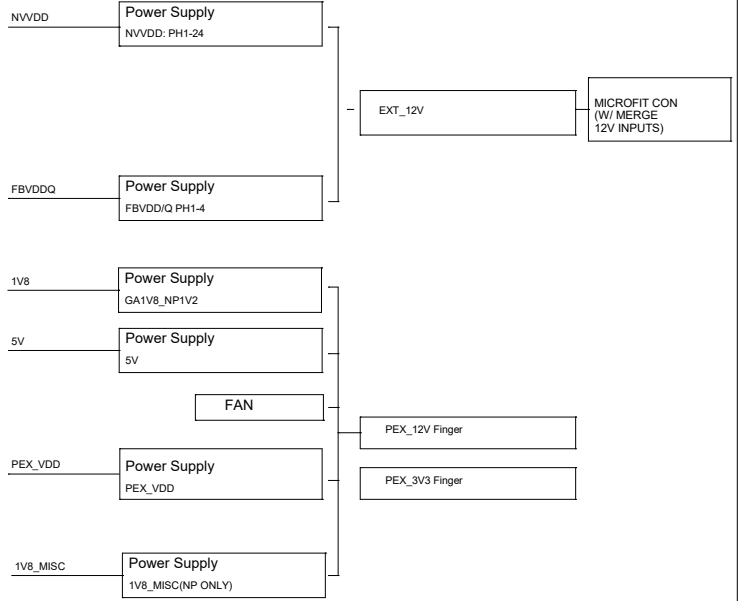
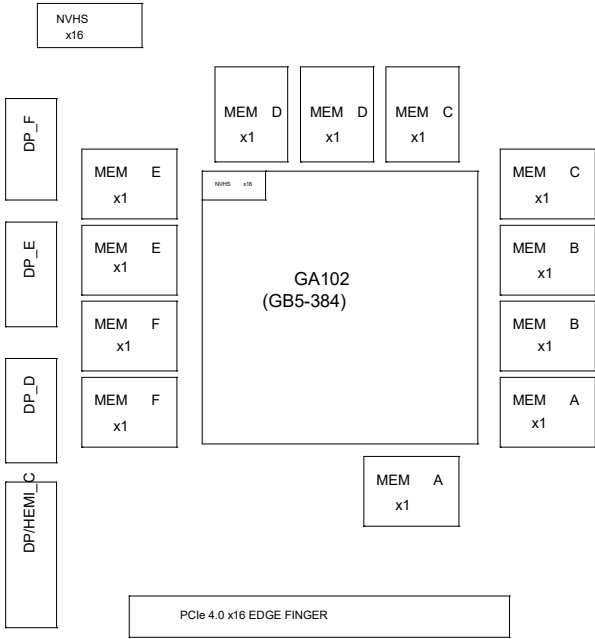




GA102/NP, GeForce SKU P-BOARD

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

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72	KICKER



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 95051, USA

Rev: **PN**

600-1G139-BASE-400

Part: **REV**

600-1G139-BASE-400

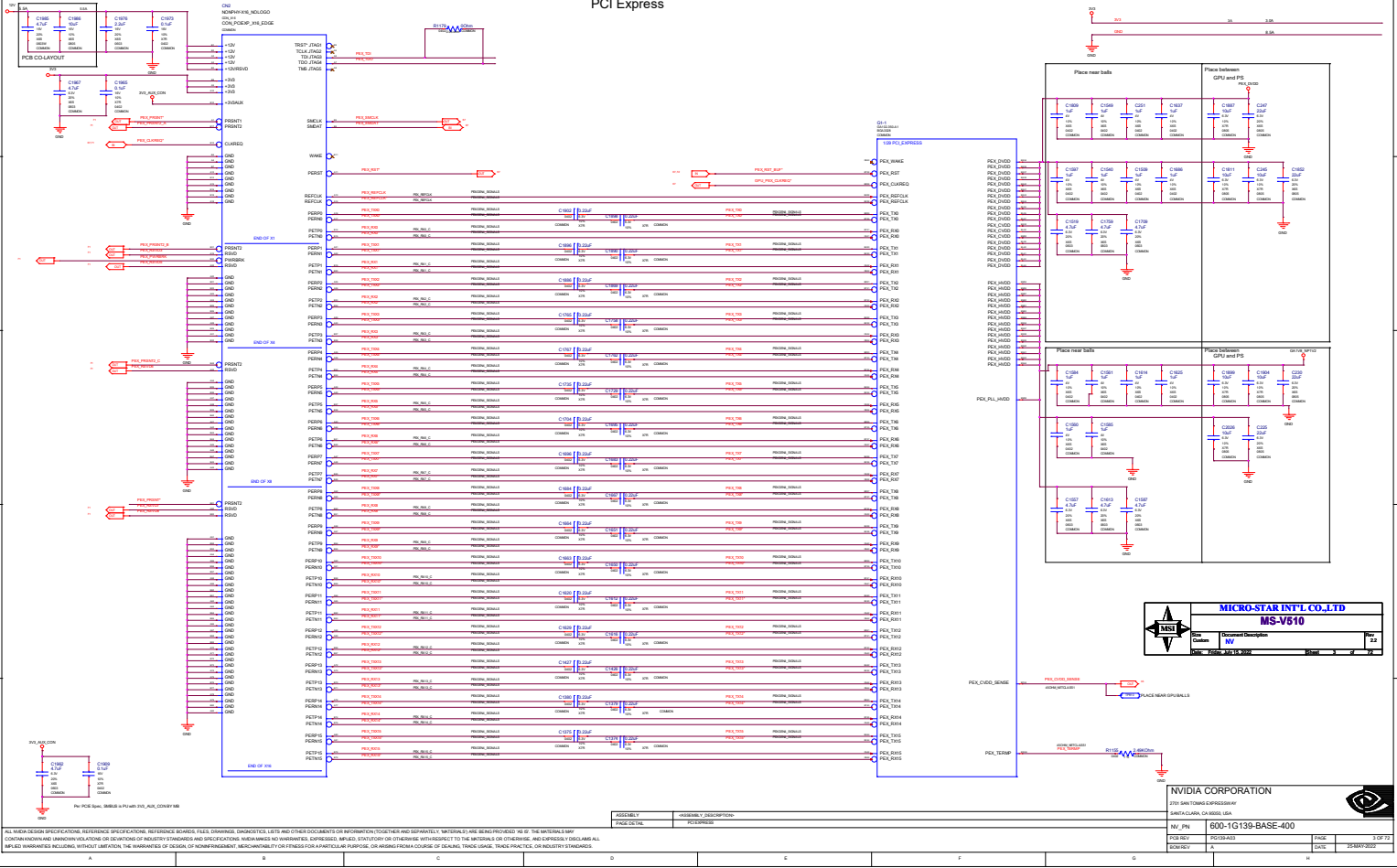
Part: **REV**

600-1G139-BASE-400

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PCI Express



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ASSEMBLY: 600-1G139-BASE-400

DESCRIPTION: 600-1G139-BASE-400

REV: 1.0

DATE: 08/01/2018

DRAWN BY: 08/01/2018

CHECKED BY: 08/01/2018

NVIDIA CORPORATION

2000 SHAW BLVD, SANTA CLARA, CA 95050, USA

REV: 1.0

DATE: 08/01/2018

DRAWN BY: 08/01/2018

CHECKED BY: 08/01/2018

08/01/2018

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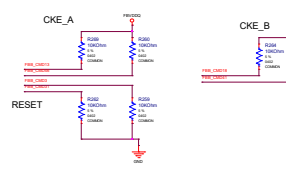
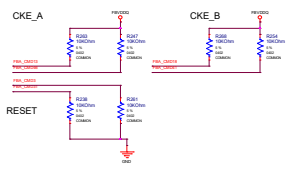
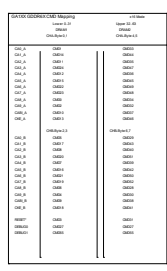
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08/01/2018

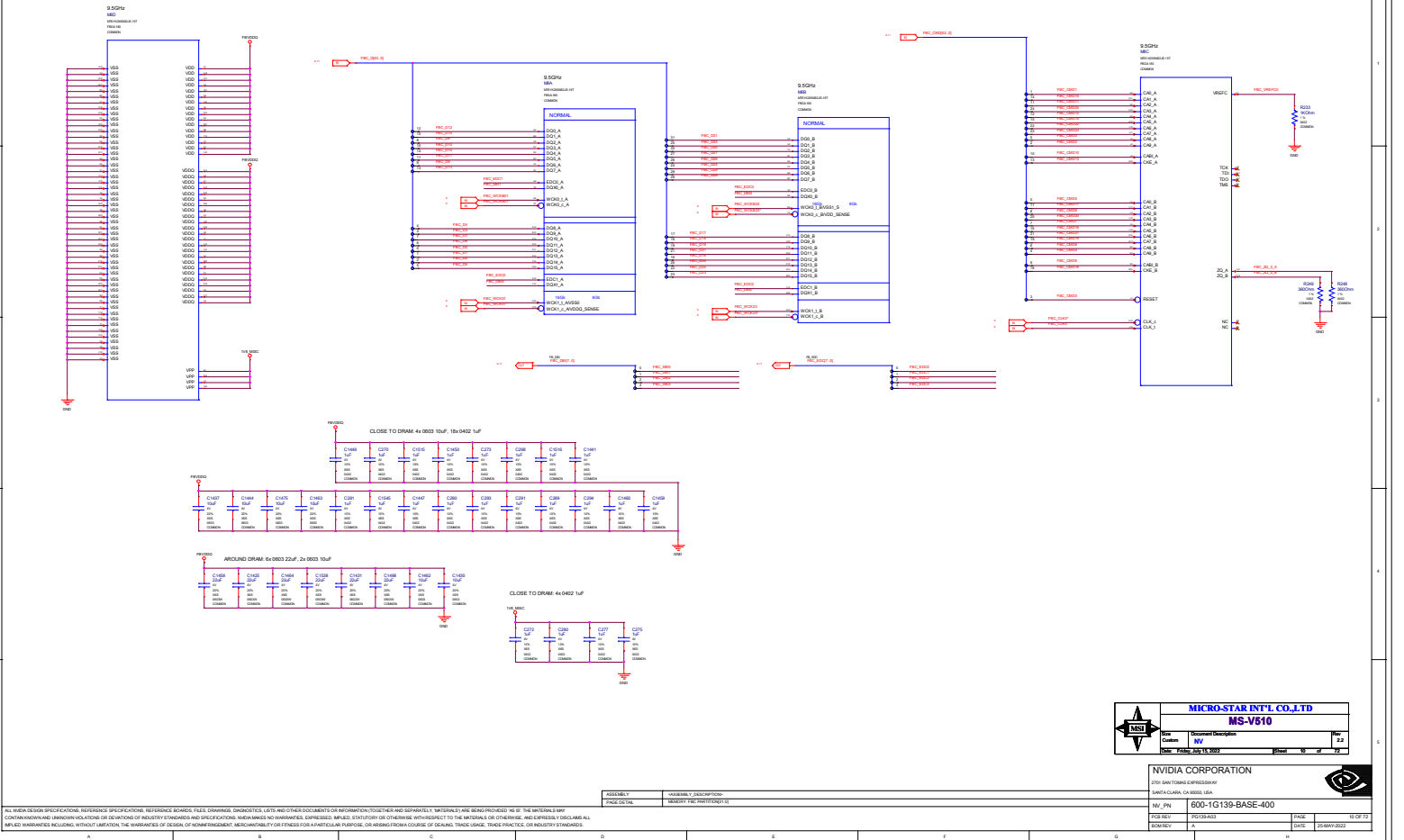
08/01/2018

08/01/2018



	MICRO-STAR INT'L CO., LTD			
	MS-V810			
	Name	Document Description		Page
	Date	Rev		of
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NVIDIA CORPORATION				
1700 SWEET HOME EXPRESSWAY SANTA CLARA, CA 95050, USA				
				
REV. #/N	600-1G139-BASE-400			
DATE	2002-03-03			Page 4 of 7
DESCRIPTION	A			DATE: 25-MAR-2002

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ASSEMBLY: NVIDIA CORPORATION
PART DETAIL: NVIDIA PART NUMBER 1E

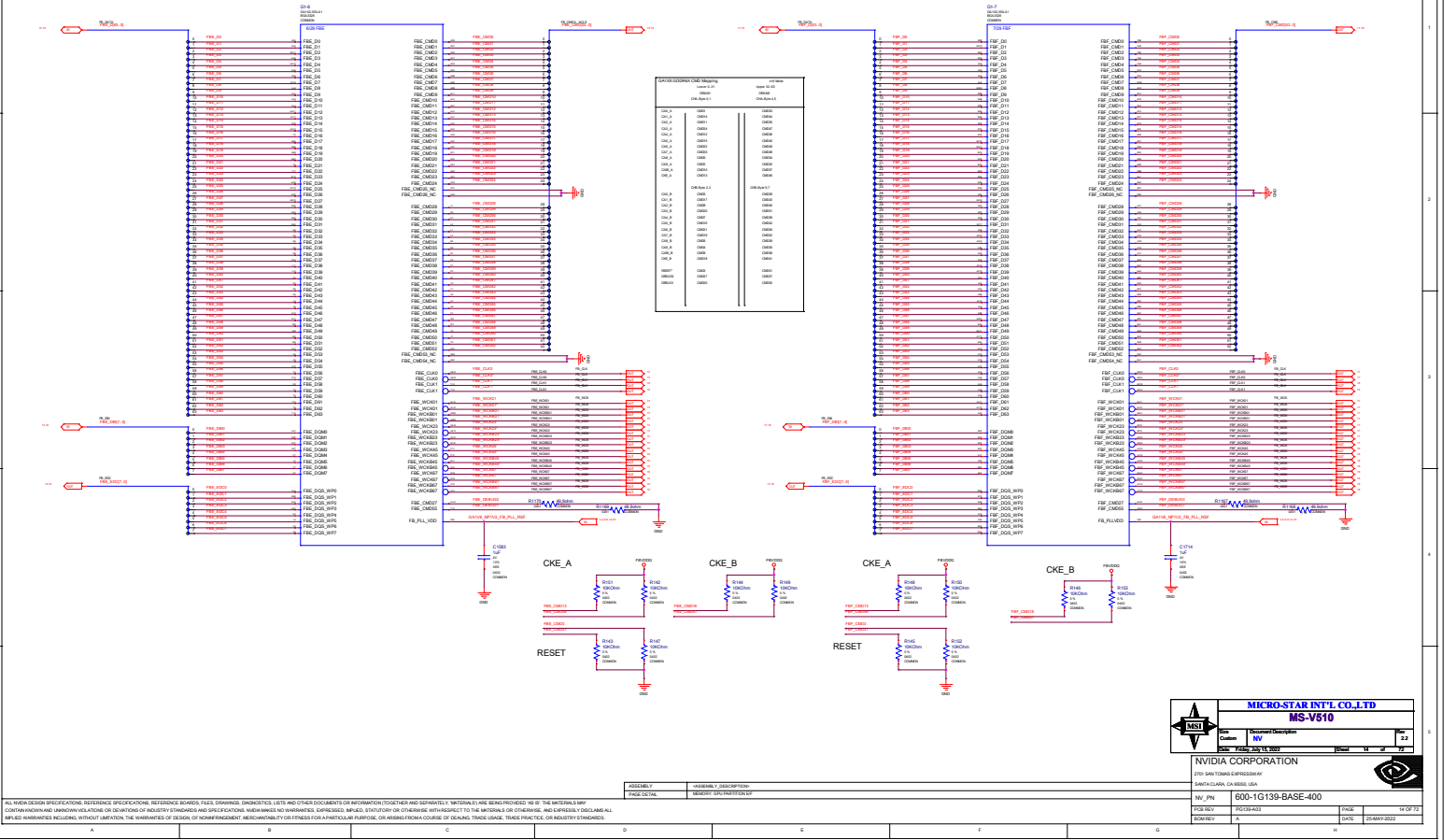
MICRO-STAR INT'L CO., LTD.			
MS-V510			
Rev.	Rev. Description	Rev. 1.1	
Rev. 1.1	Rev. 1.1	Rev. 1.1	

NVIDIA CORPORATION			
2000 SHAW BLVD., SANTA CLARA, CA 95050, USA			
Rev. PN	600-1G139-BASE-400	Rev. 1.1	
Part No.	600-1G139-BASE-400	Part No.	600-1G139-BASE-400
Rev. 1.1	Rev. 1.1	Rev. 1.1	Rev. 1.1



NVIDIA CORPORATION 2701 SANITOMAS EXPRESSWAY SANTA CLARA, CA 95050, USA				
NV_PN		600-1G139-BASE-400		
FOR REV	PG139-A03	PAGE	66 OF 72	
BOM REV	A	DATE	25-MAY-2022	

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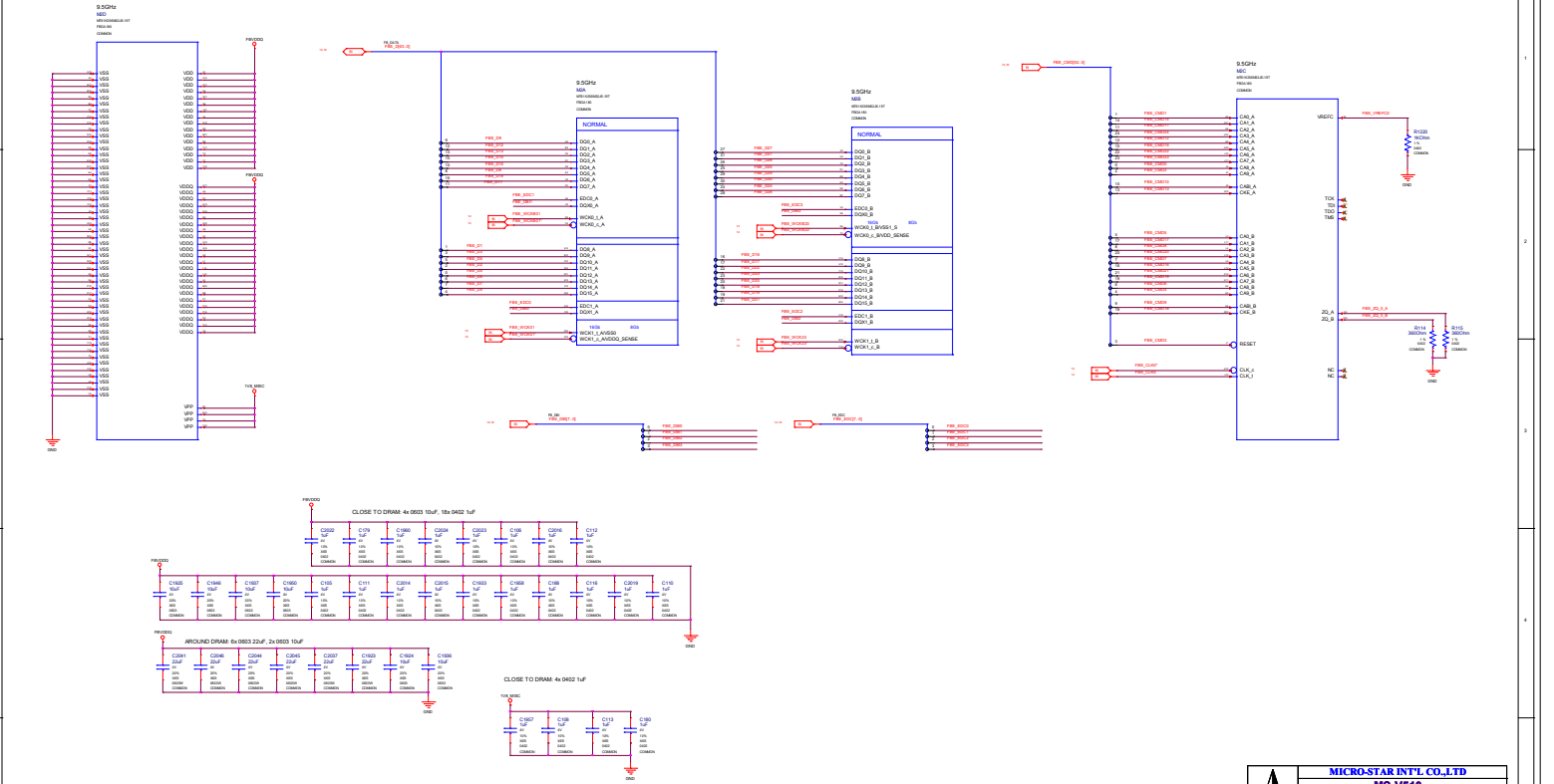
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ASSEMBLY: NVIDIA CORPORATION
PART: 600-1G139-BASE-400

MICRO-STAR INT'L CO., LTD.
MS-V610
Rev: NV
Date: Friday, July 15, 2022
Sheet: 14 of 17

NVIDIA CORPORATION
2000 Gateway Blvd., Santa Clara, CA 95050, USA

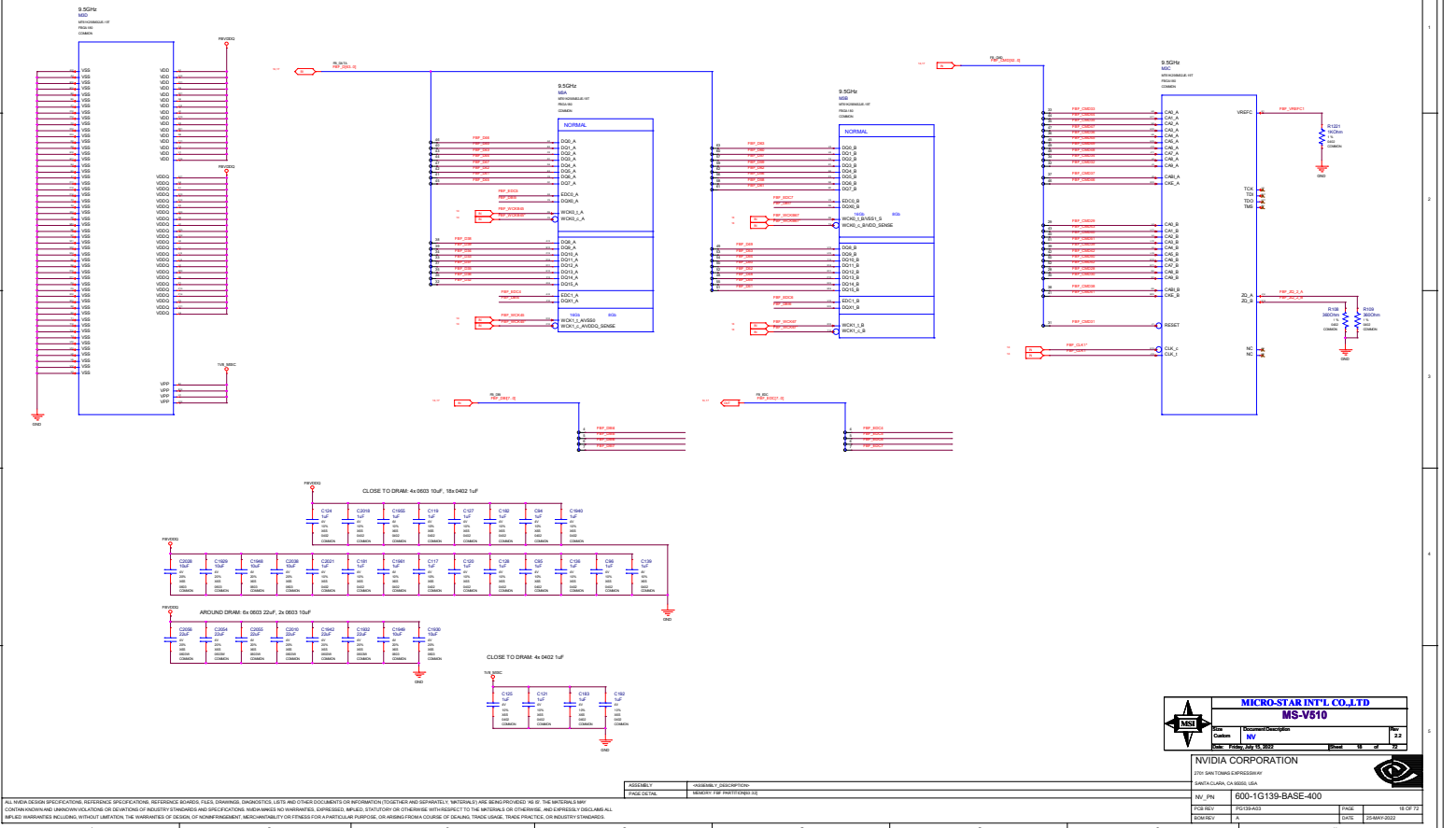
600-1G139-BASE-400
PART: 600-1G139-BASE-400
REV: 1.0
DATE: 02-04-2022



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ASSEMBLY: NVIDIA CORPORATION
PART DETAIL: NVIDIA PART NUMBER 01

MICRO-STAR INT'L CO., LTD.	
MS-V610	
Part Number	MS-V610
Rev	1.0
Date	2014.11.20
Drawn	11.20.14
Checked	11.20.14
Released	11.20.14
NVIDIA CORPORATION	
2285 AVENUE OF THE STARS	
SANTA CLARA, CA 95050, USA	
NVIDIA PART NUMBER 600-1G139-BASE-400	
Part Number	600-1G139-BASE-400
Rev	1.0
Date	2014.11.20
Drawn	11.20.14
Checked	11.20.14
Released	11.20.14



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FBF_0001	FBF_0001 PART (PART 1)

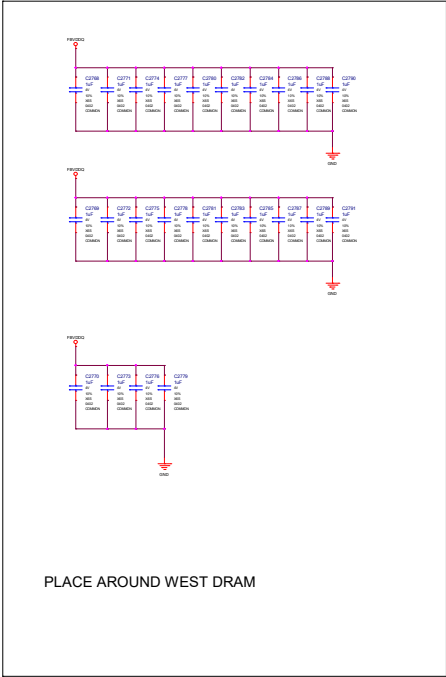


MICRO-STAR INT'L CO., LTD
MS-V810
Date: 2018.05.18
Version: 1.0
Page: 18 of 32

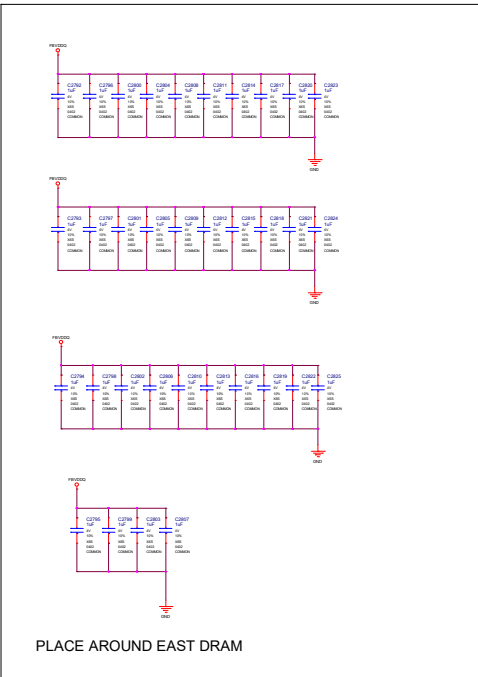


NVIDIA CORPORATION
2000 SHAW FERRY DRIVE
SANTA CLARA, CA 95050, USA
NV_PN: 600-1G139-BASE-400
PART: 600-1G139-BASE-400
REV: 1.0
DATE: 05/18/2018

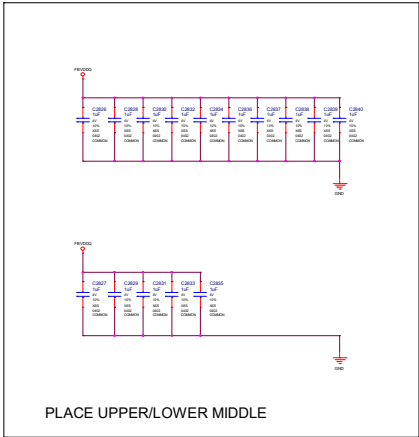
PER SI REQUIREMENT, RESERVE MORE 0402 1UF AROUND DRAM



PLACE AROUND WEST DRAM



PLACE AROUND EAST DRAM



PLACE UPPER/LOWER MIDDLE

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ASSEMBLY	DESCRIPTION
PCB DETAIL	MEMORY DECOUPLING



MICRO-STAR INT'L CO., LTD

MS-V610

Rev: 2.2

Rev: 2.2

NVIDIA CORPORATION

2000 SHAW BLVD, SANTA CLARA, CA 95051, USA

600-1G139-BASE-400

PCB DETAIL

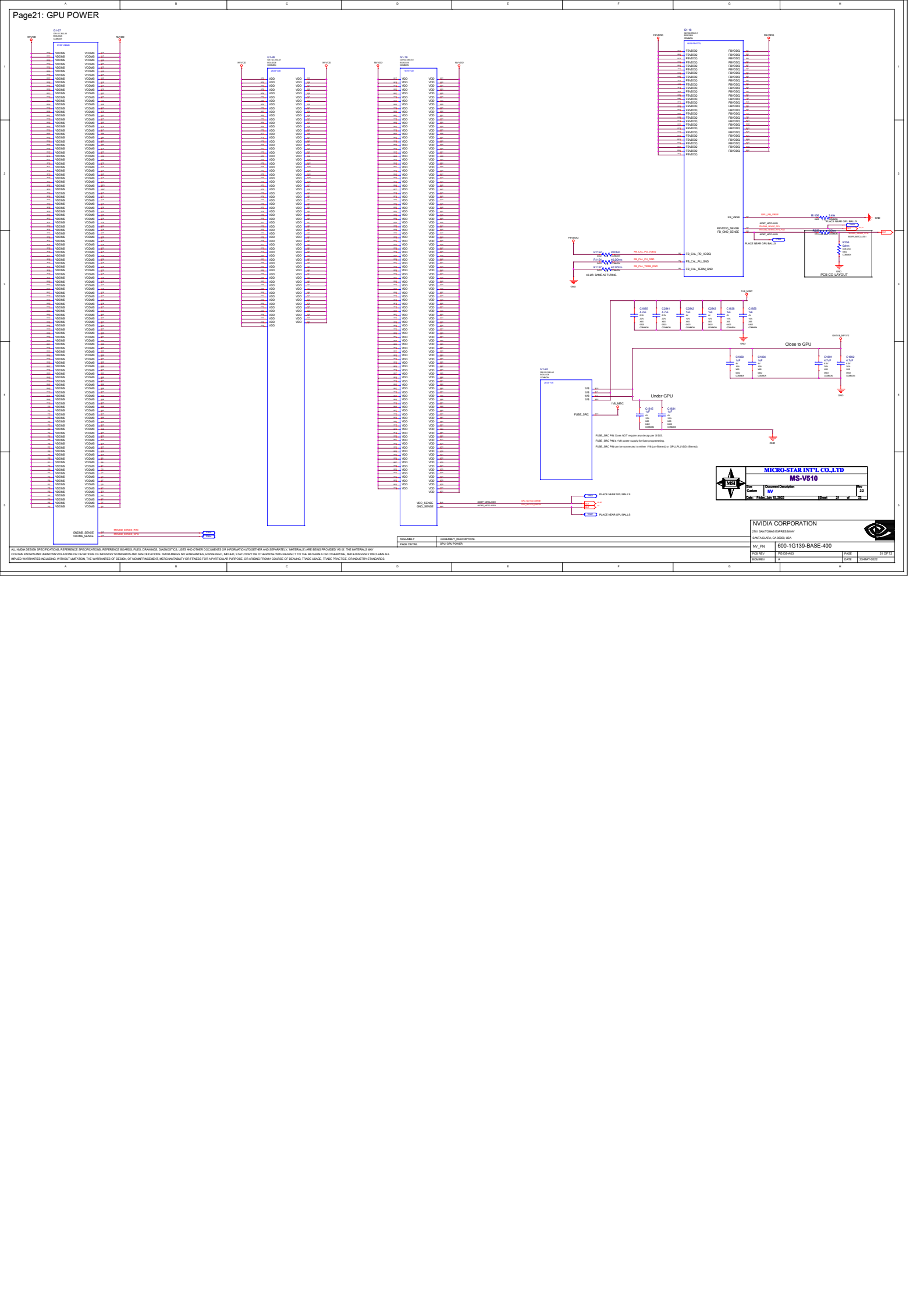
PCB DETAIL

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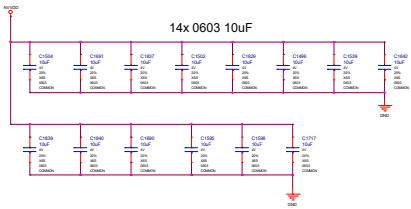


NVIDIA CORPORATION			
2701 SAN TOMAS EXPRESSWAY			
SANTA CLARA, CA 95050, USA			
NV_PN	600-1G139-BASE-400		
FOR REV	PG139-A03	PAGE	20 OF 72
BOM REV	A	DATE	25-MAY-2022

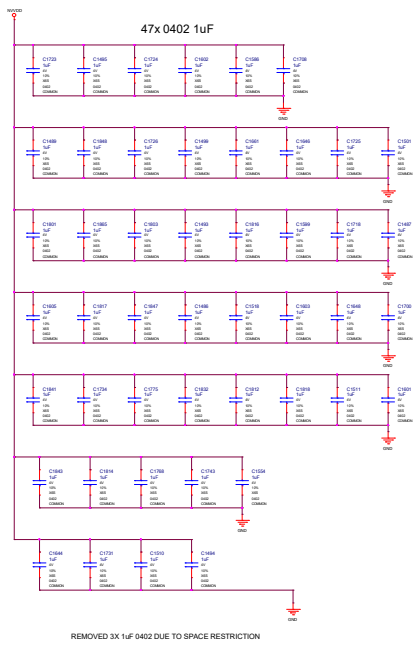
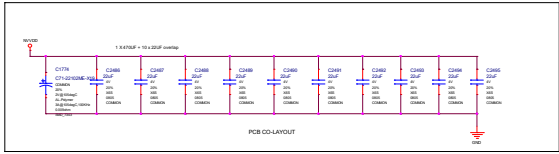
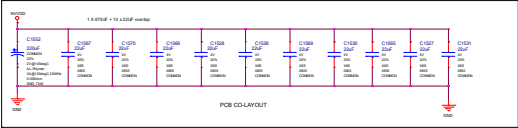


UNDER GPU

NVVDD



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



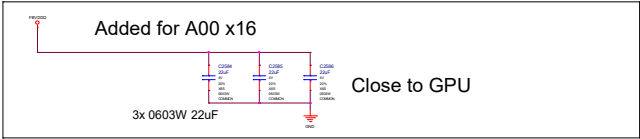
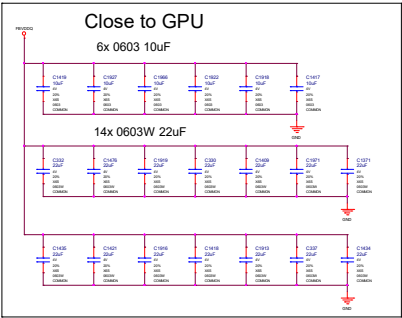
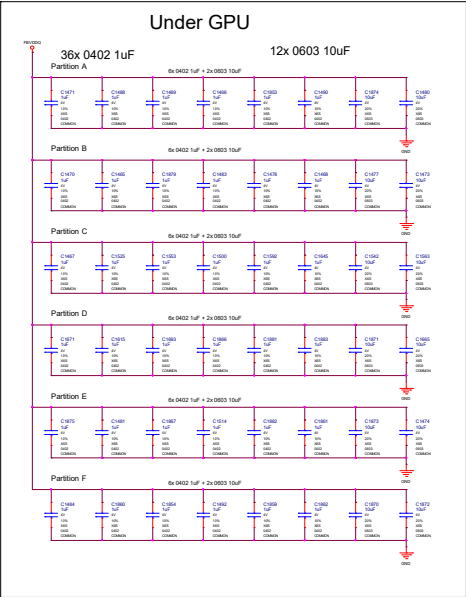
NVIDIA CORPORATION			
2000 SHAW FLORES DRIVE			
SANTA CLARA, CA 95050, USA			
REV. PN	600-1G139-BASE-400		
PCB REV	95103-A03	DATE	20 OF 32
PCB REV	A	DATE	02-04-2022

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ASSEMBLY	ASSEMBLY DESCRIPTION
PCB DESIGN	(GPU NVVDD DECOUPLING)

A B C D E F G H

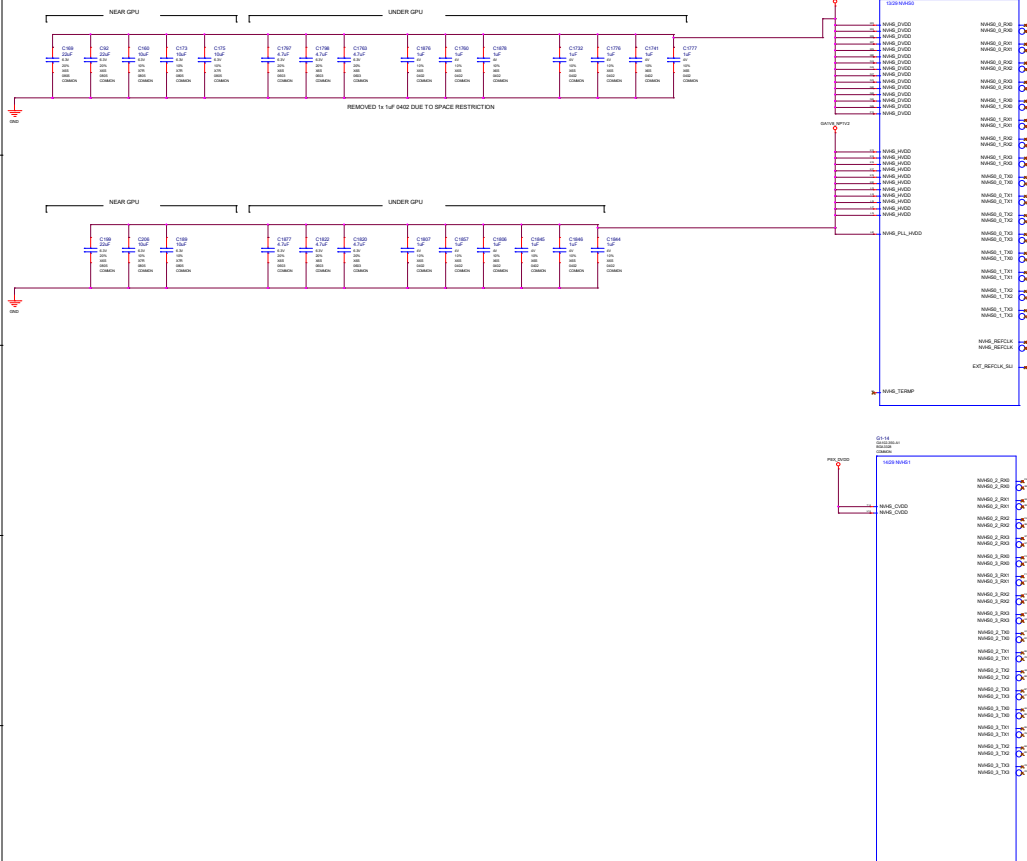
FBVDDQ



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-MAR-2022

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A	B	C	D	E	F	G	H
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ASSEMBLY	DESCRIPTION
GPU-100	GPU-100



MICRO-STAR INT'L CO., LTD
MS-V810
Rev. 1.0
Date: 2019-05-15
Page: 25 of 32

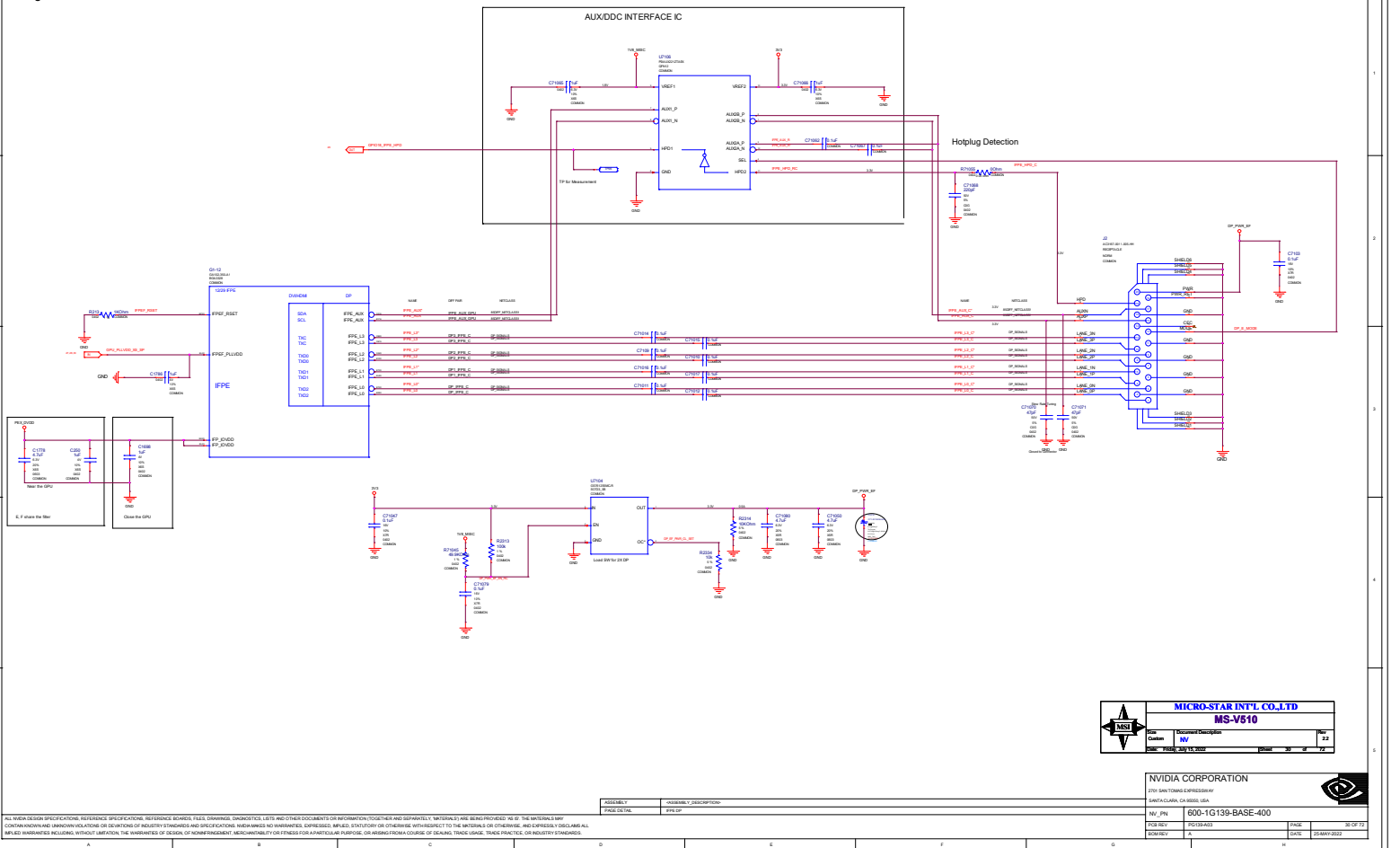


NVIDIA CORPORATION
2000 SHAW BLVD
SANTA CLARA, CA 95050, USA
REV. 1.0
600-1G139-BASE-400
REV. 1.0
2019-05-15



2701 SANTOMAS EXPRESSWAY
SANTA CLARA, CA 95050, USA

PCB REV	PG139-A03	PAGE	26 OF 72
BOM REV	A	DATE	25-MAY-2022



GROUP				
STRAP1	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

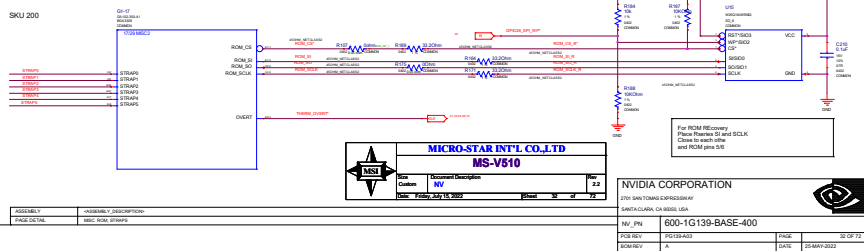
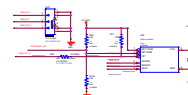
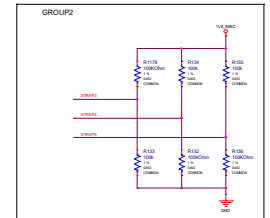
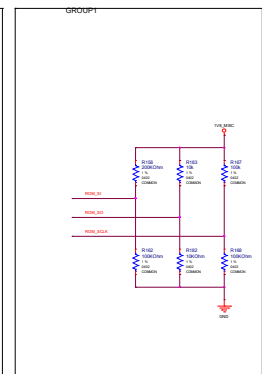
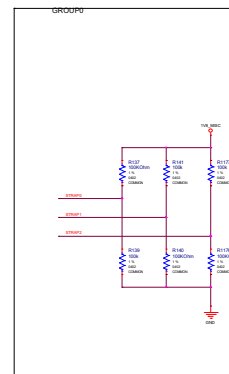
1:DEVID_SEL REBRAND
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0:PCIE_CFG HIGH POWER

1:VGA_DEVICE ENABLE
0:VGA_DEVICE DISABLE
```

Default

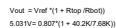
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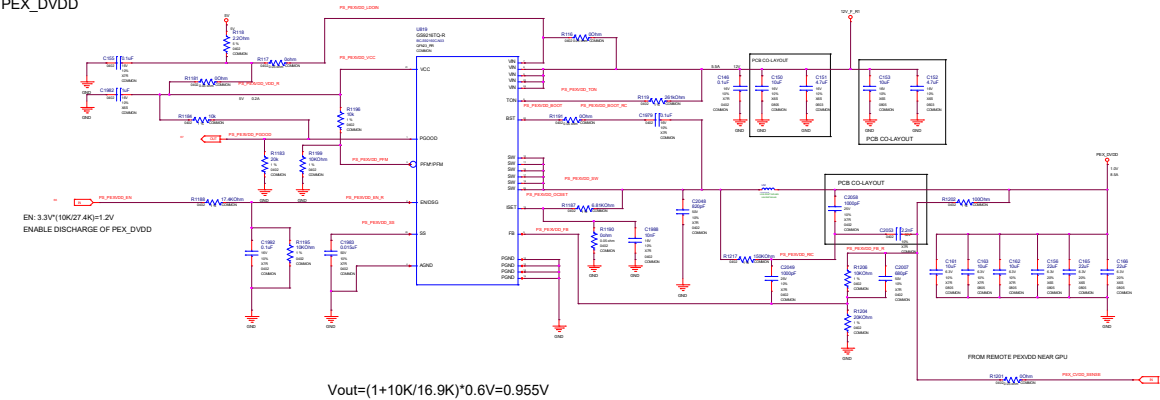
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ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	MISC. NOM. STRAPS

NVIDIA CORPORATION 2701 SAN TOMAS EXPRESSWAY SANTA CLARA, CA 95050, USA			
NV_P/N PCB REV BOM REV	600-1G139-BASE-400 PG139-A03 A	PAGE DATE	32 OF 72 05-MAY-2022

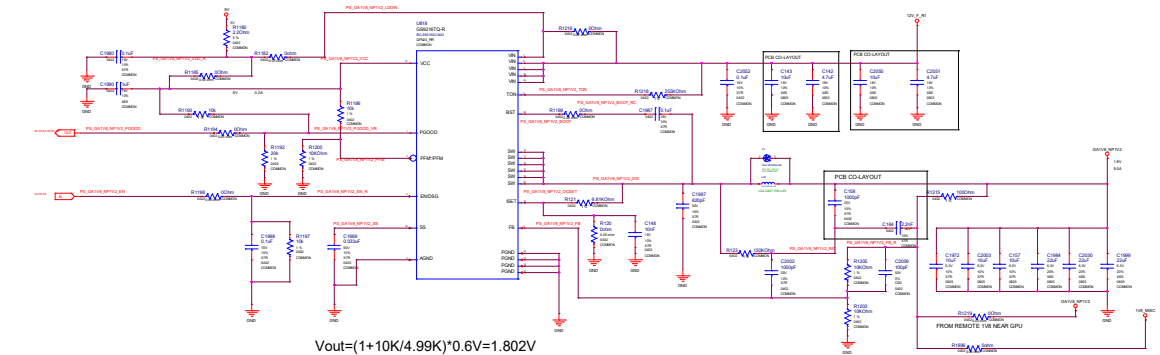


PEX_DVDD



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

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



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

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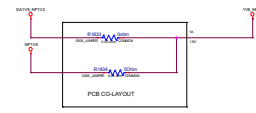
ASSEMBLY	DESCRIPTION
PEX_DVDD	PEX_DVDD (GA1V8_NP1V2)



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**
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Date: **2015.12.15**
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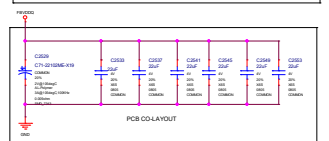
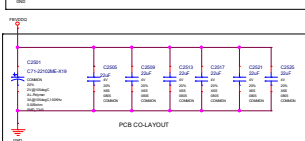


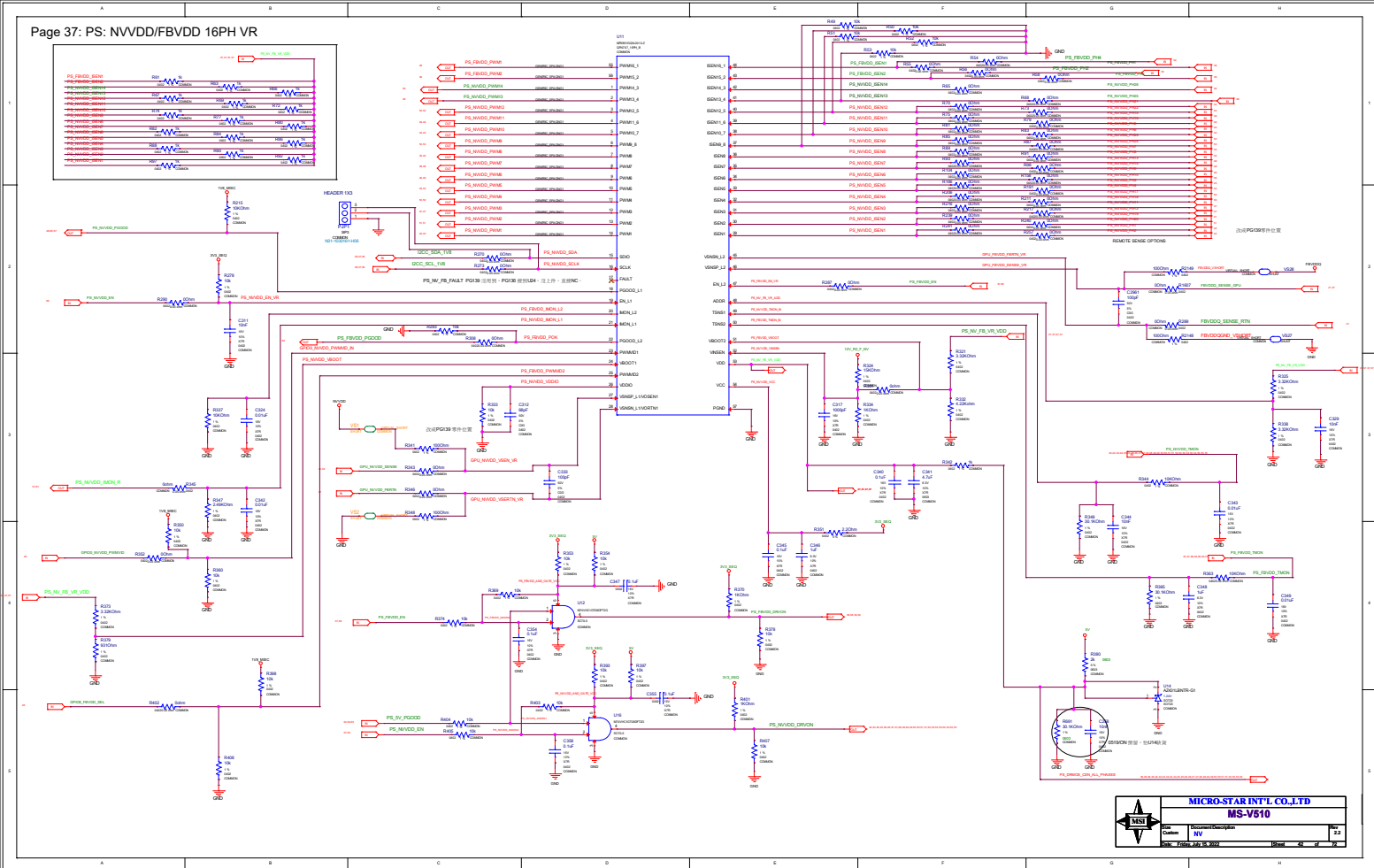
MICRO-STAR INT'L CO., LTD

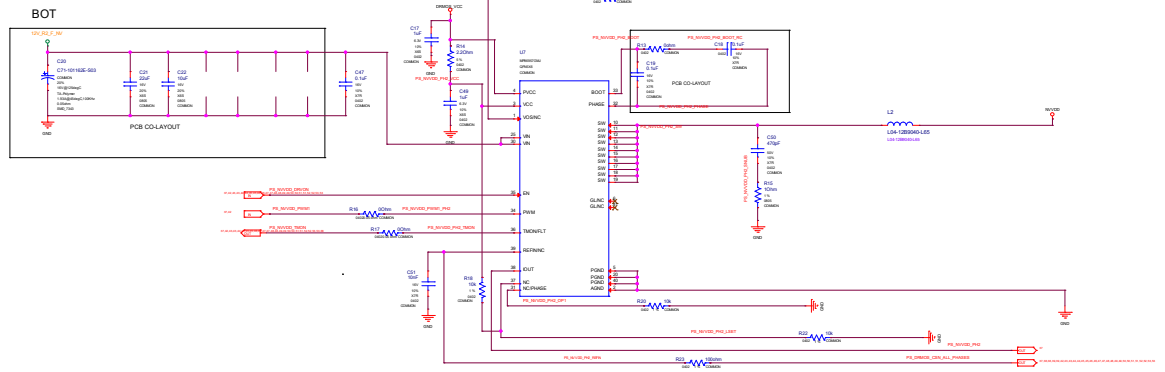
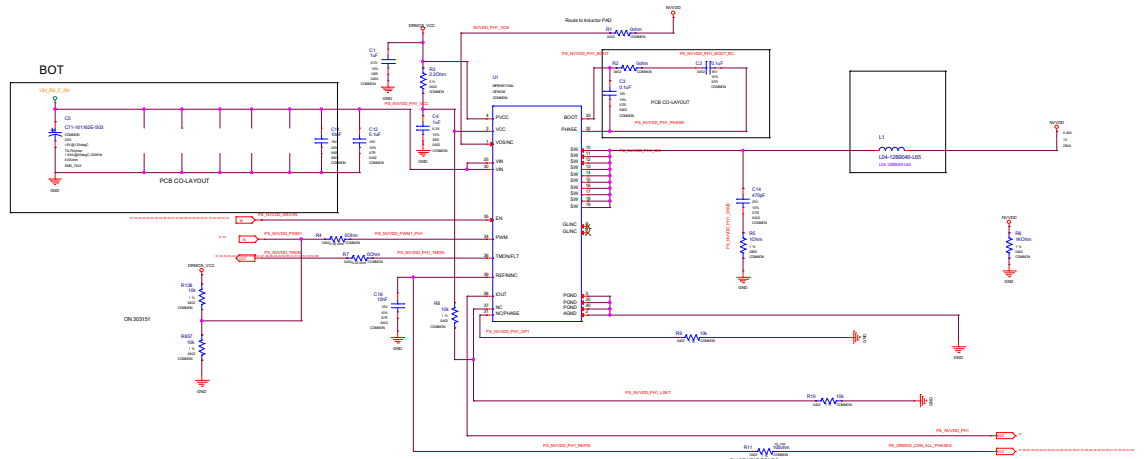
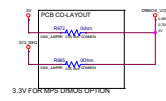
MS-V610

Rev	001	Rev	001
Rev	001	Rev	001
Rev	001	Rev	001
Rev	001	Rev	001

ADDED FOR A00 X16 DESIGN: PLACE UNDER MEMORIES

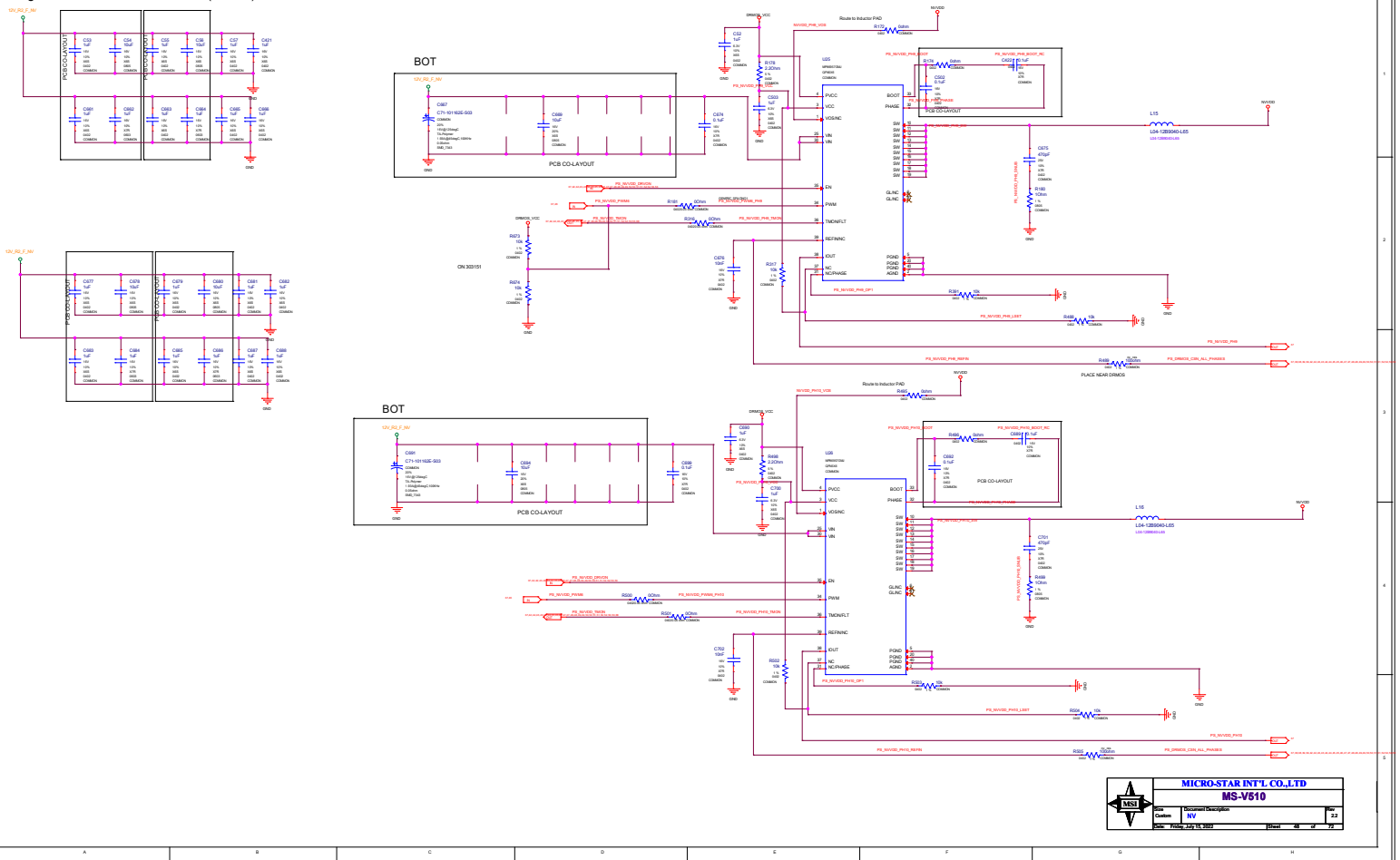


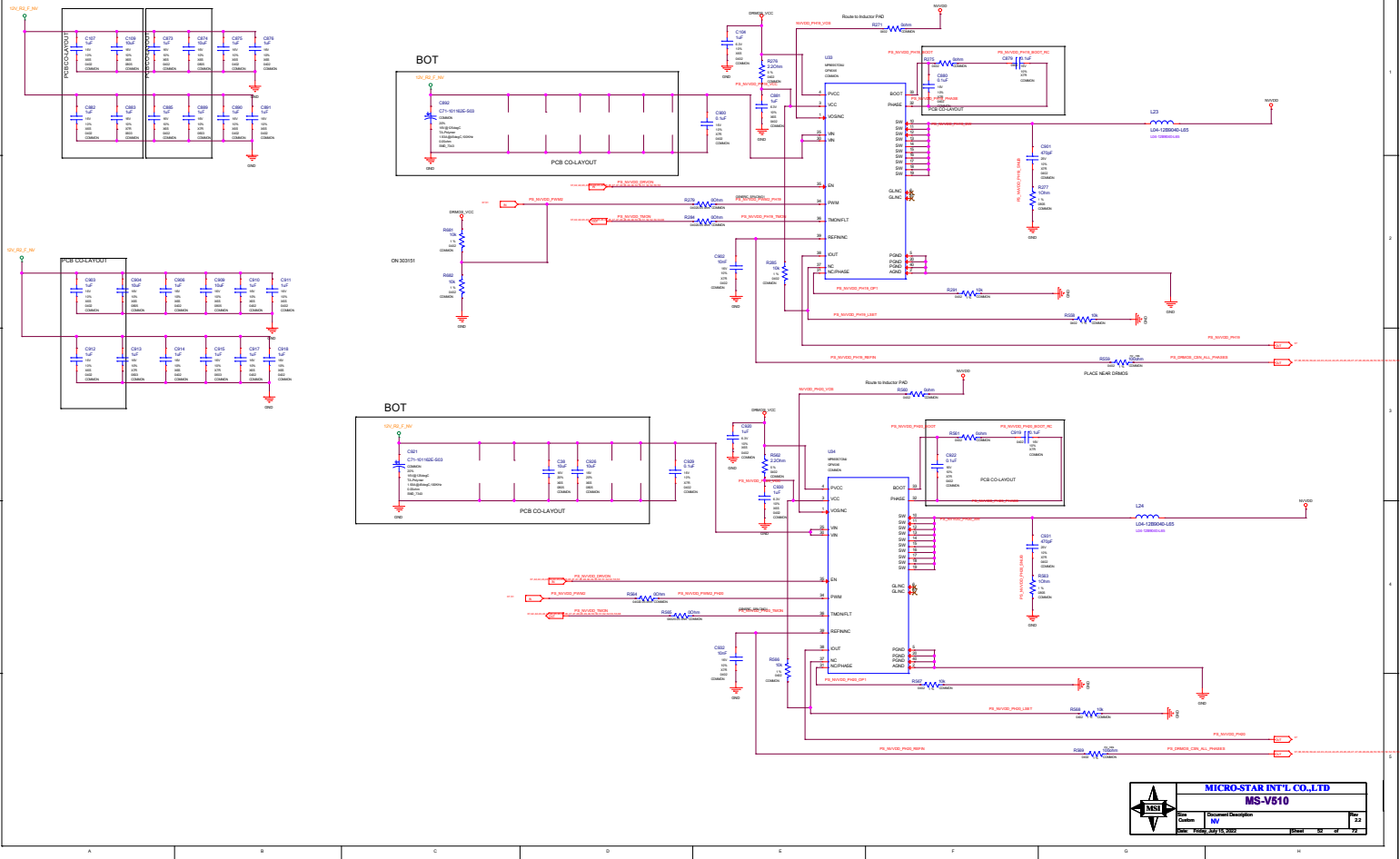


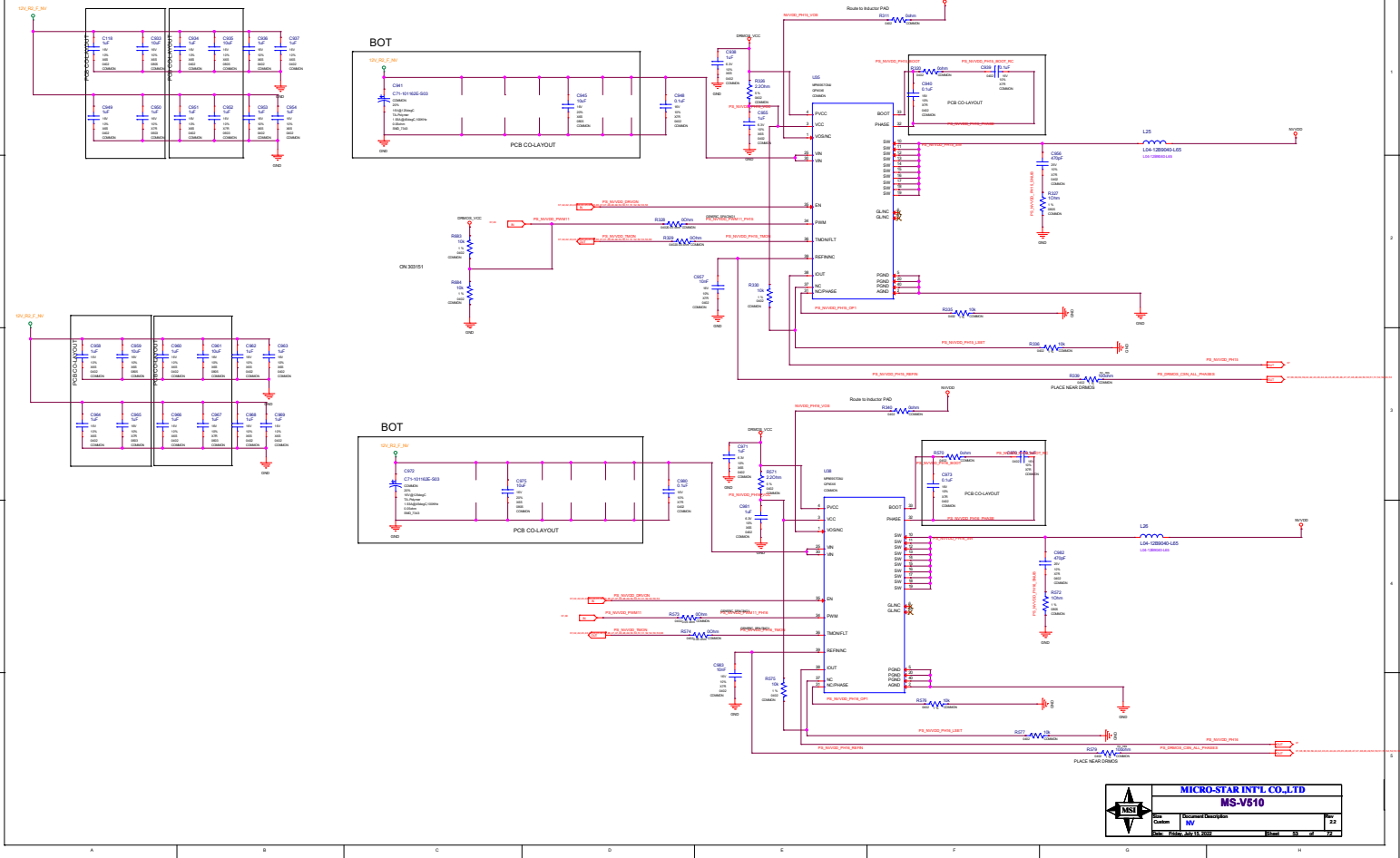


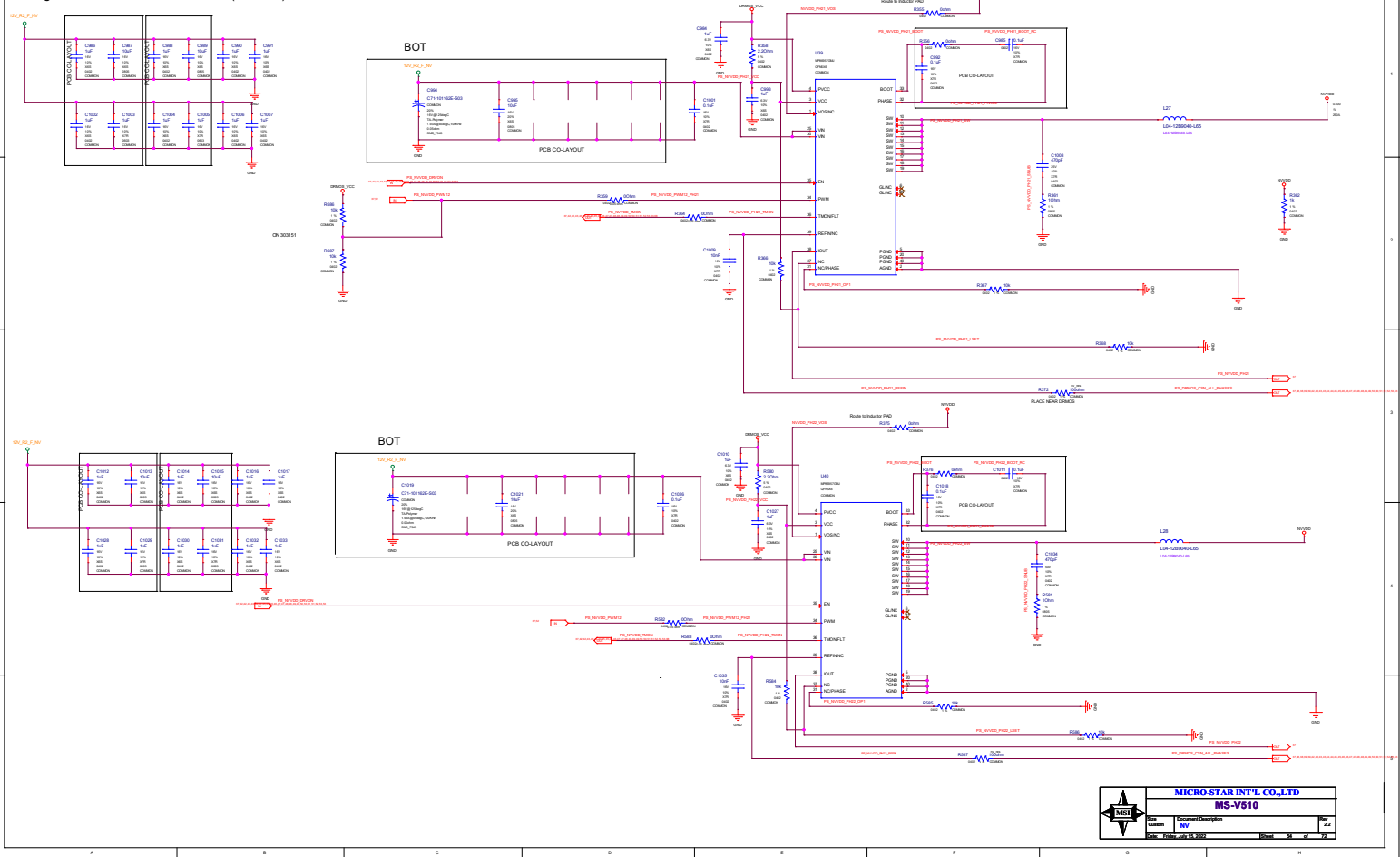


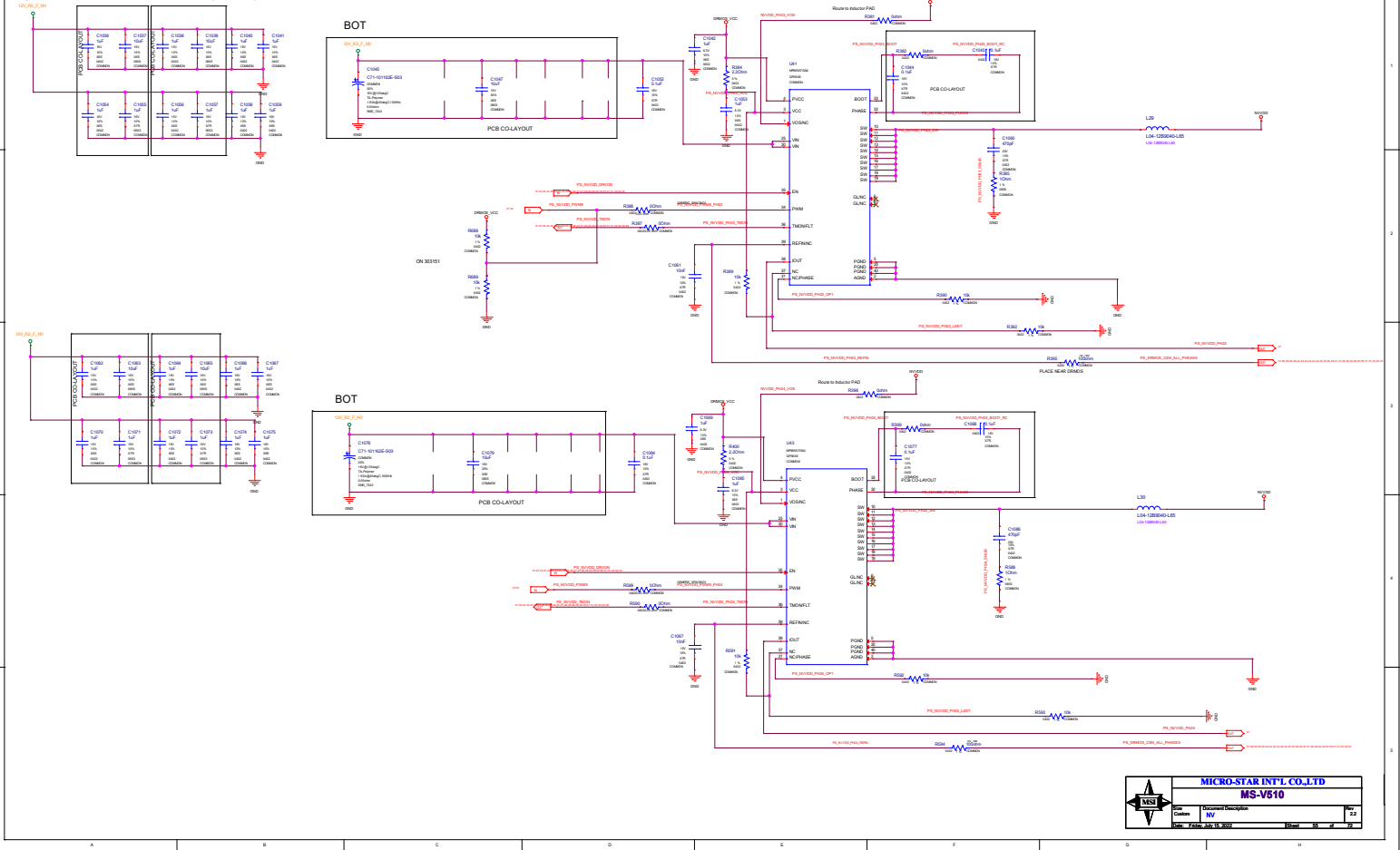


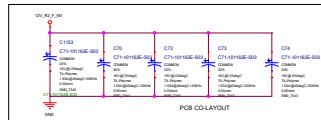
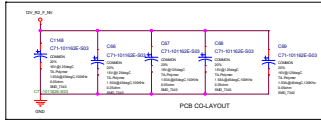
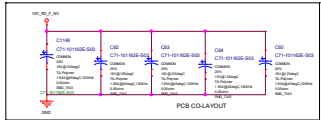
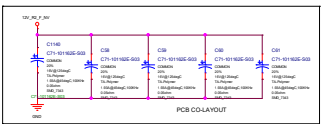
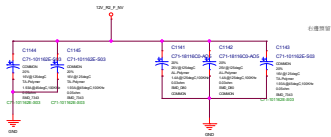




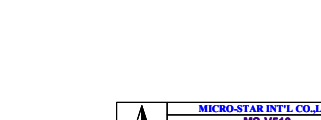
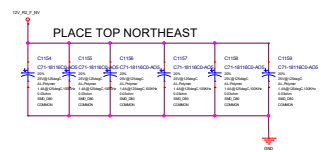
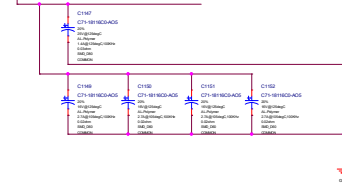




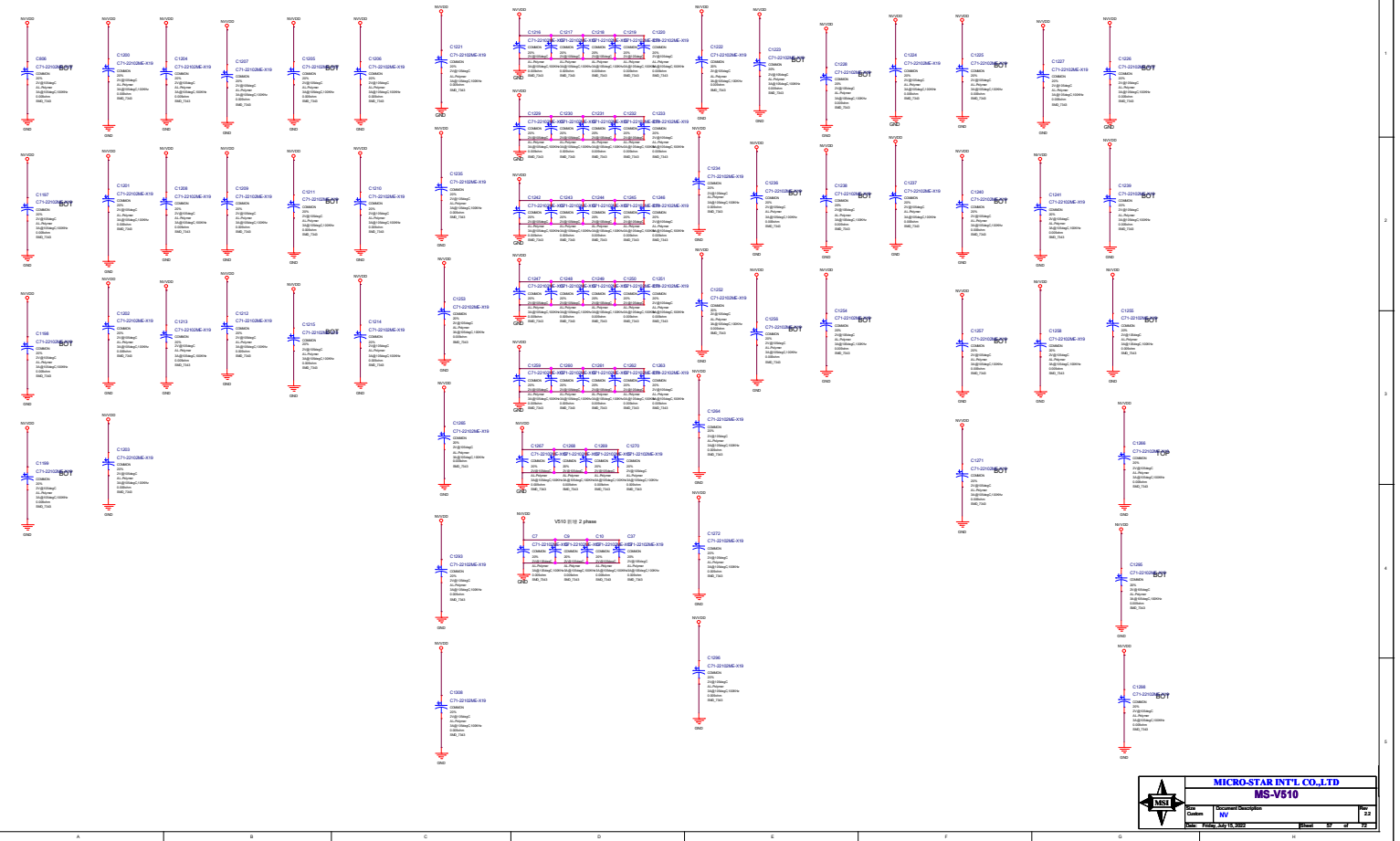




PLACE TOP SOUTHEAST



MICRO-STAR INT'L CO., LTD			
MS-V510			
Doc	Rev	Revised Description	2.1
Date: 2008-07-15 2008		Revised	Rev. of 2



	MICROSTAR INT'L CO., LTD	
	MS-V610	
	Rev: 1.0	Description: PS: NVVDD OUTPUT CAP
Author: [redacted]	Drawn: [redacted]	Check: [redacted]
Date: 2014.11.11	Scale: 1:1	Sheet: 57 of 64

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ASSEMBLY	ASSEMBLY DESCRIPTION
MS-V510	MS-V510
NVIDIA CORPORATION	
200 SHAW BLVD, SANTA CLARA, CA 95050, USA	
REV. PN	600-1G139-BASE-400
FOR SET	95139-400
FOR SET	95139-400



MICRO-STAR INT'L CO., LTD

MS-V510

Rev. PN: 600-1G139-BASE-400

FOR SET: 95139-400

FOR SET: 95139-400



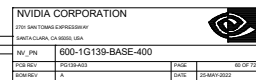
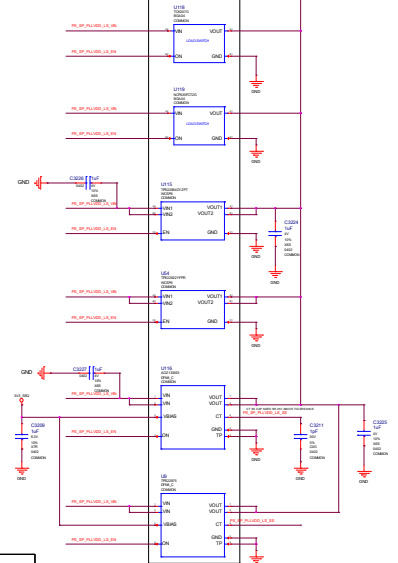
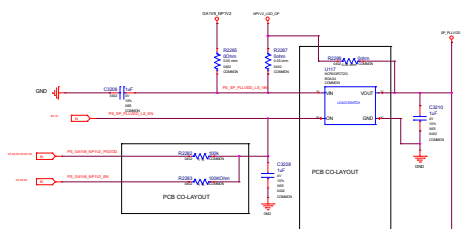
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ASSEMBLY	ISSUANCE DESCRIPTION
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		MICRO-STAR INT'L CO., LTD	
		MS-V510	
Doc. Number	Serial Description		Rev.
Doc. #	REV		1.2
Date: 2016.05.11.2016	Printed	By	at

NVIDIA CORPORATION					
200 SHAW BLVD, SANTA CLARA, CA 95050, USA					
REV. #	600-1G139-BASE-400				
FOR SET	2016.05.11.2016	FILED	50 OF 72		
FOR SET	1	DATE	2016.05.11.2016		

A	B	C	D	E	F	G	H
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ASSEMBLY	<ASSEMBLY_DESCRIPTION>
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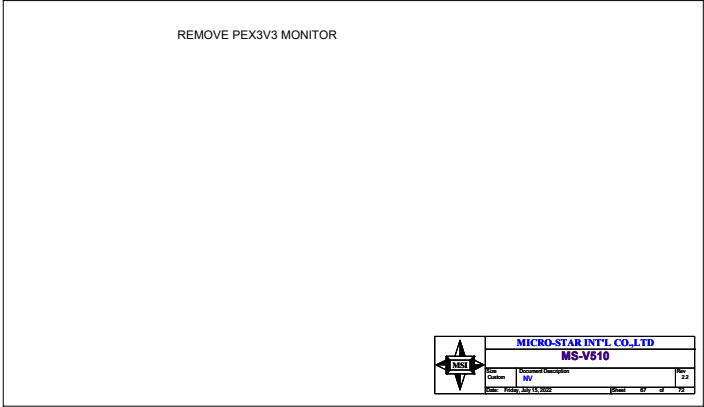
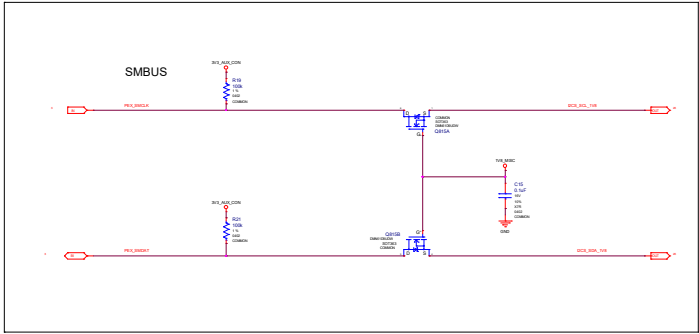
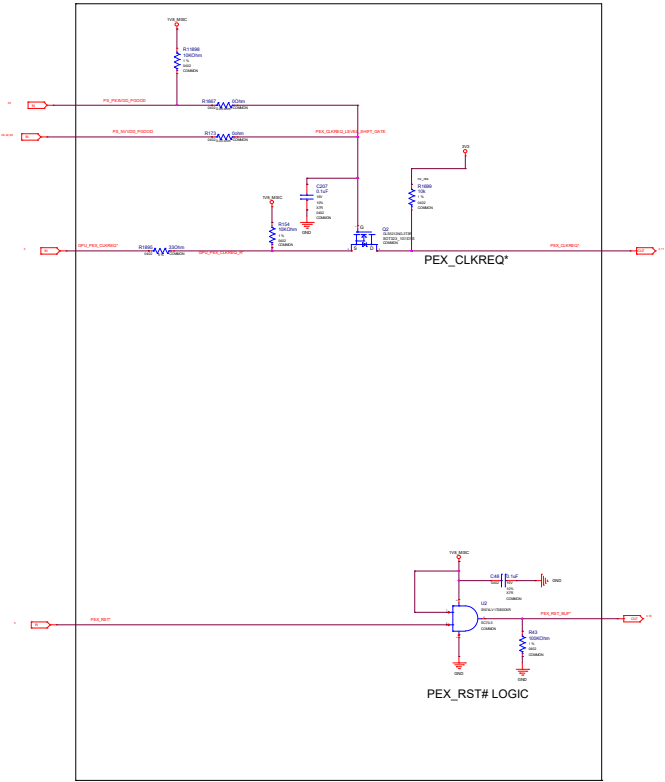
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Rev	Customer	Assembly Description	Rev
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NVIDIA CORPORATION			
200 SANTA TERESA CIRCLE			
SANTA CLARA, CA 95058, USA			
NV_PN		600-1G139-BASE-400	
FOR SET	95139-400	FILED	56 OF 72
REVISED	A	DATE	02-MAY-2022





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PAGE DETAIL	SEQ IV, GATV8, MPV2 EN, IV3, SEQ, IV3, PROT



MICRO-STAR INT'L CO., LTD	
MS-V610	
Part	MS-V610
Rev	2.2
Date	2009-05-18
Drawn	SP
Check	SP

NVIDIA CORPORATION

2000 SHAW FLORENCE DRIVE

SAN JOSE, CALIFORNIA 95134, USA

Part No. 600-1G139-BASE-400

Product 600-1G139-BASE-400

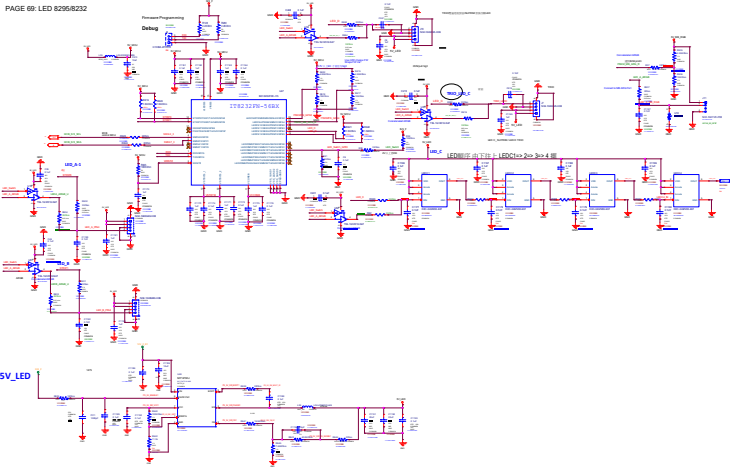
Version 1.0

Date 05-18-2009

Page 1 of 1



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SV_LED

ASSEMBLY	ASSEMBLY DESCRIPTION
MS-V610	MS-V610

MICRO-STAR INT'L CO., LTD	
MS-V610	
Rev	Revised Description
001	MS-V610
Date	04/18/2018
By	04/18/2018

NVIDIA CORPORATION

2000 SHAW BLVD, SANTA CLARA, CA 95050, USA

MS-V610 600-1G139-BASE-400

REV	REV	REV	REV	REV	REV
001	001	001	001	001	001

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