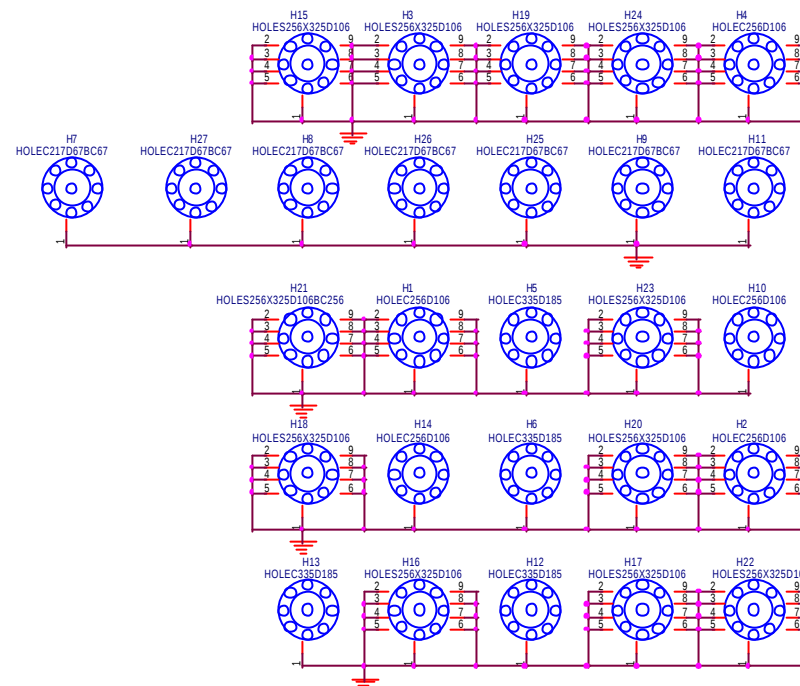


01:G731 M/B DESCRIPTION
 02:CPU_FSB1
 03:CPU_FSBII
 04:CPU_POWER
 05:SIS650-1
 06:SIS650-2
 07:SIS650-3
 08:SIS650-4
 09:SIS962-1
 10:SIS962-2
 11:SIS962-3
 12:SIS962-4
 13:CLOCK GENERATOR
 14:CLOCK BUFFER
 15:DDR_SODIMM
 16:DDR_TERMINATION RESISTOR
 17:CRT & P.P.
 18:AUDIO & AMP
 19:HDD & CD-ROM CONN.
 20:KBC PC87591
 21:SPUER I/O & IR
 22:SIS301
 23:LVDS & LED & TOUCH PAD
 24:PCI 1410
 25:MINIPCI & PCMCIA SLOT
 26:POWER SWITCH
 27:USB CONN.
 28:LAN
 29:IEEE 1394
 30:RTC & POWER SWITCH
 31:SELECTOR
 32:MAX1772 CHARGER
 33:MAX1632 SYSTEM POWER
 34:HIP6301 CPU POWER
 35:VGA & DDR POWER
 36:DDR_VTT & STANDY BY POWER
 37:HISTORY



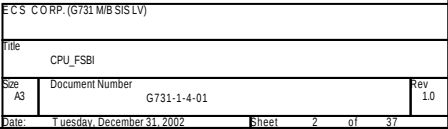
X = 0805 TYPE
 Y = 1206 TYPE
 C3216 = A TYPE
 C3528 = B TYPE
 C6032 = C TYPE
 C7343 = D TYPE

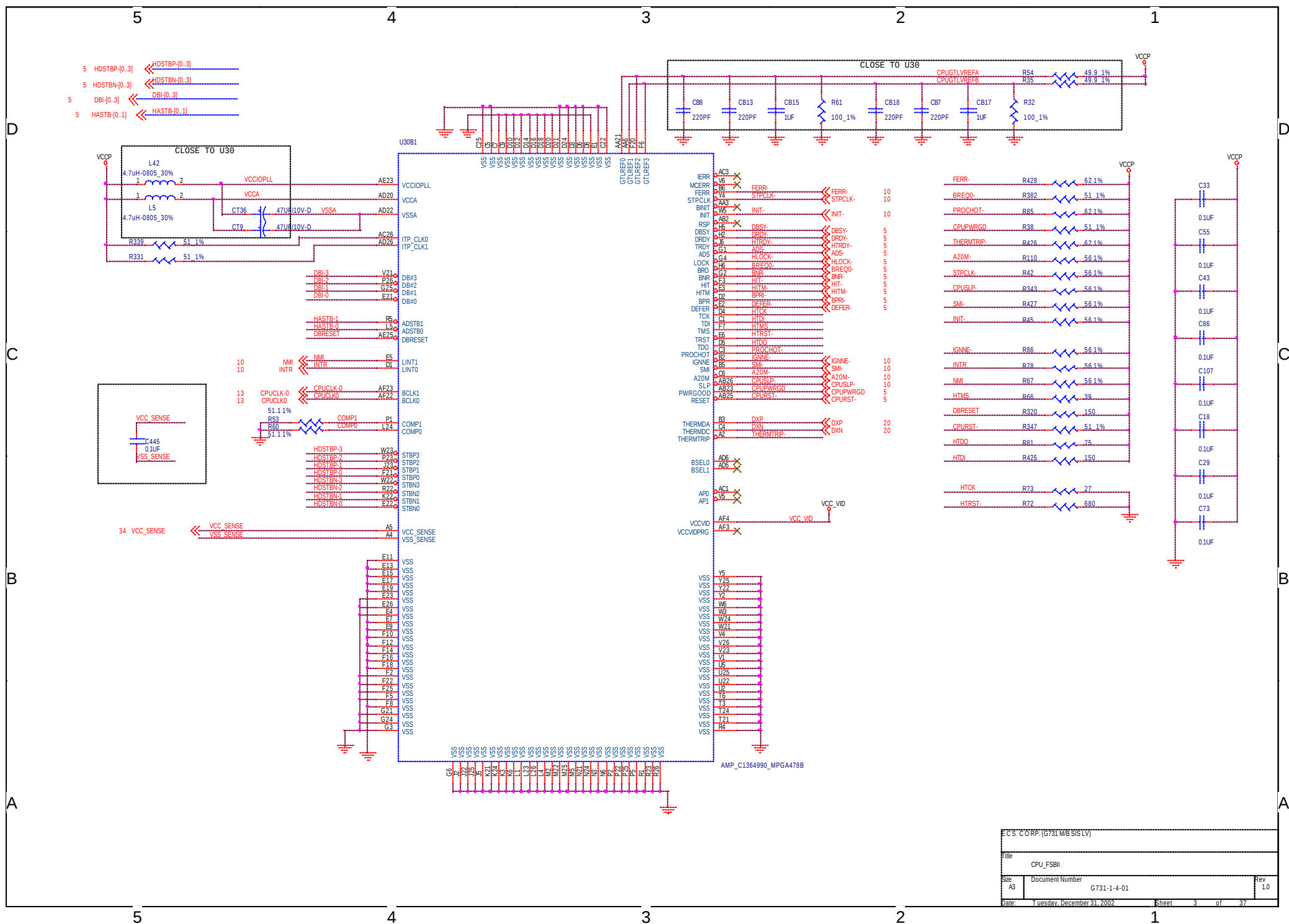
PAGE	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19
REV	1.E	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.E	1.B	1.0
DATE	12/31	05/03	05/03	05/03	05/03	05/03	05/03	05/03	05/03	05/03	05/03	05/03	05/03	05/03	05/03	05/03	12/31	05/21	05/03

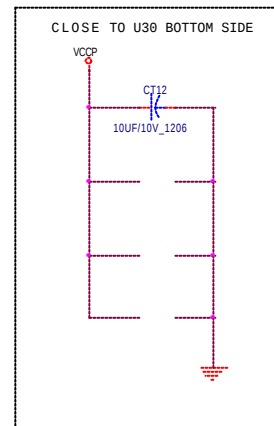
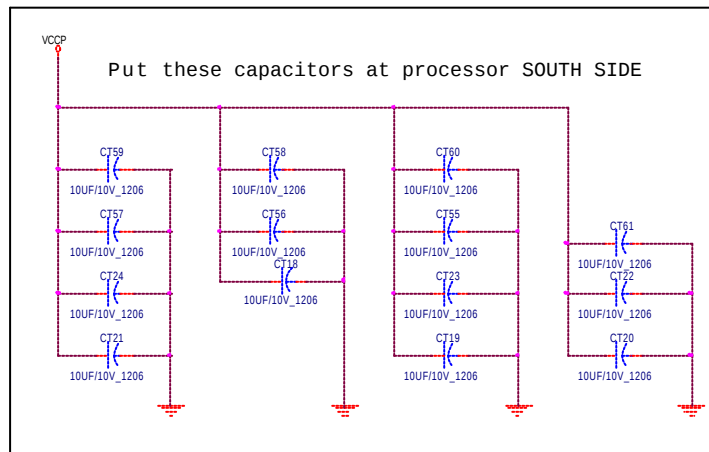
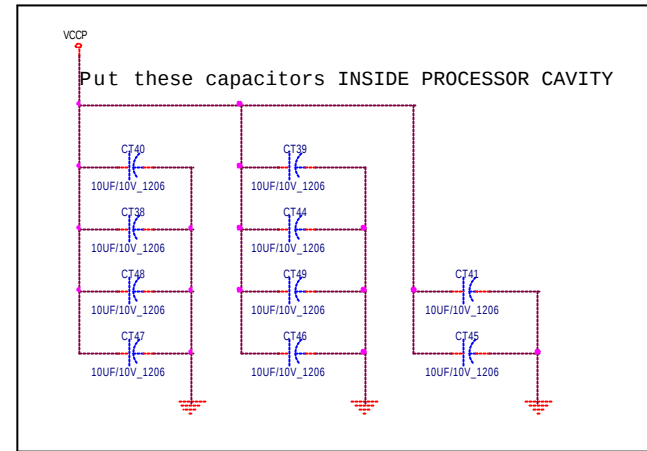
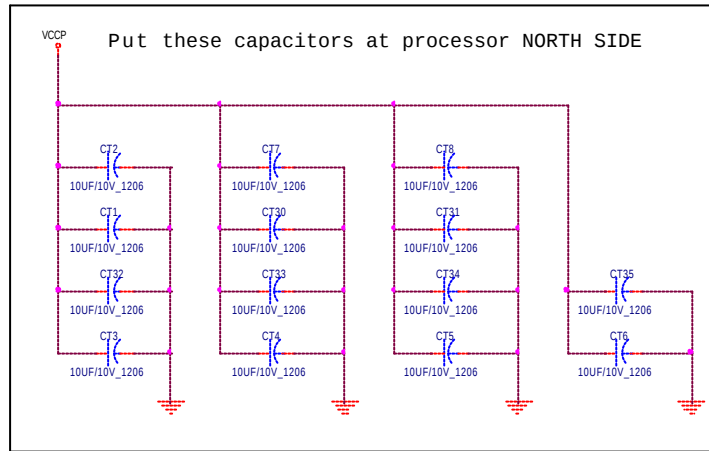
PAGE	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
REV	1.0	1.0	1.0	1.B	1.0	1.0	1.0	1.E	1.0	1.0	1.0	1.D	1.0	1.E	1.C	1.A	1.0	1.E
DATE	05/03	05/03	05/03	05/21	05/03	05/03	05/03	12/31	05/03	05/03	05/03	11/28	05/03	12/31	10/23	05/15	05/03	12/31

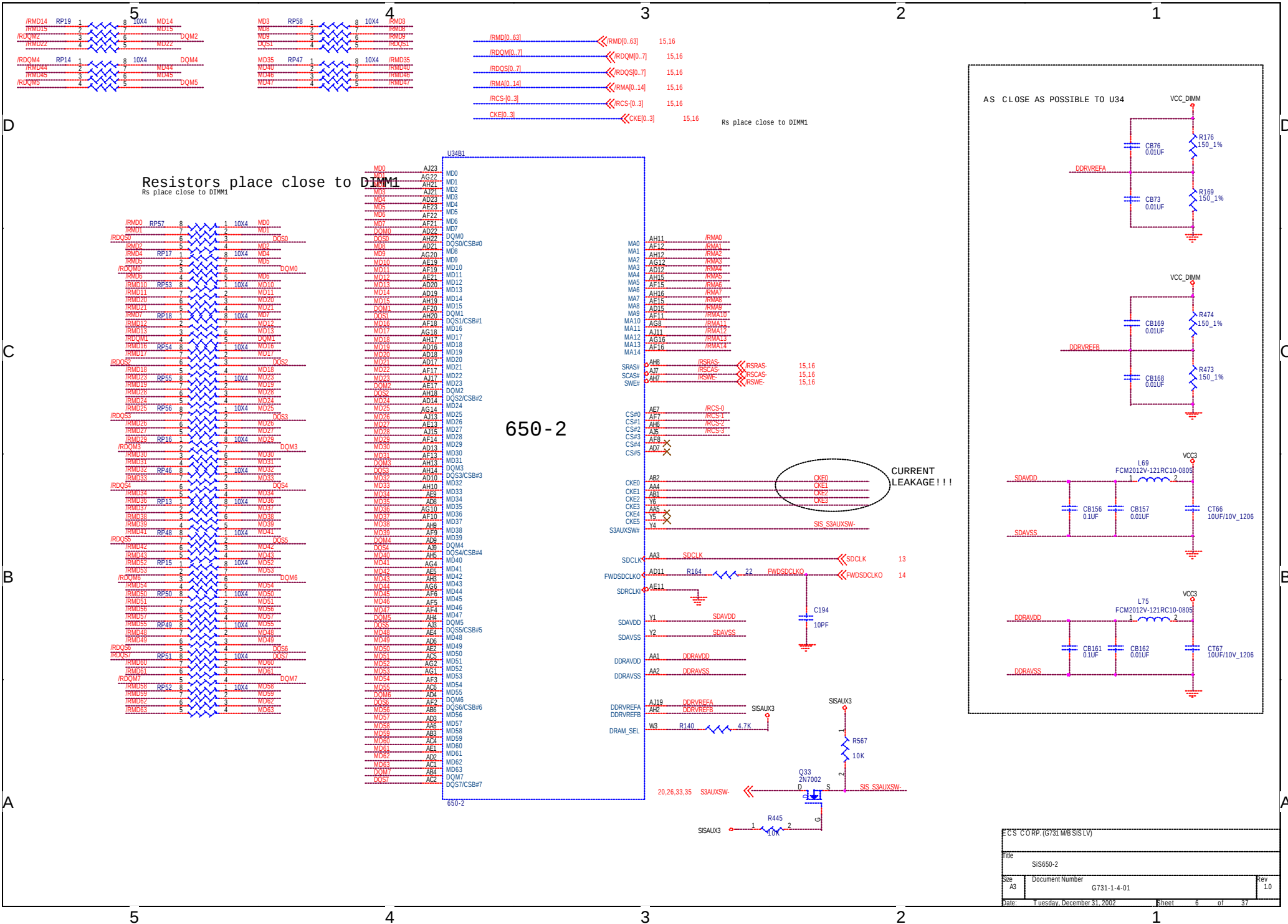
P/N:KK0G731011010

Approved by	Checked by	Designed by
ECS CORP. (G731 M/B SIS LV)		
Title G 731 M/B DESCRIPTION PAGE		
Size A3	Document Number G731-1-4-01	Rev 1.E
Date: Tuesday, December 31, 2002 Sheet 1 of 37		









NOTE: This page is for universal PCB design(suitable for both 645 or 650)

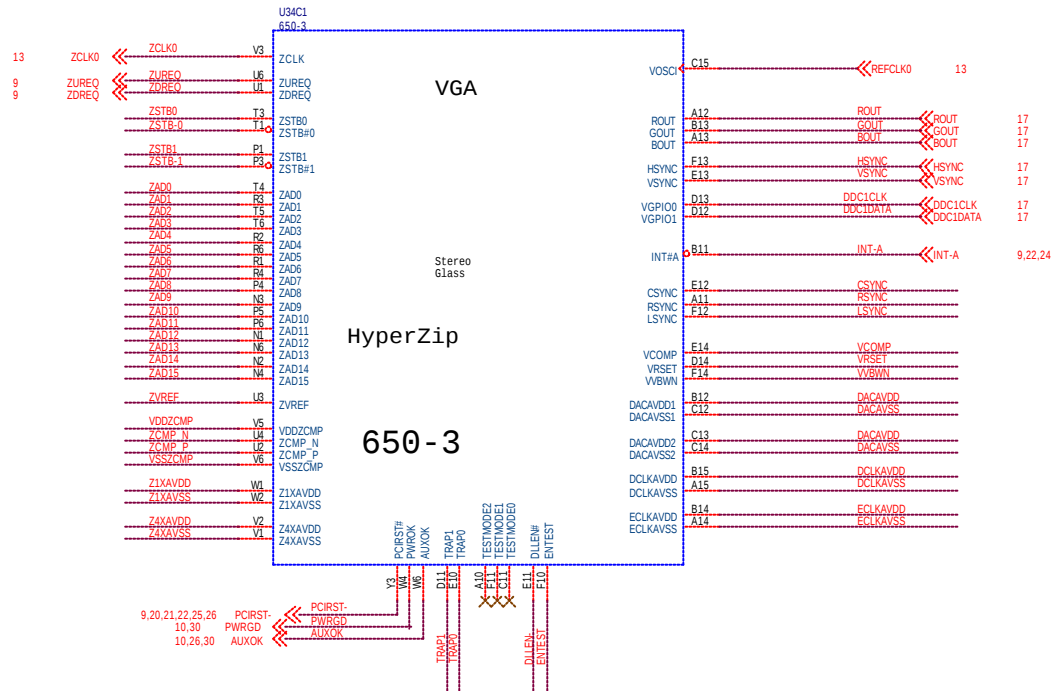
NB Hardware Trap Table

	0	1	Default
DLEN#	enable PLL	disable PLL	0
DRAW_SEL	SOR	DOR	1(DOR)
TRAP0	normal	NB debug mode	0
TRAP1	TV selection, NTSC/PAL(6/1)		0
CSYNC	enable VB		0
RSYNC	enable VGA interface		1
LSYNC	enable panel link		0

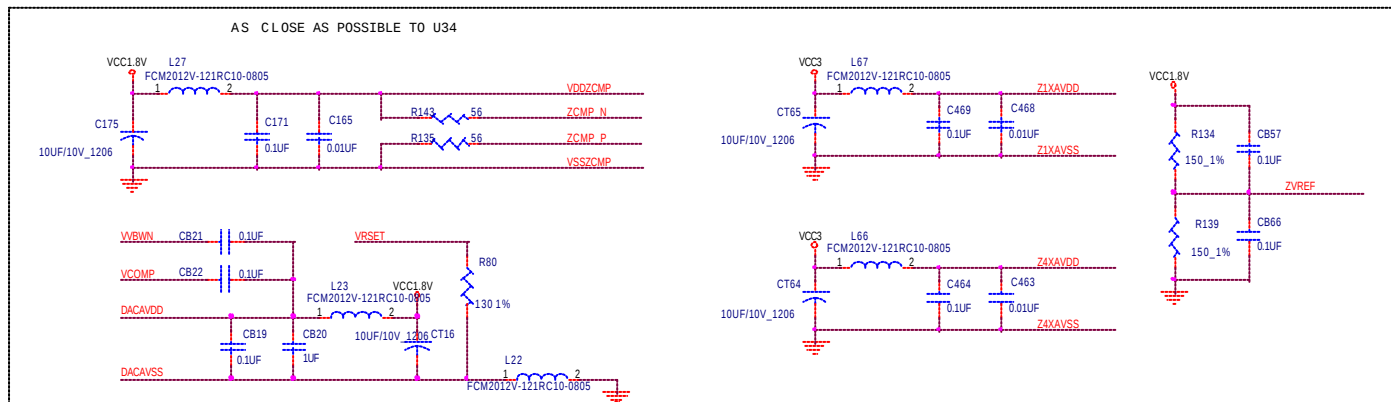
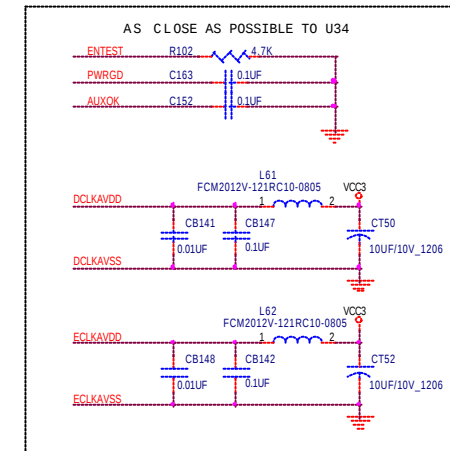
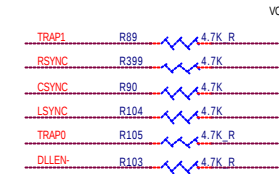
```

embedded pull-low
(30~50K Ohm)
    yes
    yes
    yes

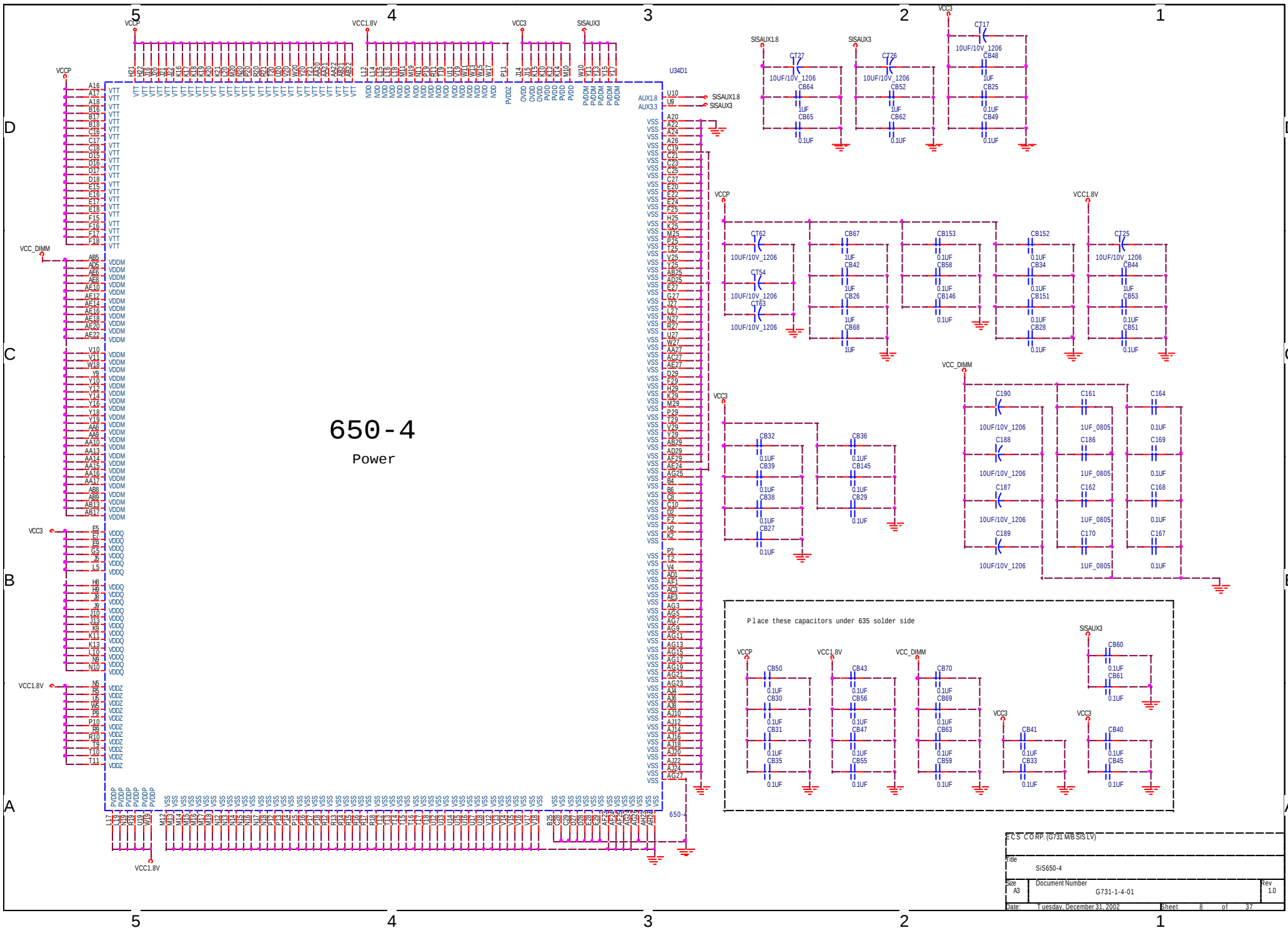
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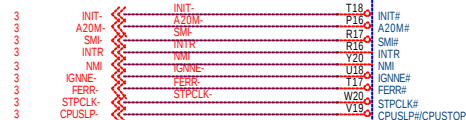
for 650 only



ECS CORP. (G731 MB SIS LV)			
Title SIS650-3			
Size A3	Document Number G731-1-4-01		Rev 1.0
Date	Tuesday, December 31, 2002	Sheet	7 of 37



Programmable on-die pull-high strength for CPU_S:
(Infinite, 150, 110, 56 Ohm)



CPU_S

APIC

LPC

RTC

961A-2

GPIO

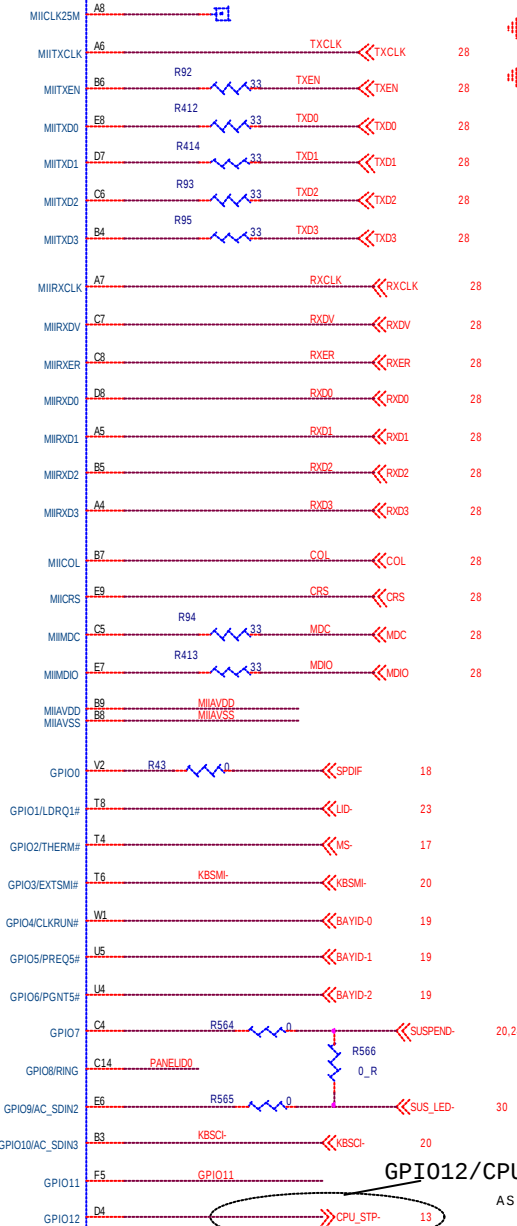
AC97

ACPI
/others

GPIO

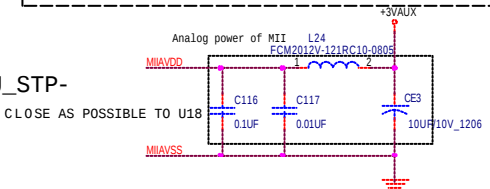
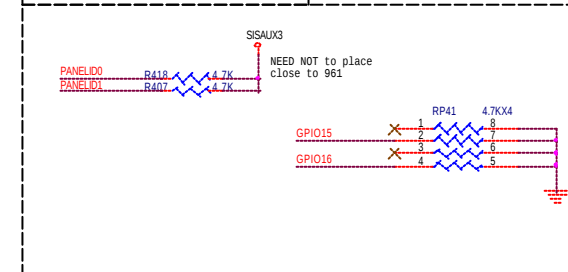
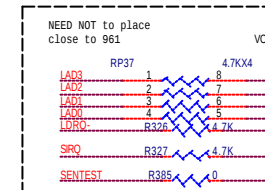
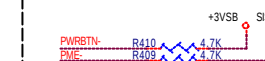
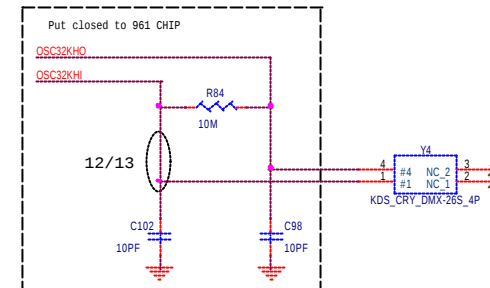
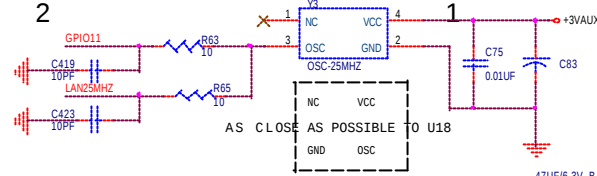
KBC
/geyserville

MII

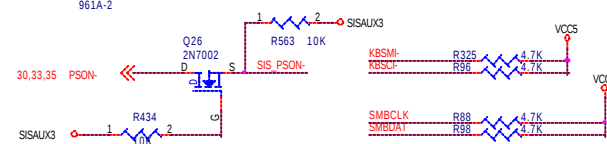
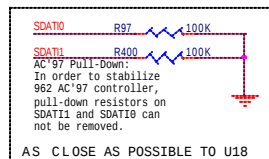


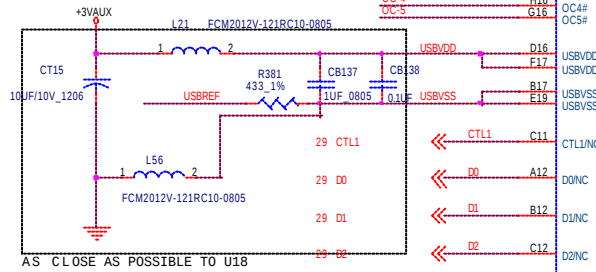
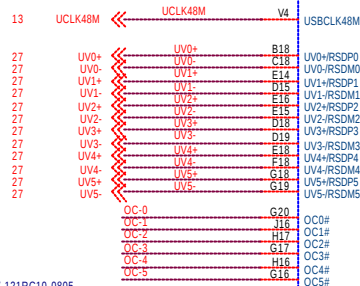
GPIO12/CPU_STP-

AS CLOSE AS POSSIBLE TO U18

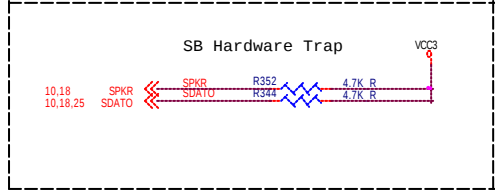
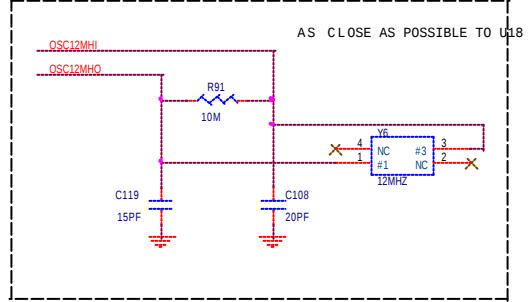
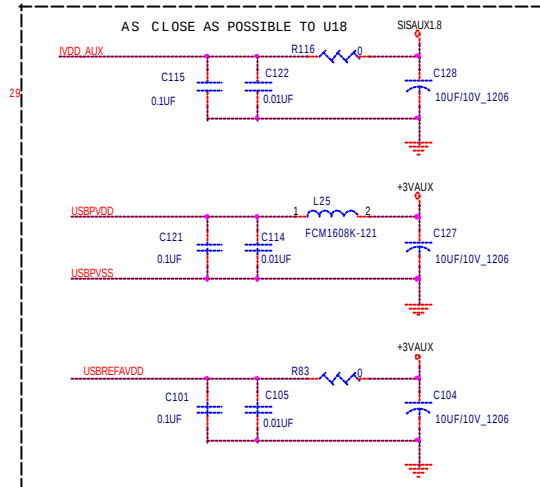
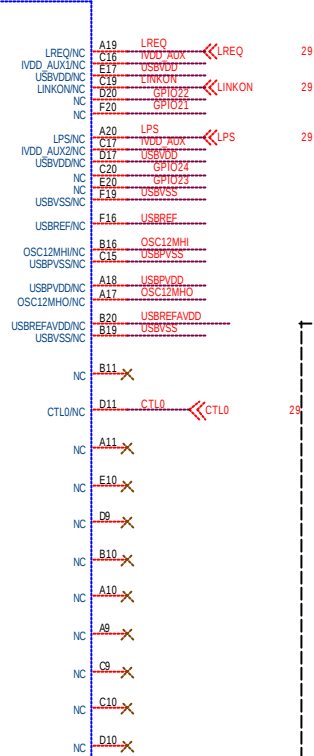


FCS CORP. (G731 MIBSISLV)			
SIS962-2			
Size	Document Number	Rev	
A3	G731-1-4-01	1.0	
Date:	Tuesday, December 31, 2002	Sheet	10 of 37



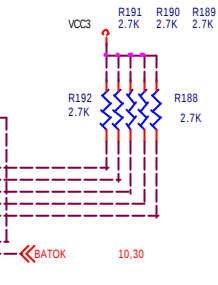
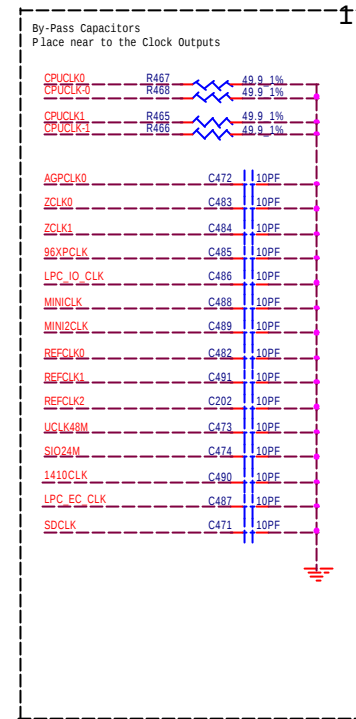


USB
961A-3



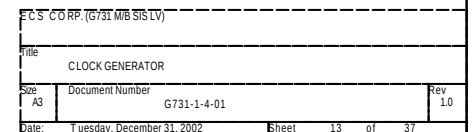
	0	1	Default
SPKR(UPG_addr_mapping)	disable	enable	0
SDA0(PCTCLK_PLL)	enable	disable	0
OC2(SB_debug_mode)	enable	disable	1
OC5(Trap_mode)	PGI_AD	ROM	1

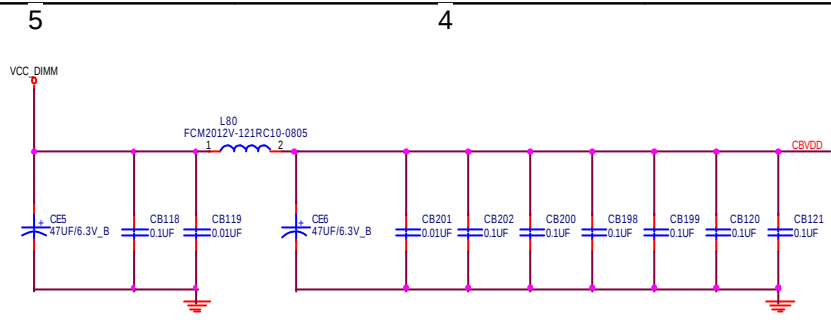
(3 OPTIONS)
1: (ICS)
2: (Cypress)
3: (Hitachi)



Library change

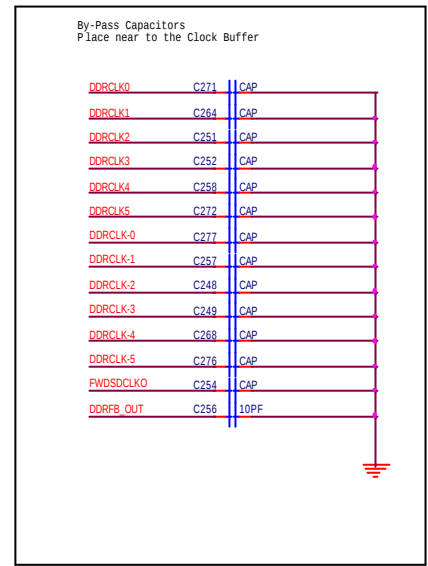
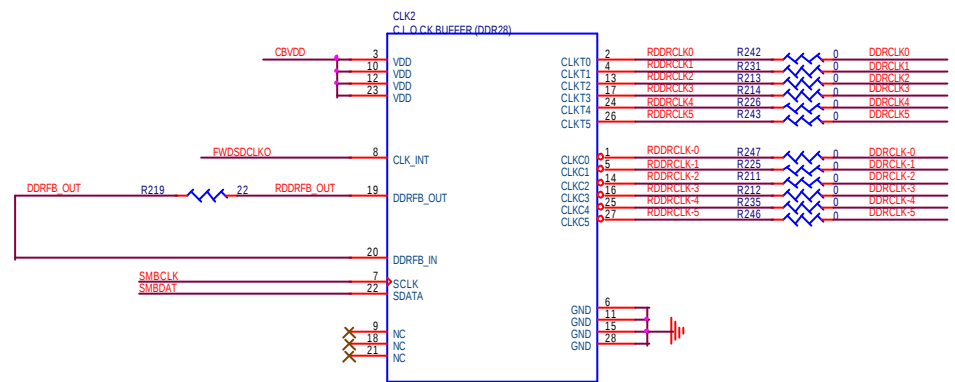
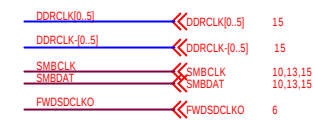
SIS650 CLOCK									
FS4	FS3	FS2	FS1	FS0	CPU (MHz)	SDRAM (MHz)	ZCLK (MHz)	AGPCLK (MHz)	PCI (MHz)
1	0	0	0	0					
1	0	0	0	1					
1	0	0	1	0					
1	0	0	1	1					
1	0	1	0	0					
1	0	1	0	1					
1	0	1	1	0					
1	0	1	1	1					
1	1	0	0	0					
1	1	0	0	1					
1	1	0	1	0					
1	1	0	1	1					
1	1	1	0	0					
1	1	1	0	1					
1	1	1	1	0					
1	1	1	1	1					





Clock Buffer (DDR)

(OPTIONS)
1: (ICS-93705)



5

4

3

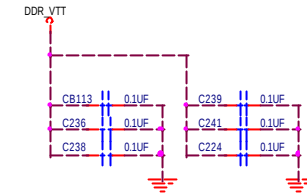
2

1

SSTL-2 Termination Resistors

/RMD[0..63]	33X4	6.15
/RDQM[0..7]	33X4	6.15
/RDQS[0..7]	33X4	6.15
/RMA[0..14]	33X4	6.15
/RCS[0..3]	33X4	6.15
/CKE[0..3]	33X4	6.15

	DDR	DDR	DDR	DDR	DDR
RD/DQM/(DQS)	LV-CMOS	LV-CMOS	LV-CMOS	LV-CMOS	LV-CMOS
MA/Control	LV-CMOS	LV-CMOS	LV-CMOS	LV-CMOS	LV-CMOS
CS	LV-CMOS	LV-CMOS	LV-CMOS	LV-CMOS	LV-CMOS
CKE	LV-CMOS	LV-CMOS	LV-CMOS	LV-CMOS	LV-CMOS



D

D

C

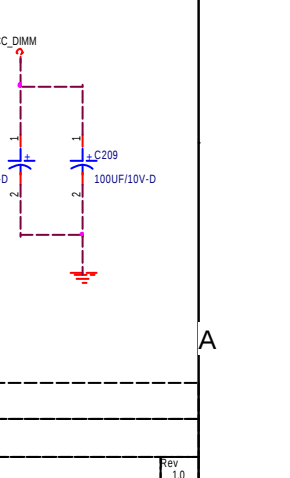
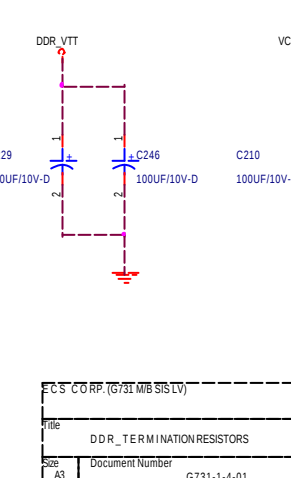
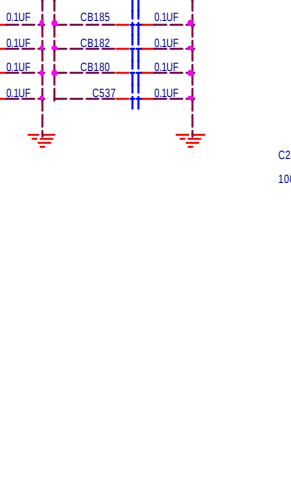
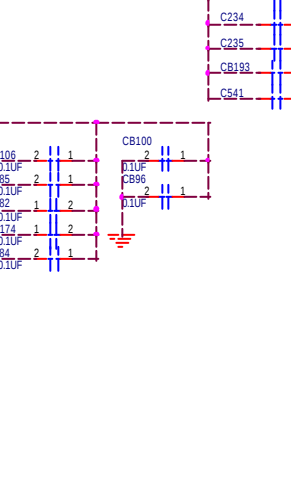
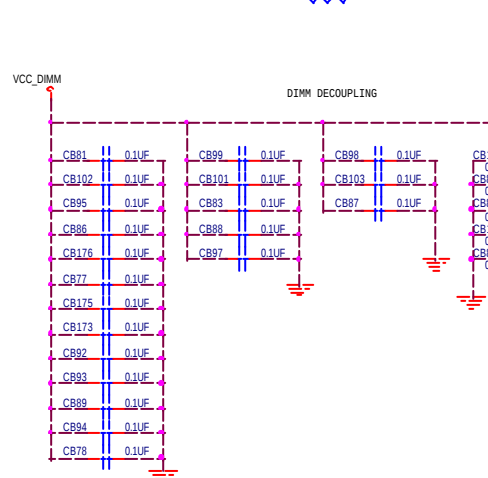
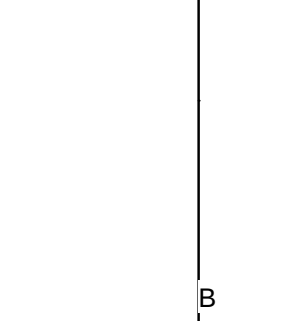
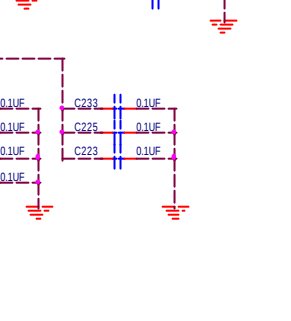
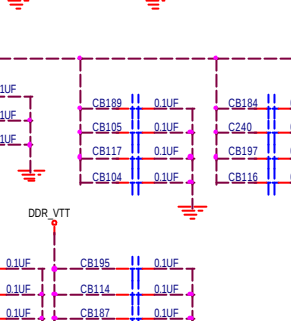
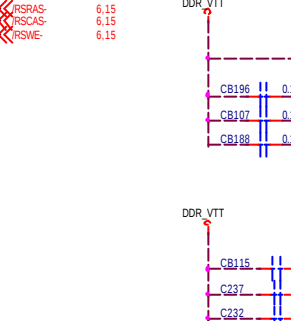
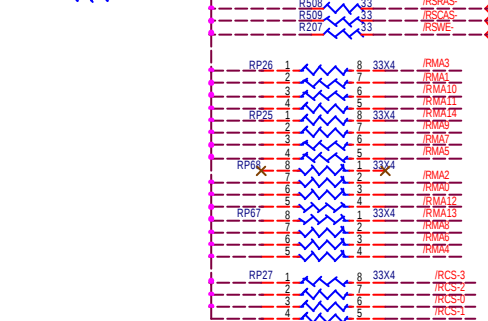
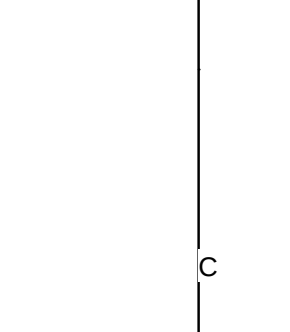
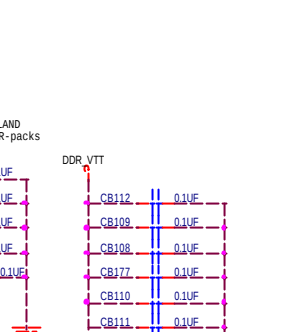
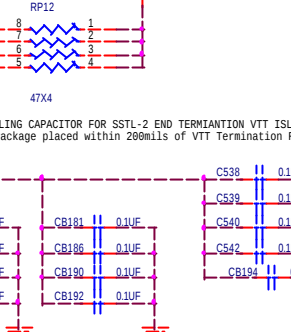
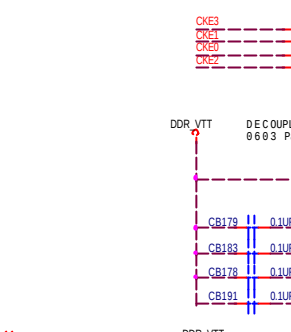
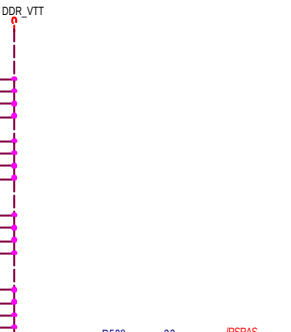
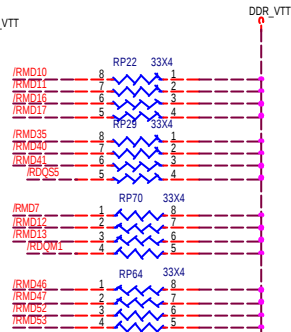
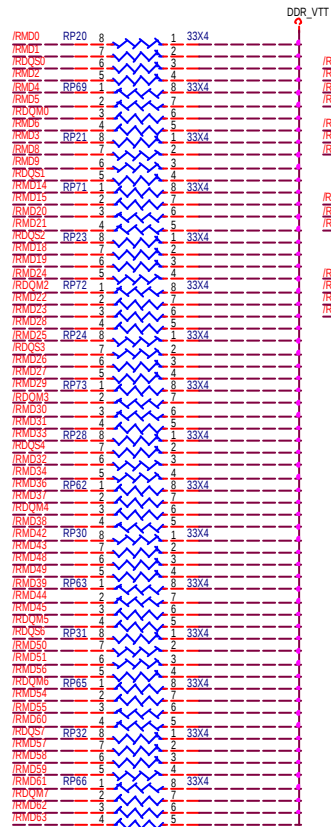
C

B

B

A

A



FCS CORP. (G/31 MIBSIS LV)		
Title: DDR_TERMINATIONRESISTORS		
Size: A3	Document Number: G731-1-4-01	Rev: 1.0
Date: Tuesday, December 31, 2002	Sheet: 16	of: 37

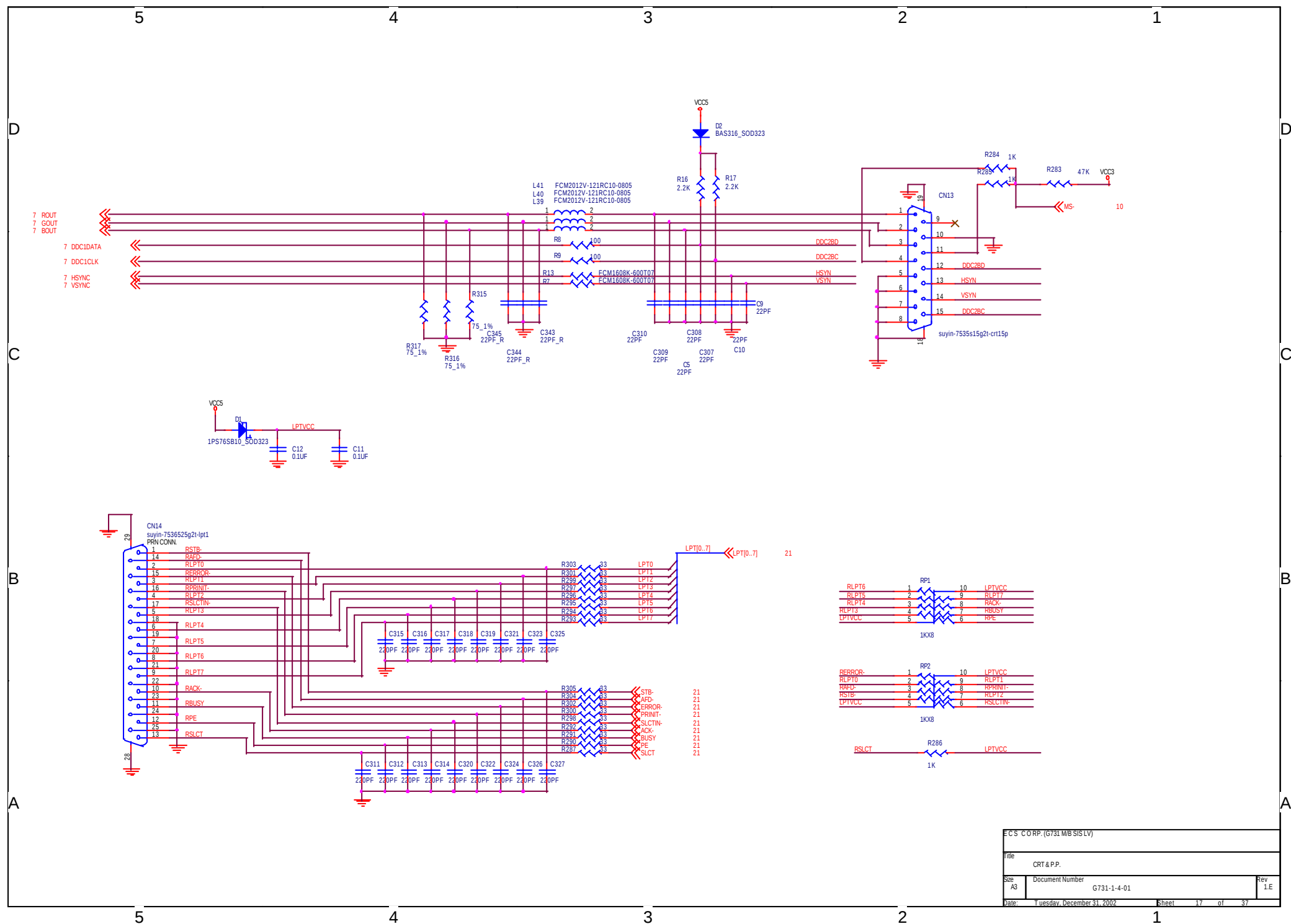
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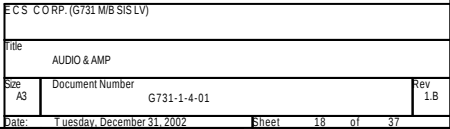
4

3

2

1





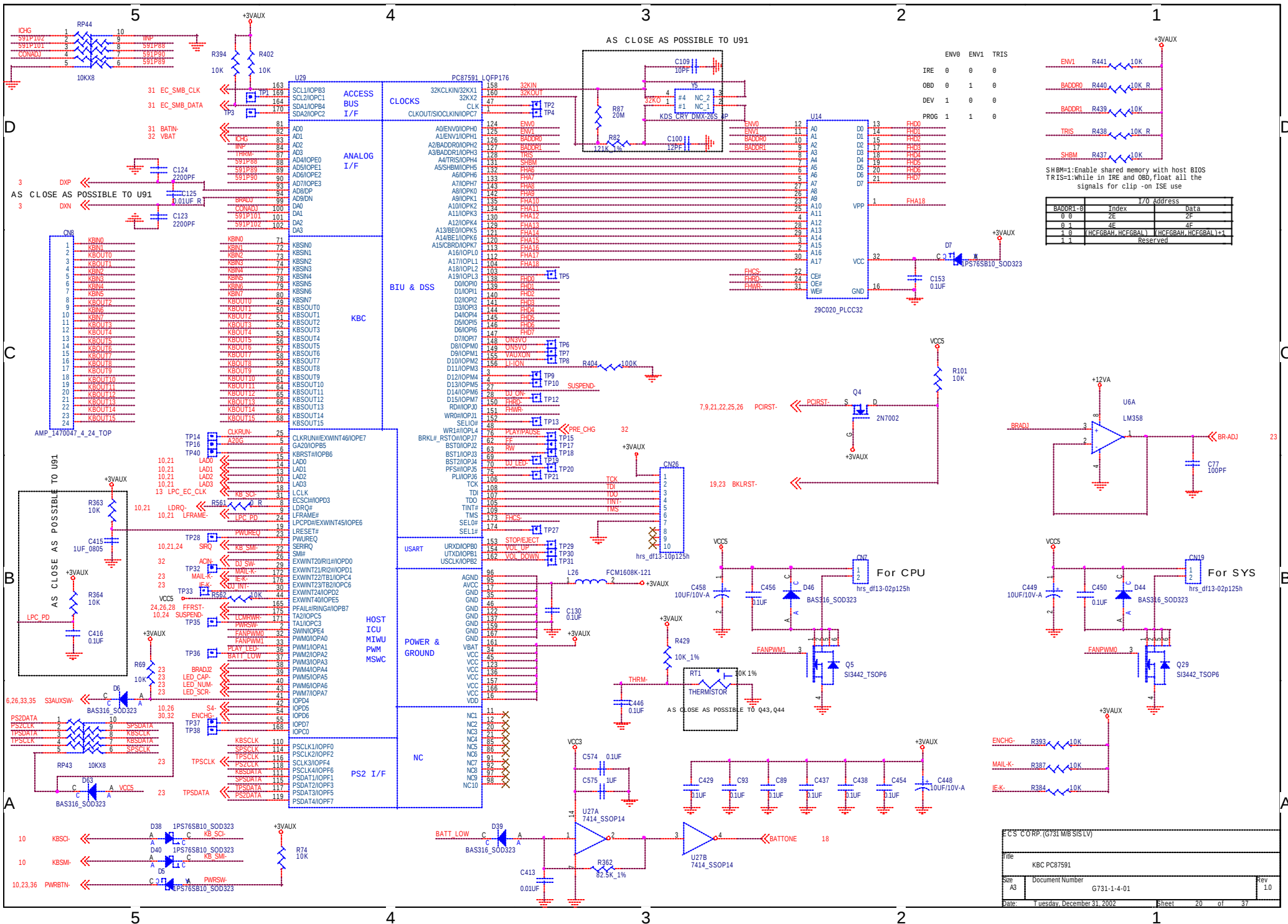
D The length must be less than 1 inch



B

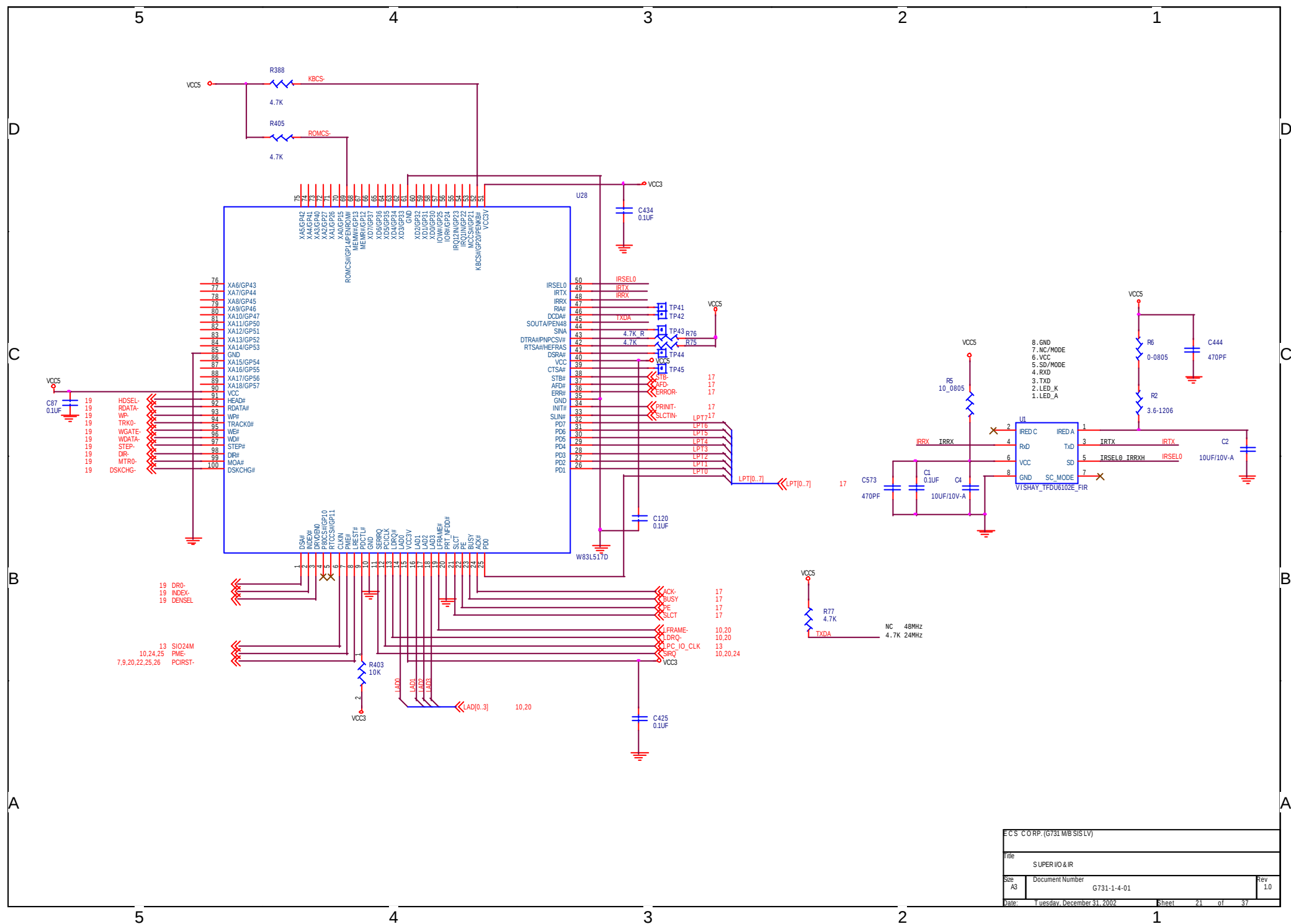


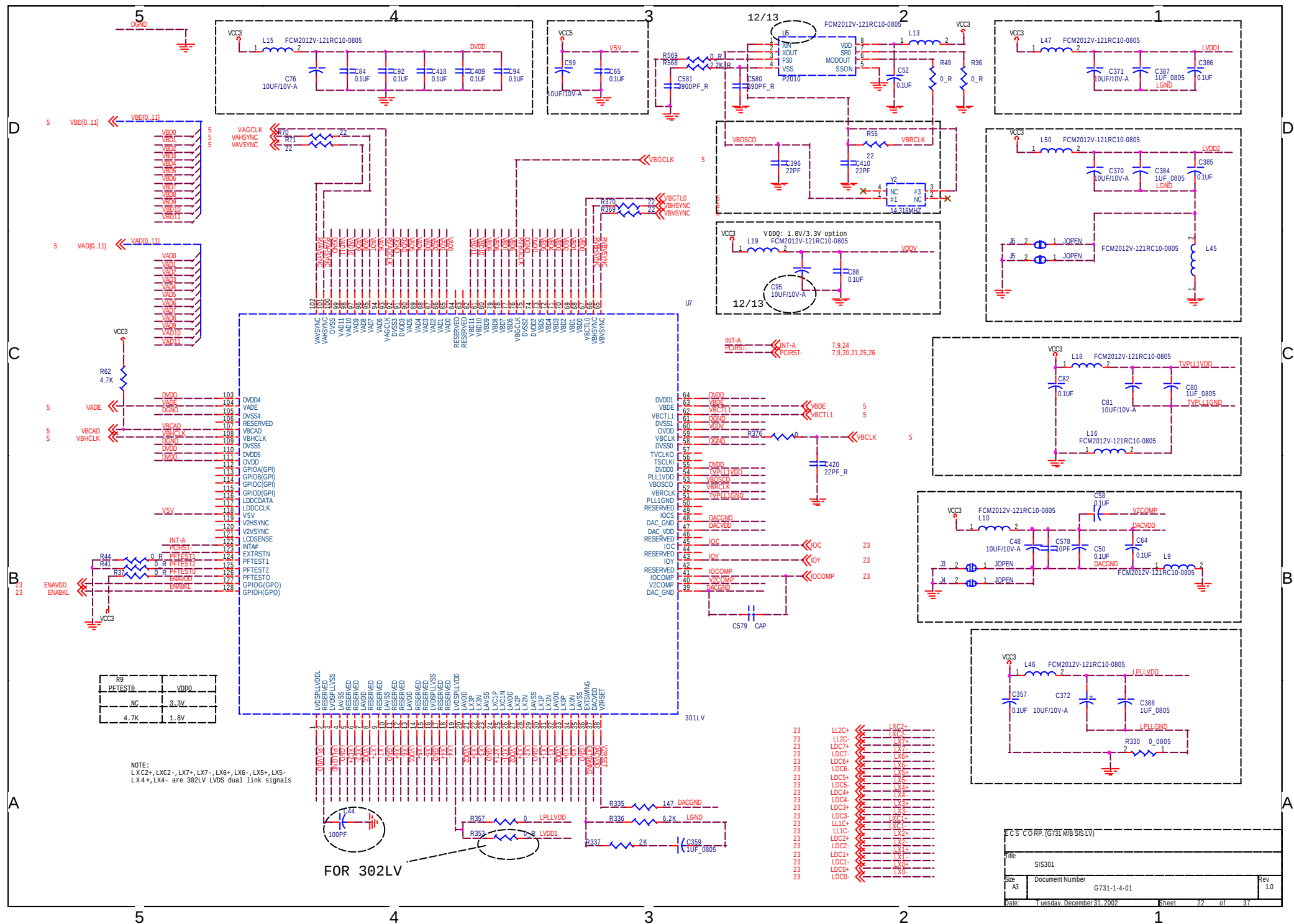
A

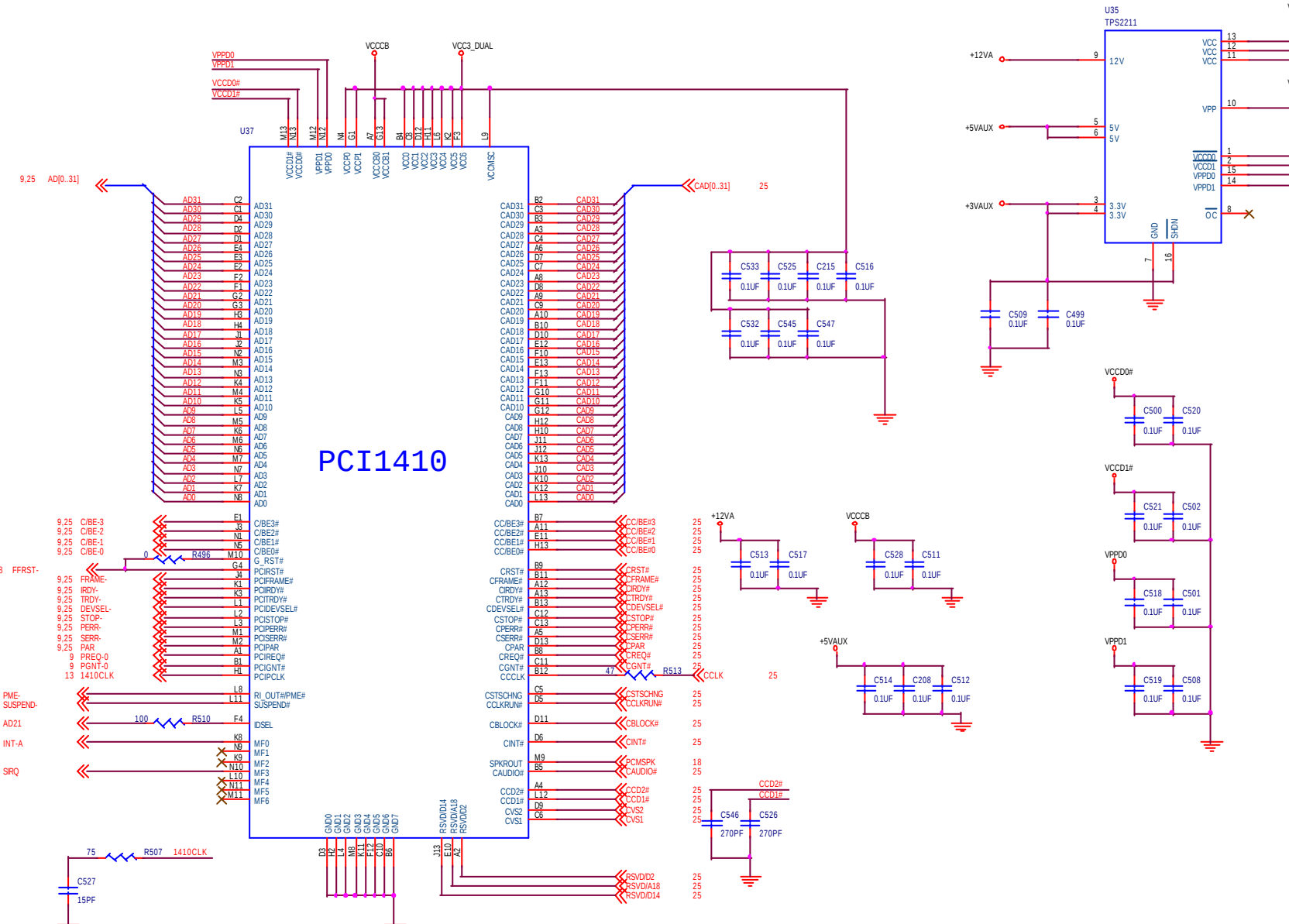


I/O Address		Index	Data
BADDR1-0	0 0	2E	2F
0 1	4E	4F	4F
1 0	HCFCBAH, HCFCBAL	HCFCBAH, HCFCBAL	+1
1 1	Reserved		

ECS CORP. (G731 MIBSIS LV)			
KBC PC87591			
Size	Document Number	Rev	
A3	G731-1-4-01	1.0	
Date:	Tuesday, December 31, 2002	Sheet	20 of 37

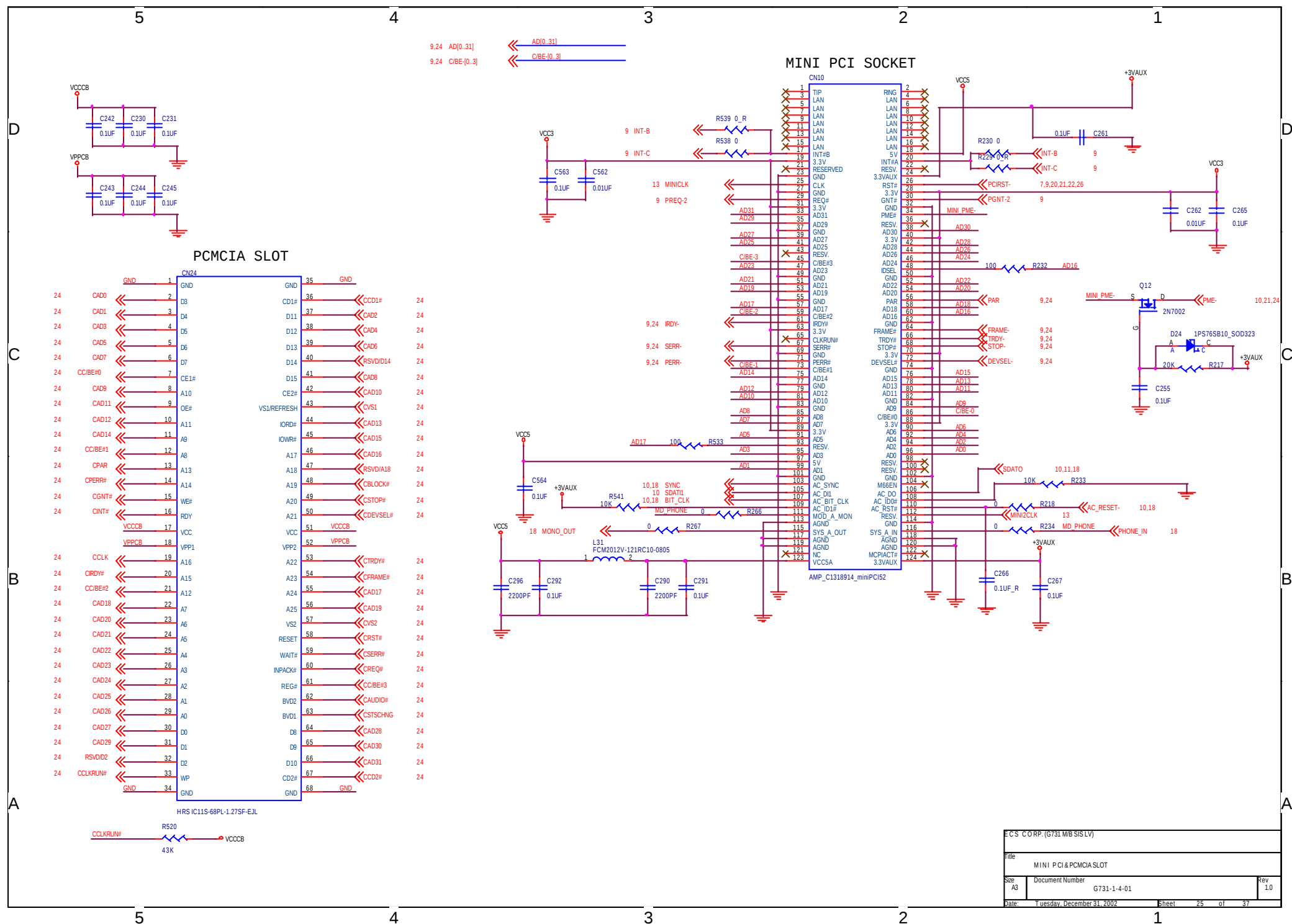


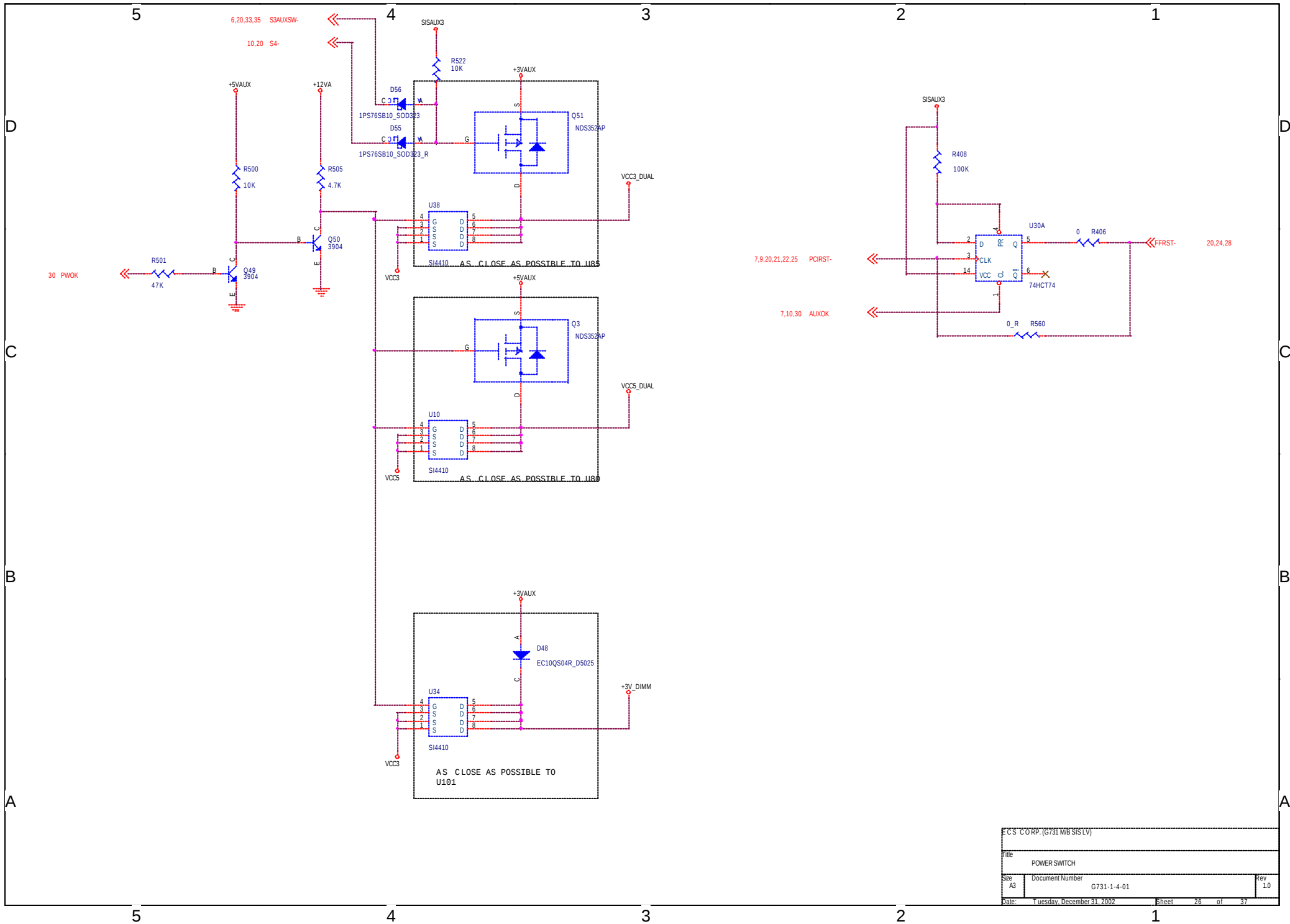




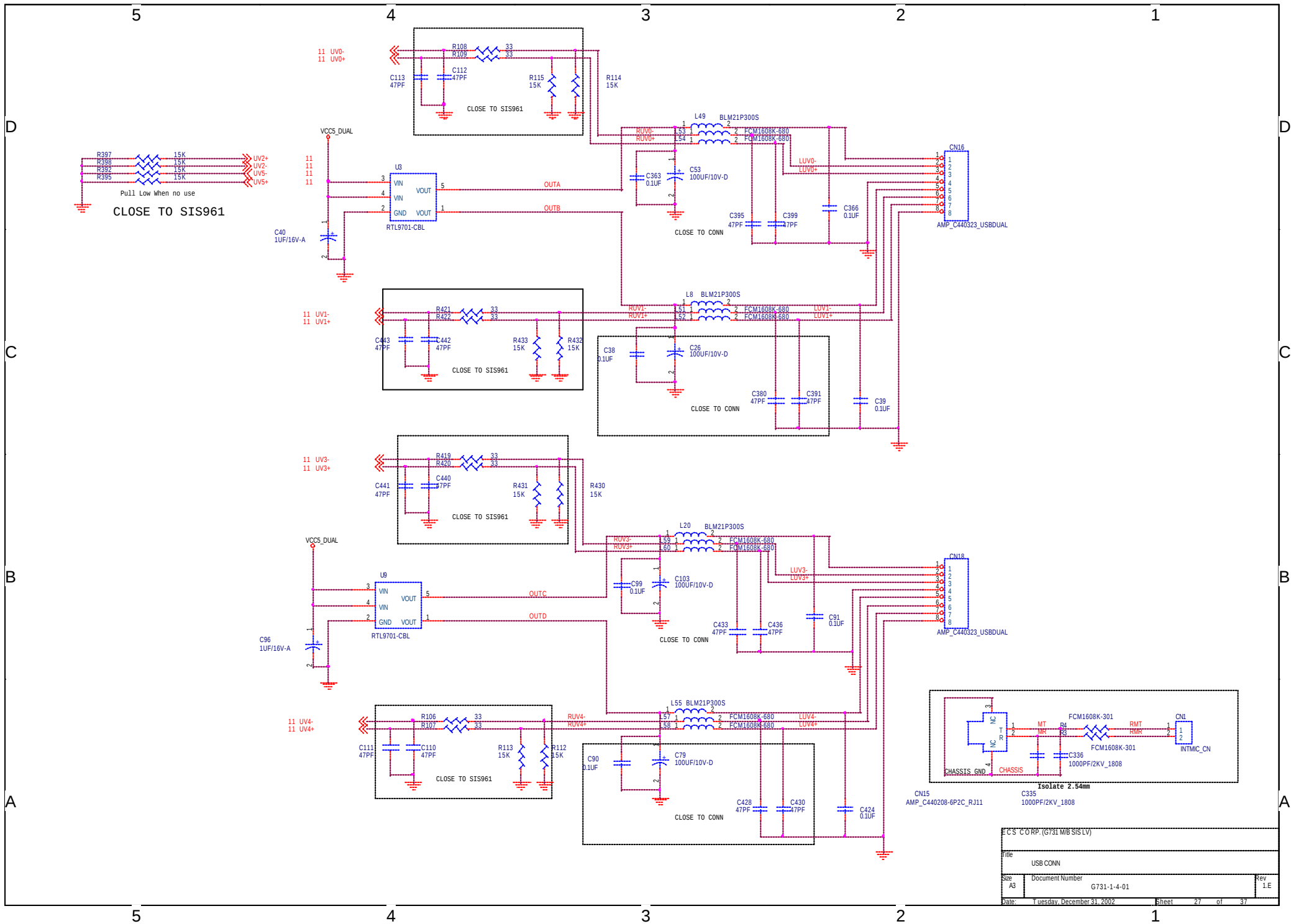
PCI1410

ECS CORP. (G731 MIB SIS LV)			
File			
PCI 1410			
Size	Document Number	Rev	
A3	G731-1-4-01	0.0	
Date:	Tuesday, December 31, 2002	Sheet	24 of 37

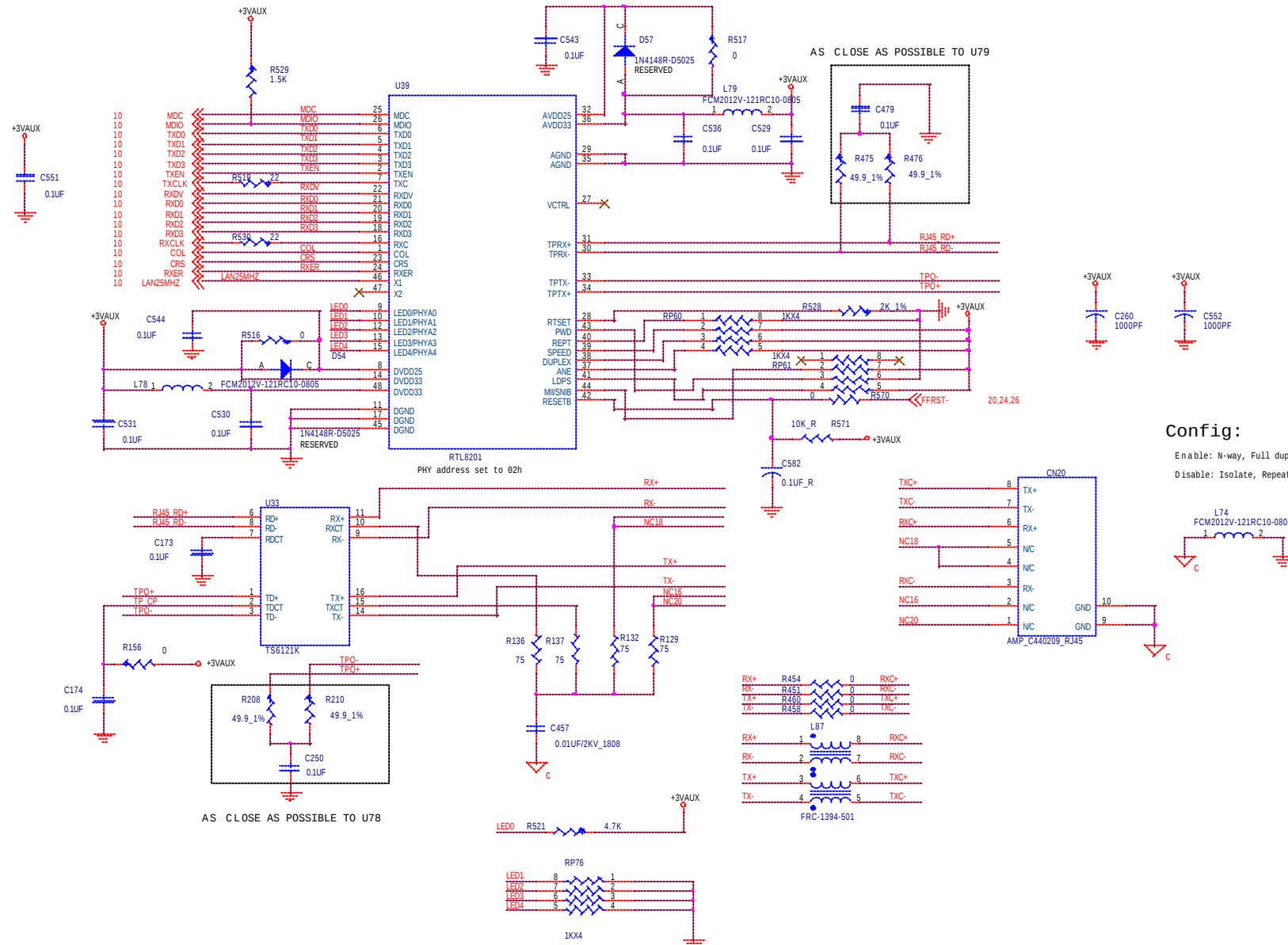




ECS CORP. (G731 MIB SIS LV)			
Title POWER SWITCH			
Size A3	Document Number G731-1-4-01		Rev 1.0
Date: Tuesday, December 31, 2002	Sheet 26	of 37	

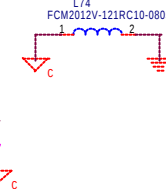


RTL8201

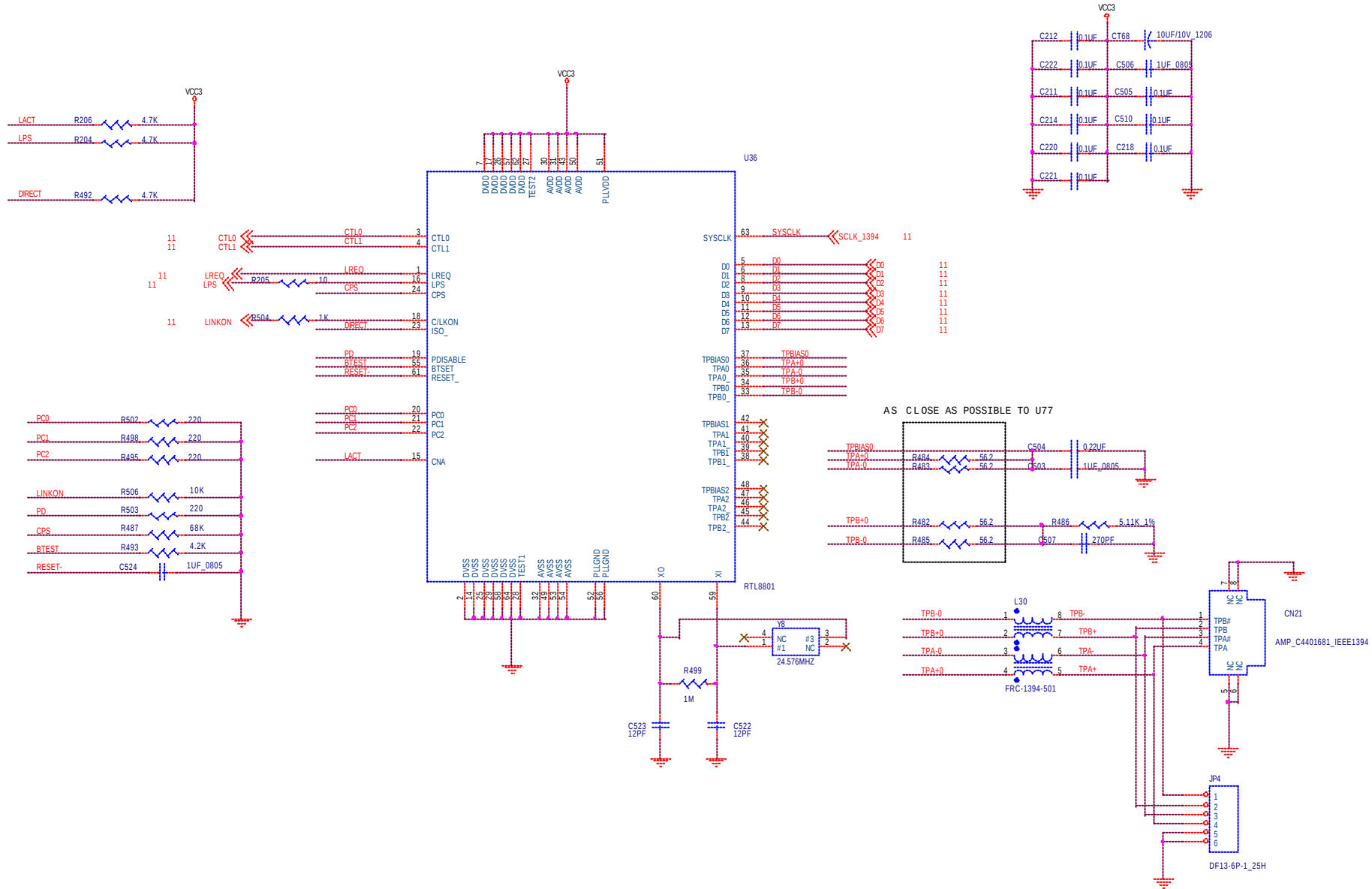


Config:

Enable: N-way, Full duplex, 100Mbps, Link Down Power Saving
Disable: Isolate, Repeater Mode

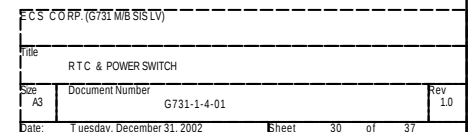
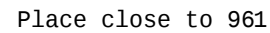


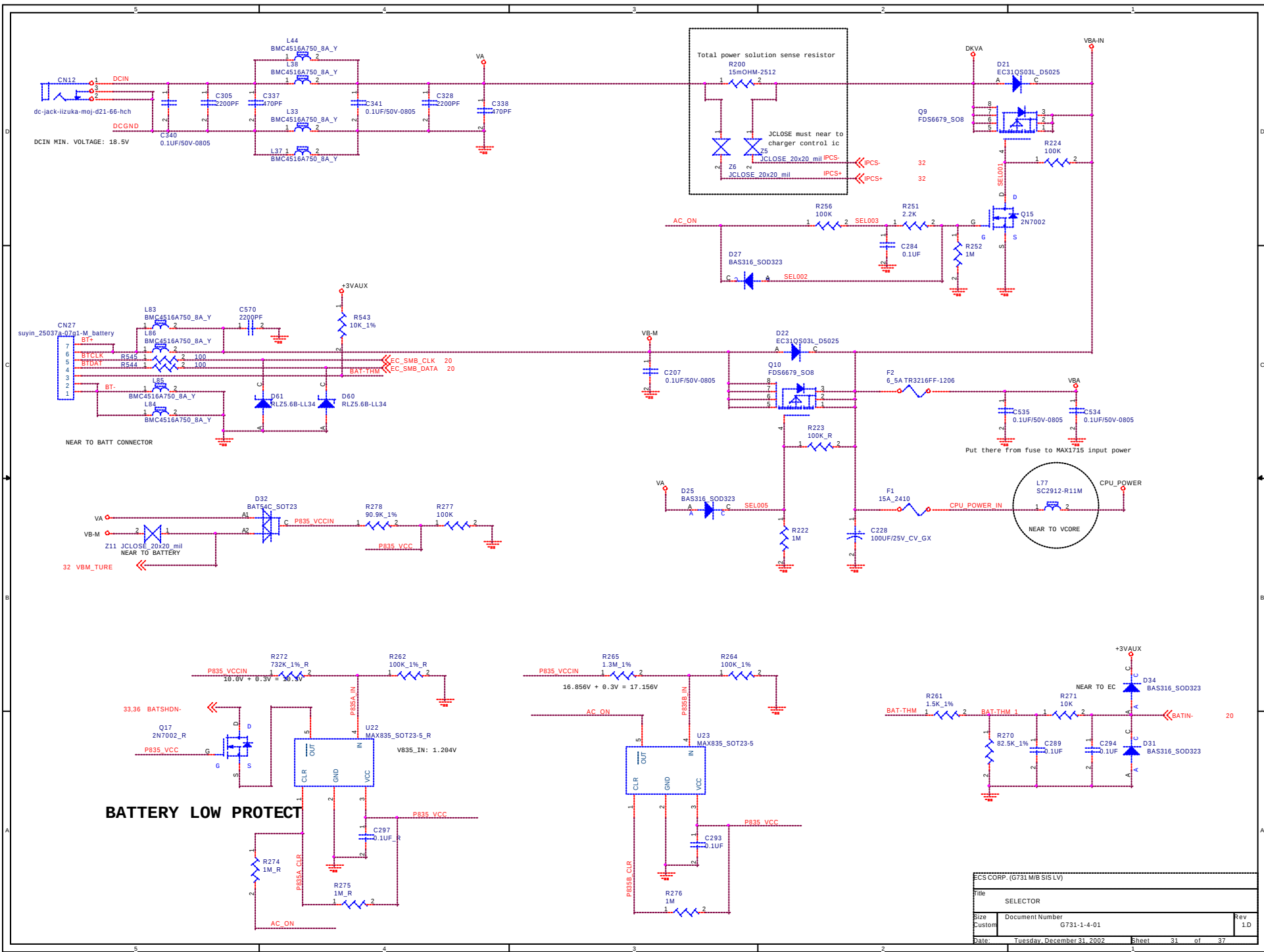
ECS CORP.(G731 MBSISLV)			
Title LAN			
Size A3	Document Number G731-1-4-01		Rev 1.0
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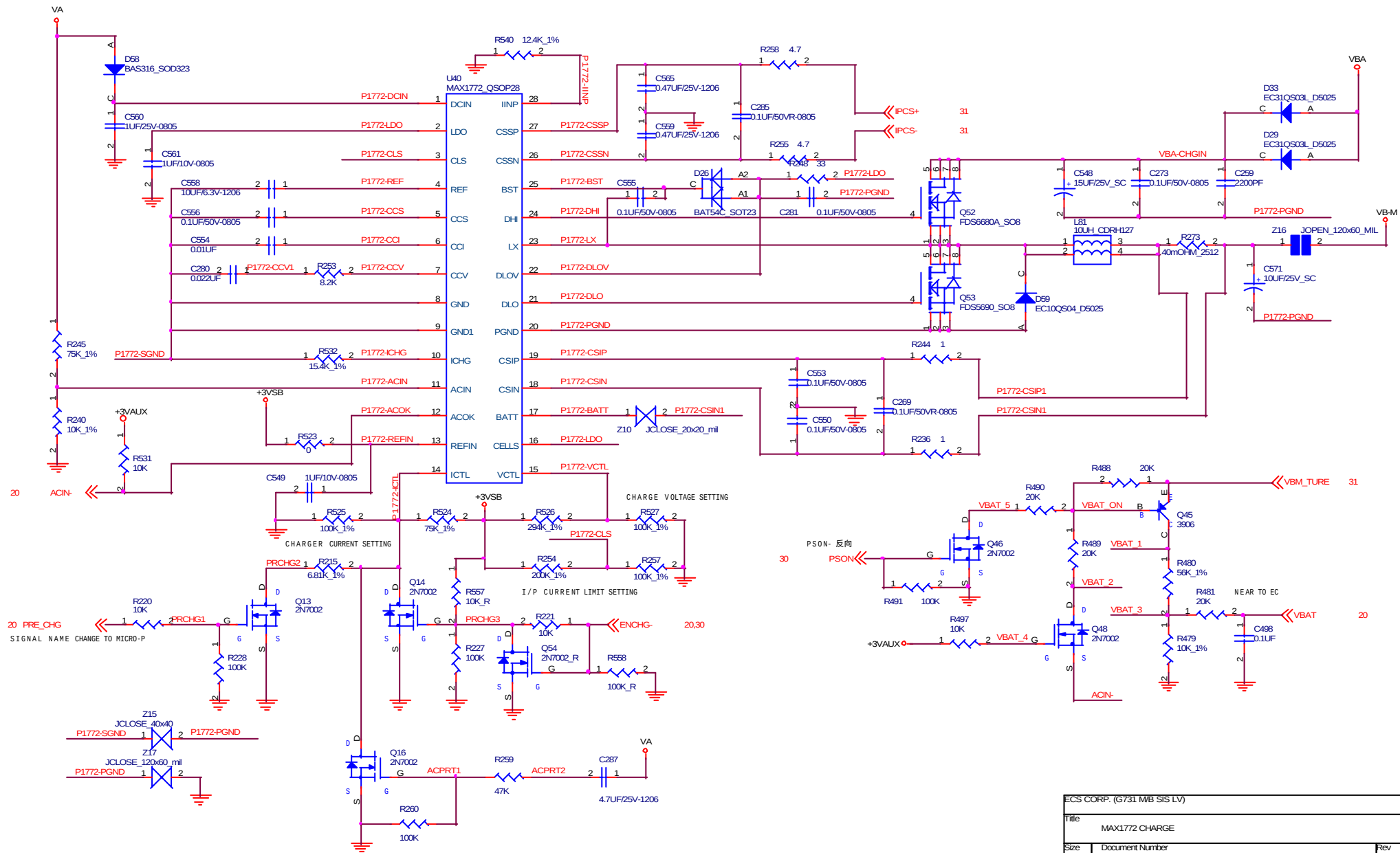
ECS CORP. (G731 MIBSIS LV)			
Title			
IEEE 1394			
Size	Document Number	Rev	
A3	G731-1-4-01	1.0	
Date: Tuesday, December 31, 2002		Sheet	29 of 37

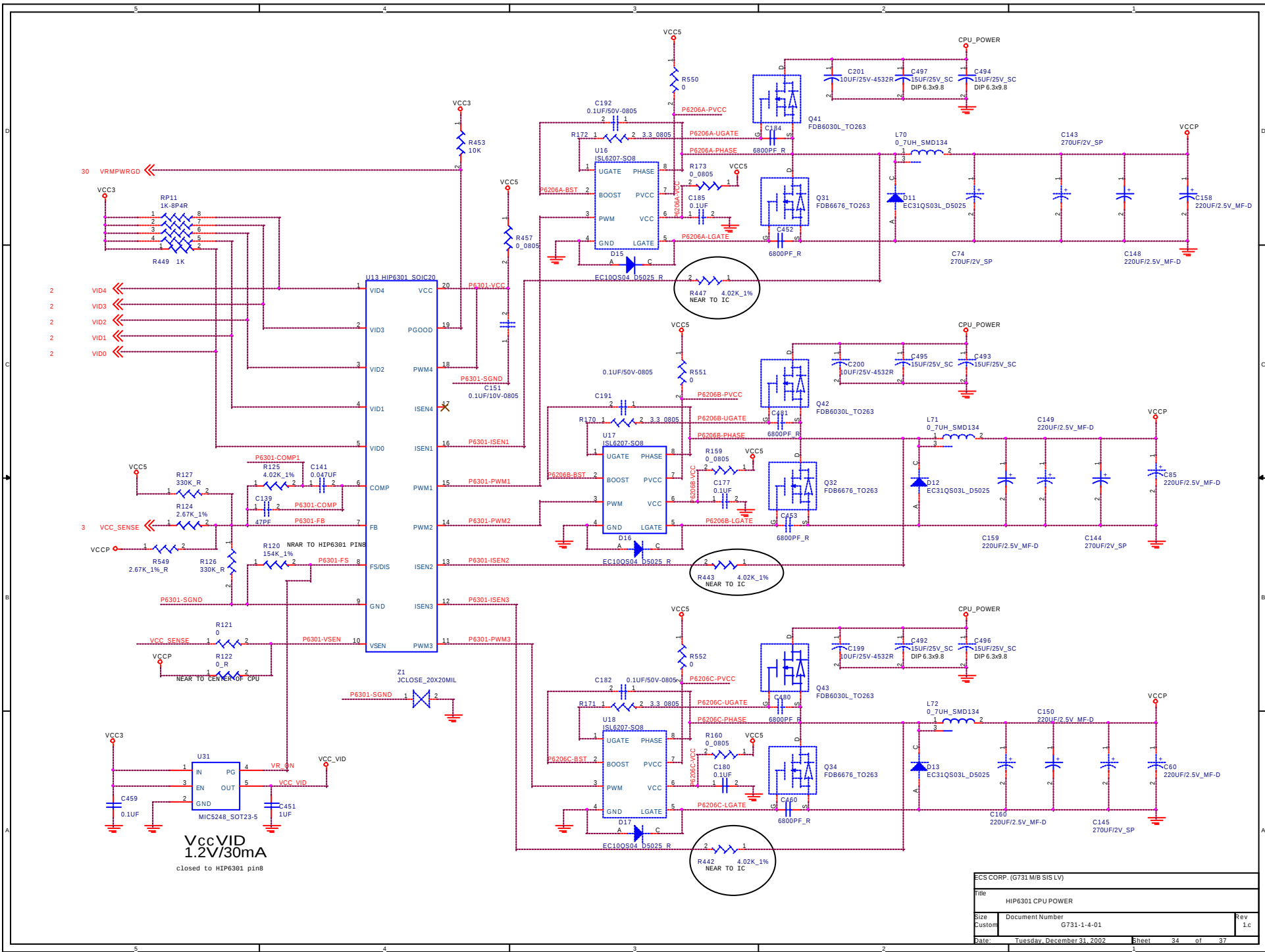
Sis is not responsible for RTC problems from foreign designs.

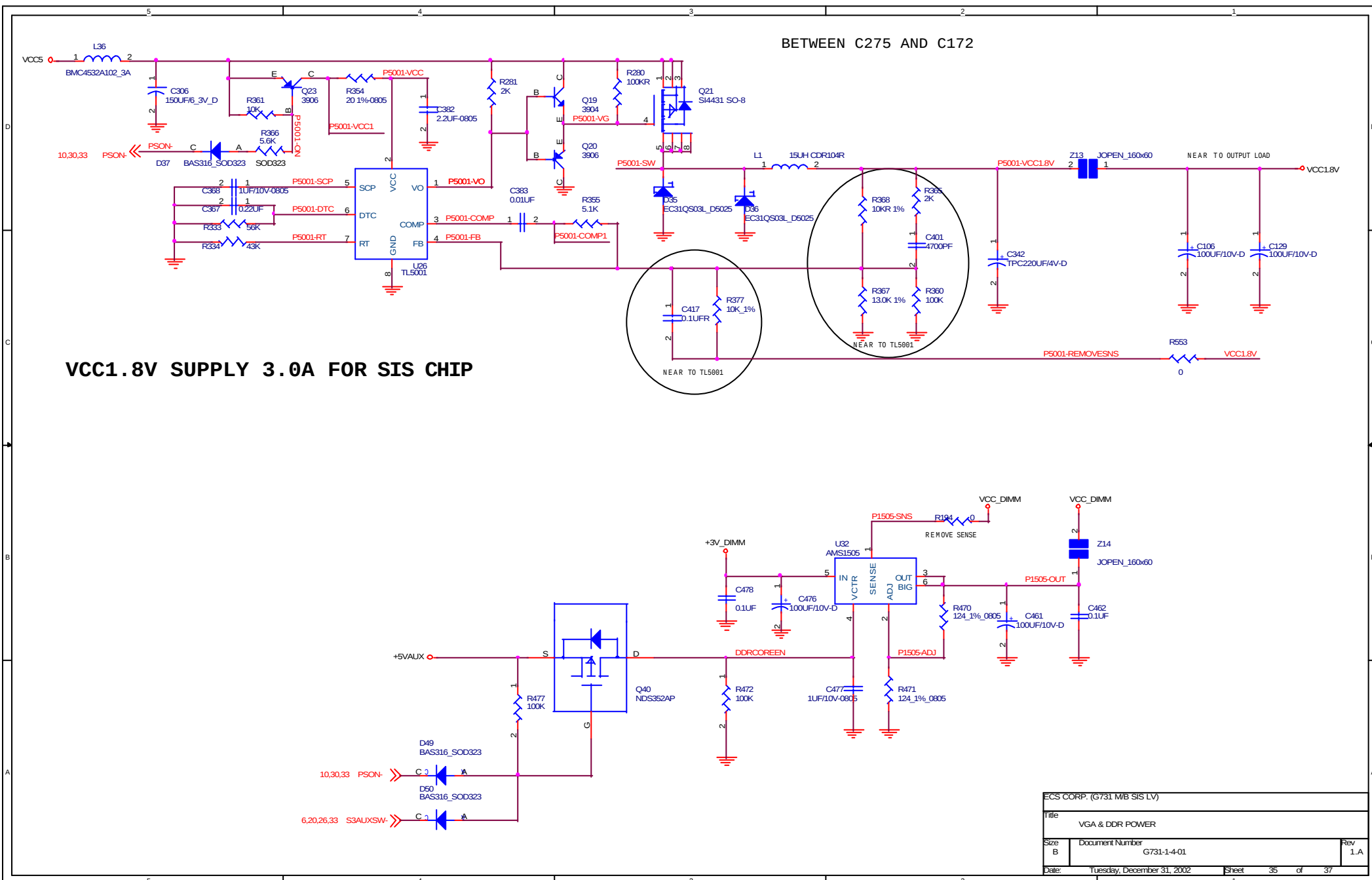


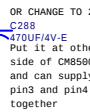


ECS CORP. (G731 MIB SIS LV)			
Title	SELECTOR		
Size	Document Number	Rev	
Custom	G731-1-4-01	1.0	
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Title DDR_VTT & STAND BY POWER			
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HISTORY:

1.0 : INITIAL

1.A : To improve a stable switch waveform on VCC1.8V

1.B : Decrease TV-OUT EMI and Headphone high-frequence noise

1.C : ISL6206 shortage.

1.D : 68UF/25V_CV_AX shortage.

1.E : Add new EMI solution for passing LGA test.

ECS CORP. (G731 MIB SIS LV)			
Title		HISTORY	
Size B	Document Number G731-1-4-01		Rev 1.E
Date:	Tuesday, December 31, 2002	Sheet	37 of 37