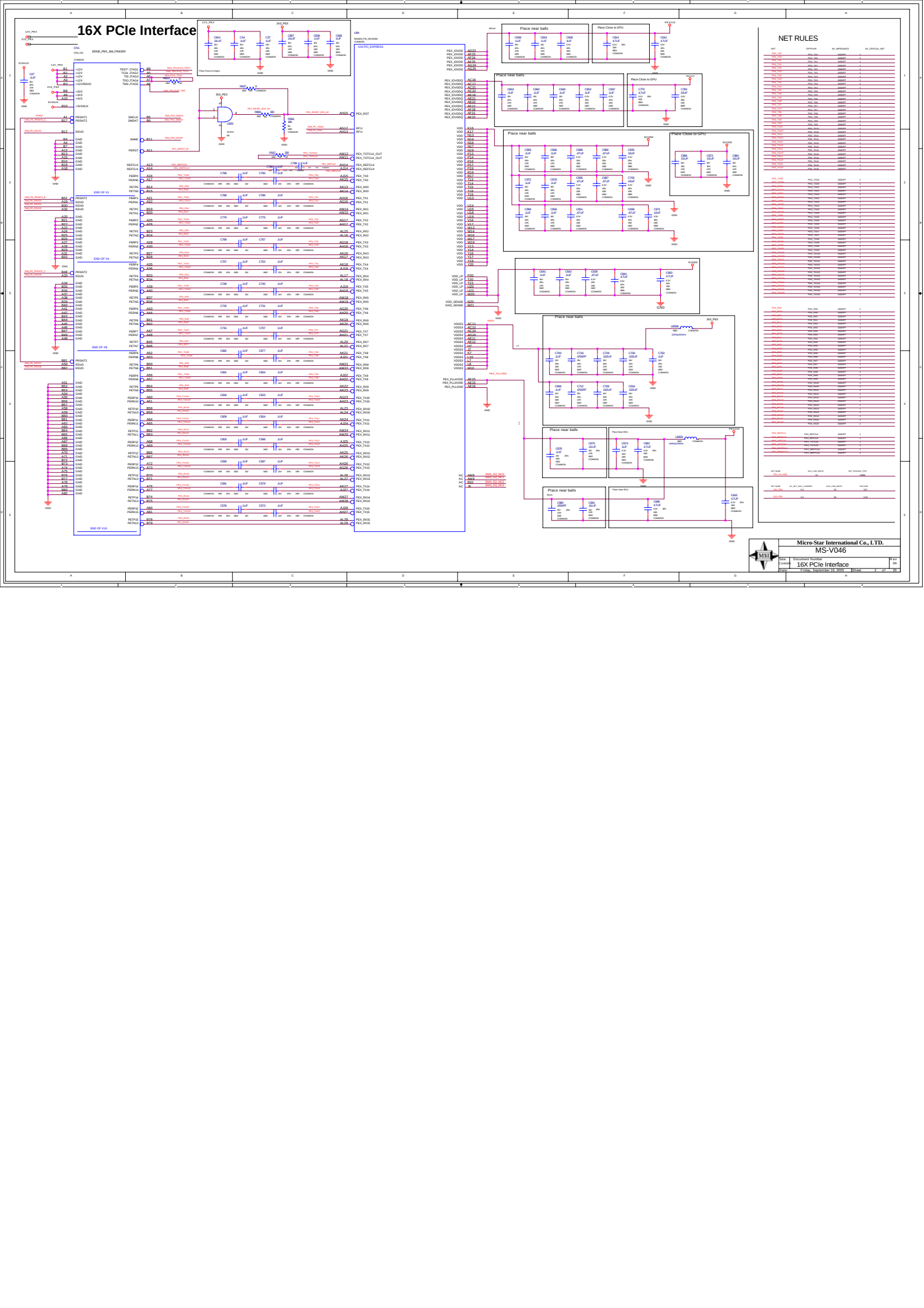
MS-V046 VER 0A

Base on P295-A00 DESIGN NV43 300/267MHZ 128MB/256MB/512MB DDR2 84-FBGA to modify V046

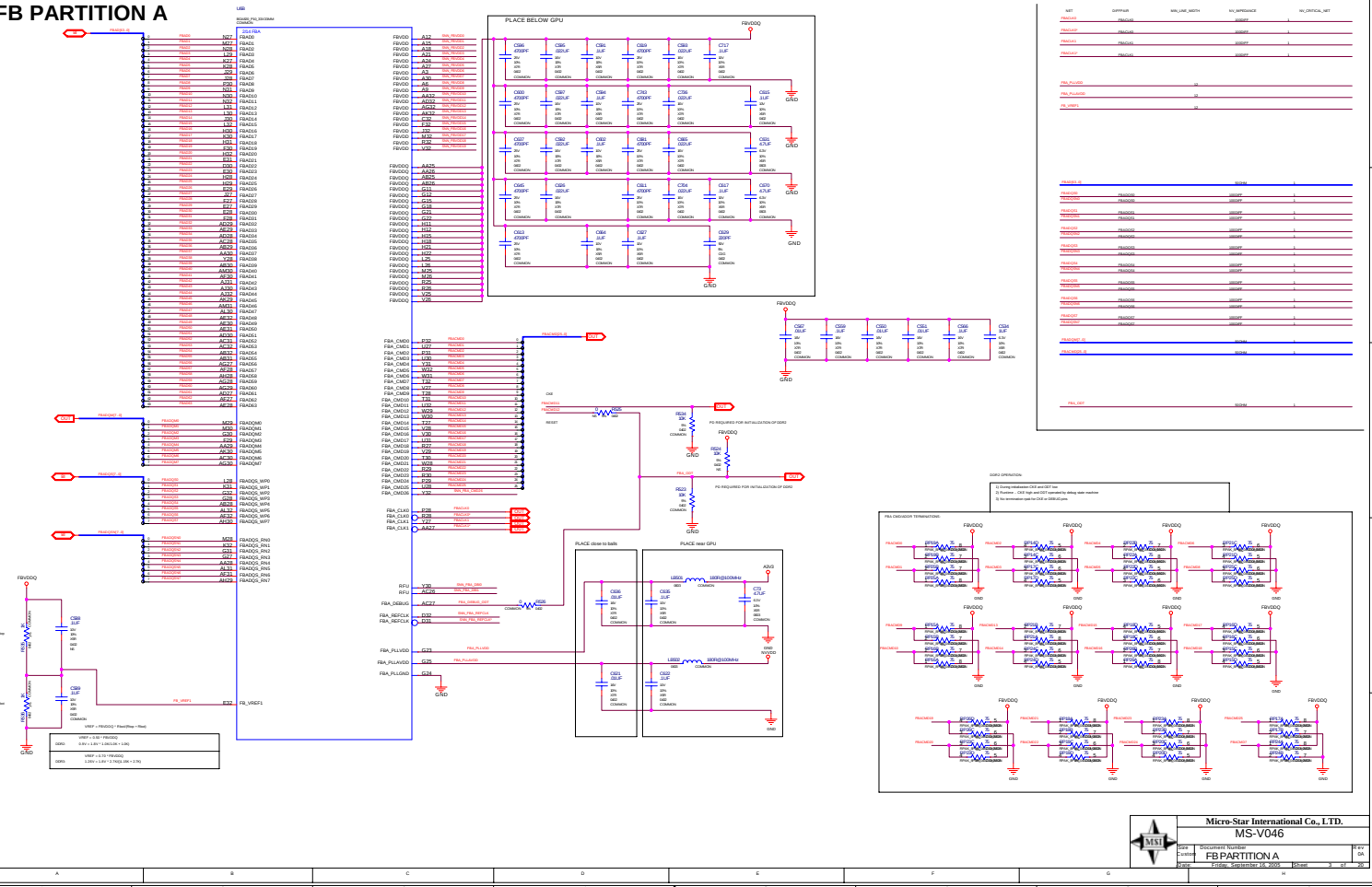
PAGE SUMMARY:

Page Changed:

Chage FBVDD & NVVDD Power solution for MS11 20050829
Adding DACA_C RSET SETTING 20050829
Adding Bridge & termernation resister for DVI 20050829
Pull 3v3 for GPIO30-33 of GPIO controller 20050831


16X PCIe Interface
NET RULES
Micro-Star International Co., LTD.
MS-V046
16X PCIe Interface
Friday, September 14, 2007

FB PARTITION A



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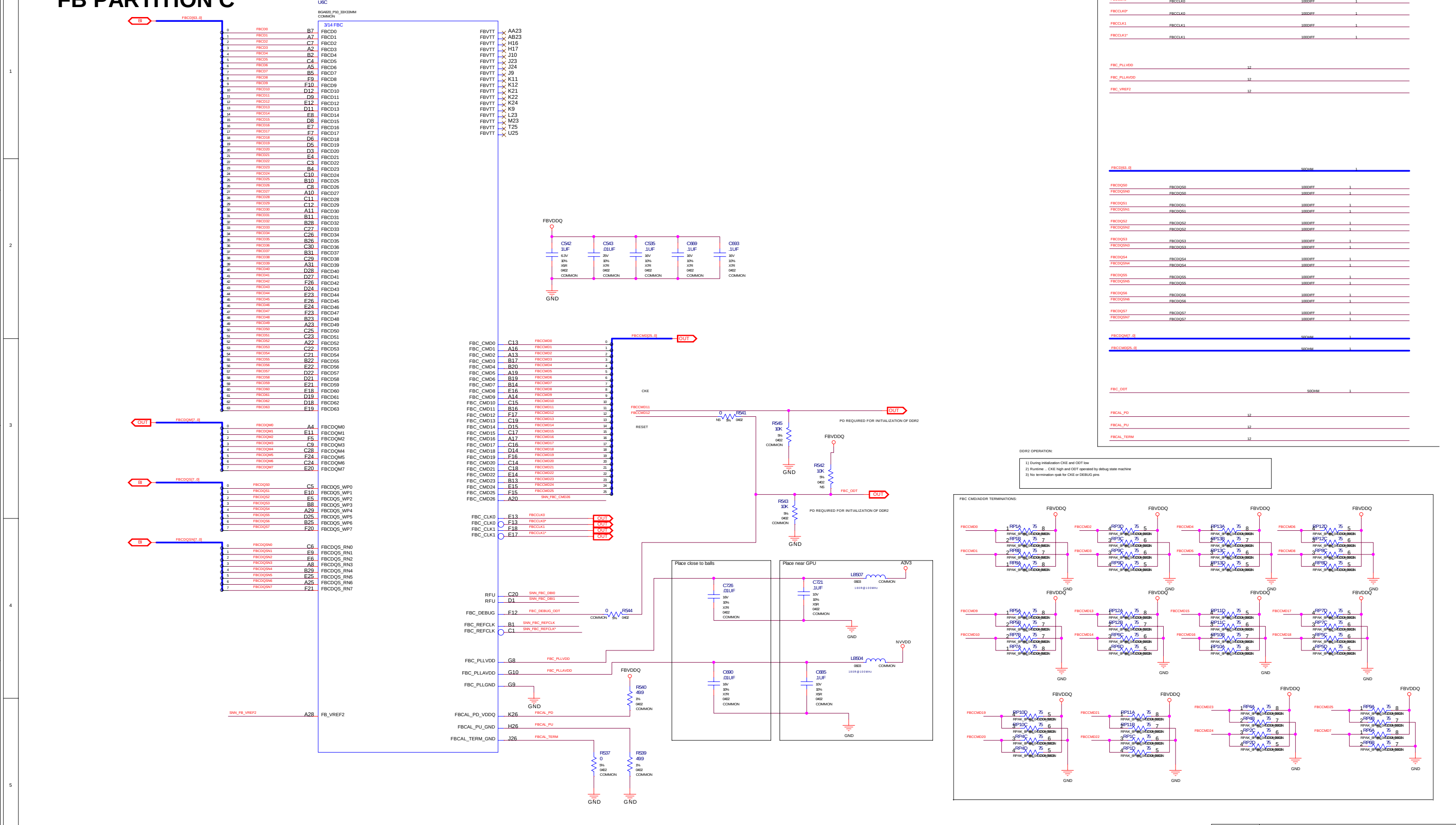
FB PARTITION C



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Custom	FB PARTITION C	0A

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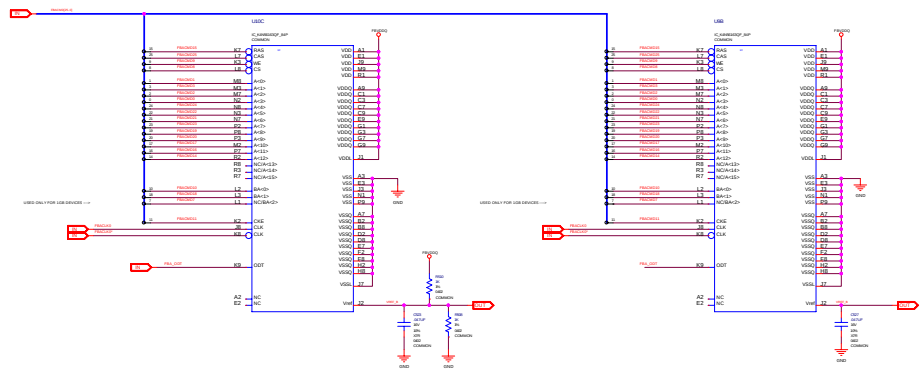
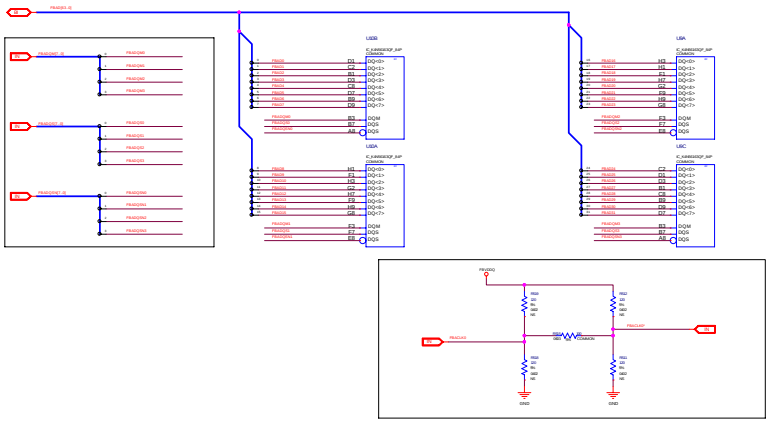
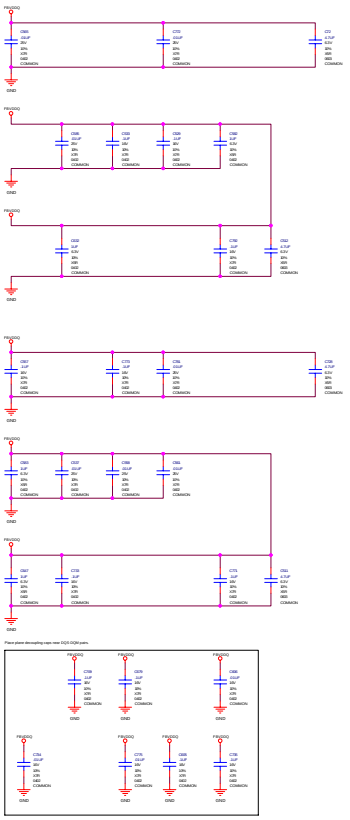
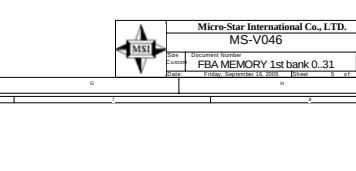
FBA MEMORY 1st bank 0..31

PLACE ALL DISCRETE COMPONENTS AS NEAR AS POSSIBLE TO MEMORY









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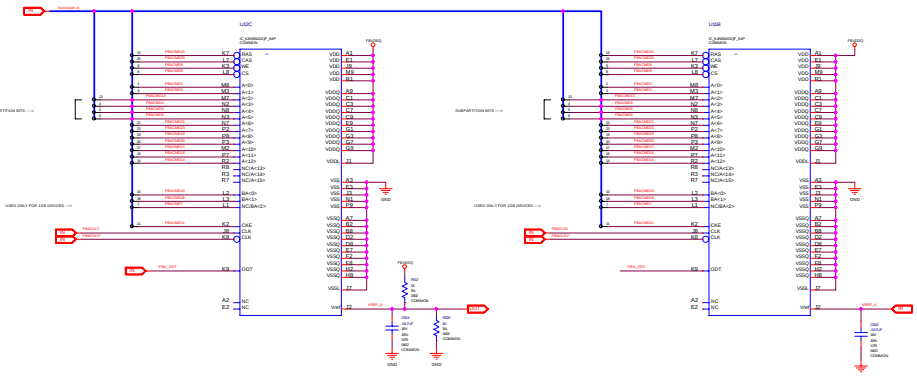
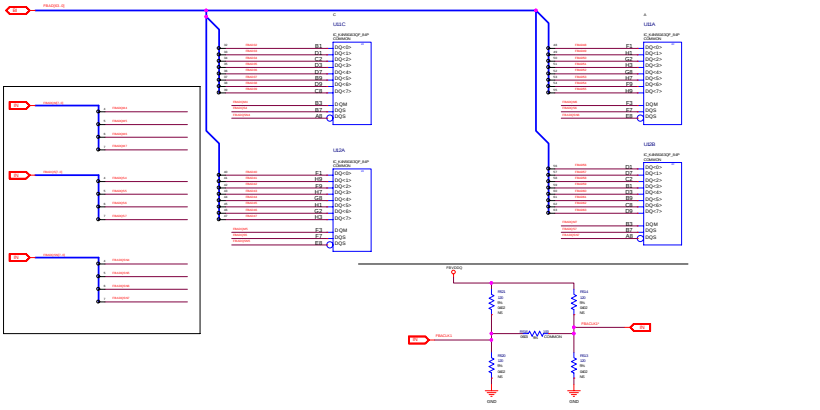
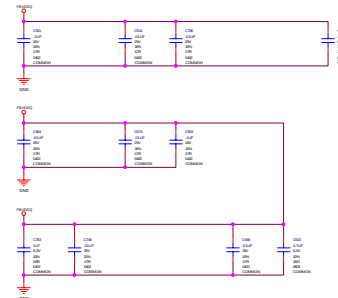
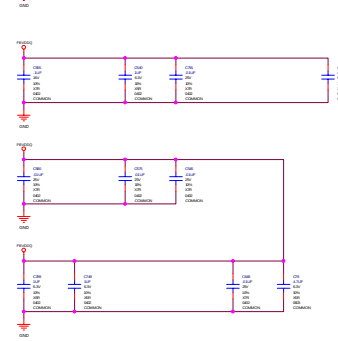
FBA MEMORY 1st bank 32..63

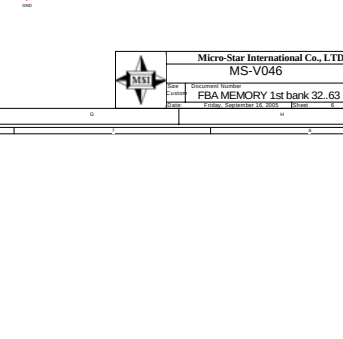
PLACE ALL DISCRETE COMPONENTS AS NEAR AS POSSIBLE TO MEMORY











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FBC MEMORY 2nd bank 0..31

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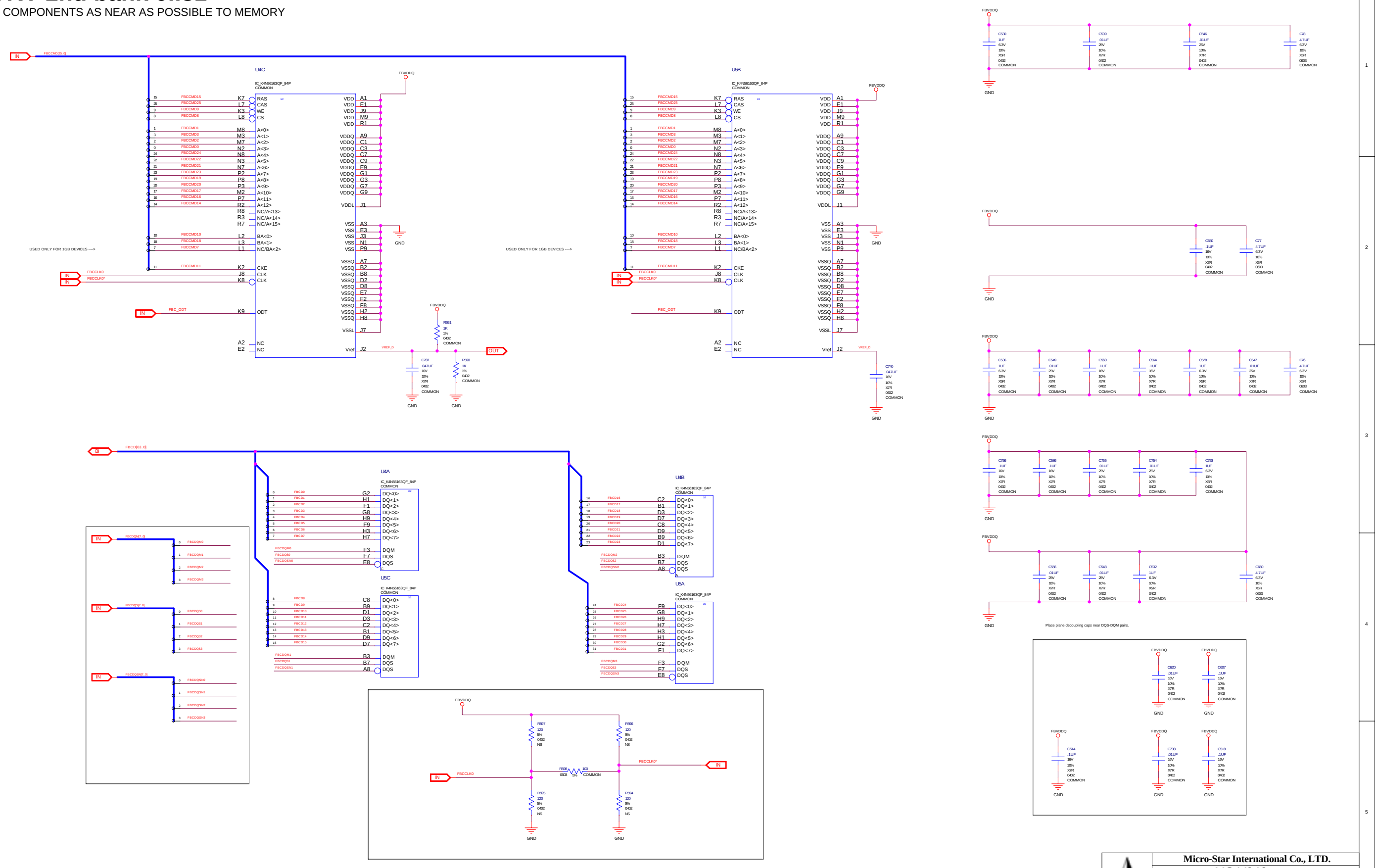

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FBC MEMORY 2nd bank 32..63

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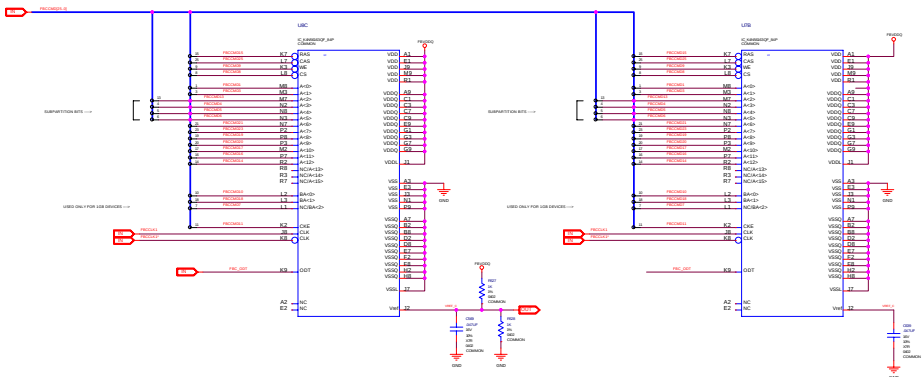

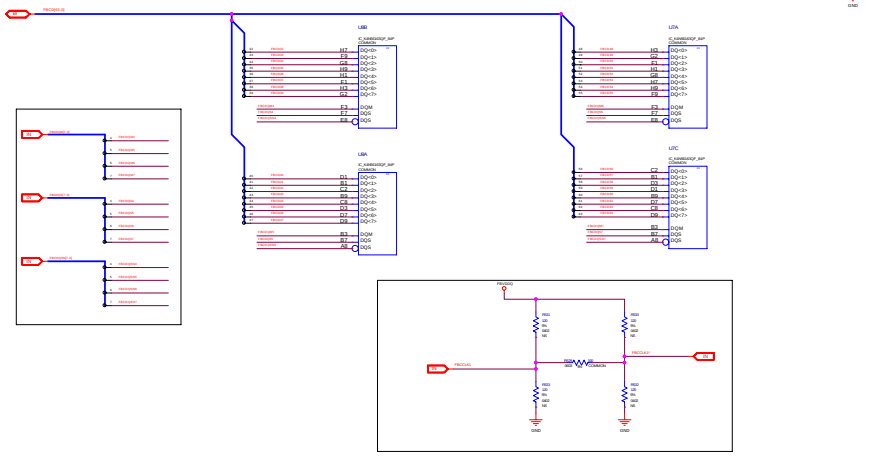

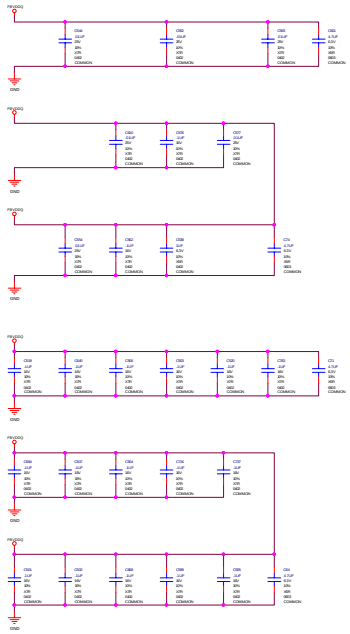

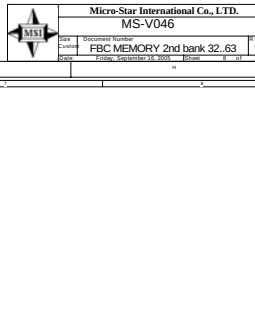

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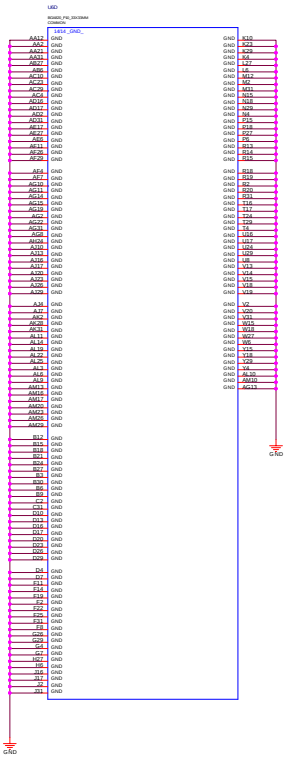
GND



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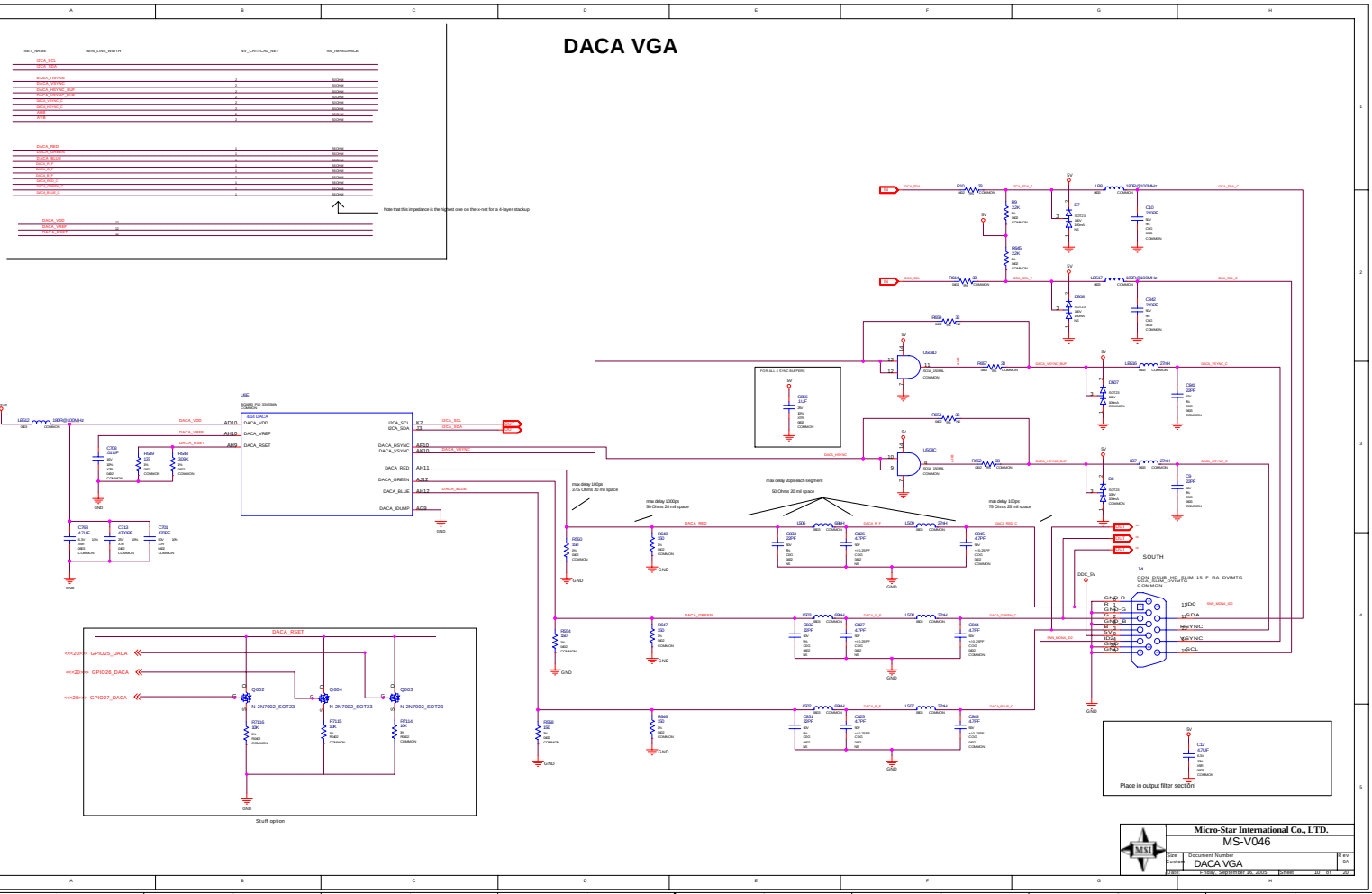
DACA VGA



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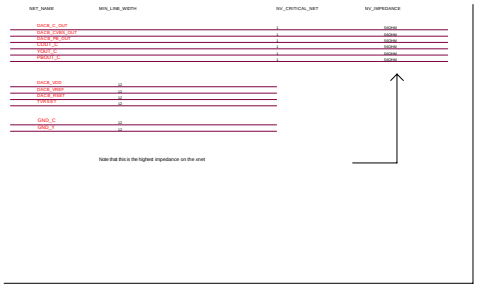
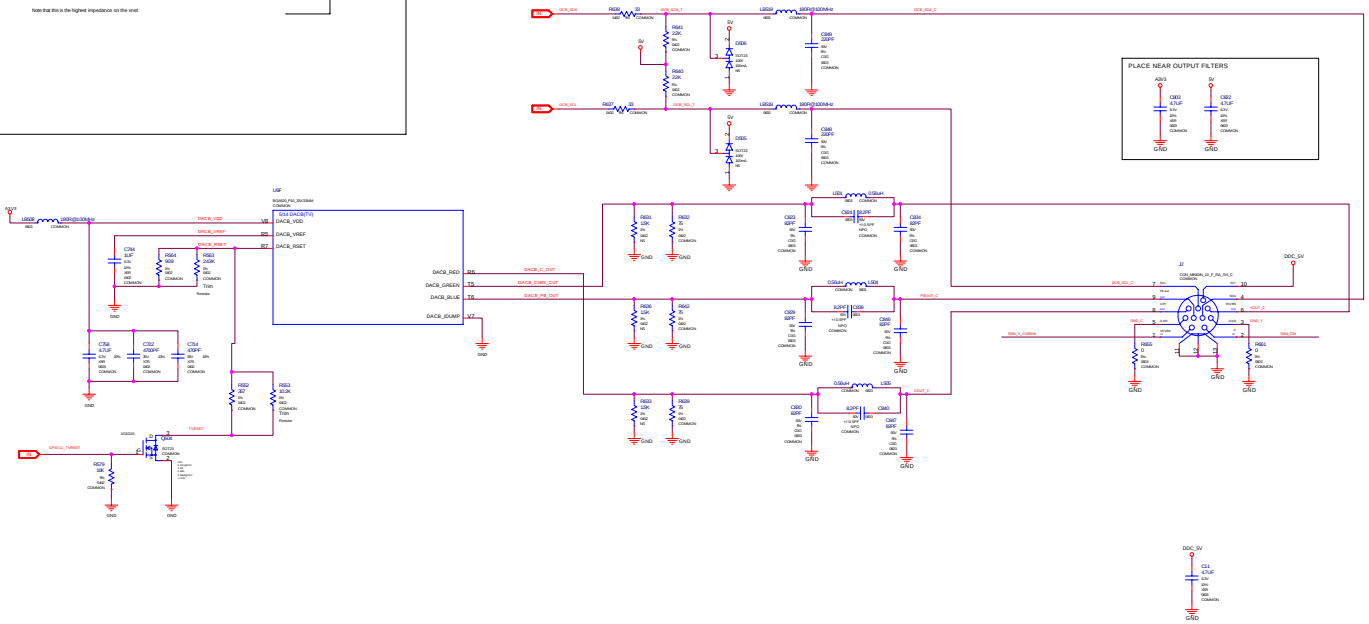
DACB TVOUT





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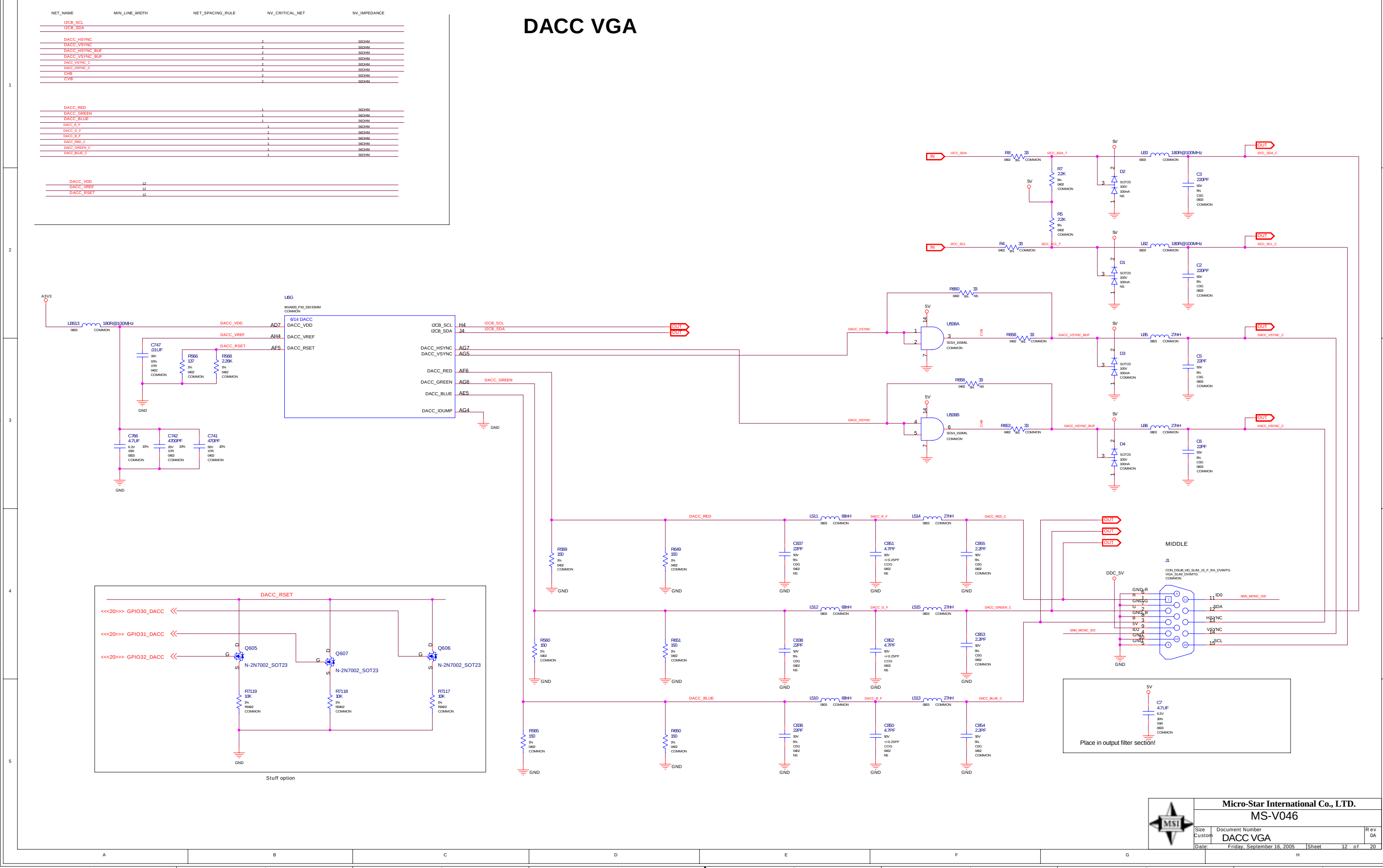
DACC VGA



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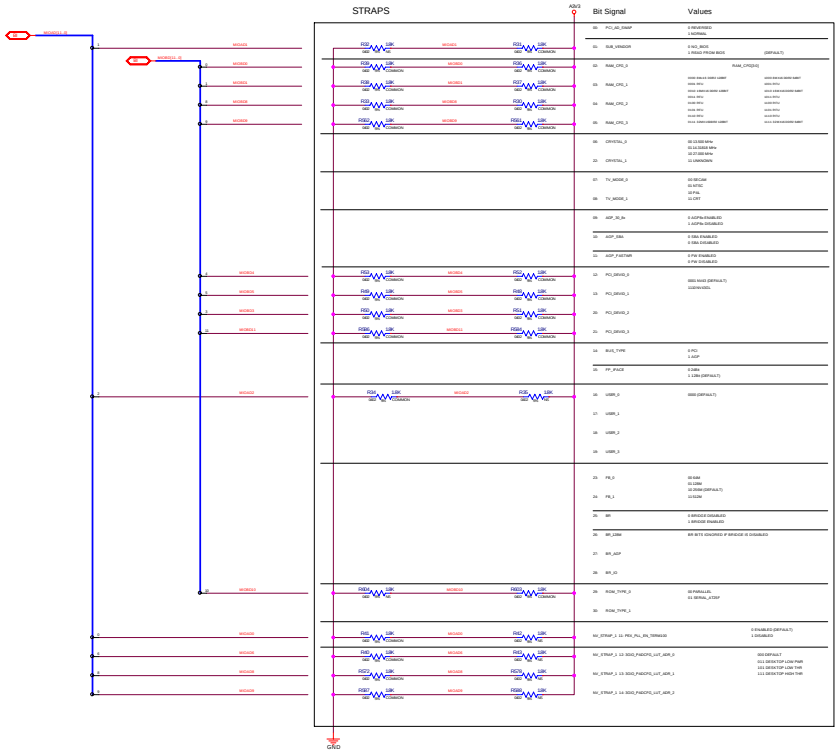
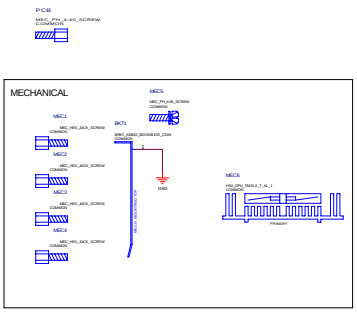
STRAPS





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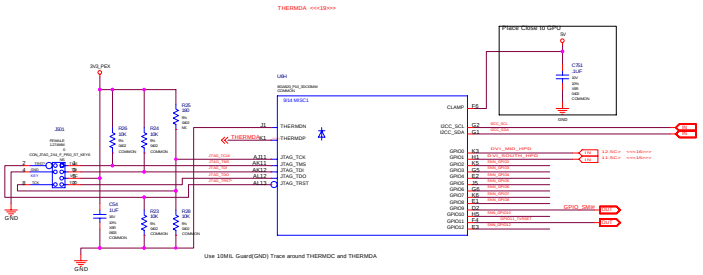
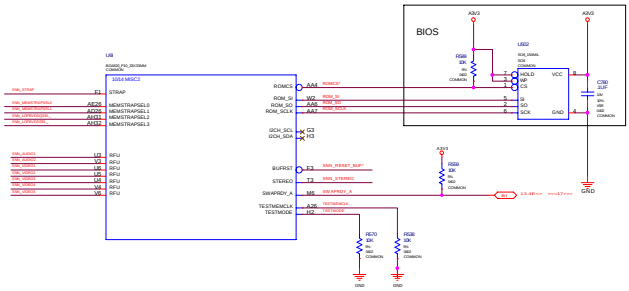
JTAG, GPIO, BIOS ROM

GPIO Assignment Table

GPIO	I/O	FUNCTION
0	IN	DVI MID HOTPLUG DET
1	IN	RESERVED
2	IN	RESERVED
3	IN	RESERVED
4	IN	RESERVED
5	IN	RESERVED
6	IN	RESERVED
7	IN	RESERVED
8	IN	THERM ALERT/SLOW
9	OUT	FAN CONTROL
10	IN	RESERVED
11	OUT	HDTVSDTV SELECT
12	IN	RESERVED

NET	MIN_LINE_WIDTH
FAN_THERM_INTR#25	20
FAN_PWM	20
FAN_TACH_A	20
FAN_TACH_C	20
THERMDC	20
THERMDA	20





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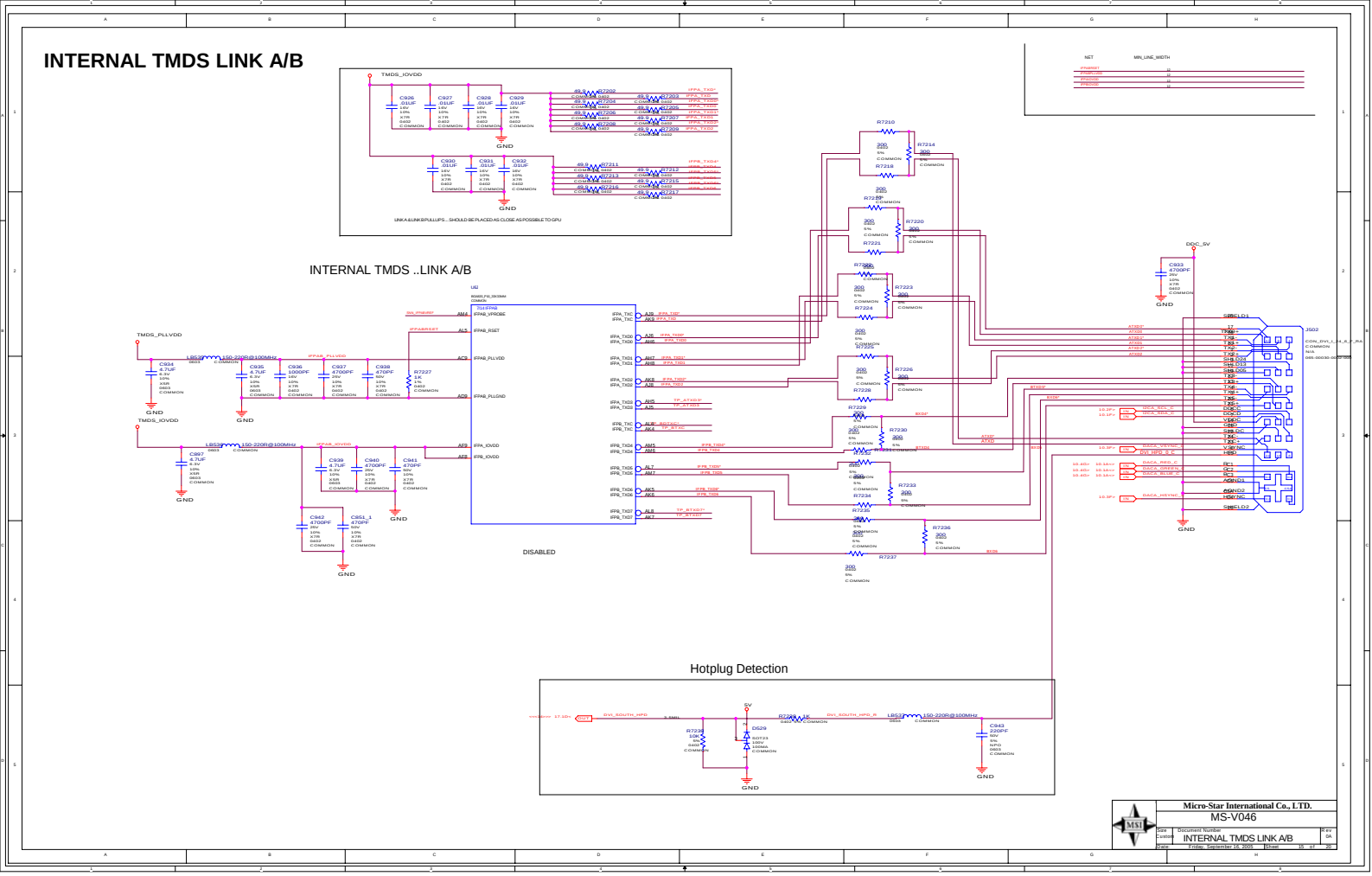
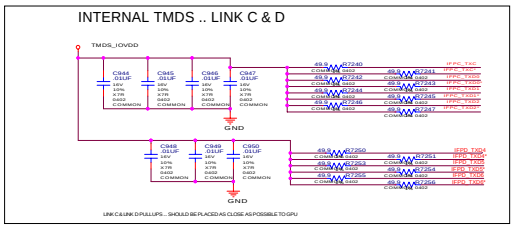
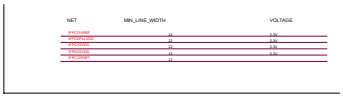
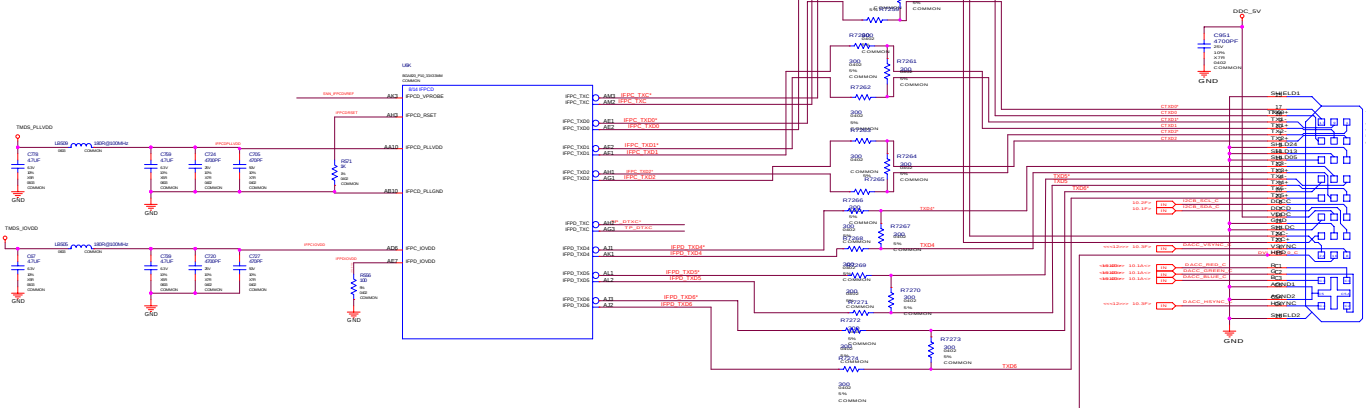
INTERNAL TMDS LINK A/B

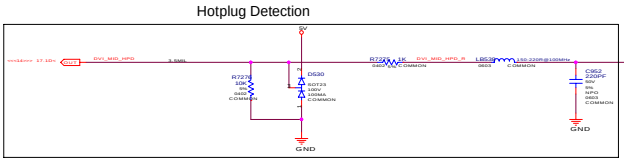


INTERNAL TMDS LINK C/D









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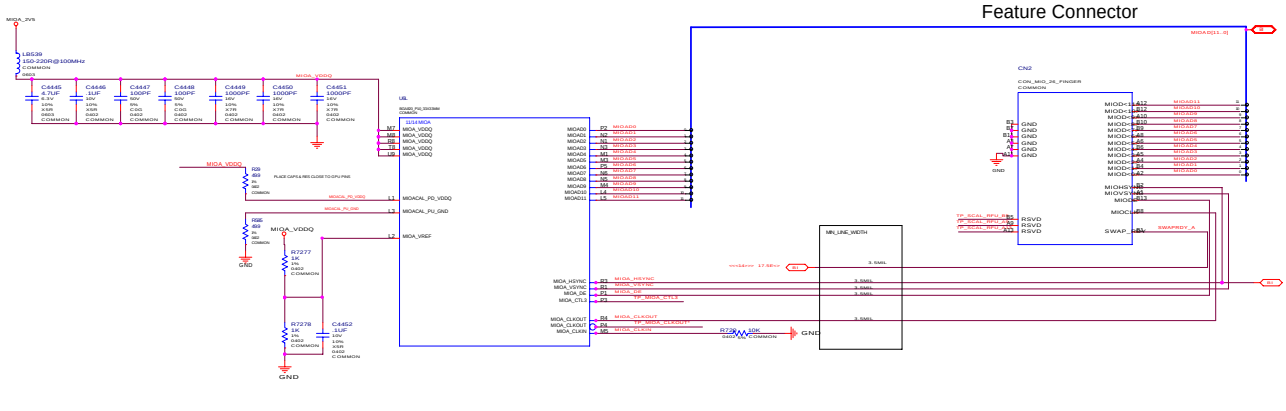
MIOA/B XTALPLLVDD

MIOA



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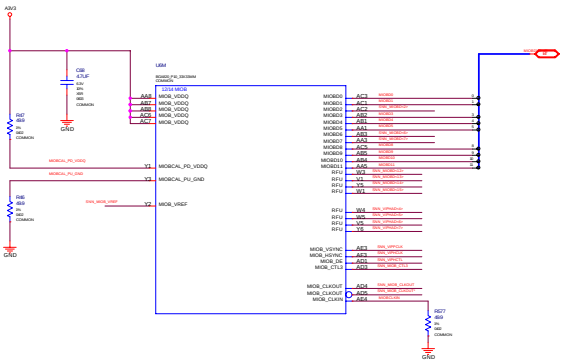
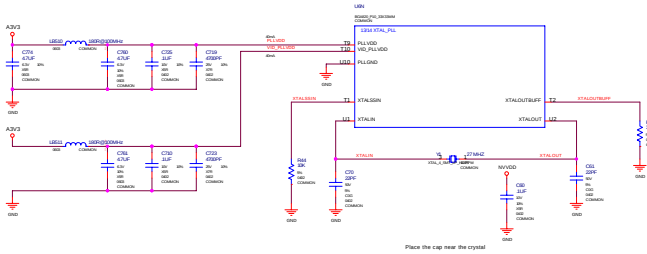


XTAL/PLLVDD



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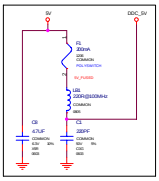
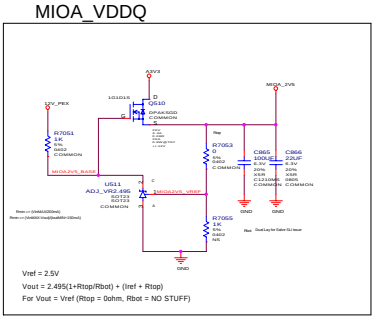
5V/PEX1V2/PLLVDD/IOVDD

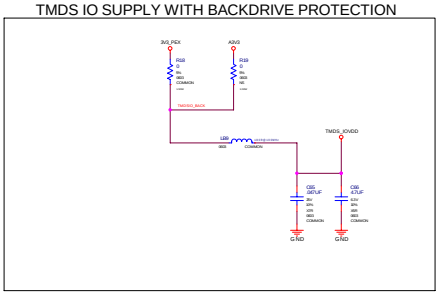
DDC 5V

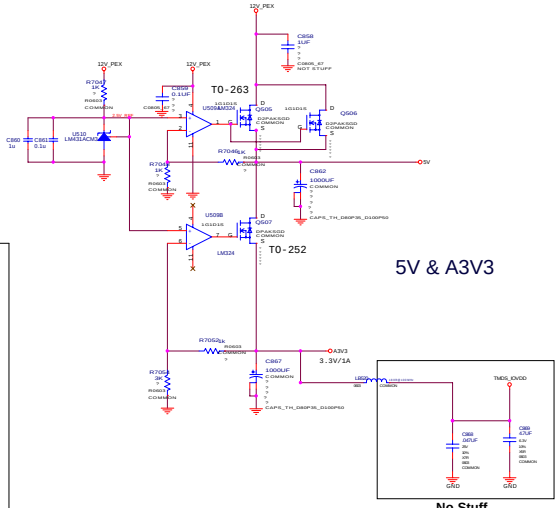


MIOA_VDDQ

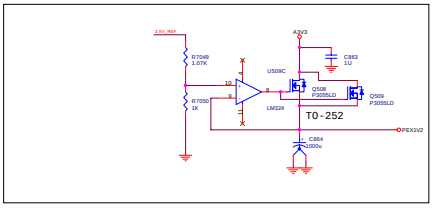


TMDS IO SUPPLY WITH BACKDRIVE PROTECTION

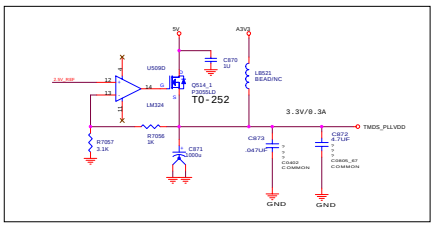




PEX1V2



TMDS AB/CD PLL Supply



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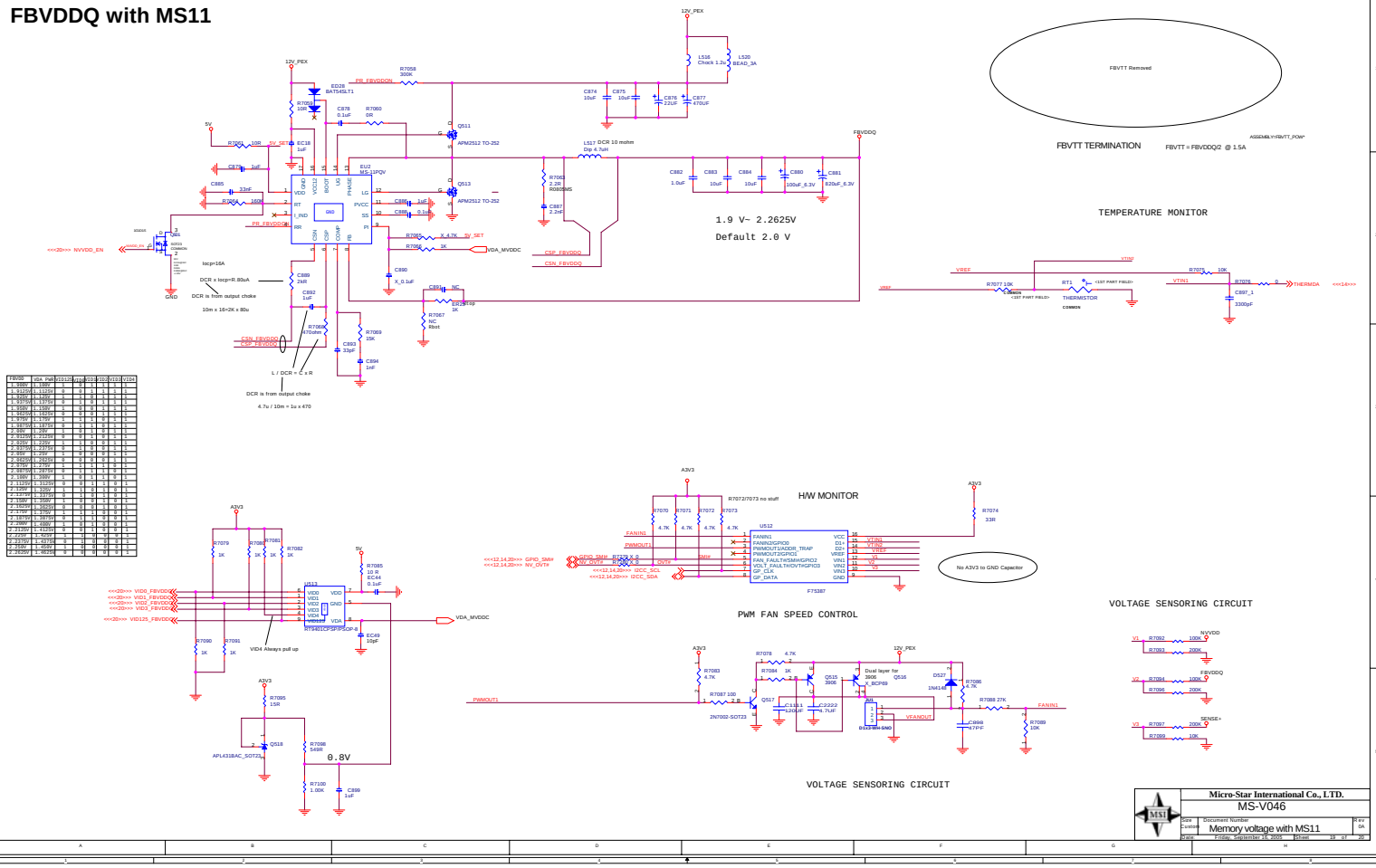
FBVDDQ with MS11



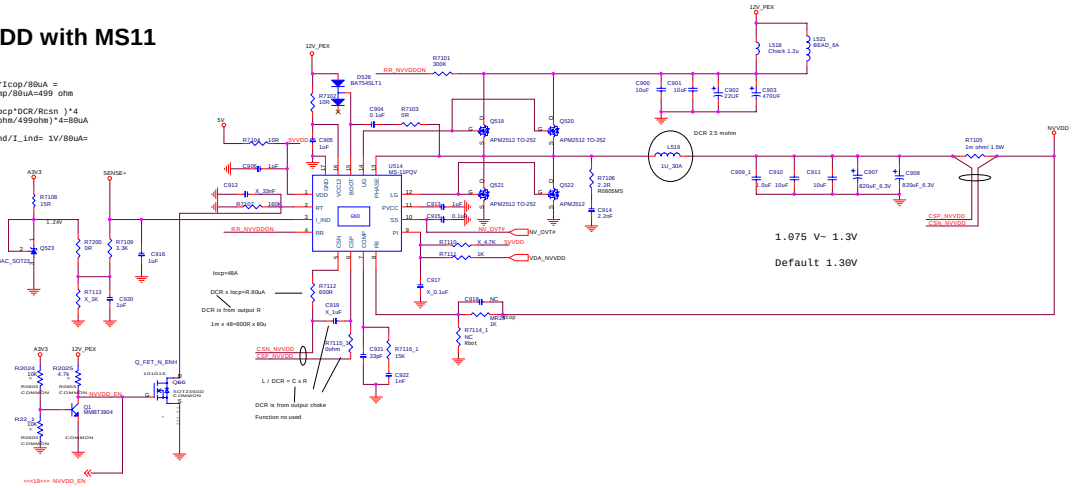
FBVDD	VDA PWR	VID125	VID4	VID3	VID2	VID1	VID0
1.395V	1.139V	1	0	1	1	1	1
1.4125V	1.1425V	0	0	1	1	1	1
1.43V	1.145V	1	0	1	1	1	0
1.4475V	1.1475V	0	0	1	1	1	0
1.465V	1.150V	1	0	1	1	0	1
1.4825V	1.1525V	0	0	1	1	0	1
1.5V	1.155V	1	0	1	1	0	0
1.5175V	1.1575V	0	0	1	1	0	0
1.535V	1.160V	1	0	1	0	1	1
1.5525V	1.1625V	0	0	1	0	1	1
1.57V	1.165V	1	0	1	0	1	0
1.5875V	1.1675V	0	0	1	0	1	0
1.605V	1.170V	1	0	1	0	0	1
1.6225V	1.1725V	0	0	1	0	0	1
1.64V	1.175V	1	0	1	0	0	0
1.6575V	1.1775V	0	0	1	0	0	0
1.675V	1.180V	1	0	0	1	1	1
1.6925V	1.1825V	0	0	0	1	1	1
1.71V	1.185V	1	0	0	1	1	0
1.7275V	1.1875V	0	0	0	1	1	0
1.745V	1.190V	1	0	0	1	0	1
1.7625V	1.1925V	0	0	0	1	0	1
1.78V	1.195V	1	0	0	1	0	0
1.7975V	1.1975V	0	0	0	1	0	0
1.815V	1.200V	1	0	0	0	1	1
1.8325V	1.2025V	0	0	0	0	1	1
1.85V	1.205V	1	0	0	0	1	0
1.8675V	1.2075V	0	0	0	0	1	0
1.885V	1.210V	1	0	0	0	0	1
1.9025V	1.2125V	0	0	0	0	0	1
1.92V	1.215V	1	0	0	0	0	0
1.9375V	1.2175V	0	0	0	0	0	0
1.955V	1.220V	1	0	0	0	0	0
1.9725V	1.2225V	0	0	0	0	0	0
1.99V	1.225V	1	0	0	0	0	0
2.0075V	1.2275V	0	0	0	0	0	0
2.025V	1.230V	1	0	0	0	0	0
2.0425V	1.2325V	0	0	0	0	0	0
2.06V	1.235V	1	0	0	0	0	0
2.0775V	1.2375V	0	0	0	0	0	0
2.095V	1.240V	1	0	0	0	0	0

NVVDD with MS11

Rcsn= DCR*Icop/80uA =
1mohm*40Amp/80uA=499 ohm

I_ind= (Iocp*DCR/Rcsn)*4
= (40A*1mohm/499ohm)*4=80uA

R_ind=V_ind/I_ind= 1V/80uA=
3.3K



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