
Material name : Evaluation data

Customer's product name :

TDK product name : DC-DC converter
CC3-1212DF-E , CC3-1212DR-E

TDK-Lambda

TDK Corporation
Power Systems Business Group

DWG.No.	TRSC-1525-2
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Revised 2006/12/01

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* The measurement has been done without external output capacitor.

(Product specification)

Product name	Input voltage(V)	Output voltage(V)	Output current(mA)	The maximum output power(W)	Ambient temperature(°C)
CC3-1212DF-E	9~18	±12 ±5%	0~125	3	-40 ~ +85 *2
CC3-1212DR-E		±15 ±5% *1	0~100		

*1 TRM and -Vout are short-circuited.

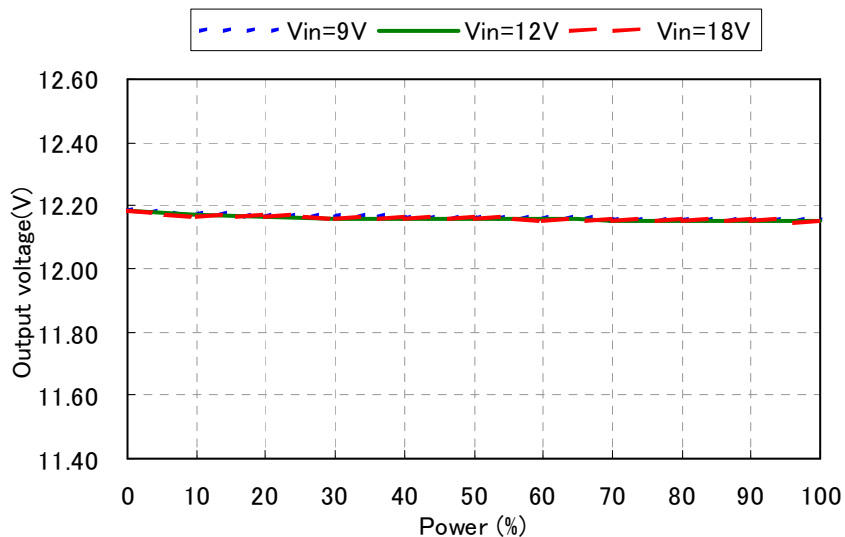
*2 At 50°C or more, output power derating is necessary.

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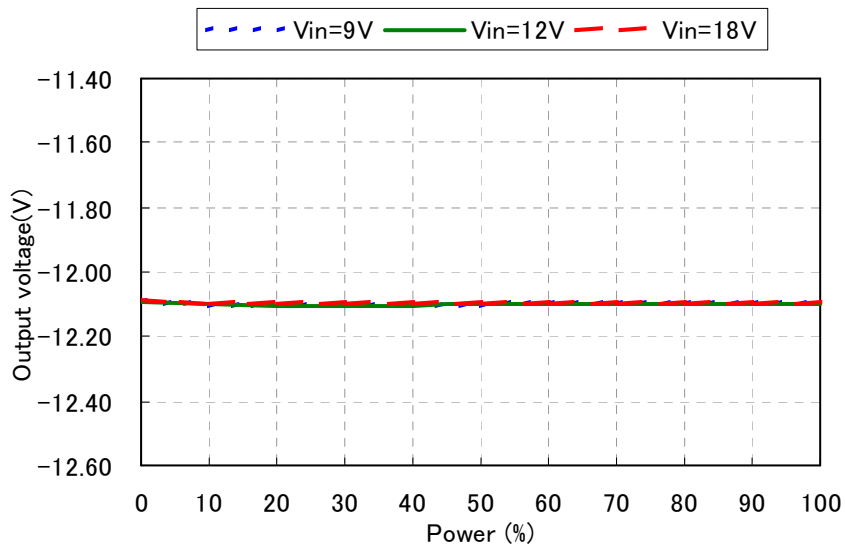
1. Load regulation

Condition Ta : 25°C

Vout=+12V



Vout=-12V

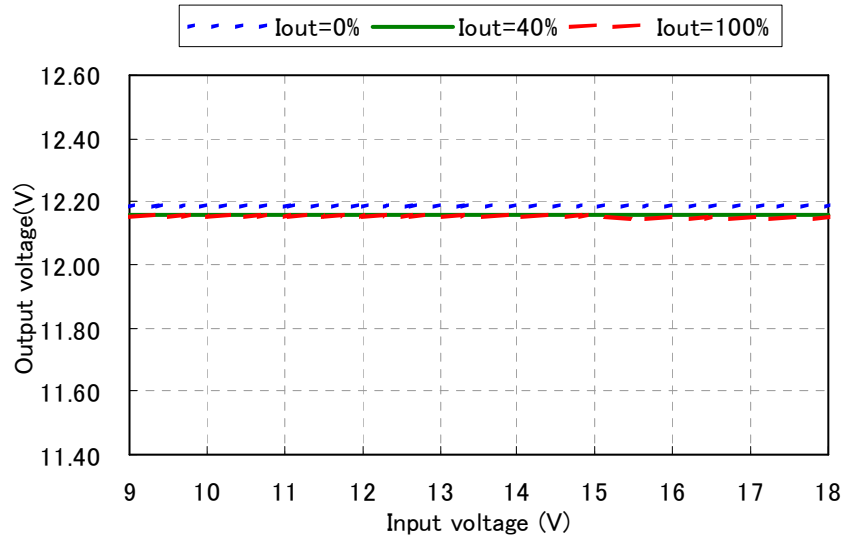


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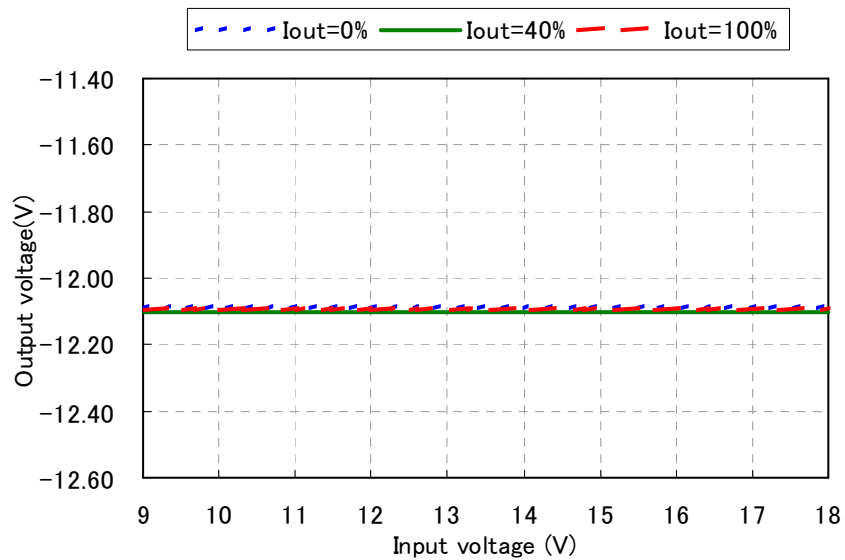
2. Line regulation

Condition Ta : 25°C

Vout=+12V



Vout=-12V



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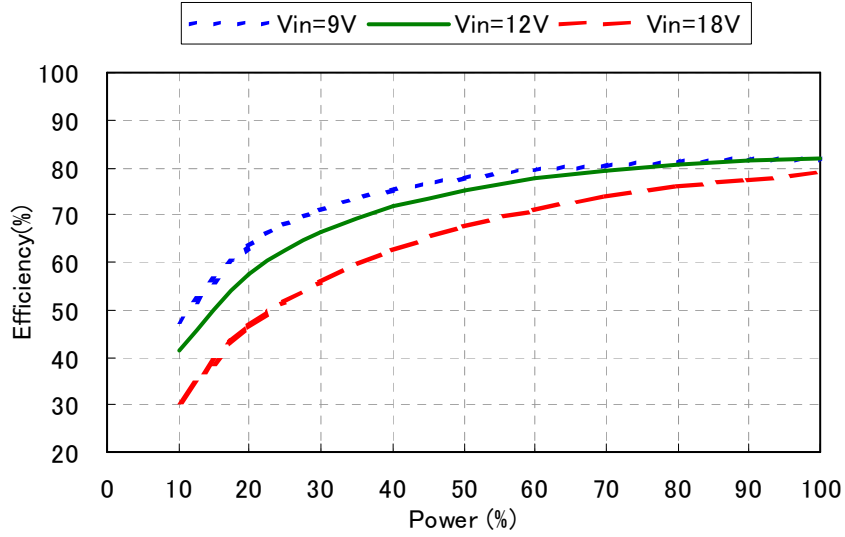
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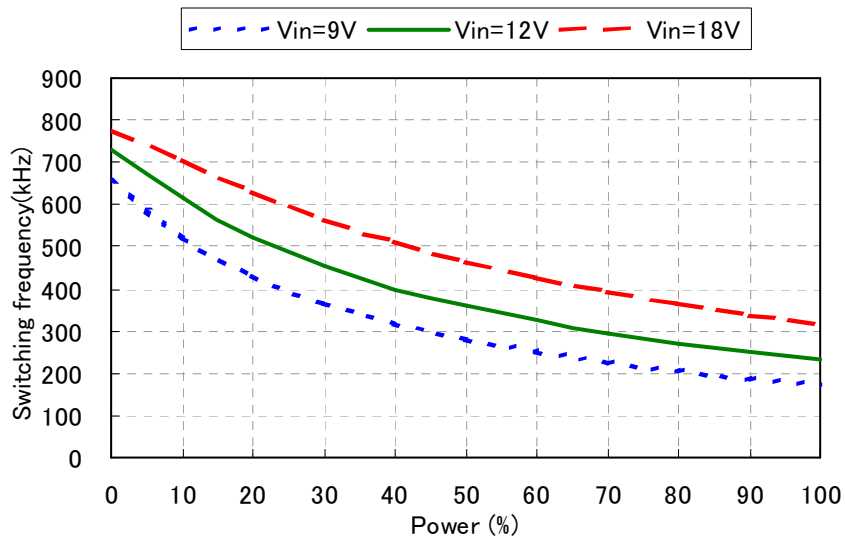
3. Efficiency

Condition Ta : 25°C



4. Switching frequency vs. output power

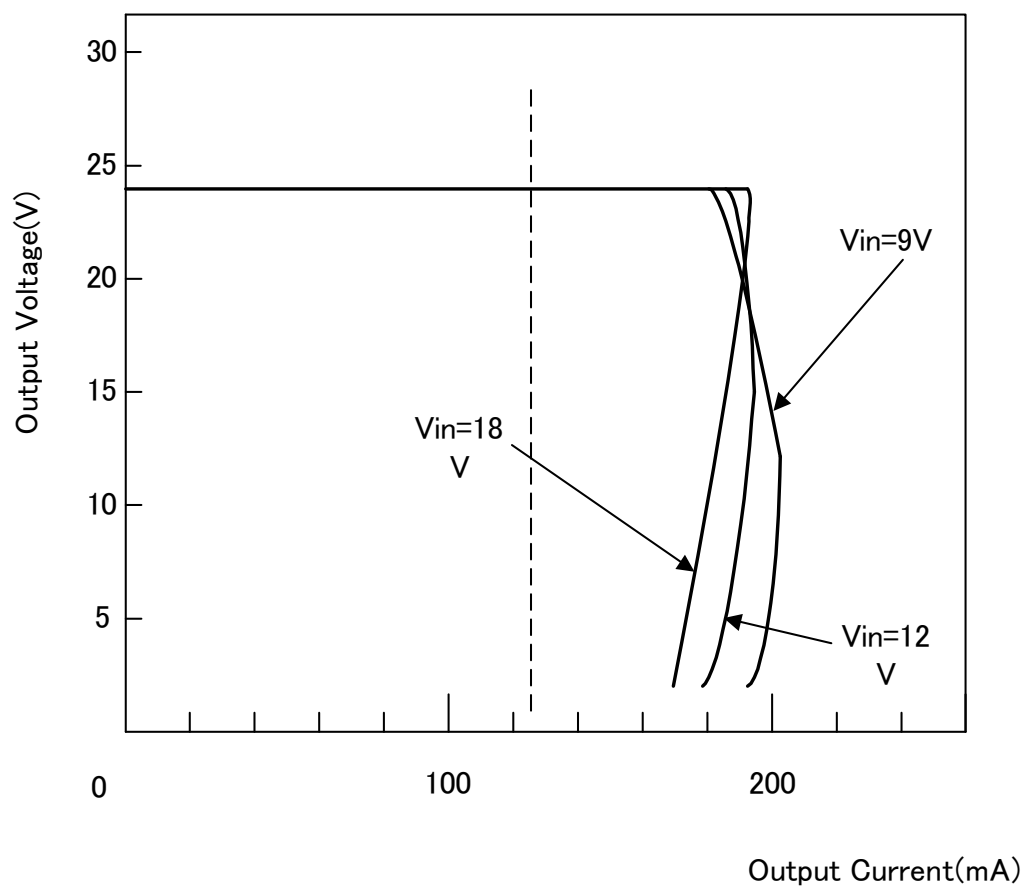
Condition Ta : 25°C



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5. Over current protection characteristics

Condition Ta : 25°C

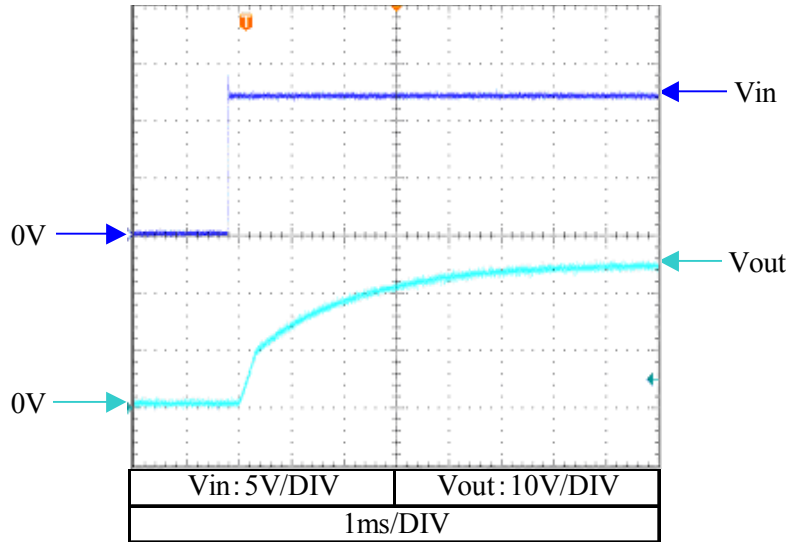


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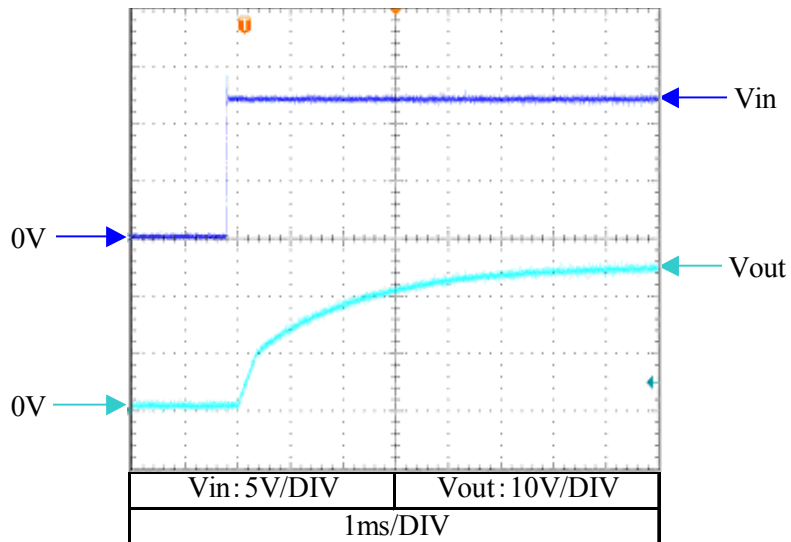
6. Output rise characteristics

Condition V_{in} : 12V
 T_a : 25°C

I_{out} : 0%



I_{out} : 100%



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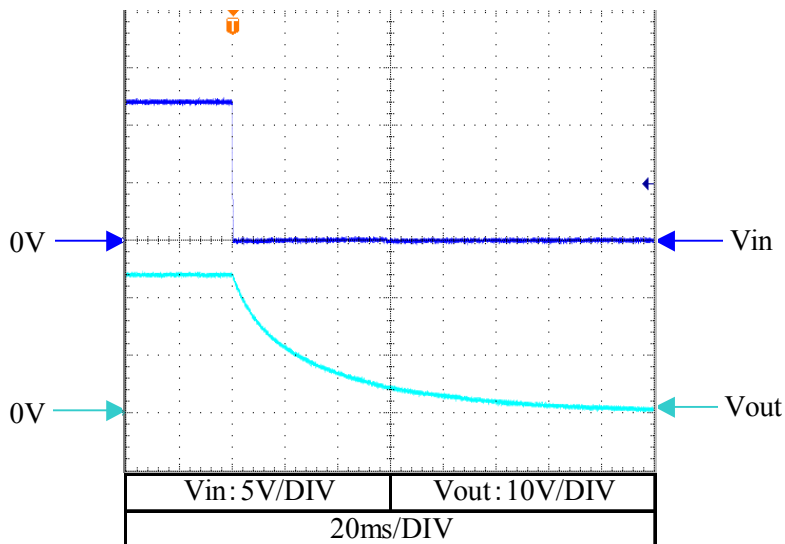
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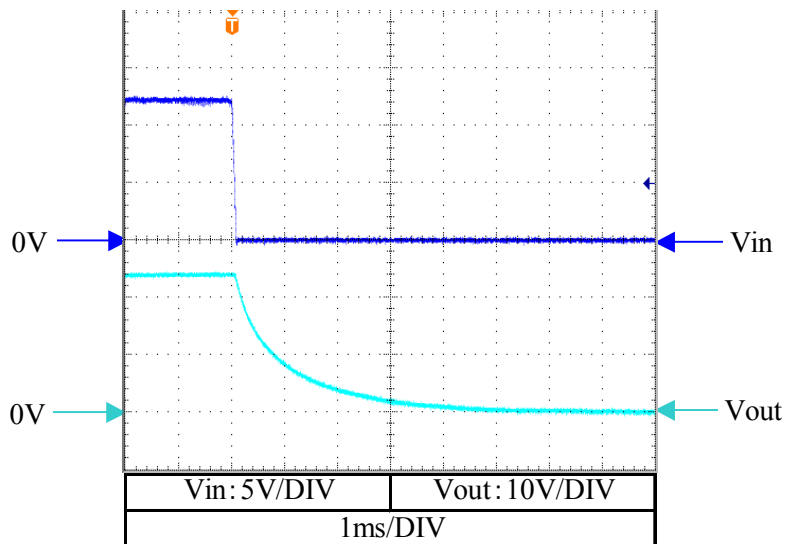
7. Output fall characteristics

Condition Vin : 12V
 Ta : 25°C

Iout : 0%



Iout : 100%

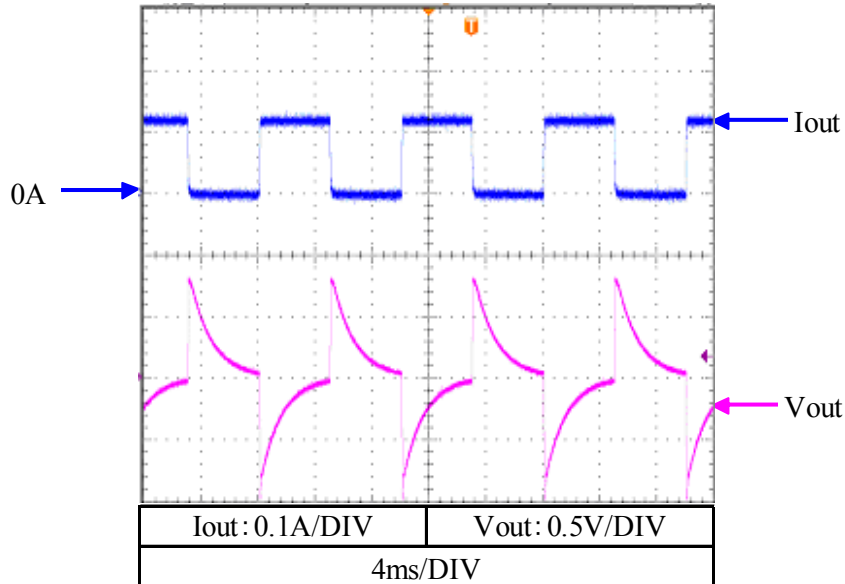


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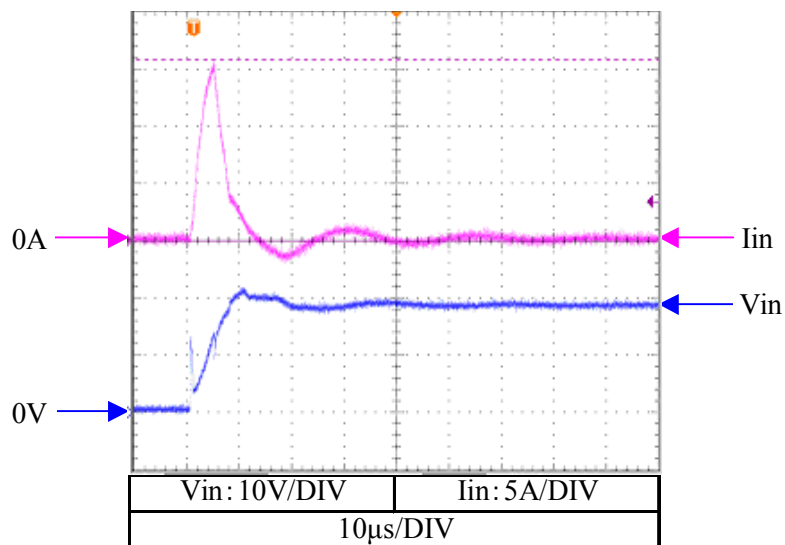
8. Dynamic load response characteristics

Condition
 V_{in} : 12V
 V_{out} : $\pm 12V$
 I_{out} : 0% \leftrightarrow 100%
 $T_r=T_f$: 100 μs
 f : 100Hz
 T_a : 25°C



9. Inrush current waveform

Condition
 V_{in} : 18V
 I_{out} : 100%
 T_a : 25°C



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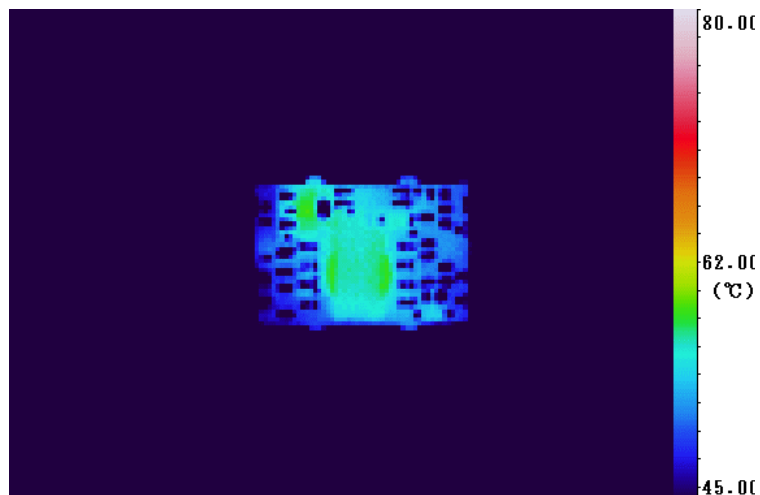
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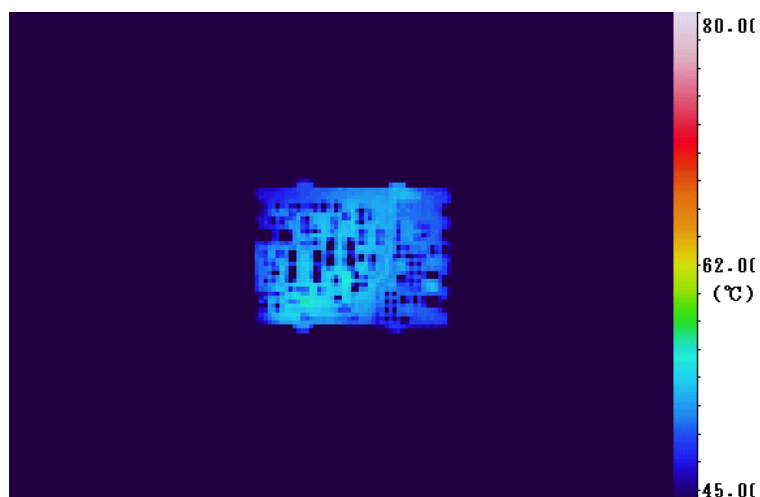
10. Temperature distribution

Condition Vin : 12V
 Vout : ±12V
 Iout : 100%
 Ta : 25°C
 Wind velocity : 0m/s

Top View



Bottom View



(*) • This test was done on our evaluation board. (Glass epoxy substrate, Size:100x100x1.6mm)
 • We measured the temperatures of parts without the case by using the thermography.
 Therefore, it might be different a little from the actual temperature.

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