参考資料

COSEL

TEST DATA OF LCA100S-24-H

(100V INPUT)

Regulated DC Power Supply

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コーセル株式会社

COSEL CO., LTD.

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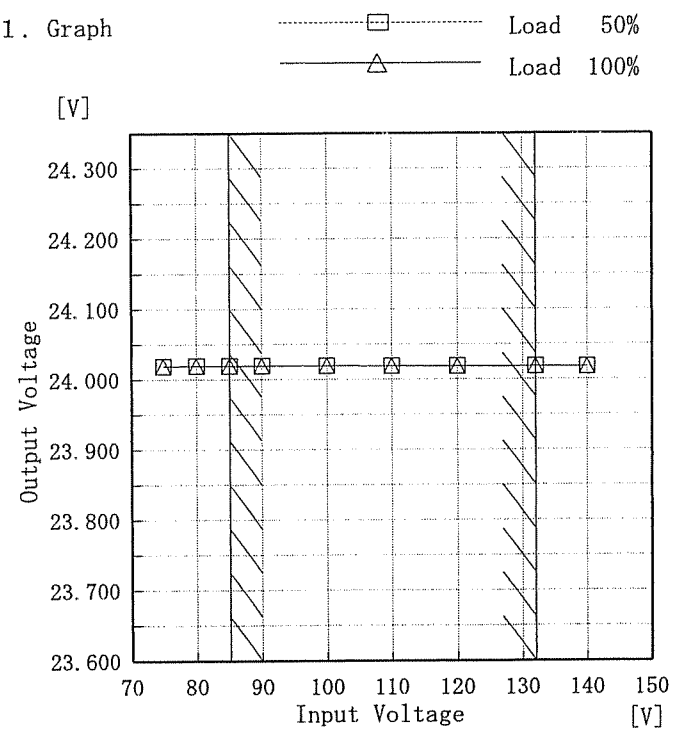
Item	Line Regulation 静的入力変動
Object	+24.0V4.3A

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	24.019	24.019
80	24.020	24.019
85	24.020	24.020
90	24.020	24.020
100	24.019	24.020
110	24.019	24.019
120	24.019	24.019
132	24.019	24.019
140	24.018	24.018

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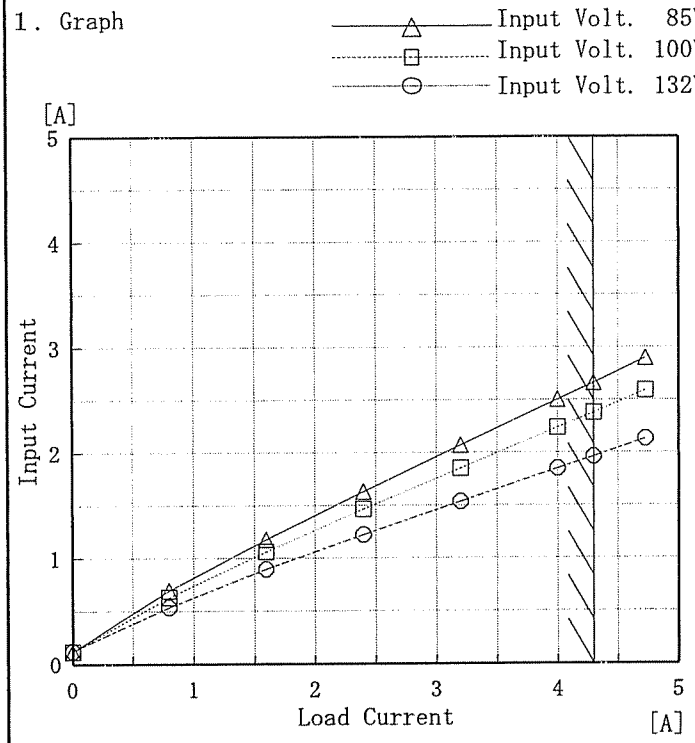
Model	LCA100S-24-H
Item	Input Current (by Load Current) 入力電流（負荷特性）
Object	————

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]	Input Current [A]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0.00	0.118	0.119	0.124
0.80	0.696	0.631	0.535
1.60	1.179	1.064	0.898
2.40	1.630	1.465	1.223
3.20	2.070	1.853	1.537
4.00	2.503	2.238	1.847
4.30	2.661	2.379	1.961
4.73	2.896	2.591	2.132
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—

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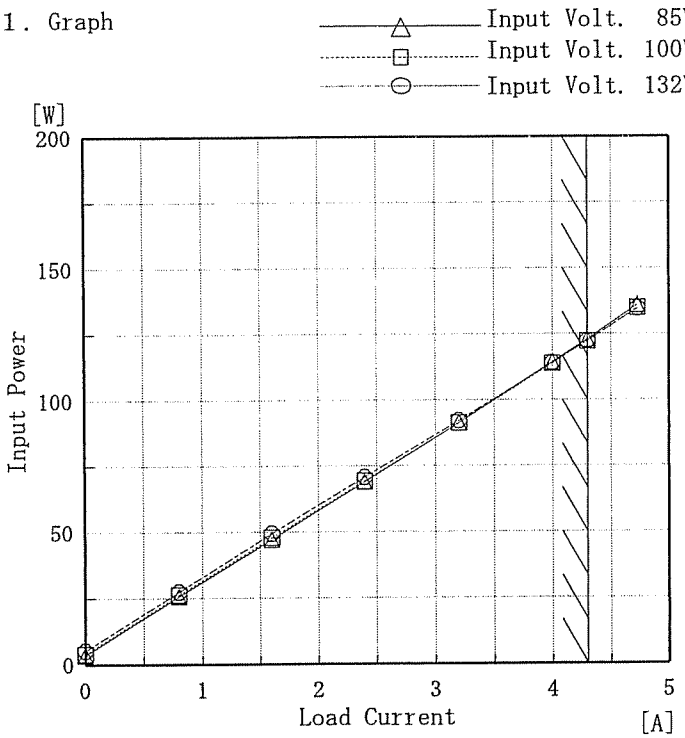
COSEL

Model	LCA100S-24-H
Item	Input Power (by Load Current) 入力電力（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

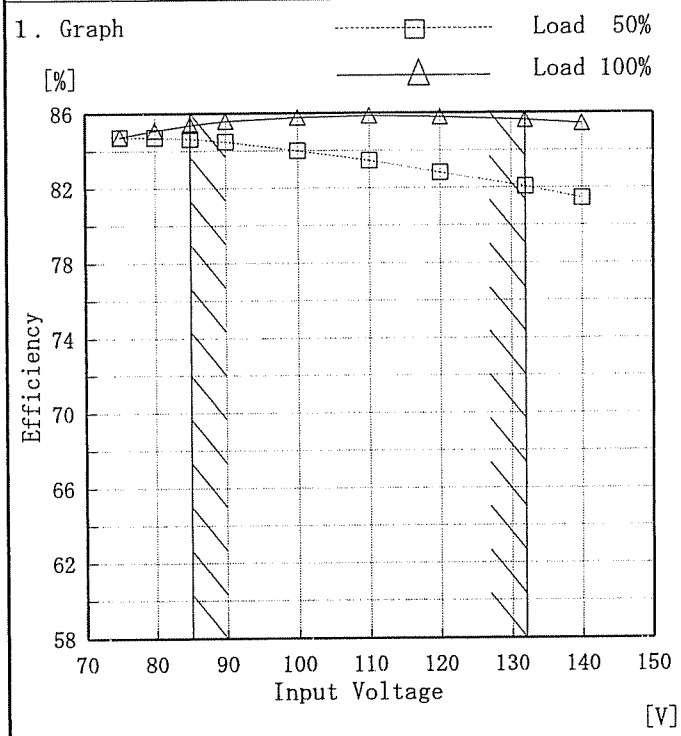
Load Current [A]	Input Power [W]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0.00	3.46	3.97	5.21
0.80	25.78	26.32	27.48
1.60	47.29	47.95	49.60
2.40	69.00	69.38	70.80
3.20	91.30	91.30	92.20
4.00	114.30	113.80	114.10
4.30	122.90	122.20	122.30
4.73	136.00	135.00	134.70
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—

COSEL

Model	LCA100S-24-H
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

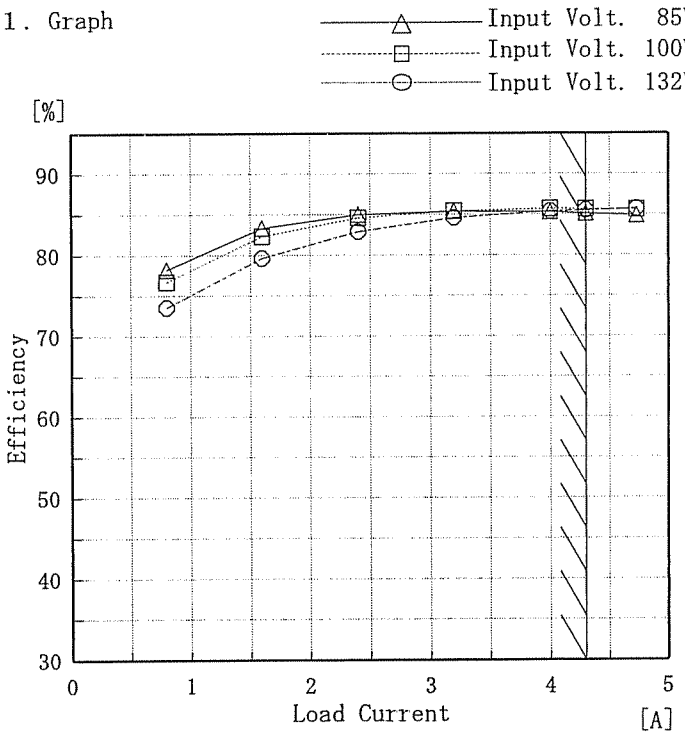
Input Voltage [V]	Efficiency [%]	
	Load 50%	Load 100%
75	84.7	84.8
80	84.7	85.1
85	84.6	85.4
90	84.5	85.6
100	84.0	85.8
110	83.5	85.9
120	82.8	85.8
132	82.1	85.6
140	81.4	85.4

COSEL

Model	LCA100S-24-H
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]
0.80	78.2	76.7	73.5
1.60	83.3	82.3	79.6
2.40	85.0	84.6	82.9
3.20	85.4	85.4	84.6
4.00	85.3	85.7	85.4
4.30	85.1	85.7	85.5
4.73	84.9	85.6	85.7
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—

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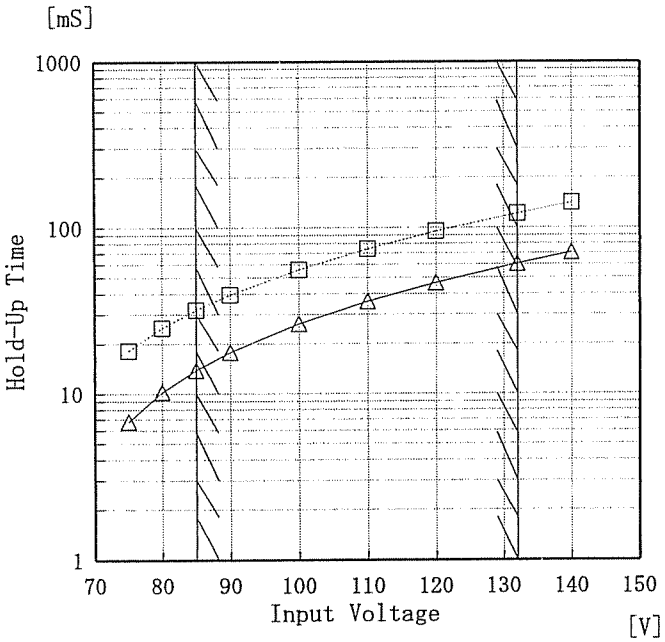
Model	LCA100S-24-H
Item	Hold-Up Time 出力保持時間
Object	+24.0V4.3A

Temperature 25℃
Testing Circuitry Figure A

1. Graph

Load 50%
Load 100%



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、定電圧精度の規格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	18	7
80	25	10
85	32	14
90	40	18
100	56	26
110	75	36
120	95	47
132	122	61
140	141	71

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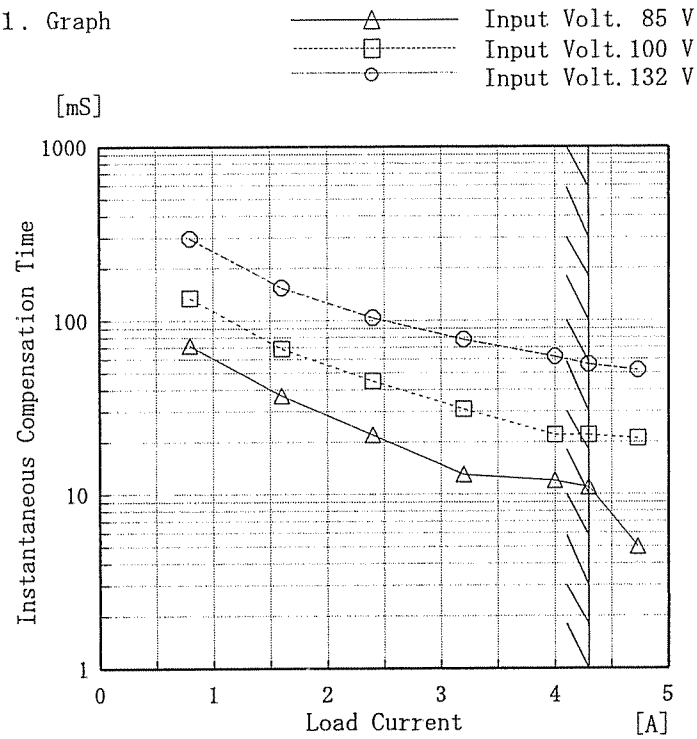
Model	LCA100S-24-H
Item	Instantaneous Interruption Compensation 瞬時停電保障
Object	+24.0V4.3A

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 load current.

瞬時停電保障時間とは、出力電圧が定電圧精度の規格範囲を保持している瞬時停電時間をいう。
(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]
0.00	—	—	—
0.80	72	135	296
1.60	37	69	155
2.40	22	45	104
3.20	13	31	78
4.00	12	22	62
4.30	11	22	56
4.73	5	21	52
—	—	—	—
—	—	—	—
—	—	—	—

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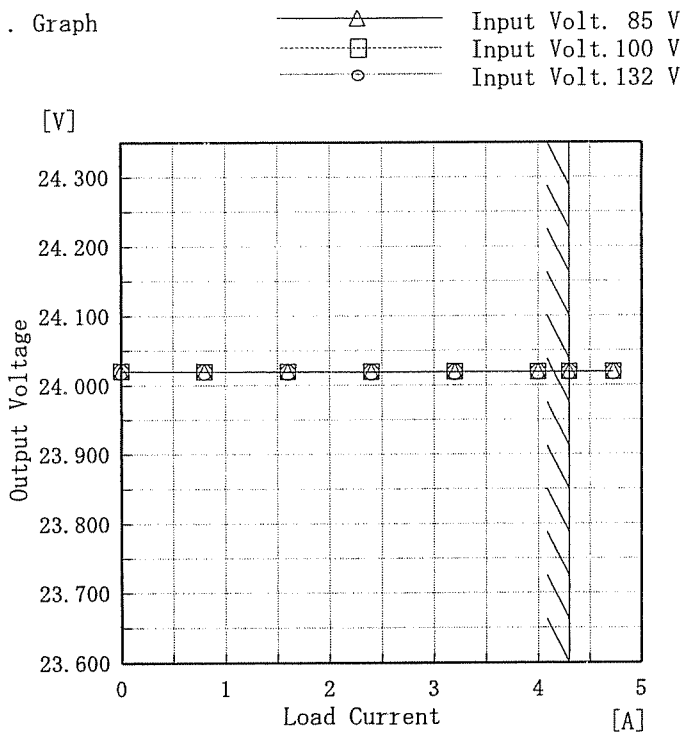
Model	LCA100S-24-H
Item	Load Regulation 静的負荷変動
Object	+24.0V4.3A

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]
0.00	24.020	24.021	24.020
0.80	24.019	24.020	24.020
1.60	24.020	24.020	24.019
2.40	24.020	24.020	24.019
3.20	24.020	24.019	24.019
4.00	24.020	24.019	24.019
4.30	24.020	24.019	24.019
4.73	24.019	24.019	24.019
—	—	—	—
—	—	—	—

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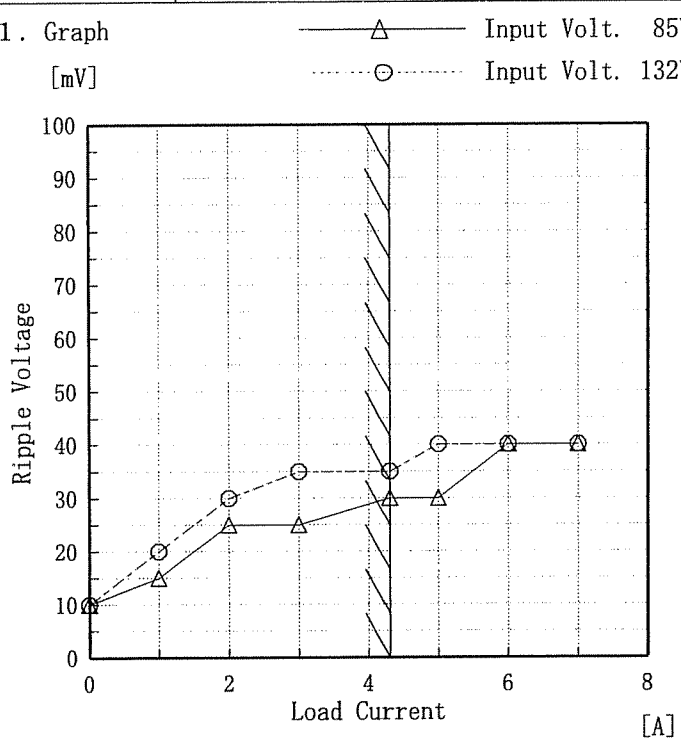
Model	LCA100S-24-H
Item	Ripple Voltage(by Load Current) リップル電圧(負荷特性)
Object	+24V4.3A

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

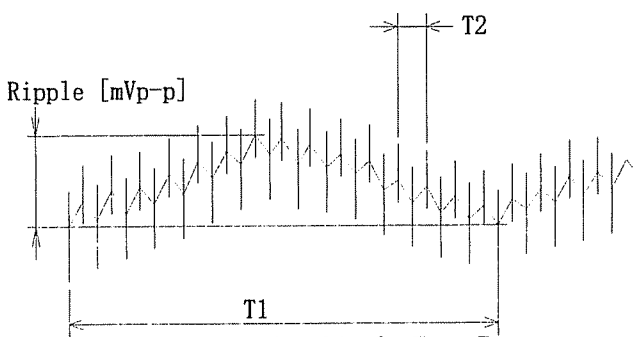


Fig. Complex Ripple Wave Form
図　リップル波形詳細図

2. Values

Load Current [A]	Ripple Output Voltage [mV]	
	Input Volt. 85 [V]	Input Volt. 132 [V]
0.0	10	10
1.0	15	20
2.0	25	30
3.0	25	35
4.3	30	35
5.0	30	40
6.0	40	40
7.0	40	40
—	—	—
—	—	—
—	—	—

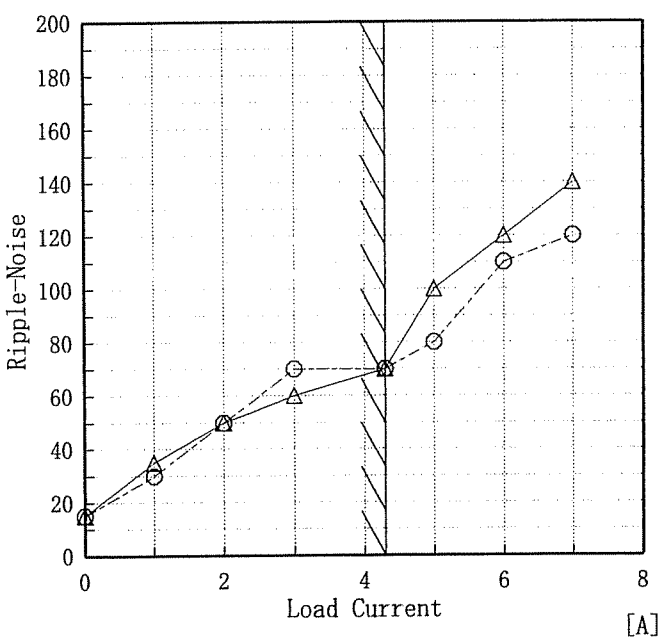
COSEL

Model	LCA100S-24-H
Item	Ripple-Noise リップルノイズ
Object	+24V4.3A

Temperature 25℃
Testing Circuitry Figure A

1. Graph

△——△ Input Volt. 85V
○·····○ Input Volt. 132V



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

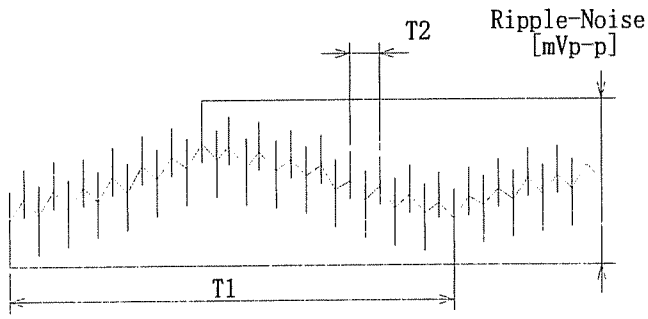


Fig. Complex Ripple Wave Form
図 リップル波形詳細図

2. Values

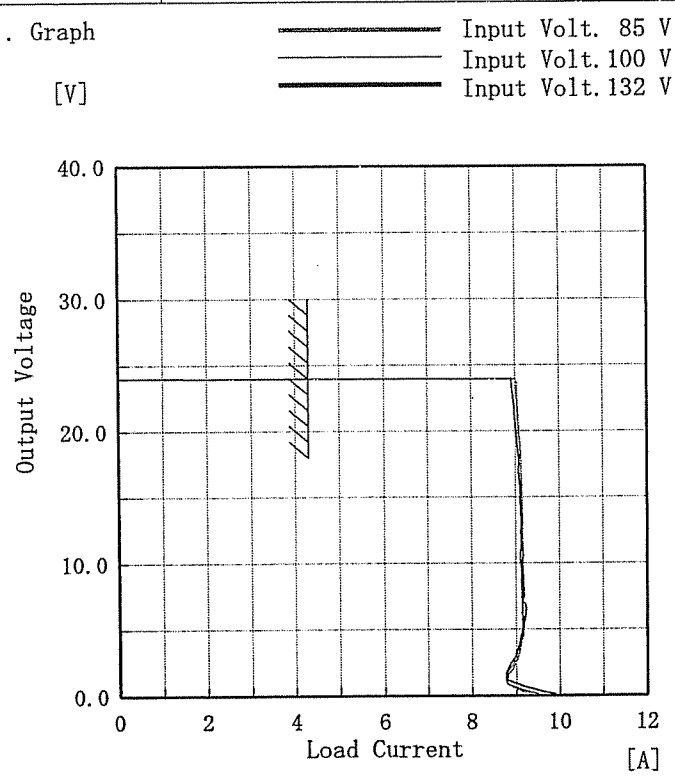
Load Current [A]	Ripple-Noise [mV]	
	Input Volt. 85 [V]	Input Volt. 132 [V]
0.0	15	15
1.0	35	30
2.0	50	50
3.0	60	70
4.3	70	70
5.0	100	80
6.0	120	110
7.0	140	120
—	—	—
—	—	—
—	—	—

COSEL

Model	LCA100S-24-H
Item	Overcurrent Protection 過電流保護
Object	+24.0V4.3A

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. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
24.00	9.022	8.912	8.913
22.80	9.037	8.933	8.943
21.60	9.050	8.968	8.971
19.20	9.098	9.047	9.026
16.80	9.127	9.077	9.070
14.40	9.152	9.099	9.120
12.00	9.157	9.126	9.116
9.60	9.129	9.114	9.151
7.20	9.150	9.128	9.161
4.80	9.172	9.137	9.129
2.40	8.981	8.932	8.869
0.00	9.349	9.520	9.913

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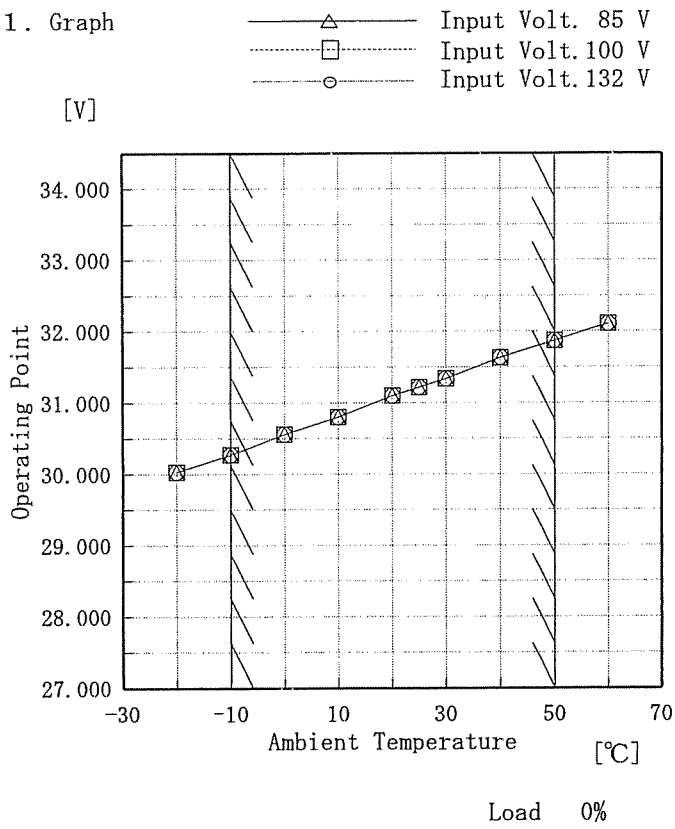
Model	LCA100S-24-H
Item	Overvoltage Protection 過電圧保護
Object	+24.0V4.3A

Testing Circuitry Figure A

1. Graph



Load 0%

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	30.03	30.03	30.03
-10	30.27	30.27	30.27
0	30.56	30.56	30.56
10	30.80	30.80	30.80
20	31.10	31.10	31.10
25	31.22	31.22	31.22
30	31.34	31.34	31.34
40	31.63	31.63	31.64
50	31.87	31.87	31.87
60	32.11	32.11	32.11
—	—	—	—

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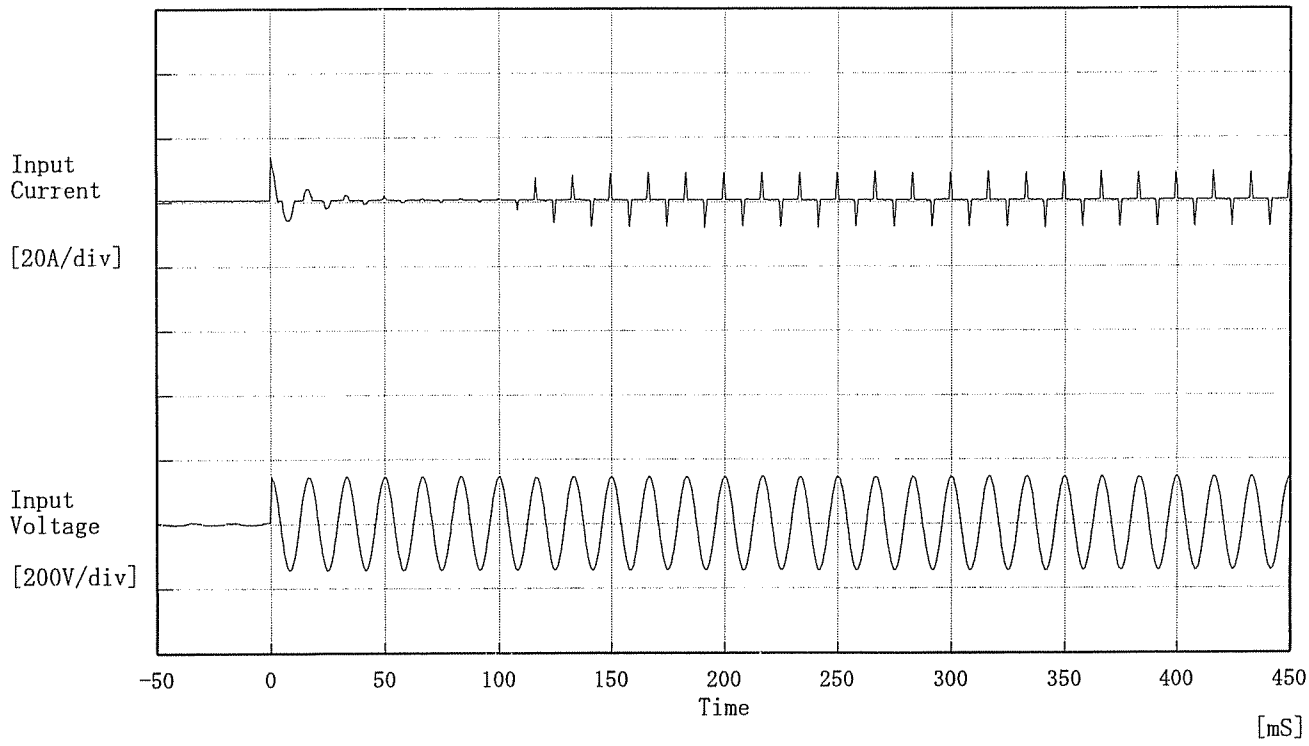
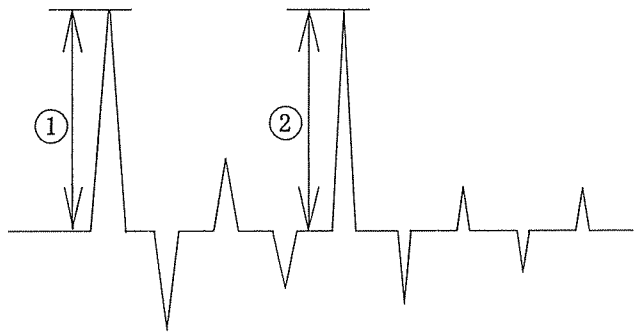
Model	LCA100S-24-H		
Item	Inrush Current 突入電流	Temperature Testing Circuitry	25℃ Figure A
Object	―――――――――――		



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



COSEL

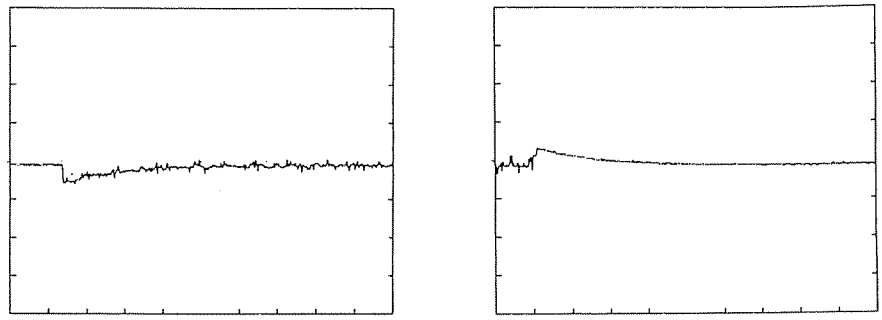
Model	LCA100S-24-H		
Item	Dynamic Load Responce 動的負荷変動	Temperature Testing Circuitry	25℃ Figure A
Object	+24.0V4.3A		

Input Volt. 100 V

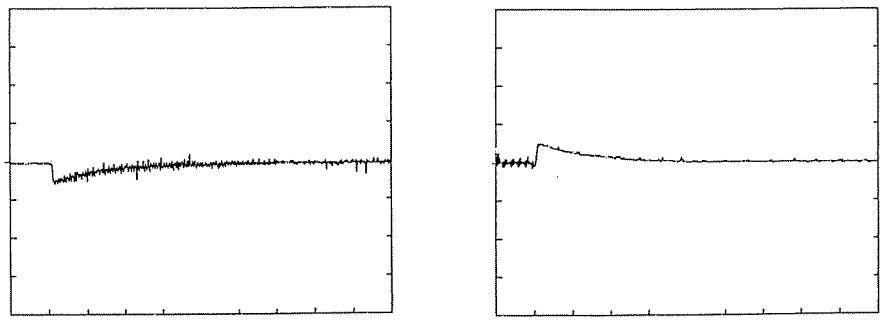
Cycle 1000 mS

Load Current

Load 0% ⟷
Load 100 %



Load 0% ⟷
Load 50 %



100 mV/div

10 mS/div

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Model	LCA100S-24-H		
Item	Dynamic Load Responce 動的負荷変動	Temperature Testing Circuitry	25℃ Figure A
Object	+24.0V4.3A		

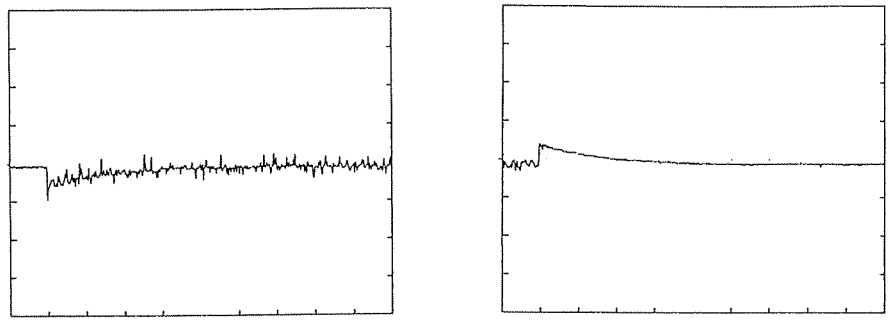
Input Volt. 100 V

Cycle 1000 mS

Load Current

Load 0% ←→

Load Peak



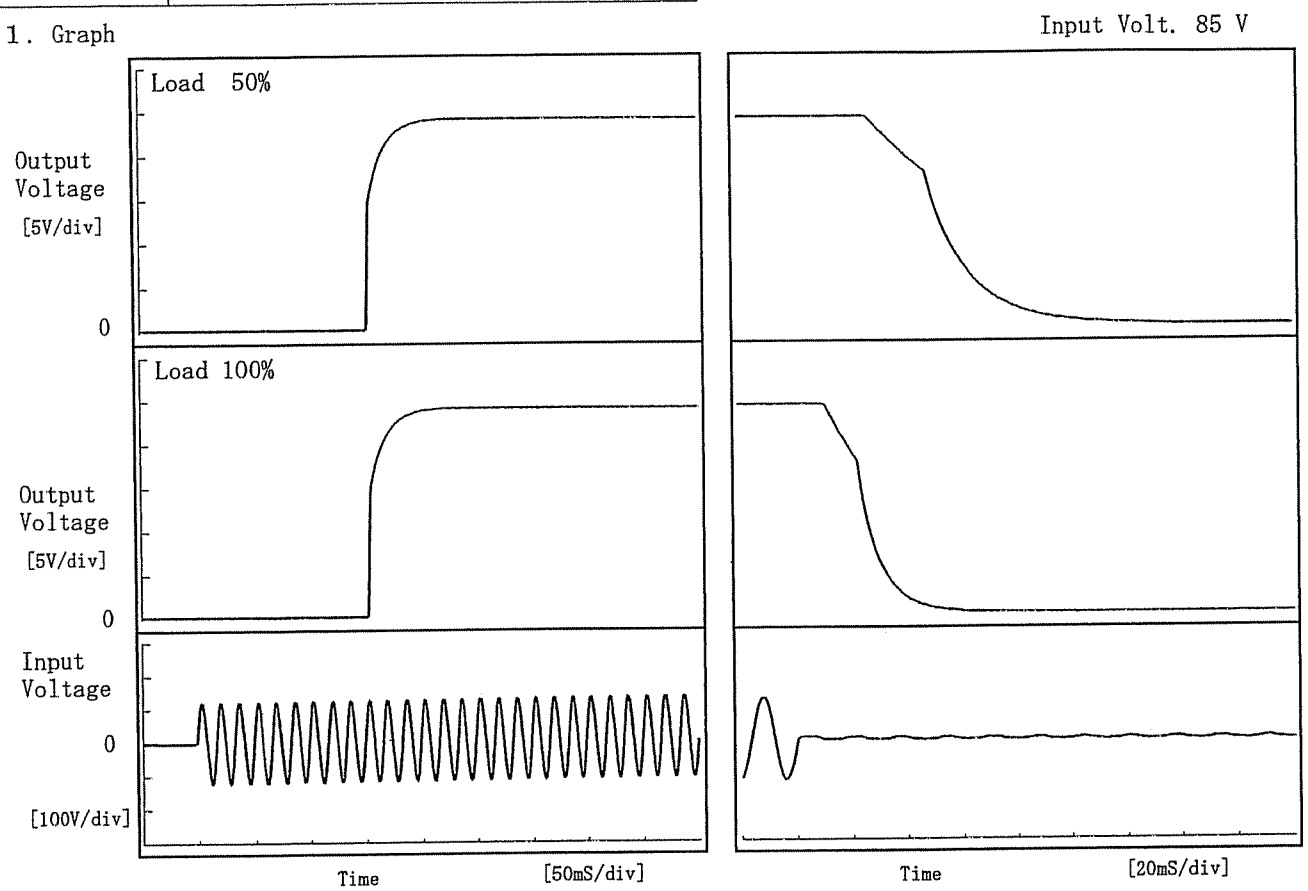
100 mV/div

10 mS/div

COSEL

Model	LCA100S-24-H		
Item	Rise and Fall Time 立上り、立下り時間	Temperature Testing Circuitry	25℃ Figure A
Object	+24.0V4.3A		

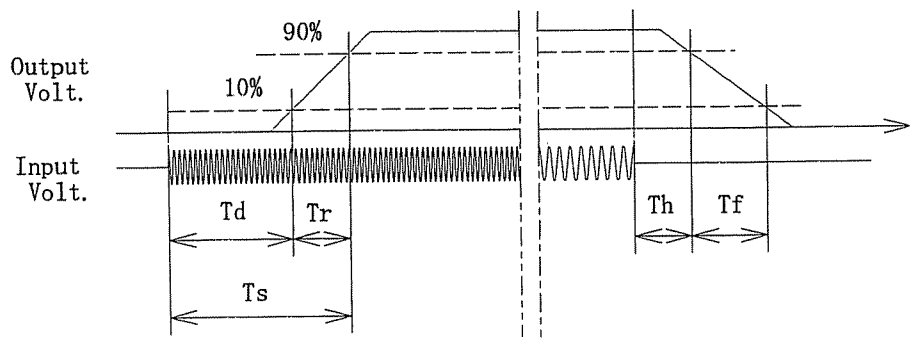
1. Graph



2. Values

[mS]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	152.5	22.0	174.5	33.4	46.4
100 %	152.5	22.0	174.5	14.4	23.7

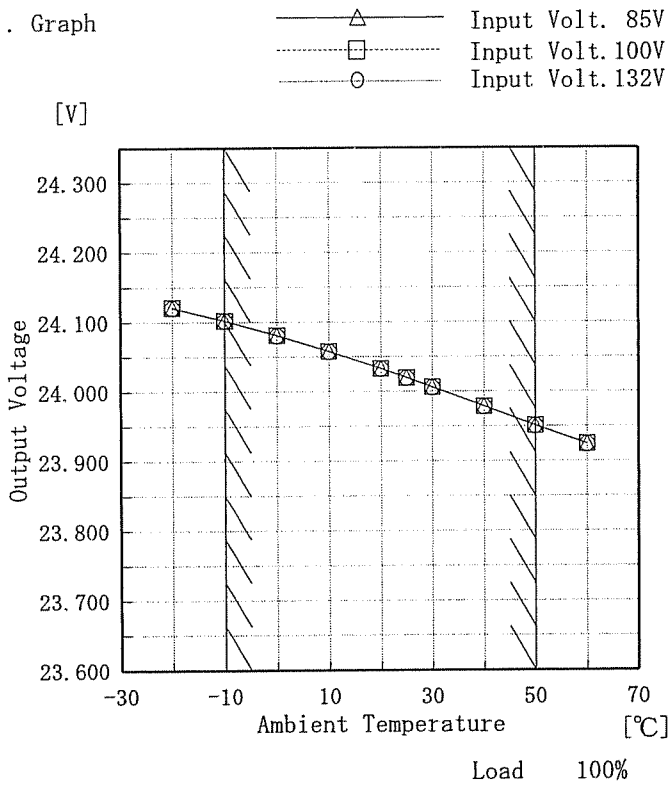


COSEL

Model	LCA100S-24-H
Item	Ambient Temperature Drift 周囲温度変動
Object	+24.0V4.3A

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

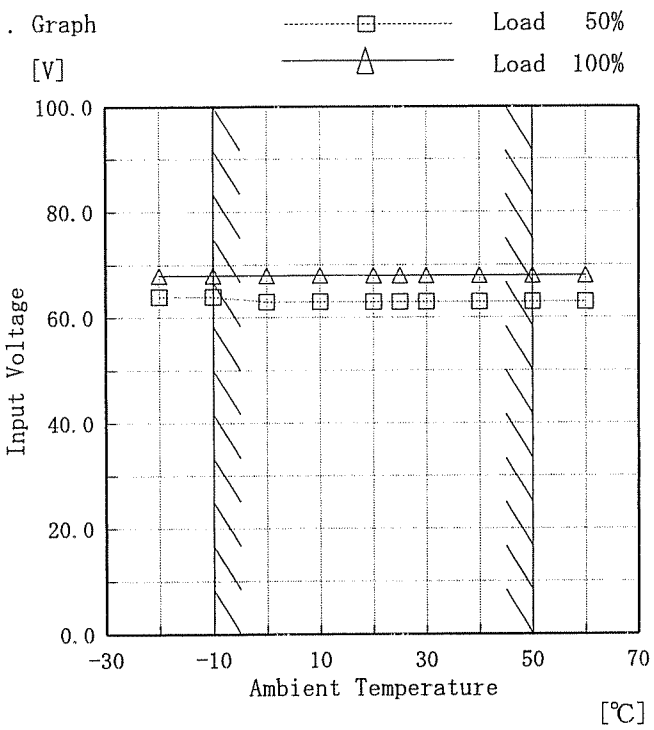
Ambient Temperature [℃]	Output Voltage [V]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
-20	24.121	24.121	24.121
-10	24.102	24.102	24.102
0	24.081	24.081	24.080
10	24.058	24.058	24.057
20	24.033	24.033	24.032
25	24.020	24.020	24.019
30	24.006	24.006	24.006
40	23.979	23.978	23.978
50	23.951	23.951	23.950
60	23.925	23.924	23.924
—	—	—	—

COSEL

Model	LCA100S-24-H
Item	Minimum Input Voltage for Regulated Output Voltage 最低レギュレーション電圧
Object	+24.0V4.3A

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

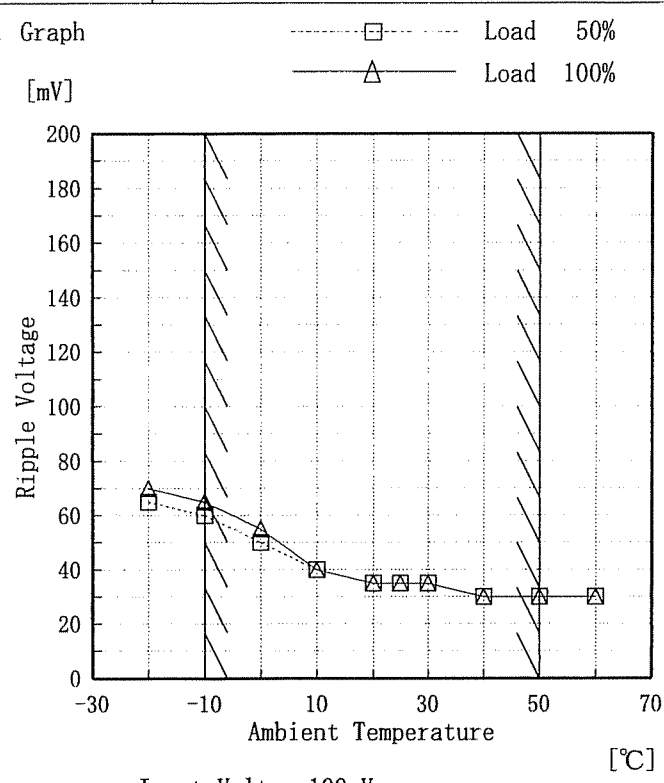
Ambient Temperature [℃]	Input Voltage [V]	
	Load 50%	Load 100%
-20	64	68
-10	64	68
0	63	68
10	63	68
20	63	68
25	63	68
30	63	68
40	63	68
50	63	68
60	63	68
—	—	—

COSEL

Model	LCA100S-24-H
Item	Ripple Voltage (by Ambient Temp.) リップル電圧 (周囲温度特性)
Object	+24.0V4.3A

Testing Circuitry Figure A

1. Graph



Input Volt. 100 V

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

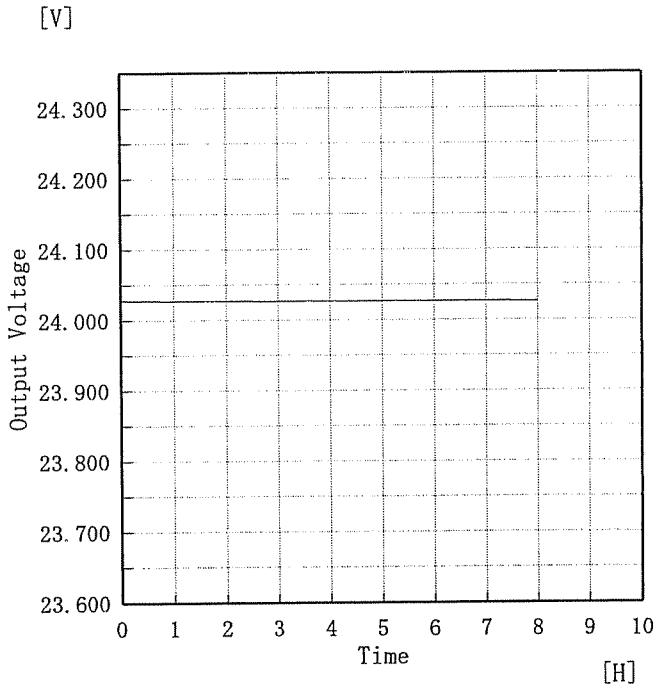
Ambient Temperature [℃]	Ripple Output Voltage [mV]	
	Load 50%	Load 100%
-20	65	70
-10	60	65
0	50	55
10	40	40
20	35	35
25	35	35
30	35	35
40	30	30
50	30	30
60	30	30
—	—	—

COSEL

Model	LCA100S-24-H
Item	Time Lapse Drift 経時ドリフト
Object	+24.0V4.3A

Temperature 25℃
Testing Circuitry Figure A

1. Graph



Input Volt. 100V
Load 100%

2. Values

Time since start [H]	Output Voltage [V]
0.0	24.034
0.5	24.027
1.0	24.027
2.0	24.027
3.0	24.027
4.0	24.027
5.0	24.027
6.0	24.027
7.0	24.026
8.0	24.026

COSEL

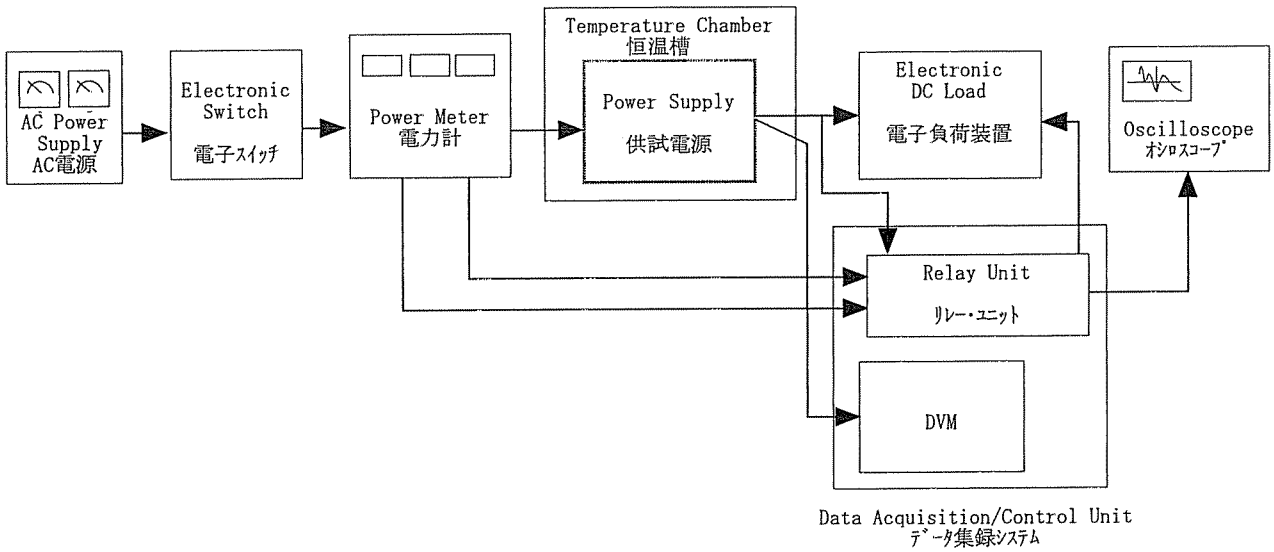


Figure A

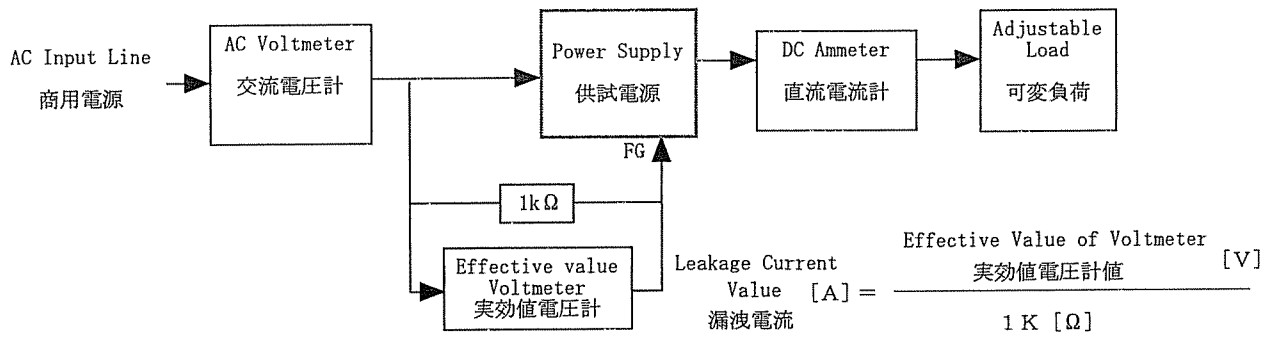


Figure B(DENTORI)

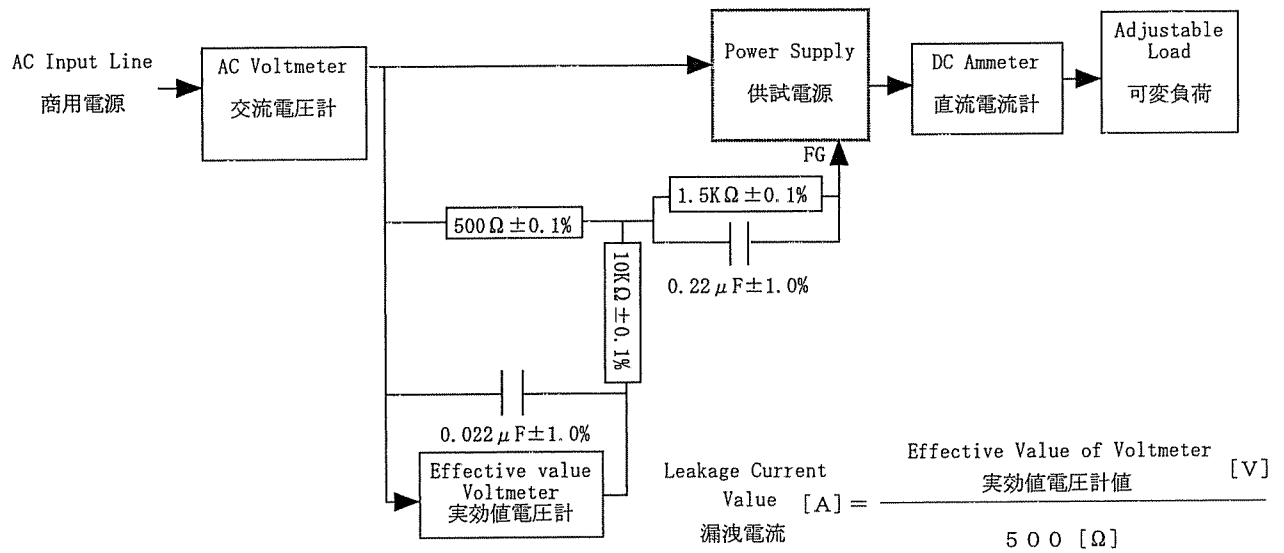


Figure B(IEC60950)

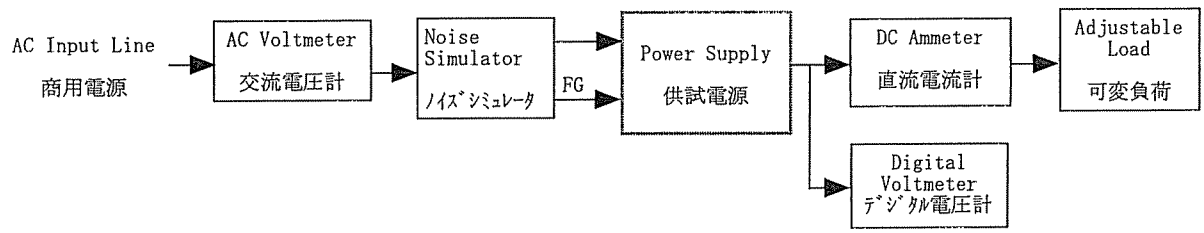


Figure C

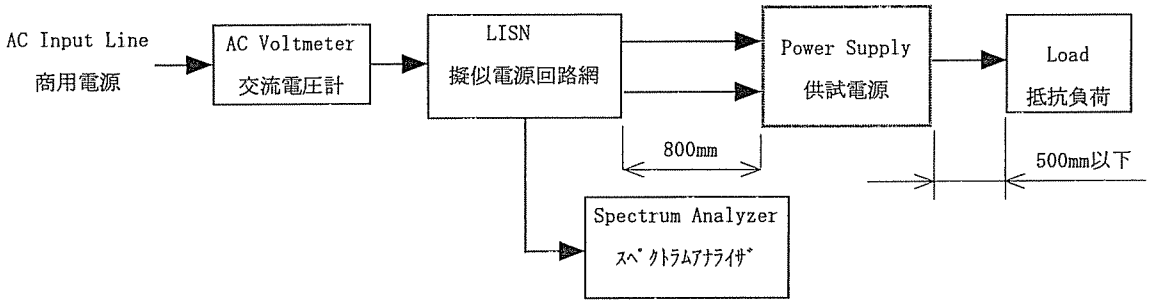


Figure D

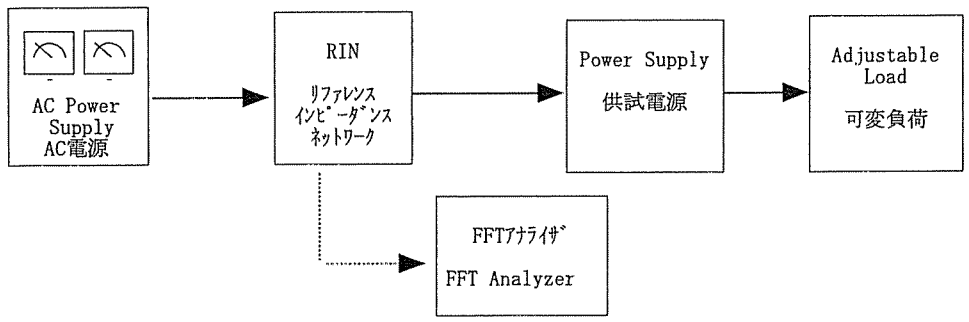


Figure E