参考資料

COSEL

TEST DATA OF RMC15A-1

(100V INPUT)

Regulated DC Power Supply

Sep. 24, 1999

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Prepared by : Yuichi Takahashi
Design Engineer

コーセル株式会社

COSEL CO., LTD.

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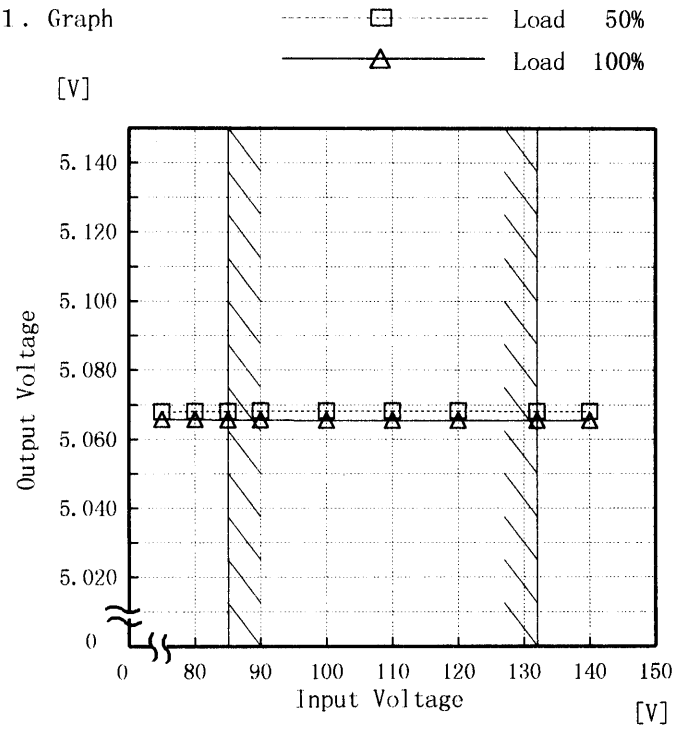
COSEL

Model	RMC15A-1
Item	Line Regulation 静的入力変動

Temperature 25℃
Testing Circuitry Figure A

Object +5.0V2A

1. Graph

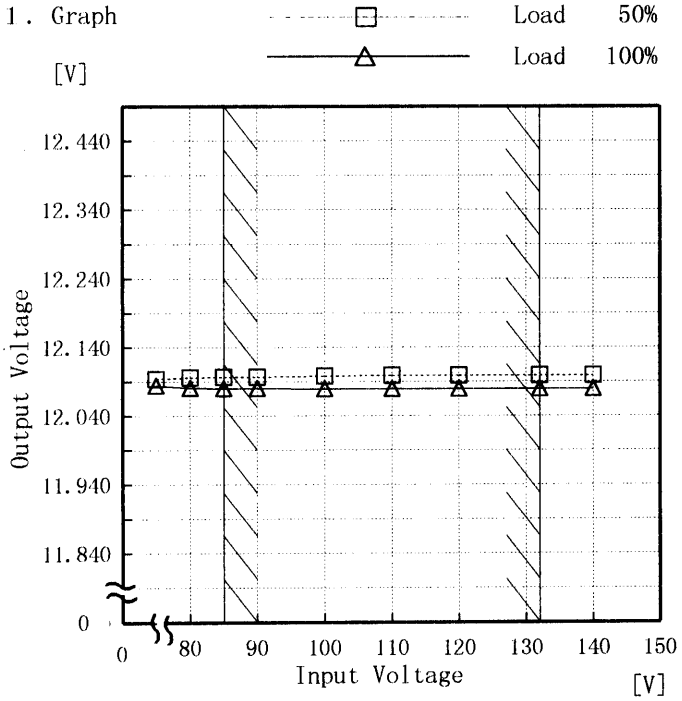


2. Values

Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
75	5.068	5.066
80	5.068	5.066
85	5.068	5.066
90	5.068	5.066
100	5.068	5.066
110	5.068	5.066
120	5.068	5.066
132	5.068	5.066
140	5.068	5.066

Object +12.0V0.3A

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	12.094	12.084
80	12.096	12.081
85	12.097	12.080
90	12.097	12.080
100	12.098	12.079
110	12.099	12.079
120	12.099	12.079
132	12.099	12.079
140	12.099	12.079

BC-3256

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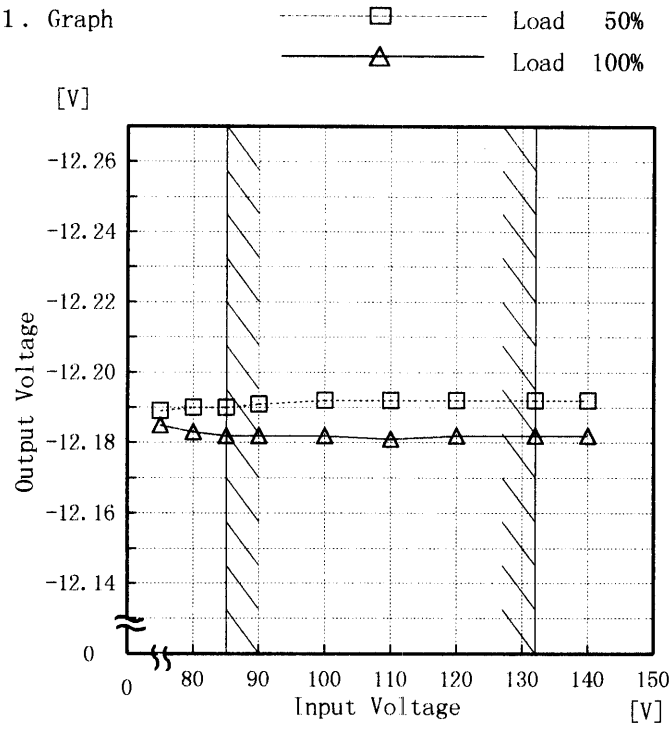
Model	RMC15A-1
Item	Line Regulation 静的入力変動
Object	−12.0V0.2A

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

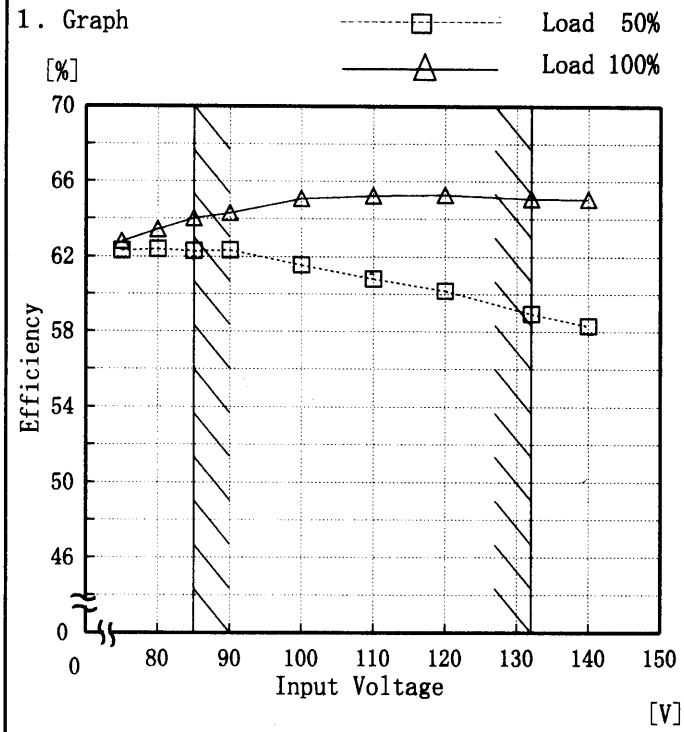
Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
75	-12.189	-12.185
80	-12.190	-12.183
85	-12.190	-12.182
90	-12.191	-12.182
100	-12.192	-12.182
110	-12.192	-12.181
120	-12.192	-12.182
132	-12.192	-12.182
140	-12.192	-12.182

COSEL

Model	RMC15A-1
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

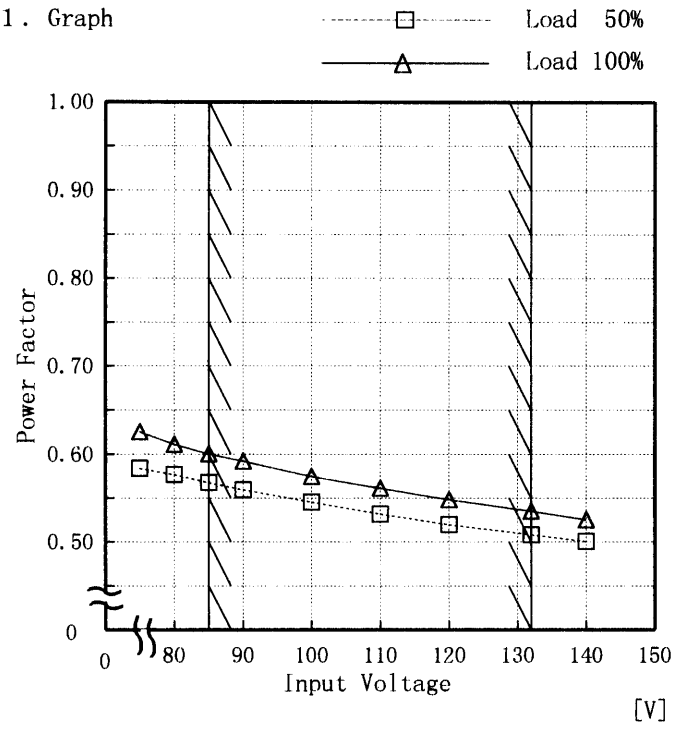
Input Voltage [V]	Efficiency [%]	
	Load 50%	Load 100%
75	62.3	62.8
80	62.4	63.4
85	62.3	64.0
90	62.4	64.3
100	61.6	65.1
110	60.8	65.2
120	60.2	65.3
132	58.9	65.1
140	58.3	65.1

COSEL

Model	RMC15A-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

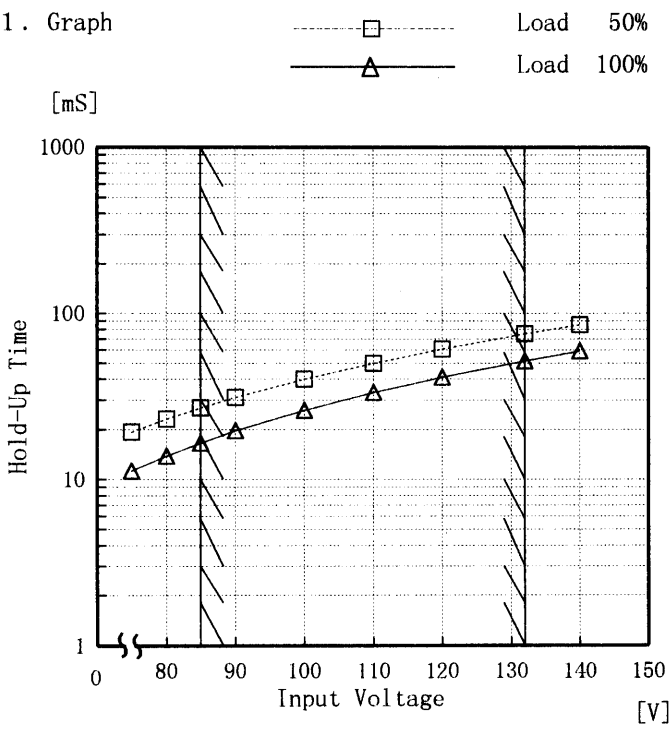
Input Voltage [V]	Power Factor	
	Load 50%	Load 100%
75	0.58	0.63
80	0.58	0.61
85	0.57	0.60
90	0.56	0.59
100	0.55	0.57
110	0.53	0.56
120	0.52	0.55
132	0.51	0.53
140	0.50	0.53

COSEL

Model	RMC15A-1
Item	Hold-Up Time 出力保持時間
Object	+5.0V2A

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

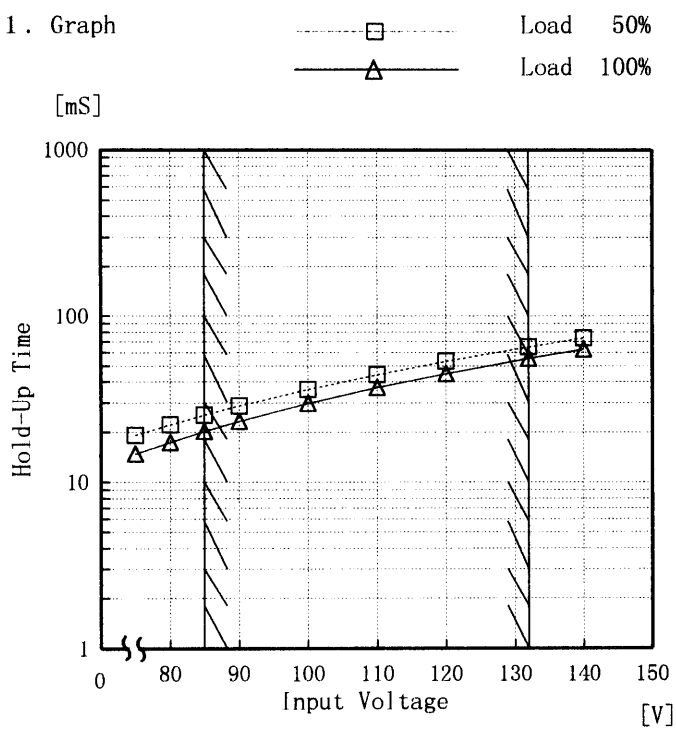
Input Voltage [V]	Hold-Up Time [mS]	
	Load 50%	Load 100%
75	19	11
80	23	14
85	27	17
90	31	20
100	40	26
110	50	33
120	61	41
132	75	52
140	85	59

COSEL

Model	RMC15A-1
Item	Hold-Up Time 出力保持時間
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 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

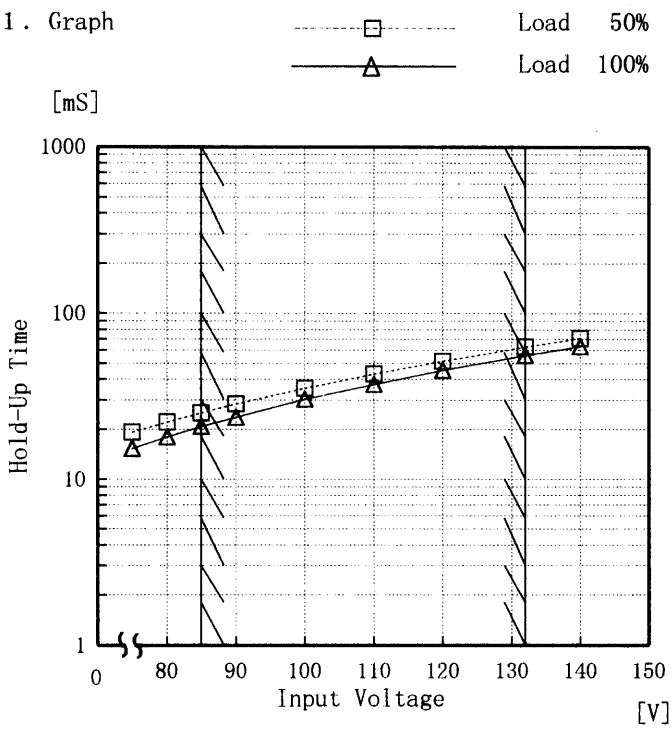
Input Voltage [V]	Hold-Up Time [mS]	
	Load 50%	Load 100%
75	19	15
80	22	17
85	25	20
90	29	23
100	36	30
110	44	37
120	53	45
132	65	55
140	74	63

COSEL

Model	RMC15A-1
Item	Hold-Up Time 出力保持時間
Object	−12.0V0.2A

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

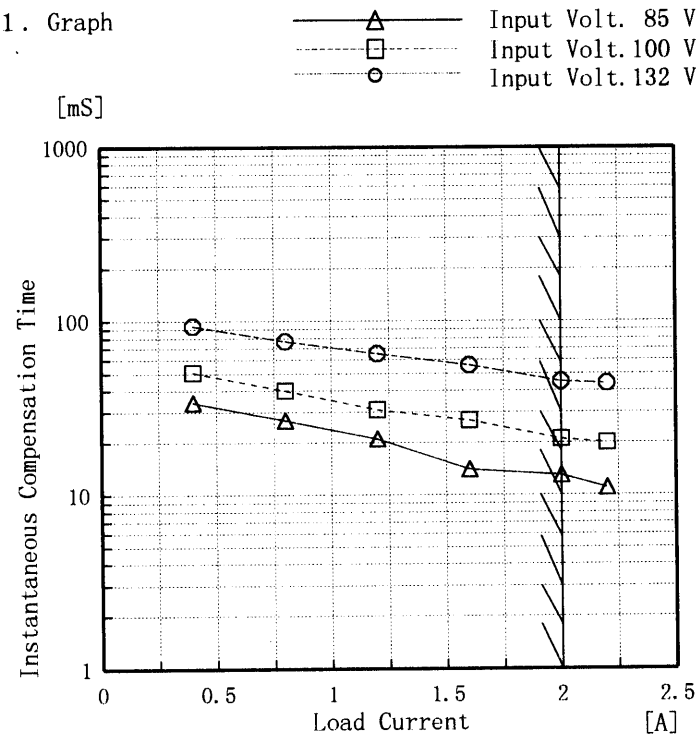
Input Voltage [V]	Hold-Up Time [mS]	
	Load 50%	Load 100%
75	19	15
80	22	18
85	25	21
90	28	24
100	35	30
110	43	37
120	52	45
132	63	56
140	71	63

COSEL

Model	RMC15A-1
Item	Instantaneous Interruption Compensation 瞬時停電保障
Object	+5.0V2A

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

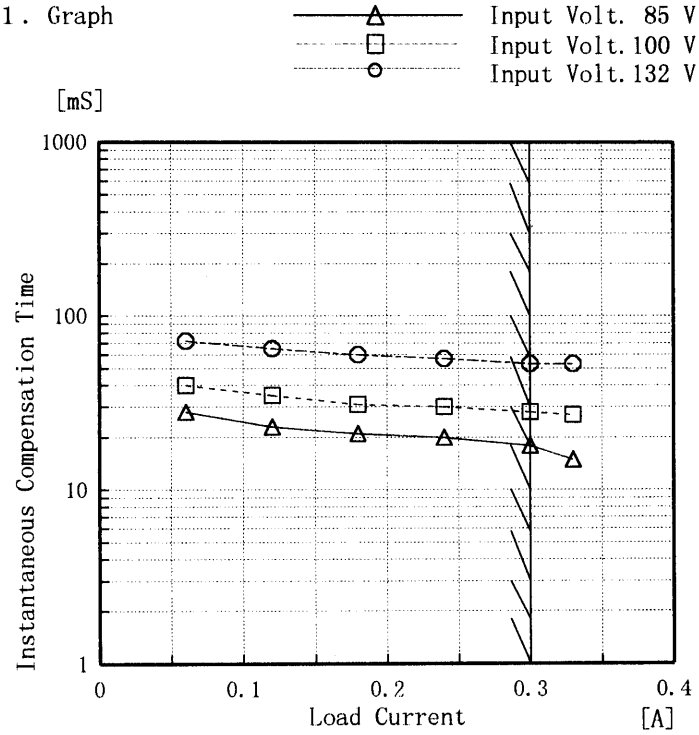
Load Current [A]	Time [mS]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0.0	—	—	—
0.4	34	51	94
0.8	27	40	77
1.2	21	31	65
1.6	14	27	56
2.0	13	21	45
2.2	11	20	44
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—

COSEL

Model	RMC15A-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

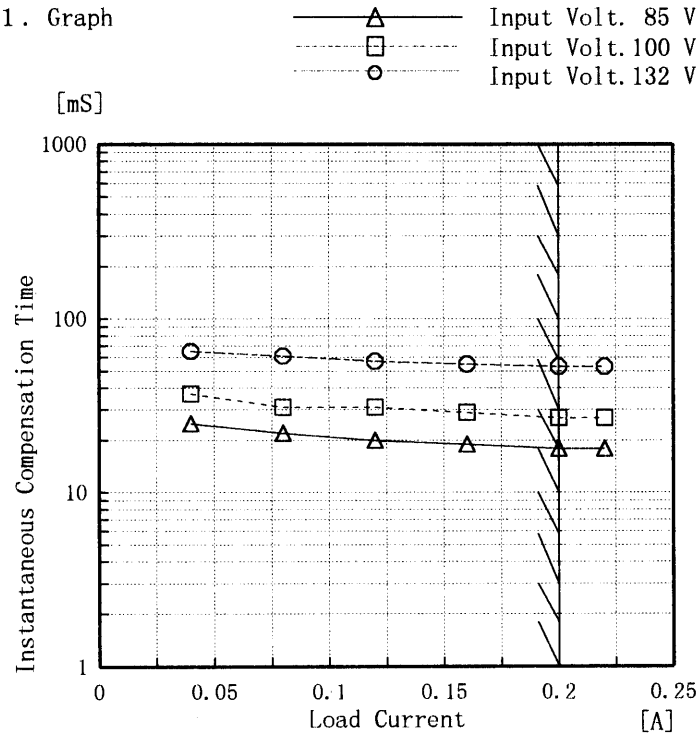
Load Current [A]	Time [mS]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0.00	—	—	—
0.06	28	40	72
0.12	23	35	65
0.18	21	31	60
0.24	20	30	57
0.30	18	28	53
0.33	15	27	53
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—

COSEL

Model	RMC15A-1
Item	Instantaneous Interruption Compensation 瞬時停電保障
Object	−12.0V0.2A

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 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	—	—	—
0.04	25	37	65
0.08	22	31	61
0.12	20	31	57
0.16	19	29	55
0.20	18	27	53
0.22	18	27	53
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—

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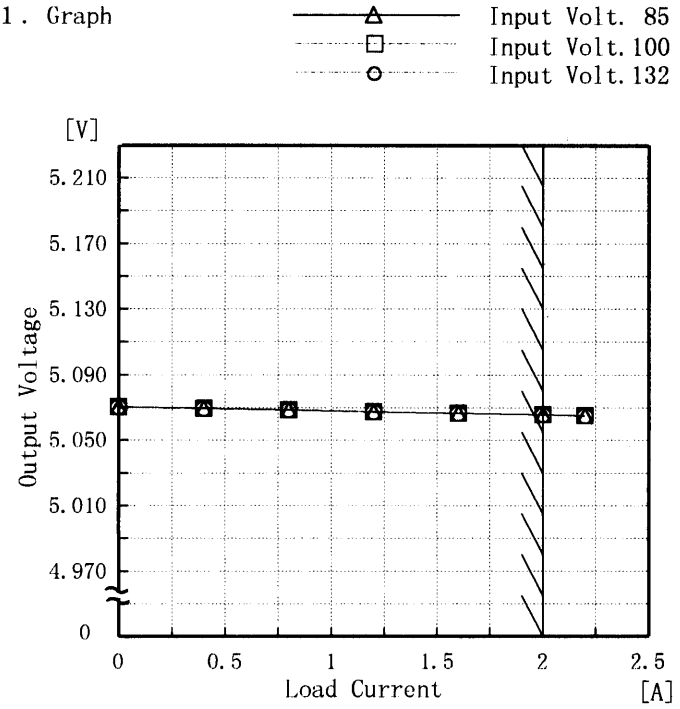
Model	RMC15A-1	Temperature	25℃
Item	Load Regulation 静的負荷変動	Testing Circuitry	Figure A

Object +5.0V2A

1. Graph

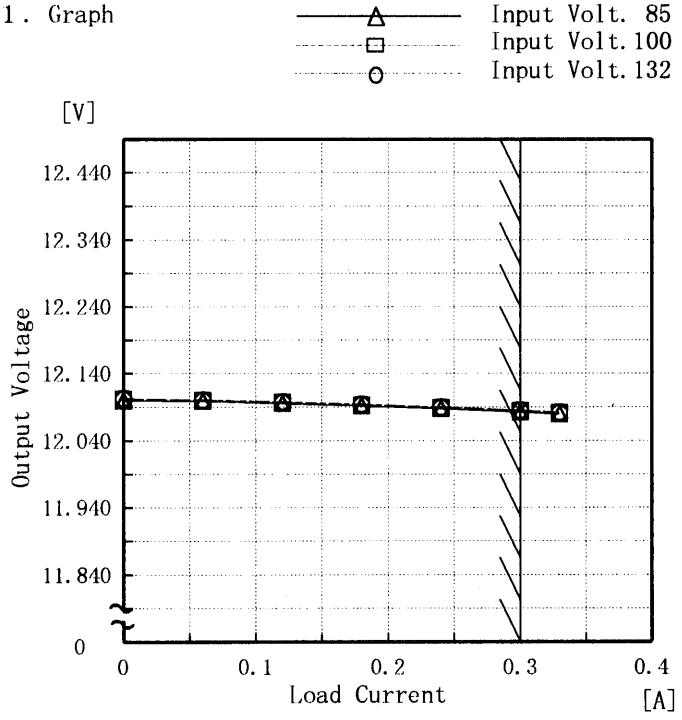


2. Values

Load Current [A]	Output Voltage [V]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0.0	5.070	5.070	5.070
0.4	5.070	5.070	5.070
0.8	5.069	5.069	5.069
1.2	5.068	5.068	5.068
1.6	5.067	5.067	5.067
2.0	5.066	5.066	5.066
2.2	5.065	5.065	5.065
—	—	—	—
—	—	—	—
—	—	—	—

Object +12.0V0.3A

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。

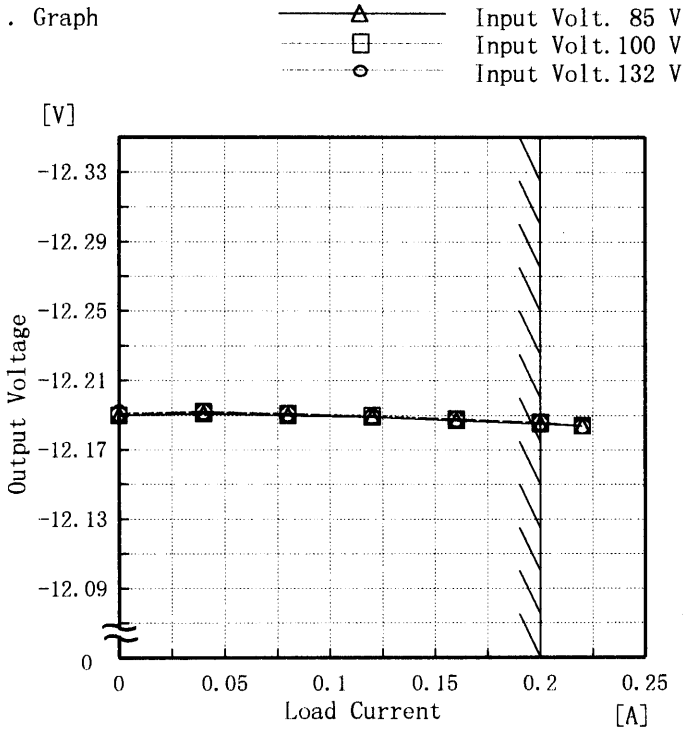
2. Values

Load Current [A]	Output Voltage [V]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0.00	12.100	12.102	12.103
0.06	12.099	12.100	12.101
0.12	12.096	12.097	12.098
0.18	12.092	12.093	12.094
0.24	12.088	12.089	12.090
0.30	12.083	12.084	12.085
0.33	12.080	12.081	12.082
—	—	—	—
—	—	—	—
—	—	—	—

COSEL

Model	RMC15A-1	Temperature	25℃
Item	Load Regulation 静的負荷変動	Testing Circuitry	Figure A
Object	−12.0V0.2A		

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

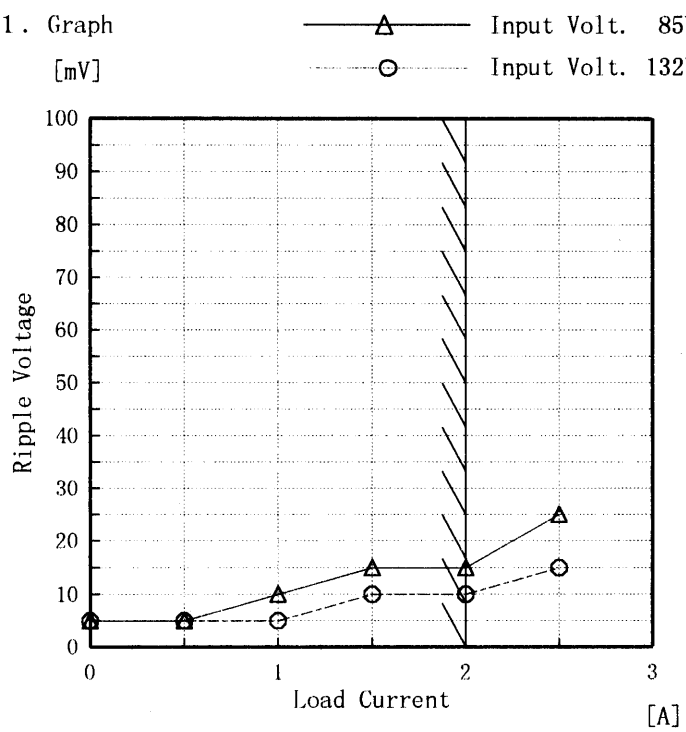
Load Current [A]	Output Voltage [V]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0.00	-12.190	-12.190	-12.191
0.04	-12.191	-12.192	-12.192
0.08	-12.190	-12.191	-12.191
0.12	-12.189	-12.190	-12.189
0.16	-12.187	-12.188	-12.188
0.20	-12.185	-12.186	-12.186
0.22	-12.184	-12.184	-12.184
—	—	—	—
—	—	—	—
—	—	—	—

COSEL

Model	RMC15A-1
Item	Ripple Voltage(by Load Current) リップル電圧(負荷特性)
Object	+5.0V2A

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

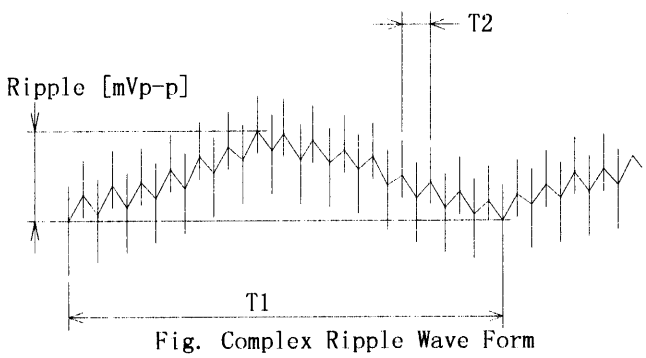


Fig. Complex Ripple Wave Form
図 リップル波形詳細図

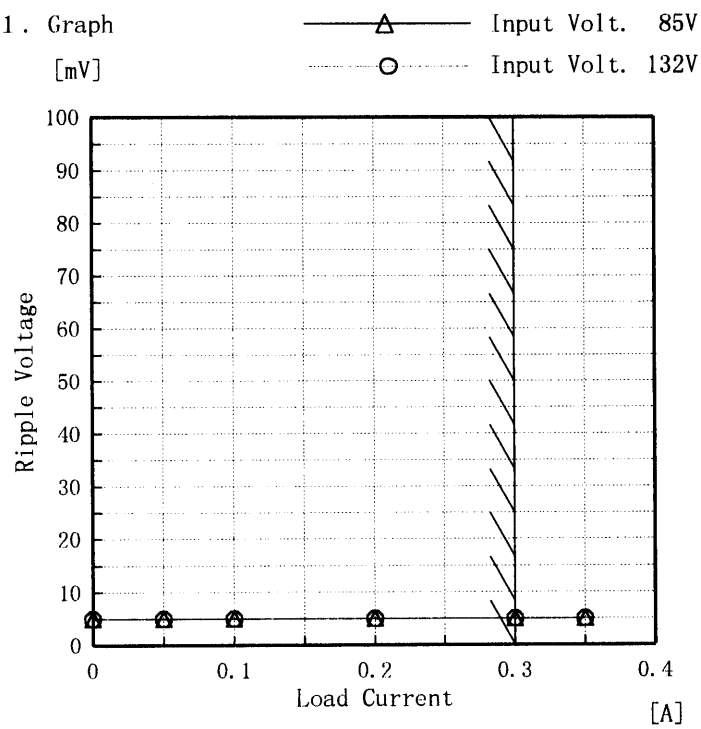
2. Values

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

COSEL

Model	RMC15A-1	
Item	Ripple Voltage(by Load Current) リップル電圧(負荷特性)	Temperature 25℃ Testing Circuitry Figure A
Object	+12.0V0.3A	

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

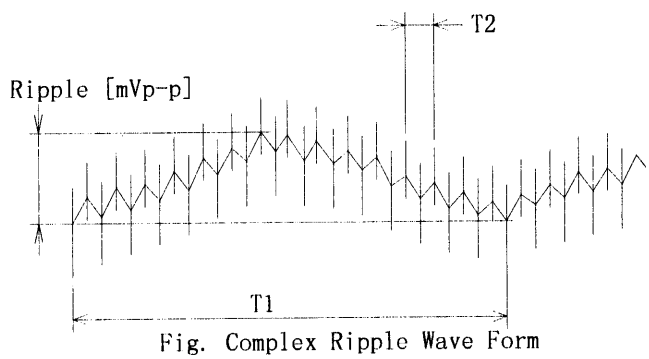


Fig. Complex Ripple Wave Form

図　リップル波形詳細図

2. Values

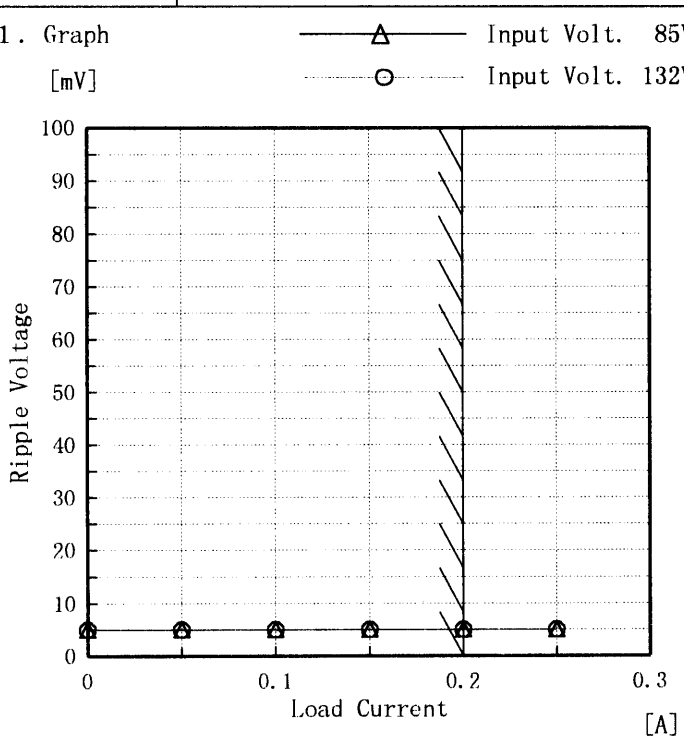
Load Current [A]	Ripple Output Voltage [mV]	
	Input Volt. 85 [V]	Input Volt. 132 [V]
0.00	5	5
0.05	5	5
0.10	5	5
0.20	5	5
0.30	5	5
0.35	5	5
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—

COSEL

Model	RMC15A-1
Item	Ripple Voltage(by Load Current) リップル電圧(負荷特性)
Object	−12.0V0.2A

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

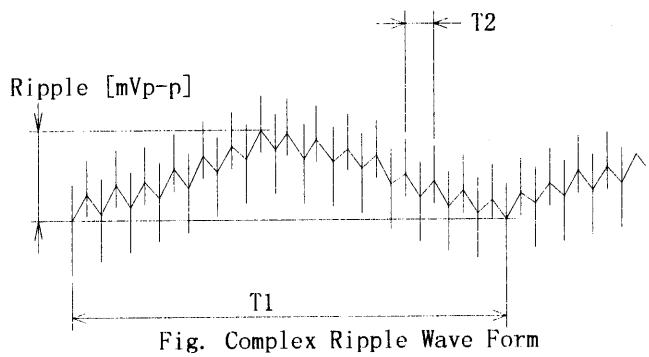


Fig. Complex Ripple Wave Form
図 リップル波形詳細図

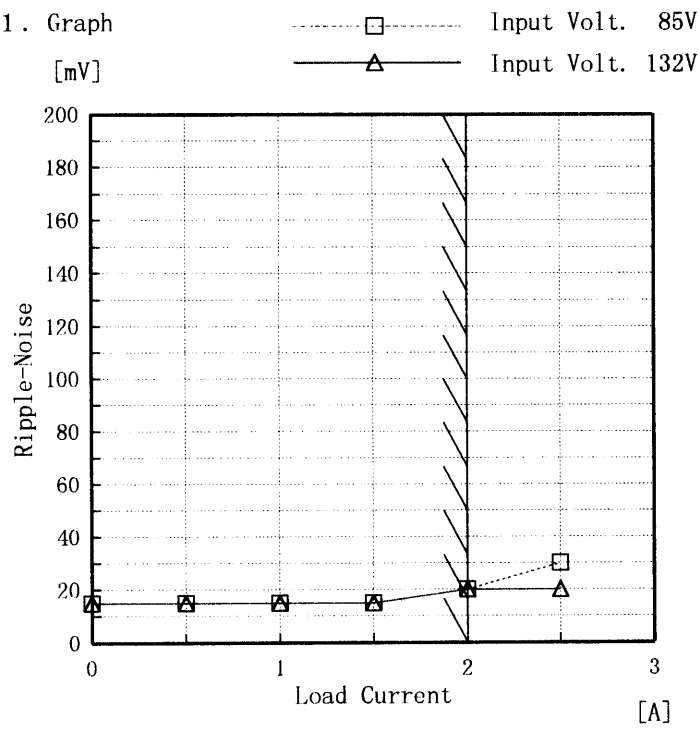
2. Values

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

COSEL

Model	RMC15A-1	Temperature	25℃
Item	Ripple-Noise リップルノイズ	Testing Circuitry	Figure A
Object	+5.0V2A		

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

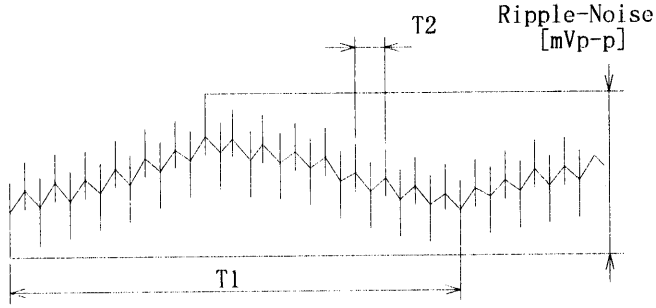


Fig. Complex Ripple Wave Form
図 リップル波形詳細図

2. Values

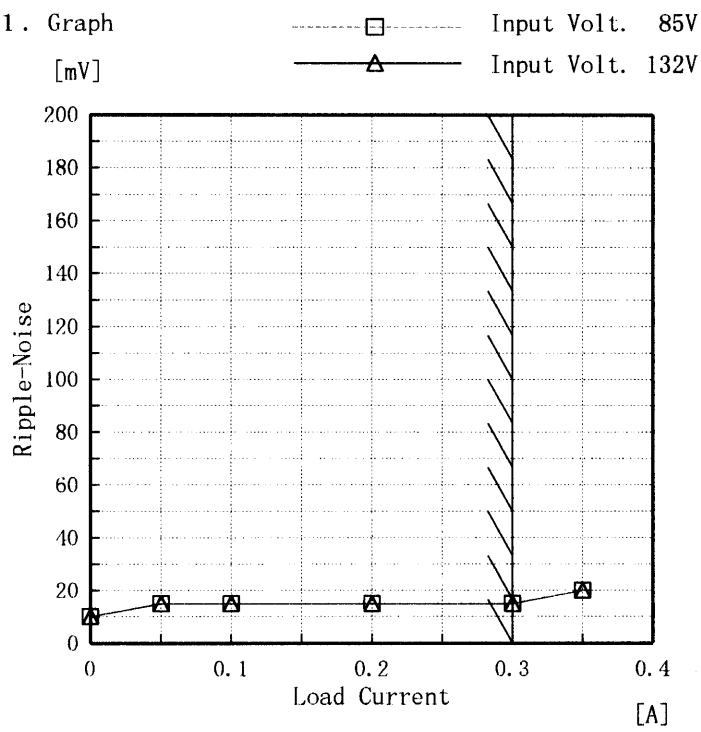
Load Current [A]	Ripple-Noise [mV]	
	Input Volt. 85 [V]	Input Volt. 132 [V]
0.0	15	15
0.5	15	15
1.0	15	15
1.5	15	15
2.0	20	20
2.5	30	20
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—

COSEL

Model	RMC15A-1
Item	Ripple-Noise　リップルノイズ
Object	+12.0V0.3A

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

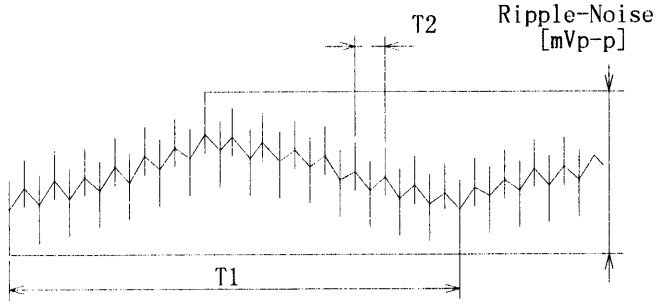


Fig. Complex Ripple Wave Form
図　リップル波形詳細図

2. Values

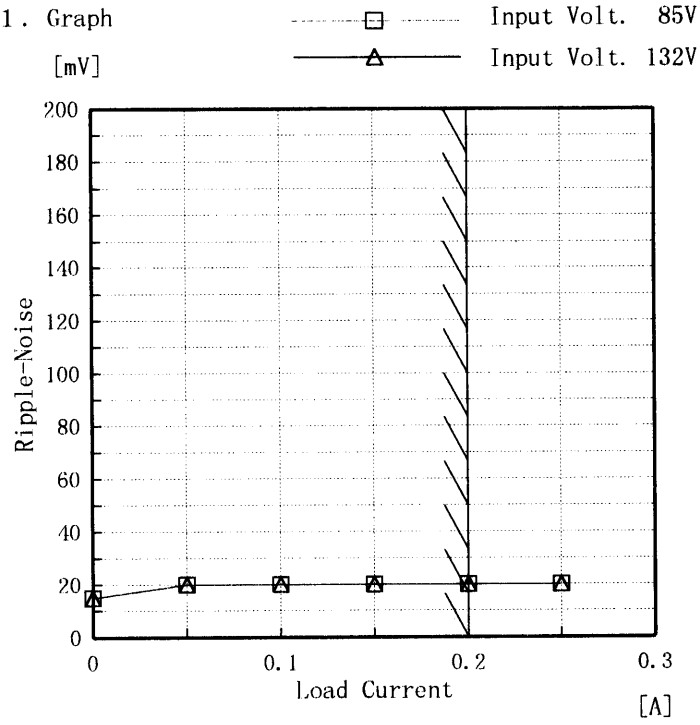
Load Current [A]	Ripple-Noise [mV]	
	Input Volt. 85 [V]	Input Volt. 132 [V]
0.00	10	10
0.05	15	15
0.10	15	15
0.20	15	15
0.30	15	15
0.35	20	20
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—

COSEL

Model	RMC15A-1
Item	Ripple-Noise リップルノイズ
Object	−12.0V0.2A

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

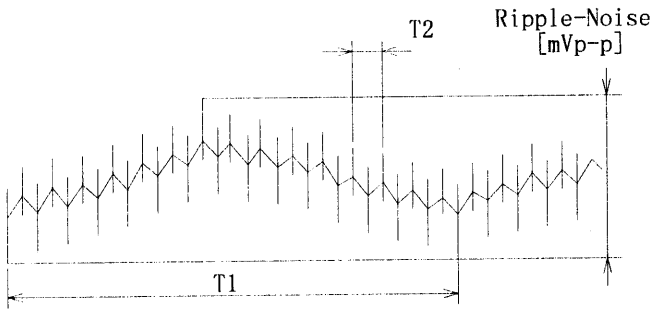


Fig. Complex Ripple Wave Form
図 リップル波形詳細図

2. Values

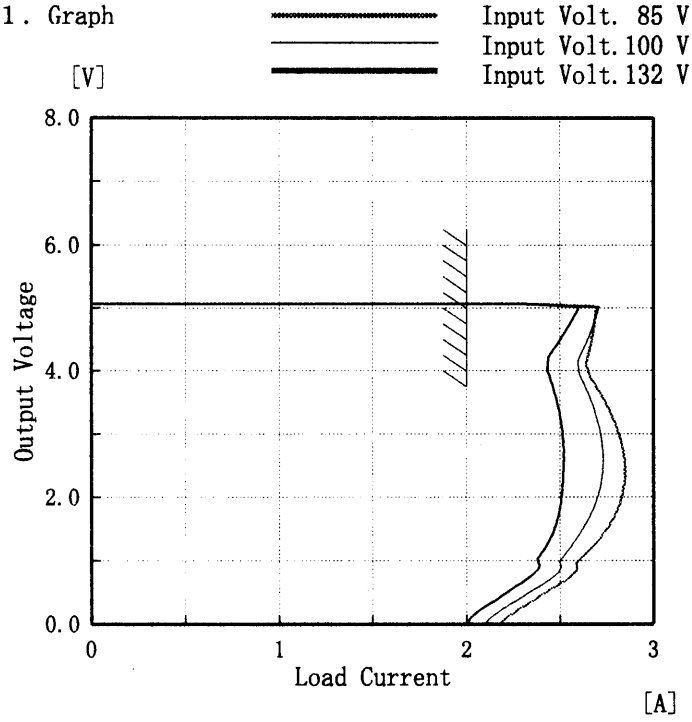
Load Current [A]	Ripple-Noise [mV]	
	Input Volt. 85 [V]	Input Volt. 132 [V]
0.00	15	15
0.05	20	20
0.10	20	20
0.15	20	20
0.20	20	20
0.25	20	20
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—

COSEL

Model	RMC15A-1	Temperature	25℃
Item	Overcurrent Protection 過電流保護	Testing Circuitry	Figure A

Object +5.0V2A

1. Graph

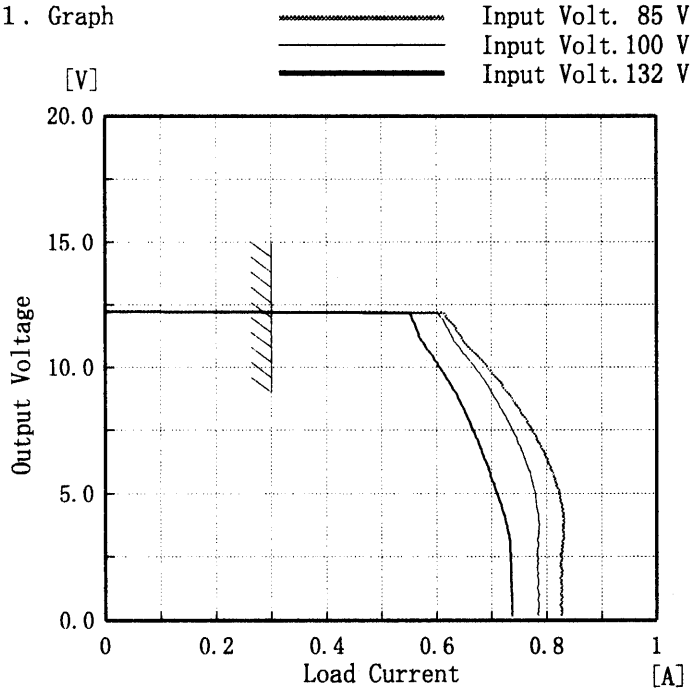


2. Values

Output Voltage [V]	Load Current [A]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
5.00	2.69	2.70	2.59
4.75	2.69	2.68	2.55
4.50	2.67	2.65	2.50
4.00	2.65	2.60	2.43
3.50	2.75	2.67	2.49
3.00	2.82	2.72	2.51
2.50	2.85	2.73	2.52
2.00	2.83	2.70	2.51
1.50	2.75	2.62	2.47
1.00	2.60	2.50	2.38
0.50	2.42	2.33	2.21
0.00	2.18	2.11	2.02

Object +12.0V0.3A

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]
12.00	0.622	0.608	0.555
11.40	0.637	0.623	0.565
10.80	0.660	0.642	0.581
9.60	0.709	0.684	0.618
8.40	0.750	0.717	0.650
7.20	0.783	0.745	0.671
6.00	0.808	0.766	0.694
4.80	0.825	0.780	0.714
3.60	0.830	0.785	0.729
2.40	0.827	0.784	0.734
1.20	0.827	0.784	0.736
0.00	0.827	0.786	0.737

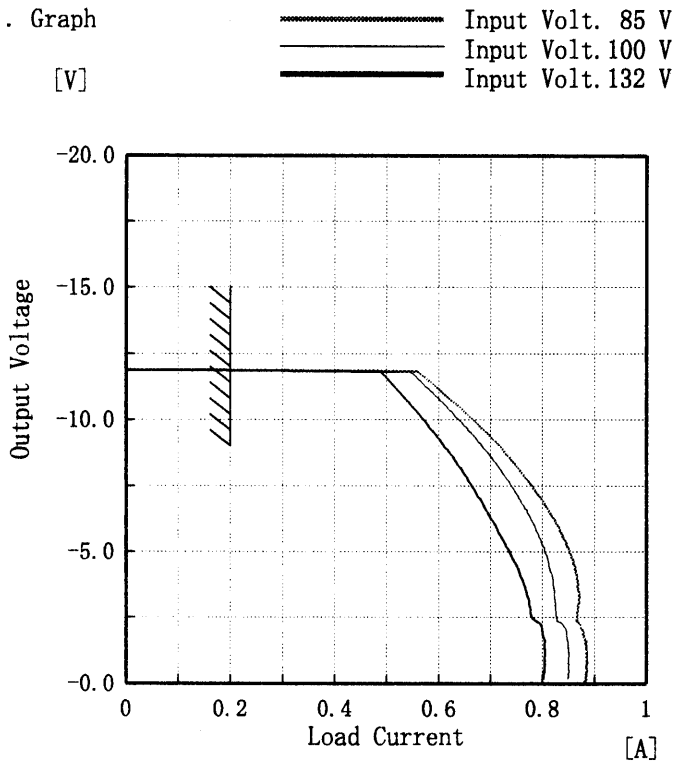
BC-3256

COSEL

Model	RMC15A-1
Item	Overcurrent Protection 過電流保護
Object	--12.0V0.2A

Temperature 25℃
Testing Circuitry Figure A

1. Graph



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

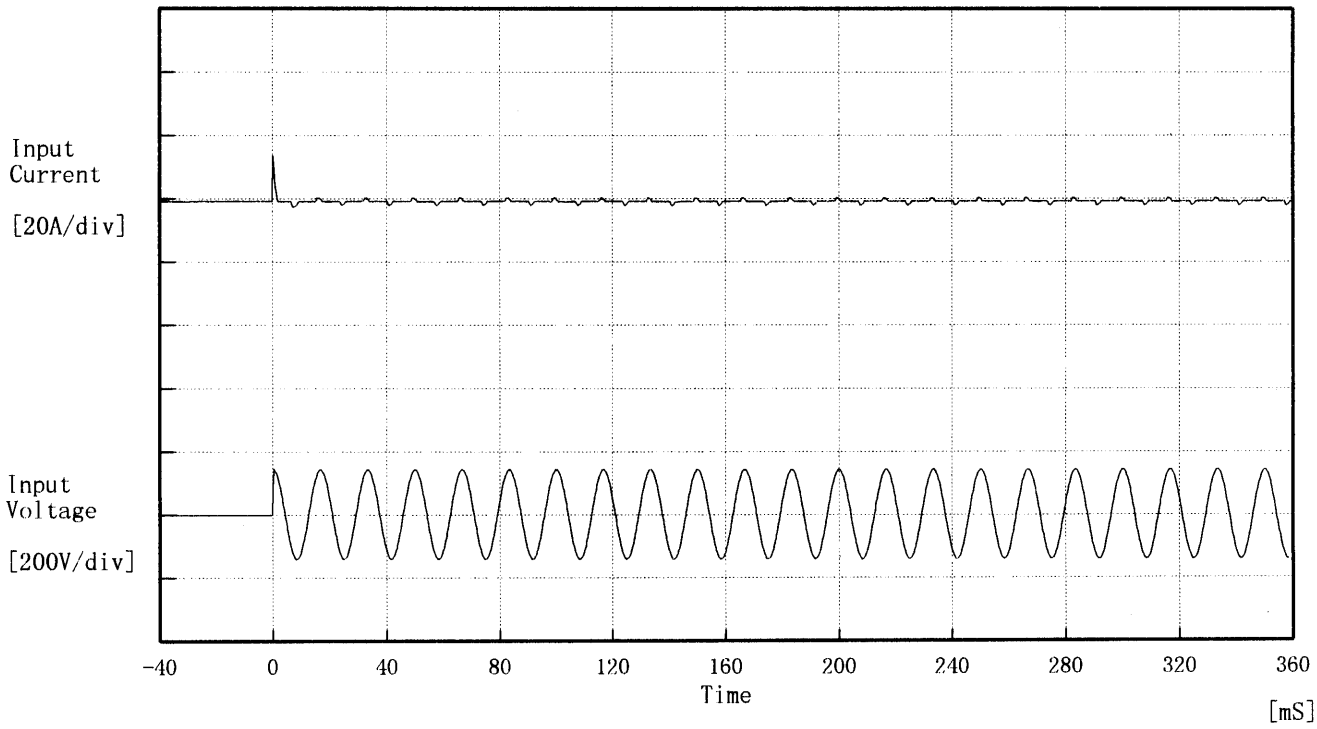
(注)斜線は定格負荷電流範囲を示す。

2. Values

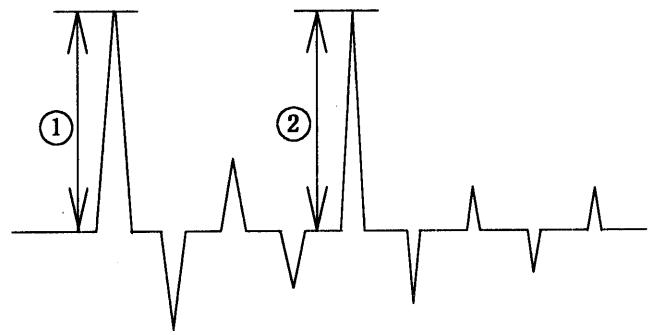
Output Voltage [V]	Load Current [A]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
-12.00	0.000	0.000	0.000
-11.40	0.586	0.568	0.508
-10.80	0.623	0.601	0.537
-9.60	0.690	0.661	0.589
-8.40	0.745	0.709	0.634
-7.20	0.790	0.752	0.675
-6.00	0.830	0.785	0.710
-4.80	0.858	0.809	0.743
-3.60	0.869	0.822	0.767
-2.40	0.866	0.828	0.787
-1.20	0.884	0.850	0.804
0.00	0.881	0.848	0.802

COSEL

Model	RMC15A-1		
Item	Inrush Current 突入電流	Temperature	25℃
		Testing Circuitry	Figure A
Object	———————		



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



COSEL

Model	RMC15A-1		
Item	Dynamic Load Responce 動的負荷変動	Temperature Testing Circuitry	25℃ Figure A
Object	+5.0V2A		

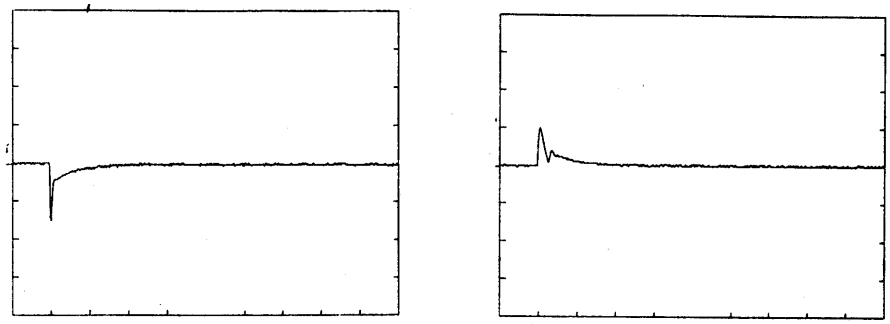
Input Volt. 100 V

Cycle 1000 mS

Load Current

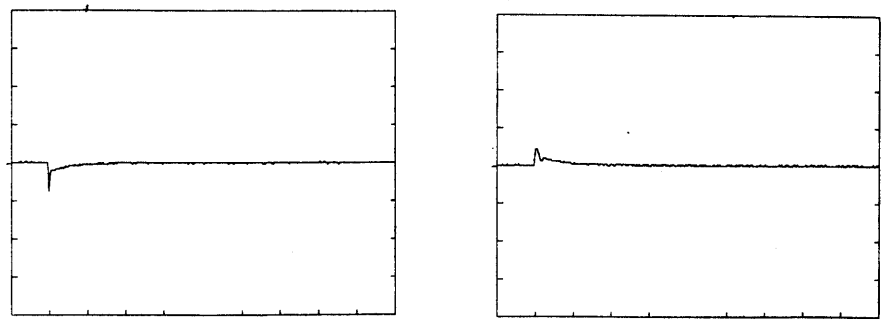
Load 0% ⟷

Load 100 %



Load 0% ⟷

Load 50 %



100 mV/div

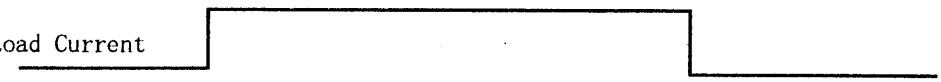
10 mS/div

COSEL

Model	RMC15A-1		
Item	Dynamic Load Responce 動的負荷変動	Temperature Testing Circuitry	25℃ Figure A
Object	+12.0V0.3A		

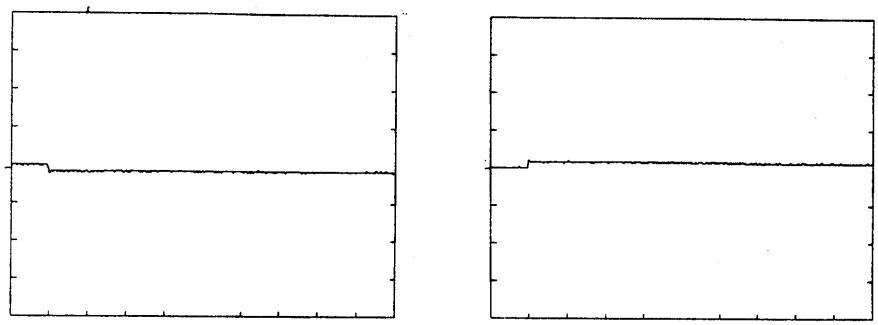
Input Volt. 100 V

Cycle 1000 mS



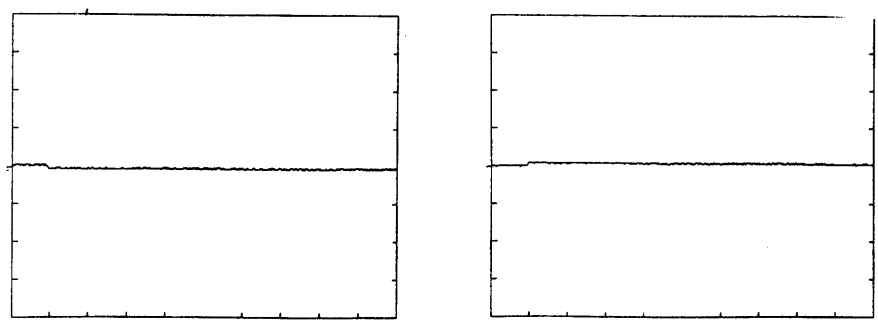
Load 0% ⟷

Load 100 %



Load 0% ⟷

Load 50 %



COSEL

Model	RMC15A-1		
Item	Dynamic Load Responce 動的負荷変動	Temperature Testing Circuitry	25℃ Figure A
Object	−12.0V0.2A		

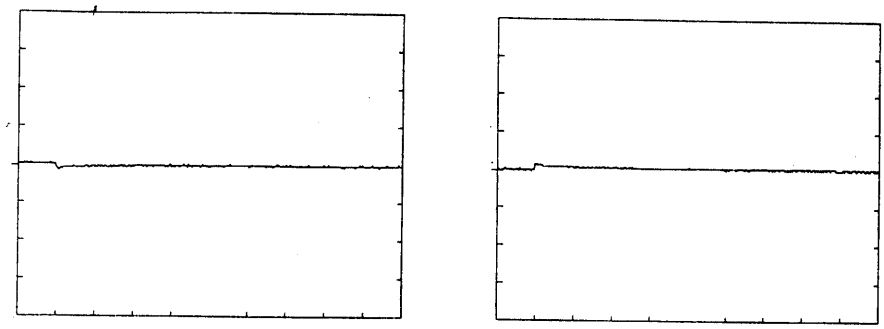
Input Volt. 100 V

Cycle 1000 mS

Load Current

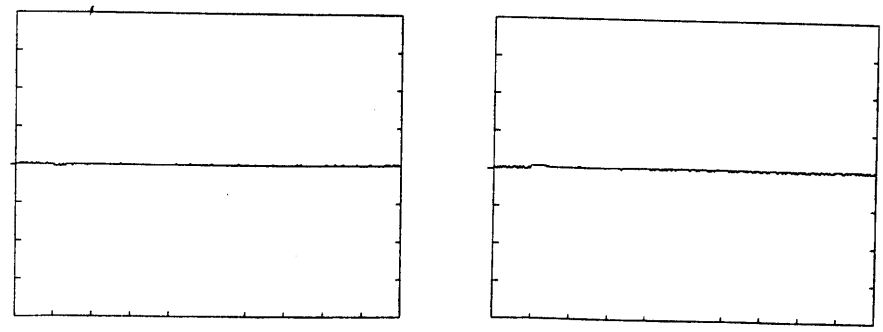
Load 0% ⟷

Load 100 %



Load 0% ⟷

Load 50 %



100 mV/div

10 mS/div

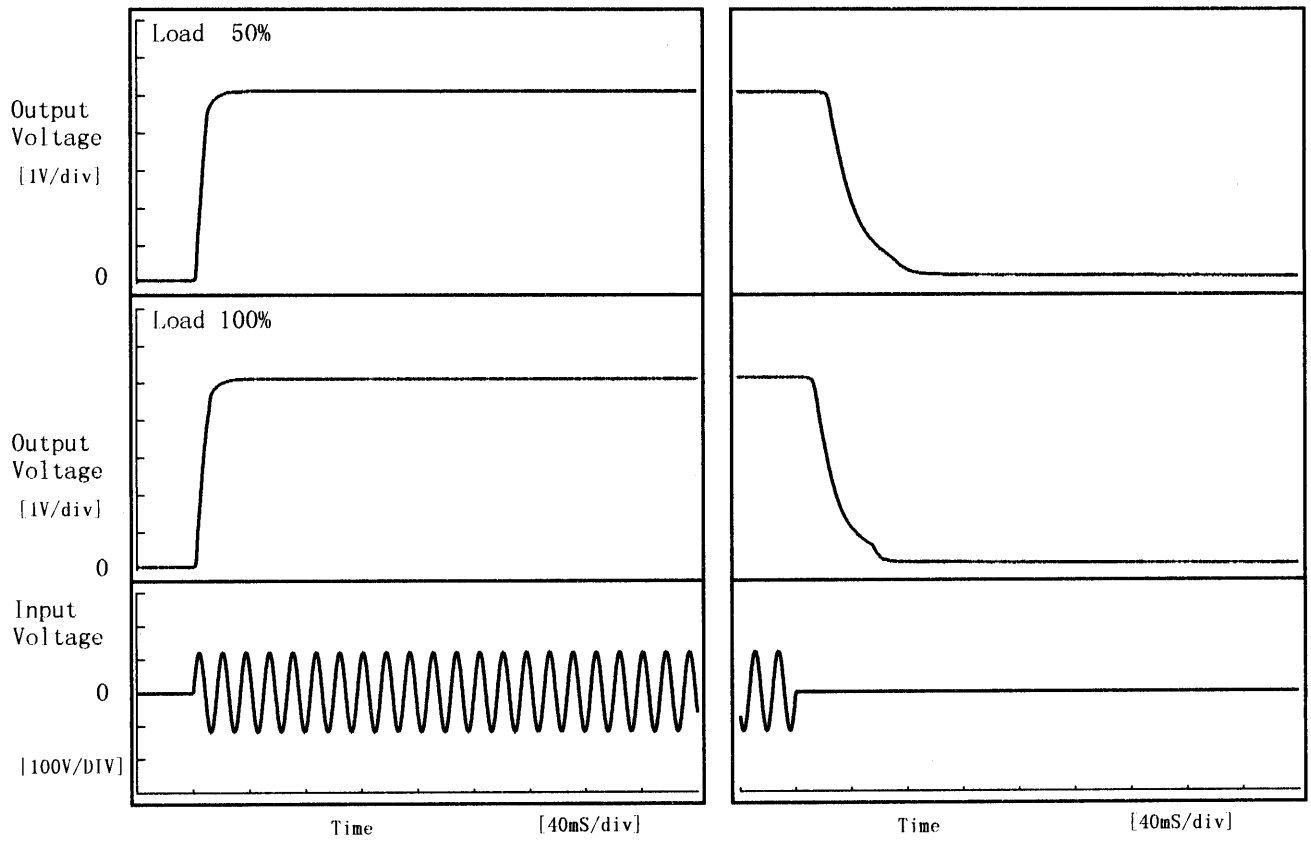
BC-3256

COSEL

Model	RMC15A-1		
Item	Rise and Fall Time 立上り、立下り時間	Temperature Testing Circuitry	25℃ Figure A
Object	+5.0V2A		

1. Graph

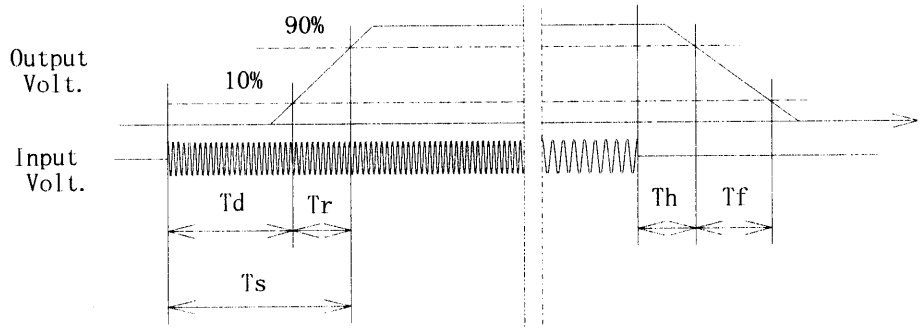
Input Volt. 85 V



2. Values

[mS]

Load \ Time	T d	T r	T s	T h	T f
50 %	2.0	8.2	10.2	26.6	47.6
100 %	2.2	10.0	12.2	16.4	41.2



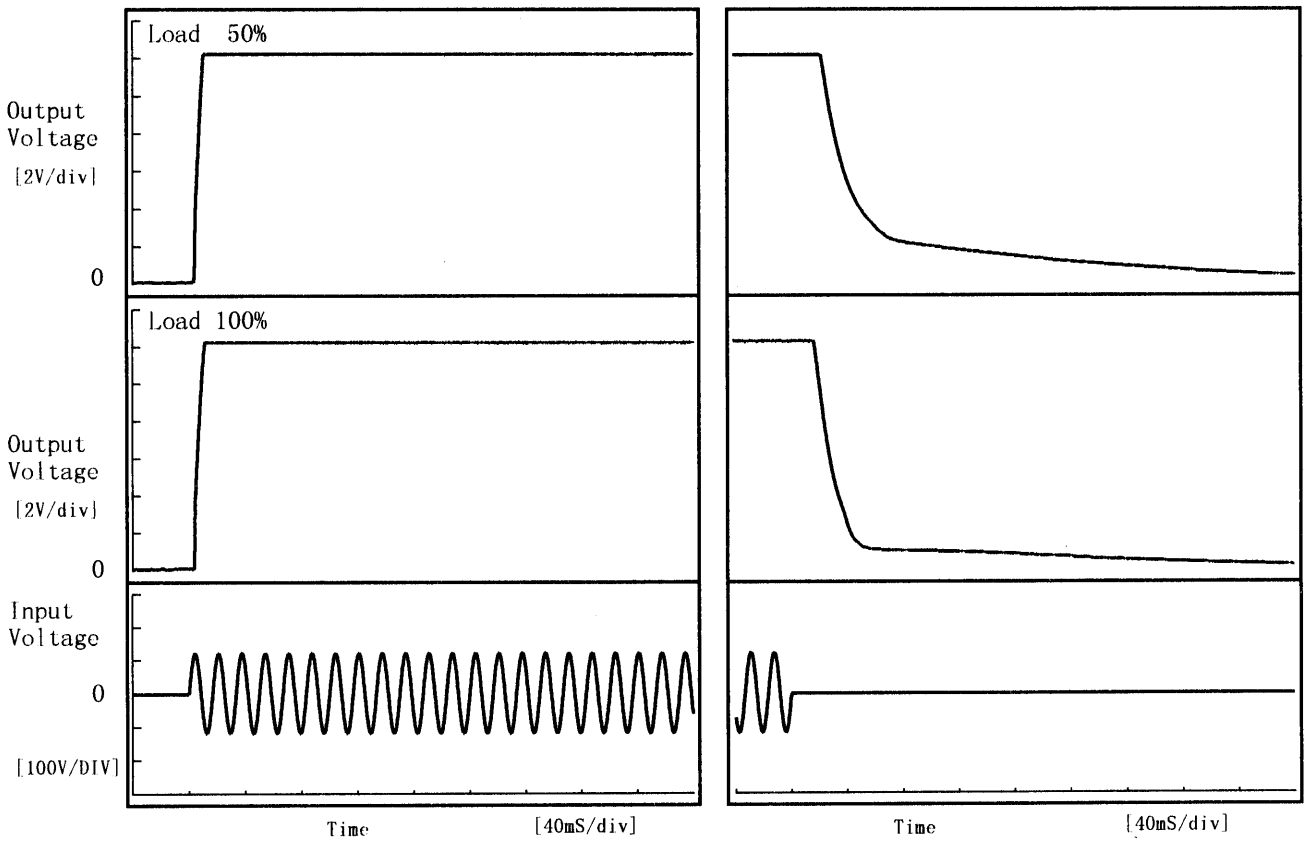
BC-3256

COSEL

Model	RMC15A-1		
Item	Rise and Fall Time 立上り、立下り時間	Temperature Testing Circuitry	25℃ Figure A
Object	+12.0V0.3A		

1. Graph

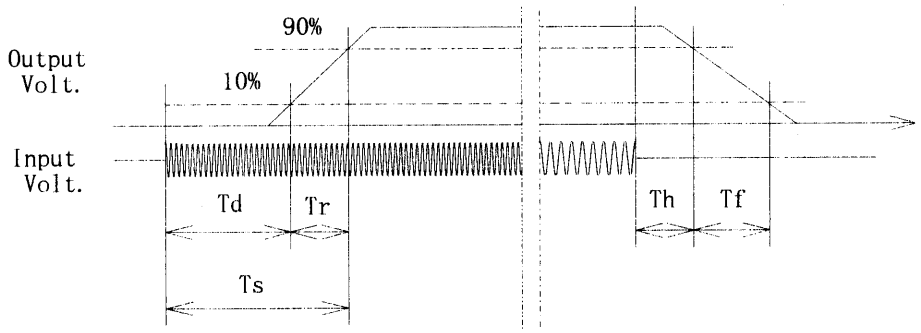
Input Volt. 85 V



2. Values

[mS]

Load \ Time	T d	T r	T s	T h	T f
50 %	3.4	5.6	9.0	25.0	161.6
100 %	3.6	6.2	9.8	19.6	31.8

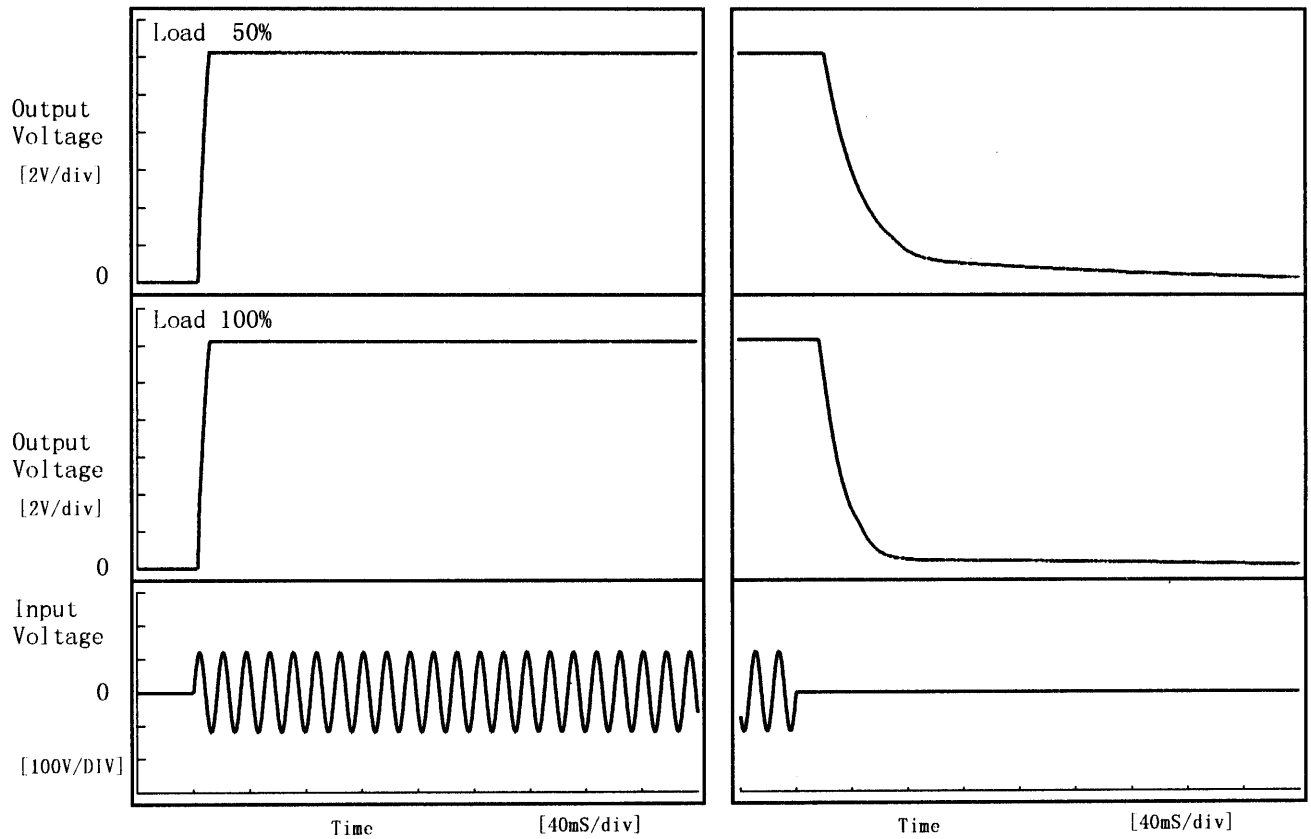


COSEL

Model	RMC15A-1		
Item	Rise and Fall Time 立上り、立下り時間	Temperature Testing Circuitry	25℃ Figure A
Object	−12.0V0.2A		

1. Graph

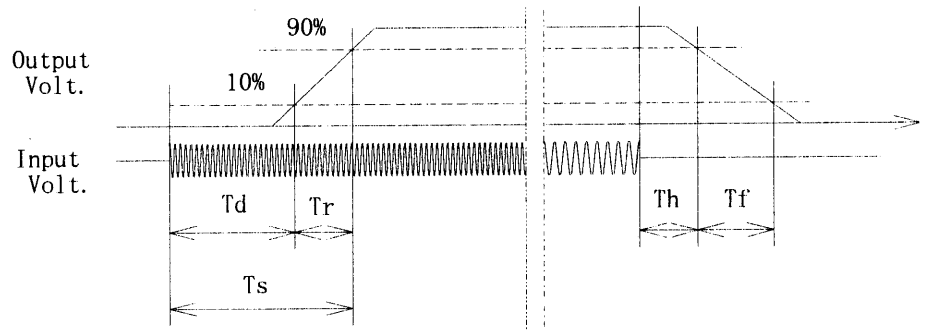
Input Volt. 85 V



2. Values

[mS]

Load \ Time	T d	T r	T s	T h	T f
50 %	3.0	6.4	9.4	24.4	78.2
100 %	3.0	7.0	10.0	20.2	36.4



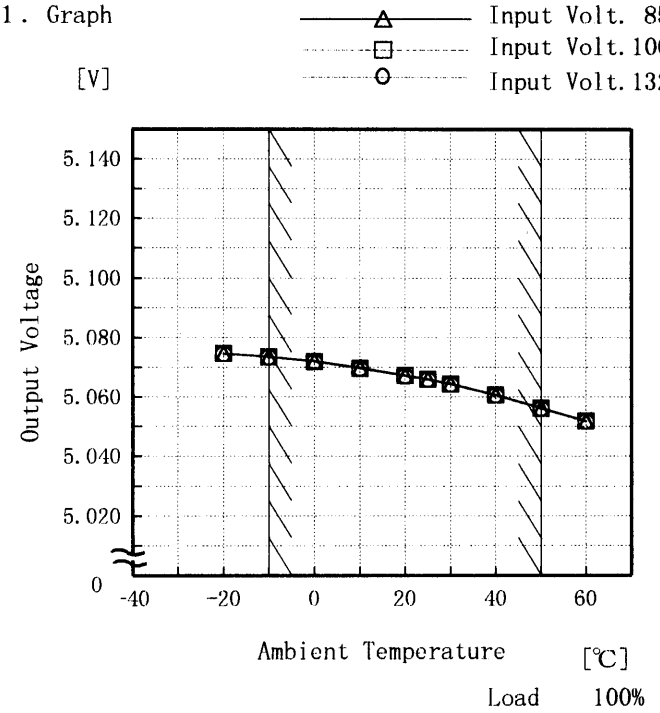
COSEL

Model	RMC15A-1
Item	Ambient Temperature Drift 周囲温度変動

Testing Circuitry Figure A

Object +5.0V2A

1. Graph

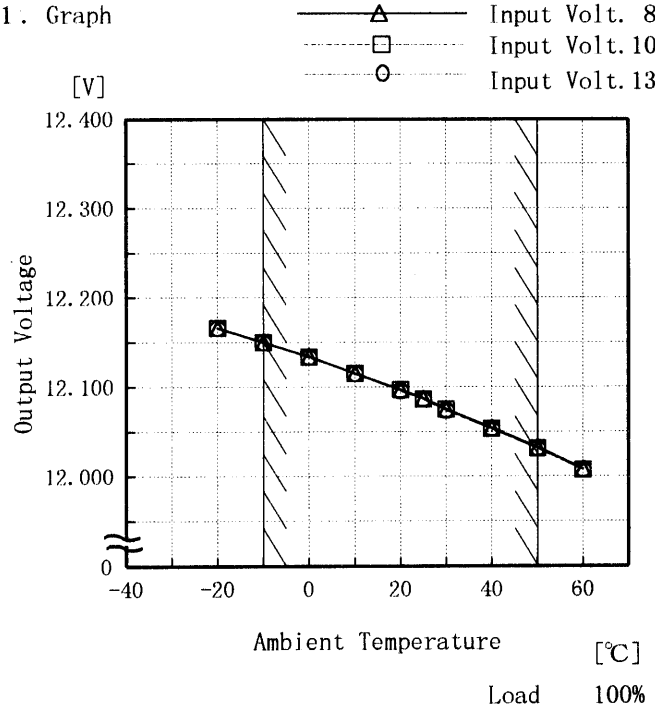


2. Values

Ambient Temperature [℃]	Output Voltage [V]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
-20	5.075	5.075	5.075
-10	5.074	5.074	5.074
0	5.072	5.072	5.072
10	5.070	5.070	5.070
20	5.067	5.067	5.067
25	5.066	5.066	5.066
30	5.064	5.064	5.064
40	5.061	5.061	5.061
50	5.056	5.056	5.056
60	5.052	5.052	5.052
—	—	—	—

Object +12.0V0.3A

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

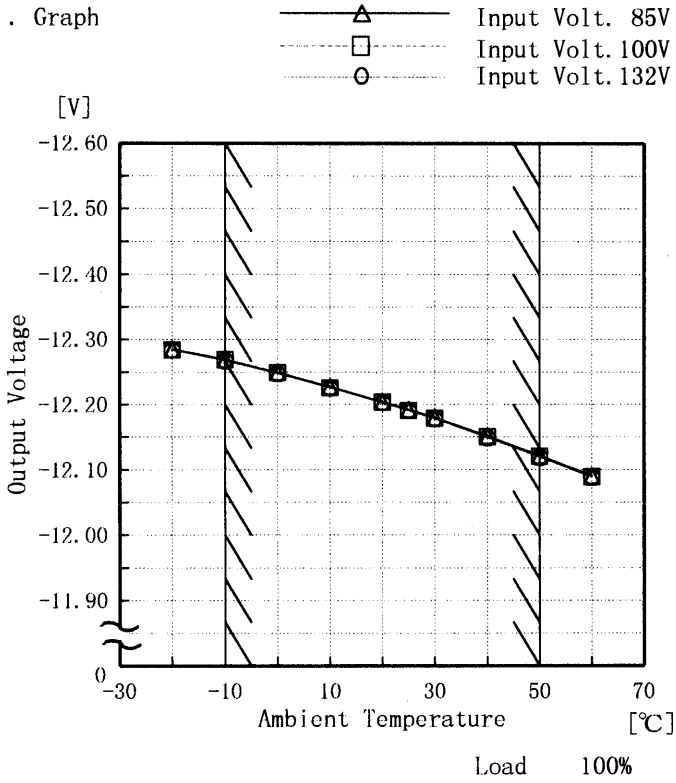
Ambient Temperature [℃]	Output Voltage [V]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
-20	12.166	12.166	12.166
-10	12.150	12.150	12.150
0	12.134	12.133	12.133
10	12.115	12.115	12.115
20	12.097	12.097	12.096
25	12.087	12.086	12.086
30	12.075	12.075	12.074
40	12.054	12.053	12.053
50	12.032	12.031	12.031
60	12.008	12.007	12.007
—	—	—	—

COSEL

Model	RMC15A-1
Item	Ambient Temperature Drift 周囲温度変動
Object	−12.0V0.2A

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

Ambient Temperature [℃]	Output Voltage [V]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
-20	-12.285	-12.284	-12.284
-10	-12.269	-12.269	-12.268
0	-12.249	-12.249	-12.248
10	-12.227	-12.226	-12.226
20	-12.204	-12.204	-12.203
25	-12.192	-12.191	-12.191
30	-12.180	-12.179	-12.178
40	-12.151	-12.150	-12.149
50	-12.121	-12.120	-12.119
60	-12.090	-12.089	-12.088
—	—	—	—

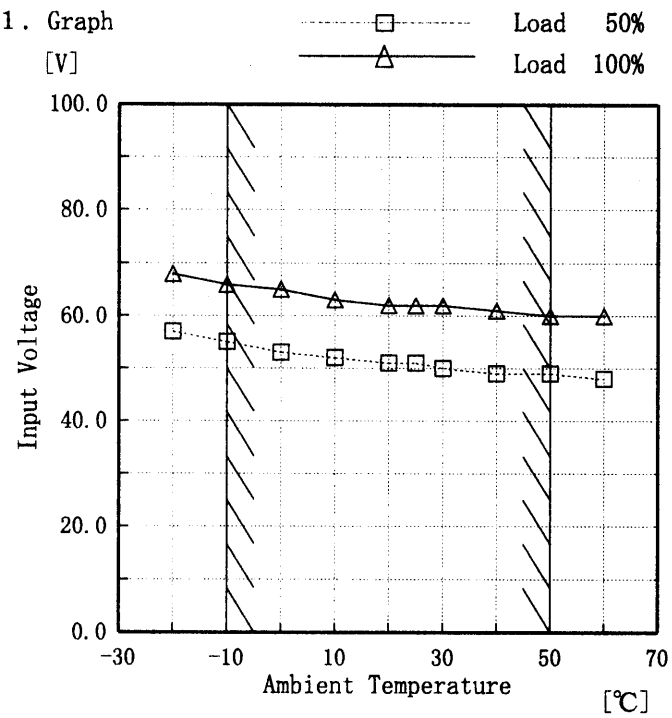
COSEL

Model	RMC15A-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 +5.0V2A

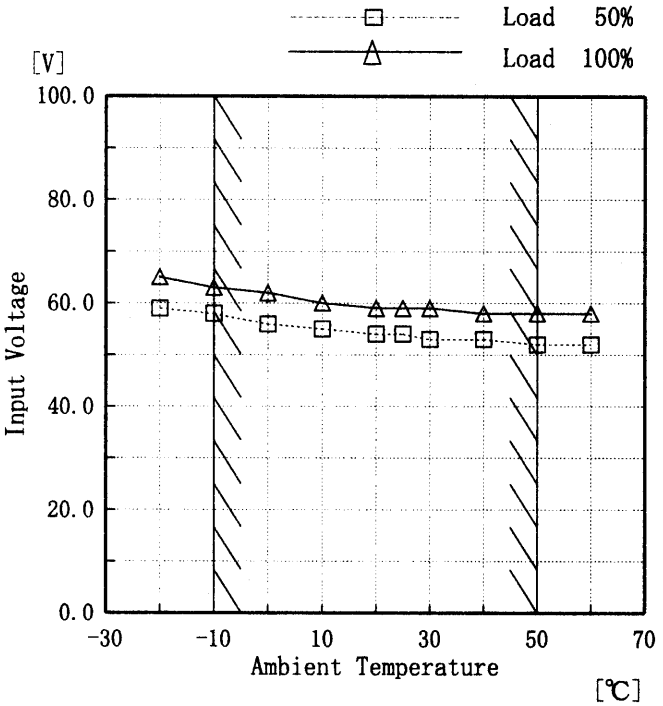
1. Graph



2. Values

Ambient Temperature [℃]	Input Voltage [V]	
	Load 50%	Load 100%
-20	57	68
-10	55	66
0	53	65
10	52	63
20	51	62
25	51	62
30	50	62
40	49	61
50	49	60
60	48	60
—	—	—

Object +12.0V0.3A



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

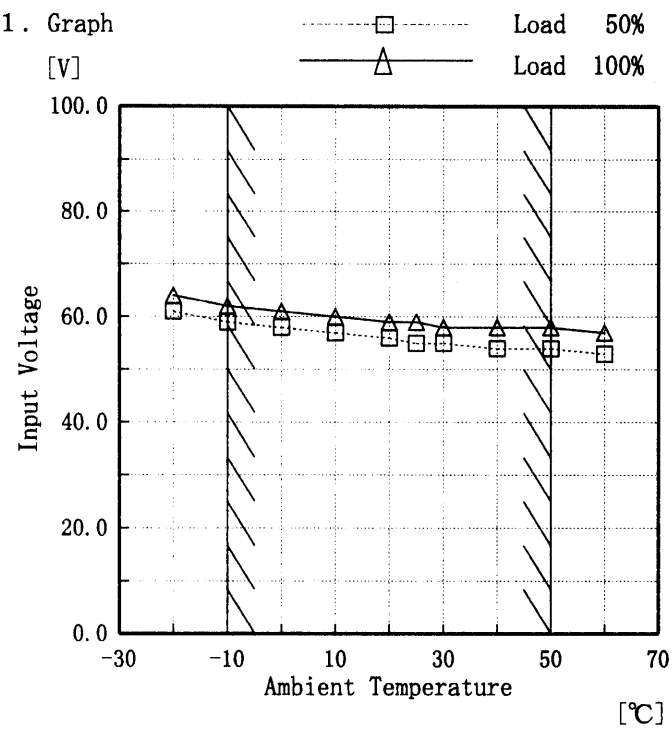
Ambient Temperature [℃]	Input Voltage [V]	
	Load 50%	Load 100%
-20	59	65
-10	58	63
0	56	62
10	55	60
20	54	59
25	54	59
30	53	59
40	53	58
50	52	58
60	52	58
—	—	—

COSEL

Model	RMC15A-1
Item	Minimum Input Voltage for Regulated Output Voltage 最低レギュレーション電圧
Object	−12.0V0.2A

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	61	64
-10	59	62
0	58	61
10	57	60
20	56	59
25	55	59
30	55	58
40	54	58
50	54	58
60	53	57
—	—	—

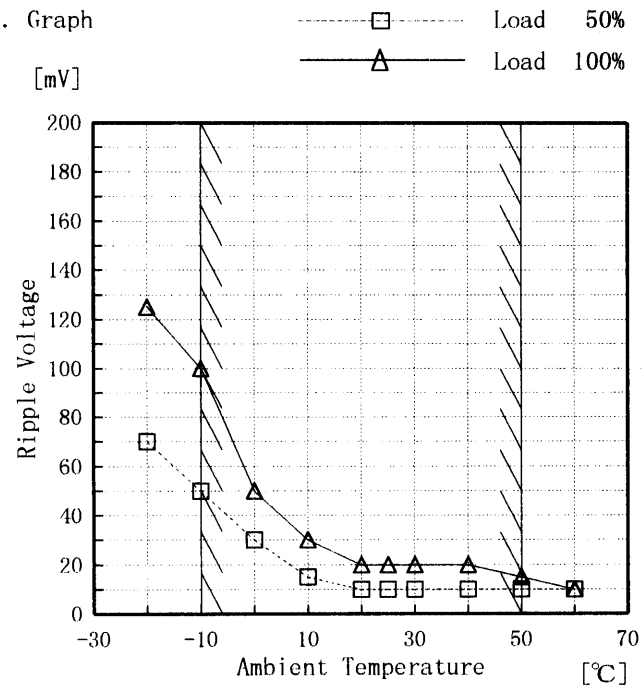
COSEL

Model	RMC15A-1
Item	Ripple Voltage (by Ambient Temp.) リップル電圧（周囲温度特性）

Testing Circuitry Figure A

Object +5.0V2A

1. Graph



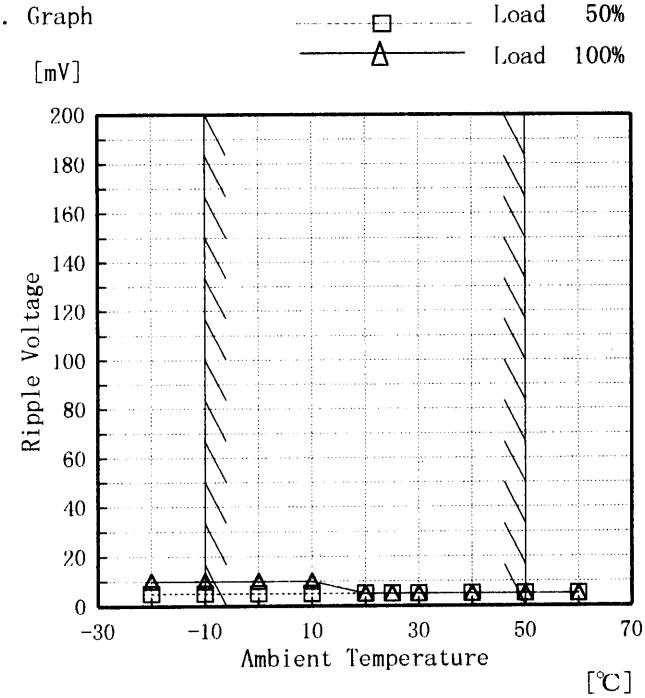
Input Volt. 100 V

2. Values

Ambient Temperature [℃]	Ripple Output Voltage [mV]	
	Load 50%	Load 100%
-20	70	125
-10	50	100
0	30	50
10	15	30
20	10	20
25	10	20
30	10	20
40	10	20
50	10	15
60	10	10
—	—	—

Object +12.0V0.3A

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

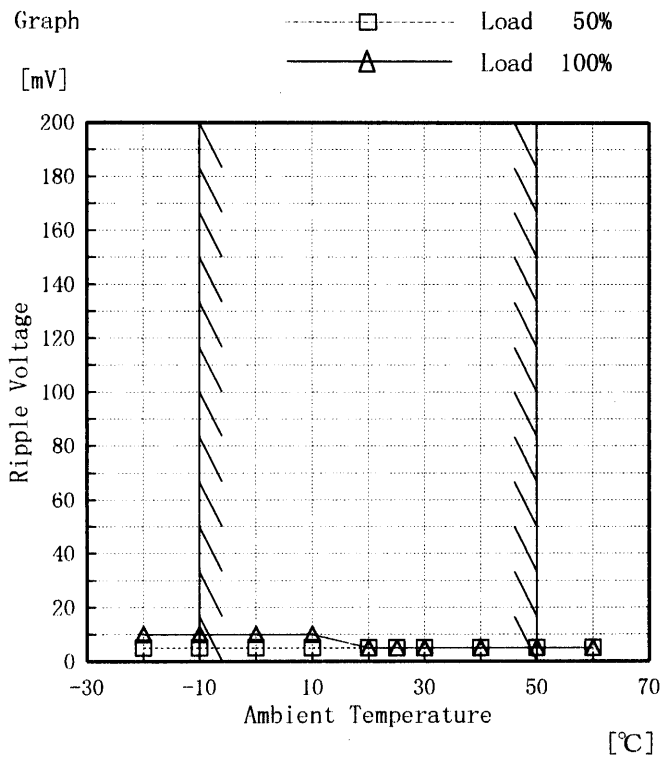
Ambient Temperature [℃]	Ripple Output Voltage [mV]	
	Load 50%	Load 100%
-20	5	10
-10	5	10
0	5	10
10	5	10
20	5	5
25	5	5
30	5	5
40	5	5
50	5	5
60	5	5
—	—	—

COSEL

Model	RMC15A-1
Item	Ripple Voltage (by Ambient Temp.) リップル電圧（周囲温度特性）
Object	−12.0V0.2A

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	5	10
-10	5	10
0	5	10
10	5	10
20	5	5
25	5	5
30	5	5
40	5	5
50	5	5
60	5	5
—	—	—

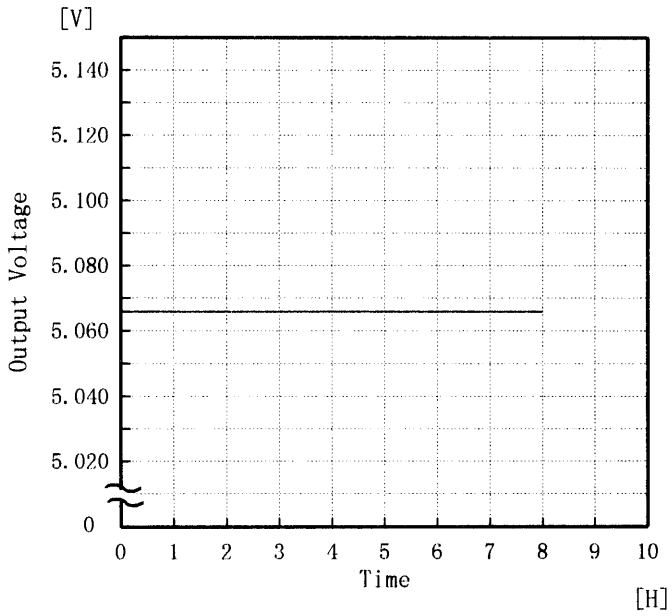
COSEL

Model	RMC15A-1
Item	Time Lapse Drift 経時ドリフト

Temperature 25℃
Testing Circuitry Figure A

Object +5.0V2A

1. Graph



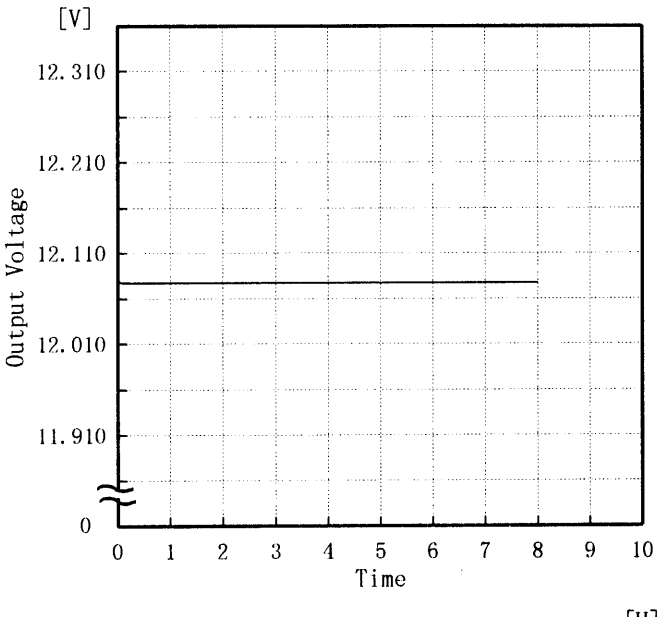
Input Volt. 100V
Load 100%

2. Values

Time since start [H]	Output Voltage [V]
0.0	5.068
0.5	5.066
1.0	5.066
2.0	5.066
3.0	5.066
4.0	5.066
5.0	5.066
6.0	5.066
7.0	5.066
8.0	5.066

Object +12.0V0.3A

1. Graph



Input Volt. 100V
Load 100%

2. Values

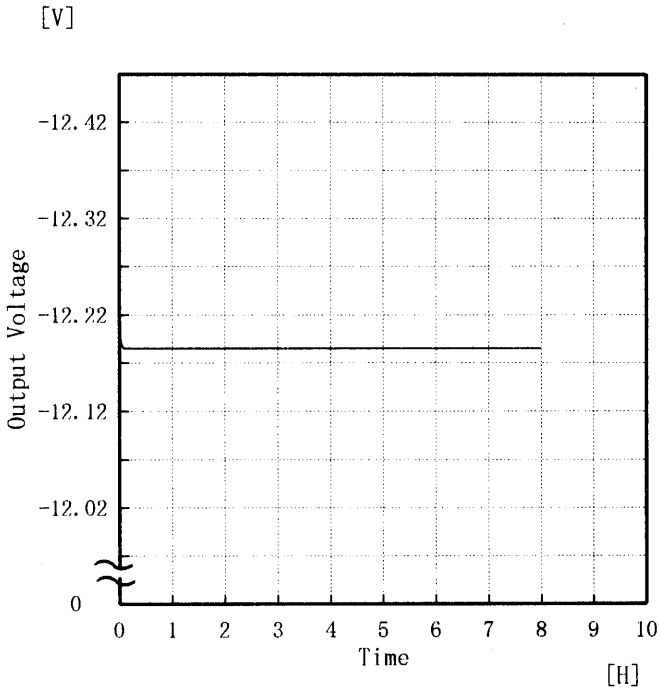
Time since start [H]	Output Voltage [V]
0.0	12.109
0.5	12.077
1.0	12.077
2.0	12.077
3.0	12.077
4.0	12.077
5.0	12.077
6.0	12.077
7.0	12.077
8.0	12.077

COSEL

Model	RMC15A-1
Item	Time Lapse Drift 経時ドリフト
Object	−12.0V0.2A

Temperature 25℃
Testing Circuitry Figure A

1. Graph



Input Volt. 100V
Load 100%

2. Values

Time since start [H]	Output Voltage [V]
0.0	-12.222
0.5	-12.185
1.0	-12.185
2.0	-12.185
3.0	-12.185
4.0	-12.185
5.0	-12.185
6.0	-12.185
7.0	-12.185
8.0	-12.185

COSEL

Model	RMC15A-1	
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 : -10～50 ℃

Input Voltage : 85～132 V

Load Current (AVR 1) : 0～2 A　(AVR 2) : 0～0.3 A　(AVR 3) : 0～0.2 A

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

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

1. 定電圧精度

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

周囲温度　-10～50 ℃

入力電圧　85～132 V

負荷電流　(AVR 1) : 0～2 A　(AVR 2) : 0～0.3 A　(AVR 3) : 0～0.2 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

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

2. Values

Object	+5.0V2A					
Item	Temperature [℃]	Input Voltage [V]	Output Current [A]	Output Voltage [V]	Output Voltage Accuracy [mV]	Output Voltage Accuracy(Ration)[%]
Maximum Voltage	-10	85	0	5.078	±11	±0.3
Minimum Voltage	50	132	2	5.056		

Object	+12.0V0.3A					
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	12.183	±81	±0.7
Minimum Voltage	50	132	0.3	12.022		

Object	−12.0V0.2A					
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	-12.277	±83	±0.7
Minimum Voltage	50	132	0.2	-12.111		

COSEL

Model	RMC15A-1	
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	+5.0V2A

Item	Data	Testing Conditions
Output Voltage [V]	5.066	Input Volt.: 100V, Load Current:2A
Line Regulation [mV]	1	Input Volt.: 85～132V, Load Current:2A
Load Regulation [mV]	4	Input Volt.: 100V, Load Current:0～2A

Object	+12.0V0.3A

Item	Data	Testing Conditions
Output Voltage [V]	12.079	Input Volt.: 100V, Load Current:0.3A
Line Regulation [mV]	1	Input Volt.: 85～132V, Load Current:0.3A
Load Regulation [mV]	18	Input Volt.: 100V, Load Current:0～0.3A

Object	−12.0V0.2A

Item	Data	Testing Conditions
Output Voltage [V]	-12.182	Input Volt.: 100V, Load Current:0.2A
Line Regulation [mV]	2	Input Volt.: 85～132V, Load Current:0.2A
Load Regulation [mV]	6	Input Volt.: 100V, Load Current:0～0.2A

COSEL

Model	RMC15A-1		
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	0.11	0.13	0.18
(B) IEC60950	0.12	0.14	0.18

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	RMC15A-1
Item	Conducted Emission 雑音端子電圧
Object	———————

Testing Circuitry Figure D

1. Graph

Remarks

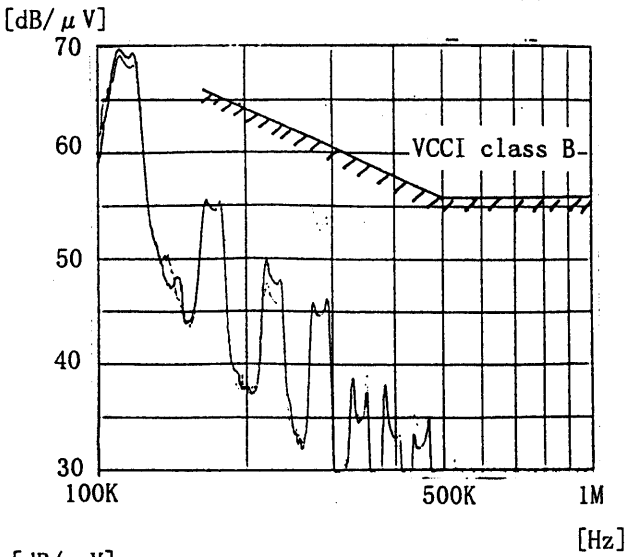
Input Volt. 120 V(VCCI:100V)

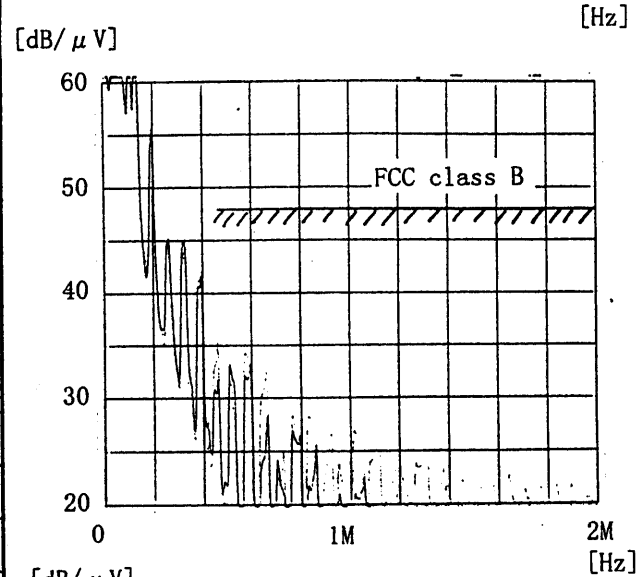
Load 100 %

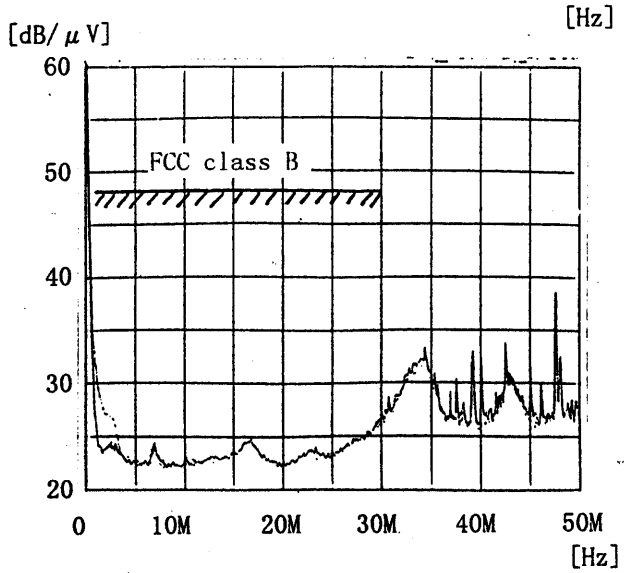
Note: Slanted line shows the range of Tolerance.

(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







COSEL

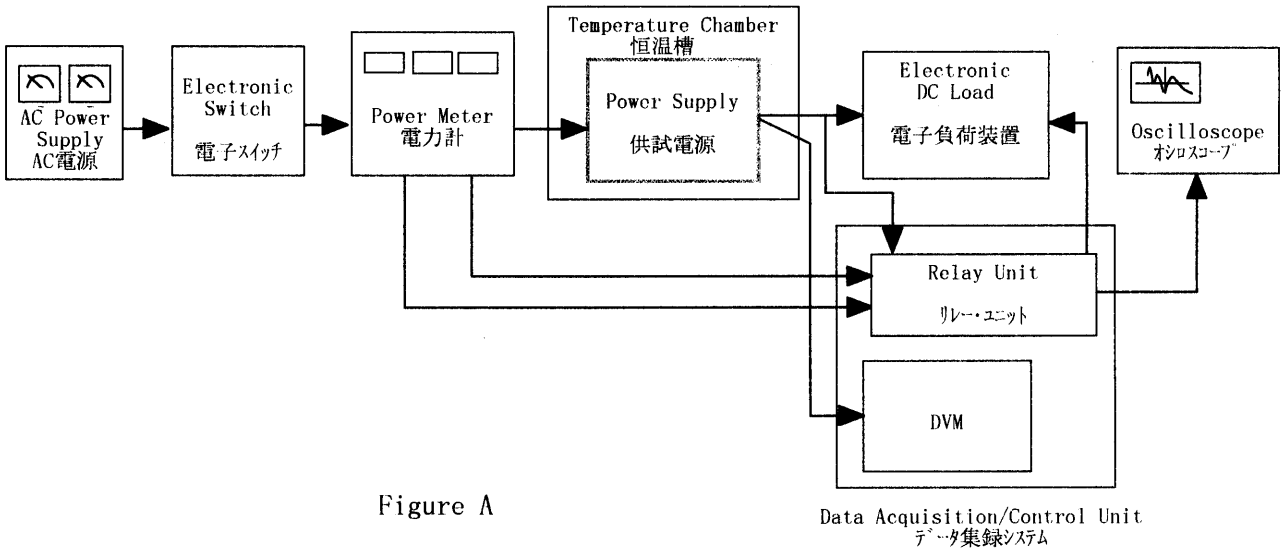


Figure A

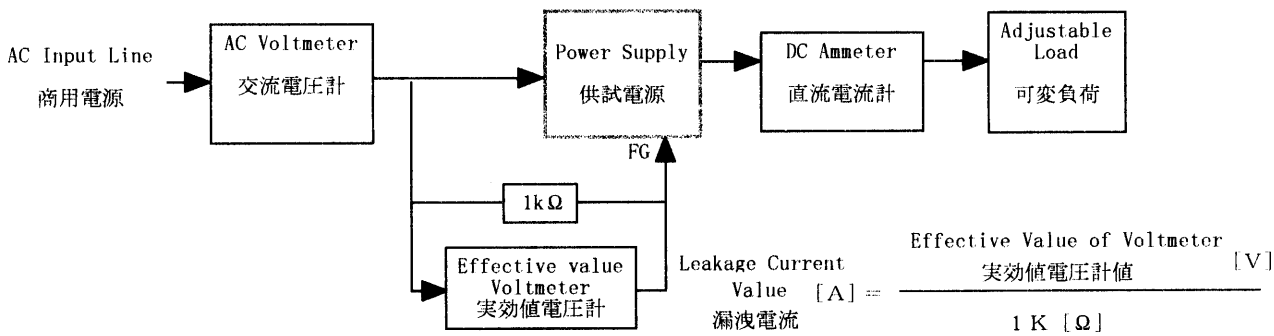


Figure B(DENTORI)

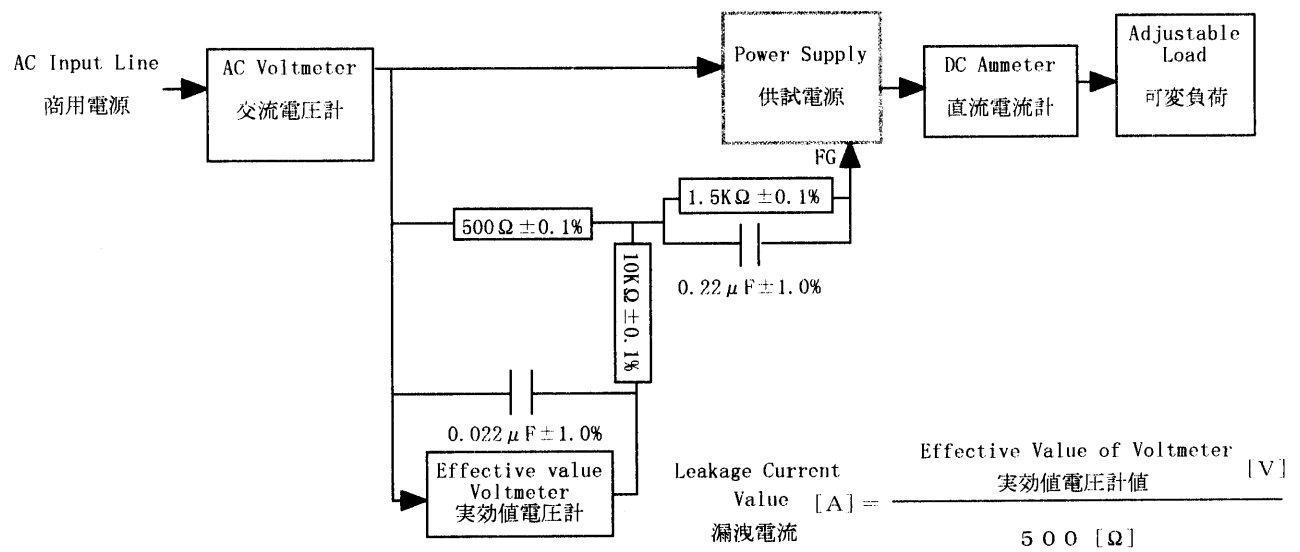


Figure B (IEC60950)

COSEL

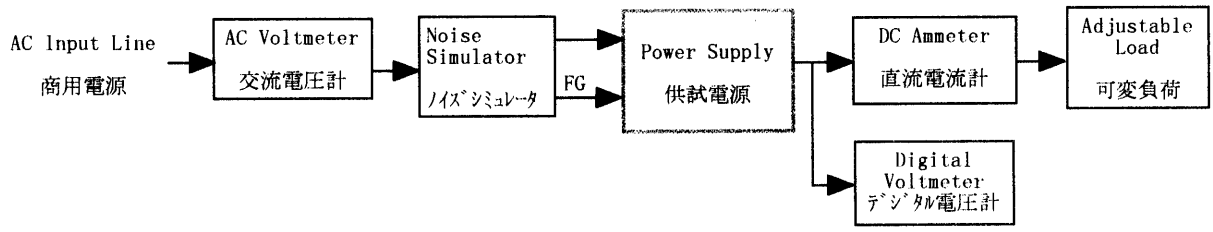


Figure C

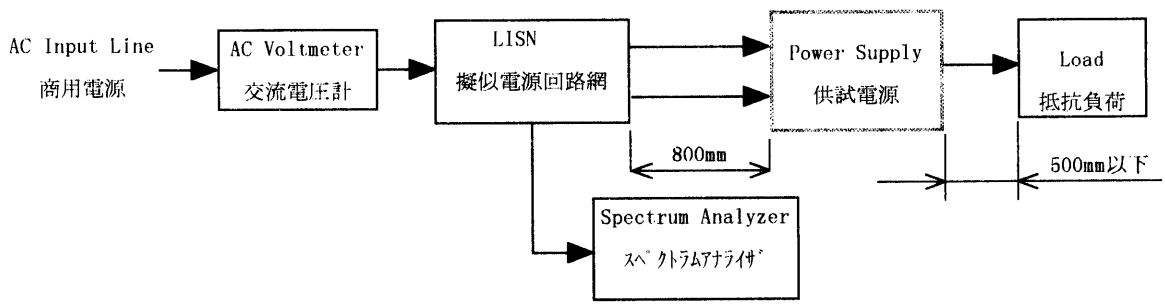


Figure D

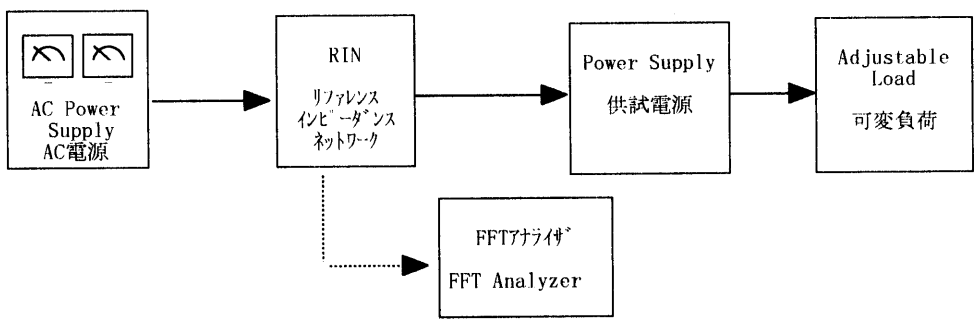


Figure E