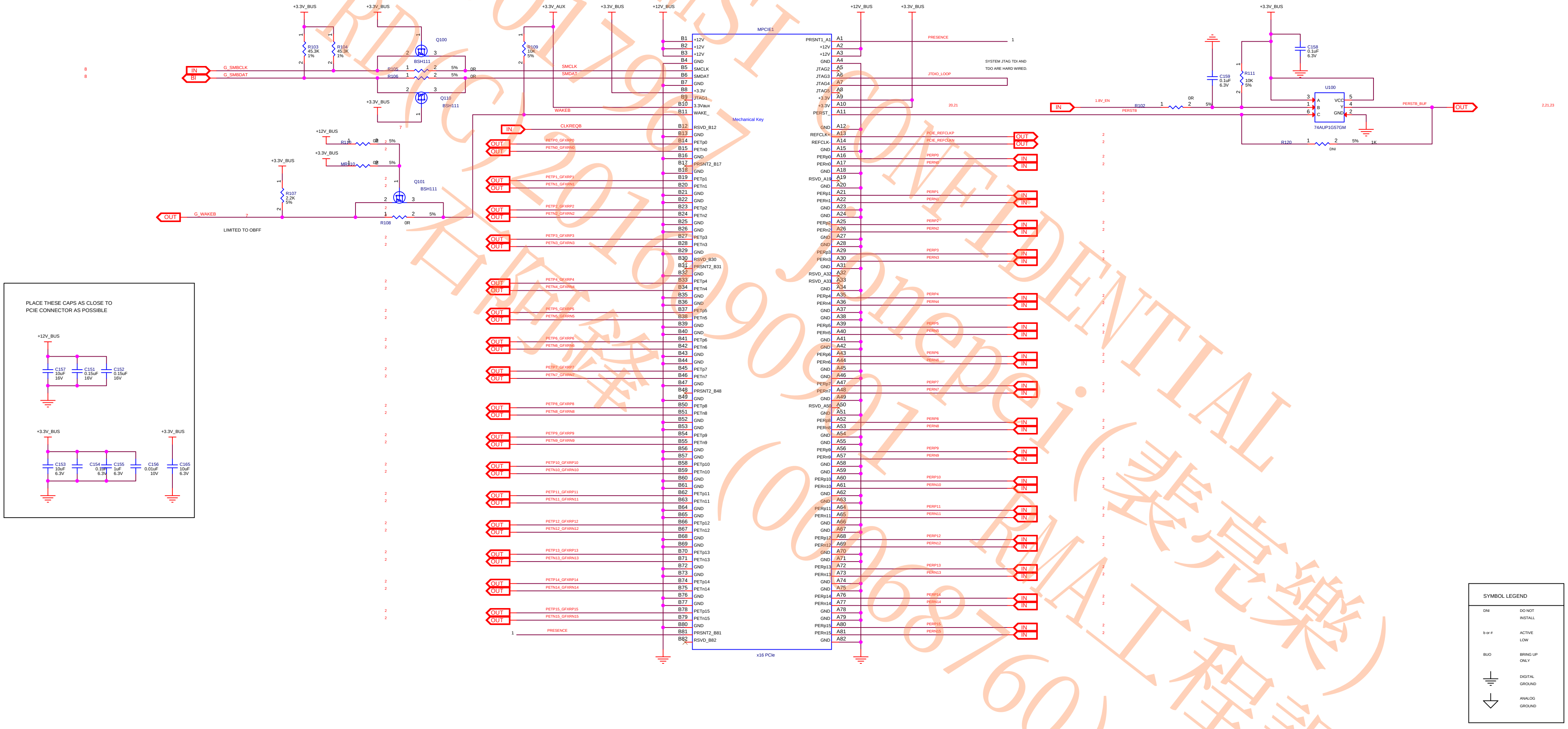
(1) PCI-EXPRESS EDGE CONNECTOR



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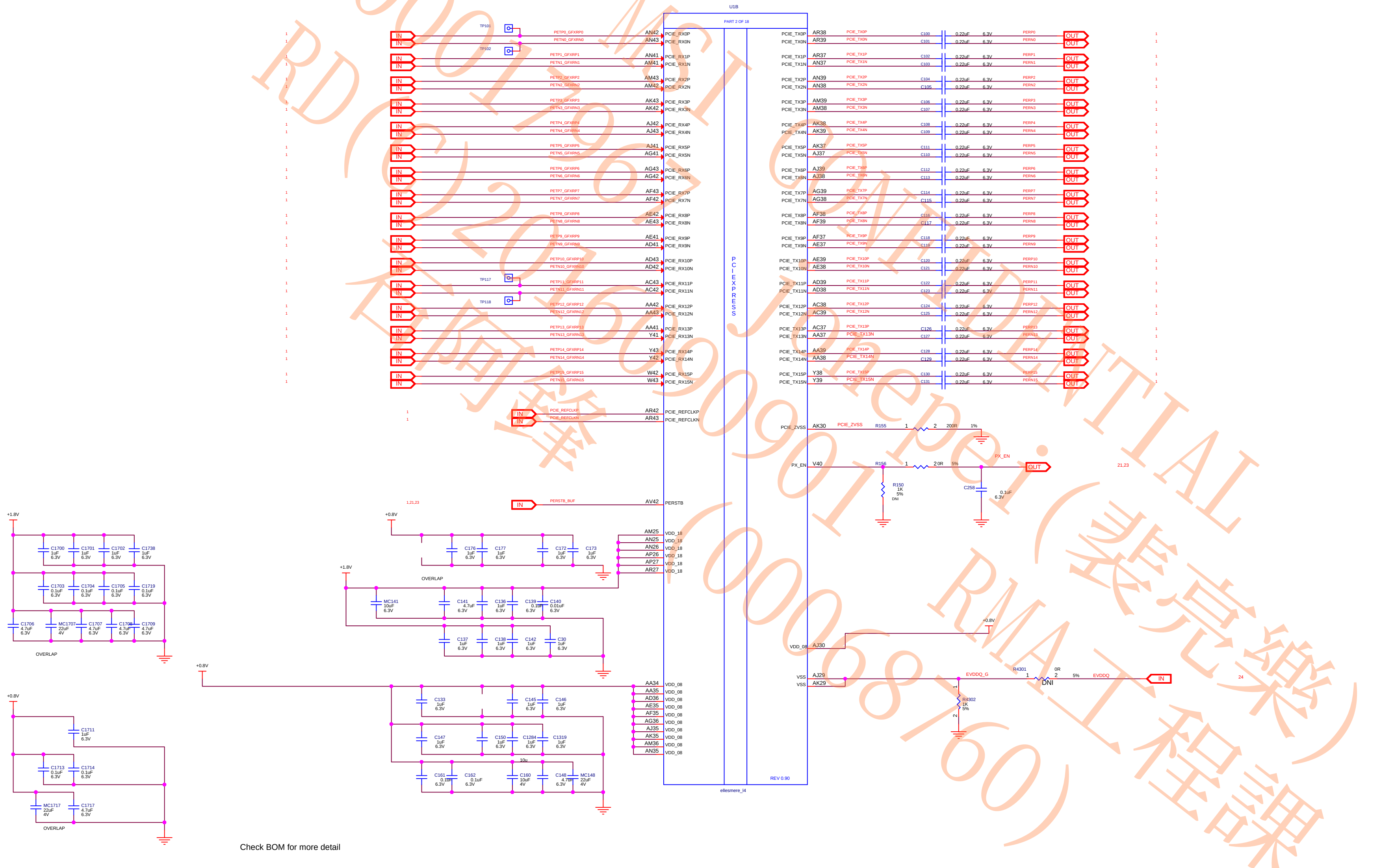
(2) ELLESMERE PCIE INTERFACE



Check BOM for more detail

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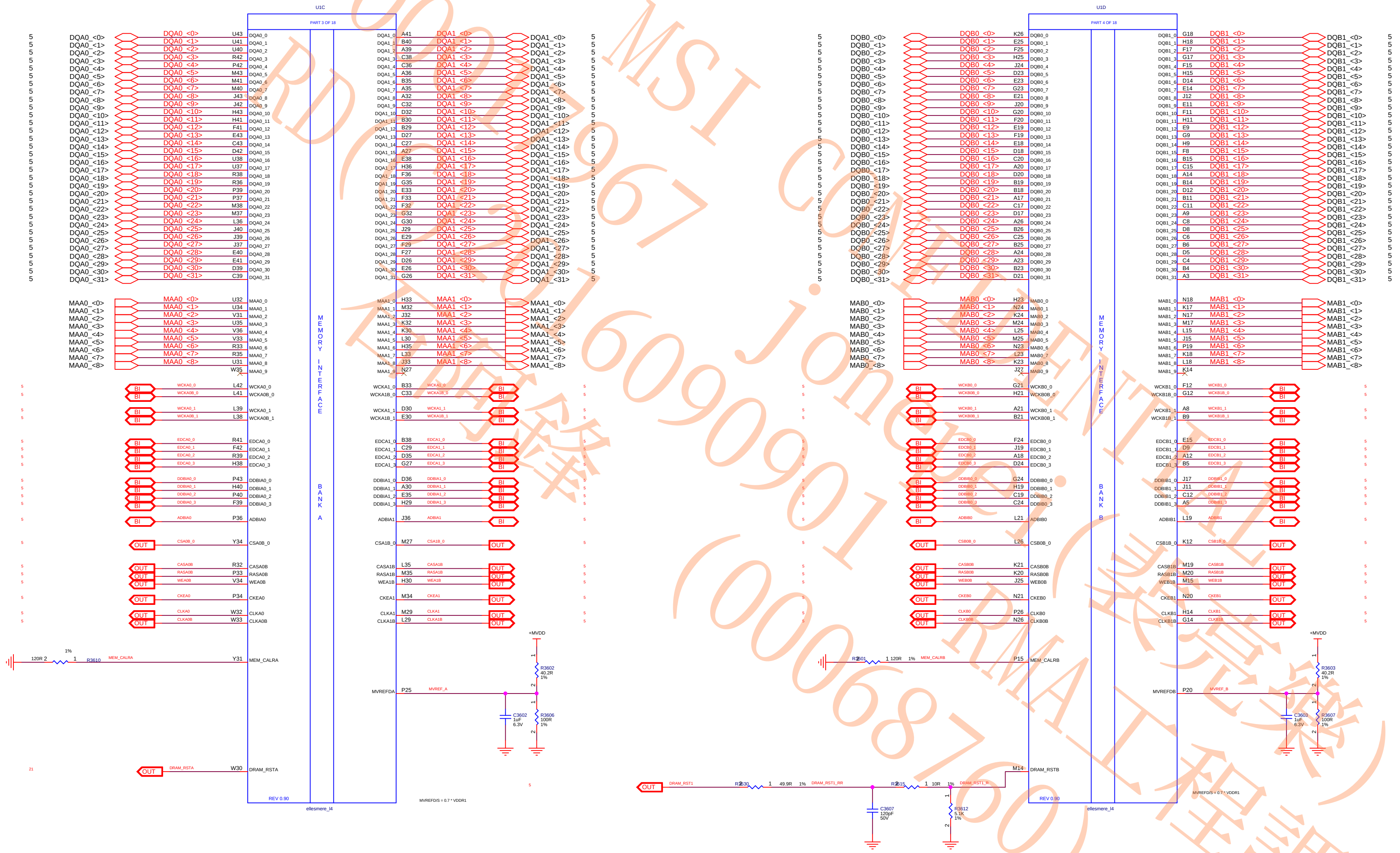
(3) ELLESMERE MEM INTERFACE CH A/B



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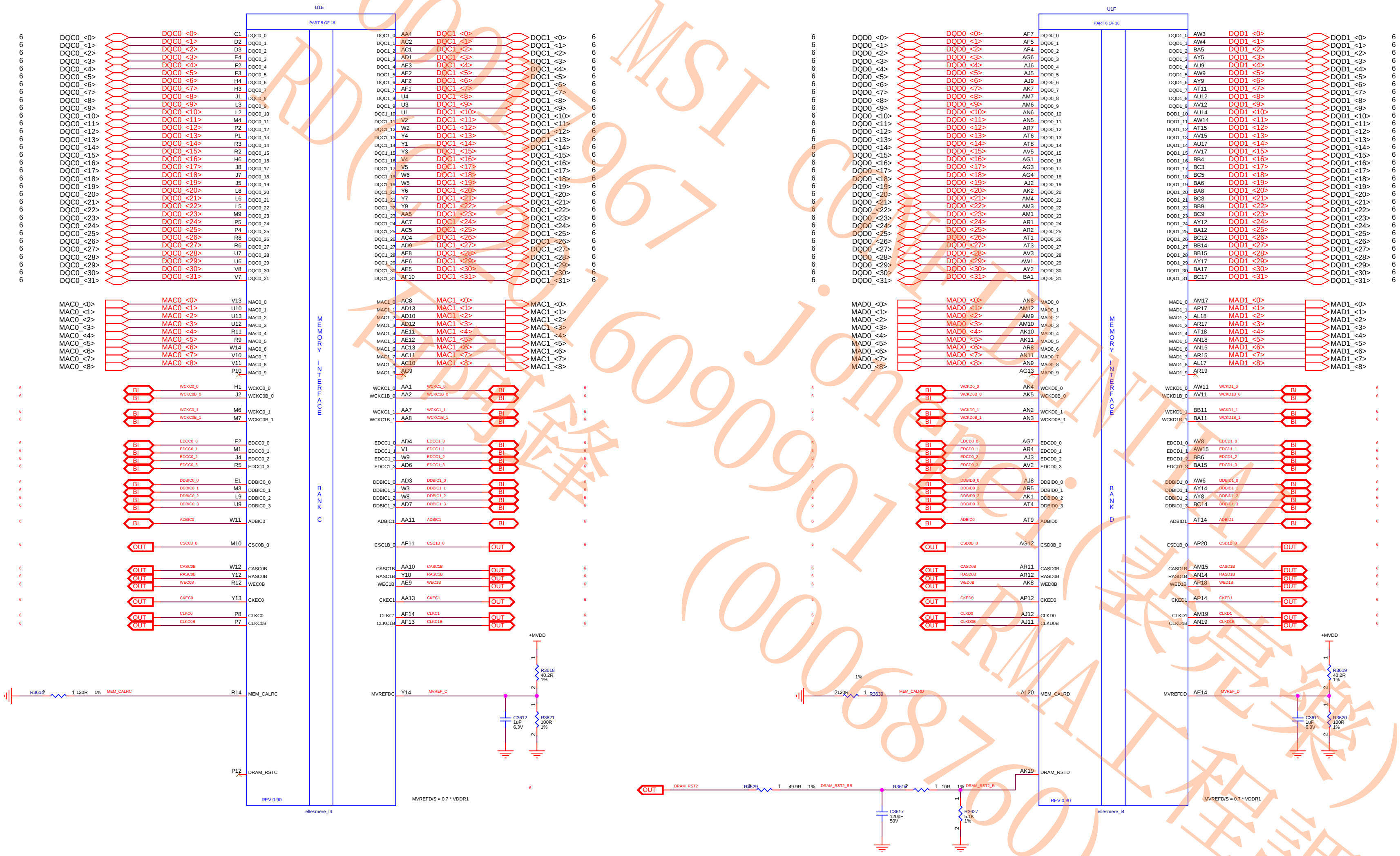
(4) ELLESMERE MEM INTERFACE CH C/D



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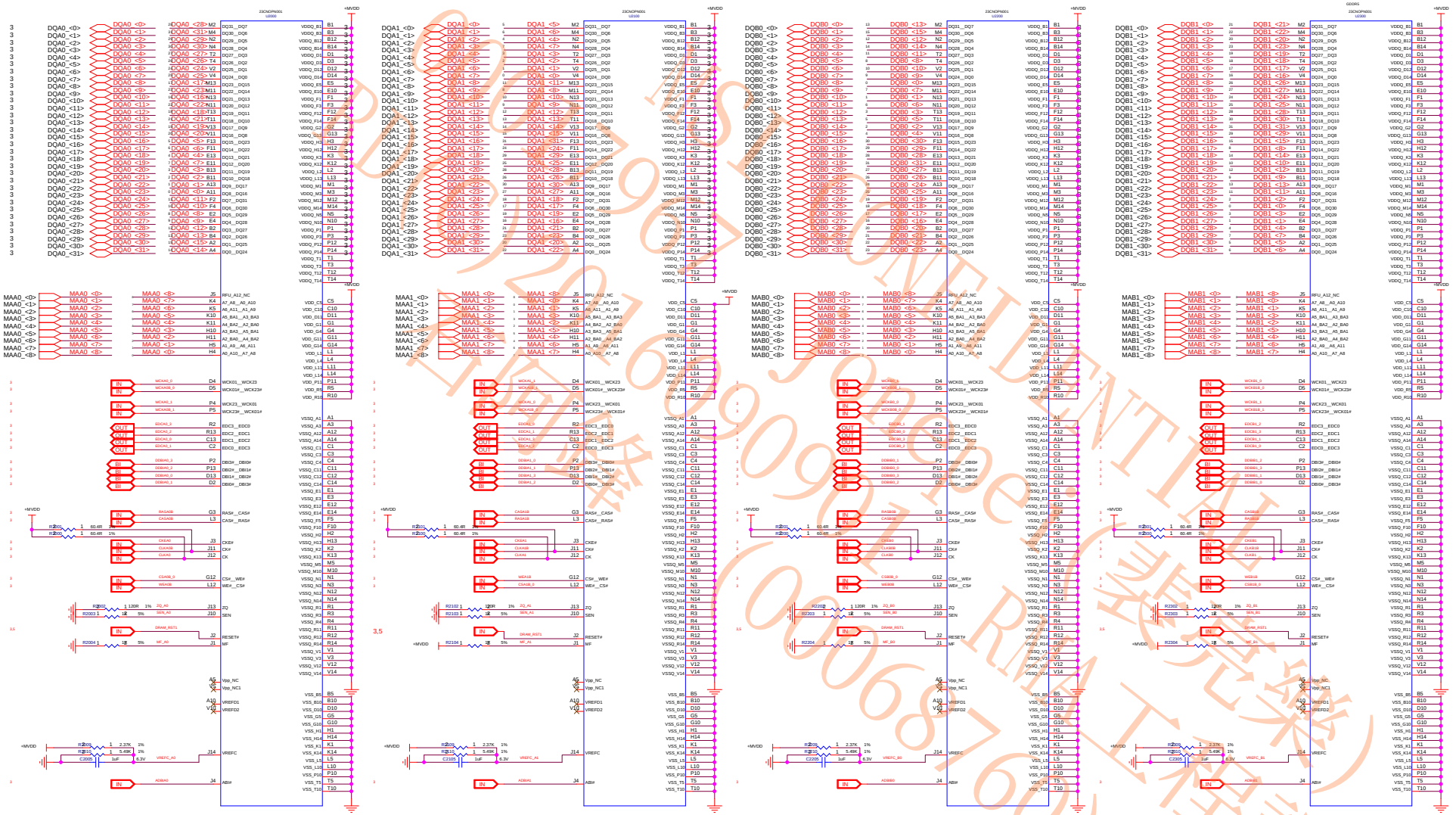
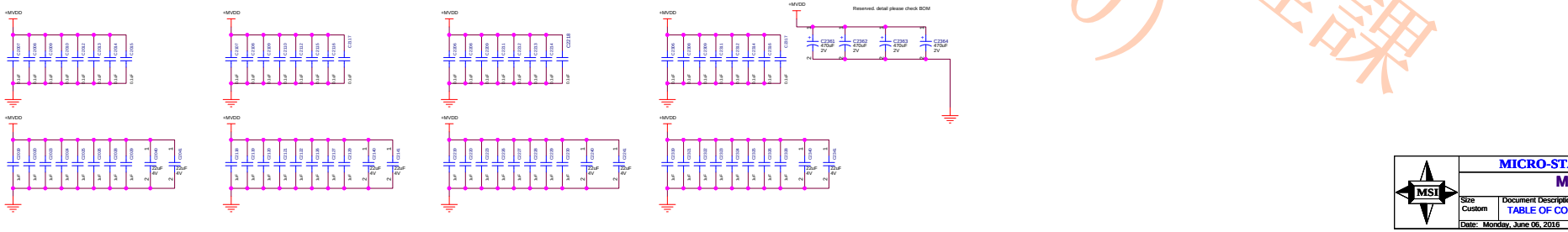
(5) GDDR5 MEMORY CH A/B





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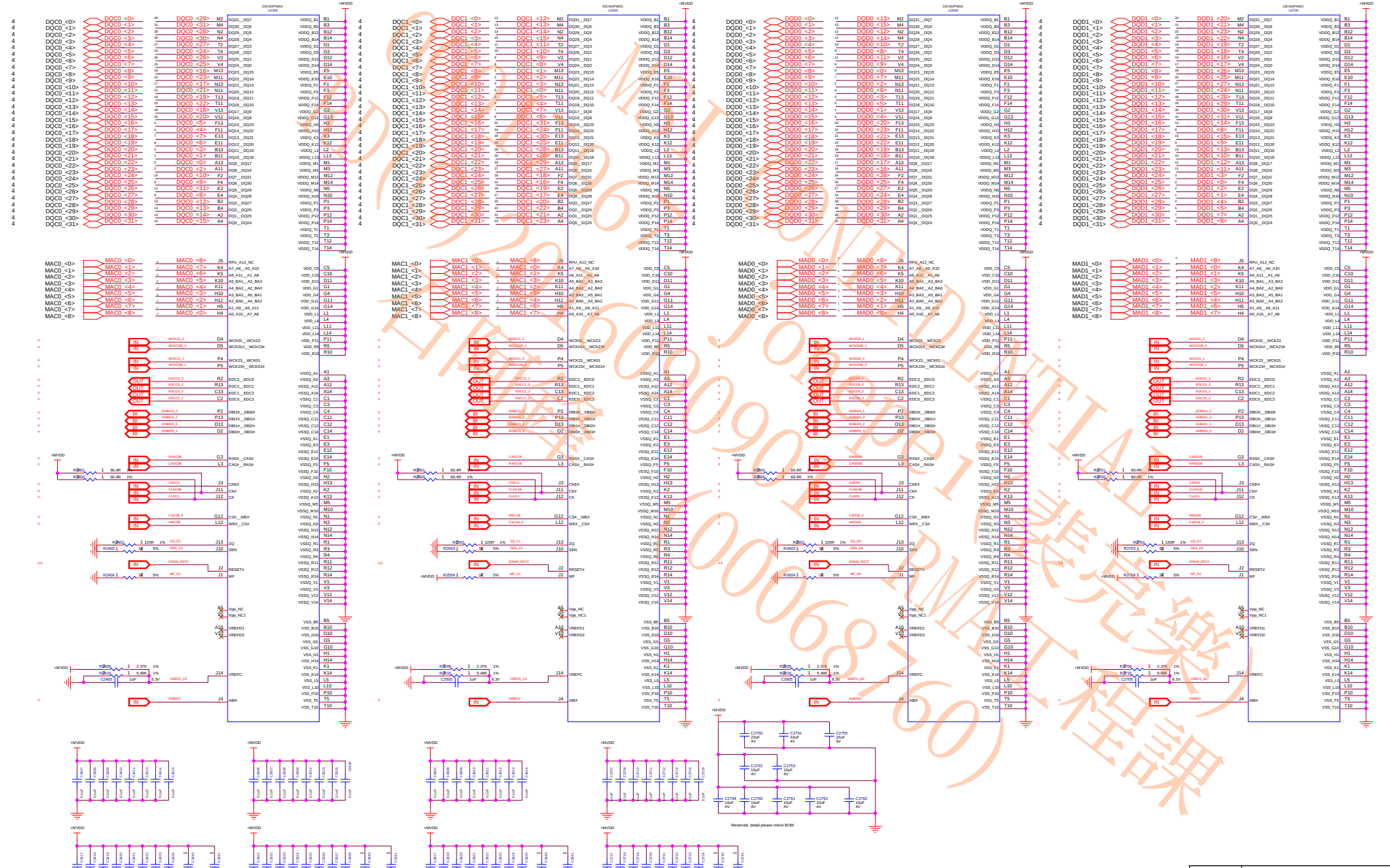
(6) GDDR5 MEMORY CH C/D



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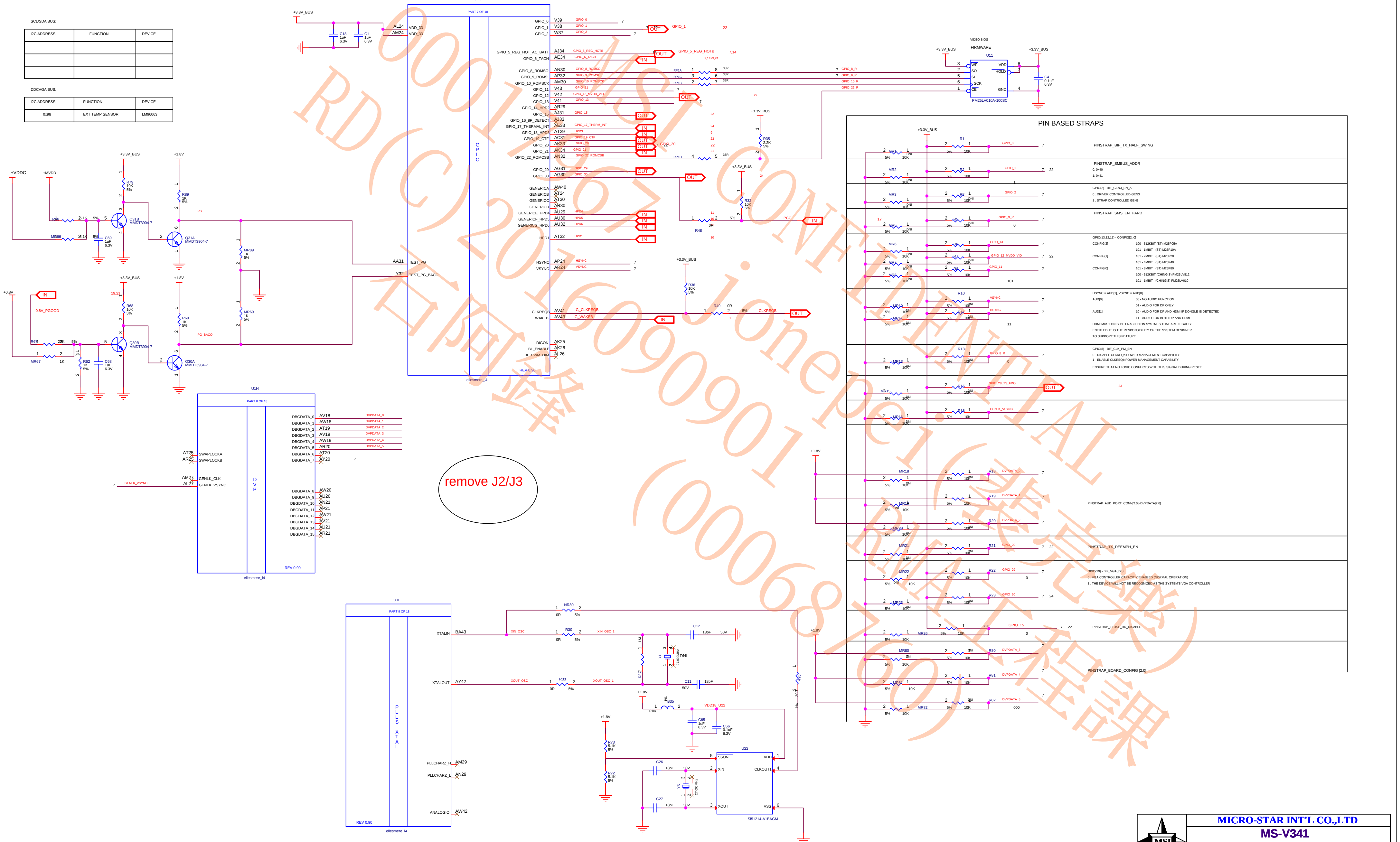
(7) ELLESMERE GPIO STRAP CF XTAL



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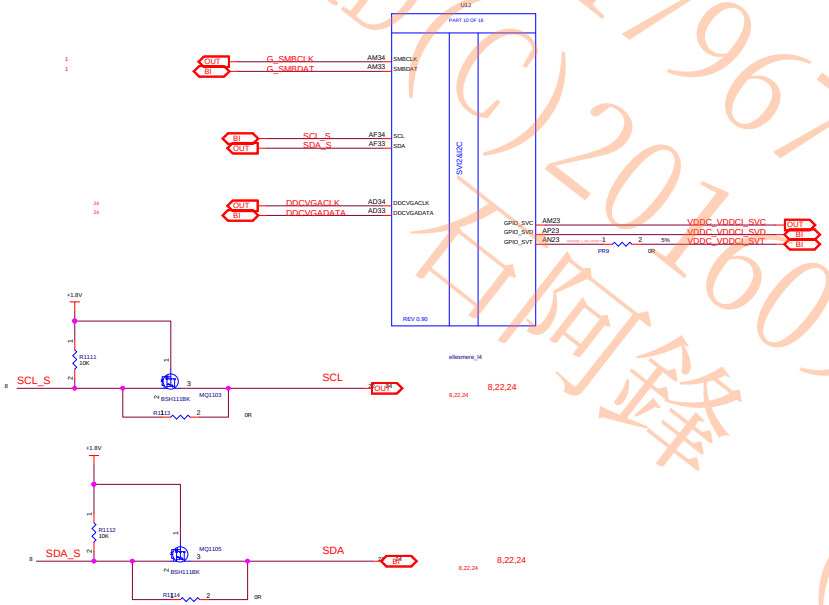
(8) ELLESMERE DAC1 LOCK



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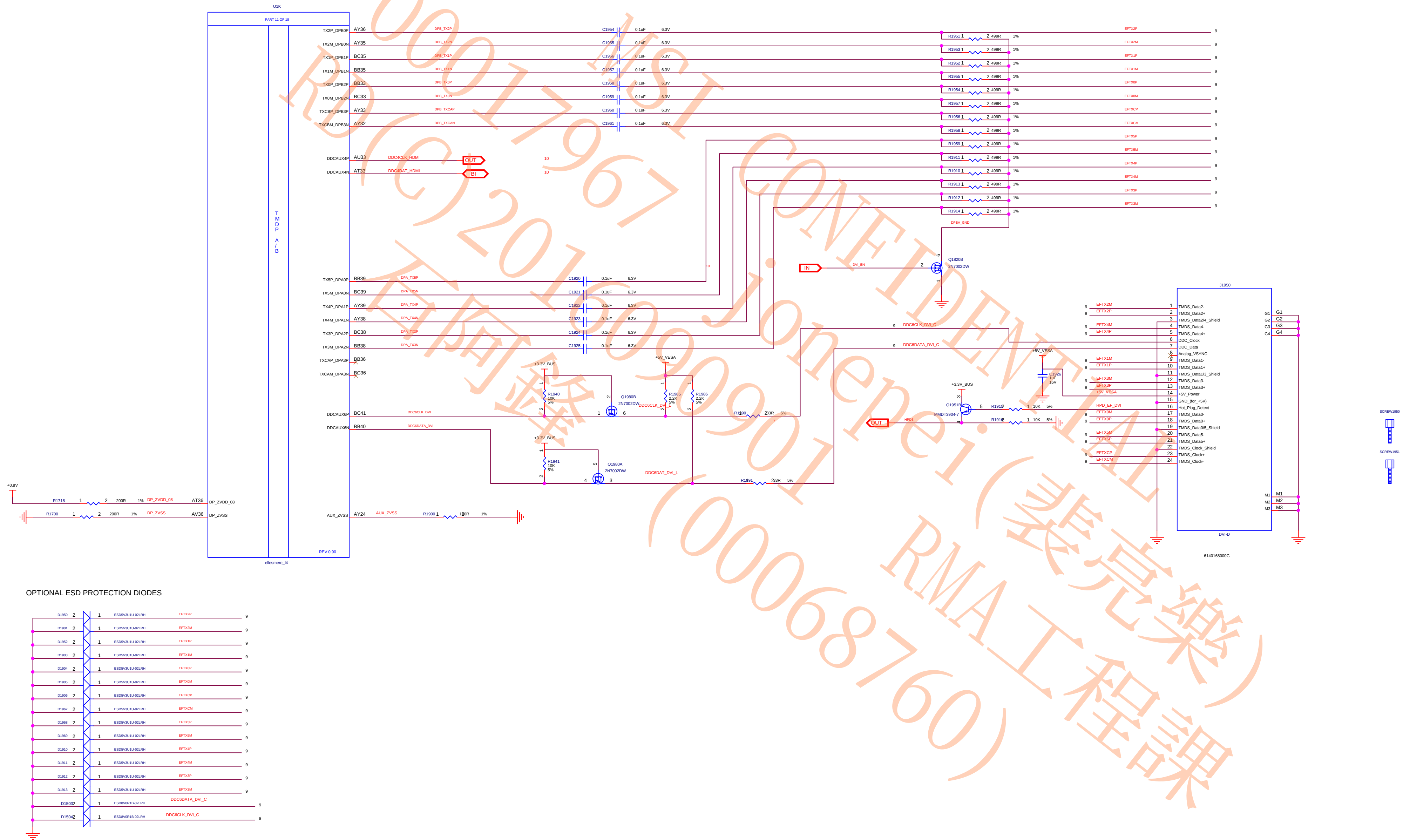
(9) ELLESMERE TMDP A/B



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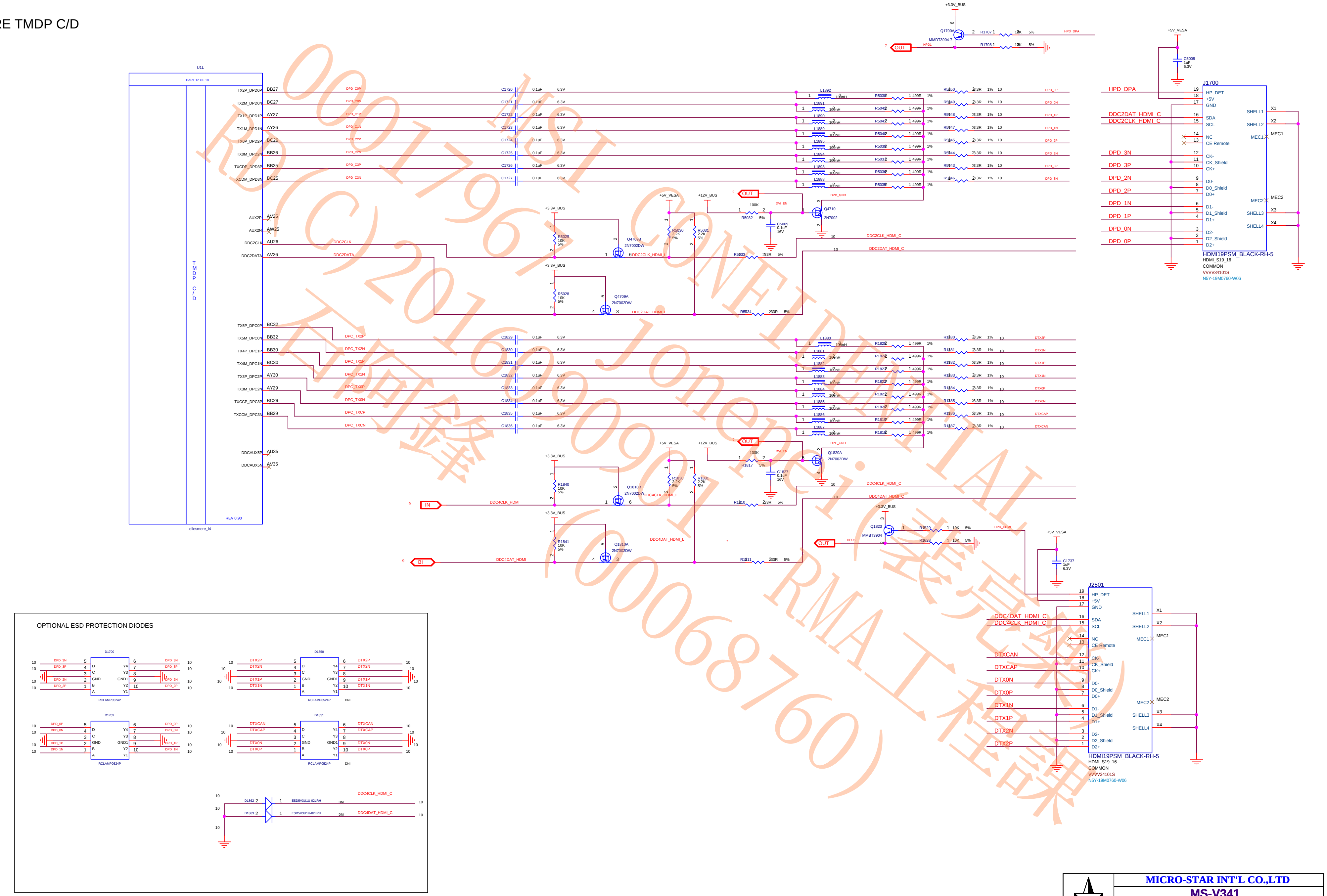
(10) ELLESMERE TMDP C/D



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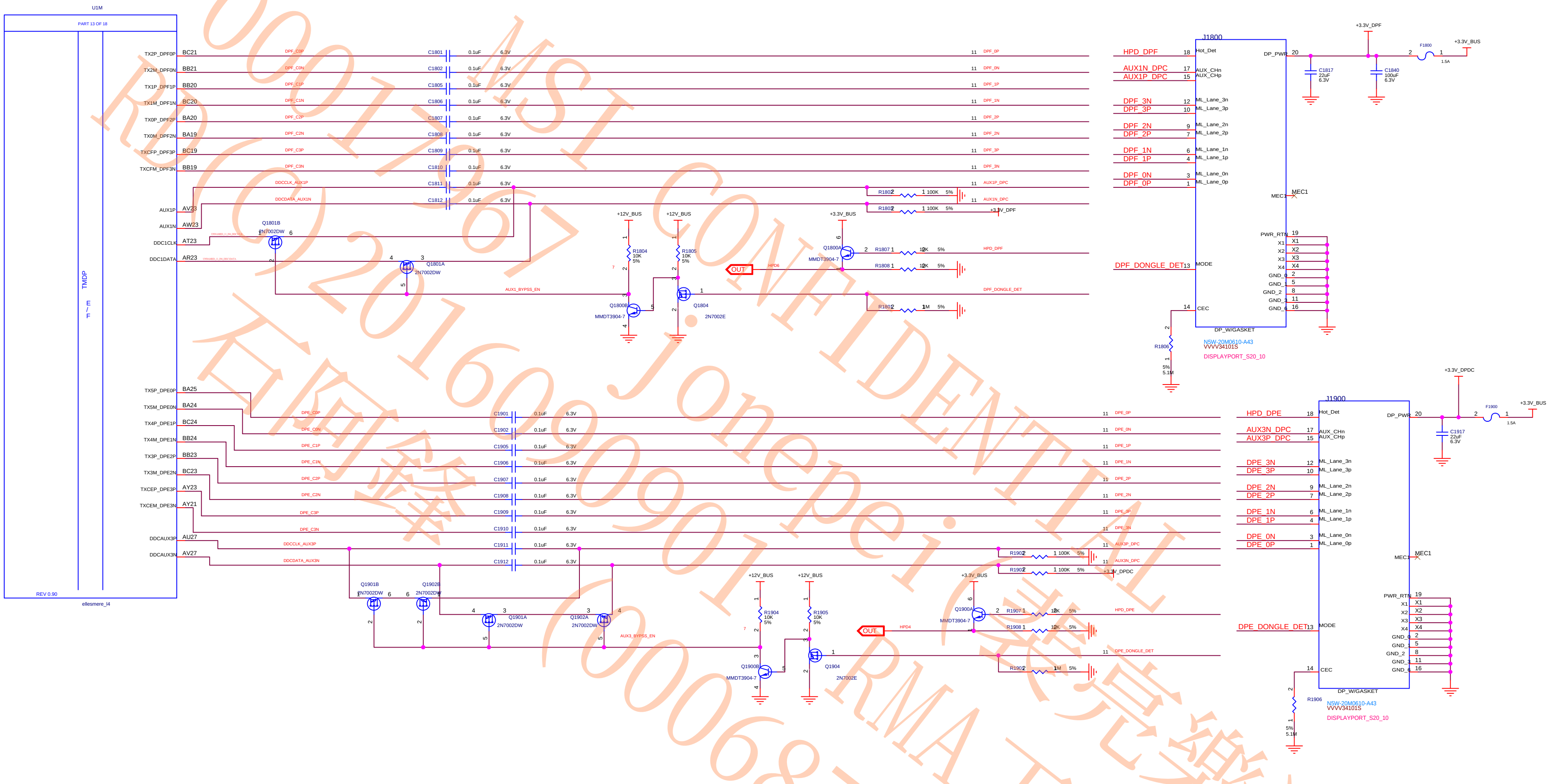
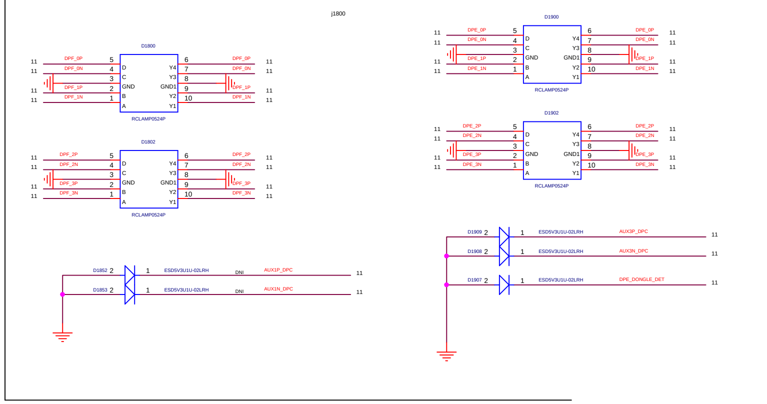
(11) ELLESMERE LVTMDP E/F



OPTIONAL ESD PROTECTION DIODES



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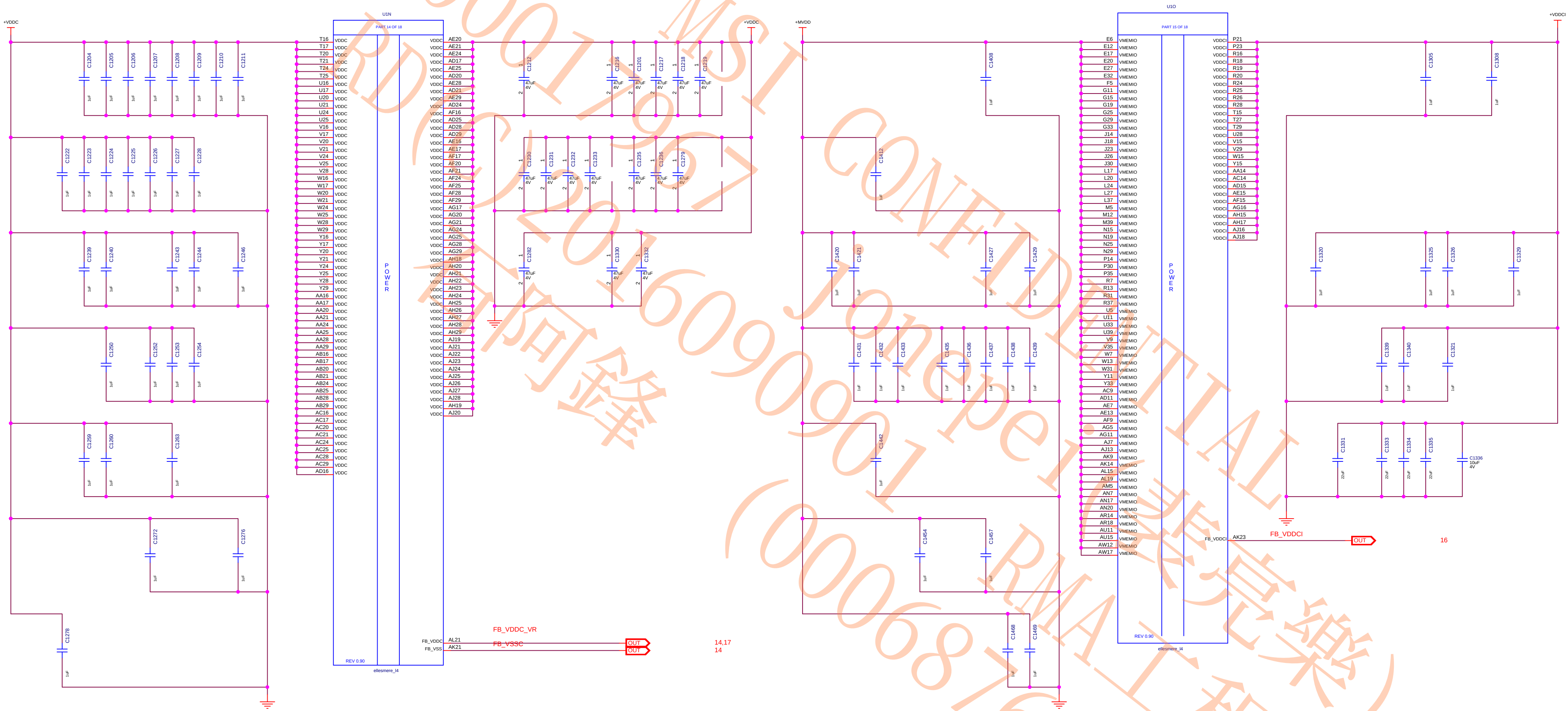
(12) ELLESMERE POWER



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(13) ELLESMERE GROUND

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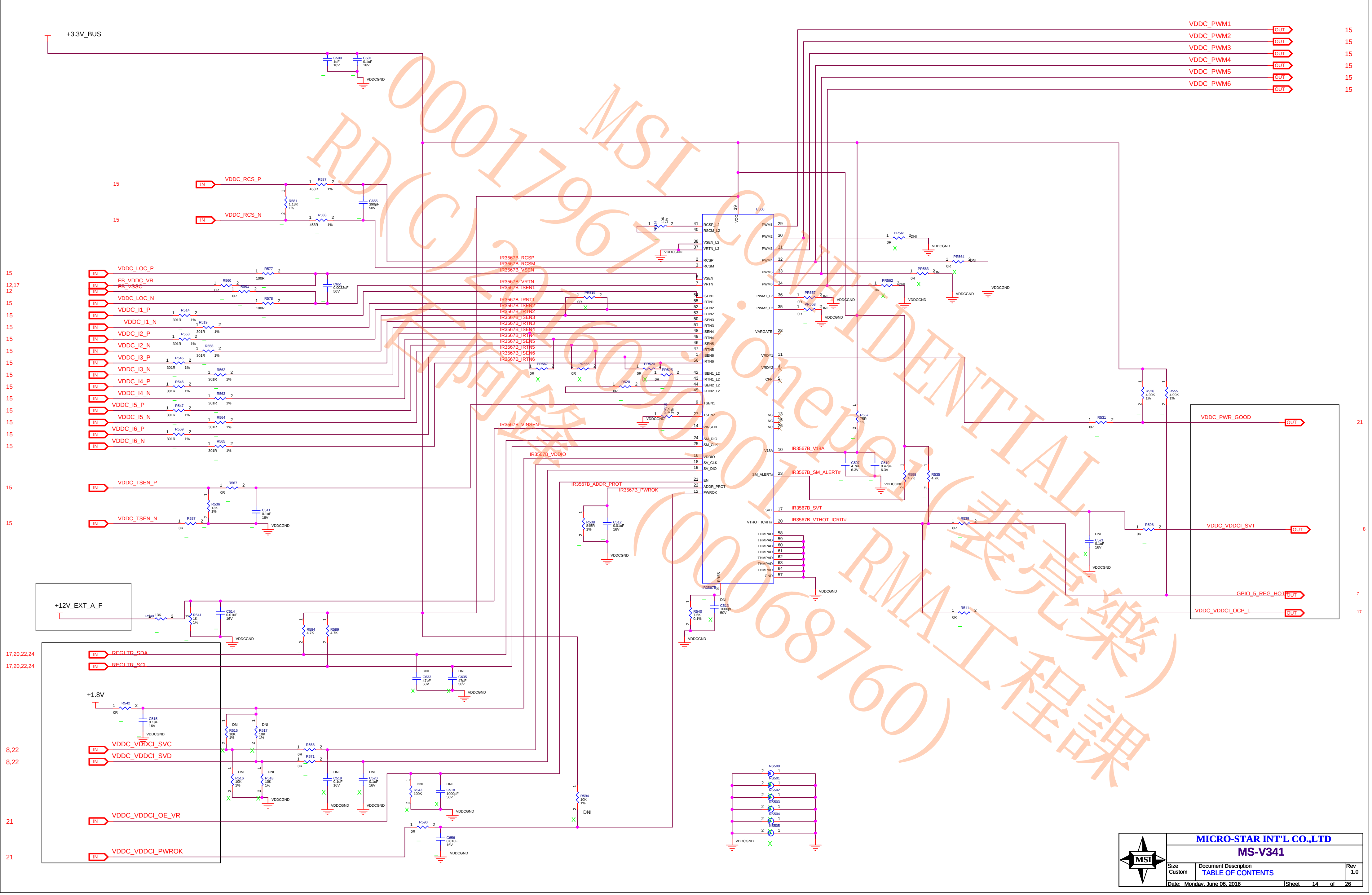

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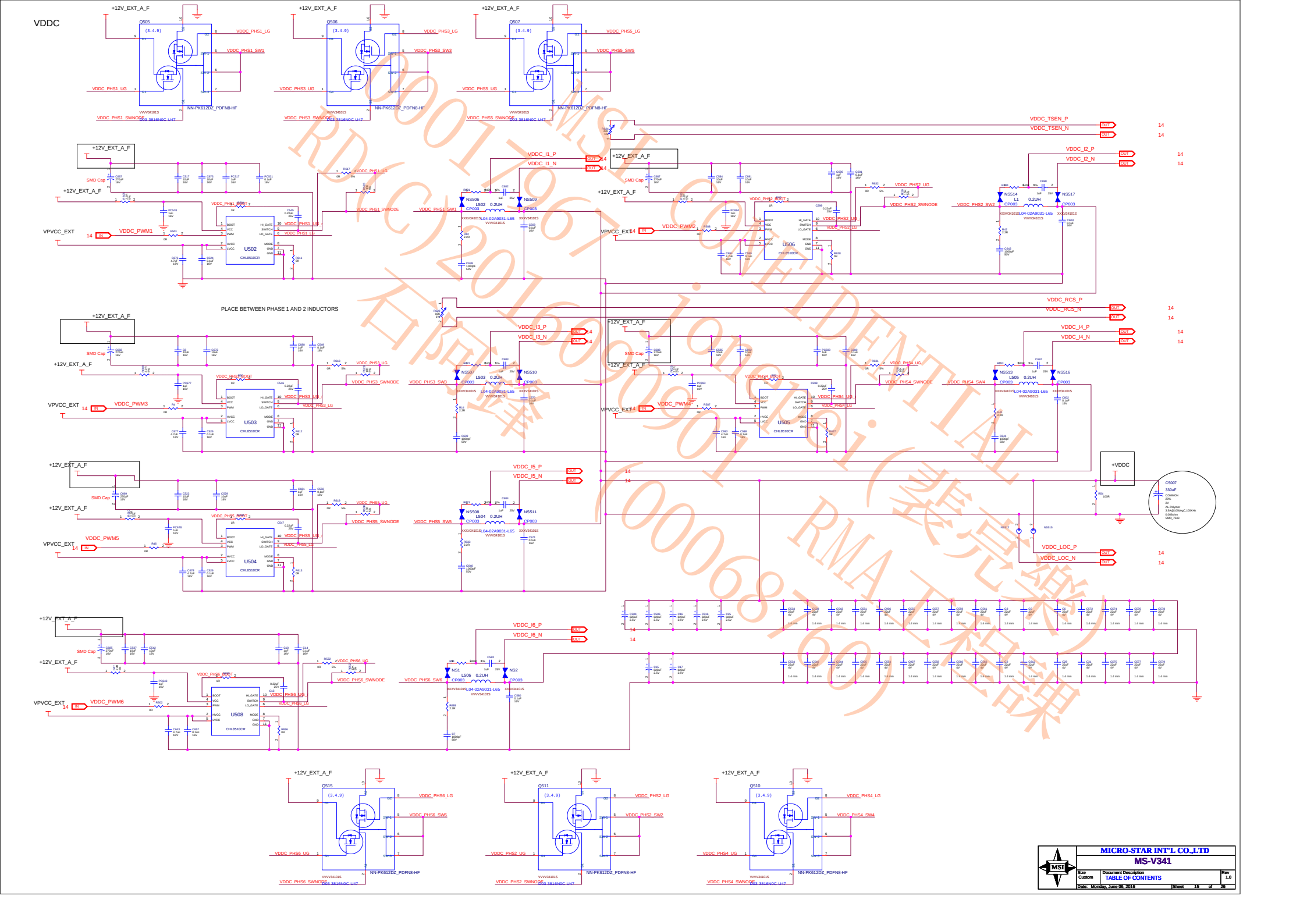
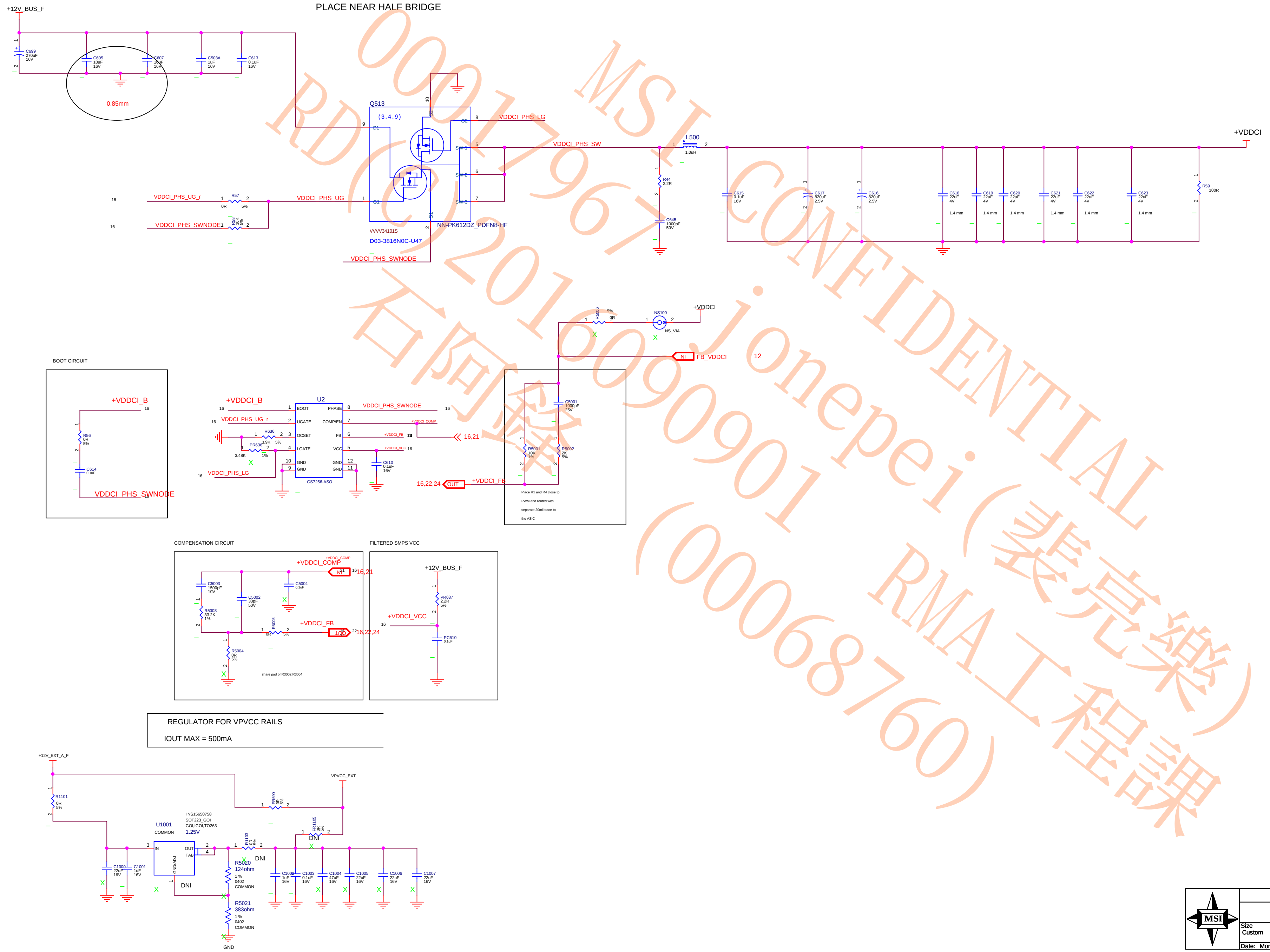

VDDC
PLACE BETWEEN PHASE 1 AND 2 INDUCTORS
U502
U503
U504
U505
U506
U508
CHL8510CR
NN-PK612DZ_PDFN8-HF
L502 0.2UH
L503 0.2UH
L504 0.2UH
L505 0.2UH
L506 0.2UH
VDDC_PWM1
VDDC_PWM2
VDDC_PWM3
VDDC_PWM4
VDDC_PWM5
VDDC_PWM6
VDDC_TSEN_P
VDDC_TSEN_N
VDDC_I2_P
VDDC_I2_N
VDDC_I1_P
VDDC_I1_N
VDDC_I3_P
VDDC_I3_N
VDDC_I4_P
VDDC_I4_N
VDDC_I5_P
VDDC_I5_N
VDDC_I6_P
VDDC_I6_N
VDDC_RCS_P
VDDC_RCS_N
VDDC_LOC_P
VDDC_LOC_N
+VDDC
+12V_EXT_A_F
SMD Cap
VPVCC_EXT



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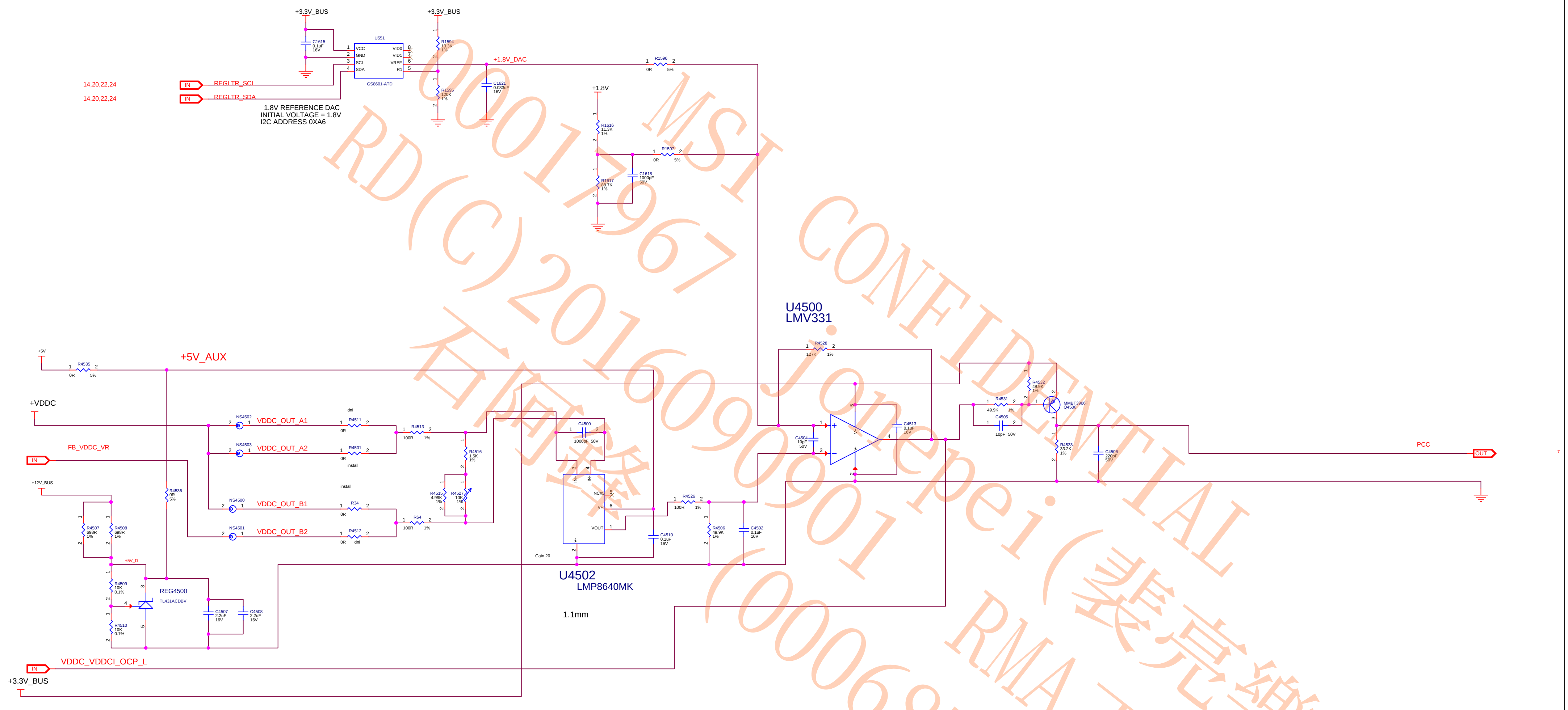

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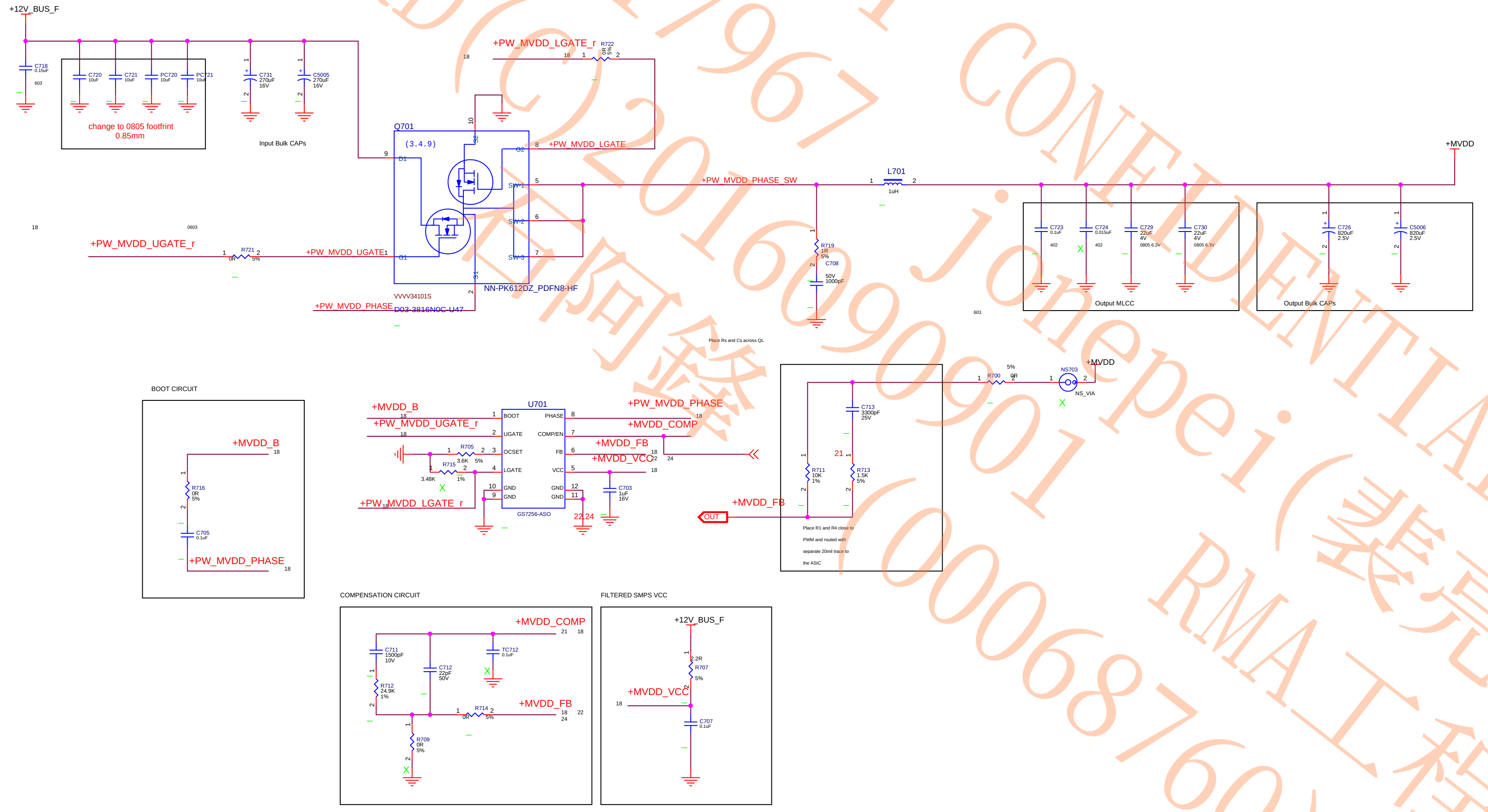
(16) MVDD



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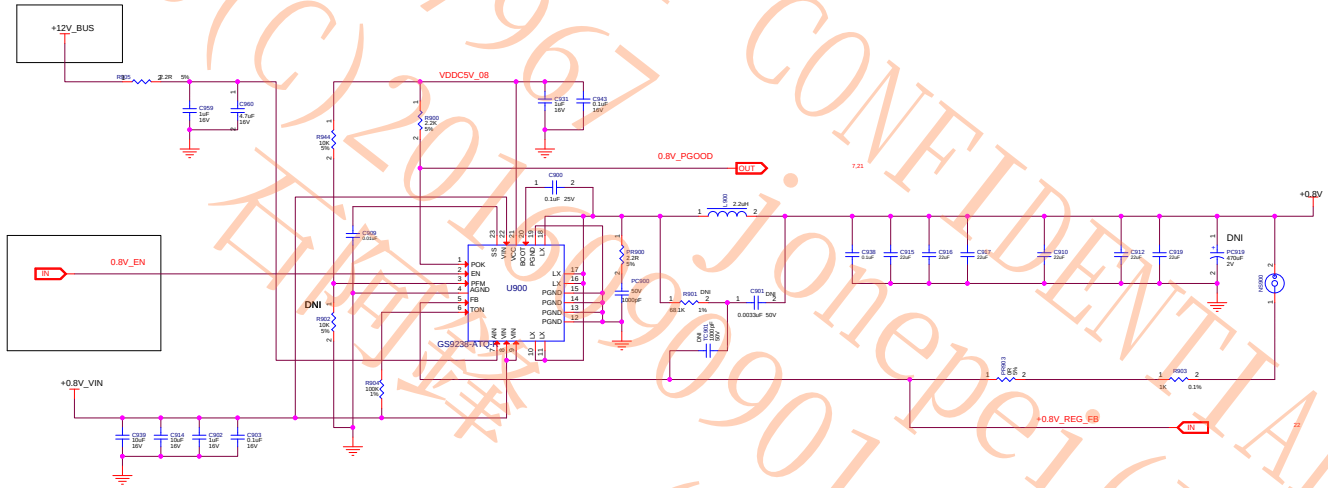
(17) 0.95V



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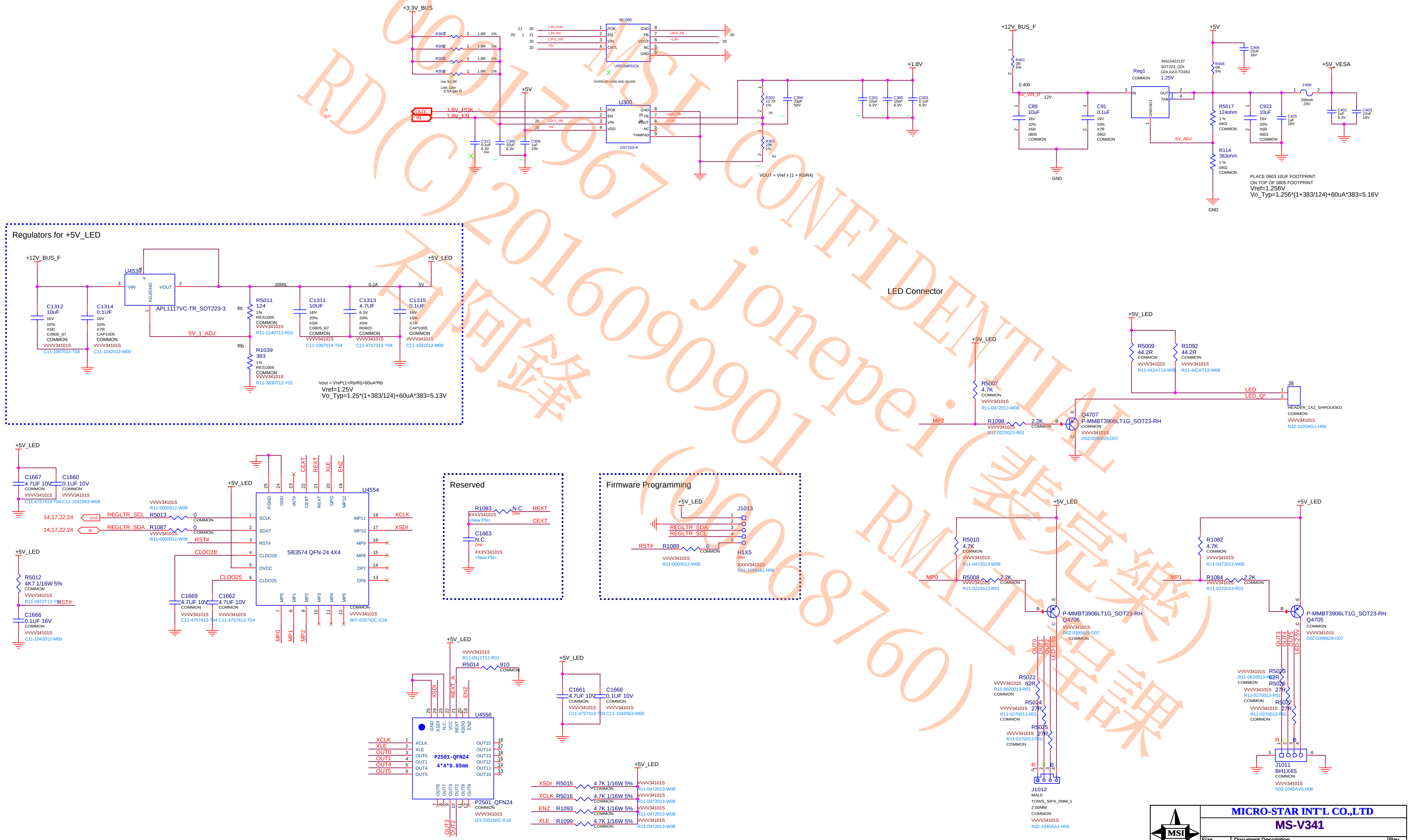
(18) SMALL RAIL REGULATORS , LED_CONTROLLER_ENE3574

LDO #1: VIN = 3.0V TO 3.6V MAX VOUT = +1.8V +/- 2% IOUT = 1.3A RMS MAX

PCB: 50 TO 70mm SQ. COPPER AREA FOR COOLING

REGULATOR FOR +5V RAILS

IOUT MAX = 150mA



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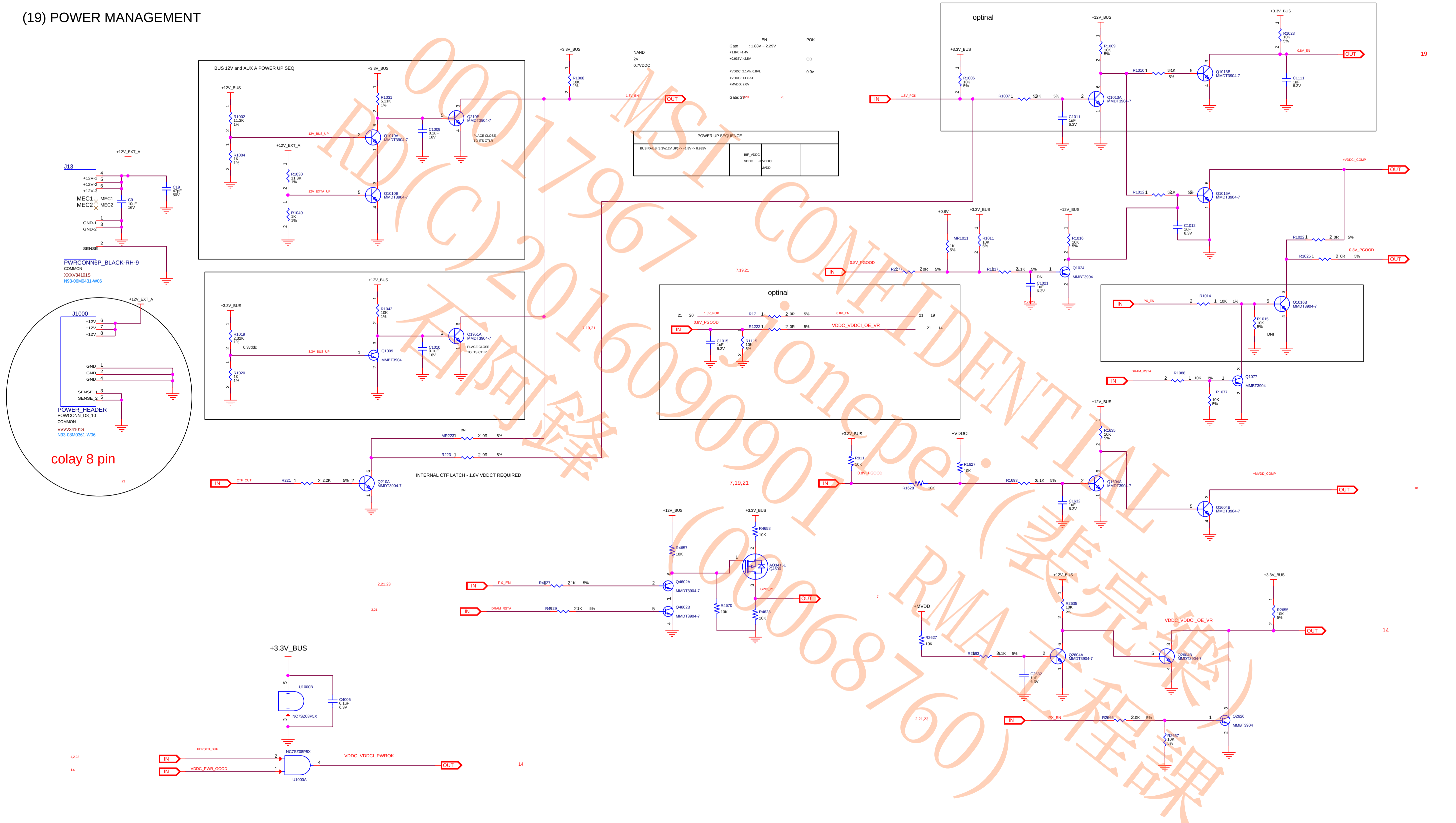
(19) POWER MANAGEMENT



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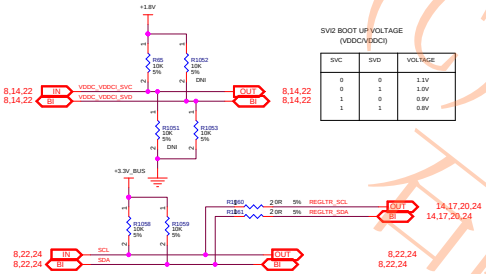
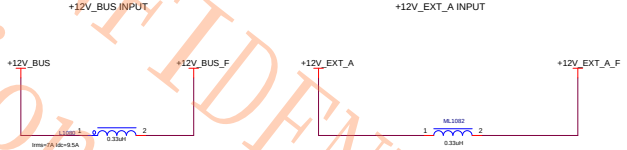
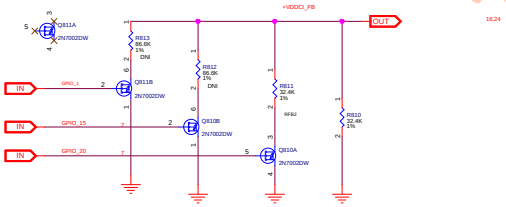
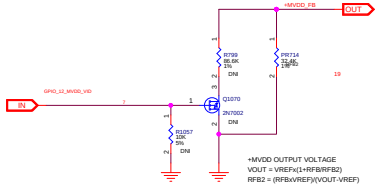


SVI2 BOOT UP VOLTAGE
(VDDC/VDDCI)

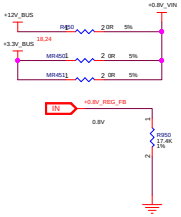
SVC	SVD	VOLTAGE
0	0	1.1V
0	1	1.0V
1	0	0.9V
1	1	0.8V







+MVDD OUTPUT VOLTAGE
VOUT = VREFx(1+RFB/RFB2)
RFB2 = (RFBxVREF)/(VOUT-VREF)



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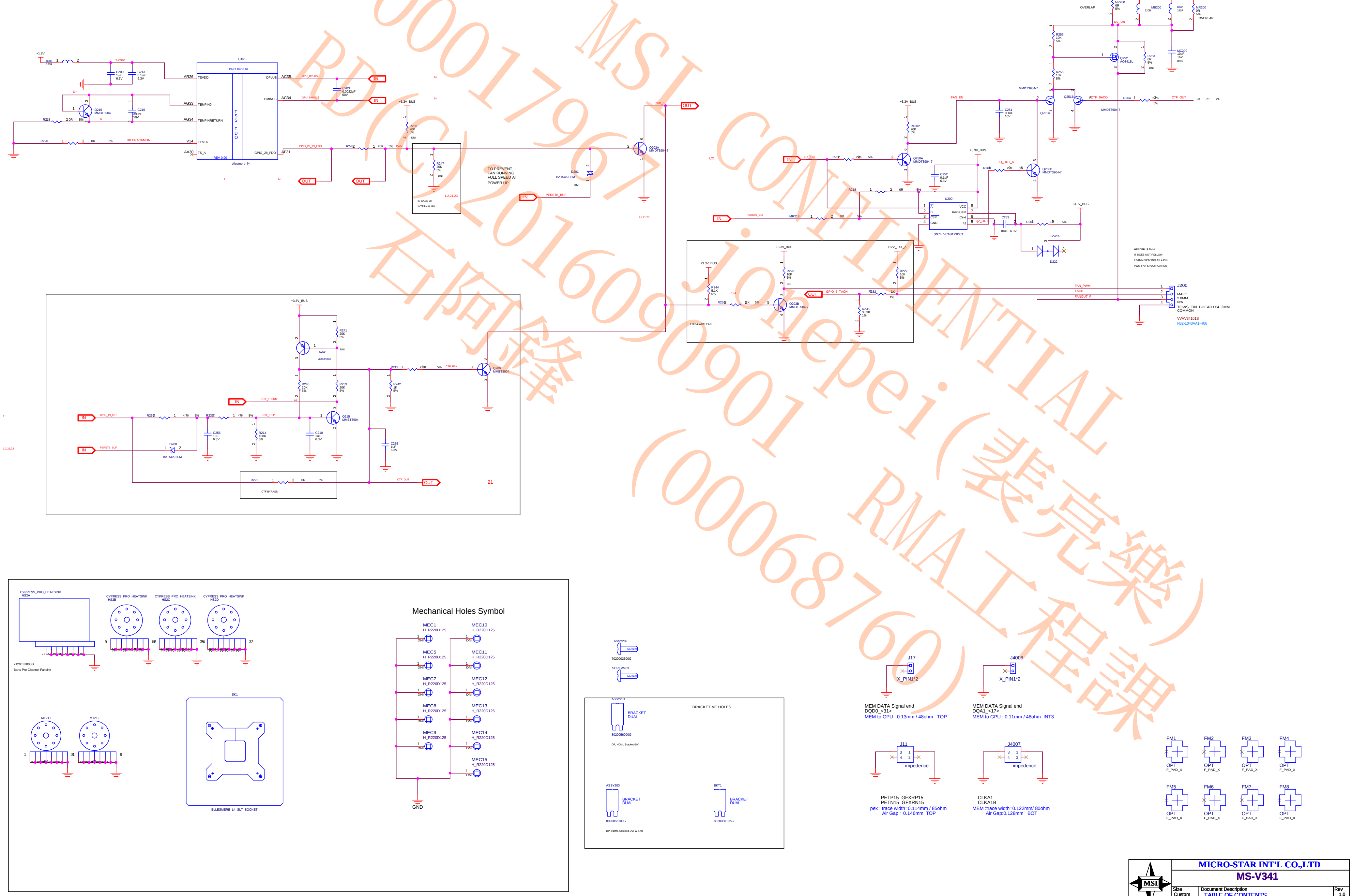
(20) MECHANICAL AND THERMAL MANAGEMENT



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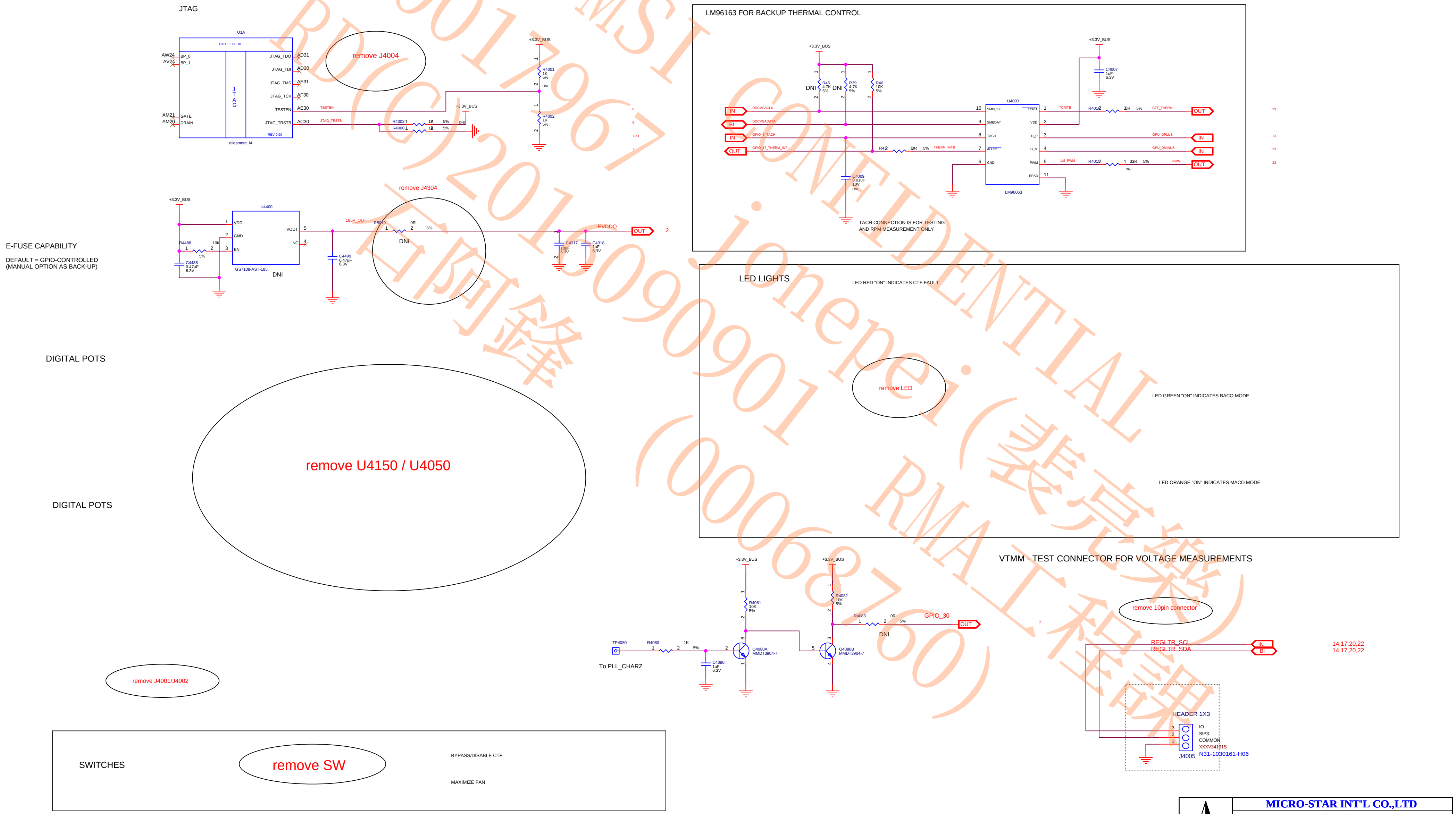
(21) DEBUG CIRCUITS



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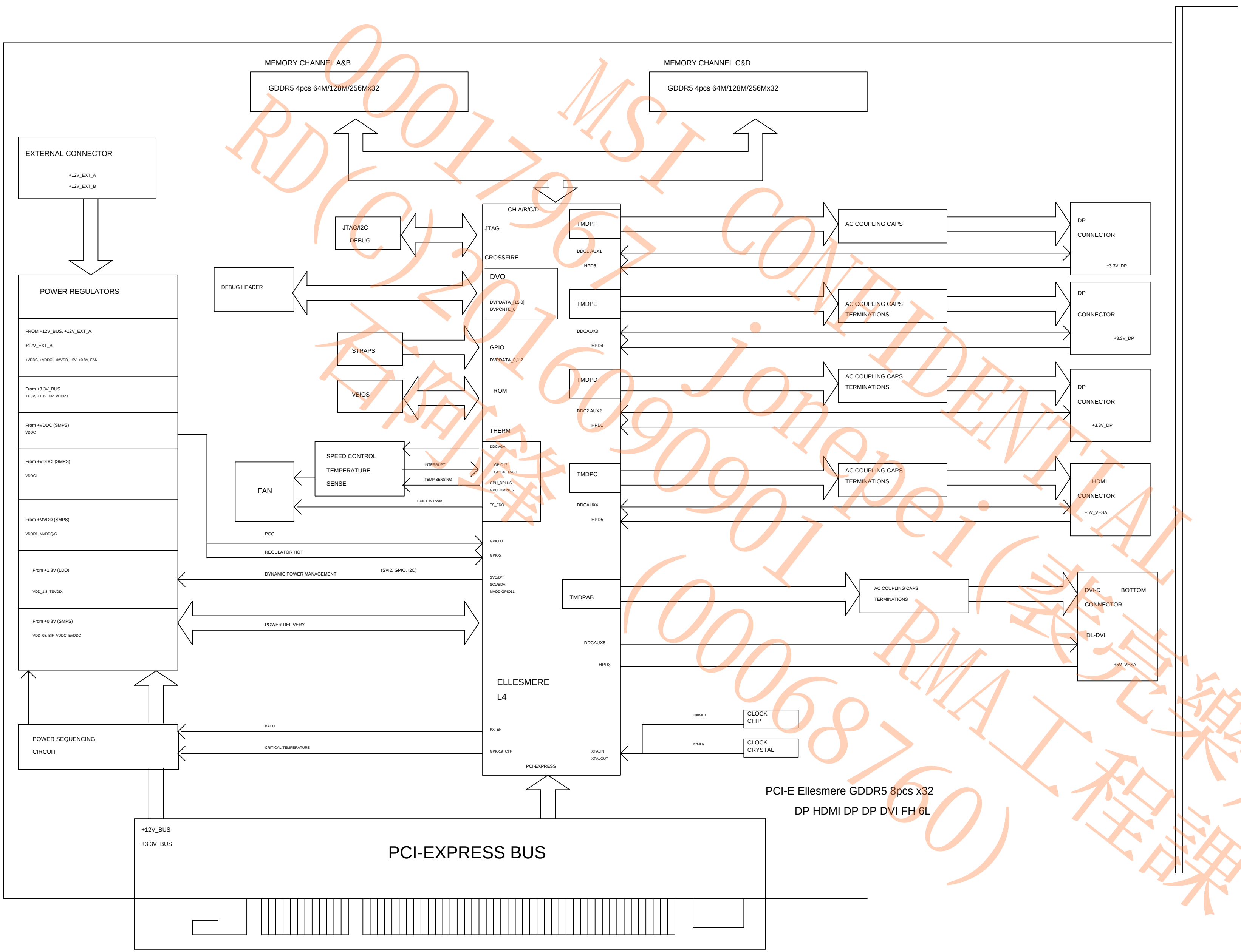

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0	00A	08/26/2016	
1	00B	10/19/2016	1. Add GPIO1 for dynamic VDDCI 2. update VDDC driver sequence
2	00C	01/21/2016	HDMI: - add series resistor R1880 ~R1887 - add pull down inductor L1880 ~L1887 remove C405, C403, VR400,C410,C414,R405

Page7: remove J2,J3

Page9: enable DVI

Page10: DP change to HDMI

Page15: change dual-N MOS

Page16: change dual-N MOS

Page18: change dual-N MOS

Page20: Add LED circuit

Page21: colay 8pin power connecter

Page24: remove debug circuit

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