参考資料

COSEL

TEST DATA OF RMC30A-1
(100V INPUT)

Regulated DC Power Supply

Date : June 4, 1999

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Design Engineer

コーセル株式会社

COSEL CO.,LTD.

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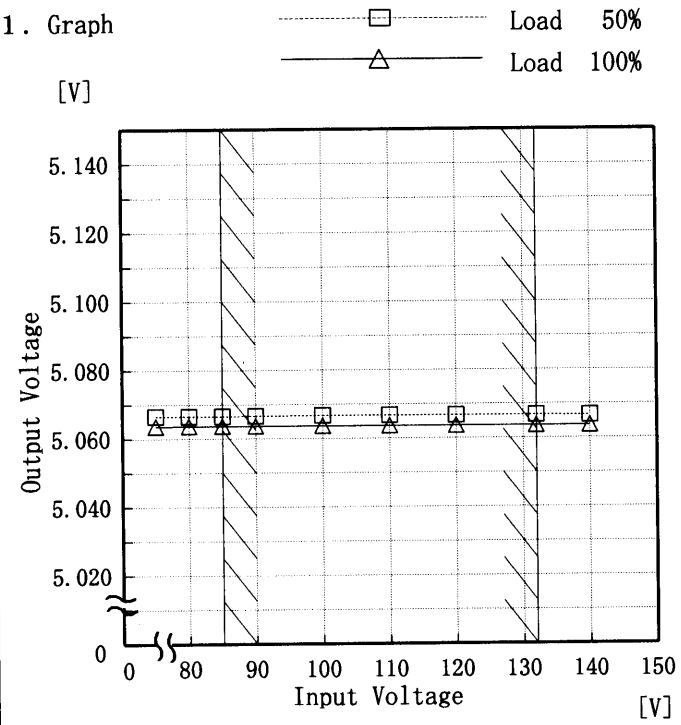
Model	RMC30A-1
Item	Line Regulation 静的入力変動

Temperature 25℃
Testing Circuitry Figure A

Object +5.0V3A

1. Graph

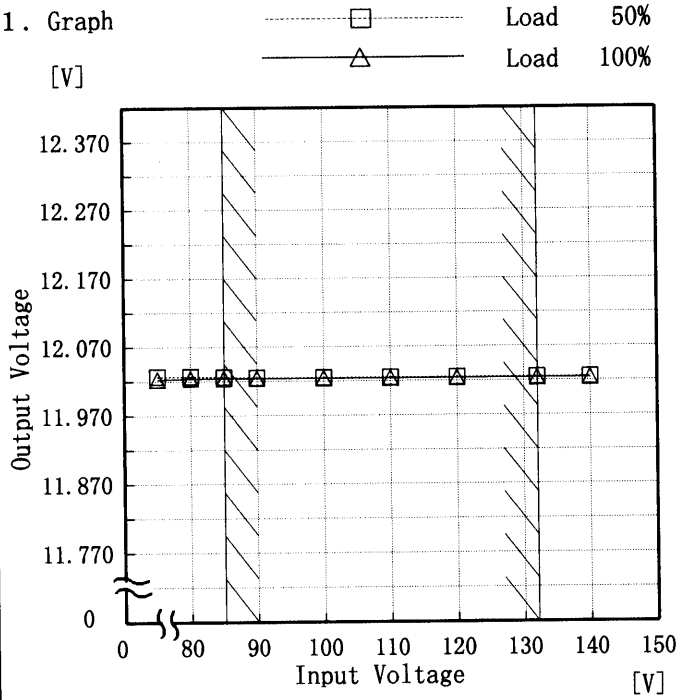


2. Values

Input Voltage [V]	Load 50% Output Volt. [V]	Load 100% Output Volt. [V]
75	5.067	5.064
80	5.067	5.064
85	5.067	5.064
90	5.067	5.064
100	5.067	5.064
110	5.067	5.064
120	5.067	5.064
132	5.067	5.064
140	5.067	5.064

Object +12V1.20A

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]	Load 50% Output Volt. [V]	Load 100% Output Volt. [V]
75	12.027	12.023
80	12.027	12.024
85	12.026	12.024
90	12.025	12.024
100	12.025	12.024
110	12.025	12.024
120	12.025	12.024
132	12.025	12.024
140	12.025	12.024

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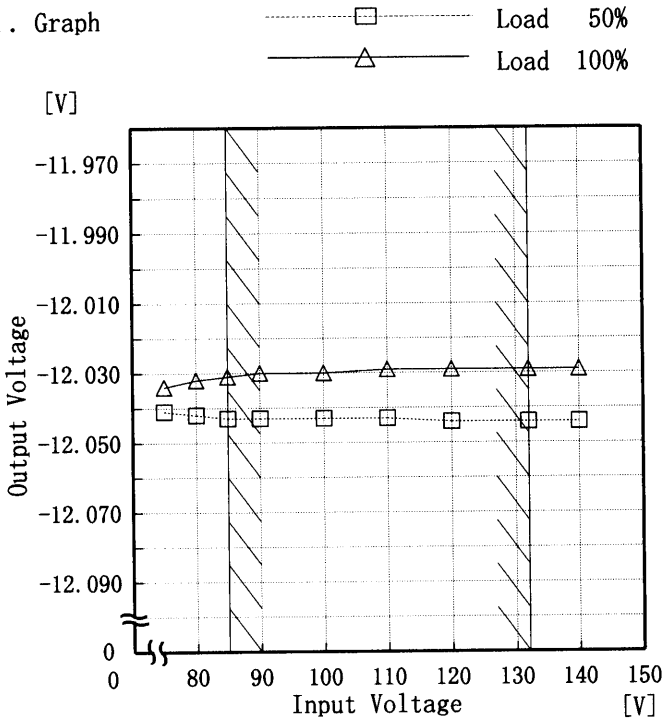
Model	RMC30A-1
Item	Line Regulation 静的入力変動
Object	-12.0V0.3A

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

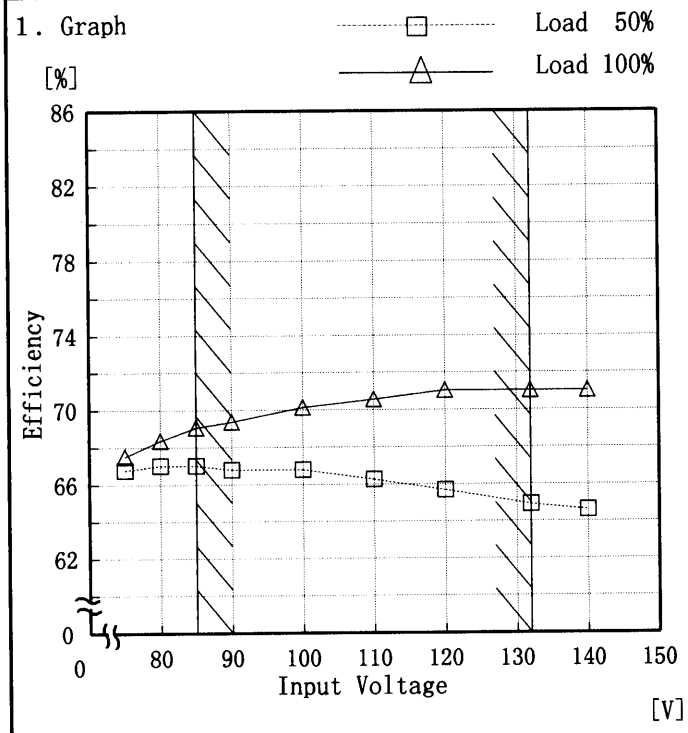
Input Voltage [V]	Load 50% Output Volt. [V]	Load 100% Output Volt. [V]
75	-12.041	-12.034
80	-12.042	-12.032
85	-12.043	-12.031
90	-12.043	-12.030
100	-12.043	-12.030
110	-12.043	-12.029
120	-12.044	-12.029
132	-12.044	-12.029
140	-12.044	-12.029

COSEL

Model	RMC30A-1
Item	Efficiency 効率
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

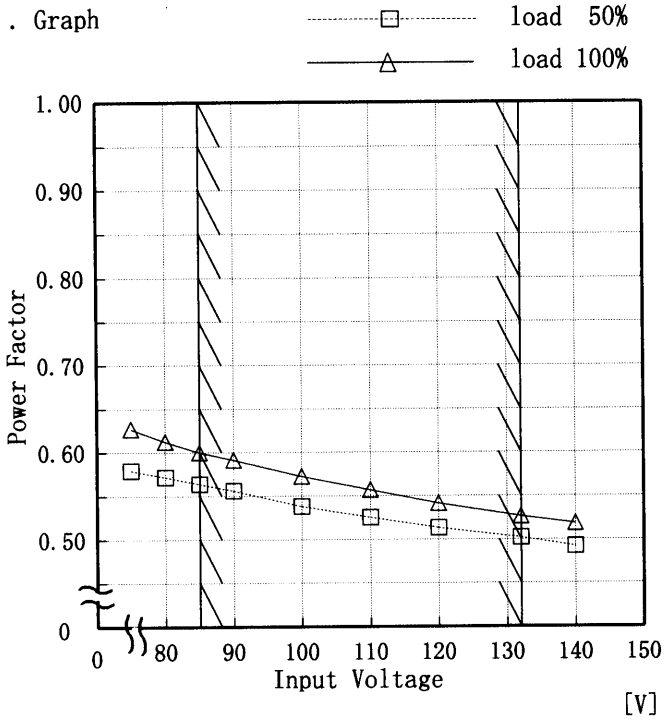
Input Voltage [V]	Load 50% Efficiency [%]	Load 100% Efficiency [%]
75	66.8	67.5
80	67.0	68.4
85	67.0	69.1
90	66.8	69.4
100	66.8	70.1
110	66.3	70.6
120	65.7	71.0
132	64.9	71.0
140	64.6	71.0

COSEL

Model	RMC30A-1
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]	load 50% Power Factor	load 100% Power Factor
75	0.58	0.63
80	0.57	0.61
85	0.56	0.60
90	0.56	0.59
100	0.54	0.57
110	0.53	0.56
120	0.51	0.54
132	0.50	0.53
140	0.49	0.52

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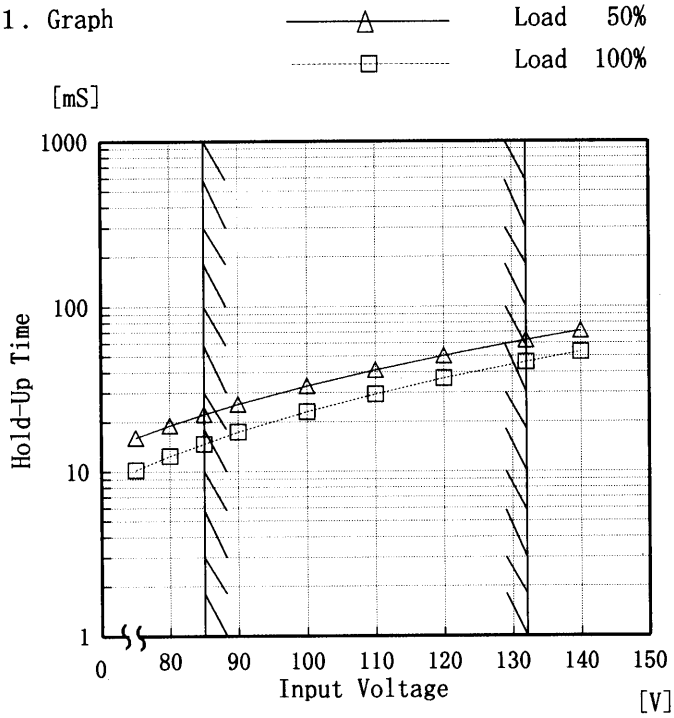
Model	RMC30A-1
Item	Hold-Up Time 出力保持時間
Object	+5.0V3A

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]	Load 50% Hold-Up Time [mS]	Load 100% Hold-Up Time [mS]
75	16	10
80	19	12
85	22	15
90	26	17
100	33	23
110	41	29
120	50	37
132	62	46
140	71	53

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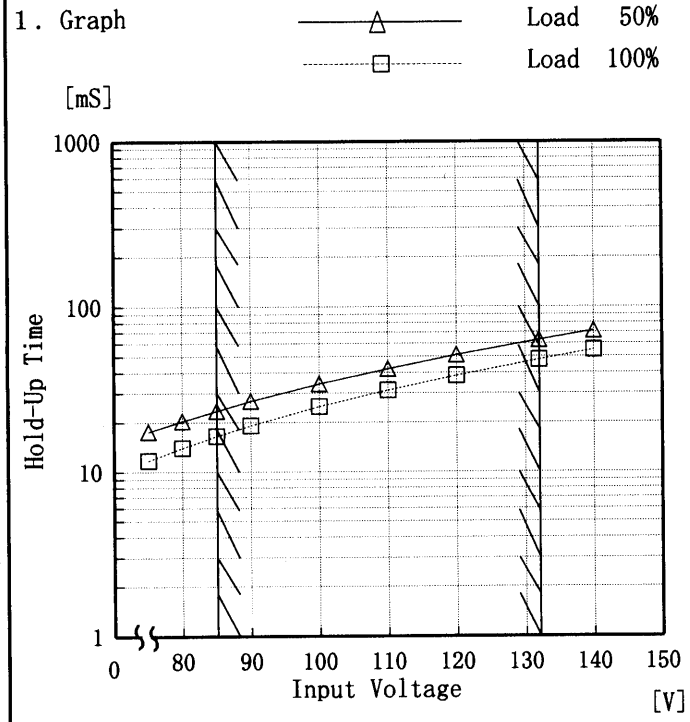
COSEL

Model	RMC30A-1
Item	Hold-Up Time 出力保持時間
Object	+12.0V1.2A

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]	Load 50% Hold-Up Time [mS]	Load 100% Hold-Up Time [mS]
75	18	12
80	20	14
85	23	17
90	27	19
100	34	25
110	42	31
120	51	38
132	63	48
140	72	55

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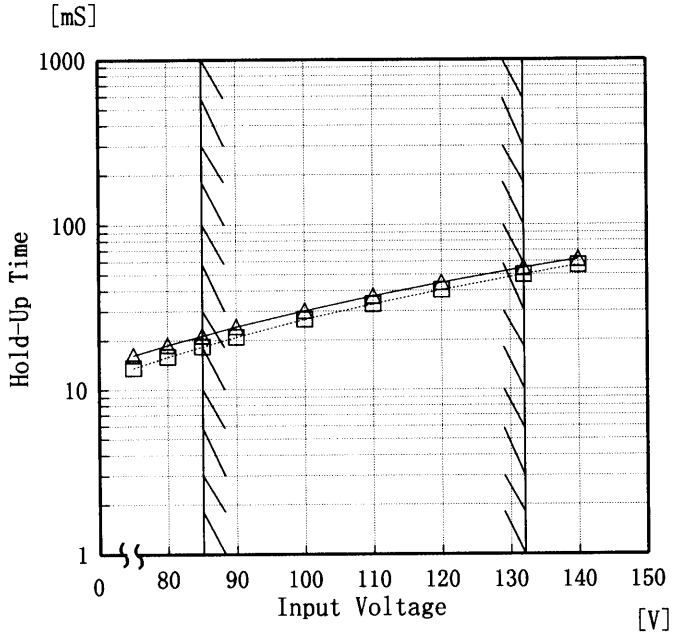
COSEL

Model	RMC30A-1
Item	Hold-Up Time 出力保持時間
Object	-12.0V0.3A

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

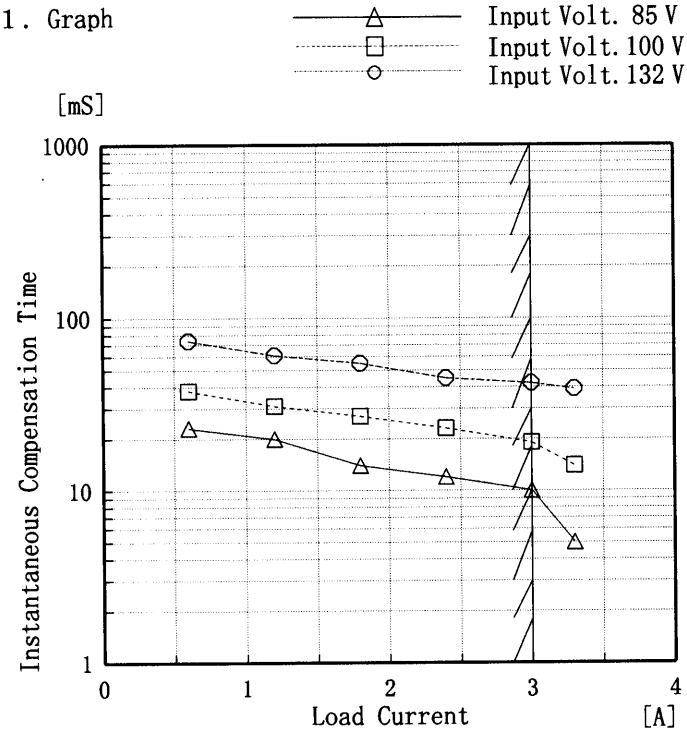
Input Voltage [V]	Load 50% Hold-Up Time [mS]	Load 100% Hold-Up Time [mS]
75	16	14
80	19	16
85	21	18
90	24	21
100	30	27
110	37	33
120	45	40
132	55	50
140	62	57

COSEL

Model	RMC30A-1
Item	Instantaneous Interruption Compensation 瞬時停電保障
Object	+5.0V3A

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]	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
	Time [mS]		
0.0	—	—	—
0.6	23	38	74
1.2	20	31	61
1.8	14	27	55
2.4	12	23	45
3.0	10	19	42
3.3	5	14	39
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—

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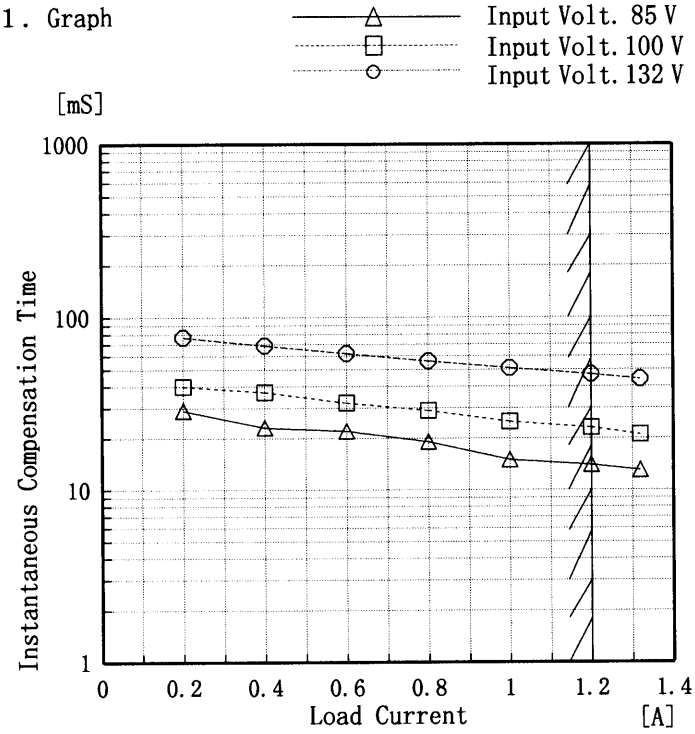
COSEL

Model	RMC30A-1	Temperature	25℃
Item	Instantaneous Interruption Compensation 瞬時停電保障	Testing Circuitry	Figure A
Object	+12.0V1.2A		

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

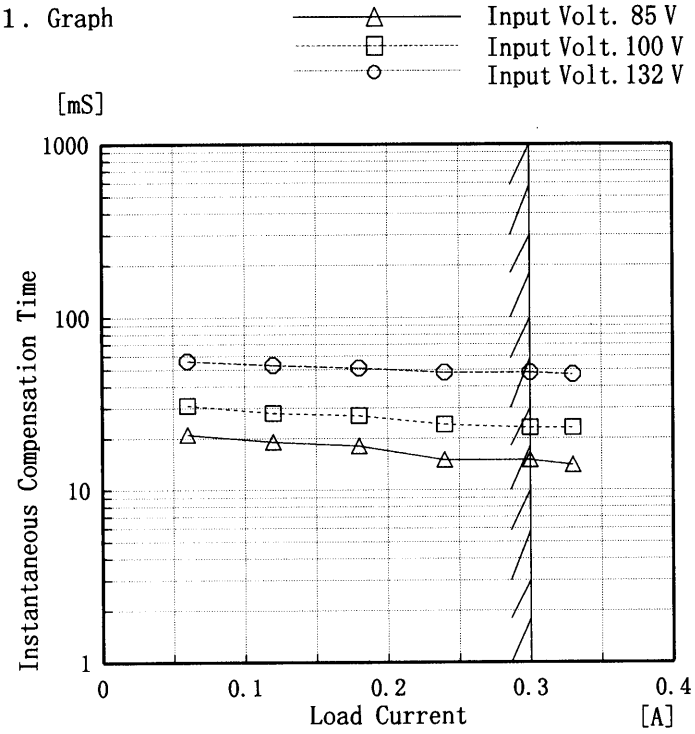
Load Current [A]	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
	Time [mS]		
0.00	—	—	—
0.20	29	40	77
0.40	23	37	69
0.60	22	32	62
0.80	19	29	56
1.00	15	25	51
1.20	14	23	47
1.20	14	23	47
1.32	13	21	44
—	—	—	—
—	—	—	—

COSEL

Model	RMC30A-1
Item	Instantaneous Interruption Compensation 瞬時停電保障
Object	-12.0V0.3A

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]	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
	Time [mS]		
0.00	—	—	—
0.06	21	31	56
0.12	19	28	53
0.18	18	27	51
0.24	15	24	48
0.30	15	23	48
0.33	14	23	47
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—

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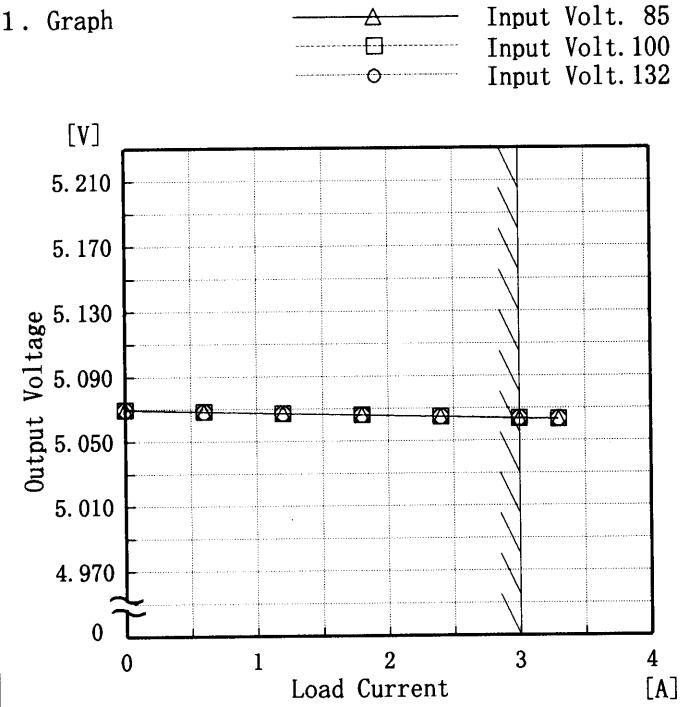
Model	RMC30A-1	Temperature	25℃
Item	Load Regulation 静的負荷変動	Testing Circuitry	Figure A

Object +5.0V3A

1. Graph

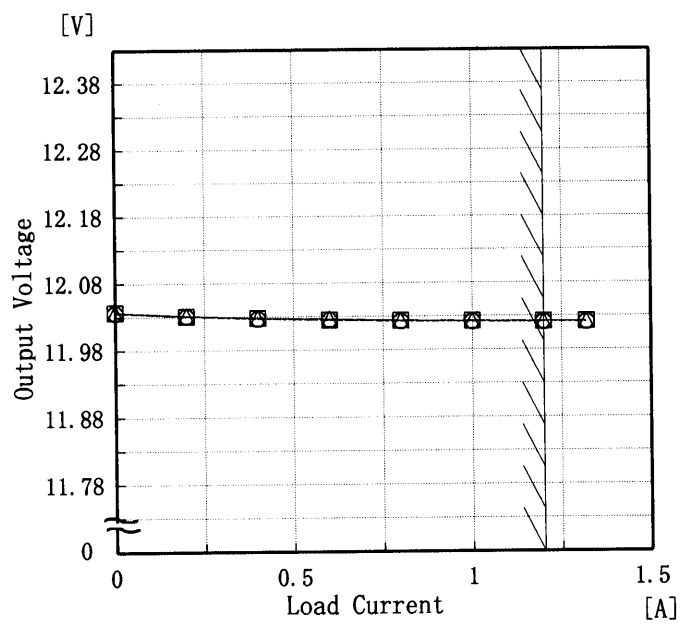


2. Values

Load Current [A]	Input Volt. 85[V] Output Volt. [V]	Input Volt. 100[V] Output Volt. [V]	Input Volt. 132[V] Output Volt. [V]
0.0	5.070	5.070	5.070
0.6	5.068	5.068	5.069
1.2	5.067	5.067	5.067
1.8	5.066	5.066	5.066
2.4	5.065	5.065	5.065
3.0	5.064	5.064	5.064
3.3	5.063	5.063	5.063
—	—	—	—
—	—	—	—
—	—	—	—

Object +12V1.2A

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

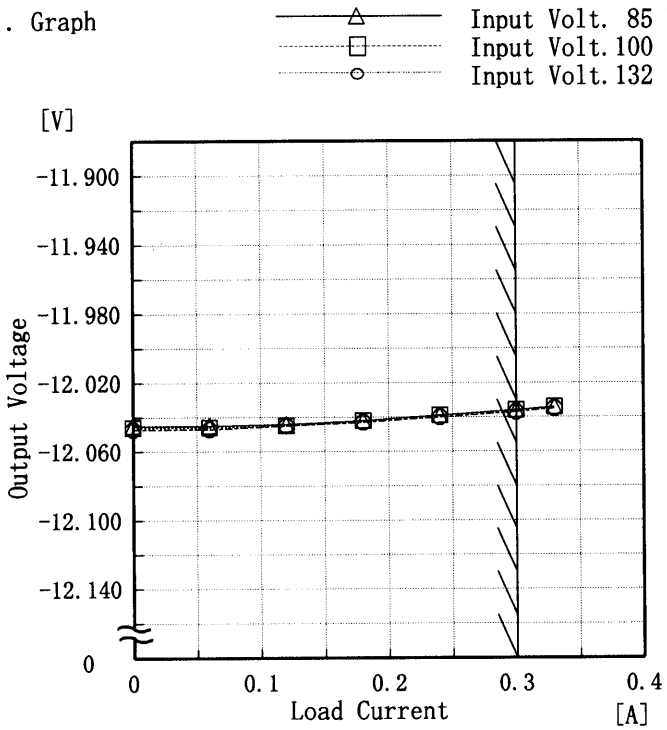
Load Current [A]	Input Volt. 85[V] Output Volt. [V]	Input Volt. 100[V] Output Volt. [V]	Input Volt. 132[V] Output Volt. [V]
0.00	12.037	12.037	12.036
0.20	12.032	12.031	12.031
0.40	12.028	12.028	12.027
0.60	12.026	12.025	12.025
0.80	12.024	12.024	12.023
1.00	12.023	12.023	12.022
1.20	12.022	12.022	12.021
1.20	12.022	12.022	12.022
1.32	12.022	12.022	12.021
—	—	—	—

COSEL

Model	RMC30A-1
Item	Load Regulation 静的負荷変動
Object	-12.0V0.3A

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

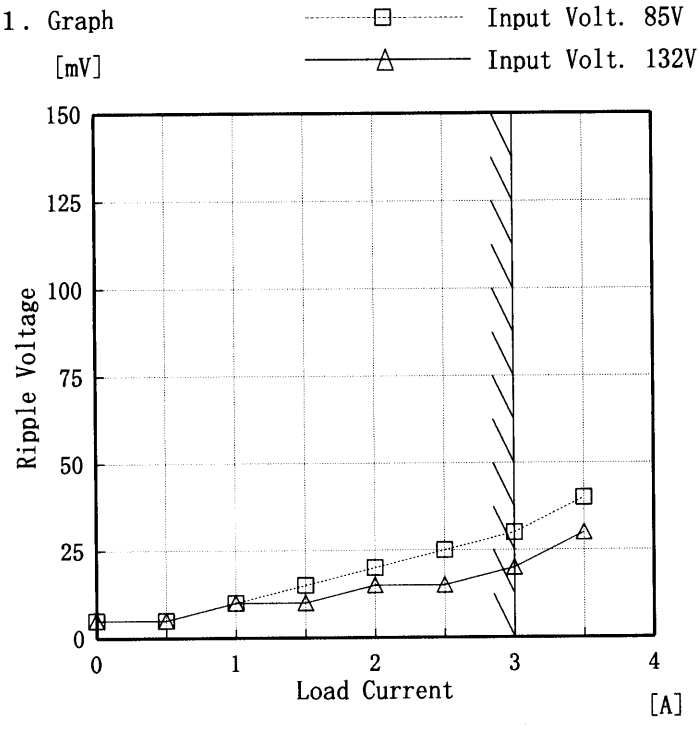
Load Current [A]	Input Volt. 85[V] Output Volt. [V]	Input Volt. 100[V] Output Volt. [V]	Input Volt. 132[V] Output Volt. [V]
0.00	-12.045	-12.046	-12.047
0.06	-12.045	-12.046	-12.047
0.12	-12.044	-12.045	-12.045
0.18	-12.042	-12.042	-12.043
0.24	-12.039	-12.039	-12.040
0.30	-12.036	-12.036	-12.037
0.33	-12.034	-12.034	-12.035
—	—	—	—
—	—	—	—
—	—	—	—

COSEL

Model	RMC30A-1
Item	Ripple Voltage(by Load Current) リップル電圧(負荷電流特性)
Object	+5.0V3.00A

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

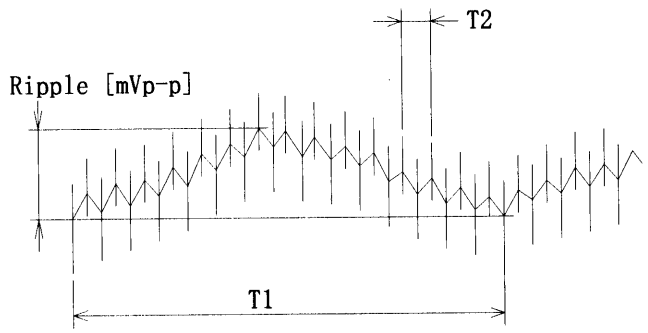


Fig. Complex Ripple Wave Form
図 リップル波形詳細図

2. Values

Load Current [A]	Input Volt. 85 [V] Ripple Output Volt. [mV]	Input Volt. 132 [V] Ripple Output Volt. [mV]
0.0	5	5
0.5	5	5
1.0	10	10
1.5	15	10
2.0	20	15
2.5	25	15
3.0	30	20
3.5	40	30
—	—	—
—	—	—
—	—	—

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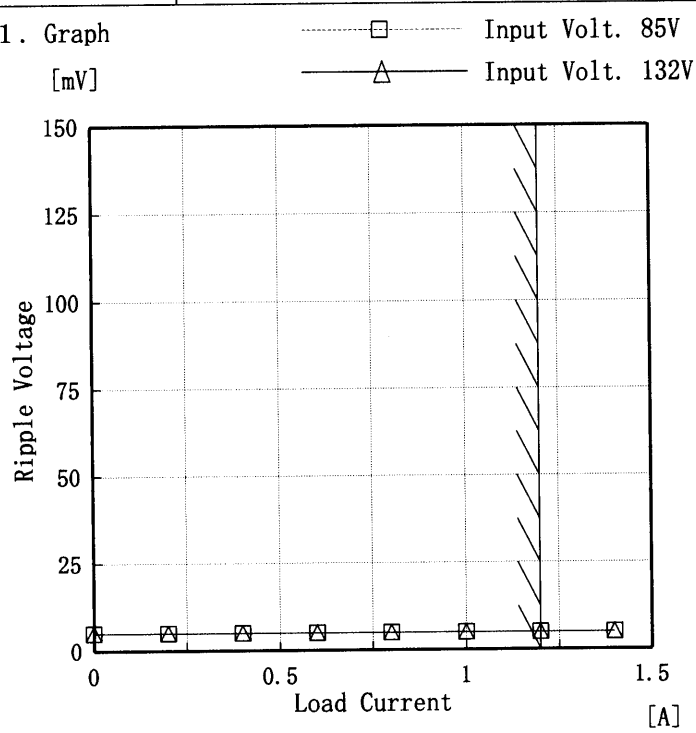
COSEL

Model	RMC30A-1
Item	Ripple Voltage(by Load Current) リップル電圧(負荷電流特性)
Object	+12.0V1.20A

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

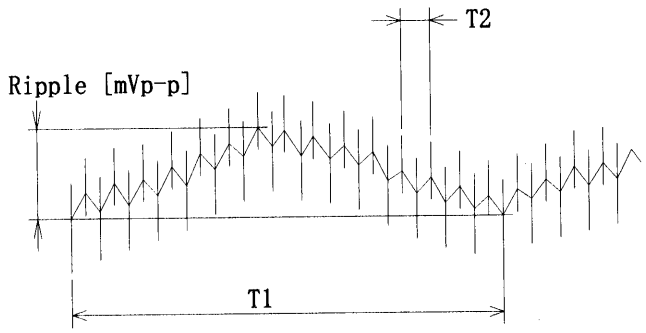


Fig. Complex Ripple Wave Form
図 リップル波形詳細図

2. Values

Load Current [A]	Input Volt. 85 [V] Ripple Output Volt. [mV]	Input Volt. 132 [V] Ripple Output Volt. [mV]
0.0	5	5
0.2	5	5
0.4	5	5
0.6	5	5
0.8	5	5
1.0	5	5
1.2	5	5
1.4	5	5
—	—	—
—	—	—
—	—	—

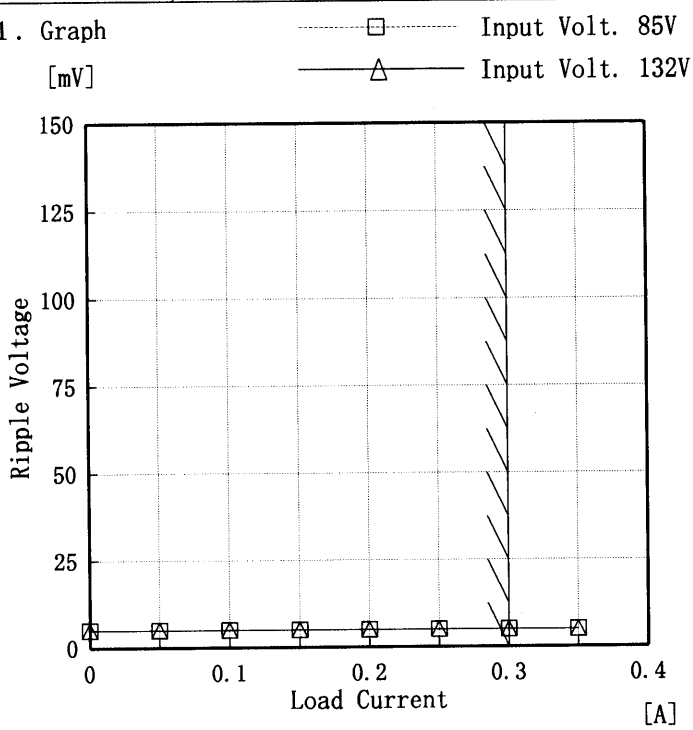
BC-3238

COSEL

Model	RMC30A-1
Item	Ripple Voltage(by Load Current) リップル電圧(負荷電流特性)
Object	-12.0V0.30A

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

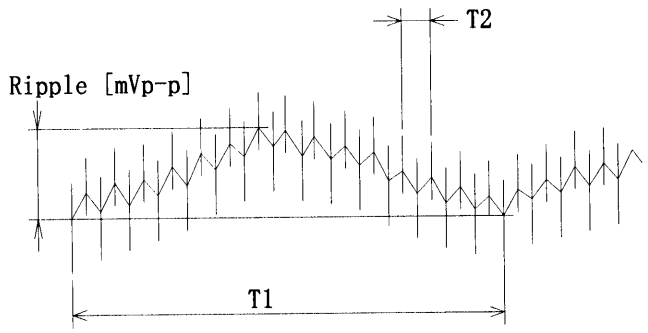


Fig. Complex Ripple Wave Form
図 リップル波形詳細図

2. Values

Load Current [A]	Input Volt. 85 [V] Ripple Output Volt. [mV]	Input Volt. 132 [V] Ripple Output Volt. [mV]
0.00	5	5
0.05	5	5
0.10	5	5
0.15	5	5
0.20	5	5
0.25	5	5
0.30	5	5
0.35	5	5
—	—	—
—	—	—
—	—	—

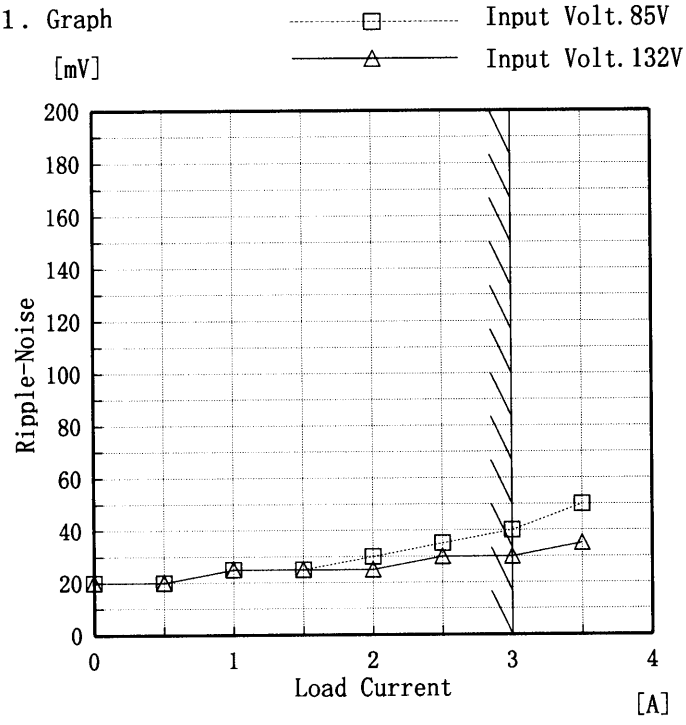
BC-3238

COSEL

Model	RMC30A-1
Item	Ripple-Noise　リップルノイズ
Object	+5.0V3.00A

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

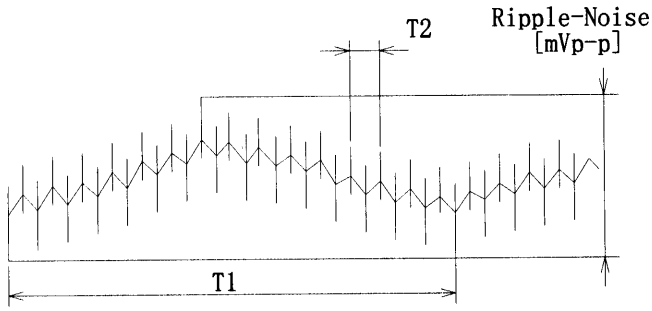


Fig. Complex Ripple Wave Form
図　リップル波形詳細図

2. Values

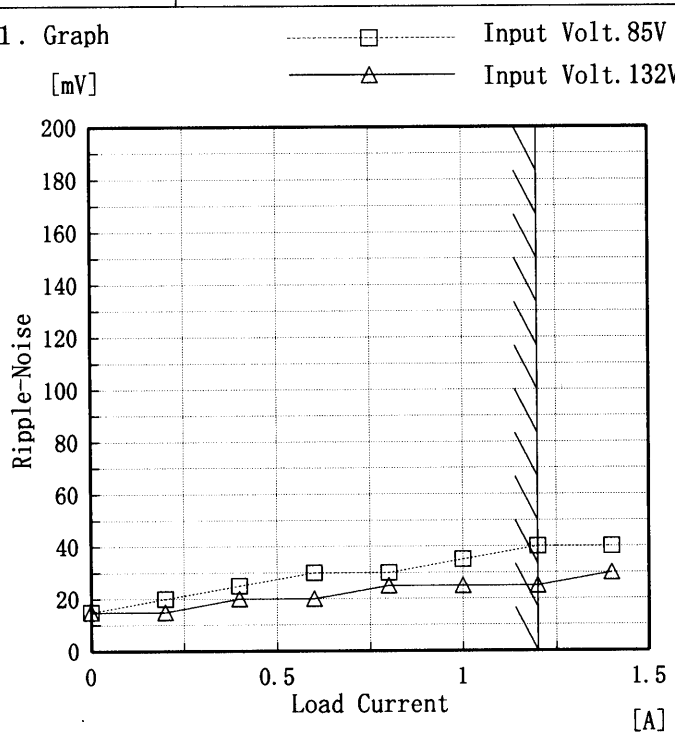
Load current [A]	Input Volt. 85 [V] Ripple-Noise [mV]	Input Volt. 132 [V] Ripple-Noise [mV]
0.0	20	20
0.5	20	20
1.0	25	25
1.5	25	25
2.0	30	25
2.5	35	30
3.0	40	30
3.5	50	35
—	—	—
—	—	—
—	—	—

COSEL

Model	RMC30A-1
Item	Ripple-Noise リップルノイズ
Object	+12.0V1.20A

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

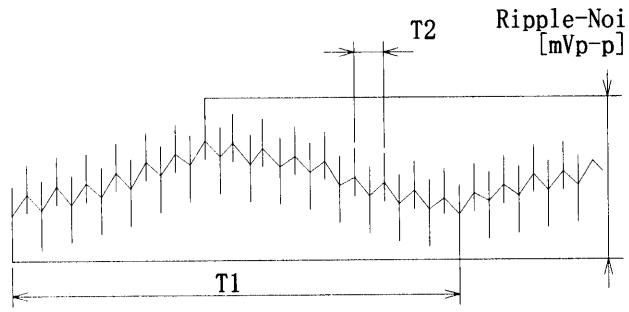


Fig. Complex Ripple Wave Form
図 リップル波形詳細図

2. Values

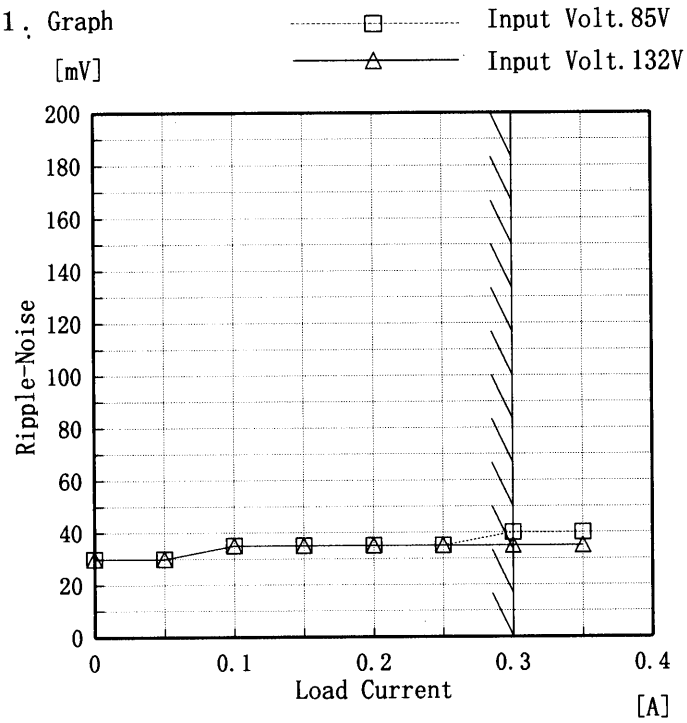
Load current [A]	Input Volt. 85 [V] Ripple-Noise [mV]	Input Volt. 132 [V] Ripple-Noise [mV]
0.0	15	15
0.2	20	15
0.4	25	20
0.6	30	20
0.8	30	25
1.0	35	25
1.2	40	25
1.4	40	30
—	—	—
—	—	—
—	—	—

COSEL

Model	RMC30A-1
Item	Ripple-Noise リップルノイズ
Object	-12.0V0.30A

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

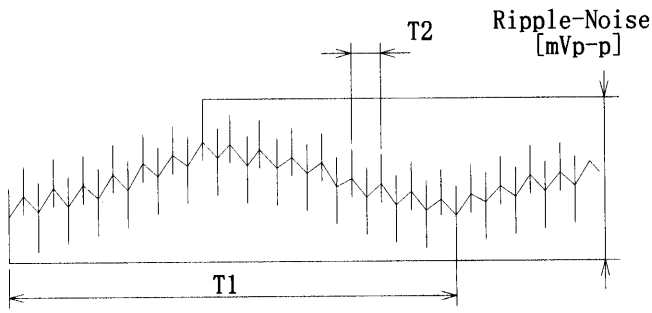


Fig. Complex Ripple Wave Form
図 リップル波形詳細図

2. Values

Load current [A]	Input Volt. 85 [V] Ripple-Noise [mV]	Input Volt. 132 [V] Ripple-Noise [mV]
0.00	30	30
0.05	30	30
0.10	35	35
0.15	35	35
0.20	35	35
0.25	35	35
0.30	40	35
0.35	40	35
—	—	—
—	—	—
—	—	—

BC-3238

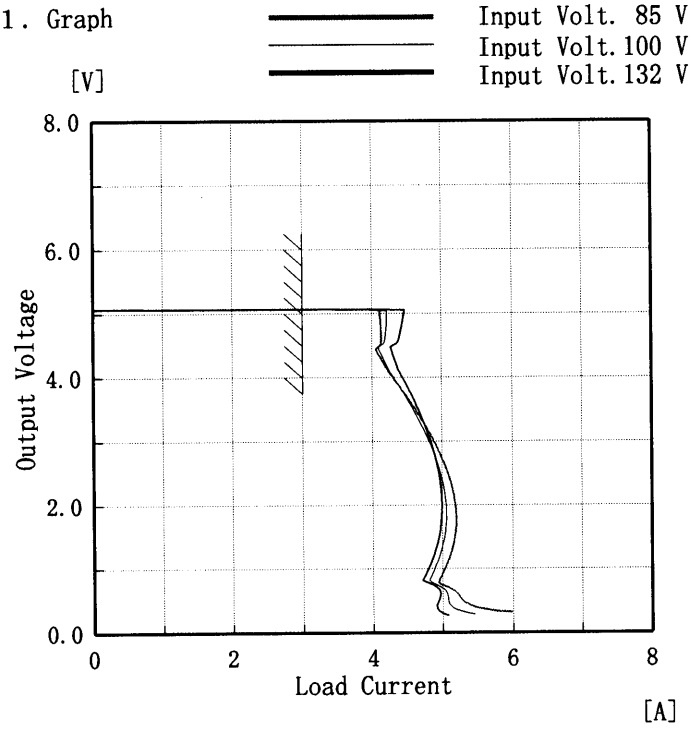
COSEL

Model	RMC30A-1
Item	Overcurrent Protection 過電流保護

Temperature 25℃
Testing Circuitry Figure A

Object +5.0V3A

1. Graph

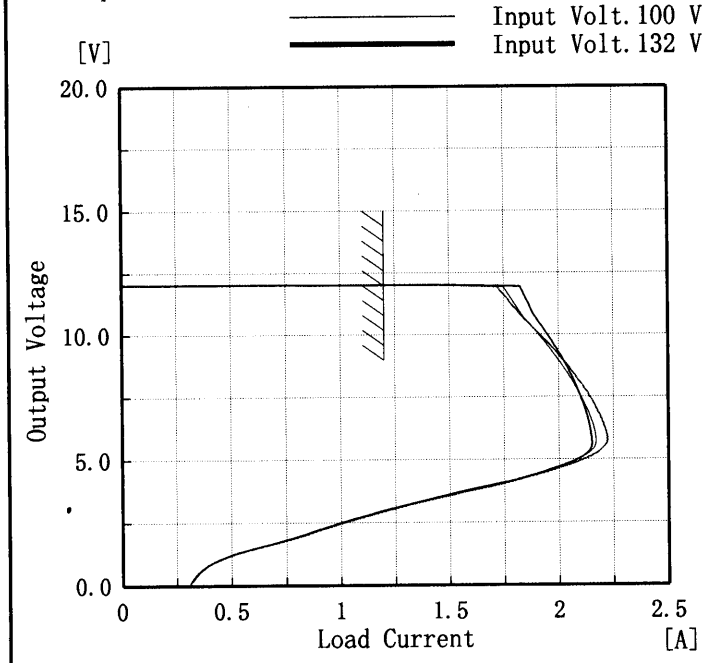


2. Values

Output Voltage [V]	Input Volt. 85[V] Load Current [A]	Input Volt. 100[V] Load Current [A]	Input Volt. 132[V] Load Current [A]
5.00	4.12	4.21	4.46
4.75	4.13	4.20	4.42
4.50	4.06	4.09	4.27
4.00	4.30	4.31	4.44
3.50	4.62	4.59	4.66
3.00	4.90	4.82	4.84
2.50	5.08	4.97	4.95
2.00	5.19	5.05	4.99
1.50	5.17	5.02	4.94
1.00	5.02	4.87	4.79
0.50	5.30	5.08	4.92
0.00	6.00	5.45	5.08

Object +12V1.2A

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]	Input Volt. 85[V] Load Current [A]	Input Volt. 100[V] Load Current [A]	Input Volt. 132[V] Load Current [A]
12.00	1.719	1.748	1.825
11.40	1.765	1.790	1.856
10.80	1.827	1.841	1.895
9.60	1.963	1.949	1.981
8.40	2.074	2.042	2.055
7.20	2.166	2.121	2.115
6.00	2.220	2.166	2.146
4.80	2.027	2.000	2.005
3.60	1.484	1.469	1.459
2.40	0.952	0.941	0.936
1.20	0.481	0.478	0.477
0.00	0.311	0.308	0.307

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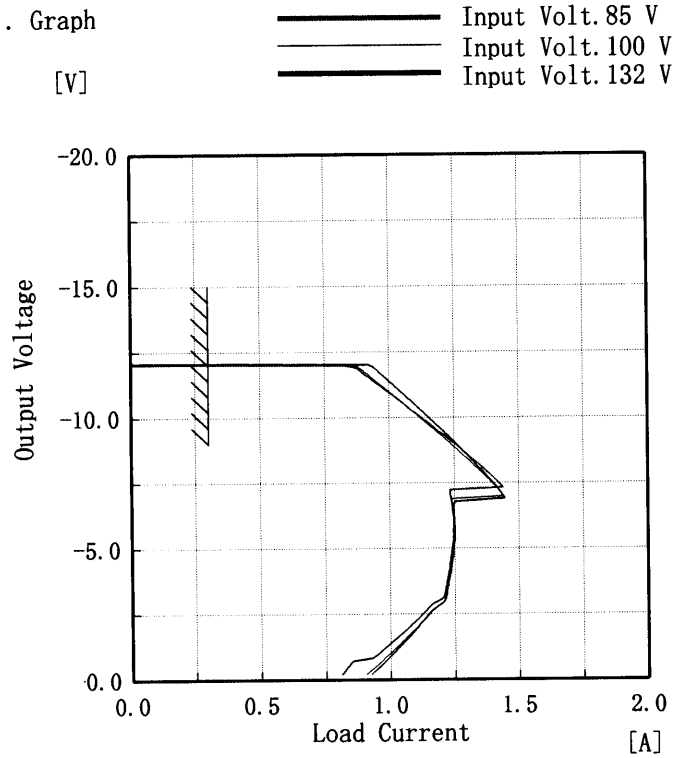
COSEL

Model	RMC30A-1
Item	Overcurrent Protection 過電流保護
Object	-12.0V0.30A

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

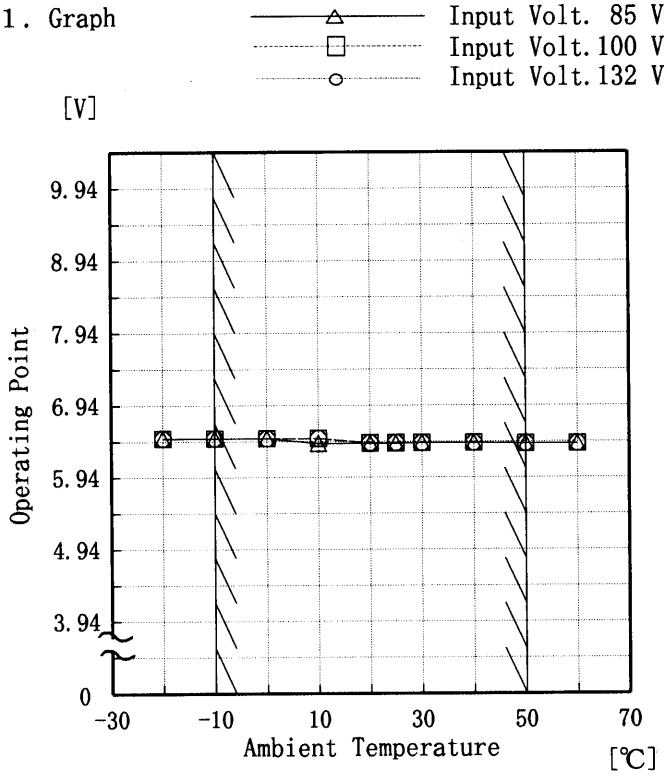
Output Voltage [V]	Input Volt. 85[V] Load Current [A]	Input Volt. 100[V] Load Current [A]	Input Volt. 132[V] Load Current [A]
-12.00	0.83	0.88	0.94
-11.40	0.94	0.95	1.00
-10.80	1.03	1.03	1.07
-9.60	1.18	1.17	1.20
-8.40	1.33	1.31	1.32
-7.20	1.23	1.43	1.43
-6.00	1.25	1.25	1.25
-4.80	1.24	1.24	1.24
-3.60	1.22	1.22	1.22
-2.40	1.14	1.14	1.11
-1.20	1.03	1.02	0.98
0.00	0.92	0.90	0.81

COSEL

Model	RMC30A-1
Item	Overvoltage Protection 過電圧保護
Object	+5.0V3A

Testing Circuitry Figure A

1. Graph



Load 0%

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

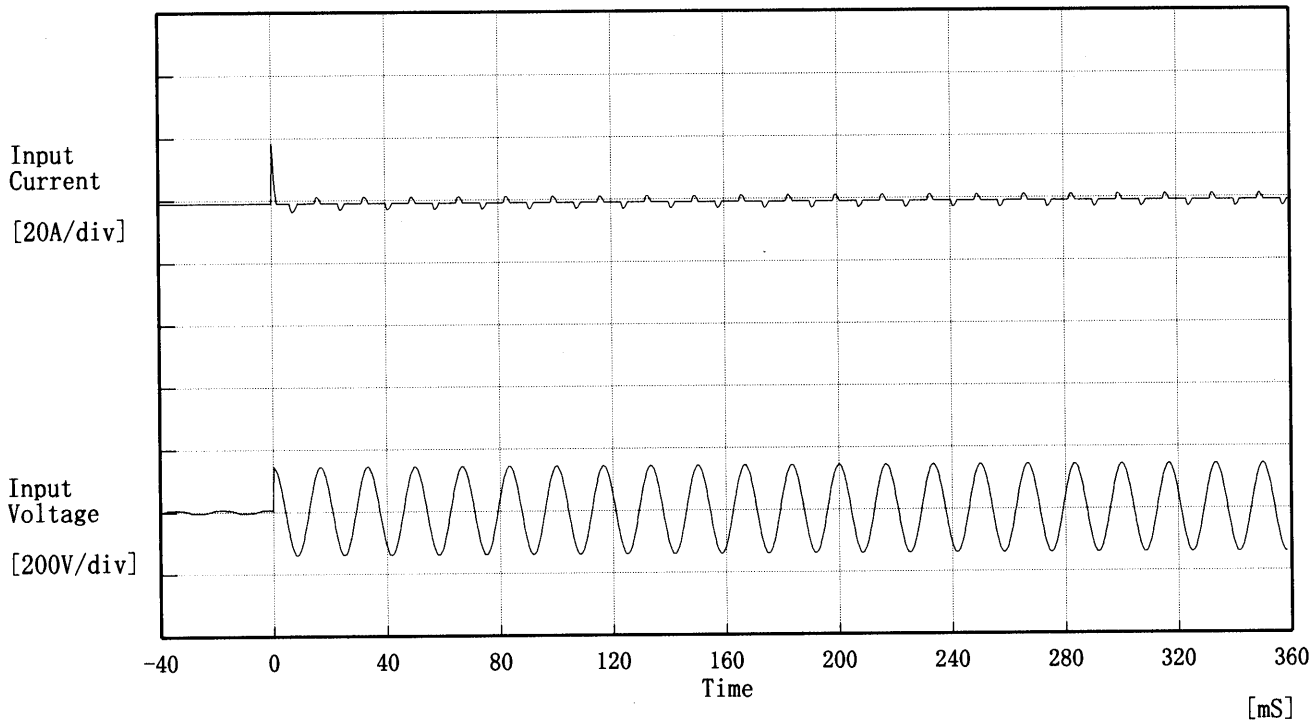
(注)斜線は定格周囲温度範囲を示す。

2. Values

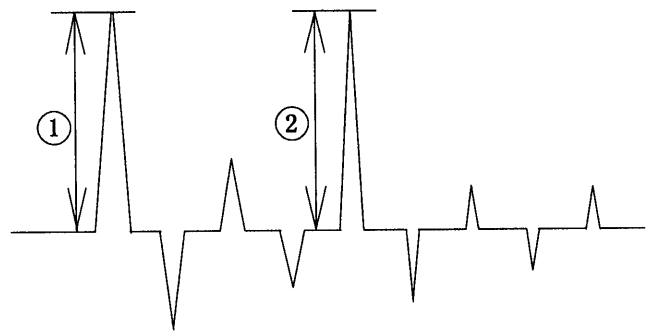
Ambient Temp. [℃]	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
	Operating Point [V]		
-20	6.48	6.48	6.48
-10	6.48	6.48	6.48
0	6.48	6.48	6.48
10	6.41	6.48	6.48
20	6.41	6.42	6.42
25	6.41	6.42	6.42
30	6.42	6.42	6.42
40	6.42	6.42	6.42
50	6.41	6.41	6.41
60	6.41	6.41	6.41
—	—	—	—

COSEL

Model	RMC30A-1	Temperature	25℃
Item	Inrush Current 突入電流	Testing Circuitry	Figure A
Object	――――――――		



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



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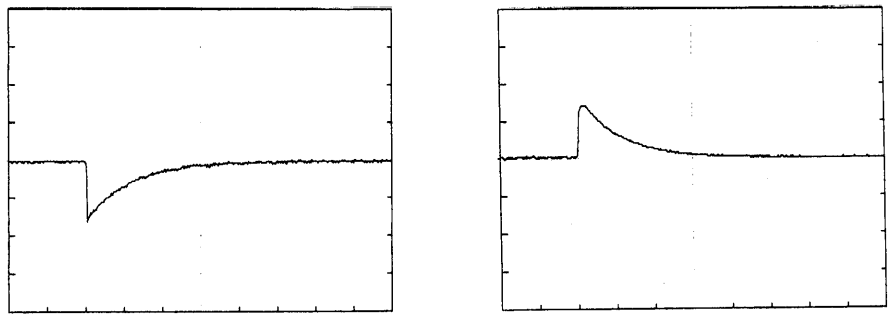
COSEL

Model	RMC30A-1		
Item	Dynamic Load Responce 動的負荷変動	Temperature Testing Circuitry	25℃ Figure A
Object	+5.0V3.00A		

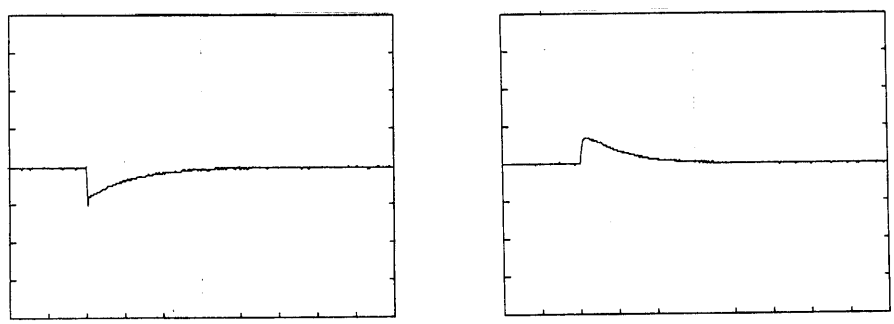
Input Volt. 100 V
Cycle 1000 mS

Load Current

Load 0% ⟷
Load 100 %



Load 0% ⟷
Load 50 %



100 mV/div

10 mS/div

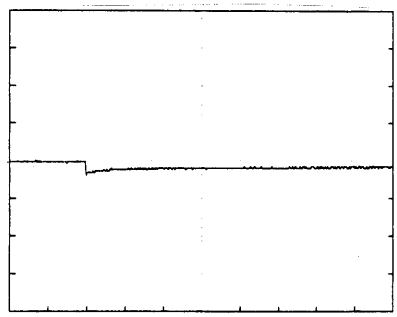
COSEL

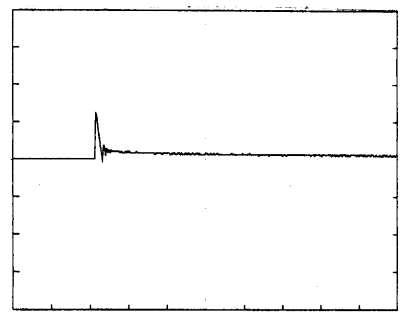
Model	RMC30A-1		
Item	Dynamic Load Responce 動的負荷変動	Temperature Testing Circuitry	25℃ Figure A
Object	+12.0V1.20A		

Input Volt. 100 V
Cycle 1000 mS

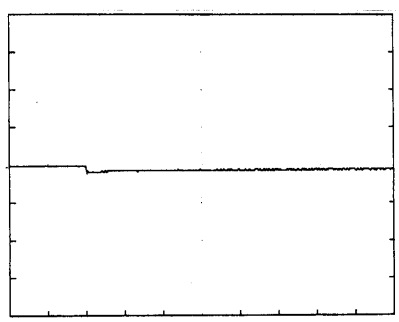
Load Current

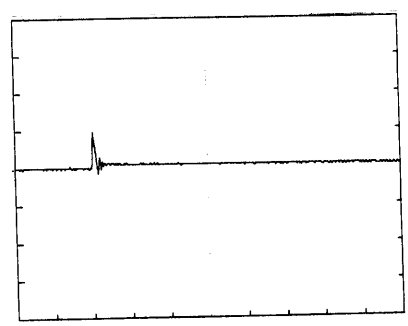
Load 0% ⟷
Load 100 %





Load 0% ⟷
Load 50 %





100 mV/div

10 mS/div

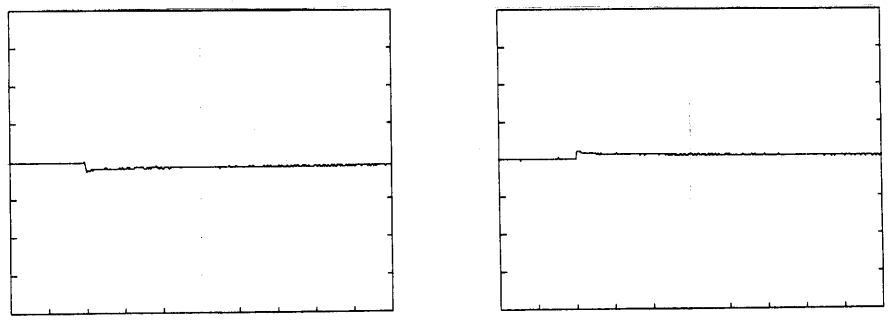
COSEL

Model	RMC30A-1		
Item	Dynamic Load Responce 動的負荷変動	Temperature Testing Circuitry	25℃ Figure A
Object	-12.0V0.30A		

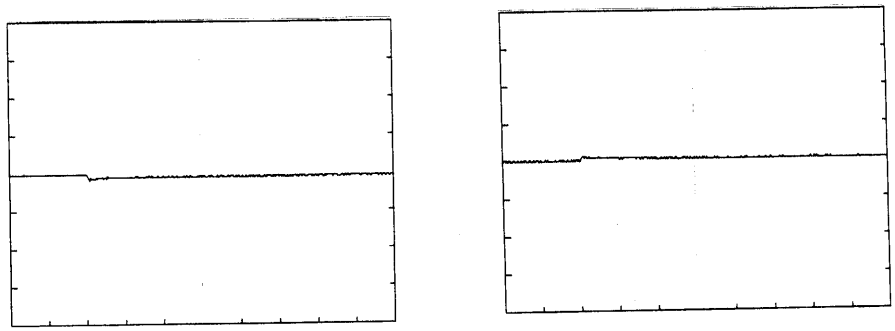
Input Volt. 100 V

Cycle 1000 mS

Load 0% ⟷
Load 100 %



Load 0% ⟷
Load 50 %



100 mV/div

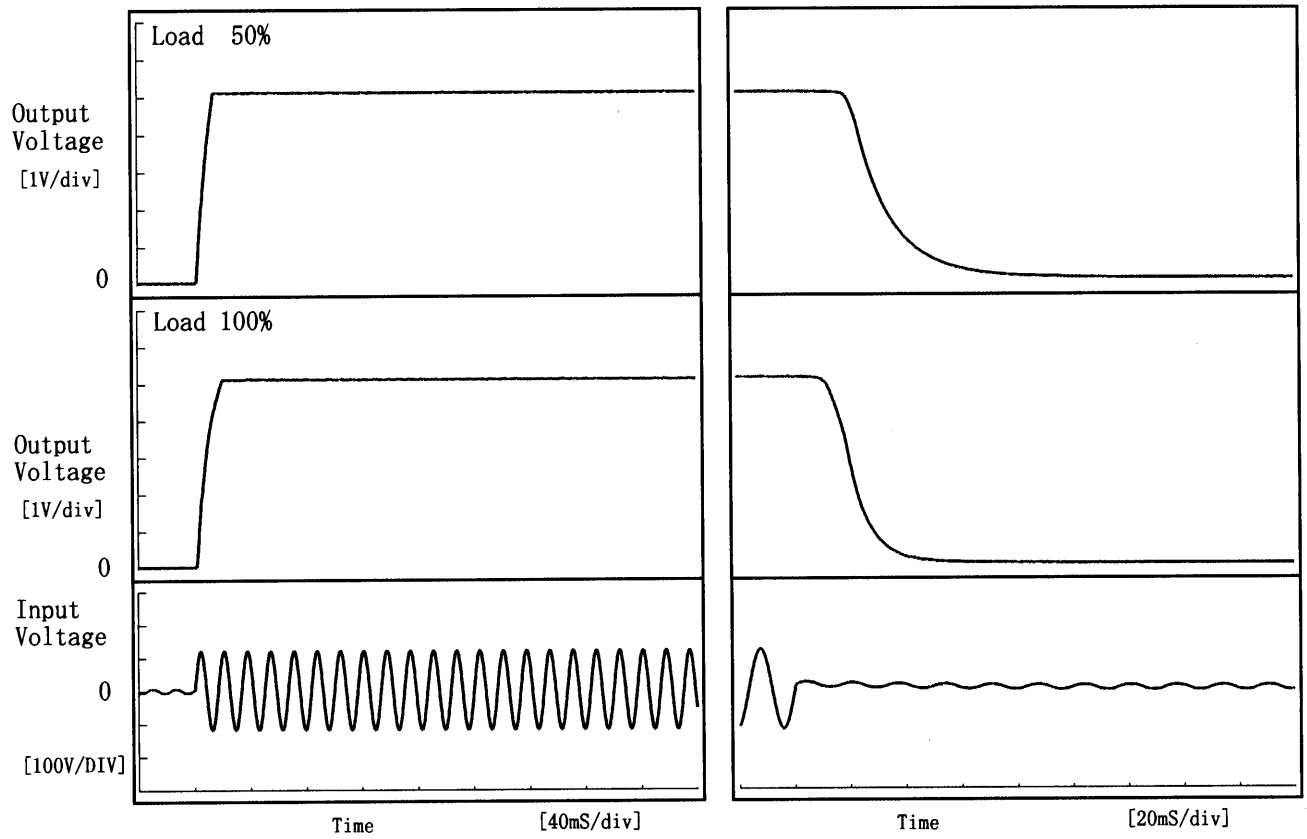
10 mS/div

COSEL

Model	RMC30A-1		
Item	Rise and Fall Time 立上り、立下り時間	Temperature	25℃
		Testing Circuitry	Figure A
Object	+5.0V3.00A		

1. Graph

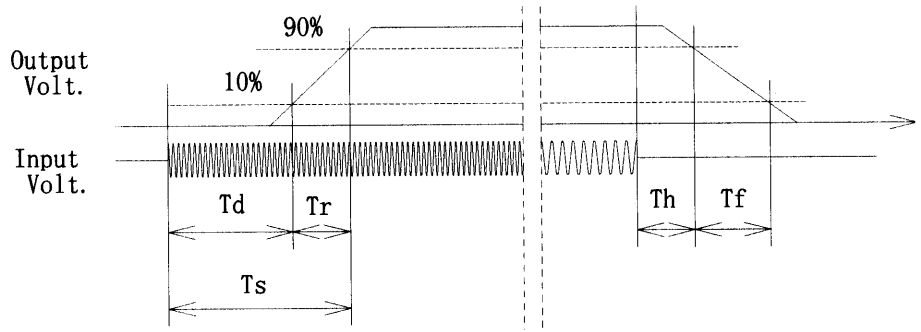
Input Volt. 85 V



2. Values

[mS]

Load \ Time	T d	T r	T s	T h	T f
50 %	2.6	9.8	12.4	21.9	32.2
100 %	2.8	13.2	16.0	14.3	19.7



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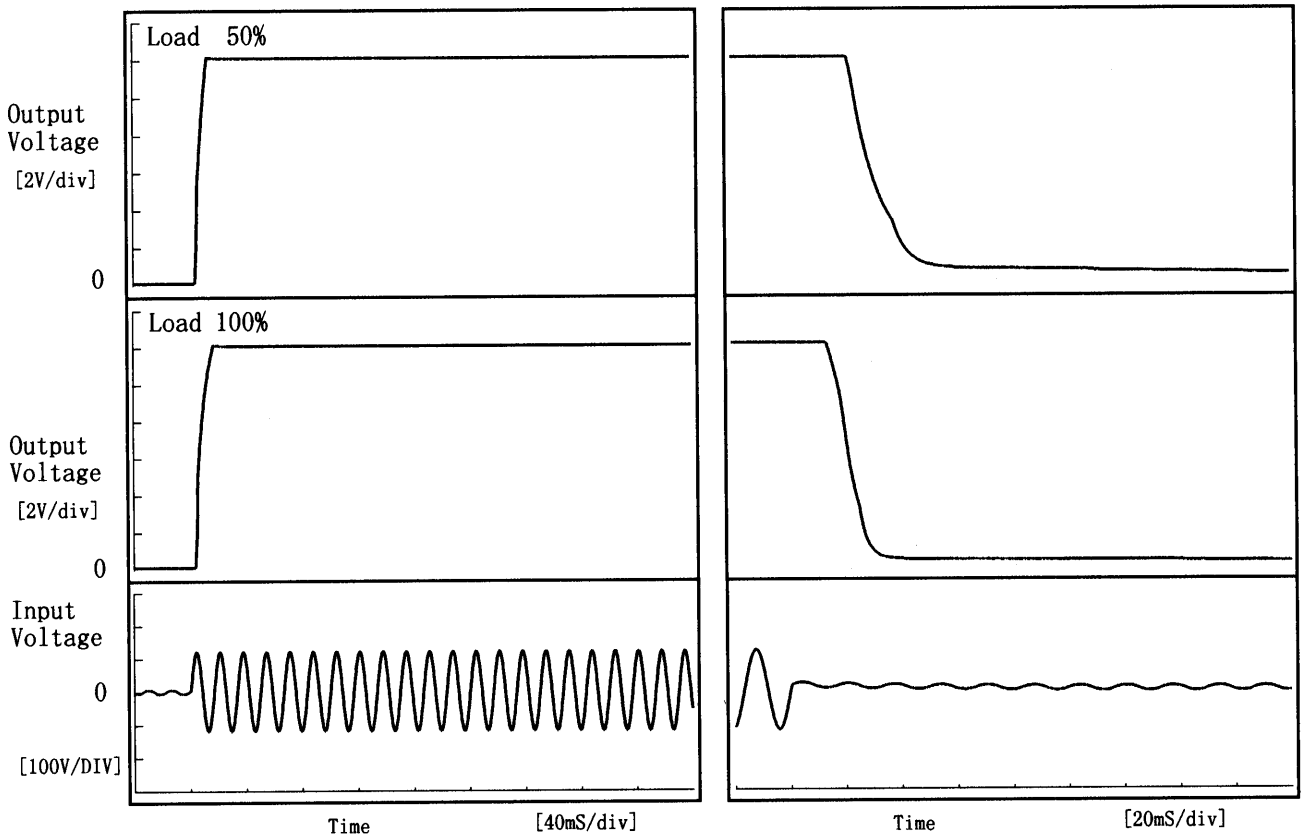
COSEL

Model	RMC30A-1		
Item	Rise and Fall Time 立上り、立下り時間	Temperature Testing Circuitry	25℃ Figure A
Object	+12.0V1.20A		

1. Graph

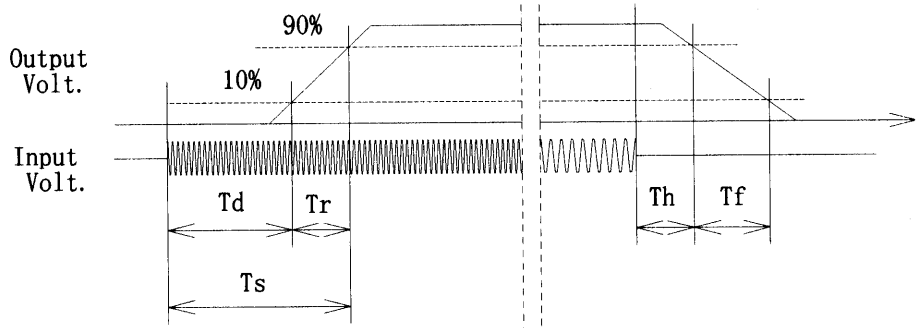
Input Volt. 85 V



2. Values

[mS]

Load \ Time	T d	T r	T s	T h	T f
50 %	4.6	6.6	11.2	23.1	23.5
100 %	4.6	9.0	13.6	16.1	12.9



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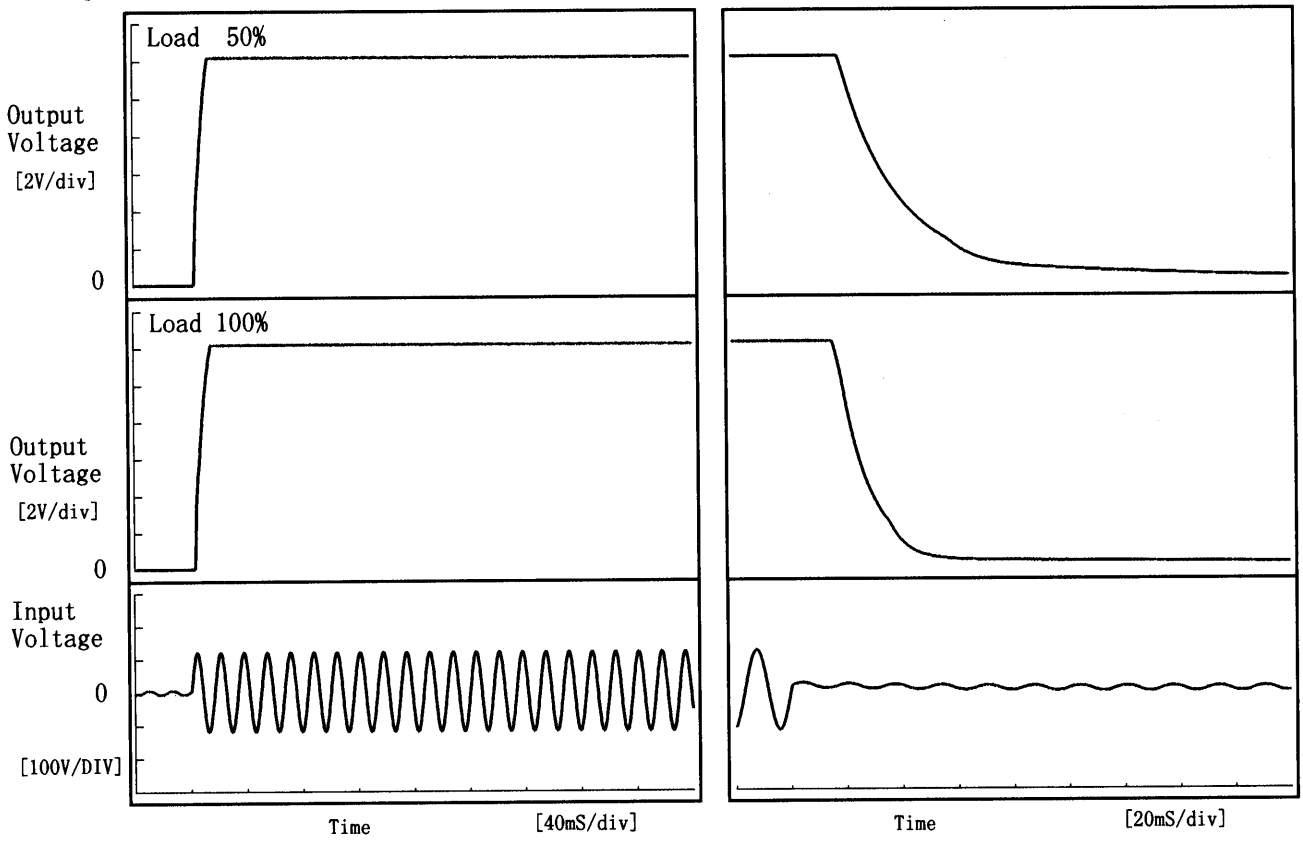
COSEL

Model	RMC30A-1		
Item	Rise and Fall Time 立上り、立下り時間	Temperature	25℃
		Testing Circuitry	Figure A
Object	-12.0V0.30A		

1. Graph

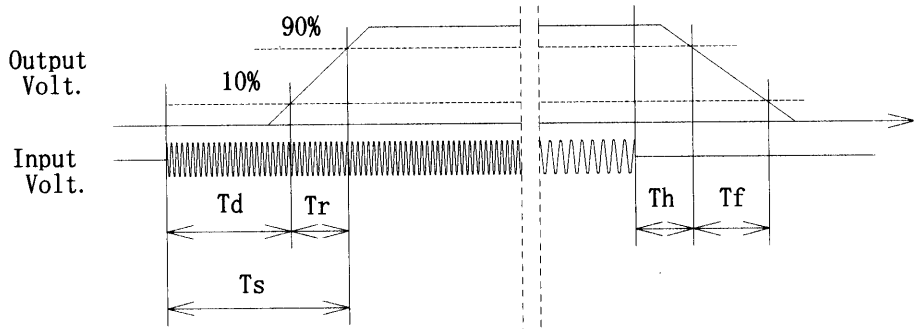
Input Volt. 85 V



2. Values

[mS]

Load \ Time	T d	T r	T s	T h	T f
50 %	3.2	8.0	11.2	20.8	52.0
100 %	3.6	8.8	12.4	18.0	24.2



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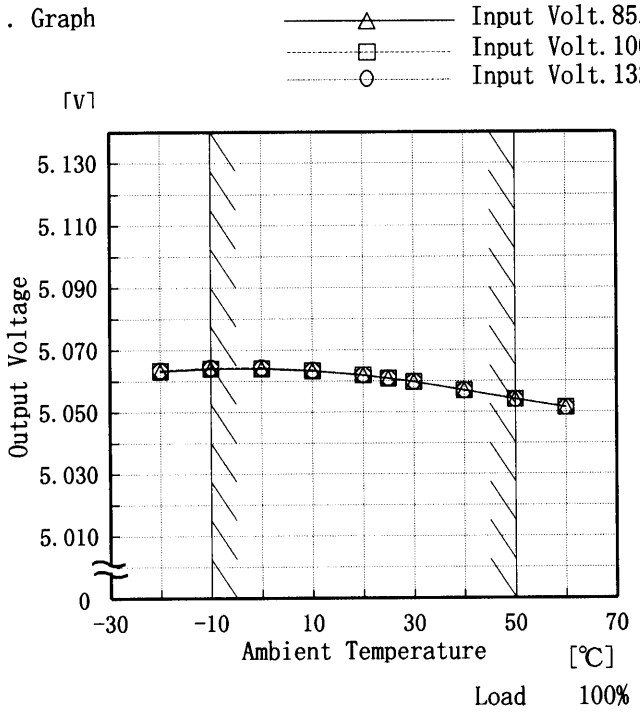
COSEL

Model	RMC30A-1
Item	Ambient Temperature Drift 周囲温度変動

Testing Circuitry Figure A

Object +5.0V3.00A

1. Graph

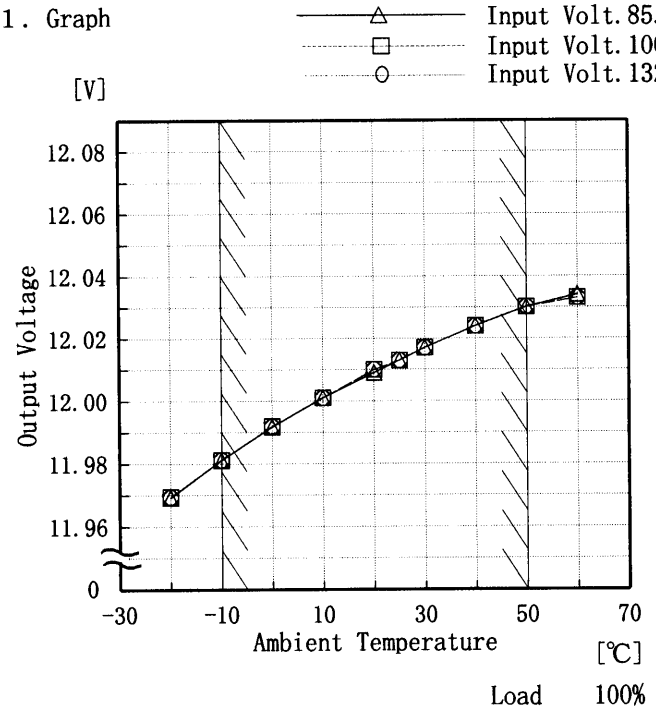


2. Values

Temperature [℃]	Input Volt. 85.0[V] Output Volt. [V]	Input Volt. 100.0[V] Output Volt. [V]	Input Volt. 132.0[V] Output Volt. [V]
-20	5.063	5.063	5.064
-10	5.064	5.064	5.064
0	5.064	5.064	5.064
10	5.063	5.063	5.063
20	5.062	5.062	5.062
25	5.061	5.061	5.061
30	5.060	5.060	5.060
40	5.057	5.057	5.057
50	5.054	5.054	5.054
60	5.051	5.051	5.051
—	—	—	—

Object +12V1.20A

1. Graph



2. Values

Temperature [℃]	Input Volt. 85.0[V] Output Volt. [V]	Input Volt. 100.0[V] Output Volt. [V]	Input Volt. 132.0[V] Output Volt. [V]
-20	11.969	11.970	11.969
-10	11.981	11.981	11.981
0	11.992	11.992	11.992
10	12.001	12.001	12.001
20	12.009	12.010	12.010
25	12.013	12.013	12.013
30	12.017	12.017	12.017
40	12.024	12.024	12.024
50	12.030	12.030	12.030
60	12.034	12.033	12.033
—	—	—	—

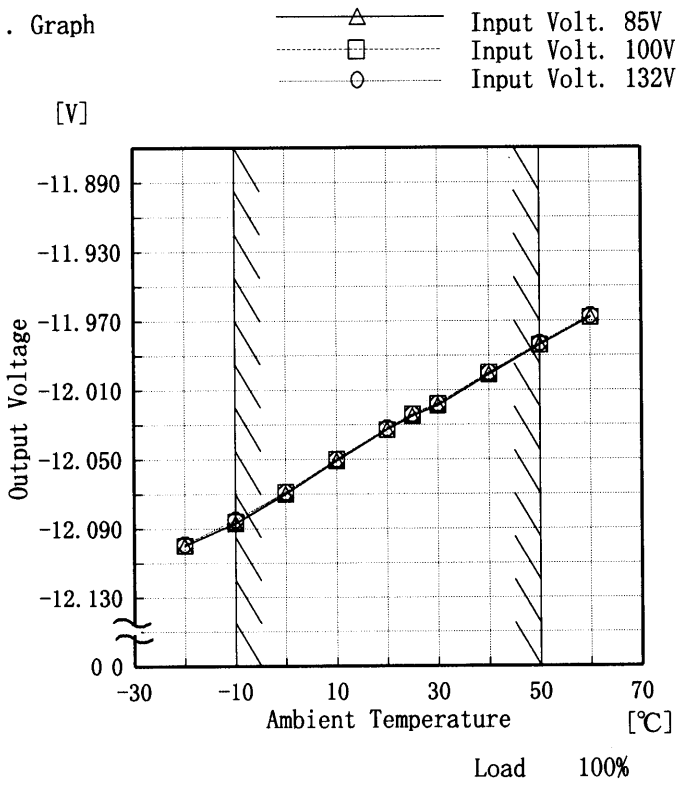
Note: Slanted line shows the range of the rated ambient temperature.
(注)斜線は定格周囲温度範囲を示す。

COSEL

Model	RMC30A-1
Item	Ambient Temperature Drift 周囲温度変動
Object	-12.0V0.30A

Testing Circuitry Figure A

1. Graph



Load 100%

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

Temperature [℃]	Input Volt. 85[V] Output Volt. [V]	Input Volt. 100[V] Output Volt. [V]	Input Volt. 132[V] Output Volt. [V]
-20	-12.100	-12.100	-12.099
-10	-12.087	-12.086	-12.085
0	-12.070	-12.069	-12.069
10	-12.051	-12.050	-12.050
20	-12.033	-12.033	-12.032
25	-12.025	-12.024	-12.024
30	-12.019	-12.018	-12.018
40	-12.001	-12.000	-12.000
50	-11.984	-11.984	-11.983
60	-11.968	-11.968	-11.967
—	—	—	—

BC-3238

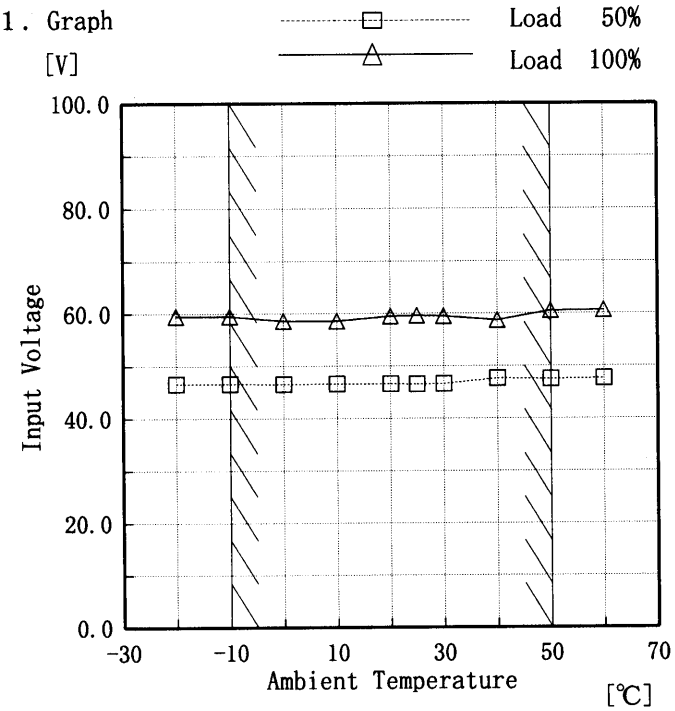
COSEL

Model	RMC30A-1
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 +5.0V3A

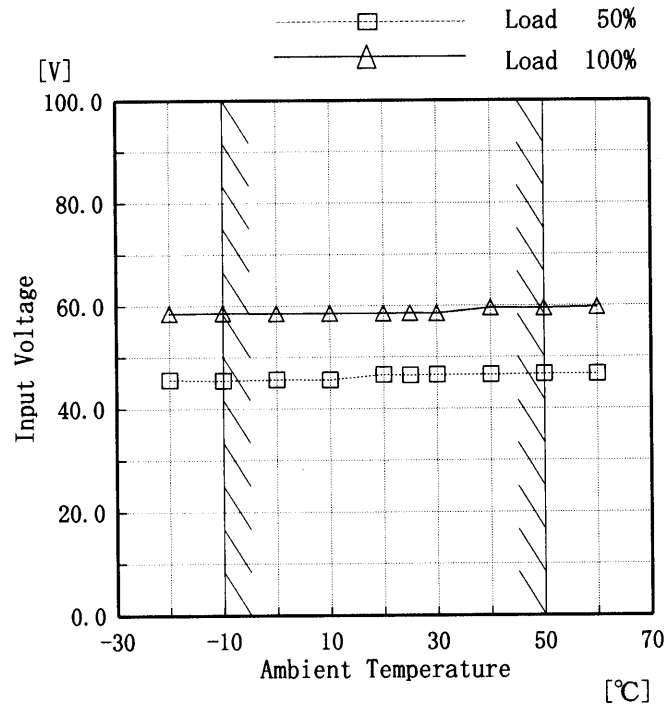
1. Graph



2. Values

Ambient Temp. [℃]	Load 50% Input Volt. [V]	Load 100% Input Volt. [V]
-20	46.6	59.5
-10	46.6	59.5
0	46.5	58.6
10	46.6	58.6
20	46.6	59.5
25	46.5	59.6
30	46.6	59.5
40	47.6	58.7
50	47.5	60.5
60	47.6	60.6
—	—	—

Object +12V1.20A



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

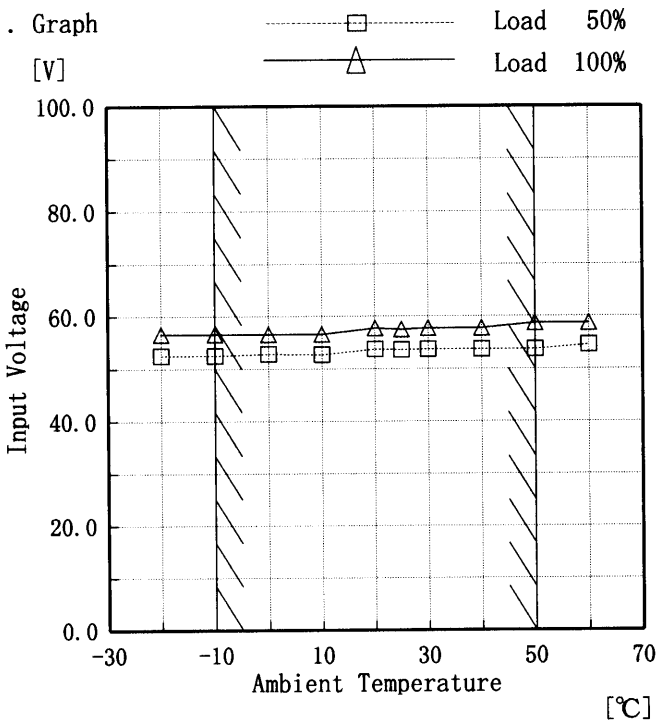
Ambient Temp. [℃]	Load 50% Input Volt. [V]	Load 100% Input Volt. [V]
-20	45.6	58.5
-10	45.5	58.6
0	45.7	58.5
10	45.6	58.5
20	46.6	58.5
25	46.5	58.6
30	46.6	58.5
40	46.6	59.6
50	46.7	59.5
60	46.7	59.7
—	—	—

COSEL

Model	RMC30A-1
Item	Minimum Input Voltage for Regulated Output Voltage 最低レギュレーション電圧
Object	-12.0V0.30A

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 Temp. [℃]	Load 50% Input Volt. [V]	Load 100% Input Volt. [V]
-20	53	57
-10	53	57
0	53	57
10	53	57
20	54	58
25	54	58
30	54	58
40	54	58
50	54	59
60	55	59
—	—	—

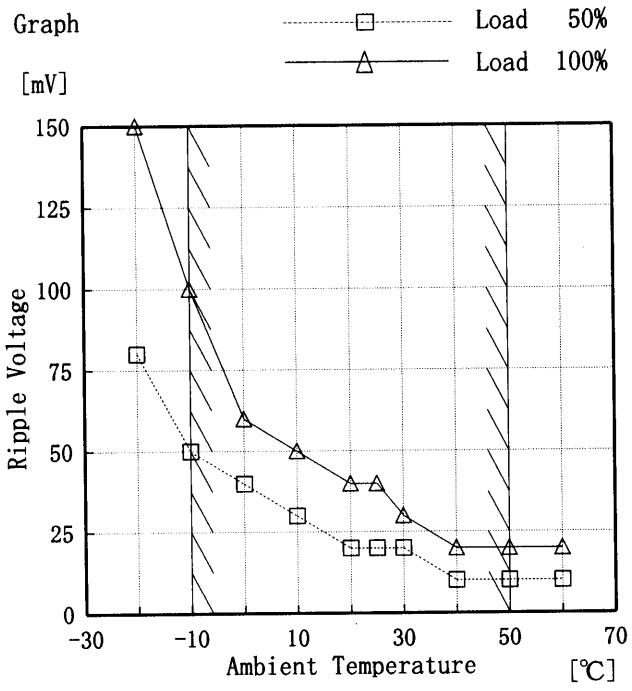
COSEL

Model	RMC30A-1
Item	Ripple Voltage (by Ambient Temp.) リップル電圧 (周囲温度特性)

Testing Circuitry Figure A

Object +5.0V3.00A

1. Graph



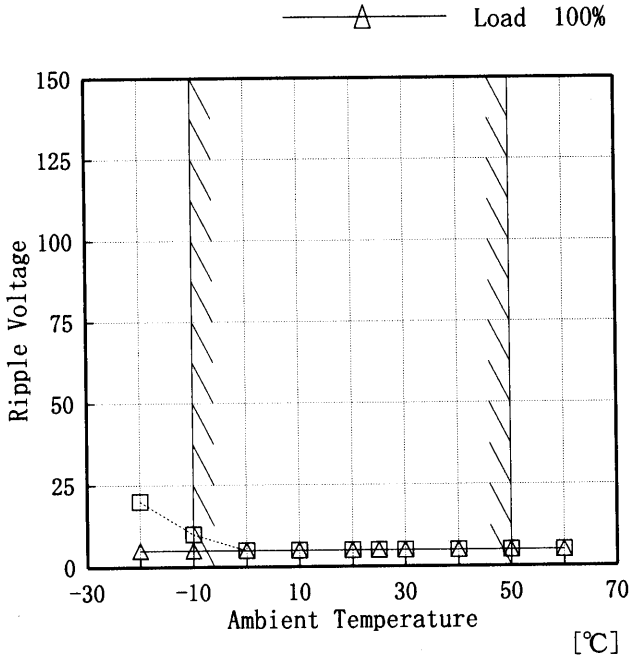
Input Volt. 100 V

2. Values

Ambient Temp. [℃]	Load 50% Ripple Output Volt. [mV]	Load 100% Ripple Output Volt. [mV]
-20	80	150
-10	50	100
0	40	60
10	30	50
20	20	40
25	20	40
30	20	30
40	10	20
50	10	20
60	10	20
—	—	—

Object +12V1.20A

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

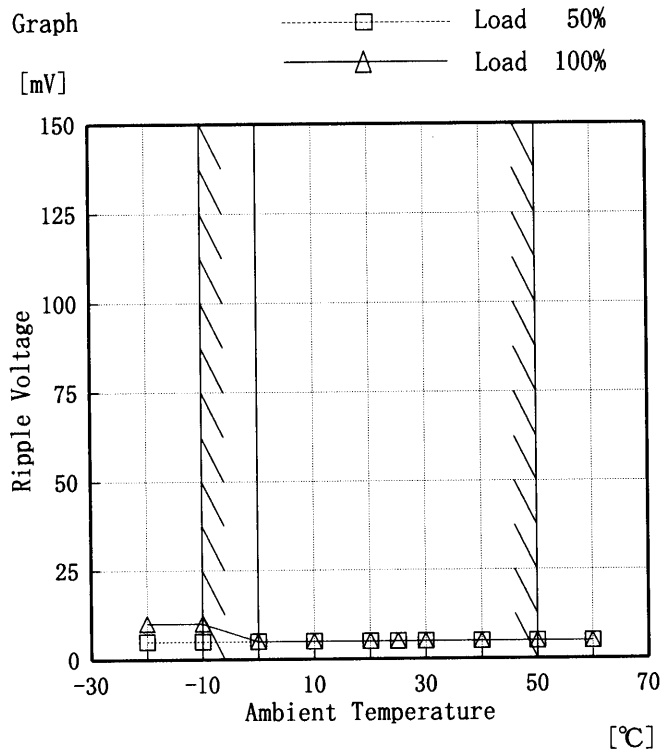
Ambient Temp. [℃]	Load 50% Ripple Output Volt. [mV]	Load 100% Ripple Output Volt. [mV]
-20	5	20
-10	5	10
0	5	5
10	5	5
20	5	5
25	5	5
30	5	5
40	5	5
50	5	5
60	5	5
—	—	—

COSEL

Model	RMC30A-1
Item	Ripple Voltage (by Ambient Temp.) リップル電圧 (周囲温度特性)
Object	-12.0V0.30A

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 Temp. [℃]	Load 50% Ripple Output Volt. [mV]	Load 100% Ripple Output Volt. [mV]
-20	5	10
-10	5	10
0	5	5
10	5	5
20	5	5
25	5	5
30	5	5
40	5	5
50	5	5
60	5	5
—	—	—

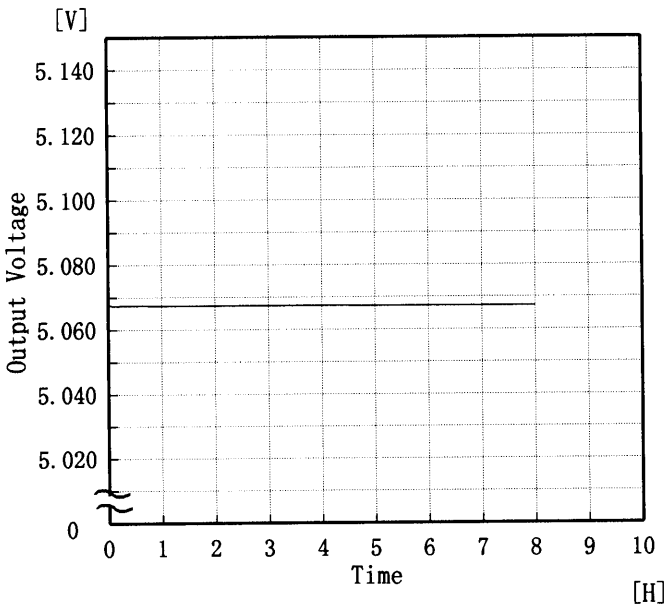
COSEL

Model	RMC30A-1
Item	Time Lapse Drift 経時ドリフト

Temperature 25 ℃
Testing Circuitry Figure A

Object +5.0V3.00A

1. Graph



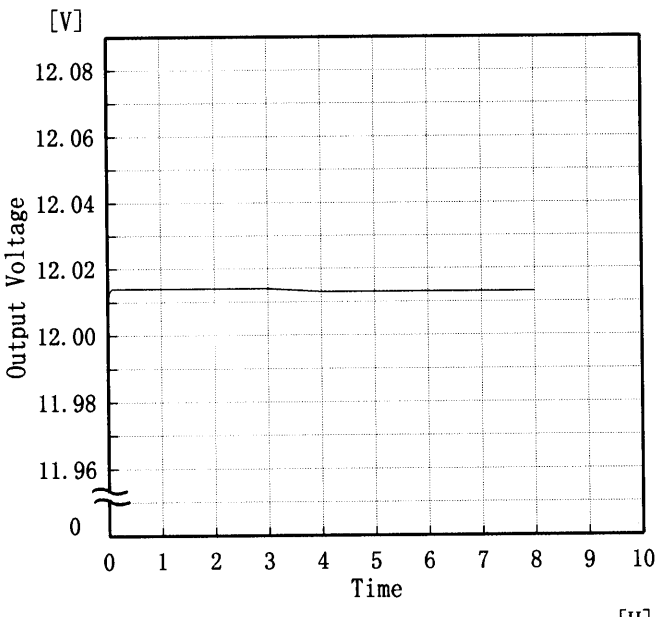
Input Volt. 100V
Load 100%

2. Values

Time since start [H]	Output Voltage [V]
0.0	5.068
0.5	5.067
1.0	5.067
2.0	5.067
3.0	5.067
4.0	5.067
5.0	5.067
6.0	5.067
7.0	5.067
8.0	5.067

Object +12V1.20A

1. Graph



Input Volt. 100V
Load 100%

2. Values

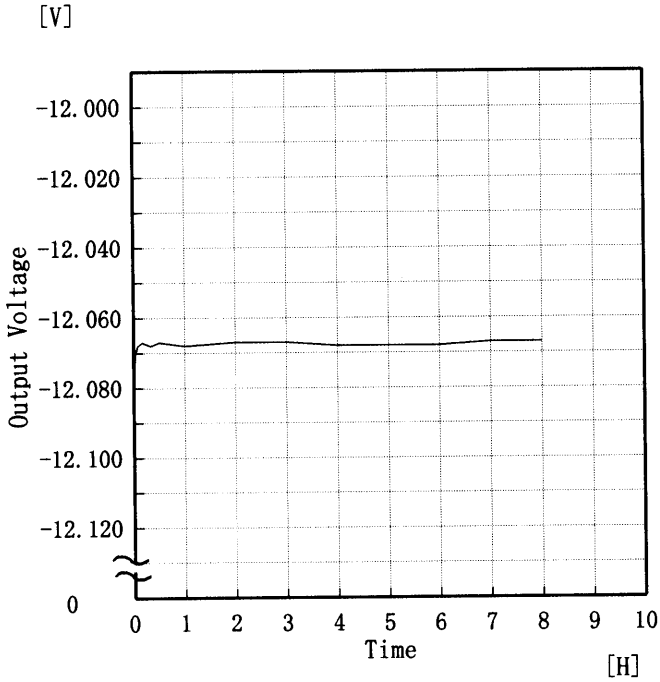
Time since start [H]	Output Voltage [V]
0.0	12.000
0.5	12.014
1.0	12.014
2.0	12.014
3.0	12.014
4.0	12.013
5.0	12.013
6.0	12.013
7.0	12.013
8.0	12.013

COSEL

Model	RMC30A-1
Item	Time Lapse Drift 経時ドリフト
Object	-12.0V0.3A

Temperature 25 ℃
Testing Circuitry Figure A

1. Graph



Input Volt. 100V
Load 100%

2. Values

Time since start [H]	Output Voltage [V]
0.0	-12.099
0.5	-12.067
1.0	-12.068
2.0	-12.067
3.0	-12.067
4.0	-12.068
5.0	-12.068
6.0	-12.068
7.0	-12.067
8.0	-12.067

COSEL

Model	RMC30A-1	
Item	Output Voltage Accuracy 定電圧精度	Testing Circuitry Figure A

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 : -10～50 ℃

Input Voltage : 85.0～132.0 V

Load Current (AVR 1) : 0.00～3.00 (AVR 2) : 0.00～1.20 / (AVR 3) : 0.00～0.30 A

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

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

定電圧精度

周囲温度、入力電圧、負荷を下記仕様内で、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 -10～50 ℃

入力電圧 85.0～132.0 V

負荷電流 (AVR 1) 0.00～3.00 A (AVR 2) : 0.00～1.20 A (AVR 3) : 0.00～0.30 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

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

Object	+5.0V3.00A					
Item	Temperature [℃]	Input Voltage [V]	Output Current [A]	Output Voltage [V]	Output Voltage Accuracy [mV]	Output Voltage Accuracy(Ration)[%]
Maximum Voltage	-10	85.0	0.000	5.074	±8	±0.2
Minimum Voltage	50	85.0	3.000	5.059		

Object	+12V1.20A					
Item	Temperature [℃]	Input Voltage [V]	Output Current [A]	Output Voltage [V]	Output Voltage Accuracy [mV]	Output Voltage Accuracy(Ration)[%]
Maximum Voltage	50	85.0	0.00	12.037	±28	±0.3
Minimum Voltage	-10	85.0	0.00	11.981		

Object	−12V0.30A					
Item	Temperature [℃]	Input Voltage [V]	Output Current [A]	Output Voltage [V]	Output Voltage Accuracy [mV]	Output Voltage Accuracy(Ration)[%]
Maximum Voltage	-10	85.0	0.00	-12.110	±48	±0.4
Minimum Voltage	50	132.0	0.30	-12.015		

COSEL

Model	RMC30A-1
Item	Condensation 結露特性
Object	+5.0V3A

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

Item	Data	Testing Conditions
Output Voltage [V]	5.064	Input Volt.: 100V, Load Current:3A
Line Regulation [mV]	1	Input Volt.: 85～132V, Load Current:3A
Load Regulation [mV]	6	Input Volt.: 100V, Load Current:0～3A

COSEL

Model	RMC30A-1	
Item	Condensation 結露特性	Testing Circuitry Figure A
Object	+12.0V1.2A	

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

Item	Data	Testing Conditions
Output Voltage [V]	12.022	Input Volt.: 100V, Load Current:1.2A
Line Regulation [mV]	1	Input Volt.: 85～132V, Load Current:1.2A
Load Regulation [mV]	15	Input Volt.: 100V, Load Current:0.0～1.2A

COSEL

Model	RMC30A-1
Item	Condensation 結露特性
Object	-12.0V0.3A

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

Item	Data	Testing Conditions
Output Voltage [V]	-12.036	Input Volt.: 100V, Load Current:0.3A
Line Regulation [mV]	1	Input Volt.: 85～132V, Load Current:0.3A
Load Regulation [mV]	10	Input Volt.: 100V, Load Current:0.0～0.3A

COSEL

Model	RMC30A-1		
Item	Leakage Current 漏洩電流	Temperature	25℃
		Testing Circuitry	Figure A
Object	———————		

1. Results

Standards	Leakage Current [mA]		
	Input Volt. 85 [V]	Input Volt. 100 [V]	Input Volt. 132 [V]
(A) DENTORI	0.16	0.18	0.25
(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	RMC30A-1
Item	Conducted Emission 雑音端子電圧
Object	————————

Testing Circuitry Figure D

1. Graph

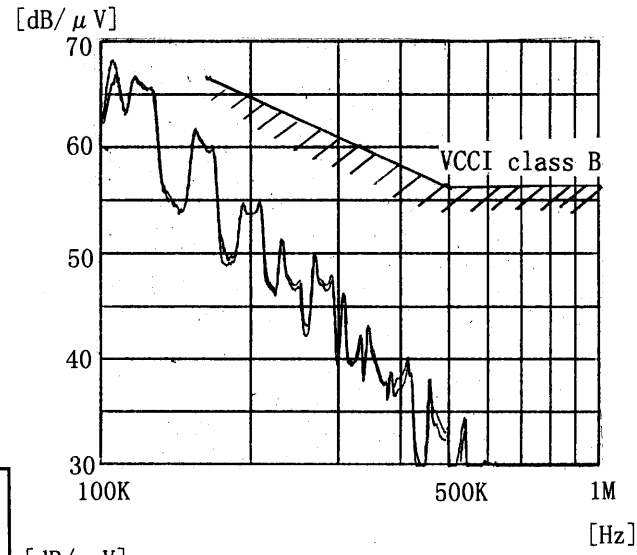
Remarks

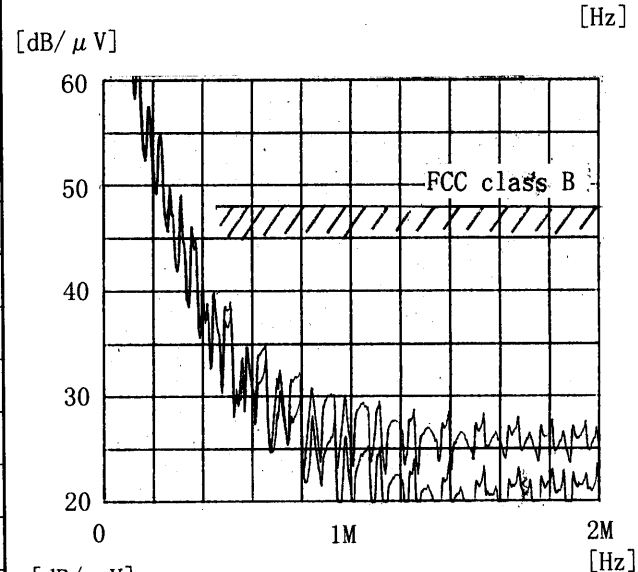
Input Volt. 120 V(VCCI:100V)

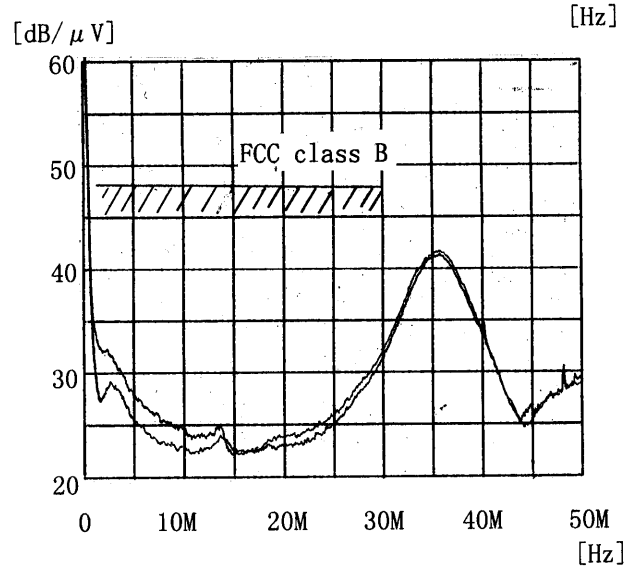
Load 100 %

Note: Slanted line shows the range of Tolerance.
(注)斜線は許容値を示す。

NO	Standards	Standards Complied	Frequency [MHz]	Tolerance [dB/μV]
1	FCC class A		0.45～1.6	60
			1.6～30	69.5
2	FCC class B	○	0.45～30	48
3	VCCI class A		0.15～0.5	79
			0.5～30	73
4	VCCI class B	○	0.15～0.5	66-56
			0.5～5	56
			5～30	60
5	CISPR Pub.22 class A (EN55022)		0.15～0.5	79
			0.5～30	73
6	CISPR Pub.22 class B (EN55022)		0.15～0.5	66-56
			0.5～5	56
			5～30	60







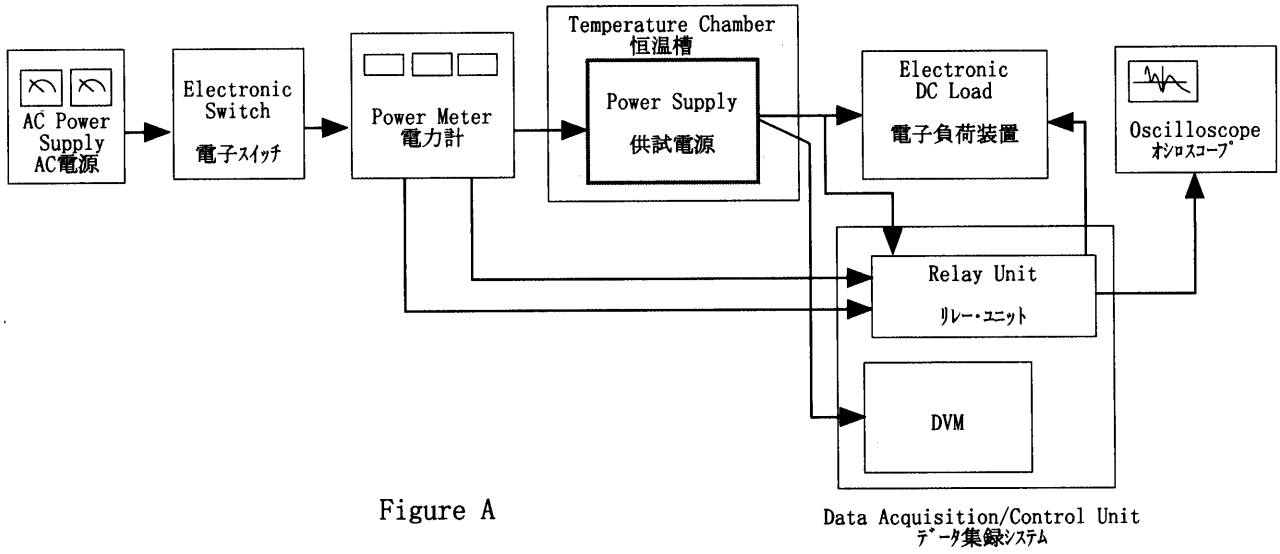


Figure A

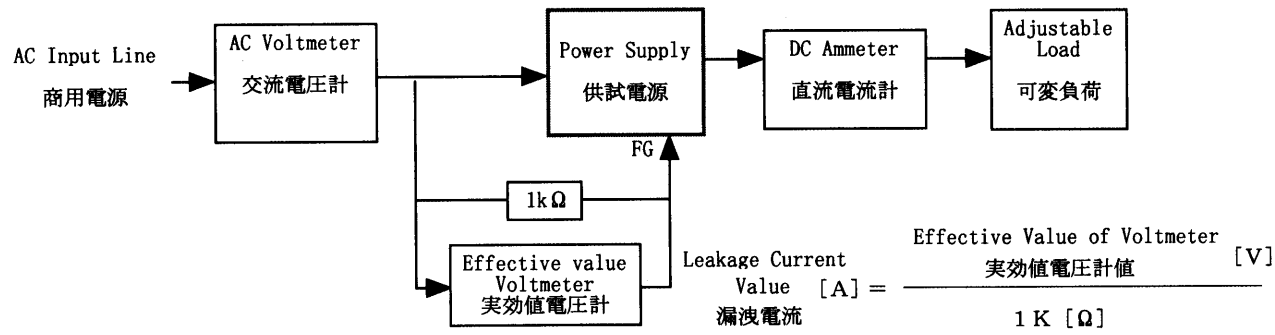


Figure B(DENTORI)

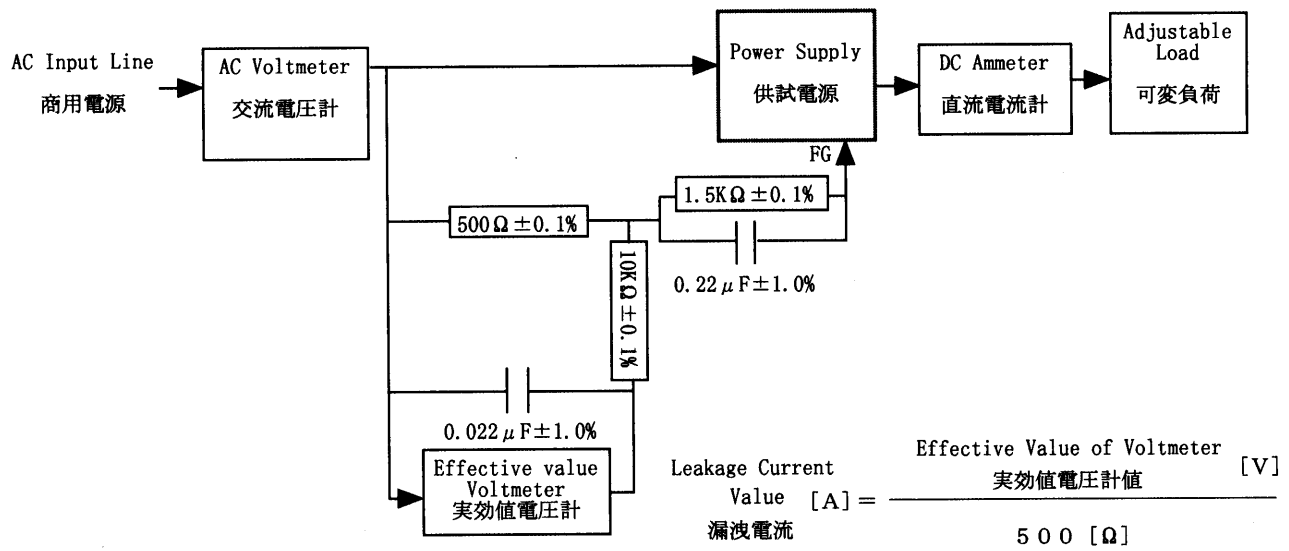


Figure B (IEC60950)

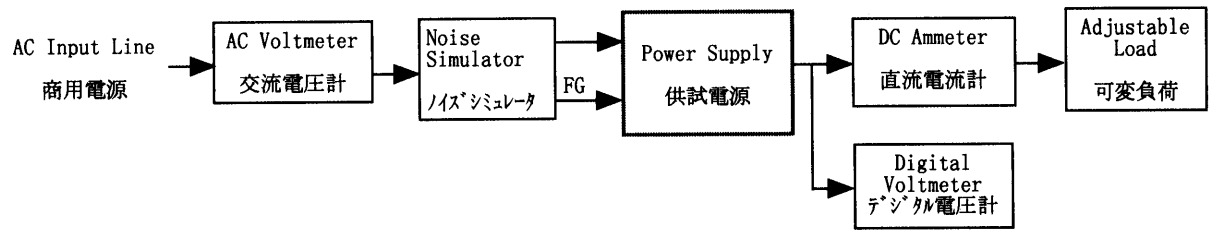


Figure C

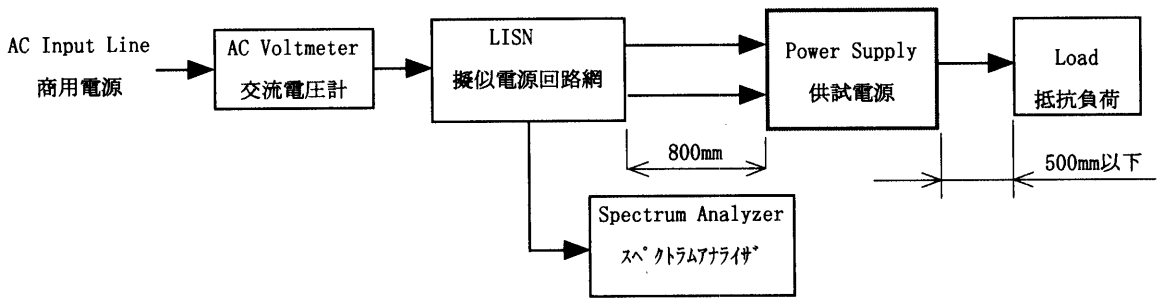


Figure D

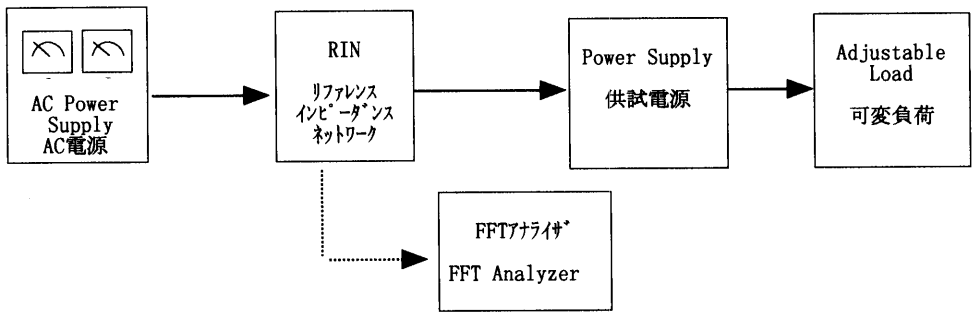


Figure E