参考資料

COSEL

TEST DATA OF LDA300W-3

(100V INPUT)

Regulated DC Power Supply

Dec.7. 2001

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コーセル株式会社

COSEL CO.,LTD.

COSEL

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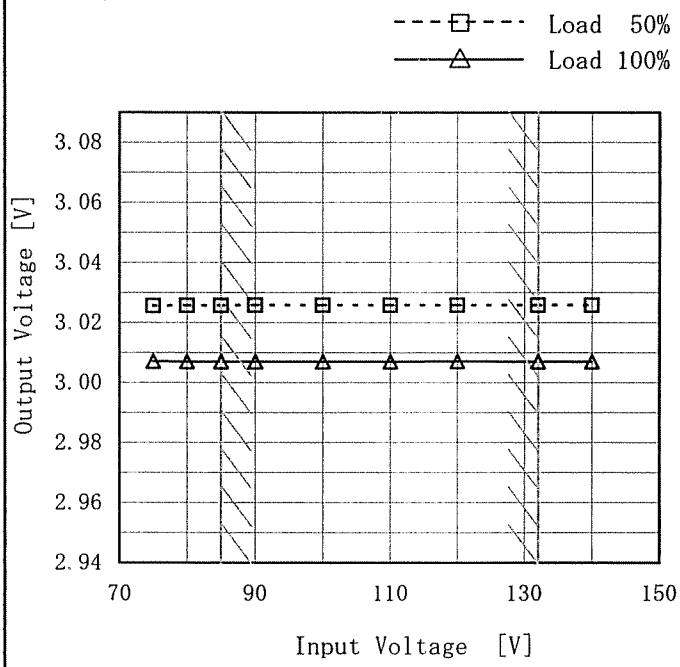
COSEL

Model	LDA300W-3
Item	Line Regulation 静的入力変動
Object	+3V60A

Temperature 25℃
Testing Circuitry Figure A

1. Graph



Note: Slanted line shows the range of the rated input voltage.

（注）斜線は定格入力電圧範囲を示す。

2. Values

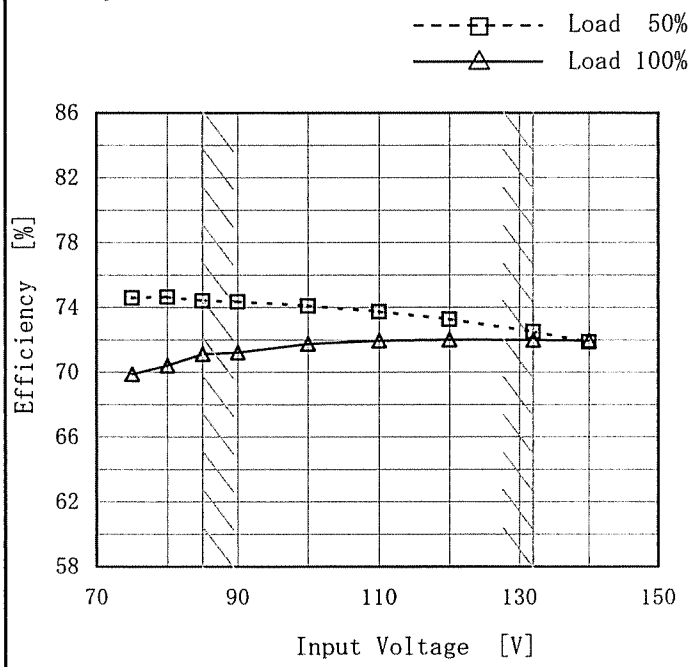
Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
75	3.026	3.007
80	3.026	3.007
85	3.026	3.007
90	3.026	3.007
100	3.026	3.007
110	3.026	3.007
120	3.026	3.007
132	3.026	3.007
140	3.026	3.007

COSEL

Model	LDA300W-3
Item	Efficiency (by Input Voltage) 効率（入力電圧特性）
Object	――――――――――――――

Temperature 25℃
Testing Circuitry Figure A

1. Graph



Note: Slanted line shows the range of the rated input voltage.

（注）斜線は定格入力電圧範囲を示す。

2. Values

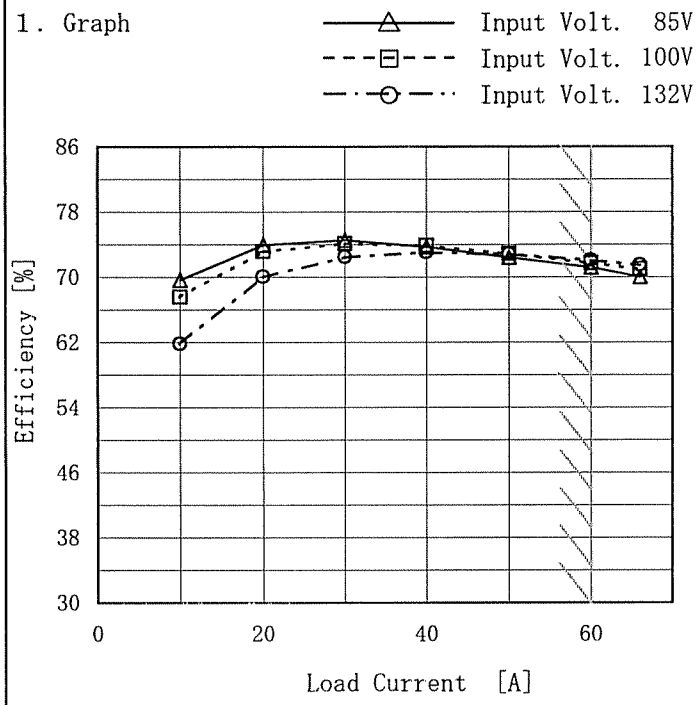
Input Voltage [V]	Efficiency [%]	
	Load 50%	Load 100%
75	74.6	69.9
80	74.7	70.4
85	74.4	71.1
90	74.3	71.2
100	74.1	71.8
110	73.7	72.0
120	73.3	72.0
132	72.5	72.0
140	71.9	72.0

COSEL

Model	LDA300W-3
Item	Efficiency (by Load Current) 効率（負荷特性）
Object	――――――――

Temperature 25℃
Testing Circuitry Figure A

1. Graph



Note: Slanted line shows the range of the rated load current.

（注）斜線は定格負荷電流範囲を示す。

2. Values

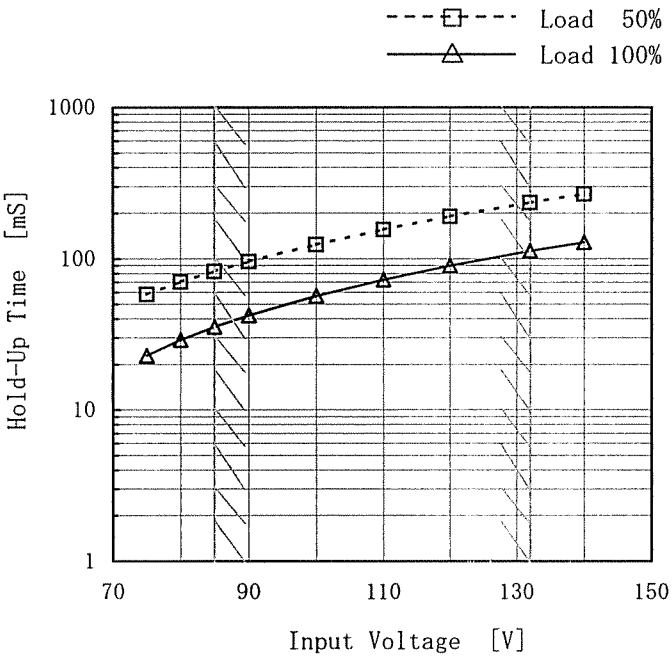
Load Current [A]	Efficiency [%] Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0	—	—	—
10	69.6	67.6	61.8
20	74.0	73.2	70.0
30	74.5	74.1	72.4
40	73.7	73.9	73.1
50	72.4	72.9	72.8
60	71.2	71.7	72.1
66	70.0	71.0	71.5
--	—	—	—
--	—	—	—
--	—	—	—

COSEL

Model	LDA300W-3
Item	Hold-Up Time 出力保持時間
Object	+3V60A

Temperature 25℃
Testing Circuitry Figure A

1. Graph



This duration covers from Shut-off of input voltage to the moment when output voltage descends to the rated range of voltage accuracy.
Note: Slanted line shows the range of the rated input voltage.

出力保持時間とは、入力電圧断から出力電圧が定電圧精度の範囲を保持しているところまでの時間。
（注）斜線は定格入力電圧範囲を示す。

2. Values

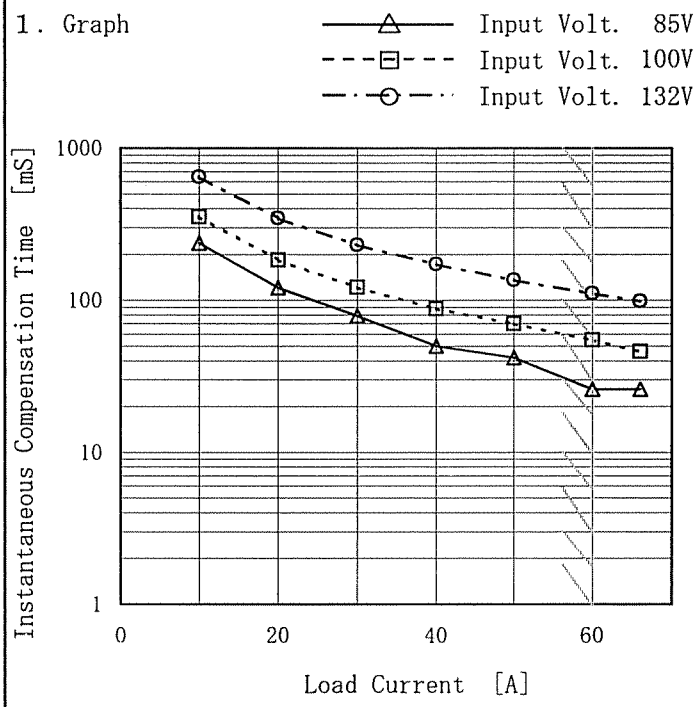
Input Voltage [V]	Hold-Up Time [mS]	
	Load 50%	Load 100%
75	58	23
80	70	29
85	83	35
90	96	42
100	124	57
110	156	73
120	190	90
132	235	113
140	268	129

COSEL

Model	LDA300W-3
Item	Instantaneous Interruption Compensation 瞬時停電保障
Object	+3V60A

Temperature 25℃
Testing Circuitry Figure A

1. Graph



Note: Slanted line shows the range of the rated load current.

(注) 斜線は定格負荷電流範囲を示す。

2. Values

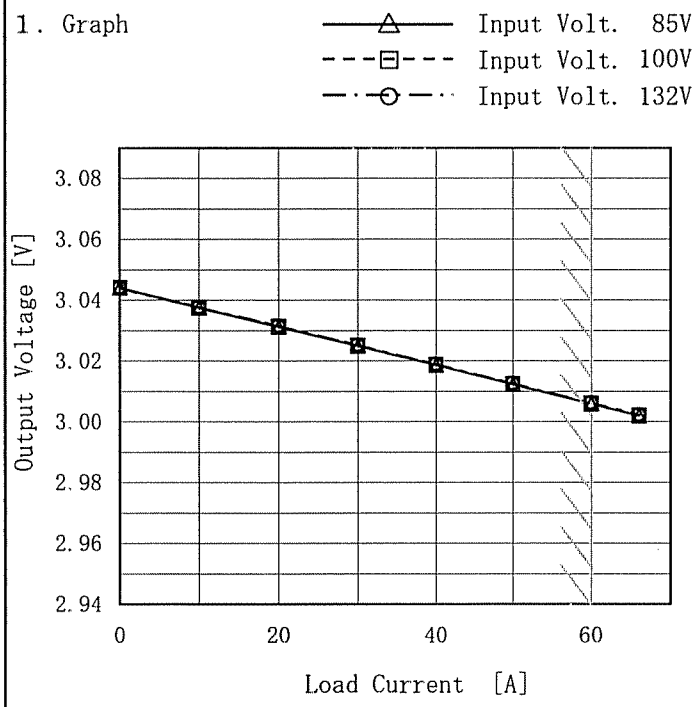
Load Current [A]	Time [mS]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0	—	—	—
10	238	354	646
20	121	185	347
30	79	122	231
40	50	88	173
50	42	70	136
60	26	55	111
66	26	46	99
--	—	—	—
--	—	—	—
--	—	—	—

COSEL

Model	LDA300W-3
Item	Load Regulation 静的負荷変動
Object	+3V60A

Temperature 25℃
Testing Circuitry Figure A

1. Graph



Note: Slanted line shows the range of the rated load current.

(注) 斜線は定格負荷電流範囲を示す。

2. Values

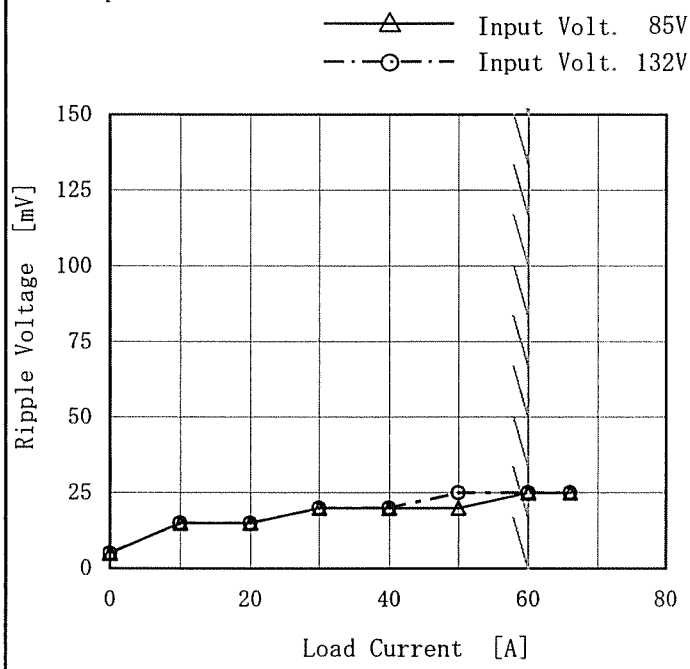
Load Current [A]	Output Voltage [V]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0	3.044	3.044	3.044
10	3.038	3.038	3.038
20	3.031	3.031	3.032
30	3.025	3.025	3.025
40	3.019	3.019	3.019
50	3.012	3.013	3.013
60	3.006	3.006	3.006
66	3.002	3.002	3.002
--	—	—	—
--	—	—	—

COSEL

Model	LDA300W-3
Item	Ripple Voltage (by Load Current) リップル電圧（負荷特性）
Object	+3V60A

Temperature 25℃
Testing Circuitry Figure A

1. Graph



Ripple Voltage is shown as p-p in the figure below.
Note: Slanted line shows the range of the rated load current.

リップル電圧は、下図ｐ－ｐ値で示される。
（注）斜線は定格負荷電流範囲を示す。

T1: Due to AC Input Line
入力商用周期
T2: Due to Switching
ｽｲｯﾁﾝｸﾞ周期

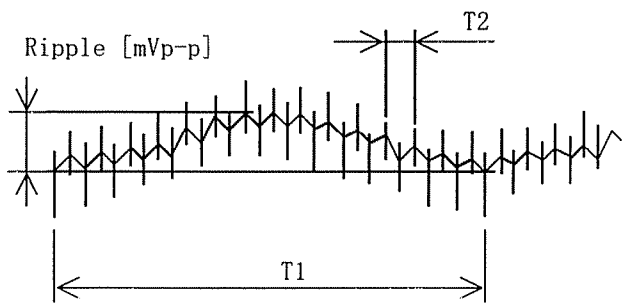


Fig. Complex Ripple Wave Form
図　リップル波形詳細図

2. Values

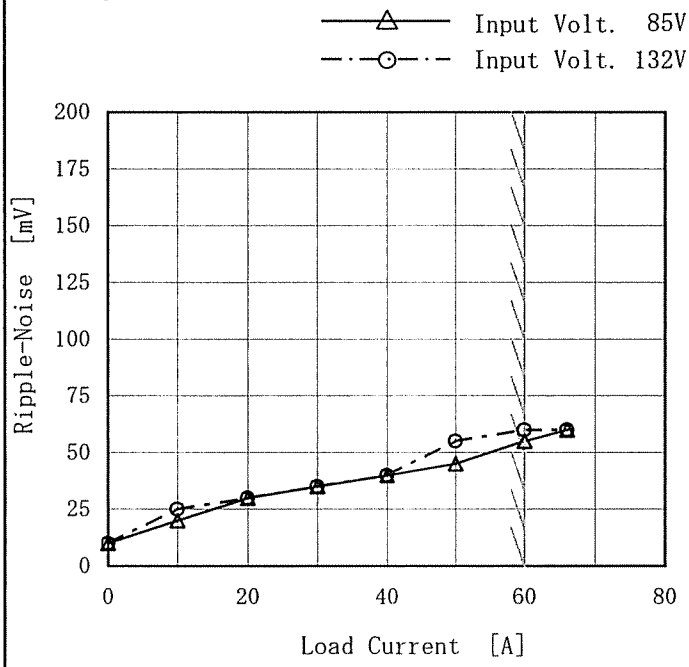
Load Current [A]	Ripple Voltage [mV]	
	Input Volt. 85 [V]	Input Volt. 132 [V]
0	5	5
10	15	15
20	15	15
30	20	20
40	20	20
50	20	25
60	25	25
66	25	25
--	—	—
--	—	—
--	—	—

COSEL

Model	LDA300W-3
Item	Ripple-Noise リップルノイズ
Object	+3V60A

Temperature 25℃
Testing Circuitry Figure A

1. Graph



Ripple-Noise is shown as p-p in the figure below.
Note: Slanted line shows the range of the rated load current.

リップルノイズは、下図ｐ－ｐ値で示される。
（注）斜線は定格負荷電流範囲を示す。

T1: Due to AC Input Line
入力商用周期
T2: Due to Switching
ｽｲｯﾁﾝｸﾞ周期

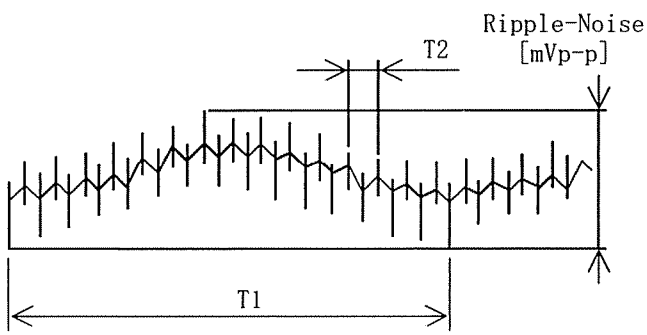


Fig. Complex Ripple Wave Form
図　リップル波形詳細図

2. Values

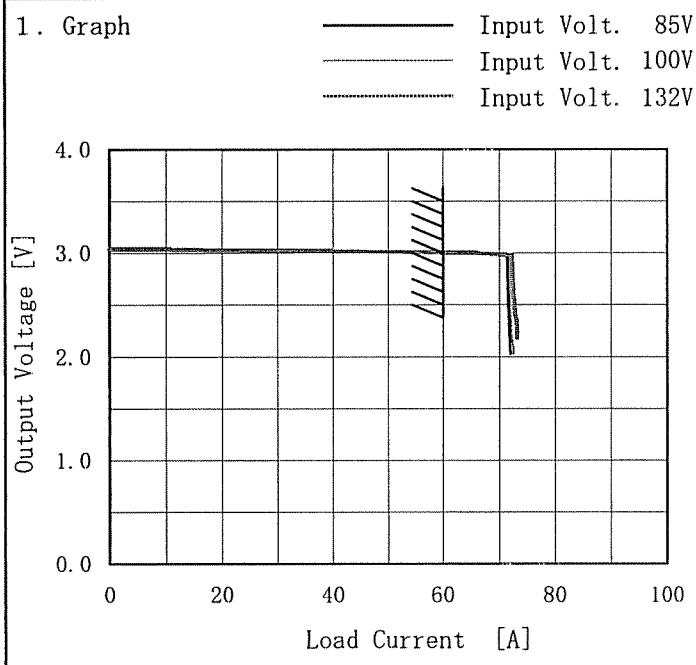
Load Current [A]	Ripple-Noise [mV]	
	Input Volt. 85 [V]	Input Volt. 132 [V]
0	10	10
10	20	25
20	30	30
30	35	35
40	40	40
50	45	55
60	55	60
66	60	60
--	—	—
--	—	—
--	—	—

COSEL

Model	LDA300W-3
Item	Overcurrent Protection 過電流保護
Object	+3V60A

Temperature 25℃
Testing Circuitry Figure A

1. Graph



Note: Slanted line shows the range of the rated load current.
(注) 斜線は定格負荷電流範囲を示す。

Intermittent opertion occurs when the output voltage is from 2V to 0V.
2V～0V間は、間欠モードとなる。

2. Values

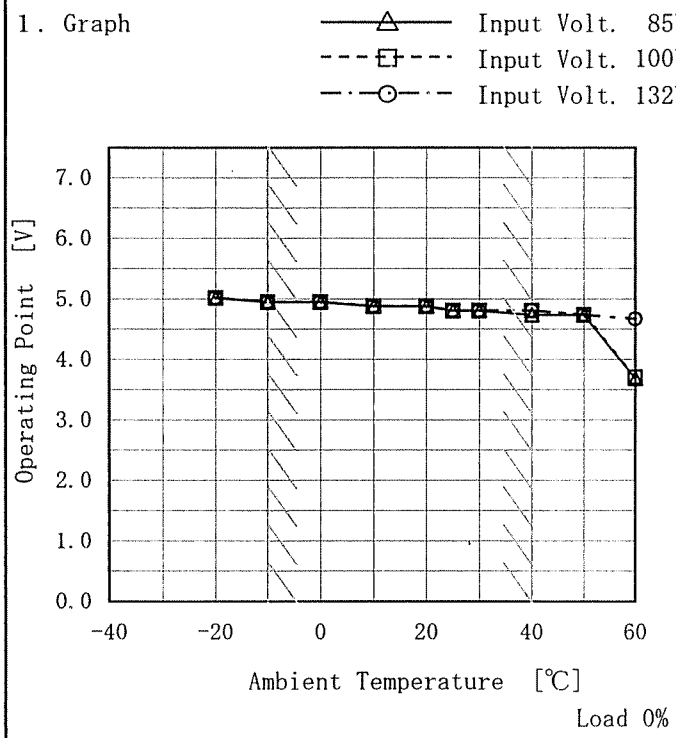
Output Voltage [V]	Load Current [A]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
3.00	65.86	65.84	65.98
2.85	71.38	71.71	72.34
2.70	71.44	71.77	72.46
2.40	71.62	72.01	72.91
2.10	71.89	72.49	73.15
--	—	—	—
--	—	—	—
--	—	—	—
--	—	—	—
--	—	—	—
--	—	—	—
--	—	—	—

COSEL

Model	LDA300W-3
Item	Overvoltage Protection 過電圧保護
Object	+3V60A

Testing Circuitry Figure A

1. Graph



Note: Slanted line shows the range of the rated ambient temperature.

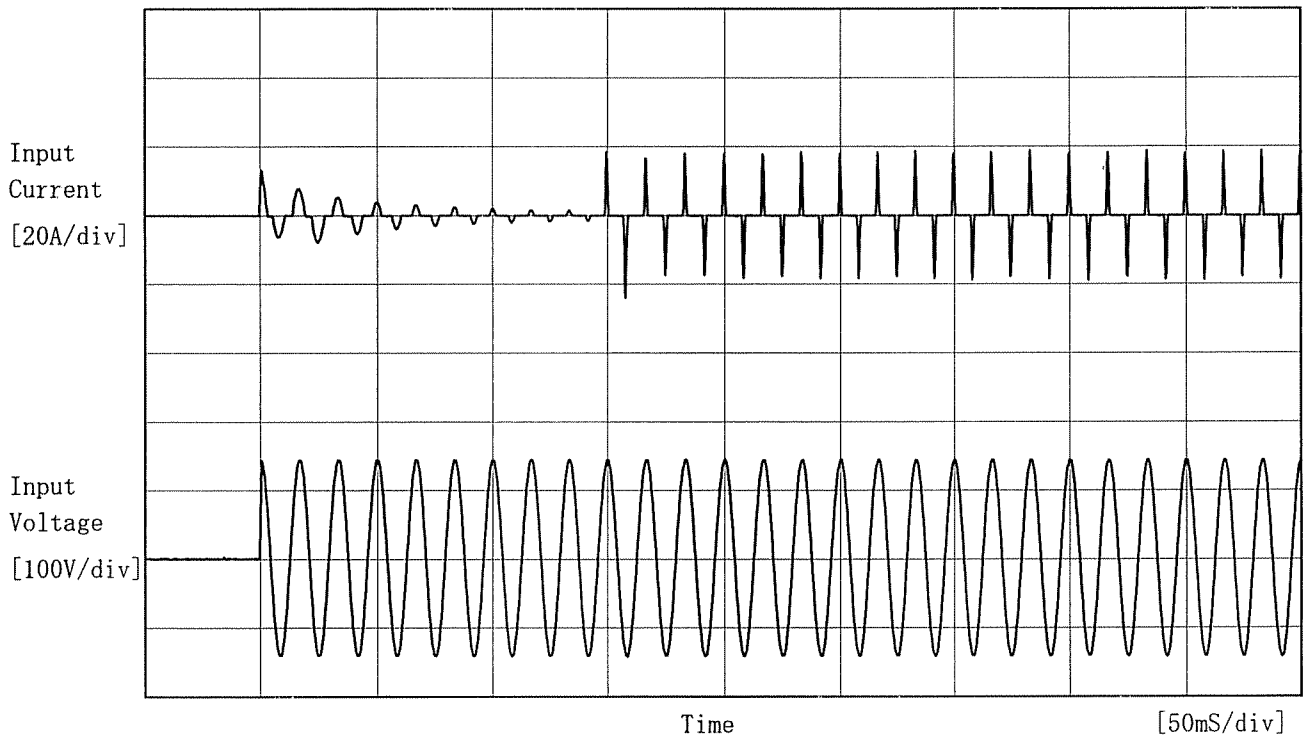
(注) 斜線は定格周囲温度範囲を示す。

2. Values

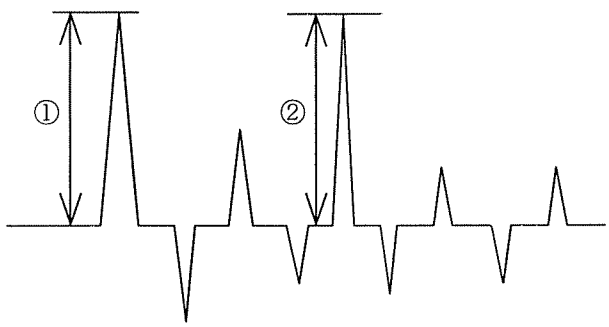
Ambient Temperature [℃]	Operating Point [V]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
-20	5.02	5.02	5.02
-10	4.95	4.95	4.95
0	4.95	4.95	4.95
10	4.88	4.88	4.88
20	4.88	4.88	4.88
25	4.81	4.81	4.81
30	4.81	4.81	4.81
40	4.74	4.81	4.81
50	4.74	4.74	4.74
60	3.69	3.71	4.67
--	—	—	—

COSEL

Model	LDA300W-3		
Item	Inrush Current 突入電流	Temperature Testing Circuitry	25℃ Figure A
Object	————————		



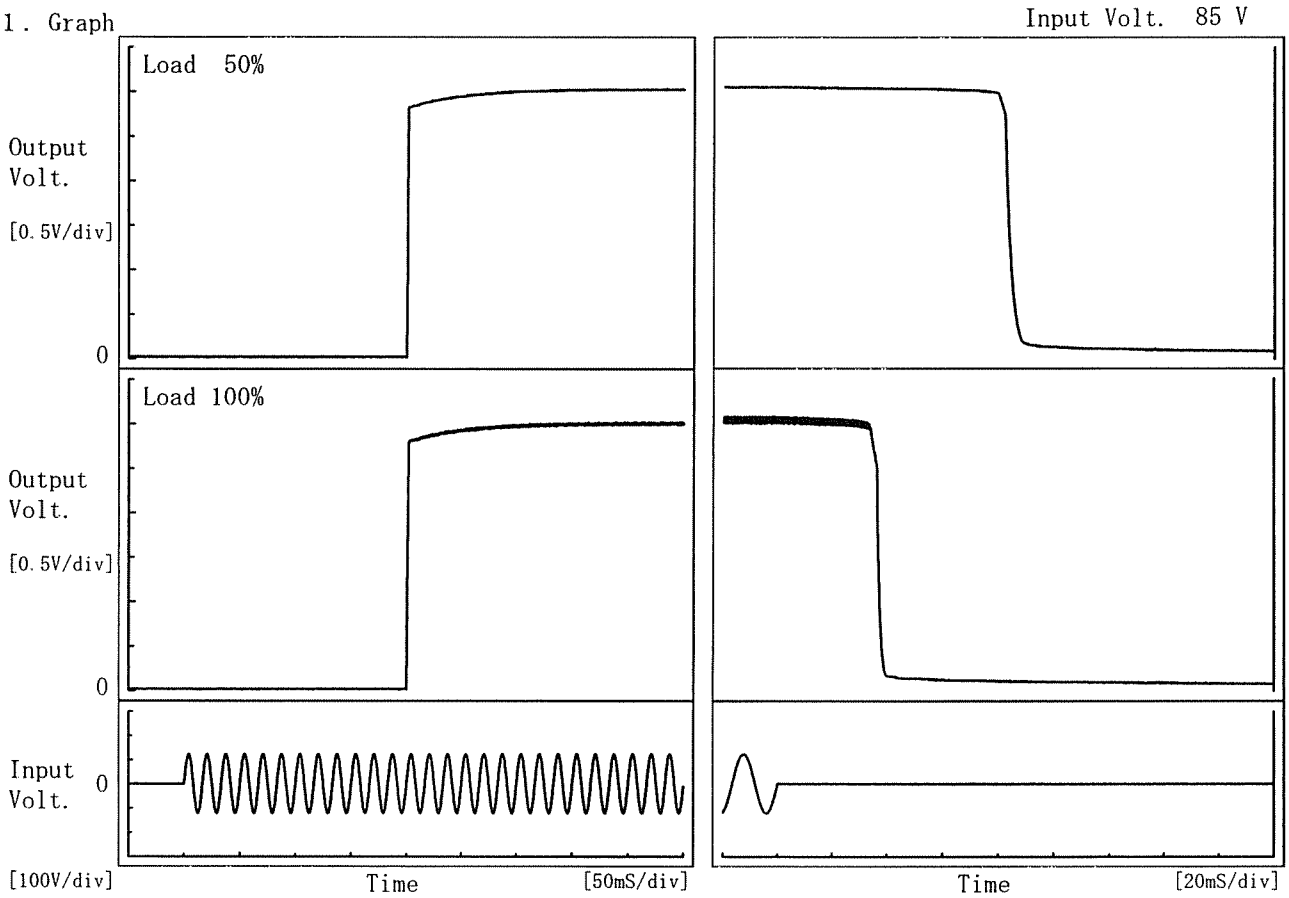
Input Voltage 100 V
Frequency 60 Hz
Load 100 %
Inrush Current
① 13.1 [A]
② 24.0 [A]



COSEL

Model	LDA300W-3		
Item	Rise and Fall Time 立上り、立下り時間	Temperature	25℃
		Testing Circuitry	Figure A
Object	+3V60A		

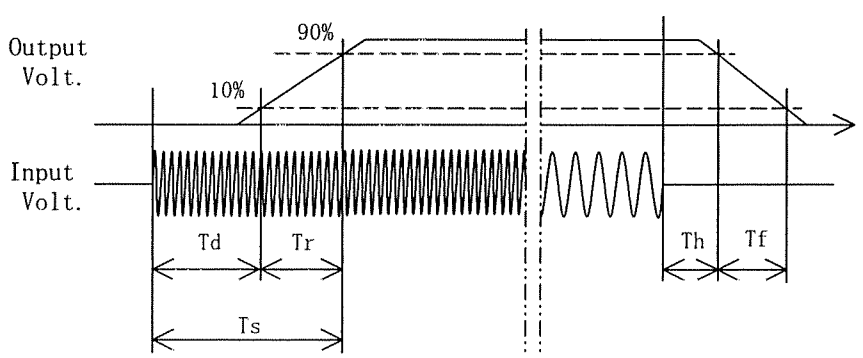
1. Graph



2. Values

[mS]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	200.5	1.3	201.8	82.1	4.9
100 %	200.3	1.8	202.0	35.1	3.6

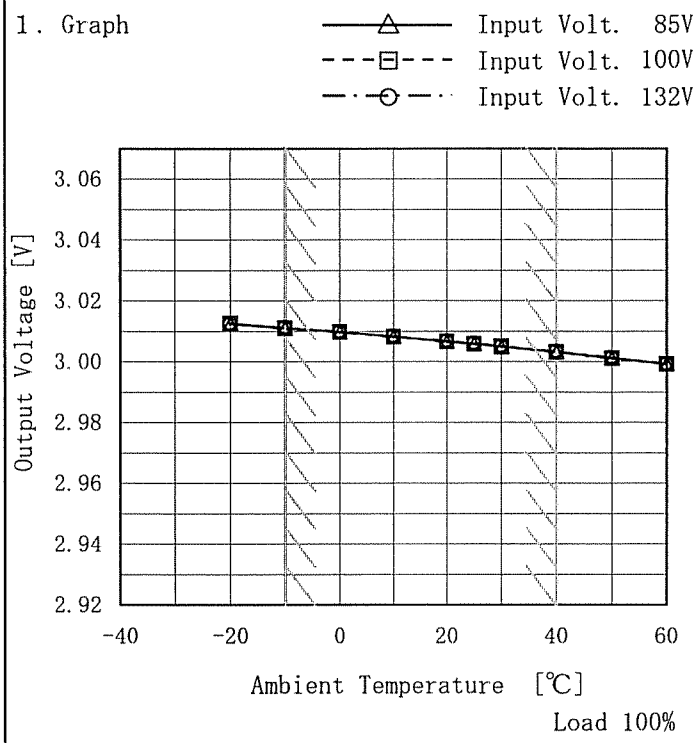


COSEL

Model	LDA300W-3
Item	Ambient Temperature Drift 周囲温度変動
Object	+3V60A

Testing Circuitry Figure A

1. Graph



Note: Slanted line shows the range of the rated ambient temperature.

（注）斜線は定格周囲温度範囲を示す。

2. Values

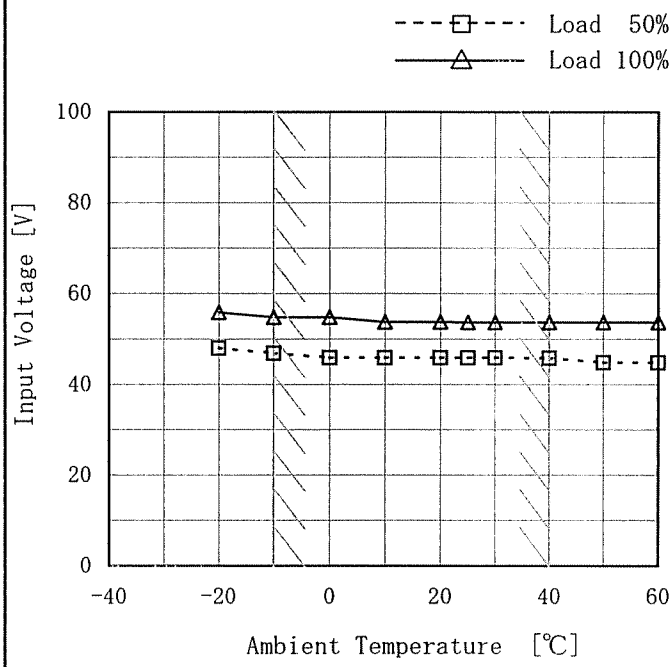
Ambient Temperature [℃]	Output Voltage [V]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
-20	3.013	3.013	3.013
-10	3.011	3.011	3.011
0	3.010	3.010	3.010
10	3.008	3.008	3.008
20	3.007	3.007	3.007
25	3.006	3.006	3.006
30	3.005	3.005	3.005
40	3.003	3.003	3.003
50	3.001	3.001	3.001
60	2.999	2.999	2.999
--	—	—	—

COSEL

Model	LDA300W-3
Item	Minimum Input Voltage for Regulated Output Voltage 最低レギュレーション電圧
Object	+3V60A

Testing Circuitry Figure A

1. Graph



Note: Slanted line shows the range of the rated ambient temperature.

(注) 斜線は定格周囲温度範囲を示す。

2. Values

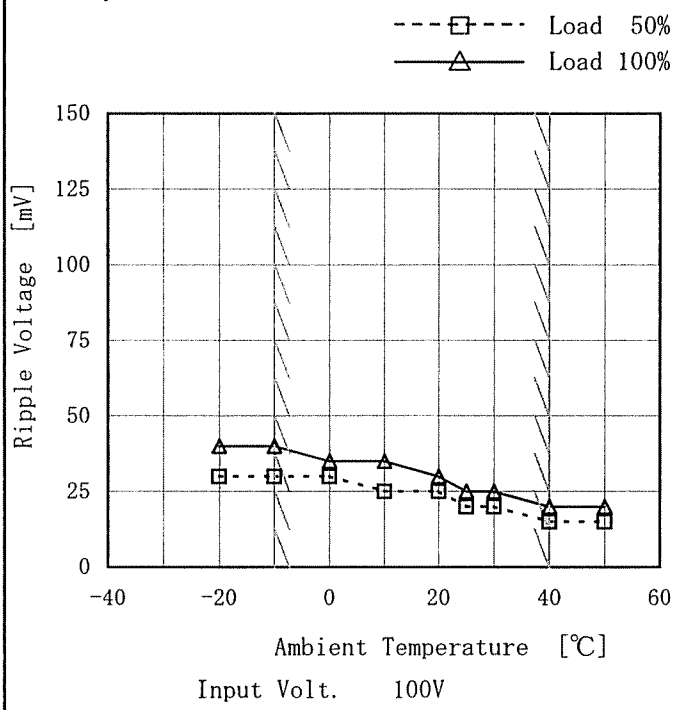
Ambient Temperature [℃]	Input Voltage [V]	
	Load 50%	Load 100%
-20	48	56
-10	47	55
0	46	55
10	46	54
20	46	54
25	46	54
30	46	54
40	46	54
50	45	54
60	45	54
--	—	—

COSEL

Model	LDA300W-3
Item	Ripple Voltage (by Ambient Temp.) リップル電圧（周囲温度特性）
Object	+3V60A

Testing Circuitry Figure A

1. Graph



Input Volt. 100V

Note: Slanted line shows the range of the rated ambient temperature.

（注）斜線は定格周囲温度範囲を示す。

2. Values

Ambient Temperature [℃]	Ripple Voltage [mV]	
	Load 50%	Load 100%
-20	30	40
-10	30	40
0	30	35
10	25	35
20	25	30
25	20	25
30	20	25
40	15	20
50	15	20
--	—	—
--	—	—

COSEL

Model	LDA300W-3
Item	Output Voltage Accuracy 定電圧精度
Object	+3V60A

Testing Circuitry Figure A

1. Output Voltage Accuracy

This is defined as the value of the output voltage, regulation load, ambient temperature and input voltage varied at random in the range as specified below.

Temperature : -10 ～ 40℃
Input Voltage : 85 ～ 132V
Load Current : 0 ～ 60A

* Output Voltage Accuracy = ±(Maximum of Output Voltage − Minimum of Output Voltage)／2

$$* \text{Output Voltage Accuracy (Ration)} = \frac{\text{Output Voltage}}{\text{Rated Output Voltage}} \times 100$$

1. 定電圧精度

周囲温度、入力電圧、負荷電流を下記仕様内で、任意に変動させたときの出力電圧の変動をいう。

周囲温度 : -10 ～ 40℃
入力電圧 : 85 ～ 132V
負荷電流 : 0 ～ 60A

* 定電圧精度(変動値) ＝ ±(出力電圧の最高値−出力電圧の最低値)／2

$$* \text{定電圧精度(変動率)} = \frac{\text{変動値}}{\text{定格出力電圧}} \times 100$$

2. Values

Item	Temperature [℃]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	-10	85	0	3.046	±22	±0.7
Minimum Voltage	40	100	60	3.003		

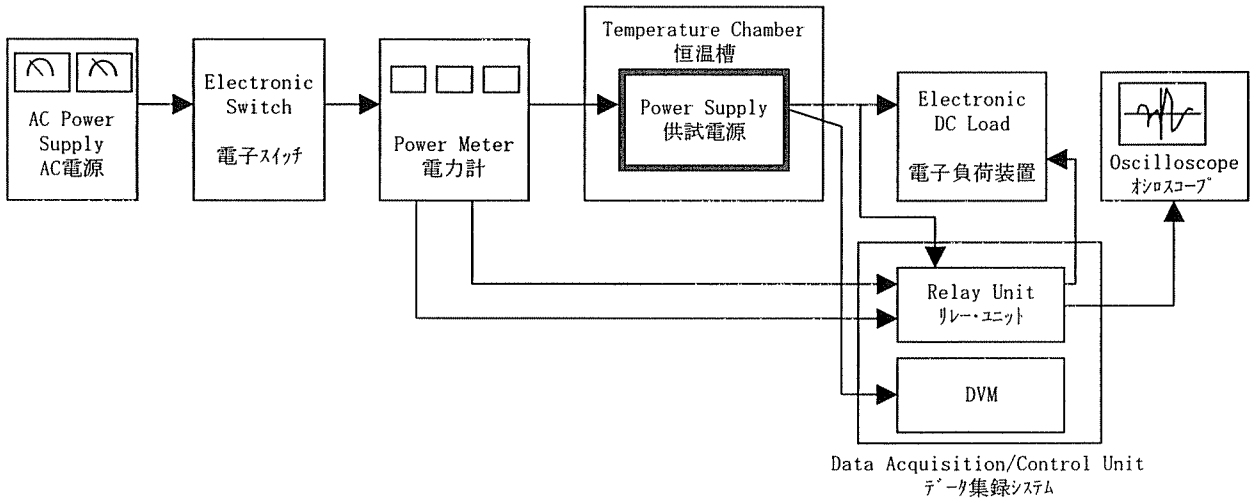

AC Power
Supply
AC電源
Electronic
Switch
電子ｽｲｯﾁ
Power Meter
電力計
Temperature Chamber
恒温槽
Power Supply
供試電源
Electronic
DC Load
電子負荷装置
Oscilloscope
ｵｼﾛｽｺｰﾌﾟ
Relay Unit
ﾘﾚｰ･ﾕﾆｯﾄ
DVM
Data Acquisition/Control Unit
ﾃﾞｰﾀ集録ｼｽﾃﾑ

Figure A