
Material name : Evaluation data

Customer's product name :

DC-DC converter
TDK product name : CC1R5-1203SF-E , CC1R5-1203 SR-E

TDK-Lambda

TDK Corporation
Power Systems Business Group

DWG.No.	TRSC-1506-2
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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)
CC1R5-1203SF-E	9~18	3.3 ±3%	0~400	1.32	-40 ~ +85 *2
CC1R5-1203SR-E		3.6 ±3% *1	0~370		

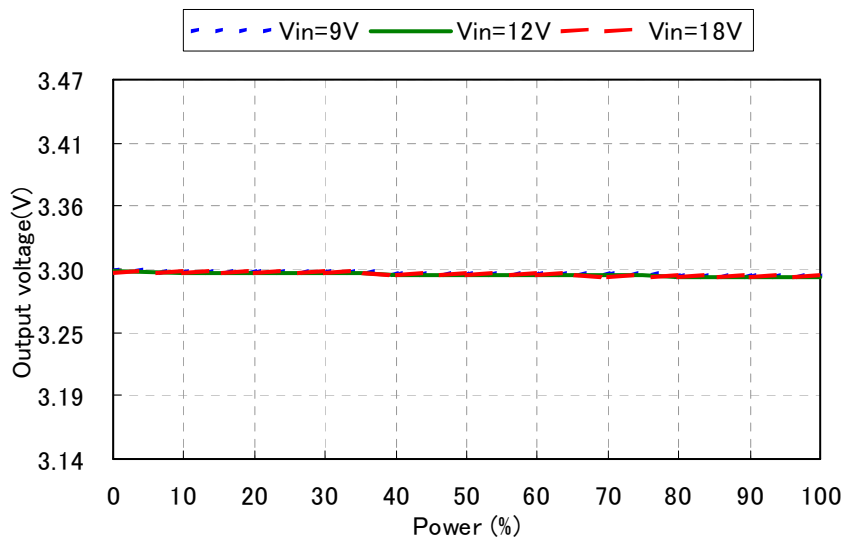
*1 TRM and -Vout are short-circuited.

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

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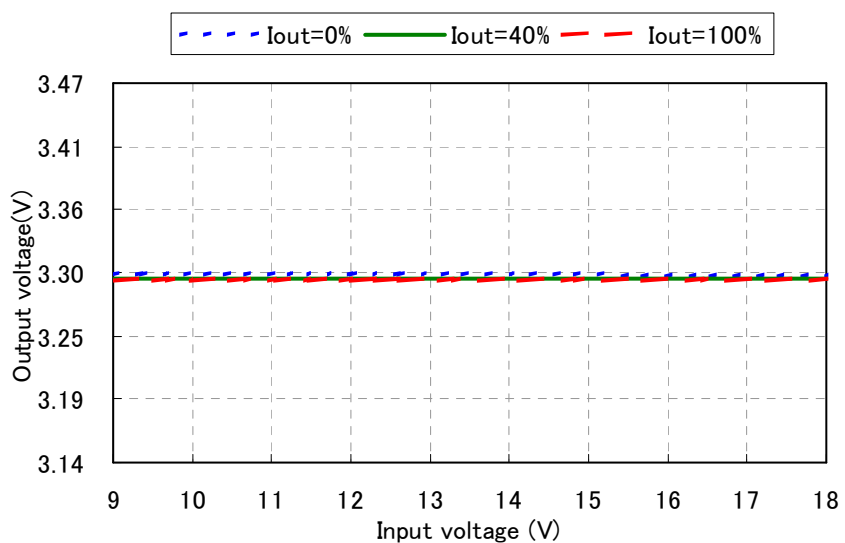
1. Load regulation

Condition Ta : 25°C



2. Line regulation

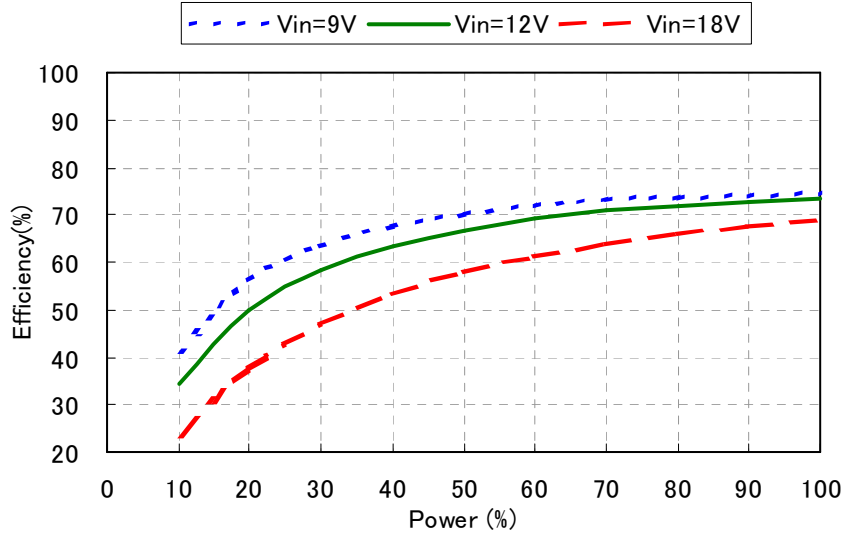
Condition Ta : 25°C



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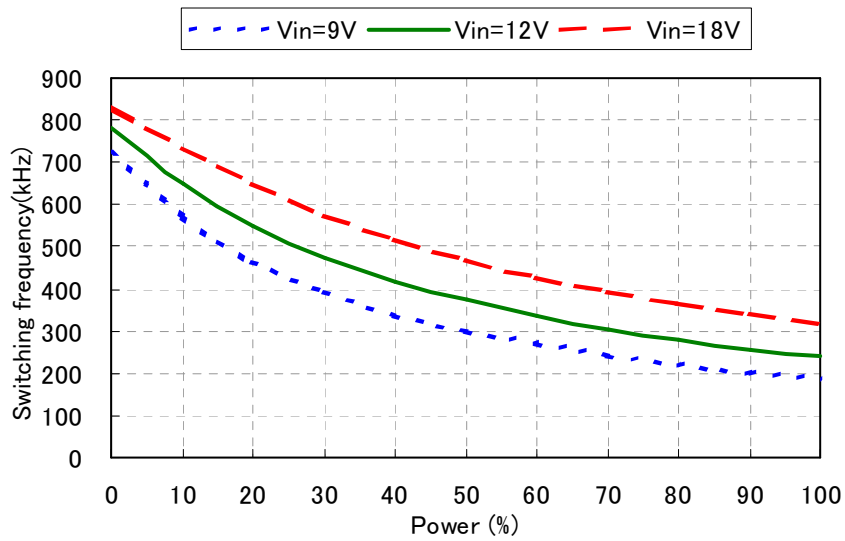
3. Efficiency

Condition Ta : 25°C



4. Switching frequency vs. output power

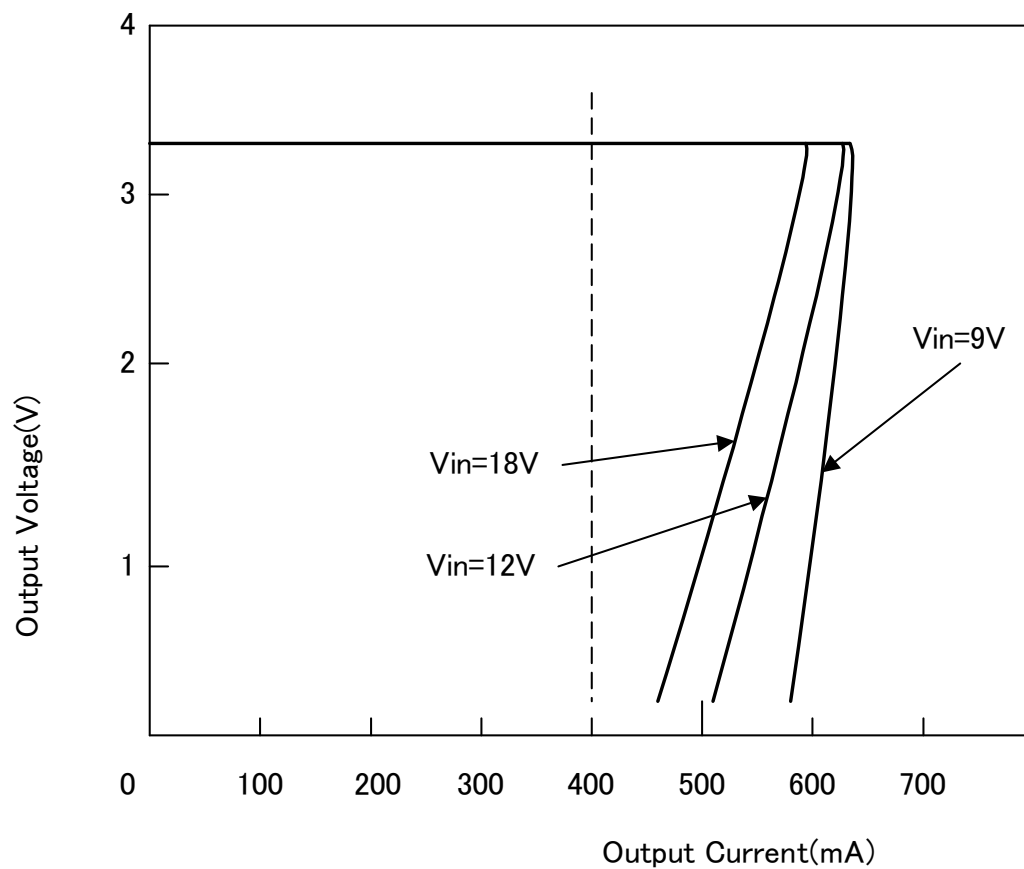
Condition Ta : 25°C



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5. Over current protection characteristics

Condition Ta : 25°C

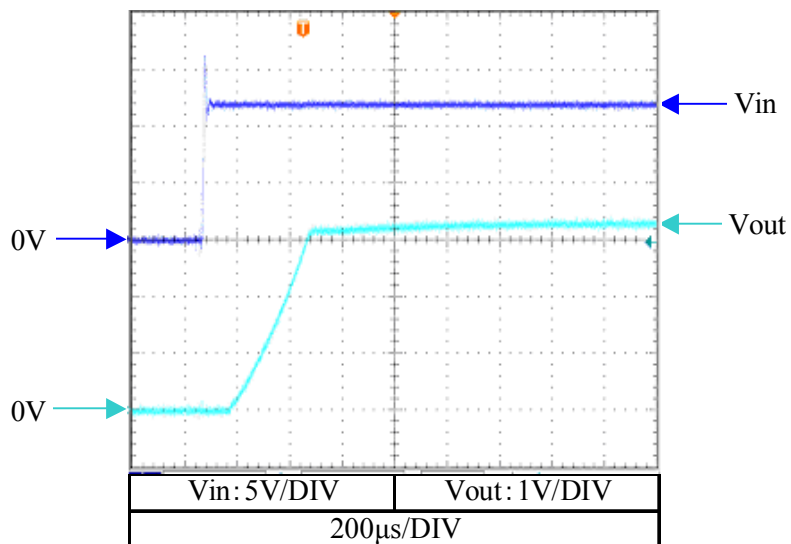


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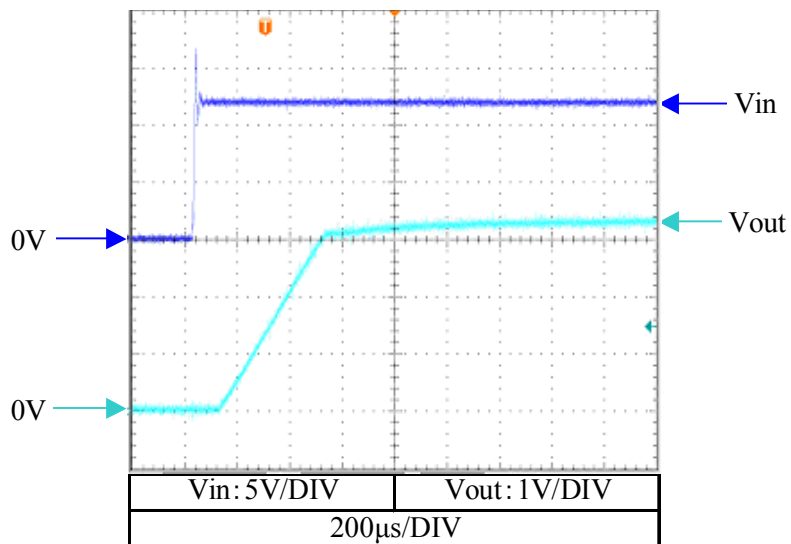
6. Output rise characteristics

Condition V_{in} : 12V
 T_a : 25°C

I_{out} : 0%



I_{out} : 100%



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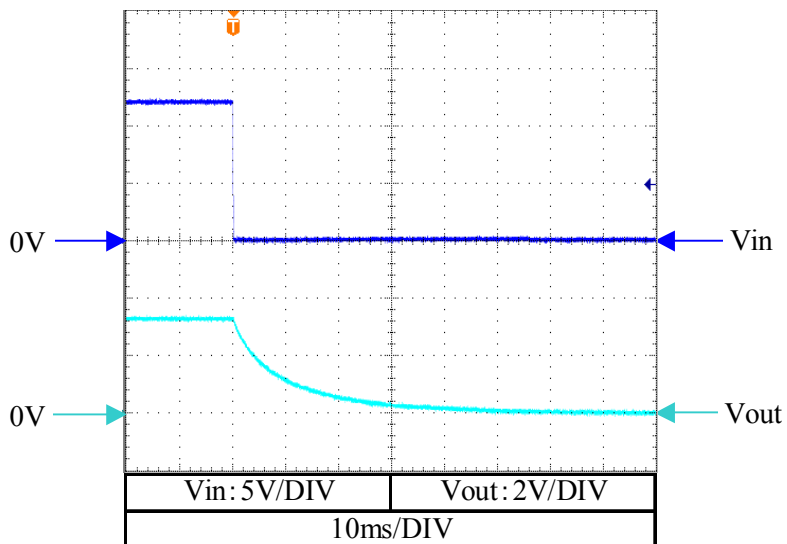
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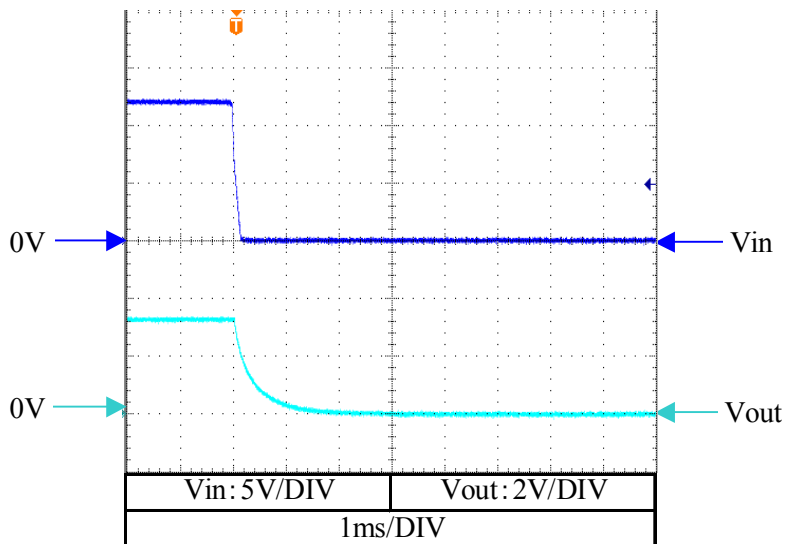
7. Output fall characteristics

Condition V_{in} : 12V
 T_a : 25°C

I_{out} : 0%



I_{out} : 100%



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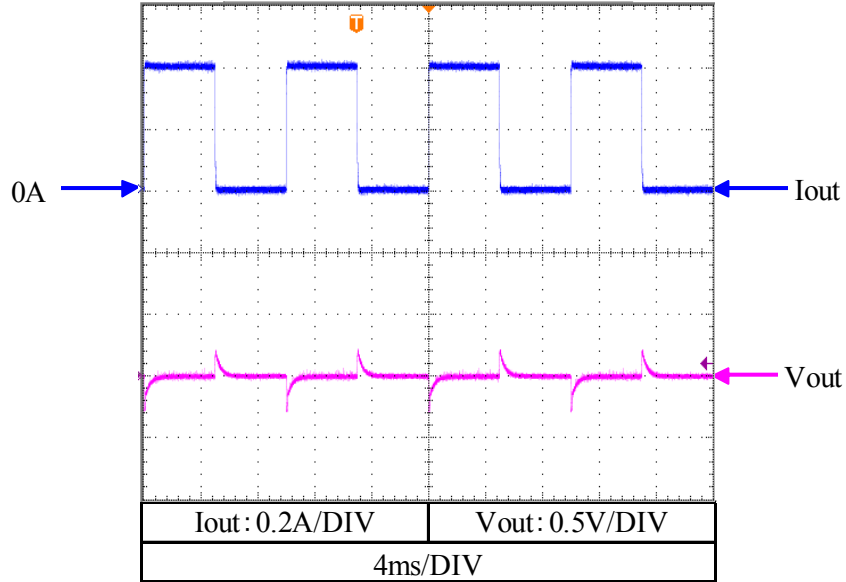
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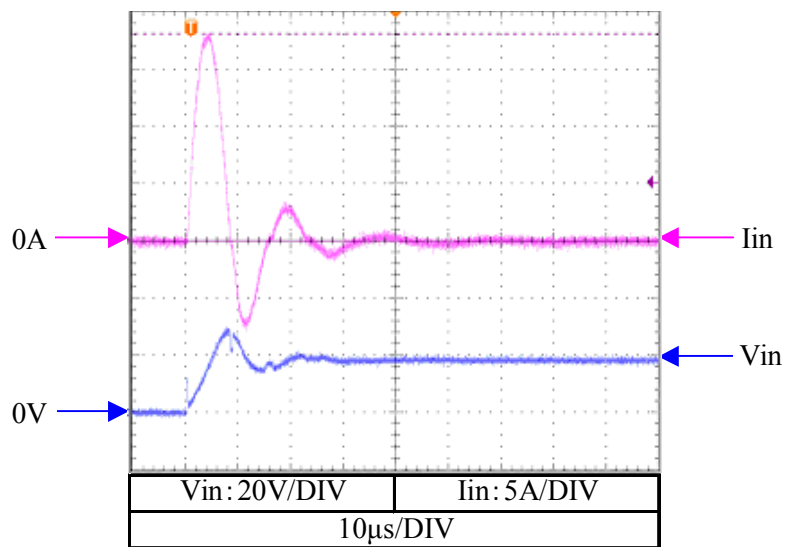
8. Dynamic load response characteristics

Condition
 Vin : 12V
 Vout : 3.3V
 Iout : 0% \leftrightarrow 100%
 Tr=Tf : 100 μ s
 f : 100Hz
 Ta : 25°C



9. Inrush current waveform

Condition
 Vin : 18V
 Iout : 100%
 Ta : 25°C



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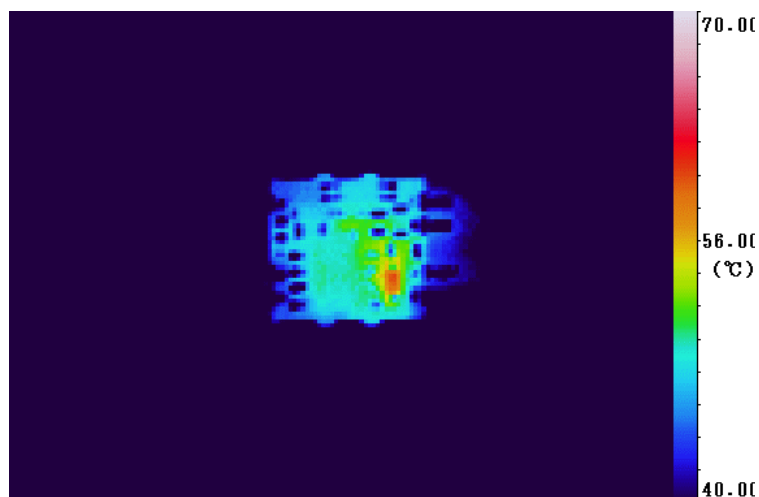
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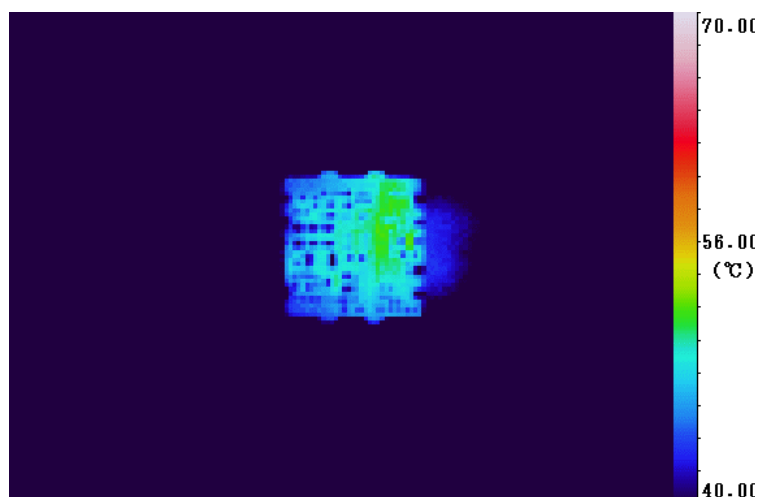
10. Temperature distribution

Condition Vin : 12V
 Vout : 3.3V
 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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