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Material name : Evaluation data

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Customer's product name :

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DC-DC converter  
TDK product name : CC1R5-4812DF-E , CC1R5-4812DR-E

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# ***TDK-Lambda***

**TDK Corporation**  
**Power Systems Business Group**

|         |             |
|---------|-------------|
| DWG.No. | TRSC-1517-2 |
|---------|-------------|

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) |
|----------------|------------------|-------------------|--------------------|-----------------------------|-------------------------|
| CC1R5-4812DF-E | 36~76            | ±12 ±5%           | 0~60               | 1.5                         | -40 ~ +85 *2            |
| CC1R5-4812DR-E |                  | ±15 ±5% *1        | 0~50               |                             |                         |

\*1 TRM and -Vout are short-circuited.

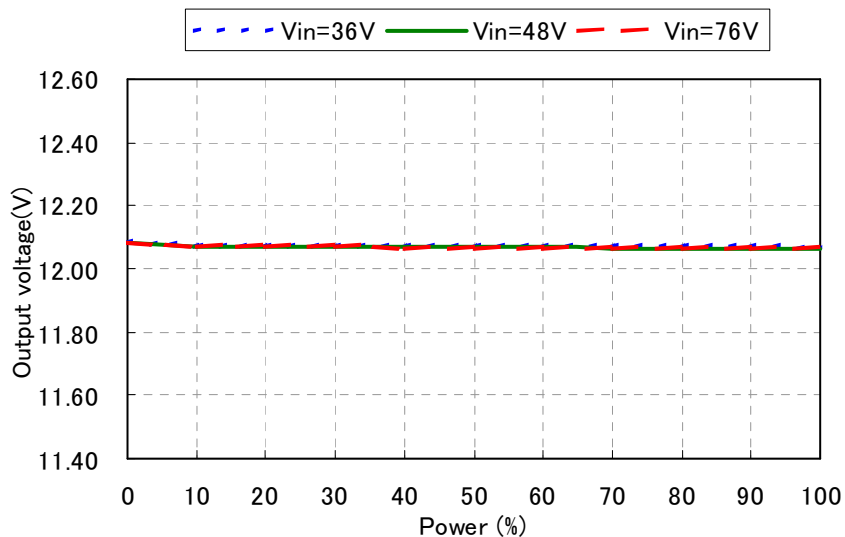
\*2 At 50°C or more, output power derating is necessary.

|                 |   |             |      |
|-----------------|---|-------------|------|
| TDK CORPORATION | Product name or model, title                    |             |      |
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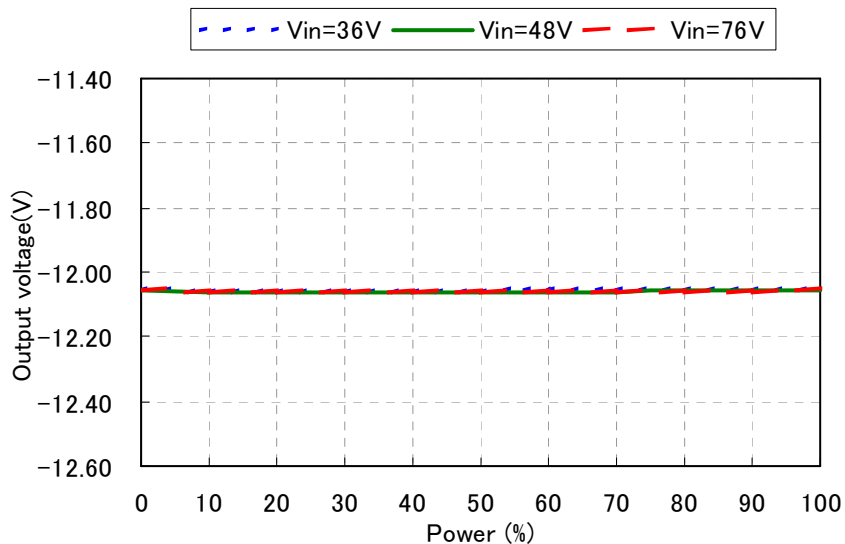
# 1. Load regulation

Condition Ta : 25°C

Vout=+12V



Vout=-12V

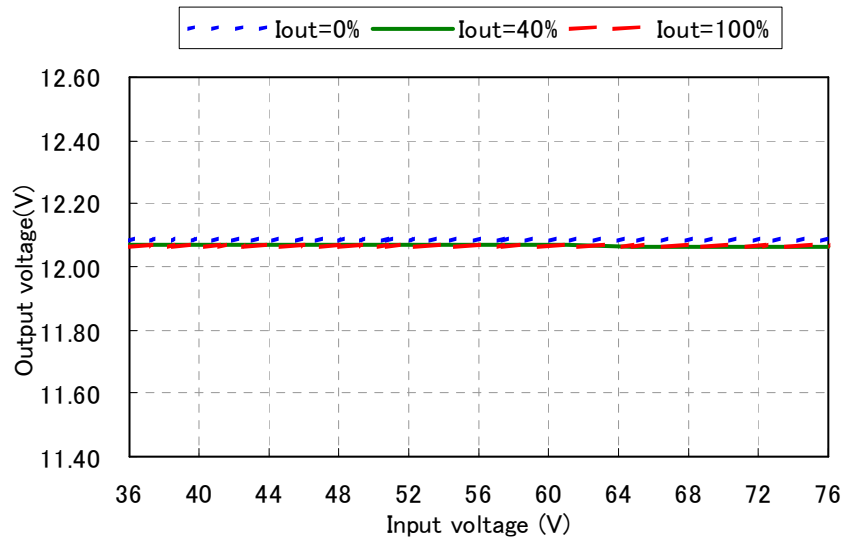


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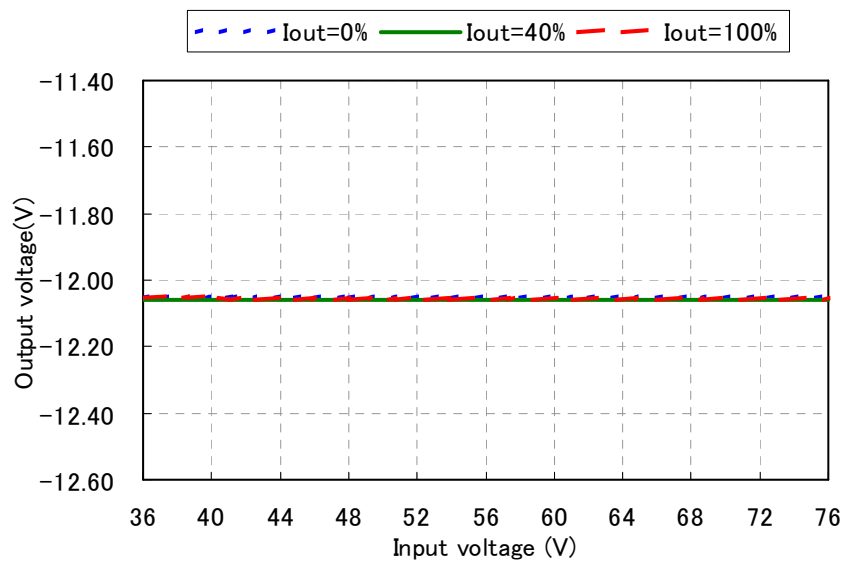
## 2. Line regulation

Condition Ta : 25°C

Vout=+12V



Vout=-12V



Product name or model, title

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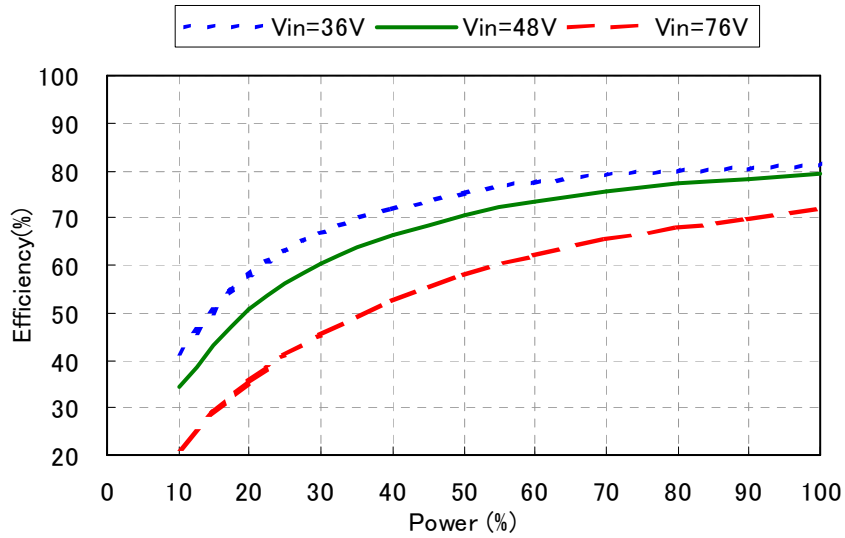
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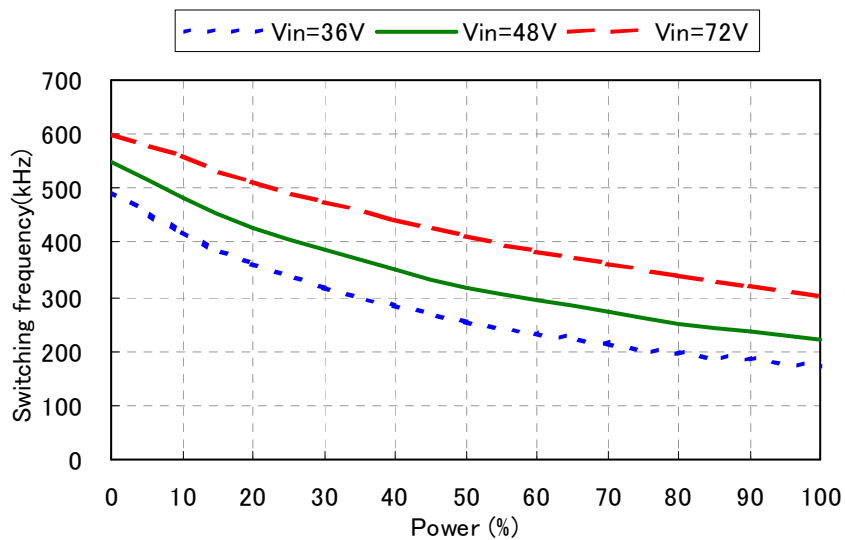
### 3. Efficiency

Condition Ta : 25°C



### 4. Switching frequency vs. output power

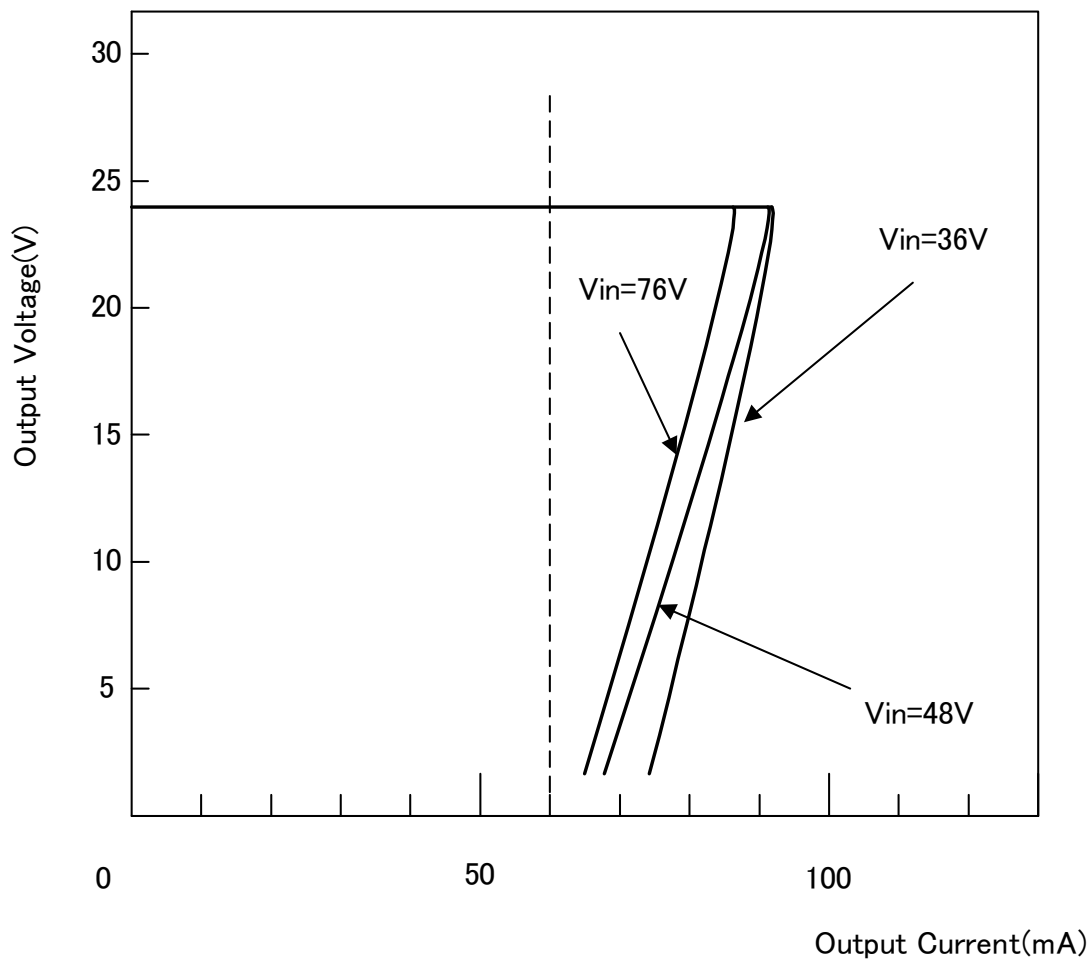
Condition Ta : 25°C



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## 5. Over current protection characteristics

Condition Ta : 25°C

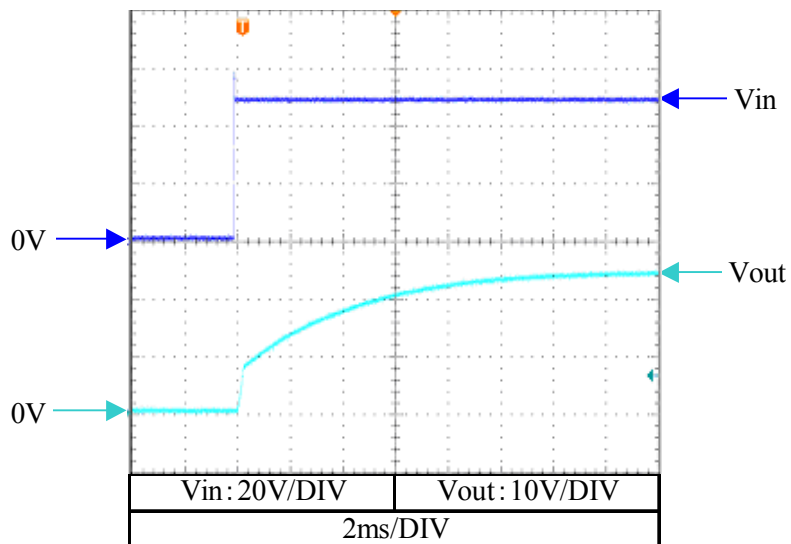


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| TDK CORPORATION                                 | Name of drawing | Drawing No. | PAGE |
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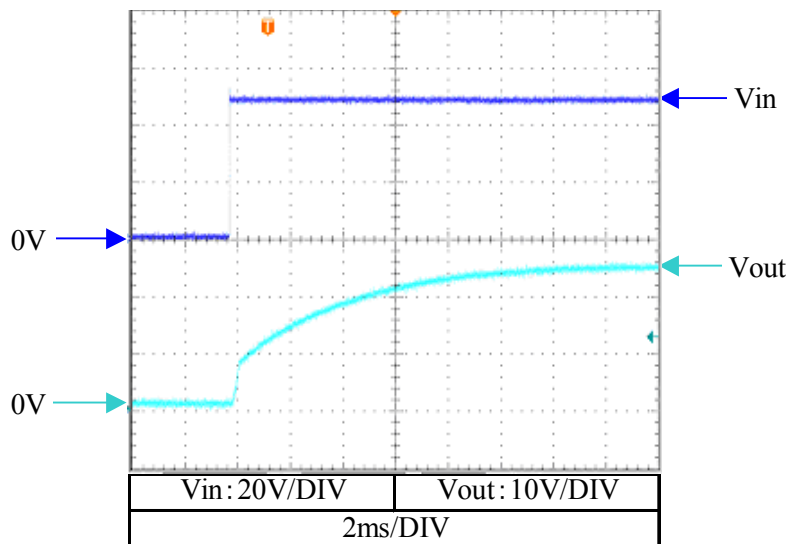
## 6. Output rise characteristics

Condition       $V_{in}$  : 48V  
                      $T_a$  : 25°C

$I_{out}$  : 0%



$I_{out}$  : 100%



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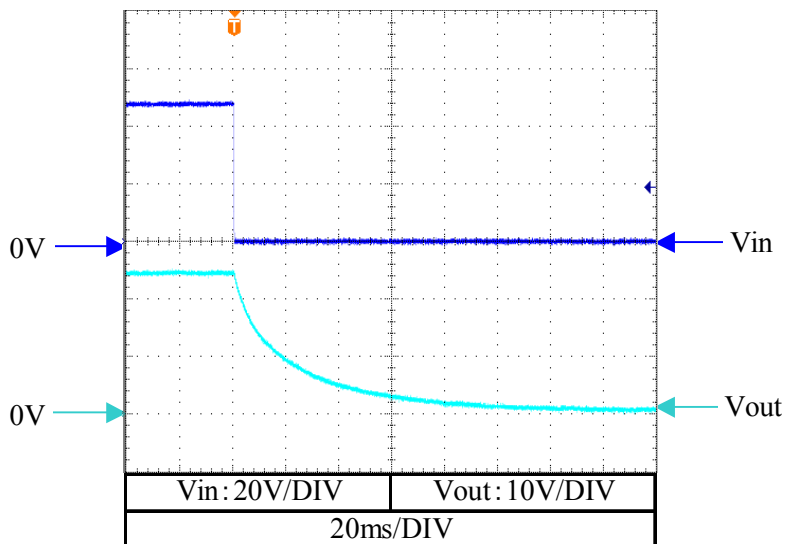
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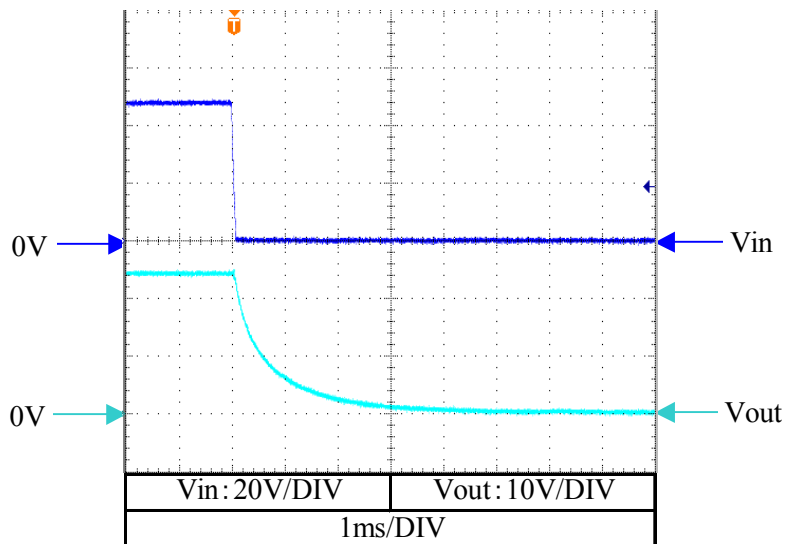
## 7. Output fall characteristics

Condition       $V_{in}$  : 48V  
                      $T_a$  : 25°C

$I_{out}$  : 0%



$I_{out}$  : 100%



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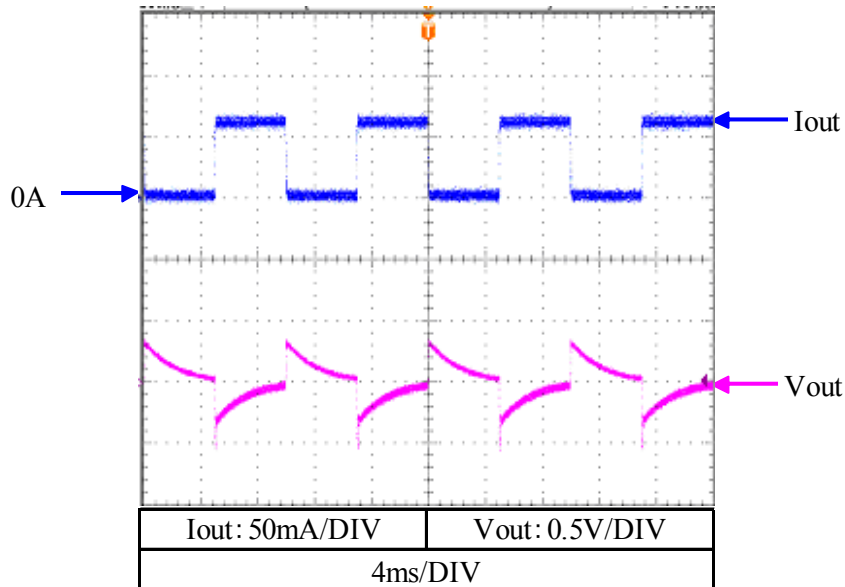
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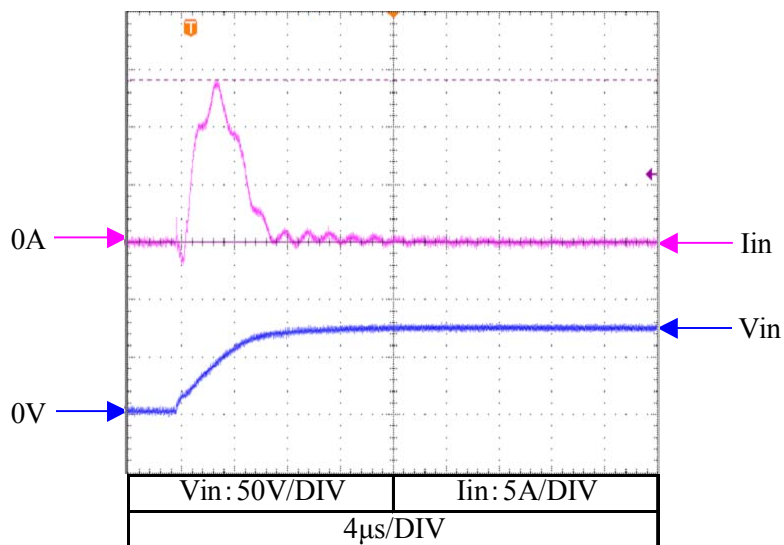
## 8. Dynamic load response characteristics

Condition  
 Vin : 48V  
 Vout : ±12V  
 Iout : 0% ⇔ 100%  
 Tr=Tf : 100 μs  
 f : 100Hz  
 Ta : 25°C



## 9. Inrush current waveform

Condition  
 Vin : 76V  
 Iout : 100%  
 Ta : 25°C



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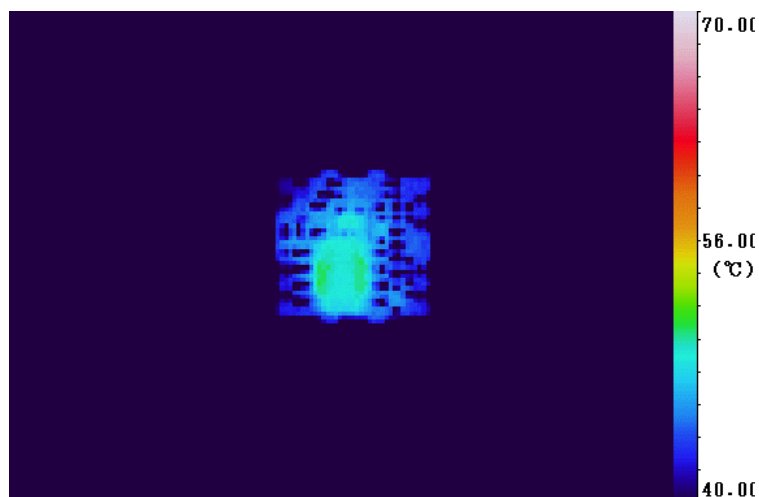
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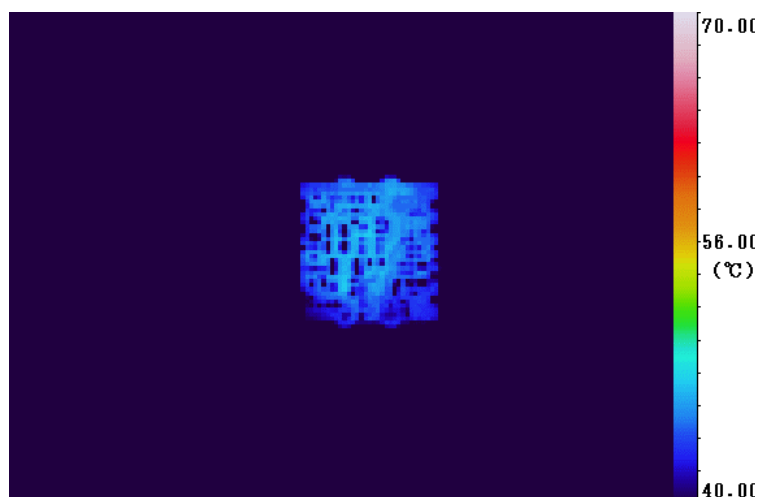
## 10. Temperature distribution

Condition      Vin : 48V  
                   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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