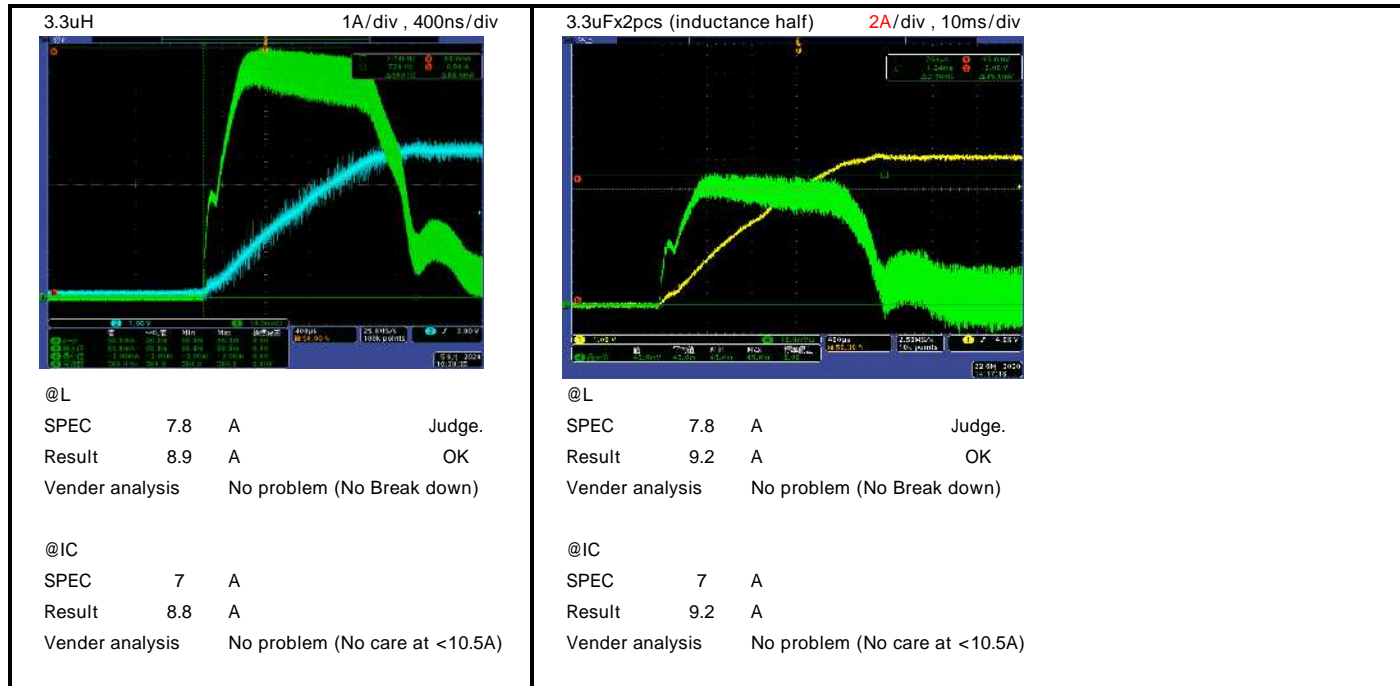


Regarding the case where the inductor rush current of DCDC exceeds the rating in P5V_SL

Checking the current value when assuming the lower limit of the inductor (largely estimated and halved)

Result: When the inductance is halved, it increases by about 0.3A, but there is no problem with the inductor and IC as a result of manufacturer analysis.



The case where the temperature rise of parts is high in the open frame state

Measurement confirmation using a thermocouple in the product state (with FAN because it has been decided to attach FAN)

Result: There is no problem with the derating margin for the Tj SPEC value even in a 40 environment.

Open Frame/Radiation thermometer

Closed Frame/thermocouple with FANx2pcs

Ref	Mesurement [°C]
L100	41.4
L101	49.3
L103	41.9
L104	38.8
L106	39.9
L107	40.1
L109	40.5
L110	41.5
L112	34.1
L113	34
U100	62.8
U101	45.7
U102	43.2
U103	47.1
U104	34.8
ROOM	24.4

Ref	Mesurement [°C]	@40 Air (Calc.)
U100	66.3	81.6
U103	56	71.3
ROOM	24.7	40
Inside	48.8	64.1

Tj/Derating Calculation

DCDC	Input	Output
[V]	13.3	5.18
[A]	1.13	2.65
[W]	15.0	13.7
	Loss [W]	1.30
	Effi. [%]	91.3

$T_{j@40} = T_{case} + (j_{tx} \cdot Loss) \cdot j_{t:0.5} [/W]$
 U100 82.3
 U103 56.7

U100/U103 Tj SPEC : 125

Derating

U100 65.8 %
 U103 45.3 %

<75% -> OK