

MALIBU-3 EXT SDV

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- 98.LOAD SW UBAY&WWAN
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- 101.PTH FOR SCREW HOLES

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|-----|------|--------|
| | DATE | EC NO. |
| REL | | |
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MLB3D-1

VER.1.42

SEP/28/'07

VER.1.42

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|---|-----|----------|---------------------|----------|
| 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

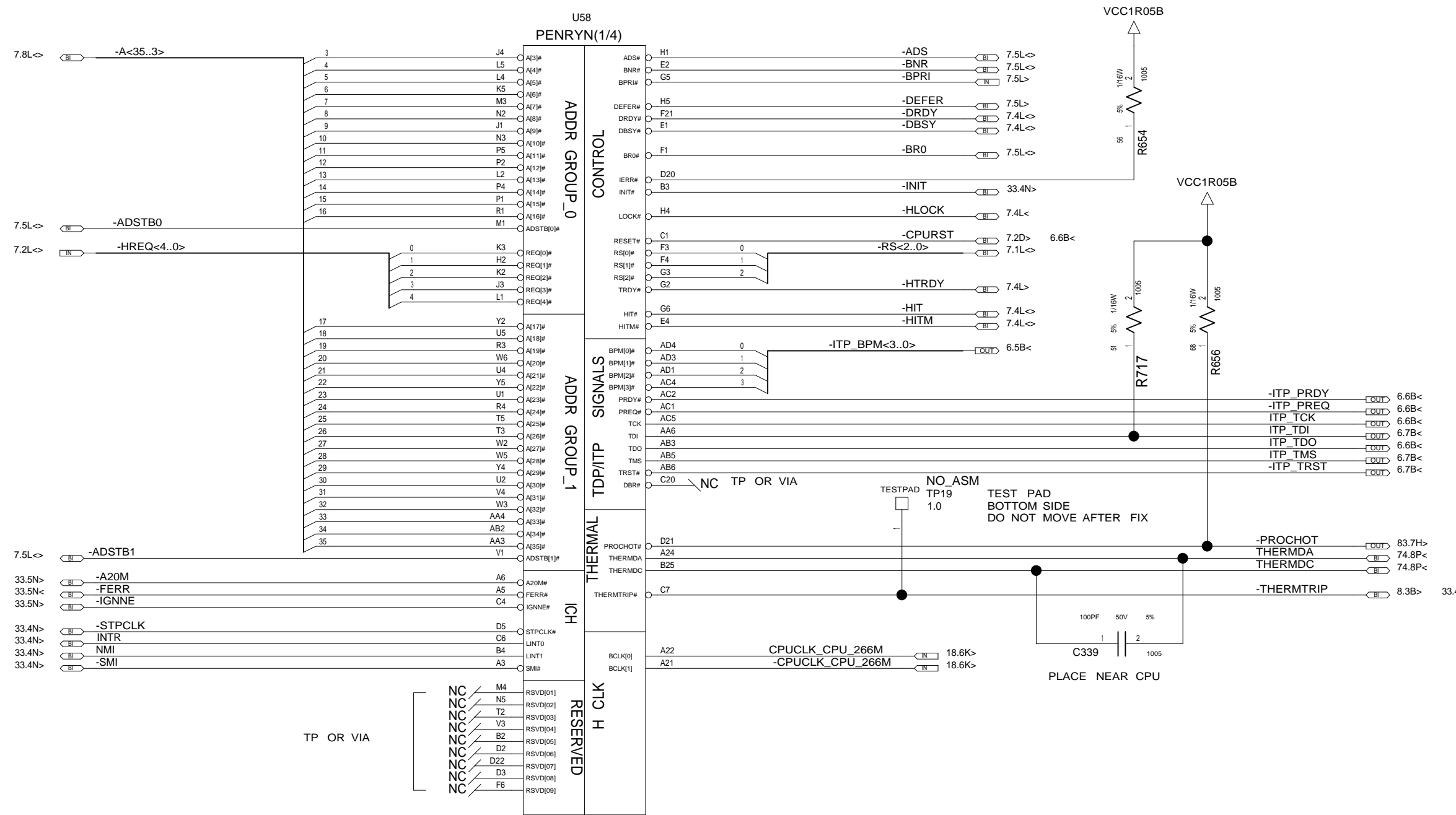
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| | DATE | EC NO. | PART NO. |
| REL | | | VER.1.42 |
| | | | DEVELOPMENT NO. |
| | | | Q/M |
| | | | 2 / 101 |

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|----------|-------|------------------------|----------|-------|--------------------|
| 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 |
| VER.0.09 | APPLY | MLB3_PDV_EC064-065 | VER.1.18 | APPLY | MLB3_PDV_EC318-320 |
| VER.0.10 | APPLY | MLB3_PDV_EC066-069 | VER.1.19 | APPLY | MLB3_PDV_EC321-325 |
| VER.0.11 | APPLY | MLB3_PDV_EC070-078 | VER.1.20 | APPLY | MLB3_PDV_EC326,327 |
| VER.0.12 | APPLY | MLB3_PDV_EC079-086 | VER.1.21 | APPLY | MLB3_PDV_EC328,329 |
| VER.0.13 | APPLY | MLB3_PDV_EC087-091 | VER.1.22 | APPLY | MLB3_PDV_EC330 |
| VER.0.14 | APPLY | MLB3_PDV_EC092-096 | VER.1.23 | APPLY | MLB3_PDV_EC331-333 |
| 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 |
| VER.0.17 | APPLY | MLB3_PDV_EC112-122 | VER.1.26 | APPLY | MLB3_PDV_EC341-343 |
| VER.0.18 | APPLY | MLB3_PDV_EC123-133 | VER.1.27 | APPLY | MLB3_PDV_EC345,346 |
| VER.0.19 | APPLY | MLB3_PDV_EC134-143 | VER.1.28 | APPLY | MLB3_PDV_EC347 |
| VER.0.20 | APPLY | MLB3_PDV_EC144-161 | VER.1.29 | APPLY | MLB3_PDV_EC348-350 |
| VER.0.21 | APPLY | MLB3_PDV_EC162-174 | VER.1.30 | APPLY | MLB3_PDV_EC351-354 |
| VER.0.22 | APPLY | MLB3_PDV_EC175-180 | VER.1.31 | APPLY | MLB3_PDV_EC355,356 |
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| VER.0.26 | APPLY | MLB3_PDV_EC186-190 | VER.1.35 | APPLY | MLB3_PDV_EC367 |
| VER.0.27 | APPLY | MLB3_PDV_EC191-194 | VER.1.36 | APPLY | MLB3_PDV_EC368 |
| VER.0.28 | APPLY | MLB3_PDV_EC 197 | VER.1.37 | APPLY | MLB3_PDV_EC369,370 |
| VER.0.29 | APPLY | MLB3_PDV_EC195,198,199 | VER.1.38 | APPLY | MLB3_PDV_EC371 |
| VER.1.00 | APPLY | MLB3_PDV_EC200,201 | VER.1.39 | APPLY | MLB3_PDV_EC372 |
| 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 |
| VER.1.04 | APPLY | MLB3_PDV_EC229-234 | | | |
| VER.1.05 | APPLY | MLB3_PDV_EC235-244 | | | |
| VER.1.06 | APPLY | MLB3_PDV_EC245-262 | | | |
| VER.1.07 | APPLY | MLB3_PDV_EC263-267 | | | |
| VER.1.08 | APPLY | MLB3_PDV_EC268-275 | | | |

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| APPROVED | H.K | 09/28/07 | | EC HISTORY |
| CLASS | H.K | 09/28/07 | | |
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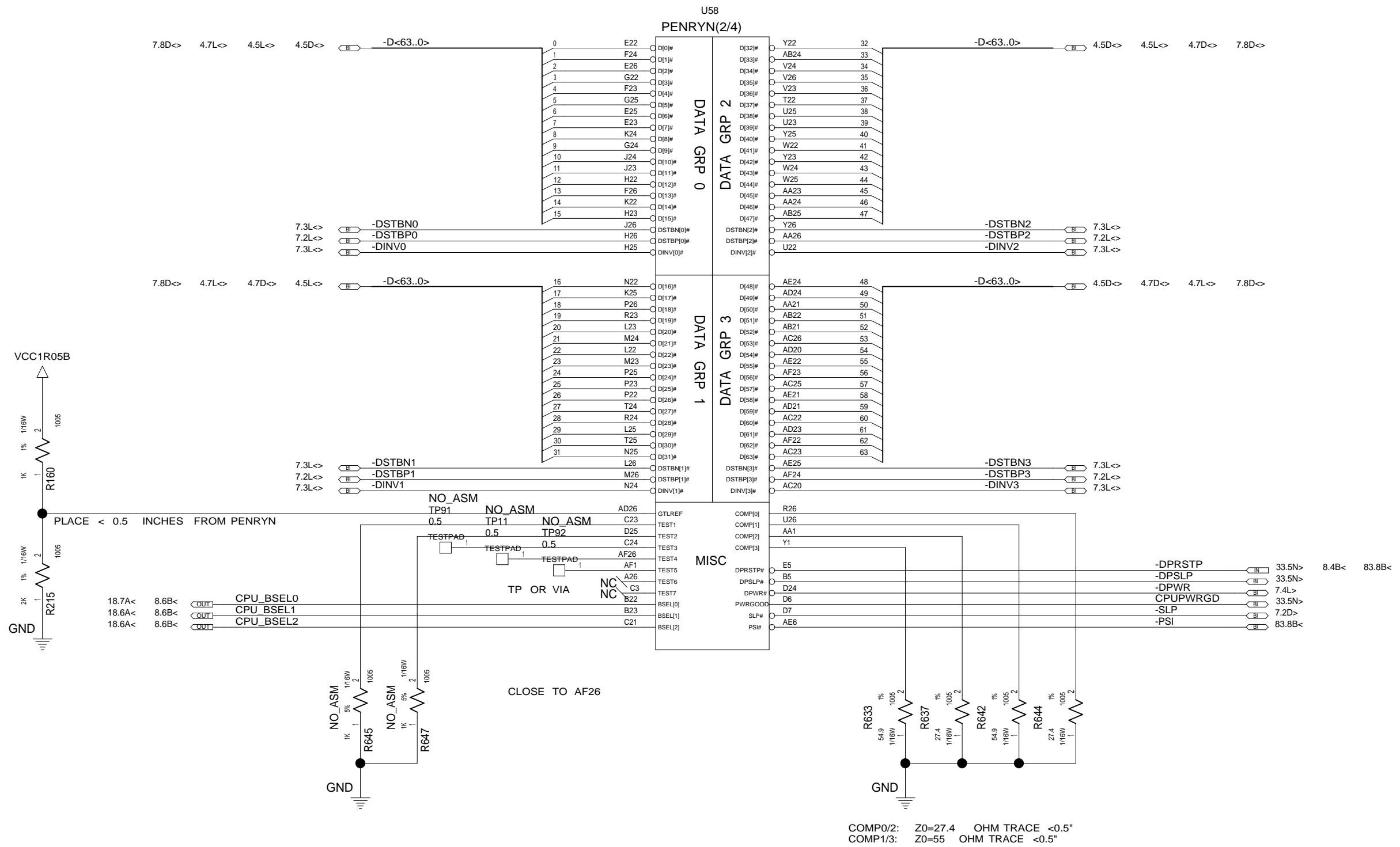
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| REL | DATE | EC NO. | PART NO. VER.1.42 | |
| | | | DEVELOPMENT NO. | Q/M 3 / 101 |



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| APPROVED | H.K | 09/28/07 | CPU(1/3) | |
| CLASS | H.K | 09/28/07 | LENOVO CONFIDENTIAL | |

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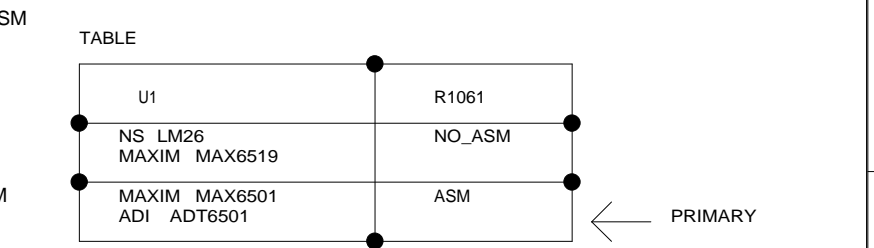
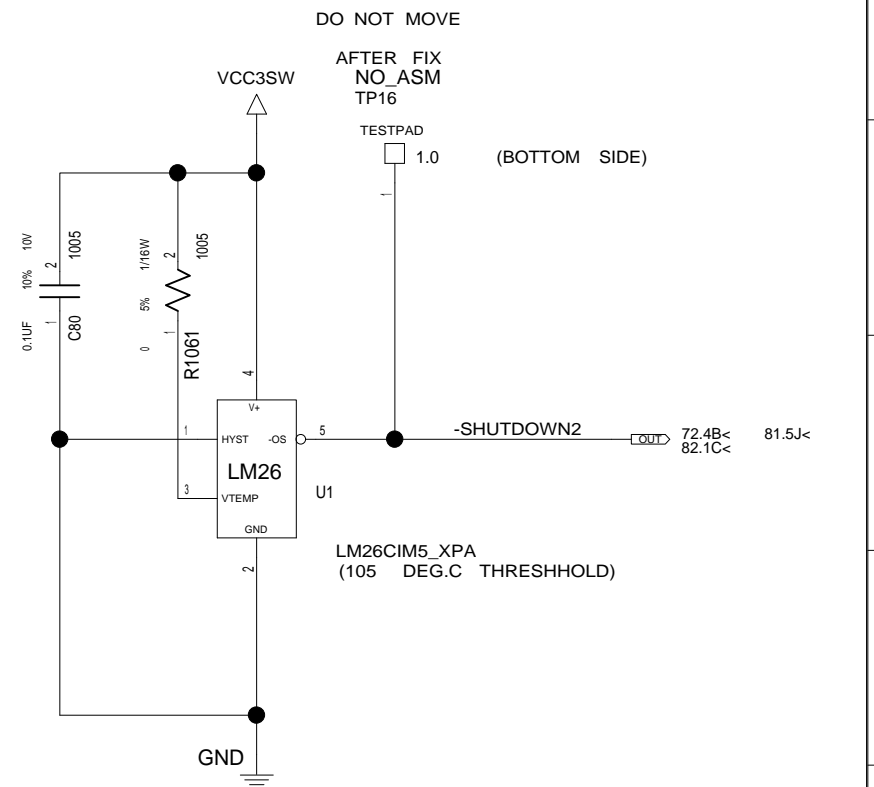
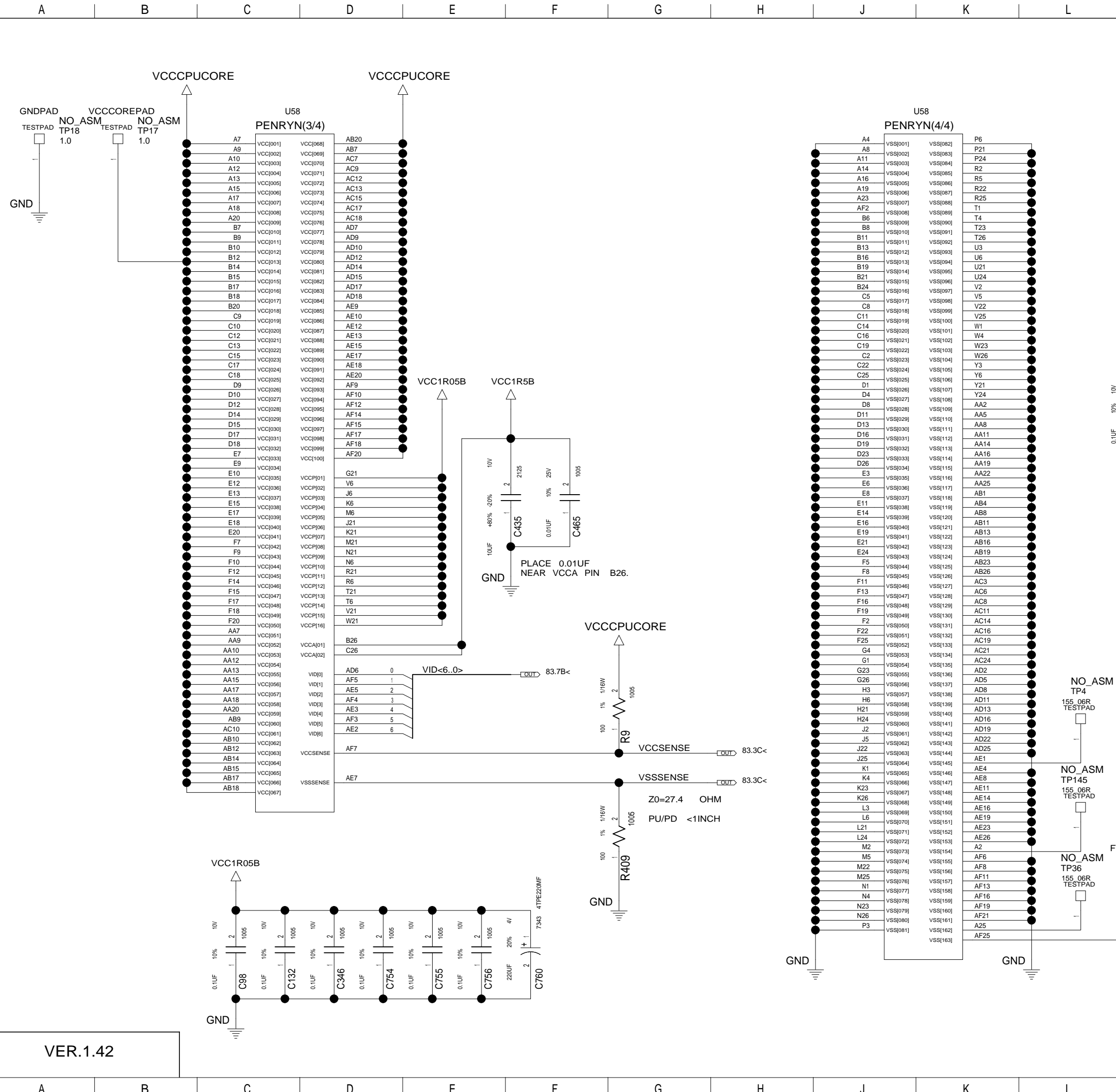
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| REL | | | VER.1.42 | |
| | | | DEVELOPMENT NO. | Q/M |
| | | | | 4 / 101 |



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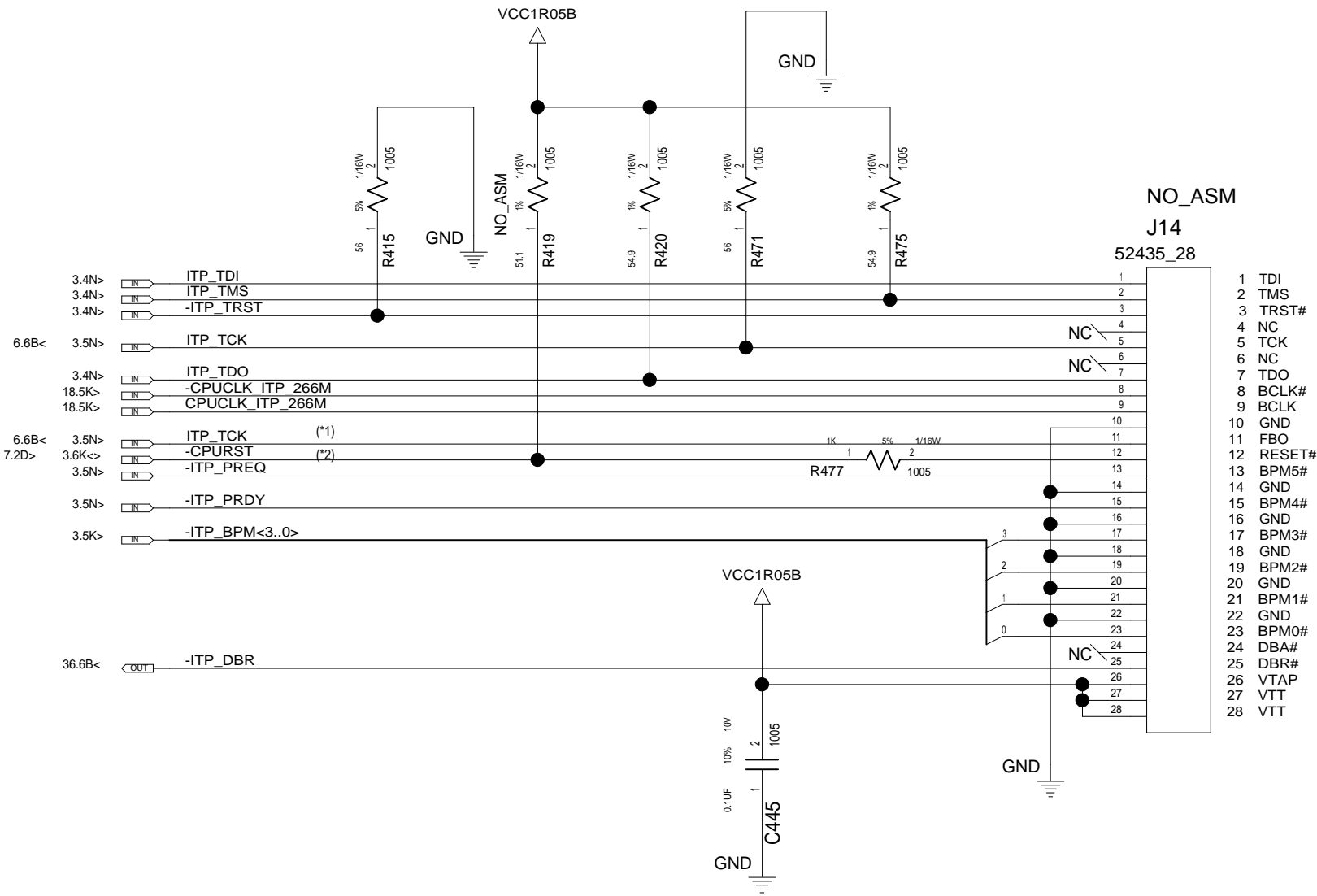
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| APPROVED | H.K | 09/28/07 | TITLE MLB-3 EXT SDV | |
| CLASS | H.K | 09/28/07 | CPU(2/3) | |
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| | | | 5 / 101 |



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| 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

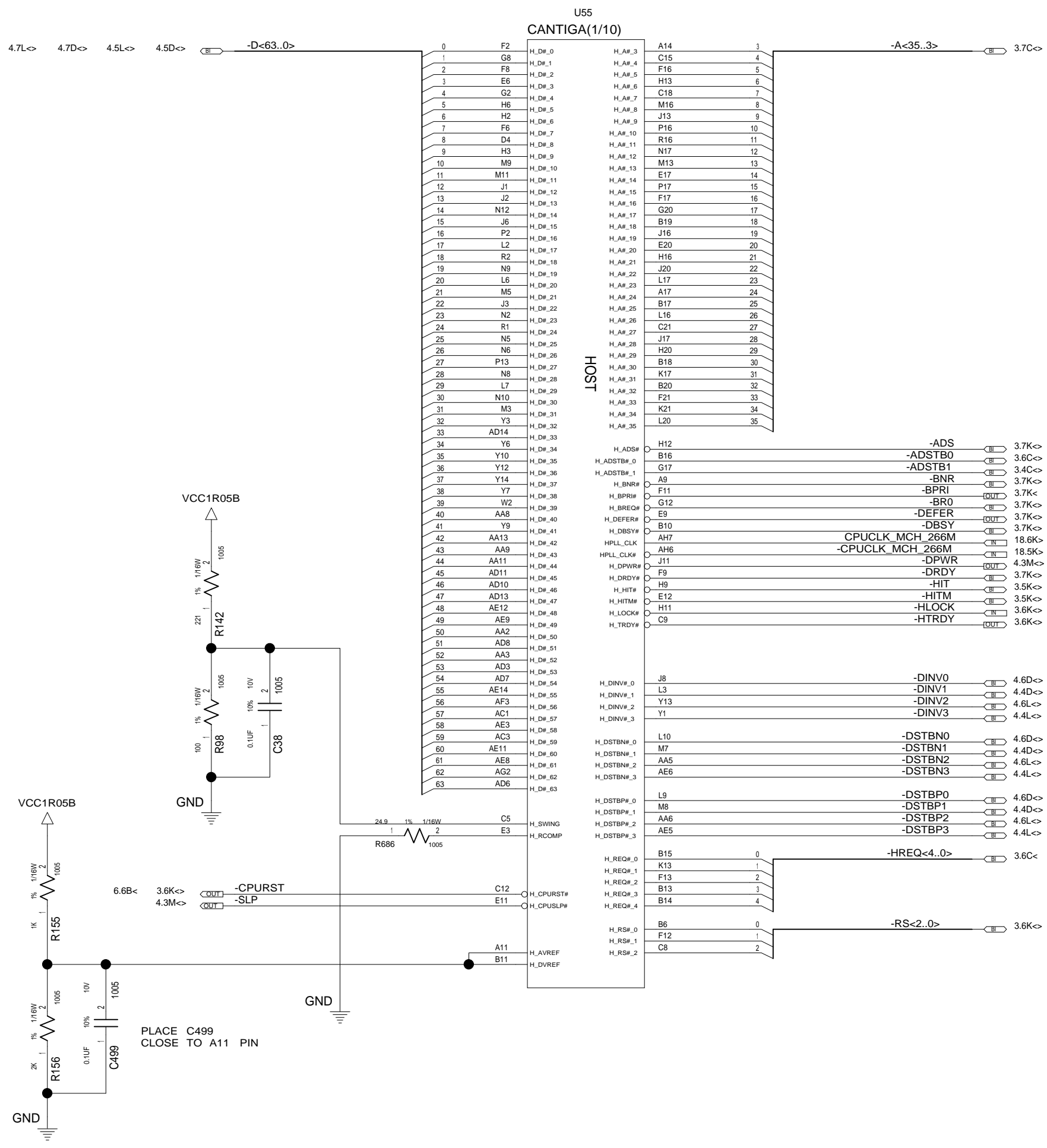
TABLE

| 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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VER.1.42

PLACE C499
CLOSE TO A11 PIN

| | | | | |
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| CLASS | H.K | 09/28/07 | CANTIGA(1/8):HOST I/F | |
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| | | | VER.1.42 |
| | | | DEVELOPMENT NO. |
| | | | Q/M |
| | | | 8 / 101 |

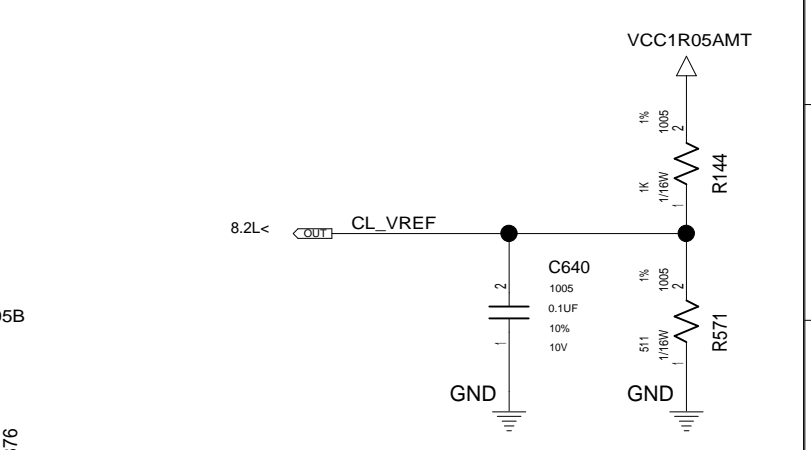
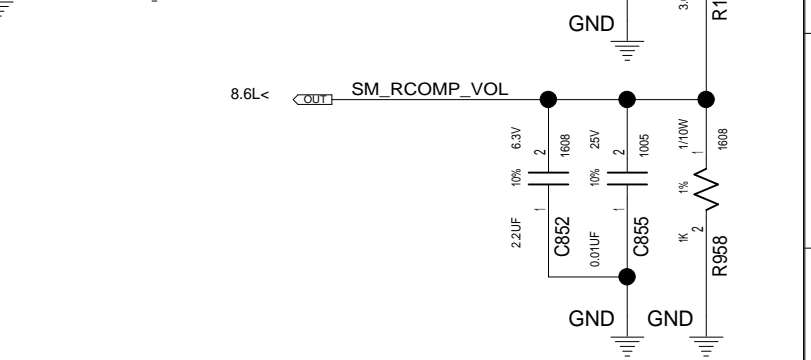
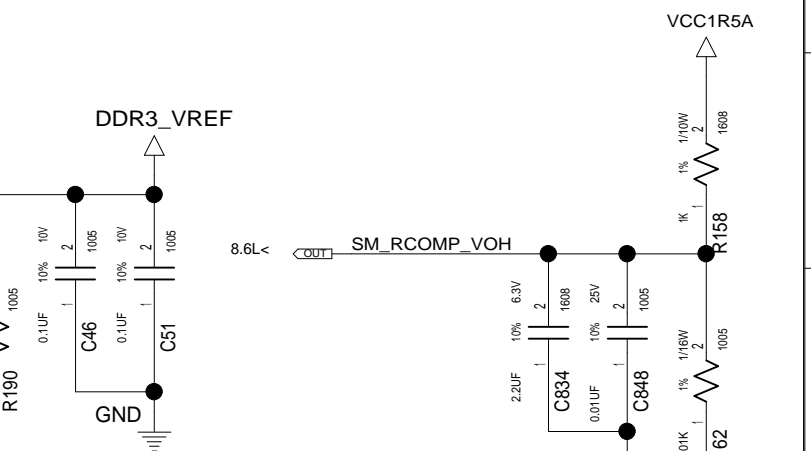
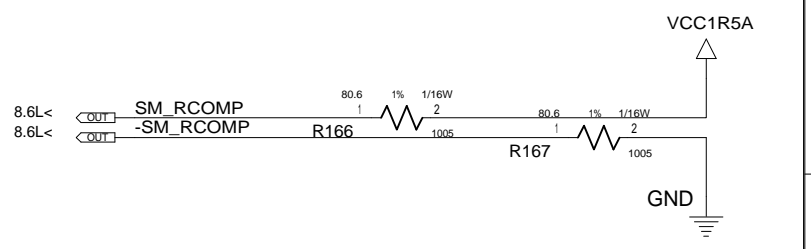
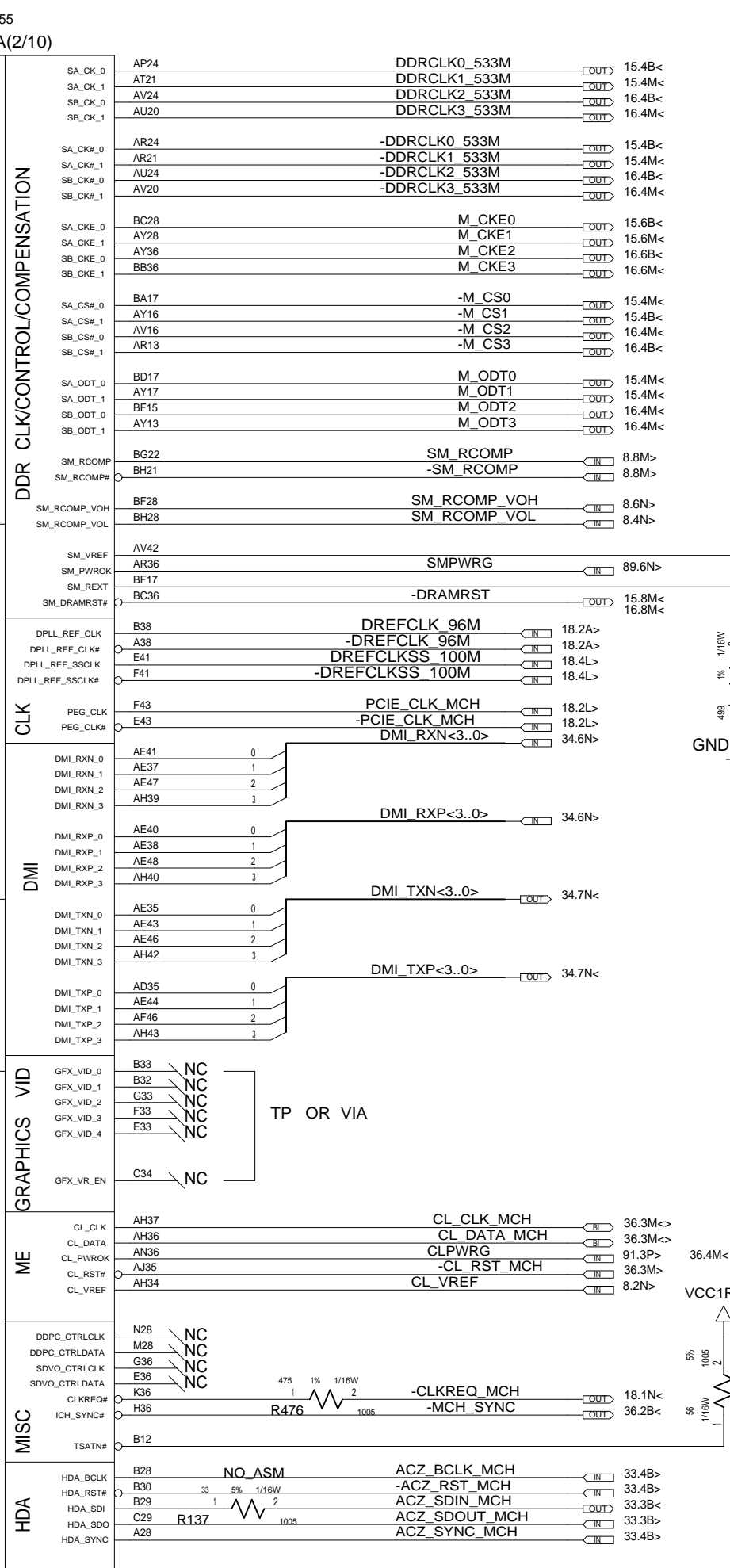
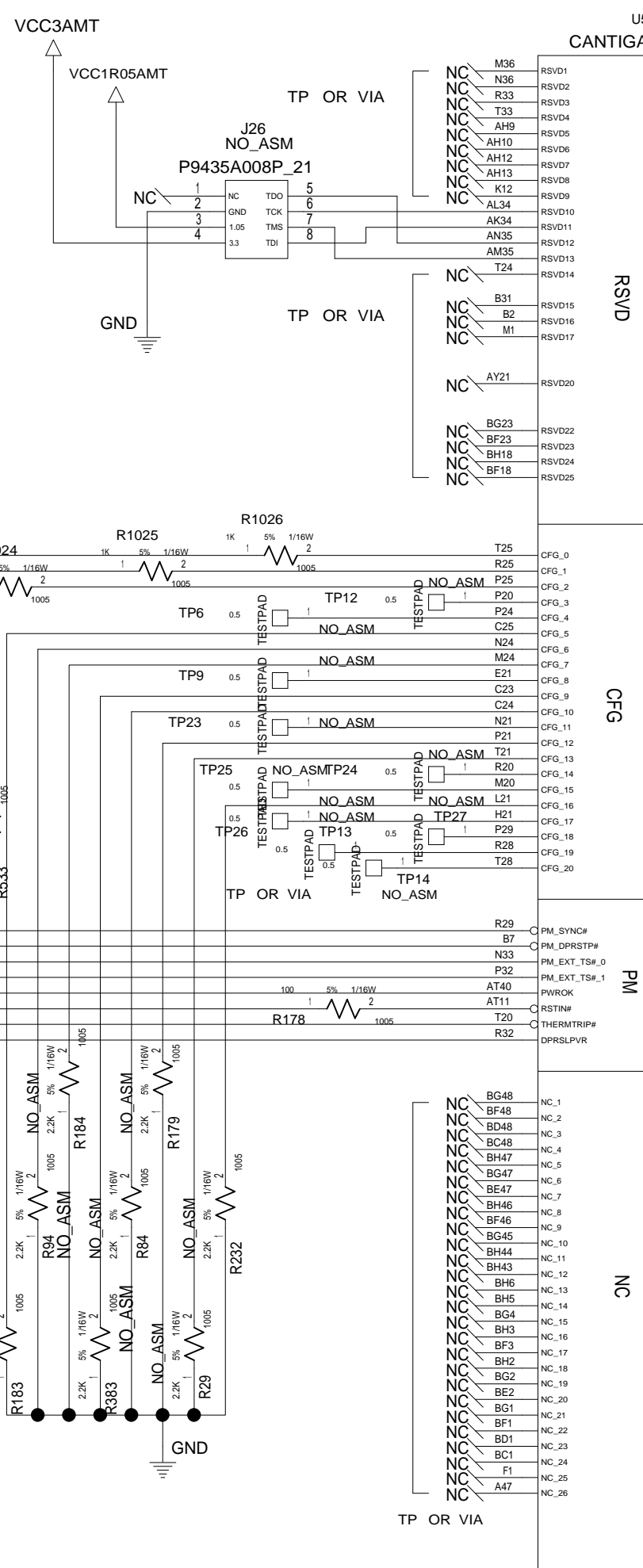
ME DEBUG PORT PIN OUT TABLE

| | |
|--------|-------------|
| 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 |

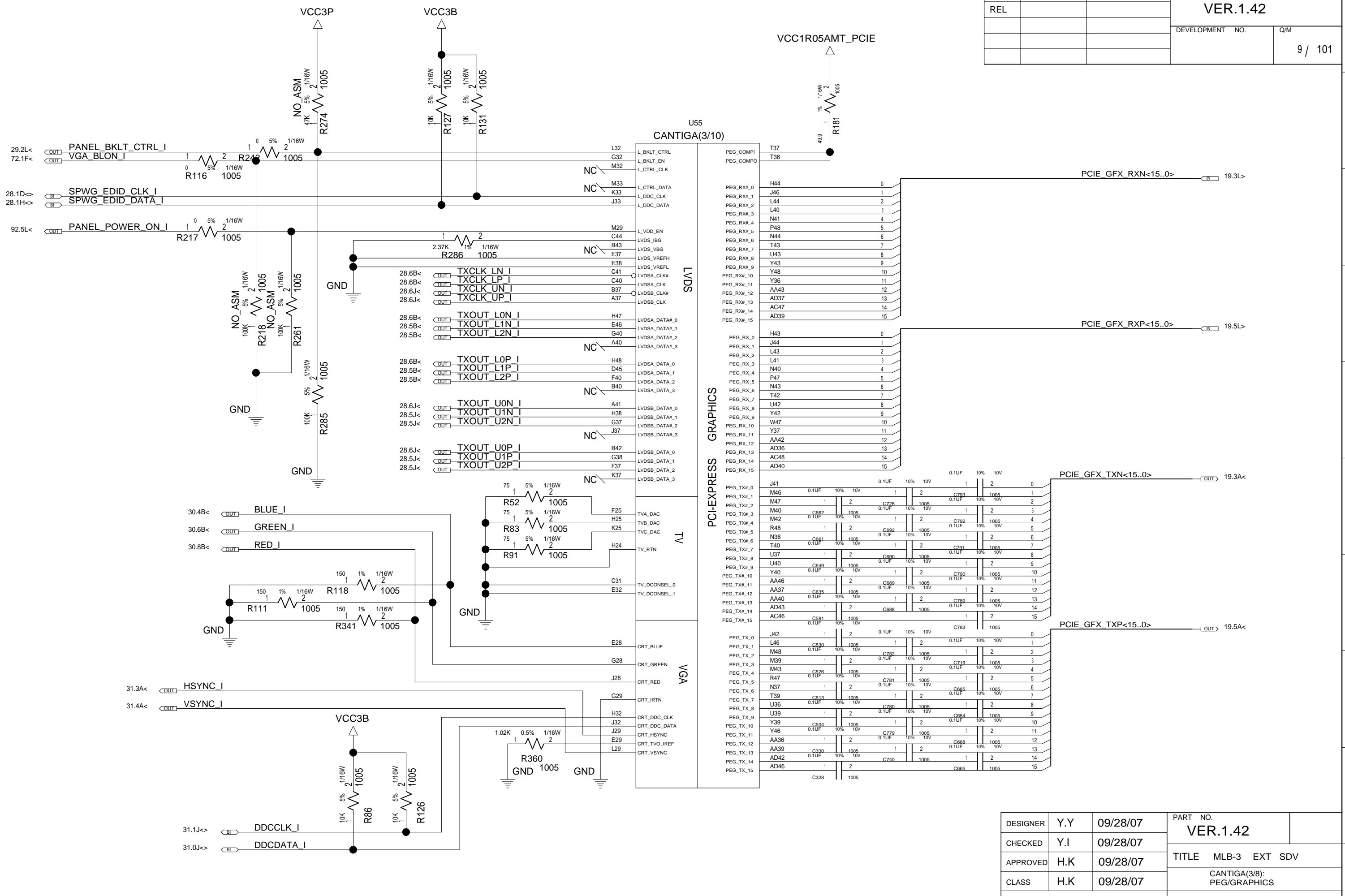


| | |
|------------|-------------------|
| CFG[17:3] | INTERNAL PULLUP |
| CFG[20:18] | INTERNAL PULLDOWN |

| | |
|------------------------|--------|
| 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 |

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| | | | CANTIGA(2/8): |
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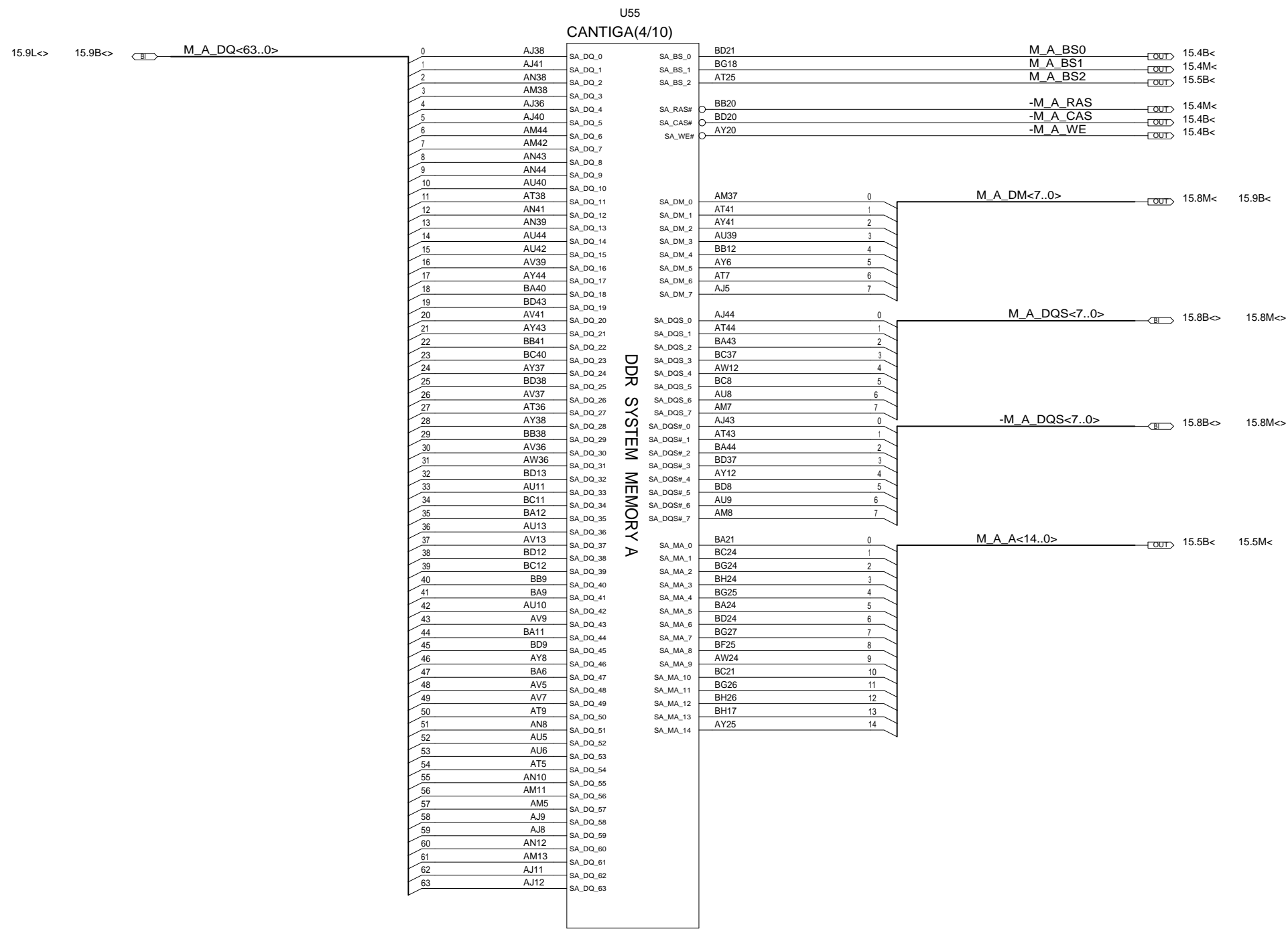
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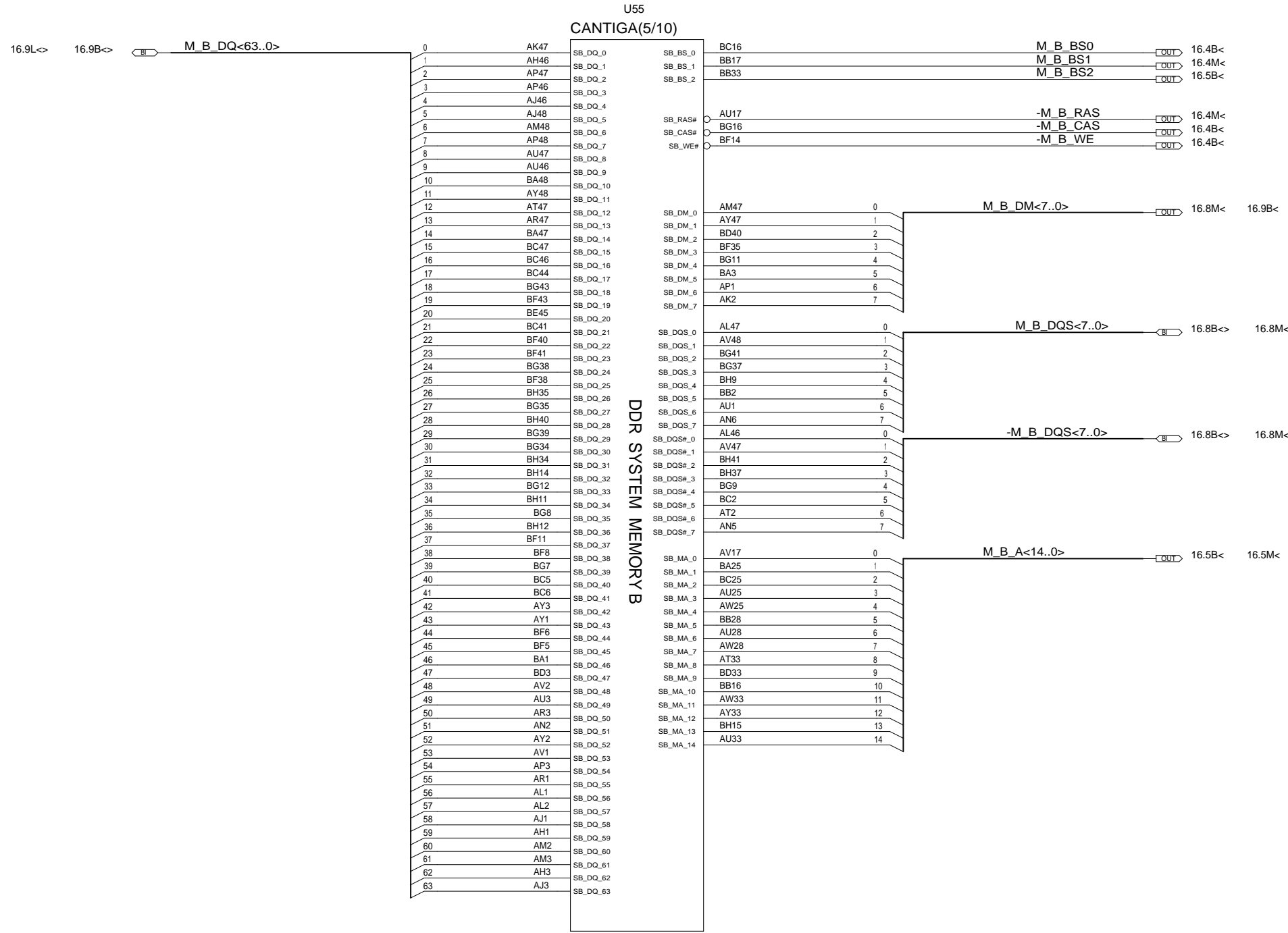
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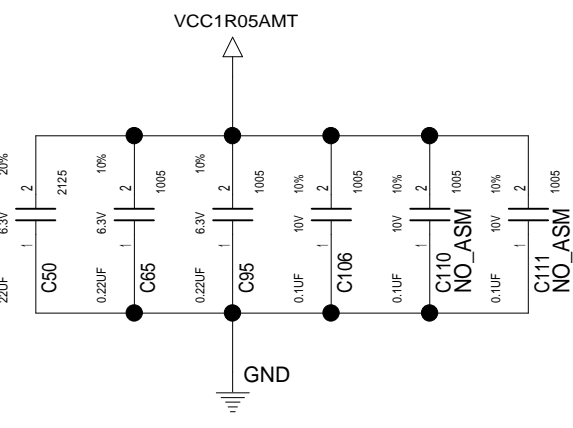
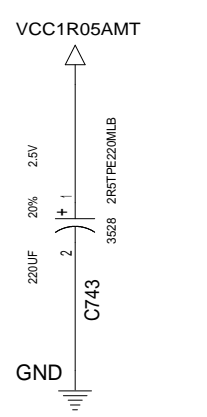
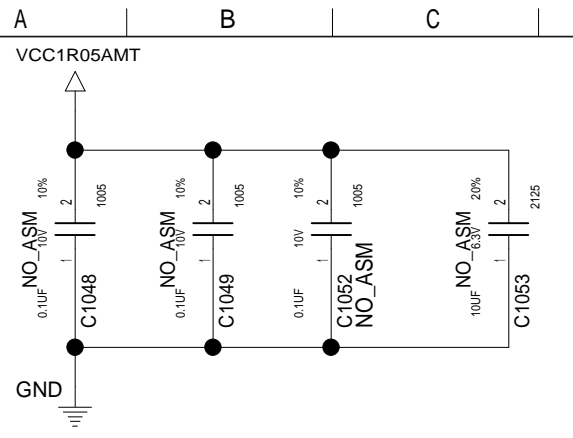
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| | | | DEVELOPMENT NO. | Q/M |
| | | | | 11 / 101 |

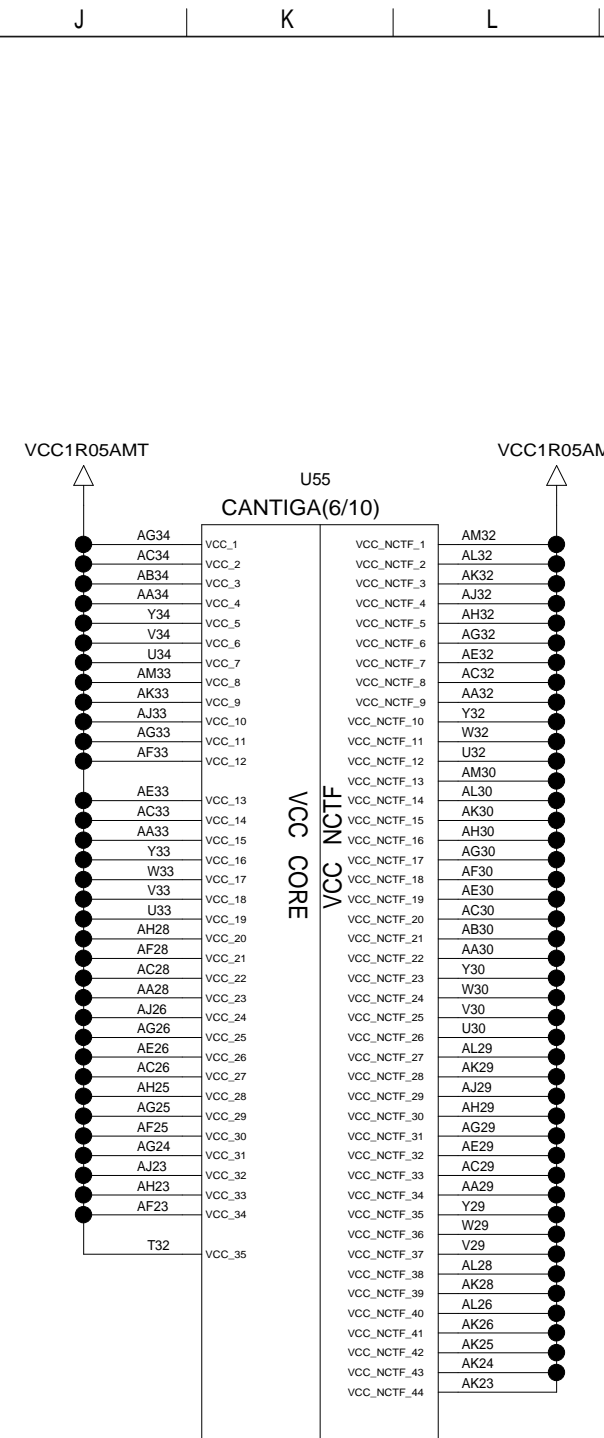
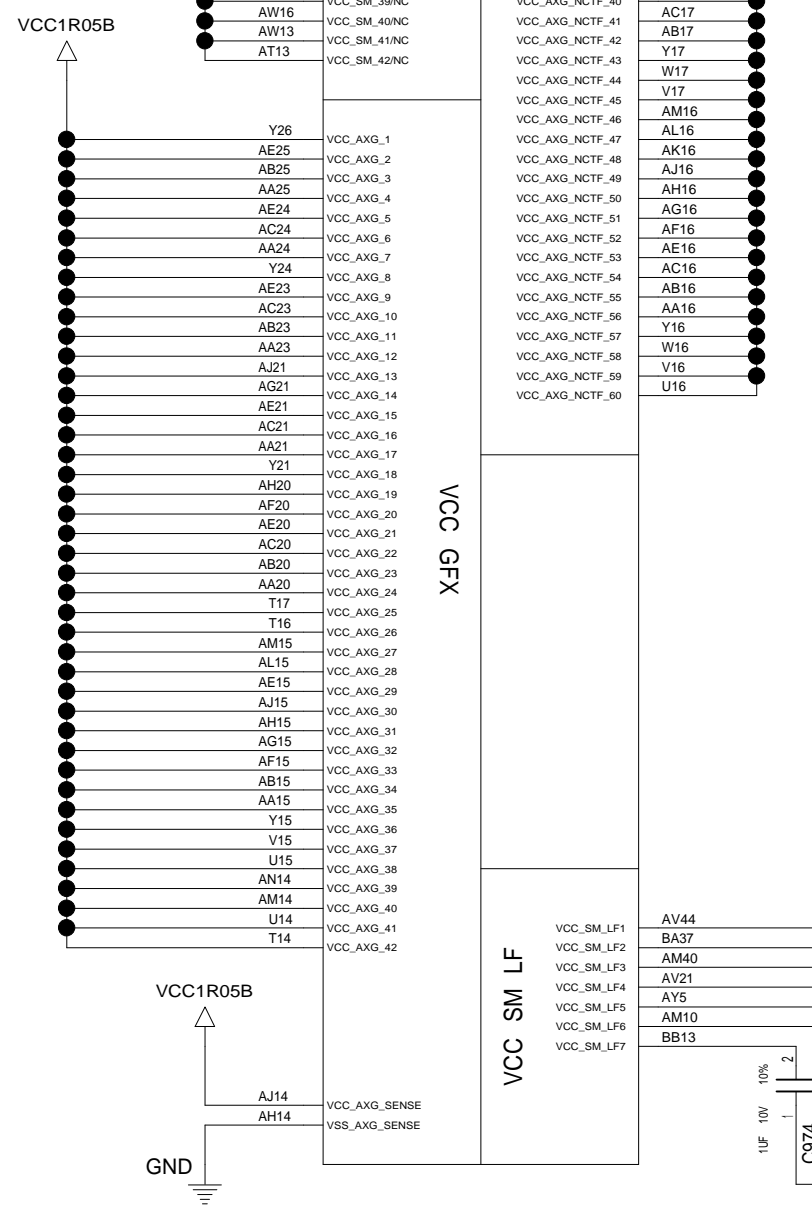
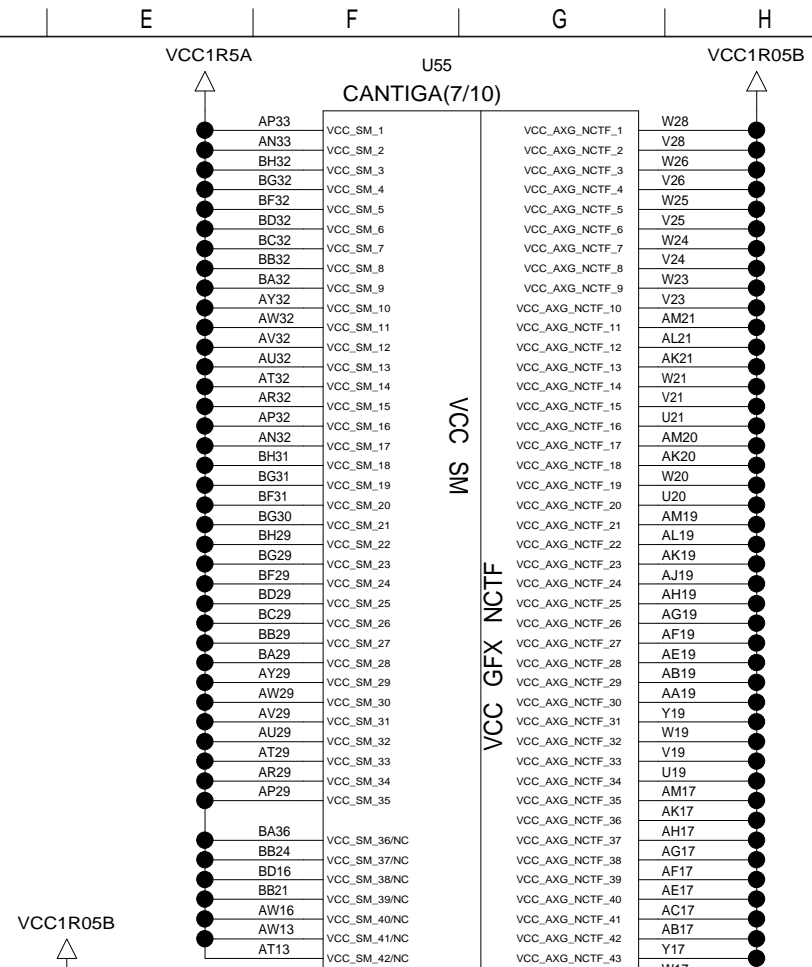


VER.1.42

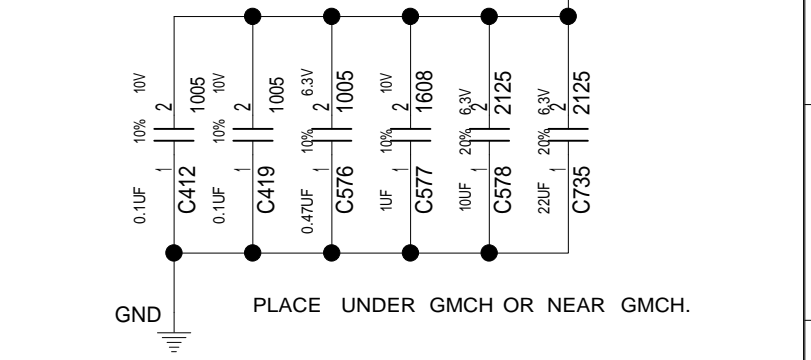
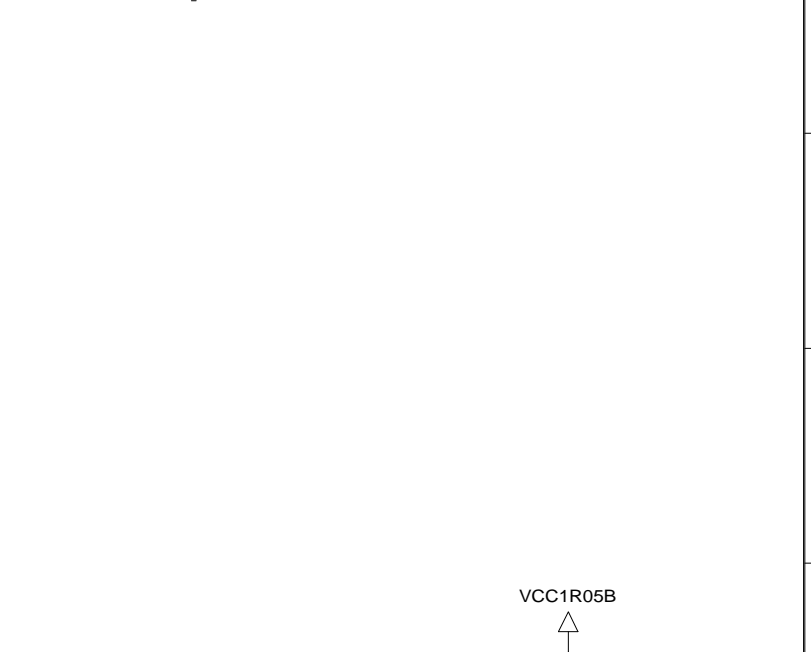
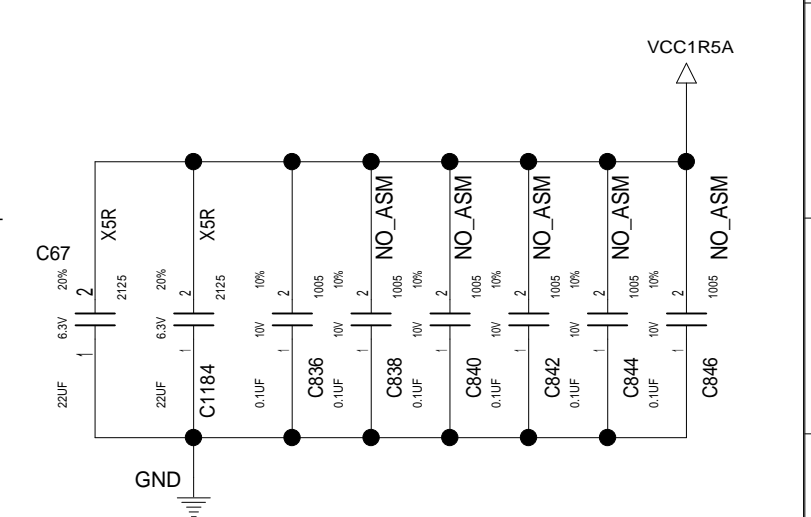
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| CHECKED | Y.I | 09/28/07 | VER.1.42 | |
| APPROVED | H.K | 09/28/07 | TITLE MLB-3 EXT SDV | |
| CLASS | H.K | 09/28/07 | CANTIGA(5/8): DDR3 CHANNEL-B | |
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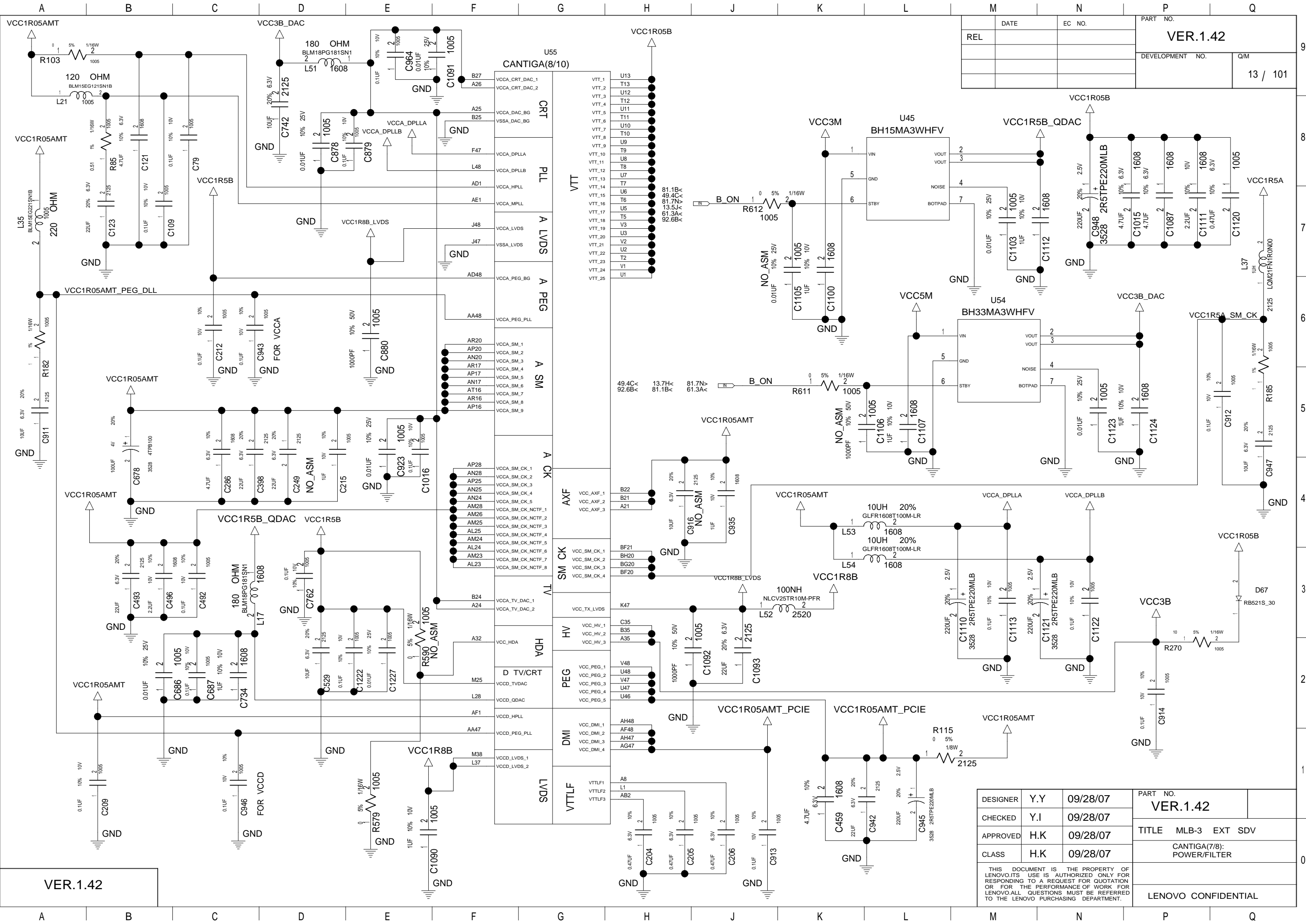
VER.1.42



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



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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 | CANTIGA(6/8):POWER |
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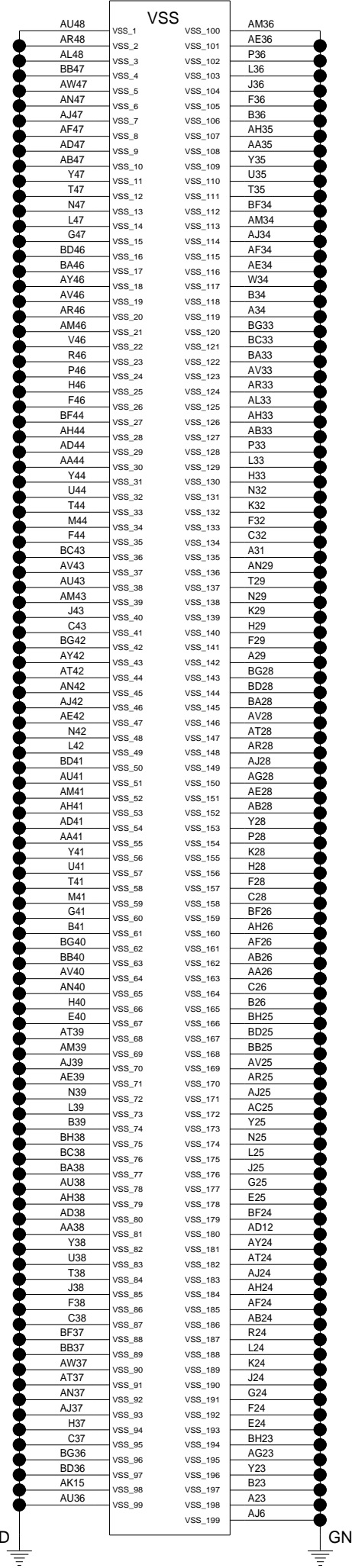
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| | | | 13 / 101 |

VER.1.42

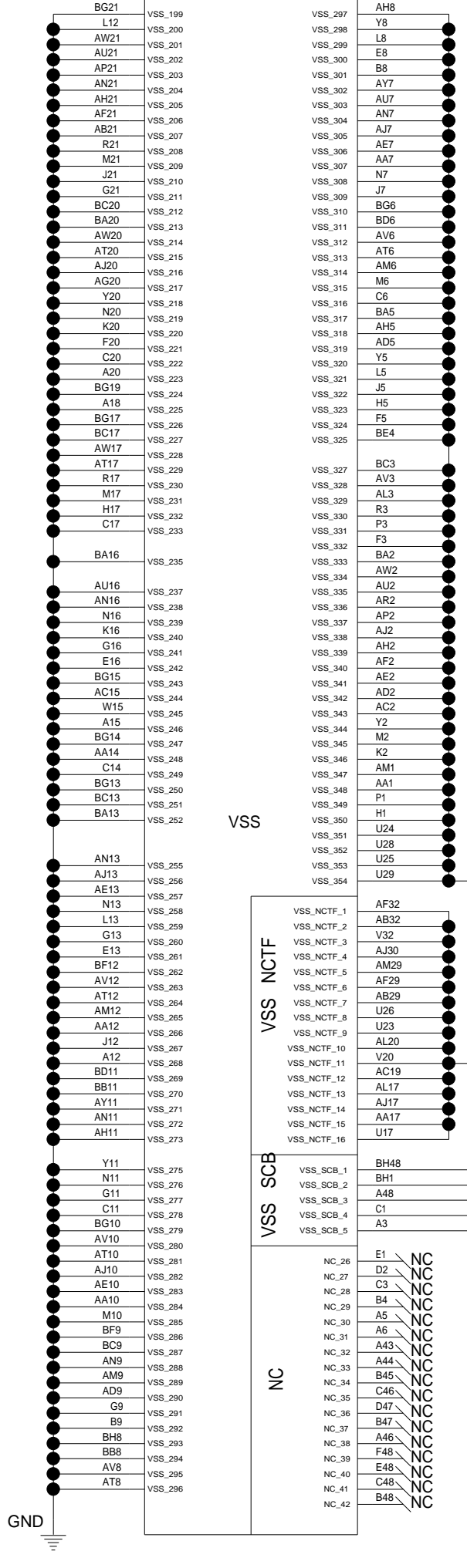
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| CHECKED | Y.I | 09/28/07 | VER.1.42 |
| APPROVED | H.K | 09/28/07 | TITLE |
| CLASS | H.K | 09/28/07 | MLB-3 EXT SDV |
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| LENOVO CONFIDENTIAL | | | |

| | | | | |
|-----|------|--------|-----------------|----------|
| | DATE | EC NO. | PART NO. | |
| REL | | | VER.1.42 | |
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| | | | | 14 / 101 |

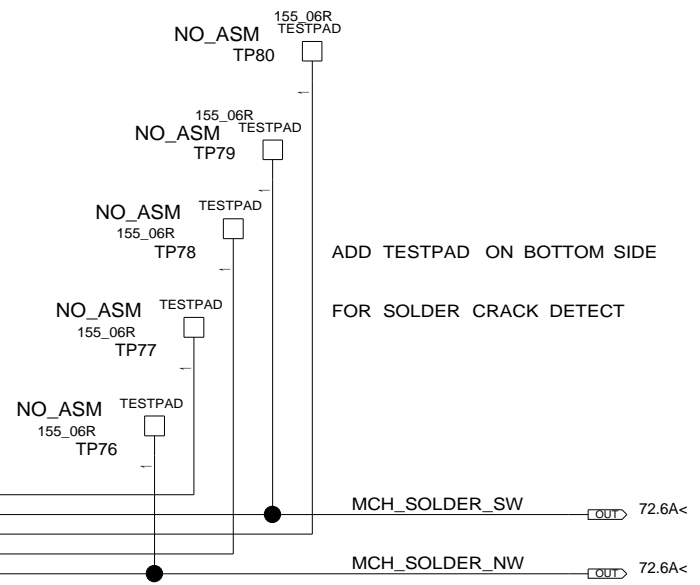
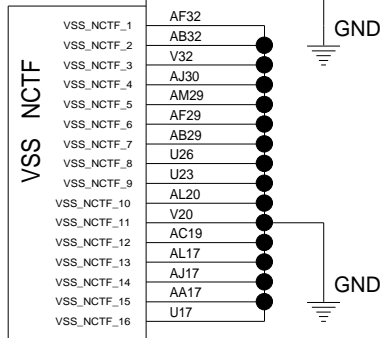
U55 CANTIGA(9/10)



U55 CANTIGA(10/10)



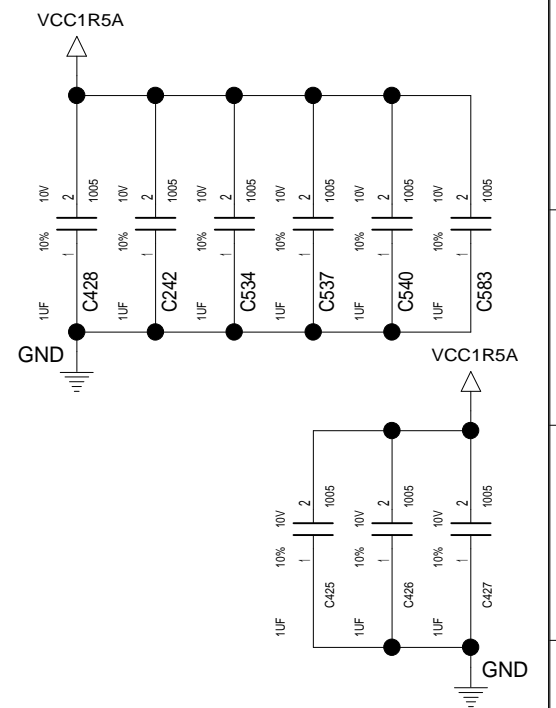
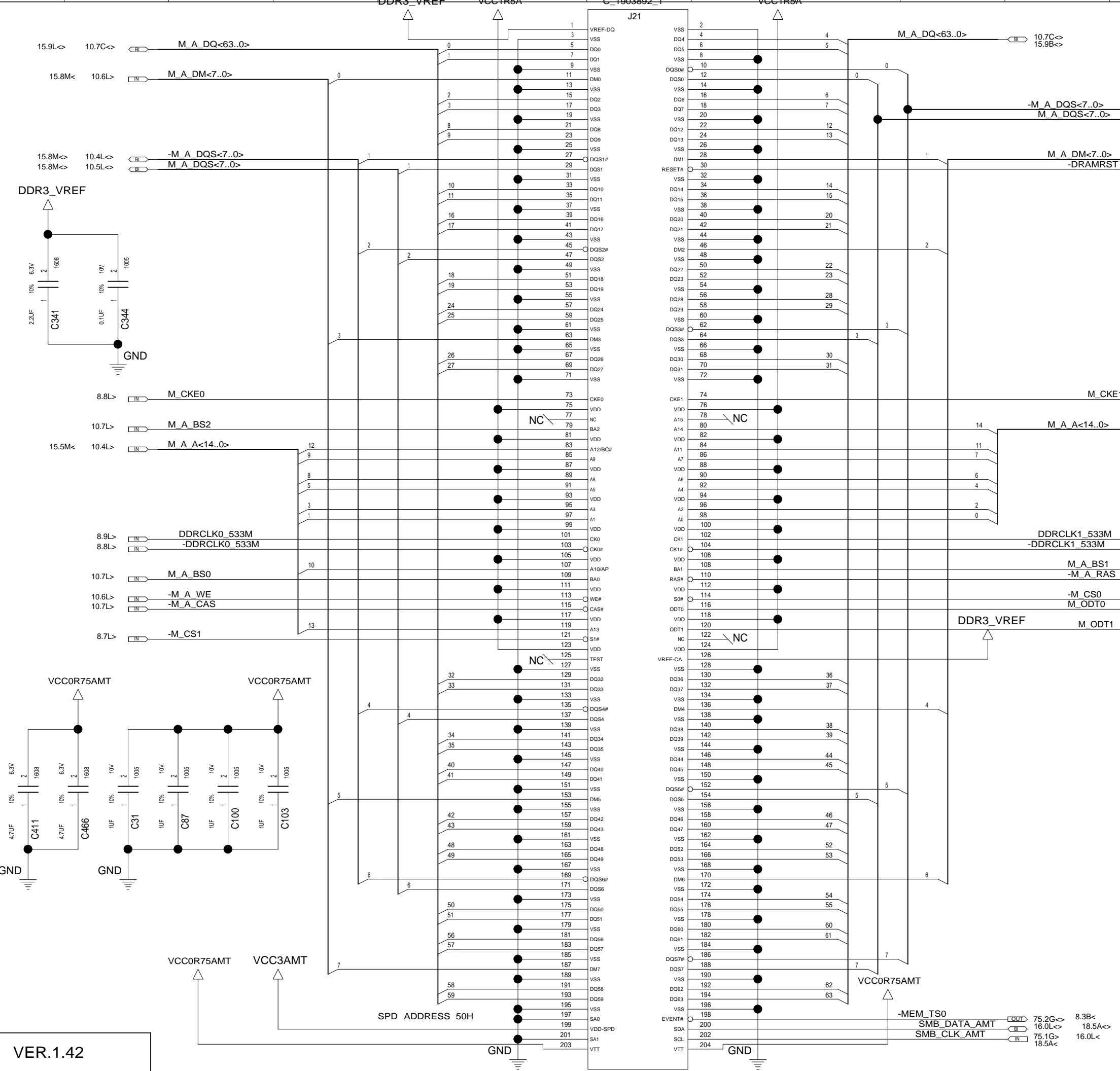
VSS



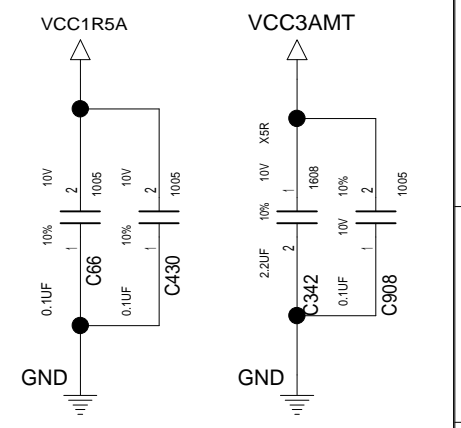
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| CHECKED | Y.I | 09/28/07 | TITLE | MLB-3 EXT SDV |
| APPROVED | H.K | 09/28/07 | | CANTIGA(8/8):GND |
| CLASS | H.K | 09/28/07 | LENOVO CONFIDENTIAL | |

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| | | | | 15 / 101 |



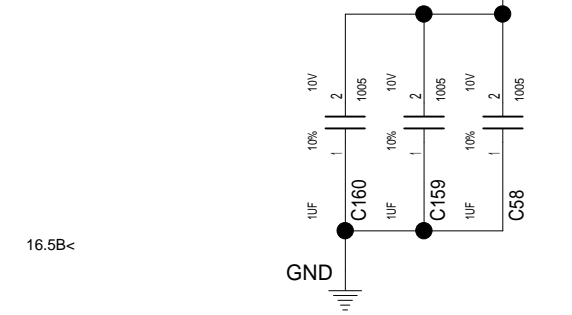
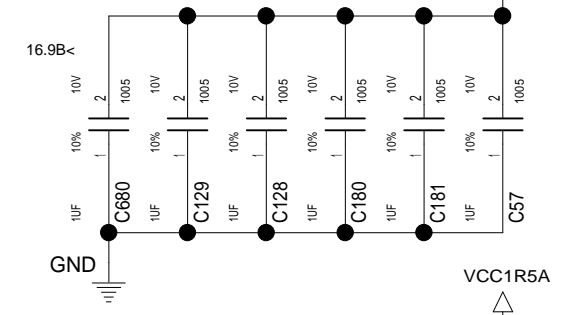
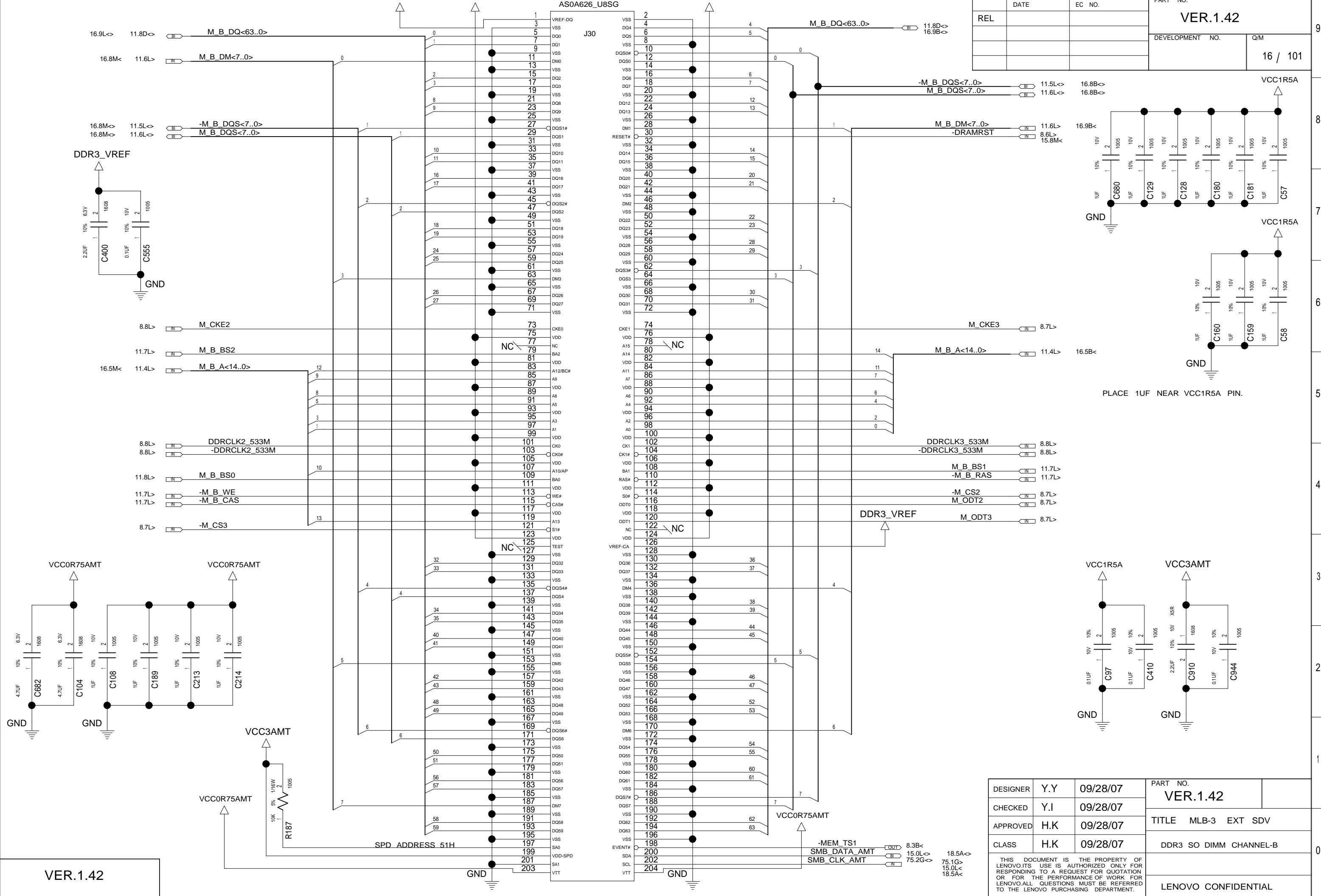
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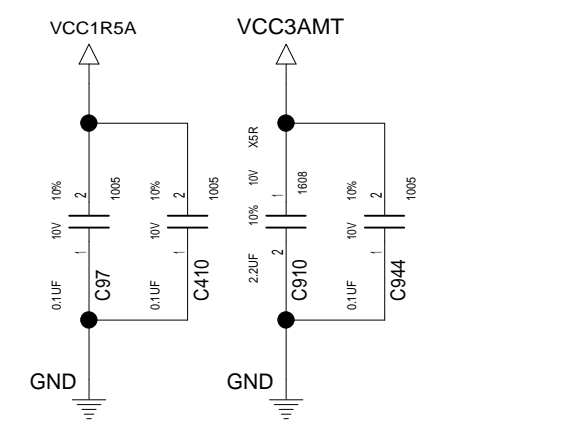
VER.1.42

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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-A | |
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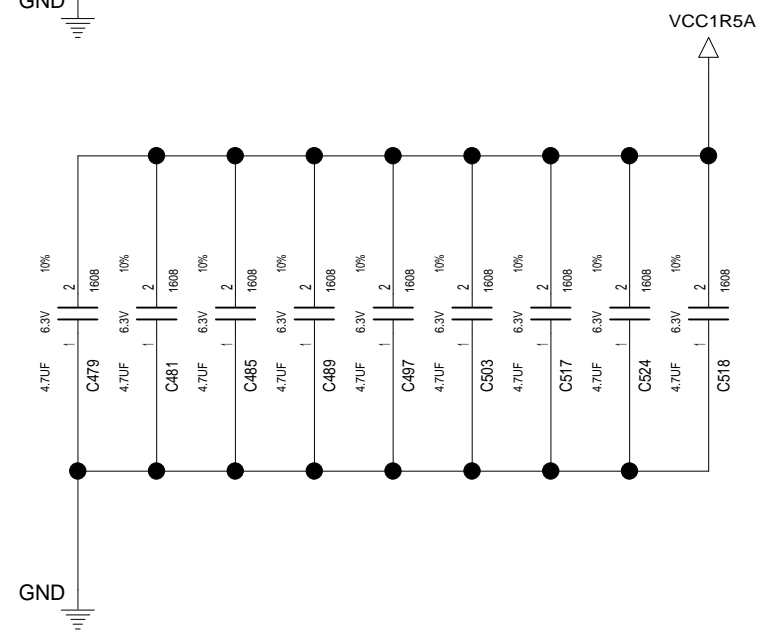
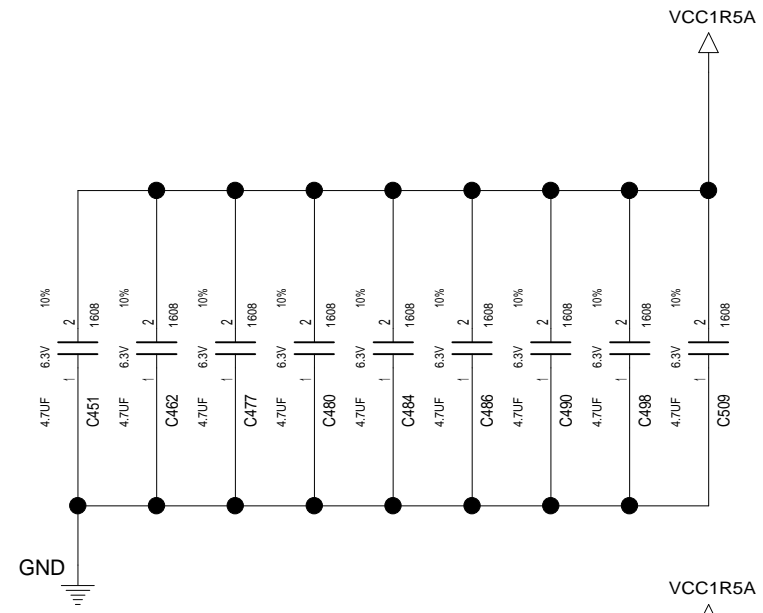
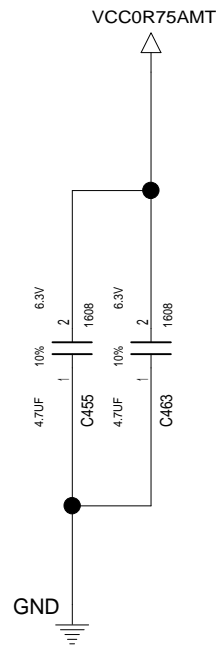
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VER.1.42

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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 | DDR3 SO DIMM CHANNEL-B | |
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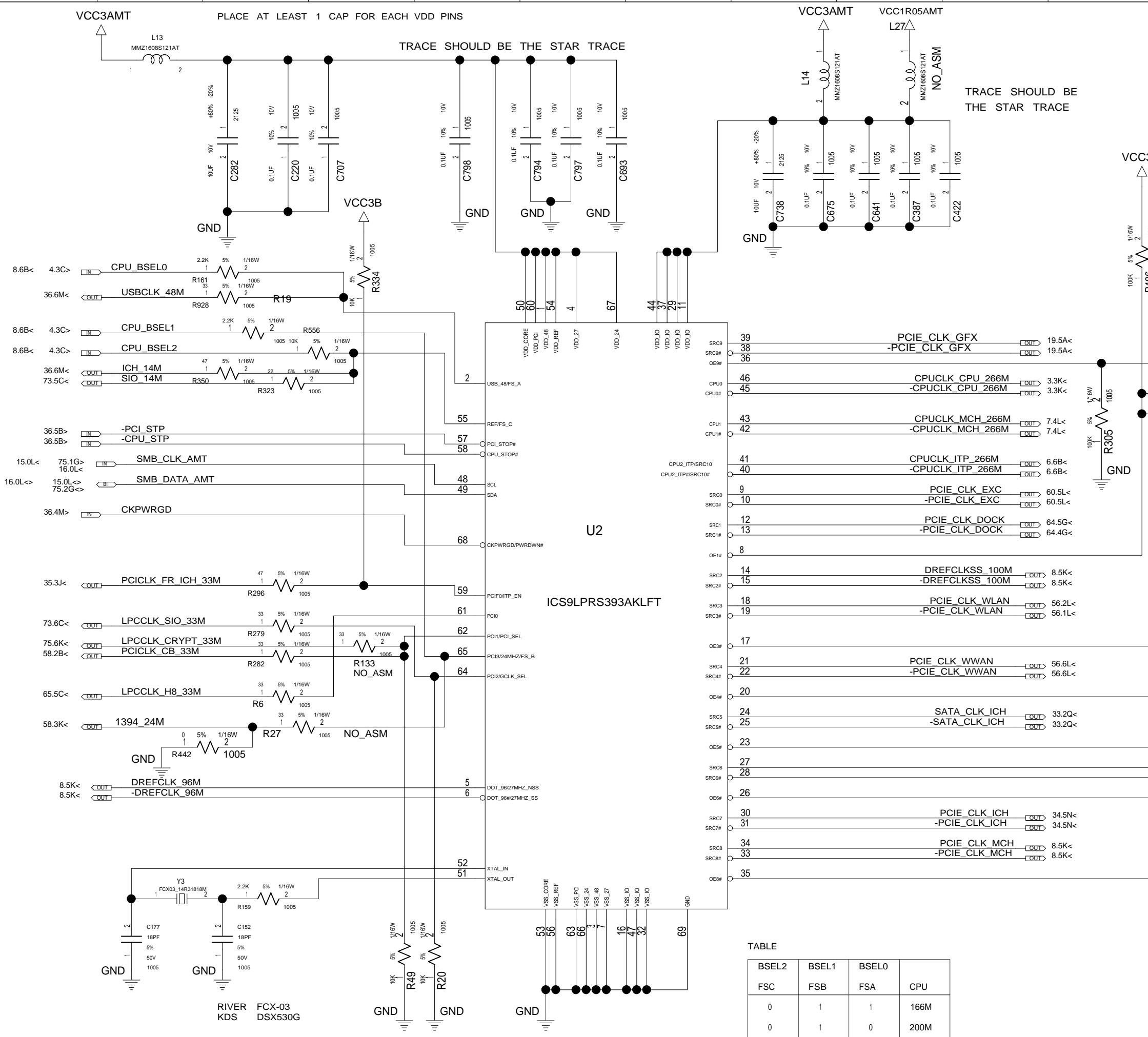
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| | DATE | EC NO. | PART NO. | |
| REL | | | VER.1.42 | |
| | | | DEVELOPMENT NO. | Q/M |
| | | | | 17 / 101 |



VER.1.42

| | | | | |
|---|-----|----------|---------------------|----------|
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| CHECKED | Y.I | 09/28/07 | TITLE MLB-3 EXT SDV | |
| APPROVED | H.K | 09/28/07 | DDR3 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 |
| | | | 18 / 101 |



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

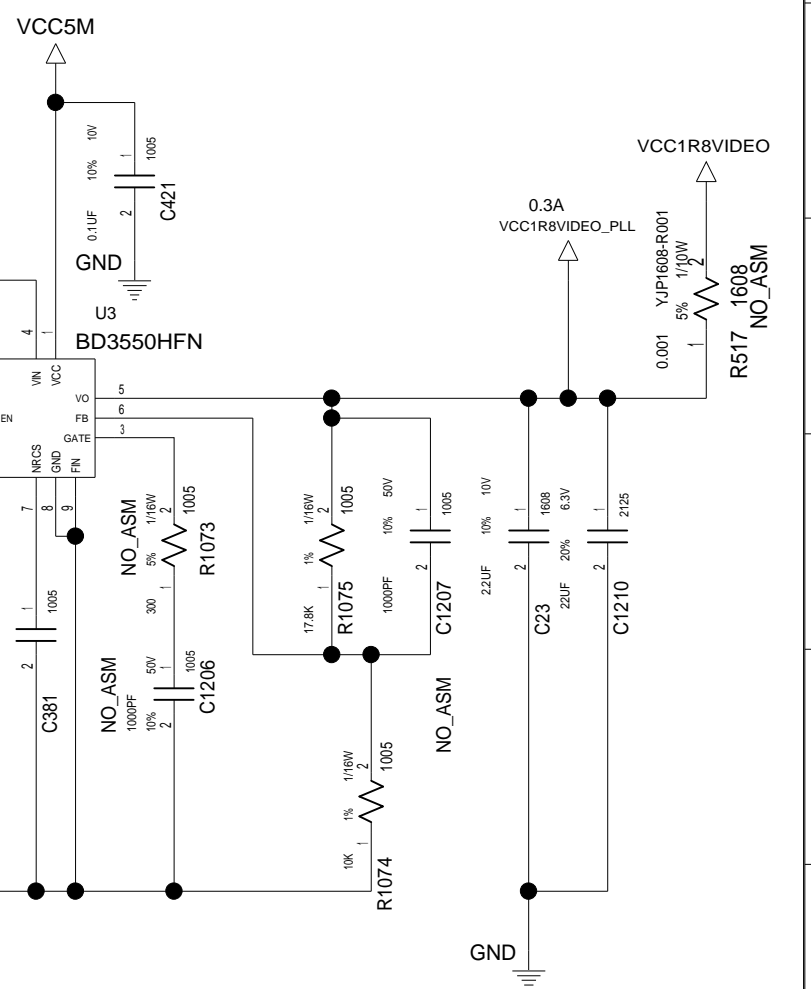
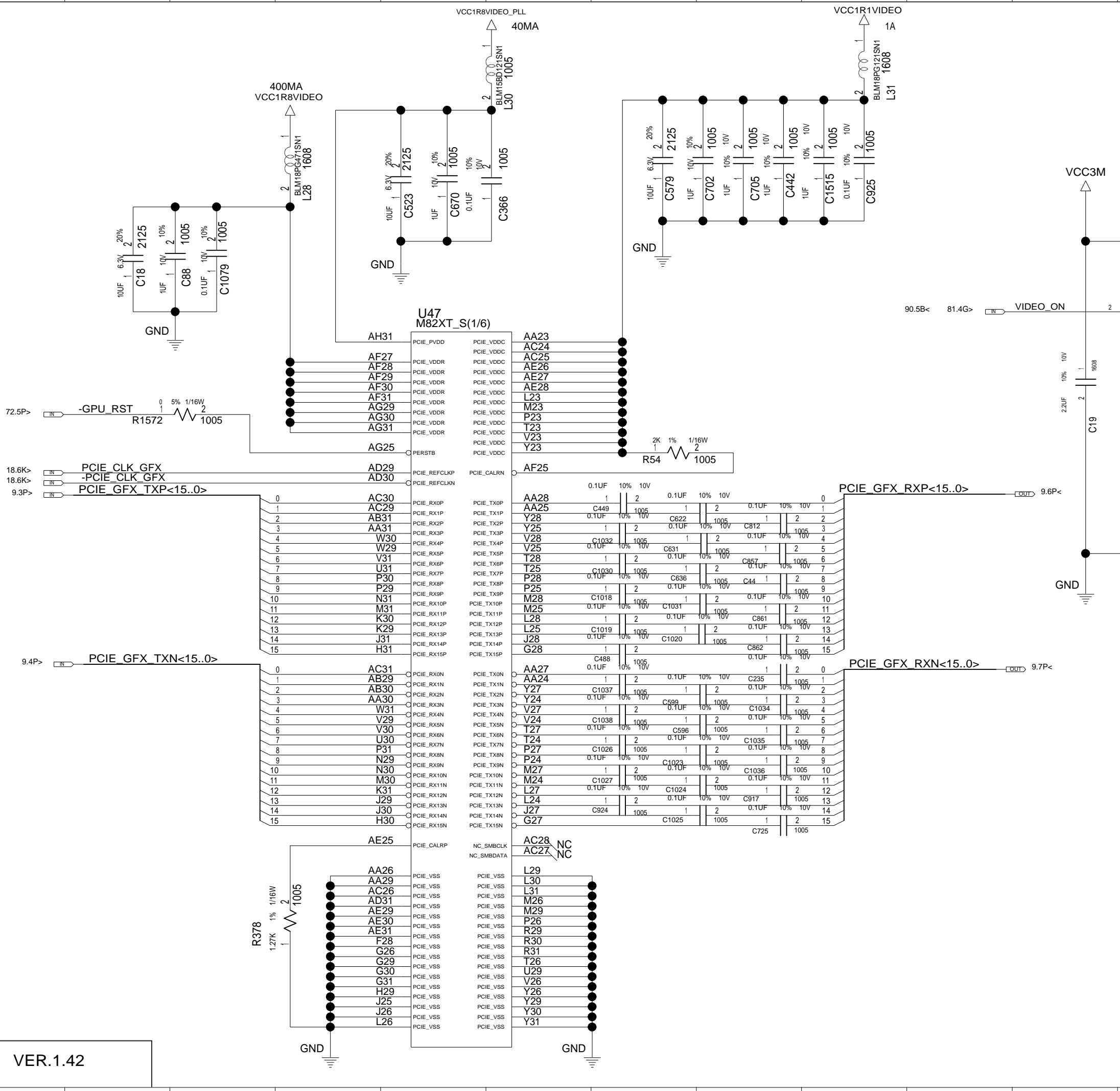
| BSEL2 | BSEL1 | BSEL0 | CPU |
|-------|-------|-------|------|
| FSC | FSB | FSA | CPU |
| 0 | 1 | 1 | 166M |
| 0 | 1 | 0 | 200M |
| 0 | 0 | 0 | 266M |
| 1 | 0 | 0 | 333M |

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

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| | | | DEVELOPMENT NO. | Q/M |
| | | | | 19 / 101 |

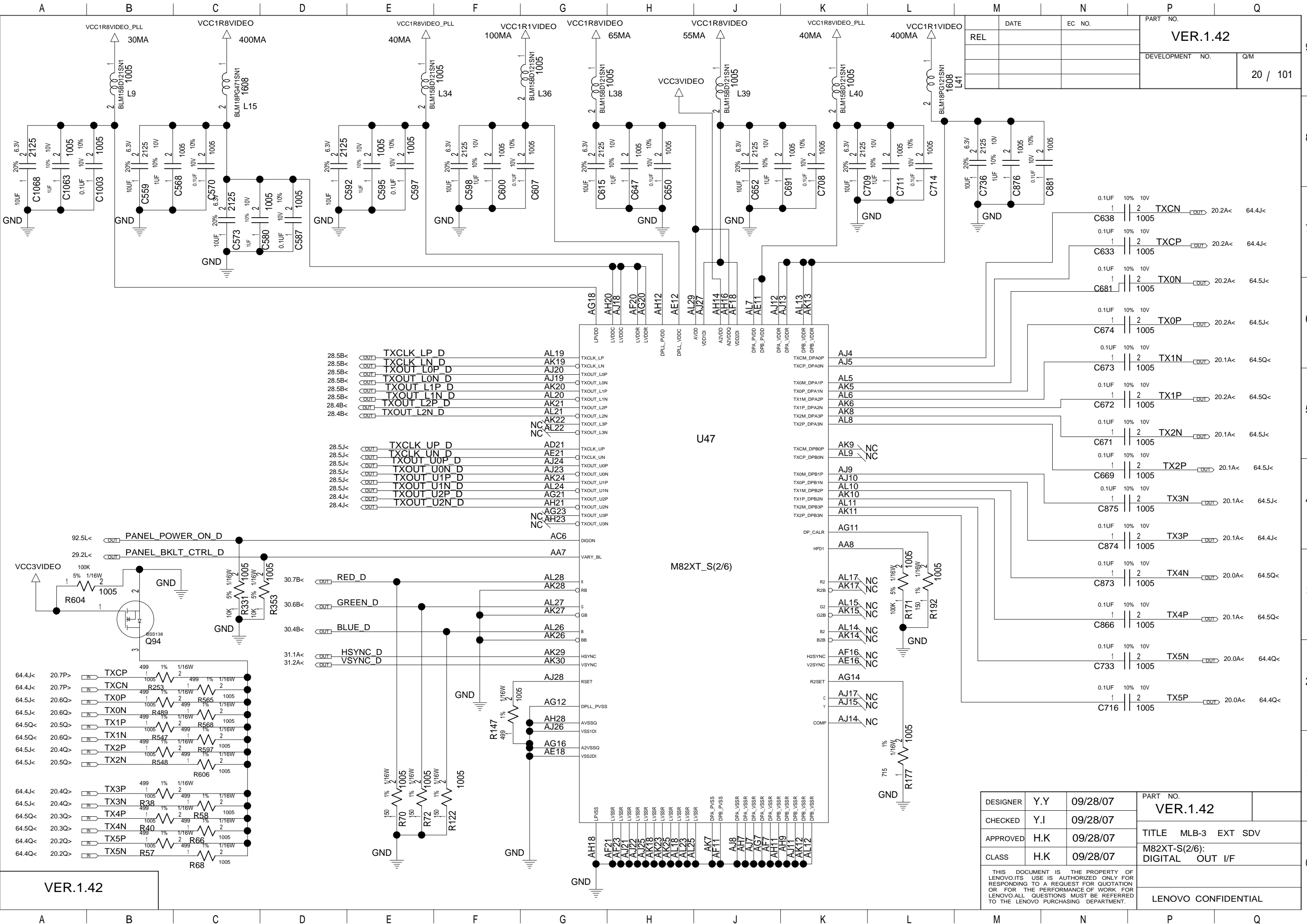


VER.1.42

| | | | | |
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| 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(1/6):PEG I/F | |
| CLASS | H.K | 09/28/07 | LENOVO CONFIDENTIAL | |

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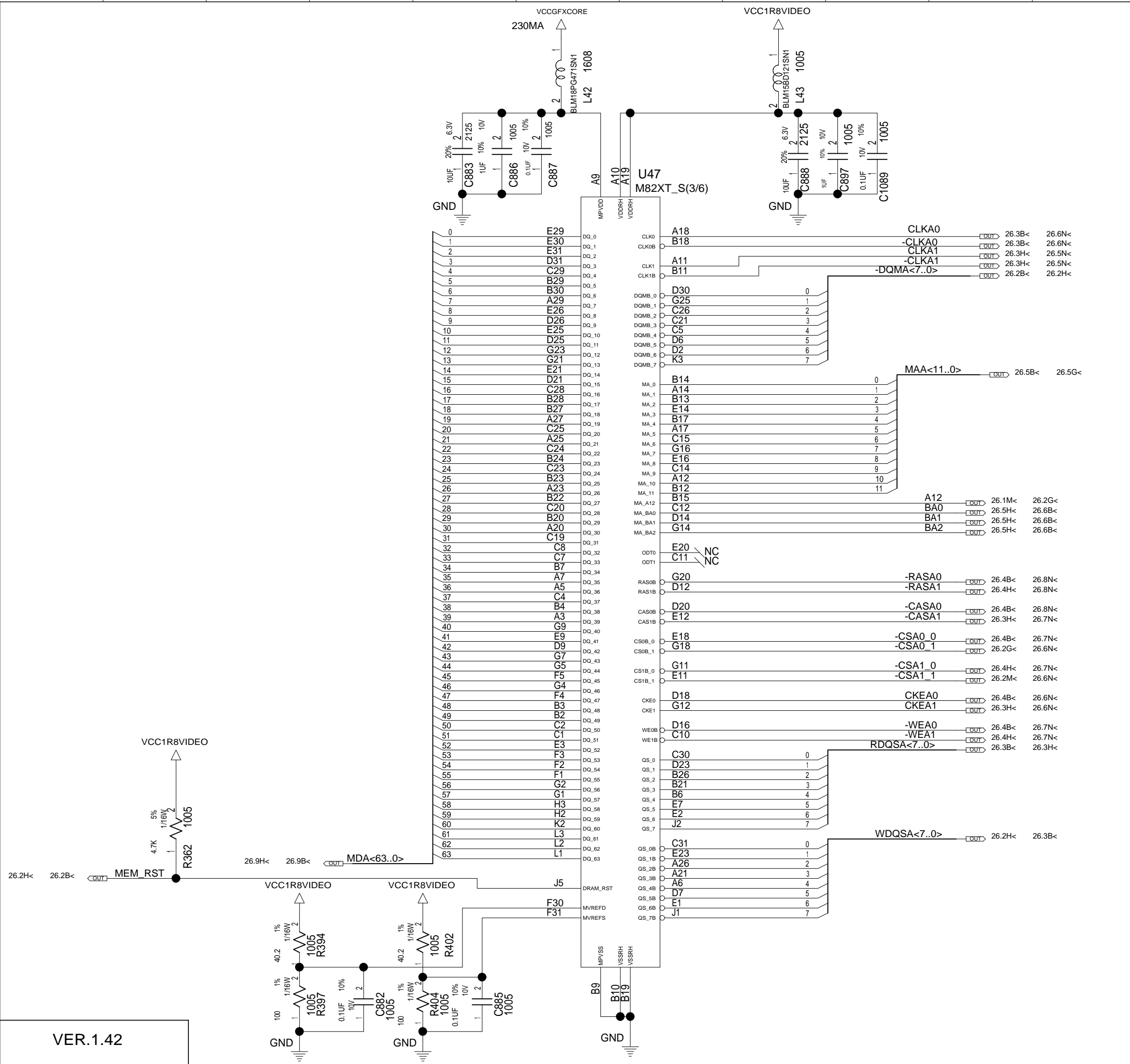
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| | | | VER.1.42 |
| | | | DEVELOPMENT NO. |
| | | | Q/M |
| | | | 20 / 101 |



VER.1.42

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|--|-----|----------|-----------------|
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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 |
| | | | M82XT-S(2/6): |
| | | | DIGITAL OUT I/F |
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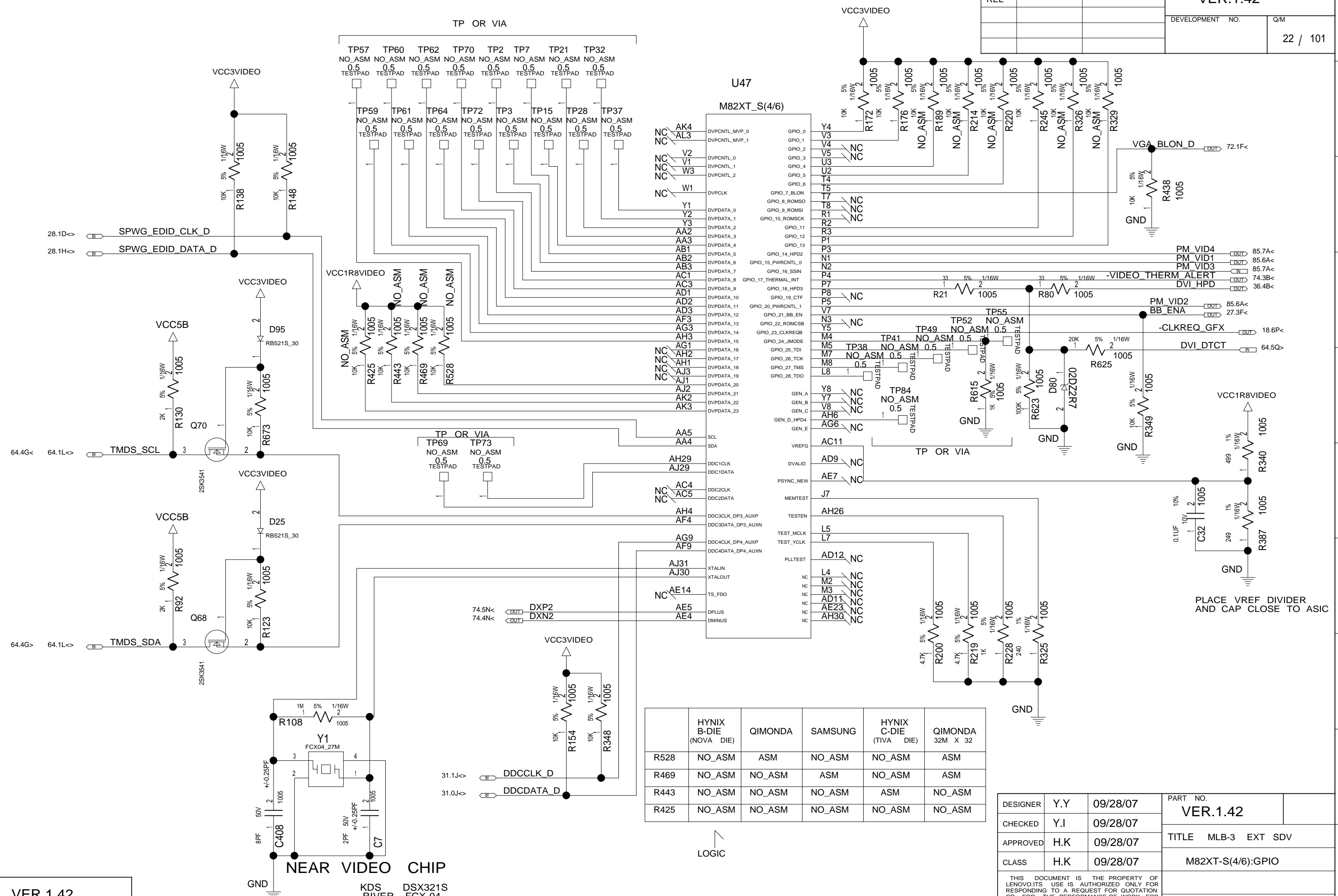
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VER.1.42

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| APPROVED | H.K | 09/28/07 | CLASS M82XT-S(3/6):VRAM I/F | |
| CLASS | H.K | 09/28/07 | LENOVO CONFIDENTIAL | |

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|-----|------|--------|-----------------|
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| | | | VER.1.42 |
| | | | DEVELOPMENT NO. |
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| | | | 22 / 101 |



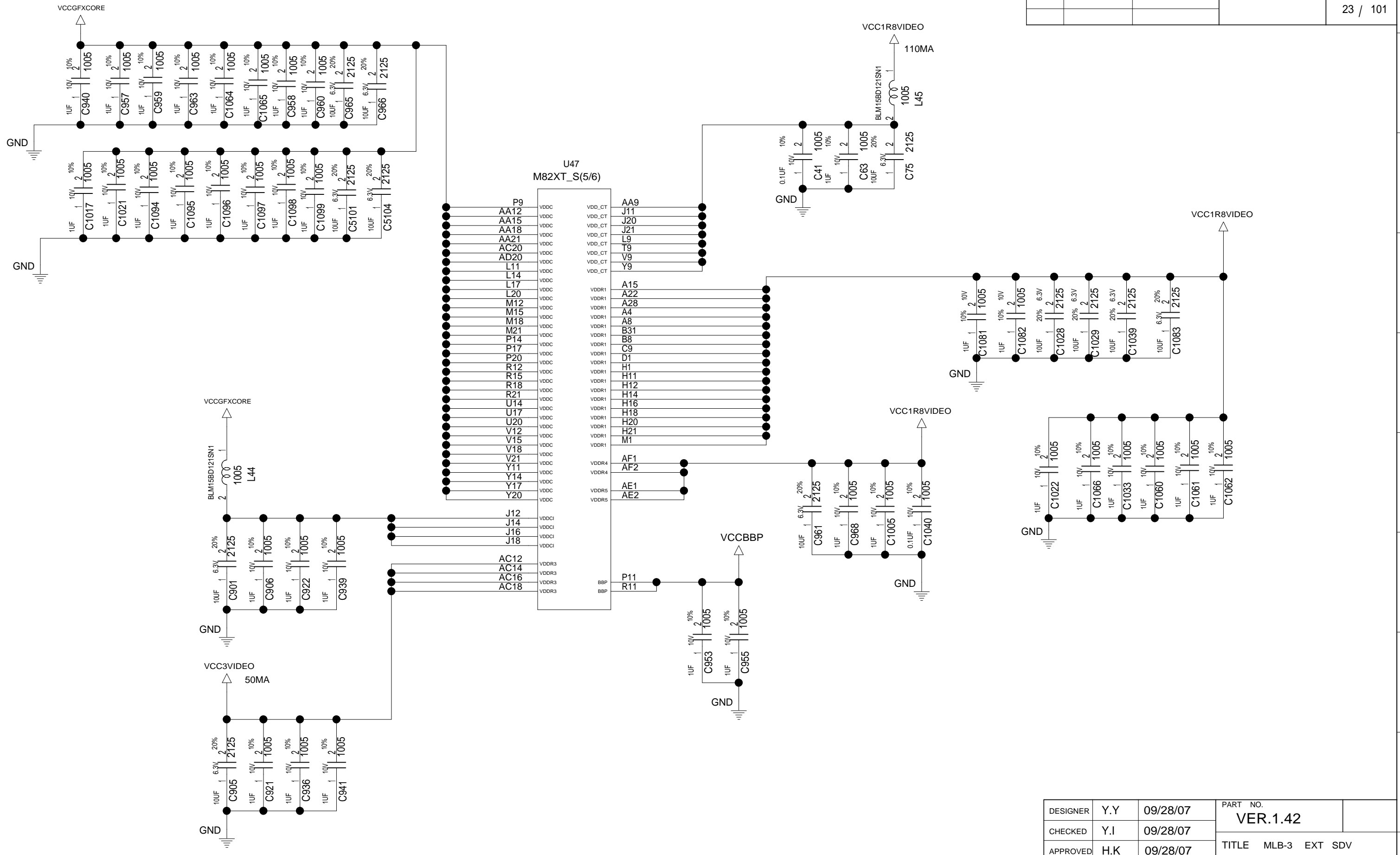
U47
M82XT_S(4/6)

| | | | | |
|----|-----|---------------|---------------------|------|
| NC | AK4 | DVPCNTL_MVP_0 | GPIO_0 | Y4 |
| 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 | VREFG | AC11 |
| | | DVPCNTL_33 | DVALID | AD9 |
| | | DVPCNTL_34 | PSYNC_NEW | AE7 |
| | | DVPCNTL_35 | MEMTEST | J7 |
| | | DVPCNTL_36 | TESTEN | AH26 |
| | | DVPCNTL_37 | TEST_MCLK | L5 |
| | | DVPCNTL_38 | TEST_YCLK | L7 |
| | | DVPCNTL_39 | PLLTEST | AD12 |
| | | DVPCNTL_40 | NC | L4 |
| | | DVPCNTL_41 | NC | M2 |
| | | DVPCNTL_42 | NC | M3 |
| | | DVPCNTL_43 | NC | AD11 |
| | | DVPCNTL_44 | NC | AE23 |
| | | DVPCNTL_45 | NC | AH30 |
| | | DVPCNTL_46 | NC | |
| | | DVPCNTL_47 | NC | |
| | | DVPCNTL_48 | NC | |
| | | DVPCNTL_49 | NC | |
| | | DVPCNTL_50 | NC | |
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| | | DVPCNTL_52 | NC | |
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| | | DVPCNTL_55 | NC | |
| | | DVPCNTL_56 | NC | |
| | | DVPCNTL_57 | NC | |
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| | | DVPCNTL_60 | NC | |
| | | DVPCNTL_61 | NC | |
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| | | DVPCNTL_91 | NC | |
| | | DVPCNTL_92 | NC | |
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| | | DVPCNTL_95 | NC | |
| | | DVPCNTL_96 | NC | |
| | | DVPCNTL_97 | NC | |
| | | DVPCNTL_98 | NC | |
| | | DVPCNTL_99 | NC | |
| | | DVPCNTL_100 | NC | |

| | 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. | VER.1.42 |
| CHECKED | Y.I | 09/28/07 | TITLE | MLB-3 EXT SDV |
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| CLASS | H.K | 09/28/07 | | |
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|-----|------|--------|-----------------|----------|
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| | | | | 23 / 101 |

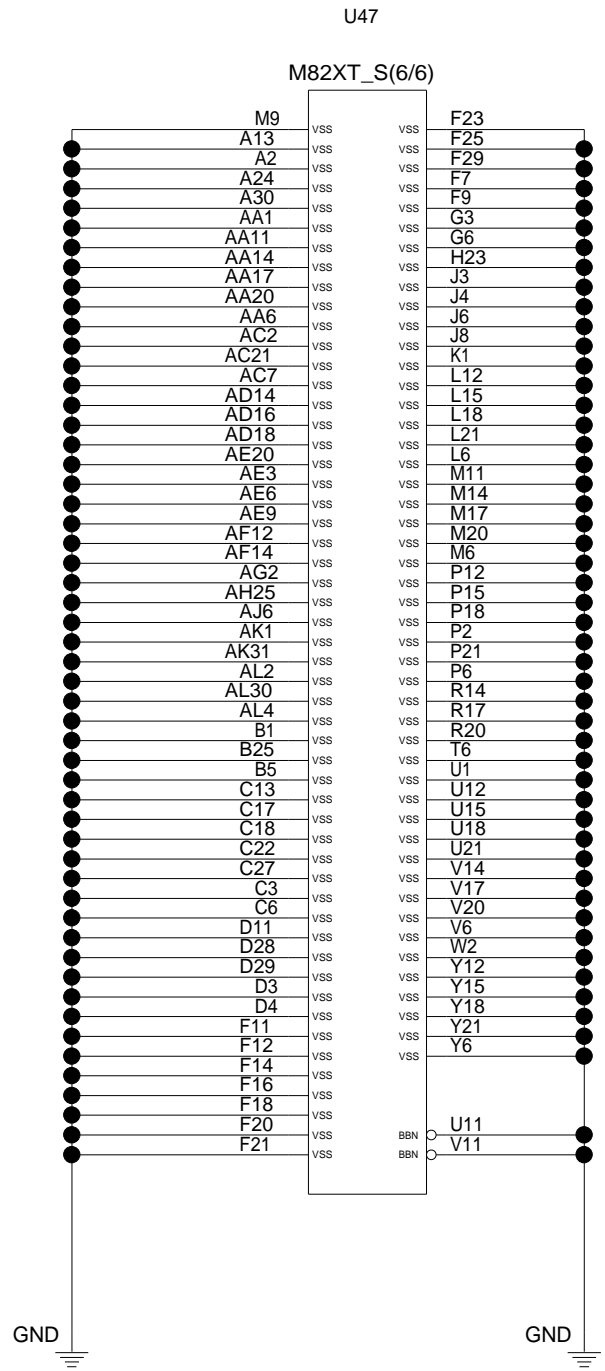


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| CHECKED | Y.I | 09/28/07 | VER.1.42 | |
| APPROVED | H.K | 09/28/07 | TITLE MLB-3 EXT SDV | |
| CLASS | H.K | 09/28/07 | M82XT-S(5/6):POWER | |
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| | DATE | EC NO. | PART NO. | |
| REL | | | VER.1.42 | |
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| APPROVED | H.K | 09/28/07 | TITLE MLB-3 EXT SDV | |
| CLASS | H.K | 09/28/07 | M82XT-S(6/6):GND | |
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| | | | | 25 / 101 |

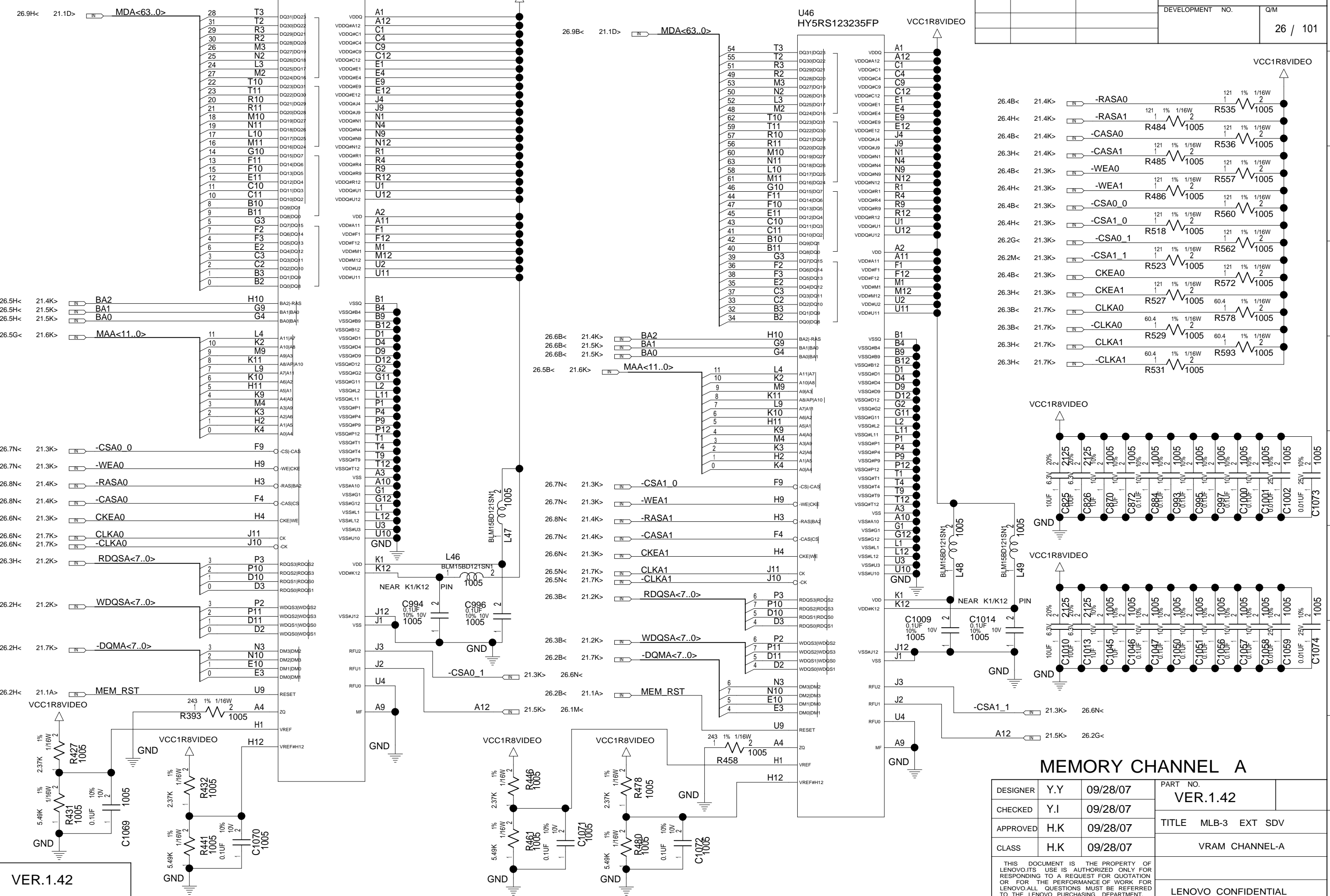
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U35 (TOP SIDE)
HY5RS123235FP

U46 (TOP SIDE)
HY5RS123235FP

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| REL | DATE | EC NO. | PART NO. |
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| | | | 26 / 101 |



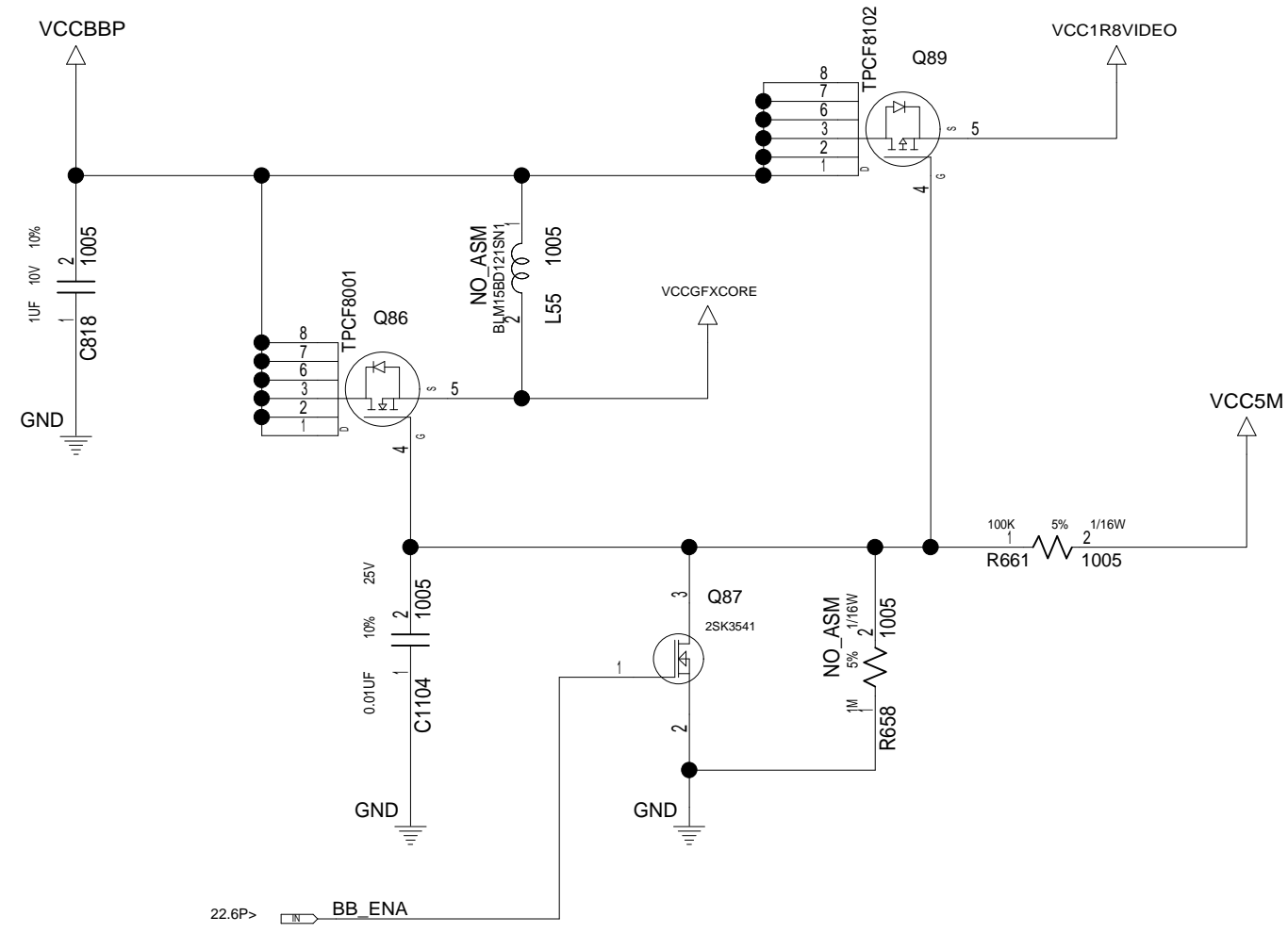
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| CLASS | H.K | 09/28/07 | MLB-3 EXT SDV |
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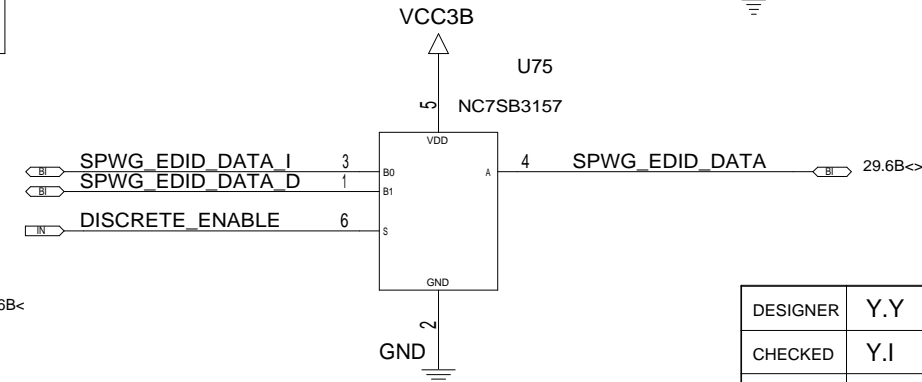
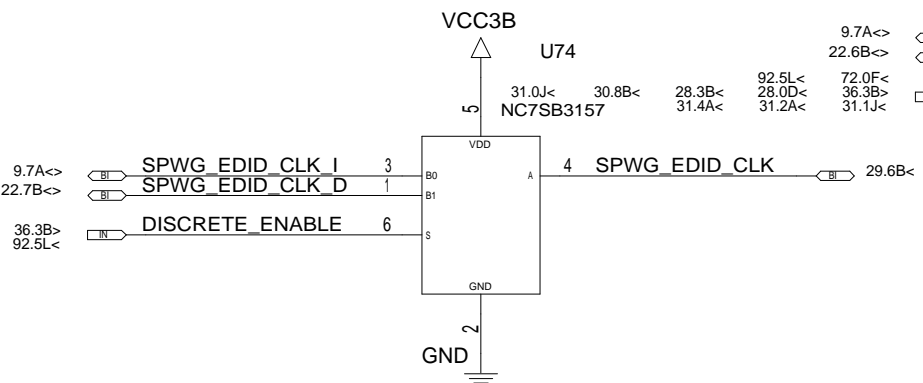
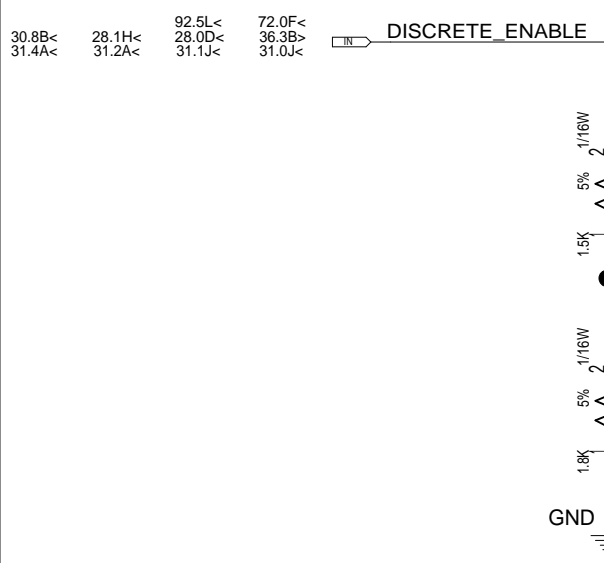
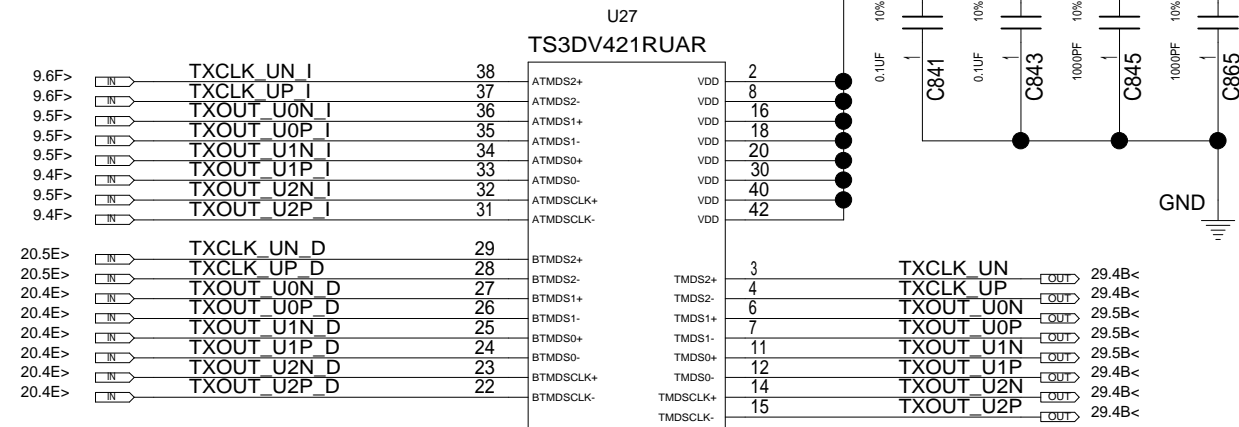
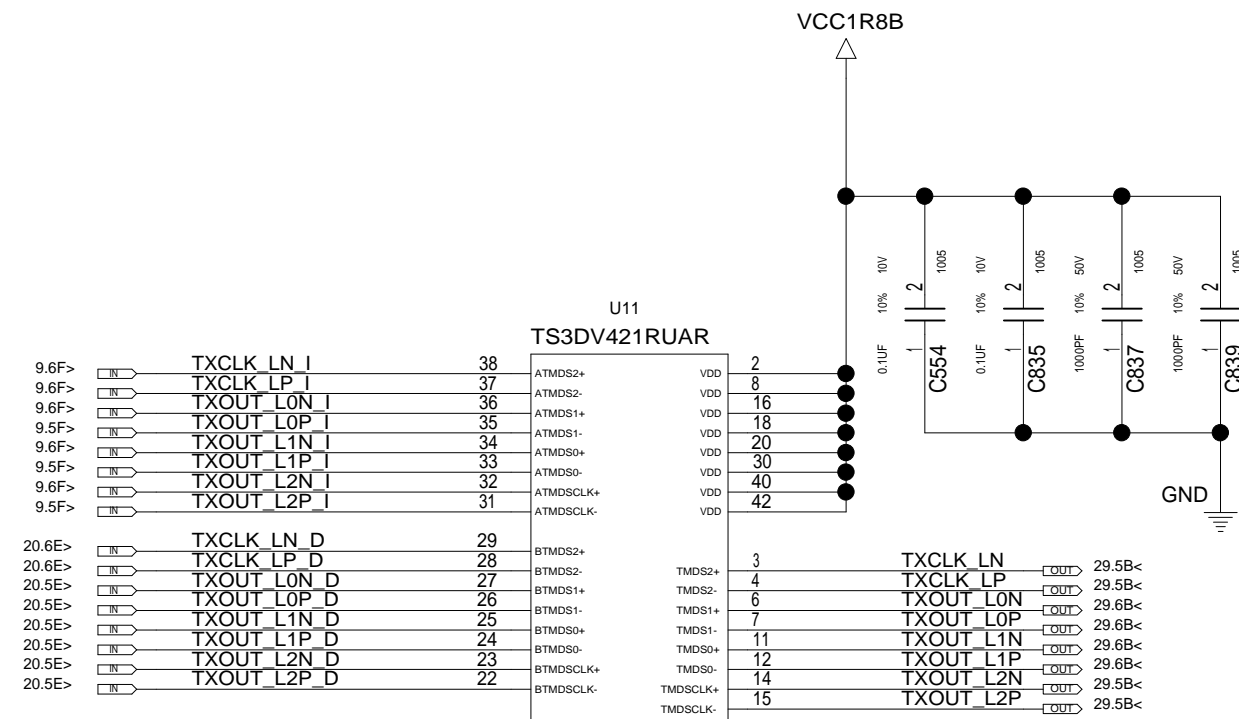
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| APPROVED | H.K | 09/28/07 | TITLE MLB-3 EXT SDV | |
| CLASS | H.K | 09/28/07 | BACK BIAS POWER | |
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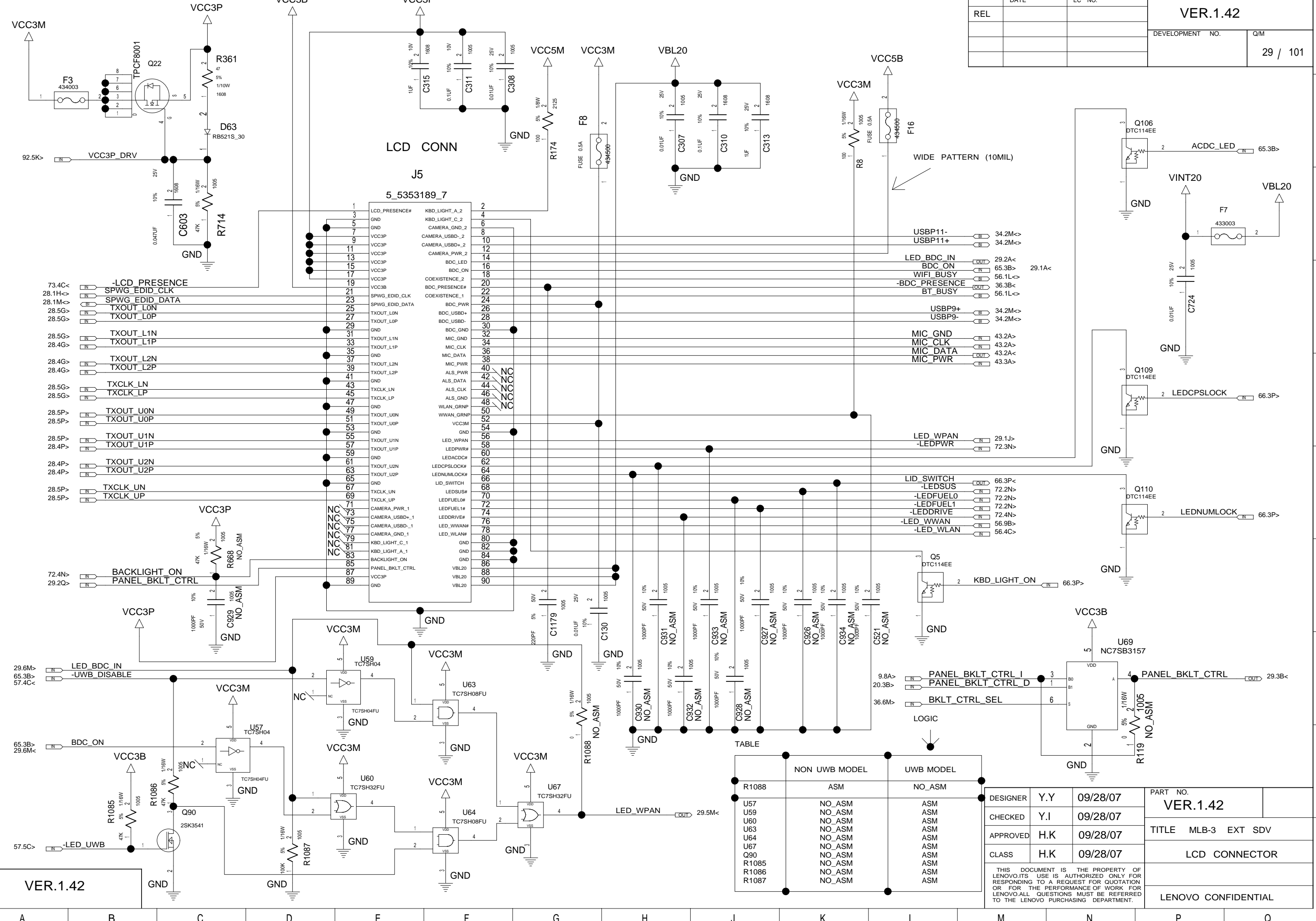
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| | | | | 28 / 101 |



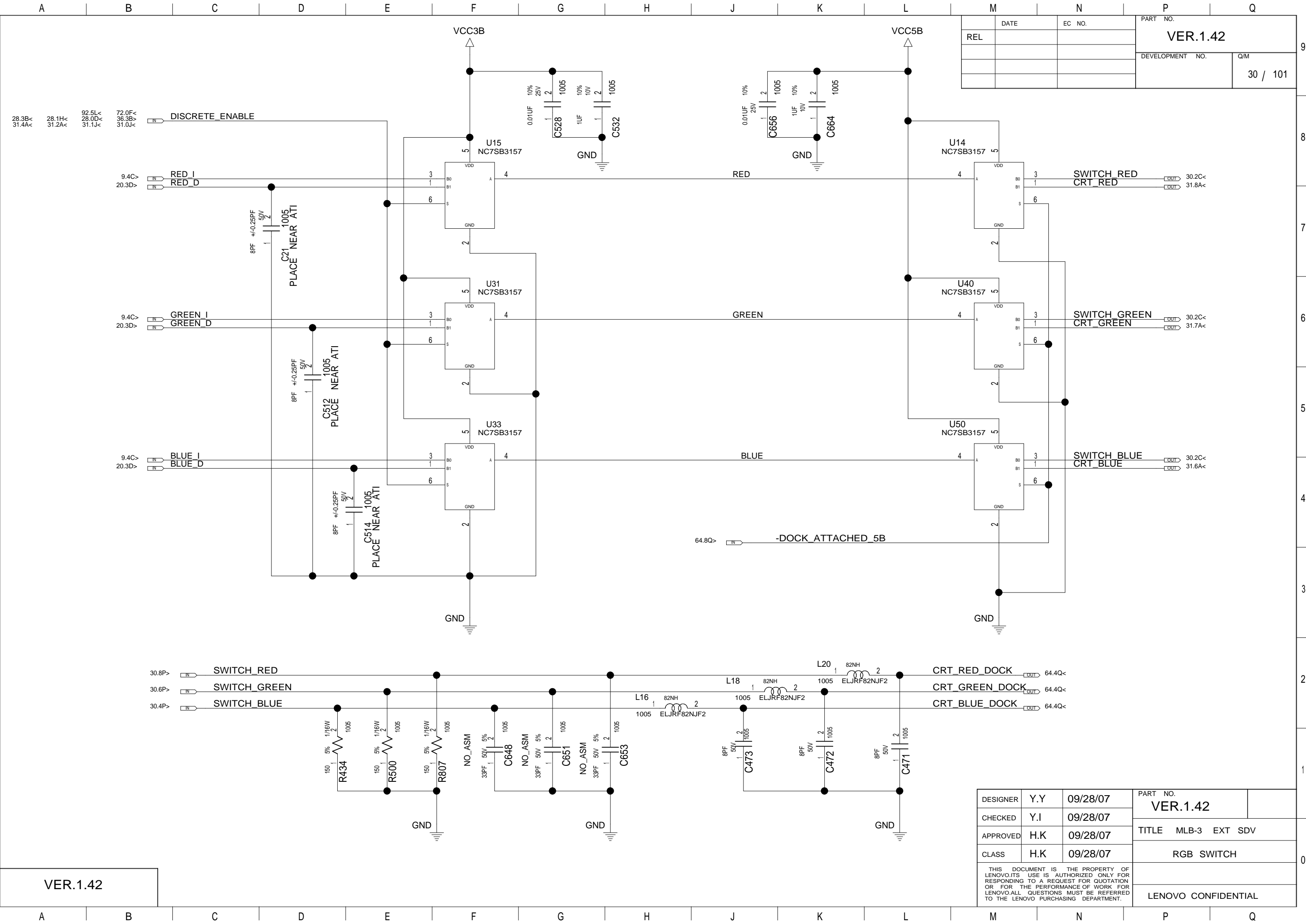
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| CLASS | H.K | 09/28/07 | LVDS SWICH | |
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| REL | DATE | EC NO. | PART NO. |
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| DATE | EC NO. | PART NO. | |
| REL | | VER.1.42 | |
| | | DEVELOPMENT NO. | Q/M |
| | | | 30 / 101 |

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9.4C> 20.3D>
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9.4C> 20.3D>
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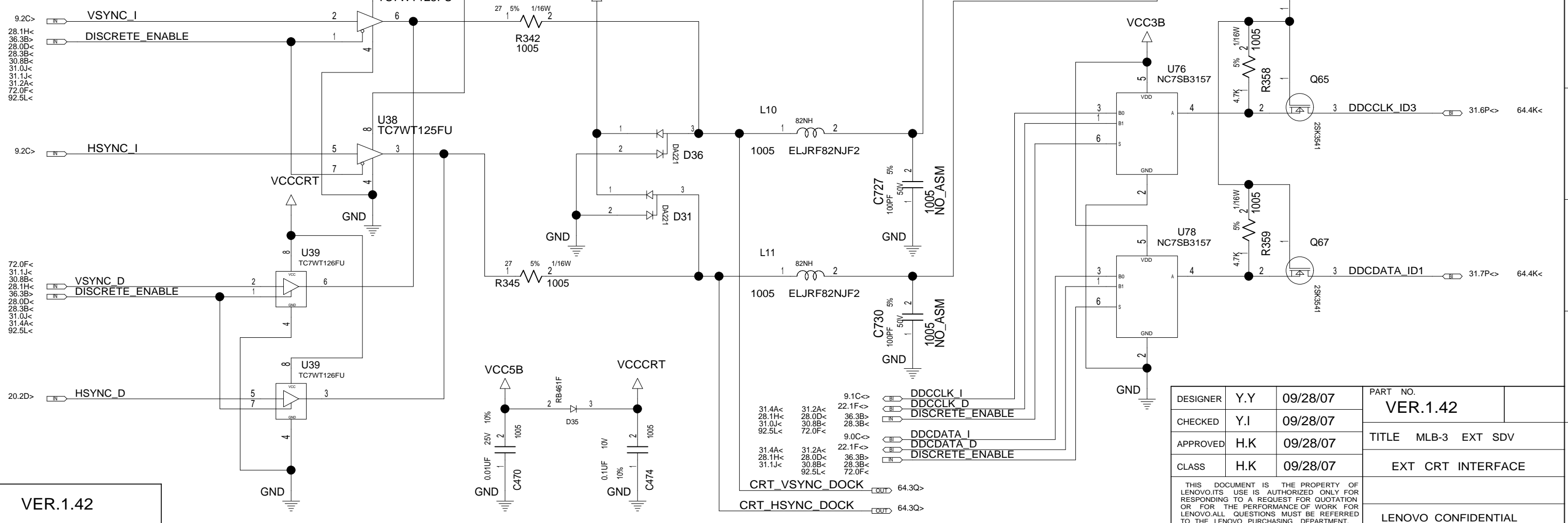
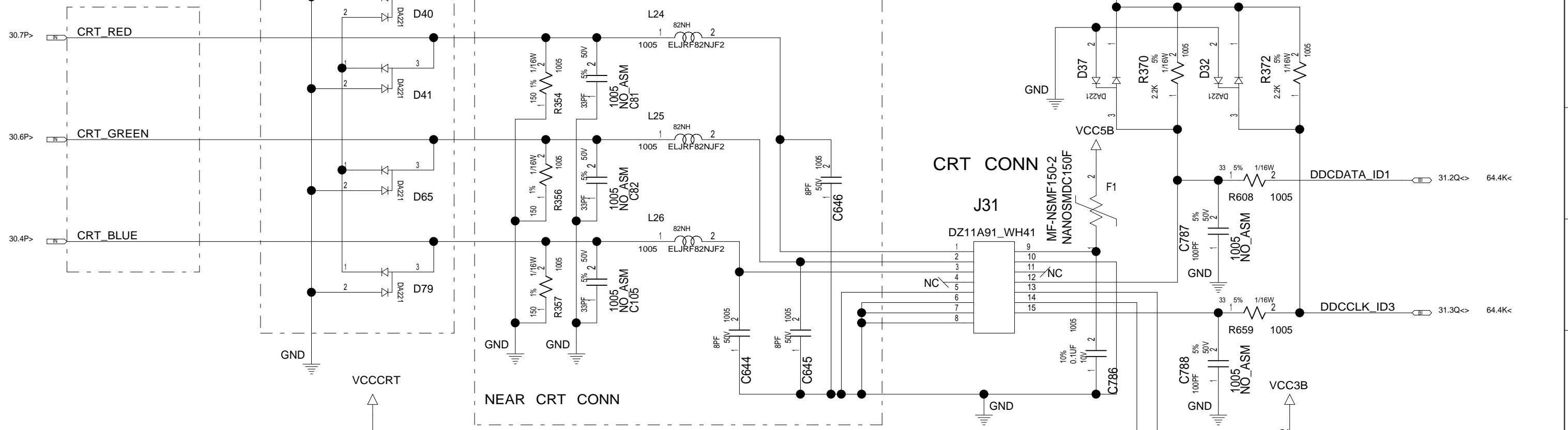
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| APPROVED | H.K | 09/28/07 | TITLE MLB-3 EXT SDV |
| CLASS | H.K | 09/28/07 | RGB SWITCH |
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| REL | DATE | EC NO. | PART NO. | |
| | | | VER.1.42 | |
| | | | DEVELOPMENT NO. | Q/M |
| | | | | 31 / 101 |

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



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| DESIGNER | Y.Y | 09/28/07 | PART NO. | |
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| APPROVED | H.K | 09/28/07 | TITLE MLB-3 EXT SDV | |
| CLASS | H.K | 09/28/07 | EXT CRT INTERFACE | |
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| REL | | | VER.1.42 | |
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| | | | | 32 / 101 |

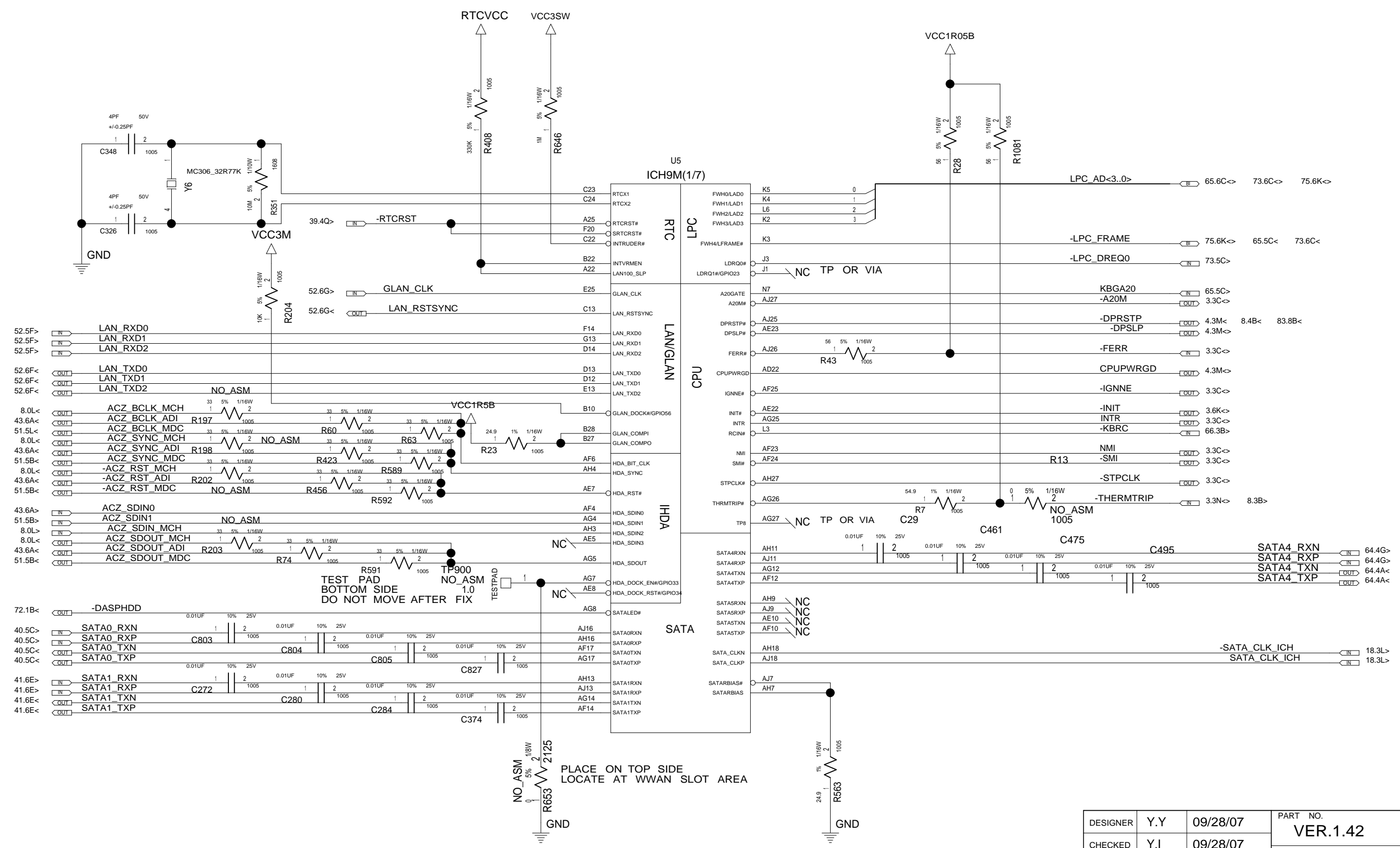
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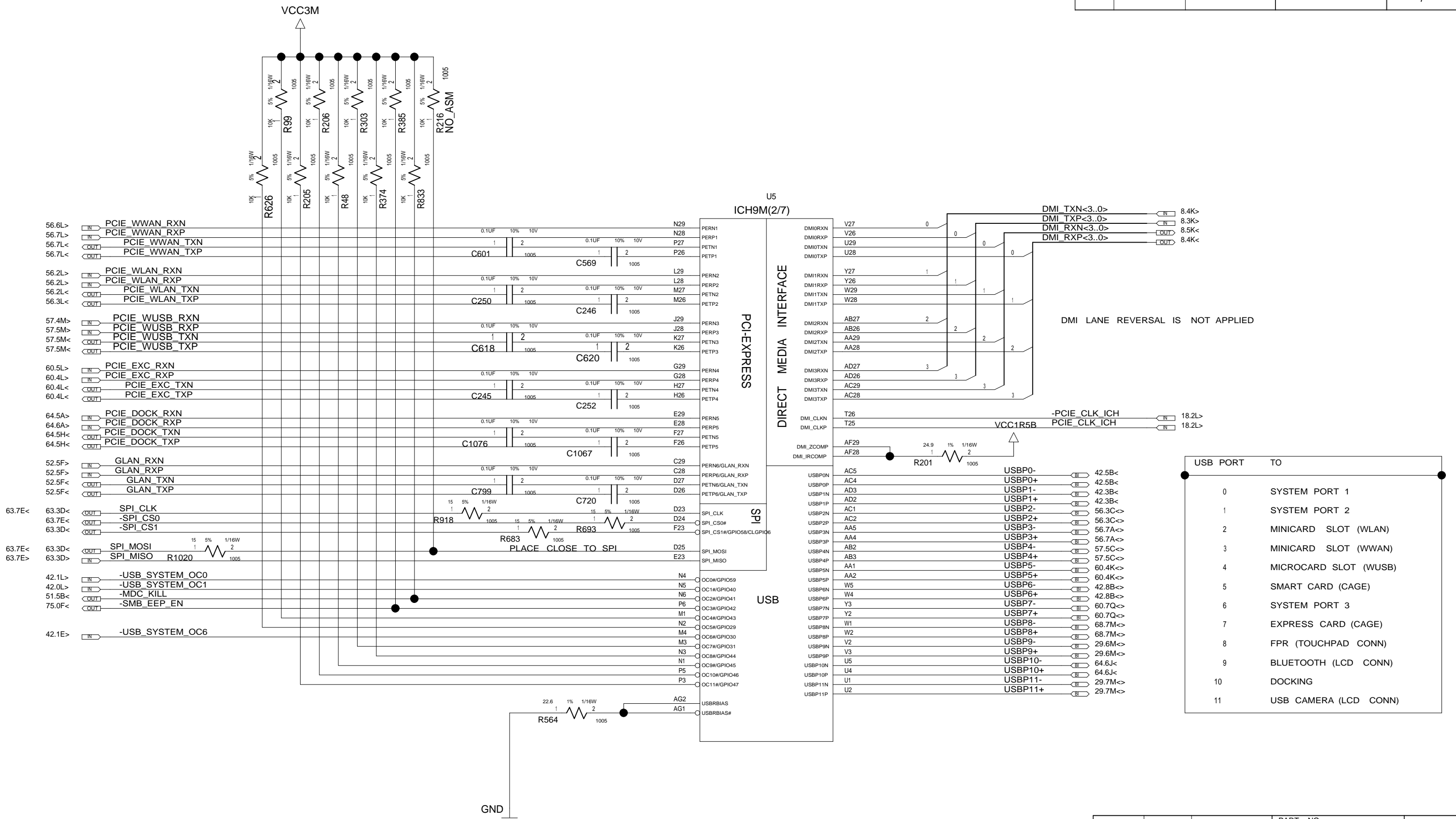
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| | | | | 33 / 101 |



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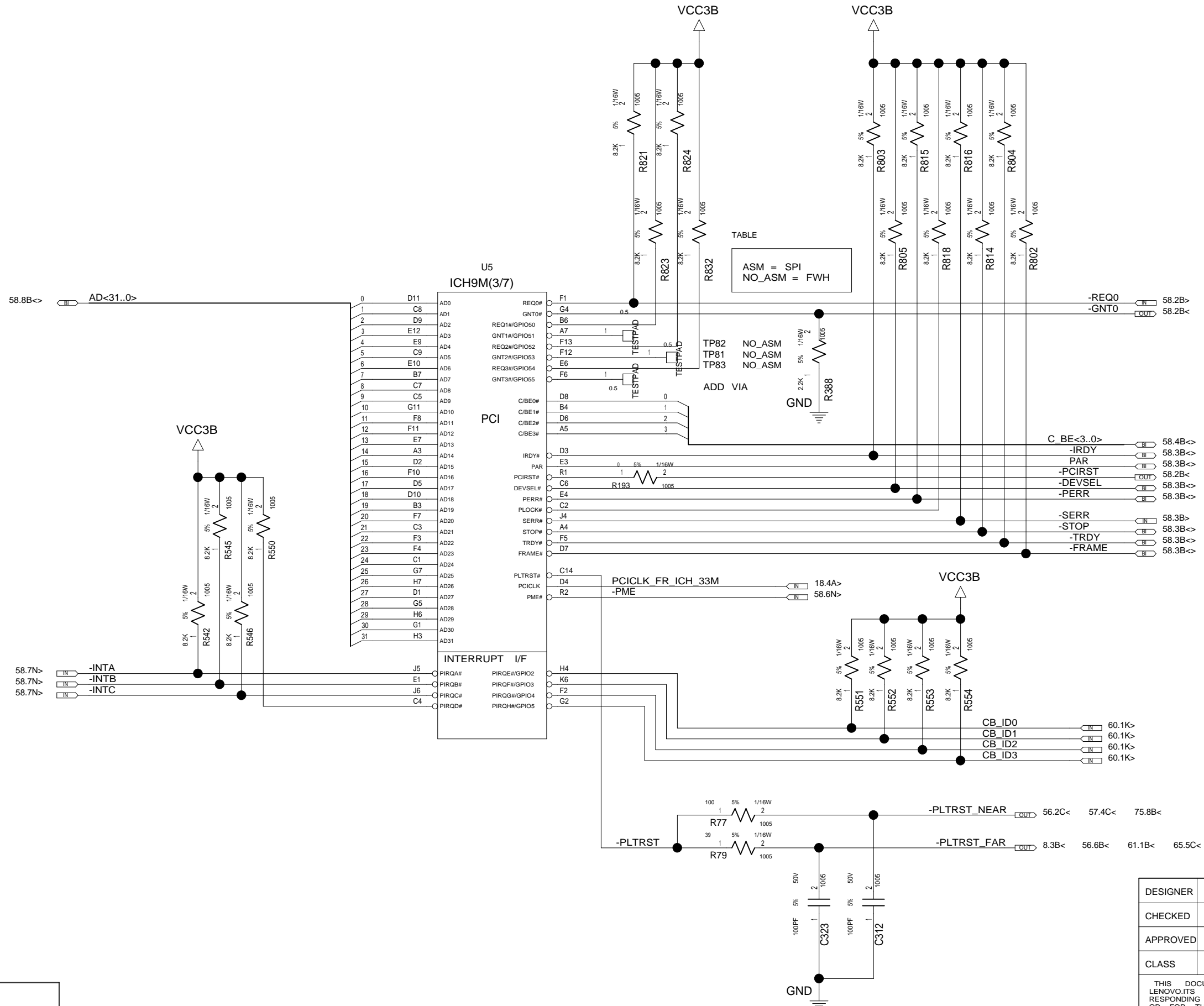
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| APPROVED | H.K | 09/28/07 | TITLE MLB-3 EXT SDV | |
| CLASS | H.K | 09/28/07 | ICH9-M(1/6): SATA/HDA/GLAN/LPC | |
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| REL | DATE | EC NO. | PART NO. | |
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| | | | | 34 / 101 |



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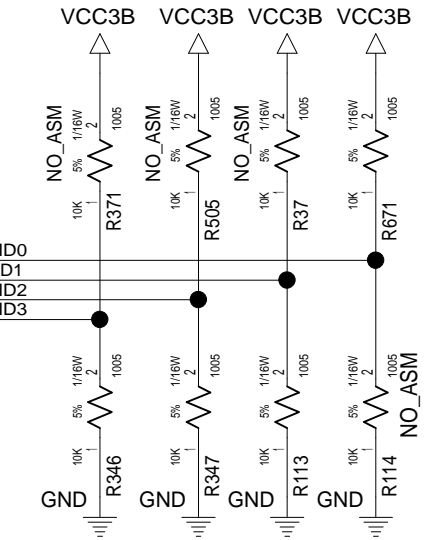
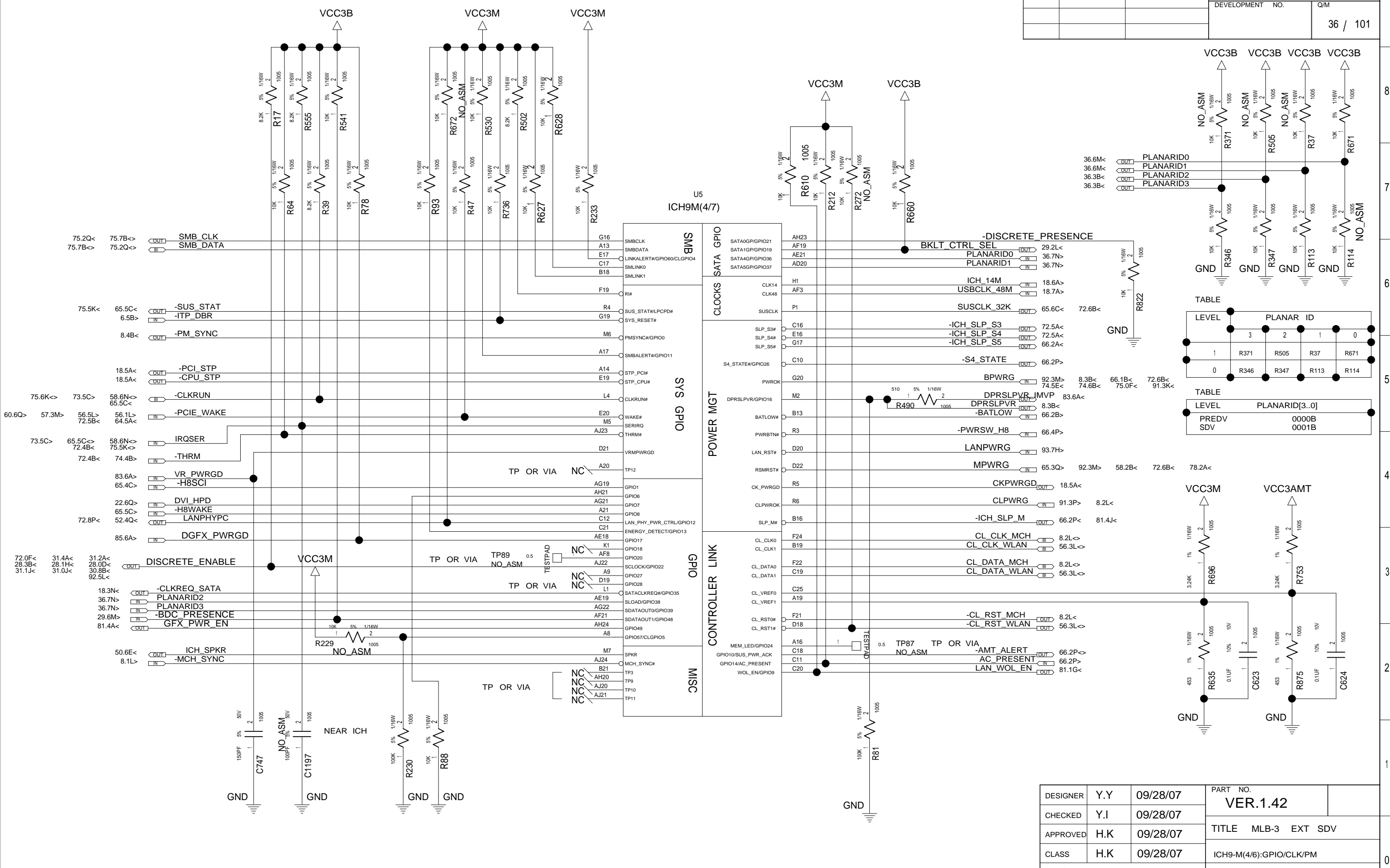
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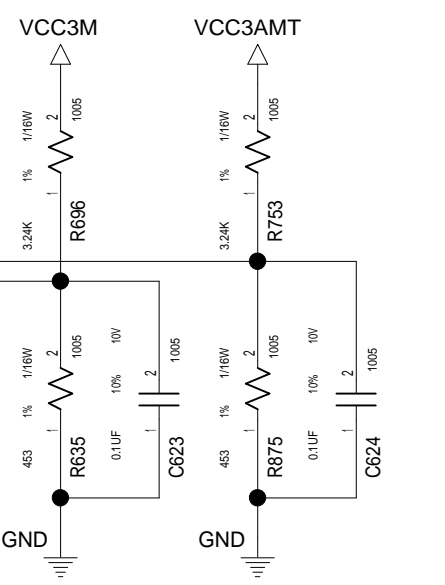
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| CLASS | H.K | 09/28/07 | ICH9-M(3/6): PCI/INTERRUPT | |
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| REL | DATE | EC NO. | PART NO. | |
| | | | VER.1.42 | |
| | | | DEVELOPMENT NO. | Q/M |
| | | | | 36 / 101 |



| LEVEL | PLANAR ID |
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| 1 | 0 |
| 0 | 3 |
| | R371 R505 R37 R671 |
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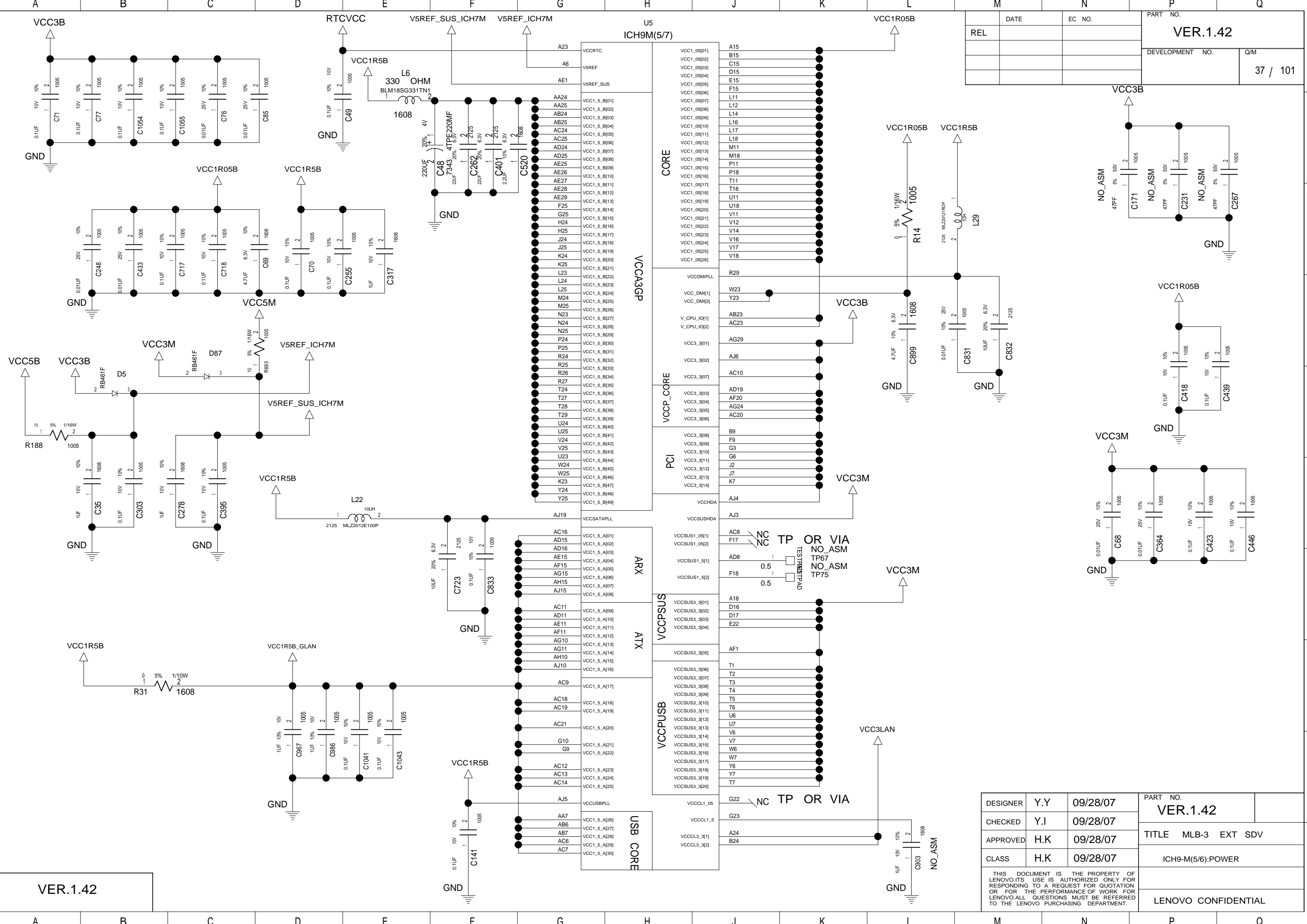
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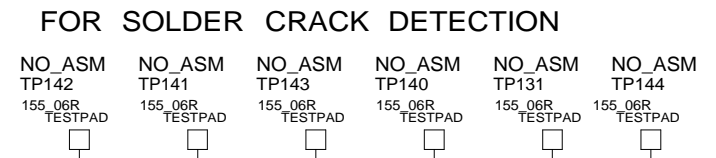
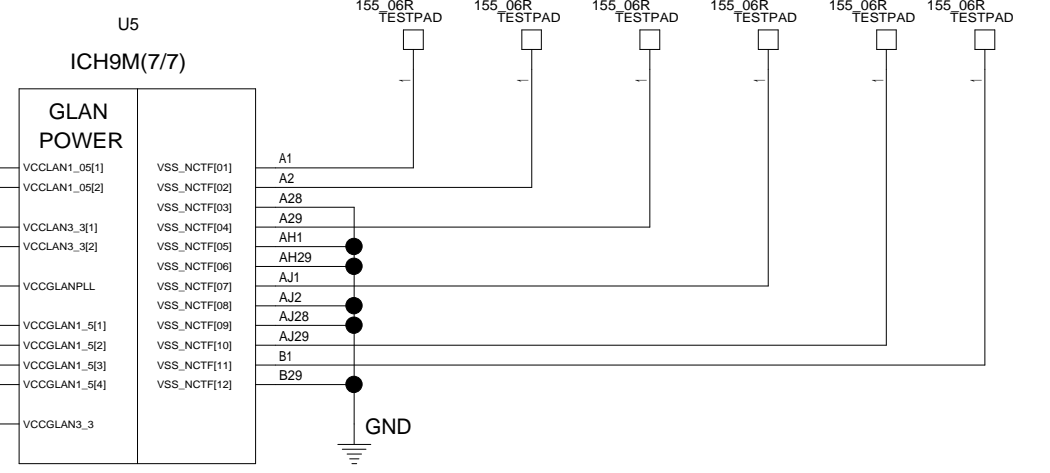
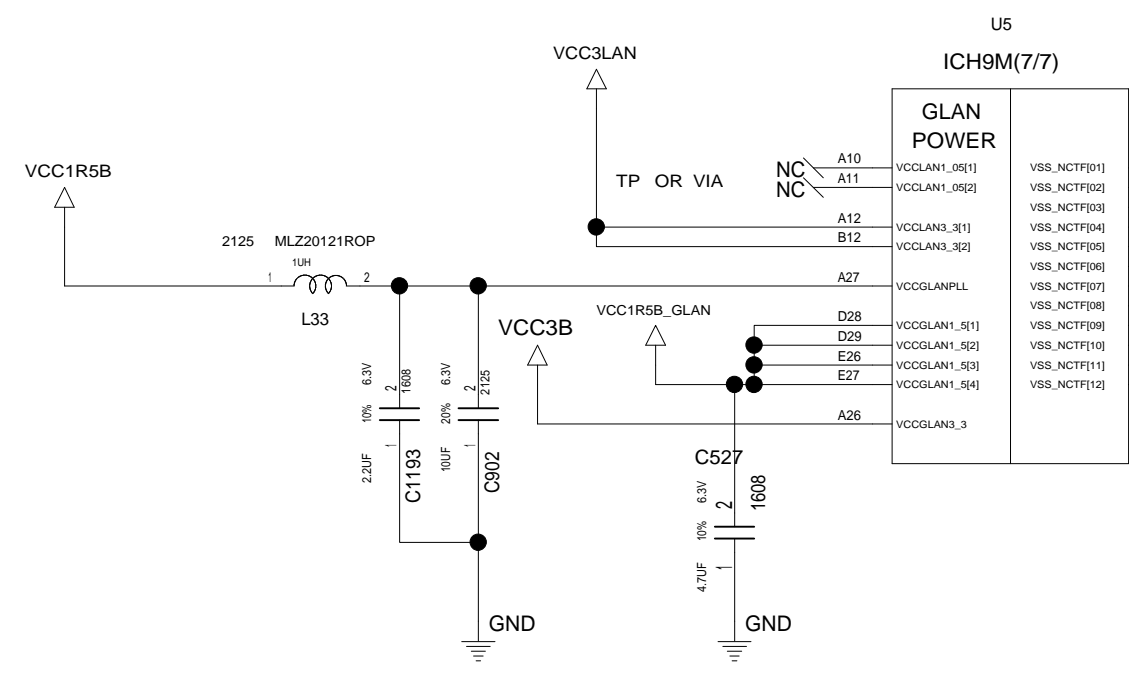
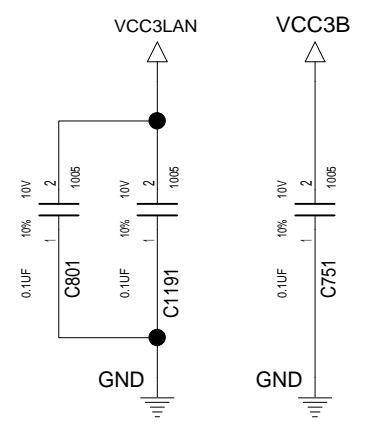
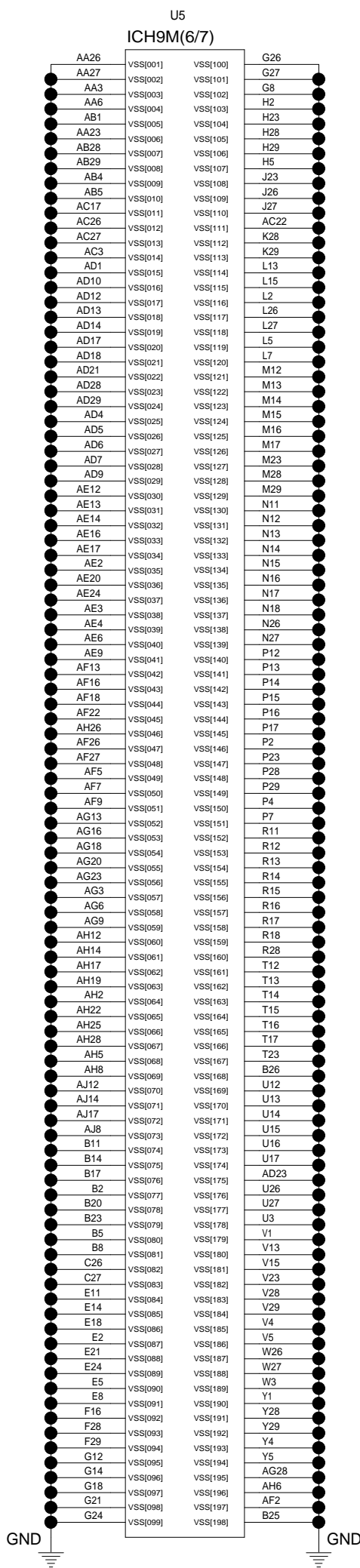
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| CLASS | H.K | 09/28/07 | ICH9-M(4/6):GPIO/CLK/PM | |
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| REL | DATE | EC NO. | PART NO. | |
| | | | VER.1.42 | |
| | | | DEVELOPMENT NO. | Q/M |
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| CLASS | H.K | 09/28/07 | ICH9-M(5/6):POWER | |
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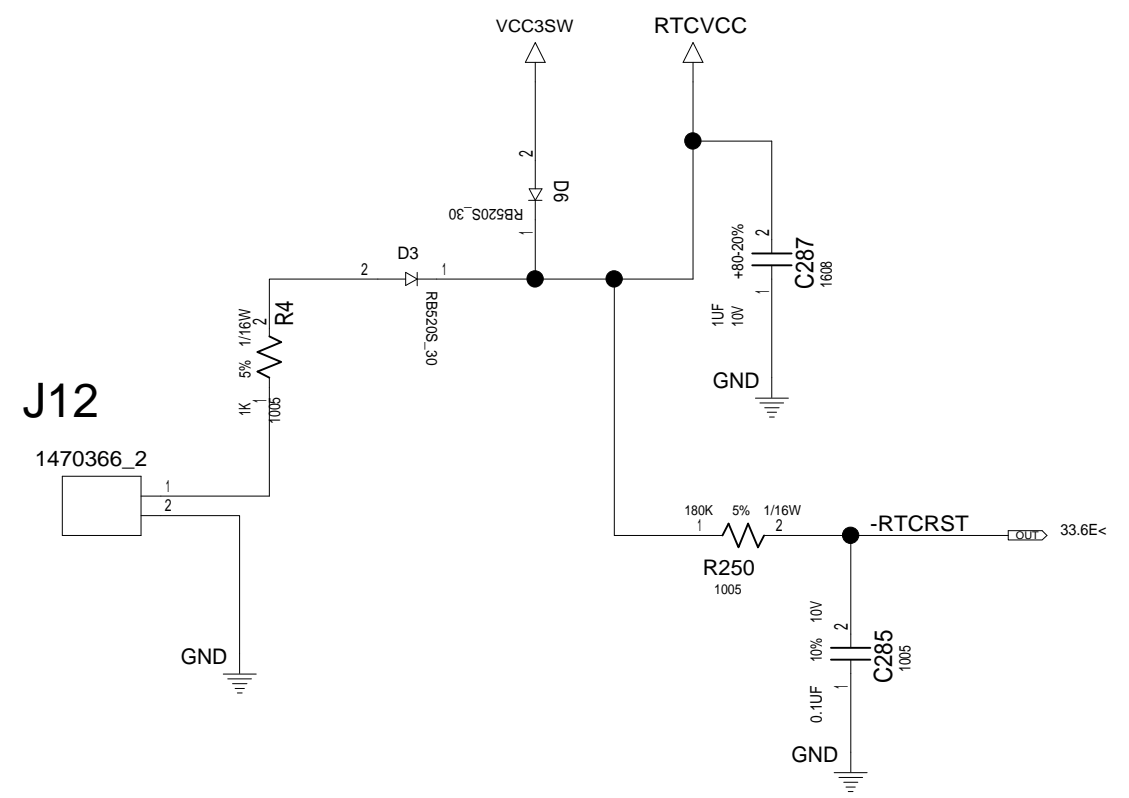


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| REL | | | VER.1.42 | |
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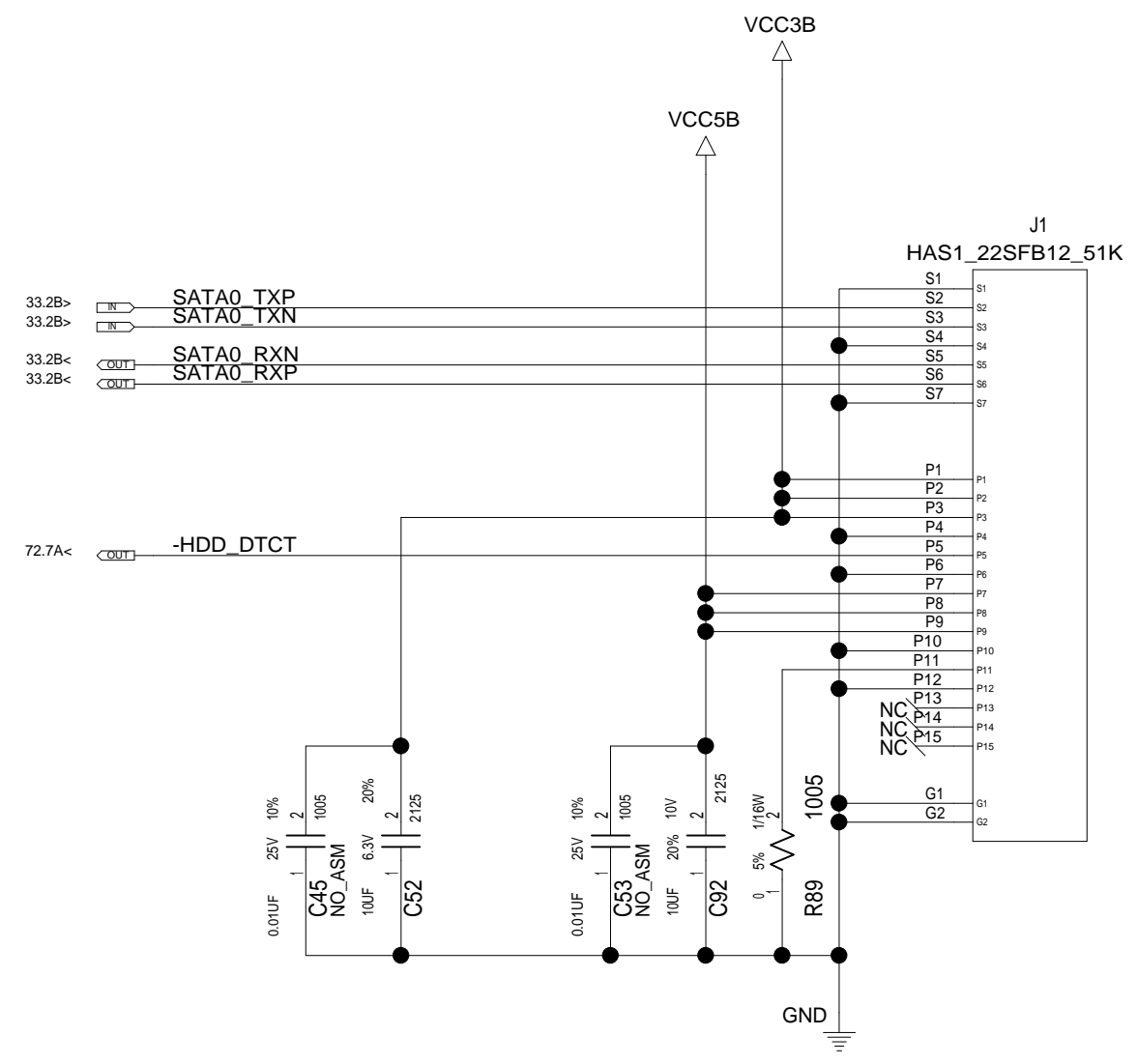


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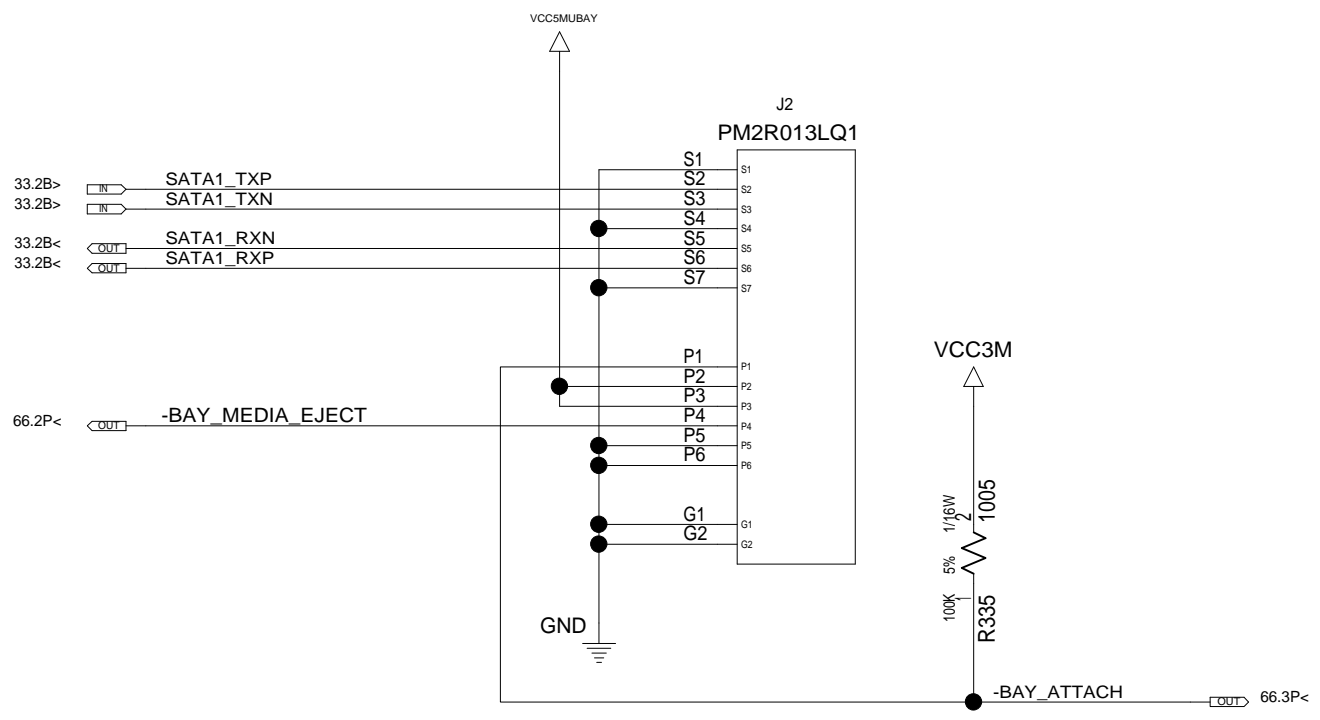
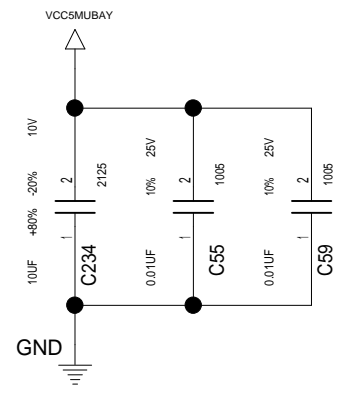
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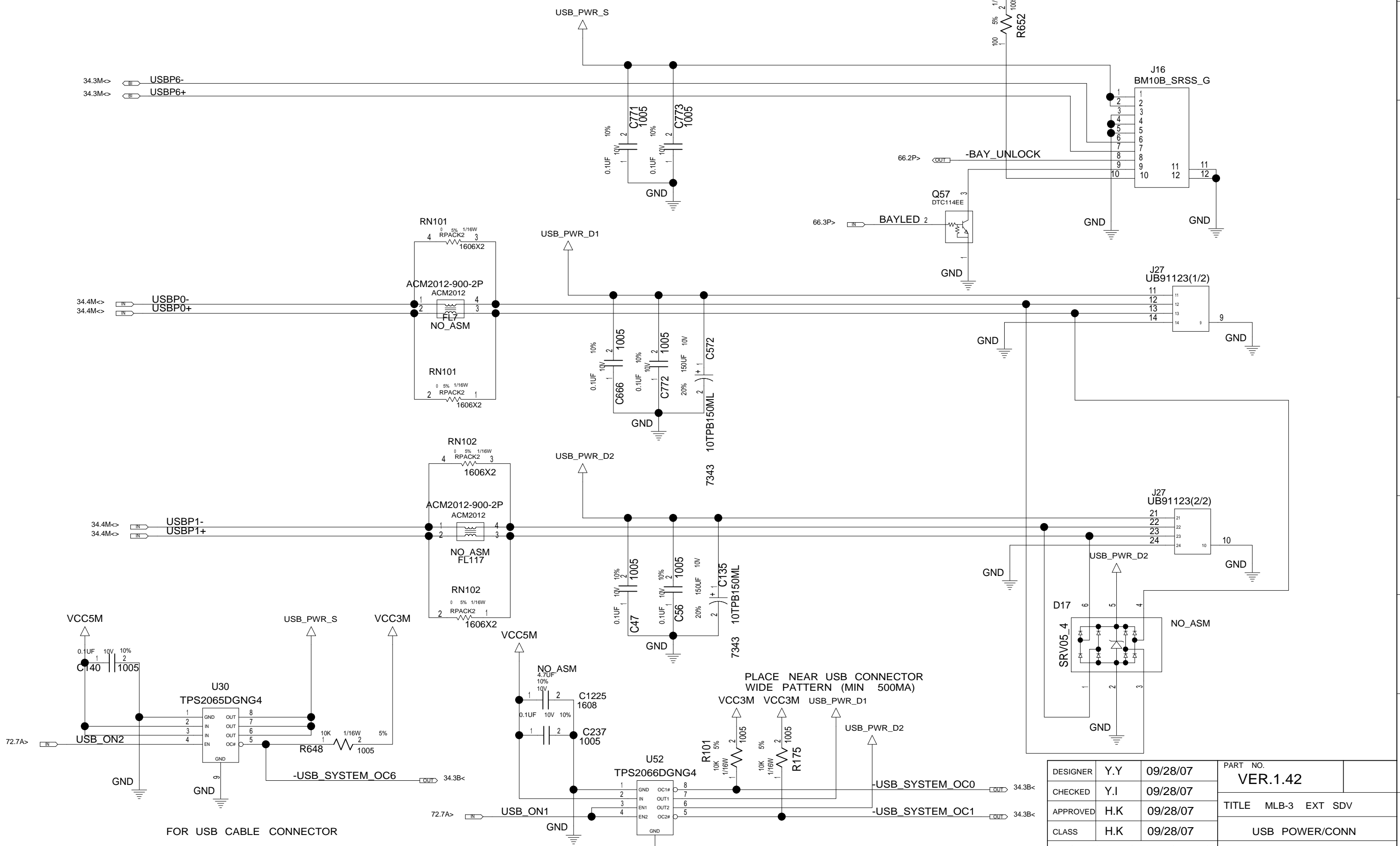
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| DESIGNER | Y.Y | 09/28/07 | PART NO. | VER.1.42 |
| CHECKED | Y.I | 09/28/07 | TITLE MLB-3 EXT SDV | |
| APPROVED | H.K | 09/28/07 | SATA BAY I/F CONN | |
| CLASS | H.K | 09/28/07 | LENOVO CONFIDENTIAL | |
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|------|--------|-----------------|----------|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

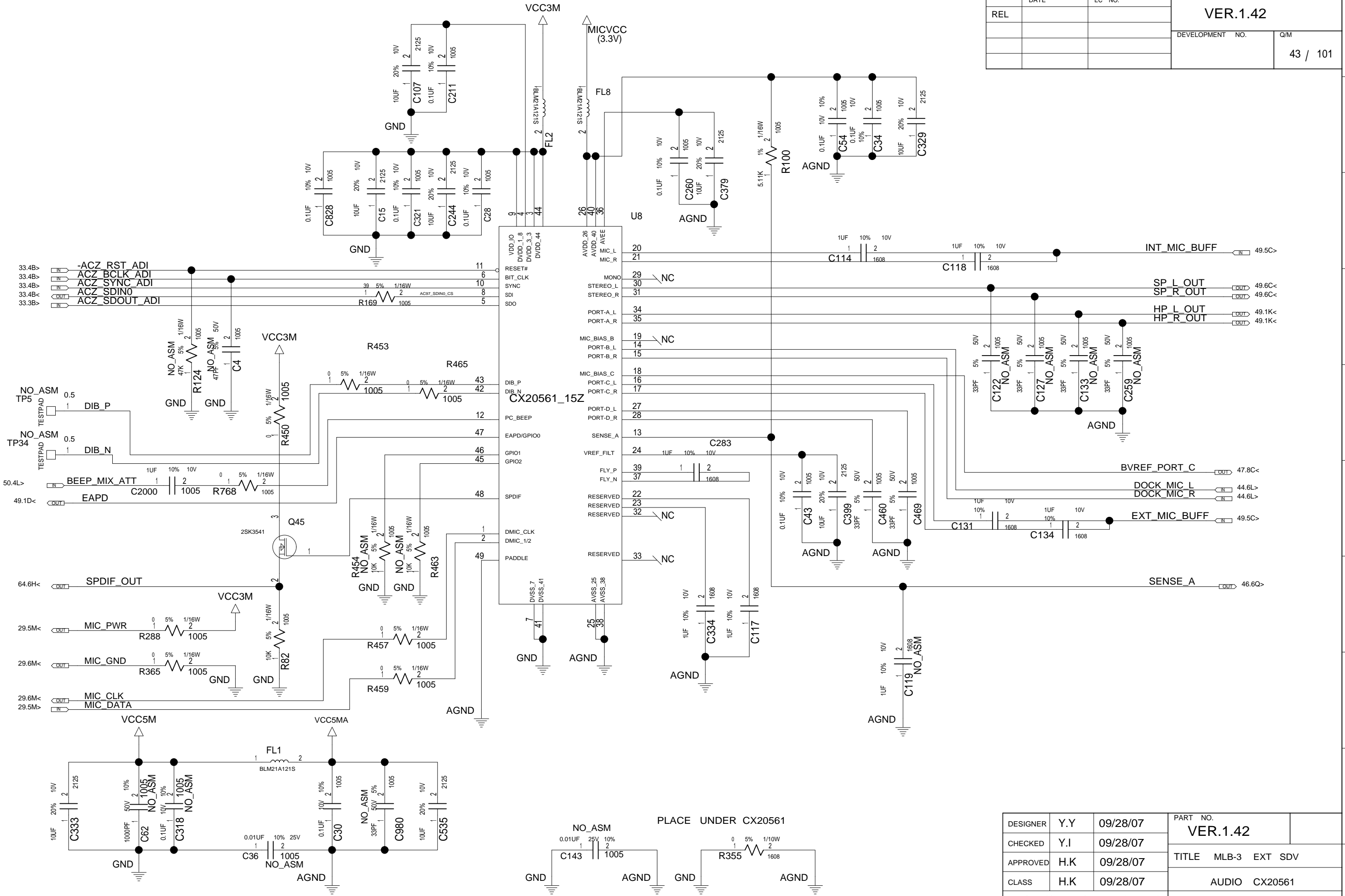


VER.1.42

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|----------|-----|----------|---------------------|----------|
| 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 | USB POWER/CONN | |
| 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 |
| | | | | 43 / 101 |

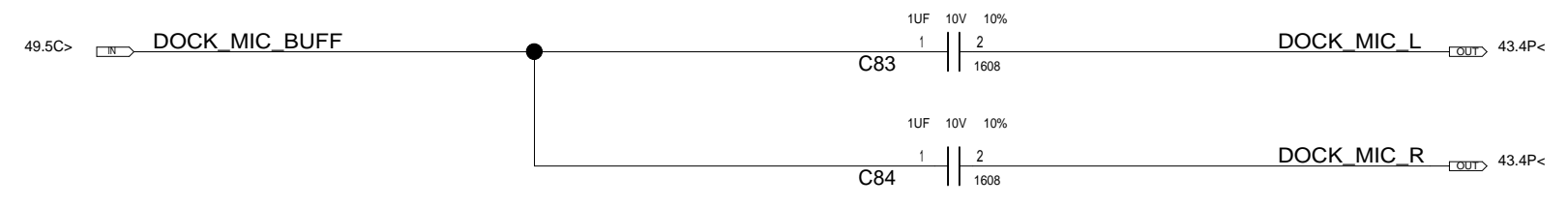


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| DESIGNER | Y.Y | 09/28/07 | PART NO. | |
| CHECKED | Y.I | 09/28/07 | VER.1.42 | |
| APPROVED | H.K | 09/28/07 | TITLE MLB-3 EXT SDV | |
| CLASS | H.K | 09/28/07 | AUDIO CX20561 | |
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A B C D E F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

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

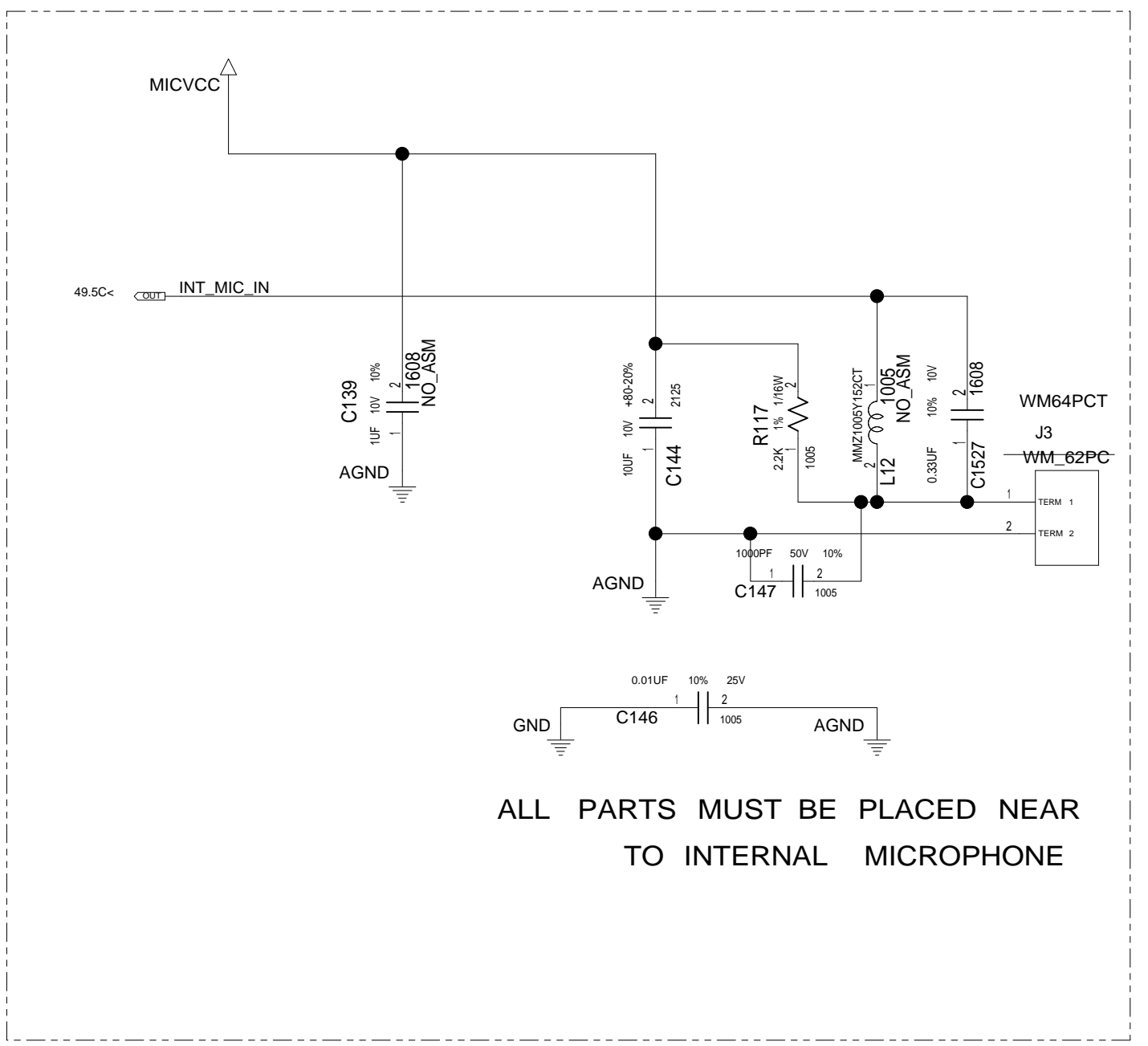
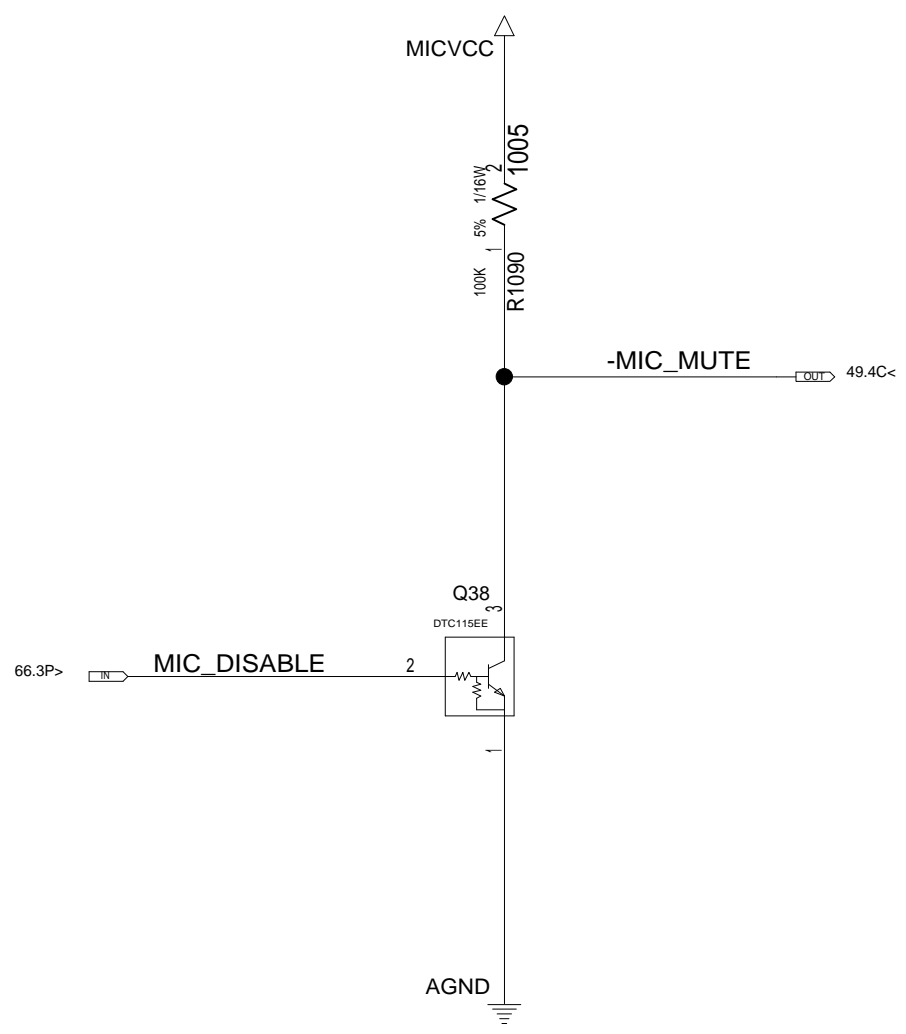
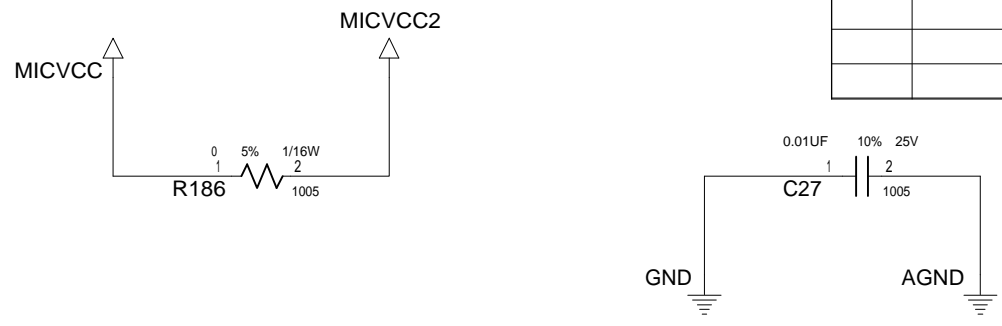


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| DESIGNER | Y.Y | 09/28/07 | PART NO. | |
| CHECKED | Y.I | 09/28/07 | VER.1.42 | |
| APPROVED | H.K | 09/28/07 | TITLE MLB-3 EXT SDV | |
| CLASS | H.K | 09/28/07 | AUDIO MISC | |
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A B C D E F G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

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



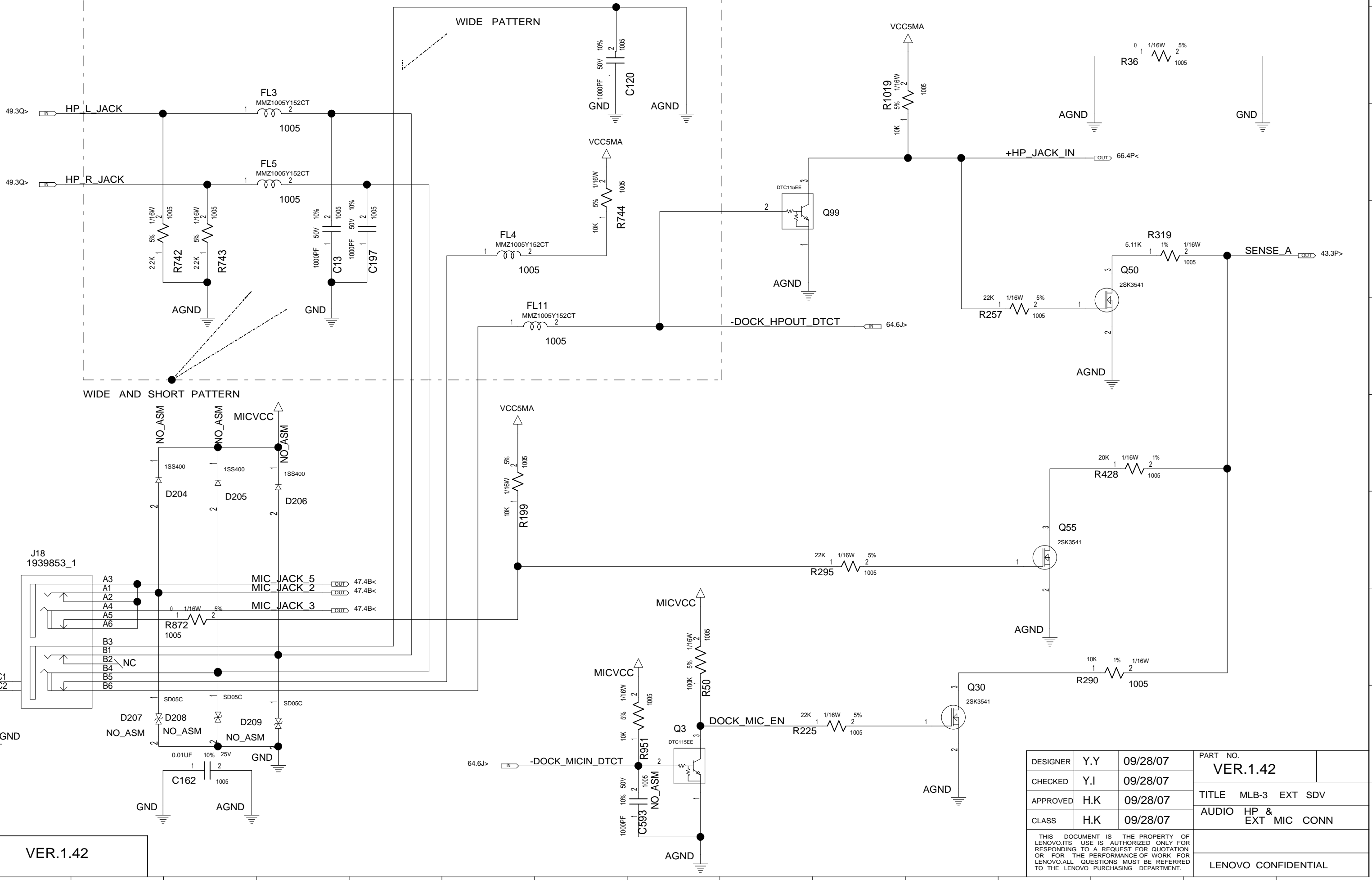
ALL PARTS MUST BE PLACED NEAR TO INTERNAL MICROPHONE

VER.1.42

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| 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 |

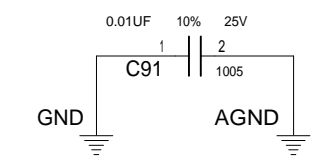
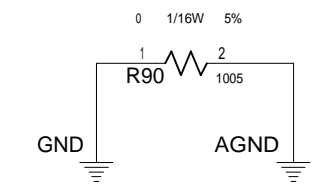
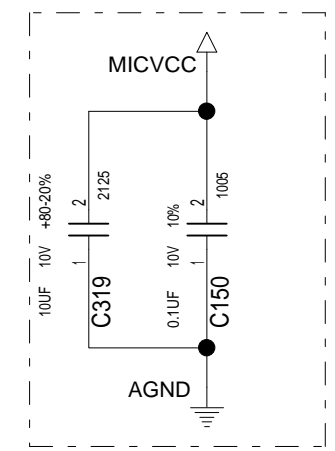
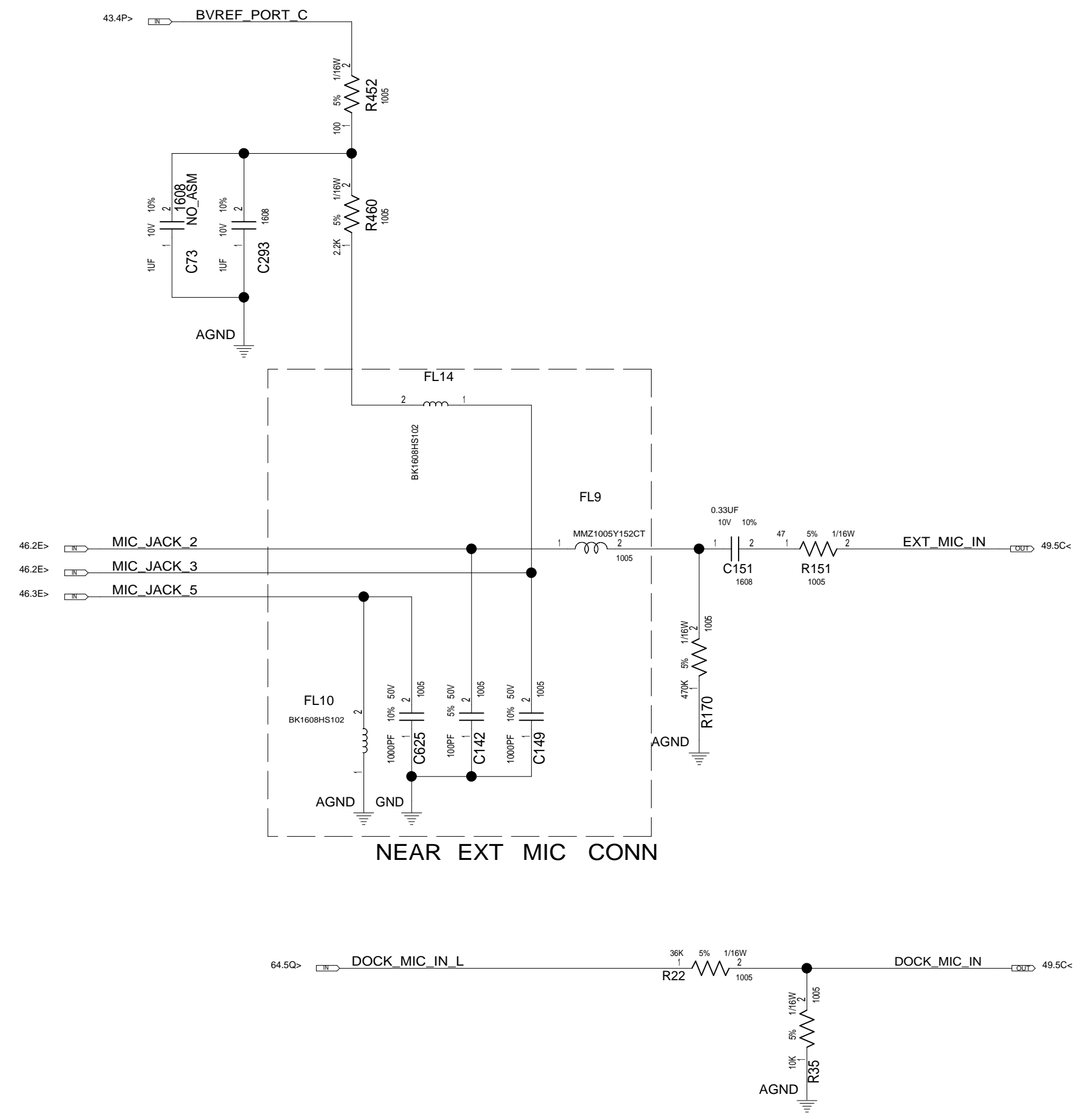
NEAR HEADPHONE CONN



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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 | AUDIO HP & EXT MIC CONN | |
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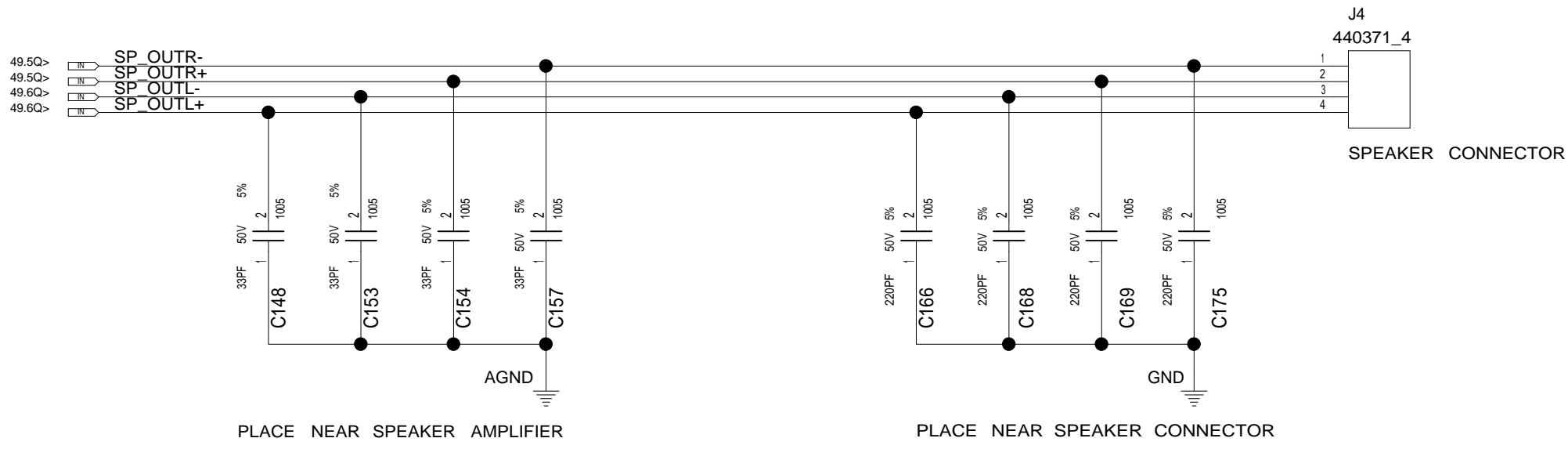
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|-----|------|--------|-----------------|----------|
| | DATE | EC NO. | PART NO. | |
| REL | | | VER.1.42 | |
| | | | DEVELOPMENT NO. | Q/M |
| | | | | 47 / 101 |



VER.1.42

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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 | AUDIO EXT MIC AMP | |
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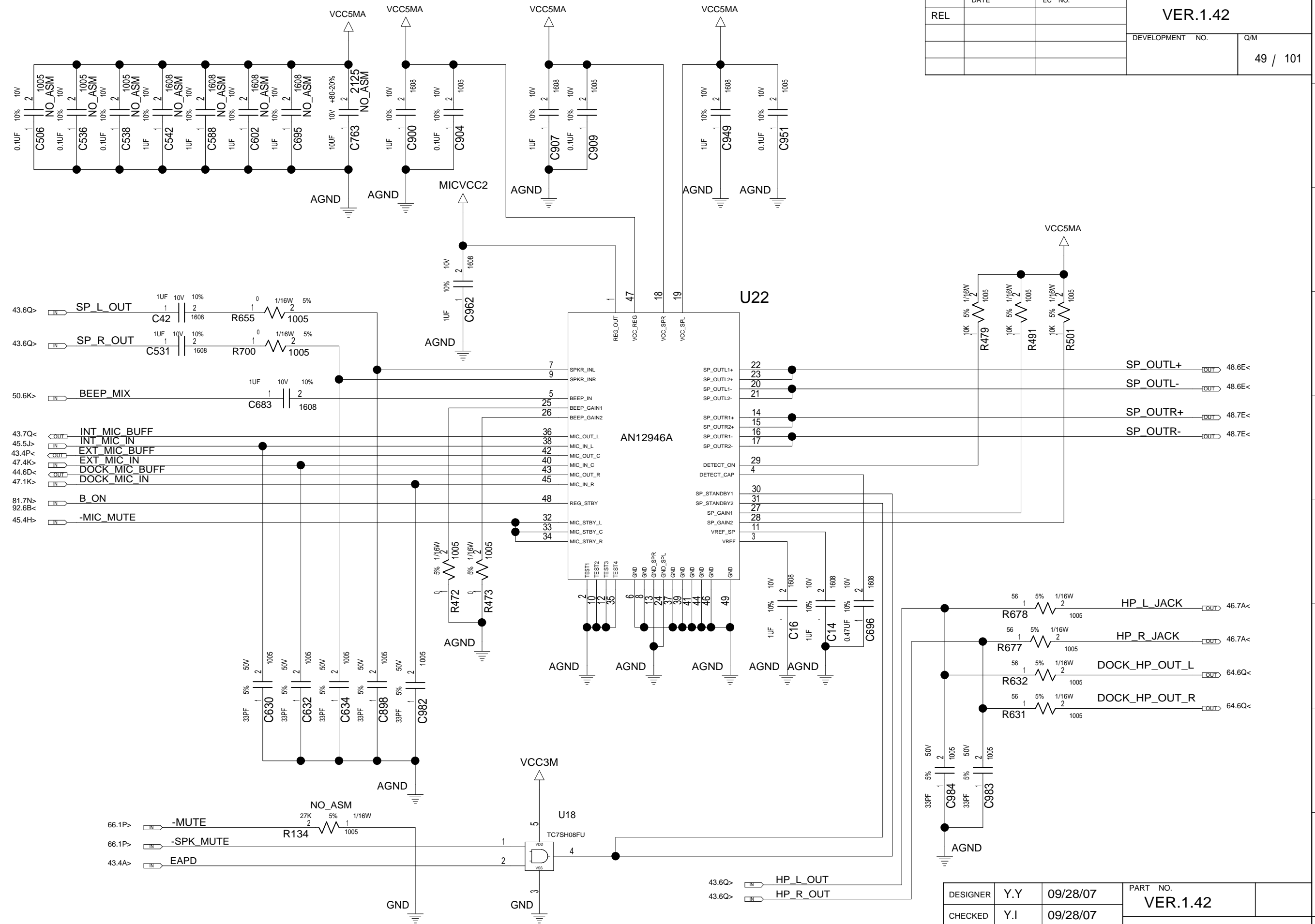
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| | DATE | EC NO. | PART NO. | |
| REL | | | VER.1.42 | |
| | | | DEVELOPMENT NO. | Q/M |
| | | | | 48 / 101 |



VER.1.42

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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 | AUDIO SPEAKER | |
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|-----|------|--------|-----------------|----------|
| REL | DATE | EC NO. | PART NO. | |
| | | | VER.1.42 | |
| | | | DEVELOPMENT NO. | Q/M |
| | | | | 49 / 101 |

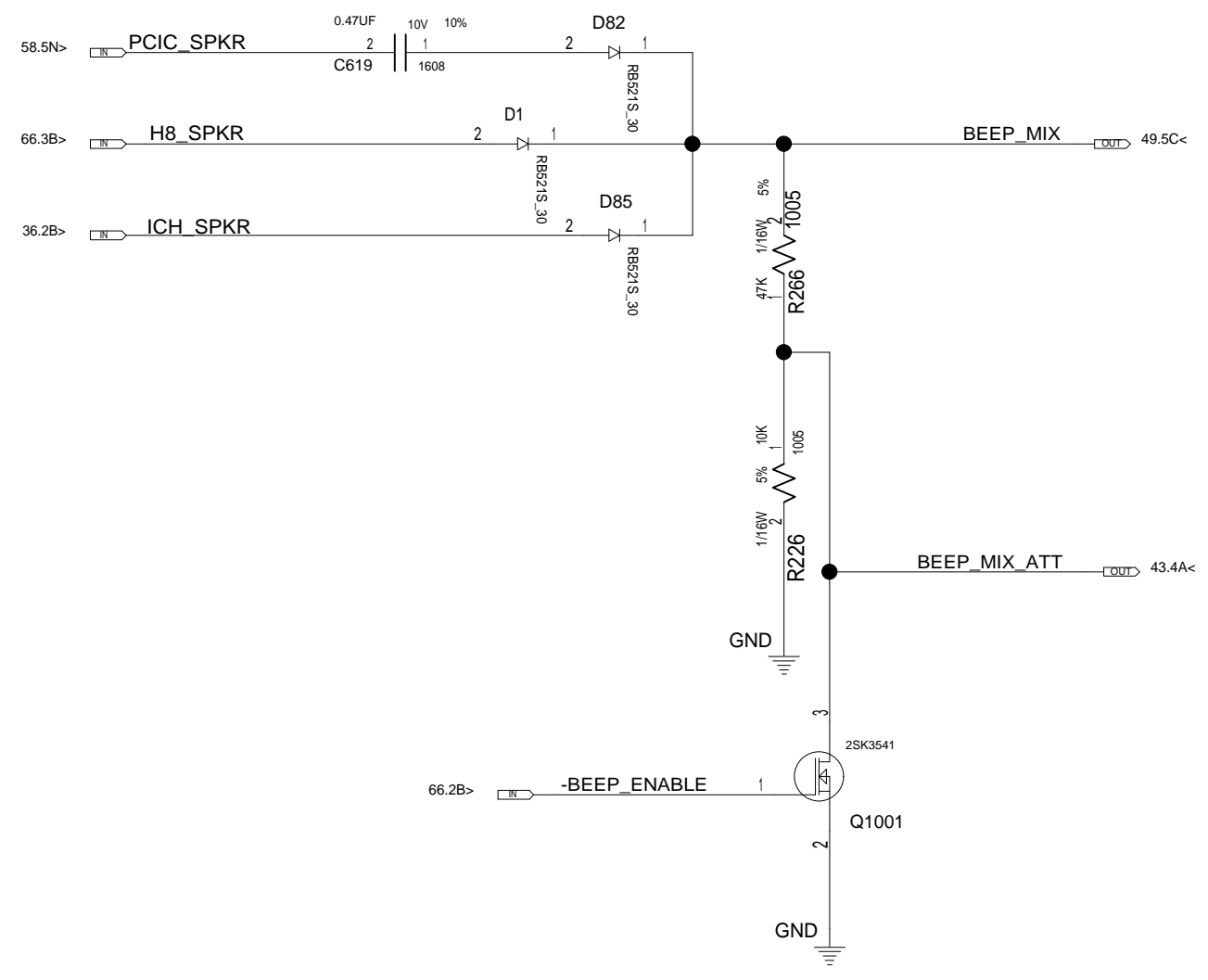


81.1B< 61.3A< 13.7H< 13.5J<

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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 | AUDIO HDP AMP | |
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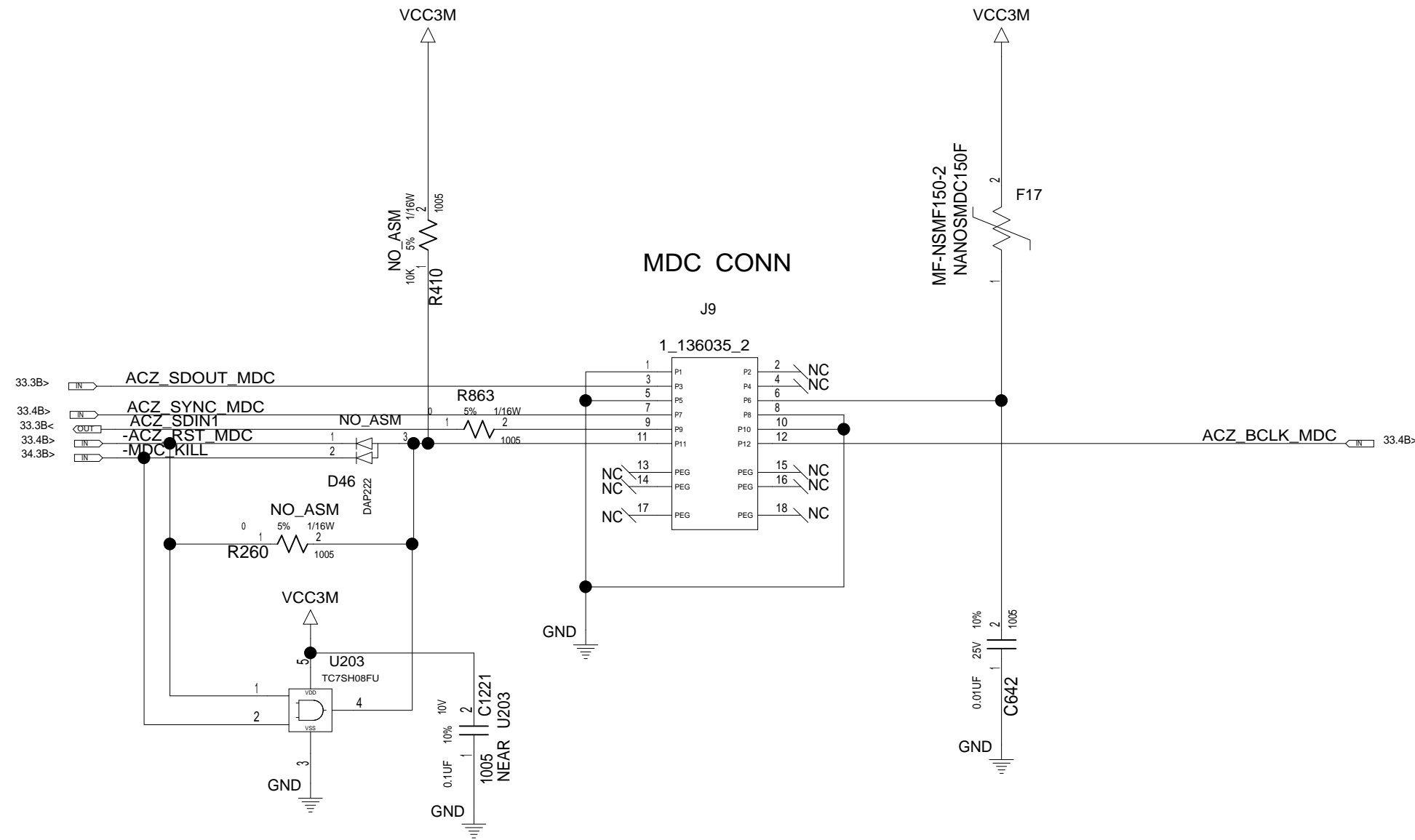
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| | DATE | EC NO. | PART NO. | |
| REL | | | VER.1.42 | |
| | | | DEVELOPMENT NO. | Q/M |
| | | | | 50 / 101 |



VER.1.42

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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 | AUDIO BEEP | |
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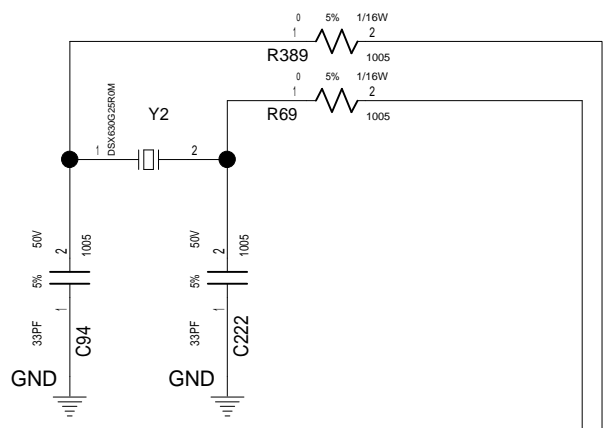
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| | DATE | EC NO. | PART NO. | |
| REL | | | VER.1.42 | |
| | | | DEVELOPMENT NO. | Q/M |
| | | | | 51 / 101 |



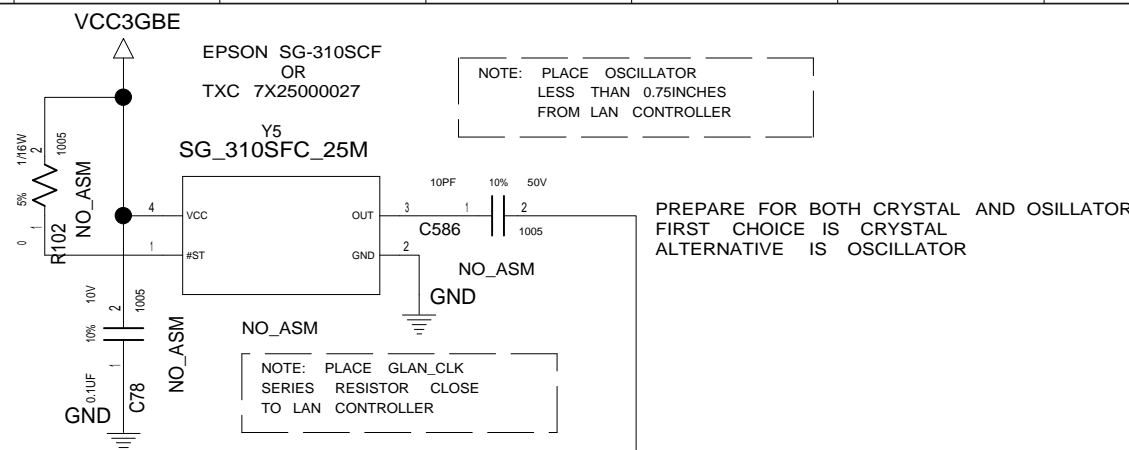
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| DESIGNER | Y.Y | 09/28/07 | PART NO. | |
| CHECKED | Y.I | 09/28/07 | VER.1.42 | |
| APPROVED | H.K | 09/28/07 | TITLE MLB-3 EXT SDV | |
| CLASS | H.K | 09/28/07 | CDC CONNECTOR | |
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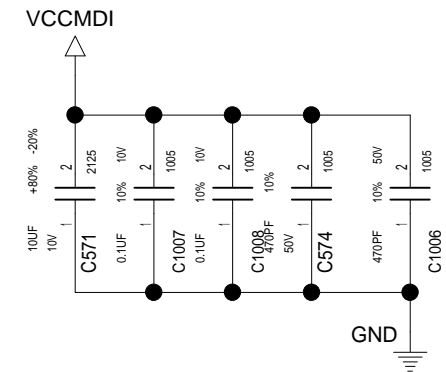
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| REL | DATE | EC NO. | PART NO. |
| | | | VER.1.42 |
| | | | DEVELOPMENT NO. |
| | | | Q/M |
| | | | 52 / 101 |



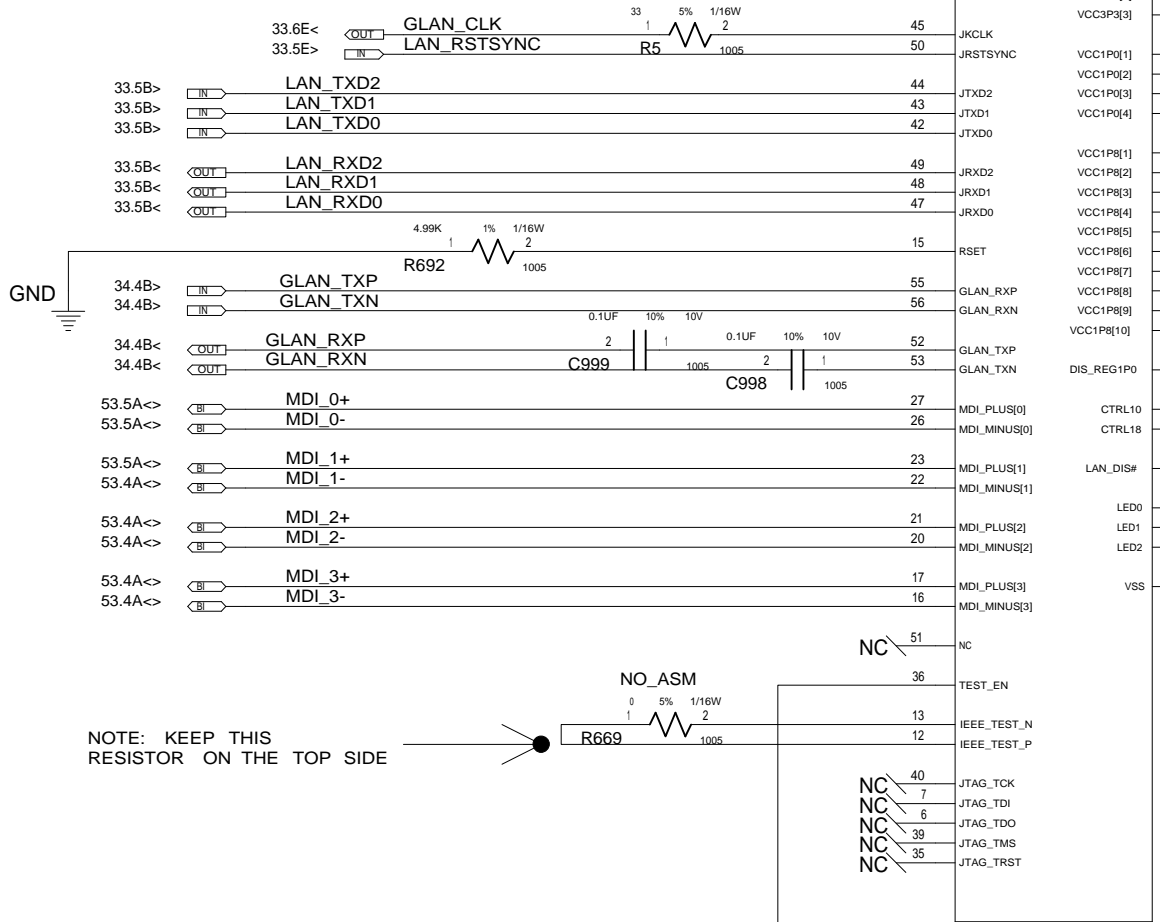
PLACE CRYSTAL LESS THAN 0.75 INCHES FROM GBE PHY



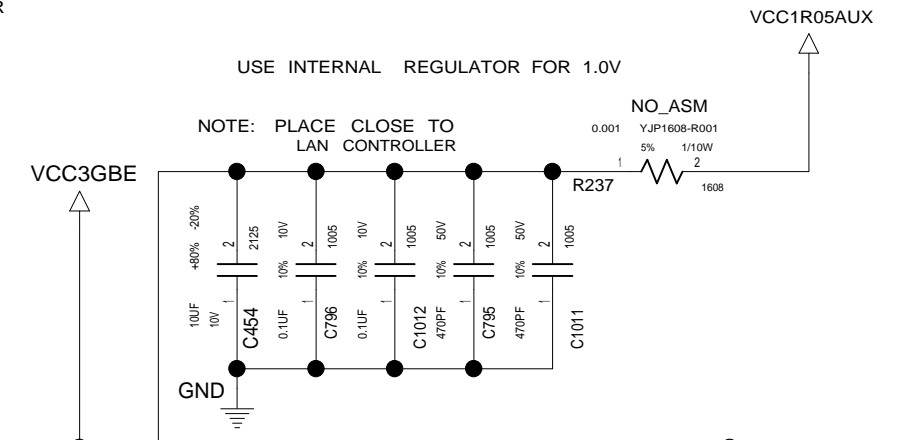
PREPARE FOR BOTH CRYSTAL AND OSILLATOR
FIRST CHOICE IS CRYSTAL
ALTERNATIVE IS OSCILLATOR



NOTE: PLACE CLOSE TO LAN CONTROLLER

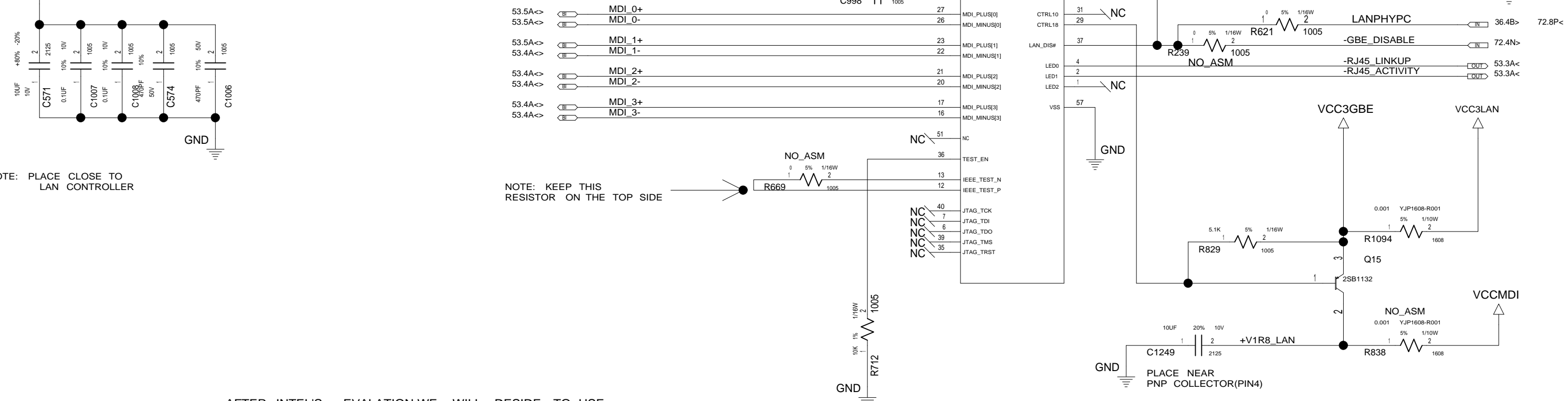


NOTE: KEEP THIS RESISTOR ON THE TOP SIDE



NOTE: PLACE CLOSE TO LAN CONTROLLER

USE INTERNAL REGULATOR FOR 1.0V

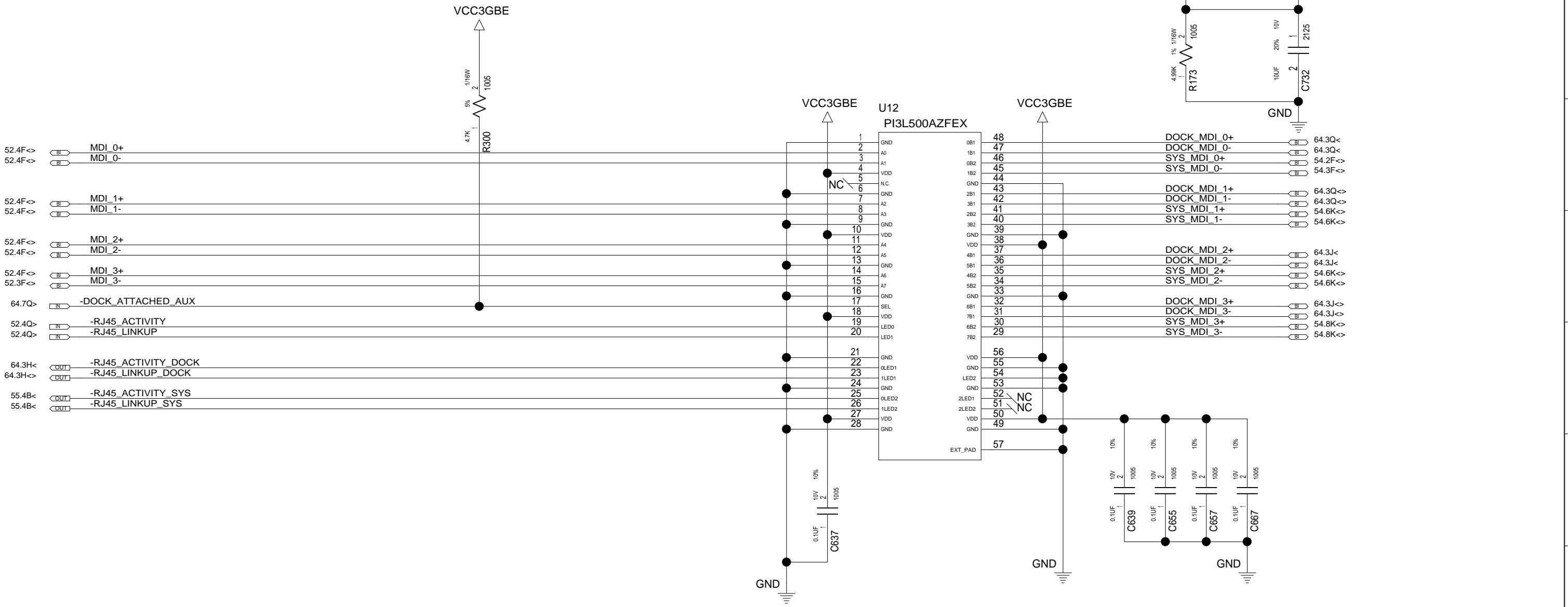


PLACE NEAR PNP COLLECTOR(PIN4)

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

| | | | |
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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 |
| 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 |



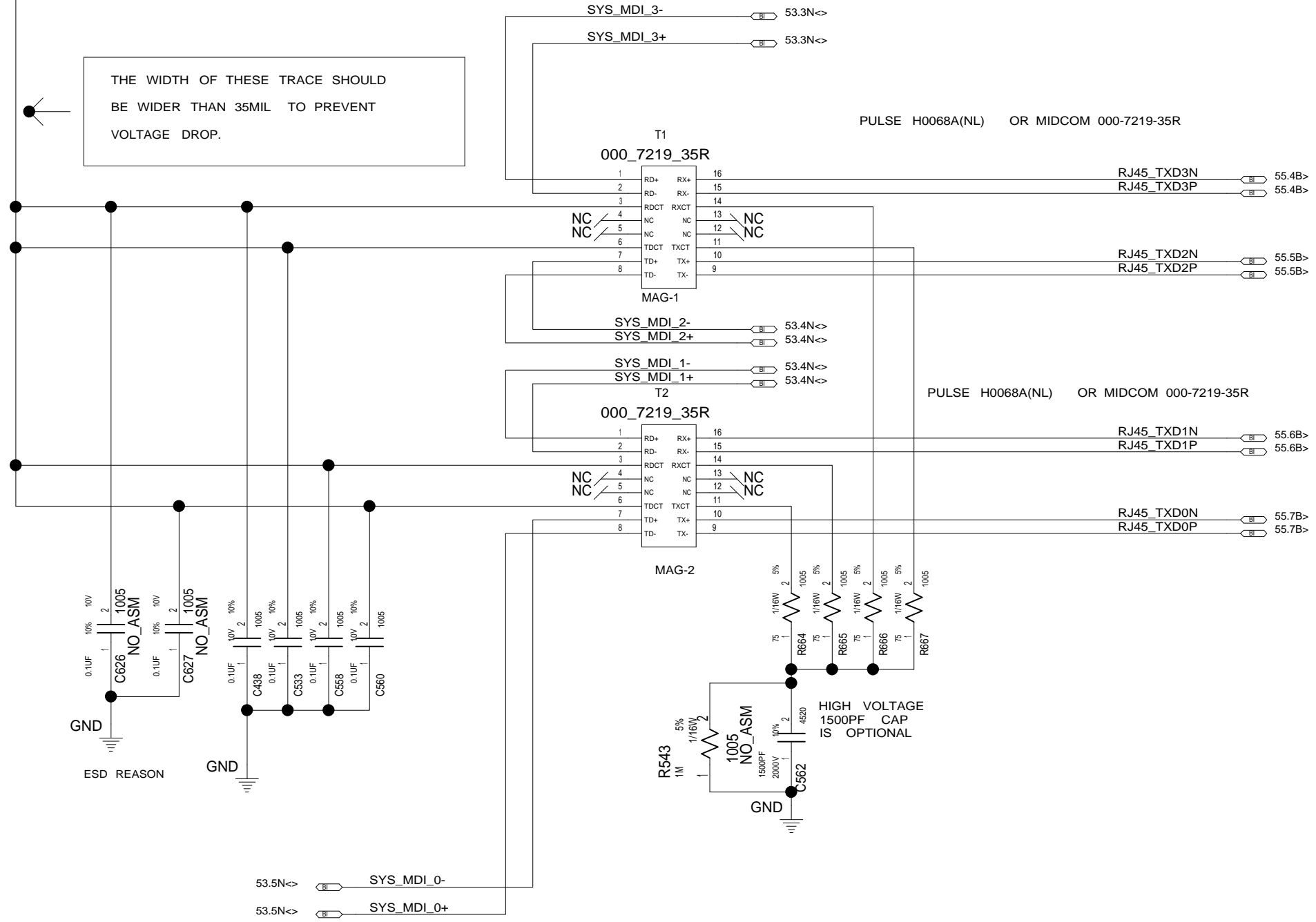
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| DESIGNER | Y.Y | 09/28/07 | PART NO. | |
| CHECKED | Y.I | 09/28/07 | VER.1.42 | |
| APPROVED | H.K | 09/28/07 | TITLE MLB-3 EXT SDV | |
| CLASS | H.K | 09/28/07 | GBE LAN SWITCH | |
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| | DATE |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

VCCMDI

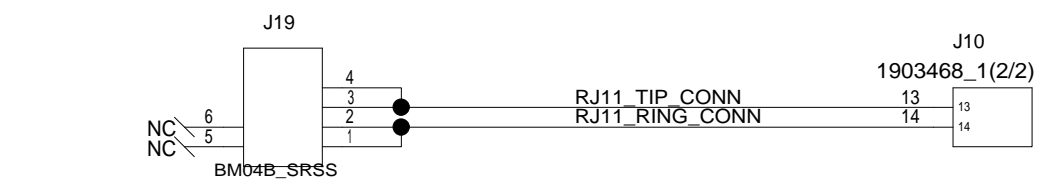
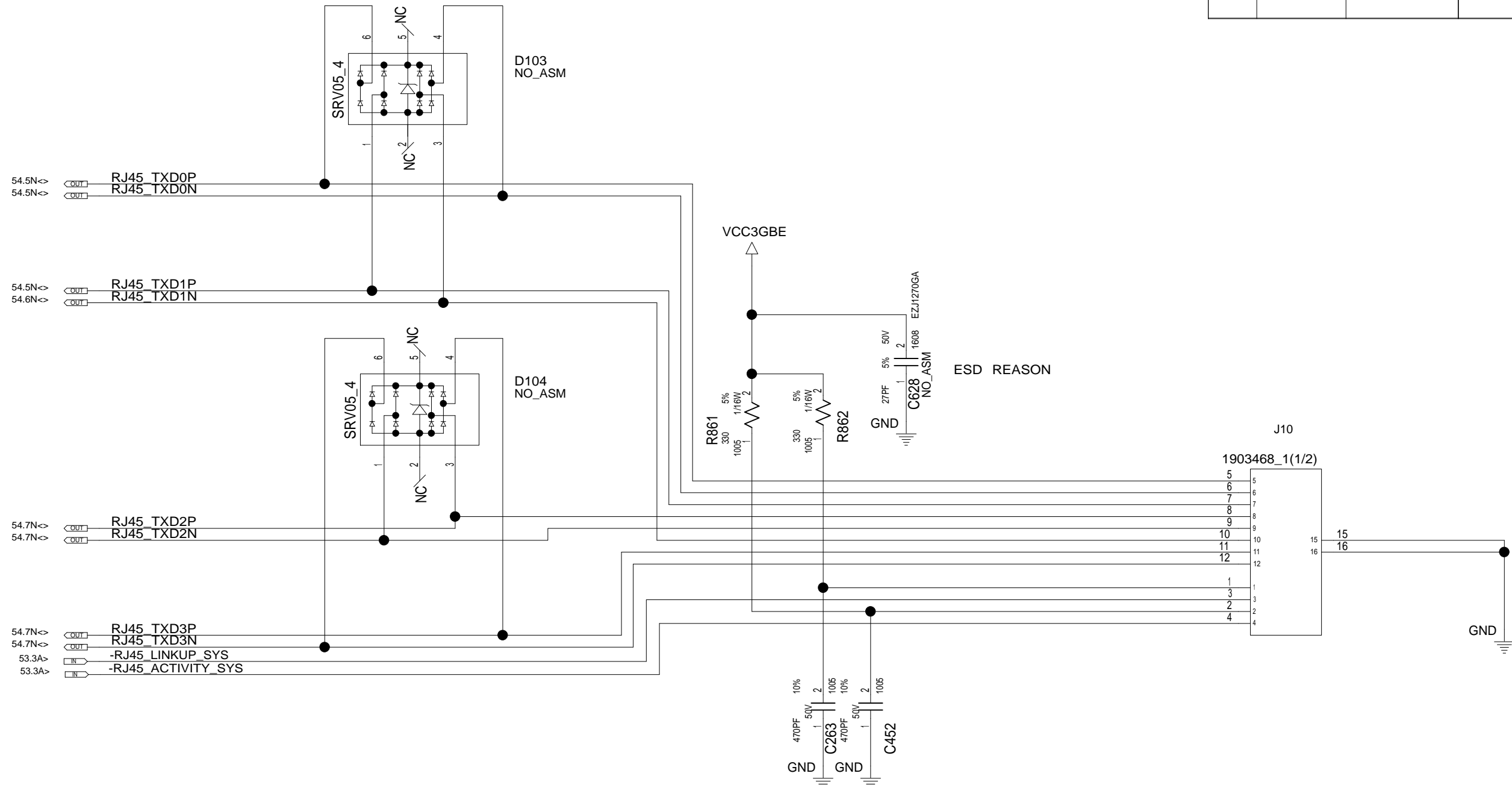
THE WIDTH OF THESE TRACE SHOULD BE WIDER THAN 35MIL TO PREVENT VOLTAGE DROP.



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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 | GBE MAGNETICS | |
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|-----|------|--------|-----------------|----------|
| | DATE | EC NO. | PART NO. | |
| REL | | | VER.1.42 | |
| | | | DEVELOPMENT NO. | Q/M |
| | | | | 55 / 101 |

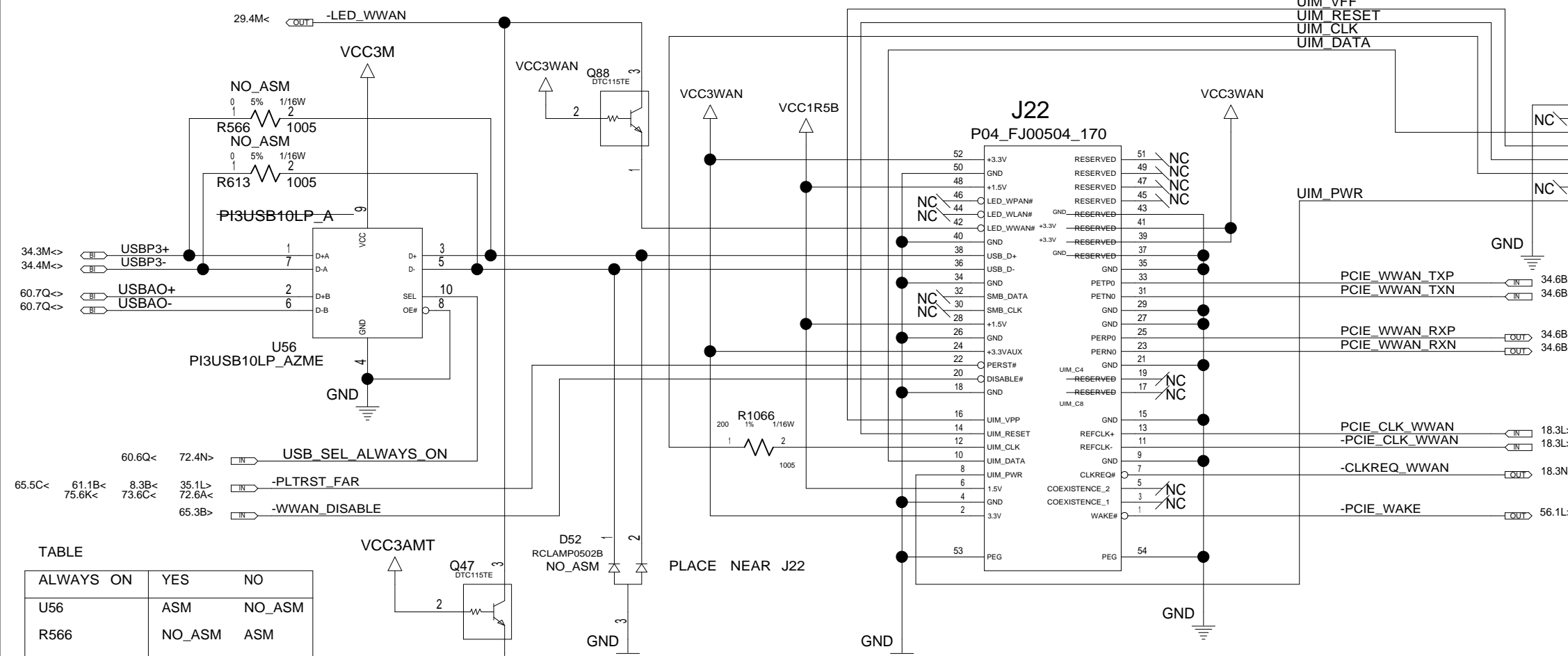


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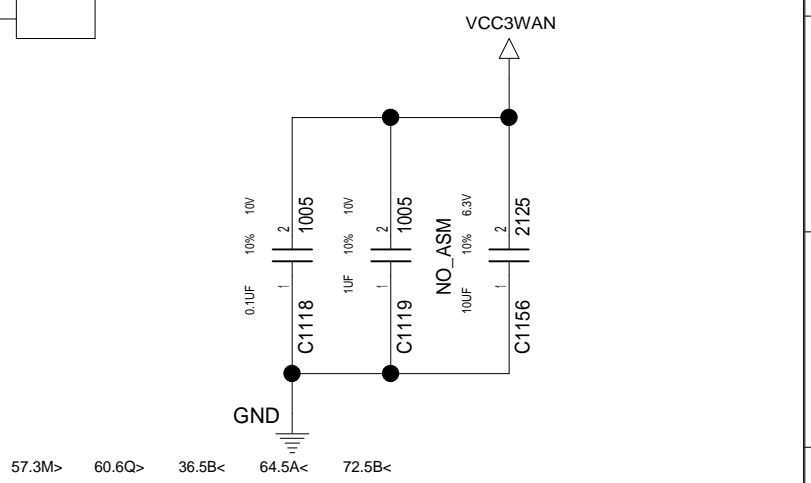
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| DESIGNER | Y.Y | 09/28/07 | PART NO. | |
| CHECKED | Y.I | 09/28/07 | VER.1.42 | |
| APPROVED | H.K | 09/28/07 | TITLE MLB-3 EXT SDV | |
| CLASS | H.K | 09/28/07 | RJ11/RJ45 | CONNECTOR |
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MINI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

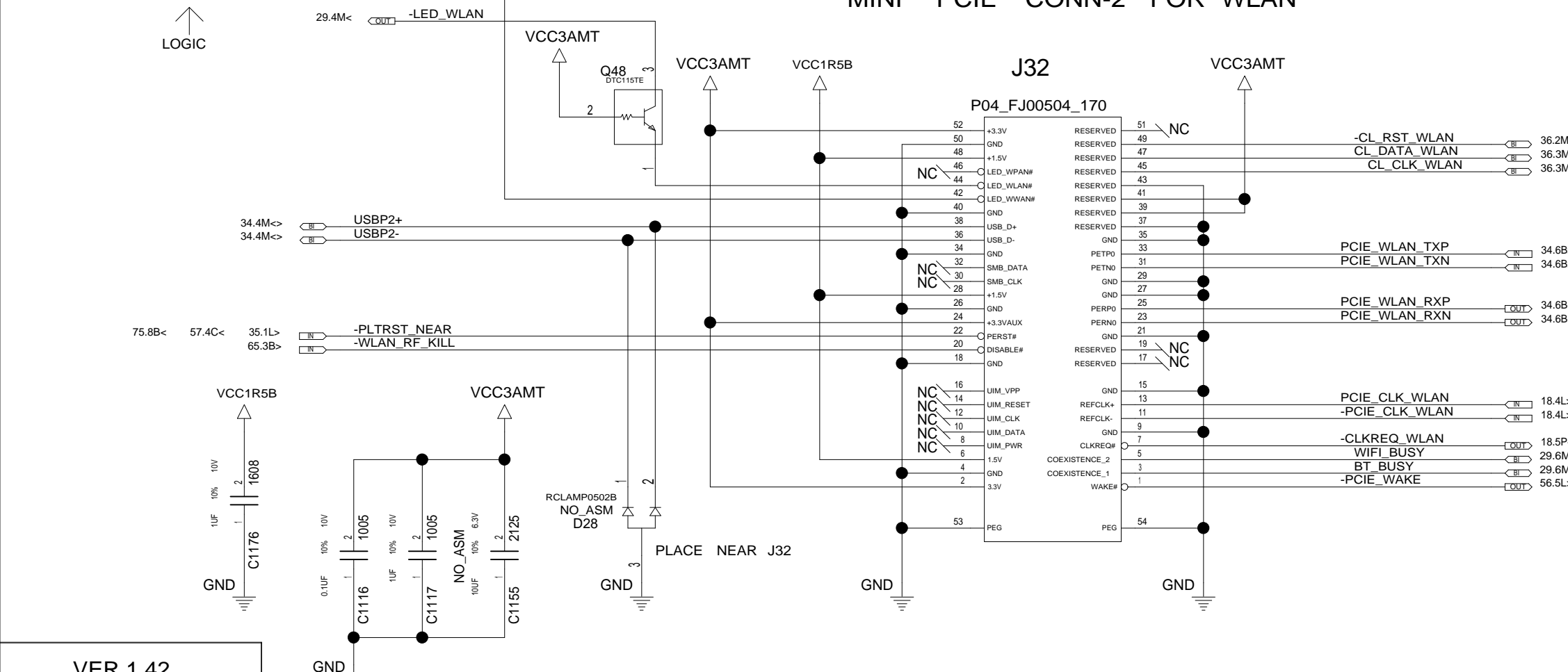
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| DATE | EC NO. | PART NO. | |
| REL | | VER.1.42 | |
| | | DEVELOPMENT NO. | Q/M |
| | | | 56 / 101 |



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



| | 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 |

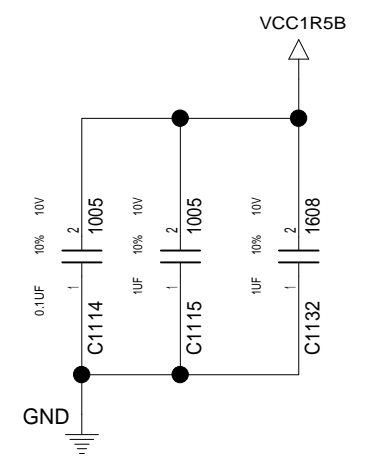
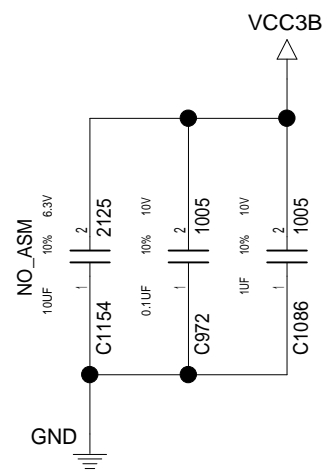
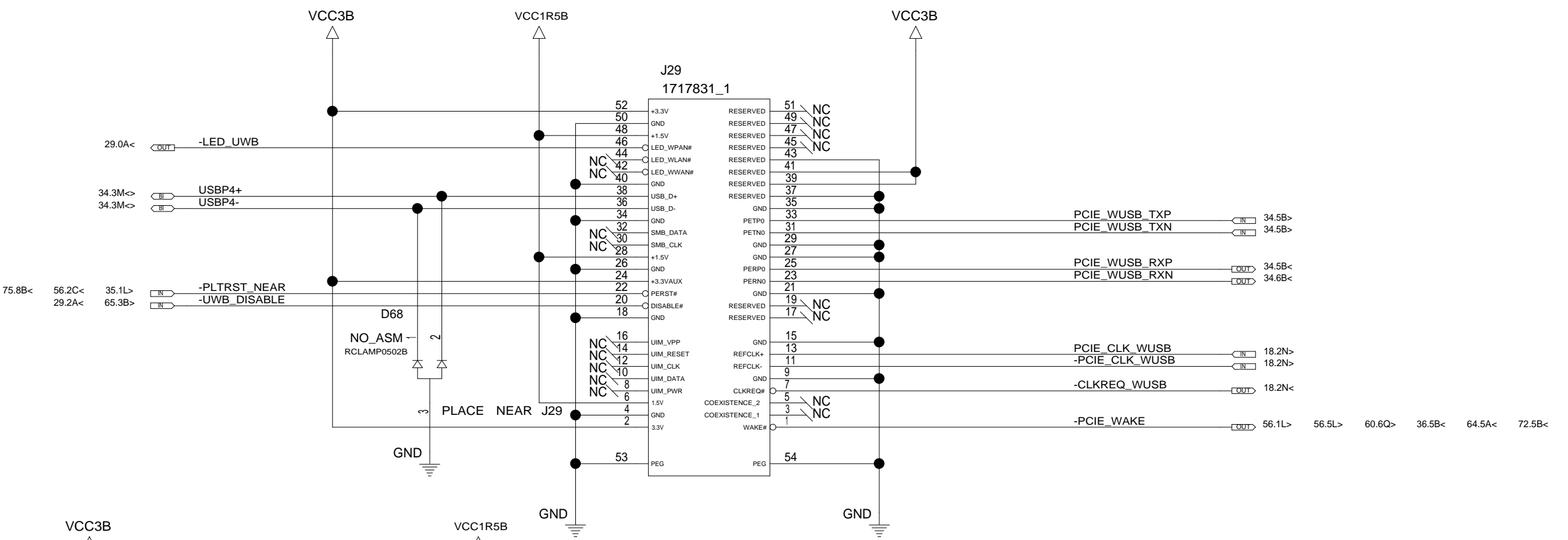


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| DESIGNER | Y.Y | 09/28/07 | PART NO. | |
| CHECKED | Y.I | 09/28/07 | VER.1.42 | |
| APPROVED | H.K | 09/28/07 | TITLE MLB-3 EXT SDV | |
| CLASS | H.K | 09/28/07 | PCIE MINI CARD SLOT | |
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MICRO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

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

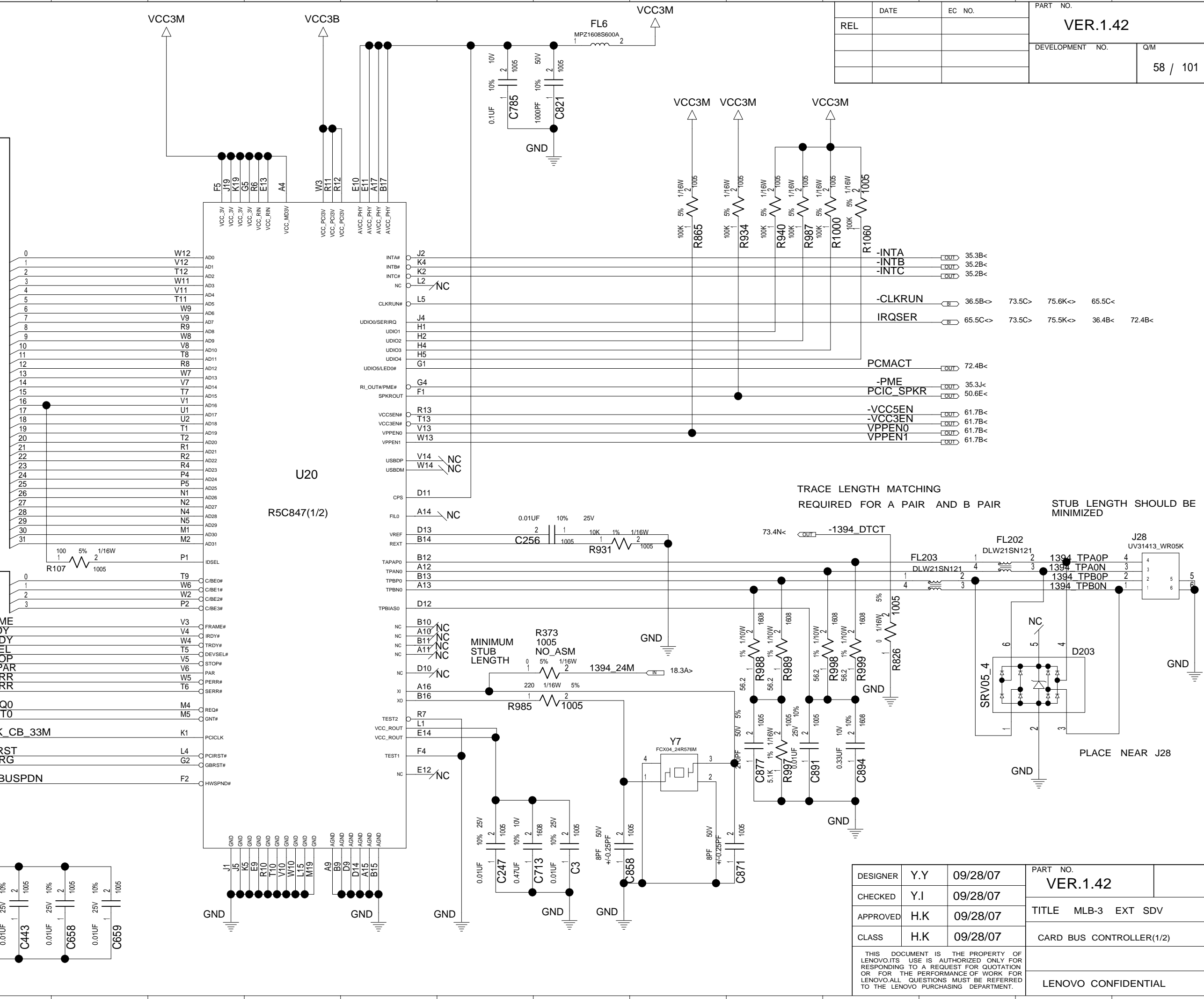


VER.1.42

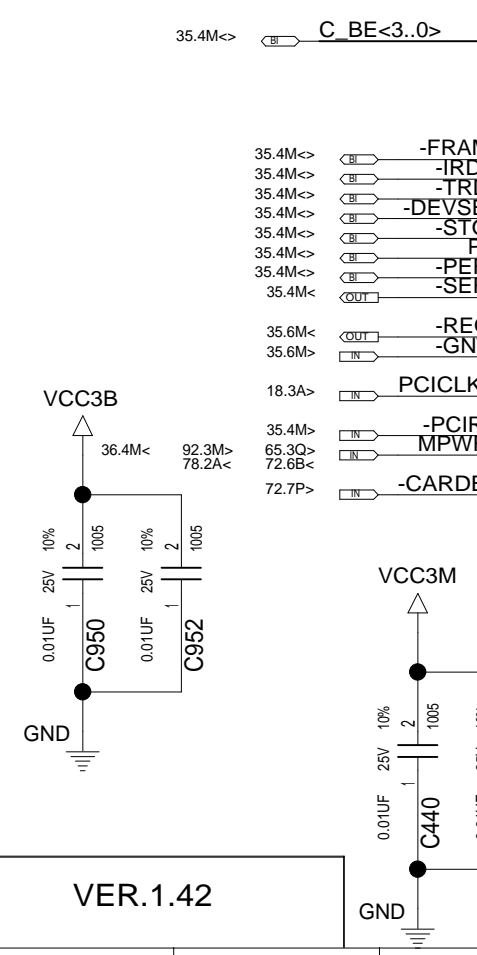
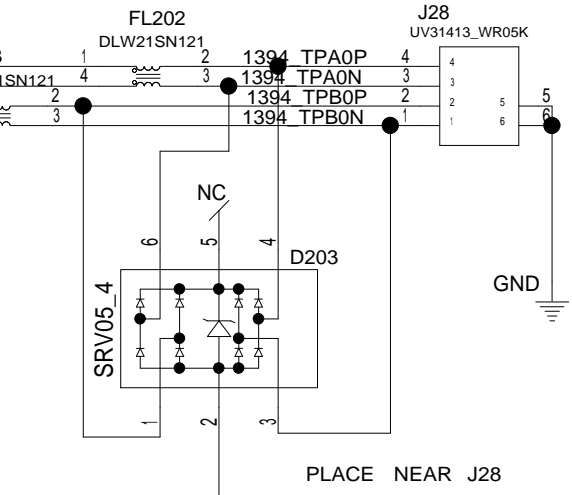
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| CHECKED | Y.I | 09/28/07 | VER.1.42 | |
| APPROVED | H.K | 09/28/07 | TITLE MLB-3 EXT SDV | |
| CLASS | H.K | 09/28/07 | PCIE HALF MINI CARD SLOT | |
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| | | | |
|-----|------|--------|-----------------|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

| TABLE | 1394 | 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 | |

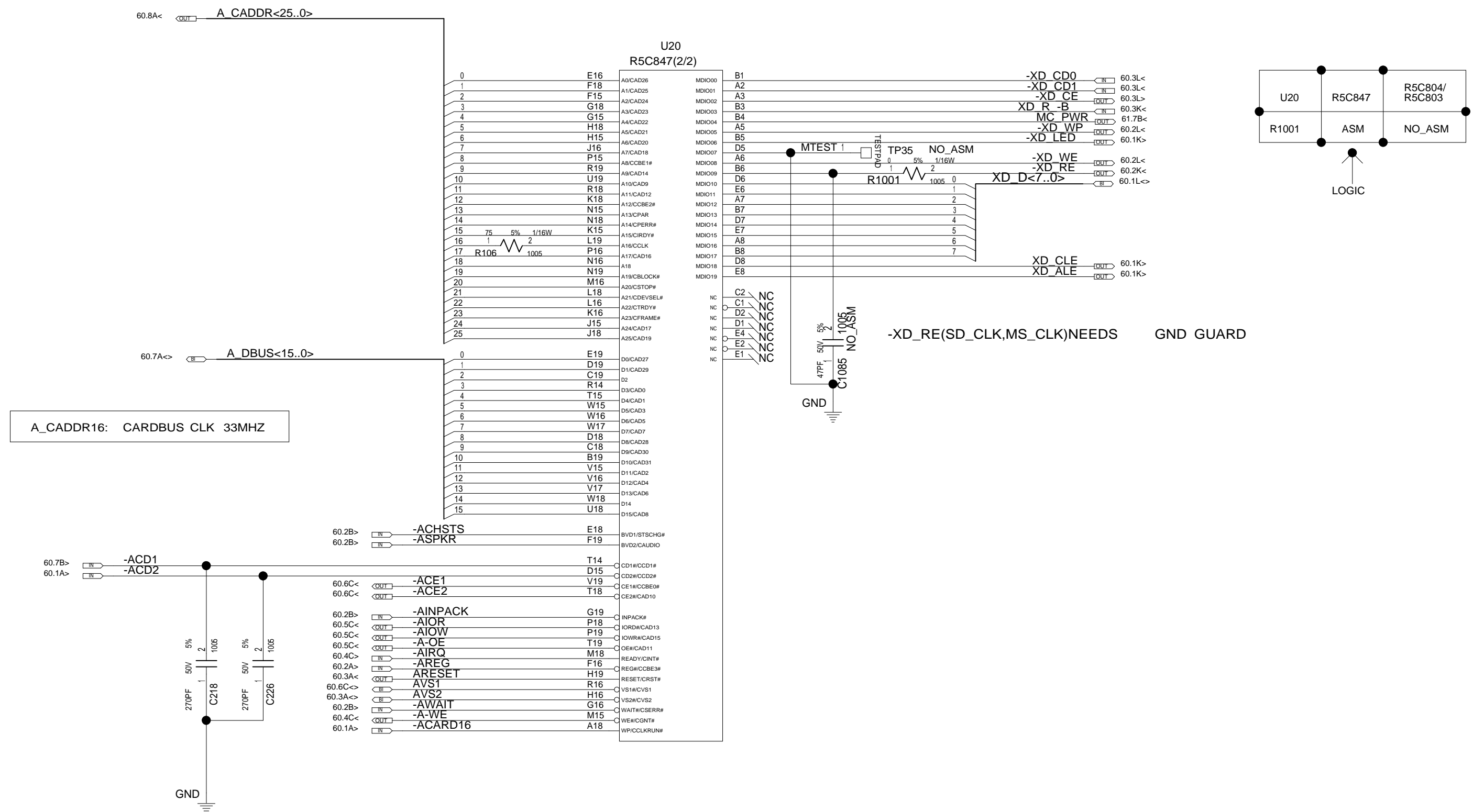


TRACE LENGTH MATCHING
REQUIRED FOR A PAIR AND B PAIR
STUB LENGTH SHOULD BE MINIMIZED



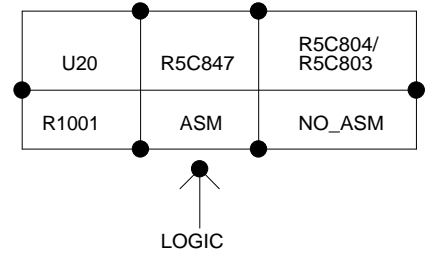
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|--|-----|----------|--------------------------|
| DESIGNER | Y.Y | 09/28/07 | PART NO. |
| CHECKED | Y.I | 09/28/07 | VER.1.42 |
| APPROVED | H.K | 09/28/07 | TITLE MLB-3 EXT SDV |
| CLASS | H.K | 09/28/07 | CARD BUS CONTROLLER(1/2) |
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|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



A_CADDR16: CARDBUS CLK 33MHZ

-XD_RE(SD_CLK,MS_CLK)NEEDS GND GUARD



VER.1.42

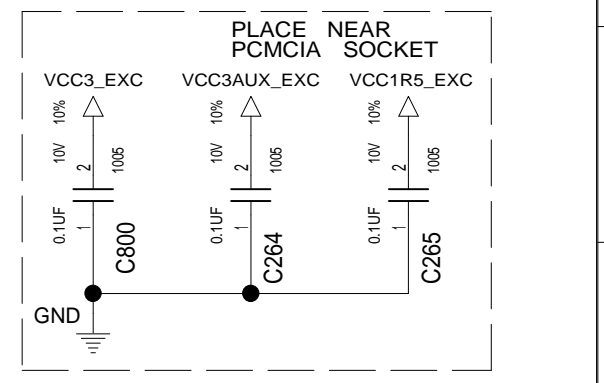
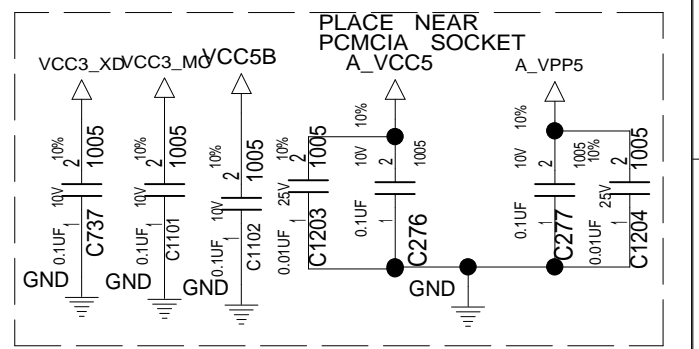
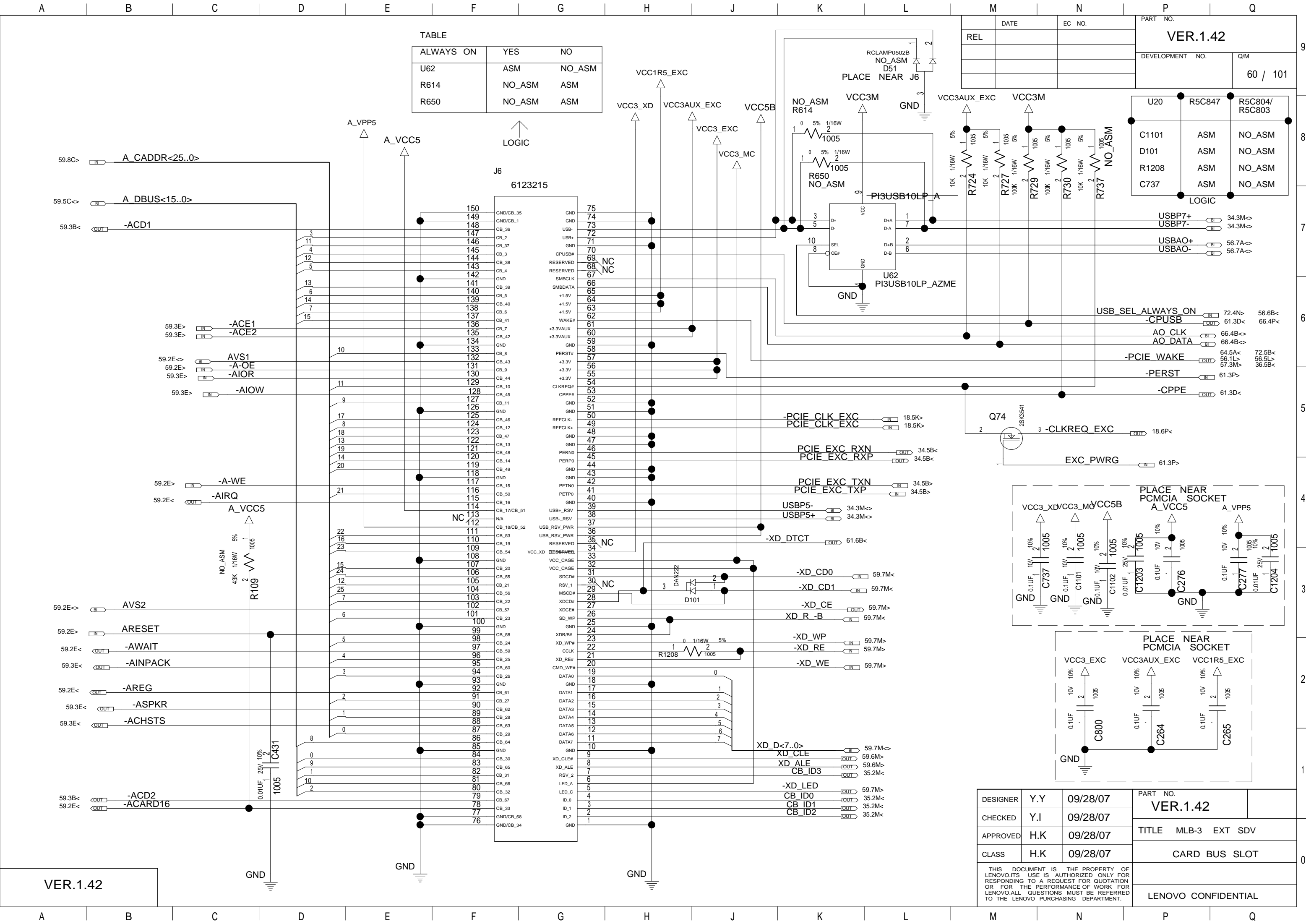
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|----------|-----|----------|-----------------------------|--|
| DESIGNER | Y.Y | 09/28/07 | PART NO. VER.1.42 | |
| CHECKED | Y.I | 09/28/07 | TITLE MLB-3 EXT SDV | |
| APPROVED | H.K | 09/28/07 | CARD BUS CONTROLLER(2/2) | |
| CLASS | H.K | 09/28/07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

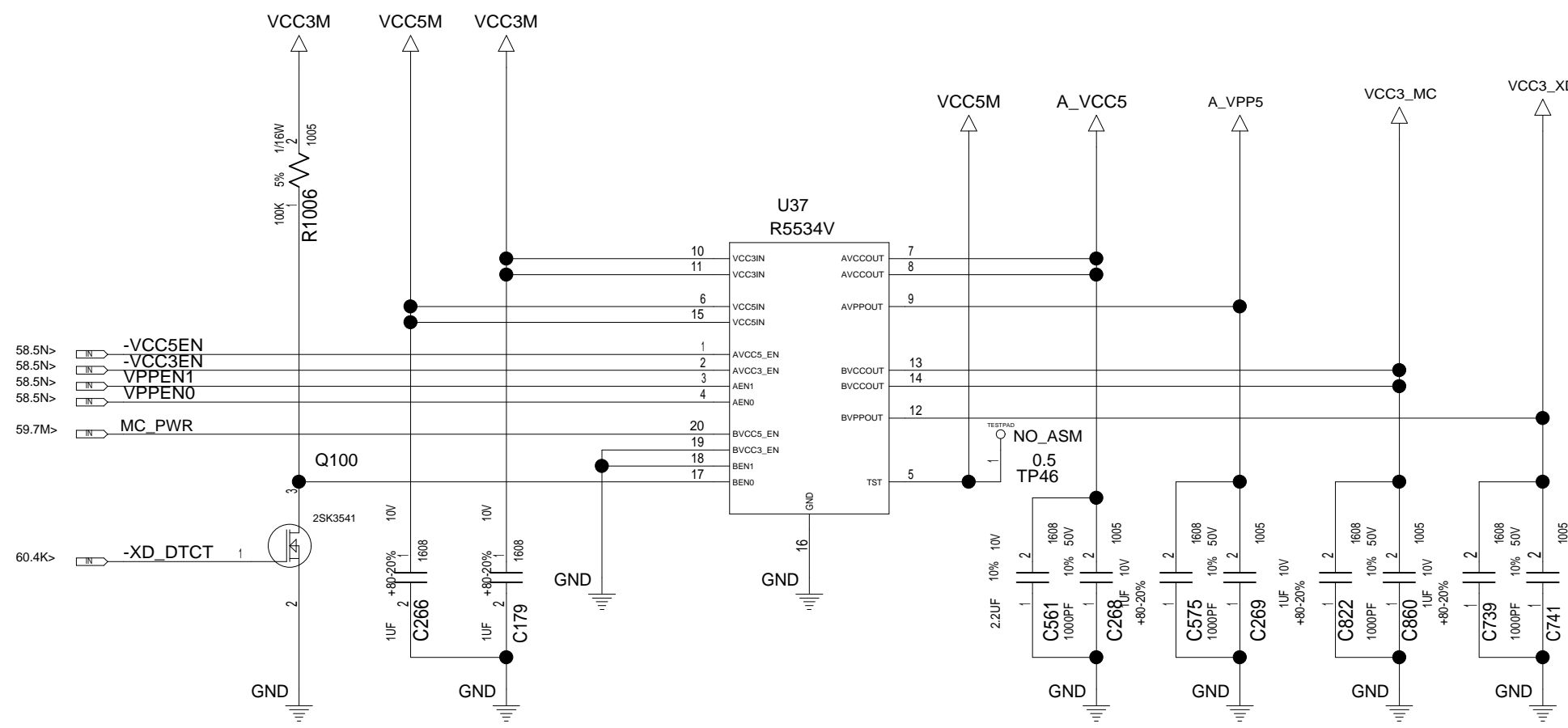
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|-------|--------|---------------|
| U20 | R5C847 | R5C804/R5C803 |
| C1101 | ASM | NO_ASM |
| D101 | ASM | NO_ASM |
| R1208 | ASM | NO_ASM |
| C737 | ASM | NO_ASM |



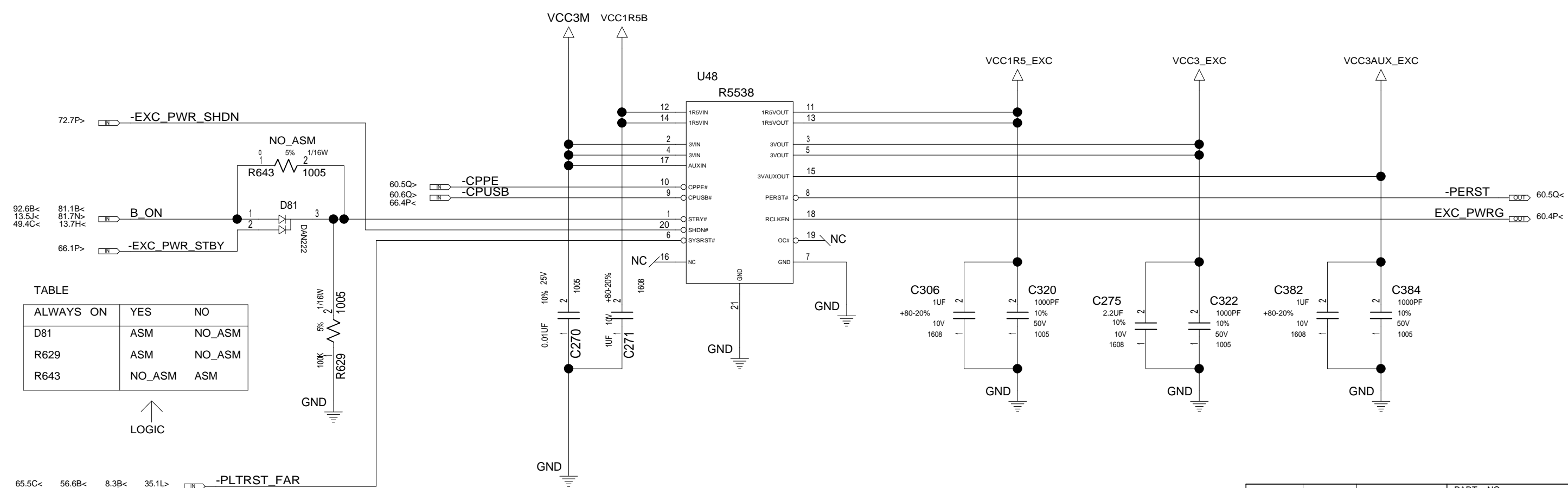
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| DESIGNER | Y.Y | 09/28/07 | PART NO. | |
| CHECKED | Y.I | 09/28/07 | VER.1.42 | |
| APPROVED | H.K | 09/28/07 | TITLE MLB-3 EXT SDV | |
| CLASS | H.K | 09/28/07 | CARD BUS SLOT | |
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| | | | | |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

| | | | | |
|--|-----|----------|------------------------|--|
| 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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VER.1.42

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 |

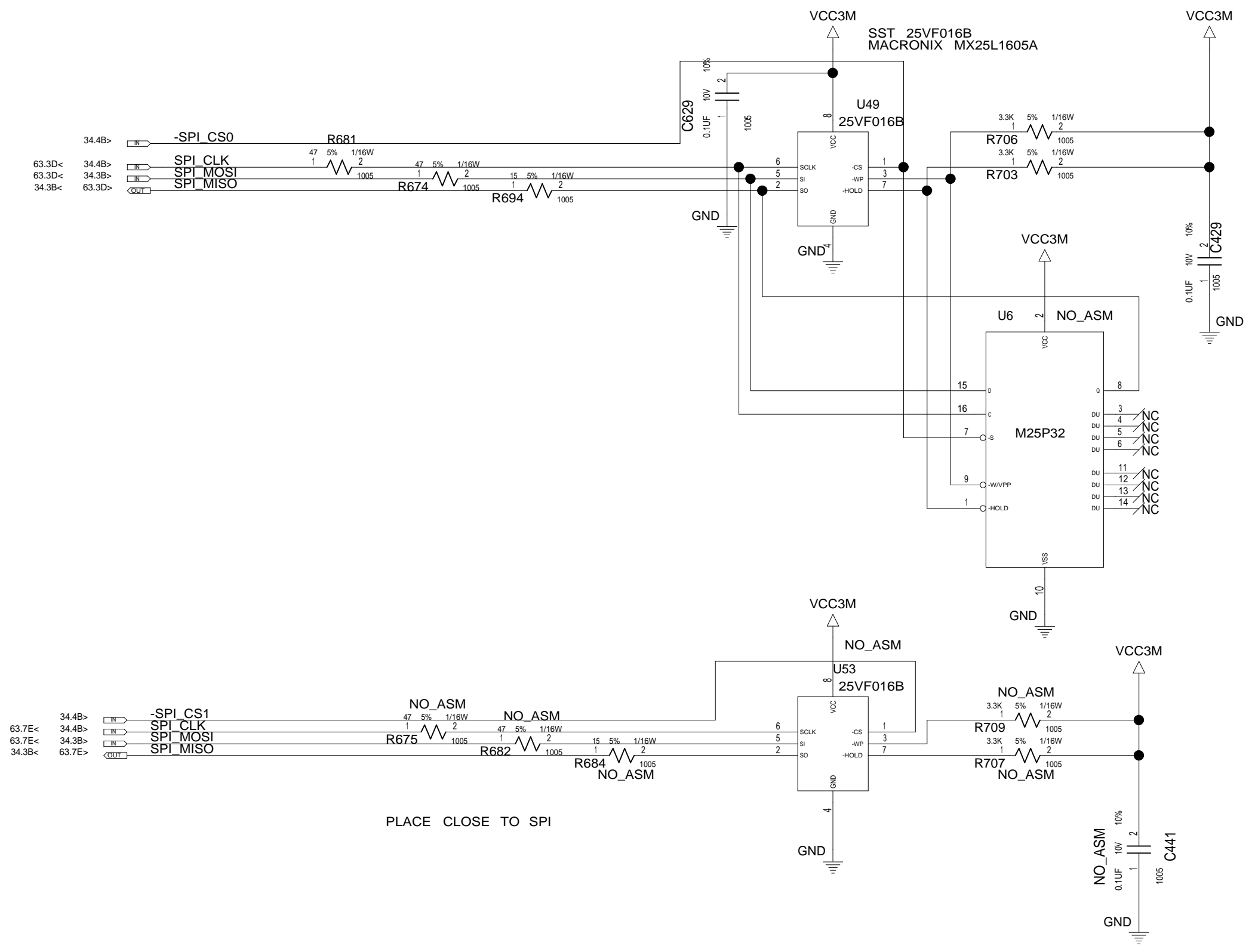
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VER.1.42

| | | | | |
|---|-----|----------|---------------------|--|
| 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 | |
| <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

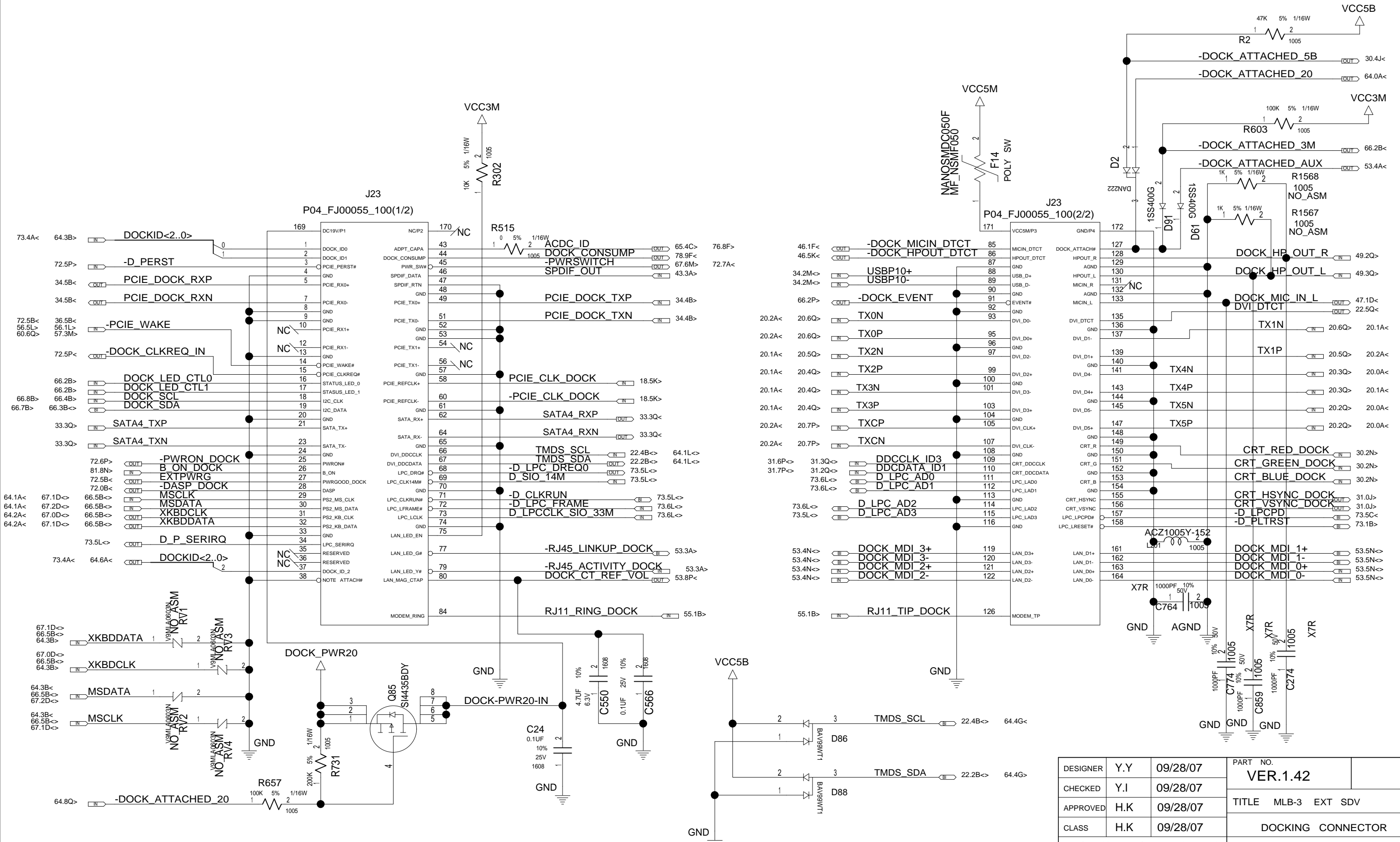
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|-----|------|--------|-----------------|----------|
| REL | DATE | EC NO. | PART NO. | |
| | | | VER.1.42 | |
| | | | DEVELOPMENT NO. | Q/M |
| | | | | 63 / 101 |



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 |

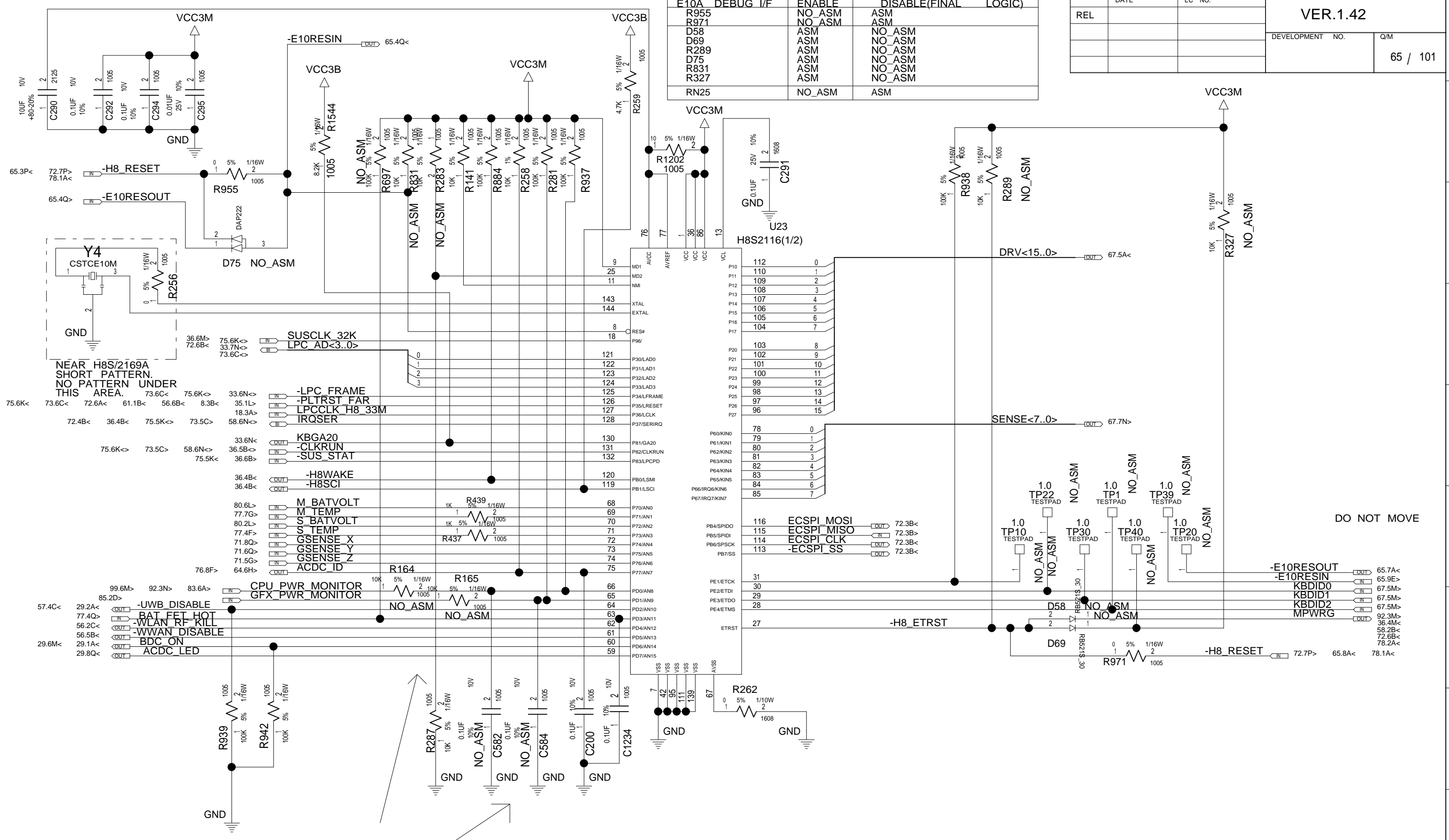


VER.1.42

| | | | |
|--|-----|----------|---------------------|
| 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 | | H8S/2116B (1/2) |
| CLASS | H.K | 09/28/07 | LENOVO CONFIDENTIAL | |

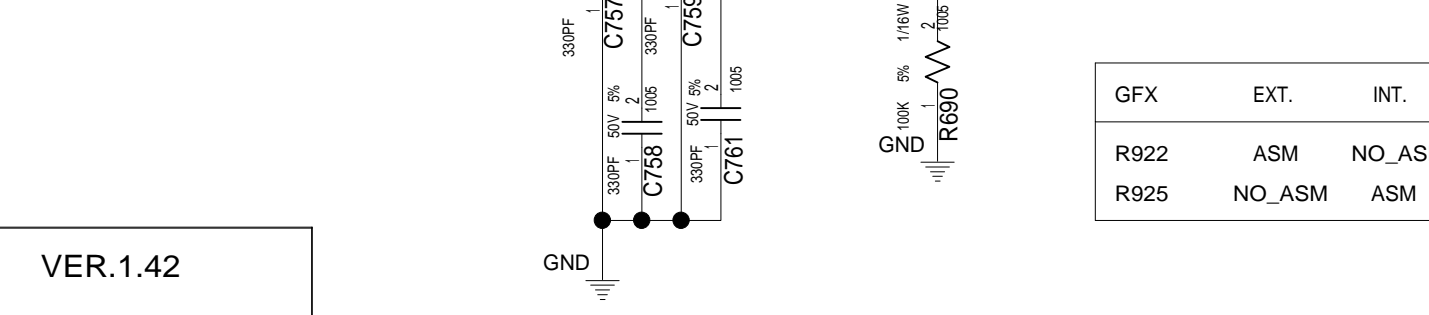
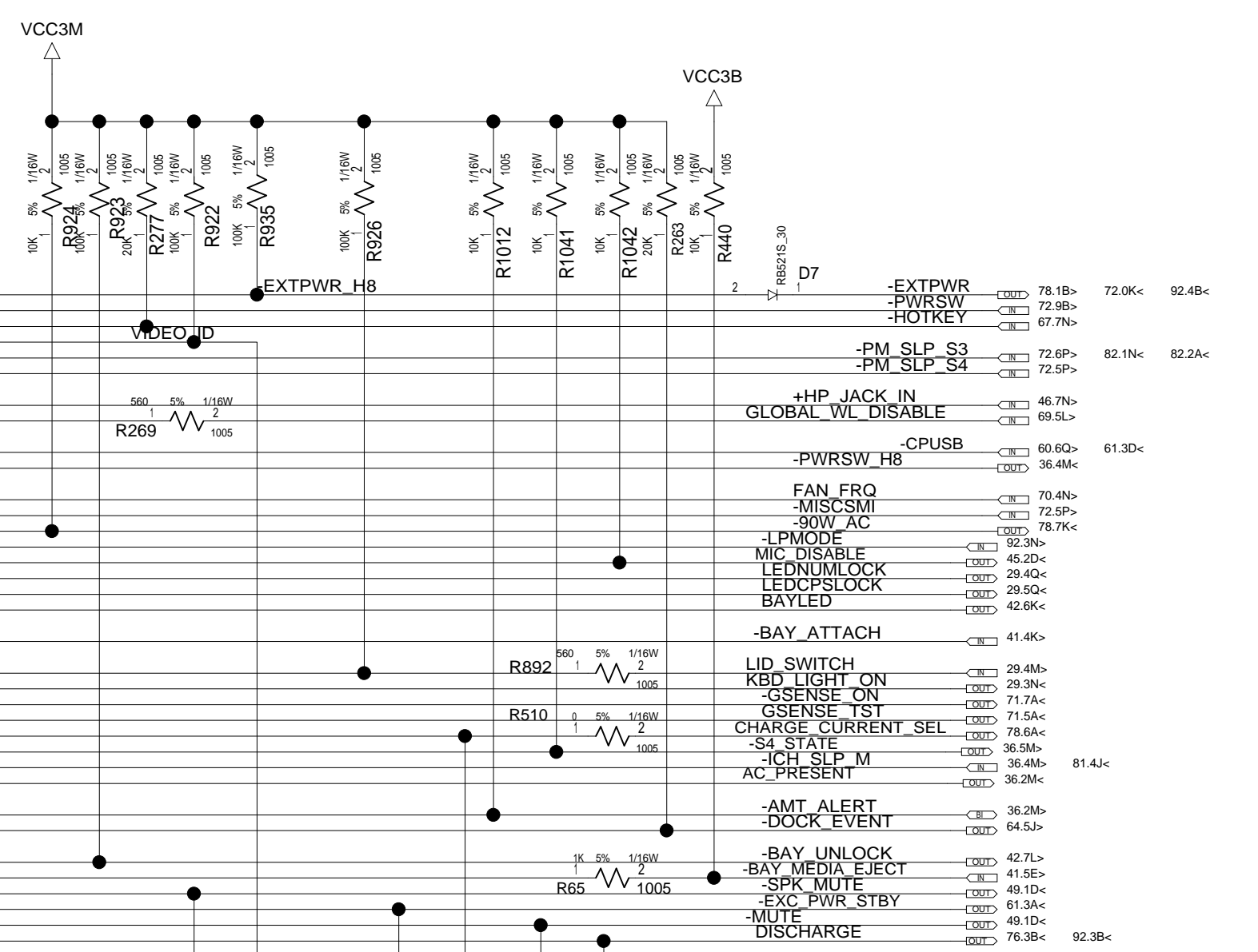
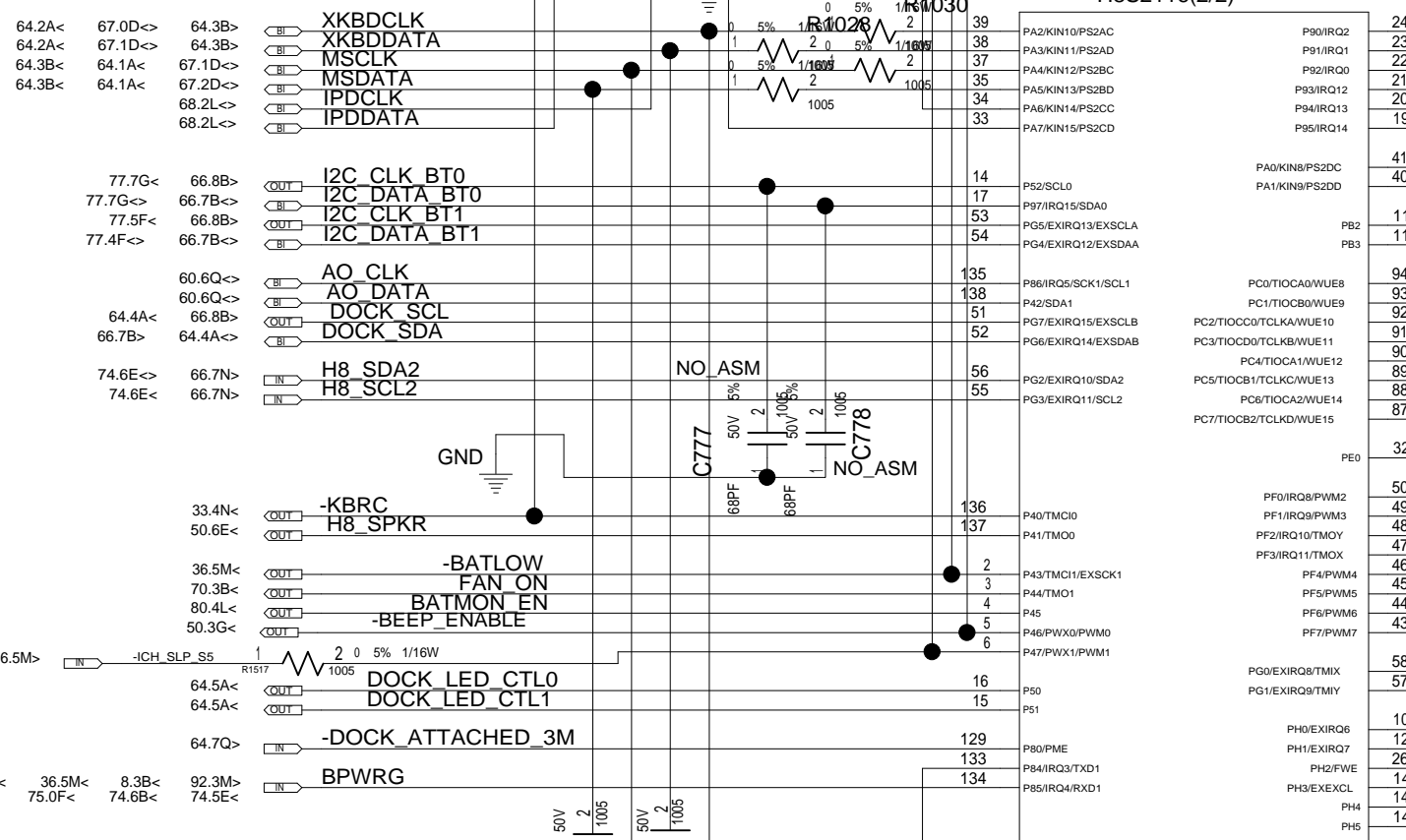
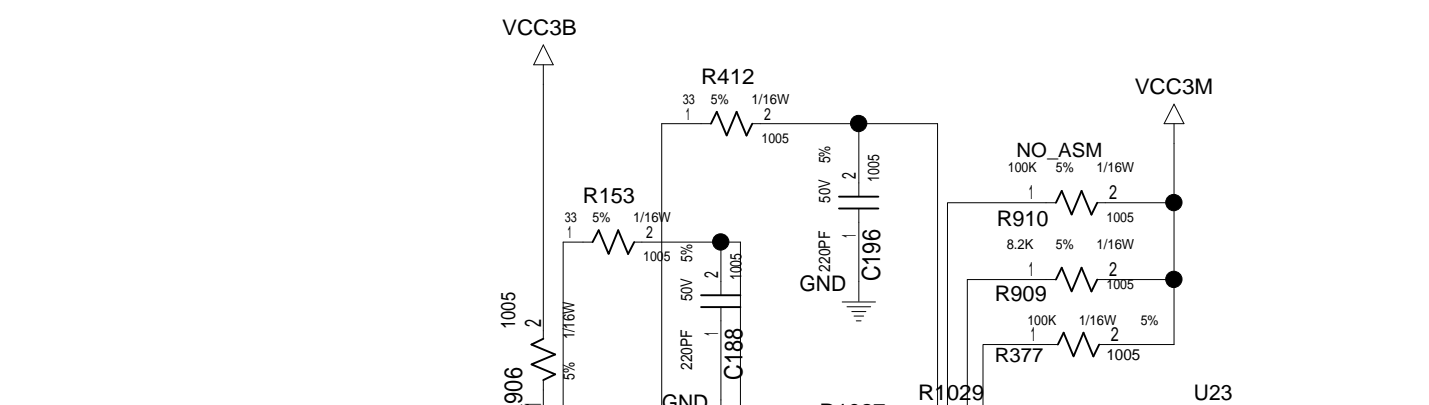
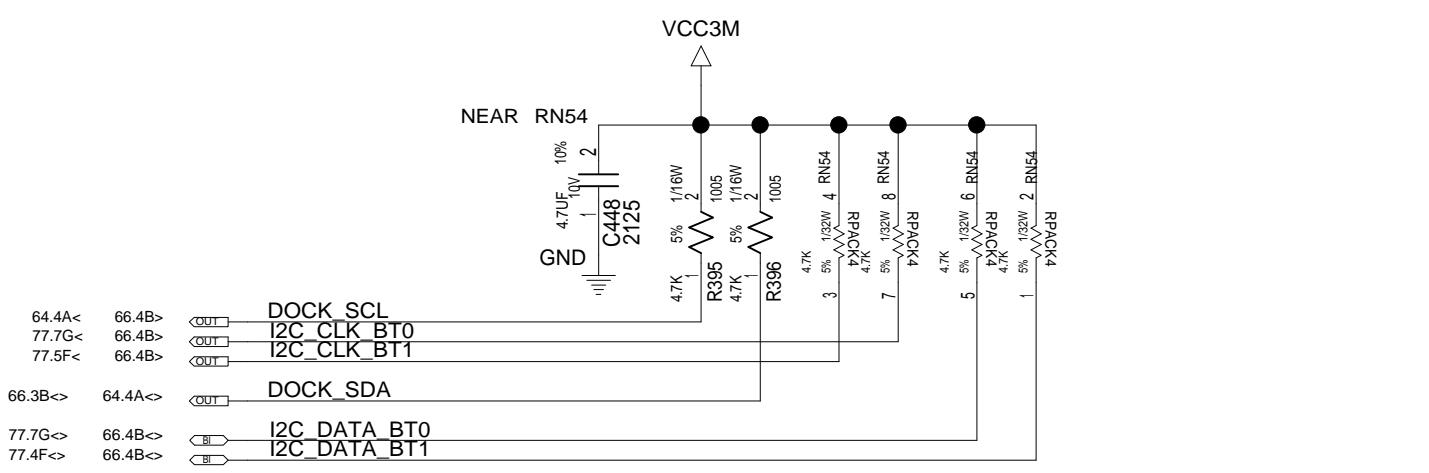
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| | | | | |
|-----|------|--------|-----------------|----------|
| REL | DATE | EC NO. | PART NO. | |
| | | | VER.1.42 | |
| | | | DEVELOPMENT NO. | Q/M |
| | | | | 66 / 101 |

TEST PAD X2
BOTTOM SIDE
DO NOT MOVE AFTER FIX

H8
I2C BUS2

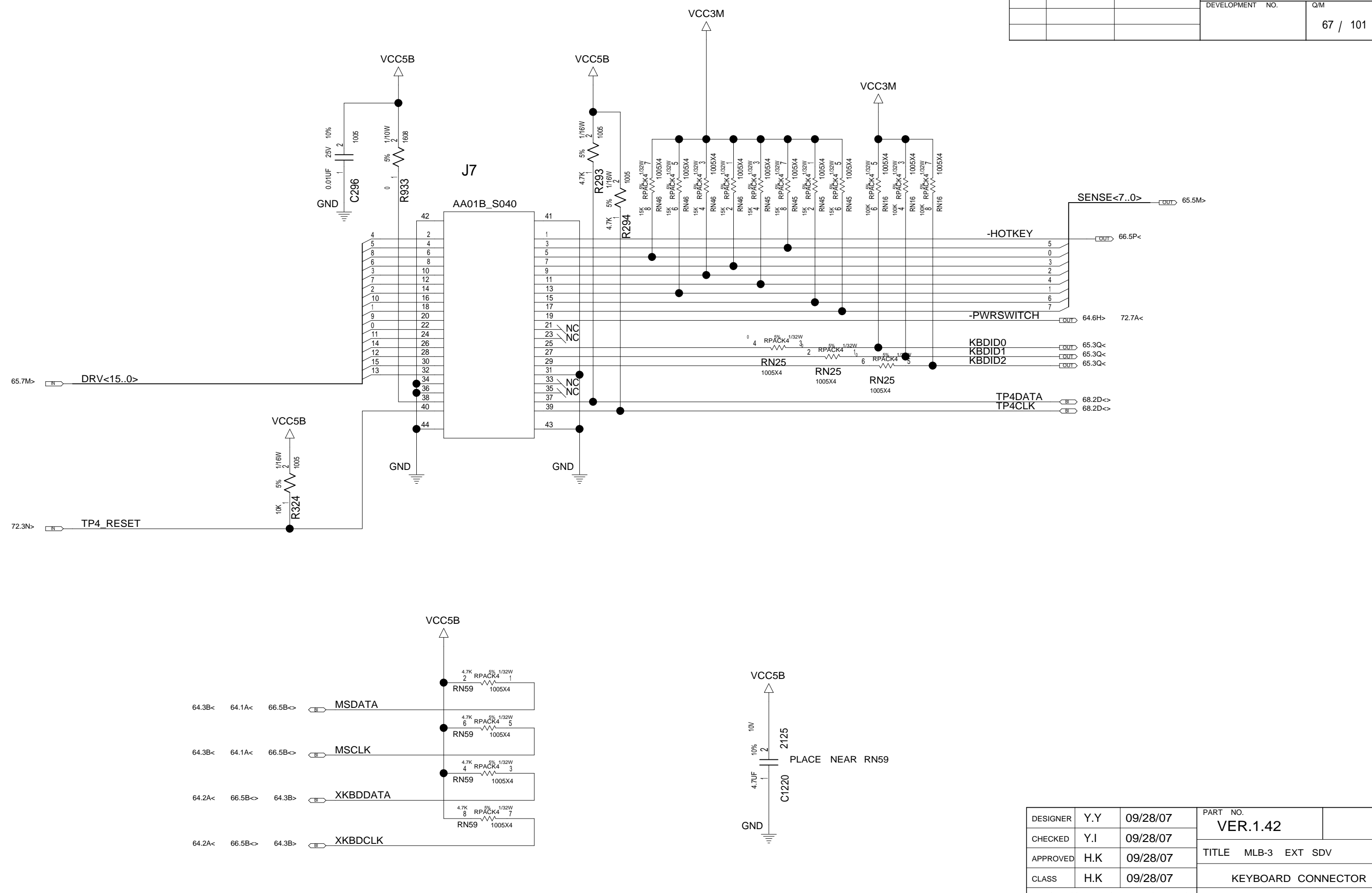
H8_SCL2
H8_SDA2



| 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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| LENOVO CONFIDENTIAL | | | | |

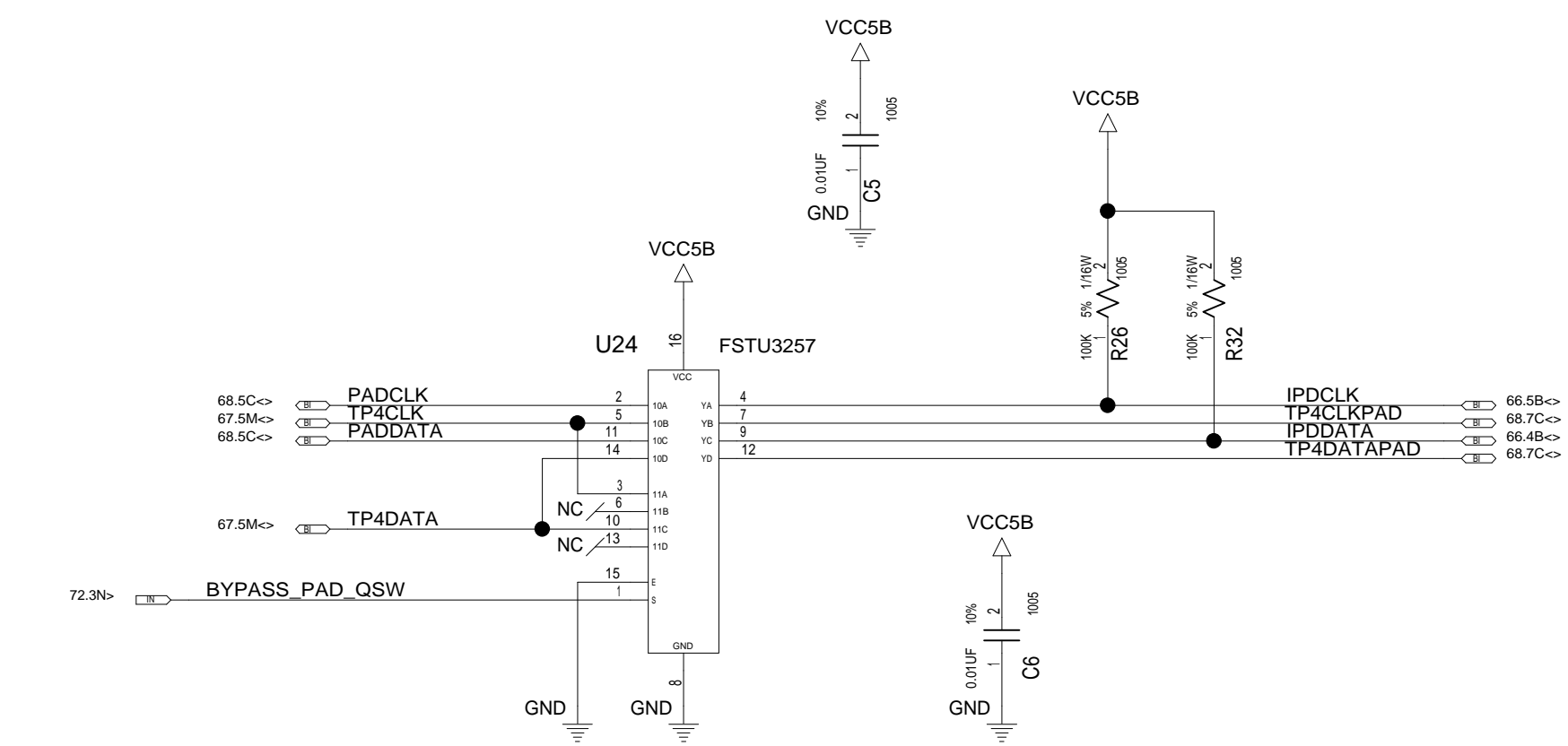
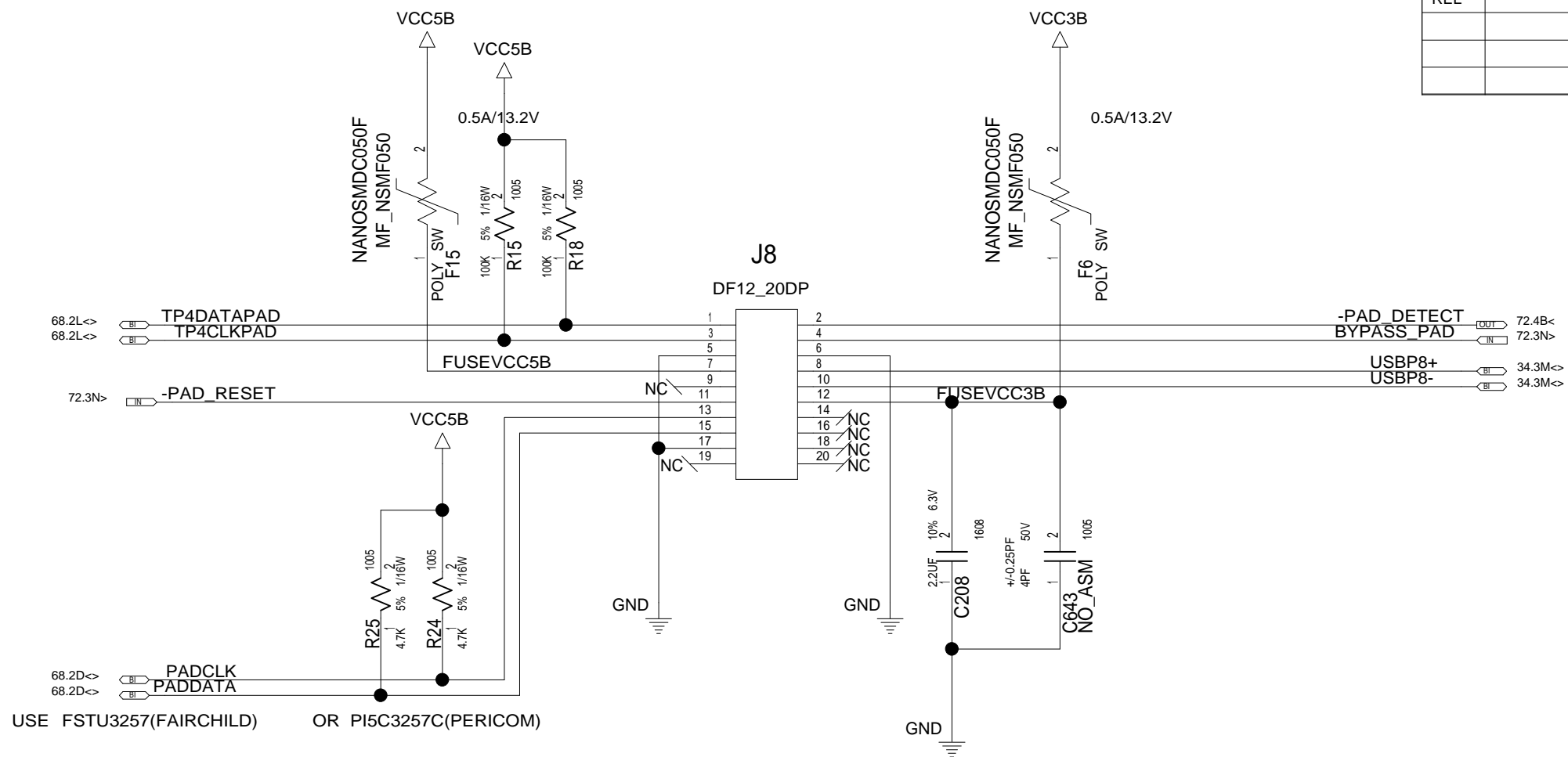
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| | DATE | EC NO. | PART NO. | |
| REL | | | VER.1.42 | |
| | | | DEVELOPMENT NO. | Q/M |
| | | | | 67 / 101 |



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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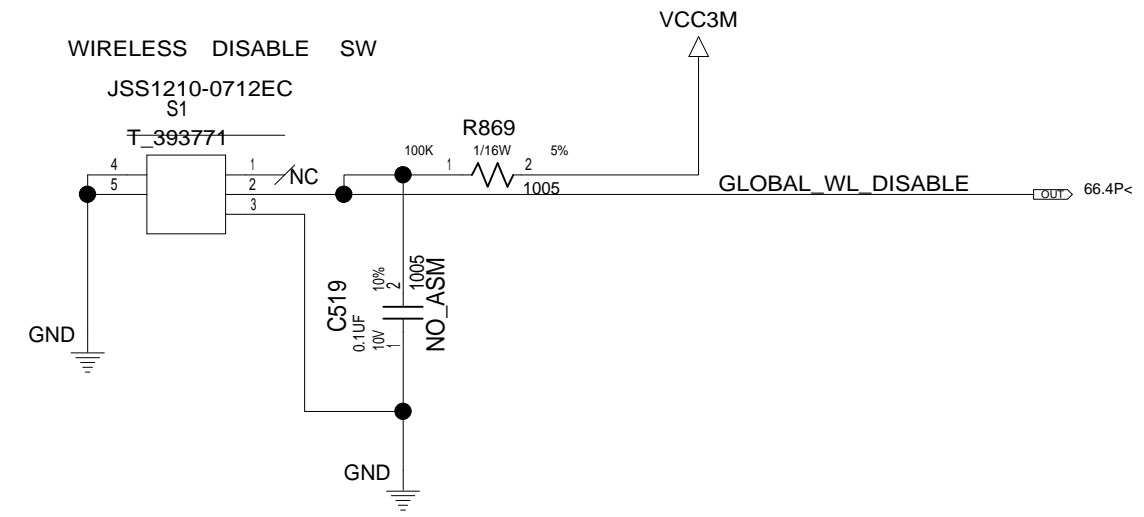
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| | DATE | EC NO. | PART NO. | |
| REL | | | VER.1.42 | |
| | | | DEVELOPMENT NO. | Q/M |
| | | | | 68 / 101 |



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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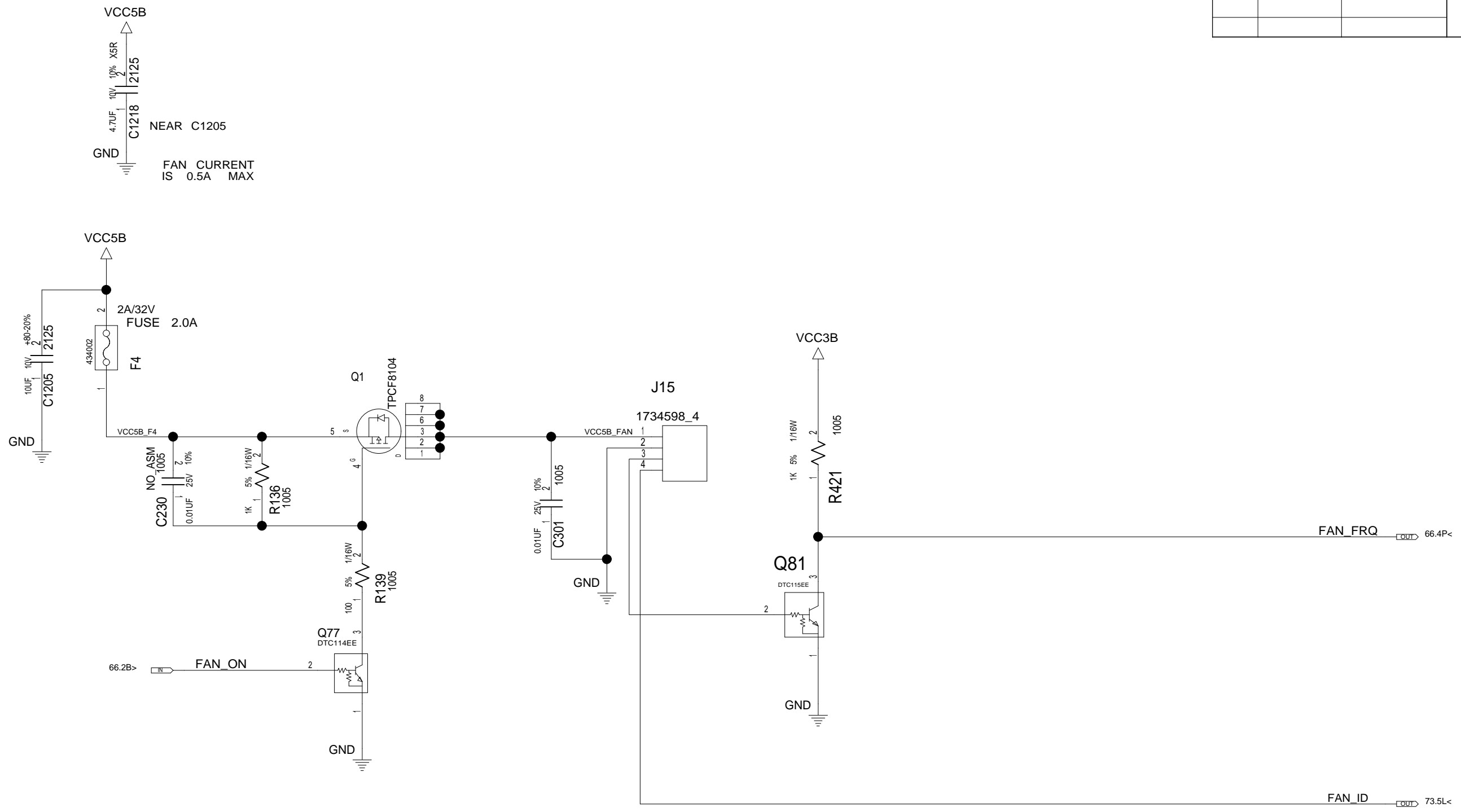
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| | DATE | EC NO. | PART NO. | |
| REL | | | VER.1.42 | |
| | | | DEVELOPMENT NO. | Q/M |
| | | | | 69 / 101 |



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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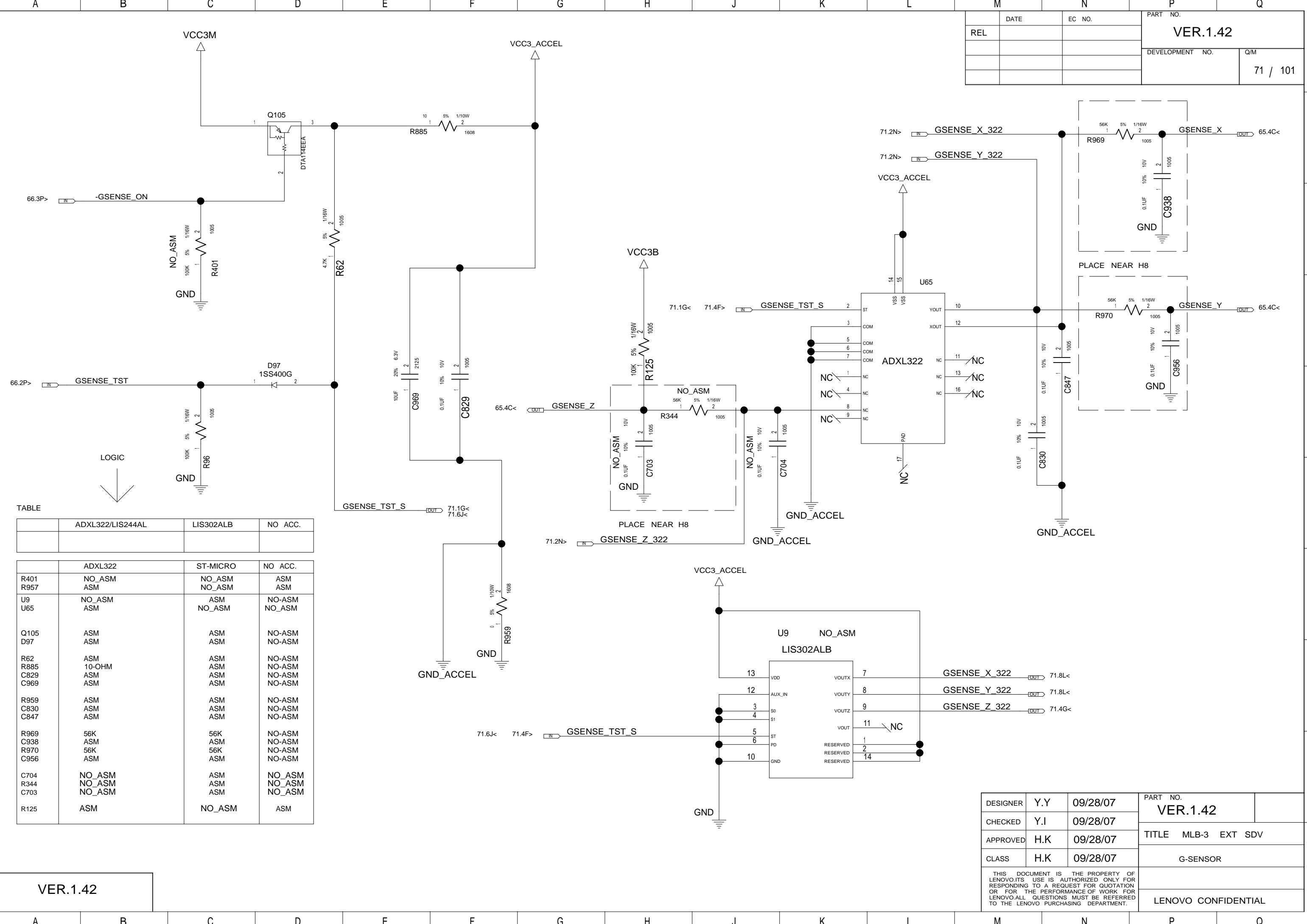
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|-----|------|--------|-----------------|----------|
| | DATE | EC NO. | PART NO. | |
| REL | | | VER.1.42 | |
| | | | DEVELOPMENT NO. | Q/M |
| | | | | 70 / 101 |



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 | FAN CONNECTOR | |
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| | | | |
|-----|------|--------|-----------------|
| REL | DATE | EC NO. | PART NO. |
| | | | VER.1.42 |
| | | | DEVELOPMENT NO. |
| | | | Q/M |
| | | | 71 / 101 |



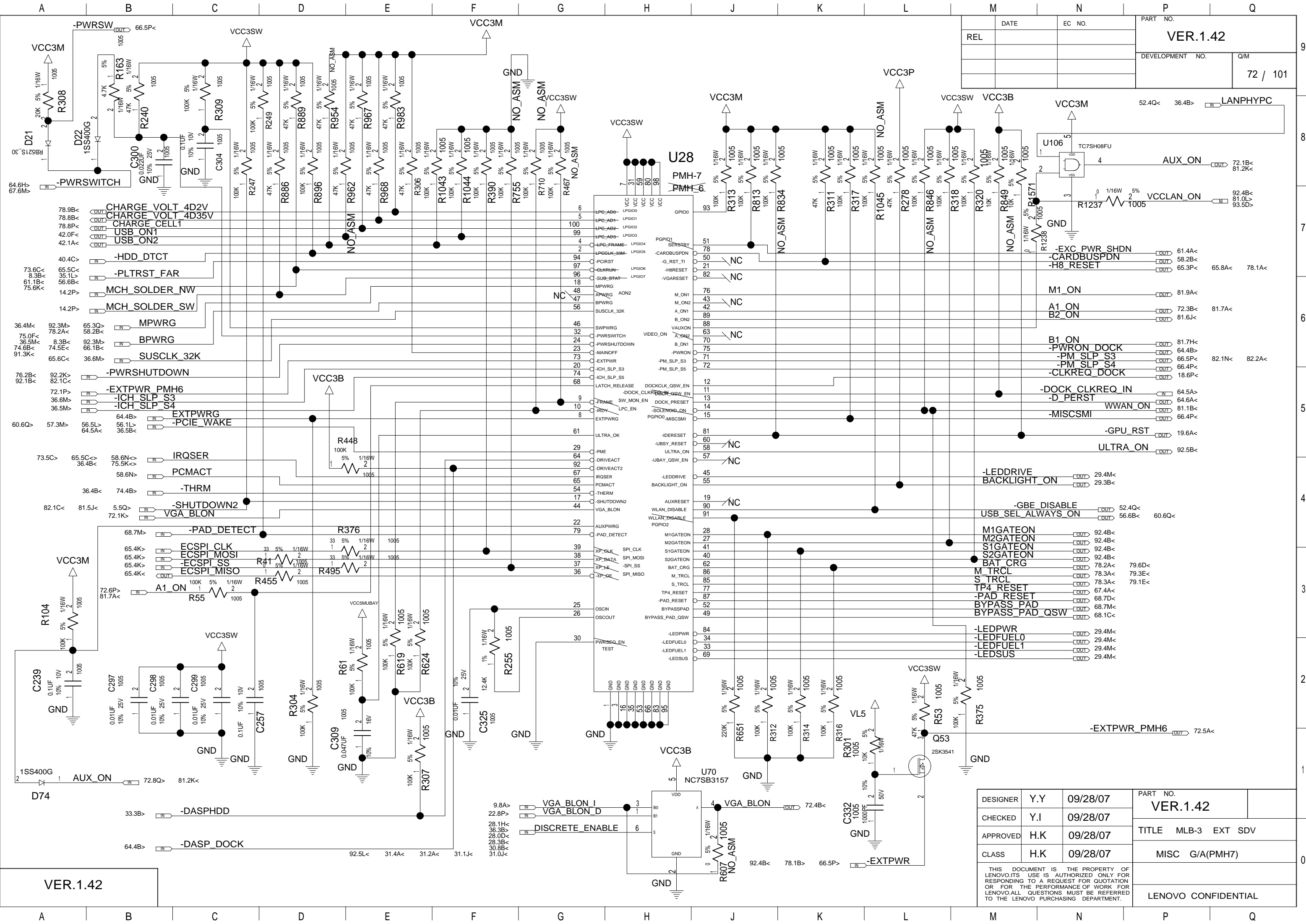
LOGIC
↓

TABLE

| | ADXL322/LIS244AL | LIS302ALB | NO ACC. |
|------|------------------|-----------|---------|
| R401 | ADXL322 | ST-MICRO | NO ACC. |
| R957 | NO_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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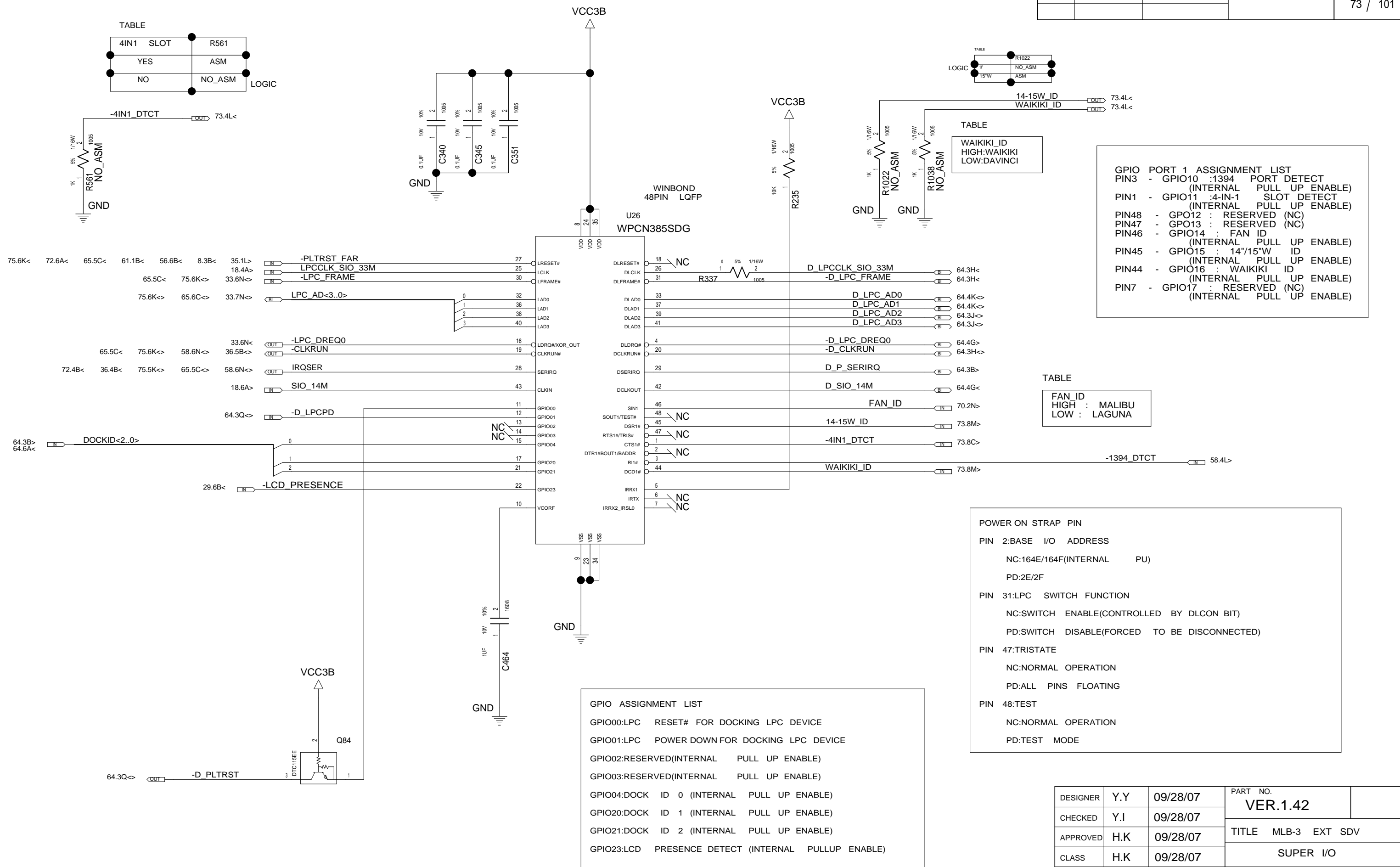


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|-----|------|--------|-----------------|
| REL | DATE | EC NO. | PART NO. |
| | | | VER.1.42 |
| | | | DEVELOPMENT NO. |
| | | | Q/M |
| | | | 72 / 101 |

| | | | |
|--|-----|----------|---------------------|
| 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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| | | | | |
|-----|------|--------|-----------------|----------|
| 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

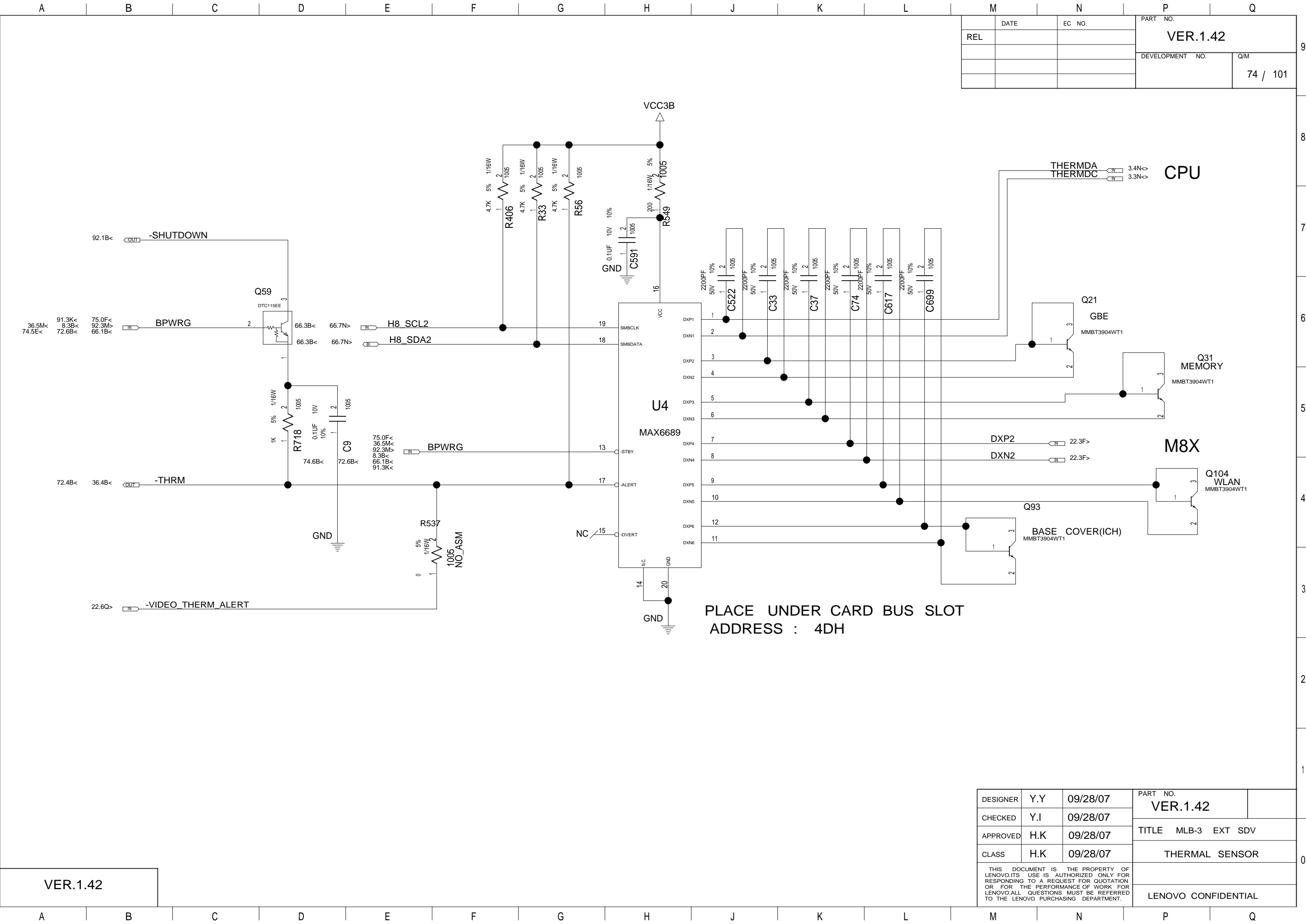
- GPIO00:LPC RESET# FOR DOCKING LPC DEVICE
- GPIO01:LPC POWER DOWN FOR DOCKING LPC DEVICE
- GPIO02:RESERVED(INTERNAL PULL UP ENABLE)
- GPIO03:RESERVED(INTERNAL PULL UP ENABLE)
- GPIO04:DOCK ID 0 (INTERNAL PULL UP ENABLE)
- GPIO20:DOCK ID 1 (INTERNAL PULL UP ENABLE)
- GPIO21:DOCK ID 2 (INTERNAL PULL UP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

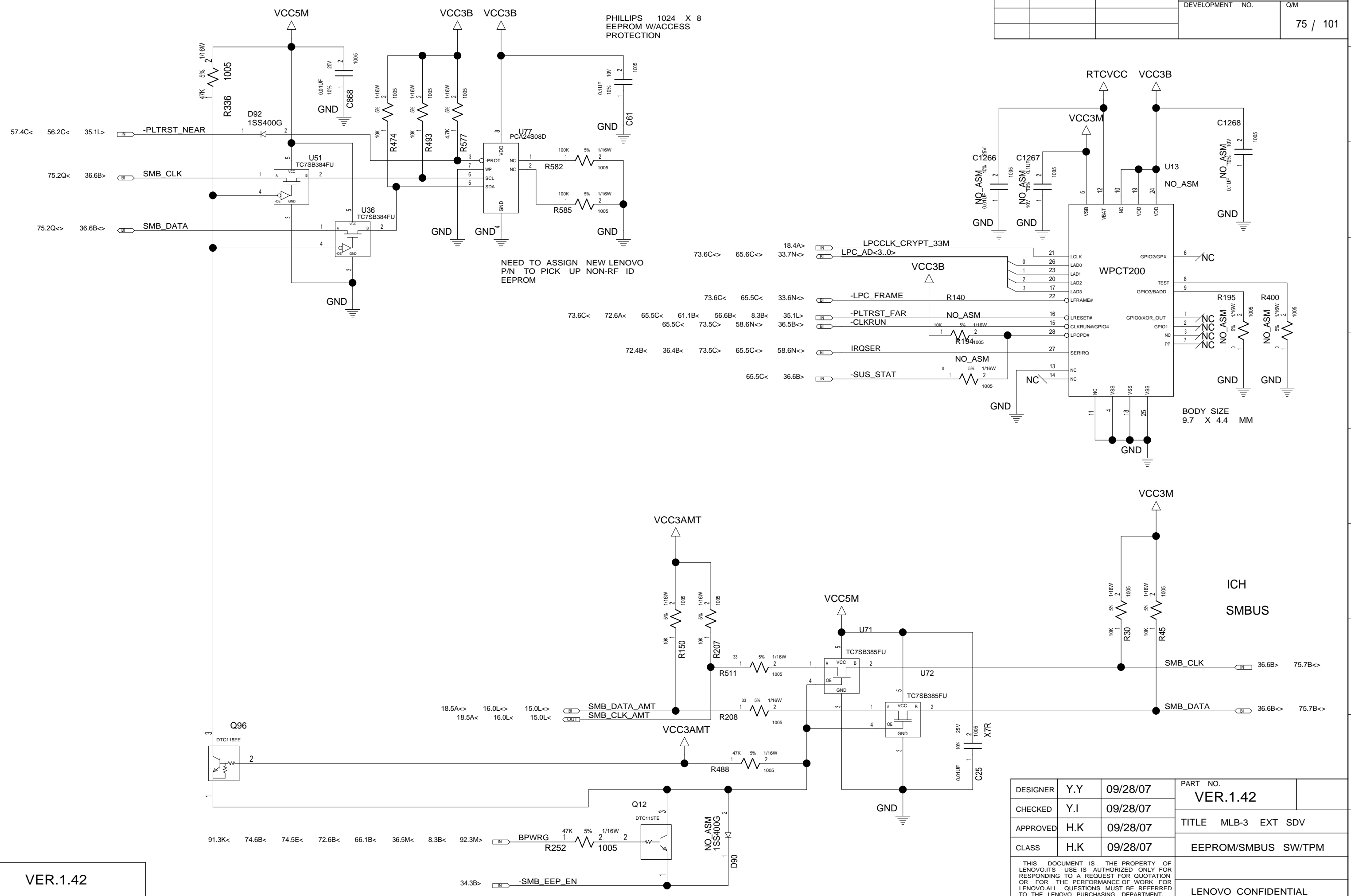


PLACE UNDER CARD BUS SLOT
ADDRESS : 4DH

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 |

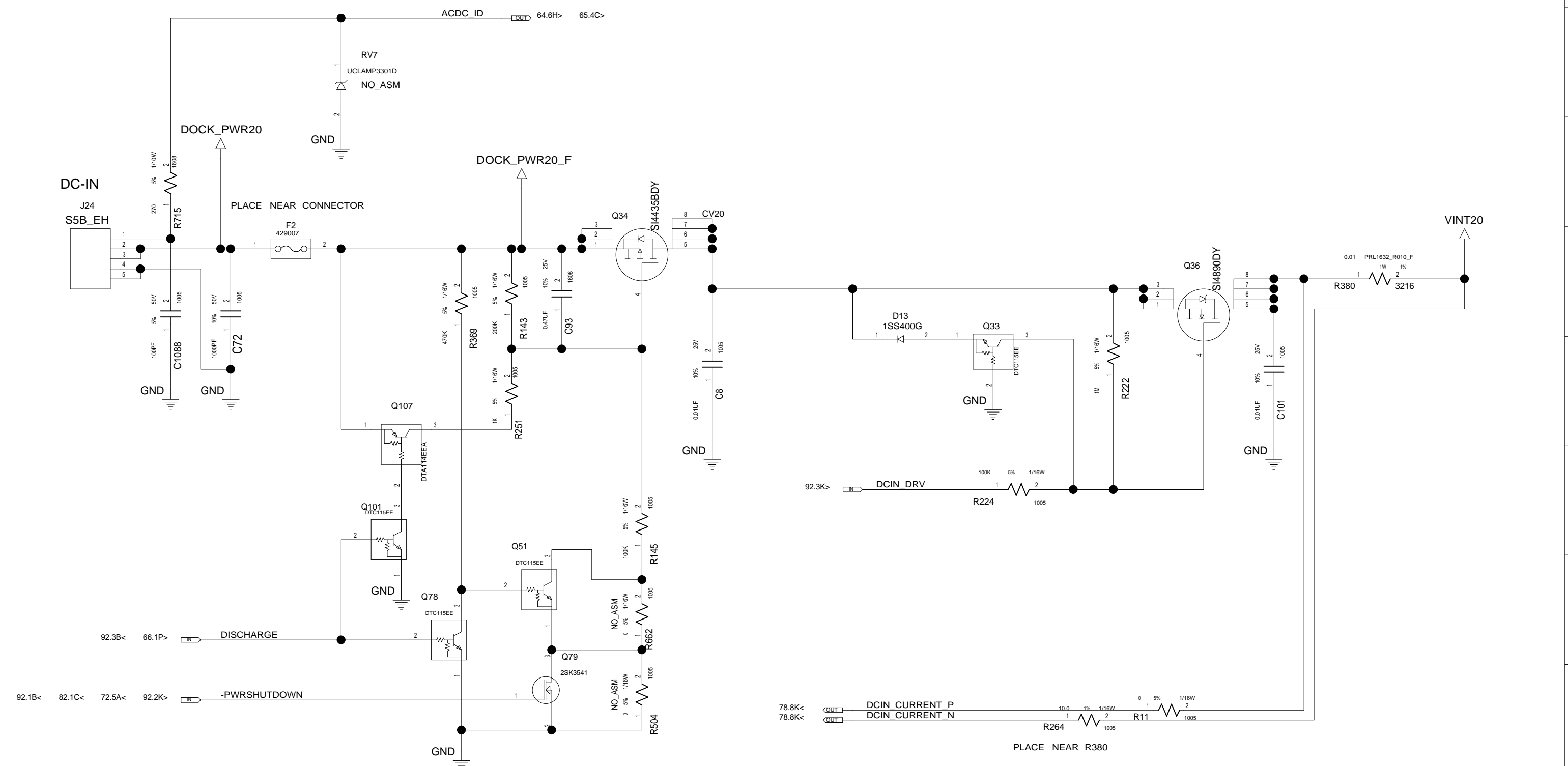


VER.1.42

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| 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 |

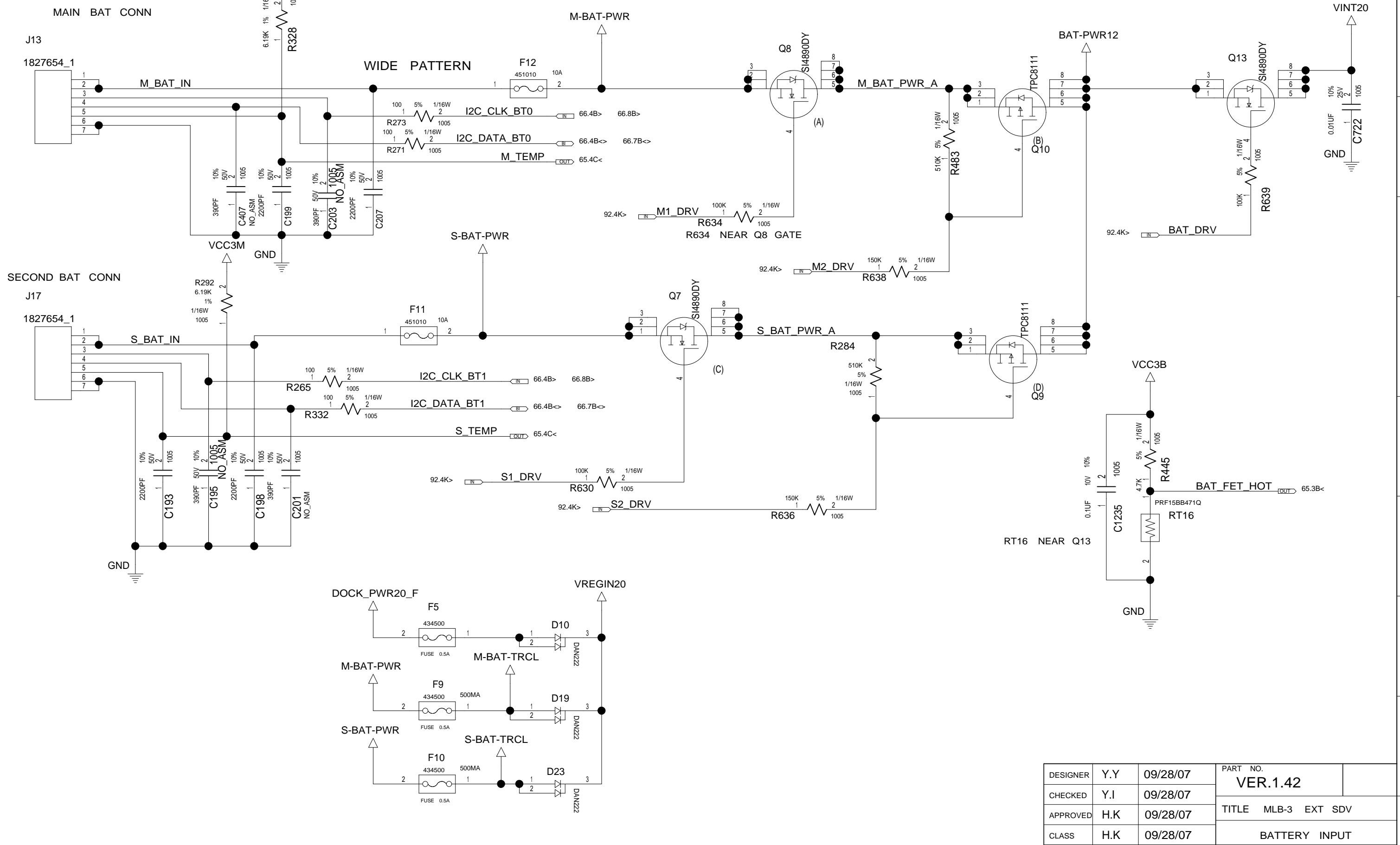
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VER.1.42

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| 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 |

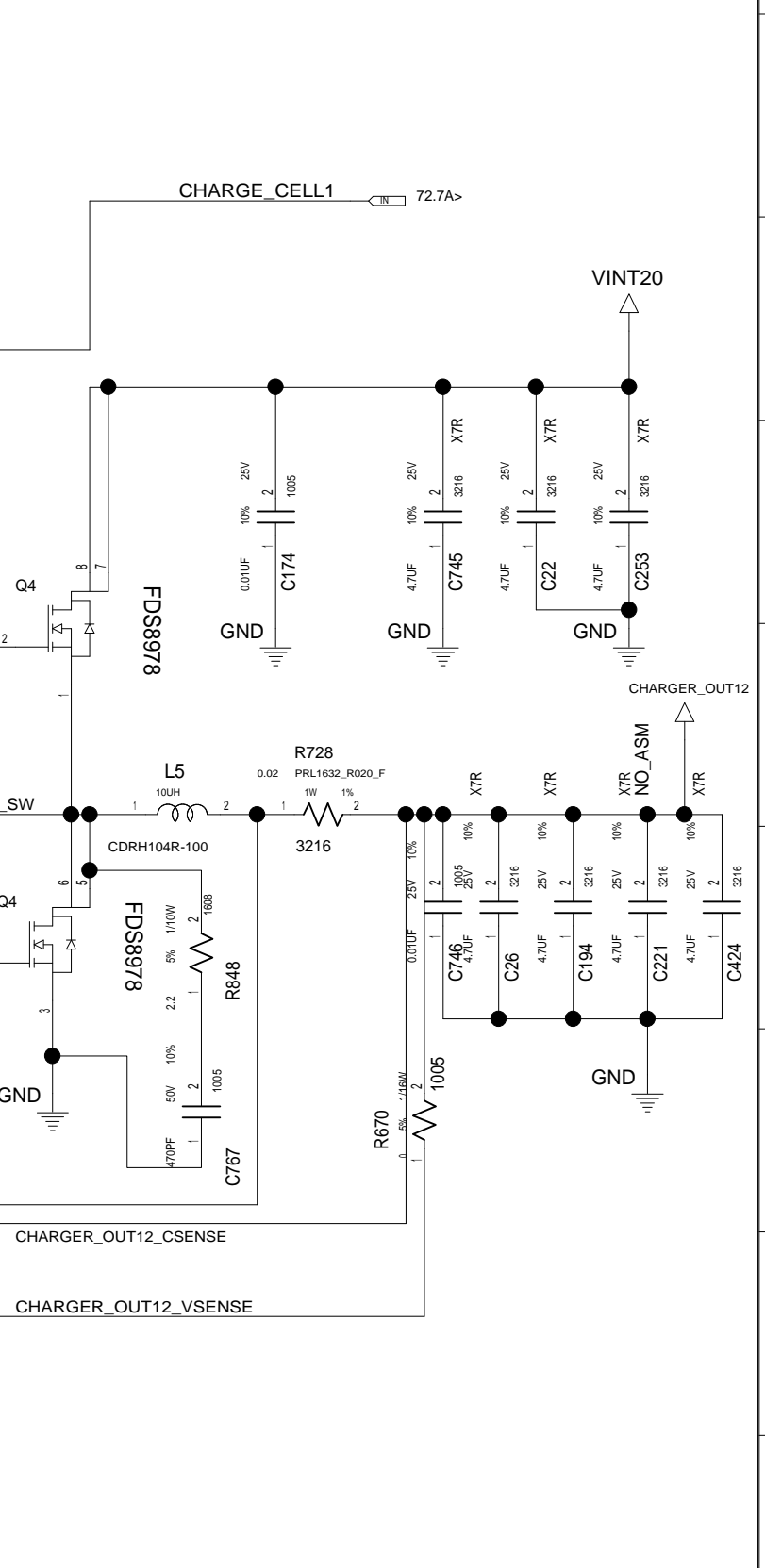
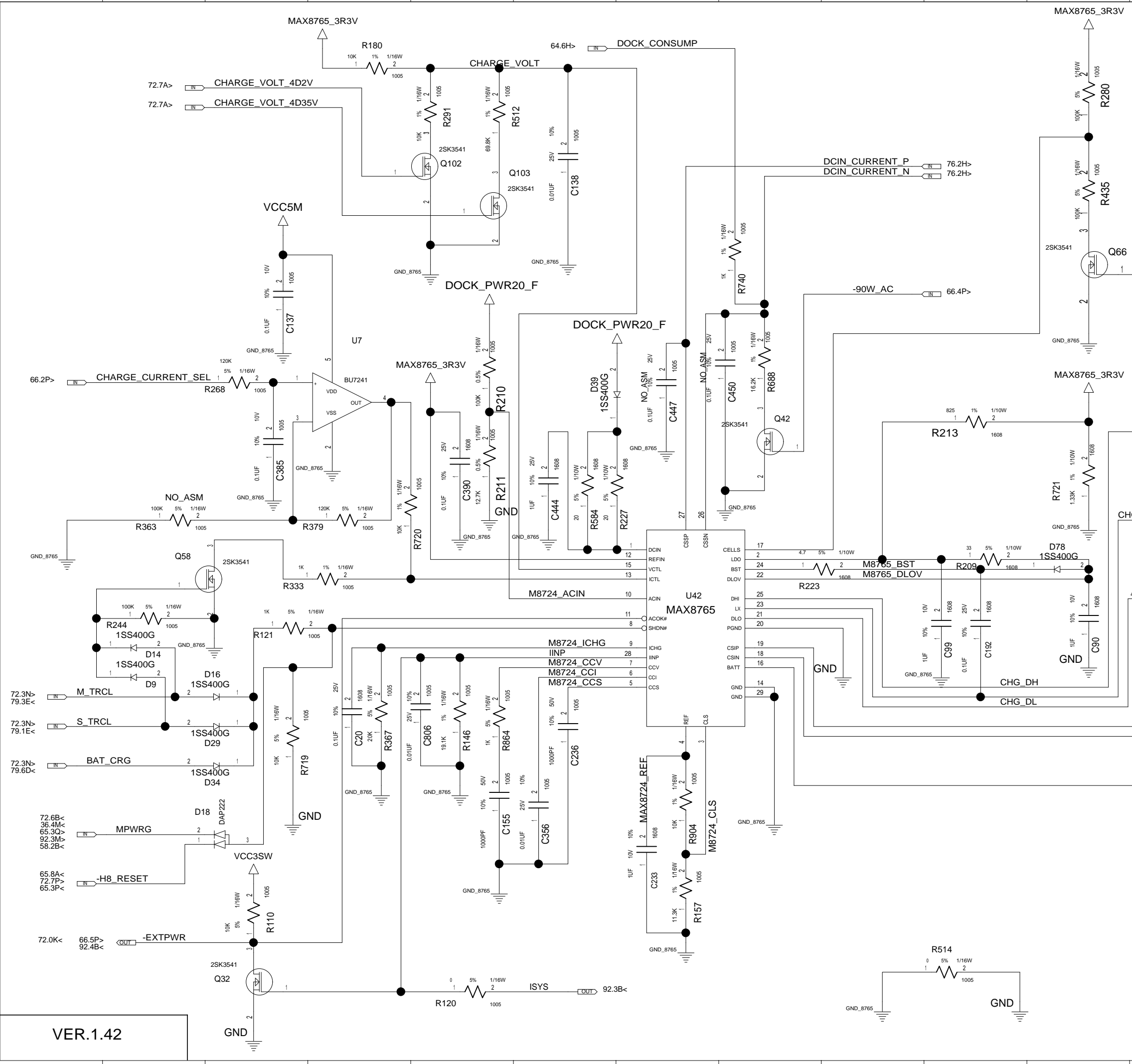


VER.1.42

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

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| REL | DATE | EC NO. | PART NO. |
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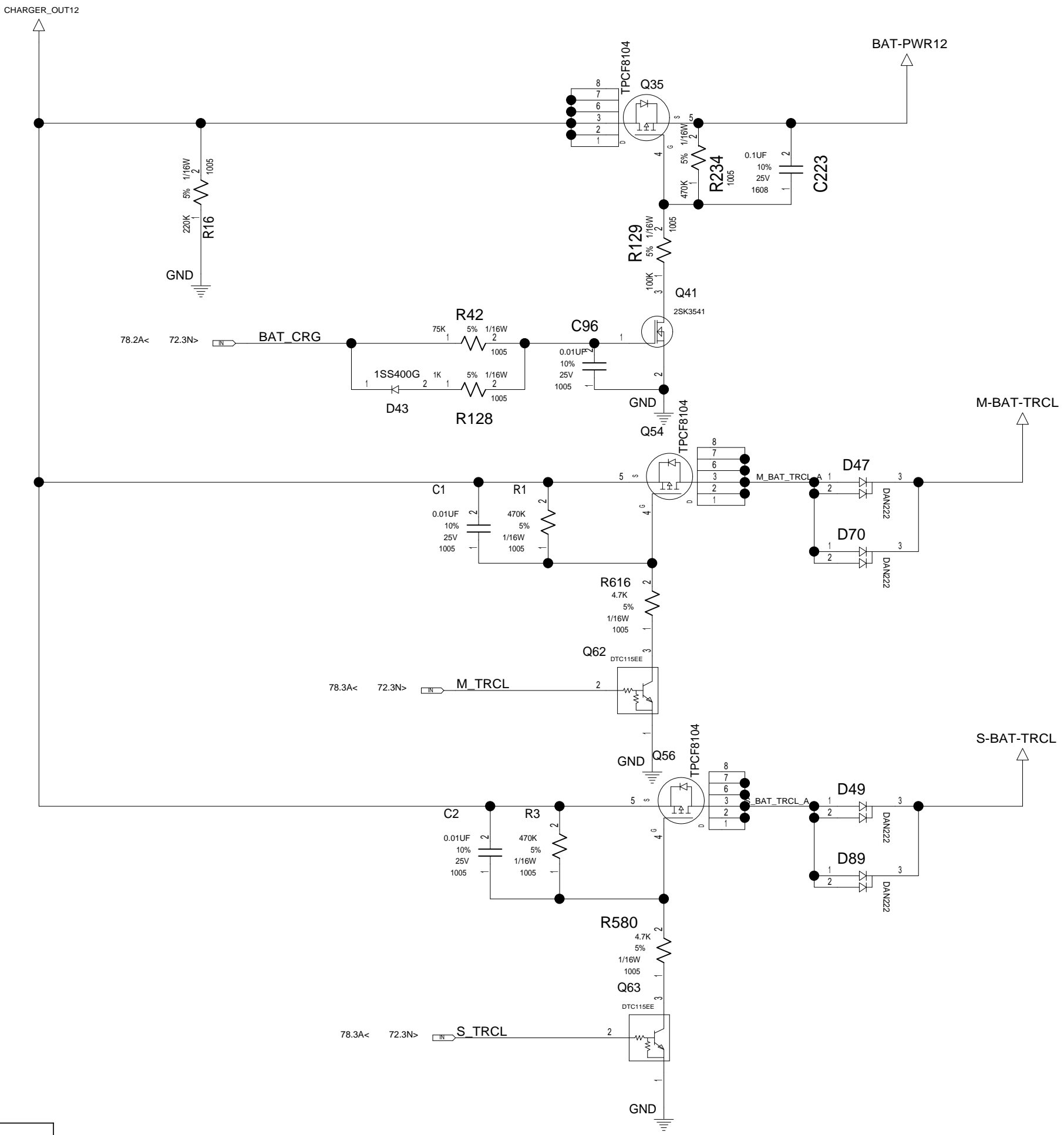


VER.1.42

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

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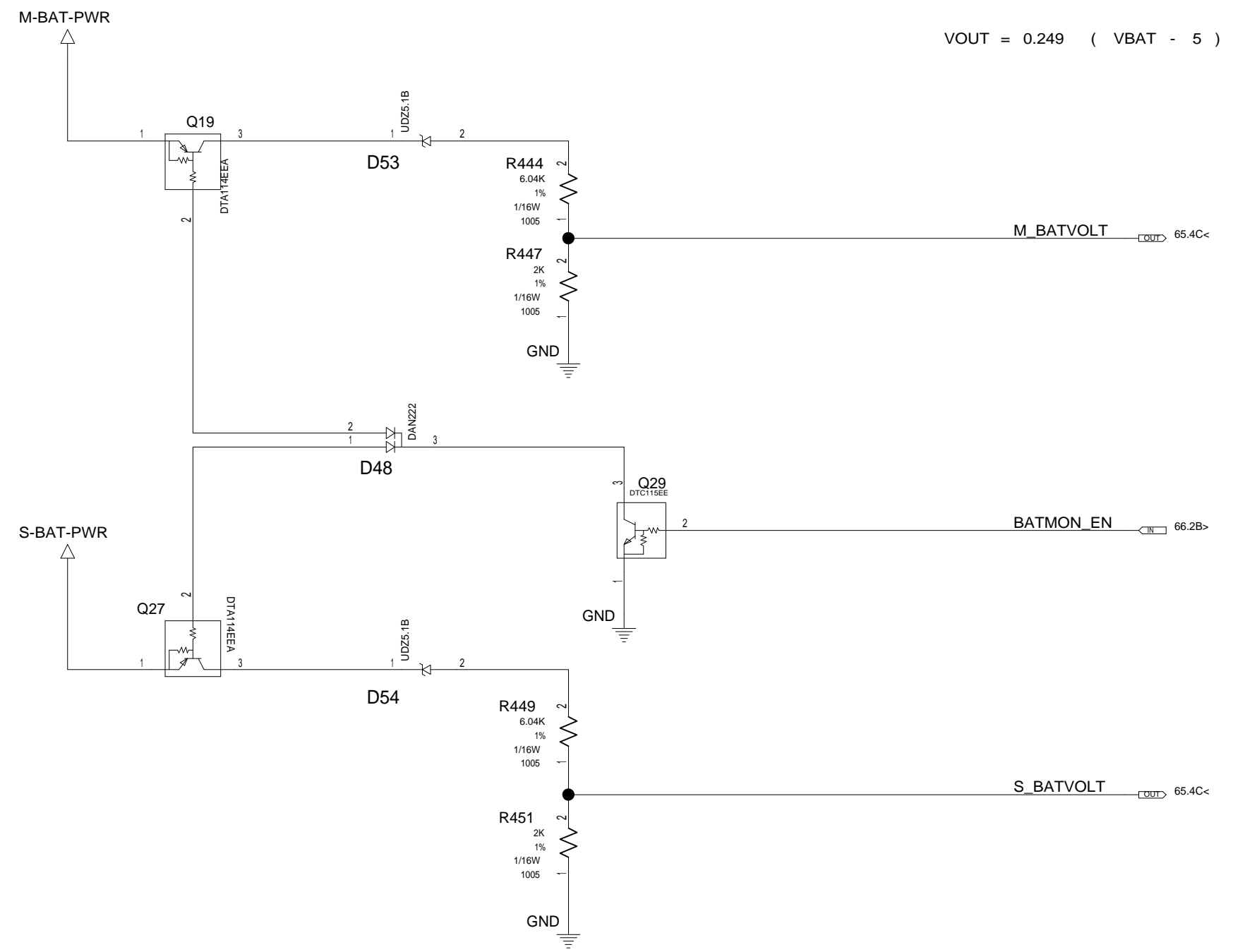


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| DESIGNER | Y.Y | 09/28/07 | PART NO. | VER.1.42 |
| CHECKED | Y.I | 09/28/07 | TITLE MLB-3 EXT SDV | |
| APPROVED | H.K | 09/28/07 | CHARGE SELECTOR | |
| CLASS | H.K | 09/28/07 | LENOVO CONFIDENTIAL | |

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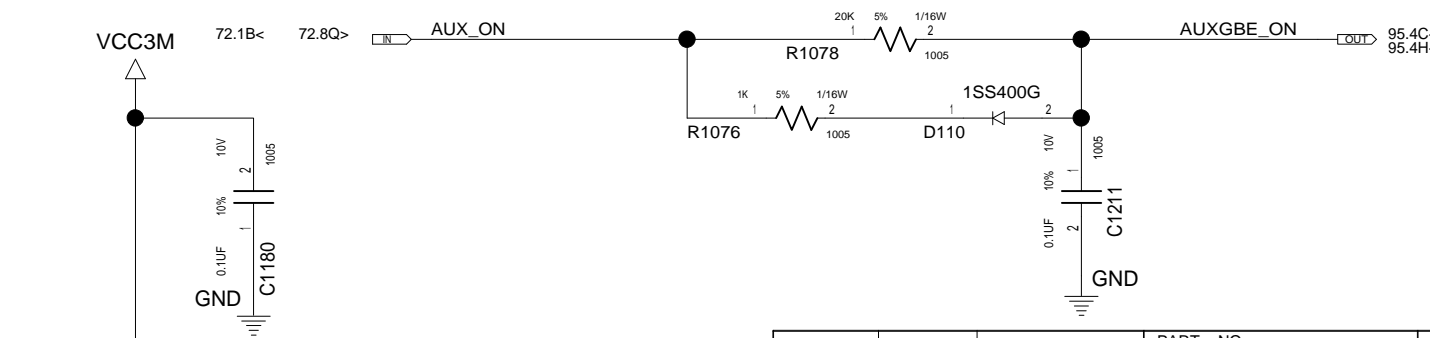
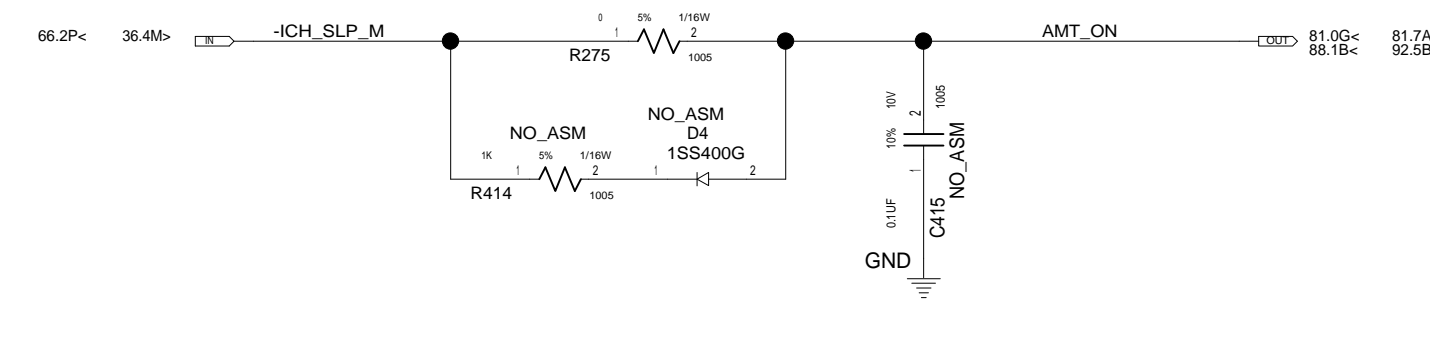
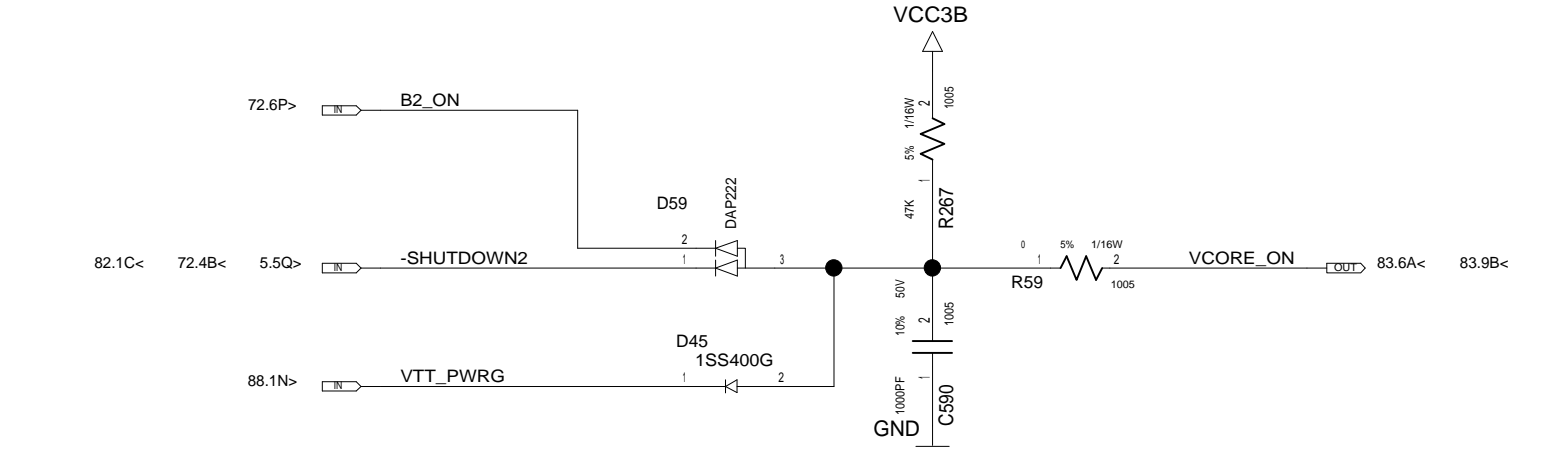
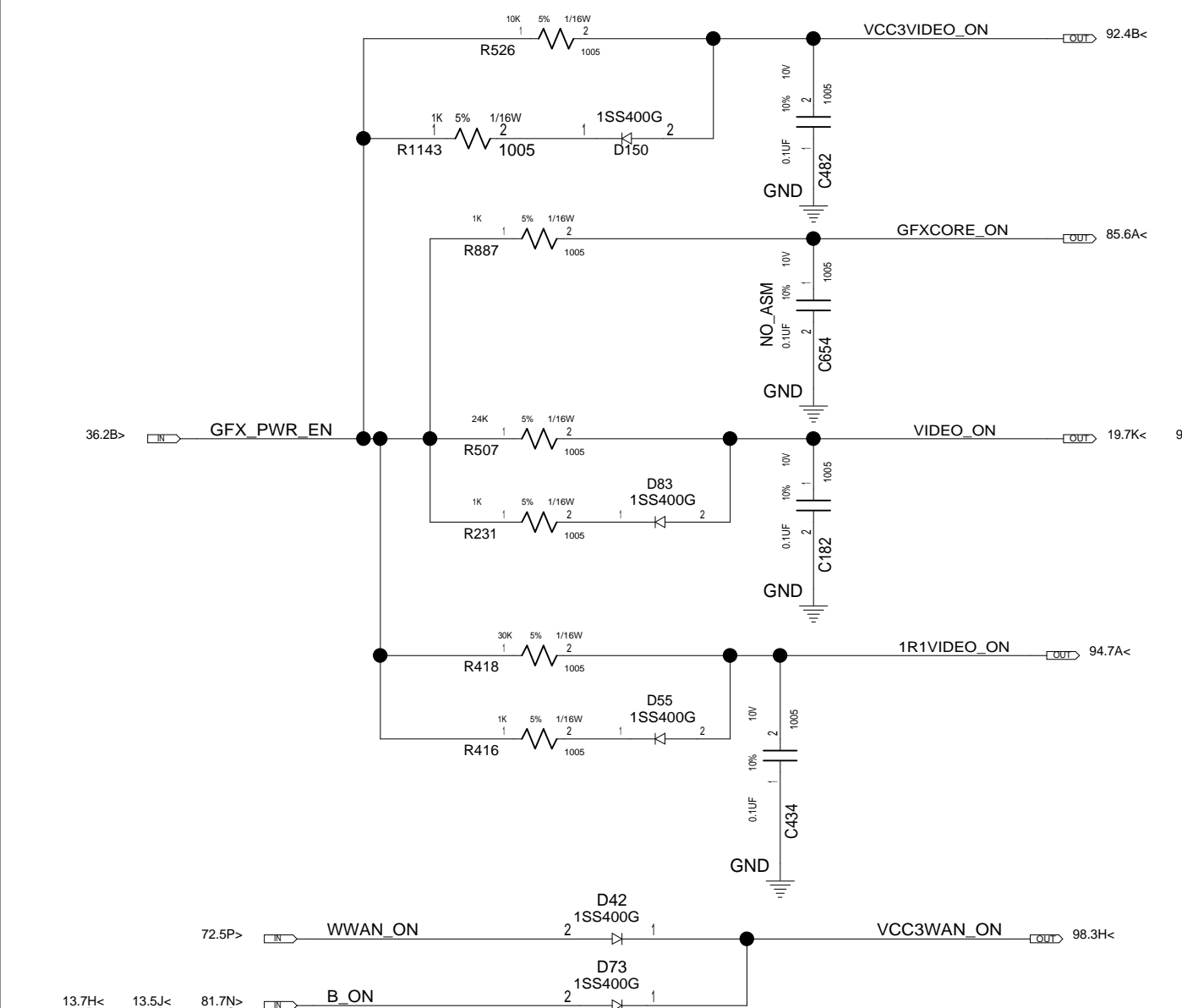
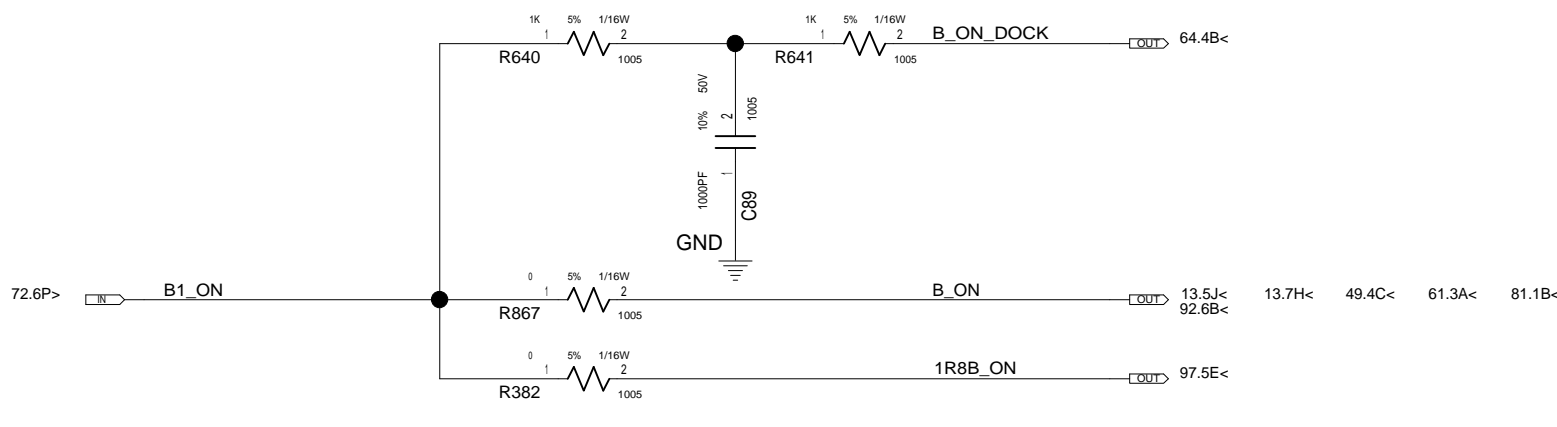
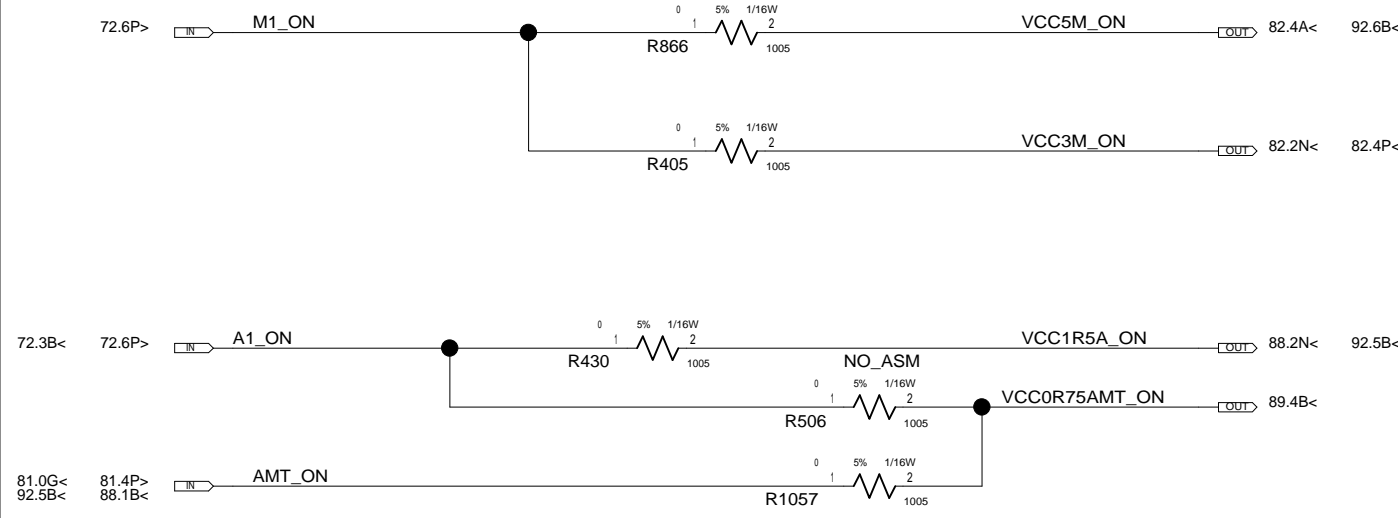
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| | DATE | EC NO. | PART NO. | |
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| | | | | 80 / 101 |



VER.1.42

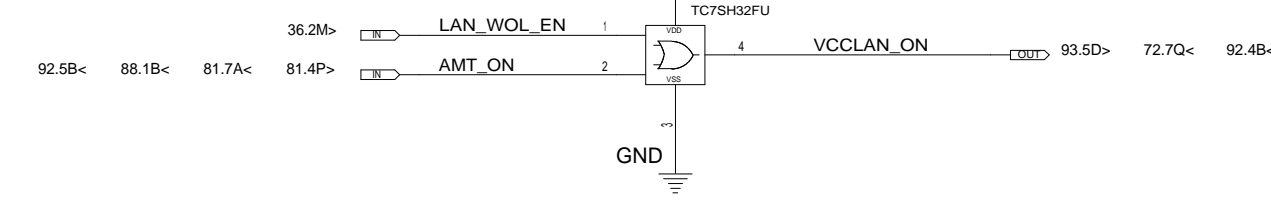
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| APPROVED | H.K | 09/28/07 | TITLE MLB-3 EXT SDV | |
| CLASS | H.K | 09/28/07 | BATTERY MONITOR | |
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|-----|------|--------|-----------------|----------|
| | DATE | EC NO. | PART NO. | |
| REL |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



TABLE

| | ALWAYS ON | YES | NO |
|-----|-----------|-----|--------|
| D42 | | ASM | NO_ASM |
| D73 | | ASM | NO_ASM |



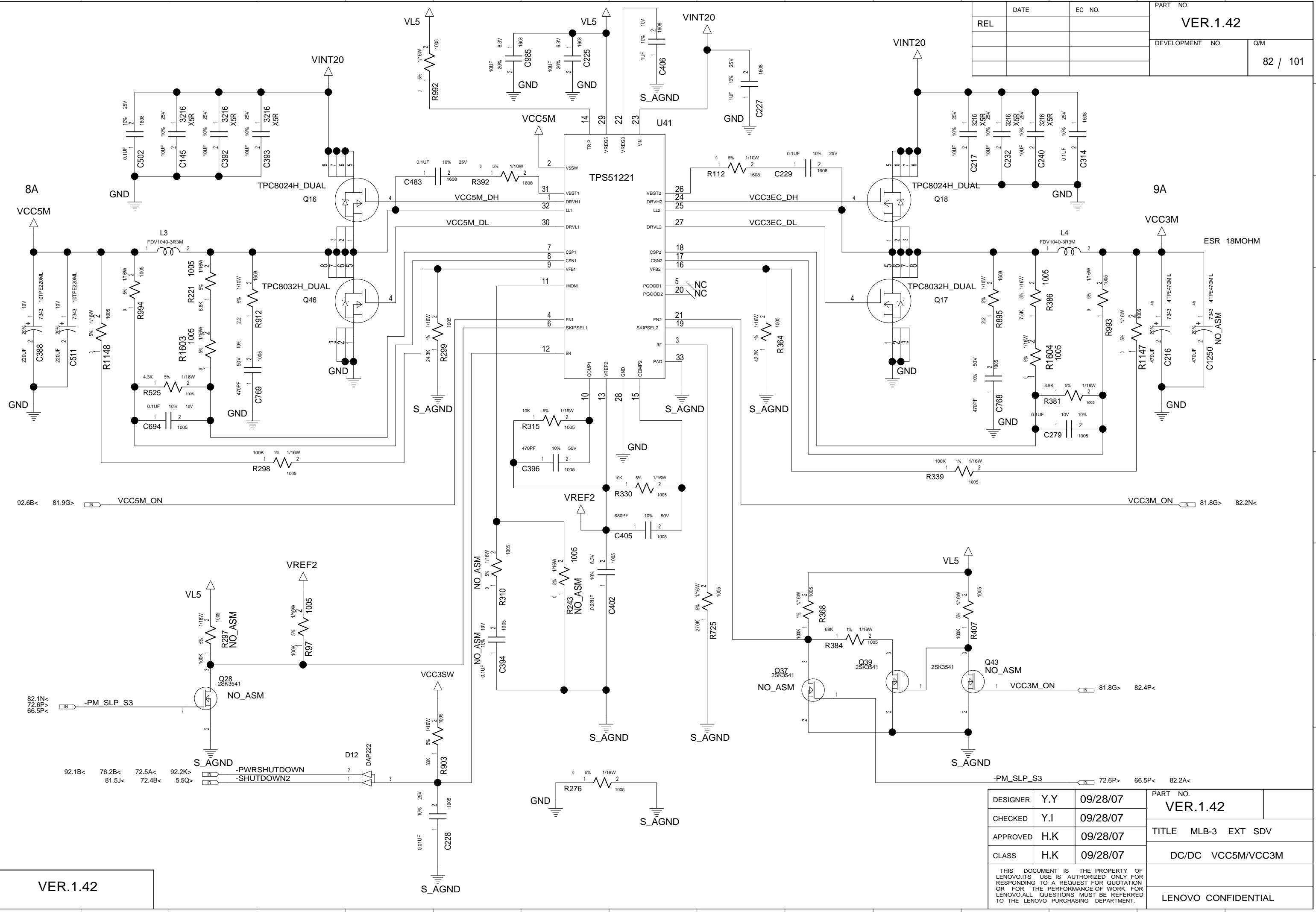
VER.1.42

LOGIC

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| APPROVED | H.K | 09/28/07 | TITLE MLB-3 EXT SDV | |
| CLASS | H.K | 09/28/07 | POWER SEQUENCE | |
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A B C D E F G H J K L M N P Q

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

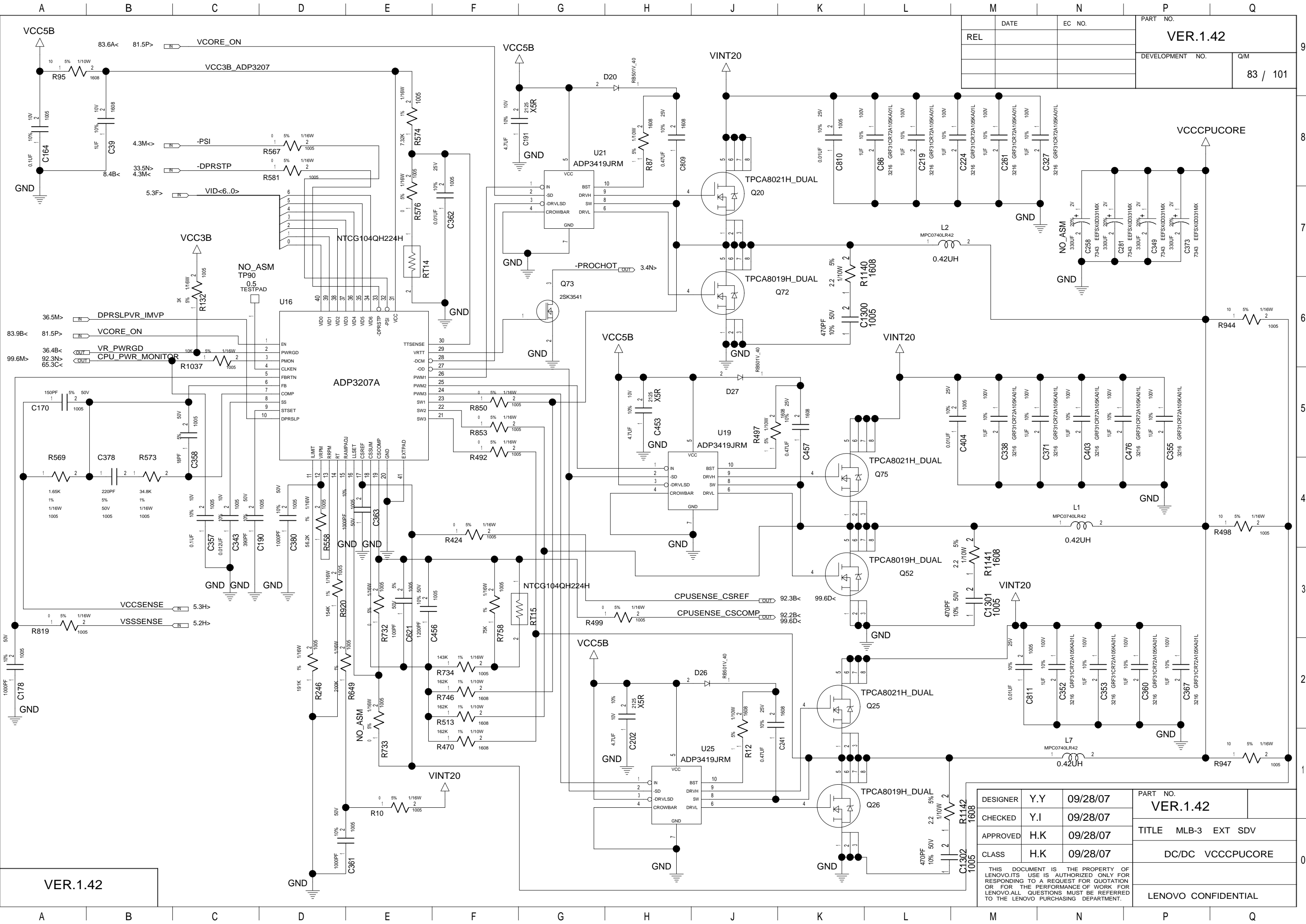


VER.1.42

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| CHECKED | Y.I | 09/28/07 | TITLE MLB-3 EXT SDV | |
| APPROVED | H.K | 09/28/07 | DC/DC VCC5M/VCC3M | |
| 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

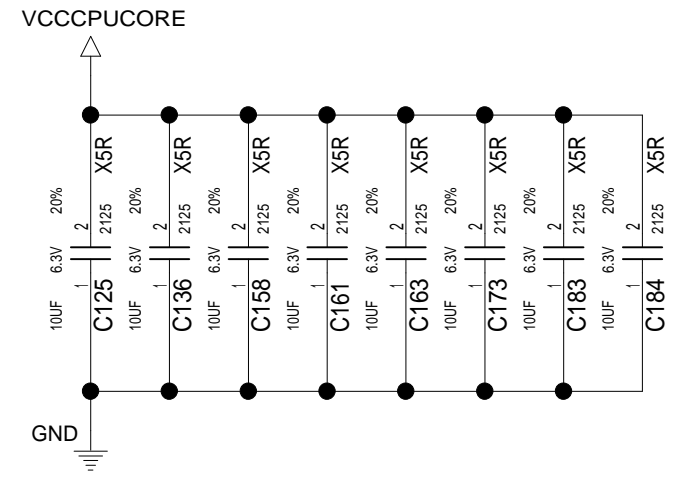


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| | | | DEVELOPMENT NO. |
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| | | | 83 / 101 |

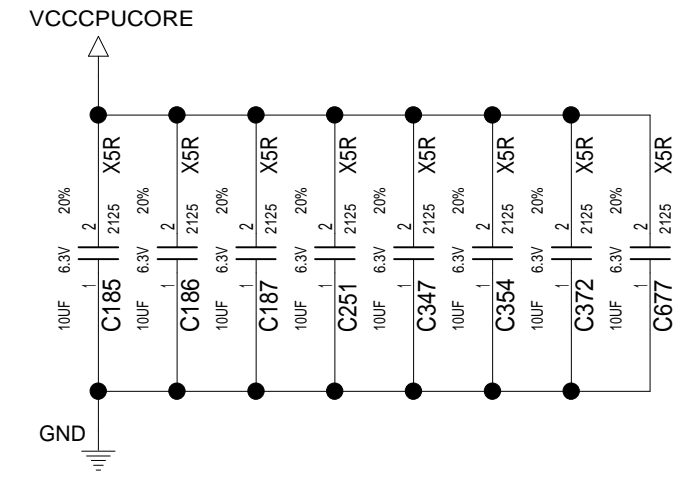
VER.1.42

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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 |
| CLASS | H.K | 09/28/07 | MLB-3 EXT SDV |
| | | | DC/DC VCCPCUCORE |
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| LENOVO CONFIDENTIAL | | | |

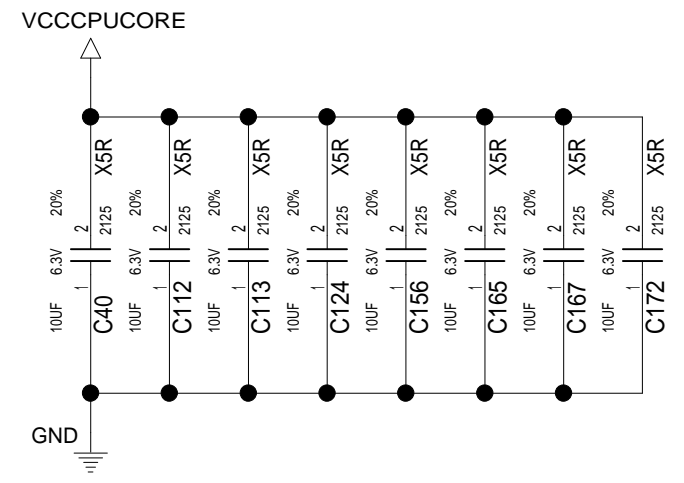
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| | | | | 84 / 101 |



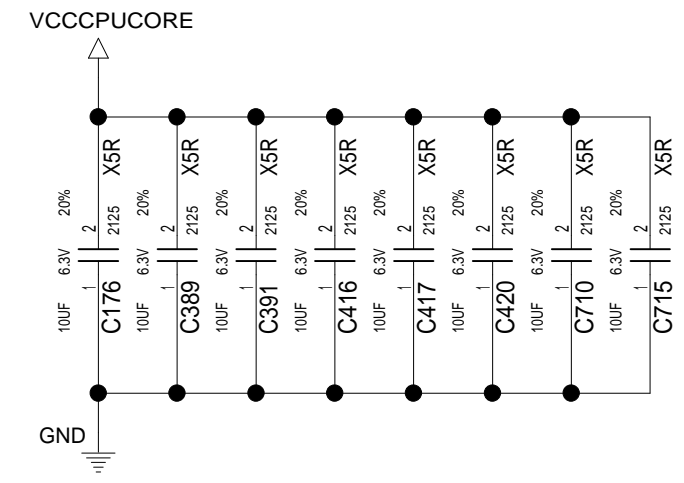
10UF 6.3V X5R 2125 1/16W X 16PCS



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



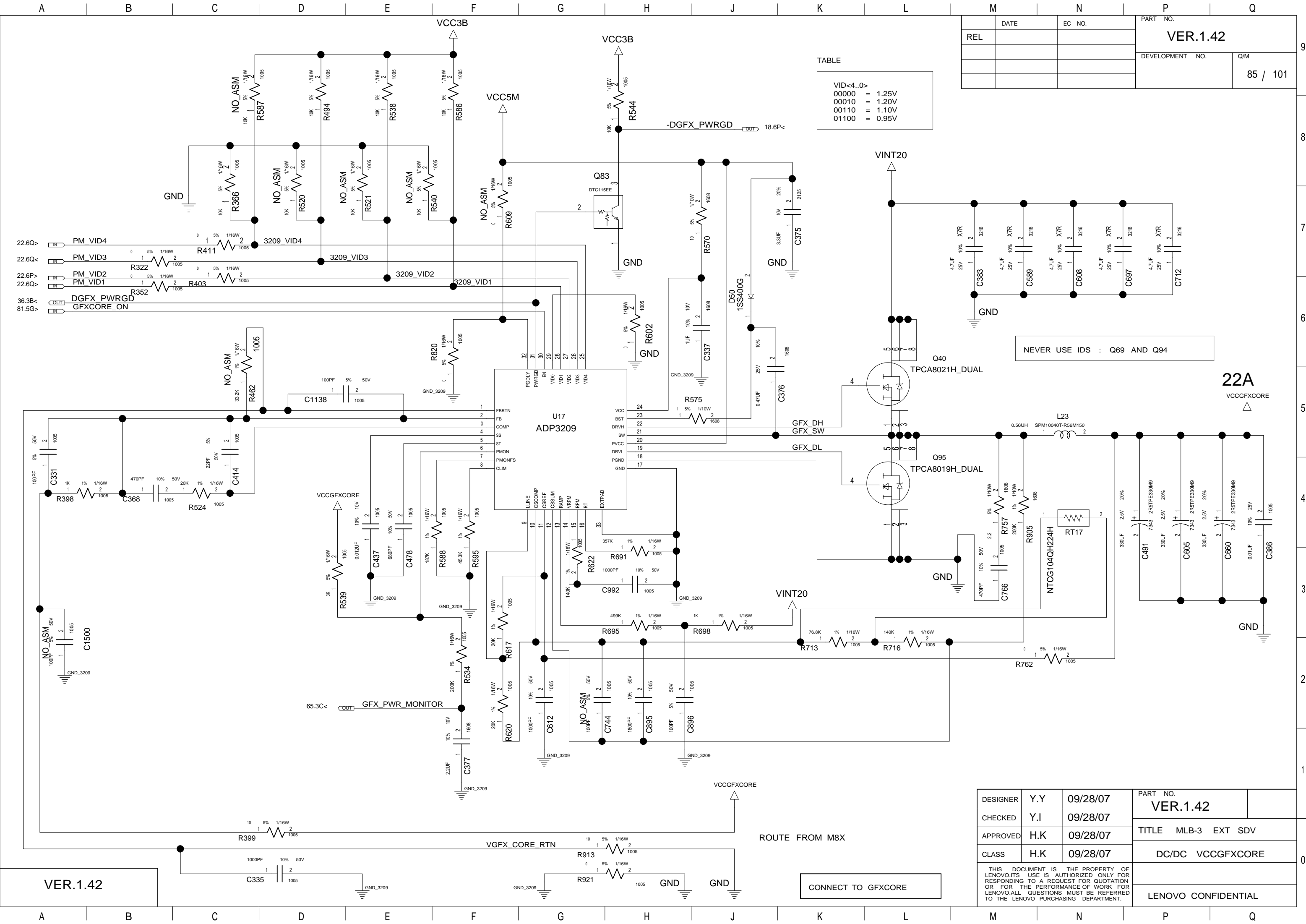
10UF 6.3V X5R 2125 1/16W X 16PCS



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

VER.1.42

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| 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 |

NEVER USE IDS : Q69 AND Q94

CONNECT TO GFXCORE

| | | | |
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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 | DC/DC VCCGFXCORE |
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A B C D E F G H J K L M N P Q

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|-----|------|--------|-----------------|----------|
| | DATE | EC NO. | PART NO. | |
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| | | | | 86 / 101 |

BLANK

VER.1.42

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| DESIGNER | Y.Y | 09/28/07 | PART NO. | |
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| <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

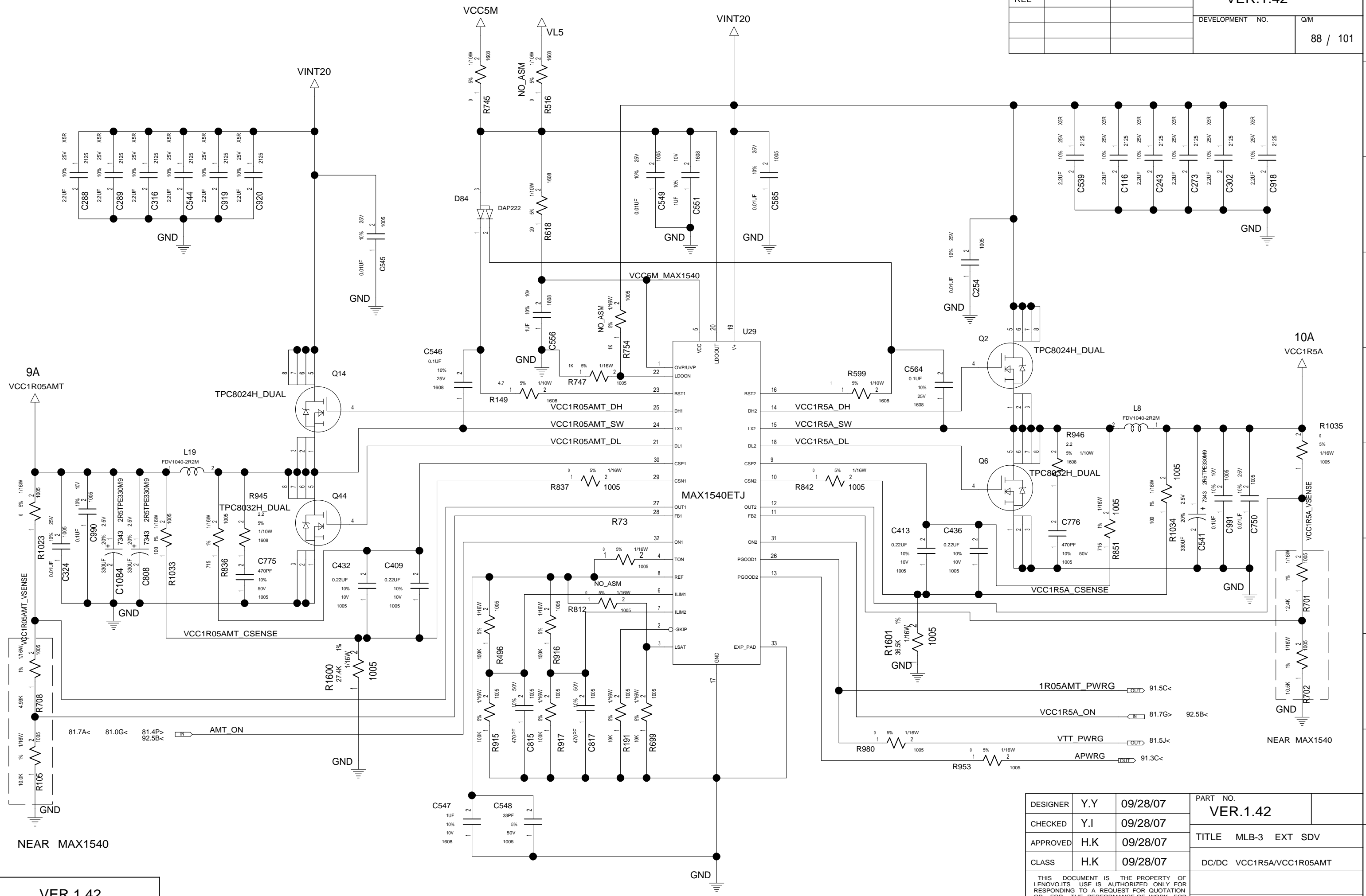
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| | | | | 87 / 101 |

VER.1.42

| | | | | |
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| DESIGNER | Y.Y | 09/28/07 | PART NO. | |
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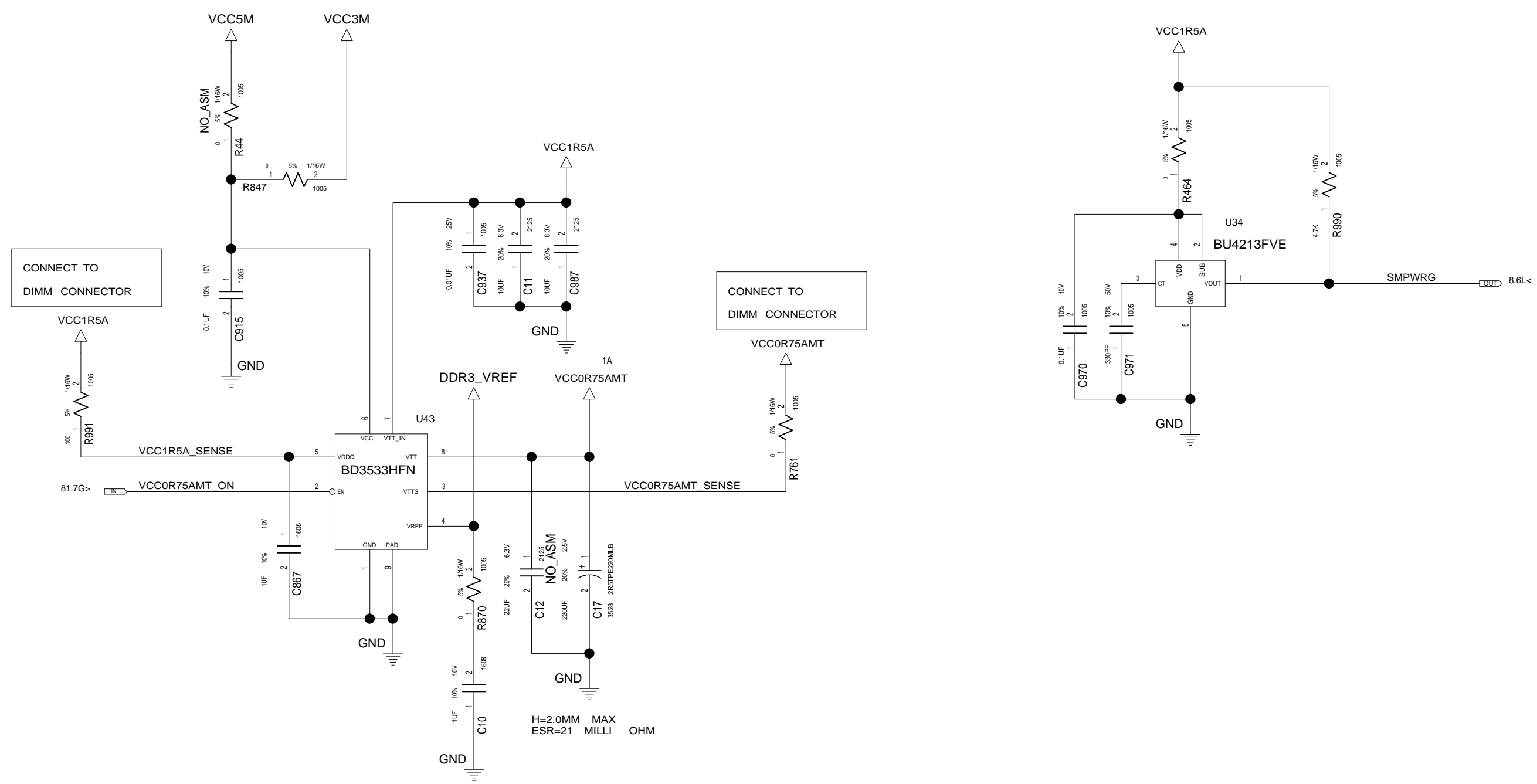
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| | | | VER.1.42 | |
| | | | DEVELOPMENT NO. | Q/M |
| | | | | 88 / 101 |



VER.1.42

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| CHECKED | Y.I | 09/28/07 | VER.1.42 | |
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| CLASS | H.K | 09/28/07 | DC/DC VCC1R5A/VCC1R05AMT | |
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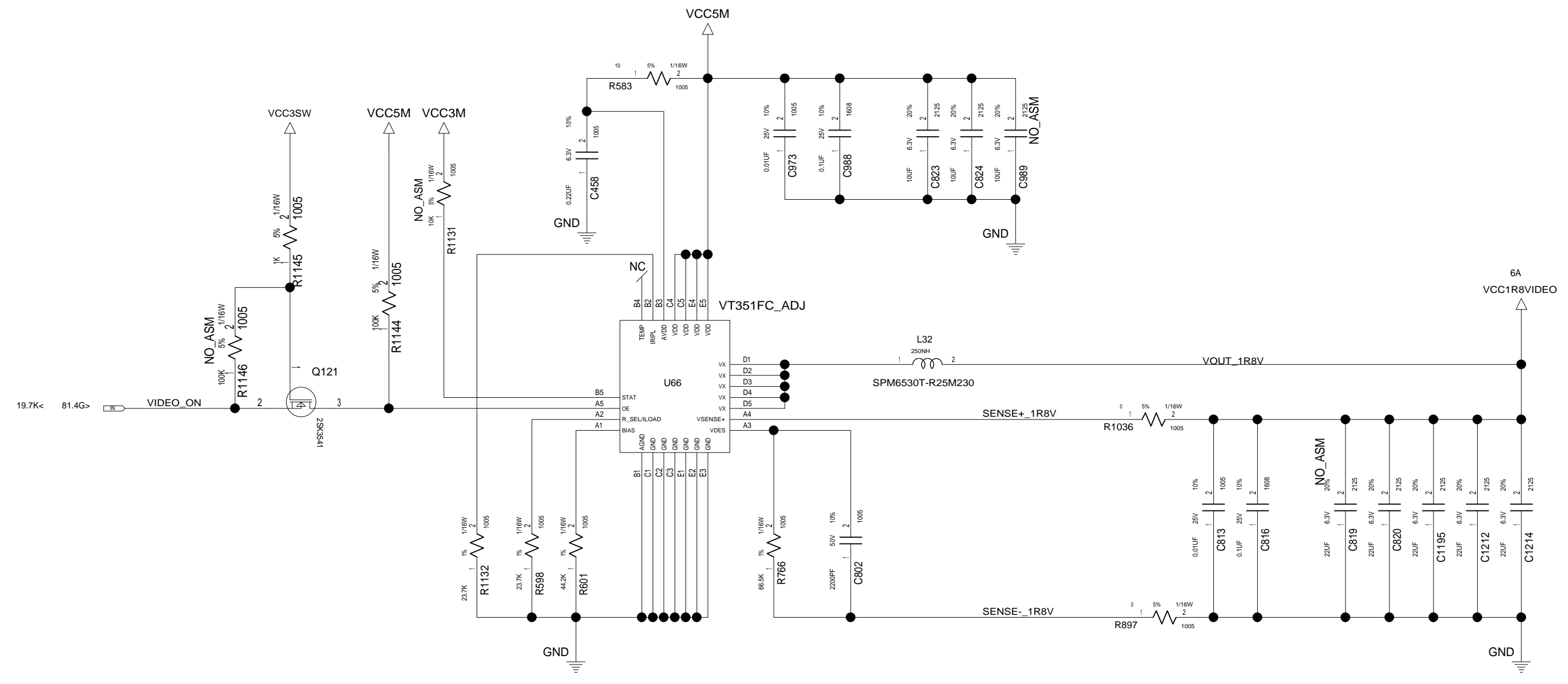
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| | | | | 89 / 101 |



VER.1.42

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| DESIGNER | Y.Y | 09/28/07 | PART NO. | |
| CHECKED | Y.I | 09/28/07 | VER.1.42 | |
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| CLASS | H.K | 09/28/07 | DC/DC VCC0R75AMT | |
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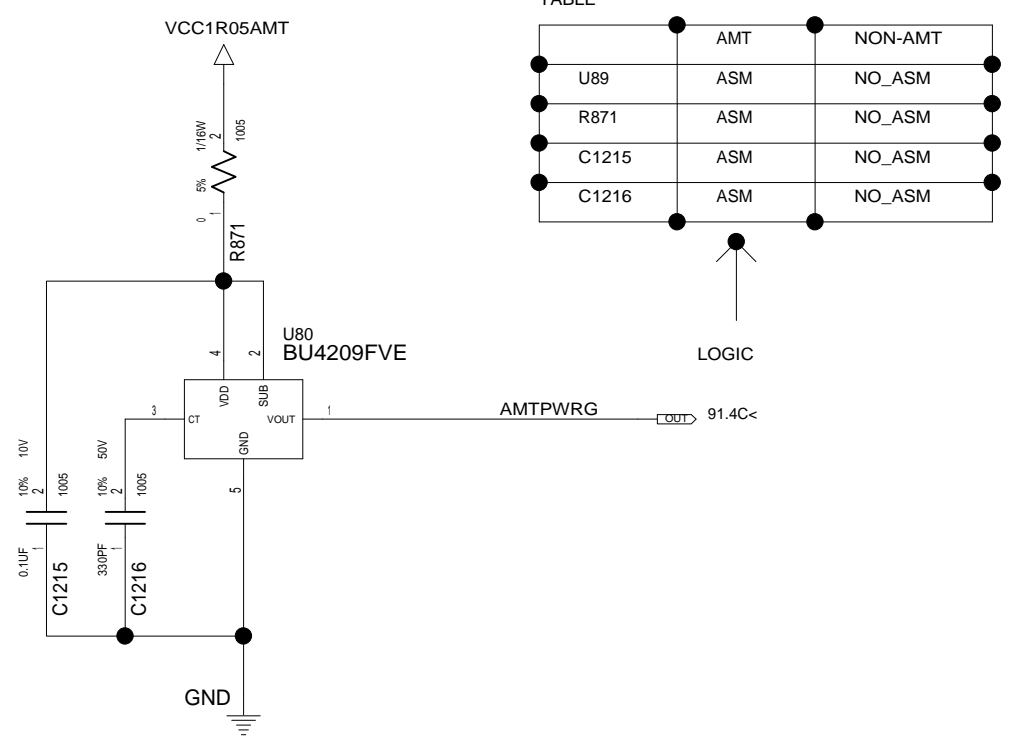
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| REL | | | VER.1.42 | |
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| | | | | 90 / 101 |



VER.1.42

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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 | DC/DC VCC1R8VIDEO | |
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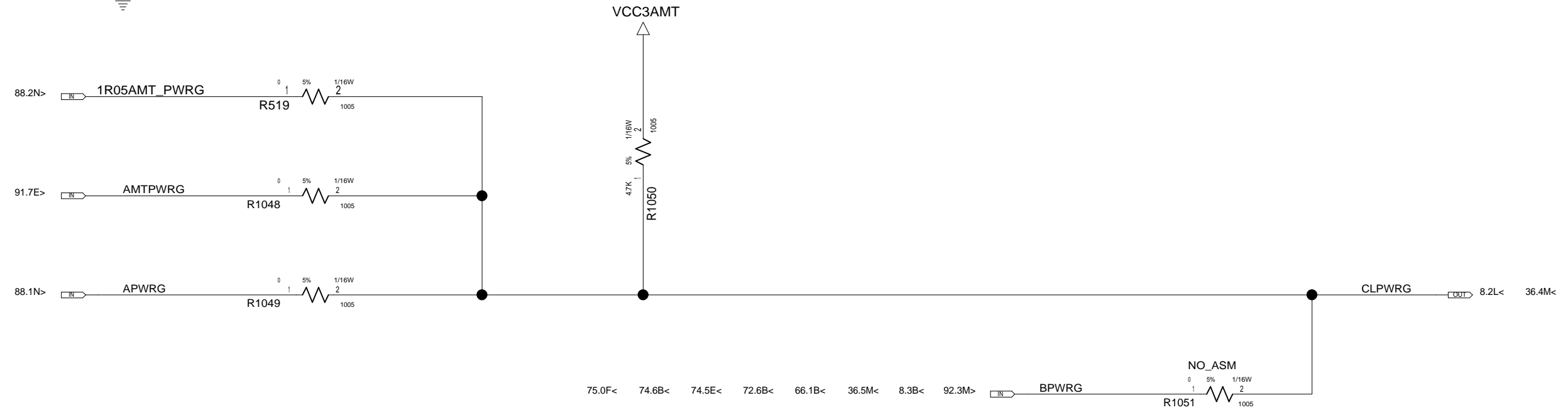
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| | | | | 91 / 101 |



TABLE

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

↑
LOGIC



TABLE

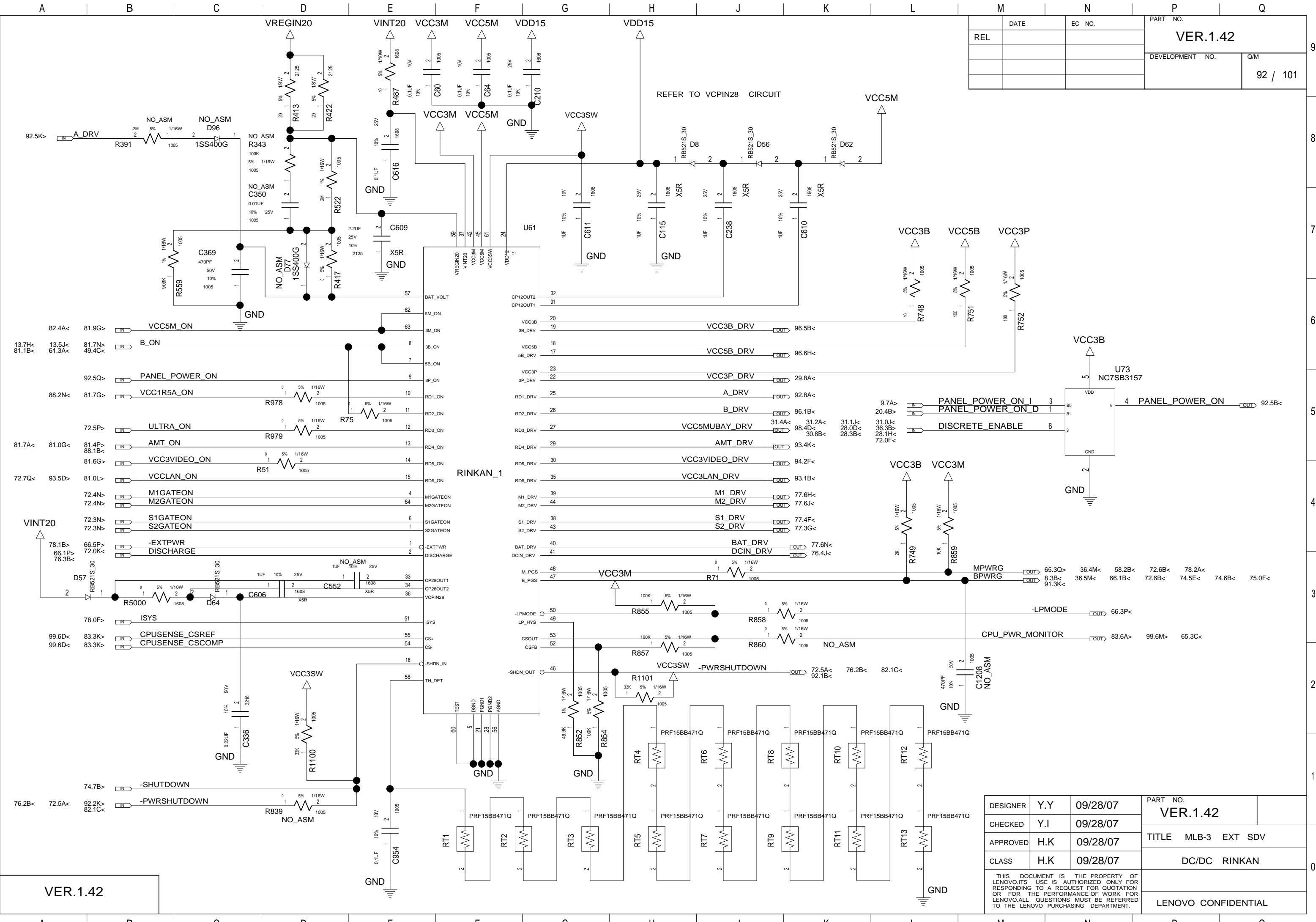
| | | |
|--------|--------|---------|
| | AMT | NON_AMT |
| R1051 | NO_ASM | ASM |
| OTHERS | ASM | NO_ASM |

↑
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 | | |
| CLASS | H.K | 09/28/07 | CLPWRG | |
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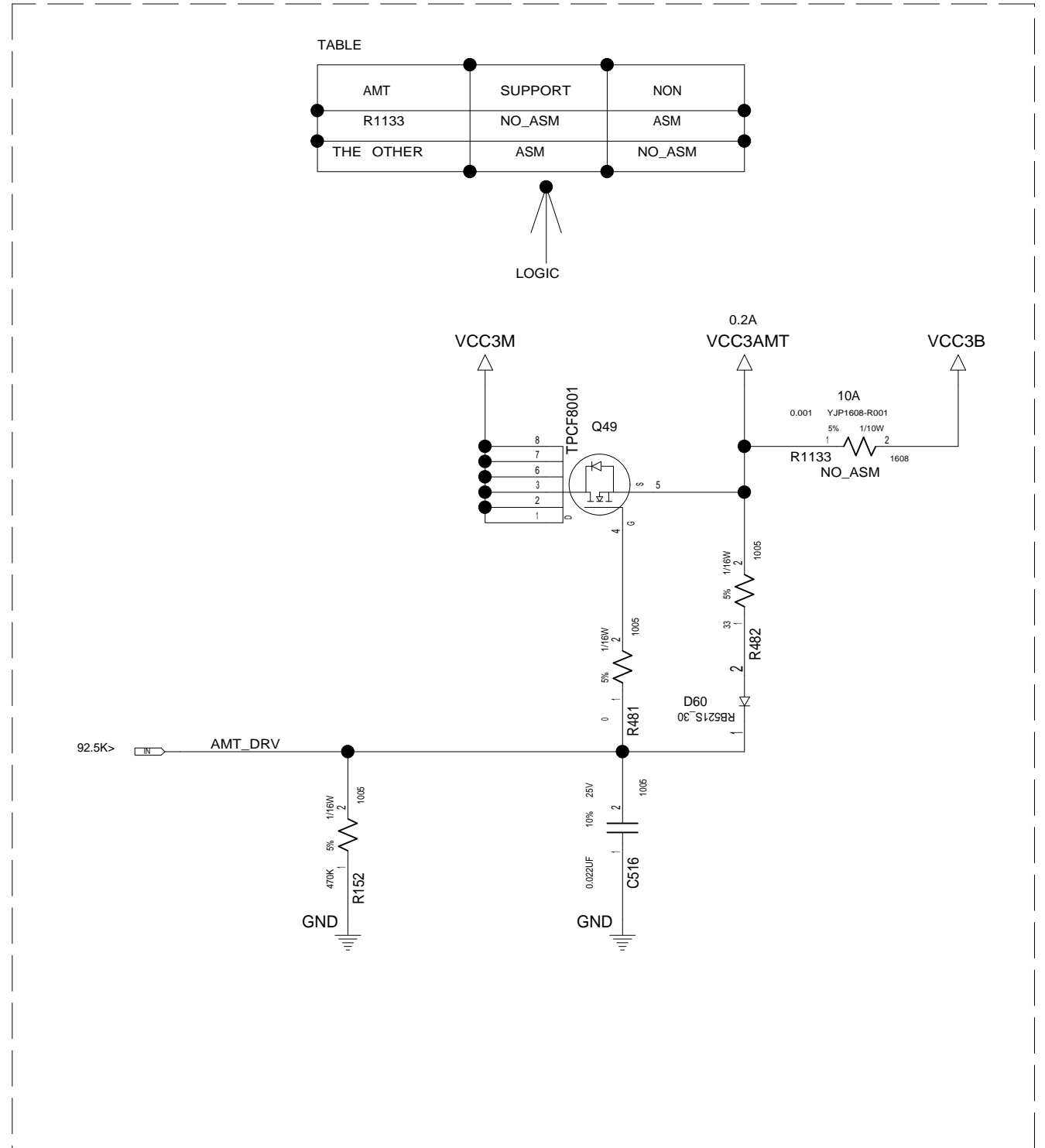
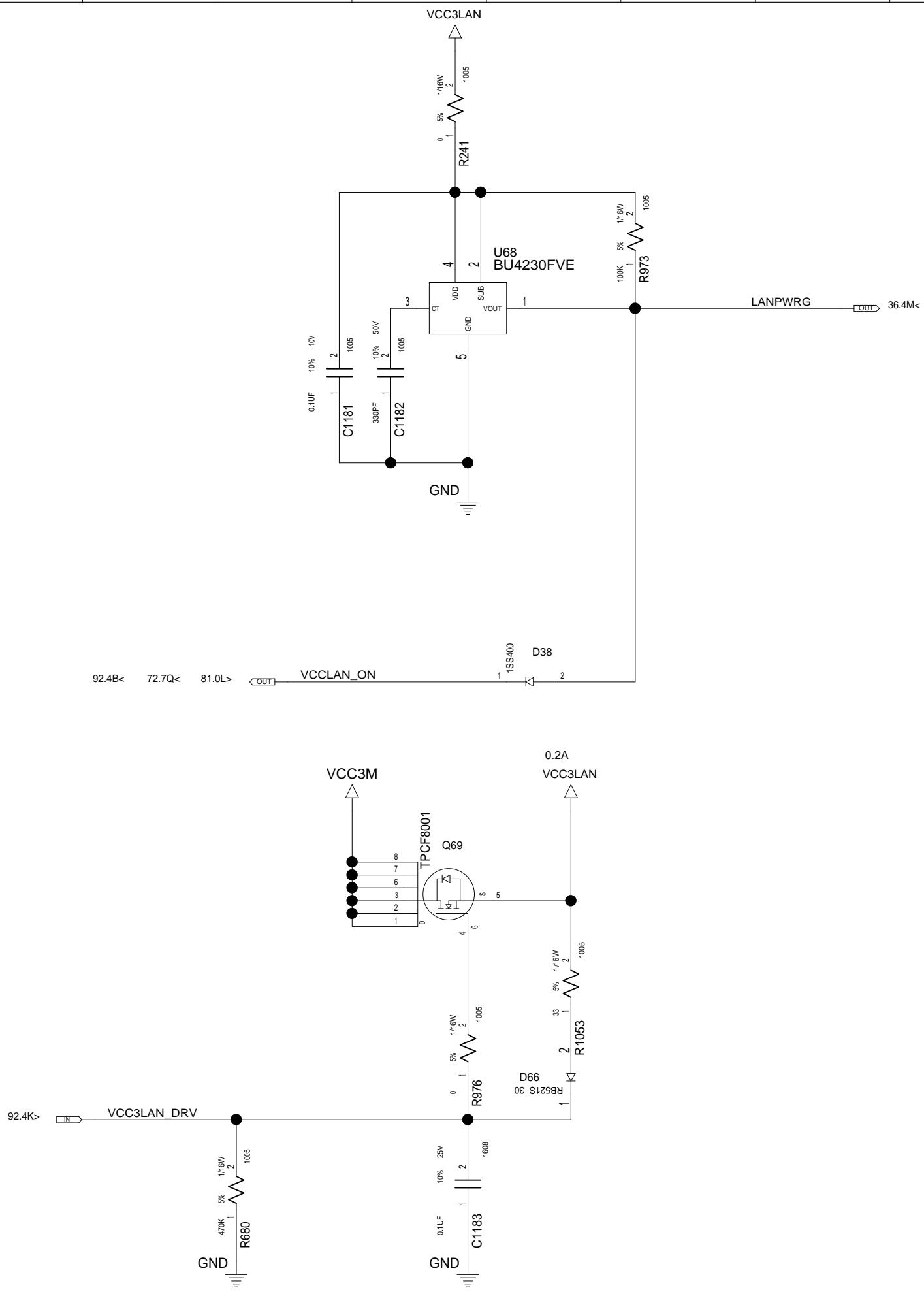
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| REL | DATE | EC NO. | PART NO. | |
| | | | VER.1.42 | |
| | | | DEVELOPMENT NO. | Q/M |
| | | | | 92 / 101 |



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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|-----|------|--------|-----------------|----------|
| | DATE | EC NO. | PART NO. | |
| REL | | | VER.1.42 | |
| | | | DEVELOPMENT NO. | Q/M |
| | | | | 93 / 101 |

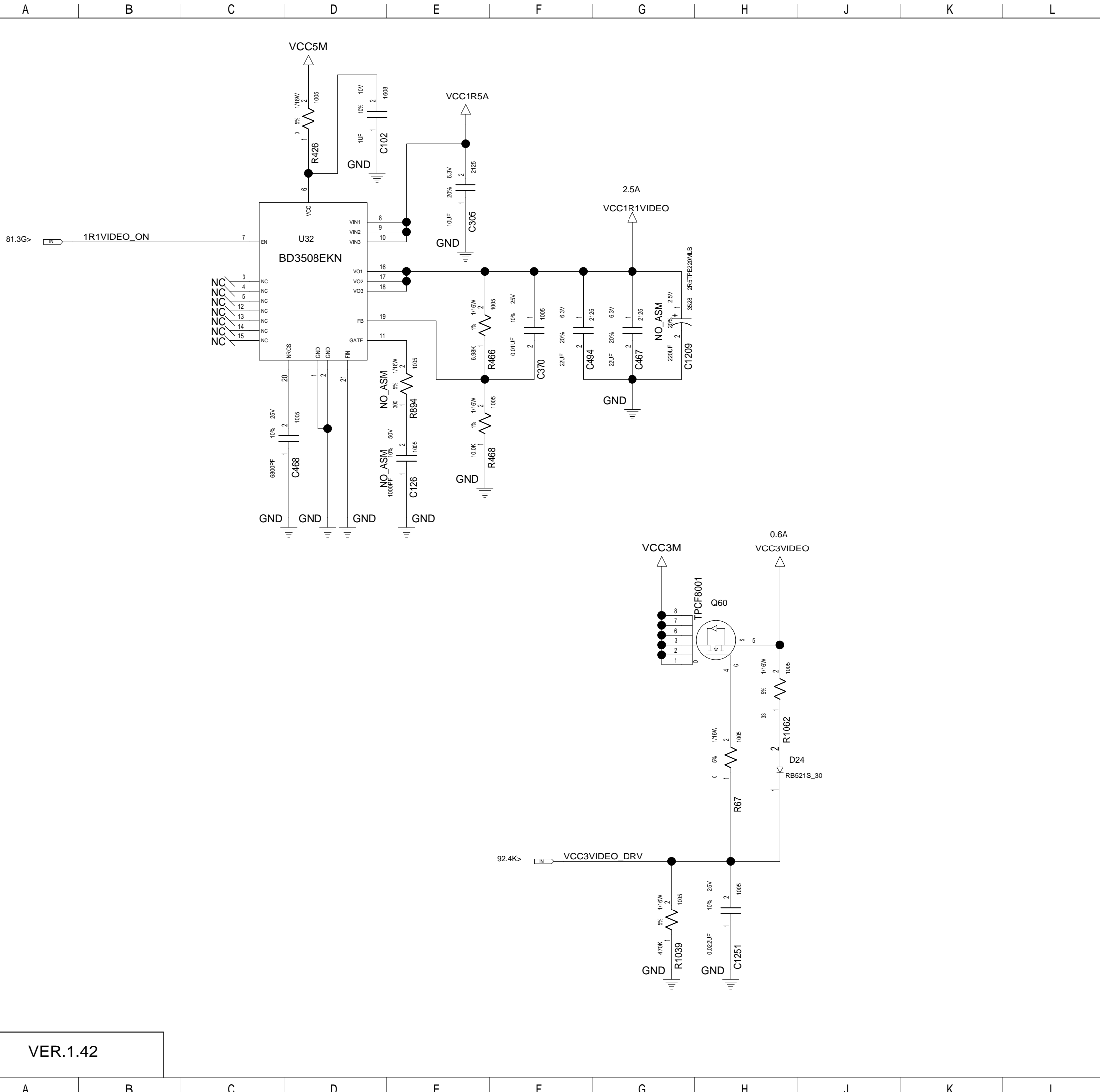


TABLE

| | | |
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| AMT | SUPPORT | NON |
| R1133 | NO_ASM | ASM |
| THE OTHER | ASM | NO_ASM |

LOGIC

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|--|-----|----------|---------------------|----------|
| 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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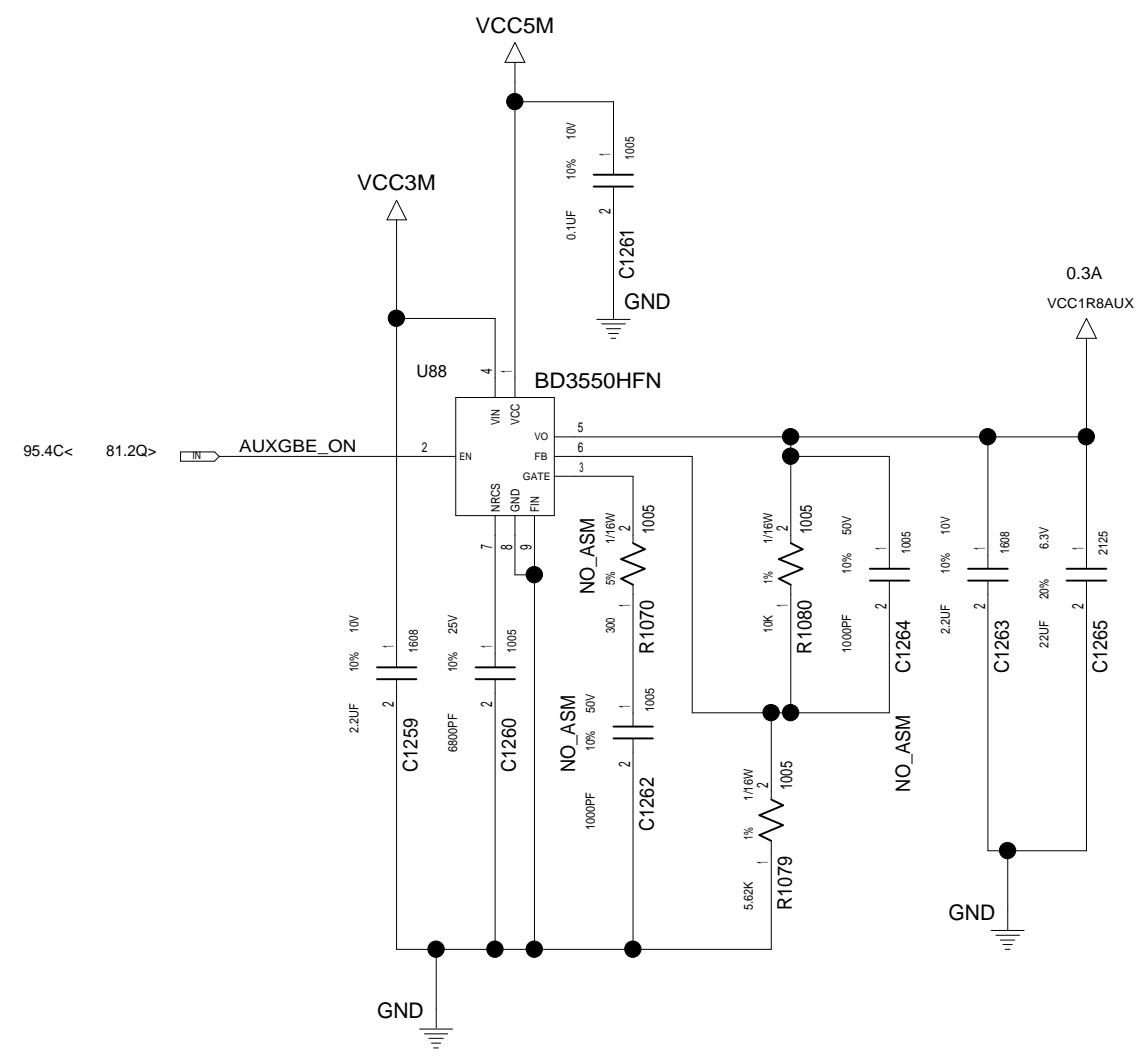
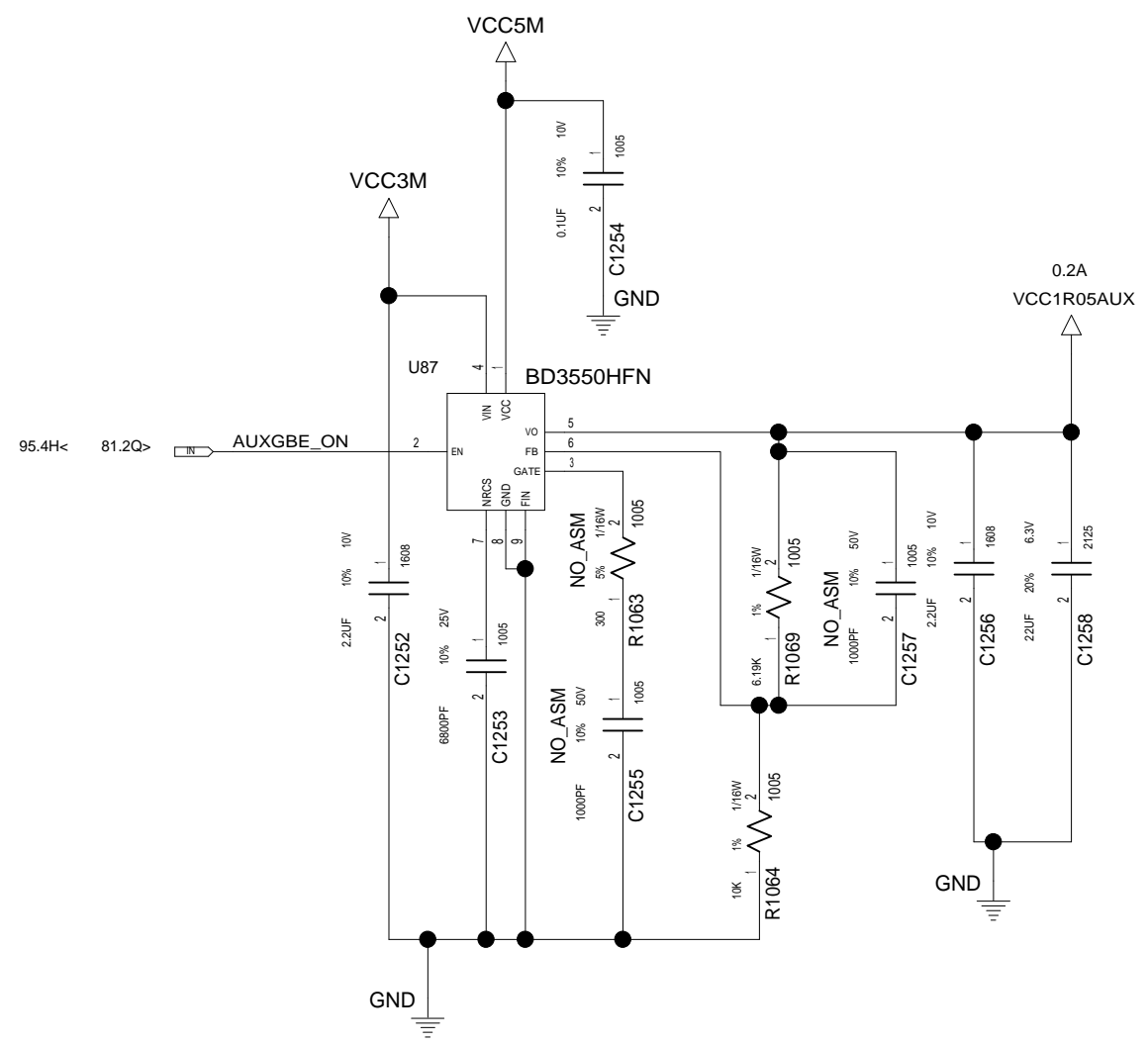
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| | | | | 94 / 101 |

VER.1.42

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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 | LOAD SW VIDEO | |
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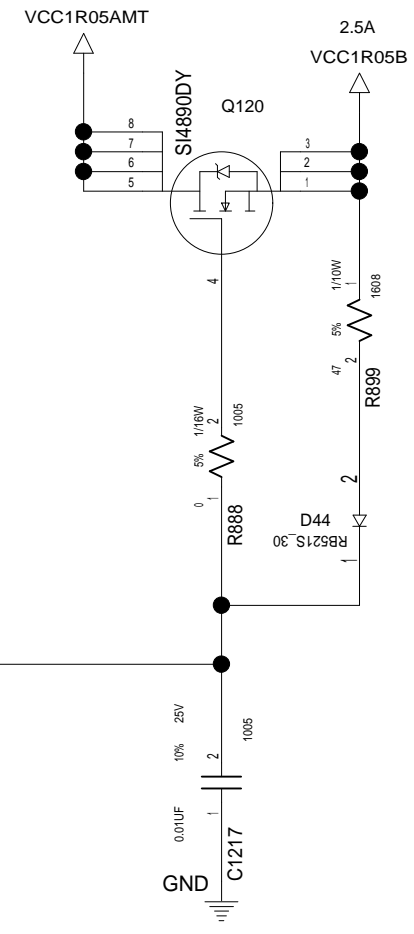
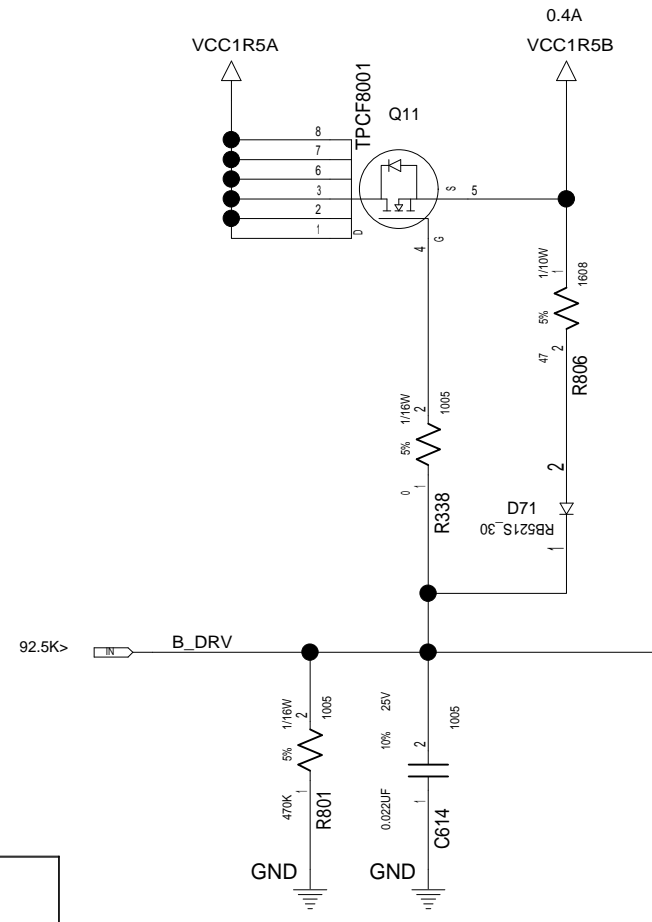
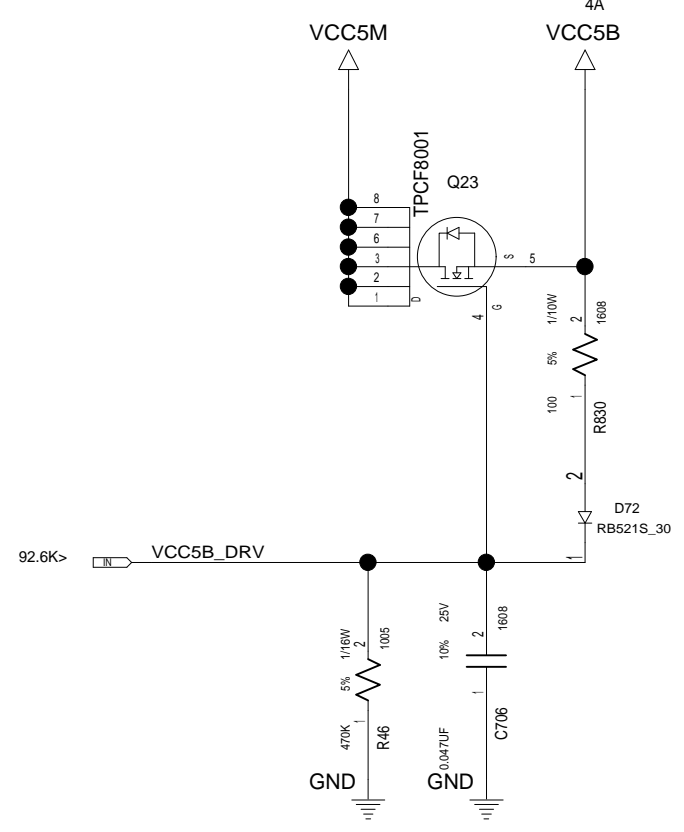
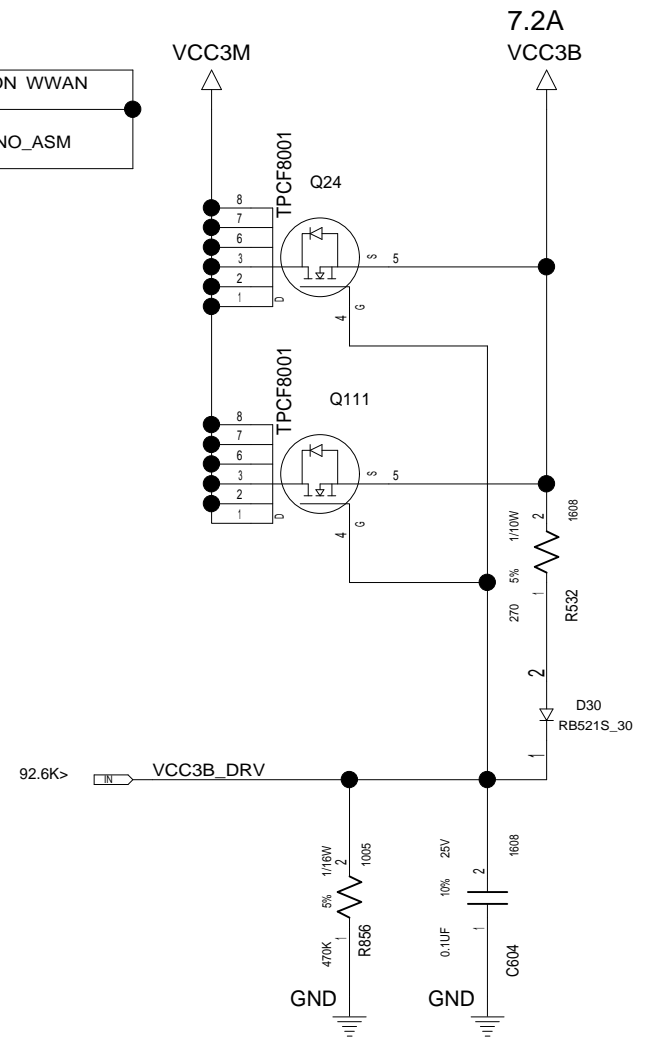
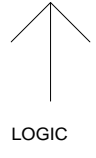
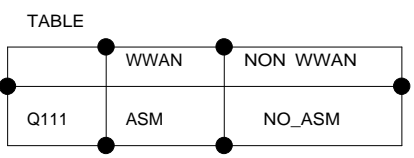
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| VCC1R8AUX | | |
| 1.8V | : R1079 | : 5.62KOHM |
| 2.5V | : R1079 | : 3.48KOHM |



VER.1.42

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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 | LOAD SW AUX | |
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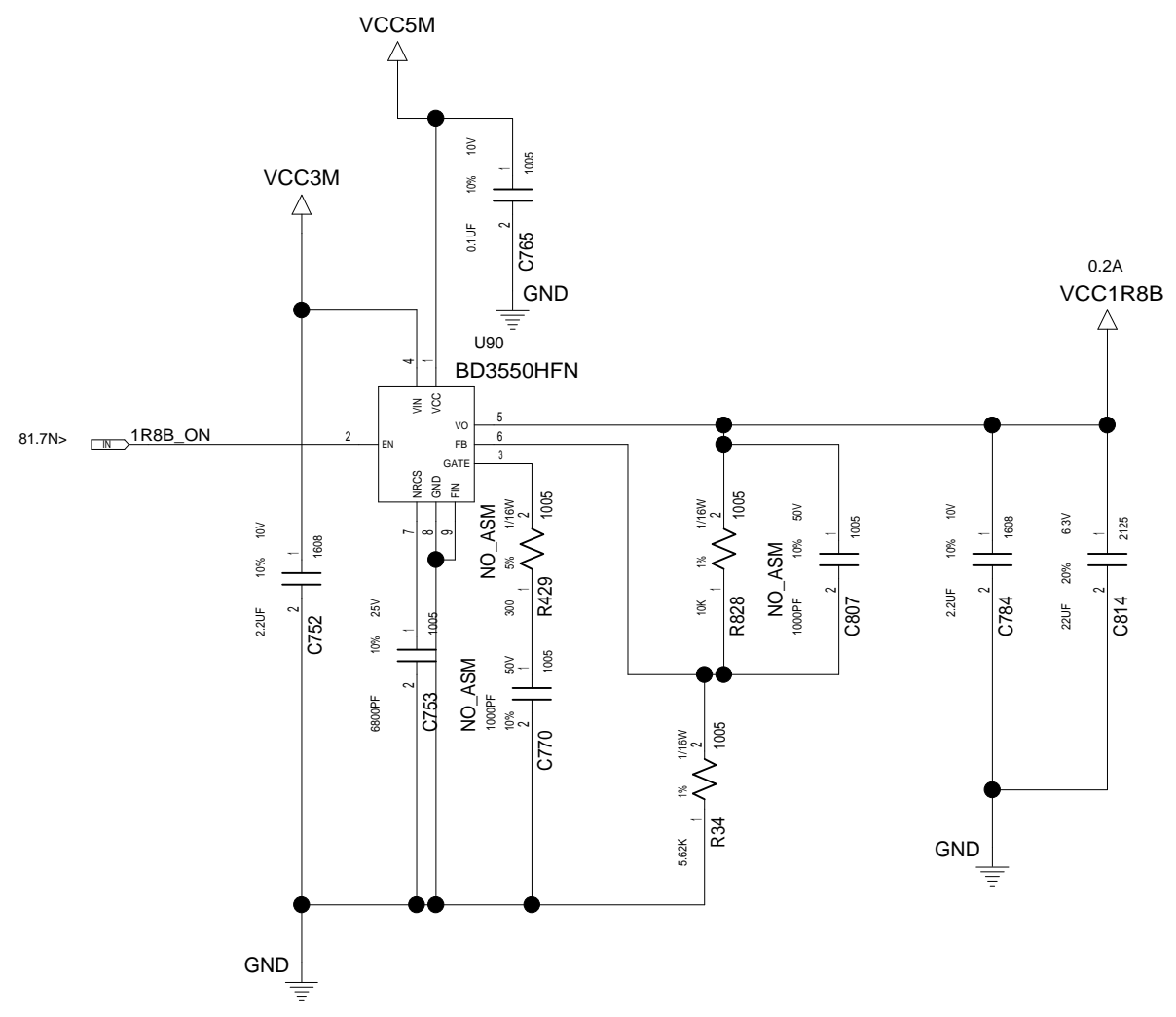
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| | | | | 96 / 101 |



VER.1.42

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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 | LOAD SW B | |
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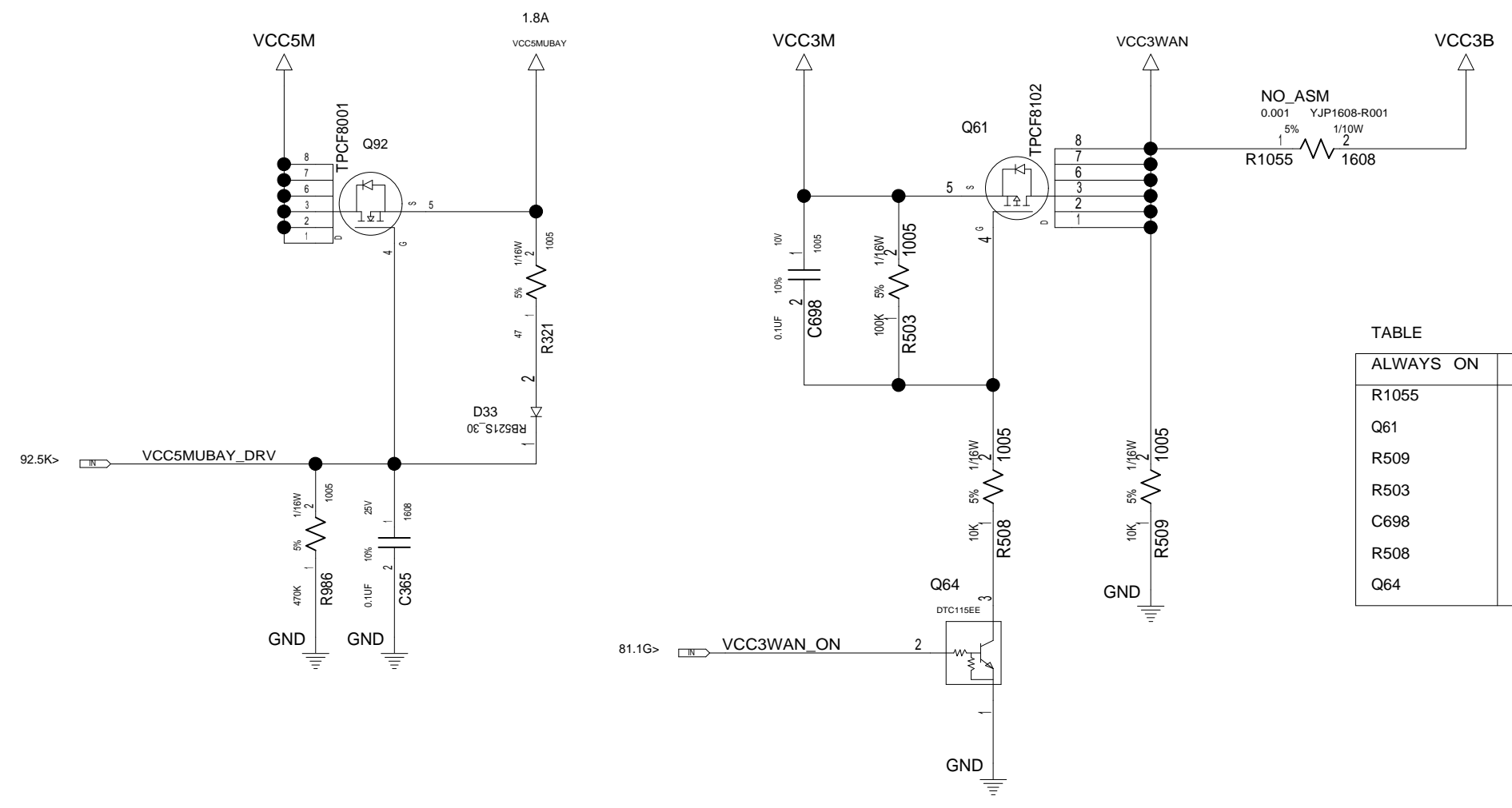
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| | | | | 97 / 101 |



VER.1.42

| | | | | |
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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 | DC/DC VCC1R8B | |
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| REL | | | VER.1.42 | |
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| | | | | 98 / 101 |



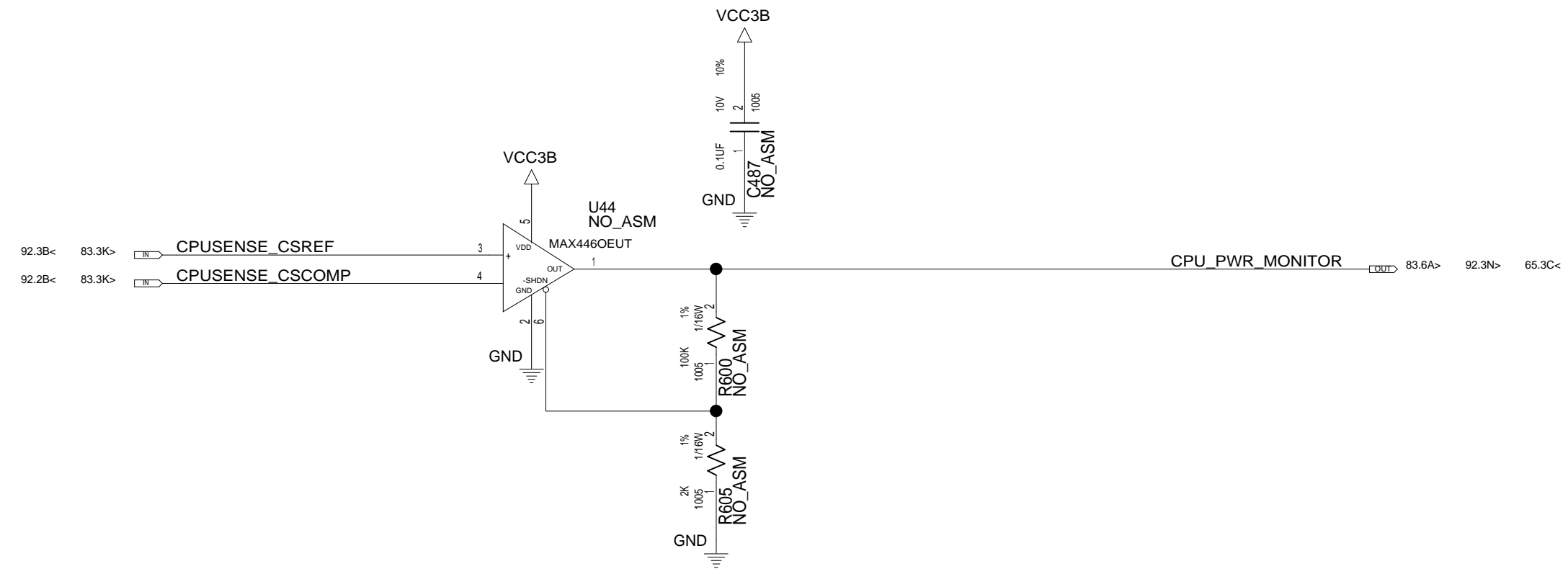
TABLE

| | 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

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|--|-----|----------|---------------------|---------------------|
| 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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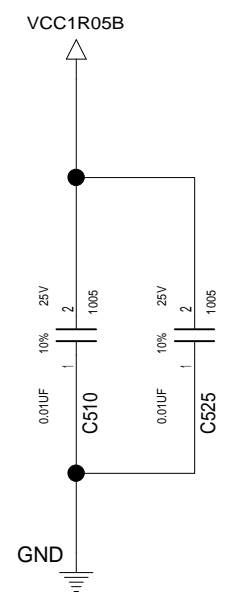
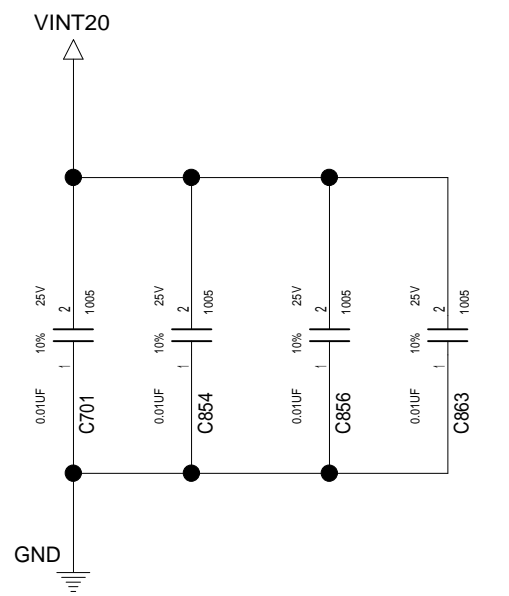
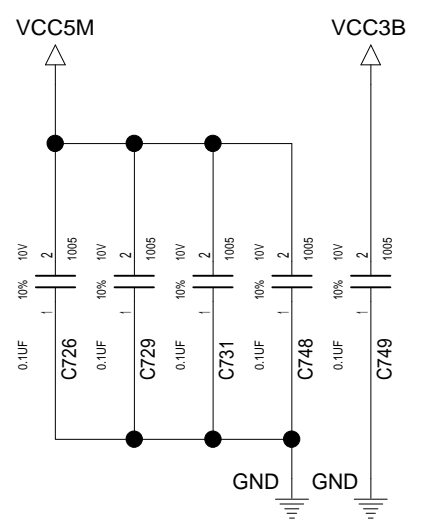
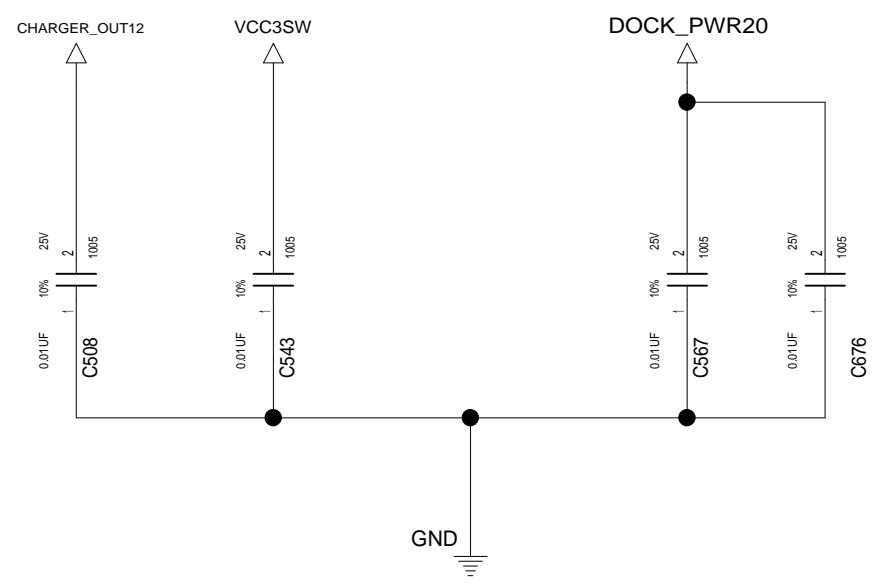
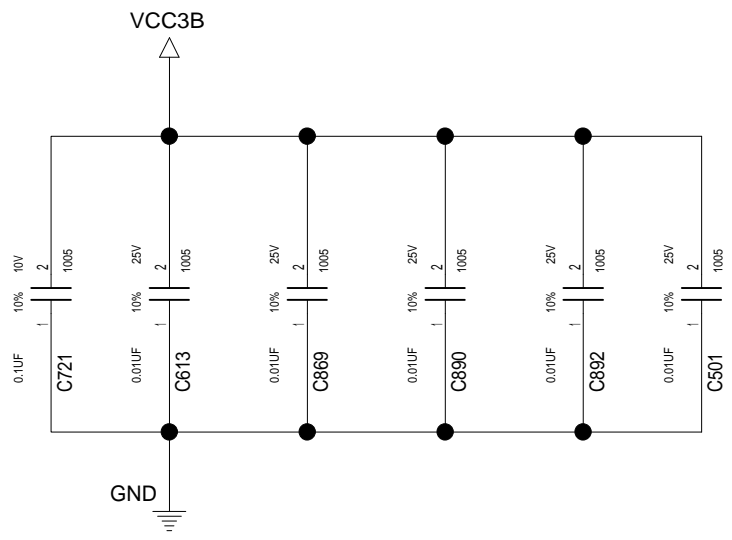
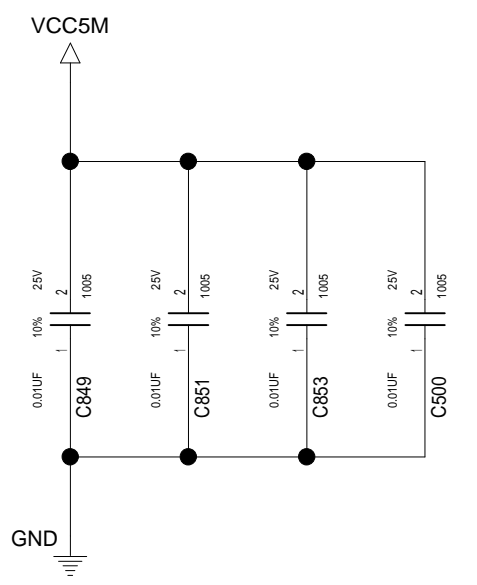
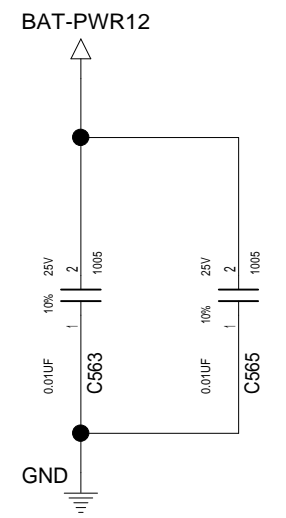
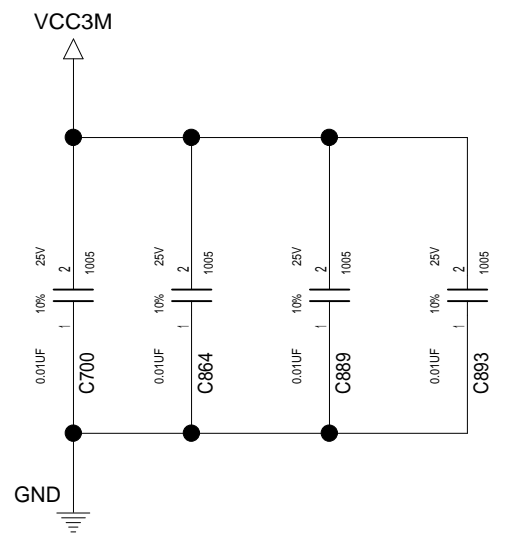
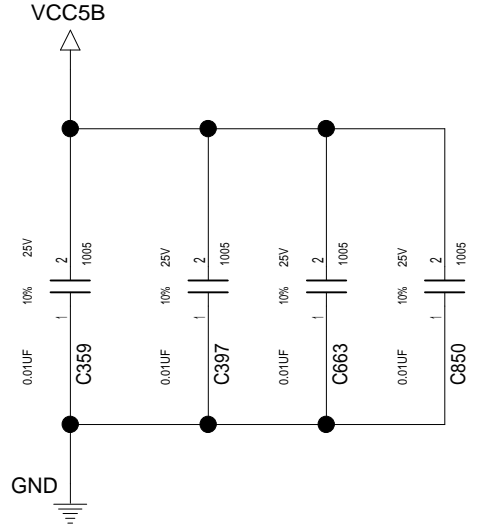
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VER.1.42

| | | | | |
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| 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 | CPU POWER MOMITOR | |
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| | | |
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| | DATE | EC NO. |
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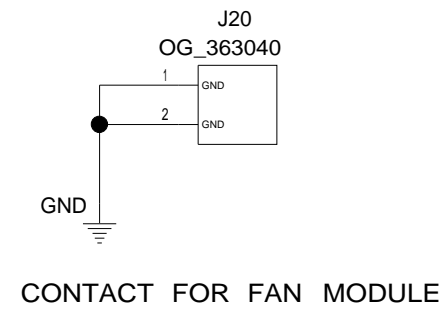
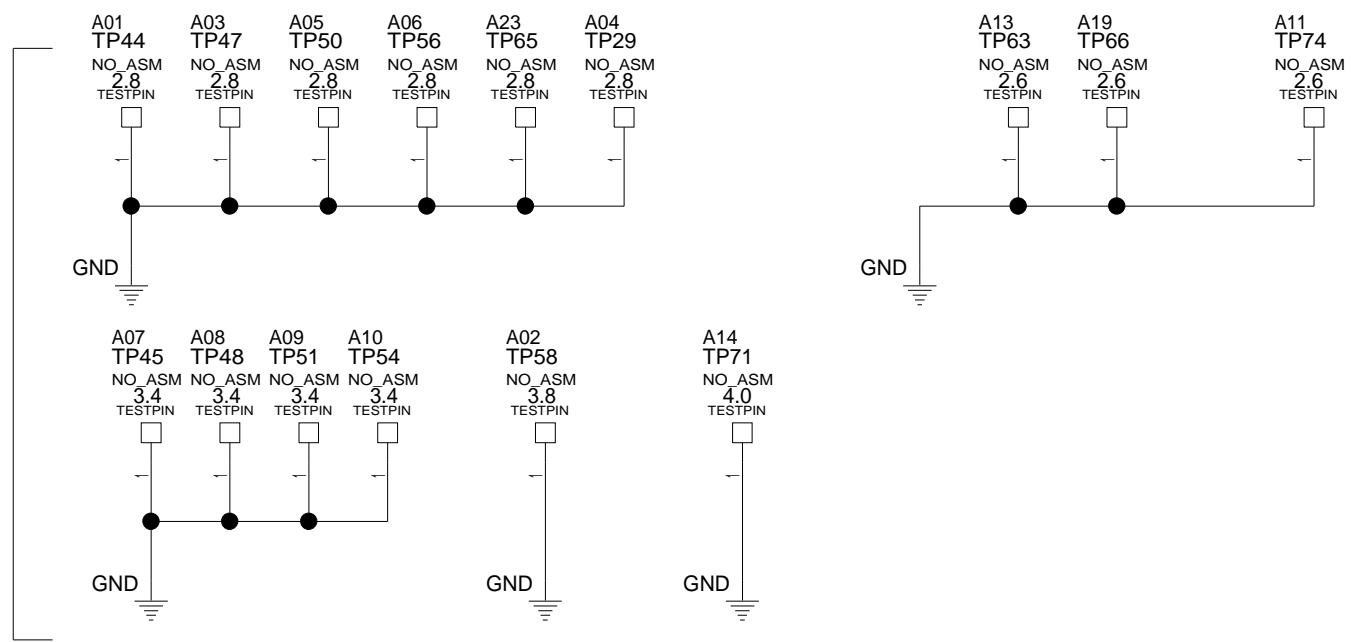
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| APPROVED | H.K | 09/28/07 | TITLE MLB-3 EXT SDV | |
| CLASS | H.K | 09/28/07 | EMC DECOUPLING | |
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A B C D E F G H J K L

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| | DATE | EC NO. |
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PTH FOR SCREW HOLE



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 | PTH FOR SCREW HOLES | |
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