

MS-V027 VER 10

NV-6600, NV43 64bit,128MB, BGA 16MX16 DDRII*4Pcs,PCIE,DVI-I,D-SUB(Fly Cable),TV-OUT(HT-7)

P295- Xrelease : NV43 , DDRII MEMORY * 4 pcs

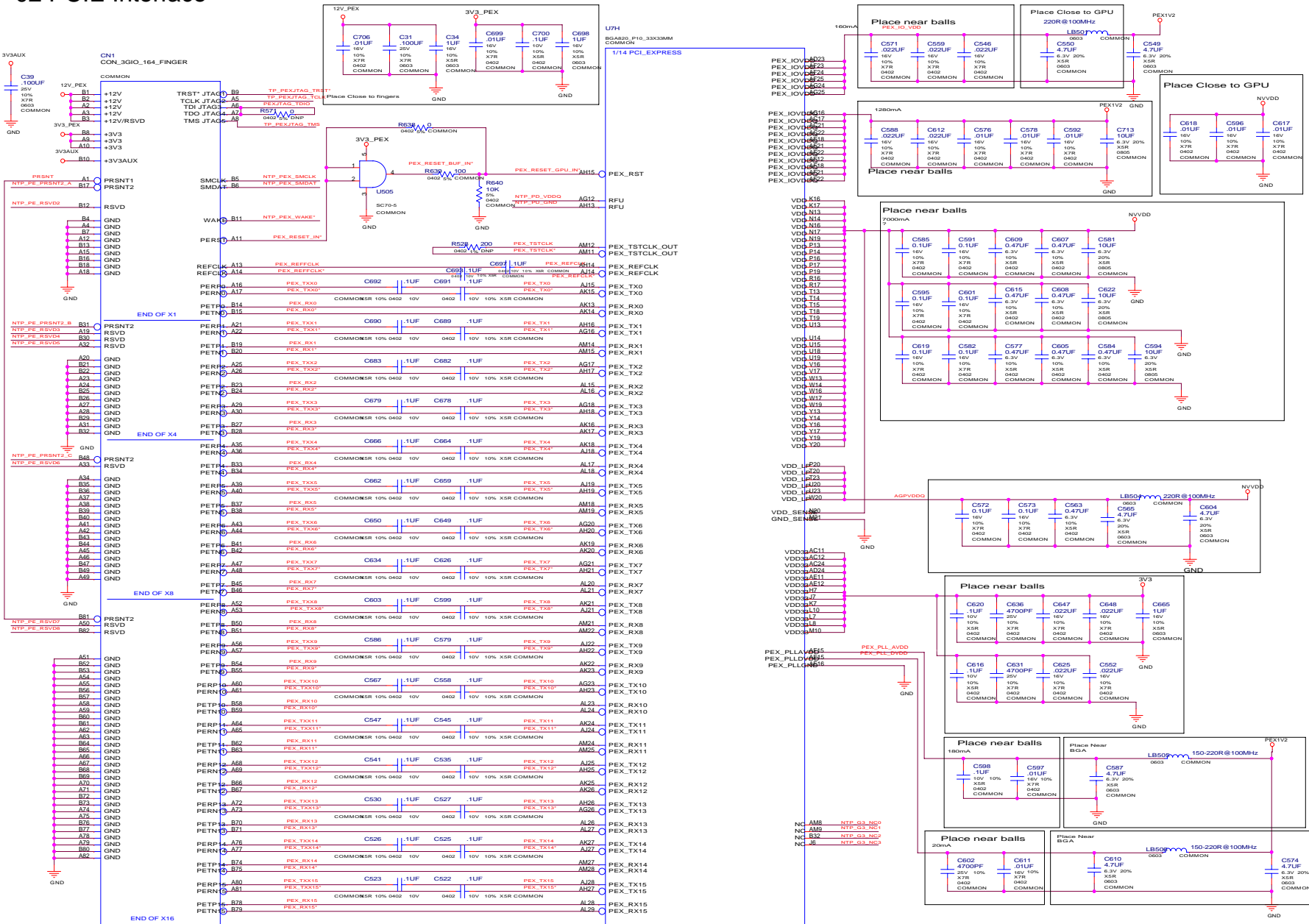
- Page1: P295 Overview
- Page2: PCIE Interface
- Page3: FB BANK A
- Page4: FB BANK C
- Page5: MEMORY 1st bank 0..31
- Page6: MEMORY 1st bank 32..63
- Page7: GND,DACA,DACB,DACC
- Page8: VGA DACA
- Page9: VGA/TV Out/HDTV DACB/C
- Page10: INTERNAL TMDS
- Page11: STRAPS, MIOA/MIOB
- Page12: XTAL, GPIO, ROM
- Page13:Power Supply (RT9218)
- Page14:Others Power Supply (Linear)
- Page15:G3 VIP/MIOB

REVISION HISTORY:

- 8/24/2005:
- 1.Removed Page:14 Memory FBVTT power circuit
- 2.Added Page:13 FBVDDQ cost down Power solution OpAmp+Mos.

REV	VARIANT	NVPN	ASSEMBLY
B	BASE	602-10229-BASE-SCH	BASE LEVEL GENERIC SCHEMATIC ONLY. COMMON & NO_STUFF ASSEMBLY NOTES AND BOM NOT FINAL
1	nv43divvgatv128m16x	602-10229-0002-101	P229-B02 NV43 GEN DVI-I/VGA/HDTV 128MB 16Mx16 TSOP
2	nv43divvgatv128m8x	602-10229-0003-101	P229-B02 NV43 GEN DVI-I/VGA/HDTV 128MB 8Mx16 TSOP
3	43gdivvgatv128m8x	602-50229-0001-101	P229-B02 NV43-GL GEN DVI-I/VGA/HDTV 128MB 8Mx16 TSOP
4	nv43divvgatv256m16x	602-10229-0004-101	P229-B02 NV43 GEN DVI-I/VGA/HDTV 256MB 16Mx16 TSOP
5	<UNDEFINED>	<UNDEFINED>	<UNDEFINED>
6	<UNDEFINED>	<UNDEFINED>	<UNDEFINED>
7	<UNDEFINED>	<UNDEFINED>	<UNDEFINED>
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12	<UNDEFINED>	<UNDEFINED>	<UNDEFINED>
13	<UNDEFINED>	<UNDEFINED>	<UNDEFINED>
14	<UNDEFINED>	<UNDEFINED>	<UNDEFINED>
15	<UNDEFINED>	<UNDEFINED>	<UNDEFINED>

02 PCIe Interface



NET RULES

NET	SNAME	NET	SFACING_RULE
PFX T00	PFX_T00	20MIL -G20 -30MIL -UPPER -DIFF	
PFX T01	PFX_T01	20MIL -G20 -30MIL -UPPER -DIFF	
PFX T02	PFX_T02	20MIL -G20 -30MIL -UPPER -DIFF	
PFX T03	PFX_T03	20MIL -G20 -30MIL -UPPER -DIFF	
PFX T04	PFX_T04	20MIL -G20 -30MIL -UPPER -DIFF	
PFX T05	PFX_T05	20MIL -G20 -30MIL -UPPER -DIFF	
PFX T06	PFX_T06	20MIL -G20 -30MIL -UPPER -DIFF	
PFX T07	PFX_T07	20MIL -G20 -30MIL -UPPER -DIFF	
PFX T08	PFX_T08	20MIL -G20 -30MIL -UPPER -DIFF	
PFX T09	PFX_T09	20MIL -G20 -30MIL -UPPER -DIFF	
PFX T10	PFX_T10	20MIL -G20 -30MIL -UPPER -DIFF	
PFX T11	PFX_T11	20MIL -G20 -30MIL -UPPER -DIFF	
PFX T12	PFX_T12	20MIL -G20 -30MIL -UPPER -DIFF	
PFX T13	PFX_T13	20MIL -G20 -30MIL -UPPER -DIFF	
PFX T14	PFX_T14	20MIL -G20 -30MIL -UPPER -DIFF	
PFX T15	PFX_T15	20MIL -G20 -30MIL -UPPER -DIFF	
PFX T16	PFX_T16	20MIL -G20 -30MIL -UPPER -DIFF	
PFX T17	PFX_T17	20MIL -G20 -30MIL -UPPER -DIFF	
PFX T18	PFX_T18	20MIL -G20 -30MIL -UPPER -DIFF	
PFX T19	PFX_T19	20MIL -G20 -30MIL -UPPER -DIFF	

[illegible]

PEX_R00		20MIL_G20_30MIL_USER_DIFF
PEX_R01		20MIL_G20_30MIL_USER_DIFF
PEX_R02		20MIL_G20_30MIL_USER_DIFF
PEX_R03		20MIL_G20_30MIL_USER_DIFF
PEX_R04		20MIL_G20_30MIL_USER_DIFF
PEX_R05		20MIL_G20_30MIL_USER_DIFF
PEX_R06		20MIL_G20_30MIL_USER_DIFF
PEX_R07		20MIL_G20_30MIL_USER_DIFF
PEX_R08		20MIL_G20_30MIL_USER_DIFF
PEX_R09		20MIL_G20_30MIL_USER_DIFF
PEX_R10		20MIL_G20_30MIL_USER_DIFF
PEX_R11		20MIL_G20_30MIL_USER_DIFF
PEX_R12		20MIL_G20_30MIL_USER_DIFF
PEX_R13		20MIL_G20_30MIL_USER_DIFF
PEX_R14		20MIL_G20_30MIL_USER_DIFF
PEX_R15		20MIL_G20_30MIL_USER_DIFF
PEX_R16		20MIL_G20_30MIL_USER_DIFF
PEX_R17		20MIL_G20_30MIL_USER_DIFF
PEX_R18		20MIL_G20_30MIL_USER_DIFF
PEX_R19		20MIL_G20_30MIL_USER_DIFF
PEX_R20		20MIL_G20_30MIL_USER_DIFF
PEX_R21		20MIL_G20_30MIL_USER_DIFF
PEX_R22		20MIL_G20_30MIL_USER_DIFF
PEX_R23		20MIL_G20_30MIL_USER_DIFF
PEX_R24		20MIL_G20_30MIL_USER_DIFF
PEX_R25		20MIL_G20_30MIL_USER_DIFF
PEX_R26		20MIL_G20_30MIL_USER_DIFF
PEX_R27		20MIL_G20_30MIL_USER_DIFF
PEX_R28		20MIL_G20_30MIL_USER_DIFF
PEX_R29		20MIL_G20_30MIL_USER_DIFF
PEX_R30		20MIL_G20_30MIL_USER_DIFF
PEX_R31		20MIL_G20_30MIL_USER_DIFF
PEX_R32		20MIL_G20_30MIL_USER_DIFF
PEX_R33		20MIL_G20_30MIL_USER_DIFF
PEX_R34		20MIL_G20_30MIL_USER_DIFF
PEX_R35		20MIL_G20_30MIL_USER_DIFF
PEX_R36		20MIL_G20_30MIL_USER_DIFF
PEX_R37		20MIL_G20_30MIL_USER_DIFF
PEX_R38		20MIL_G20_30MIL_USER_DIFF
PEX_R39		20MIL_G20_30MIL_USER_DIFF
PEX_R40		20MIL_G20_30MIL_USER_DIFF
PEX_R41		20MIL_G20_30MIL_USER_DIFF
PEX_R42		20MIL_G20_30MIL_USER_DIFF
PEX_R43		20MIL_G20_30MIL_USER_DIFF
PEX_R44		20MIL_G20_30MIL_USER_DIFF
PEX_R45		20MIL_G20_30MIL_USER_DIFF
PEX_R46		20MIL_G20_30MIL_USER_DIFF
PEX_R47		20MIL_G20_30MIL_USER_DIFF
PEX_R48		20MIL_G20_30MIL_USER_DIFF
PEX_R49		20MIL_G20_30MIL_USER_DIFF
PEX_R50		20MIL_G20_30MIL_USER_DIFF

PEX_REFCLK	PEX_REFCLK	20MHZ_G2G_30MIL_USER_DIFF
PEX_REFCLK*	PEX_REFCLK	20MHZ_G2G_30MIL_USER_DIFF
PEX_TSTCLK	PEX_TSTCLK	20MHZ_G2G_30MIL_USER_DIFF
PEX_TSTCLK*	PEX_TSTCLK	20MHZ_G2G_30MIL_USER_DIFF
PEX_REFCLK	PEX_REFCLK	20MHZ_G2G_30MIL_USER_DIFF
PEX_REFCLK*	PEX_REFCLK	20MHZ_G2G_30MIL_USER_DIFF

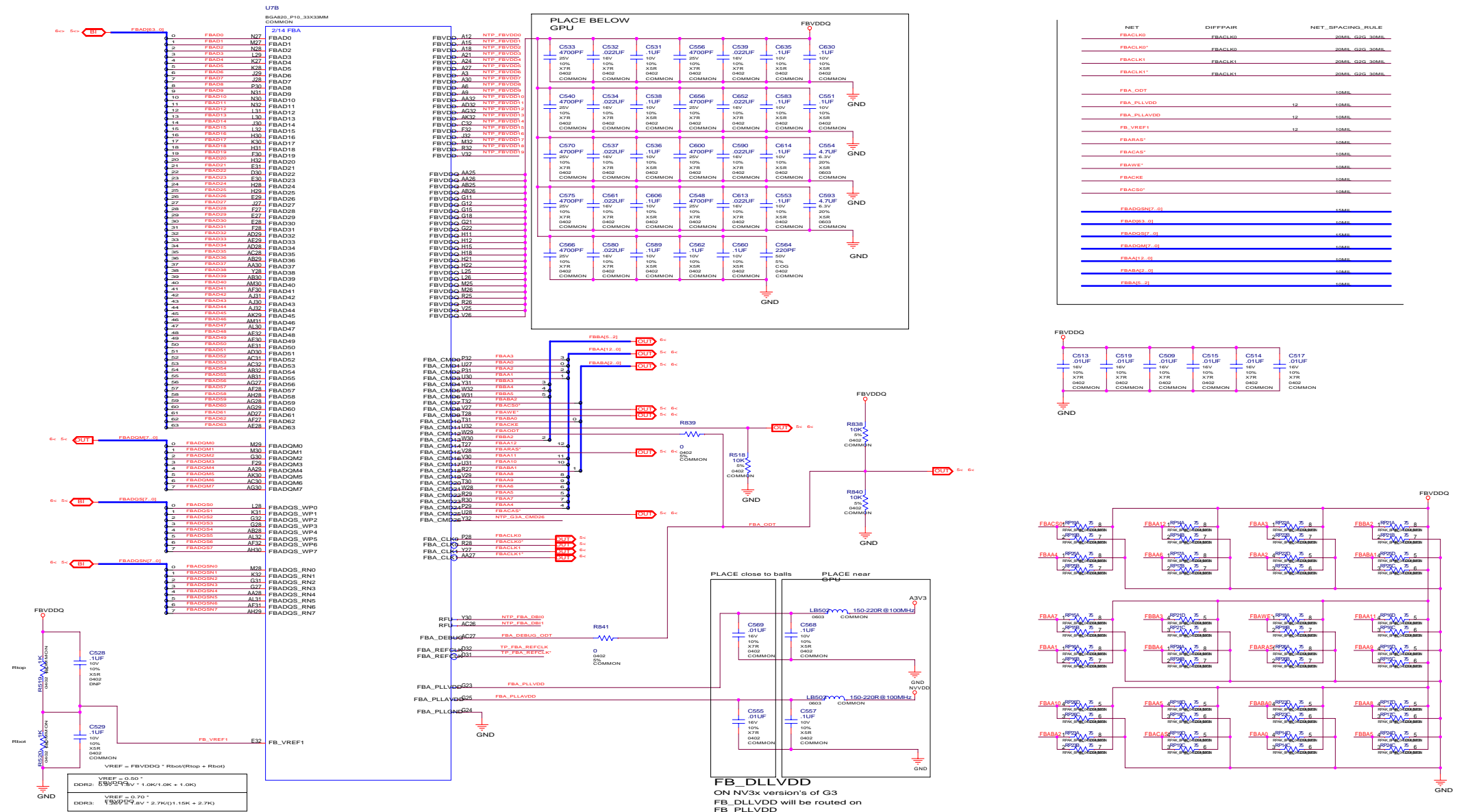
Net Name	MIN_LINE_WIDTH	NET_SPACING	TYPE
AGPVDDQ	16	10MIL	AGPVDDQ
PEX_IO_VDD	16	10MIL	
PEX_PLL_AVDD	12	10MIL	
PEX_PLL_DVDD	12	10MIL	



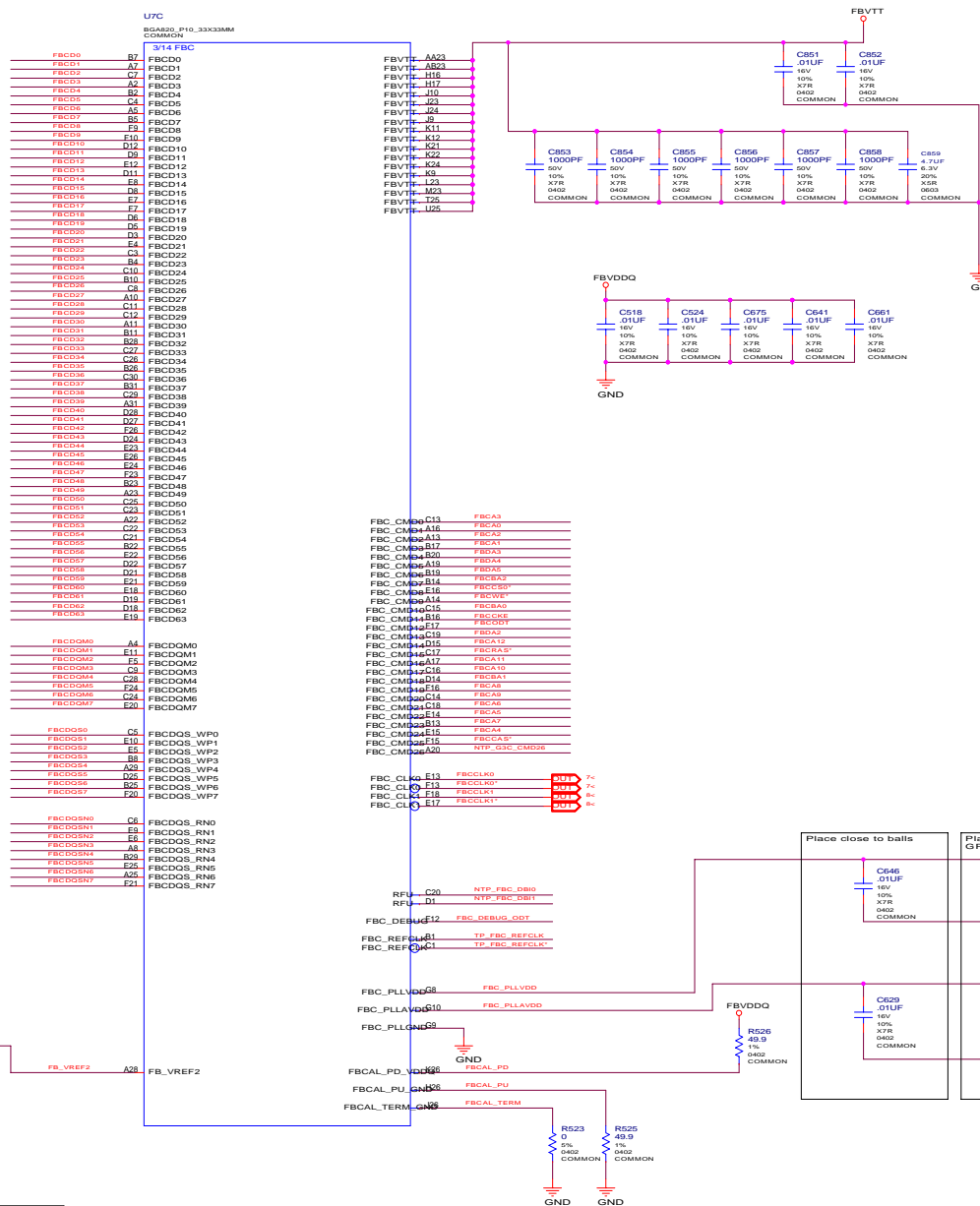
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MS-V027		
Size Custom	Document Number PCIE Interface	Rev 0A
Date: Monday, August 28, 2006	Sheet	2 of 15

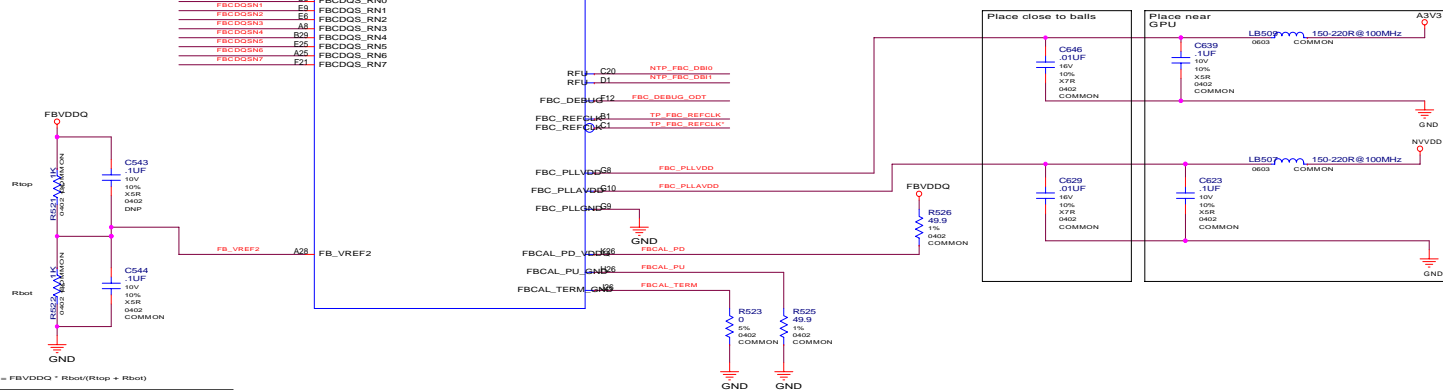
03 FB BANK A



04 FB BANK C

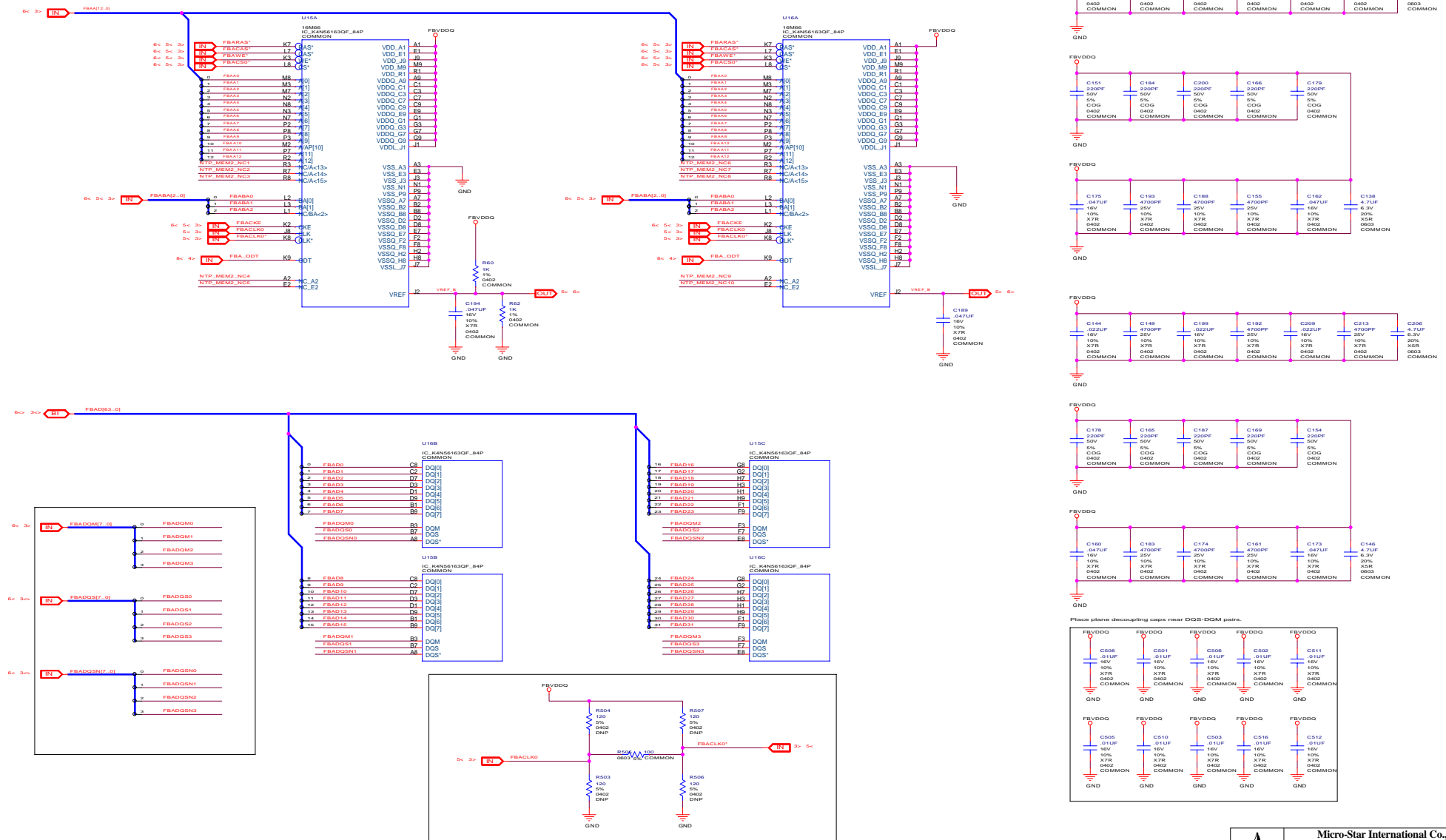


NET	DIFFPAIR	NET_SPACING_RULE
FBCCLK0	FBCCLK0	20MIL_G2G_30MIL
FBCCLK0*	FBCCLK0	20MIL_G2G_30MIL
FBCCLK1	FBCCLK1	20MIL_G2G_30MIL
FBCCLK1*	FBCCLK1	20MIL_G2G_30MIL
FBC_PLLVDD		10MIL
FBC_PLLAVDD		12 10MIL
FBC_VREF2		12 10MIL
FBCRAS*		10MIL
FBCCAS*		10MIL
FBCWE*		10MIL
FBCCKE		10MIL
FBCCS0*		10MIL
FBCDQS[7_0]		14MIL
FBCDQ[63_0]		14MIL
FBCDQS[7_0]		14MIL
FBCDQ[67_0]		14MIL
FBCA[12_0]		10MIL
FBCBA[0_0]		10MIL
FBCBA[0_3]		10MIL
FBCAL_PD		10MIL
FBCAL_PU		10MIL
FBCAL_TERM		10MIL



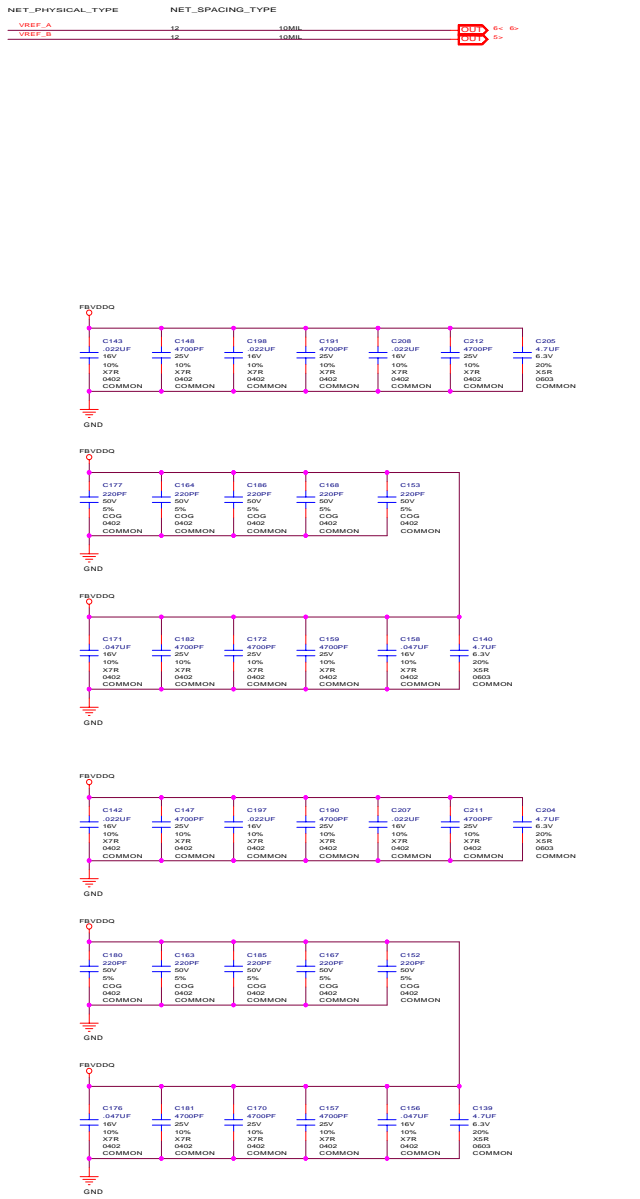
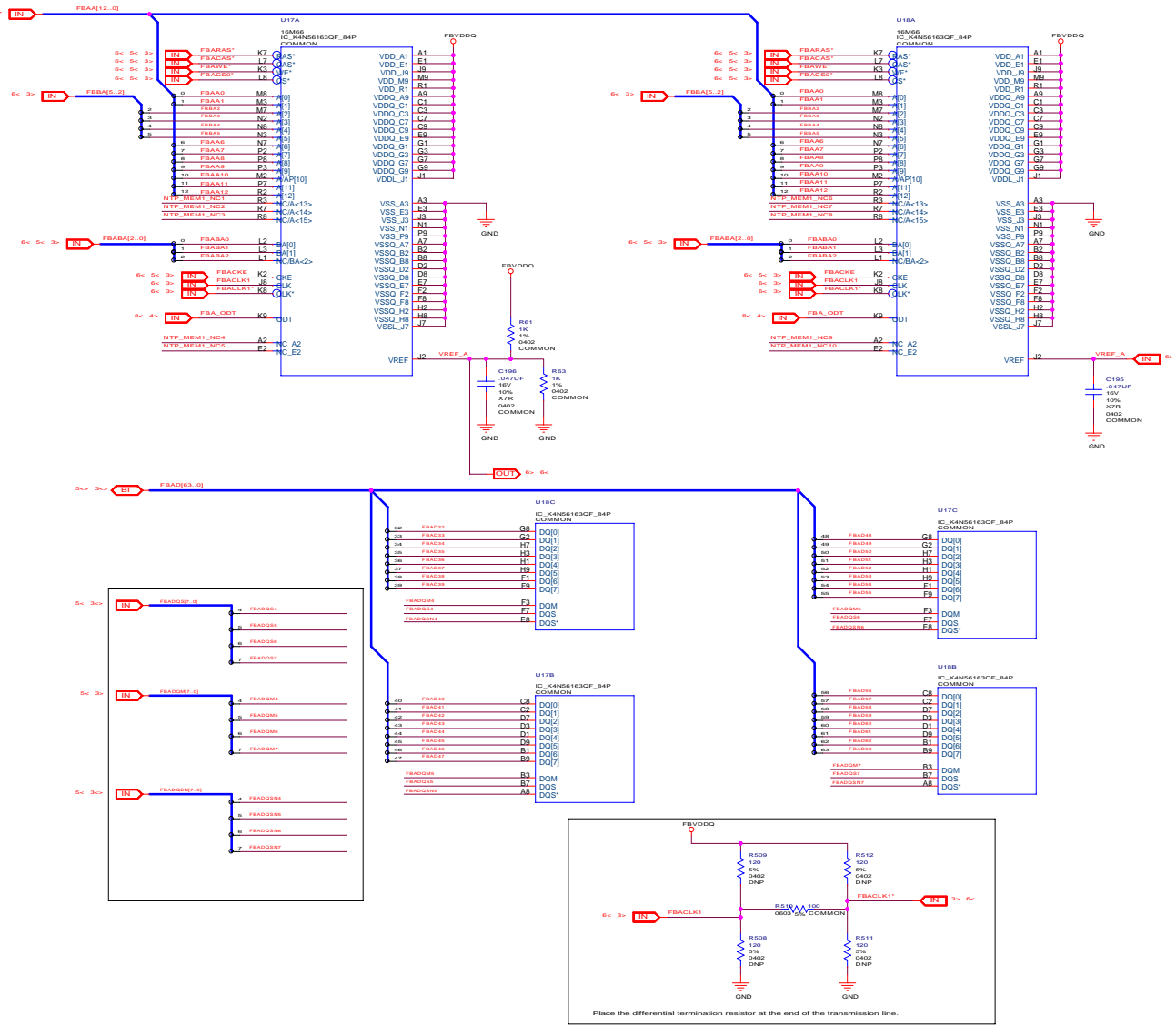
VREF = FBVDDQ * Rbot/(Rtop + Rbot)	
VREF = 0.50 * FBVDDQ	
DDR2: 0.9V = 1.8V * 1.0K/(1.0K + 1.0K)	
VREF = 0.70 * FBVDDQ	
DDR3: 1.26V = 1.8V * 2.7K/(1.15K + 2.7K)	

PLACE ALL DISCRETE COMPONENTS AS NEAR AS POSSIBLE TO MEMORY

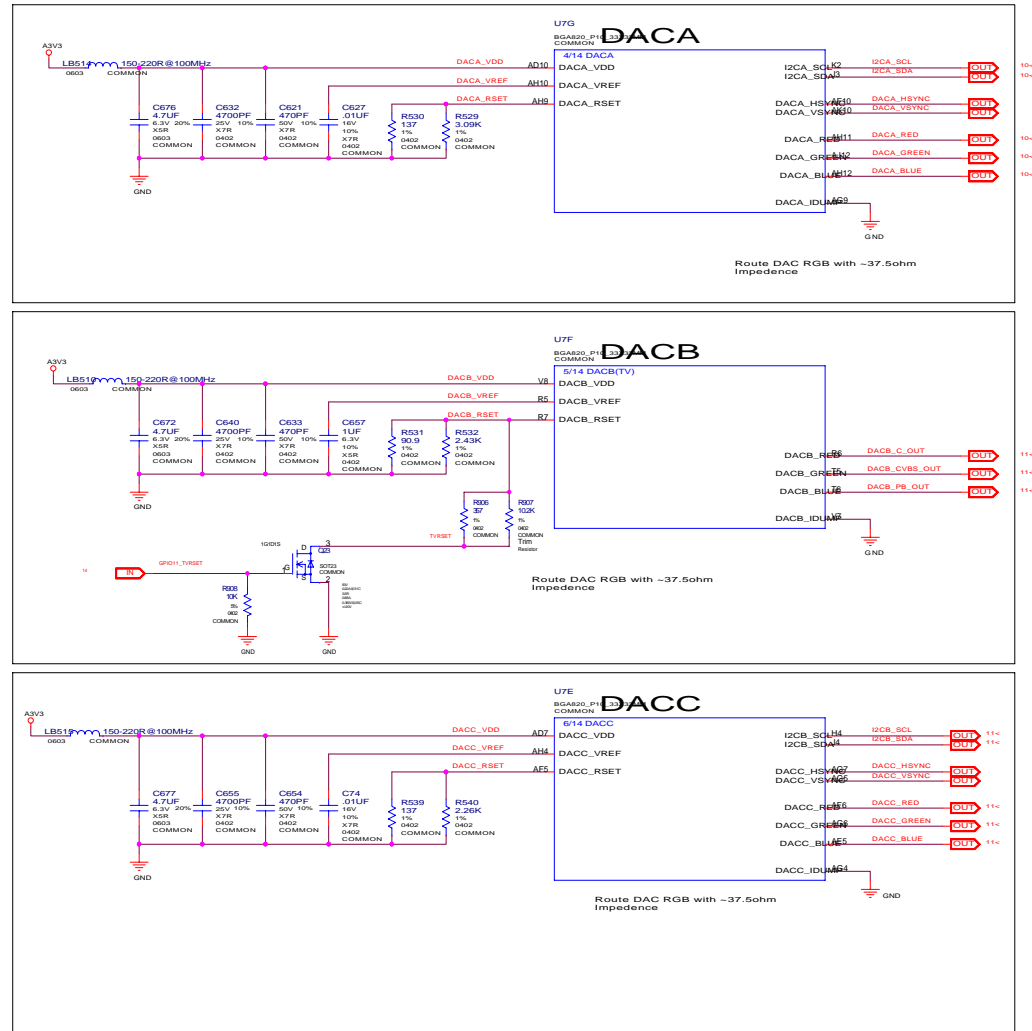
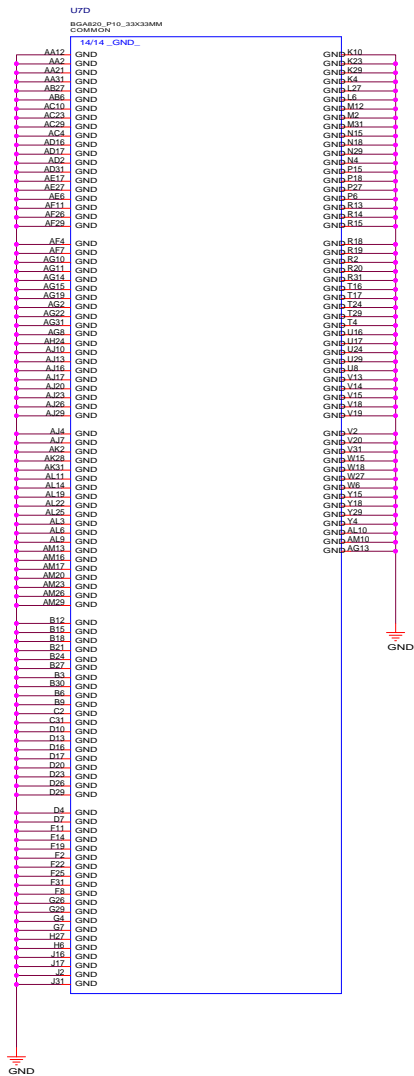


06 MEMORY 1st bank 32..63

PLACE ALL DISCRETE COMPONENTS AS NEAR AS POSSIBLE TO MEMORY

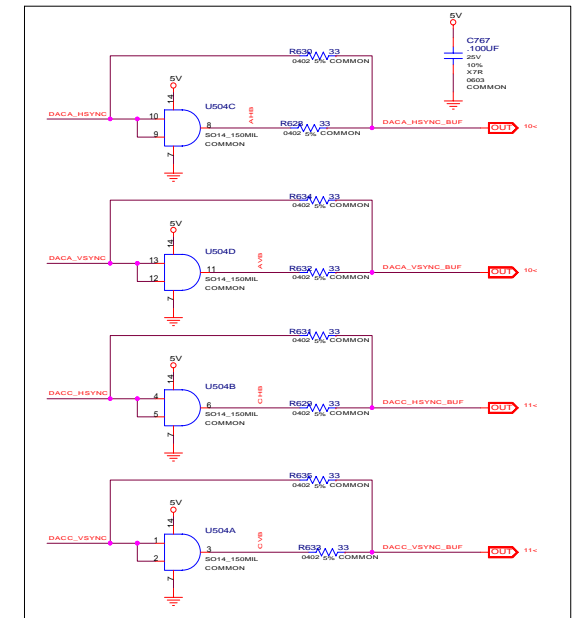


07 GND,DACA,DACB,DACC



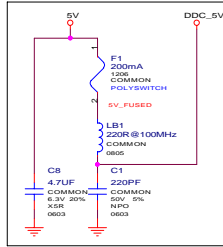
NET RULES			
NET_NAME	MIN_LENGTH	NET_SPACING_RULE	IMPEDANCE
DCA_SCL		10MIL	
DCA_SDA		10MIL	
DCA_HSYNC		10MIL	
DCA_VSYNC		10MIL	
DCA_RED		10MIL	
DCA_GREEN		20MIL	US_A111-R117-1-37-50 OHM-2%
DCA_BLUE		20MIL	US_A112-R116-1-37-50 OHM-2%
DCA_VDD	12	10MIL	US_A112-R115-1-37-50 OHM-2%
DCA_OREF	12	10MIL	
DCA_RESET	12	10MIL	
<hr/>			
DACB_C_OUT		20MIL	US_BE-R141-1-37-50 OHM-2%
DACB_CVBS_OUT		20MIL	US_T5-R160-1-37-50 OHM-2%
DACB_PS_OUT		20MIL	US_T6-R163-1-37-50 OHM-2%
DACB_VDD	12	10MIL	
DACB_VREF	12	10MIL	
DACB_RESET	12	10MIL	
DACB_SCL	12	10MIL	
<hr/>			
DACC_HSYNC		10MIL	
DACC_VSYNC		10MIL	
DACC_RED		20MIL	US_AFA-R123-1-37-50 OHM-2%
DACC_GREEN		20MIL	US_AFA-R127-1-37-50 OHM-2%
DACC_BLUE		20MIL	US_AFA-R127-1-37-50 OHM-2%
DACC_VDD	12	10MIL	US_AFA-R127-1-37-50 OHM-2%
DACC_VREF	12	10MIL	
DACC_RESET	12	10MIL	
DACC_SCL	12	10MIL	
DCCB_SDA		10MIL	
DCCB_SCL		10MIL	
SEL_2ND_DEV		10MIL	
ARB		10MIL	
AVS		10MIL	
DACA_HSYNC_BUF		10MIL	
DACA_VSYNC_BUF		10MIL	
CHB		10MIL	
CVB		10MIL	
DACC_HSYNC_BUF		10MIL	
DACC_VSYNC_BUF		10MIL	

DACA & DACC Sync Buffers

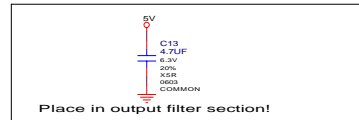
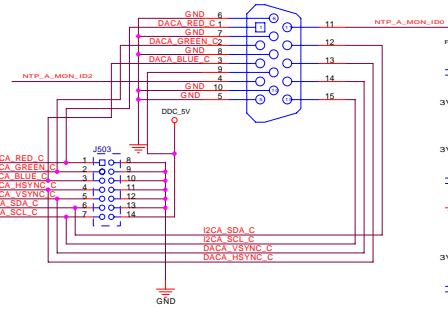
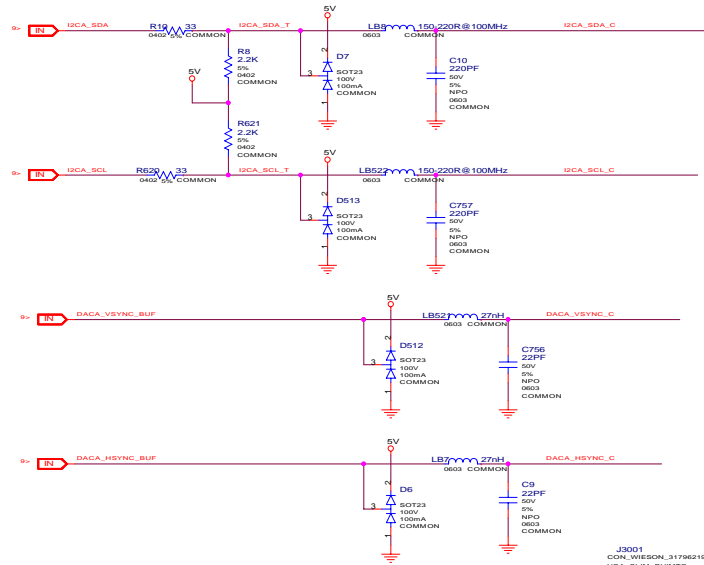
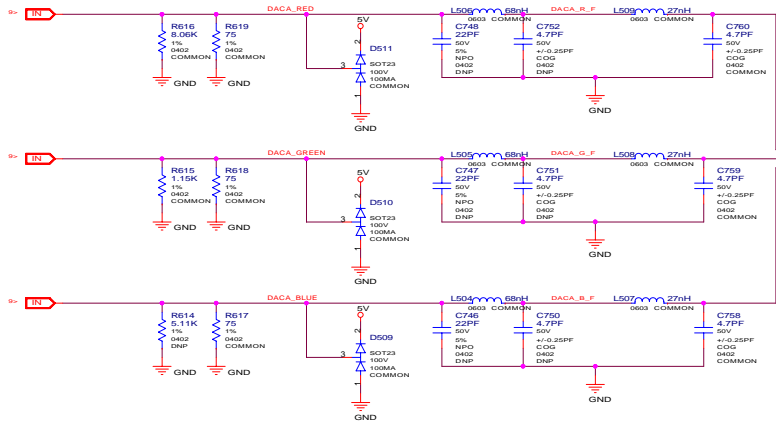


08 VGA DACA

DDC 5V



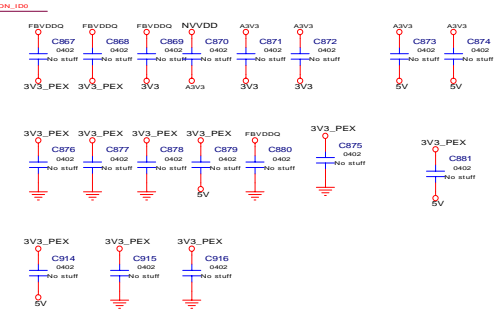
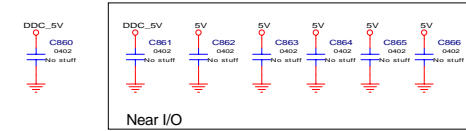
Changed the FUSE to 200mA



NET_NAME		NET_SPACING_RULE	
	DACA_R_F	20MIL	
	DACA_G_F	20MIL	
	DACA_B_F	20MIL	
	DACA_RED_C	20MIL	
	DACA_GREEN_C	20MIL	
	DACA_BLUE_C	20MIL	
	DACA_HSYNC_C	100MIL	
	DACA_HSYNC_C	100MIL	

		MIN_LINE_WIDTH	VOLTAGE
SV	SV_FUSED	16	5V
DDC_SV	RDE_SV	16	5V
A3V3	NR3	16	3.3V
GND	GND	16	3V

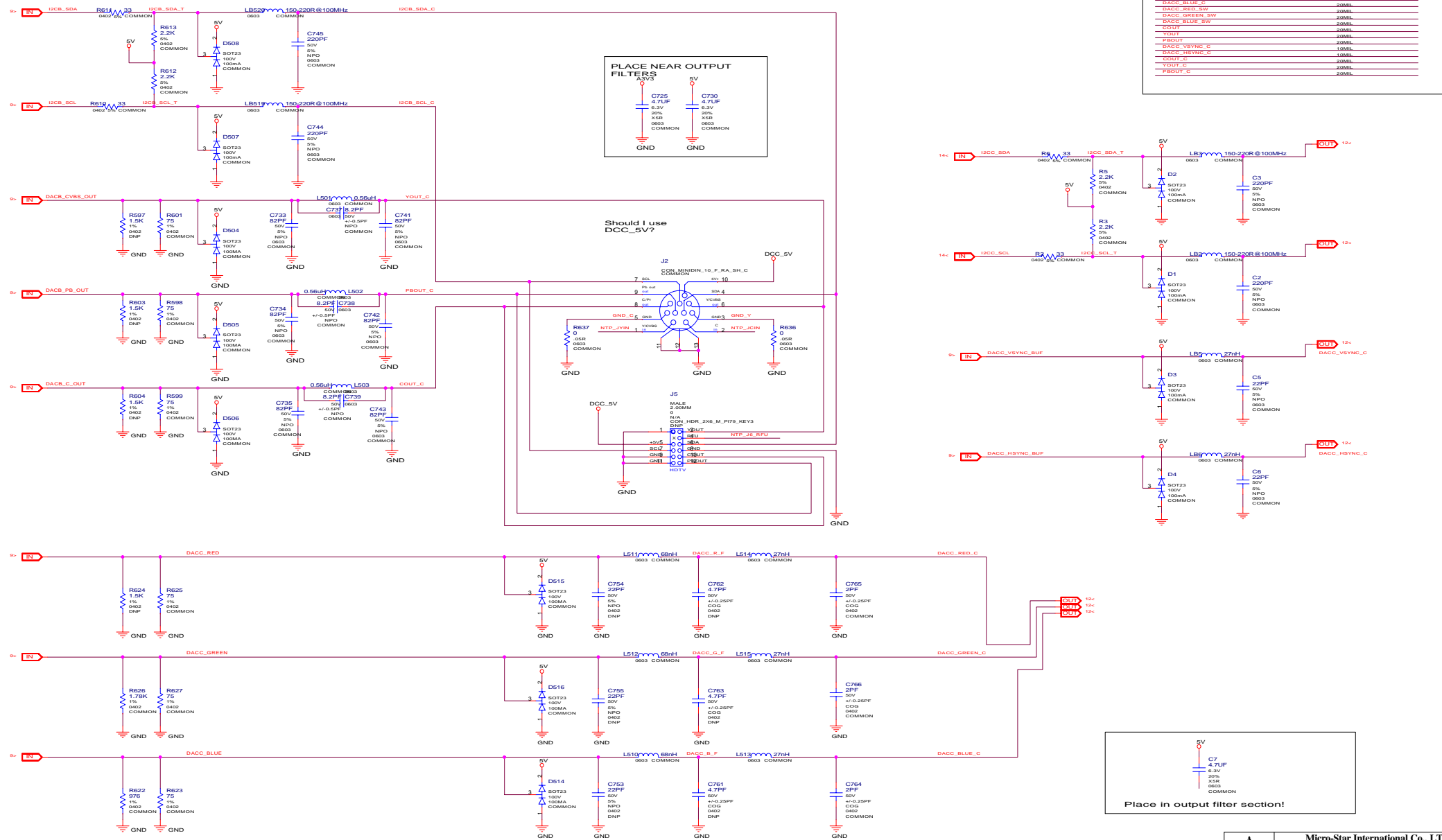
EMI Reserve Cap.



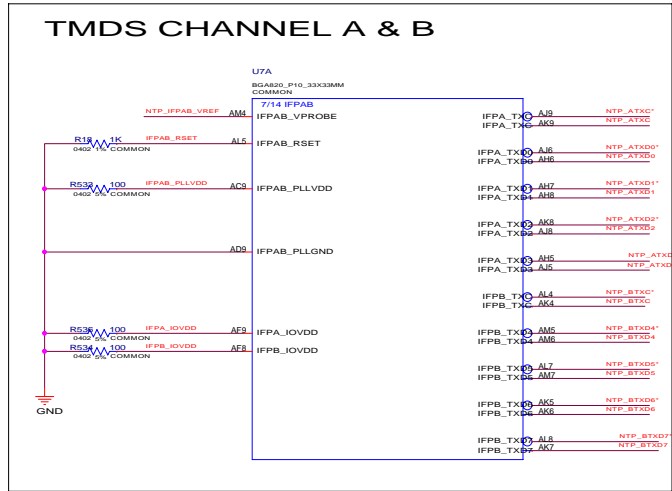
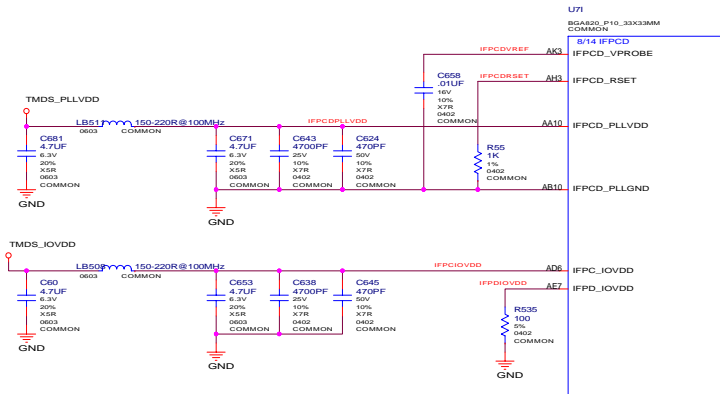
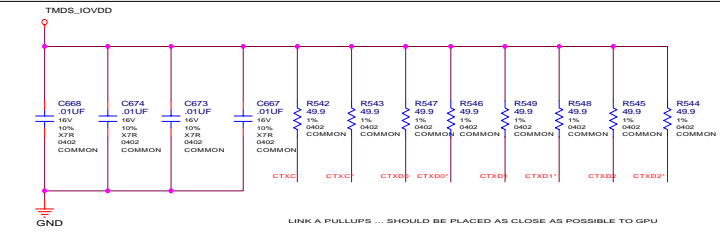
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MS-V027		
Size Custom	Document Number VGA DACA	R (
Date: Monday, August 29, 2005	Sheet 8 of	

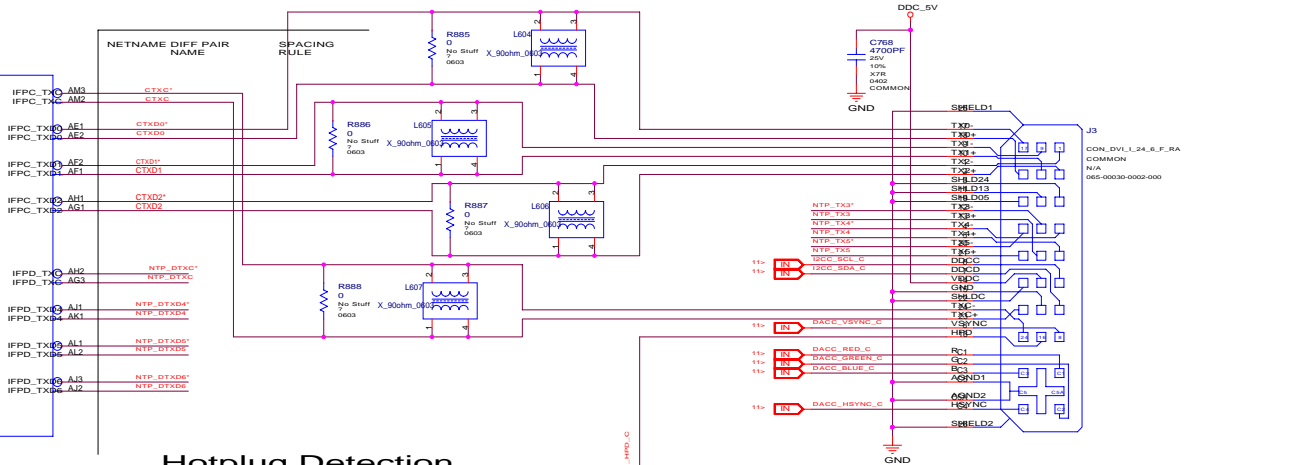
09 VGA/TV Out/HDTV DACB/C



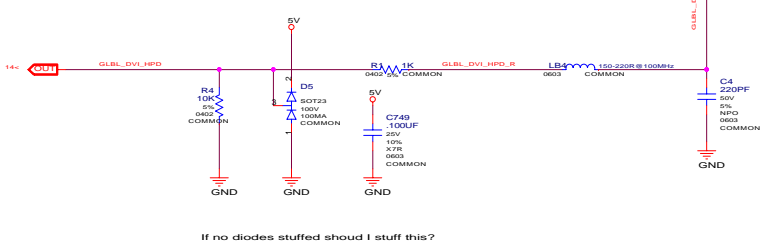
10 INTERNAL TMDS



INTERNAL TMDS ..LINK C/D



Hotplug Detection



NET	MIN_LINE_WIDTH	VOLTAGE
IFPCDVREF	12	3.3V
IFPCDRLVDD	12	3.3V
IFPCDVDD	12	3.3V

NETNAME	DIFF PAIR NAME	SPACING RULE
CTX0*	CTX0	20MIL_G25_30MIL
CTX0*	CTX0	20MIL_G25_30MIL
CTX00*	CTX00	20MIL_G25_30MIL
CTX00	CTX00	20MIL_G25_30MIL
CTX01*	CTX01	20MIL_G25_30MIL
CTX01	CTX01	20MIL_G25_30MIL
CTX02*	CTX02	20MIL_G25_30MIL
CTX02	CTX02	20MIL_G25_30MIL

Overlap pads to save space and to prevent assembly of both resistors.

Layout

Ground Signal High logic voltage

STRAPS	Bit Signal	Values
	00: PCL_AD_SWAP	0 REVERSED 1 NORMAL
R31 1.8K 0402 0% COMMON	01: SUB_VENDOR	00 0000 FROM (DEFAULT) 01 0000 FROM (DEFAULT)
R51 1.8K 0402 0% COMMON	02: RAM_CFG_0	0000 1000 0001 16Mx16DDR 0010 32Mx16DDR 0011 64Mx16DDR 0100 128Mx16DDR 0101 256Mx16DDR 0110 512Mx16DDR 0111 1GBx16DDR 1000 2GBx16DDR 1001 4GBx16DDR 1010 8GBx16DDR 1011 16GBx16DDR 1100 32GBx16DDR 1101 64GBx16DDR 1110 128GBx16DDR 1111 256GBx16DDR
R33 1.8K 0402 0% COMMON	03: RAM_CFG_1	0000 1000 0001 16Mx16DDR 0010 32Mx16DDR 0011 64Mx16DDR 0100 128Mx16DDR 0101 256Mx16DDR 0110 512Mx16DDR 0111 1GBx16DDR 1000 2GBx16DDR 1001 4GBx16DDR 1010 8GBx16DDR 1011 16GBx16DDR 1100 32GBx16DDR 1101 64GBx16DDR 1110 128GBx16DDR 1111 256GBx16DDR
R35 1.8K 0402 0% COMMON	04: RAM_CFG_2	0000 1000 0001 16Mx16DDR 0010 32Mx16DDR 0011 64Mx16DDR 0100 128Mx16DDR 0101 256Mx16DDR 0110 512Mx16DDR 0111 1GBx16DDR 1000 2GBx16DDR 1001 4GBx16DDR 1010 8GBx16DDR 1011 16GBx16DDR 1100 32GBx16DDR 1101 64GBx16DDR 1110 128GBx16DDR 1111 256GBx16DDR
R37 1.8K 0402 0% COMMON	05: RAM_CFG_3	0000 1000 0001 16Mx16DDR 0010 32Mx16DDR 0011 64Mx16DDR 0100 128Mx16DDR 0101 256Mx16DDR 0110 512Mx16DDR 0111 1GBx16DDR 1000 2GBx16DDR 1001 4GBx16DDR 1010 8GBx16DDR 1011 16GBx16DDR 1100 32GBx16DDR 1101 64GBx16DDR 1110 128GBx16DDR 1111 256GBx16DDR
R39 1.8K 0402 0% COMMON	06: CRYSTAL_0	00 13.500 MHz 01 14.31818 MHz 10 17.000 MHz 11 UNKNOWN
R41 1.8K 0402 0% COMMON	22: CRYSTAL_1	00 13.500 MHz 01 14.31818 MHz 10 17.000 MHz 11 UNKNOWN
R43 1.8K 0402 0% COMMON	07: TV_MODE_0	00 2P-CAM 01 2P-SC 10 2P-AL 11 2P-CET
R45 1.8K 0402 0% COMMON	08: TV_MODE_1	00 2P-CAM 01 2P-SC 10 2P-AL 11 2P-CET
R47 1.8K 0402 0% COMMON	09: AGP_30_Bx	0 0AGP 1 1AGP 2 2AGP 3 3AGP 4 4AGP 5 5AGP 6 6AGP 7 7AGP 8 8AGP 9 9AGP 10 10AGP 11 11AGP 12 12AGP 13 13AGP 14 14AGP 15 15AGP 16 16AGP 17 17AGP 18 18AGP 19 19AGP 20 20AGP 21 21AGP 22 22AGP 23 23AGP 24 24AGP 25 25AGP 26 26AGP 27 27AGP 28 28AGP 29 29AGP 30 30AGP 31 31AGP 32 32AGP 33 33AGP 34 34AGP 35 35AGP 36 36AGP 37 37AGP 38 38AGP 39 39AGP 40 40AGP 41 41AGP 42 42AGP 43 43AGP 44 44AGP 45 45AGP 46 46AGP 47 47AGP 48 48AGP 49 49AGP 50 50AGP 51 51AGP 52 52AGP 53 53AGP 54 54AGP 55 55AGP 56 56AGP 57 57AGP 58 58AGP 59 59AGP 60 60AGP 61 61AGP 62 62AGP 63 63AGP 64 64AGP 65 65AGP 66 66AGP 67 67AGP 68 68AGP 69 69AGP 70 70AGP 71 71AGP 72 72AGP 73 73AGP 74 74AGP 75 75AGP 76 76AGP 77 77AGP 78 78AGP 79 79AGP 80 80AGP 81 81AGP 82 82AGP 83 83AGP 84 84AGP 85 85AGP 86 86AGP 87 87AGP 88 88AGP 89 89AGP 90 90AGP 91 91AGP 92 92AGP 93 93AGP 94 94AGP 95 95AGP 96 96AGP 97 97AGP 98 98AGP 99 99AGP 100 100AGP 101 101AGP 102 102AGP 103 103AGP 104 104AGP 105 105AGP 106 106AGP 107 107AGP 108 108AGP 109 109AGP 110 110AGP 111 111AGP 112 112AGP 113 113AGP 114 114AGP 115 115AGP 116 116AGP 117 117AGP 118 118AGP 119 119AGP 120 120AGP 121 121AGP 122 122AGP 123 123AGP 124 124AGP 125 125AGP 126 126AGP 127 127AGP 128 128AGP 129 129AGP 130 130AGP 131 131AGP 132 132AGP 133 133AGP 134 134AGP 135 135AGP 136 136AGP 137 137AGP 138 138AGP 139 139AGP 140 140AGP 141 141AGP 142 142AGP 143 143AGP 144 144AGP 145 145AGP 146 146AGP 147 147AGP 148 148AGP 149 149AGP 150 150AGP 151 151AGP 152 152AGP 153 153AGP 154 154AGP 155 155AGP 156 156AGP 157 157AGP 158 158AGP 159 159AGP 160 160AGP 161 161AGP 162 162AGP 163 163AGP 164 164AGP 165 165AGP 166 166AGP 167 167AGP 168 168AGP 169 169AGP 170 170AGP 171 171AGP 172 172AGP 173 173AGP 174 174AGP 175 175AGP 176 176AGP 177 177AGP 178 178AGP 179 179AGP 180 180AGP 181 181AGP 182 182AGP 183 183AGP 184 184AGP 185 185AGP 186 186AGP 187 187AGP 188 188AGP 189 189AGP 190 190AGP 191 191AGP 192 192AGP 193 193AGP 194 194AGP 195 195AGP 196 196AGP 197 197AGP 198 198AGP 199 199AGP 200 200AGP 201 201AGP 202 202AGP 203 203AGP 204 204AGP 205 205AGP 206 206AGP 207 207AGP 208 208AGP 209 209AGP 210 210AGP 211 211AGP 212 212AGP 213 213AGP 214 214AGP 215 215AGP 216 216AGP 217 217AGP 218 218AGP 219 219AGP 220 220AGP 221 221AGP 222 222AGP 223 223AGP 224 224AGP 225 225AGP 226 226AGP 227 227AGP 228 228AGP 229 229AGP 230 230AGP 231 231AGP 232 232AGP 233 233AGP 234 234AGP 235 235AGP 236 236AGP 237 237AGP 238 238AGP 239 239AGP 240 240AGP 241 241AGP 242 242AGP 243 243AGP 244 244AGP 245 245AGP 246 246AGP 247 24

MEC3
MEC_HEX_JACK_SCREW
COMMON

MEC5
MEC_HEX_JACK_SCREW
COMMON

MEC4
MEC_HEX_JACK_SCREW
COMMON

MEC2
MEC_HEX_JACK_SCREW
COMMON

MECH MOUNTING TOP

BKT1
mg3_454_8viss
COMMON

1

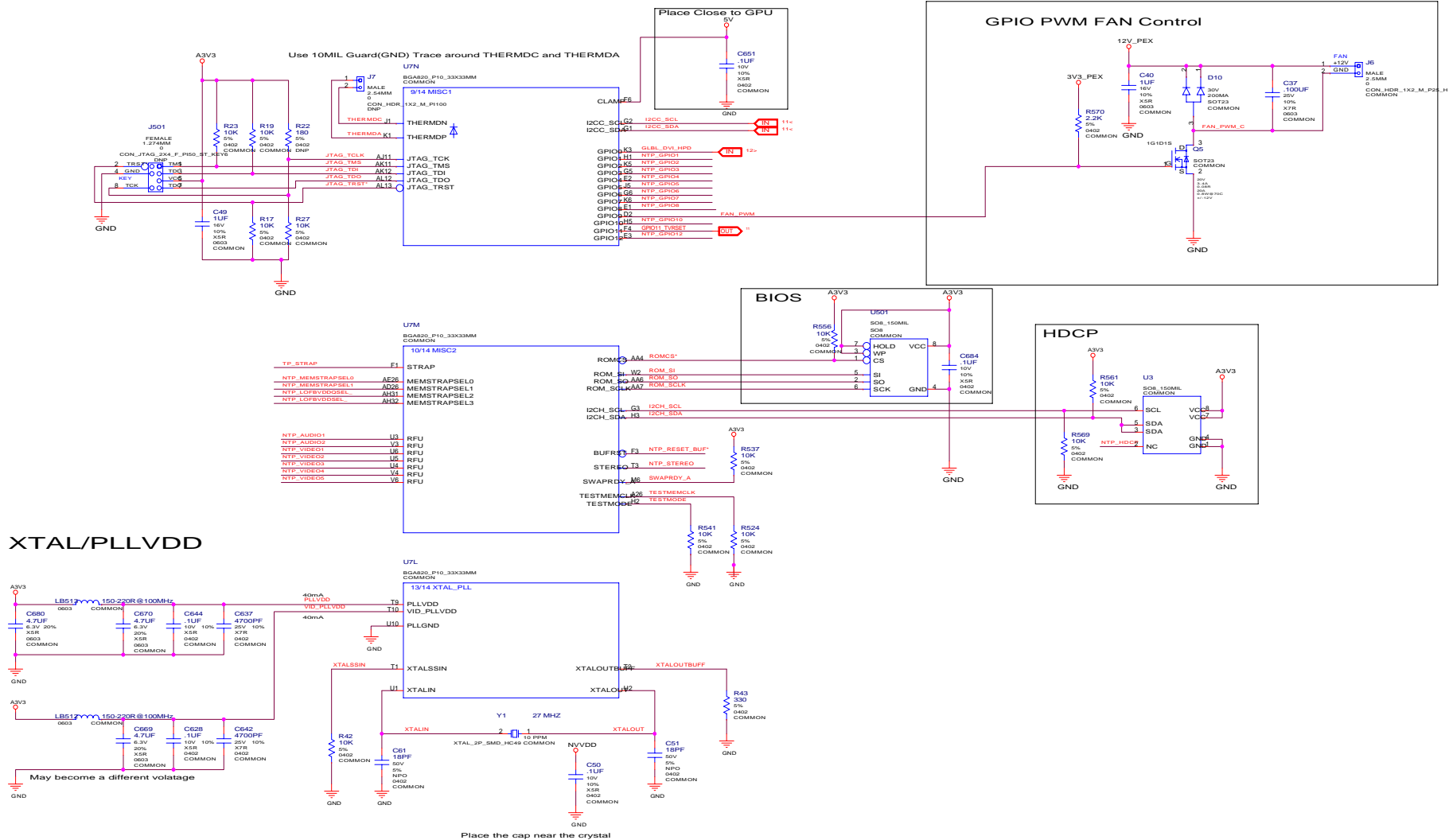
GND

CABLE

MEC6
HSP_GU_TAL_1_27342314_V1
COMMON

12 XTAL, GPIO, ROM

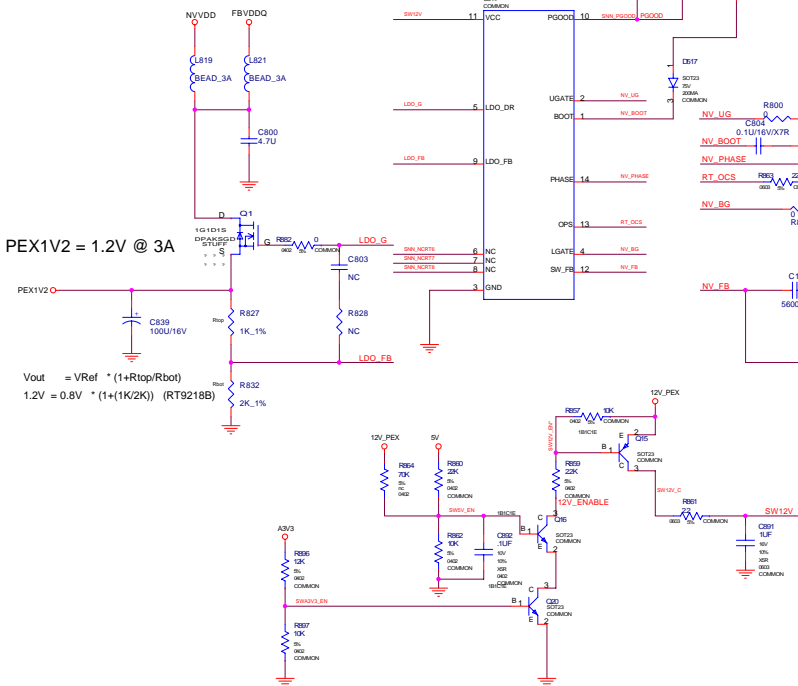
NET	MIN LIN WIDTH	NET_SPACING_TYPE
XTALIN		20MIL
XTALOUT		20MIL
PLLVD	12	10MIL
VID_PLLVD	12	10MIL
FAN_PWM		20MIL
FAN_PWM_B		20MIL
FAN_PWM_C		20MIL
THERMDC	10	
THERMDA	10	



13 Power Supply (RT9218)

NV-Standard use FBVDDQ ,
Can't use RT9218 PGood power sequence

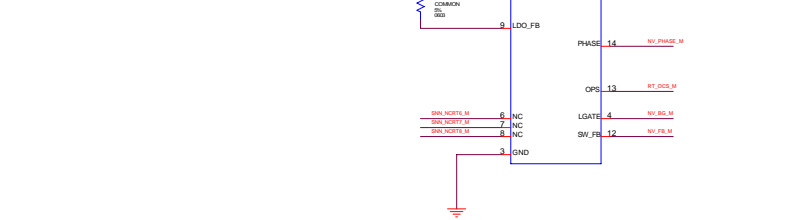
BOM added L821,C905
removed L819



Choose RT9218 PGood power sequence

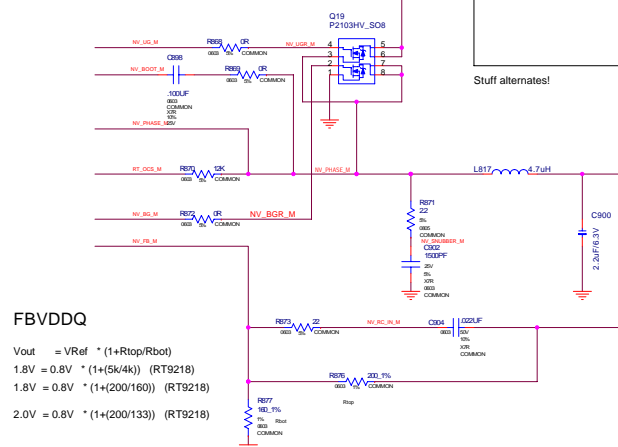
Added BOM R883,R904

Removed R905

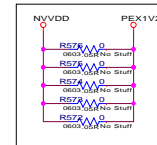


FBVDDQ

$$\begin{aligned} V_{out} &= V_{Ref} * (1 + (R_{top}/R_{bot})) \\ 1.8V &= 0.8V * (1 + (5k/4k)) \quad (RT9218) \\ 1.8V &= 0.8V * (1 + (200/160)) \quad (RT9218) \\ 2.0V &= 0.8V * (1 + (200/133)) \quad (RT9218) \end{aligned}$$



1V2 NVVDD
bypass



NVVDD = 1.35V @ upto 18A

1.2V~1.4V/24A(ambient)
 $NVDD = 0.8V * (1 + R_t/R_b)$

FBVDDQ Supply

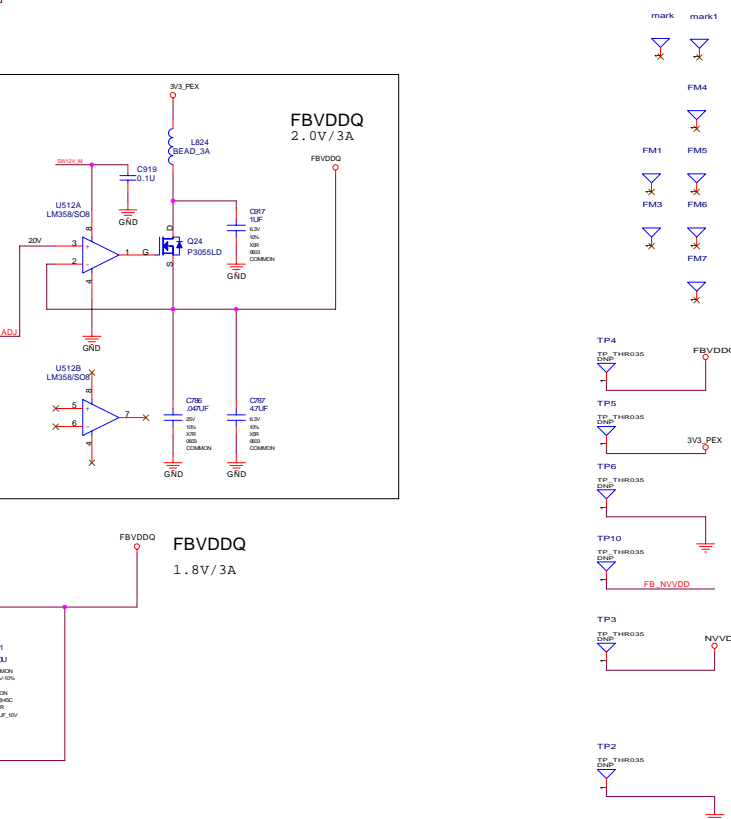
$$V_{out} = V_{ref} * (R_b / (R_t + R_b))$$
$$2.0V = 2.5V * (1K / 1.25K)$$
$$1.7985V = 2.5V * (1K / 1.39K)$$

Stuff alternates

100

FBVDDQ

Net Name	MIN_LINE_WIDTH	VOLTAGE
SV	16	3
NOVDD	16	20
V12_PEX	20	1.8V
PEV12	4	1.8V
V12_PEX_FLTRD	20	4
FBV12	20	1.8V
FBV12_V	20	1.8
DRIVE1_V2	20	
UGATE_1	20	
UGATE_1	20	
UGATE_2	20	
UGATE_2	20	
NODE_1	20	
NODE_2	20	
V12_IB	16	
SELV2_VDD	10	
COMP1_NOVDD	10	
FB1_NOVDD	10	
COMP2_SV	10	
FB2_SV	10	
FB1_V2	10	
REF12_V2	10	
DE_REFOUT	10	
VREF_V2	10	
FB2_IB	10	
BIOS1	10	
BIOS2	20	
BIOS3	20	
BIOS4	20	
SEL_NOVDD	10	
SE_SV	10	
SEL_V2	10	
UGATE_1_IB	20	
UGATE_2_IB	20	
COMP1_IB	10	
COMP2_IB	10	
NOVDD_IB	10	
SV_IB	10	
NODE_1_SINUB	20	
NODE_2_SINUB	20	
UGATE_1	20	
BIOS1	20	
BIOS2	20	
BIOS3	20	



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MS-V027

Size	Document Number
Custom	Power Supply I (PT9218)

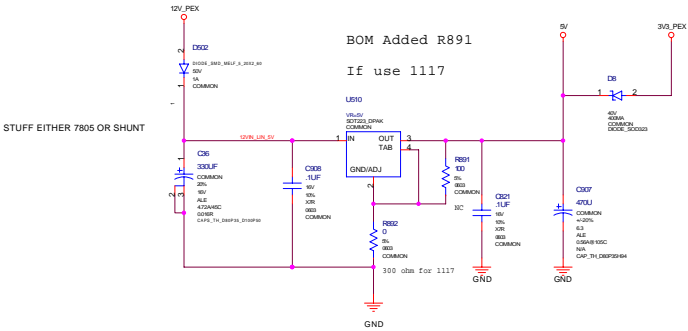
Date: Monday, August 29, 2005 Sheet 13 of 1

14 Others Power Supply (Linears)

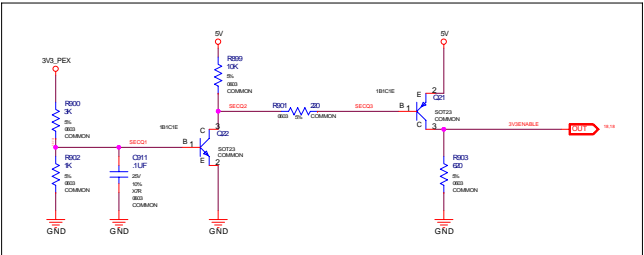
5V,FBVDDQ,A3V3,3V3,TMDS_PLLVDD,TMDS_IOVDD,FBVTT

5V LOW COST REGULATOR

HERE IN CASE 3V3 COMES UP FIRST TO GUARANTEE 5V -> 3V3 SEQUENCE!

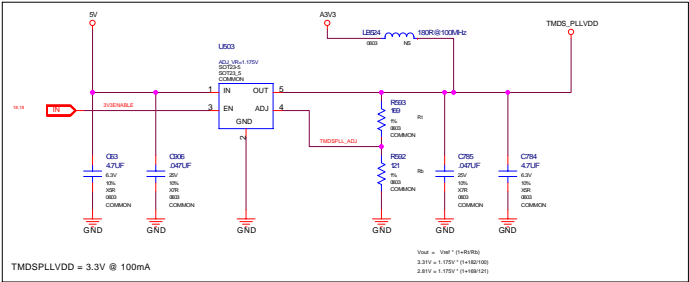


Power Sequencing

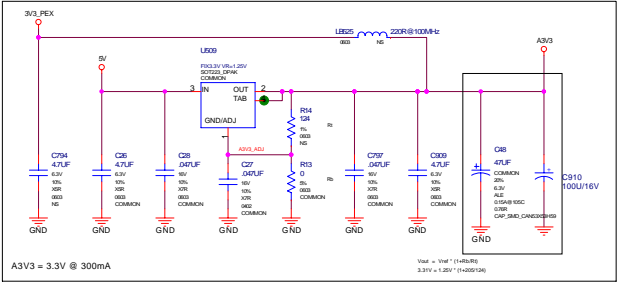


5V AND PEX3V3 UP .. ALL OTHER LINEARS UP

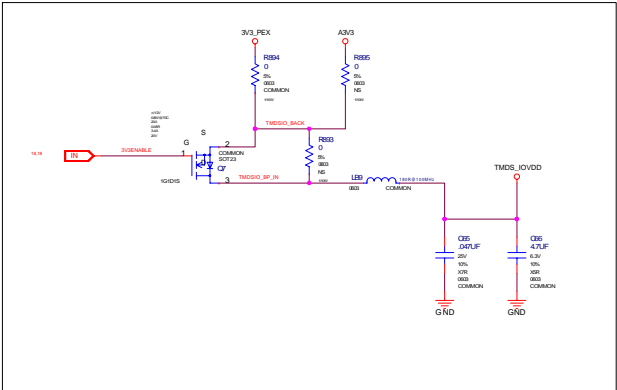
TMDS PLL Supply



A3V3 Power Supply



TMDS IO SUPPLY WITH BACKDRIVE PROTECTION



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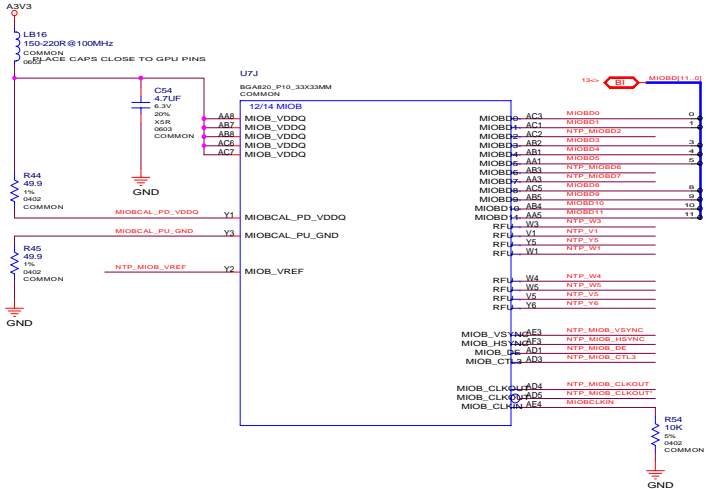
MS-V027

Size Document Number

Others Power Supply (Linears)

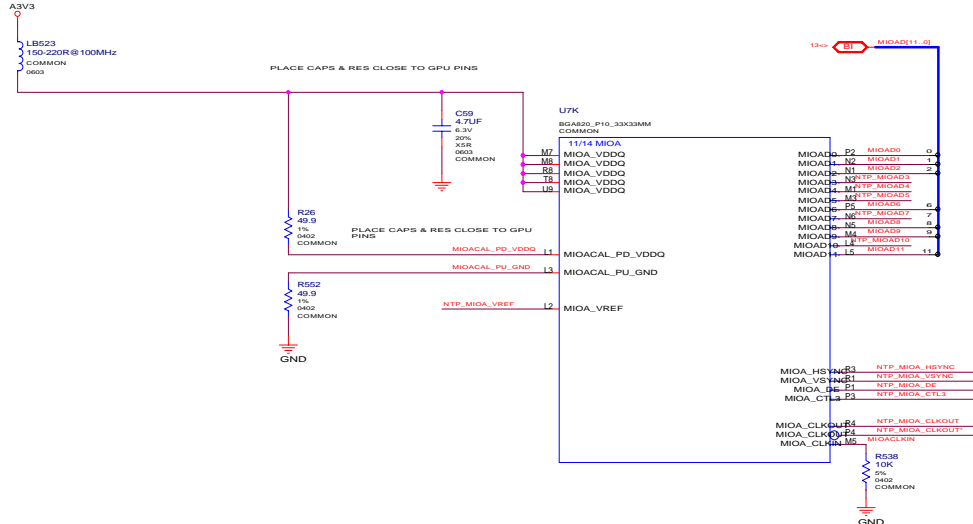
Date Monday, August 28, 2006 Sheet 14 of 15

15 G3 VIP/MIOB



		NETNAME	MIN_LINE_WIDTH	SPACING RULE
(14, 18)	18.2A<	MIBD[7..9]	3.5MIL	15MIL
	14.3A<	MIBD[11..13]	3.5MIL	15MIL
(18)	18.2A<	MIBD[7..9]	3.5MIL	15MIL
	15.1E<	MIBD[11..13]	3.5MIL	15MIL
(14)	14.4A<	VIFPCL	3.5MIL	20MIL_G2G_30MIL
	13.2E<	MIBD[11..13]	3.5MIL	15MIL
(18)	18.1A<	MIBD[7..9]	3.5MIL	15MIL
	15.1E<	MIBD[11..13]	3.5MIL	15MIL
		MIBD_CLKOUT	3.5MIL	20MIL_G2G_30MIL
		MIBD_CLKOUT**	3.5MIL	20MIL_G2G_30MIL

G3 MIOA



Feature Connector



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MS-V027			
Size Custom	Document Number G3 VIP/MIOB		Rev 0A
Date:	Monday, August 29, 2005	Sheet	15 of 15