ROG-STRIX-RTX2060S-8G-EVO-V2-GAMING (CG180PL)   Repair Guide
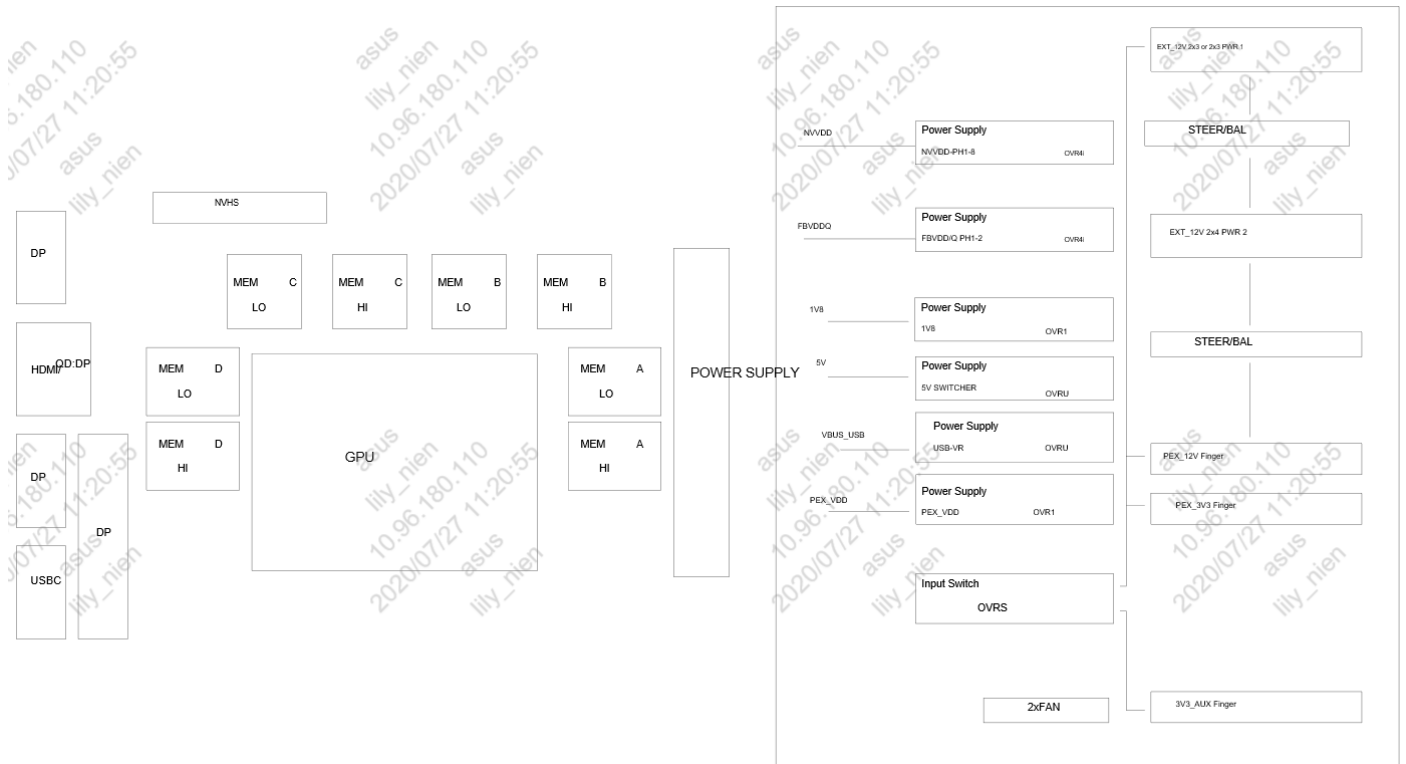
Model List

Model name	60PN	GPU	Date
ROG-STRIX-RTX2060S-8G-EVO-V2-GAMING	YV0DQ5	CG180PL	2020/7/27

STANDARD APPEARANCE

ROG-STRIX-RTX2060S-8G-EVO-V2-GAMING

BLOCK DIAGRAM
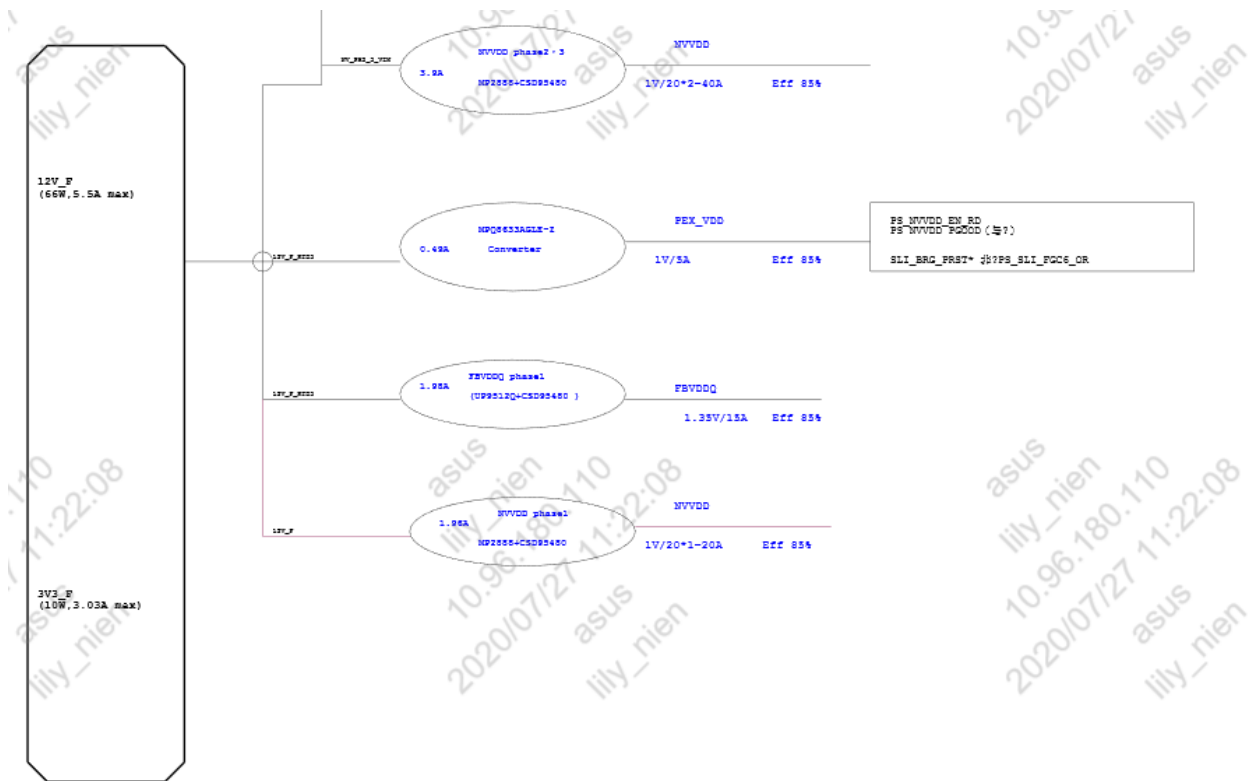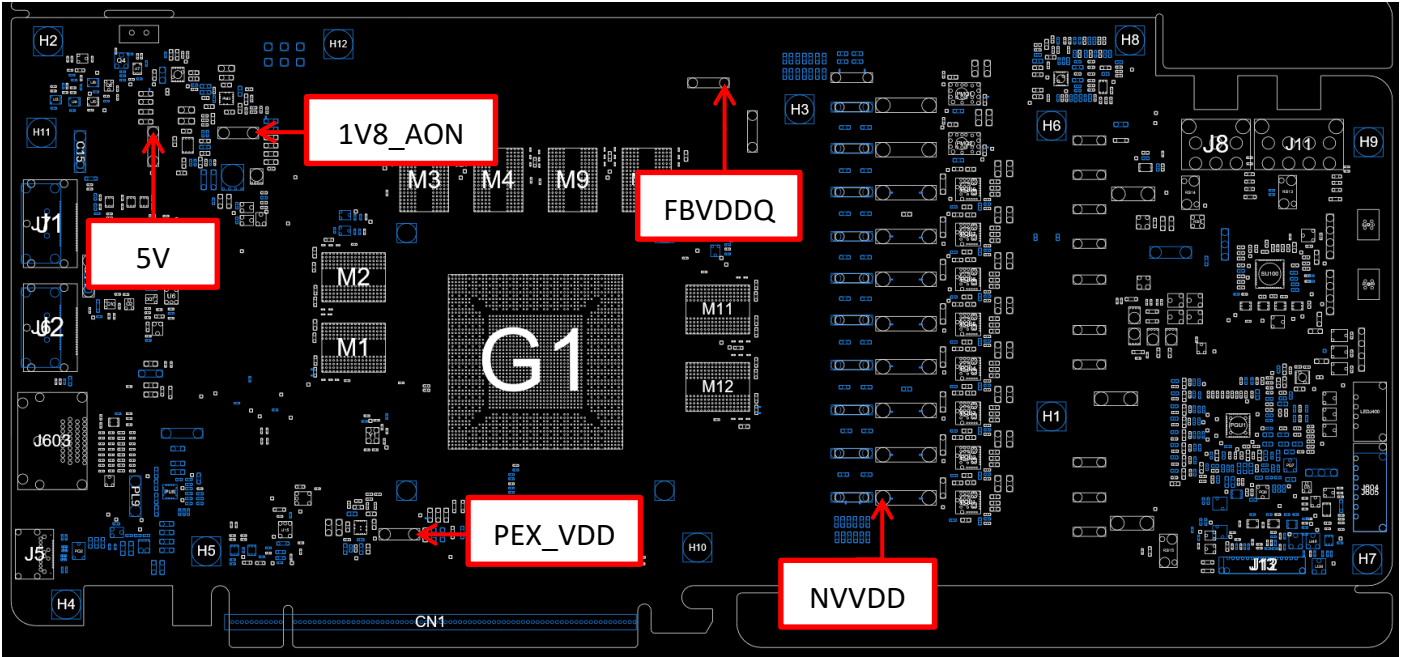
NVHS

DP

HDMI/DD:DP

DP

DP

USBC

MEM C LO
MEM C HI
MEM B LO
MEM B HI

MEM D LO
MEM D HI

GPU

MEM A LO
MEM A HI

POWER SUPPLY

Power Supply	
NVVDD-PH1-8	OVR4i

NVVDD

Power Supply	
FBVDD/Q PH1-2	OVR4i

FBVDDQ

Power Supply	
1V8	OVR1

1V8

Power Supply	
5V SWITCHER	OVRU

5V

Power Supply	
USB-VR	OVRU

VBUS_USB

Power Supply	
PEX_VDD	OVR1

PEX_VDD

Input Switch	
OVRS	

2xFAN

EXT_12V 2x3 or 2x3 PWR 1

STEER/BAL

EXT_12V 2x4 PWR 2

STEER/BAL

PEX_ 12V Finger

PEX_3V3 Finger

3V3_AUX Finger

POWER FLOW

12V_PEX8_F2
(150W,12.5A max)

12V_PEX6_8_F1
(75W,6.25A max)

FBVDDQ phase2
(UP9512Q+CSD95450)
1.9A
FBVDDQ
1.35V/15A   Eff 85%

NVVDD phase7-8
3.9A
MP2888+CSD95480
NVVDD
1V/20*2-40A   Eff 85%

NVVDD phase5-6
3.9A
MP2888+CSD95450
NVVDD
1V/20*2-40A   Eff 85%

NVVDD phase4
1.9A
MP2888+CSD95450
NVVDD
1V/20*1-20A   Eff 85%

35W(2.91A)   MP8855
Buck-Boost Converter
USBC_VOUT
5V/9V/12V   Eff 85%

MPQ8633AGLE-Z
Converter
1.4A
1V8_AON
1.8V/8A   Eff 85%

MPQ28186
Buck-Boost Converter
1.4A
5V
Eff 85%

PS_FBVDD_BUFF_R control refin discharge

GPIO1_GC6_FB_EN 要?
PS_NVVDD_PGOOD_AND

THERM_OVERT*
PS_NV3V3_EN (diode)   要?
PS_VMON_PGOOD
GPIO4_GC6_1V8_MAIN_EN (diode)

VBUS FET EN
(PD controller out)

PJC138K
EMF20B02V*2
F-MOS
12v/3a   USBC_VBUS

USB_DSCH_CTL
(PD controller out)
DISCHARGE
AO3414

VBUS_PWR_EN
(PD controller out)

PS_5V_PGOOD
PS_VMON_PGOOD (要?)

GPIO1_GC6_FB_EN

GPIO26_FP_FUSE
GS7615STDB-R   FP_FUSE_GPU

PJC138K
AON7534
1V8_MAIN

GPIO4_GC6_1V8_MAIN_EN
PS_SLT_PG26_OR (要?)

PS_NV3V3_EN
GS7612SMA-R   DDC_5V

APL3552ABI-TRG   5V_VCONN

PS_5V_PGOOD
GS7155NVTD-R   3V3_SBQ

PS_NV3V3_EN
NCP114AMX330TCG   NV3V3

VOLTAGE MEASURE POINT

BGA REFLOW PROFILE

Setpoints (Celsius)										
Zone	1	2	3	4	5	6	7	8	9	10
Top	100	125	150	170	190	215	235	250	255	200
Bottom	100	125	150	170	190	215	235	250	255	200
Conveyor Speed (inch/min):	26.00									
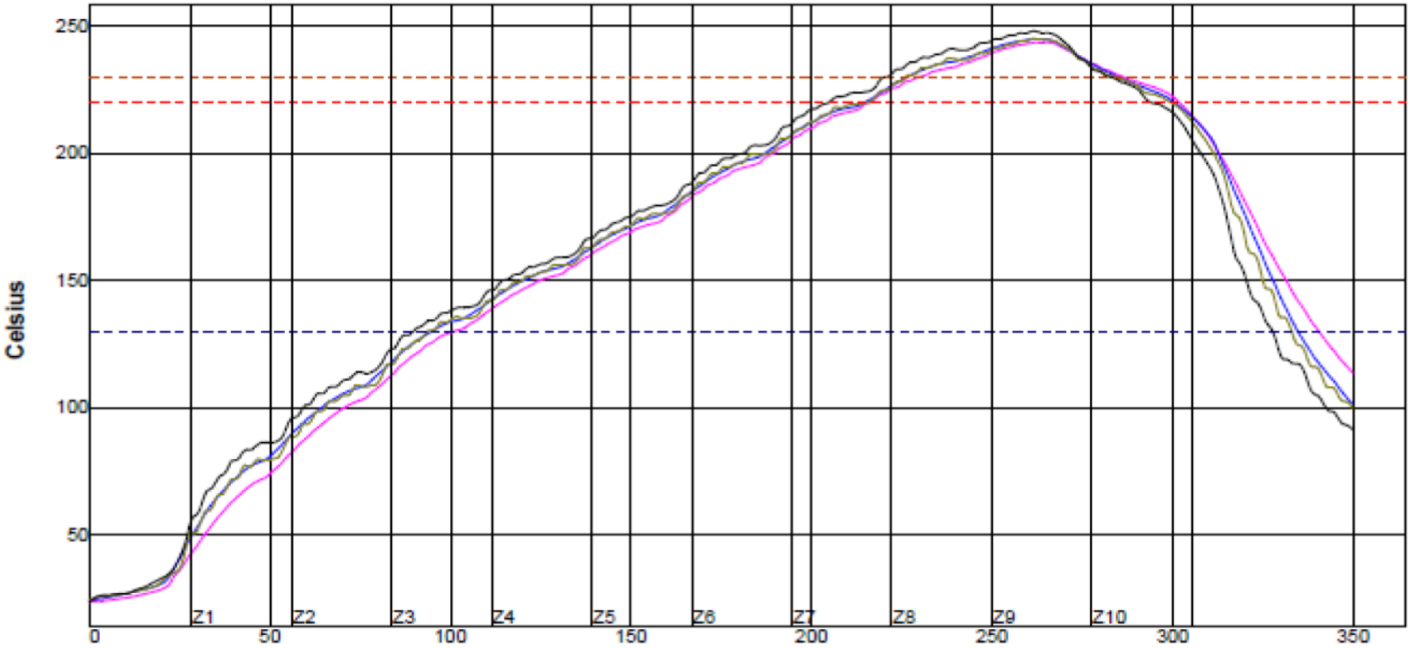
PWI= 95%	Max Rising Slope		Max Falling Slope		Preheat 130-220C		Reflow Time /220C		Peak Temp		Tot Time /230C	
U4 CEN - 1	1.80	-28%	-2.69	16%	115.35	71%	85.97	84%	243.84	38%	57.36	43%
M2 - 1	2.07	-17%	-3.26	-13%	120.00	78%	85.84	83%	245.06	51%	58.78	47%
J7 - 2	2.15	-14%	-3.41	-21%	121.51	80%	84.73	79%	245.34	53%	58.12	46%
L7 - 2	2.35	-6%	-3.75	-38%	115.16	71%	88.37	95%	248.28	63%	63.36	58%
Delta	0.55		1.06		6.35		4.85		4.44		6.00	