

GA102/NP, GeForce SKU P-BOARD

450W/600W, 384bit, GDDR6x x16 24GB
DP + DP + DP + HDMI/DP

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MICRO-STAR INT'L CO.,LTD

MS-V610

Rev: **001**

Customer: **MSI**

Part: **MS-V610**

Rev: **22**



NVIDIA CORPORATION
2000 SHAW BLVD
SANTA CLARA, CA 95050, USA

REV: **PN**

600-1G139-BASE-400

FOR SET: **95139-A03**

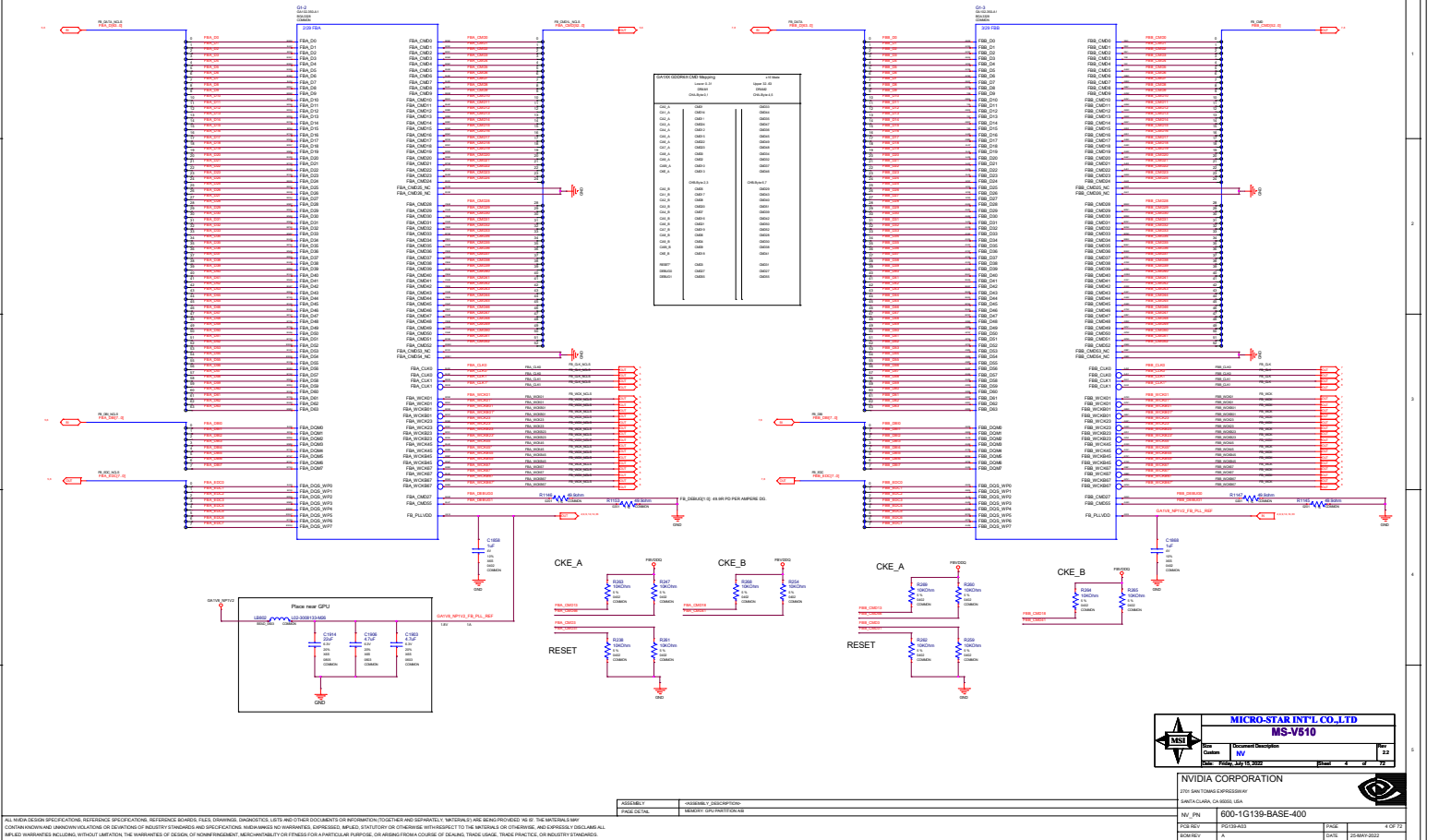
DATE: **02-MAR-2022**

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DATE: **02-MAR-2022**

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Document Type: BOM

Page: 4 of 12

NVIDIA CORPORATION

2000 SHAW BLVD, SANTA CLARA, CA 95050, USA

Rev: 1.0

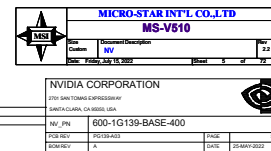
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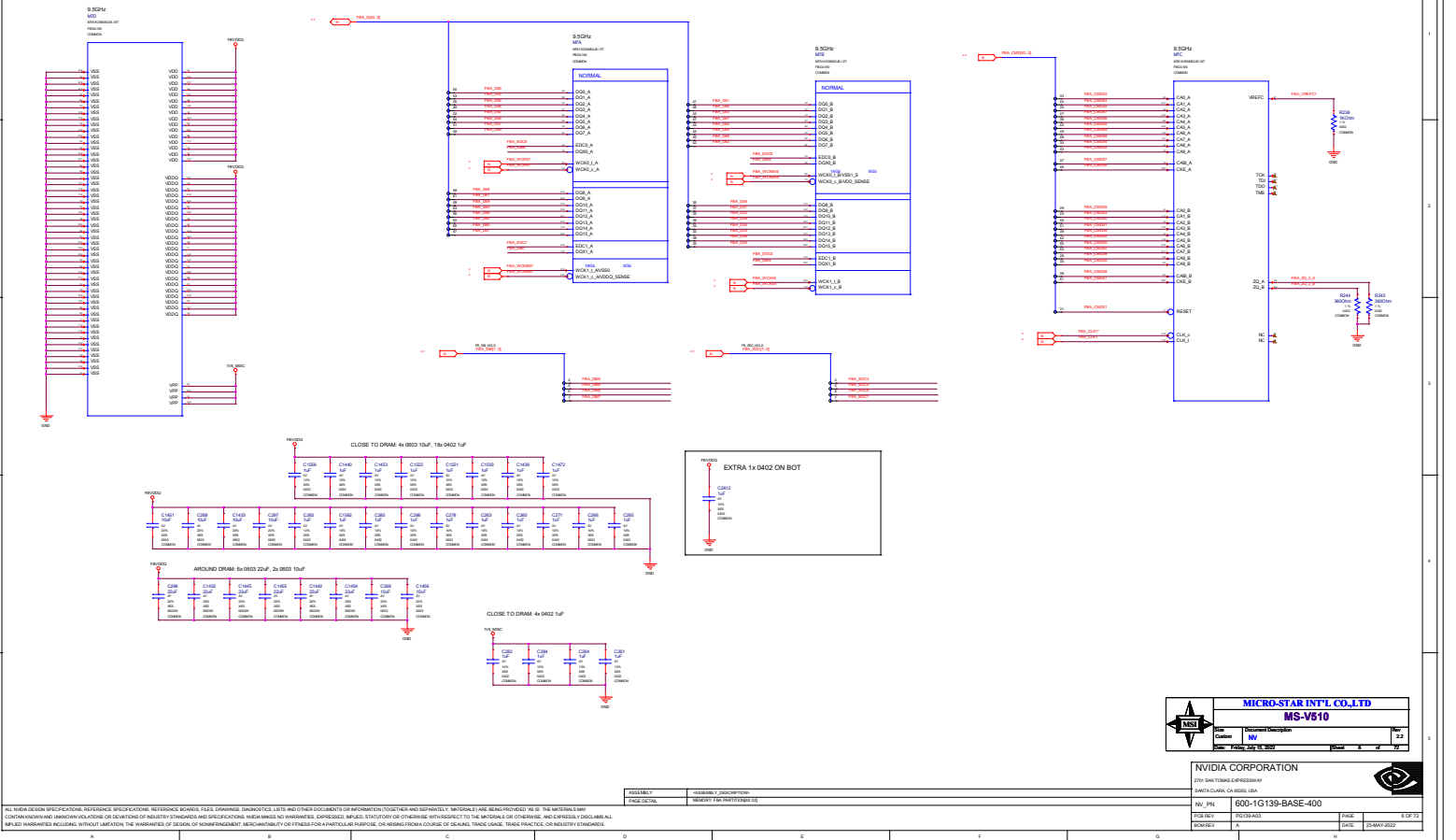
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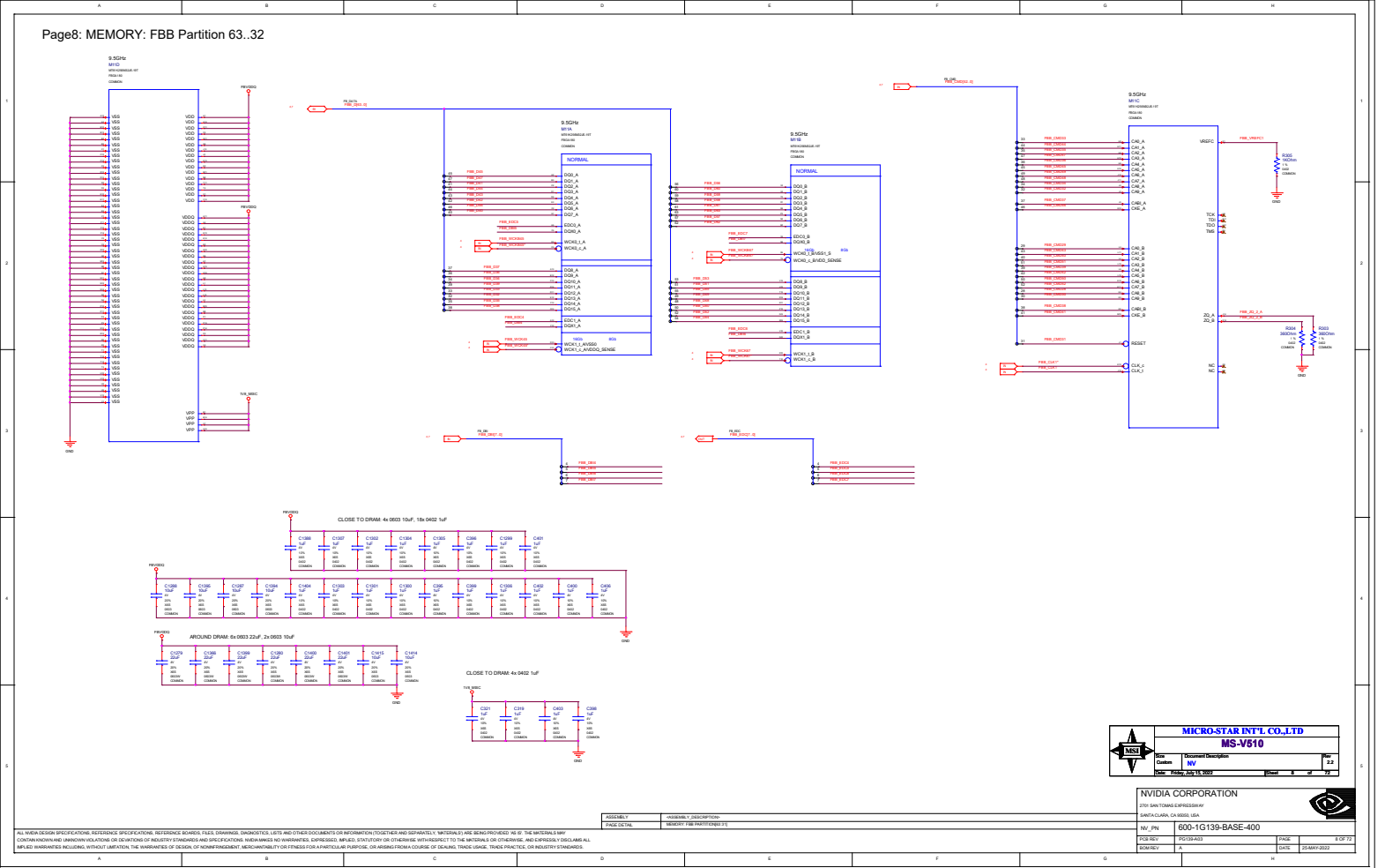
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PA1_0000_00	PA1_0000_00

MICRO-STAR INT'L CO., LTD.
MS-V610

NAME	MS-V610	REV	1.0
DATE	2010-05-18	DESIGN	1.0

NVIDIA CORPORATION
2000 SHAW BLVD, SANTA CLARA, CA 95050, USA

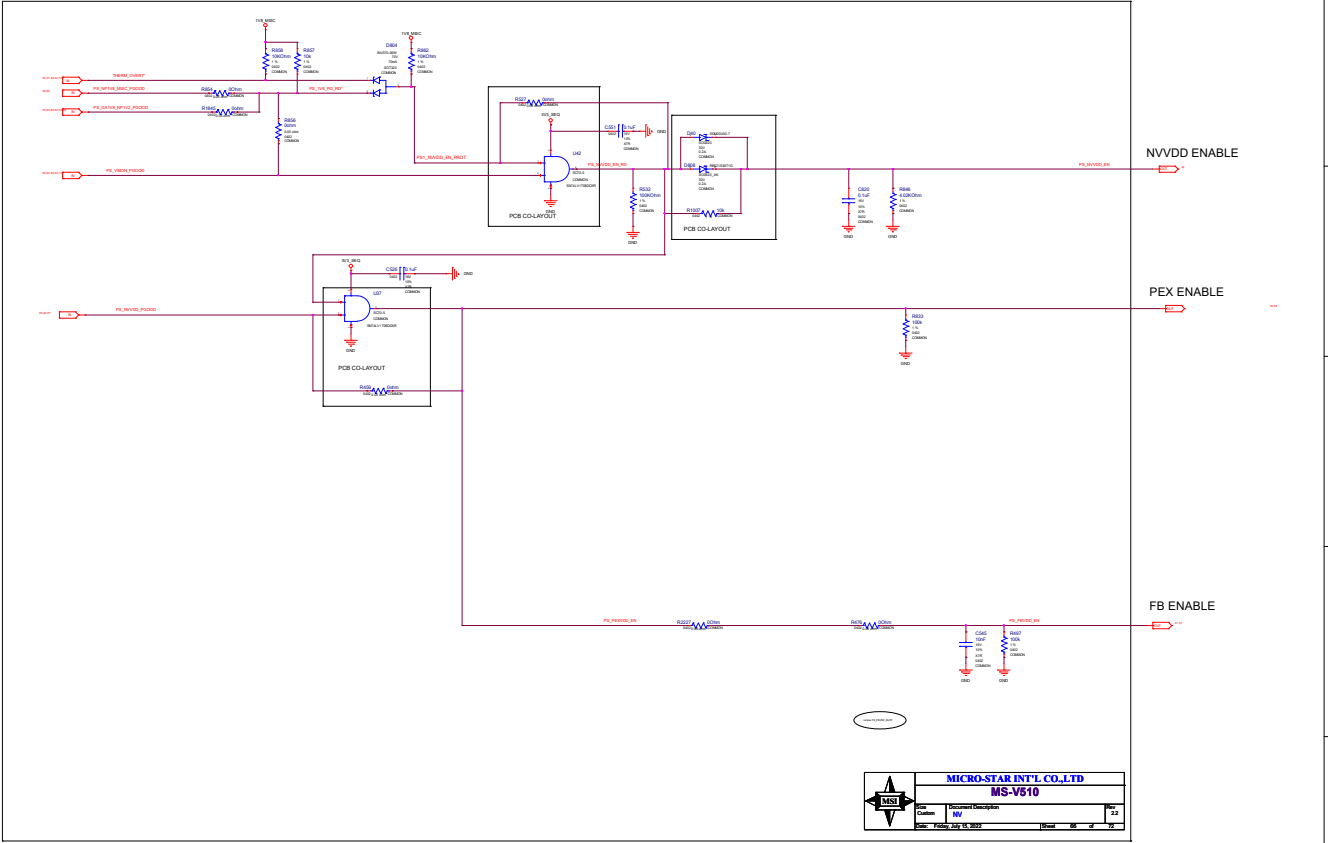
REV.	PN	600-1G139-BASE-400
REV.	PN	600-1G139-BASE-400
REV.	PN	600-1G139-BASE-400




MICRO-STAR INT'L CO., LTD	
MS-V510	
Customer: MSI	Product Description: MSI
Date: 2010.05.11.10:00	Drawn: MSI
NVIDIA CORPORATION	
3840 AVENUE, CA 95051, USA	
NV_PN: 600-1G139-BASE-400	
FOR SET: 9510-A33	FILE: MSI
FOR SET: MSI	DATE: 2010.05.11.10:00

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MS-V510

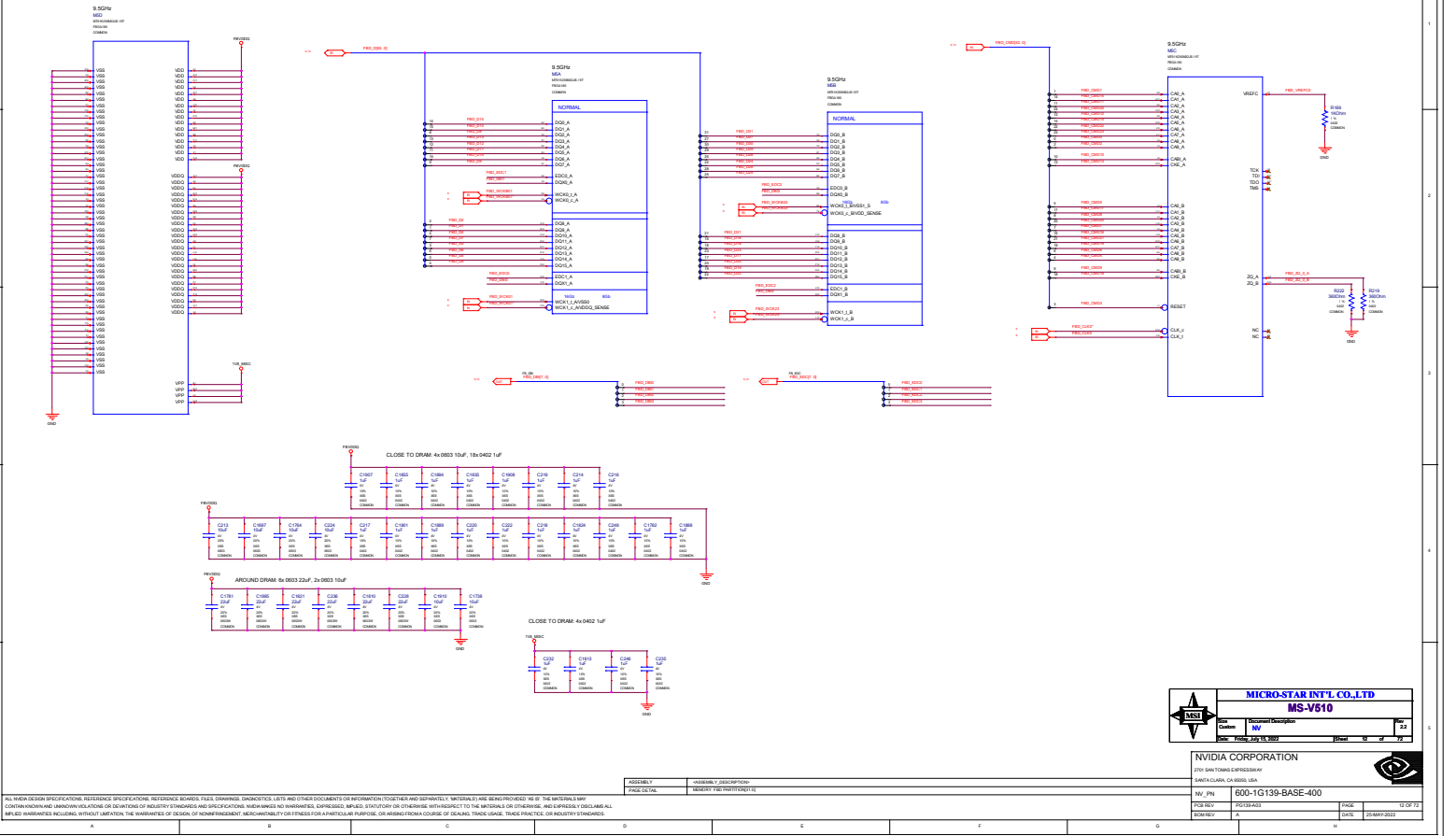
Doc. Control: **NV**

Doc. Name: **Product Design**

Doc. No.: **600-1G139-BASE-400**

Doc. Rev.: **2.0**

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ASSEMBLY	DESCRIPTION	NV_PN	600-1G139-BASE-400	REV	2.0
PROD DETAIL	REV A1 NV_PEX_FB_EN	PROD DETAIL	REV A1 NV_PEX_FB_EN	PROD DETAIL	REV A1 NV_PEX_FB_EN



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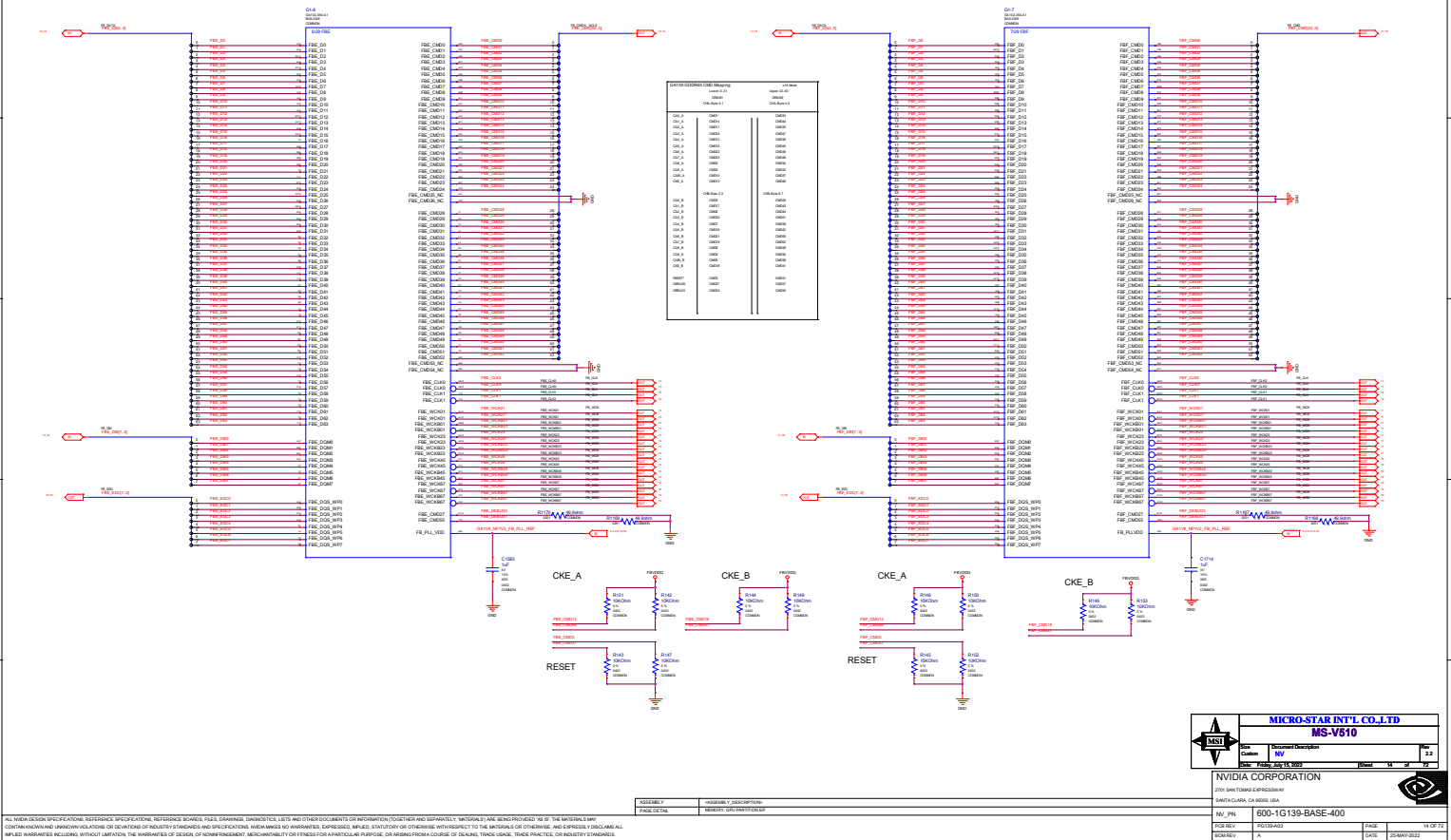
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PART DETAIL: NVIDIA CORPORATION

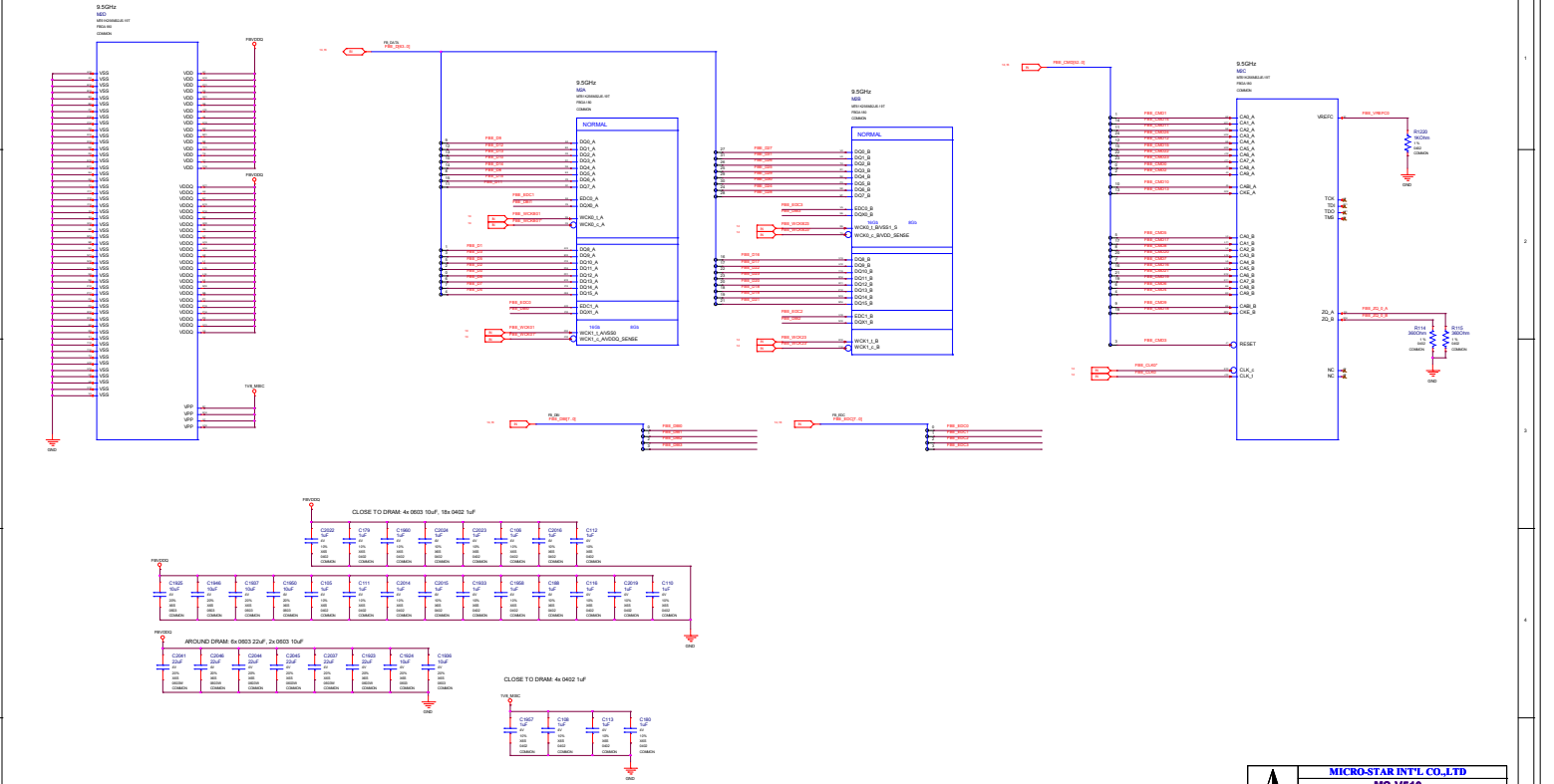


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MS-V810
Rev: 1.0
Date: 2008.12.10
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NVIDIA CORPORATION
2000 SHAW BLVD
SANTA CLARA, CA 95050 USA
NV_PN: 600-1G139-BASE-400
FOR SET: 600-1G139-BASE-400
FOR SET: 600-1G139-BASE-400
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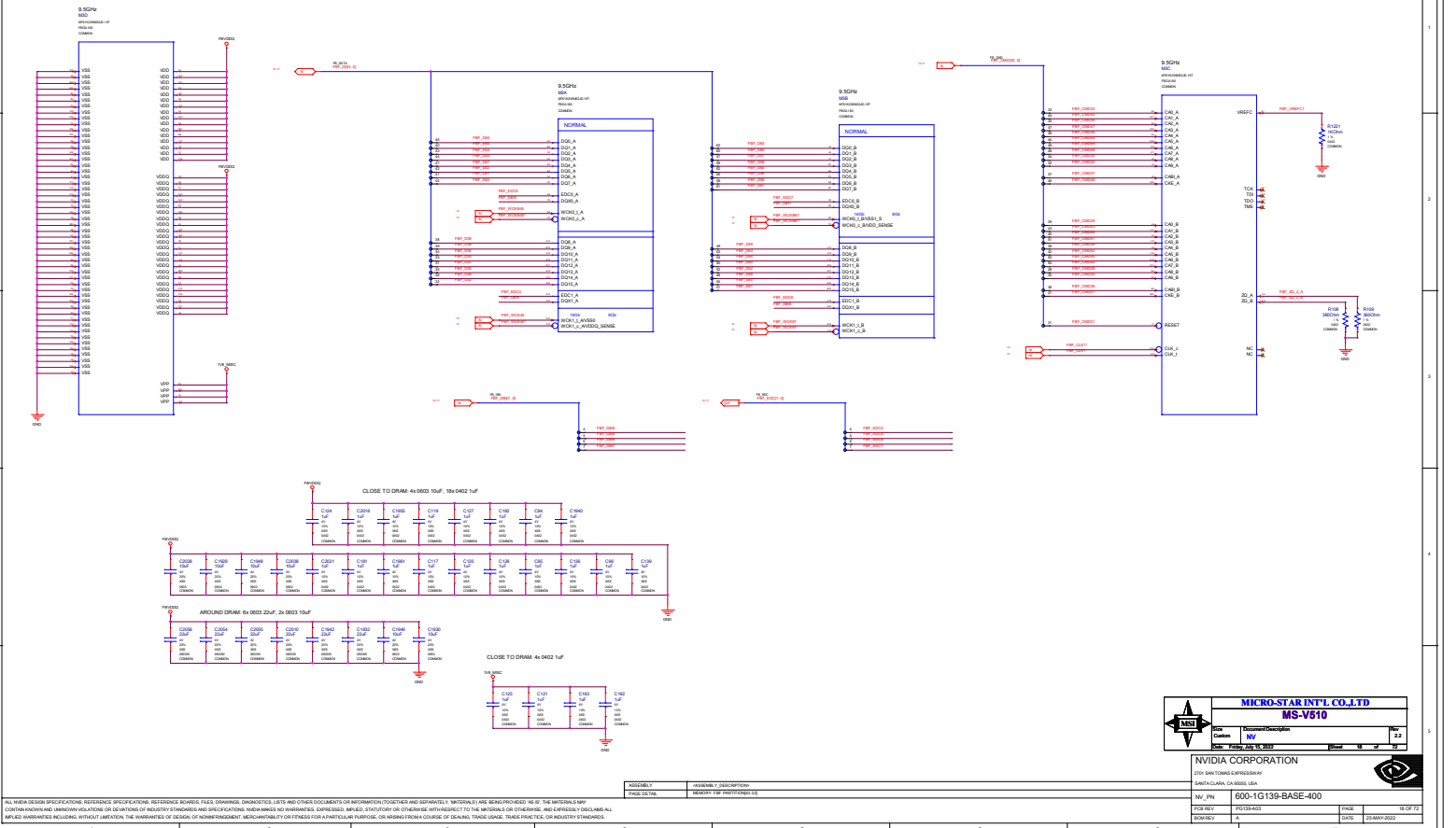
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PART DETAIL: NVIDIA PART NUMBER 01



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MS-V610
Rev: 1.0
Date: 10/14/2010
Page: 15 of 17




NVIDIA CORPORATION
2005 GIGAWATT DRIVE
SANTA CLARA, CA 95050, USA
NV_PN: 600-1G139-BASE-400
P/N: 600-1G139-BASE-400
P/N: 600-1G139-BASE-400
P/N: 600-1G139-BASE-400




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ASSEMBLY	ASSEMBLY DESCRIPTION
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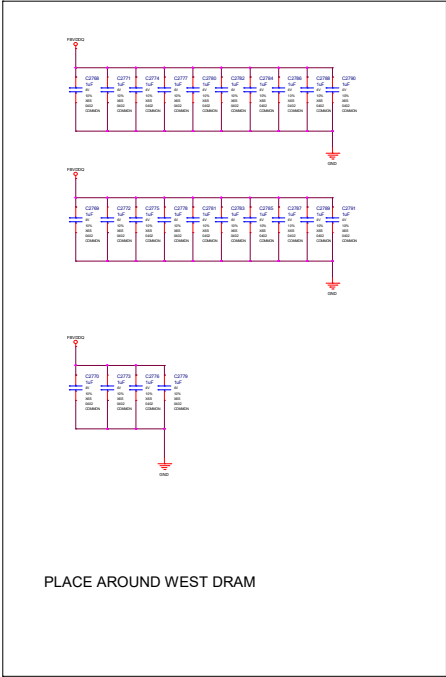


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MS-V810
Date: 2010.10.10
Version: 1.0
Page: 18 of 32

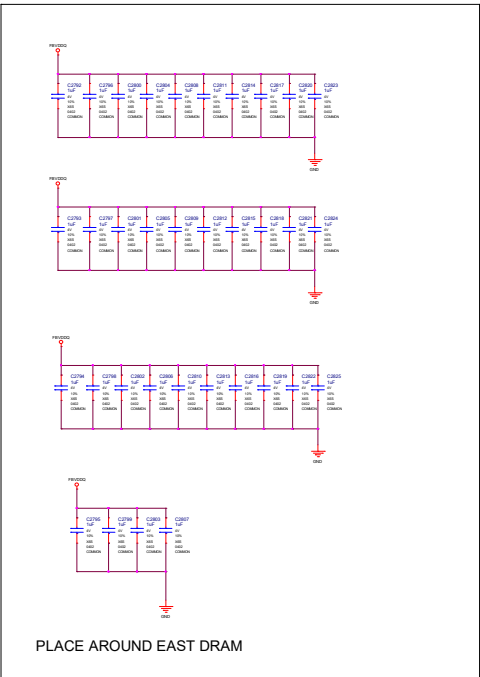


NVIDIA CORPORATION
2000 SHAW FERRY DRIVE
SANTA CLARA, CA 95050, USA
NV_PN: 600-1G139-BASE-400
PART NO: 600-1G139-BASE-400
REV: 1.0
DATE: 02-04-2010

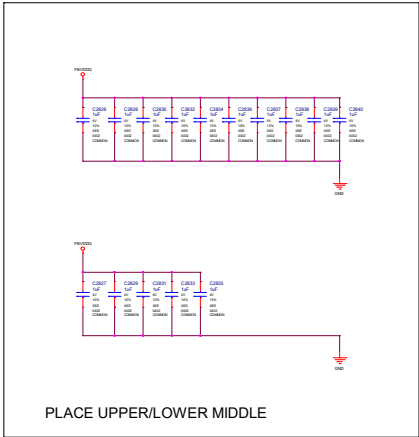
PER SI REQUIREMENT, RESERVE MORE 0402 1UF AROUND DRAM



PLACE AROUND WEST DRAM



PLACE AROUND EAST DRAM



PLACE UPPER/LOWER MIDDLE

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ASSEMBLY	DESCRIPTION
MS-V610	MEMORY DECOUPLING



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MS-V610

Rev: 1.0

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Rev: 1.0

Rev: 1.0

NVIDIA CORPORATION

2000 SHAW BLVD, SANTA CLARA, CA 95050, USA

Rev: 1.0

Rev: 1.0

Rev: 1.0

Rev: 1.0

600-1G139-BASE-400

POWER: 150W

POWER: 150W

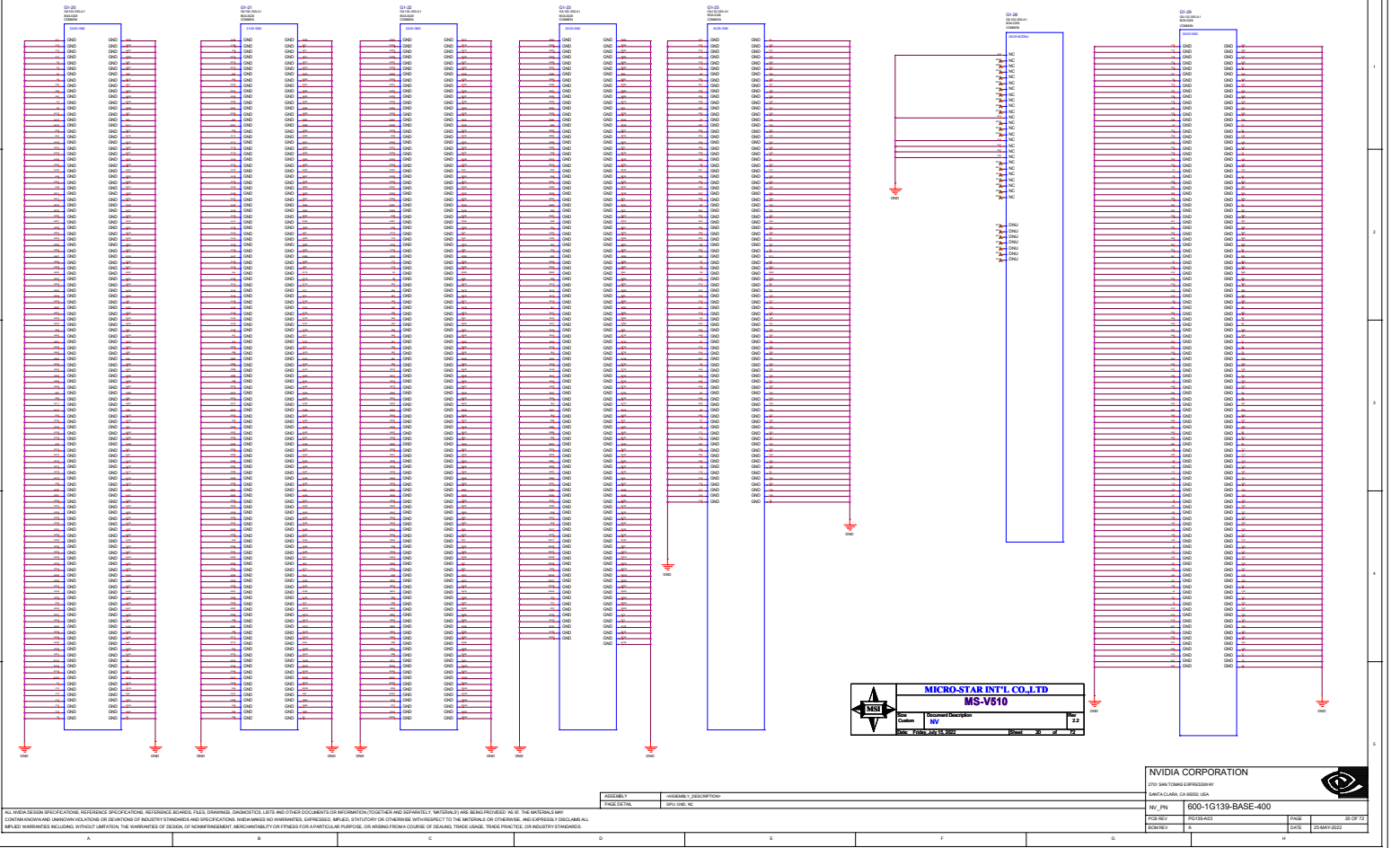
POWER: 150W

10 OF 12

10 OF 12

10 OF 12

10 OF 12



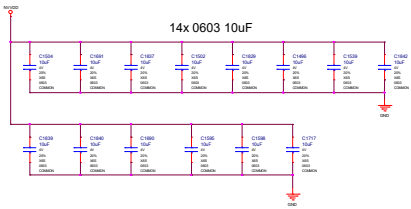
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ASSEMBLY	DESCRIPTION
GPU GND, NC	GPU GND, NC

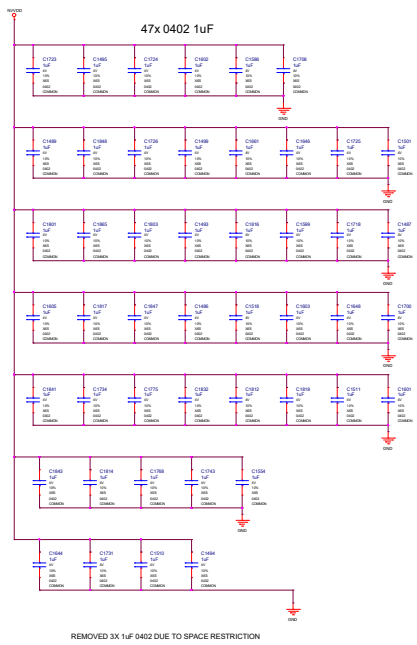
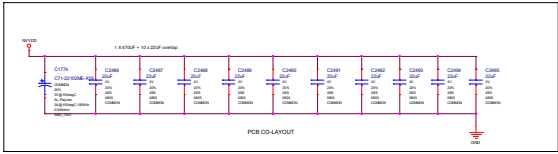
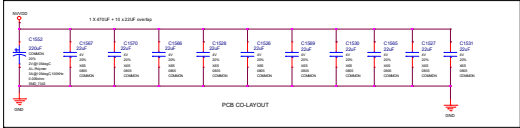
NVIDIA CORPORATION			
2000 SHAW BLVD. SUITE 1000			
SANTA CLARA, CA 95050 USA			
REV. PN	600-1G139-BASE-400		
FOR TEST	95101-001	DATE	05/01/2002
REVISED		DATE	05/01/2002

UNDER GPU

NVVDD



2x SMD7343 330uF (EACH CO-LAYOUT WITH 10x 22uF 0805)

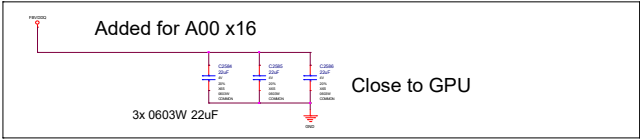
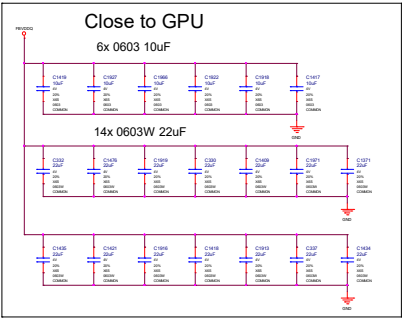
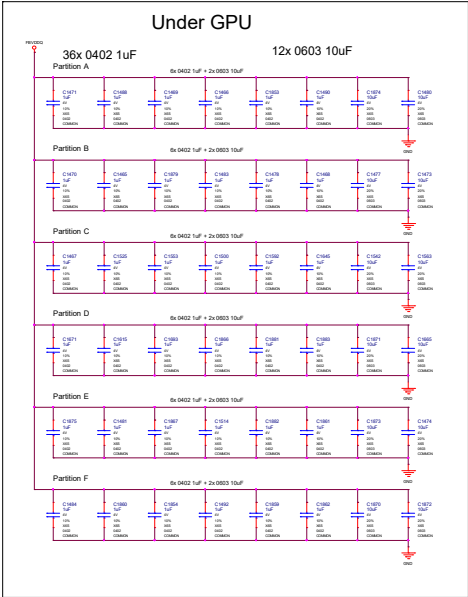


NVIDIA CORPORATION			
2000 SHAW FLORENCE DRIVE			
SANTA CLARA, CA 95050, USA			
REV. PN	600-1G139-BASE-400		
PCB REV	95103-A03	DATE	20 OF 32
PCB REV	A	DATE	02-04-2022

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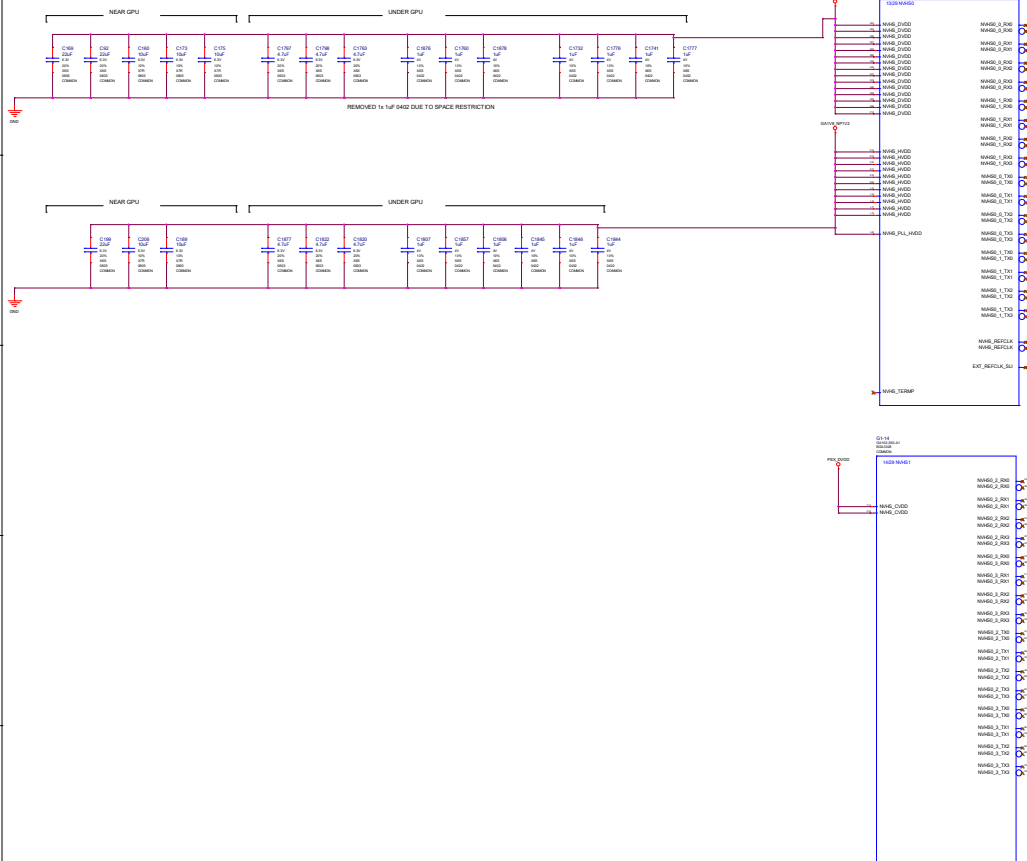
FBVDDQ



NVIDIA CORPORATION			
2000 SHAW FERRY DRIVE			
SANTA CLARA, CA 95050, USA			
REV. PIN	600-1G139-BASE-400		
FOR TEST	95139-A03	FWH	26 OF 32
FOR TEST	A	DATE	02-MAY-2022


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A	B	C	D	E	F	G	H
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ASSEMBLY	ASSEMBLY DESCRIPTION
GPU NVHS x16	GPU NVHS x16





MICRO-STAR INT'L CO., LTD
MS-V810
Rev. 1.0
Date: 08/18/2021
Page: 25 of 32



NVIDIA CORPORATION
2285 RAVENHILL CIRCLE
SANTA CLARA, CA 95050, USA
REV. PN: 600-1G139-BASE-400
FOR TEST: 95139-400
FOR TEST: A
PAGE: 25 of 32
DATE: 08/18/2021



NVIDIA CORPORATION			
2701 SAN TOMAS EXPRESSWAY			
SANTA CLARA, CA 95050, USA			
NV_PN		600-1G139-BASE-400	
PCB REV	PG139-A03	PAGE	26 OF 72
DOMREV	A	DATE	25-MAY-2022

NVIDIA CORPORATION			
2701 SAN TOMAS EXPRESSWAY			
SANTA CLARA, CA 95050, USA			
NV_PN		600-1G139-BASE-400	
PCB REV	PG139-A03	PAGE	26 OF 72
DOMREV	A	DATE	25-MAY-2022



GROUP				
STRAP2	STRAP1	STRAP0	RAMCFQ[4:0]	
L	L	L	00000	RAMCFG MICRON 16Gb G6X x16 (161-0480-900)
L	L	H	00001	RAMCFG MICRON 16Gb G6X x16 (161-0479-900)
L	H	H	00011	
L	M	H	01010	
H	H	H	00111	

For NP, Middle Level should be 0.6V
H=High :Tied to 1.8V
M=Middle:Tied to 0.9V
L=Low :Tied to 0V

DEFAULT

GROUP1				
ROM_SO	ROM_SI	ROM_SCLK	SMARTFAN(Z0)_FS_OVERT	1.ENABLE 0.DISABLE
L	M	L	1001	FAN01=33%/33%, FS_OVERT ENABLE

<DEFAULT

GROUP2						
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 ORIGINAL

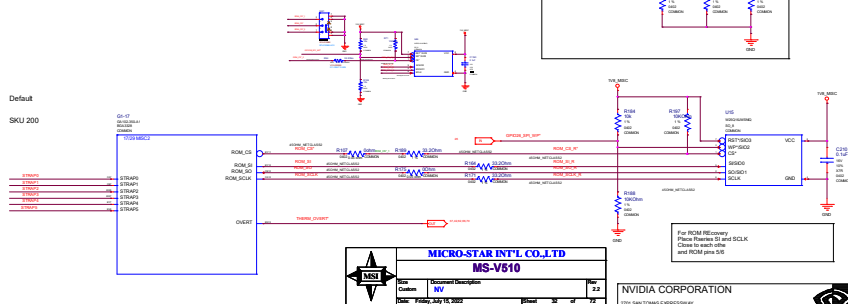
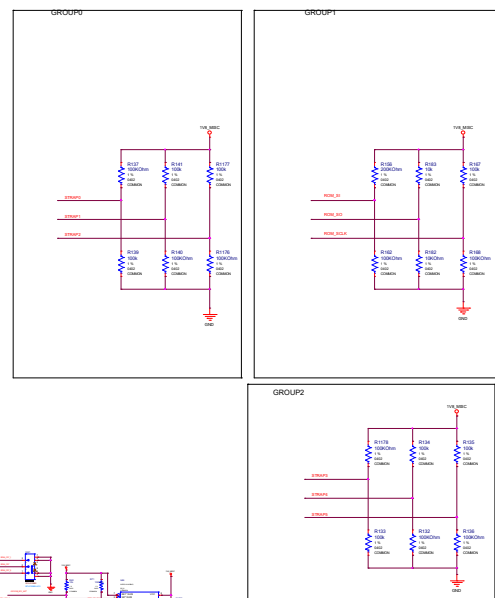
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0:PCIE_CFG HIGH POWER

1:VGA_DEVICE ENABLE
0:VGA_DEVICE DISABLE

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Default

SKU 200



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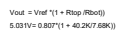
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PAGE DETAIL	MISC. ROAD STOPS	600-1G139-BASE-400
		WV_PIV
		FORD FOCUS
		75138A33
		REG# 25-MAY-2022
		EXP DATE 30 SEP 22



2701 SANTOMAS EXPRESS.

STANDARD DEVIATION	25	STANDARD DEVIATION	25
10			

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$$V_{out} = V_{ref} * (1 + R_{top}/R_{bot})$$

$$5.031V = 0.807V * (1 + 40.2K/7.68K)$$

ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE COUNT	PG. 01

ASSEMBLY	ASSEMBLY
ENGINE CO. INC.	ENGINE CO. INC.



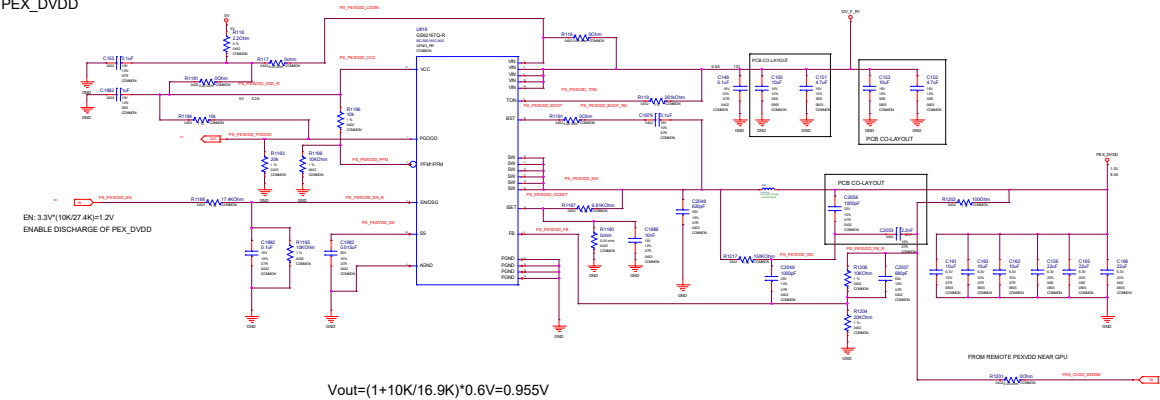
NVIDIA CORPORATION

2701 SANTOMAS EXPRESS
SANTA CLARA, CA 95050 USA

PCB REV	PG139-A03	PAGE	34 OF 34
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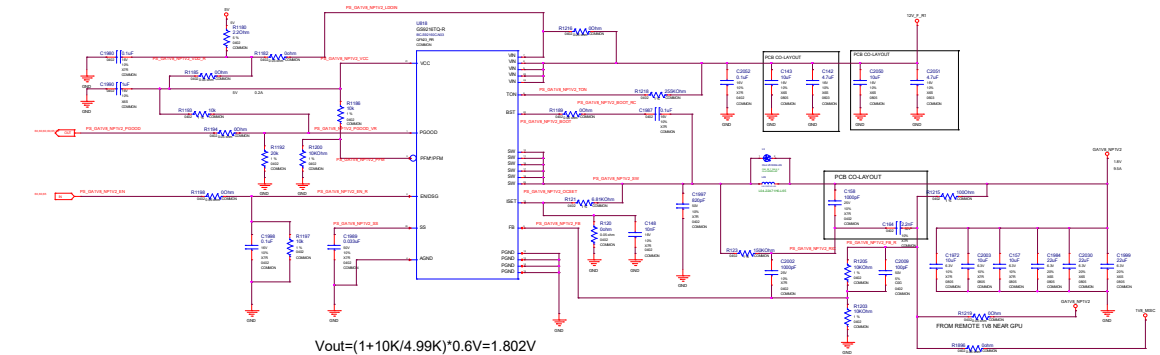
PCB REV	PG139-A03	PAGE	34 OF 34
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PEX_DVDD



$V_{out} = (1+10K/16.9K) \cdot 0.6V = 0.955V$

1V8(1V2 for NP;1V8 for GA102)



$V_{out} = (1+10K/4.99K) \cdot 0.6V = 1.802V$

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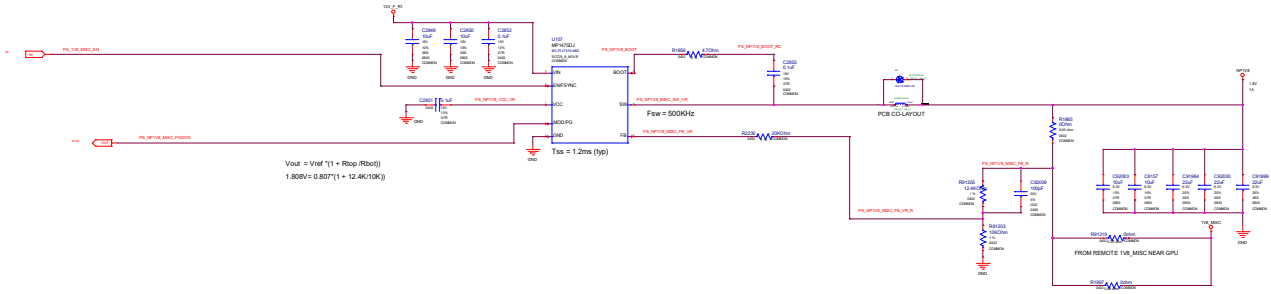
ASSEMBLY	DESCRIPTION
PEX_DVDD	PEX_DVDD (GA102)



MICRO-STAR INT'L CO., LTD
MS-V510
Rev: **1.0**
Date: **2015.12.15**
Page: **35** of **35**



NVIDIA CORPORATION
2000 SHAW BLVD, SANTA CLARA, CA 95050, USA
Part Number: **600-1G139-BASE-400**
Rev: **1.0**
Date: **2015.12.15**
Page: **35** of **35**





MICRO-STAR INT'L CO., LTD
MS-V810
Rev: 1.0
Date: 01/10/2011

NVIDIA CORPORATION			
2000 SHAW BLVD, SANTA CLARA, CA 95050, USA			
REV. PIN	600-1G139-BASE-400		
PCB REV	PCB10-001	DATE	01/10/2011
PCB REV	PCB10-001	DATE	01/10/2011

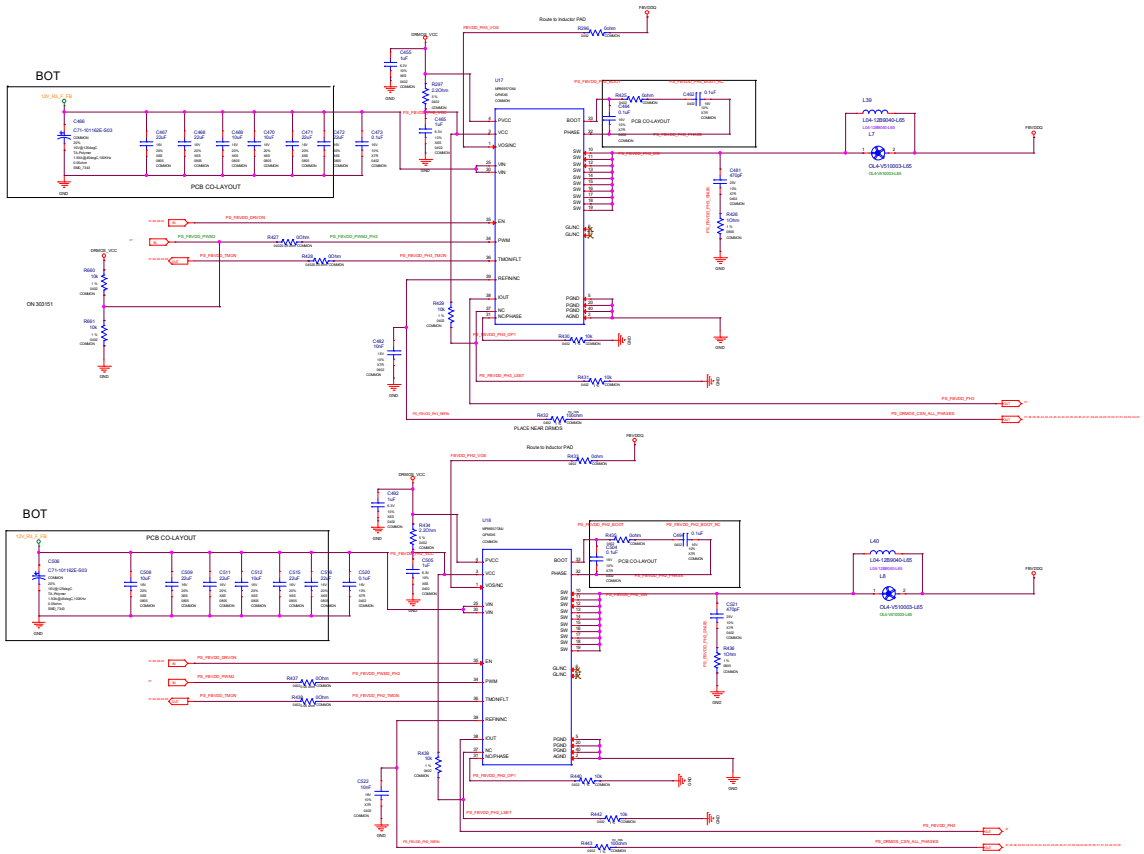
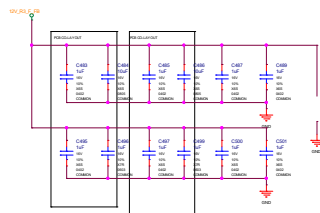
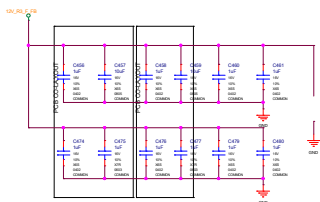
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MICRO-STAR INT'L CO., LTD

MS-V610

Rev	001	Rev	001
Created	2017	Created	2017
By	PS:FBVDDQ	By	PS:FBVDDQ

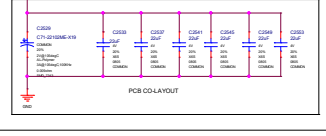
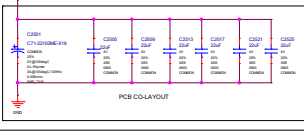
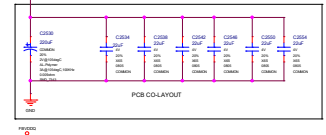
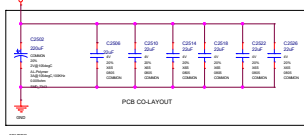
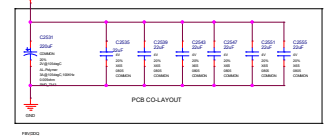
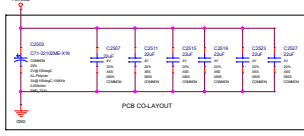
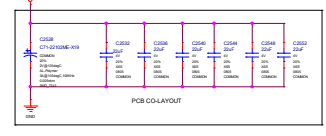
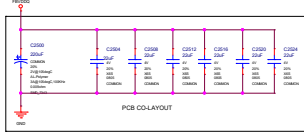
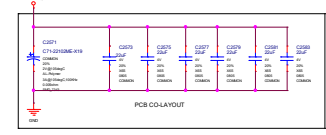
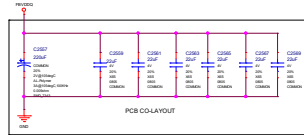
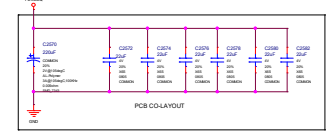
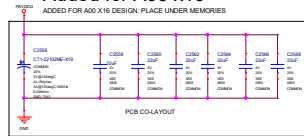


MICRO-STAR INT'L CO., LTD.	
MS-V810	
Model: MS-V810	Revision: 1.0
Date: 2010.03.10	Drawn: 30
Checked: 30	Approved: 30

REVISION DATE

Added for A00 x16

ADDED FOR A00 X16 DESIGN: PLACE UNDER MEMORIES





MICRO-STAR INT'L CO., LTD

MS-V610

Rev: 2.3

Change: NV

Document Description: MS-V610

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ASSEMBLY: 100% INSPECTION

PROD DATE: 10 FEB 2020

INVIDIA CORPORATION

200 SAN Geronimo
SANTA CLARA, CA 95050, USA

REV: 1.0

600-1G139-BASE-000

PROD DATE: 10 FEB 2020

REV: 1.0

10 FEB 2020



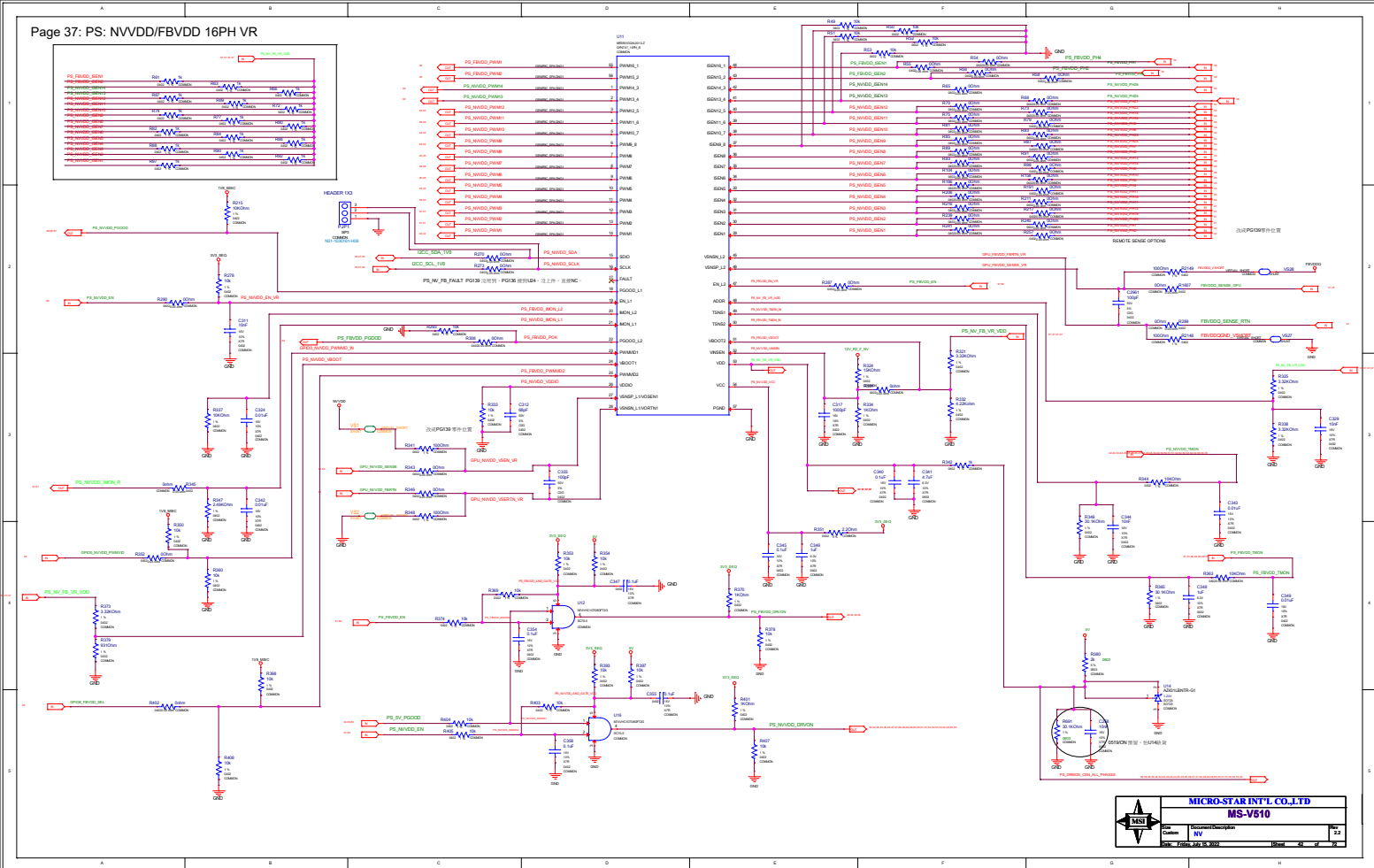
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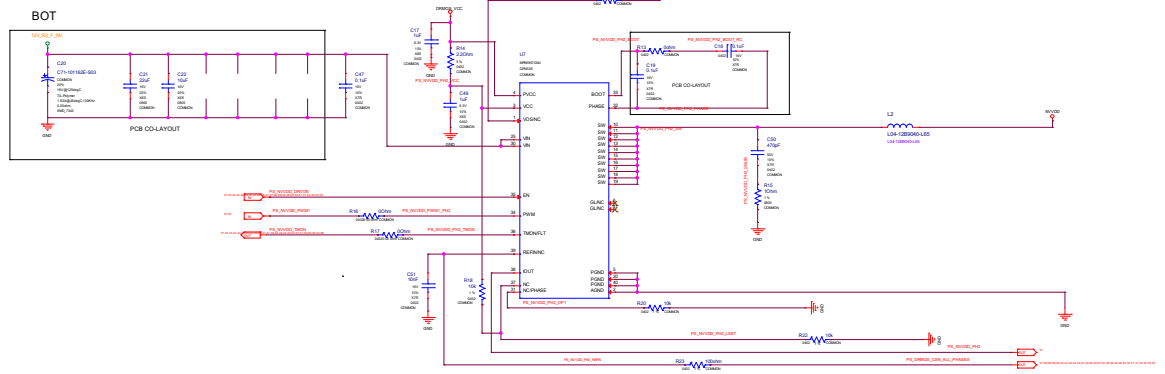
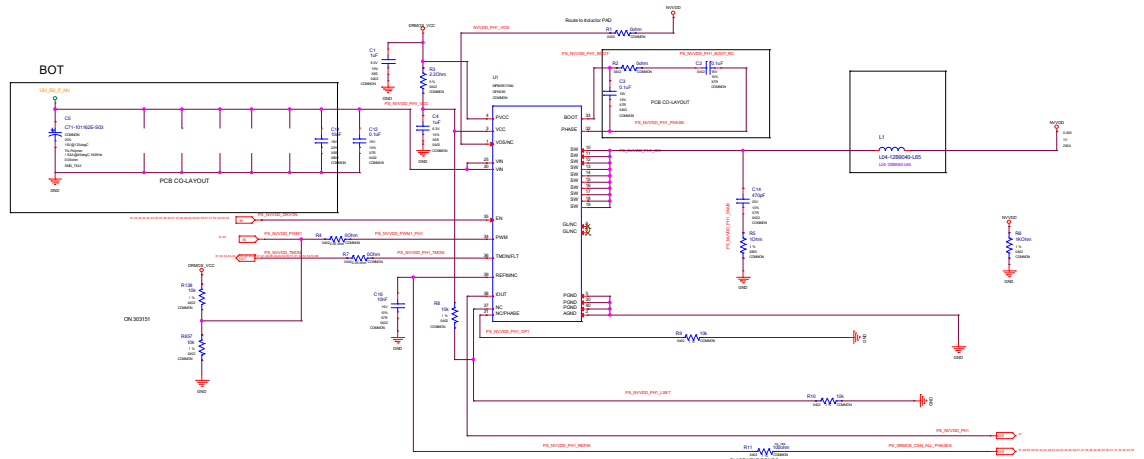
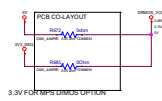
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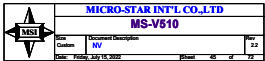
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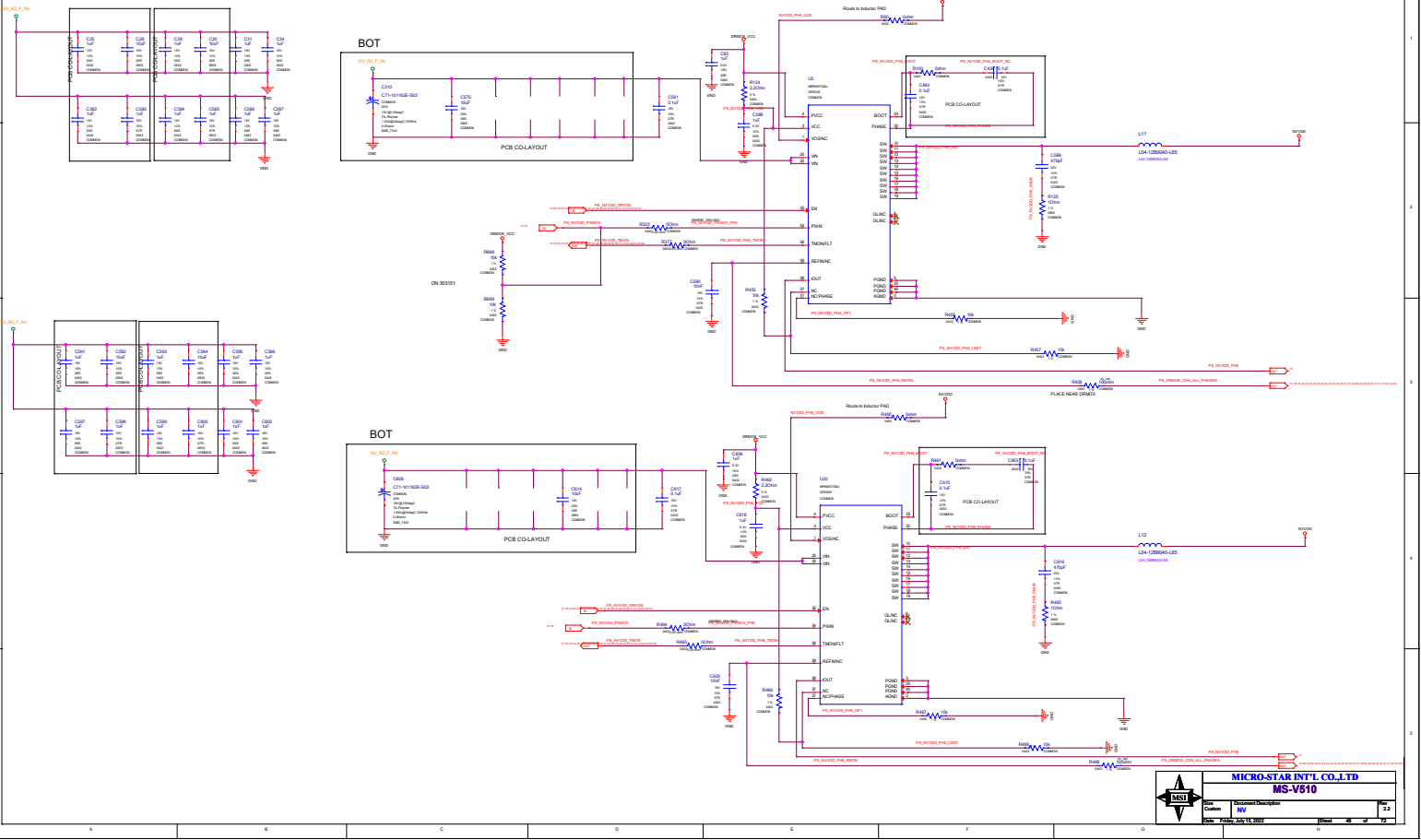
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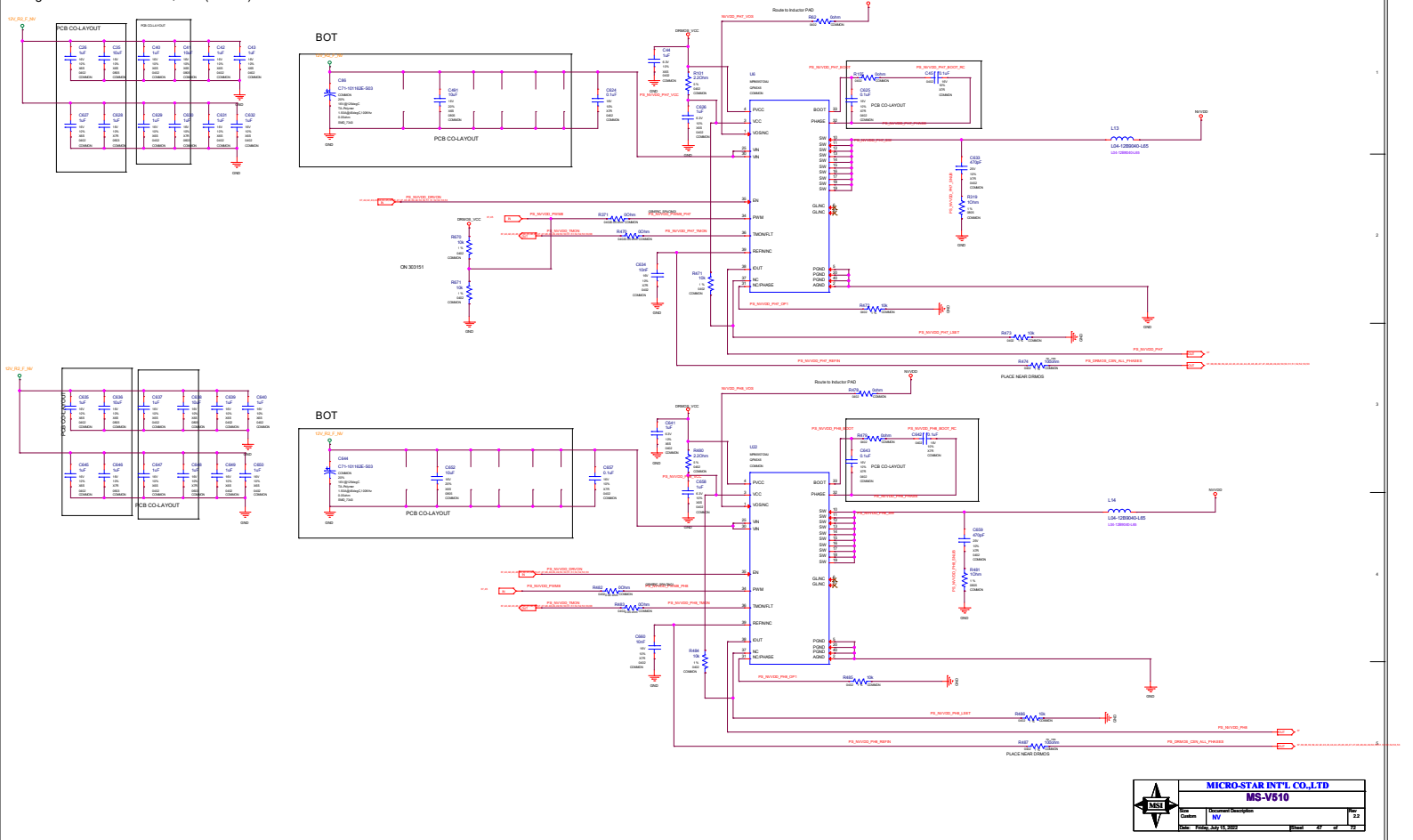
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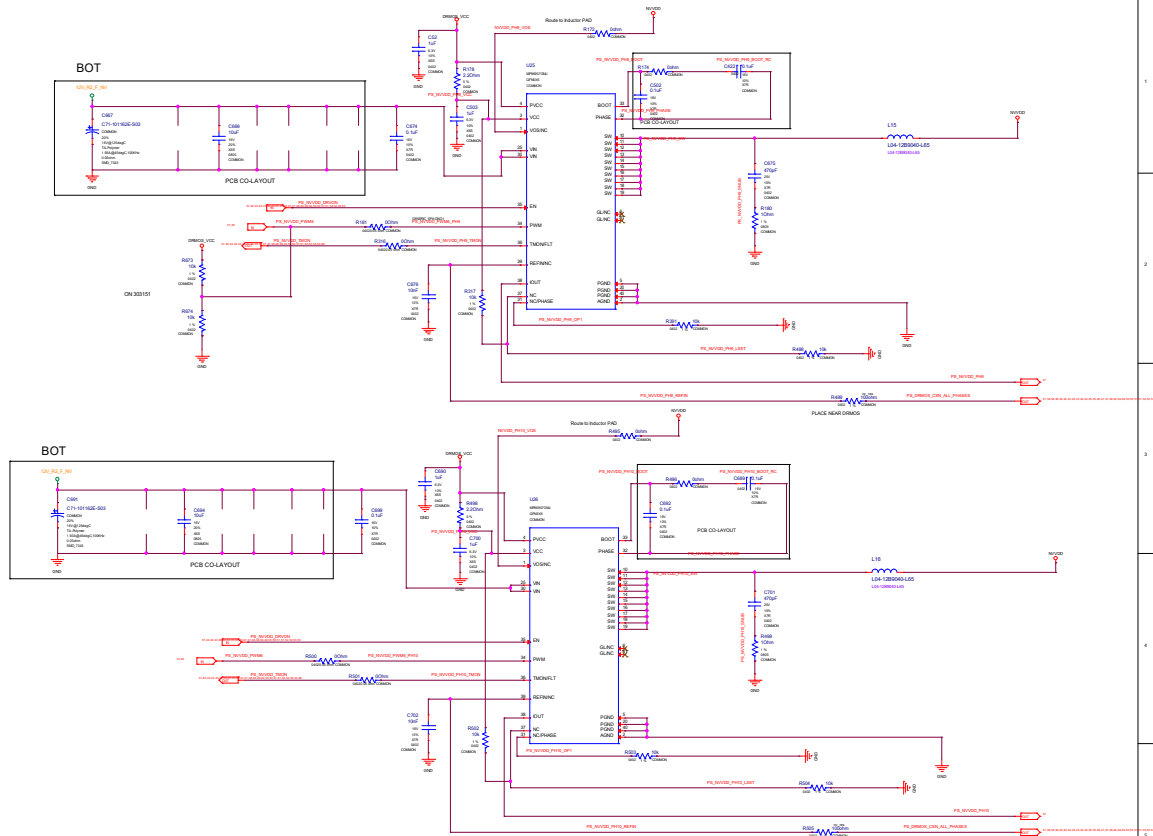
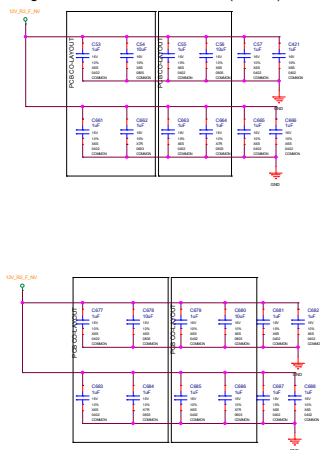


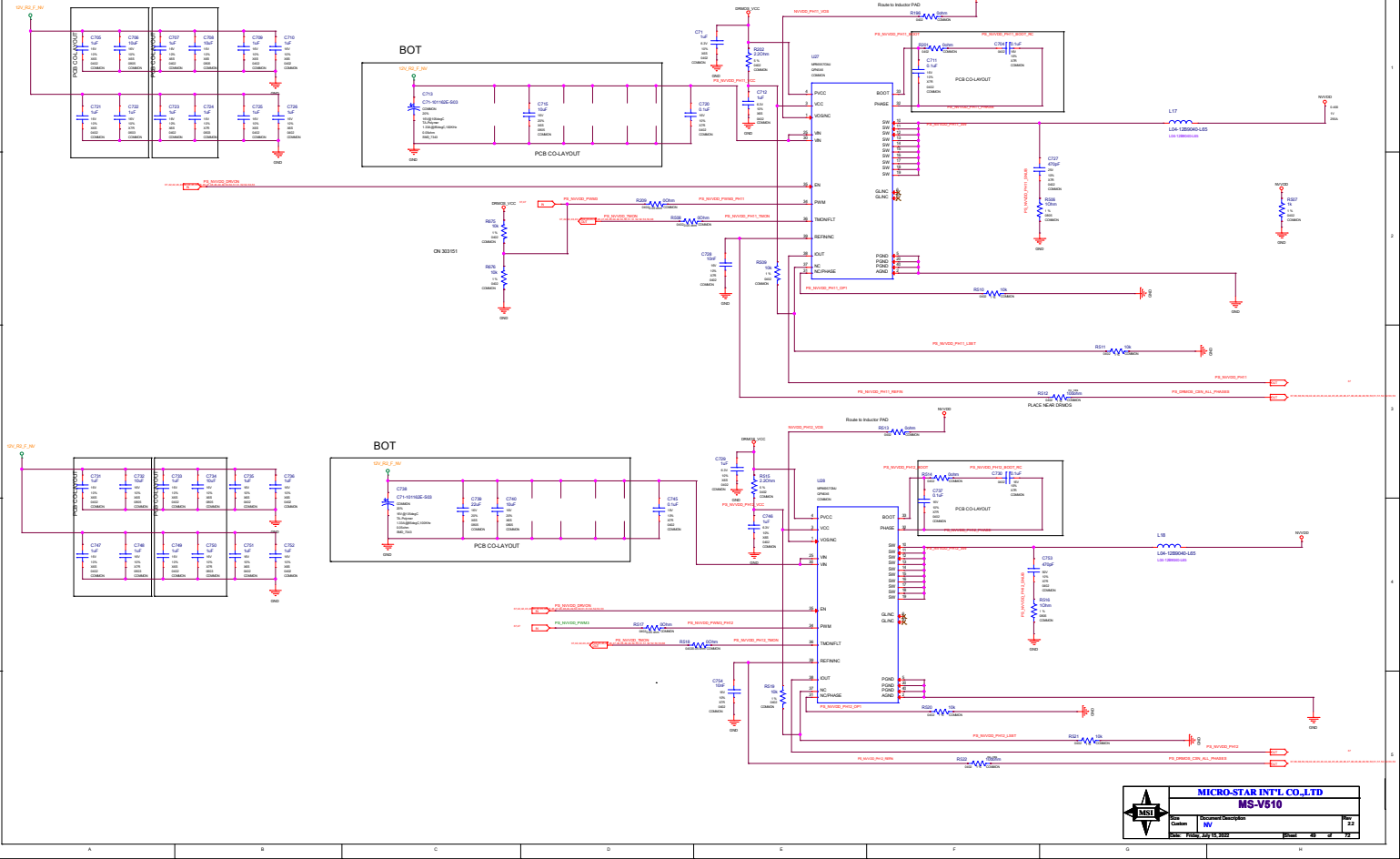


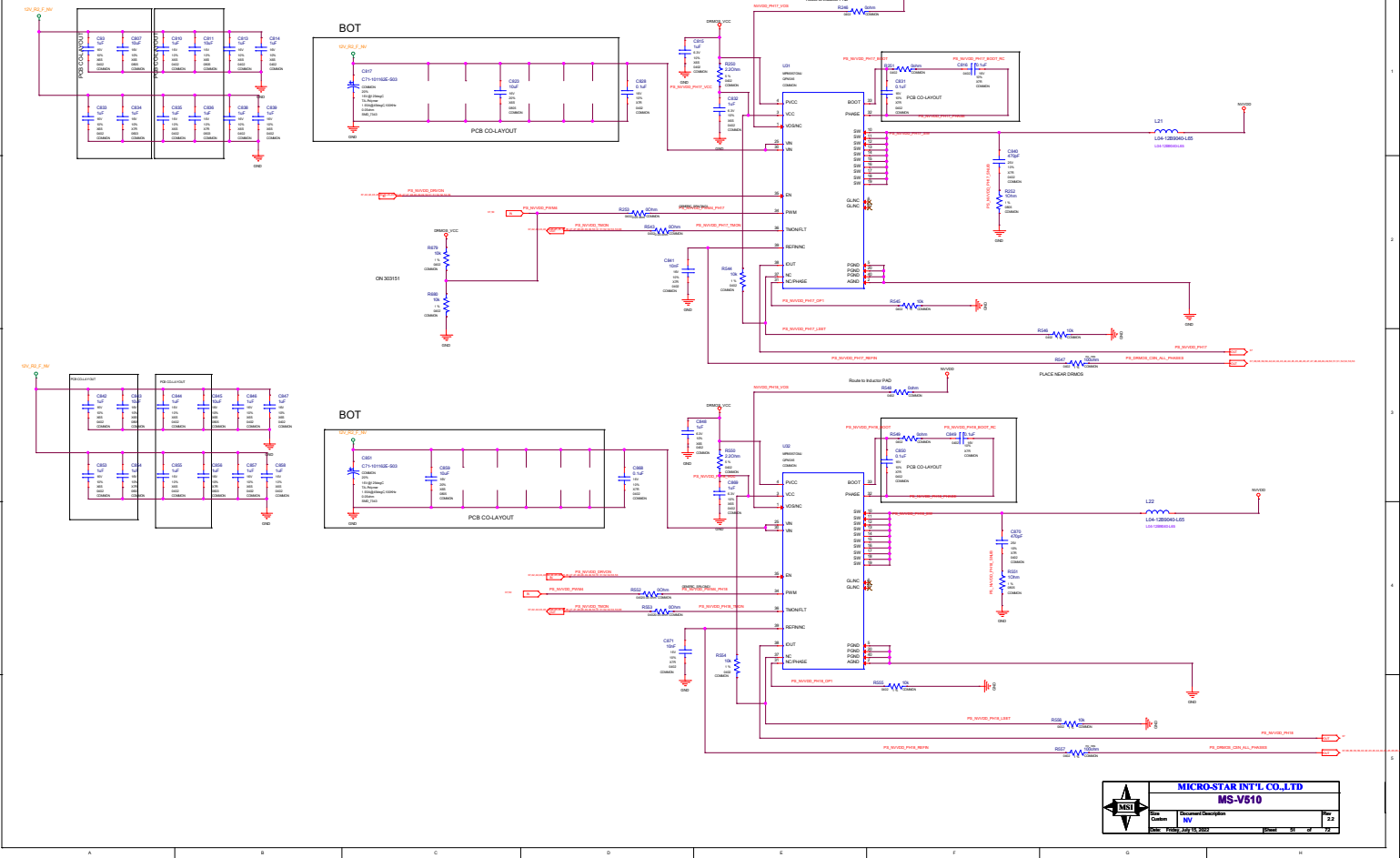


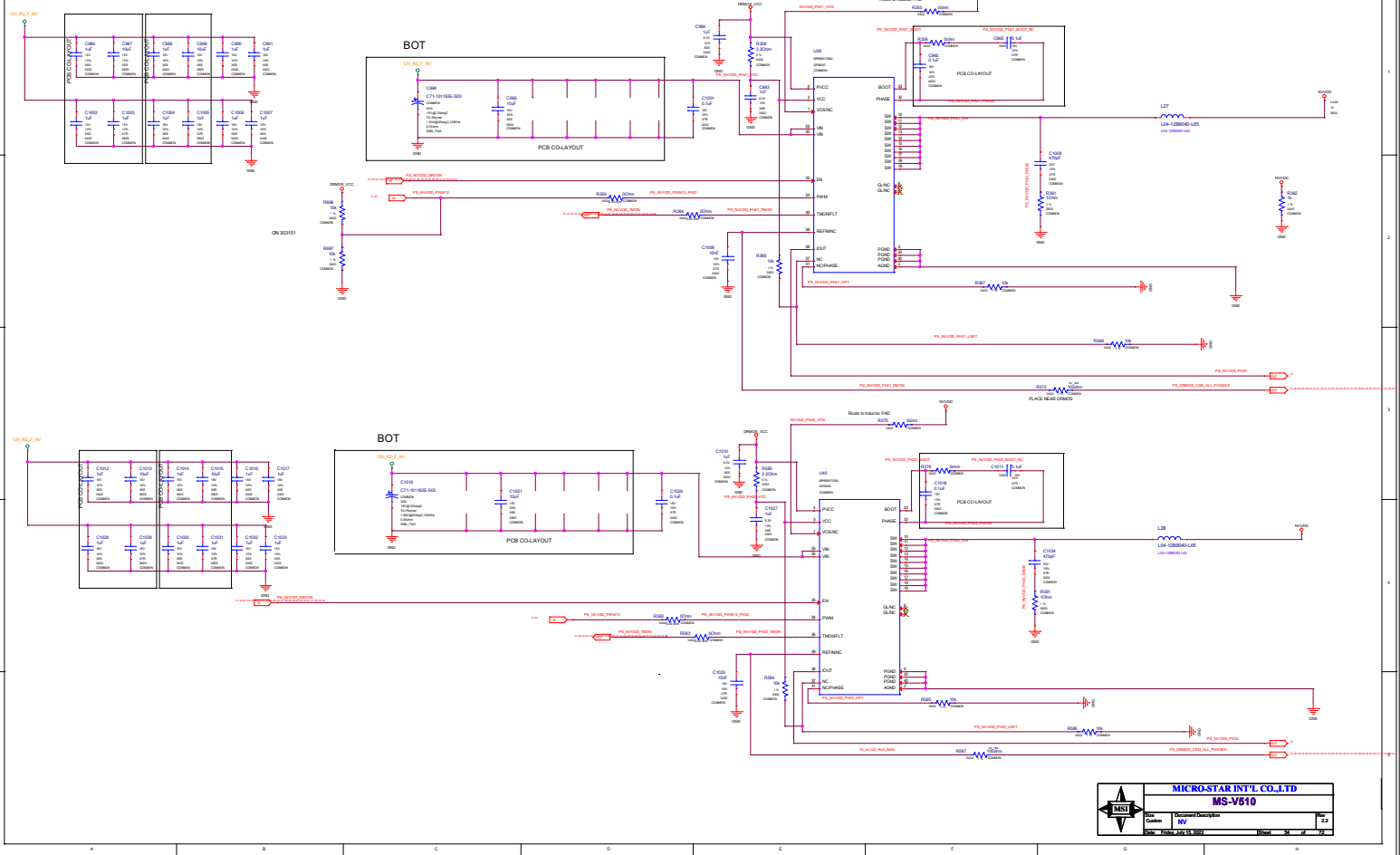


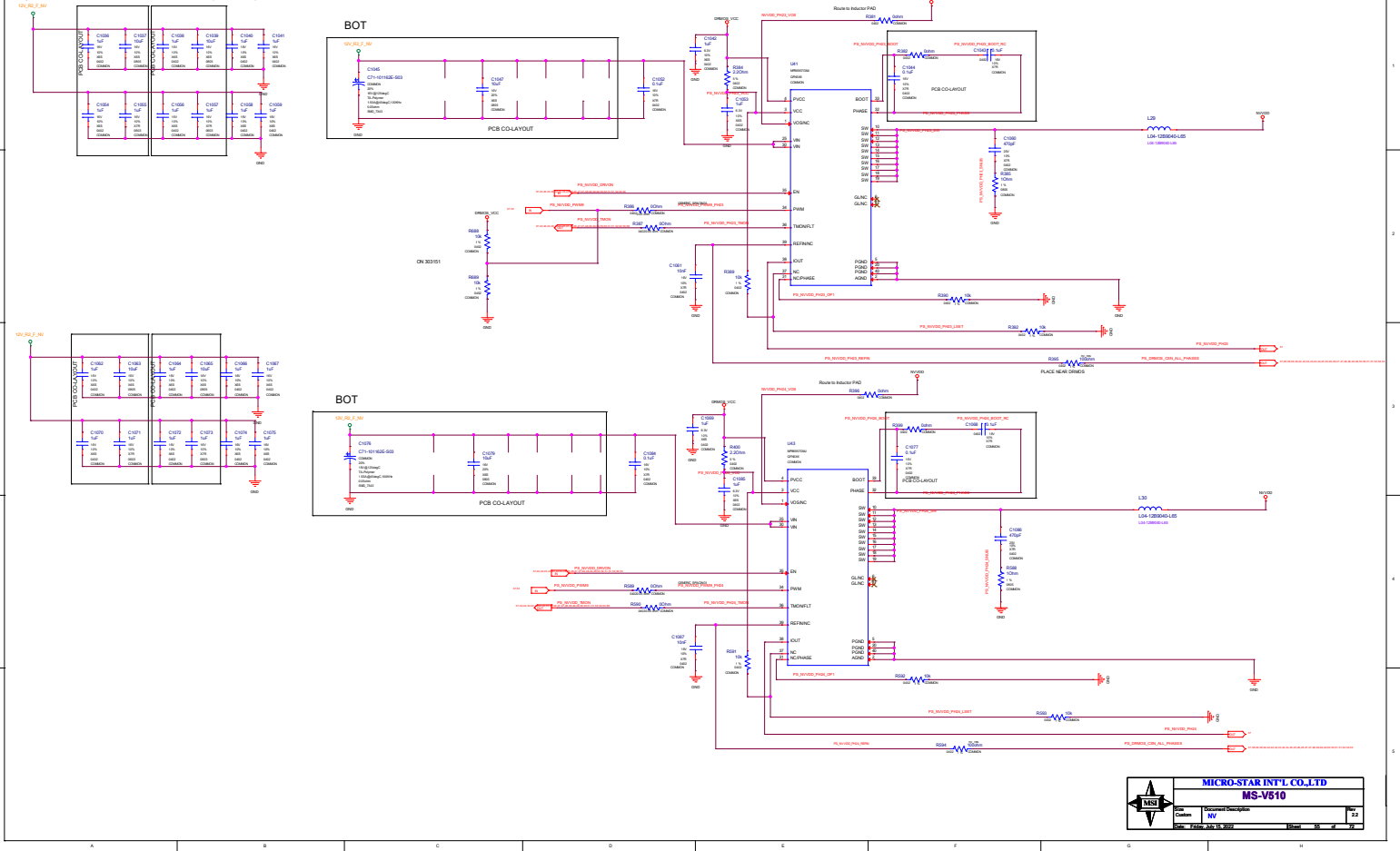


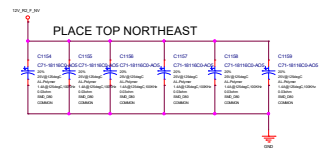
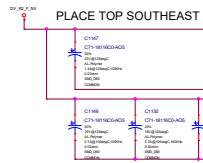
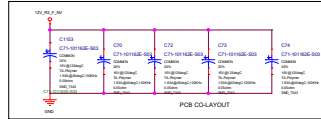
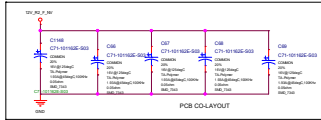
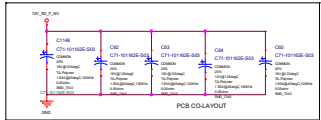
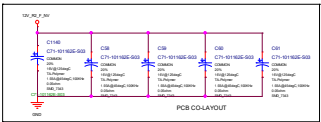
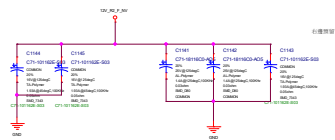


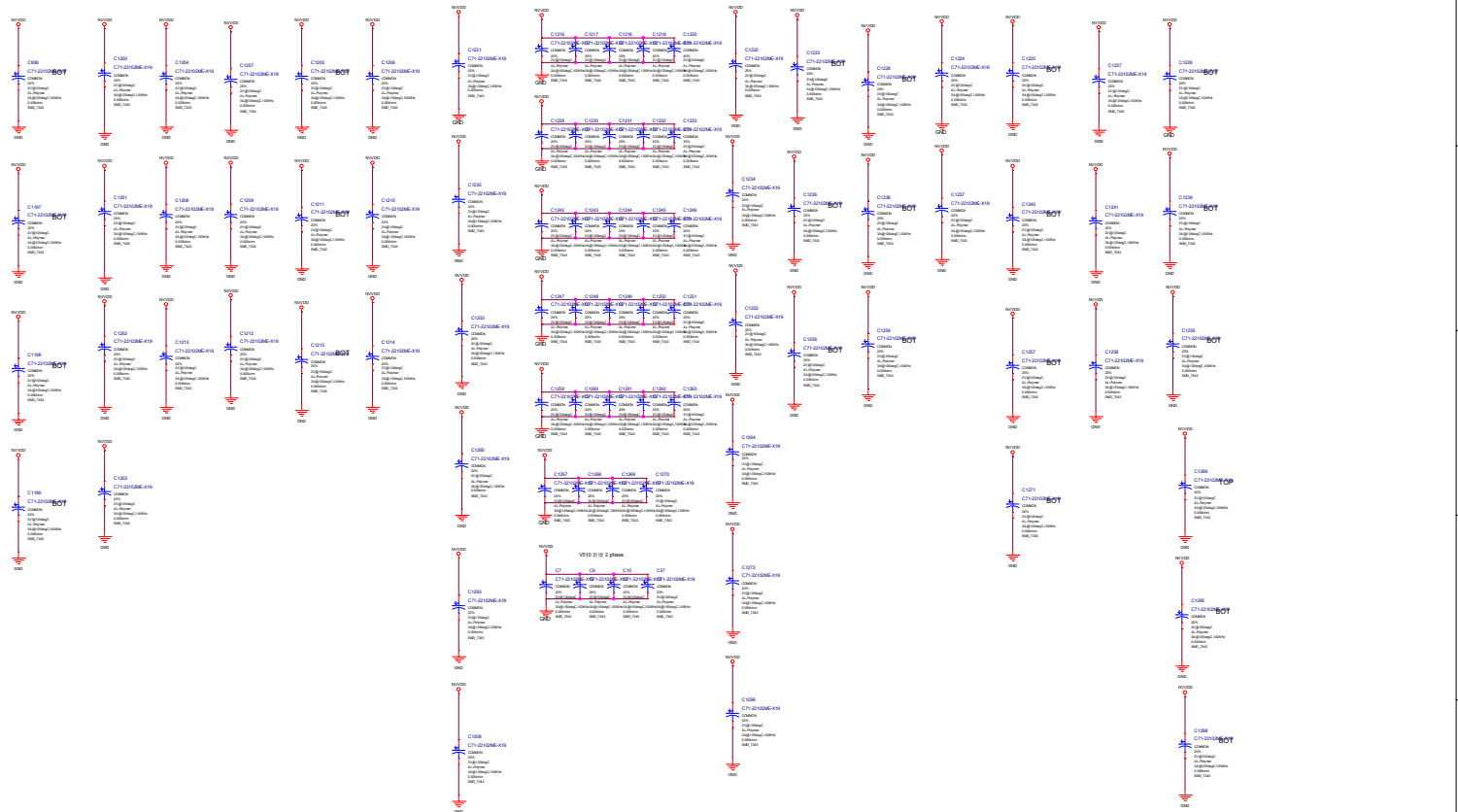












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ASSEMBLY	ASSEMBLY DESCRIPTION
MS-V510	BLANK




MICRO-STAR INT'L CO., LTD

MS-V510

Part Number	MS-V510	Rev	1.0
Doc. No.	MS-V510-001	Doc. No.	MS-V510-001

NVIDIA CORPORATION
2000 SHAW BLVD
SANTA CLARA, CA 95050, USA



Part No.	600-1G139-BASE-400	Rev	1.0
Doc. No.	600-1G139-BASE-400	Doc. No.	600-1G139-BASE-400

A	B	C	D	E	F	G	H
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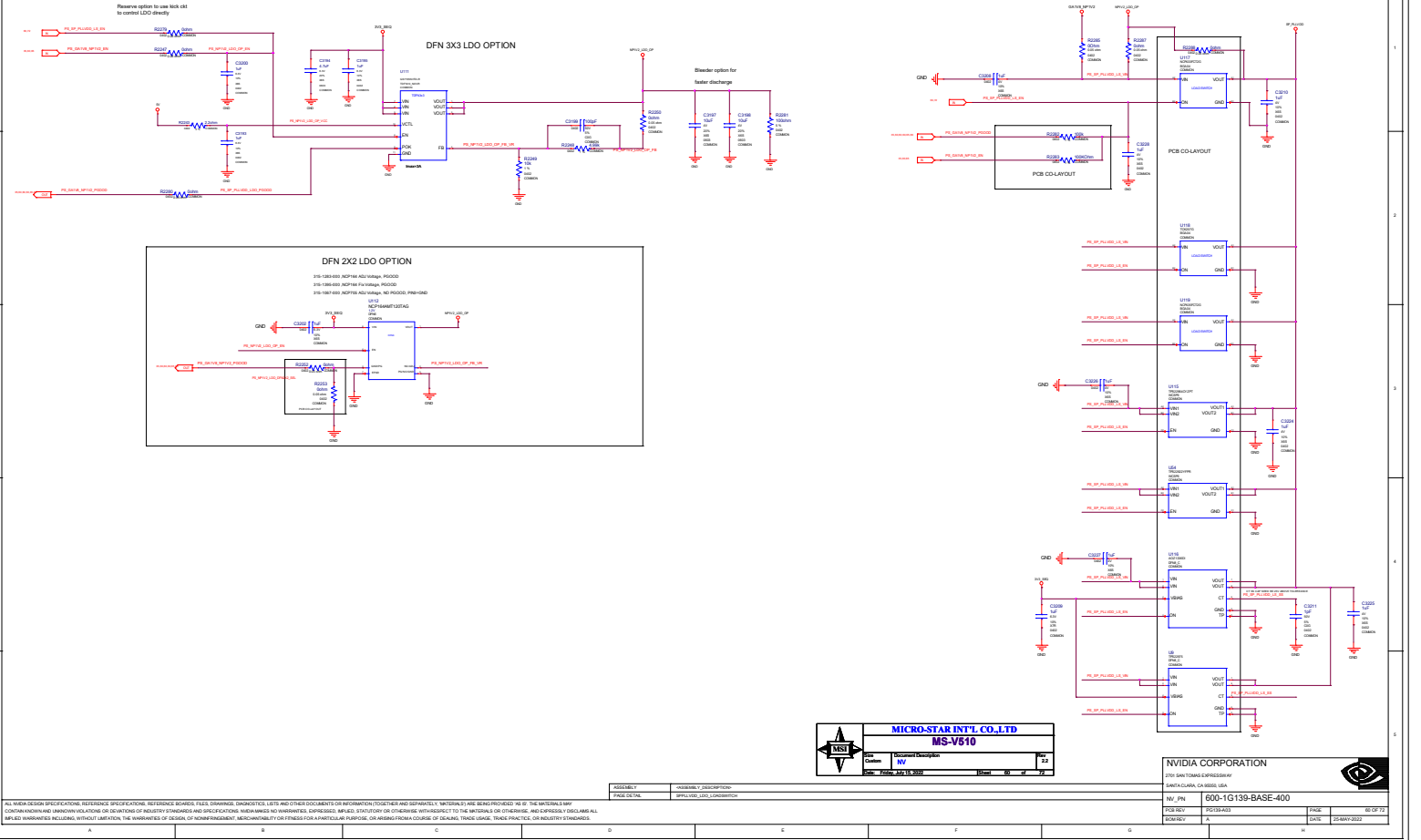
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PROD DATE	BLANK

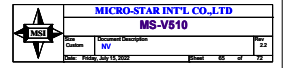
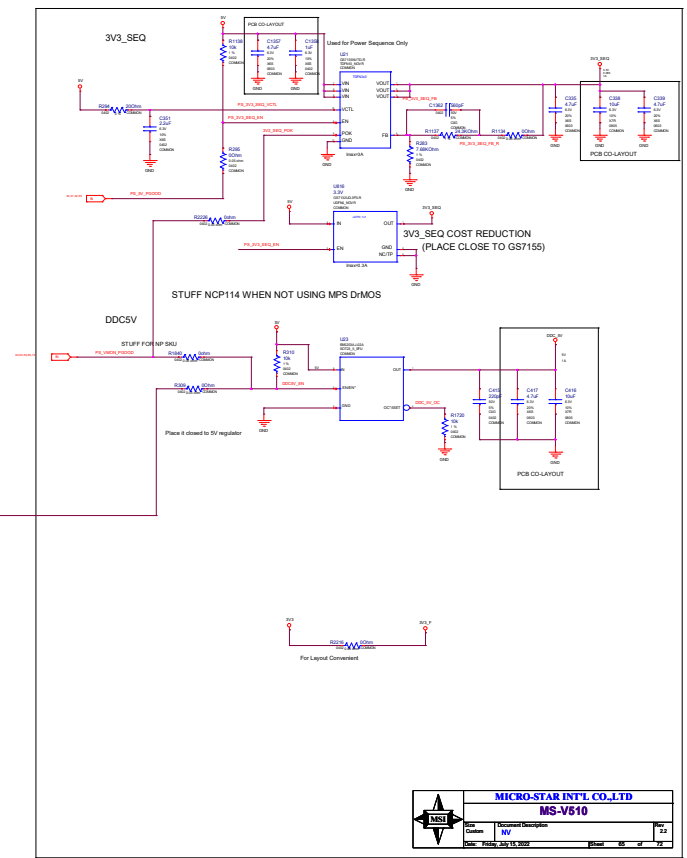
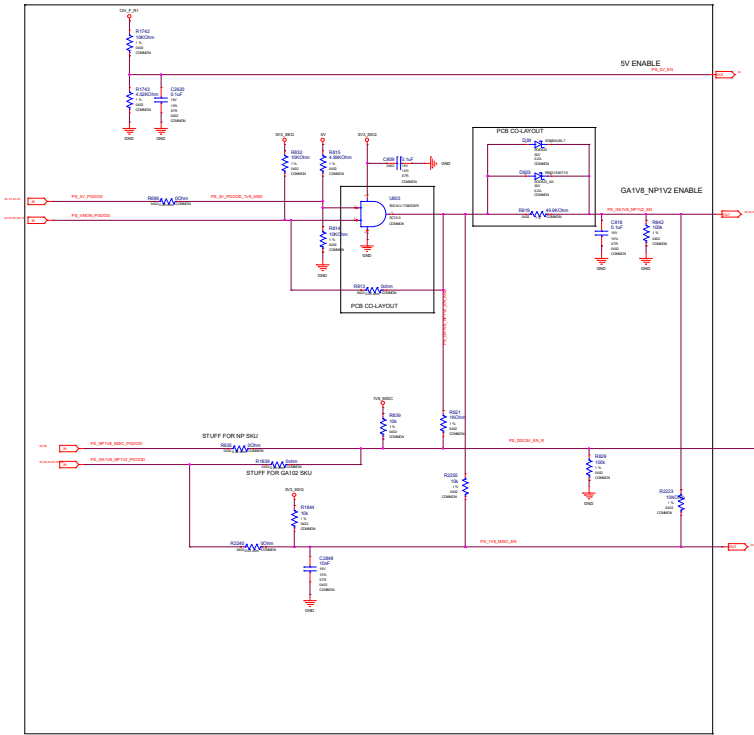
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		MS-V510	
Doc. Number	Revision		Rev. 2
Date: 2018.05.15.2018	Initial	Rev	Rev

NVIDIA CORPORATION			
200 SHAW BLVD, SUITE 200, SANTA CLARA, CA 95050, USA			
REV. PN	600-1G139-BASE-400		
FOR SET	2018.05.15.2018	FILED	50 OF 52
FOR SET	2018.05.15.2018	FILED	50 OF 52





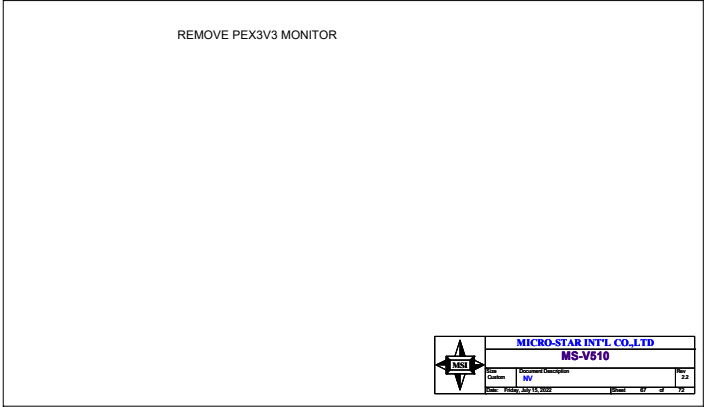
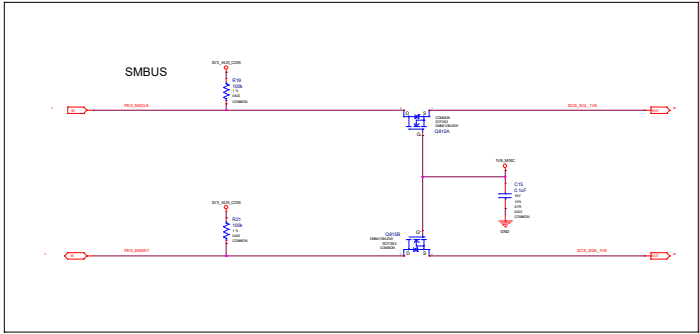
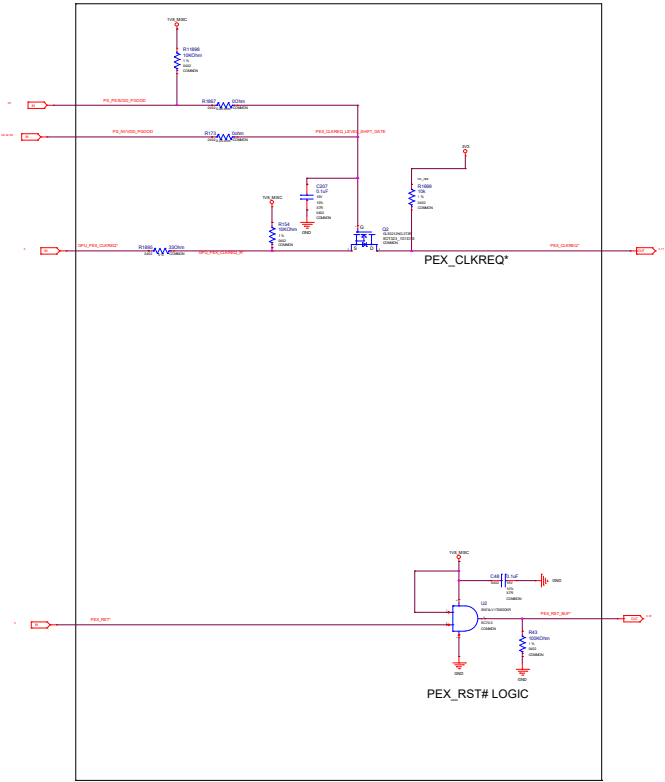
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ASSEMBLY	DESCRIPTION
PCB CO-LAYOUT	SPPLLVD_LDO_LOADSWITCH
REV	REV
DATE	DATE
DESIGNER	DESIGNER
CHECKER	CHECKER
APPROVED	APPROVED
DATE	DATE
DESIGNER	DESIGNER
CHECKER	CHECKER
APPROVED	APPROVED
DATE	DATE



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ASSEMBLY	ASSEMBLY DESCRIPTION
3V3_SEQ	3V3_SEQ

NVIDIA CORPORATION			
220, SHAOYUAN, CAIJI, TAIPEI, ROC			
SANDHILL, CA 94568, USA			
REV	600-1G139-BASE-400	DATE	02/01/2022
REV	600-1G139-BASE-400	DATE	02/01/2022



MICRO-STAR INT'L CO., LTD	
MS-V610	
Part	MS-V610
Rev	2.2
Date	2010/05/18
Drawn	SP
Check	SP

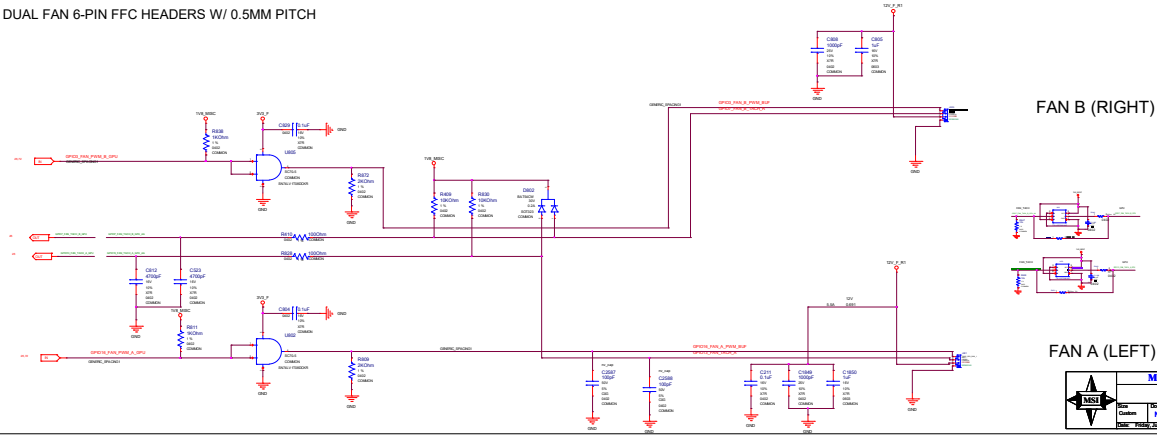
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ASSEMBLY	ASSEMBLY DESCRIPTION
PEX3V3 MONITOR	PEX3V3 MONITOR

NVIDIA CORPORATION	
2200 GIGAWATT DRIVE	
SANTA CLARA, CA 95058, USA	
Part	600-1G139-BASE-400
Rev	1.0
Date	2010/05/18
Drawn	SP
Check	SP



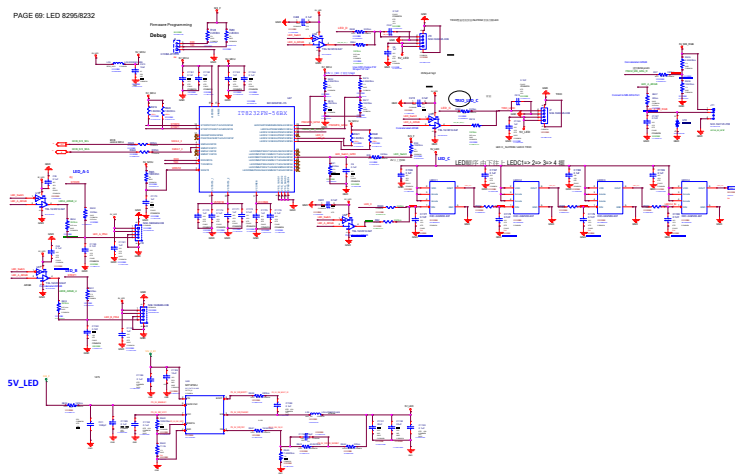
DUAL FAN 6-PIN FFC HEADERS W/ 0.5MM PITCH







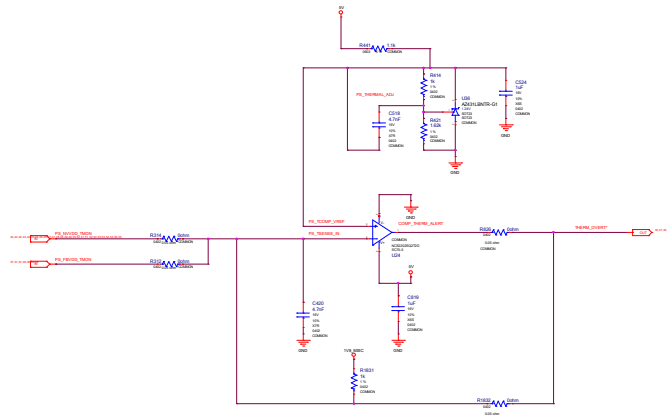
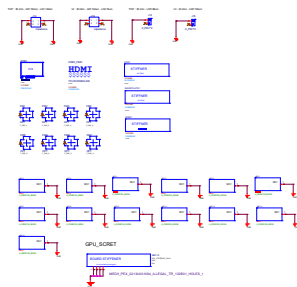
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MS-V810
Rev: 1.0
Date: 2010-07-15
Page: 68 of 72

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PART DETAIL: FAN & NORTH LOGO LED		PART DETAIL: FAN & NORTH LOGO LED		PART DETAIL: FAN & NORTH LOGO LED		PART DETAIL: FAN & NORTH LOGO LED		PART DETAIL: FAN & NORTH LOGO LED	
REV: 1.0		REV: 1.0		REV: 1.0		REV: 1.0		REV: 1.0	
DATE: 2010-07-15		DATE: 2010-07-15		DATE: 2010-07-15		DATE: 2010-07-15		DATE: 2010-07-15	
PAGE: 68		PAGE: 68		PAGE: 68		PAGE: 68		PAGE: 68	
OF 72		OF 72		OF 72		OF 72		OF 72	

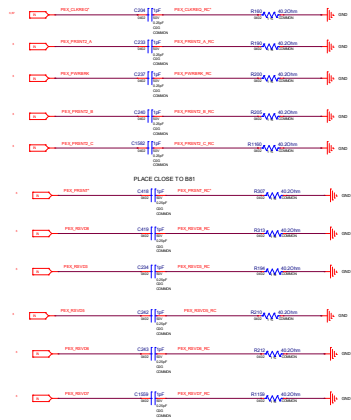


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	MS-V510		
	Case	Estimated Description	No.
	Category	NV	23
	Date: Aug 14, 2002	Printed: 08 of 02	

NVIDIA CORPORATION		
2750 SANDHORN EXPRESSWAY		
SANTA CLARA, CA 95058, USA		
600-I0139-Base-400		
FOR NRE	PC100-AG3	PRICE
800NRE1	A	DATE: 25MAR02 0022



NVIDIA CORPORATION			
2000 E. BAYVIEW AVENUE, SUITE 100			
SAN JOSE, CALIFORNIA 95134, USA			
Part Number	600-1G139-BASE-400	Rev	1.0
Doc ID	600-1G139-BASE-400	Doc ID	600-1G139-BASE-400
Doc ID	600-1G139-BASE-400	Doc ID	600-1G139-BASE-400
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Version	REV
Date	2010-07-16 10:00
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By	Of
By	Of

NVIDIA CORPORATION	
2000 SHAW BLVD, SANTA CLARA, CA 95050, USA	
REV. PIN	600-1G139-BASE-400
FOR REV	2010-03-03
FOR REV	2010-03-03



ASSEMBLY		ASSEMBLY DESCRIPTION	
PCI TERM		PCI TERM	

A		B		C		D		E		F		G		H	
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