORRIS CHIANG** 23-Jul-2003

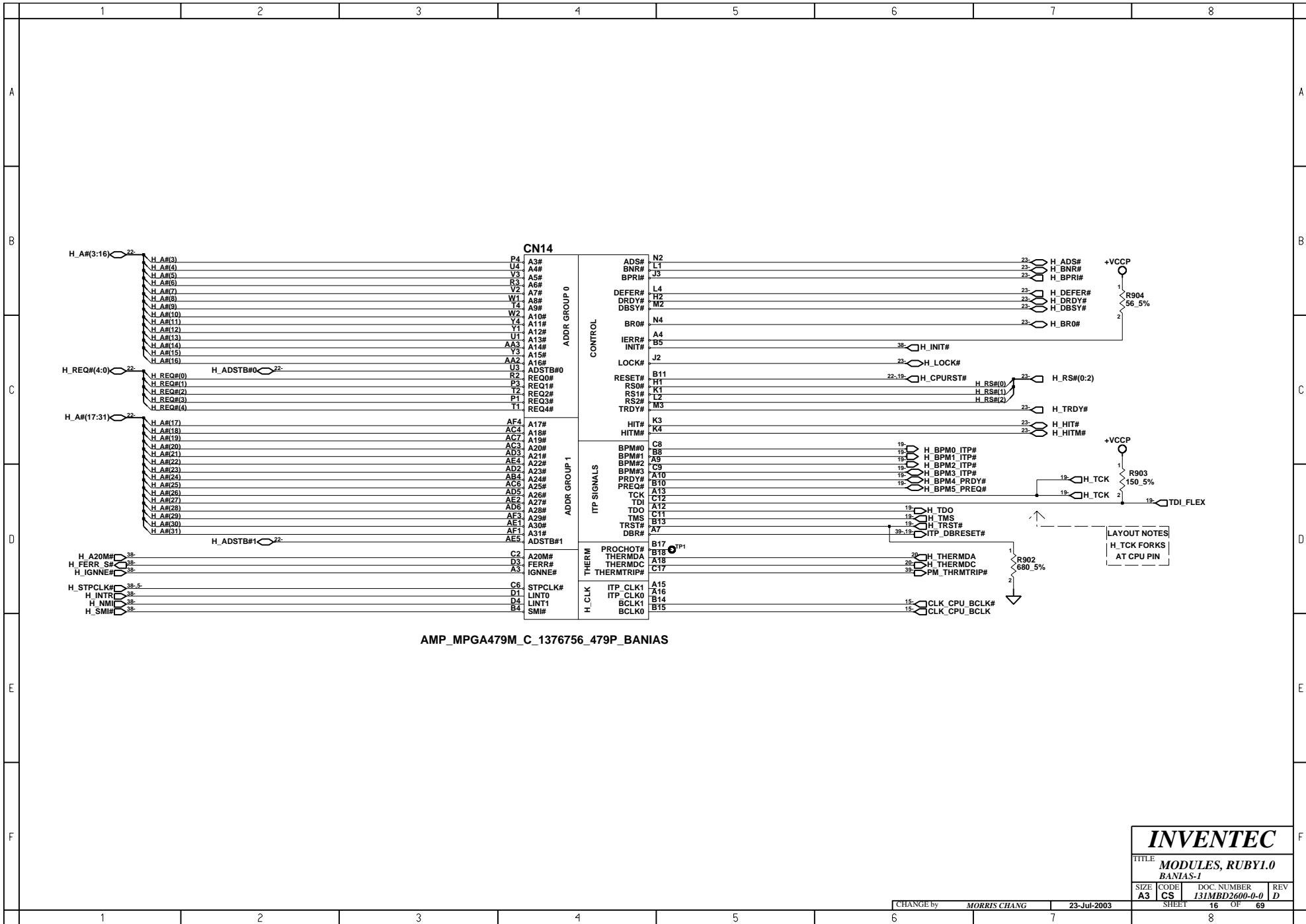
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<b>INVENTEC</b>			
TITLE <b>MODULES, RUBY1.0</b>			
POWER(SEQUENCE)			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	I31MBD2600-0-0	D
CHANGE by		23-Jul-2003	SHEET 14 OF 69
MORRIS CHANG			

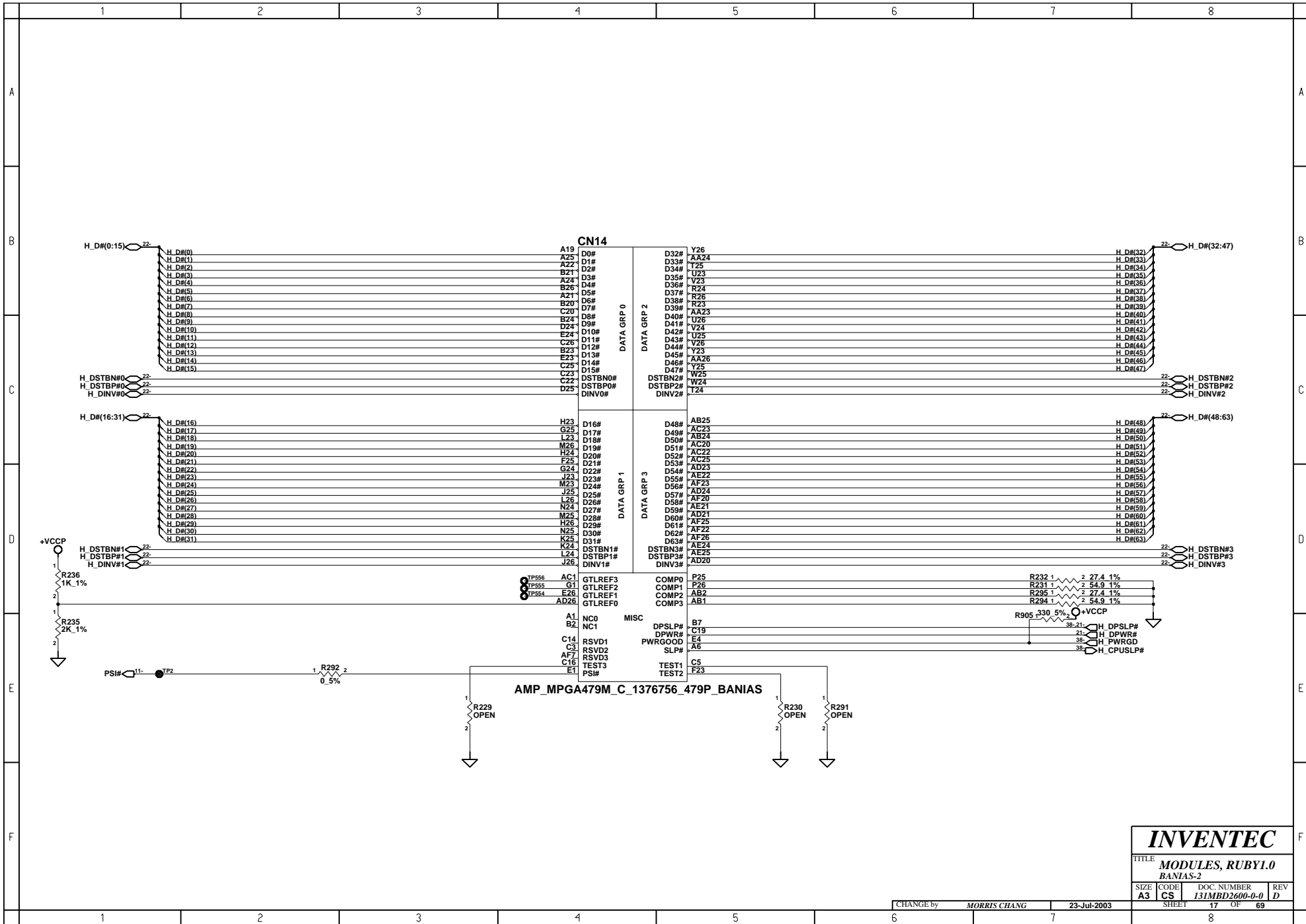


<b>INVENTEC</b>			
TITLE <b>MODULES, RUBY1.0</b>			
<b>CLOCK_GENERATOR</b>			
SIZE	CODE	DOC NUMBER	REV
A3	CS	I31MBD2600-0-0	D
CHANGE by		MORRIS CHIANG	23-Jul-2003
SHEET		15	OF 69

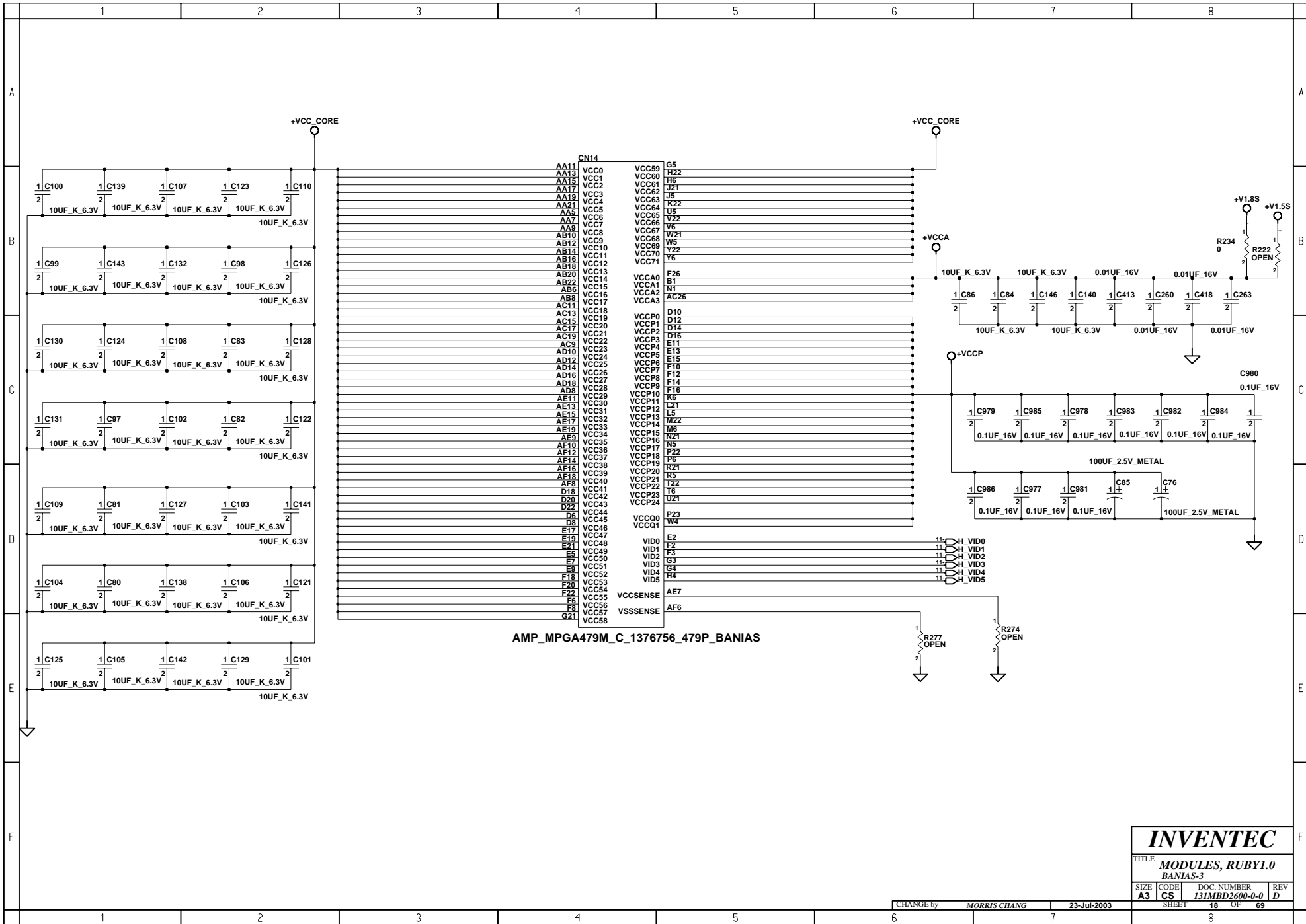


<b>INVENTEC</b>			
TITLE <b>MODULES, RUBY1.0</b> <i>BANIAS-1</i>			
SIZE <b>A3</b>	CODE <b>CS</b>	DOC. NUMBER <b>I31MBD2600-0-0</b>	REV <b>D</b>
CHANGE by <i>MORRIS CHIANG</i>		23-Jul-2003	SHEET 16 OF 69

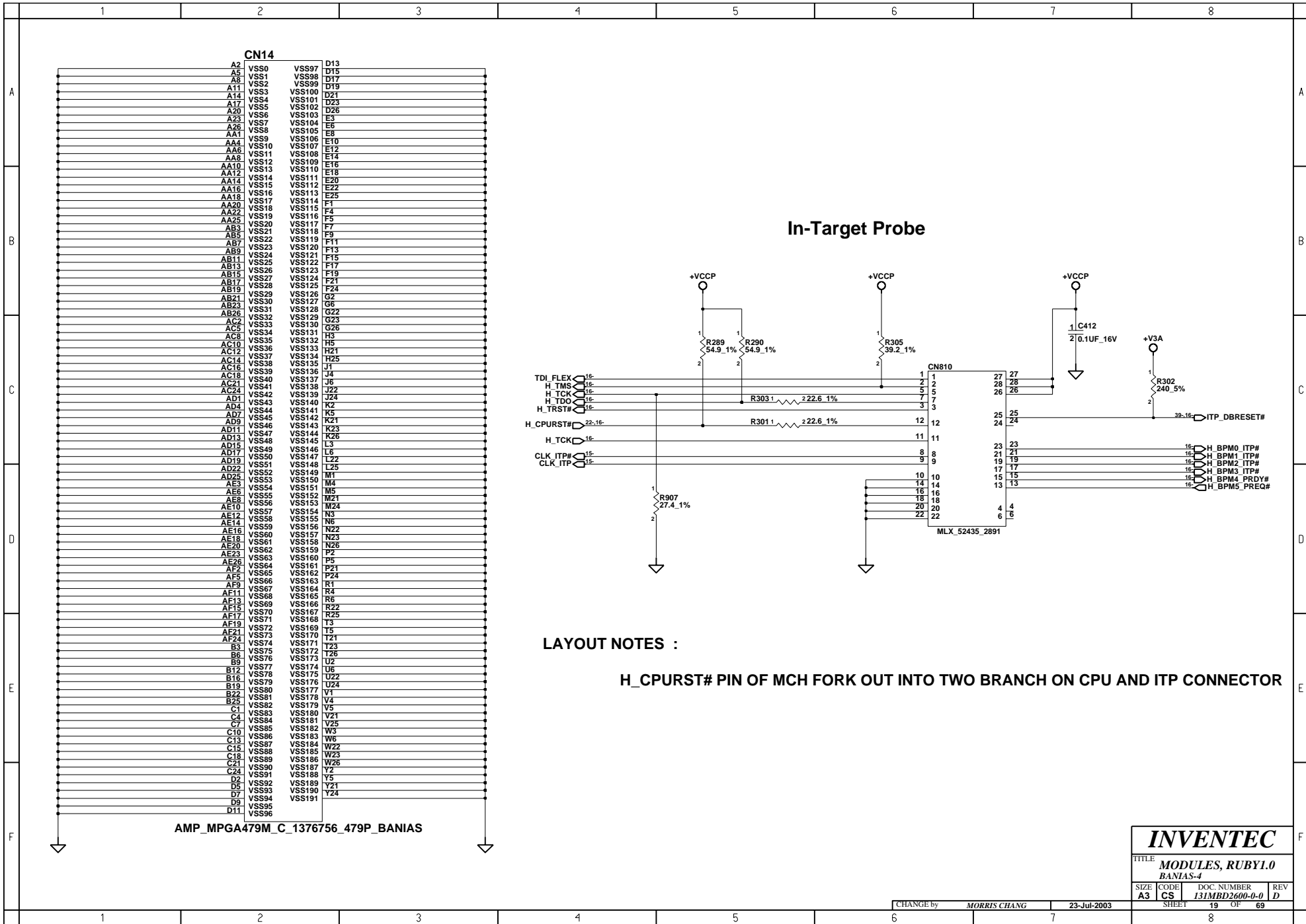




<b>INVENTEC</b>			
TITLE <b>MODULES, RUBY1.0</b>			
BANIAS-2			
SIZE	CODE	DOC NUMBER	REV
A3	CS	I31MBD2600-0-0	D
CHANGE by		MORRIS CHIANG	23-Jul-2003
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<b>INVENTEC</b>			
TITLE <b>MODULES, RUBY1.0</b>			
BANIAS-3			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	I31MBD2600-0-0	D
CHANGE by		23-Jul-2003	SHEET 18 OF 69

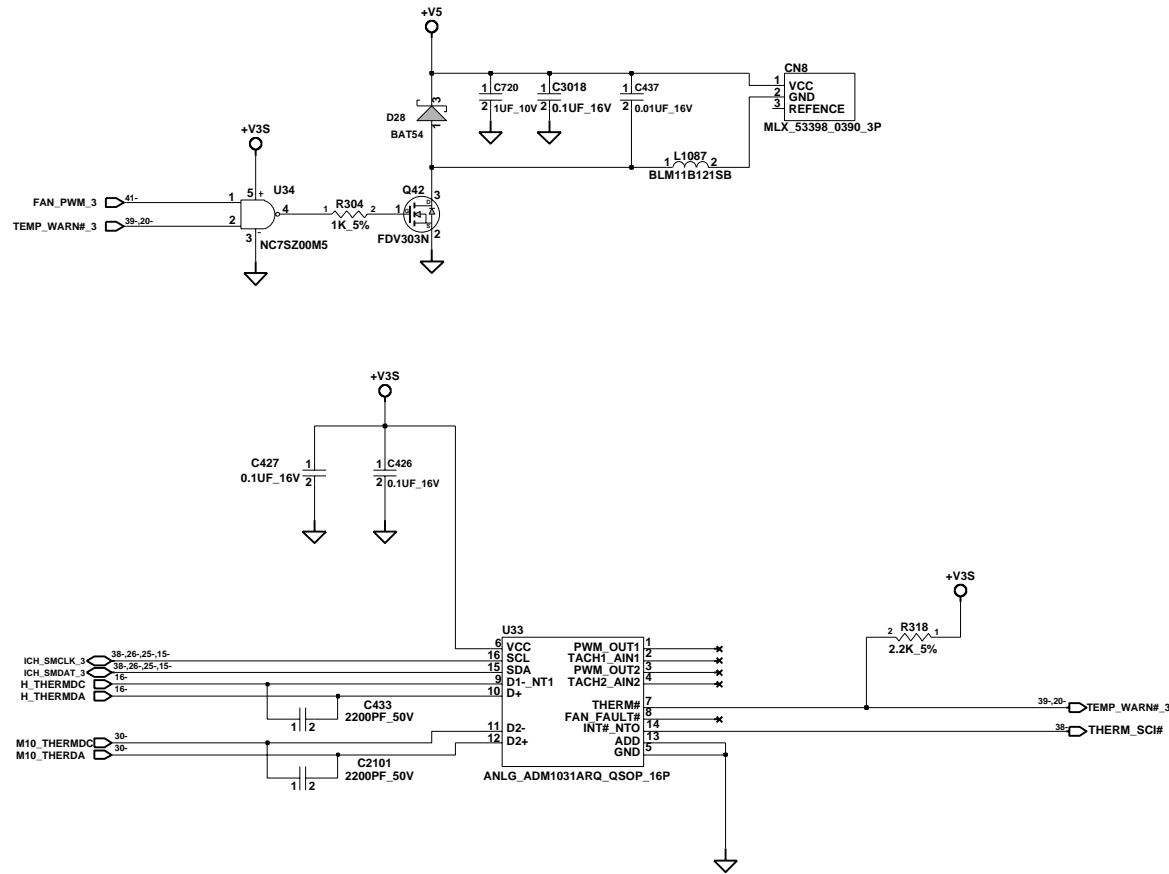


**In-Target Probe**

**LAYOUT NOTES :**  
**H\_CPURST# PIN OF MCH FORK OUT INTO TWO BRANCH ON CPU AND ITP CONNECTOR**

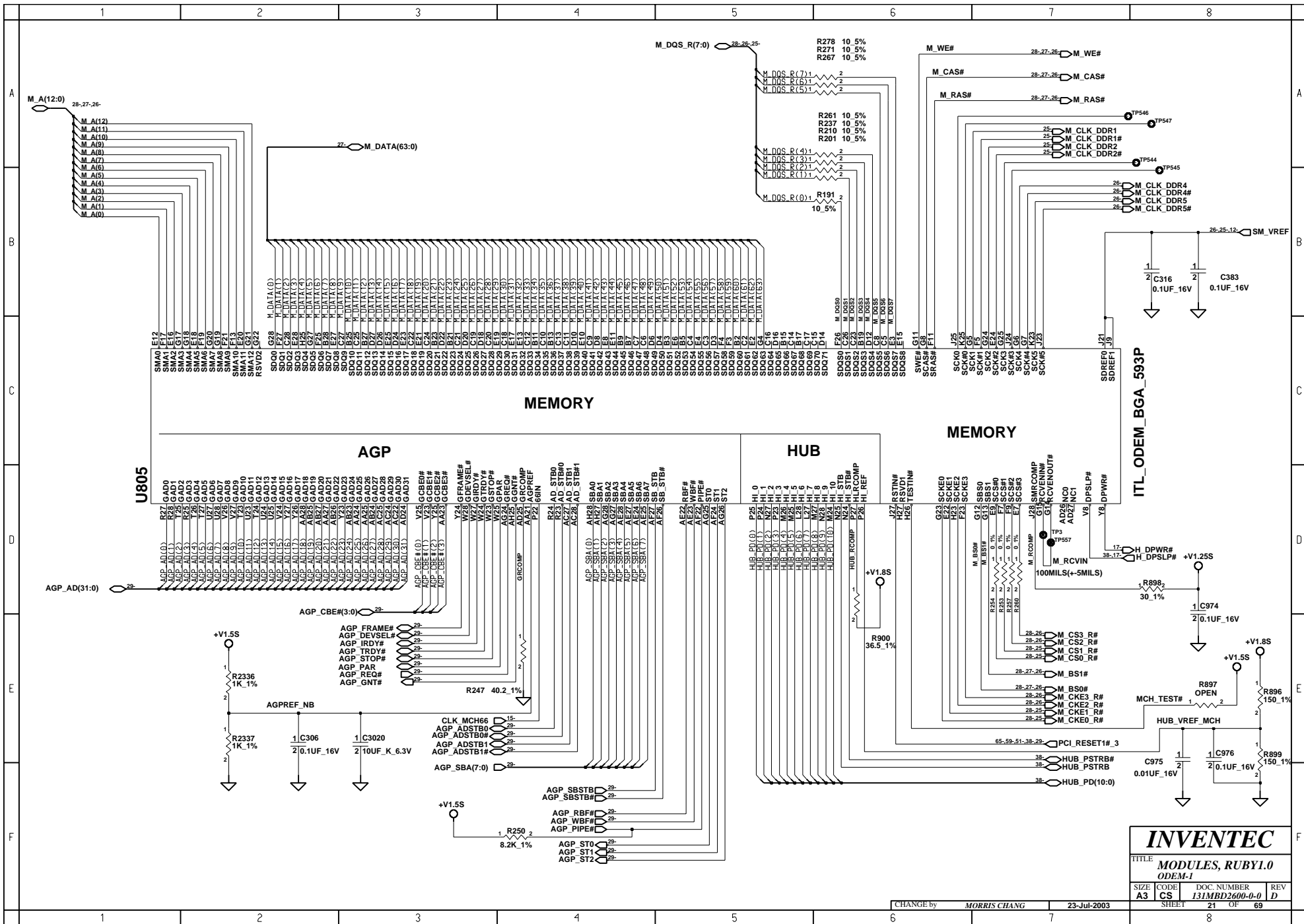
AMP\_MPGA479M\_C\_1376756\_479P\_BANIAS

<b>INVENTEC</b>			
TITLE <b>MODULES, RUBY1.0</b>			
SUBTITLE <b>BANIAS-4</b>			
SIZE <b>A3</b>	CODE <b>CS</b>	DOC NUMBER <b>I31MBD2600-0-0</b>	REV <b>D</b>
CHANGE by <b>MORRIS CHIANG</b>		23-Jul-2003	
SHEET <b>19</b>		OF <b>69</b>	

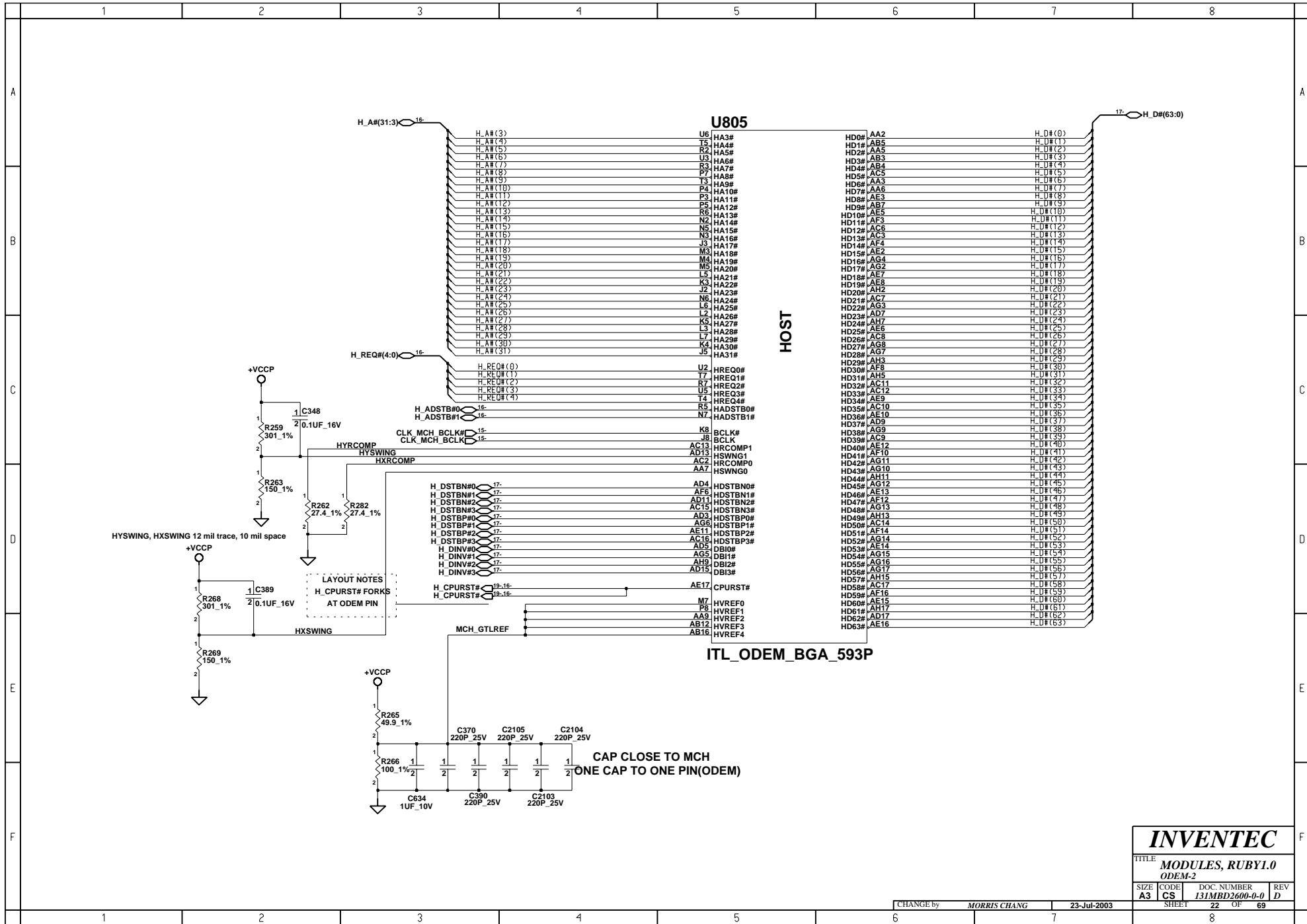


LAYOUT NOTES : PUT THE THERMAL SENSOR CLOSE TO CPU

<b>INVENTEC</b>			
TITLE <b>MODULES, RUBY1.0</b>			
<b>THERMAL&amp;FAN CONTROLLER</b>			
SIZE	CODE	DOC NUMBER	REV
A3	CS	I31MBD2600-0-0	D
CHANGE by		MORRIS CHANG	23-Jul-2003
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<b>INVENTEC</b>			
TITLE <b>MODULES, RUBY1.0</b>			
ODEM-1			
SIZE <b>A3</b>	CODE <b>CS</b>	DOC NUMBER <b>131MBD2600-0-0</b>	REV <b>D</b>
CHANGE by <b>MORRIS CHANG</b>		23-Jul-2003	
SHEET <b>21</b>		OF <b>69</b>	

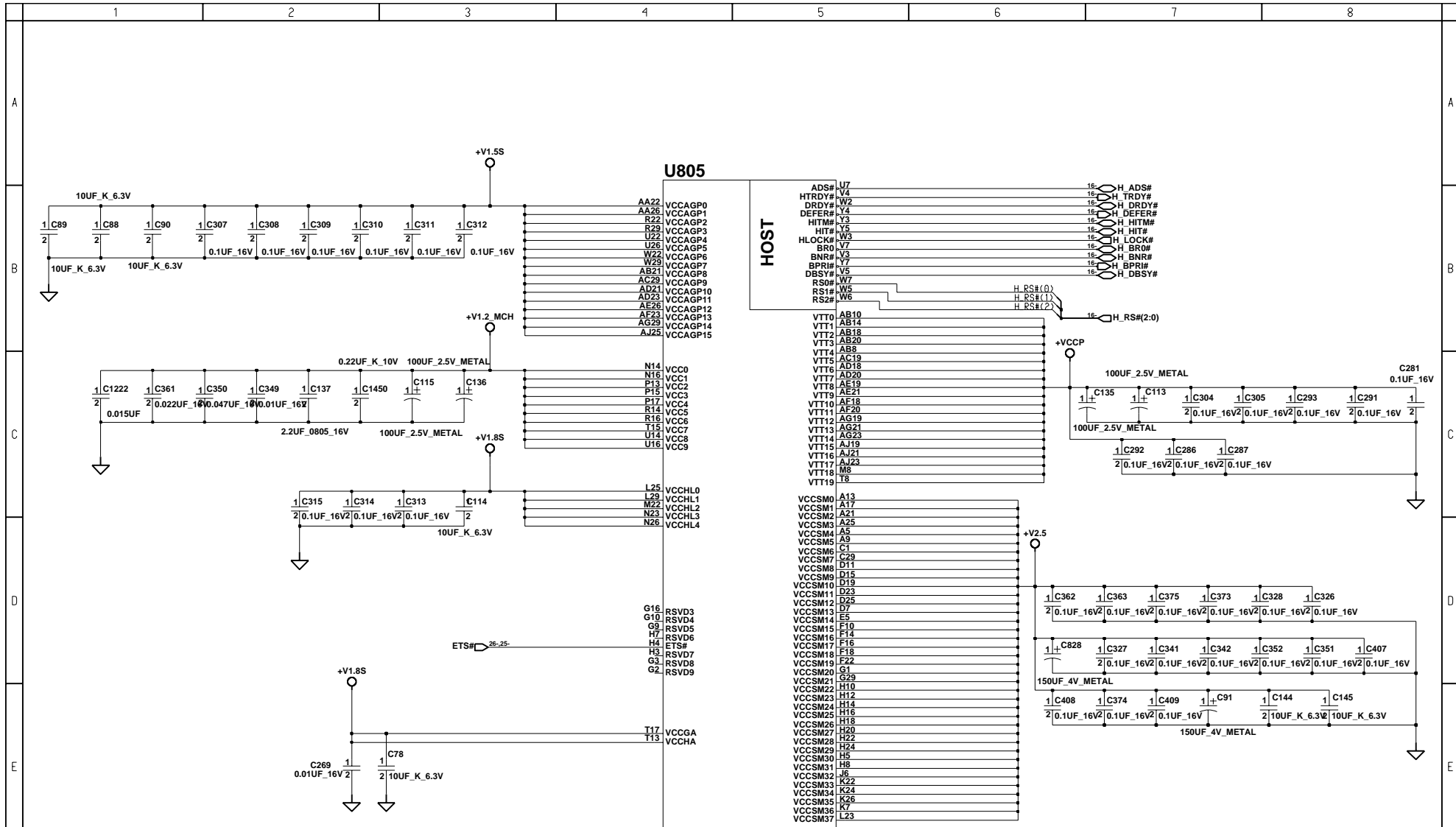


**INVENTEC**  
 TITLE: **MODULES, RUBY1.0**  
**ODEM-2**

SIZE	CODE	DOC. NUMBER	REV
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CHANGE by **MORRIS CHIANG** 23-Jul-2003

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ITL\_ODEM\_BGA\_593P

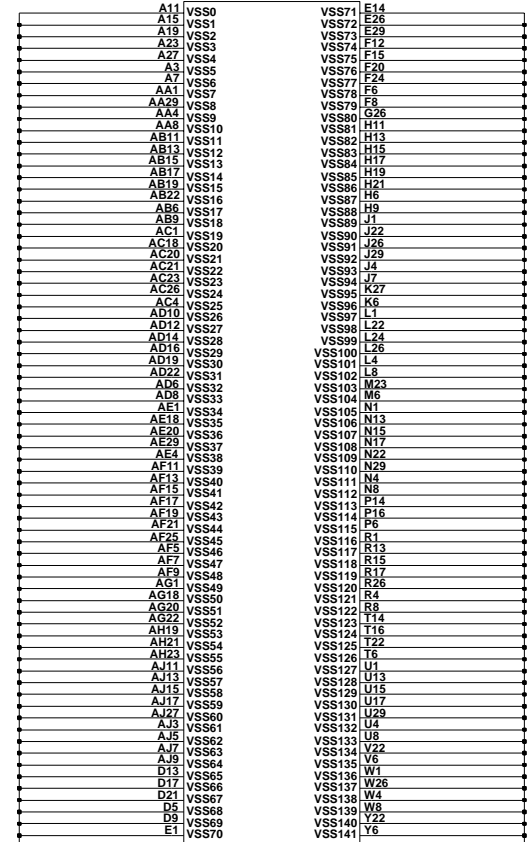
**INVENTEC**

TITLE **MODULES, RUBY1.0**  
ODEM-3

SIZE	CODE	DOC. NUMBER	REV
A3	CS	I31MBD2600-0-0	D

CHANGE by MORRIS CHIANG 23-Jul-2003 SHEET 23 OF 69

**U805**



**ITL\_ODEM\_BGA\_593P**

**INVENTEC**

TITLE **MODULES, RUBY1.0  
ODEM-4**

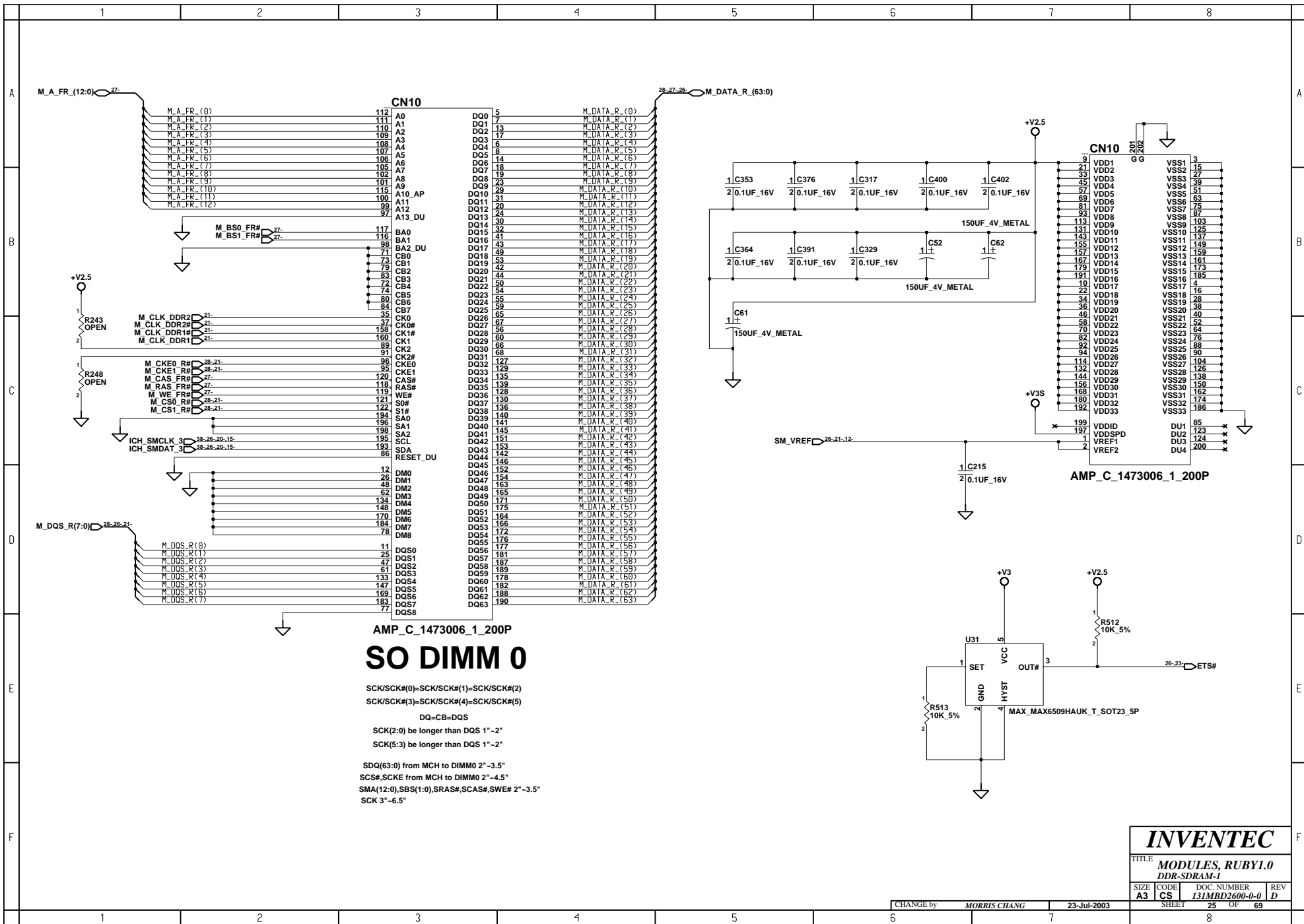
SIZE <b>A3</b>	CODE <b>CS</b>	DOC. NUMBER <b>131MBD2600-0-0</b>	REV <b>D</b>
-------------------	-------------------	--------------------------------------	-----------------

CHANGE by **MORRIS CHIANG** 23-Jul-2003

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



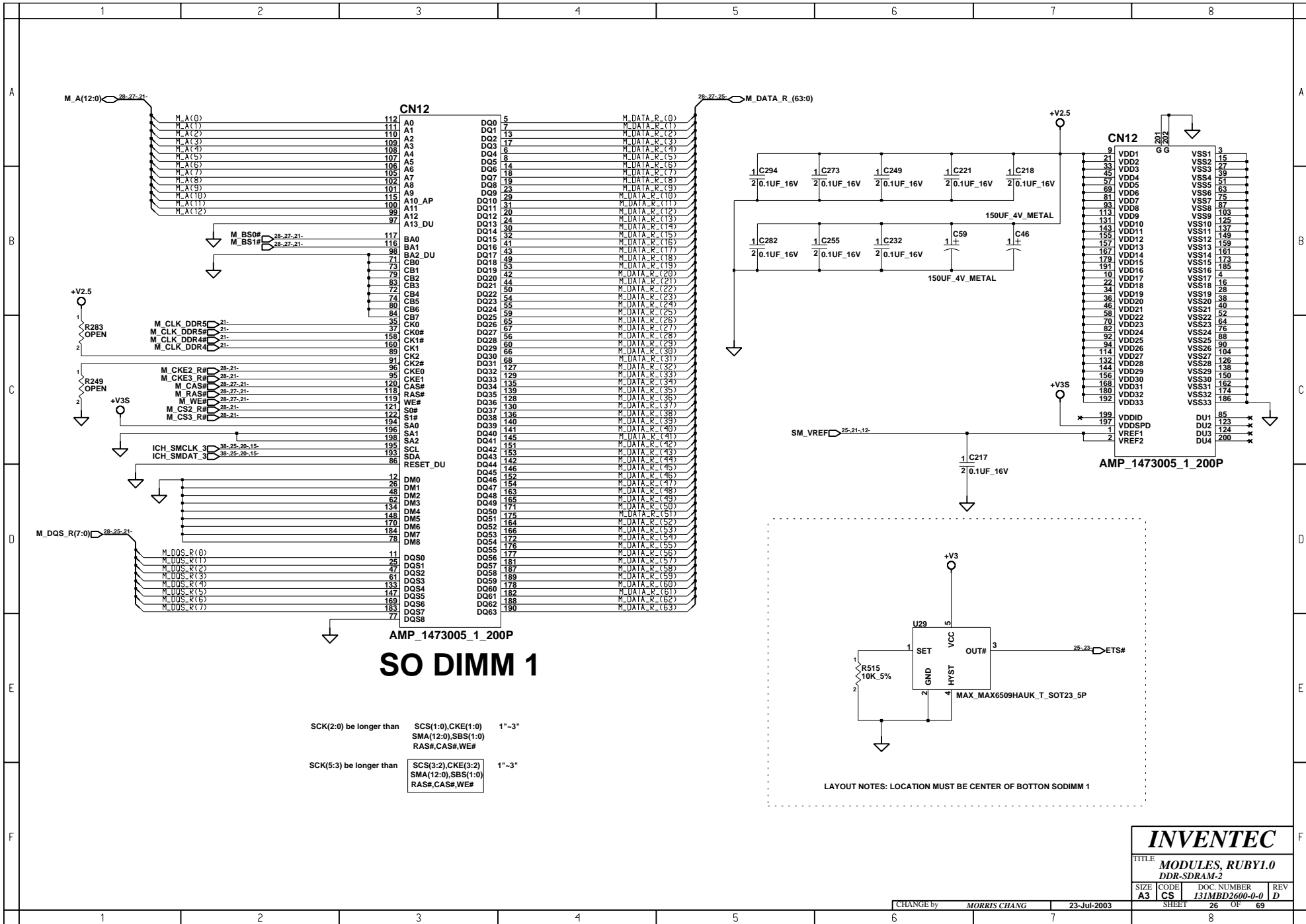


AMP\_C\_1473006\_1\_200P

# SO DIMM 0

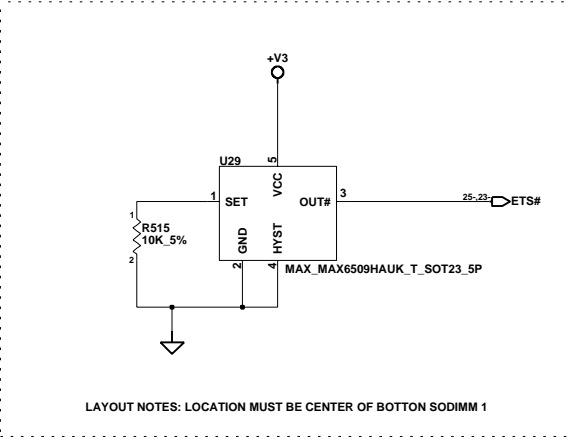
SCK/SCK#(0)=SCK/SCK#(1)=SCK/SCK#(2)  
 SCK/SCK#(3)=SCK/SCK#(4)=SCK/SCK#(5)  
 DQ=CB=DQS  
 SCK(2:0) be longer than DQS 1"-2"  
 SCK(5:3) be longer than DQS 1"-2"  
 SDQ(63:0) from MCH to DIMM0 2"-3.5"  
 SCS#,SCKE from MCH to DIMM0 2"-4.5"  
 SMA(12:0),SBS(1:0),SRAS#,SCAS#,SWE# 2"-3.5"  
 SCK 3"-6.5"

<b>INVENTEC</b>			
TITLE <b>MODULES, RUBY1.0</b>			
<b>DDR-SDRAM-1</b>			
SIZE <b>A3</b>	CODE <b>CS</b>	DOC. NUMBER <b>I31MBD2600-0-0</b>	REV <b>D</b>
CHANGE by <b>MORRIS CHIANG</b>		23-Jul-2003	
SHEET <b>25</b>		OF <b>69</b>	

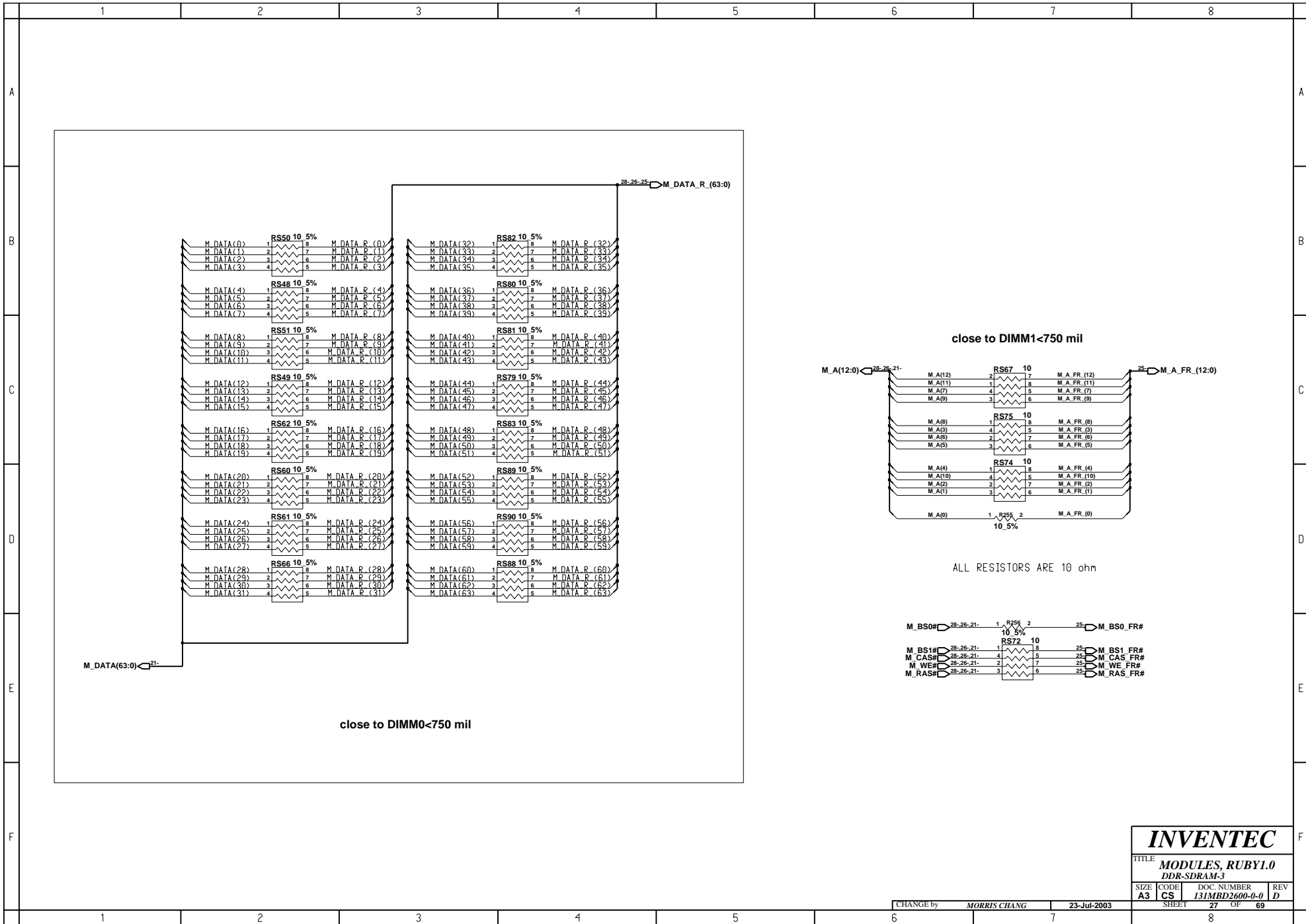


SCK(2:0) be longer than SCS(1:0),CKE(1:0) 1"-3"  
 SMA(12:0),SBS(1:0)  
 RAS#,CAS#,WE#

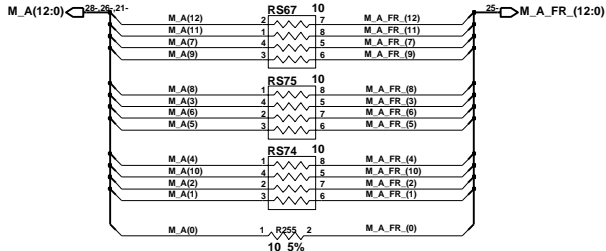
SCK(5:3) be longer than SCS(3:2),CKE(3:2) 1"-3"  
 SMA(12:0),SBS(1:0)  
 RAS#,CAS#,WE#



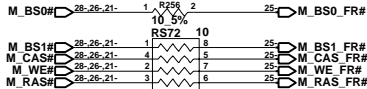
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TITLE: <b>MODULES, RUBY1.0</b>			
DDR-SDRAM-2			
SIZE	CODE	DOC NUMBER	REV
A3	CS	131MBD2600-0-0	D
CHANGE by		MORRIS CHIANG	23-Jul-2003
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close to DIMM1<750 mil



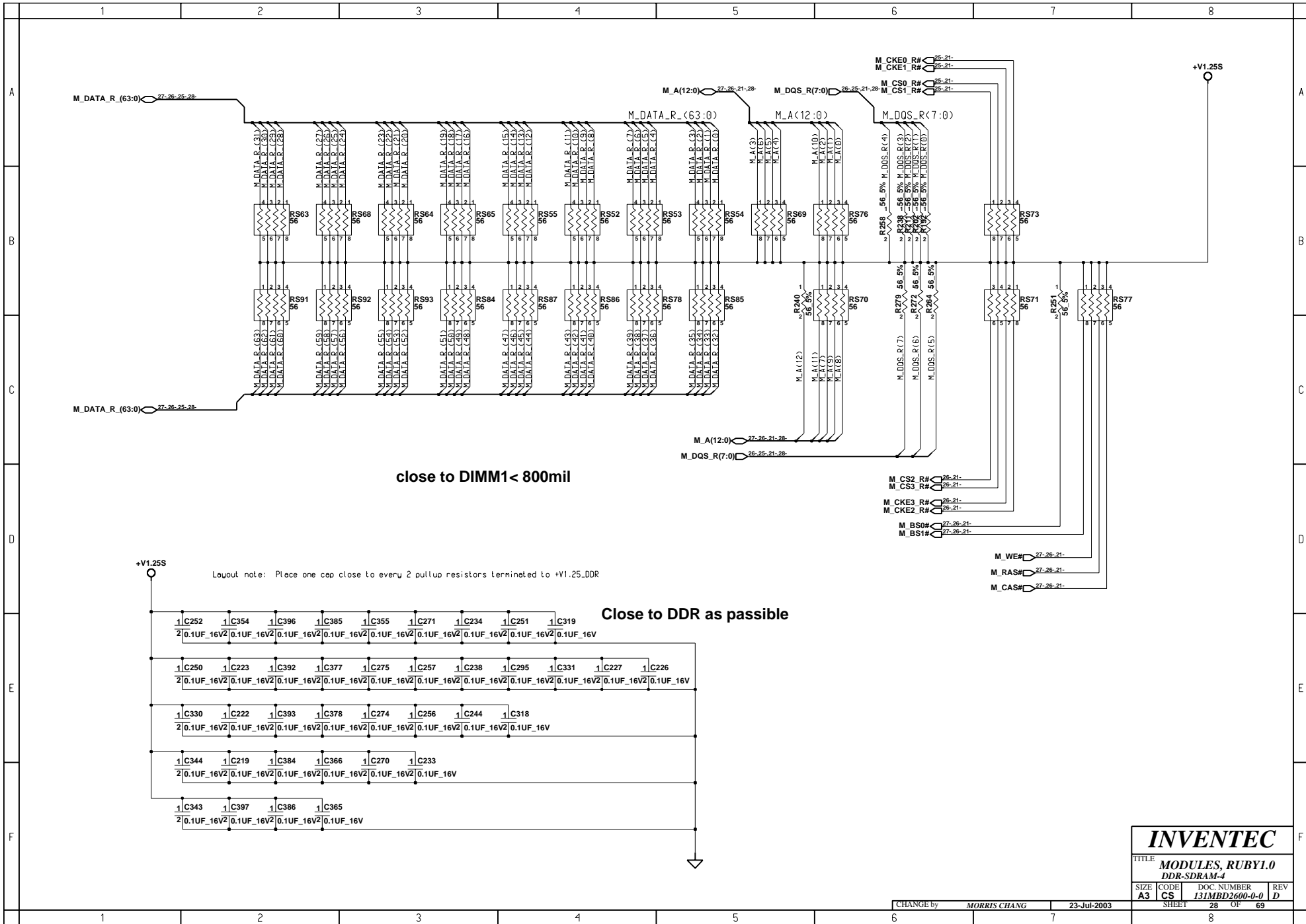
ALL RESISTORS ARE 10 ohm



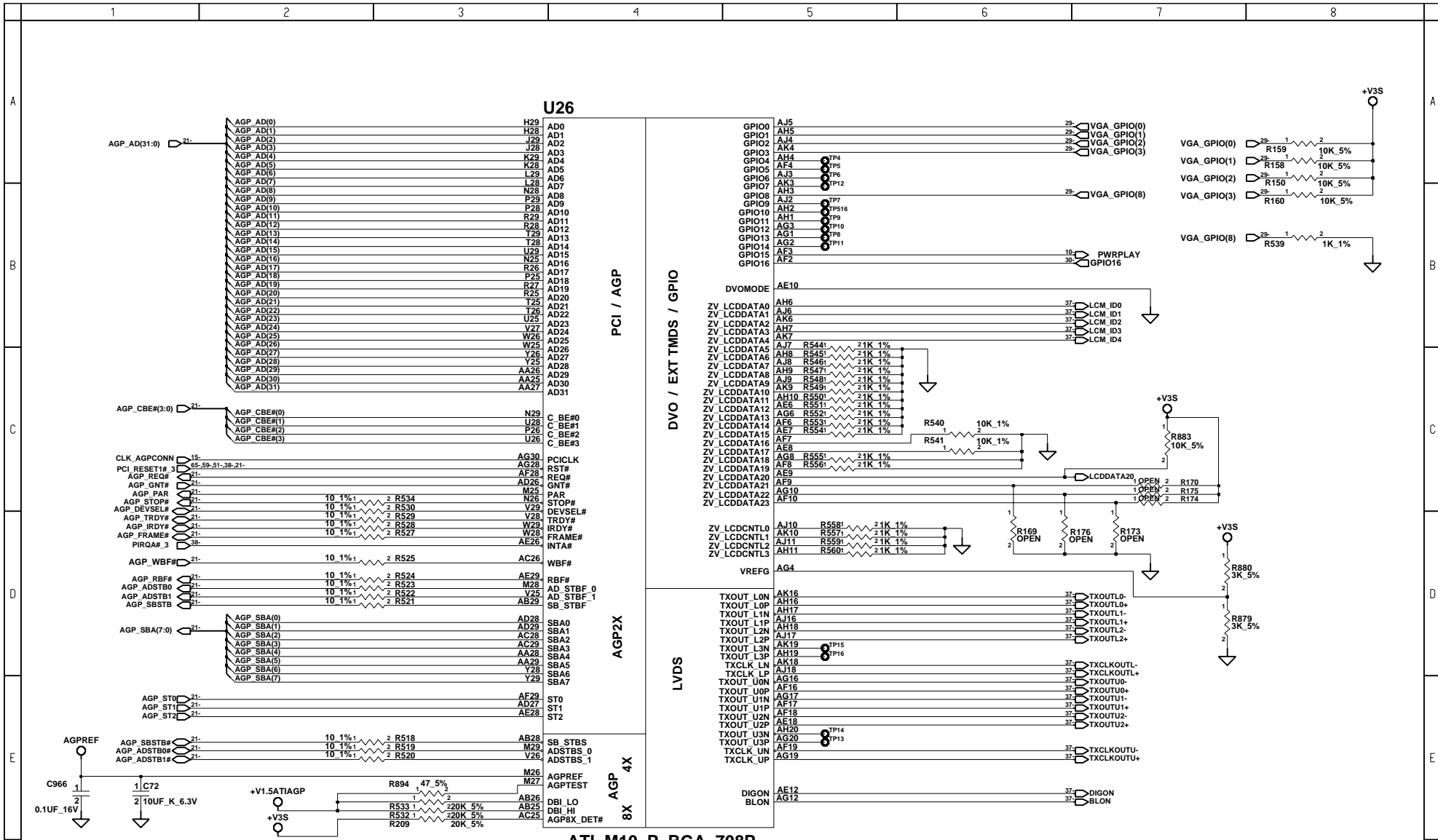
**INVENTEC**

TITLE **MODULES, RUBY1.0**  
**DDR-SDRAM-3**

SIZE <b>A3</b>	CODE <b>CS</b>	DOC NUMBER <b>I31MBD2600-0-0</b>	REV <b>D</b>
CHANGE by <b>MORRIS CHIANG</b>		23-Jul-2003	SHEET <b>27</b> OF <b>69</b>



<b>INVENTEC</b>			
TITLE <b>MODULES, RUBY1.0</b>			
DDR-SDRAM-4			
SIZE	CODE	DOC NUMBER	REV
A3	CS	I31MBD2600-0-0	D
CHANGE by		MORRIS CHIANG	23-Jul-2003
SHEET		28	OF 69



LAYOUT NOTE : C1255 , C1876 CLOSE TO M10-P

**ATI\_M10\_P\_BGA\_708P**

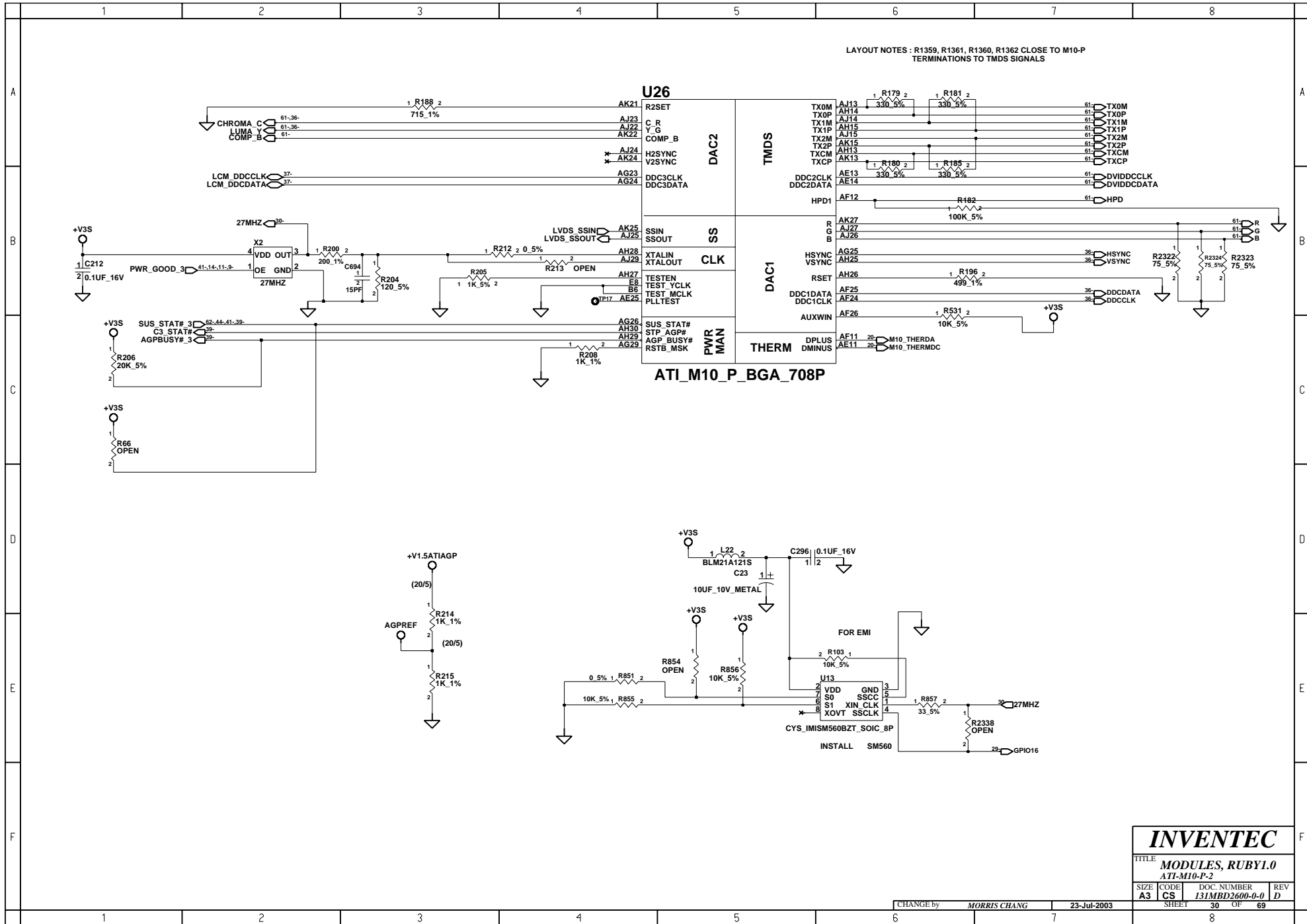
**INVENTEC**

TITLE  
**MODULES, RUBY1.0**  
 ATI-M10-P-1

SIZE	CODE	DOC. NUMBER	REV
A3	CS	I31MBD2600-0-0	D

CHANGE by MORRIS CHIANG 23-Jul-2003

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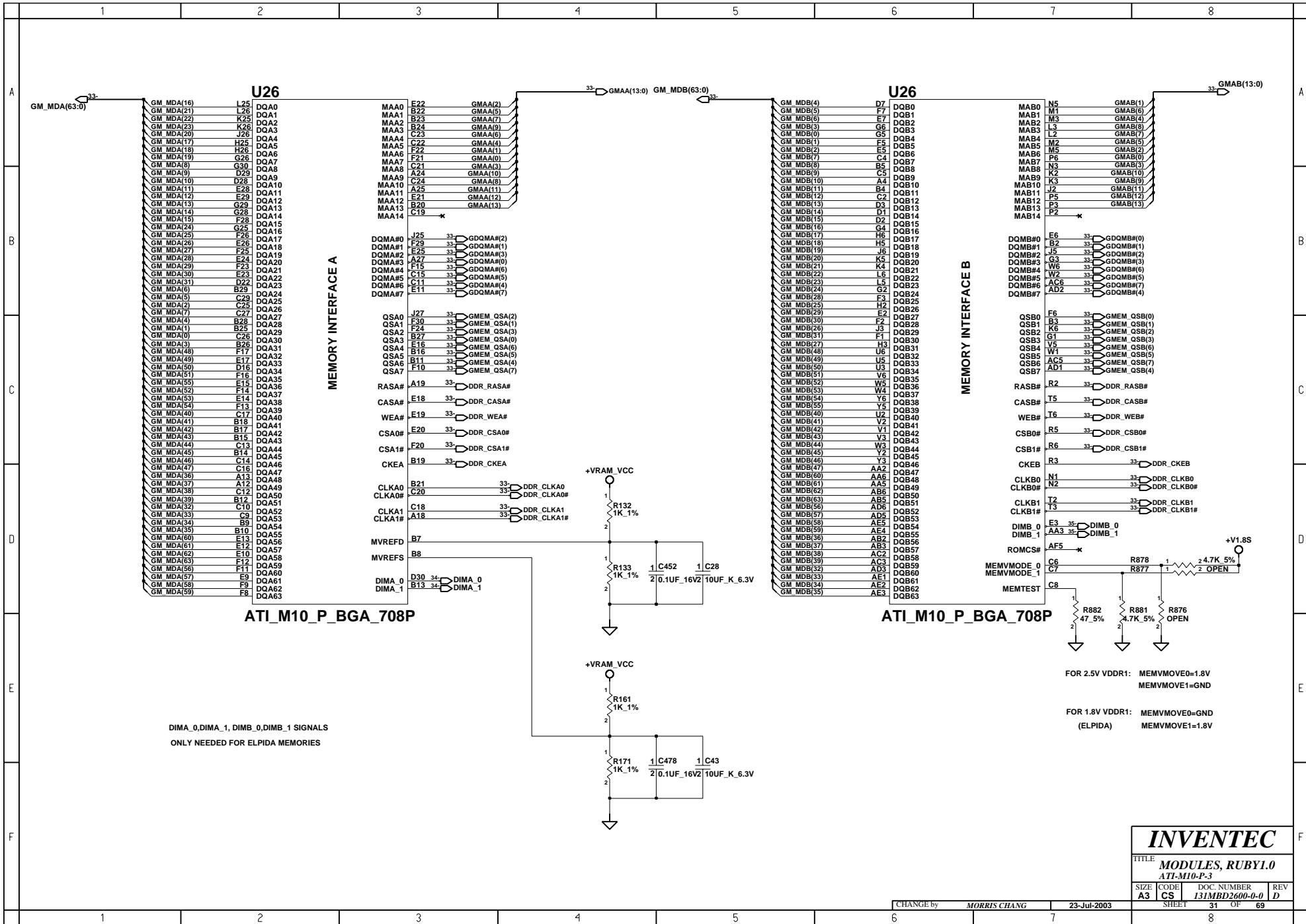


LAYOUT NOTES : R1359, R1361, R1360, R1362 CLOSE TO M10-P  
TERMINATIONS TO TMDS SIGNALS

U26

ATI\_M10\_P\_BGA\_708P

<b>INVENTEC</b>			
TITLE <b>MODULES, RUBY1.0</b> ATI-M10-P-2			
SIZE <b>A3</b>	CODE <b>CS</b>	DOC NUMBER <b>I31MBD2600-0-0</b>	REV <b>D</b>
CHANGE by <b>MORRIS CHIANG</b>		23-Jul-2003	
SHEET <b>30</b>		OF <b>69</b>	



DIMA\_0, DIMA\_1, DIMB\_0, DIMB\_1 SIGNALS  
ONLY NEEDED FOR ELPIDA MEMORIES

FOR 2.5V VDDR1: MEMVMODE0=1.8V  
MEMVMODE1=GND

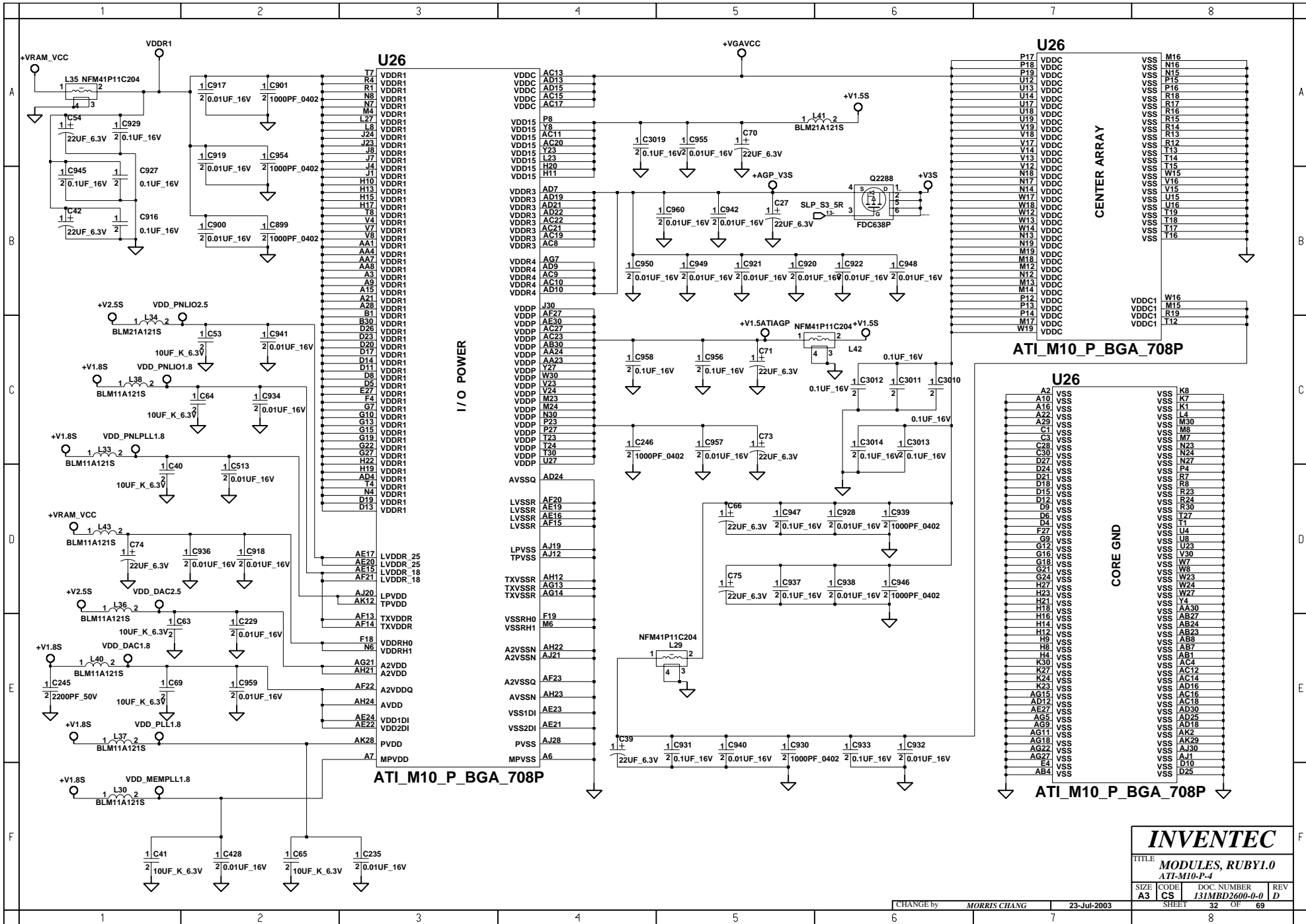
FOR 1.8V VDDR1: MEMVMODE0=GND  
(ELPIDA) MEMVMODE1=1.8V

**INVENTEC**  
TITLE  
MODULES, RUBY1.0  
ATI-M10-P-3

SIZE	CODE	DOC. NUMBER	REV
A3	CS	I31MBD2600-0-0	D

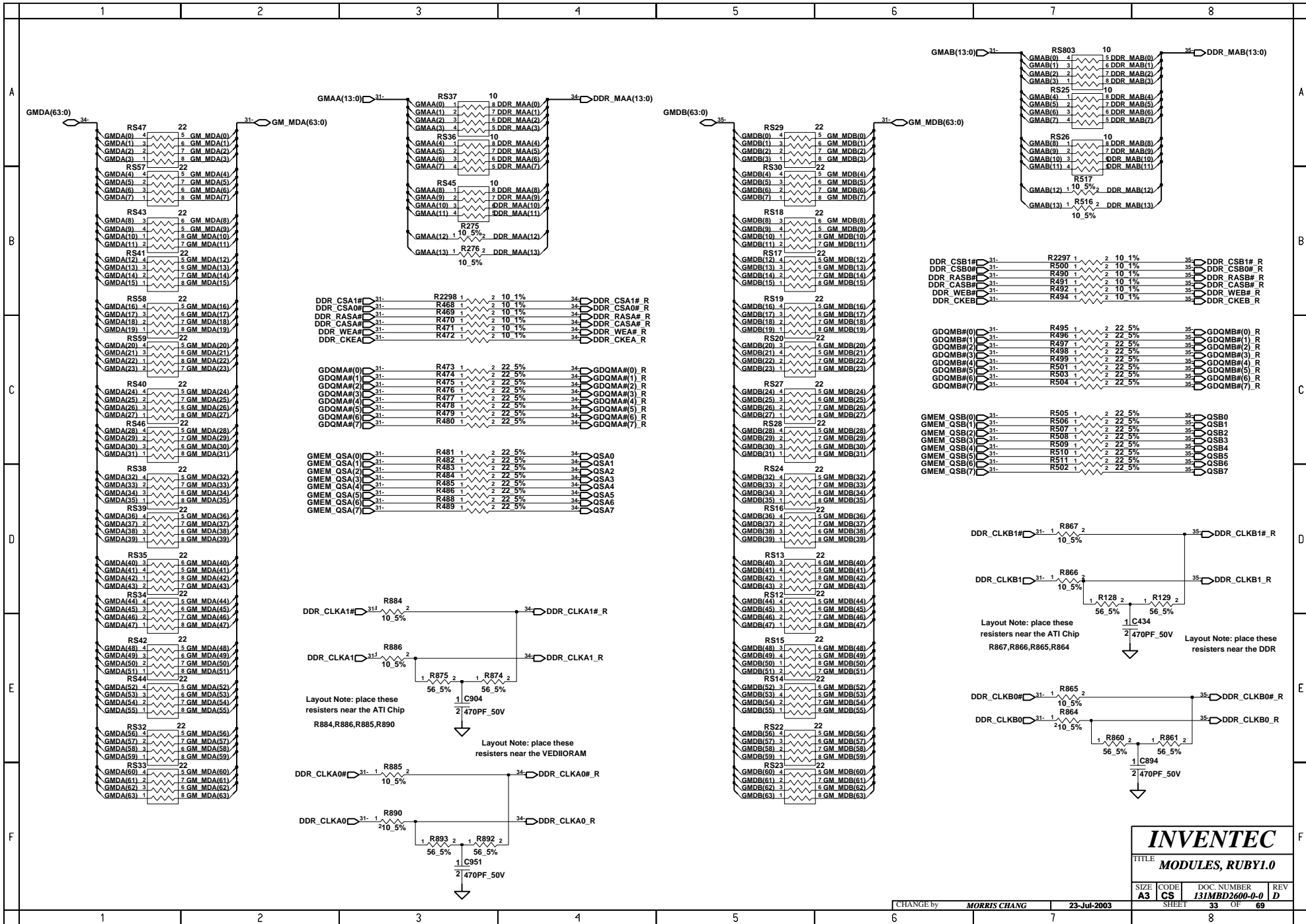
CHANGE by MORRIS CHANG 23-Jul-2003

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<b>INVENTEC</b>			
TITLE: <b>MODULES, RUBY1.0</b>			
ATI-M10-P-4			
SIZE	CODE	DOC NUMBER	REV
A3	CS	131MBD2600-0-0	D
CHANGE by		MORRIS CHIANG	23-Jul-2003
SHEET		32	OF 69

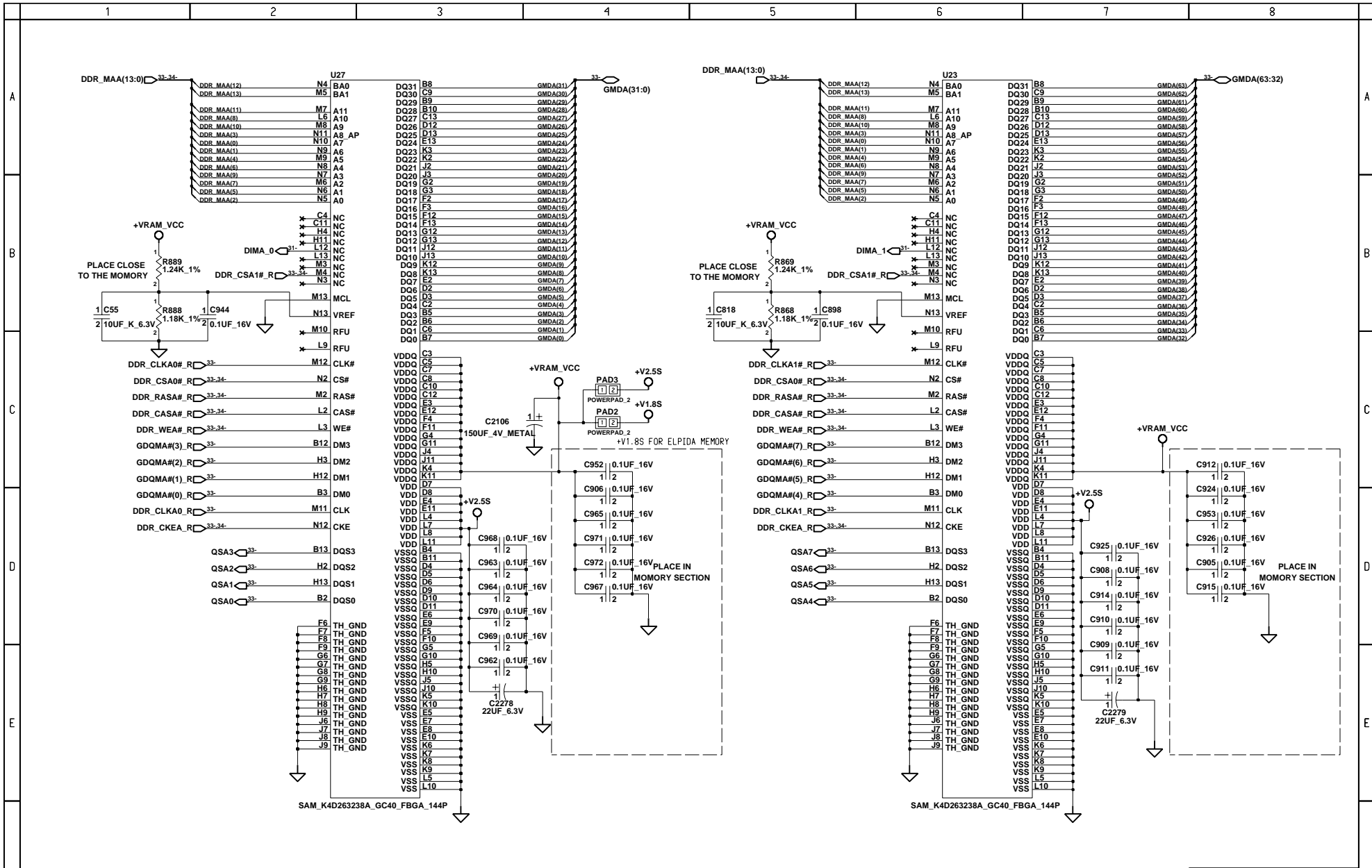




**INVENTEC**  
 TITLE  
 MODULES, RUBY1.0

SIZE	CODE	DOC NUMBER	REV
A3	CS	131MBD2600-0-0	D

CHANGE by MORRIS CHANG 23-Jul-2003 SHEET 33 OF 69

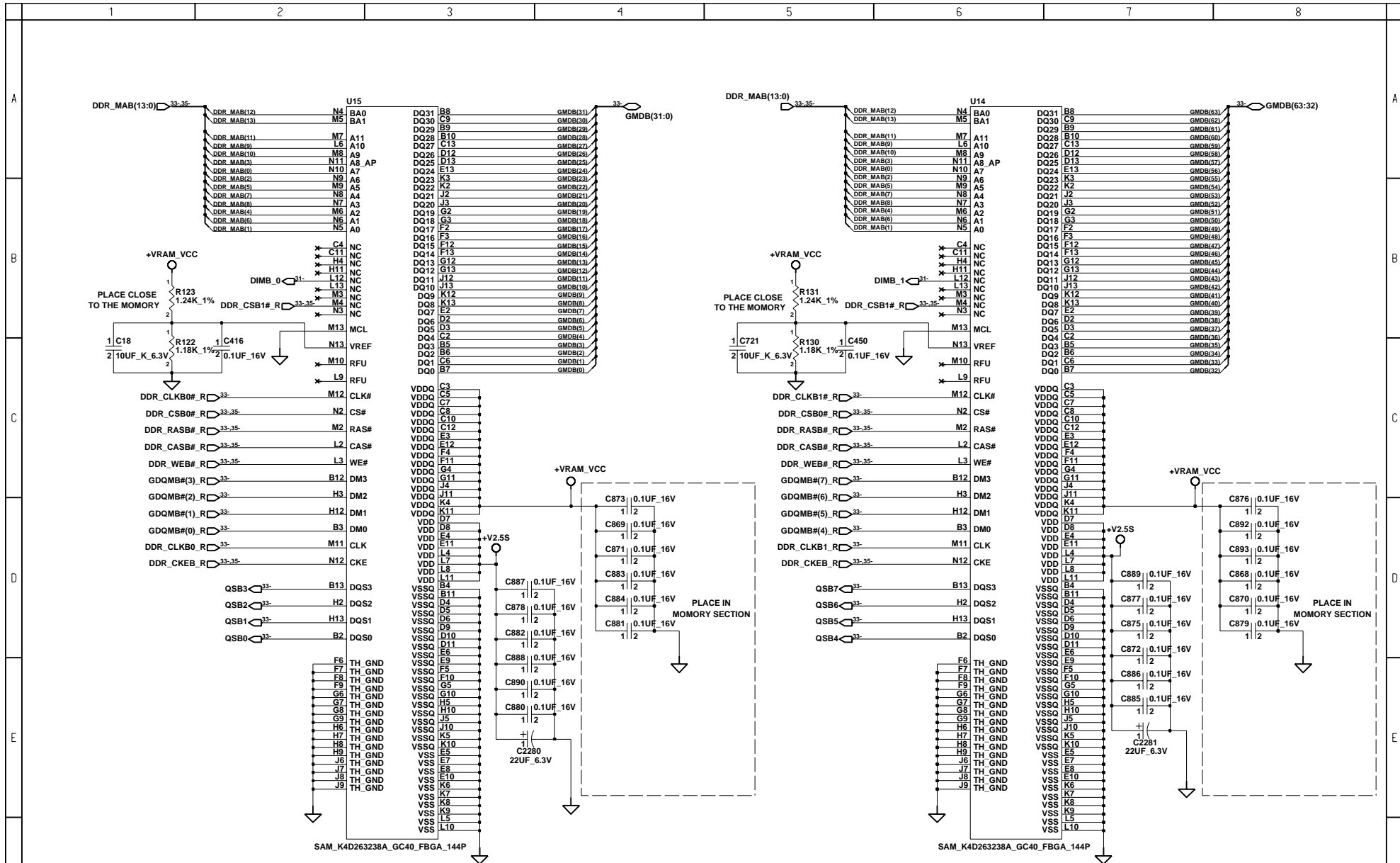


**INVENTEC**  
 TITLE: **MODULES, RUBY1.0**

SIZE	CODE	DOC. NUMBER	REV
A3	CS	131MBD2600-0-0	D

CHANGE by: MORRIS CHANG 23-Jul-2003

SHEET 34 OF 69



SAM\_K4D263238A\_GC40\_FBG4\_144P

SAM\_K4D263238A\_GC40\_FBG4\_144P

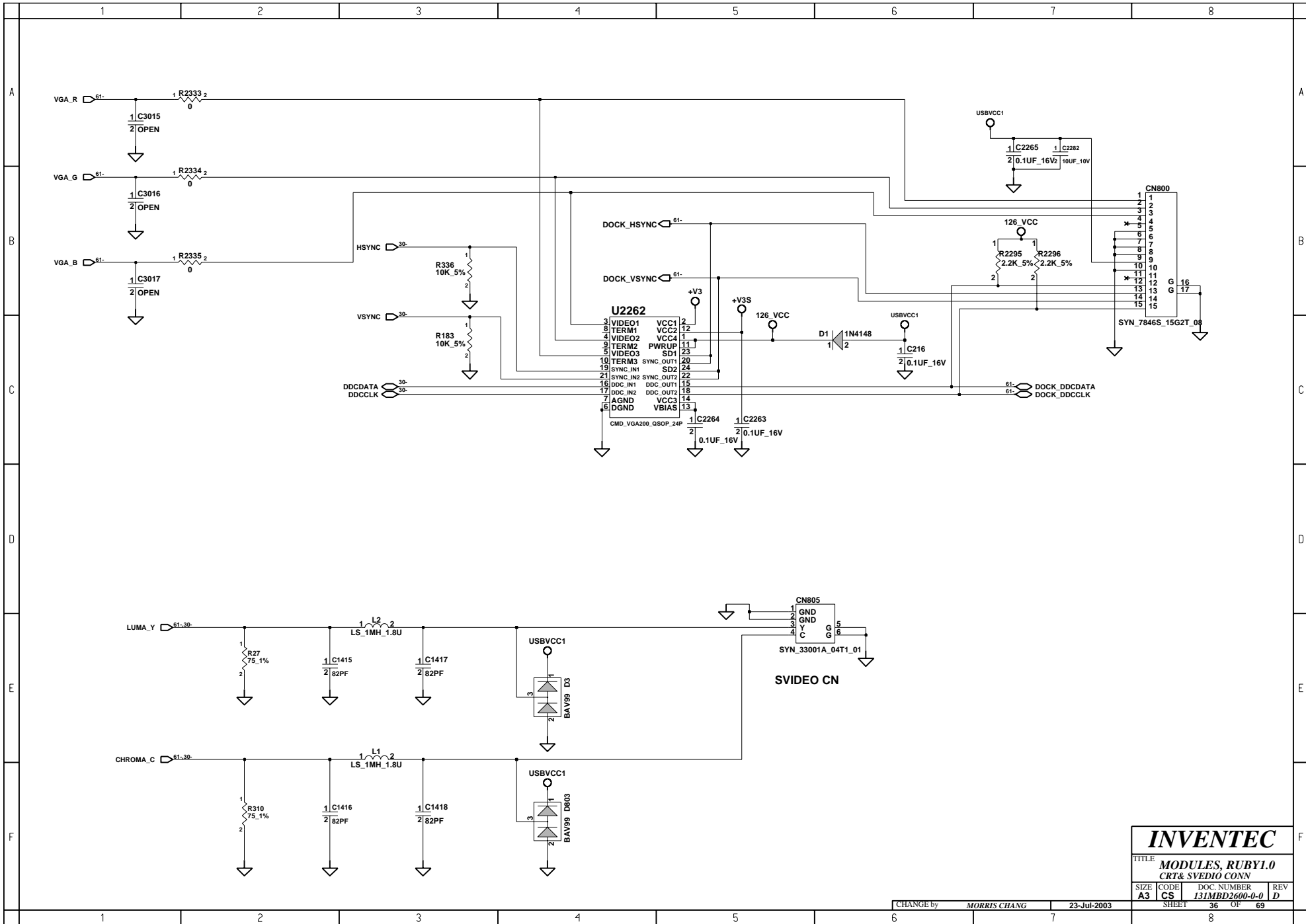
# INVENTEC

TITLE **MODULES, RUBY1.0**  
VIDEO RAM-2

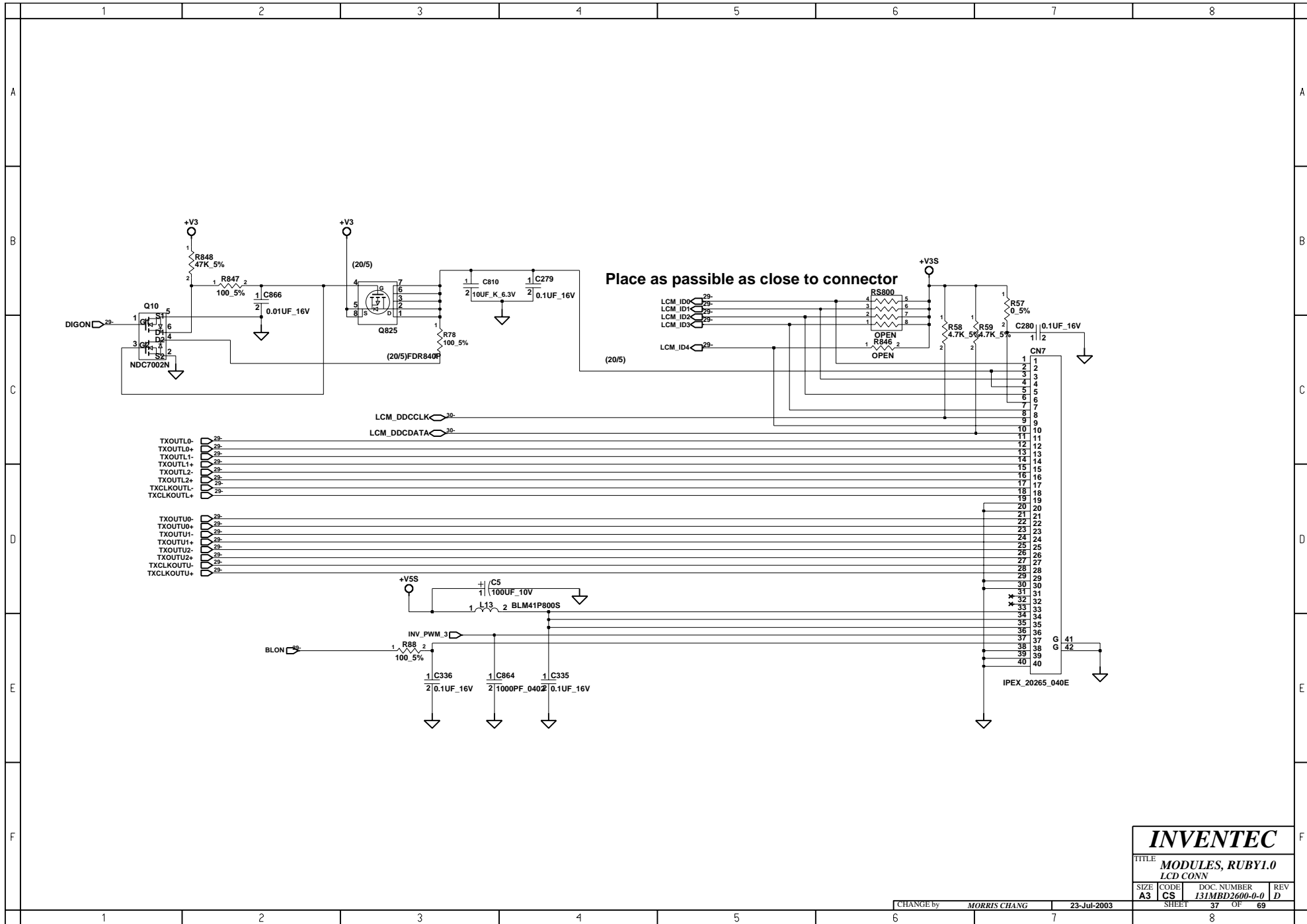
SIZE	CODE	DOC NUMBER	REV
A3	CS	131MBD2600-0-0	D

CHANGE by MORRIS CHANG 23-Jul-2003

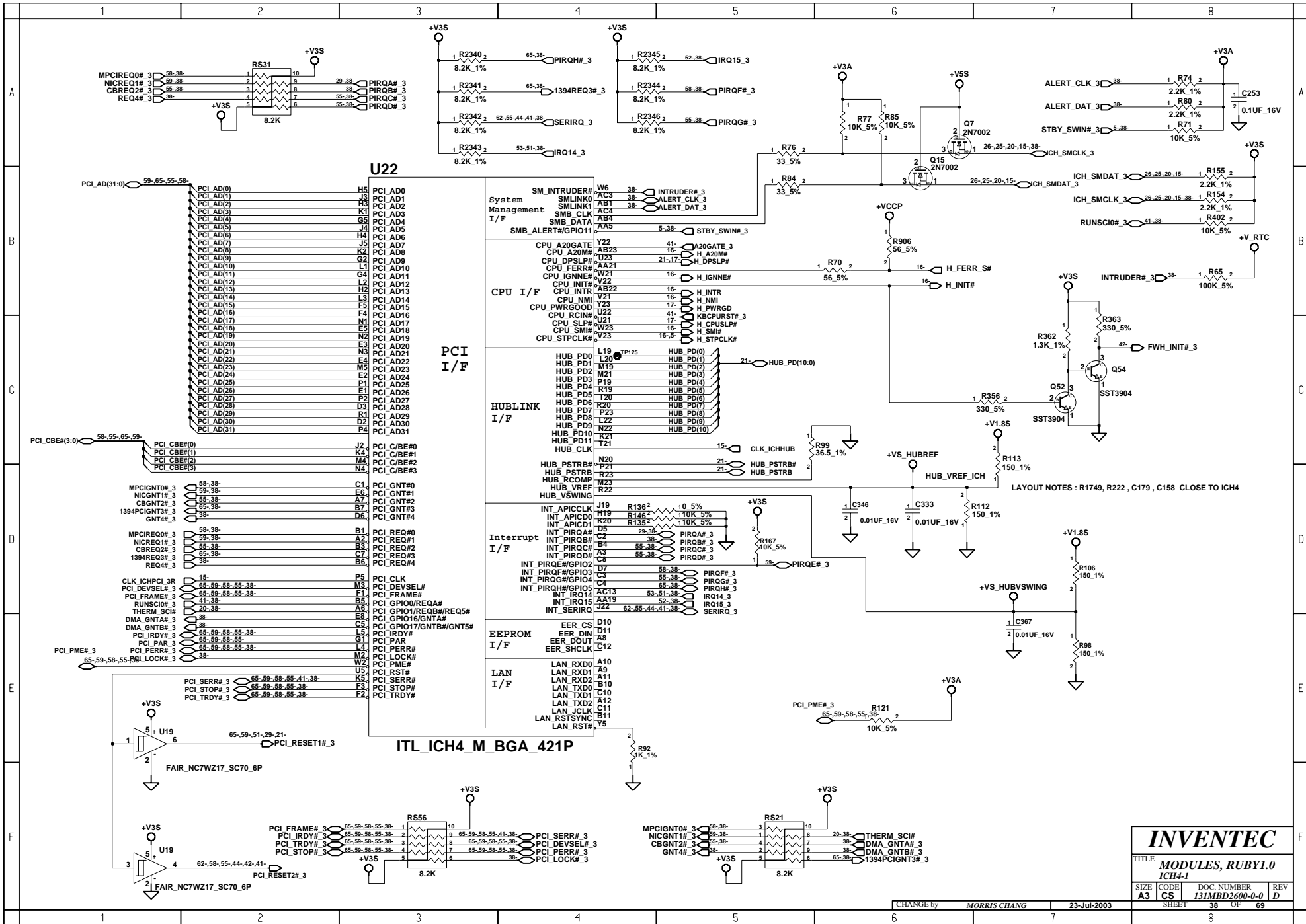
SHEET 35 OF 69



<b>INVENTEC</b>			
TITLE: <b>MODULES, RUBY1.0</b>			
CRT & SVEDIO CONN			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	I31MBD2600-0-0	D
CHANGE by		MORRIS CHIANG	23-Jul-2003
SHEET		36	OF 69



<b>INVENTEC</b>			
TITLE: <b>MODULES, RUBY1.0</b>			
LCD CONN			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	I31MBD2600-0-0	D
CHANGE by		MORRIS CHIANG	23-Jul-2003
SHEET		37	OF 69



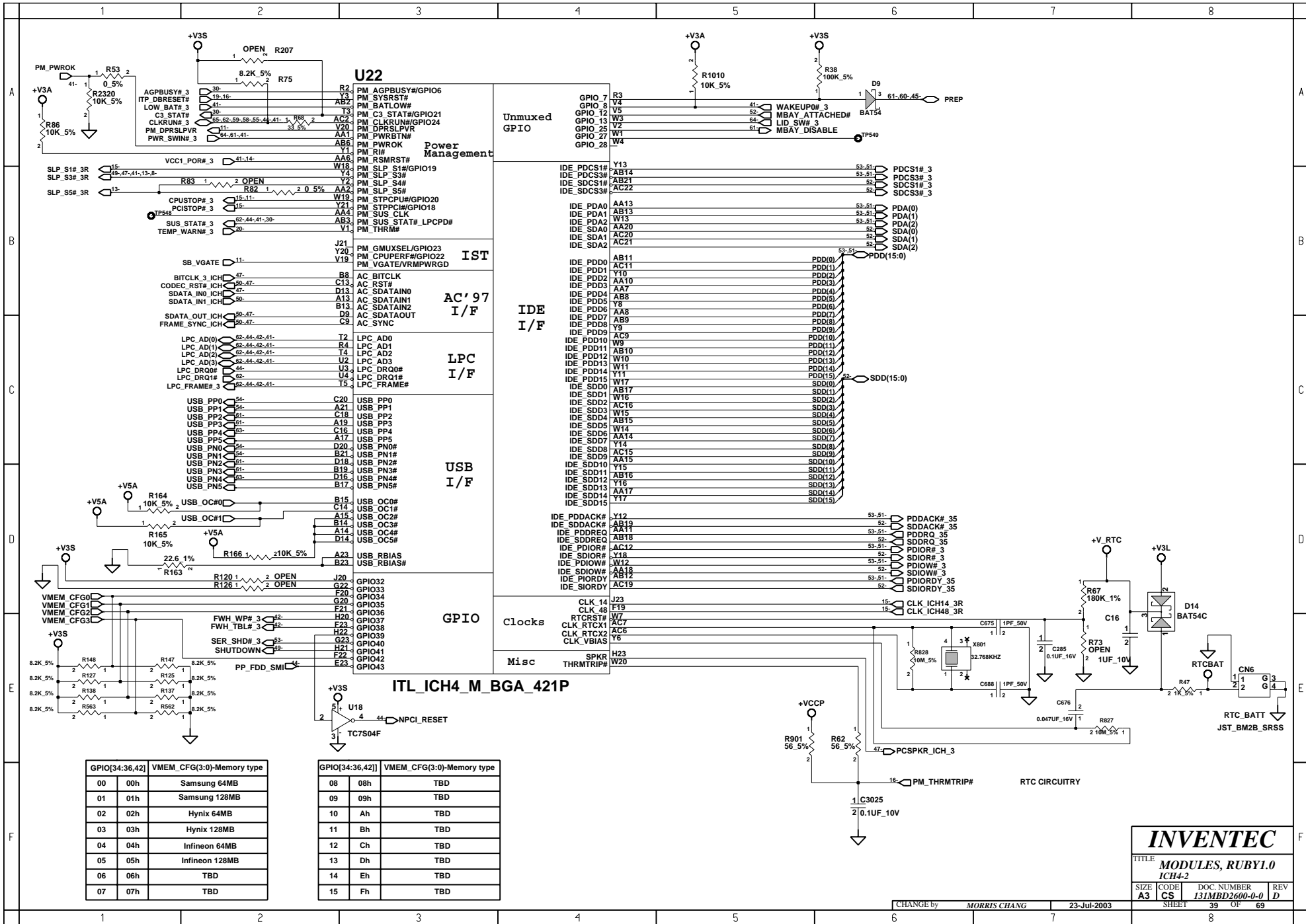
**INVENTEC**

TITLE: **MODULES, RUBY1.0**  
**ICH4-1**

SIZE: **A3** CODE: **CS** DOC. NUMBER: **131MBD2600-0-0** REV: **D**

SHEET: **38** OF: **69**

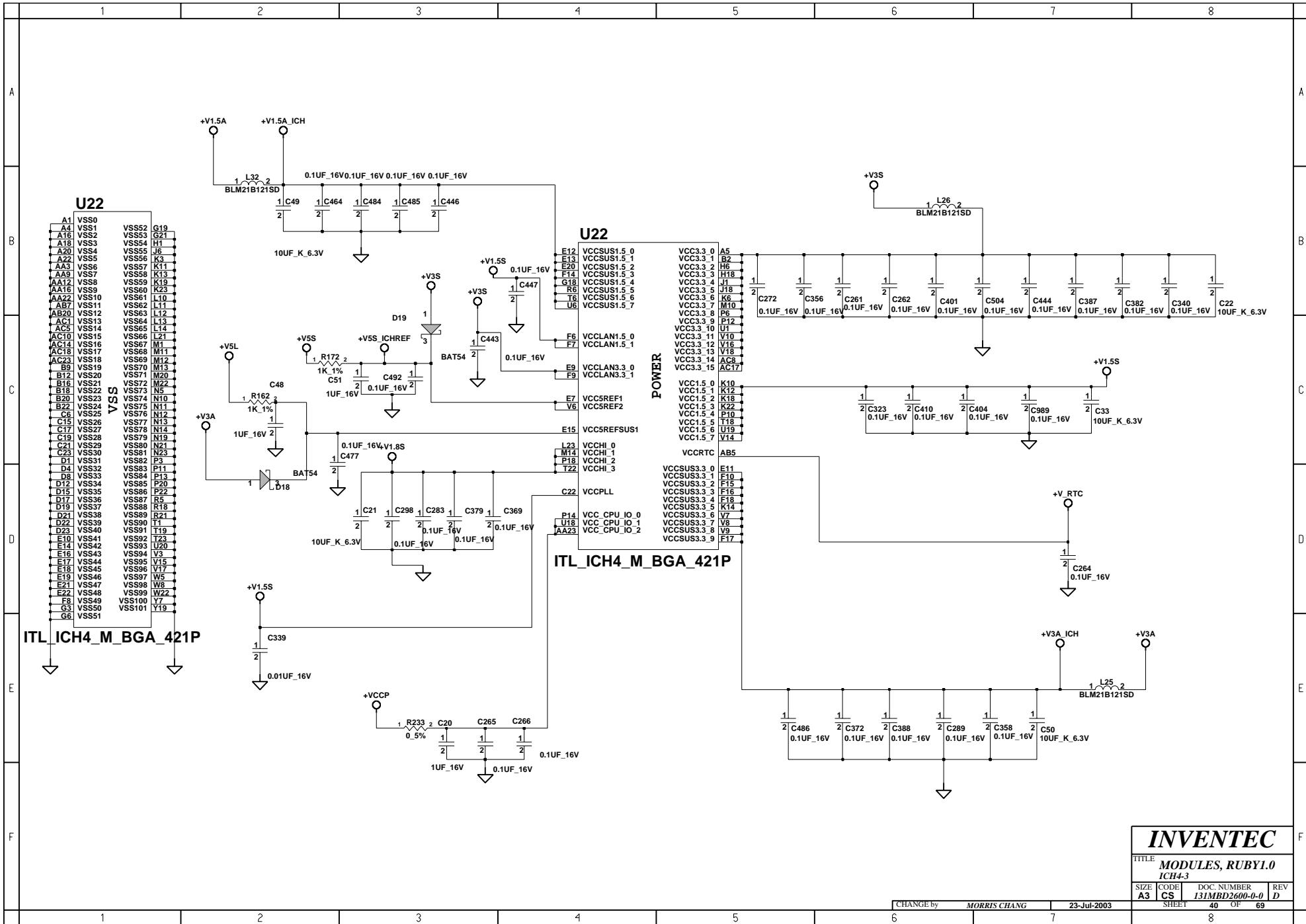
CHANGE by: **MORRIS CHIANG** 23-Jul-2003



GPIO[34:36,42]	VMEM_CFG(3:0)-Memory type
00	00h Samsung 64MB
01	01h Samsung 128MB
02	02h Hynix 64MB
03	03h Hynix 128MB
04	04h Infineon 64MB
05	05h Infineon 128MB
06	06h TBD
07	07h TBD

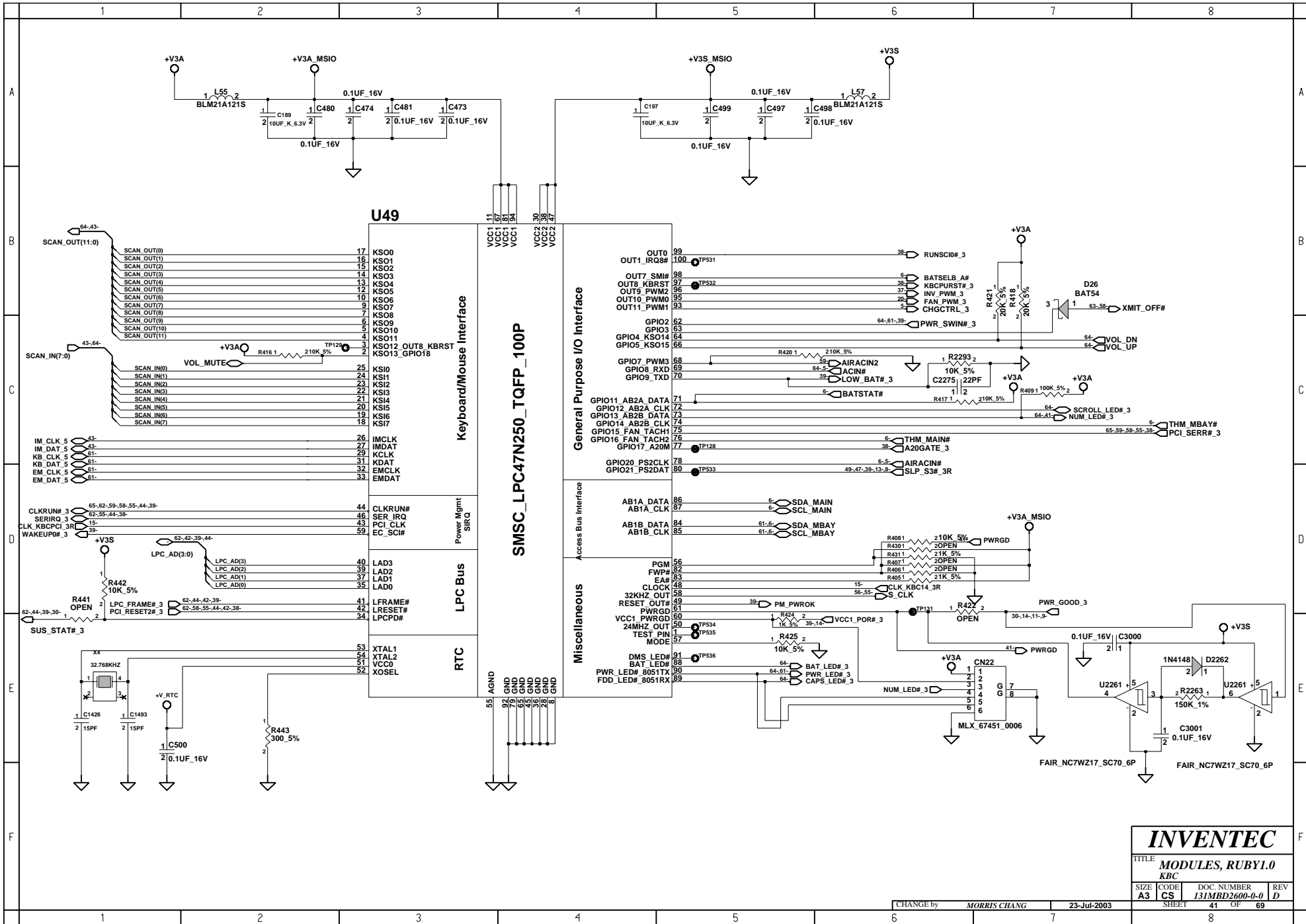
GPIO[34:36,42]	VMEM_CFG(3:0)-Memory type
08	08h TBD
09	09h TBD
10	Ah TBD
11	Bh TBD
12	Ch TBD
13	Dh TBD
14	Eh TBD
15	Fh TBD

**INVENTEC**  
 TITLE: **MODULES, RUBY1.0**  
 ICH4-2  
 SIZE: A3 CODE: CS DOC. NUMBER: 131MBD2600-0-0 REV: D  
 SHEET: 39 OF 69

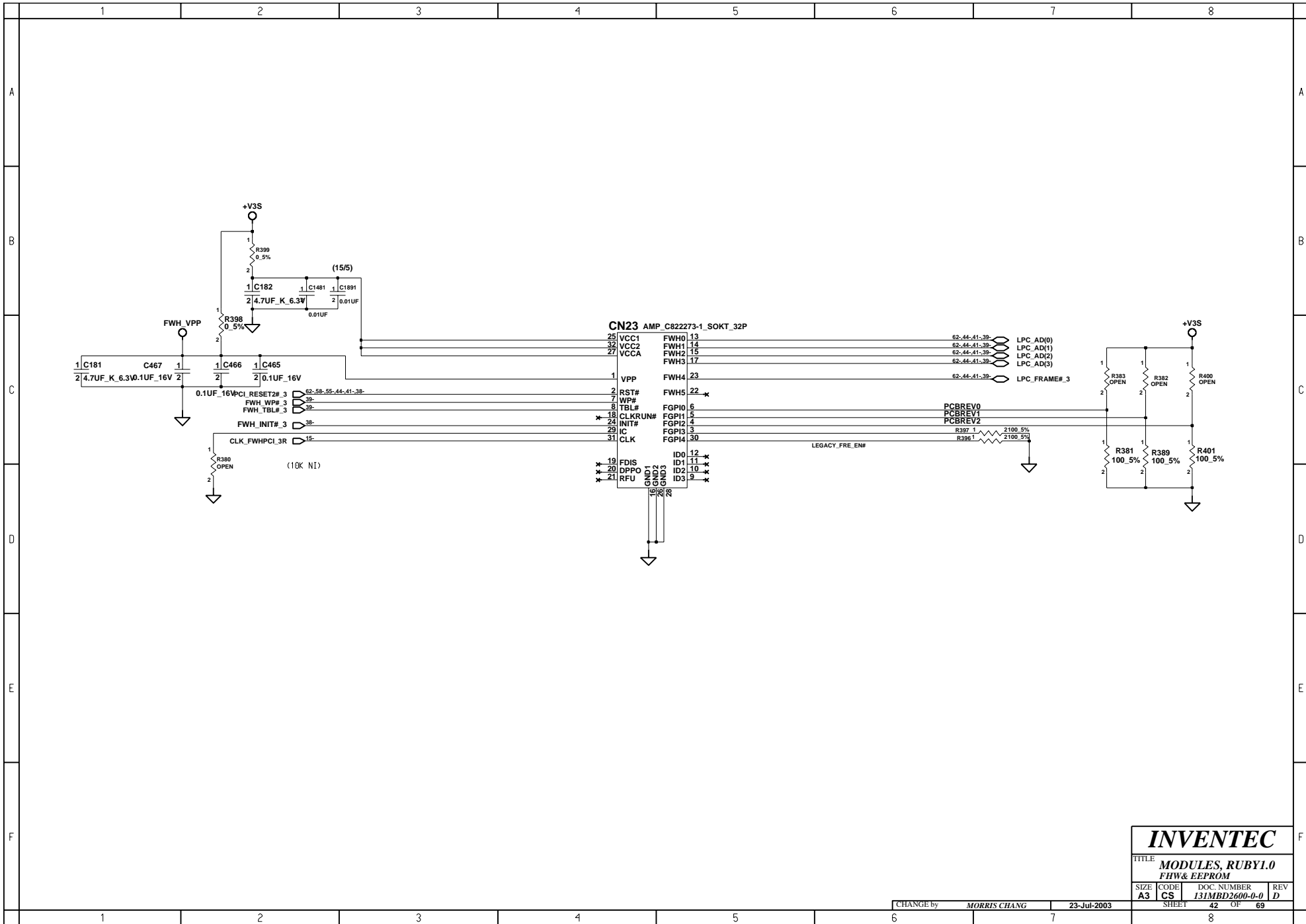


<b>INVENTEC</b>			
TITLE: <b>MODULES, RUBY1.0</b>			
IC4-3			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	I31MBD2600-0-0	D
CHANGE by		MORRIS CHIANG	23-Jul-2003
SHEET		40	OF 69

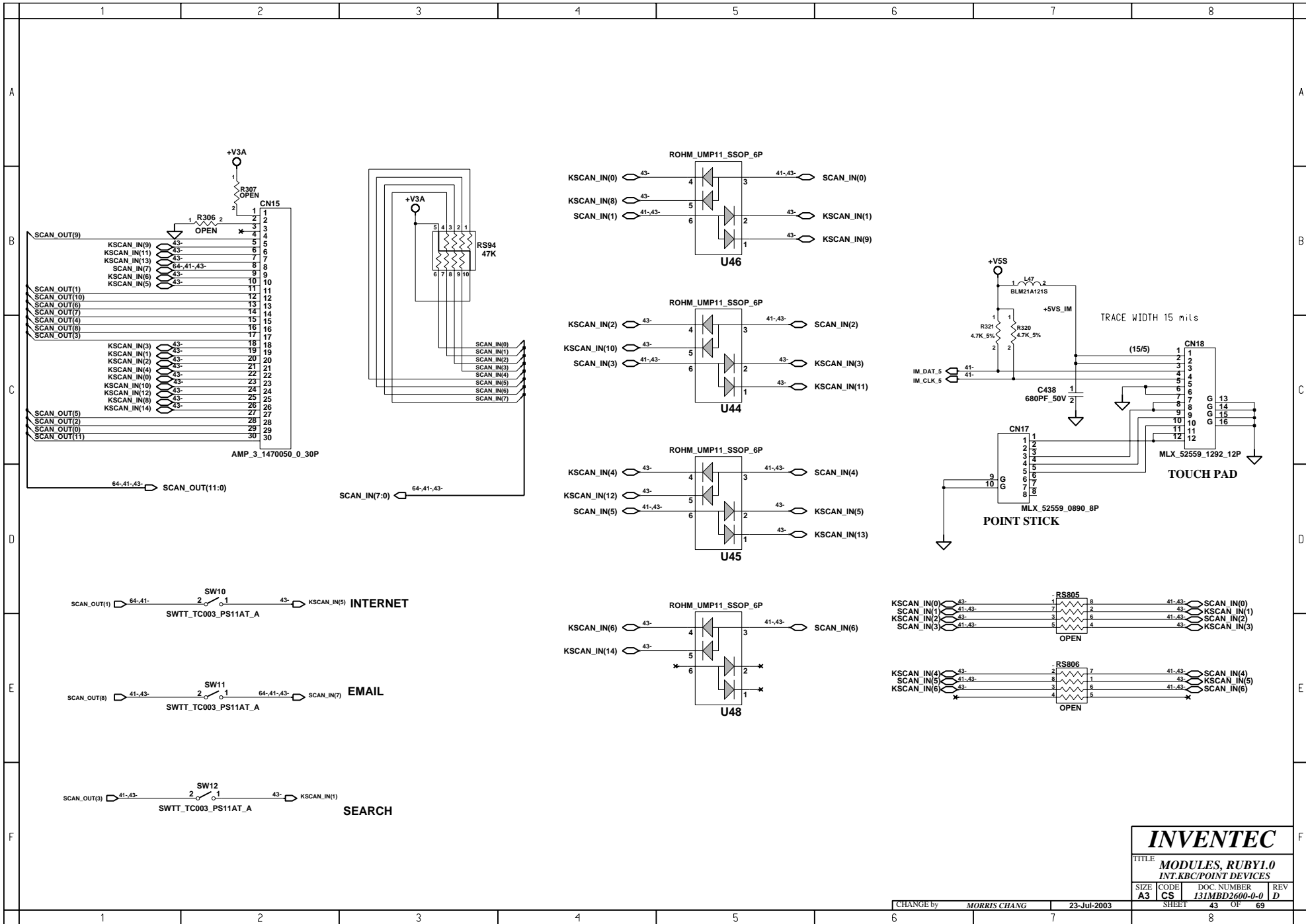




<b>INVENTEC</b>			
TITLE: <b>MODULES, RUBY1.0</b>			
KBC			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	131MBD2600-0-0	D
CHANGE by: MORRIS CHIANG		23-Jul-2003	
SHEET 41		OF 69	



<b>INVENTEC</b>			
TITLE <b>MODULES, RUBY1.0</b>			
FWH & EEPROM			
SIZE	CODE	DOC NUMBER	REV
A3	CS	I31MBD2600-0-0	D
CHANGE by		23-Jul-2003	
MORRIS CHIANG		SHEET 42 OF 69	



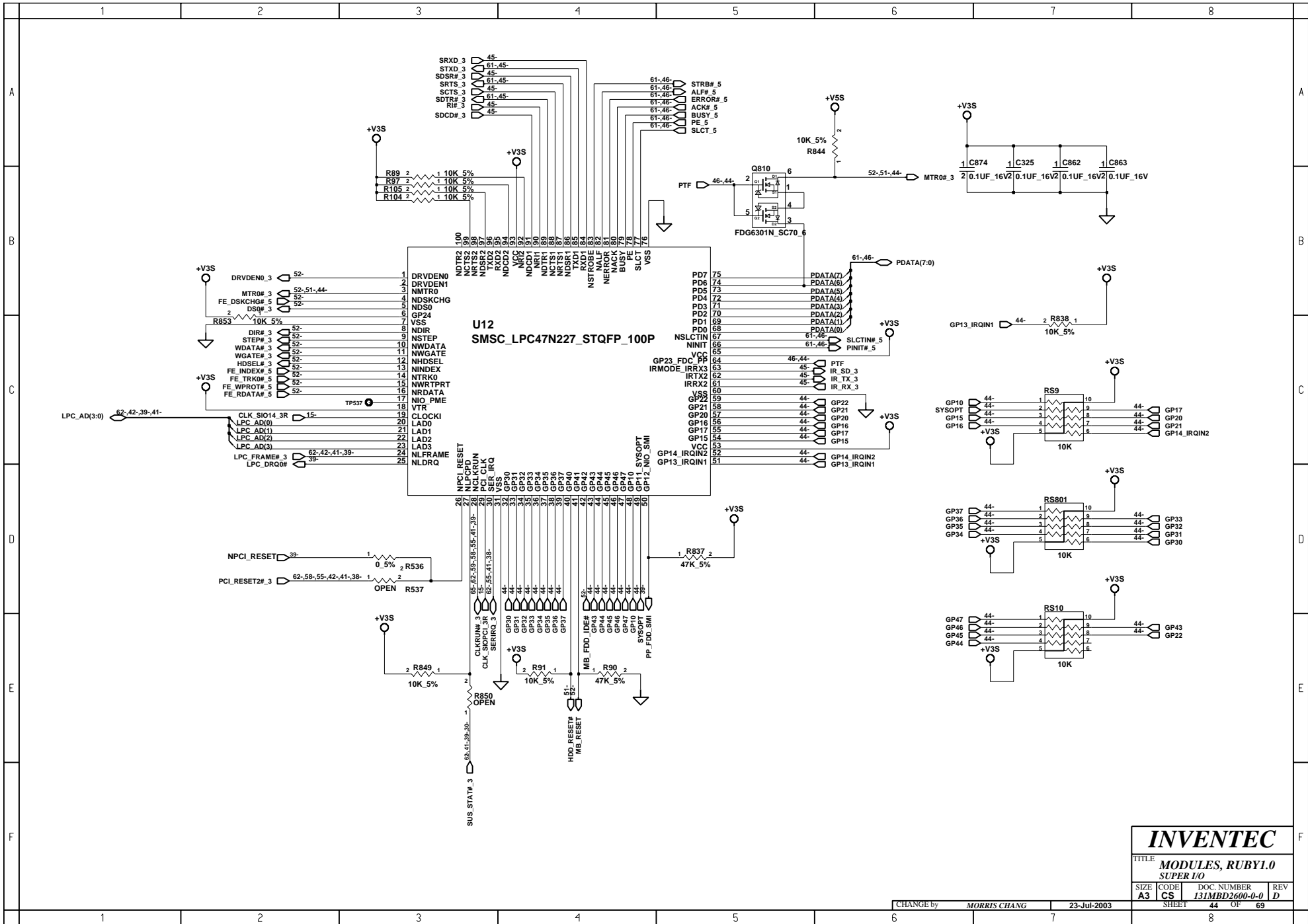
**INVENTEC**

TITLE **MODULES, RUBY1.0**  
**INT.KBC/POINT DEVICES**

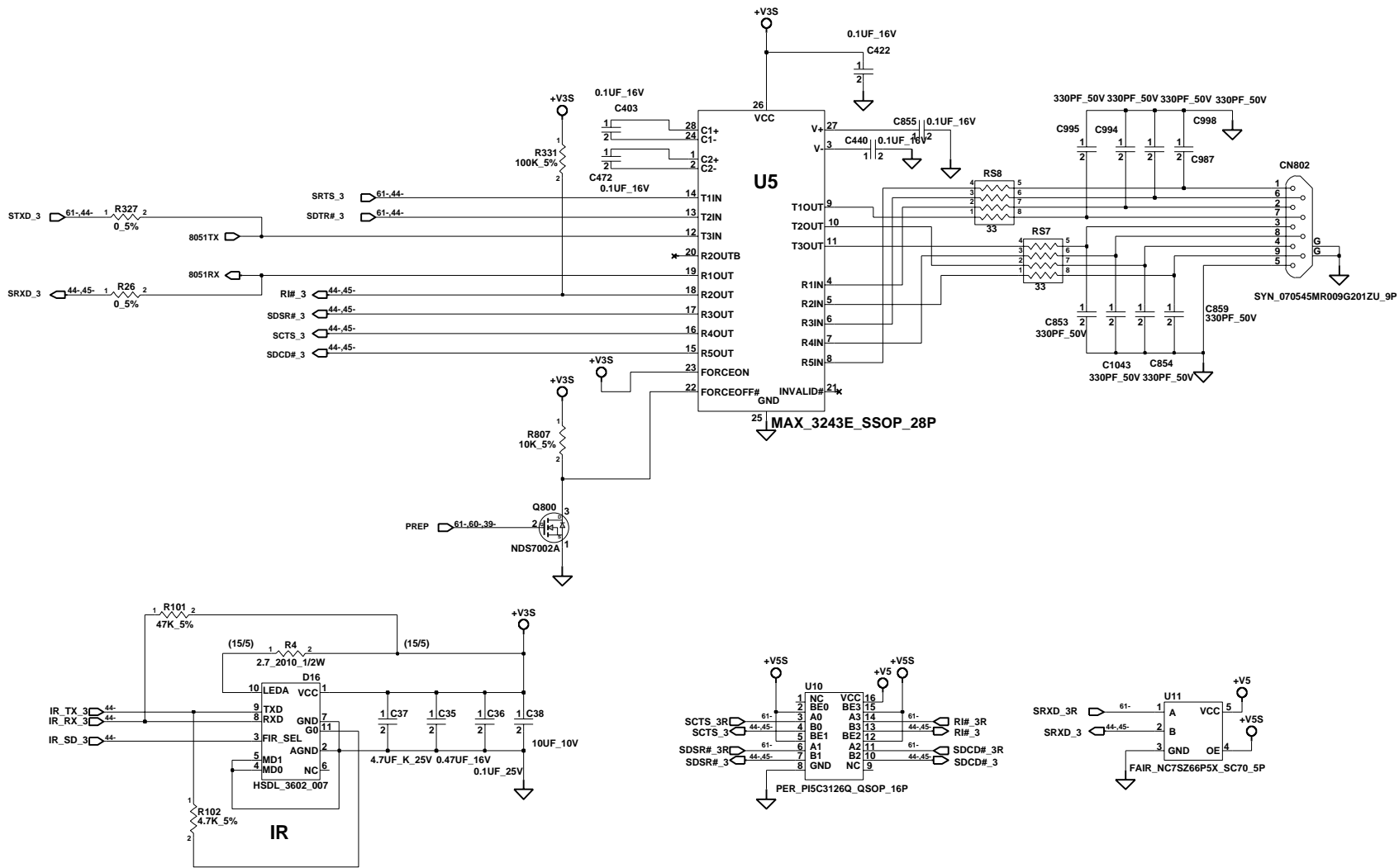
SIZE	CODE	DOC NUMBER	REV
A3	CS	131MBD2600-0-0	D

CHANGE by **MORRIS CHIANG** 23-Jul-2003

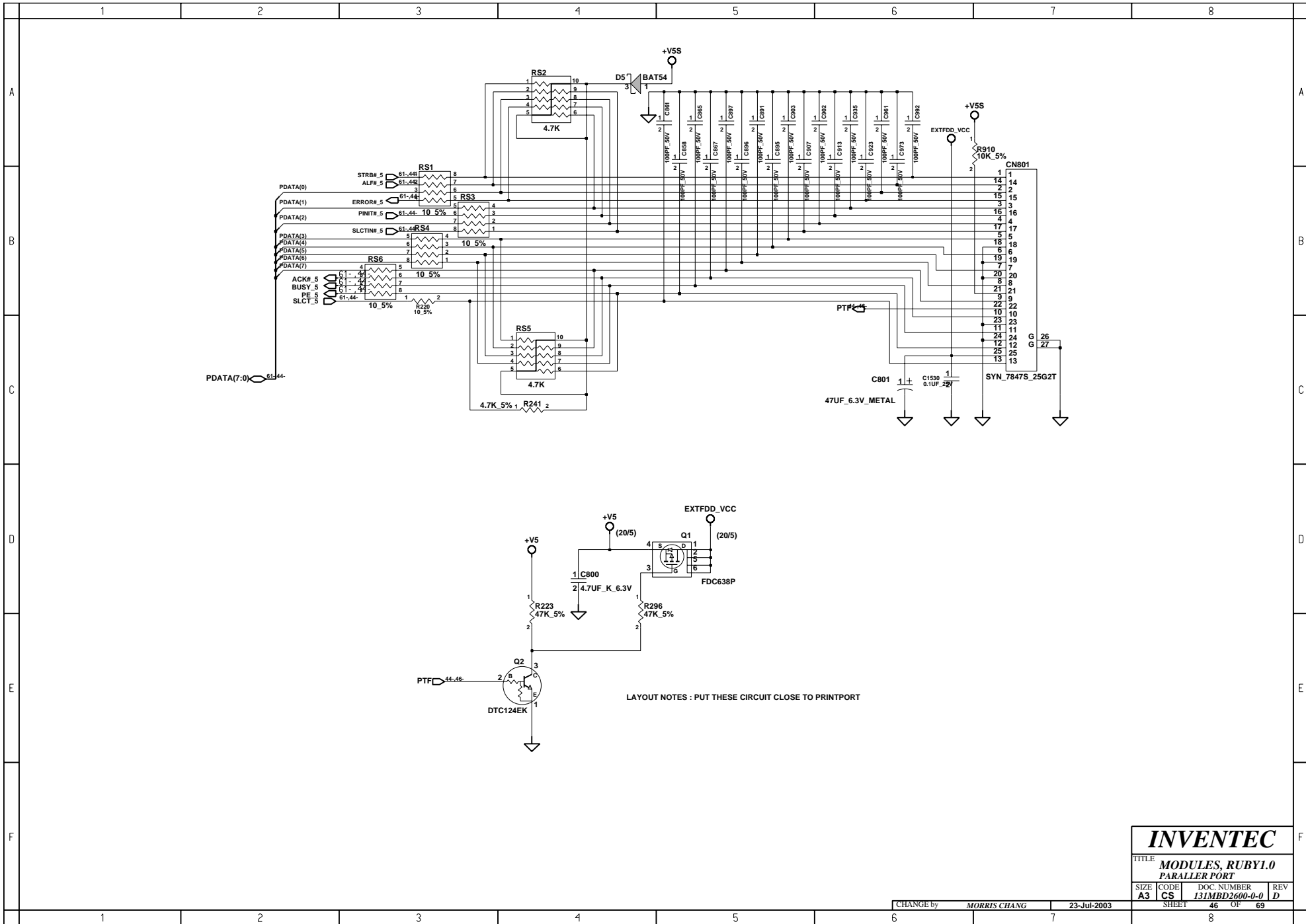
SHEET 43 OF 69



<b>INVENTEC</b>			
TITLE <b>MODULES, RUBY1.0 SUPER I/O</b>			
SIZE <b>A3</b>	CODE <b>CS</b>	DOC. NUMBER <b>I31MBD2600-0-0</b>	REV <b>D</b>
CHANGE by <b>MORRIS CHIANG</b>		23-Jul-2003	
SHEET <b>44</b>		OF <b>69</b>	

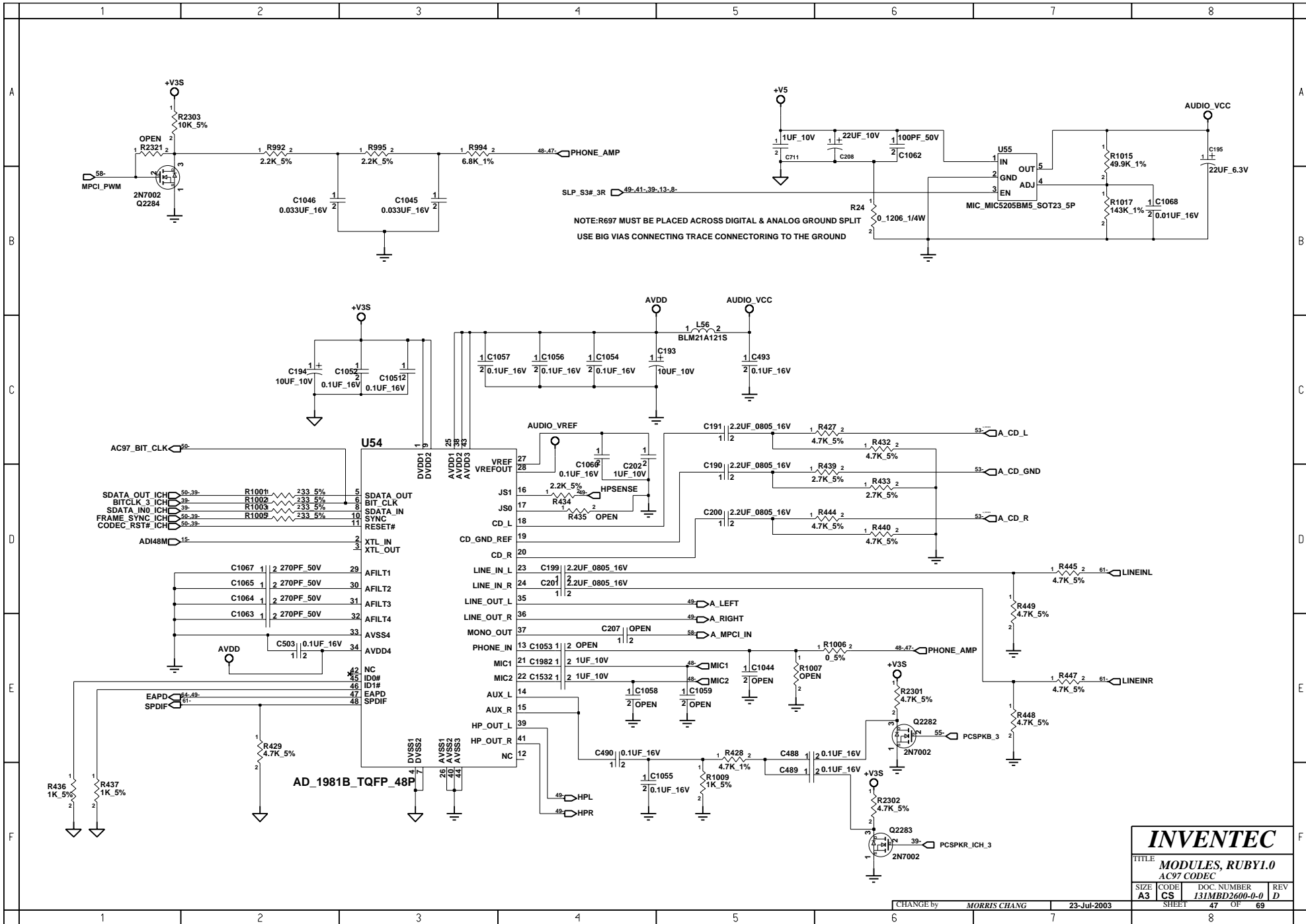


<b>INVENTEC</b>			
TITLE <b>MODULES, RUBY1.0 SERIAL PORT&amp;IR</b>			
SIZE <b>A3</b>	CODE <b>CS</b>	DOC NUMBER <b>I31MBD2600-0-0</b>	REV <b>D</b>
CHANGE by <b>MORRIS CHIANG</b>		23-Jul-2003	
SHEET <b>45</b>		OF <b>69</b>	

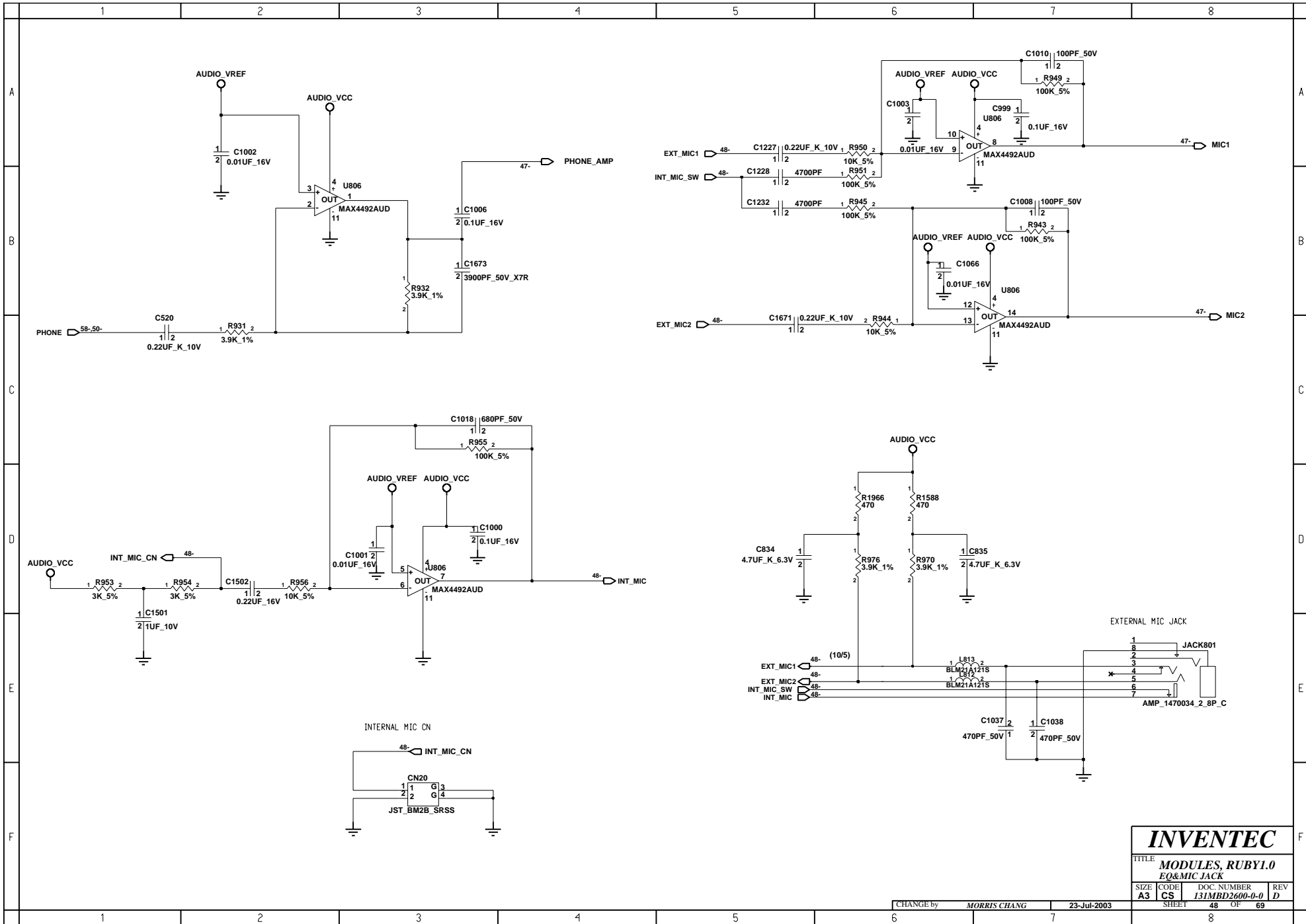


LAYOUT NOTES : PUT THESE CIRCUIT CLOSE TO PRINTPORT

<b>INVENTEC</b>			
TITLE: <b>MODULES, RUBY1.0 PARALLEL PORT</b>			
SIZE: <b>A3</b>	CODE: <b>CS</b>	DOC NUMBER: <b>I31MBD2600-0-0</b>	REV: <b>D</b>
CHANGE by: <b>MORRIS CHIANG</b>		23-Jul-2003	
SHEET: <b>46</b>		OF: <b>69</b>	



<b>INVENTEC</b>			
TITLE <b>MODULES, RUBY1.0</b> AC97 CODEC			
SIZE <b>A3</b>	CODE <b>CS</b>	DOC NUMBER <b>I31MBD2600-0-0</b>	REV <b>D</b>
CHANGE by <b>MORRIS CHIANG</b>		23-Jul-2003	SHEET <b>47</b> OF <b>69</b>

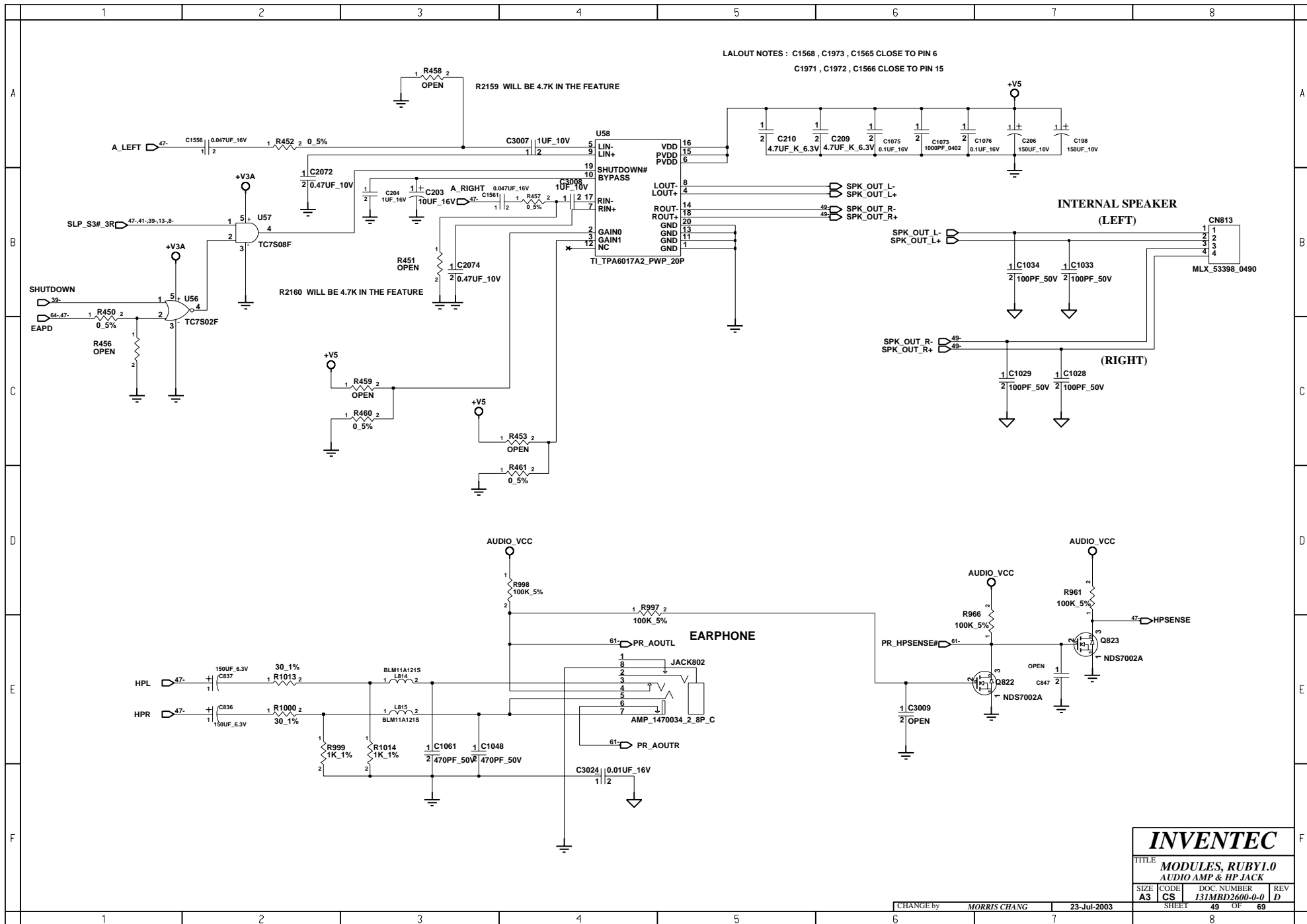


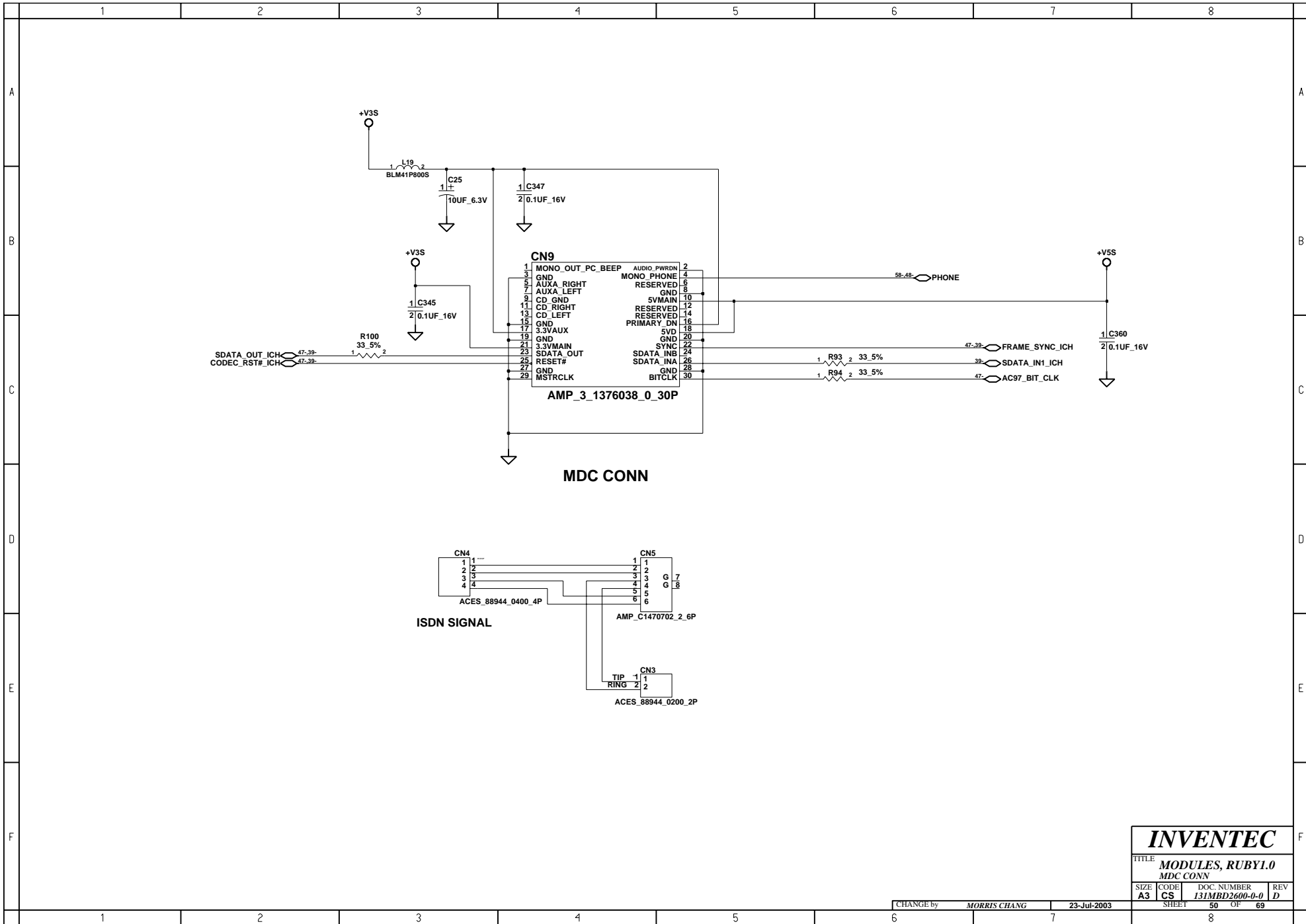
**INVENTEC**

TITLE **MODULES, RUBY1.0 EQ&MIC JACK**

SIZE <b>A3</b>	CODE <b>CS</b>	DOC NUMBER <b>I31MBD2600-0-0</b>	REV <b>D</b>
CHANGE by <b>MORRIS CHIANG</b>		23-Jul-2003	
SHEET <b>48</b>		OF <b>69</b>	







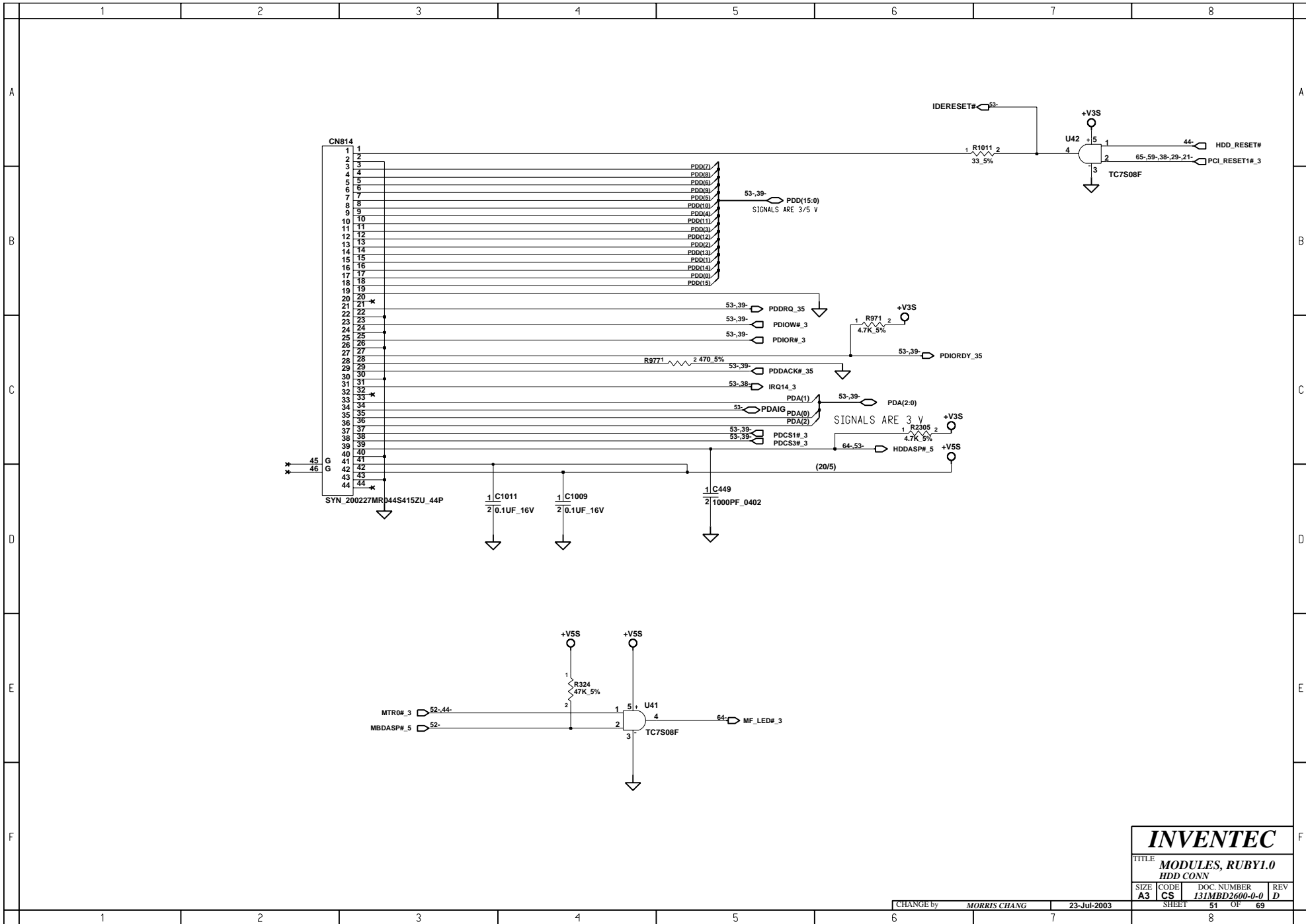
**INVENTEC**

TITLE **MODULES, RUBY1.0**  
**MDC CONN**

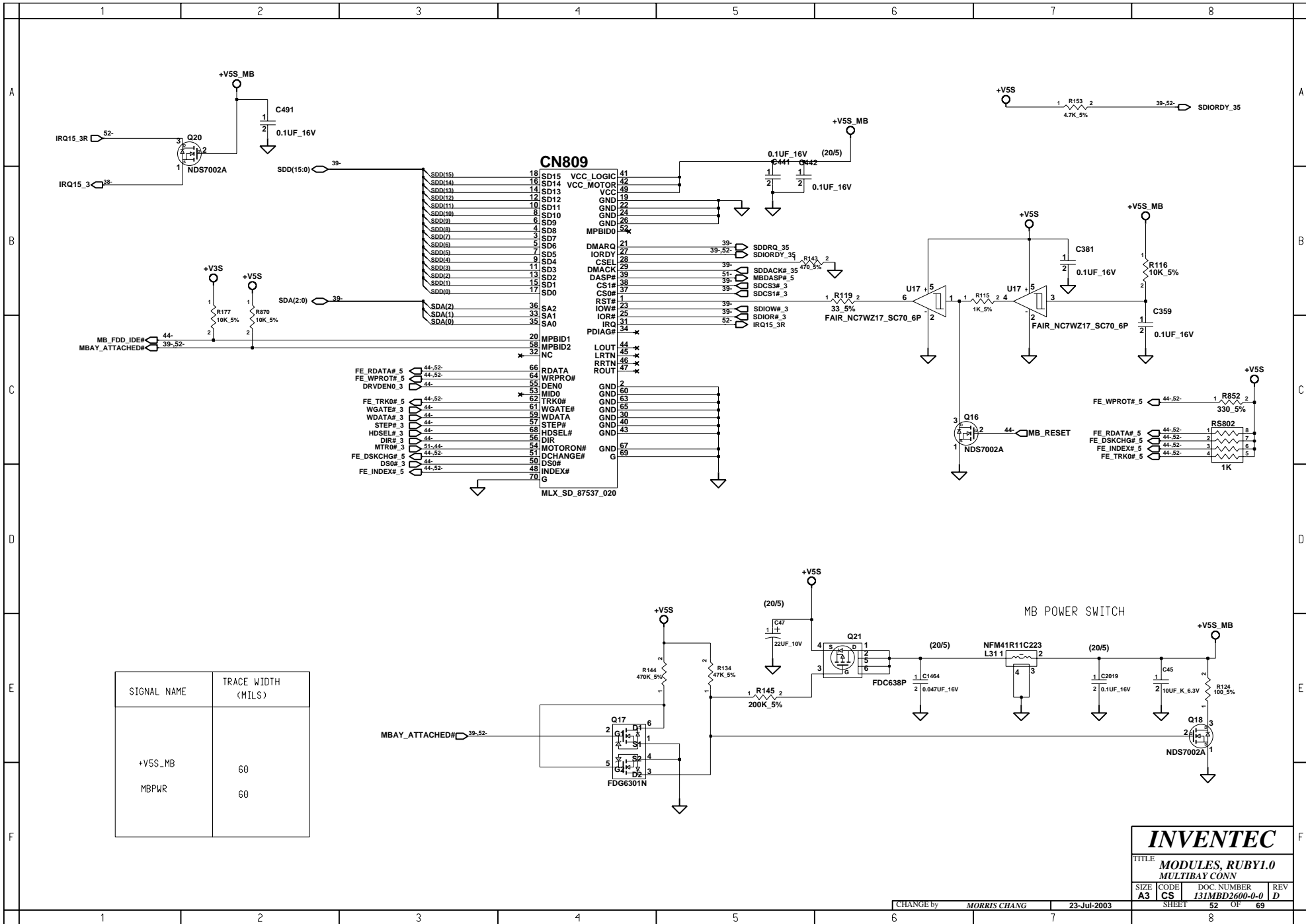
SIZE <b>A3</b>	CODE <b>CS</b>	DOC. NUMBER <b>I31MBD2600-0-0</b>	REV <b>D</b>
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CHANGE by **MORRIS CHIANG** 23-Jul-2003

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<b>INVENTEC</b>			
TITLE <b>MODULES, RUBY1.0</b> HDD CONN			
SIZE <b>A3</b>	CODE <b>CS</b>	DOC. NUMBER <b>I31MBD2600-0-0</b>	REV <b>D</b>
CHANGE by <b>MORRIS CHIANG</b>		23-Jul-2003	
SHEET <b>51</b>		OF <b>69</b>	



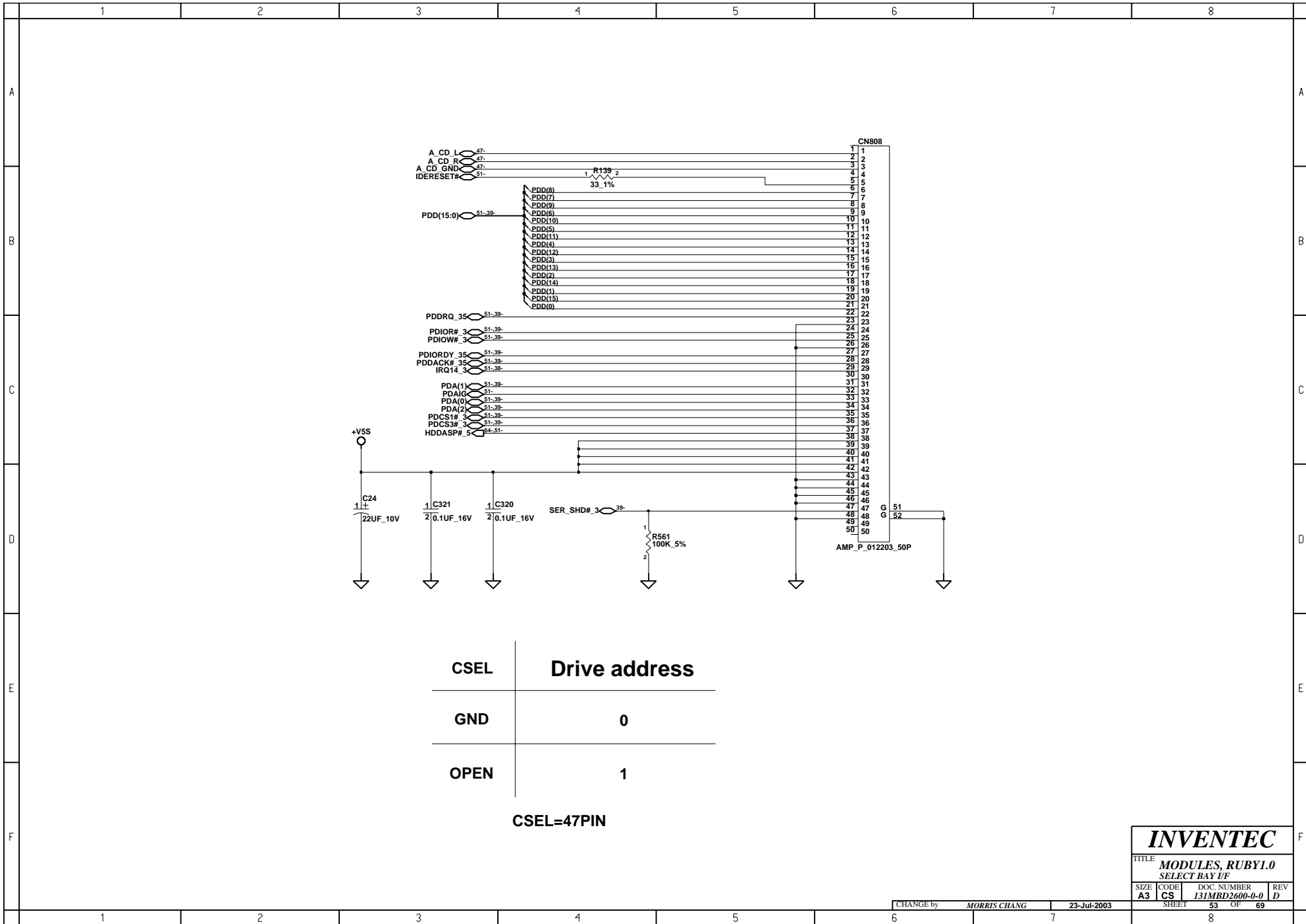
SIGNAL NAME	TRACE WIDTH (MILS)
+VSS_MB	60
MBPWR	60

**INVENTEC**

TITLE: **MODULES, RUBY1.0**  
MULTIBAY CONN

SIZE	CODE	DOC NUMBER	REV
A3	CS	I31MBD2600-0-0	D

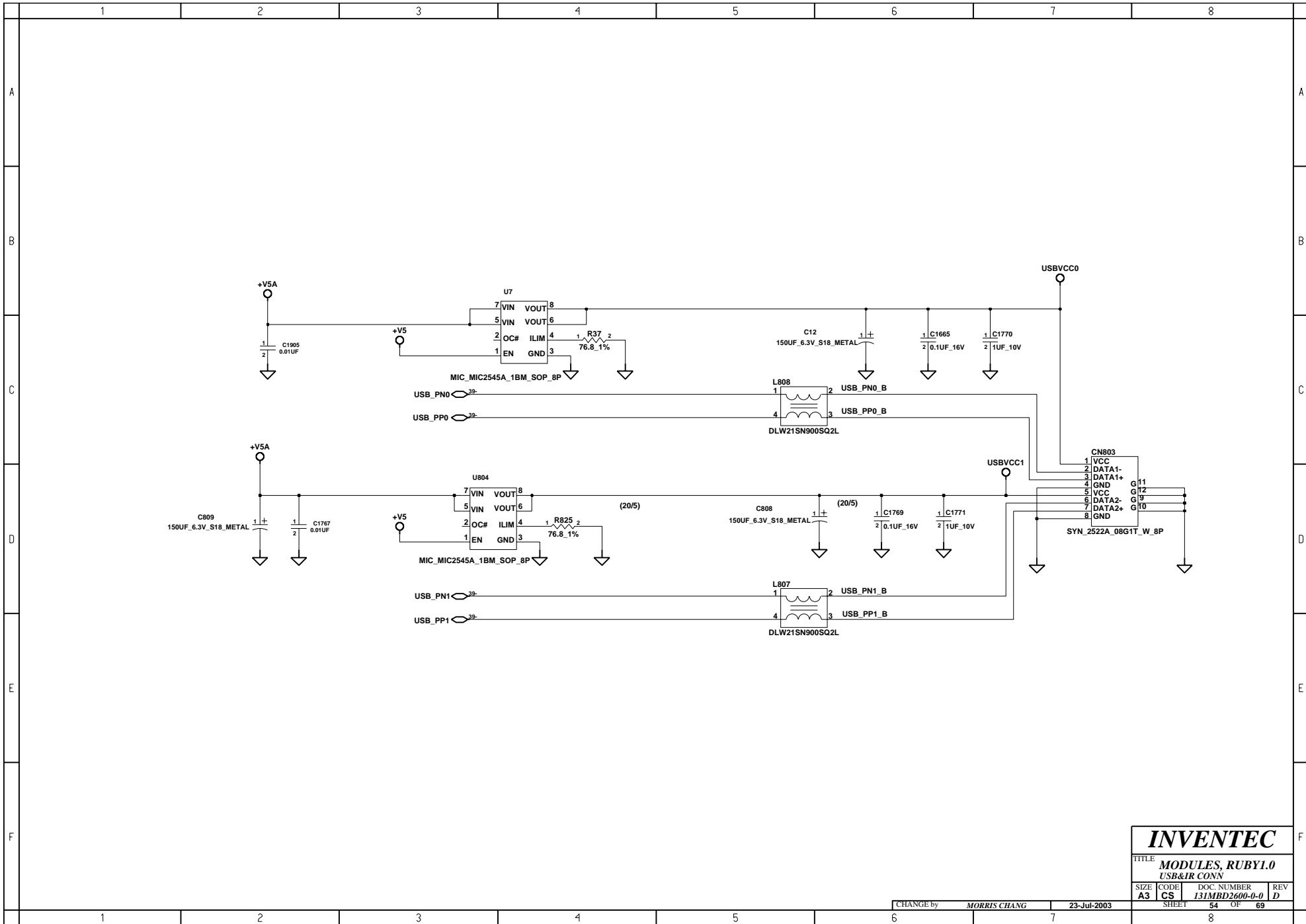
CHANGE by: MORRIS CHIANG 23-Jul-2003 SHEET 52 OF 69



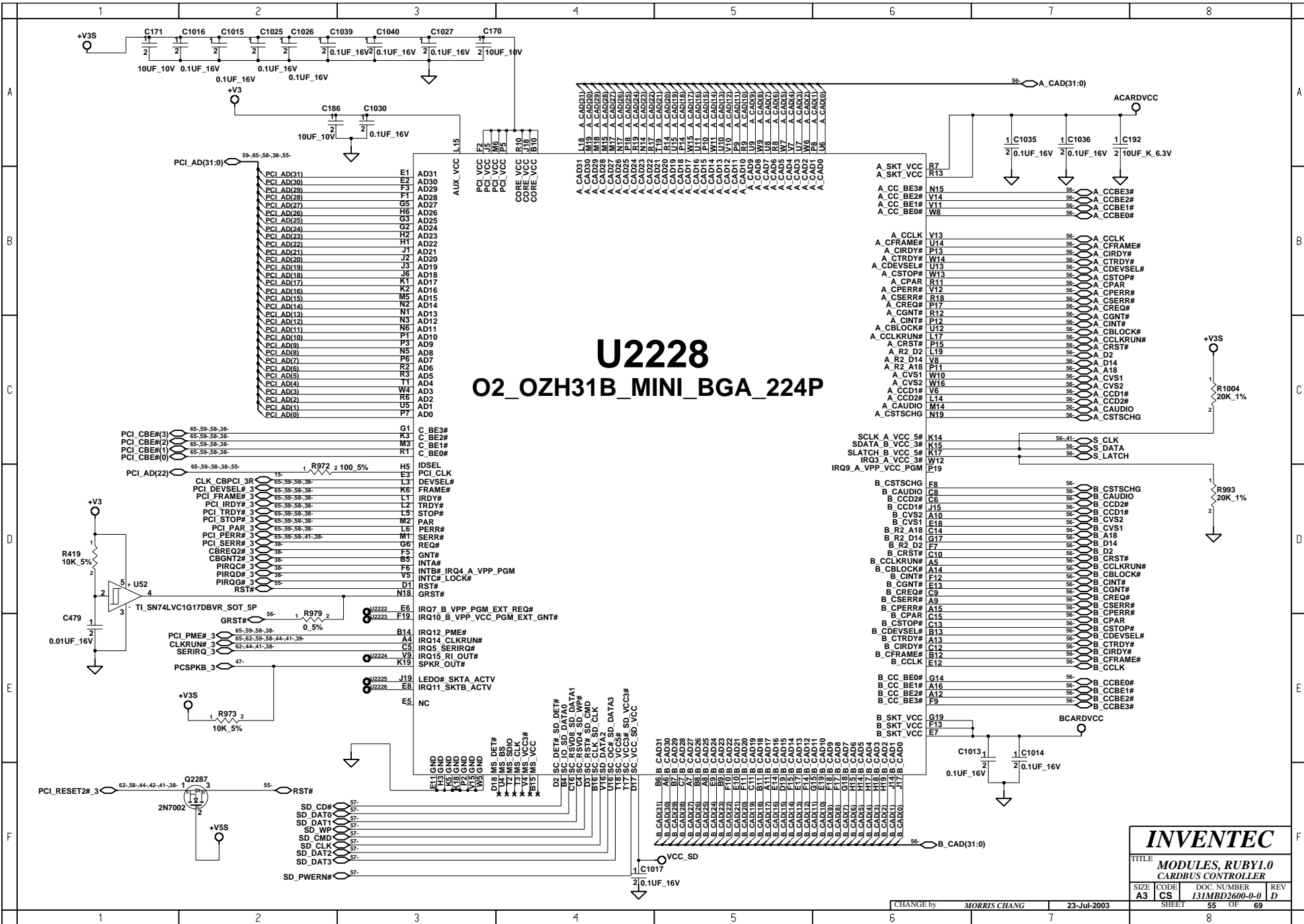
**INVENTEC**

TITLE **MODULES, RUBY1.0**  
**SELECT BAY 1/F**

SIZE <b>A3</b>	CODE <b>CS</b>	DOC NUMBER <b>I31MBD2600-0-0</b>	REV <b>D</b>
CHANGE by <b>MORRIS CHANG</b>		23-Jul-2003	
SHEET <b>53</b>		OF <b>69</b>	

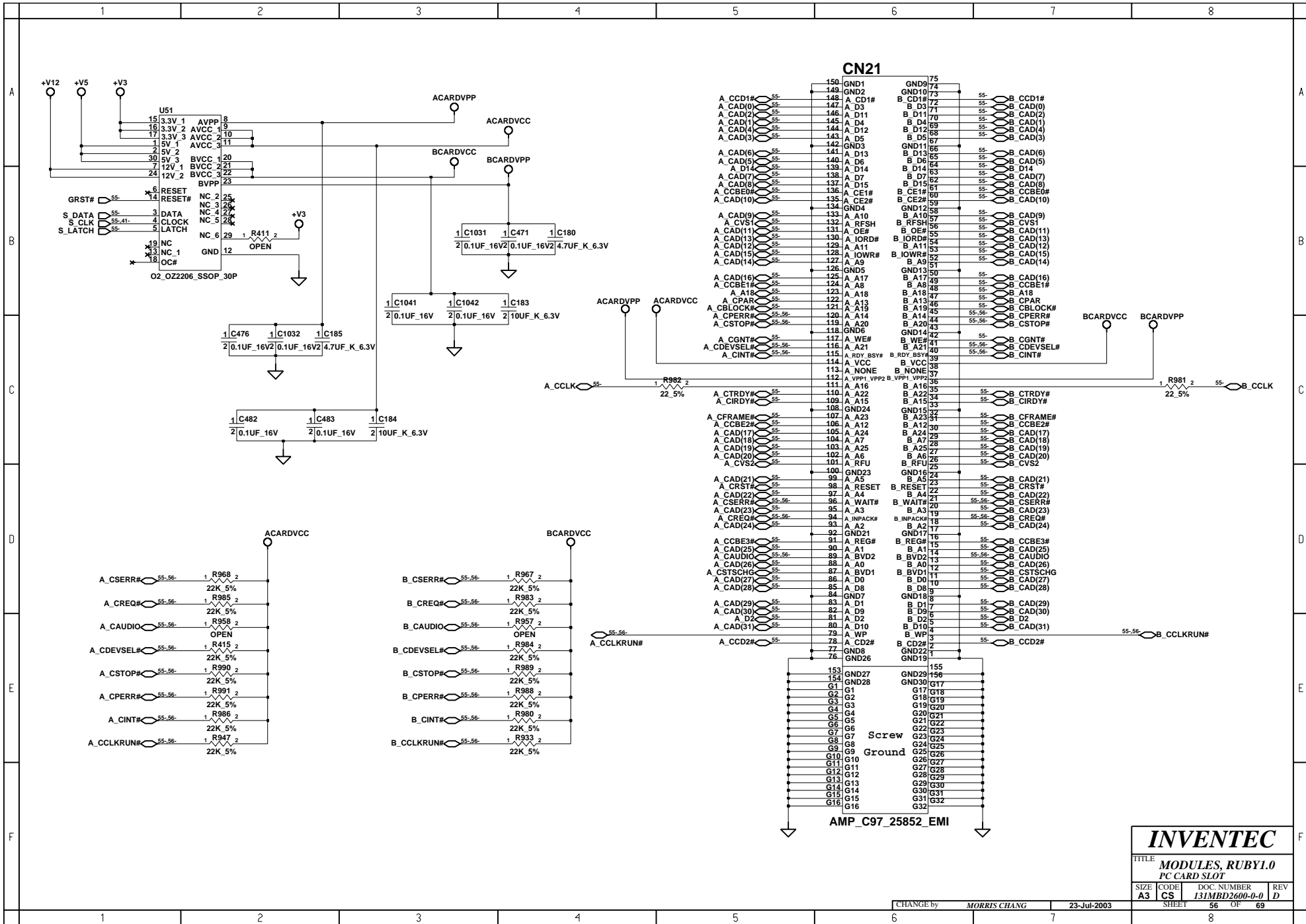


<b>INVENTEC</b>			
TITLE: <b>MODULES, RUBY1.0</b>			
USB&IR CONN			
SIZE	CODE	DOC NUMBER	REV
A3	CS	131MBD2600-0-0	D
CHANGE by		23-Jul-2003	SHEET 54 OF 69
MORRIS CHANG			



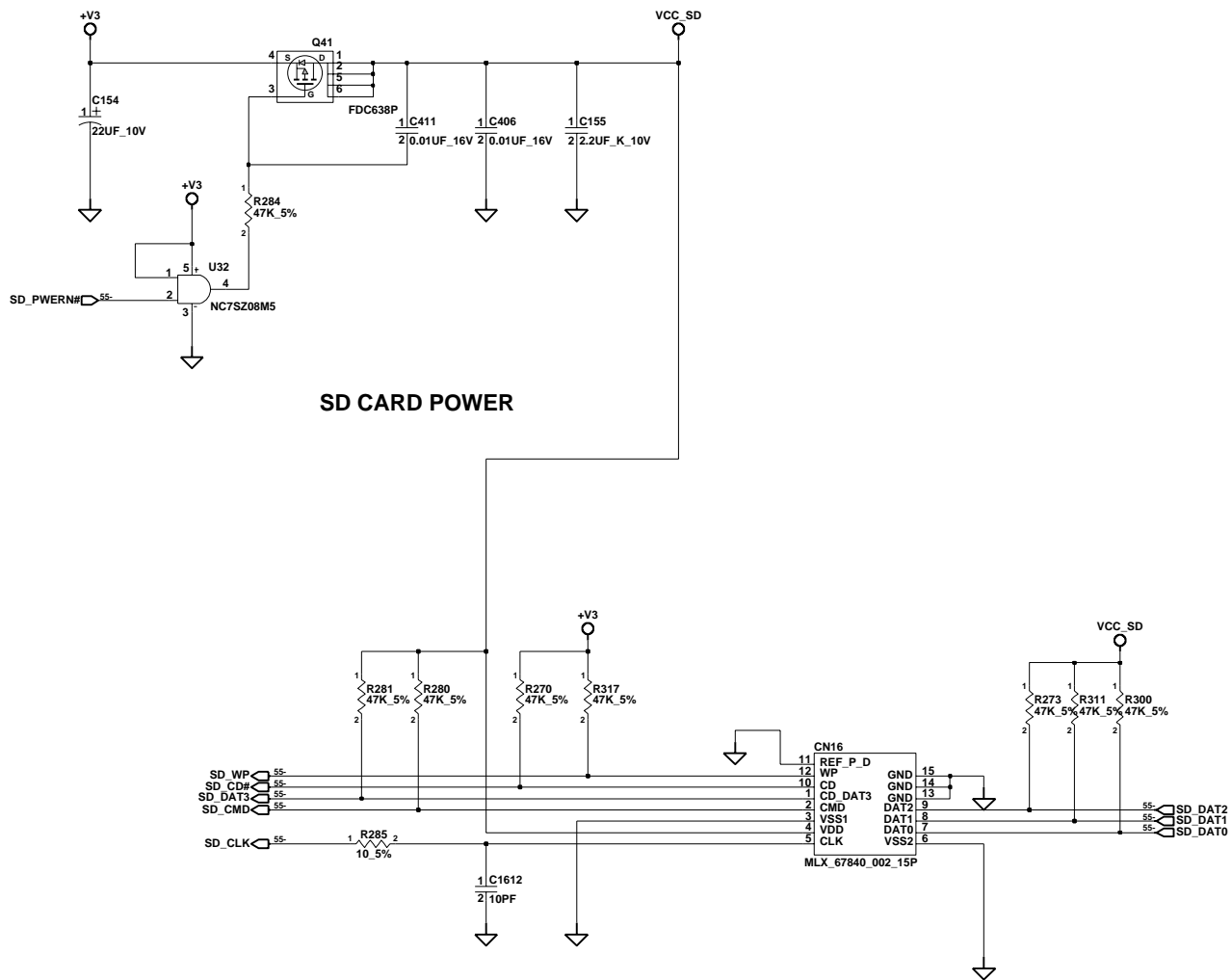
**U2228**  
**O2\_OZH31B\_MINI\_BGA\_224P**

<b>INVENTEC</b>			
TITLE: <b>MODULES, RUBY1.0 CARBUS CONTROLLER</b>			
SIZE	CODE	DOC NUMBER	REV
A3	CS	131MBD2600-0-0	D
SHEET		55	OF 69



<b>INVENTEC</b>			
TITLE: <b>MODULES, RUBY1.0 PC CARD SLOT</b>			
SIZE: <b>A3</b>	CODE: <b>CS</b>	DOC NUMBER: <b>131MBD2600-0-0</b>	REV: <b>D</b>
CHANGE by: <b>MORRIS CHIANG</b>		23-Jul-2003	SHEET: <b>56</b> OF <b>69</b>





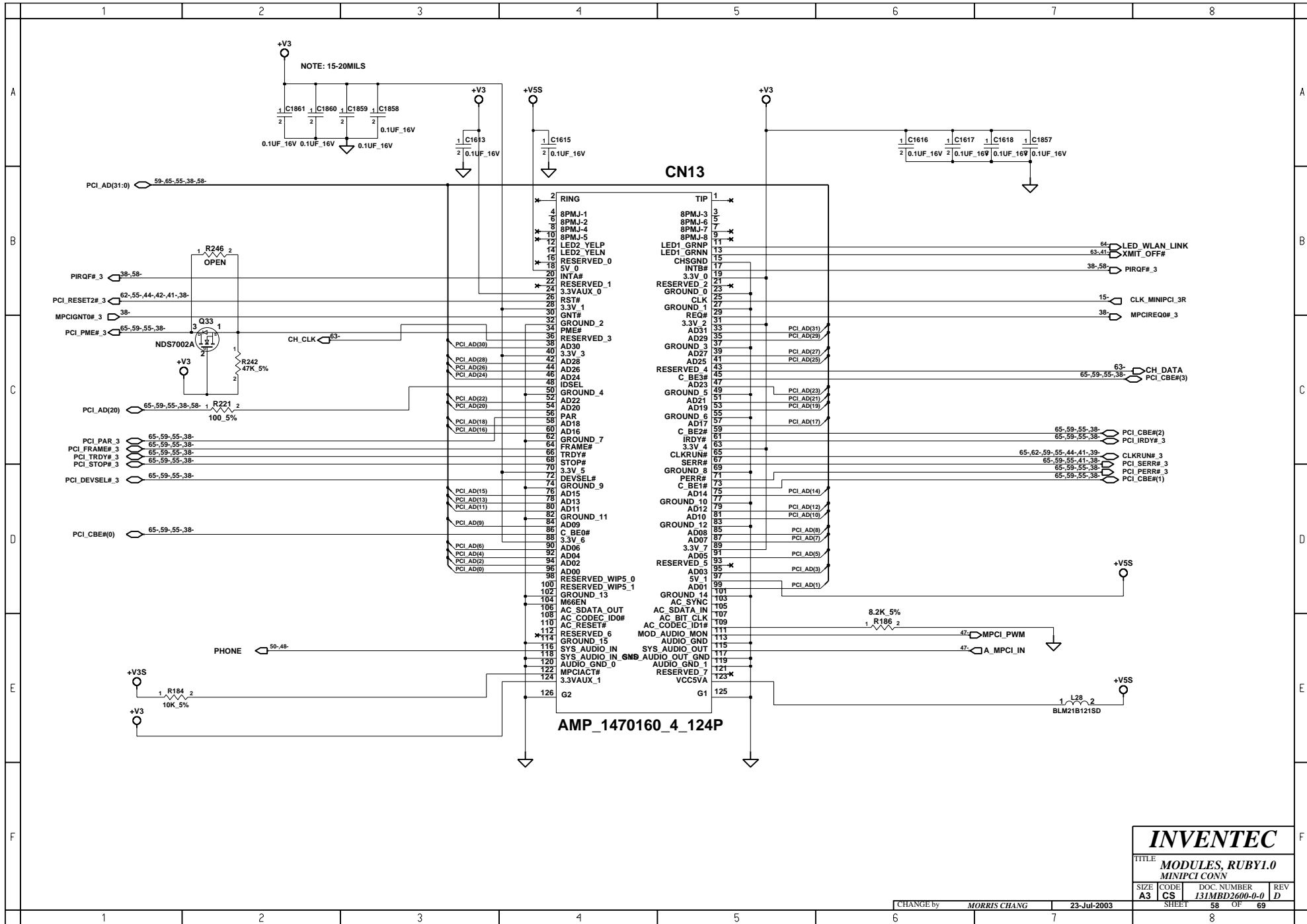
# INVENTEC

TITLE: **MODULES, RUBY1.0**  
SD CARD CONN

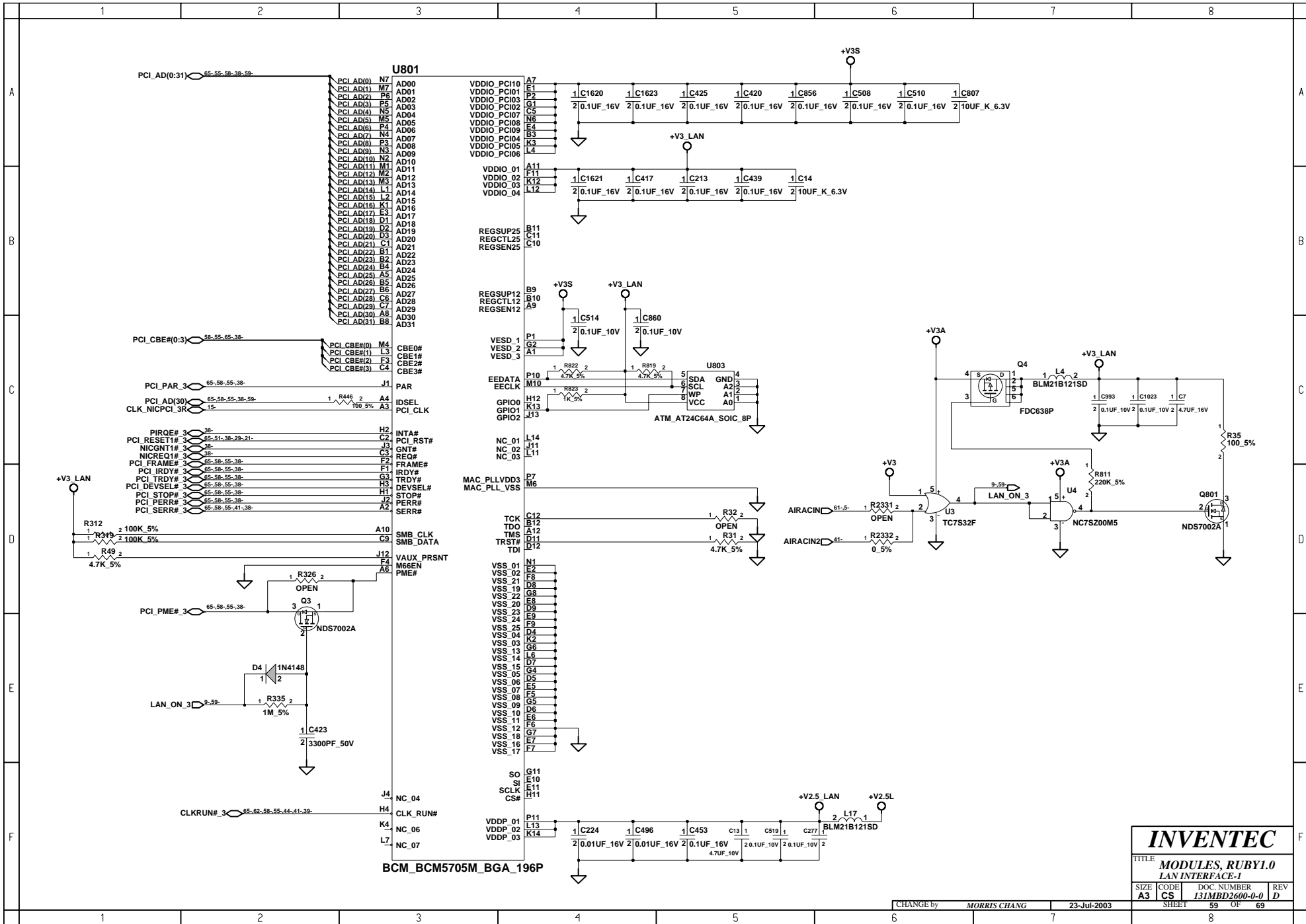
SIZE	CODE	DOC. NUMBER	REV
A3	CS	131MBD2600-0-0	D

CHANGE by: *MORRIS CHANG*    23-Jul-2003

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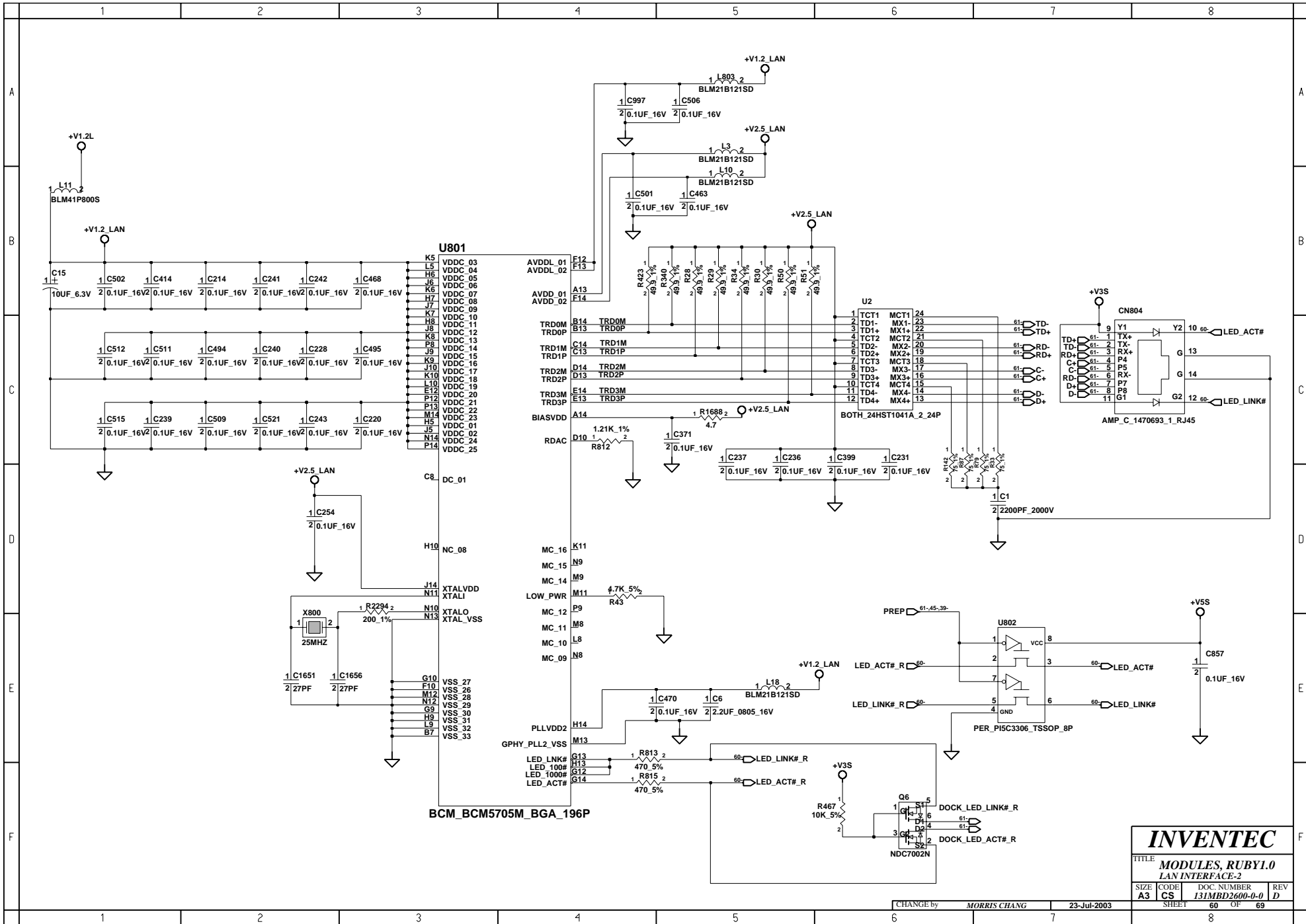


<b>INVENTEC</b>			
TITLE: <b>MODULES, RUBY1.0</b>			
MINIPCI CONN			
SIZE	CODE	DOC NUMBER	REV
A3	CS	I31MBD2600-0-0	D
CHANGE by		MORRIS CHIANG	23-Jul-2003
SHEET		58	OF 69

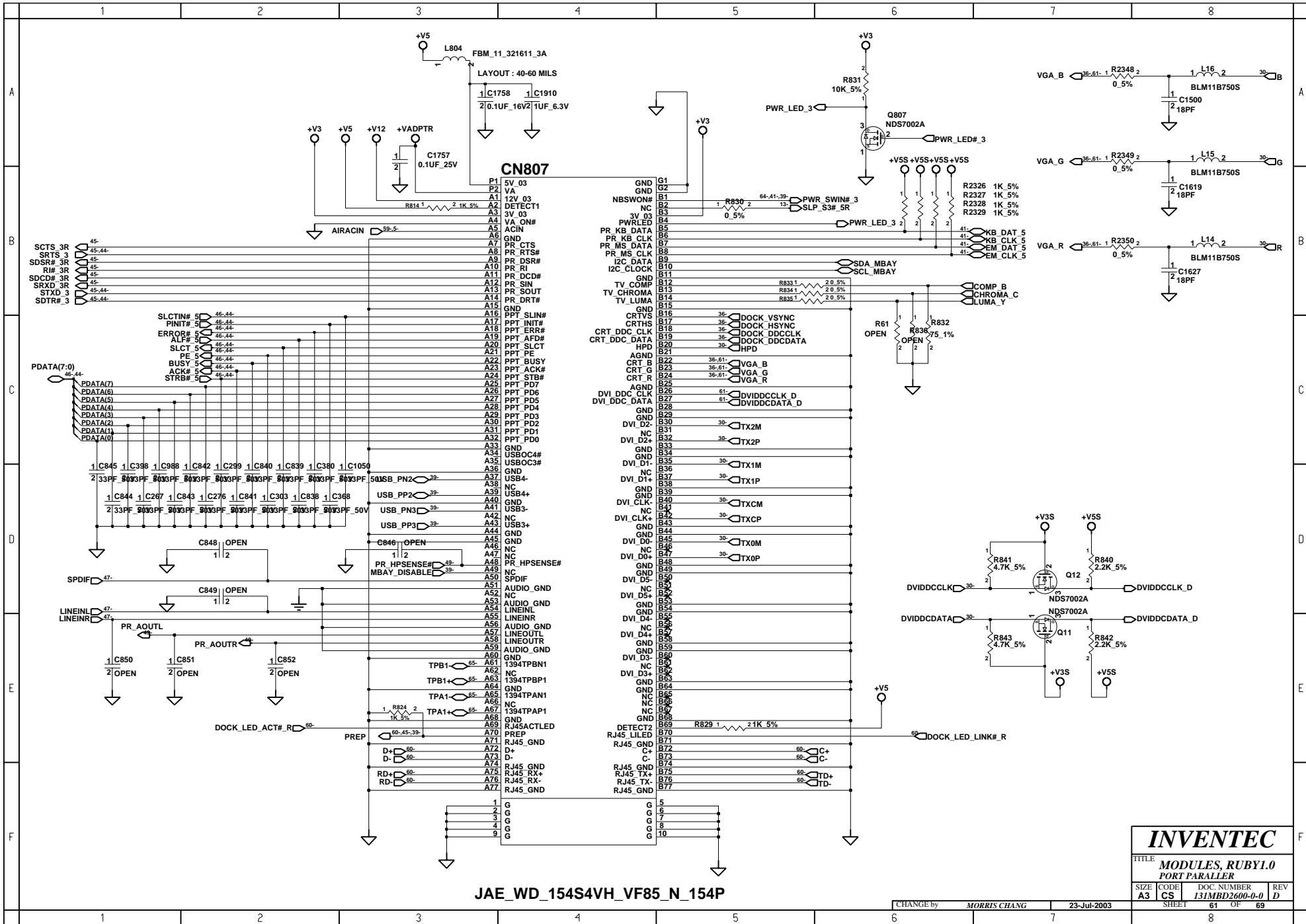


<b>INVENTEC</b>			
TITLE: <b>MODULES, RUBY1.0</b>			
LAN INTERFACE-1			
SIZE	CODE	DOC NUMBER	REV
A3	CS	I31MBD2600-0-0	D
CHANGE by		SHEET	
MORRIS CHIANG		59 OF 69	

23-Jul-2003

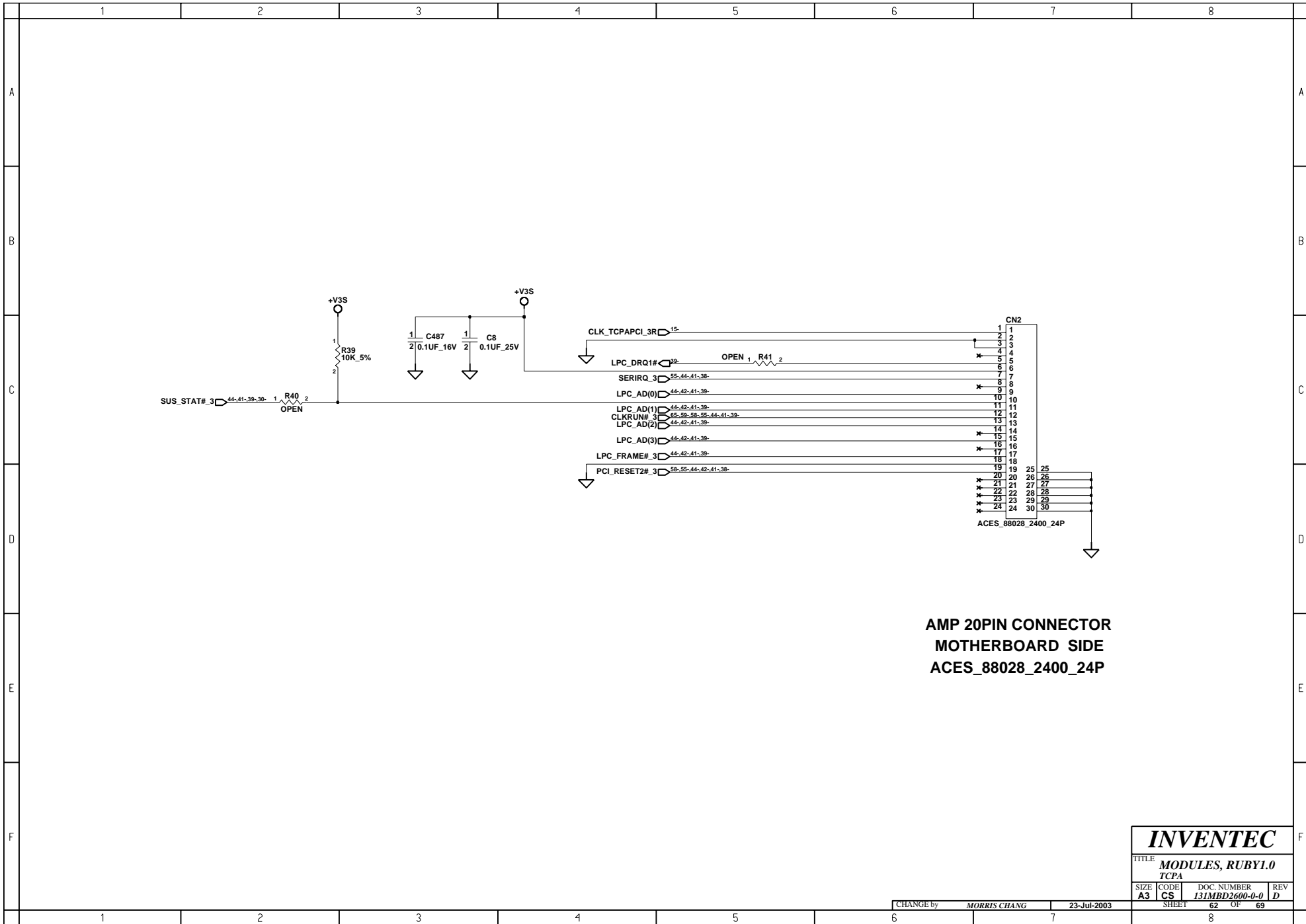


<b>INVENTEC</b>			
TITLE <b>MODULES, RUBY1.0</b> LAN INTERFACE-2			
SIZE <b>A3</b>	CODE <b>CS</b>	DOC NUMBER <b>I31MBD2600-0-0</b>	REV <b>D</b>
CHANGE by <b>MORRIS CHIANG</b>		23-Jul-2003	
SHEET <b>60</b>		OF <b>69</b>	



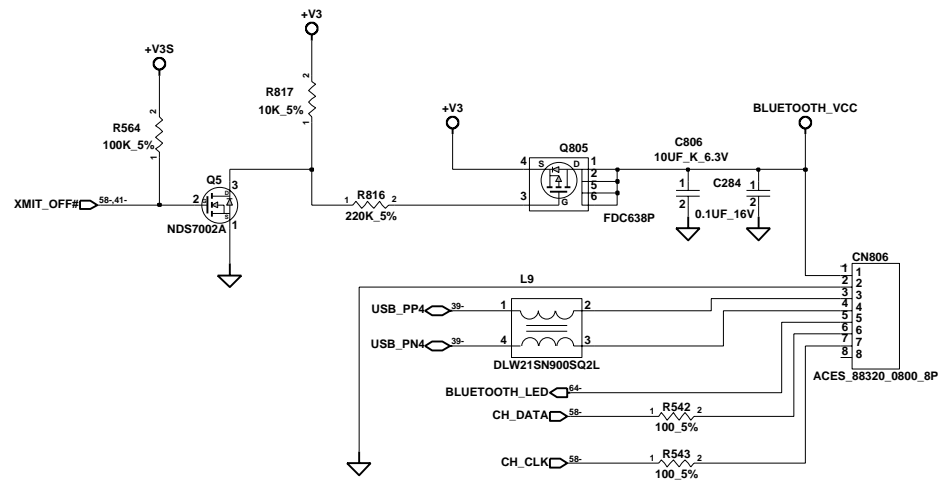
JAE\_WD\_154S4VH\_VF85\_N\_154P

<b>INVENTEC</b>			
TITLE: <b>MODULES, RUBY1.0</b>			
PORT PARALLEL			
SIZE	CODE	DOC NUMBER	REV
A3	CS	131MBD2600-0-0	D
CHANGE by		MORRIS CHIANG	23-Jul-2003
SHEET		61	OF 69



**AMP 20PIN CONNECTOR  
MOTHERBOARD SIDE  
ACES\_88028\_2400\_24P**

<b>INVENTEC</b>			
TITLE <b>MODULES, RUBY1.0</b>			
TCPA			
SIZE <b>A3</b>	CODE <b>CS</b>	DOC. NUMBER <b>I31MBD2600-0-0</b>	REV <b>D</b>
CHANGE by <b>MORRIS CHANG</b>		23-Jul-2003	SHEET <b>62</b> OF <b>69</b>



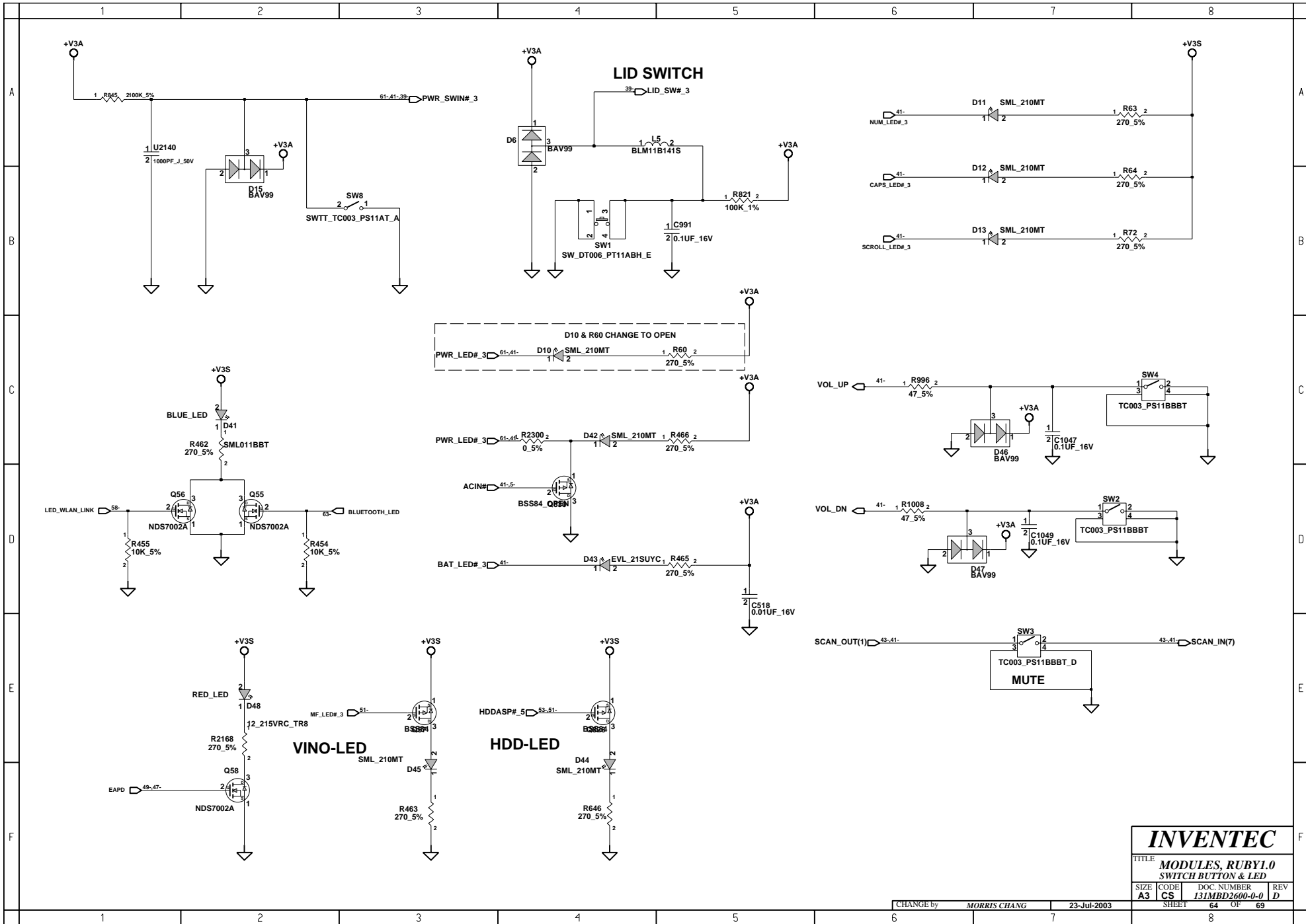
**INVENTEC**

TITLE **MODULES, RUBY1.0  
BLUETOOTH**

SIZE <b>A3</b>	CODE <b>CS</b>	DOC. NUMBER <b>131MBD2600-0-0</b>	REV <b>D</b>
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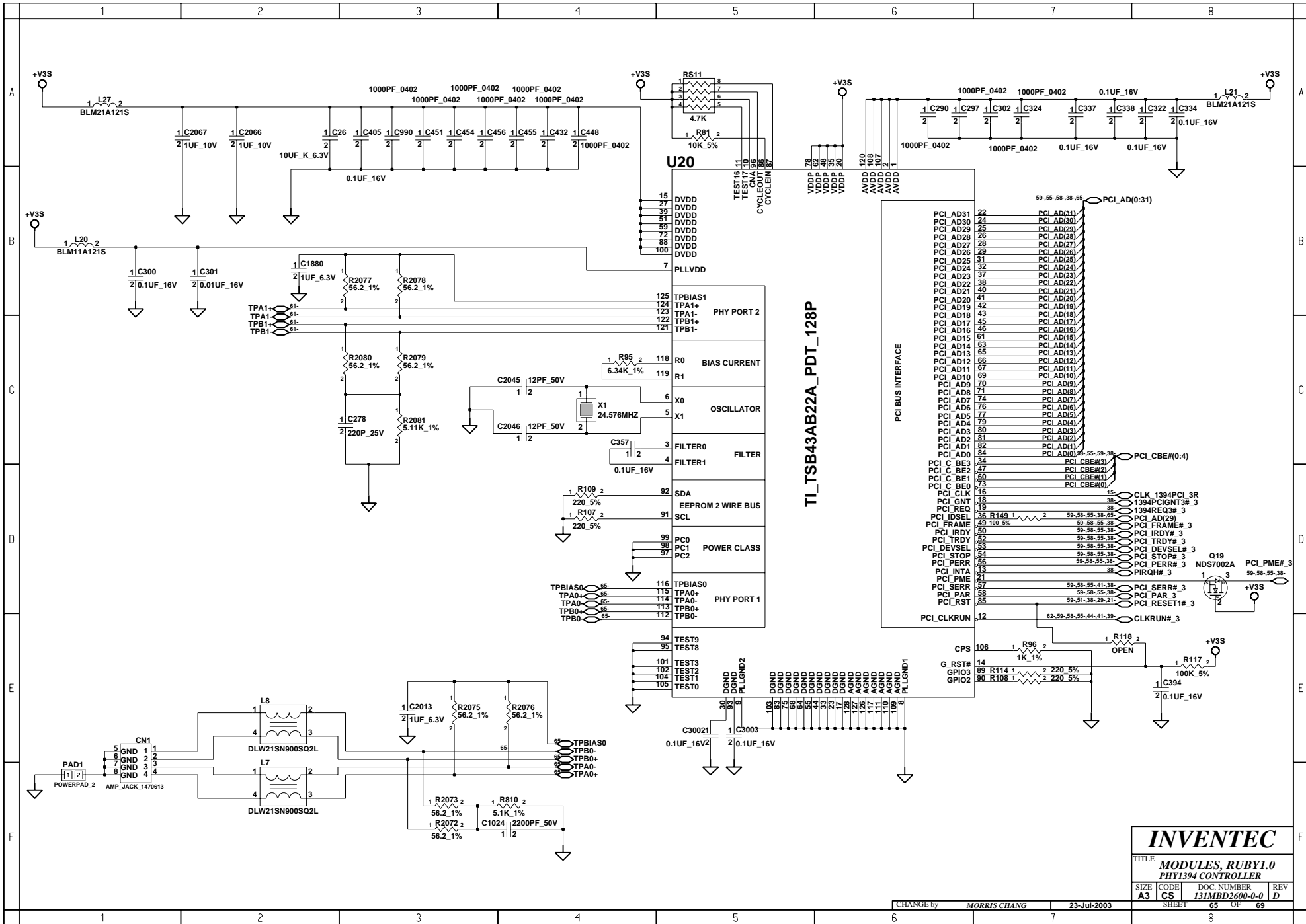
CHANGE by **MORRIS CHANG** 23-Jul-2003

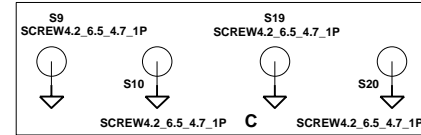
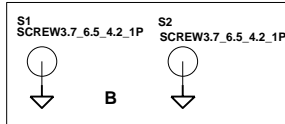
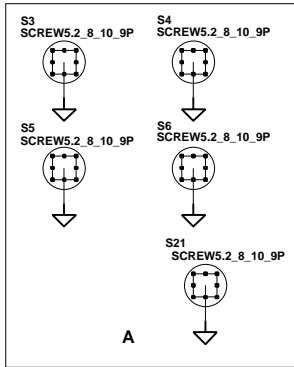
SHEET **63** OF **69**



<b>INVENTEC</b>			
TITLE: <b>MODULES, RUBY1.0 SWITCH BUTTON &amp; LED</b>			
SIZE	CODE	DOC NUMBER	REV
A3	CS	I31MBD2600-0-0	D
CHANGE by		MORRIS CHIANG	23-Jul-2003
SHEET		64	OF 69







S22 SCREW3.7\_6.5\_4.2\_1P



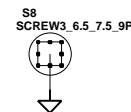
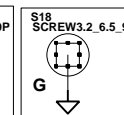
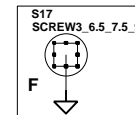
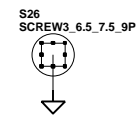
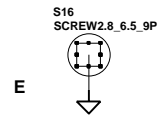
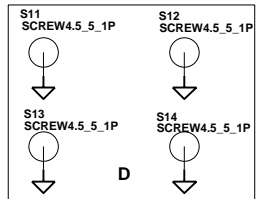
S24 SCREW3.7\_6.5\_4.2\_1P



S15 SCREW3.3\_5\_1P



S27 SCREW5.2\_8\_9P



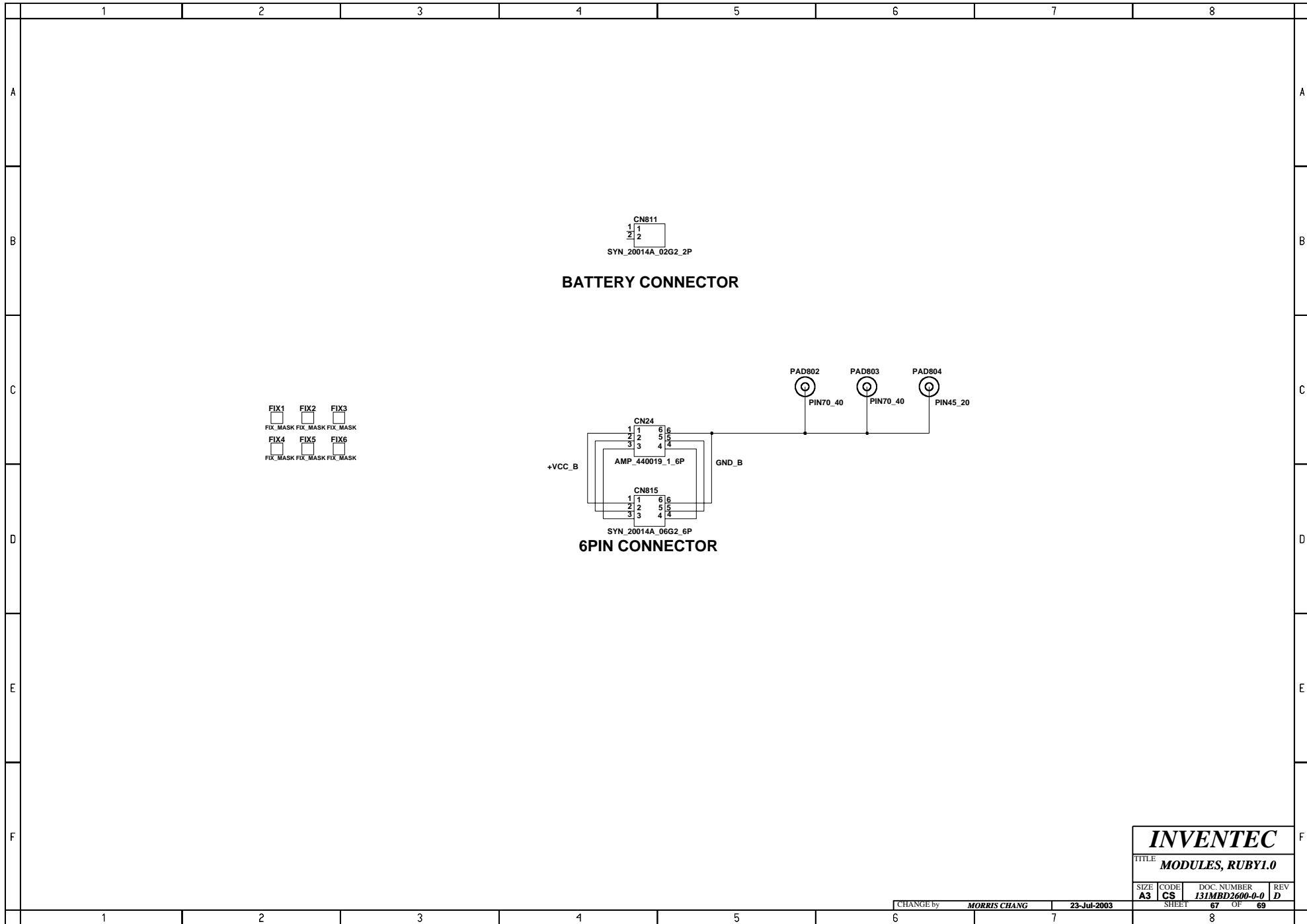
**INVENTEC**

TITLE **MODULES, RUBY1.0**  
SCREW

SIZE	CODE	DOC. NUMBER	REV
A3	CS	131MBD2600-0-0	D

CHANGE by MORRIS CHANG 23-Jul-2003

SHEET 66 OF 69



<b>INVENTEC</b>			
TITLE <b>MODULES, RUBY1.0</b>			
SIZE	CODE	DOC. NUMBER	REV
<b>A3</b>	<b>CS</b>	<b>131MBD2600-0-0</b>	<b>D</b>
CHANGE by <b>MORRIS CHANG</b>		<b>23-Jul-2003</b>	
SHEET <b>67</b>		OF <b>69</b>	

	1	2	3	4	5	6	7	8	
A	<b>SHEET 10</b> 1. R1293 CHANGE FROM 4.99K TO 5.6K 2. R322 CHANGE FROM 10K TO 200K AND ADD CAP(0.01UF) IN R322 PIN2 TO GND NOTE: FOR ATI POWER SEQUENCE  <b>SHEET 11</b> 1. ADD PM_VGATE DELAY CIRCUIT : U46 , U58 ,R426 , C525 , C526 2. R349 CHANGE FROM 1K TO 0 (OHM) AND ADD CAP (0.01UF) IN R349 RIN2 TO GND NOTE : FOR PCI_RESET , PCI_CLOCK , PM_VGATE TIMING  <b>SHEET 13</b> 1. R1783 CHANGE FROM 220K TO 100K AND ADD CAP(0.1UF) IN R1783 PIN1 TO GND NOTE : FOR ATI POWER SEQUENCE(ADJUSTED TIMING OF THE VDD15)  <b>SHEET 14</b> 1. R936 (INPUT TO U40 PIN2) CHANGE FROM 36.5K TO 182(OHM) NOTE : FOR POWER SEQUENCE  <b>SHEET 15</b> 1. REMOVE Q54 , R390 CHANGE FROM 10K TO 0(OHM) NOTE :SAME THE DIAMOND SYSTEM  <b>SHEET 17</b> 1. R229 , R230 , R291 CHANGE FROM 0(OHM) TO OPEN NOTE: MEET THE INTEL RDDP SPEC.  <b>SHEET 20</b> 1. CN8 (FAN CONNECT) CHANGE FROM 5PIN TO 3 PIN NOTE: MECHANICAL CHANGE  <b>SHEET 29</b> 1. ADD SERIES RESISTORS ON SB_STDS (R518 ) , ADSTBS_O(R519 ),ADSSTBS_1( R520 ) 2. CHANGE R894 49.9 TO 40.2(OHM) 3. AGP8X_DETb PULL HIGH POWER RAIL CHANGE FROM +V1.SATIAGP TO +V3S 4 . ADD TEST POINT IN GPIO[4:7] GPIO[9:14] 5. VGA_GPIO[0:3] STATUS CHANGE FROM 10K PULL DOWN TO 10K PULL UP (+V3S) 6. ADD 1K PULL DOWN ON GPIO8 7. ADD 1K PULL DOWN RESISTOR TO PREVENT LEAKAGE FOR SOME ZV_LCDDATA , ZV_LCDCNTL IN (ZV_LCDDATA[5:15] , [18:19], ZV_LCDCNTL[0:3]) 8. ADD 10K PULL DOWN RESISTOR TO PREVENT LEAKAGE FOR ZV_LCDDATA[16:17] NOTE: ABOVE ITEMS FOR ATI RECOMMED 9. R879 , R880 CHANGE FROM 1K TO 3K NOTE: FOR +V3A POWER RAIL(ATI-VREFG)	<b>SHEET 30</b> 1. ADD 0 OHM SERIES RESISTOR ON THE PATH OF OSC OUTPUT TO XTALIN AND XTALOUT NOTE : SELECT FREQUENCY ENTER CHANNEL 2. ADD 10K(R531) PULL UP TO +V3S NOTE: FOR ATI RECOMMED  <b>SHEET 32</b> 1. L36 CHANGE FROM BLM11A121S TO BLM21A121S NOTE: FOR ATI RECOMMED  <b>SHEET 33</b> 1. ADD VGA DAMPING PESTISOR NOTE: FOR ATI RECOMMED  <b>SHEET 39</b> 1. U22-V19(PM_VGATE/VMPWRGD) CHANGE FROM PM_VGATE TO SB_VGATE 2. (VMEM_CFG3)ADD OPEN(R513) PULL-UP TO +V3S AND 8.2K(R512) PULL-DOWN 3. CREATE RUBY VIDEO MEMORY CALL-BACK DEFINITION TABLE  <b>SHEET 43</b> 1. ROTATE CN16(THE KEYBOARD CONNECT) : 180 POINT OF VIEW 2. ROTATE CN18(THE TOUCH-PAD CONNECT) : 180 POINT OF VIEW 3. CHANGE CN17(STICK POINT) GEOMETRIC(LAYOUT PATTERN)  <b>SHEET 48</b> 1. CHANGE JACK801(MIC JACK) GEOMETRIC(LAYOUT PATTERN)  <b>SHEET 49</b> 1. CHANGE JACK802(EAR-PHONE JACK) GEOMETRIC(LAYOUT PATTERN)  <b>SHEET 51 '53</b> 1. IRQ14_3: CN808(PAGE53) PIN29 CONNECT TO CN814-PIN31(PAGE51) 2. PDCS1#: CN808(PAGE53) PI35 CONNECT TO CN814 -PIN37(PAGE51) 3. HDDASP#_5: CN808(PAGE53) PIN37 CONNECT TO U35-PIN1(PAGE51) 4. PDIAG#: CN808-PIN32(PAGE53) CONNECT TO CN814-PIN34(PAGE51) 5. IDERESET#: R139-PIN1(PAGE53) CONNECT TO U36-PIN4(PAGE51) NOTE : FOR OPTICAL DRIVE  <b>SHEET 55</b> 1. SWAPPED BELOW SIGNAL : PCI_AD(7)&PCI_AD(8), B_CAD(10)&B_CAD(11), B_CAD(14)&B_CAD(15)  <b>SHEET 65</b> 1. C126 CHANGE VALUE FROM 0.01UF TO 0.1UF NOTE : REFERENCE TI 1394 CIRCUIT  <b>SHEET 66</b> 1. ADD BELOW SCREW (S21 , S22 , S24 , S26) 2. REMOVE BELOW SCREW (S15) NOTE: MECHANICAL CHANGE	<b>02 11 CHANGE LIST</b>  <b>SHEET 11</b> 1. R348 TO OPEN  <b>SHEET 29</b> 1. ADD (R521 ,R522 ,R523 ,R524 ,R525 , R527 , R528 ,R529 ,R530 ,R534) 0 (OHM) SERIES RESISTOR WOULD BE USEFUL IN TUNING AGP  <b>SHEET 53</b> 1. OPTICAL DRIVE(CN808) CHANGE CONNECT TO AMP_P_012203_50P  <b>SHEET 65</b> 1. U57 ,R526 , R535 RESERVE FOR GUID  <b>02 12 CHANGE LIST</b>  <b>SHEET 20</b> 1. CHANGE CN8 PIN2 CONNECTION FROM GND TO Q43 PIN3 CN8 PIN3 CHANGE TO OPEN  <b>SHEET 39/44</b> 1. ADD INVERTER BETWEEN , PIN H22(GPIO39) OF U22 AND NPCI RESET (PIN26) OF U10. PCI_RESET#_3 WILL NOT LONGER BE CONNECTED TO PIN 26 OF U10  <b>02 14 CHANGE LIST</b> <b>SHEET 10</b> 1. ADD SCHMITT BUFFER BETWEEN R322 PIN2 AND PIN10(ON1) OF U38  <b>SHEET 26</b> 1. ADD DDR-THERMAL SENSE PARTS(U57 , R512 ,R513)  <b>SHEET 29</b> 1. ADD TEST POINT TO PINS AK19 , AH19 , AH20 ,AG20  <b>SHEET 30</b> 1. ADD TEST POINT TO PINS AE25 2. REMOVE C247 ,C248 ,R542 ,R543 3. CHANGE U17 FROM ICS_MK1707S TO SM560  <b>SHEET 39</b> 1. R512 , R513(REFERENCE) CHANGE TO R562 , R563  <b>SHEET 49</b> 1. ADD 0.1UF CAPACITOR BETWEEN ANALOG AND DIGITAL GROUND ON PIN8 OF JACK802  <b>SHEET 53</b> 1. ADD 1K RESISTOR PULL-DOWN TO PIN47 OF CN808  <b>SHEET 65</b> 1. ADD 1K RESISTOR PULL-DOWN TO PIN7 OF U57 2. CN1 PINOUTS ARE REVERSED 3. L9(BLM11A121S) CHANGE TO POWER_PAD2 4. U57(REFERENCE) CHANGE TO U61  <b>SHEET 66</b> 1. ADD SCREW (S15))  <b>SHEET 39/53</b> 1. U22 PIN G23(GPIO40) CONNECT TO CN808 PIN47  <b>02 17 CHANGE LIST</b>  <b>SHEET 53</b> 1. R561 1K CHANGE TO 100K  <b>SHEET 68</b> 1. CN15 PIN12 CONNECT TO GND	A					
B									B
C									C
D									D
E									E
F									F
	1	2	3	4	5	6	7	8	

<b>INVENTEC</b>			
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CHANGE by <b>MORRIS CHANG</b>		23-Jul-2003	
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# RUBY SI BUILD CHANGE LIST

1. ADD OPC CIRCUIT ON PAGE5.
2. R2169 CHANGE FROM 10K TO OPEN ---PAGE6
3. REMOVE D22 ---PAGE6
4. U28-PIN8 CONNECTION STATUS : CHANGE IT FROM R2169-PIN1 TO Q802-PIN1.2.3 ---PAGE6
5. Q22-PIN1.2.3 AND Q26-PIN1.2.3 POWER NAME, CHANGE IT FORM +VBATR TO +VADP2 ---PAGE6
6. REMOVE PAD9 ---PAGE11
7. REMOVE PAD11 AND PAD12 ---PAGE12
8. CHANGE MOSFET TO REDUCE RDS ON Q809 Q39 ---PAGE13
9. CHANGE THERMAL IC PART, FROM ADM1032 TO ADM 1031 FOR CPU&VAG ---PAGE20
10. ADD TEST-POINT (TP557) ---PAGE21
11. ADD CAP (220PF) 3 PCS BETWEEN THE MCH\_GTLREF AND GND ---PAGE22
12. REMOVE C60 (150UF) ---PAGE26
13. DELETE THERMAL SENSOR CIRCUIT ---PAGE30
14. R468-R489, R490-R492, R494-R511 : CHANGE THESE RESISTOR FROM 0(OHM) TO 10(OHM) ---PAGE33
15. ADD CAP (150UF)BETWEEN THE +VRAM\_VCC AND GND ---PAGE34
16. PIN1 OF D2,D3,D800,D801,D802,D803,D804 ARE CHANGE FROM +V3 TO USBCC1 ---PAGE36
17. A\_CSTOP# , B\_CSTOP# OF U2228 SIGNAL(PAGE55) CONNECT TO CN21(PAGE56)
18. CHANGE CN10 SYMBOL : PIN11 IS REF\_P\_D AND PIN12 IS WP ---PAGE57
19. REMOVE C230, C395, C1674, C1675. CHAISY\_GND CHANGE TO DIGITAL\_GND ---PAGE60
20. UPDATE CN807 FROM JAE\_WD\_154S4V\_VF78\_ML\_154P TO JAE\_WD\_154S4VH\_VF85\_N\_154P AND ADD D+, D-, C+, C- SIGNALS FROM U2(PAGE60) ---PAGE61
21. BREAKING PIN1 AND PIN3 CONNECTION FOR SW2, SW3, SW4 THEN ALL OF PIN3 CONNECT TO GND ---PAGE64
22. UPDATE CN1 SYMBOL, ADD GND SIGNAL OF PIN7, PIN8 THEN CONNECT TO GND ---PAGE65
23. ADD NAME PORT(MAX\_LX5) IN L44-PIN1 ...PAGE7
24. REMOVE NONE-USE SIGNAL-PORT(SLP\_S5#\_5R) ...PAGE13
25. Q48 CHANGE FROM FDC638P TO FDR840P ...PAGE13
26. R293 CHANGE FROM 10K TO OPEN ...PAGE17
27. Q806 CHANGE FROM FDC638P TO FDR840P(Q825) ...PAGE37
28. R848-PIN1 AND Q825-PIN5,PIN8 POWER RAIL FROM +V3S TO +V3 ...PAGE37
29. R67 CHANGE VALUE FROM 180K TO 51K ...PAGE39
30. REMOVE D39 ...PAGE41
31. ADD DELAY CIRCUIT FOR THE PWR\_GOOD3 ...PAGE41
32. ADD RNET FOR KAHUNA PROGRAMMING(RS850,RS860) ...PAGE43
33. REMOVE D17 ...PAGE52
34. U7 AND U804 PIN5,PIN7 POWER RAIL CHANGE FROM +V5 TO +V5A ; OC# SIGNAL OF THE PIN2 IS REMOVE EN SIGNAL OF THE PIN1 IS CONNECT TO +V5 ...PAGE54
35. REMOVE R934 R946 OF THE PULL-HIGH CIRCUIT ...PAGE56
36. CHANGE TURN ON CIRCUIT OF THE H.D.D-LED, USING A MOS-FET(Q286) TO CONTROL H.D.D-LED ...PAGE64
37. R1679 CHANGE VALUE FROM 20K TO 1.3K ; R2139 CHANGE VALUE FROM 150K TO 10K ...PAGE5
38. DELETE R514 ...PAGE26
39. FOLLOWIG RESISTORS ARE CHANGE VALUE FROM 10 OHM TO 24 OHM : RS12-RS20 , RS22-RS24 ; RS27-RS30 RS27-RS30 ; RS32-RS35 ; RS38-RS44 ; RS46-RS47 ; RS57-RS59 ; R481-R486 ; R488 , R489 ; R505-R511 ; R502 ...PAGE33
40. ADD CAP(22UF) BETWEEN THE +V2.5S AND GND IN U23 , U27 OF THE VRAM ...PAGE34
41. ADD CAP(22UF) BETWEEN THE +V2.5S AND GND IN U14 , U15 OF THE VRAM ...PAGE35
42. CHANGE CRT CIRCUIT, REFER TO THE DIAMOND CRT CIRCUIT ...PAGE36
43. R67 CHANGE VALUE 51K TO 180K ...PAGE39
44. POWER RAIL OF THE R223-PIN1, CHANGE VALUE FROM +V5A TO +V5 ...PAGE46
45. POWER RAIL OF THE U32-PIN5, CHANGE VALUE FROM +V5 TO +V3 ...PAGE57
46. C1620 , C1621 , C1623 CHANGE VALUE FROM 0.01UF TO 0.1UF ...PAGE59
47. C1651 , C1656 CHANGE VALUE FROM 22PF TO 27PF ...PAGE60
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49. D41 CHANGE FROM SML\_210MT TO SML010BAT(BLUE-LED) ; D48 CHANGE FROM SML\_210MT TO 12-215VRC\_TR8(RED-LED) ...PAGE64
50. DELETE U8 , R526 , R535 , R538 ...PAGE65
51. CN1 CHANGE FROM AMP\_JACK\_440148 TO AMP\_JACK\_1470613 ...PAGE65
52. CN4 CHANGE FROM MLX\_53398\_0490 TO JST\_BM4B\_SRSS ...PAGE50

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