
Material name : Evaluation data

Customer's product name :

DC-DC converter
TDK product name : CC1R5-2405SF-E , CC1R5-2405 SR-E

TDK-Lambda

TDK Corporation
Power Systems Business Group

DWG.No.	TRSC-1511-2
---------	-------------

Revised 2006/12/01

INDEX

1. Load regulation.....	P2
2. Line regulation.....	P2
3. Efficiency.....	P3
4. Switching frequency vs. output power.....	P3
5. Over current protection characteristics.....	P4
6. Output rise characteristics.....	P5
7. Output fall characteristics.....	P6
8. Dynamic load response characteristics.....	P7
9. Inrush current waveform.....	P7
10. Temperature distribution.....	P8

* 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)
CC1R5-2405SF-E	18~36	5 ±3%	0~300	1.5	-40 ~ +85 *2
CC1R5-2405SR-E		6 ±3% *1	0~250		

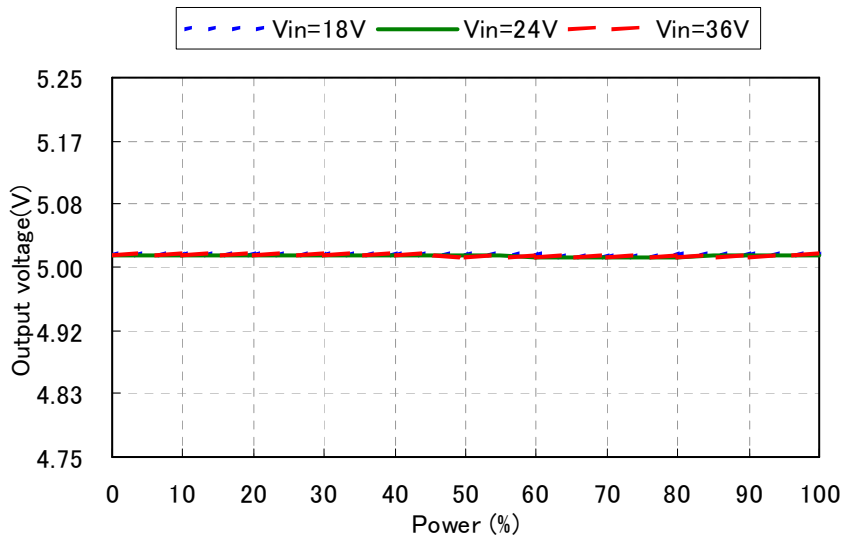
*1 TRM and -Vout are short-circuited.

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

TDK CORPORATION	Product name or model, title		
	DC-DC converter CC1R5-2405SF-E , CC1R5-2405SR-E		
	Name of drawing	Drawing No.	PAGE
	Evaluation data	TRSC-1511-2	1/ 8

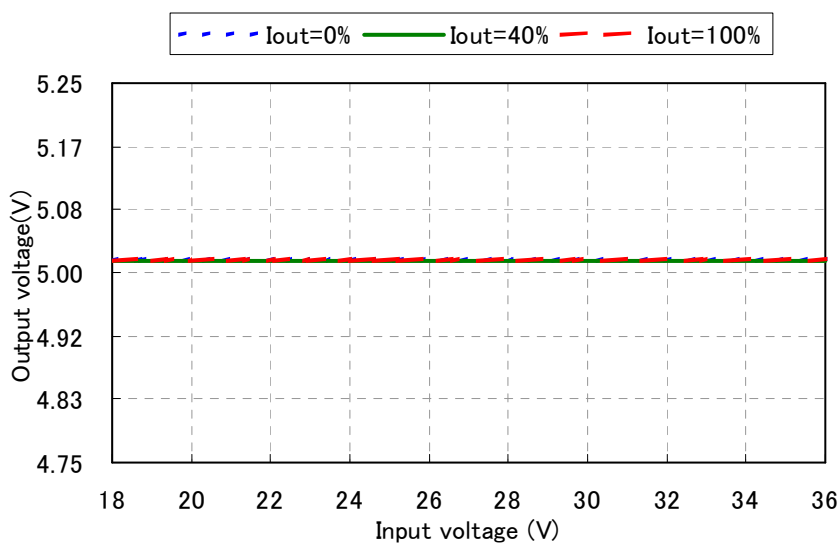
1. Load regulation

Condition Ta : 25°C



2. Line regulation

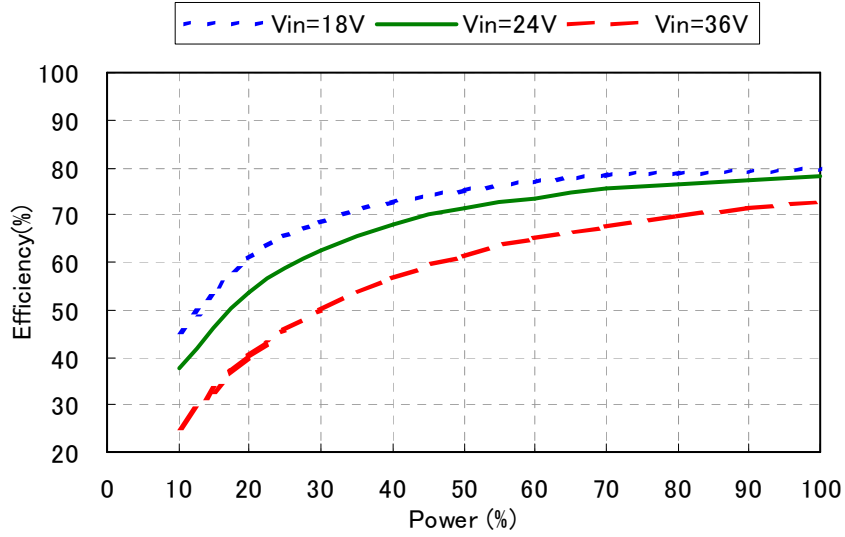
Condition Ta : 25°C



Product name or model, title			
DC-DC converter CC1R5-2405SF-E , CC1R5-2405SR-E			
TDK CORPORATION	Name of drawing	Drawing No.	PAGE
	Evaluation data	TRSC-1511-2	2/ 8

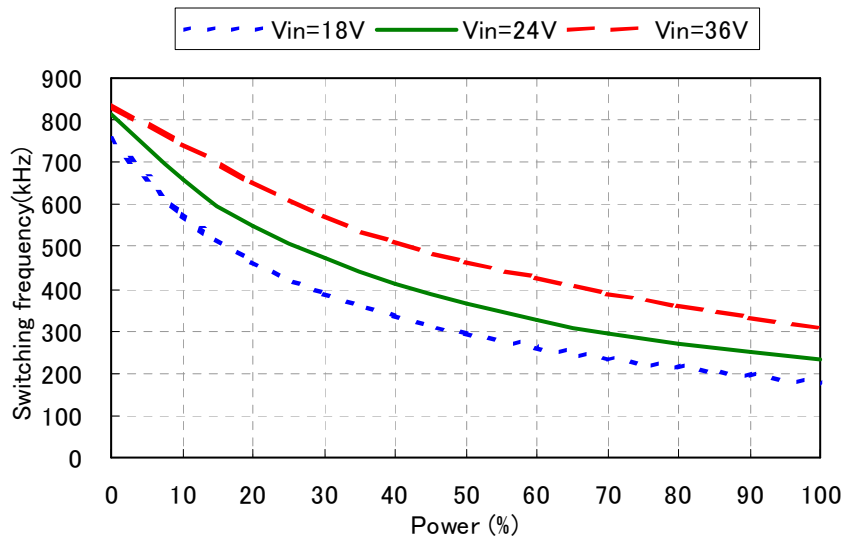
3. Efficiency

Condition Ta : 25°C



4. Switching frequency vs. output power

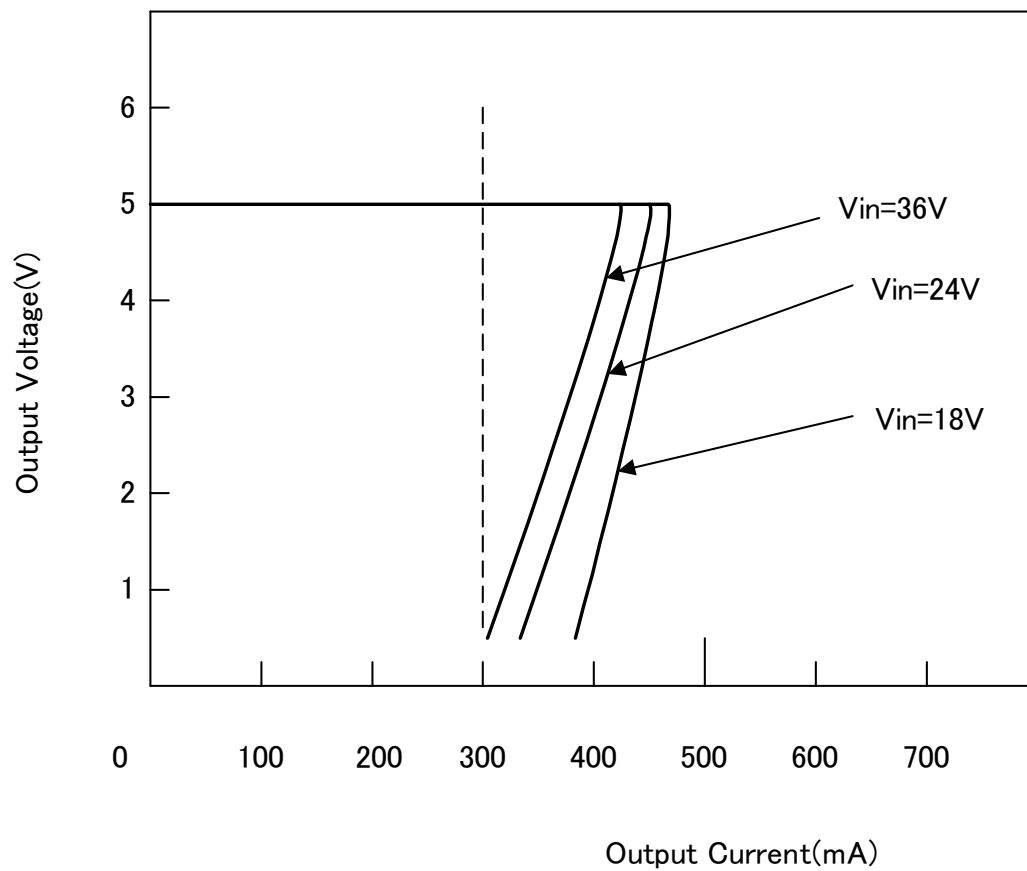
Condition Ta : 25°C



Product name or model, title			
DC-DC converter CC1R5-2405SF-E , CC1R5-2405SR-E			
TDK CORPORATION	Name of drawing	Drawing No.	PAGE
	Evaluation data	TRSC-1511-2	3 / 8

5. Over current protection characteristics

Condition Ta : 25°C

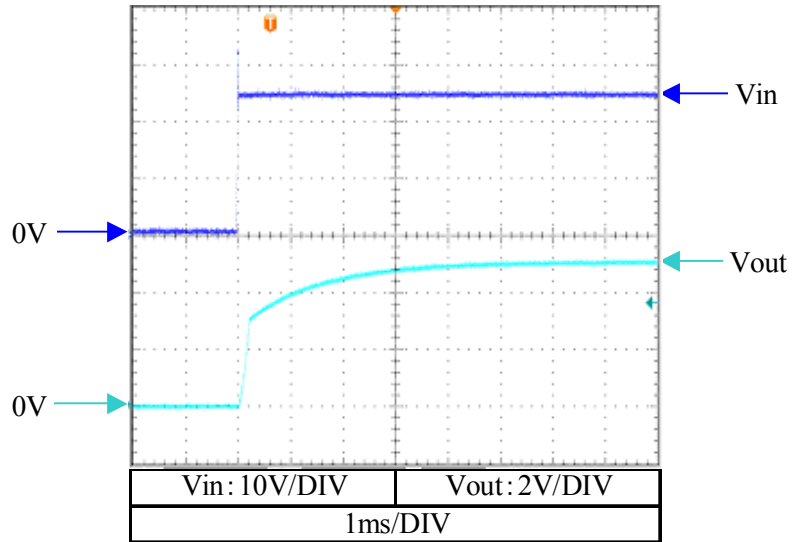


Product name or model, title		
DC-DC converter CC1R5-2405SF-E , CC1R5-2405SR-E		
Name of drawing	Drawing No.	PAGE
Evaluation data	TRSC-1511-2	4/ 8

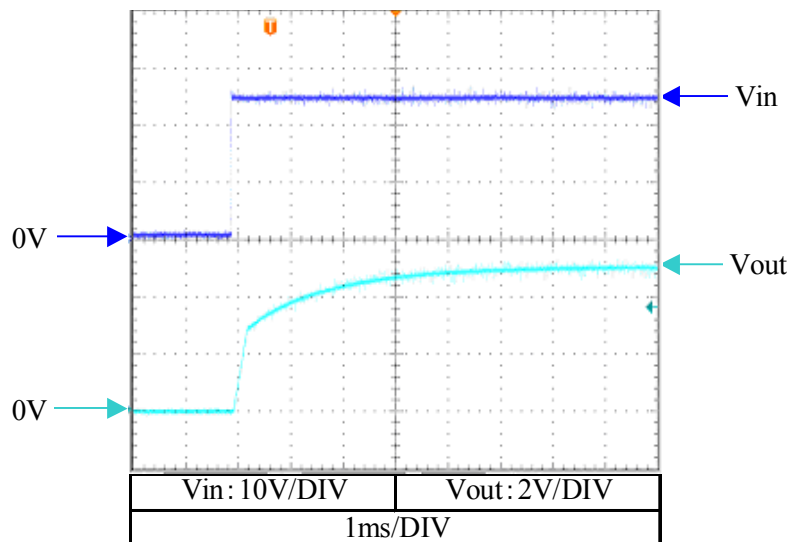
6. Output rise characteristics

Condition V_{in} : 24V
 T_a : 25°C

I_{out} : 0%



I_{out} : 100%



Product name or model, title

DC-DC converter CC1R5-2405SF-E , CC1R5-2405SR-E

TDK CORPORATION

Name of drawing

Drawing No.

PAGE

Evaluation data

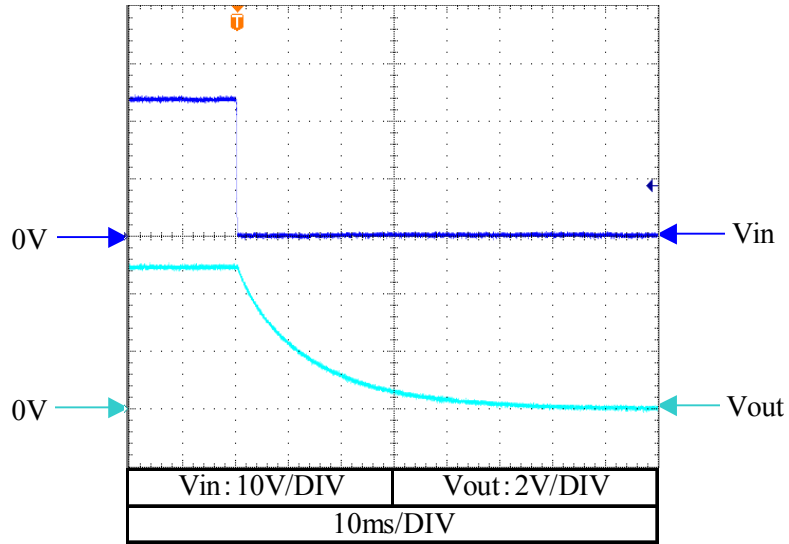
TRSC-1511-2

5/ 8

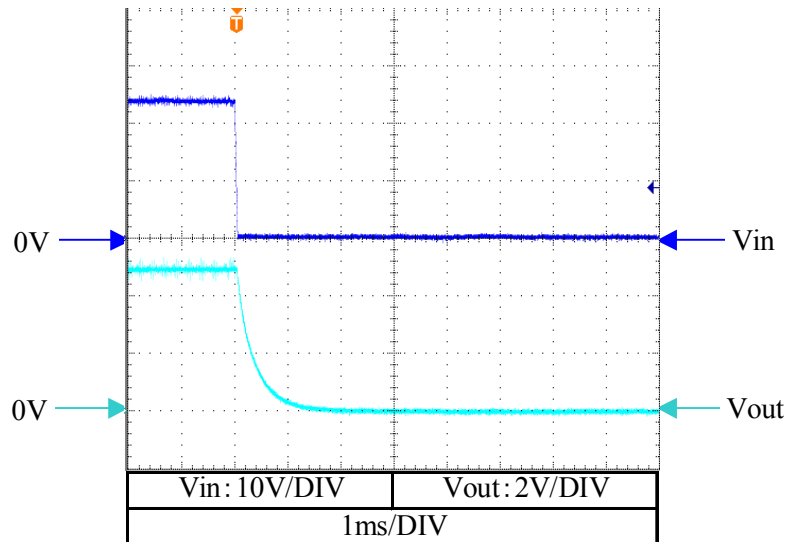
7. Output fall characteristics

Condition Vin : 24V
Ta : 25°C

Iout : 0%



Iout : 100%



Product name or model, title

DC-DC converter CC1R5-2405SF-E , CC1R5-2405SR-E

TDK CORPORATION

Name of drawing

Drawing No.

PAGE

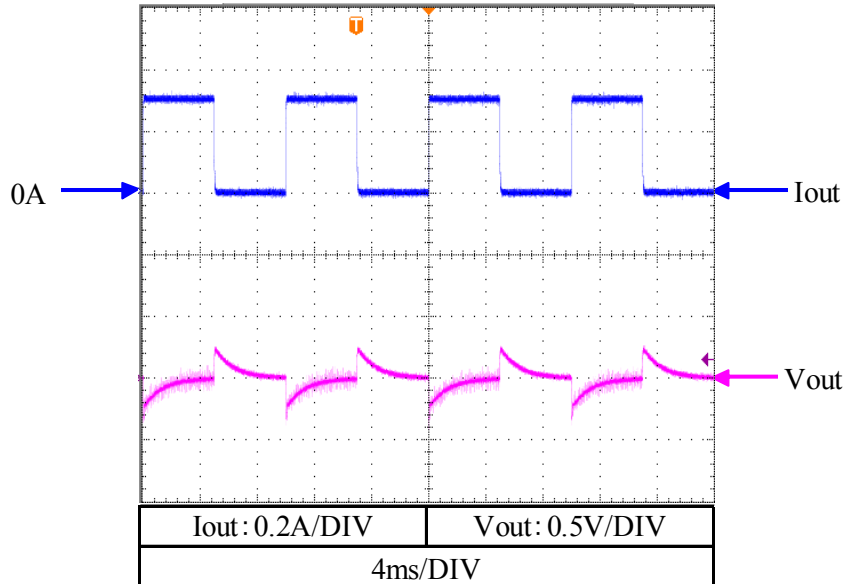
Evaluation data

TRSC-1511-2

6 / 8

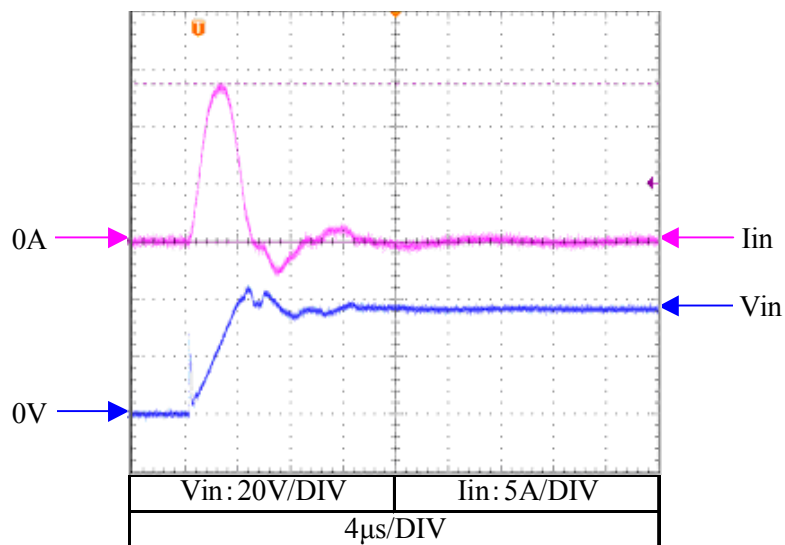
8. Dynamic load response characteristics

Condition
 Vin : 24V
 Vout : 5V
 Iout : 0% \leftrightarrow 100%
 Tr=Tf : 100 μ s
 f : 100Hz
 Ta : 25°C



9. Inrush current waveform

Condition
 Vin : 36V
 Iout : 100%
 Ta : 25°C



Product name or model, title

DC-DC converter CC1R5-2405SF-E , CC1R5-2405SR-E

TDK CORPORATION

Name of drawing

Drawing No.

PAGE

Evaluation data

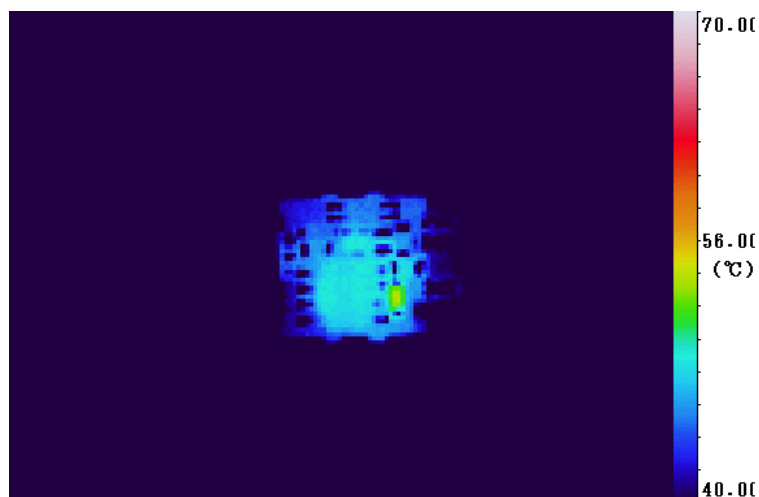
TRSC-1511-2

7/ 8

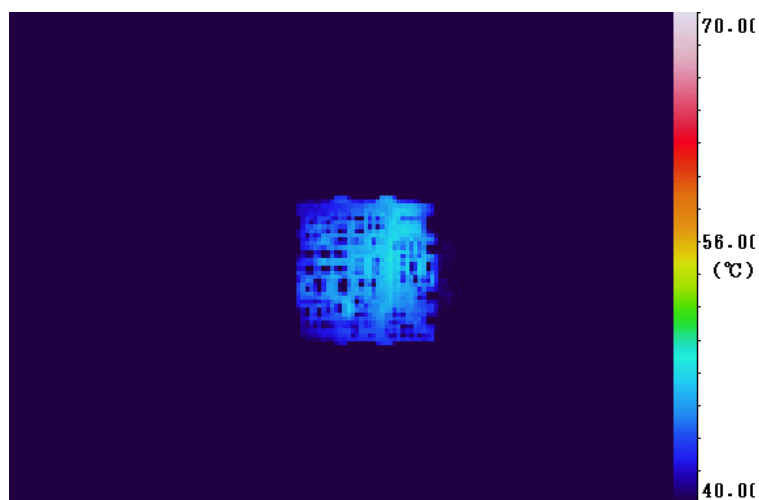
10. Temperature distribution

Condition Vin : 24V
 Vout : 5V
 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.

	Product name or model, title		
	DC-DC converter CC1R5-2405SF-E , CC1R5-2405SR-E		
TDK CORPORATION	Name of drawing	Drawing No.	PAGE
	Evaluation data	TRSC-1511-2	8/8