

# ME3 Block Diagram

**Intel CPU**  
*Meron 2M/4M SV*  
*FSB:667 or 800 MHz*  
 4,5,6

Project code : 91.4X601.001  
 PCB P/N :  
 Revision :

**G792** 22  
**CLK GEN**  
*REALTEK RTM875* 3

**DDRII** Slot 0 13,14  
*DDRII 667 Channel A*  
**DDRII** Slot 1 13,14  
*DDRII 667 Channel B*  
**Crestline-GM/GML**  
 AGTL+ CPU I/F DDR I/F  
 INTEGRATED GRAPHICS  
 LVDS, CRT I/F 7,8,9,10,11,12  
*Host BUS* 533/667MHz  
*PCI-E x16*  
*DMI I/F* 100MHz

**nVIDIA**  
*NB8M-GS* 44,45,46  
**GDDR3**  
**Graphics RAM**  
 256-Mbit 47,48  
**TV OUT** 15  
**CRT** 15  
**LCD** 16  
**HDMI** 17  
**EEPROM** 46

**Power Switch** G577 23  
**Mini Card 2** Robson 23  
**Mini Card 1** 802.11a/b/g/n 23  
**RJ45 CONN** 25  
**10/100 Controller**  
*Realtek RTL8101E* 24  
**INTEL**  
**ICH8-M**  
 10 USB 2.0/1.1 ports  
 ETHERNET (10/100/1000Mb)  
 High Definition Audio  
 ATA 66/100  
 ACPI 1.1  
 LPC I/F  
 PCI/PCI BRIDGE  
 18,19,20,21  
*PCI-E x1*  
*PCI-E x2*

**Mic In**  
**Line In**  
**Codec**  
*ALC662* 34  
**AZALIA**

**INT.SPKR**  
**Line Out (SPDIF)**  
**AMP** G1432 35  
**AMP** G1412 35  
**AZALIA**

**RJ11**  
**MODEM** MDC Card 28  
**AZALIA**

**INT. MIC Array Digital**  
**Codec** ALC268

**HDMI (SPDIF)**  
**E-SATA CONN** 28  
**E-SATA** SIL3531 29

**SATA** **SATA** **PATA**  
**HDD** 30 **CDROM** 30 **CAPACITY BUTTON** 33  
**Touch Pad** 33 **INT. KB** 33 **Flash Rom** W25X80-VSS 32  
**KBC** Winbond WPC8763 31  
*32.768KHz* **SPI**  
**TPM** SLB9635TT 32  
*32.768KHz*  
**USB 2.0**  
**Realtek** RTL5158 27  
**MS/MS Pro/xD/ MMC/SD** 4 in 1 27  
**27MHz**  
**32.768KHz**  
**Blue tooth** 26  
**RF** 26  
**USB X 4** 28  
**Finger print** 26  
**Camera** 26  
**LPC** DEBUG CONN. 32  
**LPC BUS**

SYSTEM DC/DC	
TPS51120	
INPUTS	OUTPUTS
DCBATOUT	5V_S3 3V_S5

SYSTEM DC/DC	
MAX8743	
INPUTS	OUTPUTS
DCBATOUT	1D05V_S0 1D8V_S3

SYSTEM DC/DC	
FAN5234	
INPUTS	OUTPUTS
DCBATOUT	VGA_CORE_S0 11A

MAXIM CHARGER	
MAX8725	
INPUTS	OUTPUTS
DCBATOUT	BT+ 18V 3.0A 5V 100mA

CPU DC/DC	
MAX8736ETL	
INPUTS	OUTPUTS
DCBATOUT	VCC_CORE 0.844-1.3V 44A

PCB LAYER	
L1:	Signal 1
L2:	GND
L3:	Signal 2
L4:	Signal 3
L5:	GND
L6:	VCC
L7:	Signal 4
L8:	Signal 5
L9:	GND
L10:	Signal 5

Prepare by Steven CF Chou

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Title: **Block Diagram**  
 Size: A3 Document Number: **ME3-Discrete** Rev: **SA**  
 Date: Monday, July 30, 2007 Sheet 1 of 51

# INTEL ICH8-M STRAP PIN

Signal	Usage/When Sampled	Comment
HDA_SDOUT	XOR Chain Entrance/ PCIe Port Config 1 bit1, Rising Edge of PWROK	Allows entrance to XOR Chain testing when TP3 pulled low at rising edge of PWROK. When TP3 not pulled low at rising edge of PWROK, sets bit1 of RPC.PC(Config Registers:offset 224h)
HDA_SYNC	PCIe Port Config 1 bit0, Rising Edge of PWROK.	Sets bit0 of RPC.PC(Config Registers:Offset 224h)
GNT2#	PCIe Port Config 2 bit0, Rising Edge of PWROK.	Sets bit2 of RPC.PC(Config Registers:Offset 224h)
GPIO20	Reserved	Weak Internal PULL-DOWN.NOTE:This signal should not be pull HIGH.
GNT3#	Top-Block Swap Override. Rising Edge of PWROK.	Sampled low:Top-Block Swap mode(inverts A16 for all cycles targeting FWH BIOS space). Note: Software will not be able to clear the Top-Swap bit until the system is rebooted without GNT3# being pulled down.
GNT0# SPI_CS1#	Boot BIOS Destination Selection. Rising Edge of PWROK.	Controllable via Boot BIOS Destination bit (Config Registers:Offset 3410h:bit 11:10). GNT0# is MSB, 01-SPI, 10-PCI, 11-LPC.
INTVRMEN	Integrated VccSus1_05 VccSus1_5 and VccCLI_5 VRM Enable/Disable.Always sampled.	Enables integrated VccSus1_05,VccSus1_5 and VccCLI_5 VRM when sampled high
LAN100_SLP	Integrated VccLAN1_05 VccCLI_05 VRM enable /Disable. Always sampled.	Enables integrated VccLAN1_05,VccCLI_05 VRM when sampled high
SATALED#	PCIe LAN REVERSAL.Rising Edge of PWROK.	This signal has weak internal pull-up. set bit27 of MPC.LR(Device28:Function0:Offset D8)
SPKR	No Reboot. Rising Edge of PWROK.	If sampled high, the system is strapped to the "No Reboot" mode(ICH8M will disable the TCO Timer system reboot feature). The status is readable via the NO REBOOT bit.(Offset:3410h:bit5)
TP3	XOR Chain Entrance. Rising Edge of PWROK.	This signal should not be pull low unless using XOR Chain testing.
GPIO33/ HDA_DOCK_EN#	Flash Descriptor Security Override Strap Rising Edge of PWROK.	Internal Pull-Up.If sampled low,the Flash Descriptor Security will be overridden.if high,the Security measures defined in the Flash Descriptor will be in effect. This should only be used in manufacturing environments

ICH_RSVP#3	AZ DOUT ICH	Description
0	0	RSVD
0	1	Enter XOR Chain
1	0	Normal Operation(default)
1	1	Set PCIe port coeip bit

PCI_GNT#3	low = A16 swap override enable	high = default
0	1	SPT
1	0	PCT
1	1	LPC(Default)

SM_INTVRMEN	High=Enable	Low=Disable
LAN100_SLP	High=Enable	Low=Disable

No Reboot Strap	
SPKR	LOW = Defaule
	High=No Reboot

8.2K PULL HIGH

# INTEL ICH8-M INTEGRATED PULL-UPS and PULL-DOWNS

SIGNAL	Resistor Type/Value
HDA_BIT_CLK	PULL-DOWN 20K
HDA_RST#	NONE
HDA_SDIN[3:0]	PULL-DOWN 20K
HDA_SDOUT	PULL-DOWN 20K
HDA_SYNC	PULL-DOWN 20K
GNT[3:0]	PULL-UP 20K
GPIO[20]	PULL-DOWN 20K
LDA[3:0]#/FWH[3:0]#	PULL-UP 20K
LAN_RXD[2:0]	PULL-UP 20K
LDRQ[0]	PULL-UP 20K
LDRQ[1]/GPIO23	PULL-UP 20K
PME#	PULL-UP 20K
PWRBTN#	PULL-UP 20K
SATALED#	PULL-UP 20K
SPI_CS1#	PULL-UP 20K
SPI_CLK	PULL-UP 20K
SPI_MOSI	PULL-UP 20K
SPI_MISO	PULL-UP 20K
TACH_[3:0]	PULL-UP 20K
SPKR	PULL-DOWN 20K
TP[3]	PULL-UP 20K
USB[9:0][P,N]	PULL-DOWN 15K
CL_RST#	TBD

# INTEL CRESTLINE STRAP PIN

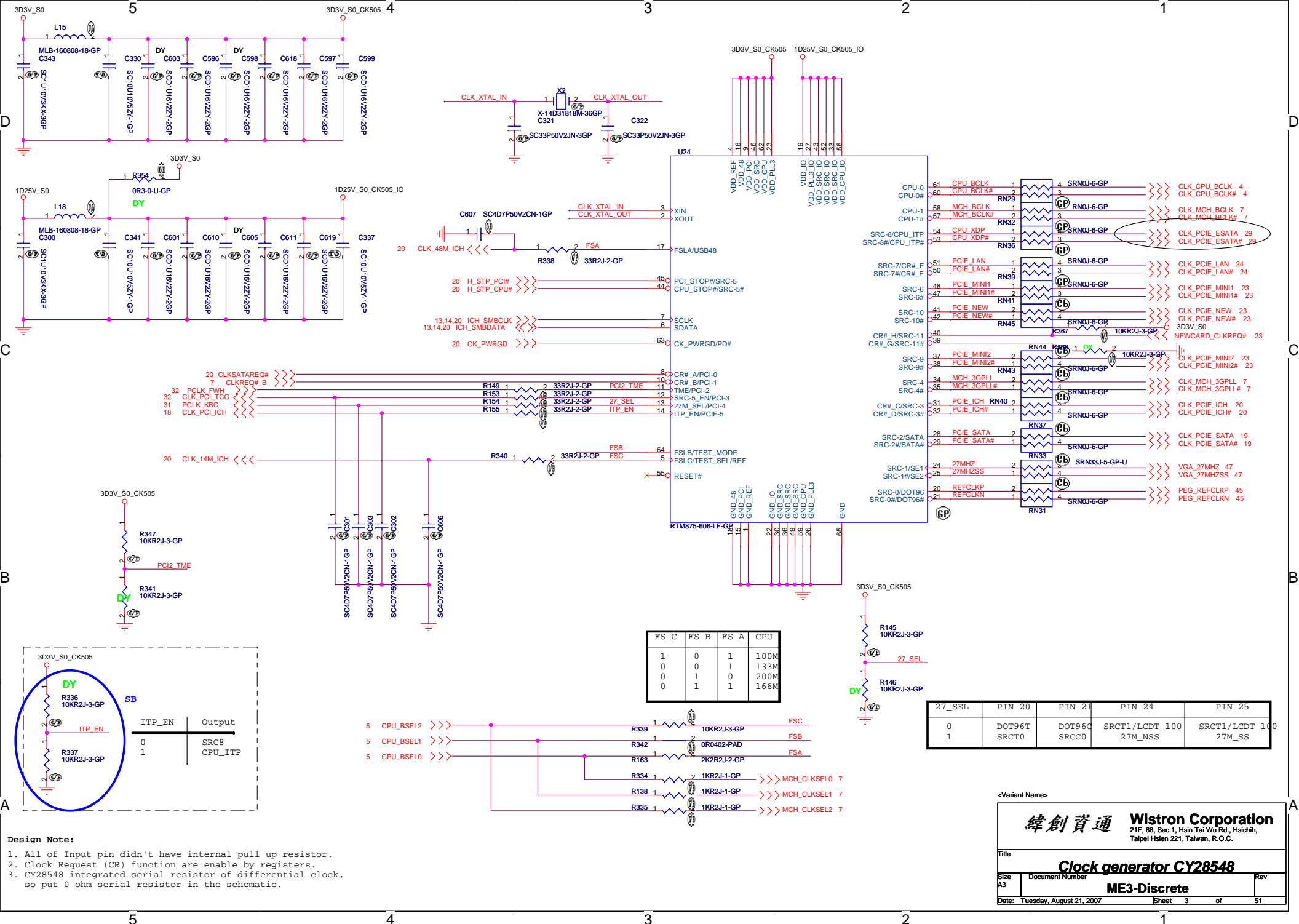
MB: 07230  
LED: 07537  
FP: 07546  
Audio: 07545  
USB: 07547

CFG Strap	LOW 0	HIGH 1
CFG 5	DMI X 2	DMI X 4 ★
CFG 8 Low Power PCI Express	Normal★	Low Power mode
CFG 9 PCI Express Graphics Lane Reversal	Lane Reversal	Normal Mode(Lanes number in order)★
CFG 16 FSB Dynamic ODR	Disabled	Enabled★
CFG 19 DMI Lane Reserved	Normal Operation★	Reserved Lane
CFG 20 Concurrent SDVO/PCIE	Only PCIE or SDVO is operation★	PCIE and SDVO are operation simultaneous
SDVO_CTRL_DATA SDVO Present	NO SDVO Card Present★	SDVO Card Present
CFG 12	XOR/ALL-Z	
CFG 13 LH(0)	Reserved	
LH(01)	XOR Mode Enabled	
LH(10)	All Z Mode Enabled	
LH(11)	Normal Operation	

U45 : 71.0NB8M.00U (VGA)  
U35: 71.00662.00G (Audio)  
U28: 71.08763.B0G (KBC)  
U74: 71.08101.B0G (LAN)  
U26: 71.1CH8M.C0U (SB)  
U18: 71.1M965.A0U (NB)  
TV1: 22.10021.H21  
Hole Spring  
HDM11: 22.10296.011

<Core Design>

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**Design Note:**

- All of Input pin didn't have internal pull up resistor.
- Clock Request (CR) function can enable by registers.
- CY28548 integrated serial resistor of differential clock, so put 0 ohm serial resistor in the schematic.

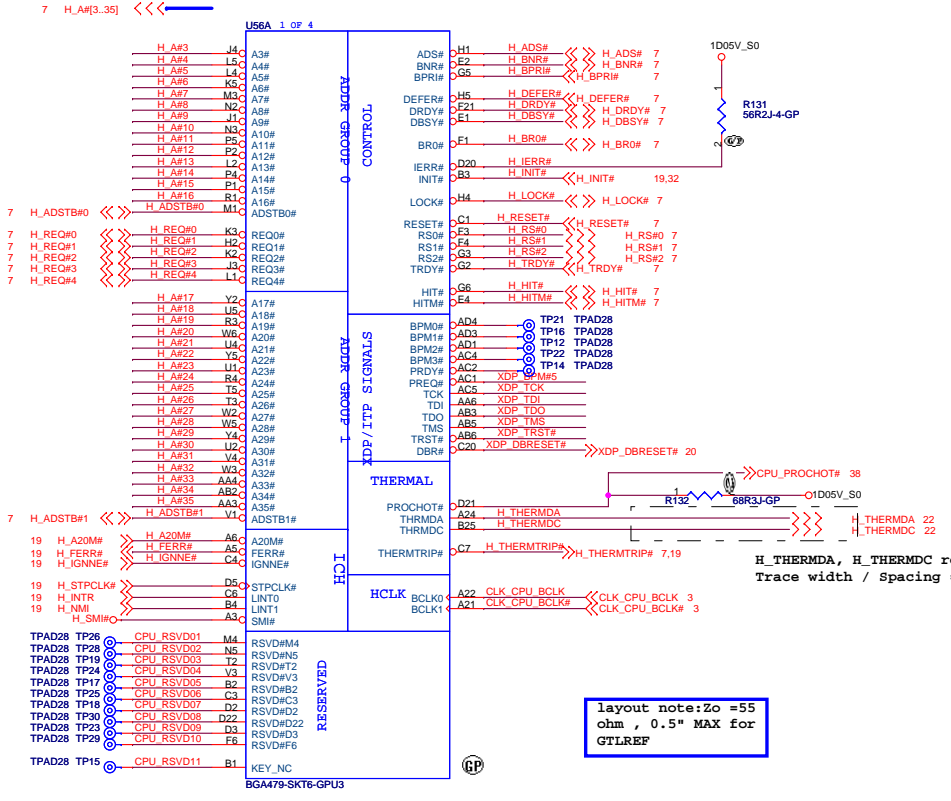
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Title: **Clock generator CY28548**

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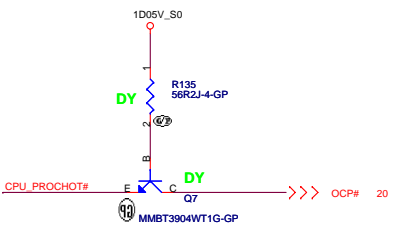
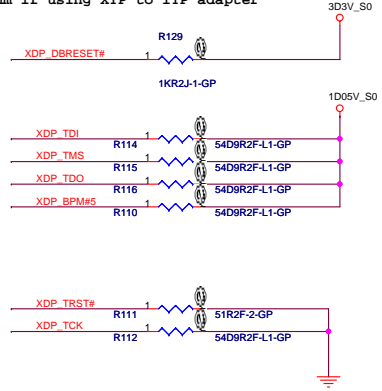


layout note: Zo = 55 ohm, 0.5" MAX for GTLREF

H\_THERMDA, H\_THERMDC routing together, Trace width / Spacing = 10 / 10 mil

layout note : Change R237 to 649 ohm if using XTP to ITP adapter

original value: BGA479-SKT6-GPU1



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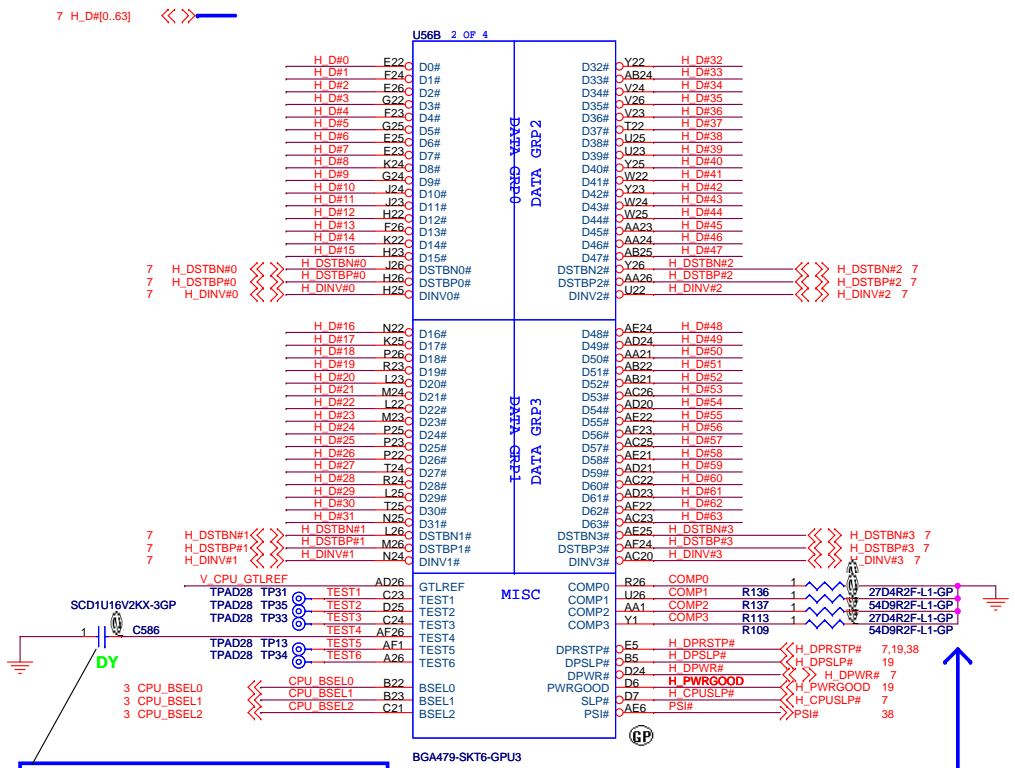
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Size: Customer Document Number

Rev

Customer: **ME3-Discrete**

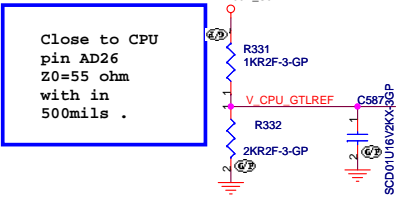
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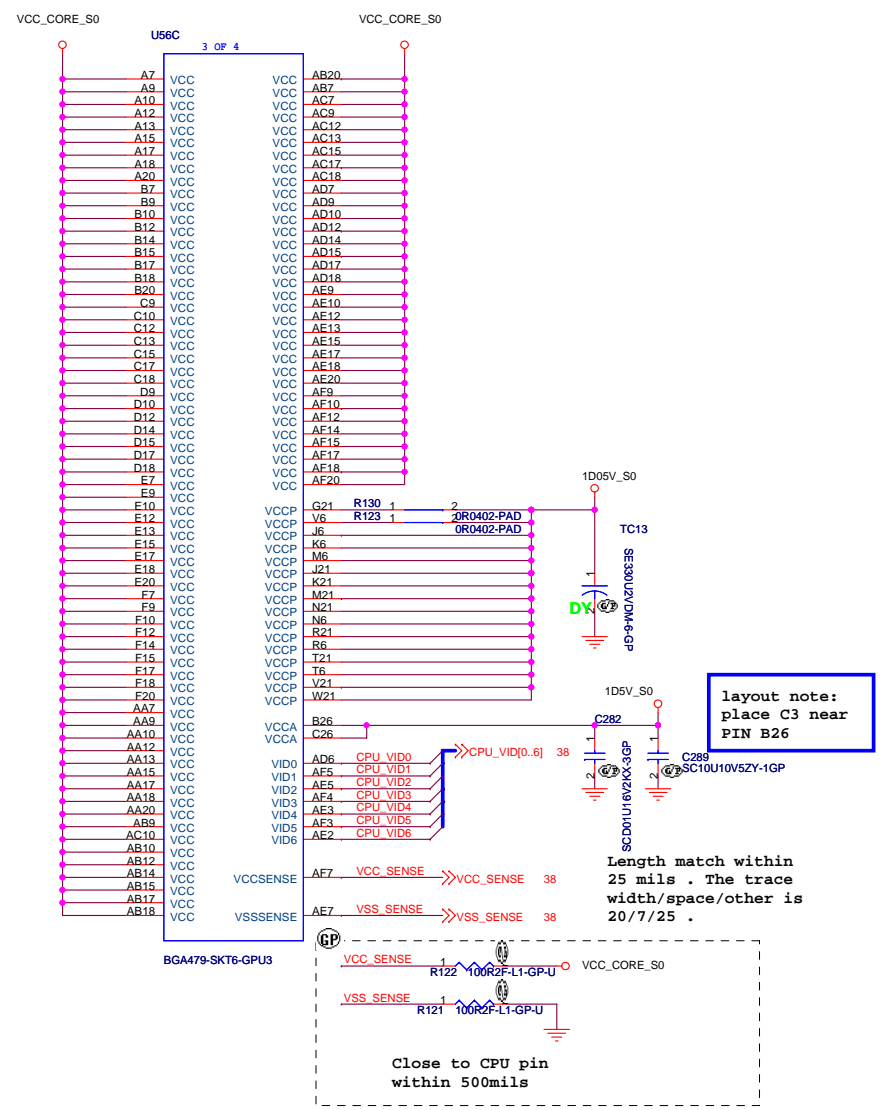
PLACE C173 close to the TEST4 PIN, make sure TEST3,TEST4,TEST5 trace routing is reference to GND and away other noisy signals

CPU_BSEL	CPU_BSEL2	CPU_BSEL1	CPU_BSEL0
166	0	1	1
200	0	1	0

Resistor Placed within 0.5" of CPU pin. Trace should be at least 25 mils away from any other toggling signal . COMP[0,2] trace width is 18 mils. COMP[1,3] trace width is 4 mils .

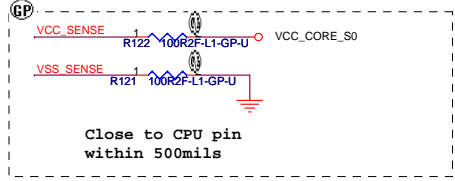


Close to CPU pin AD26 Z0=55 ohm with in 500mils .



layout note: place C3 near PIN B26

Length match within 25 mils . The trace width/space/other is 20/7/25 .



Close to CPU pin within 500mils

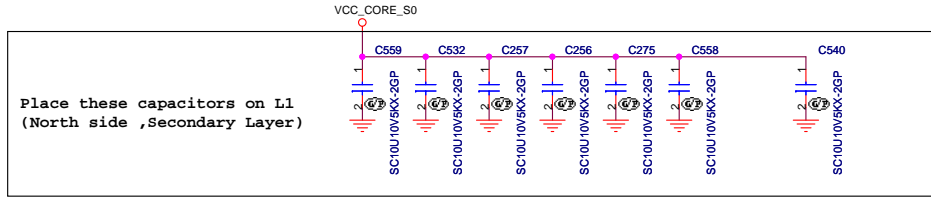
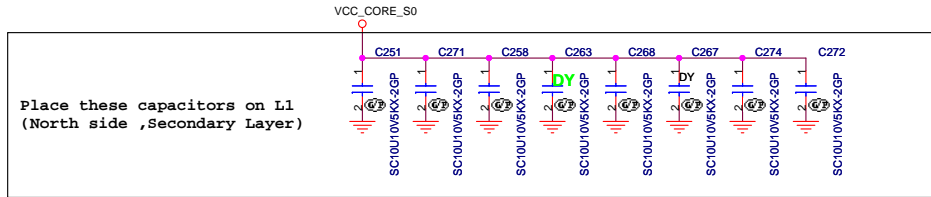
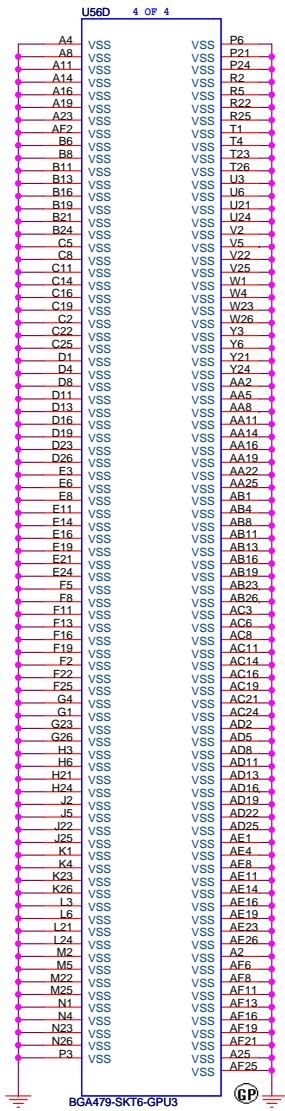
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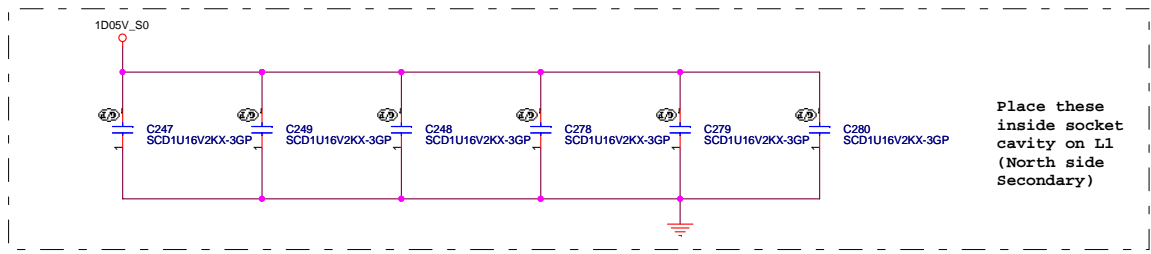
Title: **Merom(2/3)-AGTL+/PWR**

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### Mid Freqend Decoupling



<Core Design>

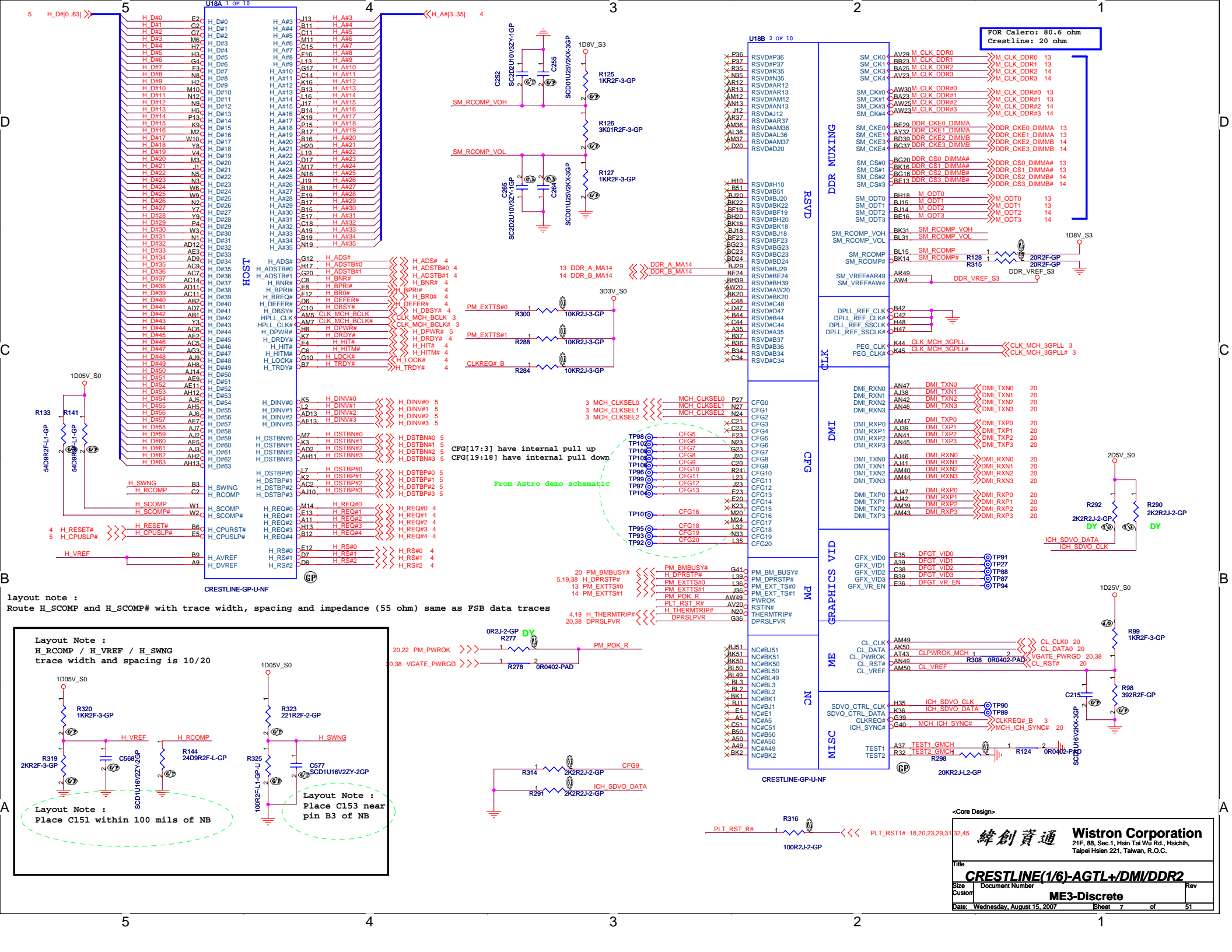
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Title: **Merom(3/3)-GND&Bypass**

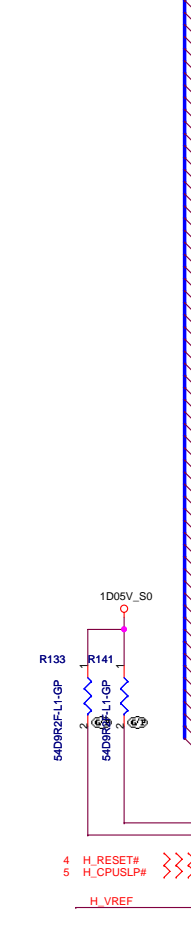
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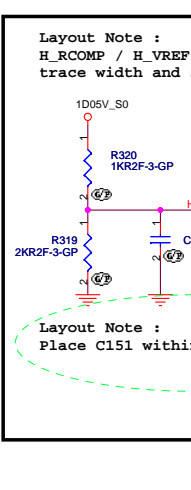




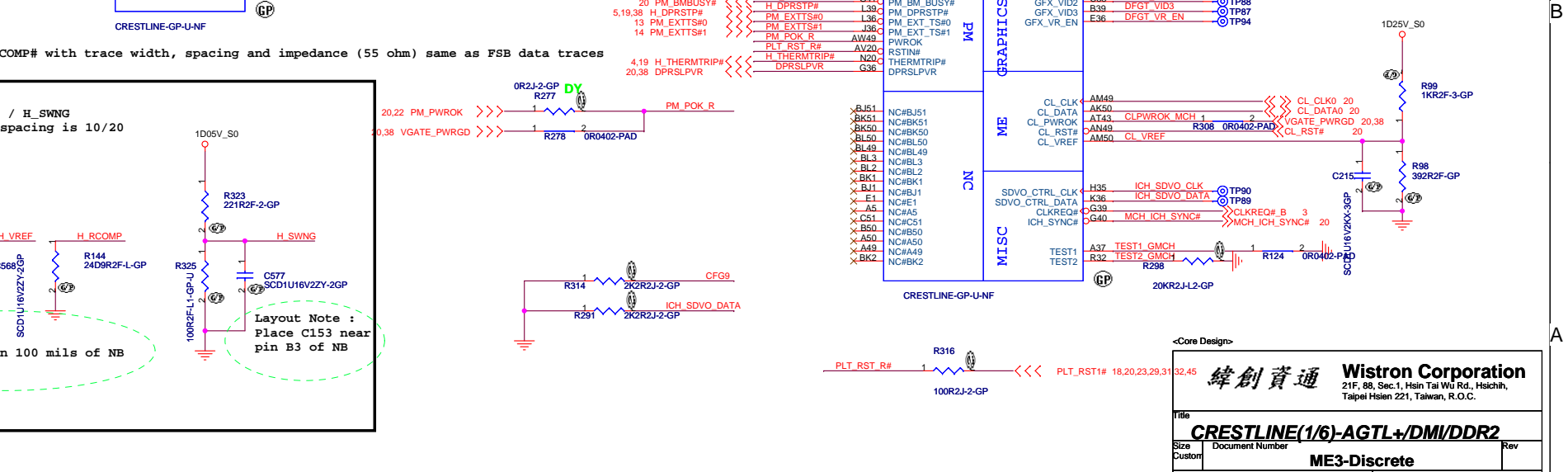
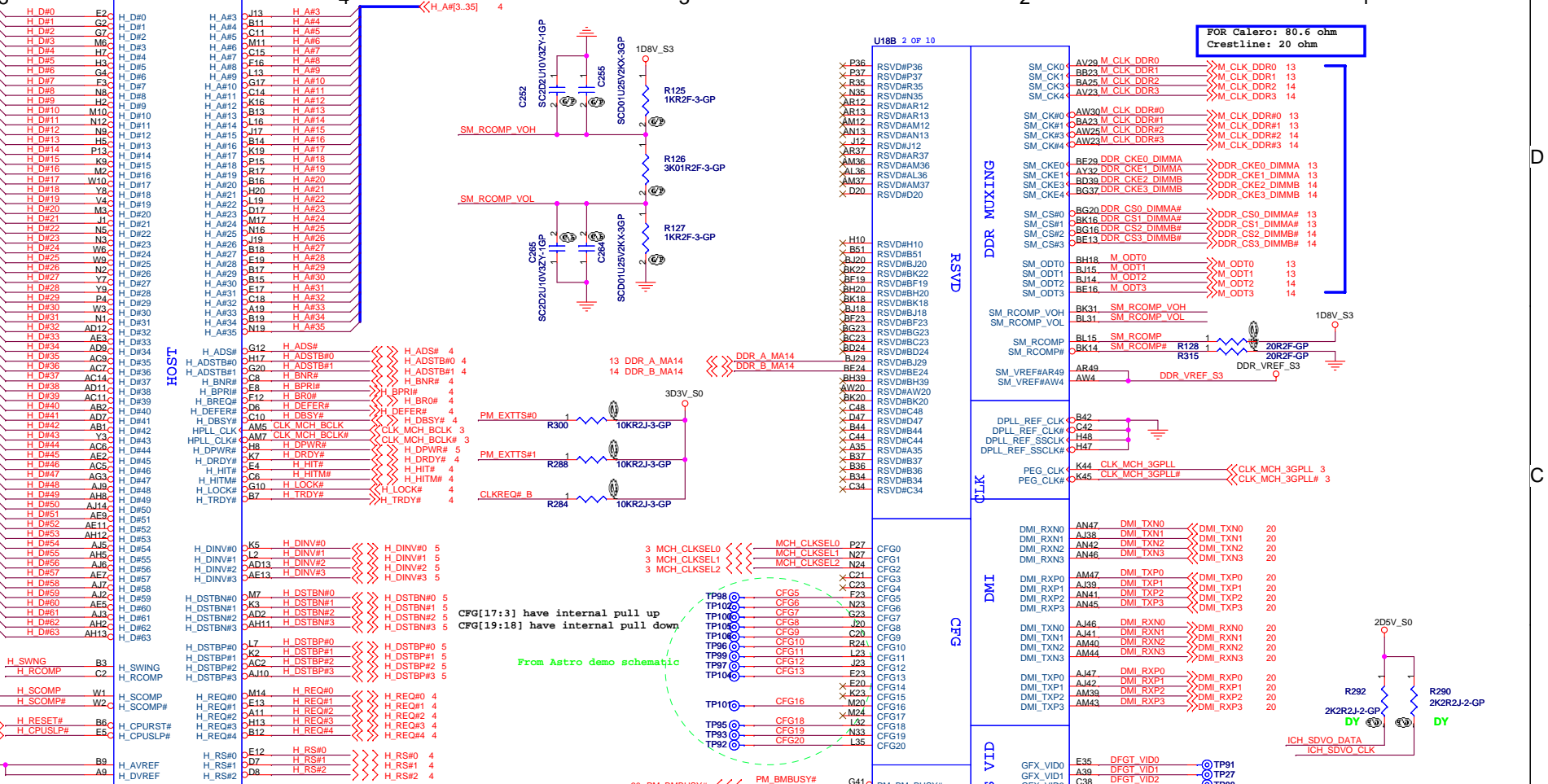
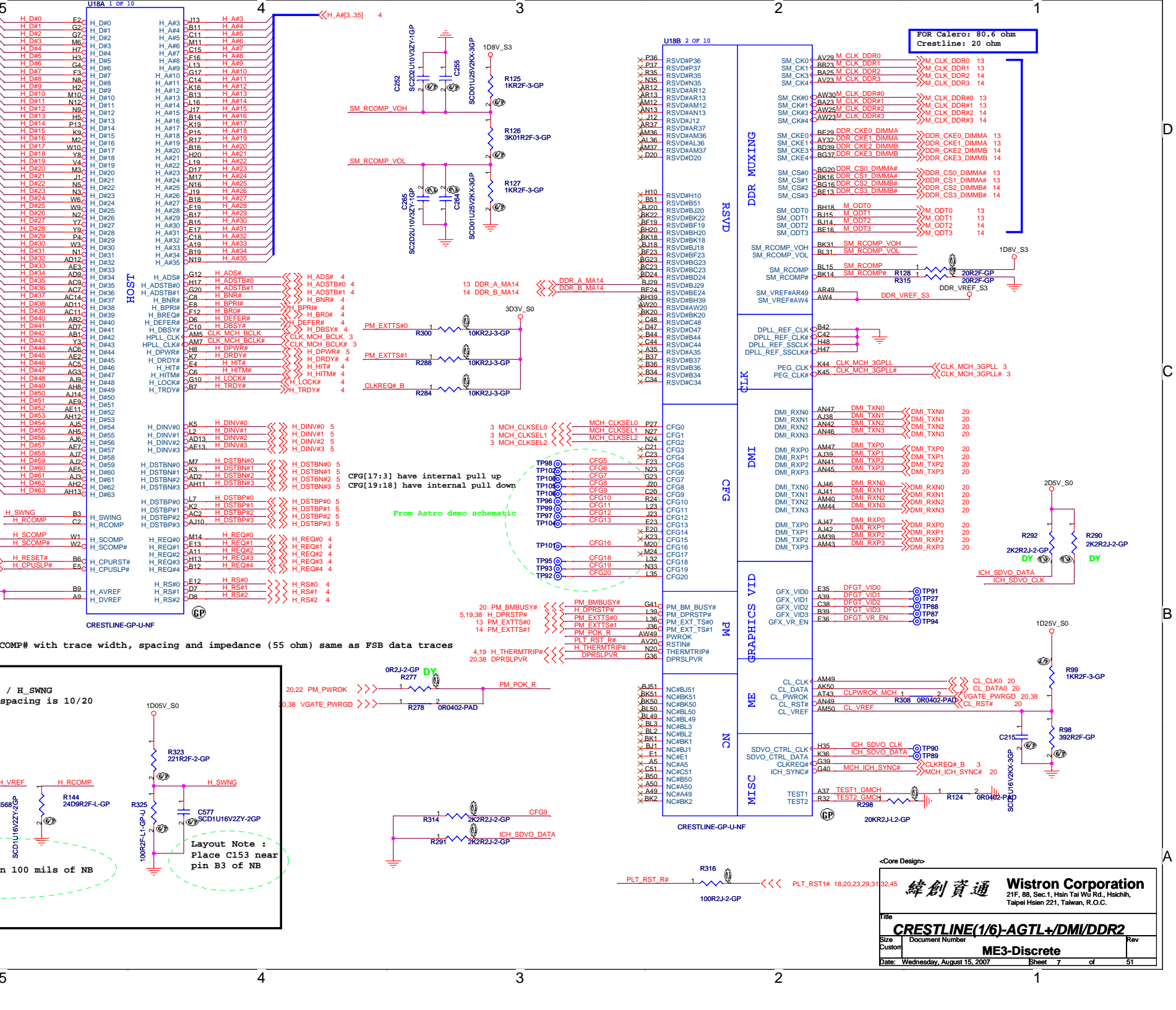
5 H\_D#0[.63]



layout note :  
Route H\_SCOMP and H\_SCOMP# with trace width, spacing and impedance (55 ohm) same as FSB data traces



Layout Note :  
Place C151 within 100 mils of NB



CRESTLINE-GP-U-NF

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 Title: CRESTLINE(1/6)-AGTL/DMI/DDR2  
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<< >> DDR\_A\_D[0..63] 13  
 << >> DDR\_A\_BS[0..2] 13  
 << >> DDR\_A\_DM[0..7] 13  
 << >> DDR\_A\_DQS[0..7] 13  
 << >> DDR\_A\_DQS#[0..7] 13  
 << >> DDR\_A\_MA[0..13] 13

<< >> DDR\_B\_D[0..63] 14  
 << >> DDR\_B\_BS[0..2] 14  
 << >> DDR\_B\_DM[0..7] 14  
 << >> DDR\_B\_DQS[0..7] 14  
 << >> DDR\_B\_DQS#[0..7] 14  
 << >> DDR\_B\_MA[0..13] 14

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DDR A D0	AR43	SA_DQ0	SA_BS0	BB19	DDR A BS0
DDR A D1	AW44	SA_DQ1	SA_BS1	BK19	DDR A BS1
DDR A D2	BA45	SA_DQ2	SA_BS2	BF29	DDR A BS2
DDR A D3	AY46	SA_DQ3			
DDR A D4	AR41	SA_DQ4	SA_CAS#	BL17	DDR A CAS# >>> DDR_A_CAS# 13
DDR A D5	AR45	SA_DQ5			
DDR A D6	AT42	SA_DQ6	SA_DM0	AT45	DDR A DM0
DDR A D7	AW47	SA_DQ7	SA_DM1	BD44	DDR A DM1
DDR A D8	BB45	SA_DQ8	SA_DM2	BD42	DDR A DM2
DDR A D9	BF48	SA_DQ9	SA_DM3	AW38	DDR A DM3
DDR A D10	BG47	SA_DQ10	SA_DM4	AW13	DDR A DM4
DDR A D11	BJ46	SA_DQ11	SA_DM5	BG8	DDR A DM5
DDR A D12	BB47	SA_DQ12	SA_DM6	AY5	DDR A DM6
DDR A D13	BG50	SA_DQ13	SA_DM7	AN6	DDR A DM7
DDR A D14	BH49	SA_DQ14			
DDR A D15	BE45	SA_DQ15	SA_DQS0	AT46	DDR A DQS0
DDR A D16	AW43	SA_DQ16	SA_DQS1	BE48	DDR A DQS1
DDR A D17	BE44	SA_DQ17	SA_DQS2	BB43	DDR A DQS2
DDR A D18	BG42	SA_DQ18	SA_DQS3	BC37	DDR A DQS3
DDR A D19	BE40	SA_DQ19	SA_DQS4	BB16	DDR A DQS4
DDR A D20	BF44	SA_DQ20	SA_DQS5	BH6	DDR A DQS5
DDR A D21	BH45	SA_DQ21	SA_DQS6	BB2	DDR A DQS6
DDR A D22	BG40	SA_DQ22	SA_DQS7	AP3	DDR A DQS7
DDR A D23	BF40	SA_DQ23	SA_DQS#0	AT47	DDR A DQS#0
DDR A D24	AR40	SA_DQ24	SA_DQS#1	BD47	DDR A DQS#1
DDR A D25	AW40	SA_DQ25	SA_DQS#2	BC41	DDR A DQS#2
DDR A D26	AT39	SA_DQ26	SA_DQS#3	BA37	DDR A DQS#3
DDR A D27	AW36	SA_DQ27	SA_DQS#4	BA16	DDR A DQS#4
DDR A D28	AW41	SA_DQ28	SA_DQS#5	BH7	DDR A DQS#5
DDR A D29	AY41	SA_DQ29	SA_DQS#6	BC1	DDR A DQS#6
DDR A D30	AV38	SA_DQ30	SA_DQS#7	AP2	DDR A DQS#7
DDR A D31	AT38	SA_DQ31			
DDR A D32	AV13	SA_DQ32	SA_MA0	BJ19	DDR A MA0
DDR A D33	AT13	SA_DQ33	SA_MA1	BD20	DDR A MA1
DDR A D34	AW11	SA_DQ34	SA_MA2	BK27	DDR A MA2
DDR A D35	AV11	SA_DQ35	SA_MA3	BH28	DDR A MA3
DDR A D36	AU15	SA_DQ36	SA_MA4	BL24	DDR A MA4
DDR A D37	AT11	SA_DQ37	SA_MA5	BK28	DDR A MA5
DDR A D38	BA13	SA_DQ38	SA_MA6	BJ27	DDR A MA6
DDR A D39	BA11	SA_DQ39	SA_MA7	BJ25	DDR A MA7
DDR A D40	BE10	SA_DQ40	SA_MA8	BL28	DDR A MA8
DDR A D41	BD10	SA_DQ41	SA_MA9	BA28	DDR A MA9
DDR A D42	BD8	SA_DQ42	SA_MA10	BC19	DDR A MA10
DDR A D43	AY9	SA_DQ43	SA_MA11	BE28	DDR A MA11
DDR A D44	BG10	SA_DQ44	SA_MA12	BC30	DDR A MA12
DDR A D45	AW9	SA_DQ45	SA_MA13	BJ16	DDR A MA13
DDR A D46	BD7	SA_DQ46			
DDR A D47	BB9	SA_DQ47			
DDR A D48	BB5	SA_DQ48	SA_RAS#	BE18	DDR A RAS# >>> DDR_A_RAS# 13
DDR A D49	AY7	SA_DQ49	SA_RCVEN#	AY20	SA RCVEN# TP107
DDR A D50	AT5	SA_DQ50			
DDR A D51	AT7	SA_DQ51	SA_WE#	BA19	DDR A WE# >>> DDR_A_WE# 13
DDR A D52	AY6	SA_DQ52			
DDR A D53	BB7	SA_DQ53			
DDR A D54	AB5	SA_DQ54			
DDR A D55	AR8	SA_DQ55			
DDR A D56	AR9	SA_DQ56			
DDR A D57	AN3	SA_DQ57			
DDR A D58	AM8	SA_DQ58			
DDR A D59	AN10	SA_DQ59			
DDR A D60	AT9	SA_DQ60			
DDR A D61	AN9	SA_DQ61			
DDR A D62	AM9	SA_DQ62			
DDR A D63	AN11	SA_DQ63			

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DDR SYSTEM MEMORY A

CRESTLINE-GP-U-NF

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DDR B D0	AP49	SB_DQ0	SB_BS0	AV17	DDR B BS0
DDR B D1	AR51	SB_DQ1	SB_BS1	BG18	DDR B BS1
DDR B D2	AW50	SB_DQ2	SB_BS2	BG36	DDR B BS2
DDR B D3	AW51	SB_DQ3			
DDR B D4	AN51	SB_DQ4	SB_CAS#	BE17	DDR B CAS# >>> DDR_B_CAS# 14
DDR B D5	AN50	SB_DQ5			
DDR B D6	AV50	SB_DQ6	SB_DM0	AR50	DDR B DM0
DDR B D7	AV49	SB_DQ7	SB_DM1	BD49	DDR B DM1
DDR B D8	BA50	SB_DQ8	SB_DM2	BK45	DDR B DM2
DDR B D9	BB50	SB_DQ9	SB_DM3	BL39	DDR B DM3
DDR B D10	BA49	SB_DQ10	SB_DM4	BH42	DDR B DM4
DDR B D11	BE50	SB_DQ11	SB_DM5	BJ7	DDR B DM5
DDR B D12	BA51	SB_DQ12	SB_DM6	BF3	DDR B DM6
DDR B D13	AY49	SB_DQ13	SB_DM7	AW2	DDR B DM7
DDR B D14	BF49	SB_DQ14			
DDR B D15	BF50	SB_DQ15	SB_DQS0	AT50	DDR B DQS0
DDR B D16	BJ50	SB_DQ16	SB_DQS1	BD50	DDR B DQS1
DDR B D17	BJ44	SB_DQ17	SB_DQS2	BK46	DDR B DQS2
DDR B D18	BJ43	SB_DQ18	SB_DQS3	BK39	DDR B DQS3
DDR B D19	BL43	SB_DQ19	SB_DQS4	BJ12	DDR B DQS4
DDR B D20	BK49	SB_DQ20	SB_DQS5	BL7	DDR B DQS5
DDR B D21	BK49	SB_DQ21	SB_DQS6	BE2	DDR B DQS6
DDR B D22	BK43	SB_DQ22	SB_DQS7	AV2	DDR B DQS7
DDR B D23	BK42	SB_DQ23	SB_DQS#0	CAU50	DDR B DQS#0
DDR B D24	BJ41	SB_DQ24	SB_DQS#1	BC50	DDR B DQS#1
DDR B D25	BL41	SB_DQ25	SB_DQS#2	BL45	DDR B DQS#2
DDR B D26	BJ37	SB_DQ26	SB_DQS#3	BK38	DDR B DQS#3
DDR B D27	BJ36	SB_DQ27	SB_DQS#4	BK12	DDR B DQS#4
DDR B D28	BK41	SB_DQ28	SB_DQS#5	BK7	DDR B DQS#5
DDR B D29	BJ40	SB_DQ29	SB_DQS#6	BF2	DDR B DQS#6
DDR B D30	BL35	SB_DQ30	SB_DQS#7	AV3	DDR B DQS#7
DDR B D31	BK37	SB_DQ31			
DDR B D32	BK13	SB_DQ32	SB_MA0	BC18	DDR B MA0
DDR B D33	BE11	SB_DQ33	SB_MA1	BG28	DDR B MA1
DDR B D34	BK11	SB_DQ34	SB_MA2	BG25	DDR B MA2
DDR B D35	BC11	SB_DQ35	SB_MA3	AW17	DDR B MA3
DDR B D36	BC13	SB_DQ36	SB_MA4	BF25	DDR B MA4
DDR B D37	BE12	SB_DQ37	SB_MA5	BE25	DDR B MA5
DDR B D38	BC12	SB_DQ38	SB_MA6	BA29	DDR B MA6
DDR B D39	BC12	SB_DQ39	SB_MA7	BC28	DDR B MA7
DDR B D40	BJ10	SB_DQ40	SB_MA8	AY28	DDR B MA8
DDR B D41	BL9	SB_DQ41	SB_MA9	BD37	DDR B MA9
DDR B D42	BK5	SB_DQ42	SB_MA10	BG17	DDR B MA10
DDR B D43	BL5	SB_DQ43	SB_MA11	BE37	DDR B MA11
DDR B D44	BK9	SB_DQ44	SB_MA12	BA39	DDR B MA12
DDR B D45	BK10	SB_DQ45	SB_MA13	BG13	DDR B MA13
DDR B D46	BJ8	SB_DQ46			
DDR B D47	BJ6	SB_DQ47	SB_RAS#	AV16	DDR B RAS# >>> DDR_B_RAS# 14
DDR B D48	BF4	SB_DQ48	SB_RCVEN#	AY18	SB RCVEN# TP108
DDR B D49	BY7	SB_DQ49			
DDR B D50	BG1	SB_DQ50	SB_WE#	BC17	DDR B WE# >>> DDR_B_WE# 14
DDR B D51	BC2	SB_DQ51			
DDR B D52	BK3	SB_DQ52			
DDR B D53	BE4	SB_DQ53			
DDR B D54	BC3	SB_DQ54			
DDR B D55	BJ2	SB_DQ55			
DDR B D56	BA3	SB_DQ56			
DDR B D57	BB3	SB_DQ57			
DDR B D58	AB1	SB_DQ58			
DDR B D59	AT3	SB_DQ59			
DDR B D60	AY2	SB_DQ60			
DDR B D61	AY3	SB_DQ61			
DDR B D62	AU2	SB_DQ62			
DDR B D63	AT2	SB_DQ63			

U18E 5 OF 10

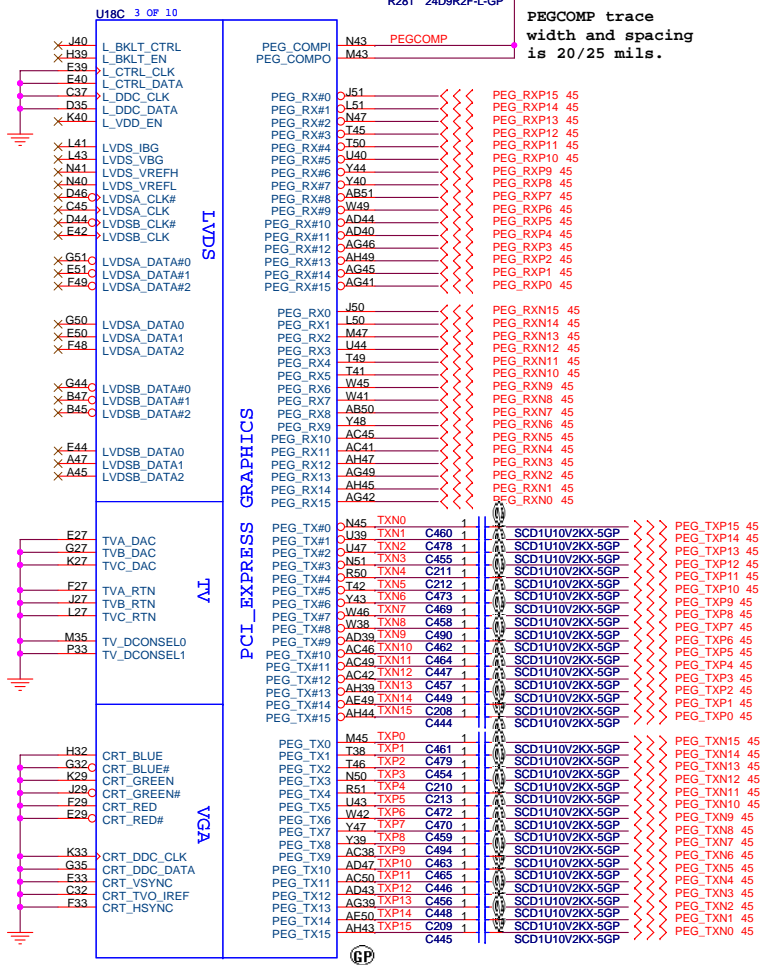
DDR SYSTEM MEMORY B

CRESTLINE-GP-U-NF

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 <b>Wistron Corporation</b> 21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichin, Taipei Hsien 221, Taiwan, R.O.C.	
Title	
<b>CRESTLINE(2/6)-DDR2 A/B CH</b>	
Size	Rev
A3	
<b>ME3-Discrete</b>	
Date: Wednesday, August 15, 2007	Sheet 8 of 51



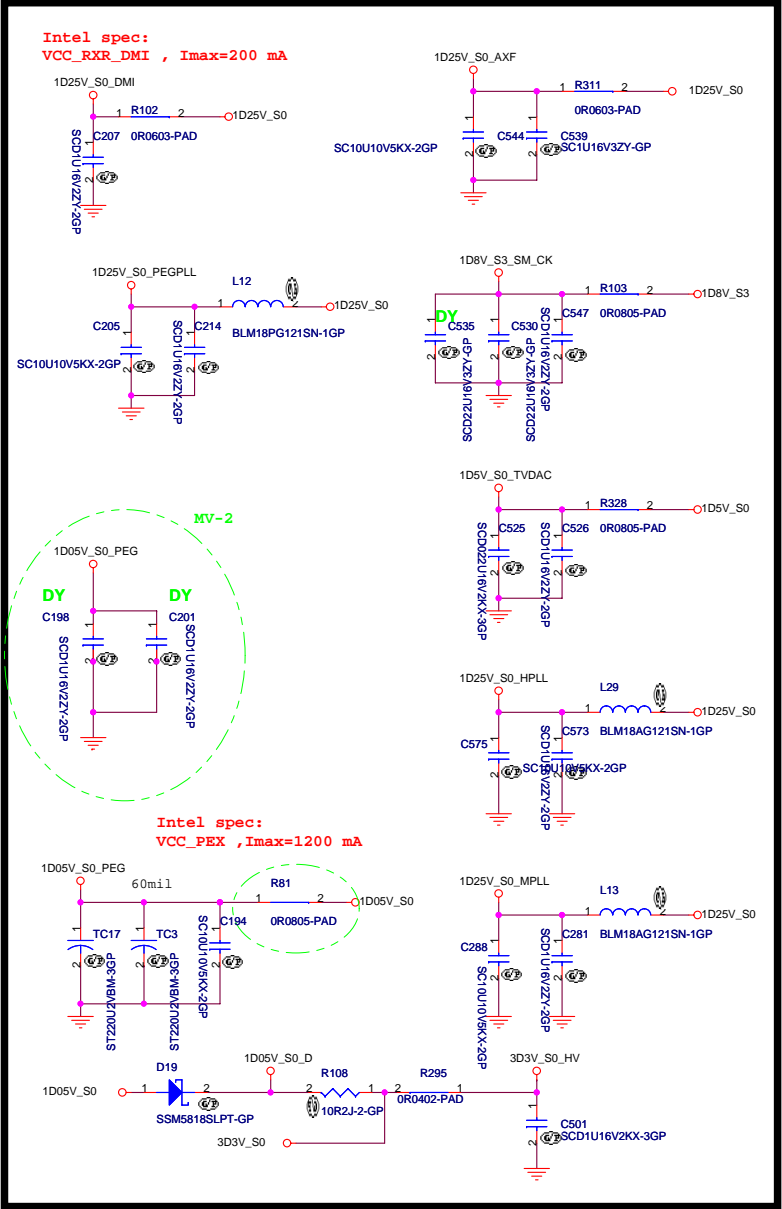
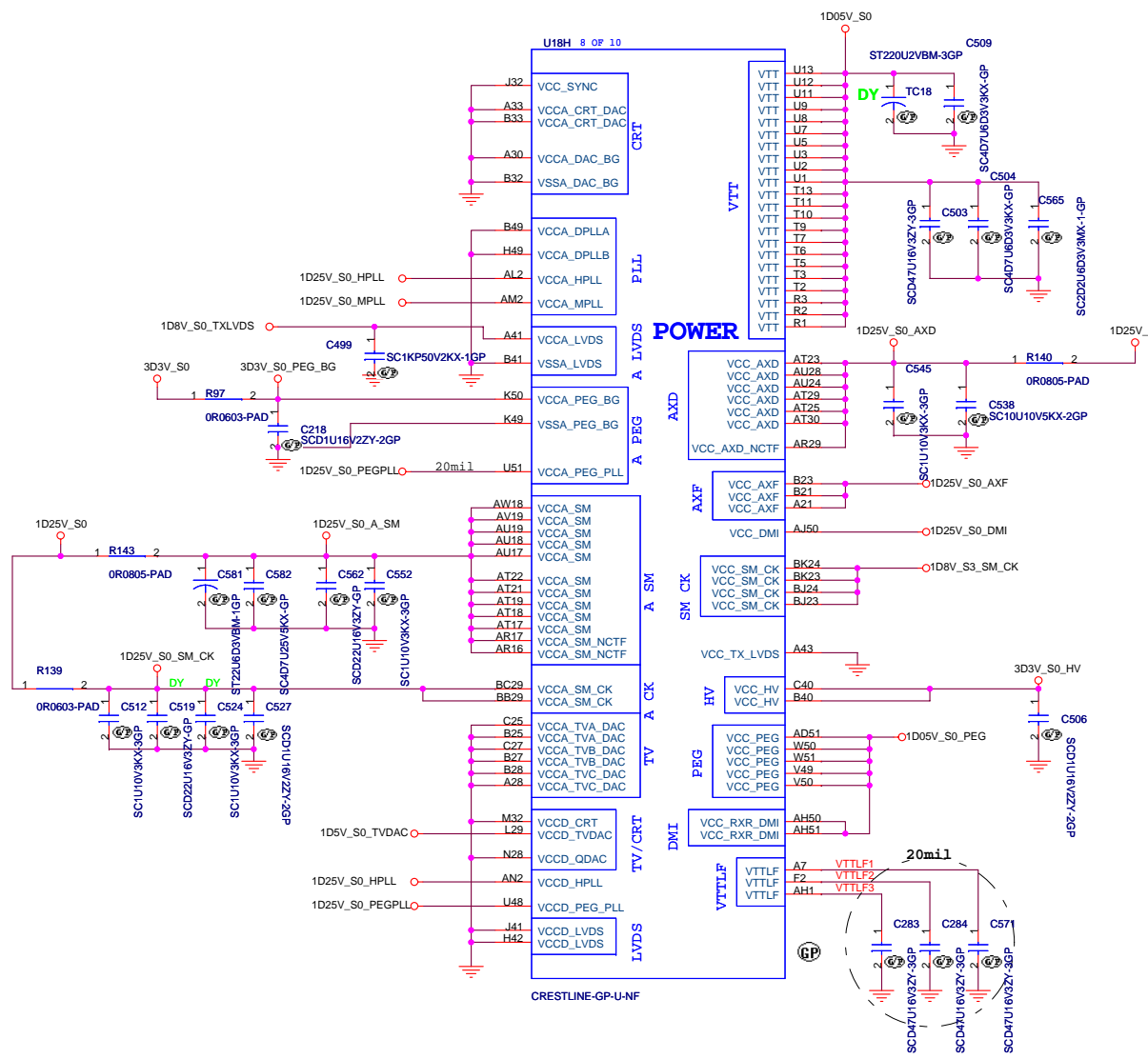


### Strap Pin Table

CFG[2:0] FSB Freq select	010 = FSB 800MHz 011 = FSB 667MHz Others = Reserved
CFG5 (DMI select)	0 = DMI x 2 1 = DMI x 4 *
CFG6	Reserved
CFG7 (CPU Strap)	0 = Reserved 1 = Mobile CPU *
CFG8 (Low power PCIE)	0 = Normal mode 1 = Low Power mode *
CFG9 (PCIE Graphics Lane Reversal)	0 = Reverse Lane 1 = Normal Operation *
CFG[11:10]	Reserved
CFG[13:12] (XOR/ALLZ)	00 = Reserved 01 = XOR Mode Enabled 10 = All Z Mode Enabled 11 = Normal Operation (Default)*
CFG[15:14]	Reserved
CFG16 (FSB Dynamic ODT)	0 = Disable 1 = Enable *
CFG[18:17]	Reversed
SDVO_CTRLDATA	0 = No SDVO Device Present * 1 = SDVO Device Present
CFG19(DMI Lane Reversal)	0 = Normal Operation (Lane number in Order) 1 = Reverse lane *
CFG20(PCIE/SDVO concurrent)	0 = Only PCIE or SDVO is operational * 1 = PCIE/SDVO are operating simu.

<Core Design>

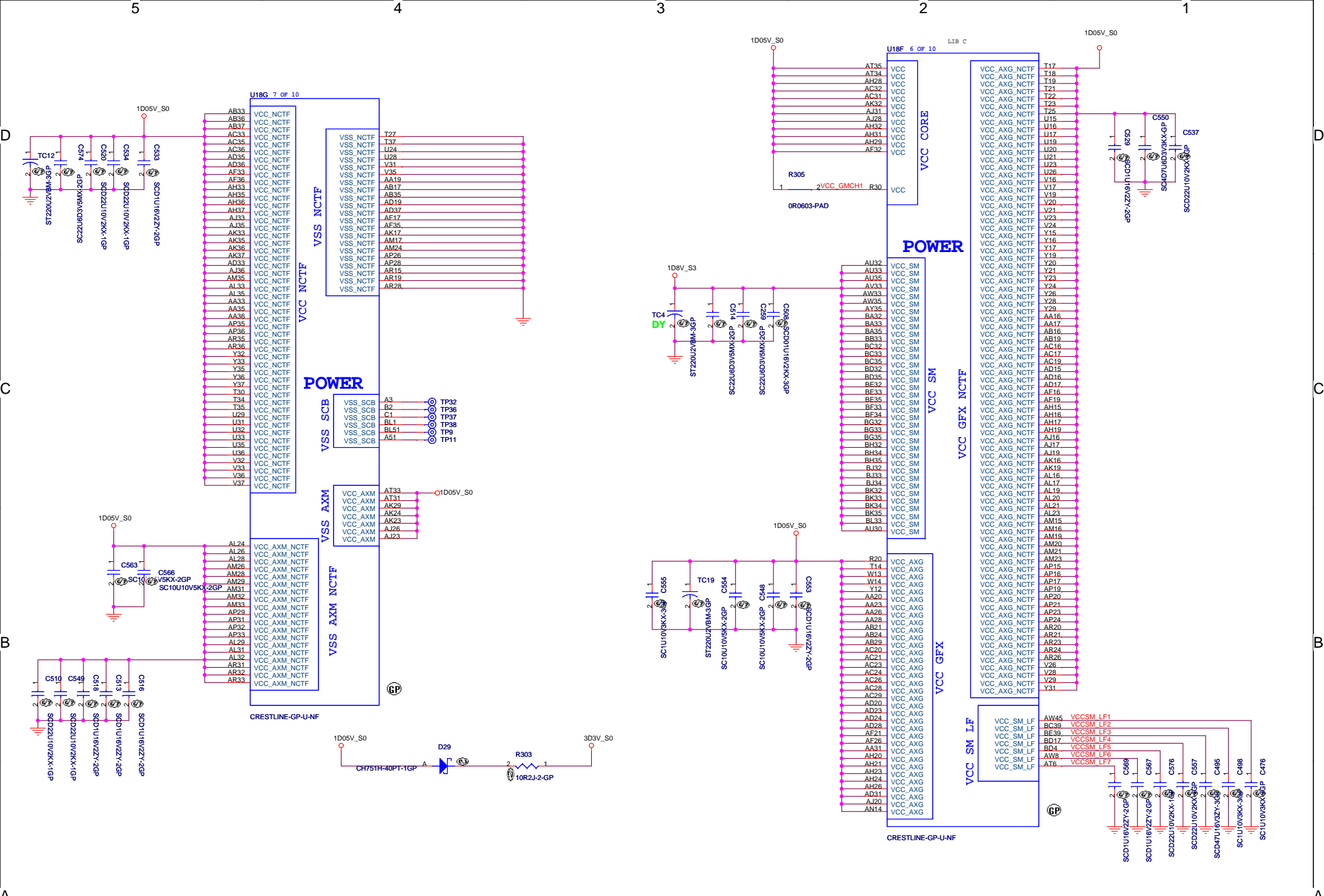
<b>緯創資通</b>		<b>Wistron Corporation</b>	
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.			
<b>CRESTLINE(3/6)-VGA/LVDS/TV</b>			
Title		Rev	
Size		Document Number	
A3		ME3-Discrete	
Date: Wednesday, August 15, 2007		Sheet 9 of 51	



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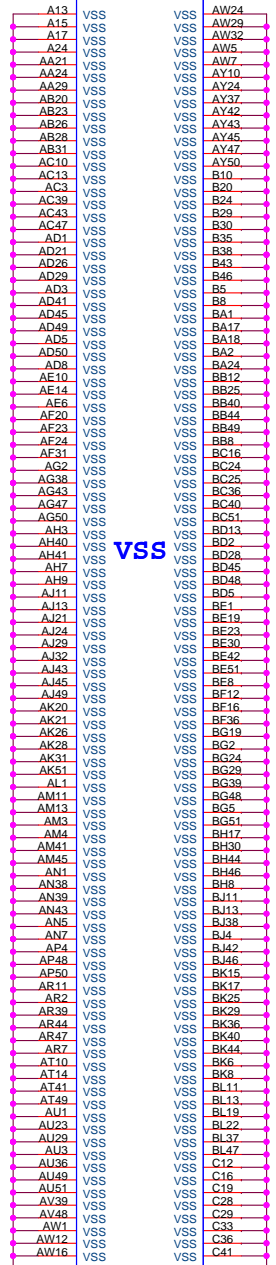
**緯創資通 Wistron Corporation**  
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,  
Taipei Hsien 221, Taiwan, R.O.C.

Title <b>CRESTLINE(4/6)-PWR</b>		
Size A3	Document Number <b>ME3-Discrete</b>	Rev
Date: Sunday, September 09, 2007		
Sheet 10		of 51



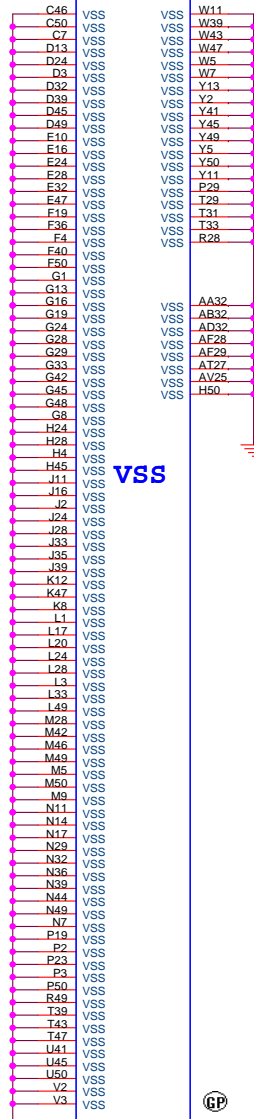
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U18J 9 OF 10



CRESTLINE-GP-U-NF

U18J 10 OF 10



VSS

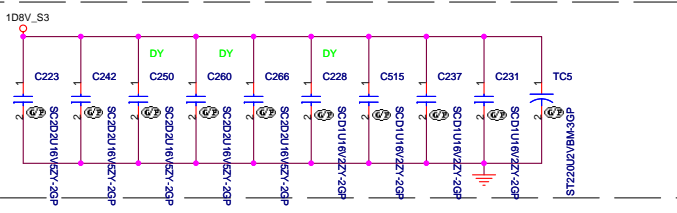
CRESTLINE-GP-U-NF

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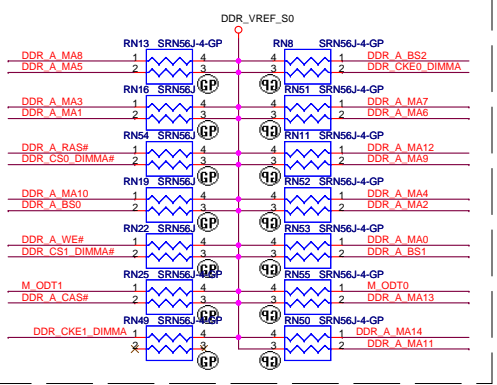
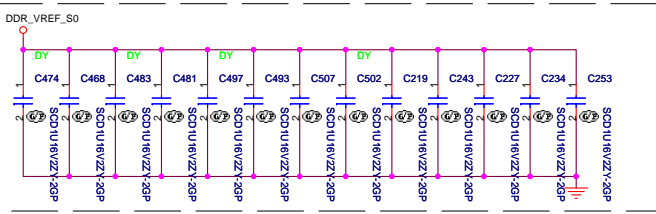
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		21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichin, Taipei Hsien 221, Taiwan, R.O.C.	
Title			
<b>CRESTLINE(6/6)-PWR/GND</b>			
Size	Document Number		Rev
A3			
<b>ME3-Discrete</b>			
Date:	Monday, July 30, 2007	Sheet	12 of 51

8 DDR\_A\_DQS# [0..7] <<>>  
 8 DDR\_A\_D [0..63] <<>>  
 8 DDR\_A\_DM [0..7] <<>>  
 8 DDR\_A\_DQS [0..7] <<>>  
 8 DDR\_A\_MA [0..13] <<>>  
 8 DDR\_A\_BS [0..2] <<>>

**Layout Note:**  
Place near DM1



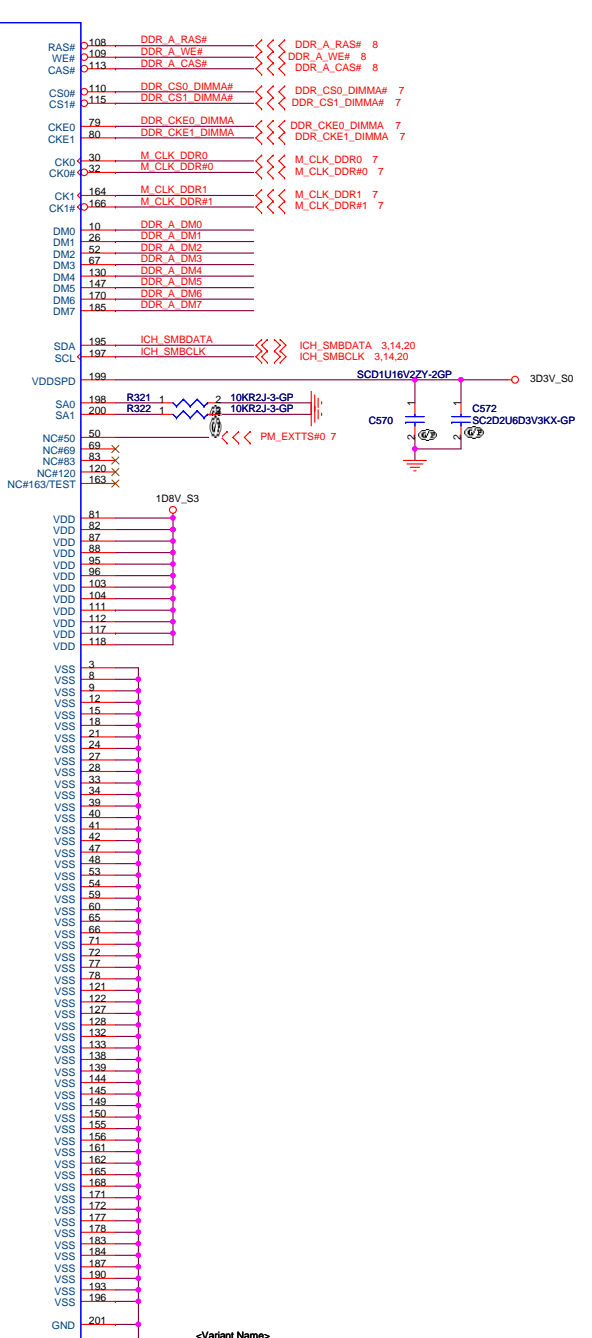
**Layout Note:**  
Place one cap close to every 2 pullup resistors terminated to +0.9VS



**Layout Note:**  
Place these resistors closely DM1, all trace length Max=1.5"

DM2  
 DDR\_A\_MA0 102 A0  
 DDR\_A\_MA1 101 A1  
 DDR\_A\_MA2 100 A2  
 DDR\_A\_MA3 99 A3  
 DDR\_A\_MA4 98 A4  
 DDR\_A\_MA5 97 A5  
 DDR\_A\_MA6 94 A7  
 DDR\_A\_MA7 92 A8  
 DDR\_A\_MA8 93 A9  
 DDR\_A\_MA9 91 A10/AP  
 DDR\_A\_MA10 105 A11  
 DDR\_A\_MA11 90 A12  
 DDR\_A\_MA12 89 A13  
 DDR\_A\_MA13 116 A14  
 DDR\_A\_MA14 86 A15  
 7 DDR\_A\_MA14 <<>> 84 A16/BA2  
 DDR\_A\_BS2 85 BA0  
 DDR\_A\_BS0 107 BA1  
 DDR\_A\_BS1 106 BA1

DDR\_A\_D0 5 DO0  
 DDR\_A\_D1 17 DO1  
 DDR\_A\_D2 12 DO2  
 DDR\_A\_D3 19 DO3  
 DDR\_A\_D4 4 DO4  
 DDR\_A\_D5 14 DO5  
 DDR\_A\_D6 7 DO6  
 DDR\_A\_D7 16 DO7  
 DDR\_A\_D8 23 DO8  
 DDR\_A\_D9 29 DO9  
 DDR\_A\_D10 35 DO10  
 DDR\_A\_D11 37 DO11  
 DDR\_A\_D12 20 DO12  
 DDR\_A\_D13 22 DO13  
 DDR\_A\_D14 36 DO14  
 DDR\_A\_D15 38 DO15  
 DDR\_A\_D16 43 DO16  
 DDR\_A\_D17 45 DO17  
 DDR\_A\_D18 55 DO18  
 DDR\_A\_D19 57 DO19  
 DDR\_A\_D20 44 DO20  
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 DDR\_A\_D30 74 DO30  
 DDR\_A\_D31 76 DO31  
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 DDR\_A\_D57 181 DO57  
 DDR\_A\_D58 189 DO58  
 DDR\_A\_D59 191 DO59  
 DDR\_A\_D60 180 DO60  
 DDR\_A\_D61 182 DO61  
 DDR\_A\_D62 192 DO62  
 DDR\_A\_D63 194 DO63



<Variant Name>

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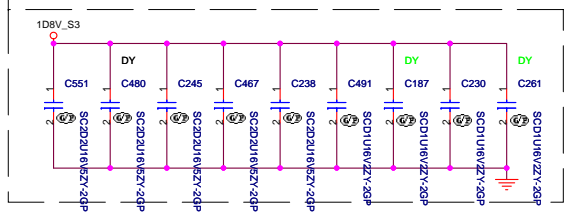
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Size: Document Number  
 Custom: **ME3-Discrete** Rev

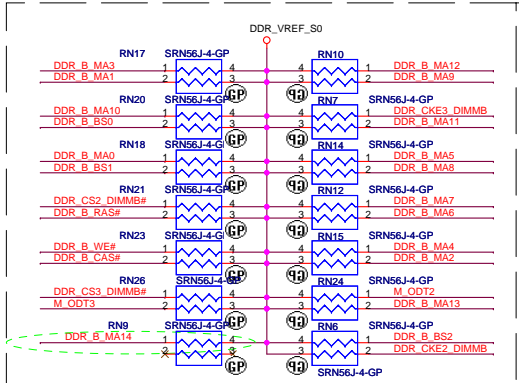
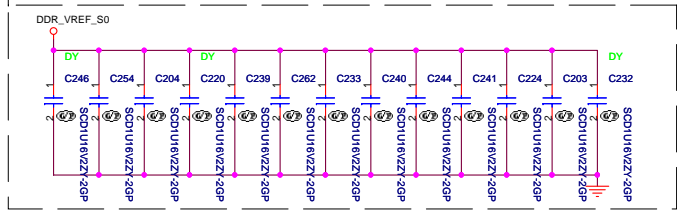
Date: Wednesday, August 15, 2007 Sheet 13 of 51

- 8 DDR\_B\_DQS#(0..7) <<>
- 8 DDR\_B\_D[0..63] <<>
- 8 DDR\_B\_DM(0..7) <<>
- 8 DDR\_B\_DQS(0..7) <<>
- 8 DDR\_B\_MA(0..13) <<>
- 8 DDR\_B\_BS(0..2) <<>

Layout Note:  
Place near DM2

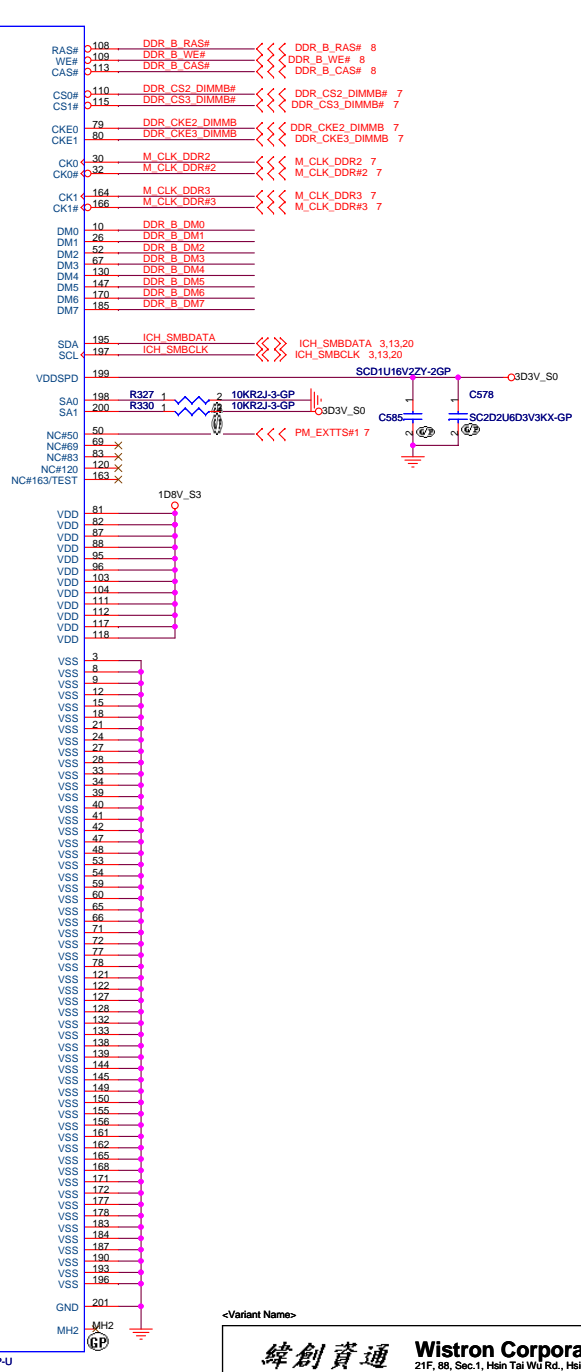
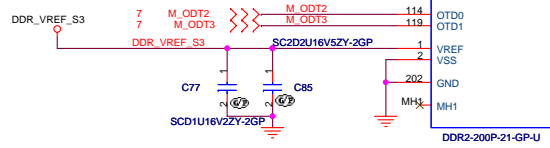


Layout Note:  
Place one cap close to every 2 pullup resistors terminated to +0.9Vs



Layout Note:  
Place these resistors closely DM2, all trace length Max=1.5"

DDR_B_MA0	102	A0
DDR_B_MA1	101	A1
DDR_B_MA2	100	A2
DDR_B_MA3	99	A3
DDR_B_MA4	98	A4
DDR_B_MA5	97	A5
DDR_B_MA6	94	A6
DDR_B_MA7	92	A7
DDR_B_MA8	93	A8
DDR_B_MA9	91	A9
DDR_B_MA10	105	A10/AP
DDR_B_MA11	90	A11
DDR_B_MA12	116	A12
DDR_B_MA13	118	A13
DDR_B_MA14	86	A14
DDR_B_BS2	84	A15
DDR_B_BS1	108	A16/BA2
DDR_B_BS0	107	BA0
DDR_B_D0	5	DO0
DDR_B_D1	7	DO1
DDR_B_D2	17	DO2
DDR_B_D3	19	DO3
DDR_B_D4	4	DO4
DDR_B_D5	6	DO5
DDR_B_D6	14	DO6
DDR_B_D7	10	DO7
DDR_B_D8	23	DO8
DDR_B_D9	26	DO9
DDR_B_D10	28	DO10
DDR_B_D11	37	DO11
DDR_B_D12	20	DO12
DDR_B_D13	22	DO13
DDR_B_D14	38	DO14
DDR_B_D15	38	DO15
DDR_B_D16	43	DO16
DDR_B_D17	45	DO17
DDR_B_D18	55	DO18
DDR_B_D19	57	DO19
DDR_B_D20	44	DO20
DDR_B_D21	46	DO21
DDR_B_D22	56	DO22
DDR_B_D23	58	DO23
DDR_B_D24	61	DO24
DDR_B_D25	63	DO25
DDR_B_D26	73	DO26
DDR_B_D27	75	DO27
DDR_B_D28	69	DO28
DDR_B_D29	64	DO29
DDR_B_D30	74	DO30
DDR_B_D31	76	DO31
DDR_B_D32	123	DO32
DDR_B_D33	125	DO33
DDR_B_D34	132	DO34
DDR_B_D35	137	DO35
DDR_B_D36	124	DO36
DDR_B_D37	126	DO37
DDR_B_D38	134	DO38
DDR_B_D39	136	DO39
DDR_B_D40	141	DO40
DDR_B_D41	143	DO41
DDR_B_D42	151	DO42
DDR_B_D43	153	DO43
DDR_B_D44	149	DO44
DDR_B_D45	142	DO45
DDR_B_D46	152	DO46
DDR_B_D47	154	DO47
DDR_B_D48	157	DO48
DDR_B_D49	159	DO49
DDR_B_D50	173	DO50
DDR_B_D51	175	DO51
DDR_B_D52	158	DO52
DDR_B_D53	160	DO53
DDR_B_D54	174	DO54
DDR_B_D55	176	DO55
DDR_B_D56	179	DO56
DDR_B_D57	181	DO57
DDR_B_D58	180	DO58
DDR_B_D59	191	DO59
DDR_B_D60	180	DO60
DDR_B_D61	182	DO61
DDR_B_D62	192	DO62
DDR_B_D63	194	DO63
DDR_B_DQS#0	11	DO64#
DDR_B_DQS#1	25	DO65#
DDR_B_DQS#2	49	DO66#
DDR_B_DQS#3	68	DO67#
DDR_B_DQS#4	125	DO68#
DDR_B_DQS#5	146	DO69#
DDR_B_DQS#6	167	DO70#
DDR_B_DQS#7	196	DO71#
DDR_B_DQS#0	13	DO80#
DDR_B_DQS#1	31	DO81#
DDR_B_DQS#2	51	DO82#
DDR_B_DQS#3	70	DO83#
DDR_B_DQS#4	131	DO84#
DDR_B_DQS#5	148	DO85#
DDR_B_DQS#6	169	DO86#
DDR_B_DQS#7	188	DO87#
DDR_B_DQS#0	114	OTD0
DDR_B_DQS#1	119	OTD1
M_ODT2	114	M_ODT2
M_ODT3	119	M_ODT3
VREF	1	VREF
VSS	2	VSS
GND	202	GND
MH1	201	MH1
MH2	201	MH2



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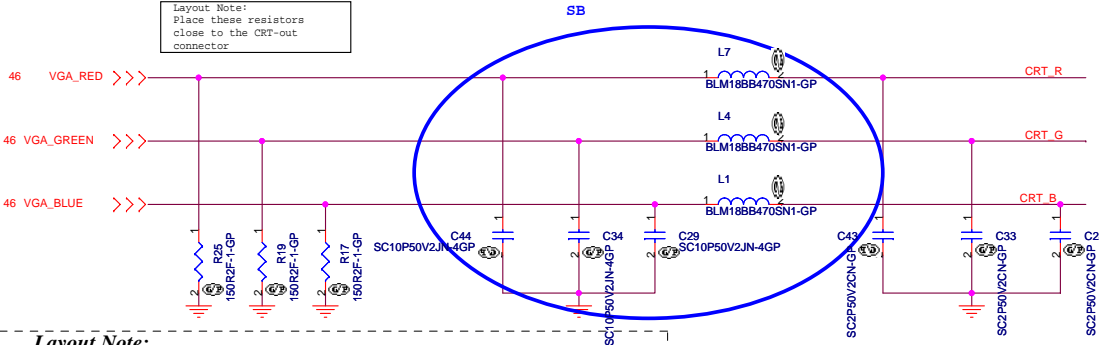
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Size: Document Number  
Custom: **ME3-Discrete** Rev  
Date: Wednesday, August 15, 2007 Sheet 14 of 51



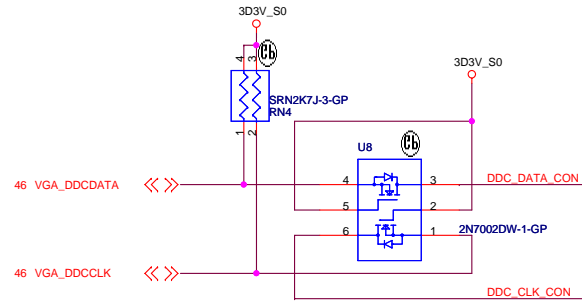
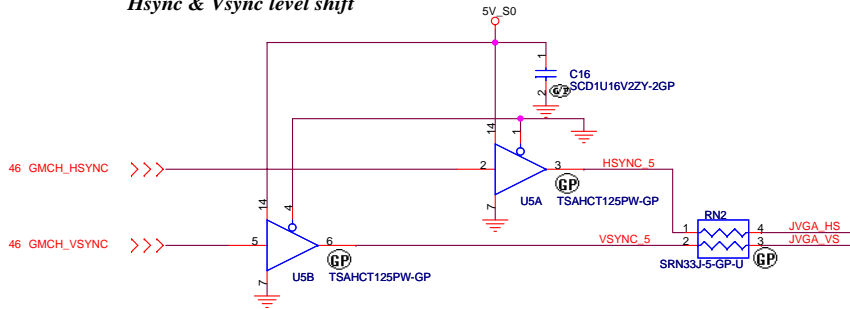
# CRT I/F & CONNECTOR

Layout Note:  
Place these resistors  
close to the CRT-out  
connector

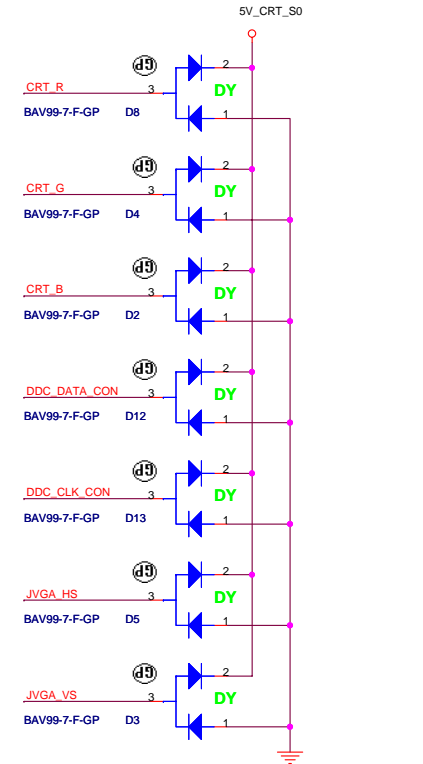


**Layout Note:**  
\* Must be a ground return path between this ground and the ground on the VGA connector.  
Pi-filter & 150 Ohm pull-down resistors should be as close as to CRT CONN. RGB will hit 75 Ohm first, pi-filter, then CRT CONN.

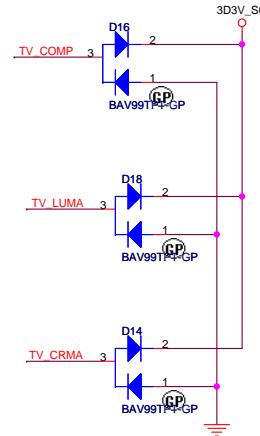
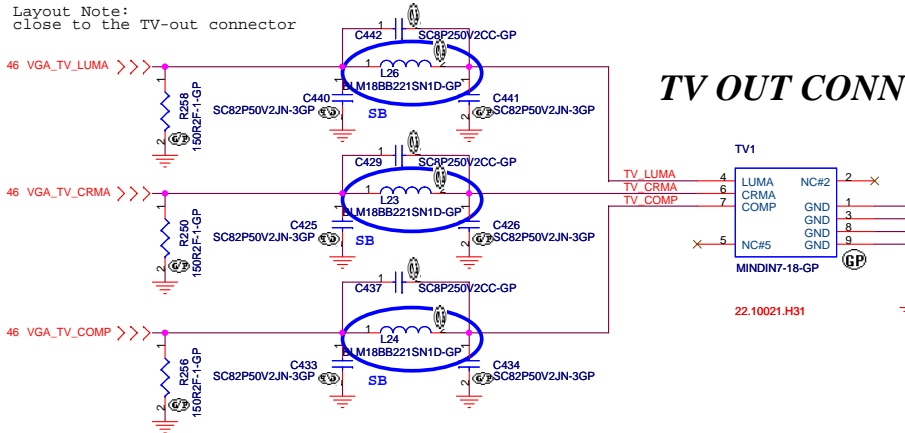
## Hsync & Vsync level shift



## DDC\_CLK & DATA level shift



Layout Note:  
close to the TV-out connector

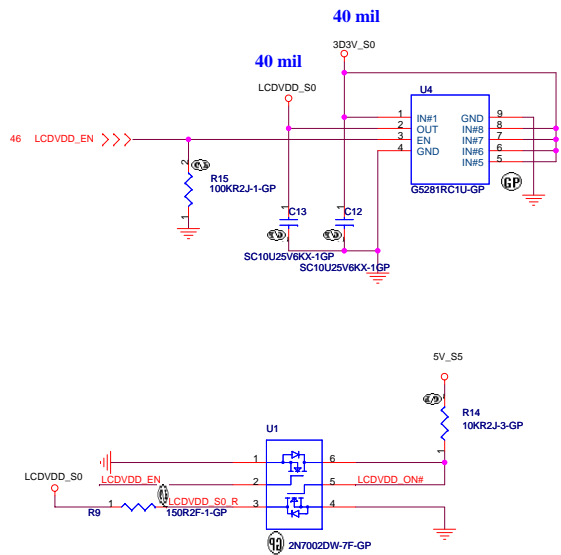
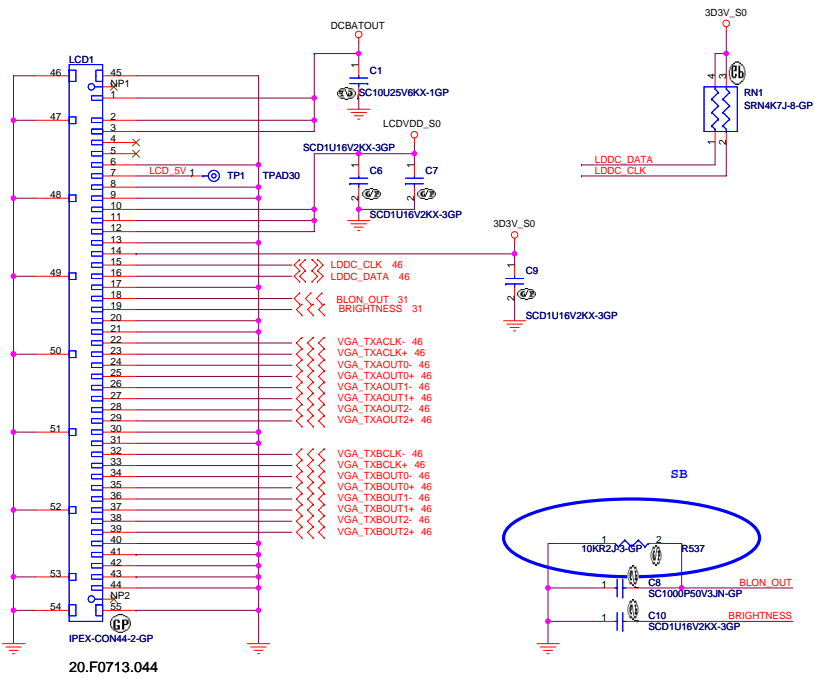


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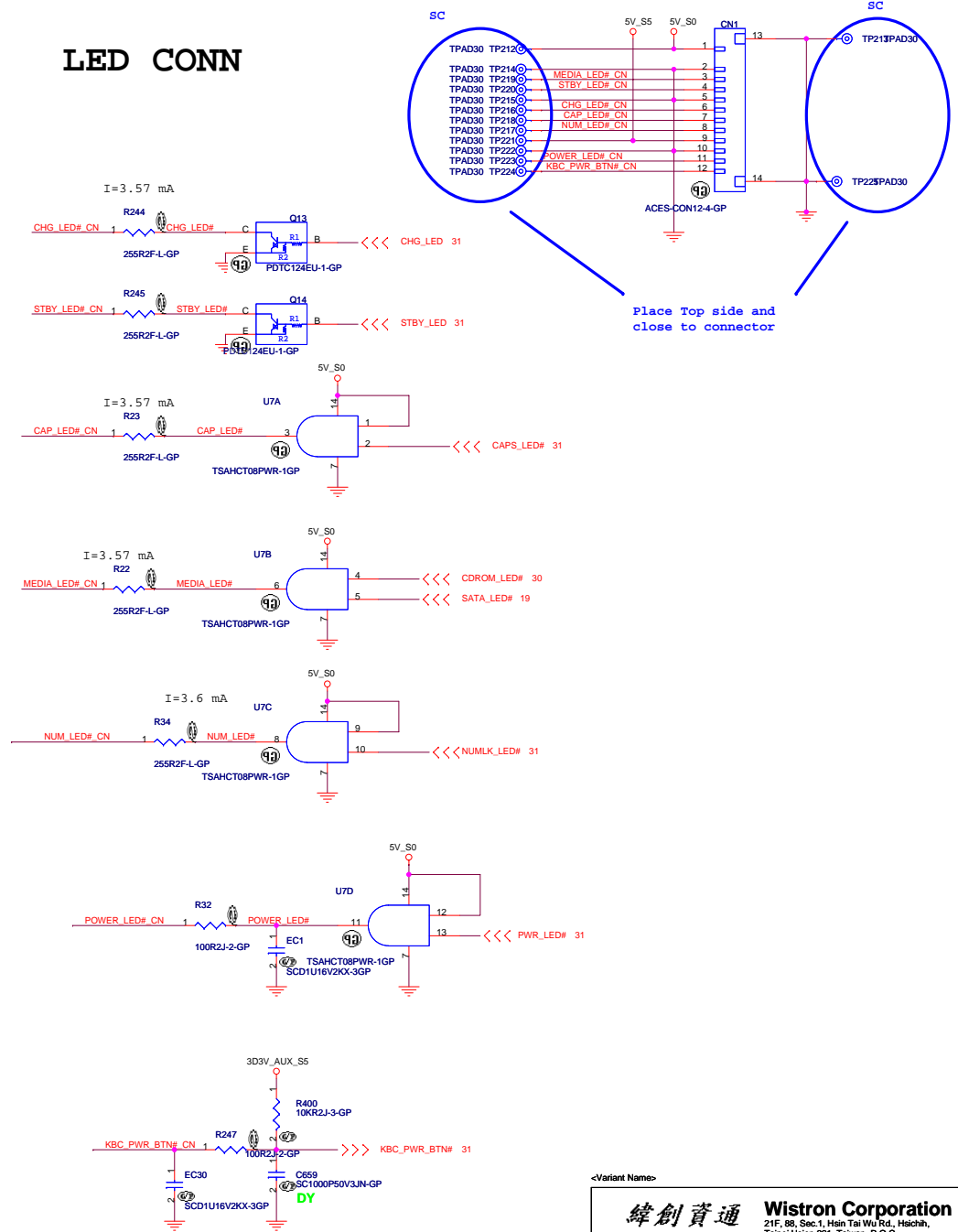
**緯創資通** **Wistron Corporation**  
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,  
Taipei Hsien 221, Taiwan, R.O.C.

Title <b>CRT/TV CONNECTOR</b>		
Size A3	Document Number <b>ME3-Discrete</b>	Rev
Date: Thursday, September 13, 2007	Sheet 15	of 51

# LCD/INVERTER CONN

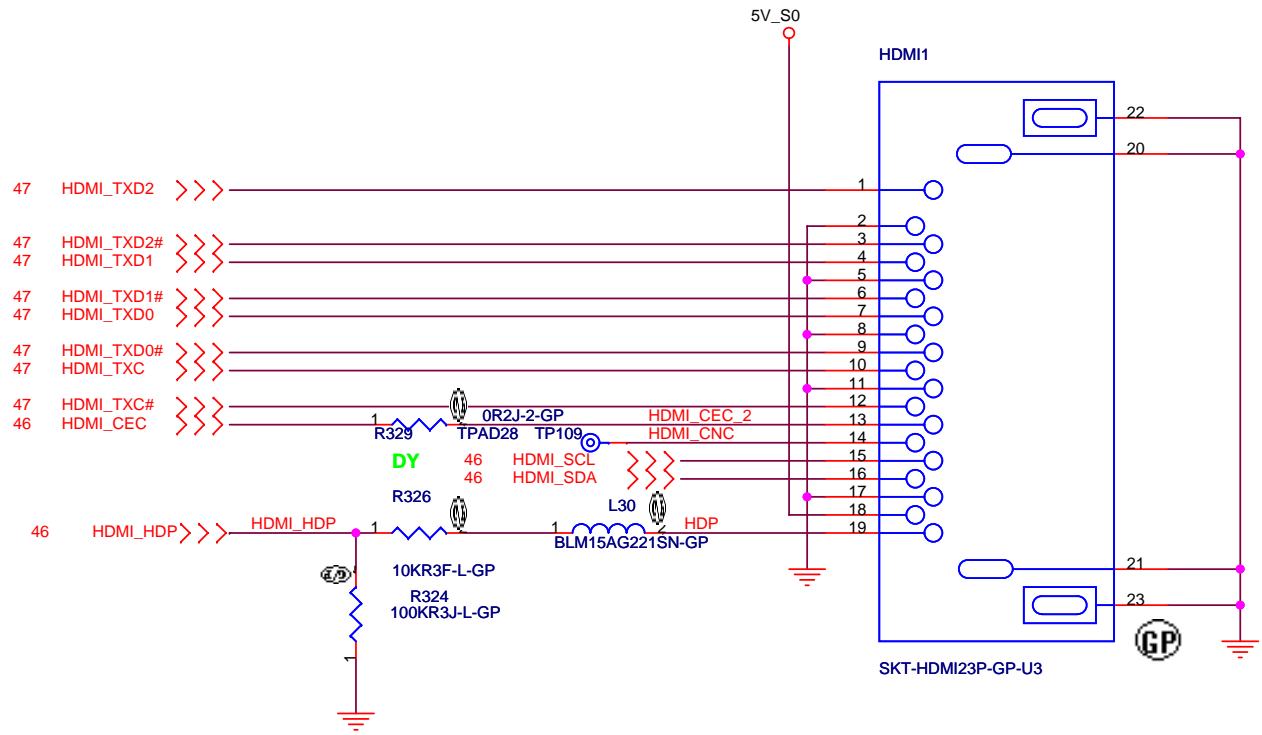


# LED CONN



<Variant Name>

<b>Wistron Corporation</b> 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichang, Taipei Hsien 221, Taiwan, R.O.C.	
File	LCD CONN & LED
Size	Document Number
<b>ME3-Discrete</b>	
Date	Thursday, September 13, 2007
Sheet	16 of 51



緯創資通

**Wistron Corporation**  
 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,  
 Taipei Hsien 221, Taiwan, R.O.C.

Title

**HDMI**

Size

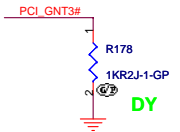
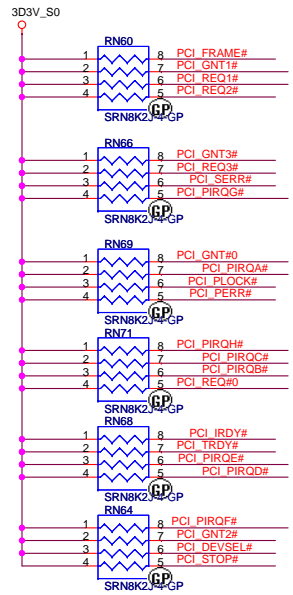
Document Number

Rev

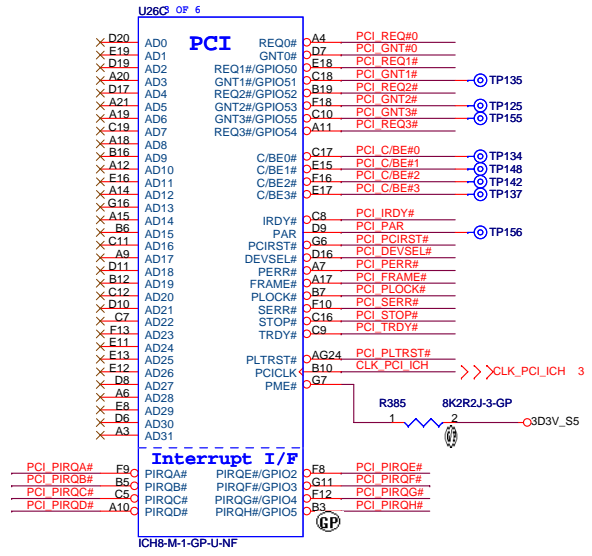
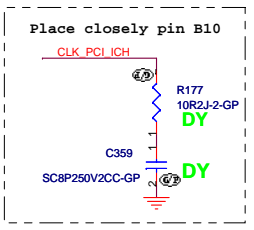
**ME3-Discrete**

Date: Wednesday, August 15, 2007

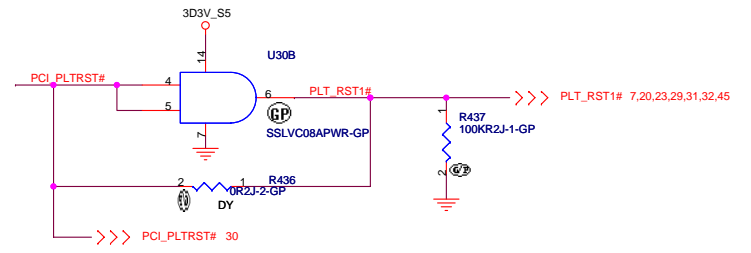
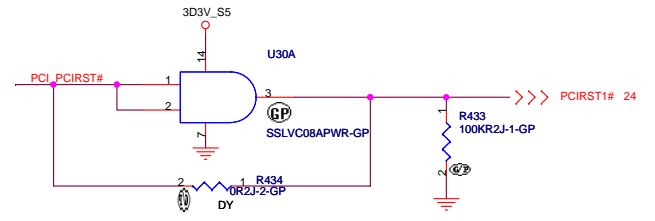
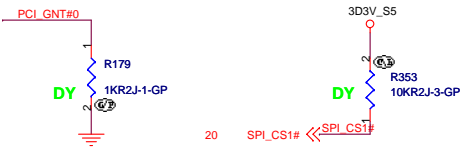
Sheet 17 of 51



A16 swap override Strap	
PCI_GNT3#	Low= A16 swap override Enable High= Default *



Boot BIOS Strap		
PCI_GNT0#	SPI_CS#1	Boot BIOS Location
0	1	SPI
1	0	PCI
1	1	LPC *



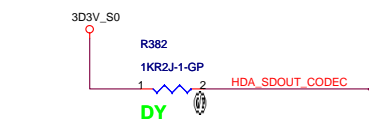
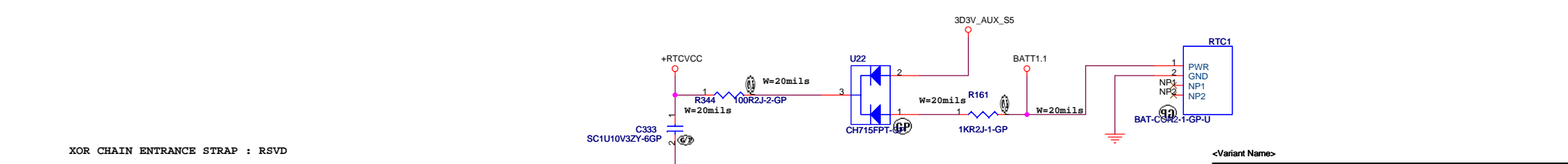
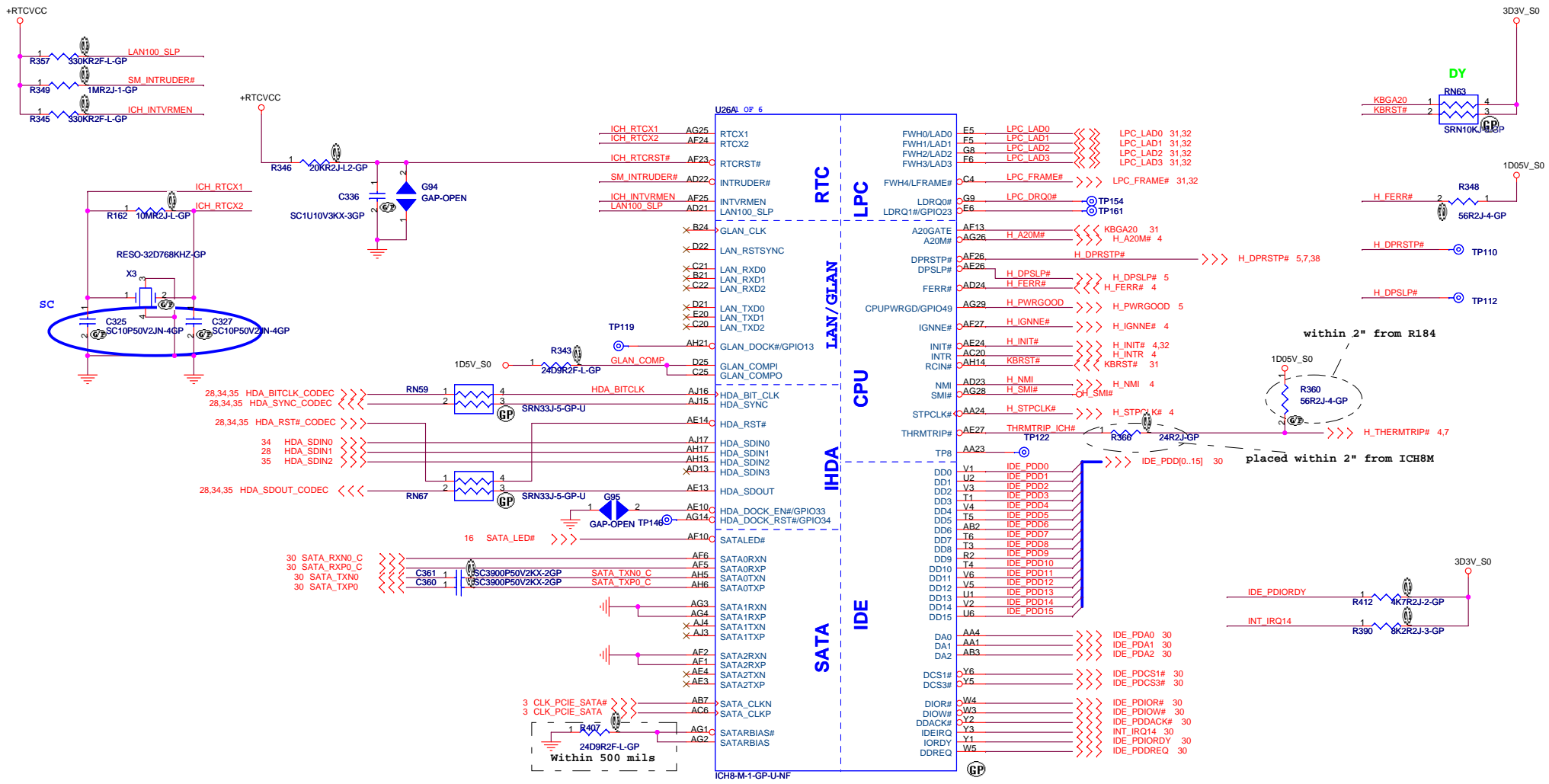
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**緯創資通 Wistron Corporation**  
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

Title: **ICH8(1/4)-PCI/INT**

Size A3 Document Number **ME3-Discrete** Rev

Date: Wednesday, August 15, 2007 Sheet 18 of 51



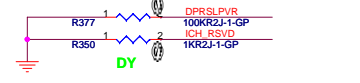
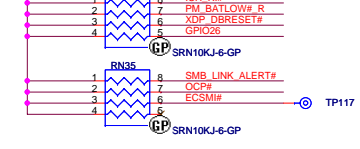
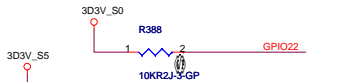
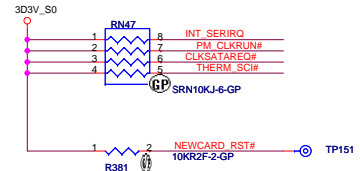
<Variant Name>

**緯創資通 Wistron Corporation**  
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

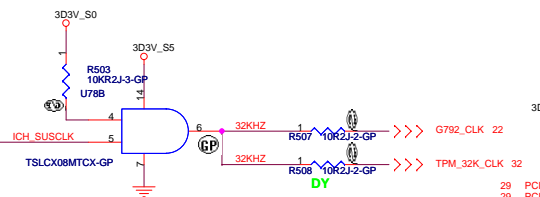
Title: **ICH8(2/4) LAN,HD,IDE,LPC**

Size: A3 Document Number: **ME3-Discrete** Rev:

Date: Wednesday, September 19, 2007 Sheet 19 of 51



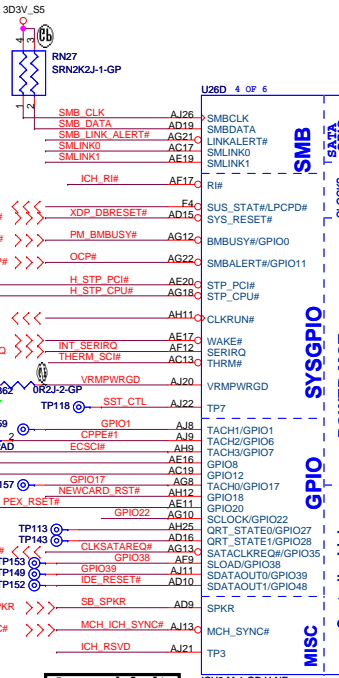
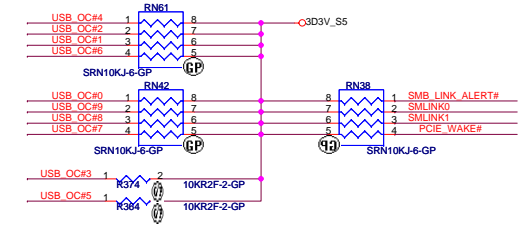
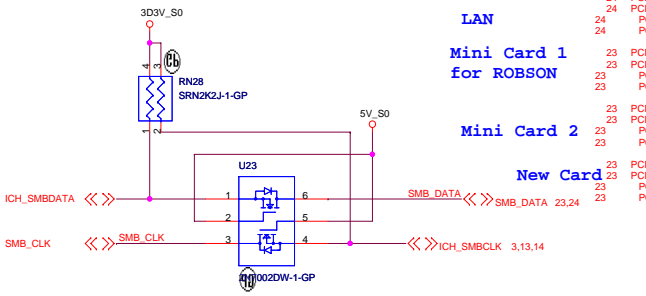
32K suspend clock output



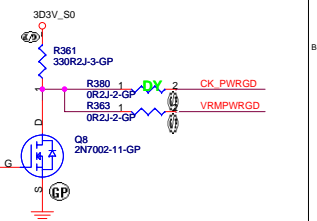
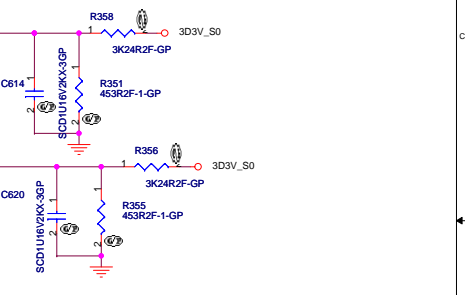
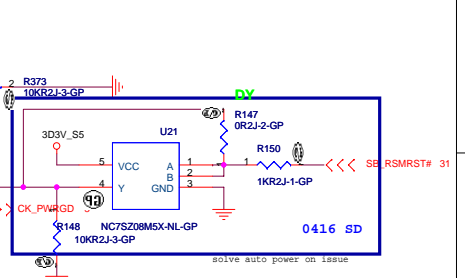
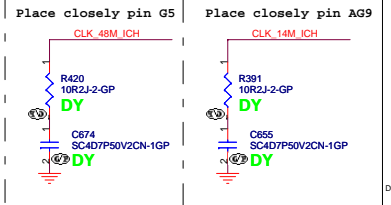
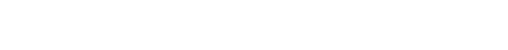
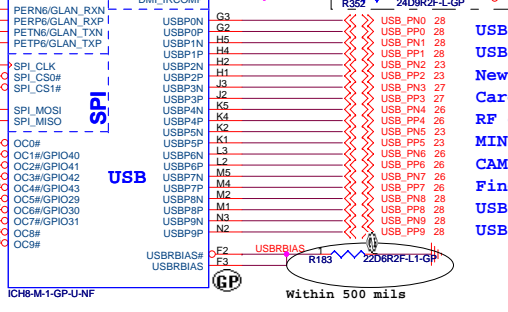
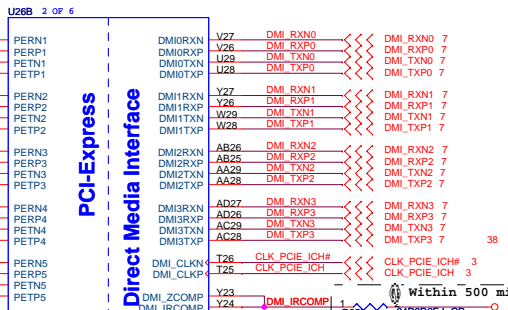
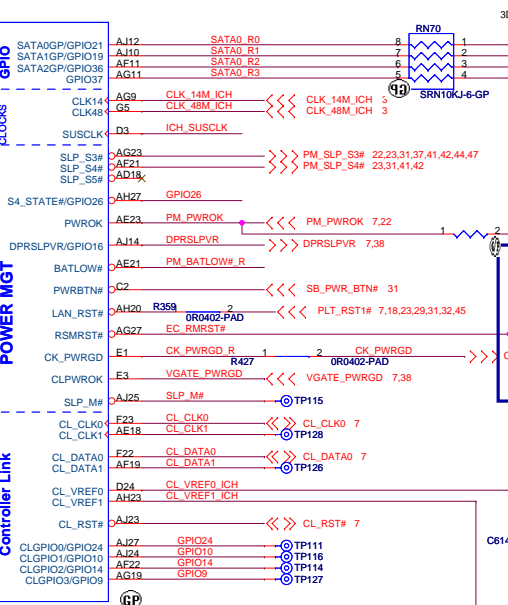
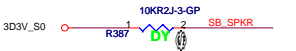
**ESATA**

**LAN**  
Mini Card 1 for ROBSON  
Mini Card 2

**New Card**



Low--> default  
High--> No boot



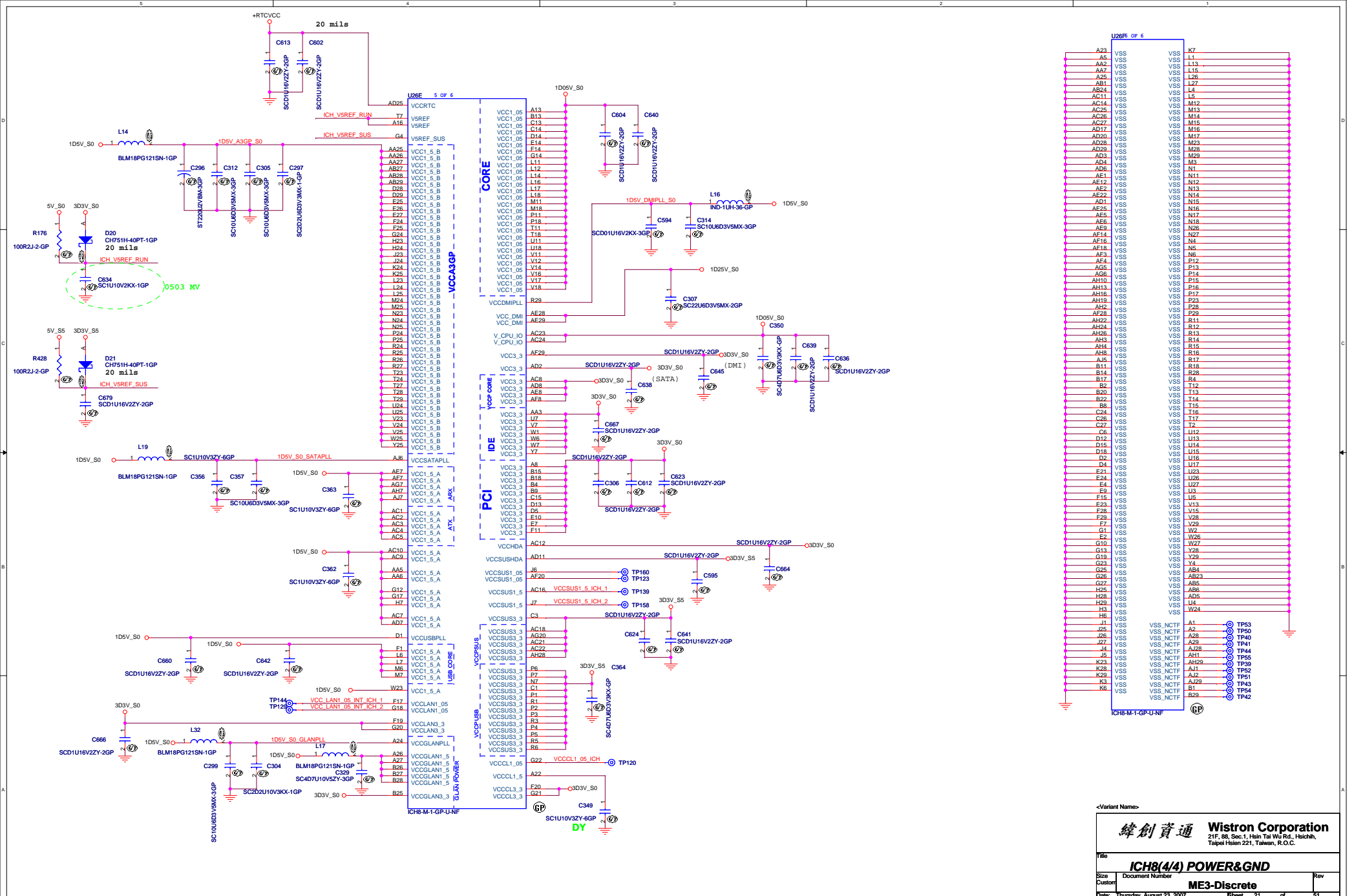
- USB1
- USB2\_1
- New Card
- Card Reader
- RF or BT
- MINICARD 2
- CAMERA
- Printer
- USB2\_2.1
- USB2\_2.2

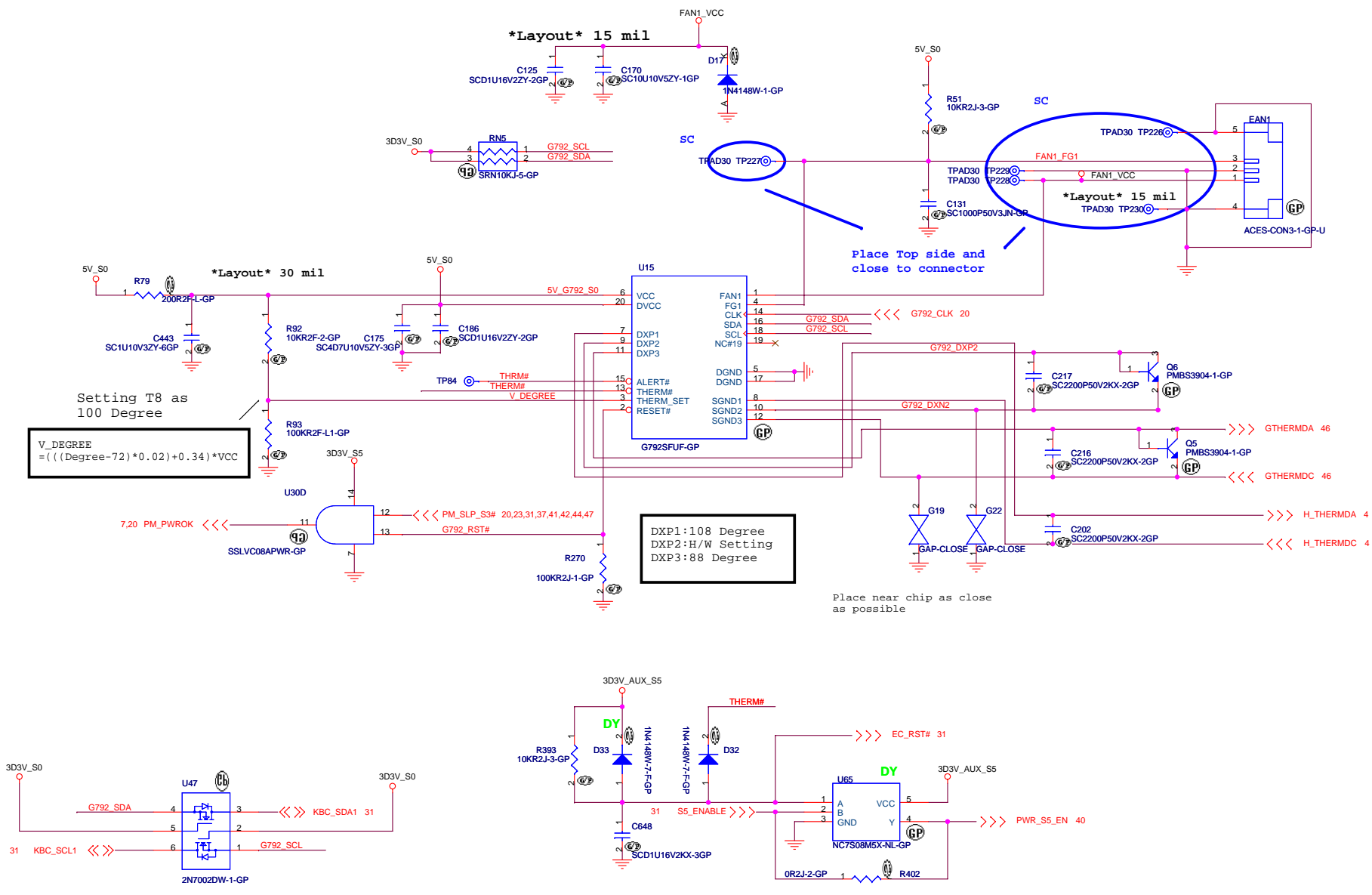
**緯創資通 Wistron Corporation**  
21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsiehshih, Taipei Hsien 221, Taiwan, R.O.C.

**ICH8(3/4) PM,USB,GPIO**

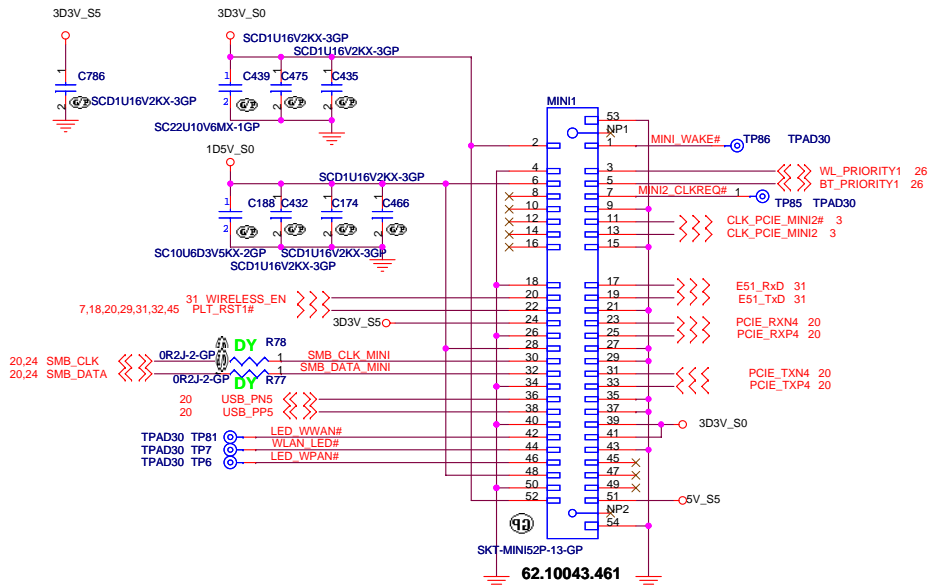
File: \_\_\_\_\_  
Size: \_\_\_\_\_ Document Number: \_\_\_\_\_ Rev: \_\_\_\_\_  
Customer: \_\_\_\_\_  
Date: Sunday, September 09, 2007 Sheet 20 of 51



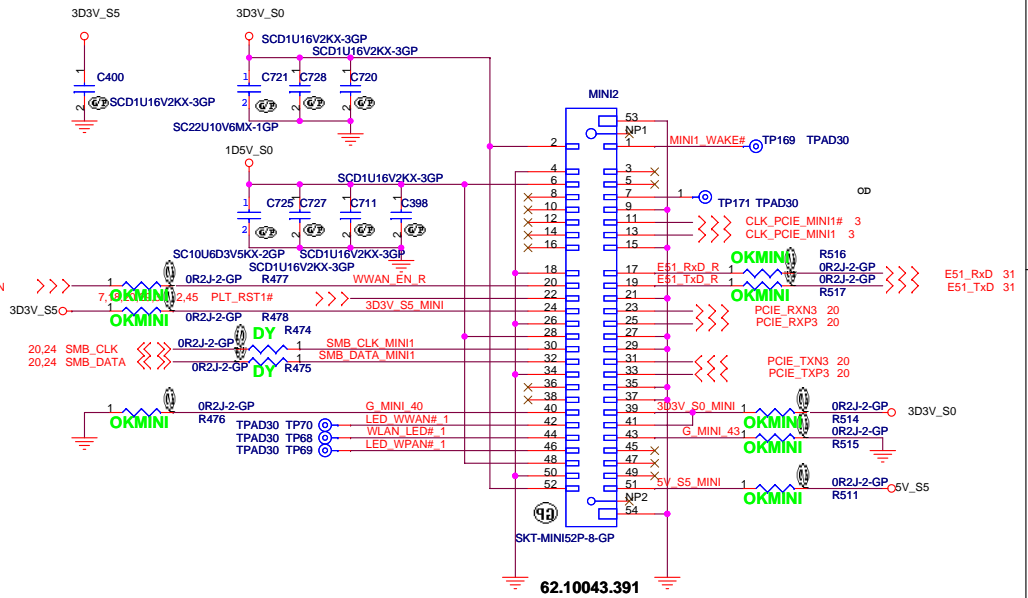




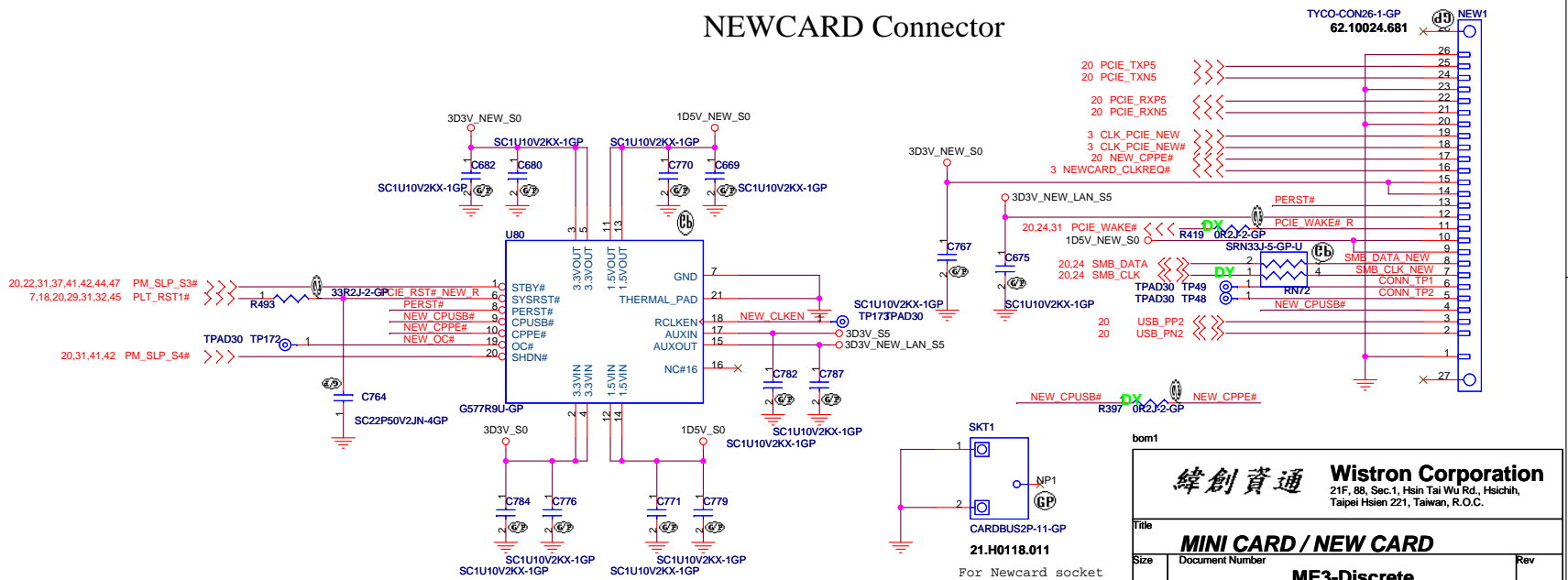
# Mini Card Connector



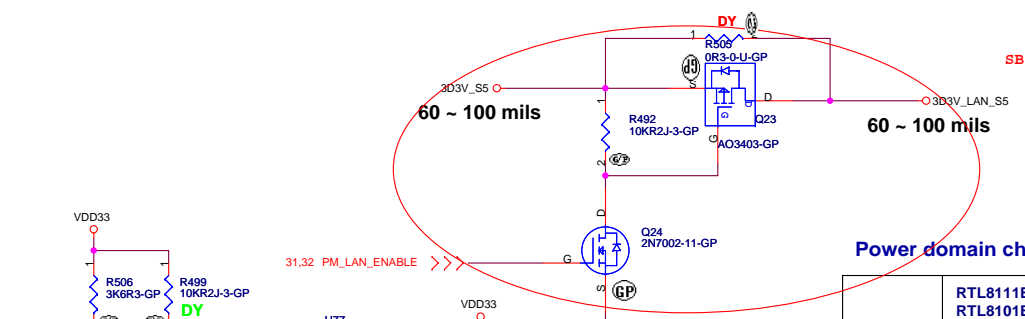
# Mini Card Connector for ROBSON



# NEWCARD Connector



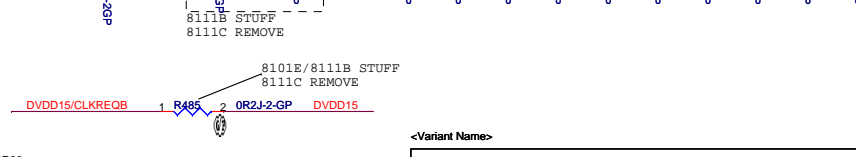
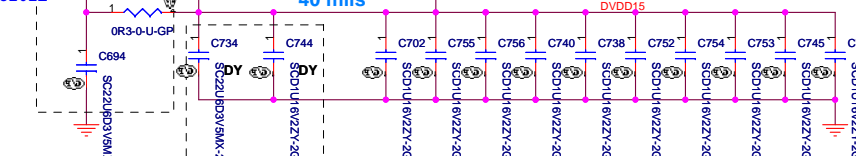
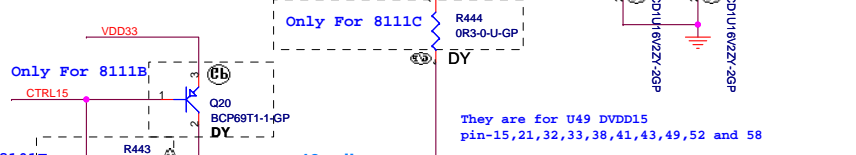
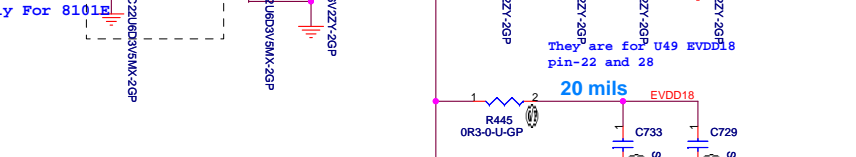
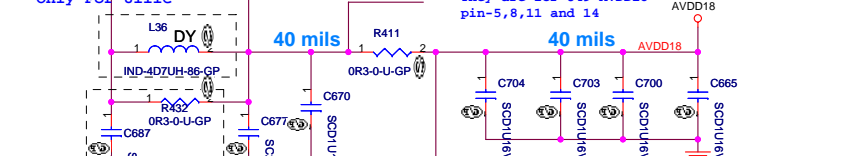
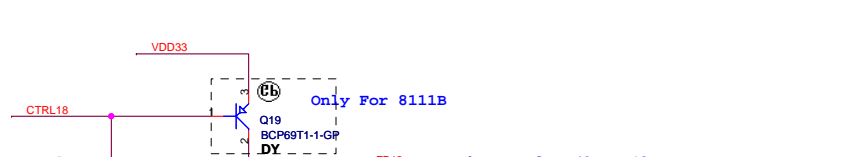
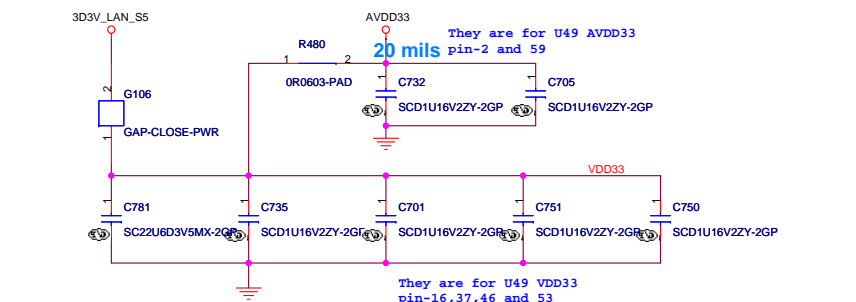
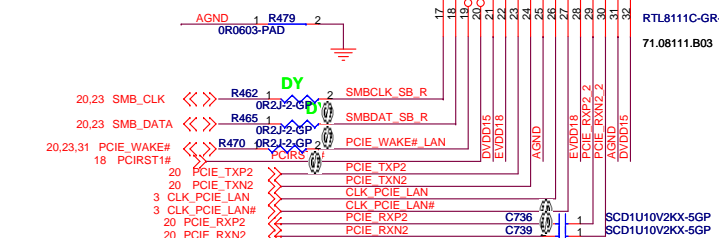
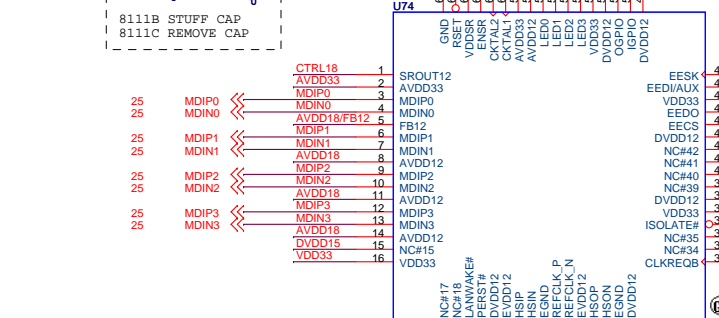
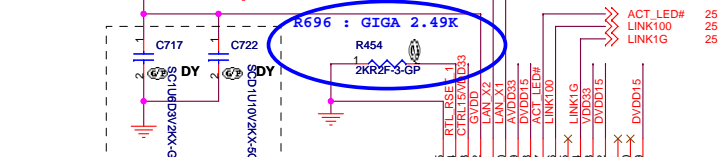
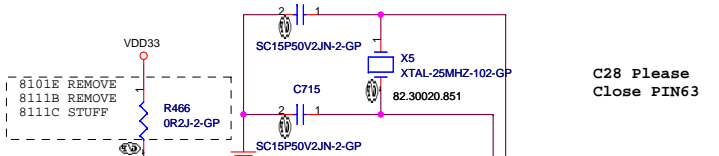
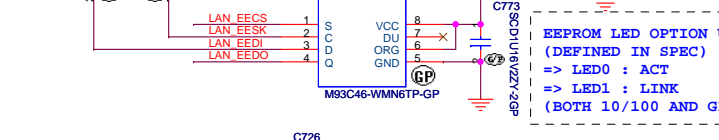
<b>緯創資通</b>		<b>Wistron Corporation</b>	
		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
<b>MINI CARD / NEW CARD</b>			
Title	Document Number	Rev	
	<b>21.H0118.011</b>	<b>ME3-Discrete</b>	
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Power domain chart

	RTL8111B / RTL8101E	RTL8111C
AVDD33	3.3V	3.3V
AVDD18	1.8V	1.2V
EVDD18	1.8V	1.2V
DVDD15	1.5V	1.2V

	Q3	Q5
RTL8111B	Need	Need
RTL8111C	N/A	N/A
RTL8101E	N/A	N/A

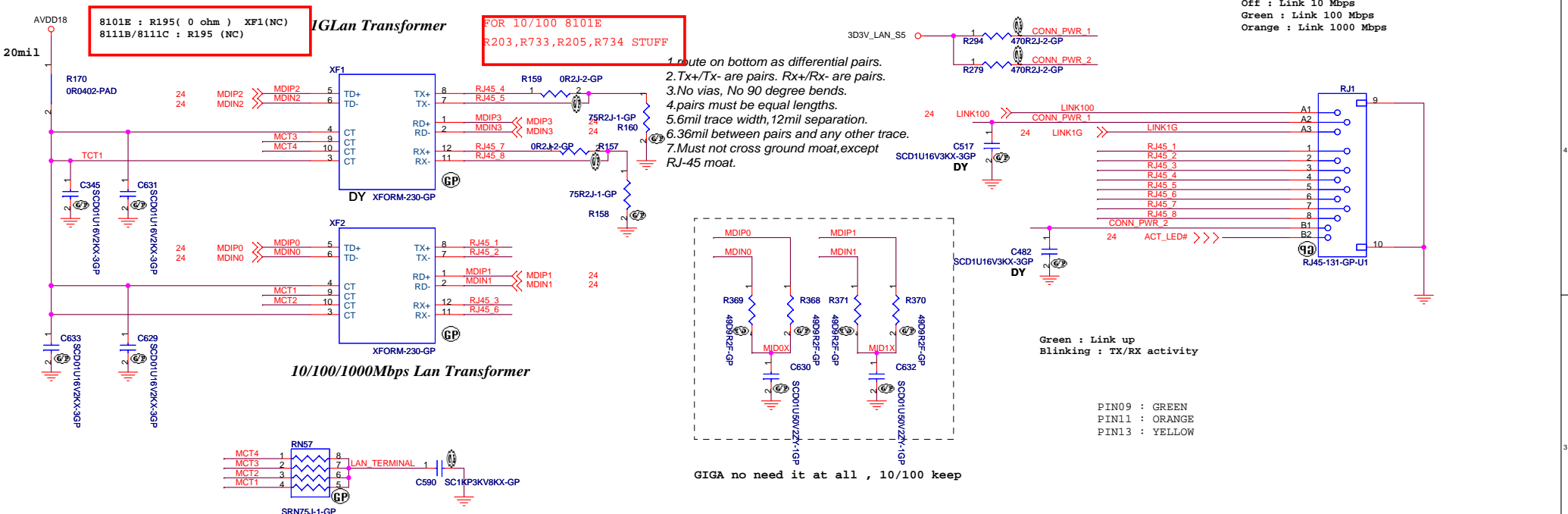


Variant Name: **RTL8111C/8101E**

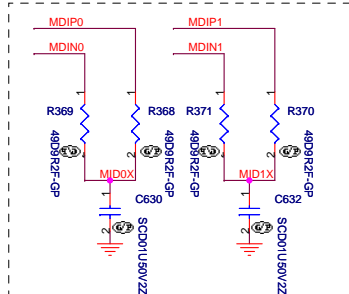
Size: **ME3-Discrete**

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Wistron Corporation  
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.



1. route on bottom as differential pairs.
2. Tx+/Tx- are pairs. Rx+/Rx- are pairs.
3. No vias, No 90 degree bends.
4. pairs must be equal lengths.
5. 6mil trace width, 12mil separation.
6. 36mil between pairs and any other trace.
7. Must not cross ground moat, except RJ-45 moat.



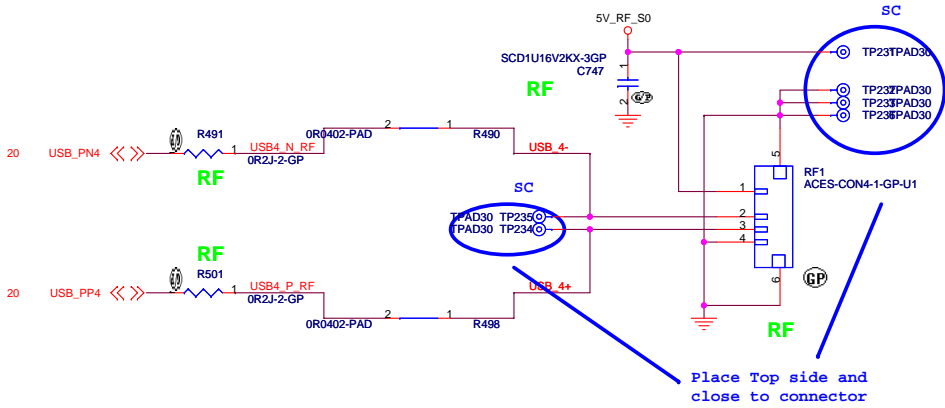
GIGA no need it at all , 10/100 keep

<Core Design>

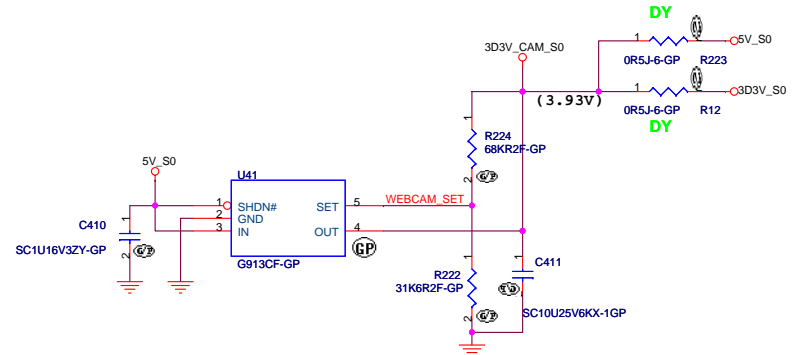
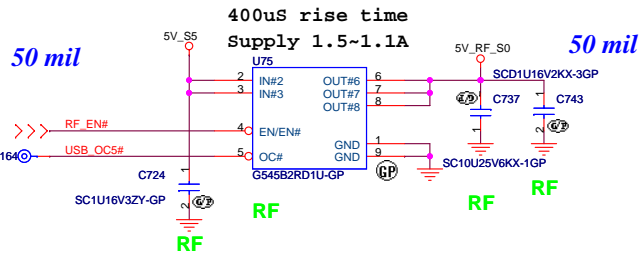
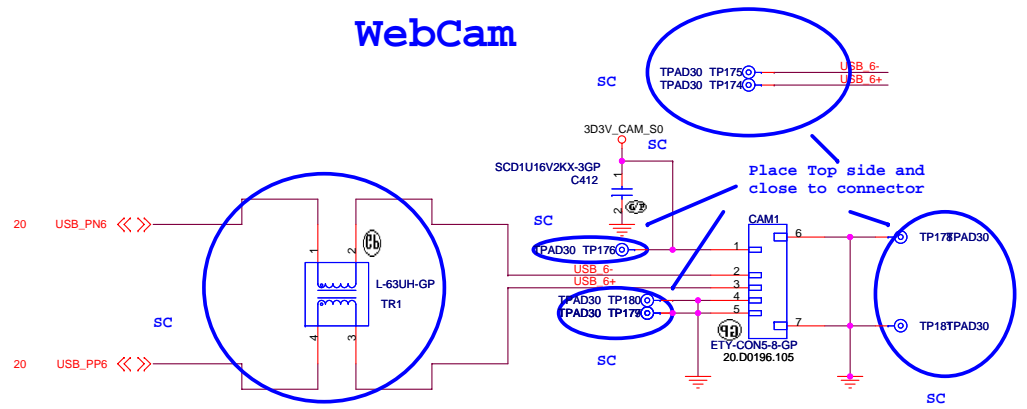
**緯創資通 Wistron Corporation**  
 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,  
 Taipei Hsien 221, Taiwan, R.O.C.

Title		
LAN connector/NEW CARD/SIM		
Size	Document Number	Rev
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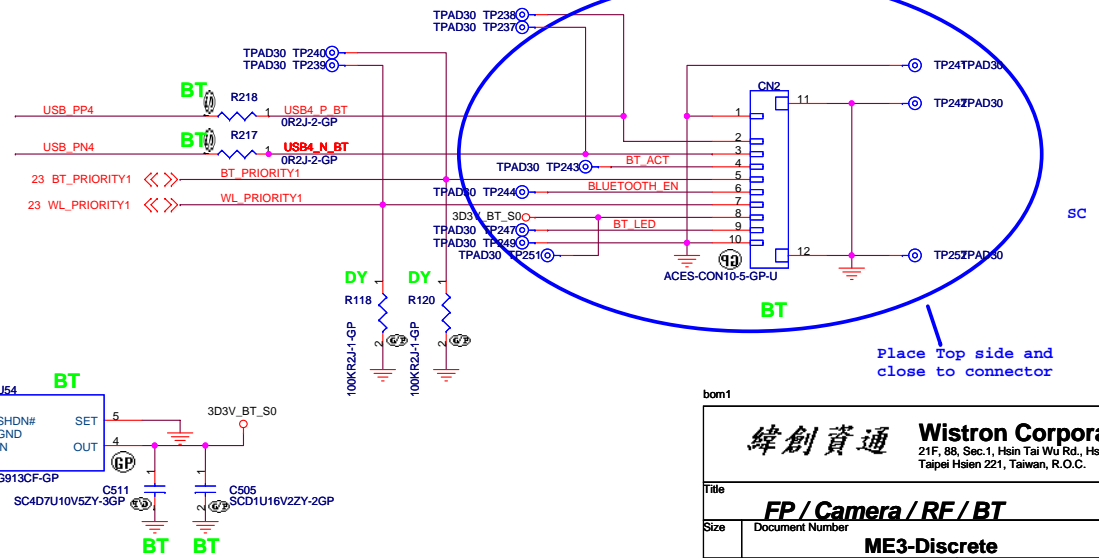
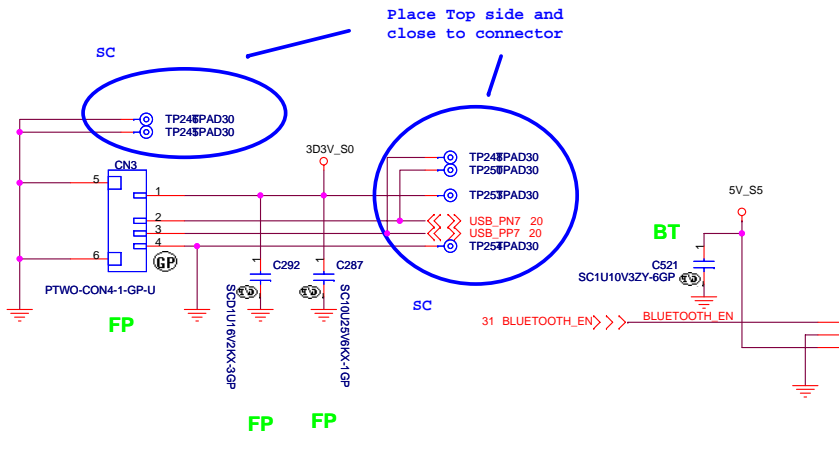
# RF



# WebCam

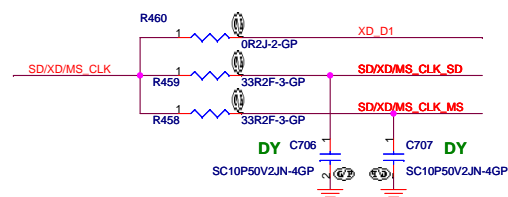
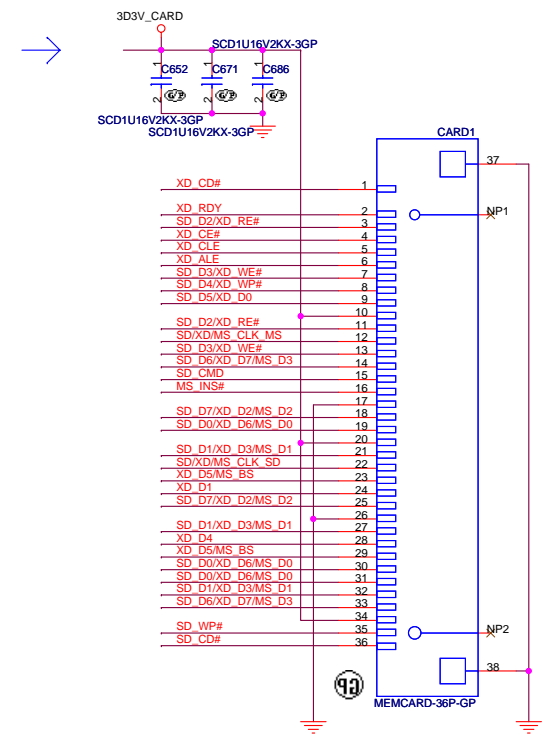
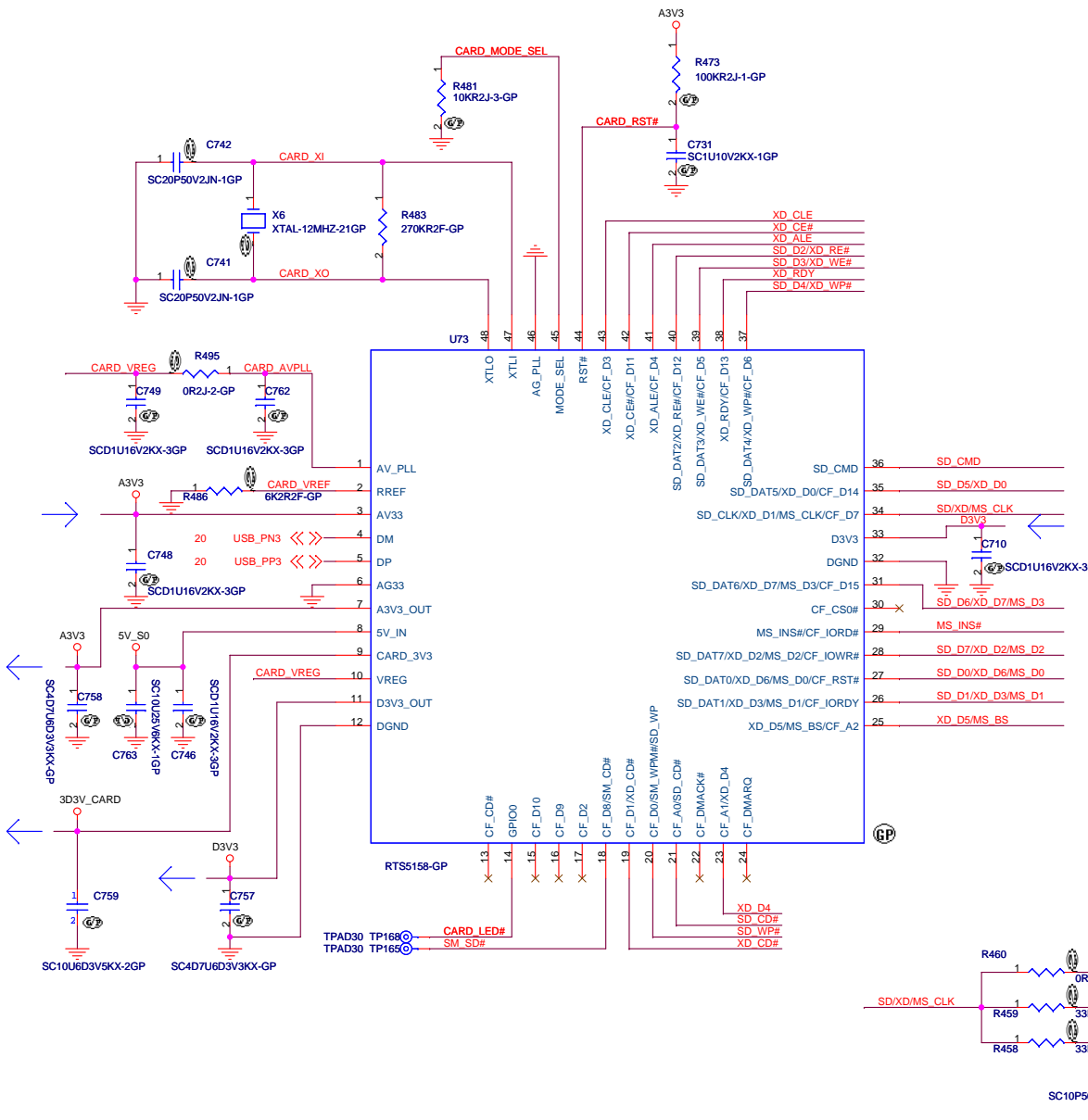


# Finger Printer



		<b>Wistron Corporation</b> 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title <b>FP / Camera / RF / BT</b>		
Size	Document Number	Rev
<b>ME3-Discrete</b>		
Date: Thursday, September 13, 2007	Sheet 26	of 51



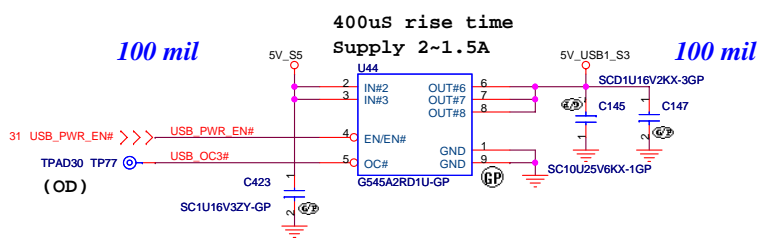


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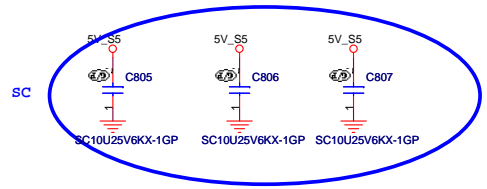
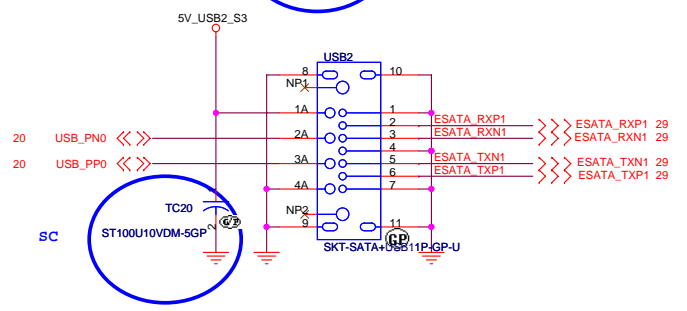
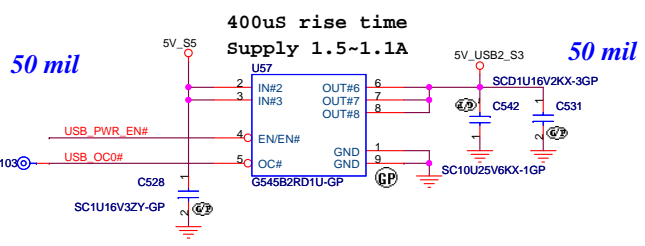
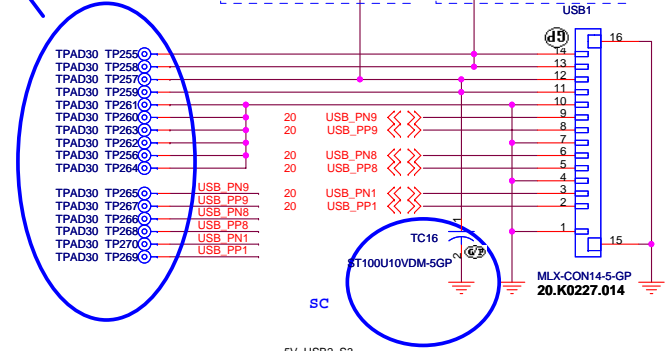
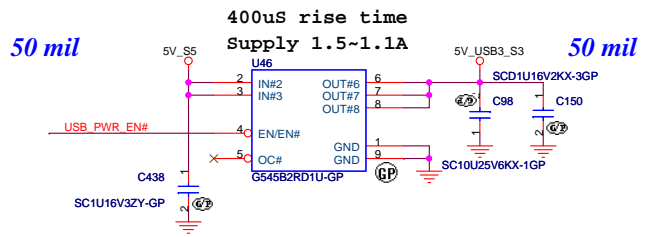
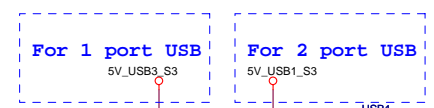
**緯創資通 Wistron Corporation**  
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichu, Taipei Hsien 221, Taiwan, R.O.C.

File		
<b>Card Reader RTS5158</b>		
Size	Document Number	Rev
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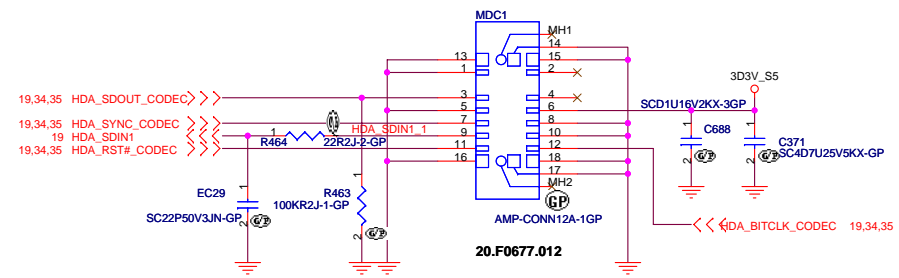
# USB PORT



Place Top side and close to connector

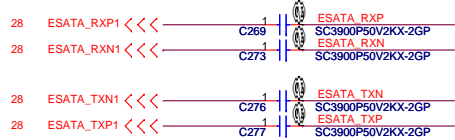
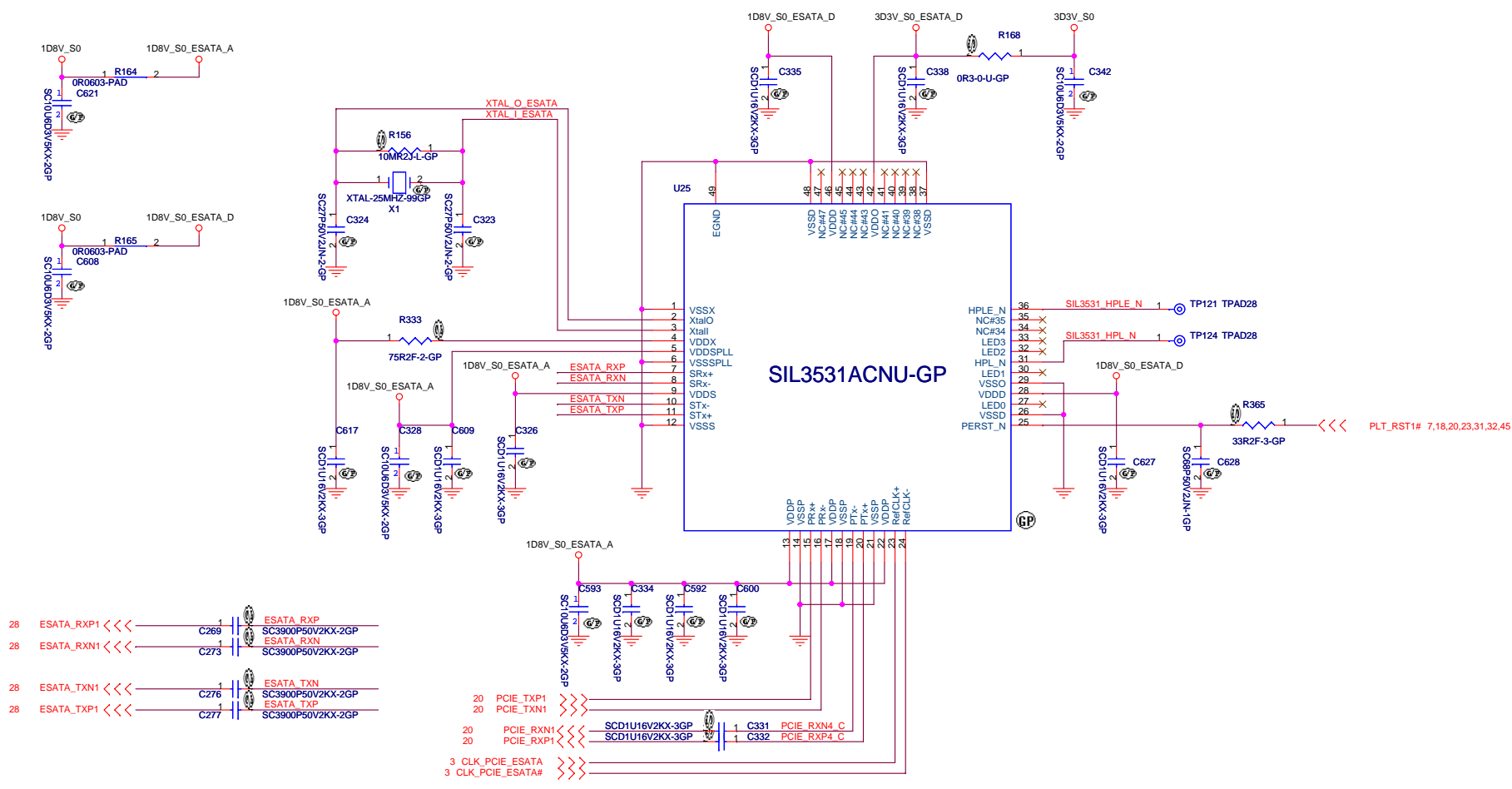


# MDC 1.5 CONN



bom1

<b>緯創資通</b>		<b>Wistron Corporation</b>	
		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
<b>USB / MDC / E-SATA CON</b>			
Title	Document Number		
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<Core Design>

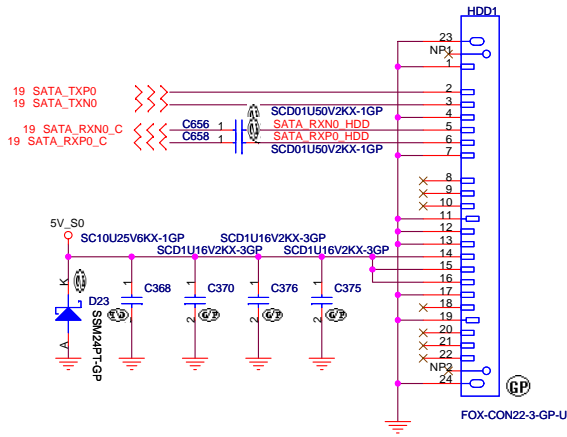
**緯創資通 Wistron Corporation**  
 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,  
 Taipei Hsien 221, Taiwan, R.O.C.

Title: **ESATA**

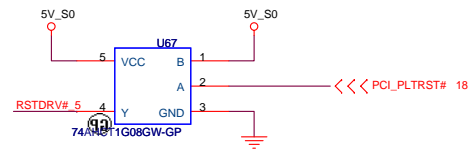
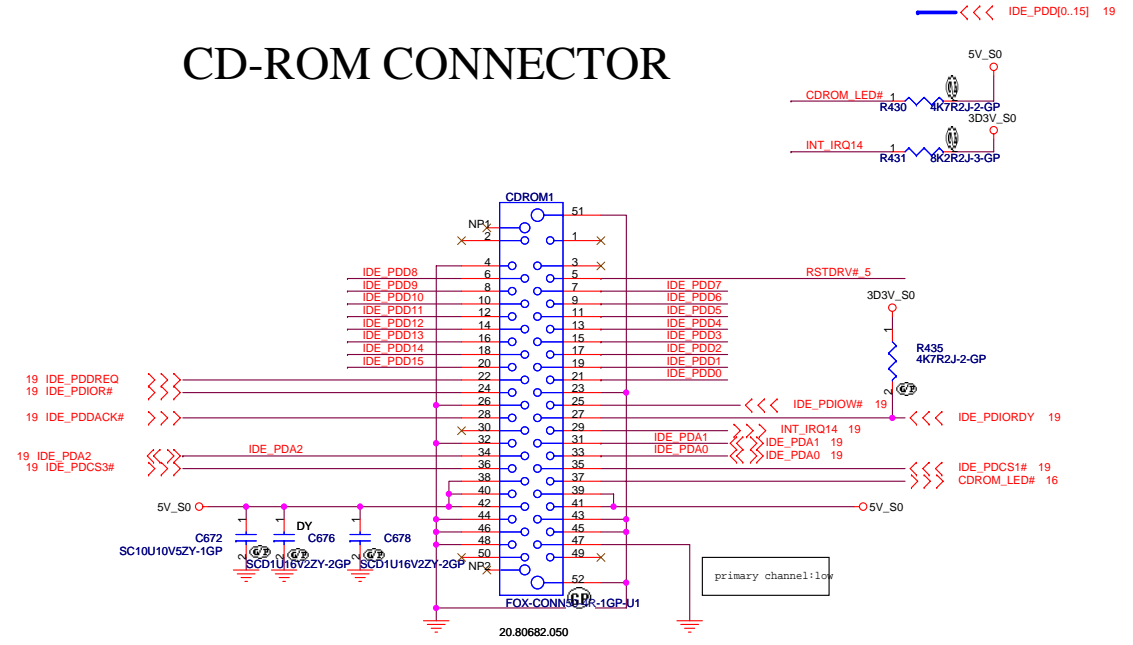
Size: 43 Document Number: **ME3-Discrete** Rev: \_\_\_\_\_

Date: Sunday, September 09, 2007 Sheet 29 of 51

# SATA HD Connector

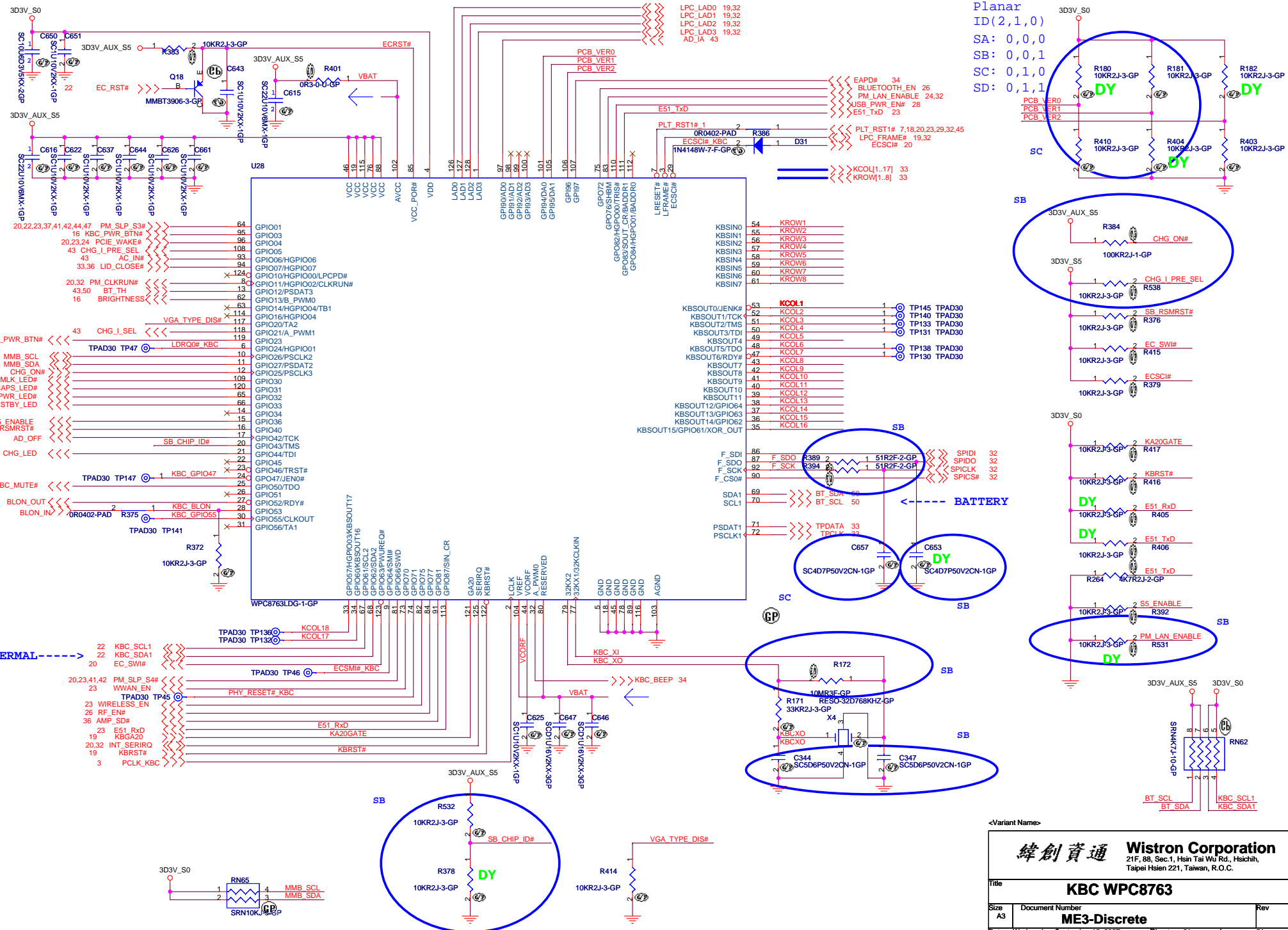


# CD-ROM CONNECTOR



<Variant Name>

<b>緯創資通 Wistron Corporation</b> 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
Title <b>HD/CDROM</b>		
Size A3	Document Number <b>ME3-Discrete</b>	Rev
Date: Wednesday, August 15, 2007	Sheet 30	of 51



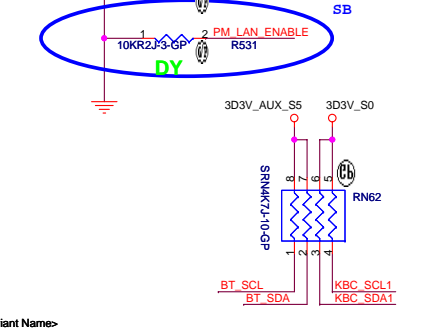
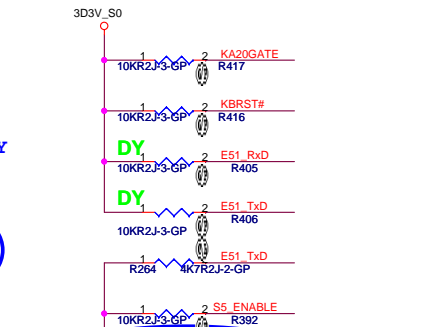
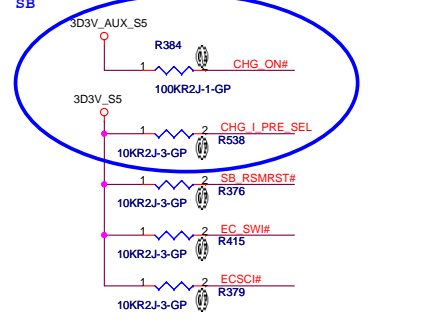
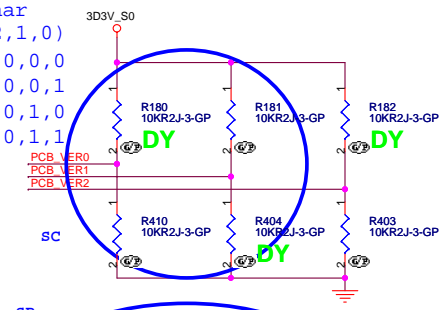
Planar  
ID(2,1,0)  
SA: 0,0,0  
SB: 0,0,1  
SC: 0,1,0  
SD: 0,1,1

LPC\_LAD0 19,32  
LPC\_LAD1 19,32  
LPC\_LAD2 19,32  
LPC\_LAD3 19,32  
AD\_IA -43

EAPD# 34  
BLUETOOTH\_EN 26  
PM\_LAN\_ENABLE 24,32  
USB\_PWR\_EN# 28  
E51\_TxD 23

PLT\_RST1# 7,18,20,23,29,32,45  
LPC\_FRAME# 19,32  
ECSC1# 20

KCOL1[1..17] 33  
KROW[1..8] 33



<Variant Name>

**緯創資通 Wistron Corporation**  
21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,  
Taipei Hsien 221, Taiwan, R.O.C.

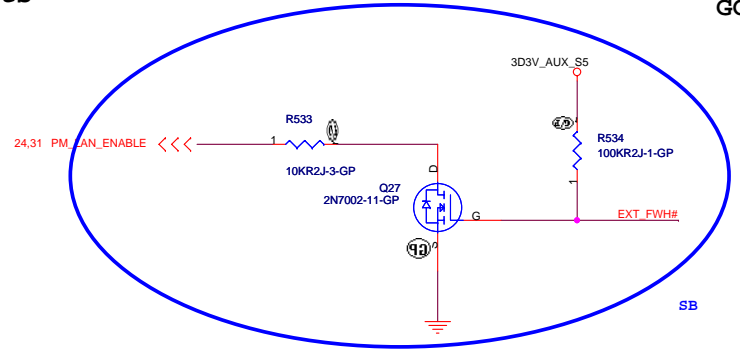
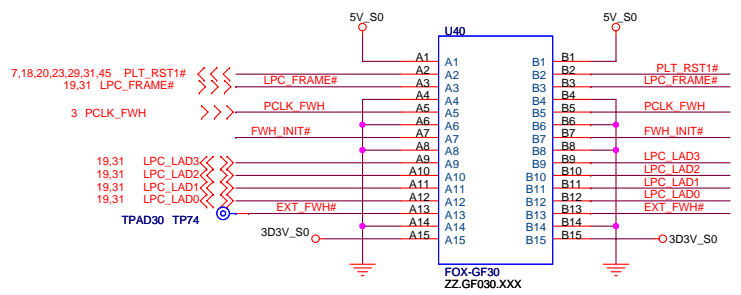
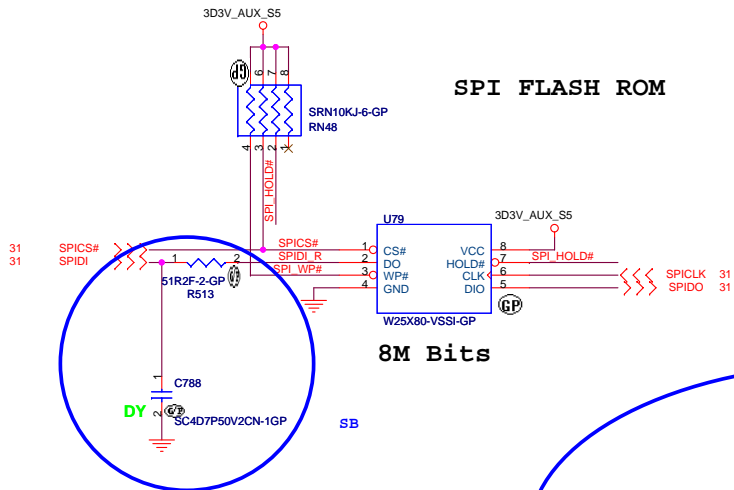
Title **KBC WPC8763**

Size	Document Number	Rev
A3	<b>ME3-Discrete</b>	

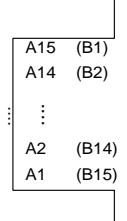
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THERMAL----->

<Variant Name>

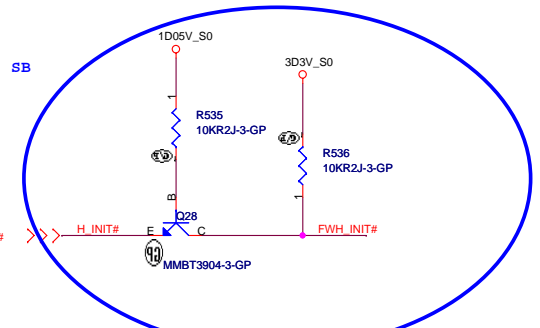
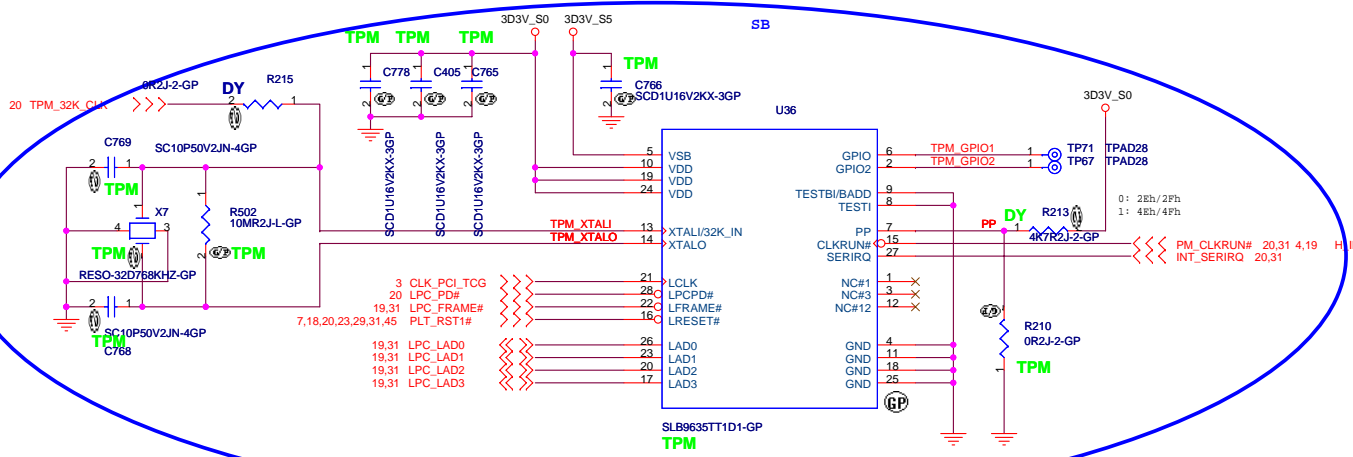


TOP VIEW



(BOTTOM VIEW)

### TPM 1.2

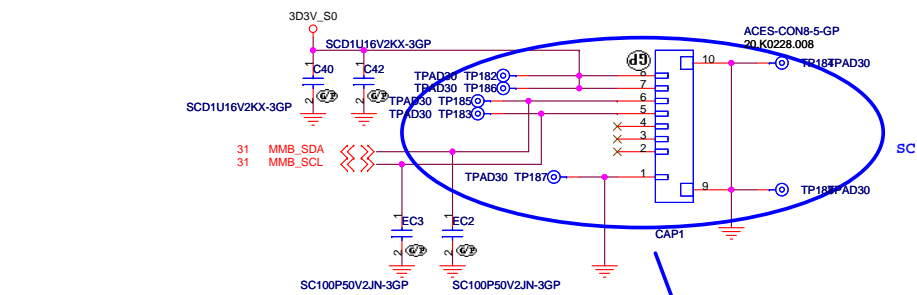


<Core Design>

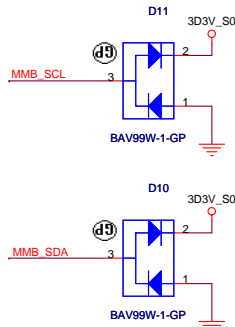
<b>緯創資通 Wistron Corporation</b>	
21F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichin, Taipei Hsien 221, Taiwan, R.O.C.	
<b>BIOS</b>	
Title	ME3-Discrete
Size A3	Document Number
Date: Thursday, August 23, 2007	Sheet 32 of 51



**CAPACITY BUTTON**

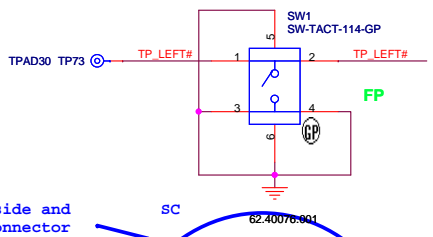
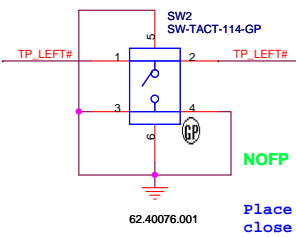
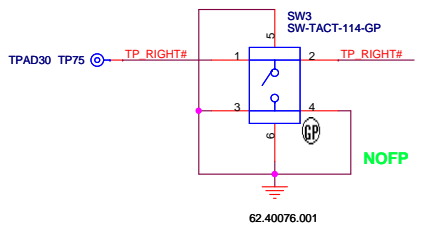
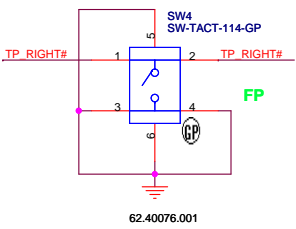
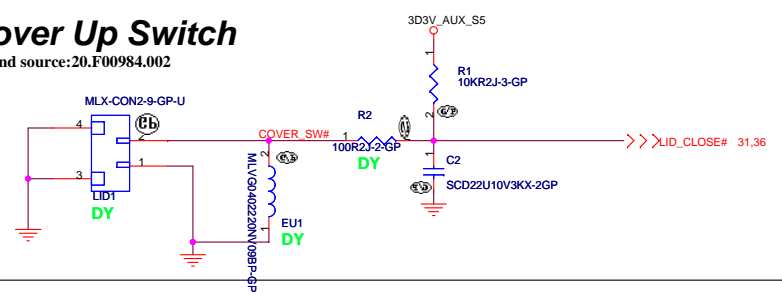


Place Top side and close to connector



**Cover Up Switch**

2nd source: 20.F00984.002

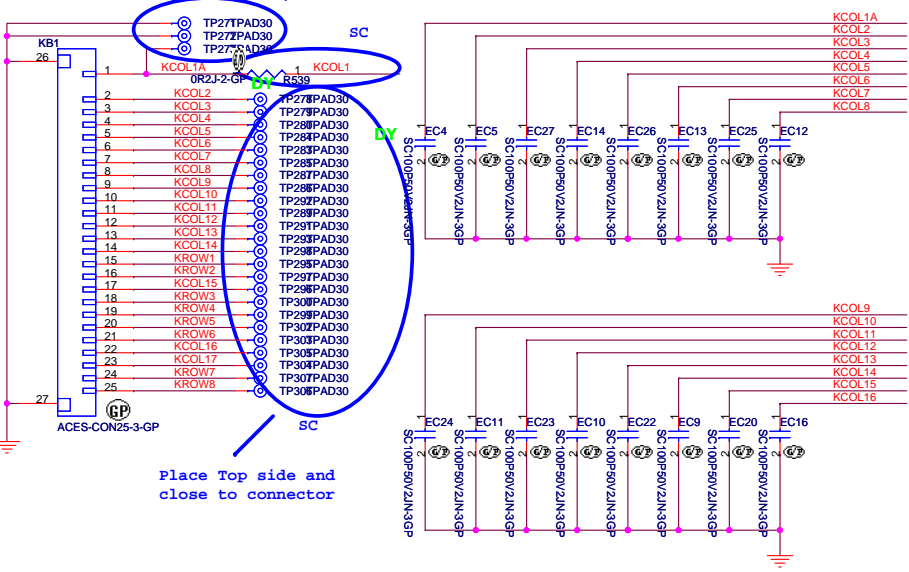


Place Top side and close to connector

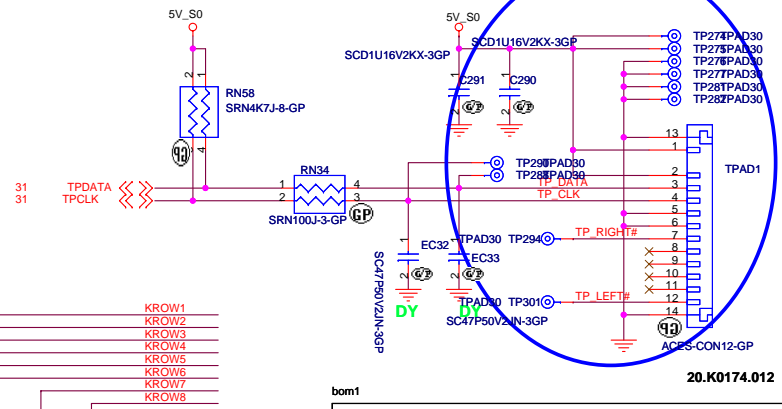
**Internal Keyboard CONN**

EMI Bypass cap.

31 KROW[1..8] <<< Place Top side and close to connector  
31 KCOL[1..17] <<<



Place Top side and close to connector

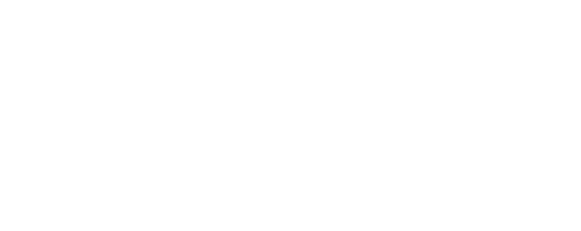
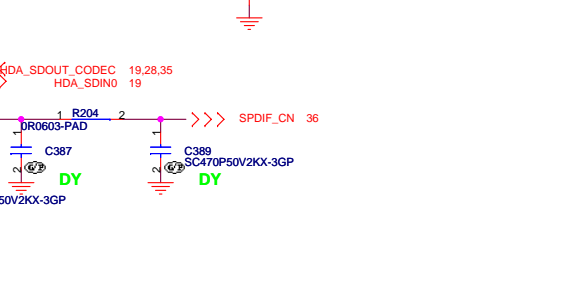
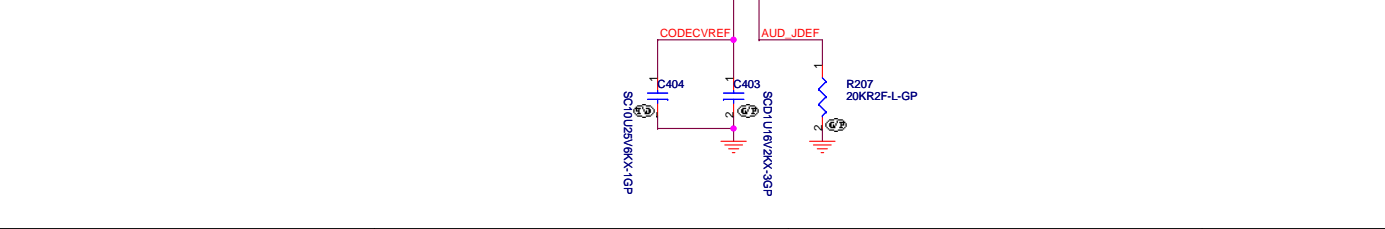
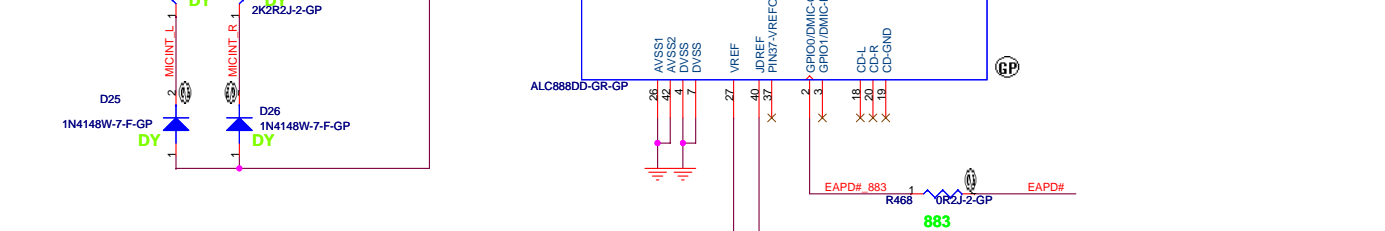
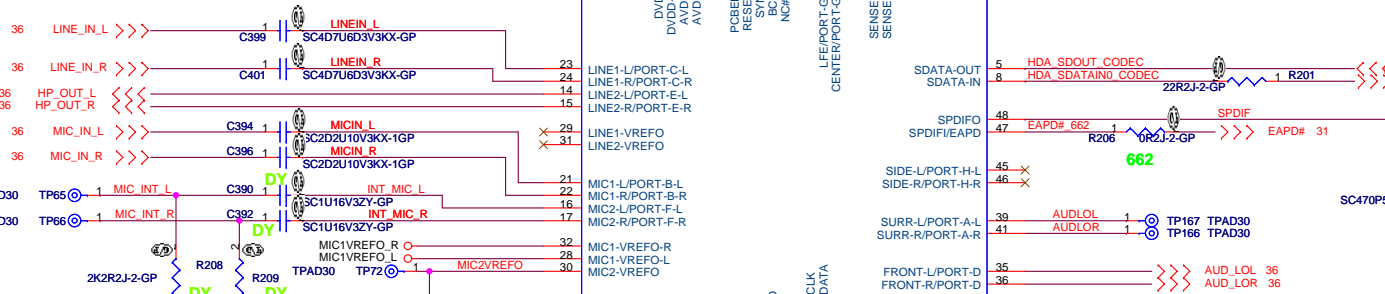
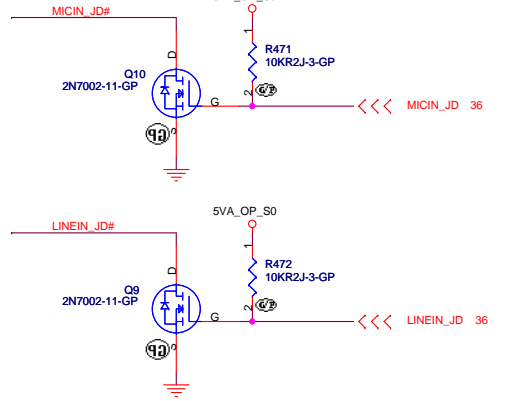
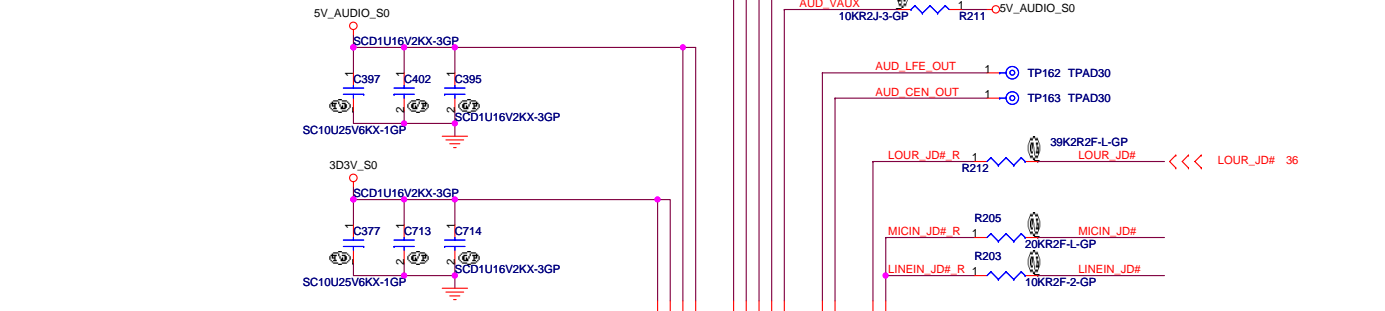
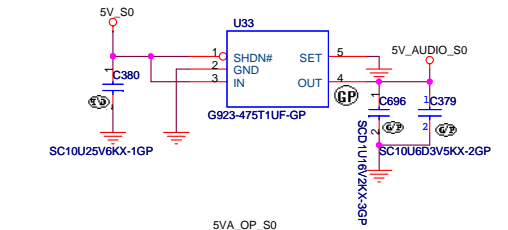
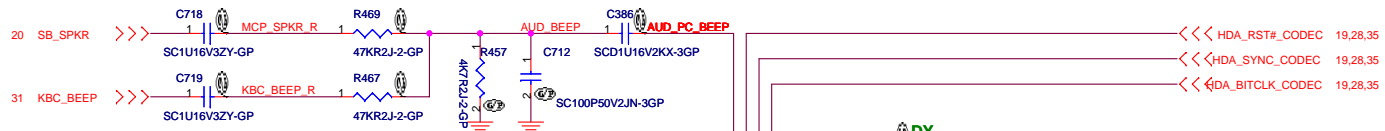


Place Top side and close to connector

bom1

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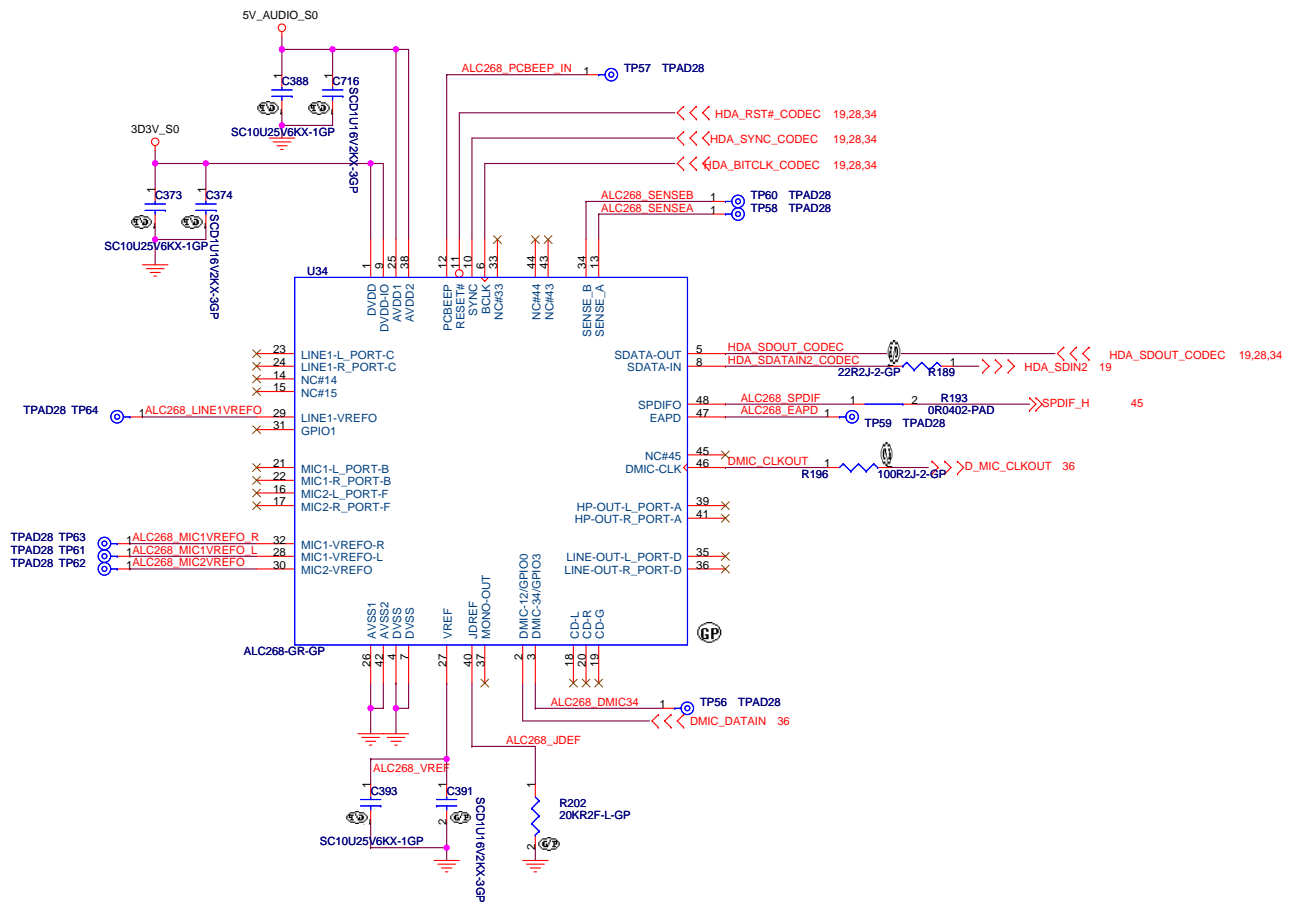
Title	<b>BUTTONs / KB / TOUCHPAD</b>		
Size	Document Number	Rev	
		<b>ME3-Discrete</b>	
Date: Thursday, September 13, 2007	Sheet	33	of 51



<Variant Name>

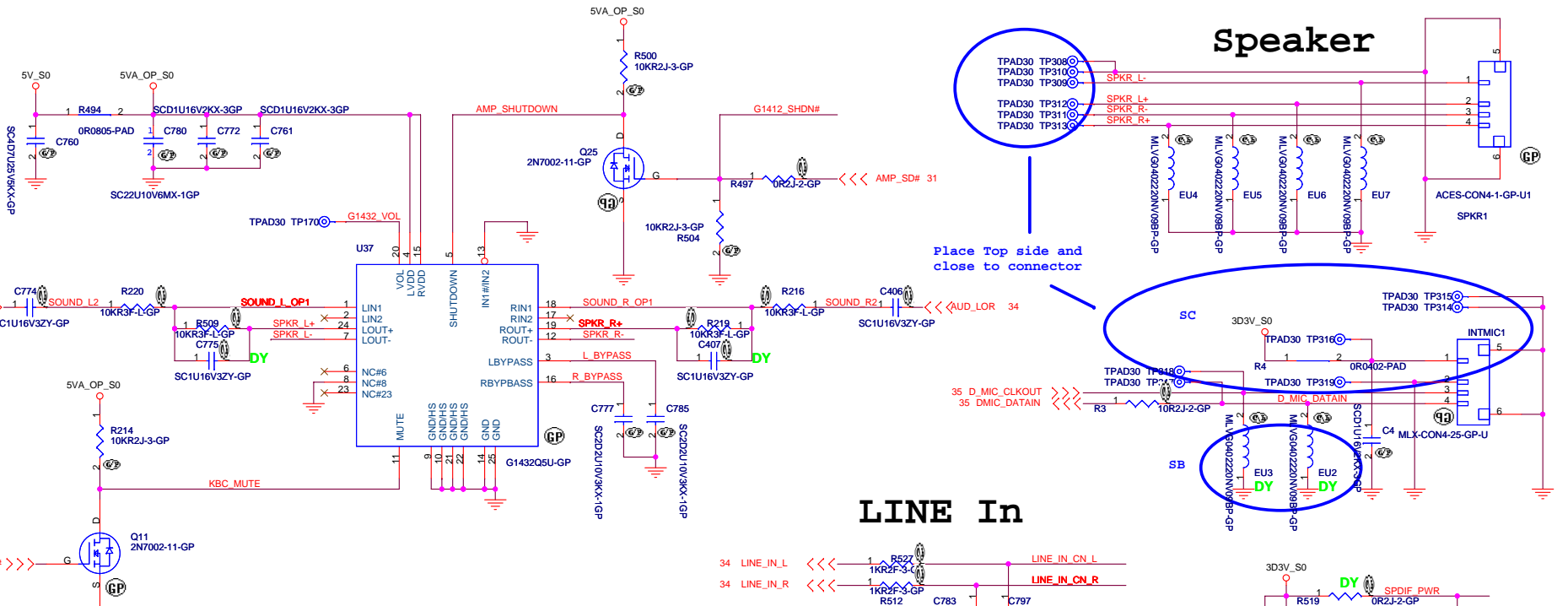
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21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

Title	<b>ALC888</b>		Rev
Size	A3	Document Number	<b>ME3-Discrete</b>
Date:	Sunday, September 09, 2007	Sheet	34 of 51

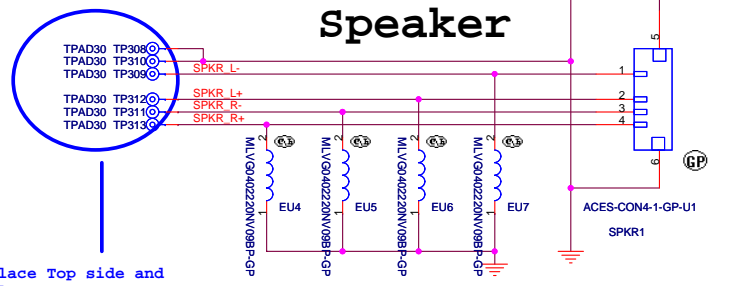


<Variant Name>

<b>緯創資通</b>		<b>Wistron Corporation</b>	
		21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.	
<b>CODEC ALC268</b>			
Size	Document Number	Rev	
A3		<b>ME3-Discrete</b>	
Date:	Sunday, September 09, 2007	Sheet	35 of 51

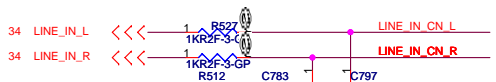


# Speaker



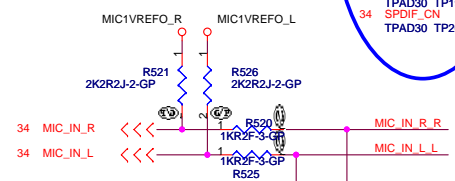
Place Top side and close to connector

# LINE In



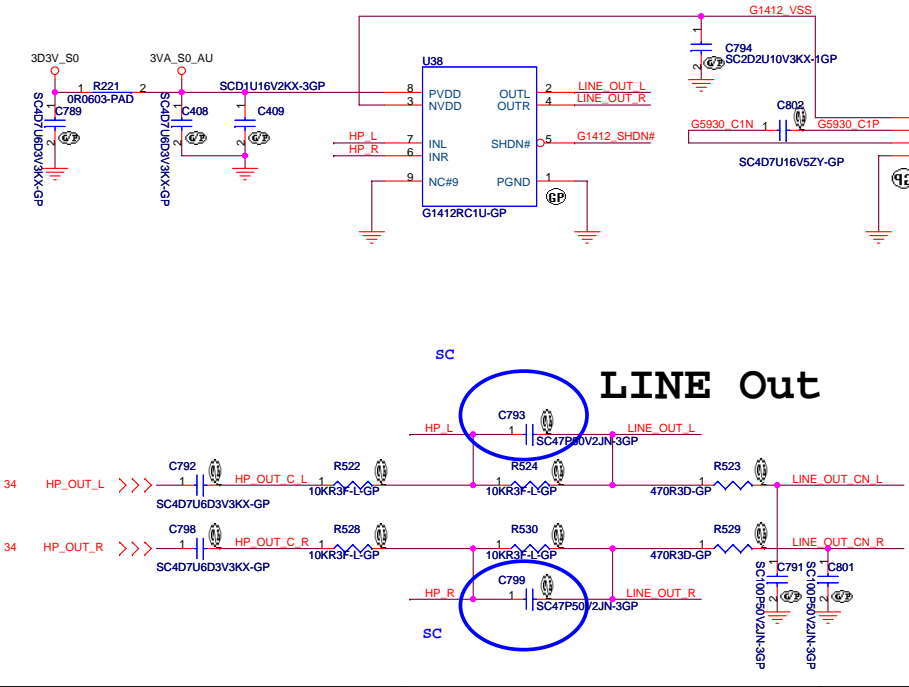
Place Top side and close to connector

# MIC In

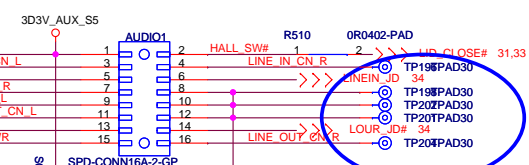
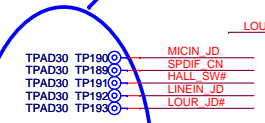


Place Top side and close to connector

# LINE Out



Place Top side and close to connector

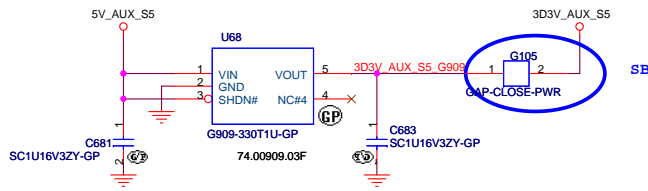


<Core Design>

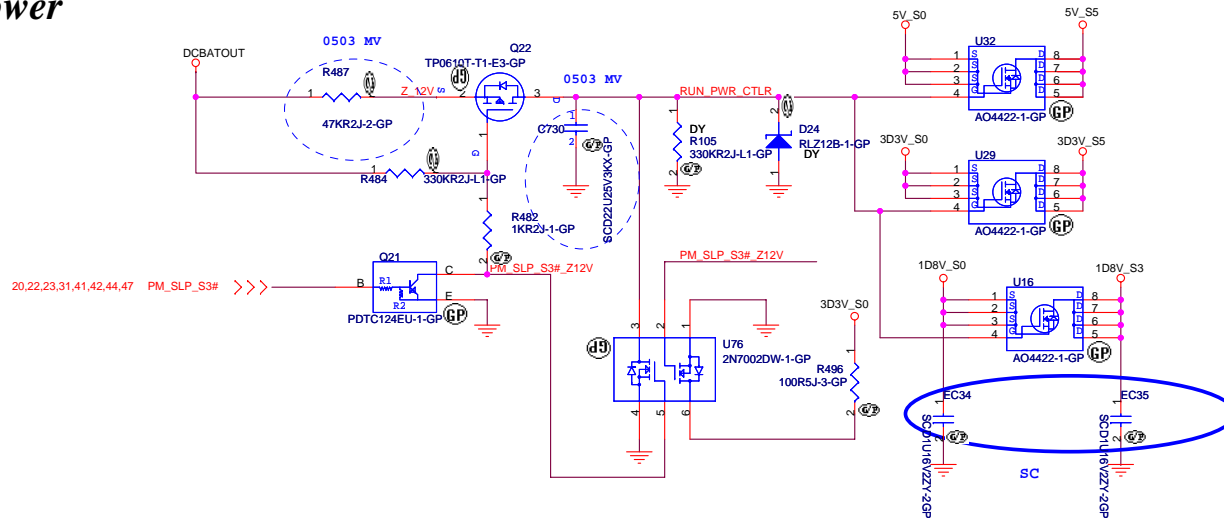
<b>緯創資通</b>			<b>Wistron Corporation</b>		
			21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
<b>AUDIO AMP/SPEAKER</b>					
Title	Document Number				Rev
Size	ME3-Discrete				
Date:	Monday, September 17, 2007	Sheet	36	of	51

5V\_AUX\_S5 TO 3D3V\_AUX\_S5

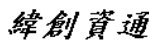
*Aux Power* 3D3V\_AUX\_S5

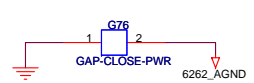
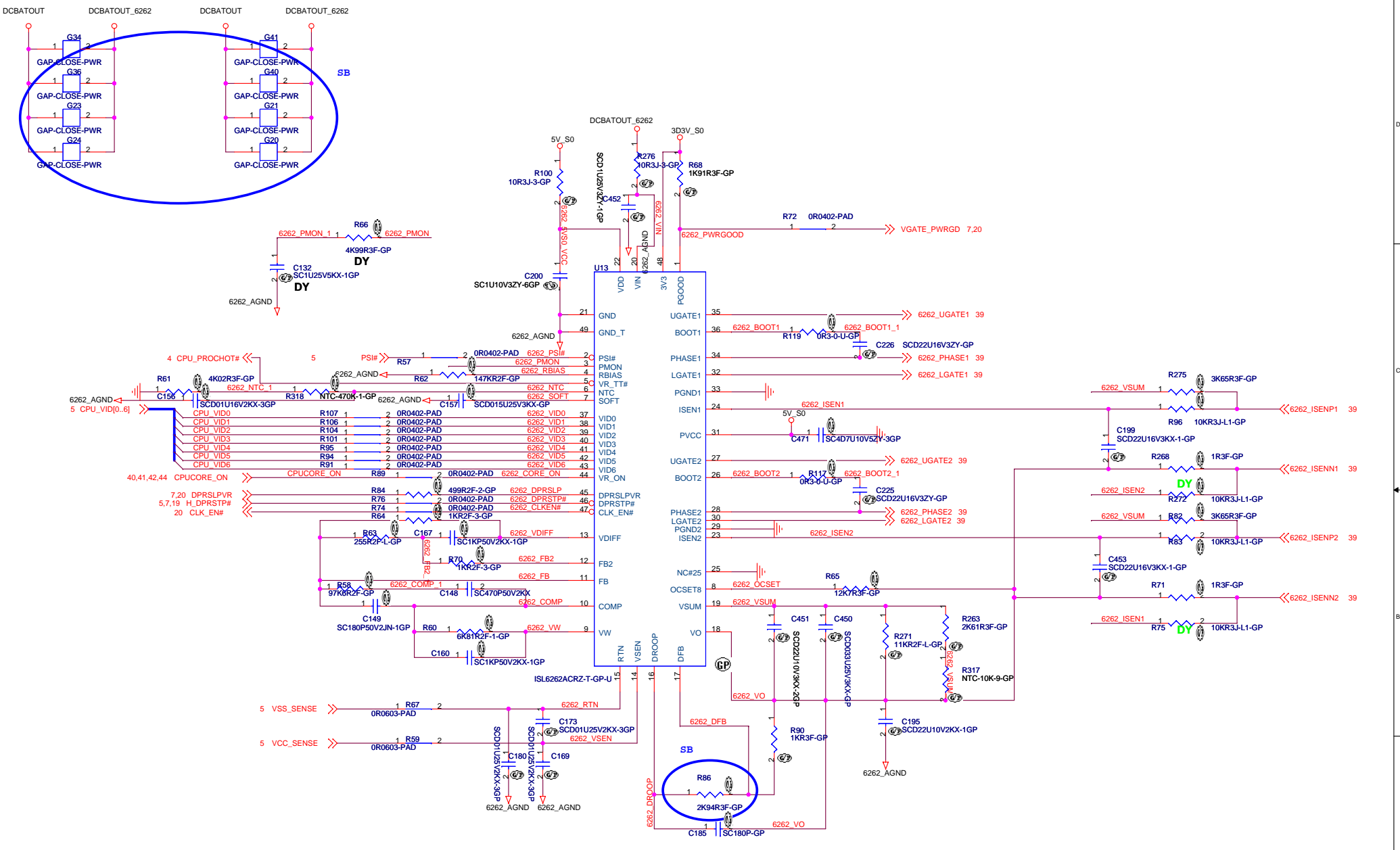


*Run Power*



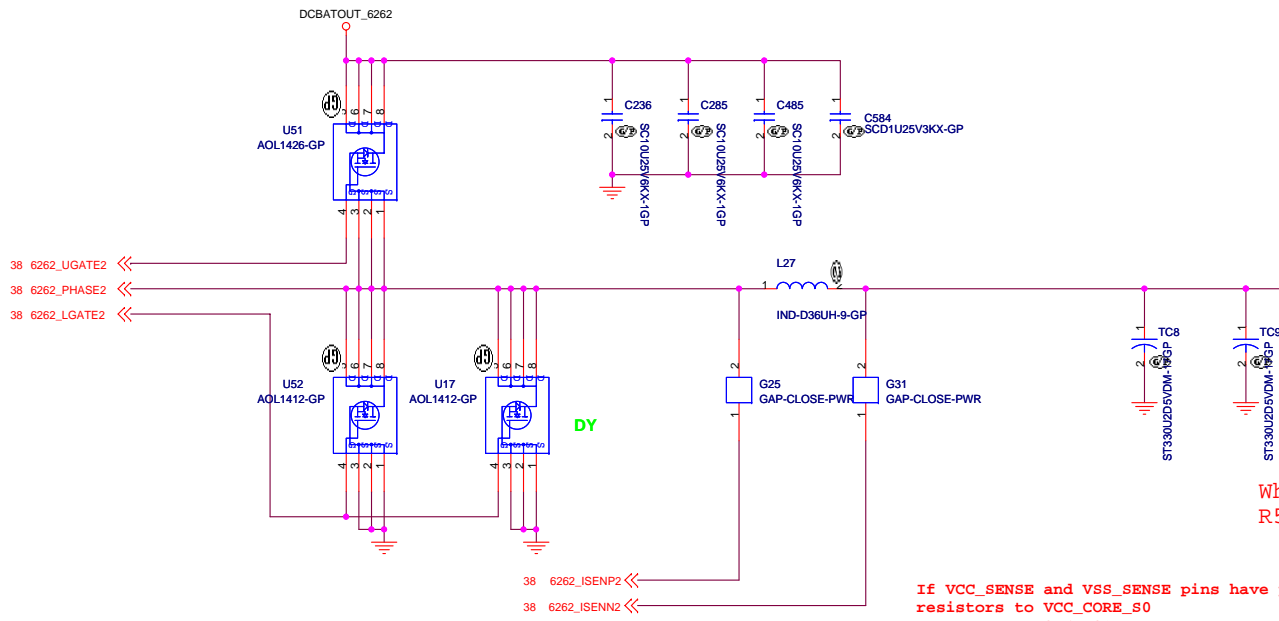
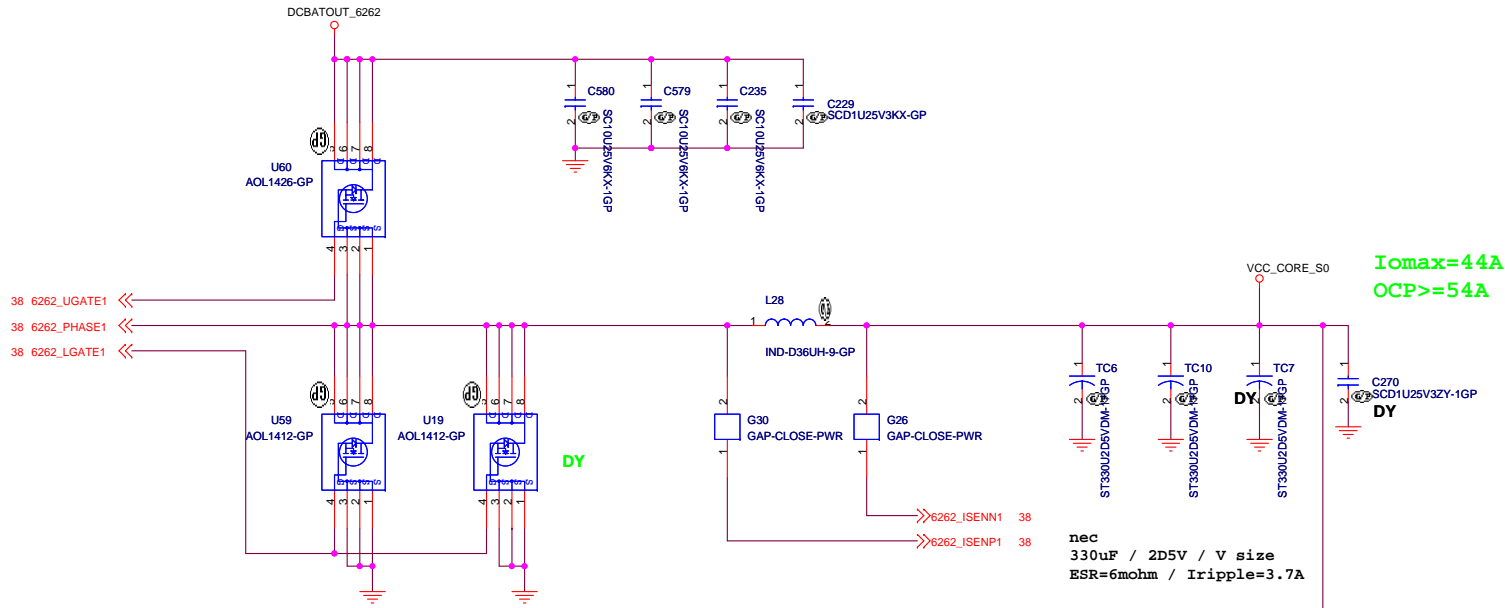
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 <b>Wistron Corporation</b> 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.		
<b>Title</b> <b>PWRPLANE&amp;RESETLOGIC</b>		
Size A3	Document Number <b>ME3-Discrete</b>	Rev
Date: Wednesday, September 19, 2007 Sheet 37 of 51		



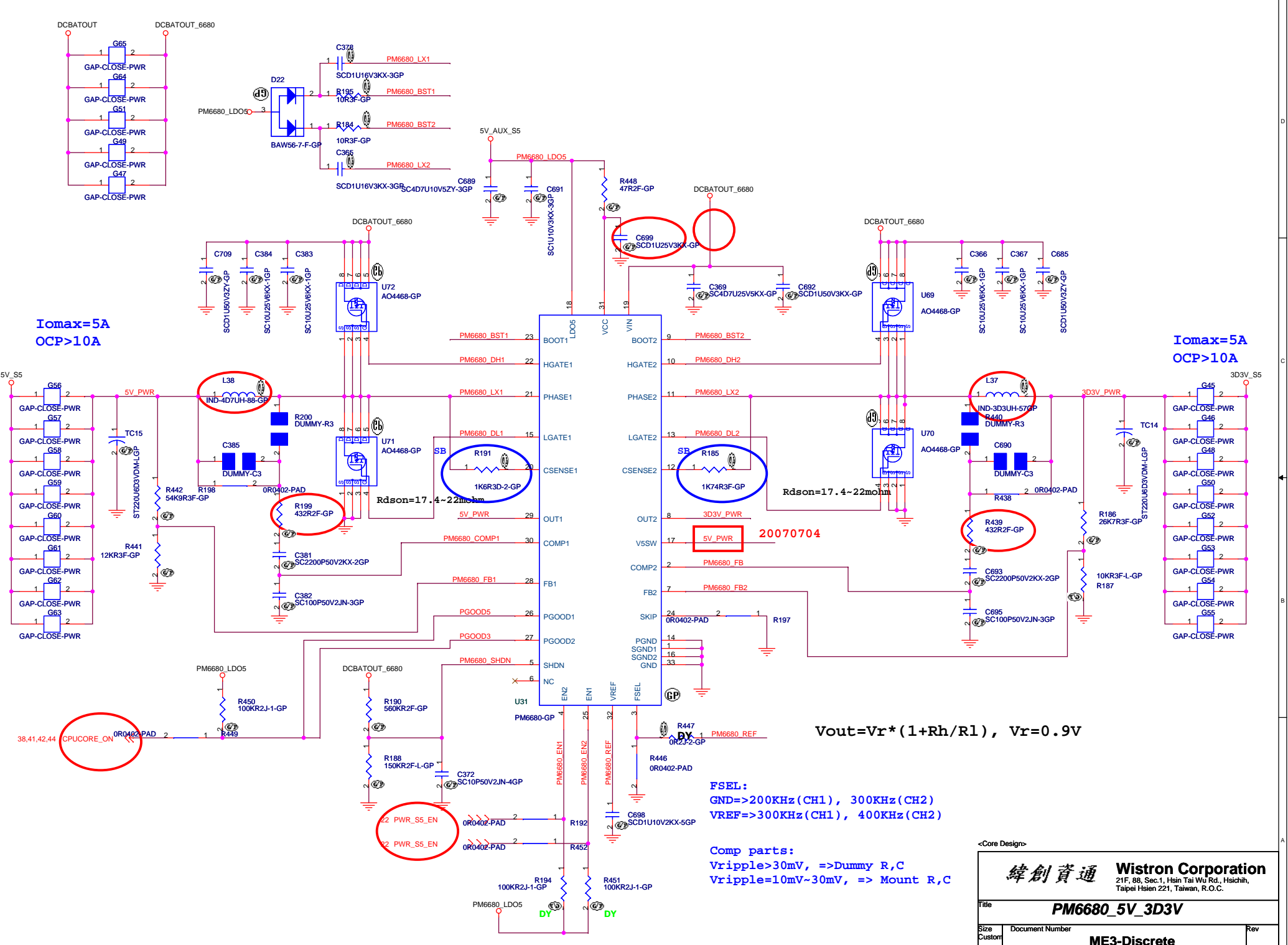
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<b>wistron</b>		Wistron Incorporated 21F, 88, Hsin Tai Wu Rd Hsichih, Taipei	
Title <b>CPU CORE(1/2) ISL6262</b>			
Size A3	Document Number <b>ME3-Discrete</b>	Rev <b>sc</b>	
Date: Sunday, September 09, 2007	Sheet 38	of 51	



<Variant Name>			
<b>wistron</b>		Wistron Incorporated 21F, 88, Hsin Tai Wu Rd Hsichih, Taipei	
<b>Title CPU CORE(2/2) ISL6262</b>			
Size A3	Document Number <b>ME3-Discrete</b>	Rev <b>SC</b>	
Date: Wednesday, August 15, 2007		Sheet 39 of 51	





Iomax=5A  
OCP>10A

Iomax=5A  
OCP>10A

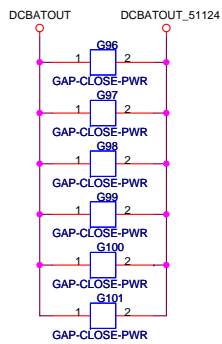
$$V_{out} = V_r * (1 + R_h/R_l), \quad V_r = 0.9V$$

FSEL:  
GND => 200KHz (CH1), 300KHz (CH2)  
VREF => 300KHz (CH1), 400KHz (CH2)

Comp parts:  
Vripple > 30mV, => Dummy R,C  
Vripple = 10mV ~ 30mV, => Mount R,C

<Core Design>

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<b>Title</b>			
<b>PM6680_5V_3D3V</b>			
Size	Document Number		Rev
Custom	<b>ME3-Discrete</b>		
Date:	Sunday, September 09, 2007	Sheet	40 of 51



Id=9.2A  
Qg=9~12nC,  
Rdson=17.4~22mohm

Id=13.2A  
Qg=27nC,  
Rdson=6.8~8.2mohm

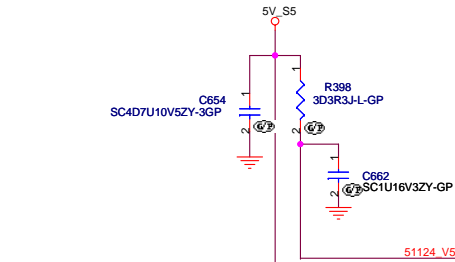
Id=9.2A  
Qg=9~12nC,  
Rdson=17.4~22mohm

Id=9.6A  
Qg=18~nC,  
Rdson=13.5~16.5mohm

1D8V Iomax=10A  
OCP>15A

1D05V Iomax=8A  
OCP>11A

$$V_{out} = 0.758V * (R1 + R2) / R2$$



$V_{trip}(mV) = R_{trip}(Kohm) * 10(uA)$   
 $I_{ocp} = (V_{trip}/R_{dson}) + ((1/(2 * L * f)) * ((V_{in} - V_{out}) * V_{out}) / V_{in})$

	GND	OPEN	V5FILT
TONSEL	240k/CH1 300k/CH2	300k/CH1 360k/CH2	360k/CH1 420k/CH2

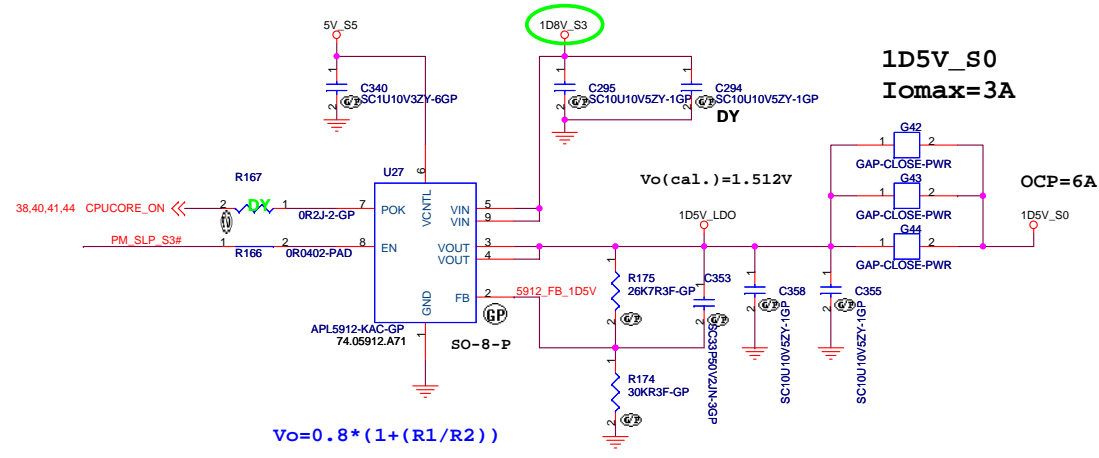
ICS

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

Title: **TPS51124 1D8V 1D05V**

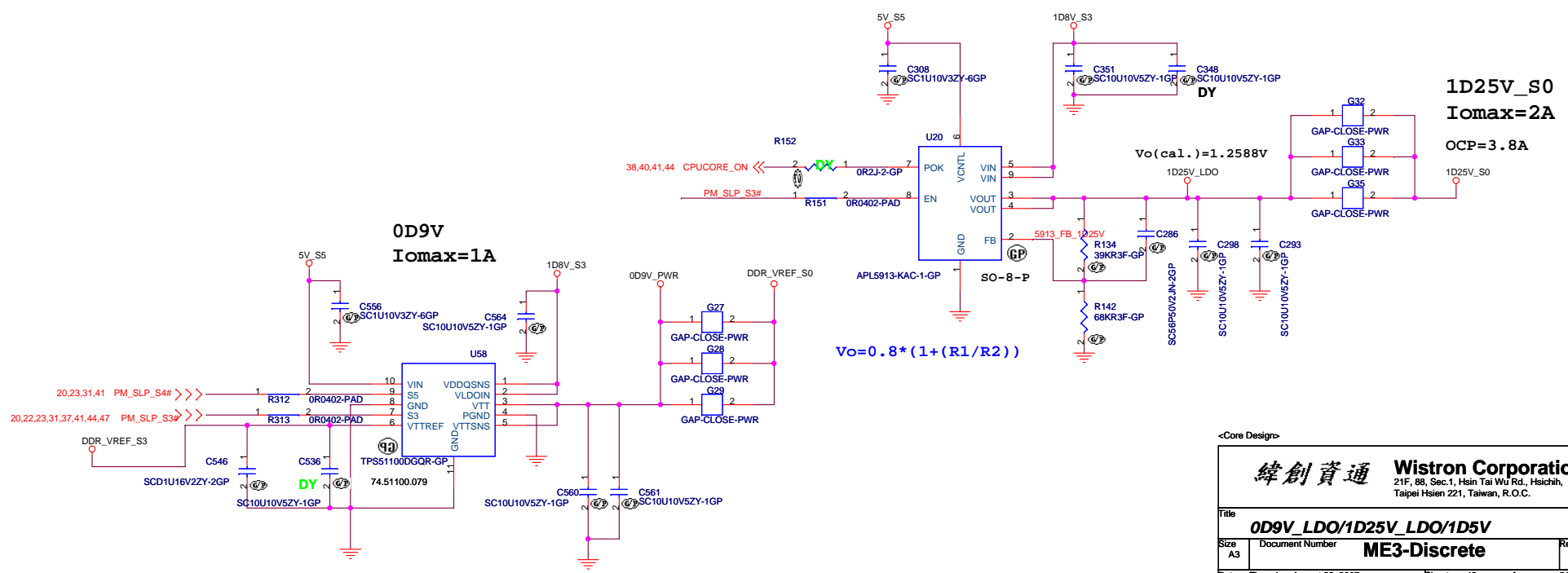
Size A3 Document Number **ME3-Discrete** Rev SA

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$$V_o = 0.8 * (1 + (R1/R2))$$

$$V_o = 0.8 * (1 + (R1/R2))$$

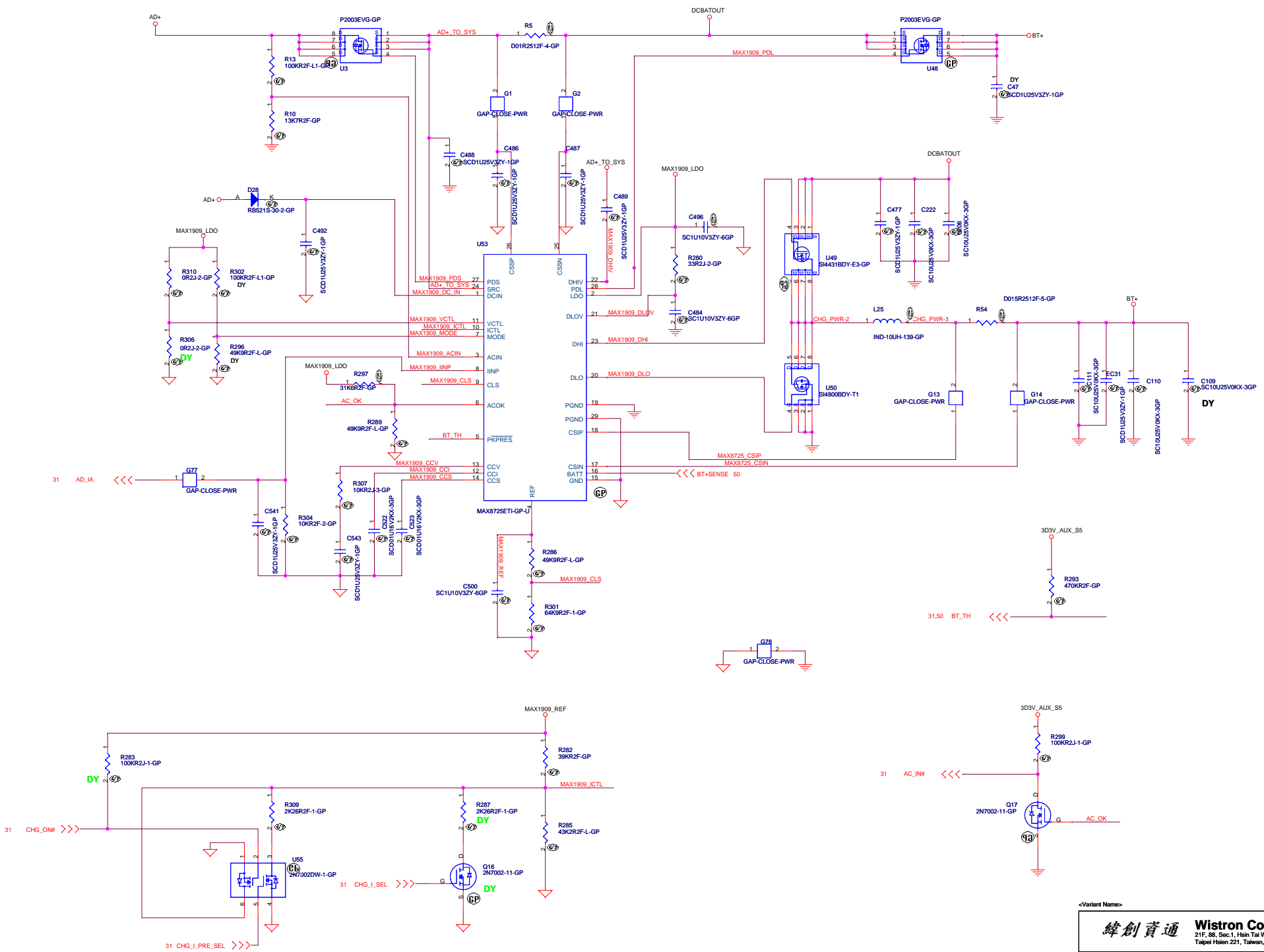


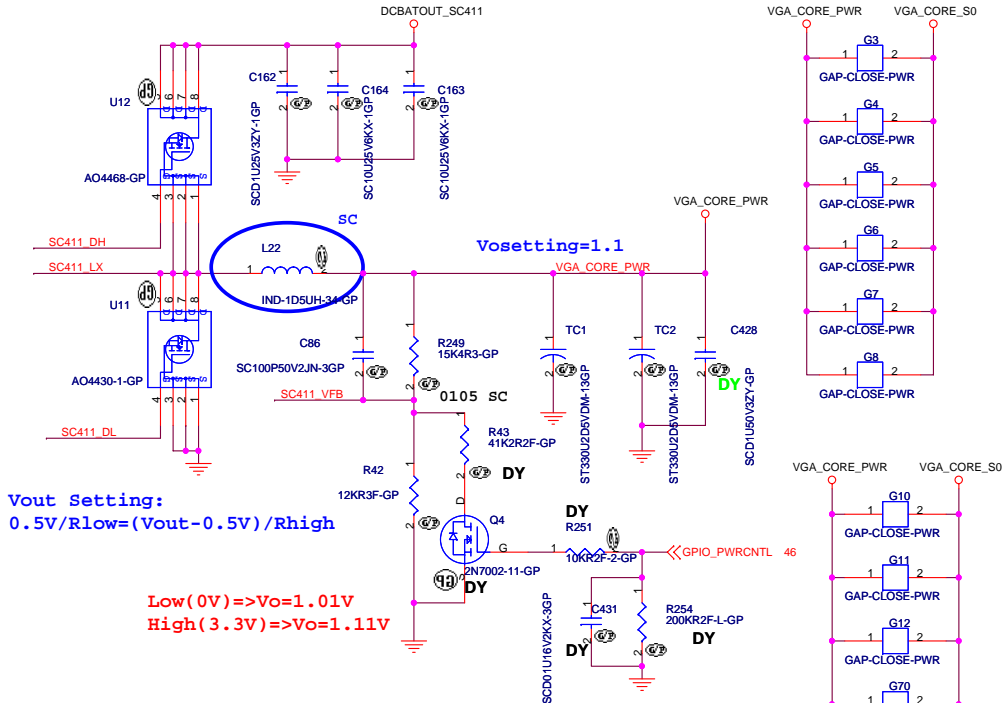
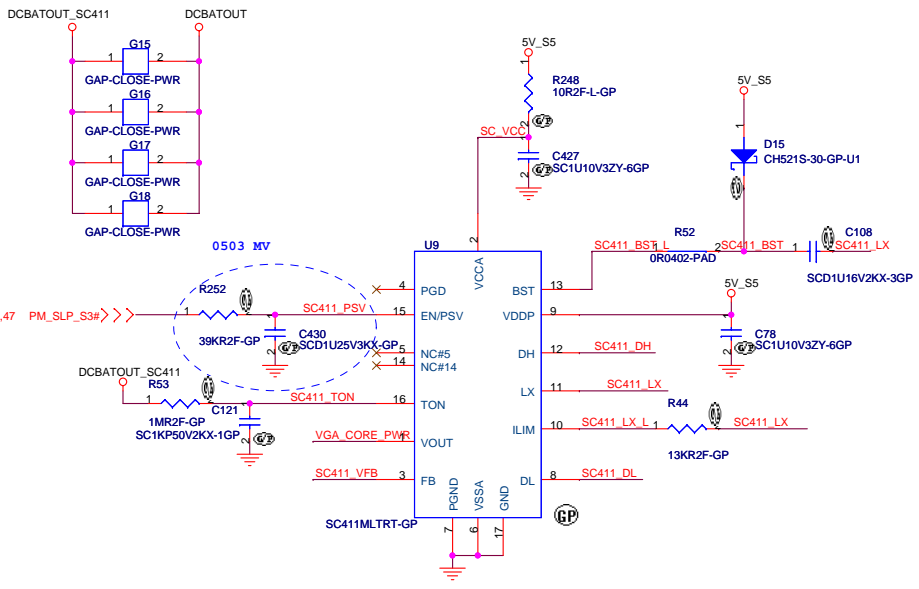
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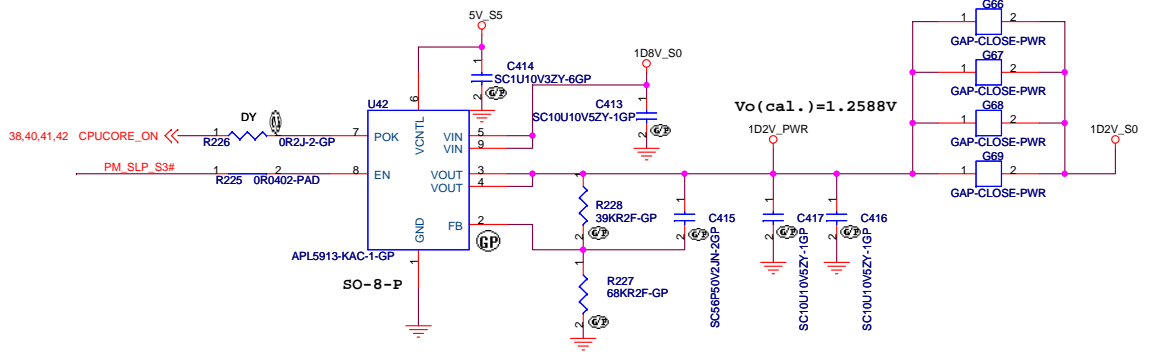
Title	<b>0D9V_LDO/1D25V_LDO/1D5V</b>	
Size	Document Number	Rev
A3	<b>ME3-Discrete</b>	

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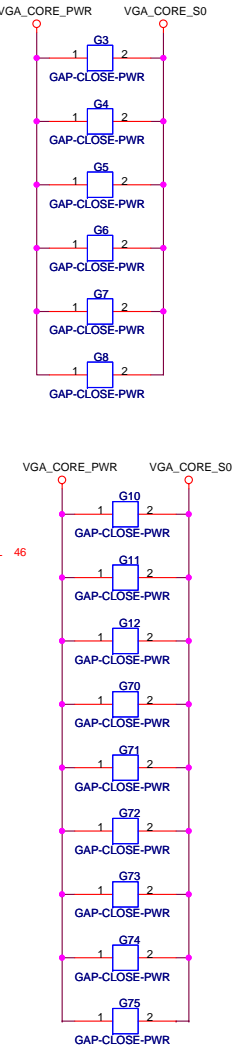
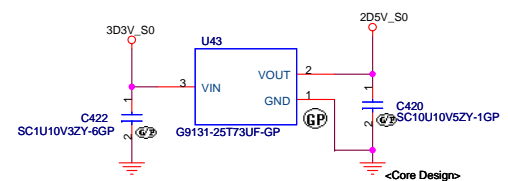


**1D2V\_S0**  
Iomax = 3A



$V_{out} = 0.8 * (1 + R1/R2)$

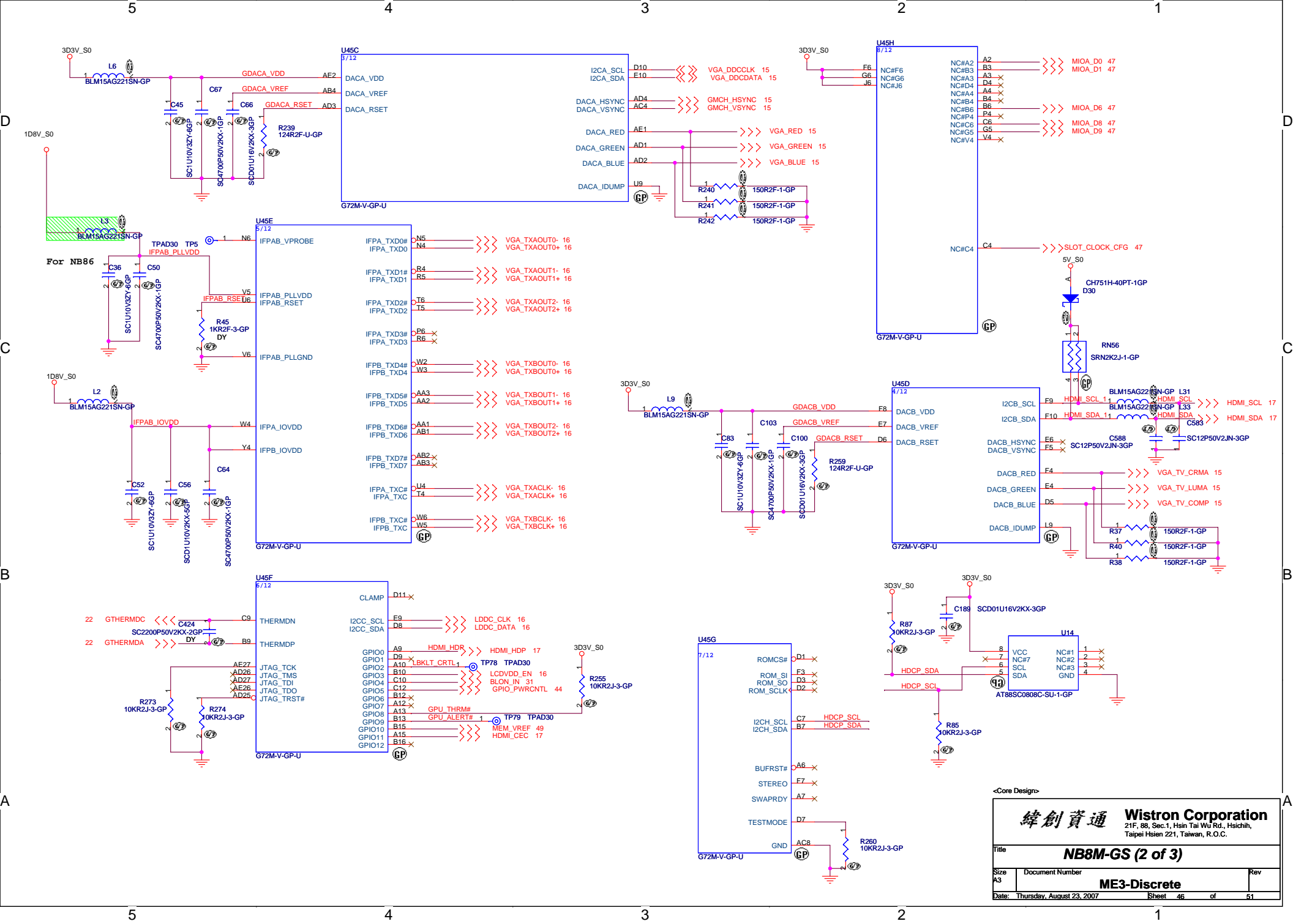
**2D5V\_S0**  
Iomax = 300mA



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<b>Title</b>		
<b>VGA CORE 1V</b>		
<b>Size</b>	<b>Document Number</b>	<b>Rev</b>
A3	<b>ME3-Discrete</b>	
<b>Date:</b> Monday, September 17, 2007		
<b>Sheet</b> 44 <b>of</b> 51		



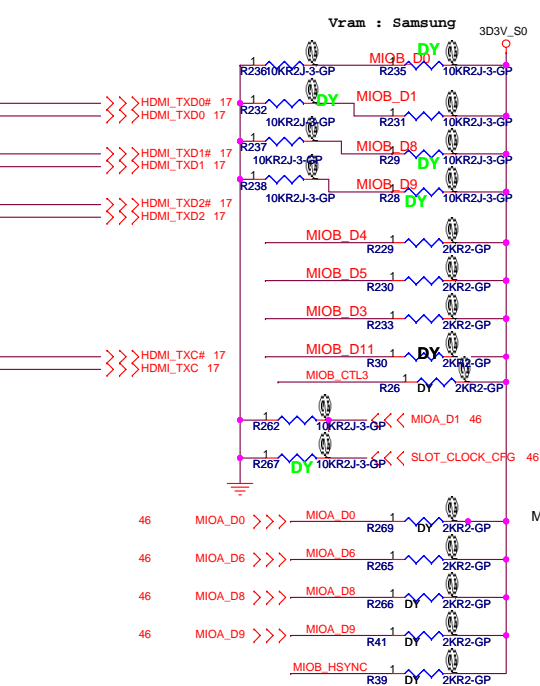
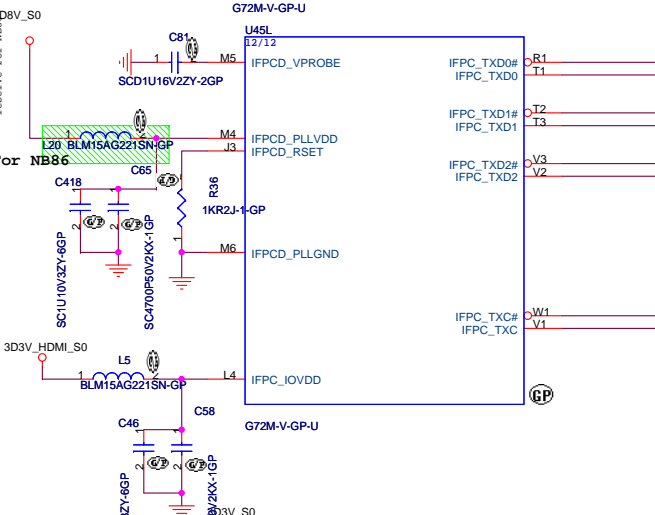
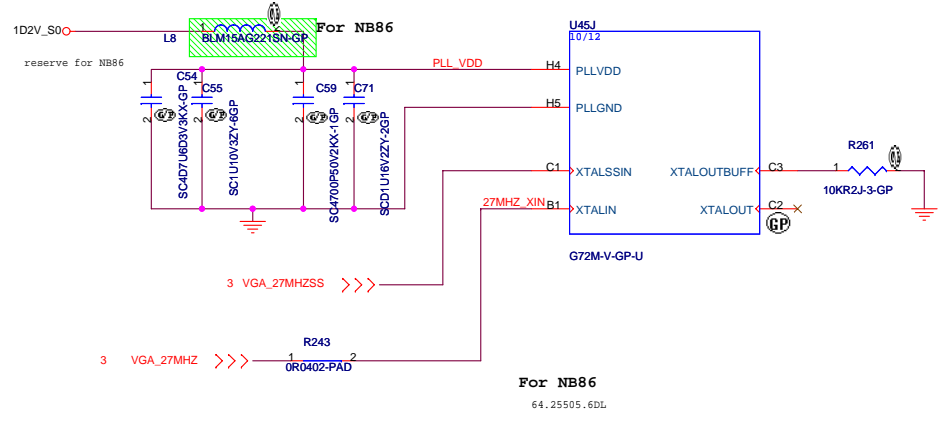
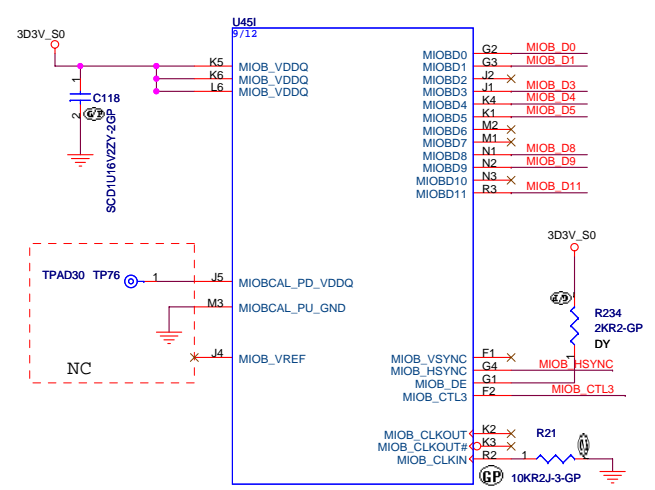


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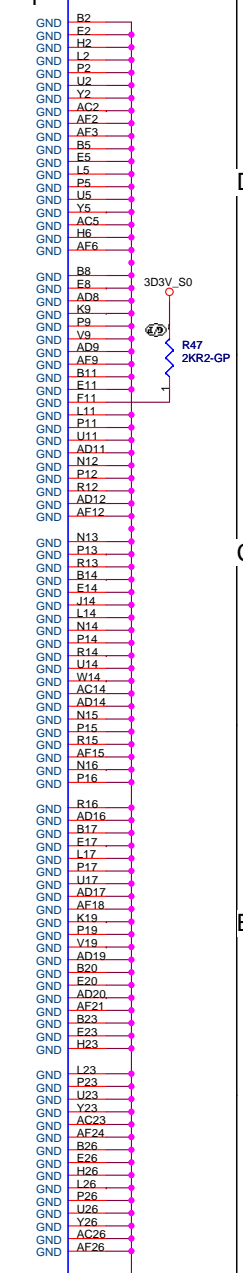
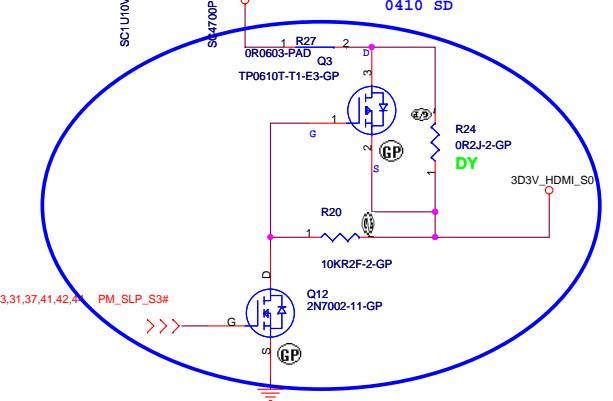
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<b>Title</b>		
<b>NB8M-GS (2 of 3)</b>		
<b>Size</b>	<b>Document Number</b>	<b>Rev</b>
43	<b>ME3-Discrete</b>	
<b>Date:</b> Thursday, August 23, 2007		<b>Sheet</b> 46 <b>of</b> 51





Bit Signal	Values
MI0B_D0:	RAM_CFG_0
MI0B_D1:	RAM_CFG_1
MI0B_D8:	RAM_CFG_2
MI0B_D9:	RAM_CFG_3
MI0B_D4:	PCI_DEVID_0
MI0B_D5:	PCI_DEVID_1
MI0B_D3:	PCI_DEVID_2
MI0B_D11:	PCI_DEVID_3
MI0B_CTL3:	PCI_DEVID_4
MIOA_D1:	SUB_VENDOR
MIOA_D0:	PEX_PLL_EN_TERM100
MIOA_D6:	3GIO_PADCFG_LUT_ADDR[0]
MIOA_D8:	3GIO_PADCFG_LUT_ADDR[1]
MIOA_D9:	3GIO_PADCFG_LUT_ADDR[2]
MIOB_HSYNC:	3GIO_PADCFG_LUT_ADDR[3]



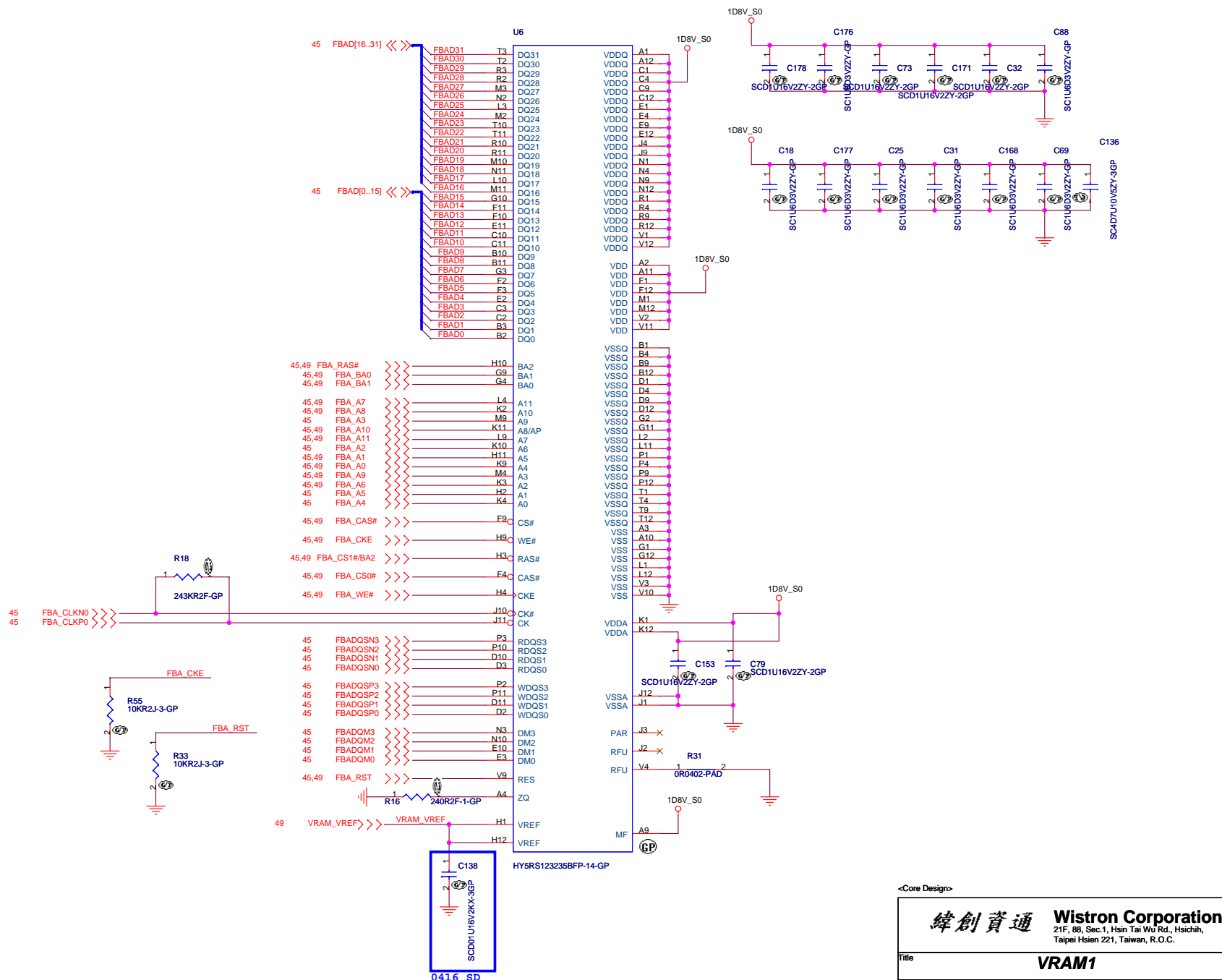
<Core Design> G72M-V-GP-U

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File: **NB8M-GS (3 of 3)**

Size: A3 Document Number: **ME3-Discrete** Rev:

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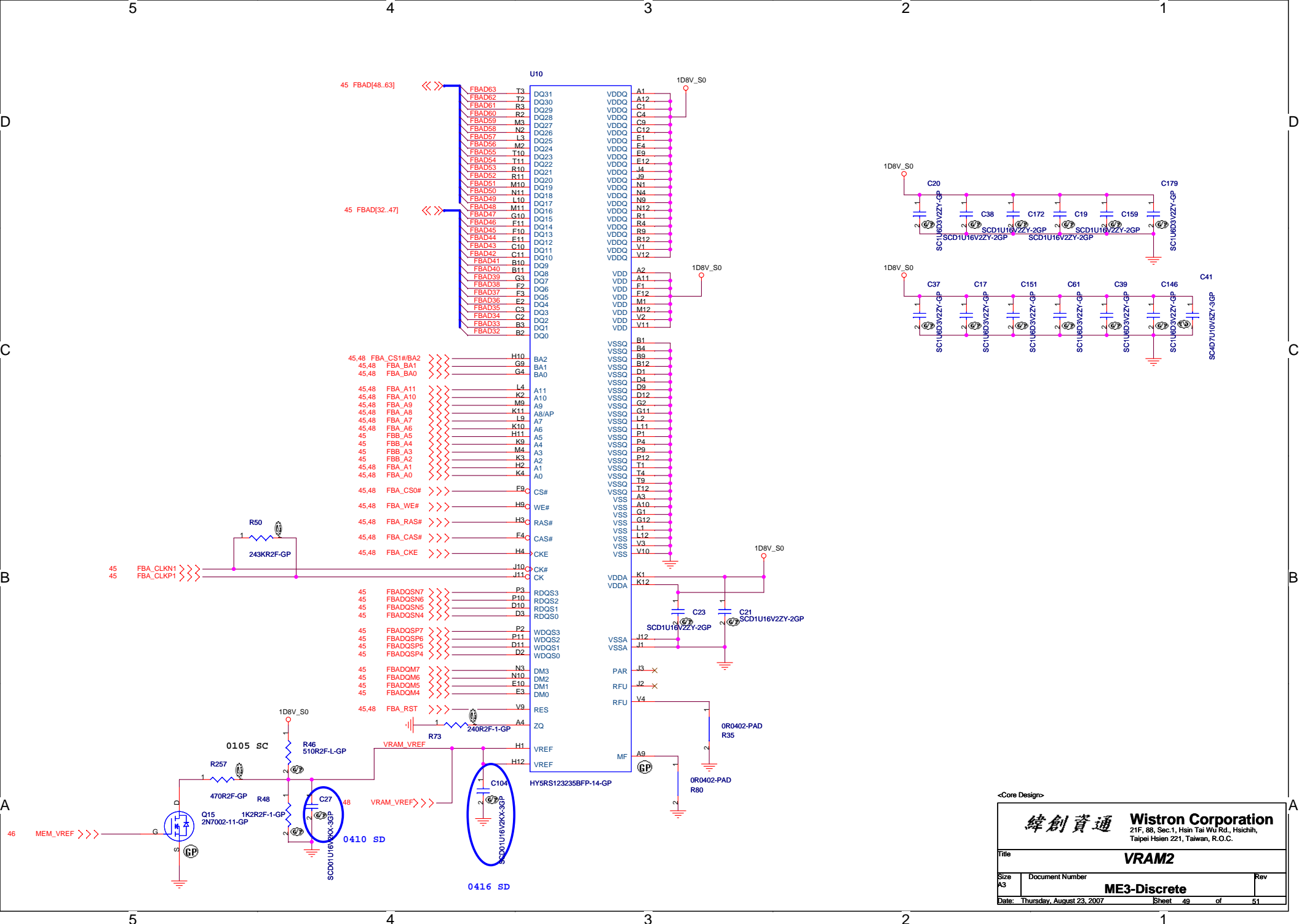
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Title: **VRAM1**

Size A3	Document Number	Rev
	<b>ME3-Discrete</b>	

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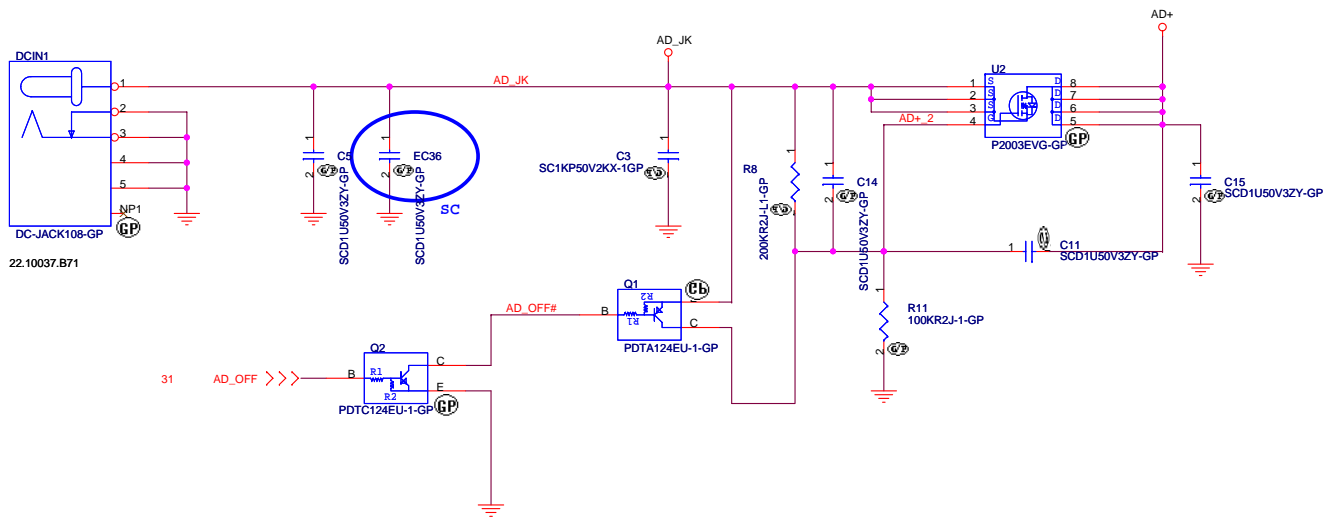
<Core Design>

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 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih,  
 Taipei Hsien 221, Taiwan, R.O.C.

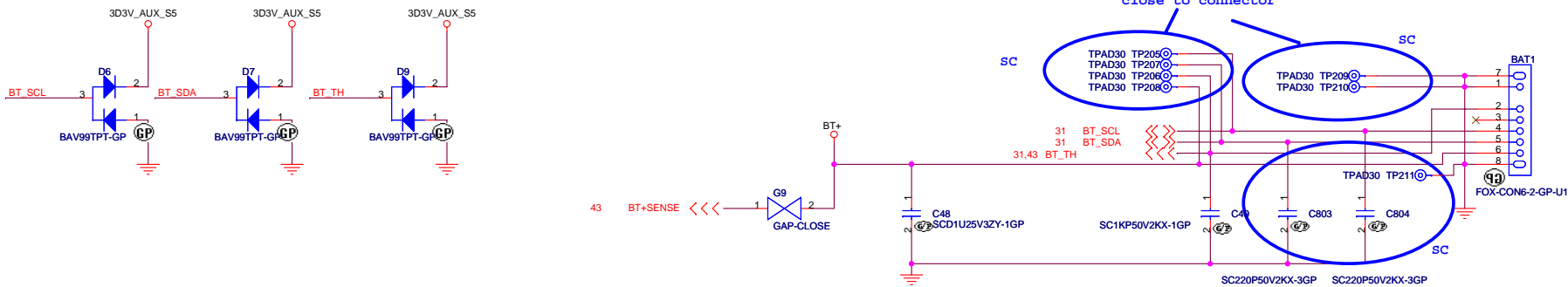
Title: **VRAM2**

Size: 43	Document Number: <b>ME3-Discrete</b>	Rev:
Date: Thursday, August 23, 2007	Sheet: 49	of 51

# Adaptor in to generate DCBATOUT



# BATTERY CONNECTOR



<Variant Name>

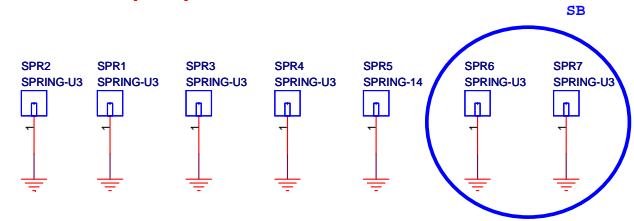
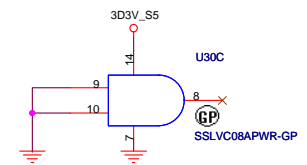
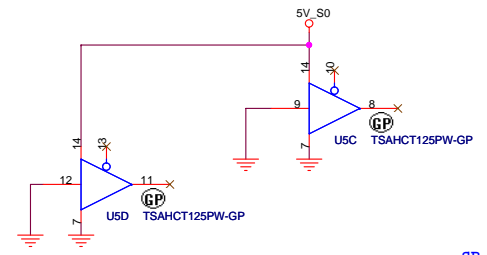
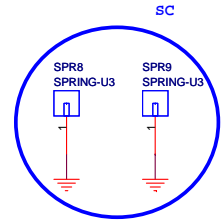
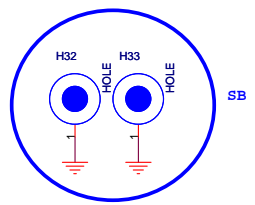
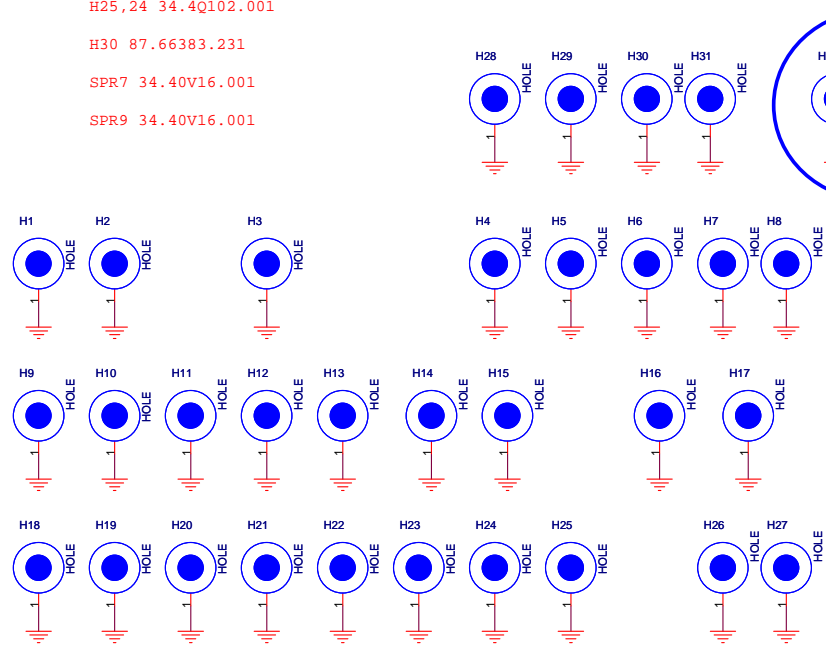
**緯創資通 Wistron Corporation**  
 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.

Title: **AD/BATT CONN**

Size A3 Document Number **ME3-Discrete** Rev

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H13 34.4B602.001  
H25,24 34.4Q102.001  
H30 87.66383.231  
SPR7 34.40V16.001  
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