

# LONGBEACH 10/20

## LA-2371 REV

### 1.0 Schematic

Portability Prescott/Northwood  
RC300ML(RX300ML)+IXP150+ATI M11P(128MB VRAM)  
2004-07-23

**Compal Electronics, Inc.**

Title

Size

Custom

Document Number

LA-2371

Rev

1.0

Date: 星期二, 七月 27, 2004

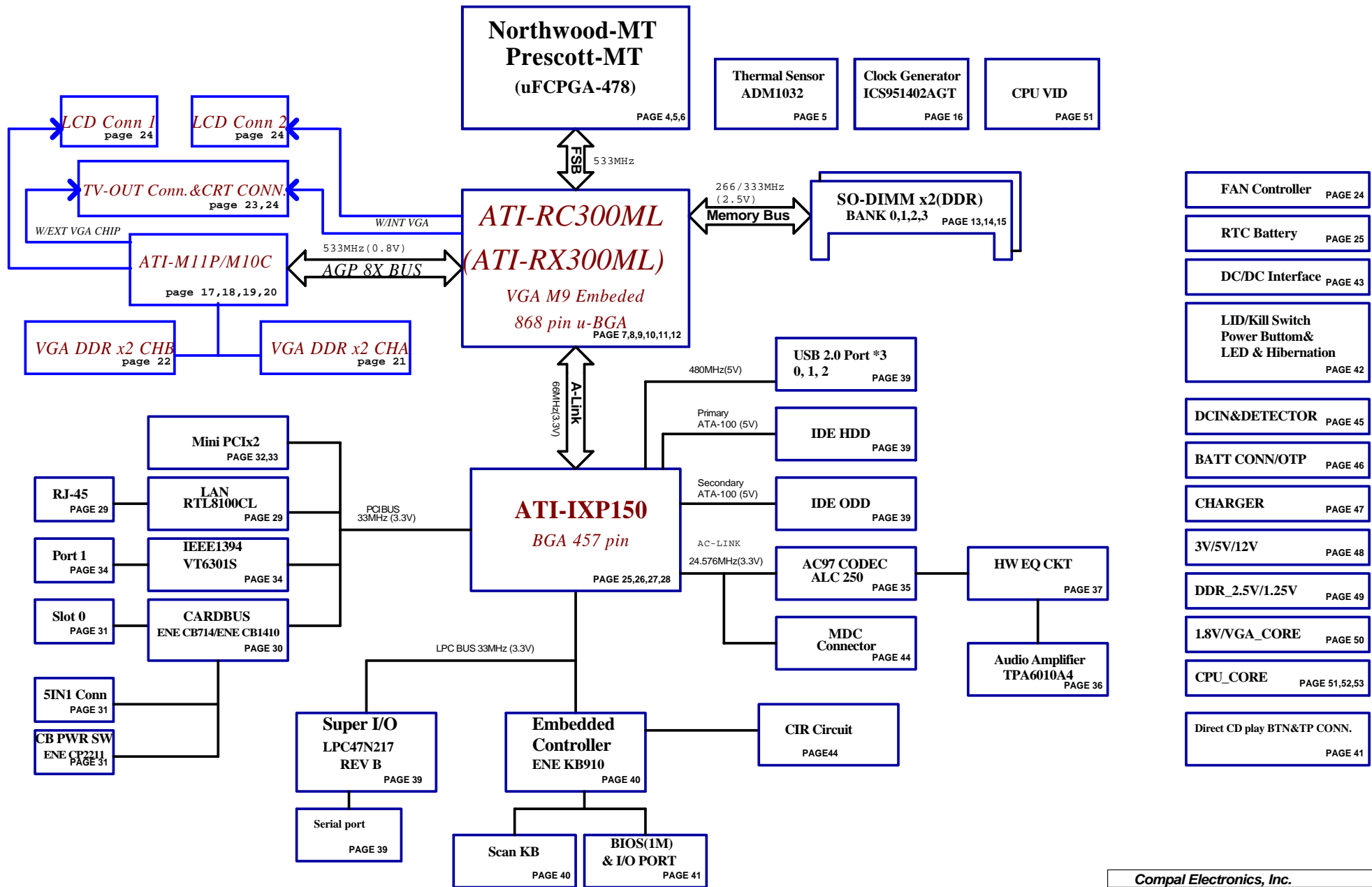
Sheet 1 of 56

Compal confidential

# http://laptopblue.vn BLOCK DIAGRAM

Model Name : EFQ00 & EEQ00

File Name : LA-2371 Rev: 1.0



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Title			
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## Voltage Rails

Power Plane	Description	S1	S3	S5
VIN	Adapter power supply (19V)	ON	ON	ON
B+	AC or battery power rail for power circuit.	ON	ON	ON
+CPU_CORE	Core voltage for CPU	ON	OFF	OFF
+CPUVID	1.2V switched power rail for CPU AGTL Bus	ON	OFF	OFF
+VGA_CORE	1.0V/1.2V switched power rail for VGA chip	ON	OFF	OFF
+1.25VS	1.25V switched power rail	ON	OFF	OFF
+1.5VS	AGP 4X/8X	ON	OFF	OFF
+1.8VS	1.8VS switched power rail	ON	OFF	OFF
+2.5VALW	2.5V always on power rail	ON	ON	ON*
+2.5V	2.5V power rail	ON	ON	OFF
+2.5VS	2.5V switched power rail	ON	OFF	OFF
+3VALW	3.3V always on power rail	ON	ON	ON*
+3V	3.3V power rail	ON	ON	OFF
+3VS	3.3V switched power rail	ON	OFF	OFF
+5VALW	5V always on power rail	ON	ON	ON*
+5VS	5V switched power rail	ON	OFF	OFF
+12VALW	12V always on power rail	ON	ON	ON*
+RTCVCC	RTC power	ON	ON	ON

Note : ON\* means that this power plane is ON only with AC power available, otherwise it is OFF.

## External PCI Devices

Device	IDSEL#	REQ#GNT#	Interrupts
VGA	AD16		PIRQA
CardBus	AD20	2	PIRQA
LAN	AD19	3	PIRQD
Mini-PCI1	AD18	1(for Wireless Lan)	PIRQC/PIRQD
1394	AD16	0	PIRQA
5IN1	AD20	2	PIRQB
Mini-PCI2	AD22	4(for TV tuner)	PIRQC/PIRQD

## EC SM Bus1 address

Device	Address	Device	Address
Smart Battery	0001 011X b	ADM1032	1001 110X b
EEPROM(24C16/02)	1010 000X b		
(24C04)	1011 000Xb		

## EC SM Bus2 address

## IXP150 SM Bus address

Device	Address
Clock Generator (ICS951402AGT)	1101 001Xb
DDR DIMM0	1010 000Xb
DDR DIMM2	1010 001Xb

http://laptopblue.vn

STATE	SIGNAL	SLP_S3#	SLP_S5#	+VALW	+V	+VS	Clock
Full ON		HIGH	HIGH	ON	ON	ON	ON
S1(Power On Suspend)		HIGH	HIGH	ON	ON	ON	LOW
S3 (Suspend to RAM)		LOW	HIGH	ON	ON	OFF	OFF
S4 (Suspend to Disk)		LOW	HIGH	ON	OFF	OFF	OFF
S5 (Soft OFF)		LOW	LOW	ON	OFF	OFF	OFF

## Board ID Table for AD channel

Vcc	3.3V +/- 5%			
Ra	100K +/- 5%			
Board ID	Rb	VAD_BID min	VAD_BID typ	VAD_BID max
0	0	0 V	0 V	0 V
1	8.2K +/- 5%	0.216 V	0.250 V	0.289 V
2	18K +/- 5%	0.436 V	0.503 V	0.538 V
3	33K +/- 5%	0.712 V	0.819 V	0.875 V
4	56K +/- 5%	1.036 V	1.185 V	1.264 V
5	100K +/- 5%	1.453 V	1.650 V	1.759 V
6	200K +/- 5%	1.935 V	2.200 V	2.341 V
7	NC	2.500 V	3.300 V	3.300 V

Board ID	PCB Revision
0	0.1
1	
2	
3	
4	
5	
6	
7	

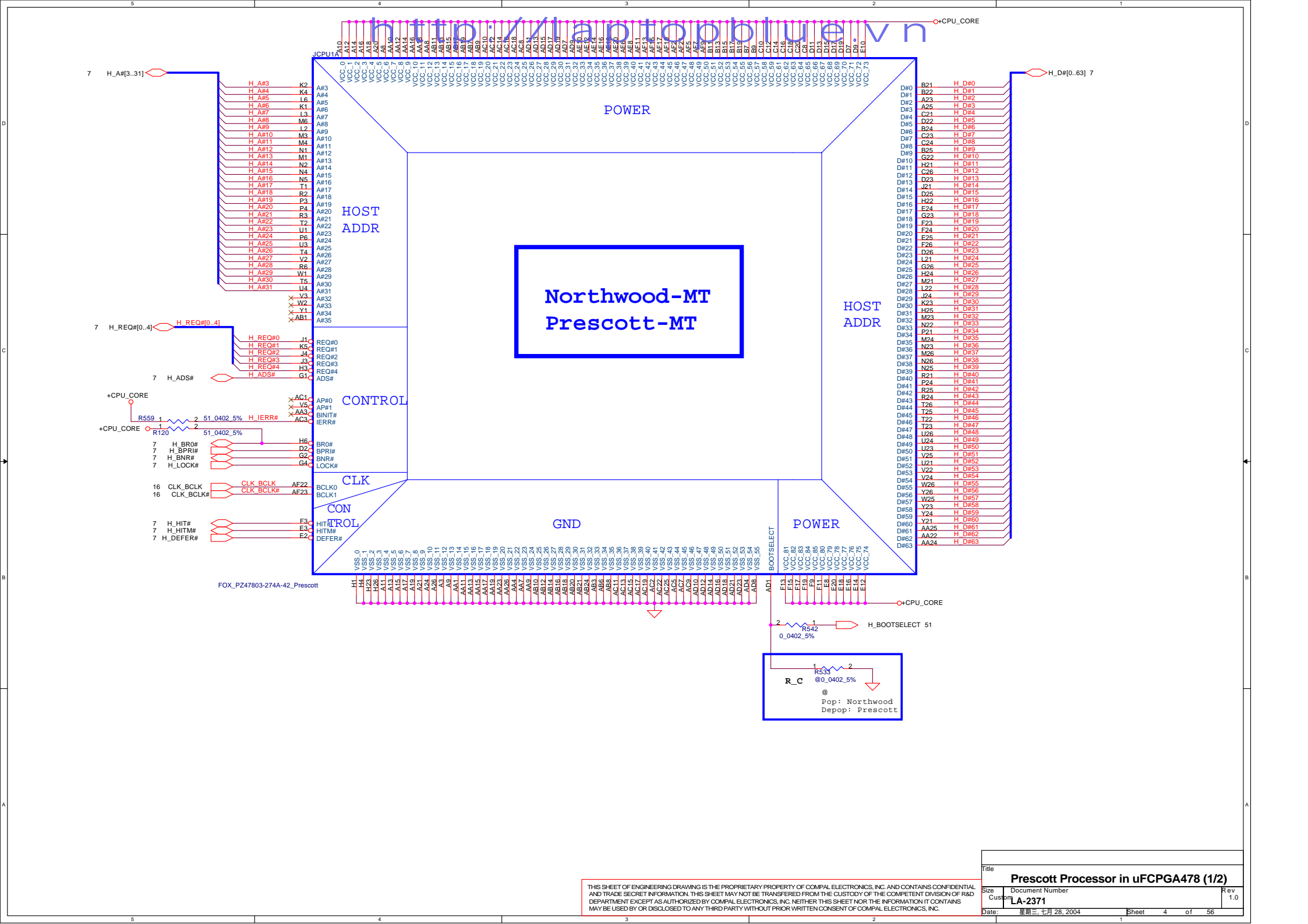
## SKU ID Table for AD channel

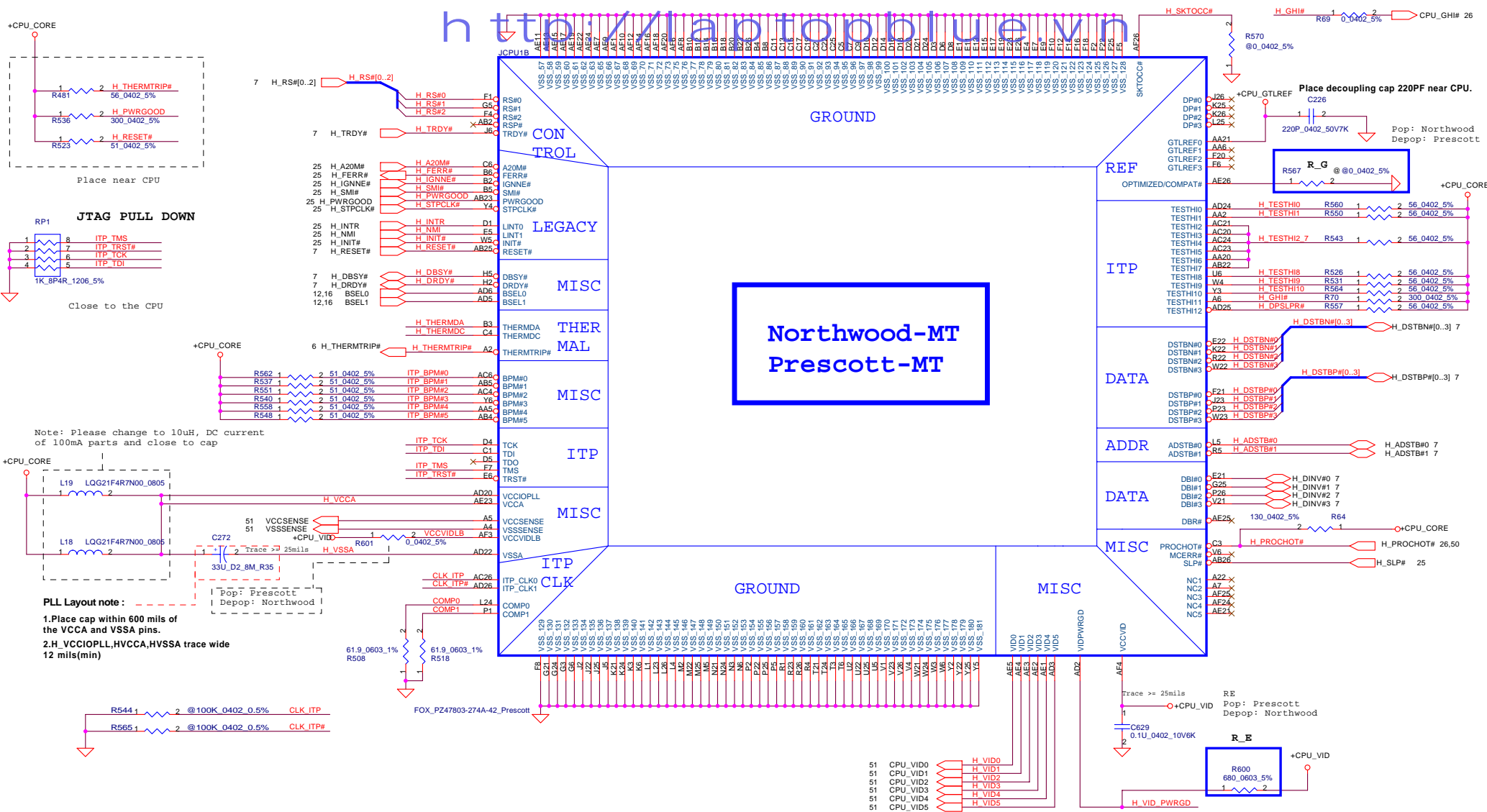
Vcc	3.3V +/- 5%			
Ra	100K +/- 5%			
Board ID	Rb	VAD_BID min	VAD_BID typ	VAD_BID max
0	0	0 V	0 V	0 V
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2	18K +/- 5%	0.436 V	0.503 V	0.538 V
3	33K +/- 5%	0.712 V	0.819 V	0.875 V
4	56K +/- 5%	1.036 V	1.185 V	1.264 V
5	100K +/- 5%	1.453 V	1.650 V	1.759 V
6	200K +/- 5%	1.935 V	2.200 V	2.341 V
7	NC	2.500 V	3.300 V	3.300 V

BIOS\_ID: H EFW00  
L EEW00

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### Thermal Sensor

3+VS

C470

0.1U\_0402\_16V4Z

R479 @10K\_0402\_5%

U36

VDD1

ALERT#

SCLK

THERM#

SDATA

GND

ADM1032ARM\_RM8

35,40 EC\_SMB\_CK2

35,40 EC\_SMB\_DA2

### VID PWRGD Circuit

3+V

C477

0.1U\_0402\_16V4Z

R517 10K\_0402\_5%

R513 0.0402\_5%

U408

SN74LVC125APWLE\_TSSOP14

3+V POWER

### GTL Reference Voltage

Layout note:

- Place R\_A and R\_B near CPU (Within 1.5").
- +CPU\_GTLREF Trace wide 12mils(min),Space 15mils

+CPU\_CORE

R\_A

R158 100\_0402\_1%

R153 169\_0402\_1%

C207 1U\_0603\_10V4Z

+CPU\_GTLREF

25,51 PM\_STPCPU#

R535

4.7K\_0402\_5%

Q54

MMBT3904\_SOT23

Q55

MMBT3904\_SOT23

4.7K\_0402\_5%

3+VS

### VID Pull High

3+VS

R561 1K\_0402\_5%

R555 1K\_0402\_5%

RP44

1K\_8P4R\_1206\_5%

H\_VID5

H\_VID4

H\_VID3

H\_VID2

H\_VID1

H\_VID0

### Compal Electronics, Inc.

Title

Prescott Processor in uFCPGA478 (2/2)

Size

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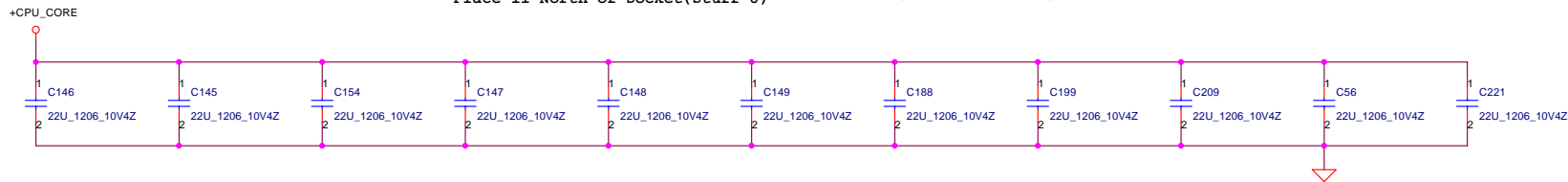
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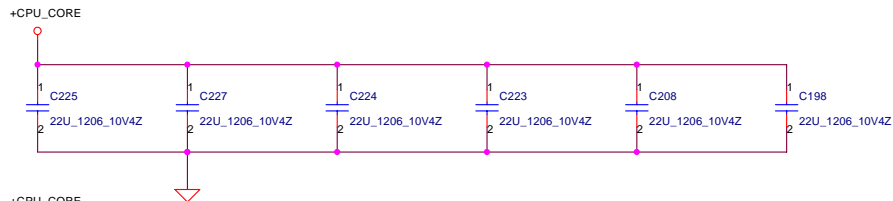
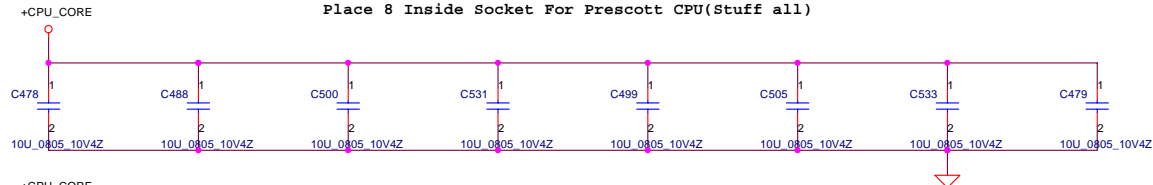
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Place 11 North of Socket(Stuff 8)



22uF depop reference  
Springdale Customer Schematic R1.2 page82

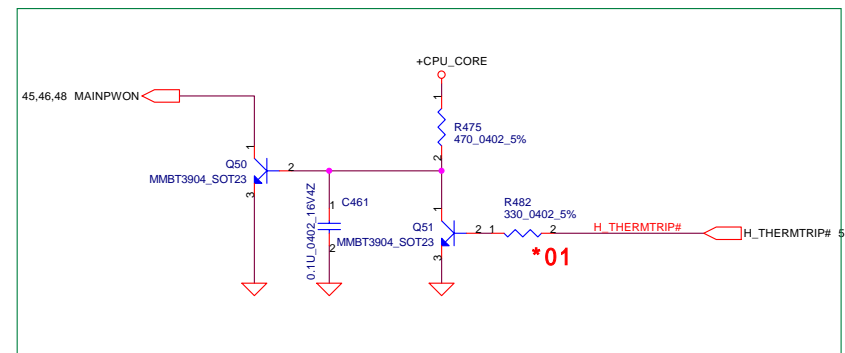
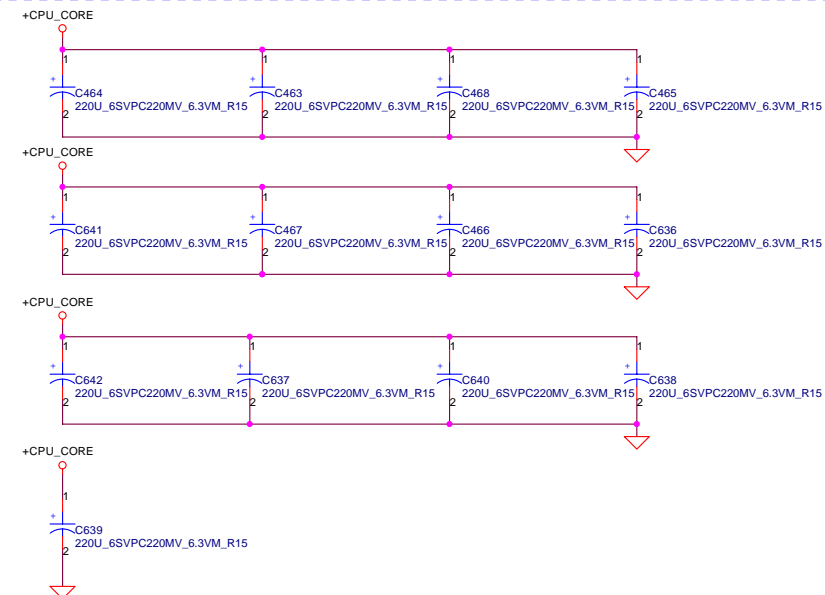
Place 8 Inside Socket For Prescott CPU(Stuff all)

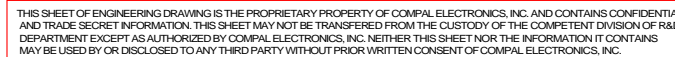


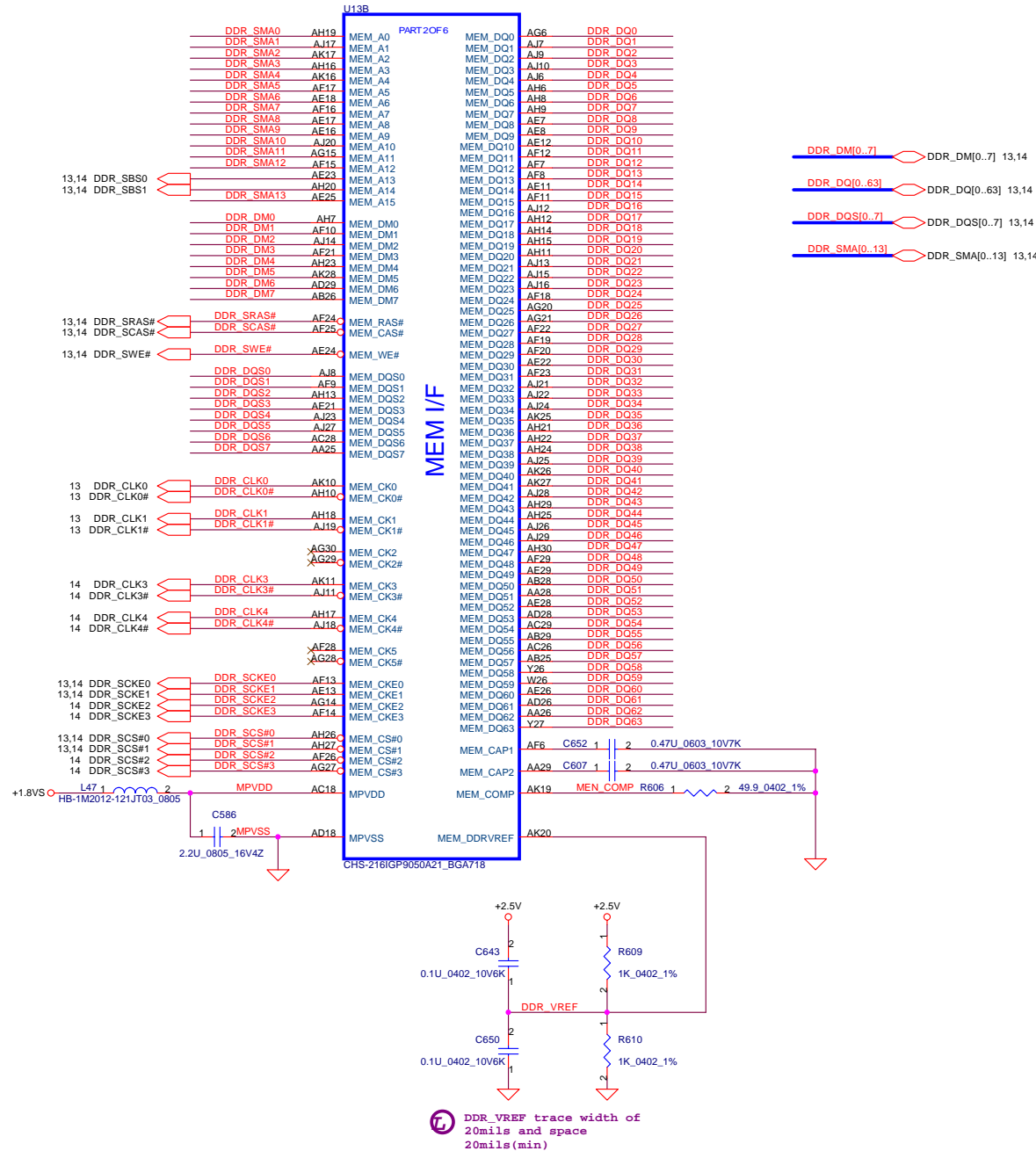
Place 9 South of Socket(Unstuff all)

Decoupling Reference Document:  
Springdale Chipset Platform Design guide Rev1.11  
(12474)page239

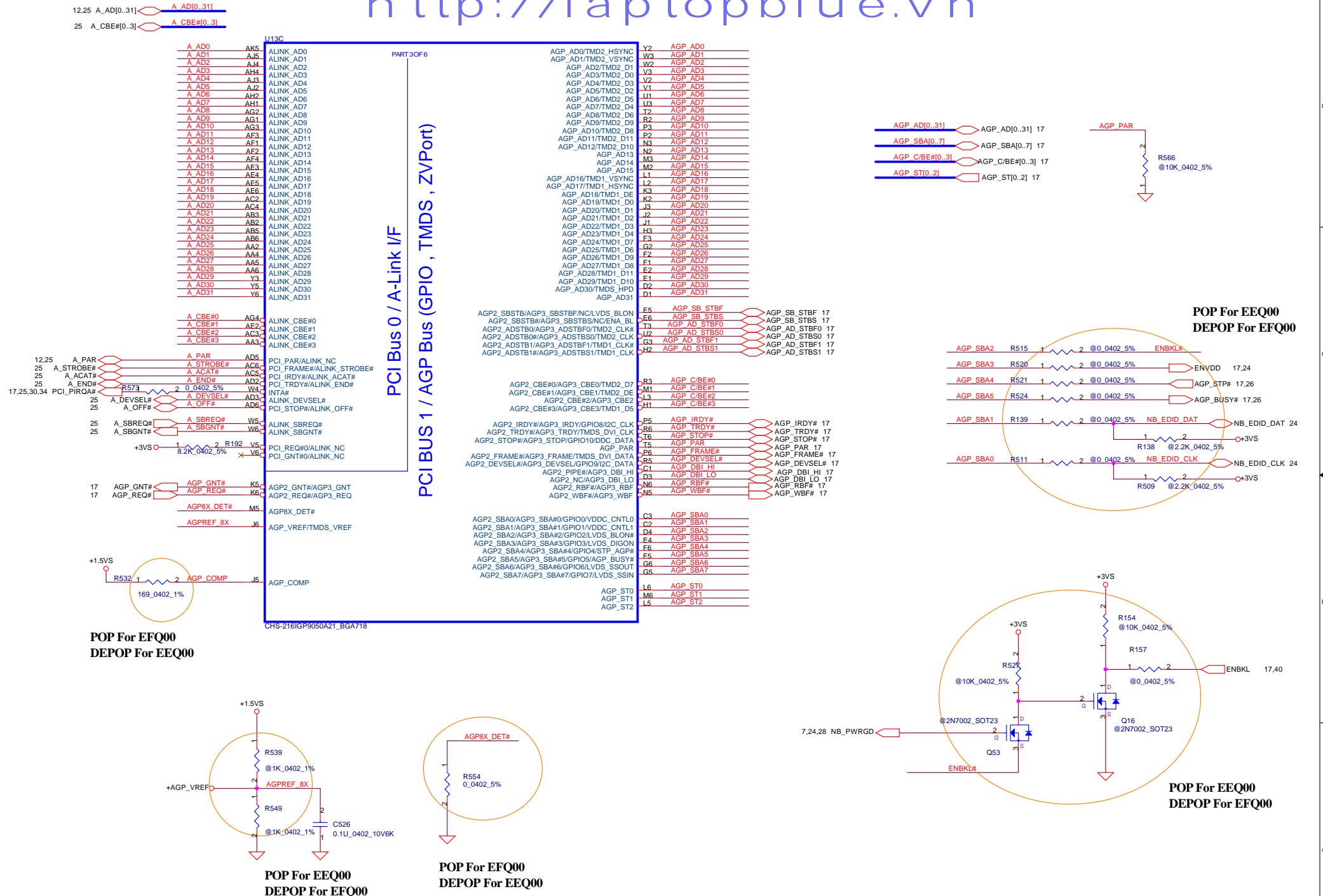
Decoupling Reference Requirement:  
560uF Polymer, ESR:5m ohm(each) \* 10  
22uF X5R \* 32

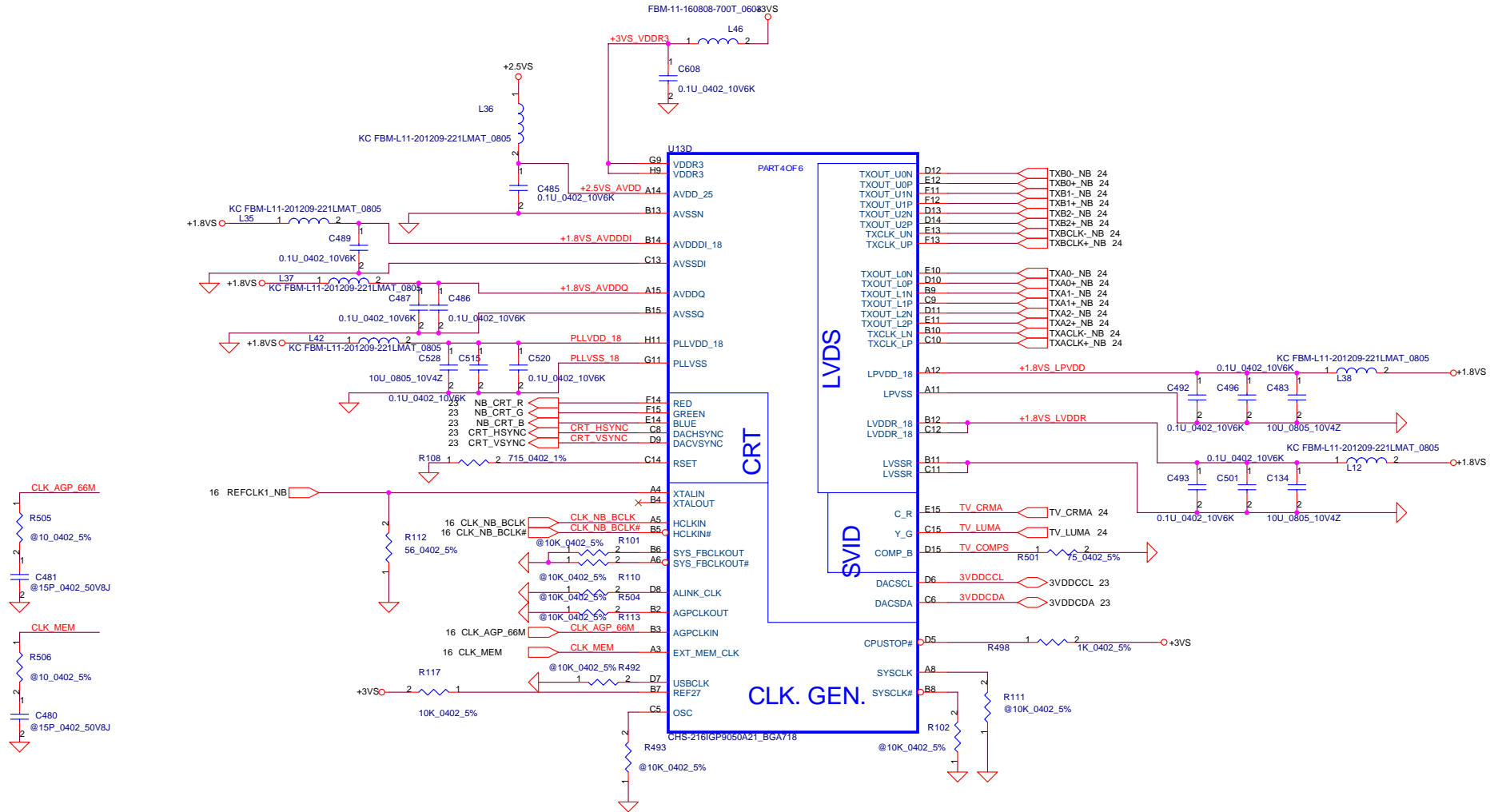


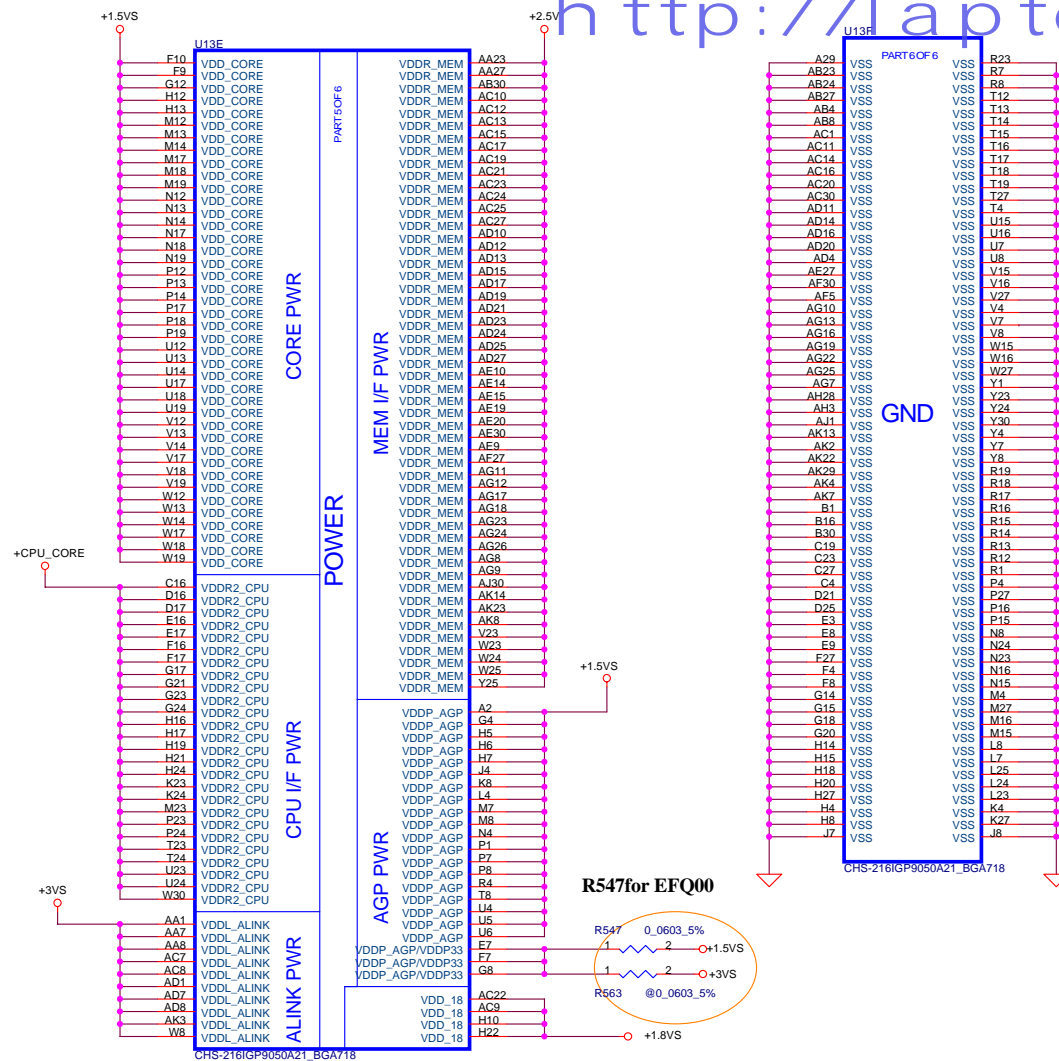






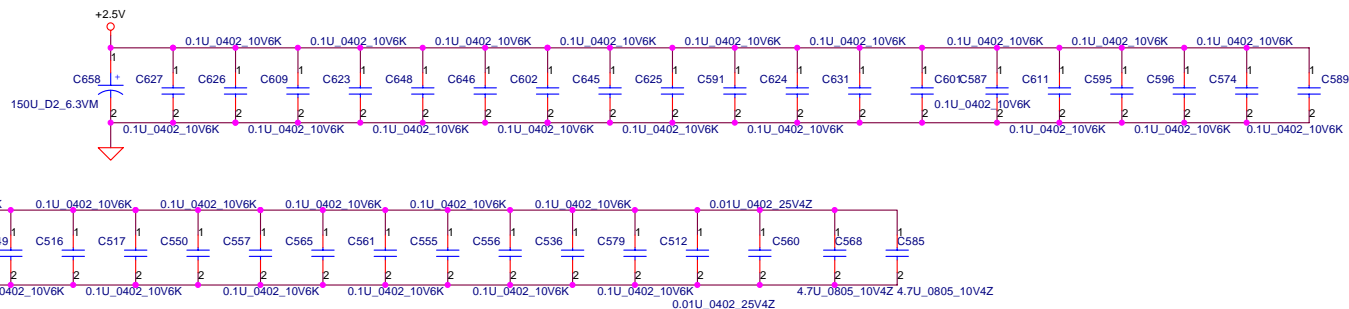
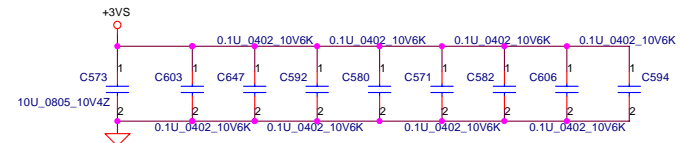
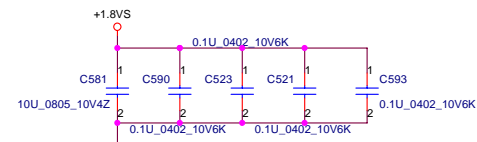
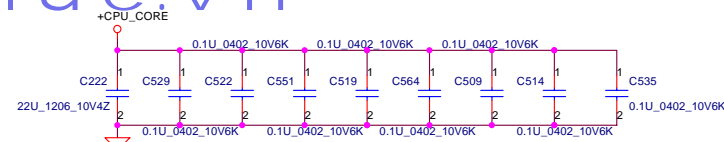






R547for EFQ00

R563 For EEQ00

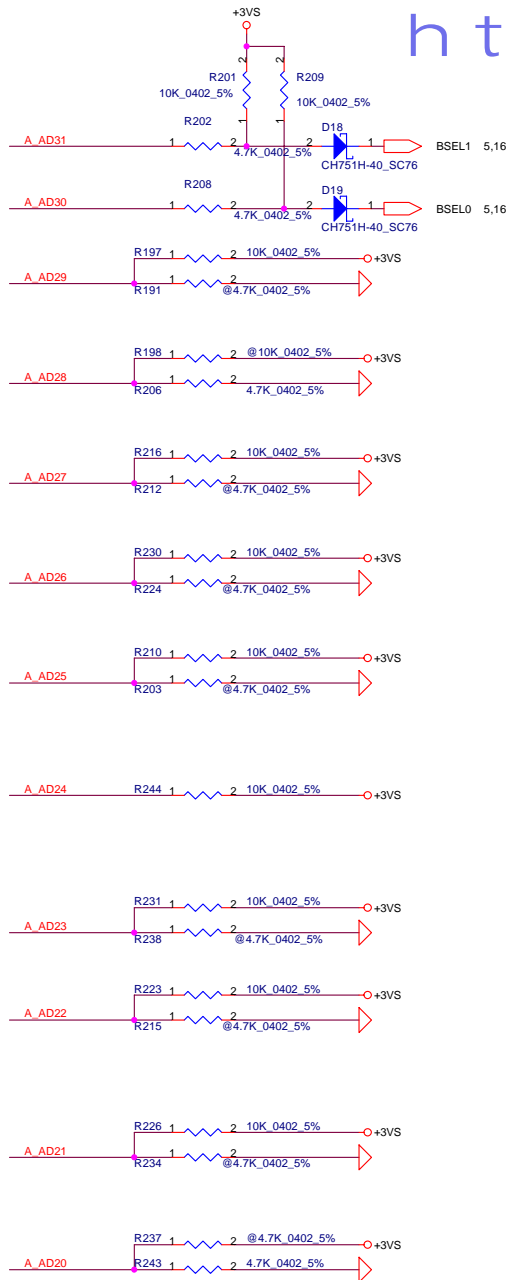


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ATIRC300M-POWER

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**A\_AD[31..30] : FSB CLK SPEED**

**DEFAULT: 01**

00: 100 MHZ  
01: 133 MHZ  
10: 200MHZ  
11:166 MHZ

**A\_AD29: STRAP CONFIGURATION**

**DEFAULT:1**

0:REDUCEDE SET  
1:FULL SET

**A\_AD28: SPREAD SPECTRUM ENABLE**

**DEFAULT:0**

0: DISABLE  
1:ENABLE

**A\_AD27: FrcShortReset#**

**DEFAULT: 1**

0:TESTMODE  
1:NORMAL MODE

**A\_AD26 : ENABLE IOQ**

**DEFAULT: 1**

0: IOQ=1  
1: IOQ=12

**A\_AD25/A\_AD17 : CPU VOLTAGE[1..0]**

**DEFAULT: 10**

AD25=1 DESTOP CPU  
AD25=0 MOBILE CPU  
AD17--DON'T CARE

**A\_AD24 : MOBILE CPU SELECT**

**DEFAULT: 1**

0: BANIAS CPU  
1: OTHER CPU

**A\_AD23 : CLOCK BYPASS DISABLE**

**DEFAULT: 1**

0:TESTMODE  
1: NORMAL

**A\_AD22 : OSC PAD OUTPUT PCICLK**

**DEFAULT : 1**

0: PCICLK OUT  
1: OSC CLK OUT

**A\_AD21 : AUTO\_CAL ENABLE**

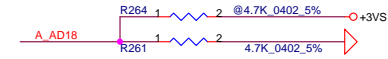
**DEFAULT : 1**

0: DISABLE  
1: ENABLE

**A\_AD20 : INTERNAL CLK GEN ENABLE**

**DEFAULT : 0**

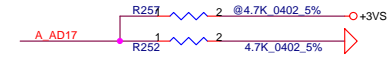
0: DISABLE  
1: ENABLE



**A\_AD18 : ENABLE PHASE CALIBRATION**

**DEFAULT: 0**

0: DISABLE  
1:ENABLE



**A\_AD25/A\_AD17 : CPU VOLTAGE[1..0]**

**DEFAULT: 0**

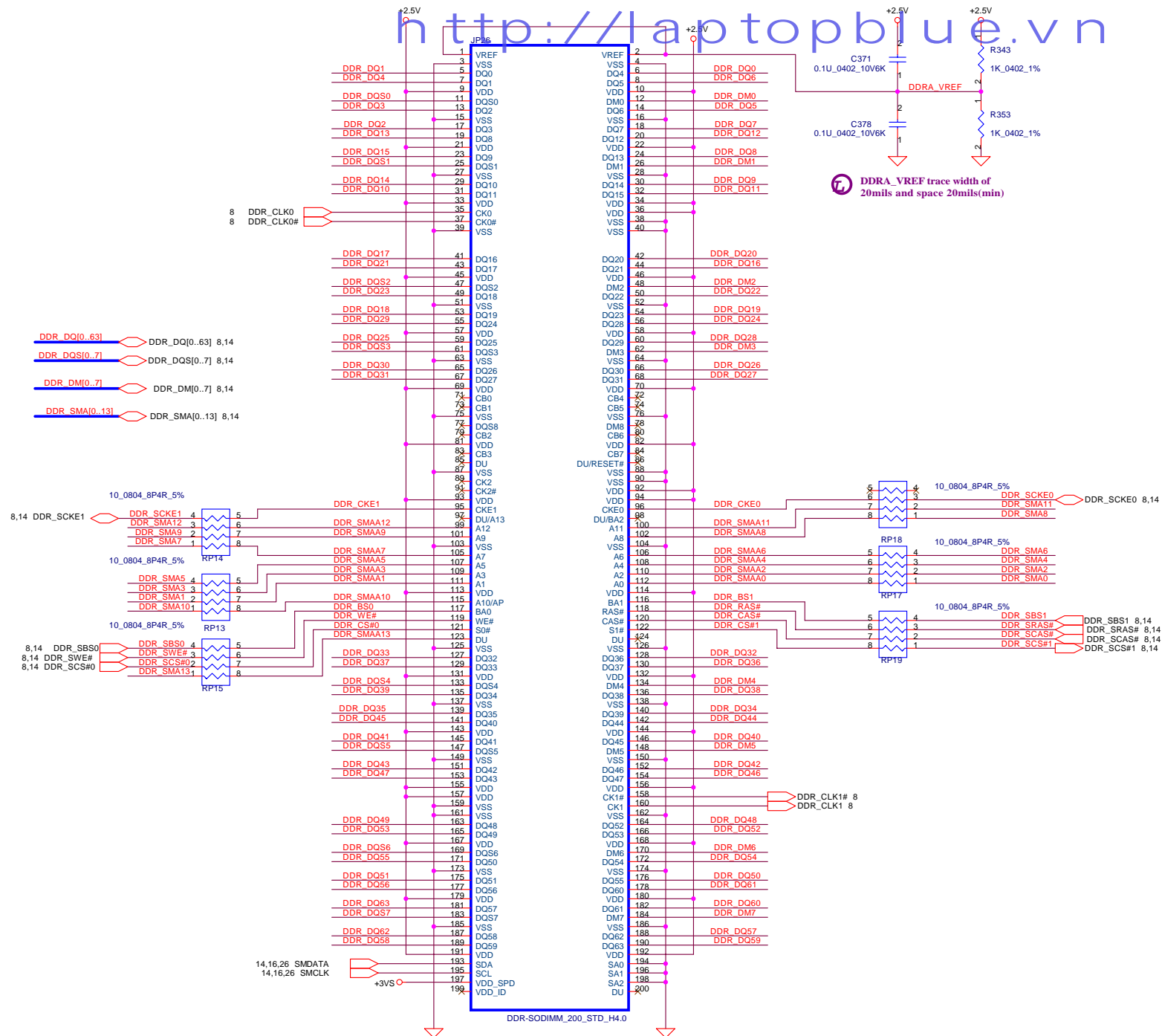
00: 1.05V  
01: 1.35V  
11: 1.75V  
10: 1.45V



**PAR: EXTENDED DEBUG MODE**

**DEFAULT : 1**

0:DEBUG MODE  
1: NORMAL



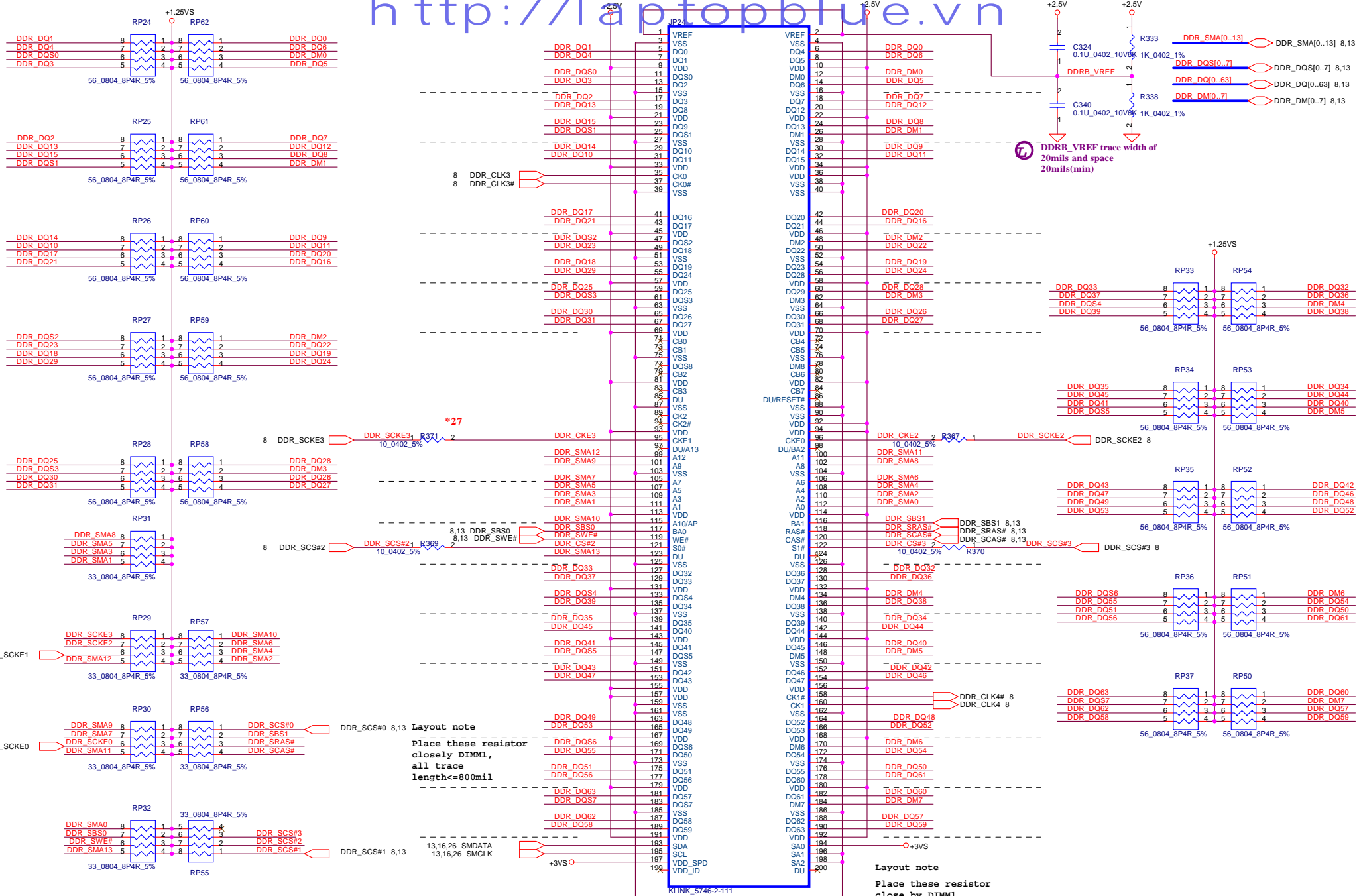
Layout note

Layout note  
Place Add/Command resisotrs  
Close to Pin, max L = 300 mils

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<b>Compal Electronics, Inc.</b>			
Title			
<b>DDR-SODIMM SLOT0</b>			
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	<b>LA-2371</b>		<b>1.0</b>
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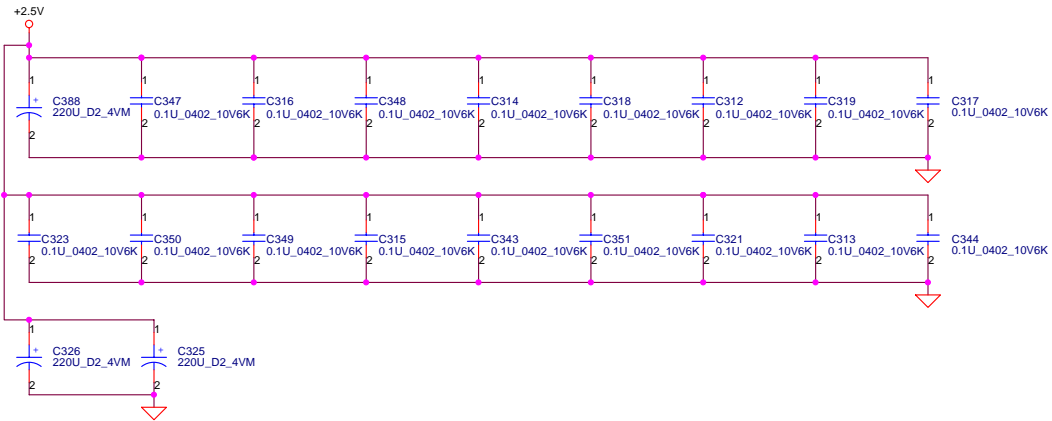
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```
DDR TOPOLOGY 1 FOR SMAA[0, 3, 6:12], SBA[1, 0], SRAS#, SCAS#, SWE#
```

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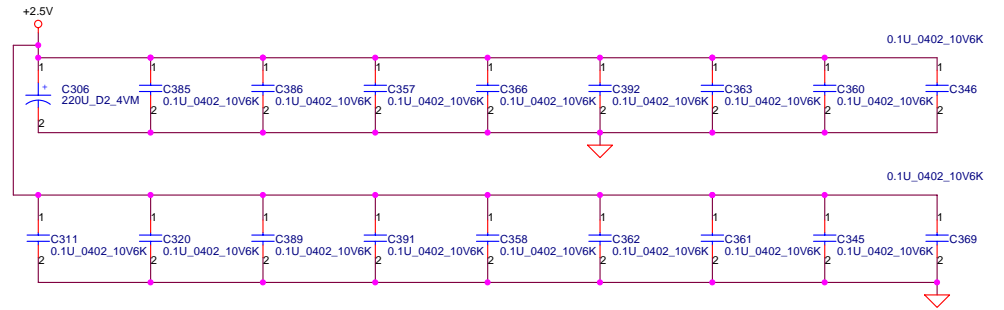
Layout note :  
Distribute as close as possible  
to DDR-SODIMM0.



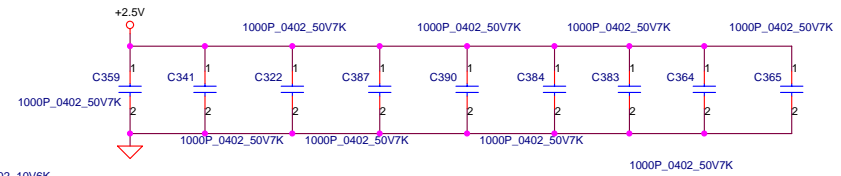
Layout note :  
Place one cap close to every 2 pull up resistors termination to  
+1.25VS



Layout note :  
Distribute as close as possible  
to DDR-SODIMM1.



Layout note :  
for EMI solution



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DDR SODIMM Decoupling			
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	FS4	FS3	FS2	FS1	FS0	CPU	MEM	With Spread Enabled...
*	0	0	0	1	0	200	200	Spread OFF OR Center spread +/-0.3%
	0	0	0	0	1	133	133	
	0	0	0	0	0	100	100	

\* \*

PCI33/66# = HIGH	66MHZ
PCI33/66# = LOW	33MHZ

5,12 BSEL1

5,12 BSEL0

1 D44

2 CH751H-40\_SC76

1 D45

2 CH751H-40\_SC76

+3VS

+3VS

R575

10K\_0402\_5%

R569

10K\_0402\_5%

+3V\_CLK

R587

10K\_0402\_5%

R597

10K\_0402\_5%

R586

4.7K\_0402\_5%

R596

20K\_0402\_5%

R229

10K\_0402\_5%

R585

10K\_0402\_5%

R228

10K\_0402\_5%

R584

@10K\_0402\_5%

FS2

FS3

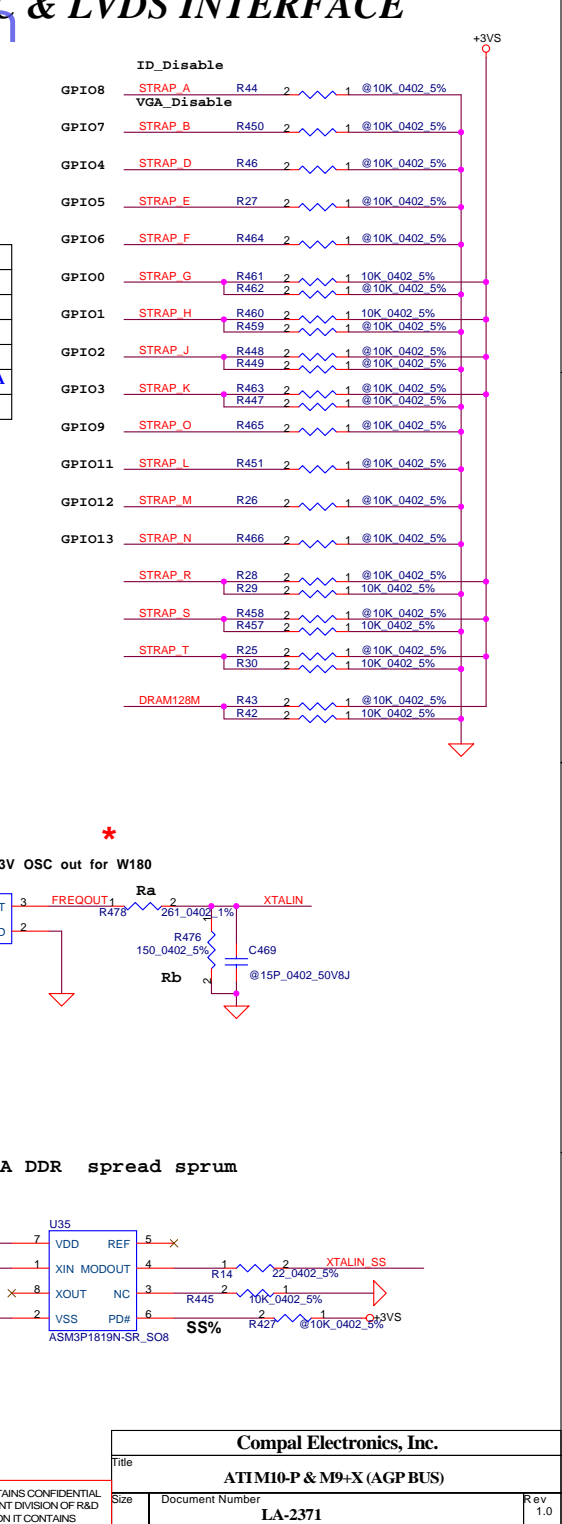
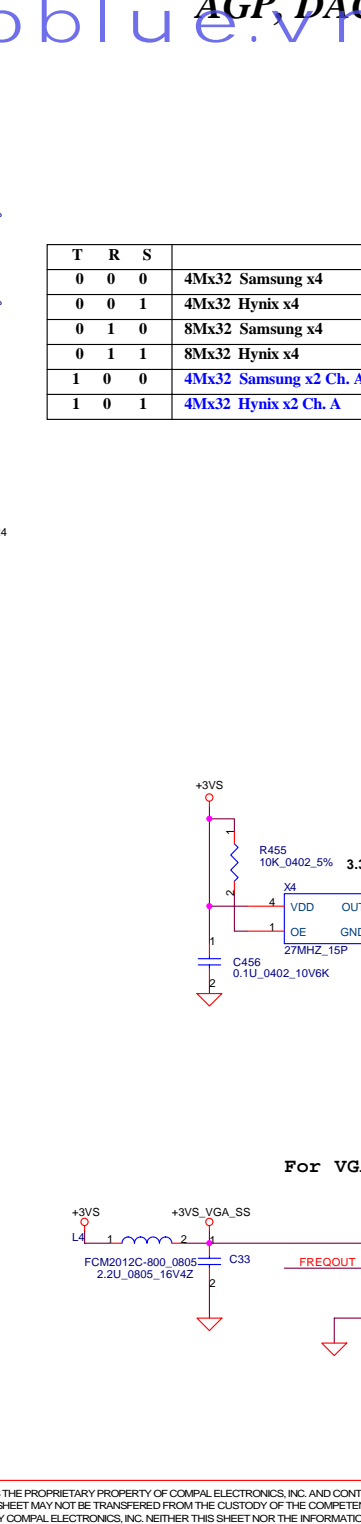
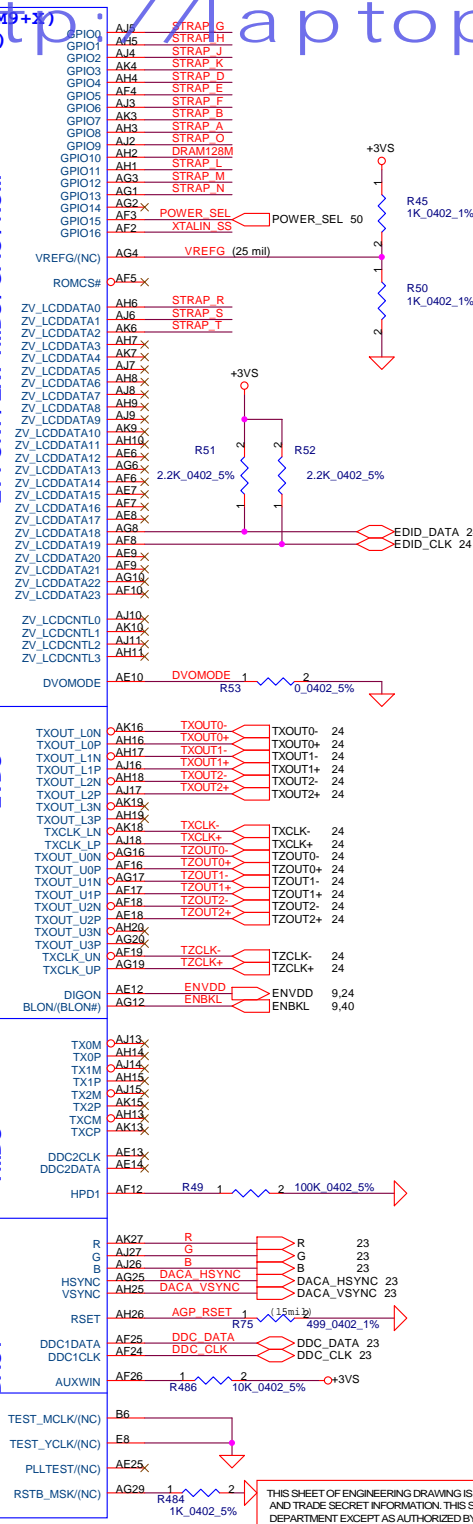
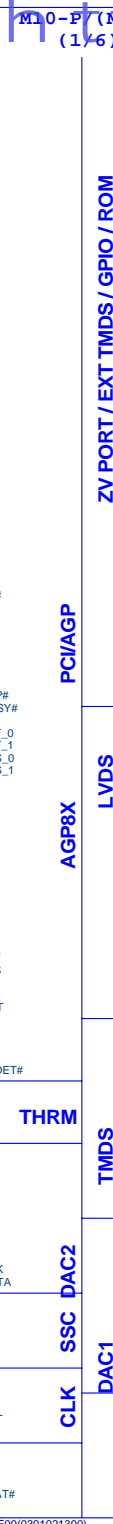
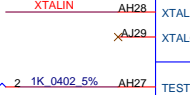
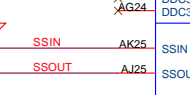
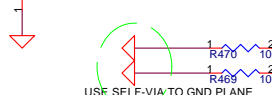
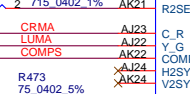
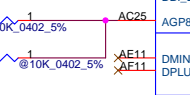
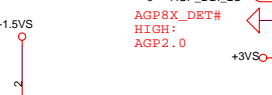
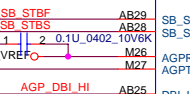
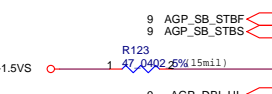
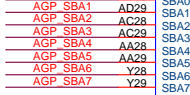
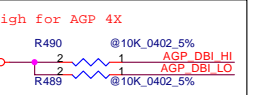
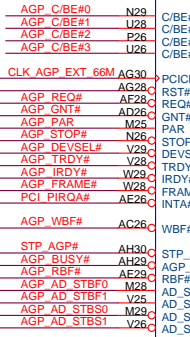
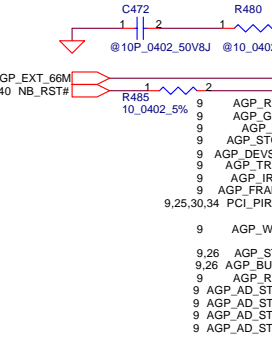
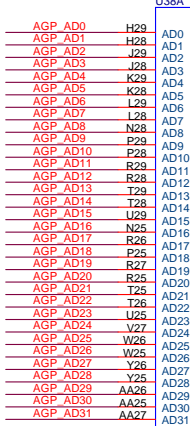
FS4

PCI3366#

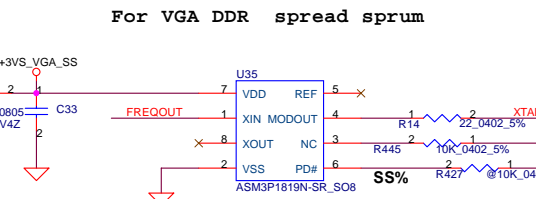
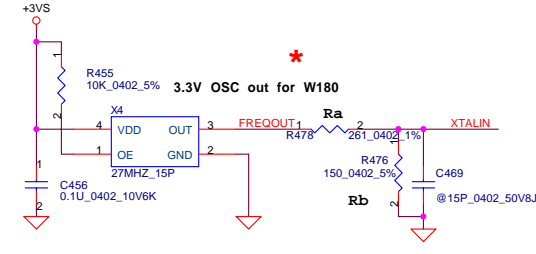
(EEQ00 R596 4.7K)



# AGP, DAC & LVDS INTERFACE



T	R	S	
0	0	0	4Mx32 Samsung x4
0	0	1	4Mx32 Hynix x4
0	1	0	8Mx32 Samsung x4
0	1	1	8Mx32 Hynix x4
1	0	0	4Mx32 Samsung x2 Ch. A
1	0	1	4Mx32 Hynix x2 Ch. A

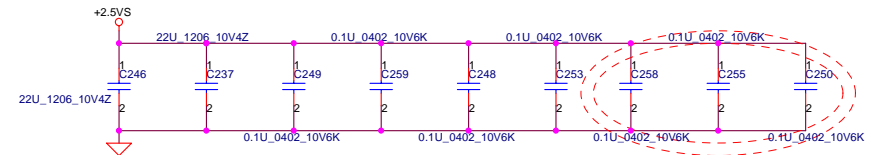


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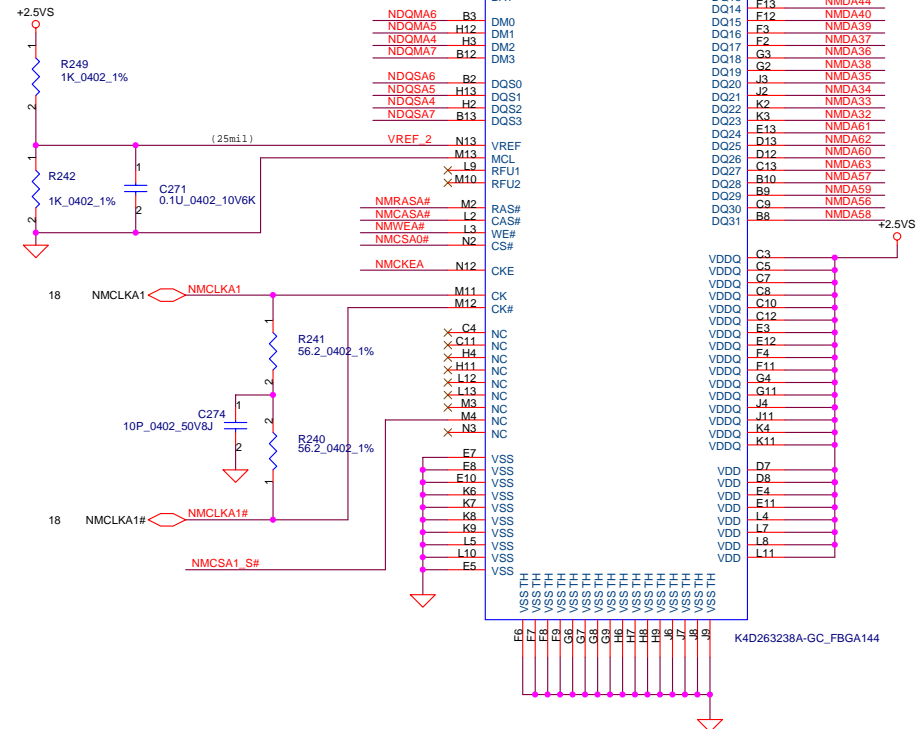
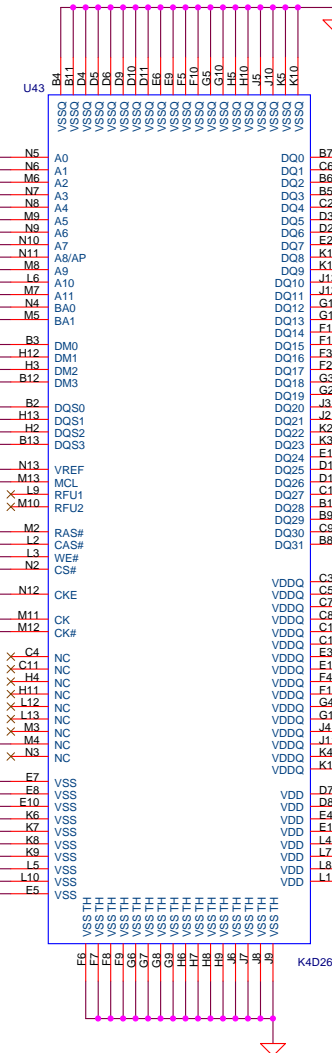


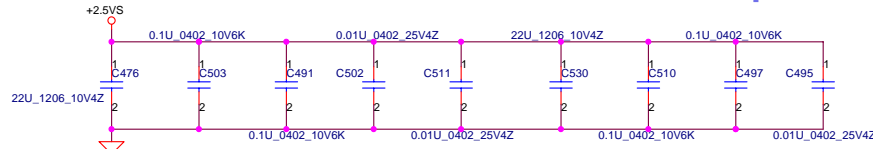






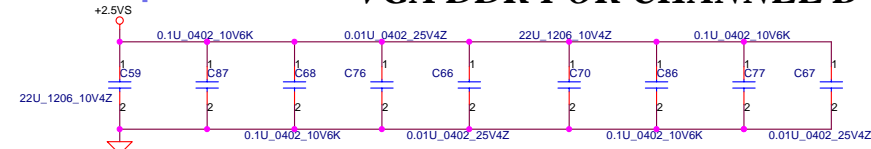
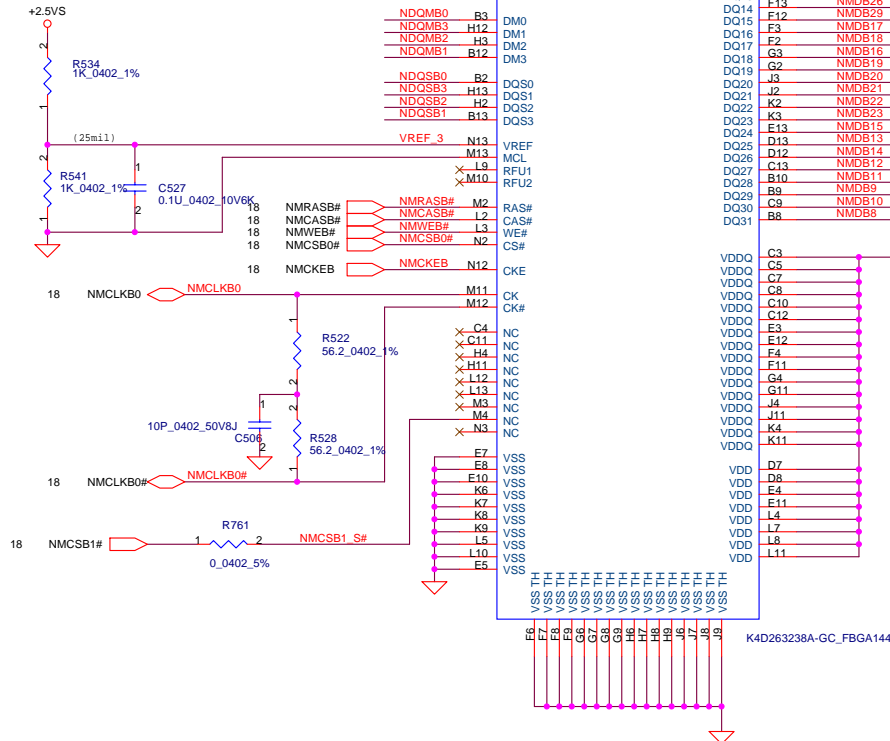
As close as ppossible to related pin





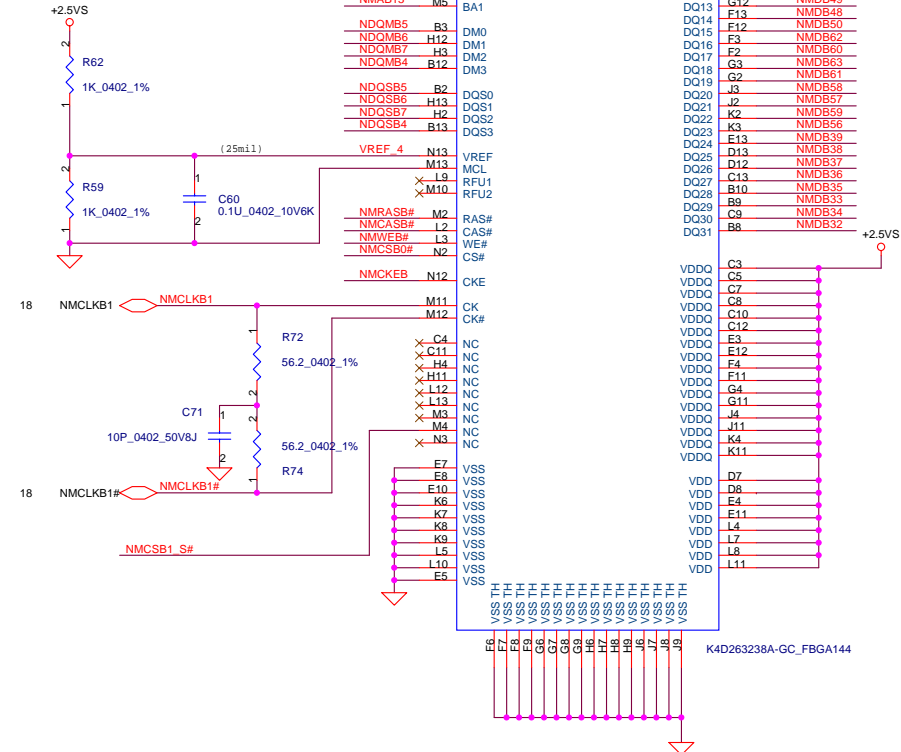
As close as possible to related pin

- 18 NMAB[0..13] NMAB[0..13]
- 18 NMDB[0..63] NMDB[0..63]
- 18 NDQMB[0..7] NDQMB[0..7]
- 18 NDQSB[0..7] NDQSB[0..7]



As close as possible to related pin

- 18 NMAB[0..13] NMAB[0..13]
- 18 NMDB[0..63] NMDB[0..63]
- 18 NDQMB[0..7] NDQMB[0..7]
- 18 NDQSB[0..7] NDQSB[0..7]



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VGA DDR FOR CHANNEL B

LA-2371

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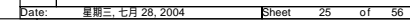


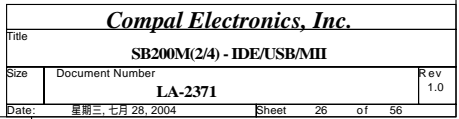


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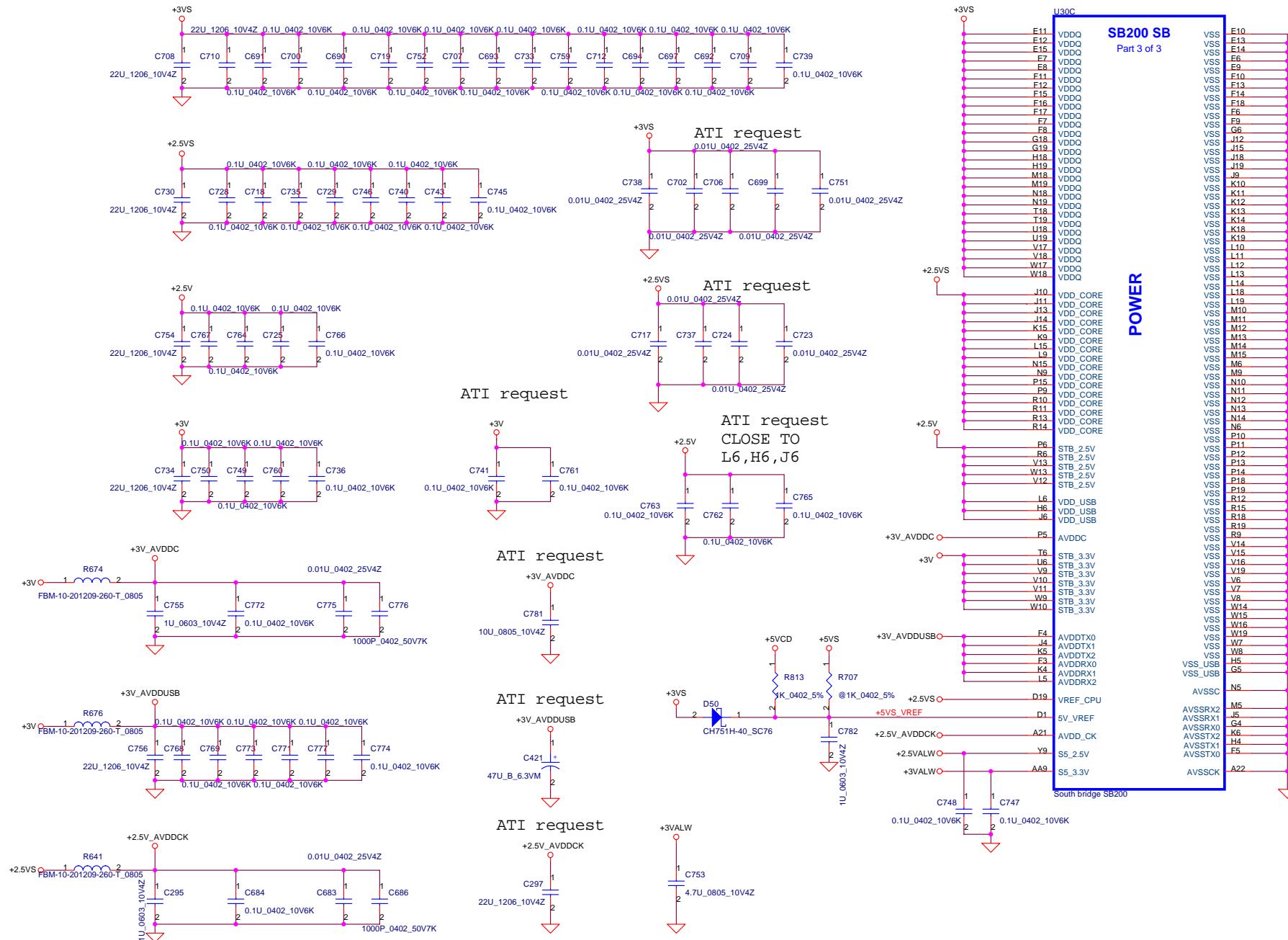


**Layout note:**  
Trace length of PCI\_CLK\_R + PCI\_CLK\_FB should be less than 200 mils.





<http://laptopblue.vn>

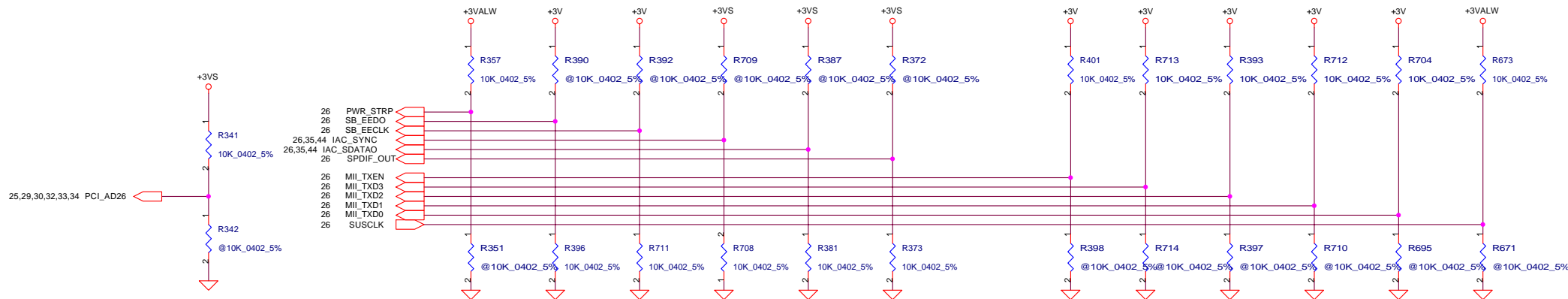


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**SB200M(3/4) - PWR**

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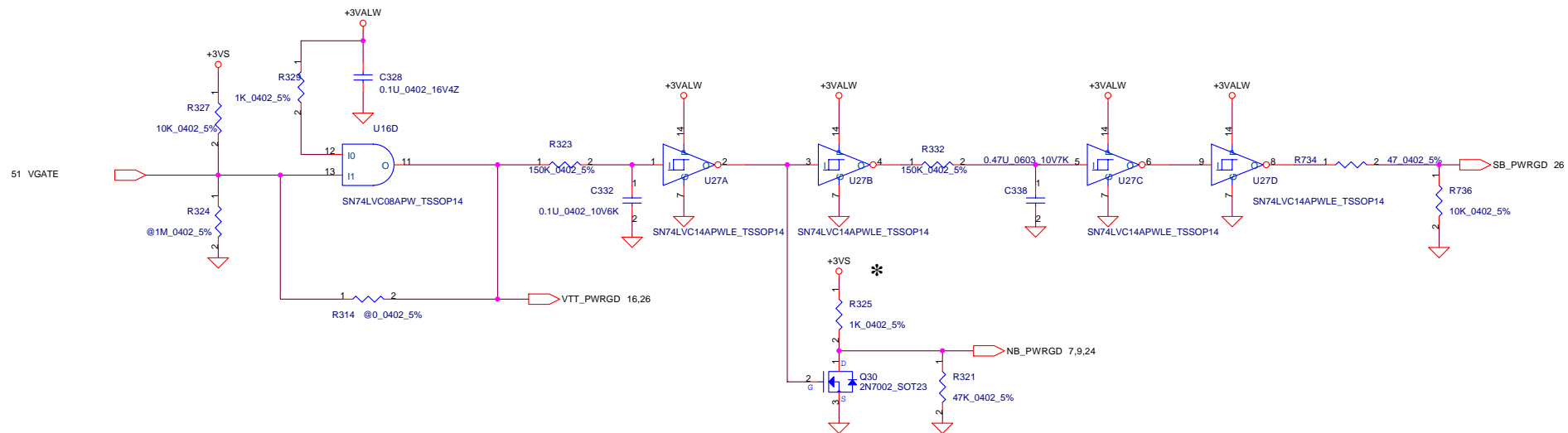
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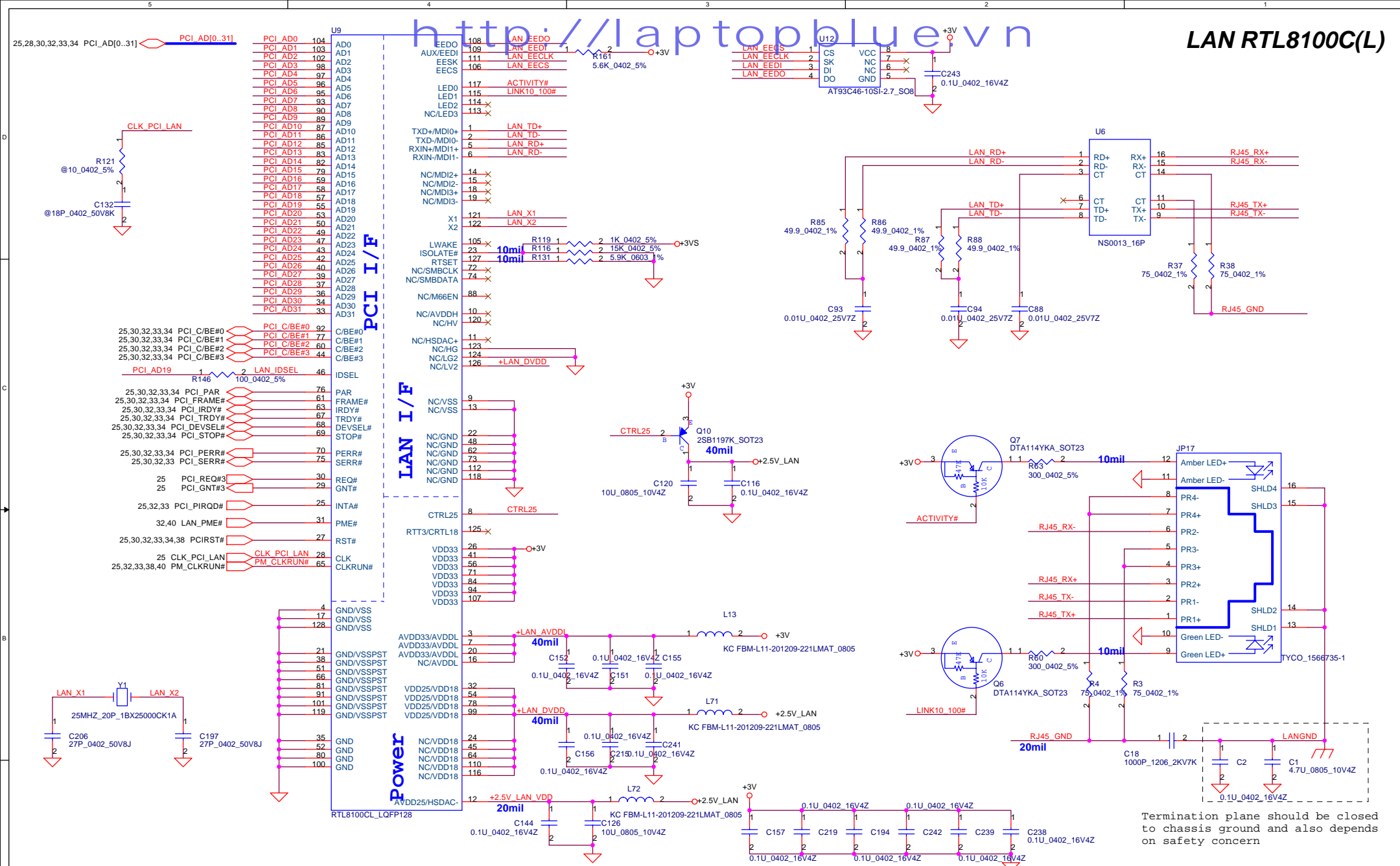


PCI\_AD26 H: ENE910  
L: NS87591

### REQUIRED SYSTEM STRAPS

	PWR_STRP	IGN DEBUG EEDO	EECK	IAC_SYNC	IAC_SDATA0	SPDIF_OUT	SPEEDSTEP CPU_STP#	FREQLTCH TX_EN	ETHERNET TXD[3:0]	32KHZ_S5
STRAP HIGH	MANUAL PWR ON DEFAULT	USE DEBUG STRAPS	ROM ON PCI BUS	INIT ACTIVE HIGH	33MHz NB BUS	SIO 24MHz	ENABLE SPEED STEP	DISABLE CPU FREQ SETTING DEFAULT	PROCESSOR FREQ MULTIPLIER	32KHZ OUTPUT FROM SB200 (INT RTC) DEFAULT
STRAP LOW	AUTO PWR ON	IGNORE DEBUG STRAPS DEFAULT	ROM ON LPC BUS DEFAULT	INIT ACTIVE LOW (PIII) DEFAULT	HI SPEED A-LINK DEFAULT	SIO 48MHz DEFAULT	DISABLE SPEED STEP DEFAULT	ENABLE CPU FREQ SETTING		32KHZ INPUT TO SB200 (EXT RTC)





**Compal Electronics, Inc.**

LAN REALTEK RTL8100CL

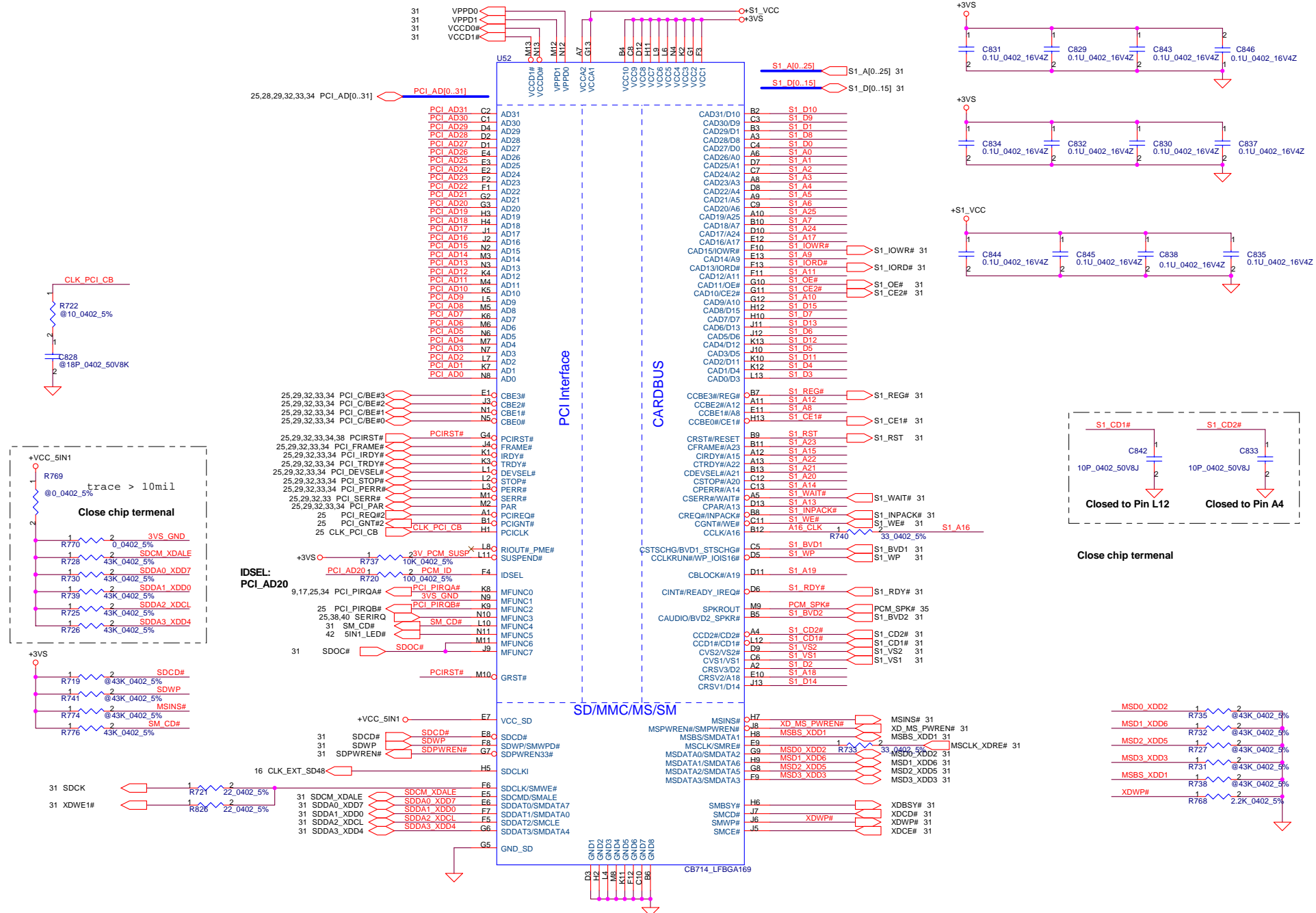
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Rev	1.0
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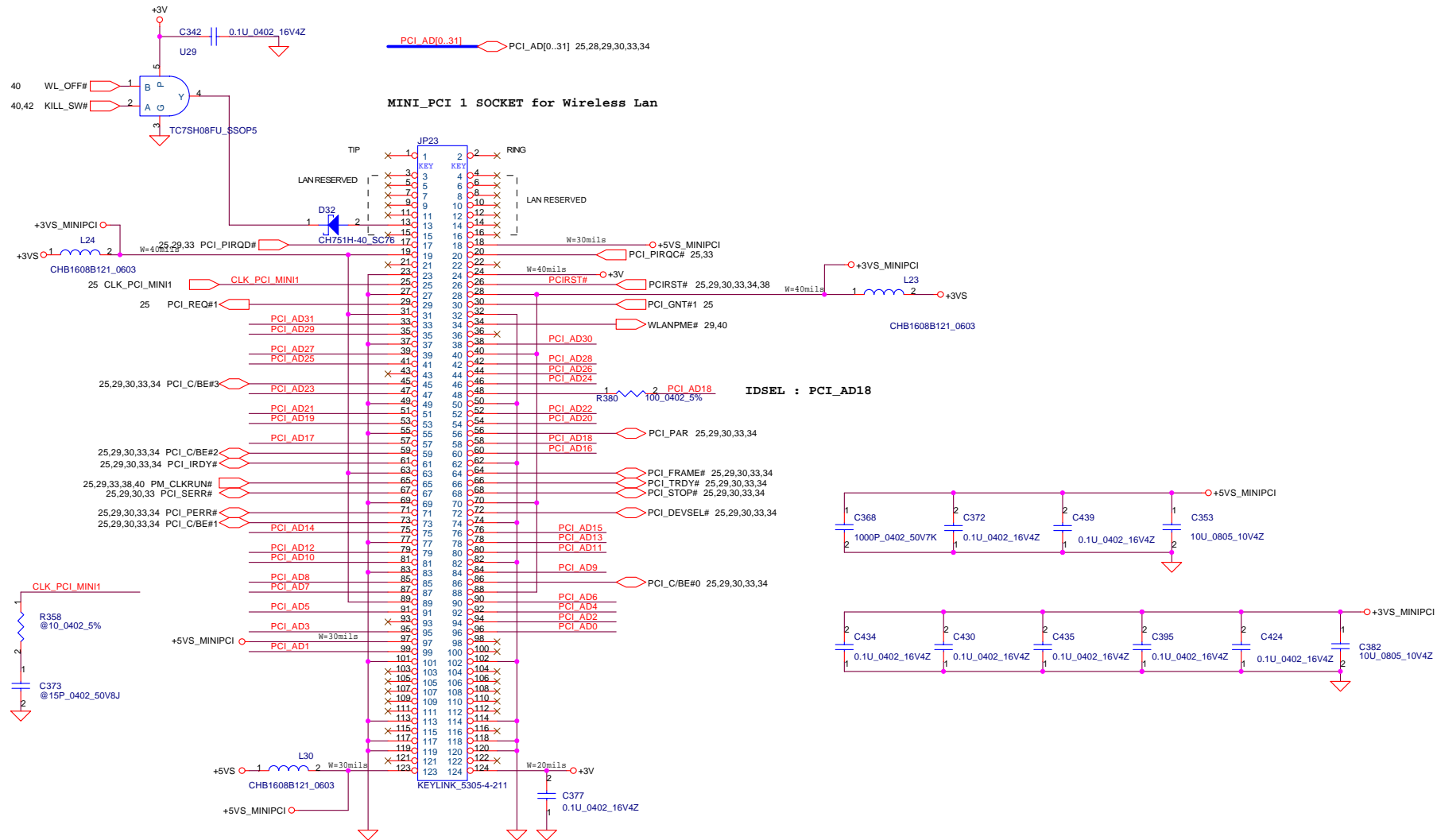
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Title			
MINI_PCI			
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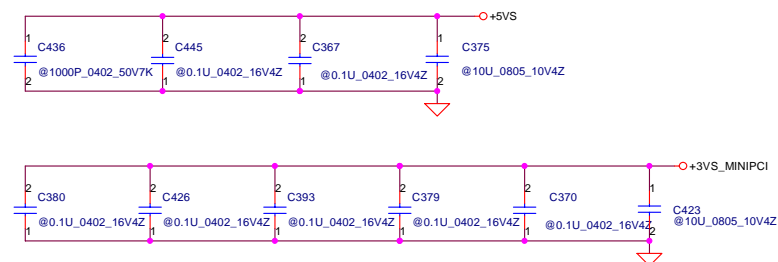
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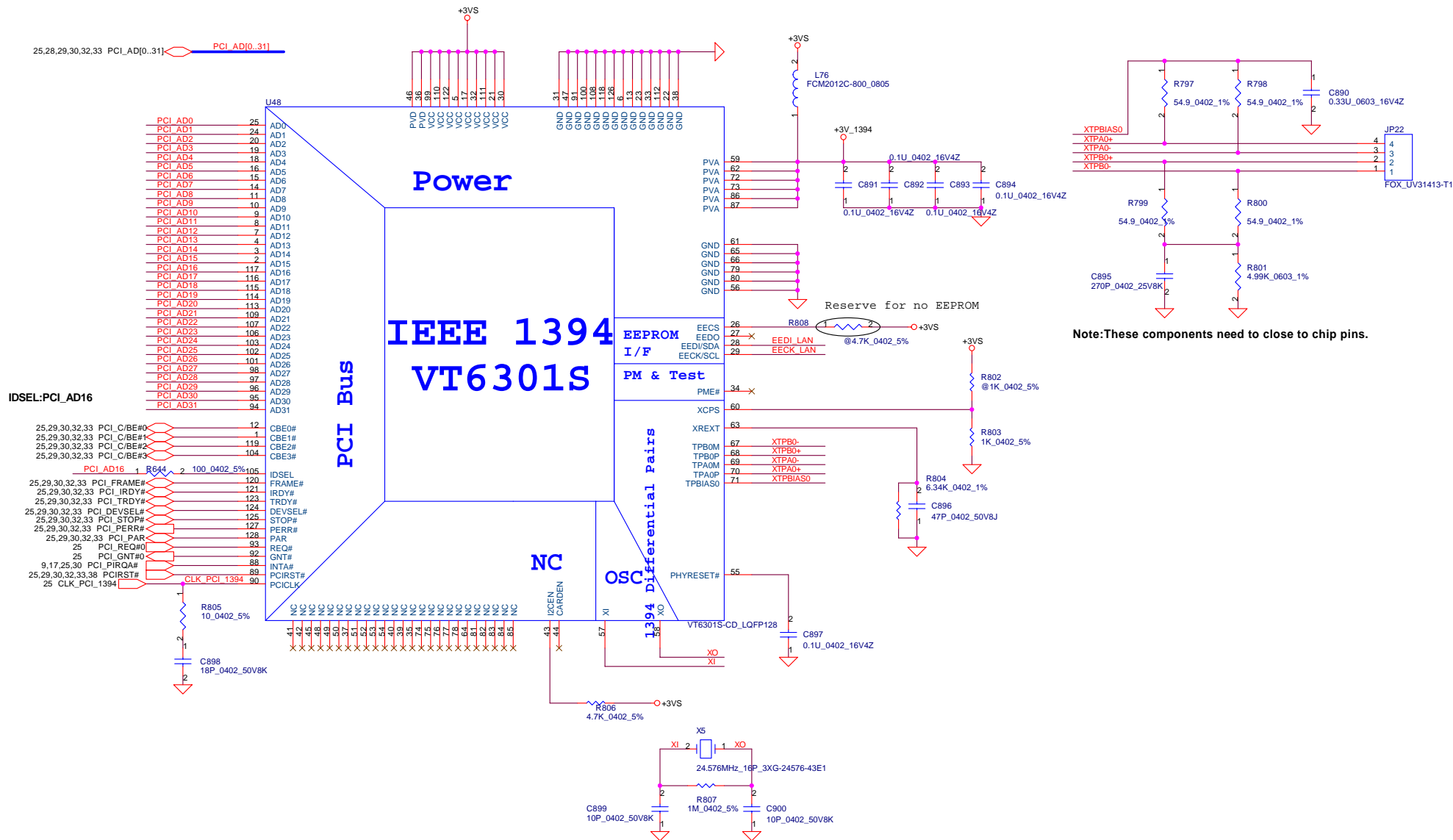


The schematic illustrates the PCI Express interface, showing the connection between the J27 connector and the system components. Key elements include:

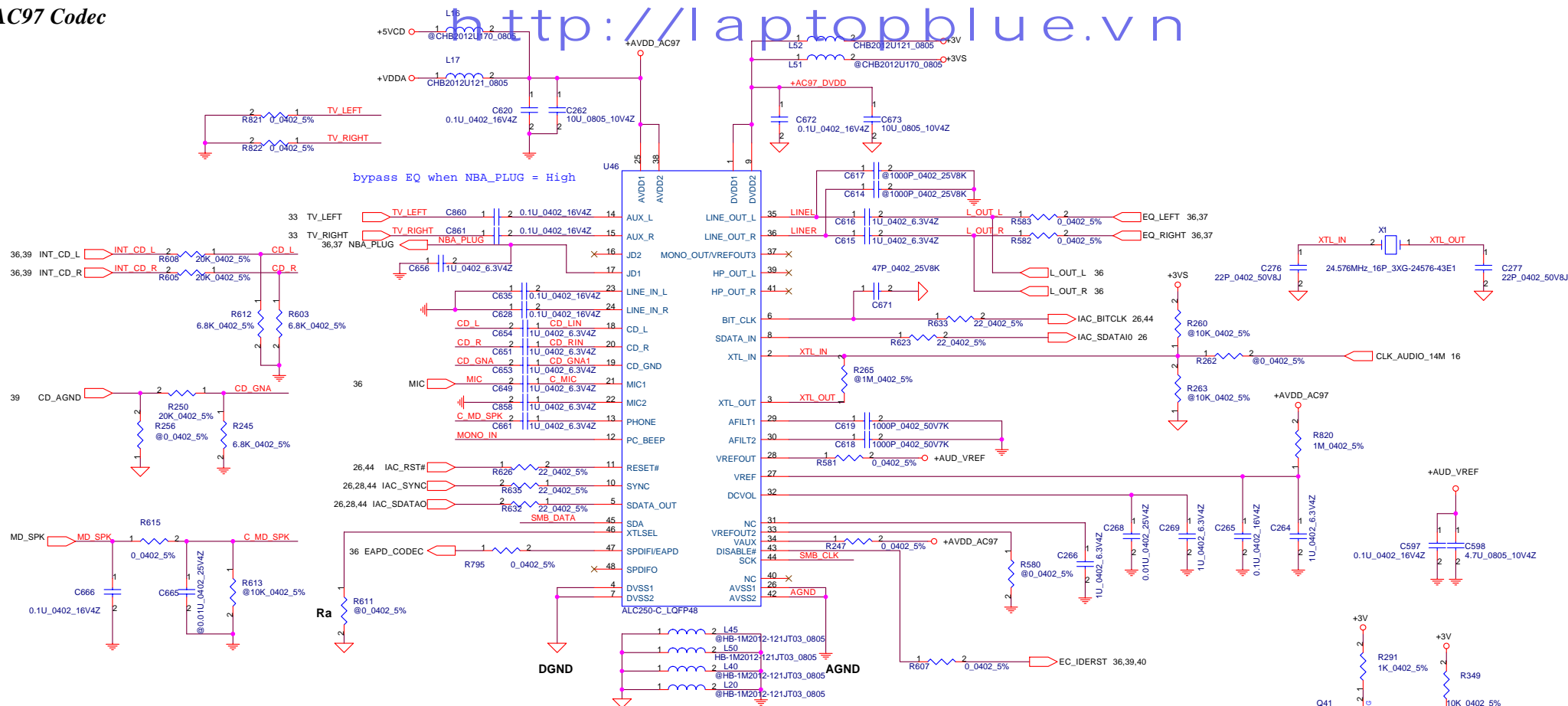
- Power and Ground:** +3VS\_MINIPCI, +3VS, +5VS, and GND connections are shown with associated components like L25, L29, R359, and C374.
- Signal Traces:** Various signal lines are labeled, including CLK\_PCI\_MINI2, PCI\_REQ#4, PCI\_C/BE#3, PCI\_C/BE#2, PM\_CLKRUN#, PCI\_SERR#, PCI\_PERR#, PCI\_C/BE#1, PCI\_AD31, PCI\_AD29, PCI\_AD27, PCI\_AD25, PCI\_AD23, PCI\_AD21, PCI\_AD19, PCI\_AD17, PCI\_AD14, PCI\_AD12, PCI\_AD10, PCI\_AD8, PCI\_AD7, PCI\_AD5, PCI\_AD3, PCI\_AD1, PCI\_AD28, PCI\_AD26, PCI\_AD24, PCI\_AD22, PCI\_AD20, PCI\_AD18, PCI\_AD16, PCI\_AD15, PCI\_AD13, PCI\_AD11, PCI\_AD9, PCI\_AD6, PCI\_AD4, PCI\_AD2, and PCI\_AD0.
- Component Values:** Resistor values (R359, R378, R426, R427, R428, R429, R430, R431, R432, R433, R434, R435, R436, R437, R438, R439, R440, R441, R442, R443, R444, R445, R446, R447, R448, R449, R450, R451, R452, R453, R454, R455, R456, R457, R458, R459, R460, R461, R462, R463, R464, R465, R466, R467, R468, R469, R470, R471, R472, R473, R474, R475, R476, R477, R478, R479, R480, R481, R482, R483, R484, R485, R486, R487, R488, R489, R490, R491, R492, R493, R494, R495, R496, R497, R498, R499, R500, R501, R502, R503, R504, R505, R506, R507, R508, R509, R510, R511, R512, R513, R514, R515, R516, R517, R518, R519, R520, R521, R522, R523, R524, R525, R526, R527, R528, R529, R530, R531, R532, R533, R534, R535, R536, R537, R538, R539, R540, R541, R542, R543, R544, R545, R546, R547, R548, R549, R550, R551, R552, R553, R554, R555, R556, R557, R558, R559, R560, R561, R562, R563, R564, R565, R566, R567, R568, R569, R570, R571, R572, R573, R574, R575, R576, R577, R578, R579, R580, R581, R582, R583, R584, R585, R586, R587, R588, R589, R590, R591, R592, R593, R594, R595, R596, R597, R598, R599, R600, R601, R602, R603, R604, R605, R606, R607, R608, R609, R610, R611, R612, R613, R614, R615, R616, R617, R618, R619, R620, R621, R622, R623, R624, R625, R626, R627, R628, R629, R630, R631, R632, R633, R634, R635, R636, R637, R638, R639, R640, R641, R642, R643, R644, R645, R646, R647, R648, R649, R650, R651, R652, R653, R654, R655, R656, R657, R658, R659, R660, R661, R662, R663, R664, R665, R666, R667, R668, R669, R670, R671, R672, R673, R674, R675, R676, R677, R678, R679, R680, R681, R682, R683, R684, R685, R686, R687, R688, R689, R690, R691, R692, R693, R694, R695, R696, R697, R698, R699, R700, R701, R702, R703, R704, R705, R706, R707, R708, R709, R710, R711, R712, R713, R714, R715, R716, R717, R718, R719, R720, R721, R722, R723, R724, R725, R726, R727, R728, R729, R730, R731, R732, R733, R734, R735, R736, R737, R738, R739, R740, R741, R742, R743, R744, R745, R746, R747, R748, R749, R750, R751, R752, R753, R754, R755, R756, R757, R758, R759, R760, R761, R762, R763, R764, R765, R766, R767, R768, R769, R770, R771, R772, R773, R774, R775, R776, R777, R778, R779, R780, R781, R782, R783, R784, R785, R786, R787, R788, R789, R790, R791, R792, R793, R794, R795, R796, R797, R798, R799, R800, R801, R802, R803, R804, R805, R806, R807, R808, R809, R810, R811, R812, R813, R814, R815, R816, R817, R818, R819, R820, R821, R822, R823, R824, R825, R826, R827, R828, R829, R830, R831, R832, R833, R834, R835, R836, R837, R838, R839, R840, R841, R842, R843, R844, R845, R846, R847, R848, R849, R850, R851, R852, R853, R854, R855, R856, R857, R858, R859, R860, R861, R862, R863, R864, R865, R866, R867, R868, R869, R870, R871, R872, R873, R874, R875, R876, R877, R878, R879, R880, R881, R882, R883, R884, R885, R886, R887, R888, R889, R890, R891, R892, R893, R894, R895, R896, R897, R898, R899, R900, R901, R902, R903, R904, R905, R906, R907, R908, R909, R910, R911, R912, R913, R914, R915, R916, R917, R918, R919, R920, R921, R922, R923, R924, R925, R926, R927, R928, R929, R930, R931, R932, R933, R934, R935, R936, R937, R938, R939, R940, R941, R942, R943, R944, R945, R946, R947, R948, R949, R950, R951, R952, R953, R954, R955, R956, R957, R958, R959, R960, R961, R962, R963, R964, R965, R966, R967, R968, R969, R970, R971, R972, R973, R974, R975, R976, R977, R978, R979, R980, R981, R982, R983, R984, R985, R986, R987, R988, R989, R990, R991, R992, R993, R994, R995, R996, R997, R998, R999, R1000, R1001, R1002, R1003, R1004, R1005, R1006, R1007, R1008, R1009, R1010, R1011, R1012, R1013, R1014, R1015, R1016, R1017, R1018, R1019, R1020, R1021, R1022, R1023, R1024, R1025, R1026, R1027, R1028, R1029, R1030, R1031, R1032, R1033, R1034, R1035, R1036, R1037, R1038, R1039, R1040, R1041, R1042, R1043, R1044, R1045, R1046, R1047, R1048, R1049, R1050, R1051, R1052, R1053, R1054, R1055, R1056, R1057, R1058, R1059, R1060, R1061, R1062, R1063, R1064, R1065, R1066, R1067, R1068, R1069, R1070, R1071, R1072, R1073, R1074, R1075, R1076, R1077, R1078, R1079, R1080, R1081, R1082, R1083, R1084, R1085, R1086, R1087, R1088, R1089, R1090, R1091, R1092, R1093, R1094, R1095, R1096, R1097, R1098, R1099, R1100, R1101, R1102, R1103, R1104, R1105, R1106, R1107, R1108, R1109, R1110, R1111, R1112, R1113, R1114, R1115, R1116, R1117, R1118, R1119, R1120, R1121, R1122, R1123, R1124, R1125, R1126, R1127, R1128, R1129, R1130, R1131, R1132, R1133, R1134, R1135, R1136, R1137, R1138, R1139, R1140, R1141, R1142, R1143, R1144, R114

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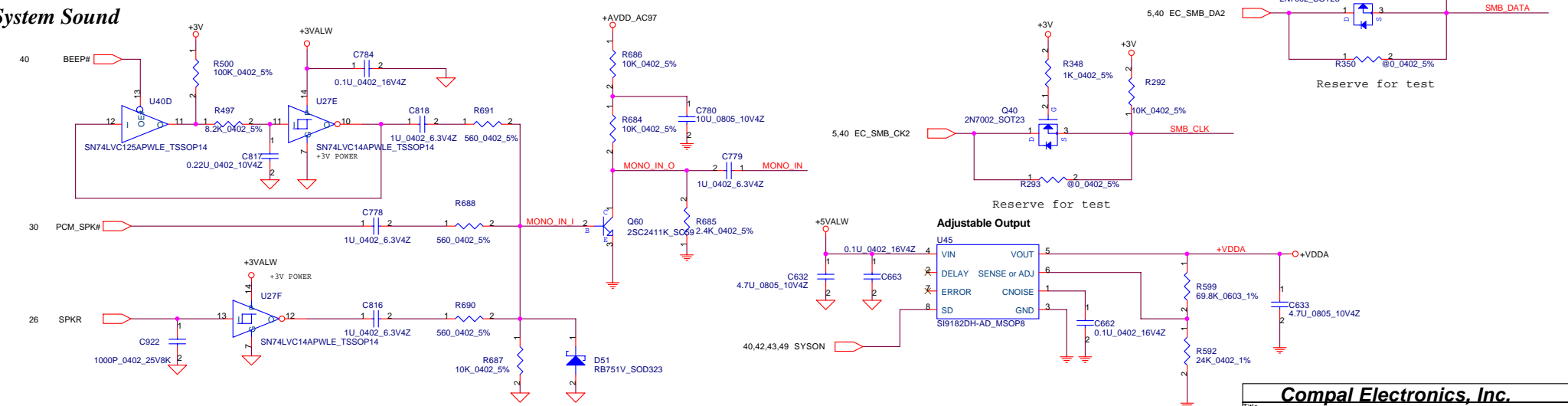




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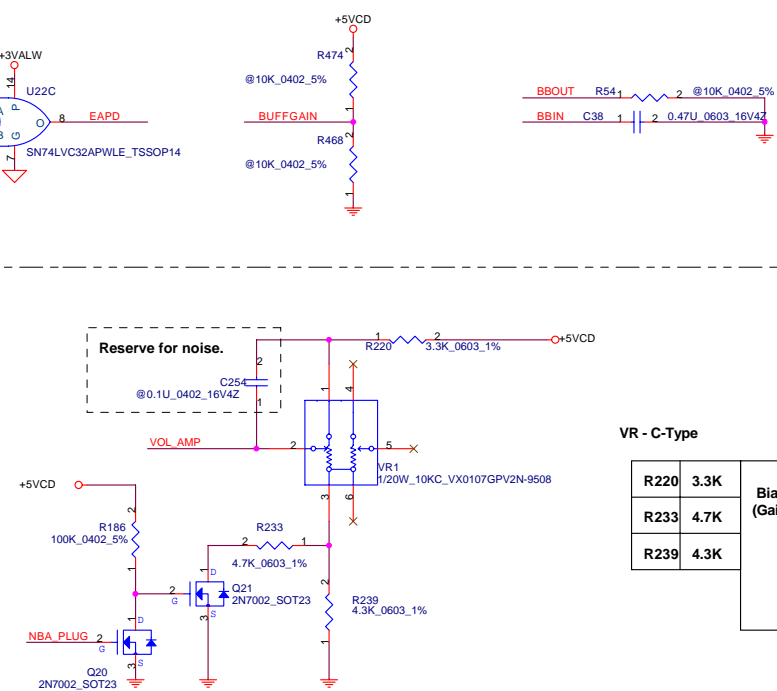
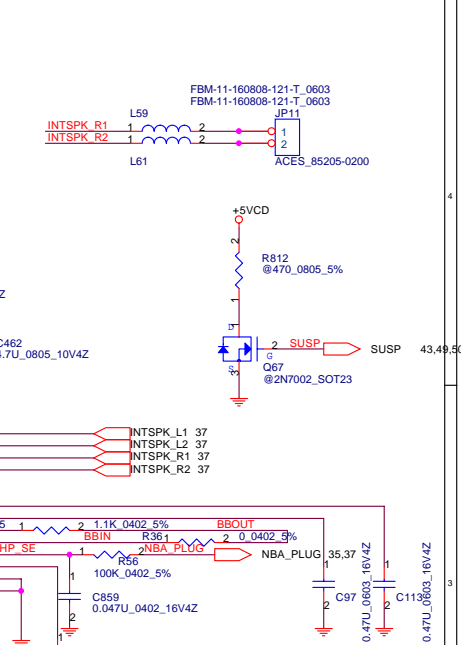
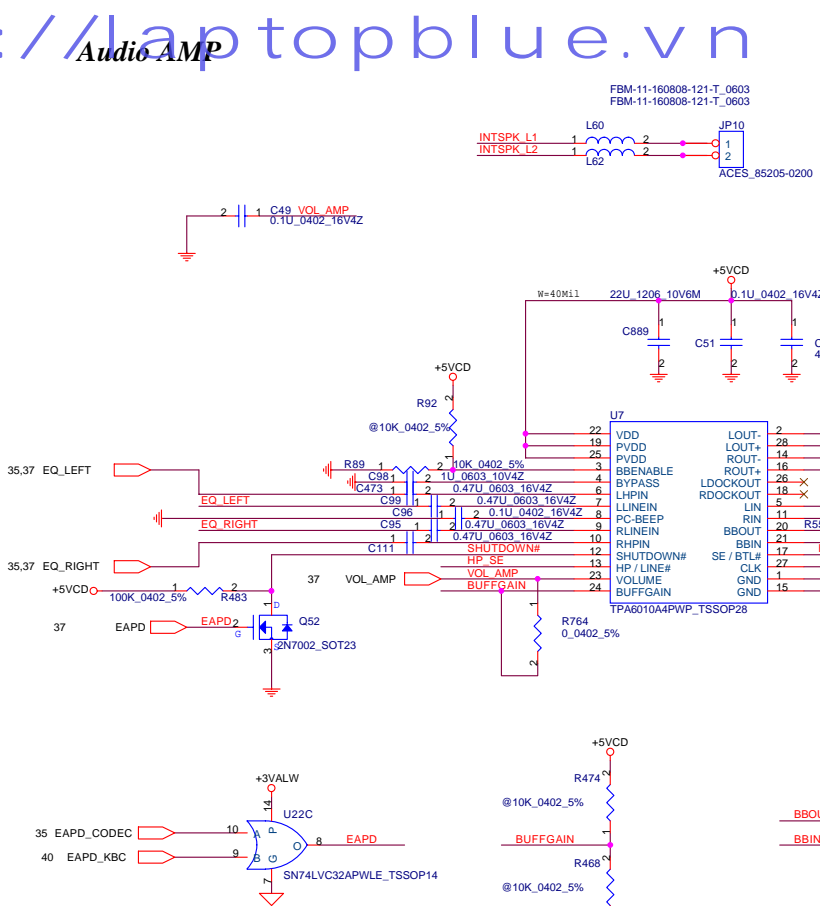
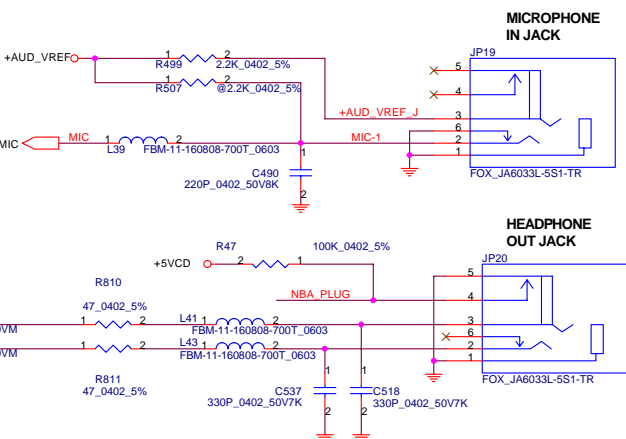
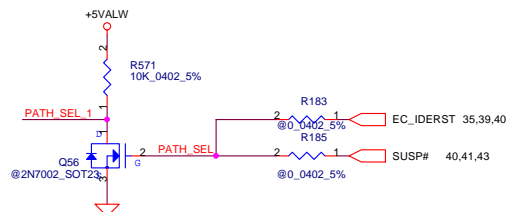
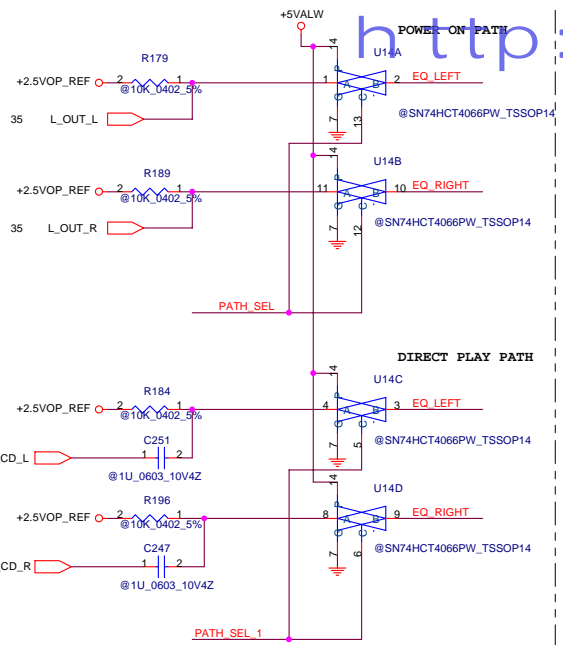


## System Sound



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# Direct CD CTL



## VR - C-Type

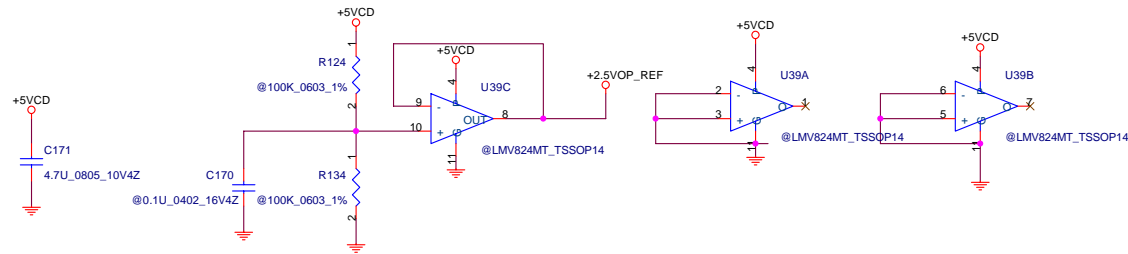
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R239	4.3K		
			HP -4dB

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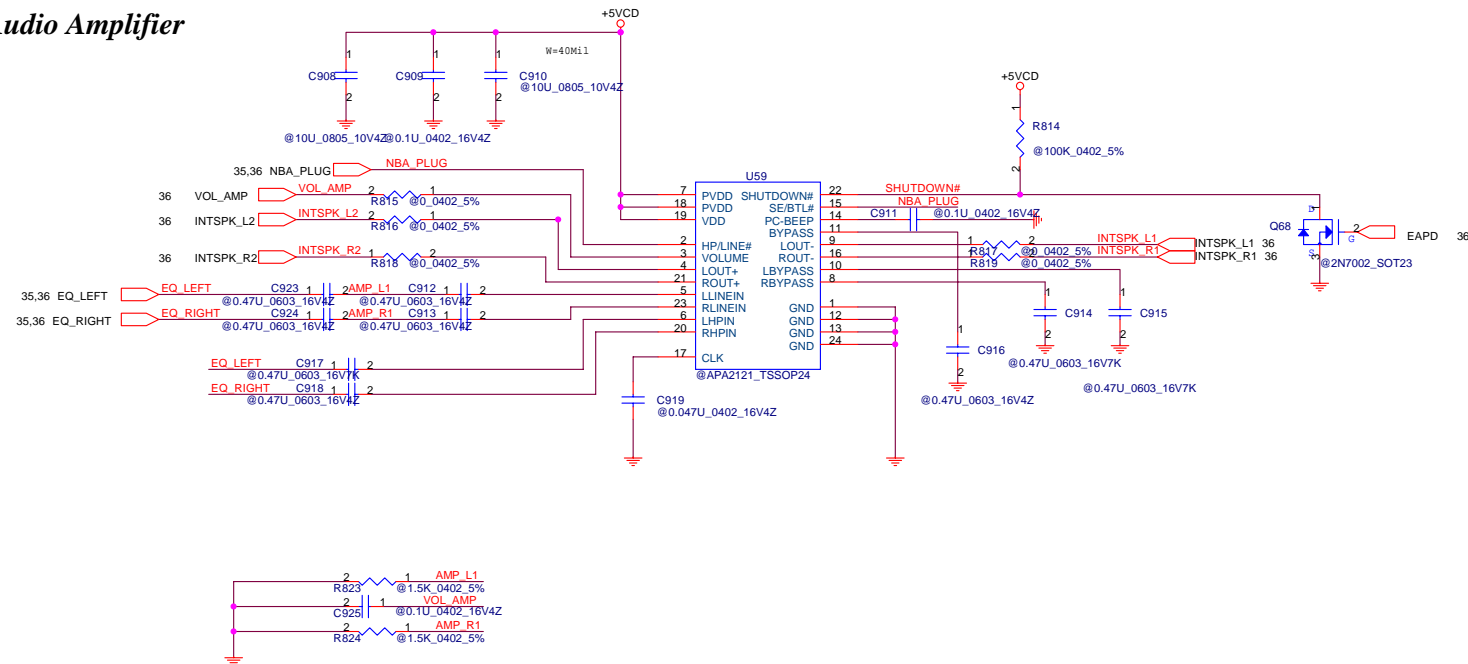
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## Audio Amplifier



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APA2121 Audio Amplifier

Document Number

LA-2371

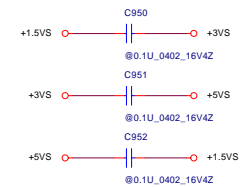
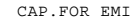
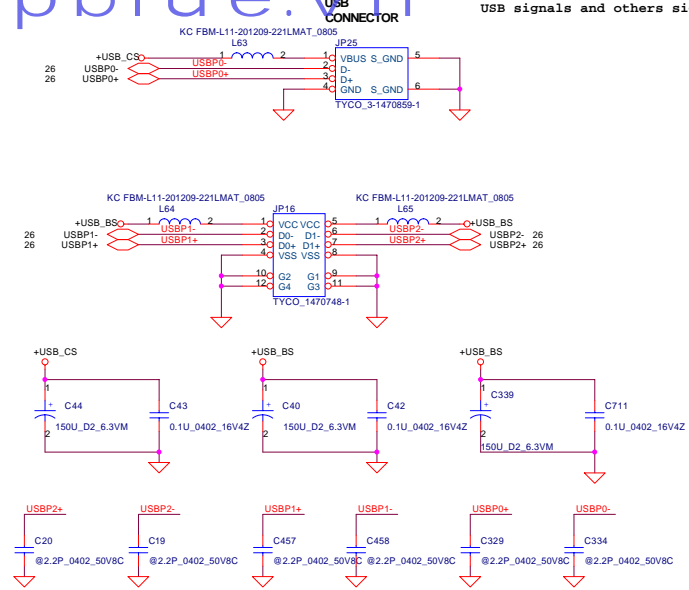
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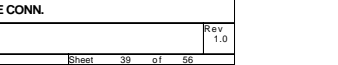
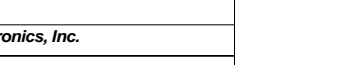
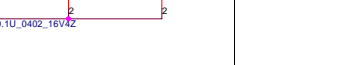
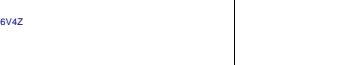
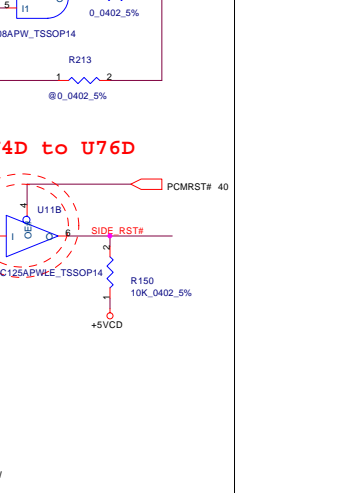
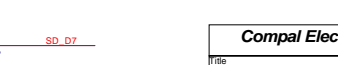
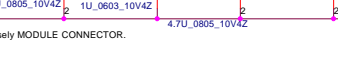
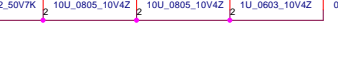
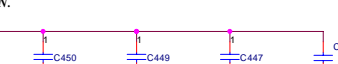
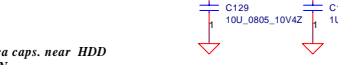
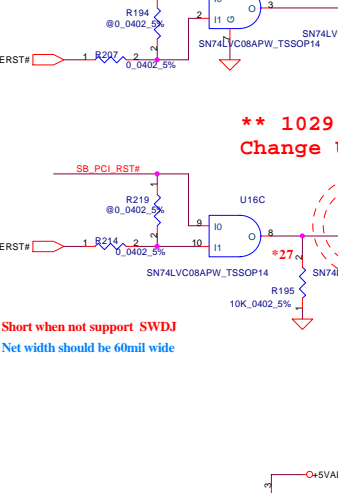
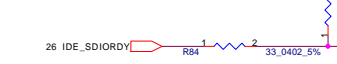
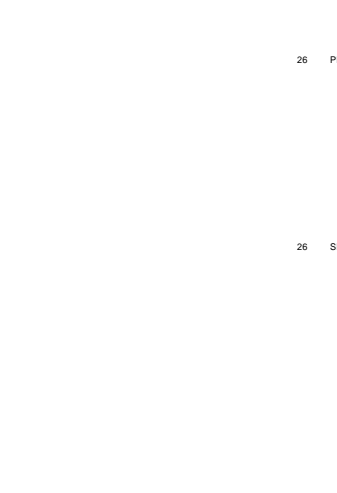
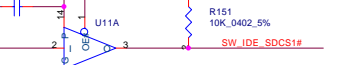
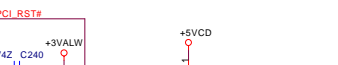
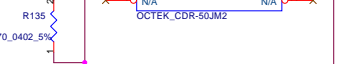
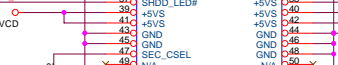
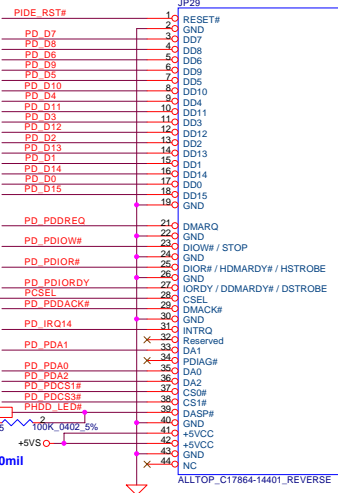
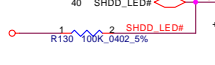
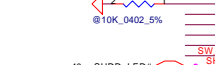
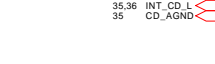
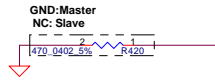
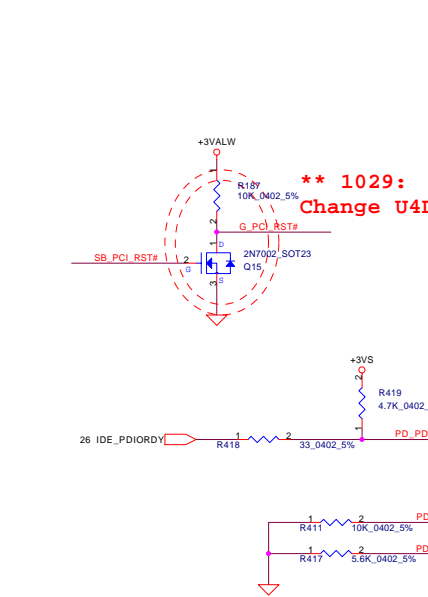
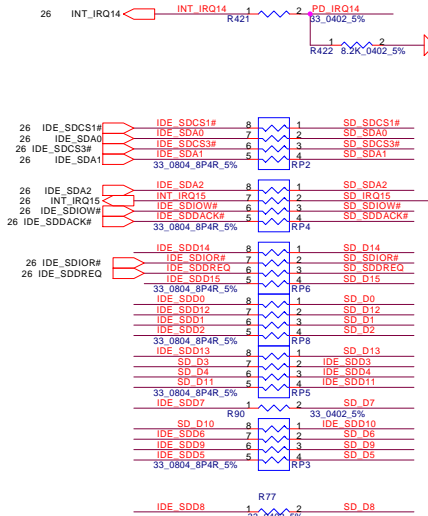
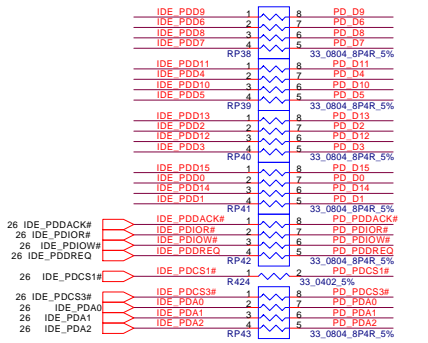
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USB  
CONNECTOR  
Keep 20 mils minimum spacing between  
USB signals and others signals



<b>Compal Electronics, Inc.</b>			
Title			
<b>USB Conn.</b>			
Size C	Document Number <b>LA-2371</b>		Rev 1.0
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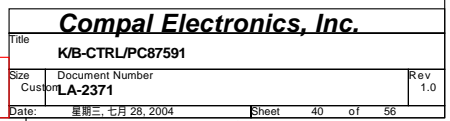
**\*\* 1029: Change U4D to U76D**

Short when not support SWDJ  
Net width should be 60mil wide

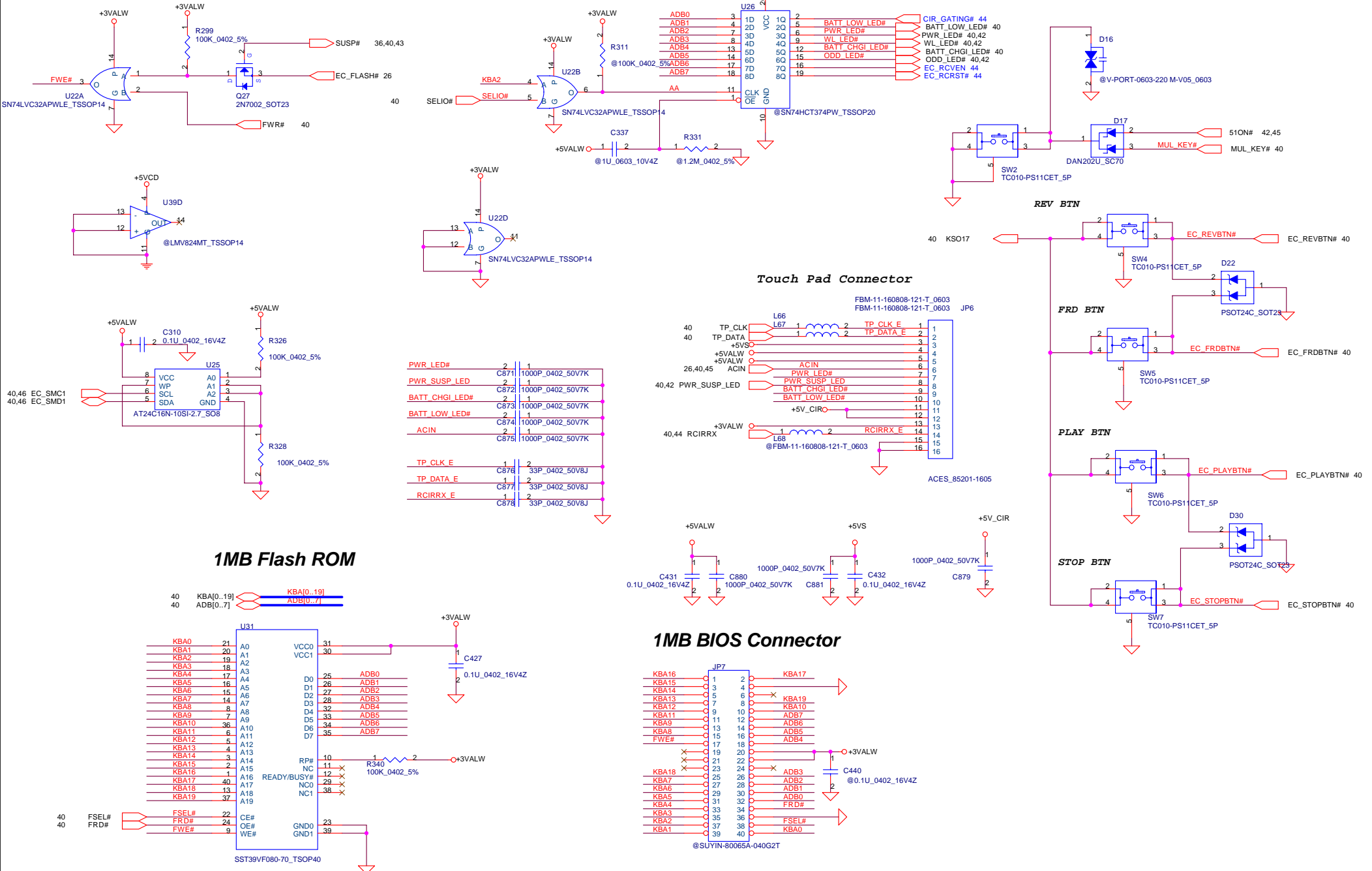
Place caps. near HDD CONN.

Place component's closely MODULE CONNECTOR.

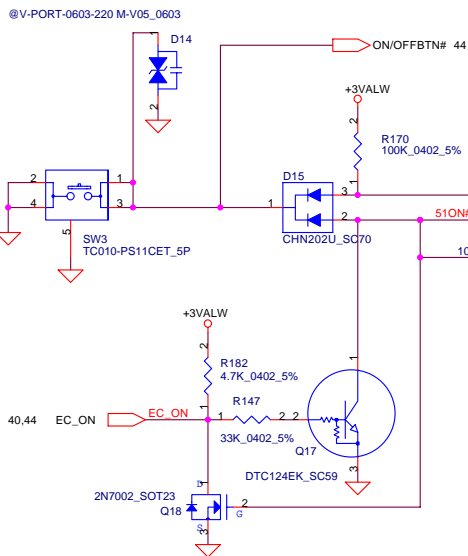




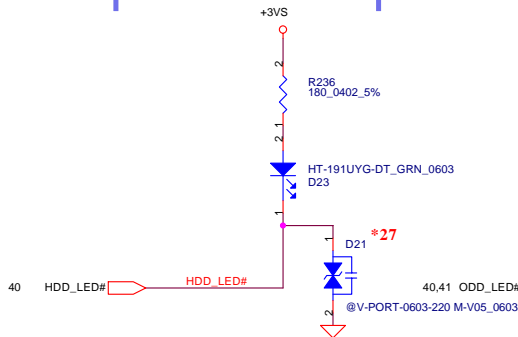




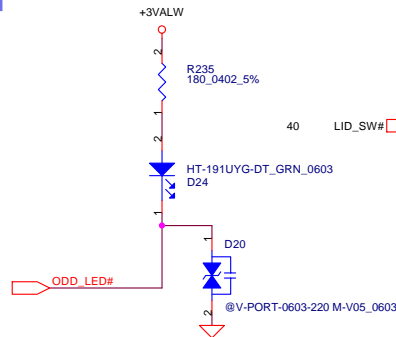
## Power Button



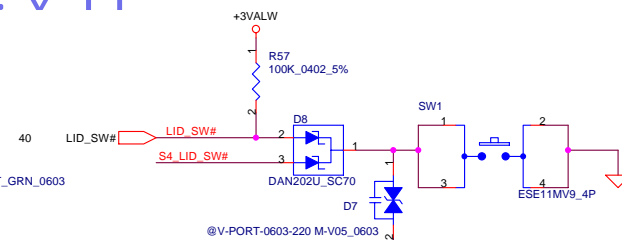
## HDD LED



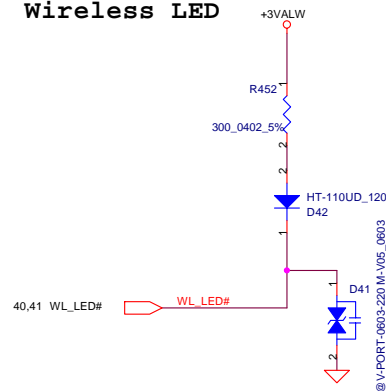
## ODD LED



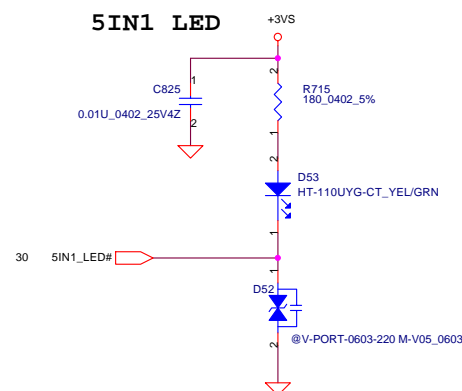
## LID Switch



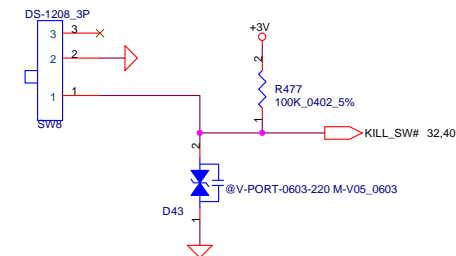
## Wireless LED



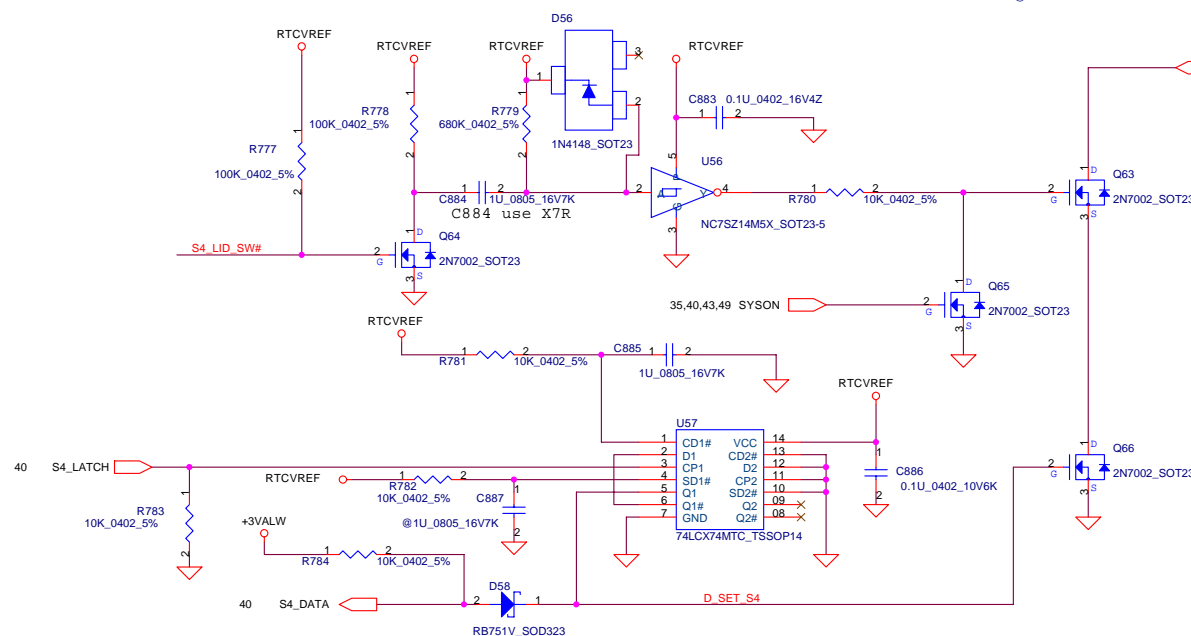
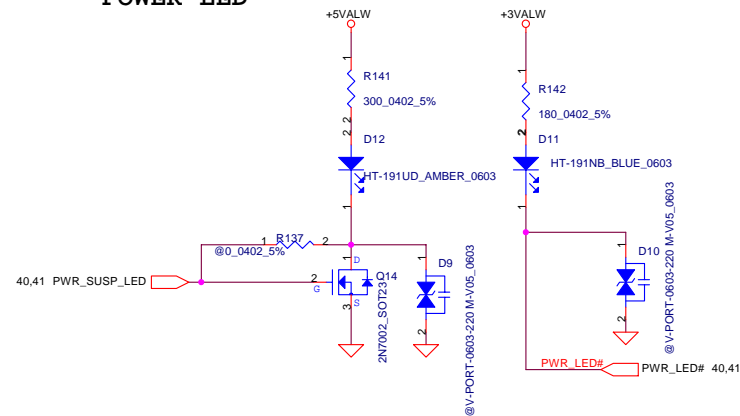
## 5IN1 LED



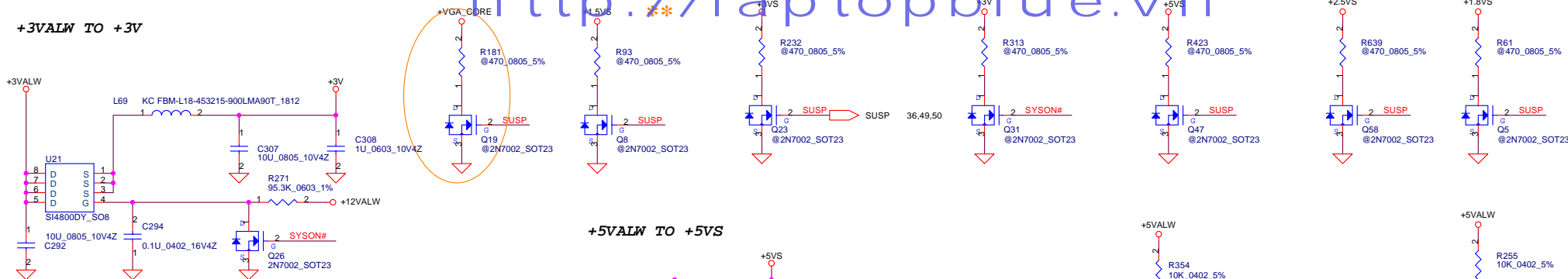
## Kill SWITCH



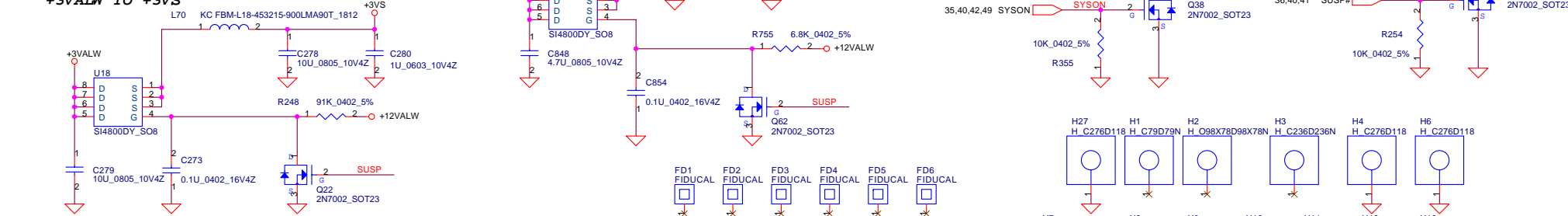
## POWER LED



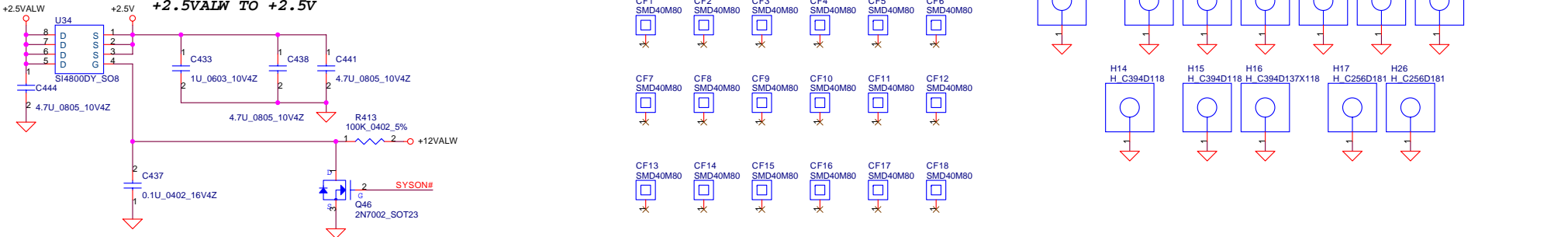
**+3VALW TO +3V**



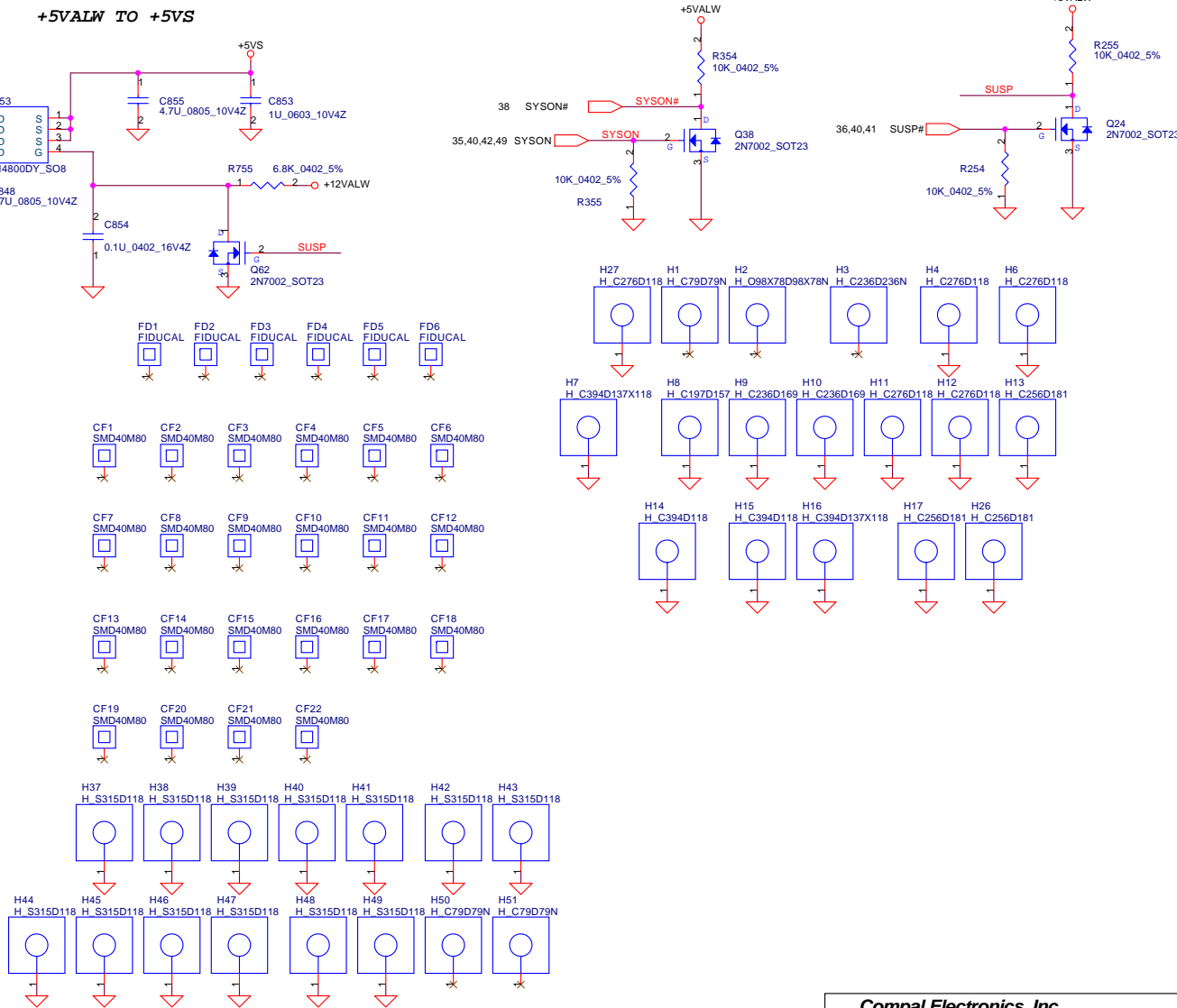
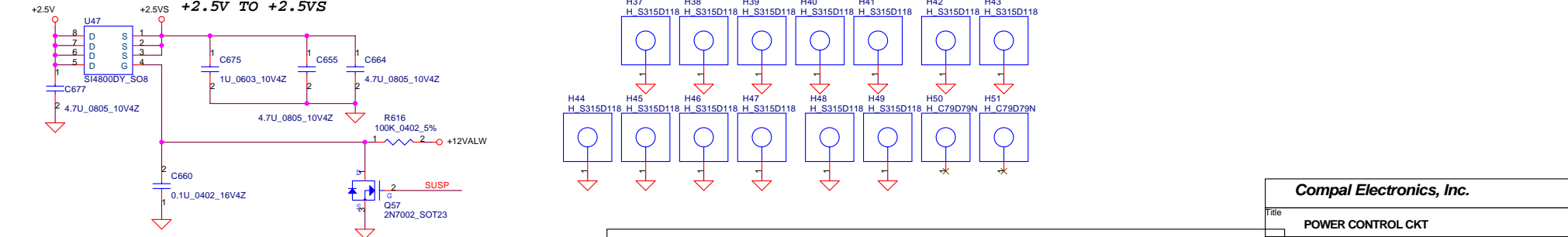
**+3VALW TO +3VS**

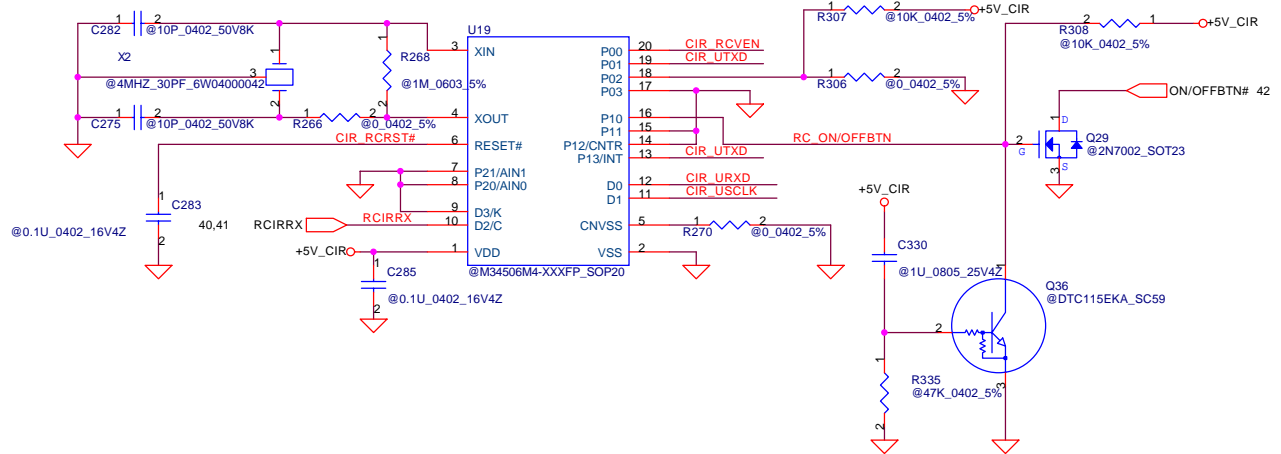
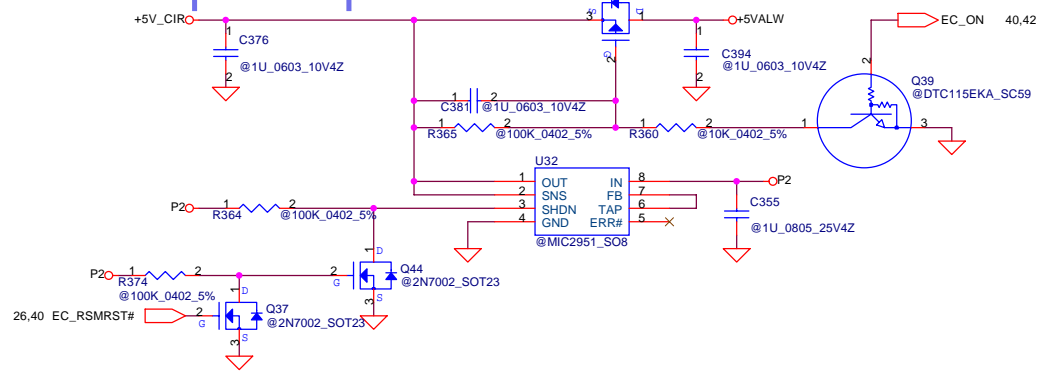
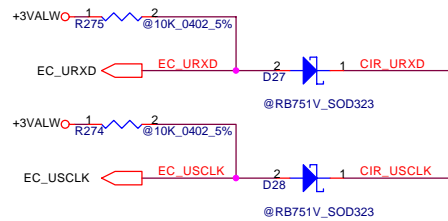
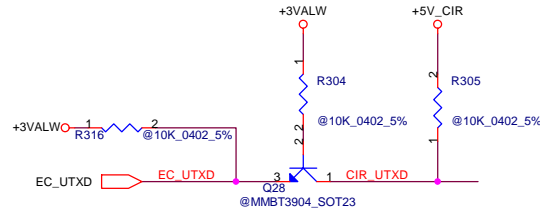
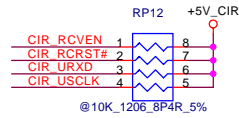


**+2.5VALW TO +2.5V**

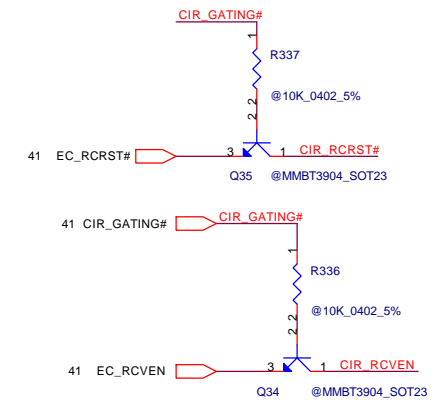
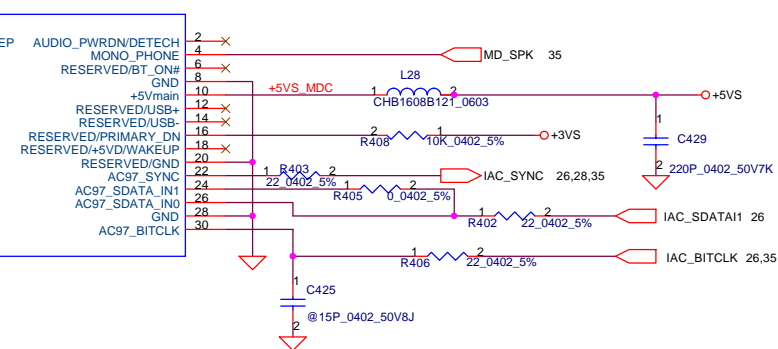
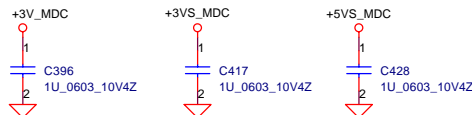
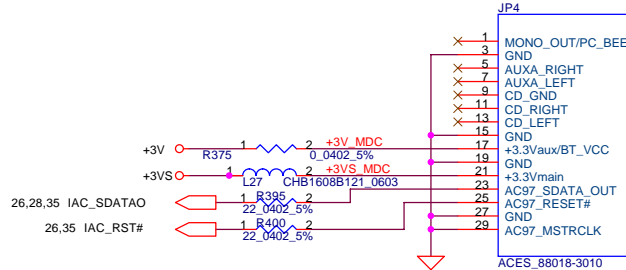


**+2.5V TO +2.5VS**





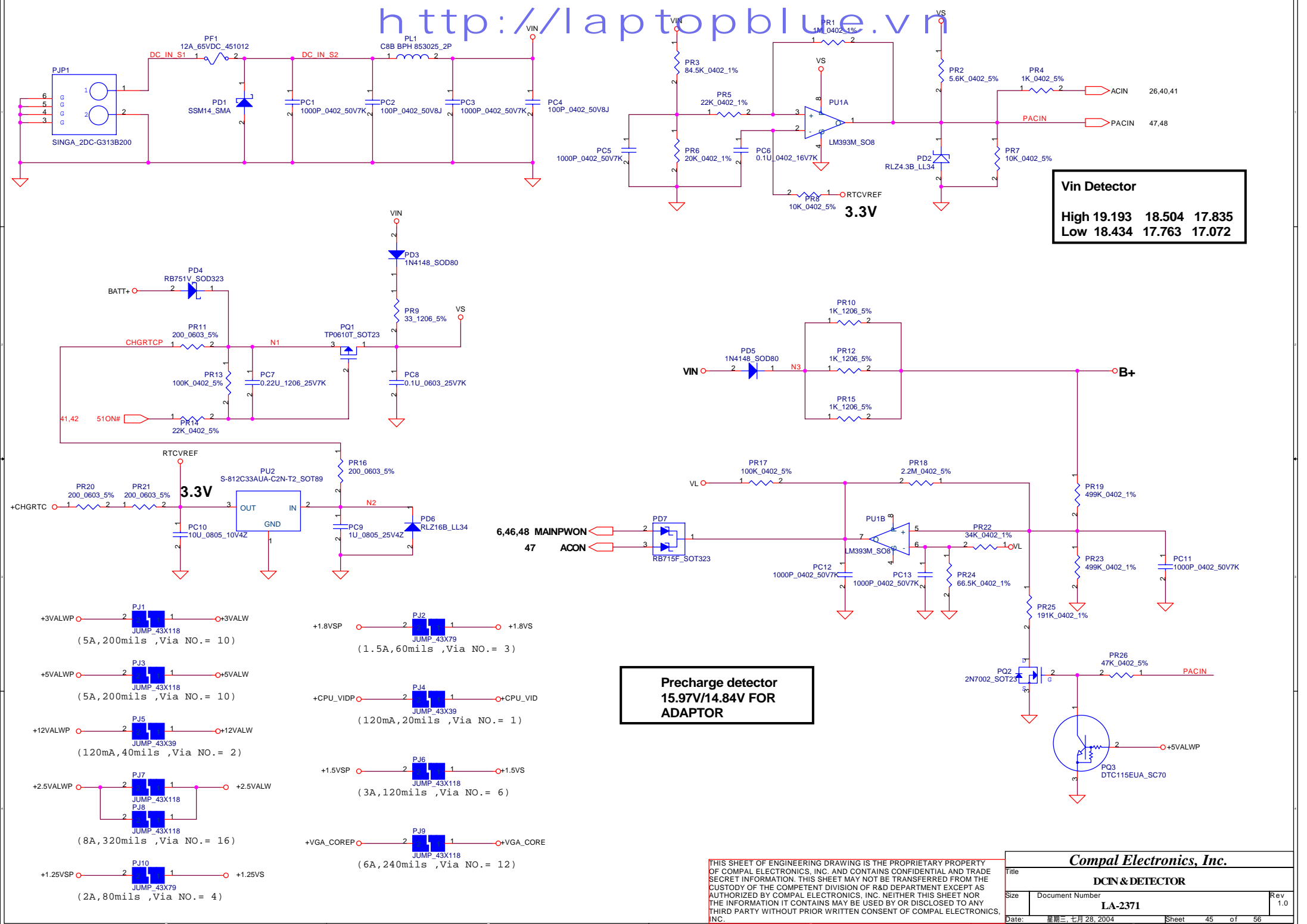
# MDC CONN.



## Compal Electronics, Inc.

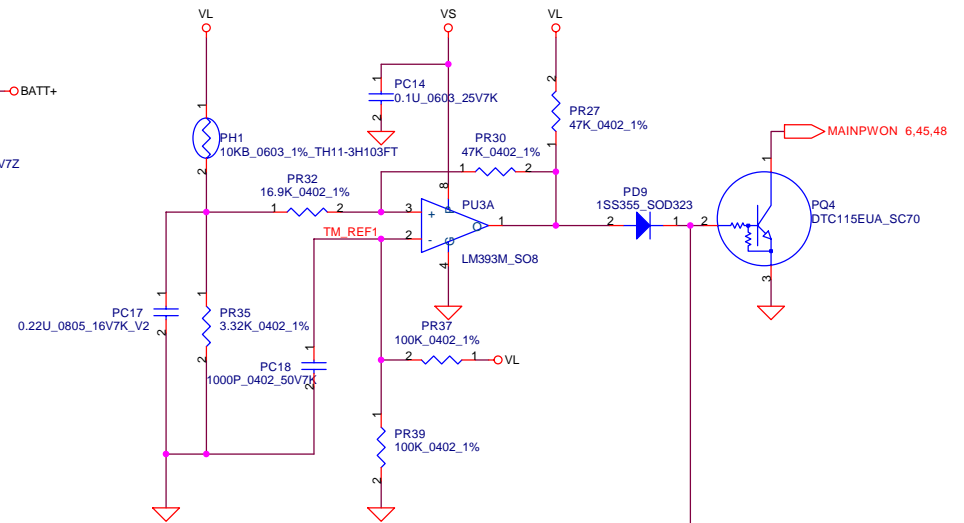
Title			CIR & MDC
Size	Document Number	Rev	
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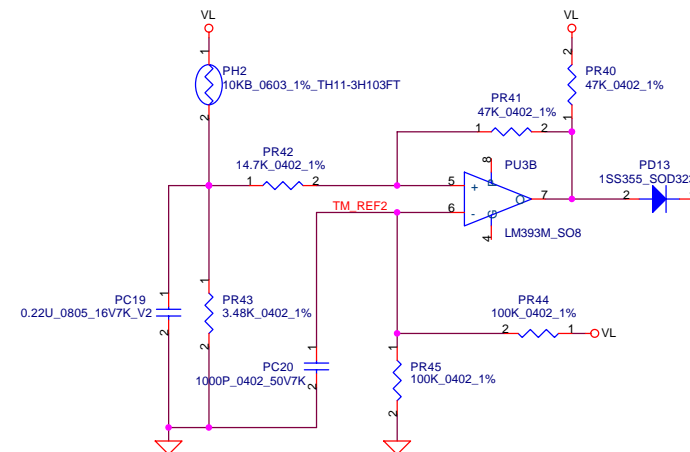
**PH1 under CPU botten side :**

CPU thermal protection at 84 degree C  
Recovery at 45 degree C



**PH2 near main Battery CONN :**

BAT. thermal protection at 79 degree C  
Recovery at 45 degree C

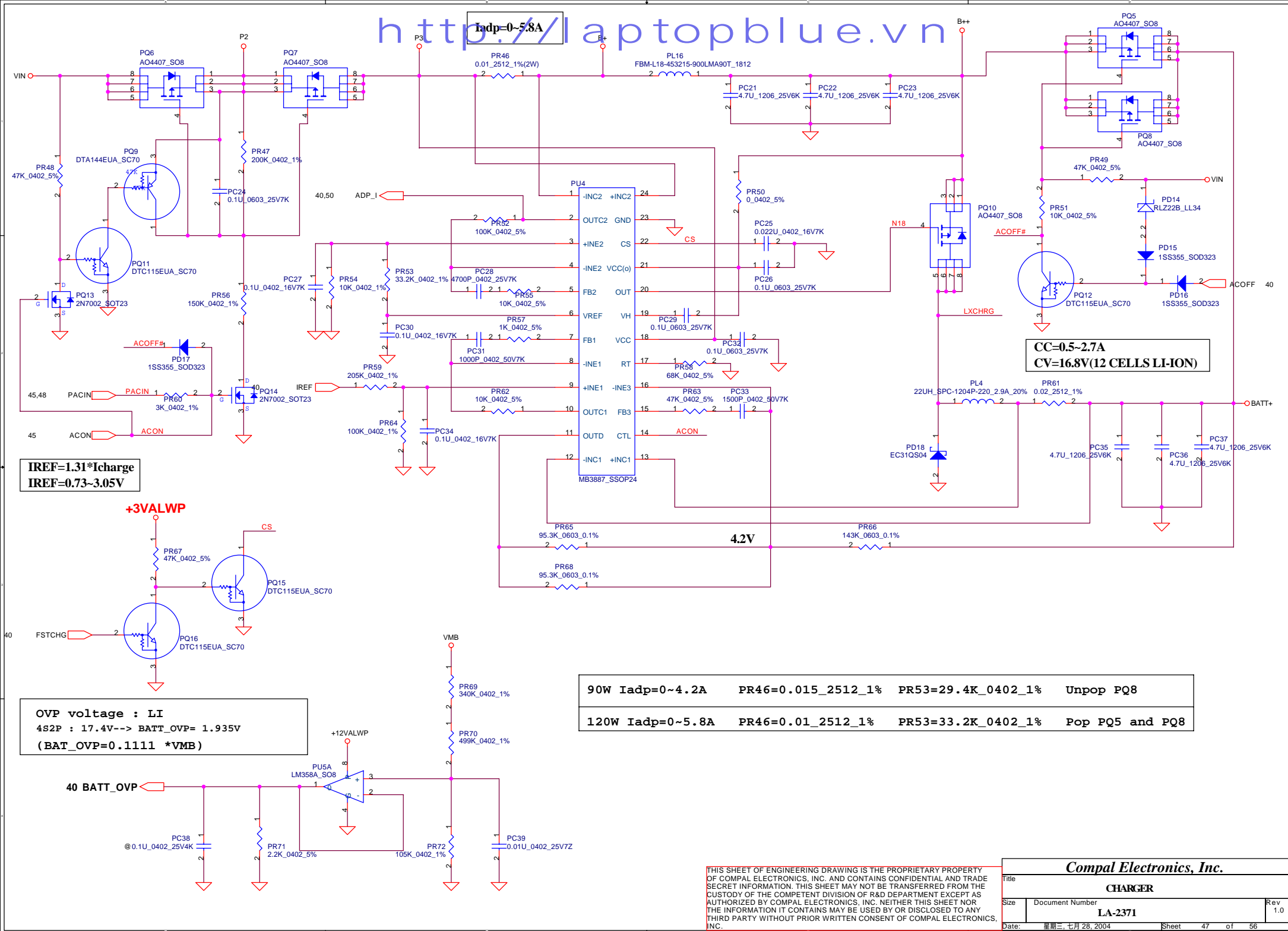


**Compal Electronics, Inc.**

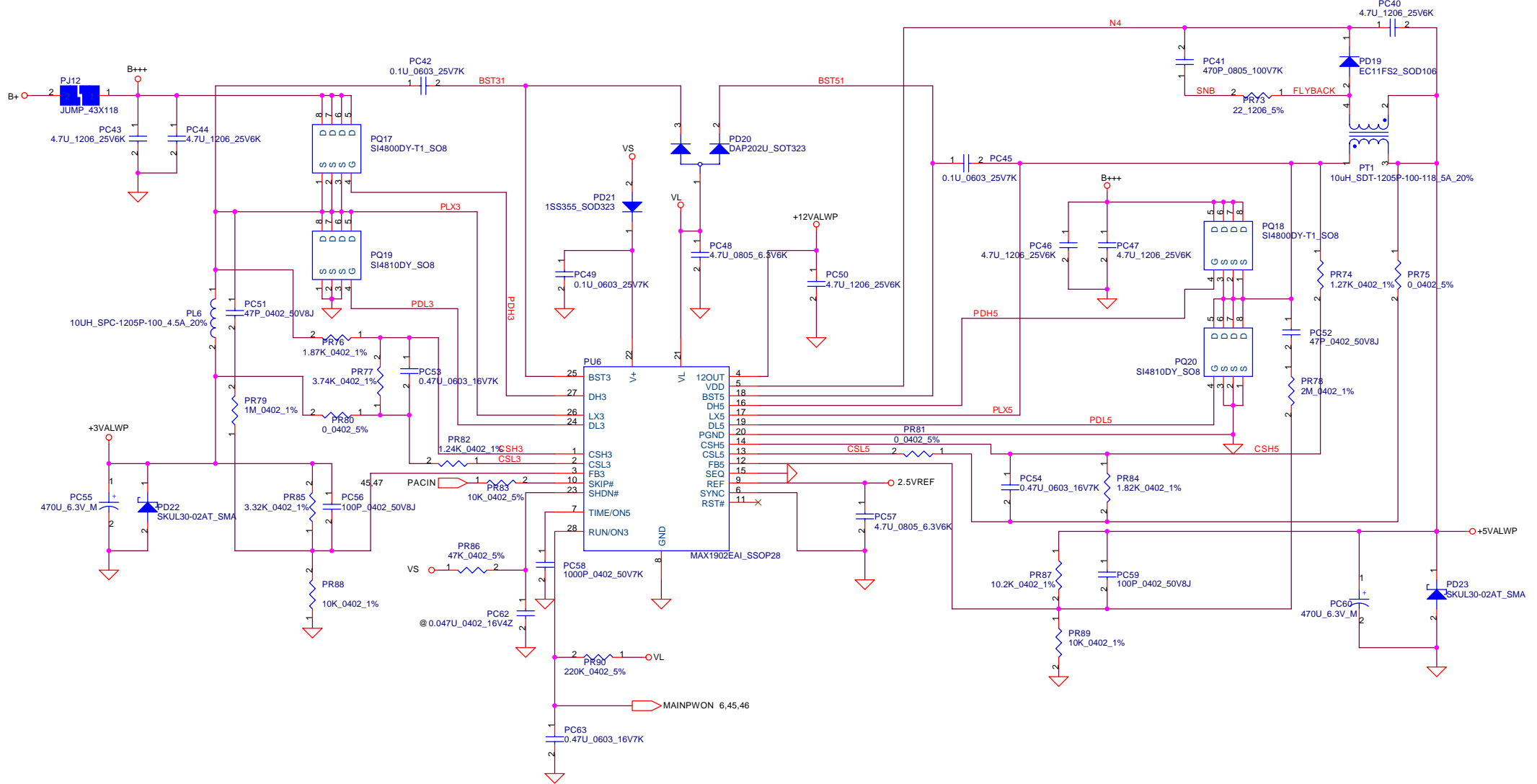
Title			
BATTERY CONN/OTP			
Size	Document Number	Rev	
	LA-2371	1.0	
Date:	星期三, 七月 28, 2004	Sheet	46 of 56

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I<sub>adp</sub>=0~5.8A







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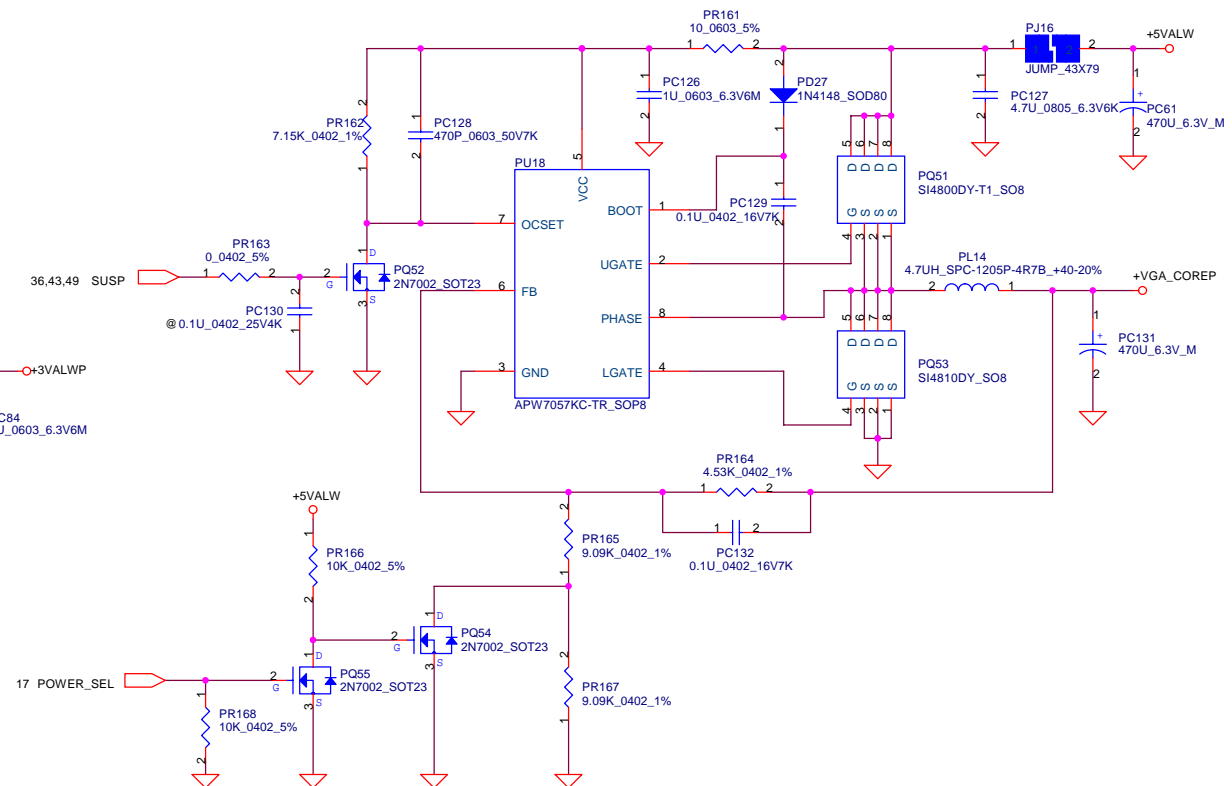
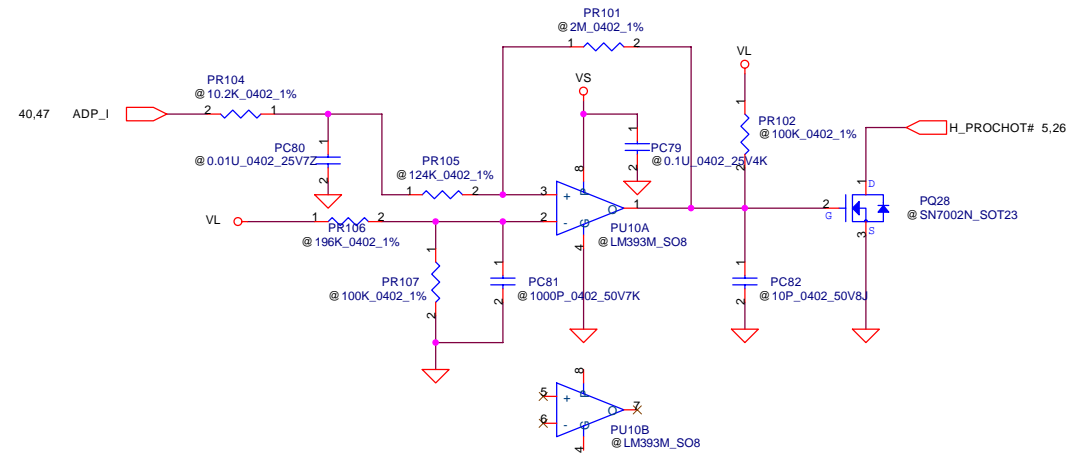
Compal Electronics, Inc.			
Title		5V/3.3V/12V	
Size	Document Number	Rev	
	LA-2371	1.0	
Date:	星期三, 七月 28, 2004	Sheet	48 of 56

PR91  
10\_0603\_5%



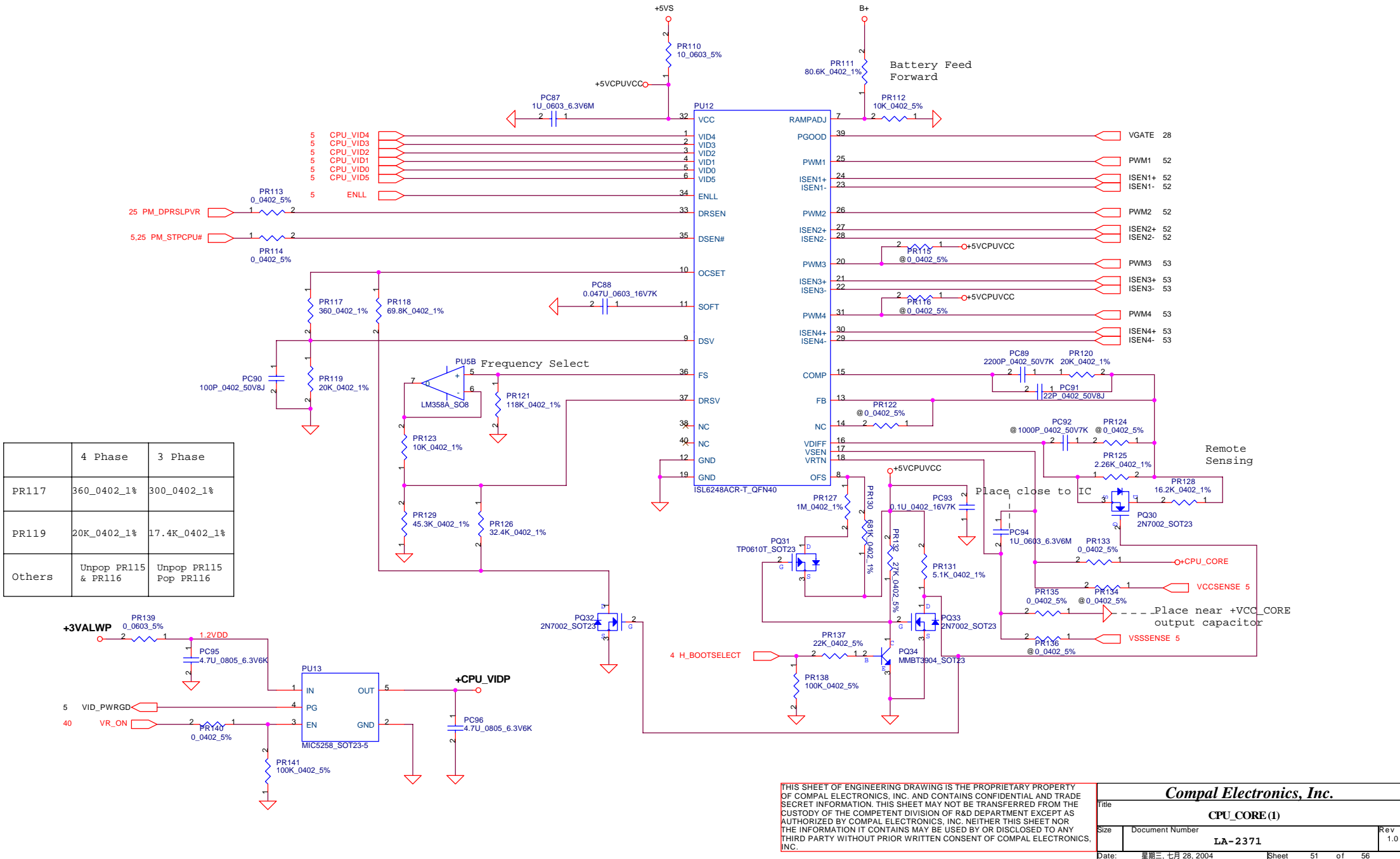
<b>Compal Electronics, Inc.</b>			
Title			
2.5V/1.5V			
Size	Document Number		Rev
	LA-2371		1.0
Date:	星期三, 七月 28, 2004	Sheet	49 of 56

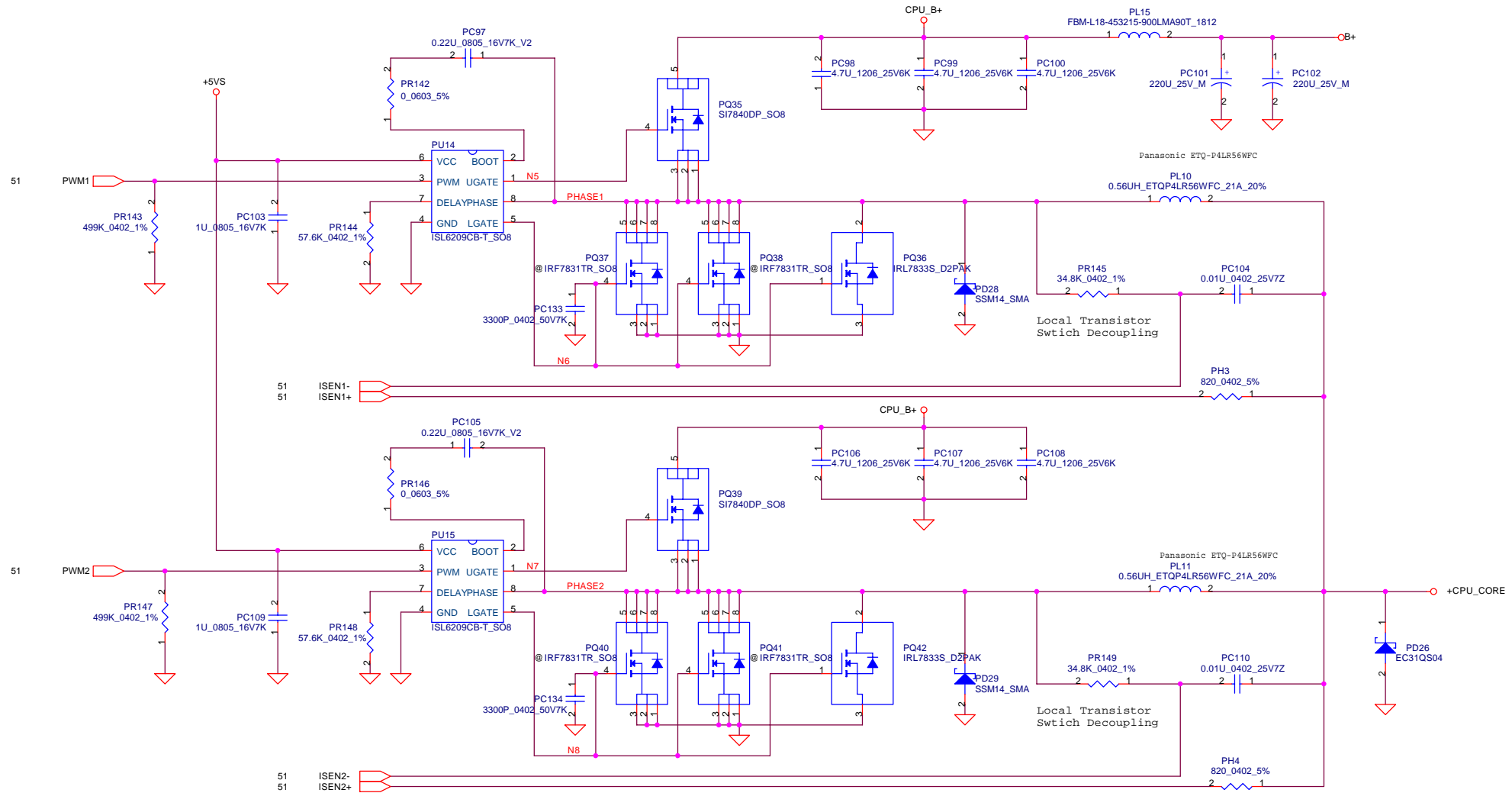
85W THROTTLING  
70W RECOVERY



**Compal Electronics, Inc.**

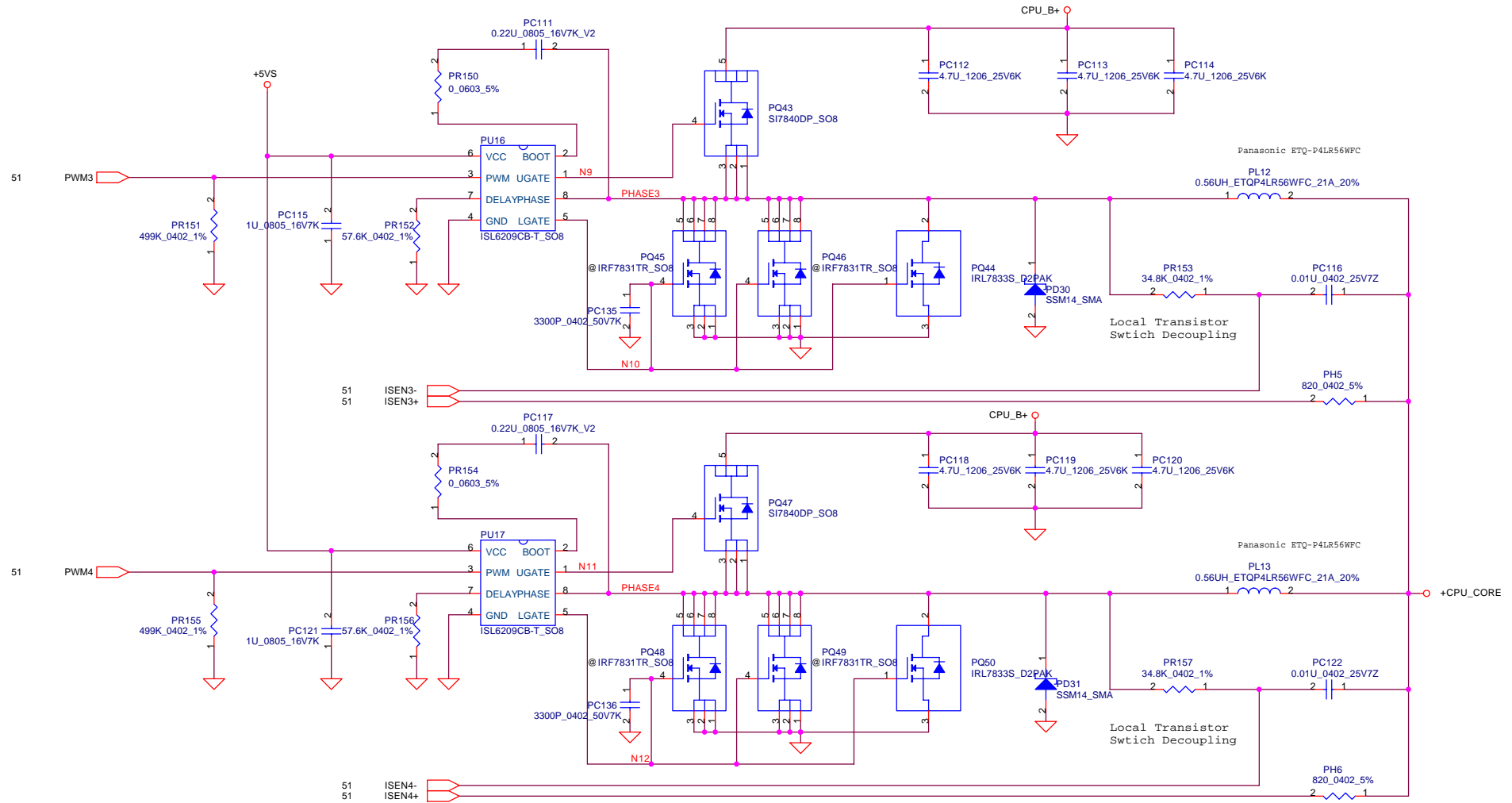
Title			
1.8V/PROCHOT/1.25V/VGA			
Size	Document Number		Rev
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Compal Electronics, Inc.			
Title			
CPU_CORE (1)			
Size	Document Number	Rev	
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Compal Electronics, Inc.			
Title			
CPU_CORE (2)			
Size	Document Number		Rev
	LA-2371		1.0
Date:	星期三, 七月 28, 2004		Sheet 53 of 56

POWER PIR LIST

page Reason for change

DVT	45,46, 49,51	Update BOM
	52	For EMI team request
	52	Solve noise issue

PVT		Add 2nd source
		For common part with H/W
	45,47	For common part
	48	To decrease 3V/5V negative voltage

http://laptopblue.vn

Modify list

Change PC7 form 0.022u to 0.22u(SE041224K03), PR36 from 25.5K to 6.49K(SD034649100)
Change PC17,PC19 form 0.022u to 0.22u(SE030224KT1), PC71 from 4.7u to 10u(SE114106K00)
Change PR130 from 340K to 681K(SD034681300)
Change PC133,PC134,PC135,PC136 from 3300p to 4700p(SE75472K00)
Add PL15 (FBM-L18-453215-900LMA90T_1812: SM010020700)
Add PC102(220u; SF22004M200)
Add 2nd source
Change PQ13,PQ14,PQ2,PQ26,PQ29,PQ30,PQ32,PQ33,PQ52,PQ54,PQ55 from SB570020500 to SB7700200T5
Change PD1 from EC10QS04(SC10QS041T4) to SSM14(SCSSSM14000)
Change PD18 from RB051L(SC1B051L000) to EC31QS04(SC11QS04000)
Change PD22,PD23 from SSM14(SCSSSM14000) to SKUL30-02AT(SCSKUL30000)

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Compal Electronics, Inc.		
Title EFW00 PIR LIST		
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NO	DATE	PAGE	MODIFICATION LIST	PURPOSE
4/21	P.42		Move R57 to D8.2	Avoid leakage current
	P.36		change footprint of U7	for SMT process
	P.29		change footprint of U9	for SMT process
	P.24		swap JP2 channel A and channel B pin	for LVDS Conn.issue
4/22	P.36		Swap C38 & R54 location	For audio speak DC 2.5V level
	P.36		Pop R55& R36 Depop R54	For Audio noise
	P.36		mirror VR1	For Audio Volume smoothly
	P.35		Del R611	For Audio clock 14.318MHz
4/26	P.25		Add R771 pull high to +3VS	Modify IXP 150 GPIO pin
	P.40		Add R772 & R773	To avoid RTCVCC loss in EC
	P.40		Modify U15.90,U15.93,U15.94	To adjust SKU ID & BIOS ID
4/27	P.31		Swap Jp31.19 and Jp31.25	For XD card issue
	P.31		Change R746,R744,R751 power plane to +VCC_5IN1	
	P.31		Add R775 for Reserve	
	P.30		Add R774 for Reserve	
	P.30		Change R769 power plane to +VCC_5IN1	
	P.31		Add JP32 for Reserve	
	P.36		To change R220=3.3k,R233=4.7k,R239=4.3k	For Speak and HP Gain
	P.36		Add R764,Del R468	For audio Gain adjust
	P.36		To modfiy U7 CIS LIB	For Speaker can not mute when plug in HP
4/30	P.24		Add L55,L57,C862,C864	for EMI issue
	P.38		Add L63-L65	for EMI issue
	P.26		Add L58,C866	for EMI issue
	P.36		Add L59-L62	for EMI issue
	P.29		Add L71,L72 / Del R97,R106 / Change L13	for EMI issue
	P.25		Change R661,R658,R662,R665,R651,R654,R668,R315	for EMI issue
	P.40		Pop CPL-CP6	for EMI issue
	P.41		Add C871-C881,L66-L68	for EMI issue
	P.43		Add L69,L70	for EMI issue
	P.35		Change U46 CIS to ALC250 ver. C	for direct CD play issue
5/3	P.40		Re-define EC_URXD/EC_UTXD/KS017 pin assignment	for CIR function
	P.40		Add C882	for SKU ID
5/4	P.24		Depop R58,R48/Pop U4,C39	for S3 panel garbage
	P.38		Add U55	for G528 reserve
	P.38		JP16 modify Layout LIB	for reverse type
	P.38		Change Power from +USB_AS to USB_BS	for reverse type
	P.24		Move R58 to Q4.2	for reserve
	P.30		Add R776	for SM_CD# pull high
	P.31		Define 5IN1 CONN. SM_CD# signal	for SM card protect
5/5	P.17		Modify VRAM strap pin, Add R30	for 32MB/64MB/128MB
5/6	P.26		Change R388 to 12K	for USB eyediagram
	P.31		Depop R749/ Change R746,R744,R742 to 10K,Change R751 to 2.2K	for ENE suggestion
	P.30		Depop R749,R735,R732,R727,R731,R738,R768,R741,R719/Pop R770/Change R768 to 2.2K	for ENE suggestion
	P.42		Add Hibernation circuit	for S4 function
	P.24		Change D25,D54 symbol	for 1N4148 Cache LIB
	P.40		Re-define S4_DATA,S4_LATCH	for Hibernation function
5/7	P.33		Change +5VS_miniPCI to +5VS	for Lifeview SPEC.
	P.7		Add R785-R788,D59,D60	For ATI suggestion
	P.35		Add C860,C861	For Analog TV sound
	P.31		Add R789	For 5in1 issue
5/8	P.40		Add R790,C888	for Battery.
	P.23		Add L73-L75	For EMI issue
	P.31		Change R718 to 43K	For 5IN1 function
5/10	P.40		Change RCIRRXX to 76 pin	For CIS function
	P.40		Add R791	For RCIRRXX pull high +3valw
5/11	P.38		Reserve JP33,R792,R793	for debug
	P.36		Add C889	For Audio noise
	P.26		Del Q32,R317,R312,R318	For ATI suggestion
5/12	P.28		Change R323,R332 to 300K/pop R736 10K	for power on sequence
	P.23		Add Jump from RF GND to Digital GND	for EMI&ESD
5/13	P.40		Reserve R794	for avoid "Po" noise when power on/off
	P.30		Add R795	for "Po" noise test
	P.34		Change IEEE 1394 to VT6301S	for cost down
5/17	P.24		Add C862,C864	for EMI issue
	P.43		Add H54	for ME
	P.44		Change R406 to 22ohm	for modem function
	P.23		Change R7,R437 to 4.7kohm	for CRT function
5/18	P.39		Reserve L77 from CD_AGND to Digital GND	for Audio noise test
	P.23		Add R809	for GPIO pin
5/20	P.31		Add Q67,R810,R811,R812	for Audio noise test
5/20	P.31		Add U22C OR gate	for Audio PO sound
=====Rev0.3=====				
6/17	write by Timo Teng			
P.27	Add R813		For S/W DJ Function	
P.31	Add C904, C905, C906 C907		For 5 in 1 card transfor noise	
P.35	Add R820		For BITCLK smooth	
	Add R822, R823, @ in L40			
	del @ in L50		For Audio noise	
P.36	Add @10k in R179, R189, R184 and R196		For SWDJ	
	Del R95, R98, C112, C110		For Cost down	
P.37	Del Hardware EQ circuits			
	Add APA2121 Audio Amplifier circuits		For Cost down	
P.40	Add GPIO at pin98, 97,92,85,86 of KB910		For cost down	
	Del @ inR773 and Add @ in R772		For RTC power saving	
P.41	Add @ in U26, C305, R311, C337 and R331		For cost down	
P.42	R235 pull up voltage from +5VS to +5VALW		For SWDJ LED	
P.43	H37 connects to GND			
P.43	Add @ in all CIR circuits.		For Del CIR function.	
6/21	write by Timo Teng			
P.20	Add C920			
	Change C230 value from 150uF to 220uF		For VGA_CORE stable.	
P.42	Change value of R235, R142 and R452 from 300 to 180 ohms		For cost down	
6/22	write by Timo Teng			
P.23	Del JP13, JP3, JP14, J1, L73, L74, L75		For take out TV turner	
P.31	Add @ into R743 and C847		For some SD Card can't be detected	
P.35	Add C922		For decrease Bo sound in Dos Mode	
P.36	Add R98, R95, C112, C110		For SWDJ if the SMBUS can't be programed	
P.37	Add R823, R824, C923, C924, C925		For SWDJ if the SMBUS can't be programed	
P.41	Add @ in L68		For take out CIR function.	
	Del C336, U33		For Del 512KB flash ROM	
6/23	write by Timo Teng			
P.40	Del CPL-CP6			
	Add C926~C949		For EMI Cost down	
6/27	write by Timo Teng			
P.24	Change Value of C26 from 1000P to 0.047U		For SWDJ backlight getting off	
for ENE suggestion				
NO	DATE	PAGE	MODIFICATION LIST	PURPOSE
7/1	P.30		Connect U52.M11 to U52.J9	for follow Fortworth definition
	P.43		Del H52,H53	for layout modify
	P.43		Reserve C950,C951,C952	for EMI test
7/12	P.11		Del C567,C545 and Add C953	for Cost down
=====Rev1.0=====				
7/23	write by Timo Teng			
P.23	Change R443,R440,R438,R442,R441,R439 from 75_0402_5% to 75_0402_1%			
P.25	Change R643 from 330 to 130 ohm		For TPDL issue	
	Add @ in R668		For EMI request	
P.26	Change R388 from 12K to 11.5K ohm		For USB2.0 quality	
P.34	Add @ in R802		For VIA recomanation	
P.36	Del R98, R95,C112, C110		For Harman request	
P.37	Add @ in APA2121 circuits			
P.38	Add @ in U5 and Super I/O circuits.			
	Del @ in U55			
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P.40 Change R175 and R176 from 0 to 1K ohm  
Add @ in R172  
P.42 Modify S4 resume circuit

For solve KB910 into test mode  
For LPDPC doesn't be used  
For solve KB910 into test mode

http://laptopblue.vn

7/27 Write by Timo Teng

P.24 R31,R34,R32,R33 from 75\_0402\_5% to 1%  
P.31 Add R825  
Change 789 from 43K to 10K  
P.36 Change JP10 and JP11 from ACES 85204-0200 to ACES 85205-0200  
P.40 Add C954 at pin176 of U15

For solve power switch ripple  
For ME request  
For FAN2 test Fail

7/28 Write by Timo Teng

P.30 Add R826  
Change R721 from 33 to 22 ohm  
P.30 Del R743

For SD Card Function

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