PG180-A02

256b GDDR6 x16

TALL DP + DP + DP + HDMI/DP + USB

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ASSEMBLY	<ASSEMBLY_DESCRIPTION>
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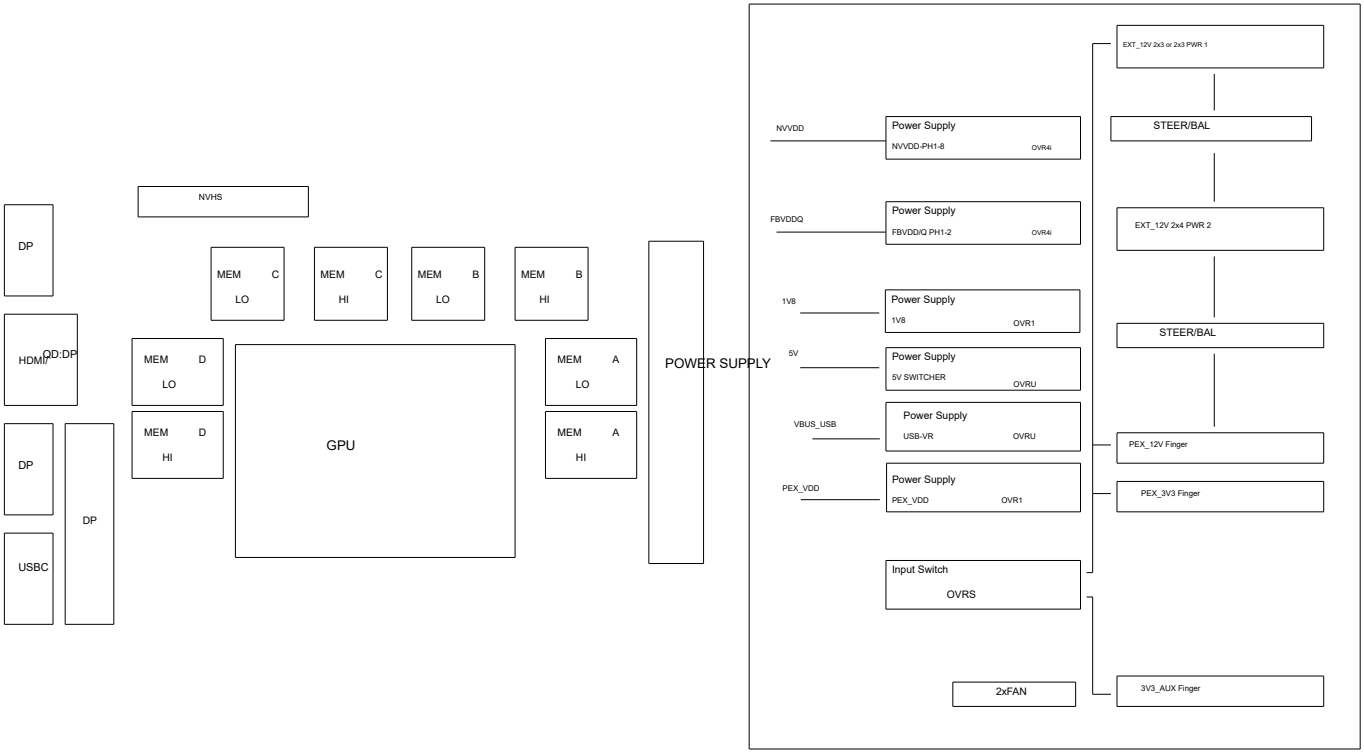
SCH REV	A	DATE	07-JUN-2019



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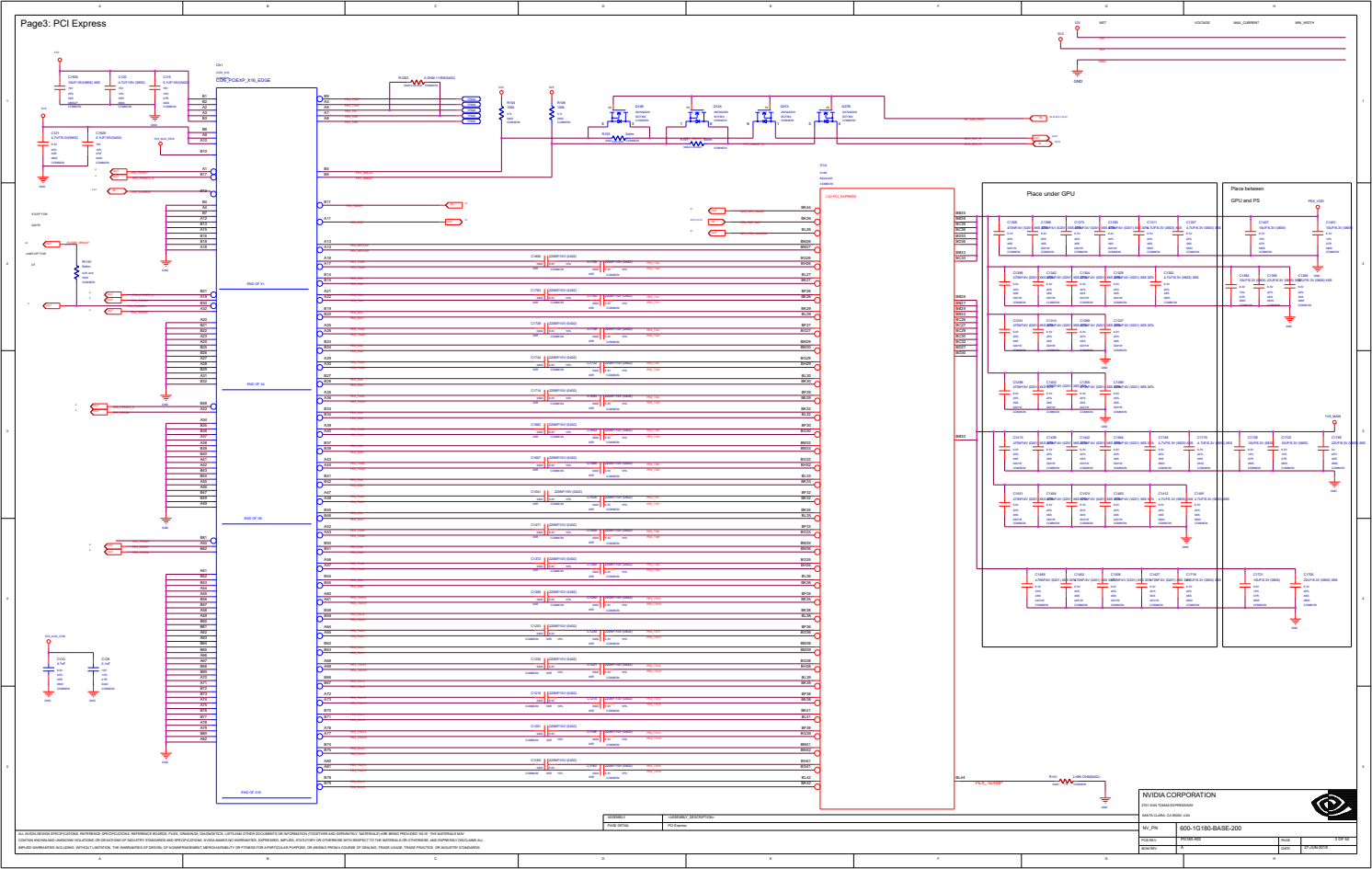

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Page4: PCI Termination

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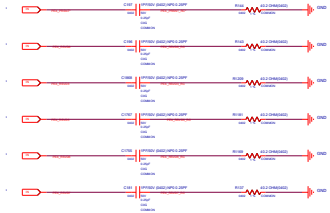

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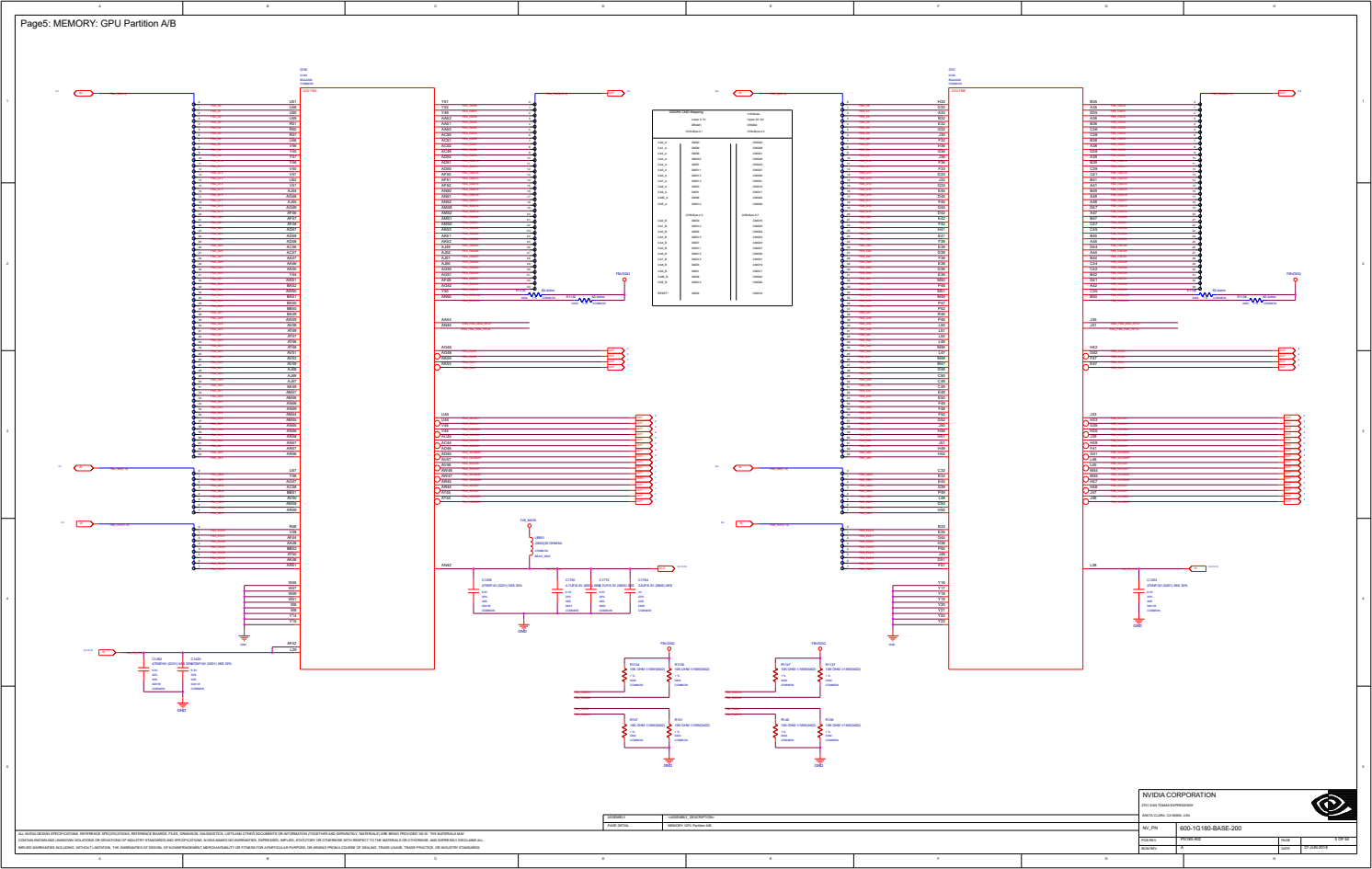
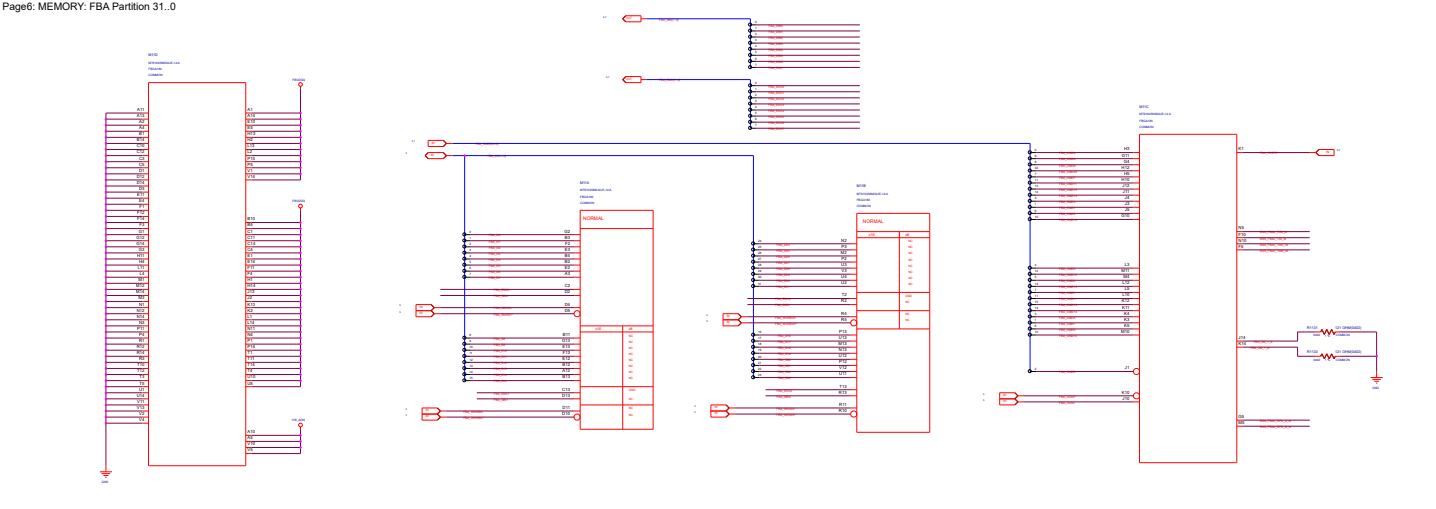
Page5: MEMORY: GPU Partition A/B



Page6: MEMORY: FBA Partition 31..0



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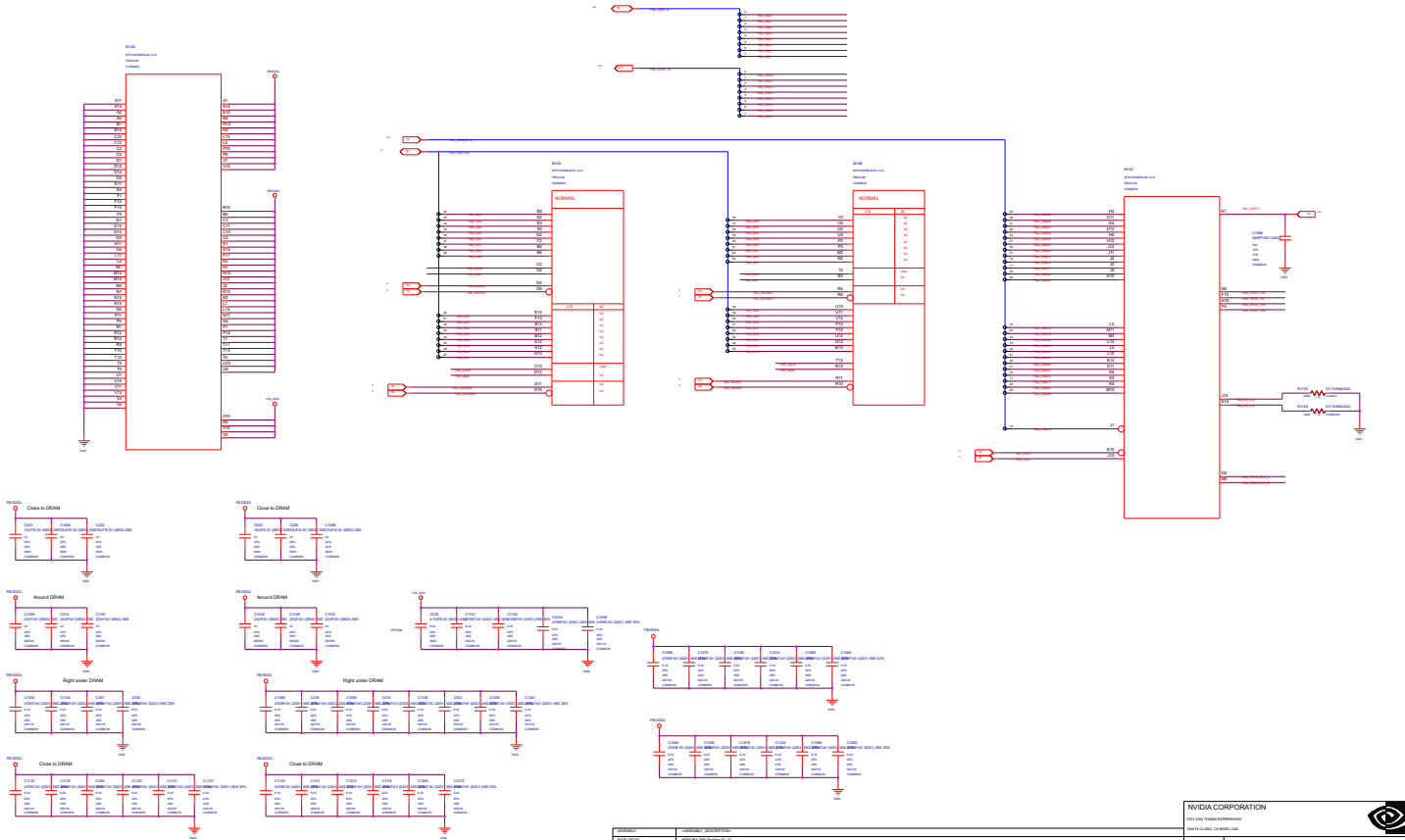
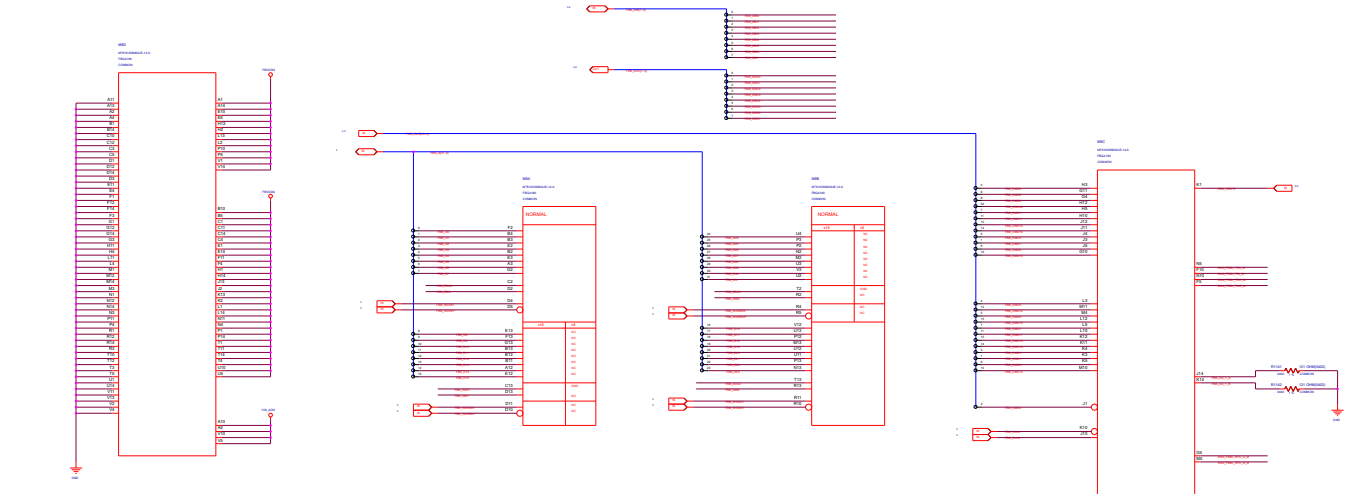
Page7: MEMORY: FBA Partition 63..32


MF2D
MF2A
MF2B
MF2C
NORMAL
FBVDDQ
Close to DRAM
Around DRAM
Right under DRAM
Close to DRAM
Close to DRAM
Close to DRAM
FBVDD2
FBVDD2
FBVDD2

Page8: MEMORY: FBB Partition 31..0



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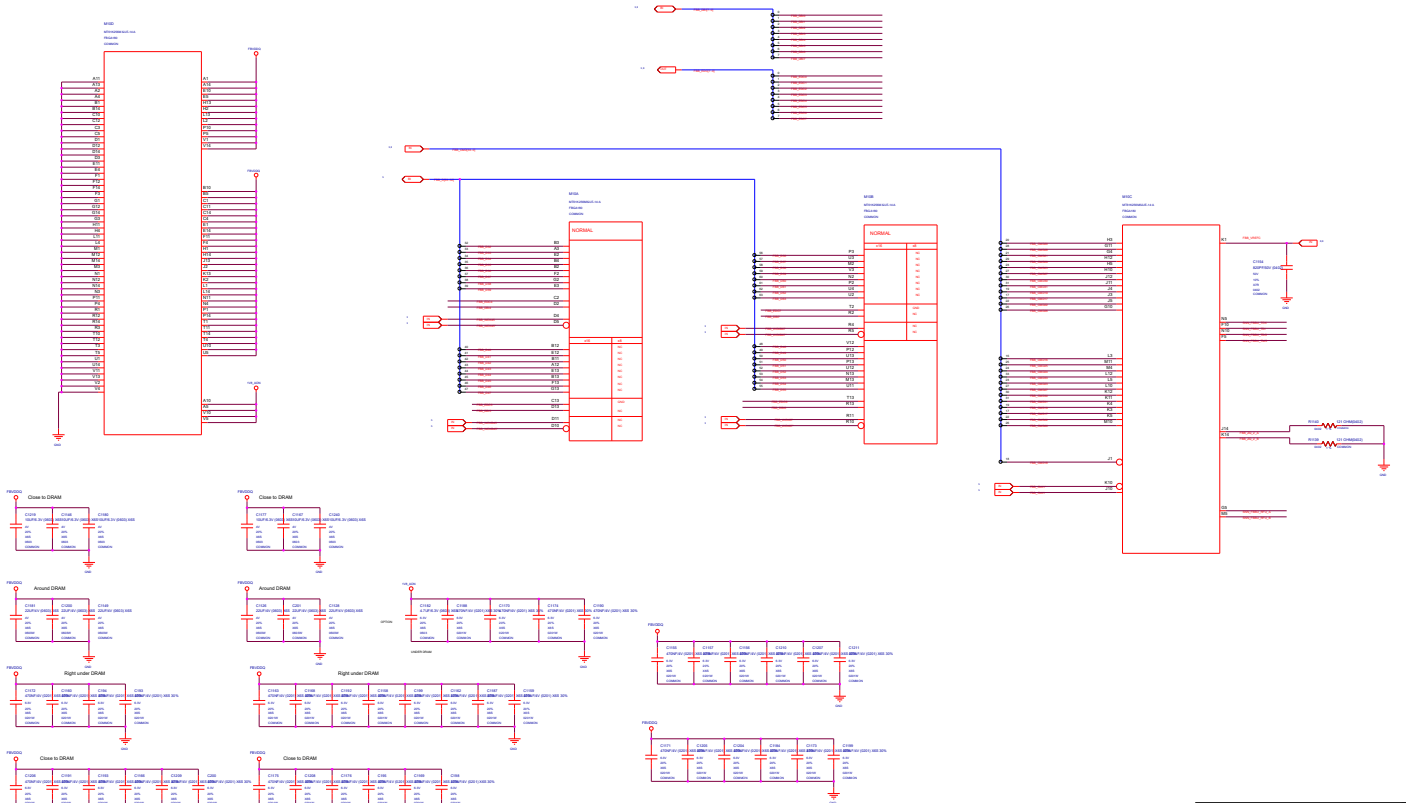
Page9: MEMORY: FBB Partition 63..32



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PAGE DETAIL	MEMORY: FBB Partition 63..32

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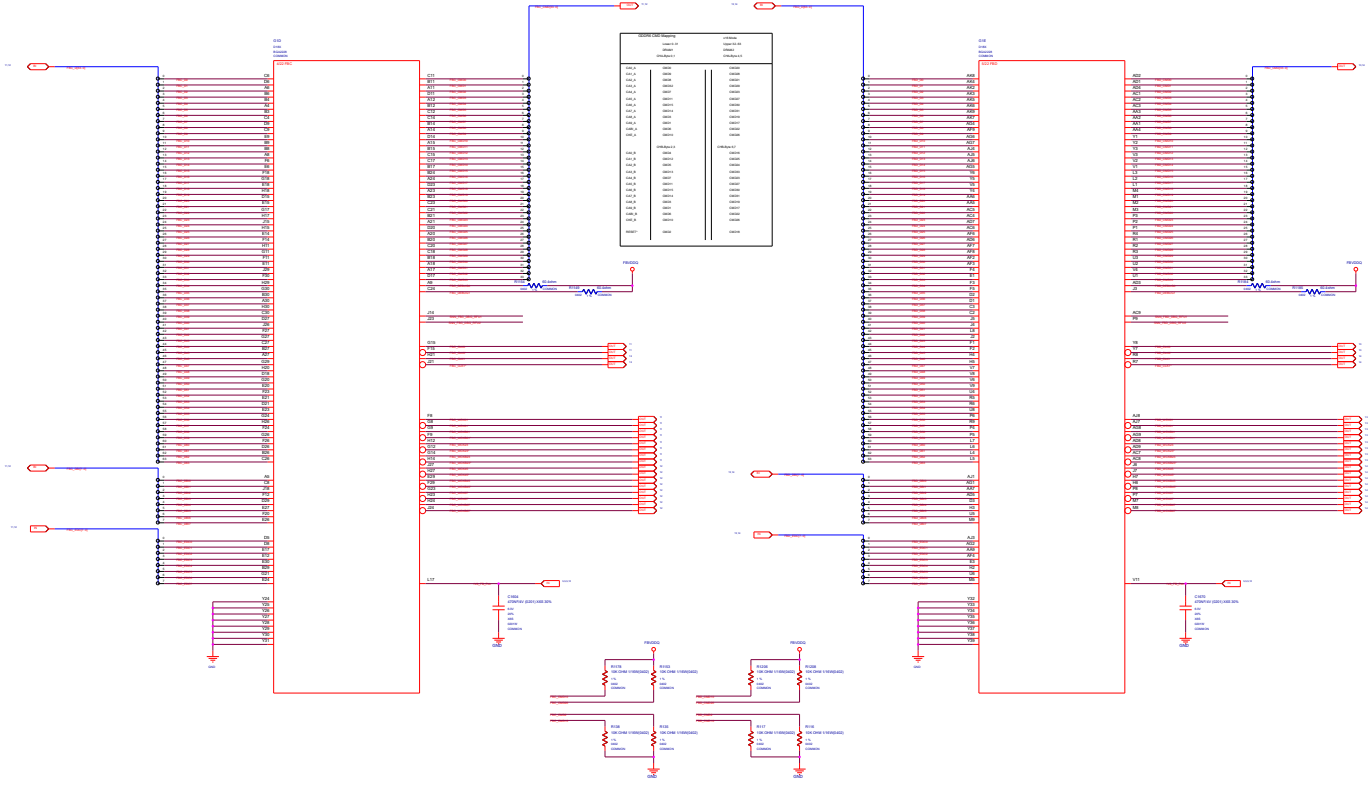
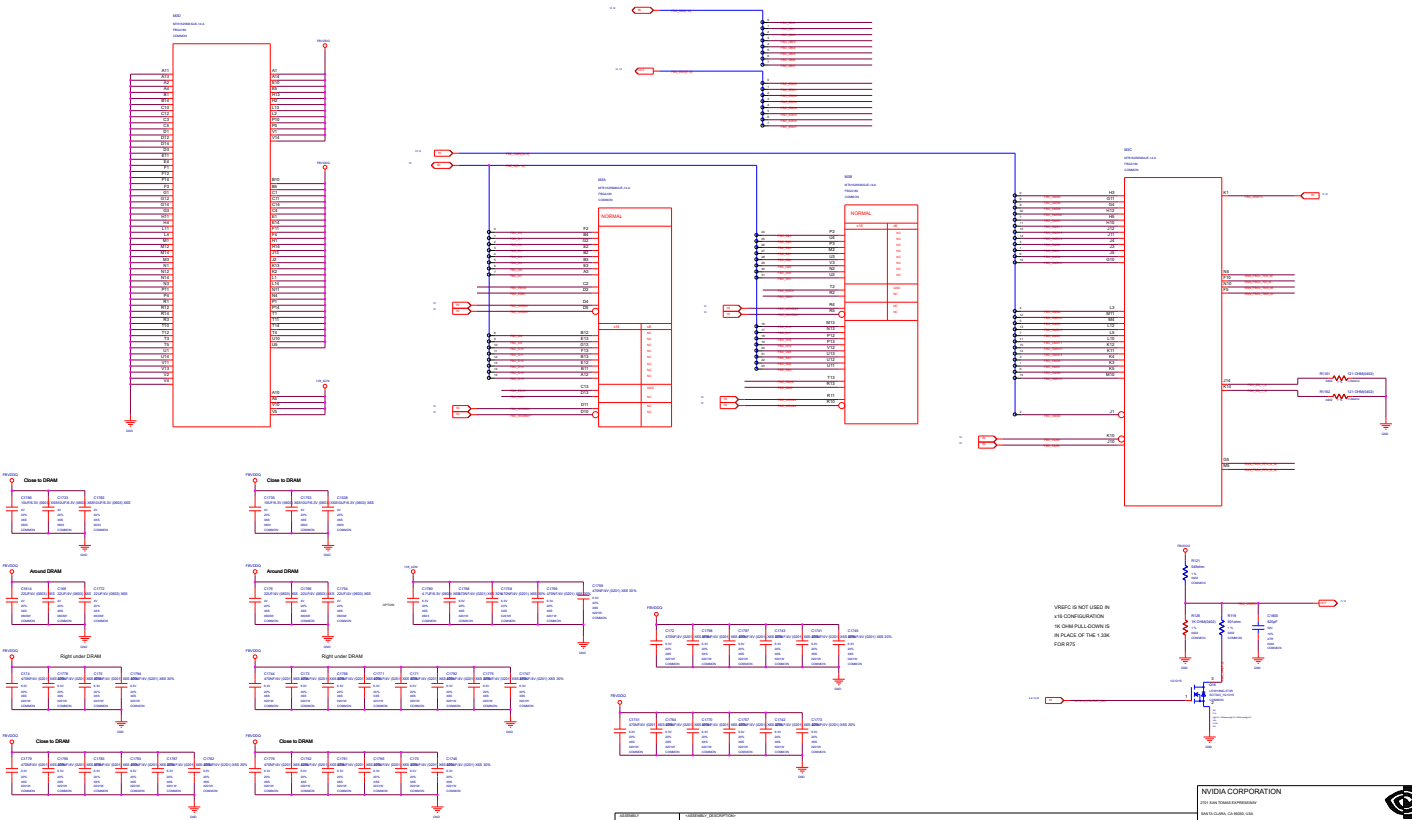
Page10: MEMORY: GPU Partition C/D



Page11: MEMORY: FBC Partition 31..0



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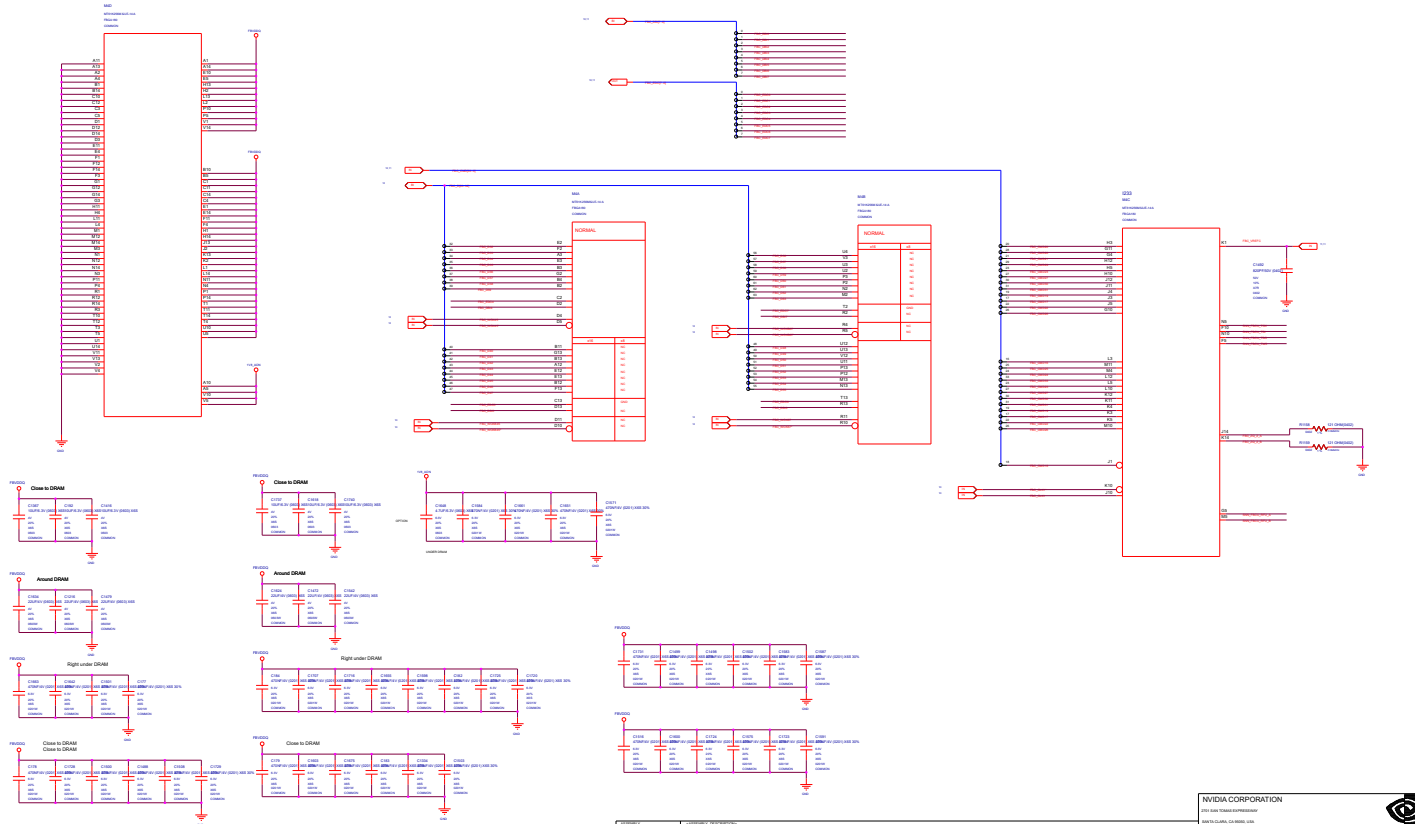
Page12: MEMORY: FBC Partition 63..32



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PAGE DETAIL	MEMORY: FBC Partition 63..32

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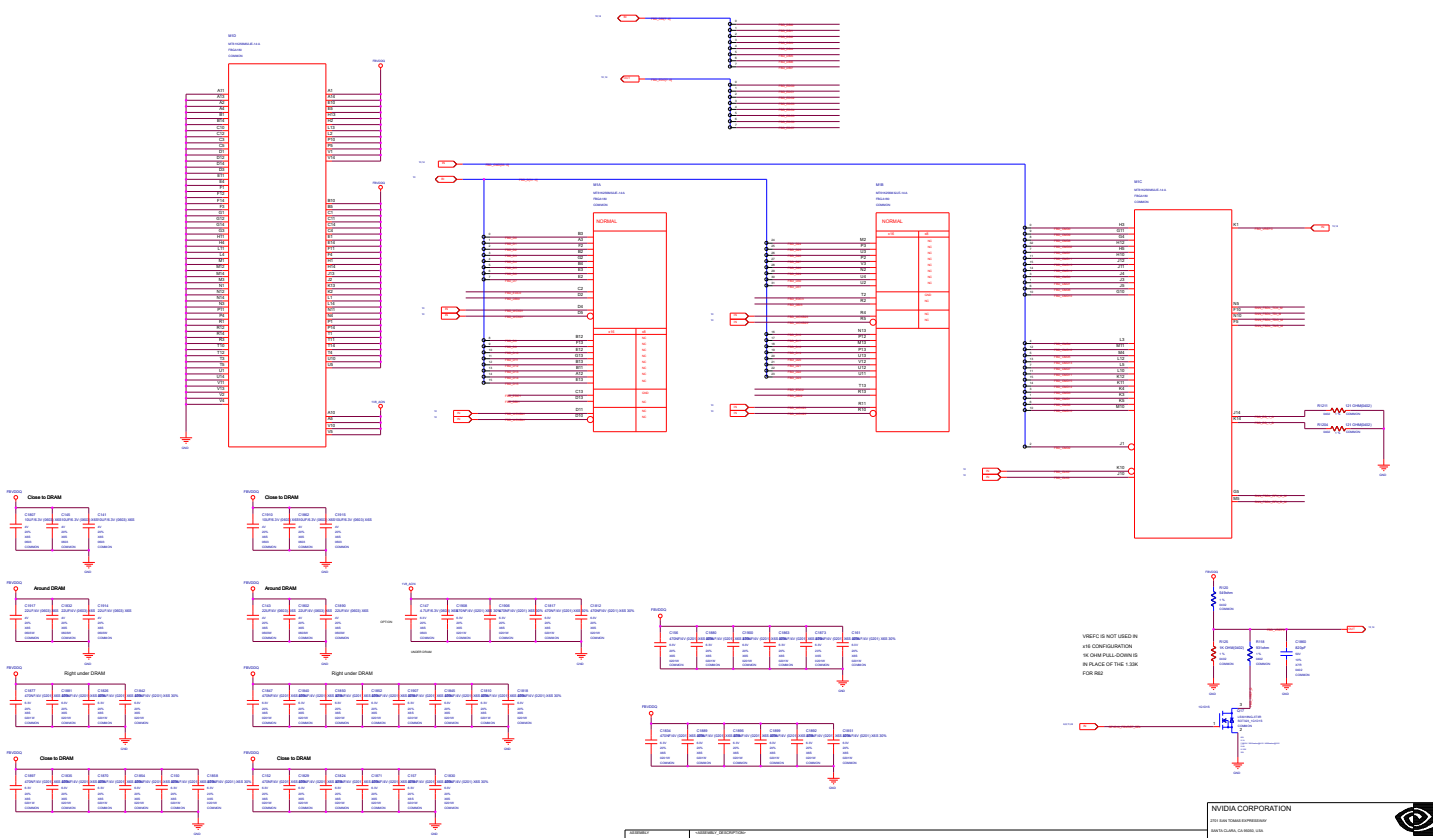

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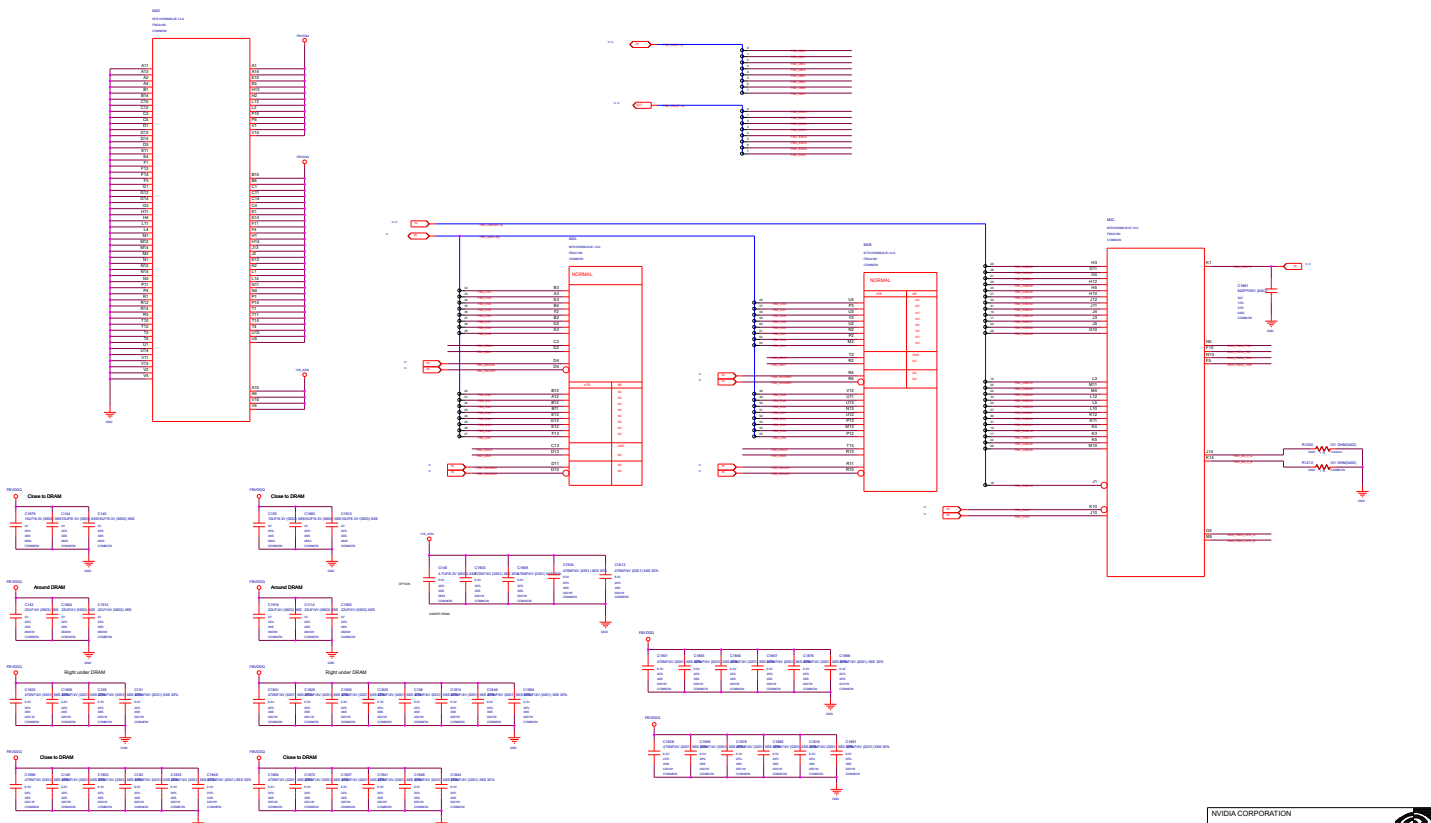
Page14: MEMORY: FBD Partition 63..32



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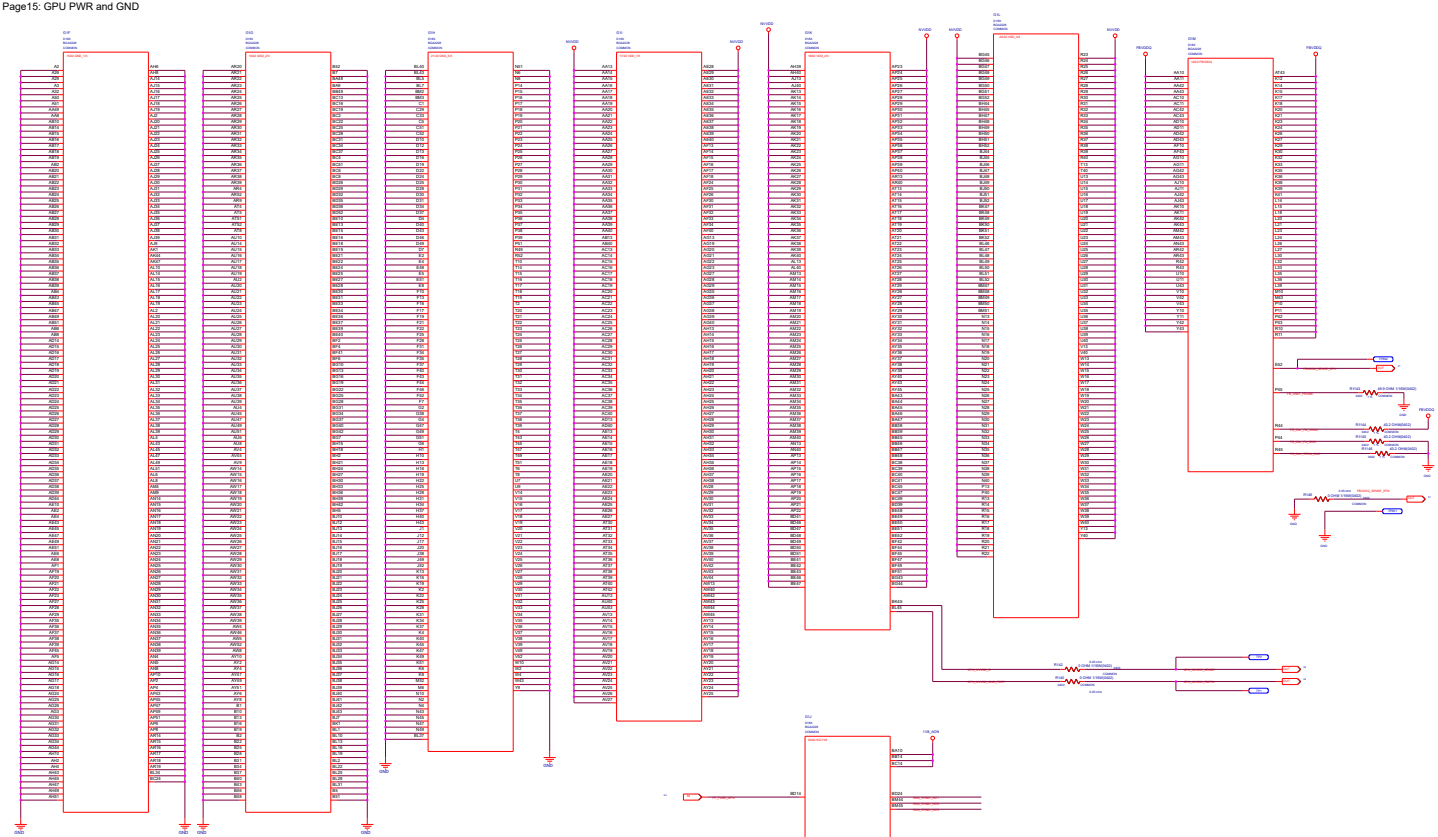
Page15: GPU PWR and GND



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Page16: GPU Decoupling

FBVDDQ

FBVDDQ

Partition A

6x 1uF and 2x 10uF

C1241 470nF/4V (0201) 440K 20% | C1242 470nF/4V (0201) 440K 20% | C1235 470nF/4V (0201) 440K 20% | C1261 470nF/4V (0201) 440K 20% | C1250 470nF/4V (0201) 440K 20% | C1248 470nF/4V (0201) 440K 20% | C1251 10uF/6.3V (0603) 660K 20% | C1246 10uF/6.3V (0603) 660K 20%

C1232 470nF/4V (0201) 440K 20% | C1234 470nF/4V (0201) 440K 20% | C1240 470nF/4V (0201) 440K 20% | C1237 470nF/4V (0201) 440K 20% | C1259 470nF/4V (0201) 440K 20% | C1258 470nF/4V (0201) 440K 20% | C1260 470nF/4V (0201) 440K 20%

Partition B

6x 1uF and 2x 10uF

C1243 470nF/4V (0201) 440K 20% | C1481 470nF/4V (0201) 440K 20% | C1256 470nF/4V (0201) 440K 20% | C1264 470nF/4V (0201) 440K 20% | C1262 470nF/4V (0201) 440K 20% | C1266 470nF/4V (0201) 440K 20% | C1231 10uF/6.3V (0603) 660K 20%

C1244 470nF/4V (0201) 440K 20% | C1236 470nF/4V (0201) 440K 20% | C1480 470nF/4V (0201) 440K 20% | C1482 470nF/4V (0201) 440K 20% | C1477 470nF/4V (0201) 440K 20% | C1230 470nF/4V (0201) 440K 20%

Partition C

6x 1uF and 2x 10uF

C1255 470nF/4V (0201) 440K 20% | C1229 470nF/4V (0201) 440K 20% | C1267 470nF/4V (0201) 440K 20% | C1713 470nF/4V (0201) 440K 20% | C1682 470nF/4V (0201) 440K 20% | C1616 470nF/4V (0201) 440K 20% | C1681 470nF/4V (0201) 440K 20% | C1253 10uF/6.3V (0603) 660K 20%

C1227 470nF/4V (0201) 440K 20% | C1602 470nF/4V (0201) 440K 20% | C1487 470nF/4V (0201) 440K 20% | C1672 470nF/4V (0201) 440K 20% | C1557 470nF/4V (0201) 440K 20% | C1701 470nF/4V (0201) 440K 20%

Partition D

6x 1uF and 2x 10uF

C1697 470nF/4V (0201) 440K 20% | C1673 470nF/4V (0201) 440K 20% | C1674 470nF/4V (0201) 440K 20% | C1702 470nF/4V (0201) 440K 20% | C1672 470nF/4V (0201) 440K 20% | C1688 470nF/4V (0201) 440K 20% | C1706 10uF/6.3V (0603) 660K 20% | C1665 10uF/6.3V (0603) 660K 20%

C1696 470nF/4V (0201) 440K 20% | C1684 470nF/4V (0201) 440K 20% | C1666 470nF/4V (0201) 440K 20% | C1668 470nF/4V (0201) 440K 20% | C1703 470nF/4V (0201) 440K 20% | C1686 470nF/4V (0201) 440K 20%

Place Close to GPU

C1637 10uF/6.3V (0603) 660K 20% | C1662 10uF/6.3V (0603) 660K 20% | C1667 10uF/6.3V (0603) 660K 20% | C1679 10uF/6.3V (0603) 660K 20%

Place Close to GPU

C1643 22uF/4V (0603) 440K 20% | C1645 22uF/4V (0603) 440K 20% | C1654 22uF/4V (0603) 440K 20% | C1664 22uF/4V (0603) 440K 20% | C1701 10uF/6.3V (0603) 660K 20% | C1647 10uF/6.3V (0603) 660K 20% | C1709 10uF/6.3V (0603) 660K 20% | C1613 10uF/6.3V (0603) 660K 20% | C1679 10uF/6.3V (0603) 660K 20%

NVVDD

NVVDD

C1233 470uF/4V (0805) 60R | C1617 470uF/4V (0805) 60R | C1236 470uF/4V (0805) 60R

C1599 10uF/6.3V (0603) 660K | C1598 10uF/6.3V (0603) 660K | C1235 10uF/6.3V (0603) 660K | C1229 10uF/6.3V (0603) 660K | C1230 10uF/6.3V (0603) 660K | C1246 10uF/6.3V (0603) 660K

C1594 10uF/6.3V (0603) 660K | C1595 10uF/6.3V (0603) 660K | C1596 10uF/6.3V (0603) 660K | C1608 10uF/6.3V (0603) 660K | C1234 10uF/6.3V (0603) 660K | C1233 10uF/6.3V (0603) 660K | C1495 10uF/6.3V (0603) 660K | C1597 10uF/6.3V (0603) 660K

C1552 470nF/4V (0201) 440K 20% | C1545 470nF/4V (0201) 440K 20% | C1550 470nF/4V (0201) 440K 20% | C1539 470nF/4V (0201) 440K 20% | C1533 470nF/4V (0201) 440K 20% | C1575 470nF/4V (0201) 440K 20% | C1532 470nF/4V (0201) 440K 20% | C1535 470nF/4V (0201) 440K 20% | C1484 470nF/4V (0201) 440K 20% | C1559 470nF/4V (0201) 440K 20% | C1559 470nF/4V (0201) 440K 20% | C1614 470nF/4V (0201) 440K 20% | C1628 470nF/4V (0201) 440K 20%

C1587 470nF/4V (0201) 440K 20% | C1470 470nF/4V (0201) 440K 20% | C1422 470nF/4V (0201) 440K 20% | C1488 470nF/4V (0201) 440K 20% | C1433 470nF/4V (0201) 440K 20% | C1548 470nF/4V (0201) 440K 20% | C1571 470nF/4V (0201) 440K 20% | C1485 470nF/4V (0201) 440K 20% | C1556 470nF/4V (0201) 440K 20% | C1555 470nF/4V (0201) 440K 20% | C1564 470nF/4V (0201) 440K 20% | C1419 470nF/4V (0201) 440K 20% | C1429 470nF/4V (0201) 440K 20% | C1469 470nF/4V (0201) 440K 20% | C1467 470nF/4V (0201) 440K 20%

C1616 470nF/4V (0201) 440K 20% | C1579 470nF/4V (0201) 440K 20% | C1579 470nF/4V (0201) 440K 20% | C1588 470nF/4V (0201) 440K 20% | C1564 470nF/4V (0201) 440K 20% | C1531 470nF/4V (0201) 440K 20% | C1539 470nF/4V (0201) 440K 20% | C1585 470nF/4V (0201) 440K 20% | C1588 470nF/4V (0201) 440K 20% | C1482 470nF/4V (0201) 440K 20% | C1564 470nF/4V (0201) 440K 20% | C1411 470nF/4V (0201) 440K 20% | C1429 470nF/4V (0201) 440K 20% | C1569 470nF/4V (0201) 440K 20% | C1570 470nF/4V (0201) 440K 20%

C1602 470nF/4V (0201) 440K 20% | C1481 470nF/4V (0201) 440K 20% | C1423 470nF/4V (0201) 440K 20% | C1562 470nF/4V (0201) 440K 20% | C1537 470nF/4V (0201) 440K 20% | C1565 470nF/4V (0201) 440K 20% | C1534 470nF/4V (0201) 440K 20% | C1619 470nF/4V (0201) 440K 20% | C1567 470nF/4V (0201) 440K 20% | C1582 470nF/4V (0201) 440K 20% | C1568 470nF/4V (0201) 440K 20% | C1578 470nF/4V (0201) 440K 20% | C1428 470nF/4V (0201) 440K 20% | C1558 470nF/4V (0201) 440K 20% | C1428 470nF/4V (0201) 440K 20%

C1599 470nF/4V (0201) 440K 20% | C1454 470nF/4V (0201) 440K 20% | C1475 470nF/4V (0201) 440K 20% | C1550 470nF/4V (0201) 440K 20% | C1569 470nF/4V (0201) 440K 20% | C1570 470nF/4V (0201) 440K 20% | C1598 470nF/4V (0201) 440K 20% | C1598 470nF/4V (0201) 440K 20% | C1577 470nF/4V (0201) 440K 20% | C1564 470nF/4V (0201) 440K 20% | C1569 470nF/4V (0201) 440K 20% | C1458 470nF/4V (0201) 440K 20% | C1563 470nF/4V (0201) 440K 20% | C1572 470nF/4V (0201) 440K 20% | C1572 470nF/4V (0201) 440K 20%

C1261 470nF/4V (0201) 440K 20% | C1540 470nF/4V (0201) 440K 20% | C1468 470nF/4V (0201) 440K 20% | C1312 470nF/4V (0201) 440K 20% | C1530 470nF/4V (0201) 440K 20% | C1480 470nF/4V (0201) 440K 20% | C1488 470nF/4V (0201) 440K 20% | C1480 470nF/4V (0201) 440K 20% | C1560 470nF/4V (0201) 440K 20% | C1581 470nF/4V (0201) 440K 20% | C1538 470nF/4V (0201) 440K 20% | C1551 470nF/4V (0201) 440K 20% | C1570 470nF/4V (0201) 440K 20% | C1580 470nF/4V (0201) 440K 20% | C1562 470nF/4V (0201) 440K 20%

C1428 470nF/4V (0201) 440K 20% | C1558 470nF/4V (0201) 440K 20% | C1564 470nF/4V (0201) 440K 20% | C1423 470nF/4V (0201) 440K 20% | C1538 470nF/4V (0201) 440K 20% | C1563 470nF/4V (0201) 440K 20% | C1488 470nF/4V (0201) 440K 20% | C1488 470nF/4V (0201) 440K 20% | C1539 470nF/4V (0201) 440K 20% | C1563 470nF/4V (0201) 440K 20% | C1579 470nF/4V (0201) 440K 20% | C1571 470nF/4V (0201) 440K 20% | C1572 470nF/4V (0201) 440K 20% | C1533 470nF/4V (0201) 440K 20% | C1613 470nF/4V (0201) 440K 20%

C1562 470nF/4V (0201) 440K 20% | C1568 470nF/4V (0201) 440K 20% | C1564 470nF/4V (0201) 440K 20% | C1561 470nF/4V (0201) 440K 20% | C1536 470nF/4V (0201) 440K 20% | C1563 470nF/4V (0201) 440K 20% | C1524 470nF/4V (0201) 440K 20% | C1480 470nF/4V (0201) 440K 20% | C1488 470nF/4V (0201) 440K 20% | C1479 470nF/4V (0201) 440K 20% | C1610 470nF/4V (0201) 440K 20% | C1588 470nF/4V (0201) 440K 20% | C1488 470nF/4V (0201) 440K 20% | C1592 470nF/4V (0201) 440K 20% | C1587 470nF/4V (0201) 440K 20% | C1575 470nF/4V (0201) 440K 20% | C1628 470nF/4V (0201) 440K 20%

1V8_AON

1V8_AON

C1726 4.7uF/6.3V (0603) 660K 20% | C1643 4.7uF/6.3V (0603) 660K 20% | C1627 4.7uF/6.3V (0603) 660K 20% | C1632 470nF/4V (0201) 440K 20% | C1661 470nF/4V (0201) 440K 20% | C1681 470nF/4V (0201) 440K 20% | C1621 470nF/4V (0201) 440K 20% | C1679 470nF/4V (0201) 440K 20% | C1656 470nF/4V (0201) 440K 20%

Near the GPU

1V8_AON

C1615 470nF/4V (0201) 440K 20% | C1619 470nF/4V (0201) 440K 20% | C1660 470nF/4V (0201) 440K 20% | C1620 470nF/4V (0201) 440K 20% | C1657 470nF/4V (0201) 440K 20% | C1664 470nF/4V (0201) 440K 20% | C1624 470nF/4V (0201) 440K 20%

Under the GPU

NVVDD

NVVDD

C1599 10uF/6.3V (0603) 660K | C1626 10uF/6.3V (0603) 660K | C1602 10uF/6.3V (0603) 660K | C1597 10uF/6.3V (0603) 660K | C1597 10uF/6.3V (0603) 660K

C1628 470nF/4V (0201) 440K 20% | C1477 470nF/4V (0201) 440K 20% | C1562 470nF/4V (0201) 440K 20% | C1413 470nF/4V (0201) 440K 20% | C1636 470nF/4V (0201) 440K 20% | C1562 470nF/4V (0201) 440K 20% | C1588 470nF/4V (0201) 440K 20% | C1487 470nF/4V (0201) 440K 20%

C1647 470nF/4V (0201) 440K 20% | C1564 470nF/4V (0201) 440K 20% | C1647 470nF/4V (0201) 440K 20% | C1565 470nF/4V (0201) 440K 20% | C1636 470nF/4V (0201) 440K 20% | C1487 470nF/4V (0201) 440K 20% | C1628 470nF/4V (0201) 440K 20%

C1572 470nF/4V (0201) 440K 20% | C1531 470nF/4V (0201) 440K 20% | C1487 470nF/4V (0201) 440K 20% | C1482 470nF/4V (0201) 440K 20% | C1537 470nF/4V (0201) 440K 20% | C1565 470nF/4V (0201) 440K 20%

032-0532-000
E6535
A01

ASSEMBLY	1X600180BA_BOM.OPTION1
PAGE DETAIL	GPU Decoupling

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SCALE	NTS
DRAWING	P
DATE	07-JUN-2015
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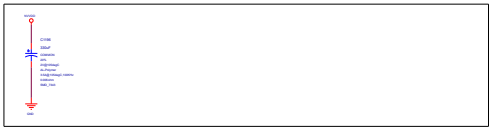
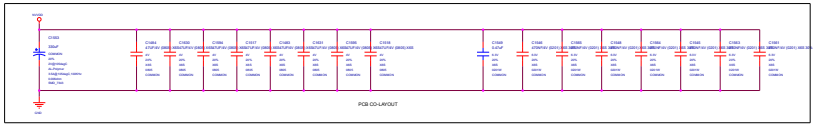
Page17: GPU Decoupling





ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	GPU DECOUPLING

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MV_PN	600-1G180-BASE-200		
PCB REV	PU180 A02	PAGE	17 OF 54
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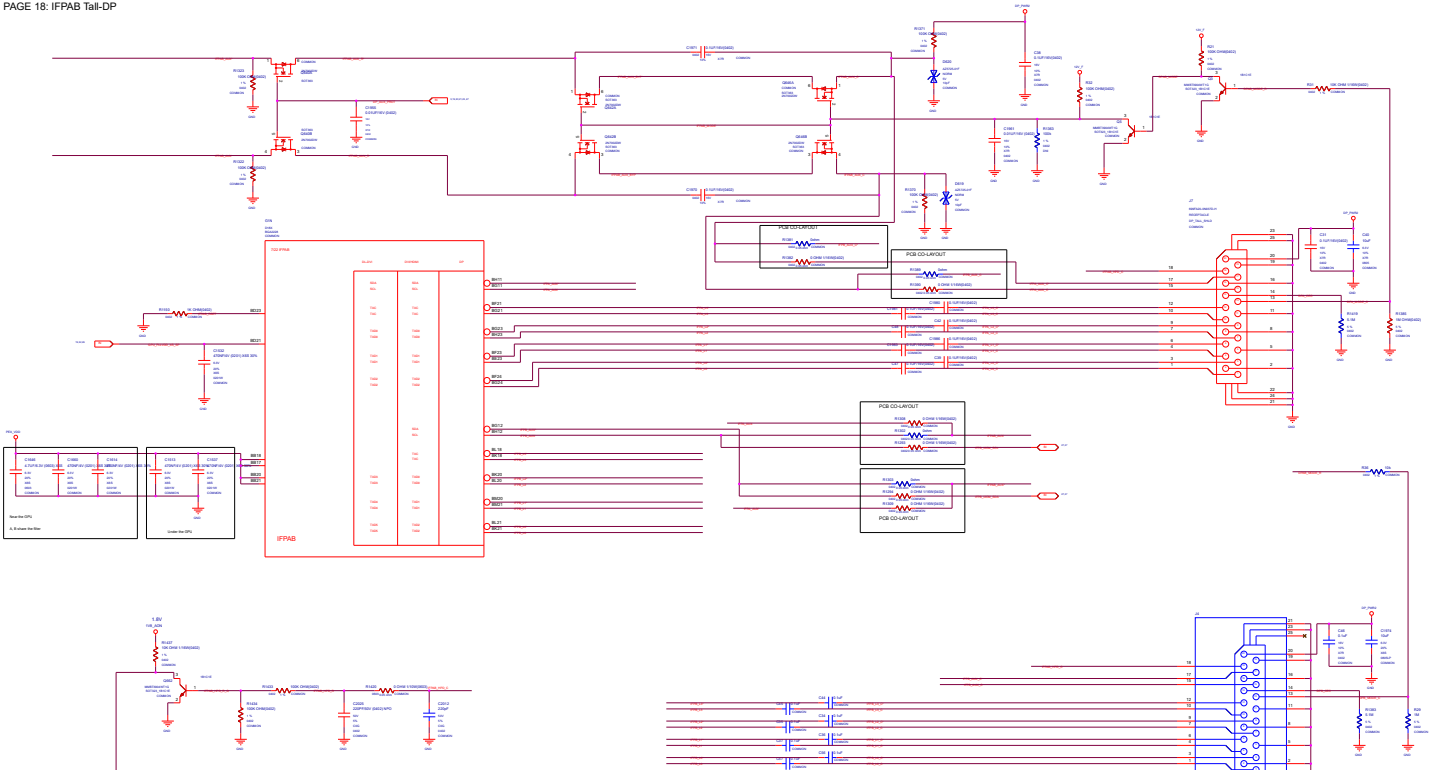

ASSEMBLY	<ASSEMBLY_GEOMGRP1Site>
PAGE DETAIL	IFPAB TAIL-DP

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PCB REV	PG180 REV
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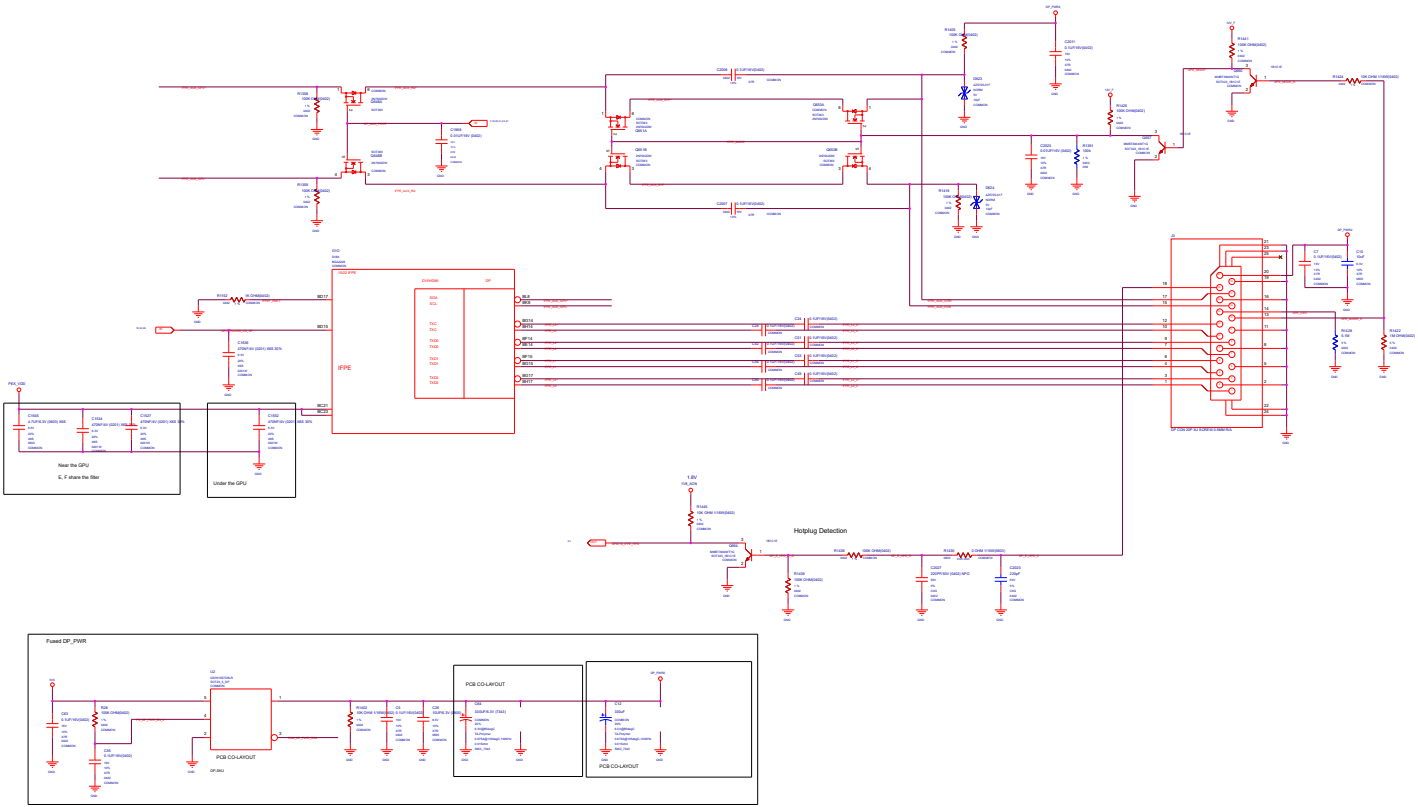
PAGE 19: IFPE DP



ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	IFPE DP

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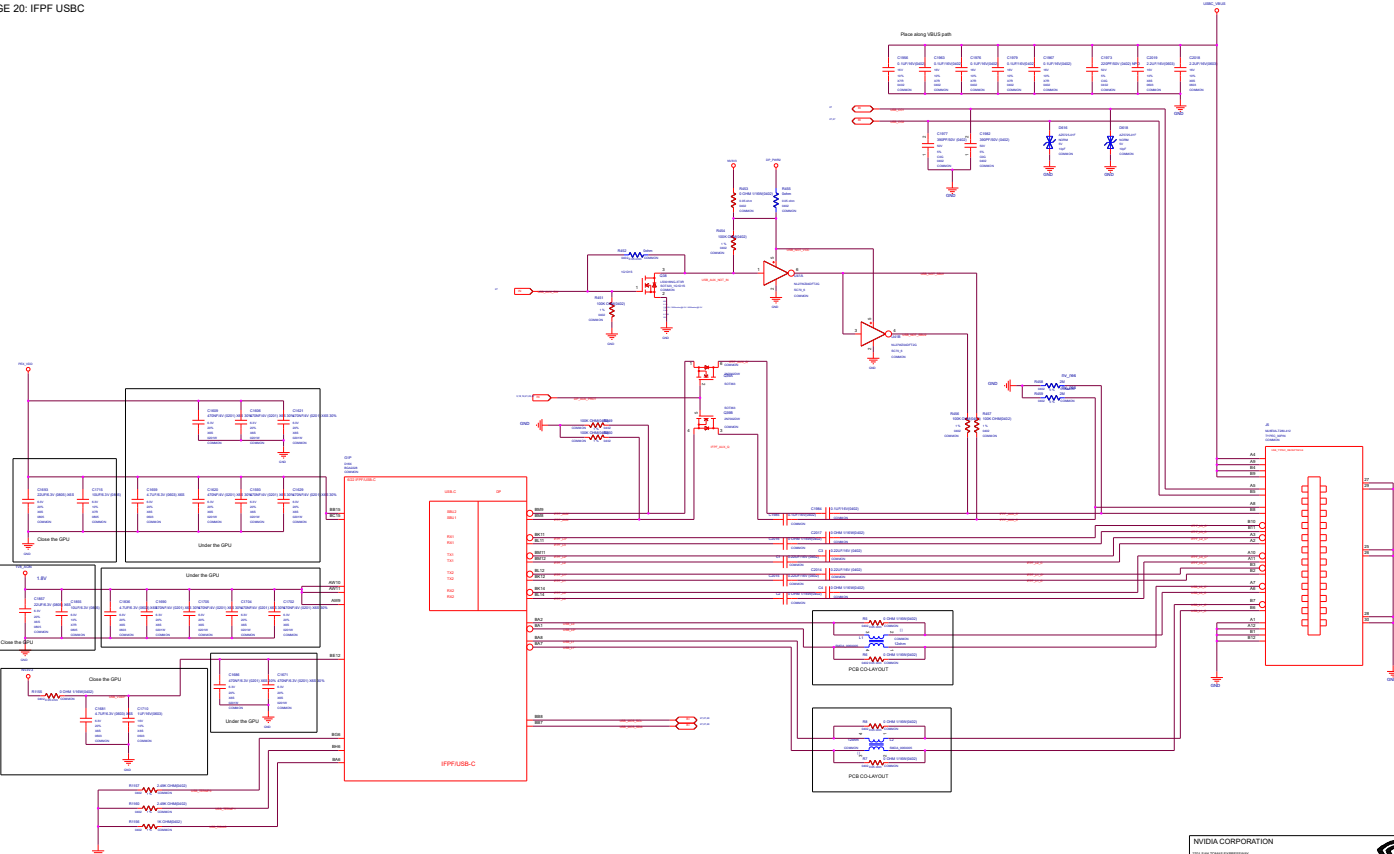
PAGE 20: IFPF USBC



ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	IFPF USBC

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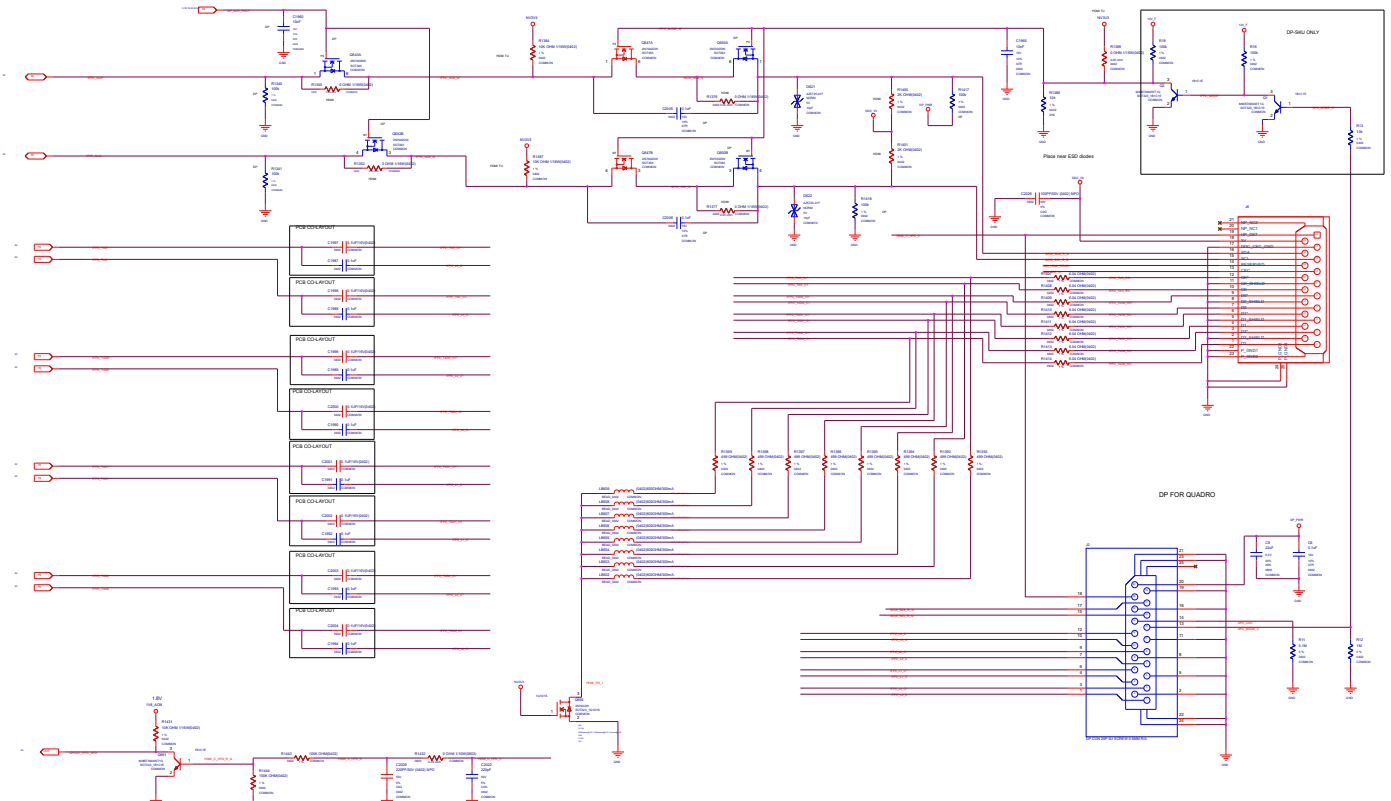
PAGE 21:IFPC HDMI 2.0/DP



ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	IFPC HDMI 2.0/DP

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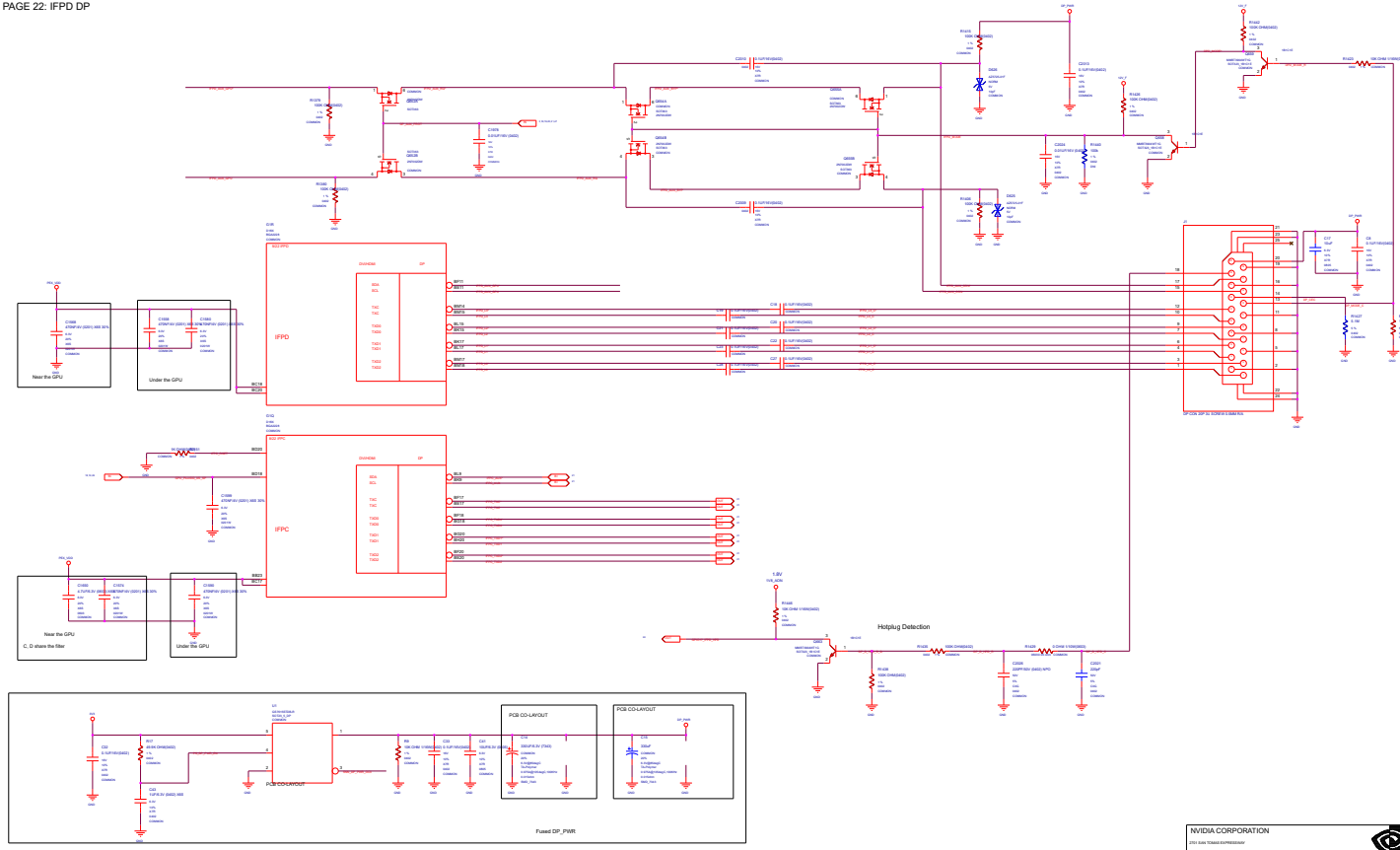
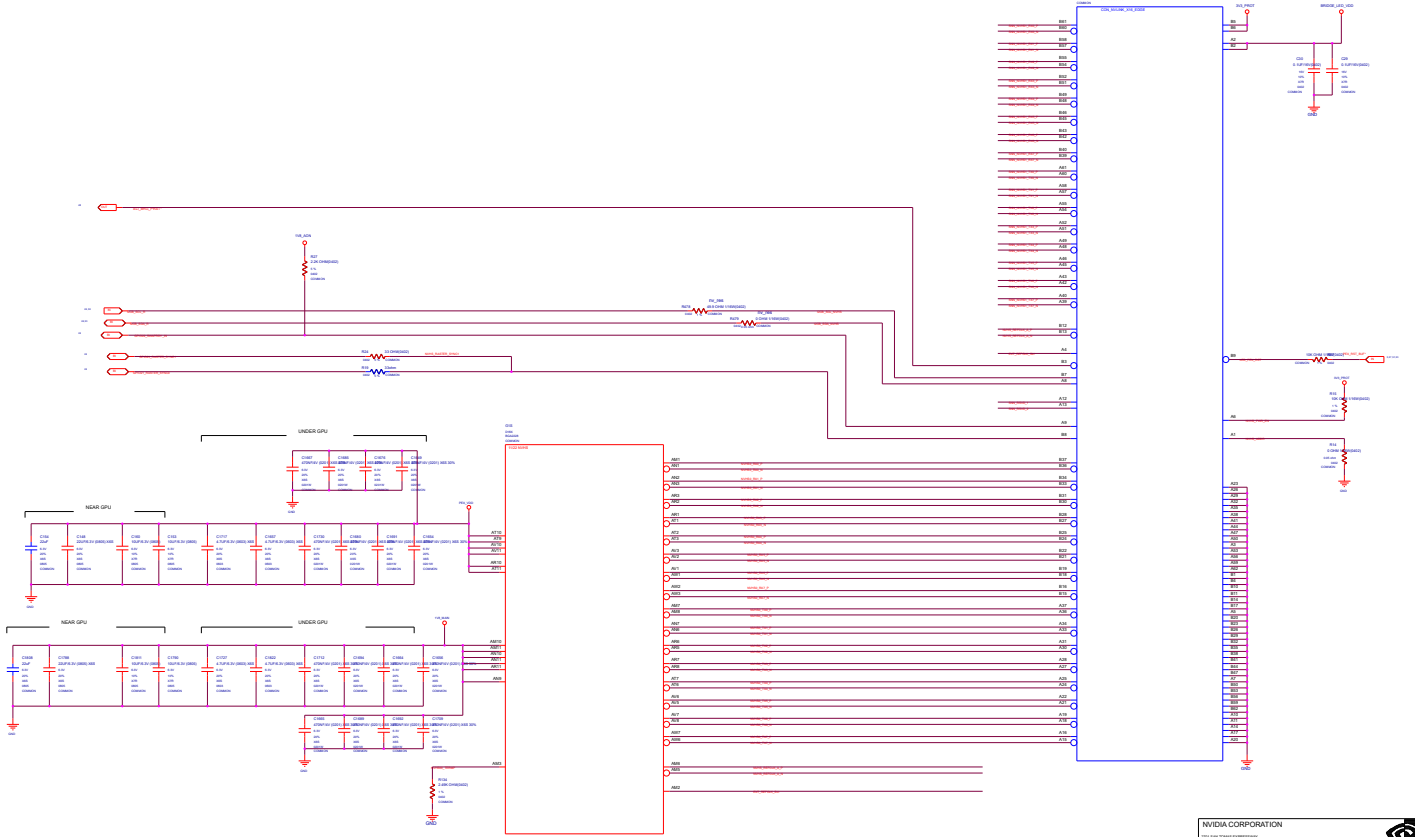
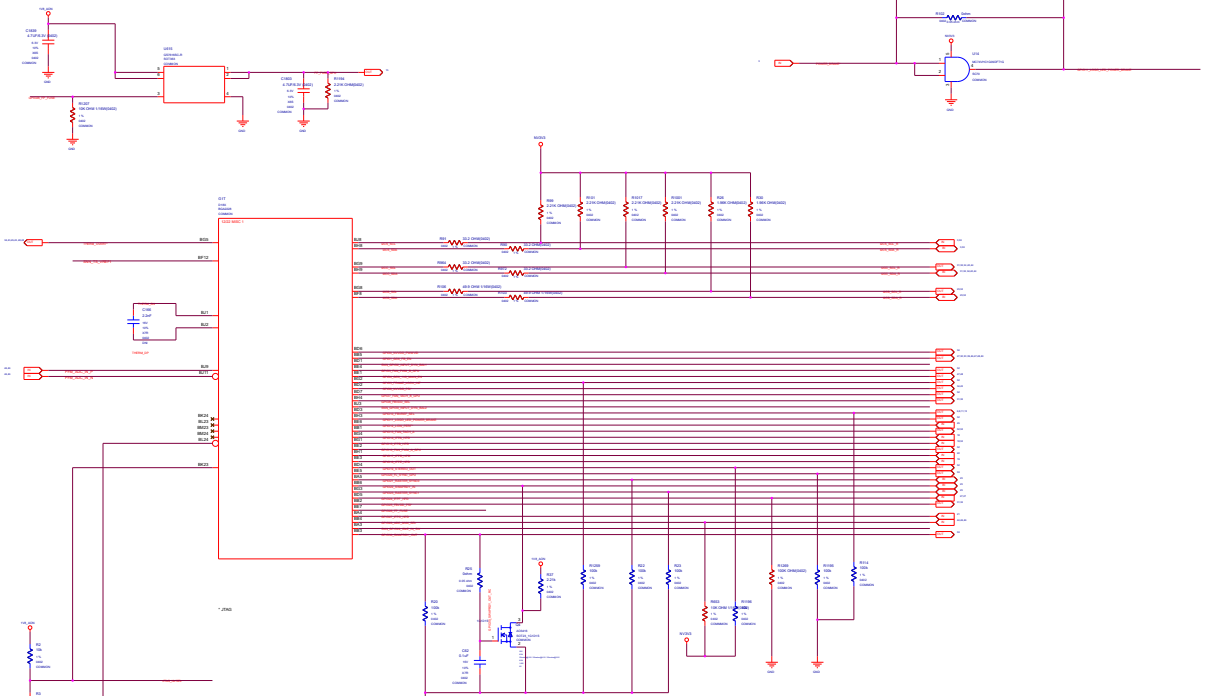
PAGE 22: IFPD DP



PAGE 23: NVHS Interface


UNDER GPU
NEAR GPU
NEAR GPU
UNDER GPU
GND
GND
GND

PAGE 24: MISC: Fan, Thermal, JTAG, GPIO, STEREO



ASSEMBLY	<ASSEMBLY_GETSCRIPT>Misc
PAGE DETAIL	MISC: FAN,THERMAL,JTAG,GPIO,STEREO

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PAGE 25: MISC: ROM, Straps

H=High :Tied to 1.8V

M=Middle:Tied to 0.9V

L=Low :Tied to 0V

STRAP2	STRAP1	STRAP0	RAMCFG[4:0]	
L	L	L	00000	RAMCFG TBD
L	L	H	00001	RAMCFG TBD
L	H	L	00010	RAMCFG TBD
L	H	H	00011	RAMCFG TBD
H	H	L	00110	RAMCFG TBD
H	H	H	00111	RAMCFG TBD

DEFAULT

RAMCFG[4:0]	DENSITY	WIDTH	VENDOR
00000	8Gb	256-bit	Samsung
00001	8Gb	256-bit	Micron
00010	8Gb	256-bit	Hynix
00110	16Gb	256-bit	Samsung
00111	16Gb	256-bit	Samsung

ROM_SO	ROM_SI	ROM_SCLK	DUMMY[2:0]FS_OVERT	1:ENABLE 0:DISABLE
L	L	L	XXX1	FS_OVERT ENABLE
L	L	M	XXX0	FS_OVERT DISABLE

DEFAULT

STRAP5	STRAP4	STRAP3	SMB_ALT_ADDR	DEVID_SEL	PCIE_CFG	VGA_DEVICE
M	H	H	1	1	1	1
M	H	L	1	1	1	0
M	L	H	1	1	0	1
M	L	L	1	1	0	0
L	H	M	1	0	1	1
L	M	H	1	0	1	0
L	M	L	1	0	0	1
L	L	M	1	0	0	0
H	H	H	0	1	1	1
H	H	L	0	1	1	0
H	L	H	0	1	0	1
H	L	L	0	1	0	0
L	H	H	0	0	1	1
L	H	L	0	0	1	0
L	L	H	0	0	0	1
L	L	L	0	0	0	0

1:SMB_ALT_ADDR ENABLE

0:SMB_ALT_ADDR DISABLE

1:DEVID_SEL REBRAND

0:DEVID_SEL ORIGNAL

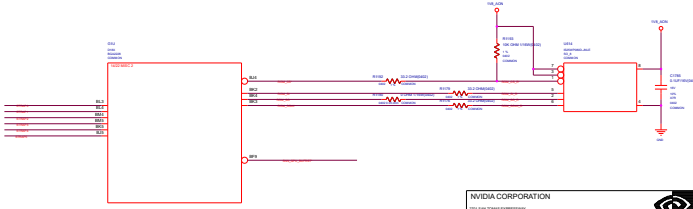
1:PCIE_CFG LOW POWER

0:PCIE_CFG HIGH POWER

1:VGA_DEVICE ENABLE

0:VGA_DEVICE DISABLE

Default



ASSEMBLY	<ASSEMBLY_DESIGNATION>
PAGE DETAIL	MISC: ROM, STRAPS

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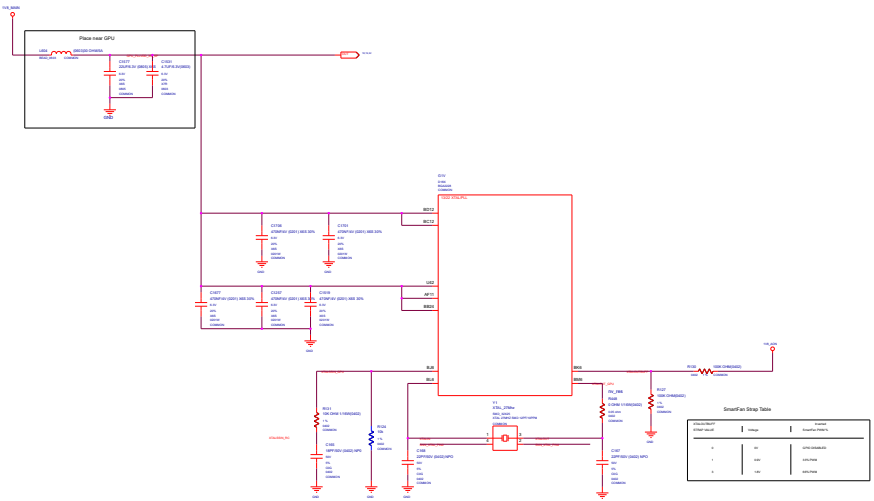
DATE	07-JUN-2019

PAGE 26: MISC: XTAL. PLL



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PAGE DETAIL	MISC: XTAL. PLL

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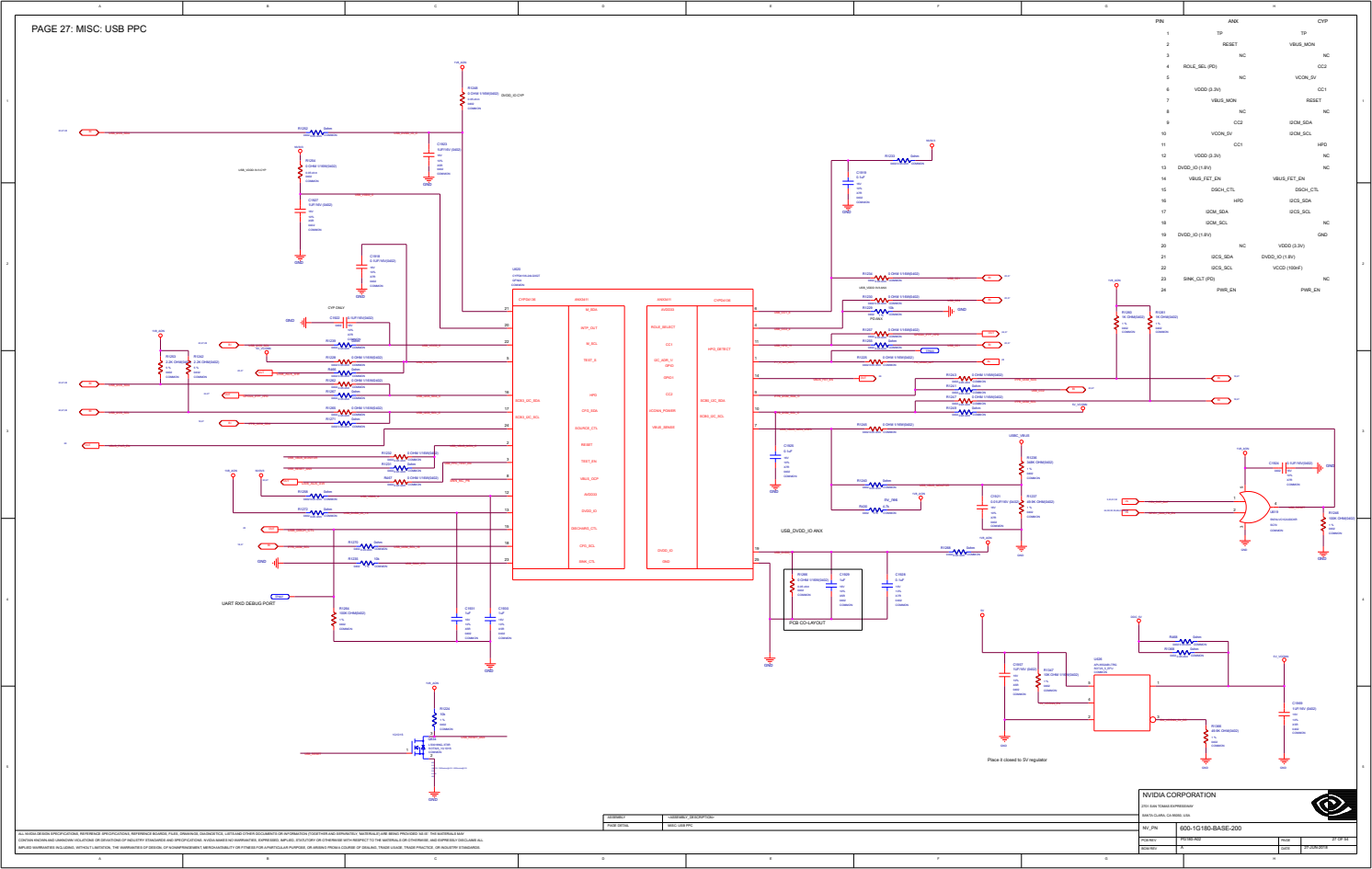
2701 SAN TOMAS EXPRESSWAY	
SANTA CLARA, CA 95050, USA	
MV_PN	600-1G180-BASE-200
PCB REV	PG180 A02
SCH REV	A
PAGE	26 OF 54
DATE	07-JUN-2015

PAGE 27: MISC: USB PPC



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PAGE DETAIL	MISC: USB PPC

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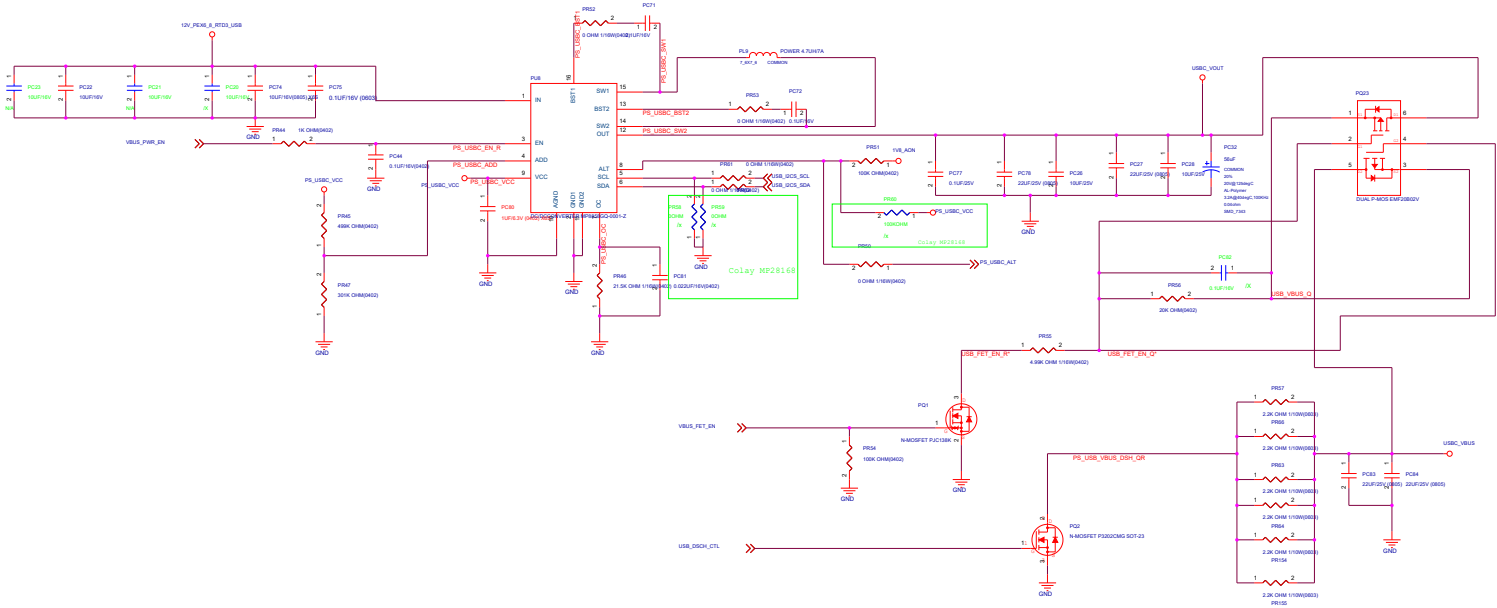
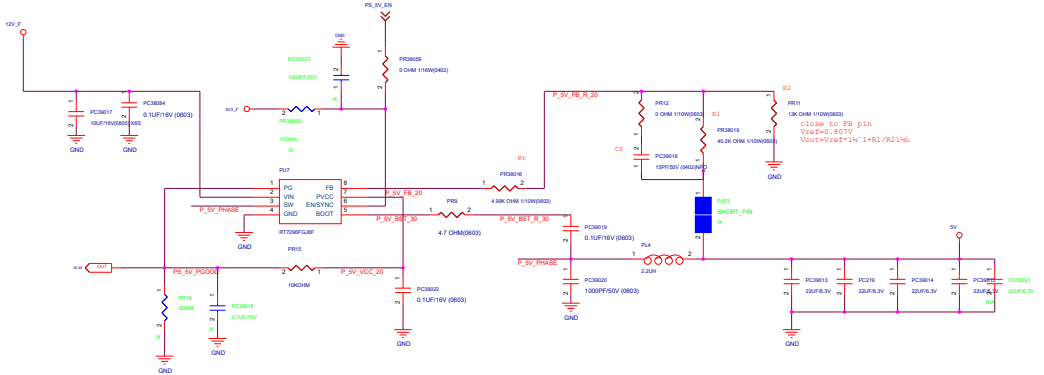
NV_PN	600-1G180-BASE-200
PCB REV	PCI180-A02
SCH REV	A
SCALE	27 OF 54
DATE	27-JUN-2019


12V_PEXE_8_RTD3_USB
PC23
10UF/16V
PC22
10UF/16V
PC21
10UF/16V
PC20
10UF/16V
PC74
10UF/16V(0805)
PC75
0.1UF/16V (0603)
VBUS_PWR_EN
PR44
1K OHM(0402)
PC44
0.1UF/16V(0402)
PS_USBC_VCC
PR45
499K OHM(0402)
PR47
301K OHM(0402)
PC80
10UF/6.3V (0805)
PS_USBC_EN_R
PS_USBC_ADD
PS_USBC_VCC
PU8
IN
EN
ADD
VCC
AGND
GND1
GND2
OC
SW1
BST1
BST2
SW2
OUT
ALT
SCL
SDA
APX9240AQBI-7
PR52
0 OHM 1/16W(0402)
PC71
0.1UF/16V
PS_USBC_SW1
PL9
POWER 4.7UH/7A
7_6X7_6
COMMON
PR53
0 OHM 1/16W(0402)
PC72
0.1UF/16V
PS_USBC_BST2
PS_USBC_SW2
PR61
0 OHM 1/16W(0402)
USB_I2CS_SCL
USB_I2CS_SDA
PR58
100KOHM
/x
PR59
100KOHM
/x
PR46
21.5K OHM 1/16W(0402)
PC81
0.022UF/16V(0402)
PS_USBC_OC
Colay MP28168
PRS1
1V8_ADN
100K OHM(0402)
PR60
100KOHM
/x
PS_USBC_VCC
PR50
0 OHM 1/16W(0402)
PS_USBC_ALT
USBC_VOUT
PC77
0.1UF/25V
PC76
22UF/25V (0805)
PC26
10UF/25V
PC27
22UF/25V (0805)
PC28
10UF/25V
PC32
56uF
COMMON
20%
20mΩ/15mΩ/C
AL-Polymer
3.2A@84mΩC, 105KHz
5.5Arms
SMG_7343
PQ23
DUAL P-MOS EMF20B02V
PC82
0.1UF/16V
/X
USB_VBUS_Q
PR56
20K OHM(0402)
PR55
4.99K OHM 1/16W(0402)
USB_FET_EN_R*
USB_FET_EN_Q*
PQ1
N-MOSFET PJC138K
VBUS_FET_EN
PR54
100K OHM(0402)
PS_USB_VBUS_DSH_QR
PQ2
N-MOSFET P3202CMG SOT-23
USB_DSCH_CTL
PR57
2.2K OHM 1/10W(0603)
PR66
2.2K OHM 1/10W(0603)
PR63
2.2K OHM 1/10W(0603)
PR64
2.2K OHM 1/10W(0603)
PR154
2.2K OHM 1/10W(0603)
PR155
2.2K OHM 1/10W(0603)
USBC_VBUS
PC83
22UF/25V (0805)
PC84
22UF/25V (0805)
GND



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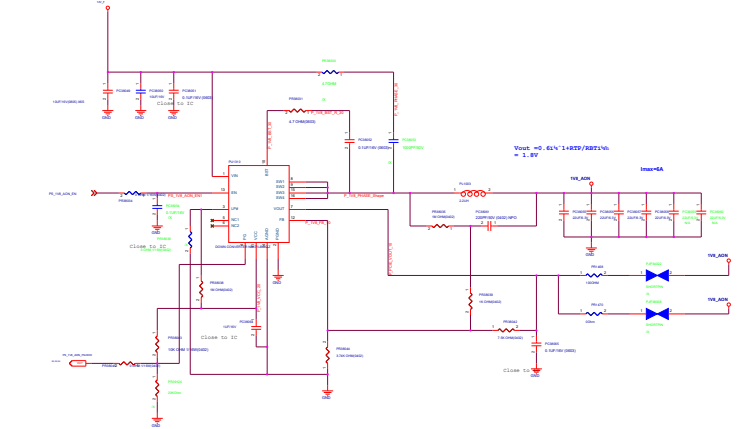
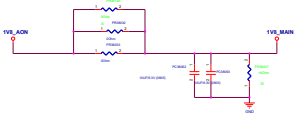
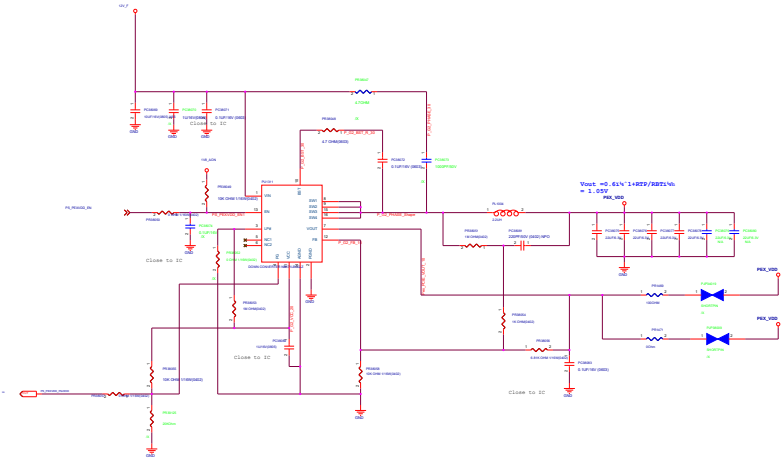
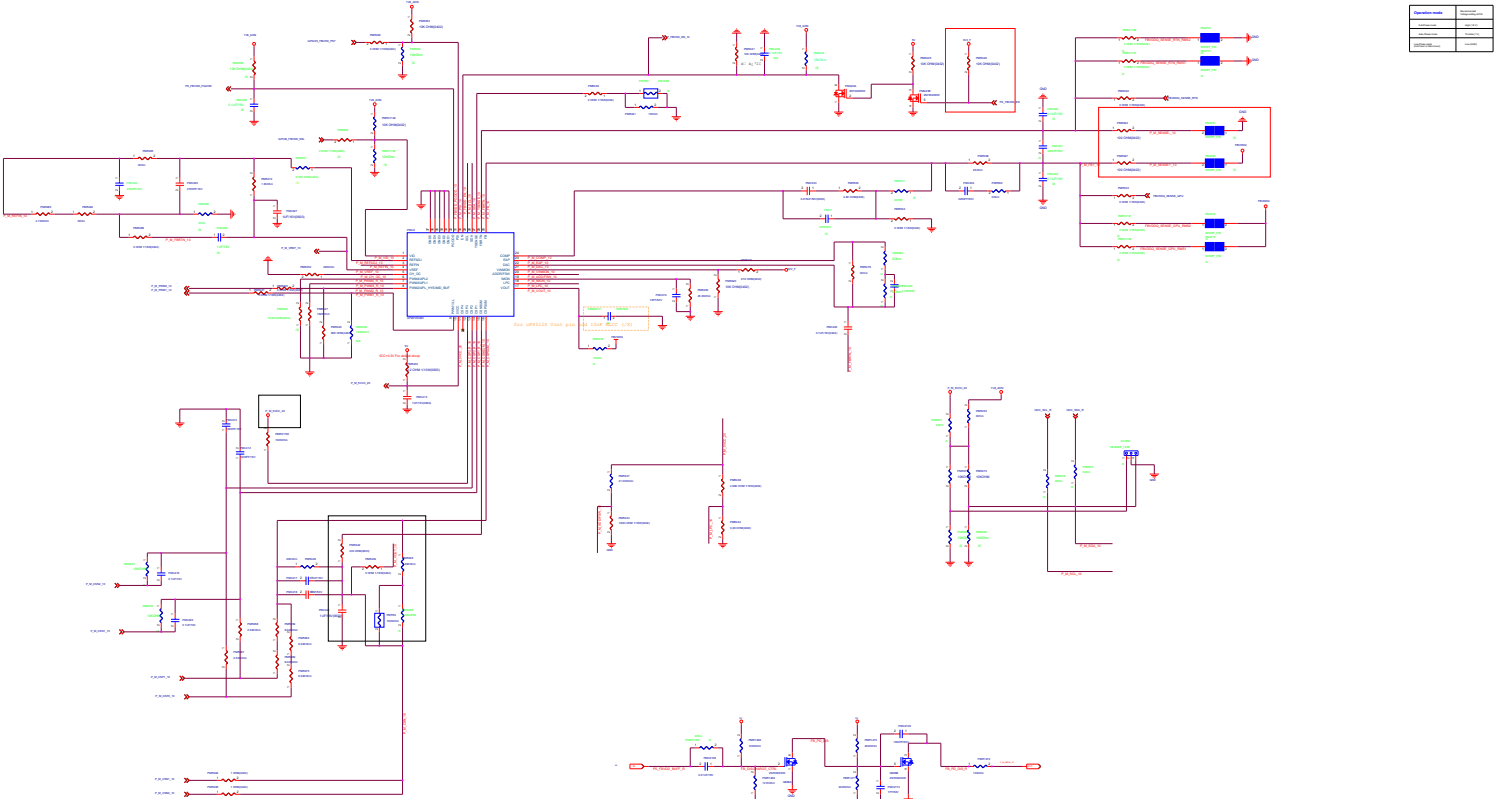
Size: C	Document Number: <Doc>		Rev: <RevCode>
Date: Friday, November 09, 2018	Sheet 1	of 1	

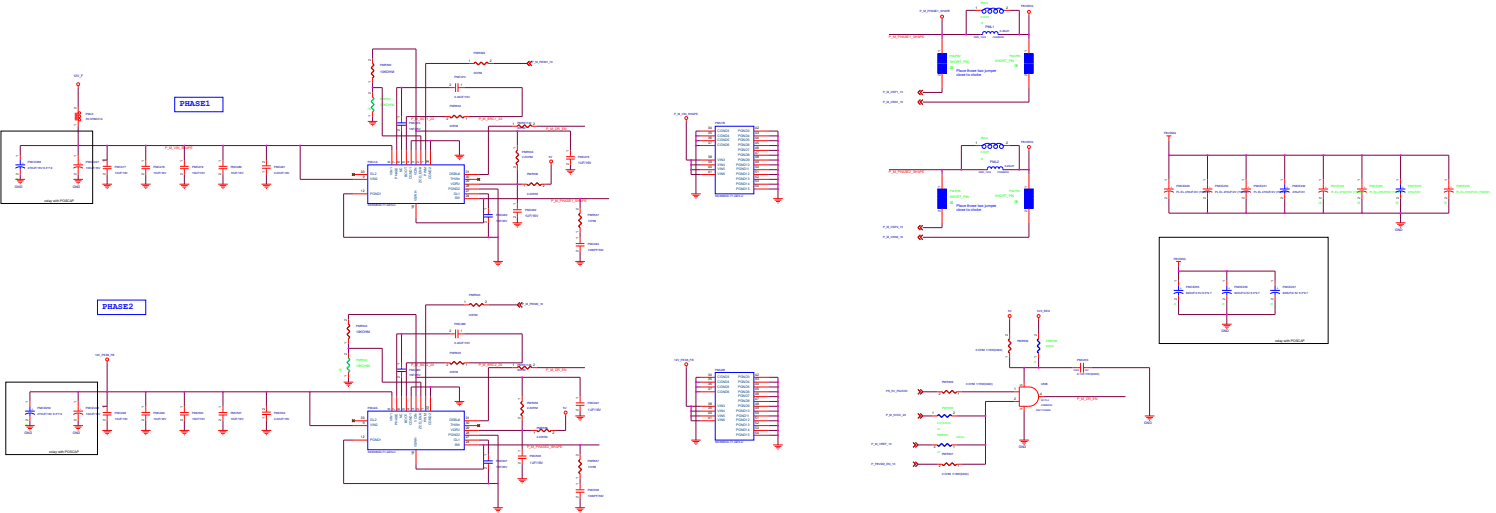

Vout =0.61*1+RTD/RST1*k
= 1.8V
Imax=6A
1V8_AON
1V8_AON
1V8_AON
Close to IC
Close to IC
Close to IC
Close to IC

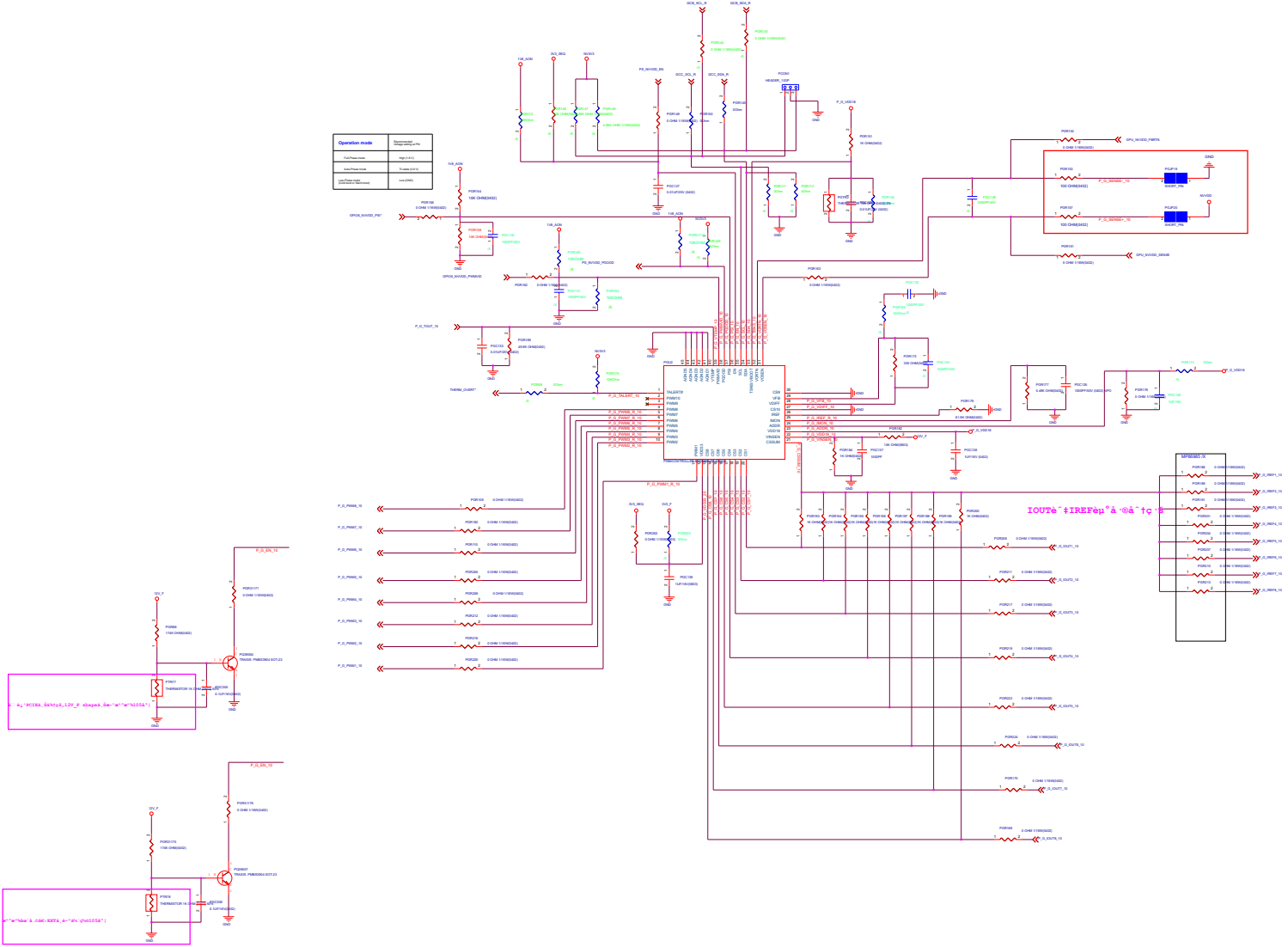

1V8_AON
1V8_MAIN

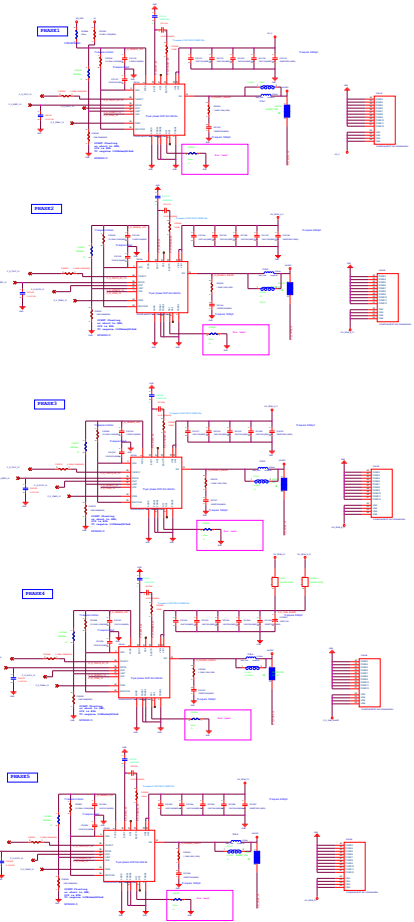

Vout =0.61*1+RTD/RST1*k
= 1.05V
P8X_VDD
P8X_VDD
P8X_VDD
Close to IC
Close to IC
Close to IC
Close to IC



		R15 (09016-00360500) L=0.15uH DCR=0.82mohm	R20 (09016-00130800) L=0.30uH DCR=0.78mohm
RC match	Csum	0.1uF	0.1uF
	Rcap	14.7K ohm	30k ohm
Total OCP (410A)	Rsum	0.5K ohm	0.5K ohm
	Isum	85.7uA	80uA
	Rimon	28K ohm (410A)	30K ohm (410A)
Loadline (0.3m ohm)	RLL	1.47K ohm	1.54K ohm
Loadline En threshold (121A En, 52A Dis)	Rtop	124K ohm	124K ohm
	Rbot	38.3K ohm	39K ohm


PHASE1
PHASE2
P_VL_PHASE1_SHUNT
P_VL_PHASE2_SHUNT
P_VL_PHASE3_SHUNT
P_VL_VSYS_VL
P_VL_VSNS_VL
P_VL_VBAT_VL
P_VL_PHASE1_SW
P_VL_PHASE2_SW
P_VL_PHASE3_SW
P_VL_VBAT_VH
P_VL_VSYS_VH
P_VL_VSNS_VH
P_VL_PHASE1_SW_VH
P_VL_PHASE2_SW_VH
P_VL_PHASE3_SW_VH
P_VL_VBAT_VH
P_VL_VSYS_VH
P_VL_VSNS_VH
P_VL_PHASE1_SW_VH
P_VL_PHASE2_SW_VH
P_VL_PHASE3_SW_VH
Place Power fuse jumper close to module
SHORT_PIN
SHUNT_PIN
Resistor 4-Terminal
Inductor
Capacitor
Ferrite Bead
Test Point
GND
VIN_P
VSYS_P
VBAT_P
VSNS_P
PHASE1_SW_P
PHASE2_SW_P
PHASE3_SW_P
PHASE1_SW_VH_P
PHASE2_SW_VH_P
PHASE3_SW_VH_P
VSYS_VH_P
VSNS_VH_P
VBAT_VH_P
Connector 1*2 pin Vertical
Connector 1*3 pin Vertical
Connector 1*4 pin Vertical
Connector 1*5 pin Vertical
Connector 1*6 pin Vertical
Connector 1*7 pin Vertical
Connector 1*8 pin Vertical
Connector 1*9 pin Vertical
Connector 1*10 pin Vertical
Connector 1*11 pin Vertical
Connector 1*12 pin Vertical
Connector 1*13 pin Vertical
Connector 1*14 pin Vertical
Connector 1*15 pin Vertical
Connector 1*16 pin Vertical
Connector 1*17 pin Vertical
Connector 1*18 pin Vertical
Connector 1*19 pin Vertical
Connector 1*20 pin Vertical
Connector 1*21 pin Vertical
Connector 1*22 pin Vertical
Connector 1*23 pin Vertical
Connector 1*24 pin Vertical
Connector 1*25 pin Vertical
Connector 1*26 pin Vertical
Connector 1*27 pin Vertical
Connector 1*28 pin Vertical
Connector 1*29 pin Vertical
Connector 1*30 pin Vertical
Connector 1*31 pin Vertical
Connector 1*32 pin Vertical
Connector 1*33 pin Vertical
Connector 1*34 pin Vertical
Connector 1*35 pin Vertical
Connector 1*36 pin Vertical
Connector 1*37 pin Vertical
Connector 1*38 pin Vertical
Connector 1*39 pin Vertical
Connector 1*40 pin Vertical
mntg with PCIEC2P
mntg with PCIEC4P
mntg with PCIEC8P
mntg with PCIEC16P


Operation mode
Full Phase mode
Auto Phase mode
Light Phase mode (Ultra Fast response time)
GND
IOUTè¯·‡IREFèµ°à·®â¯†ç·¤
THERMISTOR 10.0kΩ
TRANSISTOR
THERMISTOR 10.0kΩ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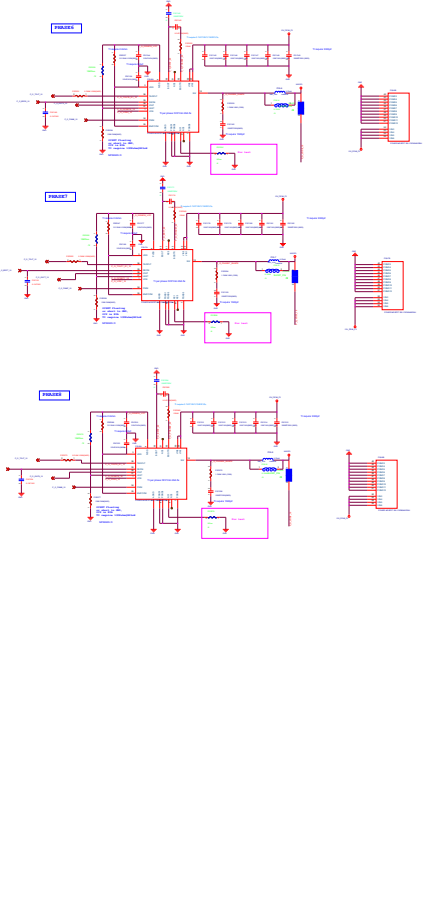
PHASE2
PHASE3
PHASE4
PHASE5

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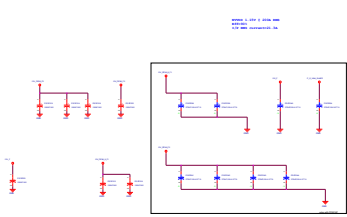
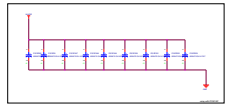
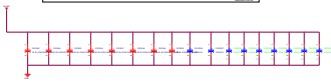
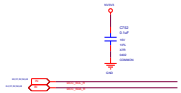
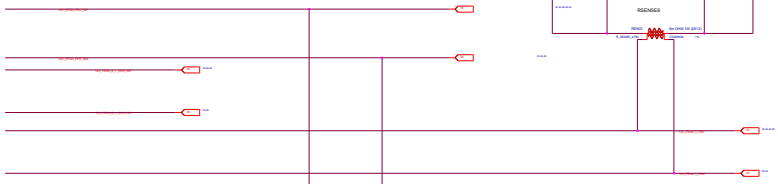
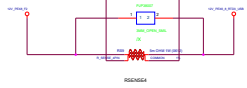
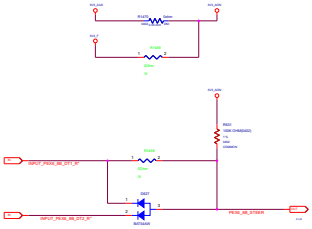
PHASE8




PAGE 40: PS: INPUT SWITCH RTD3 USB









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PAGE DETAIL	PS: INPUT SWITCH RTD3 USB

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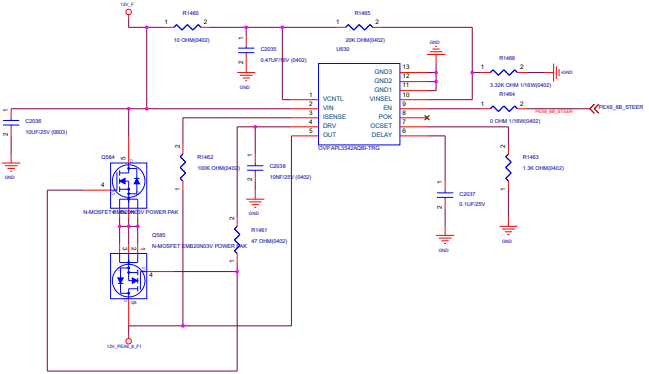
NV_PN	600-1G180-BASE-200		
PCB REV	PVT180 REV	PAGE	40 OF 54
SCM REV	A	DATE	SP JUN 2019



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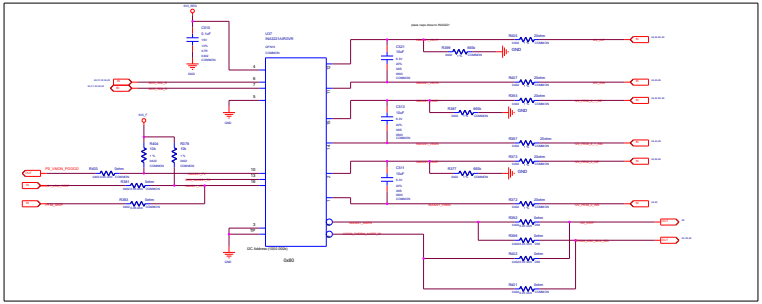
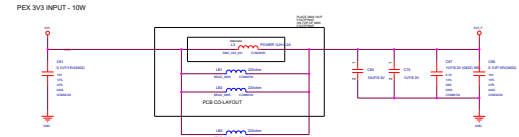
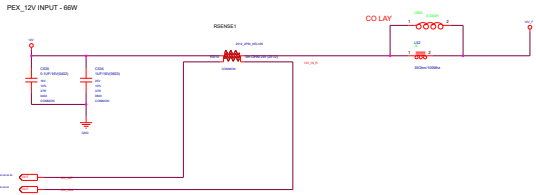
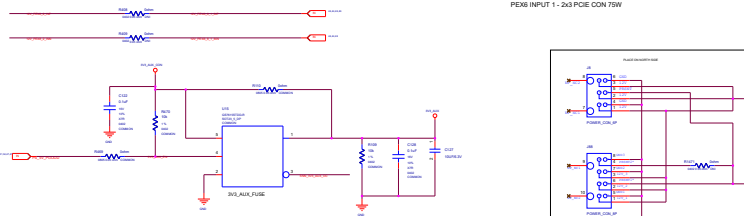
Size: C	Document Number: <Doc>		Rev: <RevCode>
Date: Friday, November 09, 2018		Sheet 1 of 1	

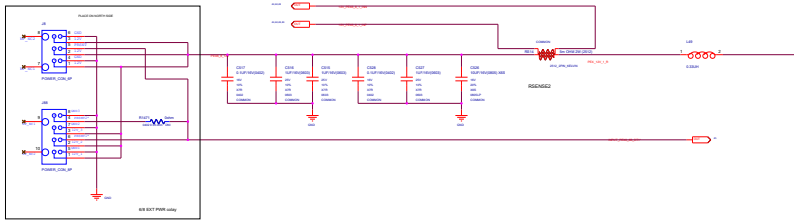
PAGE 44: PS: Inputs, Filtering, and Monitoring

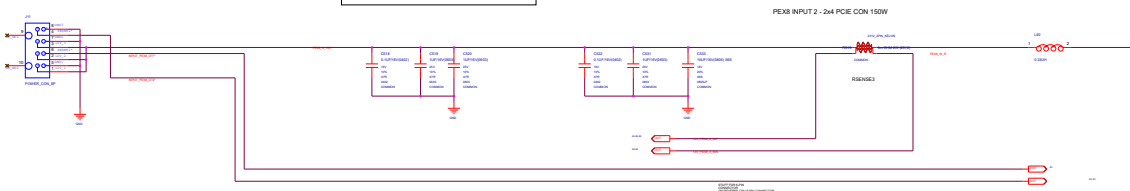












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PAGE DETAIL	PS: INPUTS, FILTERING AND MONITORING

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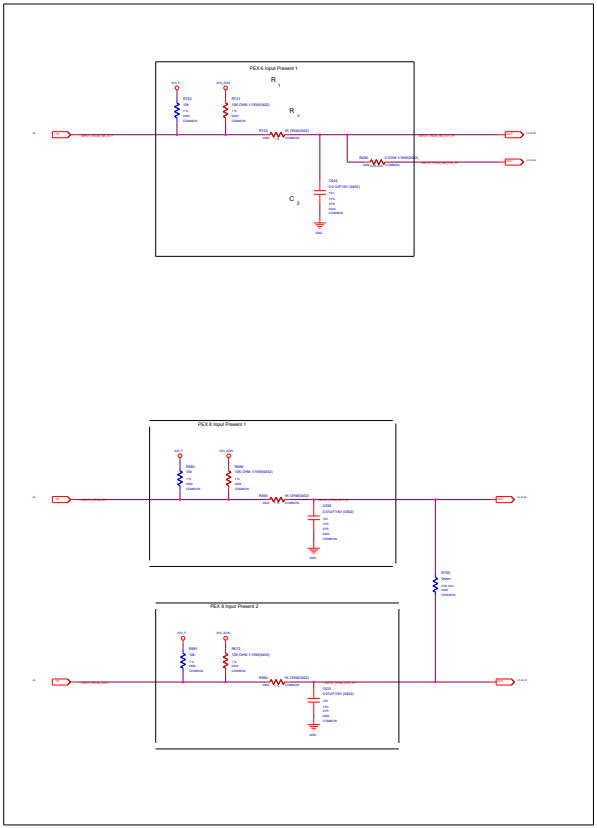
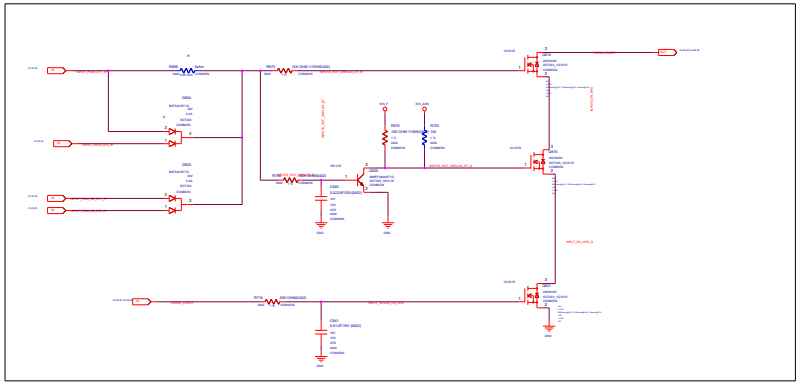
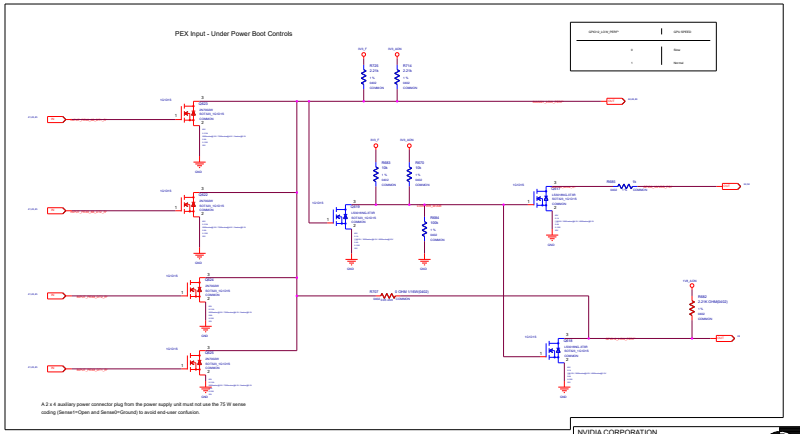
NV_PN	600-1G180-BASE-200		
PCB REV	PG180 REV	PAGE	44 OF 54
SCH REV	A	DATE	07-JUN-2019







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ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	PS: CURRENT STEERING,HOT UNPLUG DETECT

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NV_PN	600-1G180-BASE-200		
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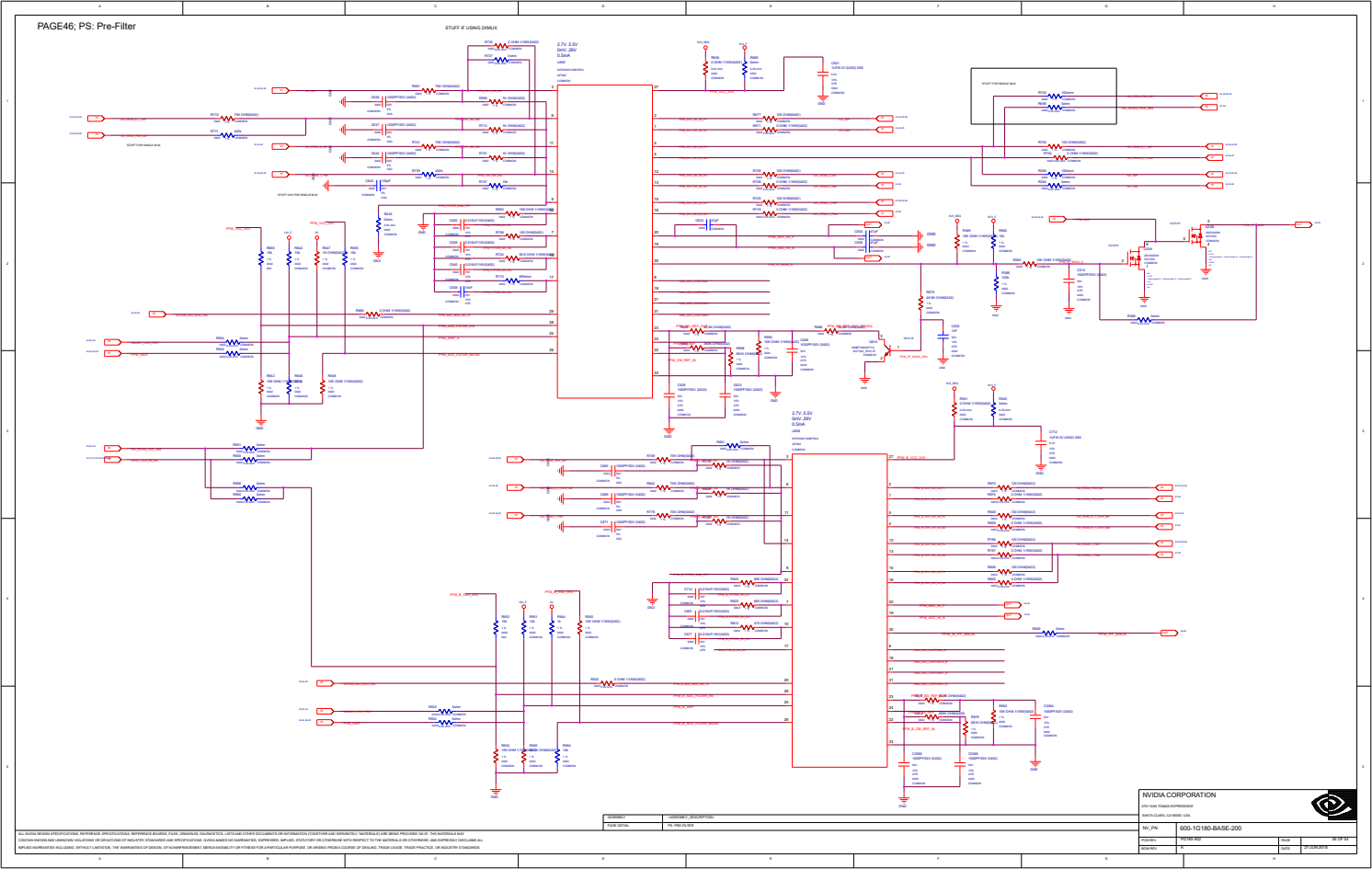
SCH REV	A	DATE	SP JUN 2019


PAGE46; PS: Pre-Filter
STUFF IF USING 2XMUX
2.7V..5.5V
0mV..26V
0.5mA
2.7V..5.5V
0mV..26V
0.5mA
STUFF FOR SINGLE MUX
STUFF FOR SINGLE MUX
STUFF FOR SINGLE MUX
STUFF FOR SINGLE MUX
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PCB REV
P0180 A02
SCALE
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SIZE/REV
A
DATE
07-JUN-2019
ASSEMBLY
<ASSEMBLY_DESCRIPTION>
PAGE DETAIL
PS: PRE-FILTER
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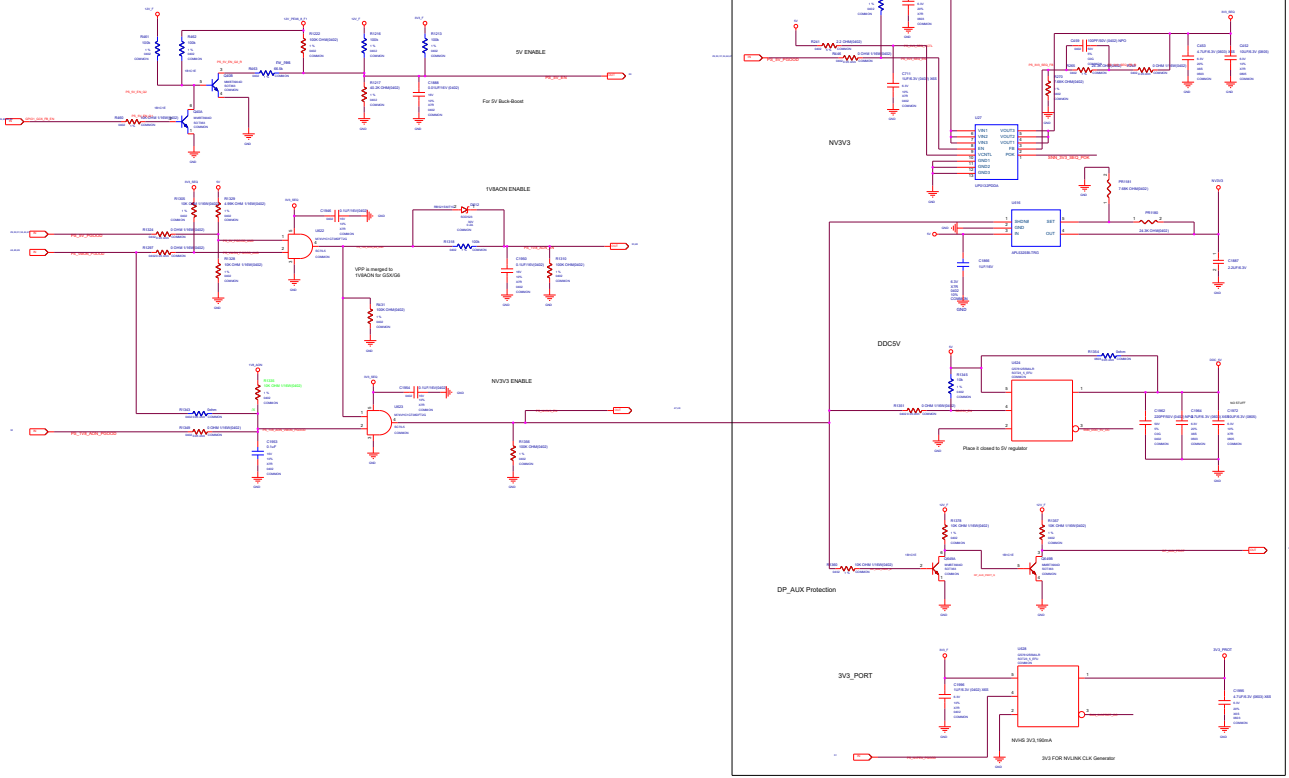
PAGE 47: SEQUENCE:5V,1V8,NV3V3 ENABLE



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PAGE DETAIL	SEQUENCE: 5V, 1V8, NV3V3 ENABLE

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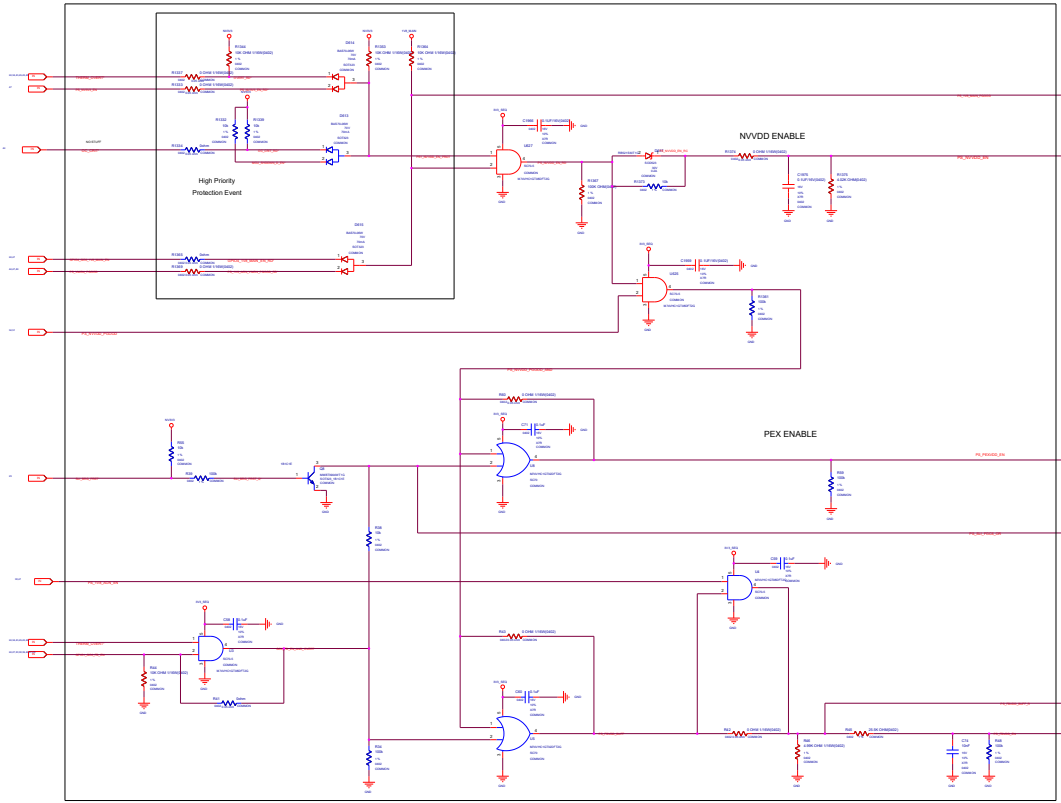
PAGE 48: SEQUENCE:NV,PEX,FB ENABLE



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PAGE DETAIL	SEQUENCE: NV, PEX, FB ENABLE

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SCH REV	A
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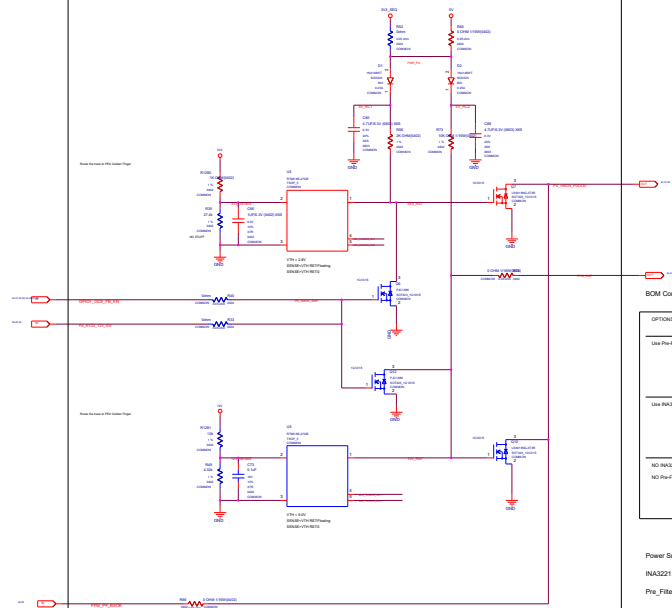
PCIE Voltage Monitor



Signal	Direction	Function
3V3	INPUT	Sense the 3V3 Voltage from PCIE golden finger
12V	INPUT	Sense the 12V Voltage from PCIE golden finger
PS_VMON_PGOOD	OPEN-DRAIN	Floating(Hi) once both 3V3 and 12V reach Vth
GC6_FB_EN	INPUT	Indicator for RTD3/GC6 residence,Use to Mask the VMON_PGOOD
PS_PF_SKIP	INPUT	From INA3221(VPU) or Pre-filter(SKIP)
PS_PF_SECK	INPUT	From INA3221(PV) or Pre-filter(SEL_CK)
PS_RTD3_12V_SW	INPUT	GC6_FB_EN && IDLE_IN_SW

BOM Configuration

OPTIONS	PEX3V3_SENSE	PEX12V_SENSE	OTHER_12V_SENSE
Use Pre-Filter	Pre-Filter NO STUFF U12 NO STUFF Q3,Q5 NO STUFF D15	Pre-Filter NO STUFF U13 NO STUFF Q4	Pre-Filter
Use INA3221	Voltage_Monitor	INA3221 NO STUFF U12 NO STUFF Q4	INA3221
NO INA3221 NO Pre-Filter	Voltage_Monitor	Voltage_Monitor	N/A

Power Supply

INA3221:3V3_SEQ

Pre_Filter(ADC_MUX):3V3(PEX)

Dual Pre-Filter case:

Only use the Primary Pre-Filter to sense 3V3PEX

and All Input 12Vs

ASSEMBLY	<ASSEMBLY_GROUP>**dm
PAGE DETAIL	SEQUENCE: PCIE VOLTAGE MONITOR

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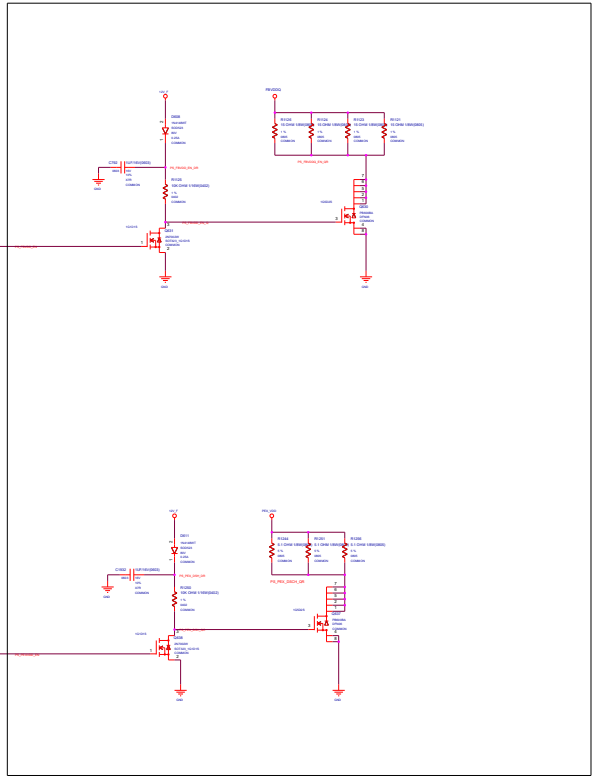
PAGE 50: SEQUENCE:DISCHARGE



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PAGE DETAIL	SEQUENCE: DISCHARGE

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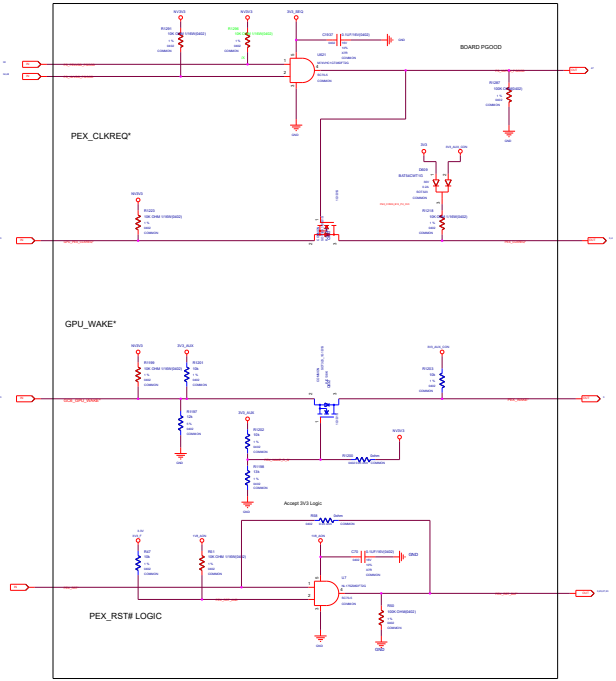
PCB REV	PCI SIG 4.0
SCALE REV	A
SCALE	NO SP 54
DATE	07-JUN-2019

PAGE 51: SEQUENCE:MISC



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SCH REV	A
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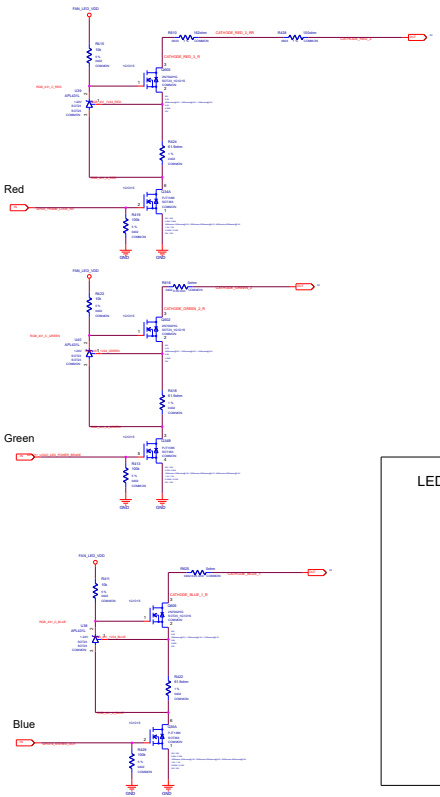
PAGE 52: LED & FAN HEADERS



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ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	LED & FAN HEADERS

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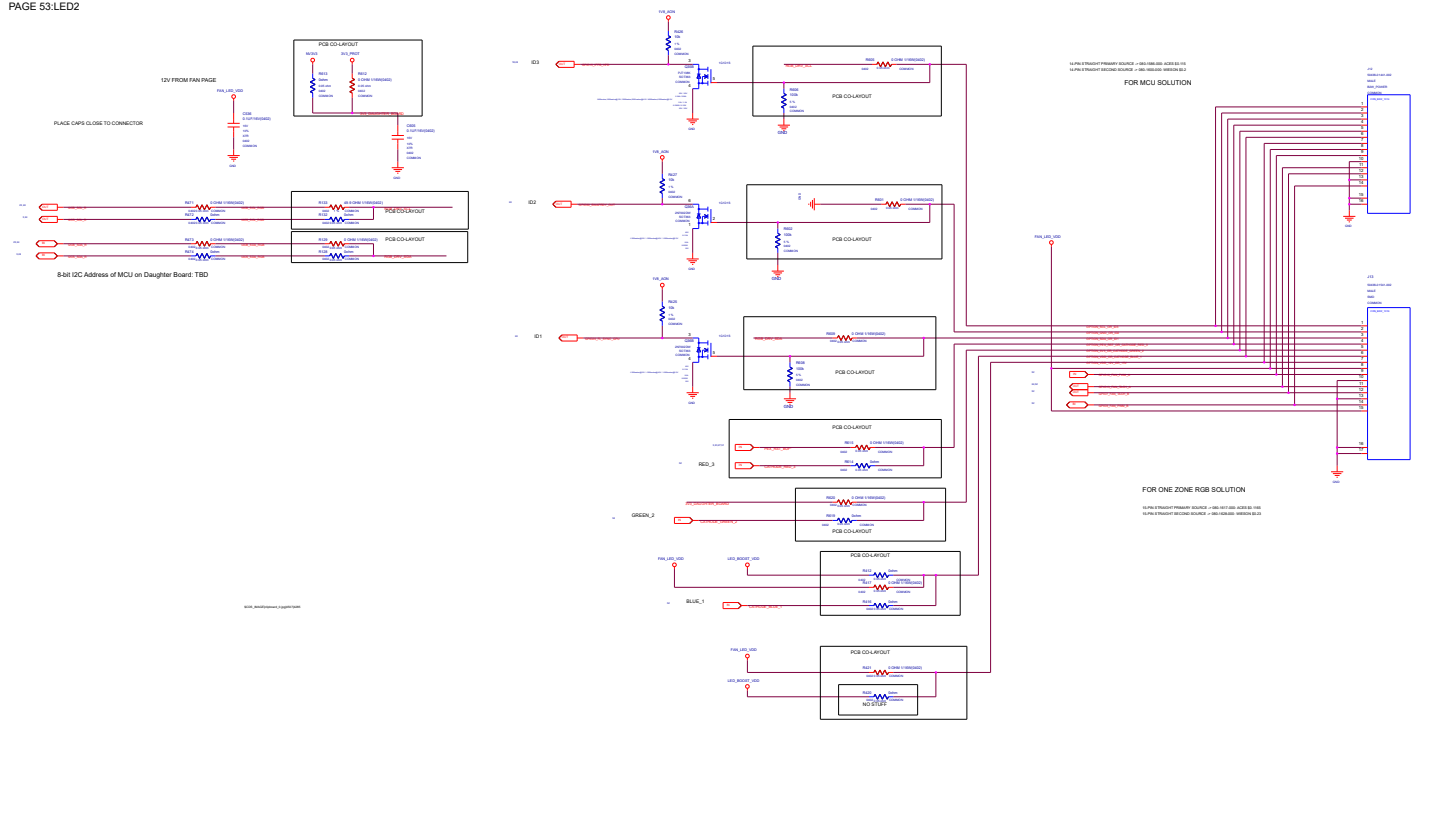
PAGE 53:LED2



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PAGE DETAIL	LED 2

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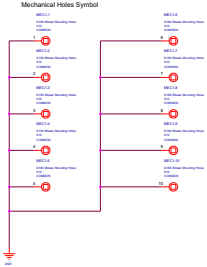
PAGE 54:MECHANICAL;BRACKET/THERMAL SOLUTION

Brackets:

Bracket Screw

STIFFENER

Mechanical Holes Symbol



GPU Socket Symbol

ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	Mechanical::Bracket/Thermal Solution

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