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Q45T-AS

Rev: 1.0

*	McCreary(Corporate) ,vPro
	EagleLake Q: Corporate Integrated Graphics
	Boulder Creek(consumer) ,VIIV
	EagleLake G: Consumer Integrated Graphics
	EagleLake P: Consumer Discrete Graphics

	PCB	Total Thickness	Core Prepreg
*	BearLake	62 mil	50 mil
	EagleLake	59 mil	47 mil

DEVICE	IDSEL	INT#	REQ#	GNT#
PCI1	17	E/F/G/H	PEQ1	GNT1
PCI2	18	F/G/H/E	PEQ0	GNT0

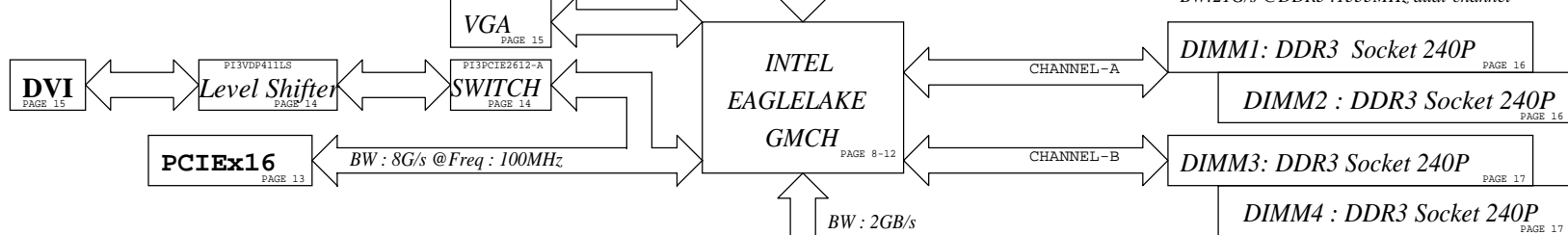
**INTEL
LGA 775 pin**
Intel P4 Processor Core 2 Duo
& Core 2 Quad & Dual Core

PAGE 4-6

FSB : 800MHz & Freq : 200MHz
FSB : 1066MHz & Freq : 266MHz
FSB : 1333MHz & Freq : 333MHz

BW : 10GB/s

DDR3 : 800/1066/1333MHz
BW:10.6G/s @DDR3 :1333MHz single-channel
BW:21G/s @DDR3 :1333MHz dual-channel



BW : 480MB/s @ Freq : 48MHz

USBLAN
2 ports
USB X4
4 ports
USB3
2 ports
USB4
2 ports

USB V2.0
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**INTEL
ICH9/10**

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BW : 500MB/s @ Freq : 100MHz

PCIE X 1

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**INTEL LAN
82567LM
(Giga PHY)**

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**USBLAN
RJ45**

PAGE 31

PCI Slot 120pin @ AD17

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PCI Slot 120pin @ AD18

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BW : 133MB/s @ Freq : 33MHz

PS. USBLAN is RJ45+2 port USB conn

**Mic In
Line Out
Line In**

PAGE 33

**HD Audio
Codec
ALC662**

PAGE 32

SATA1 7Pin

SATA2 7pin

SATA3 7Pin

E-SATA6 7pin

SATA-II
BW : 3G/s
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SPI ROM

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**ITE 8720
Super I/O
128pin PQFP**

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FLOPPY

PAGE 28

LPT

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COM X 2

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TPM

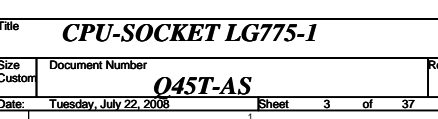
PAGE 24

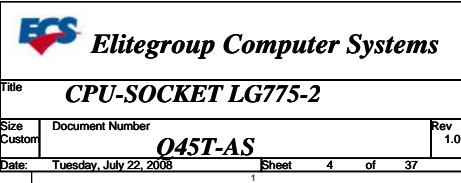
Design_Guide_Rev1_1_1

ICH10	Consumer	Corporate
GP8	DDR3_PWR-OK	Unmuxed.
GP58	Not available.	SEI_CS1
GP10	CPU_MISSING	Not available.
GP15	CK_PCISTOP	May be left unconnected.
GP25	CK_CPUSTOP	May be left unconnected.

PCB : 244 x 244 x 1.6 mm ; 4 layers

Elitegroup Computer Systems		
System Block Diagram		
Size Custom	Document Number	Rev 1.0
Q45T-AS		
Date: Tuesday, July 22, 2008	Sheet	2 of 37







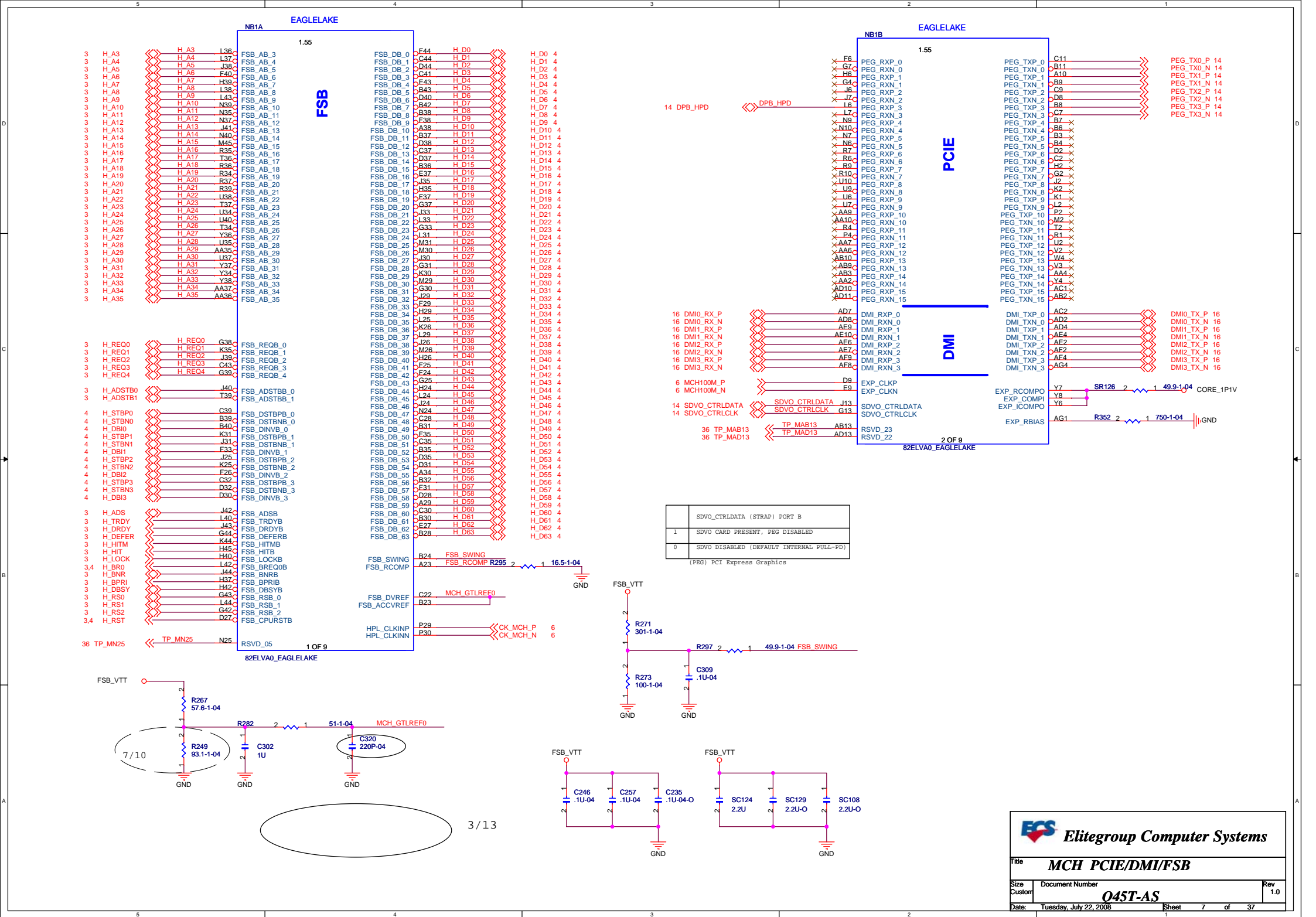
CPU1E



LGA-775-S

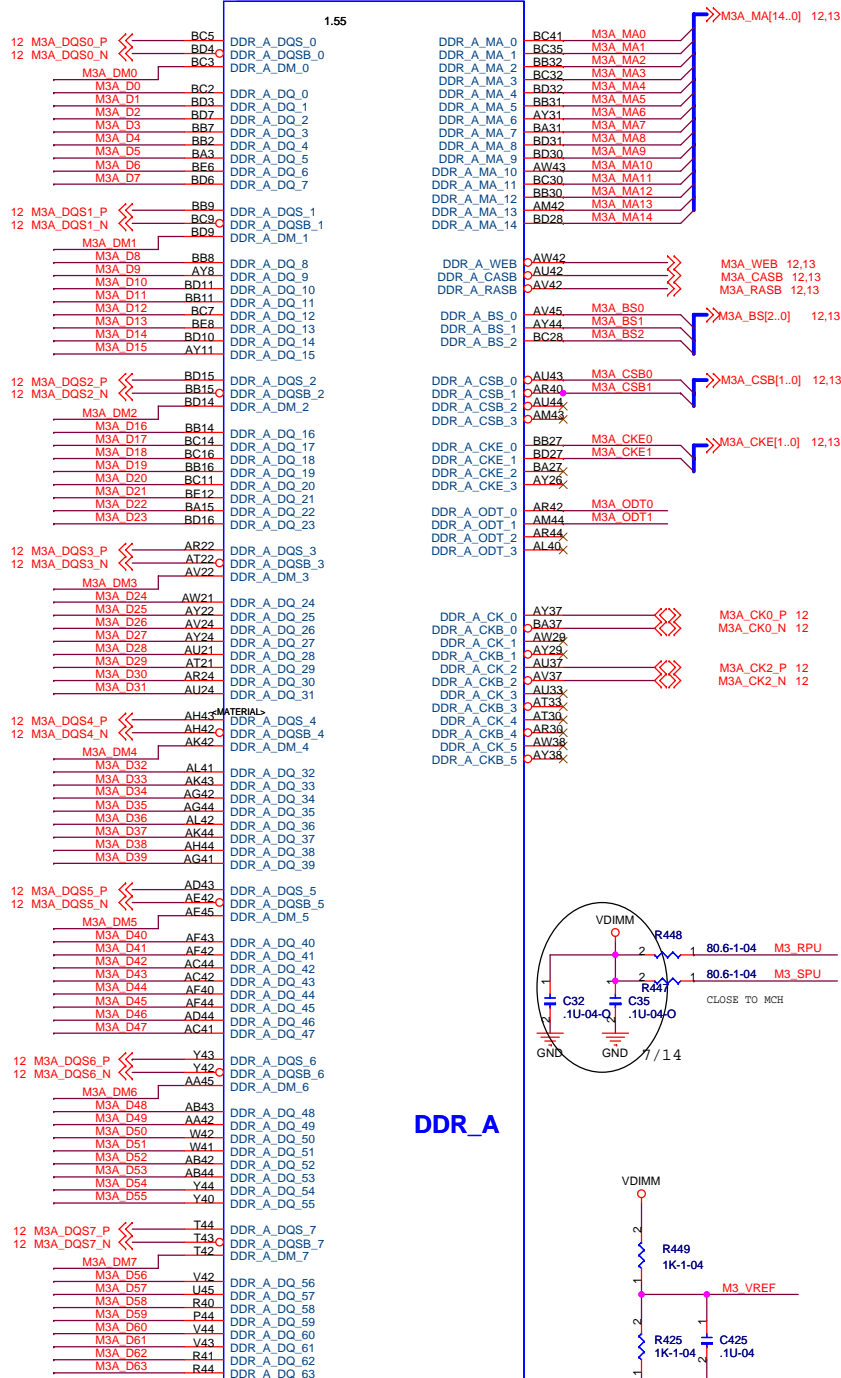


VCORE
VCORE



EAGLELAKE

NB1C

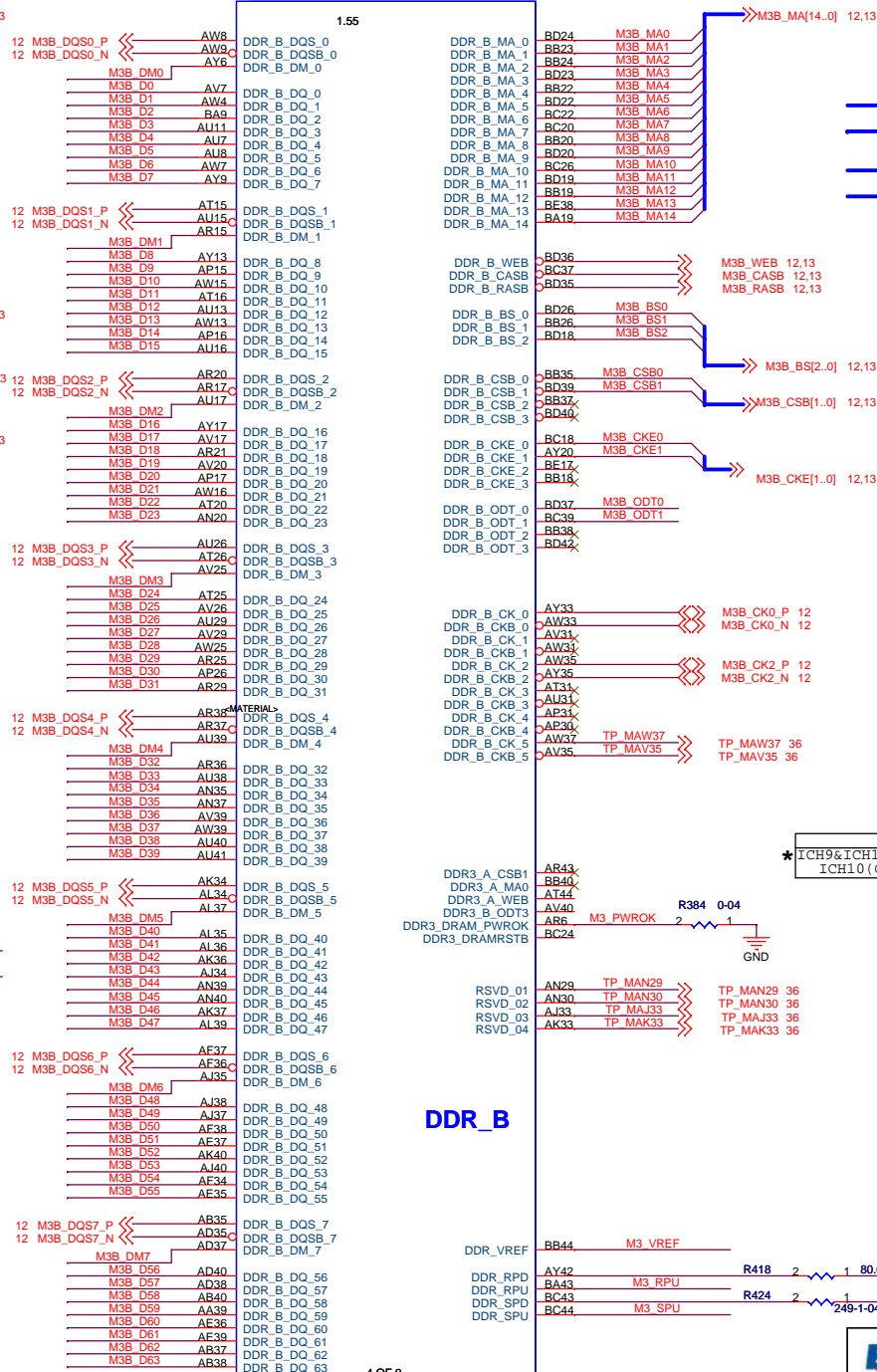


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82ELVA0_EAGLELAKE

EAGLELAKE

NB1D

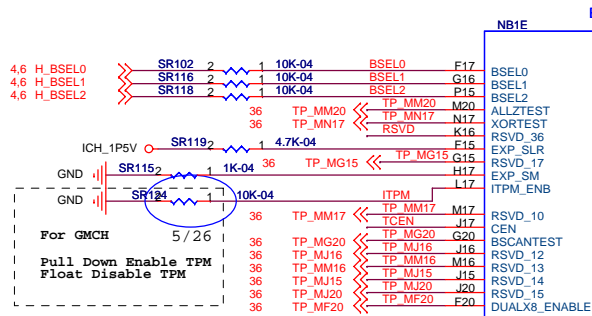


82ELVA0_EAGLELAKE

	Ra	Rb	Ca	Block A
* ICH9&ICH10 (consumer)	10K	NC	1uF	stuff
ICH10 (Corporate)	500 ohm	33 ohm	NC	NC

Elitegroup Computer Systems

Title	MCH /DDRIII/DDRII2		
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17 CLINK_N_DATA
17 CLINK_N_CLK
17 CL_RST
17 MCH_CLPWROK_R

36 TP_MAR7
36 TP_MAN10
36 TP_MAN11
36 TP_MAN9

36 TP_MR31
36 TP_MR32
36 TP_MU30
36 TP_MU31

36 TP_MR15
36 TP_MR14
36 TP_MT15
36 TP_MT14

AN17

36 TP_MAB15

NC_13
NC_12
NC_11
NC_10
NC_09

36 TP_MA45
36 TP_MB2
36 TP_MB1
36 TP_MB45

EAGLELAKE

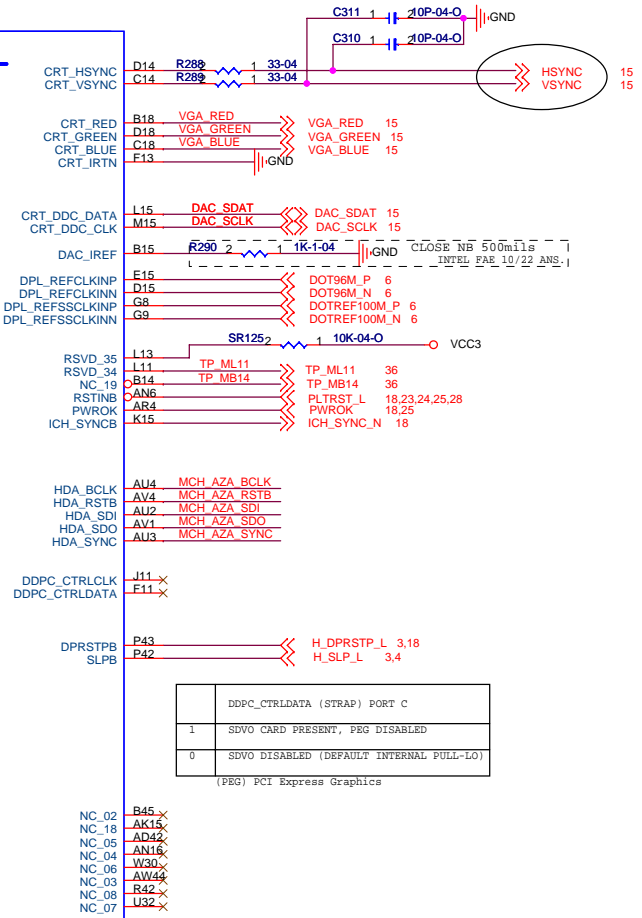
NB1E

VGA

MISC

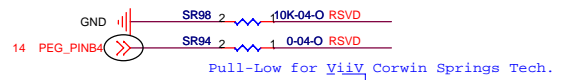
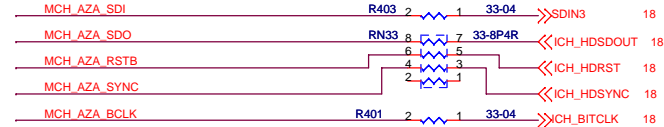
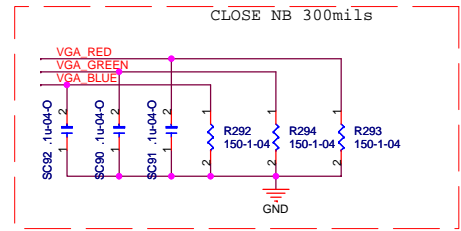
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82ELVA0_EAGLELAKE



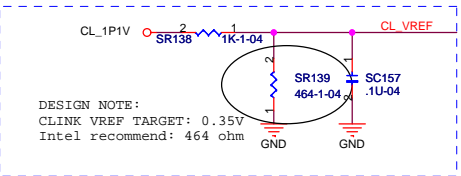
DDPC_CTRLDATA (STRAP) PORT C	
1	SDVO CARD PRESENT, PEG DISABLED
0	SDVO DISABLED (DEFAULT INTERNAL PULL-LO)

(PEG) PCI Express Graphics

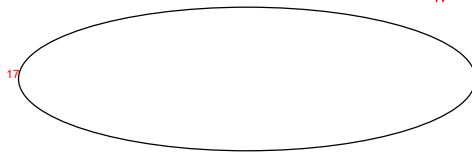
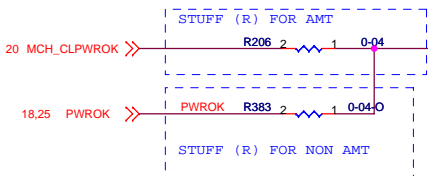


Pull-Low for Yiv Corwin Springs Tech.

For vPro feature
"Transport Layer Security"
High: Enable
Low: Disable

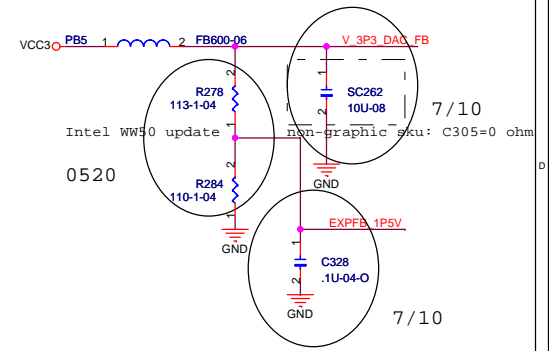
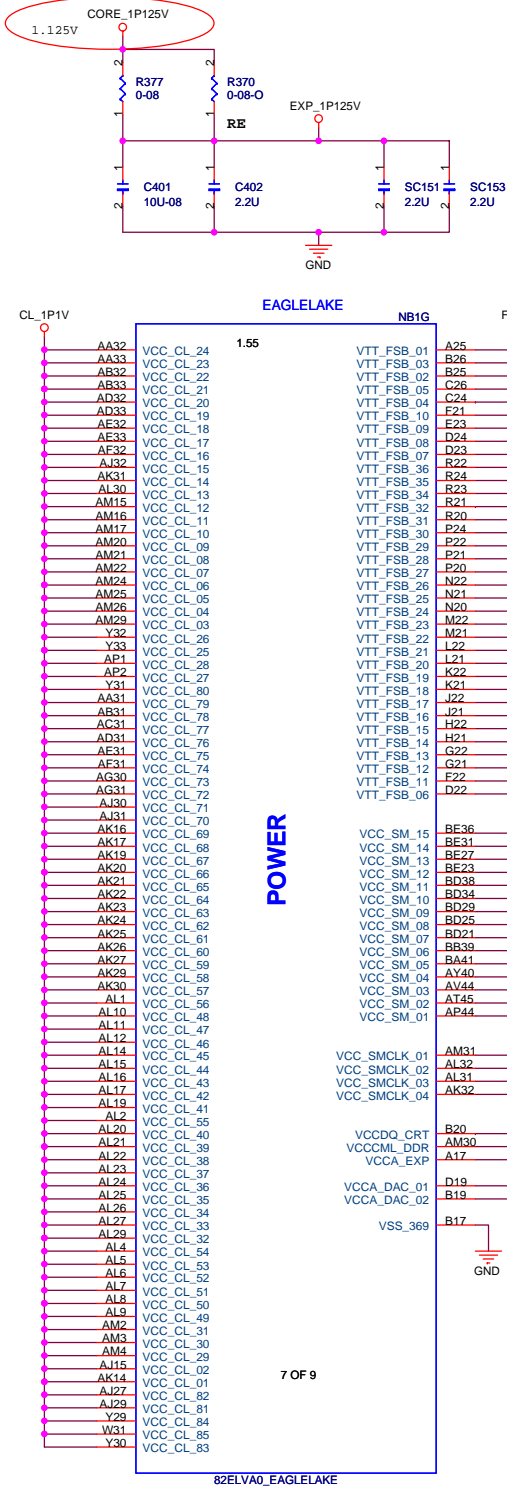
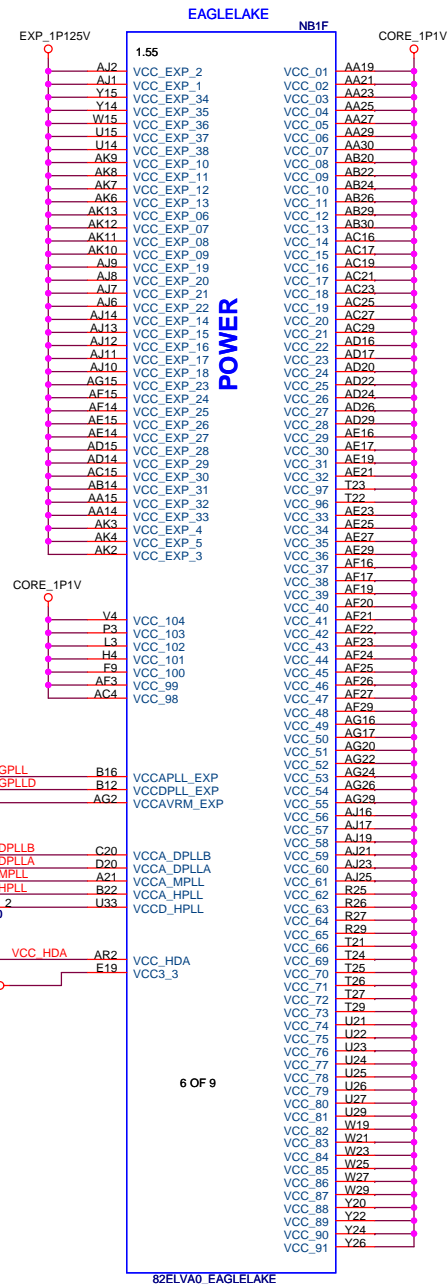
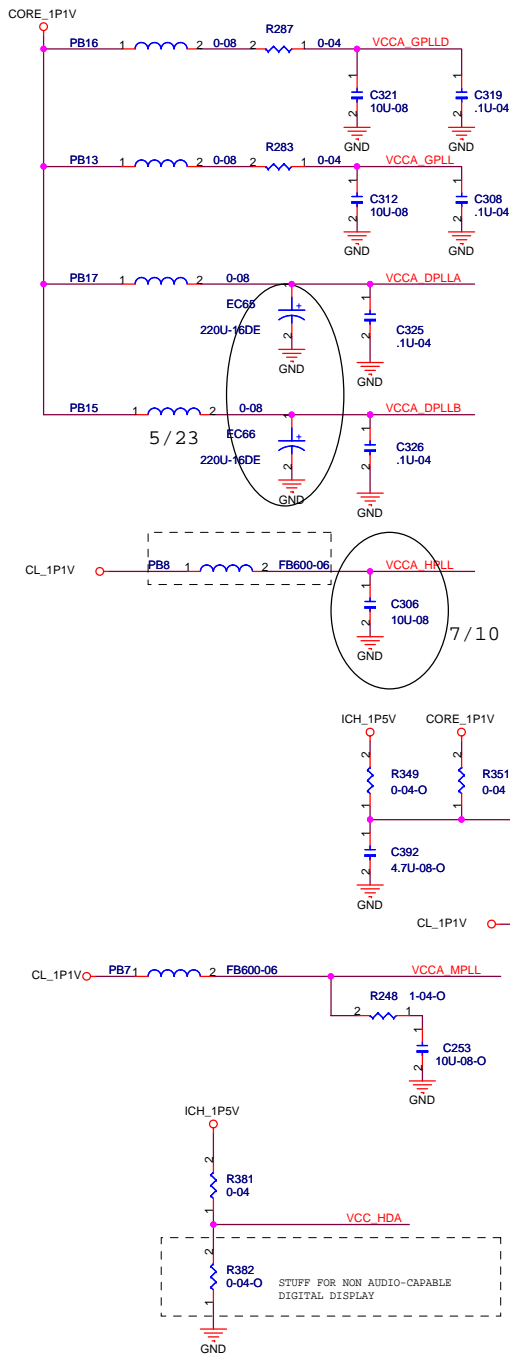


DESIGN NOTE:
CLINK VREF TARGET: 0.35V
Intel recommend: 464 ohm



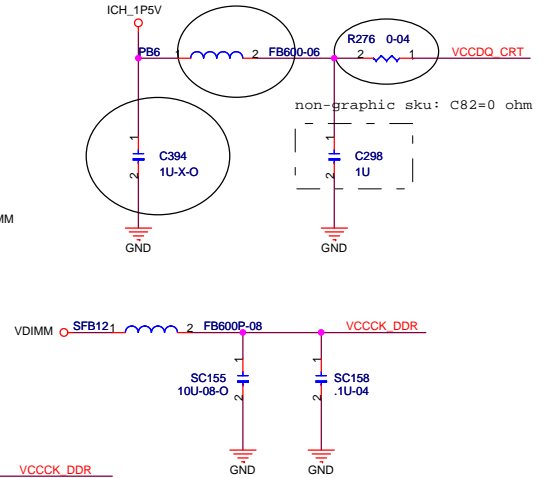
Intel Integrated TPM Straps

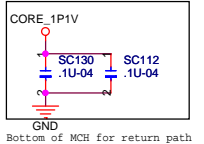
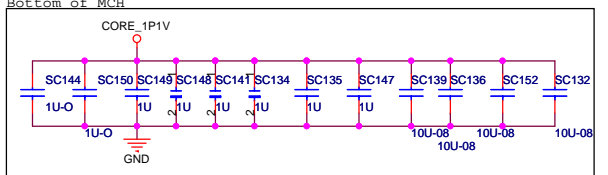
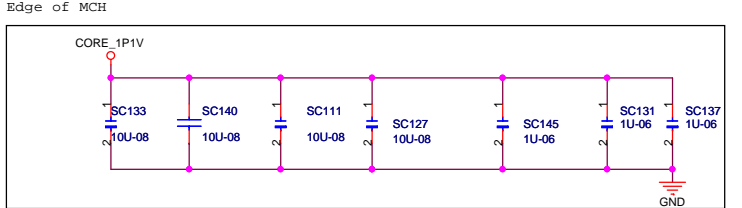
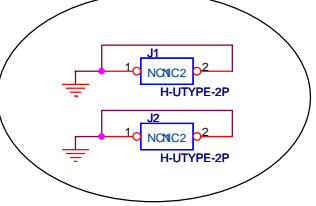
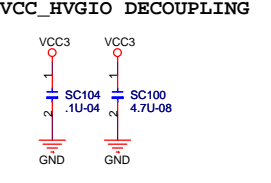
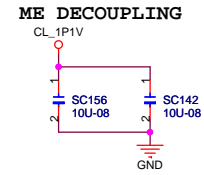
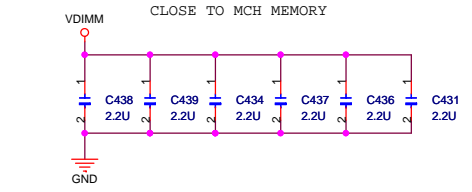
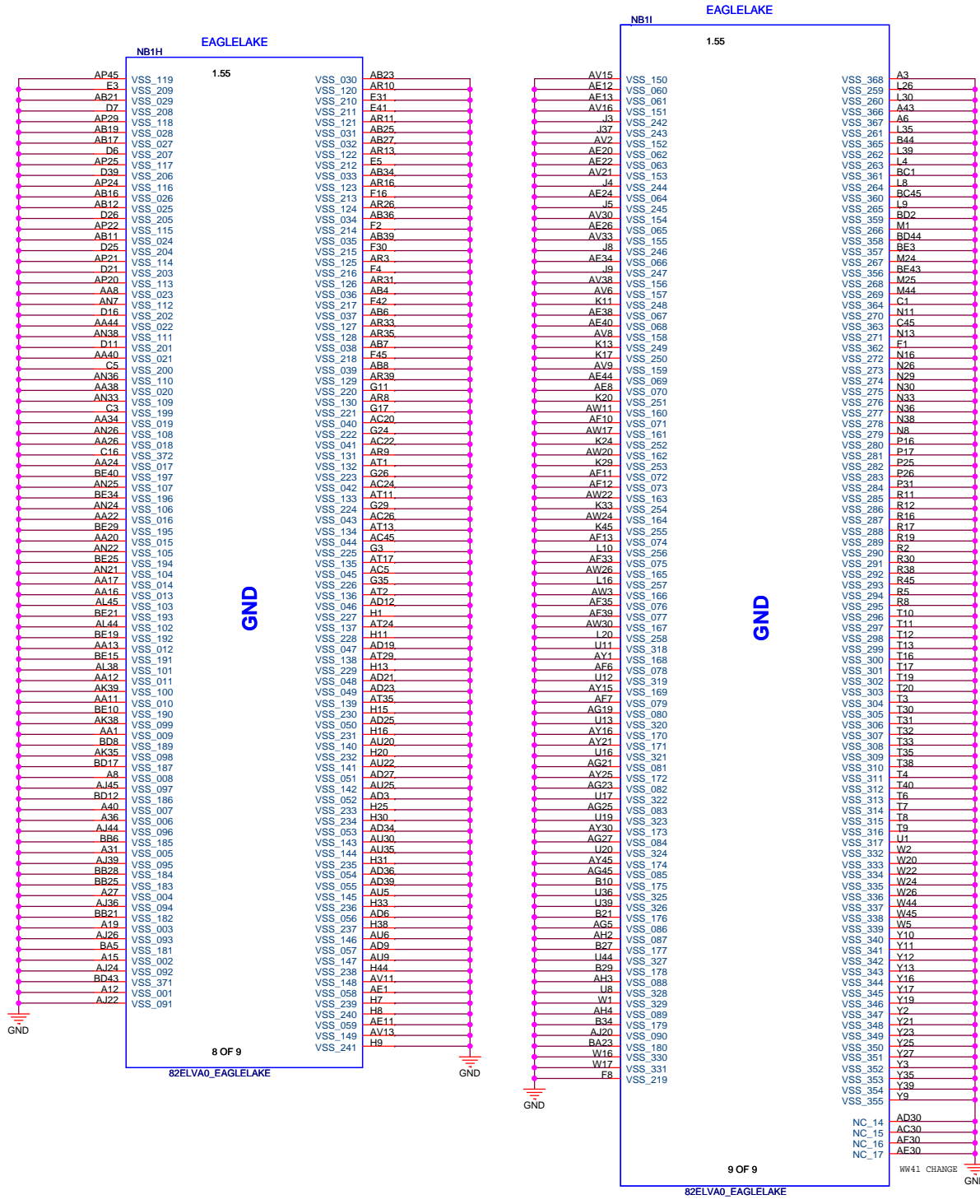
	ICH 10,C12 pin	ICH 10,C26 pin	MCH,L17 pin
Disable	Pulldown	Float	Float
Enable	Pullhi	Pullhi	Pulldown

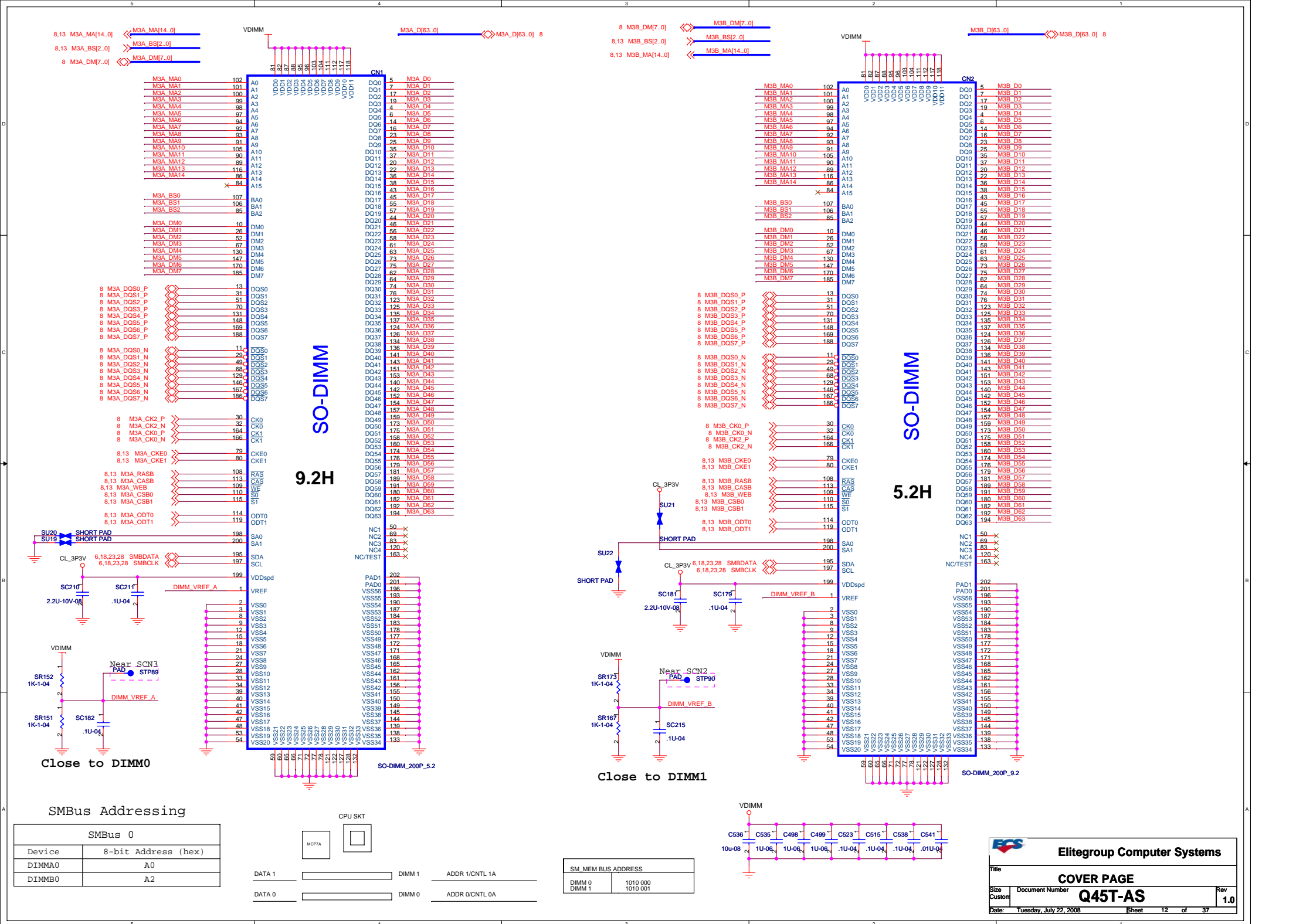


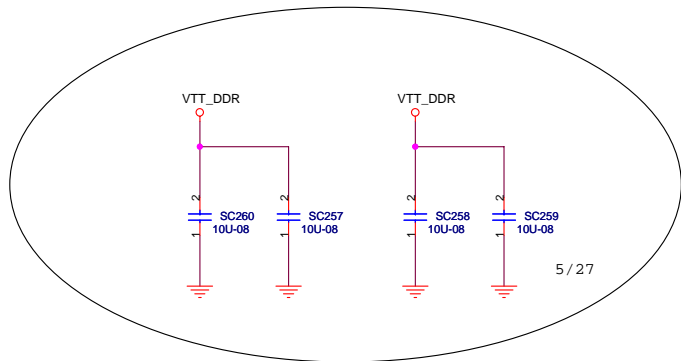
EAGLELAKE SQU TYPE			
Q	SQU	RE	==NC
G	SQU	RE	==NC
P	SQU	RE	==0 ohm

* Intel WW43 UPDATA

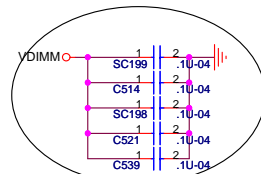
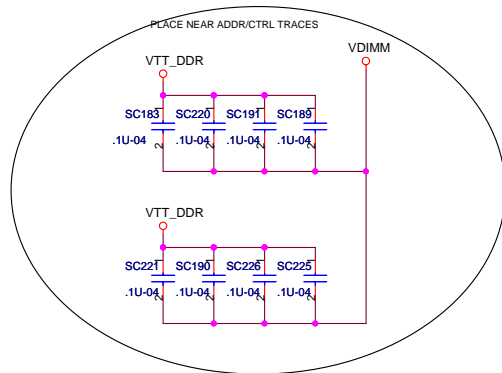




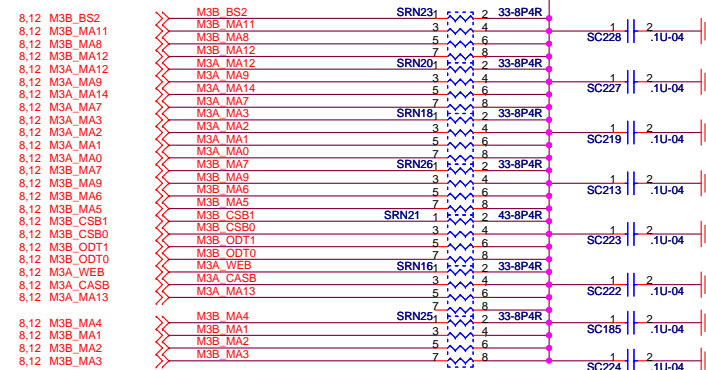
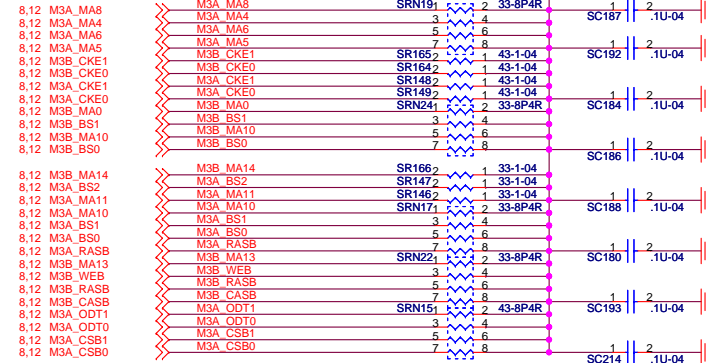
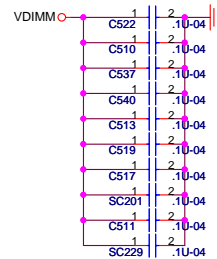
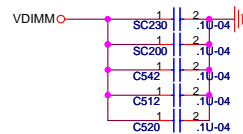




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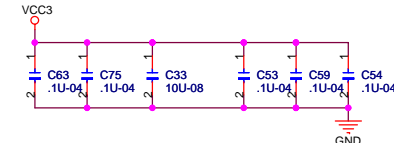
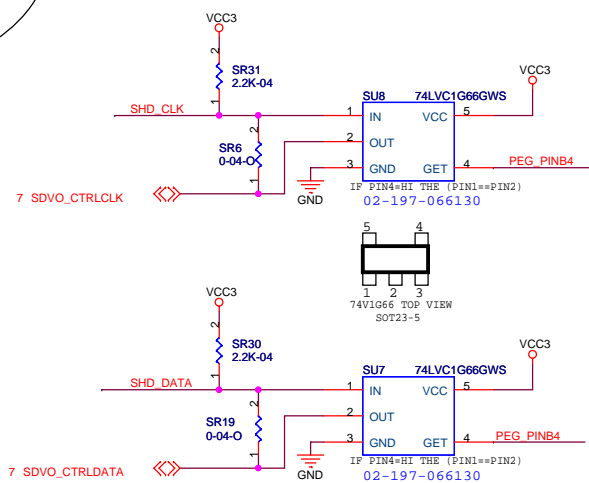
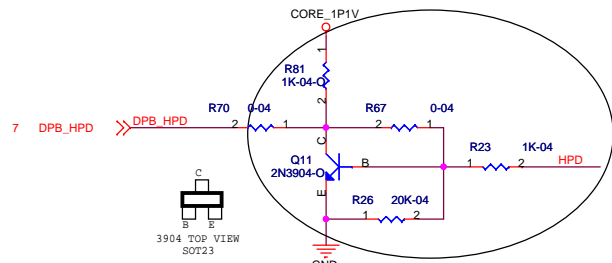
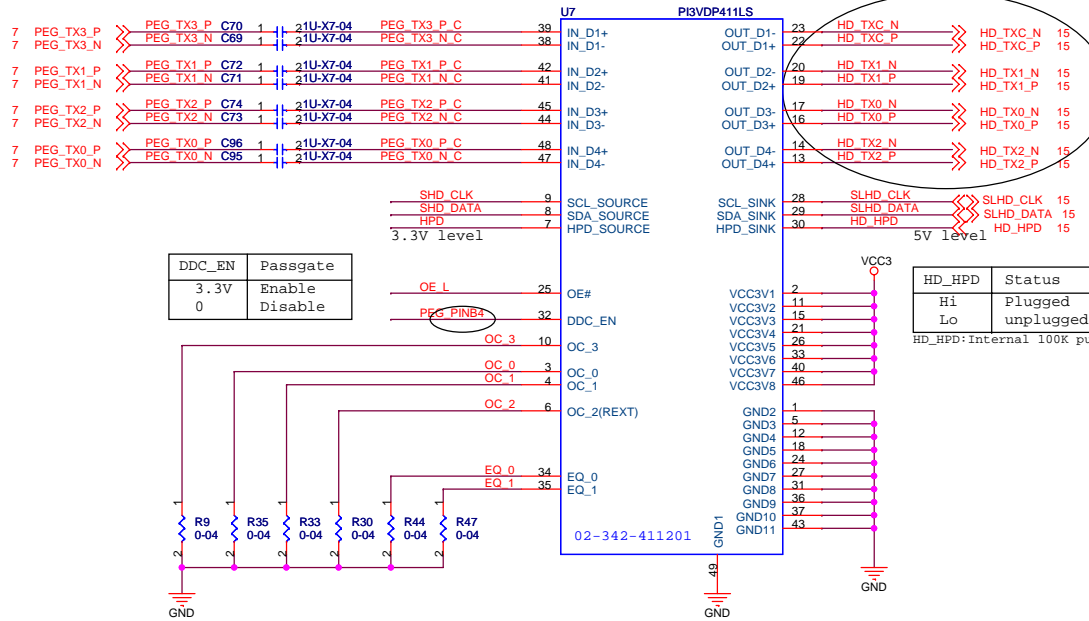


EMI decoupling cap. place evenly around CPU_VDDIO_SUS



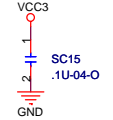
Level Shifter

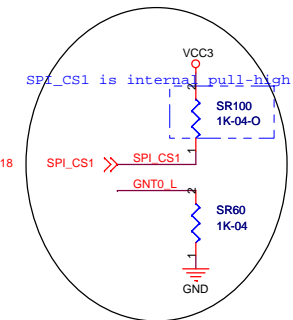
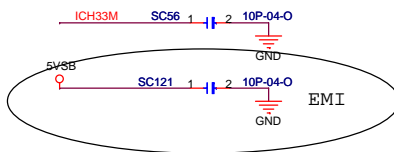
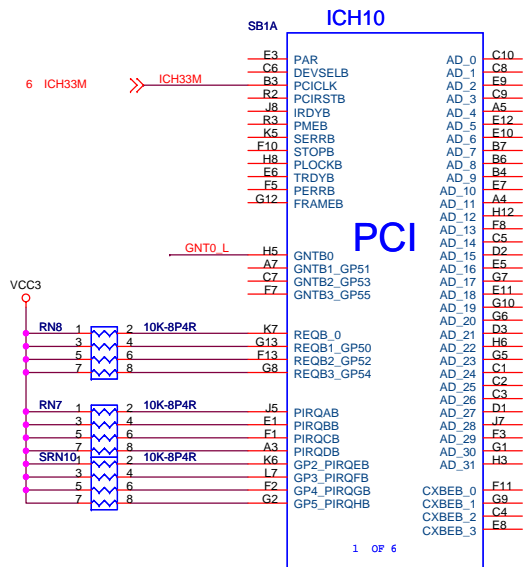
0520



OC_3	OC_2	OC_1	OC_0	Vswing(mV)	Pre/De-emphasis
0	0	0	0	500	0
0	0	0	1	600	0
0	0	1	0	750	0
.	.	.	.		

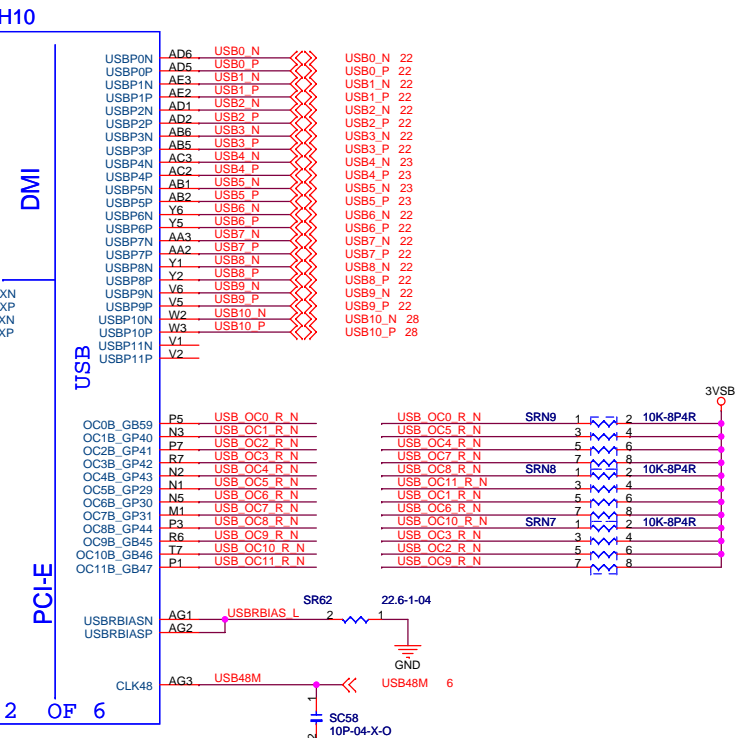
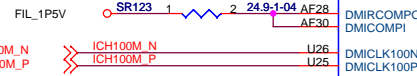
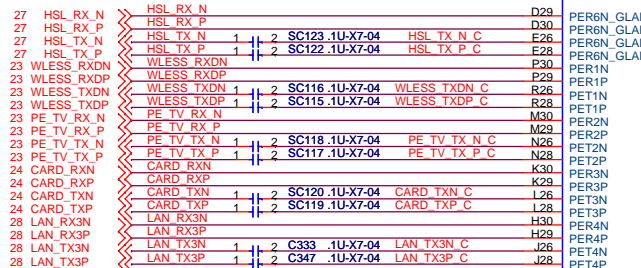
EQ_0	EQ_1	Equalization(dB)
0	0	3
0	1	7.2
1	0	10
1	1	20



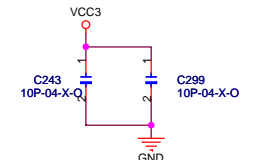
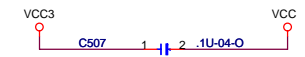


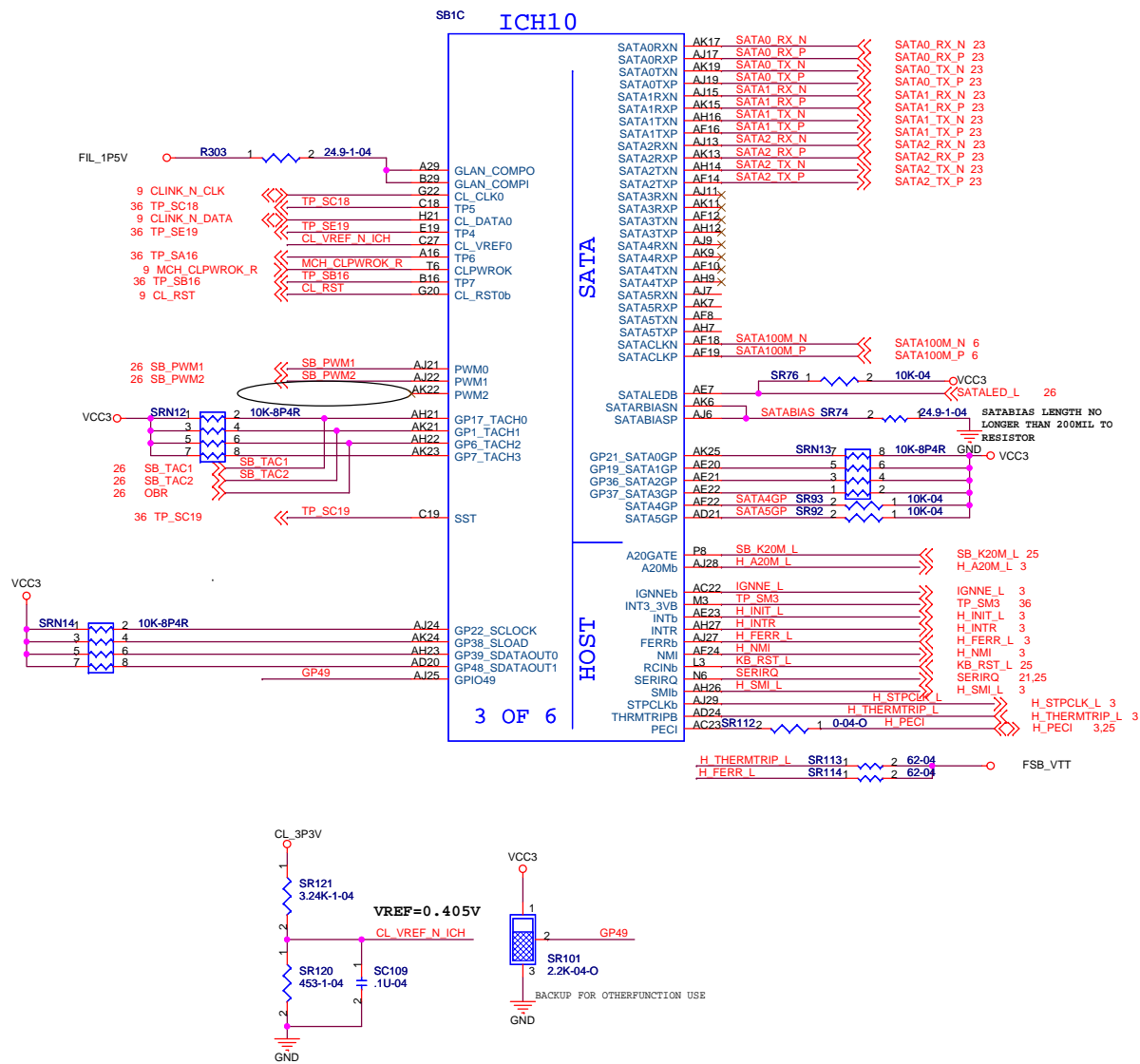
BOOT BIOS DESTINATION SELECTION		
GNT0_L	SPI_CS1	BOOT BIOS DESTINATION
0	1	SPI
1	0	PCI
1	1	LPC
0	0	Reserved

*Default



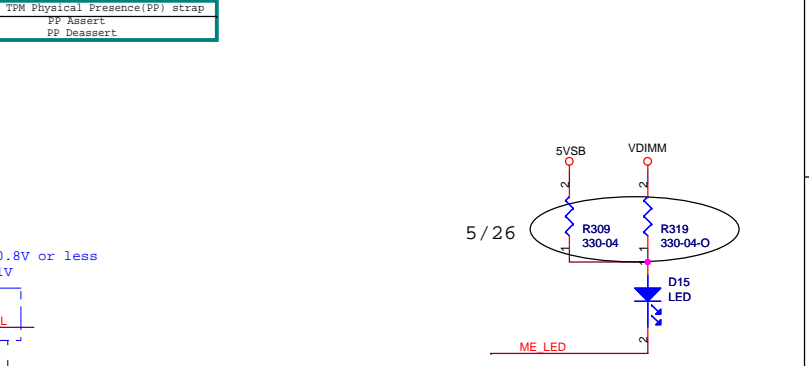
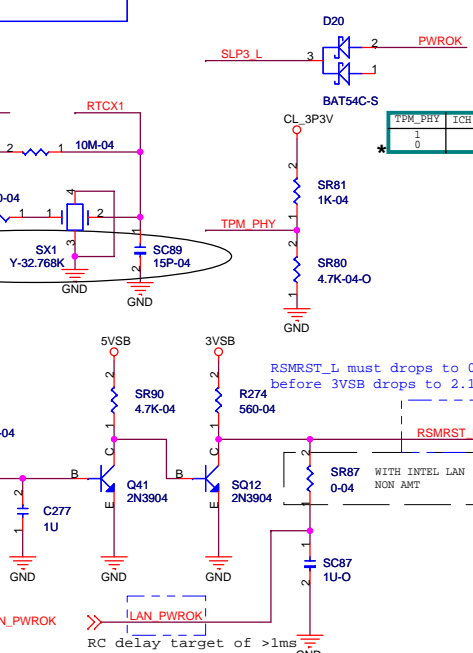
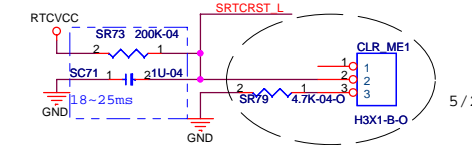
for usb current return path

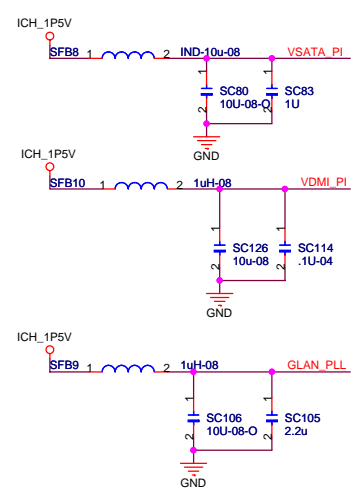
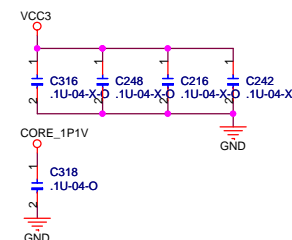
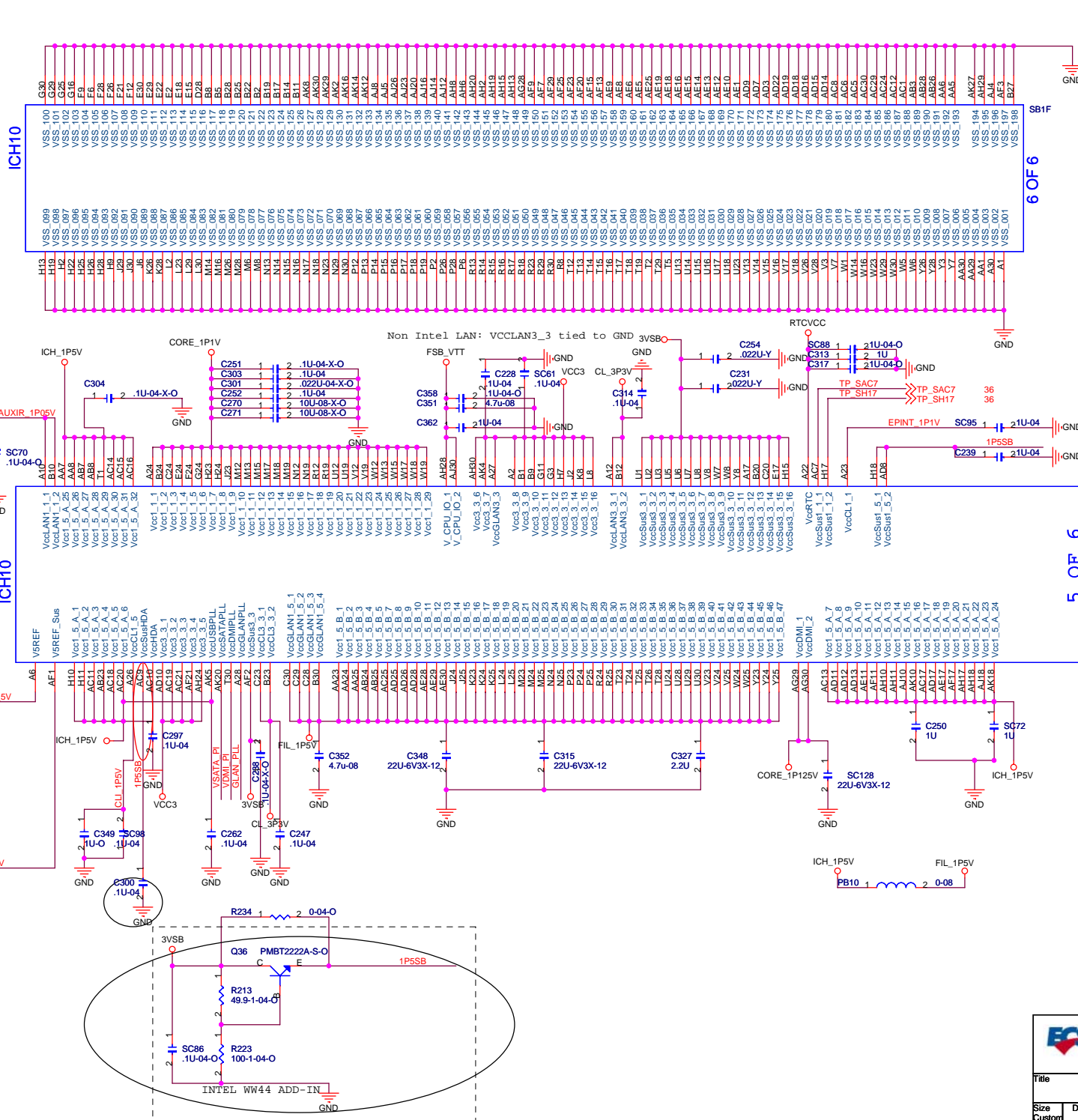
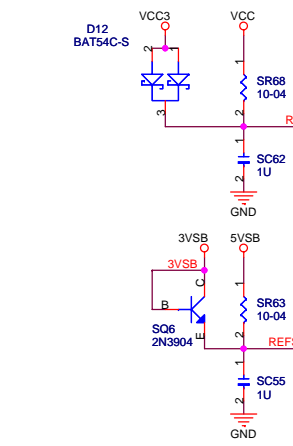
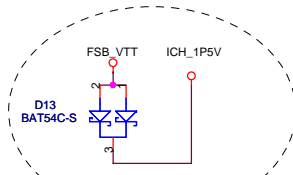


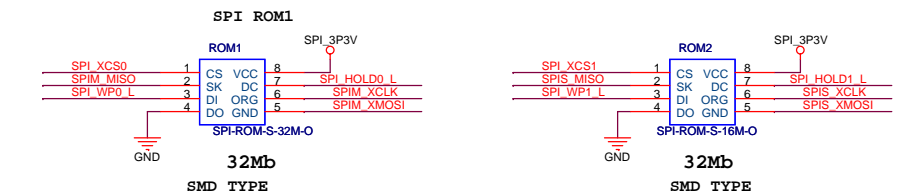
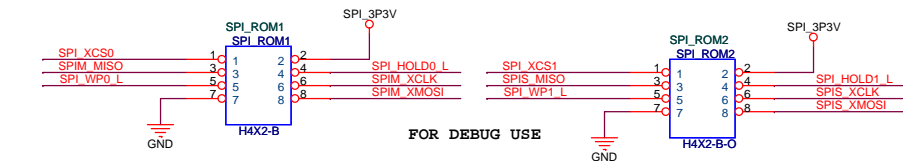
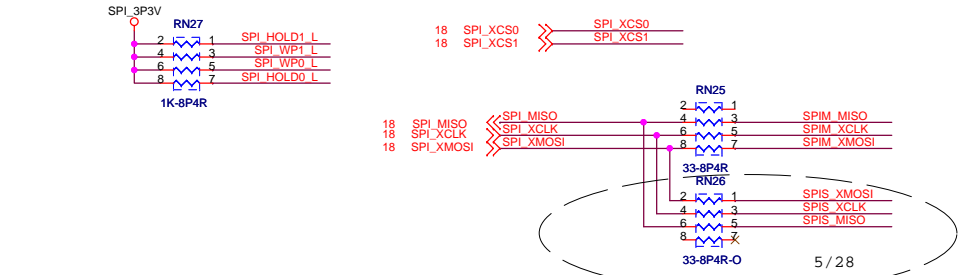
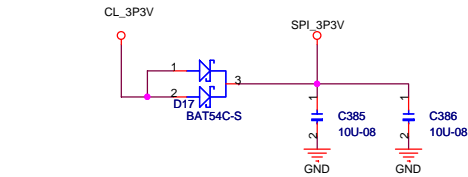
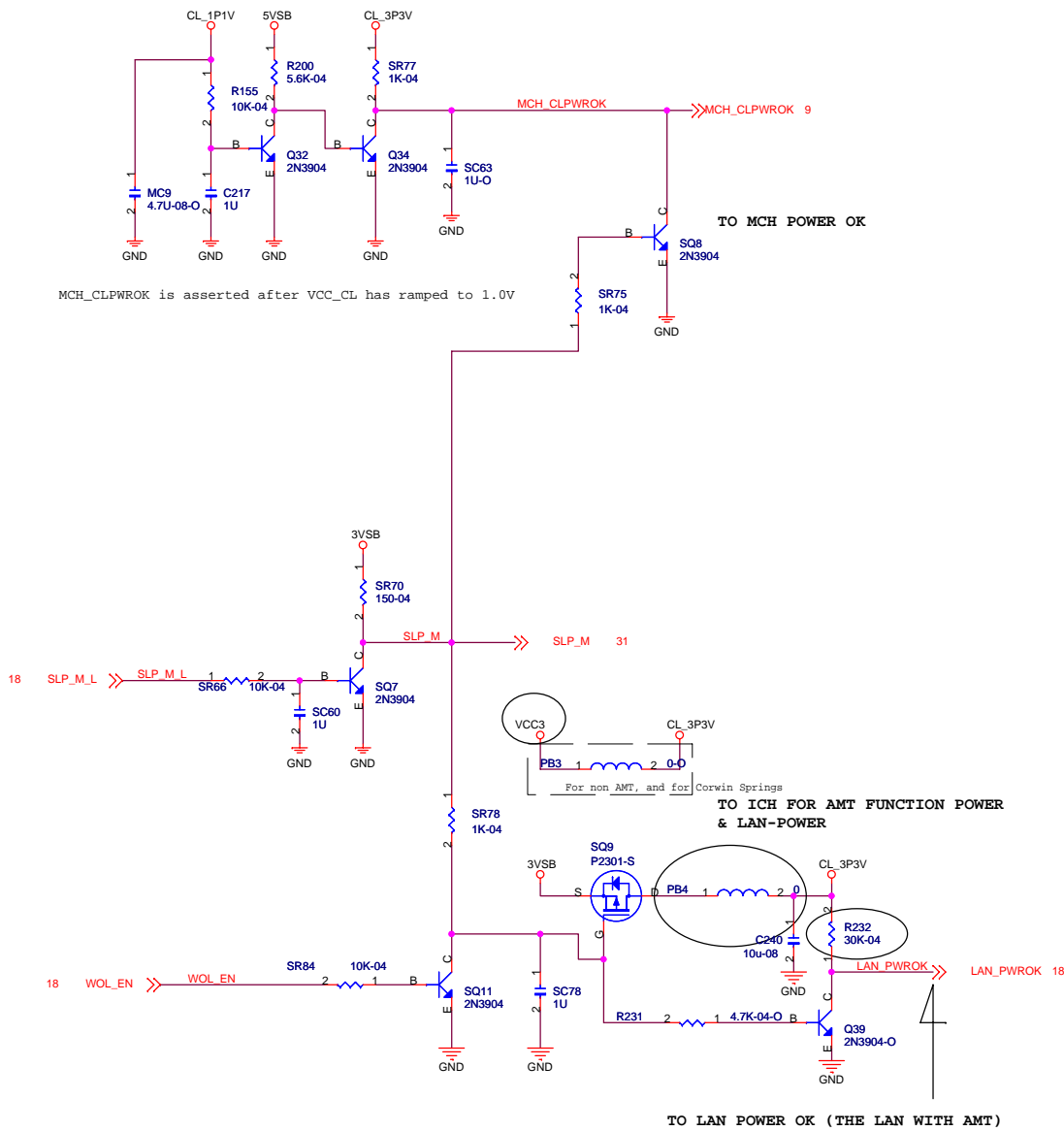


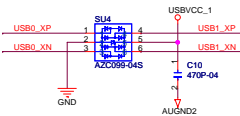
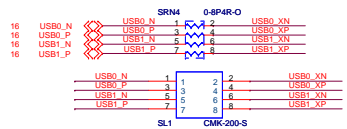
If without use pins L3,P8,N6
Please (4.7K-10K) pull-up to VCC.
Don't let it floating

	ICH 10,C12 pin	ICH 10,C26 pin	MCH,L17 pin
Disable	Pulldown	Float	Float
Enable	Pullhi	Pullhi	Pulldown

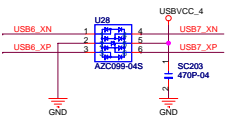
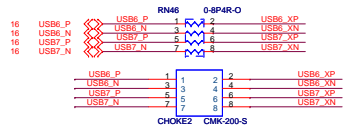
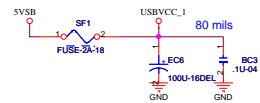
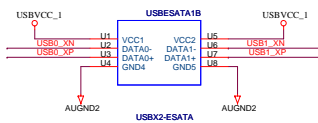




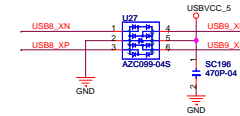
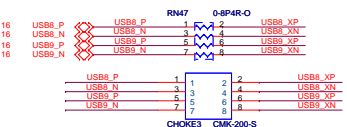
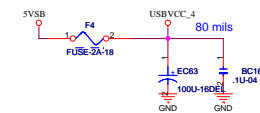
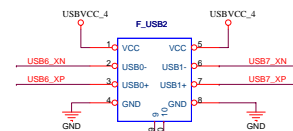




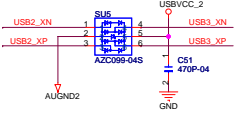
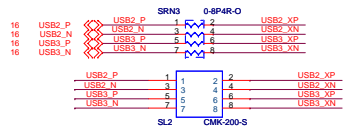
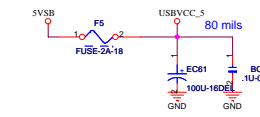
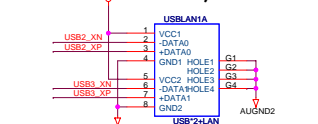
USB 0,1



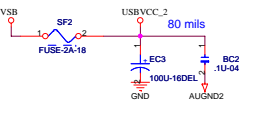
USB 6,7



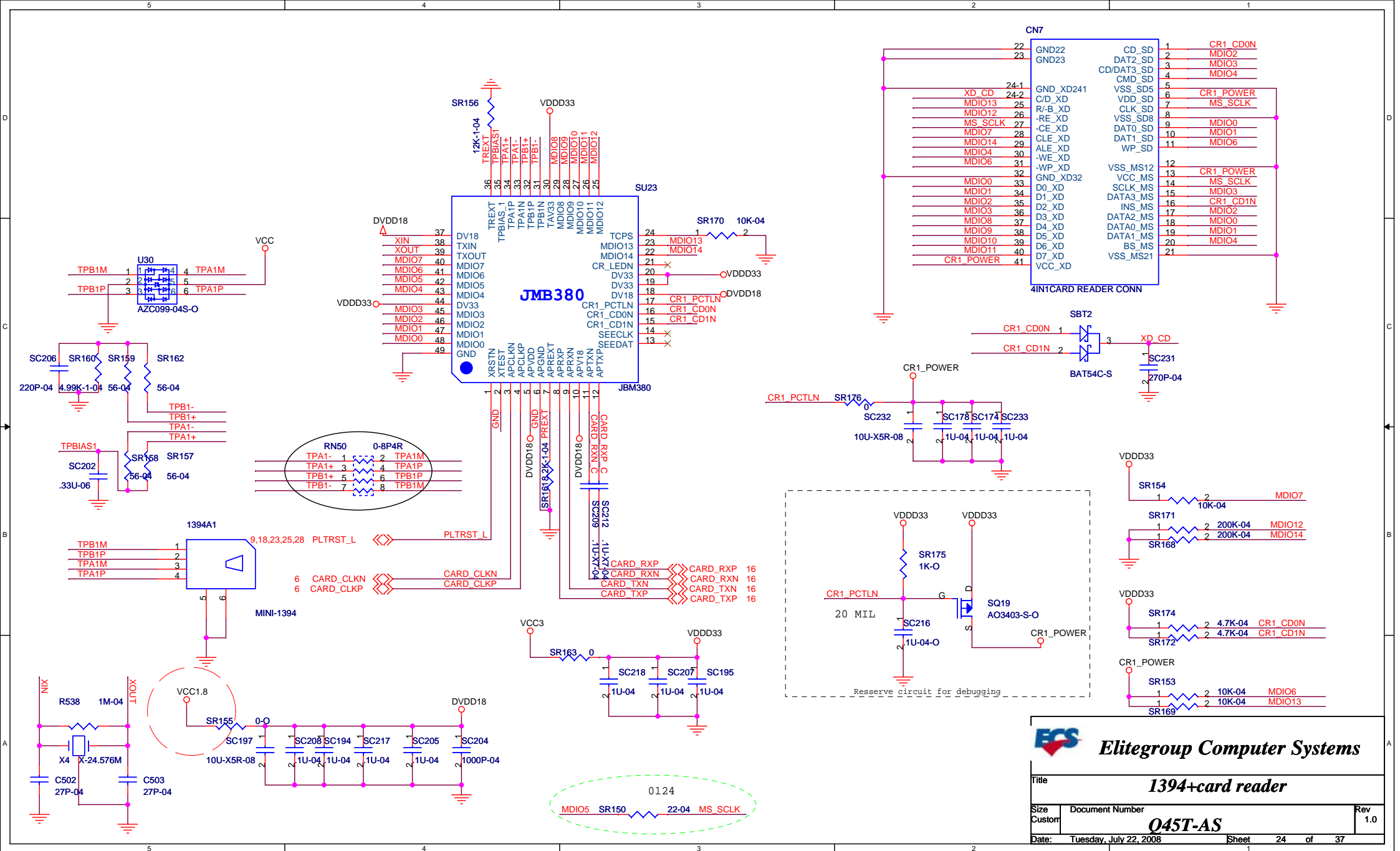
USB 2,3

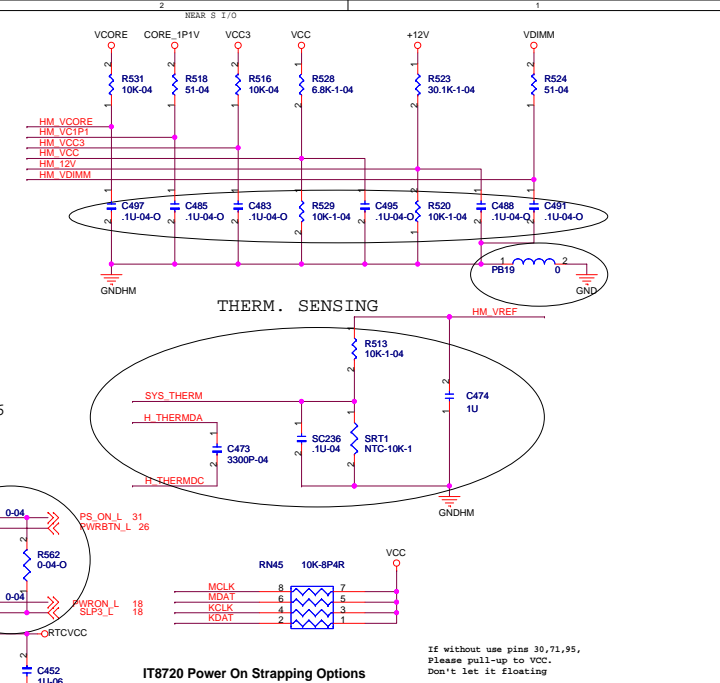


USB 2,3

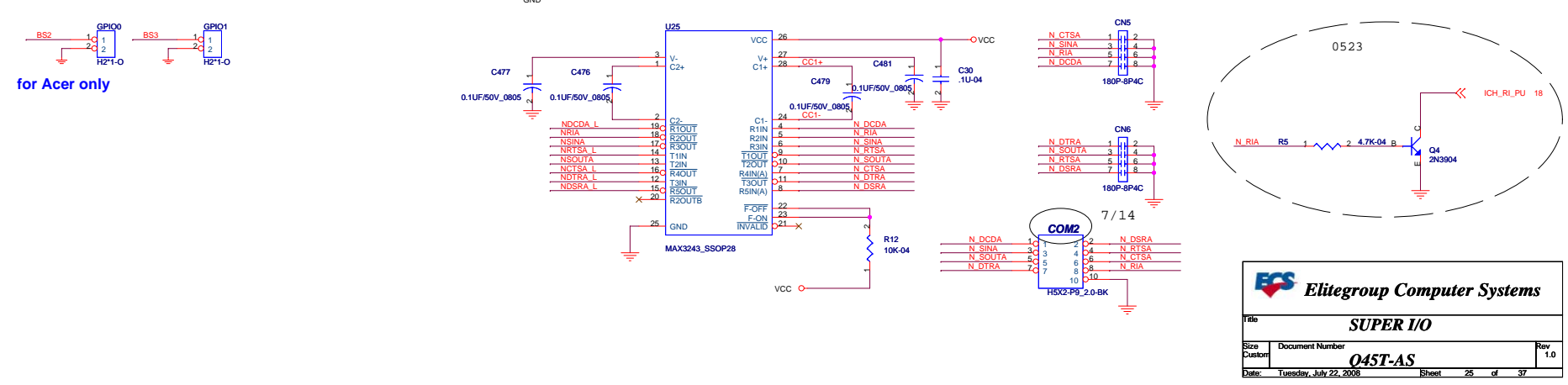


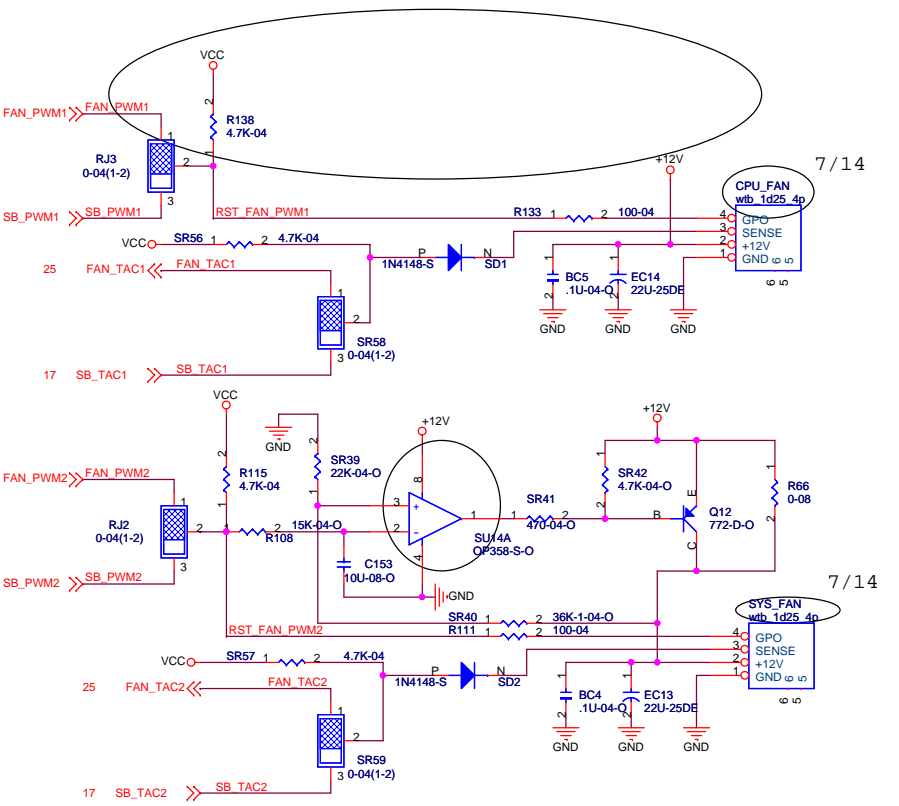
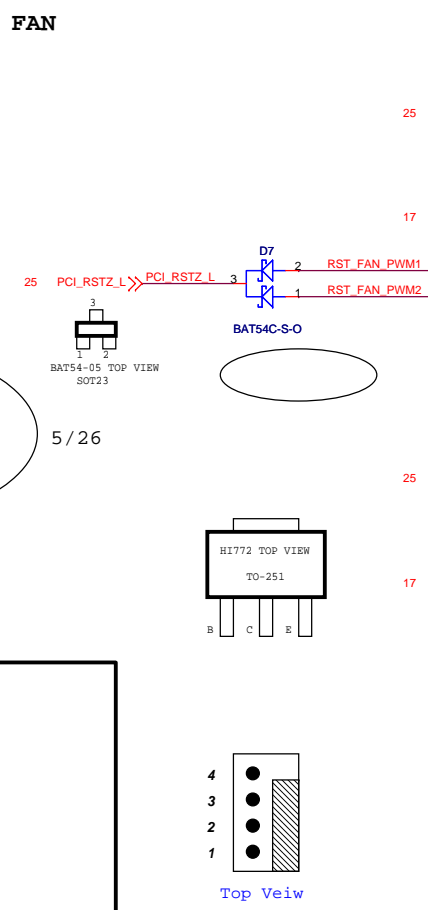
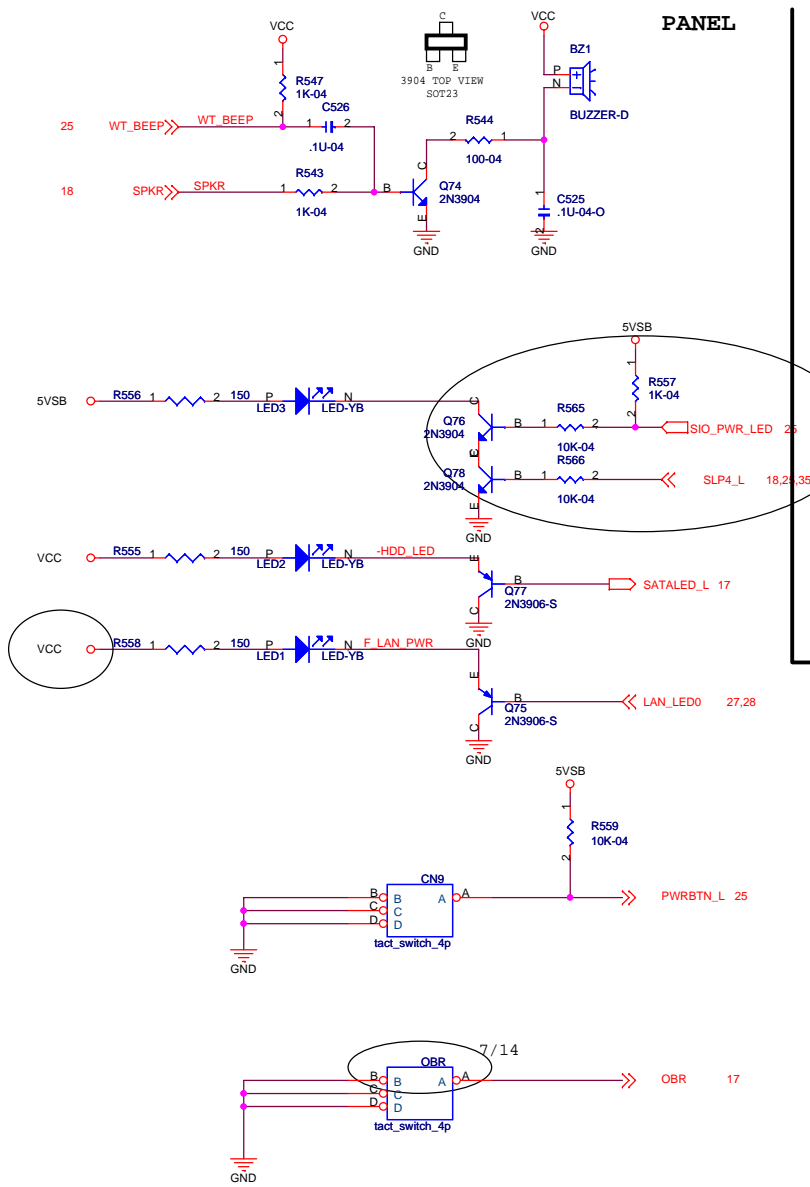




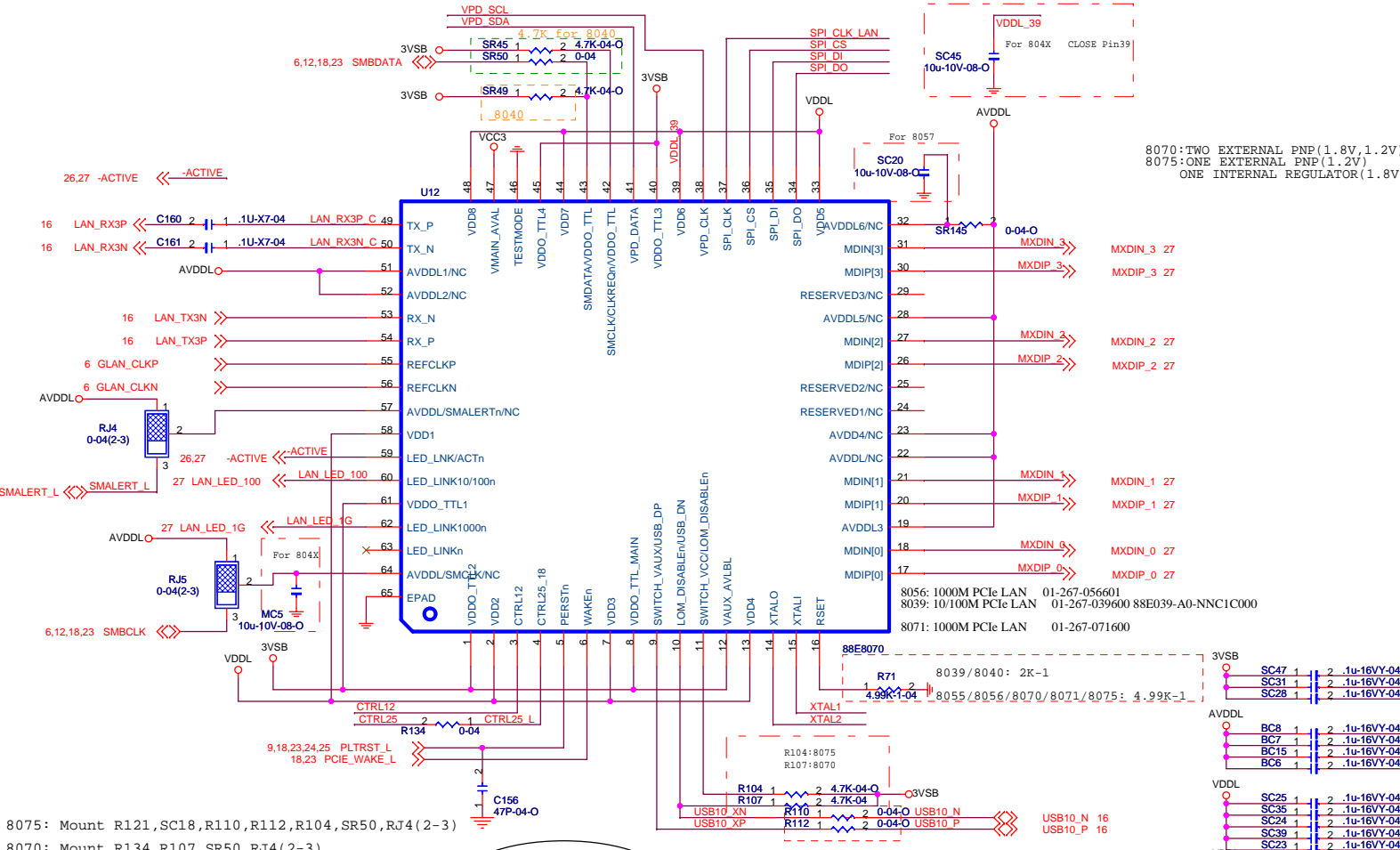


	Symbol	value	Description
JP1	Flashseg1_EN	1	Disabled.
Pin 38		0	Flash I/F Address Segment 1 is enabled
JP2	VIDO_EN	1	Disable VID output pins
Pin 122		0	Enable VID output pins
JP4	K8PWR_EN	1	K8 power sequence function is disabled
Pin 126		0	K8 power sequence function is enabled
JP3	CHIP_SEL	11	Default Index 15h/16h/17h is 40h 50%
JP5 Pin 124 Pin 46		10	Default Index 15h/16h/17h is 7Fh 0%
JP5	FAN_CTL_SEL	01	Default Index 15h/16h/17h is 00h 100%
Pin 46		00	Default Index 15h/16h/17h is 20h 75%
JP5	WDT_EN	1	Disable WDT to rest PWROK
Pin46		0	Enable WDT to rest PWROK
JP6	SVID_EN	1	Disable SVID Function
Pin29		0	Enable SVID Function

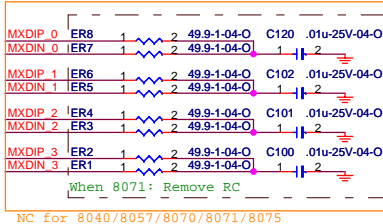
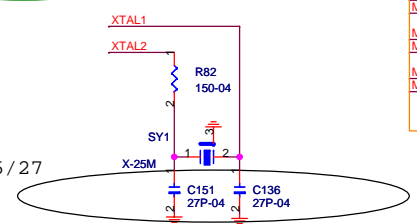
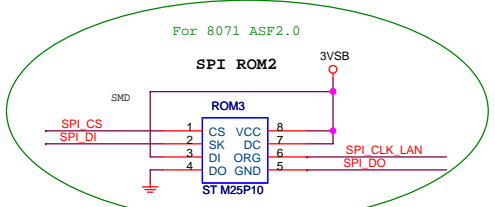




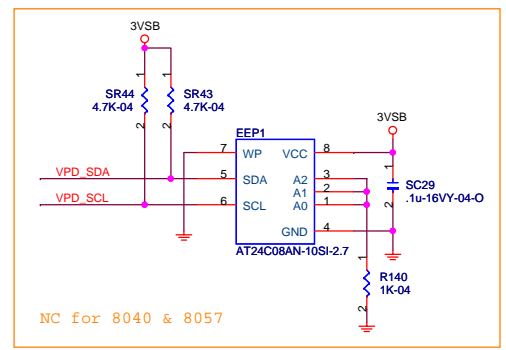
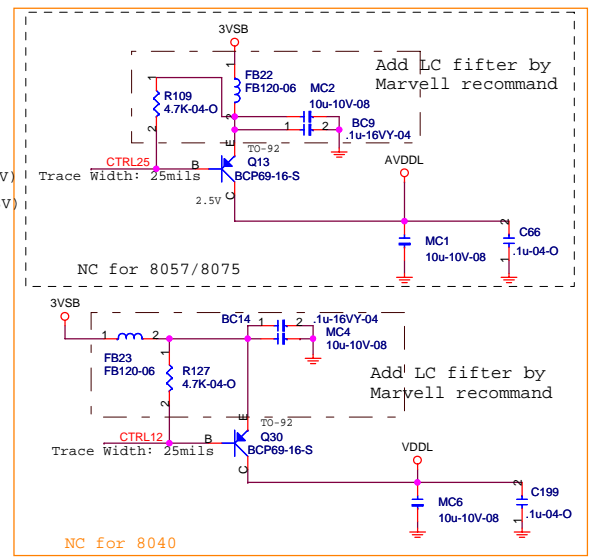
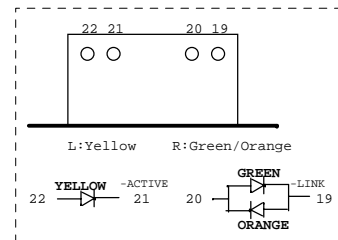
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8075: Mount R121, SC18, R110, R112, R104, SR50, RJ4 (2-3)
 8070: Mount R134, R107, SR50, RJ4 (2-3)



LAN LED	
Active	Yellow
LINK1000	Orange
LINK100	Green
LINK10	OFF



For 10/100M Conn: 10-084-022232,
 10-084-022690, 10-084-022498
 For 1000M Conn: 10-084-022514 (ESD)
 10-084-022503

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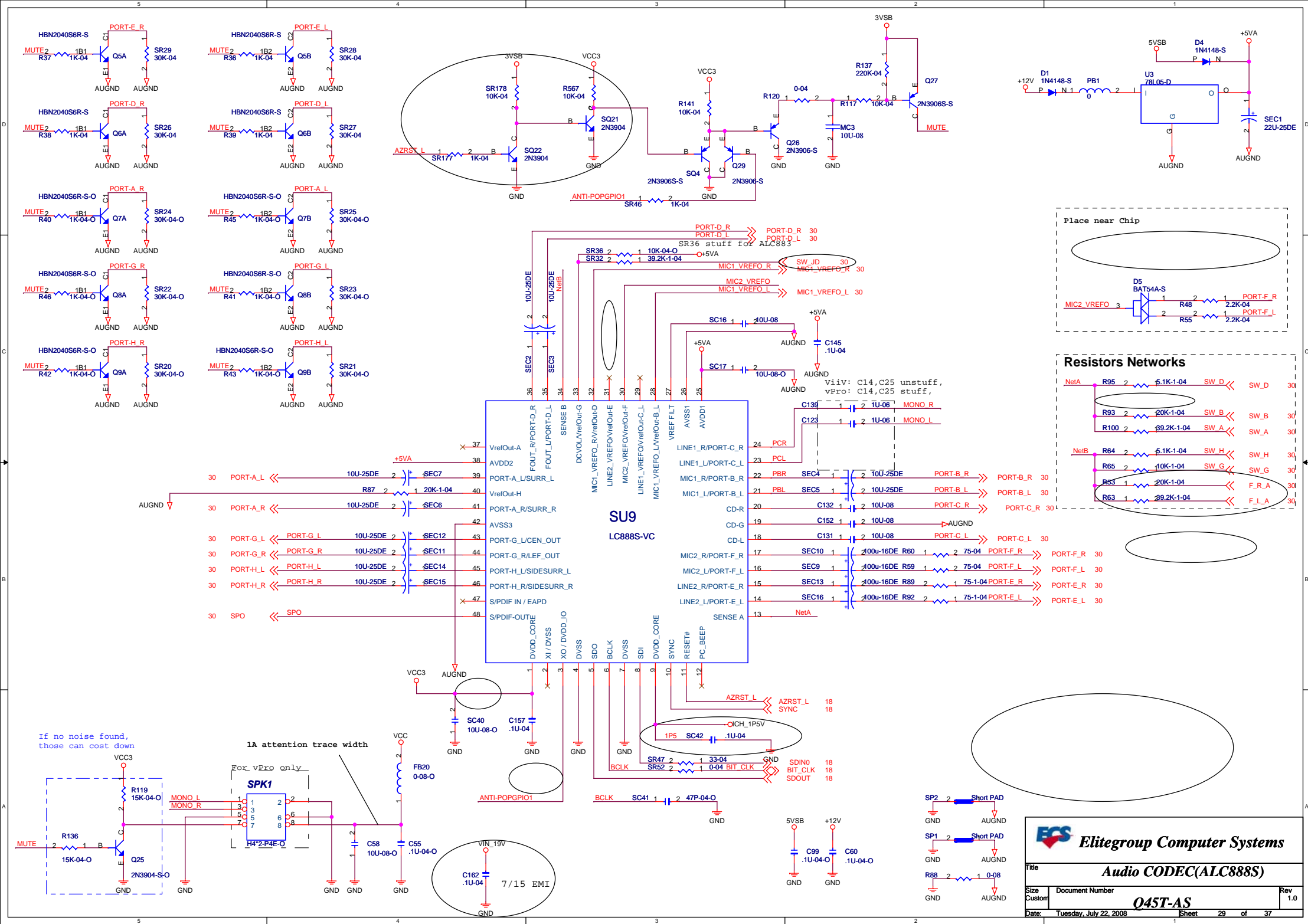
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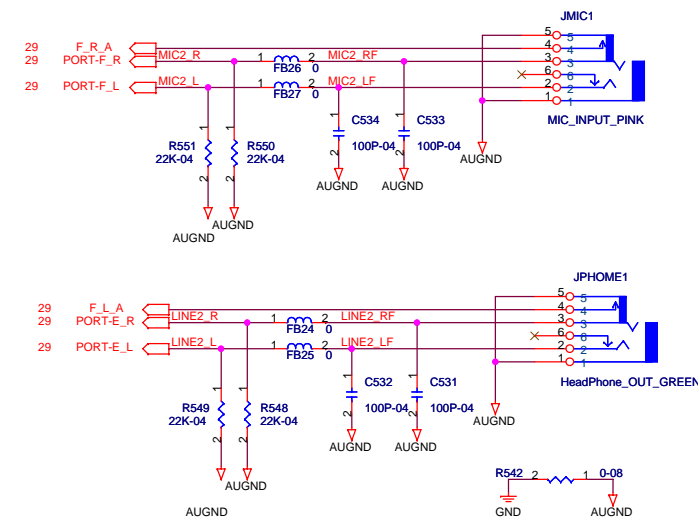
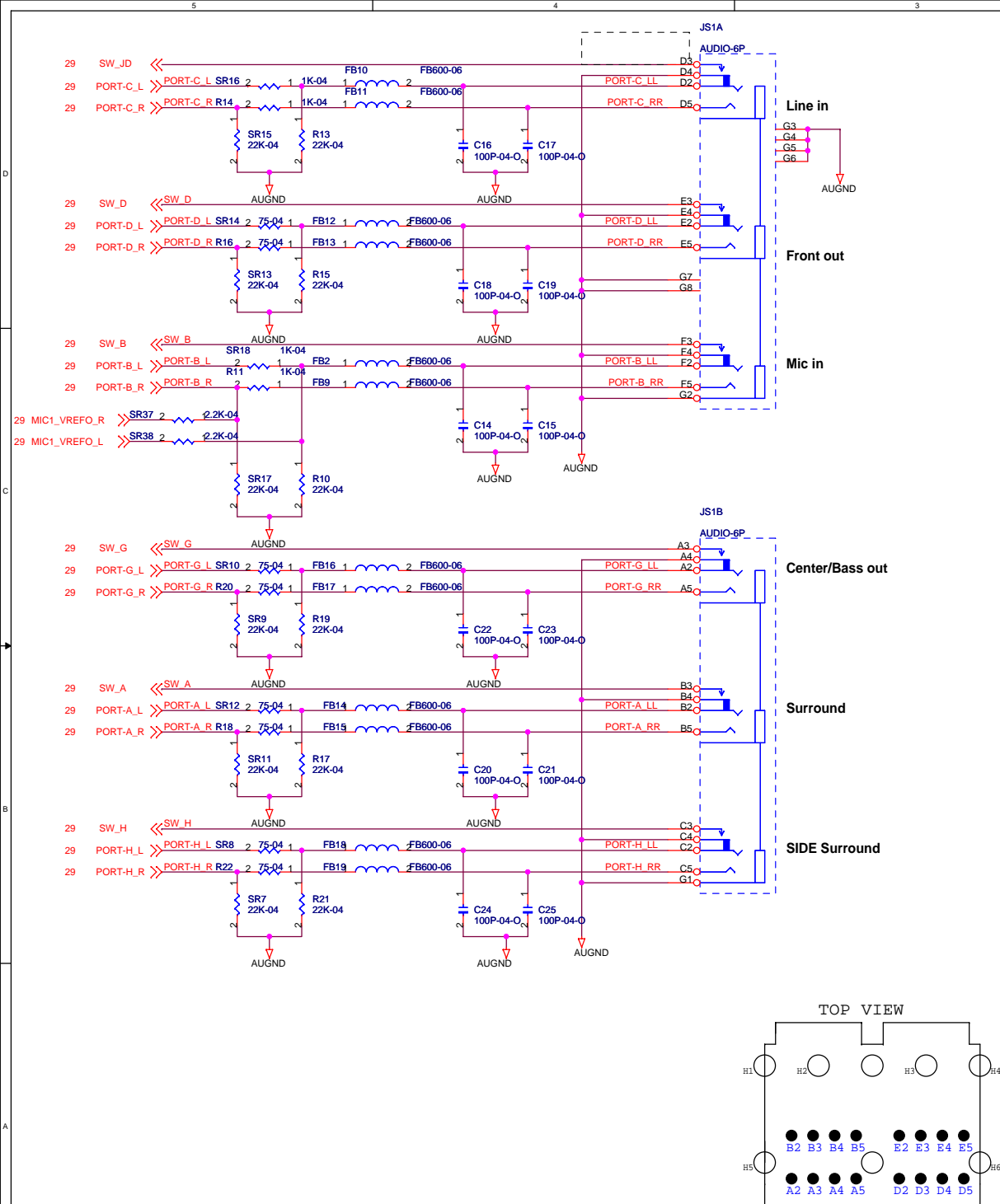
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Customer: **Q45T-AS**

Date: Tuesday, July 22, 2008

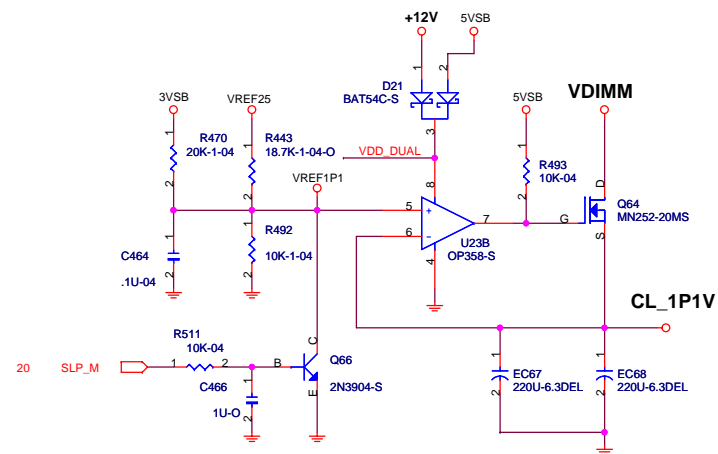
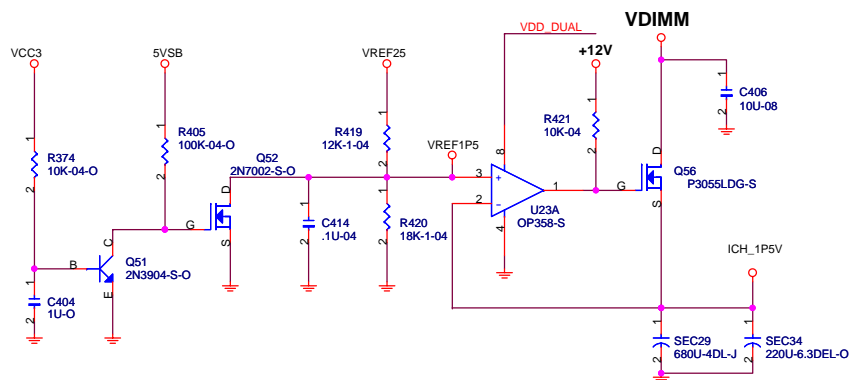
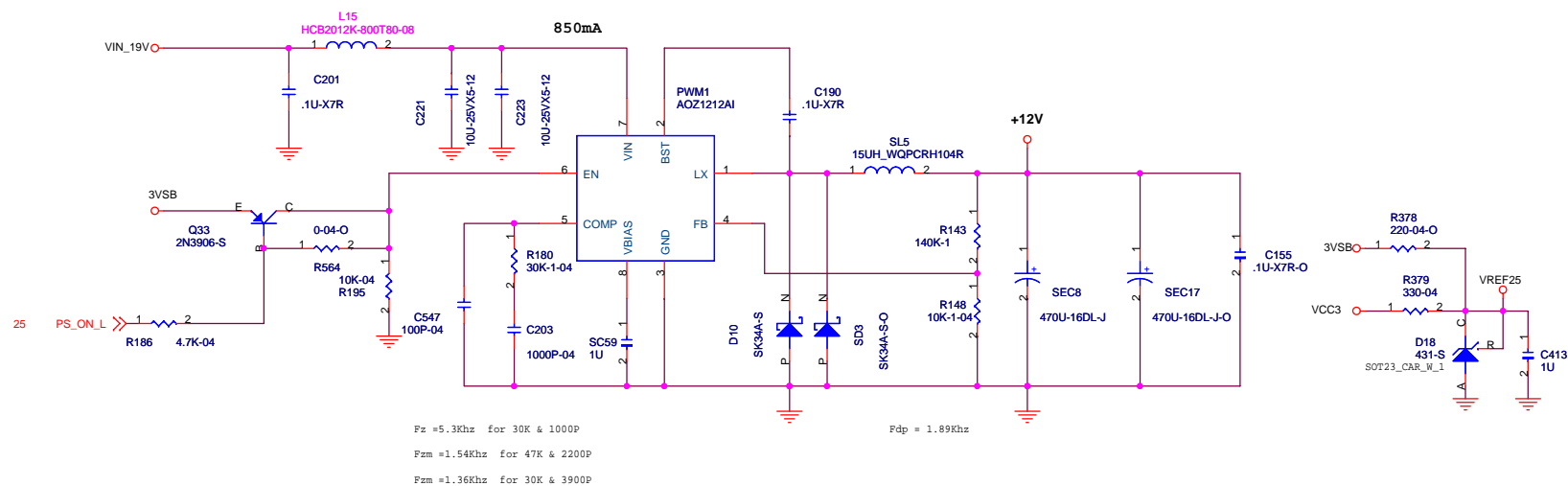
Sheet: 28 of 37



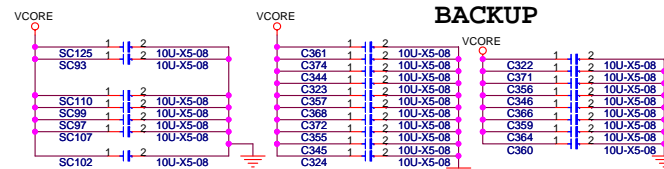
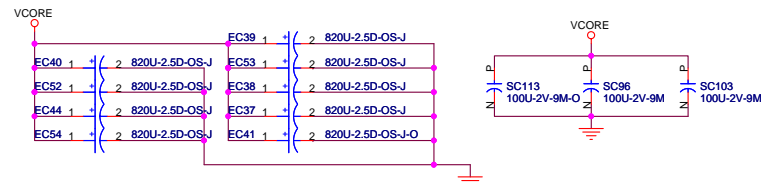
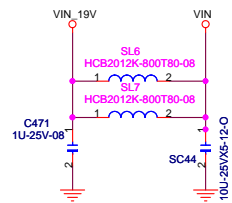
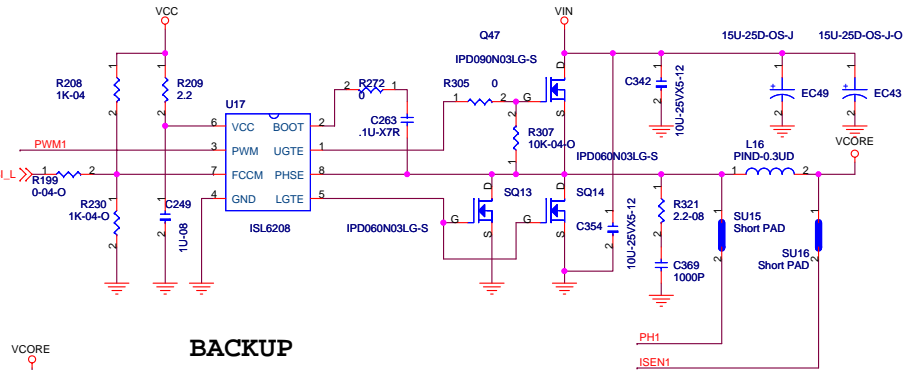
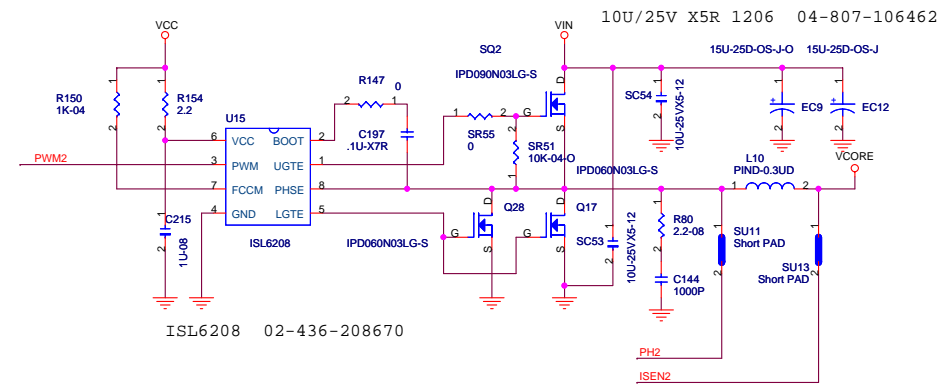
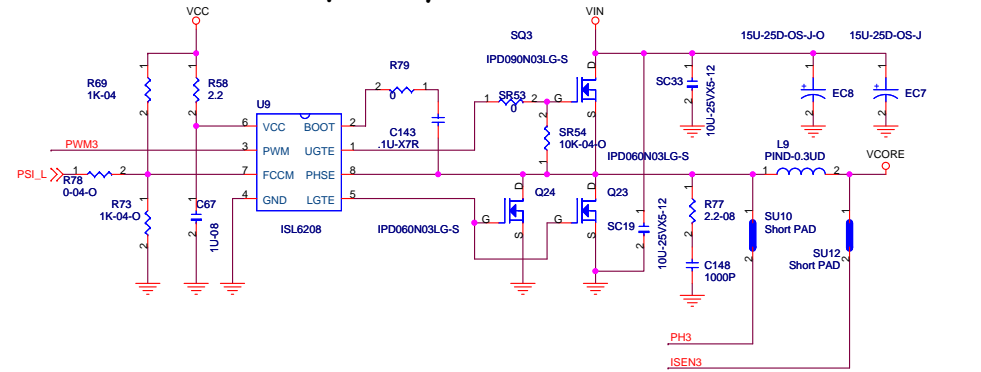
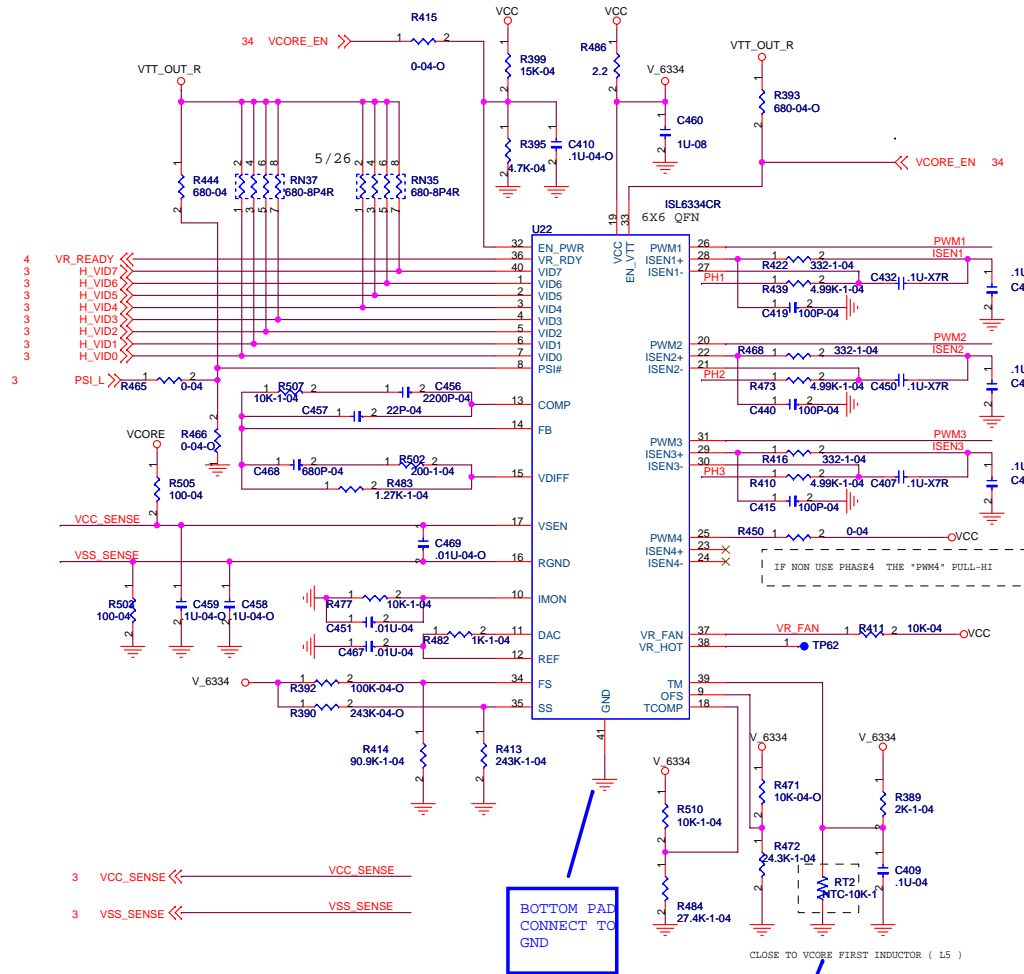


SPDIF-OUT





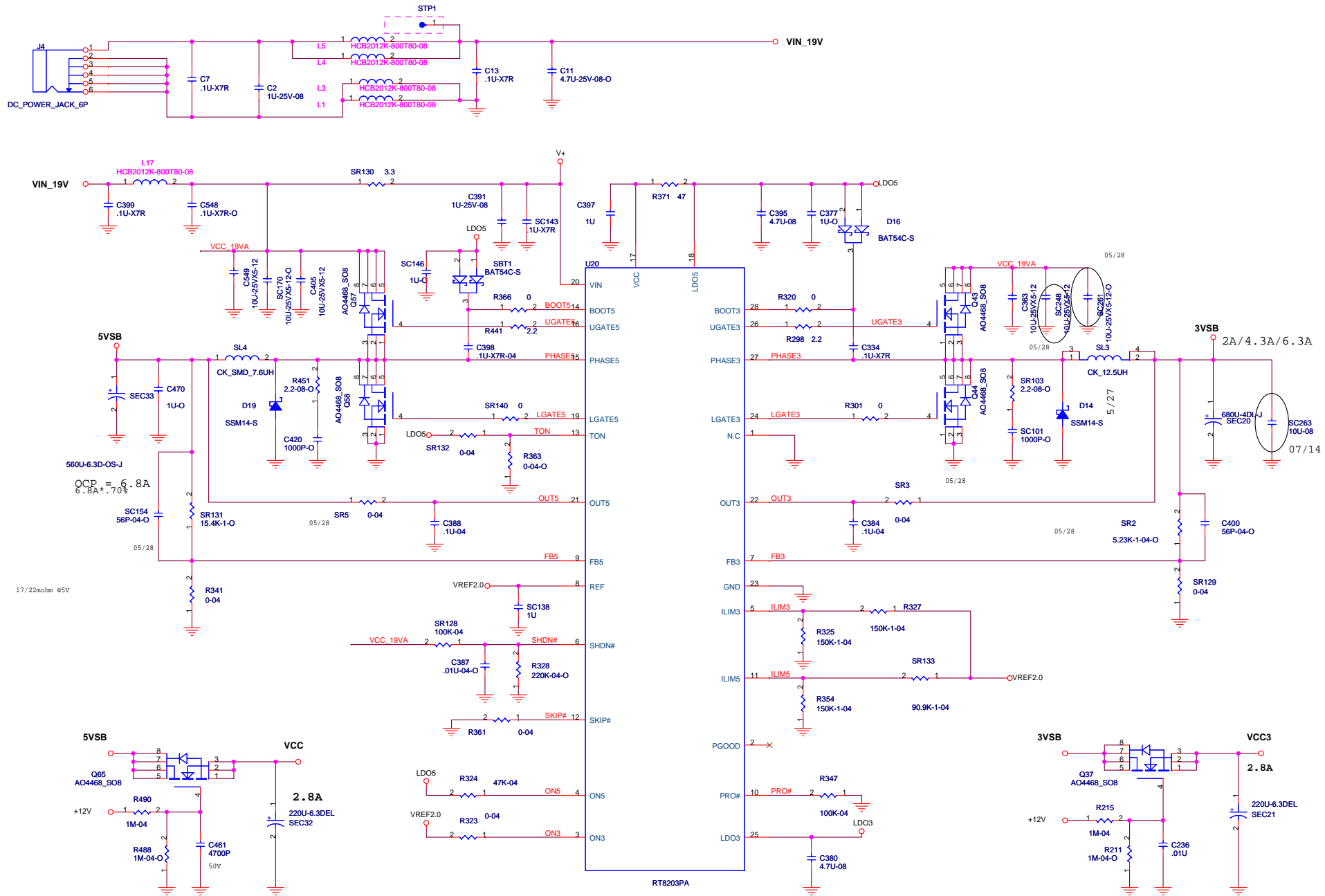
ISL6334CR FOR VRD11.1 POWER CKT (Low frequency)

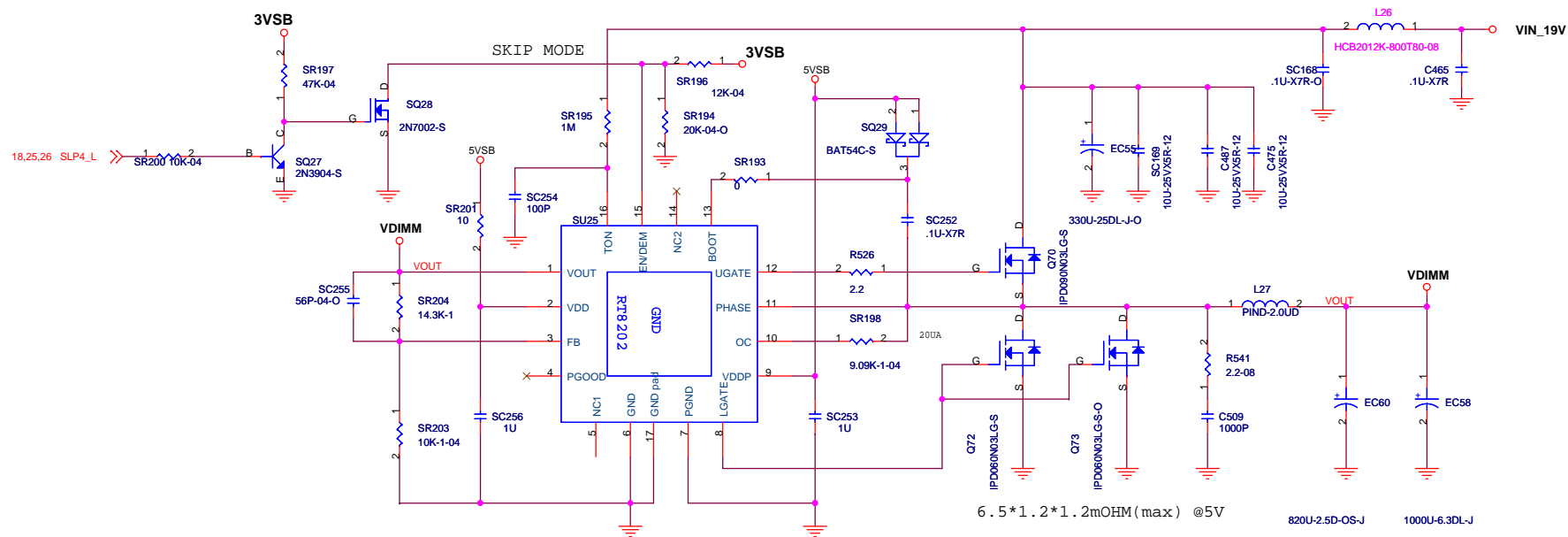


04-807-106192(10U-X5R-08-K)

BACKUP

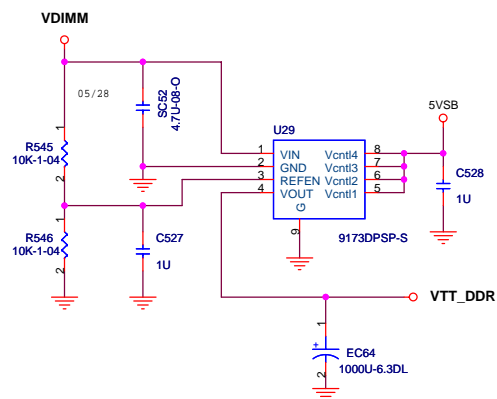
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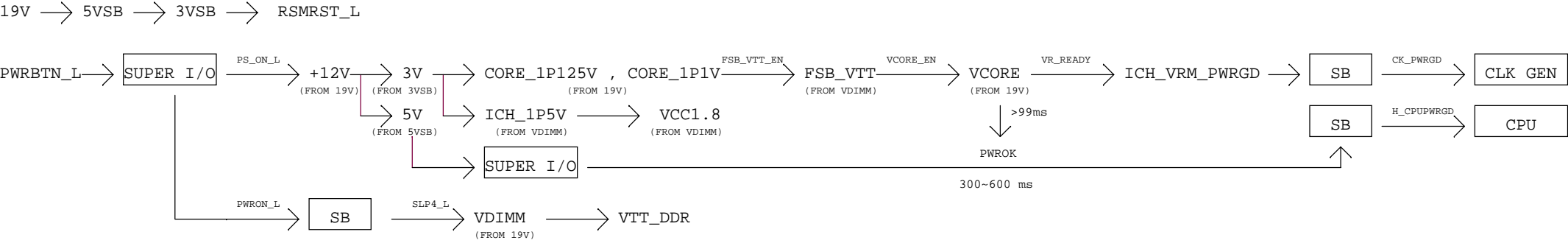





$$1.515V = 0.75V * (1 + 10.2K / 10K) 10a$$

$$1.830V = 0.75V * (1 + 14.7K / 10.2K)$$





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Title		
POWER SEQUENCE		
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Custom	Q45T-AS	1.0
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