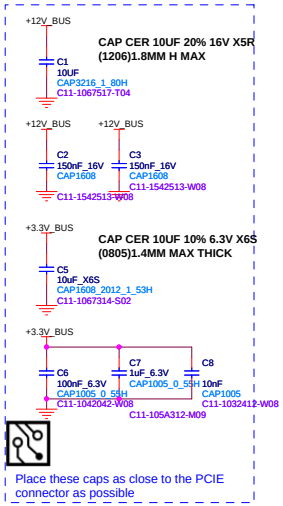
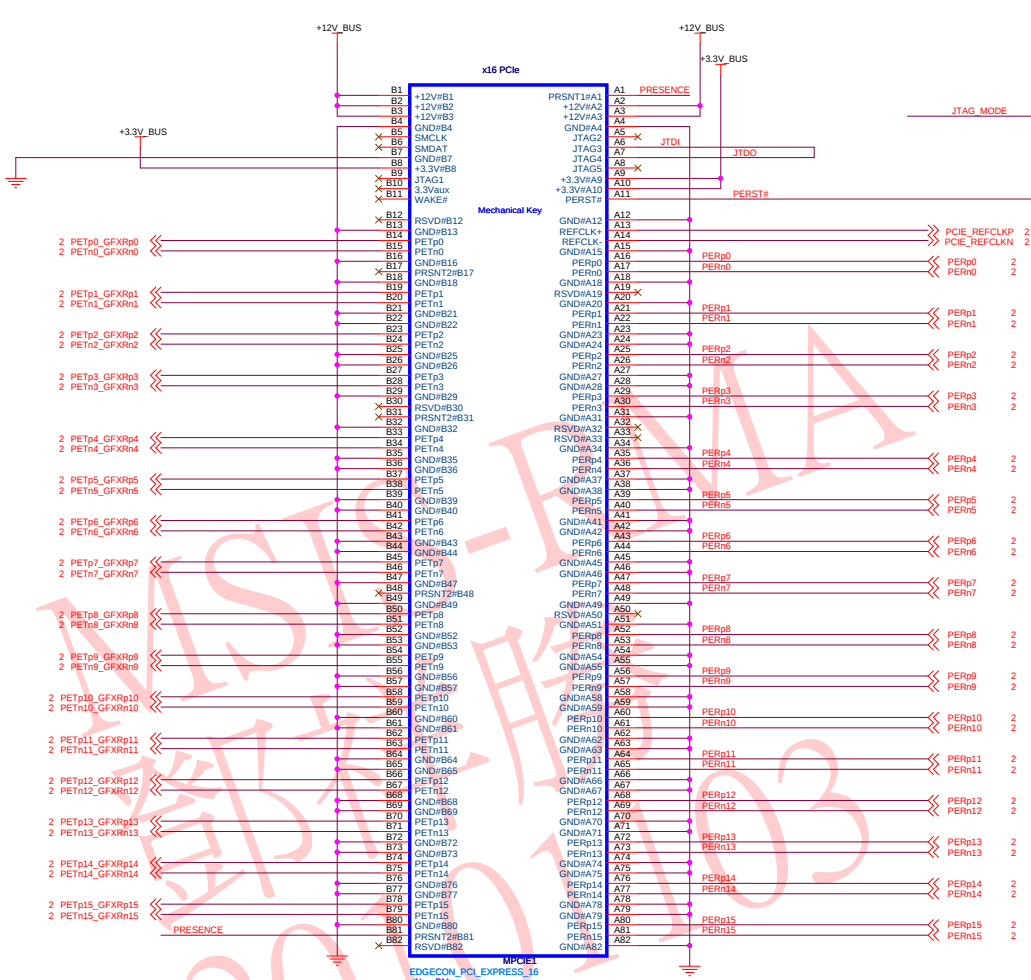
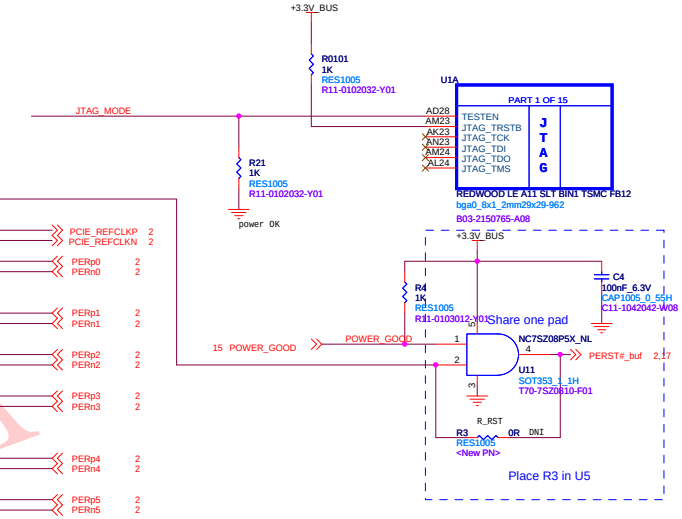
PCI-EXPRESS EDGE CONNECTOR







SYMBOL LEGEND

DNI	DO NOT INSTALL
#	ACTIVE LOW
	DIGITAL GROUND
	ANALOG GROUND
BUO	BRING UP ONLY

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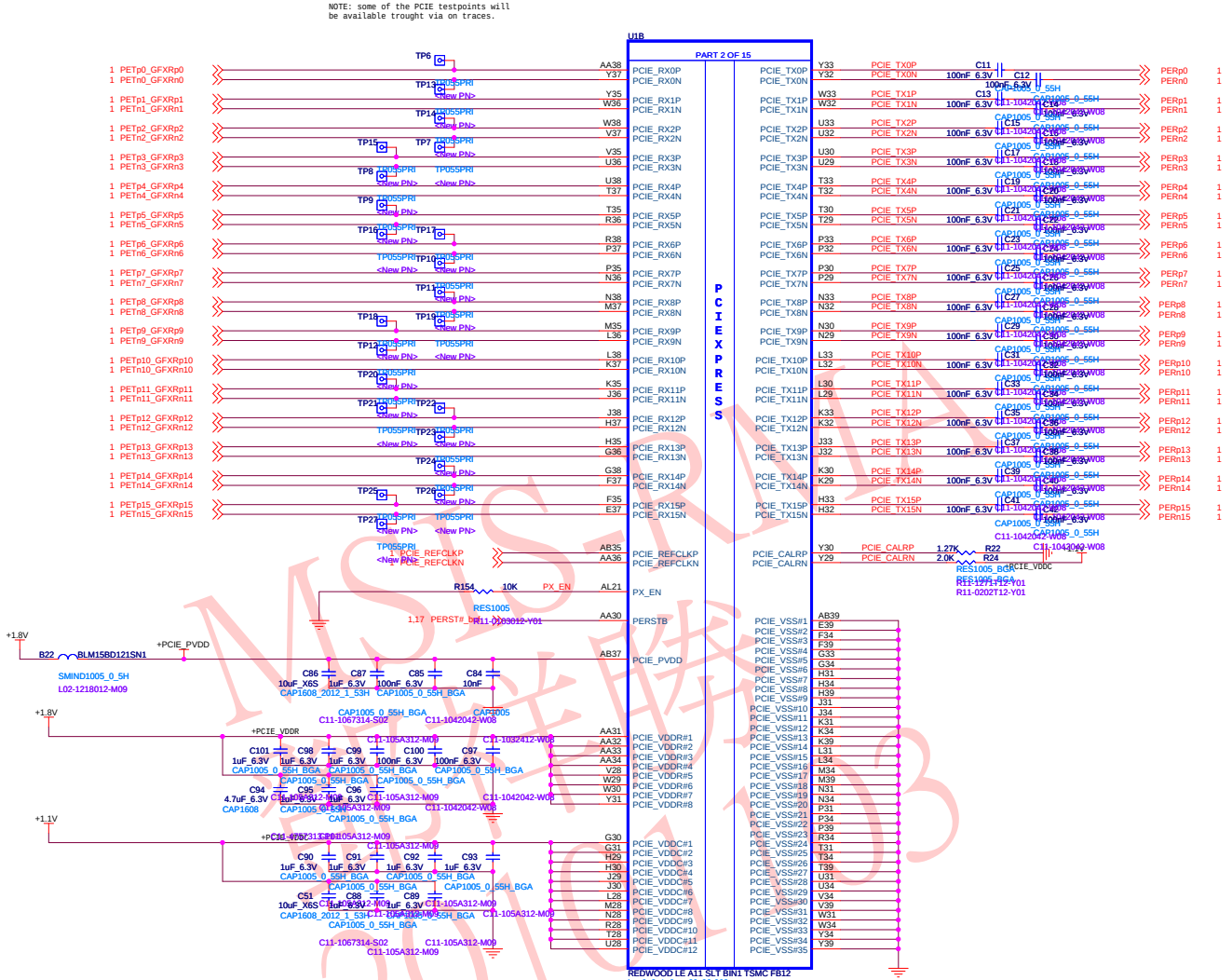
(2) REDWOOD PCIE Interface



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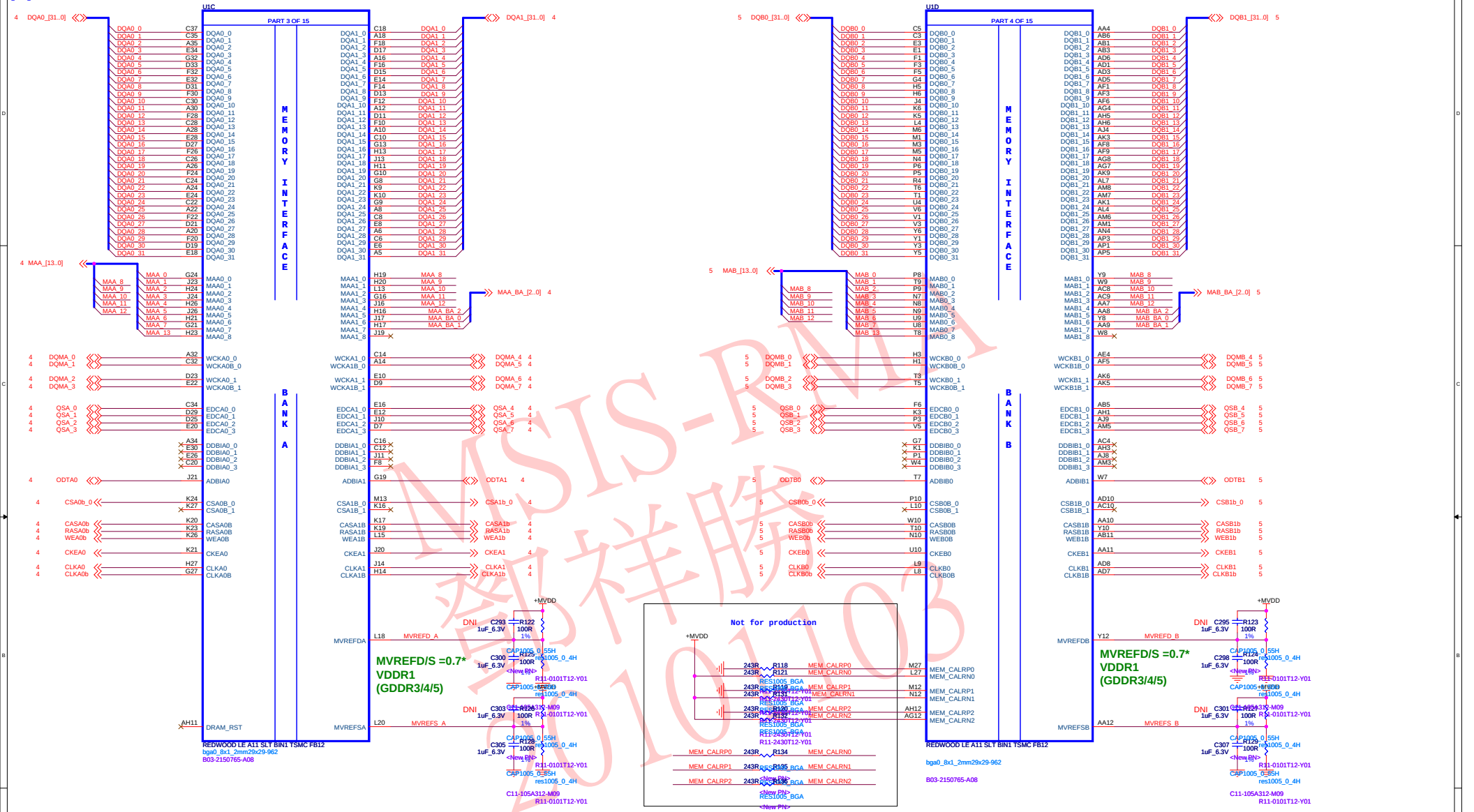
(3) REDWOOD MEM Interface Ch A&B



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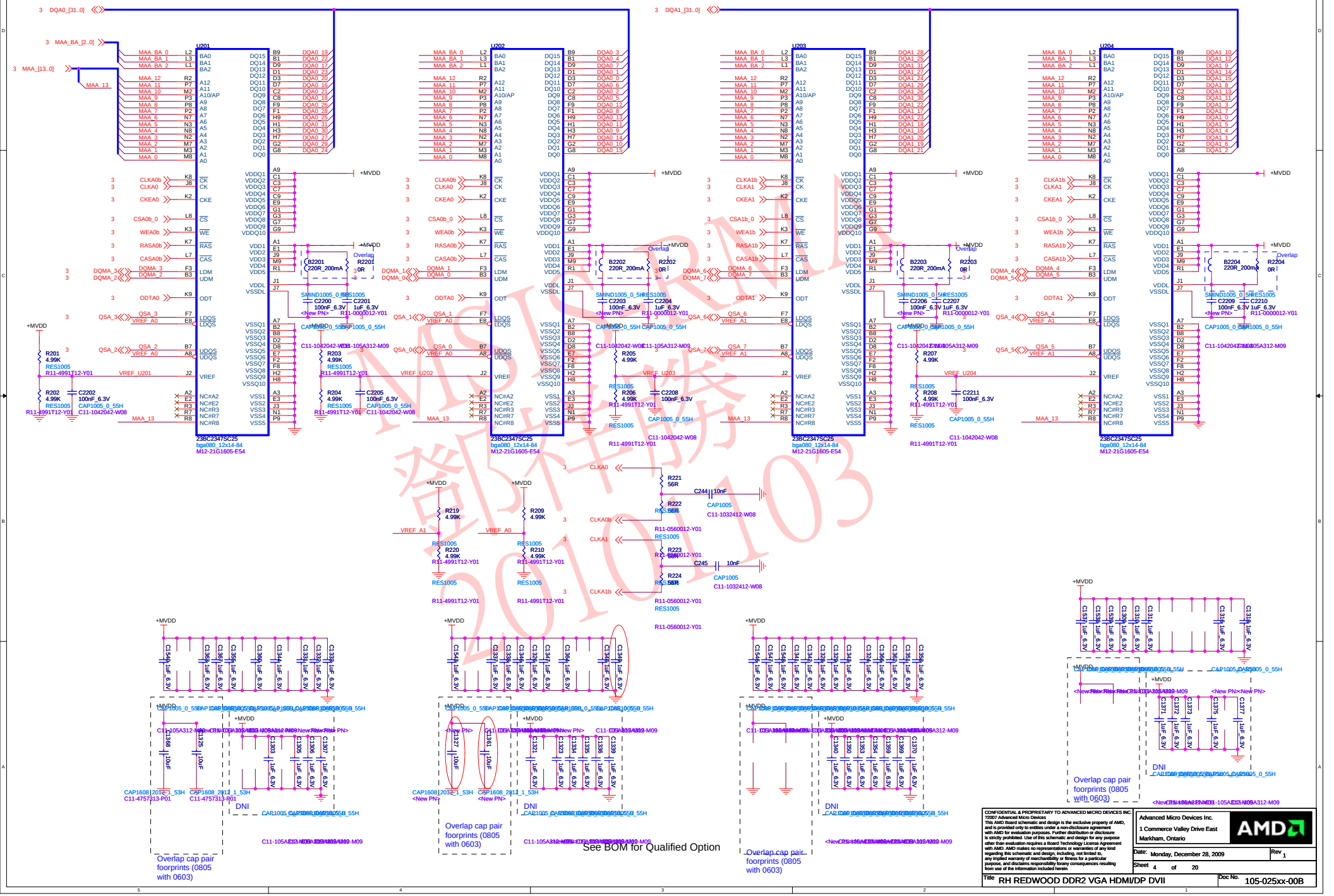
(4) DDR2 Ch A

CHANNEL A: 64MX16/128MX16 DDR2



See BOM for Qualified Option

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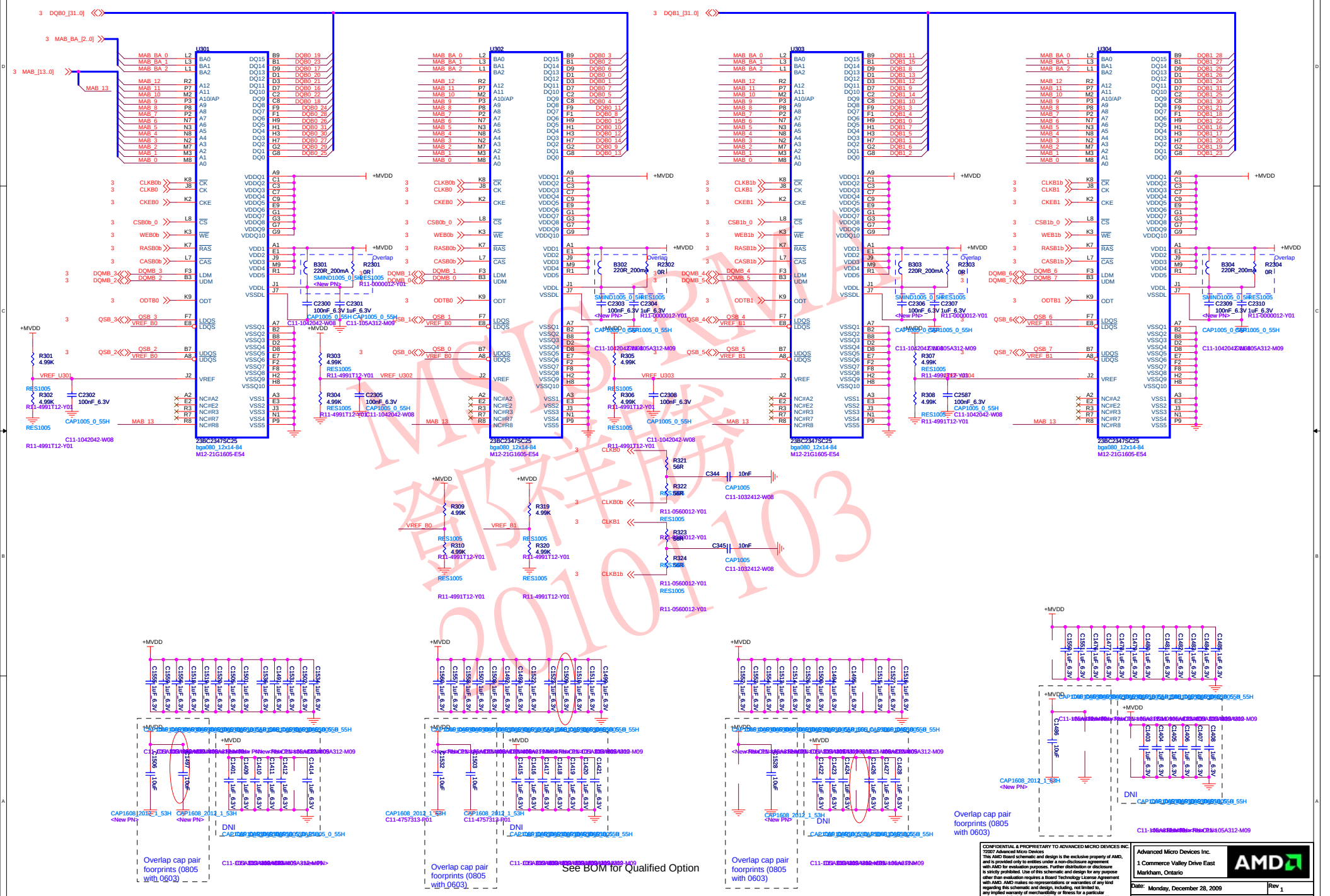
(5) DDR2 Ch B

CHANNEL B: 64MX16/128MX16 DDR2



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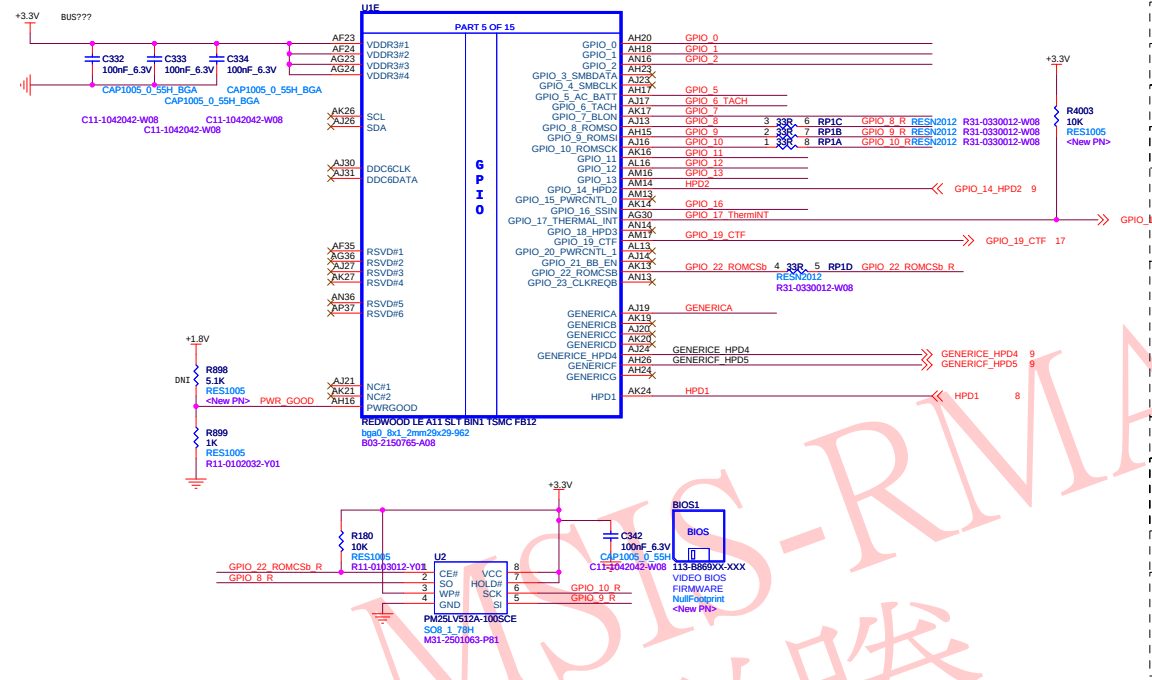
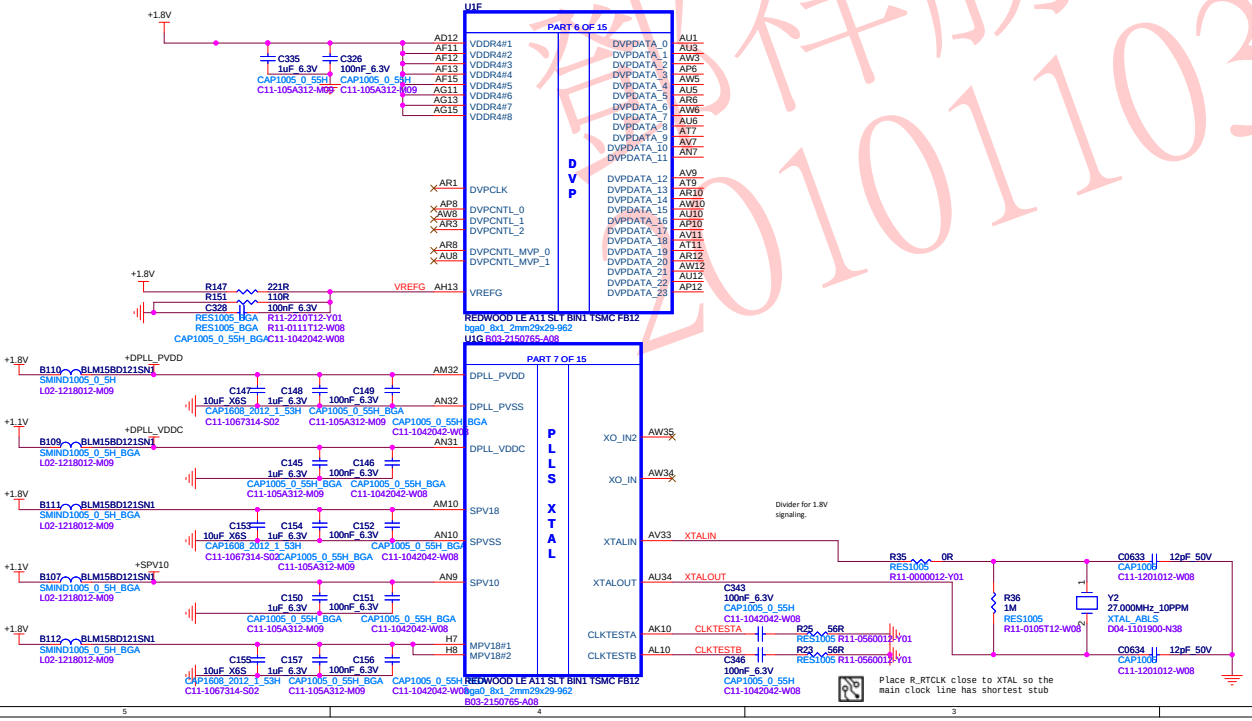
(06) REDWOOD GPIOs Strap CF XTAL





PIN BASED STRAPS

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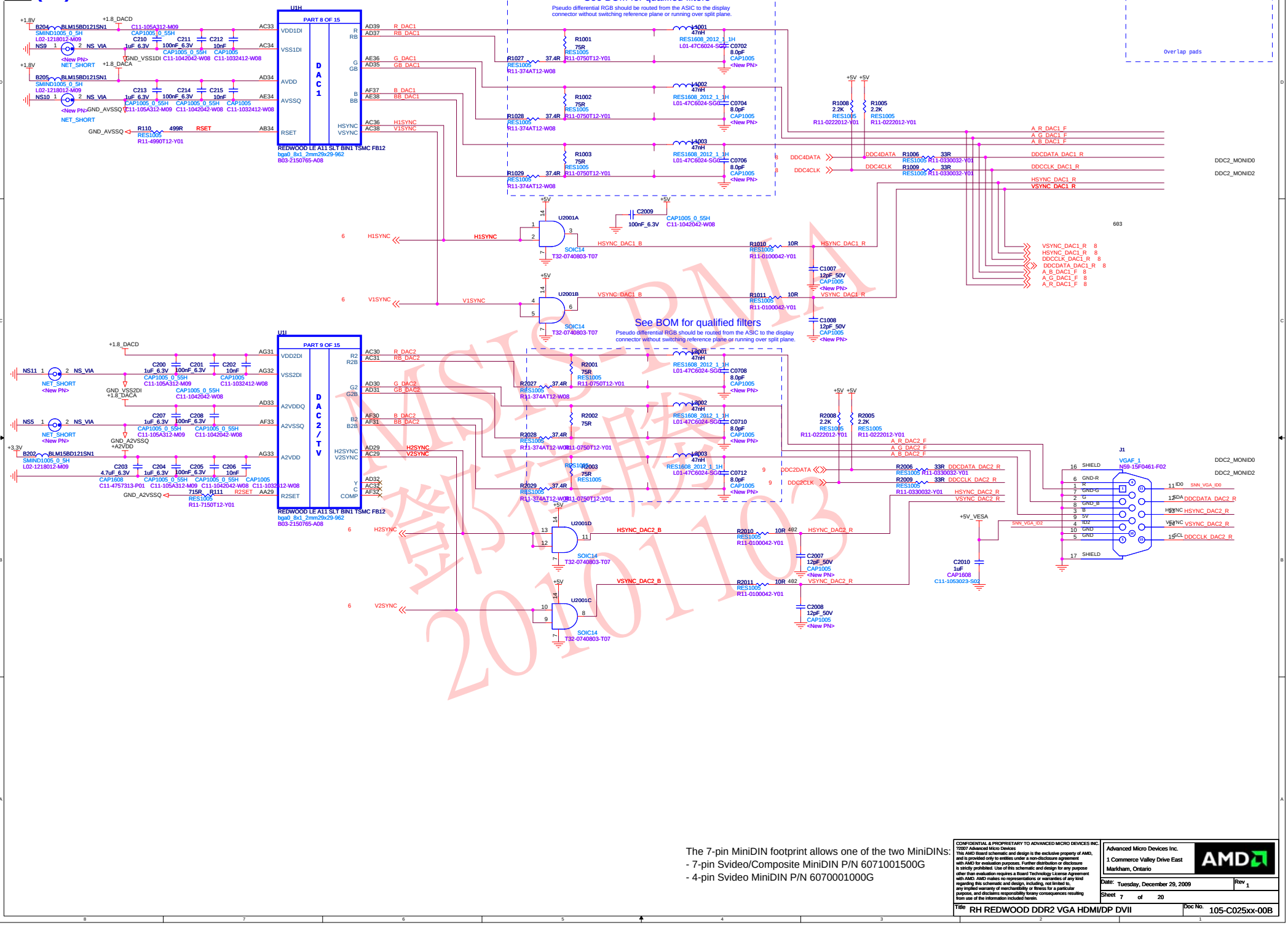
(07) REDWOOD DAC1 and DAC2/TV



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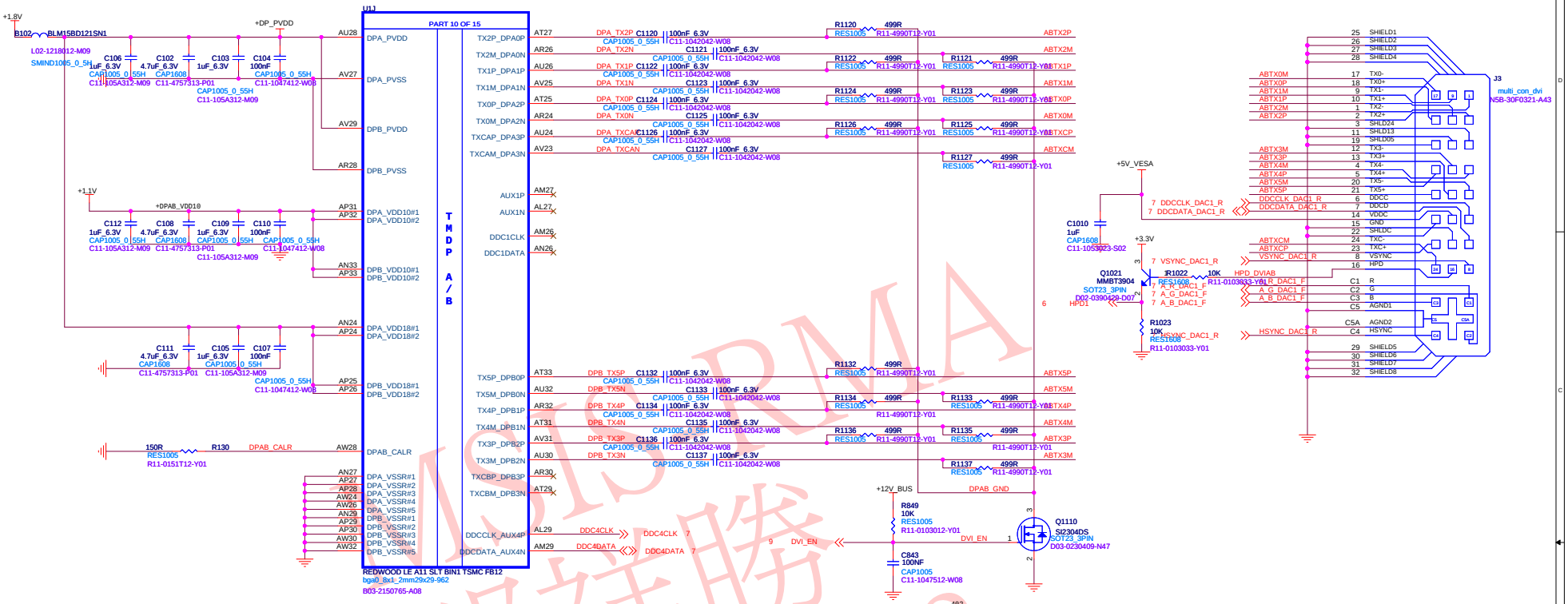
(08) REDWOOD TMDS A&B



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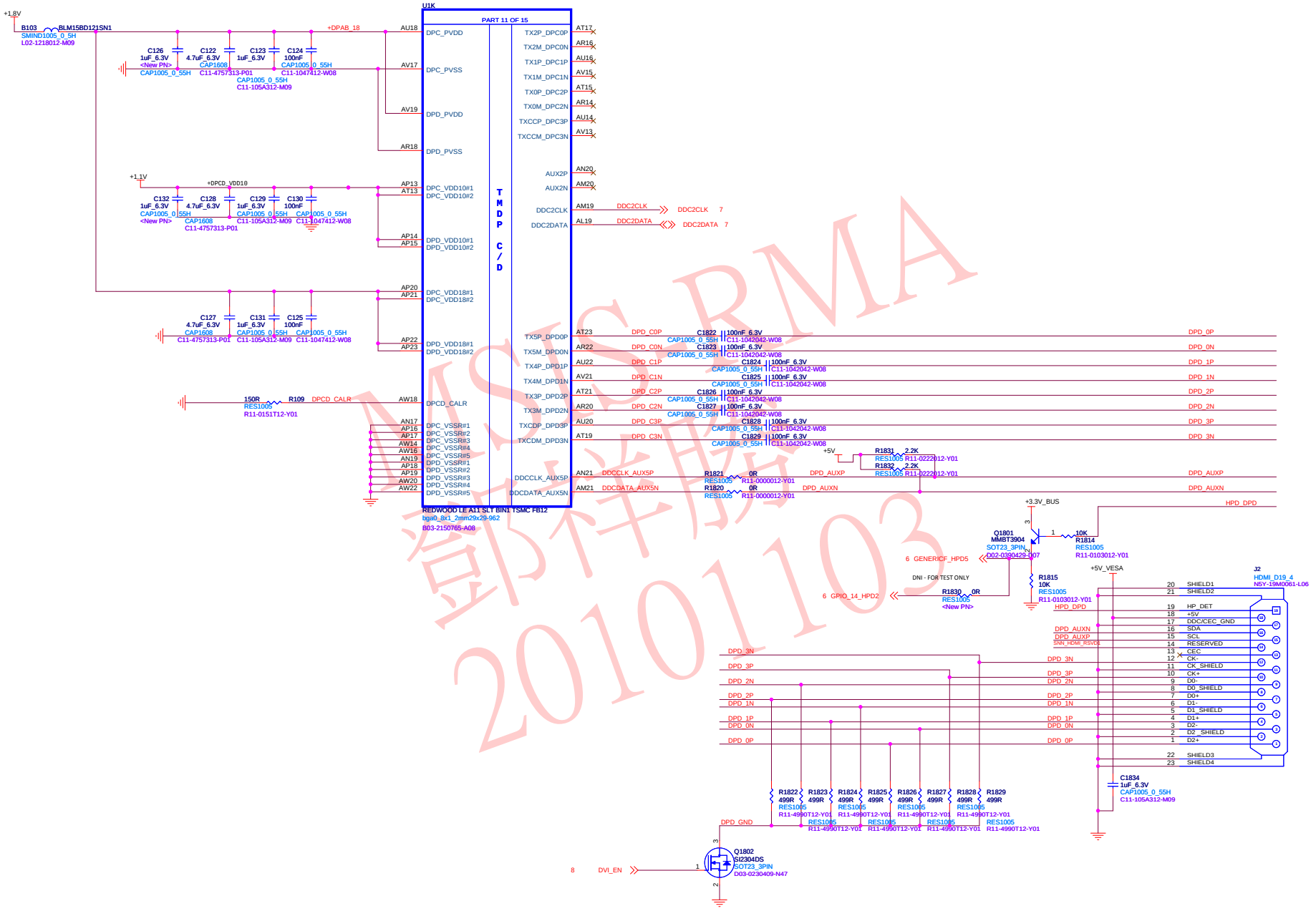
(09) REDWOOD TMDS C&D



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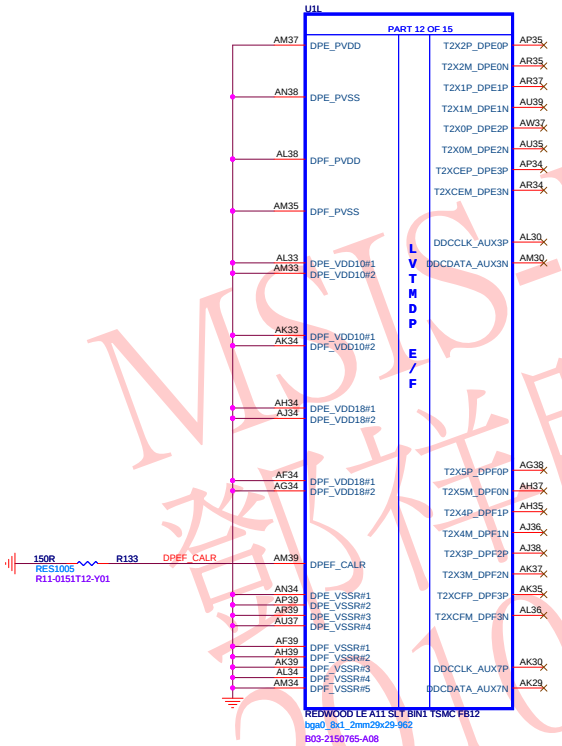
(10) No Connect E&F



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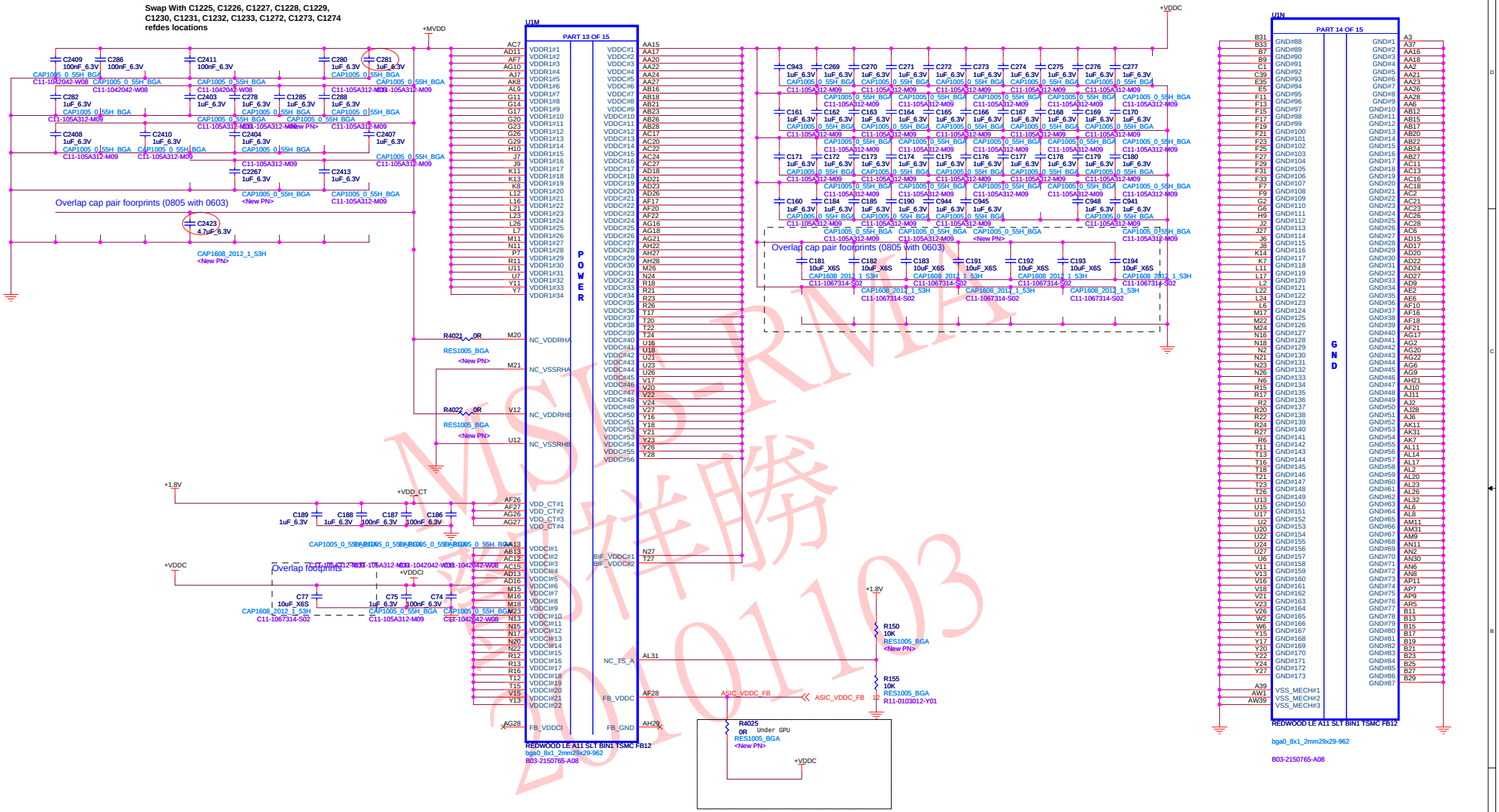
(11) REDWOOD Power & GND

Swap With C1225, C1226, C1227, C1228, C1229, C1230, C1231, C1232, C1233, C1272, C1273, C1274 refdes locations



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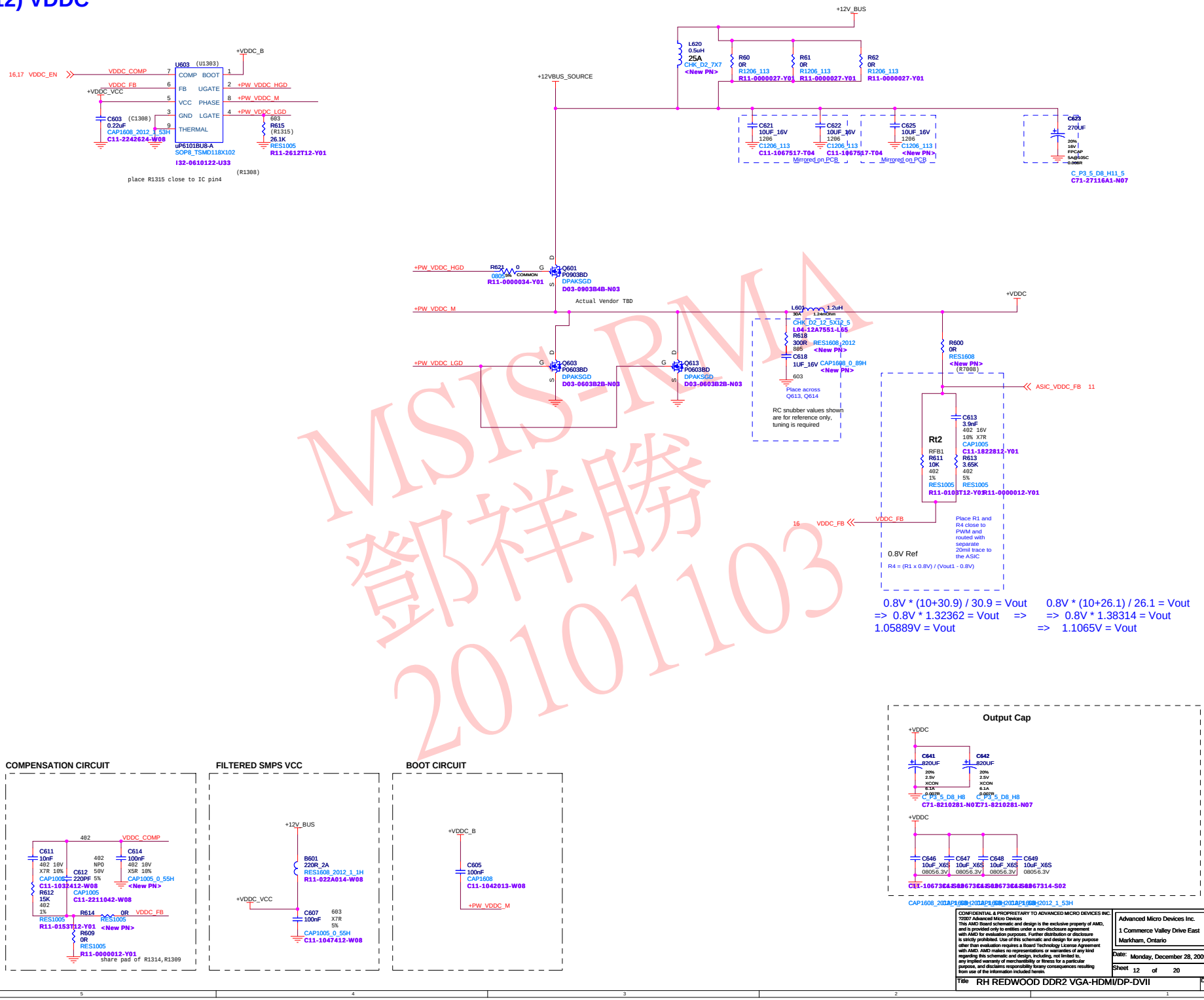
(12) VDDC



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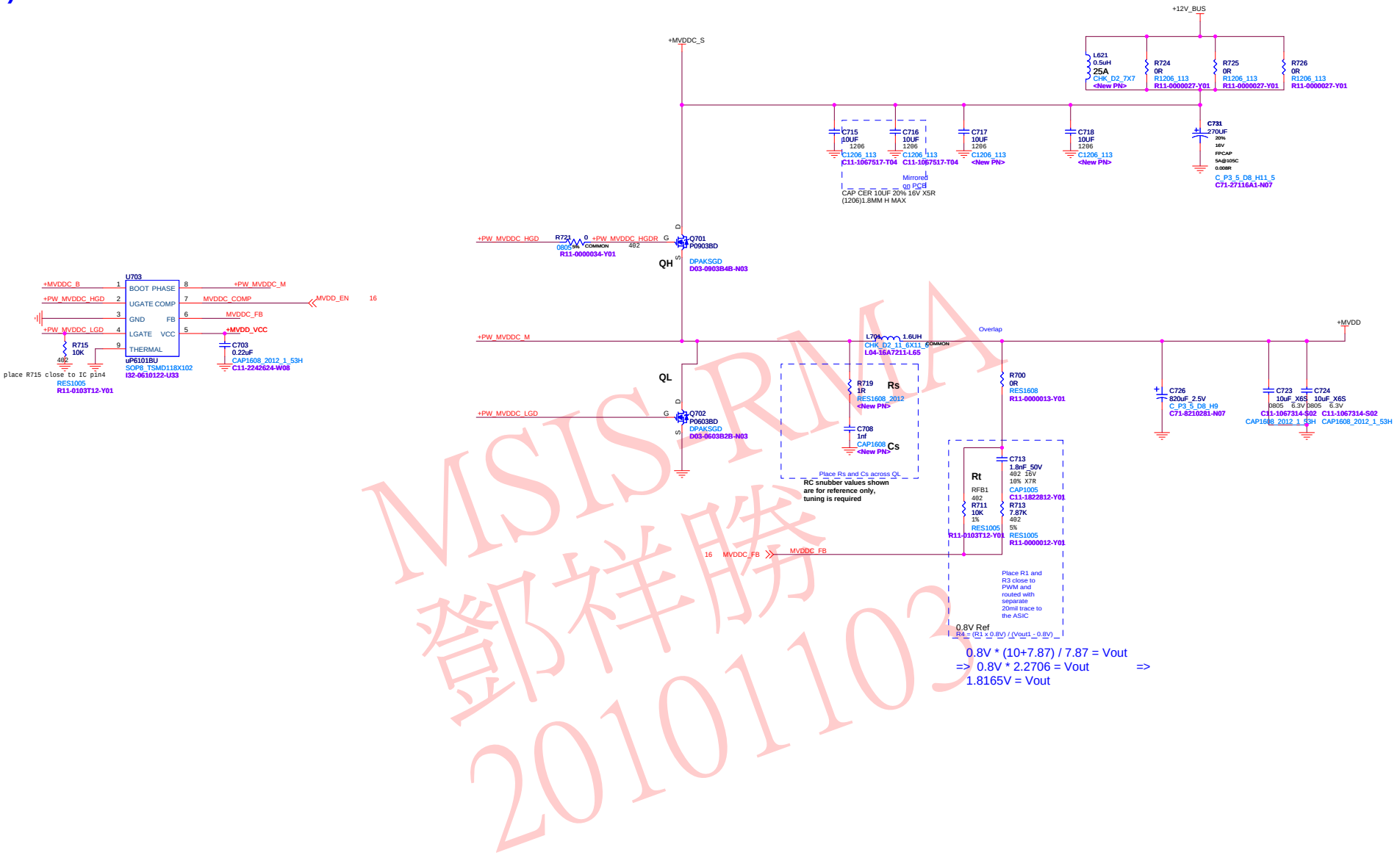
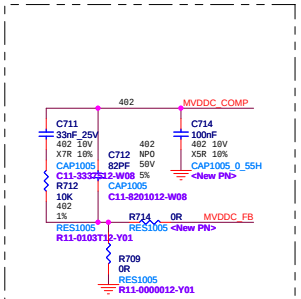
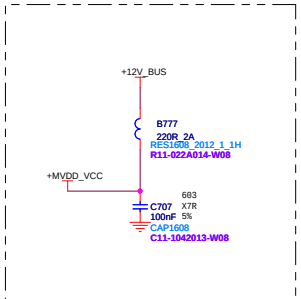
(13) MVDD



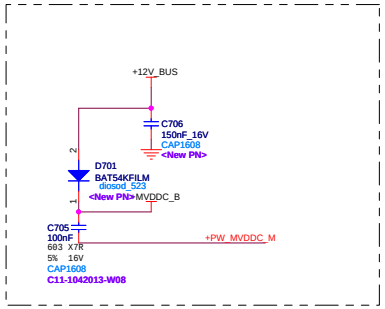
COMPENSATION CIRCUIT



FILTERED SMPS VCC



BOOT CIRCUIT



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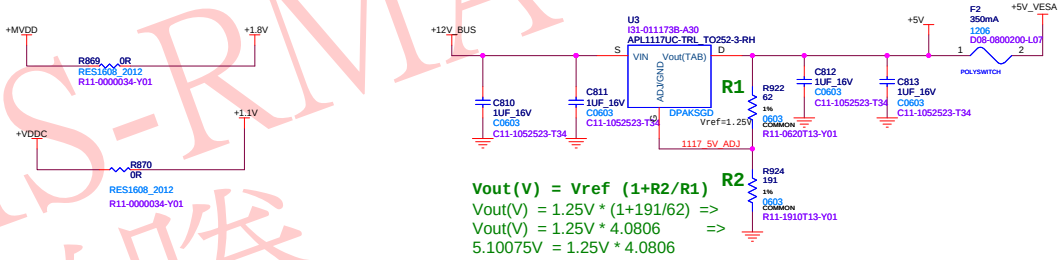
(15) Linear Regulators

Regulators for +5V, +5V_VESA and +5V_VESA2

LDO #1: Vin = 3.0V to 3.6V MAX Vout = +1.8V +/- 2% Iout = 1.6A (TBV) RMS MAX
PCB: 50 to 70mm sq. copper area for cooling



LDO #2: Vin = +1.5V to 2.0VMAX Vout = +1.0V +/- 2% Iout = 1.7A (TBV) RMS MAX
PCB: 50 to 70mm sq. copper area for cooling

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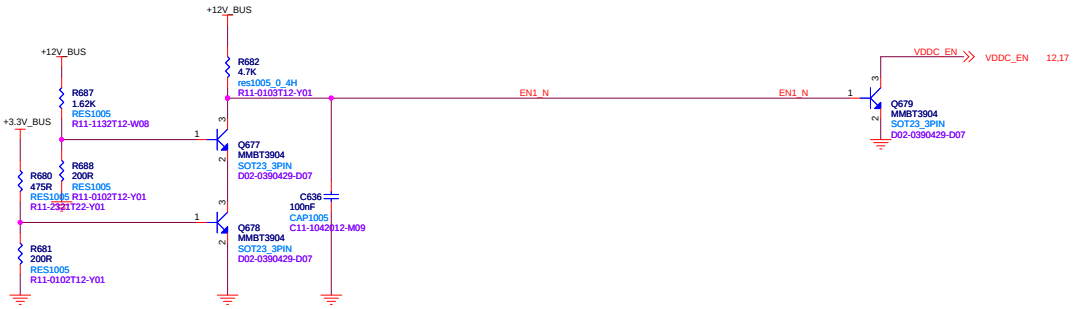
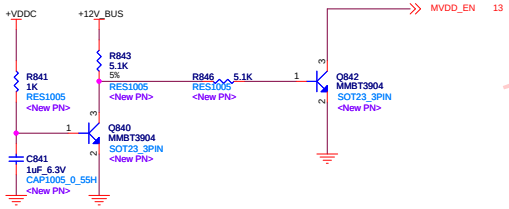
(16) Power Management

Power up Sequencing

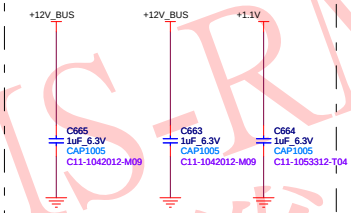


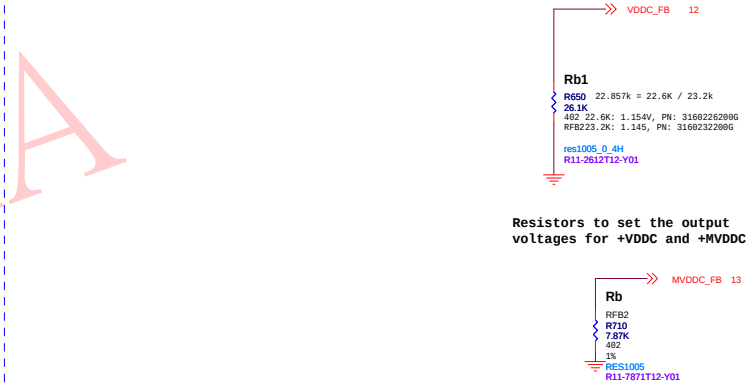
VDDC Enable Circuit

MVDD Enable Circuit



Stitching Caps





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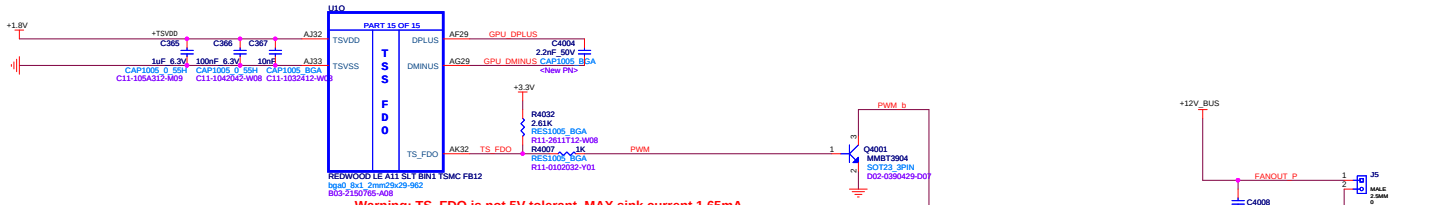
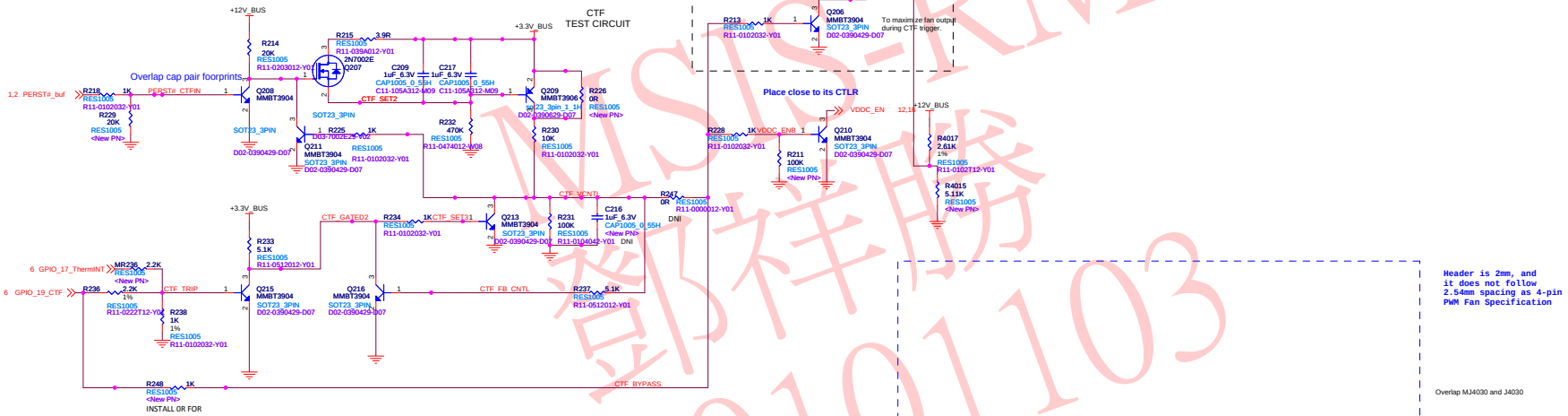
(18) Mechanical and Thermal Management



If Critical Temperature is reached this will force the fan to run at full speed while power is removed from GPU & rest of the board.
This is an open collector signal. Active level is hard pull down to ground.

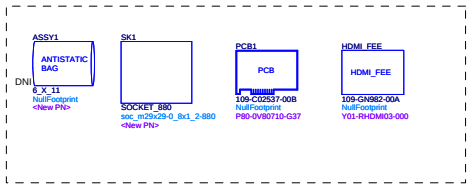
Critial Temperature Fault

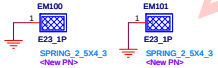


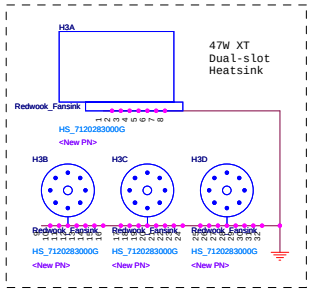
Header is 2mm, and it does not follow 2.54mm spacing as 4-pin PWM Fan Specification

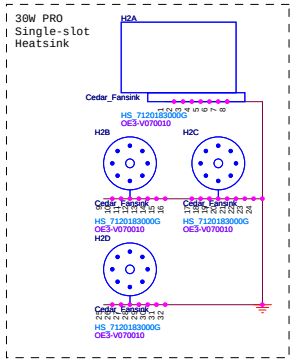
Overlap MJ4030 and J4030

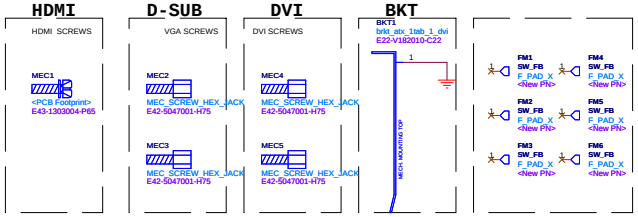
For 4-WIRE FAN ONLY

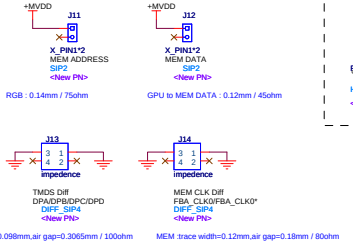












RGB : 0.14mm / 75ohm

GPU to MEM DATA : 0.12mm / 45ohm

HDMI/DVI/DP : trace width=0.098mm,air gap=0.3065mm / 100ohm

MEM :trace width=0.12mm,air gap=0.18mm / 80ohm

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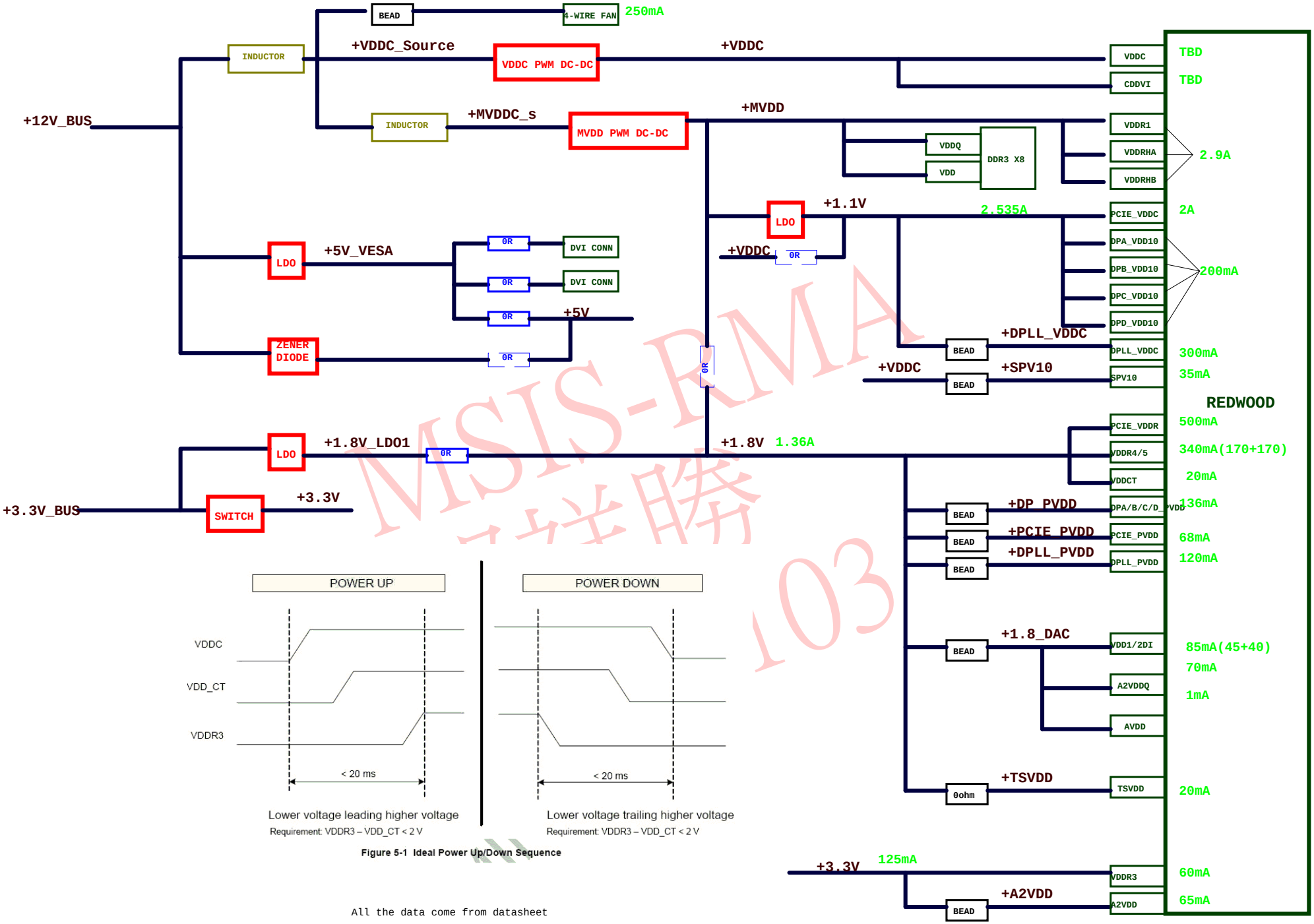

Figure 5-1 Ideal Power Up/Down Sequence

All the data come from datasheet

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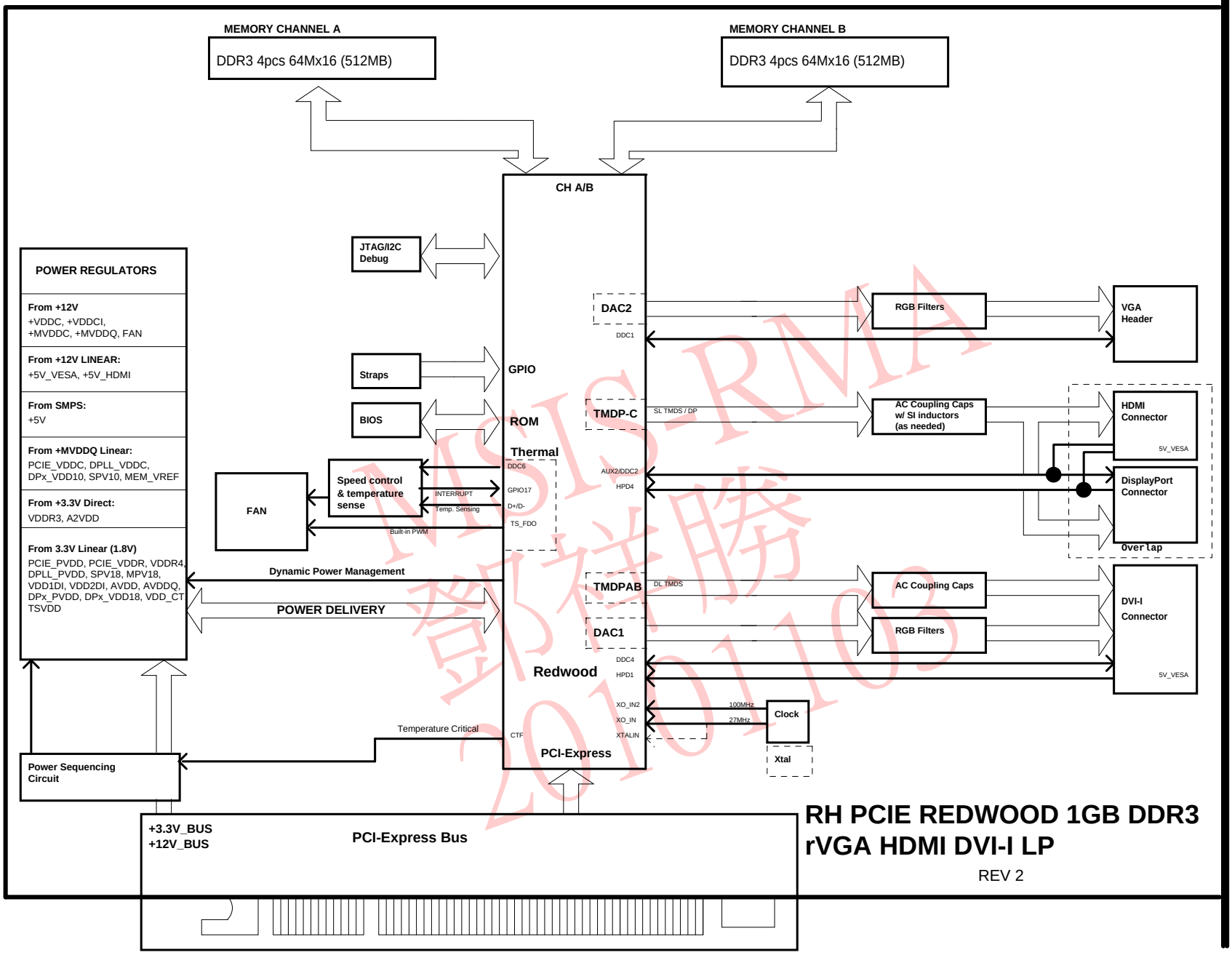

RH PCIE REDWOOD 1GB DDR3 rVGA HDMI DVI-I LP

REV 2

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Title	Schematic No.	Date:
RH REDWOOD DDR2 VGA-HDMI-DVI	105-025xx-00B	Friday, November 27, 2009

REVISION HISTORY

NOTE: **This schematic represents the PCB, it does not represent any specific SKU.**
For Stuffing options (component values, DNI , ? please consult the product specific BOM.
Please contact AMD representative to obtain latest BOM closest to the application desired.

Rev 1

Sch Rev	PCB Rev	Date	REVISION DESCRIPTION
0	00A	09/07/30	
0	00B	09/09/25	Initial design for Redwood DDR2, VGA/DP HDMI/DP DVI/VGA