

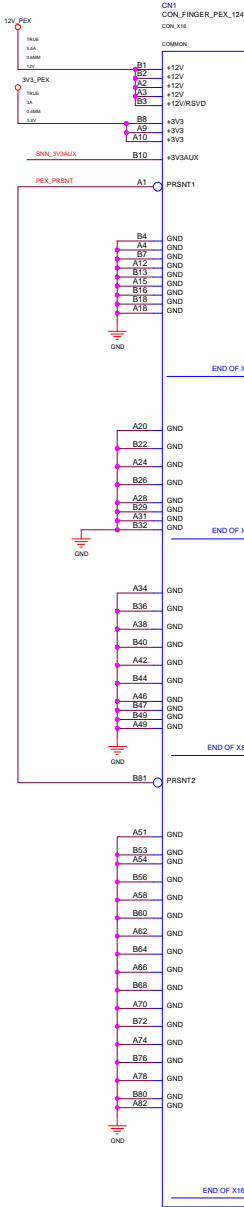
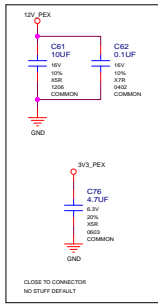
P2132-A01

NVG GK208 DDR3 64BIT
DVI-I/DVI-D + HDMI + VGA

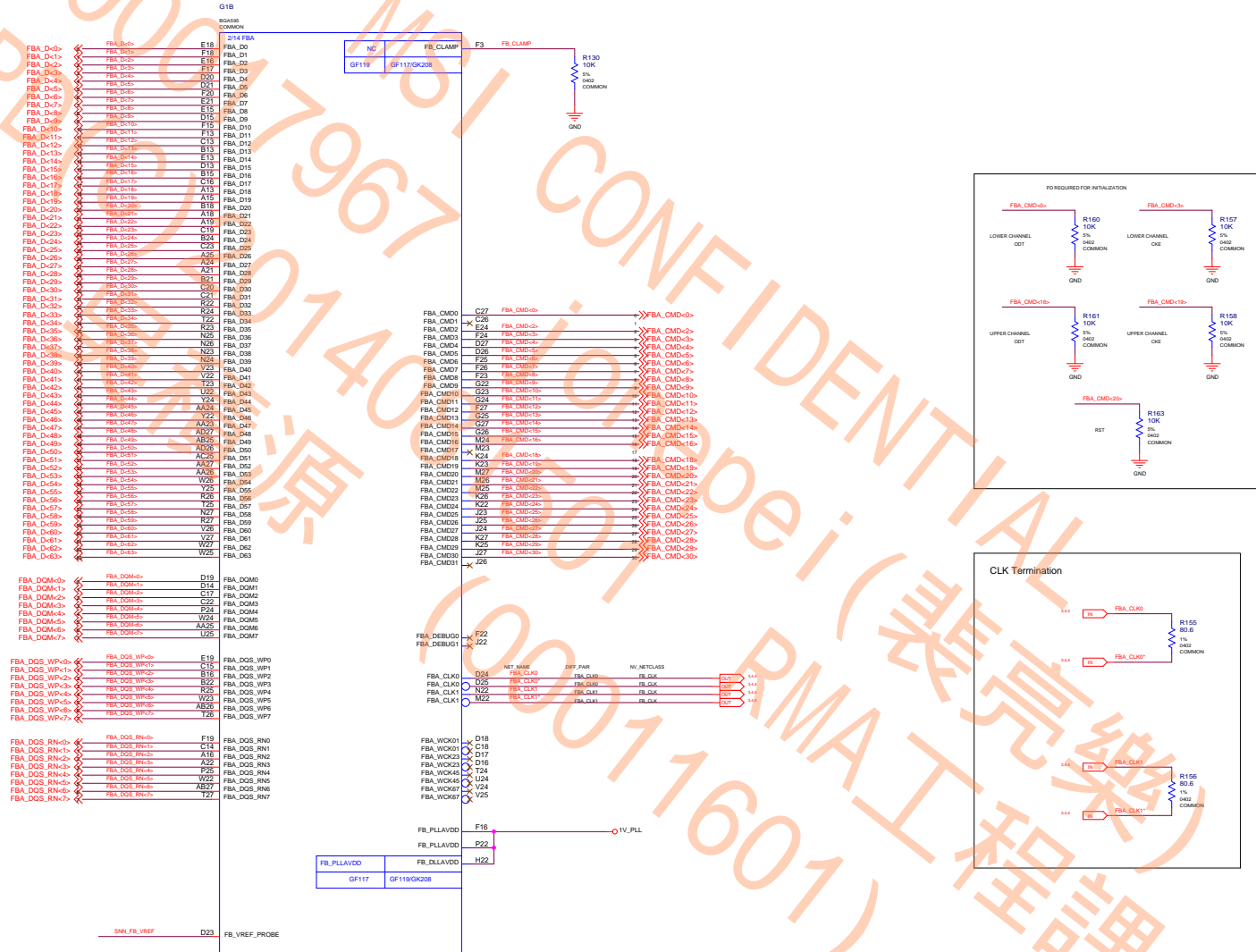
TABLE OF CONTENTS

Page	Description
1	Table of Contents
2	PCI EXPRESS
3	GPU FRAME BUFFER: PARTITION A
4	DDR3 Memories
5	DECOUPLING FOR CORE POWER_TOP
6	DACA VGA
7	IFPAB TMDS
8	IFPC HDMI
9	UNUSED IFPD, IFPE & IFPF
10	MISC INTERFACES
11	STRAPS & FAN
12	POWER SUPPLY I: PEXVDD, 5V
13	POWER SUPPLY II: FBVDDQ
14	POWER SUPPLY III: NVVDD
15	DECOUPLING FOR CORE POWER_BOTTOM

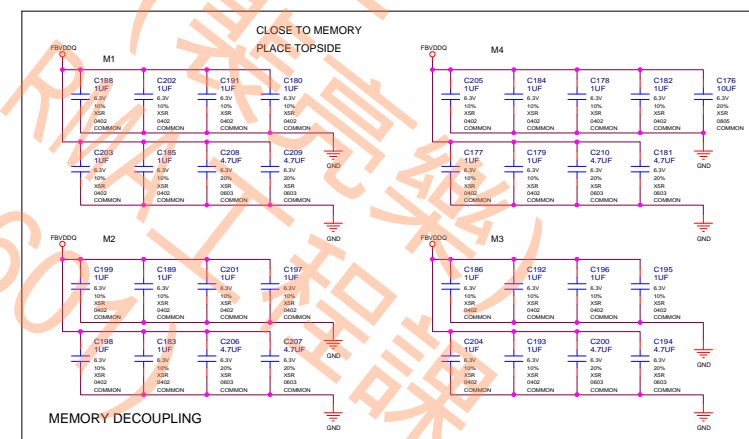
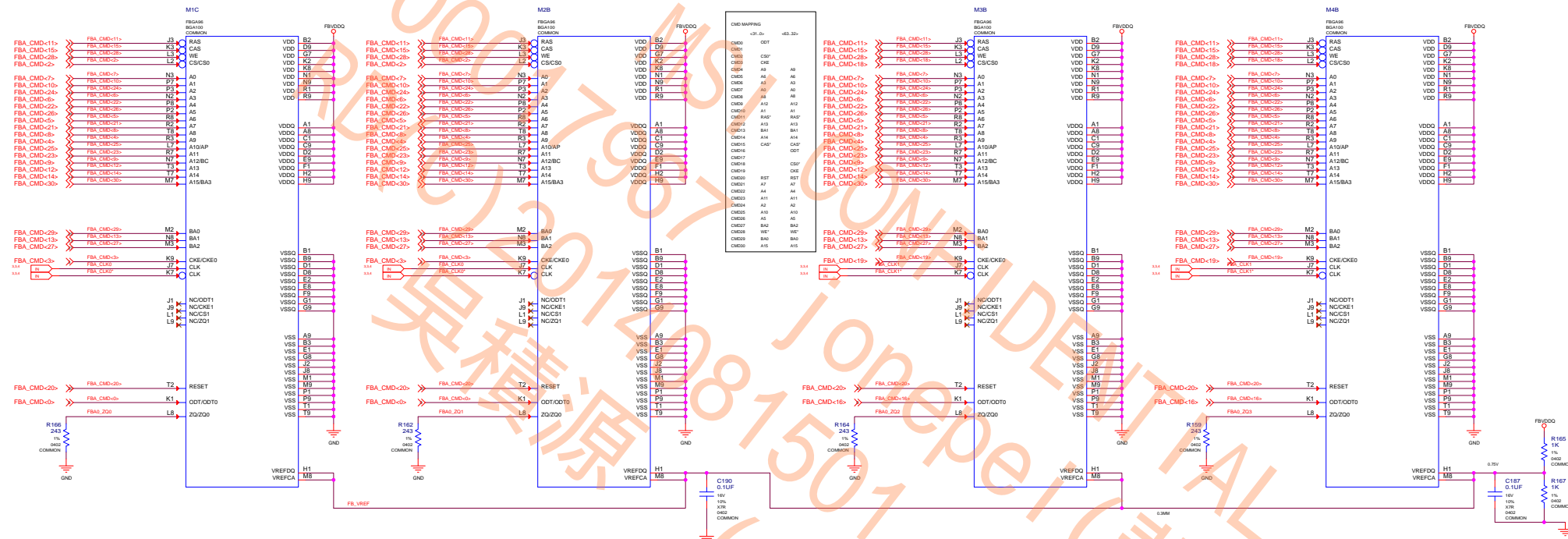
PCI EXPRESS



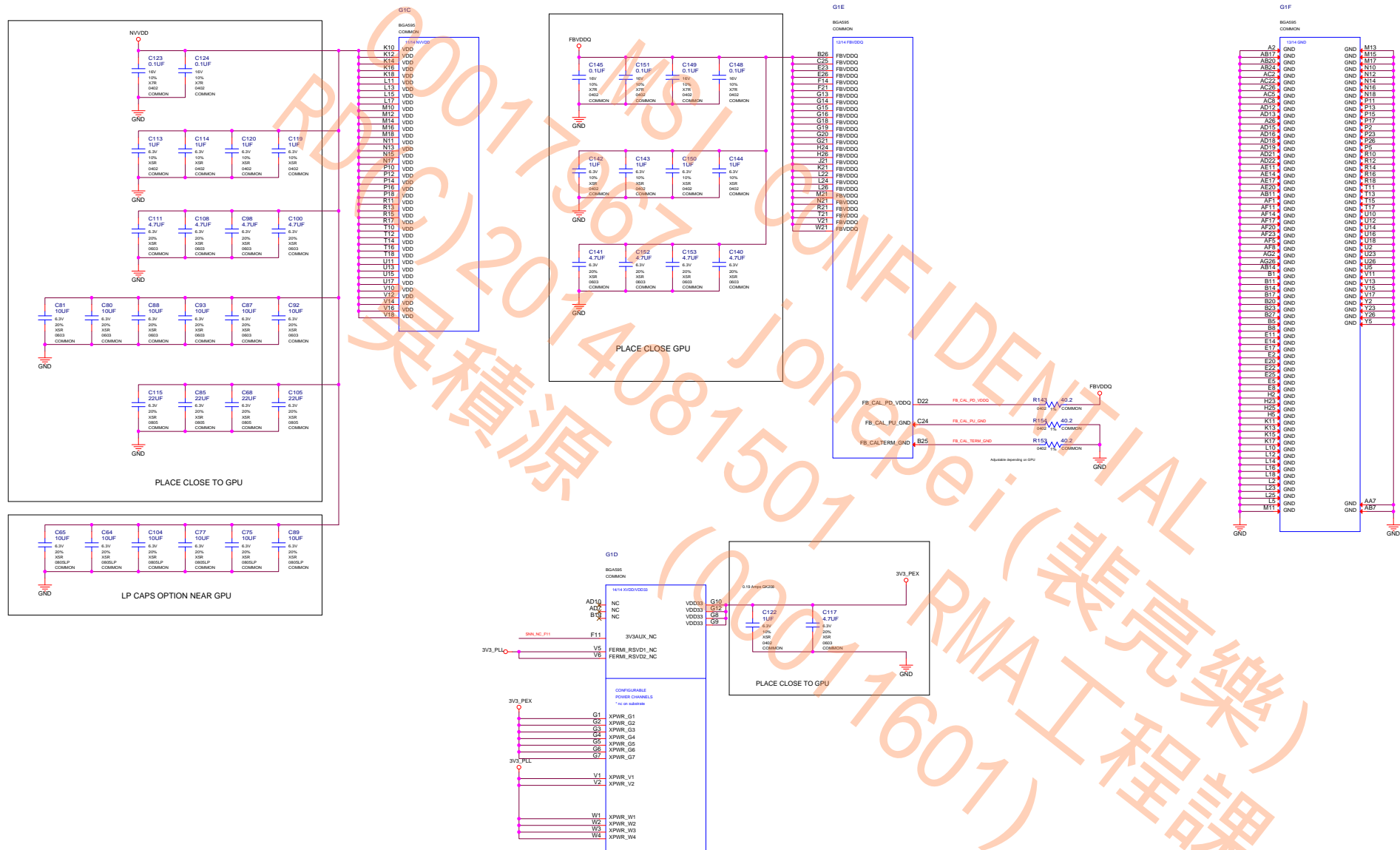
GPU FRAME BUFFER: PARTITION A

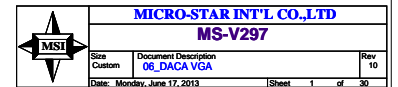
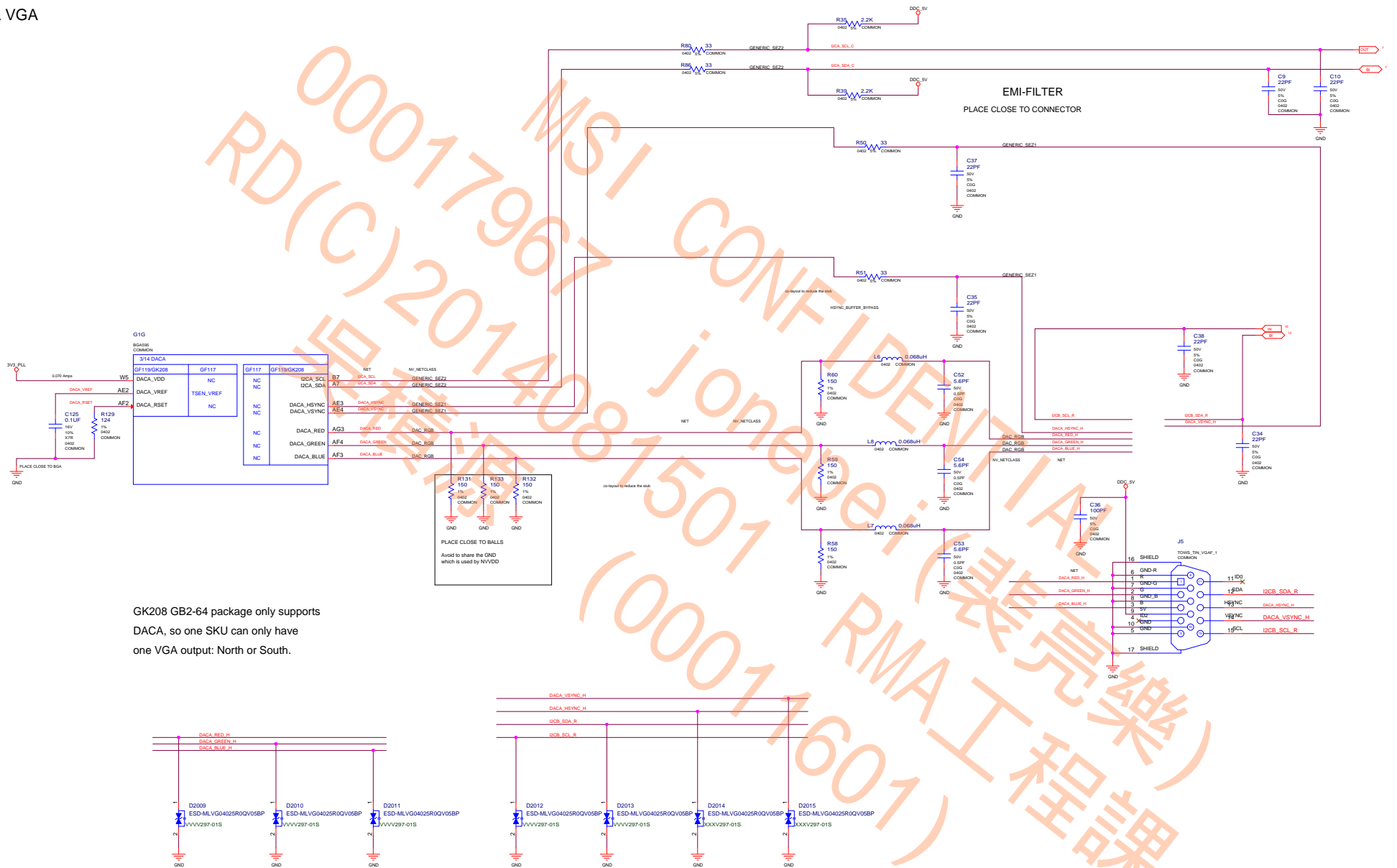


DDR3 Memories

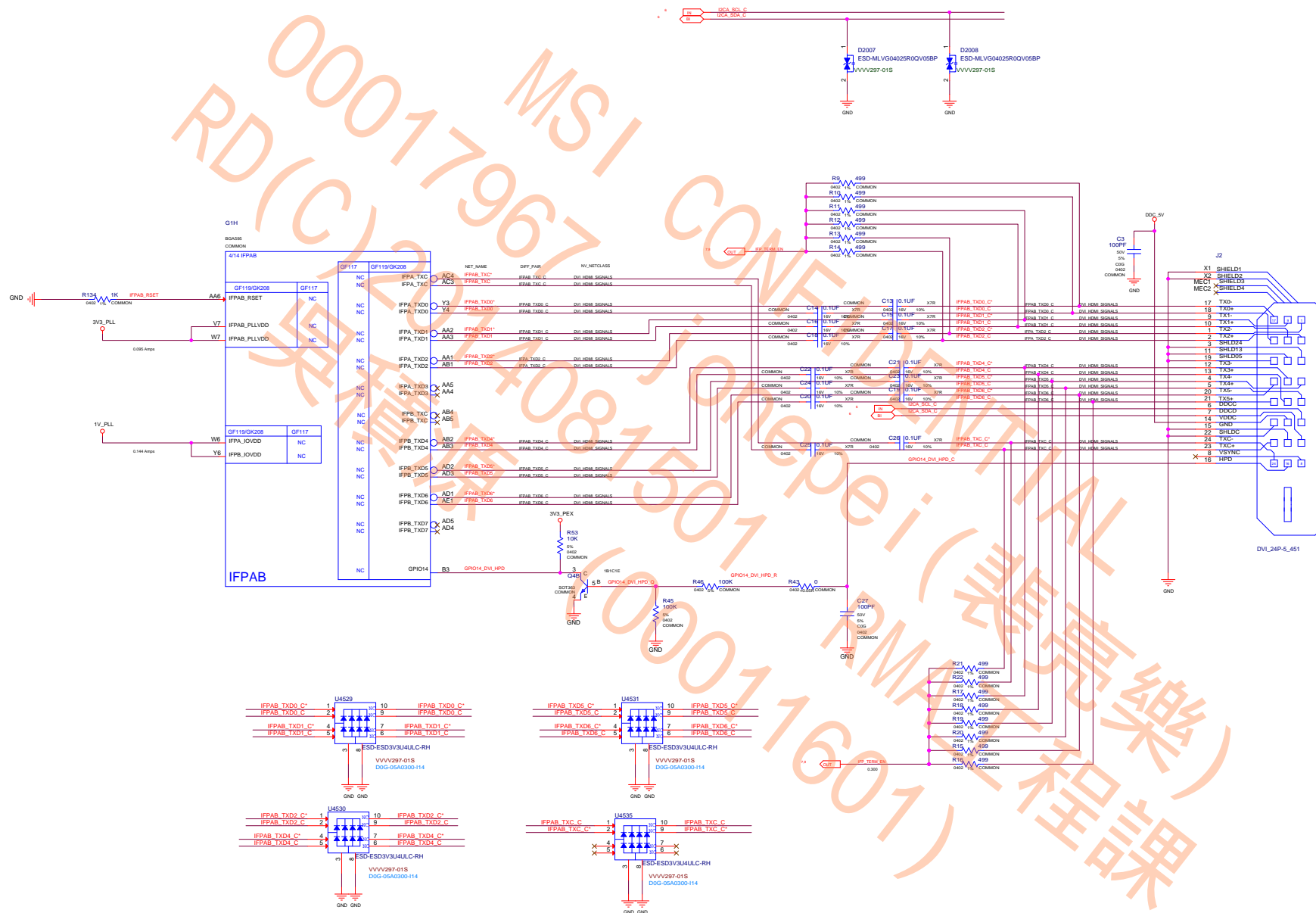


DECOUPLING FOR CORE POWER_TOP

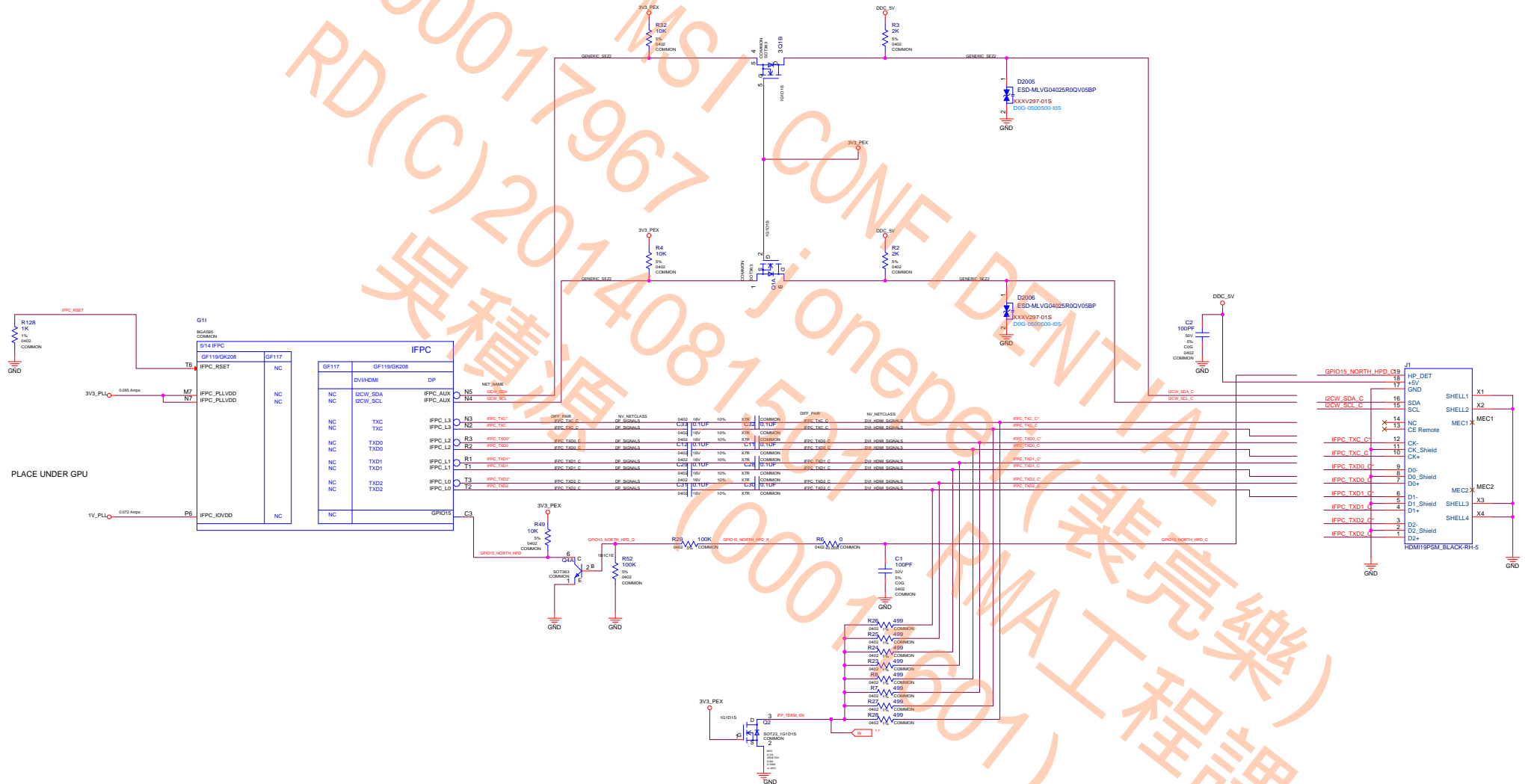




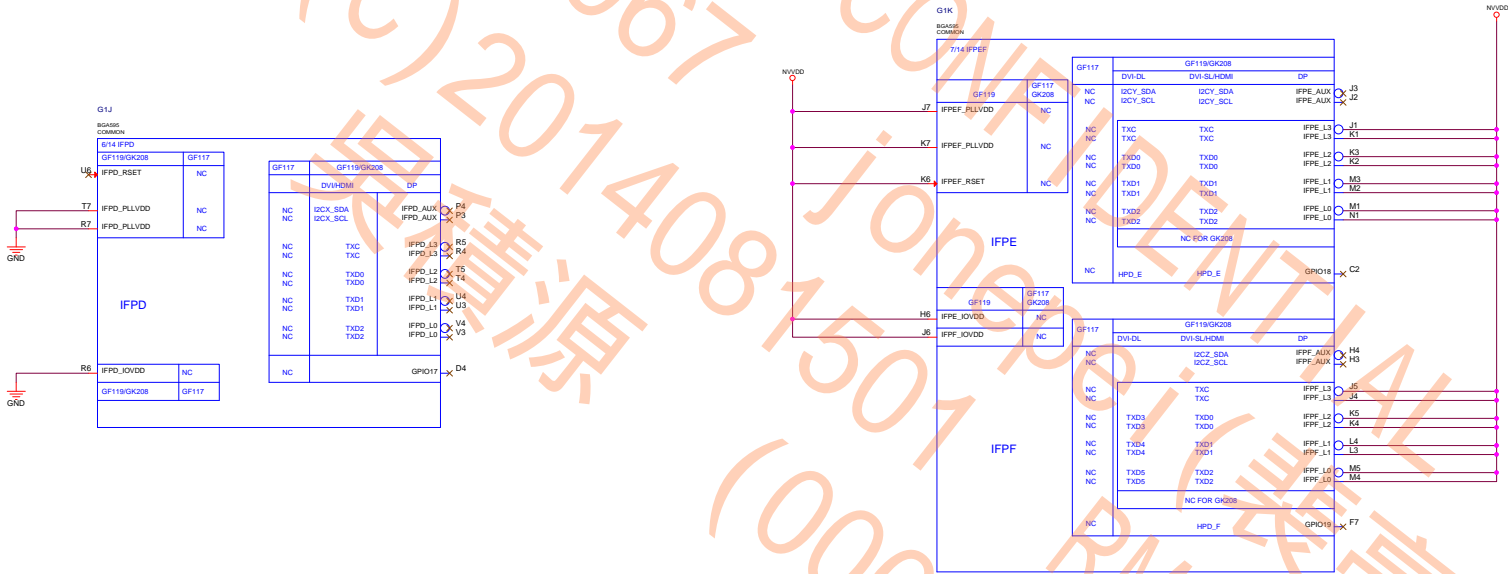
IFPAB TMDS

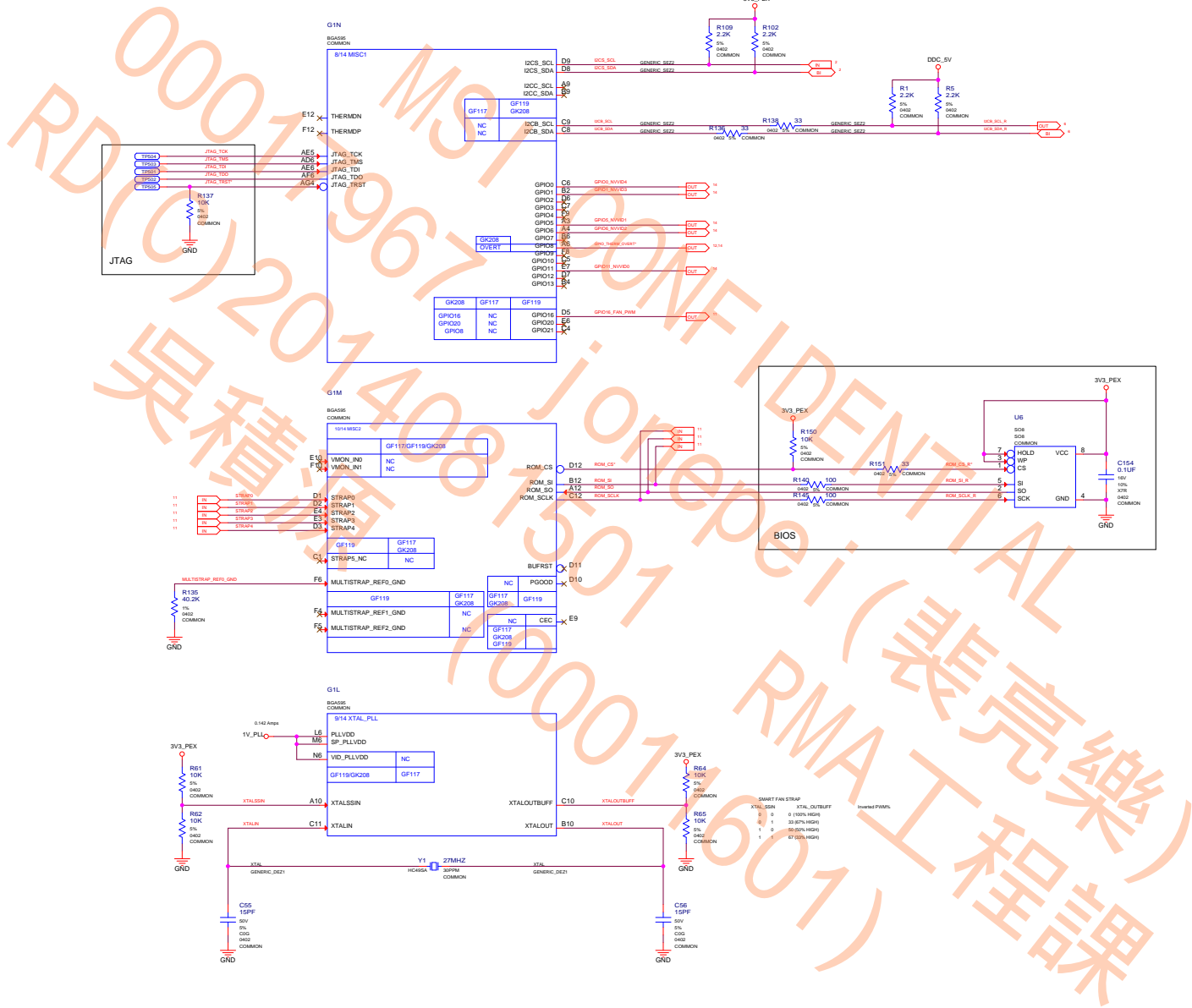


IFPC HDMI



UNUSED IFPD, IFPE & IFPF



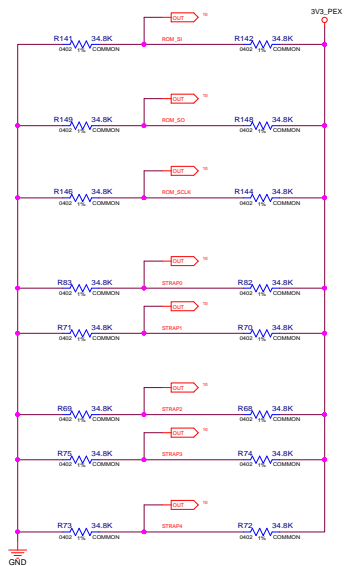


Size Custom	Document Description 10_MISC INTERFACES	Rev 10
Date: Monday, June 17, 2013		Sheet 1 of 30

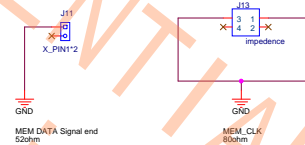
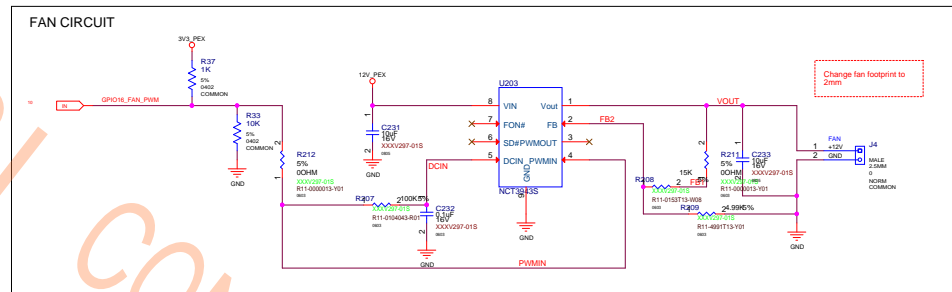
Multilevel Straps

0000	5.1K to GND	1000	5.1K to VCC
0001	10K to GND	1001	10K to VCC
0010	15K to GND	1010	15K to VCC
0011	20K to GND	1011	20K to VCC
0100	24.9K to GND	1100	24.9K to VCC
0101	30.1K to GND	1101	30.1K to VCC
0110	34.8K to GND	1110	34.8K to VCC
0111	45.3K to GND	1111	45.3K to VCC

GK208 Straps



Bit Signal		Values					
03	RAMCFG[2]	0000	Reserved	ROM_SI			
03	RAMCFG[2]	0001	256MB DCE3 X16 64kb Motion				
03	RAMCFG[2]	0010	256MB DCE3 X16 64kb Hdr				
03	RAMCFG[2]	0011	256MB DCE3 X16 64kb Samsung				
03	RAMCFG[2]	0101	128MB DCE3 X16 64kb Motion	ROM_SO			
03	RAMCFG[2]	0100	128MB DCE3 X16 64kb Hdr				
03	RAMCFG[2]	0110	128MB DCE3 X16 64kb Samsung				
03	RAMCFG[2]	0111	128MB DCE3 X16 64kb Samsung				
03	FB[0]	01	0000	ROM_SCL			
03	FB[0]	01	0001				
03	SMB_ALT_ADDR	0	DISABLED			1	ENABLED
03	VGA_DEVICE	0	DISABLED			1	ENABLED
03	POI_DEV[0]_EXT	0000	0	0001	0	ROM_SCLK	
03	SUB_VENDOR	0	NO_BIOS	1	BIOS		
03	POI_DEV[0]_EXT_BITS	0000	0	0001	TRD		
03	POI_DEV[0]_EXT_BITS	0000	0	DISABLED	1		ENABLED
03	FEI_XL_EN_TERR100	0	DISABLED	1	ENABLED	Strap0	
03	USE[0]	0000	INT				
03	USE[0]	0001					
03	USE[0]	0010					
03	SDIO_PADCFG_LUT_ADDR[0]	0000	OSDTPP_DEFAULT	1000	DSDTTP_JTHRS	Strap1	
03	SDIO_PADCFG_LUT_ADDR[0]	0001	MOBILE_JTHRS_LAMP	1001	MOBILE_JTHRS_WHPAP		
03	SDIO_PADCFG_LUT_ADDR[0]	0010	MOBILE_JTHRS_LAMP	1010	MOBILE_JTHRS_LAMP		
03	SDIO_PADCFG_LUT_ADDR[0]	0011	MOBILE_JTHRS_LAMP	1011	MOBILE_JTHRS_LAMP		
03	SDIO_PADCFG_LUT_ADDR[0]	0100	MOBILE_JTHRS_WHPAP	1100	MOBILE_JTHRS_WHPAP	Strap2	
03	SDIO_PADCFG_LUT_ADDR[0]	0101	MOBILE_JTHRS_WHPAP	1101	MOBILE_JTHRS_WHPAP		
03	SDIO_PADCFG_LUT_ADDR[0]	0110	MOBILE_JTHRS_WHPAP	1110	MOBILE_JTHRS_WHPAP		
03	SDIO_PADCFG_LUT_ADDR[0]	0111	MOBILE_JTHRS_WHPAP	1111	MOBILE_JTHRS_WHPAP		
03	POI_DEV[0]	0000	0000	Strap3			
03	POI_DEV[0]	0001					
03	POI_DEV[0]	0010					
03	POI_DEV[0]	0011					
03	SORL_EXP[0]	0	DISABLED	1	ENABLED	Strap4	
03	SORL_EXP[0]	0	DISABLED	1	ENABLED		
03	SORL_EXP[0]	0	DISABLED	1	ENABLED		
03	SORL_EXP[0]	0	DISABLED	1	ENABLED		
03	POE_SPEED_CHANGE_GEN0	0	DISABLED	1	ENABLED	Strap4	
03	POE_MAX_SPEED	0	GEN0	1	GEN2		
03	DP_PLL_VCO_3V3	0	USE[0]	1	USE[0]		
03	DP_PLL_VCO_3V3	0	USE[0]	1	USE[0]		

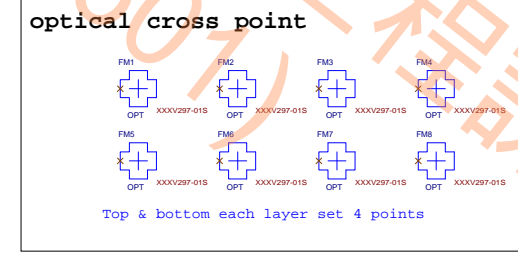
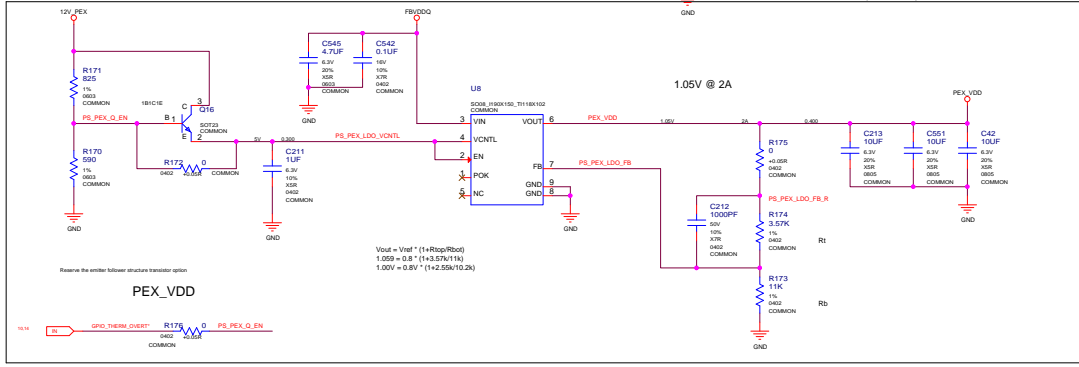
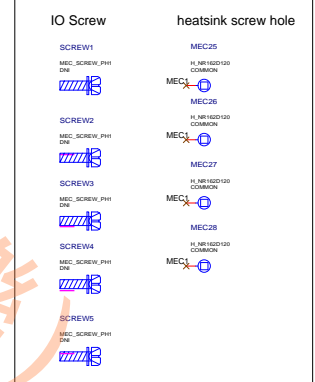
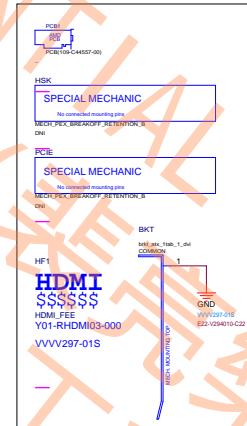
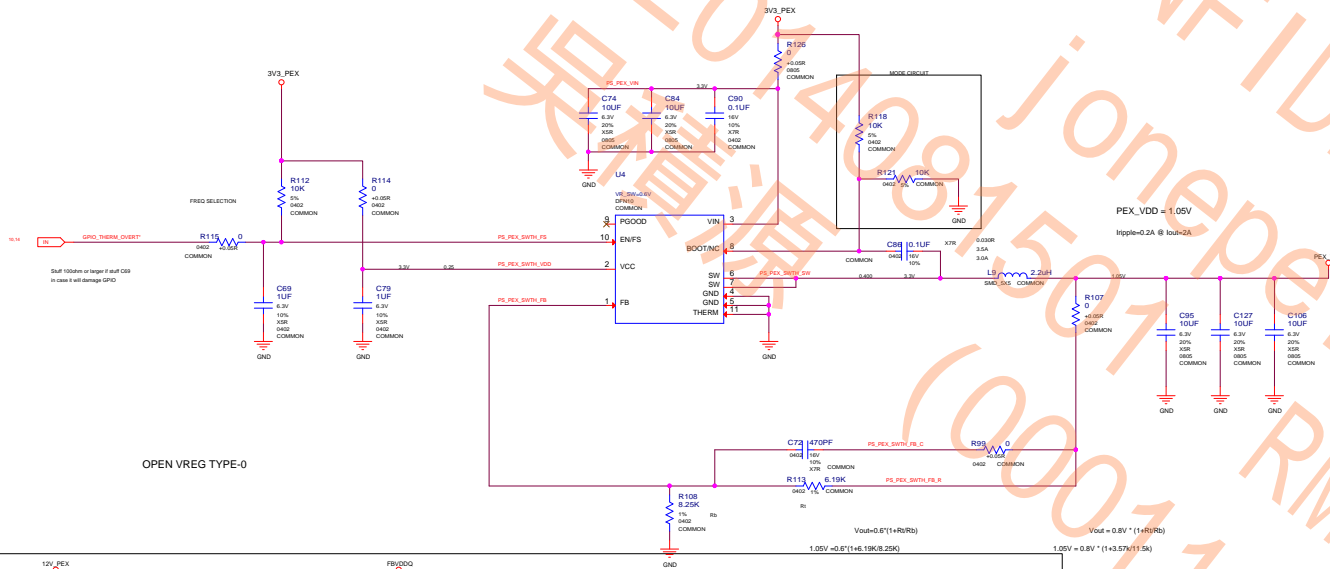
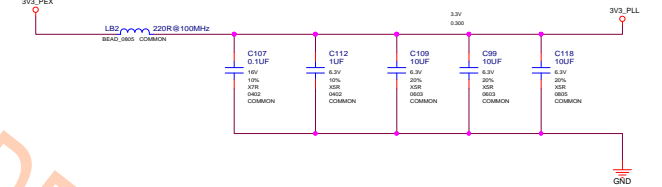
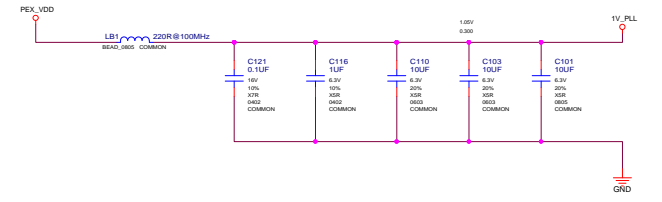
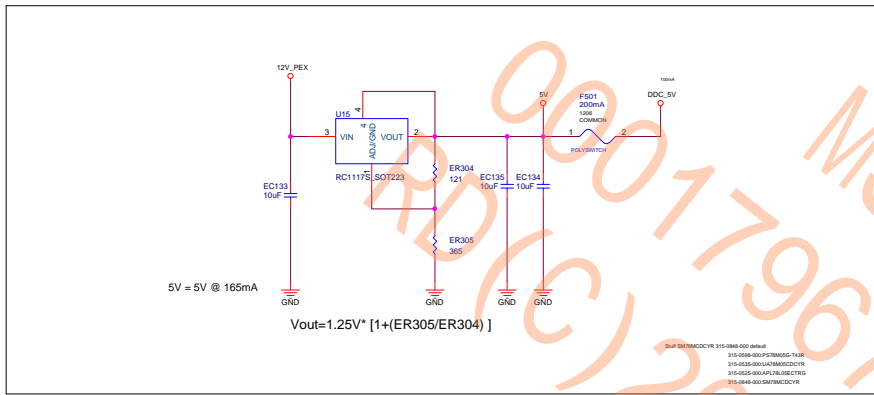


STACKUP IMPEDANCES - 607-12132-1000-A01.pdf
(Impedance Tolerance = +/- 10% unless otherwise noted)

Single Ended		SEZ	LW				Ref(above)	Ref(below)
TOP		40.0	0.17					L2
TOP		47.0	0.126					L2
TOP		52.0	0.102					L2
BOTTOM		47.0	0.126				L3	
BOTTOM		52.0	0.102				L3	
Differential (Edge)	DEZ	SEZ	PriWidth	PriGap	NeckWidth	NeckGap	Ref(above)	Ref(below)
TOP	80.0		0.12	0.101				L2
TOP	90.0		0.1	0.12				L2
BOTTOM	80.0		0.12	0.101			L3	
BOTTOM	90.0		0.1	0.12			L3	



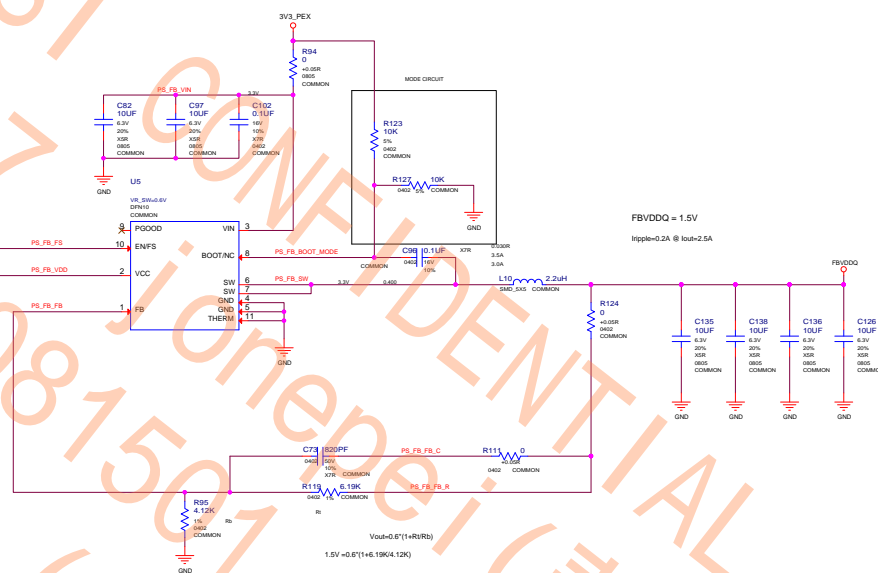
POWER SUPPLY I: PEXVDD, 5V



MICRO-STAR INT'L CO.,LTD			
MS-V297			
Size	Document Description	Rev	
Custom	12_POWER SUPPLY I_PEXVDD, 5V	10	
Date:	Monday, June 17, 2013	Sheet	1 of 30

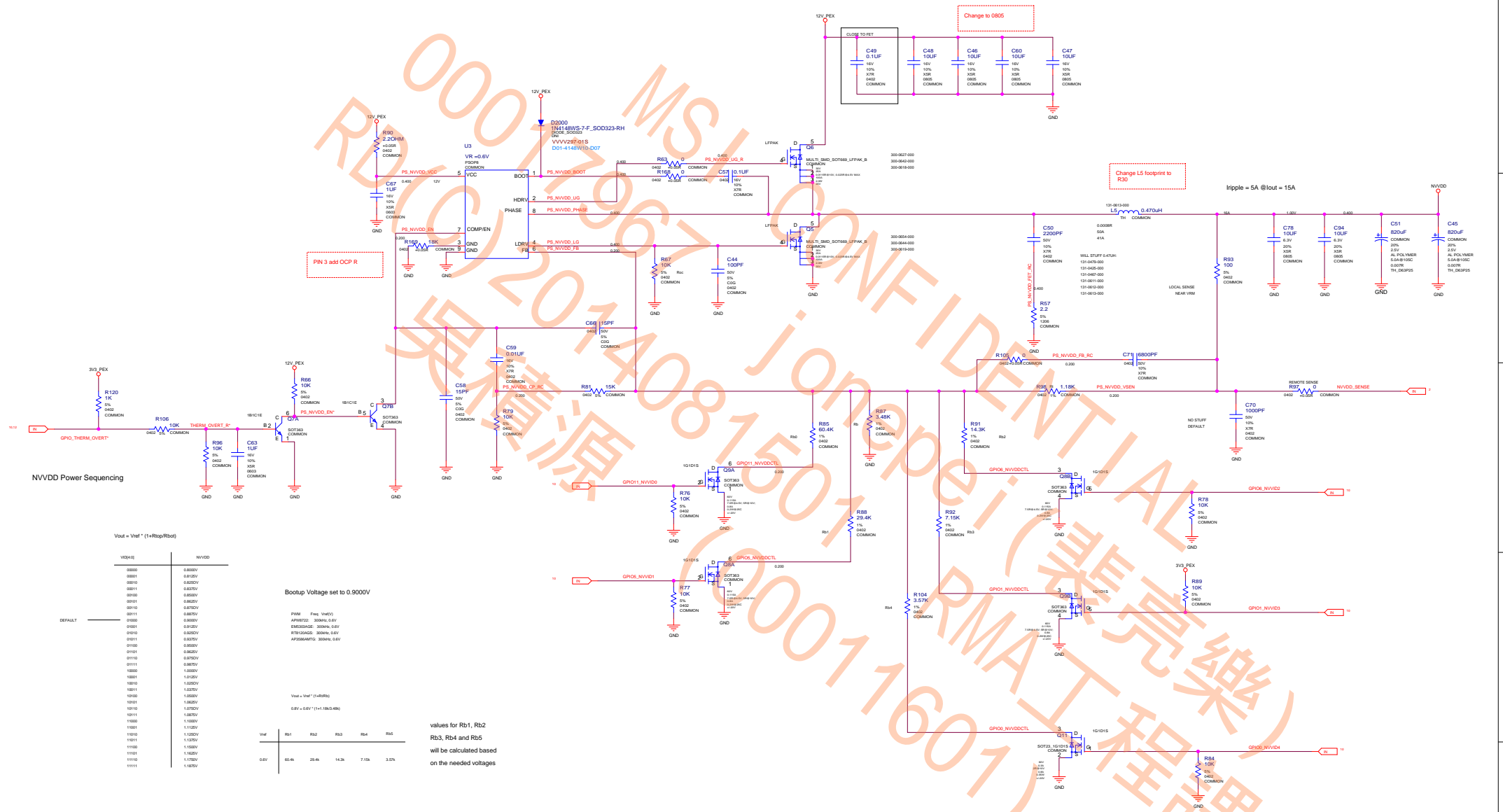
$$V_{out} = V_{ref} * (1 + R_2/R_1)$$

PS	Func	Vref	Tot
316-016B-000: AP343C0NTR 1MHz	0.6V	1.5%	
316-013A-000: RT8071AZQW 1MHz	0.6V	1.5%	
316-0746-000: UP1728P00A 1MHz	0.6V	1.5%	



FBVDDQ = 1.5V
Iripple=0.2A @ Iout=2.5A





	MICRO-STAR INT'L CO.,LTD		
	MS-V297		
	Size Custom	Document Description 14_POWER SUPPLY III, NVDD	Rev 10
	Date: Monday, June 17, 2013		Sheet 1 of 30

DECOUPLING FOR CORE POWER_BOTTOM

