参考資料

COSEL

TEST DATA OF LDA150W-48

(200V INPUT)

Regulated DC Power Supply

Nov.5. 2001

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コーセル株式会社

COSEL CO.,LTD.

COSEL

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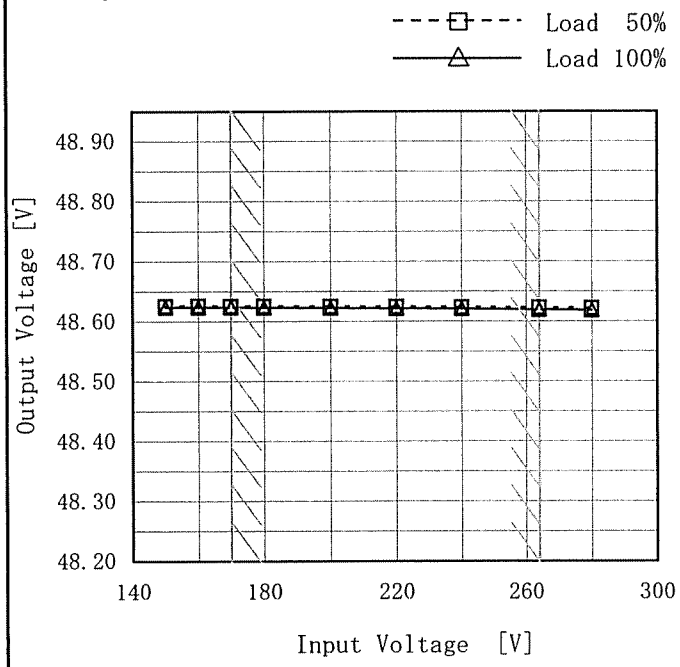


Note: Slanted line shows the range of the rated input voltage.

（注）斜線は定格入力電圧範囲を示す。

2. Values

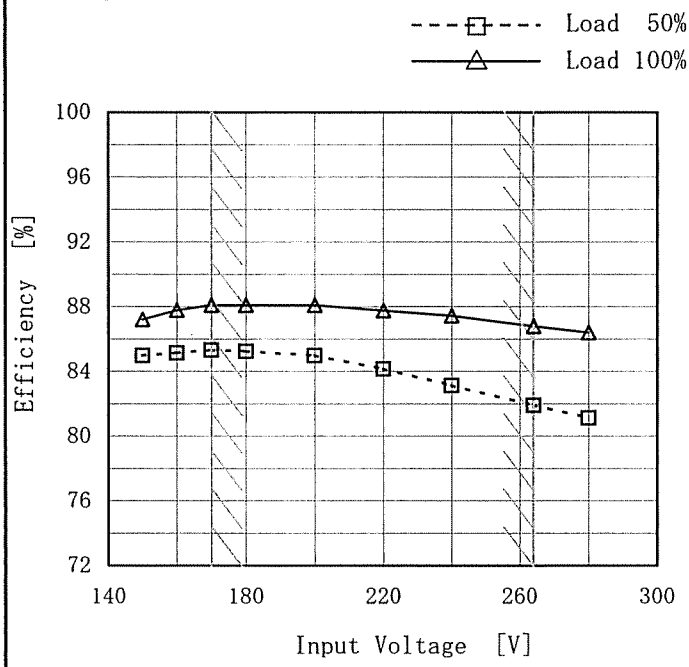
Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
150	48.626	48.624
160	48.626	48.624
170	48.626	48.624
180	48.625	48.623
200	48.625	48.623
220	48.624	48.622
240	48.624	48.621
264	48.623	48.620
280	48.622	48.619

COSEL

Model	LDA150W-48
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

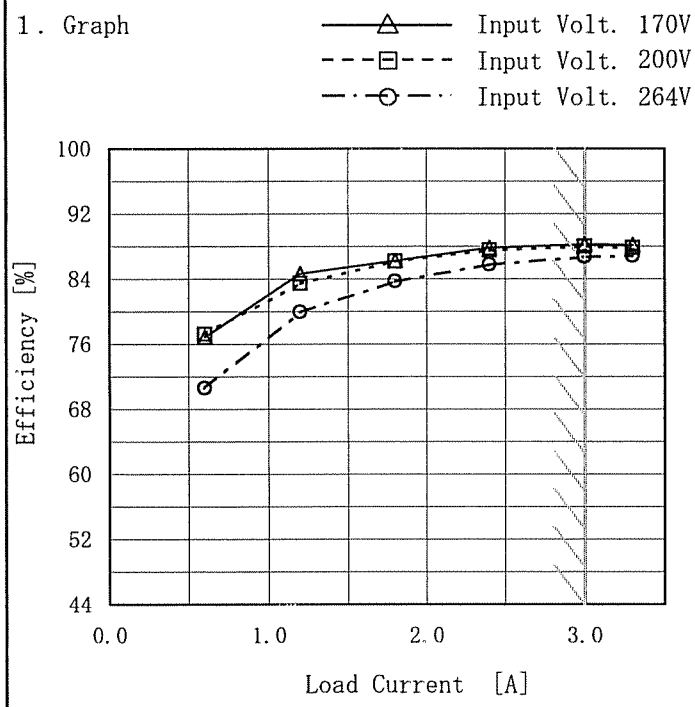
Input Voltage [V]	Efficiency [%]	
	Load 50%	Load 100%
150	85.0	87.2
160	85.1	87.8
170	85.3	88.1
180	85.2	88.1
200	85.0	88.1
220	84.2	87.8
240	83.1	87.4
264	81.9	86.8
280	81.1	86.4

COSEL

Model	LDA150W-48
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

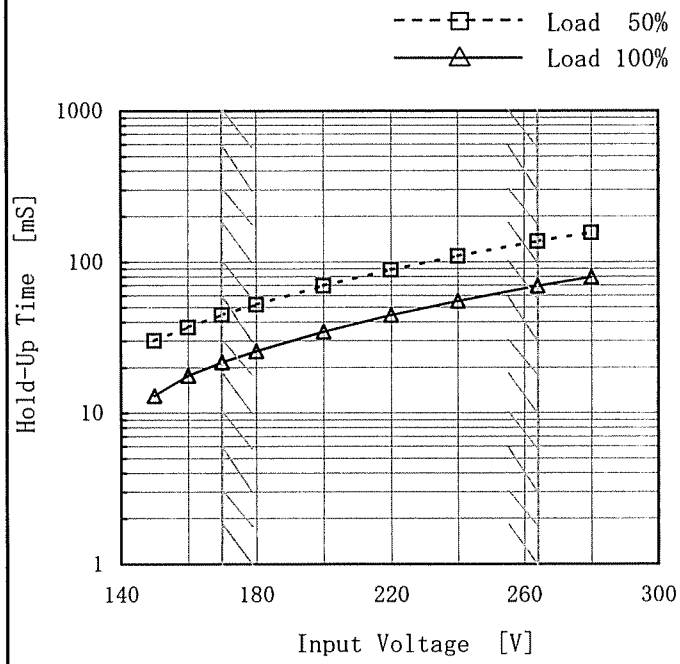
Load Current [A]	Efficiency [%]		
	Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]
0.0	—	—	—
0.6	76.9	77.2	70.6
1.2	84.7	83.5	79.9
1.8	86.2	86.2	83.7
2.4	87.8	87.5	85.8
3.0	88.2	88.0	86.7
3.3	88.2	87.8	86.8
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—

COSEL

Model	LDA150W-48
Item	Hold-Up Time 出力保持時間
Object	+48V3A

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

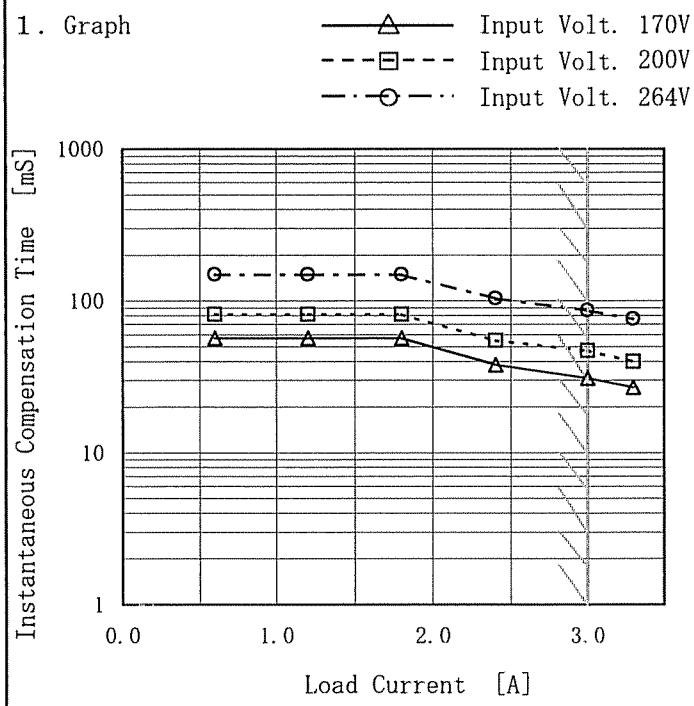
Input Voltage [V]	Hold-Up Time [mS]	
	Load 50%	Load 100%
150	30	13
160	37	18
170	45	22
180	52	26
200	70	35
220	89	45
240	110	55
264	137	69
280	156	80

COSEL

Model	LDA150W-48
Item	Instantaneous Interruption Compensation 瞬時停電保障
Object	+48V3A

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

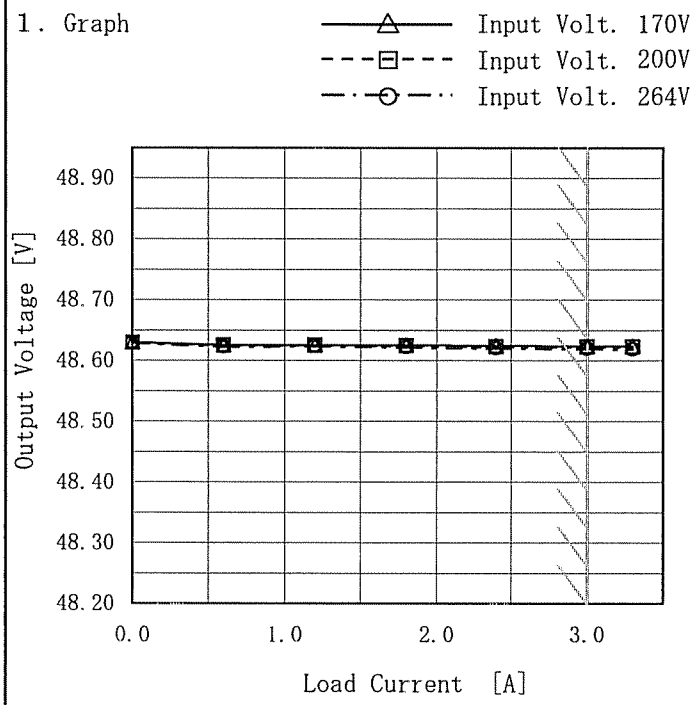
Load Current [A]	Time [mS] Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]
0.0	—	—	—
0.6	57	82	149
1.2	57	82	149
1.8	57	82	149
2.4	38	55	104
3.0	31	47	87
3.3	27	40	76
--	—	—	—
--	—	—	—
--	—	—	—
--	—	—	—

COSEL

Model	LDA150W-48
Item	Load Regulation 静的負荷変動
Object	+48V3A

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

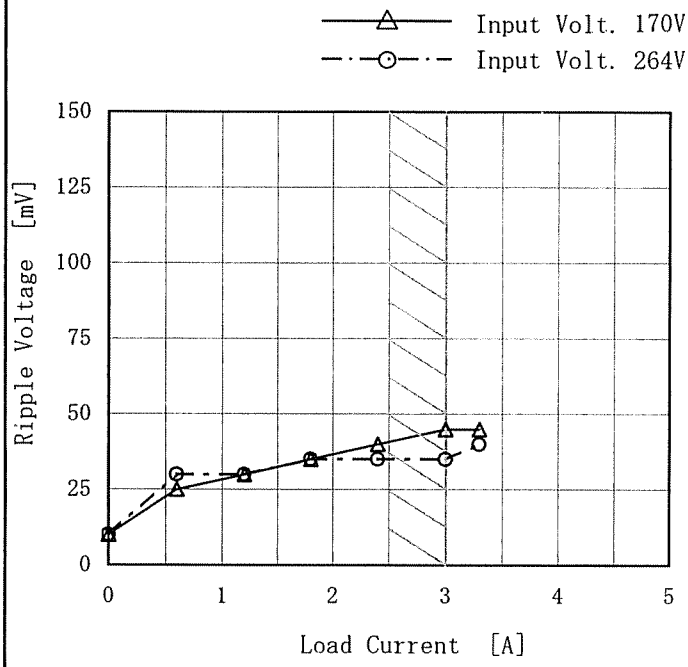
Load Current [A]	Output Voltage [V]		
	Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]
0.0	48.630	48.630	48.630
0.6	48.625	48.625	48.623
1.2	48.626	48.625	48.624
1.8	48.625	48.624	48.622
2.4	48.624	48.623	48.621
3.0	48.624	48.623	48.620
3.3	48.624	48.623	48.619
--	—	—	—
--	—	—	—
--	—	—	—

COSEL

Model	LDA150W-48
Item	Ripple Voltage (by Load Current) リップル電圧（負荷特性）
Object	+48V3A

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

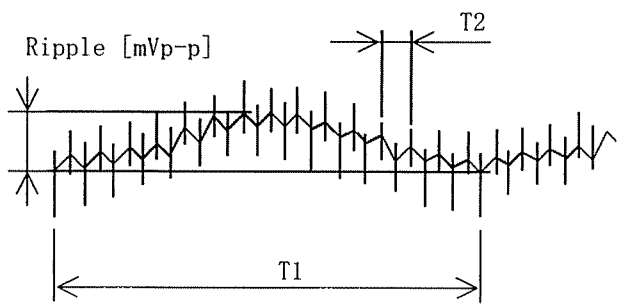


Fig. Complex Ripple Wave Form
図　リップル波形詳細図

2. Values

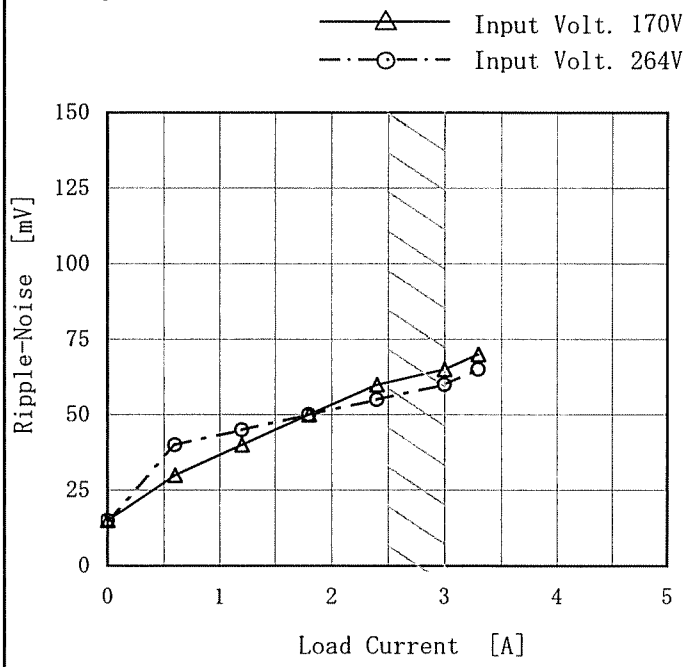
Load Current [A]	Ripple Voltage [mV]	
	Input Volt. 170 [V]	Input Volt. 264 [V]
0.0	10	10
0.6	25	30
1.2	30	30
1.8	35	35
2.4	40	35
3.0	45	35
3.3	45	40
--	—	—
--	—	—
--	—	—
--	—	—

COSEL

Model	LDA150W-48
Item	Ripple-Noise リップルノイズ
Object	+48V3A

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

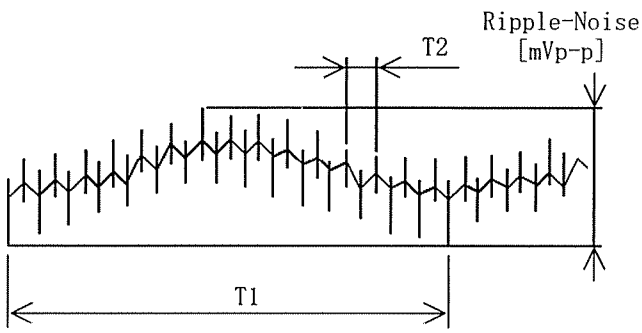


Fig. Complex Ripple Wave Form
図 リップル波形詳細図

2. Values

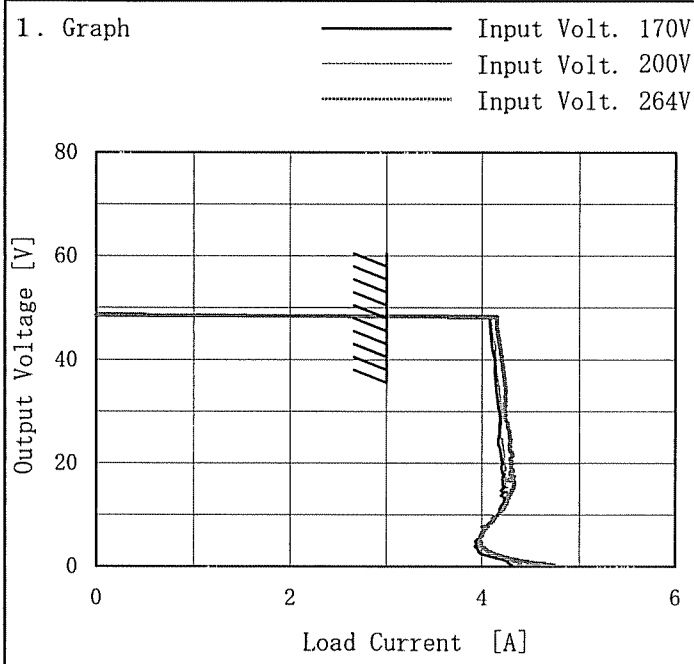
Load Current [A]	Ripple-Noise [mV]	
	Input Volt. 170 [V]	Input Volt. 264 [V]
0.0	15	15
0.6	30	40
1.2	40	45
1.8	50	50
2.4	60	55
3.0	65	60
3.3	70	65
--	—	—
--	—	—
--	—	—
--	—	—

COSEL

Model	LDA150W-48
Item	Overcurrent Protection 過電流保護
Object	+48V3A

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

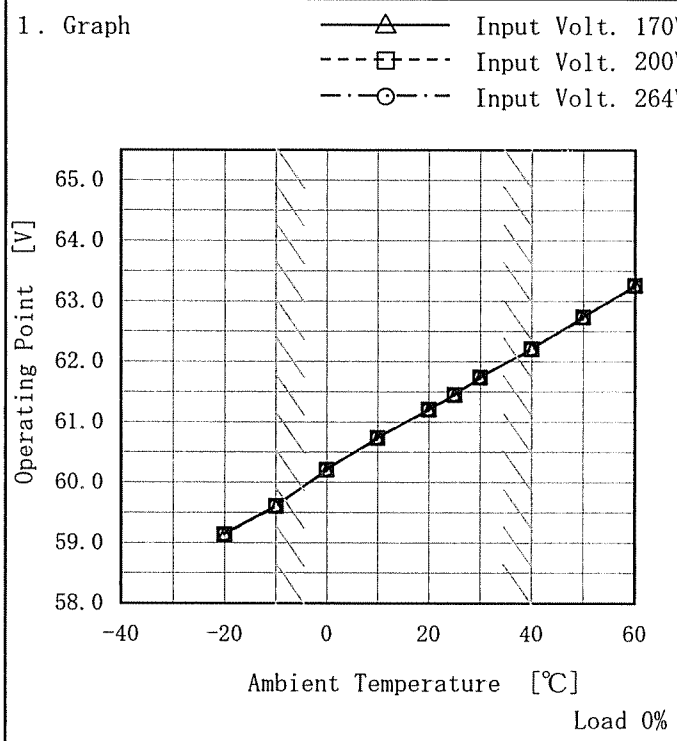
Output Voltage [V]	Load Current [A]		
	Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]
48.0	4.08	4.09	4.16
45.6	4.09	4.10	4.16
43.2	4.10	4.13	4.18
38.4	4.13	4.15	4.22
33.6	4.15	4.18	4.24
28.8	4.18	4.20	4.24
24.0	4.17	4.21	4.29
19.2	4.20	4.24	4.30
14.4	4.23	4.26	4.30
9.6	4.15	4.14	4.11
4.8	3.93	3.95	3.99
0.0	4.31	4.37	4.74

COSEL

Model	LDA150W-48
Item	Overvoltage Protection 過電圧保護
Object	+48V3A

Testing Circuitry Figure A

1. Graph



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

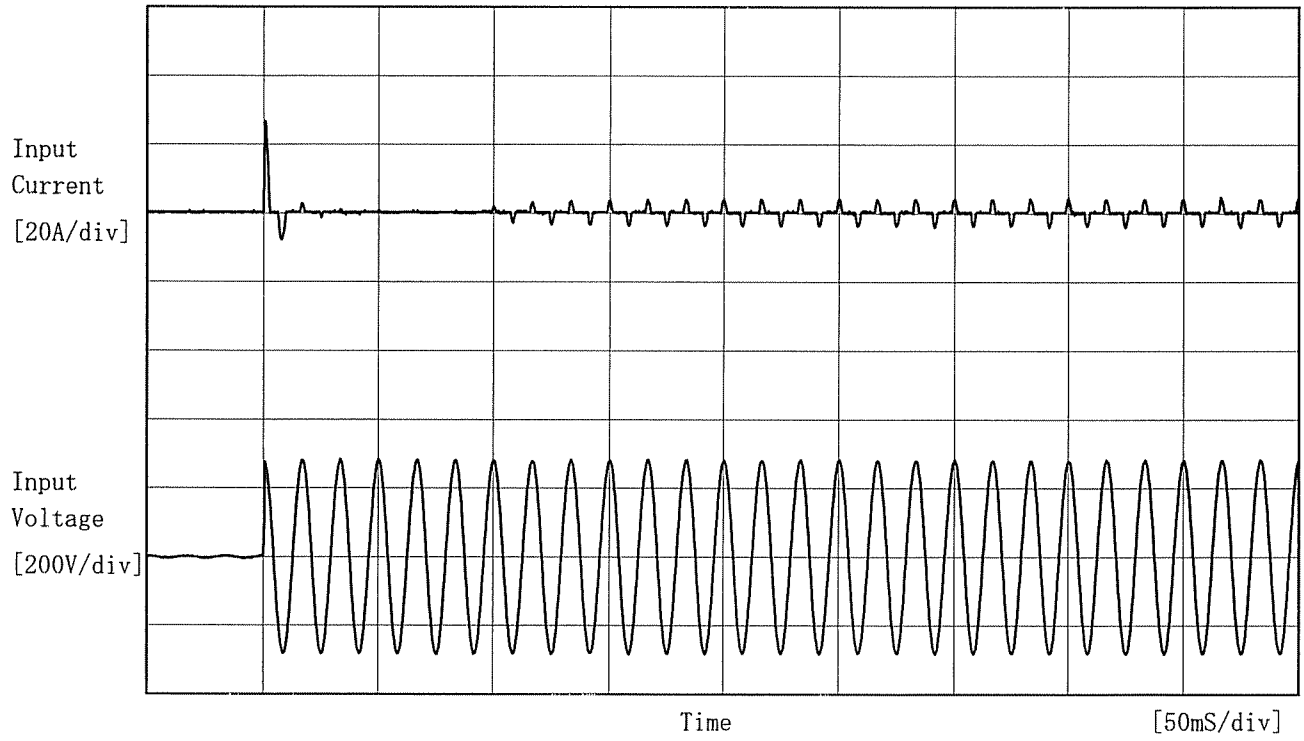
（注）斜線は定格周囲温度範囲を示す。

2. Values

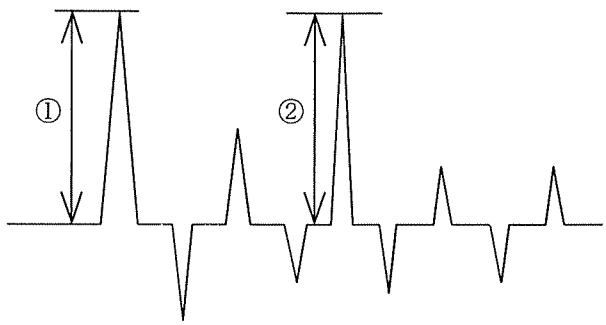
Ambient Temperature [℃]	Operating Point [V]		
	Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]
-20	59.15	59.14	59.14
-10	59.61	59.61	59.61
0	60.21	60.21	60.21
10	60.74	60.74	60.74
20	61.21	61.21	61.21
25	61.45	61.45	61.45
30	61.74	61.74	61.74
40	62.21	62.21	62.21
50	62.74	62.74	62.73
60	63.26	63.26	63.26
--	—	—	—

COSEL

Model	LDA150W-48		
Item	Inrush Current 突入電流	Temperature Testing Circuitry	25℃ Figure A
Object	――――――――		



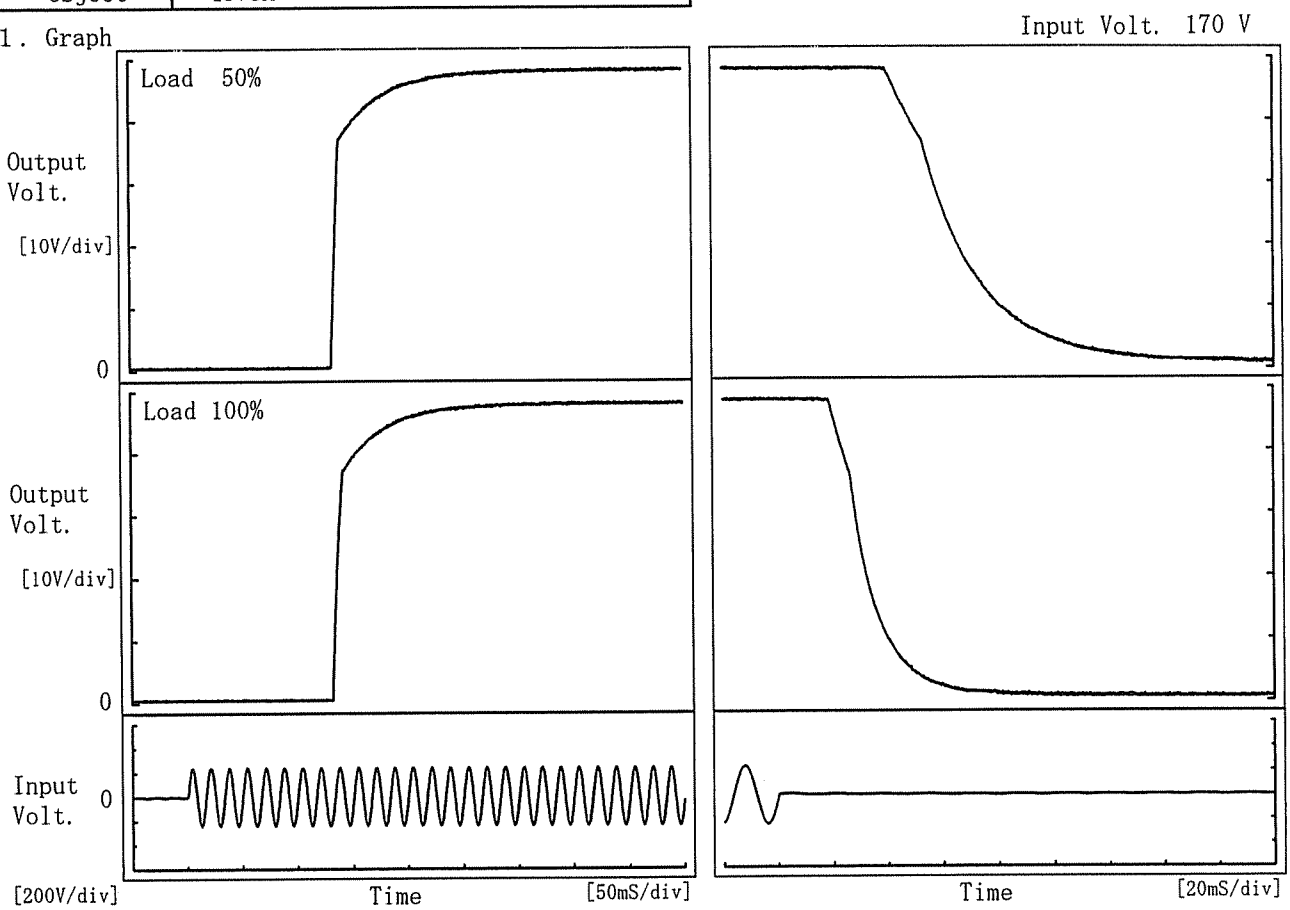
Input Voltage 200 V
Frequency 60 Hz
Load 100 %
Inrush Current
① 26.8 [A]
② 4.8 [A]



COSEL

Model	LDA150W-48		
Item	Rise and Fall Time 立上り、立下り時間	Temperature	25℃
		Testing Circuitry	Figure A
Object	+48V3A		

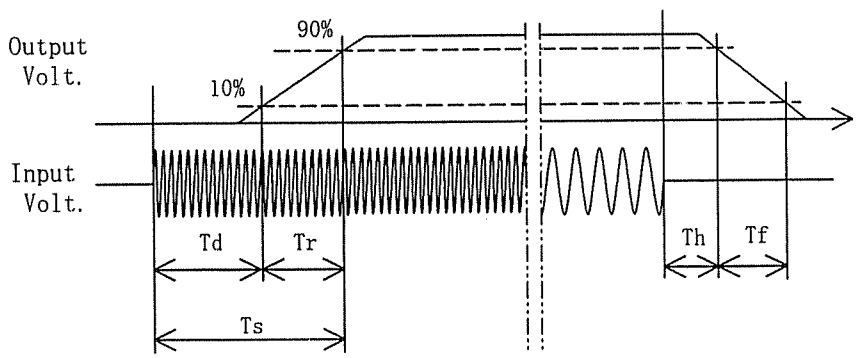
1. Graph



2. Values

[mS]

Load \ Time	T d	T r	T s	T h	T f
50 %	133.0	41.0	174.0	44.0	52.9
100 %	133.0	42.3	175.3	21.2	27.0



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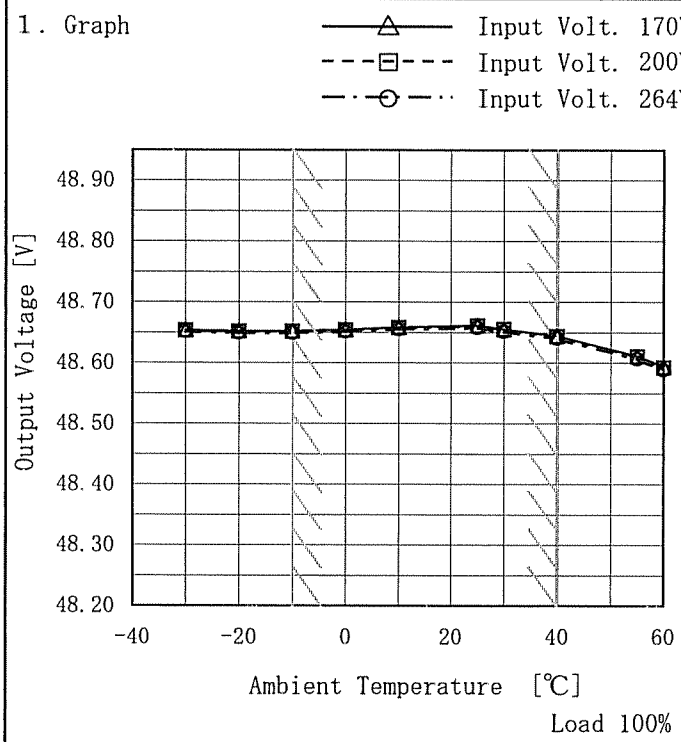
COSEL

Model	LDA150W-48
Item	Ambient Temperature Drift 周囲温度変動
Object	+48V3A

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

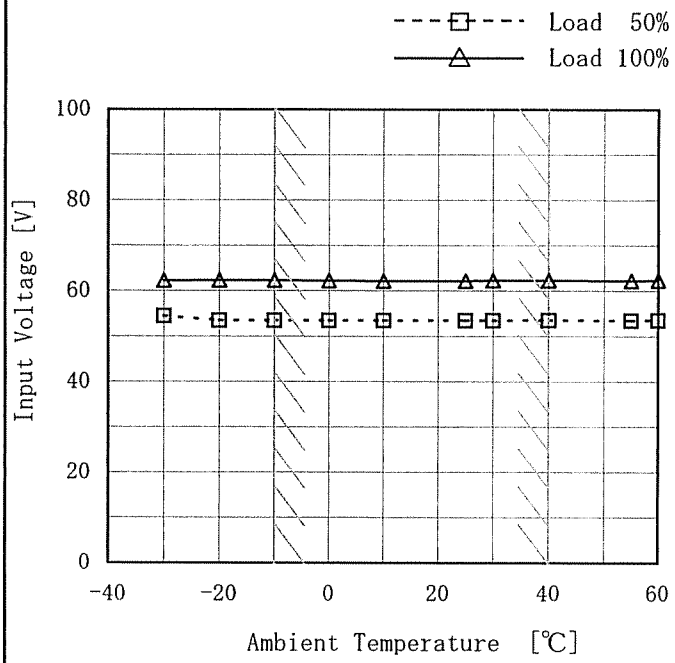
Ambient Temperature [℃]	Output Voltage [V]		
	Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]
-30	48.653	48.653	48.652
-20	48.653	48.652	48.649
-10	48.652	48.651	48.649
0	48.655	48.654	48.652
10	48.659	48.658	48.655
25	48.661	48.661	48.658
30	48.656	48.655	48.652
40	48.645	48.643	48.640
55	48.612	48.611	48.607
60	48.594	48.592	48.588
--	—	—	—

COSEL

Model	LDA150W-48
Item	Minimum Input Voltage for Regulated Output Voltage 最低レギュレーション電圧
Object	+48V3A

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

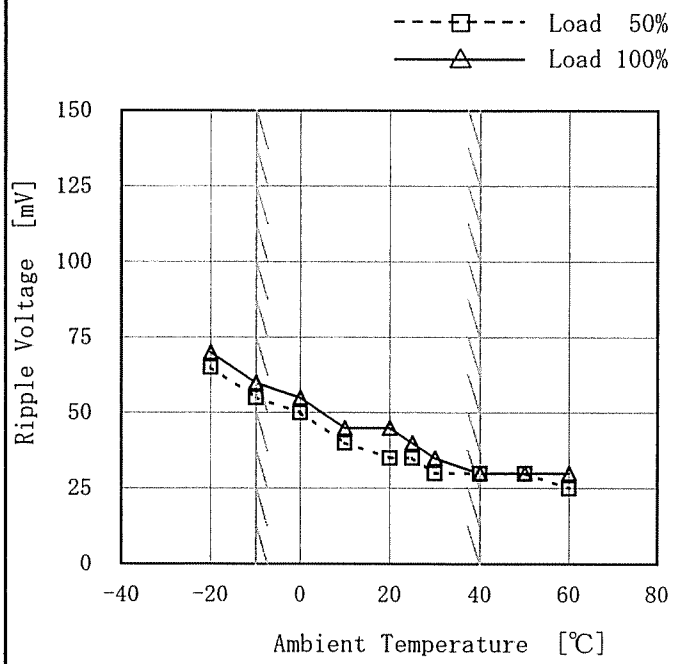
Ambient Temperature [℃]	Input Voltage [V]	
	Load 50%	Load 100%
-30	54	62
-20	54	62
-10	53	62
0	54	62
10	54	62
25	53	62
30	54	62
40	54	62
55	53	62
60	54	62
--	—	—

COSEL

Model	LDA150W-48
Item	Ripple Voltage (by Ambient Temp.) リップル電圧 (周囲温度特性)
Object	+48V3A

Testing Circuitry Figure A

1. Graph



Input Volt. 200V

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	65	70
-10	55	60
0	50	55
10	40	45
20	35	45
25	35	40
30	30	35
40	30	30
50	30	30
60	25	30
--	—	—

COSEL

Model	LDA150W-48
Item	Output Voltage Accuracy 定電圧精度
Object	+48V3A

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 : 170 ～ 264V
Load Current : 0 ～ 3A

* 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 : 170 ～ 264V
負荷電流 : 0 ～ 3A

* 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	25	200	0	48.667	±16	±0.1
Minimum Voltage	40	264	3	48.635		

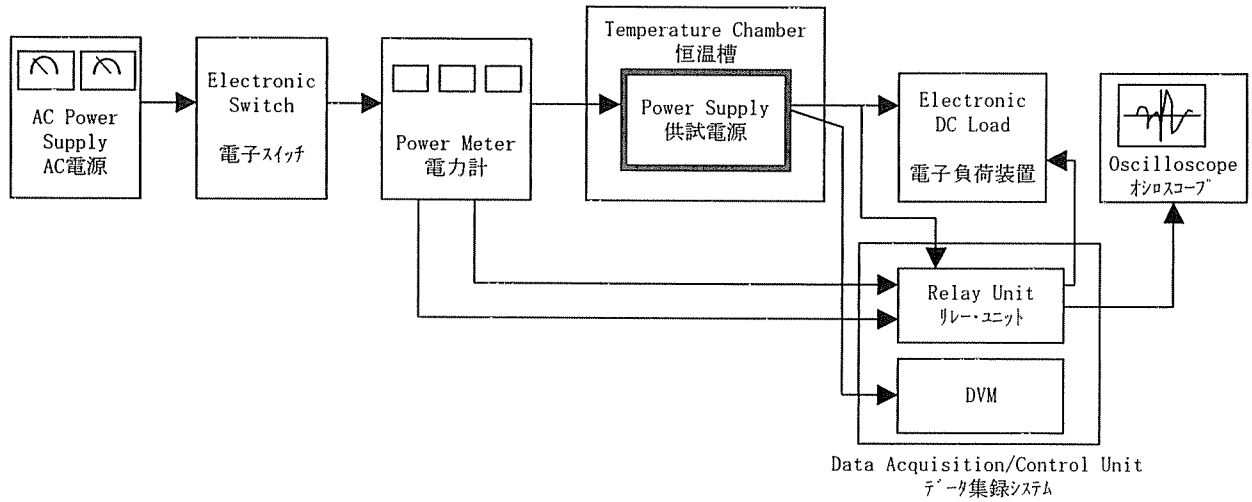

AC Power
Supply
AC電源
Electronic
Switch
電子ｽｲｯﾁ
Power Meter
電力計
Temperature Chamber
恒温槽
Power Supply
供試電源
Electronic
DC Load
電子負荷装置
Oscilloscope
ｵｼﾛｽｺｰﾌﾟ
Relay Unit
ﾘﾚｰ･ﾕﾆｯﾄ
DVM
Data Acquisition/Control Unit
ﾃﾞｰﾀ集録ｼｽﾃﾑ

Figure A