参考資料

COSEL

TEST DATA OF LEB150F-0524

(100V INPUT)

Regulated DC Power Supply

Mar. 27, 2000

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Design Engineer

コーセル株式会社

COSEL CO., LTD.

参考資料

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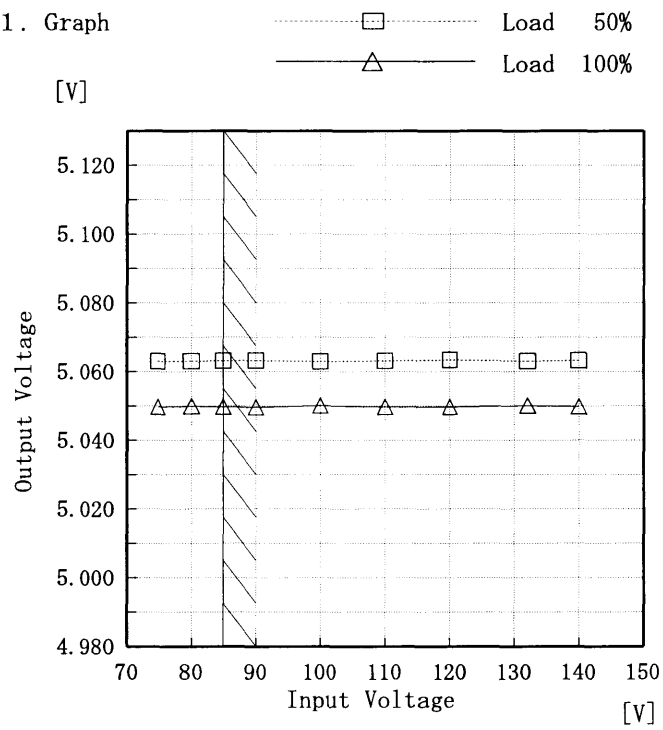
COSEL

Model	LEB150F-0524
Item	Line Regulation 静的入力変動

Temperature 25℃
Testing Circuitry Figure A

Object V1:+5.0V5A

1. Graph

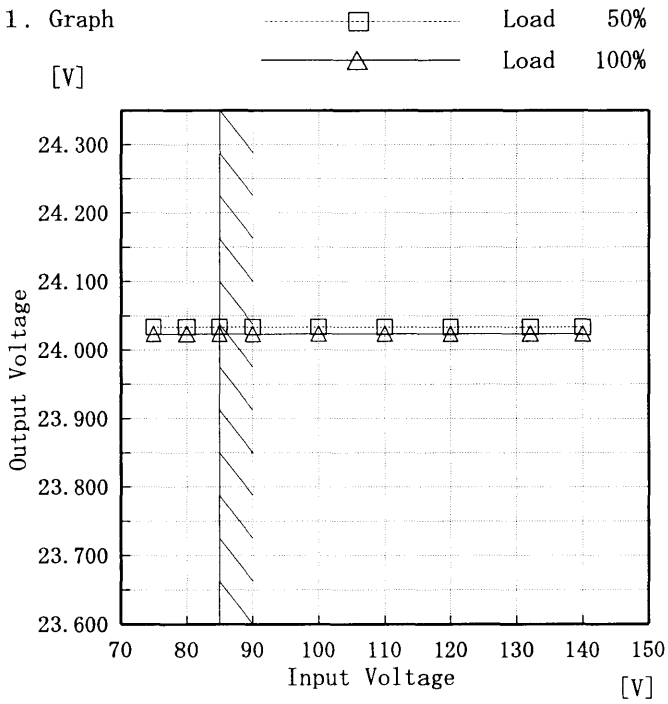


2. Values

Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
75	5.063	5.050
80	5.063	5.050
85	5.063	5.050
90	5.063	5.050
100	5.063	5.050
110	5.063	5.050
120	5.063	5.050
132	5.063	5.050
140	5.063	5.050

Object V2:+24.0V6A

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	24.034	24.023
80	24.033	24.023
85	24.034	24.023
90	24.033	24.024
100	24.034	24.024
110	24.034	24.024
120	24.034	24.024
132	24.033	24.024
140	24.033	24.024

BC−3270

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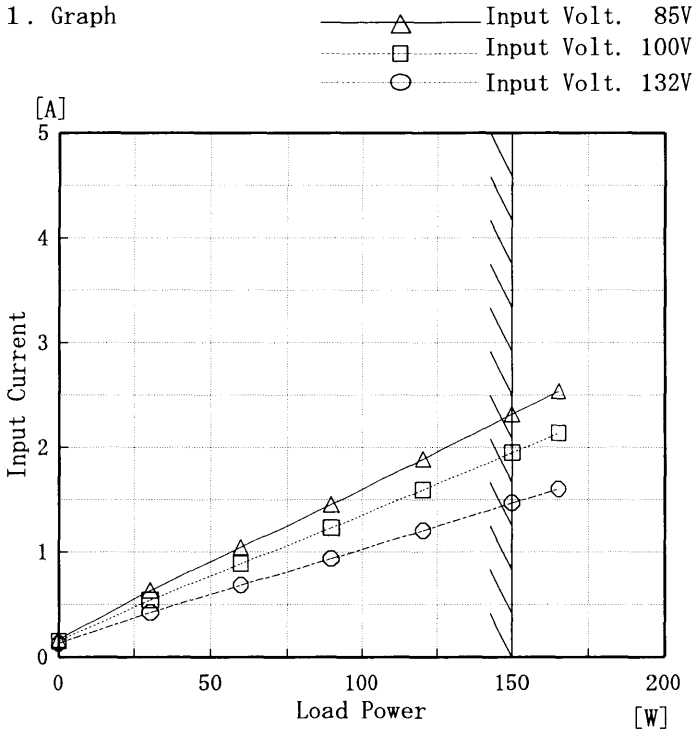
Model	LEB150F-0524
Item	Input Current (by Load Power) 入力電流（負荷特性）
Output	————

Temperature 25℃
Testing Circuitry Figure A

1. Graph



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

(注)斜線は定格出力電力範囲を示す。

2. Values

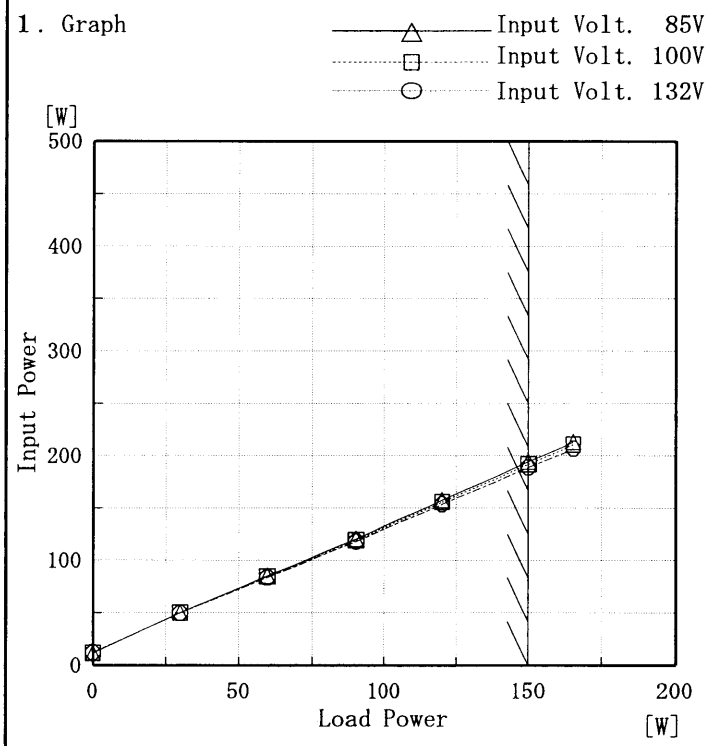
Load Power [W]	Input Current [A] Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0	0.168	0.152	0.128
30	0.634	0.544	0.425
60	1.046	0.890	0.684
90	1.456	1.233	0.939
120	1.887	1.593	1.206
150	2.317	1.951	1.470
165	2.537	2.138	1.605
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—

COSEL

Model	LEB150F-0524
Item	Input Power (by Load Power) 入力電力（負荷特性）
Output	————

Temperature 25℃
Testing Circuitry Figure A

1. Graph



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

(注)斜線は定格出力電力範囲を示す。

2. Values

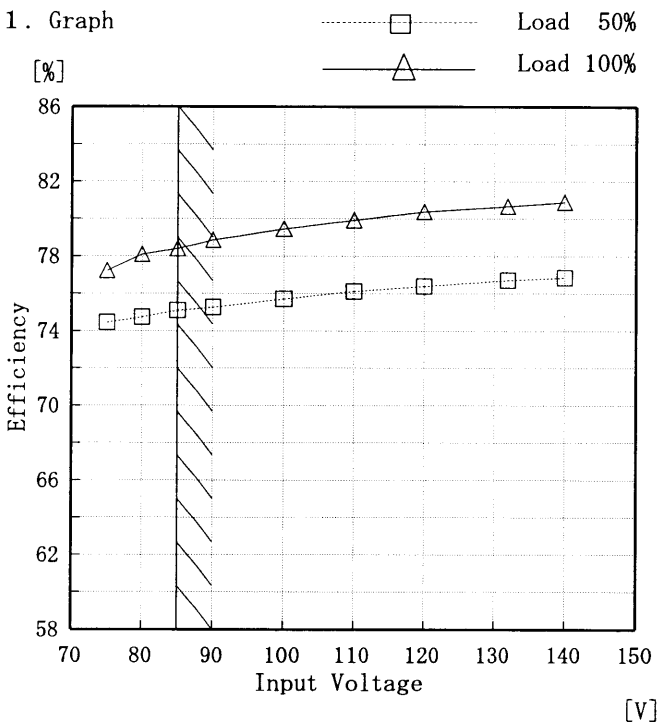
Load Power [W]	Input Power [W]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0	11.52	11.76	11.97
30	50.10	49.94	49.66
60	85.37	84.74	83.80
90	120.58	119.38	117.90
120	157.60	155.70	153.60
150	194.40	191.90	188.90
165	213.30	210.70	206.80
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—

COSEL

Model	LEB150F-0524
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

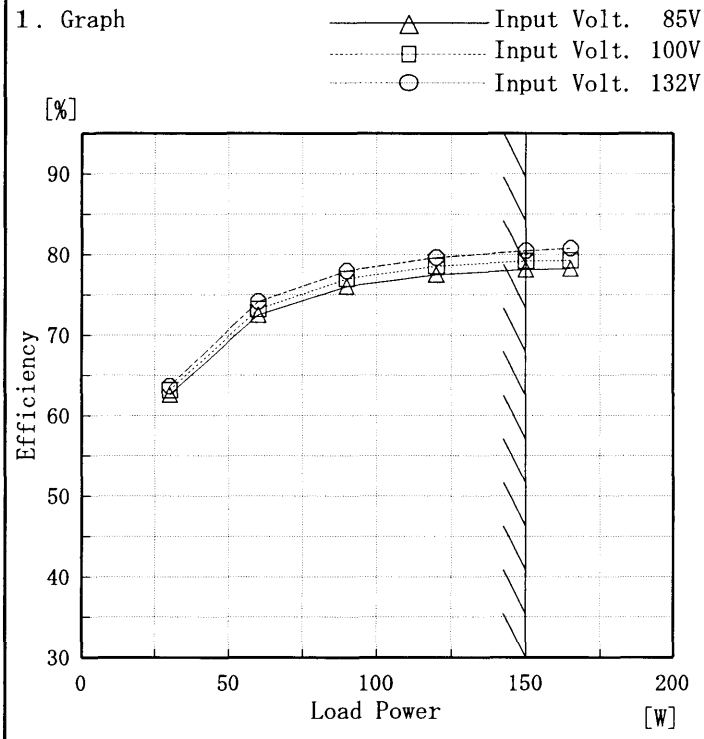
Input Voltage [V]	Efficiency [%]	
	Load 50%	Load 100%
75	74.4	77.2
80	74.7	78.1
85	75.1	78.4
90	75.3	78.9
100	75.7	79.5
110	76.1	79.9
120	76.4	80.4
132	76.7	80.7
140	76.9	80.9

COSEL

Model	LEB150F-0524
Item	Efficiency (by Load Power) 効率（負荷特性）
Output	————

Temperature 25℃
Testing Circuitry Figure A

1. Graph



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

(注)斜線は定格出力電力範囲を示す。

2. Values

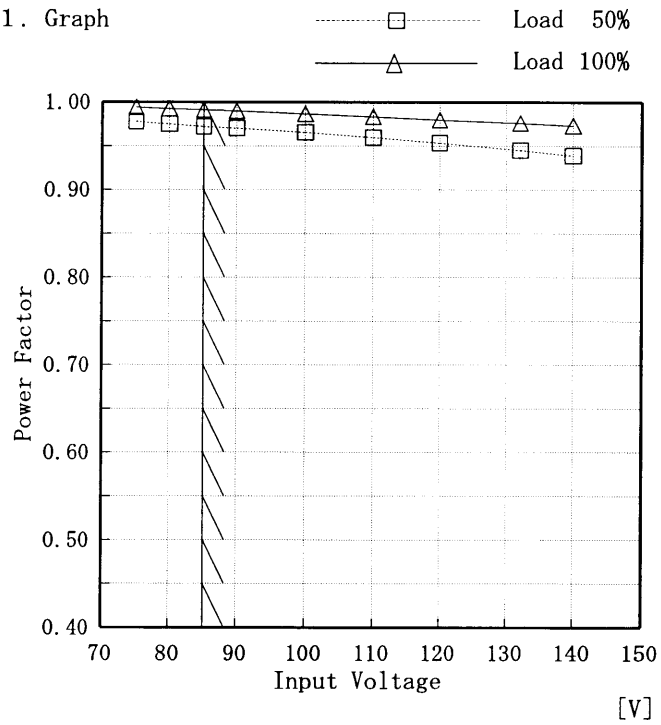
Load Power [W]	Efficiency [%] Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
30	62.6	63.2	63.6
60	72.5	73.2	74.2
90	76.0	77.0	78.0
120	77.5	78.5	79.6
150	78.1	79.2	80.4
165	78.2	79.3	80.8
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—

COSEL

Model	LEB150F-0524
Item	Power Factor (by Input Voltage) 力率（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

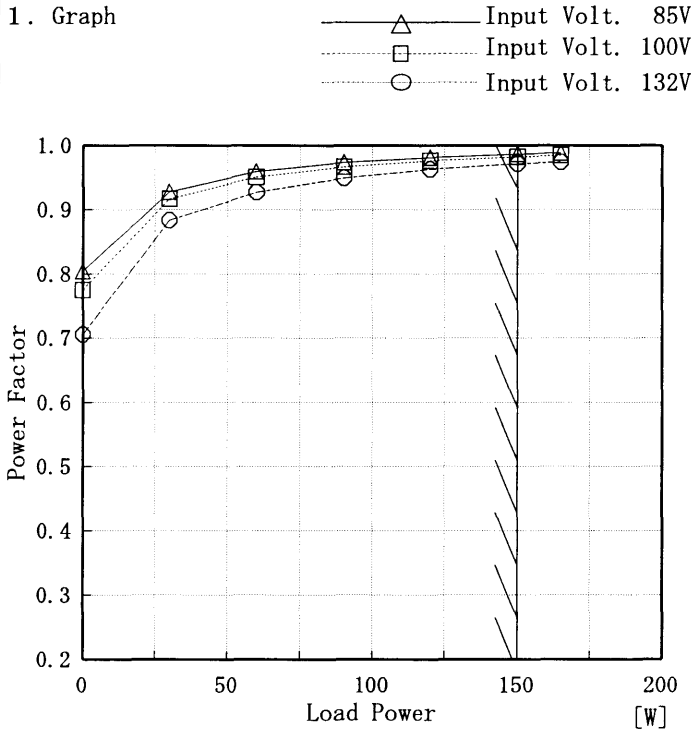
Input Voltage [V]	Power Factor	
	Load 50%	Load 100%
75	0.98	0.99
80	0.97	0.99
85	0.97	0.99
90	0.97	0.99
100	0.97	0.99
110	0.96	0.98
120	0.95	0.98
132	0.95	0.98
140	0.94	0.97

COSEL

Model	LEB150F-0524
Item	Power Factor (by Load Power) 力率（負荷特性）
Output	————

Temperature 25℃
Testing Circuitry Figure A

1. Graph



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

(注)斜線は定格出力電力範囲を示す。

2. Values

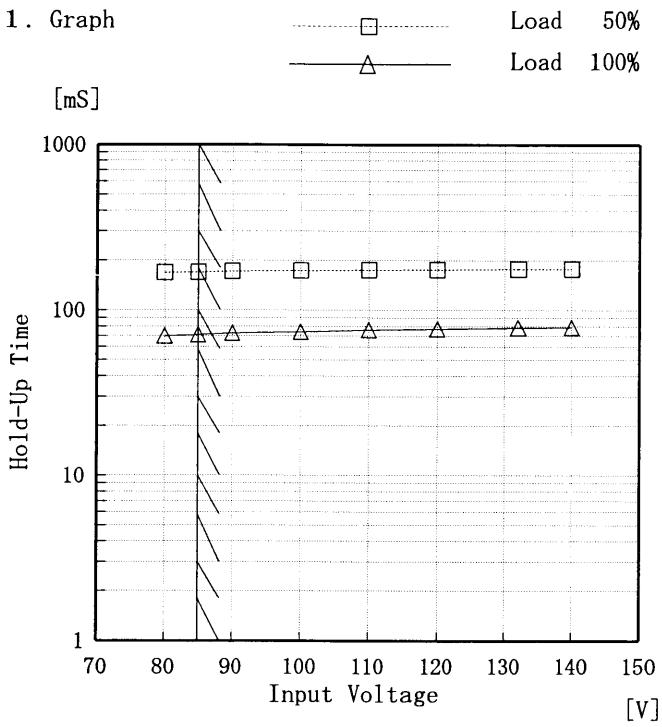
Load Power [W]	Power Factor		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0	0.80	0.78	0.71
30	0.93	0.92	0.88
60	0.96	0.95	0.93
90	0.97	0.97	0.95
120	0.98	0.98	0.96
150	0.99	0.99	0.97
165	0.99	0.99	0.97
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—

COSEL

Model	LEB150F-0524
Item	Hold-Up Time 出力保持時間
Object	V1:+5.0V5A

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	—	—
80	169	70
85	170	71
90	171	73
100	173	74
110	175	76
120	176	77
132	177	78
140	178	79

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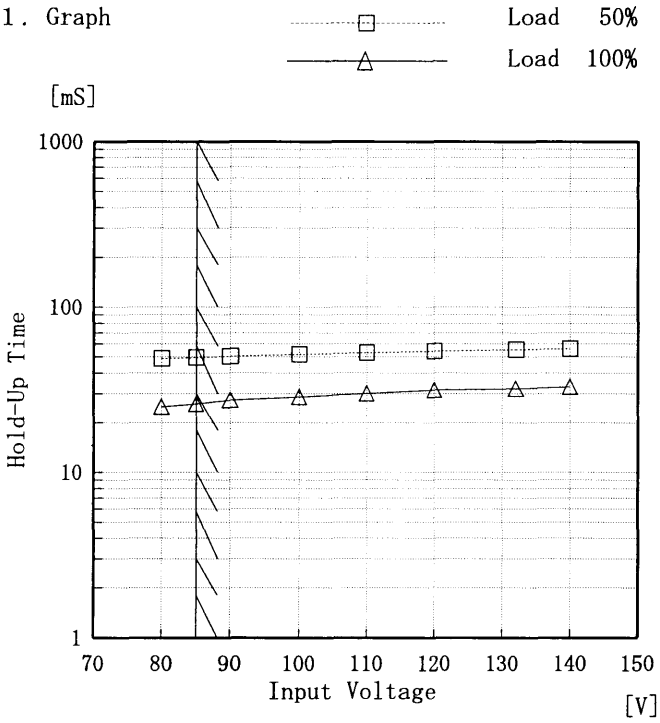
Model	LEB150F-0524
Item	Hold-Up Time 出力保持時間
Object	V2:+24.0V6A

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

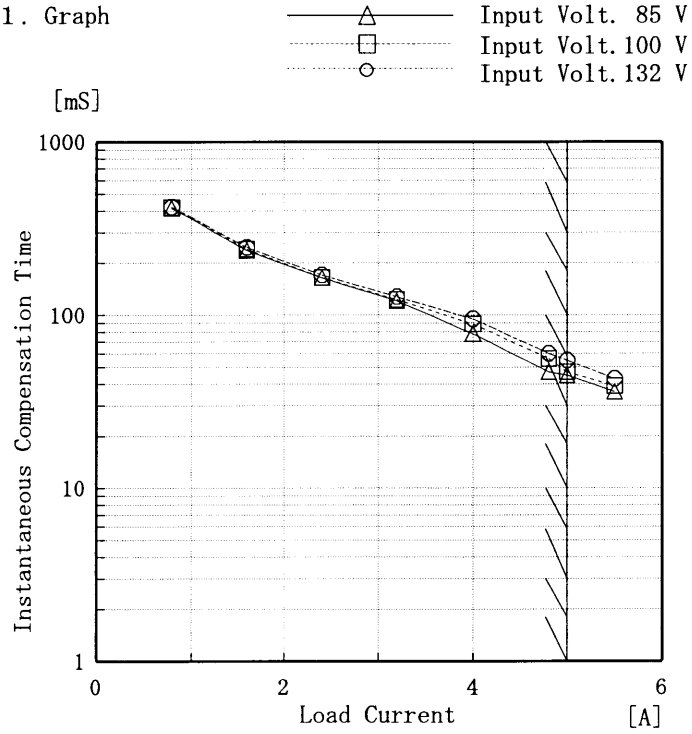
Input Voltage [V]	Hold-Up Time [mS]	
	Load 50%	Load 100%
75	—	—
80	49	25
85	50	26
90	51	27
100	52	29
110	53	30
120	54	32
132	56	32
140	56	33

COSEL

Model	LEB150F-0524
Item	Instantaneous Interruption Compensation 瞬時停電保障
Object	V1:+5.0V5A

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

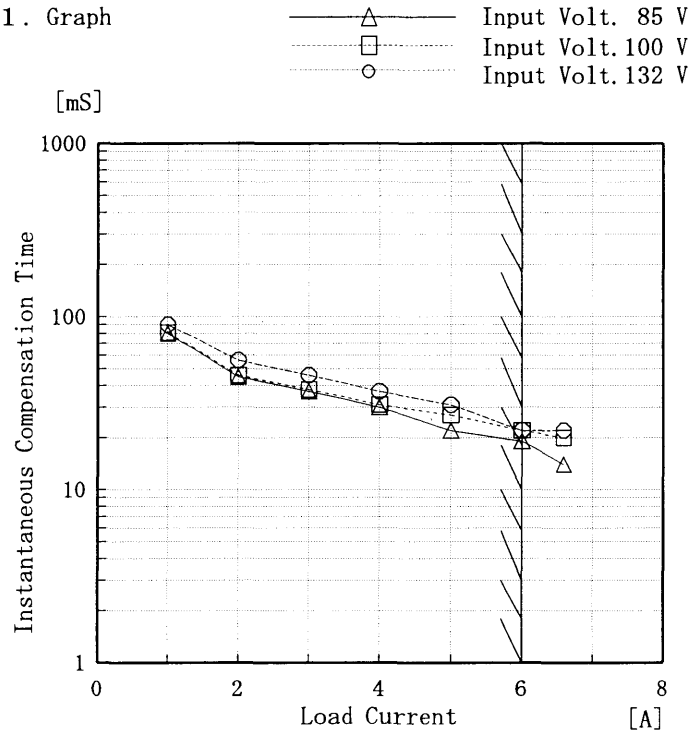
Load Current [A]	Time [mS]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0.0	—	—	—
0.8	414	418	422
1.6	236	240	246
2.4	164	165	171
3.2	121	123	128
4.0	78	89	95
4.8	47	56	60
5.0	45	47	55
5.5	36	39	43
—	—	—	—
—	—	—	—

COSEL

Model	LEB150F-0524
Item	Instantaneous Interruption Compensation 瞬時停電保障
Object	V2:＋24.0V6A

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]
0.0	—	—	—
1.0	80	81	90
2.0	45	46	56
3.0	37	38	46
4.0	30	31	37
5.0	22	27	31
6.0	19	22	22
6.6	14	20	22
—	—	—	—
—	—	—	—
—	—	—	—

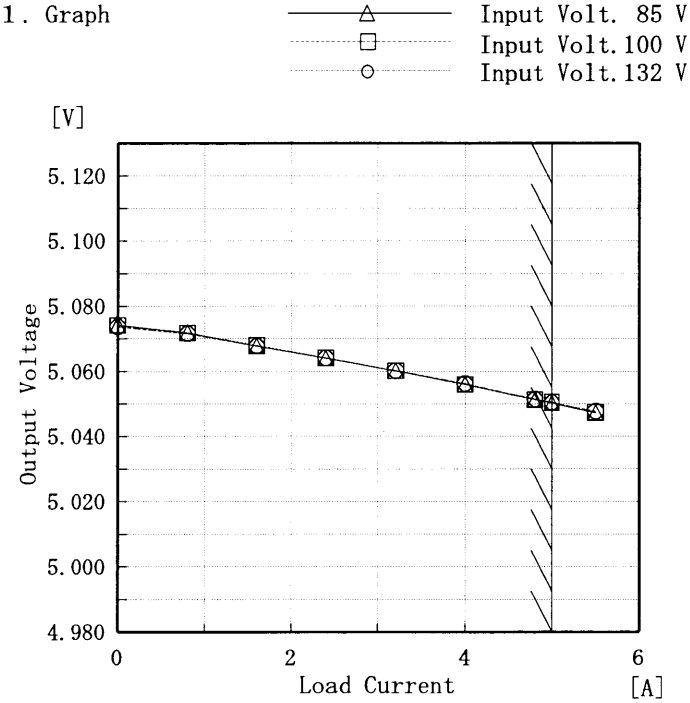
COSEL

Model	LEB150F-0524
Item	Load Regulation 静的負荷変動

Temperature 25℃
Testing Circuitry Figure A

Object V1:+5.0V5A

1. Graph

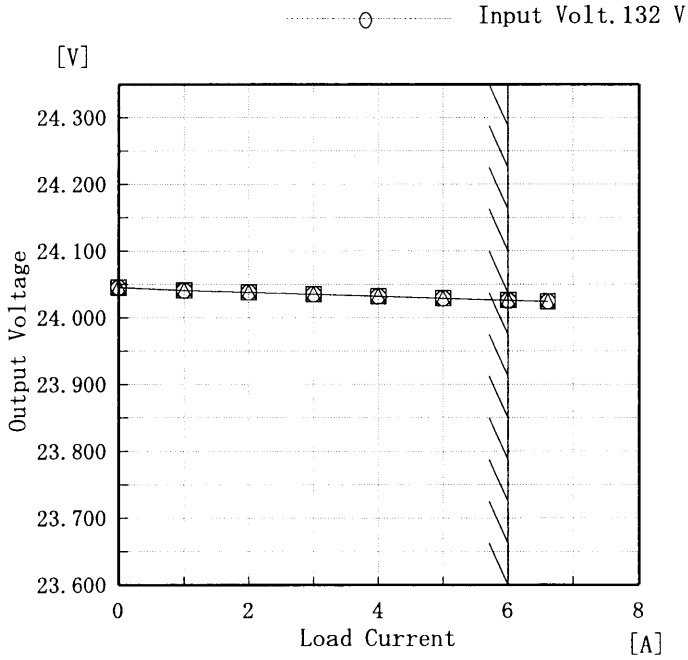


2. Values

Load Current [A]	Output Voltage [V] Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0.0	5.074	5.074	5.074
0.8	5.072	5.072	5.072
1.6	5.068	5.068	5.068
2.4	5.064	5.064	5.064
3.2	5.060	5.060	5.060
4.0	5.056	5.056	5.056
4.8	5.051	5.051	5.051
5.0	5.050	5.051	5.050
5.5	5.047	5.047	5.048
—	—	—	—

Object V2:+24.0V6A

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

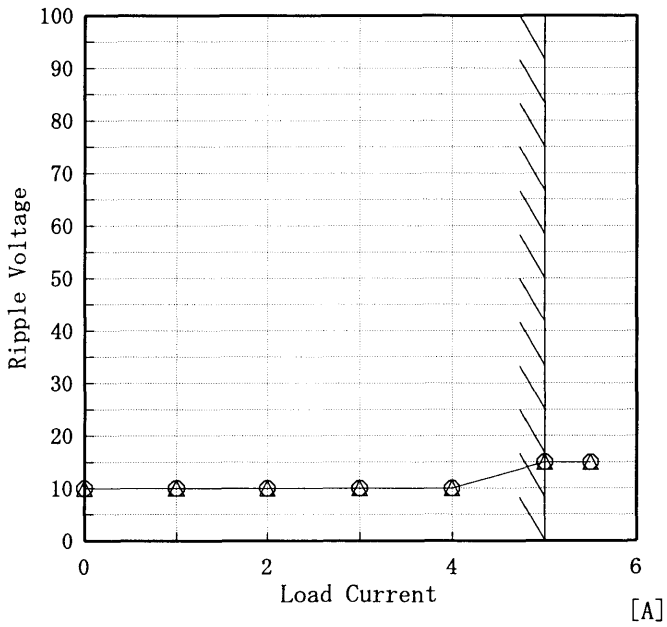
Load Current [A]	Output Voltage [V] Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0.0	24.046	24.045	24.045
1.0	24.041	24.041	24.041
2.0	24.038	24.038	24.038
3.0	24.035	24.035	24.035
4.0	24.032	24.032	24.032
5.0	24.029	24.029	24.029
6.0	24.026	24.026	24.026
6.6	24.025	24.024	24.024
—	—	—	—
—	—	—	—

COSEL

Model	LEB150F-0524
Item	Ripple Voltage(by Load Current) リップル電圧(負荷特性)
Object	V1:+5.0V5A

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

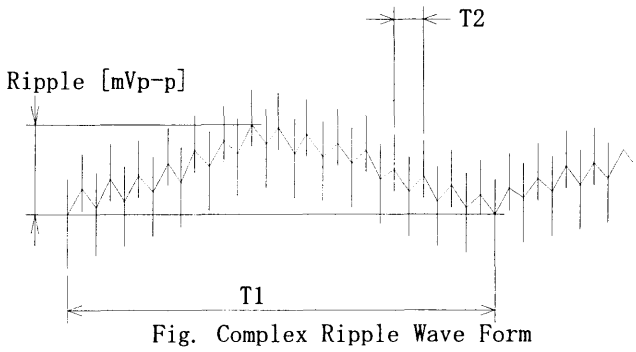


Fig. Complex Ripple Wave Form
図 リップル波形詳細図

2. Values

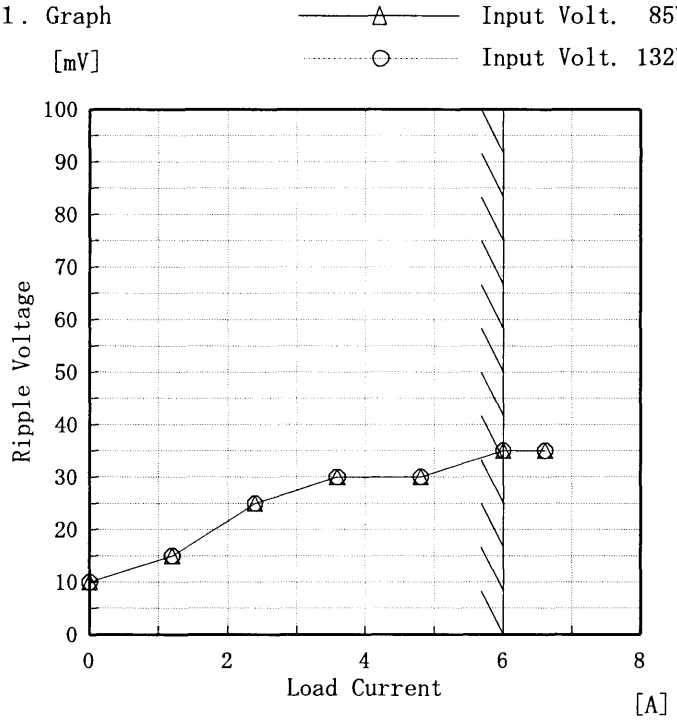
Load Current [A]	Ripple Output Voltage [mV]	
	Input Volt. 85 [V]	Input Volt. 132 [V]
0.0	10	10
1.0	10	10
2.0	10	10
3.0	10	10
4.0	10	10
5.0	15	15
5.5	15	15
—	—	—
—	—	—
—	—	—
—	—	—

COSEL

Model	LEB150F-0524
Item	Ripple Voltage(by Load Current) リップル電圧(負荷特性)
Object	V2:+24.0V6A

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

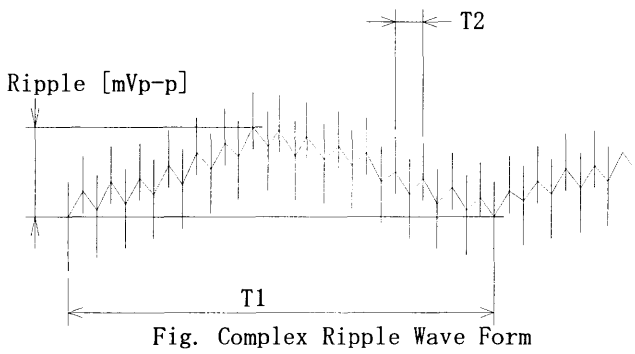


Fig. Complex Ripple Wave Form
図 リップル波形詳細図

2. Values

Load Current [A]	Ripple Output Voltage [mV]	
	Input Volt. 85 [V]	Input Volt. 132 [V]
0.0	10	10
1.2	15	15
2.4	25	25
3.6	30	30
4.8	30	30
6.0	35	35
6.6	35	35
—	—	—
—	—	—
—	—	—
—	—	—

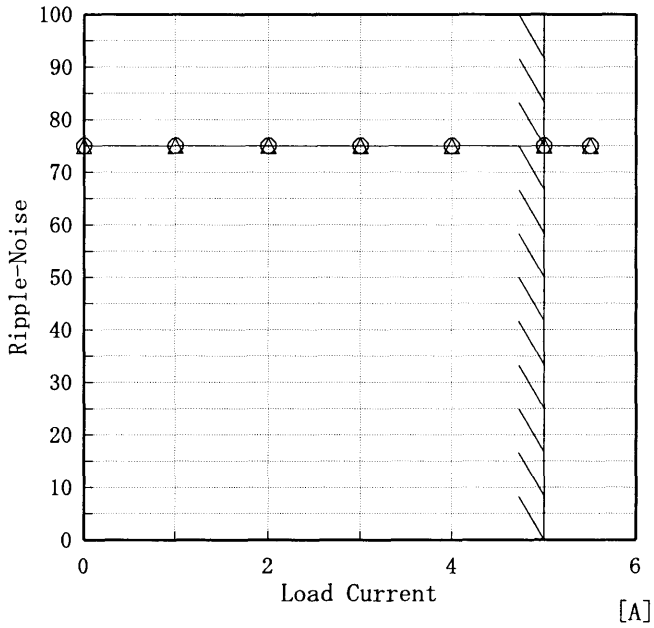
COSEL

Model	LEB150F-0524
Item	Ripple-Noise リップルノイズ
Object	V1:+5.0V5A

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

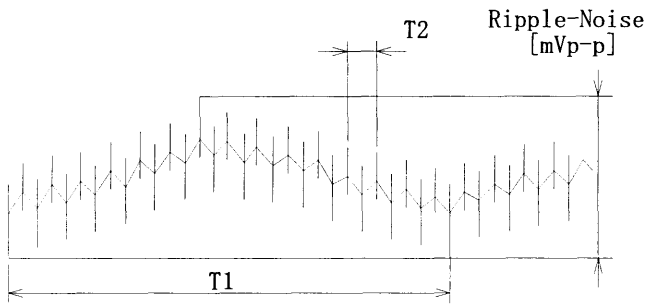


Fig. Complex Ripple Wave Form
図 リップル波形詳細図

2. Values

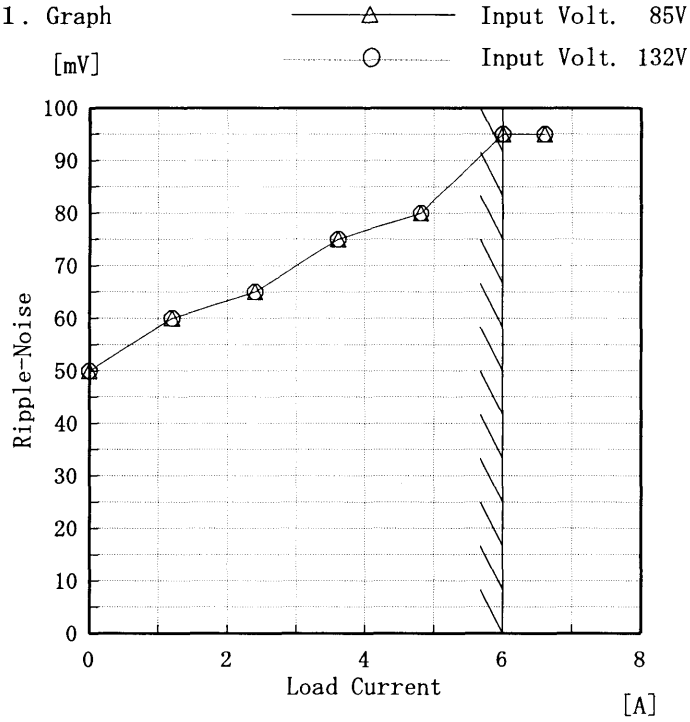
Load Current [A]	Ripple-Noise [mV]	
	Input Volt. 85 [V]	Input Volt. 132 [V]
0.0	75	75
1.0	75	75
2.0	75	75
3.0	75	75
4.0	75	75
5.0	75	75
5.5	75	75
—	—	—
—	—	—
—	—	—
—	—	—

COSEL

Model	LEB150F-0524
Item	Ripple-Noise リップルノイズ
Object	V2:+24.0V6A

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

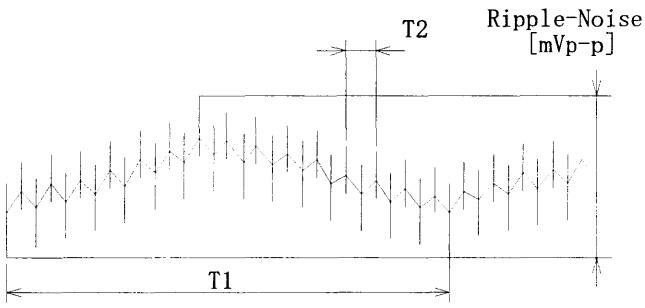


Fig. Complex Ripple Wave Form
図 リップル波形詳細図

2. Values

Load Current [A]	Ripple-Noise [mV]	
	Input Volt. 85 [V]	Input Volt. 132 [V]
0.0	50	50
1.2	60	60
2.4	65	65
3.6	75	75
4.8	80	80
6.0	95	95
6.6	95	95
—	—	—
—	—	—
—	—	—
—	—	—

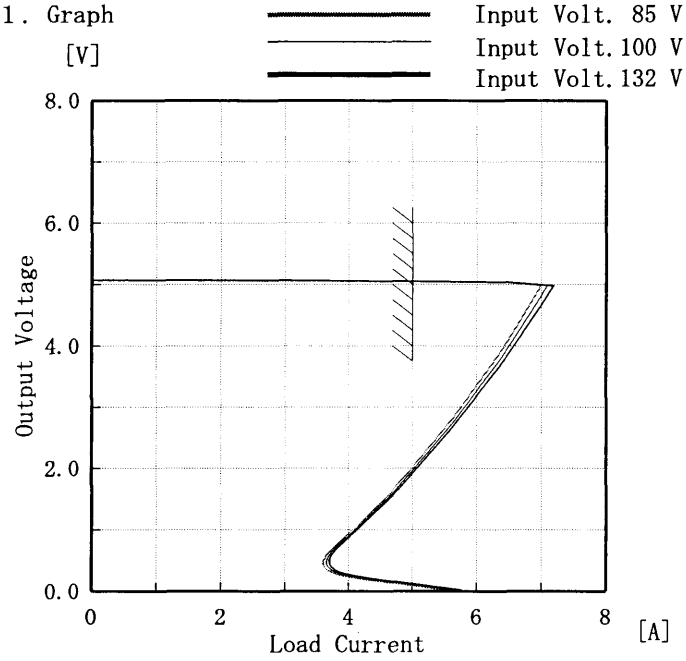
COSEL

Model	LEB150F-0524
Item	Overcurrent Protection 過電流保護

Temperature 25℃
Testing Circuitry Figure A

Object V1:+5.0V5A

1. Graph



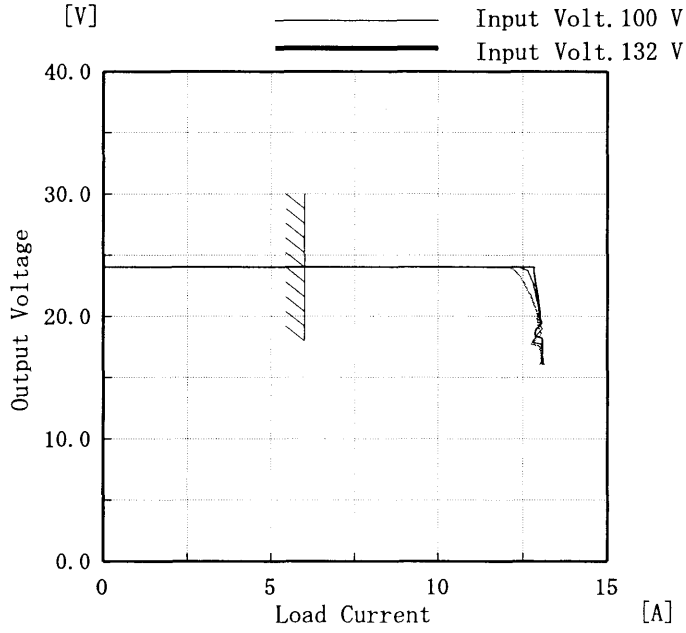
Note: Slanted line shows the range of the rated load current.

2. Values

Output Voltage [V]	Load Current [A] Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
5.00	6.99	7.09	7.18
4.75	6.86	6.95	7.04
4.50	6.73	6.81	6.90
4.00	6.43	6.50	6.57
3.50	6.12	6.18	6.25
3.00	5.77	5.82	5.88
2.50	5.39	5.44	5.49
2.00	4.99	5.04	5.08
1.50	4.58	4.62	4.66
1.00	4.12	4.15	4.19
0.50	3.62	3.66	3.70
0.00	5.54	5.66	5.78

Object V2:+24.0V6A

1. Graph



Note: Slanted line shows the range of the rated load current.
Intermittent operation occurs when the output voltage is from 16.8V to 0V.

2. Values

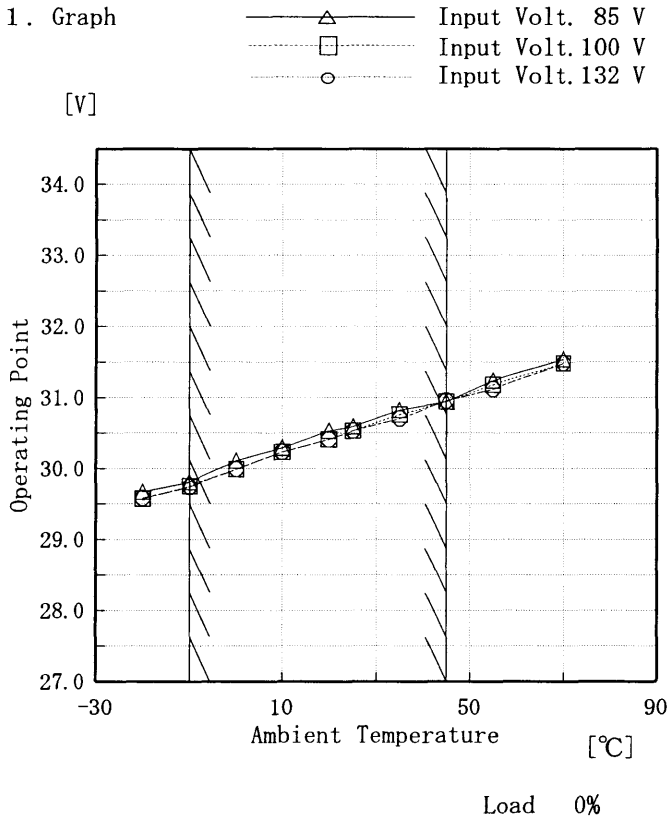
Output Voltage [V]	Load Current [A] Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
24.00	12.08	12.36	12.84
22.80	12.54	12.79	12.88
21.60	12.73	12.88	12.94
19.20	12.97	13.02	13.01
16.80	13.05	13.07	13.07
14.40	—	—	—
12.00	—	—	—
9.60	—	—	—
7.20	—	—	—
4.80	—	—	—
2.40	—	—	—
0.00	—	—	—

COSEL

Model	LEB150F-0524
Item	Overvoltage Protection 過電圧保護
Object	V2:+24.0V6A

Testing Circuitry Figure A

1. Graph



Load 0%

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

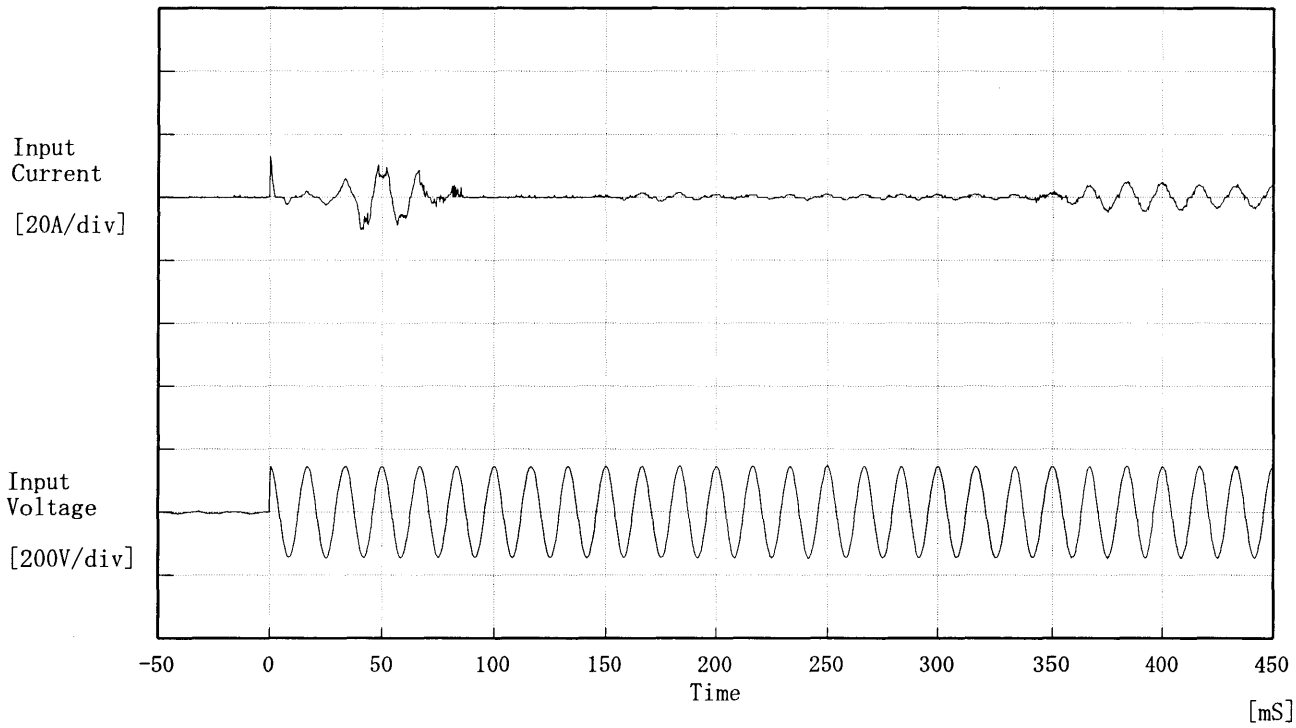
(注)斜線は定格周囲温度範囲を示す。

2. Values

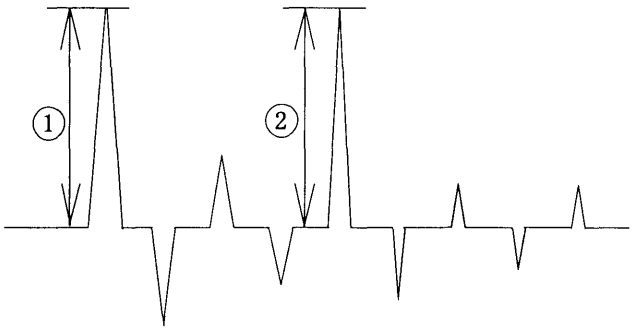
Ambient Temperature [℃]	Operating Point [V]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
-20	29.7	29.6	29.6
-10	29.8	29.8	29.7
0	30.1	30.0	30.0
10	30.3	30.2	30.2
20	30.5	30.4	30.4
25	30.6	30.5	30.5
35	30.8	30.8	30.7
45	30.9	30.9	31.0
55	31.2	31.2	31.1
70	31.5	31.5	31.5
—	—	—	—

COSEL

Model	LEB150F-0524		
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 12.70 [A]
② 9.50 [A]



COSEL

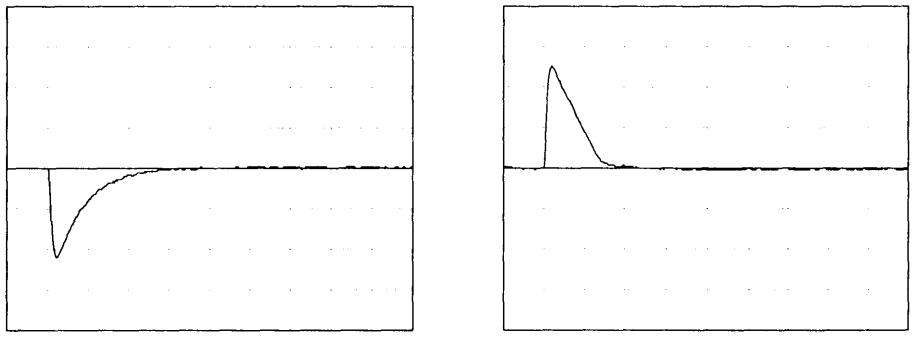
Model	LEB150F-0524		
Item	Dynamic Load Responce 動的負荷変動	Temperature Testing Circuitry	25℃ Figure A
Object	V1:+5.0V5A		

Input Volt. 100 V

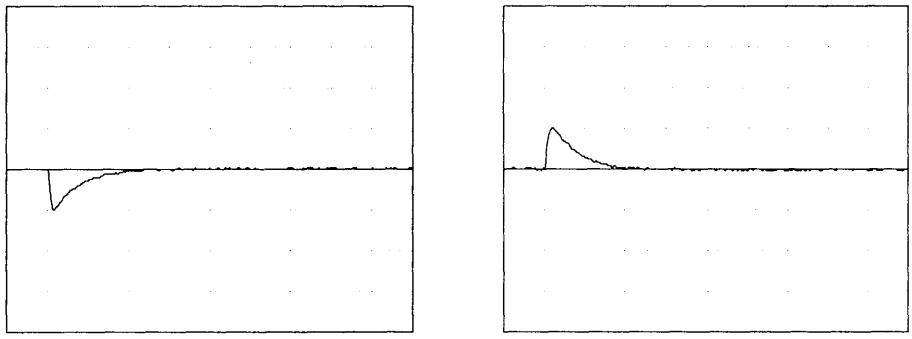
Cycle 1000 mS

Load Current

Min. Load ←→
Load 100 %



Min. Load ←→
Load 50 %



100 mV/div

10 ms/div

COSEL

Model	LEB150F-0524		
Item	Dynamic Load Responce 動的負荷変動	Temperature Testing Circuitry	25℃ Figure A
Object	V2:+24.0V6A		

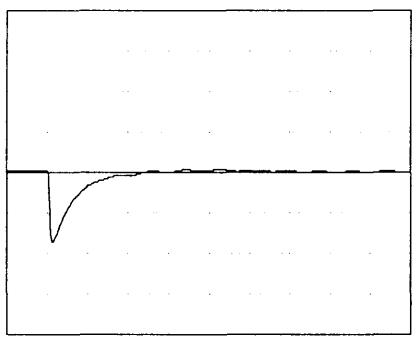
Input Volt. 100 V

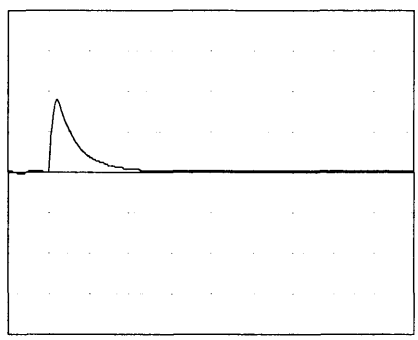
Cycle 1000 mS

Load Current

Min. Load ←→

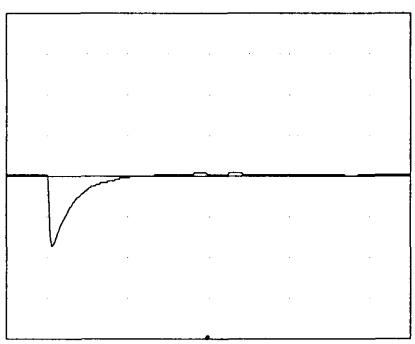
Load 100 %



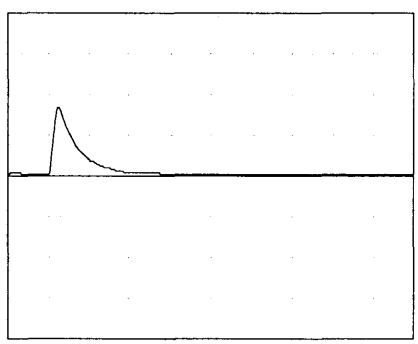


Min. Load ←→

Load 50 %



100 mV/div



10 ms/div

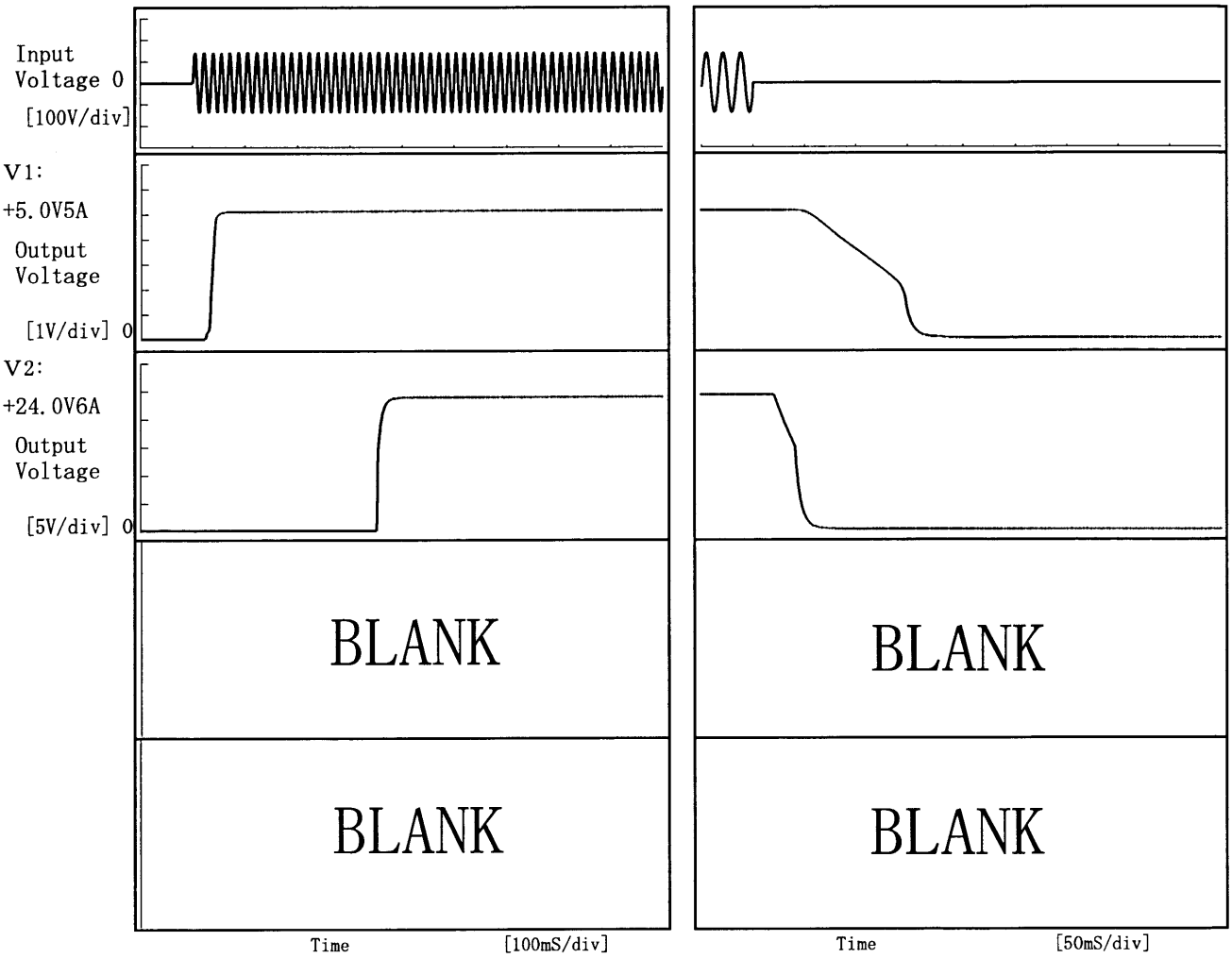
COSEL

Model	LEB150F-0524
Item	Rise and Fall Time 立上り、立下り時間
Object	————

Temperature 25℃
Testing Circuitry Figure A

Load Power 100 %
Input Volt. 100 V

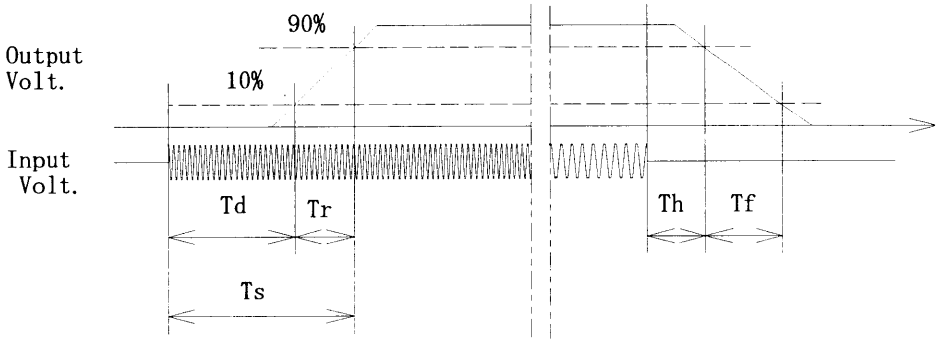
1. Graph



2. Values

[mS]

Output \ Time	Td	Tr	Ts	Th	Tf
V1	29.0	11.5	40.5	72.0	83.8
V2	350.0	13.0	363.0	26.5	25.8
—	—	—	—	—	—
—	—	—	—	—	—



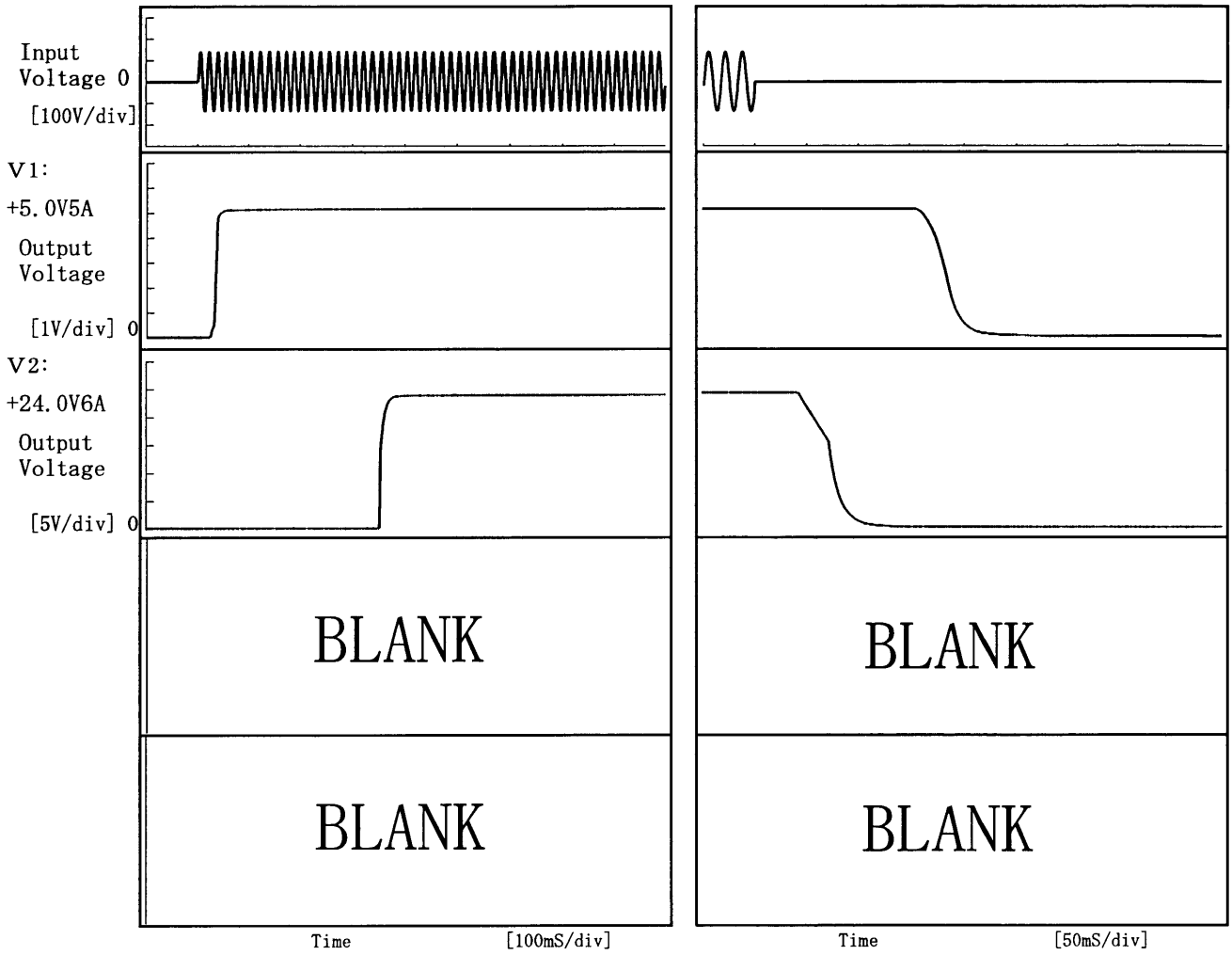
COSEL

Model	LEB150F-0524
Item	Rise and Fall Time 立上り、立下り時間
Object	————

Temperature 25℃
Testing Circuitry Figure A

Load Power 50 %
Input Volt. 100 V

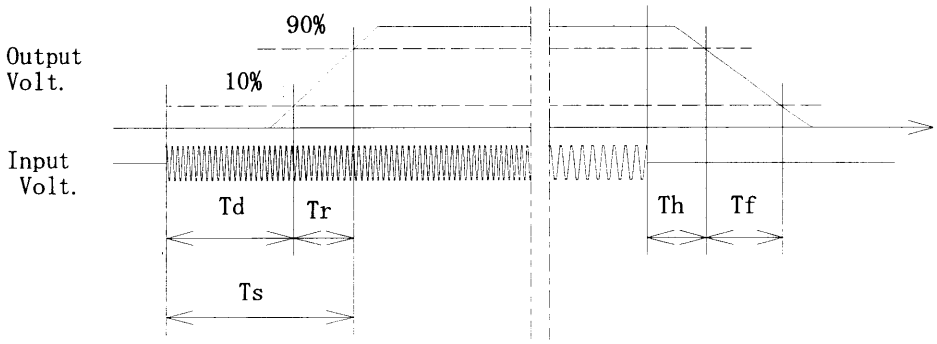
1. Graph



2. Values

[mS]

Output \ Time	Td	Tr	Ts	Th	Tf
V1	29.0	7.5	36.5	168.5	33.8
V2	350.5	12.5	363.0	50.8	42.3
—	—	—	—	—	—
—	—	—	—	—	—



BC－3270

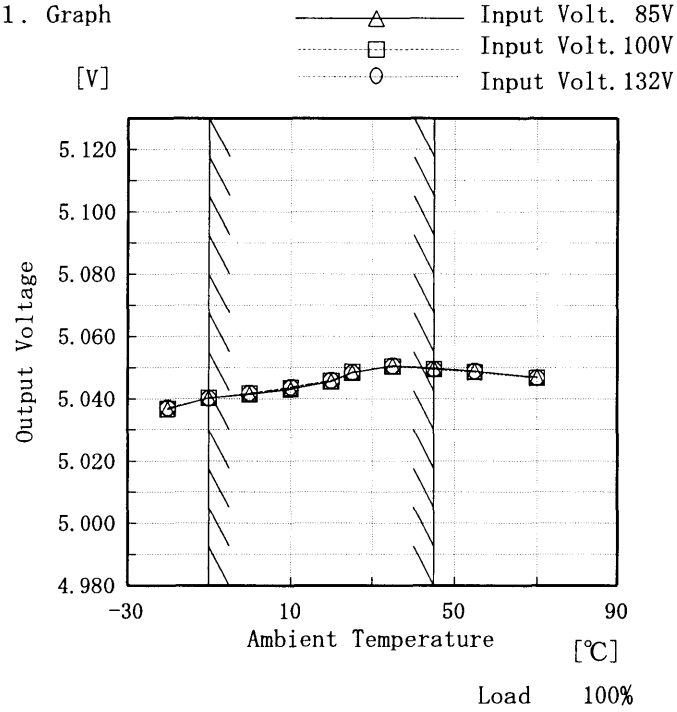
COSEL

Model	LEB150F-0524
Item	Ambient Temperature Drift 周囲温度変動

Testing Circuitry Figure A

Object V1:+5.0V5A

1. Graph

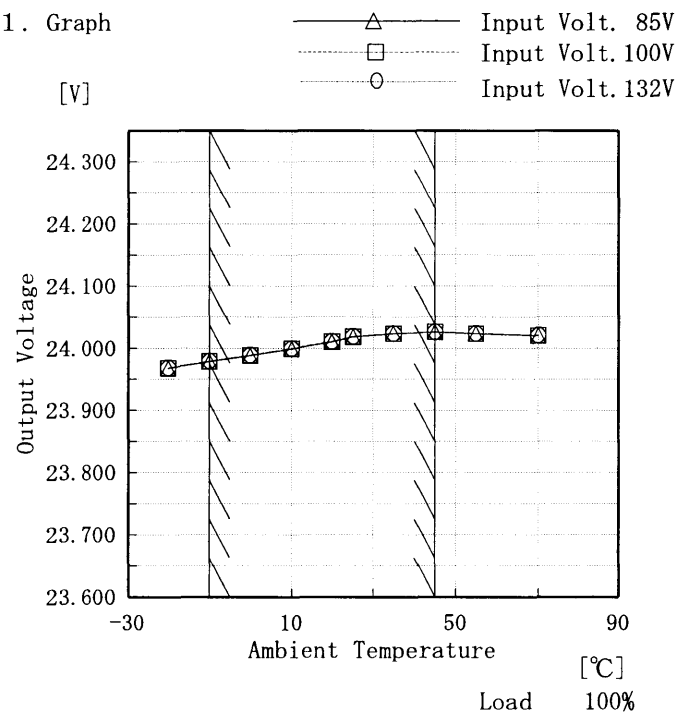


2. Values

Ambient Temperature [℃]	Output Voltage [V]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
-20	5.037	5.037	5.037
-10	5.040	5.040	5.040
0	5.041	5.042	5.042
10	5.043	5.043	5.044
20	5.046	5.046	5.046
25	5.048	5.049	5.048
35	5.051	5.050	5.051
45	5.050	5.049	5.050
55	5.049	5.049	5.049
70	5.047	5.047	5.047
—	—	—	—

Object V2:+24.0V6A

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	23.967	23.968	23.968
-10	23.978	23.979	23.979
0	23.988	23.988	23.989
10	23.999	23.999	24.000
20	24.010	24.011	24.011
25	24.018	24.018	24.019
35	24.023	24.023	24.024
45	24.026	24.026	24.026
55	24.023	24.023	24.024
70	24.020	24.020	24.021
—	—	—	—

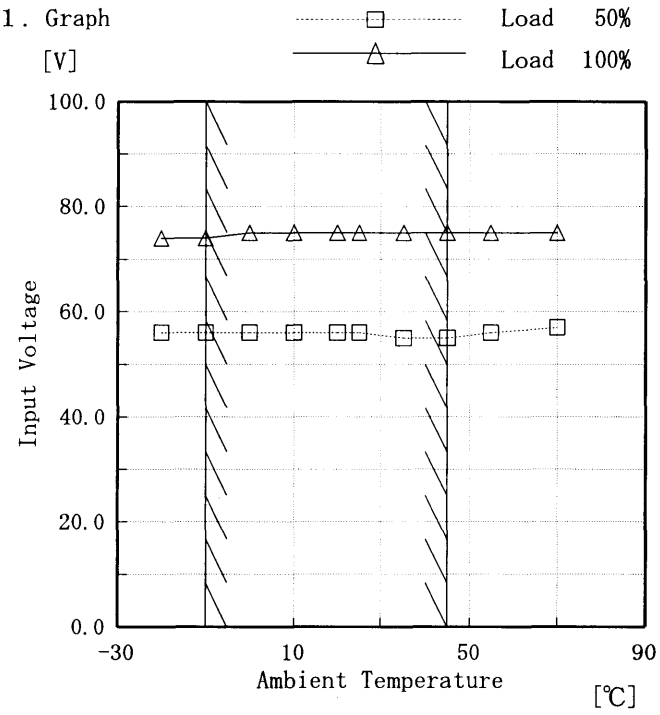
COSEL

Model	LEB150F-0524
Item	Minimum Input Voltage for Regulated Output Voltage 最低レギュレーション電圧

Testing Circuitry Figure A

Object V1:+5.0V5A

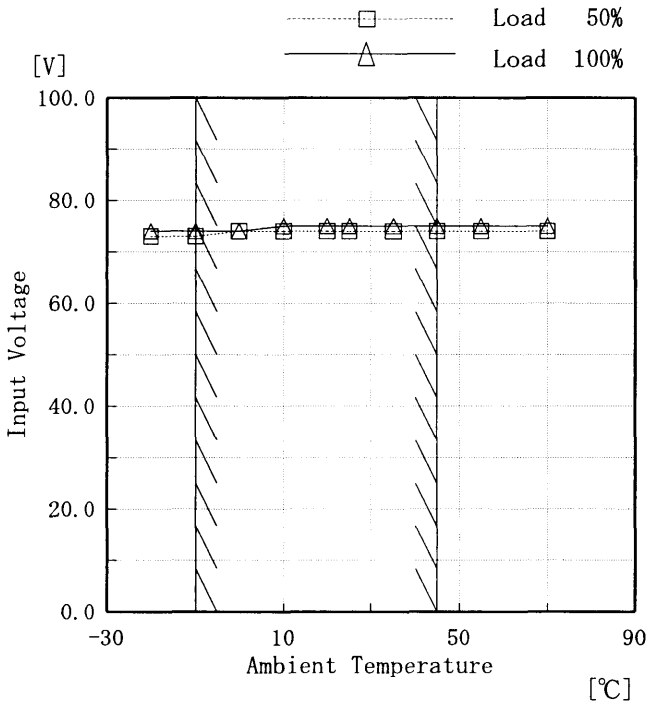
1. Graph



2. Values

Ambient Temperature [℃]	Input Voltage [V]	
	Load 50%	Load 100%
-20	56	74
-10	56	74
0	56	75
10	56	75
20	56	75
25	56	75
35	55	75
45	55	75
55	56	75
70	57	75
—	—	—

Object V2:+24.0V6A



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	73	74
-10	73	74
0	74	74
10	74	75
20	74	75
25	74	75
35	74	75
45	74	75
55	74	75
70	74	75
—	—	—

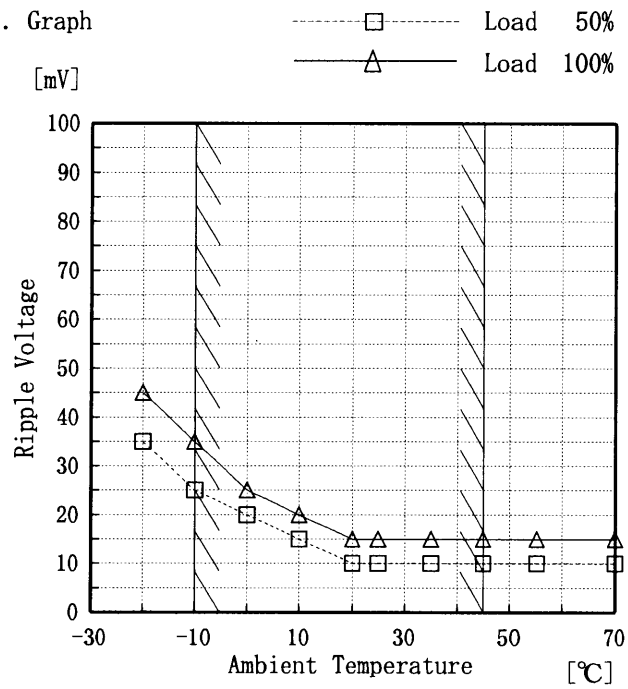
COSEL

Model	LEB150F-0524
Item	Ripple Voltage (by Ambient Temp.) リップル電圧（周囲温度特性）

Testing Circuitry　Figure A

Object　V1:+5.0V5A

1. Graph



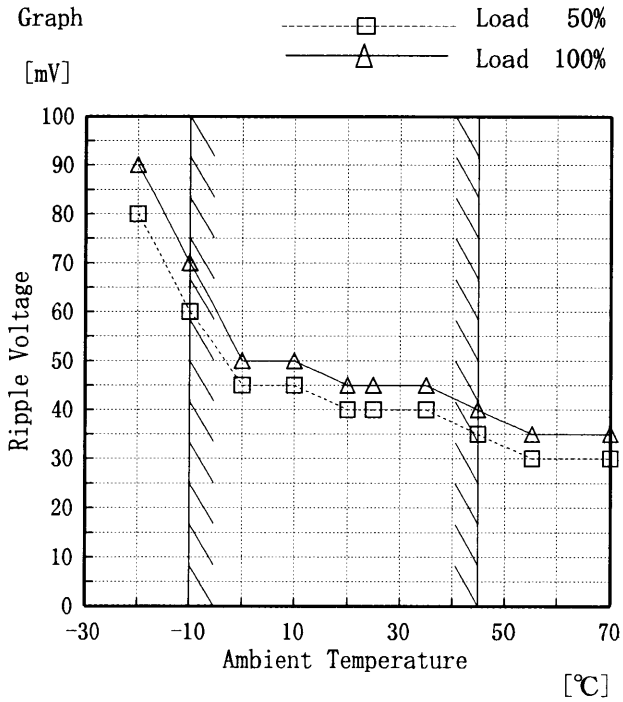
Input Volt.　100 V

2. Values

Ambient Temperature [℃]	Ripple Output Voltage [mV]	
	Load 50%	Load 100%
-20	35	45
-10	25	35
0	20	25
10	15	20
20	10	15
25	10	15
35	10	15
45	10	15
55	10	15
70	10	15
—	—	—

Object　V2:+24.0V6A

1. Graph



Input Volt.　100 V

2. Values

Ambient Temperature [℃]	Ripple Output Voltage [mV]	
	Load 50%	Load 100%
-20	80	90
-10	60	70
0	45	50
10	45	50
20	40	45
25	40	45
35	40	45
45	35	40
55	30	35
70	30	35
—	—	—

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。

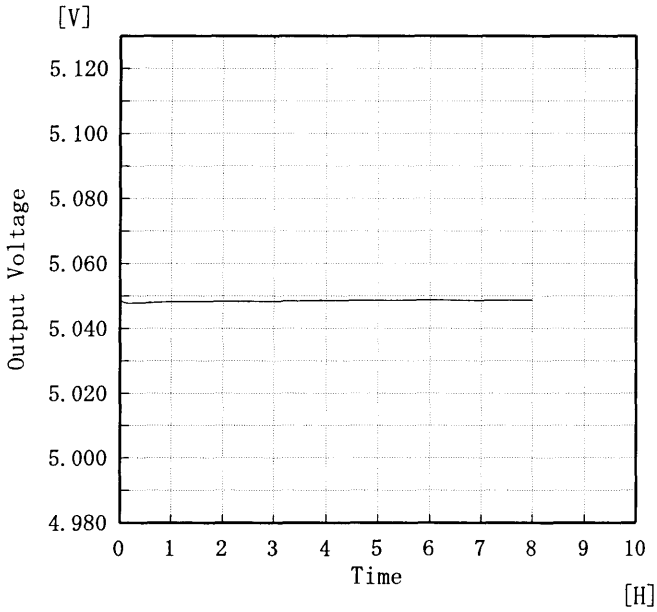
COSEL

Model	LEB150F-0524
Item	Time Lapse Drift 経時ドリフト

Temperature 25℃
Testing Circuitry Figure A

Object V1:+5.0V5A

1. Graph



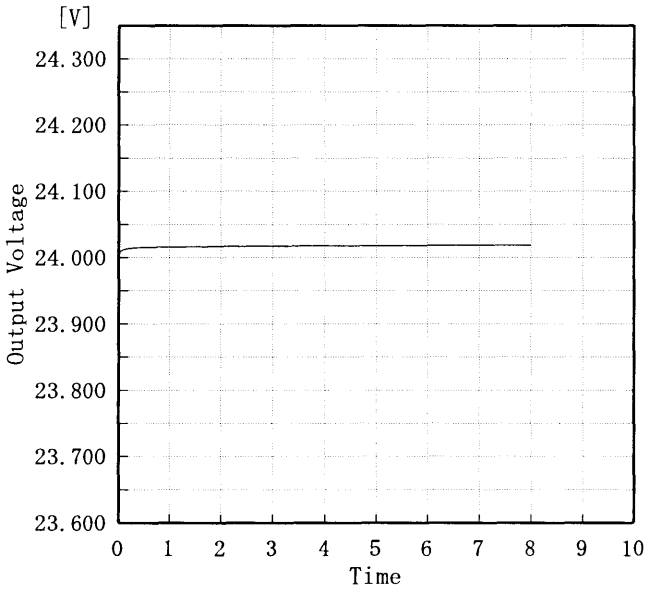
Input Volt. 100V
Load 100%

2. Values

Time since start [H]	Output Voltage [V]
0.0	5.049
0.5	5.048
1.0	5.048
2.0	5.048
3.0	5.048
4.0	5.049
5.0	5.049
6.0	5.049
7.0	5.049
8.0	5.049

Object V2:+24.0V6A

1. Graph



Input Volt. 100V
Load 100%

2. Values

Time since start [H]	Output Voltage [V]
0.0	23.999
0.5	24.015
1.0	24.016
2.0	24.017
3.0	24.017
4.0	24.018
5.0	24.018
6.0	24.018
7.0	24.019
8.0	24.019

BC－3270

COSEL

Model	LEB150F-0524
Item	Output Voltage Accuracy 定電圧精度

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 : -10～45 ℃

Input Voltage : 85～132 V

Load Current (V1) : 0～5 A

(V2) : 0～6 A

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

* Output Voltage Accuracy (Ration) = $\frac{\text{Output Voltage Accuracy}}{\text{Rated Output Voltage}}$ ×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　-10～45 ℃

入力電圧　85～132 V

負荷電流 (V1) 0～5 A

(V2) 0～6 A

* 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

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

2. Values

Object	V1:+5.0V5A

Item	Temperature [℃]	Input Voltage [V]	Output Current [A]	Output Voltage [V]	Output Voltage Accuracy [mV]	Output Voltage Accuracy(Ration)[%]
Maximum Voltage	45	132	0	5.076	±18	±0.4
Minimum Voltage	-10	100	5	5.041		

Object	V2:+24.0V6A

Item	Temperature [℃]	Input Voltage [V]	Output Current [A]	Output Voltage [V]	Output Voltage Accuracy [mV]	Output Voltage Accuracy(Ration)[%]
Maximum Voltage	25	85	0	24.046	±34	±0.2
Minimum Voltage	-10	85	6	23.978		

COSEL

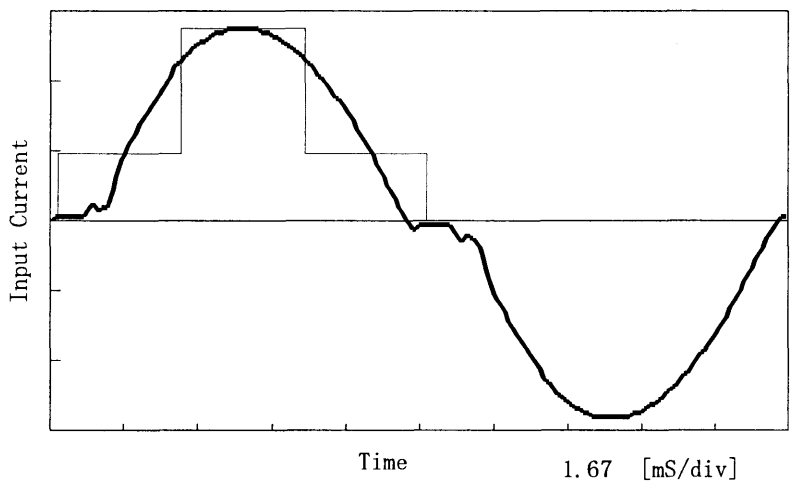
Model	LEB150F-0524		
Item	Harmonic Current 高調波電流	Temperature Testing Circuitry	25℃ Figure E
Object	――――		

1. Input Current Waveform

―― Input Current

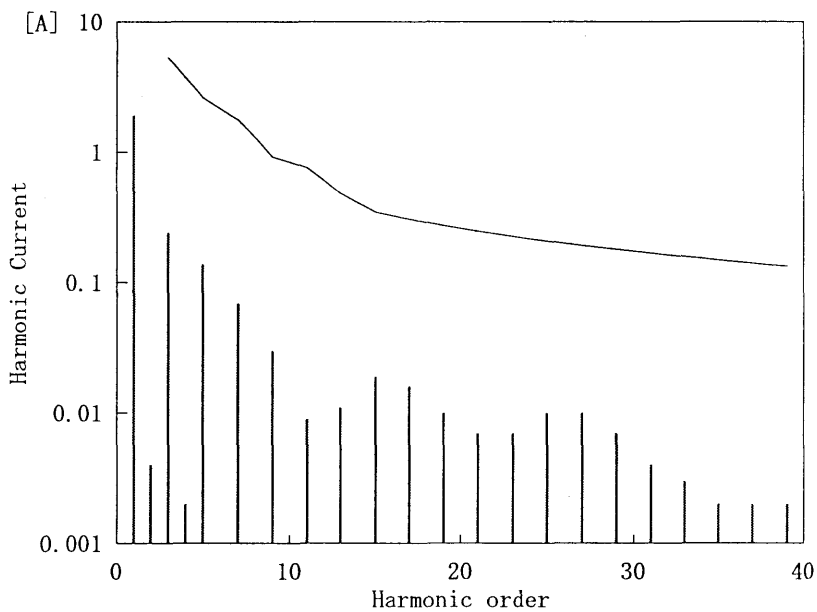
―― Envelope of the input current to classify equipment as Class D
ｸﾗｽDの機器を決定するための入力電流包絡線

1 A/div



Conditions	Values
Input Voltage [V]	99.6
Input Current [A]	1.946
Active Power [W]	191.7
Apparent Power[VA]	193.9
Frequency [Hz]	60
Power Factor	0.989
Output Power [W]	150

2. Harmonic Current



―― Harmonic Current
高調波電流

―― Limits for Class A equipment
ｸﾗｽAの機器に対する限度値

Harmonics order 高調波次数	Limits 限度値 [A]	Values 測定値 [A]
1	—	1.92300
2	—	0.00400
3	5.31124	0.24200
4	—	0.00200
5	2.63253	0.13800
6	—	0.00100
7	1.77811	0.06900
8	—	0.00100
9	0.92369	0.03000
10	—	0.00100
11	0.76205	0.00900
12	—	0.00100
13	0.48494	0.01100
14	—	0.00100
15	0.34639	0.01900
16	—	0.00100
17	0.30563	0.01600
18	—	0.00000
19	0.27346	0.01000
20	—	0.00000
21	0.24742	0.00700
22	—	0.00000
23	0.22590	0.00700
24	—	0.00000
25	0.20783	0.01000
26	—	0.00100
27	0.19244	0.01000
28	—	0.00000
29	0.17916	0.00700
30	—	0.00100
31	0.16761	0.00400
32	—	0.00000
33	0.15745	0.00300
34	—	0.00000
35	0.14845	0.00200
36	—	0.00100
37	0.14043	0.00200
38	—	0.00000
39	0.13323	0.00200
40	—	0.00100

COSEL

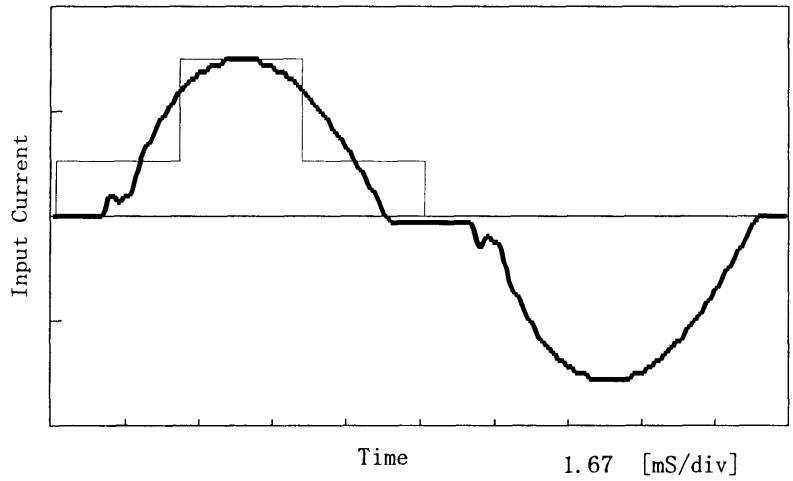
Model	LEB150F-0524		
Item	Harmonic Current 高調波電流	Temperature Testing Circuitry	25℃ Figure E
Object	――――		

1. Input Current Waveform

―― Input Current

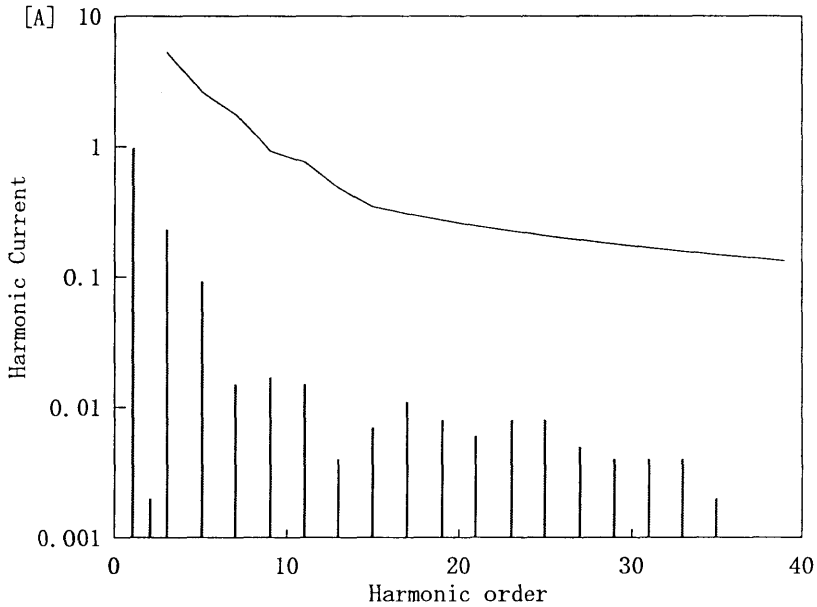
―― Envelope of the input current to classify equipment as Class D
ｸﾗｽDの機器を決定するための入力電流包絡線

1 A/div



Conditions	Values
Input Voltage [V]	100
Input Current [A]	1.014
Active Power [W]	97.9
Apparent Power[VA]	101.5
Frequency [Hz]	60
Power Factor	0.965
Output Power [W]	75

2. Harmonic Current



―― Harmonic Current
高調波電流

―― Limits for Class A equipment
ｸﾗｽAの機器に対する限度値

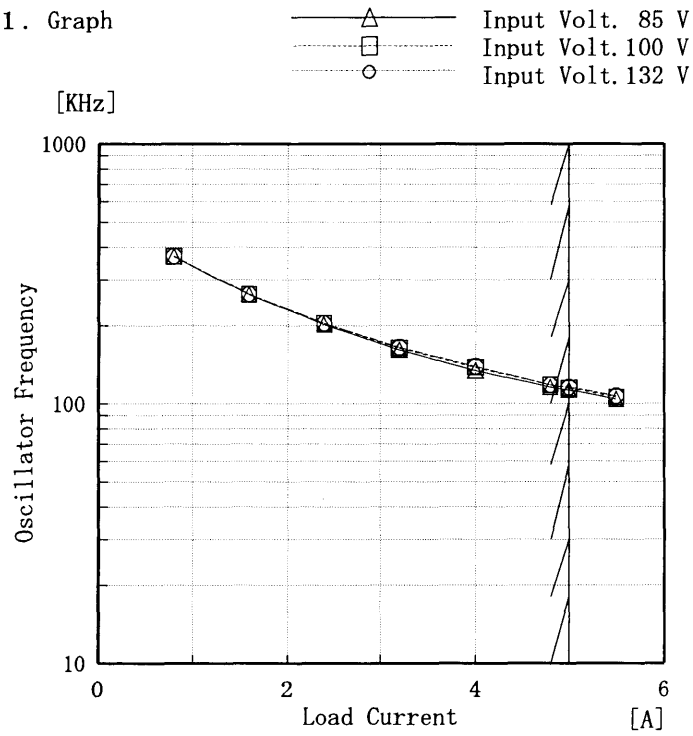
Harmonics order 高調波次数	Limits 限度値 [A]	Values 測定値 [A]
1	—	0.98200
2	—	0.00200
3	5.29000	0.23100
4	—	0.00000
5	2.62200	0.09200
6	—	0.00100
7	1.77100	0.01500
8	—	0.00000
9	0.92000	0.01700
10	—	0.00000
11	0.75900	0.01500
12	—	0.00100
13	0.48300	0.00400
14	—	0.00100
15	0.34500	0.00700
16	—	0.00100
17	0.30441	0.01100
18	—	0.00000
19	0.27237	0.00800
20	—	0.00000
21	0.24643	0.00600
22	—	0.00000
23	0.22500	0.00800
24	—	0.00000
25	0.20700	0.00800
26	—	0.00100
27	0.19167	0.00500
28	—	0.00100
29	0.17845	0.00400
30	—	0.00100
31	0.16694	0.00400
32	—	0.00000
33	0.15682	0.00400
34	—	0.00000
35	0.14786	0.00200
36	—	0.00000
37	0.13986	0.00100
38	—	0.00000
39	0.13269	0.00100
40	—	0.00000

COSEL

Model	LEB150F-0524
Item	Oscillator Frequency 発振周波数
Object	V1:+5.0V5A

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]	Oscillator Frequency [KHz]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0.8	368	370	371
1.6	263	264	265
2.4	202	204	204
3.2	161	164	165
4.0	134	138	139
4.8	116	118	118
5.0	113	115	116
5.5	104	106	107
—	—	—	—
—	—	—	—
—	—	—	—

COSEL

Model	LEB150F-0524
Item	Condensation 結露特性

Testing Circuitry　Figure A

1. Condensation test

Testing procedure is as follows.

① Keeping and cooling the unit in a tank at -10℃ for an hour with the input off.

② Taking it out of the tank and dewing itself in a room where the temperature is 25℃ and the humidity is 40%RH.

③ Testing electrical characteristics of the unit to confirm there be no fault.

1．結露特性試験

入力を切った状態で、恒温槽で－１０℃に冷却しておき、約１時間後に恒温槽から取り出し、室温２５℃、湿度４０％RHの状態におき結露させ、その電気的特性の測定を行い、異常のないことを確認する。

2. Values

Object	V1:＋5.0V5A

Item	Data	Testing Conditions
Output Voltage [V]	5.114	Input Volt.: 100V, Load Current:5A
Line Regulation [mV]	1	Input Volt.: 85～132V, Load Current:5A
Load Regulation [mV]	23	Input Volt.: 100V, Load Current:0～5A

Object	V2:＋24.0V6A

Item	Data	Testing Conditions
Output Voltage [V]	24.069	Input Volt.: 100V, Load Current:6A
Line Regulation [mV]	1	Input Volt.: 85～132V, Load Current:6A
Load Regulation [mV]	19	Input Volt.: 100V, Load Current:0～6A

COSEL

Model	LEB150F-0524		
Item	Leakage Current 漏洩電流	Temperature Testing Circuitry	25℃ Figure B
Object	――――――		

1. Results

Standards	Leakage Current [mA]		
	Input Volt. 85 [V]	Input Volt. 100 [V]	Input Volt. 132 [V]
(A) DENTORI	0.15	0.18	0.24
(B) IEC60950	0.15	0.18	0.24

Standards	Leakage Current [mA]		
	Input Volt. 170 [V]	Input Volt. 230 [V]	Input Volt. 264 [V]
(B) IEC60950	—	—	—

2. Condition

Leakage current value is concluded after measuring both phases of AC input and by choosing the larger one.

交流入力の両相について測定し、その大きい方を漏洩電流測定値とする。

COSEL

Model	LEB150F-0524		
Item	Line Noise Tolerance 入力雑音耐量	Temperature Testing Circuitry	25℃ Figure C
Object	V1:+5.0V5A		

1. Results

Conditions

Input Voltage :100 V
Pulse Input Duration:1 min. or more
Pulse Voltage :2000 V
Load :100 %
Pulse Cycle :10 mS

Pulse Width [nS]	MODE	POLARITY	No protection failure should occur 保護回路の誤動作がない	DC-like Regulation of Output Voltage 出力電圧の直流的変動
50	COMMON	+	OK	no fluctuation
		−	OK	no fluctuation
	NORMAL	+	OK	no fluctuation
		−	OK	no fluctuation
1000	COMMON	+	OK	no fluctuation
		−	OK	no fluctuation
	NORMAL	+	OK	no fluctuation
		−	OK	no fluctuation

Object	V2:+24.0V6A

1. Results

Conditions

Input Voltage :100 V
Pulse Input Duration:1 min. or more
Pulse Voltage :2000 V
Load :100 %
Pulse Cycle :10 mS

Pulse Width [nS]	MODE	POLARITY	No protection failure should occur 保護回路の誤動作がない	DC-like Regulation of Output Voltage 出力電圧の直流的変動
50	COMMON	+	OK	no fluctuation
		−	OK	no fluctuation
	NORMAL	+	OK	no fluctuation
		−	OK	no fluctuation
1000	COMMON	+	OK	no fluctuation
		−	OK	no fluctuation
	NORMAL	+	OK	no fluctuation
		−	OK	no fluctuation

COSEL

Model	LEB150F-0524		
Item	Conducted Emission 雑音端子電圧	Temperature Testing Circuitry	25℃ Figure D
Object	――――――		

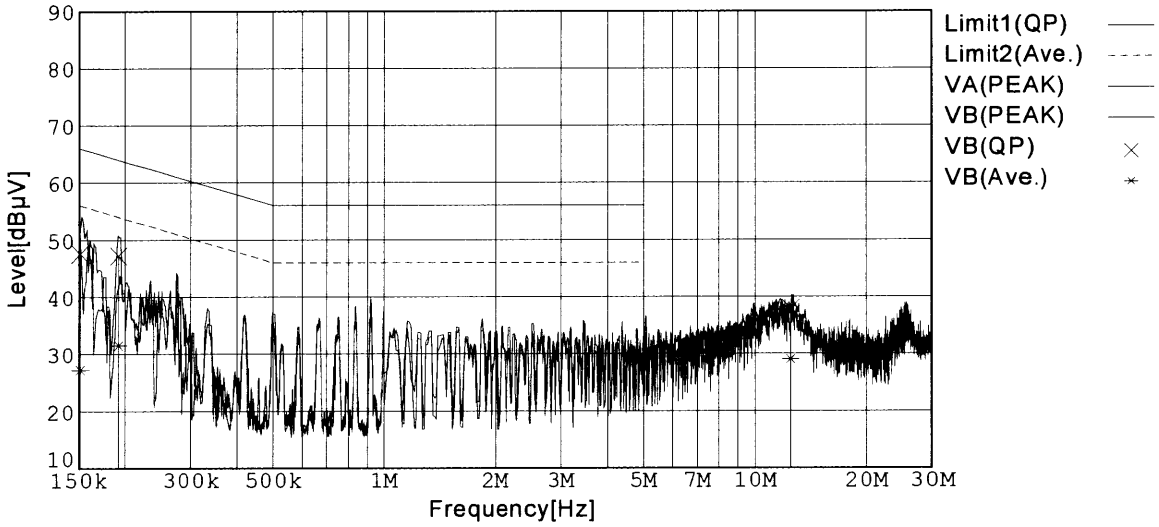
1. Graph

Remarks

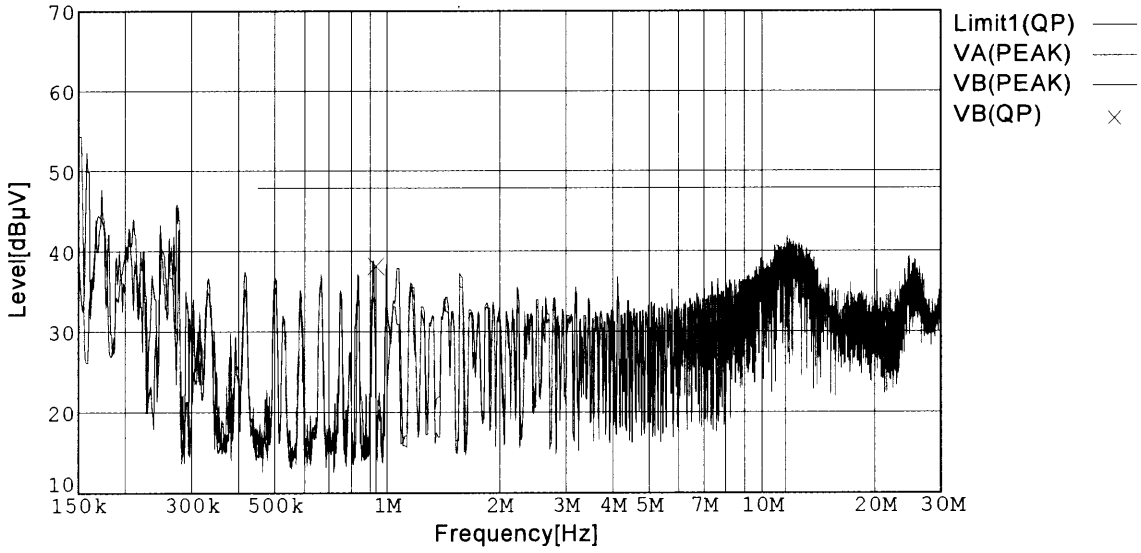
Input Volt. 100 V (VCCI Class B)
120 V (FCC Class B)

Load 100 %

Limit1: [VCCI] Class B(QP)
Limit2: [VCCI] Class B(Ave.)



Limit1: [FCC Part15] Class B



COSEL

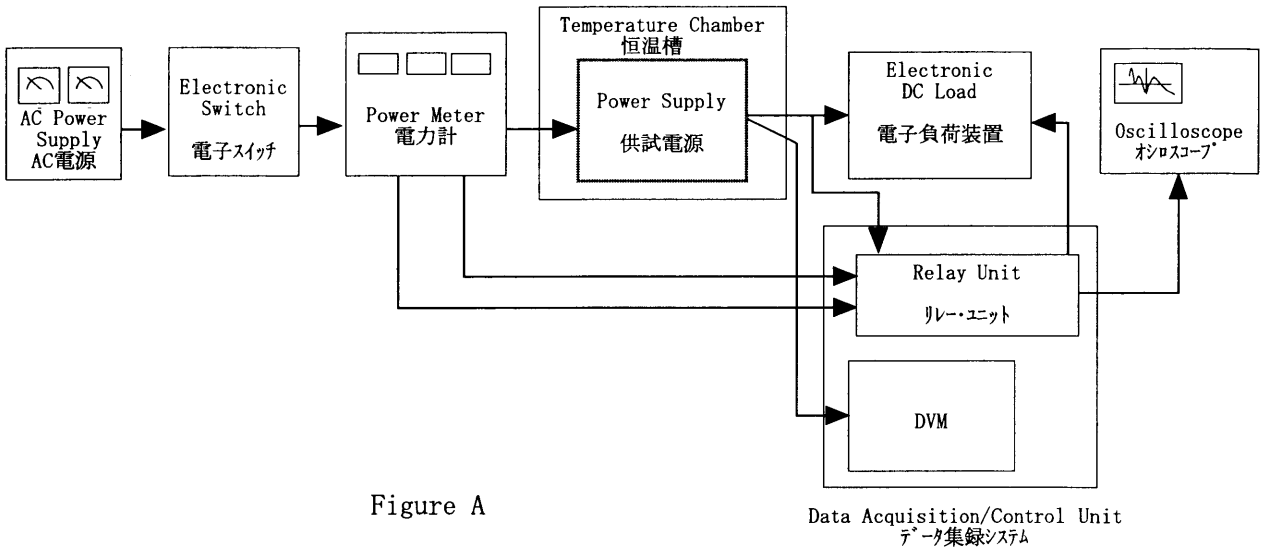


Figure A

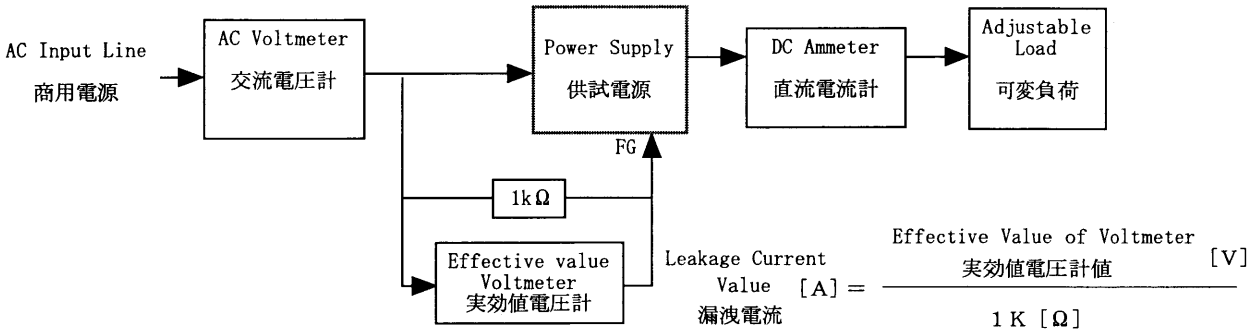


Figure B(DENTORI)

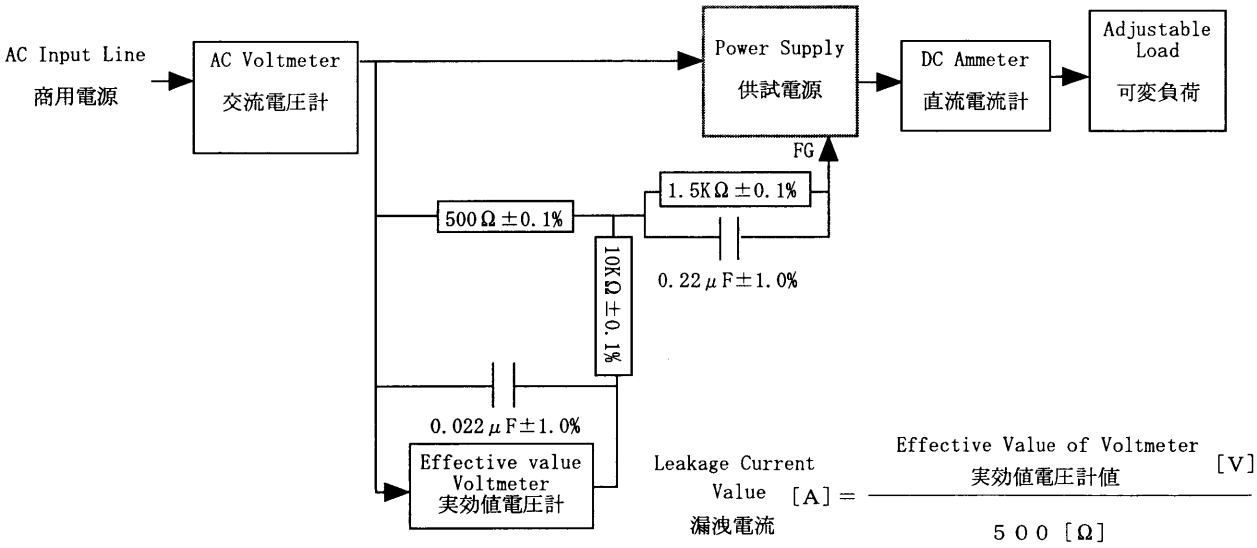


Figure B（ＩＥＣ６０９５０）

COSEL

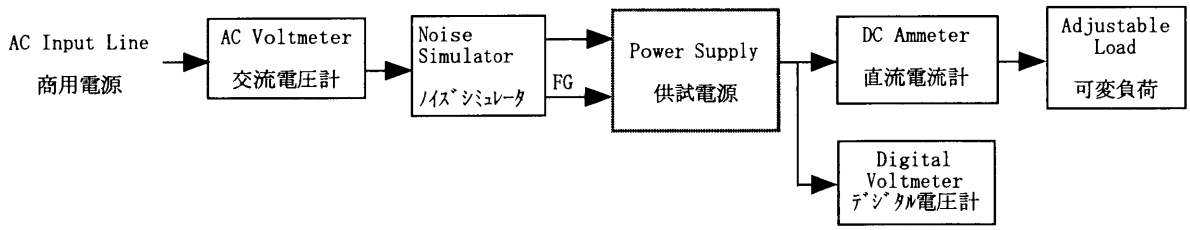


Figure C

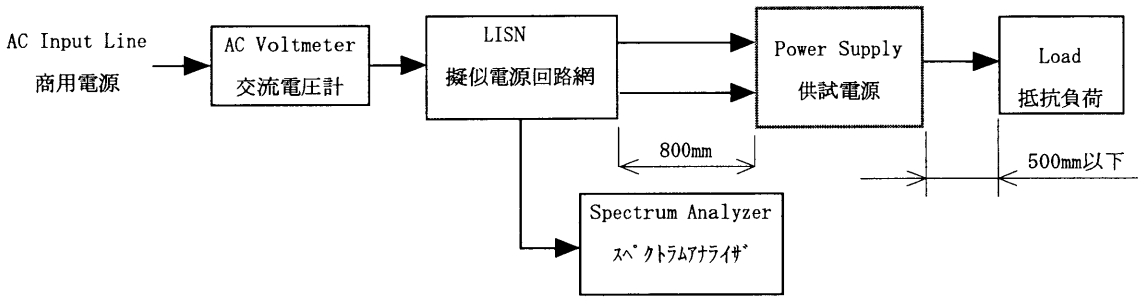


Figure D

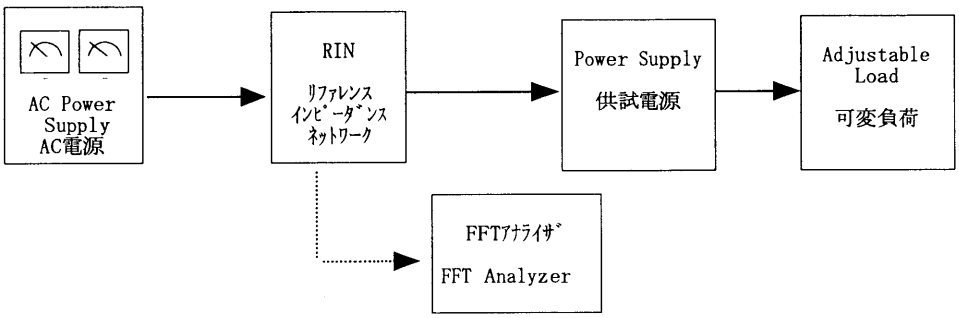


Figure E