

MALIBU-3 EXT SDV

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- 87.BLANK
- 88.DC/DC VCC1R5A/VCC1R05AMT
- 89.DC/DC VCC0R75AMT
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- 92.DC/DC RINKAN
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- 99.CPU POWER MONITOR
- 100.EMC DECOUPLING
- 101.PTH FOR SCREW HOLES

	DATE	EC NO.	PART NO.
REL			VER.1.42
			DEVELOPMENT NO. Q/M
			1 / 101

MLB3D-1
VER.1.42
SEP/28/'07

VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	VER.1.42
CHECKED	Y.I	09/28/07	TITLE MLB-3 EXT SDV	
APPROVED	H.K	09/28/07	TITLE PAGE	
CLASS	H.K	09/28/07	LENOVO CONFIDENTIAL	
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EC HISTORY

MALIBU-3 EXT PRE-DV
 BASE LOGIC MALIBU-1 EXT VER.3.11
 CORONADO-5 PRE-DV EXT VER.0.31

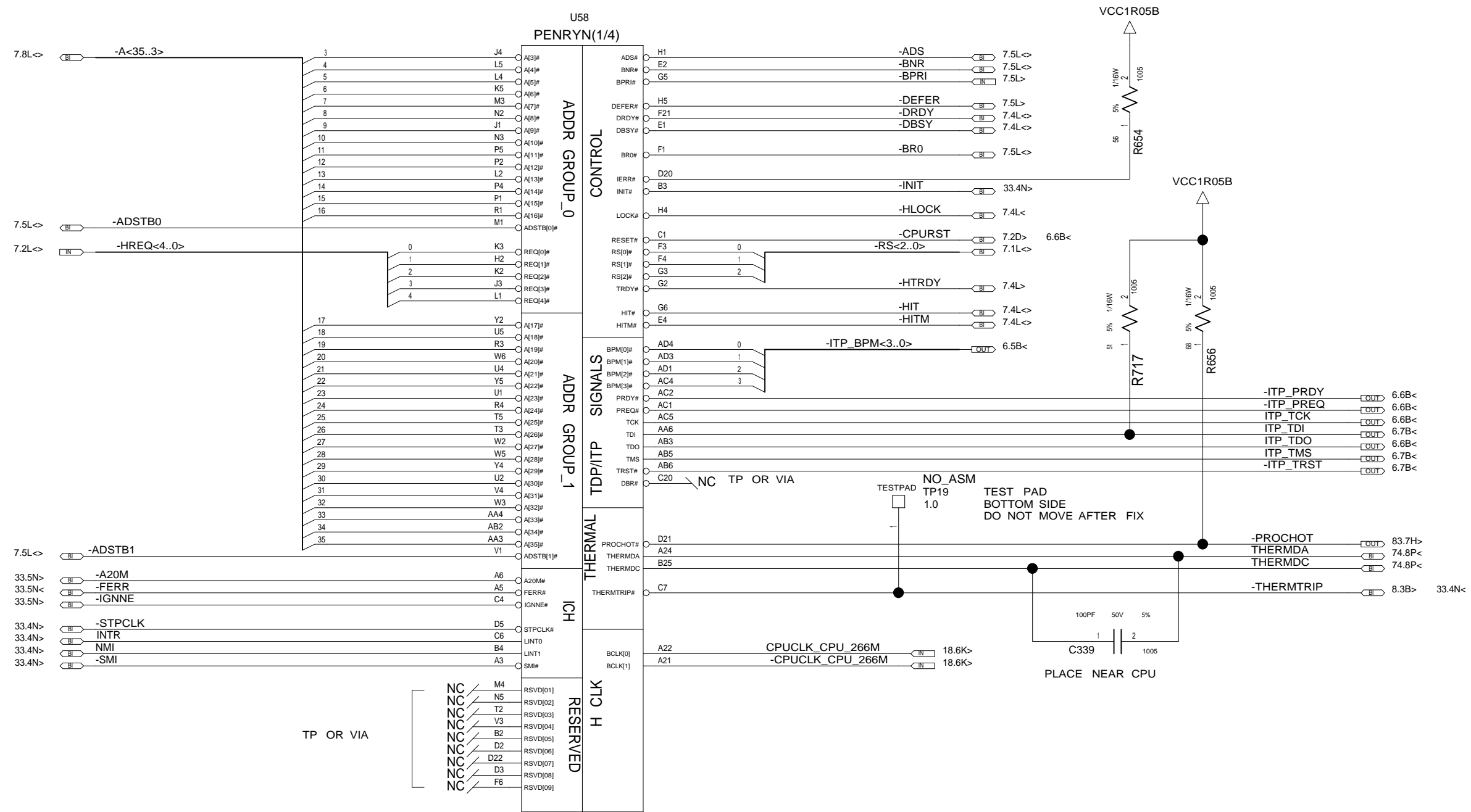
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REL			VER.1.42
			DEVELOPMENT NO.
			Q/M
			2 / 101

VER.0.00	APPLY	MLB3_PDV_EC001	VER.1.09	APPLY	MLB3_PDV_EC276-277
VER.0.01	APPLY	MLB3_PDV_EC002-014	VER.1.10	APPLY	MLB3_PDV_EC278-285
VER.0.02	APPLY	MLB3_PDV_EC015-022	VER.1.11	APPLY	MLB3_PDV_EC286-292
VER.0.03	APPLY	MLB3_PDV_EC023-026	VER.1.12	APPLY	MLB3_PDV_EC293-297
VER.0.04	APPLY	MLB3_PDV_EC027-030	VER.1.13	APPLY	MLB3_PDV_EC298-300
VER.0.05	APPLY	MLB3_PDV_EC031-036	VER.1.14	APPLY	MLB3_PDV_EC301-304
VER.0.06	APPLY	MLB3_PDV_EC037-046	VER.1.15	APPLY	MLB3_PDV_EC305,306
VER.0.07	APPLY	MLB3_PDV_EC047-054	VER.1.16	APPLY	MLB3_PDV_EC308-313
VER.0.08	APPLY	MLB3_PDV_EC055-063	VER.1.17	APPLY	MLB3_PDV_EC314-317
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VER.0.13	APPLY	MLB3_PDV_EC087-091	VER.1.22	APPLY	MLB3_PDV_EC330
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VER.0.15	APPLY	MLB3_PDV_EC097-103	VER.1.24	APPLY	MLB3_PDV_EC334
VER.0.16	APPLY	MLB3_PDV_EC104-111	VER.1.25	APPLY	MLB3_PDV_EC335-340
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VER.1.01	APPLY	MLB3_PDV_EC202-205	VER.1.40	APPLY	MLB3_PDV_EC374
VER.1.02	APPLY	MLB3_PDV_EC206-211	VER.1.41	APPLY	MLB3_PDV_EC375
VER.1.03	APPLY	MLB3_PDV_EC212-228	VER.1.42	APPLY	MLB3_PDV_EC376
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VER.1.05	APPLY	MLB3_PDV_EC235-244			
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VER.1.07	APPLY	MLB3_PDV_EC263-267			
VER.1.08	APPLY	MLB3_PDV_EC268-275			

VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	VER.1.42
CHECKED	Y.I	09/28/07	TITLE	MLB-3 EXT SDV
APPROVED	H.K	09/28/07		EC HISTORY
CLASS	H.K	09/28/07		
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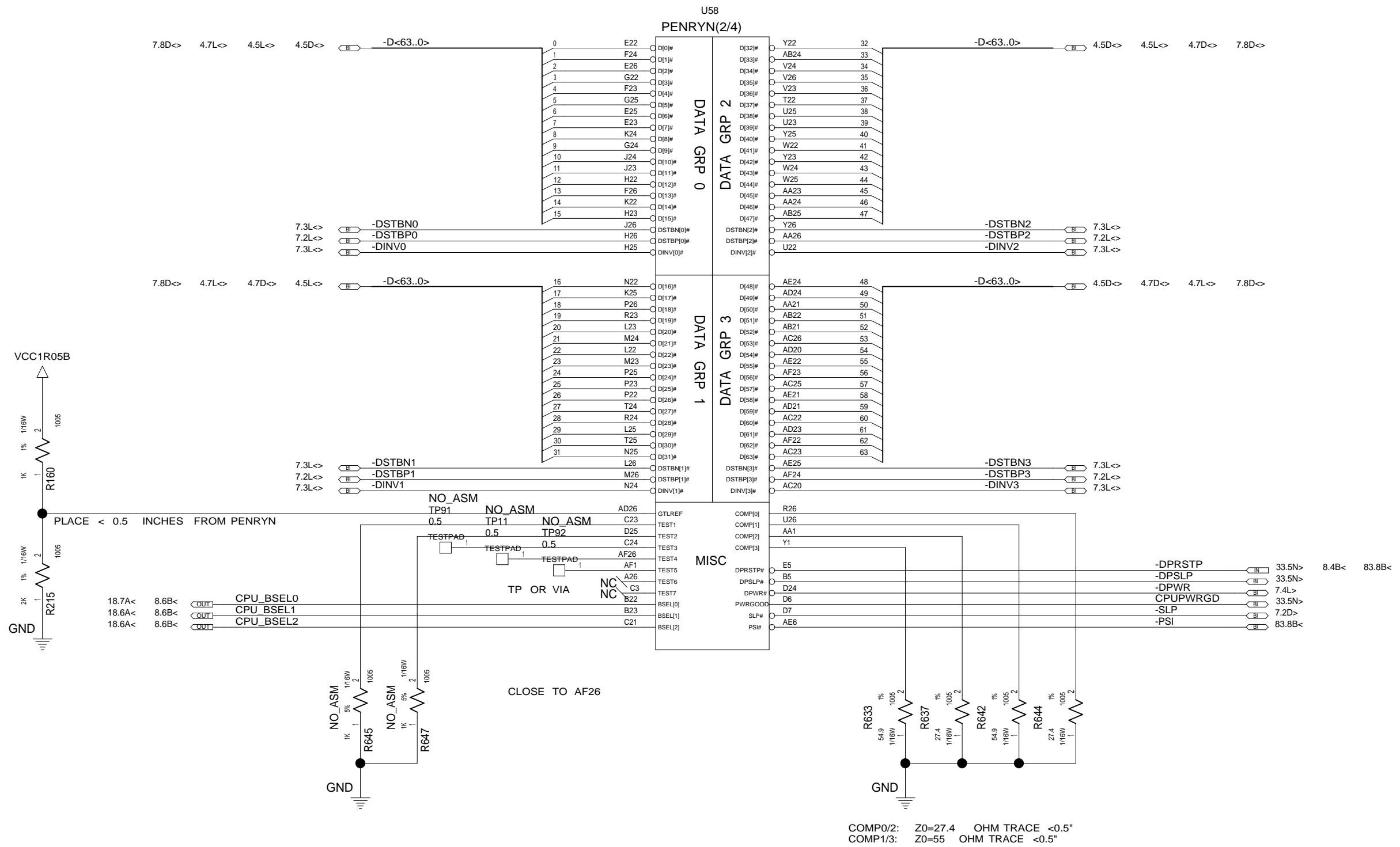
REL	DATE	EC NO.	PART NO. VER.1.42	
			DEVELOPMENT NO.	Q/M
				3 / 101



DESIGNER	Y.Y	09/28/07	PART NO. VER.1.42	
CHECKED	Y.I	09/28/07	TITLE MLB-3 EXT SDV	
APPROVED	H.K	09/28/07	CPU(1/3)	
CLASS	H.K	09/28/07	LENOVO CONFIDENTIAL	

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REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				4 / 101

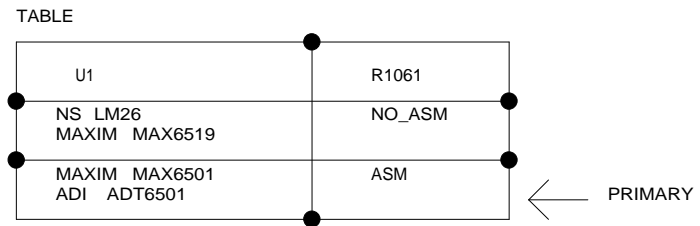
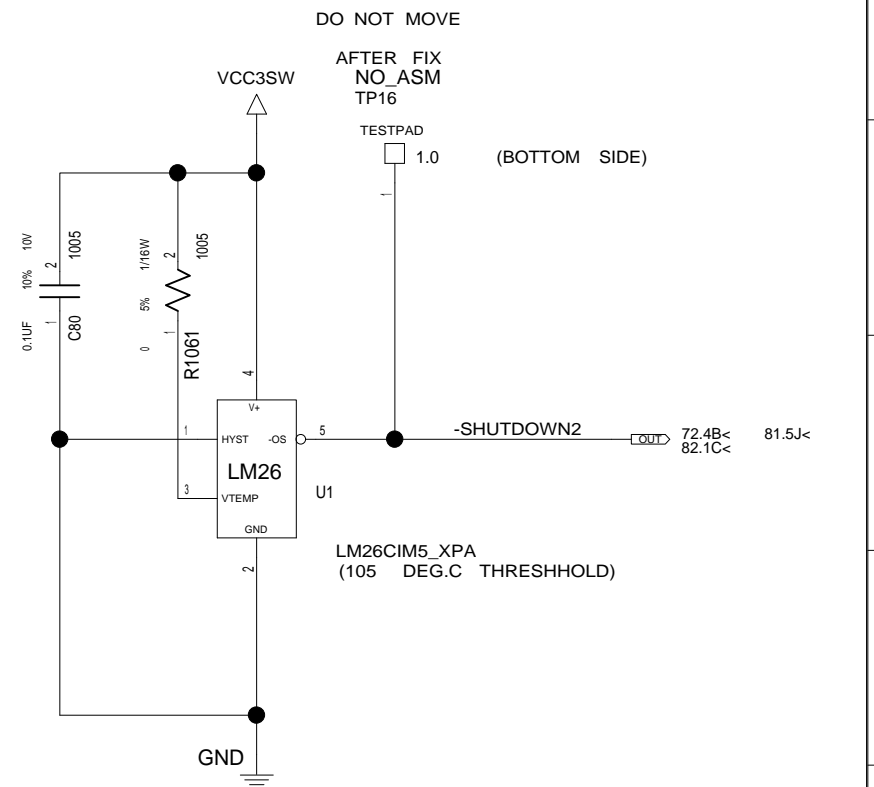
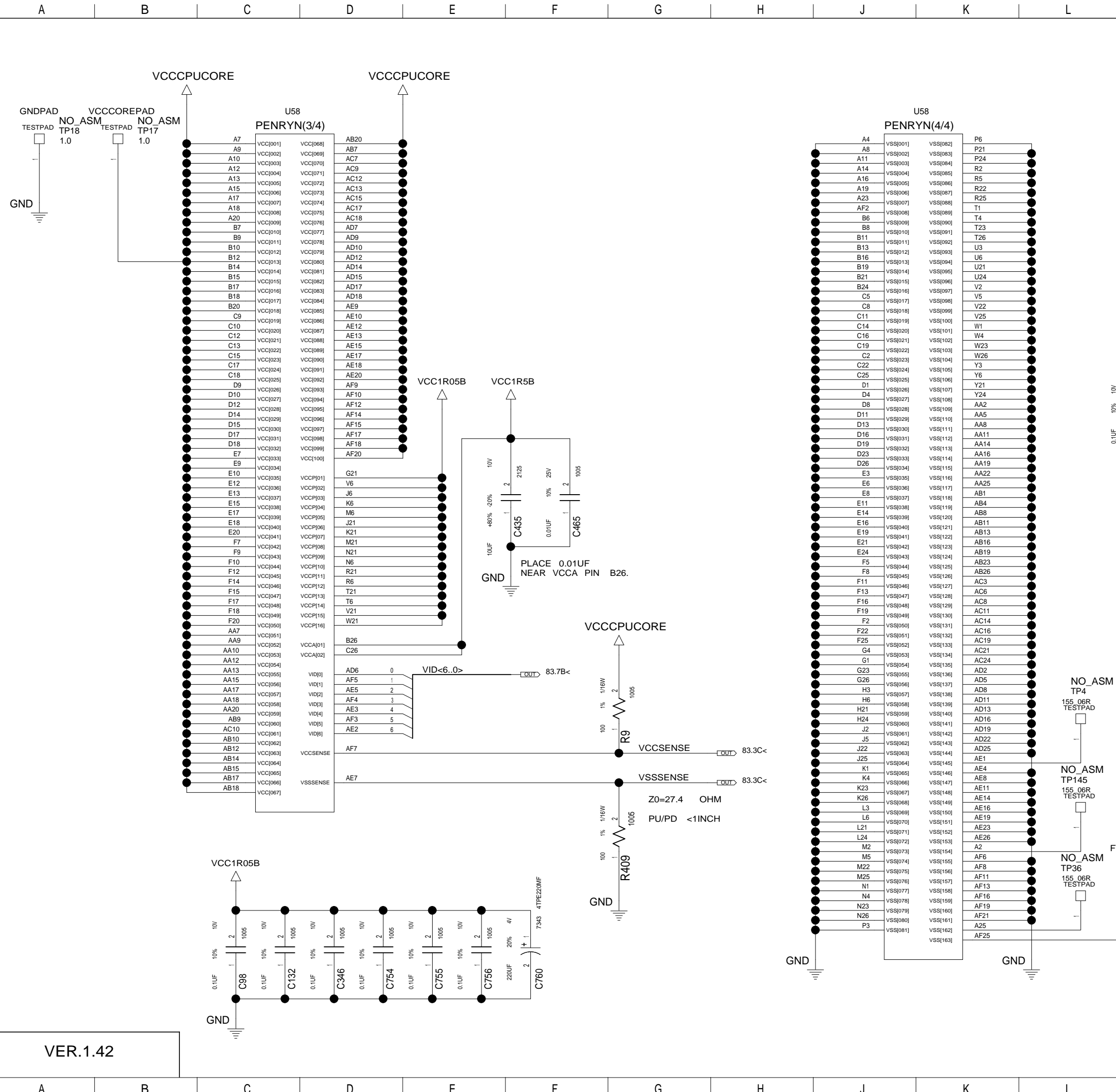


COMP0/2: Z0=27.4 OHM TRACE <0.5"
 COMP1/3: Z0=55 OHM TRACE <0.5"

VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	CPU(2/3)	
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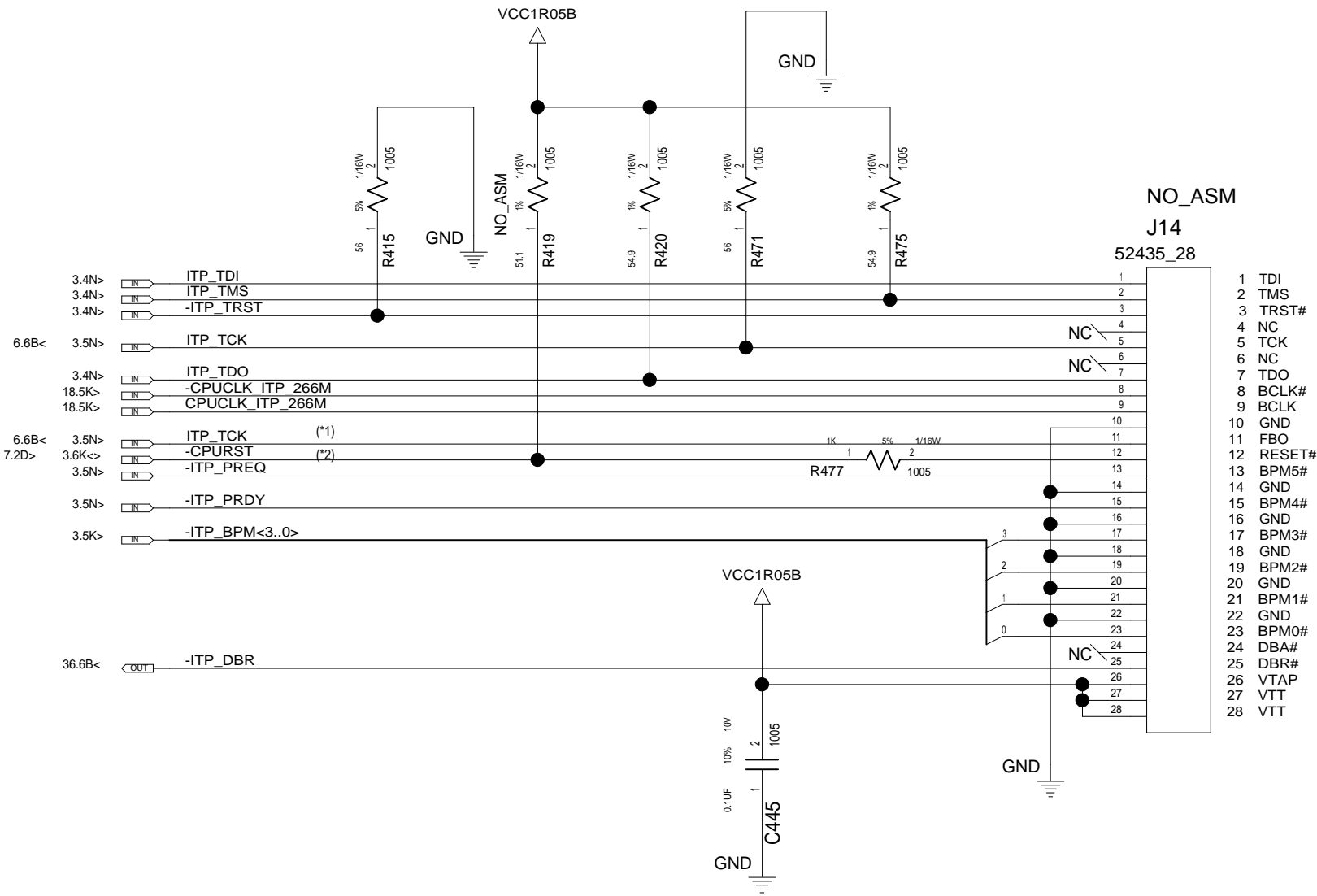
REL	DATE	EC NO.	PART NO.
			VER.1.42
			DEVELOPMENT NO.
			Q/M
			5 / 101



FOR SOLDER CRACK DETECTION
NO_ASM TP8
155_06R TESTPAD

DESIGNER	Y.Y	09/28/07	PART NO.
CHECKED	Y.I	09/28/07	VER.1.42
APPROVED	H.K	09/28/07	TITLE
CLASS	H.K	09/28/07	MLB-3 EXT SDV
			CPU(3/3)
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- NO_ASM
J14
52435_28
- 1 TDI
 - 2 TMS
 - 3 TRST#
 - 4 NC
 - 5 TCK
 - 6 NC
 - 7 TDO
 - 8 BCLK#
 - 9 BCLK
 - 10 GND
 - 11 FBO
 - 12 RESET#
 - 13 BPM5#
 - 14 GND
 - 15 BPM4#
 - 16 GND
 - 17 BPM3#
 - 18 GND
 - 19 BPM2#
 - 20 GND
 - 21 BPM1#
 - 22 GND
 - 23 BPM0#
 - 24 DBA#
 - 25 DBR#
 - 26 VTAP
 - 27 VTT
 - 28 VTT

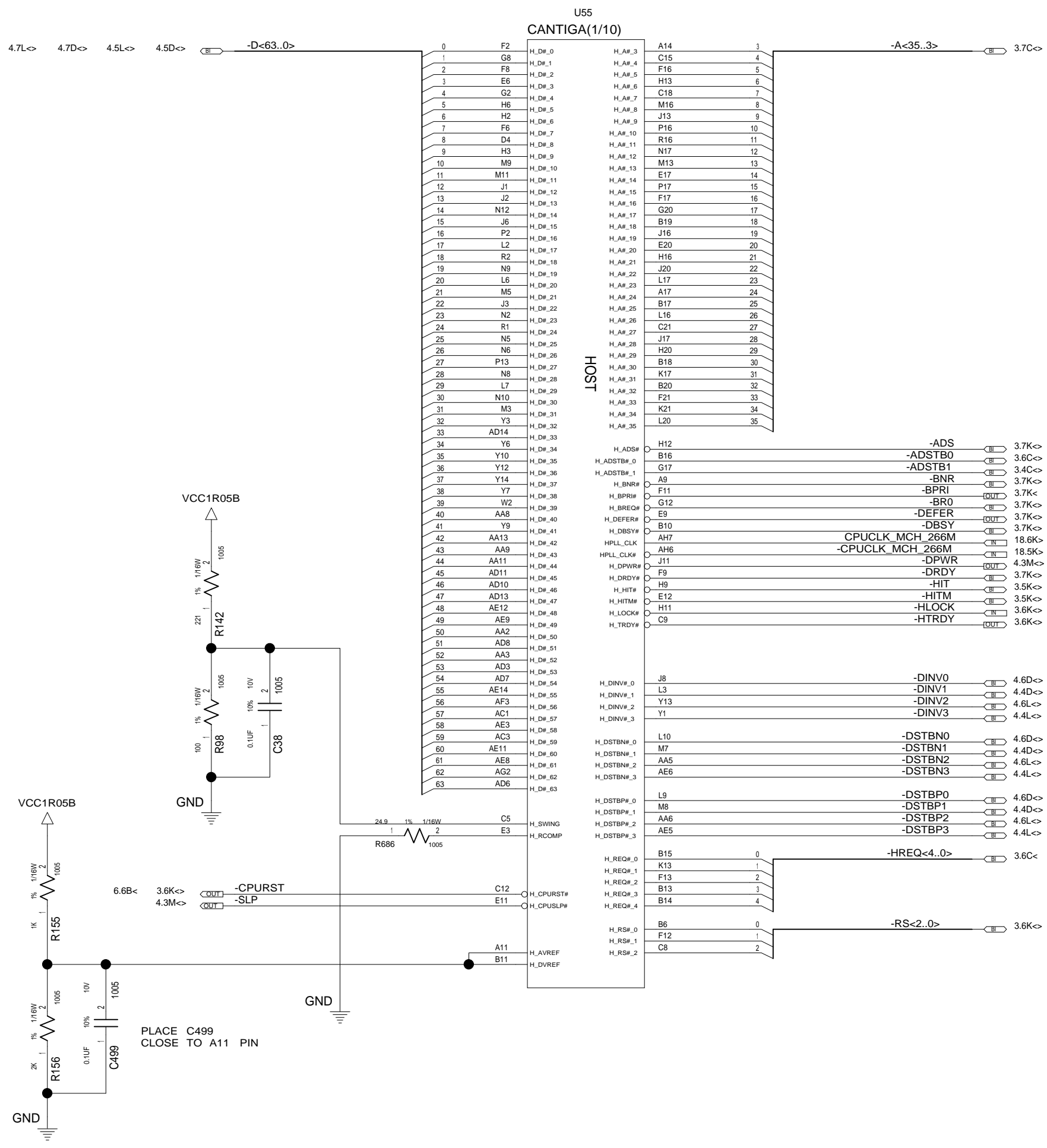
TABLE

REF DES	FOR ITP700FLEX	FOR ITP-XDP
J14	NO_ASM ---> ASM	NO_ASM ---> ASM
C445	ASM(NO CHANGE)	ASM(NO CHANGE)
R717	ASM ---> 150 5% ASM	ASM(NO CHANGE)
R477	ASM ---> 22.6 1% ASM	ASM(NO CHANGE)
R415	ASM(NO CHANGE)	ASM(NO CHANGE)
R419	NO_ASM ---> ASM	NO_ASM(NO CHANGE)
R420	ASM(NO CHANGE)	ASM(NO CHANGE)
R471	ASM ---> 27.4 1% ASM	ASM(NO CHANGE)
R475	ASM ---> 39.2 1% ASM	ASM(NO CHANGE)

NOTES : C445 AND R477 "ASM" BEFORE SIT. "NO_ASM" FROM SIT.

(*1) TCK SIGNAL IS BRANCHED AT PENRYN PIN
 (*2) -CPURST SIGNAL IS BRANCHED AT CANTIGA PIN

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CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	CANTIGA(1/8):HOST I/F	
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			VER.1.42
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			Q/M
			8 / 101

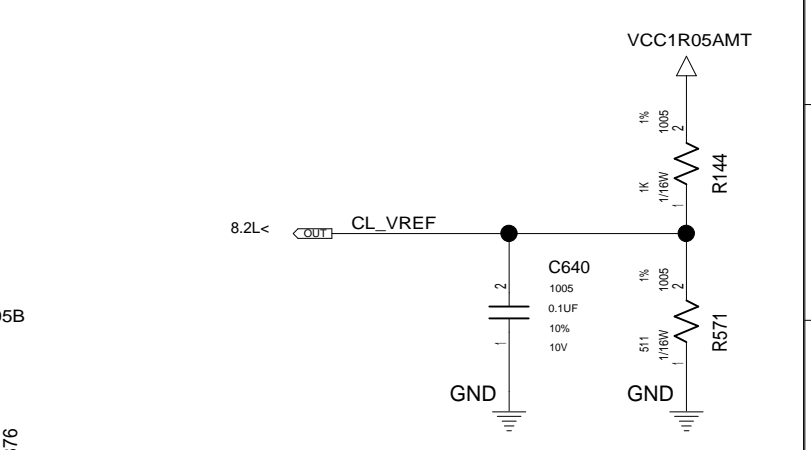
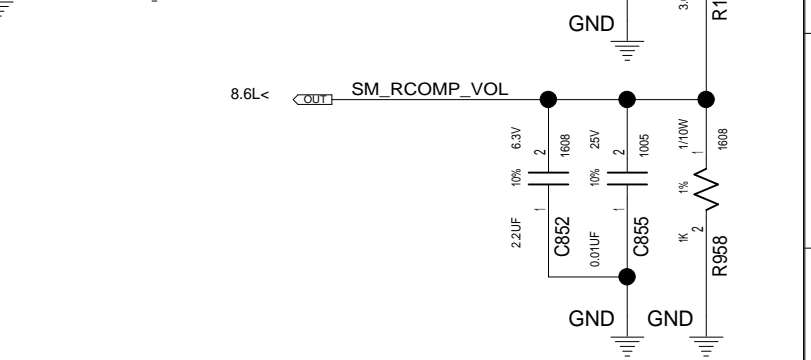
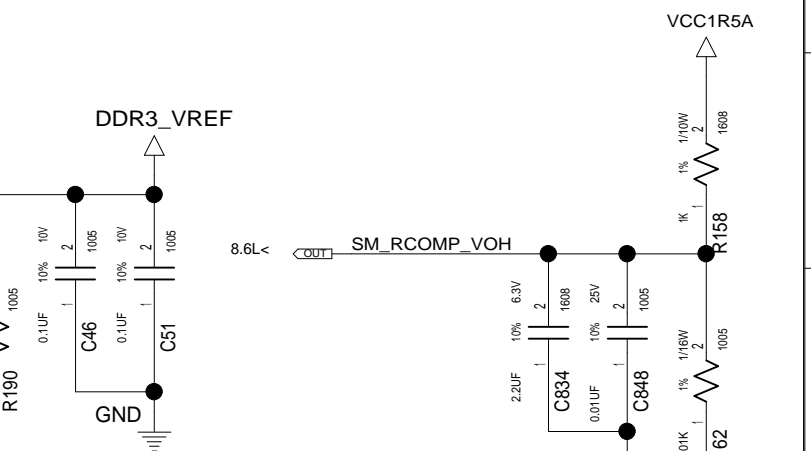
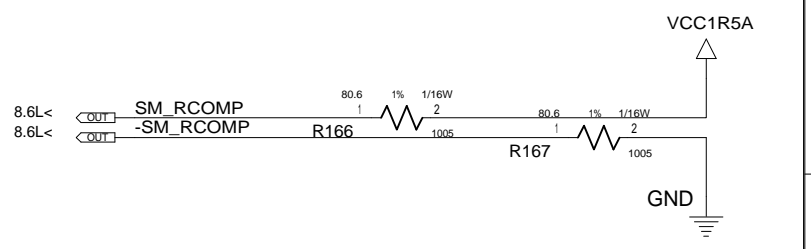
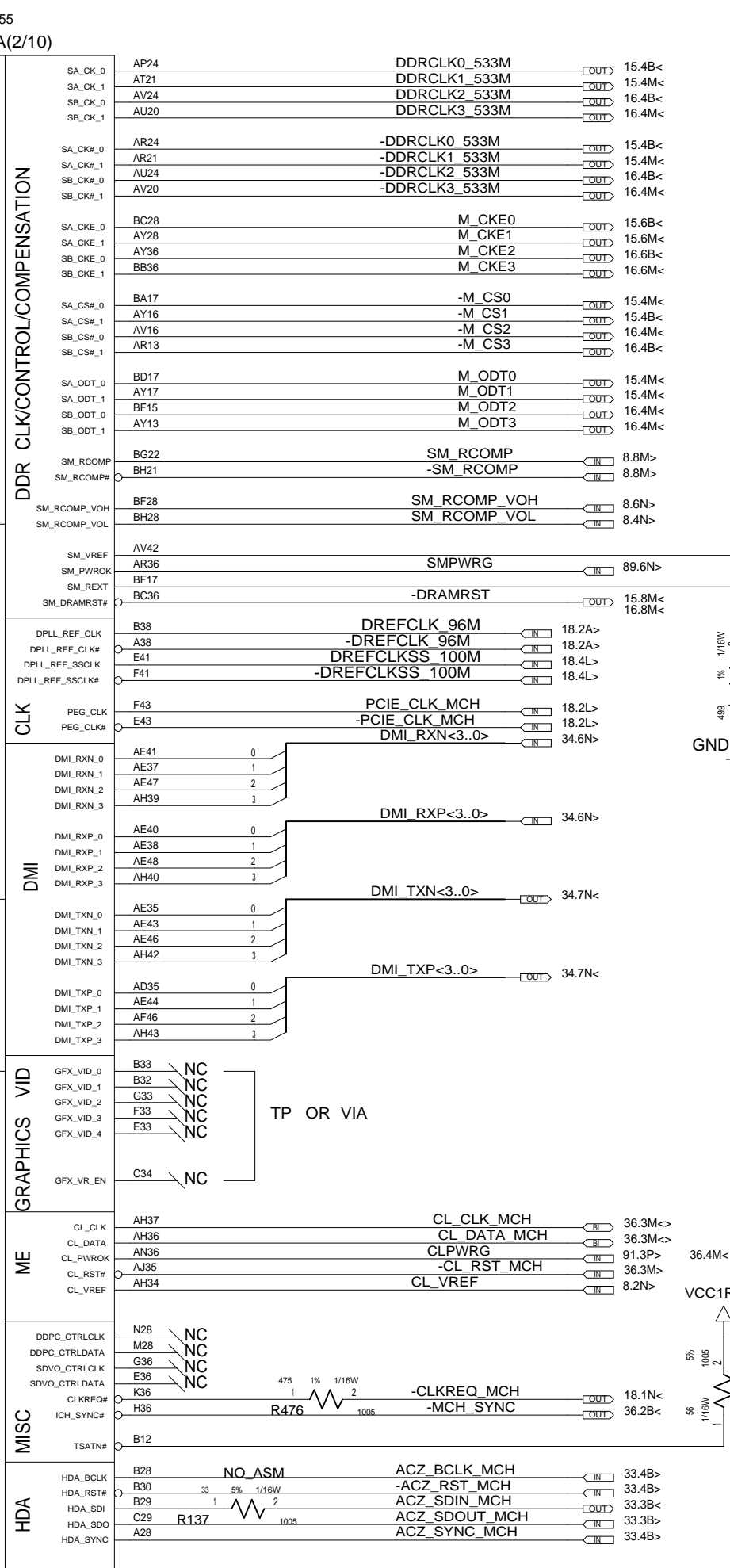
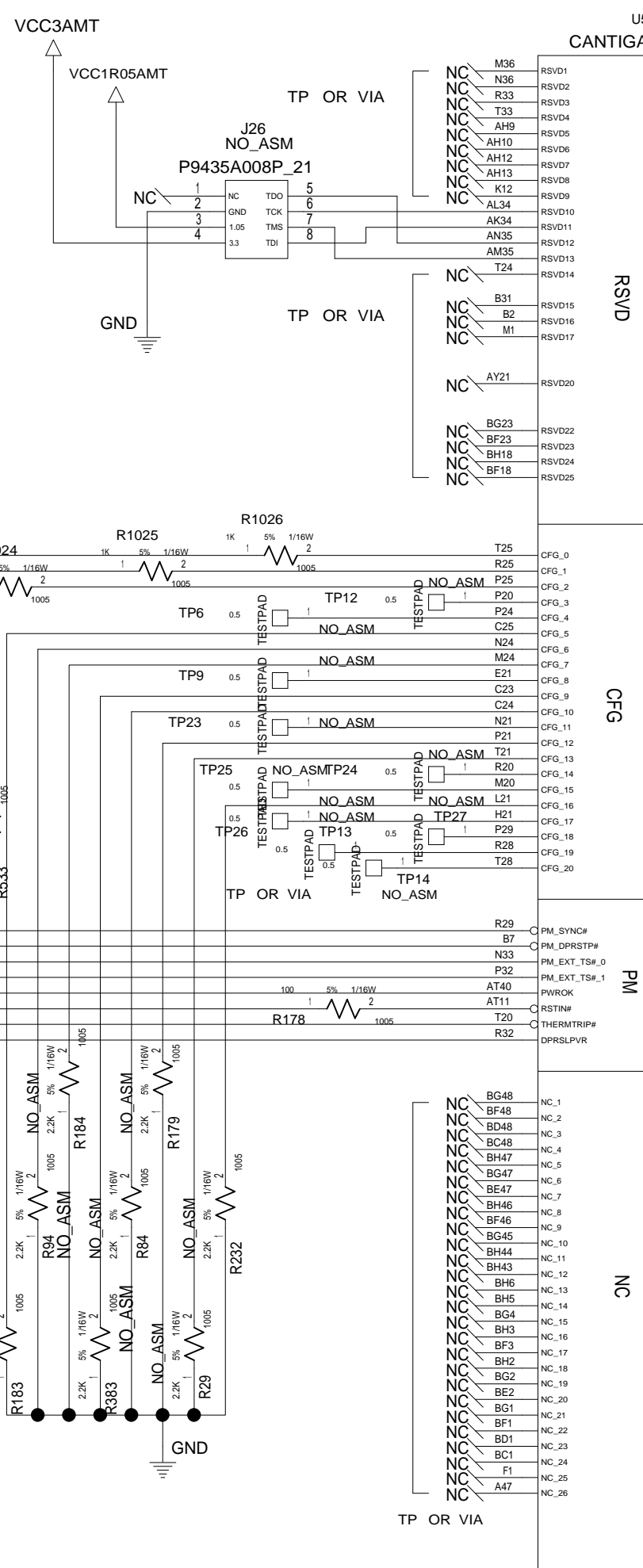
ME DEBUG PORT PIN OUT TABLE

RSVD10	ME_JTAG_TCK
RSVD11	ME_JTAG_TDI
RSVD12	ME_JTAG_TDO
RSVD13	ME_JTAG_TMS

NEED TP OR VIA FOR THESE PINS

HOST BUS CLK SELECT TABLE

	BSEL2	BSEL1	BSEL0
667M	0	1	1
800M	0	1	0
1066M	0	0	0



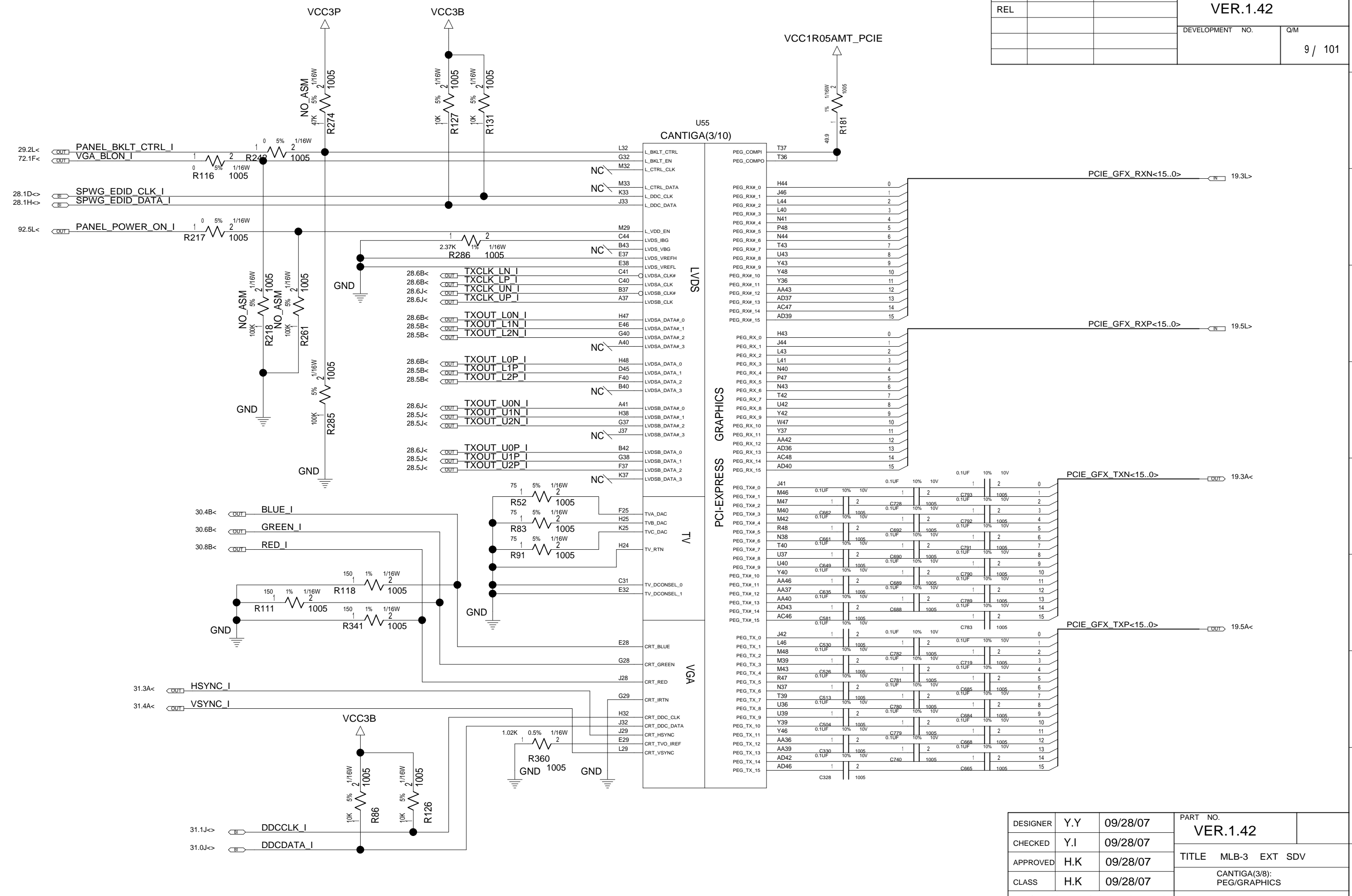
CFG[17:3]	INTERNAL PULLUP
CFG[20:18]	INTERNAL PULLDOWN

83.8B<	4.3M<	36.5B>	-PM_SYNC
16.0L>	91.3K<	33.5N>	-DPRSTP
66.1B<	36.5M<	15.0L>	-MEM_TS0
74.6B<	74.5E<	92.3M>	-MEM_TS1
		72.6B<	BPWRG
61.1B<	56.6B<	75.6K<	-PLTRST_FAR
73.6C<	35.1L>	35.1L>	
		65.5C<	
33.4N<	3.3N<		-THERMTRIP
		36.5M>	DPRSPLVR

CFG5	DMI	R183
		X2 : ASM
		X4 : NO_ASM
CFG6	ITPM HOST I/F	
	ENABLE	: ASM
	DISABLE	: NO_ASM
CFG7	ME CRYPTO STRAP	
	NO CONFIDENTIALITY	: ASM
	WITH CONFIDENTIALITY	: NO_ASM
CFG9	PEG PORT	R383
	LANE REVERSAL	: ASM
	NORMAL	: NO_ASM

DESIGNER	Y.Y	09/28/07	PART NO.
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APPROVED	H.K	09/28/07	TITLE
CLASS	H.K	09/28/07	MLB-3 EXT SDV
			CANTIGA(2/8):
			DMI/CLK/CONTROL
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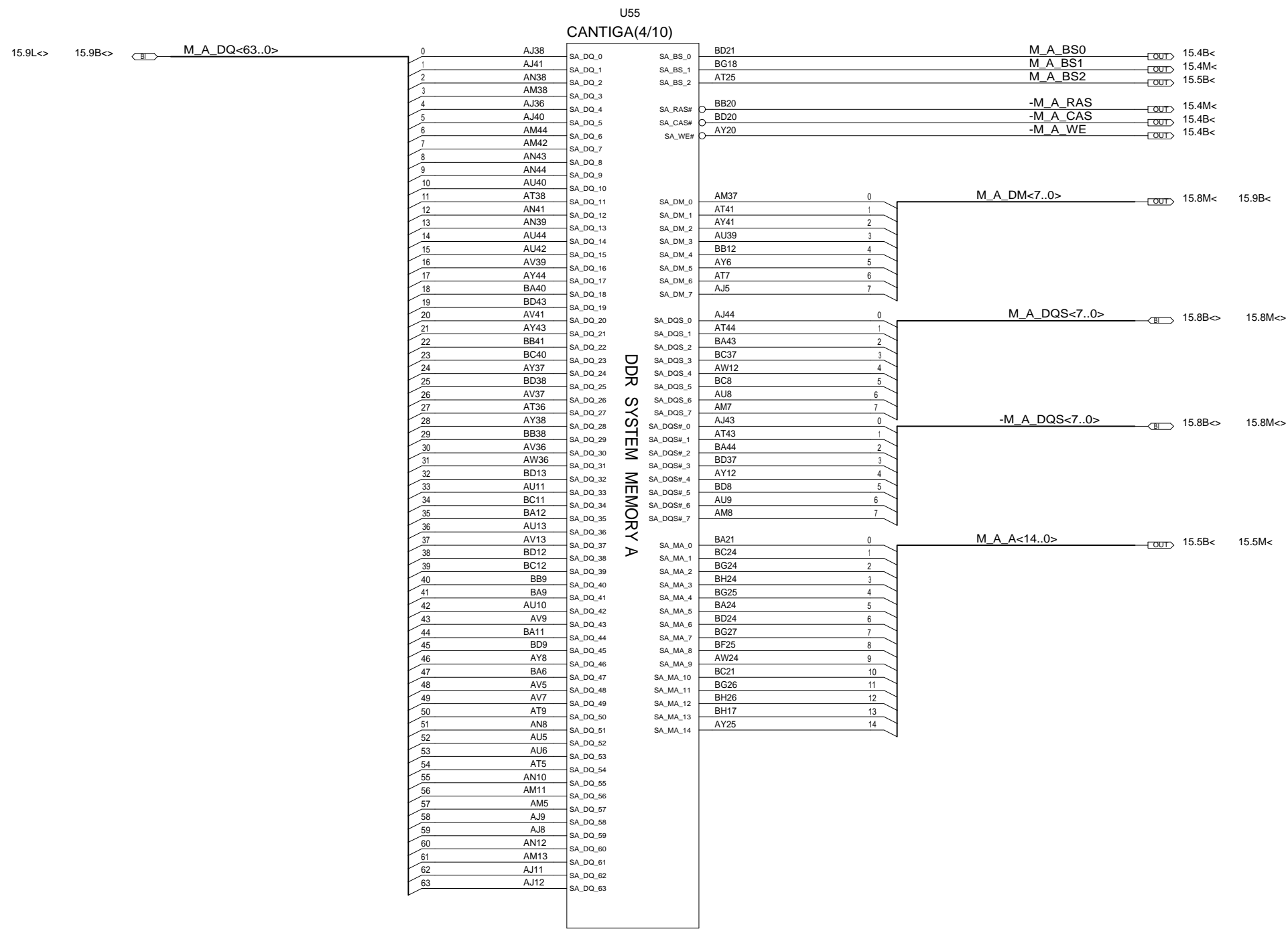
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			Q/M
			9 / 101



VER.1.42

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APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV
CLASS	H.K	09/28/07	CANTIGA(3/8): PEG/GRAPHICS
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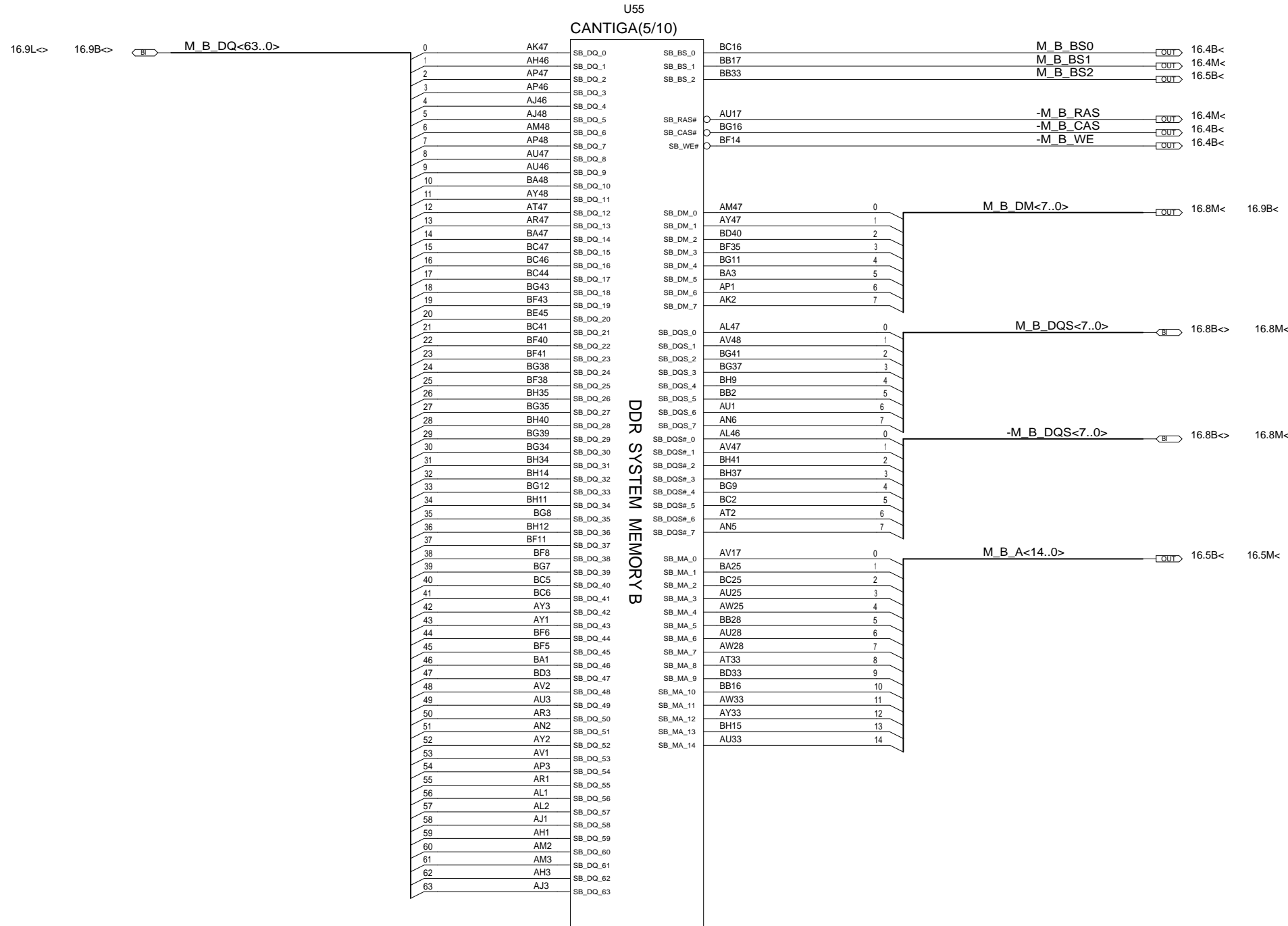
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			DEVELOPMENT NO.	Q/M
				10 / 101



VER.1.42

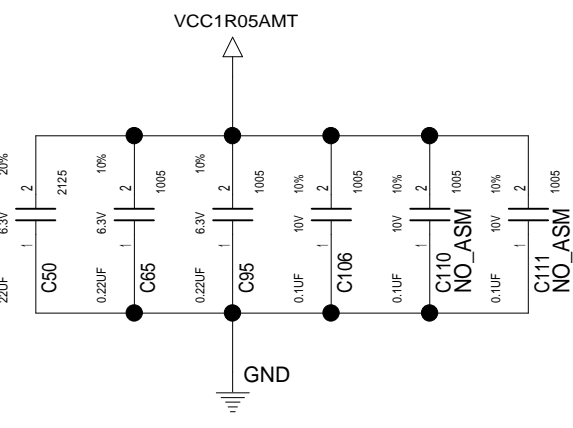
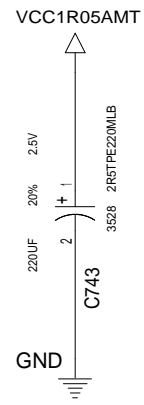
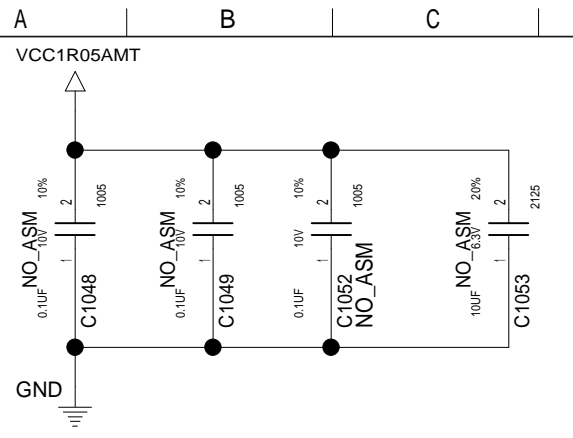
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CLASS	H.K	09/28/07	CANTIGA(4/8): DDR3 CHANNEL-A	
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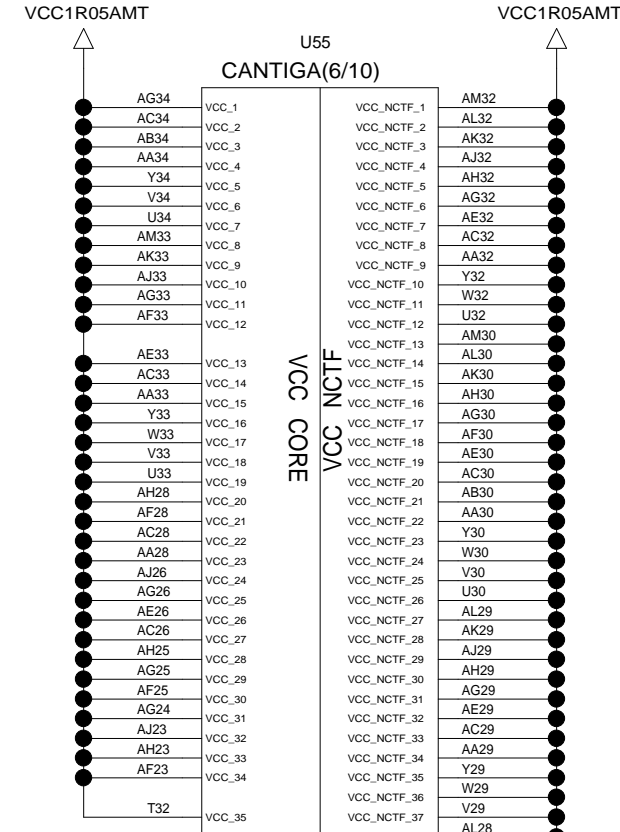
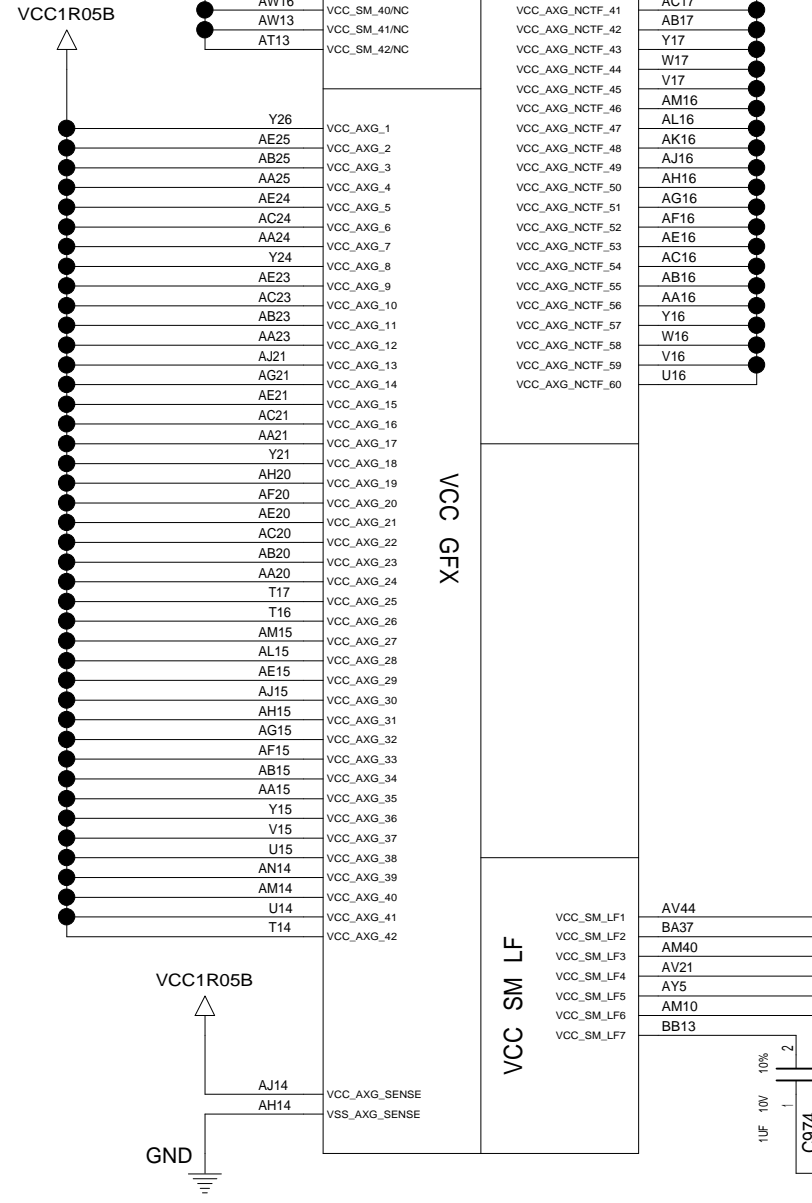
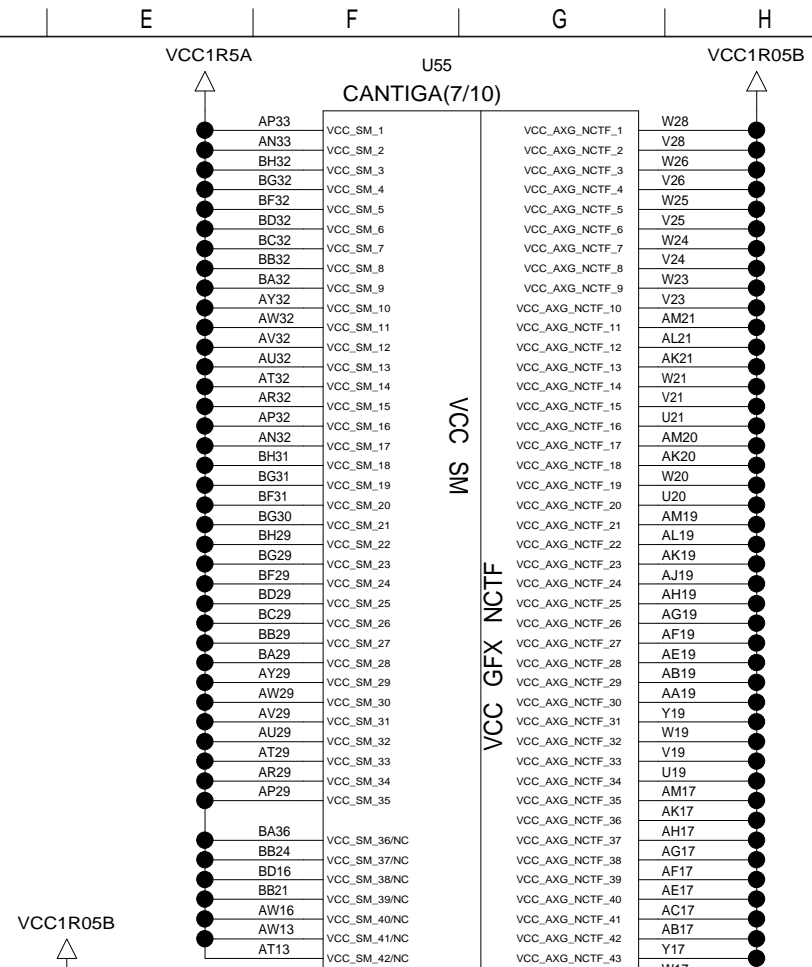


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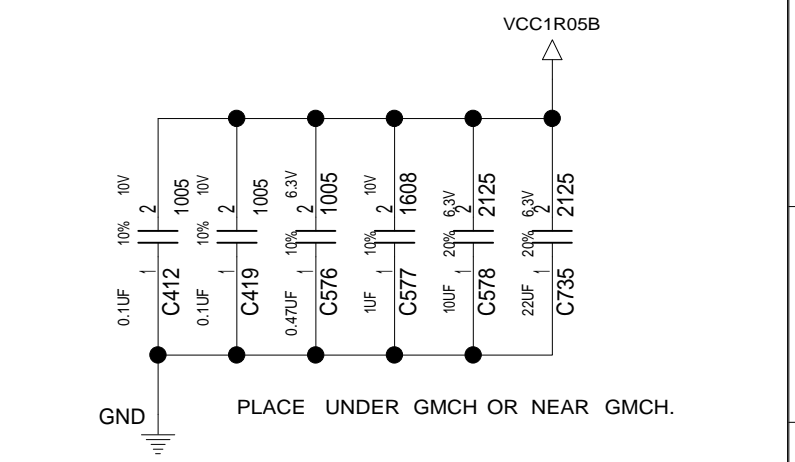
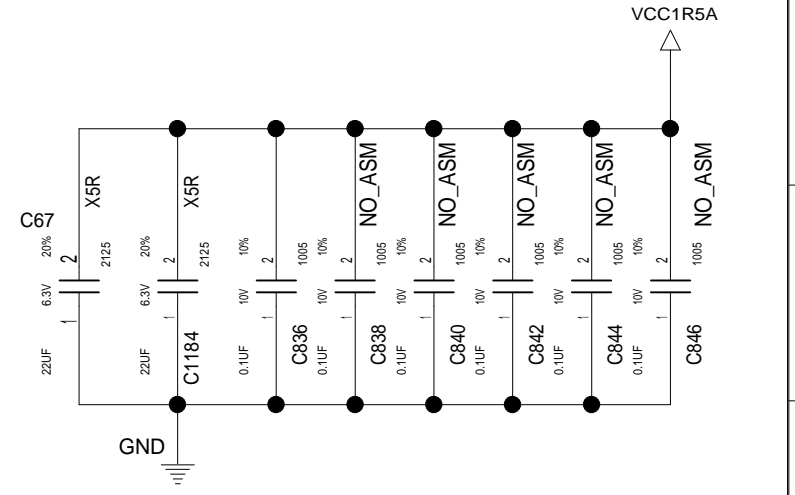
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CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	CANTIGA(5/8): DDR3 CHANNEL-B	
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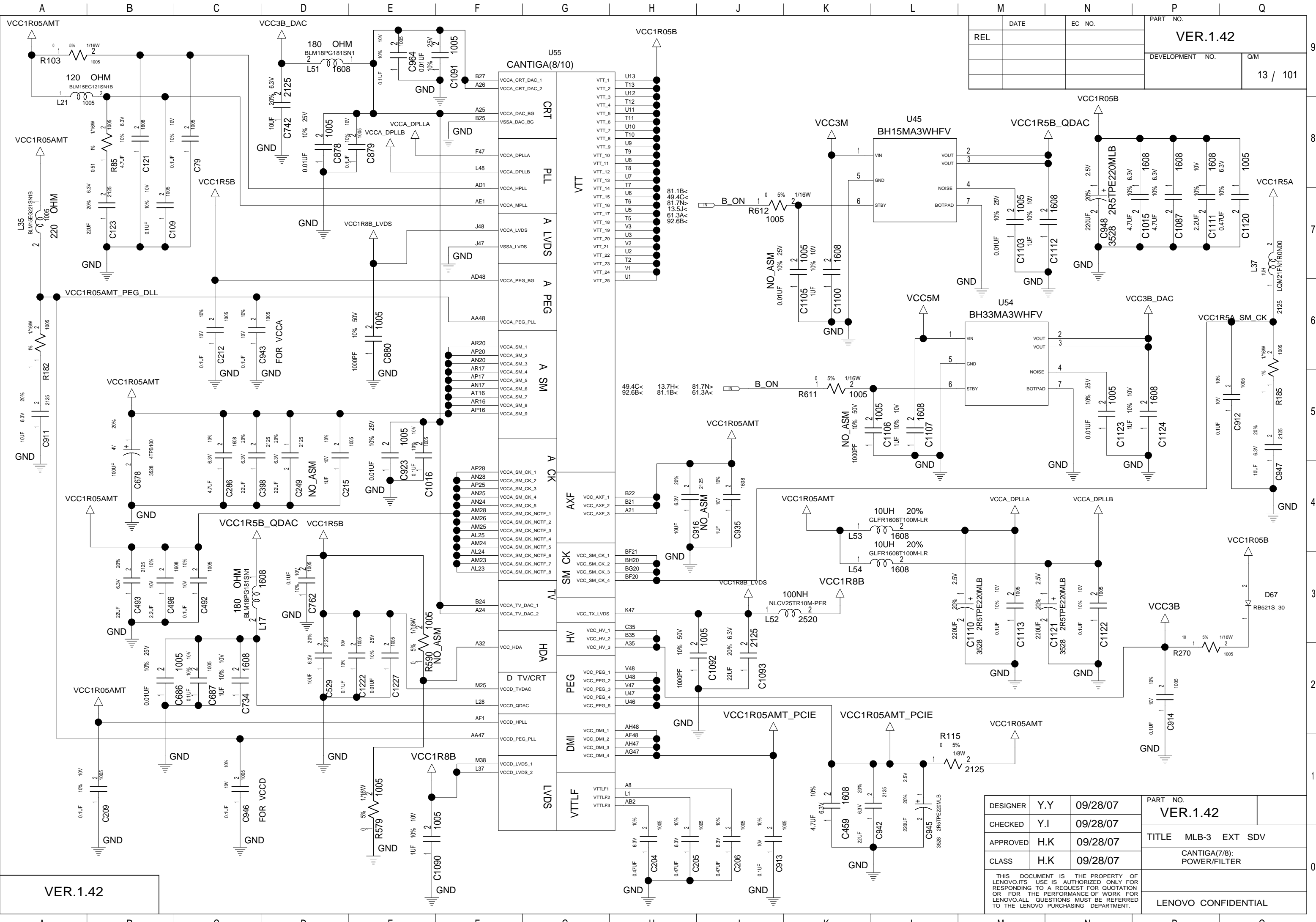
VER.1.42



REL	DATE	EC NO.	PART NO.
			VER.1.42
			DEVELOPMENT NO.
			Q/M
			12 / 101



DESIGNER	Y.Y	09/28/07	PART NO.
CHECKED	Y.I	09/28/07	VER.1.42
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV
CLASS	H.K	09/28/07	CANTIGA(6/8):POWER
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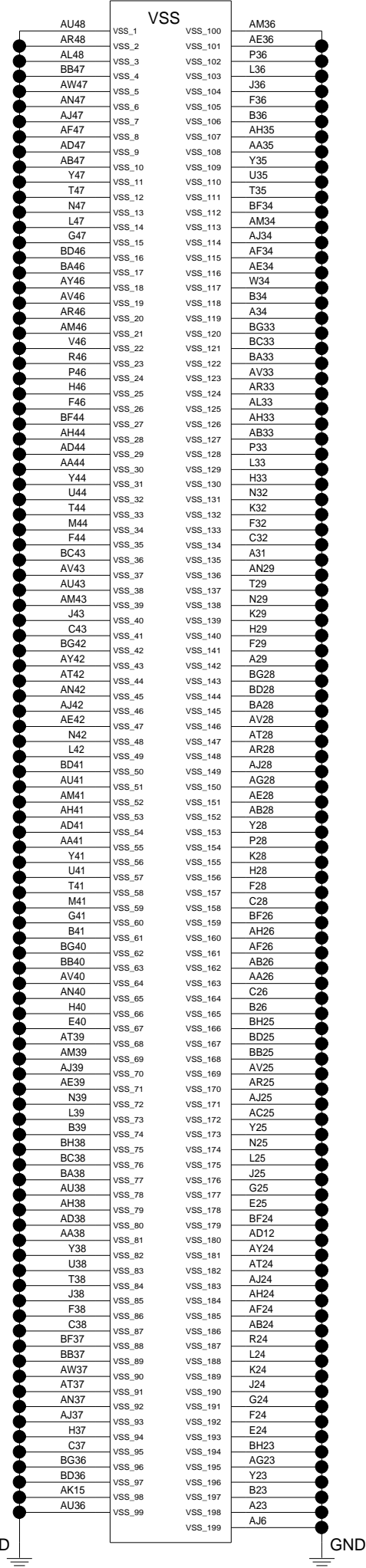


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			VER.1.42
			DEVELOPMENT NO.
			Q/M
			13 / 101

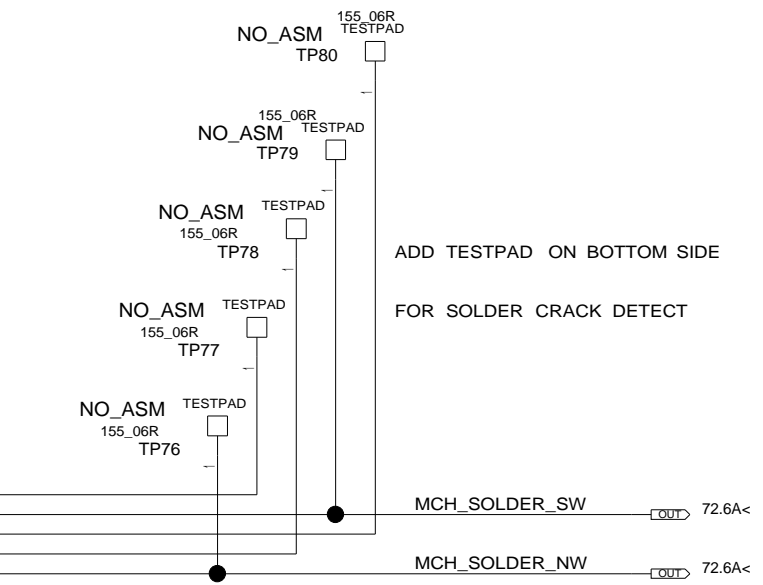
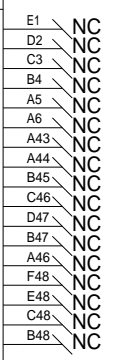
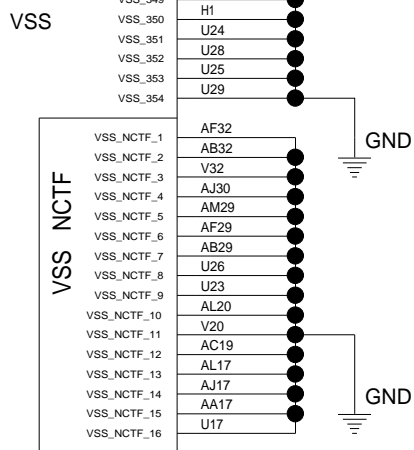
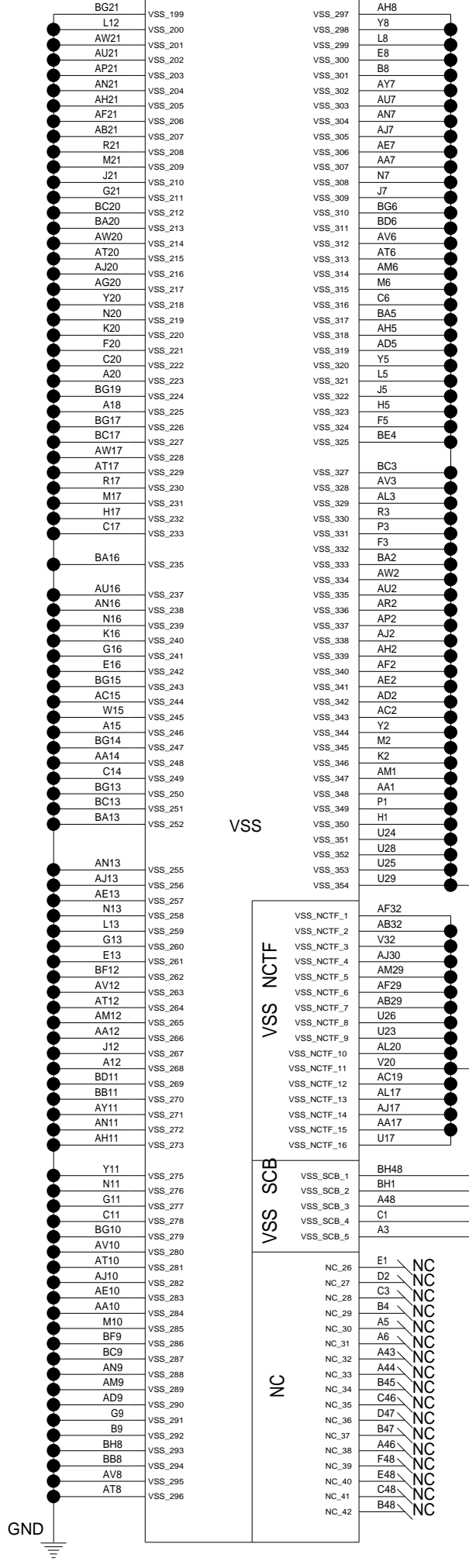
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CHECKED	Y.I	09/28/07	VER.1.42
APPROVED	H.K	09/28/07	TITLE
CLASS	H.K	09/28/07	MLB-3 EXT SDV
			CANTIGA(7/8): POWER/FILTER
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REL	DATE	EC NO.	PART NO.	
			VER.1.42	
			DEVELOPMENT NO.	Q/M
				14 / 101

U55 CANTIGA(9/10)



U55 CANTIGA(10/10)

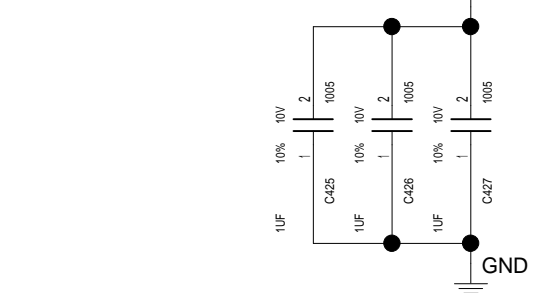
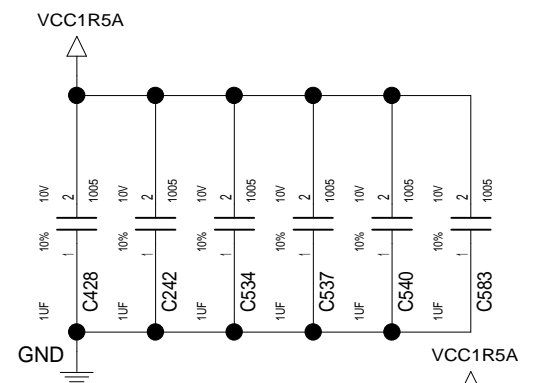
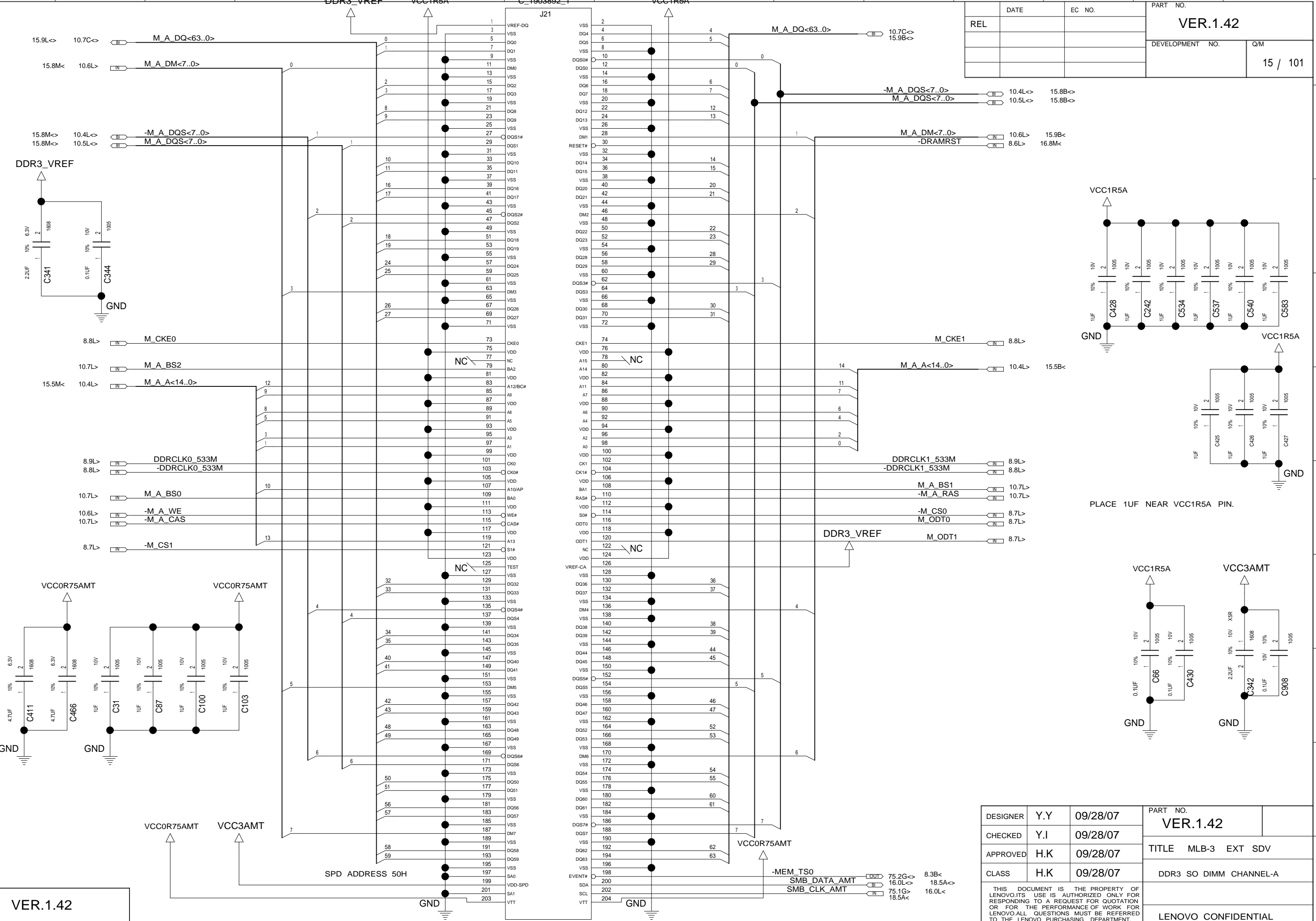


ADD TESTPAD ON BOTTOM SIDE FOR SOLDER CRACK DETECT

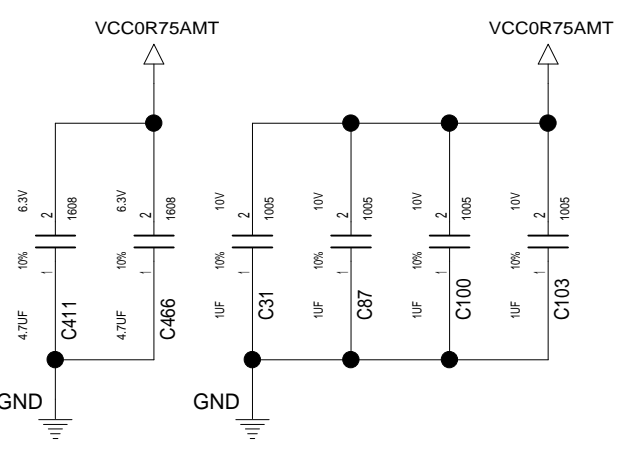
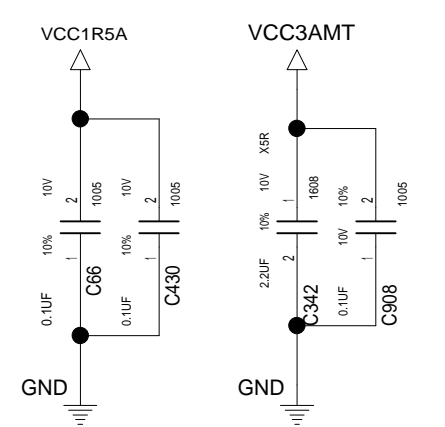
VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	CANTIGA(8/8):GND	
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REL	DATE	EC NO.	PART NO.	
			VER.1.42	
			DEVELOPMENT NO.	Q/M
				15 / 101



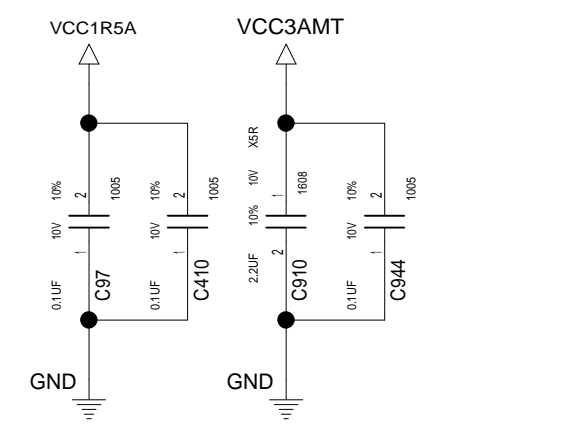
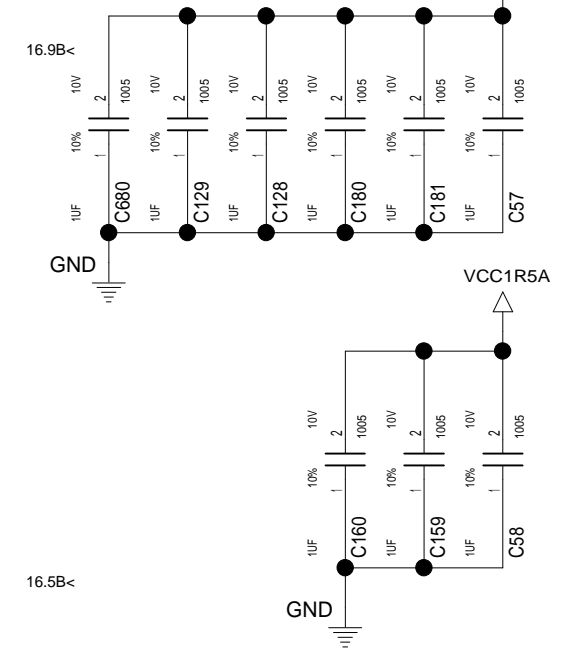
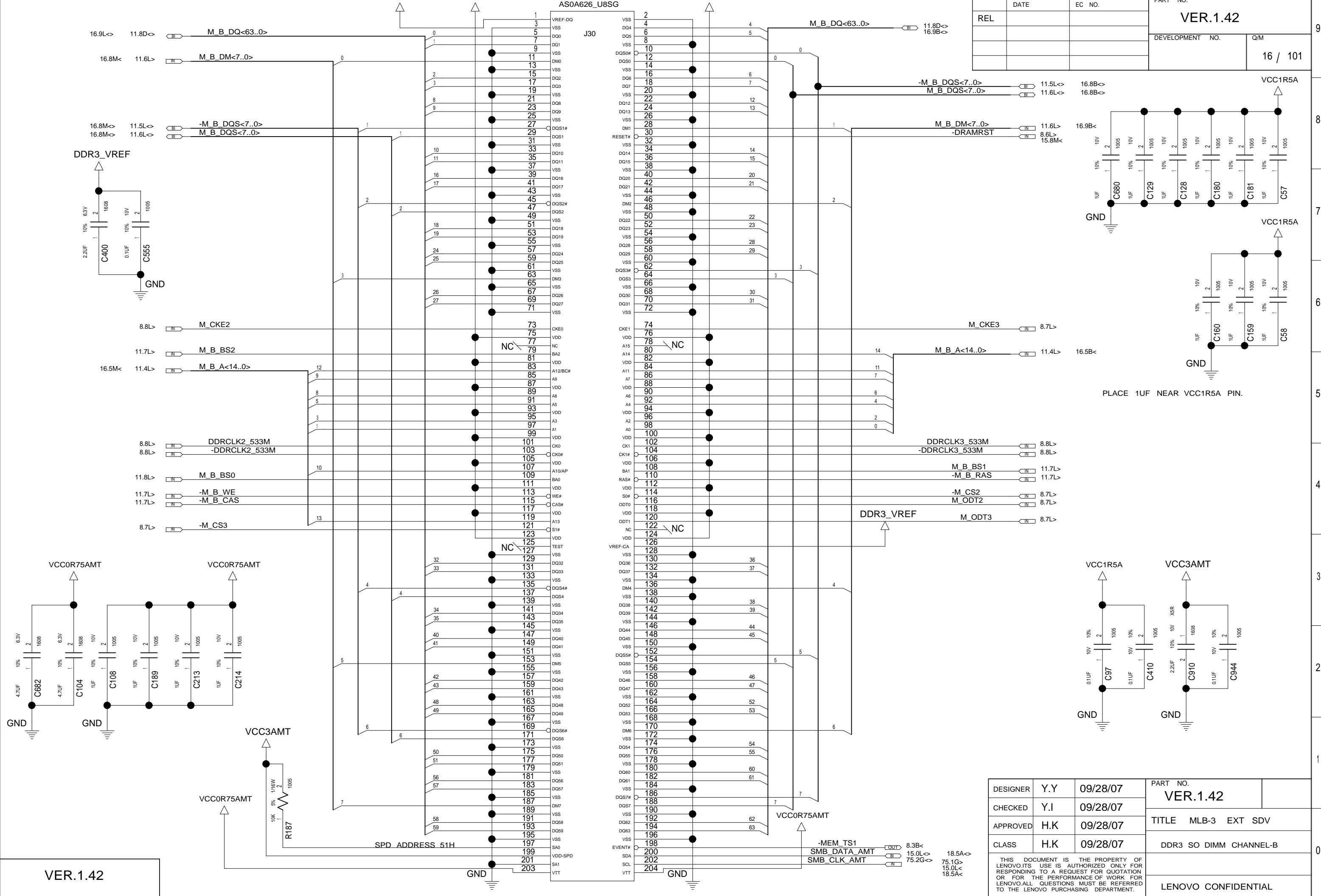
PLACE 1UF NEAR VCC1R5A PIN.



VER.1.42

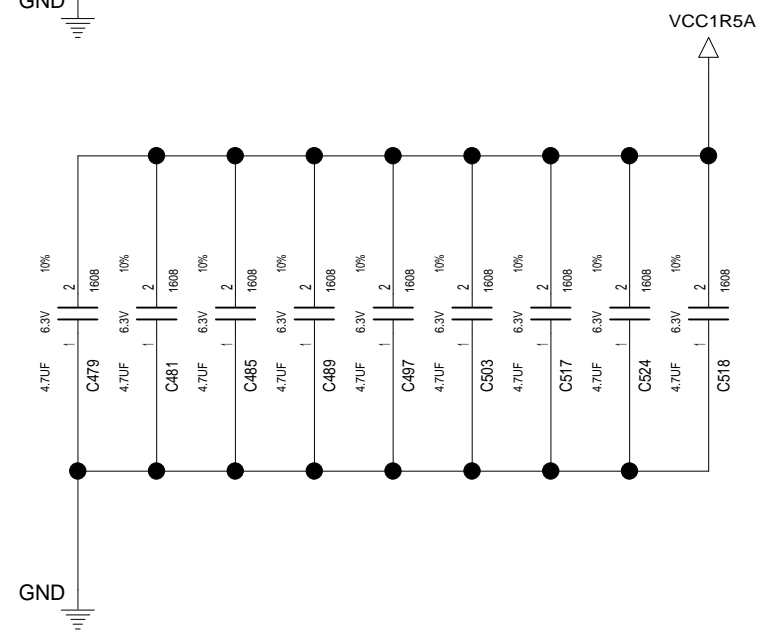
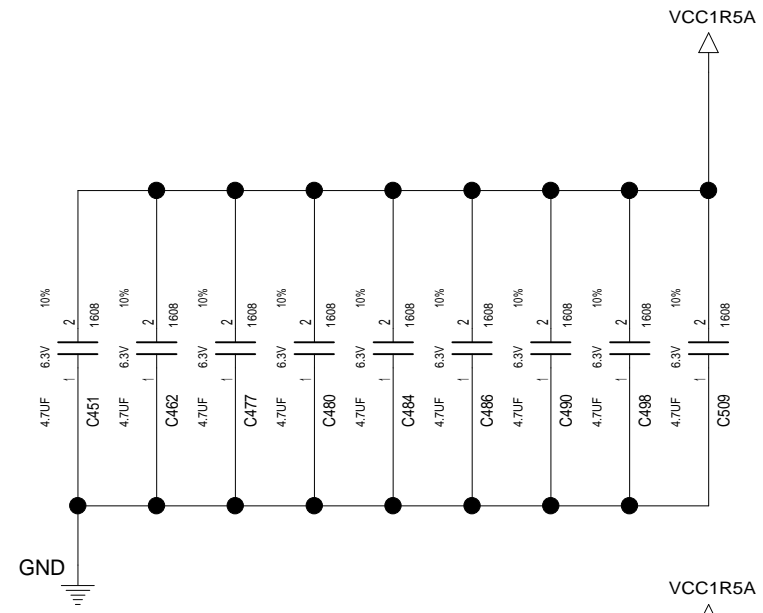
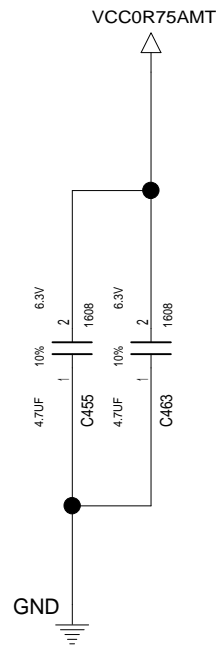
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CLASS	H.K	09/28/07	DDR3 SO DIMM CHANNEL-A	
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REL	DATE	EC NO.	PART NO.	
			VER.1.42	
			DEVELOPMENT NO.	Q/M
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DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	DDR3 SO DIMM CHANNEL-B	
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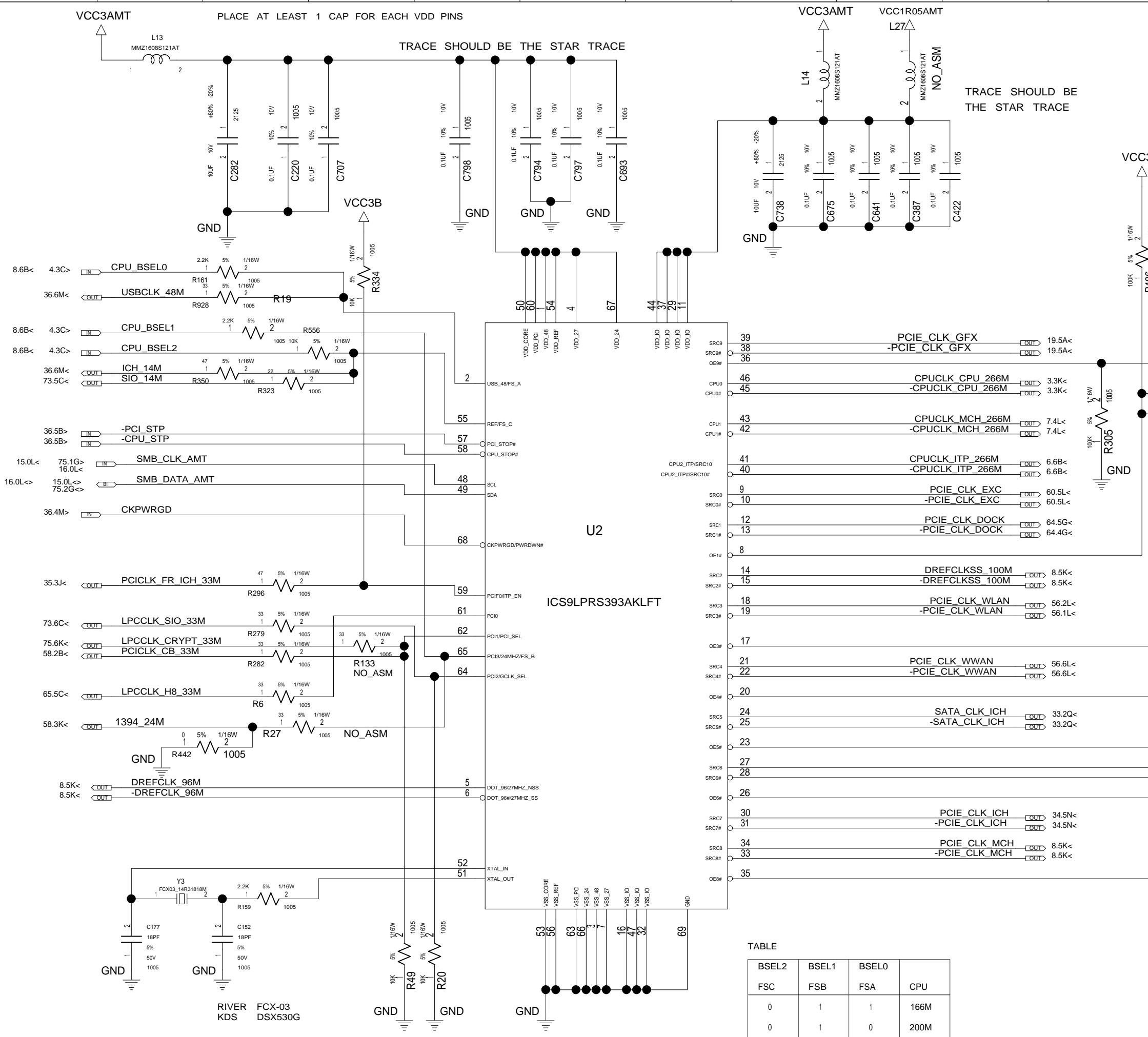
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REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				17 / 101



VER.1.42

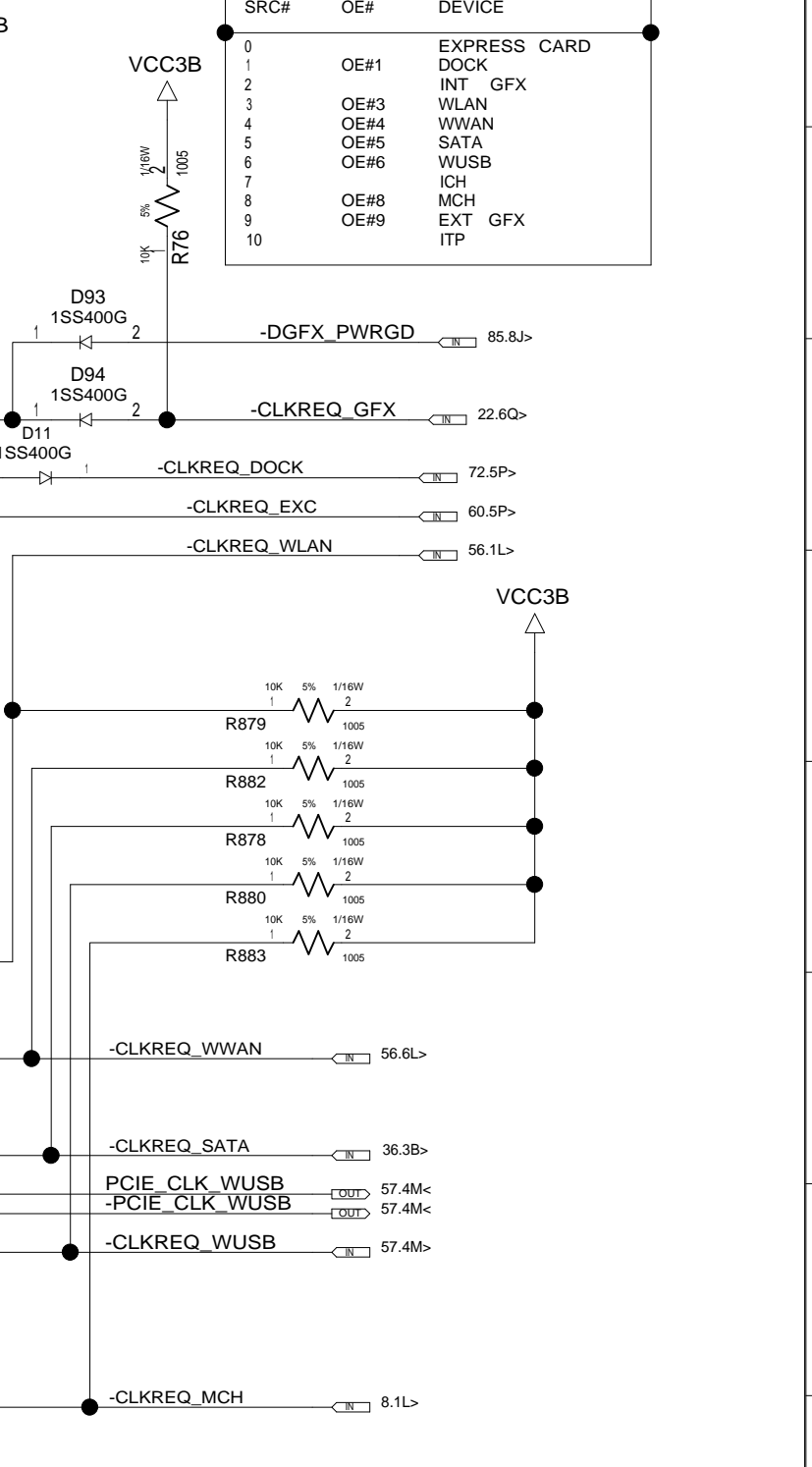
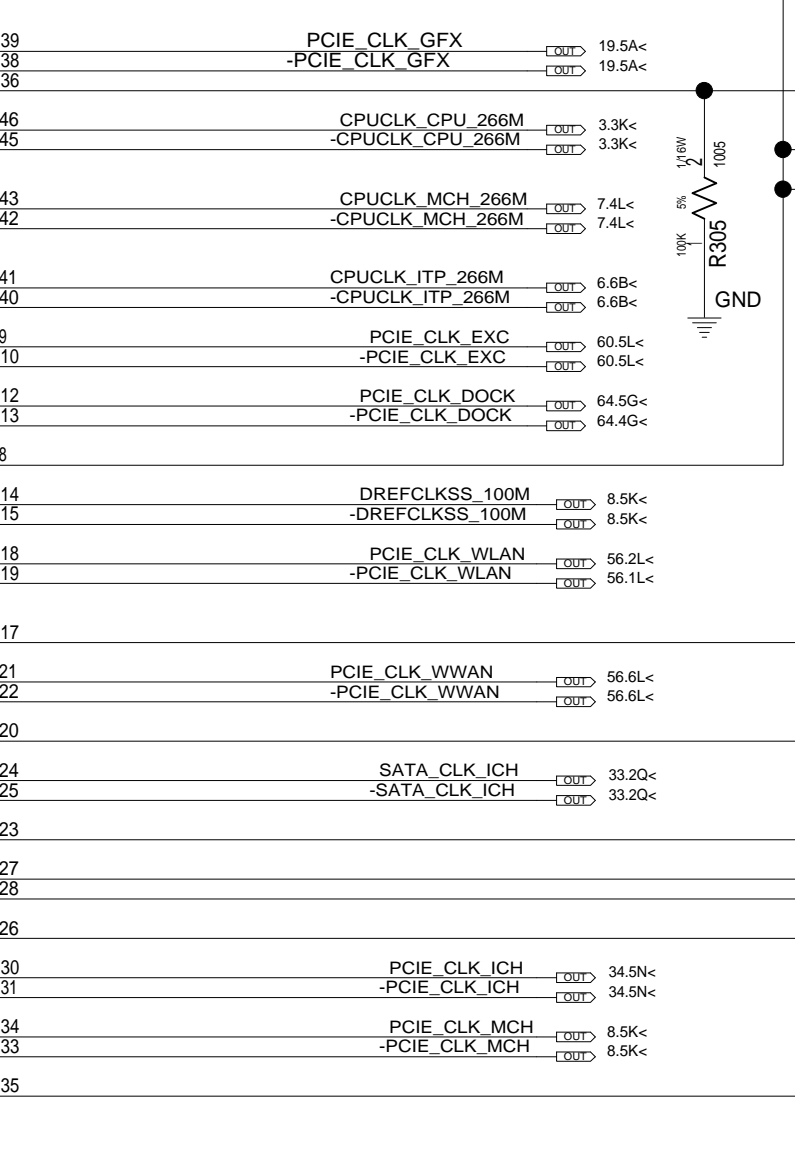
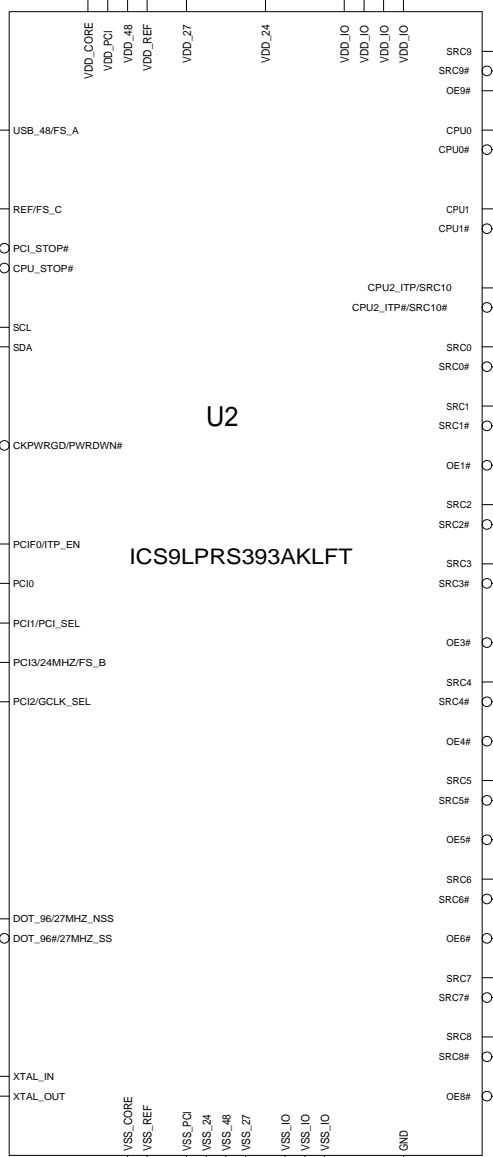
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APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	DDR3 DECOUPLING	
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REL	DATE	EC NO.	PART NO.
			VER.1.42
			DEVELOPMENT NO.
			Q/M
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TABLE

SRC#	OE#	DEVICE
0		EXPRESS CARD
1	OE#1	DOCK
2		INT GFX
3	OE#3	WLAN
4	OE#4	WWAN
5	OE#5	SATA
6	OE#6	WUSB
7		ICH
8	OE#8	MCH
9	OE#9	EXT GFX
10		ITP



TABLE

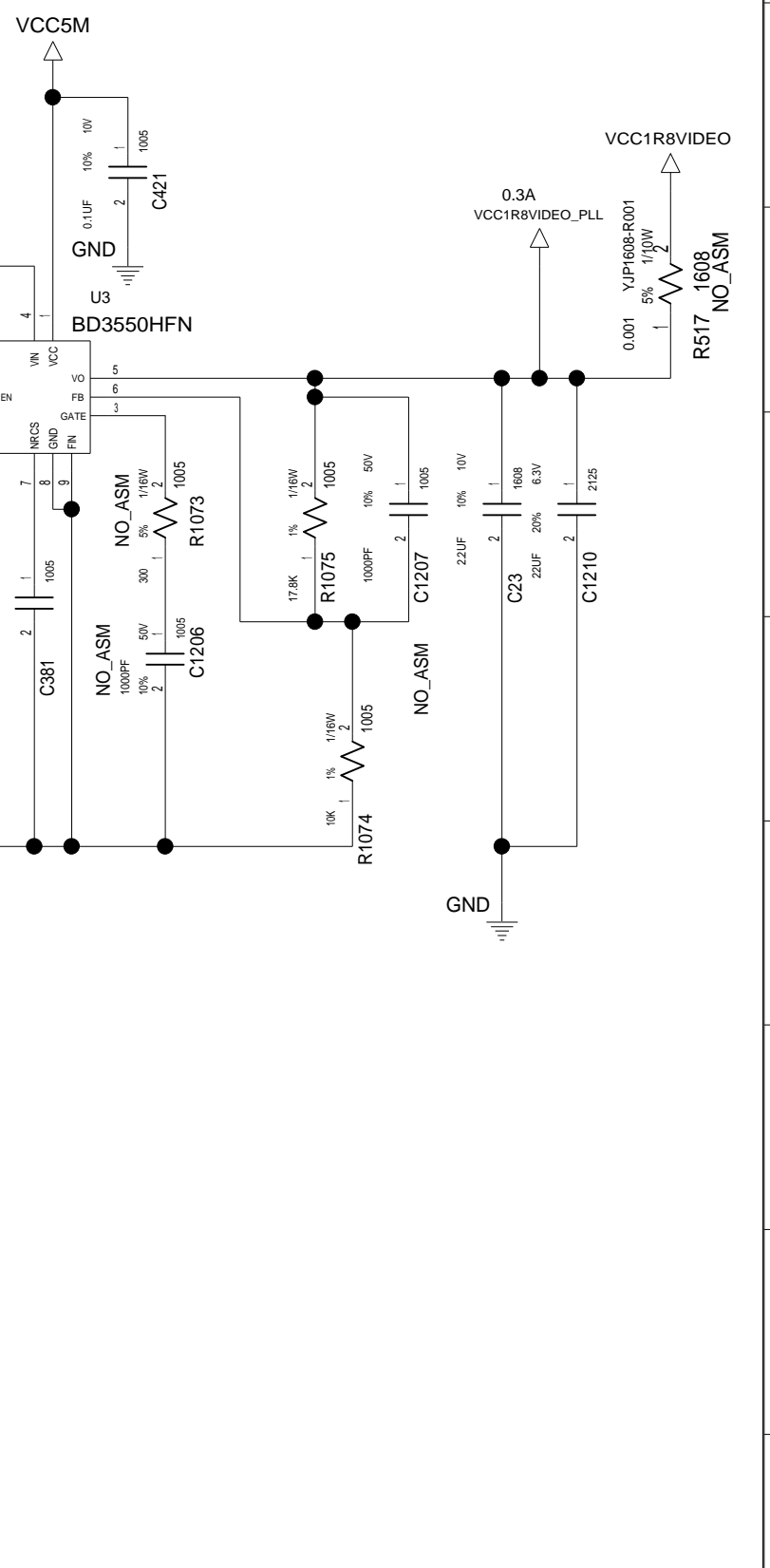
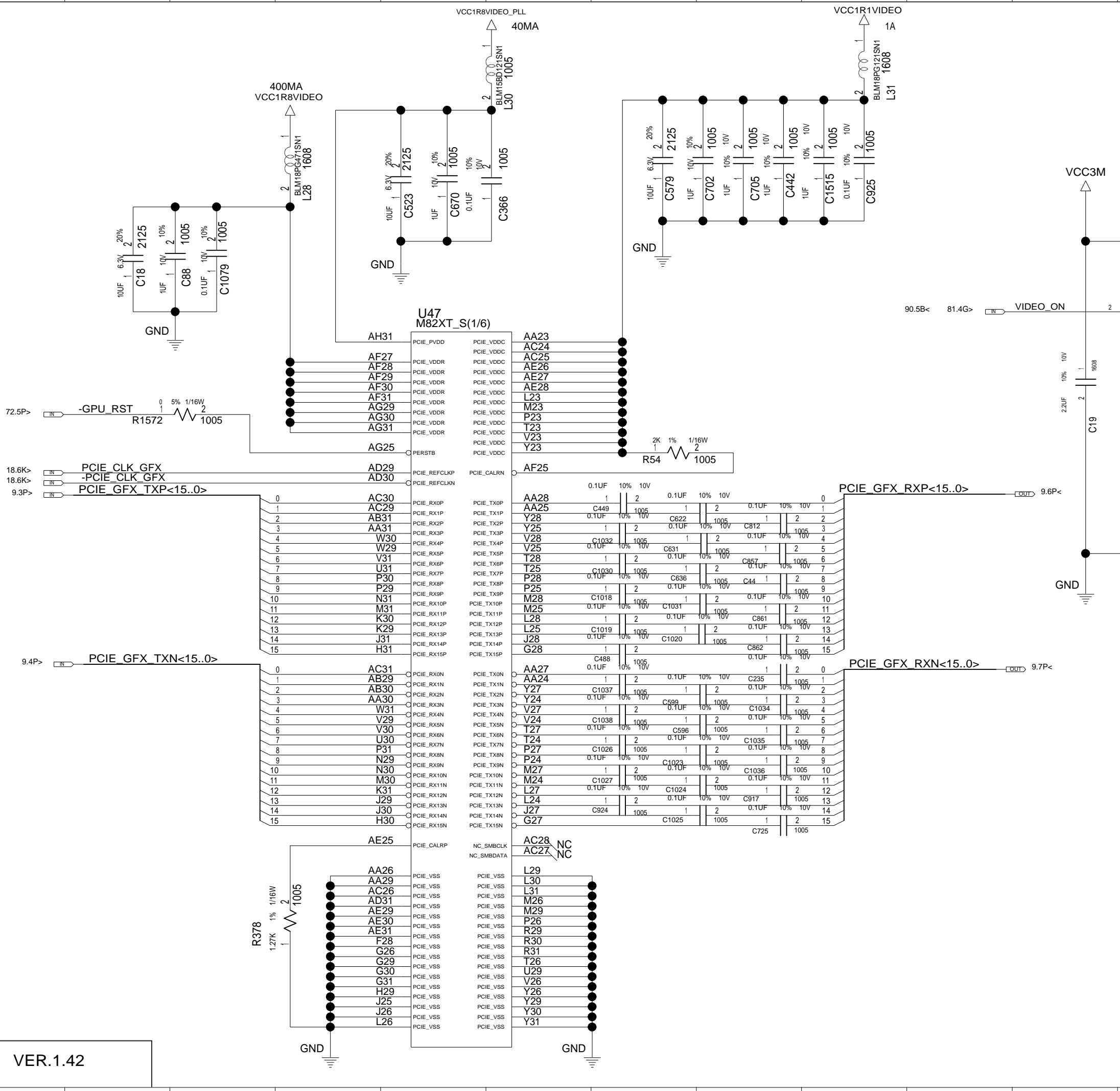
BSEL2	BSEL1	BSEL0	CPU
FSC	FSB	FSA	CPU
0	1	1	166M
0	1	0	200M
0	0	0	266M
1	0	0	333M

DESIGNER	Y.Y	09/28/07	PART NO.
CHECKED	Y.I	09/28/07	VER.1.42
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV
CLASS	H.K	09/28/07	CLOCK GEN

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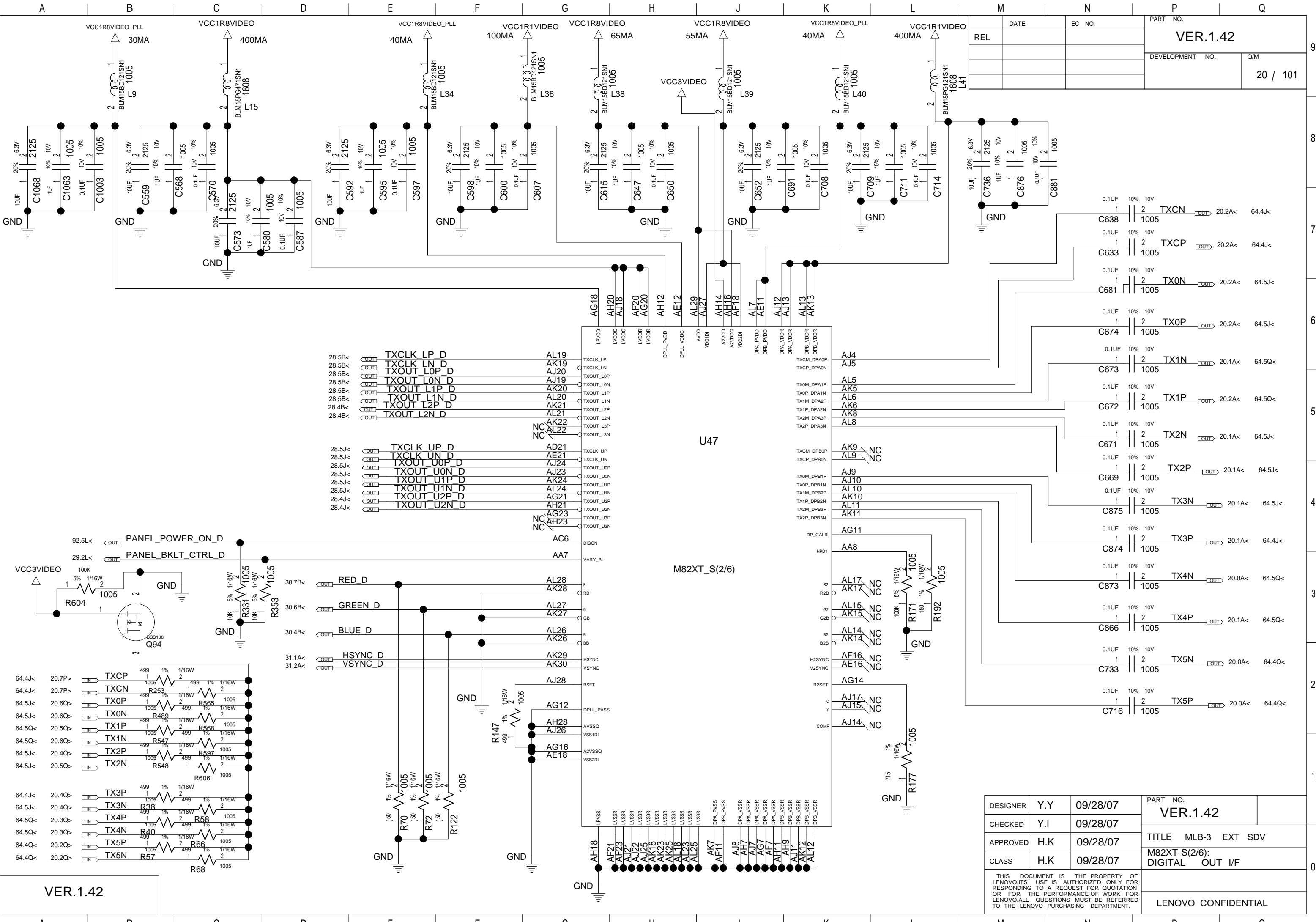
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			VER.1.42	
			DEVELOPMENT NO.	Q/M
				19 / 101



VER.1.42

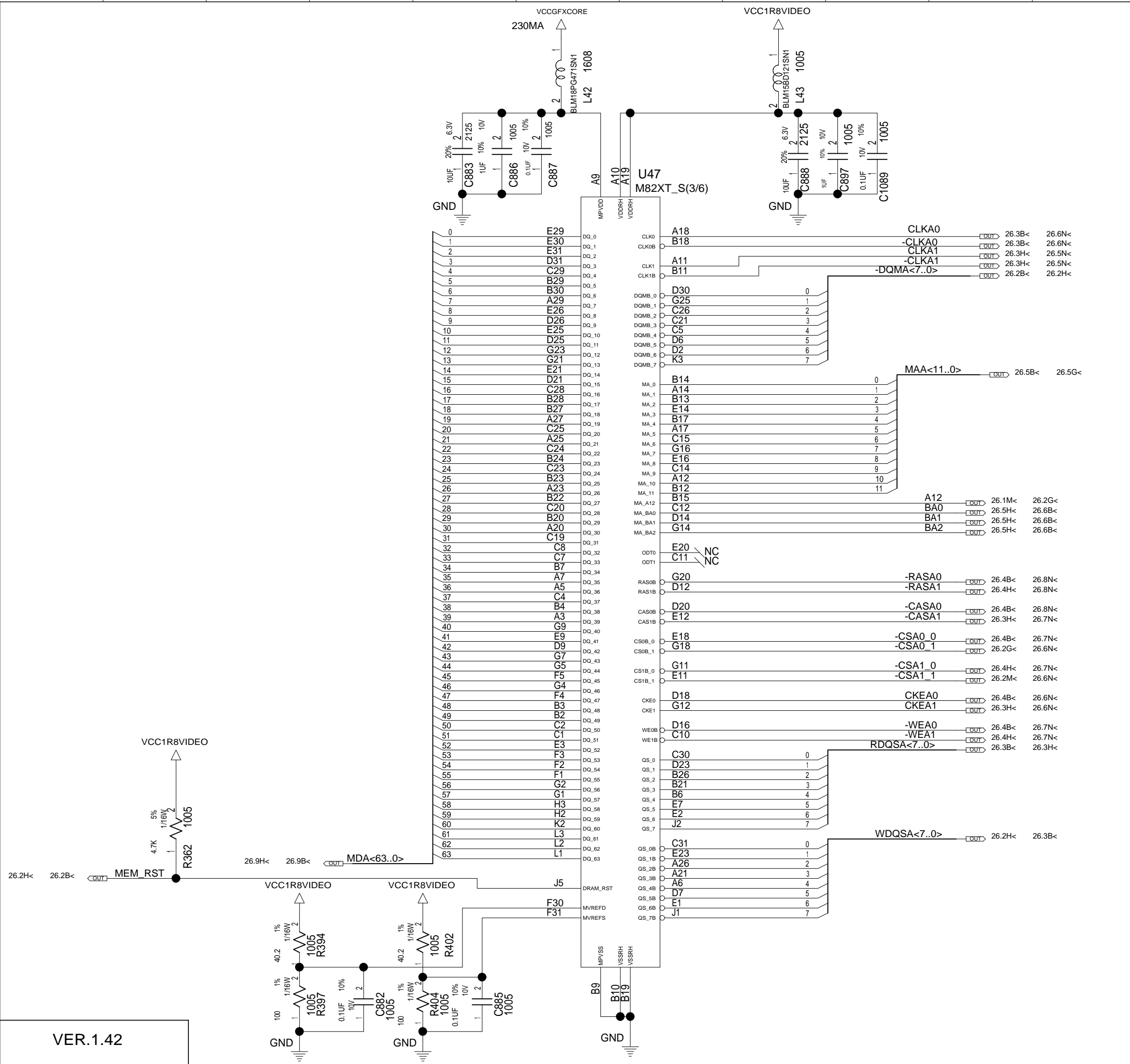
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APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	M82XT-S(1/6):PEG	I/F
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DESIGNER	Y.Y	09/28/07	PART NO.
CHECKED	Y.I	09/28/07	VER.1.42
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV
CLASS	H.K	09/28/07	M82XT-S(2/6): DIGITAL OUT I/F
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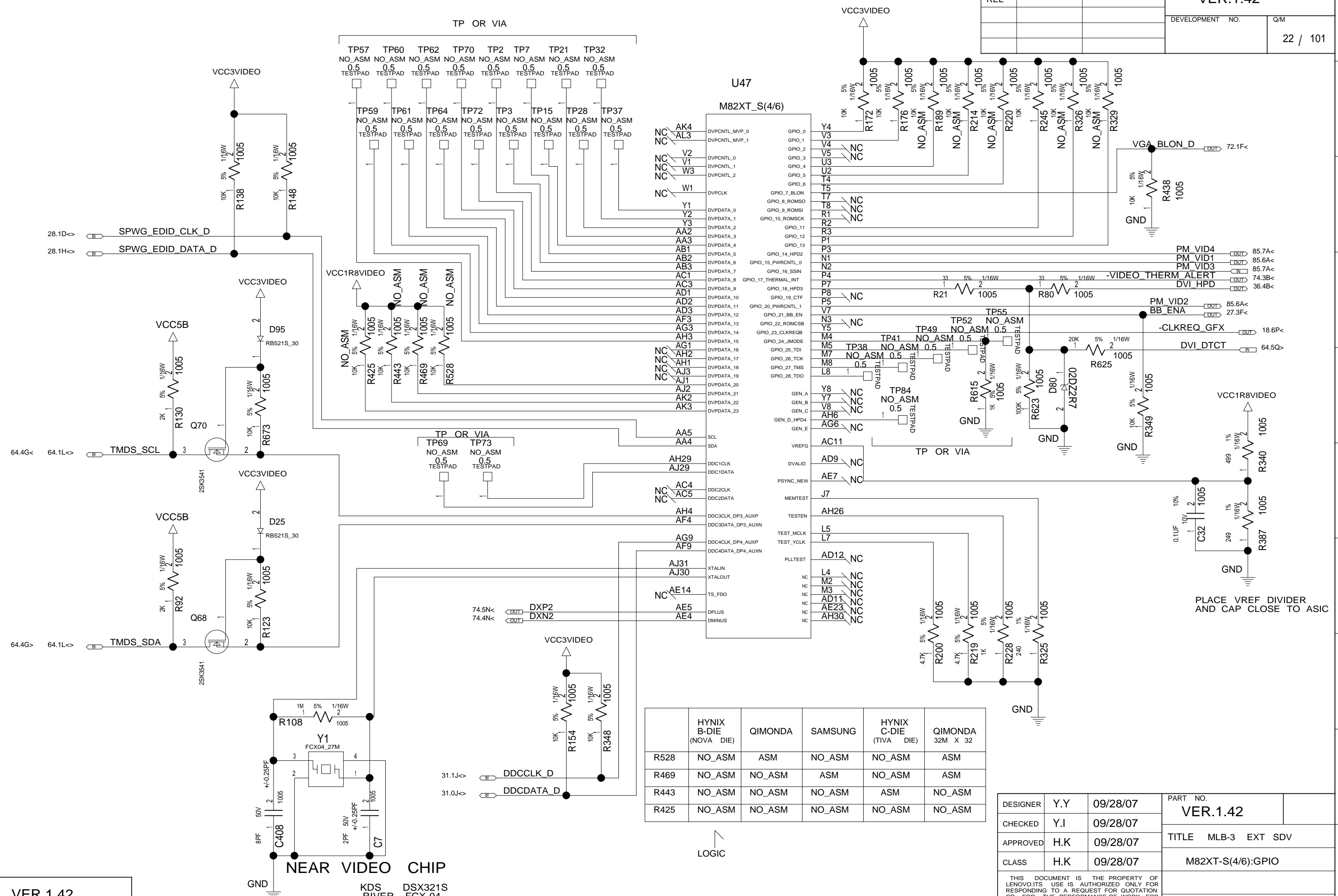
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			VER.1.42	
			DEVELOPMENT NO.	Q/M
				21 / 101



VER.1.42

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CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	M82XT-S(3/6):VRAM	I/F
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REL	DATE	EC NO.	PART NO.
			VER.1.42
			DEVELOPMENT NO.
			Q/M
			22 / 101



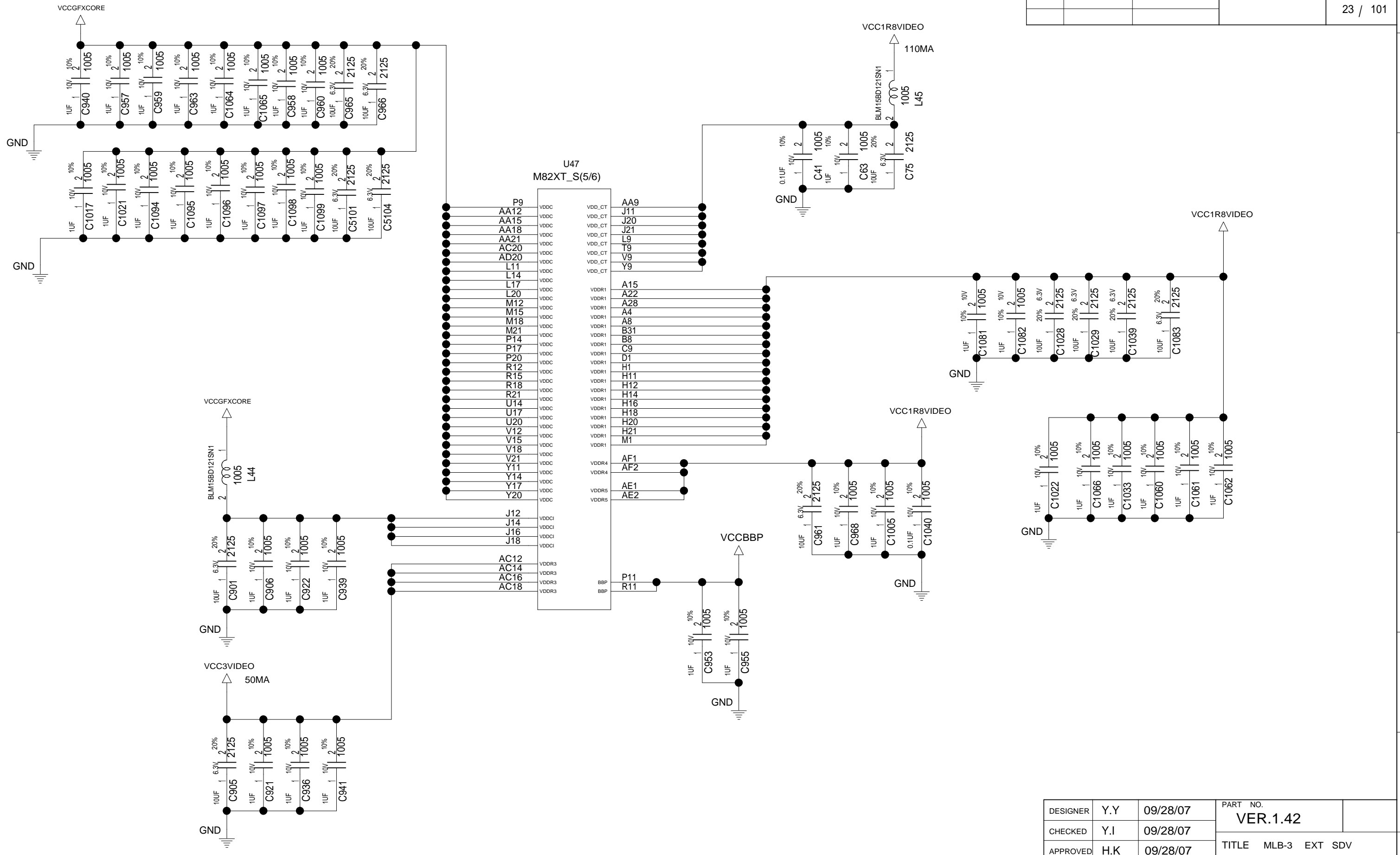
U47
M82XT_S(4/6)

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NC	AL3	DVPCNTL_MVP_1	GPIO_1	V3
NC	V2	DVPCNTL_0	GPIO_2	V4
NC	V1	DVPCNTL_1	GPIO_3	V5
NC	W3	DVPCNTL_2	GPIO_4	U3
NC	W1	DVPCNTL_3	GPIO_5	U2
		DVPCNTL_4	GPIO_6	T4
		DVPCNTL_5	GPIO_7_BLON	T5
		DVPCNTL_6	GPIO_8_ROMSO	T7
		DVPCNTL_7	GPIO_9_ROMSI	T8
		DVPCNTL_8	GPIO_10_ROMSCK	R1
		DVPCNTL_9	GPIO_11	R2
		DVPCNTL_10	GPIO_12	R3
		DVPCNTL_11	GPIO_13	P3
		DVPCNTL_12	GPIO_14_HPD2	N1
		DVPCNTL_13	GPIO_15_PWRCNTL_0	N2
		DVPCNTL_14	GPIO_16_SIN	P4
		DVPCNTL_15	GPIO_17_THERMAL_INT	P7
		DVPCNTL_16	GPIO_18_HPD3	P8
		DVPCNTL_17	GPIO_19_CTF	P5
		DVPCNTL_18	GPIO_20_PWRCNTL_1	V7
		DVPCNTL_19	GPIO_21_BB_EN	N3
		DVPCNTL_20	GPIO_22_ROMCSB	Y5
		DVPCNTL_21	GPIO_23_CLKREOB	M4
		DVPCNTL_22	GPIO_24_MODE	M7
		DVPCNTL_23	GPIO_25_TDI	M5
		DVPCNTL_24	GPIO_26_TCK	M8
		DVPCNTL_25	GPIO_27_TMS	L8
		DVPCNTL_26	GPIO_28_TDO	L8
		DVPCNTL_27	GEN_A	Y8
		DVPCNTL_28	GEN_B	Y7
		DVPCNTL_29	GEN_C	V8
		DVPCNTL_30	GEN_D_HPD4	AH6
		DVPCNTL_31	GEN_E	AG6
		DVPCNTL_32	SCL	AC11
		DVPCNTL_33	SDA	AD9
		DVPCNTL_34	DDC1CLK	AE7
		DVPCNTL_35	DDC1DATA	J7
		DVPCNTL_36	DDC2CLK	AH26
		DVPCNTL_37	DDC2DATA	L5
		DVPCNTL_38	DDC3CLK_DP3_AUXP	L7
		DVPCNTL_39	DDC3DATA_DP3_AUXN	AD12
		DVPCNTL_40	DDC4CLK_DP4_AUXP	L4
		DVPCNTL_41	DDC4DATA_DP4_AUXN	M2
		DVPCNTL_42	XTALIN	M3
		DVPCNTL_43	XTALOUT	M11
		DVPCNTL_44	TS_FDO	AD13
		DVPCNTL_45	DPLUS	AE23
		DVPCNTL_46	DMINUS	AH30

	HYNIX B-DIE (NOVA DIE)	QIMONDA	SAMSUNG	HYNIX C-DIE (TIVA DIE)	QIMONDA 32M X 32
R528	NO_ASM	ASM	NO_ASM	NO_ASM	ASM
R469	NO_ASM	NO_ASM	ASM	NO_ASM	ASM
R443	NO_ASM	NO_ASM	NO_ASM	ASM	NO_ASM
R425	NO_ASM	NO_ASM	NO_ASM	NO_ASM	NO_ASM

DESIGNER	Y.Y	09/28/07	PART NO.
CHECKED	Y.I	09/28/07	VER.1.42
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV
CLASS	H.K	09/28/07	M82XT-S(4/6):GPIO
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	DATE	EC NO.	PART NO.	
REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				23 / 101

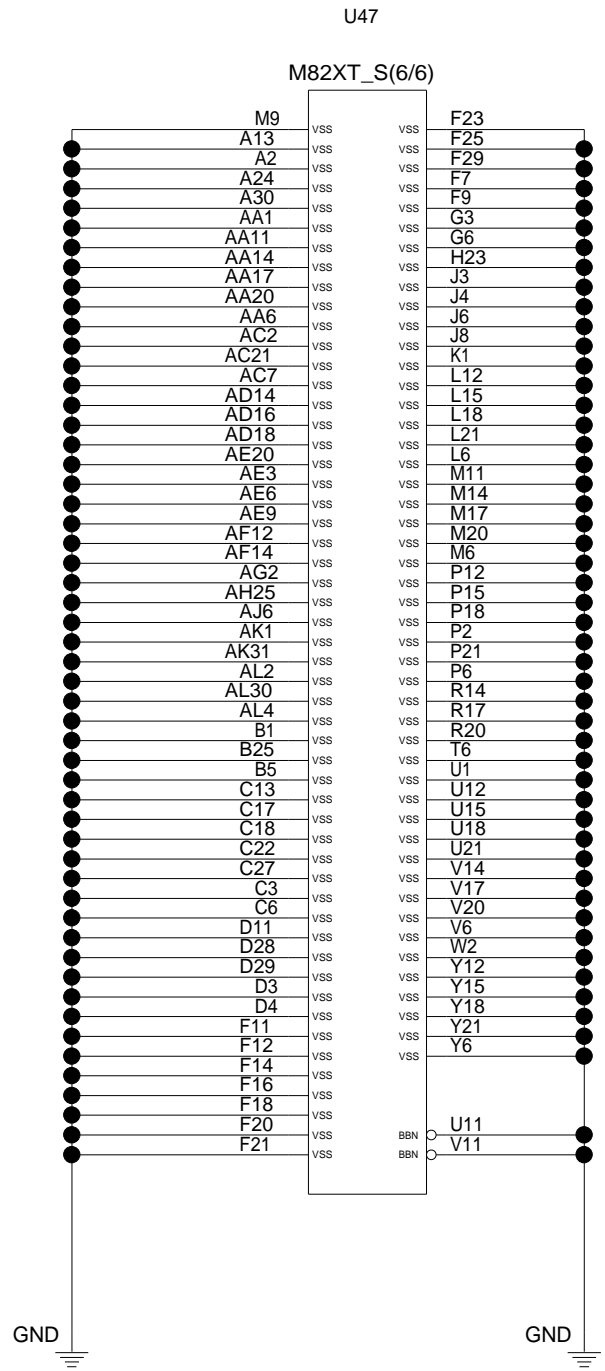


VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	M82XT-S(5/6):POWER	
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A B C D E F G H J K L M N P Q

	DATE	EC NO.	PART NO.	
REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
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VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	VER.1.42
CHECKED	Y.I	09/28/07	TITLE MLB-3 EXT SDV	
APPROVED	H.K	09/28/07	M82XT-S(6/6):GND	
CLASS	H.K	09/28/07	THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.	
			LENOVO CONFIDENTIAL	

A B C D E F G H J K L M N P Q

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REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				25 / 101

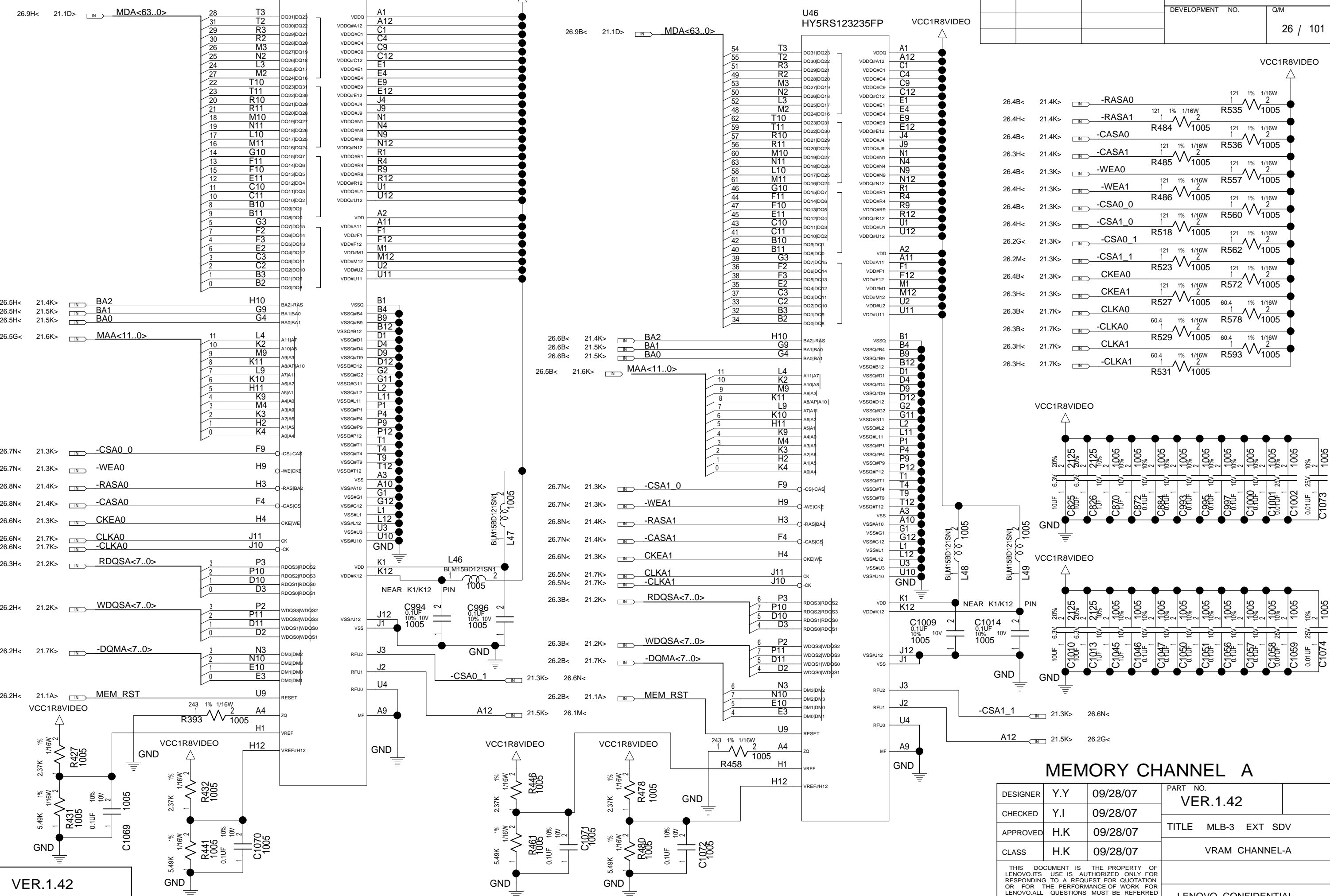
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U35 (TOP SIDE)
HY5RS123235FP

U46 (TOP SIDE)
HY5RS123235FP

REL	DATE	EC NO.	PART NO.
			VER.1.42
			DEVELOPMENT NO.
			Q/M
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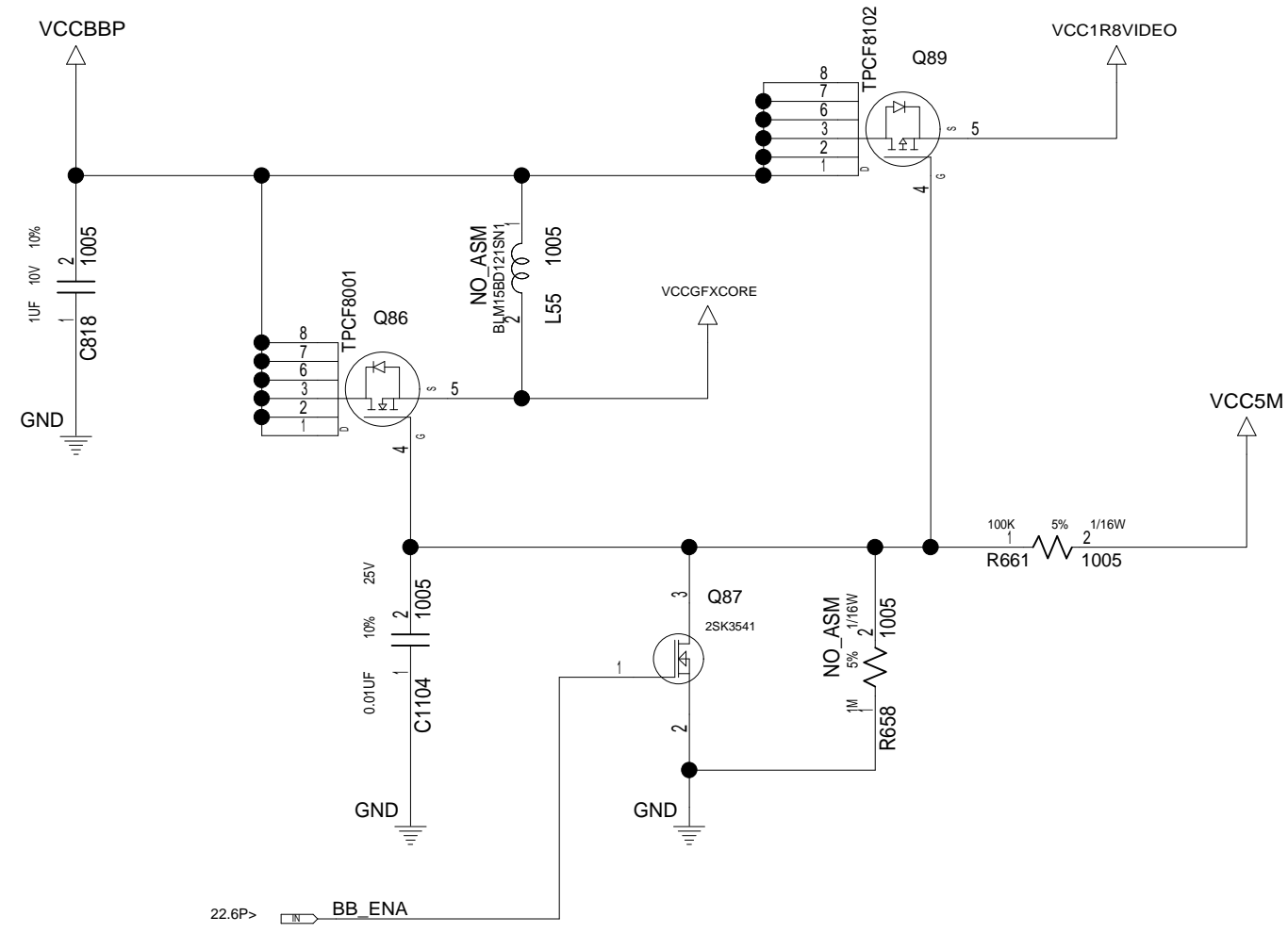
MEMORY CHANNEL A

DESIGNER	Y.Y	09/28/07	PART NO.
CHECKED	Y.I	09/28/07	VER.1.42
APPROVED	H.K	09/28/07	TITLE
CLASS	H.K	09/28/07	MLB-3 EXT SDV
			VRAM CHANNEL-A

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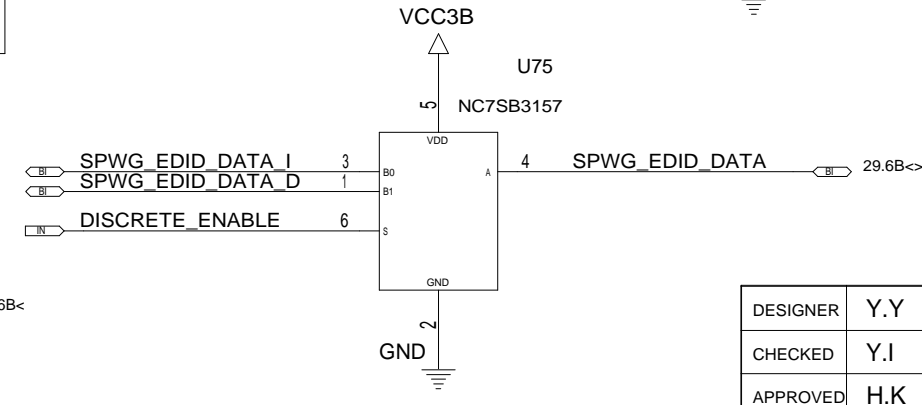
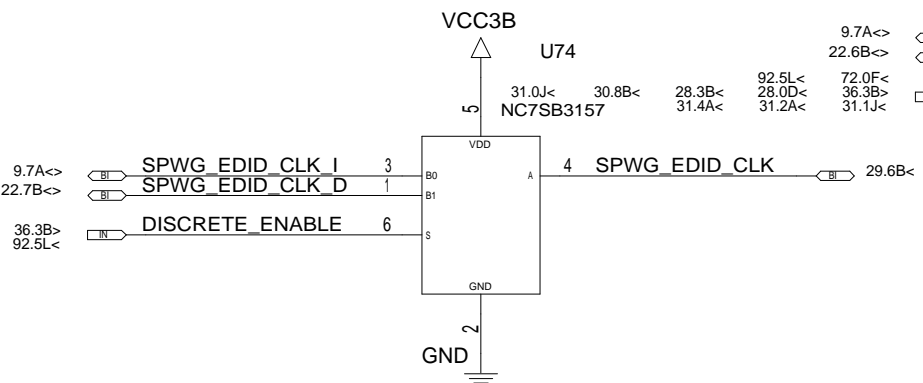
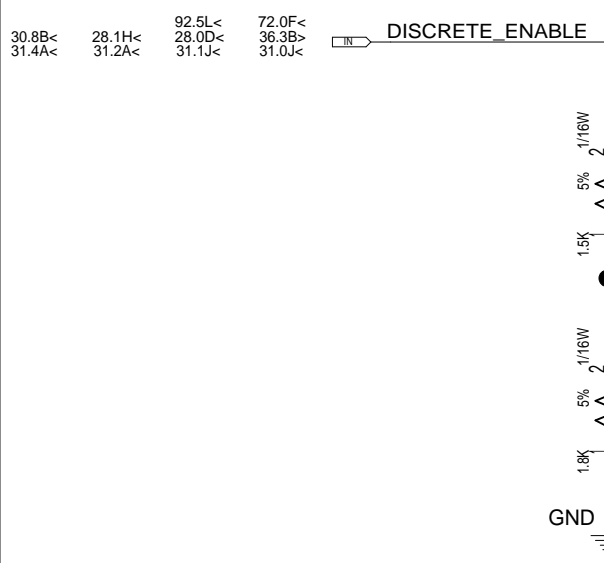
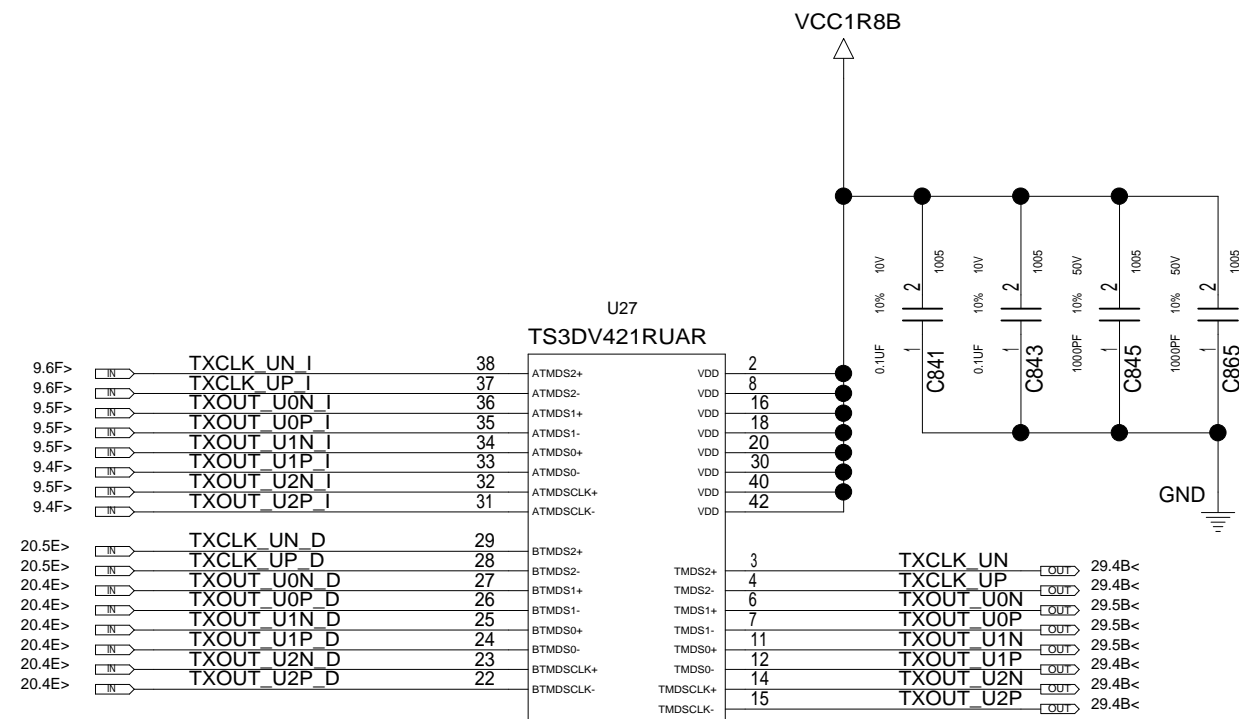
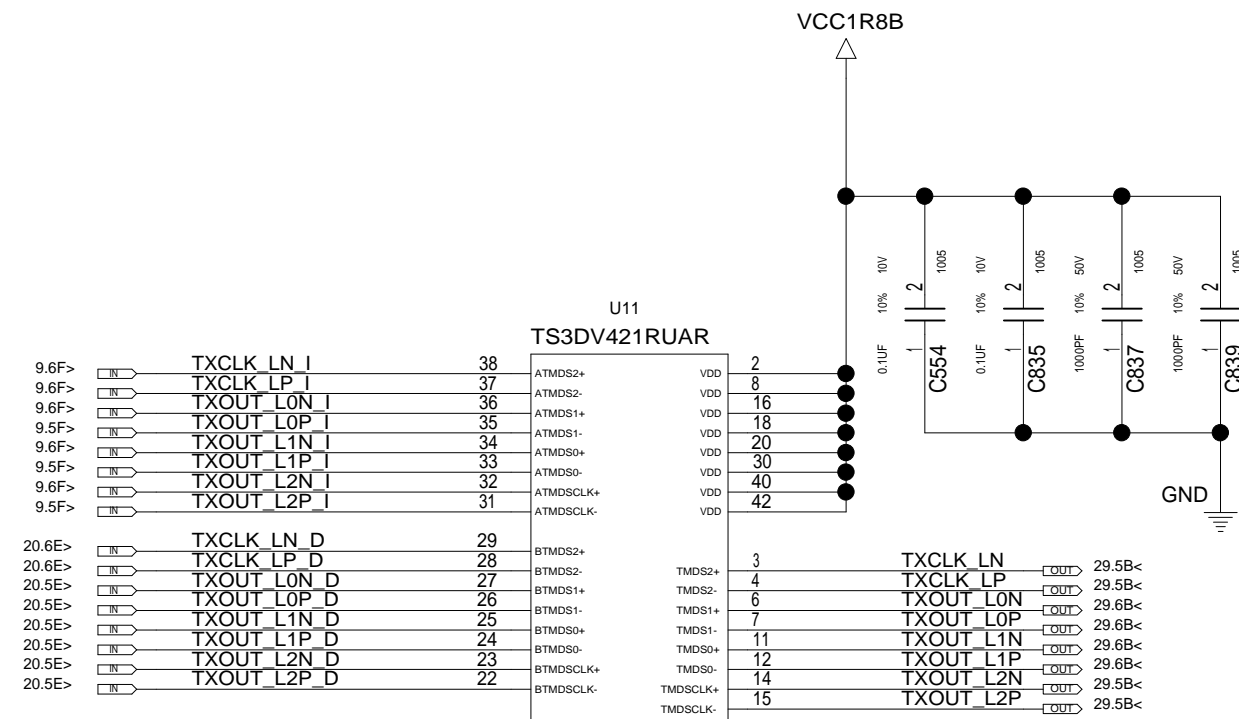
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REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
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DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	BACK BIAS POWER	
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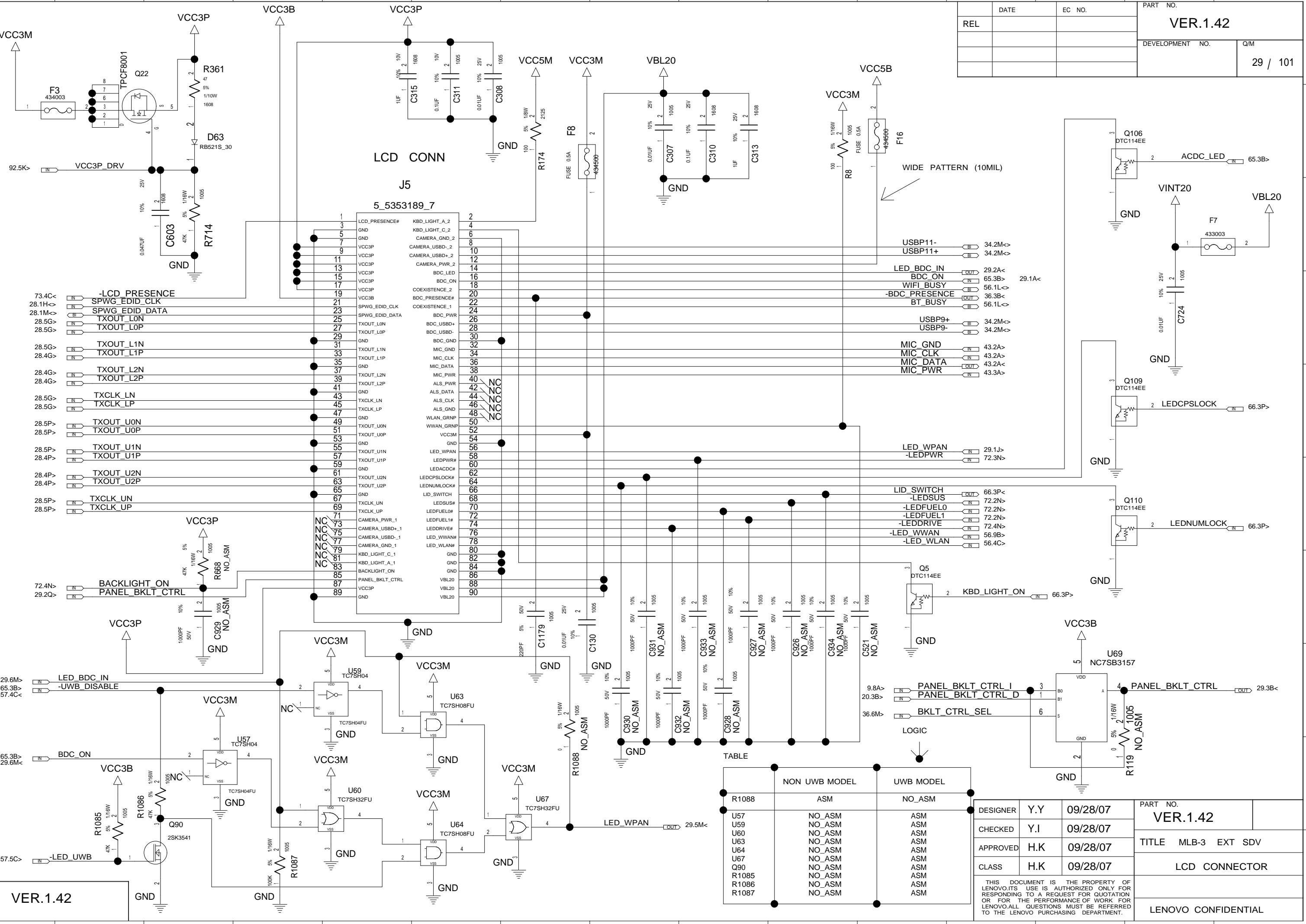
	DATE	EC NO.	PART NO.	
REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				28 / 101



VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	LVDS SWICH	
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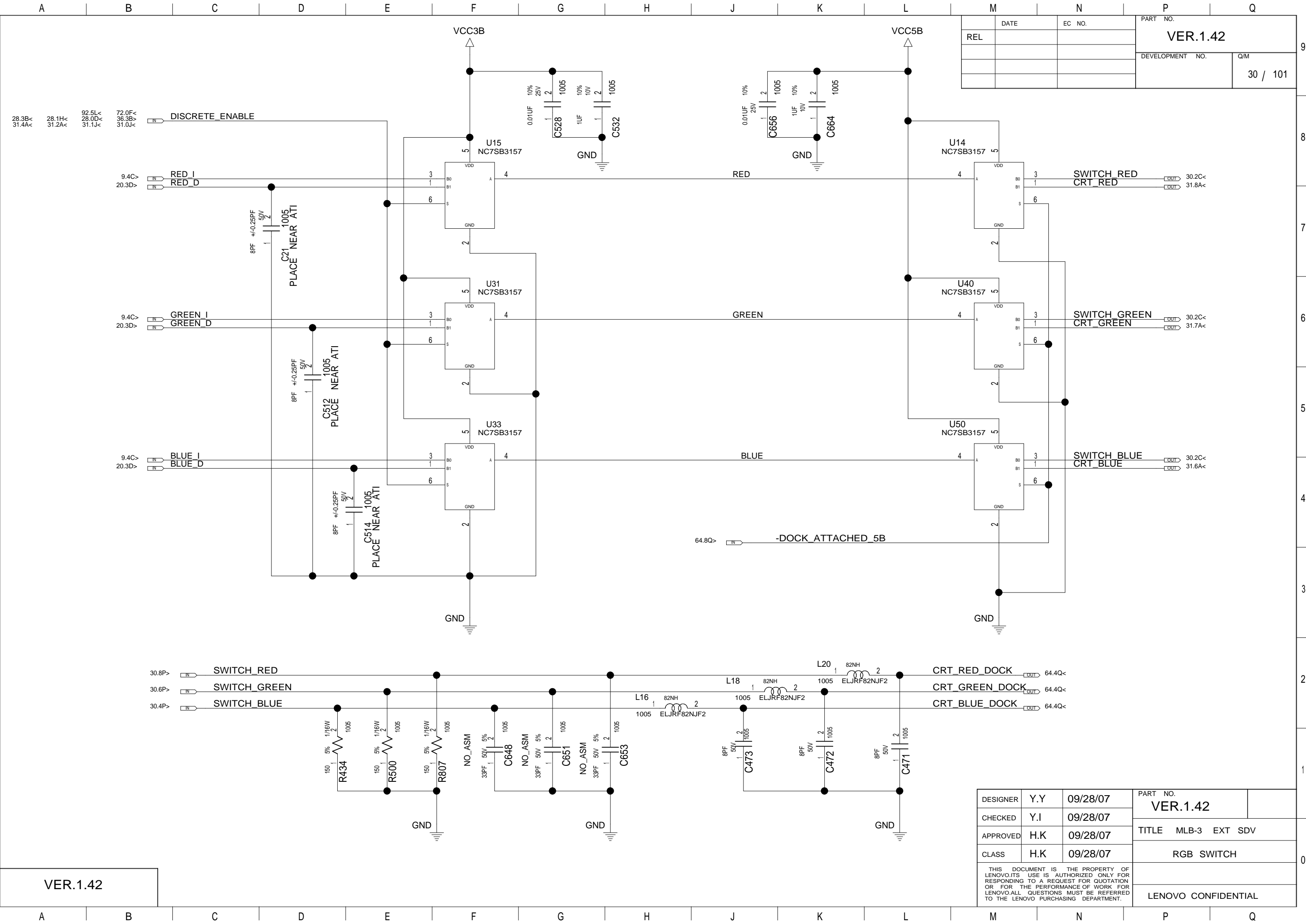
REL	DATE	EC NO.	PART NO.
			VER.1.42
			DEVELOPMENT NO.
			Q/M
			29 / 101



VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.
CHECKED	Y.I	09/28/07	VER.1.42
APPROVED	H.K	09/28/07	TITLE
CLASS	H.K	09/28/07	MLB-3 EXT SDV
			LCD CONNECTOR
			LENOVO CONFIDENTIAL

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DATE	EC NO.	PART NO.	
REL		VER.1.42	
		DEVELOPMENT NO.	Q/M
			30 / 101

28.3B< 28.1H< 92.5L< 72.0F<
 31.4A< 31.2A< 31.1J< 36.3B> 31.0J<

9.4C> 20.3D>
 9.4C> 20.3D>

9.4C> 20.3D>
 9.4C> 20.3D>

9.4C> 20.3D>
 9.4C> 20.3D>

64.8Q> -DOCK ATTACHED 5B

30.8P> SWITCH_RED
 30.6P> SWITCH_GREEN
 30.4P> SWITCH_BLUE

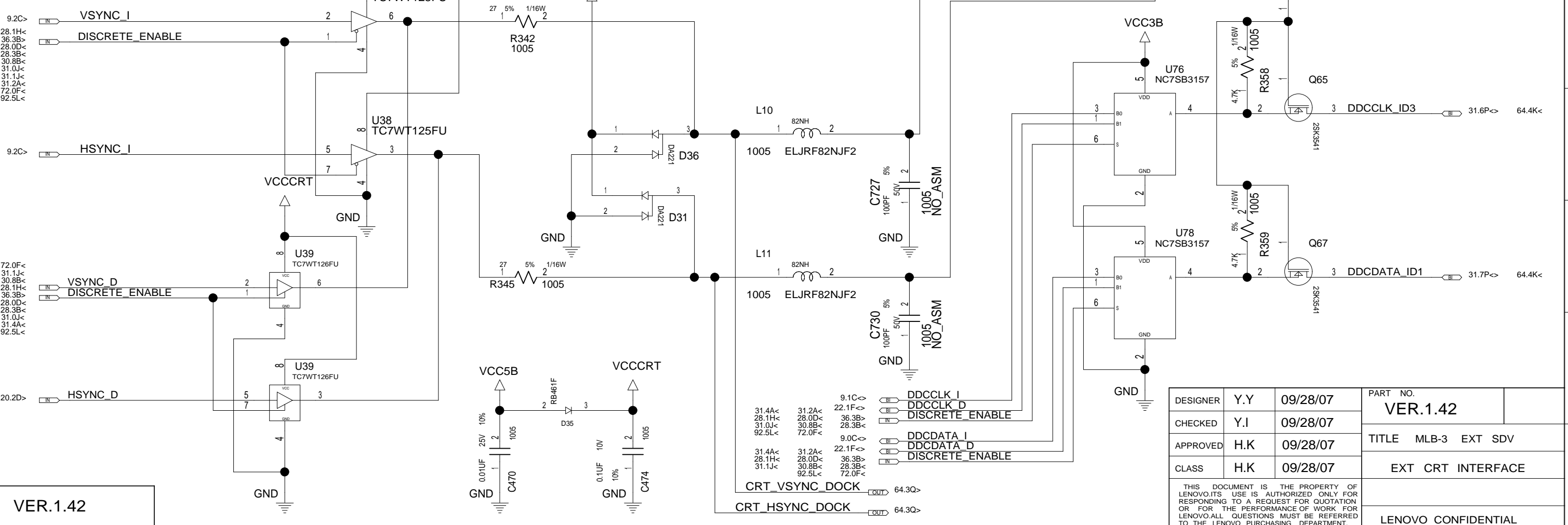
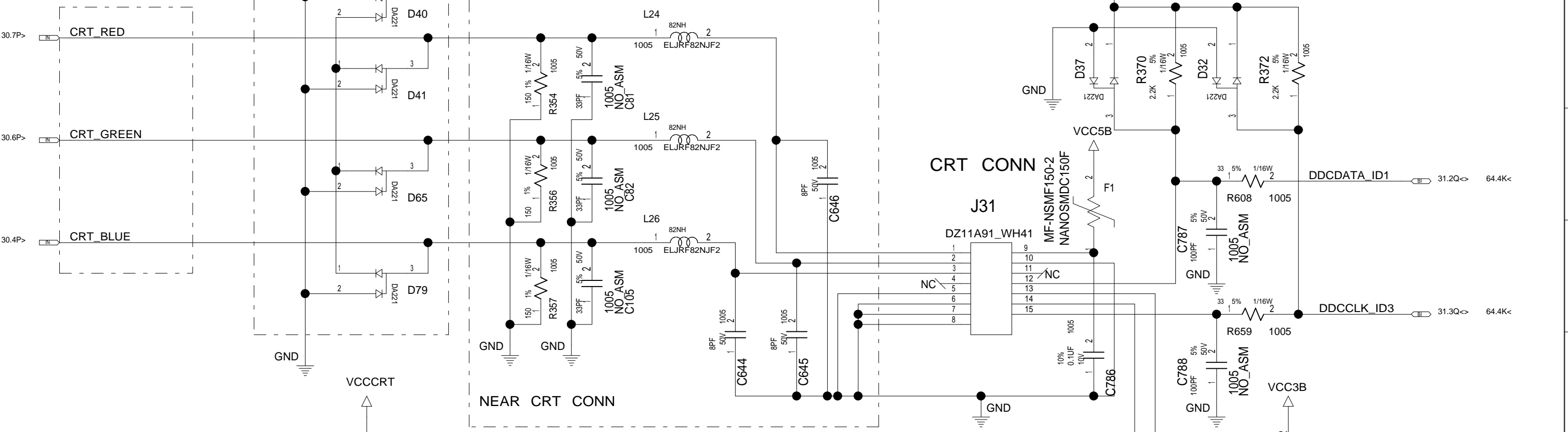
CRT_RED_DOCK 64.4Q<
 CRT_GREEN_DOCK 64.4Q<
 CRT_BLUE_DOCK 64.4Q<

VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.
CHECKED	Y.I	09/28/07	VER.1.42
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV
CLASS	H.K	09/28/07	RGB SWITCH
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REL	DATE	EC NO.	PART NO.	
			VER.1.42	
			DEVELOPMENT NO.	Q/M
				31 / 101

GND GUARDING
EACH SIGNAL WIDTH=4MIL,
SPACING=8MIL



31.4A<	31.2A<	9.1C<	DDCLK I	64.3Q>
28.1H<	28.0D<	22.1F<	DDCLK D	64.3Q>
31.0J<	30.8B<	28.3B<	DISCRETE_ENABLE	
92.5L<	72.0F<	9.0C<	DDCDATA I	
		22.1F<	DDCDATA D	
		36.3B<	DISCRETE_ENABLE	
		28.3B<		
		72.0F<		

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	EXT CRT INTERFACE	

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A B C D E F G H J K L M N P Q

	DATE	EC NO.	PART NO.	
REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				32 / 101

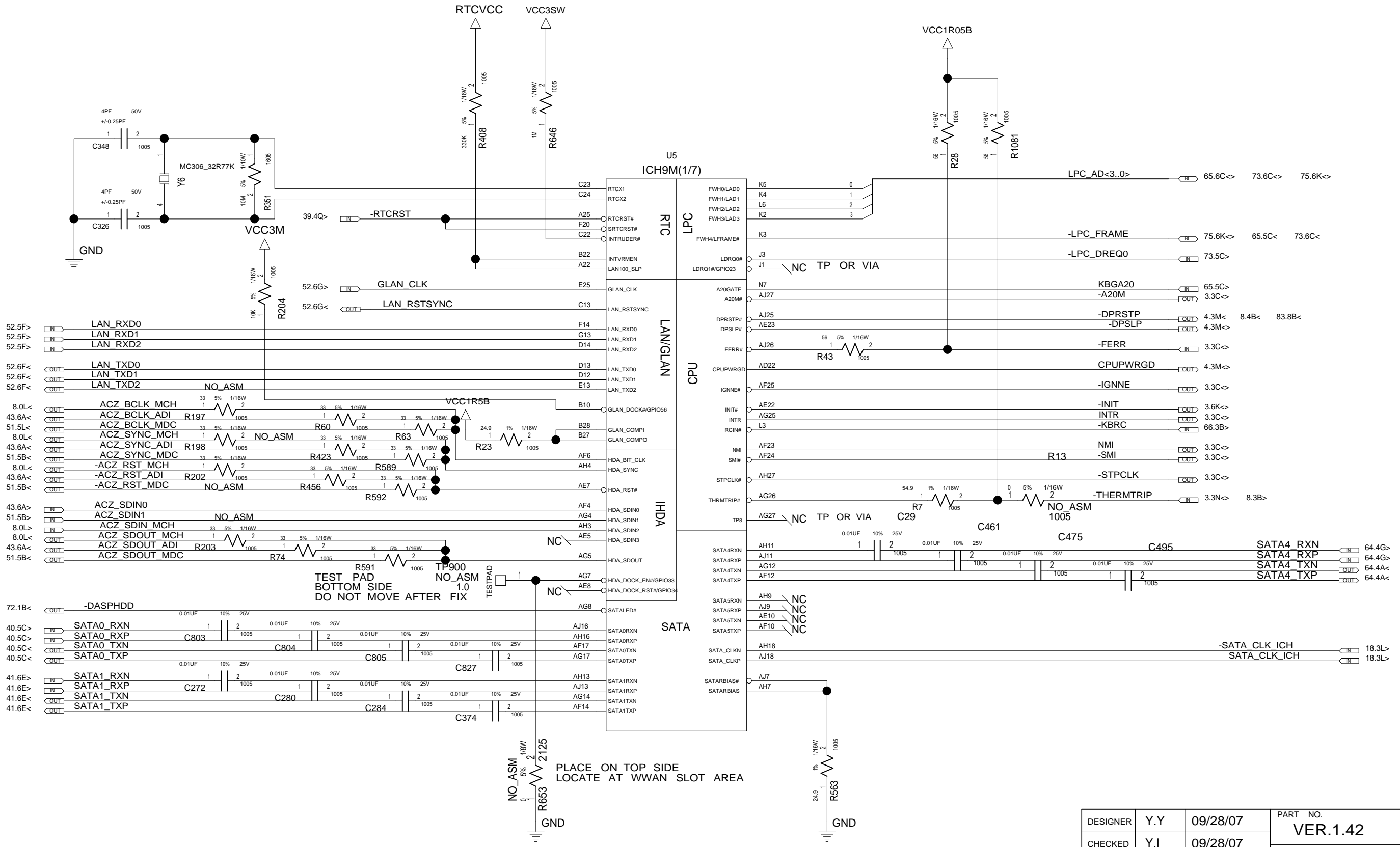
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VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	BLANK	
<small>THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.</small>			LENOVO CONFIDENTIAL	

A B C D E F G H J K L M N P Q

	DATE	EC NO.	PART NO.	
REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				33 / 101



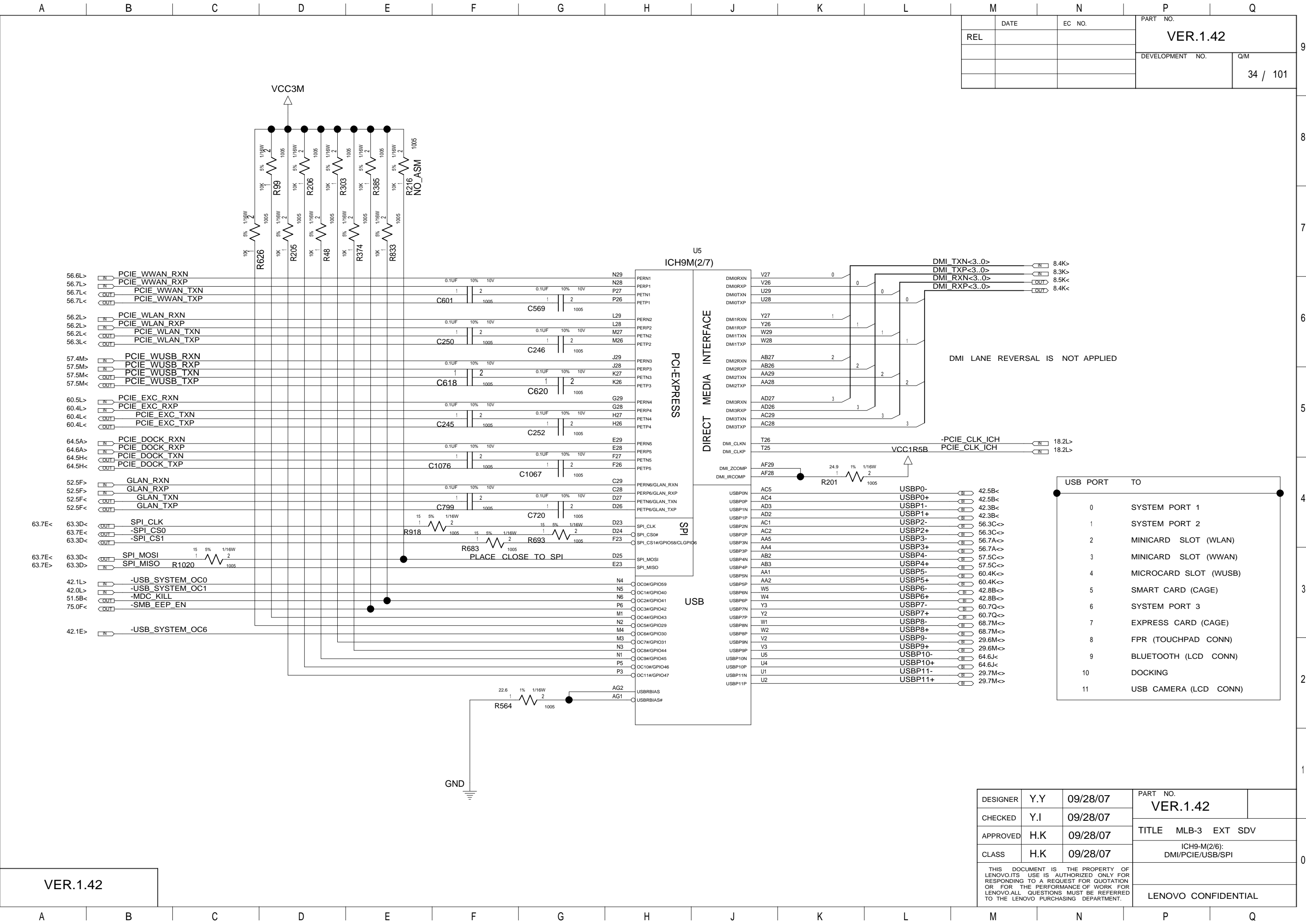
TEST PAD
BOTTOM SIDE
DO NOT MOVE AFTER FIX

PLACE ON TOP SIDE
LOCATE AT WWAN SLOT AREA

VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	ICH9-M(1/6): SATA/HDA/GLAN/LPC	
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	DATE	EC NO.	PART NO.	
REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				34 / 101

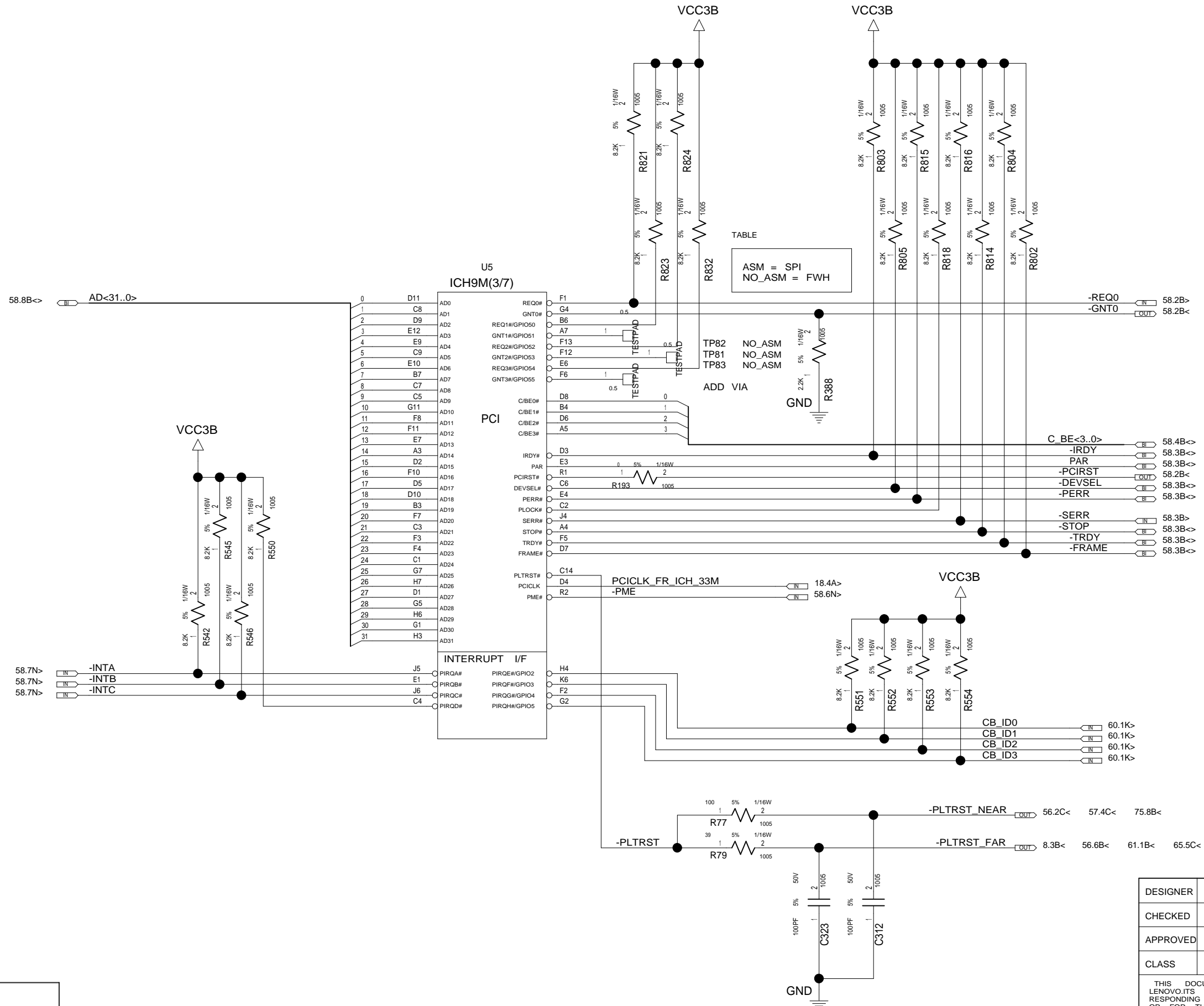


USB PORT	TO
0	SYSTEM PORT 1
1	SYSTEM PORT 2
2	MINICARD SLOT (WLAN)
3	MINICARD SLOT (WWAN)
4	MICROCARD SLOT (WUSB)
5	SMART CARD (CAGE)
6	SYSTEM PORT 3
7	EXPRESS CARD (CAGE)
8	FPR (TOUCHPAD CONN)
9	BLUETOOTH (LCD CONN)
10	DOCKING
11	USB CAMERA (LCD CONN)

DESIGNER	Y.Y	09/28/07	PART NO.	VER.1.42
CHECKED	Y.I	09/28/07	TITLE MLB-3 EXT SDV	
APPROVED	H.K	09/28/07	CLASS H.K 09/28/07	
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VER.1.42

REL	DATE	EC NO.	PART NO. VER.1.42	
			DEVELOPMENT NO.	Q/M 35 / 101

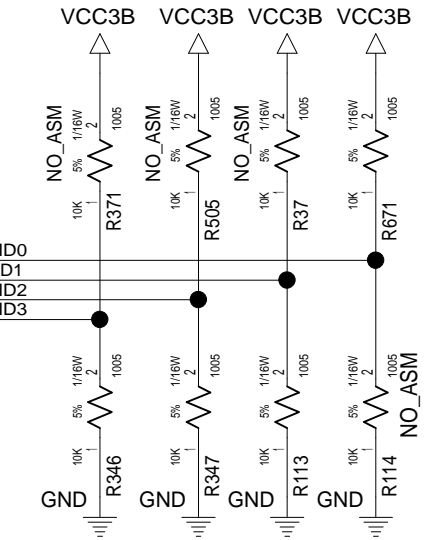
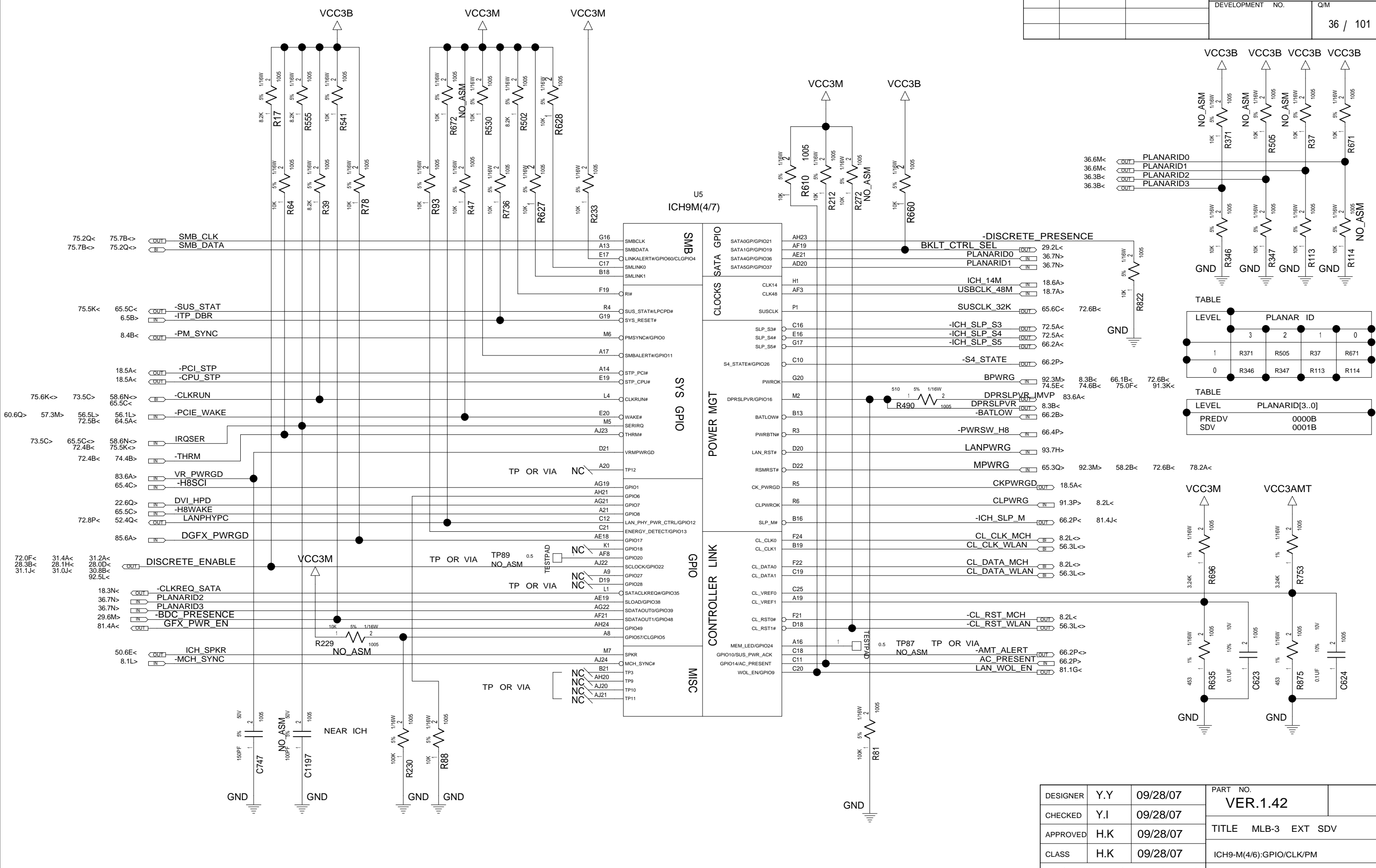


VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO. VER.1.42	
CHECKED	Y.I	09/28/07	TITLE MLB-3 EXT SDV	
APPROVED	H.K	09/28/07	ICH9-M(3/6): PCI/INTERRUPT	
CLASS	H.K	09/28/07	LENOVO CONFIDENTIAL	

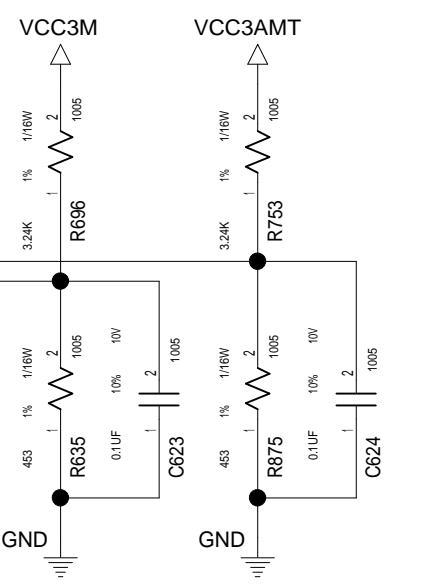
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REL	DATE	EC NO.	PART NO.	
			VER.1.42	
			DEVELOPMENT NO.	Q/M
				36 / 101



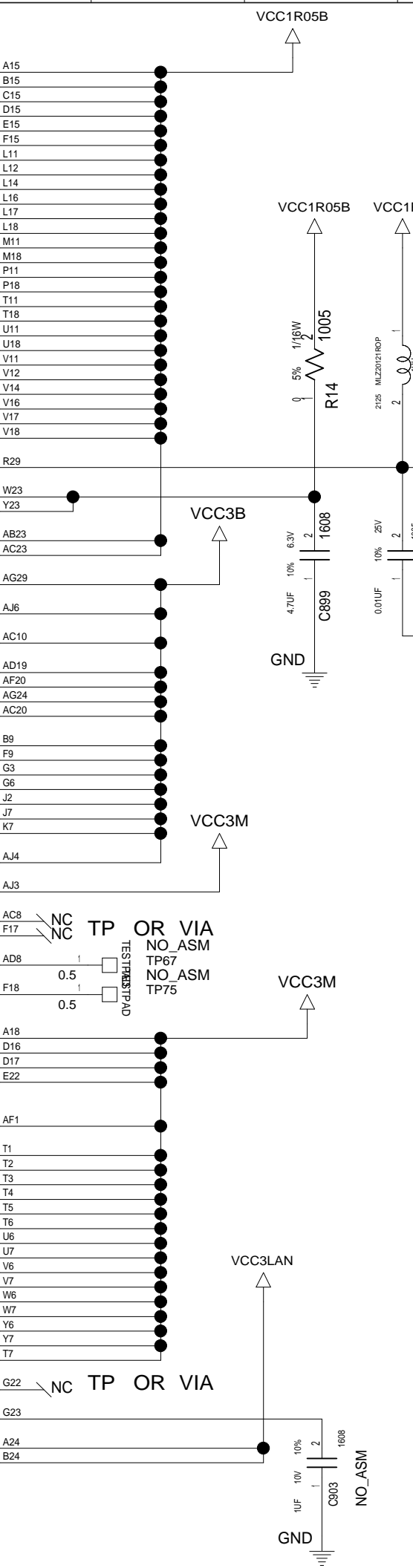
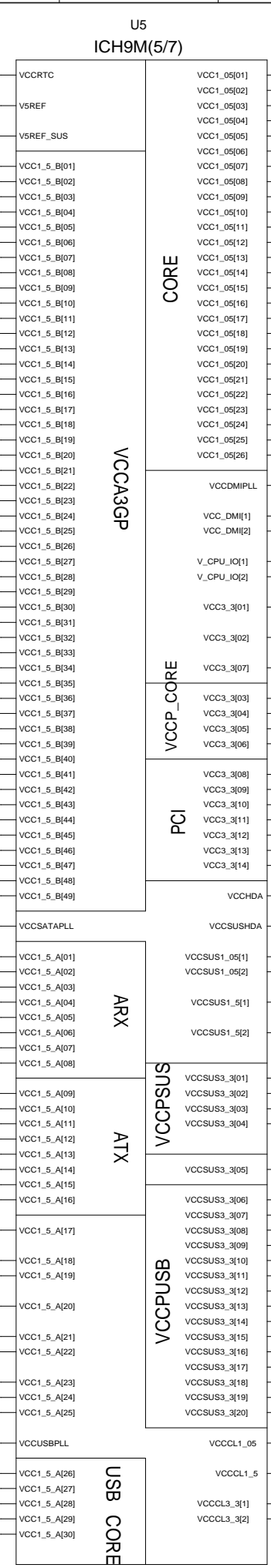
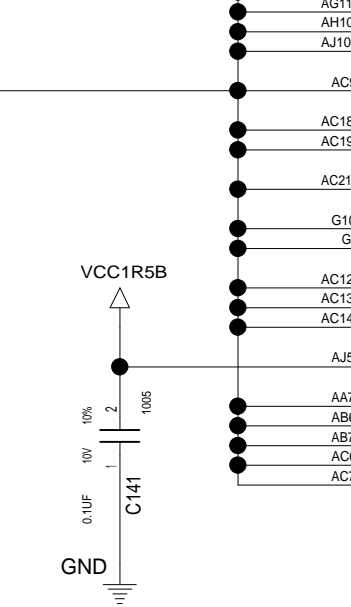
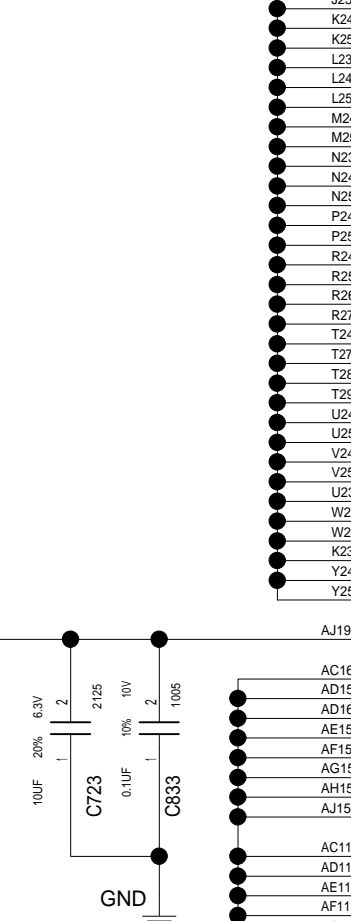
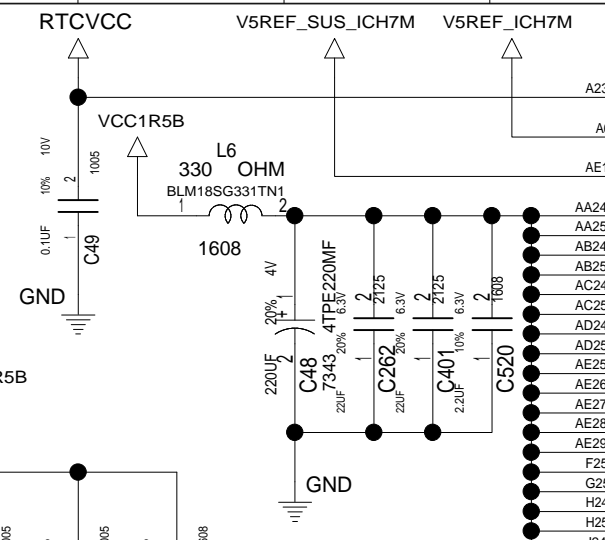
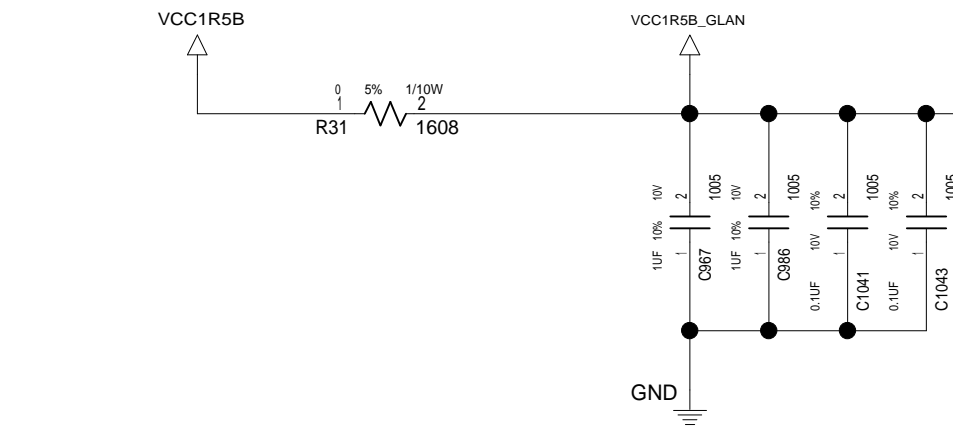
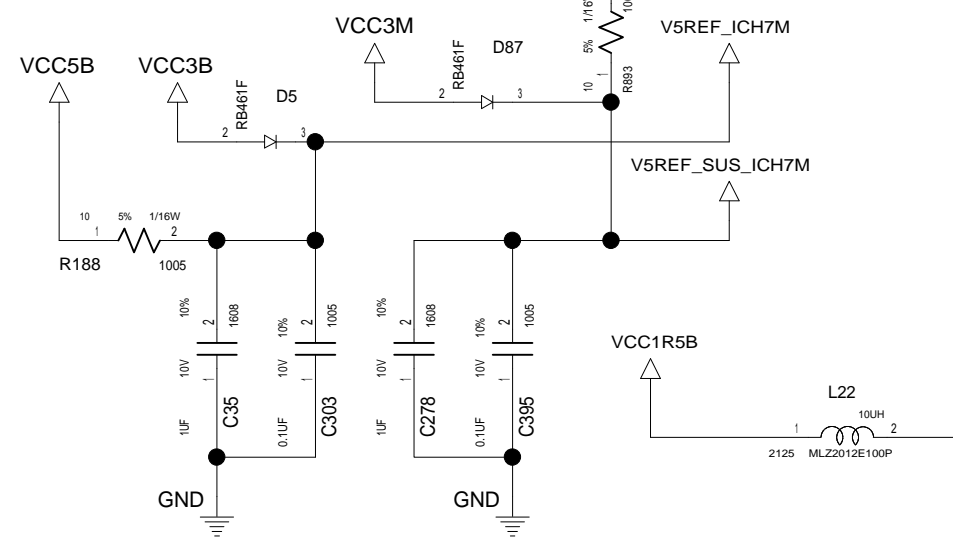
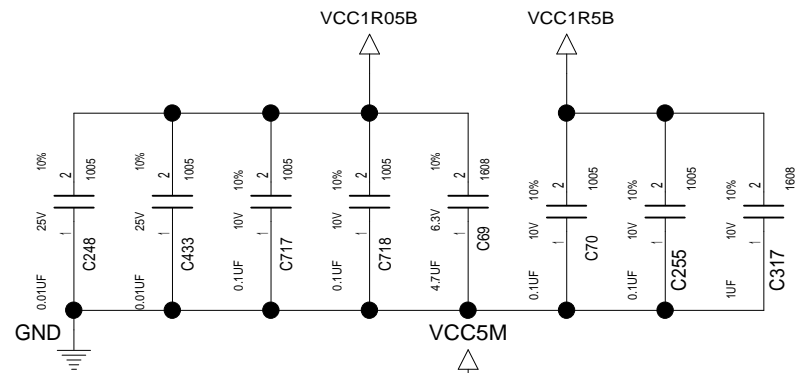
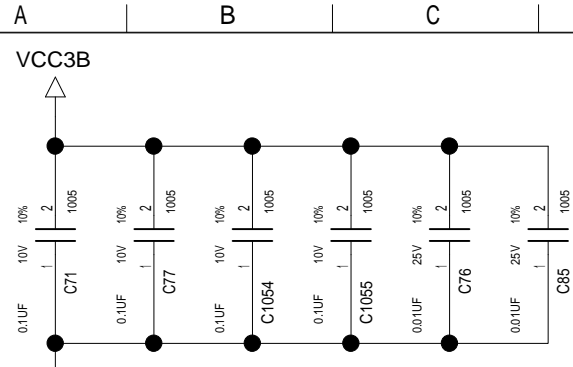
LEVEL	PLANAR ID			
3				
2				
1	R371	R505	R37	R671
0	R346	R347	R113	R114

LEVEL	PLANARID[3..0]	
PREDV	0000B	
SDV	0001B	

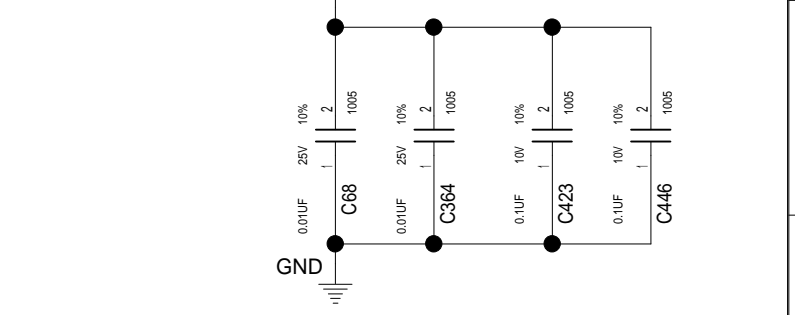
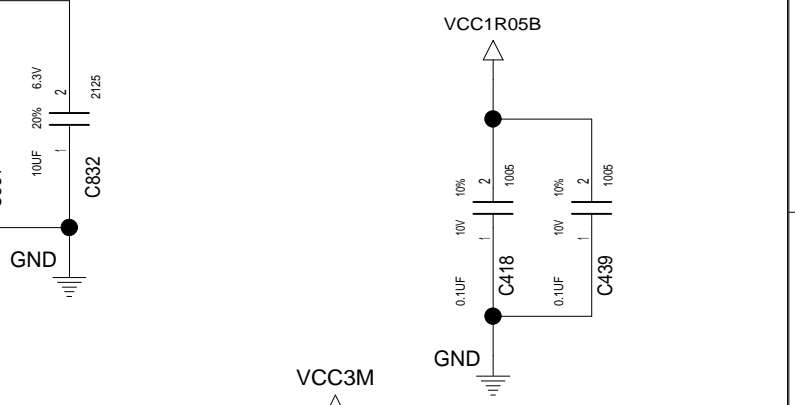
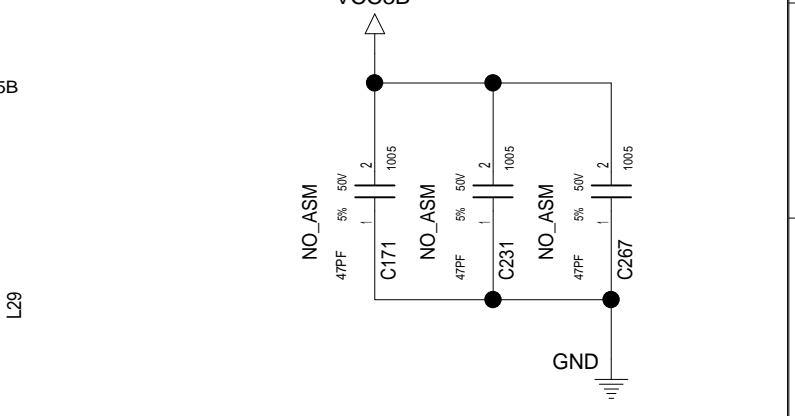


VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	ICH9-M(4/6):GPIO/CLK/PM	
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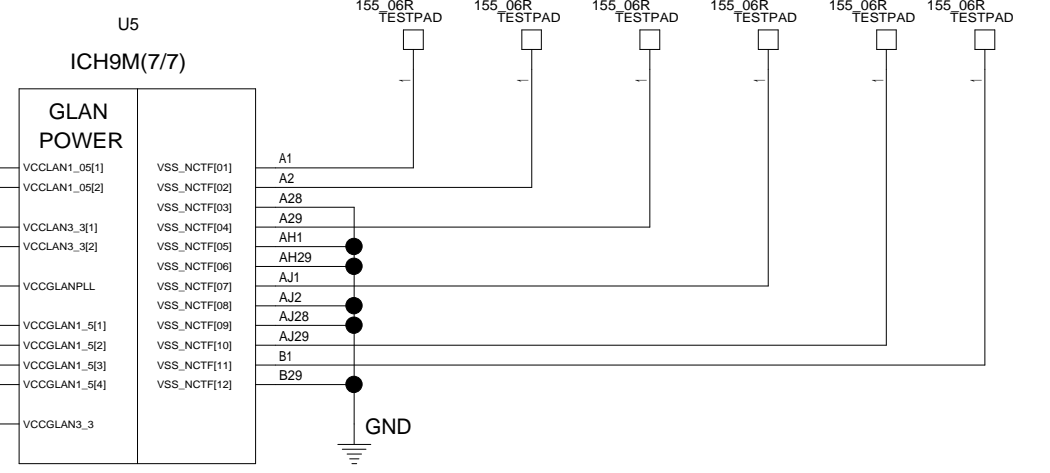
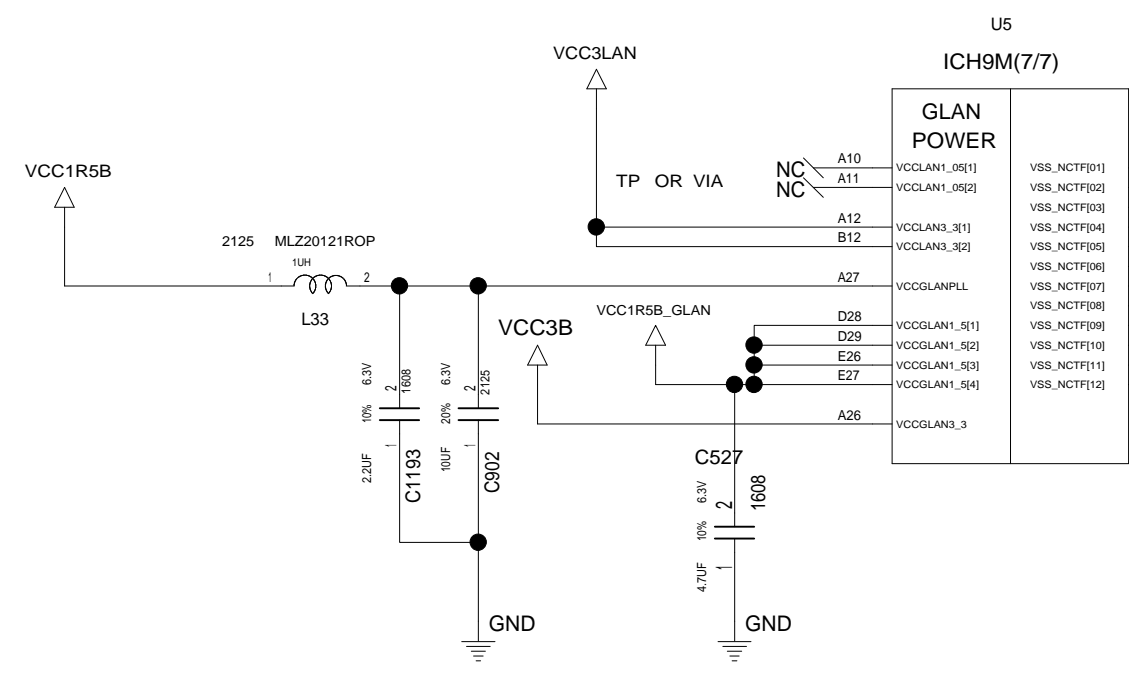
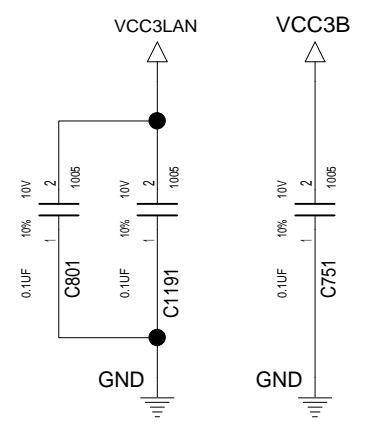
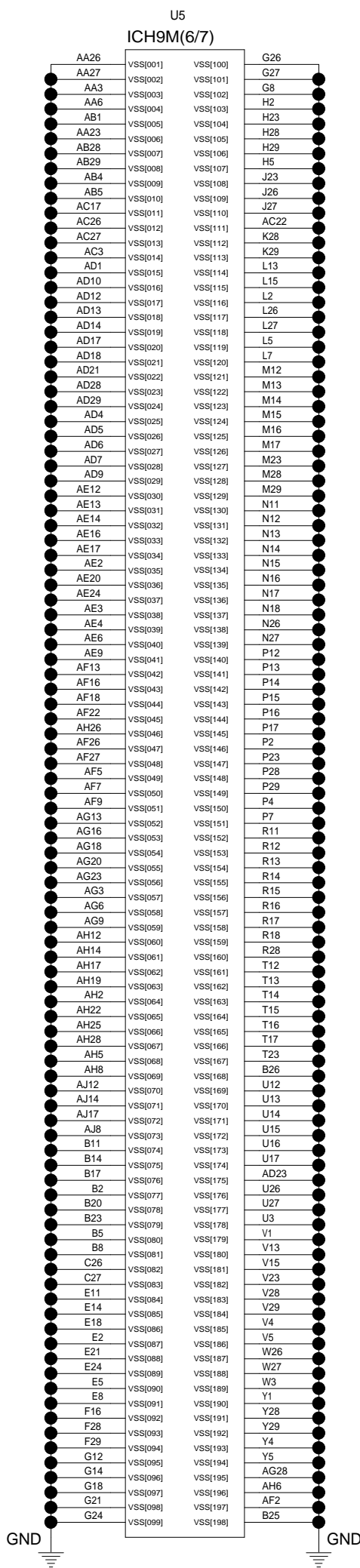
REL	DATE	EC NO.	PART NO.
			VER.1.42
			DEVELOPMENT NO.
			Q/M
			37 / 101



DESIGNER	Y.Y	09/28/07	PART NO.
CHECKED	Y.I	09/28/07	VER.1.42
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV
CLASS	H.K	09/28/07	ICH9-M(5/6):POWER
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	DATE	EC NO.	PART NO.	
REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				38 / 101



FOR SOLDER CRACK DETECTION

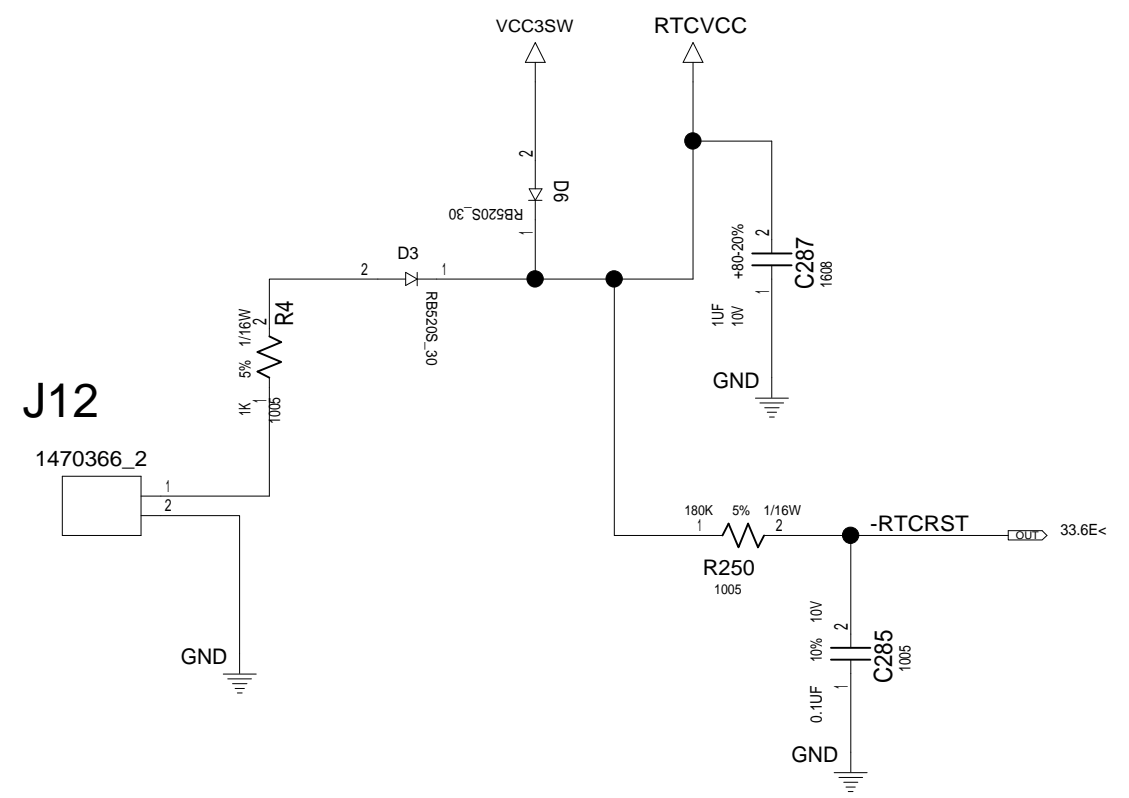
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 NO_ASM TP141 155_06R TESTPAD
 NO_ASM TP143 155_06R TESTPAD
 NO_ASM TP140 155_06R TESTPAD
 NO_ASM TP131 155_06R TESTPAD
 NO_ASM TP144 155_06R TESTPAD

DESIGNER	Y.Y	09/28/07	PART NO.	VER.1.42
CHECKED	Y.I	09/28/07	TITLE MLB-3 EXT SDV	
APPROVED	H.K	09/28/07	ICH9-M(6/6):GND	
CLASS	H.K	09/28/07	LENOVO CONFIDENTIAL	

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A B C D E F G H J K L M N P Q

	DATE	EC NO.	PART NO.	
REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				39 / 101

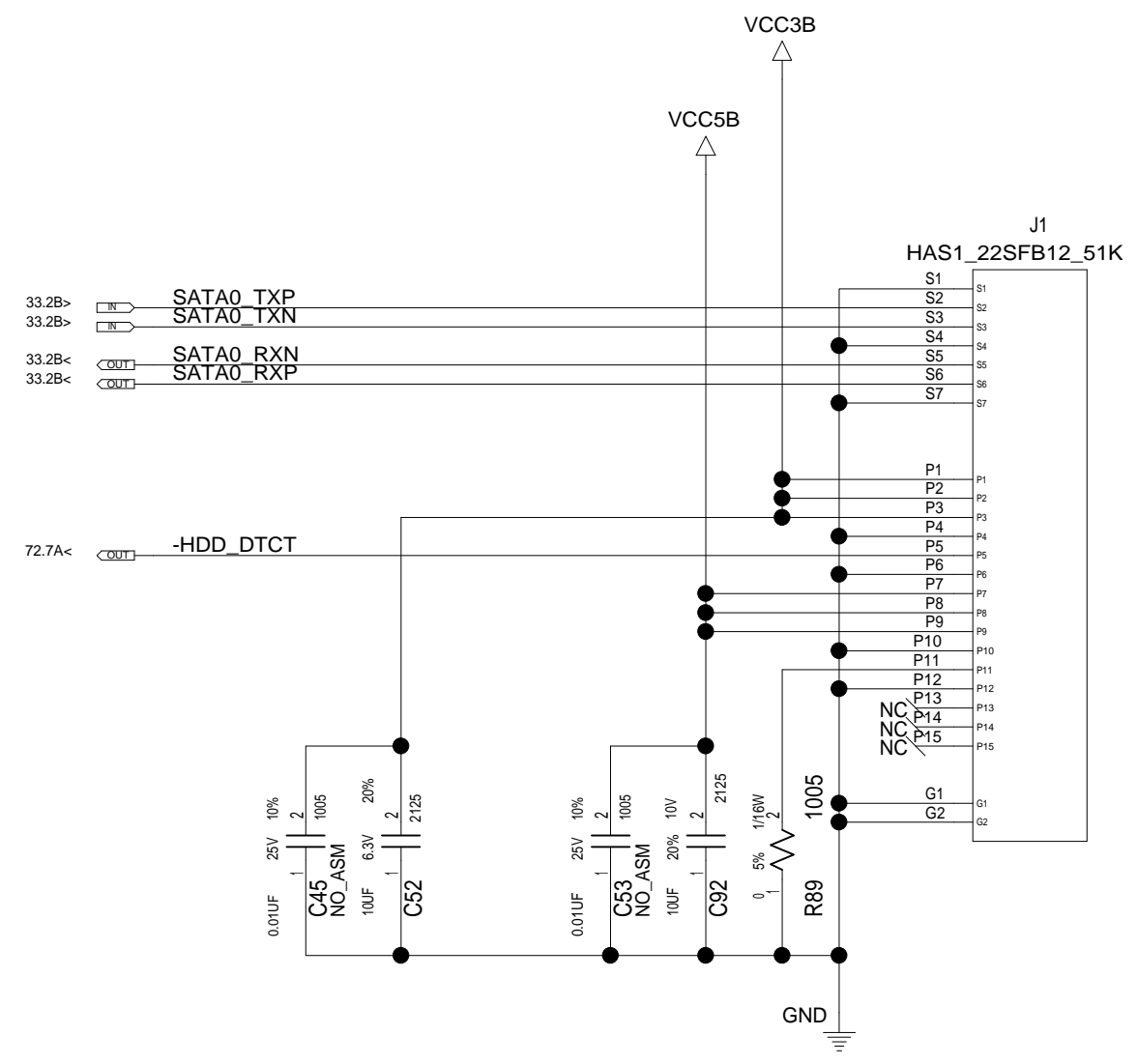


VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	RTC BATTERY	
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A B C D E F G H J K L M N P Q

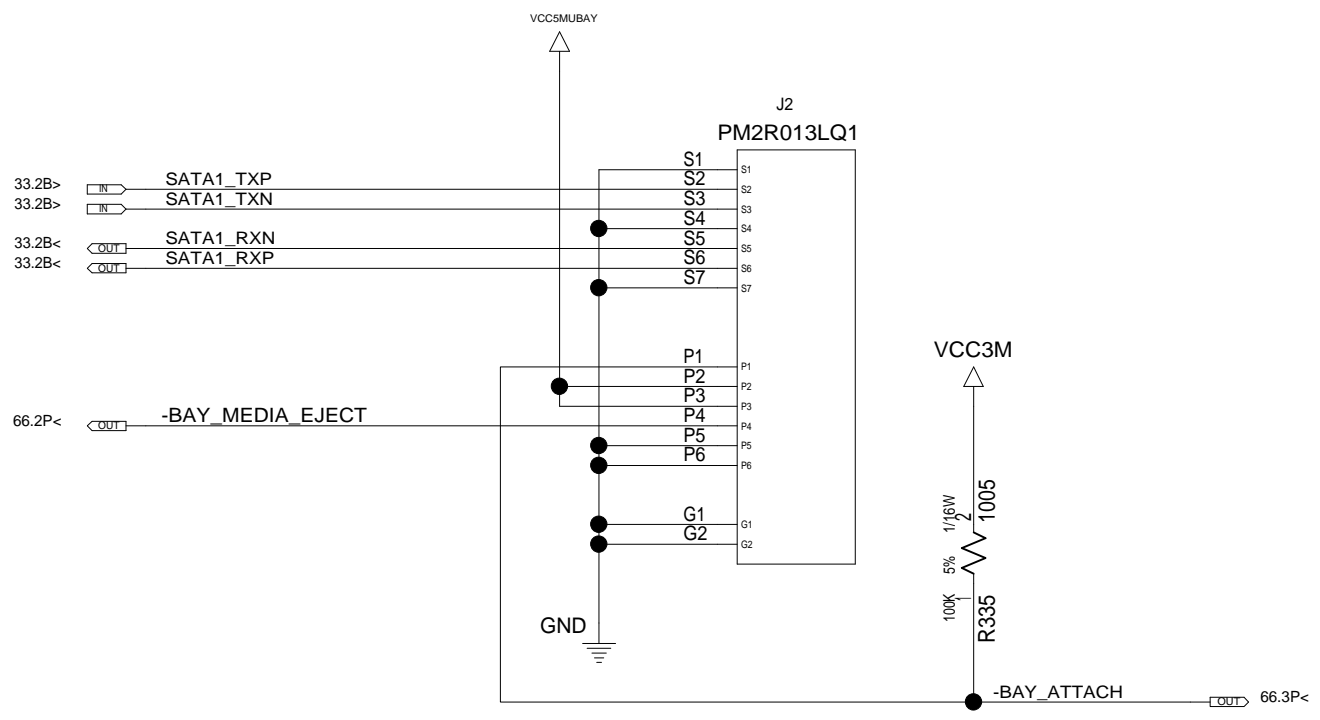
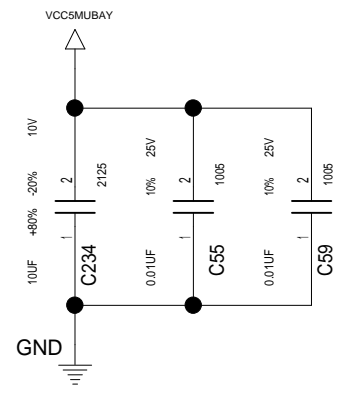
	DATE	EC NO.	PART NO.	
REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				40 / 101



VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	SATA HDD CONN	
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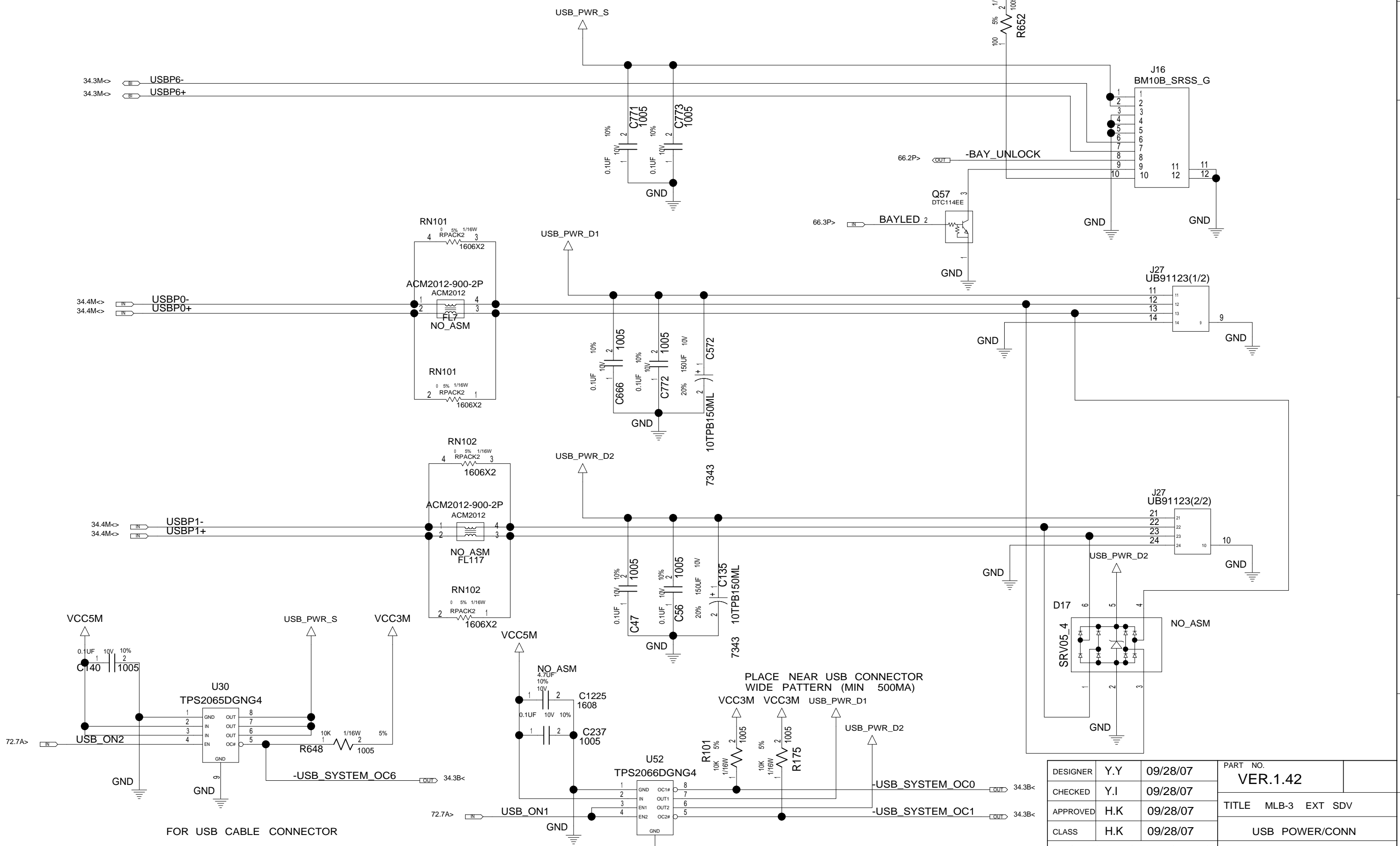
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REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				41 / 101



VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	VER.1.42
CHECKED	Y.I	09/28/07	TITLE MLB-3 EXT SDV	
APPROVED	H.K	09/28/07	SATA BAY I/F CONN	
CLASS	H.K	09/28/07	LENOVO CONFIDENTIAL	
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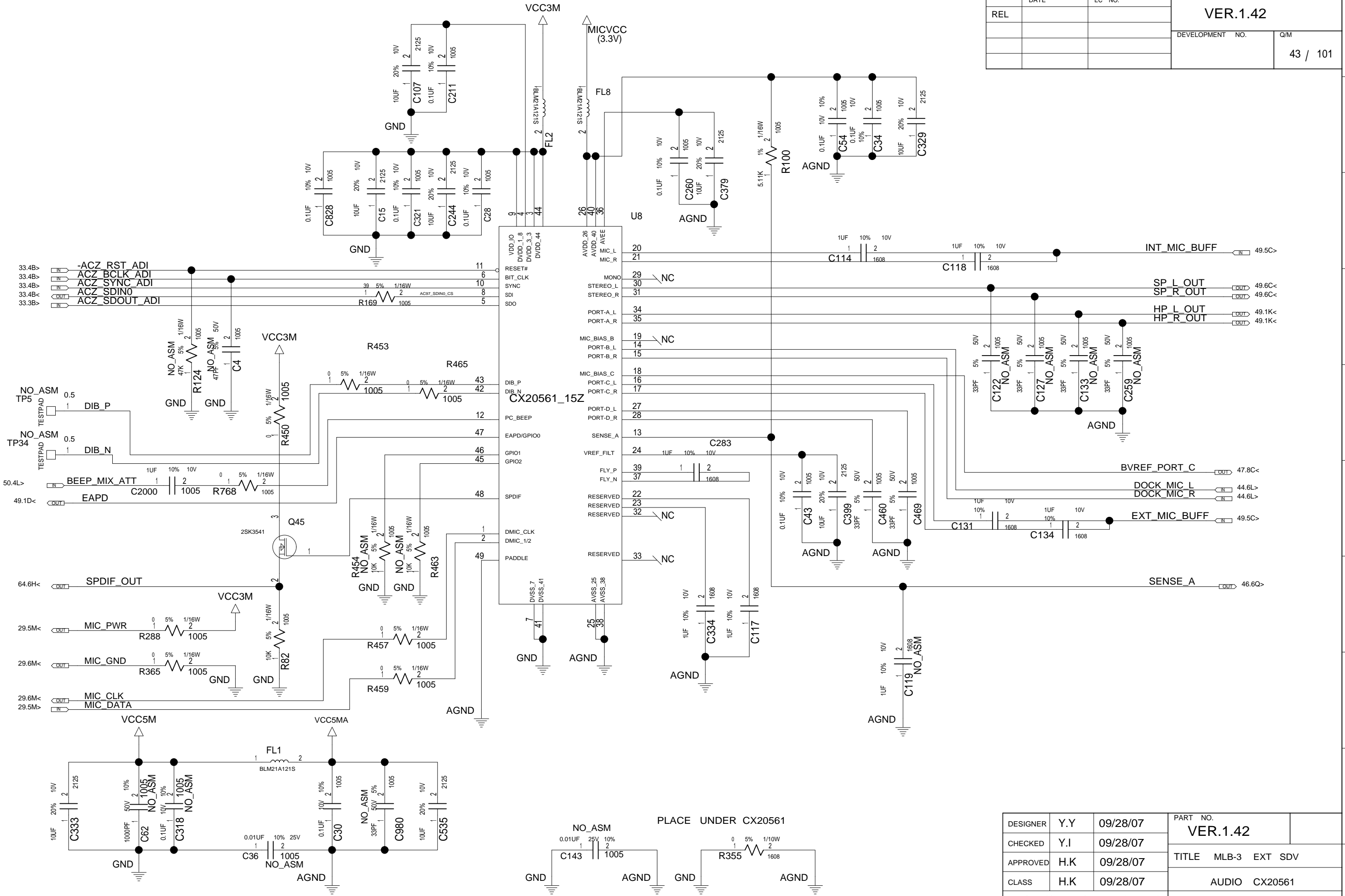
DATE	EC NO.	PART NO.	
REL		VER.1.42	
		DEVELOPMENT NO.	Q/M
			42 / 101



VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.
CHECKED	Y.I	09/28/07	VER.1.42
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV
CLASS	H.K	09/28/07	USB POWER/CONN
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REL	DATE	EC NO.	PART NO.	
			VER.1.42	
			DEVELOPMENT NO.	Q/M
				43 / 101

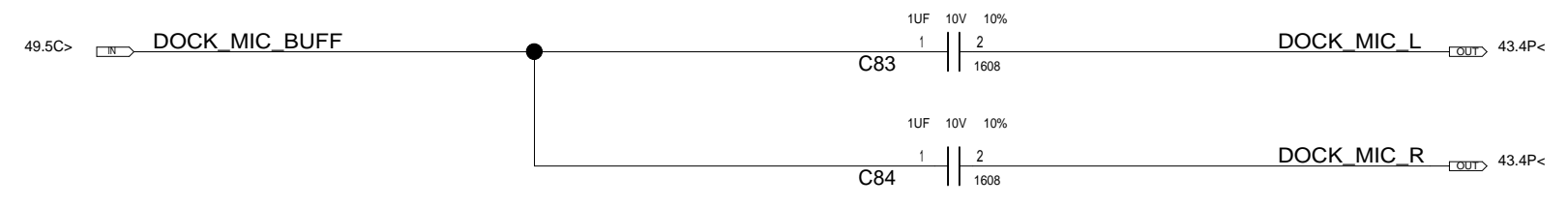


VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	AUDIO CX20561	
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A B C D E F G H J K L M N P Q

	DATE	EC NO.	PART NO.	
REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				44 / 101

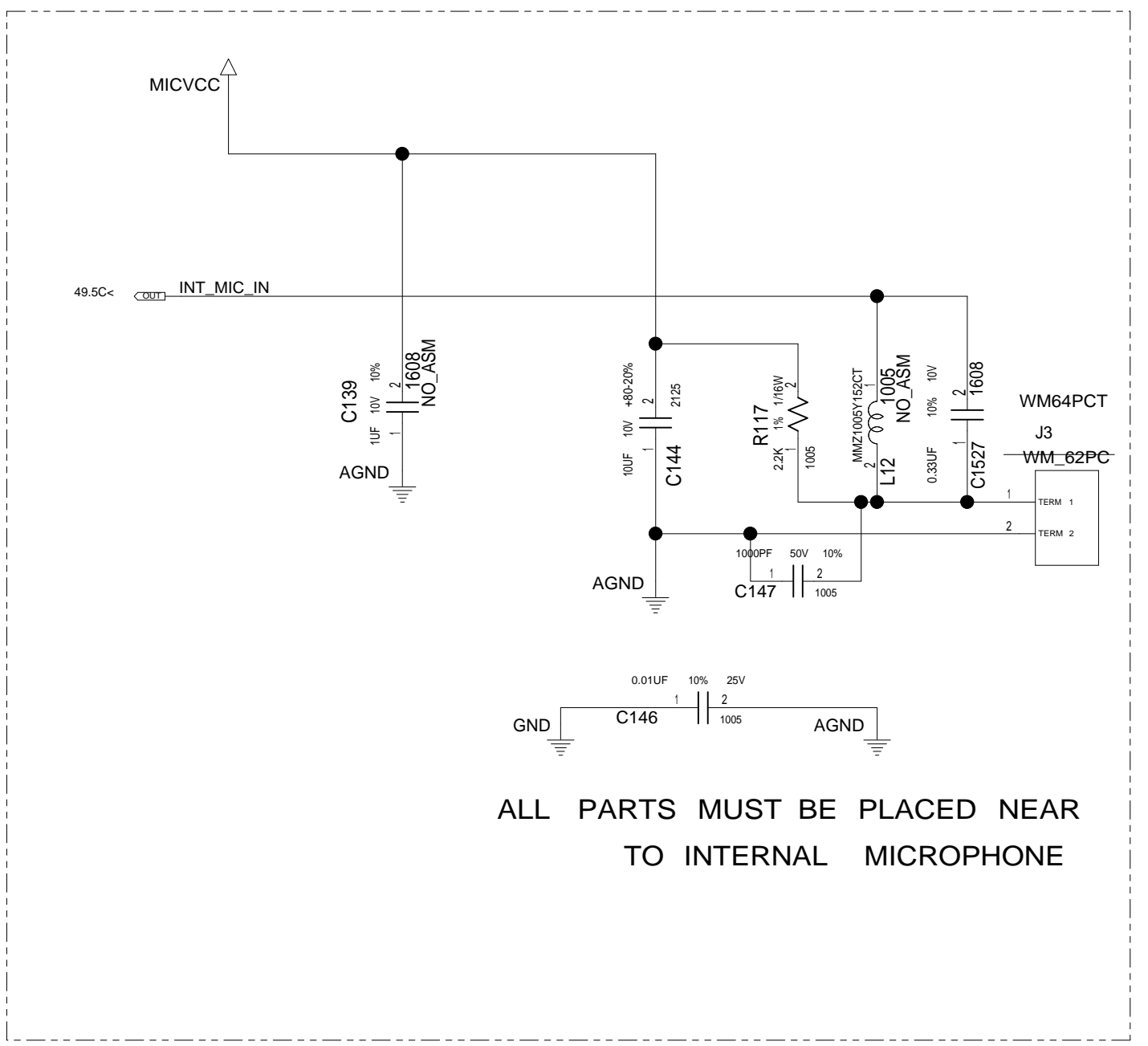
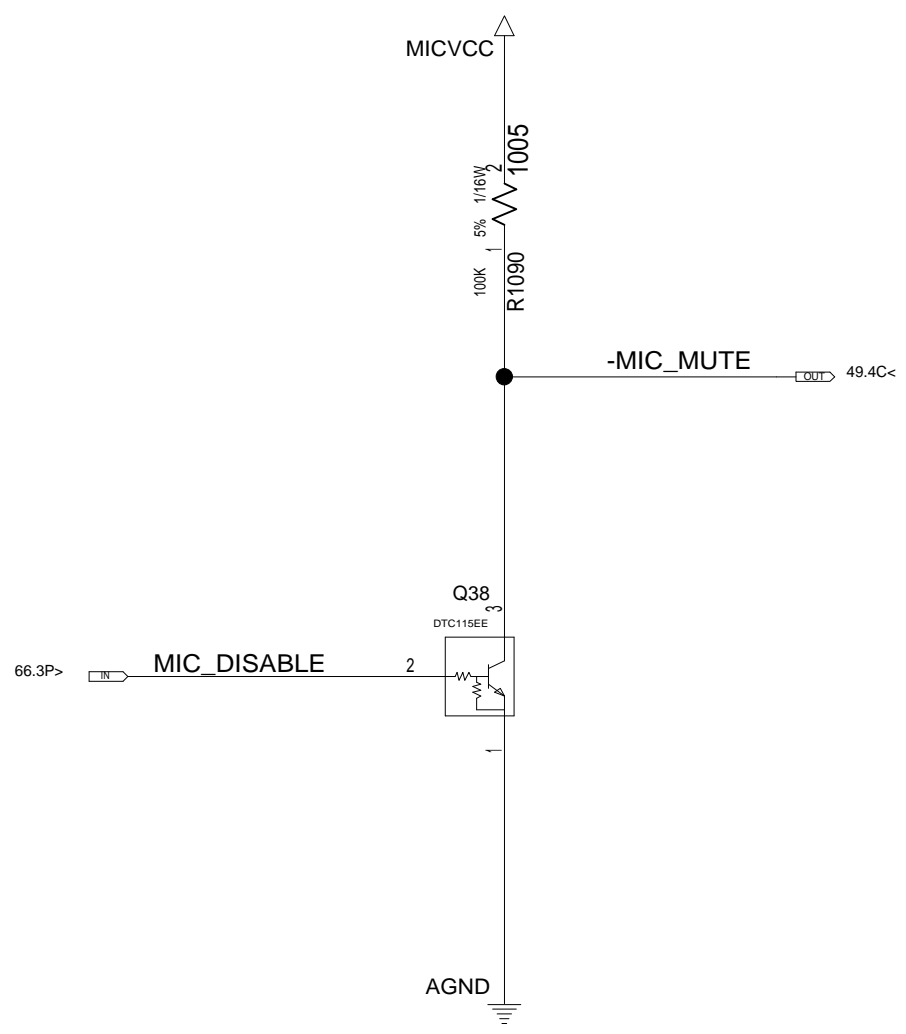
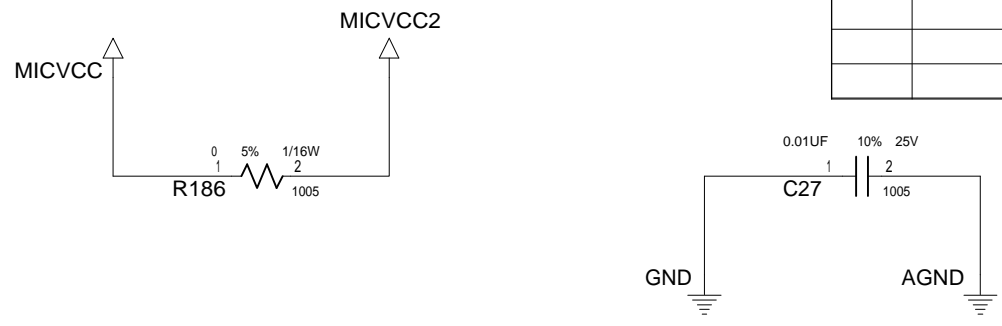


VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	AUDIO MISC	
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A B C D E F G H J K L M N P Q

REL	DATE	EC NO.	PART NO. VER.1.42	
			DEVELOPMENT NO.	Q/M 45 / 101



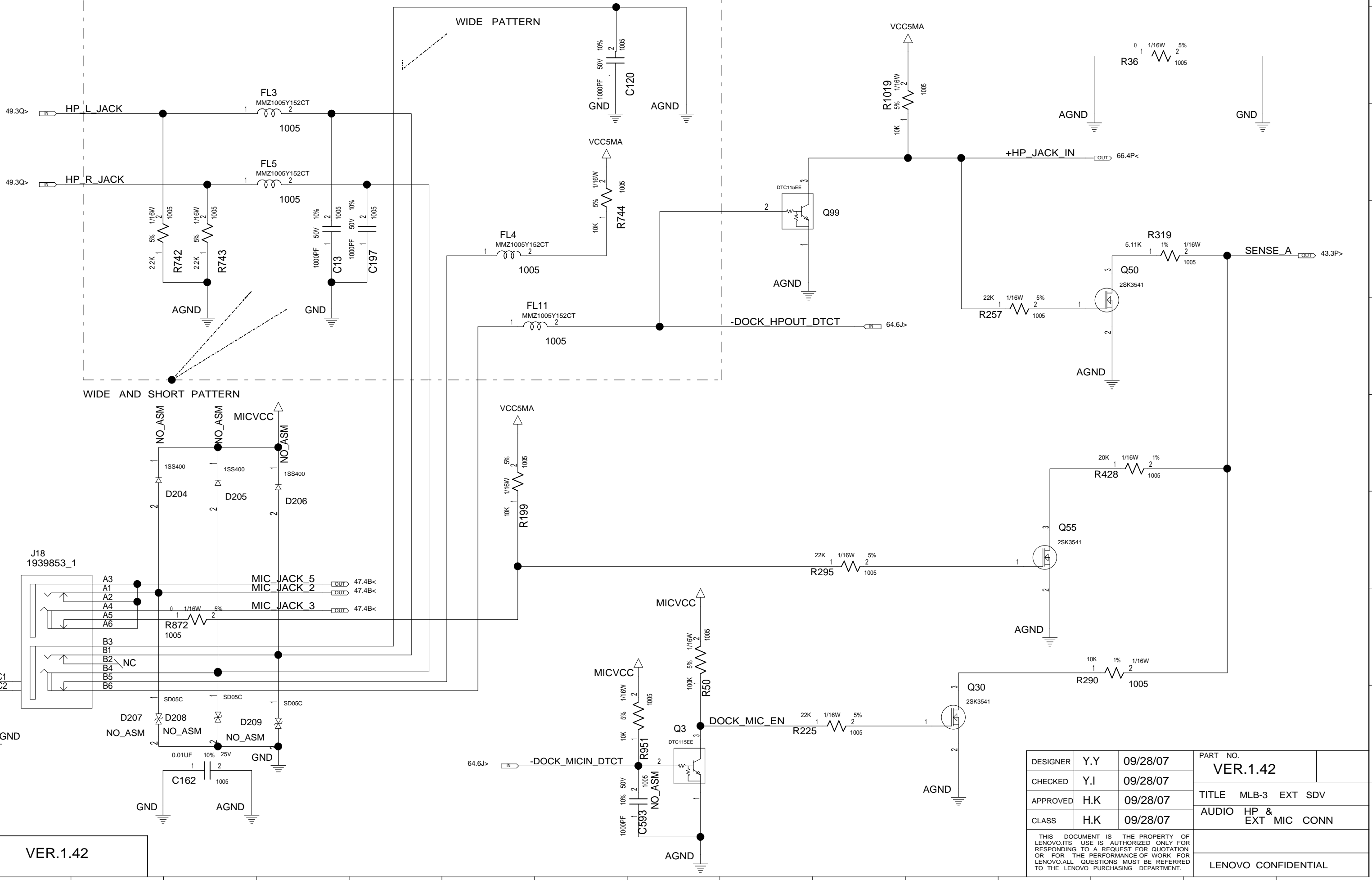
ALL PARTS MUST BE PLACED NEAR TO INTERNAL MICROPHONE

VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO. VER.1.42	
CHECKED	Y.I	09/28/07		
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	AUDIO INT MIC	
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REL	DATE	EC NO.	PART NO.	
			VER.1.42	
			DEVELOPMENT NO.	Q/M
				46 / 101

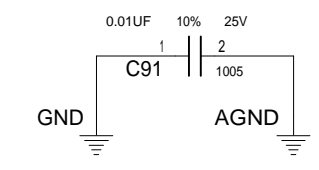
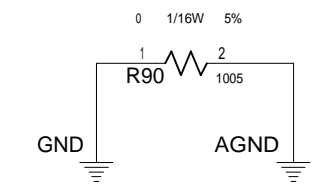
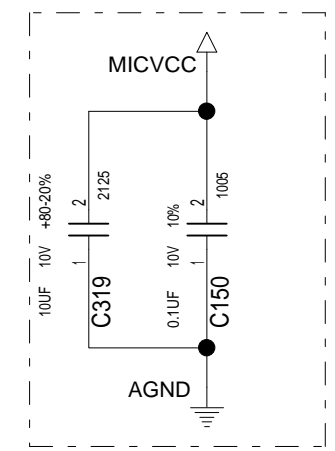
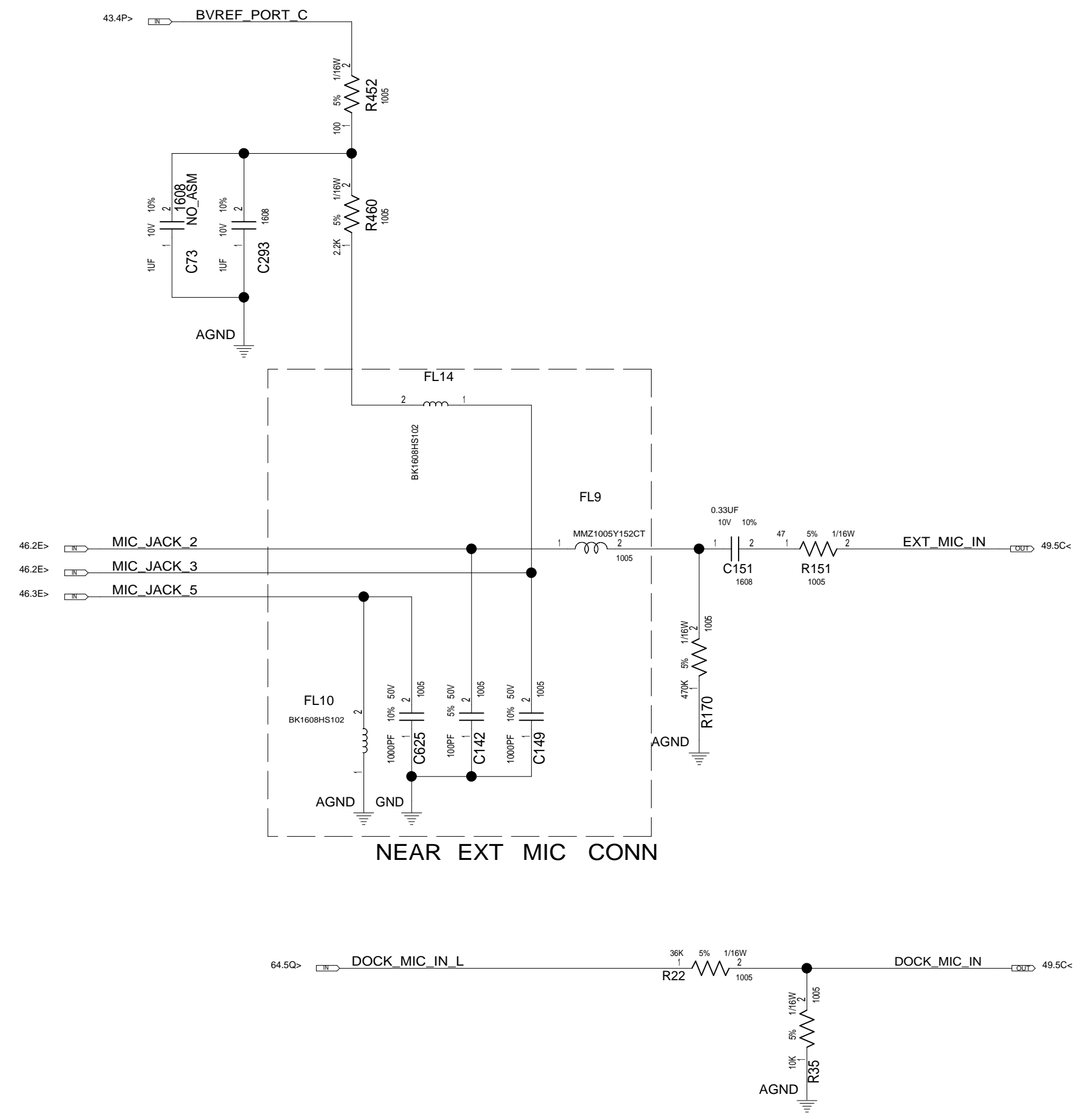
NEAR HEADPHONE CONN



VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	AUDIO HP & EXT MIC CONN	
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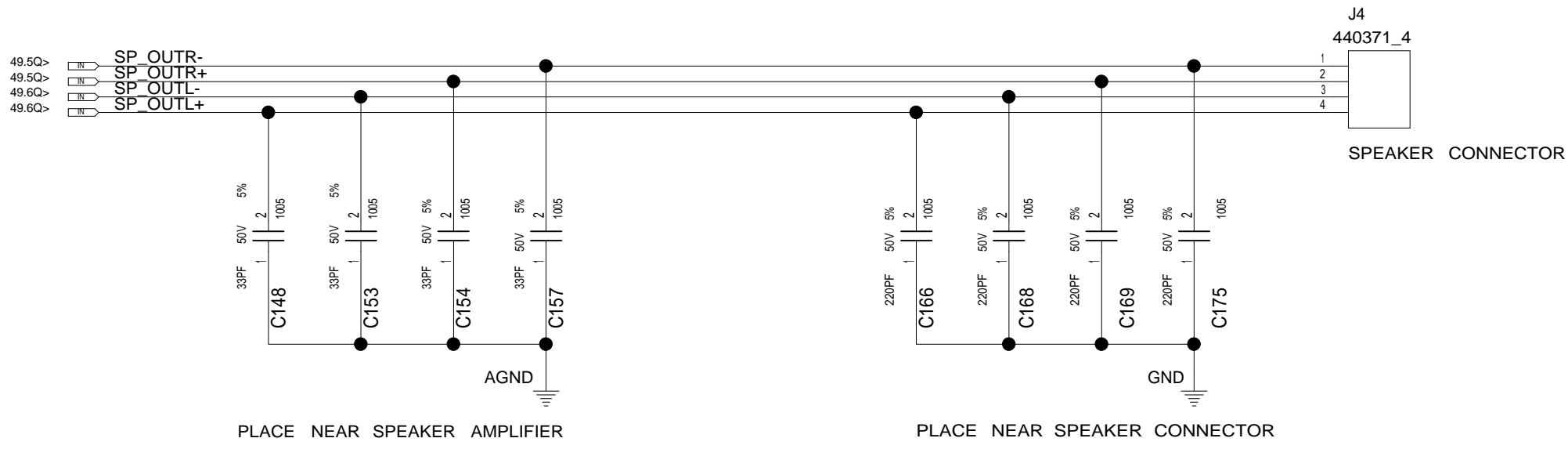
	DATE	EC NO.	PART NO.	
REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				47 / 101



VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	AUDIO EXT MIC AMP	
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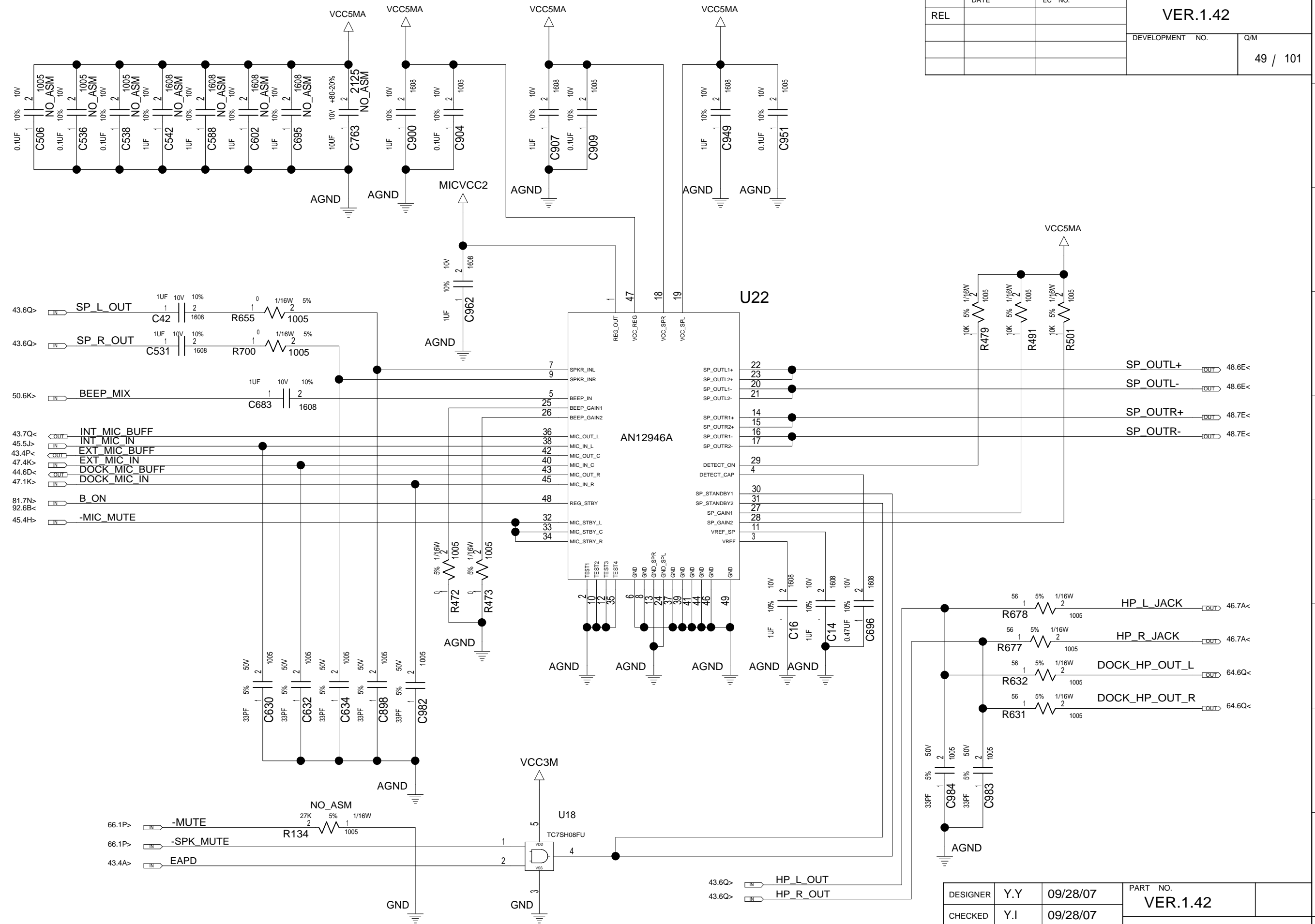
	DATE	EC NO.	PART NO.	
REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				48 / 101



VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	AUDIO SPEAKER	
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REL	DATE	EC NO.	PART NO.	
			VER.1.42	
			DEVELOPMENT NO.	Q/M
				49 / 101

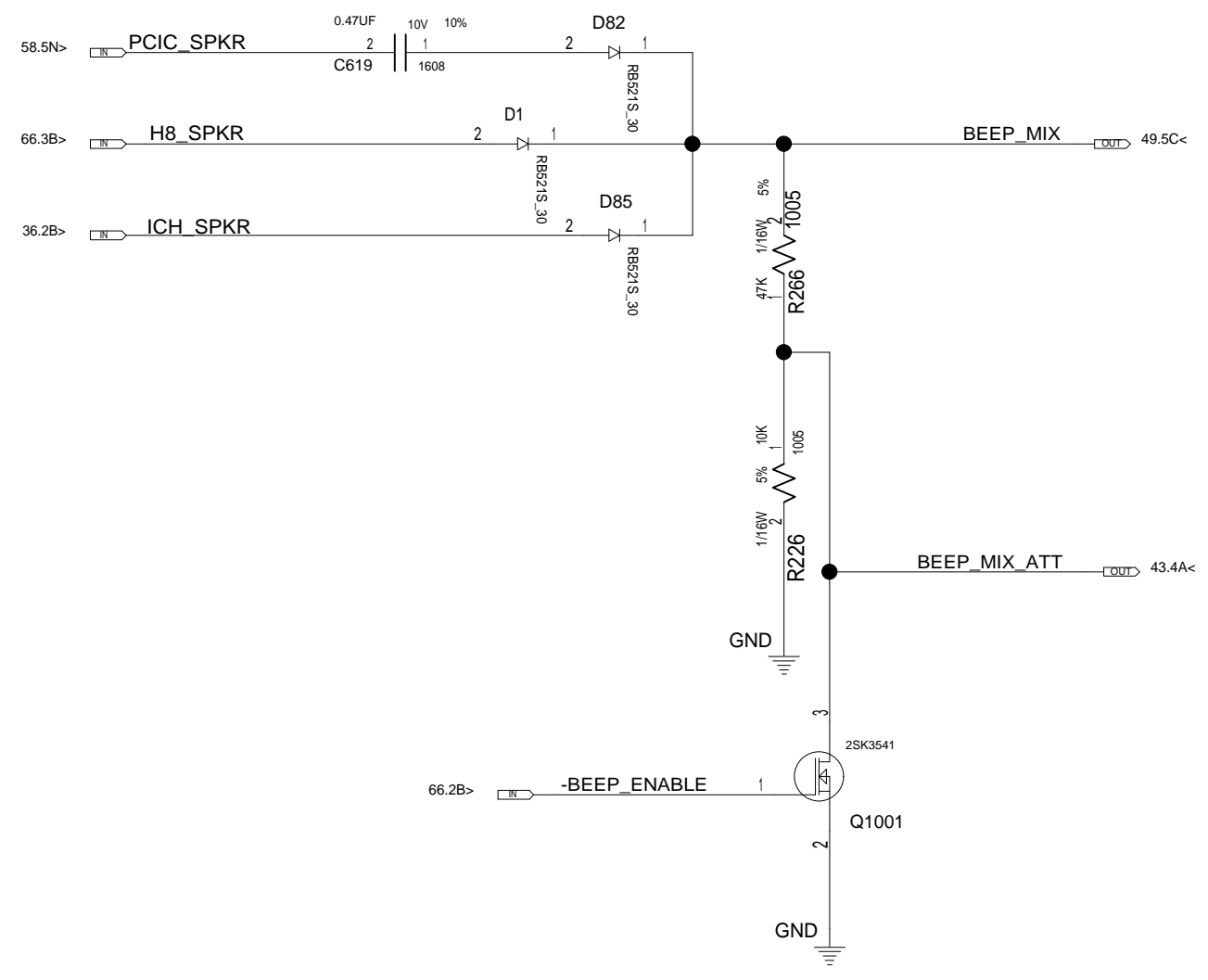


81.1B< 61.3A< 13.7H< 13.5J<

VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	AUDIO HDP AMP	
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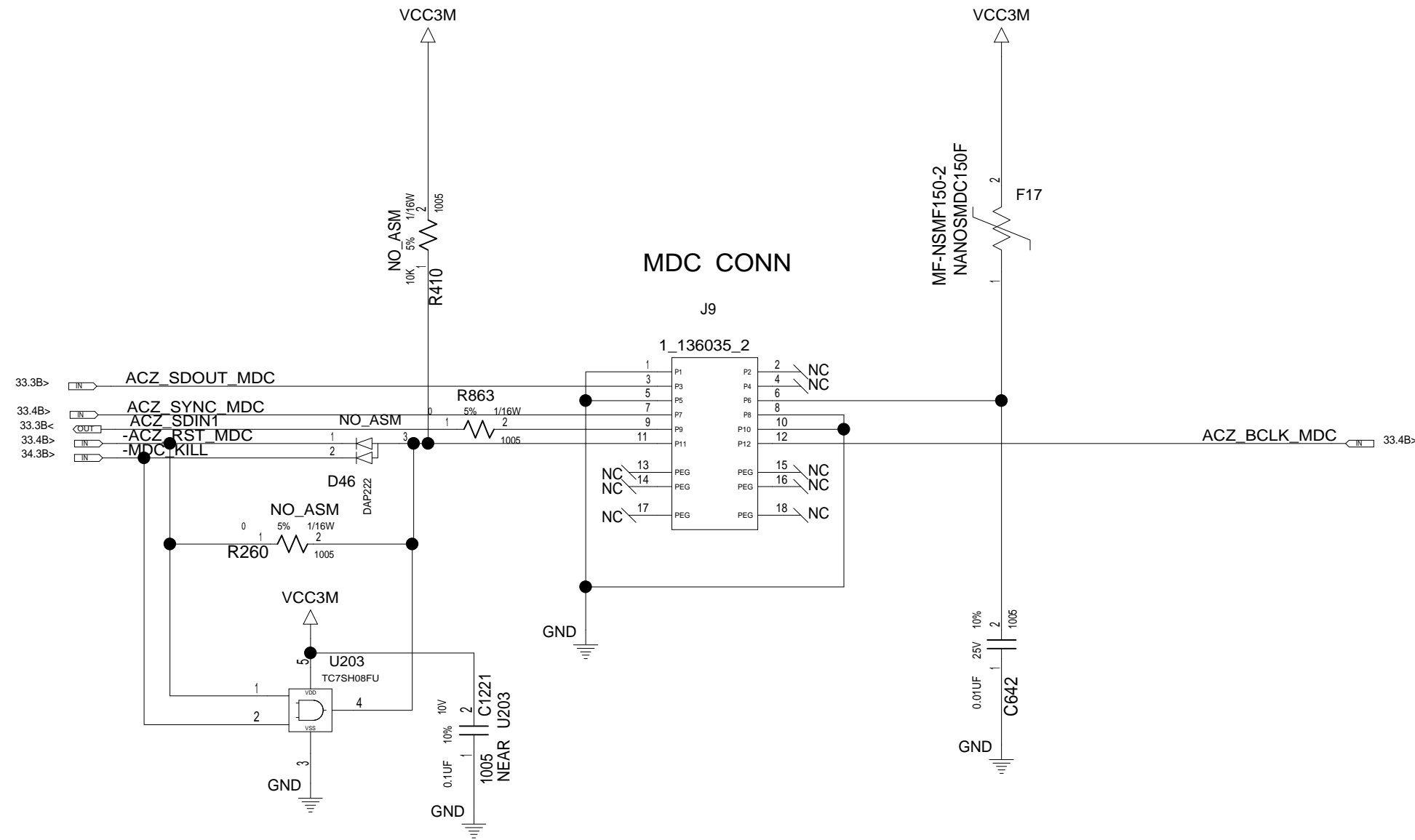
	DATE	EC NO.	PART NO.	
REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				50 / 101



VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	AUDIO BEEP	
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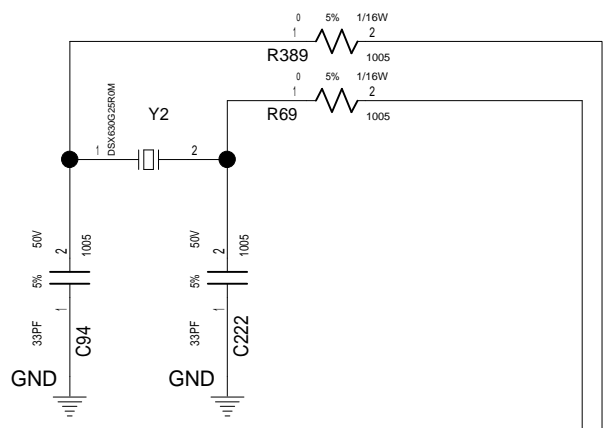
	DATE	EC NO.	PART NO.	
REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				51 / 101



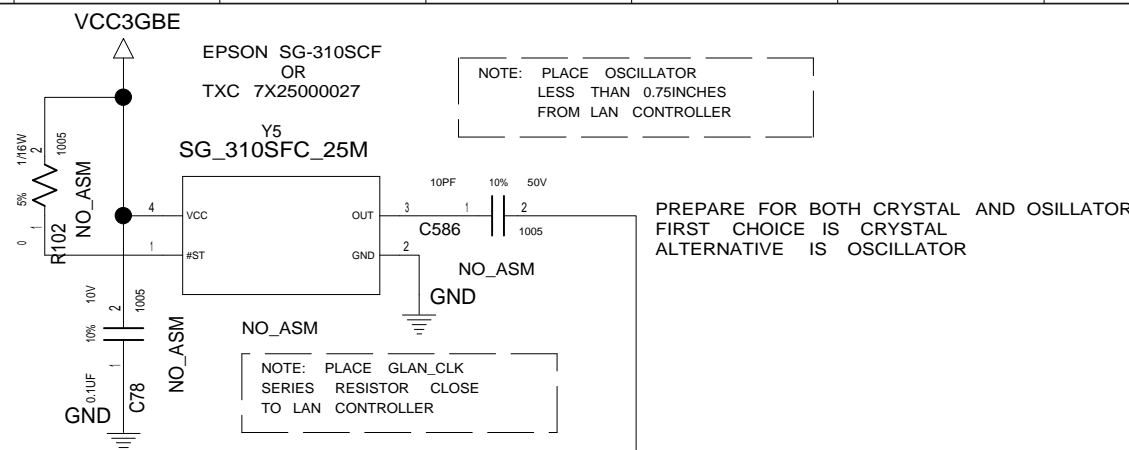
VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	CDC CONNECTOR	
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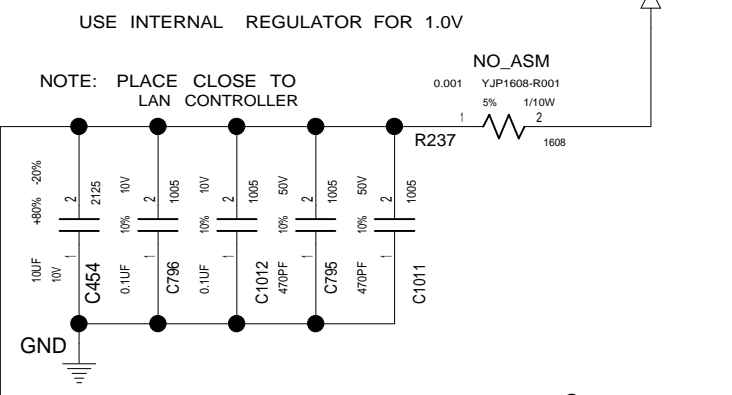
REL	DATE	EC NO.	PART NO.
			VER.1.42
			DEVELOPMENT NO.
			Q/M
			52 / 101



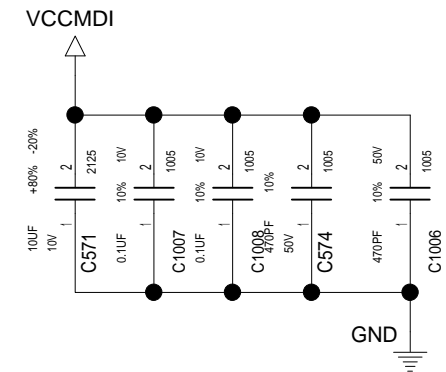
PLACE CRYSTAL LESS THAN 0.75 INCHES FROM GBE PHY



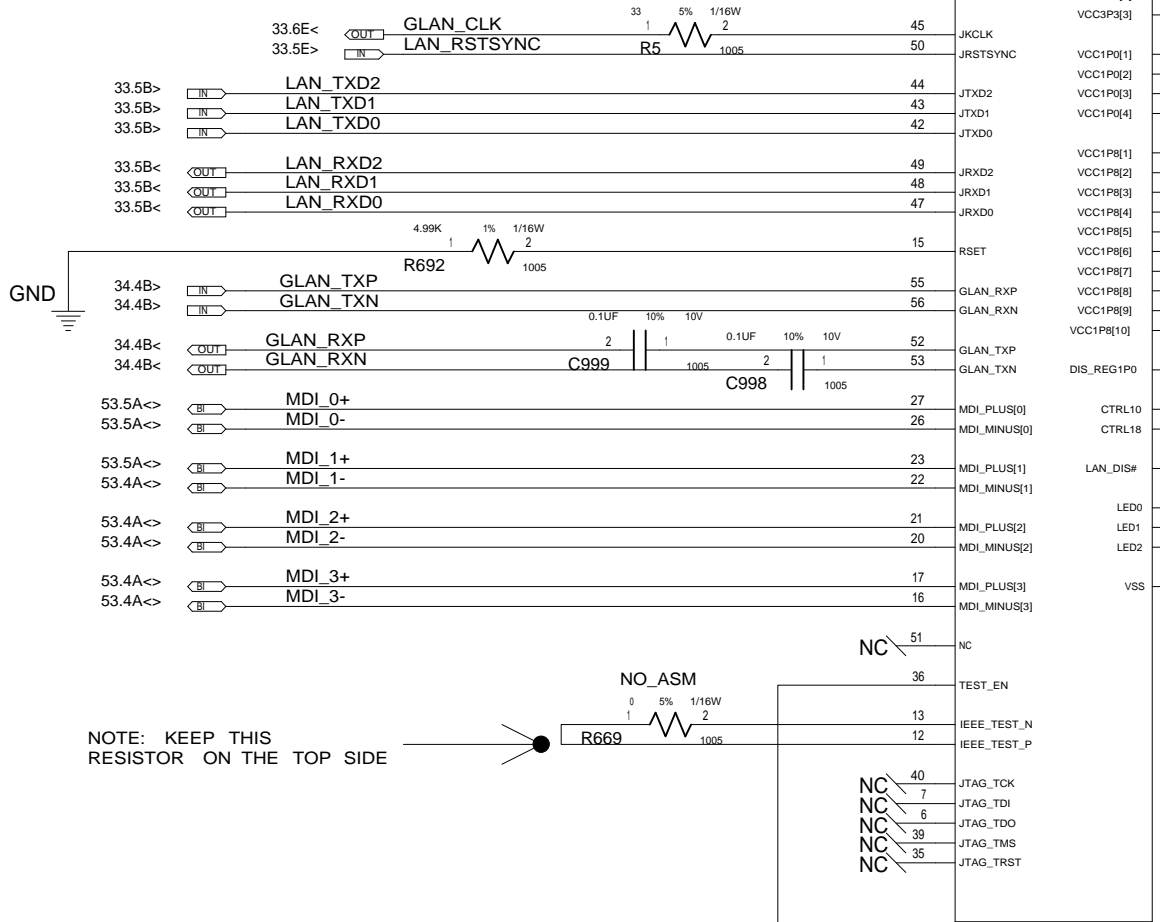
PREPARE FOR BOTH CRYSTAL AND OSILLATOR
FIRST CHOICE IS CRYSTAL
ALTERNATIVE IS OSCILLATOR



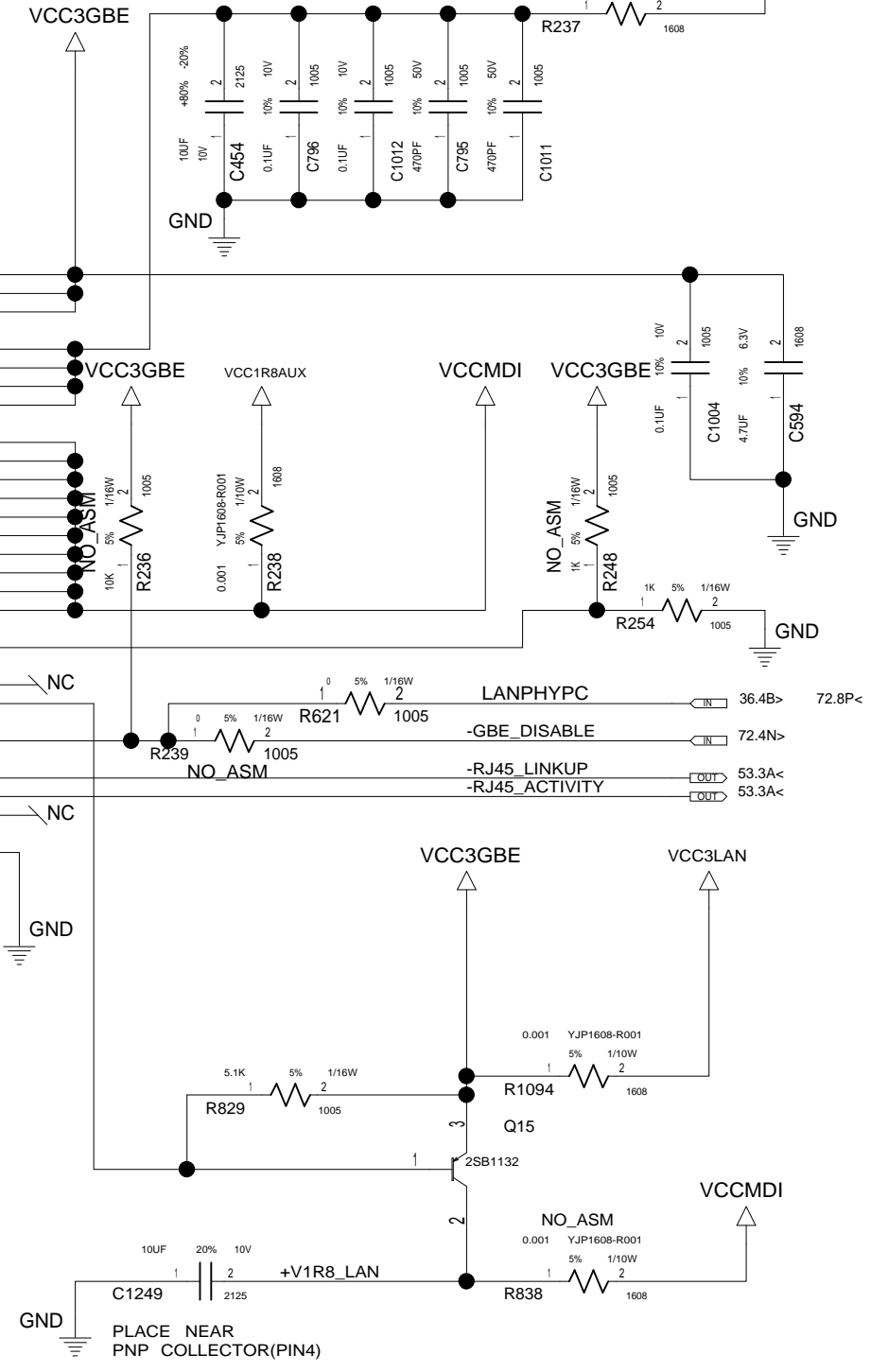
NOTE: PLACE CLOSE TO LAN CONTROLLER



NOTE: PLACE CLOSE TO LAN CONTROLLER



NOTE: KEEP THIS RESISTOR ON THE TOP SIDE

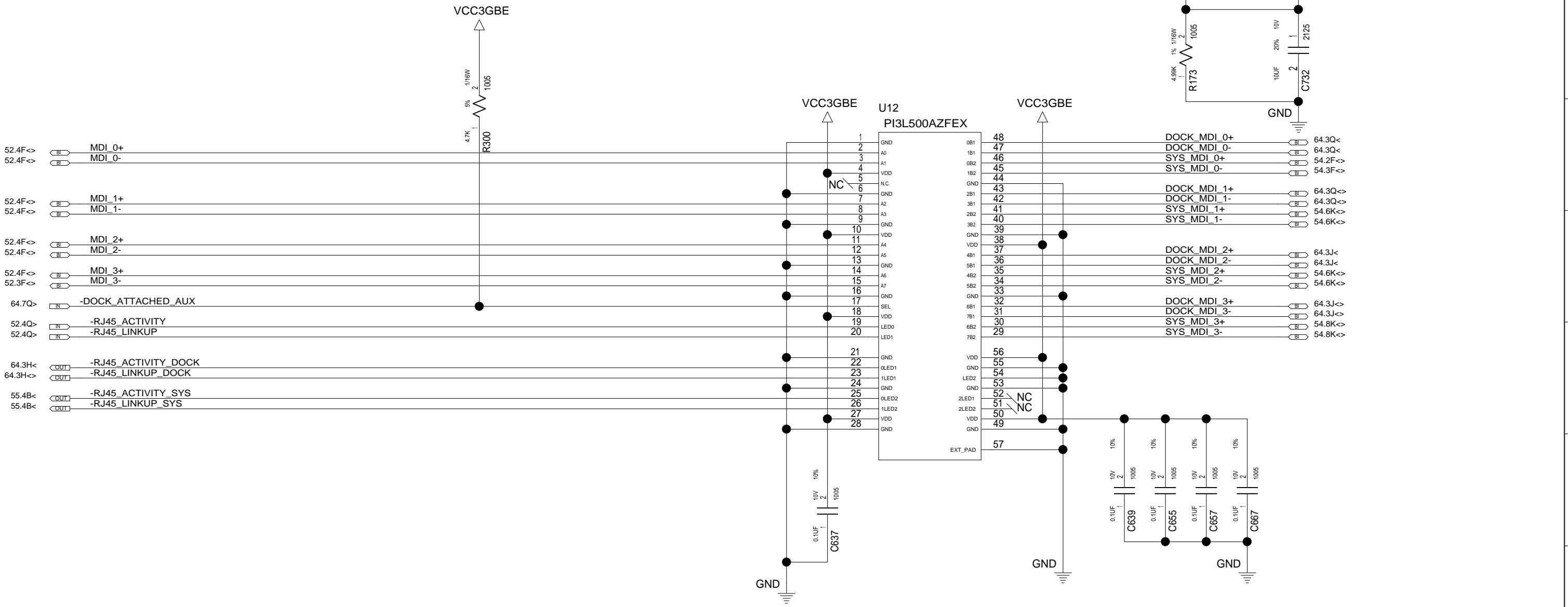


PLACE NEAR PNP COLLECTOR(PIN4)

AFTER INTEL'S EVALUATION, WE WILL DESIDE TO USE
VCC1R8AUX OR VCC2R5AUX.

DESIGNER	Y.Y	09/28/07	PART NO.
CHECKED	Y.I	09/28/07	VER.1.42
APPROVED	H.K	09/28/07	TITLE
CLASS	H.K	09/28/07	MLB-3 EXT SDV
			GBE BOAZMAN
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REL	DATE	EC NO.	PART NO.	
			VER.1.42	
			DEVELOPMENT NO.	Q/M
				53 / 101



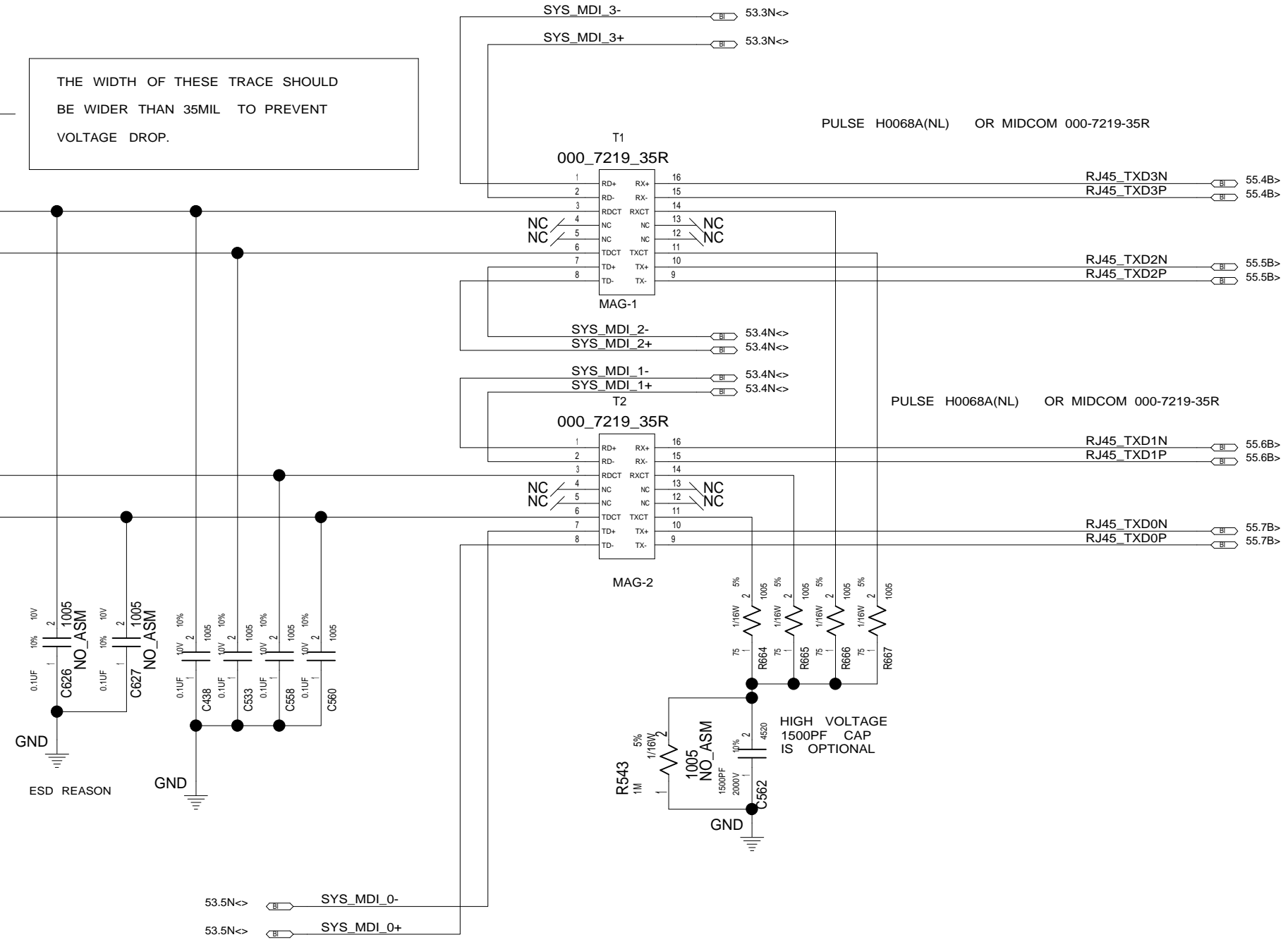
VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	GBE LAN SWITCH	
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REL	DATE	EC NO.	PART NO. VER.1.42	
			DEVELOPMENT NO.	Q/M 54 / 101

VCCMDI

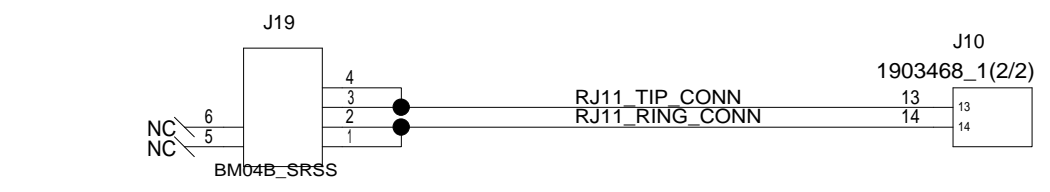
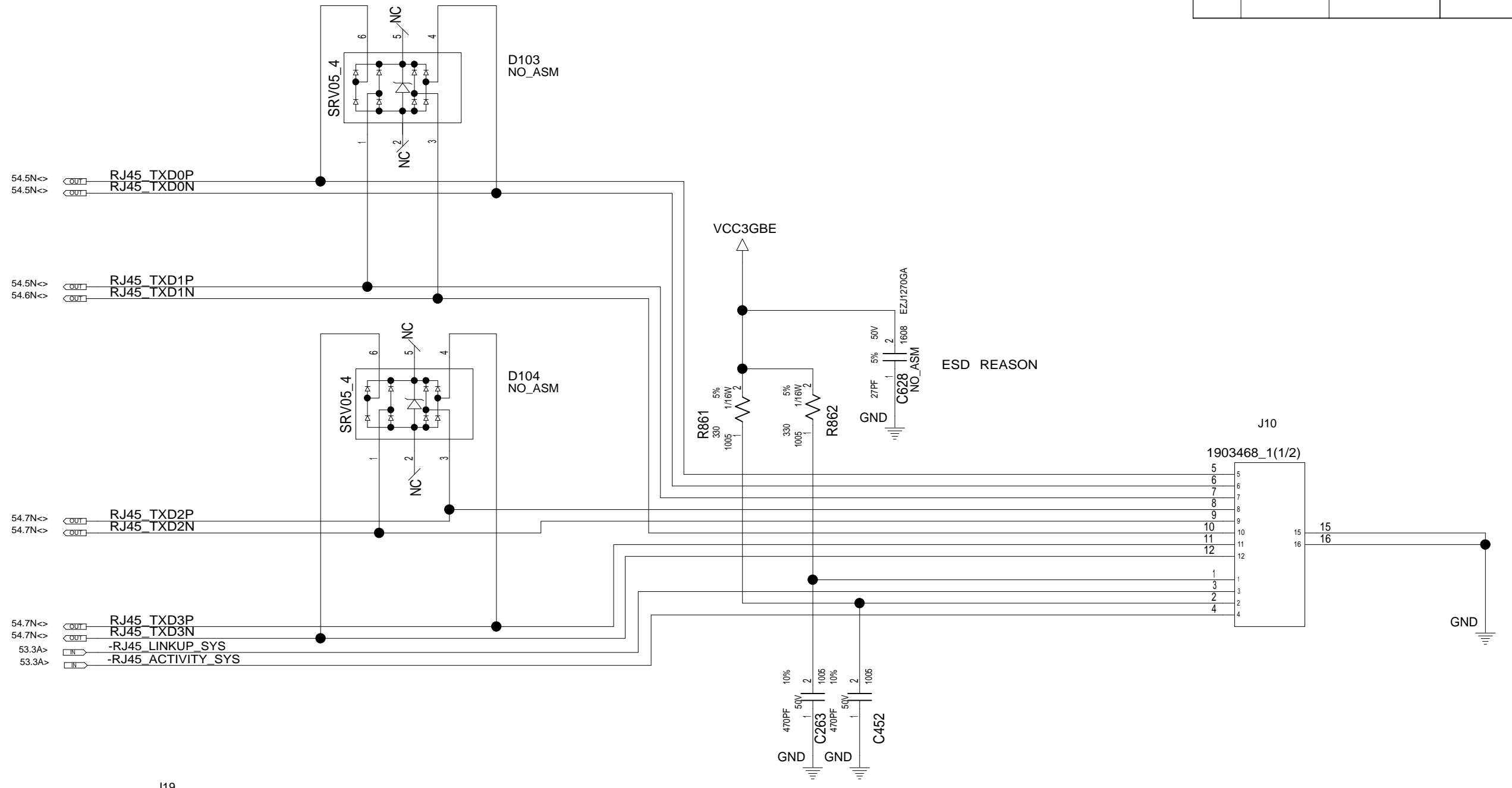
THE WIDTH OF THESE TRACE SHOULD BE WIDER THAN 35MIL TO PREVENT VOLTAGE DROP.



VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO. VER.1.42	
CHECKED	Y.I	09/28/07		
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	GBE MAGNETICS	
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	DATE	EC NO.	PART NO.	
REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				55 / 101

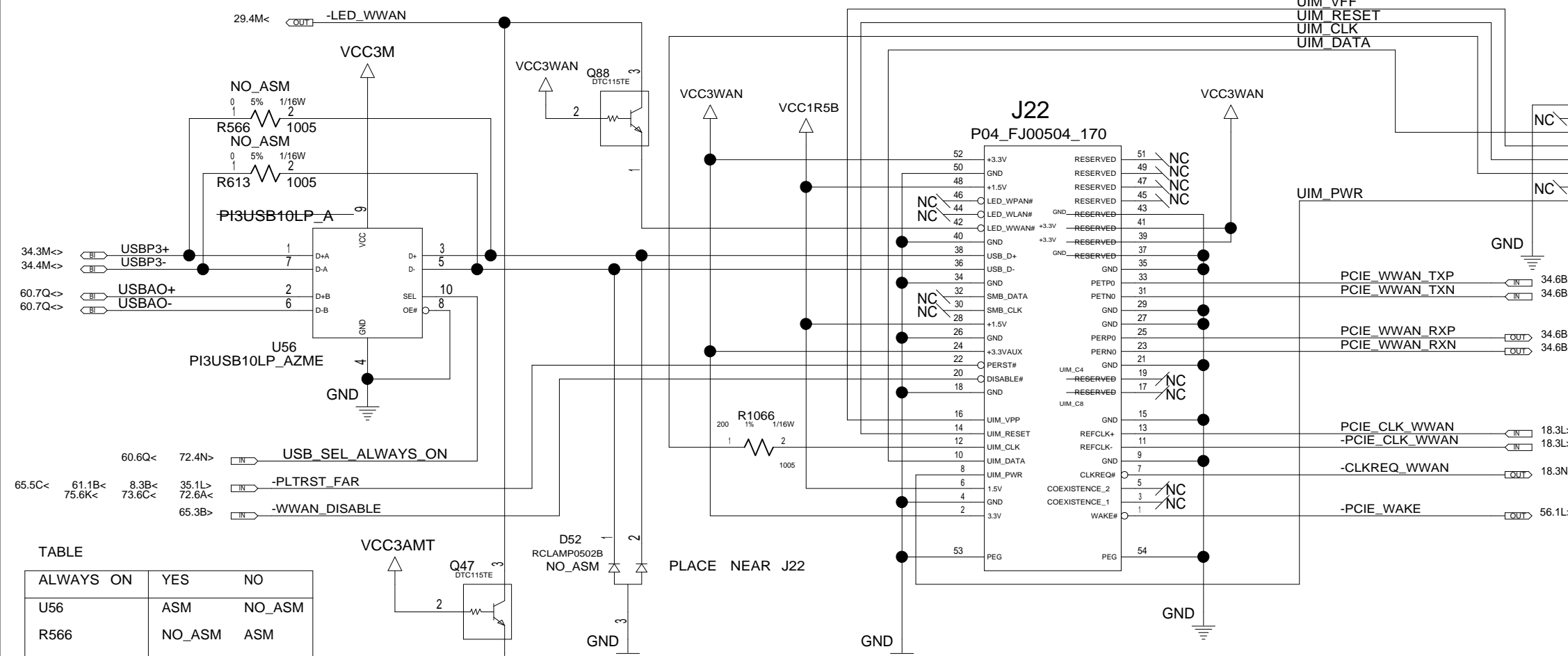


VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	RJ11/RJ45 CONNECTOR	
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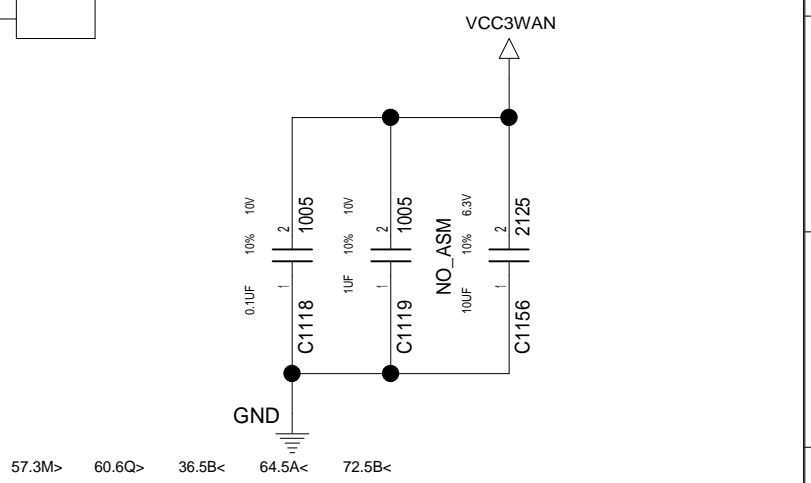
MINI PCIE CONN-1 FOR WWAN

DATE	EC NO.	PART NO.	
REL		VER.1.42	
		DEVELOPMENT NO.	Q/M
			56 / 101



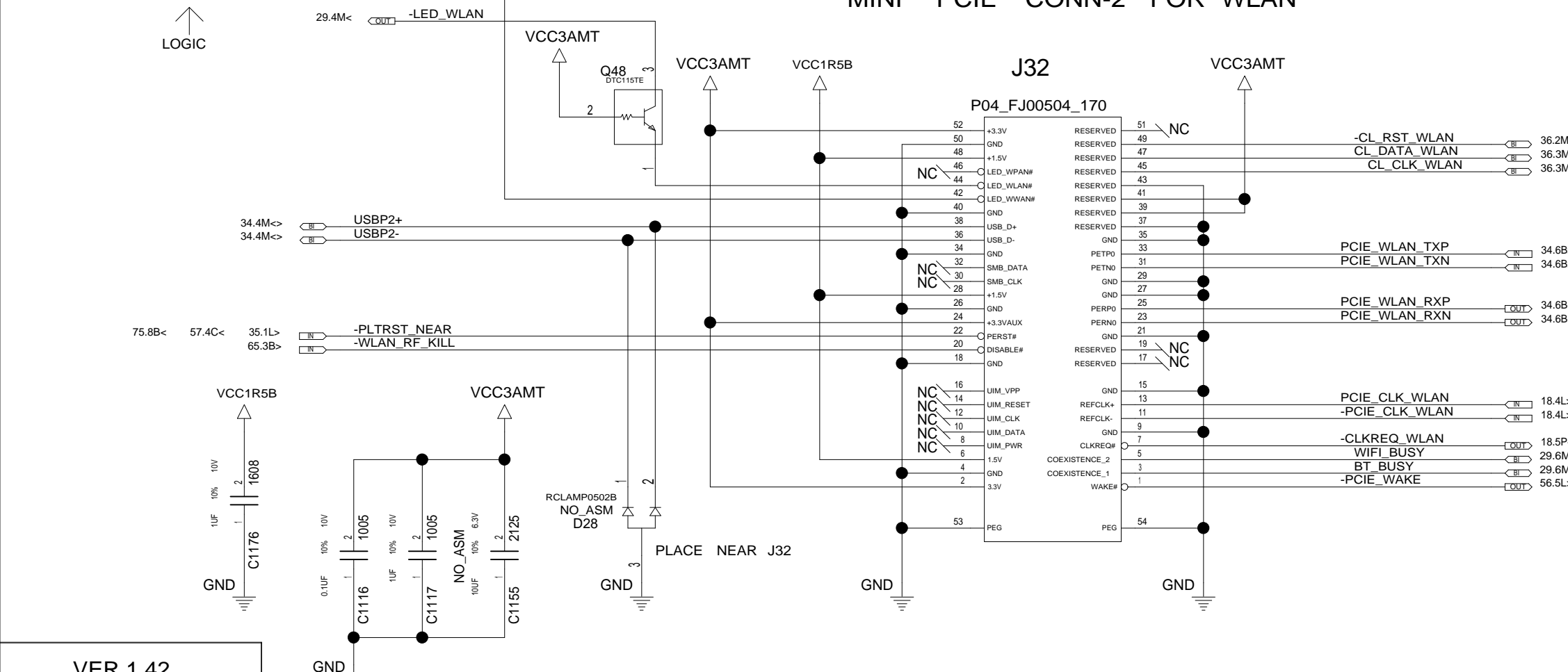
TABLE

ALWAYS ON	YES	NO
U56	ASM	NO_ASM
R566	NO_ASM	ASM
R613	NO_ASM	ASM



TABLE

	WWWAN	W/O WWAN
J22	ASM	NO_ASM
J25	ASM	NO_ASM
C1118	ASM	NO_ASM
C1119	ASM	NO_ASM
R1066	ASM	NO_ASM
Q88	ASM	NO_ASM
ALWAYS ON	YES/NO	NO
R566	NO_ASM/ASM	NO_ASM
R613	NO_ASM/ASM	NO_ASM

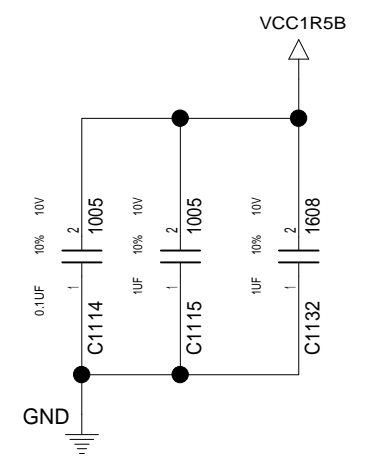
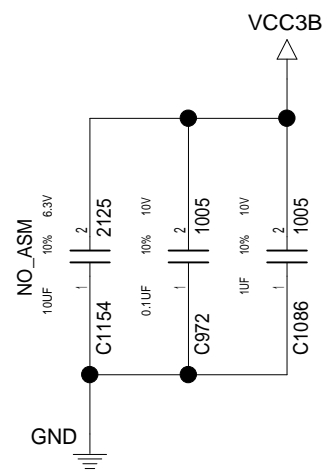
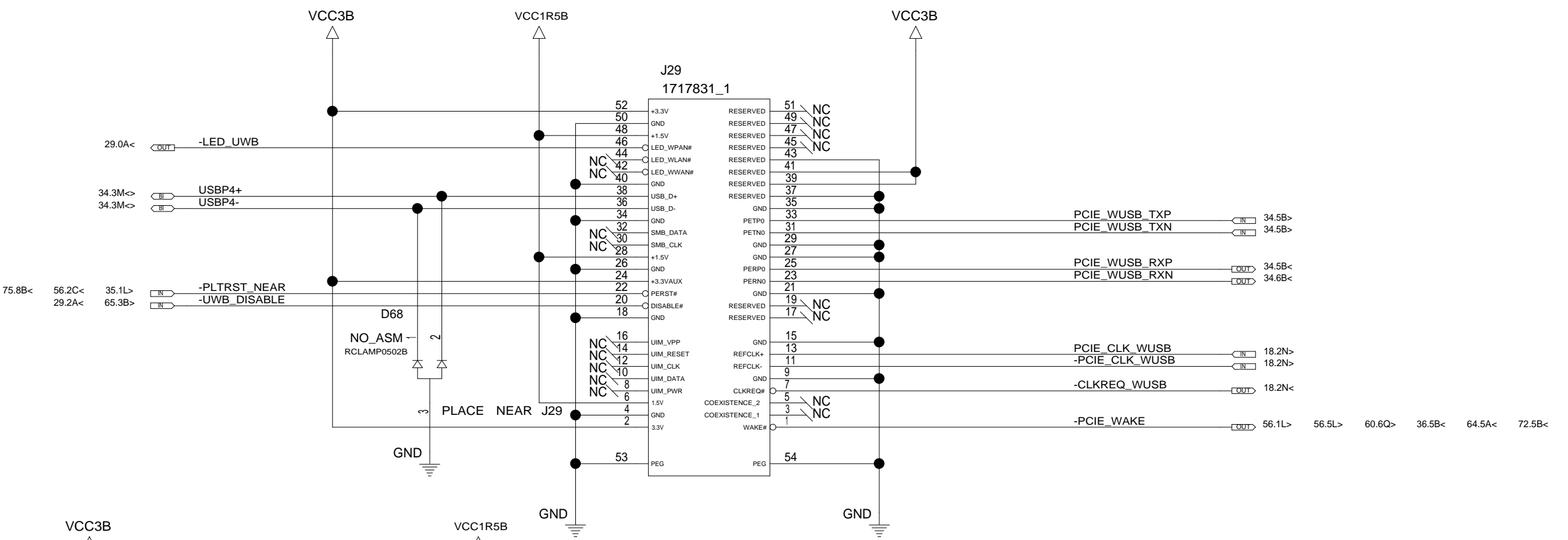


VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	PCIE MINI CARD SLOT	
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MICRO PCIE CONN

	DATE	EC NO.	PART NO.	
REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				57 / 101



VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	PCIE HALF MINI CARD SLOT	
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REL	DATE	EC NO.	PART NO.
			VER.1.42
			DEVELOPMENT NO.
			Q/M
			58 / 101

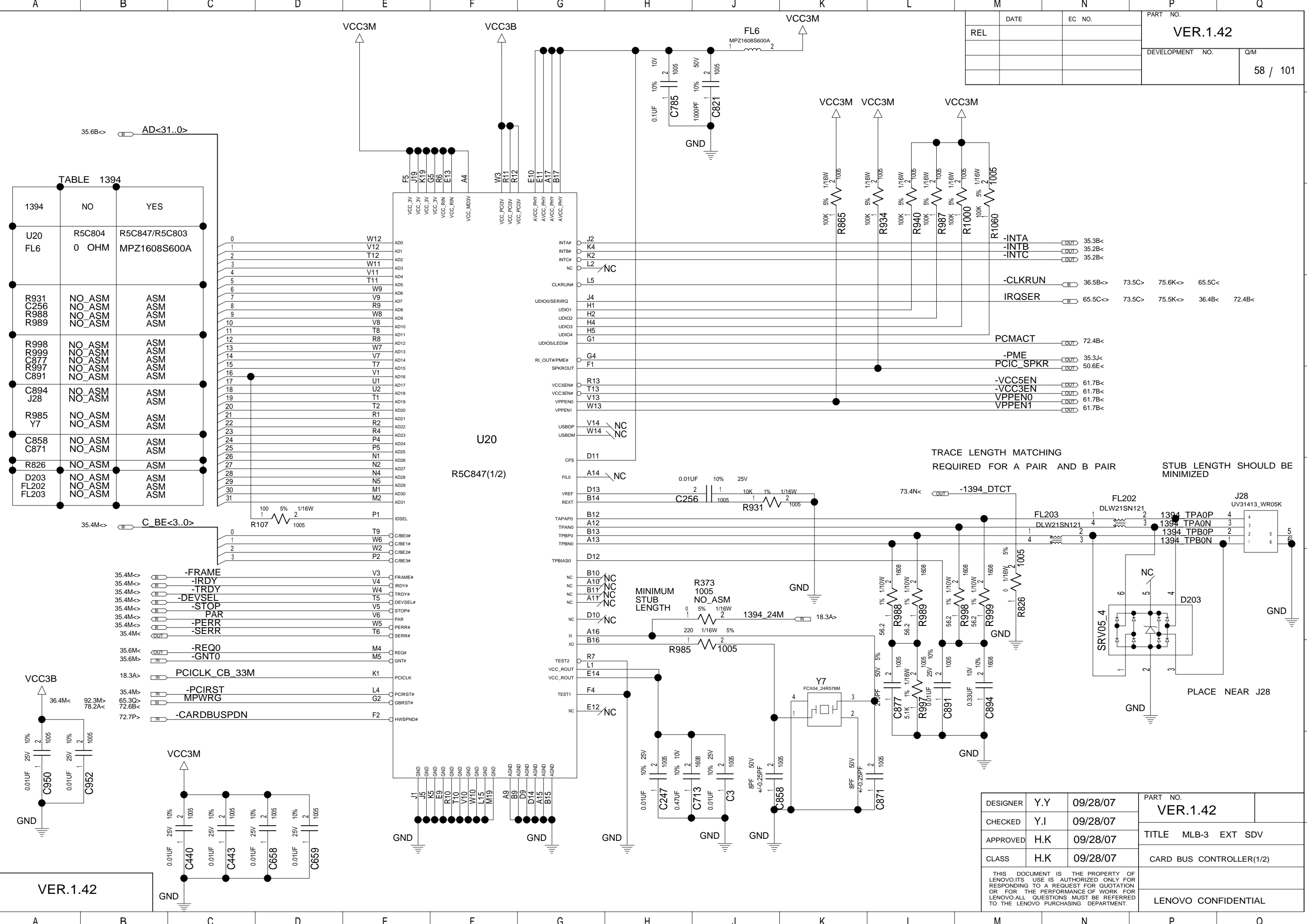


TABLE 1394

1394	NO	YES
U20	R5C804	R5C847/R5C803
FL6	0 OHM	MPZ1608S600A
R931	NO_ASM	ASM
C256	NO_ASM	ASM
R988	NO_ASM	ASM
R989	NO_ASM	ASM
R998	NO_ASM	ASM
R999	NO_ASM	ASM
C877	NO_ASM	ASM
R997	NO_ASM	ASM
C891	NO_ASM	ASM
C894	NO_ASM	ASM
J28	NO_ASM	ASM
R985	NO_ASM	ASM
Y7	NO_ASM	ASM
C858	NO_ASM	ASM
C871	NO_ASM	ASM
R826	NO_ASM	ASM
D203	NO_ASM	ASM
FL202	NO_ASM	ASM
FL203	NO_ASM	ASM

- 35.4M<-> -FRAME
- 35.4M<-> -IRDY
- 35.4M<-> -TRDY
- 35.4M<-> -DEVSEL
- 35.4M<-> -STOP
- 35.4M<-> -PAR
- 35.4M<-> -PERR
- 35.4M<-> -SERR
- 35.6M<-> -REQ0
- 35.6M<-> -GNT0
- 18.3A> PCICLK_CB_33M
- 35.4M> -PCIRST
- 65.3Q> MPWRG
- 72.6B<-> -CARDBUSPDN
- 72.7P>

TRACE LENGTH MATCHING
REQUIRED FOR A PAIR AND B PAIR
STUB LENGTH SHOULD BE MINIMIZED

DESIGNER	Y.Y	09/28/07	PART NO.
CHECKED	Y.I	09/28/07	VER.1.42
APPROVED	H.K	09/28/07	TITLE
CLASS	H.K	09/28/07	MLB-3 EXT SDV
			CARD BUS CONTROLLER(1/2)
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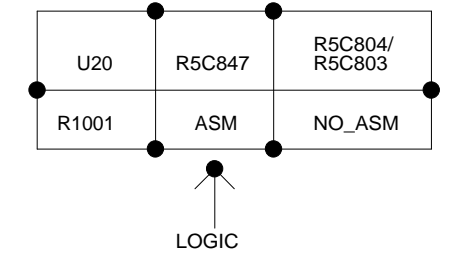
REL	DATE	EC NO.	PART NO. VER.1.42	
			DEVELOPMENT NO.	Q/M 59 / 101

60.8A< A_CADDR<25..0>

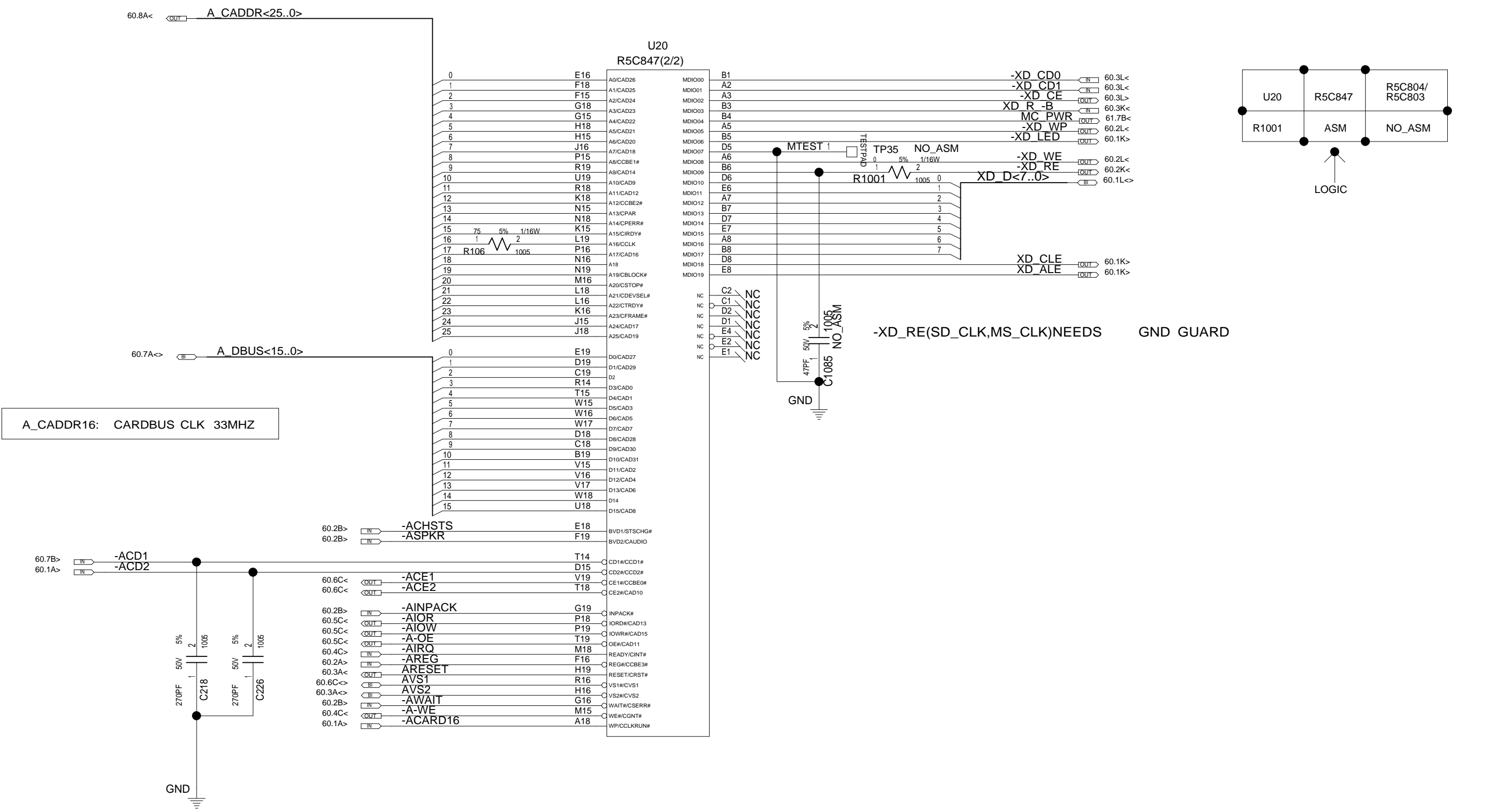
60.7A<> A_DBUS<15..0>

A_CADDR16: CARDBUS CLK 33MHZ

U20
R5C847(2/2)



-XD_RE(SD_CLK,MS_CLK)NEEDS GND GUARD



VER.1.42

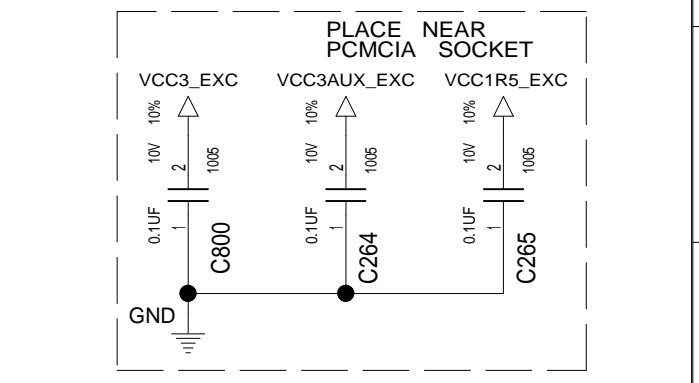
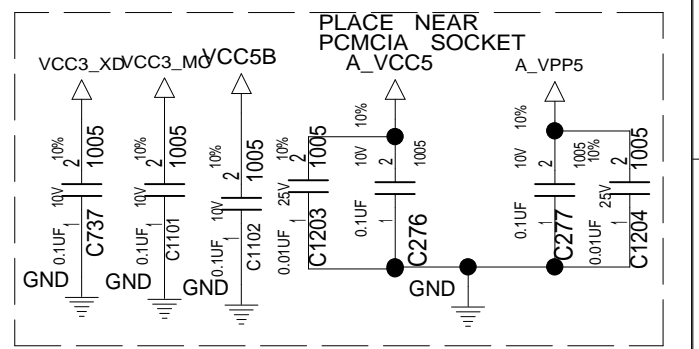
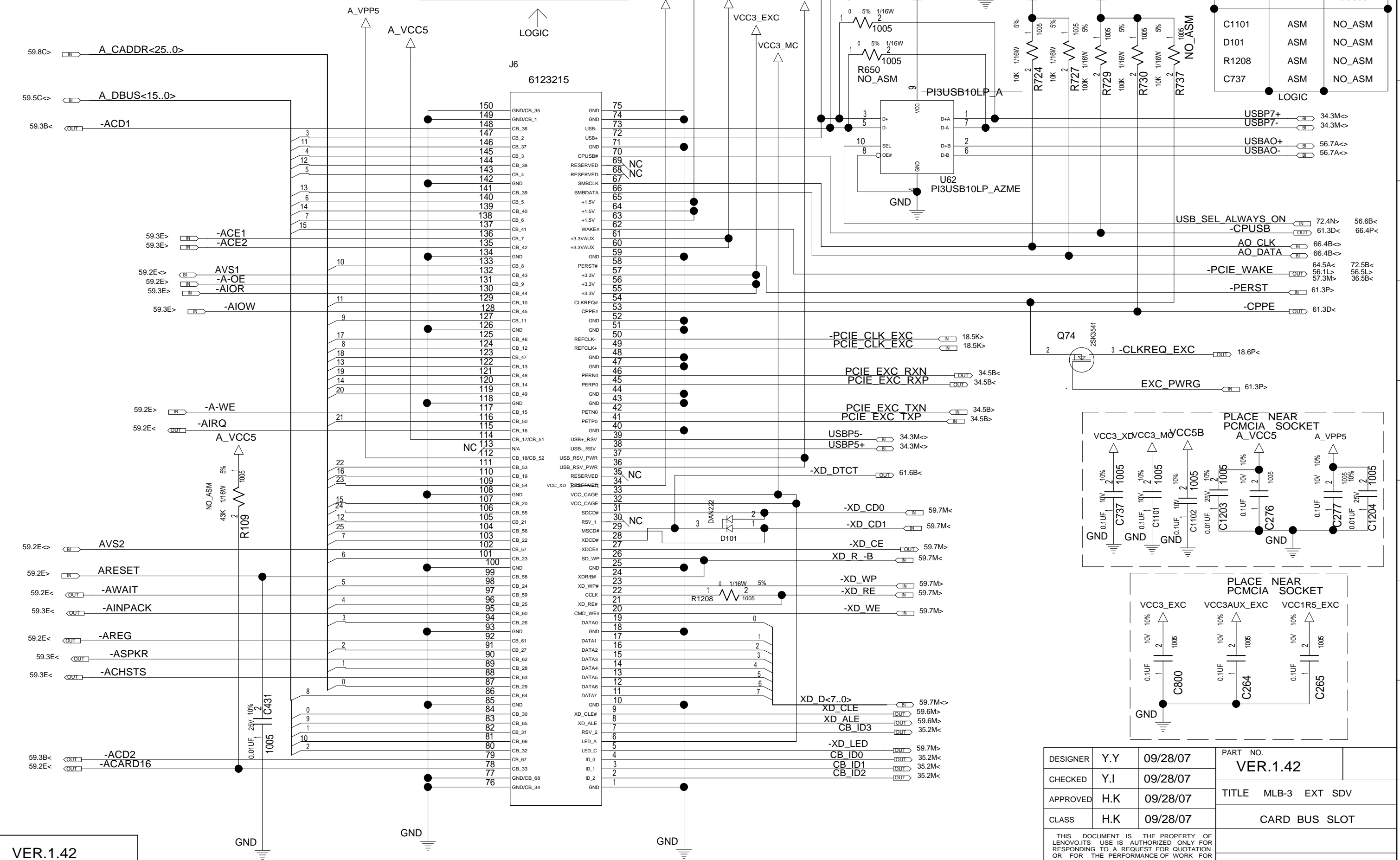
DESIGNER	Y.Y	09/28/07	PART NO. VER.1.42	
CHECKED	Y.I	09/28/07	TITLE MLB-3 EXT SDV	
APPROVED	H.K	09/28/07	CARD BUS CONTROLLER(2/2)	
CLASS	H.K	09/28/07	LENOVO CONFIDENTIAL	

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TABLE		
ALWAYS ON	YES	NO
U62	ASM	NO_ASM
R614	NO_ASM	ASM
R650	NO_ASM	ASM

REL	DATE	EC NO.	PART NO.	
			VER.1.42	
			DEVELOPMENT NO.	Q/M
				60 / 101

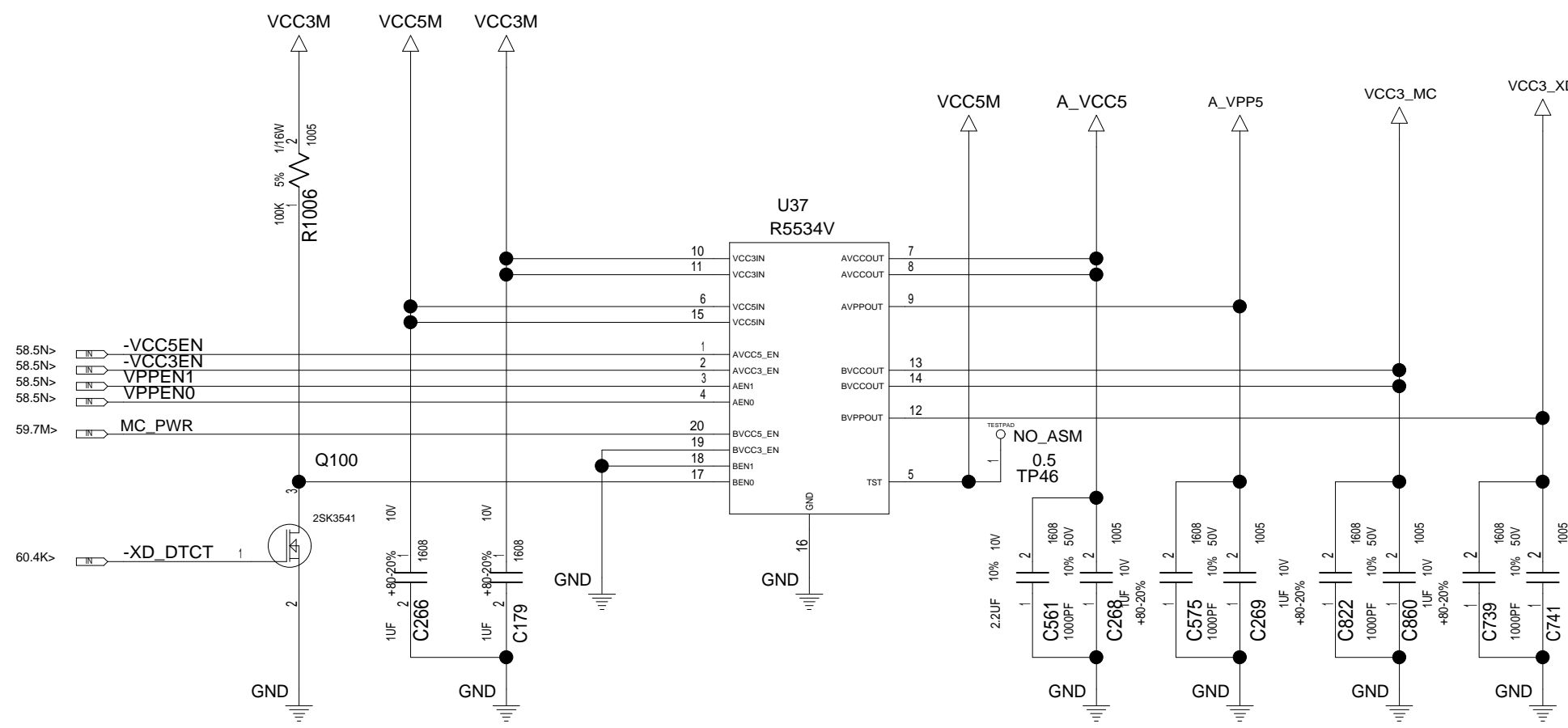
U20	R5C847	R5C804/R5C803
C1101	ASM	NO_ASM
D101	ASM	NO_ASM
R1208	ASM	NO_ASM
C737	ASM	NO_ASM



DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	CARD BUS SLOT	
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	DATE	EC NO.	PART NO.	
REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				61 / 101



U20	R5C847	R5C804/ R5C803
C822	ASM	NO_ASM
C860	ASM	NO_ASM
C739	ASM	NO_ASM
C741	ASM	NO_ASM
LOGIC		

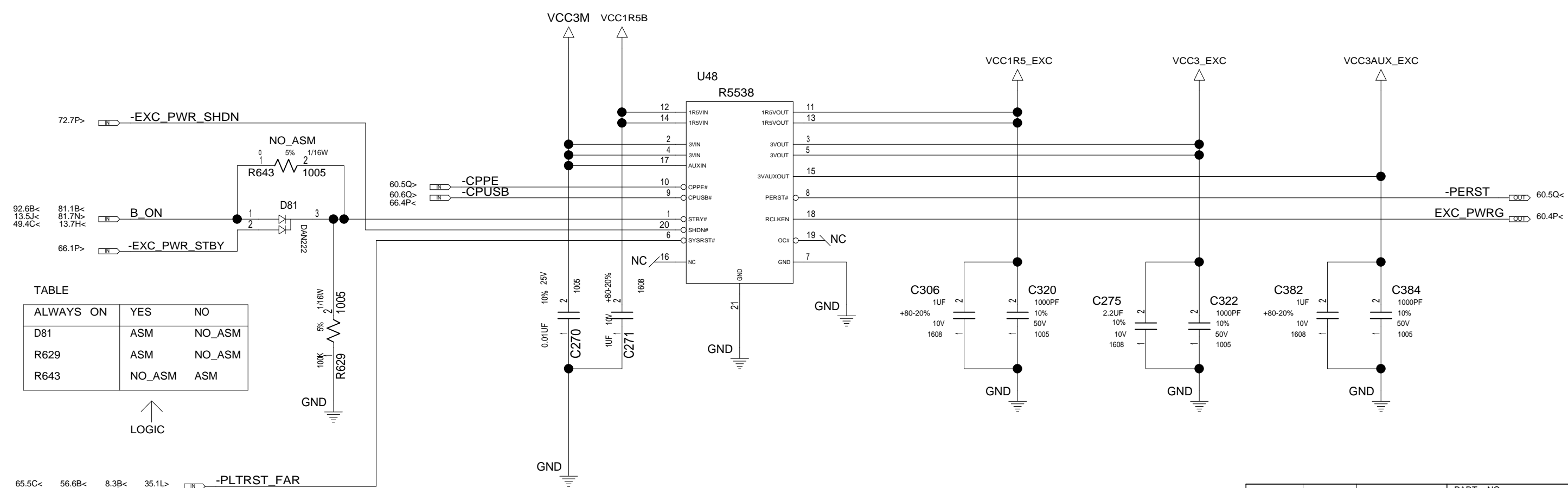


TABLE	ALWAYS ON	YES	NO
D81		ASM	NO_ASM
R629		ASM	NO_ASM
R643		NO_ASM	ASM

LOGIC

65.5C< 56.6B< 8.3B< 35.1L> -PLTRST_FAR
75.6K< 73.6C< 72.6A<

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	CARD BUS POWER CONTROL	
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A B C D E F G H J K L M N P Q

	DATE	EC NO.	PART NO.	
REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				62 / 101

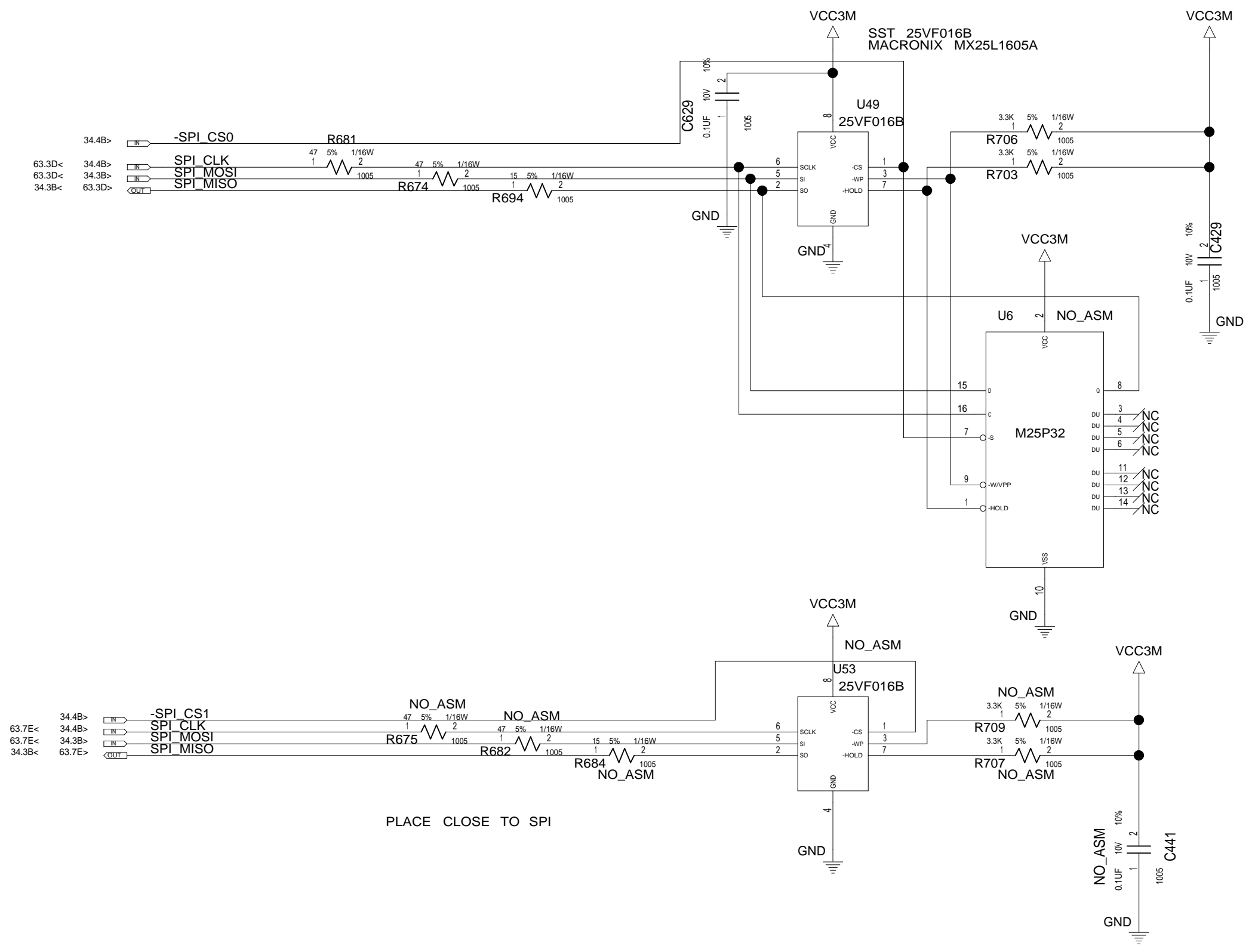
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VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	BLANK	
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A B C D E F G H J K L M N P Q

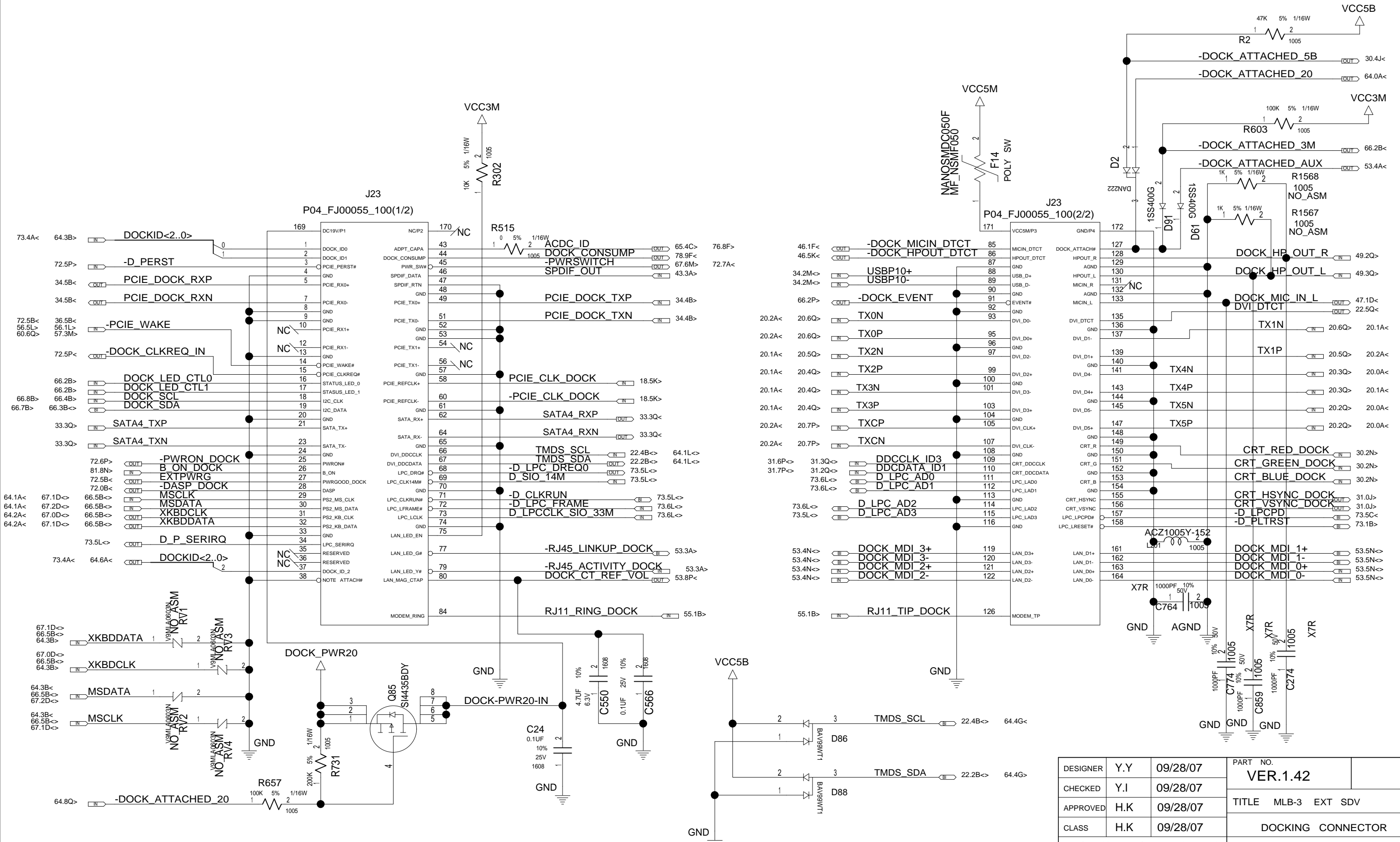
REL	DATE	EC NO.	PART NO.	
			VER.1.42	
			DEVELOPMENT NO.	Q/M
				63 / 101



VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	SPI FLASH	
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REL	DATE	EC NO.	PART NO.
			VER.1.42
			DEVELOPMENT NO.
			Q/M
			64 / 101

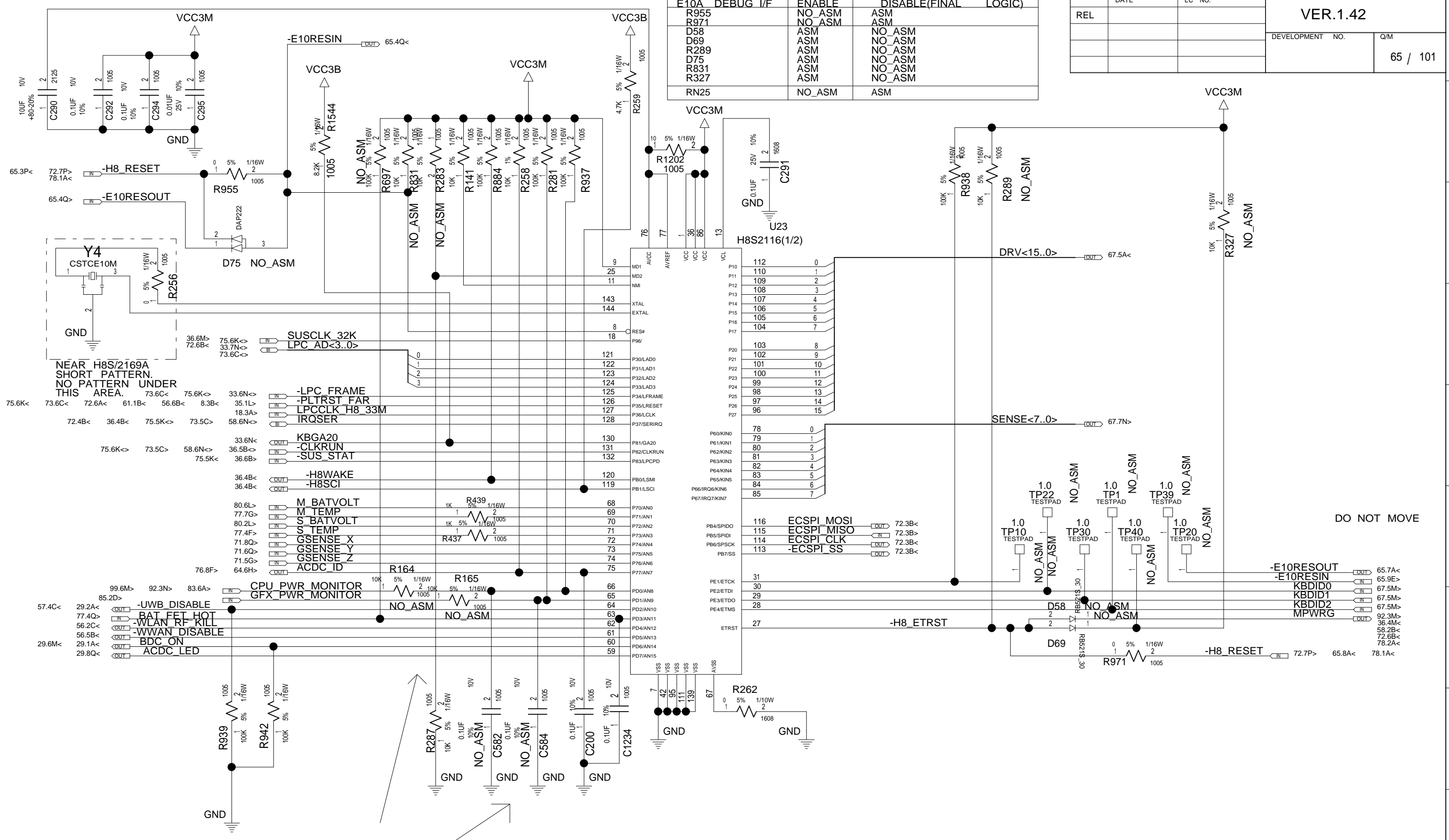


VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.
CHECKED	Y.I	09/28/07	VER.1.42
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV
CLASS	H.K	09/28/07	DOCKING CONNECTOR
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E10A_DEBUG I/F	ENABLE	DISABLE(FINAL LOGIC)
R955	NO_ASM	ASM
R971	NO_ASM	ASM
D58	ASM	NO_ASM
D69	ASM	NO_ASM
R289	ASM	NO_ASM
D75	ASM	NO_ASM
R831	ASM	NO_ASM
R327	ASM	NO_ASM
RN25	NO_ASM	ASM

REL	DATE	EC NO.	PART NO.
			VER.1.42
			DEVELOPMENT NO.
			Q/M
			65 / 101



PLACE NEAR H8

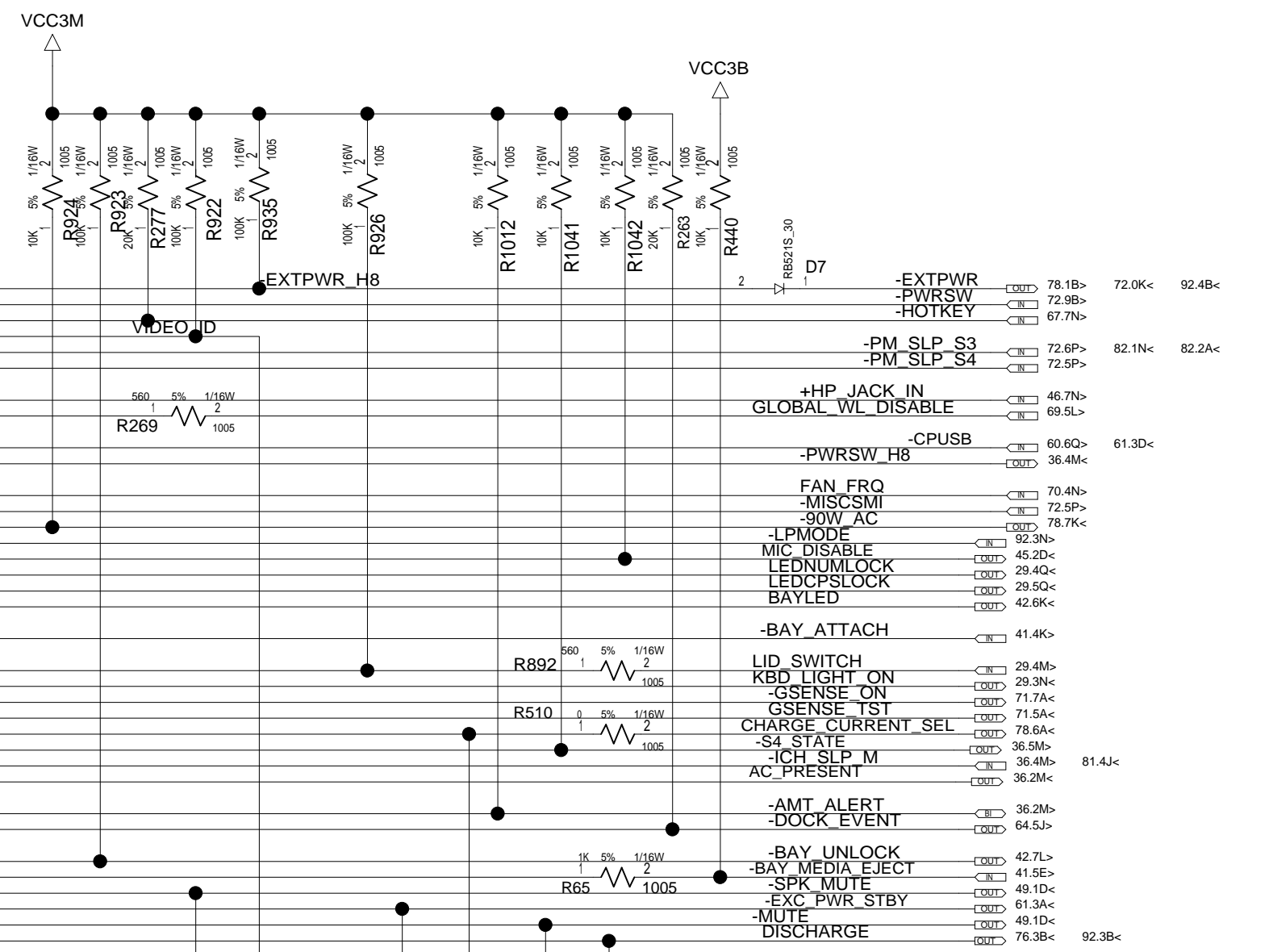
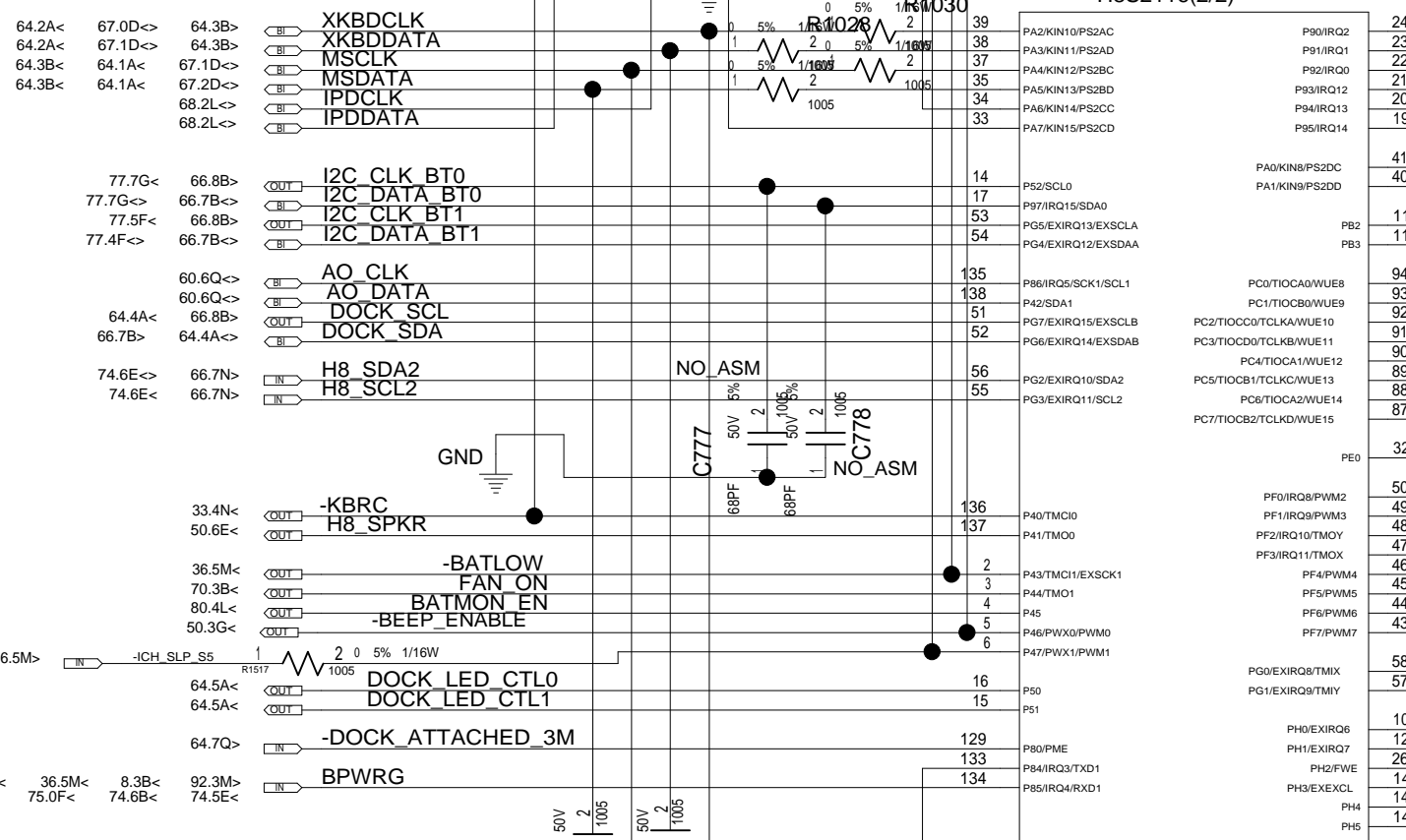
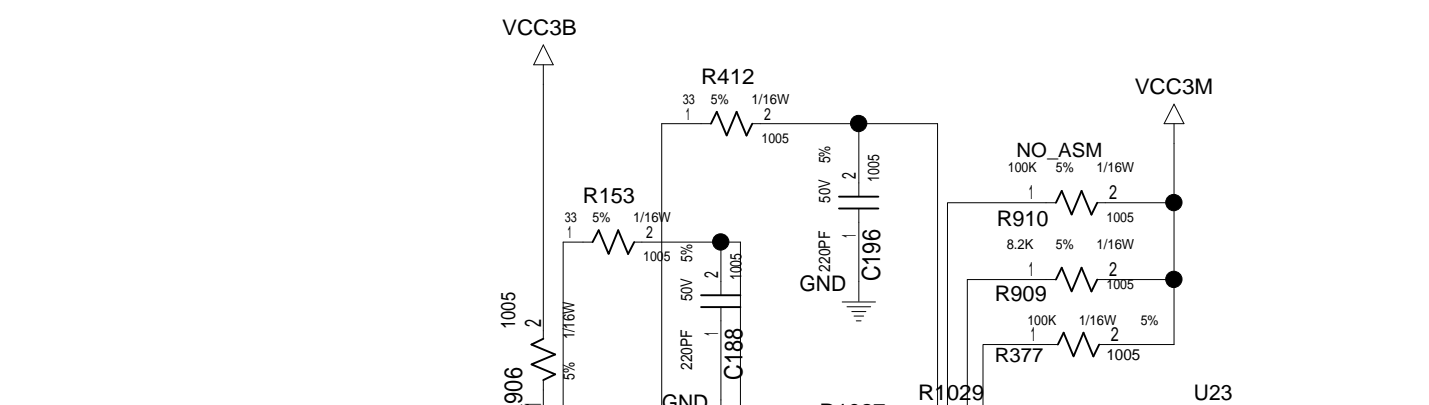
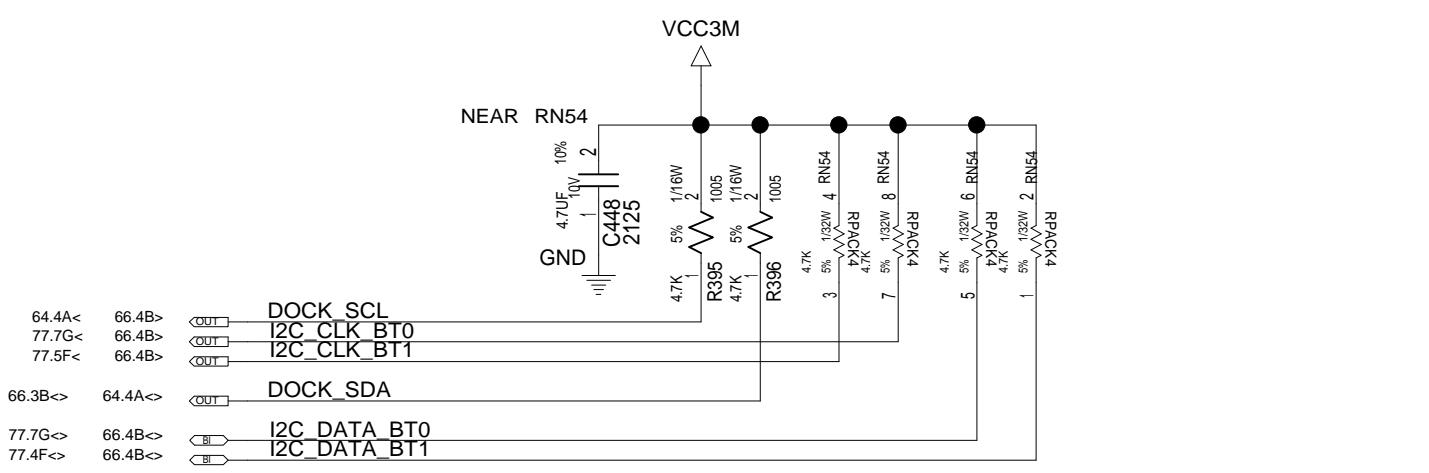
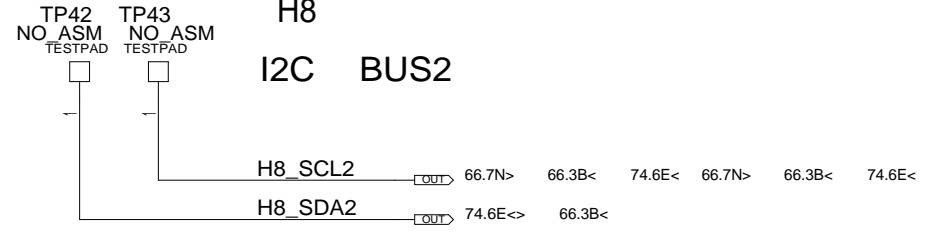
VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	VER.1.42
CHECKED	Y.I	09/28/07	TITLE	MLB-3 EXT SDV
APPROVED	H.K	09/28/07		
CLASS	H.K	09/28/07		H8S/2116B (1/2)
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REL	DATE	EC NO.	PART NO.	
			VER.1.42	
			DEVELOPMENT NO.	Q/M
				66 / 101

TEST PAD X2
BOTTOM SIDE
DO NOT MOVE AFTER FIX

H8
I2C BUS2



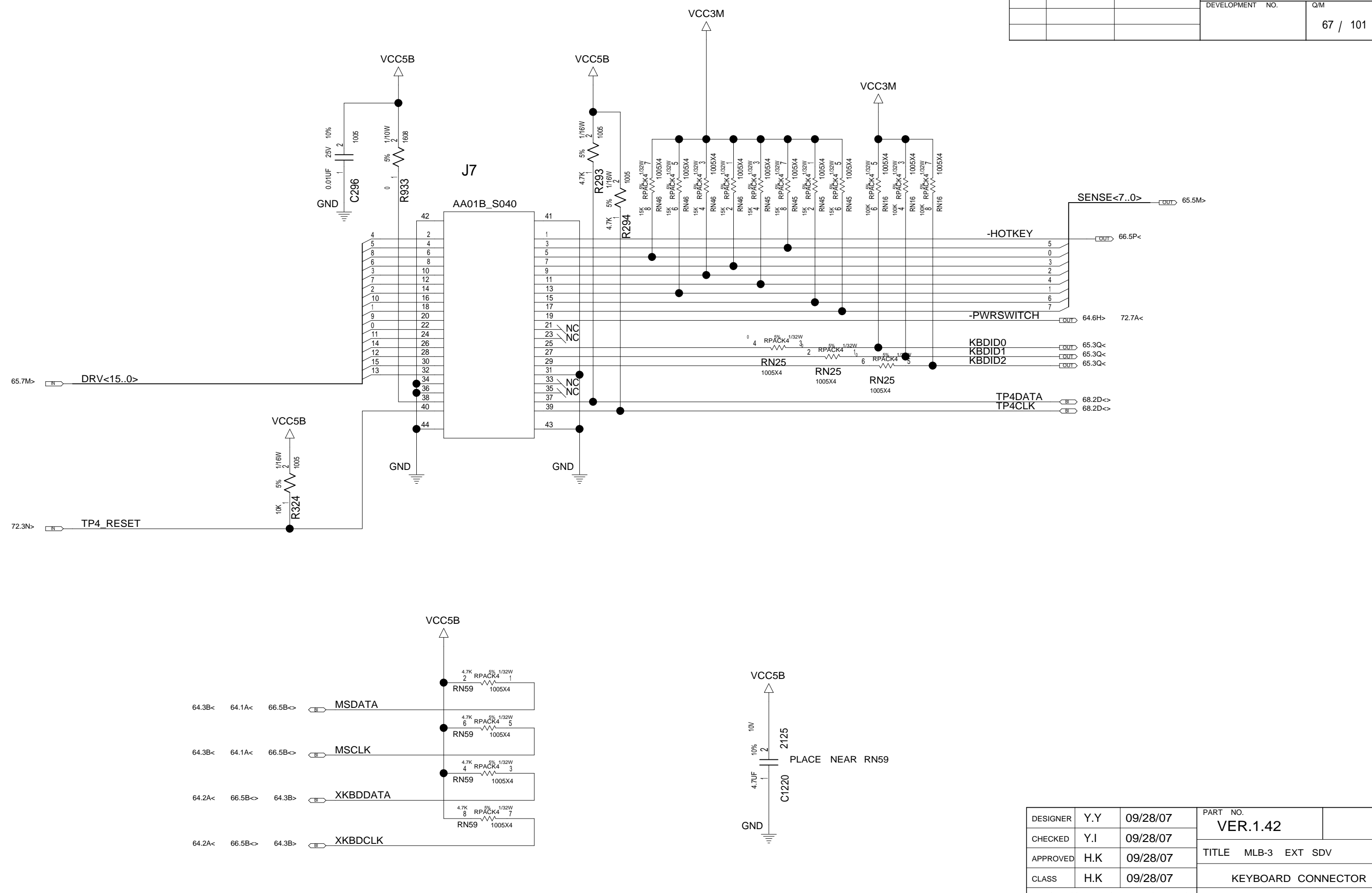
GFX	EXT.	INT.
R922	ASM	NO_ASM
R925	NO_ASM	ASM

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	H8S/2116B (2/2)	

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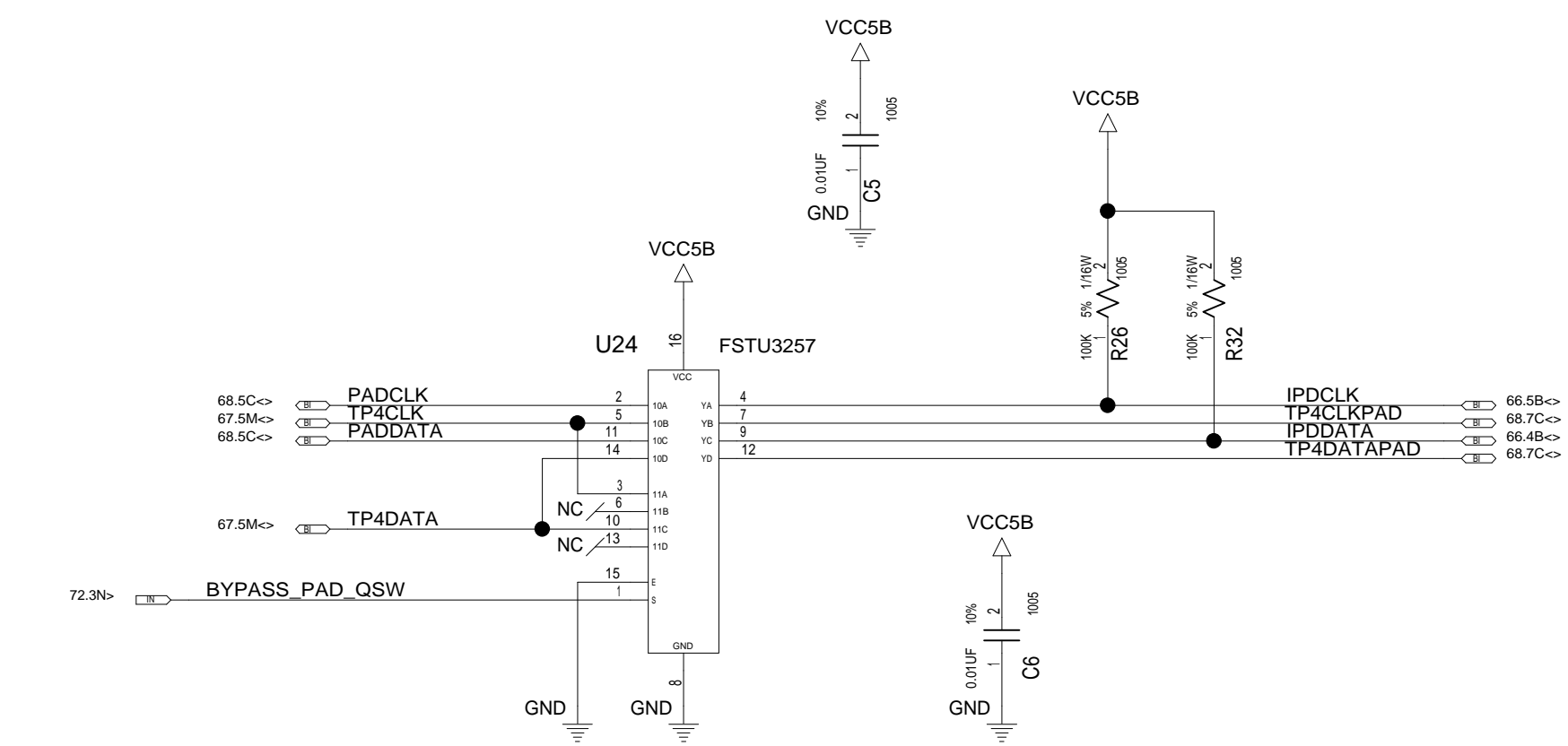
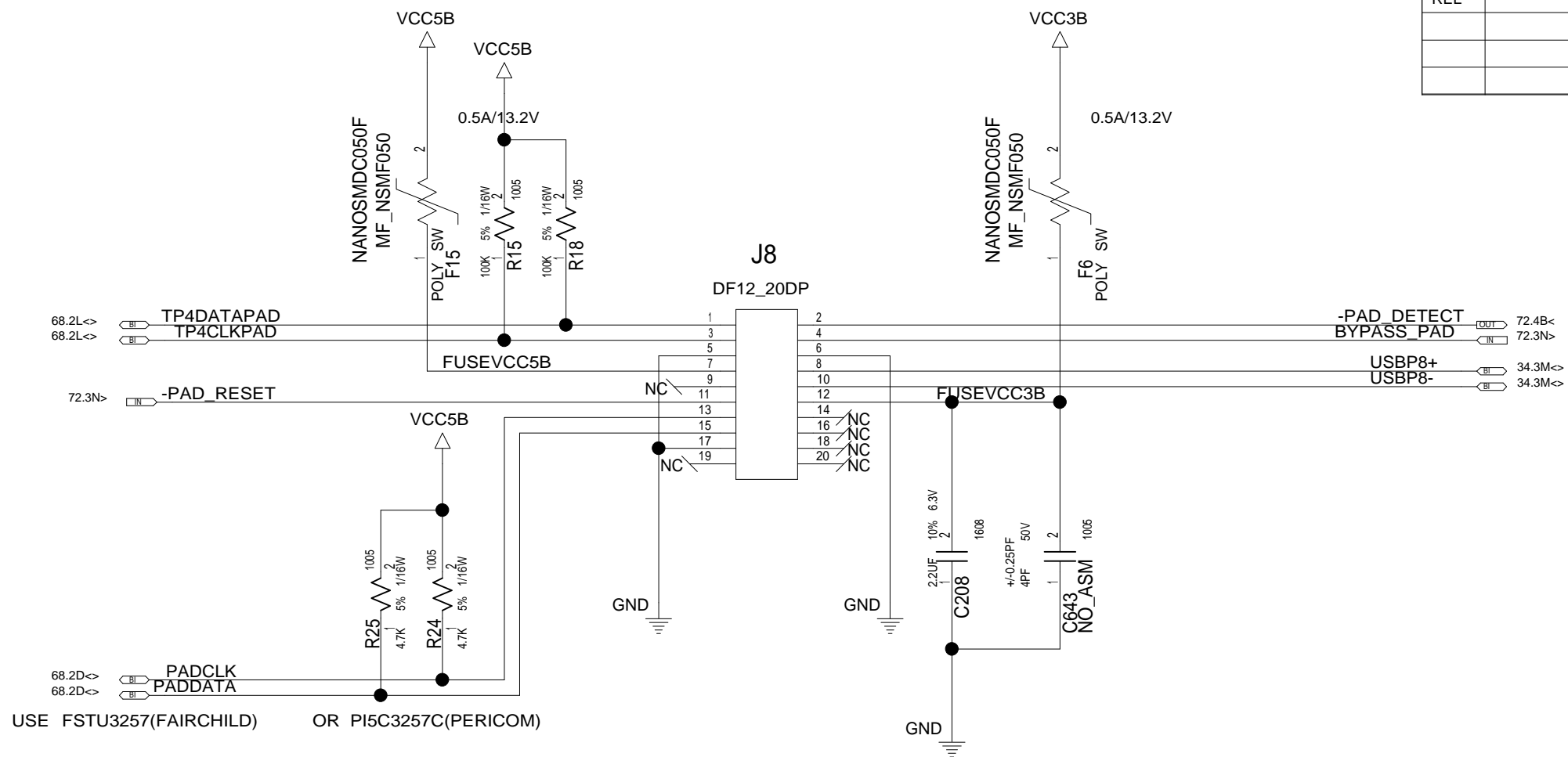
	DATE	EC NO.	PART NO.	
REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				67 / 101



VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	KEYBOARD CONNECTOR	
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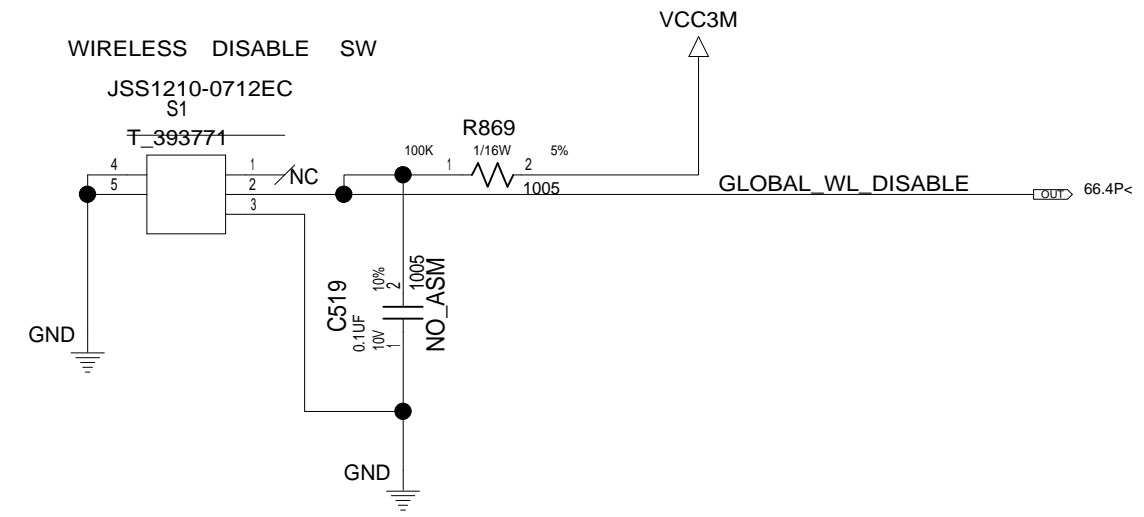
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REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				68 / 101



VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	TOUCH PAD CONNECTOR	
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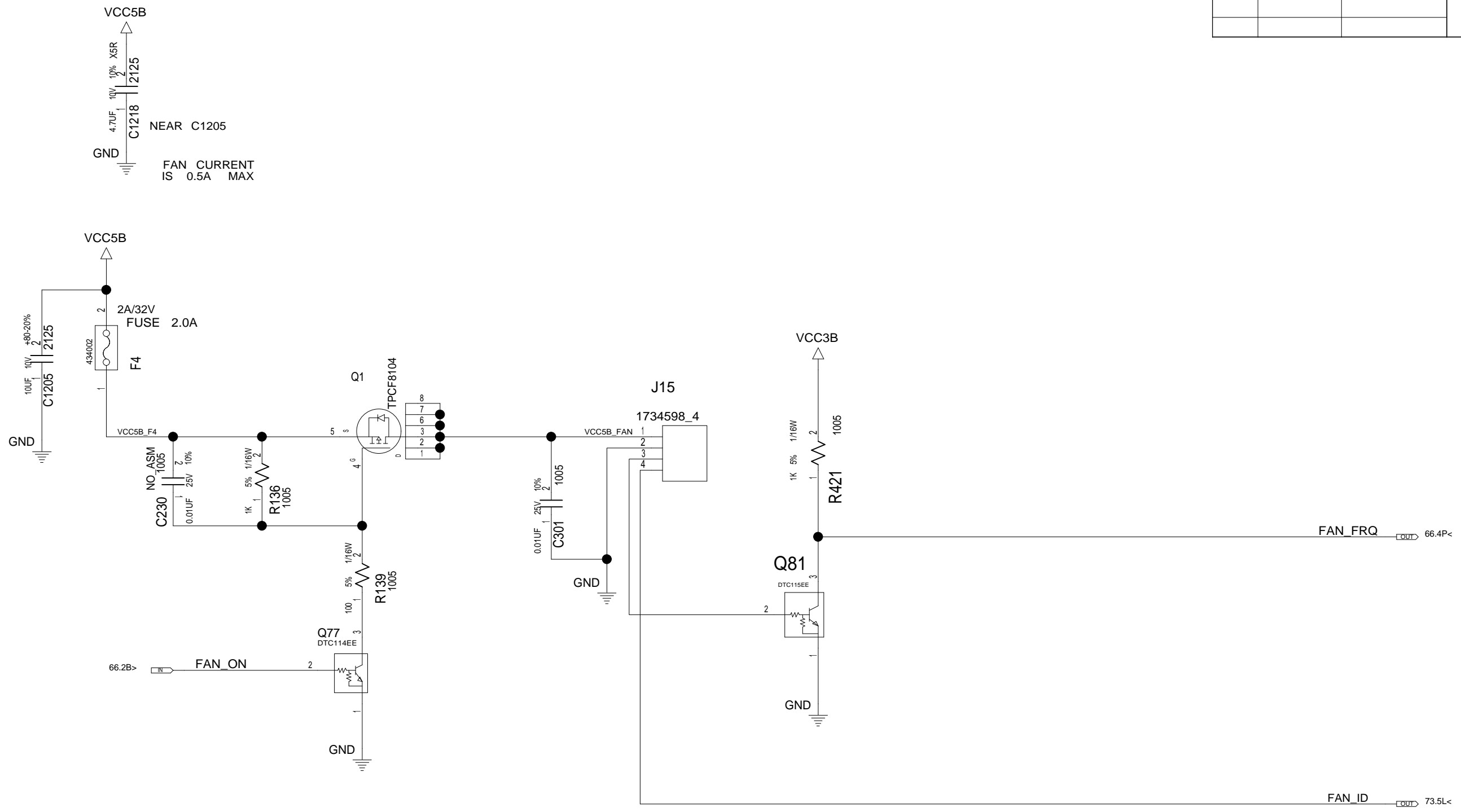
	DATE	EC NO.	PART NO.	
REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				69 / 101



VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	WIRELESS DISABLE SW	
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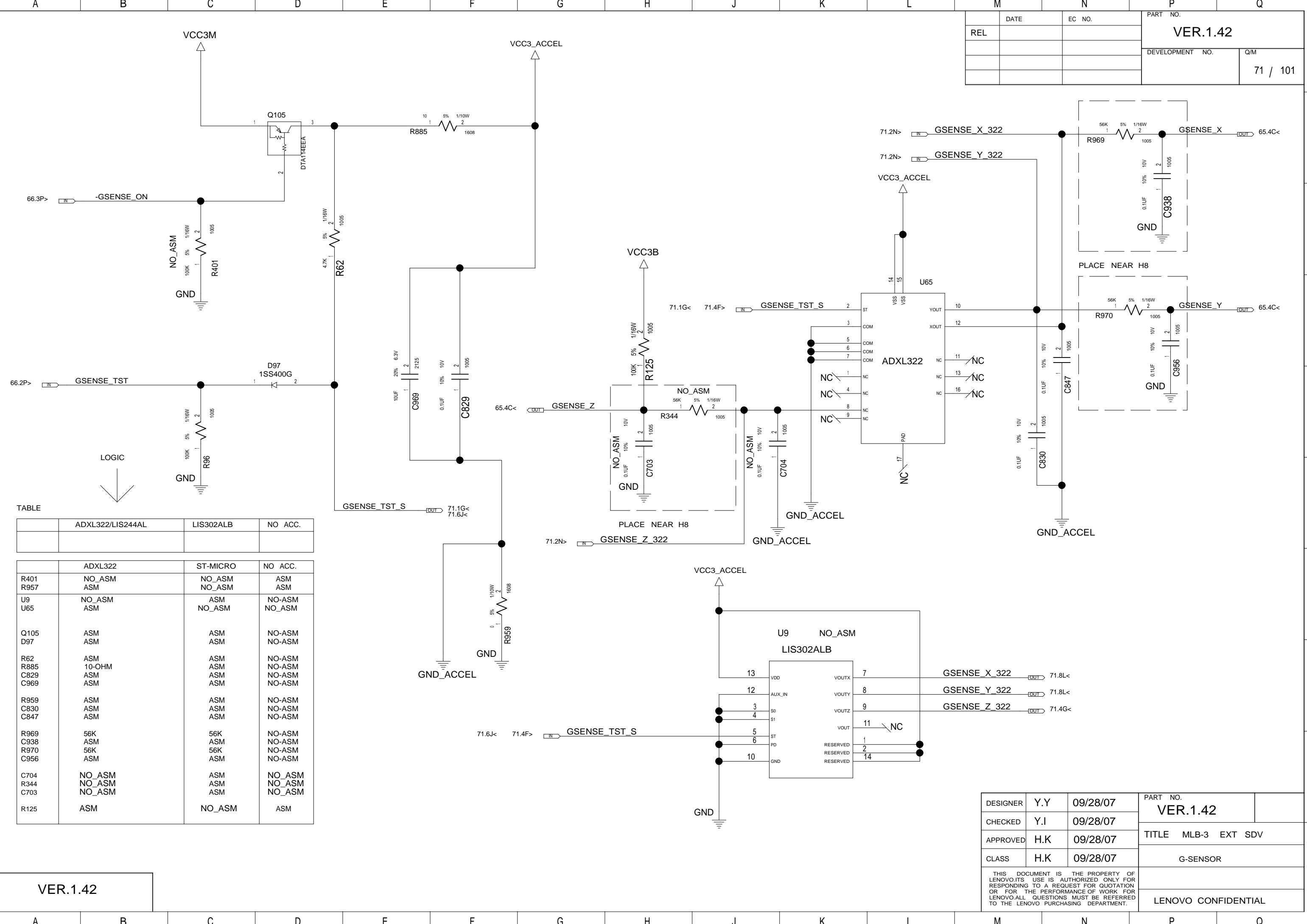
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REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				70 / 101



VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	VER.1.42
CHECKED	Y.I	09/28/07	TITLE MLB-3 EXT SDV	
APPROVED	H.K	09/28/07	FAN CONNECTOR	
CLASS	H.K	09/28/07	LENOVO CONFIDENTIAL	
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REL	DATE	EC NO.	PART NO.
			VER.1.42
			DEVELOPMENT NO.
			Q/M
			71 / 101

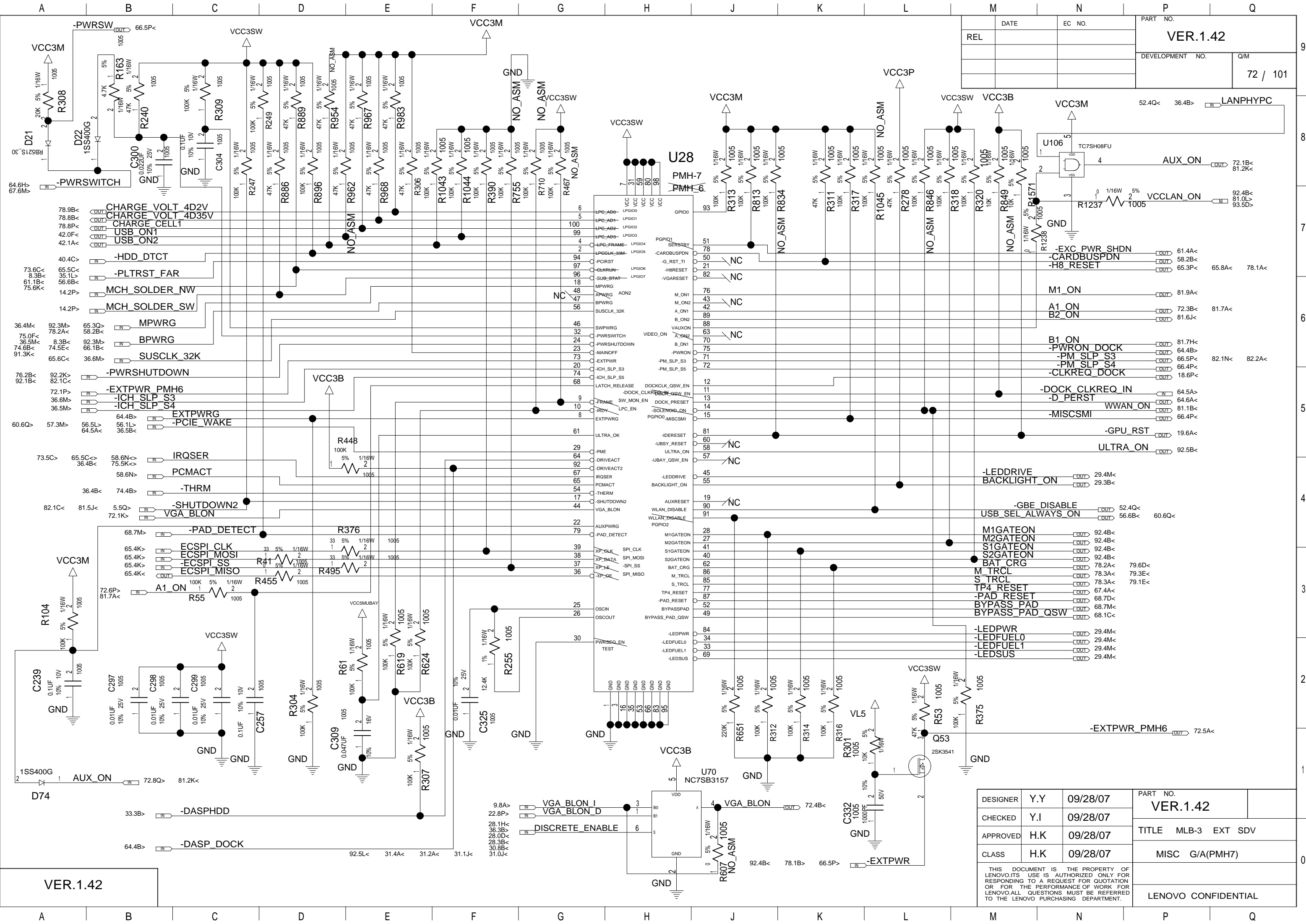


TABLE

	ADXL322/LIS244AL	LIS302ALB	NO ACC.
R401	NO_ASM	NO_ASM	ASM
R957	ASM	NO_ASM	ASM
U9	NO_ASM	ASM	NO-ASM
U65	ASM	NO_ASM	NO-ASM
Q105	ASM	ASM	NO-ASM
D97	ASM	ASM	NO-ASM
R62	ASM	ASM	NO-ASM
R885	10-OHM	ASM	NO-ASM
C829	ASM	ASM	NO-ASM
C969	ASM	ASM	NO-ASM
R959	ASM	ASM	NO-ASM
C830	ASM	ASM	NO-ASM
C847	ASM	ASM	NO-ASM
R969	56K	56K	NO-ASM
C938	ASM	ASM	NO-ASM
R970	56K	56K	NO-ASM
C956	ASM	ASM	NO-ASM
C704	NO_ASM	ASM	NO_ASM
R344	NO_ASM	ASM	NO_ASM
C703	NO_ASM	ASM	NO_ASM
R125	ASM	NO_ASM	ASM

VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.
CHECKED	Y.I	09/28/07	VER.1.42
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV
CLASS	H.K	09/28/07	G-SENSOR
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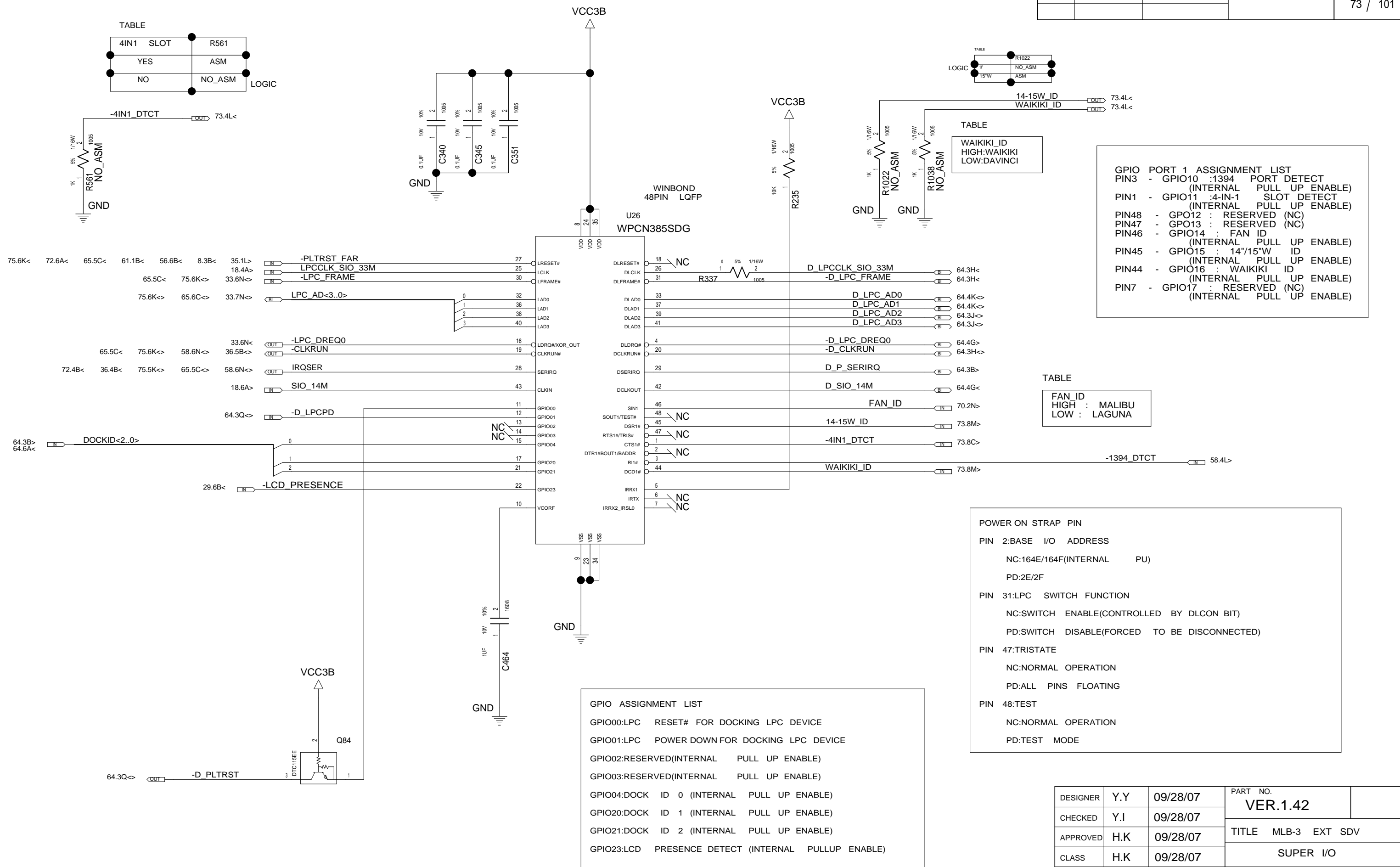


REL	DATE	EC NO.	PART NO.
			VER.1.42
			DEVELOPMENT NO.
			Q/M
			72 / 101

DESIGNER	Y.Y	09/28/07	PART NO.
CHECKED	Y.I	09/28/07	VER.1.42
APPROVED	H.K	09/28/07	TITLE
CLASS	H.K	09/28/07	MLB-3 EXT SDV
			MISC
			G/A(PMH7)
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VER.1.42

REL	DATE	EC NO.	PART NO.
			VER.1.42
			DEVELOPMENT NO.
			Q/M
			73 / 101



GPIO PORT 1 ASSIGNMENT LIST

- PIN3 - GPIO10 :1394 PORT DETECT (INTERNAL PULL UP ENABLE)
- PIN1 - GPIO11 :4-IN-1 SLOT DETECT (INTERNAL PULL UP ENABLE)
- PIN48 - GPO12 : RESERVED (NC)
- PIN47 - GPO13 : RESERVED (NC)
- PIN46 - GPIO14 : FAN ID (INTERNAL PULL UP ENABLE)
- PIN45 - GPIO15 : 14"/15"W ID (INTERNAL PULL UP ENABLE)
- PIN44 - GPIO16 : WAIKIKI ID (INTERNAL PULL UP ENABLE)
- PIN7 - GPIO17 : RESERVED (NC) (INTERNAL PULL UP ENABLE)

TABLE

FAN_ID
HIGH : MALIBU
LOW : LAGUNA

POWER ON STRAP PIN

PIN 2:BASE I/O ADDRESS

NC:164E/164F(INTERNAL PU)

PD:2E/2F

PIN 31:LPC SWITCH FUNCTION

NC:SWITCH ENABLE(CONTROLLED BY DLCON BIT)

PD:SWITCH DISABLE(FORCED TO BE DISCONNECTED)

PIN 47:TRISTATE

NC:NORMAL OPERATION

PD:ALL PINS FLOATING

PIN 48:TEST

NC:NORMAL OPERATION

PD:TEST MODE

GPIO ASSIGNMENT LIST

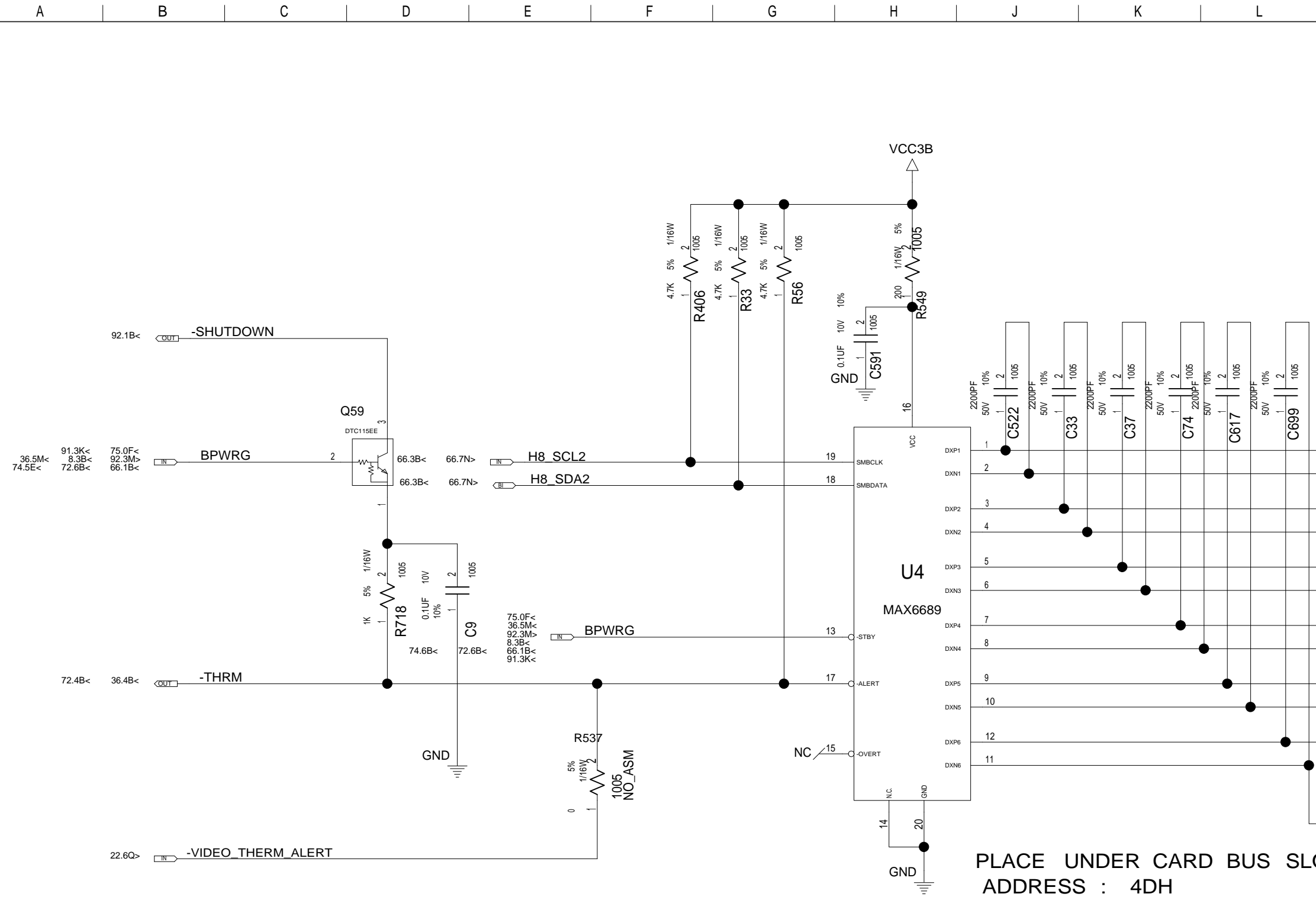
- GPIO00:LPC RESET# FOR DOCKING LPC DEVICE
- GPIO01:LPC POWER DOWN FOR DOCKING LPC DEVICE
- GPIO02:RESERVED(INTERNAL PULL UP ENABLE)
- GPIO03:RESERVED(INTERNAL PULL UP ENABLE)
- GPIO04:DOCK ID 0 (INTERNAL PULL UP ENABLE)
- GPIO20:DOCK ID 1 (INTERNAL PULL UP ENABLE)
- GPIO21:DOCK ID 2 (INTERNAL PULL UP ENABLE)
- GPIO23:LCD PRESENCE DETECT (INTERNAL PULLUP ENABLE)

DESIGNER	Y.Y	09/28/07	PART NO.
CHECKED	Y.I	09/28/07	VER.1.42
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV
CLASS	H.K	09/28/07	SUPER I/O

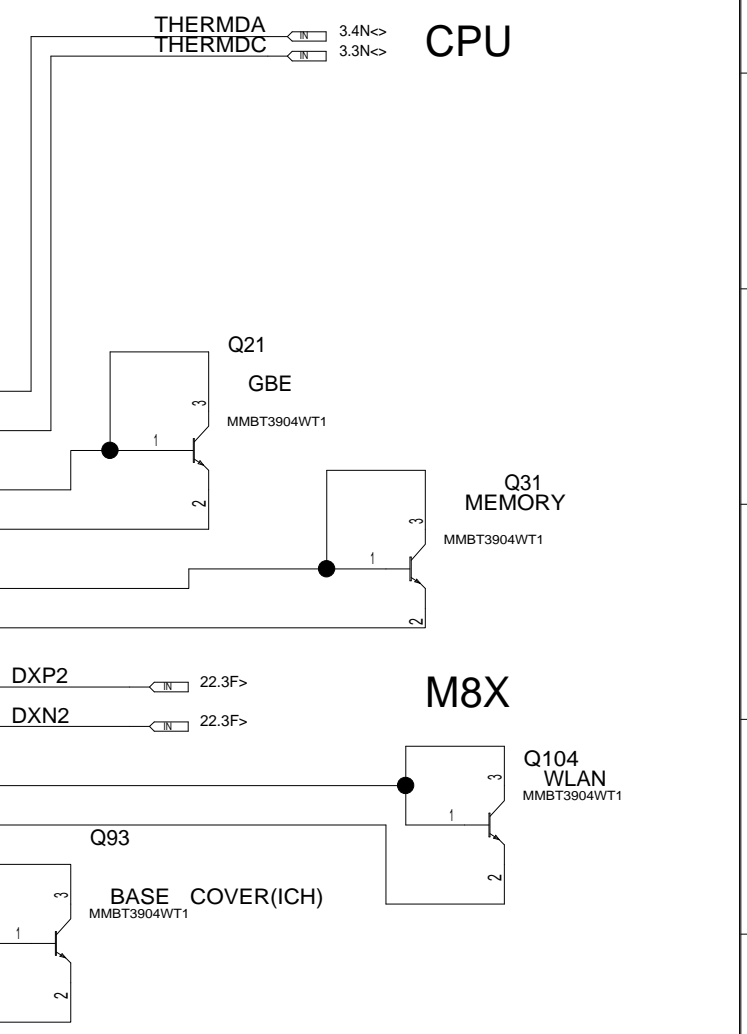
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	DATE	EC NO.	PART NO.	
REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				74 / 101



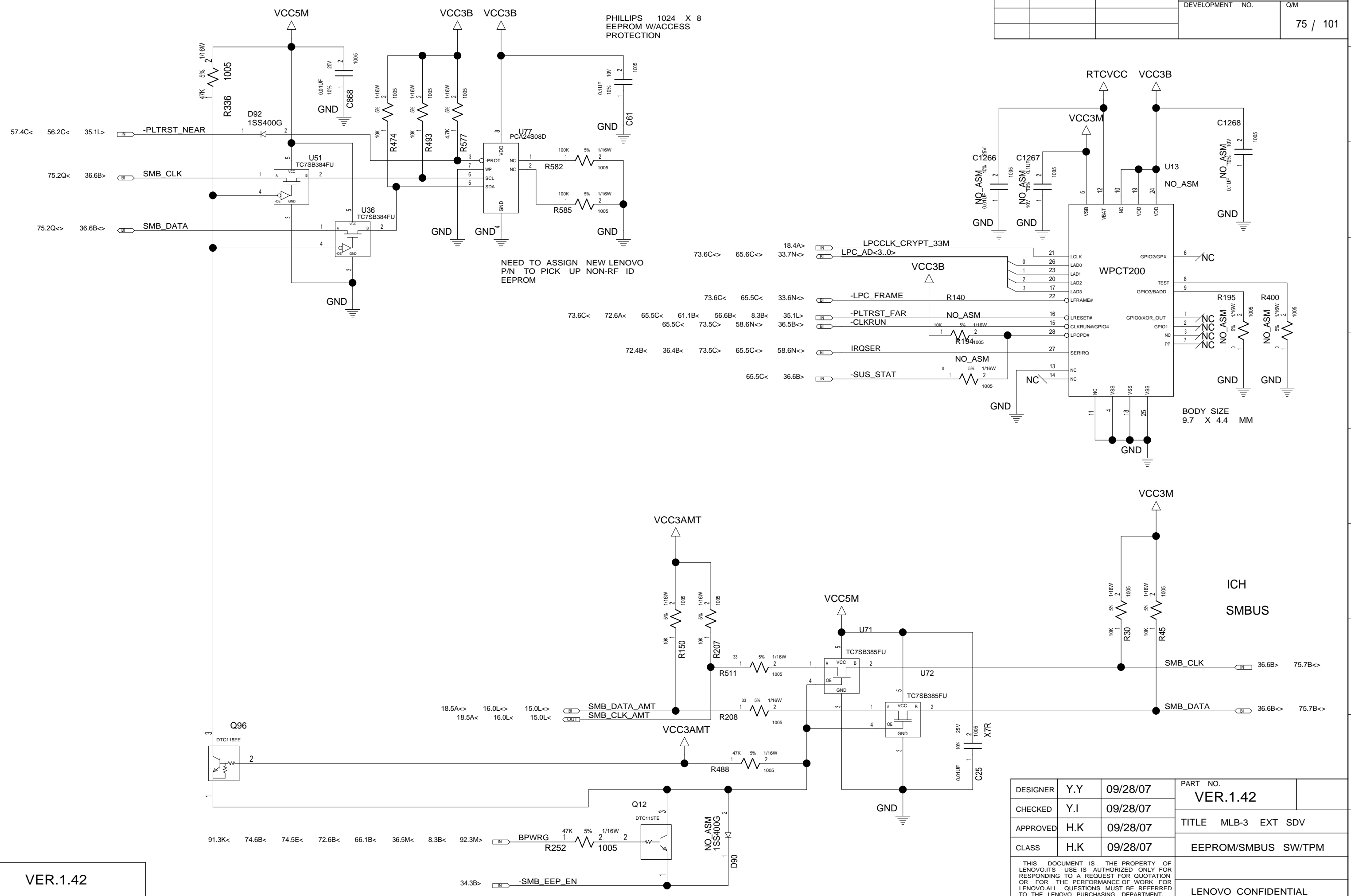
PLACE UNDER CARD BUS SLOT
ADDRESS : 4DH



VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	VER.1.42
CHECKED	Y.I	09/28/07	TITLE MLB-3 EXT SDV	
APPROVED	H.K	09/28/07	THERMAL SENSOR	
CLASS	H.K	09/28/07	LENOVO CONFIDENTIAL	
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REL	DATE	EC NO.	PART NO. VER.1.42	
			DEVELOPMENT NO.	Q/M
				75 / 101

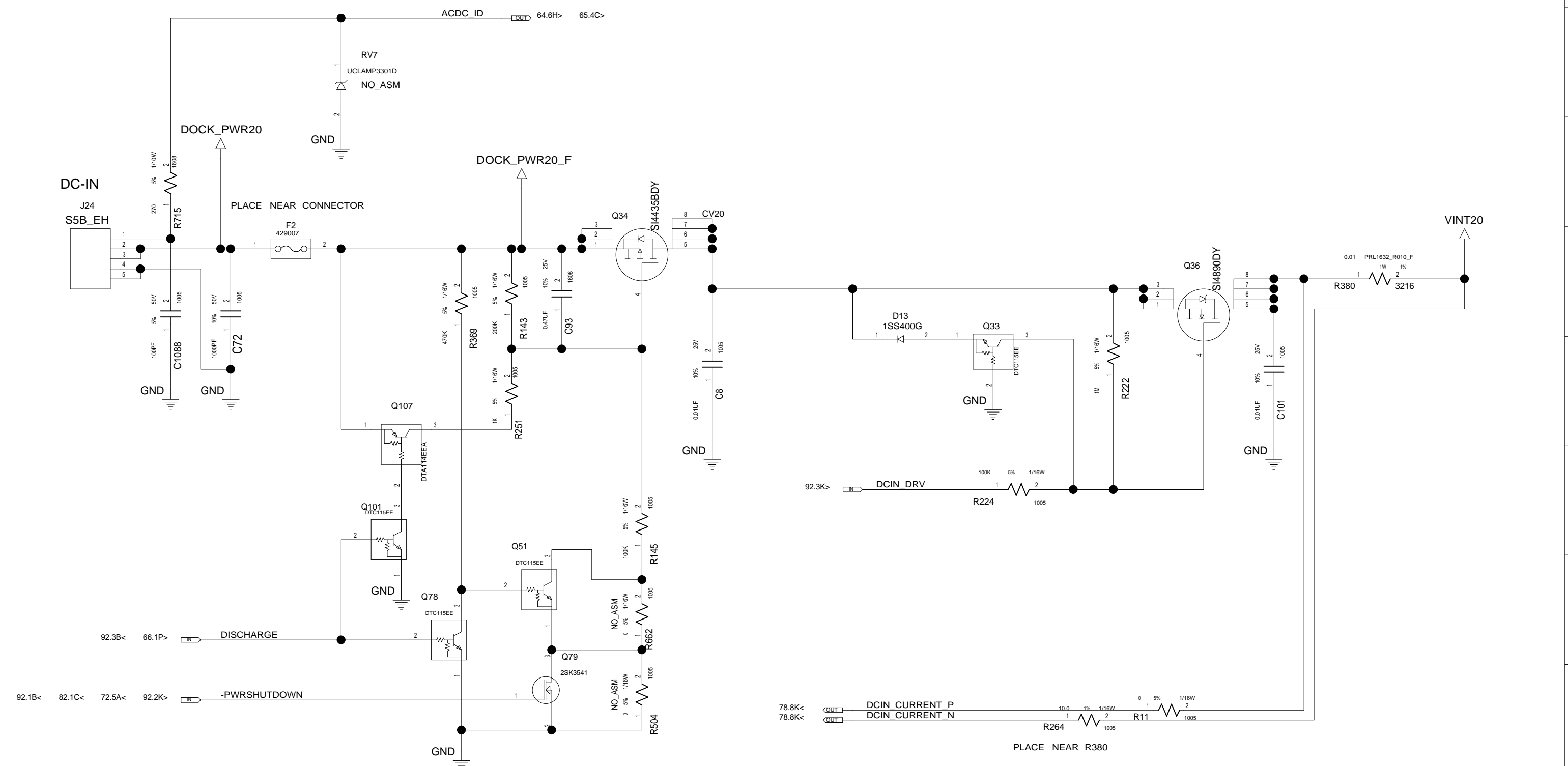


VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO. VER.1.42	
CHECKED	Y.I	09/28/07	TITLE MLB-3 EXT SDV	
APPROVED	H.K	09/28/07	EEPROM/SMBUS SW/TPM	
CLASS	H.K	09/28/07	LENOVO CONFIDENTIAL	

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	DATE	EC NO.	PART NO.	
REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				76 / 101



TABLE

PEAK SHIFT	YES	NO
R662	NO-ASM	ASM
R369	ASM	NO-ASM
Q78	ASM	NO-ASM
Q51	ASM	NO-ASM

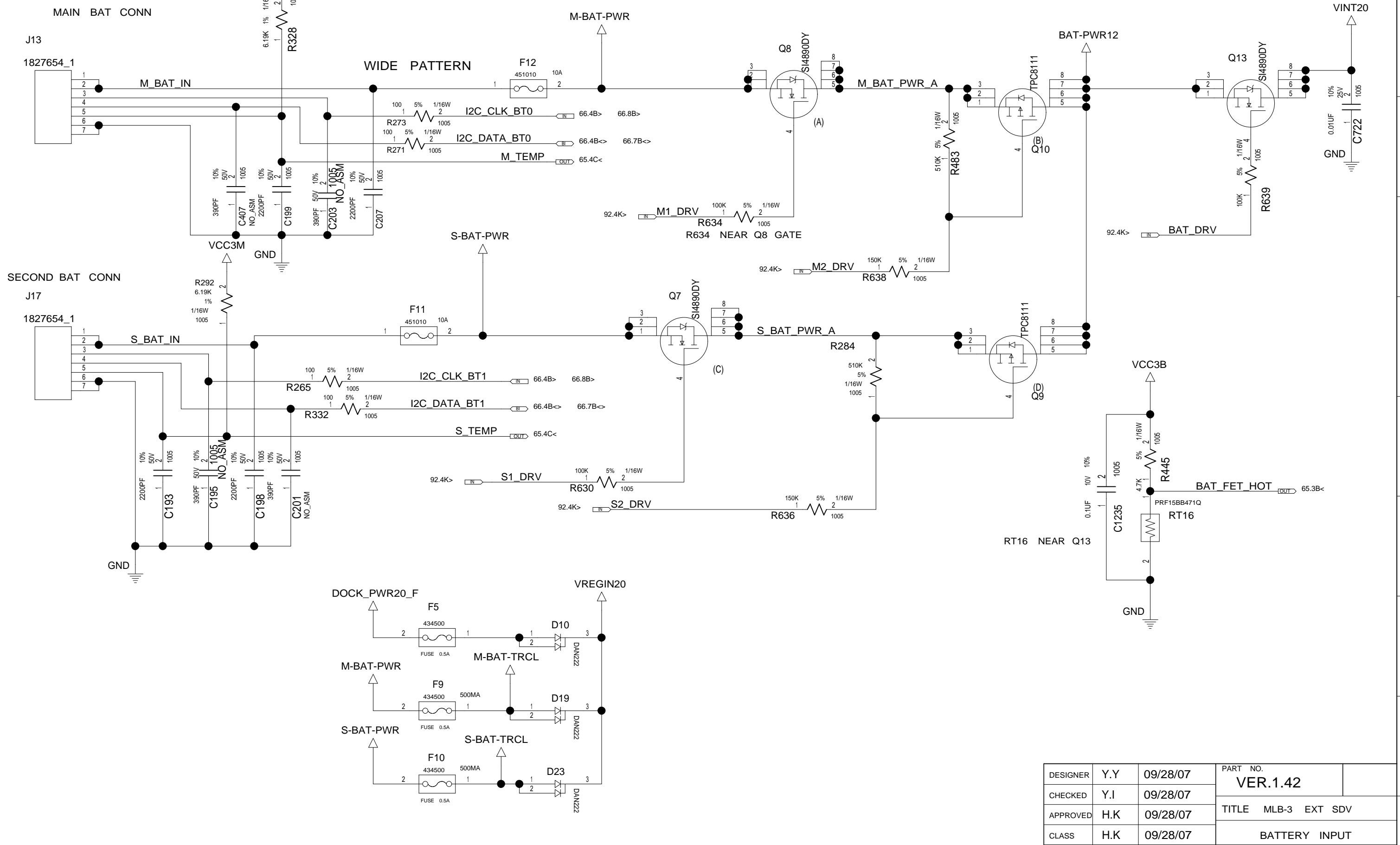
↑
LOGIC

VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	VER.1.42
CHECKED	Y.I	09/28/07	TITLE MLB-3 EXT SDV	
APPROVED	H.K	09/28/07	DC-IN	
CLASS	H.K	09/28/07	LENOVO CONFIDENTIAL	

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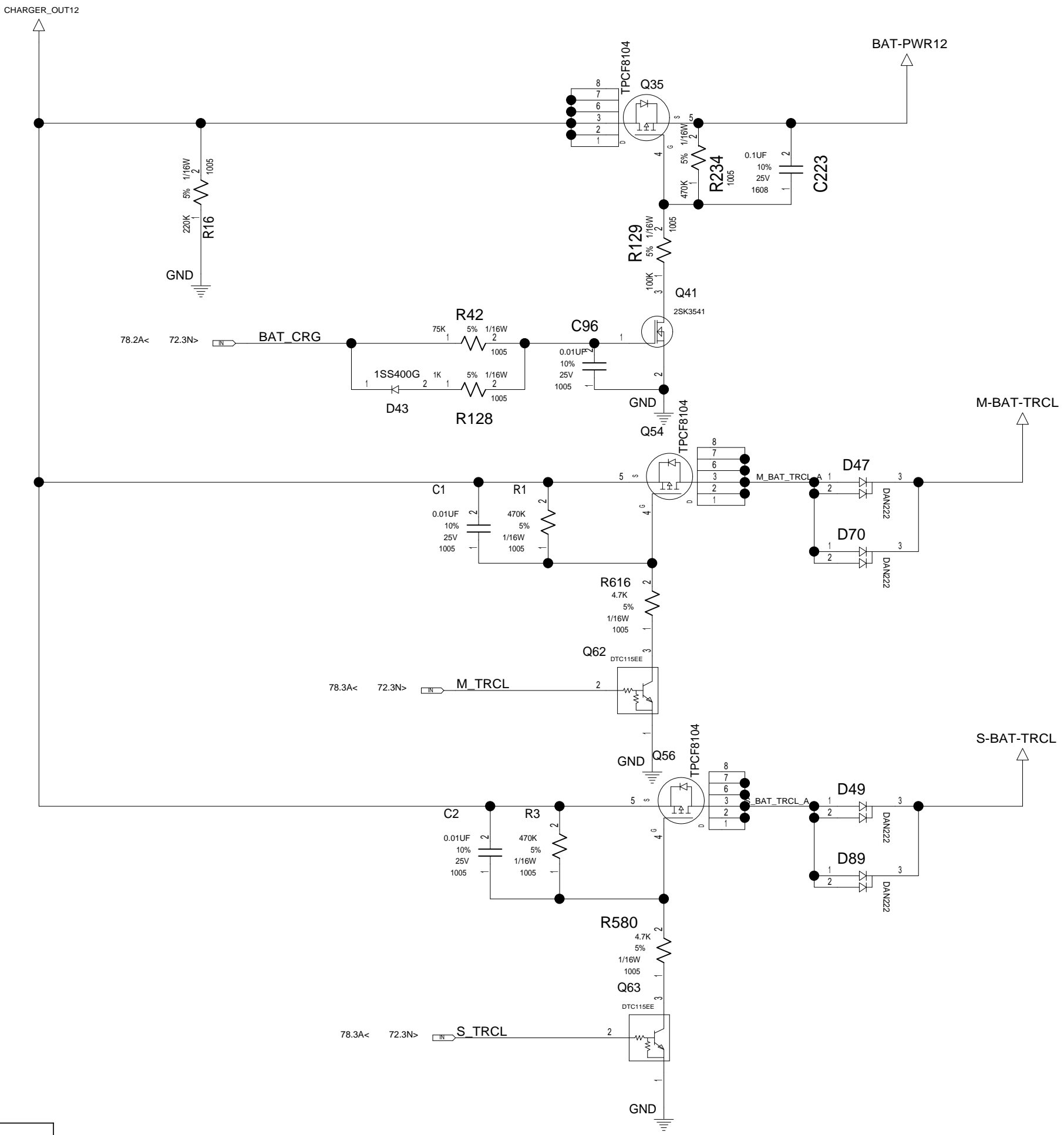
REL	DATE	EC NO.	PART NO.
			VER.1.42
			DEVELOPMENT NO.
			Q/M
			77 / 101



VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.
CHECKED	Y.I	09/28/07	VER.1.42
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV
CLASS	H.K	09/28/07	BATTERY INPUT
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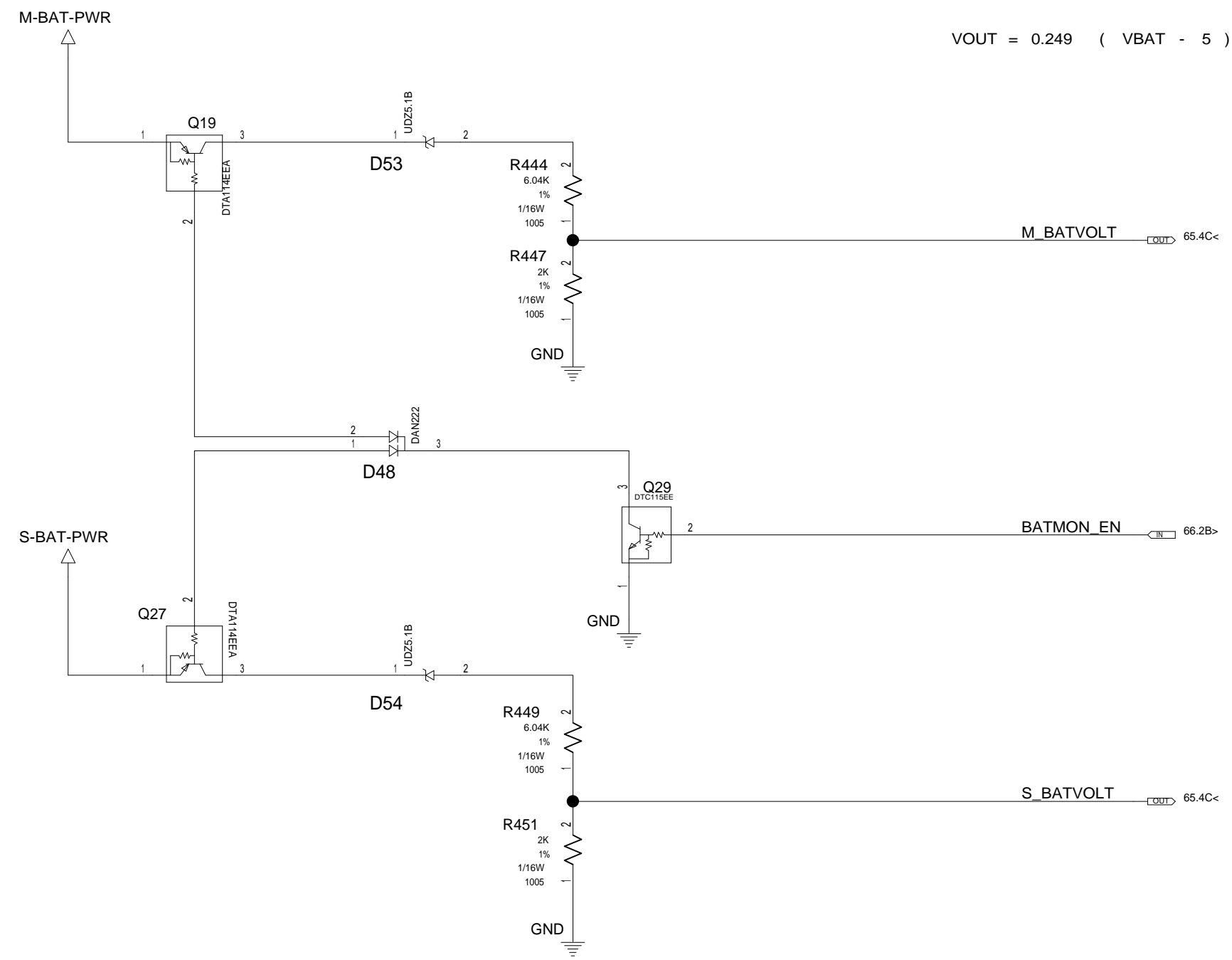
	DATE	EC NO.	PART NO.	
REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				79 / 101



VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	CHARGE SELECTOR	
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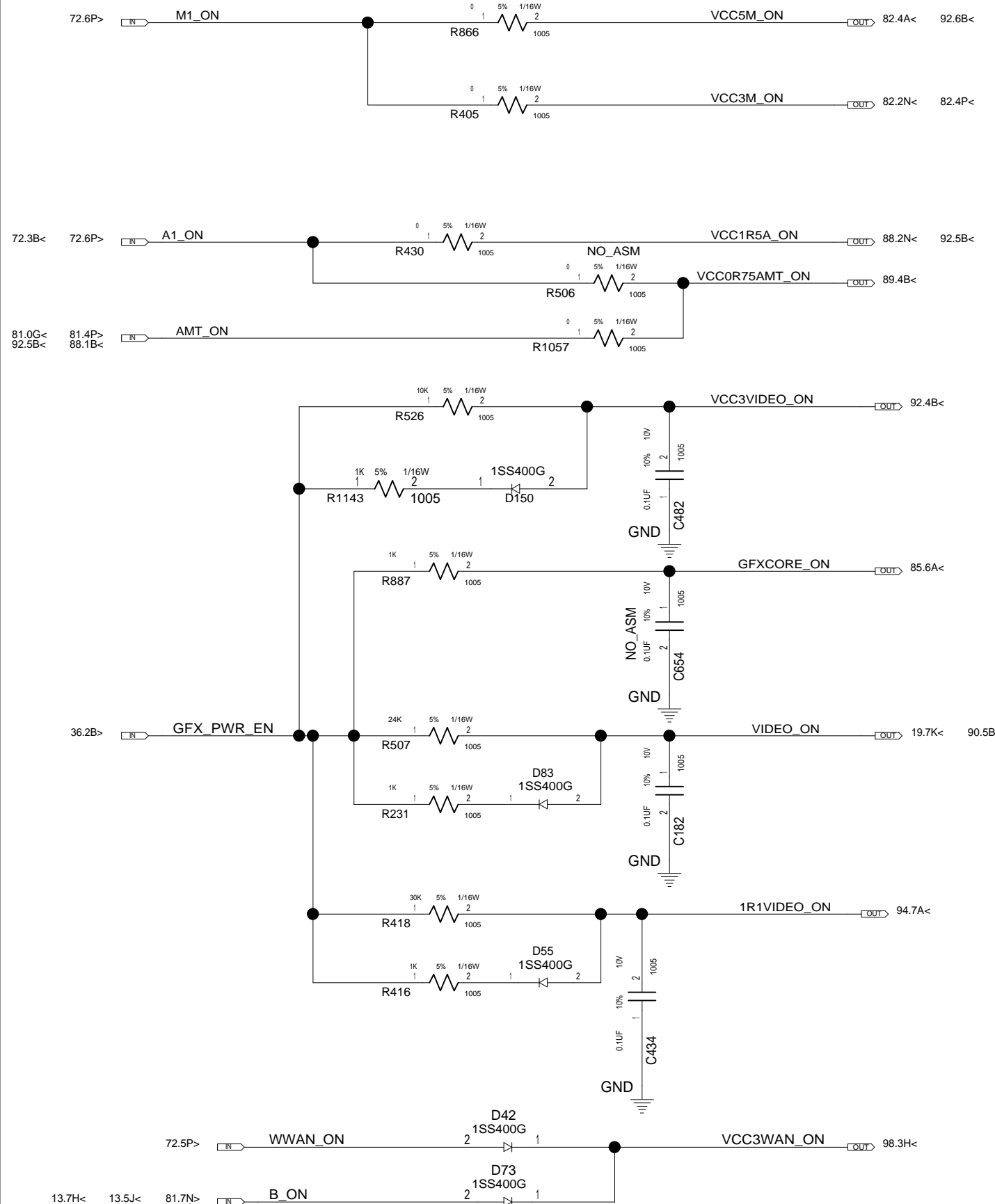
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REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				80 / 101



VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	BATTERY MONITOR	
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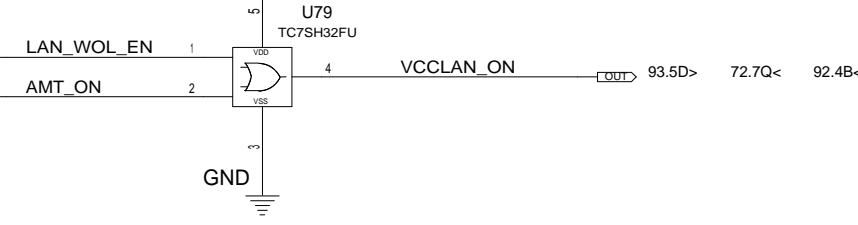
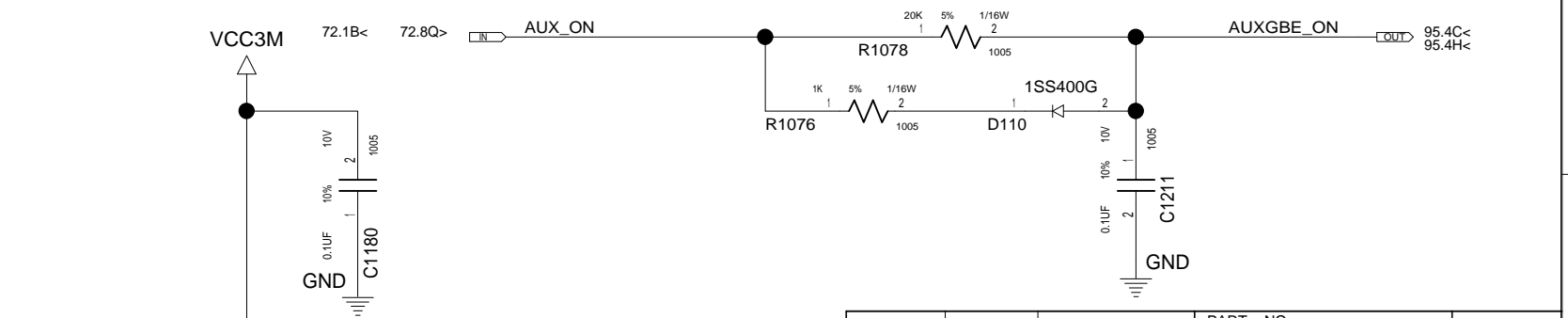
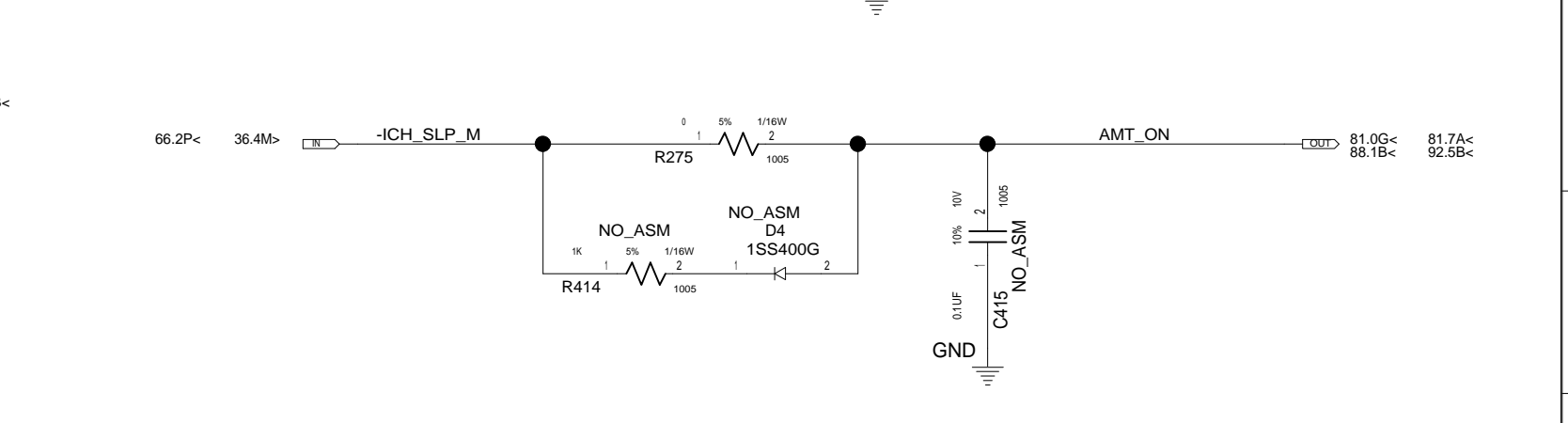
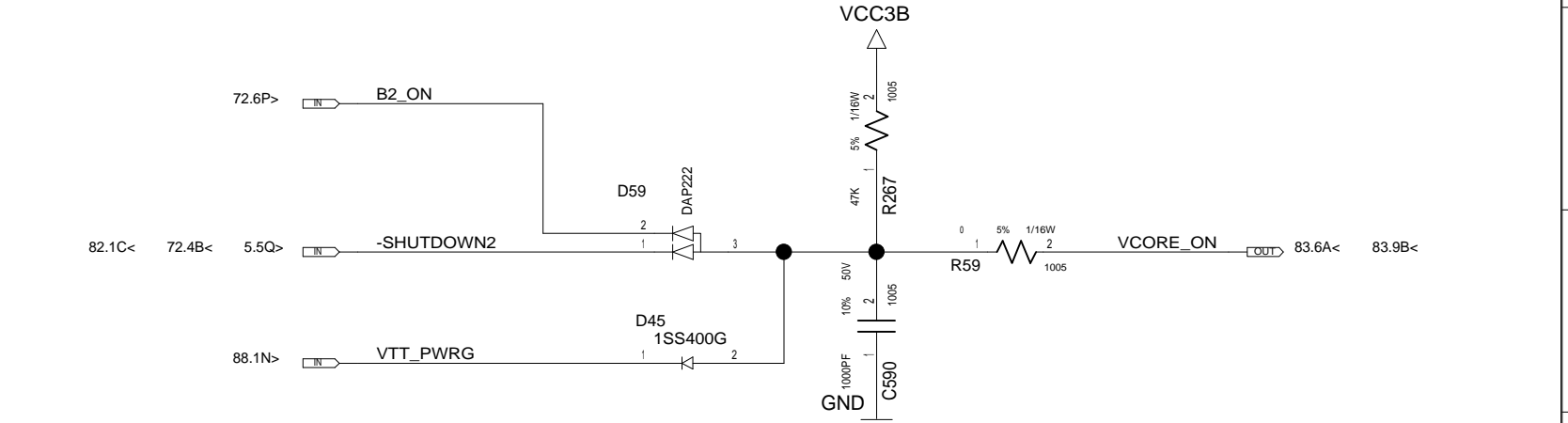
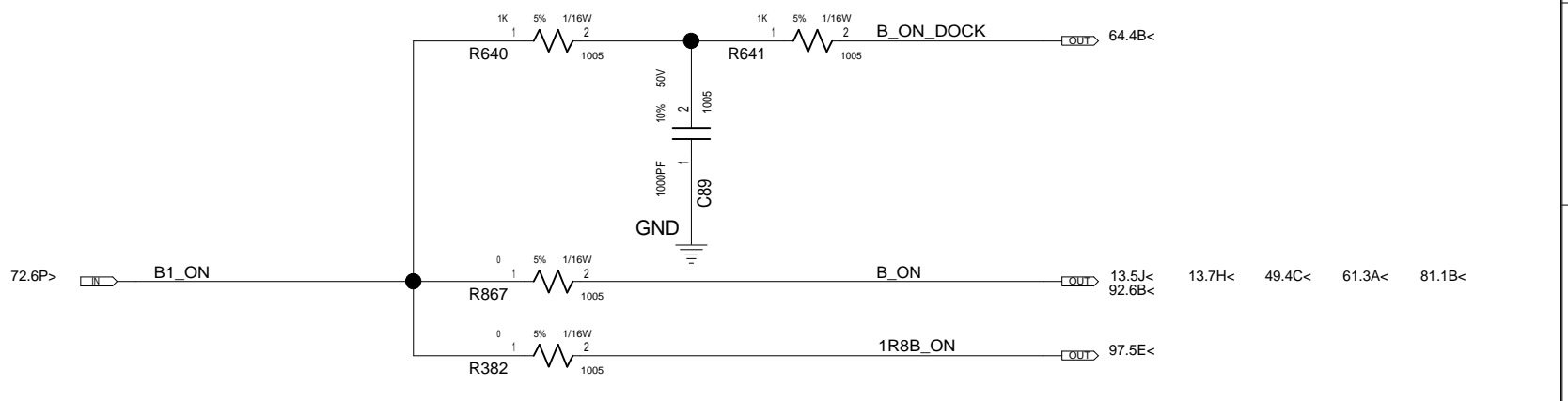
REL	DATE	EC NO.	PART NO.	
			VER.1.42	
			DEVELOPMENT NO.	Q/M
				81 / 101



TABLE

	ALWAYS ON	YES	NO
D42		ASM	NO_ASM
D73		ASM	NO_ASM

LOGIC

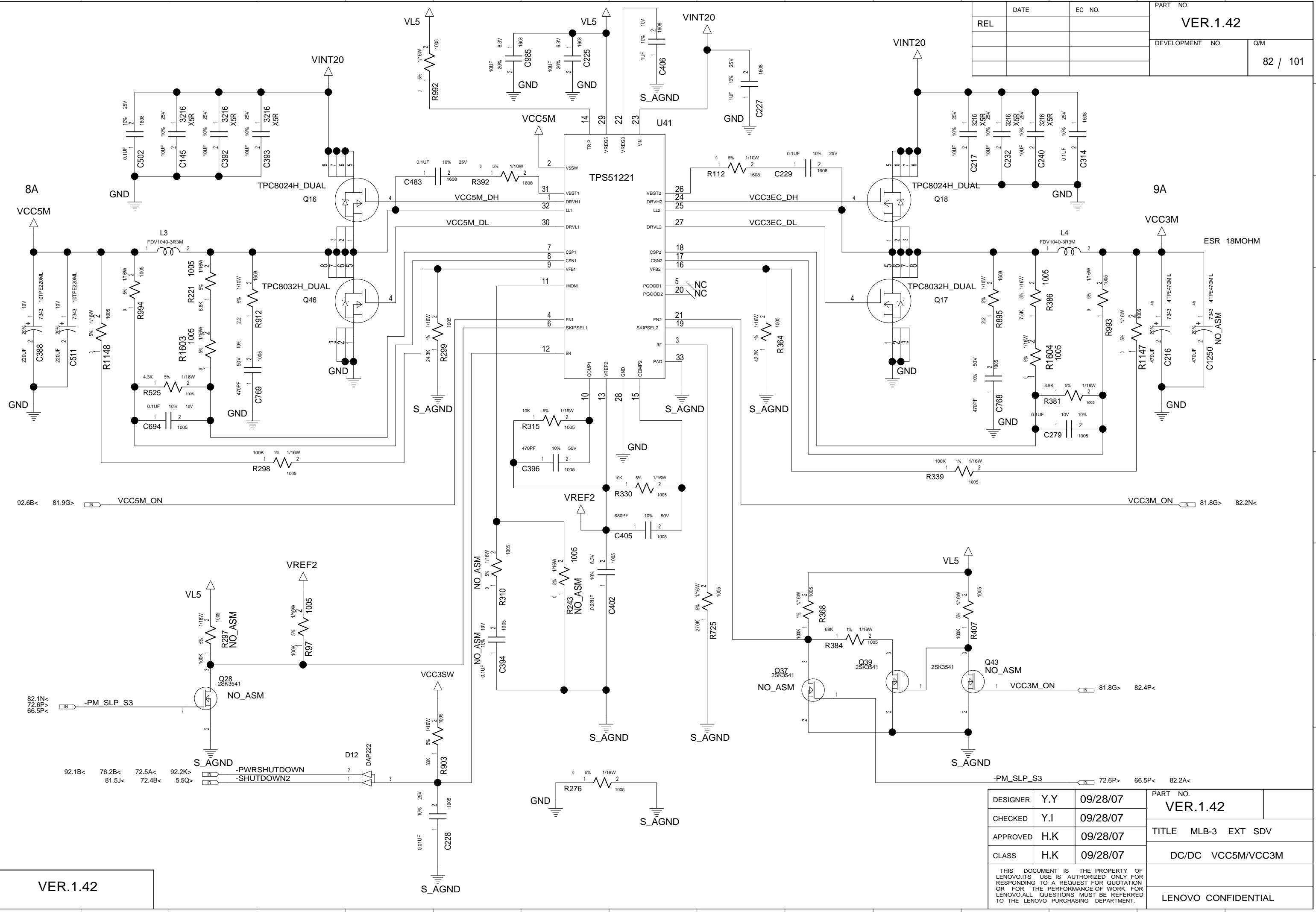


DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	POWER SEQUENCE	

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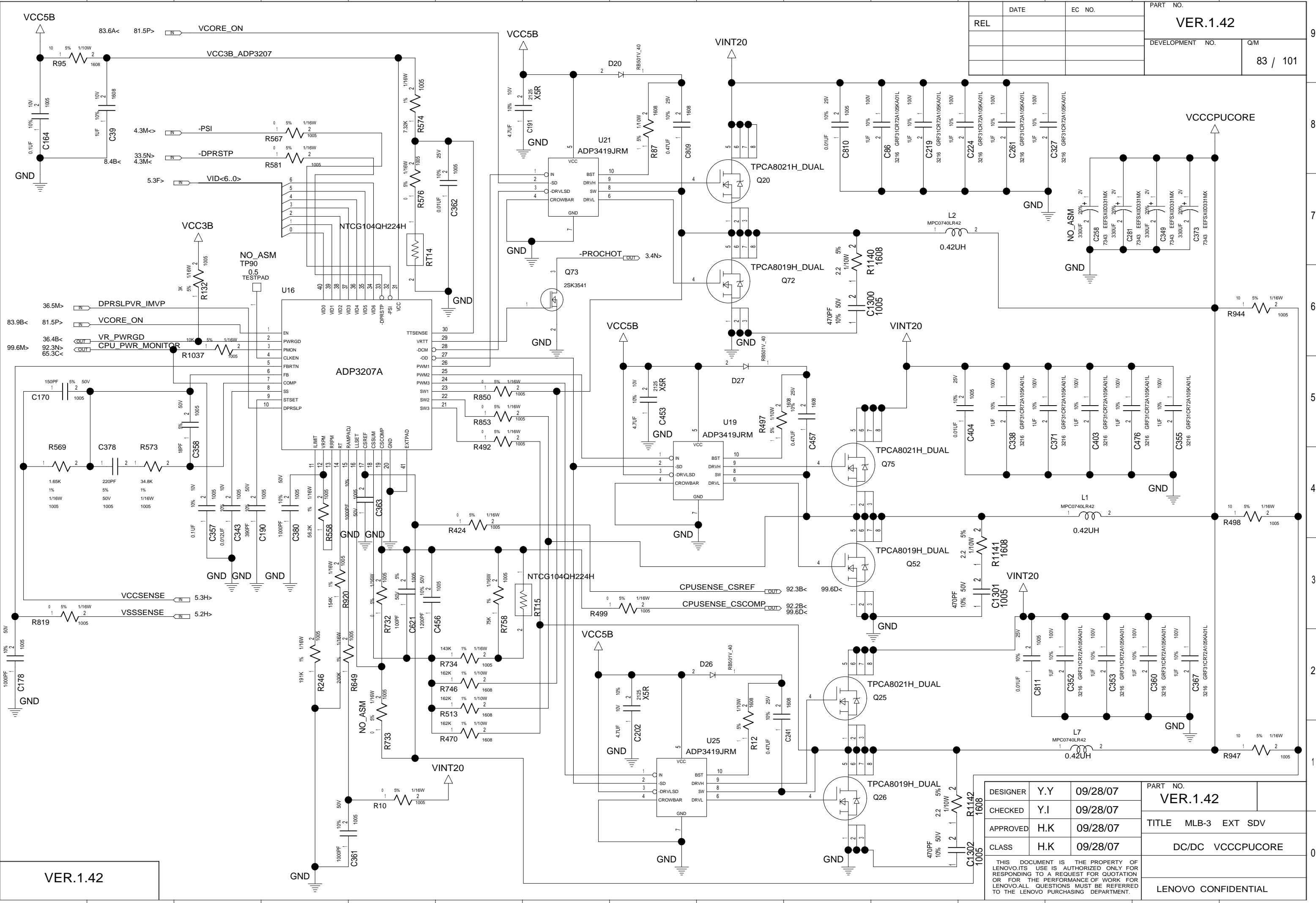
REL	DATE	EC NO.	PART NO.
			VER.1.42
			DEVELOPMENT NO.
			Q/M
			82 / 101



VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.
CHECKED	Y.I	09/28/07	VER.1.42
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV
CLASS	H.K	09/28/07	DC/DC VCC5M/VCC3M
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LENOVO CONFIDENTIAL			

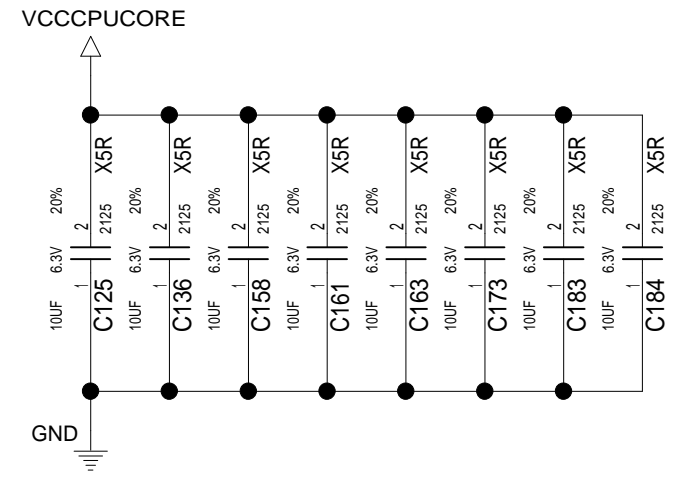
REL	DATE	EC NO.	PART NO.
			VER.1.42
			DEVELOPMENT NO.
			Q/M
			83 / 101



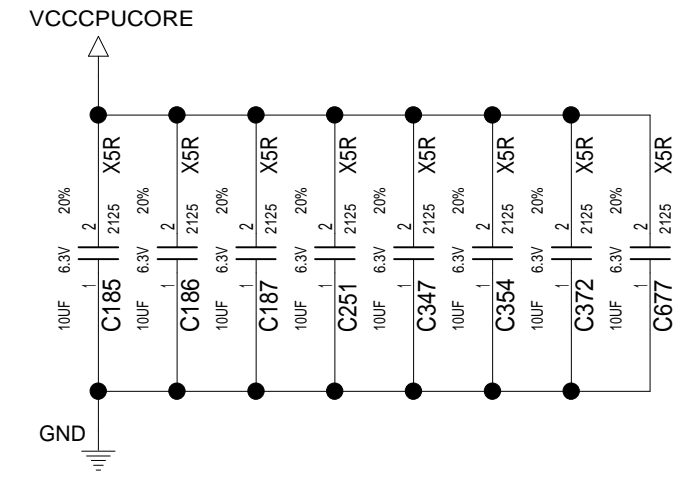
VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.
CHECKED	Y.I	09/28/07	VER.1.42
APPROVED	H.K	09/28/07	TITLE
CLASS	H.K	09/28/07	MLB-3 EXT SDV
			DC/DC VCCCPUCORE
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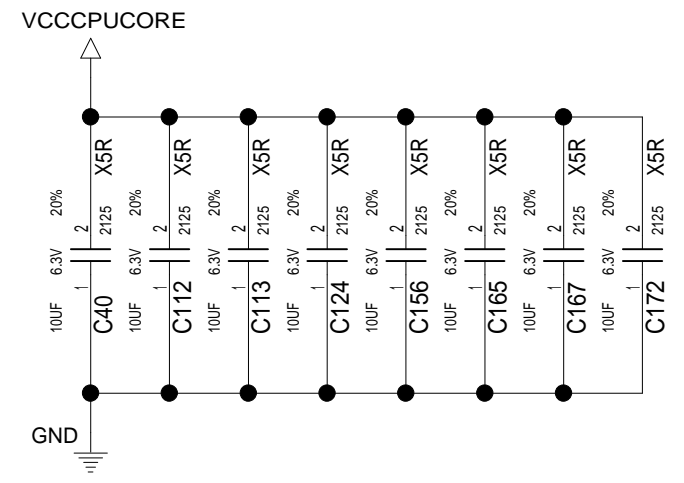
	DATE	EC NO.	PART NO.	
REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				84 / 101



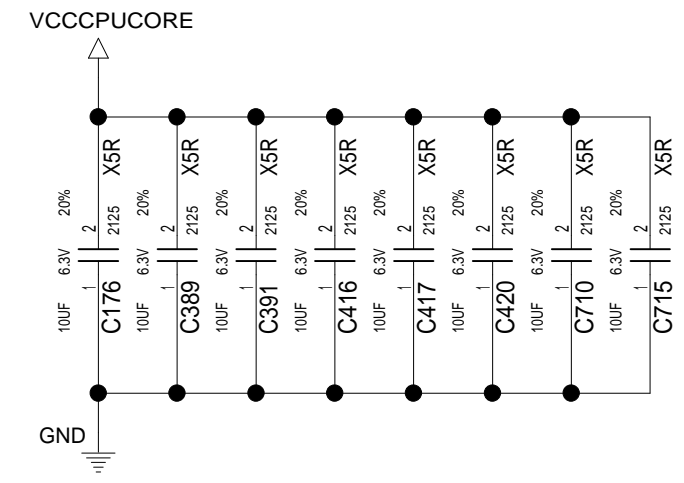
10UF 6.3V X5R 2125 1/16W X 16PCS



10UF 6.3V X5R 2125 1/16W X 16PCS



10UF 6.3V X5R 2125 1/16W X 16PCS



10UF 6.3V X5R 2125 1/16W X 16PCS

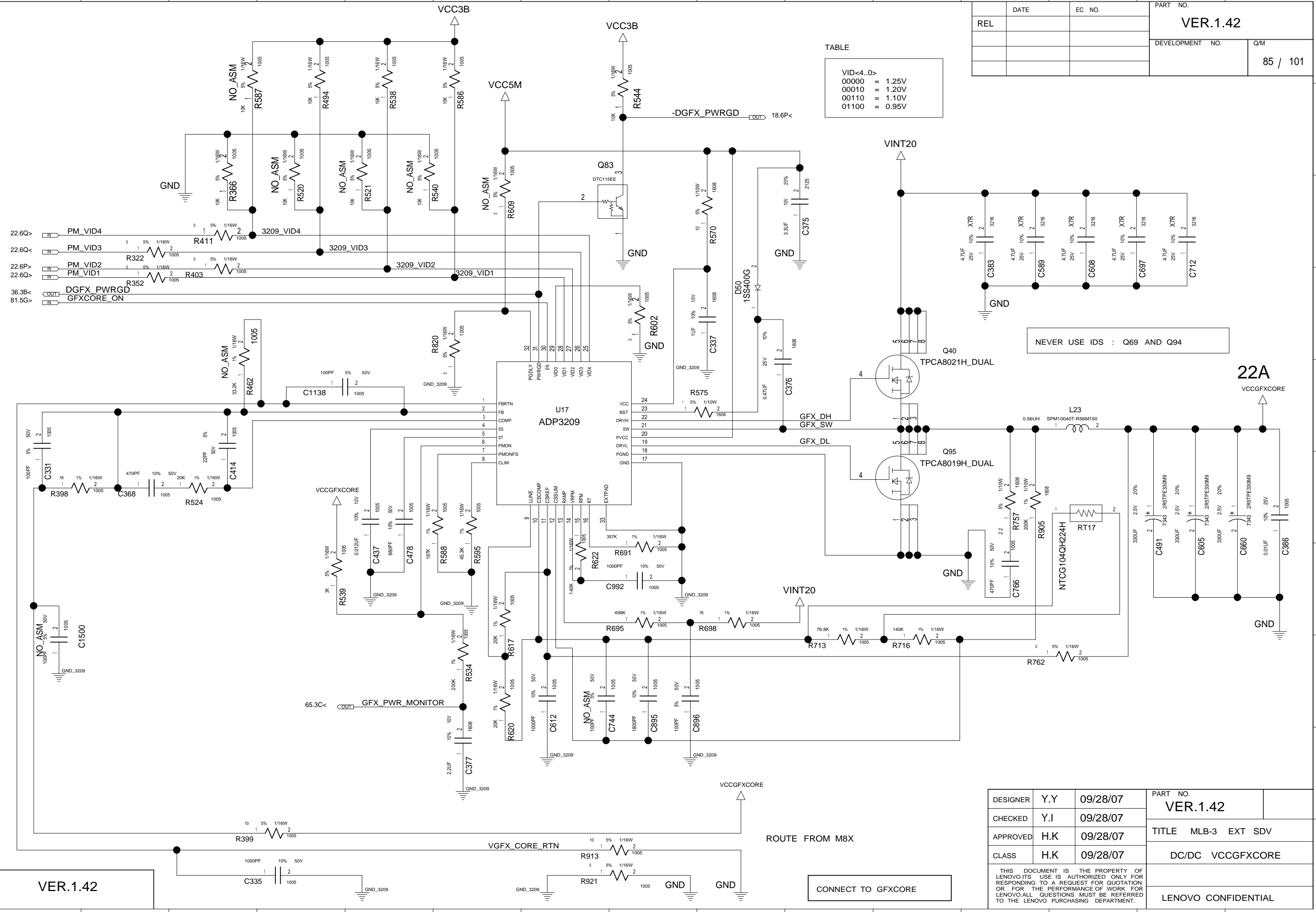
VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	VER.1.42
CHECKED	Y.I	09/28/07	TITLE MLB-3 EXT SDV	
APPROVED	H.K	09/28/07	VCCCPUCORE DECOUPLING	
CLASS	H.K	09/28/07	LENovo CONFIDENTIAL	
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REL	DATE	EC NO.	PART NO.
			VER.1.42
			DEVELOPMENT NO.
			Q/M
			85 / 101

TABLE

VID<4..0>	
00000	= 1.25V
00010	= 1.20V
00110	= 1.10V
01100	= 0.95V



VER.1.42

CONNECT TO GFXCORE

DESIGNER	Y.Y	09/28/07	PART NO.
CHECKED	Y.I	09/28/07	VER.1.42
APPROVED	H.K	09/28/07	TITLE
CLASS	H.K	09/28/07	MLB-3 EXT SDV
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			LENOVO CONFIDENTIAL

A B C D E F G H J K L M N P Q

	DATE	EC NO.	PART NO.	
REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				86 / 101

BLANK

VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	BLANK	
<small>THIS DOCUMENT IS THE PROPERTY OF LENOVO.ITS USE IS AUTHORIZED ONLY FOR RESPONDING TO A REQUEST FOR QUOTATION OR FOR THE PERFORMANCE OF WORK FOR LENOVO.ALL QUESTIONS MUST BE REFERRED TO THE LENOVO PURCHASING DEPARTMENT.</small>			LENOVO CONFIDENTIAL	

A B C D E F G H J K L M N P Q

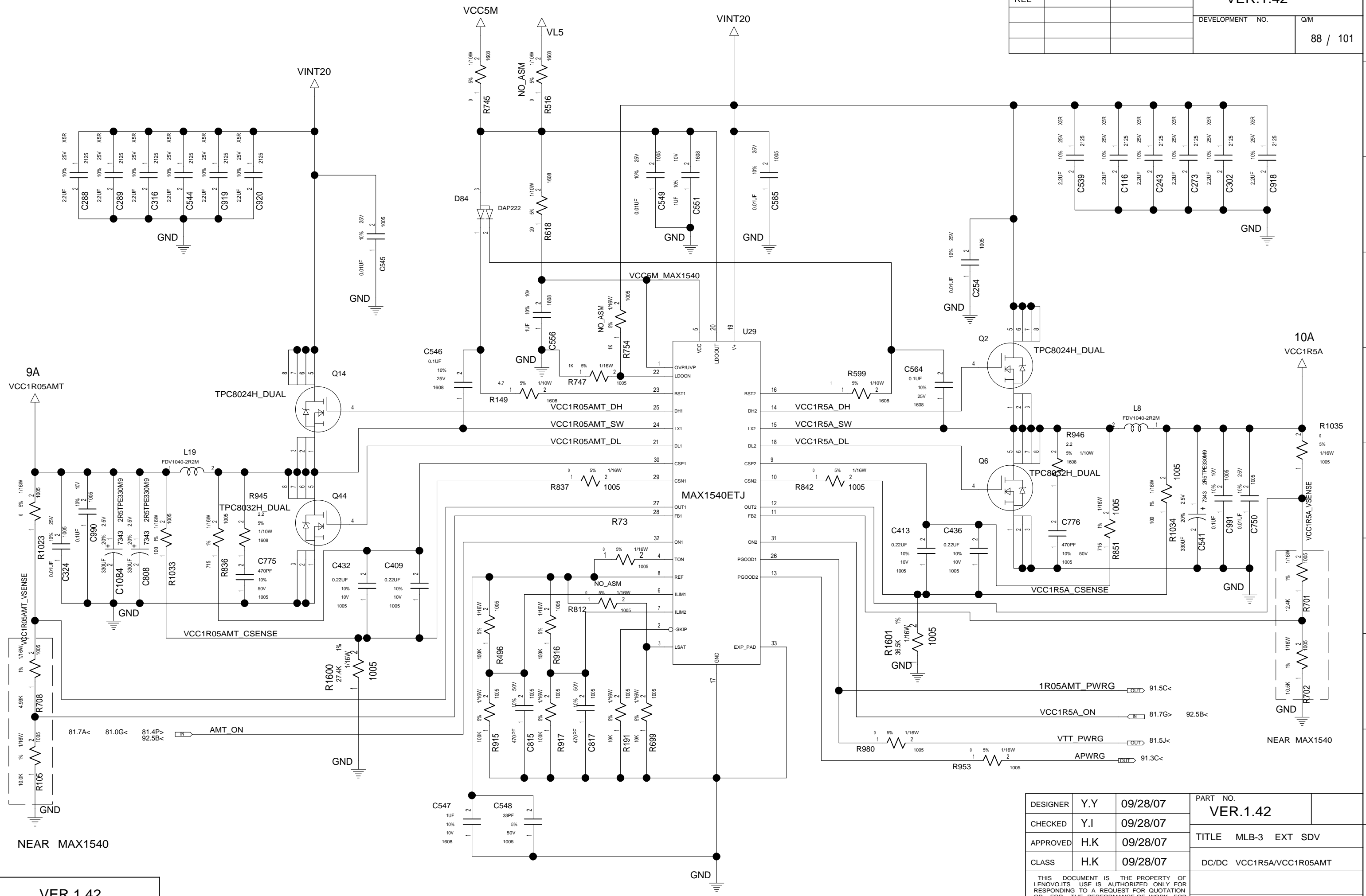
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REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				87 / 101

VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	BLANK	
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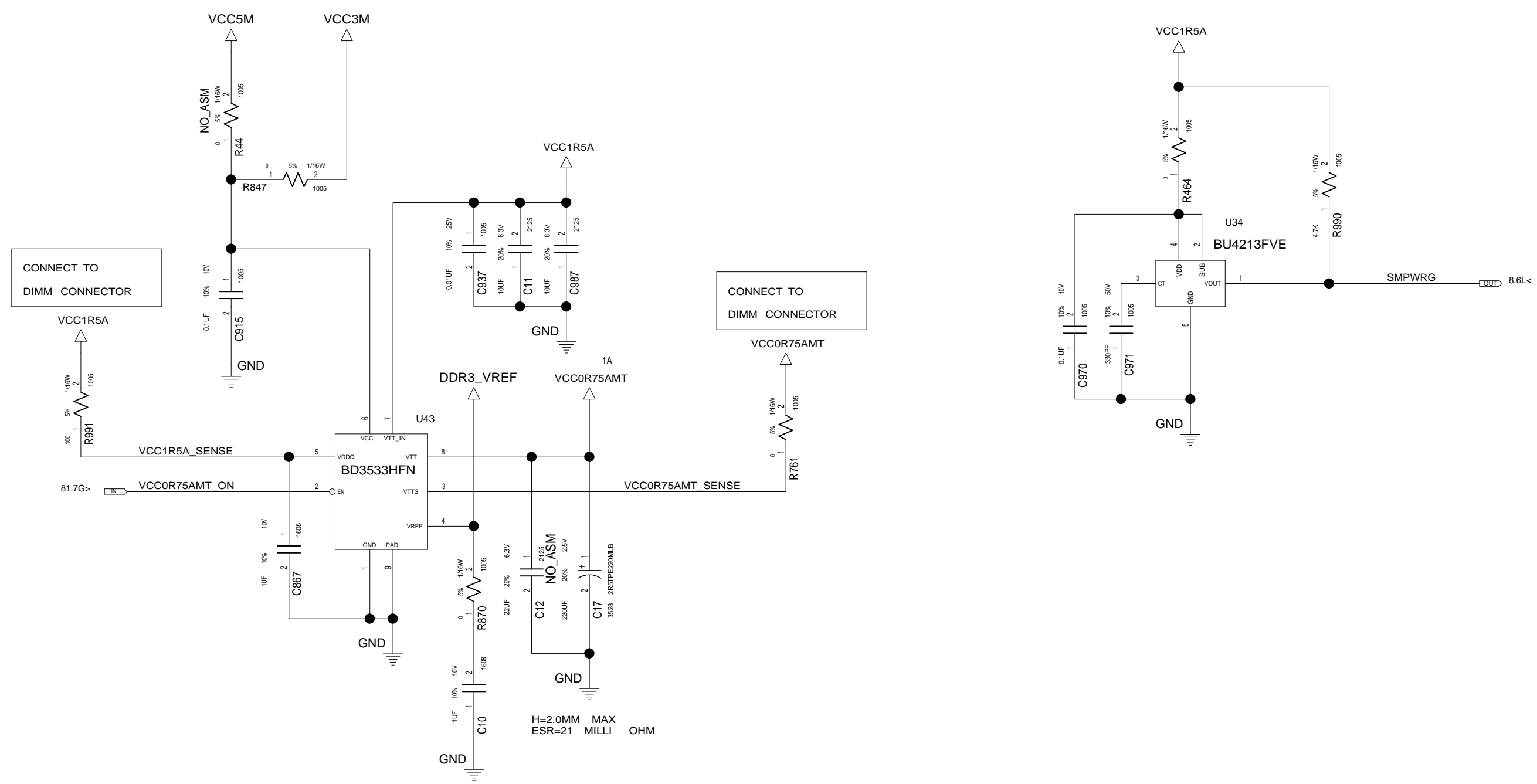
REL	DATE	EC NO.	PART NO.	
			VER.1.42	
			DEVELOPMENT NO.	Q/M
				88 / 101



VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	DC/DC VCC1R5A/VCC1R05AMT	
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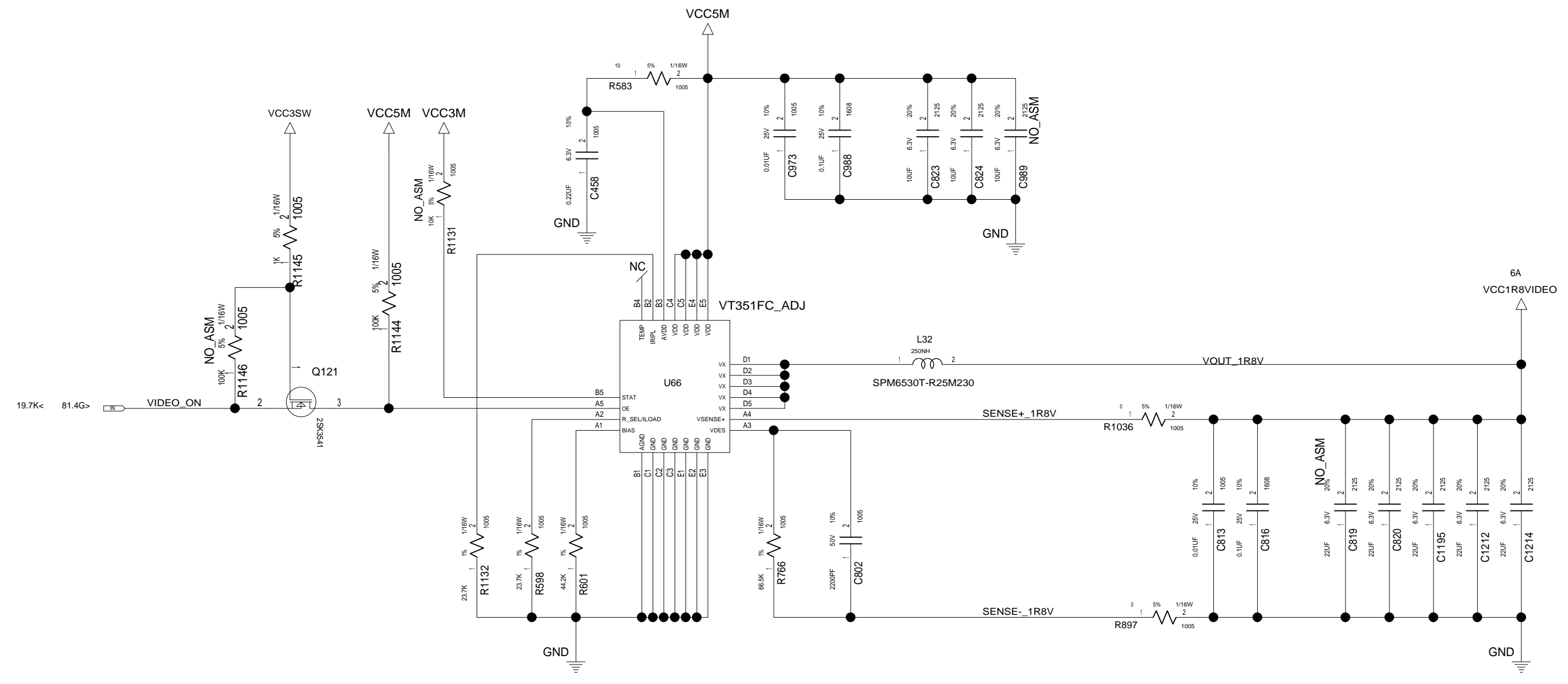
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REL			VER.1.42	
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				89 / 101



VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	DC/DC VCC0R75AMT	
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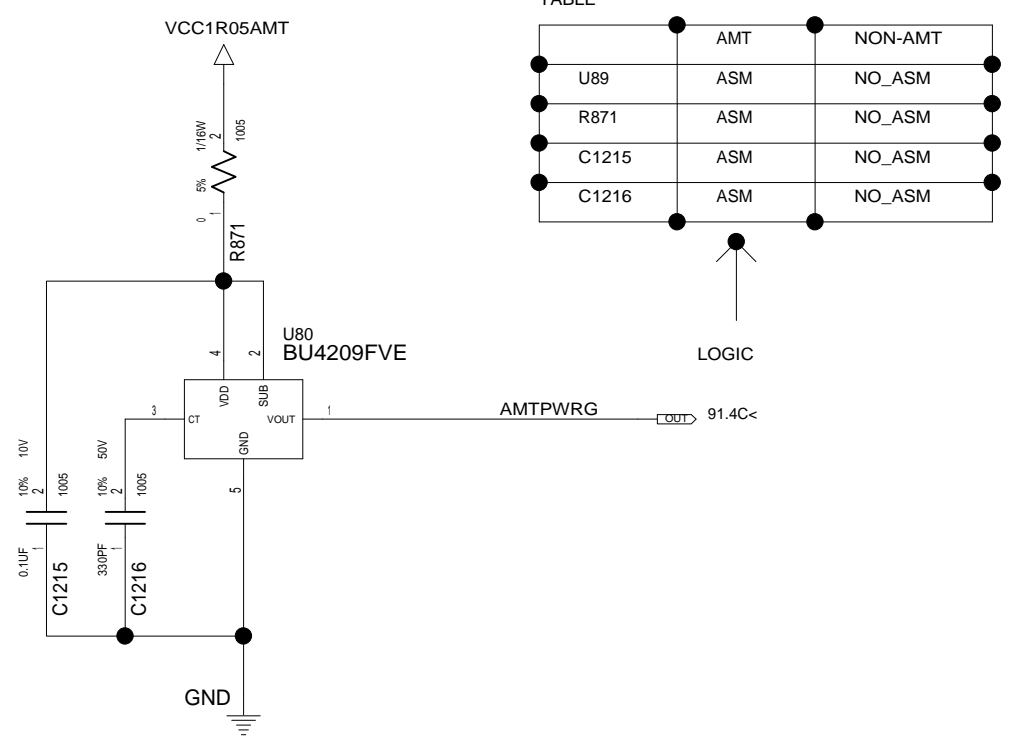
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REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				90 / 101



VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	DC/DC VCC1R8VIDEO	
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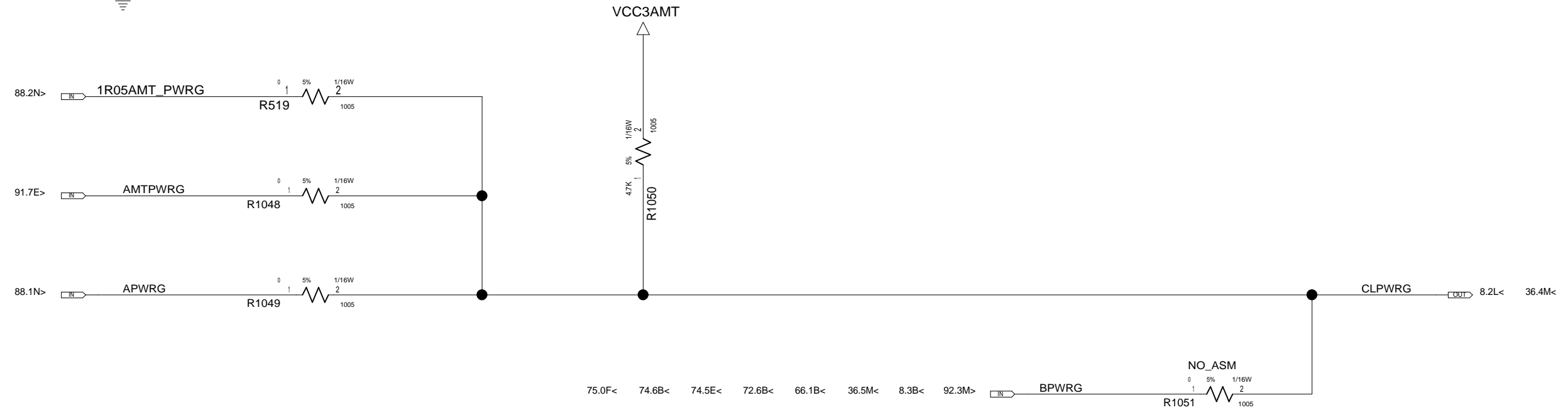
	DATE	EC NO.	PART NO.	
REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				91 / 101



TABLE

	AMT	NON-AMT
U89	ASM	NO_ASM
R871	ASM	NO_ASM
C1215	ASM	NO_ASM
C1216	ASM	NO_ASM

↑
LOGIC



TABLE

	AMT	NON_AMT
R1051	NO_ASM	ASM
OTHERS	ASM	NO_ASM

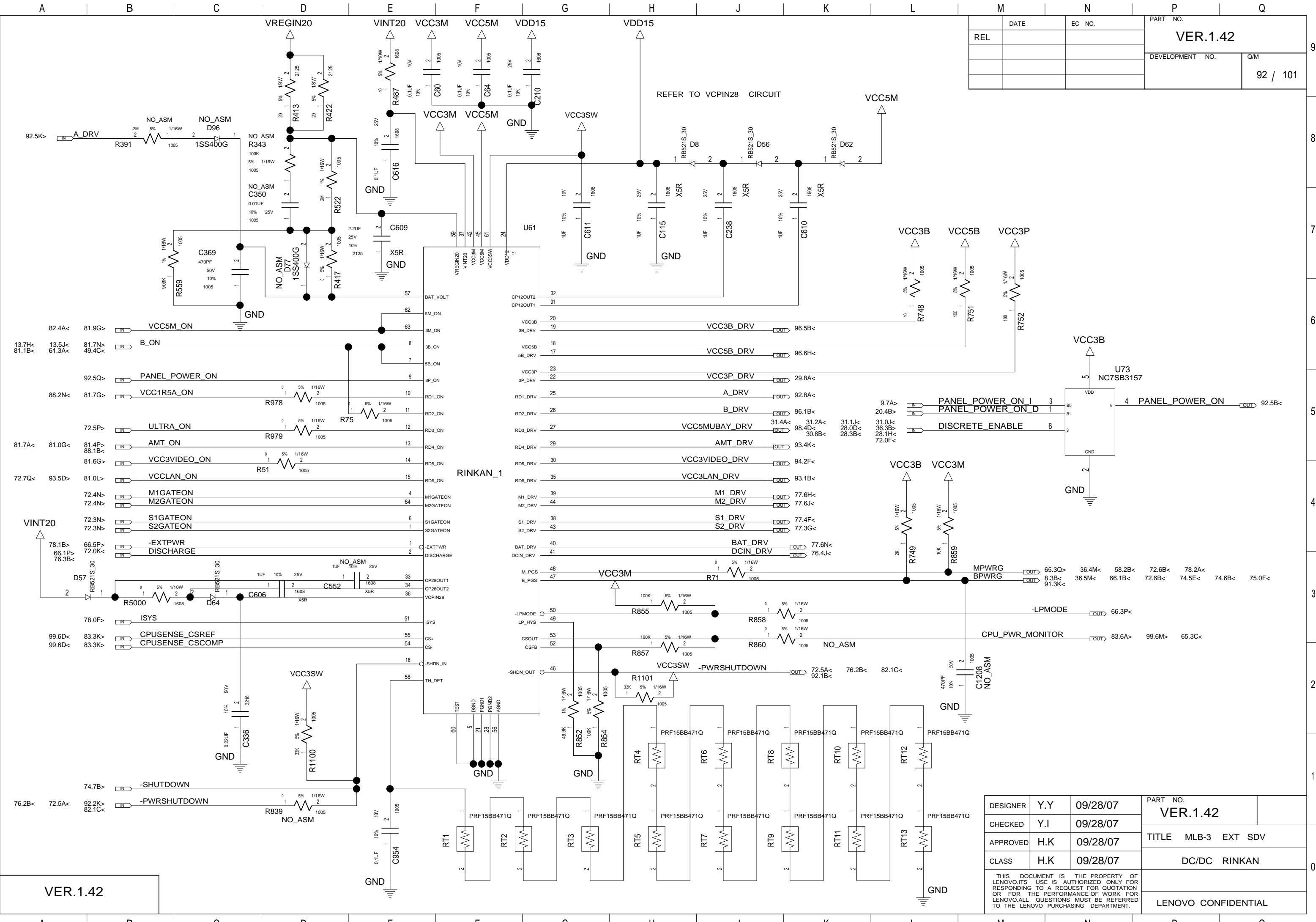
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LOGIC

DESIGNER	Y.Y	09/28/07	PART NO.	VER.1.42
CHECKED	Y.I	09/28/07	TITLE MLB-3 EXT SDV	
APPROVED	H.K	09/28/07	CLPWRG	
CLASS	H.K	09/28/07	LENovo CONFIDENTIAL	

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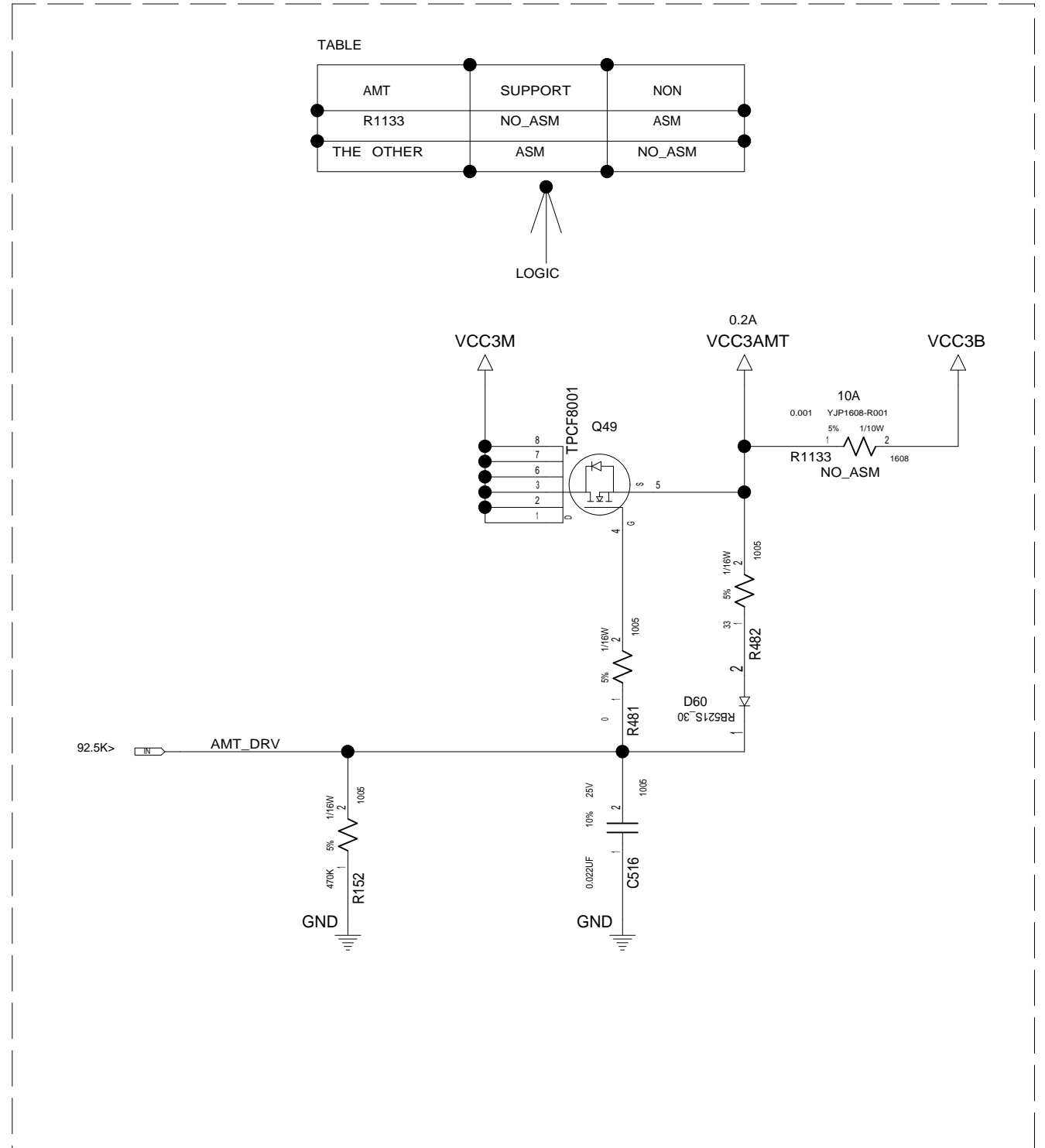
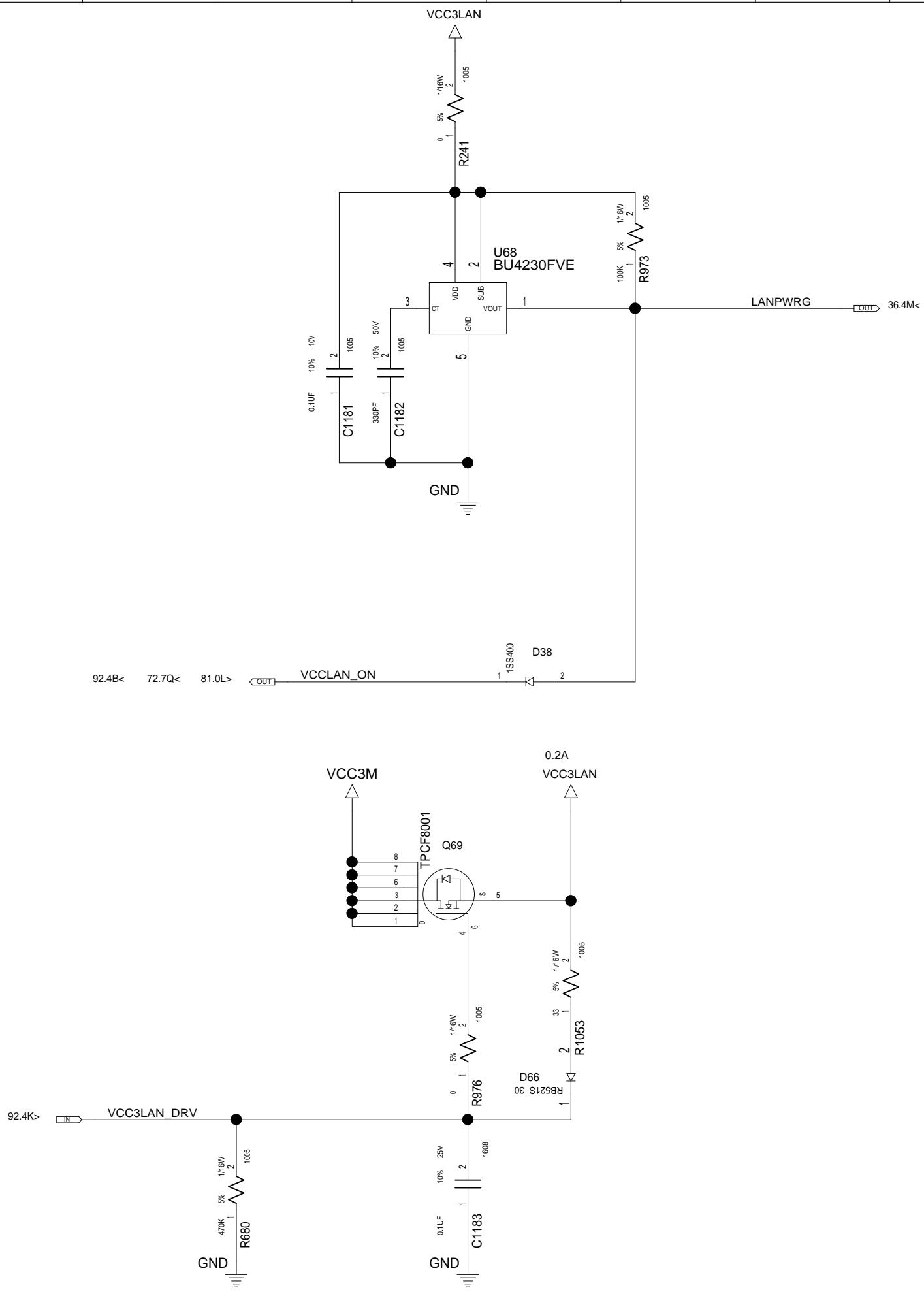
REL	DATE	EC NO.	PART NO.
			VER.1.42
			DEVELOPMENT NO.
			Q/M
			92 / 101



VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.
CHECKED	Y.I	09/28/07	VER.1.42
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV
CLASS	H.K	09/28/07	DC/DC RINKAN
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REL	DATE	EC NO.	PART NO. VER.1.42	
			DEVELOPMENT NO.	Q/M 93 / 101

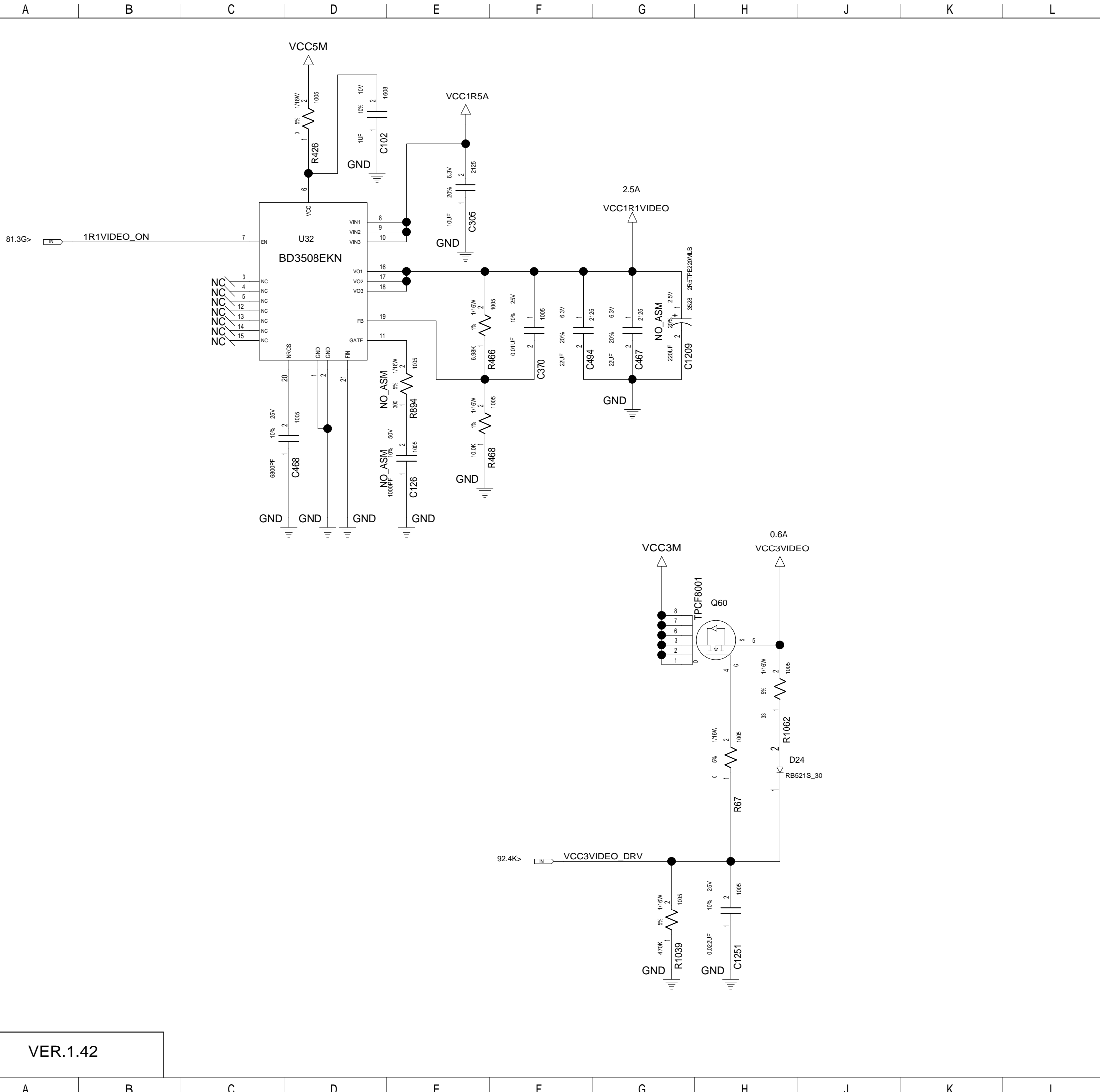


TABLE

AMT	SUPPORT	NON
R1133	NO_ASM	ASM
THE OTHER	ASM	NO_ASM

LOGIC

DESIGNER	Y.Y	09/28/07	PART NO. VER.1.42	
CHECKED	Y.I	09/28/07		
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	LOAD SW AMT&LAN	
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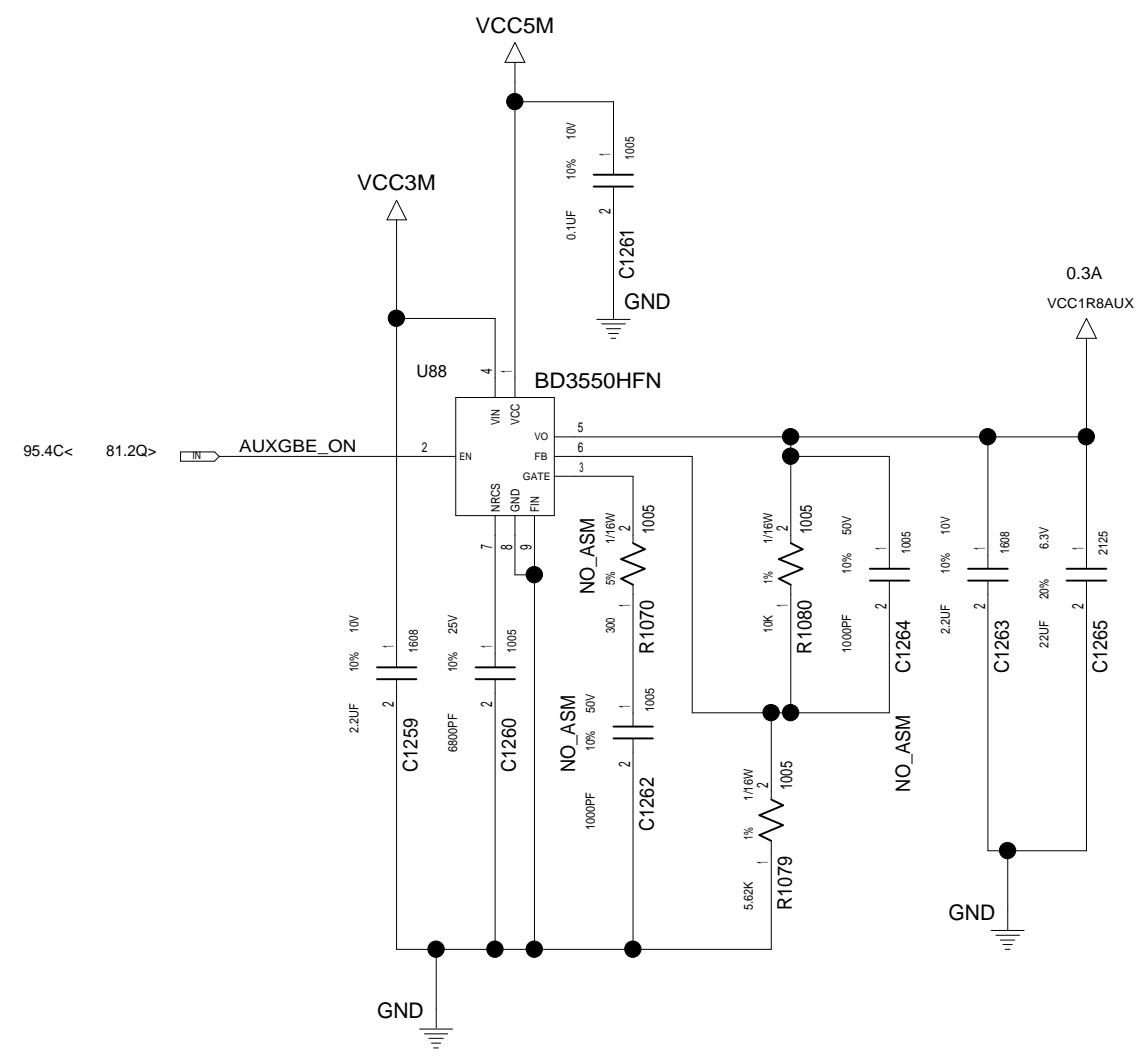
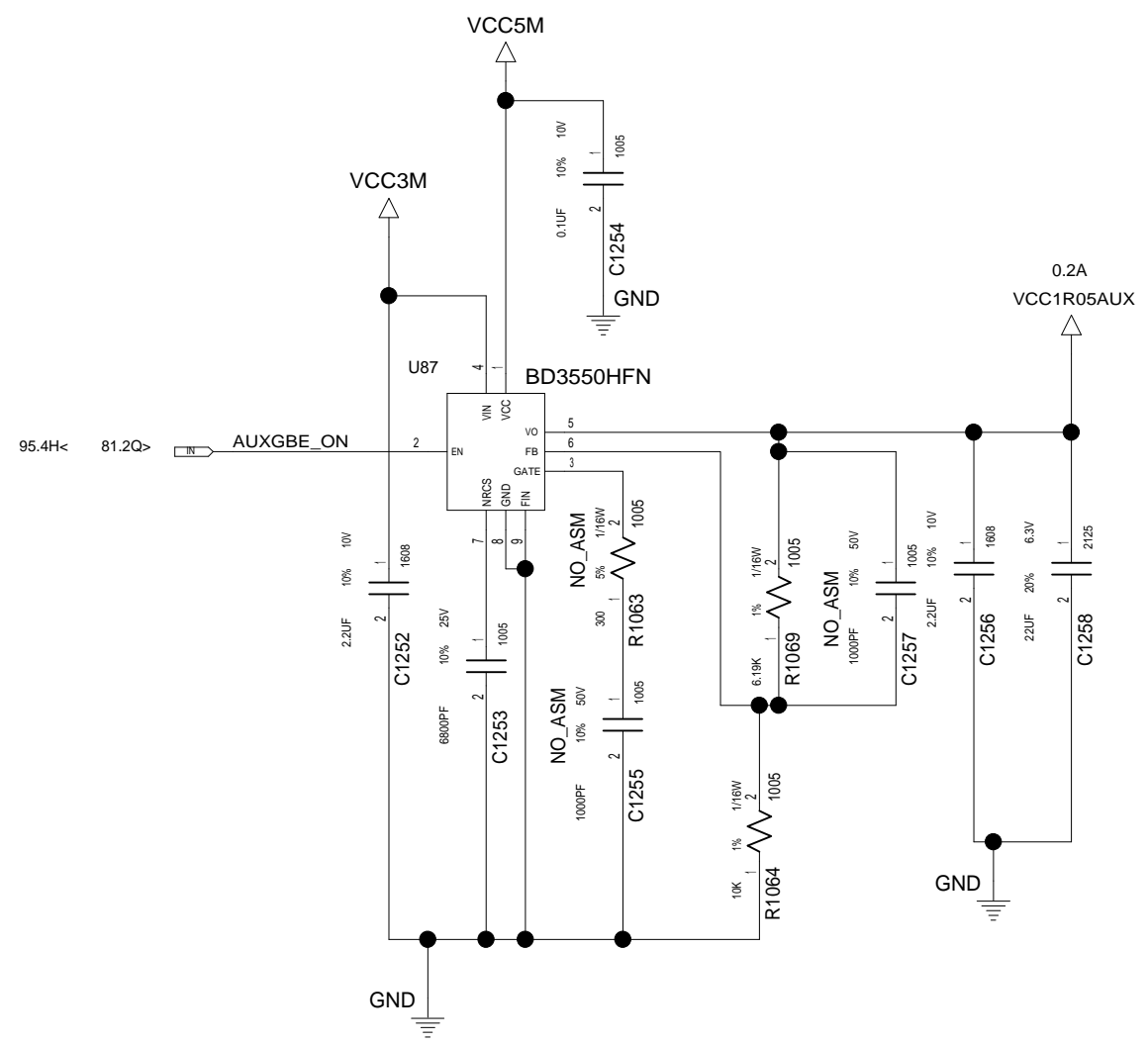
	DATE	EC NO.	PART NO.	
REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				94 / 101

VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	LOAD SW VIDEO	
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	DATE	EC NO.	PART NO.	
REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				95 / 101

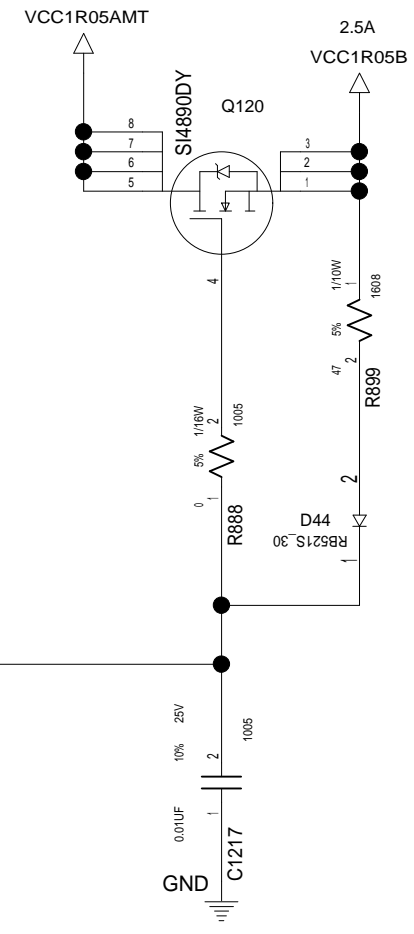
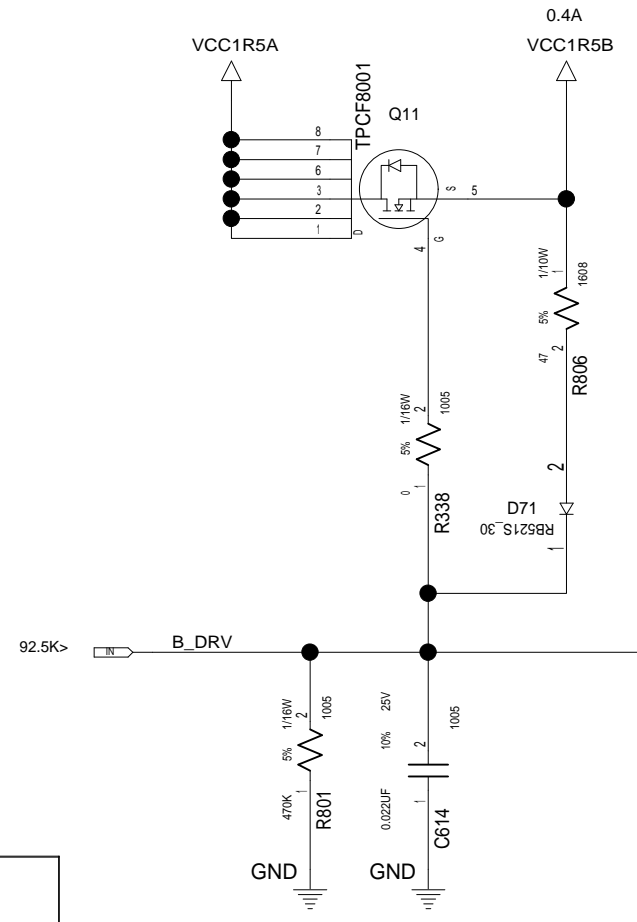
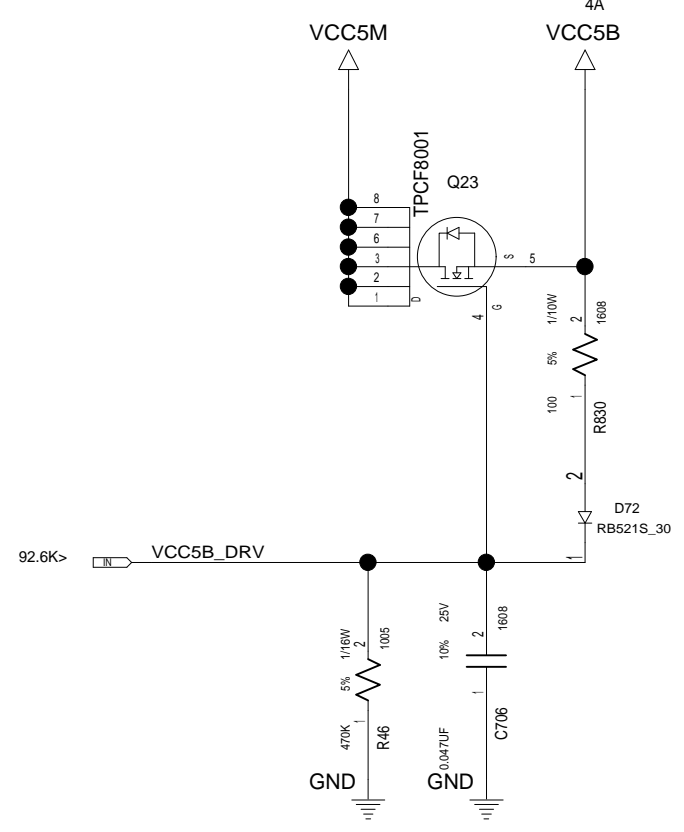
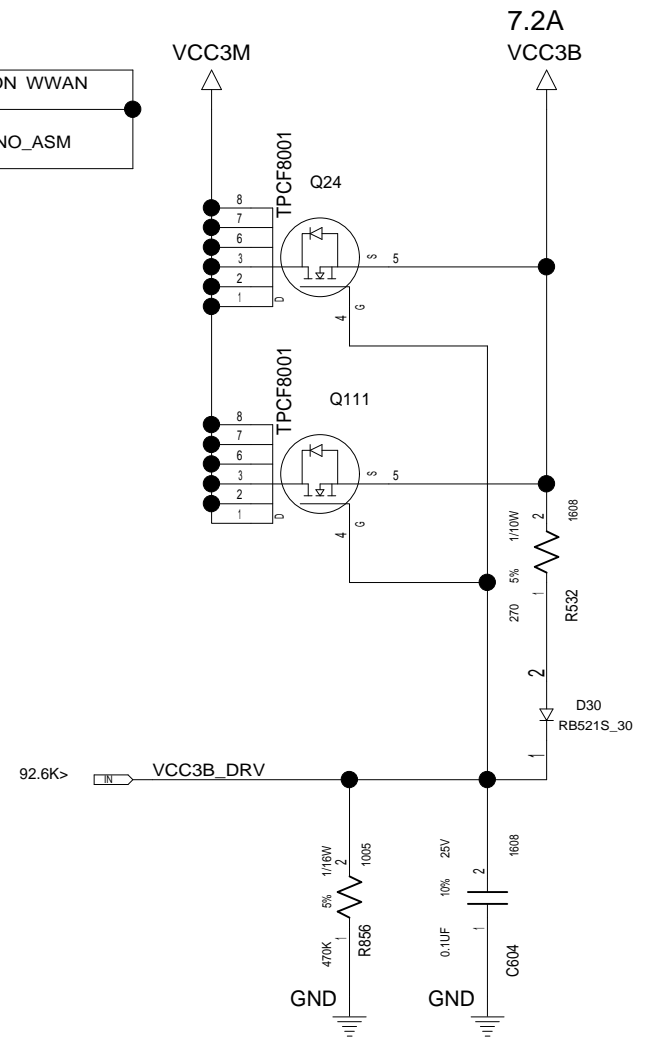
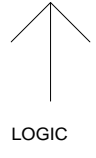
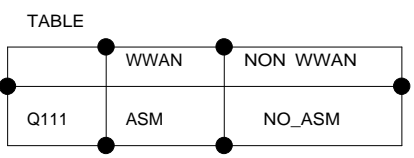
VCC1R8AUX		
1.8V	: R1079	: 5.62KOHM
2.5V	: R1079	: 3.48KOHM



VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	LOAD SW AUX	
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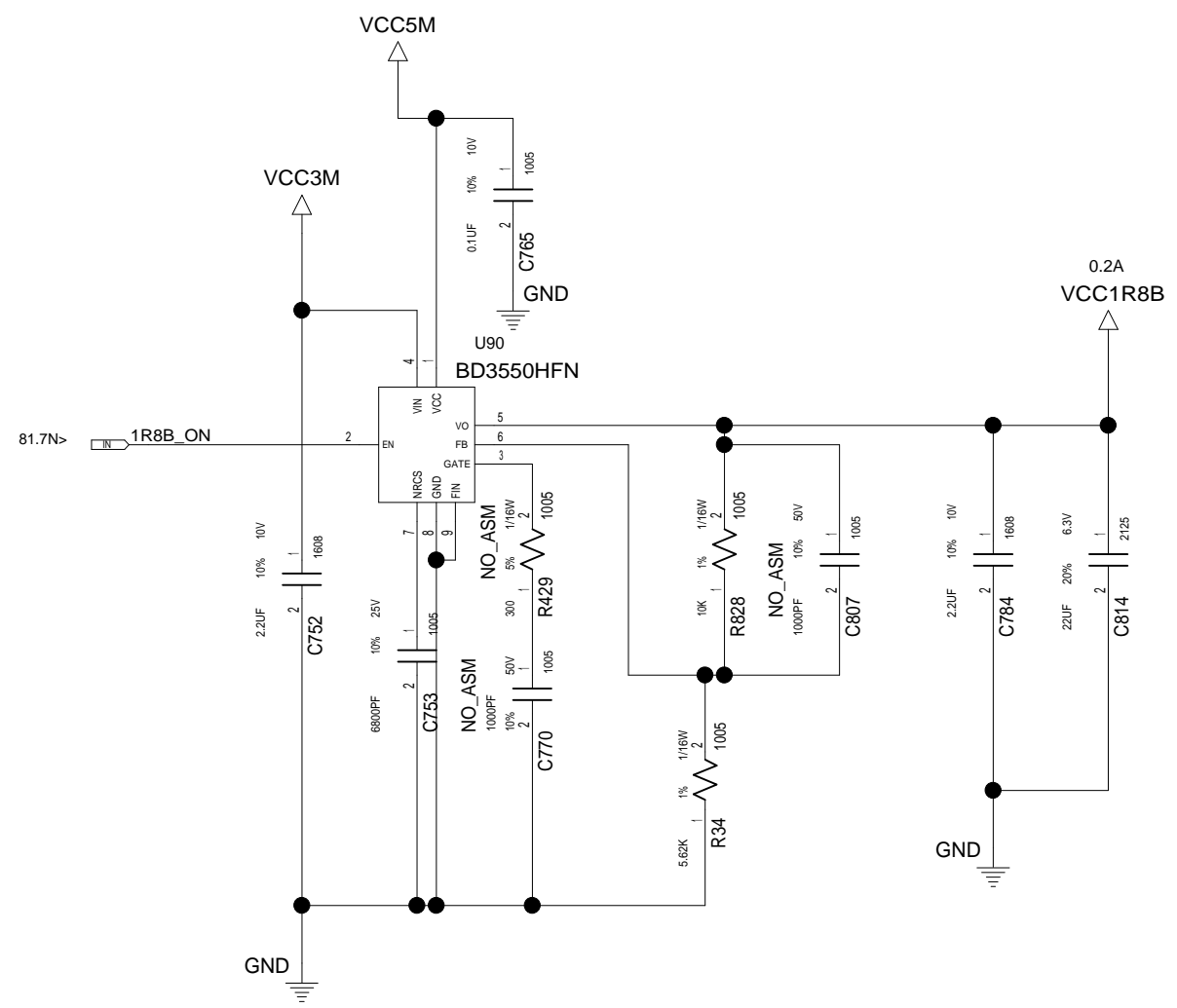
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REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				96 / 101



VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	LOAD SW B	
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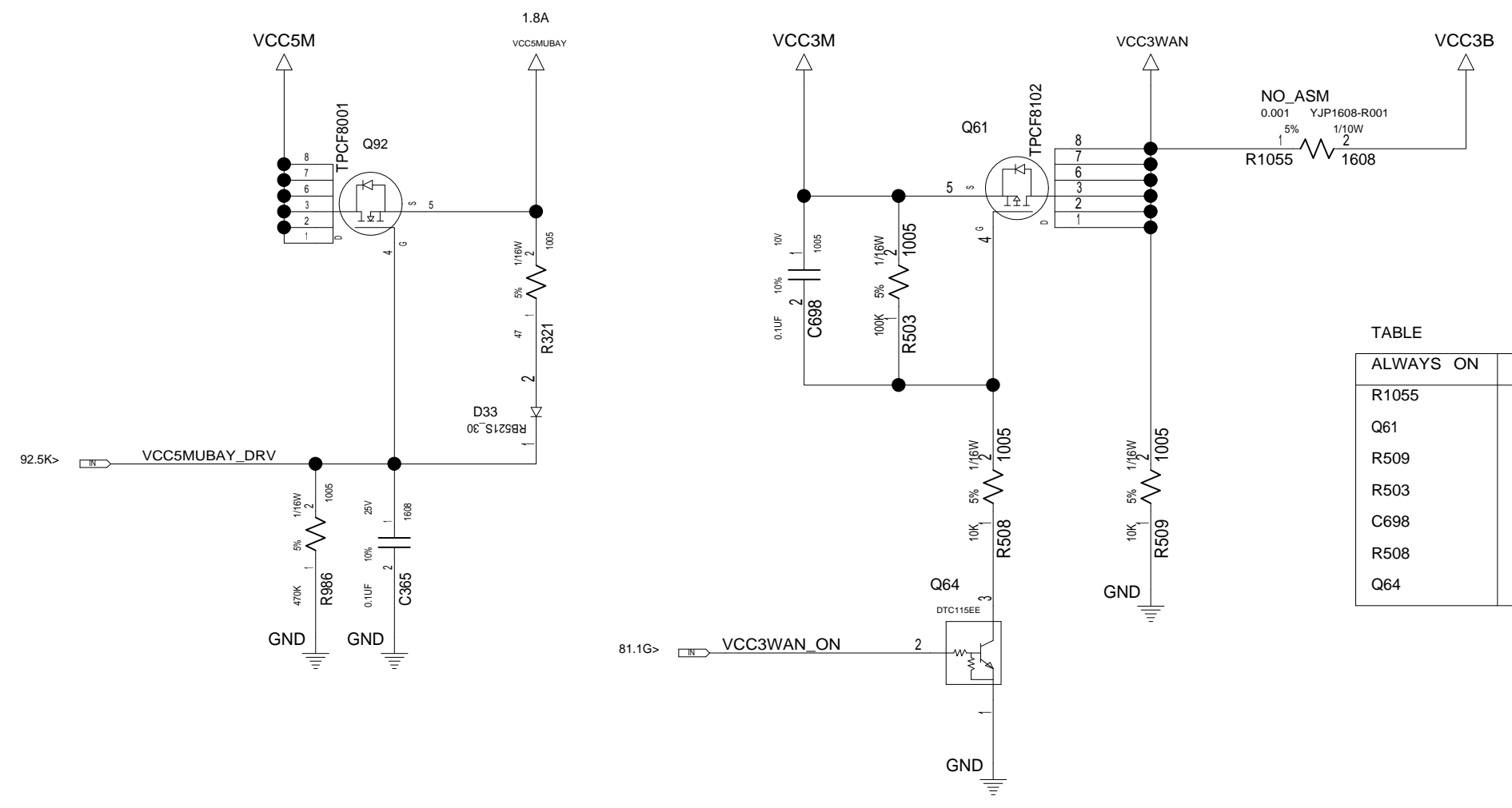
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REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				97 / 101



VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	DC/DC VCC1R8B	
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	DATE	EC NO.	PART NO.	
REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				98 / 101



TABLE

	ALWAYS ON	YES	NO
R1055		NO_ASM	ASM
Q61		ASM	NO_ASM
R509		ASM	NO_ASM
R503		ASM	NO_ASM
C698		ASM	NO_ASM
R508		ASM	NO_ASM
Q64		ASM	NO_ASM

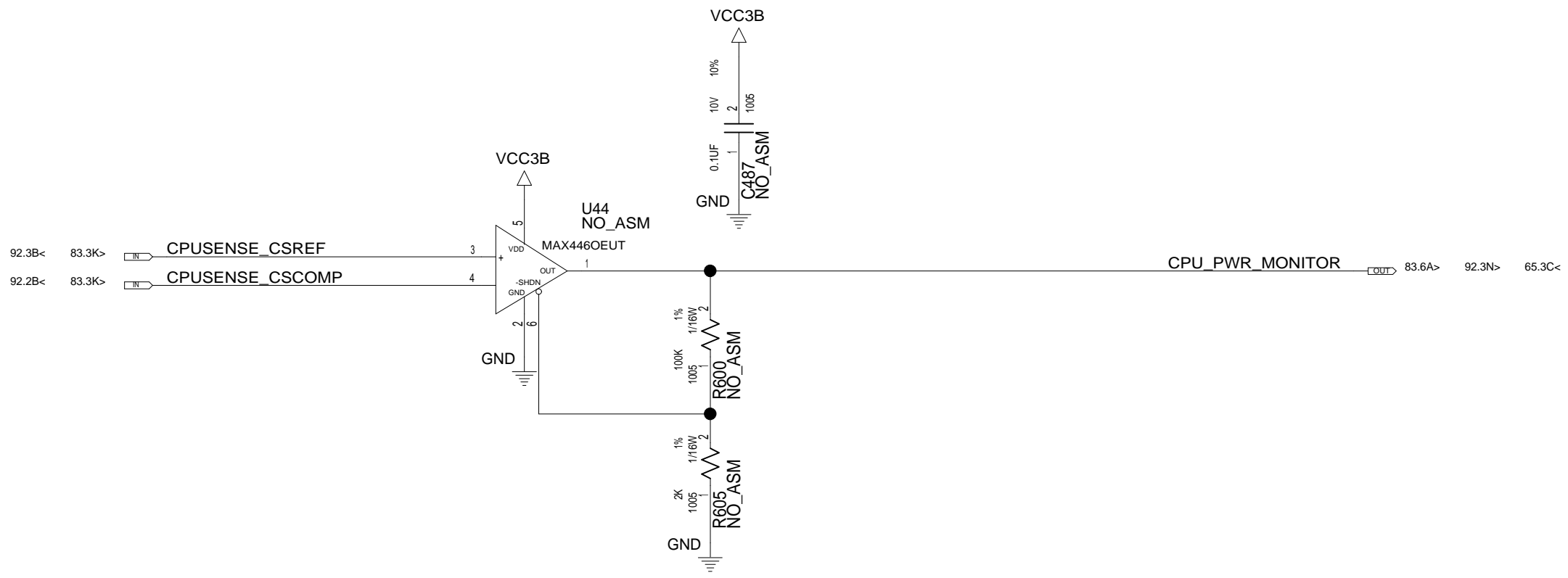
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LOGIC

VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	VER.1.42
CHECKED	Y.I	09/28/07		
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	LOAD SW UBAY&WWAN	
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A B C D E F G H J K L M N P Q

	DATE	EC NO.	PART NO.	
REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				99 / 101

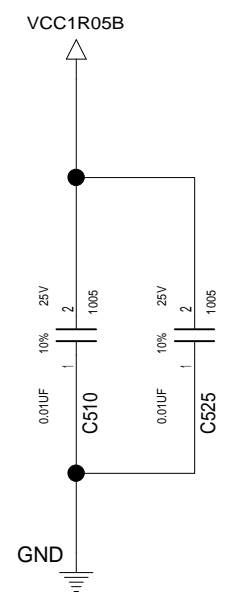
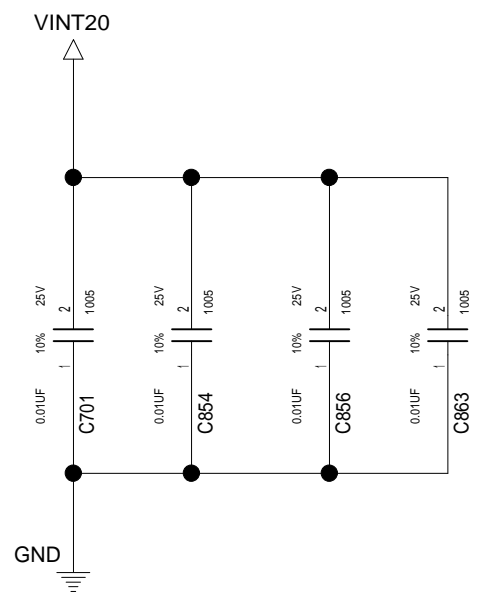
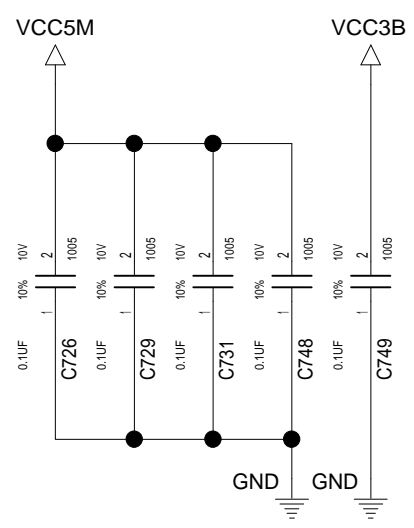
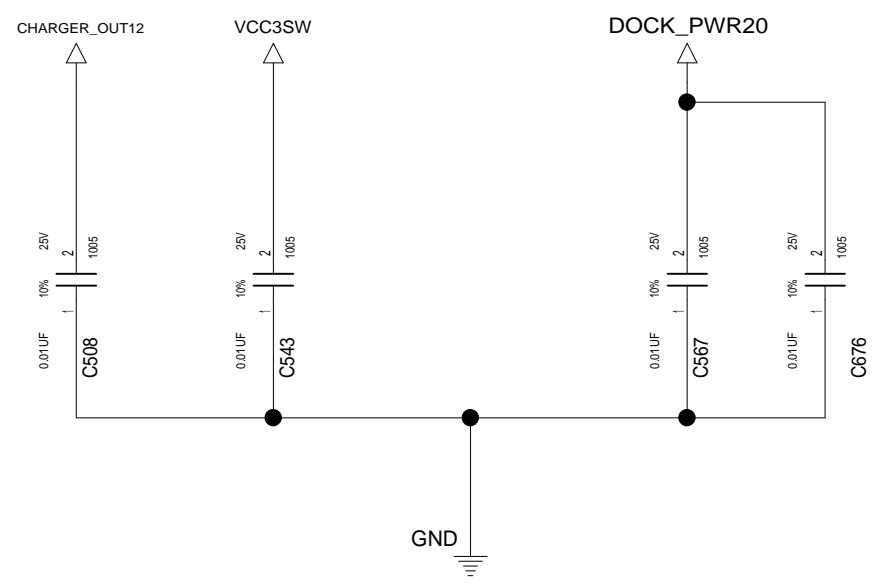
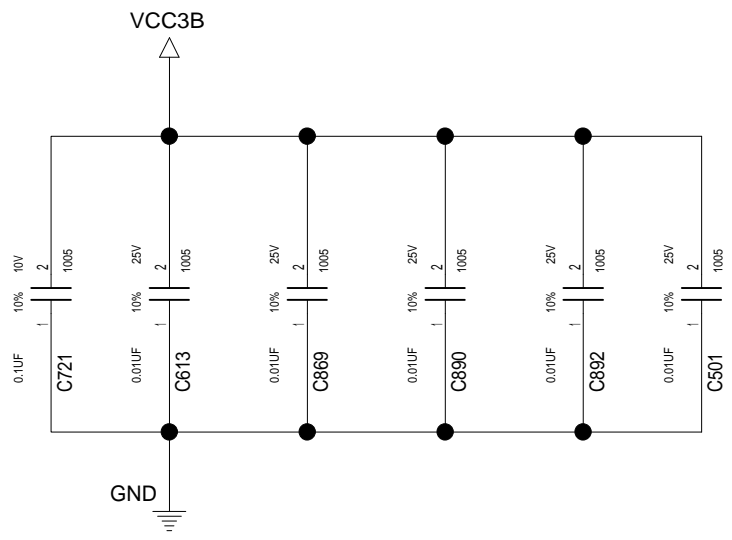
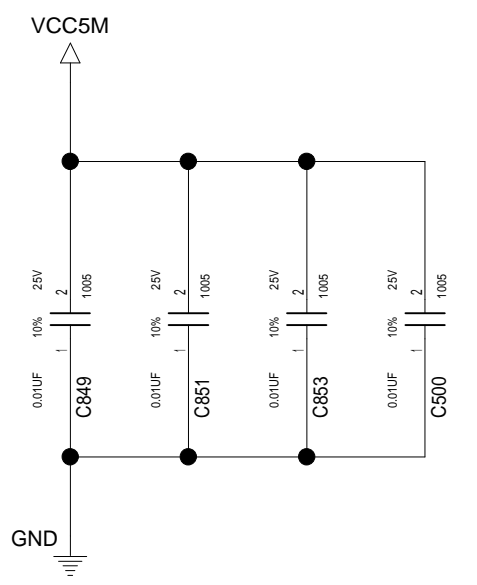
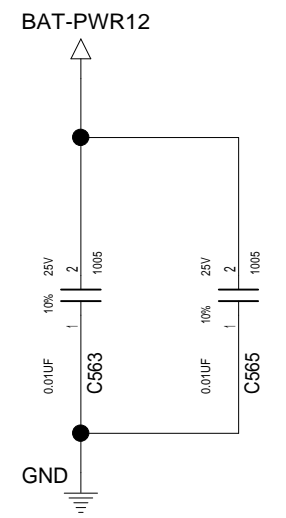
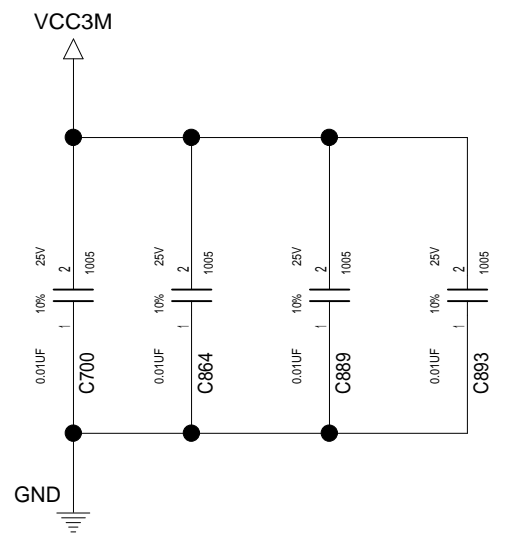
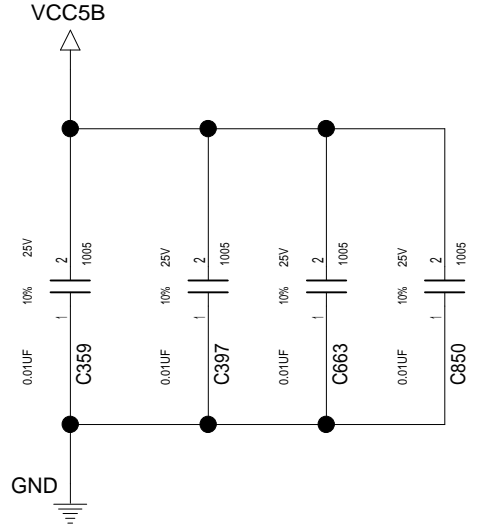


VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	CPU POWER MOMITOR	
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A B C D E F G H J K L M N P Q

	DATE	EC NO.	PART NO.	
REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				100 / 101

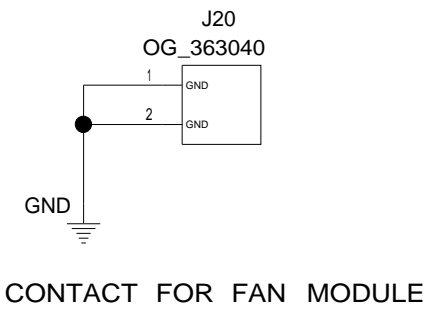
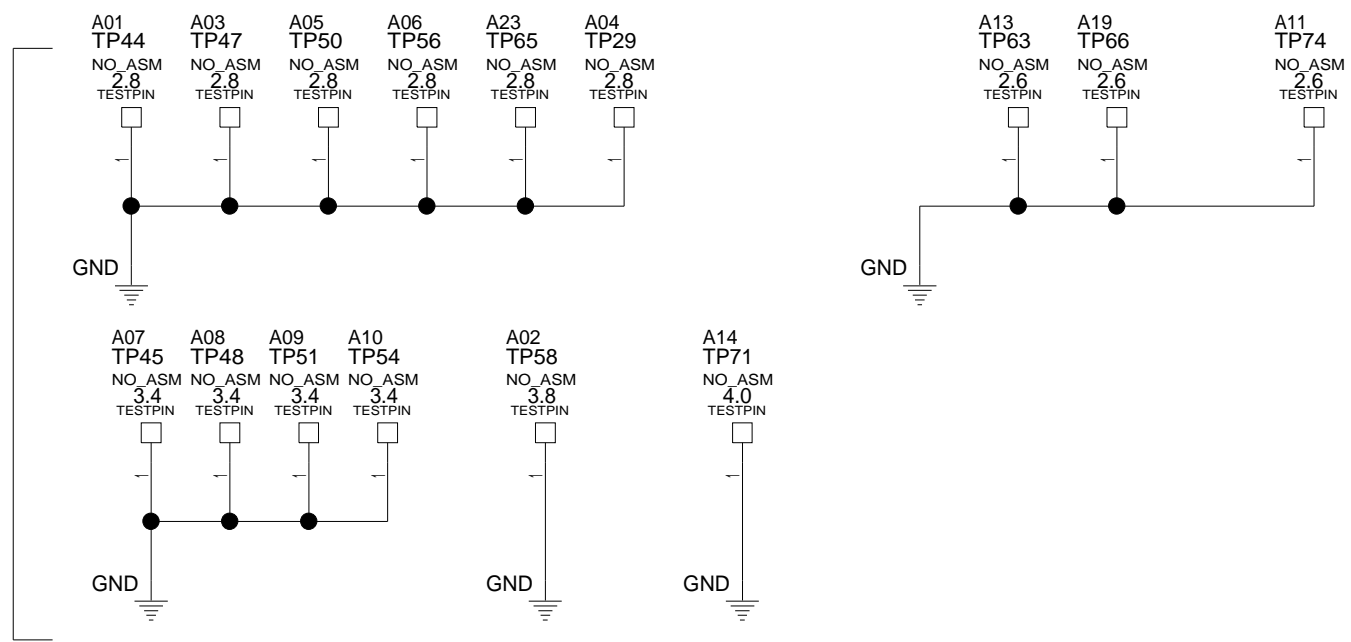


VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	EMC DECOUPLING	
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	DATE	EC NO.	PART NO.	
REL			VER.1.42	
			DEVELOPMENT NO.	Q/M
				101 / 101

PTH FOR SCREW HOLE



CONTACT FOR FAN MODULE

VER.1.42

DESIGNER	Y.Y	09/28/07	PART NO.	
CHECKED	Y.I	09/28/07	VER.1.42	
APPROVED	H.K	09/28/07	TITLE MLB-3 EXT SDV	
CLASS	H.K	09/28/07	PTH FOR SCREW HOLES	
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