

PG174-A01

TU117, 128b GDDR5 x32, 75W  
DVI-D DL/DUAL DP + HDMI


TABLE OF CONTENTS

Page	Description
1	Table of Contents
2	Block Diagram
3	PCI Express
4	MEMORY: GPU Partition A/B
5	MEMORY: FBA[31:0]
6	MEMORY: FBA[63:32]
7	MEMORY: FBB[31:0]
8	MEMORY: FBB[63:32]
9	GPU FBVDDQ & 1V8 Decoupling
10	GPU NVVDD DECOUPLING
11	IFPAB DVI-DL
12	IFPA DP
13	IFPB DP
14	IFPC
15	IFPC HDMI
16	IFPDEF UNUSED
17	MISC1: Fan, Thermal, JTAG, GPIO
18	MISC2: ROM, XTAL, Straps
19	Power Inputs and Filtering
20	SEQ: 5V, 1V8, NV3V3 ENABLE
21	SEQ: NV, PEX, FB ENABLE
22	SEQ: VOLTAGE MONITOR
23	SEQ: DISCHARGE
24	SEQ: MISC
25	PS: Pre-filter

Page	Description
26	PS: 5V
27	PS: 1V8
28	PS: PEXVDD
29	PS: FBVDDQ
30	PS: NVVDD OVR2+1
31	PS: NVVDD Phase 1,2
32	MECH: Bracket/Thermal

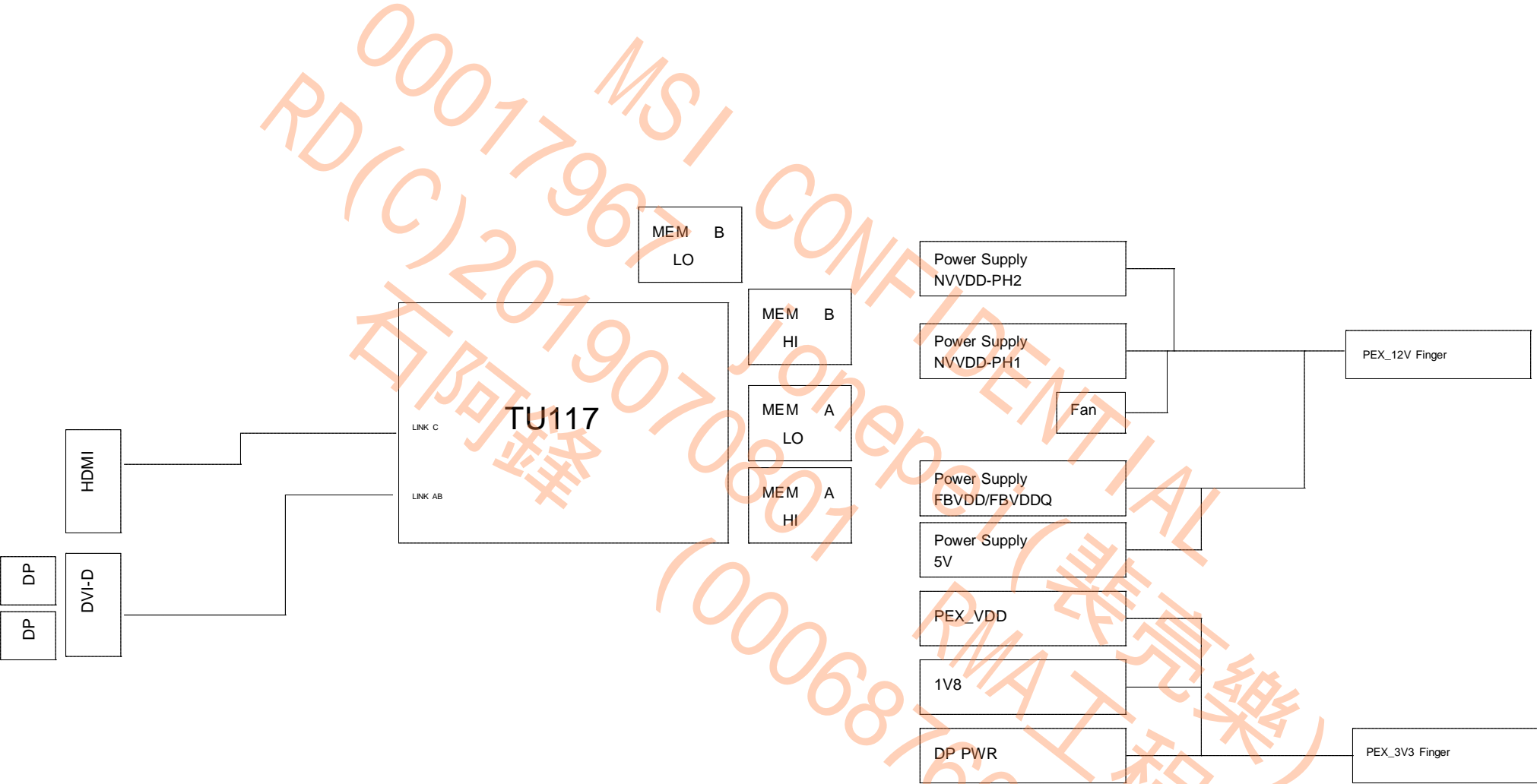
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NV_PN	600-1G174-BASE-A01		
PCR REV	PG174-A01	TRGE	1 OF 32
BCM REV	A	DATE	10-DEC-2018

Block Diagram

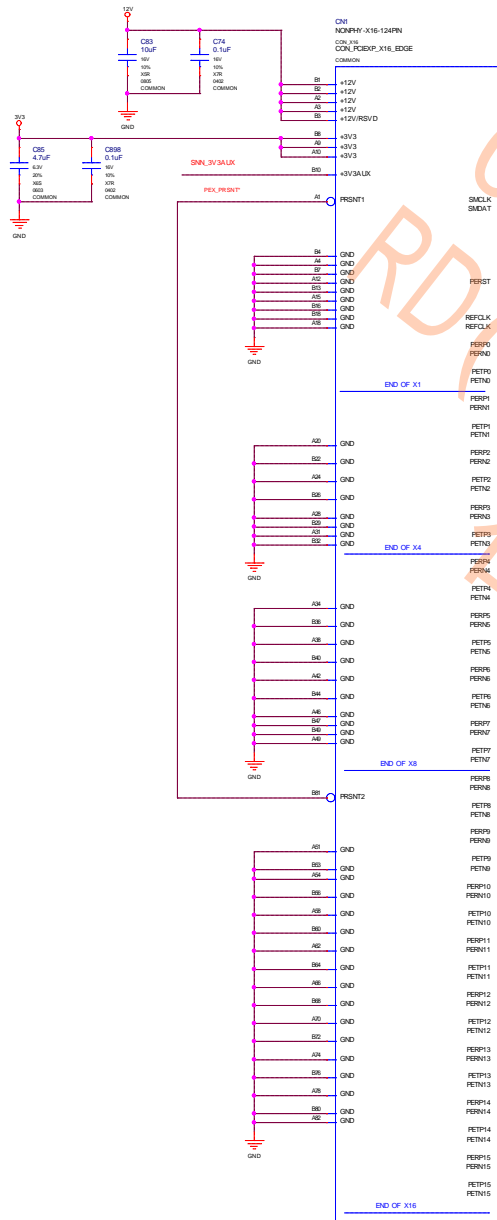


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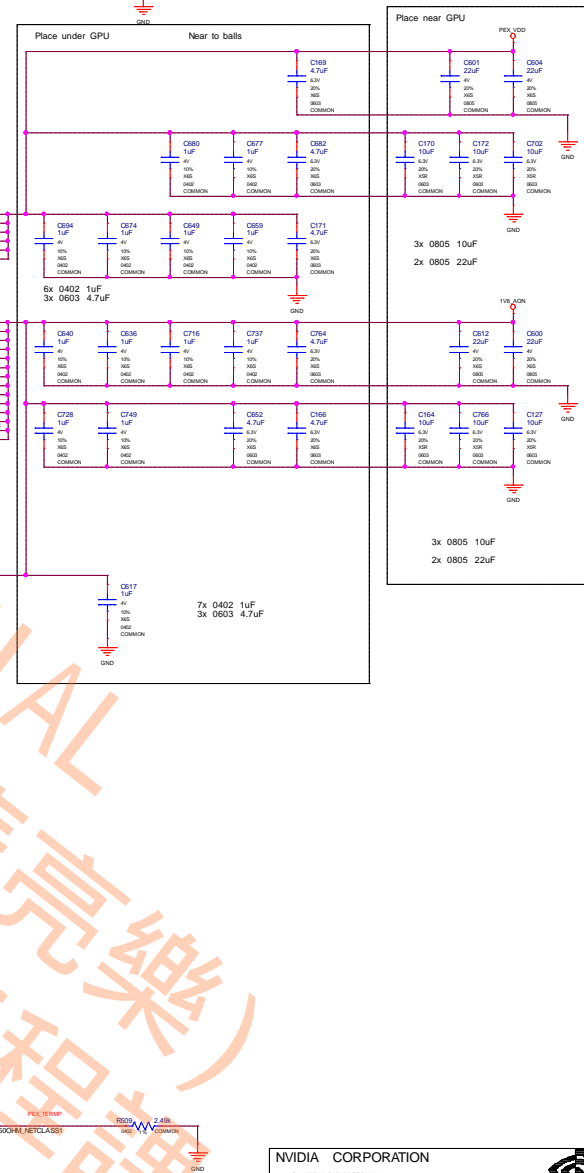
ASSEMBLY	ASSEMBLY DESCRIPTION
FRGE DETAIL	Block Diagram

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NV_PN	600-1G174-BASE-A01		
PCB REV	PG174-A01	TRGE	2 OF 32
BCM REV	A	DATE	10-DEC-2018

# PCI Express



VOLTAGE	MAX. CURRENT	MIN. WIDTH
12V	5.5A	5.400
3.3V	3.0A	5.400
0V	8.5A	5.400



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ASSEMBLY	ASSEMBLY DESCRIPTION
PCI Express	PCI Express

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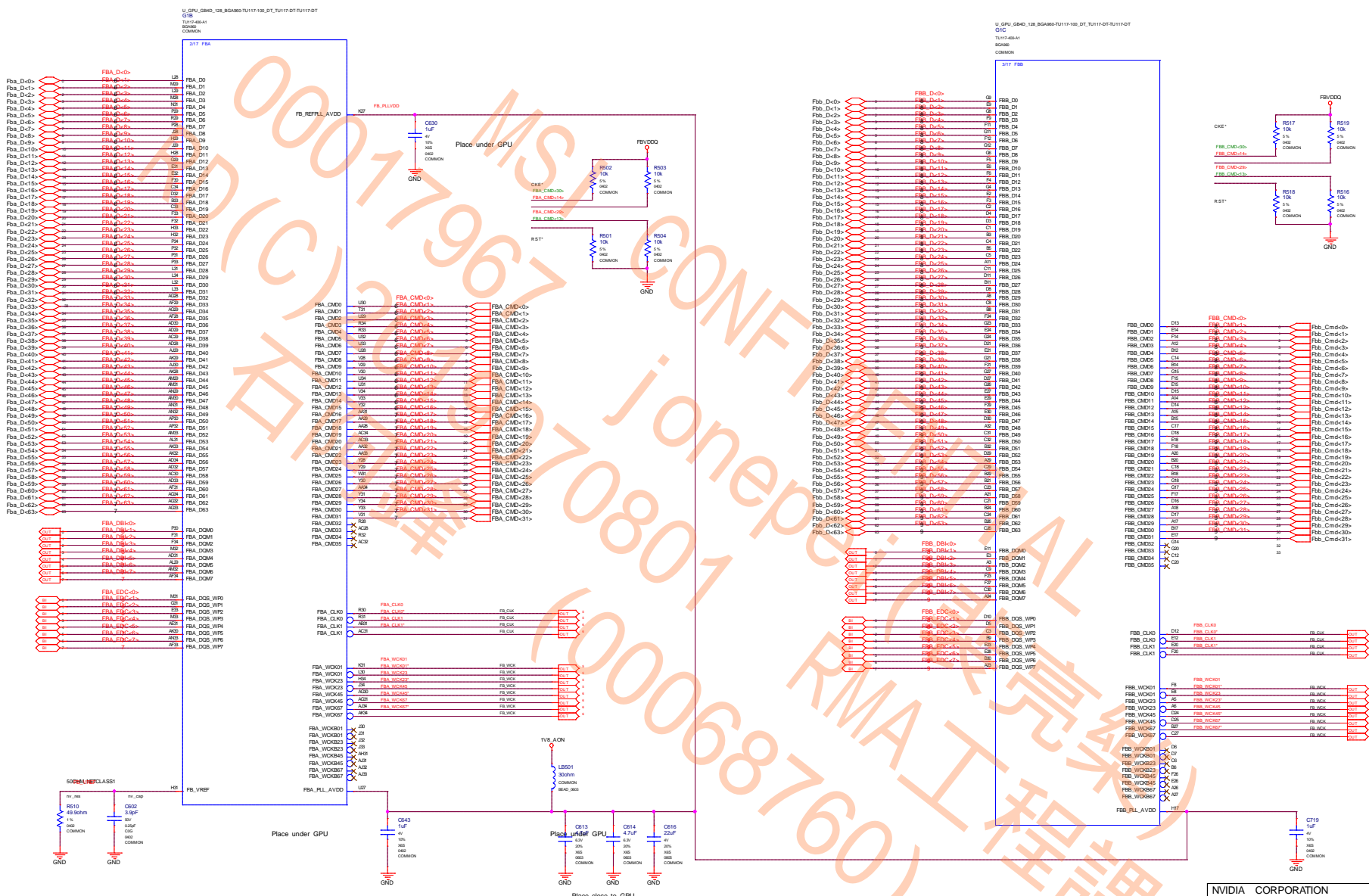
PCB REV A

DATE 10-DEC-2018

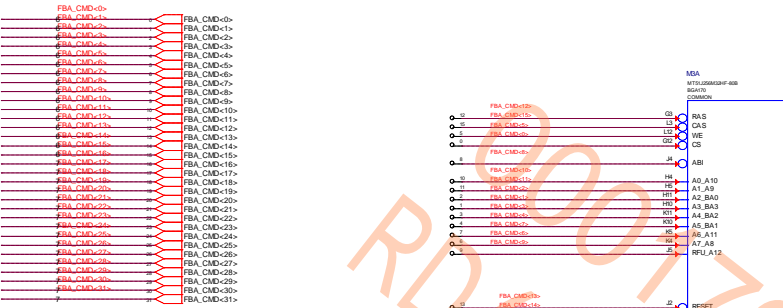


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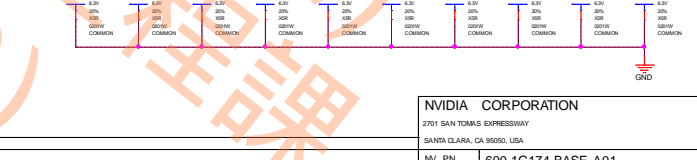
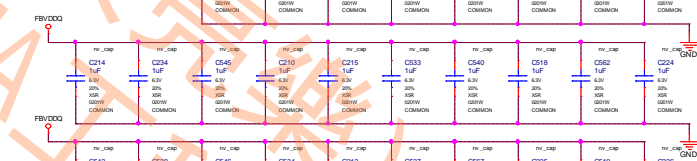
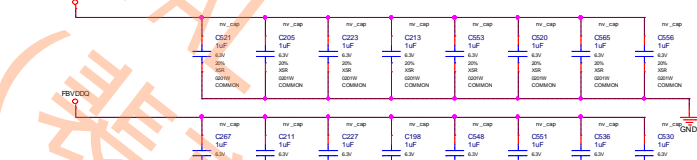
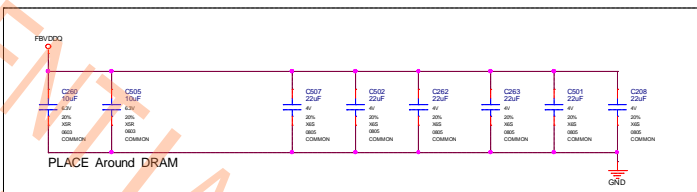
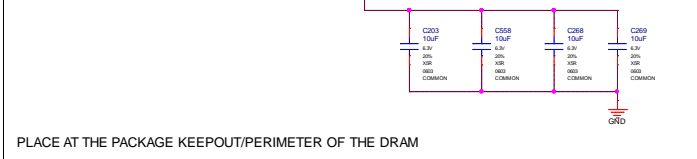
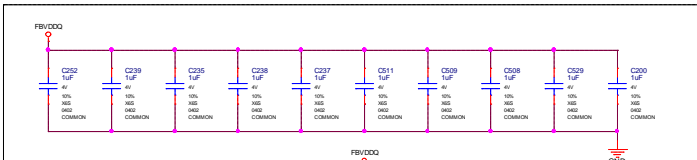
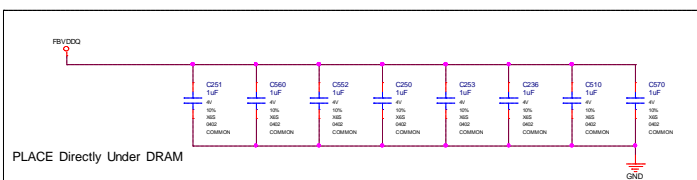
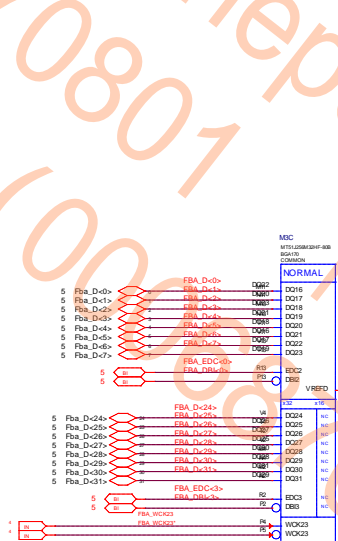
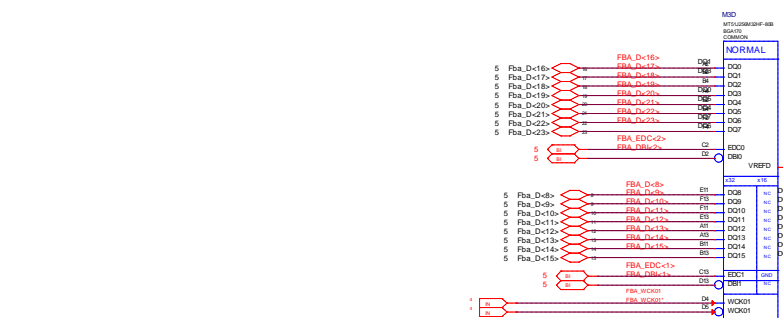
MEMORY: GPU Partition A/B



# MEMORY: FBA Partition 31..0



CMD	0.31	32..63
CMD0	CS*	
CMD1	A3, BA3	
CMD2	A2, BA2	
CMD3	A4, BA4	
CMD4	A5, BA1	
CMD5	WE*	
CMD6	A7, A8	
CMD7	A6, A11	
CMD8	AB*	
CMD9	A12, RFU	
CMD10	A0, A10	
CMD11	A1, A9	
CMD12	RAS*	
CMD13	RESET	
CMD14	OK*	
CMD15	CAS*	
CMD16	CS*	A3, BA3
CMD17		A2, BA2
CMD18		A4, BA4
CMD19		A5, BA1
CMD20		WE*
CMD21		A7, A8
CMD22		A6, A11
CMD23		AB*
CMD24		A12, RFU
CMD25		A0, A10
CMD26		A1, A9
CMD27		RAS*
CMD28		RESET
CMD29		OK*
CMD30		CAS*
CMD31		



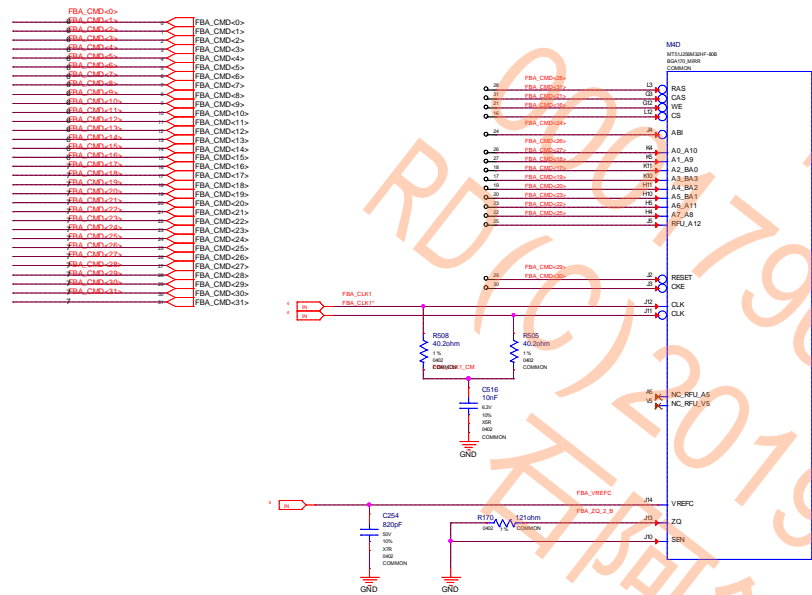
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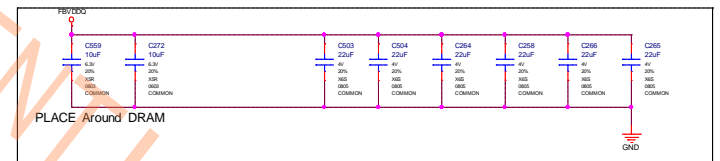
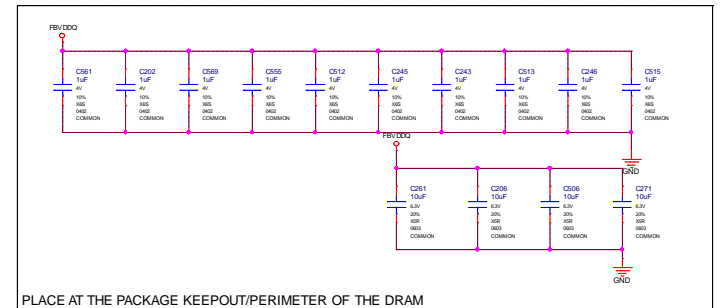
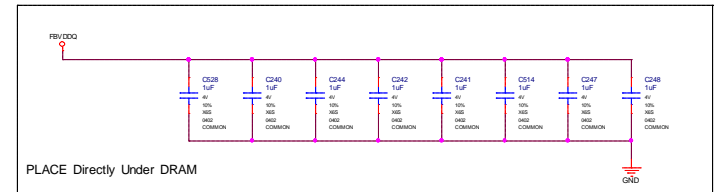
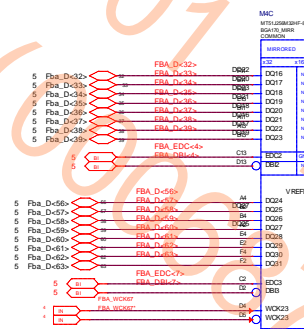
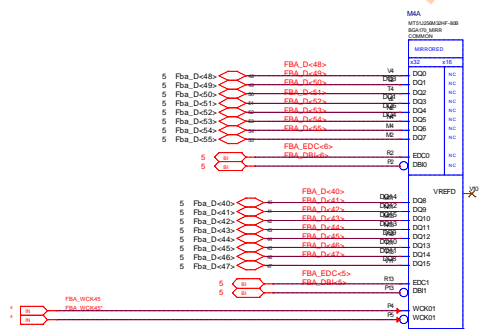
ASSEMBLY	ASSEMBLY DESCRIPTION	600-1G174-BASE-A01
PCB DETAIL	MEMORY: FBA[31:0]	PCB REV: A01
PCB REV	DATE	10-DEC-2018

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CMD	0..31	32..63
CMD0	CS*	
CMD1	A3, BA3	
CMD2	A2, BA2	
CMD3	A4, BA2	
CMD4	A2, BA1	
CMD5	WE*	
CMD6	AT, A8	
CMD7	AE, A11	
CMD8	AB*	
CMD9	A10, RFU	
CMD10	A0, A10	
CMD11	A1, A9	
CMD12	RA*	
CMD13	RS*	
CMD14	OE*	
CMD15	CA*	
CMD16		CS*
CMD17	A3, BA3	
CMD18	A2, BA2	
CMD19	A4, BA2	
CMD20	A2, BA1	
CMD21	WE*	
CMD22	AT, A8	
CMD23	AE, A11	
CMD24	AB*	
CMD25	A10, RFU	
CMD26	A0, A10	
CMD27	A1, A9	
CMD28	RA*	
CMD29	RS*	
CMD30	OE*	
CMD31	CA*	



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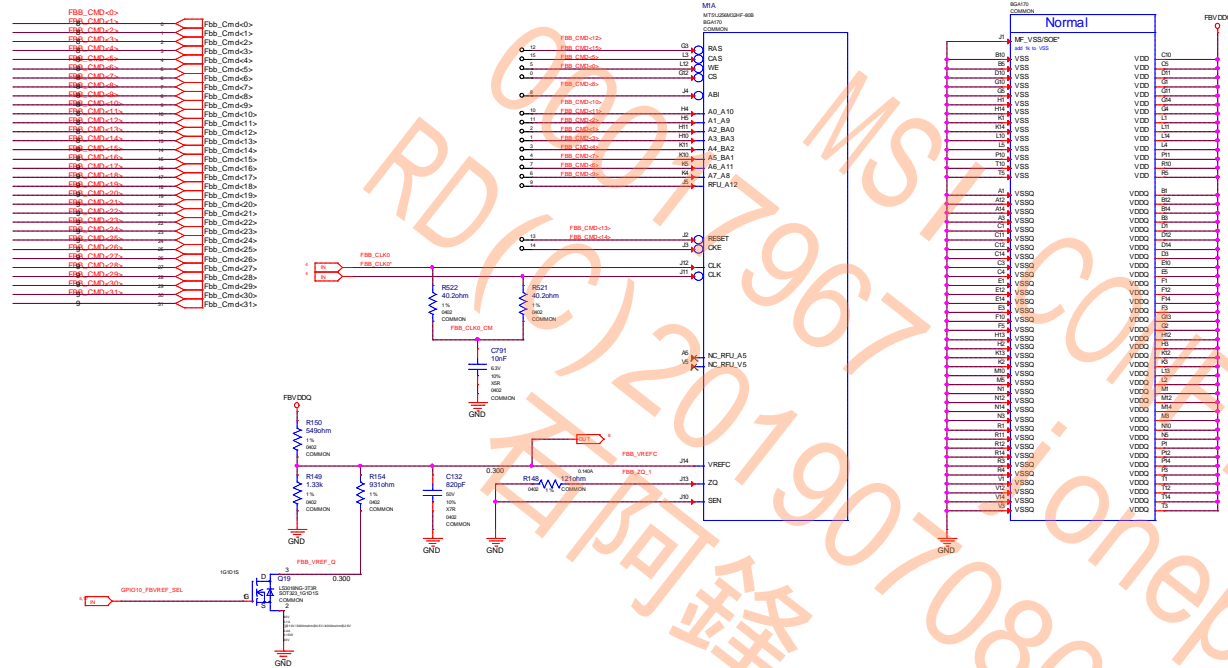
NV\_PN 600-1G174-BASE-A01

PCB REV PD174-A01  
BOM REV A PRGE 6 OF 32  
DATE 10-DEC-2018

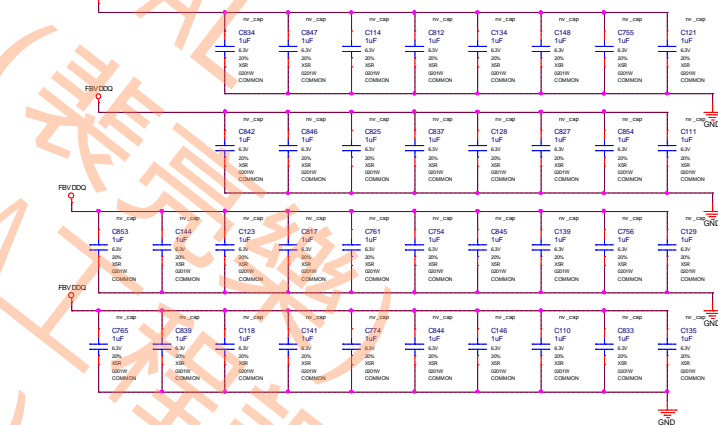
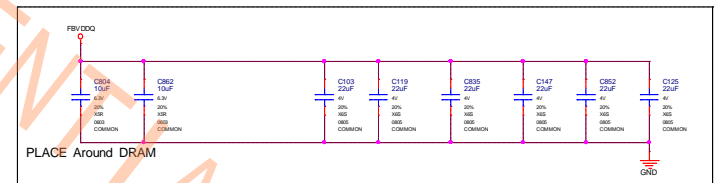
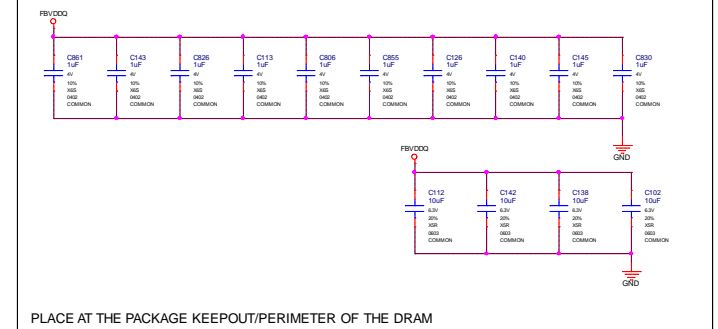
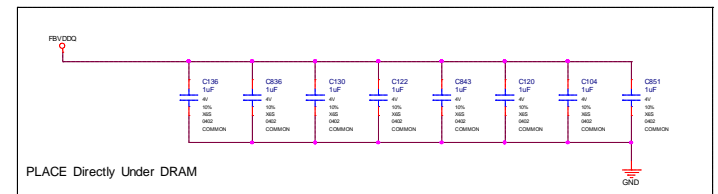
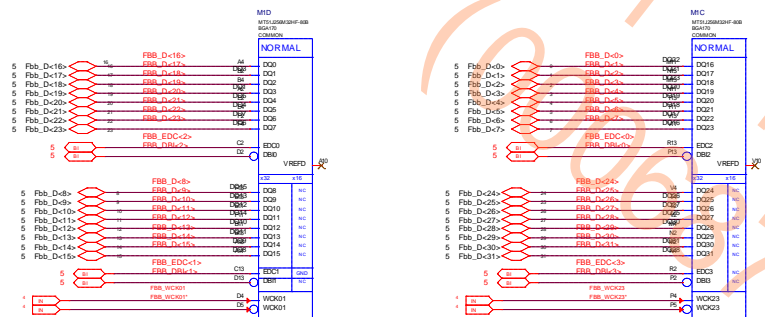
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ASSEMBLY DESCRIPTION  
PAGE DETAIL MEMORY: FBA(63..32)

MEMORY: FBB Partition 31..0



CMD	0..31	32..63
CMD0	CS*	
CMD1	A3..BA3	
CMD2	A2..BA0	
CMD3	A4..BA2	
CMD4	A5..BA1	
CMD5	WE*	
CMD6	A7..A8	
CMD7	AE..A11	
CMD8	ABP	
CMD9	A12..RFU	
CMD10	A0..A10	
CMD11	A1..A0	
CMD12	RA*	
CMD13	RS*	
CMD14	OK*	
CMD15	CAS*	
CMD16		CS*
CMD17		A3..BA3
CMD18		A2..BA0
CMD19		A4..BA2
CMD20		A5..BA1
CMD21		WE*
CMD22		A7..A8
CMD23		AE..A11
CMD24		A12..RFU
CMD25		A0..A10
CMD26		A1..A0
CMD28		RA*
CMD29		RS*
CMD30		OK*
CMD31		CAS*



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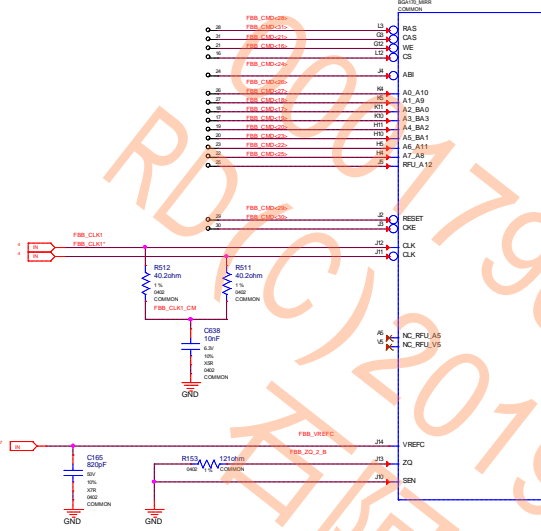
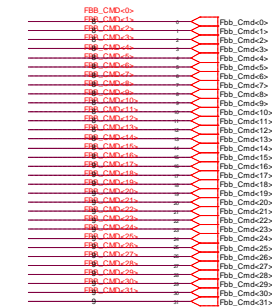


NV_PN	600-1G174-BASE-A01
PCB REV	PG174-A01
BOM REV	A

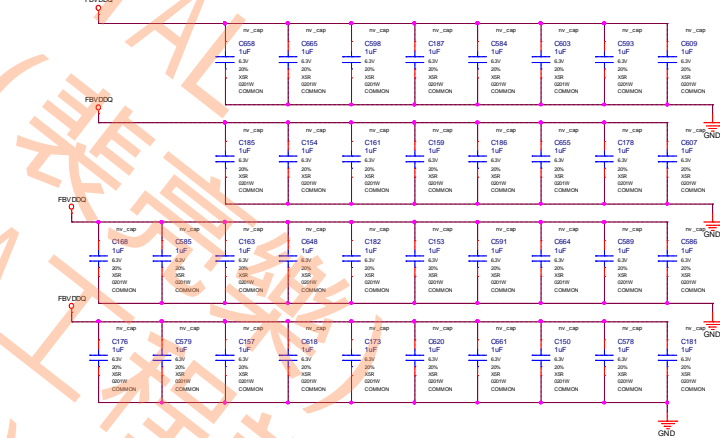
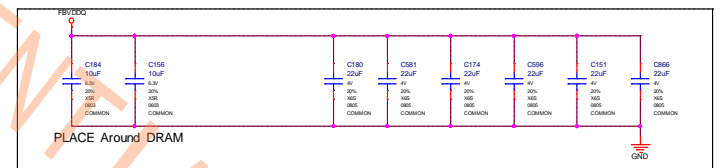
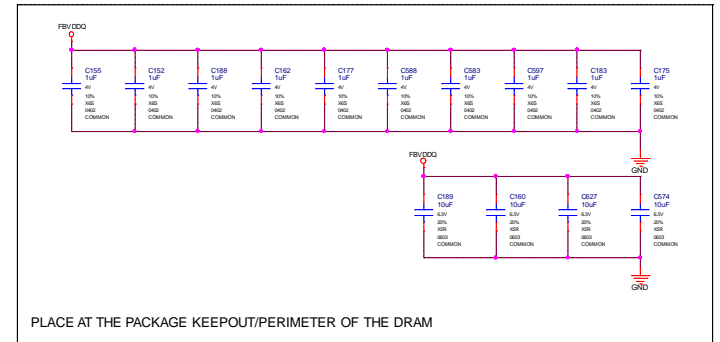
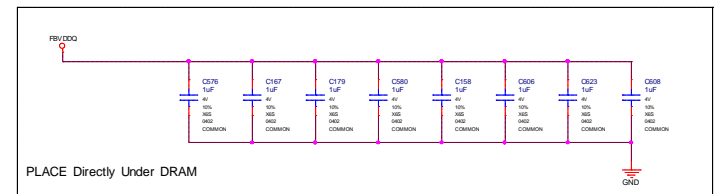
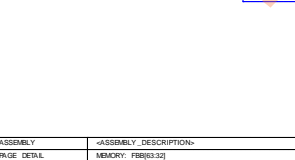
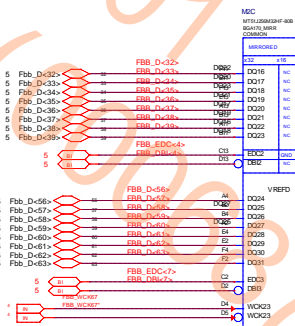
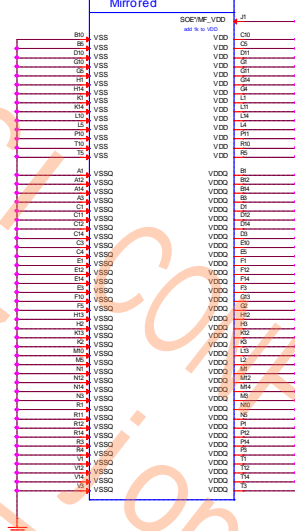
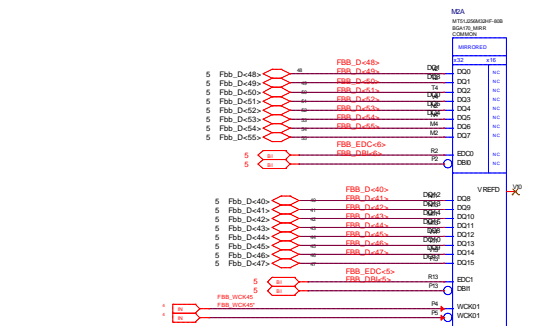
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ASSEMBLY	«ASSEMBLY_DESCRIPTION»
PAGE DETAIL	MEMORY: FBB[31:0]

NV_PN	600-1G174-BASE-A01		
PCB REV	PG174-A01	PAGE	7 OF 32
BOM REV	A	DATE	10-DEC-2018



CMD	0..31	32..63
CMD0	CS*	
CMD1	A3, BA3	
CMD2	A4, BA4	
CMD3	A4, BA4	
CMD4	A7, BA7	
CMD5	WE*	
CMD6	A7, A8	
CMD7	A7, A8	
CMD8	AB*	
CMD9	A12, RPU	
CMD10	A2, A10	
CMD11	A1, A9	
CMD12	RAS*	
CMD13	RS*	
CMD14	CAS*	
CMD15	CAS*	
CMD16		
CMD17	A3, BA3	
CMD18	A4, BA4	
CMD19	A4, BA4	
CMD20	A7, BA7	
CMD21	WE*	
CMD22	A7, A8	
CMD23	A7, A8	
CMD24	AB*	
CMD25	A12, RPU	
CMD26	A2, A10	
CMD27	A1, A9	
CMD28	RAS*	
CMD29	RS*	
CMD30	CAS*	
CMD31	CAS*	



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BOM REV A

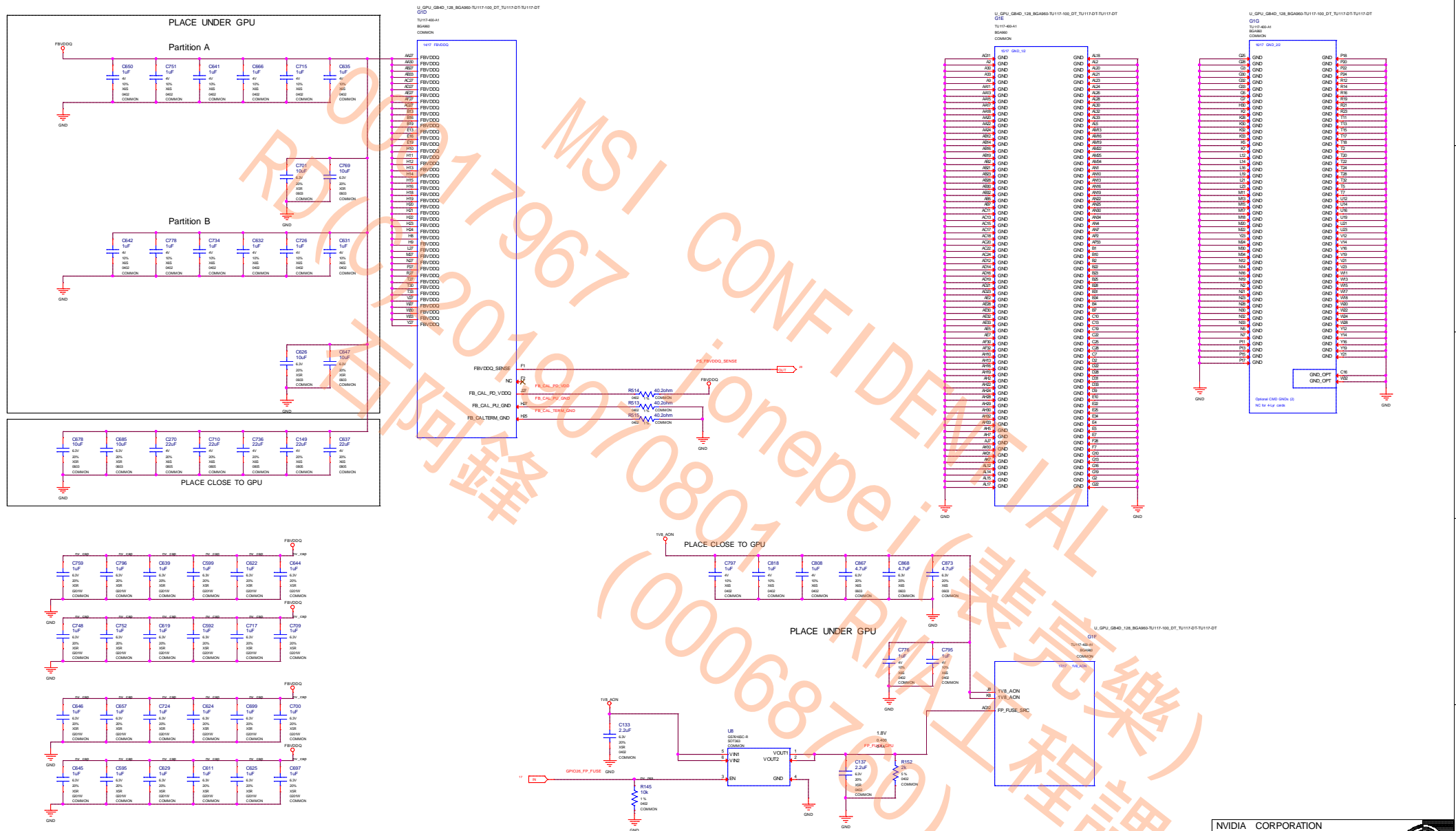
DATE 10-DEC-2018

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ASSEMBLY: <ASSEMBLY\_DESCRIPTION>  
PAGE DETAIL: MEMORY: FBB(63..32)



## GPU FBVDDQ & 1V8 Decoupling



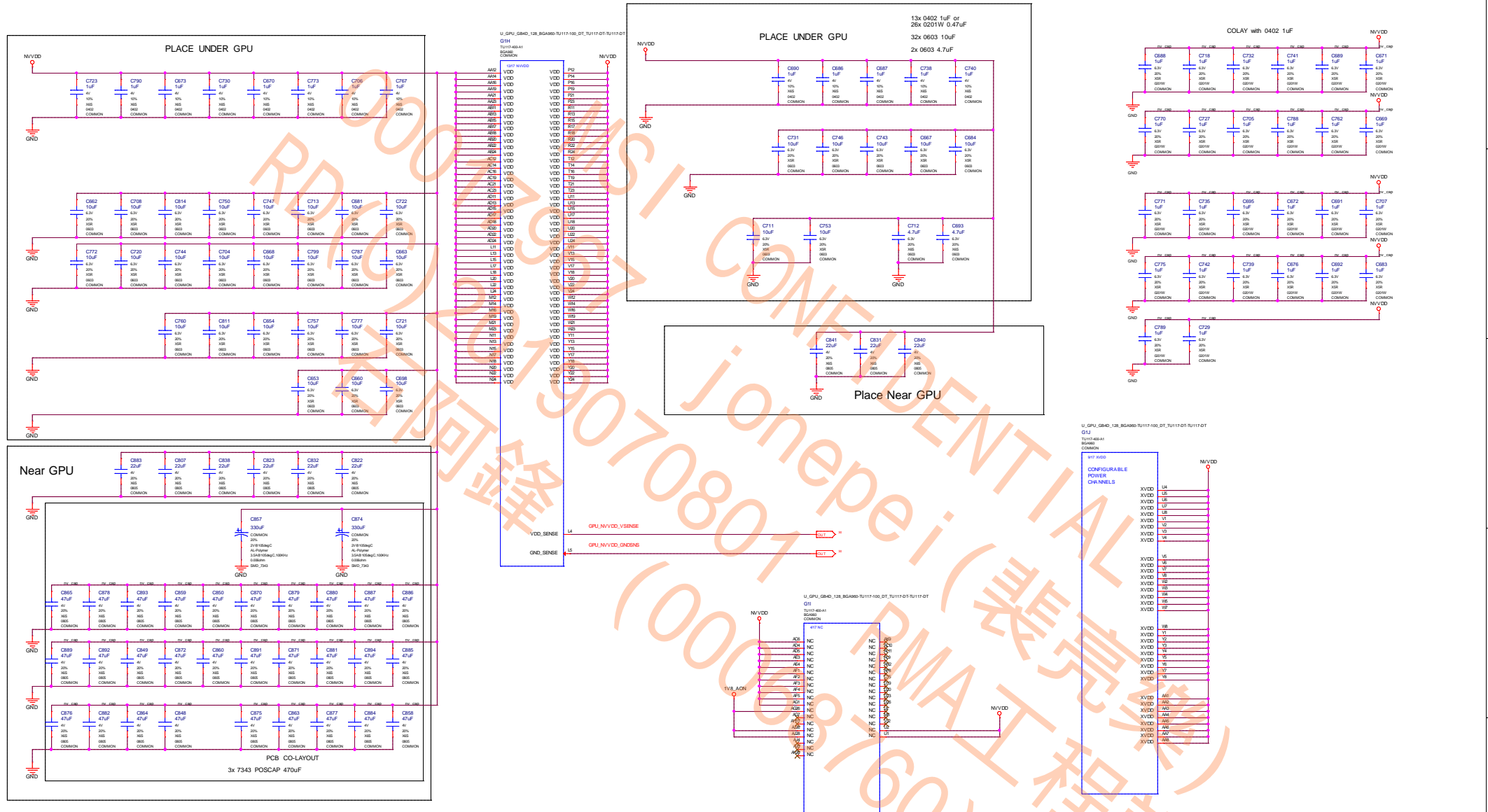
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PCB REV	PG174-AD
BOM REV	A

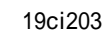
## GPU NVVDD Decoupling



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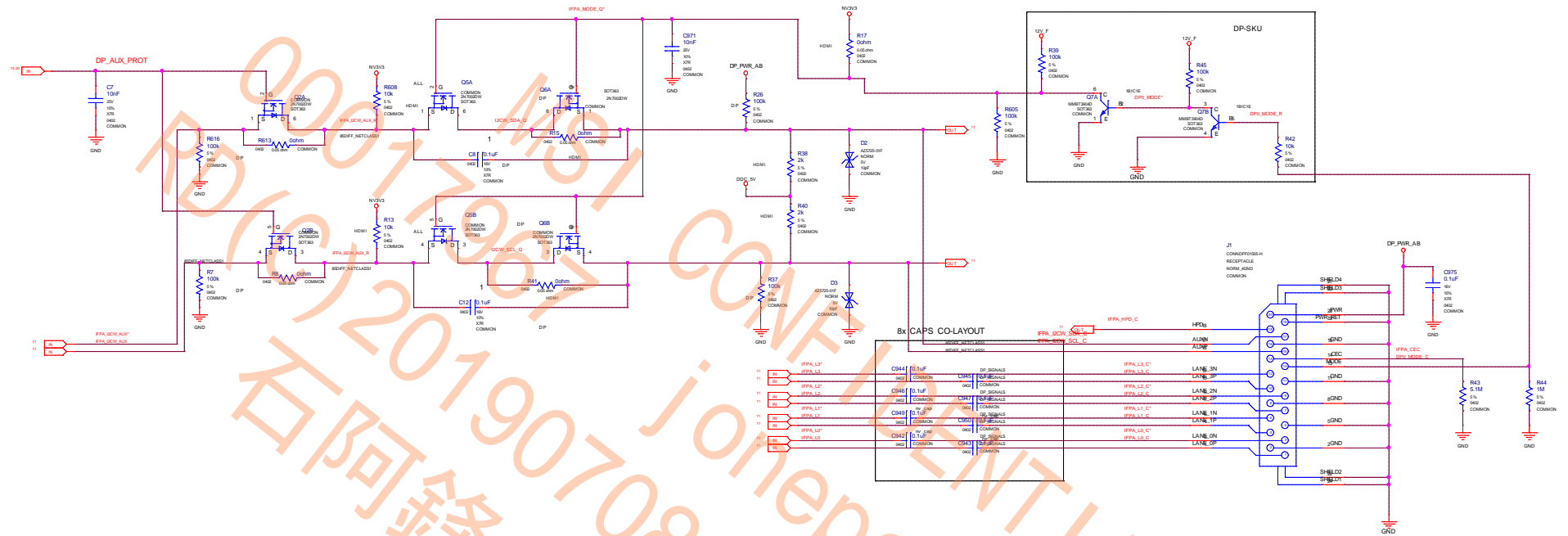
ASSEMBLY	«ASSEMBLY_DESCRIPTION
PAGE DETAIL	GPU NVVDD DECOUPLING

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POB REV	PG174-A01	PAGE	10 OF 32
BOM REV	A	DATE	10-DEC-2018



NV_PN	600-1G174-BASE-A01		
PCB REV	P6174-A01	PAGE	11 OF 3
BOM REV	A	DATE	10-DEC-2018

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# IFPA DP CO-LAYOUT WITH IFPAB DVI-D-DL

ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	FPA DP

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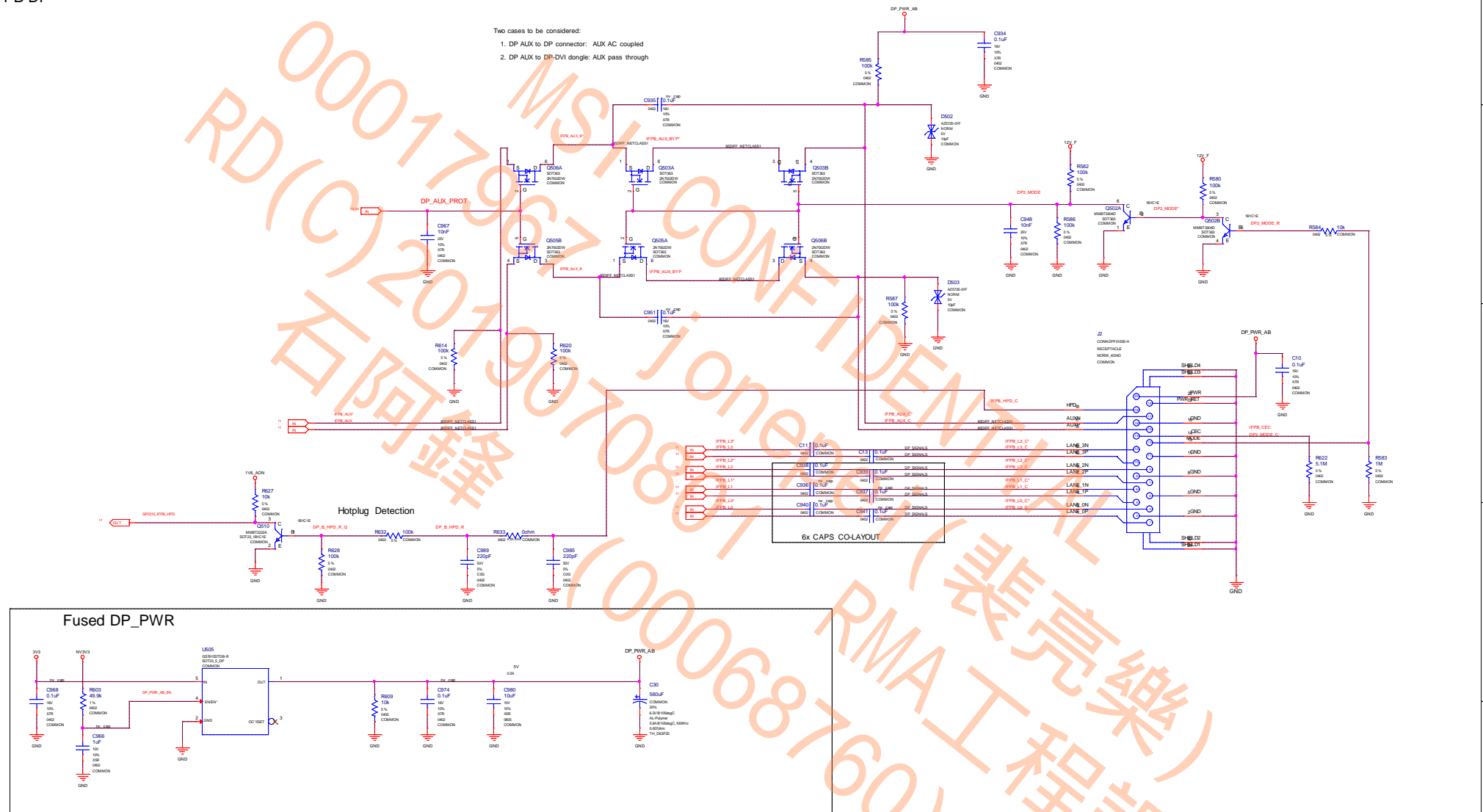
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POB REV	PG174-A01	PAGE	12 OF 32
BOM REV	A	DATE	10-DEC-2018

BOM REV	A	DATE	10-DEC-2018
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# IFPB DP CO-LAYOUT WITH IFPAB DVI-D-DL

Page13: IFPB DP



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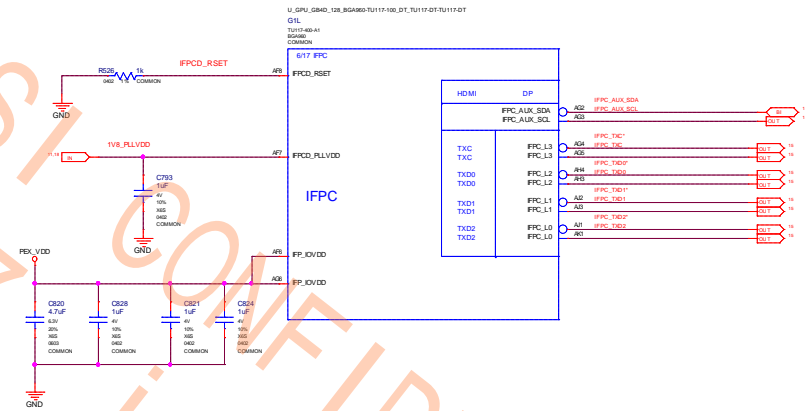


NV_PN	600-1G174-BASE-A01
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POB REV	PG174-A01	PAGE	13 OF 32
BOM REV	A	DATE	10-DEC-2018


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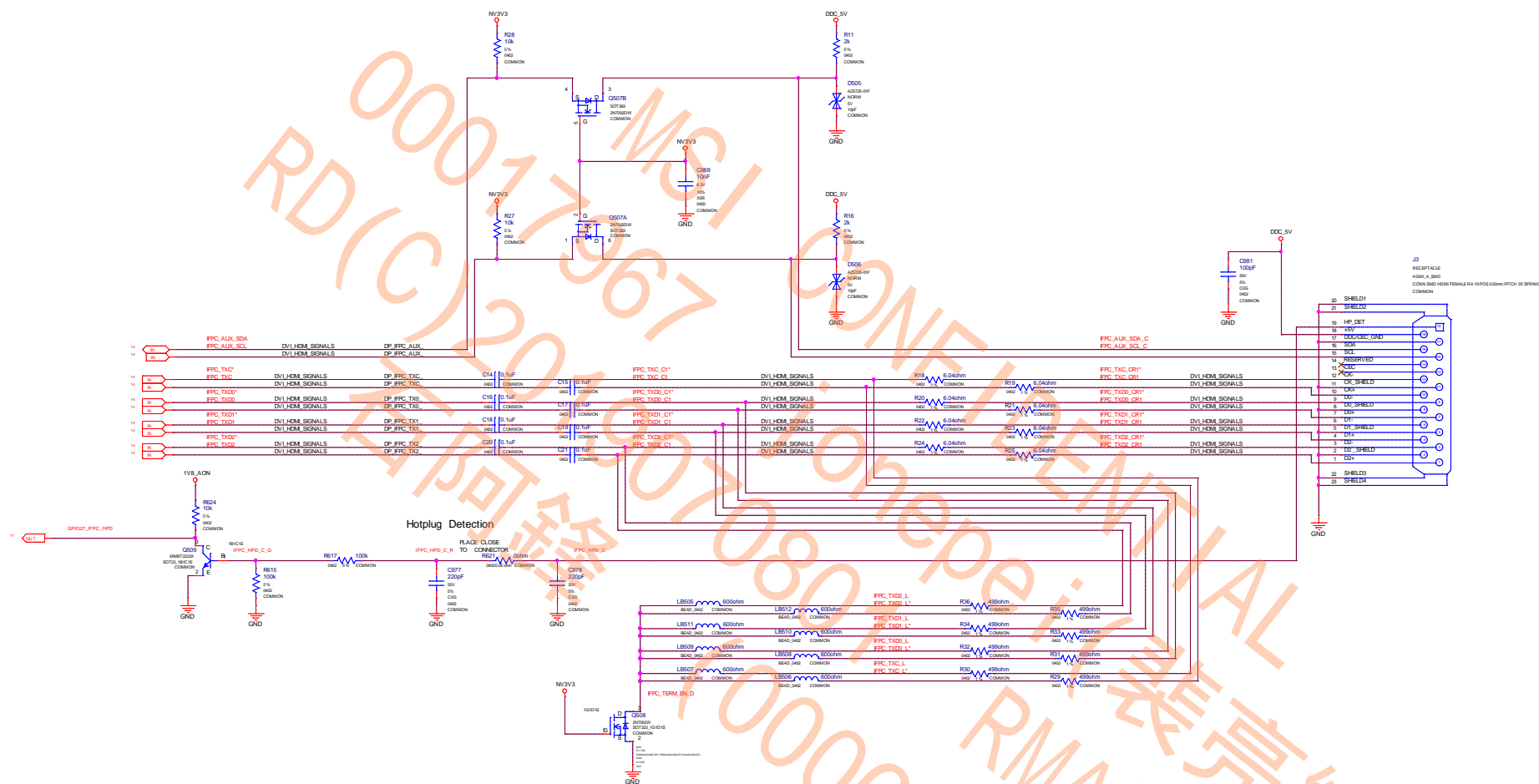
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NV_PN		601-1G174-BASE-A01		
PCB REV	PG174-A01	PAGE	14 OF 32	
BOM REV	A	DATE	10-DEC-2018	



## IFPC HDMI



19ci203

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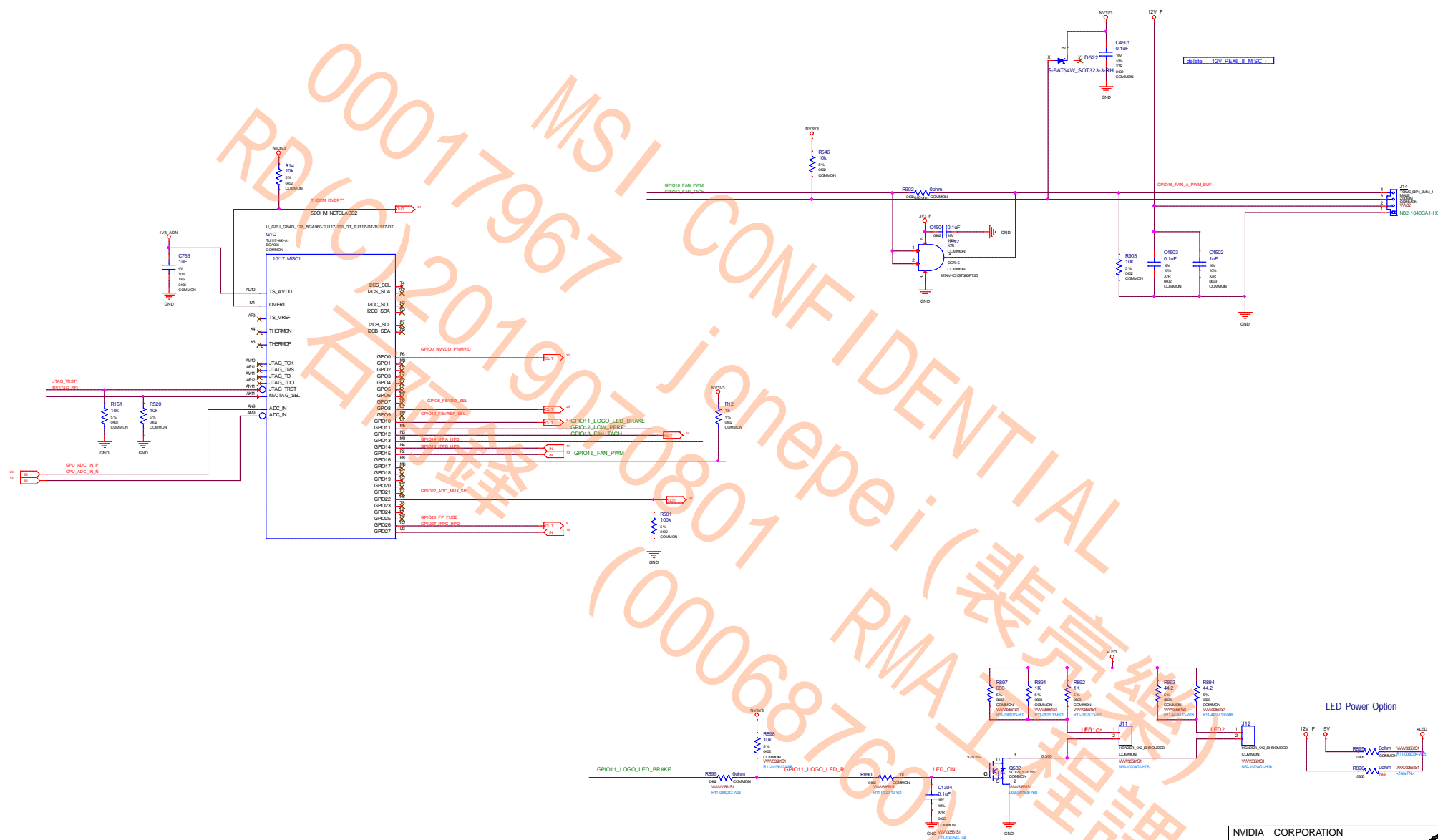
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NV_PN	600-1G174-BASE-A01		
PCB REV	PG174-A01	PAGE	15 OF 32
BOM REV	A	DATE	10-DEC-2018

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MISC1: GPIO, Fan, Thermal, JTAG



ASSEMBLY	«ASSEMBLY_DESCRIPTION»
PAGE DETAIL	MISC1: Fan, Thermal, JTAG, GPIO

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NV_PN	600-1G174-BASE-A01
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PCB REV	PG174-A0
BOM REV	A

PAGE	17 OF 32
DATE	10-DEC-2018



17 OF 32  
10-DEC-2018

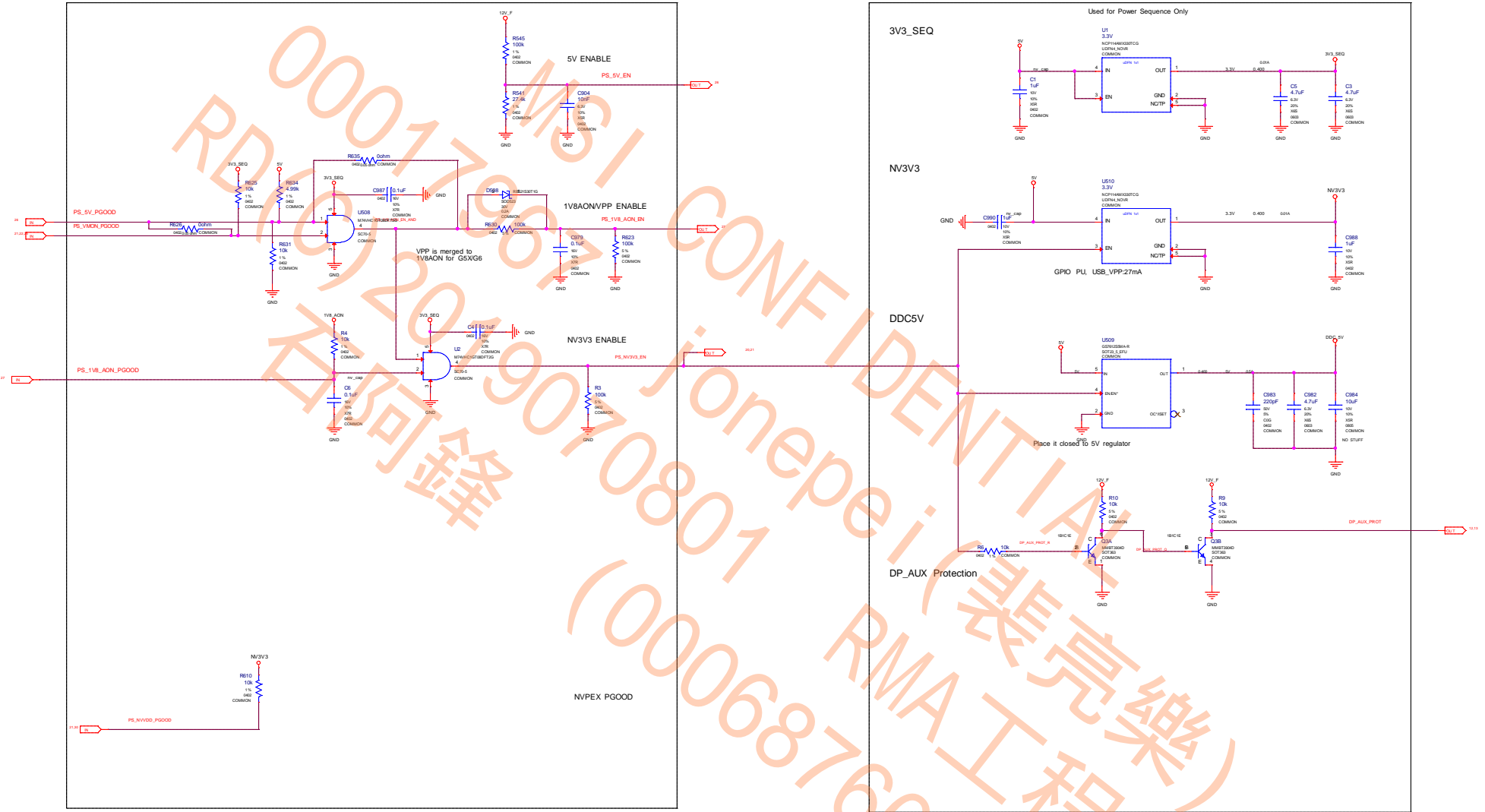
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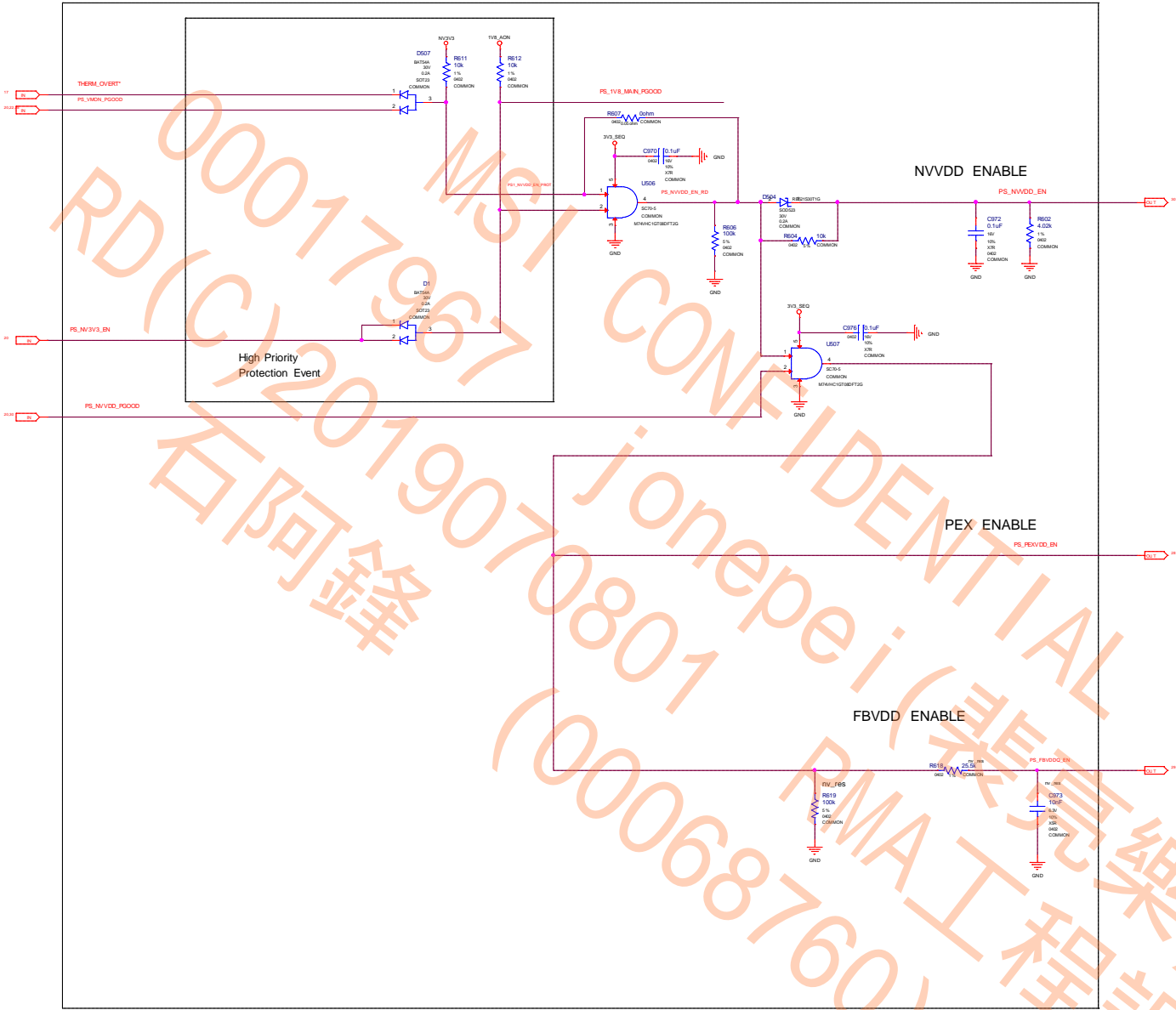


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PCB REV	PG174-A01
DATE	10-DEC-2018
PCB REV	A
DATE	10-DEC-2018



SEQ:NV,PEX,FB ENABLE



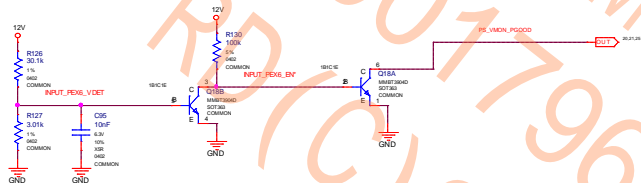
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NV_PN		600-1G174-BASE-A01	
PCB REV	PG174-A01	PRGE	21 OF 32
BCM REV	A	DATE	10-DEC-2018

SEQUENCE:Voltage Monitor



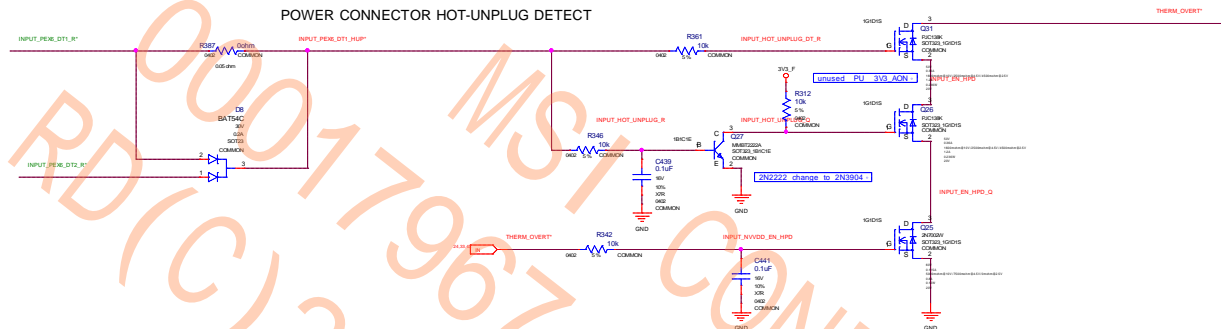
ASSEMBLY	ASSEMBLY DESCRIPTION
PCB DETAIL	SEQ VOLTAGE MONITOR

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PCB REV	PG174-A01	PRGE	22 OF 32
BOM REV	A	DATE	10-DEC-2018

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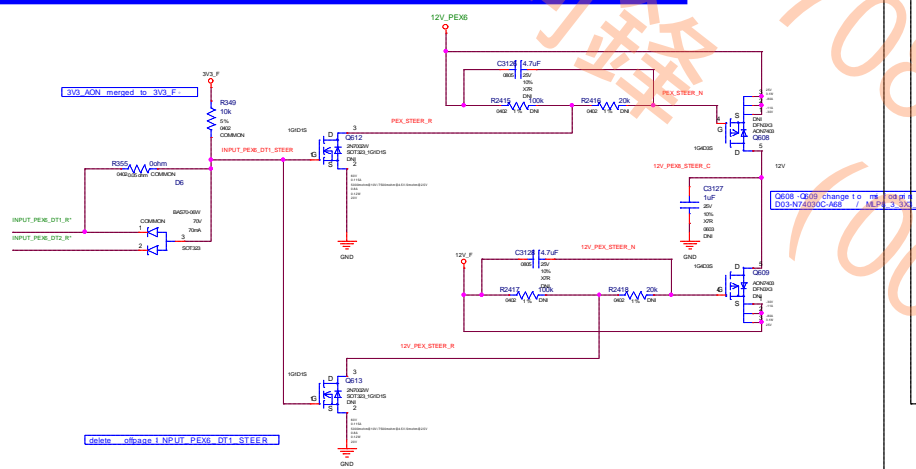
## POWER CONNECTOR HOT-UNPLUG DETECT



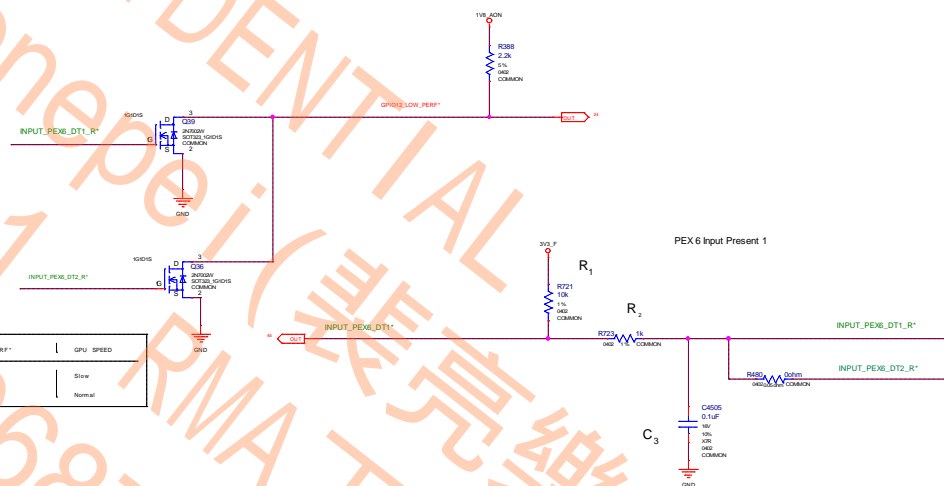
12V CURRENT STEERING (UNDER POWER BOOT):

GUIDES CURRENT FROM PEX EDGE TO PEX 6 PIN INPUT AREA

copied 12V CURRENT STEERING from V373-2.0 and BOM stuffed



## PEX Input - Power Level/PSI\* Control



ASSEMBLY	<ASSEMBLY_DESCRIPTION>
PAGE DETAIL	SEQ: DISCHARGE

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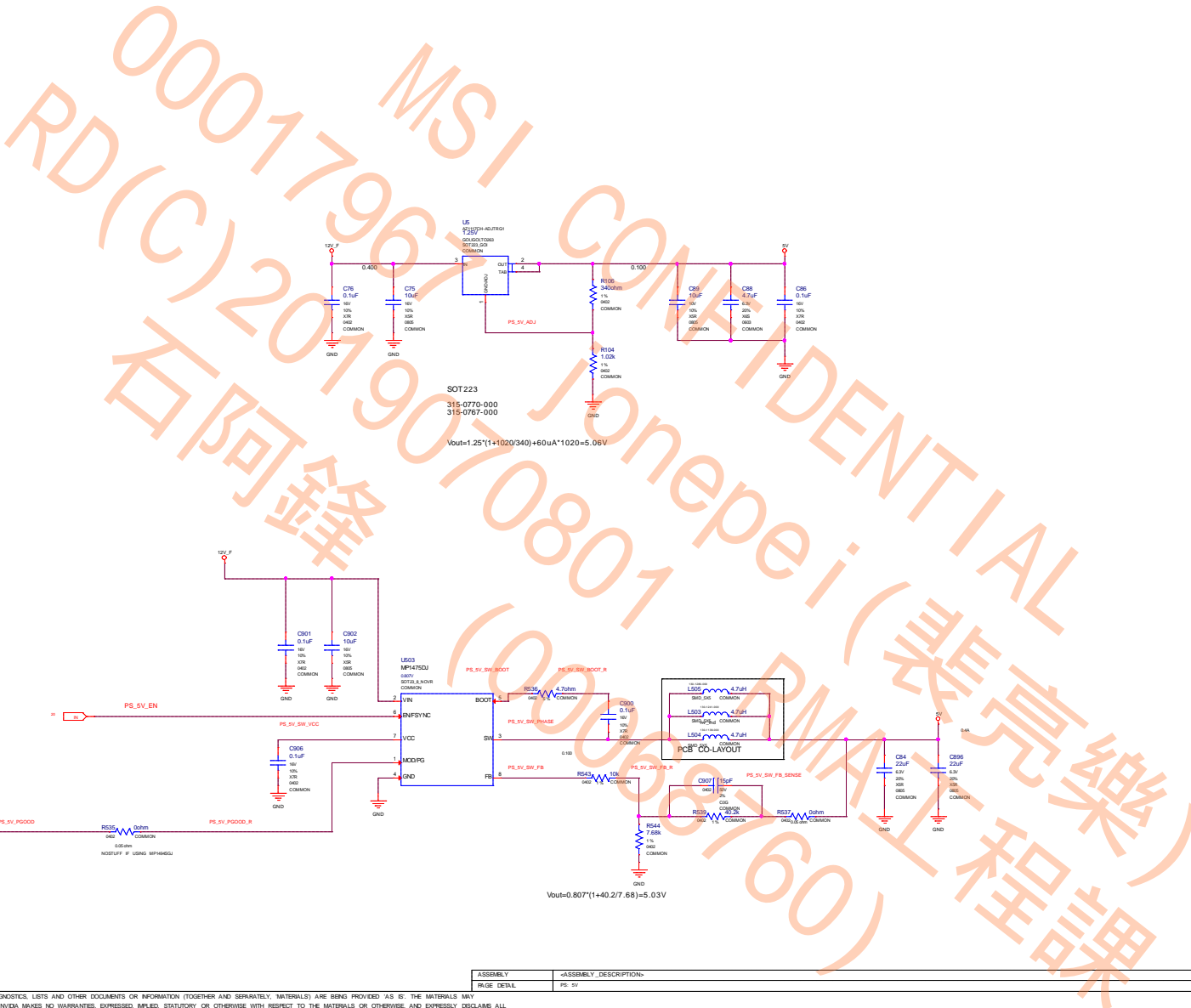
NV_PN	600-1G174-BASE-A01		
PCB REV	PG174-A01	PAGE	23 OF 3
ROM REV	A	DATE	10-DEC-2018

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MAY  
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STANDARDS.

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NV_PN	600-1G
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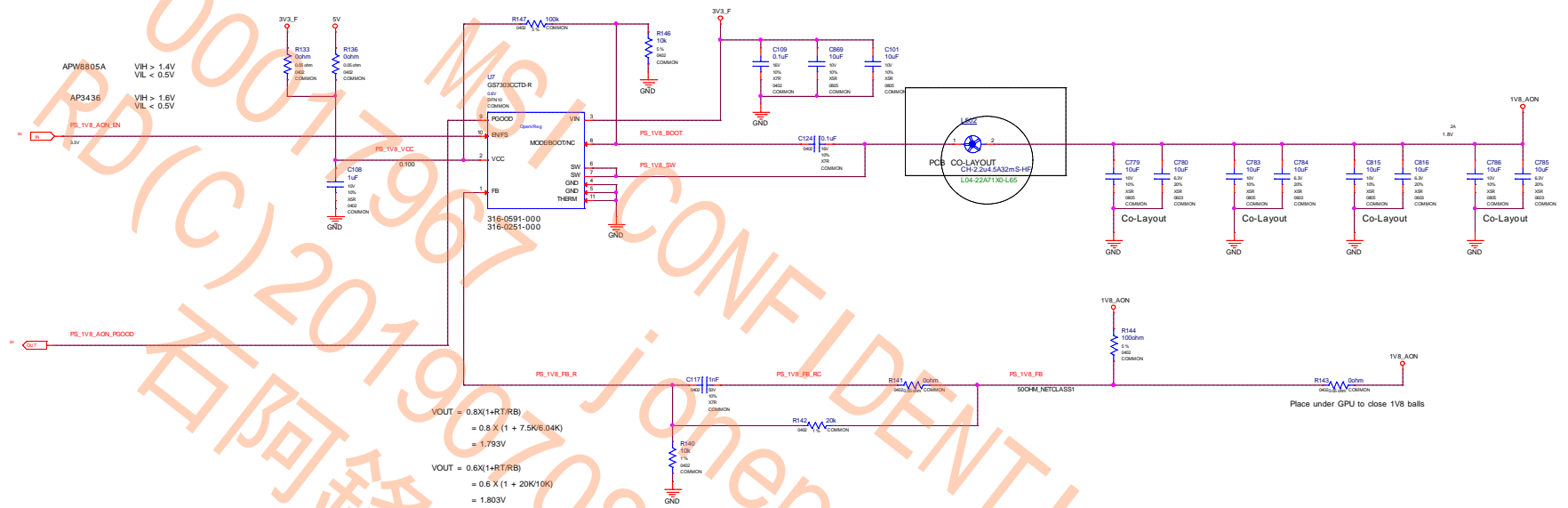


PCB REV	PG174-A01
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H

PS: 1V8


$$\begin{aligned} V_{OUT} &= 0.8X(1+R_T/R_B) \\ &= 0.8 \times (1 + 7.5K/6.04K) \\ &= 1.793V \end{aligned}$$
$$\begin{aligned} V_{OUT} &= 0.6X(1+R_T/R_B) \\ &= 0.6 \times (1 + 20K/10K) \\ &= 1.803V \end{aligned}$$
$$\begin{aligned} V_{OUT} &= 0.6X(1+R_T/R_B) \\ &= 0.6 \times (1 + 20K/10K) \\ &= 1.803V \end{aligned}$$

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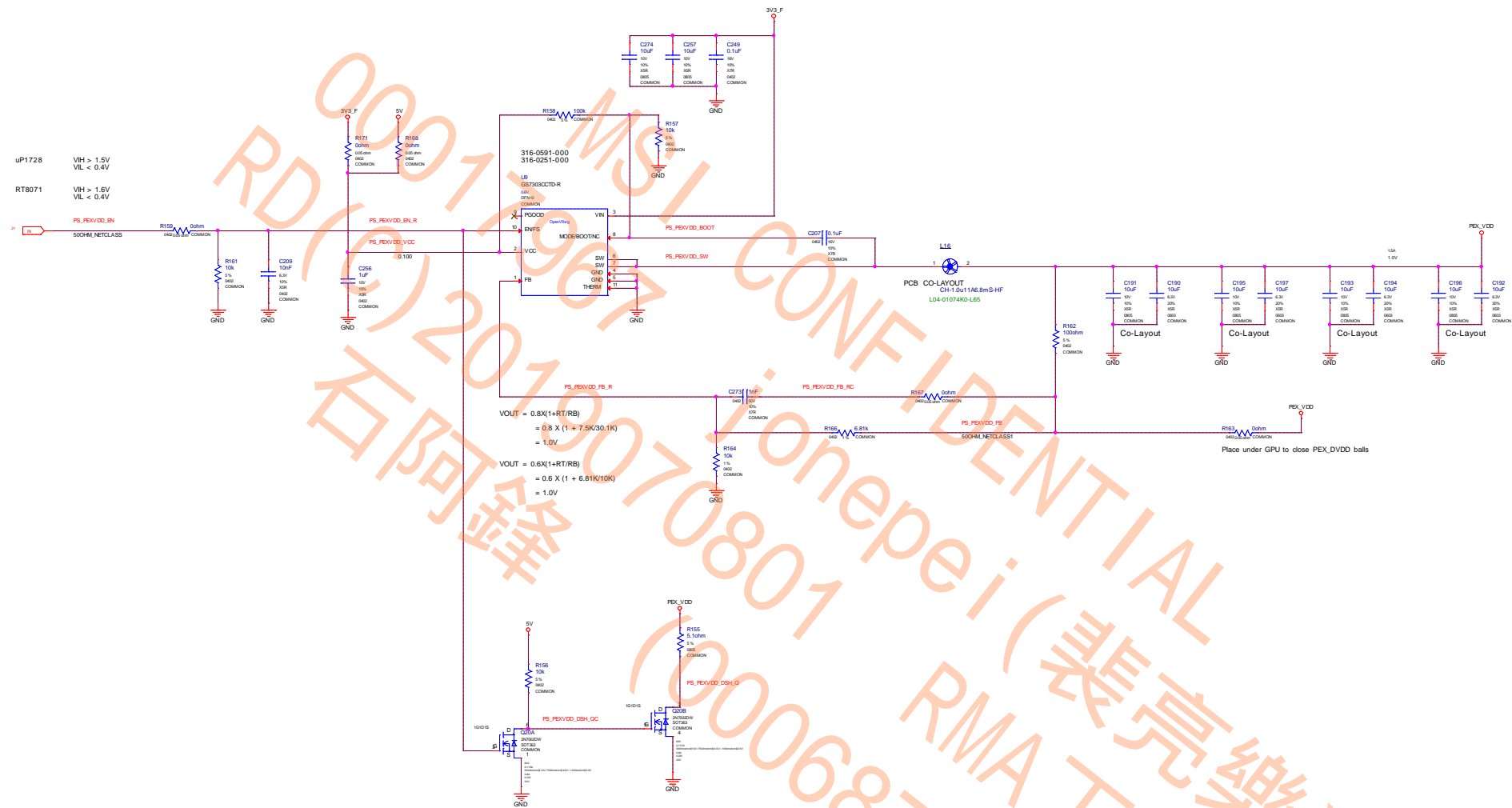
NV_PN	600-1G174-BASE-A01
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PCB REV	PG174-A01	PAGE	27 OF 32
BOM REV	A	DATE	10-DEC-2018

BOM REV	A	DATE	10-DEC-2018
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## PS: PEXVDD



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ASSEMBLY	«ASSEMBLY_DESCRIPTION
PAGE DETAIL	PS: PEXVDD

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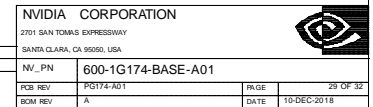
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NV_PN	600-1G174-BASE-A01
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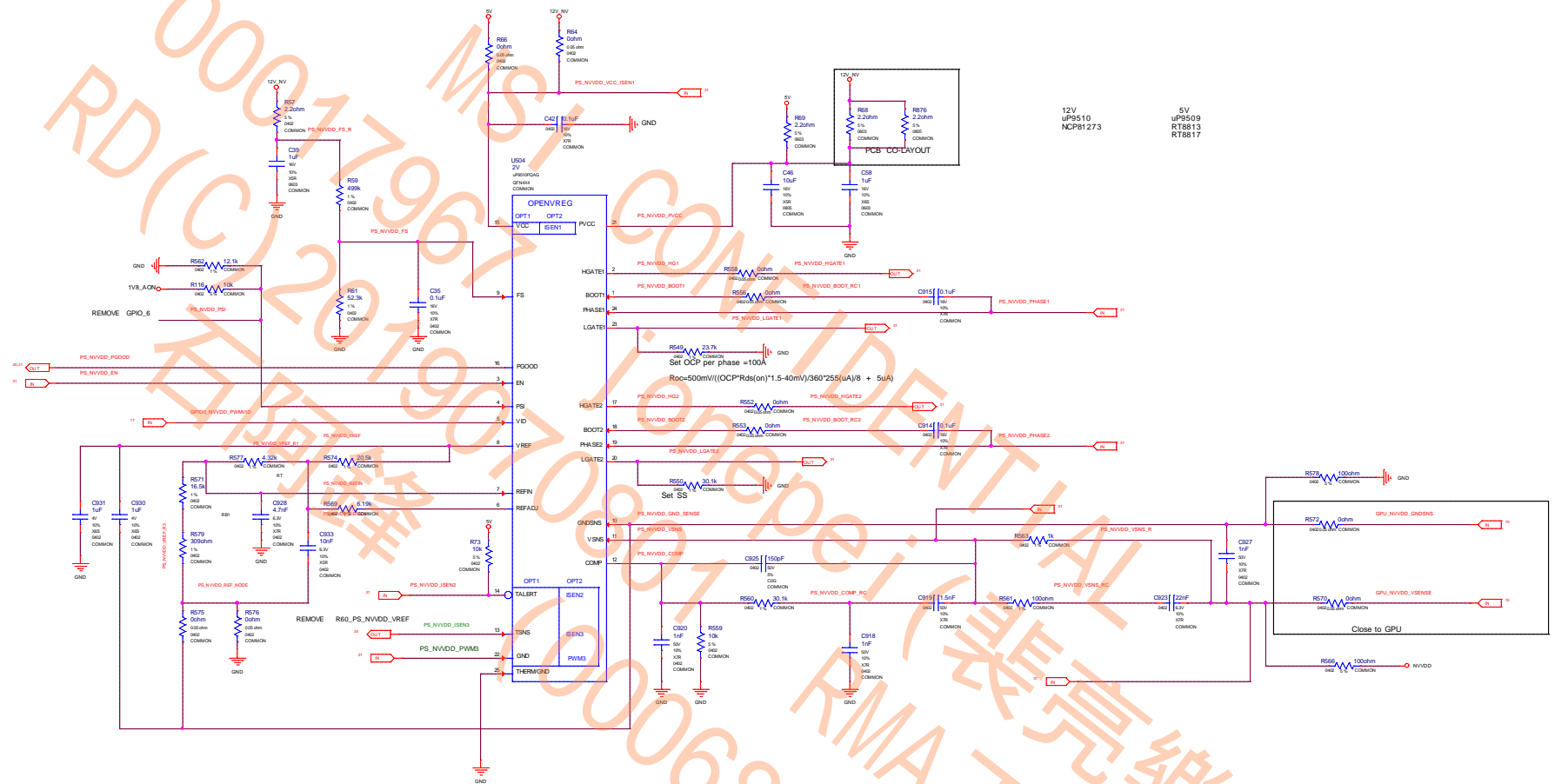
POB REV	PG174-A01	PAGE	28 OF 32
BOM REV	A	DATE	10-DEC-2018





## PS: NVVDD OVR2+1

NCP81273	EN VIH > 1.5V, VIL < 0.7V
UP9509/10	EN VIH > 1.2V, VIL < 0.6V
RT8817A	EN VIH > 1.2V, VIL < 0.6V



NVPN	Name	PVCC(21)	VCC(15)
316-0478-000	NCP81273	12v	LDO_OUT
316-0476-000	up9510	12v	ISENSE
316-0484-000	RT8817A	5v	NC

--Default  
--2nd source

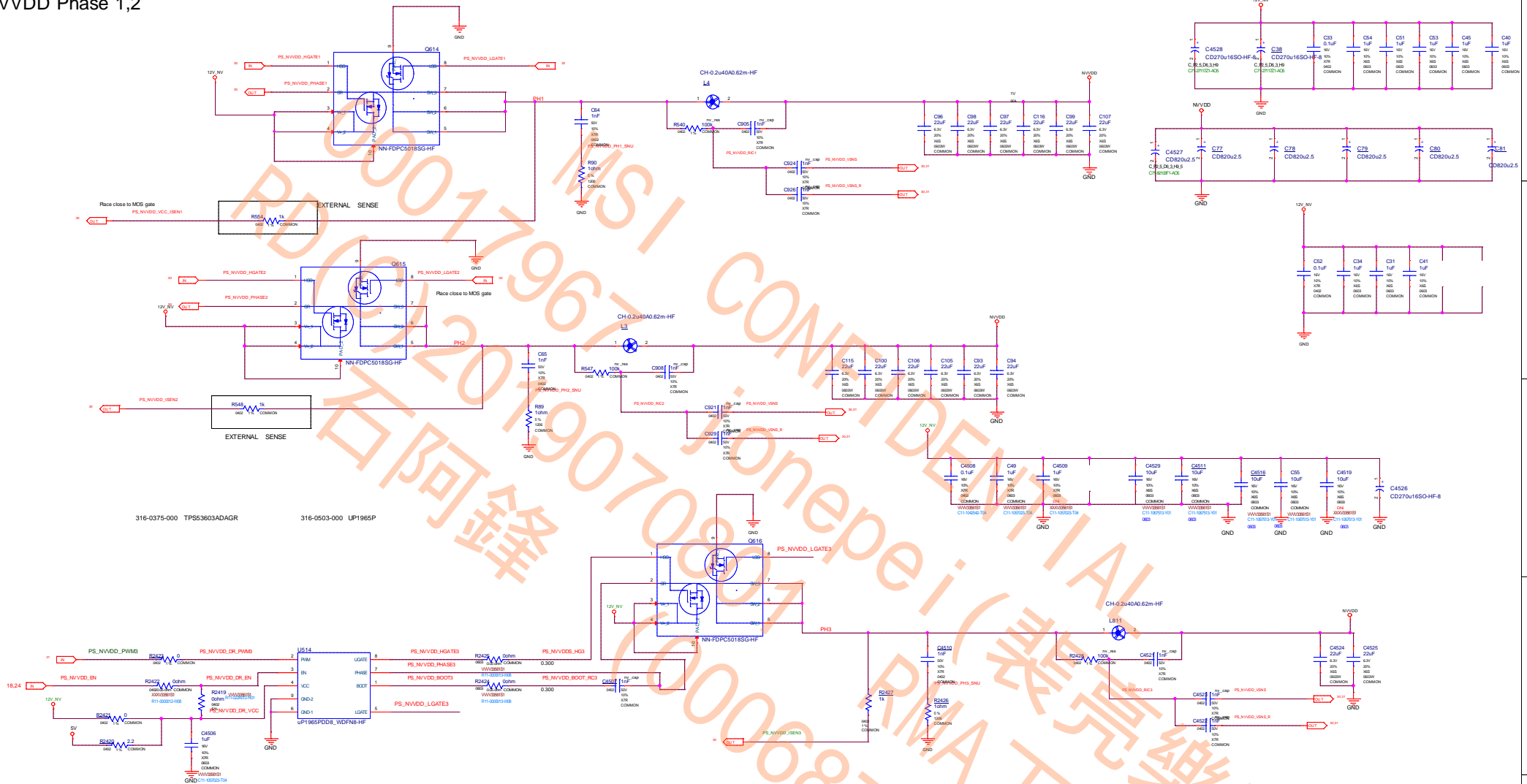
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RULE DETAIL	RS: INVDD OVHD1	600-1G174-BASE-A01	
ENVY		PCB REV	PG174-201
ENCLAME ALL		DATE	10-DEC-2018
Y. STANDARDS			

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NV_PN	600-1G174-BASE-A01		
PCB REV	PG174-A01	PAGE	30 OF 32
BOM REV	A	DATE	10-DEC-2018

PS: NVVDD Phase 1,2



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NV_PN	600-1G174-BASE-A01
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POB REV	PG174-A01
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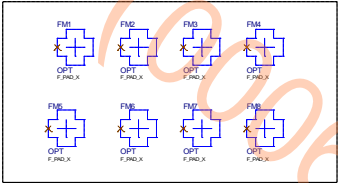
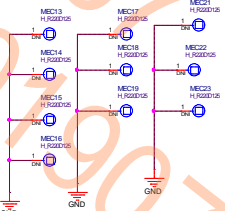
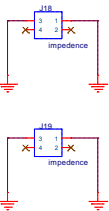
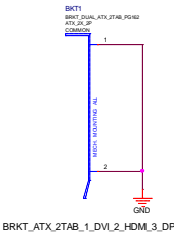
PAGE	31 OF 32
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DATE	10-DEC-2018
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Mechanical: Bracket/Thermal Solution

Brackets:



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NV_PN	600-1G174-BASE-A01		
PCB REV	PG174-A01	PRGE	32 OF 32
BOM REV	A	DATE	10-DEC-2018