

[Issue description]

- DSP hangs up suddenly during image drawing. The issue is observed on two boards so far.
- These failing boards show below behaviors.
 - The issue occurrence seems depending on the condition when these boards are power cycled.
 - Whenever the issue happens, DVDD15(+1.5V_A) current is ~70mA smaller than normal case.
 - If DVDD15 current is normal, the issue never happens until next power cycle.

	Meas. point	Current[mA]	
		NG	Good
CVDD1/VDDT1-2 (+1.0V)	FB18	400	392
(+3.0V)	FB14	23	23
DVDD18/AVDDA1 (+1.8V_C)	FB21	18.8	18.8
CVDD (+0.85_+1.1V_VAR)	FB19	1720	1800
DVDD15/VDDR1-4 (+1.5V_A)	FB15	300	376

DVDD15 current



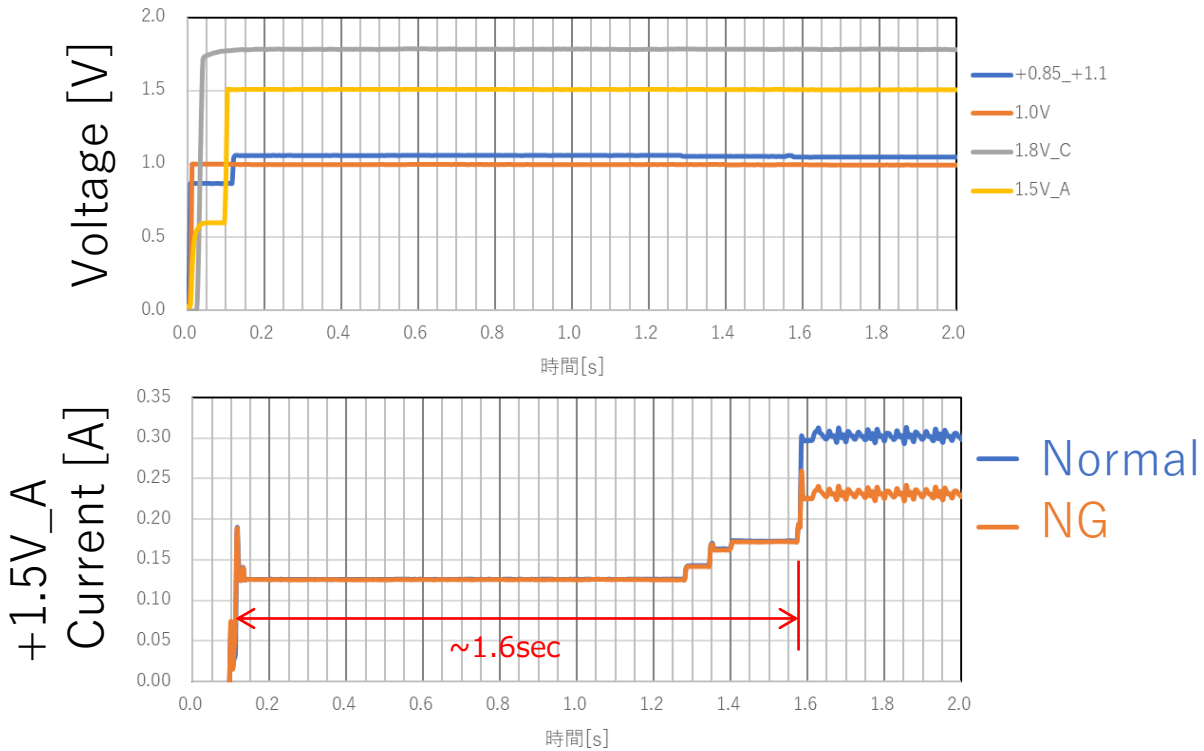
~70mA difference

[Investigation details #1]

Checked when +1.5V_A current changes.

[Measurement results]

The current difference is observed $\sim 1.6\text{sec}$ after CVDD(+0.85_+1.1) is on.



DVDD15 current



[Investigation details #2]

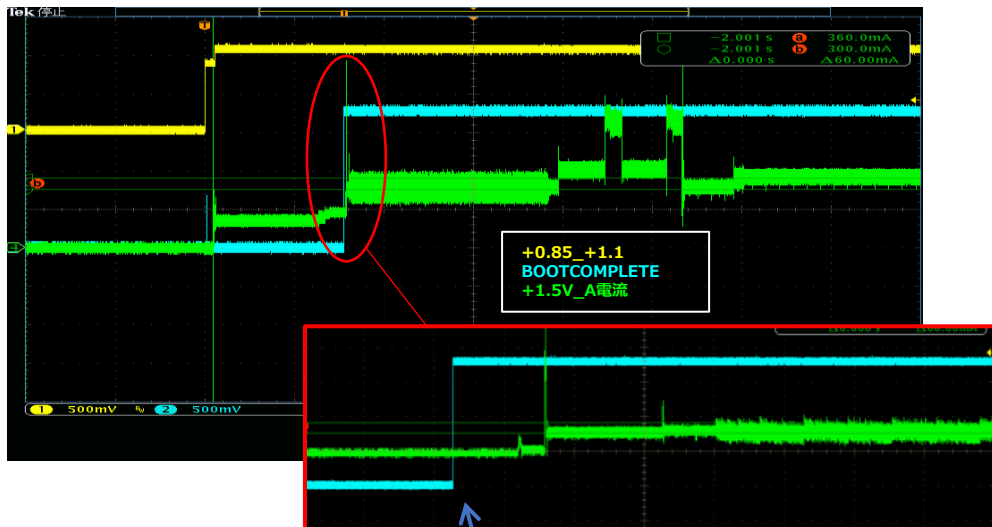
Confirm what is done by software when current difference happens.

[Results]

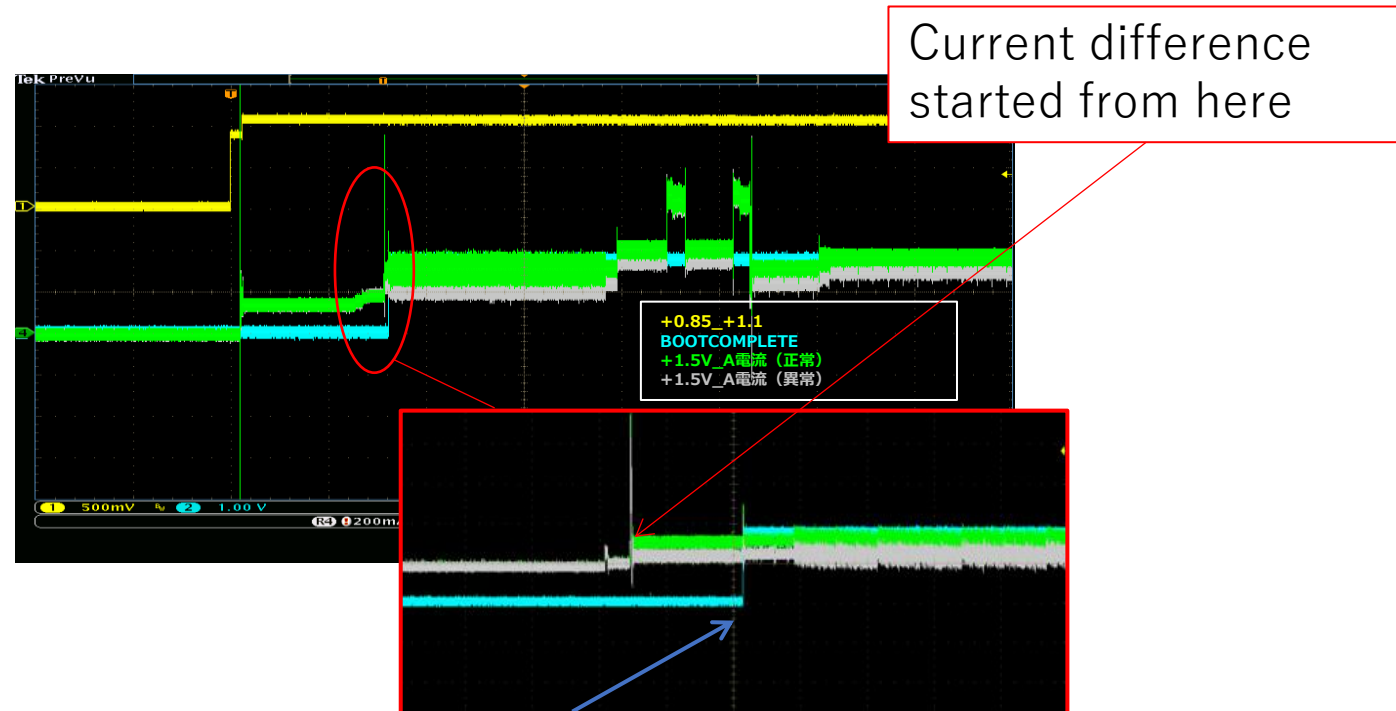
BootLoader sequence is below:

1. Initialize PCI
2. Initialize PLL,DDR3
3. Initialize UART
4. Initialize GPIO
5. Loading Main Firmware

Change the timing when BOOTCOMPLETE is asserted, then found the current change is observed during step#2 above.



BOOTCOMPLETE is just after step#1



BOOTCOMPLETE is just after step#2

[Investigation details #2]

Confirm power-up sequence is OK

Order	Power rail	Comments
1	CVDD	+0.85_+1.1
2	CDVV1/VDDT1-2	1.0V
3		CLK EN
4	DVDD18/AVDDA1-2	1.8V_C
5	DVDD15	1.5V_A
6		RESET

Current leakage from somewhere?

[Results]

Power-up sequence is the same for both normal case and NG case.



Figure.1



Figure.2

