

RESISTOR

Symbol name	Value	Tolerance (J: 5%, F: 1%, D: 0.5%, B: 0.1 %)	Rating 0402=> 1/16W, 25V 0603 => 1/16W, 75V 0805 => 1/10W, 100V	Size 2=>0402, 3=>0603, 5=>0805, 6=>1206, 0=>1210
10KR3	10K Ohm	If no letter, it means J: 5%	1/16W, 75V	0603
33D3R5	33.3 Ohm	If no letter, it means J: 5%	1/10W, 100V	0805
1KR3F	1K Ohm	F: 1%	1/16W, 75V	0603

The naming rule is value + R + size + tolerance
 For the value, it can be read by the number before R. (R means resistor)
 For the tolerance, it can be read from the last letter.
 For the rating, we don't show on the symbol name.
 For the size, R2=>0402, R3=>0603, R5=>0805,.....

PCI TABLE

DEVICE	IDSEL	IRQ (Default)	REQ# / GNT#
MINIPCI SLOT	AD18	F, G	REQ# 3/ GNT#3
CARDBUS R5C811	AD16	SERIRQ	REQ#0 / GNT#0
USB UHCI	AD29	A, C, D	
USB 2.0 EHCI	AD29	H	
DMI-to-PCI/ AC97 Modem/ AC97 Audio	AD30	B B	
LPC Bridge IDE SATA SMBus	AD31	C C B	
PCI Express	AD28	A, B, C, D	

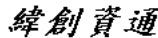
CAPACITOR

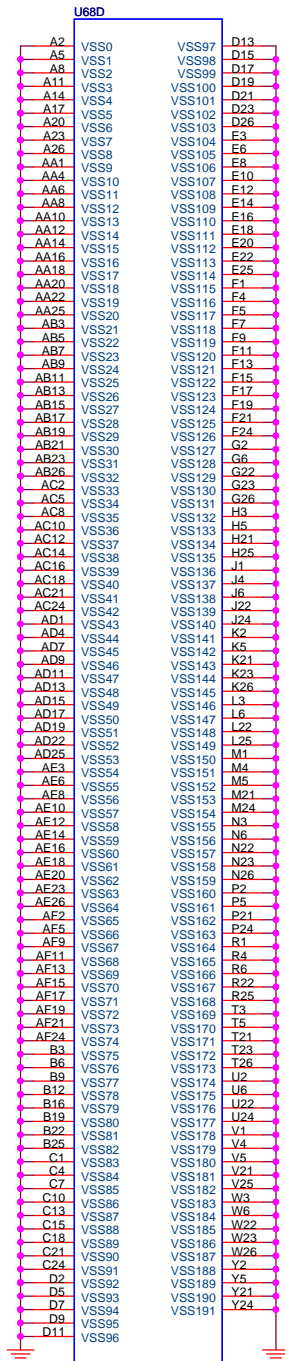
Symbol name	Value	Tolerance (M: +/-20, K: +/-10, Z: +80/-20)	Rating	Size 2=>0402, 3=>0603, 5=>0805, 6=>1206, 0=>1210
SCD1U10V2MX-1	0.1uF	M/X5R	10V	0402
SC10U6D3V5MX	10uF	M/X5R	6.3V	0805
SC2D2U16V5ZY	2.2uF	Z/Y5V	16V	0805

The naming rule is
 Capacitor type + value + rating + size + tolerance + material
 SCD1U10V2MX-1
 SC=> SMT Ceremic, TC=> POS cap or SP cap
 D1U => 0.1uF
 10V => the voltage rating is 10V
 2=> 0402, 3=>0603, 5=>0805
 M=>tolerance M, K, Z
 X=> X7R/X5R, Y=> Y5V
 -1 => symbol version, nonsense to EE characteristic

PLANAR_ID[3..0]

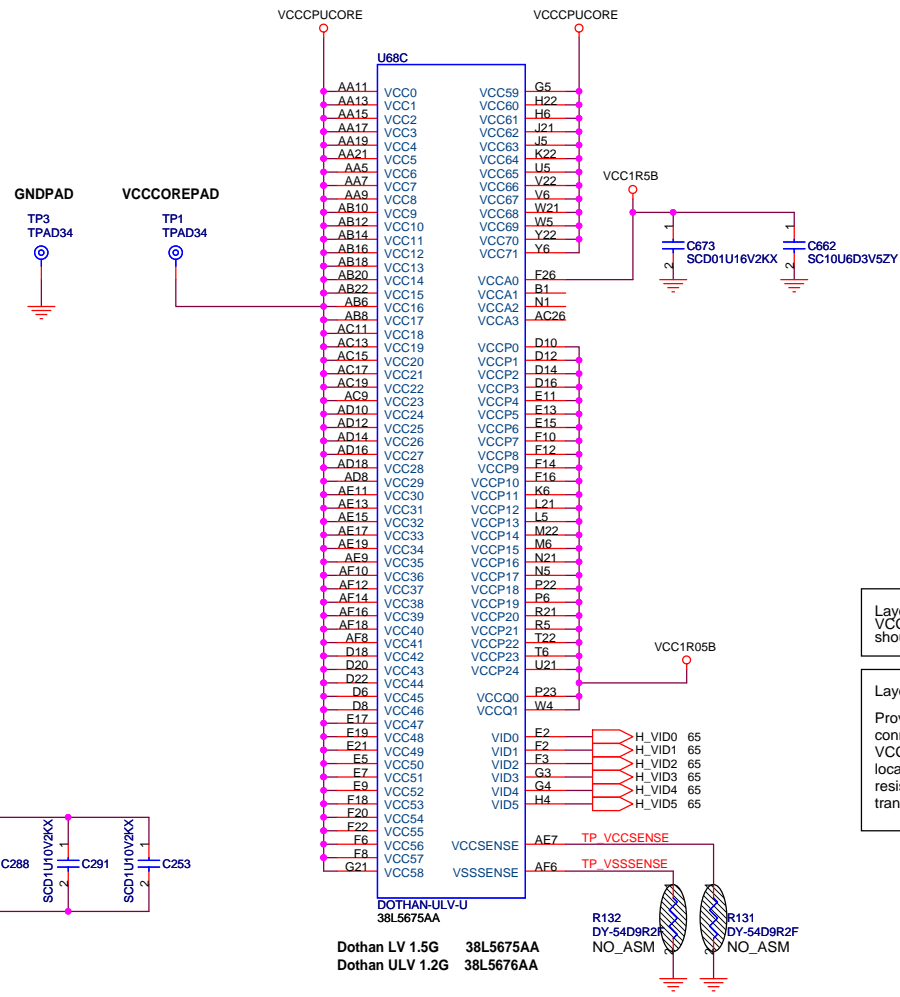
ICH4-M GPIO _n	31	30	29	26	Planar ID Version	Planar PCB Version
PLANAR_ID _n	3	2	1	0		
	0	0	0	0	SDV	04212-SA
	0	0	0	1	SIV	04212-SB
	0	0	1	0	SIT	04212-SC
	0	0	1	1	SVT	04212-1
	0	1	0	0		
	0	1	0	1		
	0	1	1	0		
	0	1	1	1		

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Reference		
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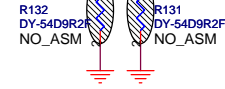


DOETHAN-ULV-U
38L5675AA

Dothan LV 1.5G 38L5675AA
Dothan ULV 1.2G 38L5676AA

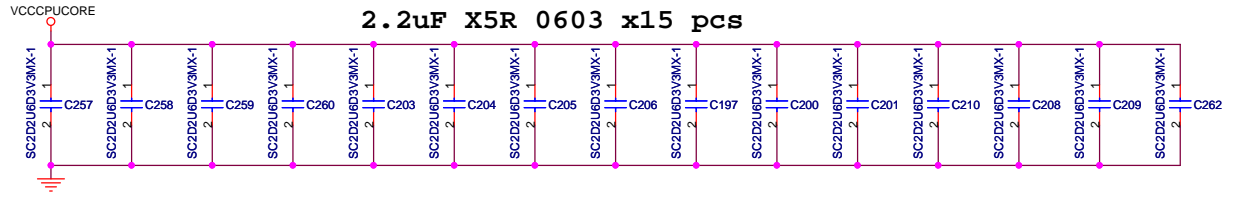
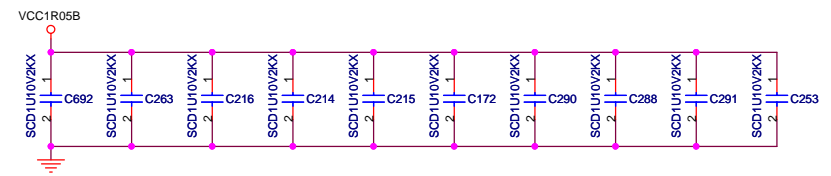


Dothan LV 1.5G 38L5675AA
Dothan ULV 1.2G 38L5676AA

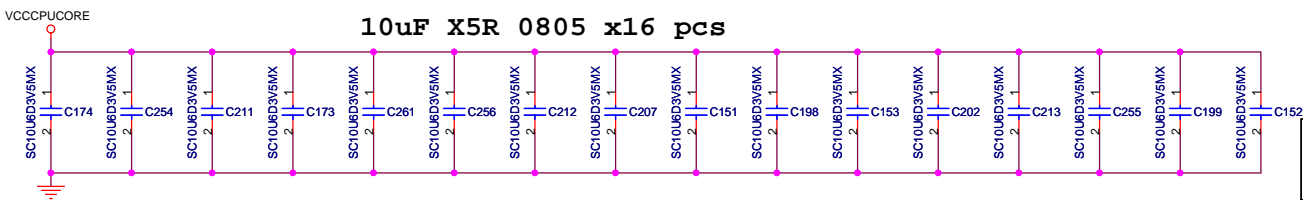


Layout Note:
VCCSENSE and VSSSENSE lines
should be of equal length.

Layout note:
Provide a test point (withno stub) to
connect a differential probe between
VCCSENSE andVSSSENSE at the
location where the two 54.9ohm
resistors terminate the 55 ohm
transmission line.



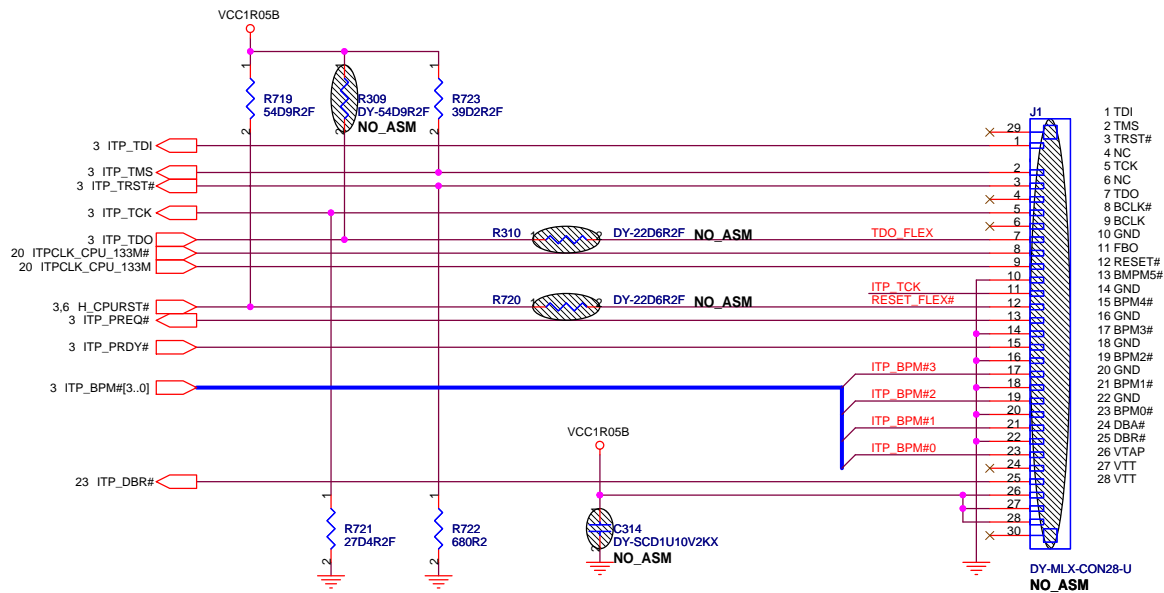
2.2uF X5R 0603 x15 pcs



10uF X5R 0805 x16 pcs

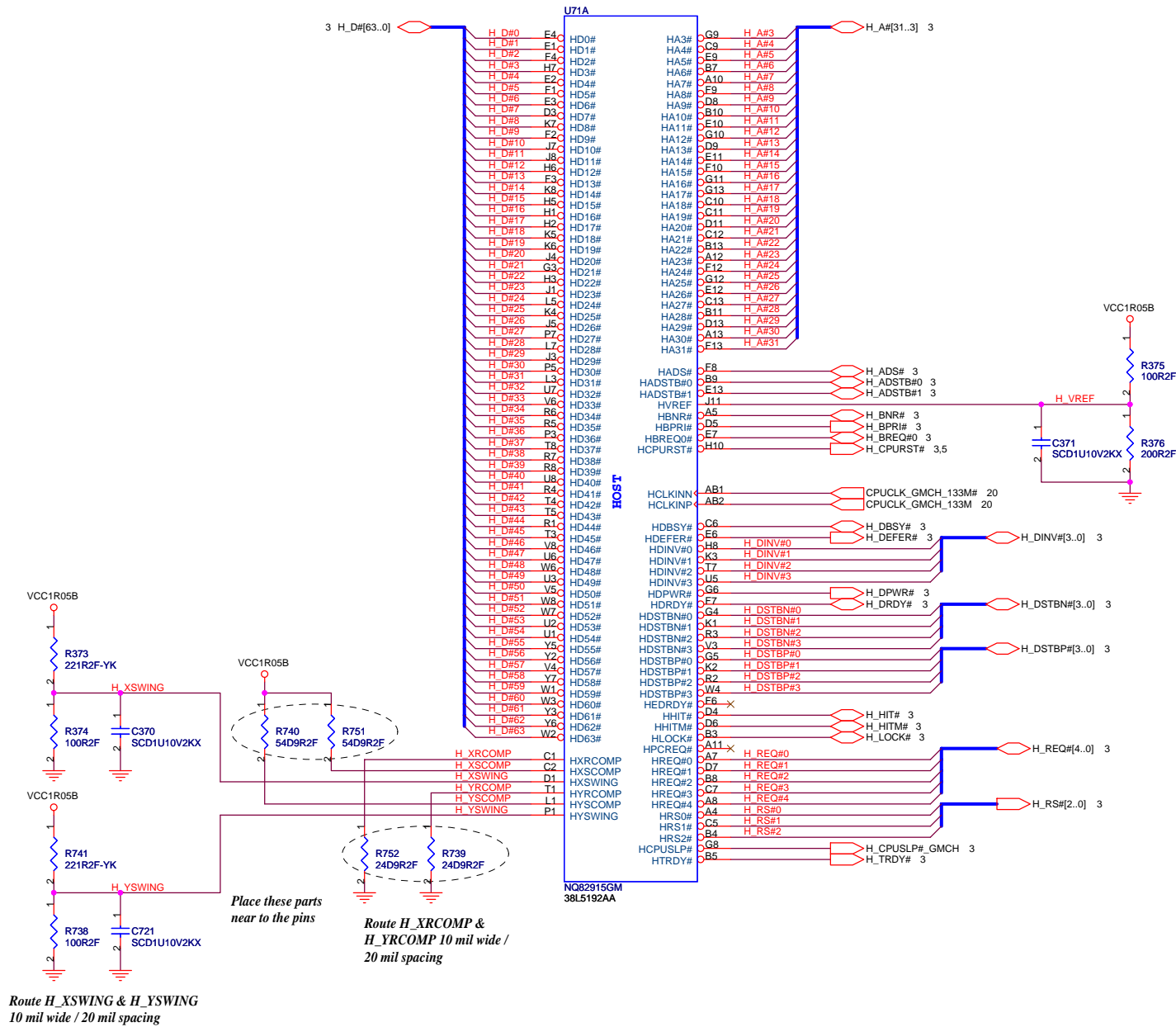
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Taipei Hsien 221, Taiwan, R.O.C.

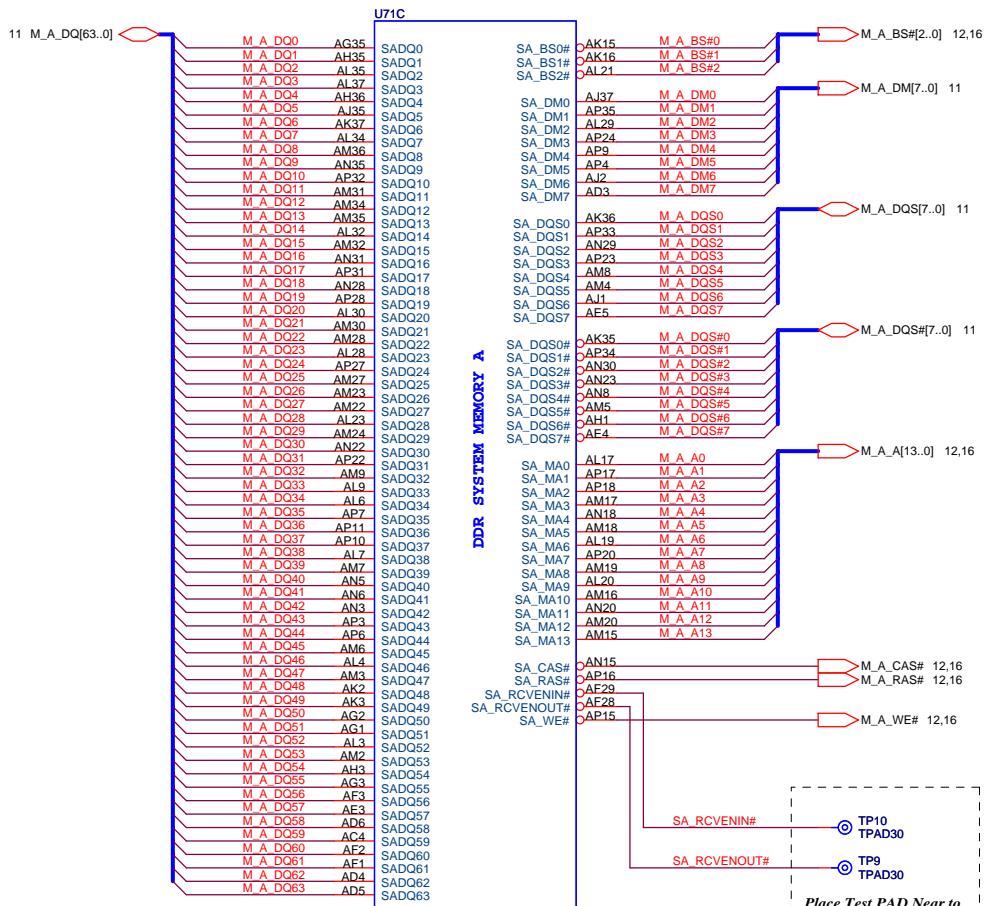
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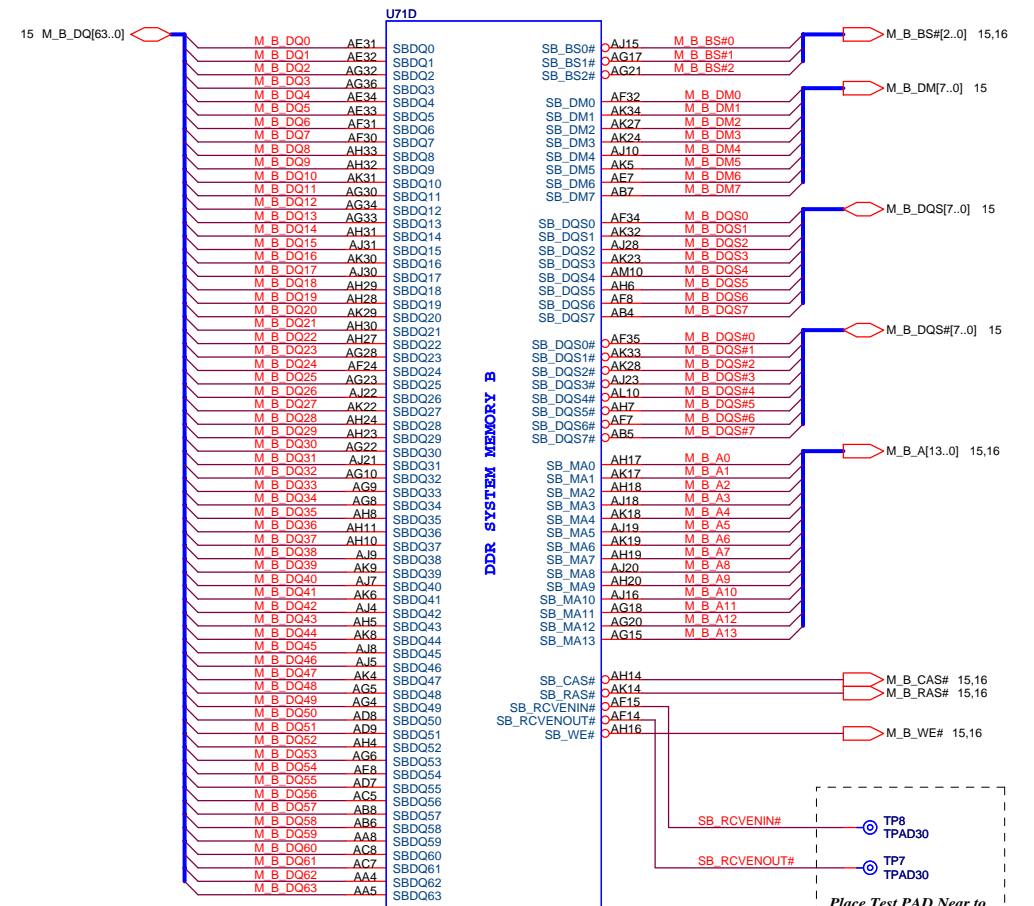
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(*2) CPURST# SIGNAL IS BRANCHED AT ALVISO PIN

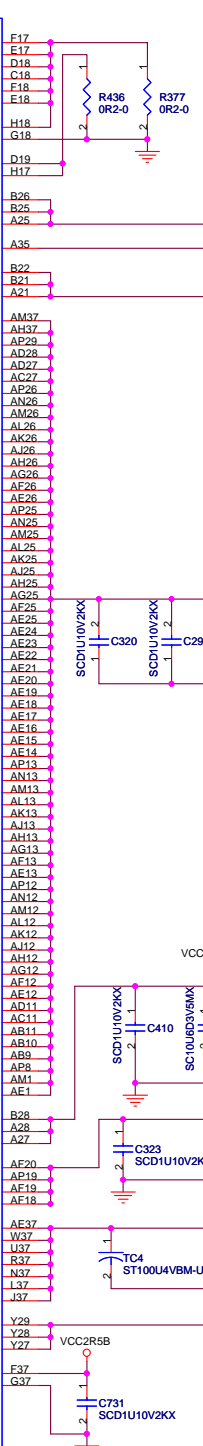
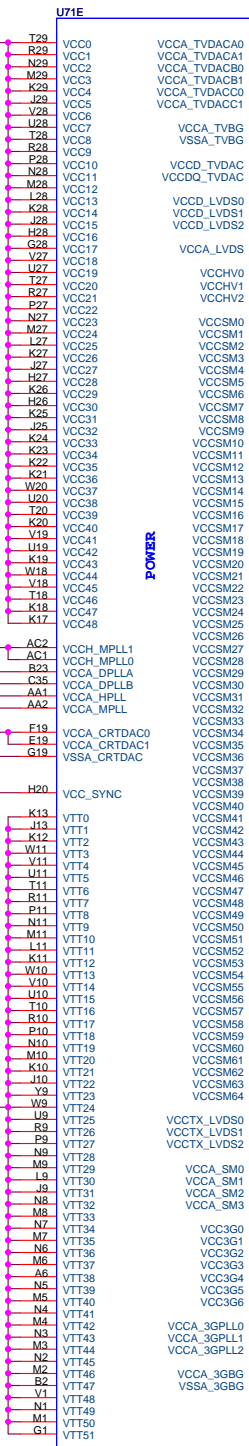
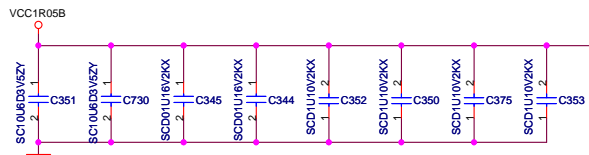




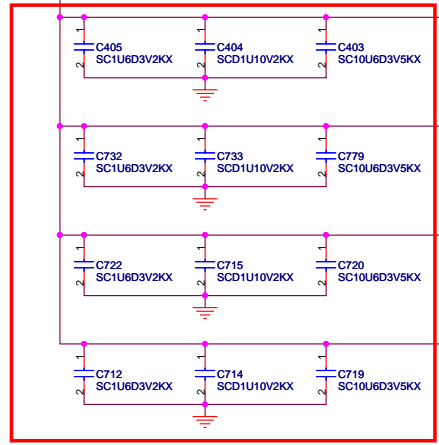
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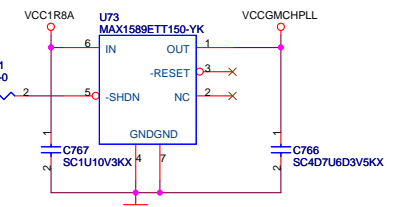
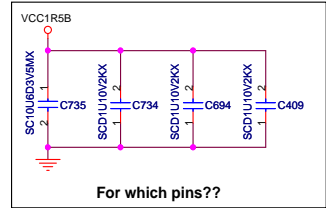
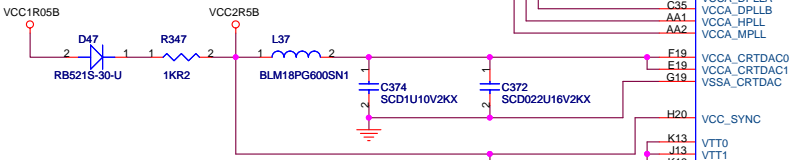
NQ82915GM
38L5192AA



ESR < 15 m-ohm



Route VSSACRTDAC gnd from GMCH to decoupling cap ground lead and then connect to the GND plane

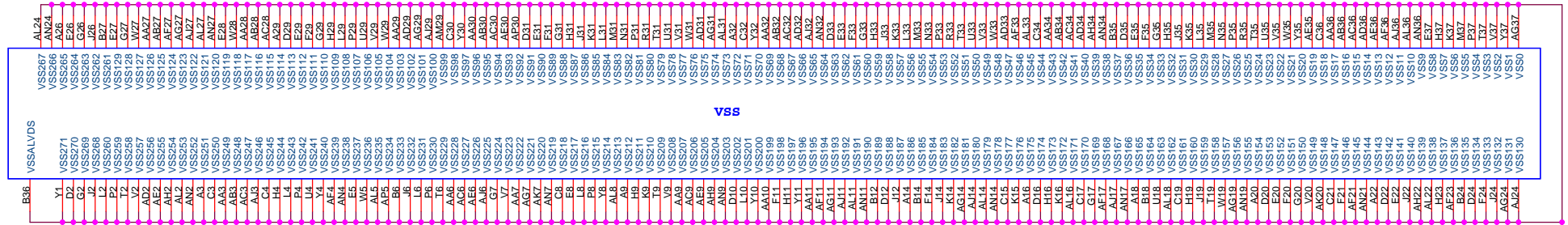


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Title		GMCH (4/5) : Power	
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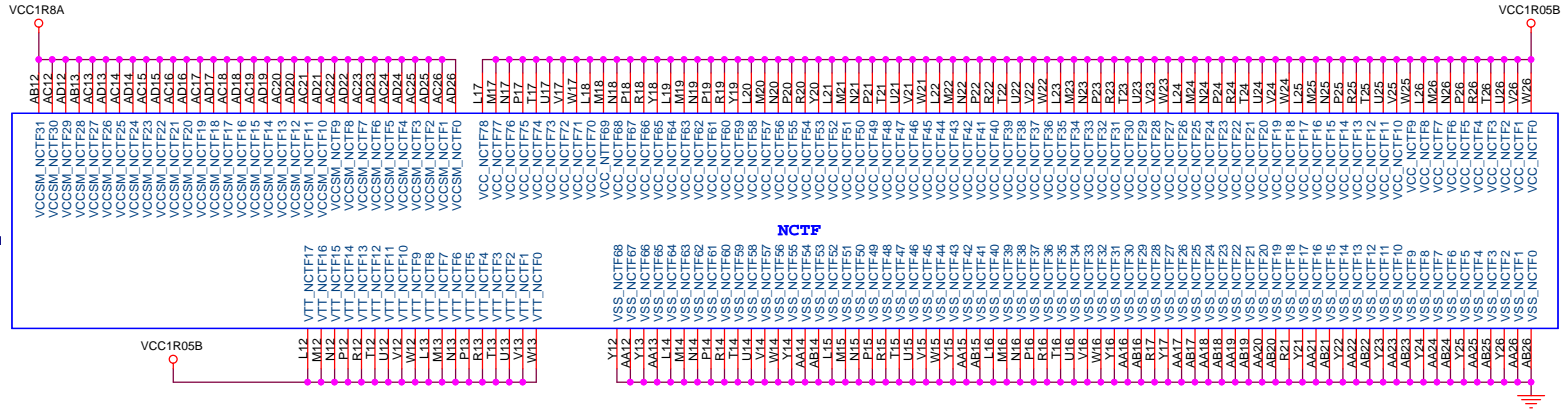
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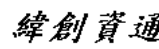


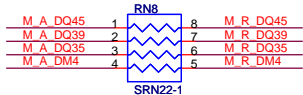
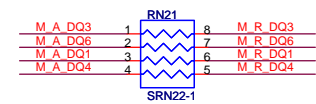
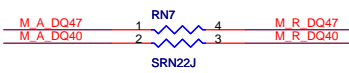
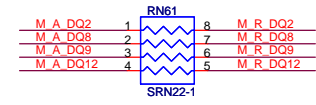
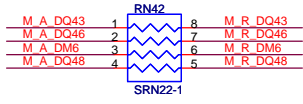
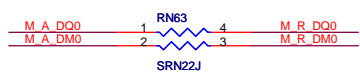
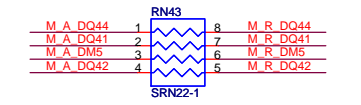
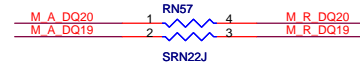
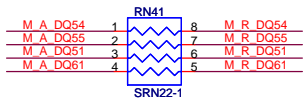
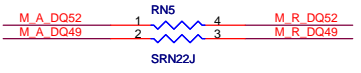
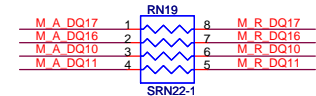
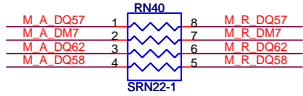
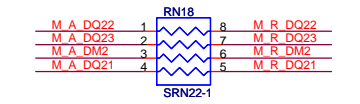
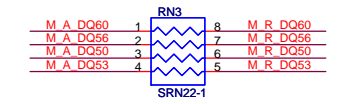
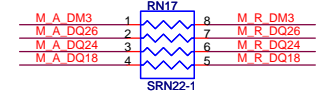
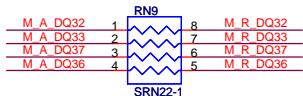
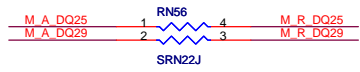
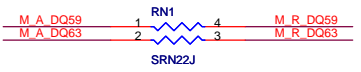
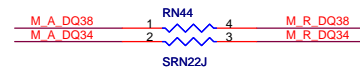
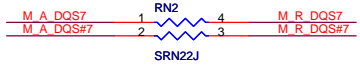
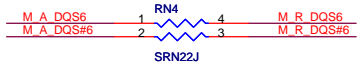
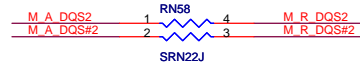
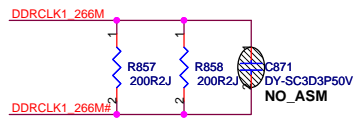
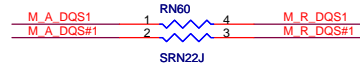
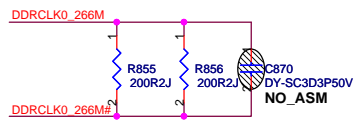
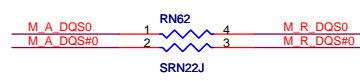
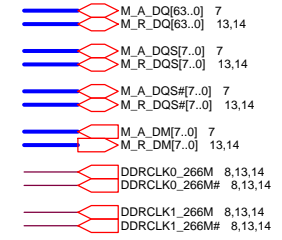
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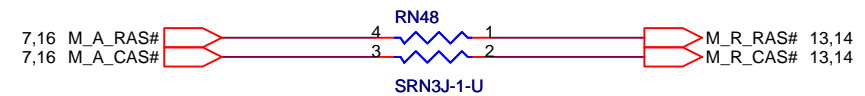
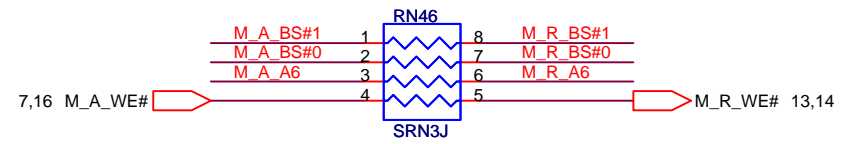
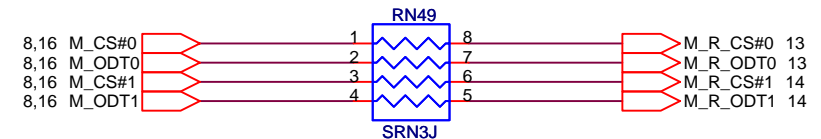
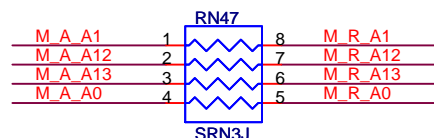
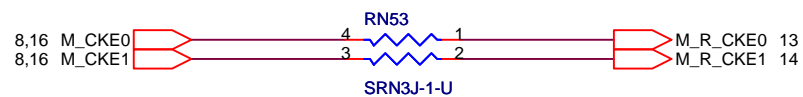
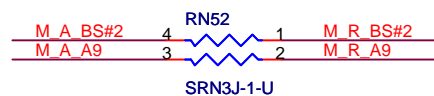
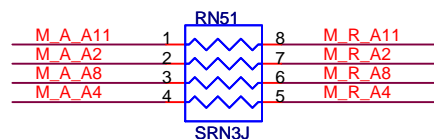
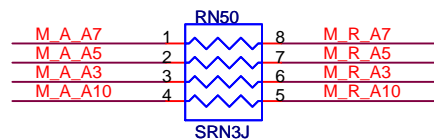
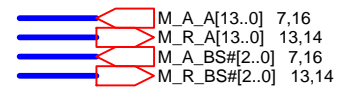
NCTF

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GMCH (5/5) : GND		
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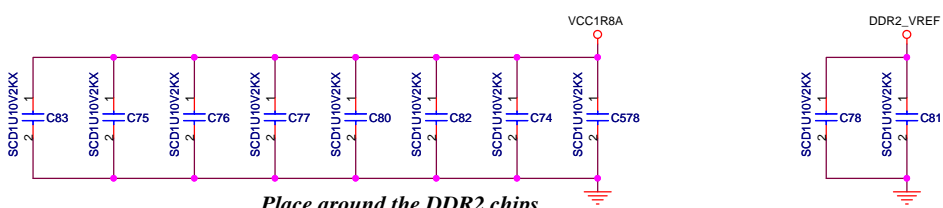
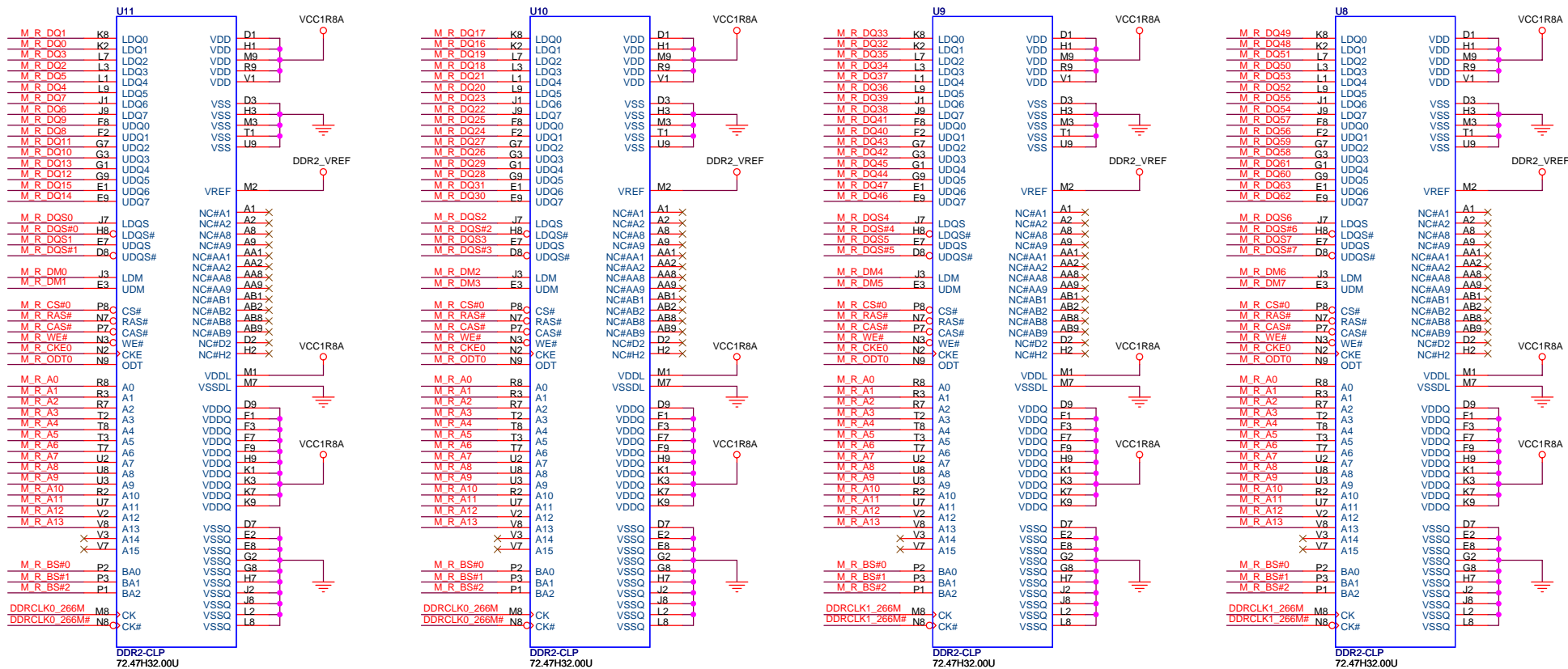
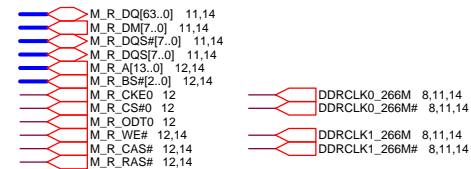
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 Size: A3 Document Number: **S Note-3** Rev: -1
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MEMORY RESISTORS (1/2)		
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On-board DDR2 Memory

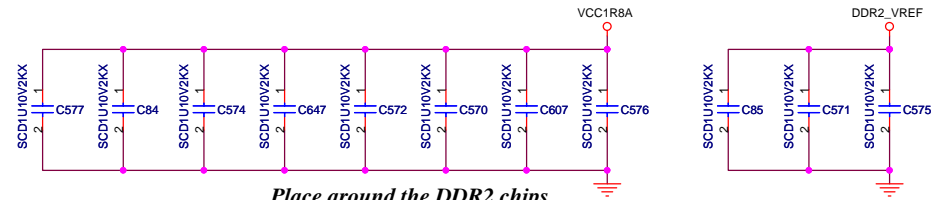
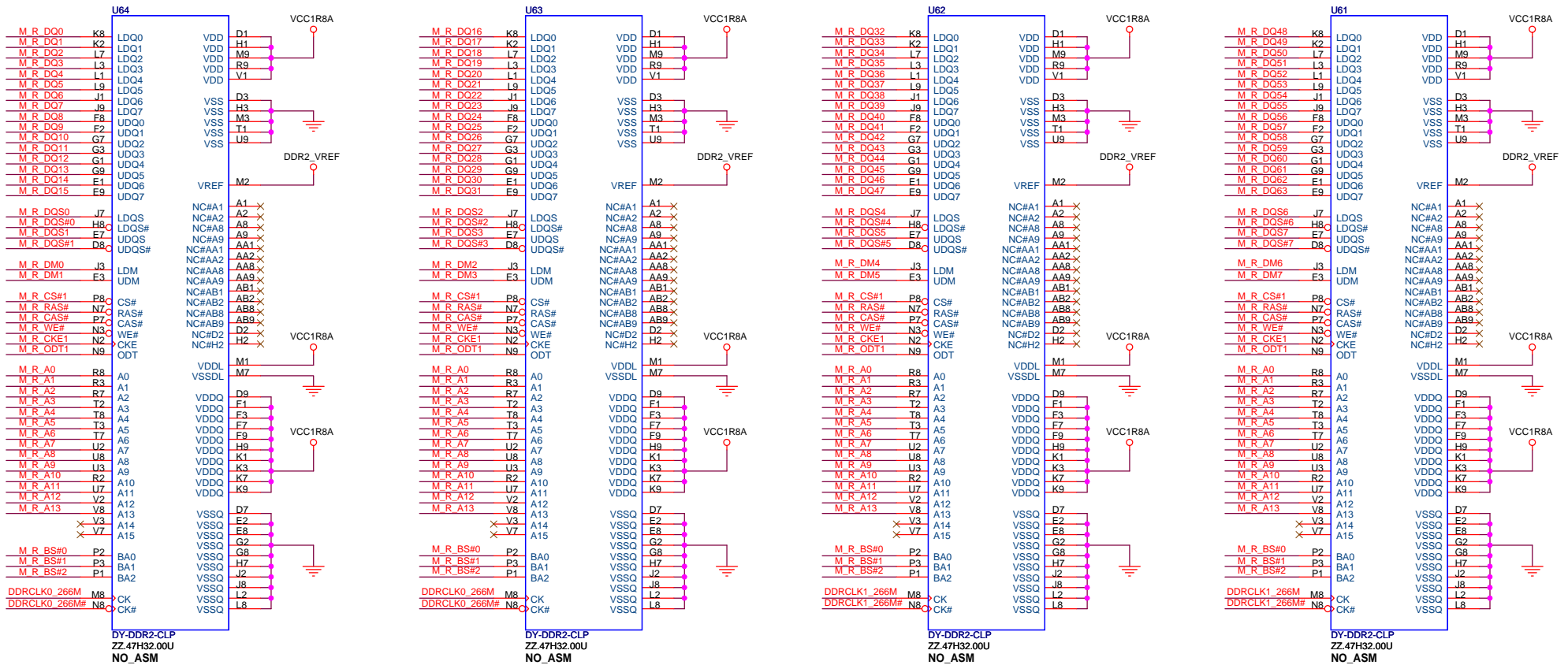
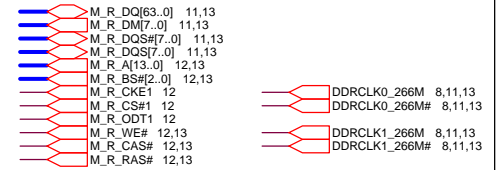


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BASE MEMORY BANK0

Title	BASE MEMORY BANK0		Rev
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On-board DDR2 Memory



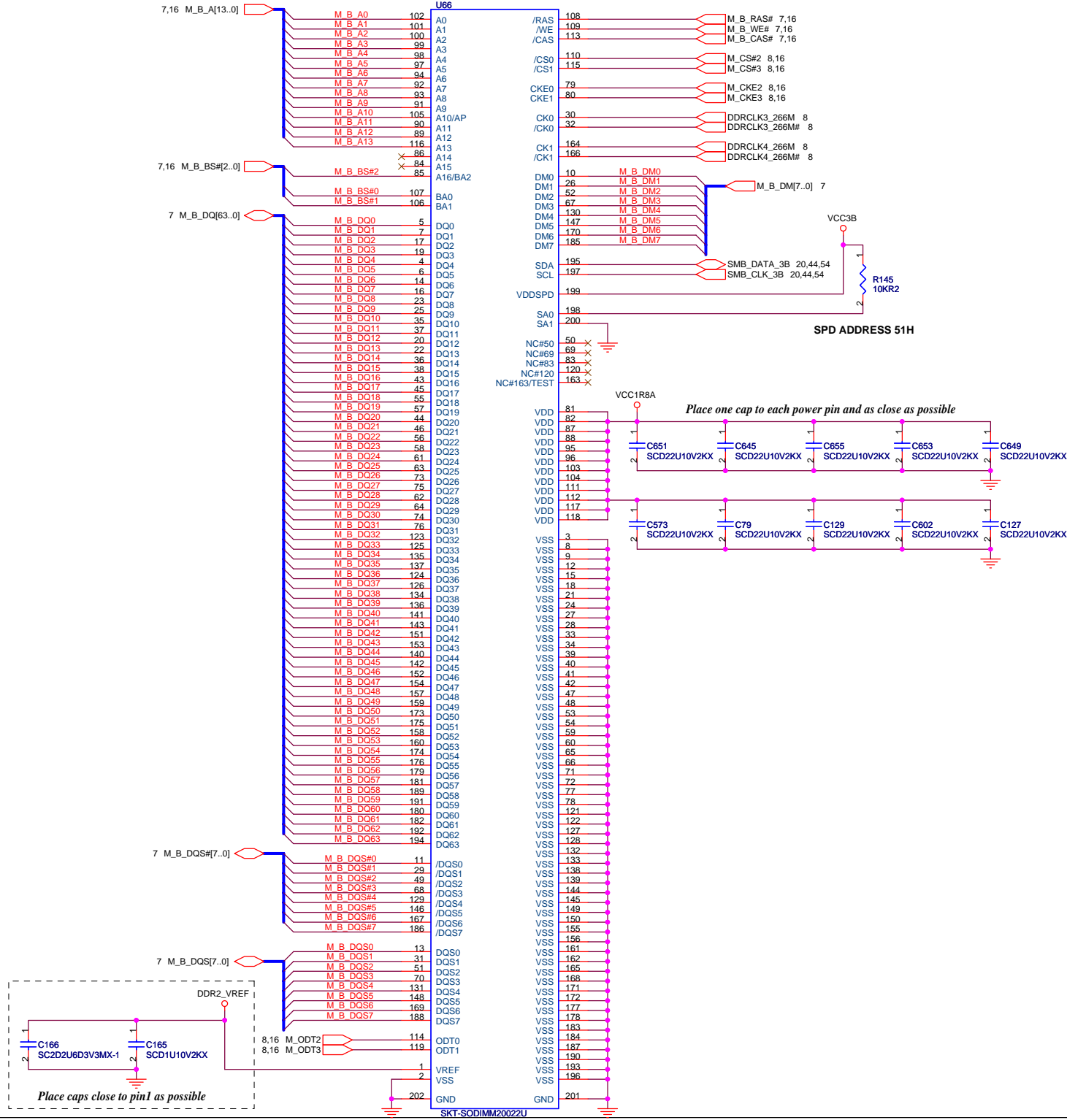
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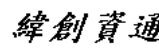
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 Taipei Hsien 221, Taiwan, R.O.C.

Title: **BASE MEMORY BANK1**

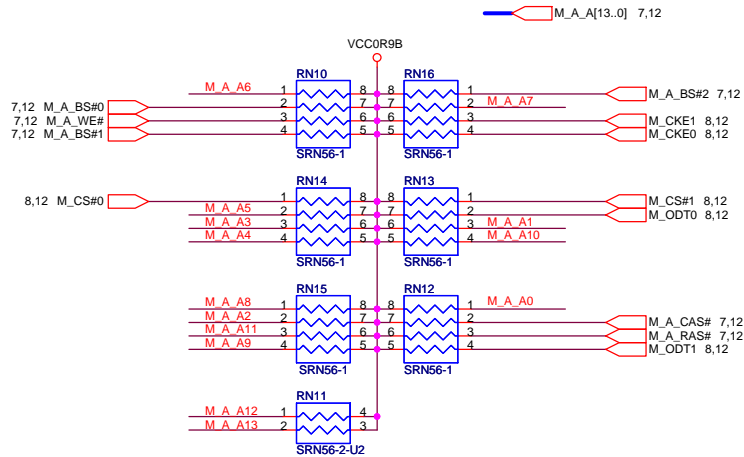
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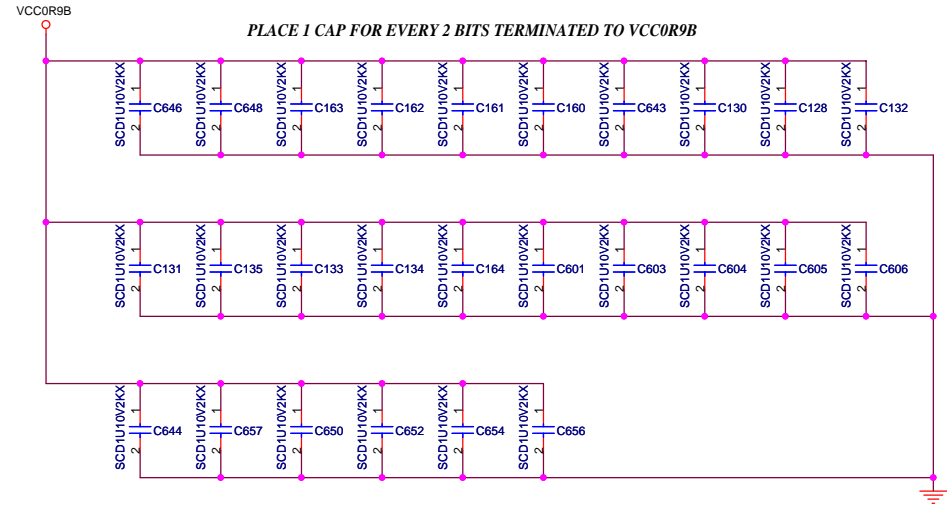
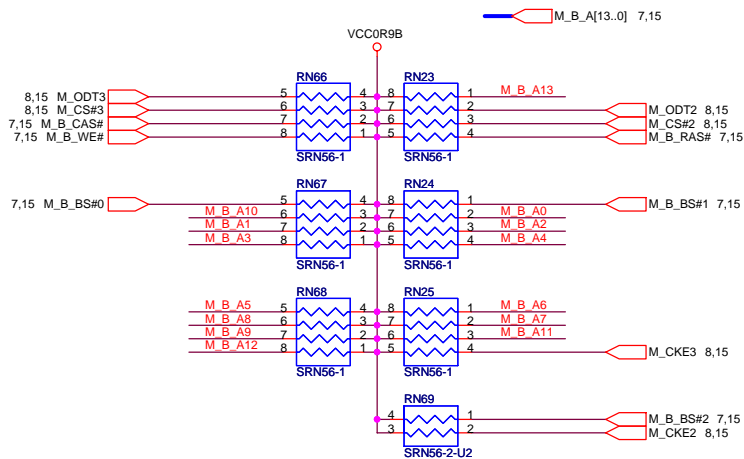


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DDR-2 SO-DIMM	
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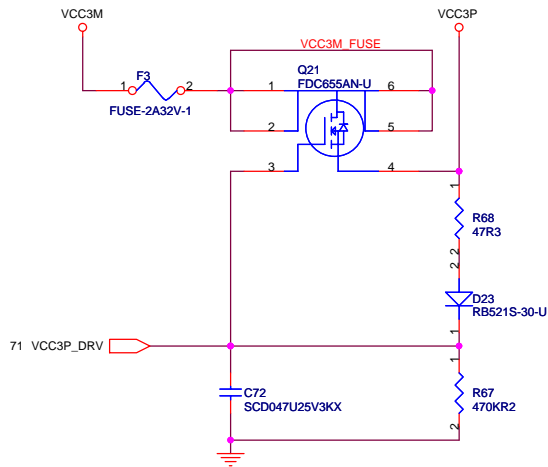
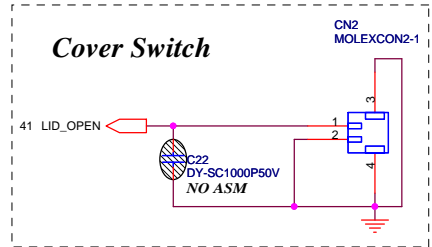
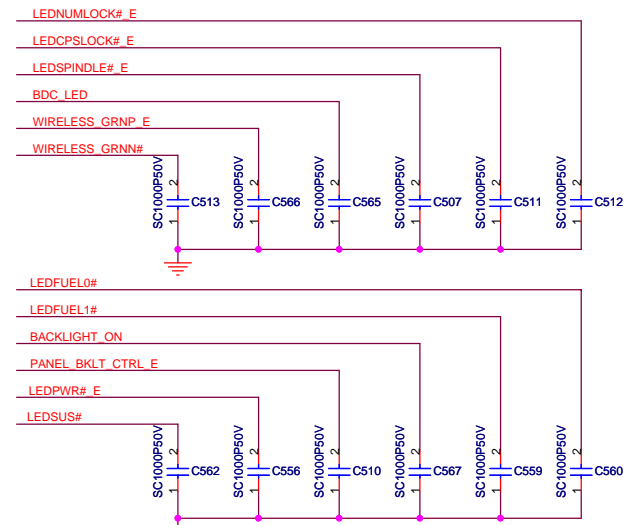
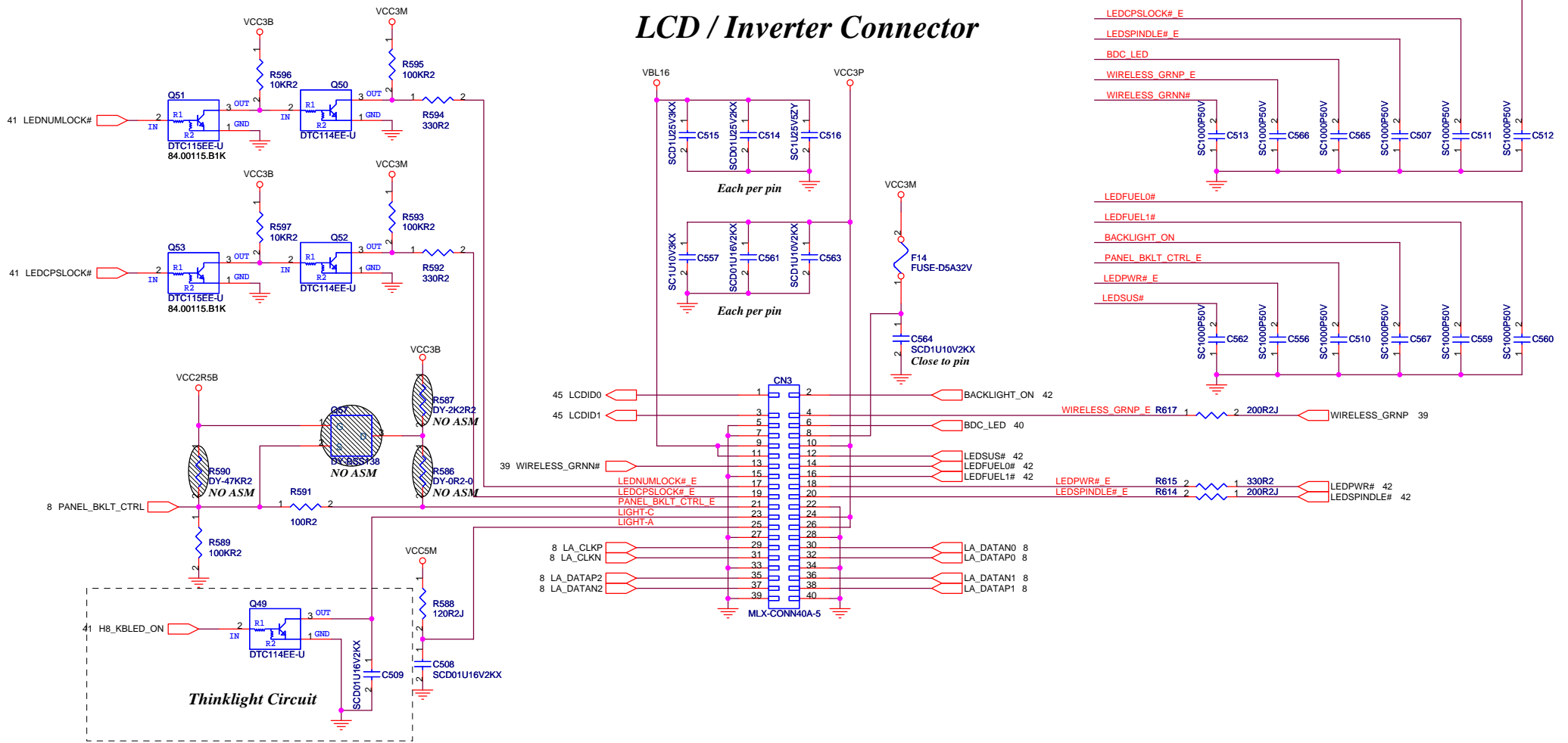
CHANNEL A PARALLEL TERMINATION



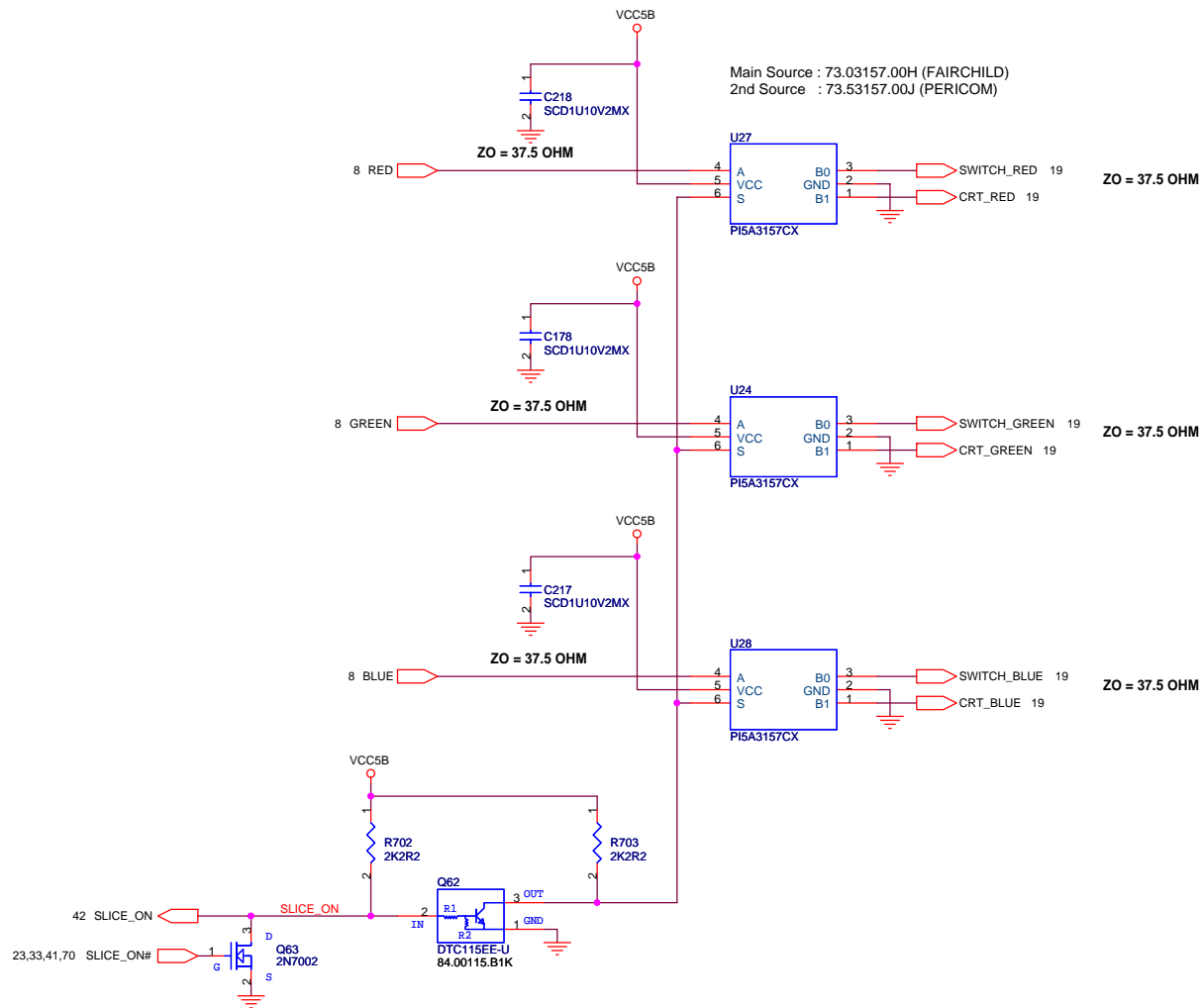
CHANNEL B PARALLEL TERMINATION



LCD / Inverter Connector

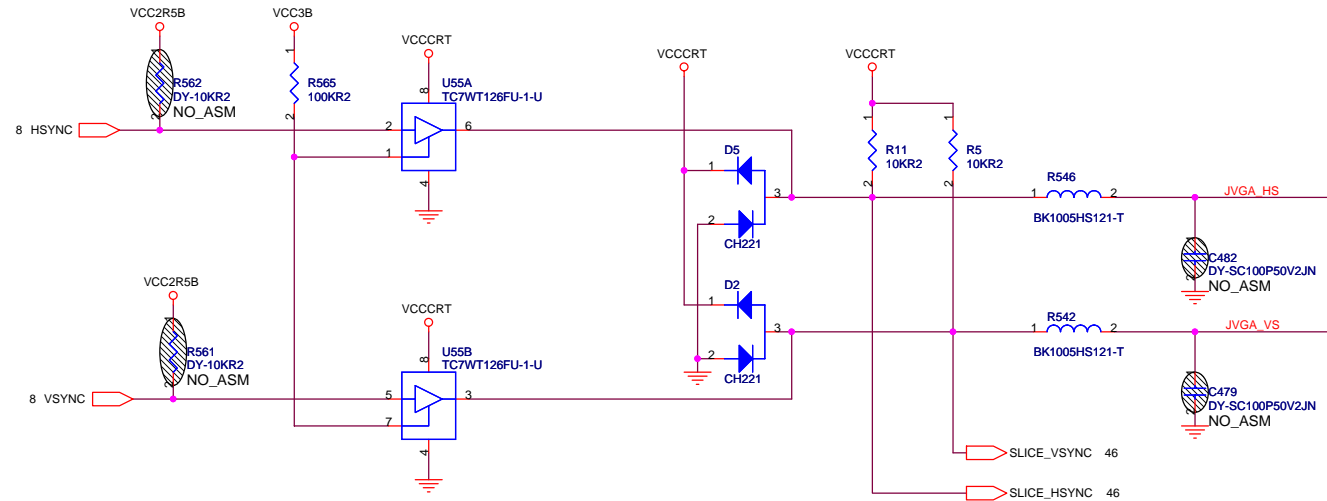
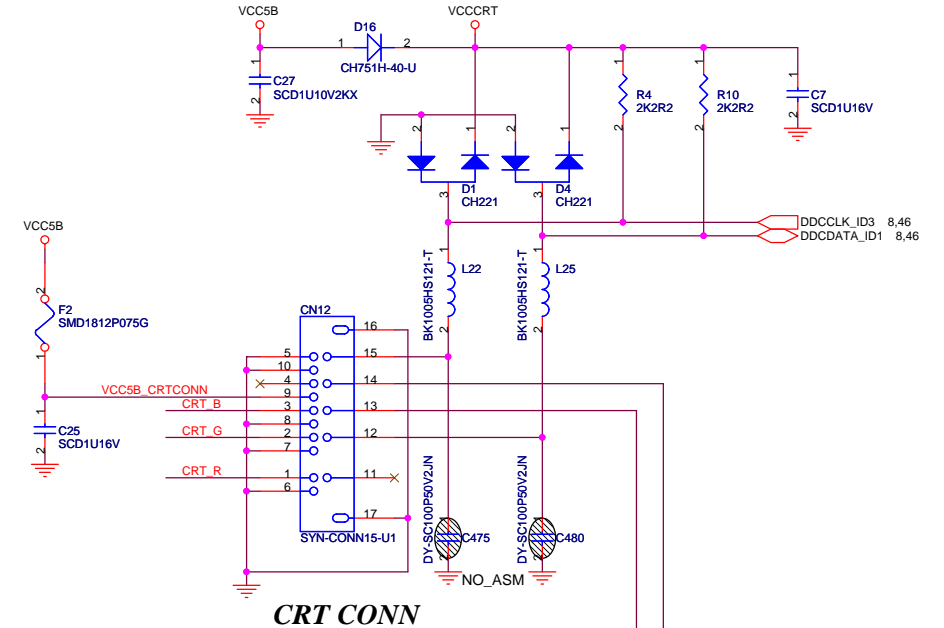
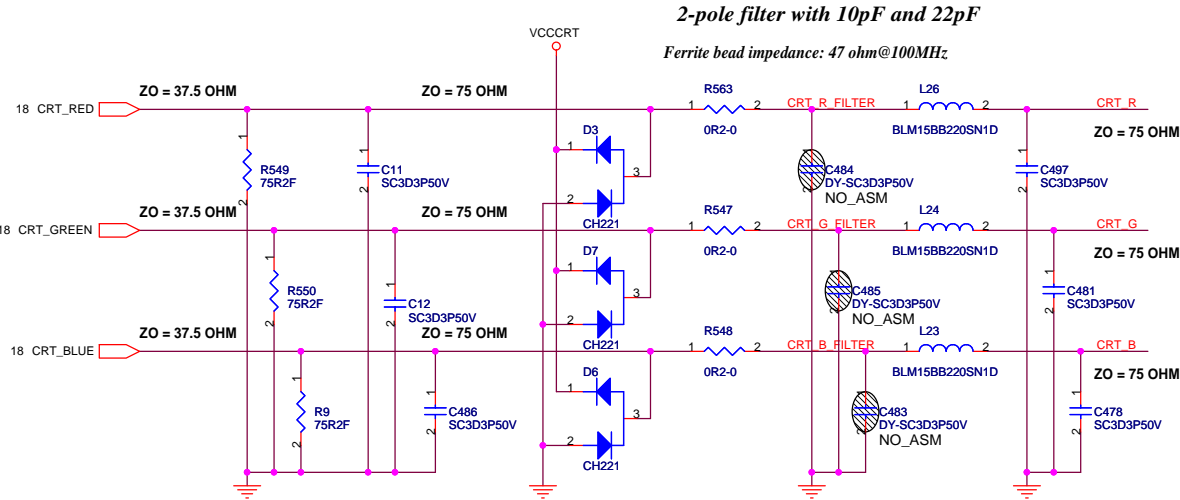
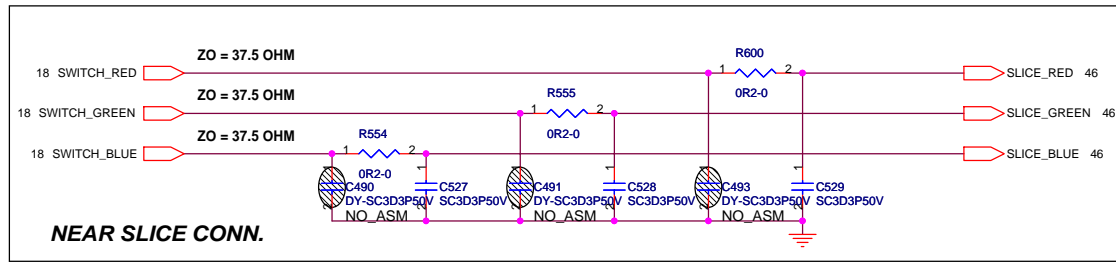


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		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
LCD CONNECTOR			
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緯創資通 **Wistron Corporation**
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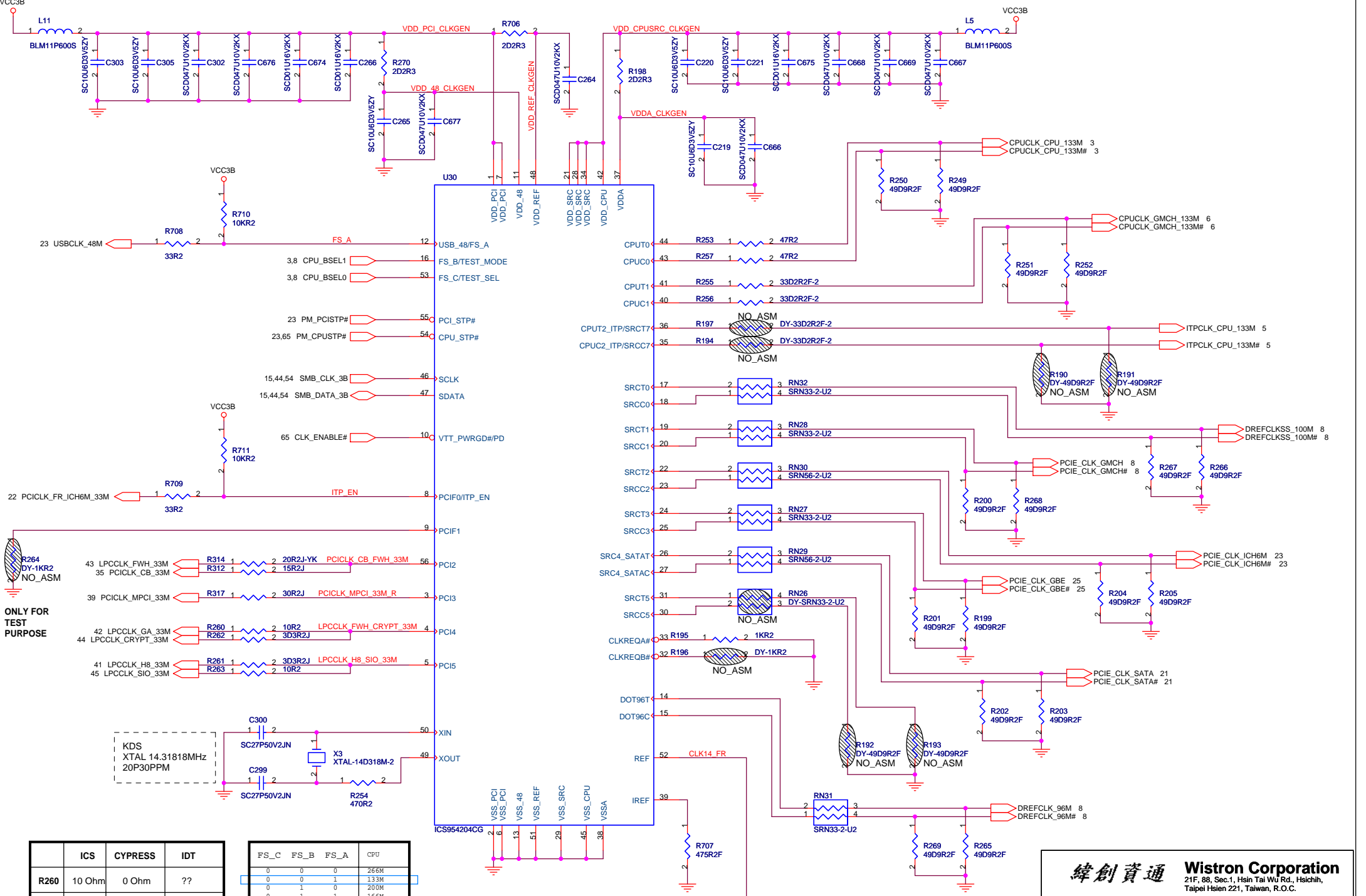
Title			CRT SELECTION
Size	Document Number	Rev	
A3		S Note-3	
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緯創資通 Wistron Corporation
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Title: **EXT CRT CONNECTOR**

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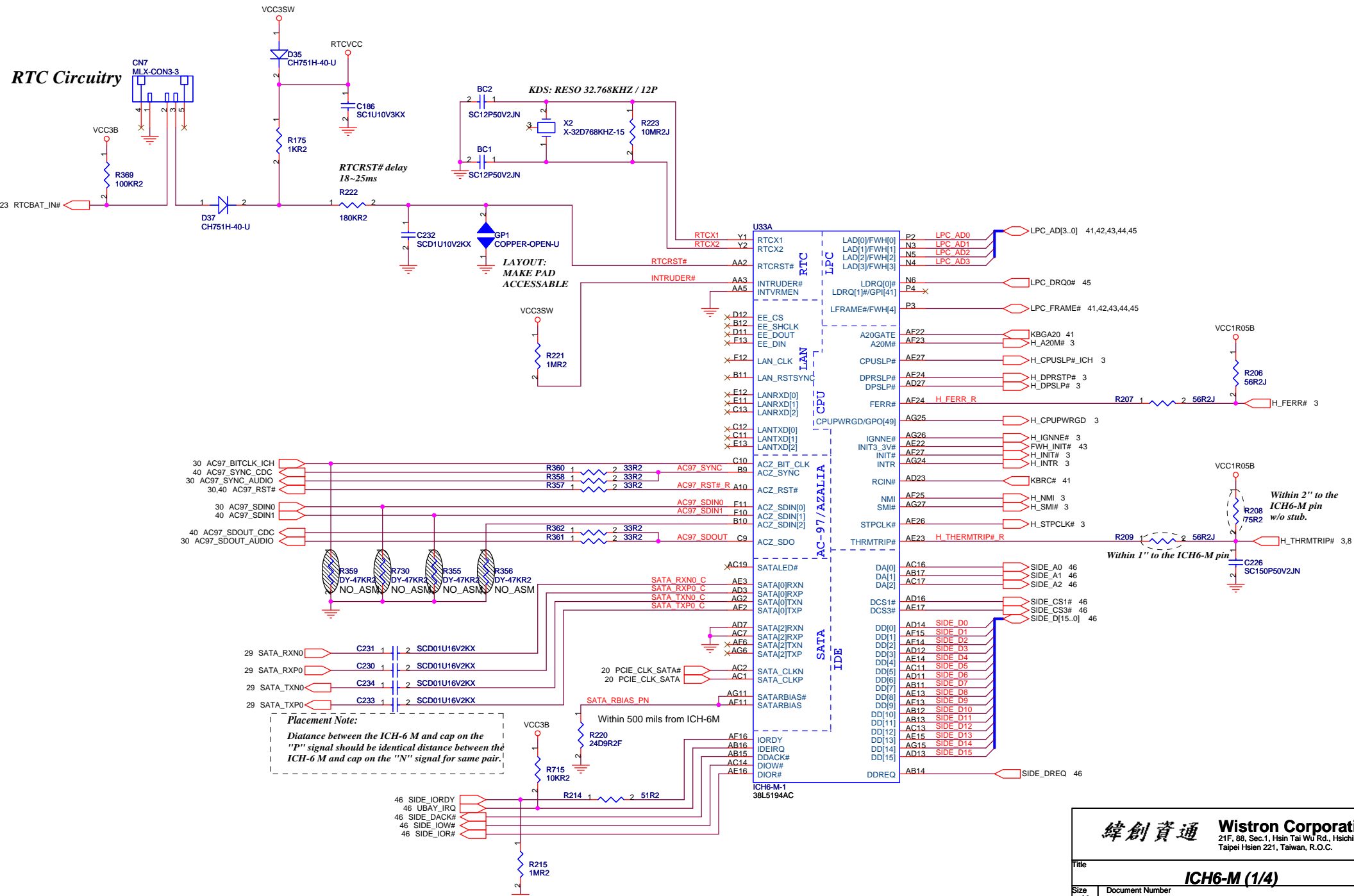
ONLY FOR TEST PURPOSE

	ICS	CYPRESS	IDT
R260	10 Ohm	0 Ohm	??
R314	20 Ohm	5.6 Ohm	??

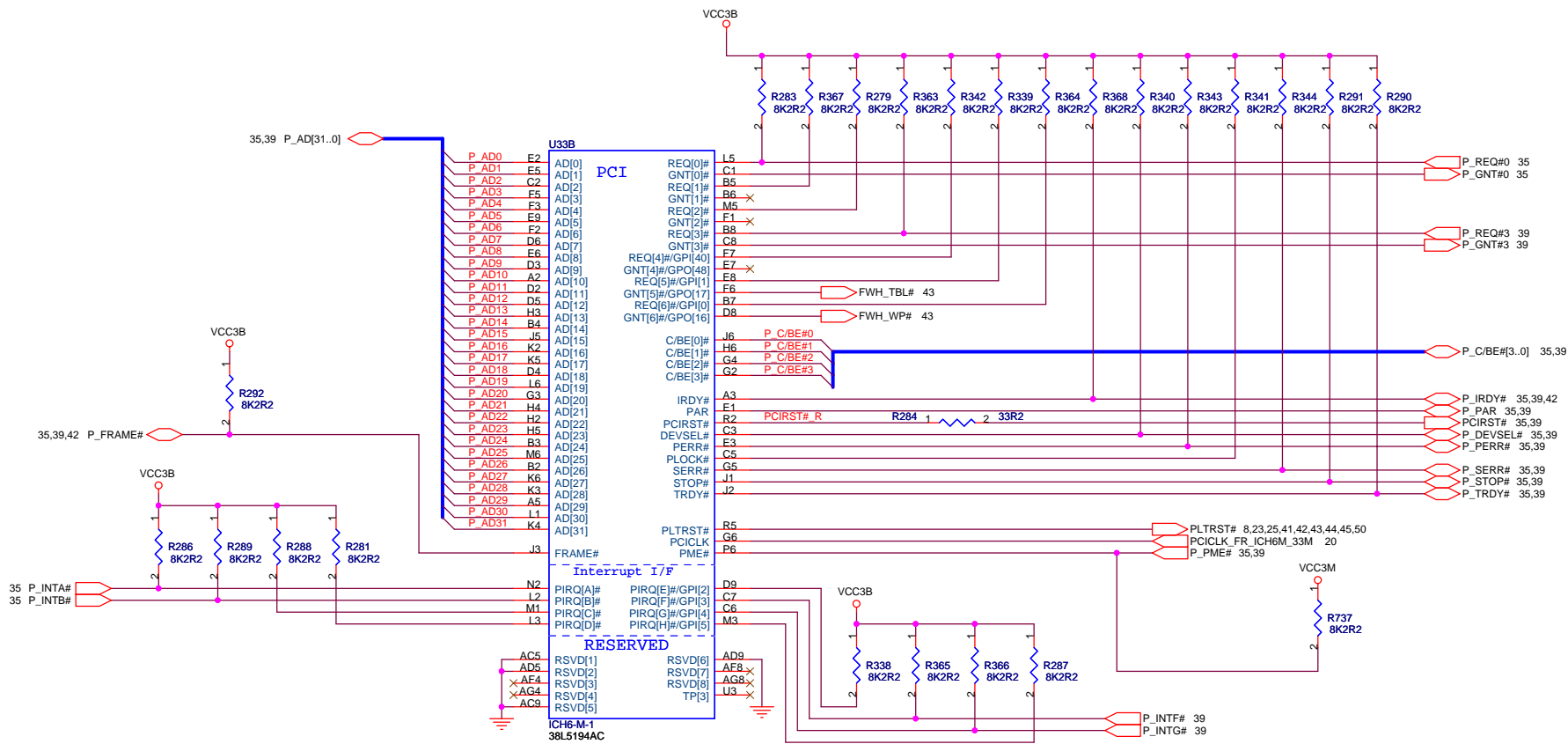
FS_C	FS_B	FS_A	CPU
0	0	0	266M
0	0	1	133M
0	1	0	200M
0	1	1	166M
1	0	0	333M
1	0	1	100M
1	1	0	400M
1	1	1	Reserved

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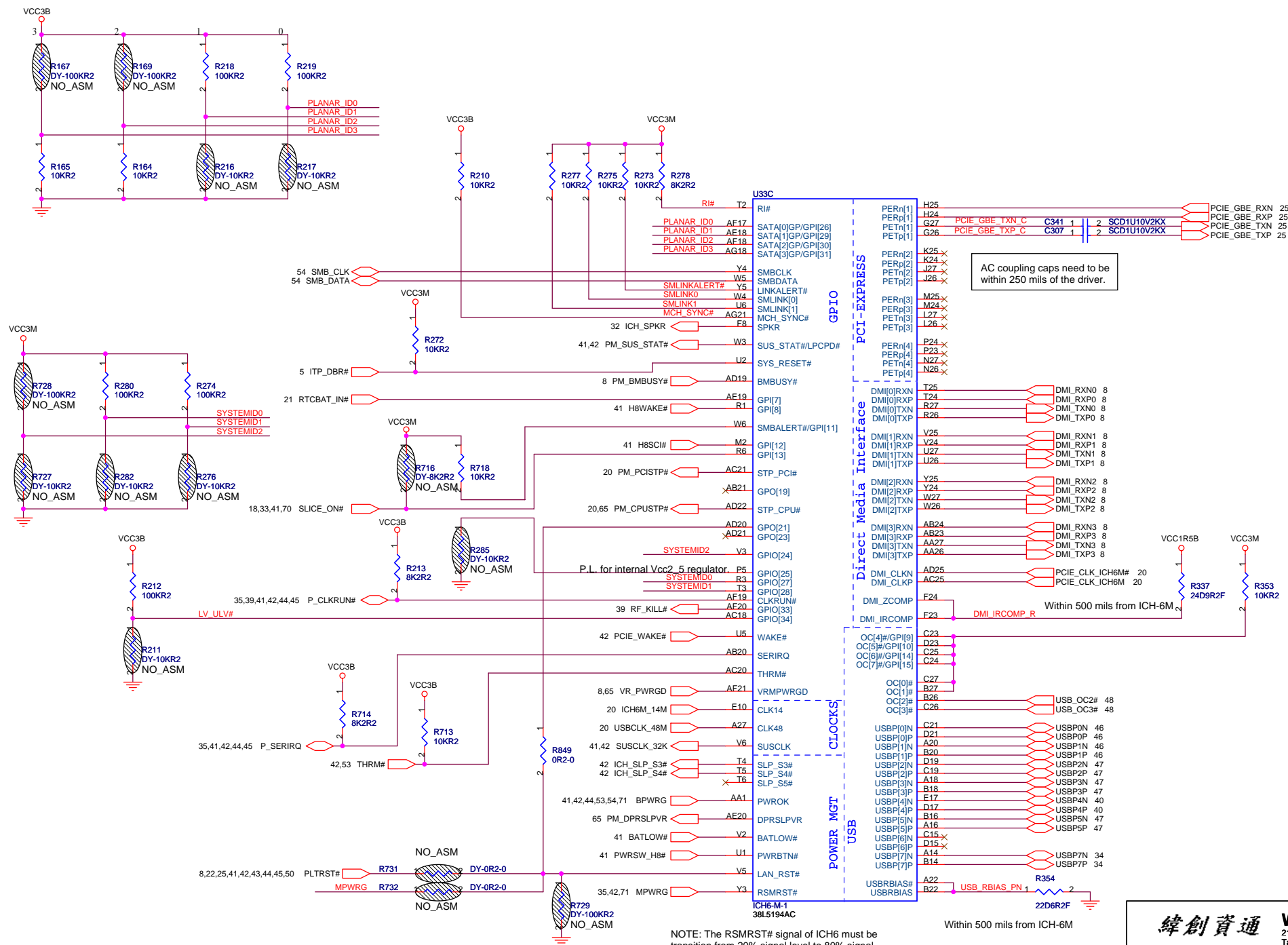
RTC Circuitry



緯創資通		Wistron Corporation	
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ICH6-M (1/4)			
Title	Document Number	Rev	
		S Note-3	
Size			-1
A3			
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AC5: SATA1RXN
 AD5: SATA1RXP
 AC9: SATA3RXN
 AD5: SATA3RXP



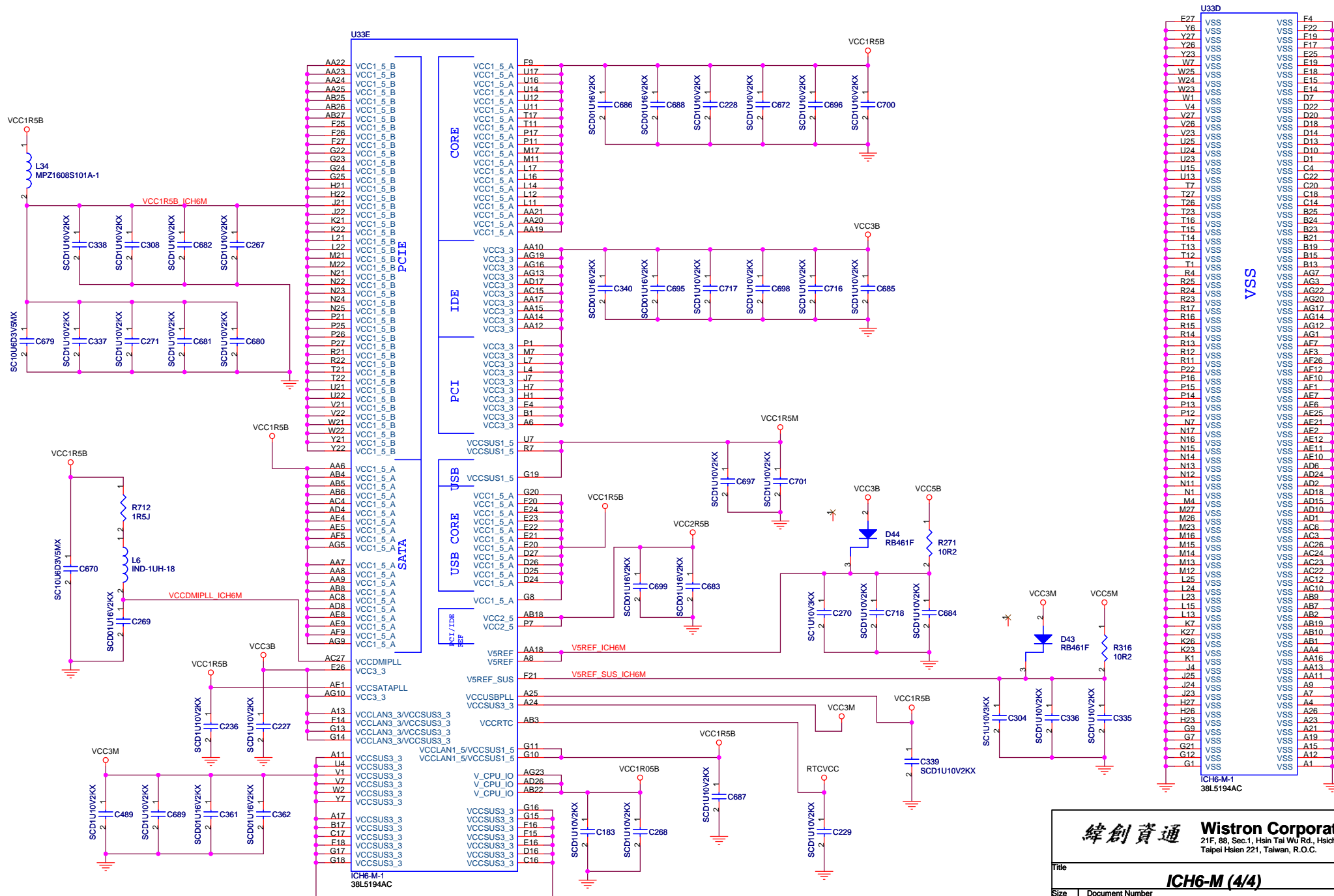
AC coupling caps need to be within 250 mils of the driver.

Within 500 mils from ICH-6M

Within 500 mils from ICH-6M

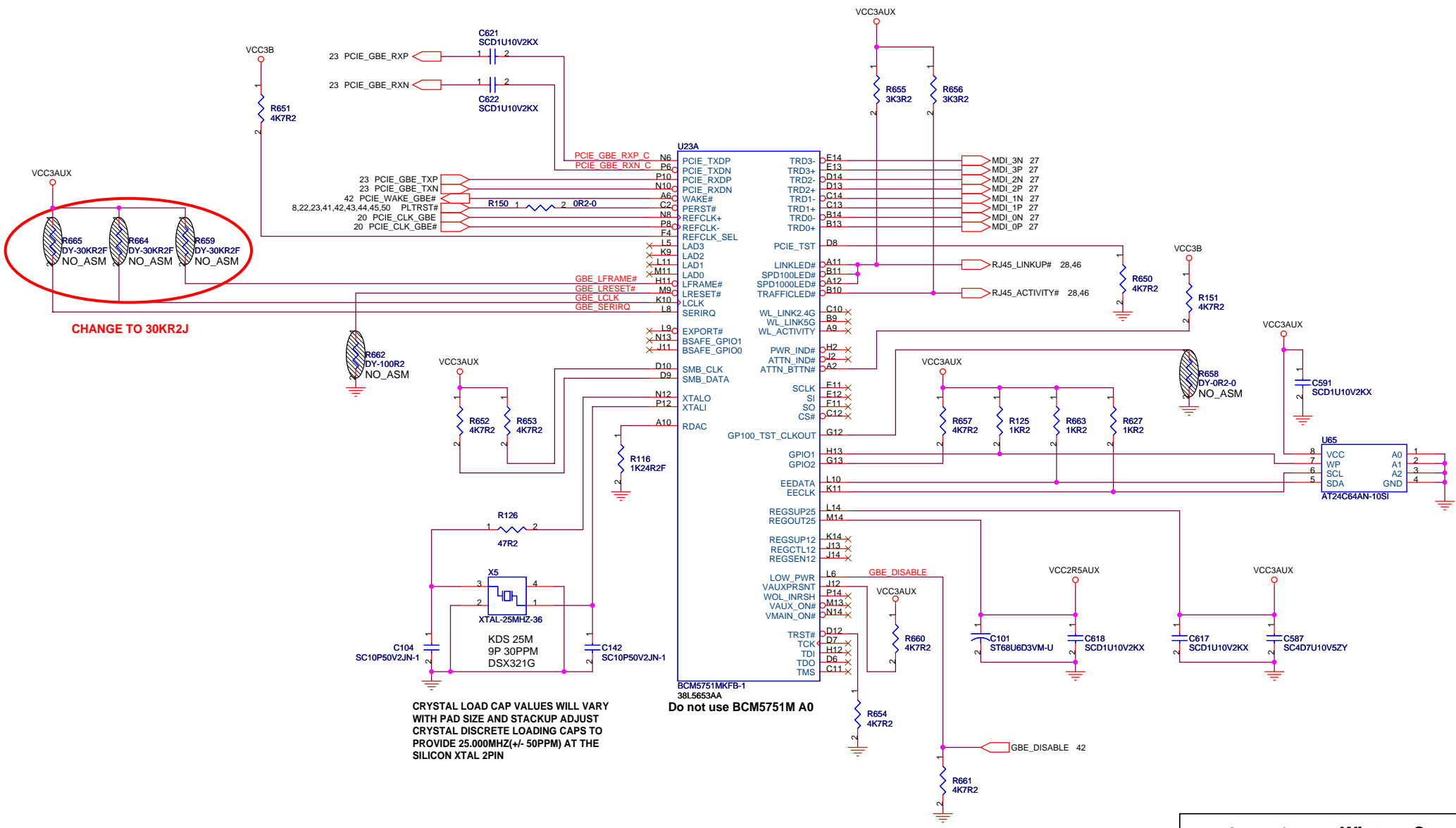
NOTE: The RSMRST# signal of ICH6 must be transition from 20% signal level to 80% signal level and vice-versa in 50us or less.

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ICH6-M (3/4)			
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ICH6-M (4/4)			
Title			
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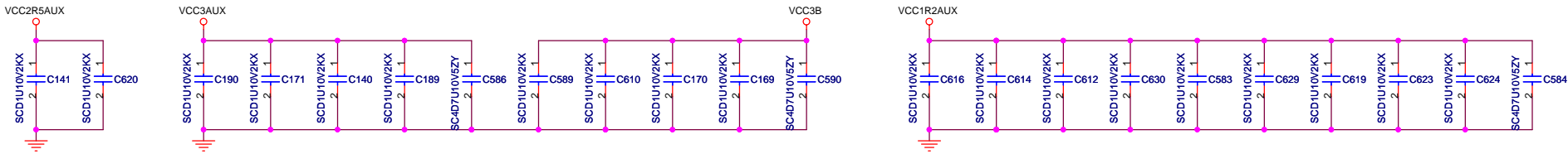
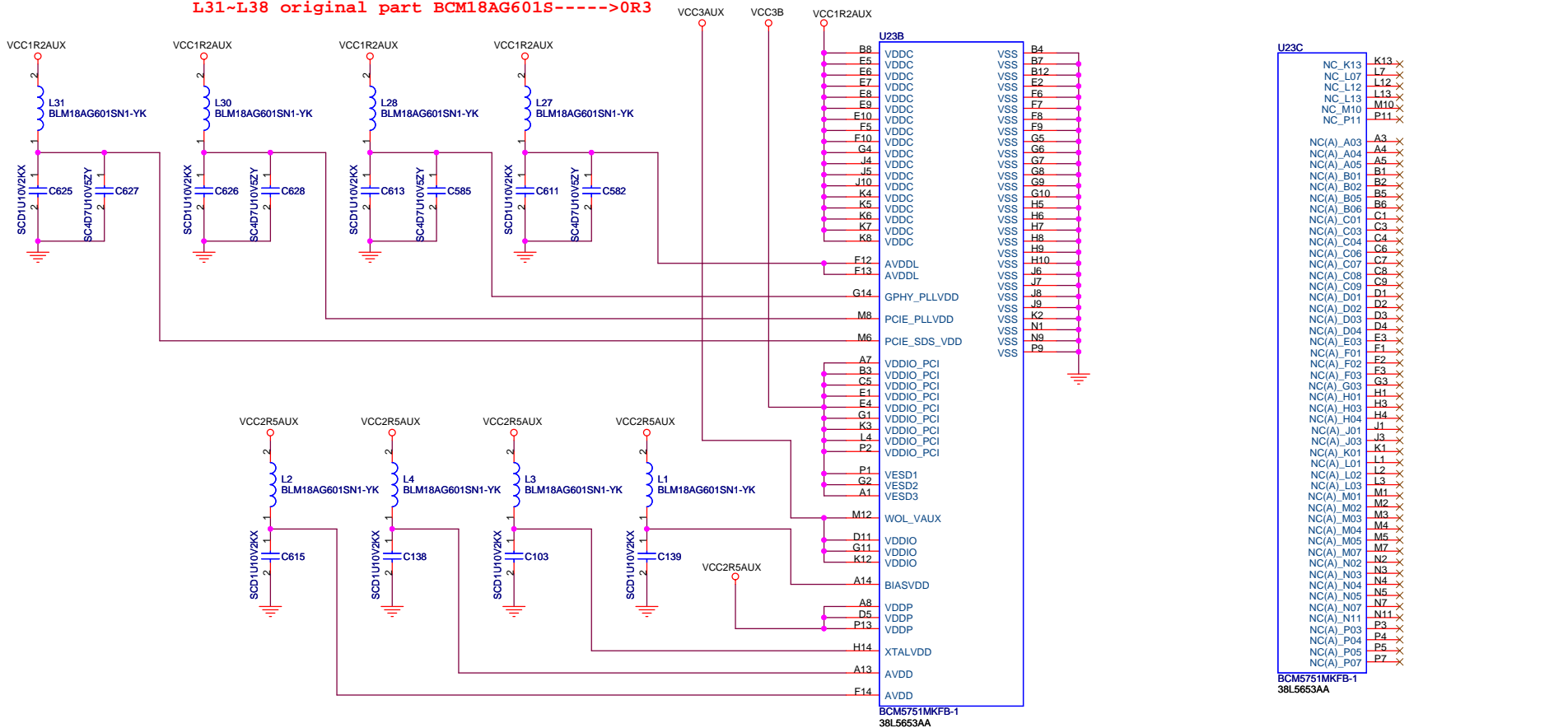
CHANGE TO 30KR2J

CRYSTAL LOAD CAP VALUES WILL VARY WITH PAD SIZE AND STACKUP ADJUST CRYSTAL DISCRETE LOADING CAPS TO PROVIDE 25.000MHZ(+/- 50PPM) AT THE SILICON XTAL 2PIN

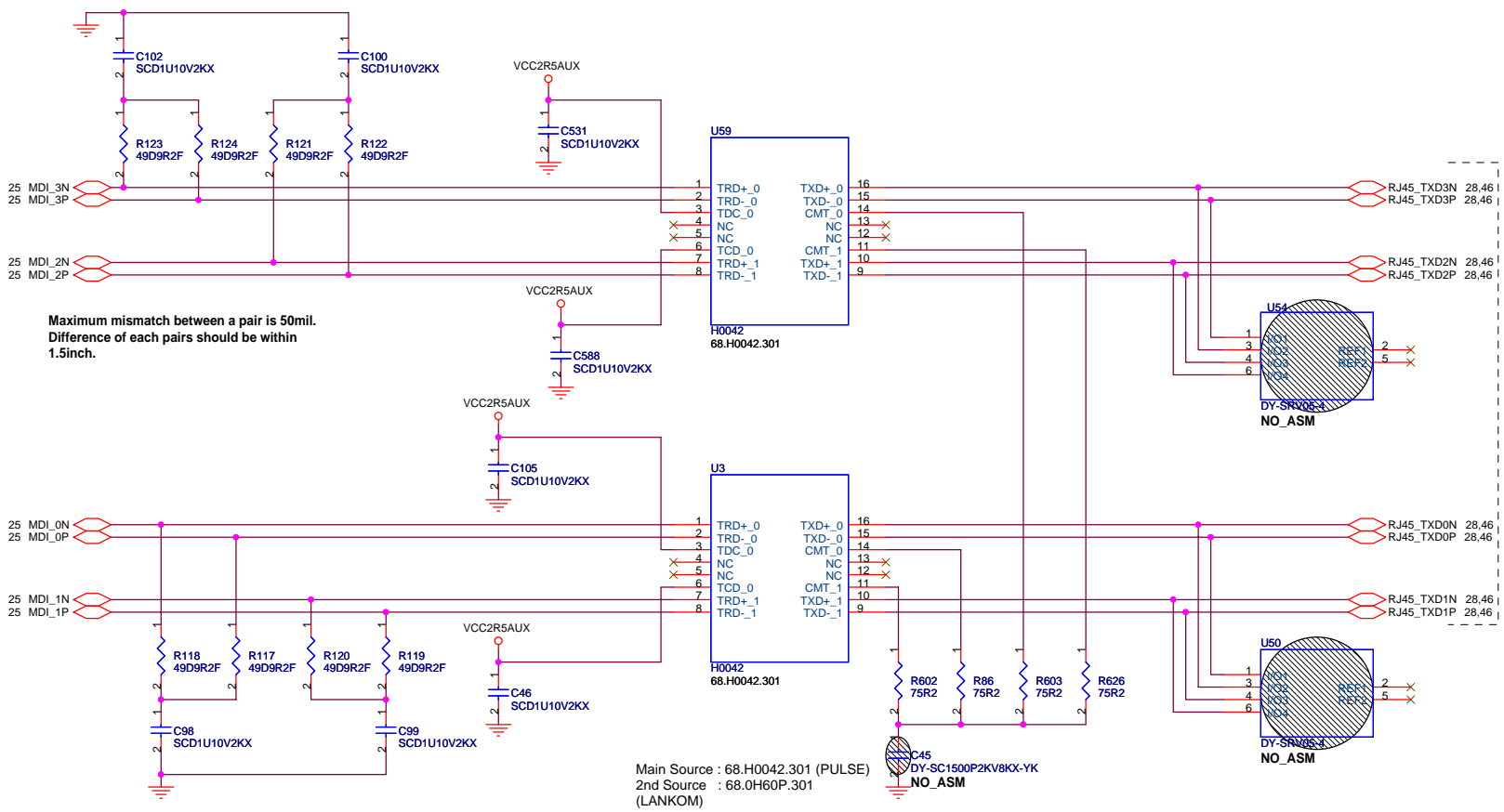
Do not use BCM5751M A0

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GBE BCM5751 (1/2)	
Title	
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L31~L38 original part BCM18AG601S----->OR3



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GBE BCM5751M (2/2) : POWER	
S Note-3	
Title Size A3	Document Number Date: Saturday, February 26, 2005
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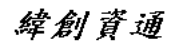


Maximum mismatch between a pair is 50mil.
Difference of each pairs should be within 1.5inch.

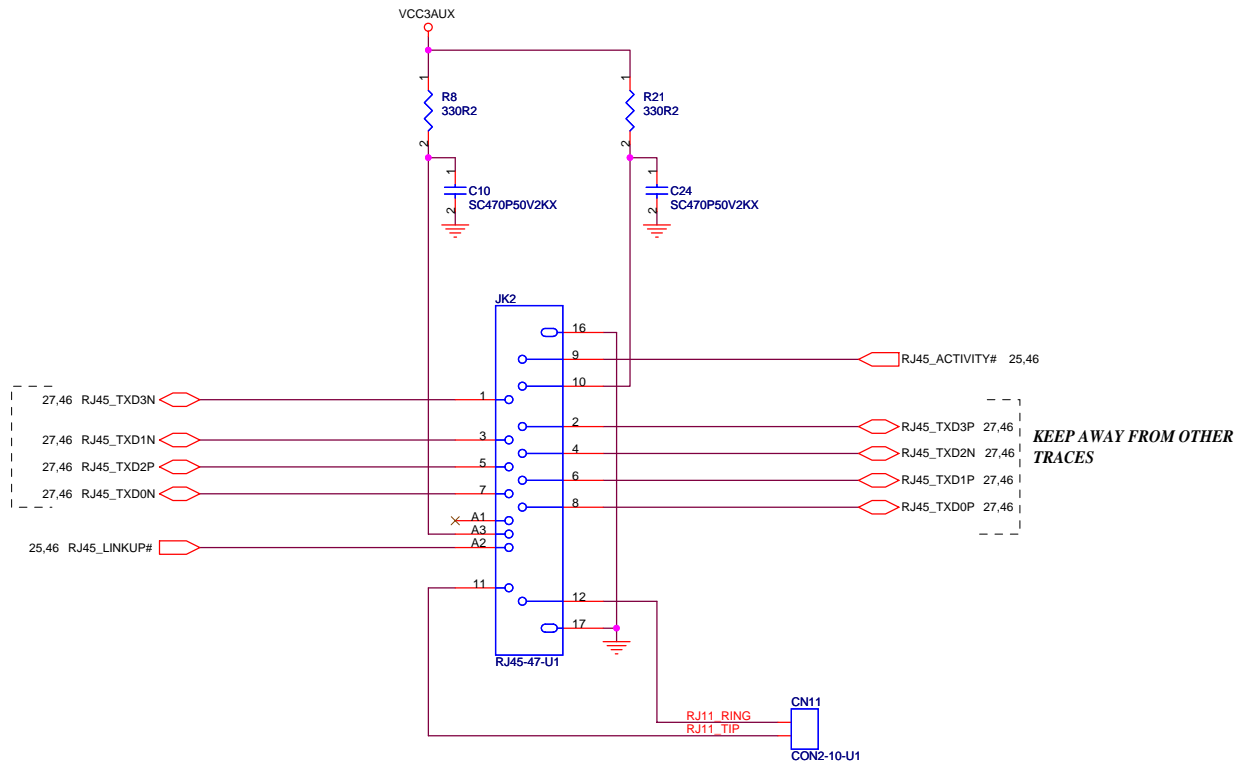
Be careful wiring.
- Need more 40mil spacing from other signals in case of routing on top/bottom(serface) side.
- Need more 20mil spacing from other signals in case of routing on internal layers.

Maximum mismatch between a pair is 50mil.
Difference of each pairs should be within 1.5inch.

Main Source : 68.H0042.301 (PULSE)
2nd Source : 68.0H60P.301 (LANKOM)

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GBE MAGNETICS	
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KEEP AWAY FROM OTHER TRACES



KEEP AWAY FROM OTHER TRACES

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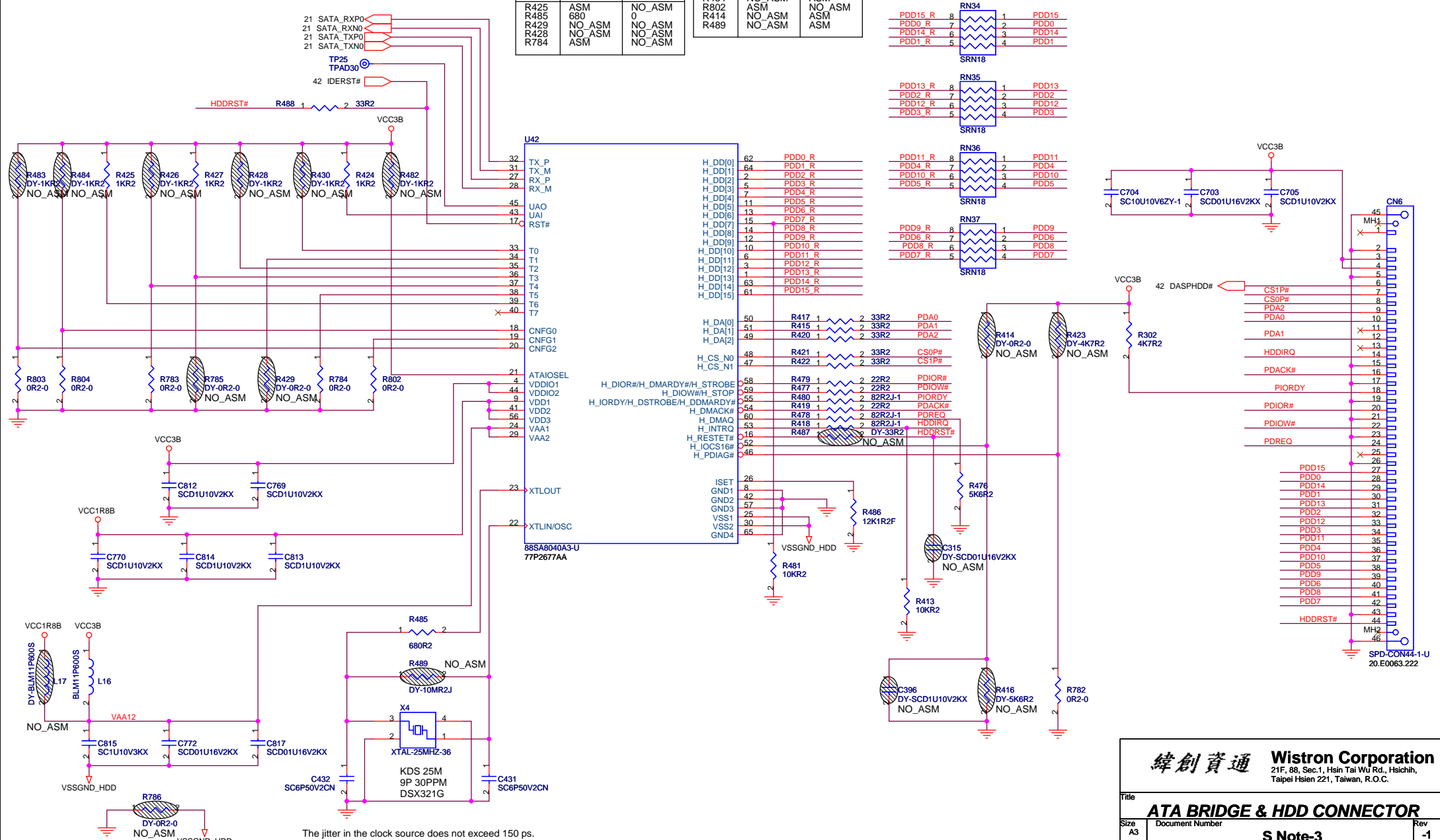
Title			RJ11/RJ45 CONN		
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A3					
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S-ATA TABLE 1/2

U42	88SA8040	Sil3811
C396 C431 C432	NO_ASM 10PF 10PF	ASM 10PF 10PF
L17 L16	NO_ASM ASM	ASM NO_ASM
R786 R426 R783 R427 R785	NO_ASM NO_ASM ASM ASM NO_ASM	ASM NO_ASM NO_ASM NO_ASM NO_ASM
R425 R485 R429 R428 R784	ASM 680 NO_ASM NO_ASM ASM	NO_ASM 0 NO_ASM NO_ASM NO_ASM

S-ATA TABLE 2/2

U42	88SA8040	Sil3811
R430 R424 R482 R486 R416	NO_ASM ASM NO_ASM 12.1K NO_ASM	NO_ASM NO_ASM ASM 1K NO_ASM
R423 R782 R803 R804 R483	NO_ASM ASM ASM ASM NO_ASM	NO_ASM ASM NO_ASM NO_ASM ASM
R484 R802 R414 R489	NO_ASM ASM NO_ASM NO_ASM	ASM NO_ASM ASM ASM



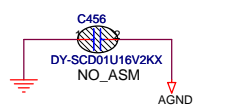
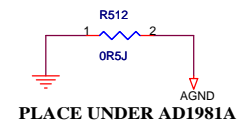
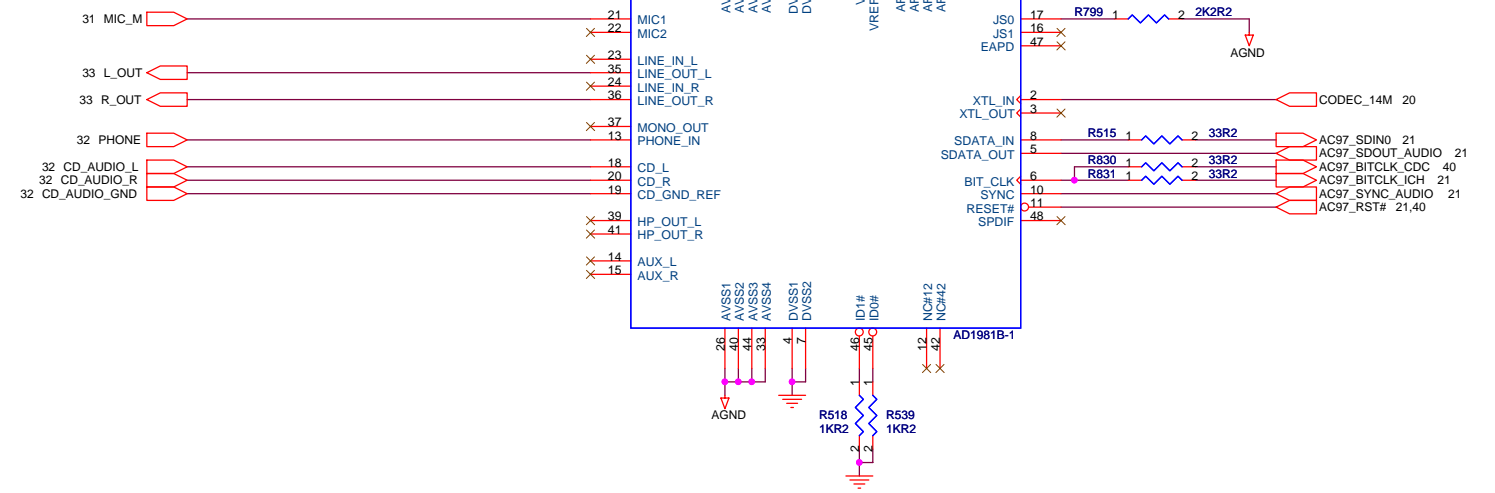
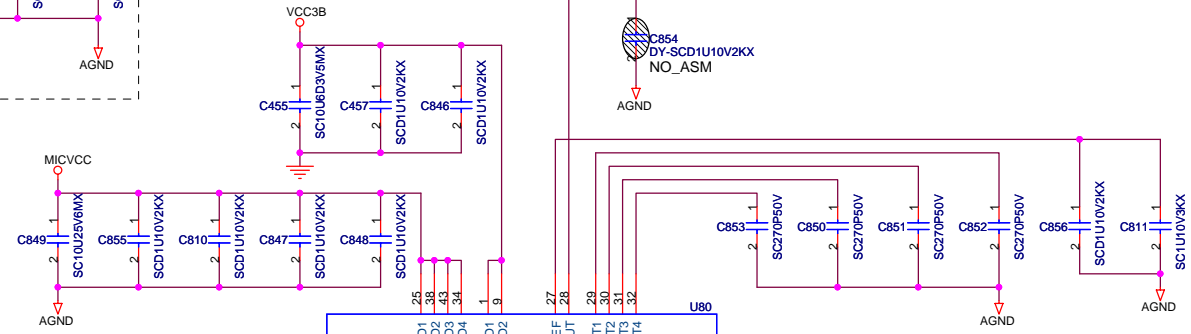
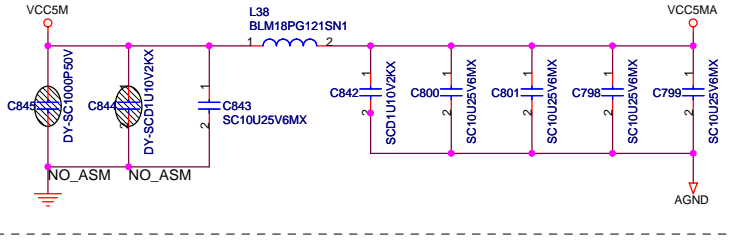
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 Taipei Hsien 221, Taiwan, R.O.C.

Title: **ATA BRIDGE & HDD CONNECTOR**

Size: A3 Document Number: **S Note-3** Rev: -1

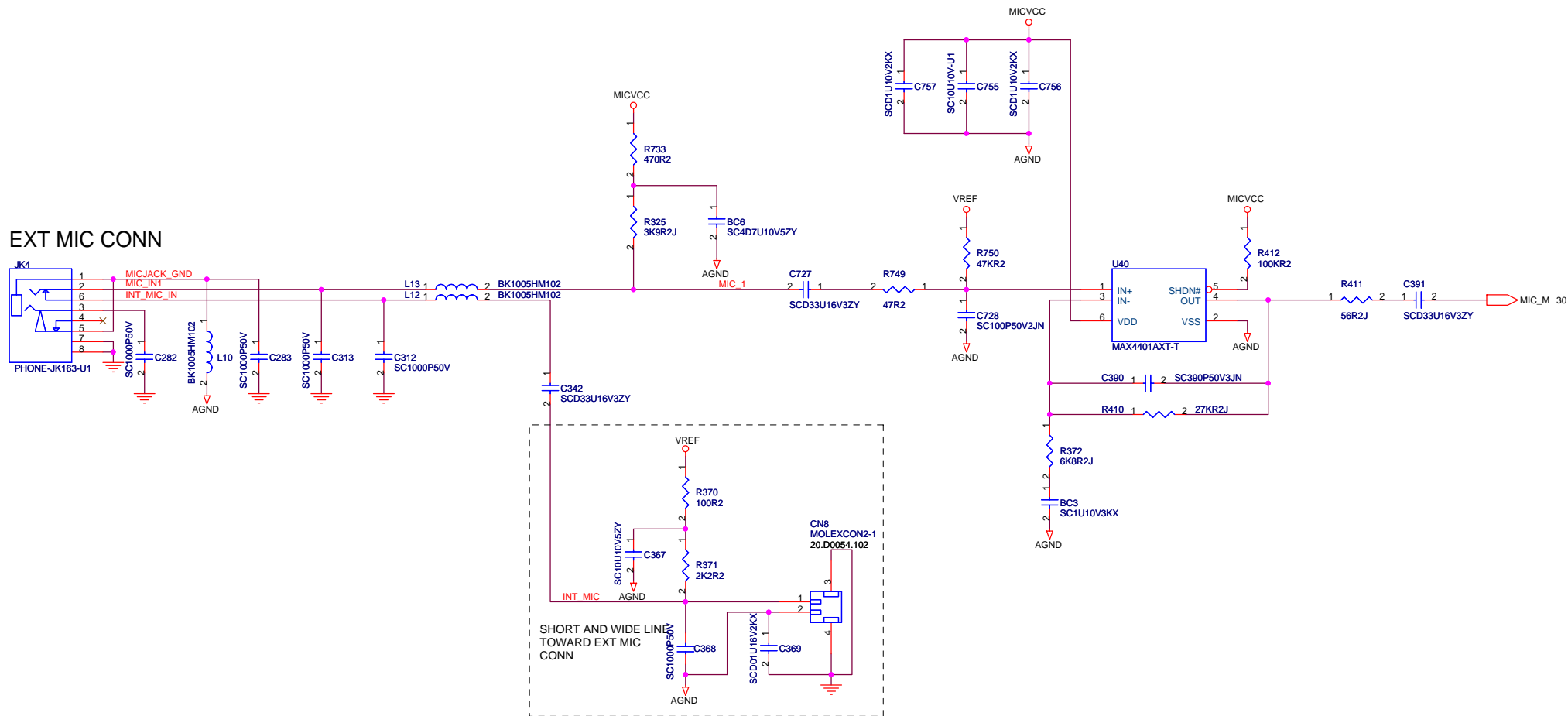
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VCC5MA



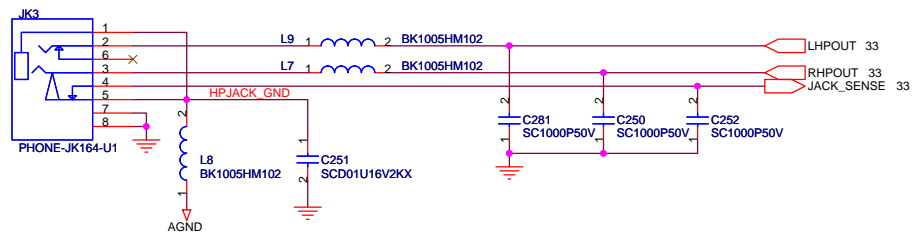
Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
AUDIO 1981B	
Title	
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EXT MIC CONN

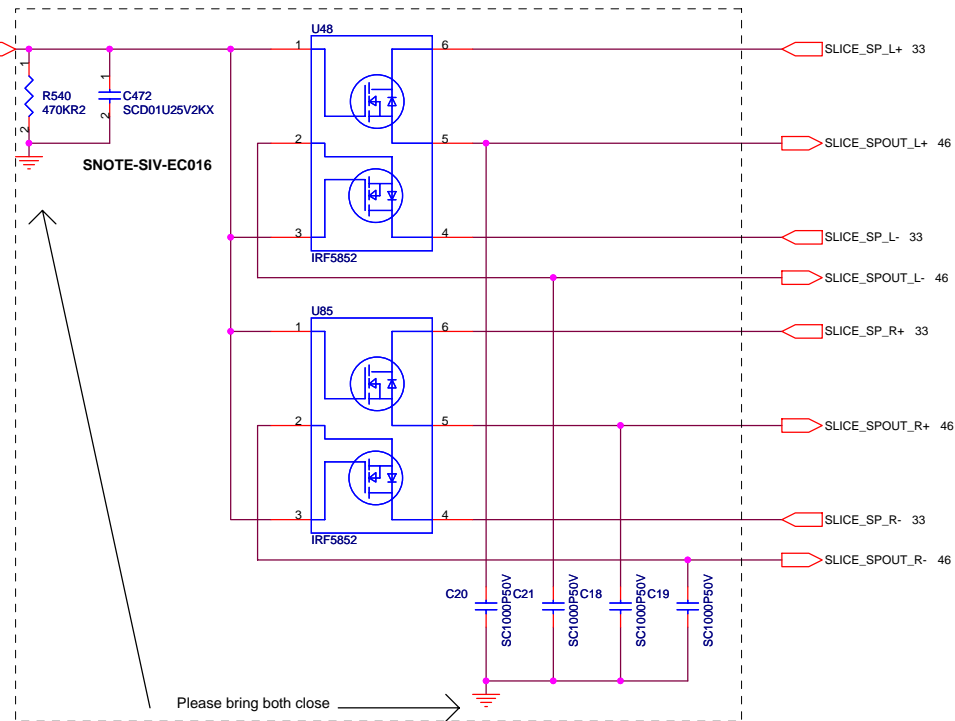
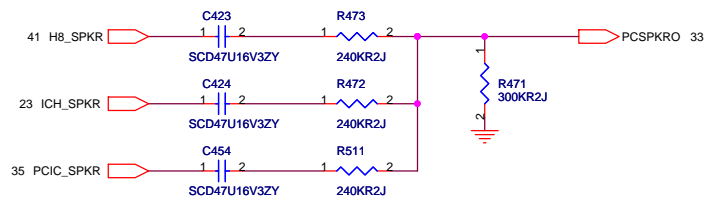
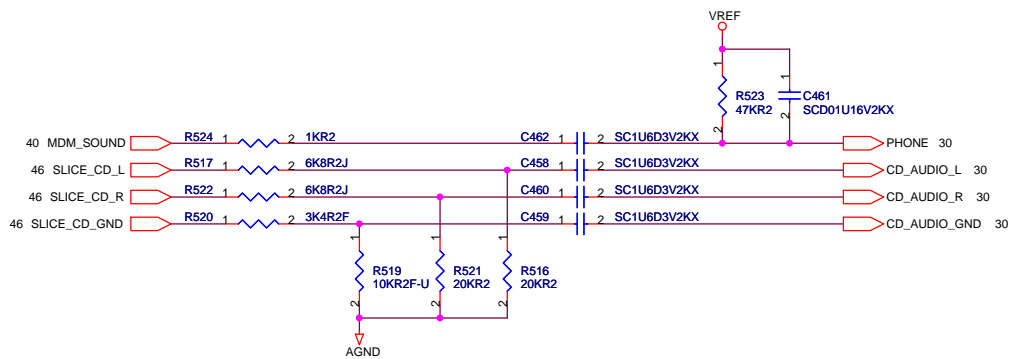
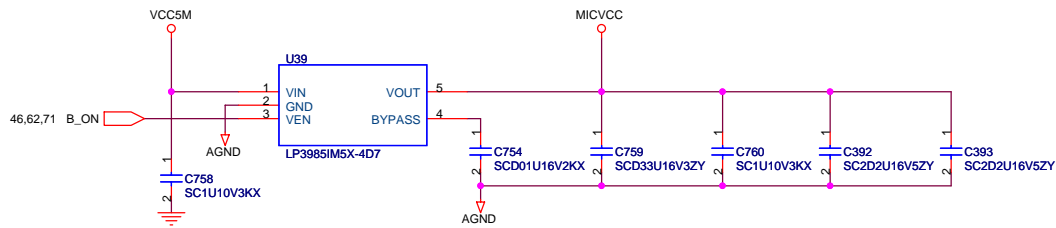


ALL PARTS MUST BE PLACED NEAR TO INTERNAL MICROPHONE

HEADPHONE CONN

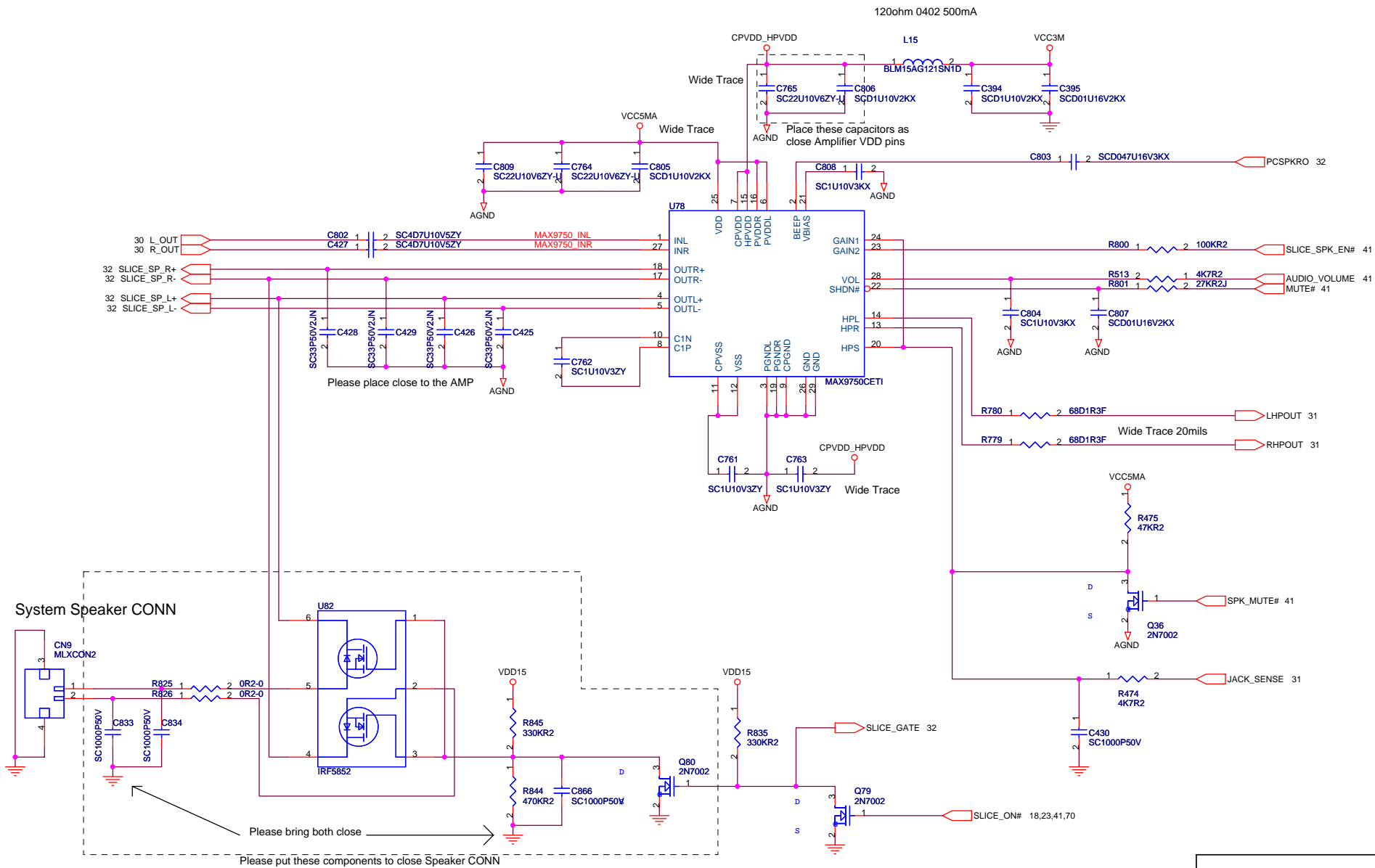


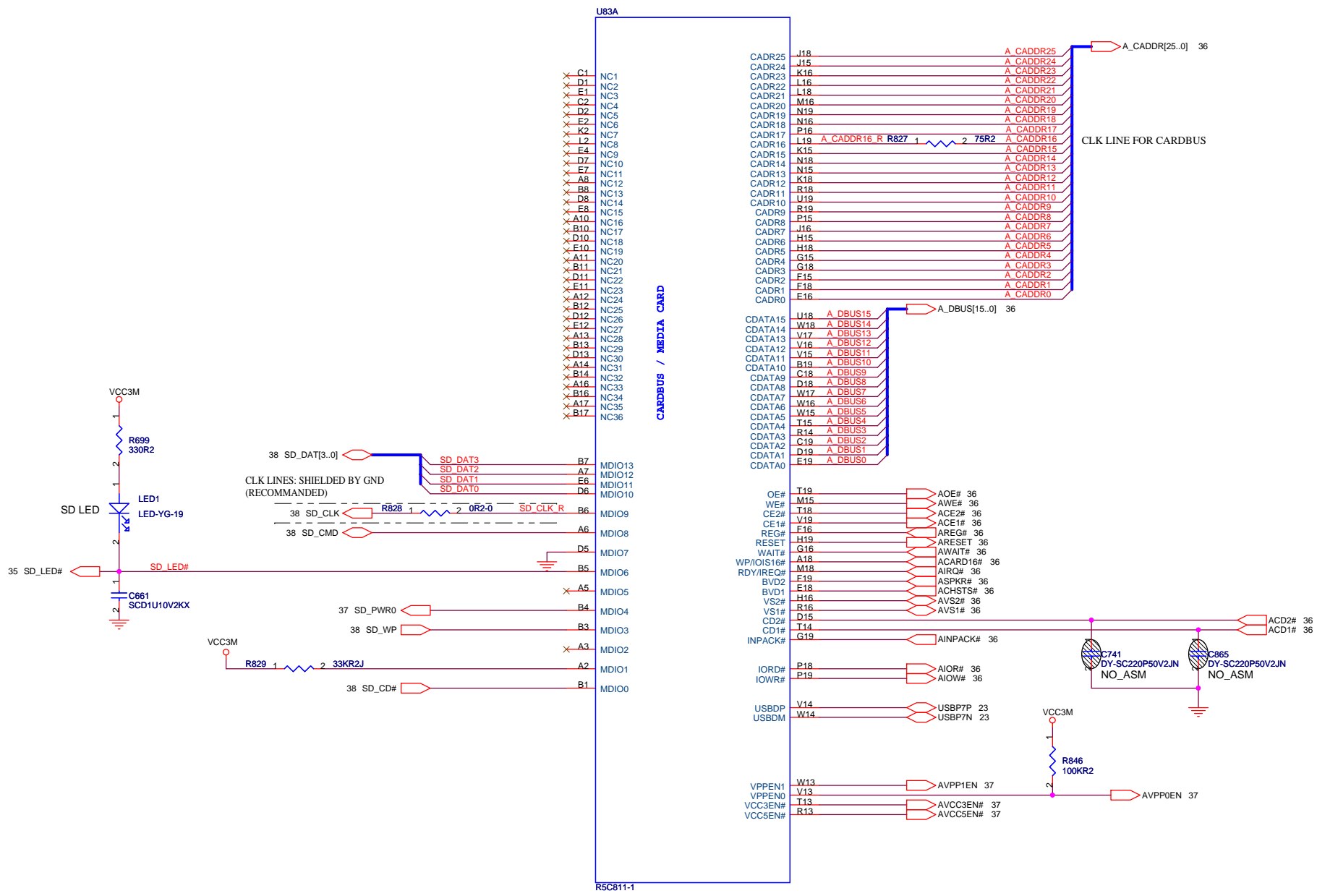
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Title	
AUDIO MIC & CONN	
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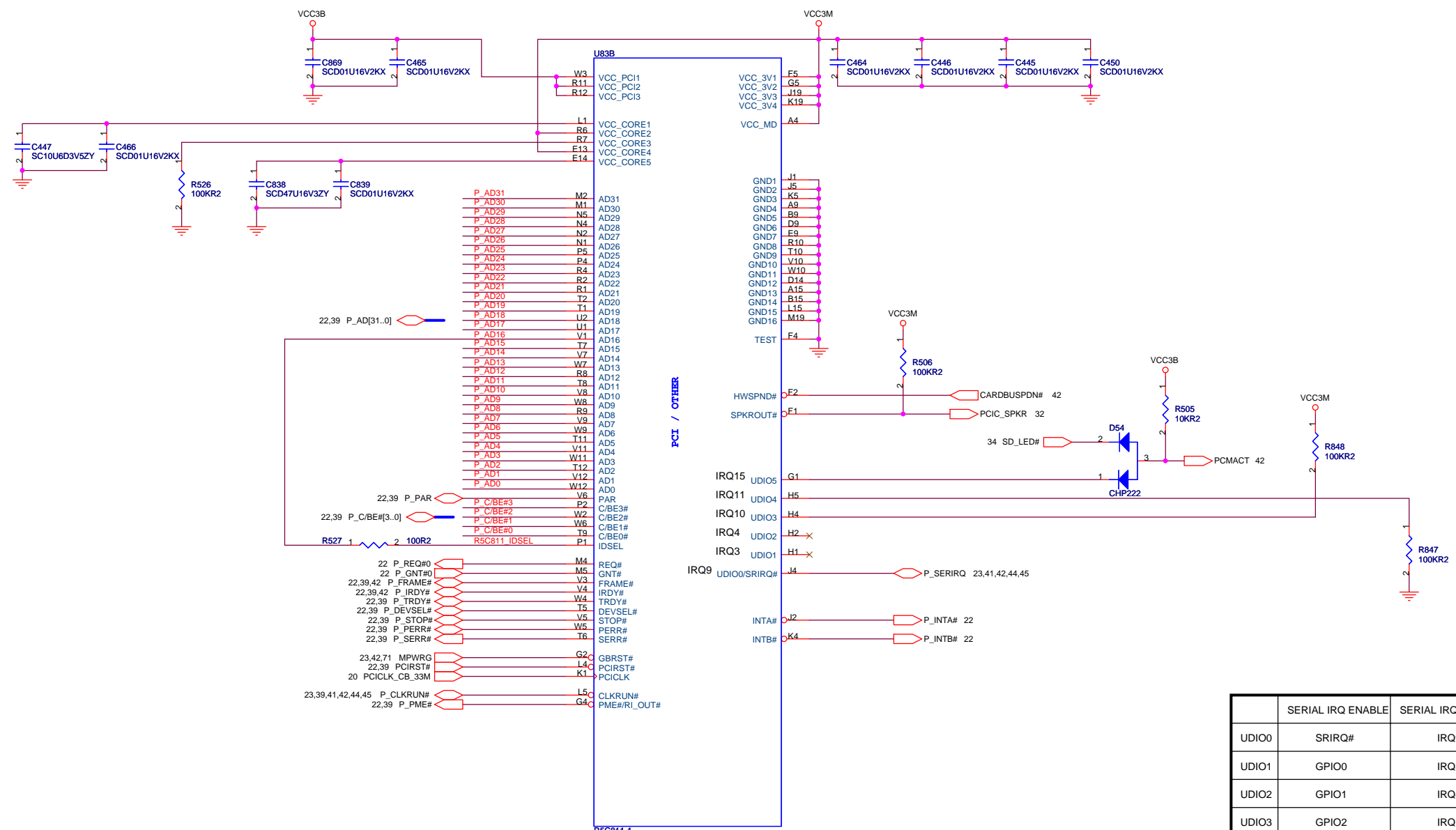


Please bring both close
Please put these components close to docking side

SPEAKER MODE GAIN (dB)				HEADPHONE MODE GAIN (dB)	
GAIN1 = 0 GAIN2 = 0	GAIN1 = 1 GAIN2 = 0	GAIN1 = 0 GAIN2 = 1	GAIN1 = 1 GAIN2 = 1	GAIN1 = X GAIN2 = 0	GAIN1 = X GAIN2 = 1
6	7.5	9	10.5	0	3







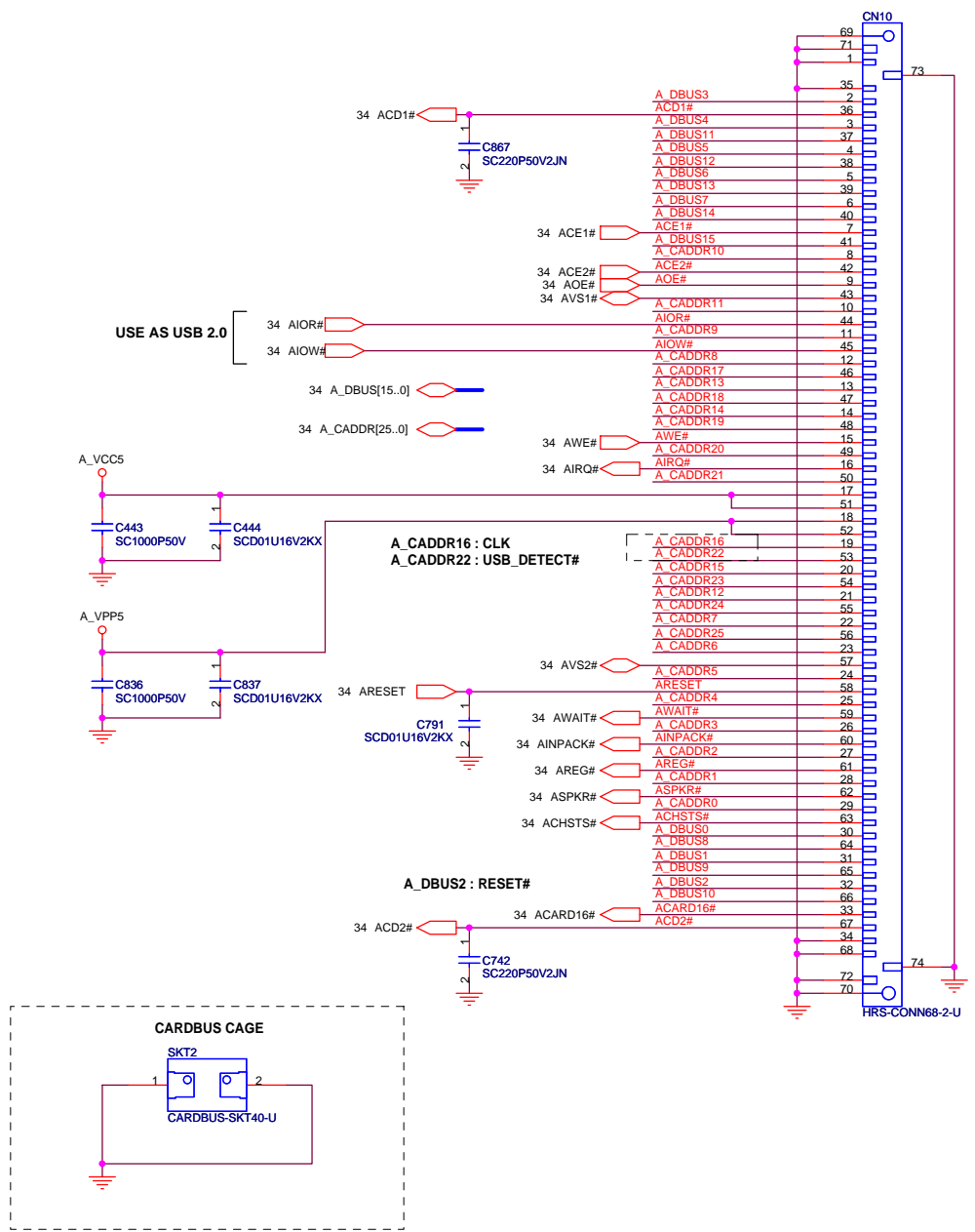
PCI / OTHER

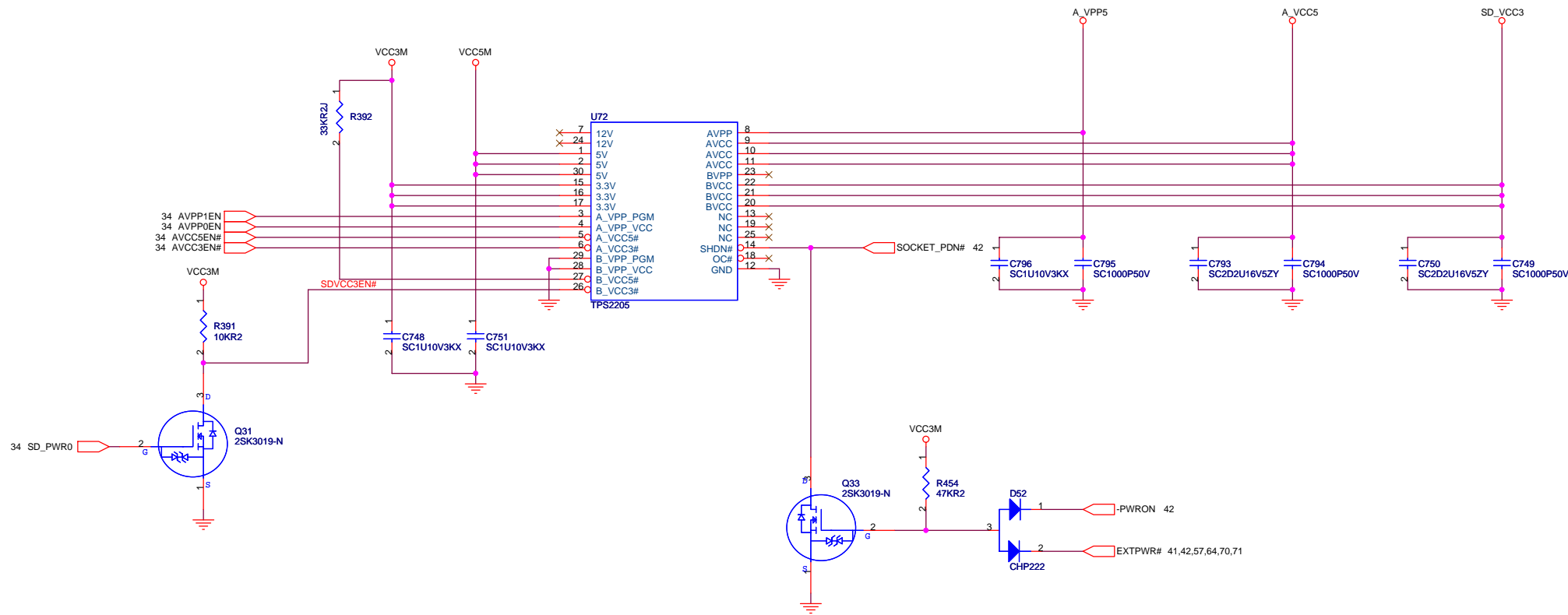
	SERIAL IRQ ENABLE	SERIAL IRQ DISABLE
UDIO0	SRIRQ#	IRQ9
UDIO1	GPIO0	IRQ3
UDIO2	GPIO1	IRQ4
UDIO3	GPIO2	IRQ10
UDIO4	GPIO3	IRQ11
UDIO5	LED0#	IRQ15

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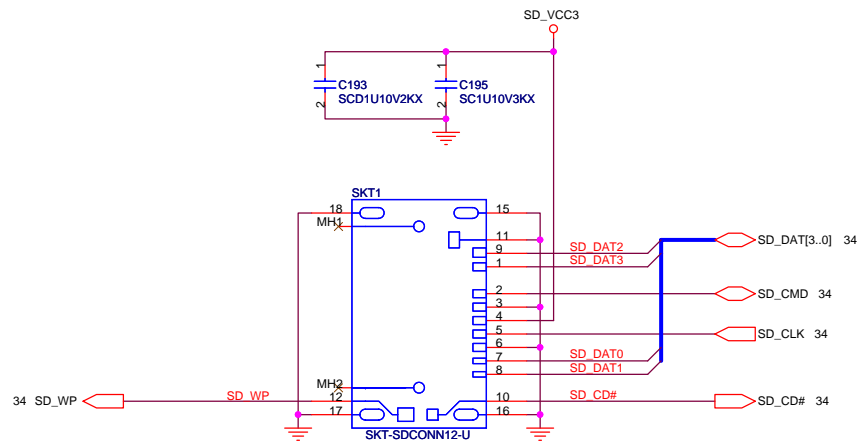
Title: **CARD BUS(2/2)**

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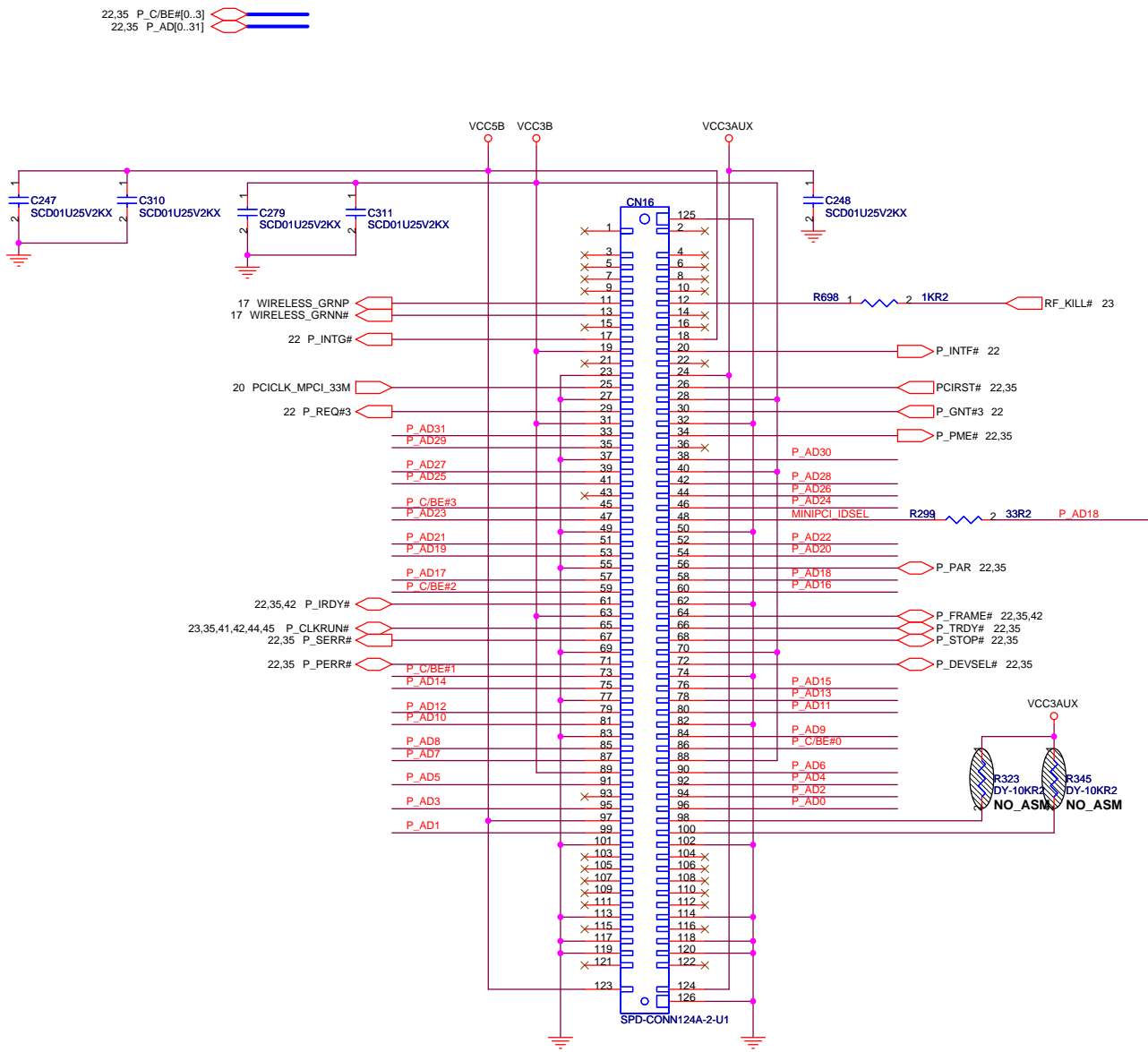


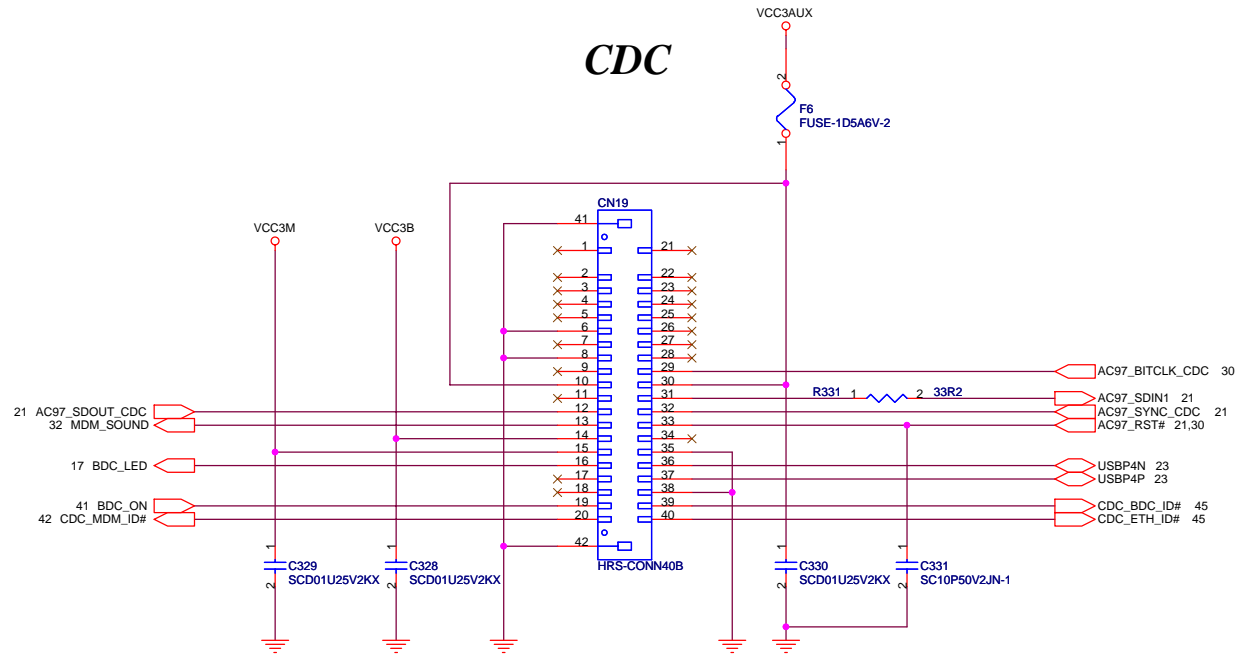
SD Slot



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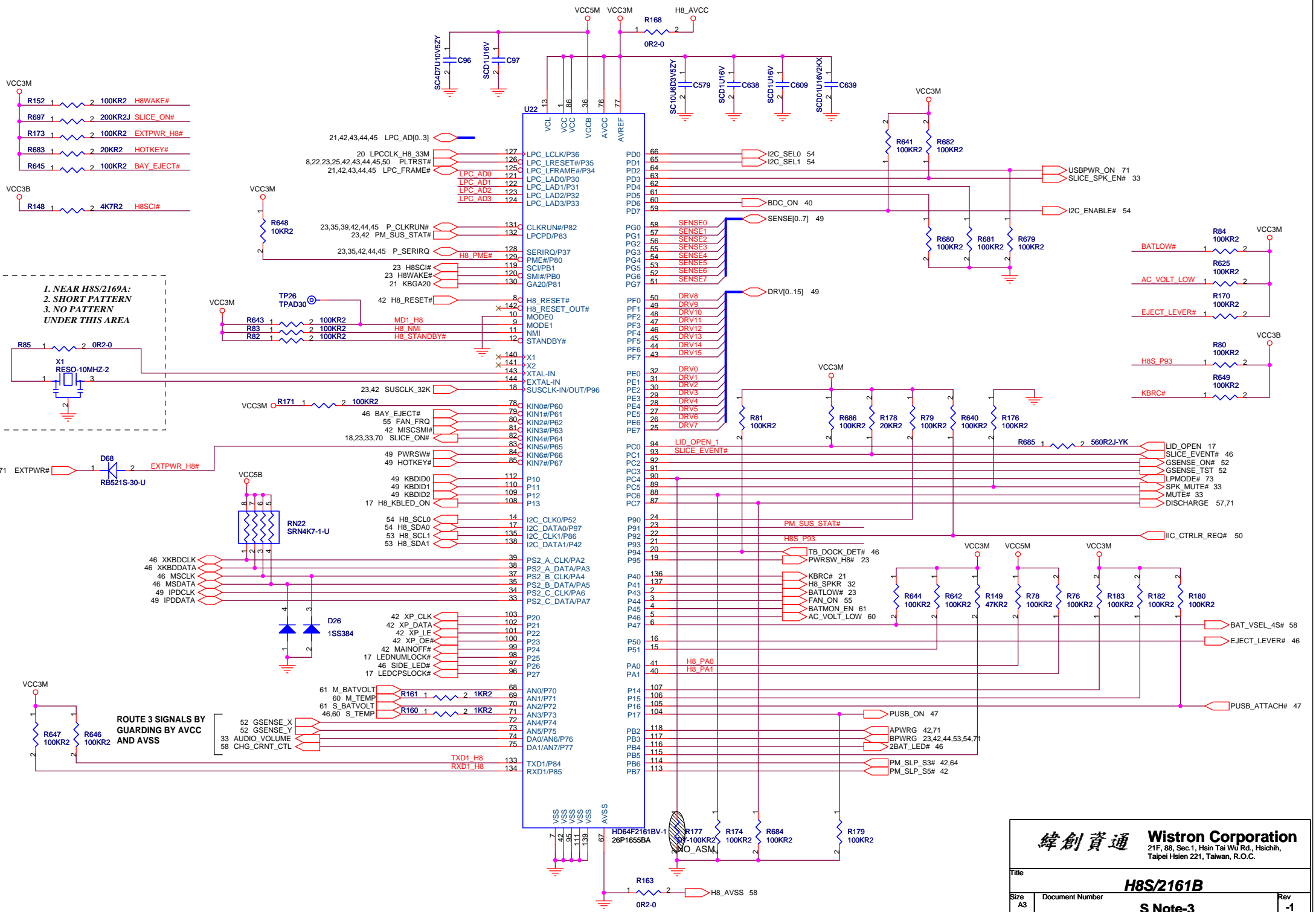
Title		
SD SLOT		
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Title			CDC/Fingerprint CONNECTOR		
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MEM_BASE_ID[4..0]

FWH GPin	4	3	2	1	0	Base Memory	Memory Capacity	Memory Bank (Device Qty)	
BASE_MEM_IDn	4	3	2	1	0	Total Capacity	Capacity		
	0	0	0	x	x	128MB	256Mbit	1 (4pcs)	Reserved
	0	0	1	x	x	256MB	256Mbit	2 (8pcs)	Reserved
	0	1	0	0	0	256MB	512Mbit	1 (4pcs)	Elpida / Hynix / Infineon / Micron / Samsung
			0	1	Reserved				
			1	0	Reserved				
			1	1	Reserved				
	0	1	1	0	0	512MB	512Mbit	2 (8pcs)	Elpida / Hynix / Infineon / Micron / Samsung
			0	1	Reserved				
			1	0	Reserved				
			1	1	Reserved				
	1	0	0	x	x	512MB	1Gbit	1 (4pcs)	Reserved
	1	0	1	x	x	1GB	1Gbit	2 (8pcs)	Reserved

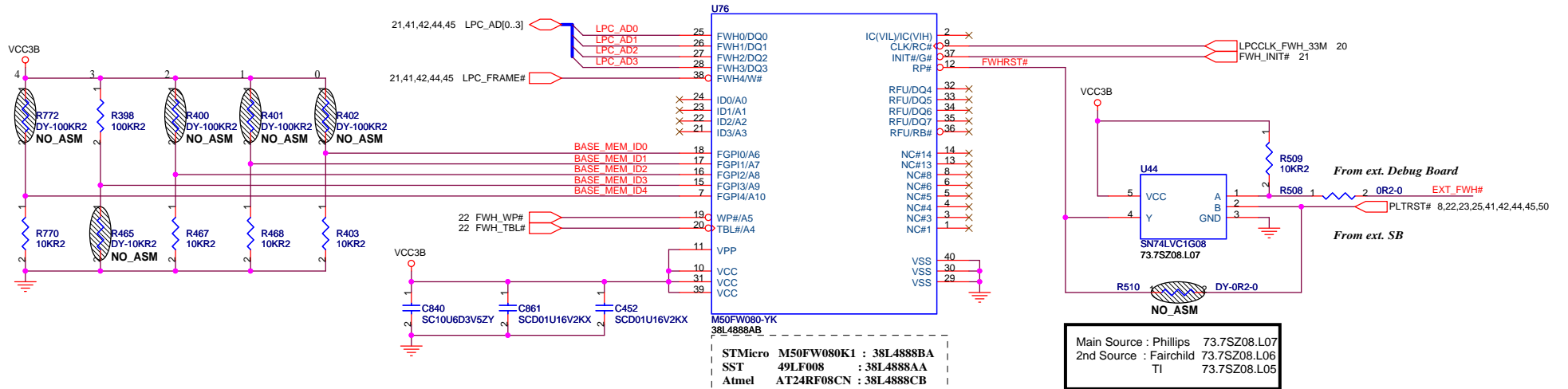
MEM_BASE_ID[4..0]

Bit 4-3 : Memory Capacity ID[1:0]
 00 = 256Mbit
 01 = 512Mbit
 10 = 1Gbit
 11 = Reserved

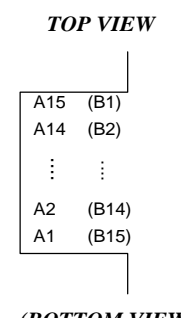
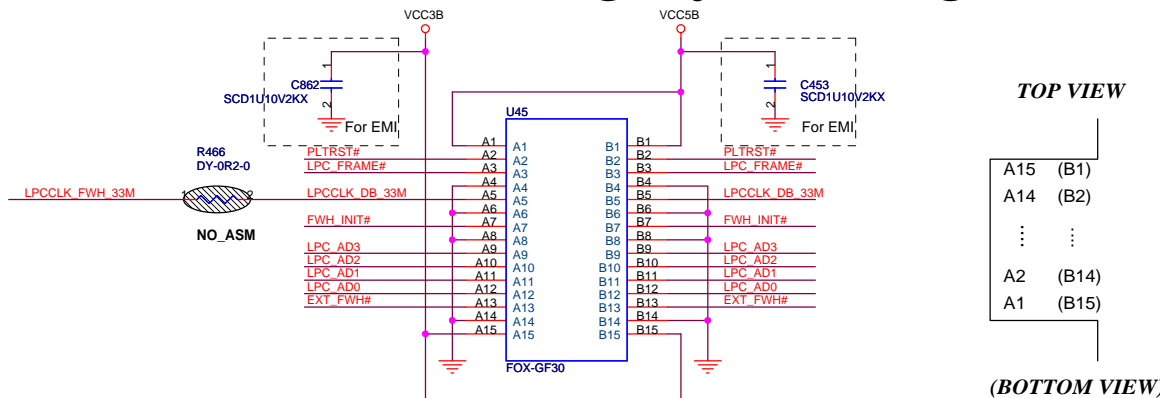
Bit 2 : Memory Bank ID
 0 = 1 Rank (4pcs)
 1 = 2 Rank (8pcs)

Bit 1-0 : Memory Vendor ID[1:0]
 00 = Default
 01 = Reserved (for Specific Memory Vendor)
 10 = Reserved (for Specific Memory Vendor)
 11 = Reserved (for Specific Memory Vendor)

x : don't care
 11000b ~ 11111b : reserved



Golden Finger for Debug Board



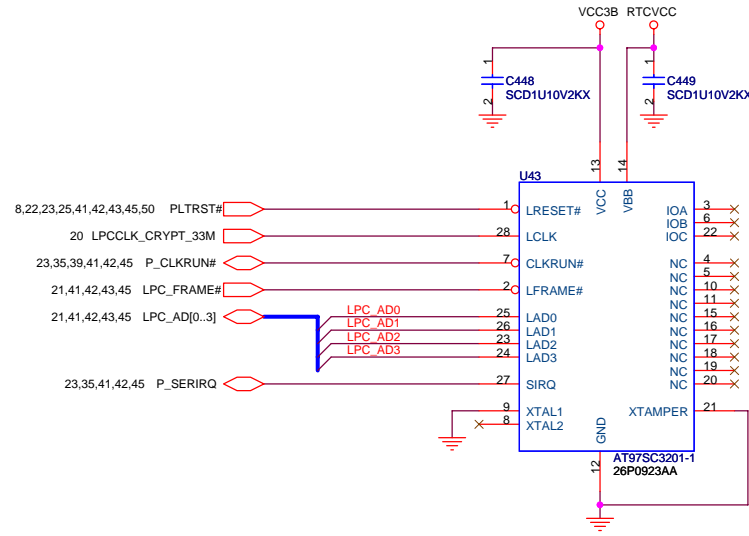
緯創資通 Wistron Corporation
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Title: **FWH**

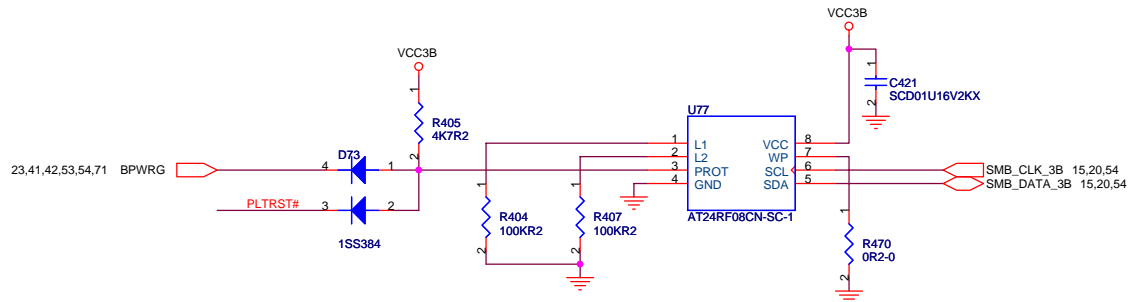
Size: A3 Document Number: **S Note-3** Rev: **-1**

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TCPA

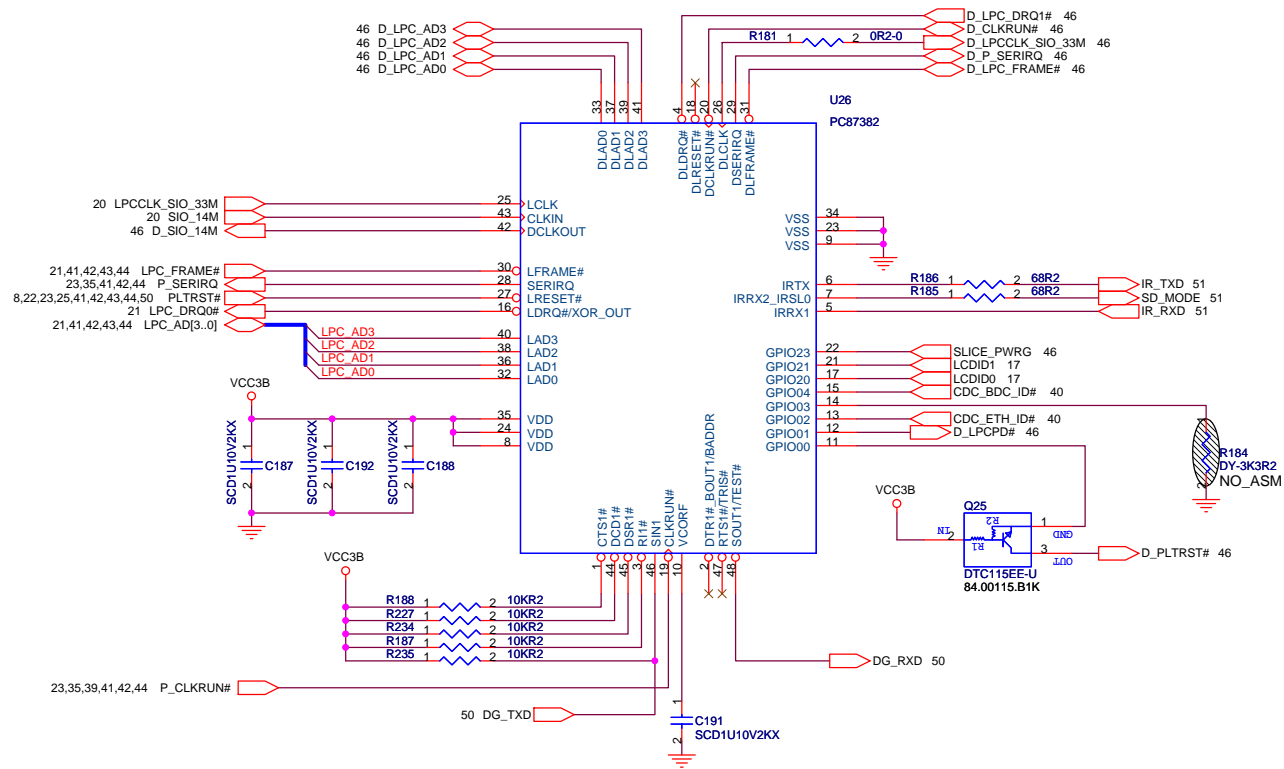


EEPROM

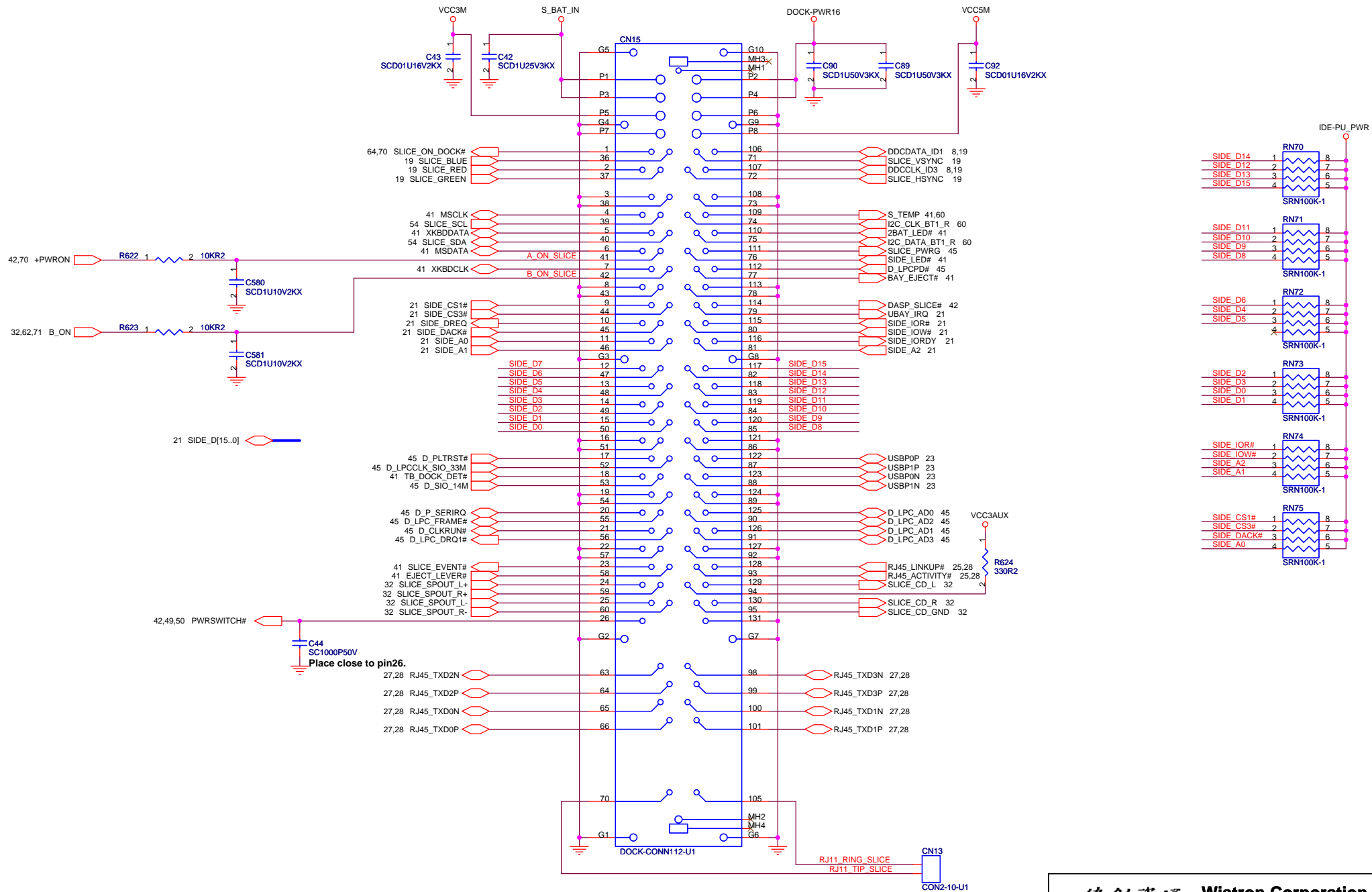


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Title		
EEPROM / TPM		
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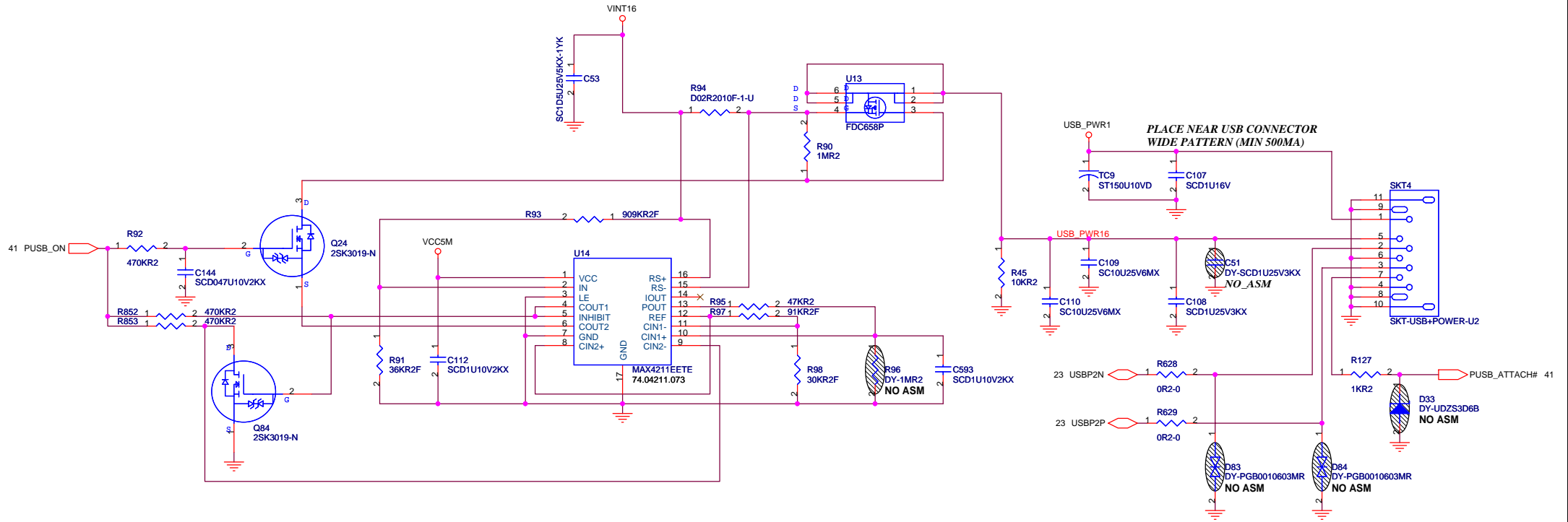


CRYPT_DETECTION BIT
None TCPA model should be assemble this pull-down resistor.

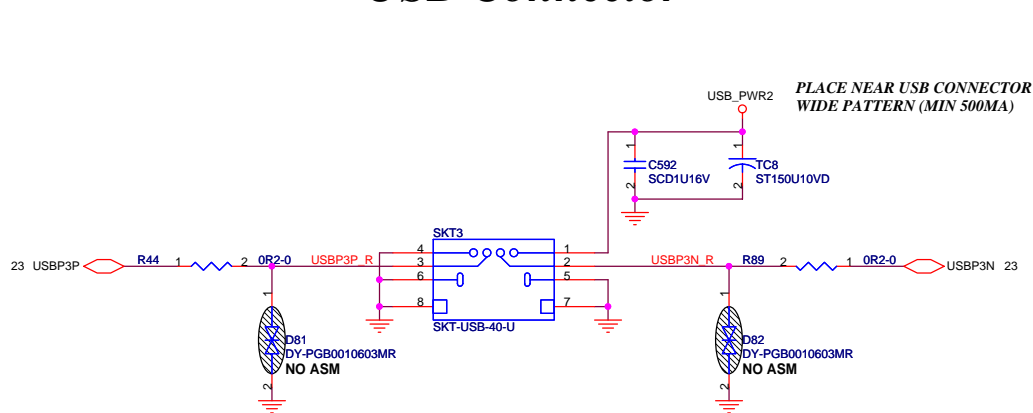


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SLICE CONNECTOR	
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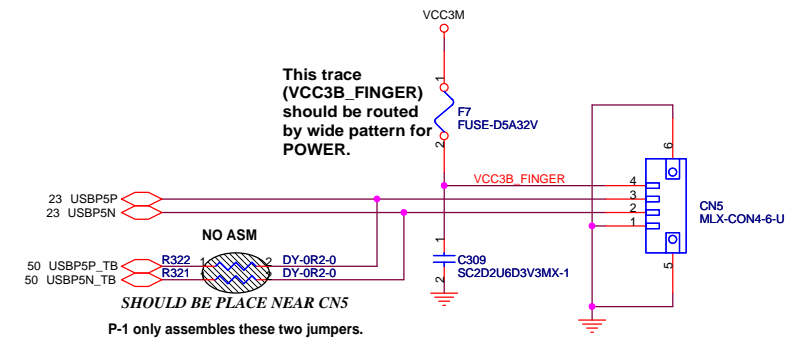
Powered USB Connector



USB Connector

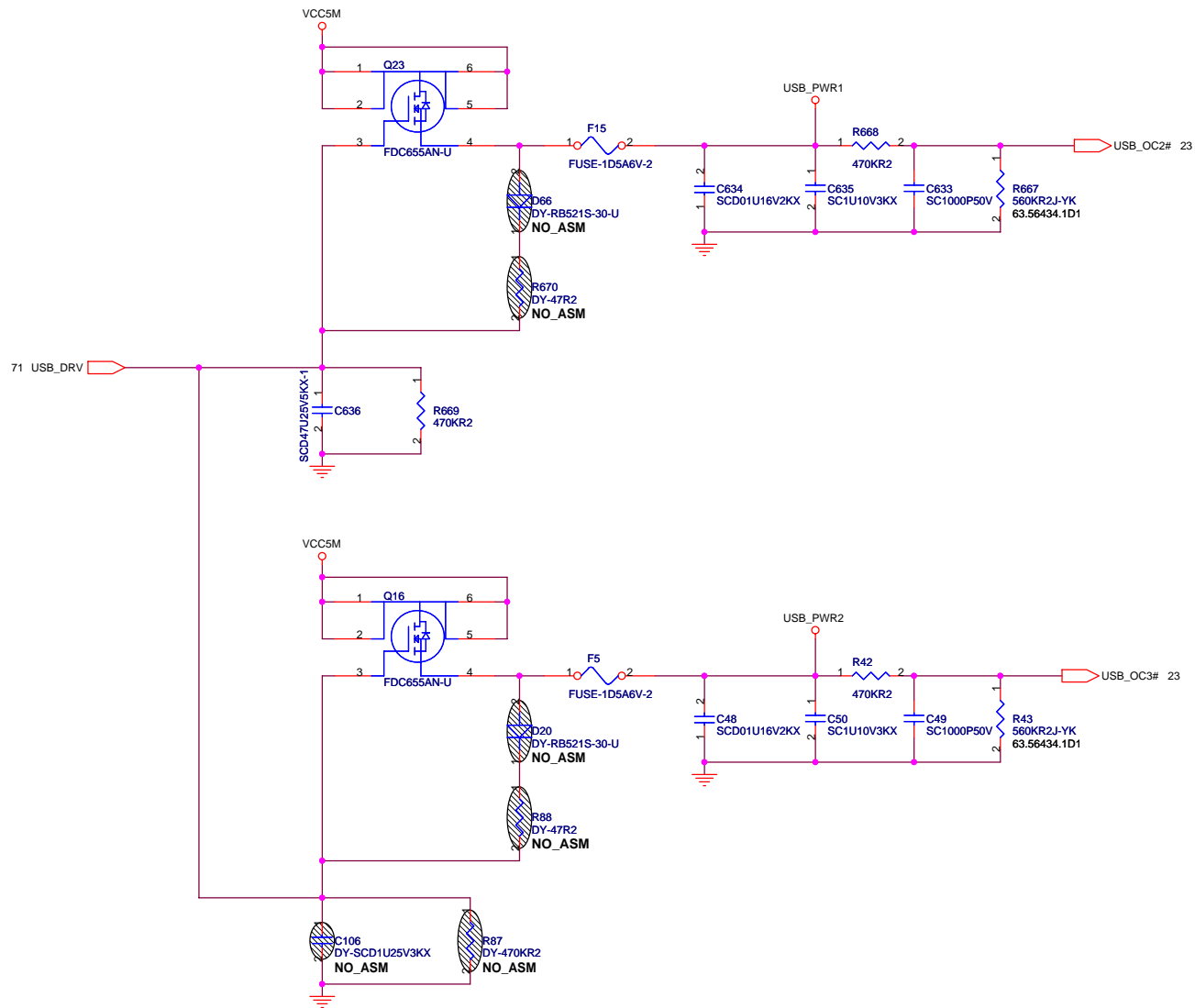


Fingerprint



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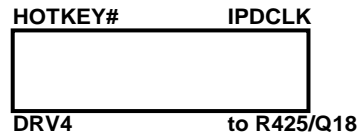
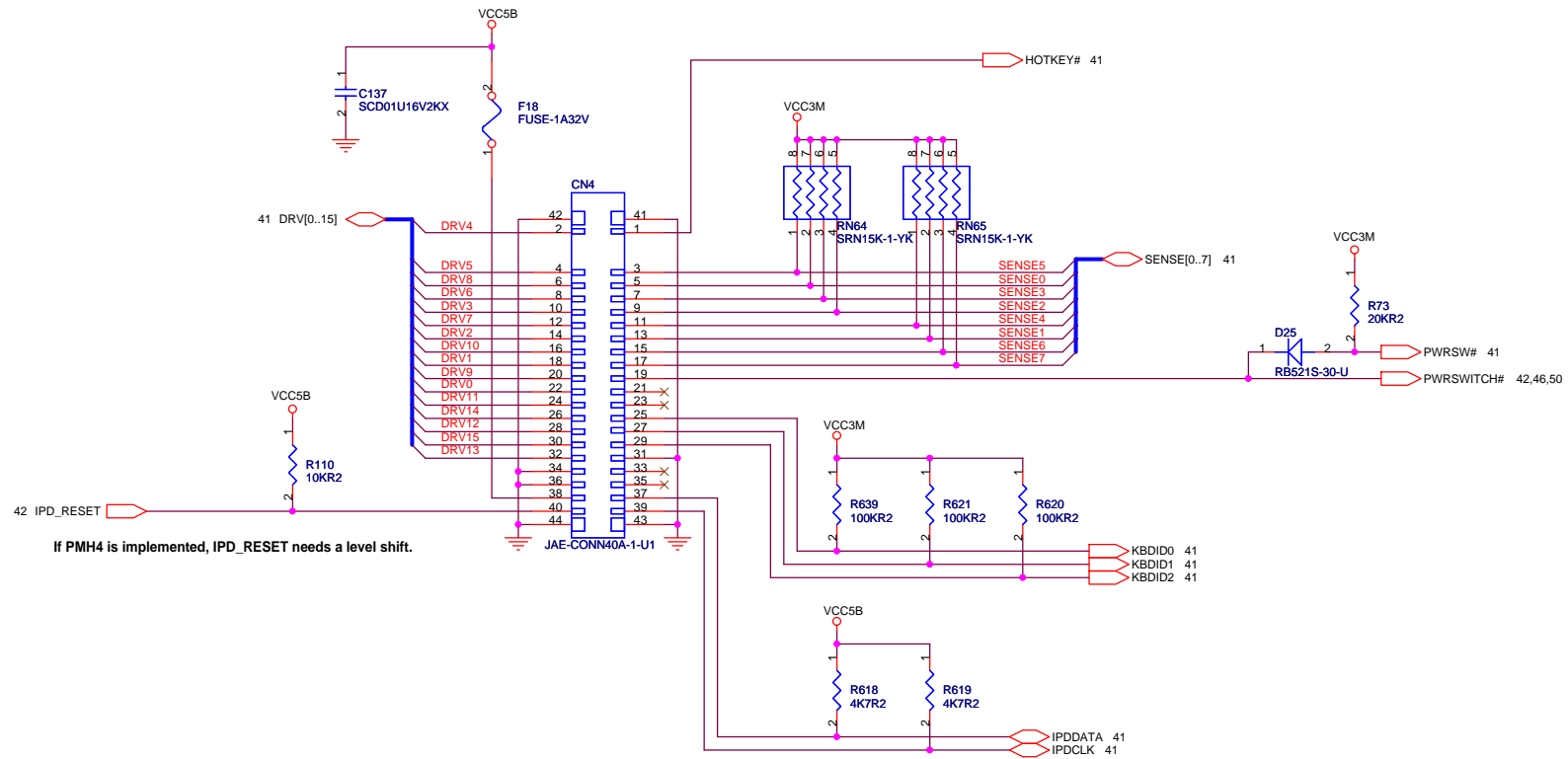
Title			
USB CONNECTOR			
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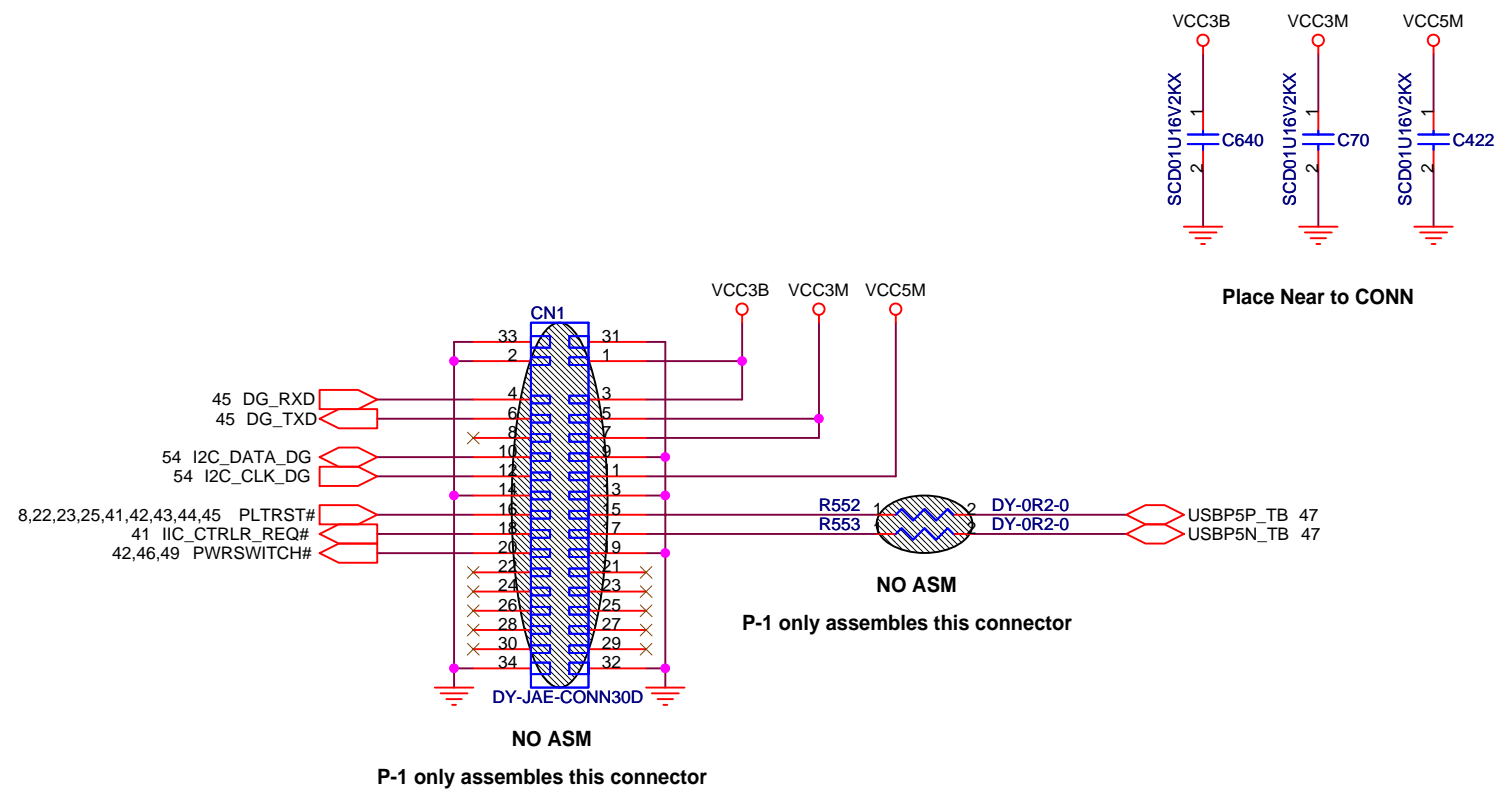
Title		
USB POWER		
Size	Document Number	Rev
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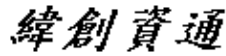
Keyboard Connector

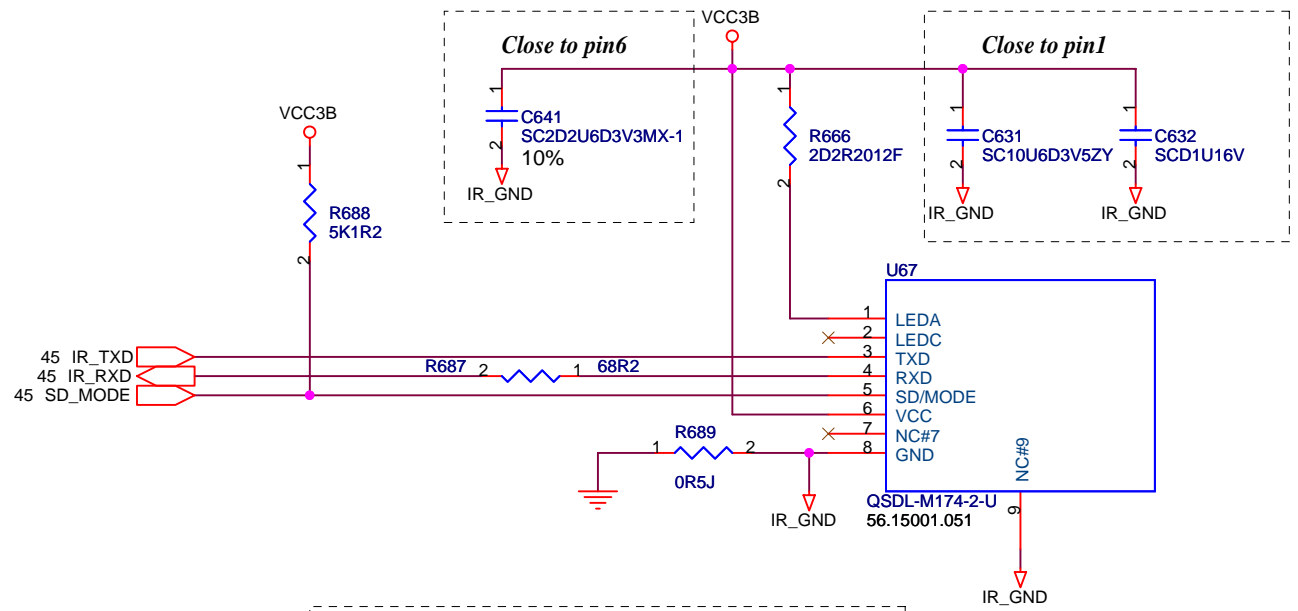


Keyboard Connector Top View

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KEYBOARD CONN			
Title			
Size	Document Number	Rev	-1
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Title DG CONNECTOR	
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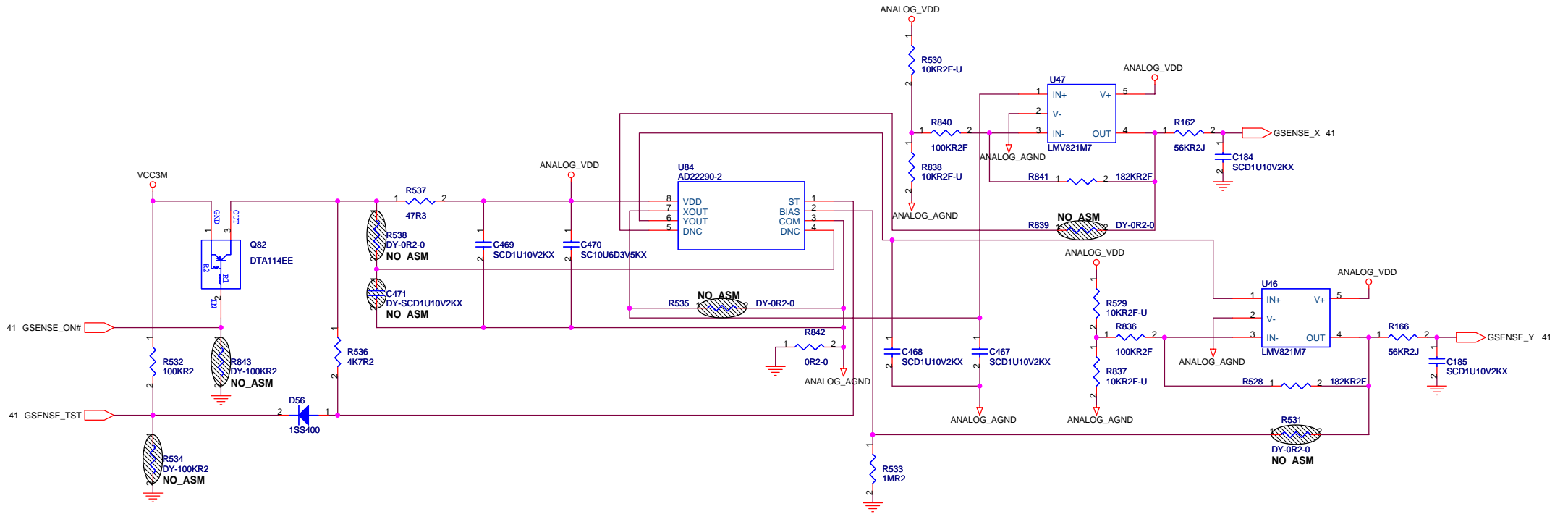
SHOULD QUALIFY BELOW PARTS
 PRIMATY ALIGENT QSDL-M174-1 : 74.00174.001
 SECOND VISHAY TFDU6102 : 56.15001.051

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Title **IR MODULE**

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Accelero Meter Parts List

Page	Usage Code	AD22290	MEMSIC	NO ACC.
52	R843 (100K 5%)	NO_ASM	NO_ASM	ASM
52	R534 (100K 5%)	NO_ASM	ASM	ASM
52	U47 (MAX4400AXK-T-1)	ASM	NO_ASM	NO_ASM
52	U84 (AD22290-2)	ASM	MXA2500GL	NO_ASM
52	U46 (MAX4400AXK-T-1)	ASM	NO_ASM	NO_ASM
52	Q82 (DTA114EE)	ASM	ASM	NO_ASM
52	D56 (1SS400)	ASM	NO_ASM	NO_ASM
52	R537(47ohm 5%)	47 ohm	10 ohm	NO_ASM
52	R530(10K 1%)	ASM	NO_ASM	NO_ASM
52	R840(100K 1%)	ASM	NO_ASM	NO_ASM
52	R612(56K 5%)	ASM	8.2K 5%	NO_ASM
52	R838(10K 1%)	ASM	NO_ASM	NO_ASM
52	R841(182K 1%)	ASM	NO_ASM	NO_ASM
52	R536(4.7K 5%)	ASM	NO_ASM	NO_ASM
52	R529(10K 1%)	ASM	NO_ASM	NO_ASM
52	R836(100K 1%)	ASM	NO_ASM	NO_ASM
52	R116(56K 5%)	ASM	8.2K 5%	NO_ASM
52	R842(0ohm 5%)	ASM	ASM	NO_ASM

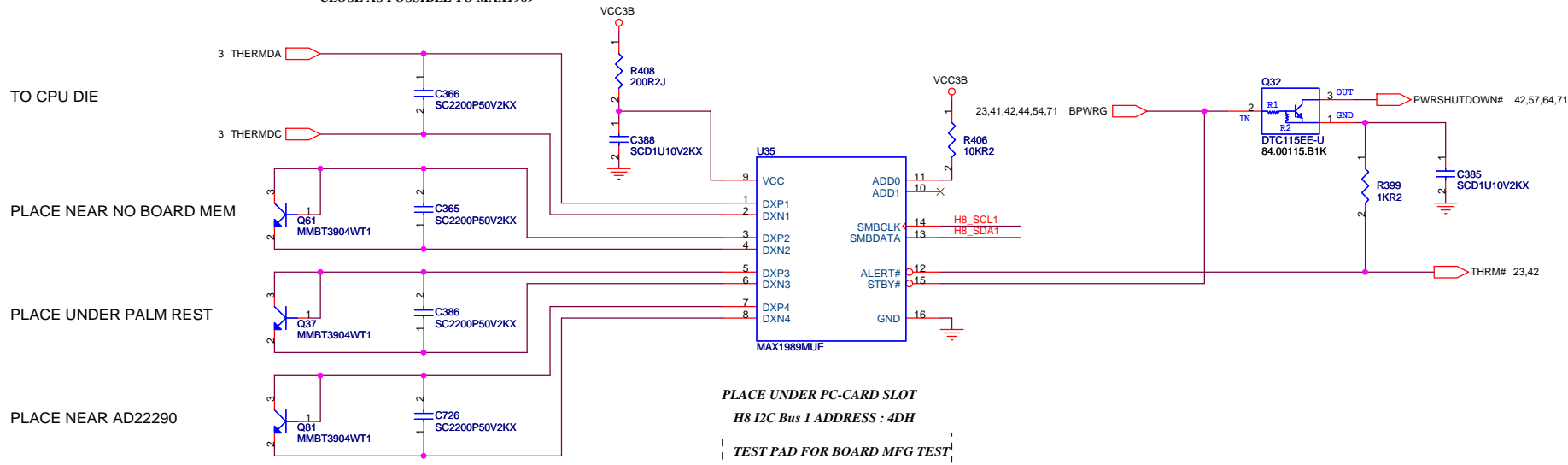
Page	Usage Code	AD22290	MEMSIC	NO ACC.
52	R532(100K 5%)	ASM	NO_ASM	NO_ASM
52	R837(10K 1%)	ASM	NO_ASM	NO_ASM
52	R528(182K 1%)	ASM	NO_ASM	NO_ASM
52	R533(1M 5%)	ASM	NO_ASM	NO_ASM
52	C184 (0.1u 10%10V)	ASM	ASM	NO_ASM
52	C469 (0.1u 10%10V)	ASM	ASM	NO_ASM
52	C468 (0.1u 10%10V)	ASM	NO_ASM	NO_ASM
52	C467 (0.1u 10%10V)	ASM	NO_ASM	NO_ASM
52	C185 (0.1u 10%10V)	ASM	ASM	NO_ASM
52	R538(0ohm 5%)	NO_ASM	ASM	NO_ASM
52	R839(0ohm 5%)	NO_ASM	ASM	NO_ASM
52	R535(0ohm 5%)	NO_ASM	ASM	NO_ASM
52	R531(0ohm 5%)	NO_ASM	ASM	NO_ASM
52	C741 (0.1u 10%10V)	NO_ASM	ASM	NO_ASM
52	C470 (10u 10% 6.3V)	ASM	NO_ASM	NO_ASM

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G-SENSOR

Title: _____
 Size: A3 Document Number: _____ Rev: -1
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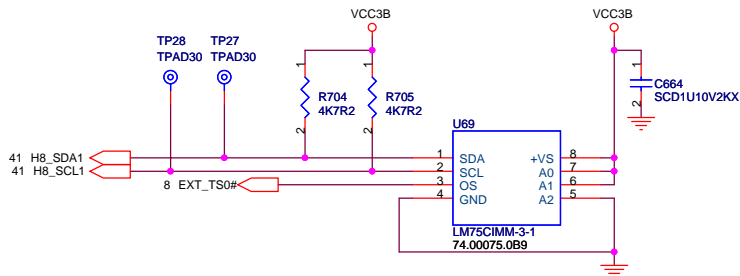
THESE CAPS MUST BE PLACED AS
CLOSE AS POSSIBLE TO MAX1989



Thermal Sensor LM75 for DDR module

(For DDR throttling implementation)

PLACE UNDER DIMM

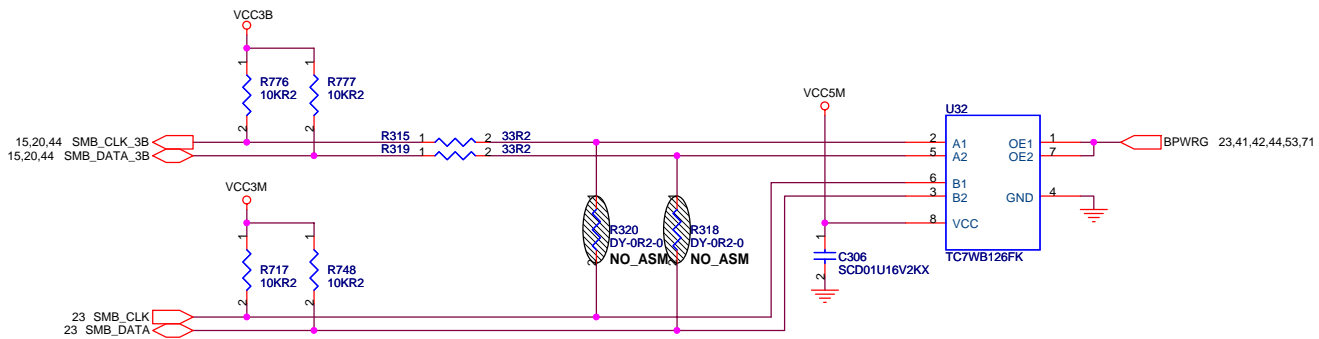
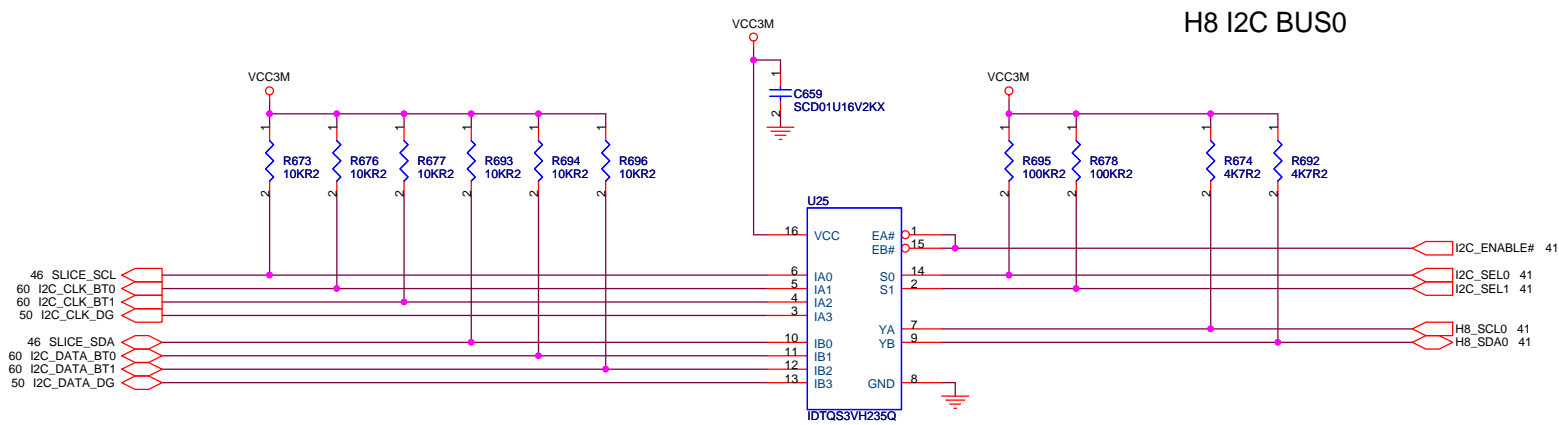


H8 I2C Bus 1 ADDRESS : 4BH

Main Source : 74.00075.0B9 (NS)
2nd Source : 74.00075.AB9 (MAXIM)
74.07416.0B9 (ADI)

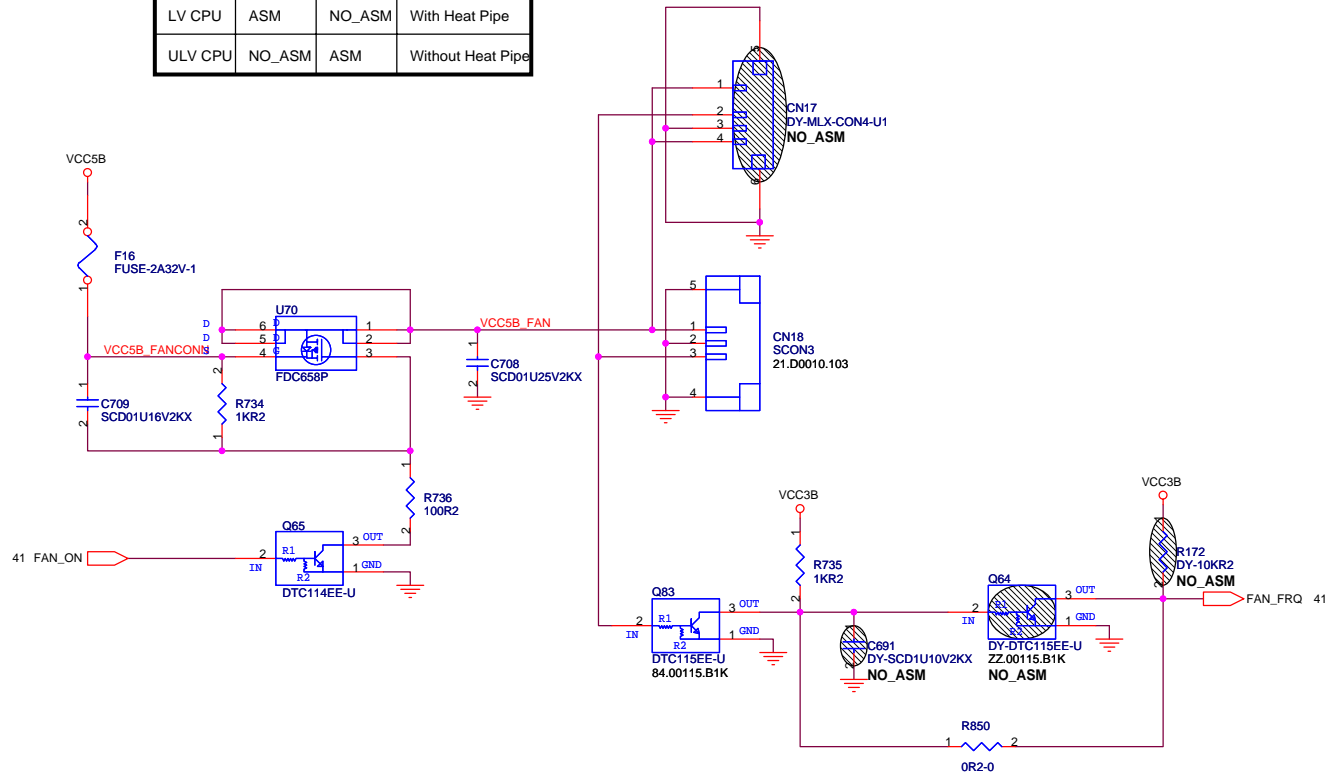
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Title		
THERMAL SENSOR		
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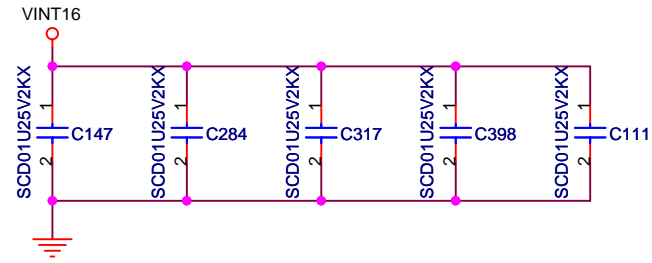
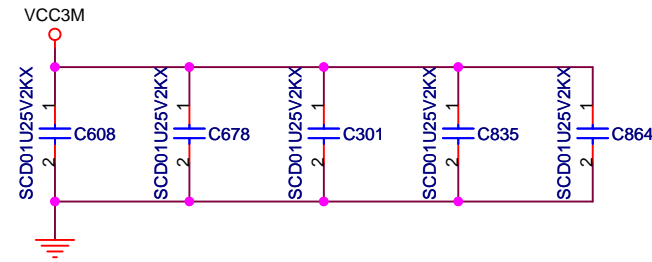
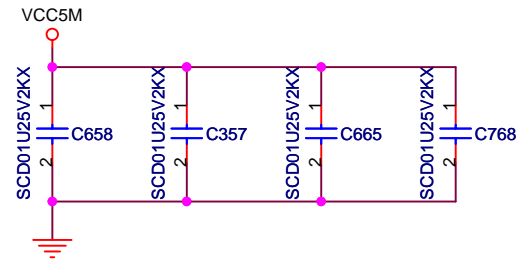
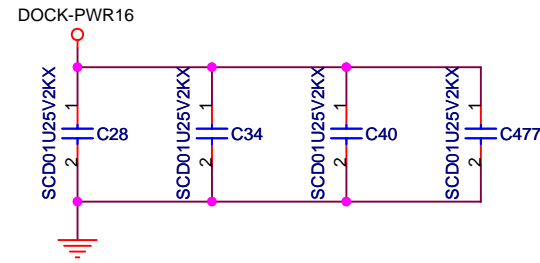
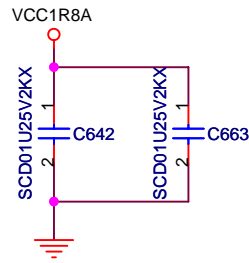
Fan Power Control

	CN18	CN17	FAN Module
LV CPU	ASM	NO_ASM	With Heat Pipe
ULV CPU	NO_ASM	ASM	Without Heat Pipe



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Title		
FAN CONTROL		
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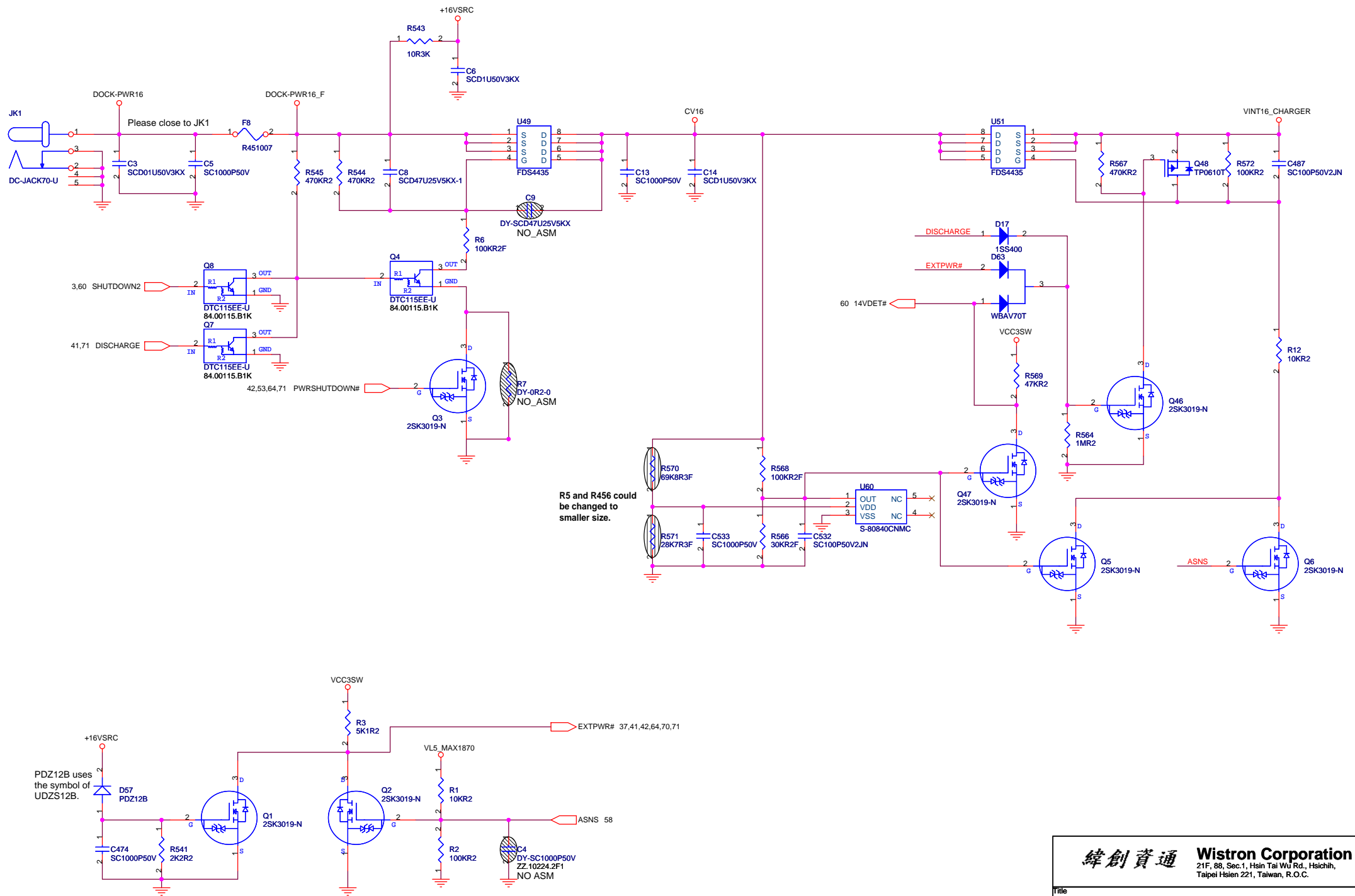


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Title **EMC DECOUPLING**

Size A4	Document Number S Note-3	Rev -1
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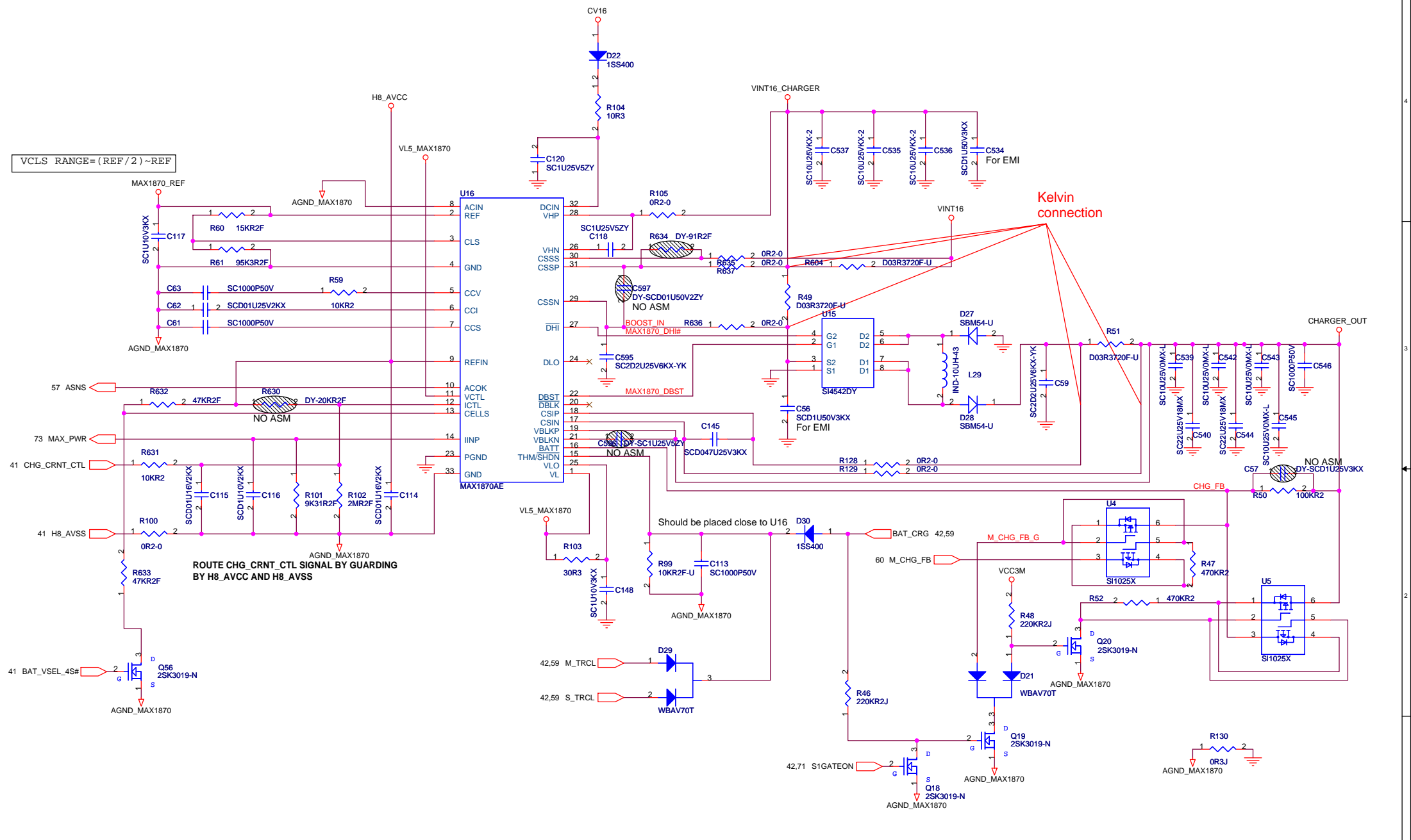
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Title		
DC-IN		
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VCLS RANGE=(REF/2)~REF



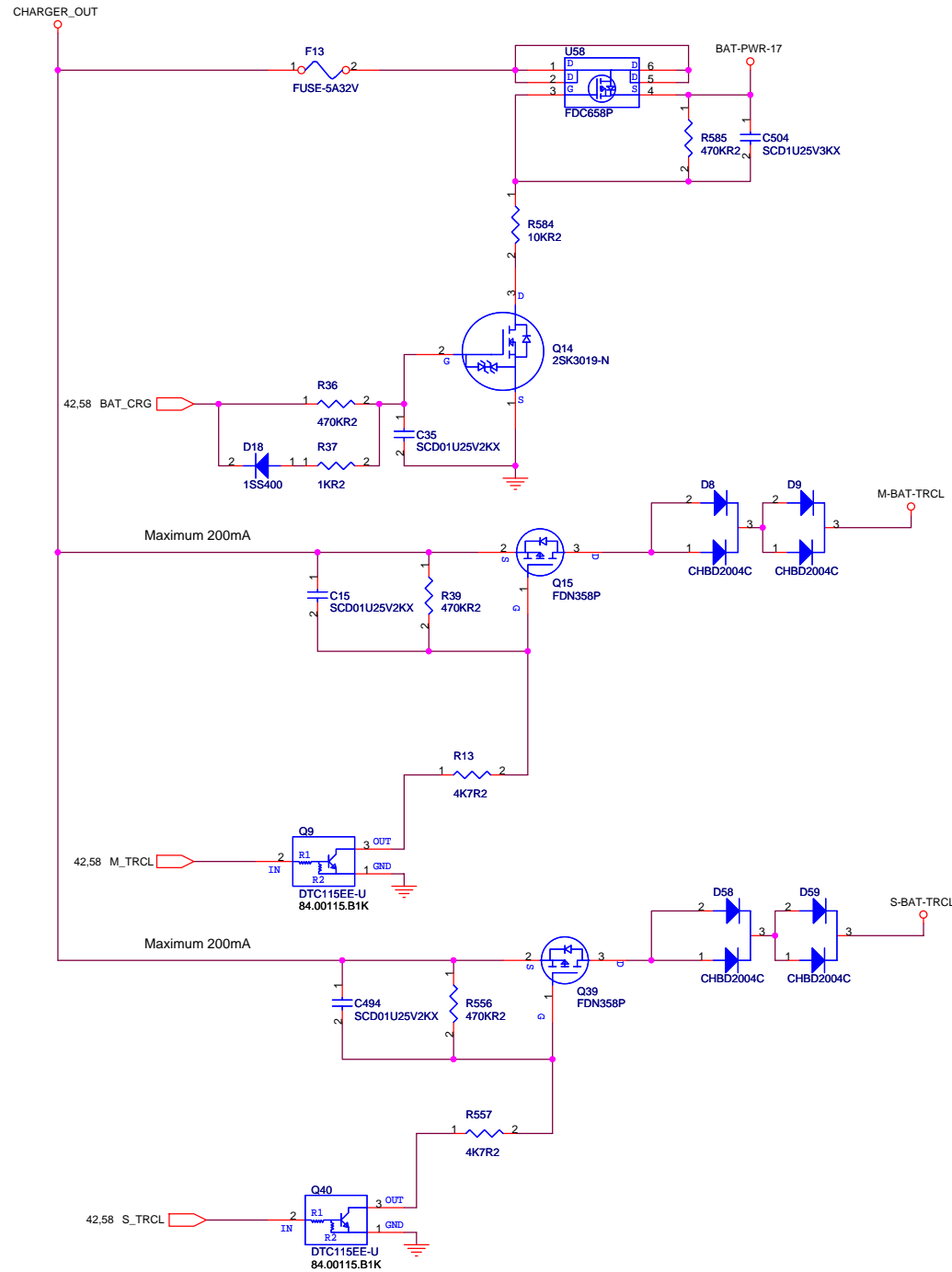
ROUTE CHG_CRNT_CTL SIGNAL BY GUARDING BY H8_AVCC AND H8_AVSS

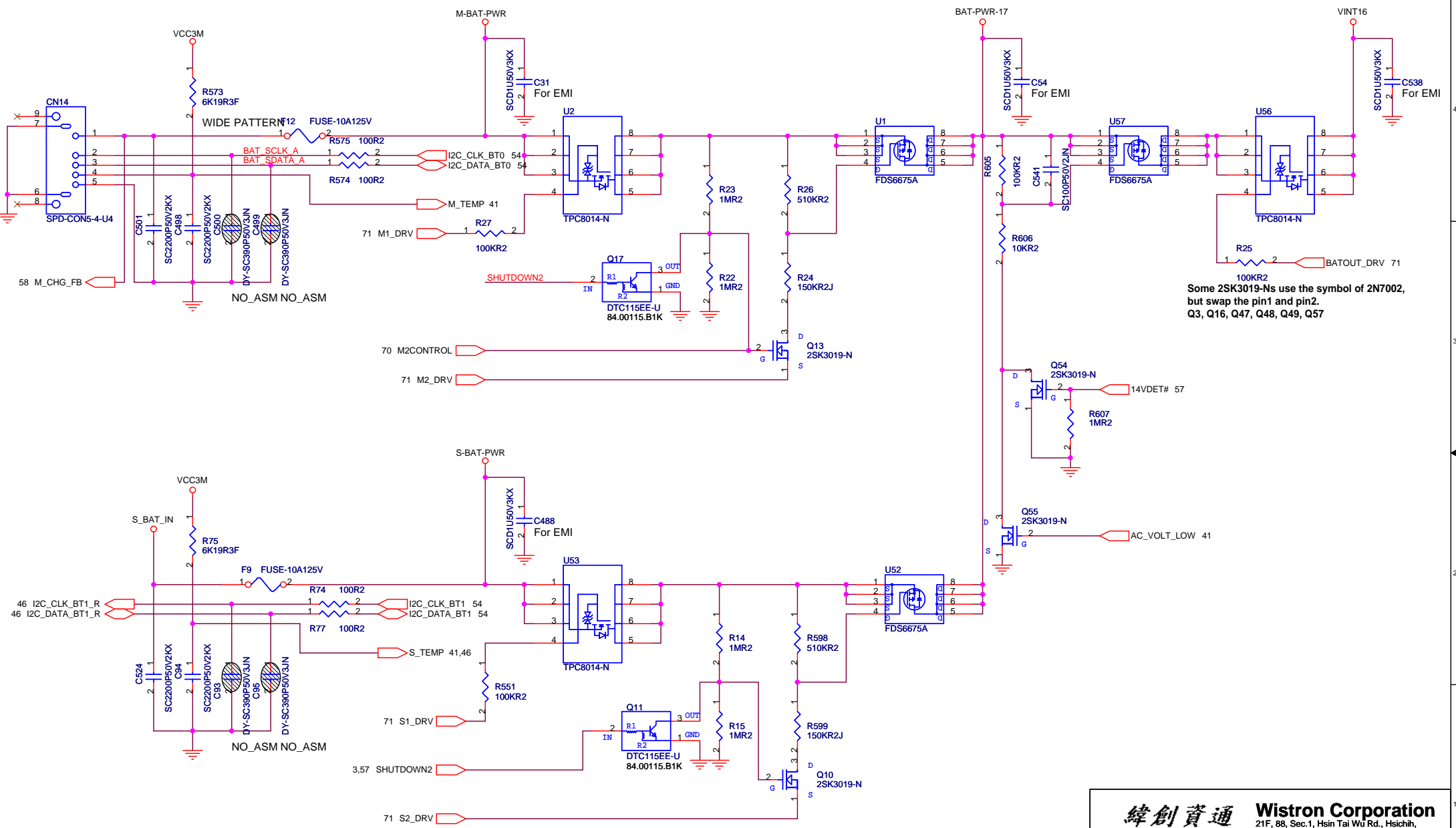
Should be placed close to U16

Some 2SK3019-Ns use the symbol of 2N7002, but swap the pin1 and pin2. Q55, Q56, Q83, Q84

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Title			CHARGER MAX1870		
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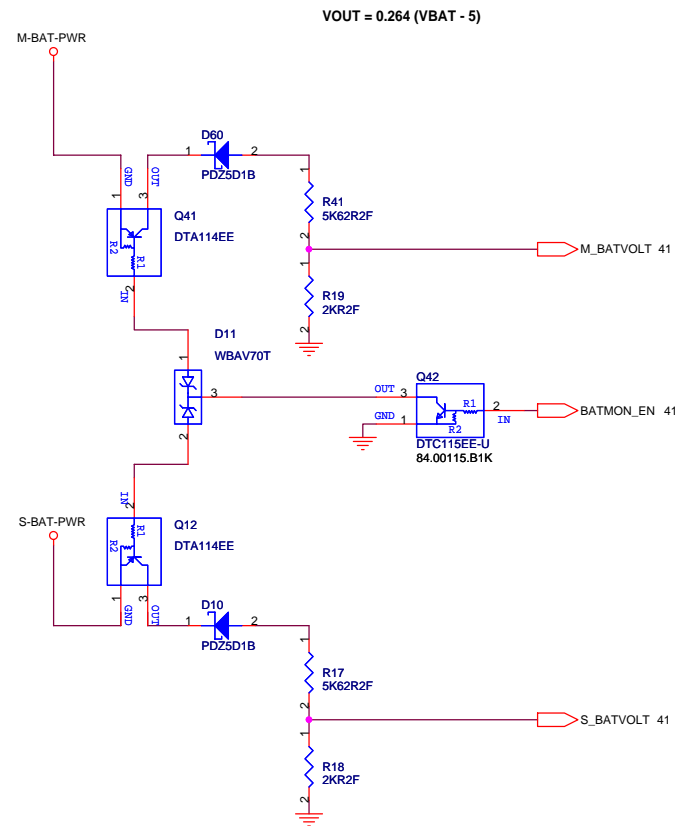


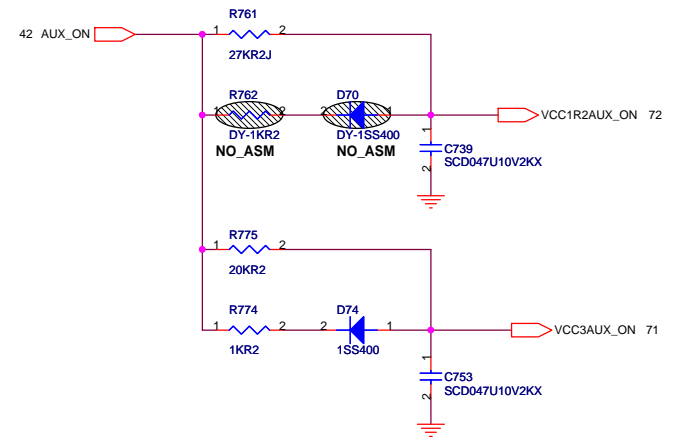
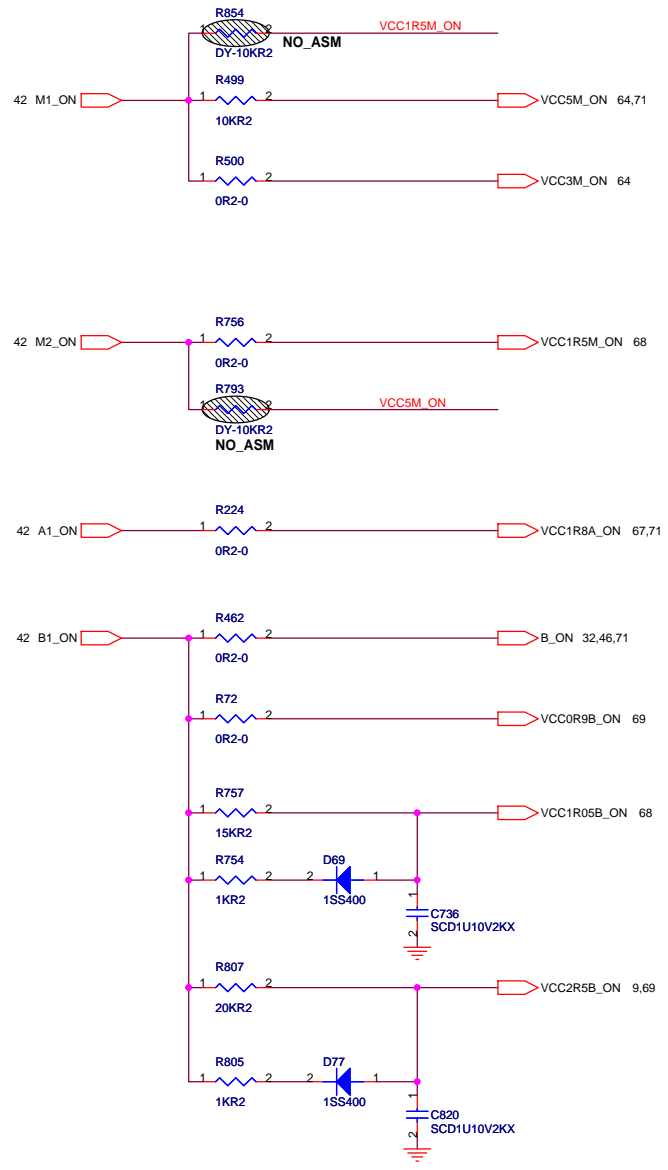


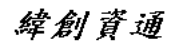
Some 2SK3019-Ns use the symbol of 2N7002, but swap the pin1 and pin2.
 Q3, Q16, Q47, Q48, Q49, Q57

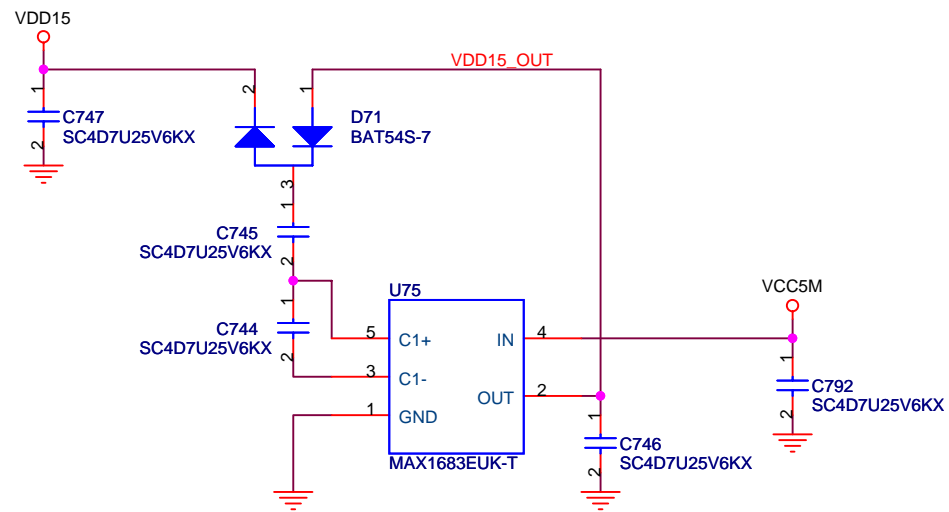
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Title		
BATTERY INPUT		
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POWER SEQUENCE		
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Title

DC-DC VDD15

Size
A4

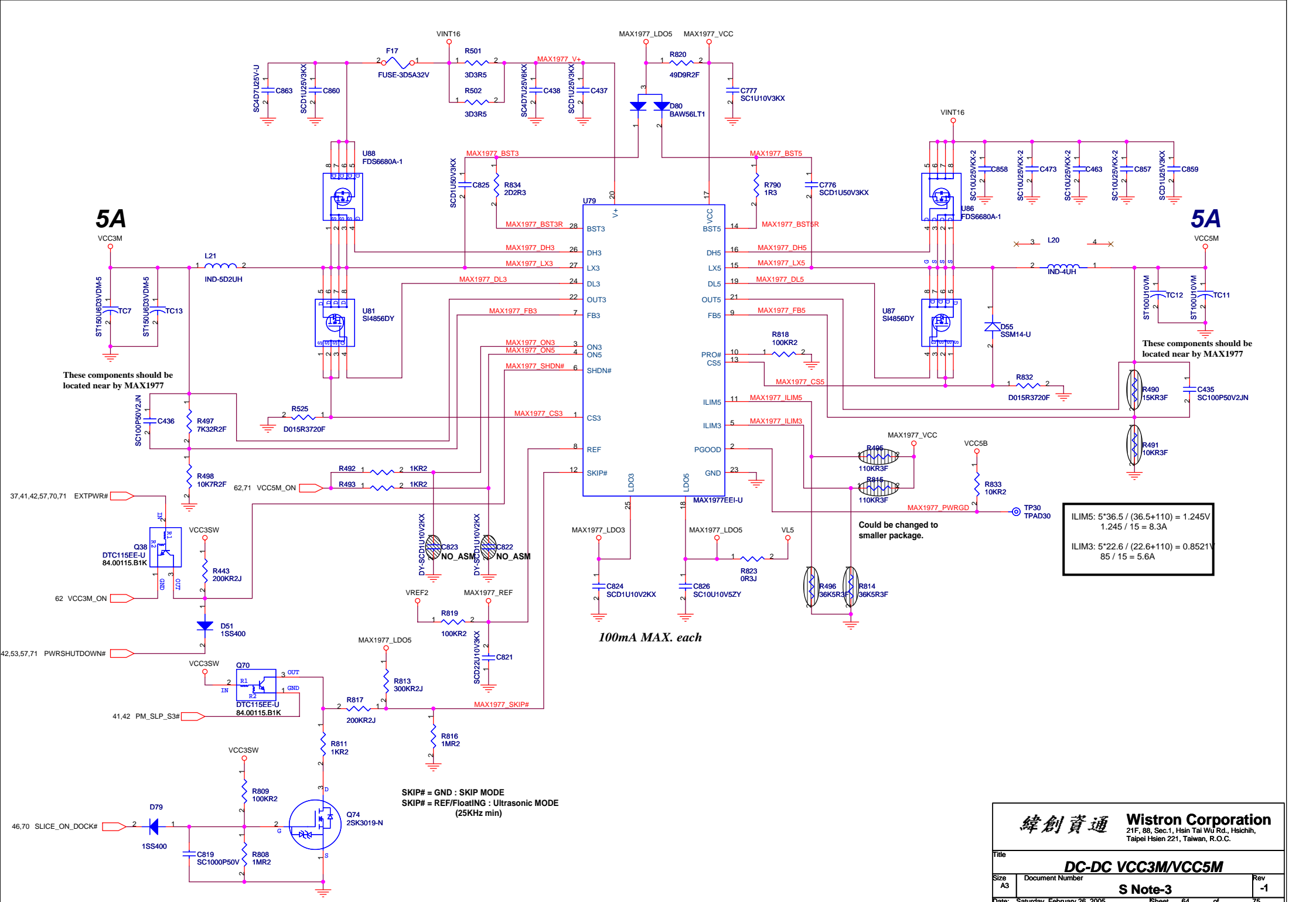
Document Number

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5A

5A

These components should be located near by MAX1977

These components should be located near by MAX1977

Could be changed to smaller package.

$$\begin{aligned} \text{ILIM5: } & 5 \times 36.5 / (36.5 + 110) = 1.245\text{V} \\ & 1.245 / 15 = 8.3\text{A} \\ \text{ILIM3: } & 5 \times 22.6 / (22.6 + 110) = 0.8521\text{V} \\ & 0.8521 / 15 = 5.6\text{A} \end{aligned}$$

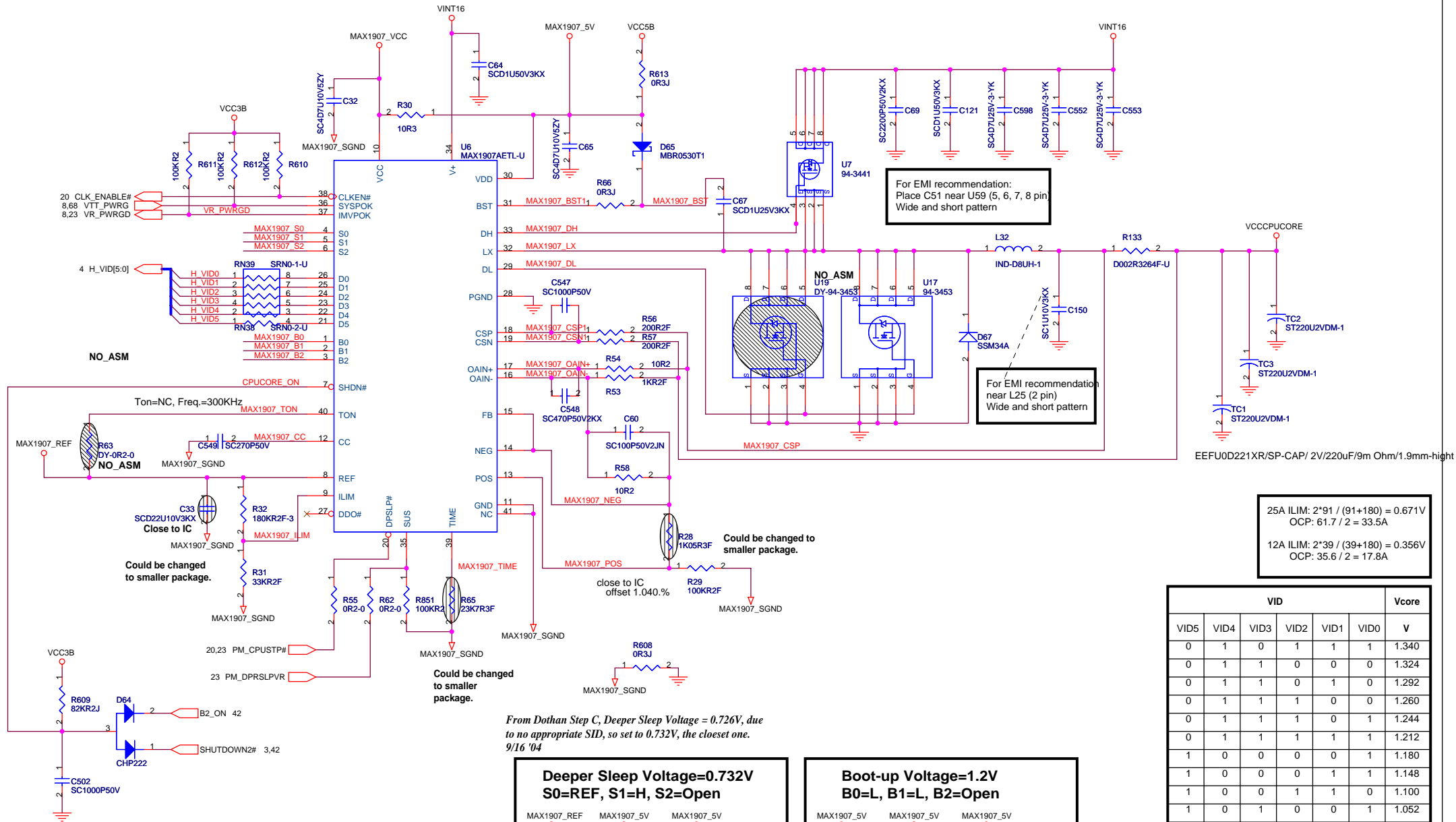
100mA MAX. each

SKIP# = GND : SKIP MODE
 SKIP# = REF/FloatiNG : Ultrasonic MODE
 (25KHz min)

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DC-DC VCC3M/VCC5M

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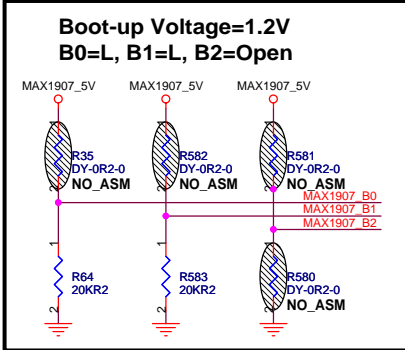
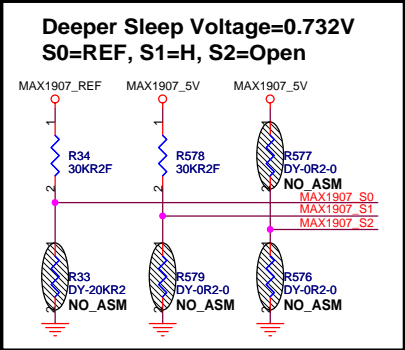


For EMI recommendation:
Place C51 near U59 (5, 6, 7, 8 pin)
Wide and short pattern

For EMI recommendation
near L25 (2 pin)
Wide and short pattern

25A ILIM: $2^*91 / (91+180) = 0.671V$
OCP: $61.7 / 2 = 33.5A$
12A ILIM: $2^*39 / (39+180) = 0.356V$
OCP: $35.6 / 2 = 17.8A$

From Dothan Step C, Deeper Sleep Voltage = 0.726V, due to no appropriate SID, so set to 0.732V, the closest one.
9/16 '04



VID						Vcore
VID5	VID4	VID3	VID2	VID1	VID0	V
0	1	0	1	1	1	1.340
0	1	1	0	0	0	1.324
0	1	1	0	1	0	1.292
0	1	1	1	0	0	1.260
0	1	1	1	0	1	1.244
0	1	1	1	1	1	1.212
1	0	0	0	0	1	1.180
1	0	0	0	1	1	1.148
1	0	0	1	1	0	1.100
1	0	1	0	0	1	1.052
1	0	1	0	1	1	1.020
1	0	1	1	1	0	0.972
1	1	0	0	0	0	0.940

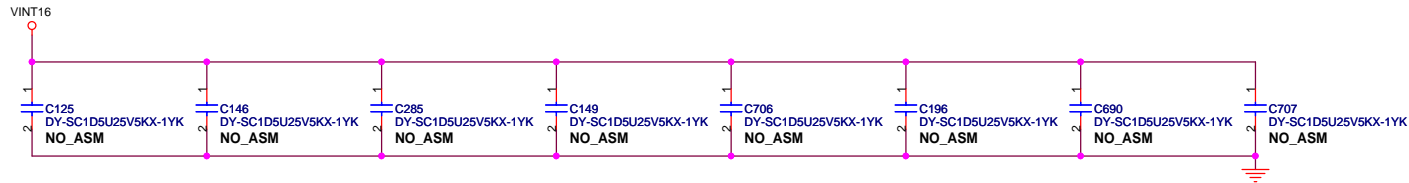
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DC-DC VCCCPUCORE

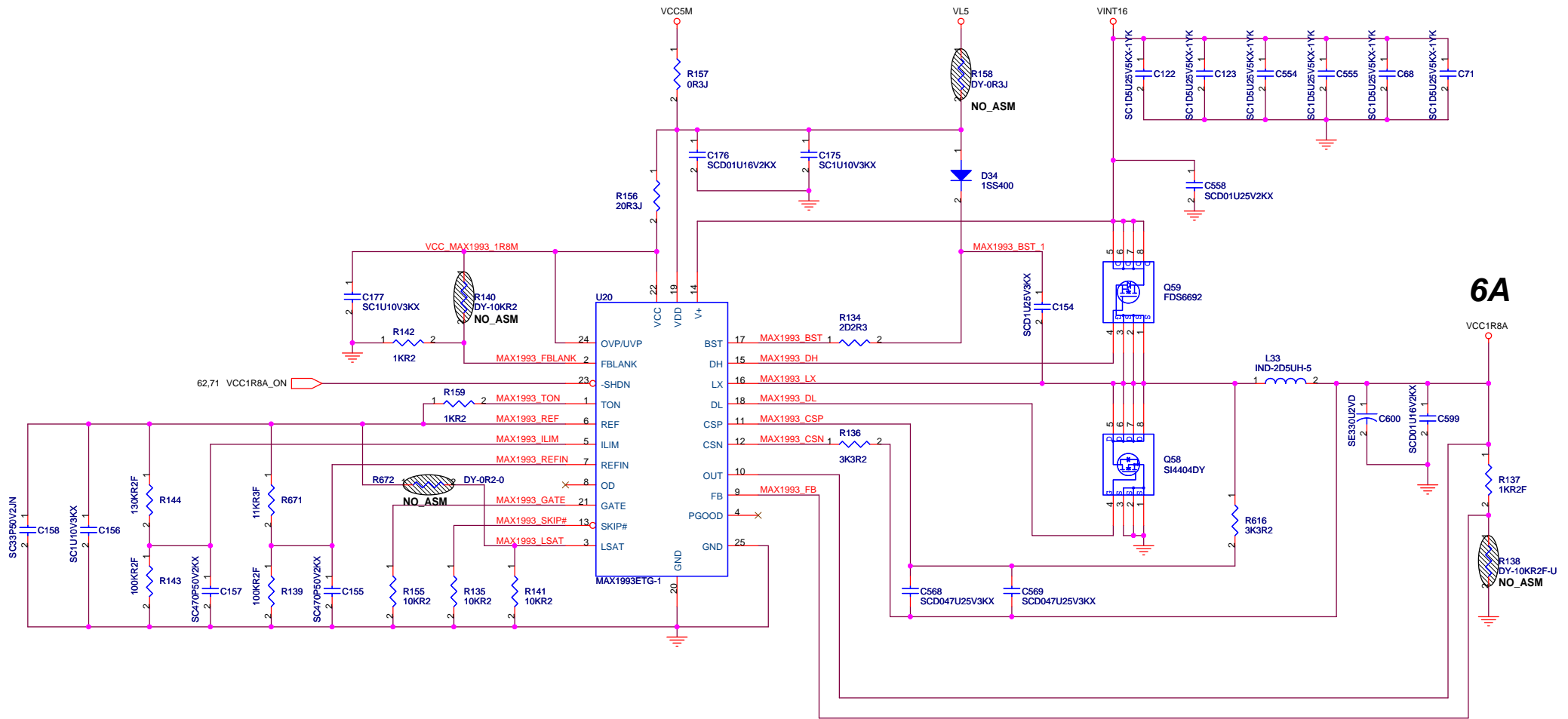
Title: DC-DC VCCCPUCORE
Size A3 Document Number: S Note-3
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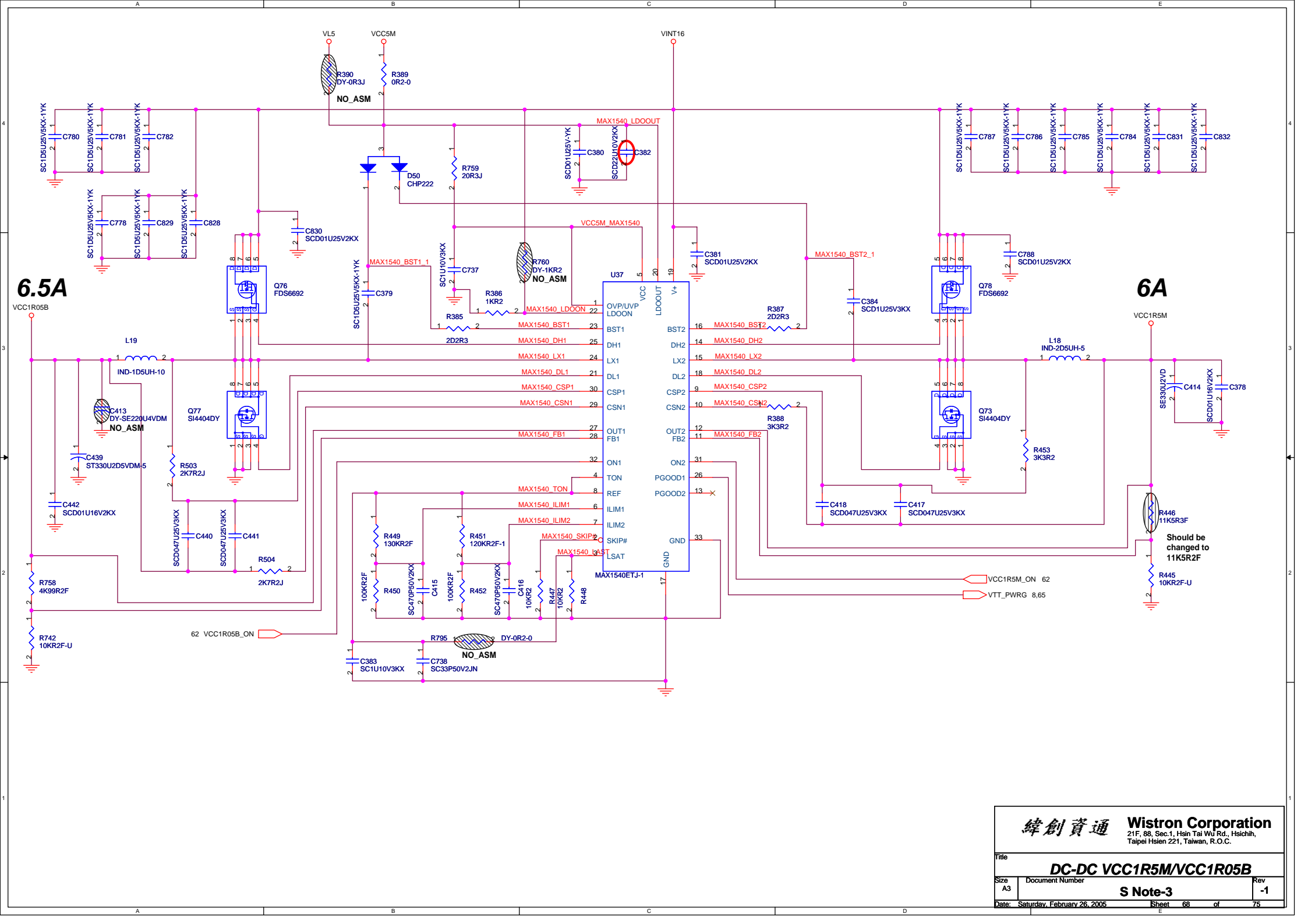
ALL CAPS ON THIS PAGE ARE NO-ASM FOR VCCCPUCORE.

X8 PCS



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Title			
DC-DC VCORE INPUT CAP			
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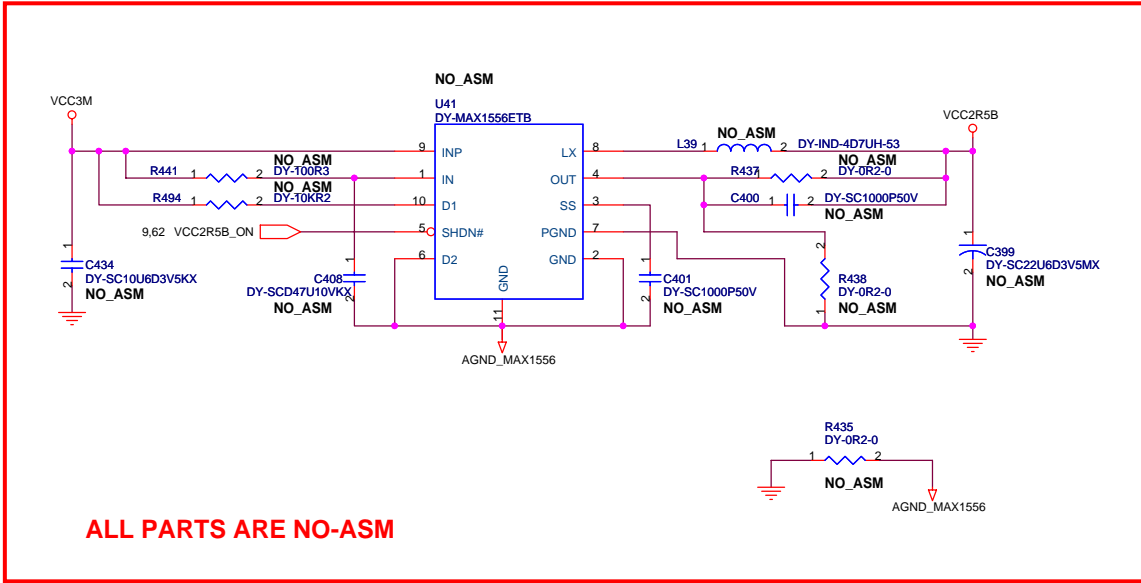




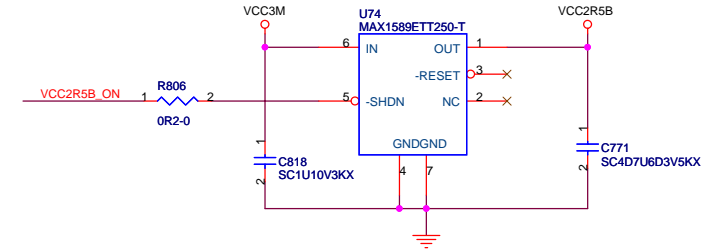
6.5A

6A

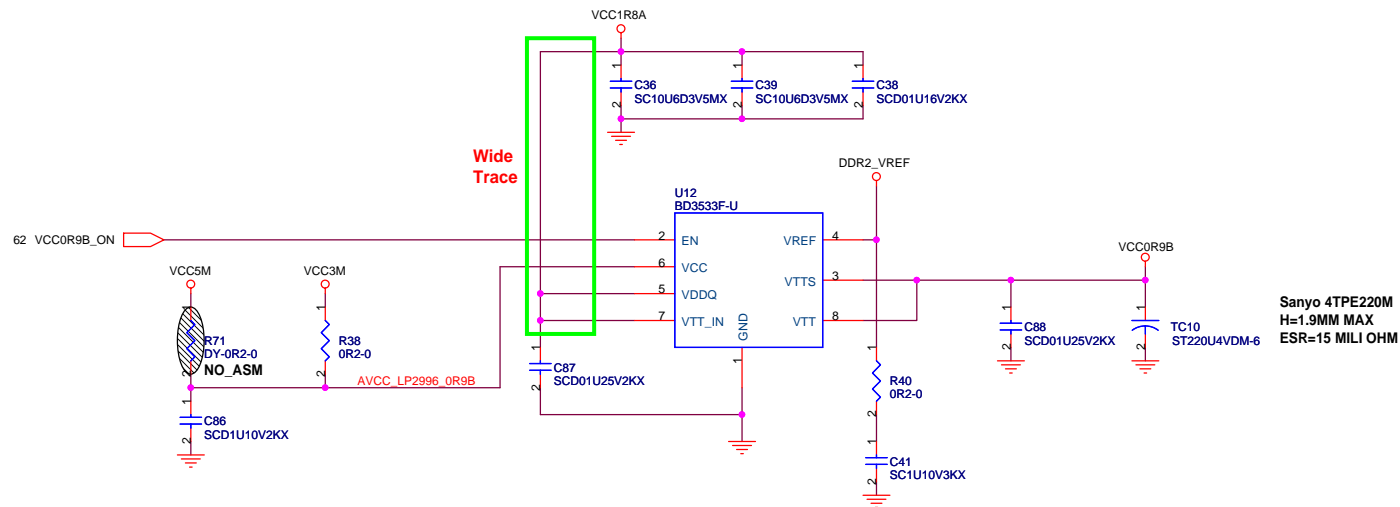
Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
Title	
DC-DC VCC1R5M/VCC1R05B	
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VCC2R5B

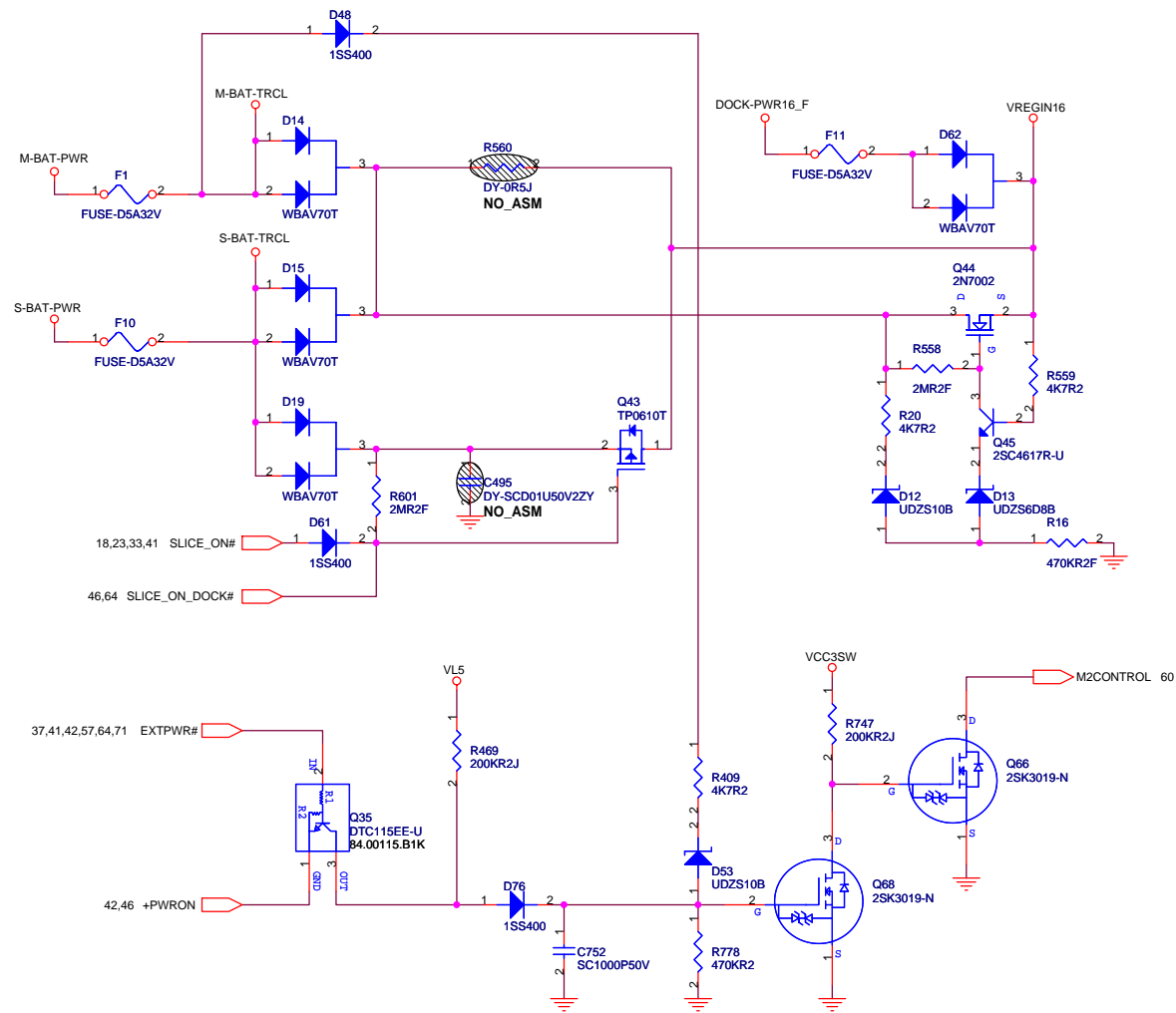


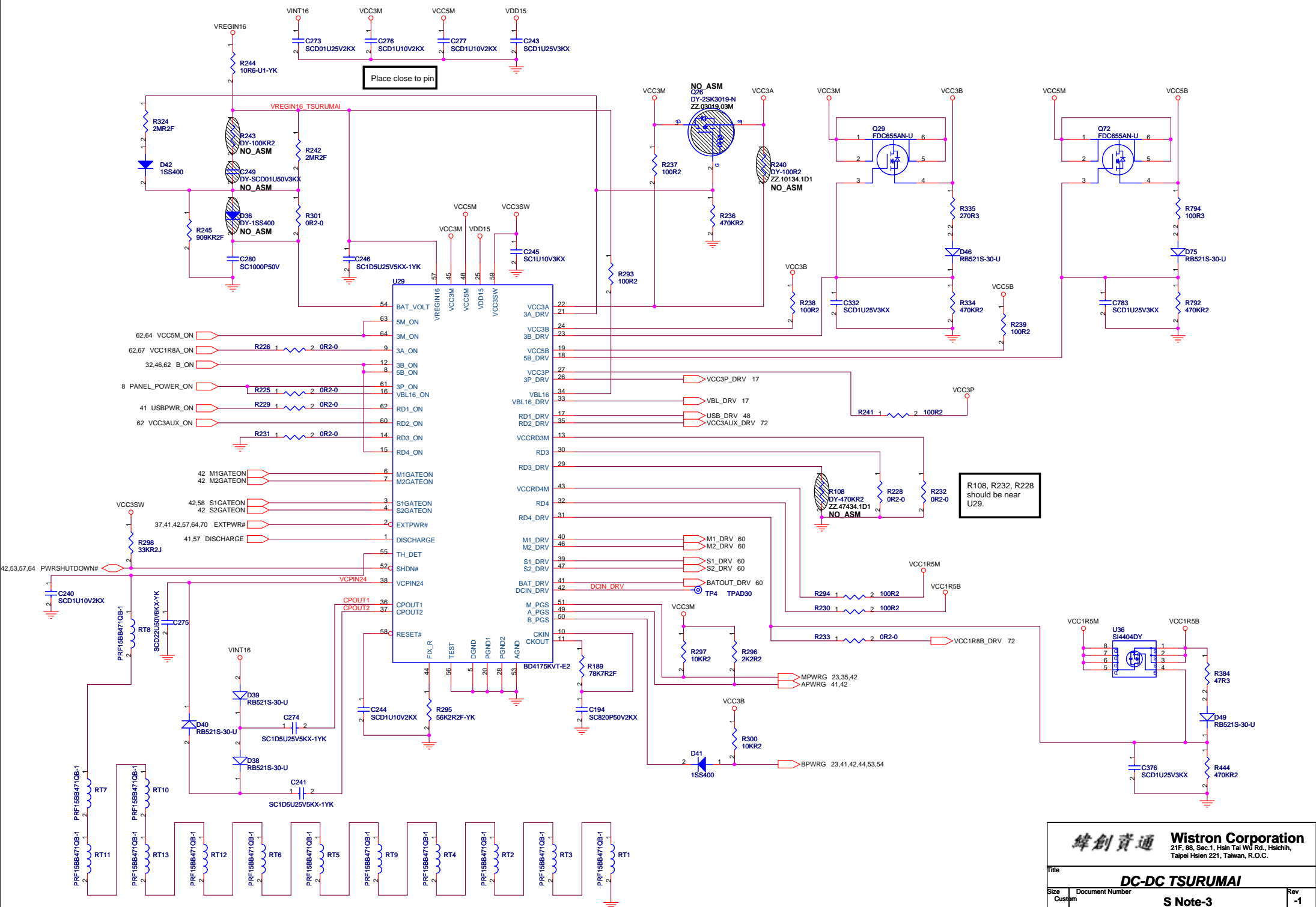
VCC0R9B & DDR2_VREF



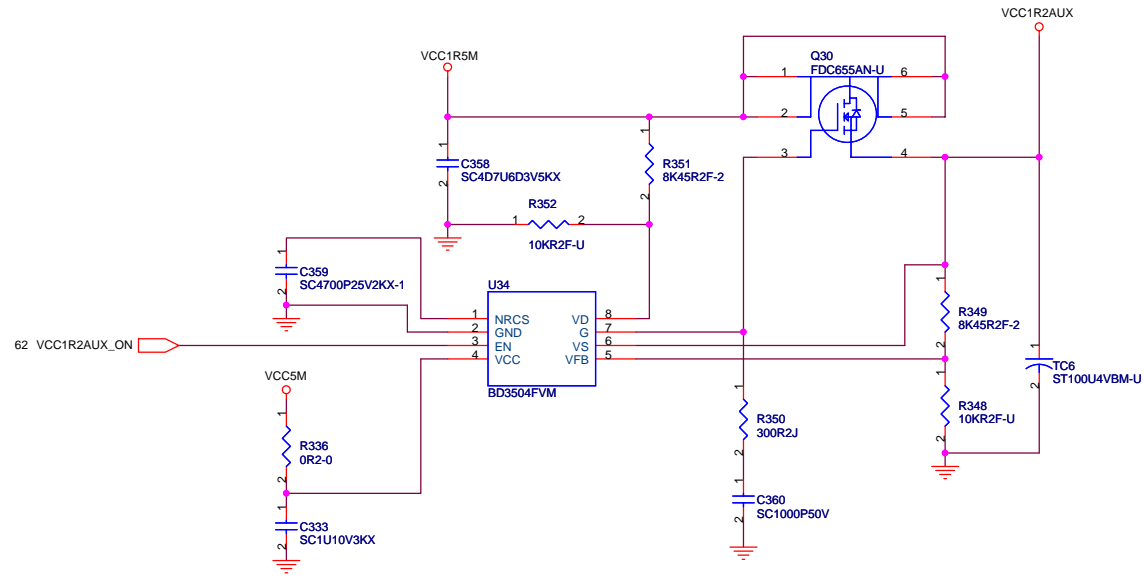
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Title		
DC-DC VCC2R5B/VCC0R9B		
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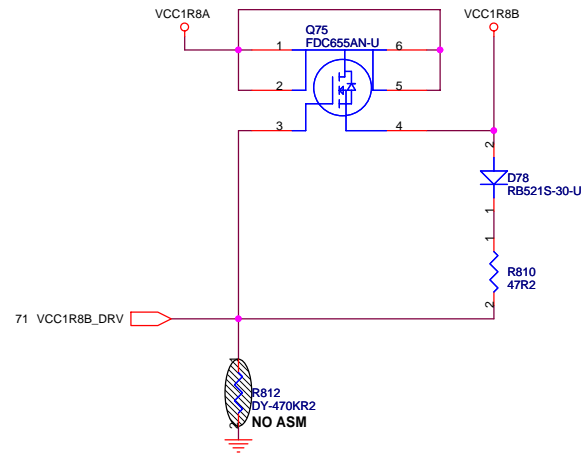




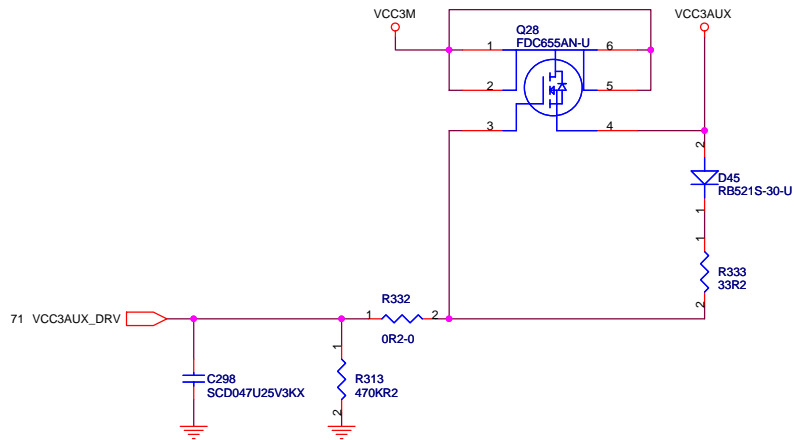
VCC1R2AUX



VCC1R8B



VCC3AUX



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Title		
LOAD SW		
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