COSEL

参考資料

TEST DATA OF MMC100B-3

Regulated DC Power Supply
April 7, 2011

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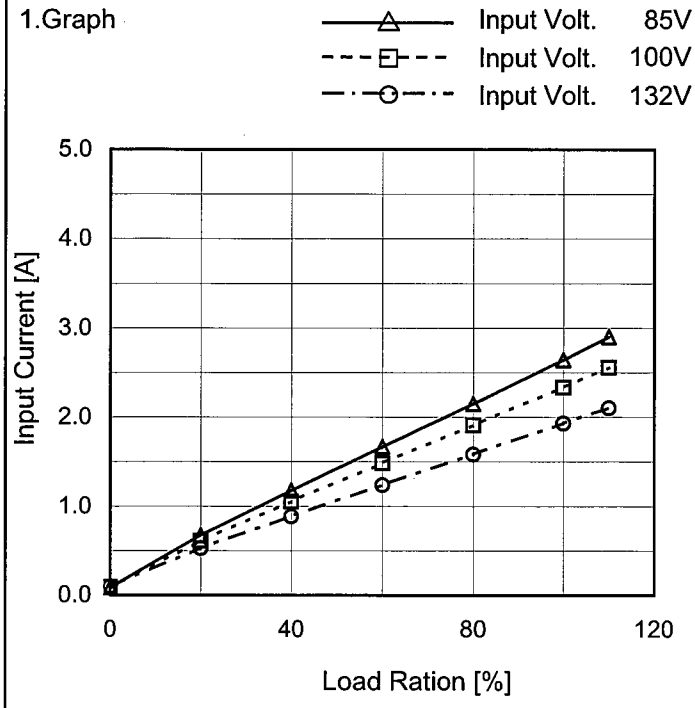
Item	Input Current (by Load Current)
Object	———————

Temperature 25°C
Testing Circuitry Figure A

1.Graph



2.Values

Load Ration [%]	Input Current [A]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0	0.088	0.091	0.096
20	0.676	0.612	0.529
40	1.178	1.053	0.888
60	1.670	1.484	1.239
80	2.152	1.910	1.584
100	2.642	2.336	1.932
110	2.901	2.558	2.106
--	-	-	-
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--	-	-	-
--	-	-	-

BC-10558

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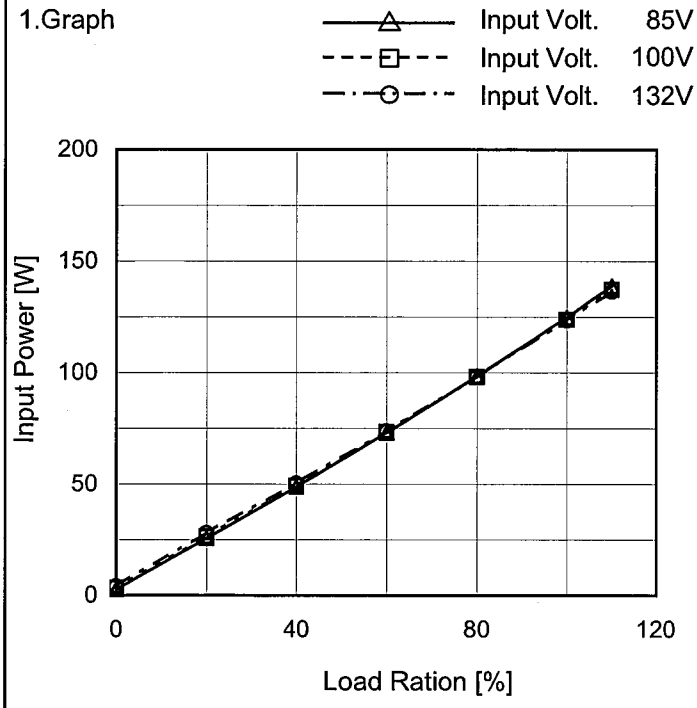
Model	MMC100B-3
Item	Input Power (by Load Current)
Object	———————

Temperature 25°C
Testing Circuitry Figure A

1.Graph



2.Values

Load Ration [%]	Input Power [W]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0	2.7	3.3	4.2
20	25.7	26.4	28.2
40	48.8	49.3	50.5
60	73.2	73.5	73.9
80	98.4	98.1	98.4
100	124.8	123.9	123.6
110	138.9	137.4	136.5
--	-	-	-
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--	-	-	-
--	-	-	-

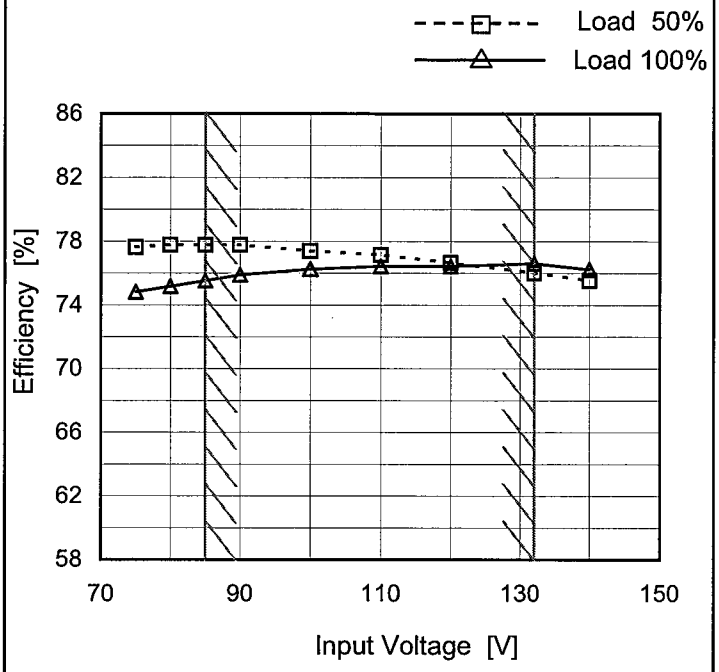
BC-10558

COSEL

Model	MMC100B-3
Item	Efficiency (by Input Voltage)
Object	———————————

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

Input Voltage [V]	Efficiency [%]	
	Load 50%	Load 100%
75	77.6	74.8
80	77.8	75.2
85	77.8	75.5
90	77.8	75.9
100	77.4	76.3
110	77.1	76.4
120	76.6	76.4
132	76.0	76.6
140	75.5	76.2

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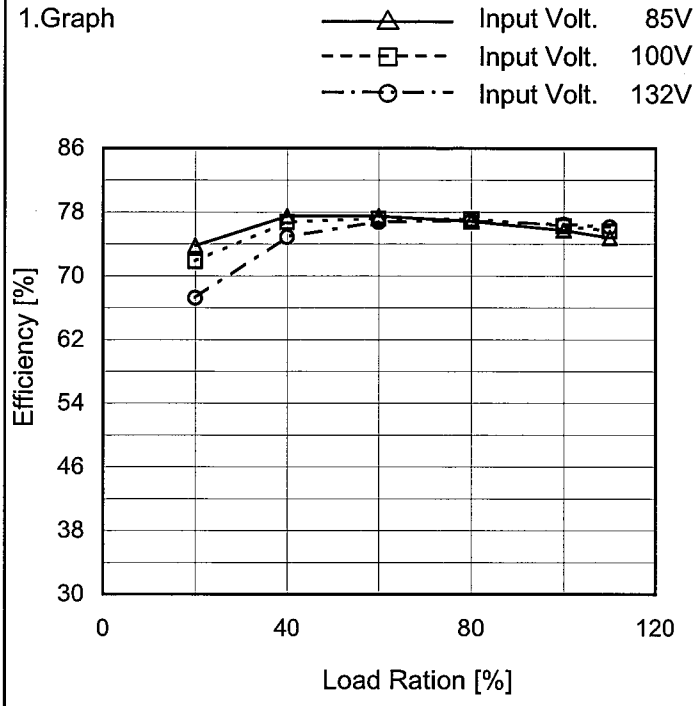
Model	MMC100B-3
Item	Efficiency (by Load Current)
Object	———————

Temperature 25°C
Testing Circuitry Figure A

1.Graph



2.Values

Load Ration [%]	Efficiency [%]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0	-	-	-
20	73.8	71.8	67.3
40	77.5	76.7	74.9
60	77.5	77.2	76.8
80	76.9	77.1	76.9
100	75.7	76.3	76.5
110	74.8	75.6	76.1
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

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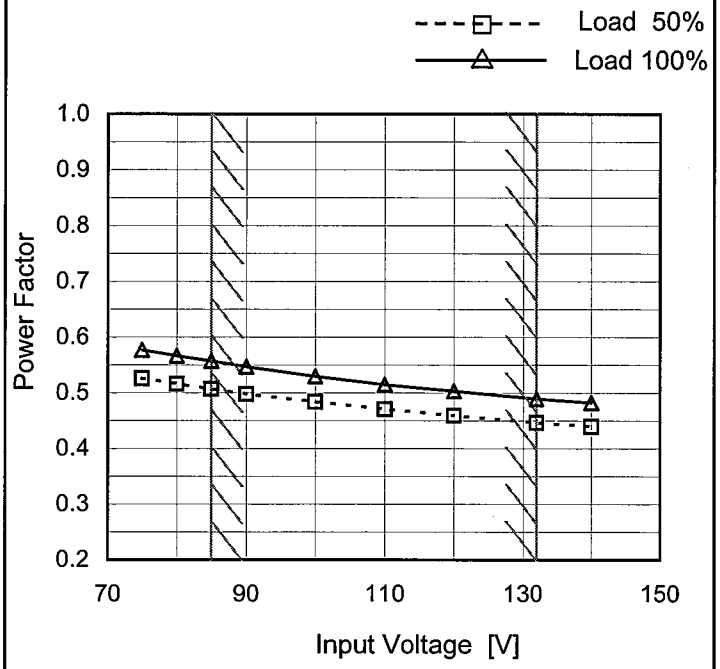
Model	MMC100B-3
Item	Power Factor (by Input Voltage)
Object	———————————

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

Input Voltage [V]	Power Factor	
	Load 50%	Load 100%
75	0.526	0.577
80	0.516	0.566
85	0.507	0.557
90	0.498	0.547
100	0.484	0.530
110	0.471	0.515
120	0.459	0.503
132	0.447	0.489
140	0.440	0.483

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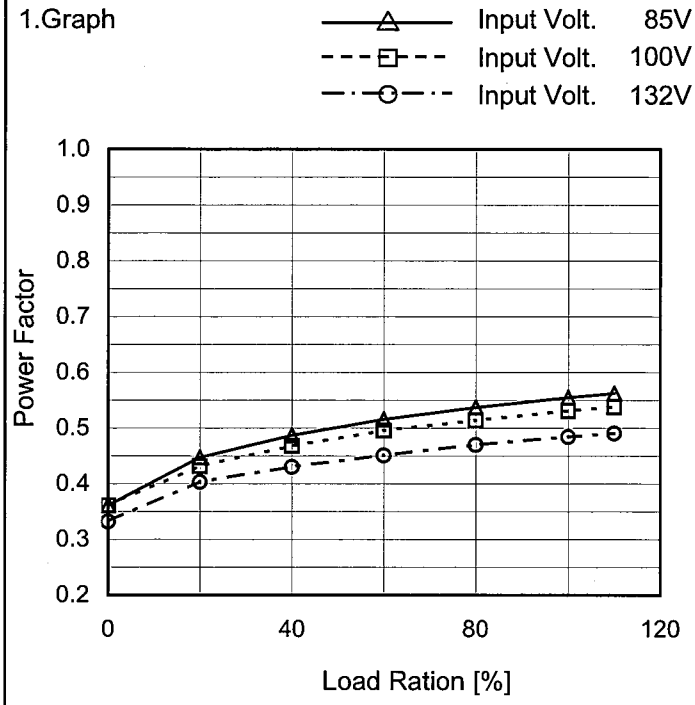
Model	MMC100B-3
Item	Power Factor (by Load Current)
Object	———————

Temperature 25°C
Testing Circuitry Figure A

1.Graph



2.Values

Load Ration [%]	Power Factor		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0	0.361	0.361	0.332
20	0.448	0.431	0.403
40	0.488	0.468	0.431
60	0.516	0.495	0.451
80	0.537	0.514	0.470
100	0.555	0.531	0.485
110	0.563	0.538	0.491
--	-	-	-
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--	-	-	-
--	-	-	-

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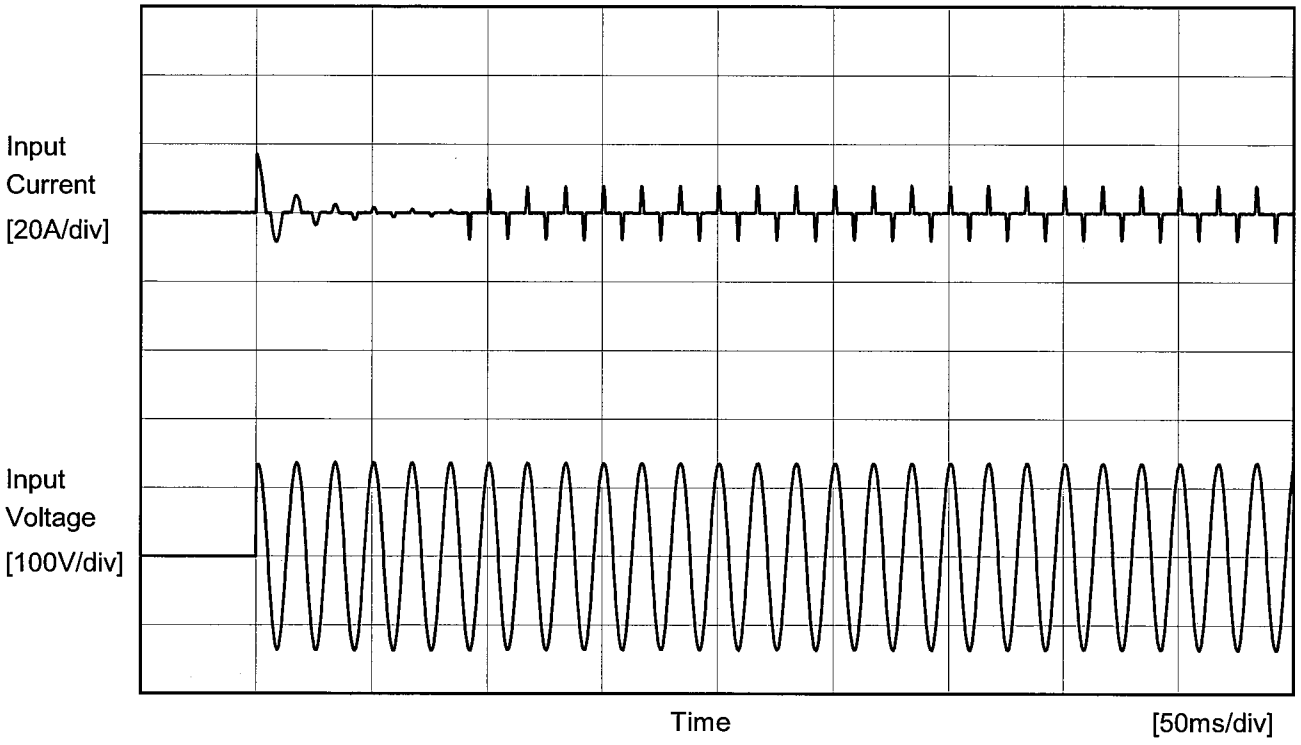
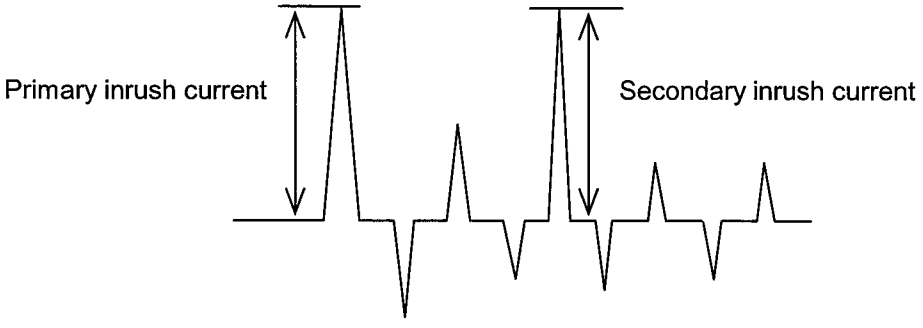
Model	MMC100B-3
Item	Inrush Current
Object	————————

Temperature 25°C
Testing Circuitry Figure A



Input Voltage	100 V
Frequency	60 Hz
Load	100 %
Primary inrush current	17.2 A
Secondary inrush current	8.1 A



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Model	MMC100B-3	
Item	Leakage Current	Temperature 25°C Testing Circuitry Figure B
Object	———————————	

1.Results

Standards	Leakage Current [mA]		
	Input Volt. 85 [V]	Input Volt. 100 [V]	Input Volt. 132 [V]
(A)DEN-AN	0.15	0.18	0.22
(B)IEC60950-1	0.15	0.19	0.25

Standards	Leakage Current [mA]		
	Input Volt. 170 [V]	Input Volt. 230 [V]	Input Volt. 264 [V]
(B)IEC60950-1	-	-	-

2.Condition

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

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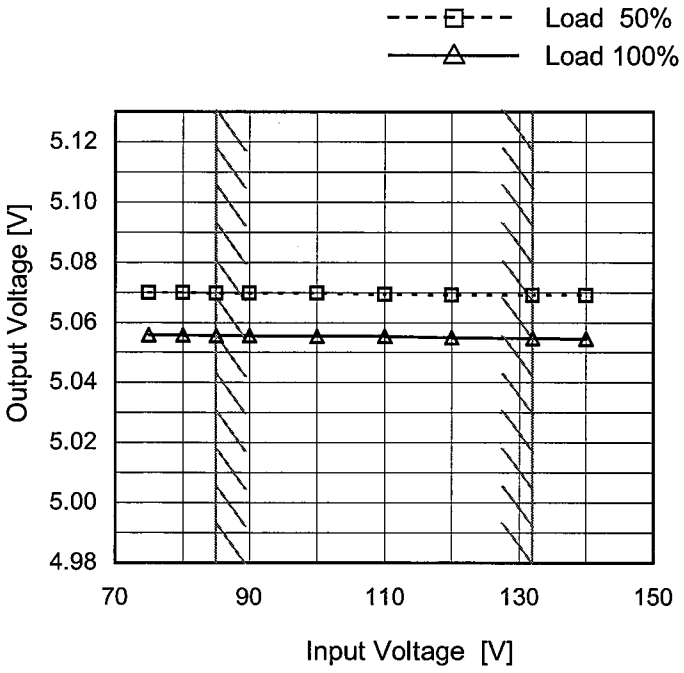
Model	MMC100B-3
Item	Line Regulation
Object	+5V13A

Temperature 25°C
Testing Circuitry Figure A

1.Graph

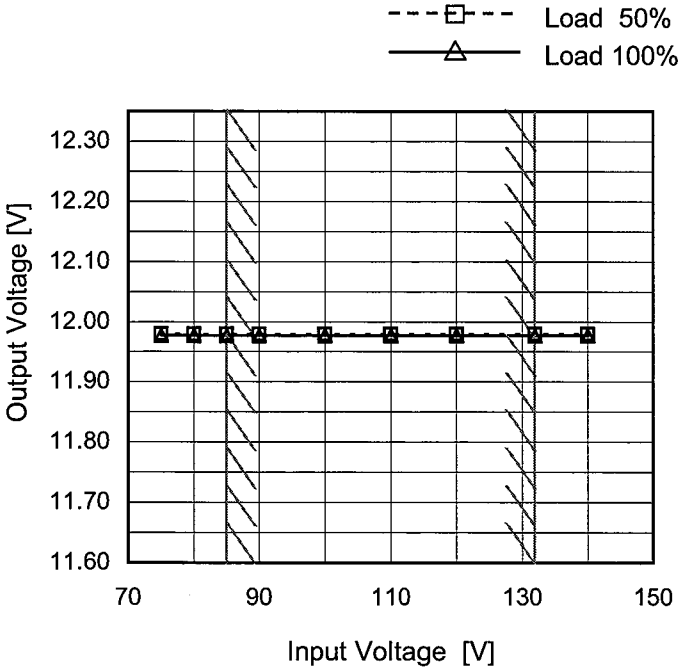


2.Values

Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
75	5.070	5.056
80	5.070	5.056
85	5.070	5.056
90	5.070	5.056
100	5.070	5.056
110	5.069	5.056
120	5.069	5.055
132	5.069	5.055
140	5.069	5.055

Object +12V2A

1.Graph



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

2.Values

Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
75	11.979	11.977
80	11.979	11.977
85	11.979	11.977
90	11.979	11.977
100	11.979	11.977
110	11.979	11.977
120	11.979	11.977
132	11.979	11.977
140	11.979	11.977

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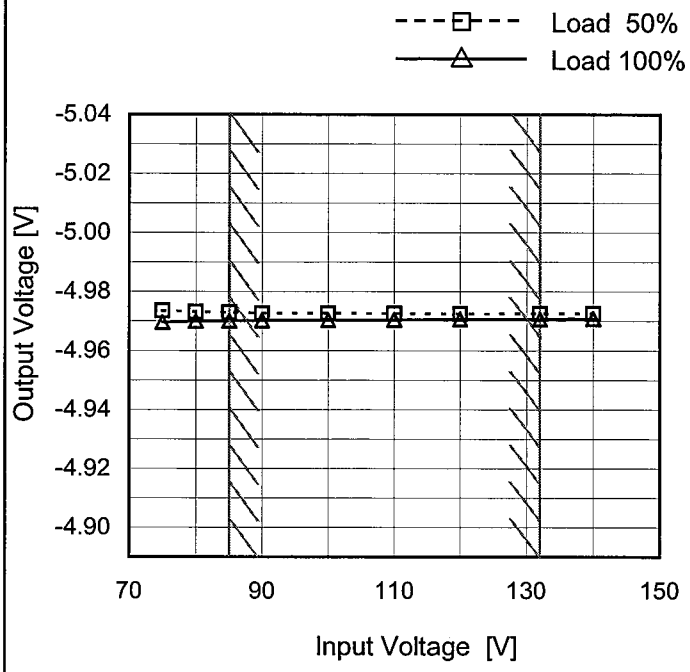
Model	MMC100B-3
Item	Line Regulation
Object	-5V1A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
75	-4.974	-4.970
80	-4.973	-4.970
85	-4.973	-4.970
90	-4.973	-4.970
100	-4.973	-4.970
110	-4.973	-4.971
120	-4.972	-4.971
132	-4.973	-4.971
140	-4.973	-4.971

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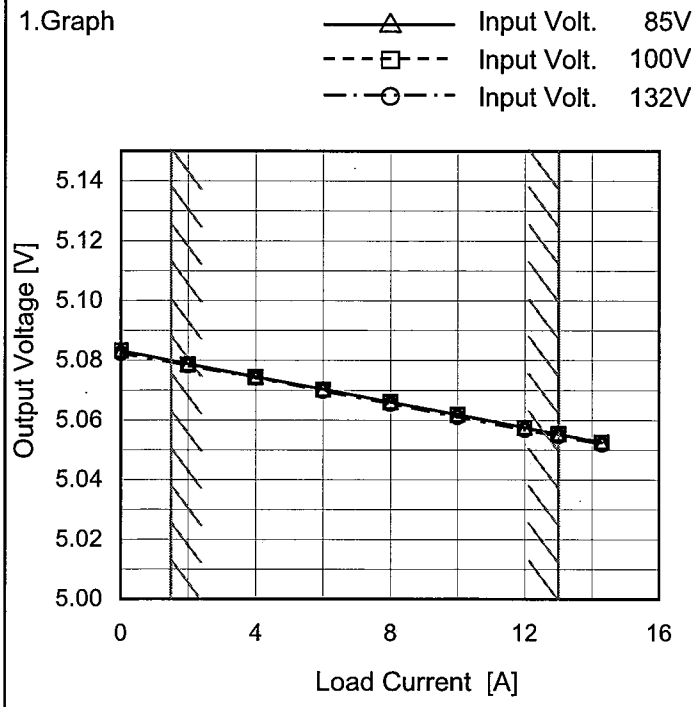
Model	MMC100B-3
Item	Load Regulation
Object	+5V13A

Temperature 25°C
Testing Circuitry Figure A

1.Graph

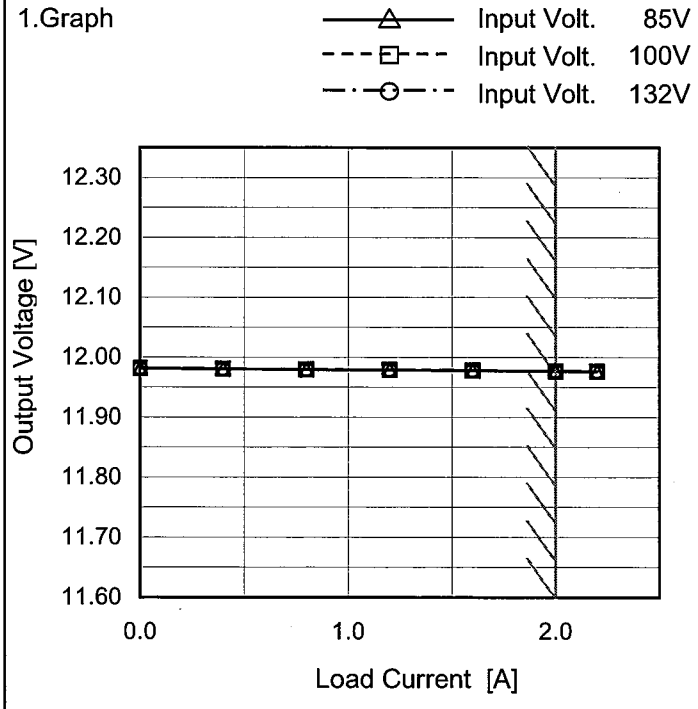


2.Values

Load Current [A]	Output Voltage [V]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0.0	5.083	5.083	5.082
2.0	5.079	5.079	5.078
4.0	5.075	5.074	5.074
6.0	5.070	5.070	5.070
8.0	5.066	5.066	5.065
10.0	5.062	5.062	5.061
12.0	5.058	5.057	5.057
13.0	5.055	5.055	5.055
14.3	5.053	5.053	5.052
--	-	-	-
--	-	-	-

Object	+12V2A

1.Graph



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

2.Values

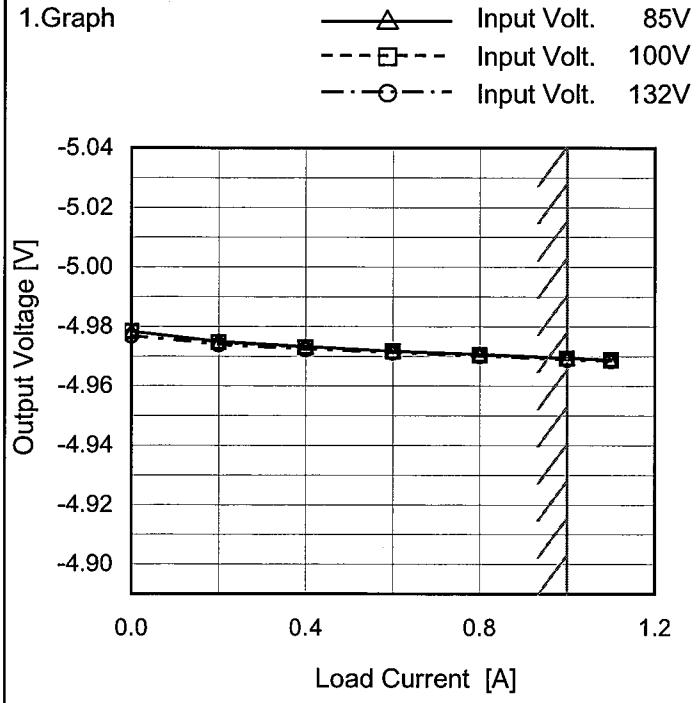
Load Current [A]	Output Voltage [V]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0.0	11.982	11.982	11.982
0.4	11.981	11.981	11.981
0.8	11.980	11.980	11.980
1.2	11.979	11.979	11.979
1.6	11.978	11.978	11.978
2.0	11.977	11.977	11.977
2.2	11.976	11.976	11.976
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

COSEL

Model	MMC100B-3
Item	Load Regulation
Object	-5V1A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

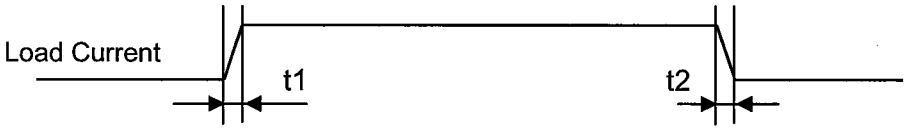
Load Current [A]	Output Voltage [V]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0.0	-4.978	-4.978	-4.977
0.2	-4.975	-4.975	-4.974
0.4	-4.973	-4.973	-4.972
0.6	-4.972	-4.972	-4.971
0.8	-4.971	-4.970	-4.970
1.0	-4.970	-4.969	-4.969
1.1	-4.969	-4.969	-4.969
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

COSEL

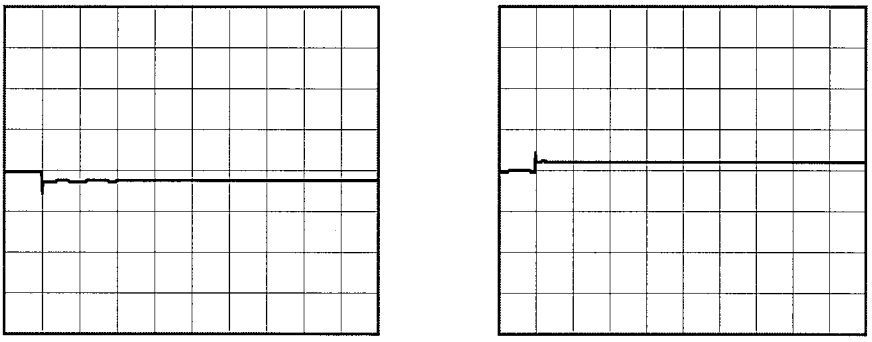
Model	MMC100B-3		
Item	Dynamic Load Response	Temperature Testing Circuitry	25˚C Figure A
Object	+5V13A		

Input Volt. 100 V
Cycle 200 ms

Response. t1=t2=50us. Typ

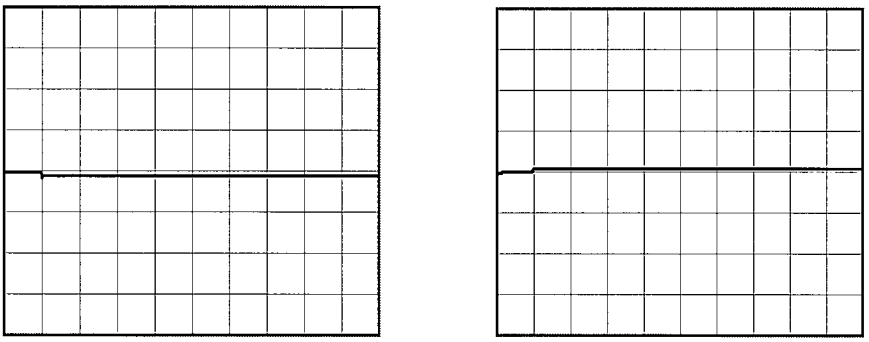


Min. Load 11.54% (1.5A) ←→
Load 100% (13A)



100 mV/div
10 ms/div
10 ms/div

Min. Load 11.54% (1.5A) ←→
Load 50% (6.5A)



100 mV/div
10 ms/div
10 ms/div

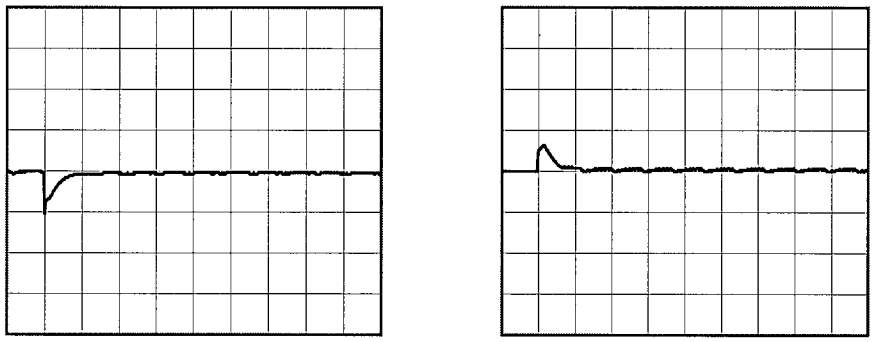
COSEL

Model	MMC100B-3		
Item	Dynamic Load Response	Temperature	25˚C
		Testing Circuitry	Figure A
Object	+12V2A		

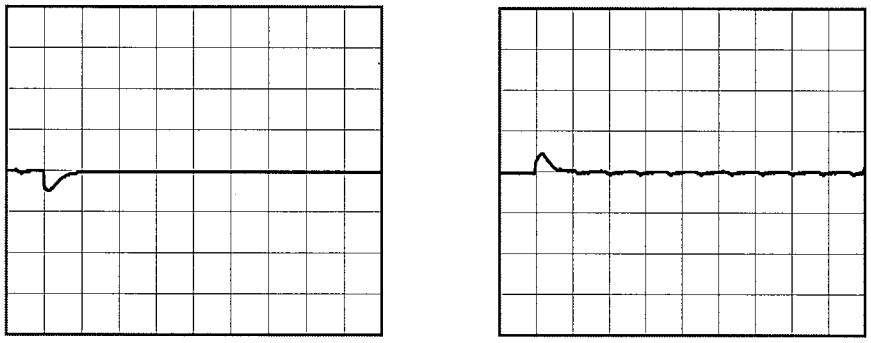
Input Volt. 100 V
Cycle 200 ms

Response. t1=t2=50us. Typ

Min. Load 0% (0A) ⟷
Load 100% (2A)



Min. Load 0% (0A) ⟷
Load 50% (1A)



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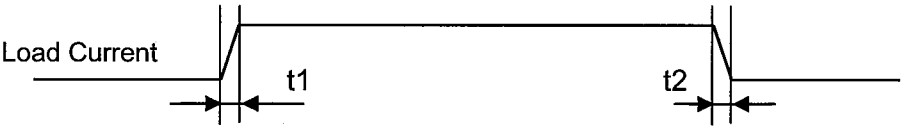
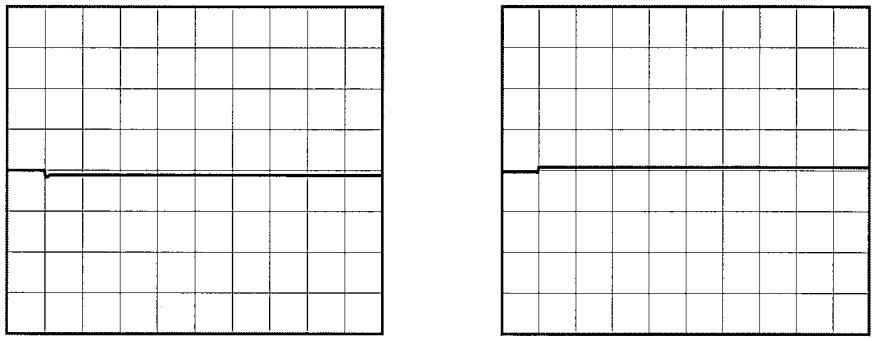
Model	MMC100B-3		
Item	Dynamic Load Response	Temperature	25˚C
		Testing Circuitry	Figure A
Object	-5V1A		

Input Volt. 100 V
Cycle 200 ms

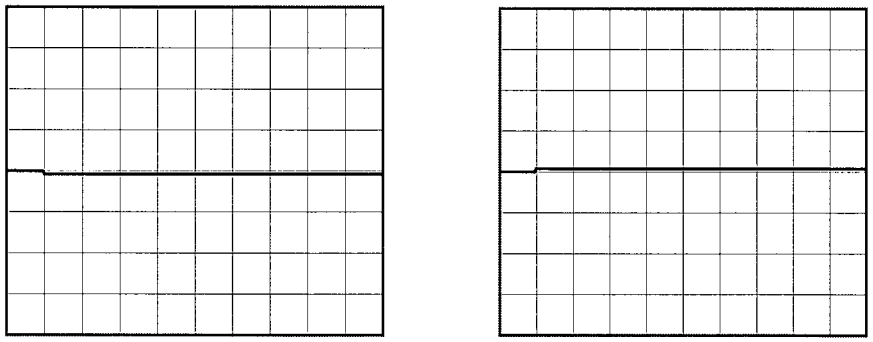
Response. t1=t2=50us. Typ



Min. Load 0% (0A) ⟷
Load 100% (1A)



Min. Load 0% (0A) ⟷
Load 50% (0.5A)



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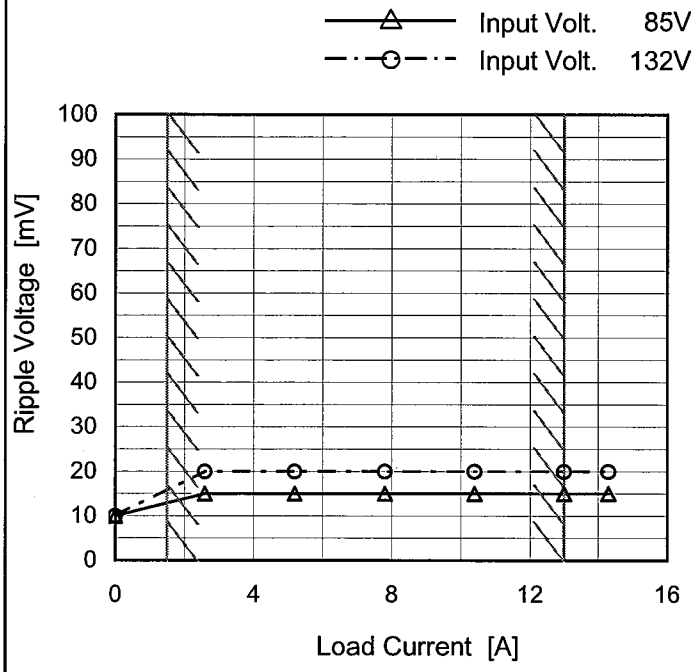
Model	MMC100B-3
Item	Ripple Voltage (by Load Current)
Object	+5V13A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Measured by 20 MHz Oscilloscope.
Ripple Voltage is shown as p-p in the figure below.
Note: Slanted line shows the range of the rated load current.

T1: Due to AC Input Line
T2: Due to Switching

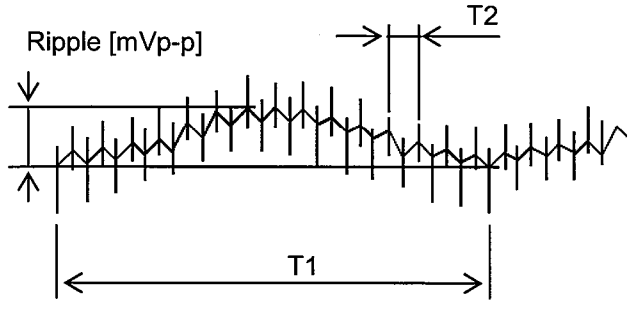


Fig. Complex Ripple Wave Form

2.Values

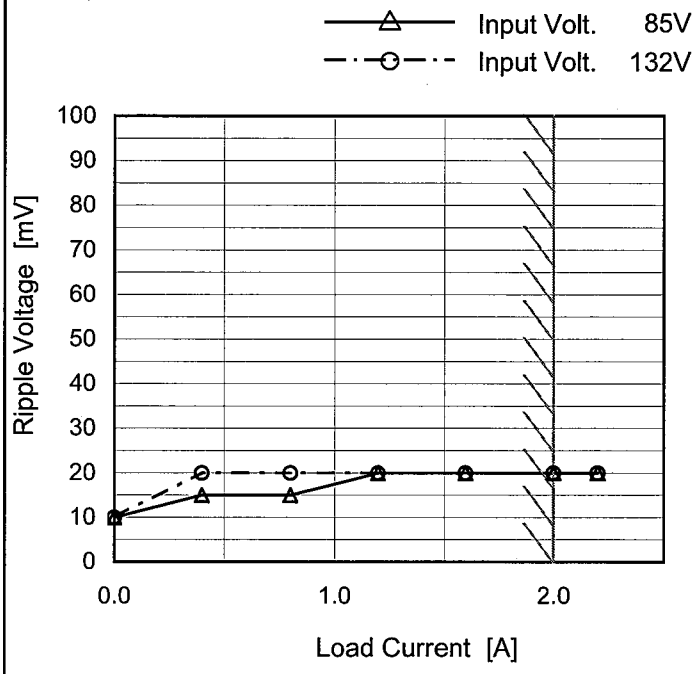
Load Current [A]	Ripple Voltage [mV]	
	Input Volt. 85 [V]	Input Volt. 132 [V]
0.0	10	10
2.6	15	20
5.2	15	20
7.8	15	20
10.4	15	20
13.0	15	20
14.3	15	20
--	-	-
--	-	-
--	-	-
--	-	-

COSEL

Model	MMC100B-3
Item	Ripple Voltage (by Load Current)
Object	+12V2A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Measured by 20 MHz Oscilloscope.
Ripple Voltage is shown as p-p in the figure below.
Note: Slanted line shows the range of the rated load current.

T1: Due to AC Input Line
T2: Due to Switching

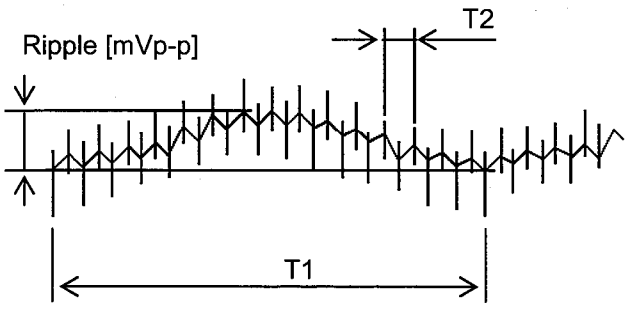


Fig. Complex Ripple Wave Form

2.Values

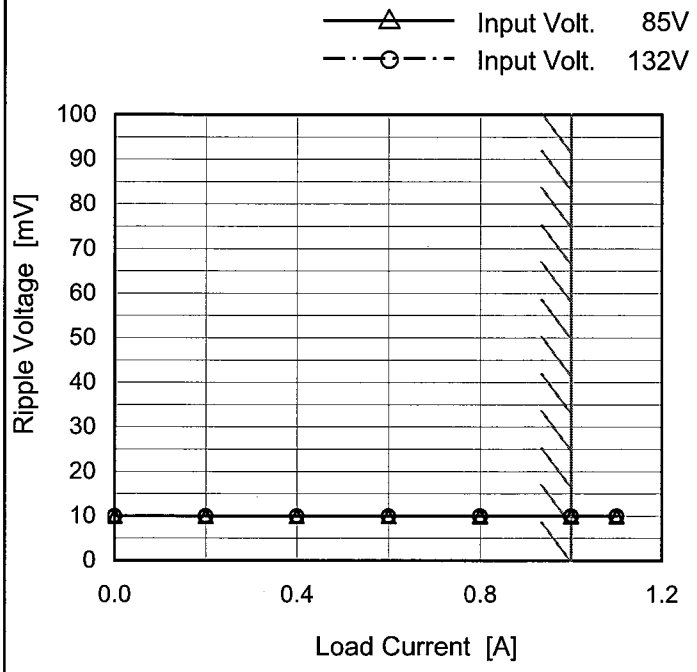
Load Current [A]	Ripple Voltage [mV]	
	Input Volt. 85 [V]	Input Volt. 132 [V]
0.0	10	10
0.4	15	20
0.8	15	20
1.2	20	20
1.6	20	20
2.0	20	20
2.2	20	20
--	-	-
--	-	-
--	-	-
--	-	-

COSEL

Model	MMC100B-3
Item	Ripple Voltage (by Load Current)
Object	-5V1A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Measured by 20 MHz Oscilloscope.
Ripple Voltage is shown as p-p in the figure below.
Note: Slanted line shows the range of the rated load current.

T1: Due to AC Input Line
T2: Due to Switching

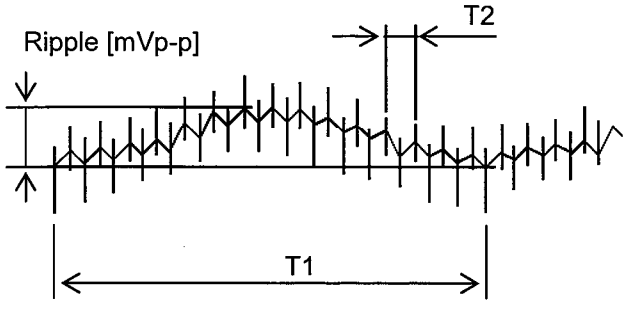


Fig. Complex Ripple Wave Form

2.Values

Load Current [A]	Ripple Voltage [mV]	
	Input Volt. 85 [V]	Input Volt. 132 [V]
0.0	10	10
0.2	10	10
0.4	10	10
0.6	10	10
0.8	10	10
1.0	10	10
1.1	10	10
--	-	-
--	-	-
--	-	-
--	-	-

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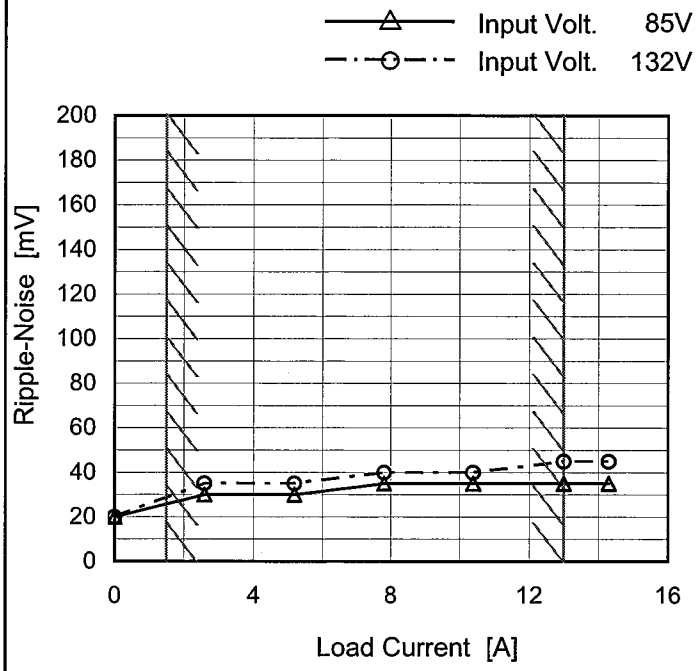
Model	MMC100B-3
Item	Ripple-Noise
Object	+5V13A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Measured by 20 MHz Oscilloscope.
Ripple-Noise is shown as p-p in the figure below.
Note: Slanted line shows the range of the rated load current.

2.Values

Load Current [A]	Ripple-Noise [mV]	
	Input Volt. 85 [V]	Input Volt. 132 [V]
0.0	20	20
2.6	30	35
5.2	30	35
7.8	35	40
10.4	35	40
13.0	35	45
14.3	35	45
--	-	-
--	-	-
--	-	-
--	-	-

T1: Due to AC Input Line
T2: Due to Switching

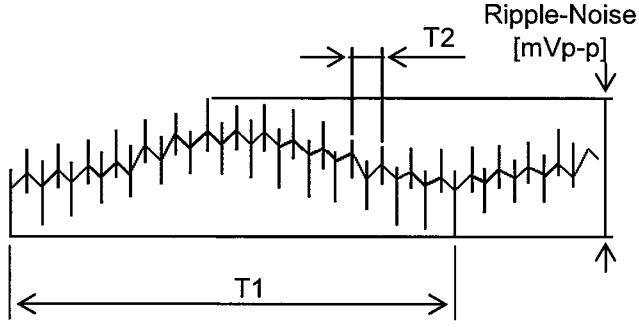


Fig. Complex Ripple Wave Form

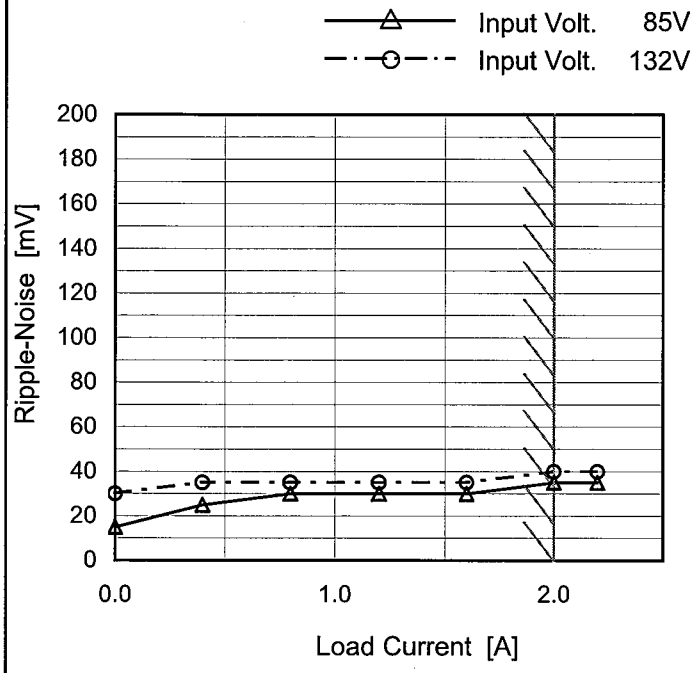
BC-10558

COSEL

Model	MMC100B-3
Item	Ripple-Noise
Object	+12V2A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Measured by 20 MHz Oscilloscope.
Ripple-Noise is shown as p-p in the figure below.
Note: Slanted line shows the range of the rated load current.

2.Values

Load Current [A]	Ripple-Noise [mV]	
	Input Volt. 85 [V]	Input Volt. 132 [V]
0.0	15	30
0.4	25	35
0.8	30	35
1.2	30	35
1.6	30	35
2.0	35	40
2.2	35	40
--	-	-
--	-	-
--	-	-
--	-	-

T1: Due to AC Input Line
T2: Due to Switching

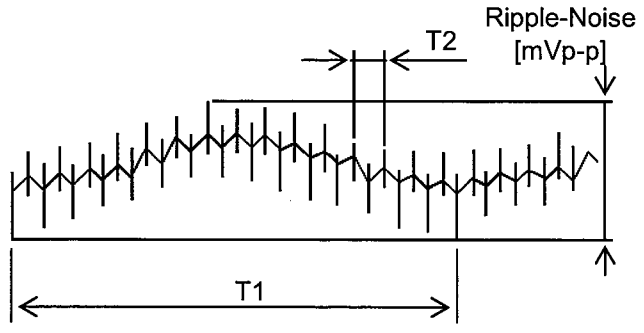


Fig. Complex Ripple Wave Form

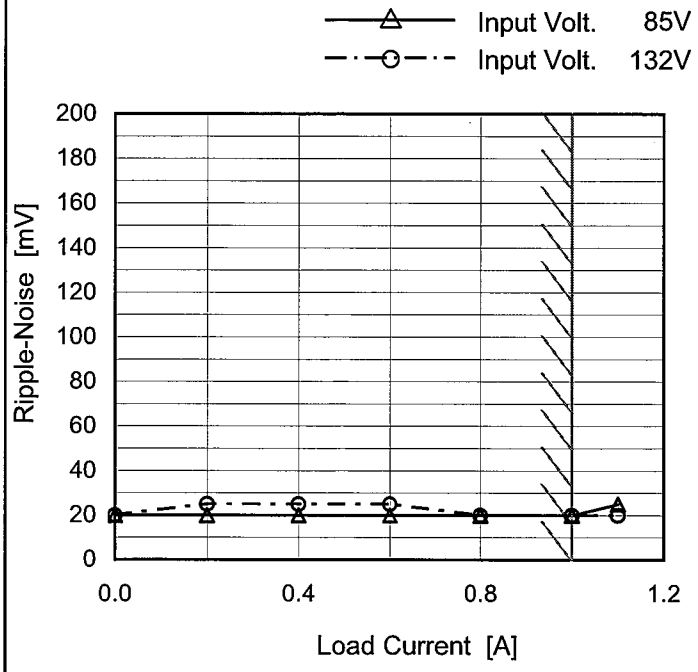
BC-10558

COSEL

Model	MMC100B-3
Item	Ripple-Noise
Object	-5V1A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Measured by 20 MHz Oscilloscope.
Ripple-Noise is shown as p-p in the figure below.
Note: Slanted line shows the range of the rated load current.

2.Values

Load Current [A]	Ripple-Noise [mV]	
	Input Volt. 85 [V]	Input Volt. 132 [V]
0.0	20	20
0.2	20	25
0.4	20	25
0.6	20	25
0.8	20	20
1.0	20	20
1.1	25	20
--	-	-
--	-	-
--	-	-
--	-	-

T1: Due to AC Input Line
T2: Due to Switching

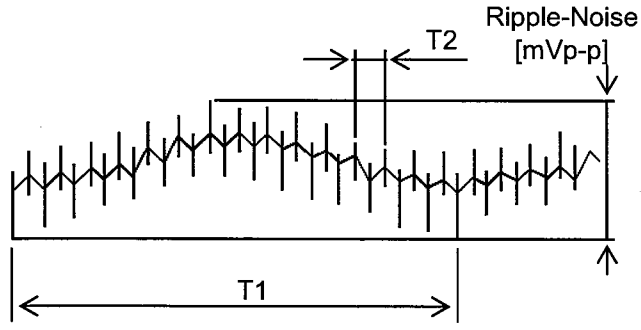


Fig. Complex Ripple Wave Form

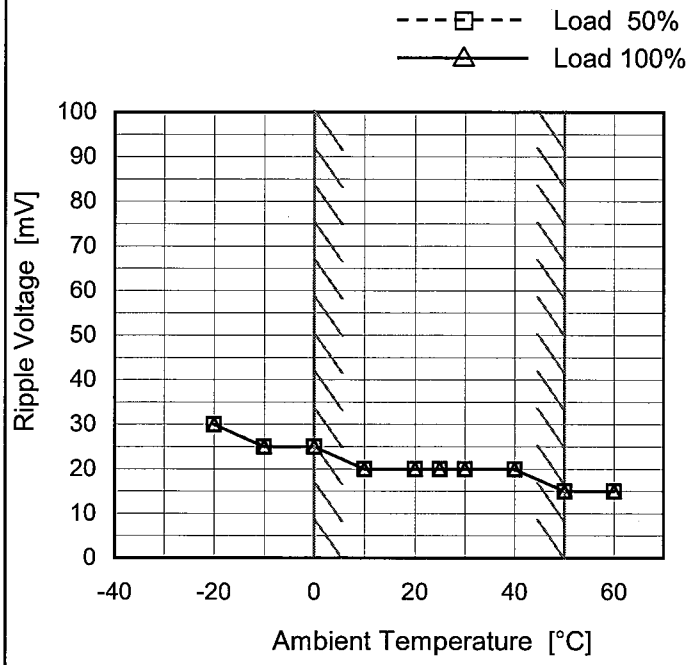
BC-10558

COSEL

Model	MMC100B-3
Item	Ripple Voltage (by Ambient Temp.)
Object	+5V13A

Testing Circuitry Figure A

1.Graph



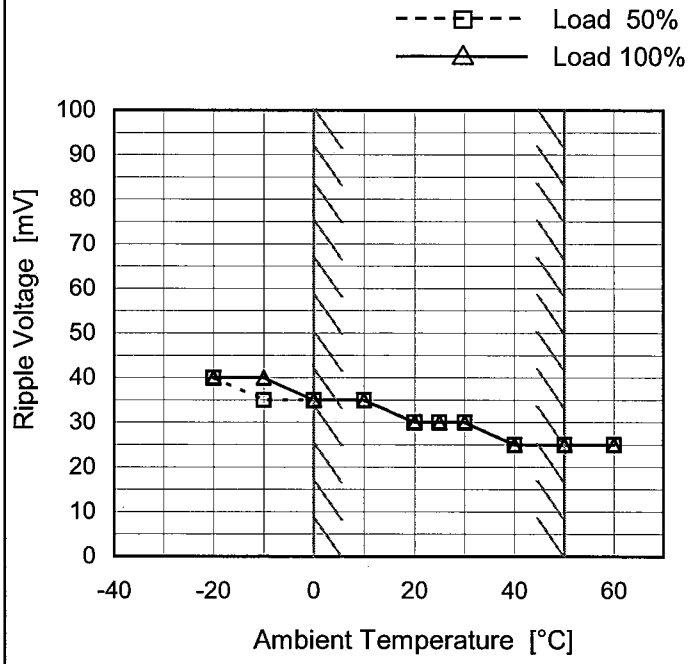
Input Volt. 100V

2.Values

Ambient Temperature [°C]	Ripple Voltage [mV]	
	Load 50%	Load 100%
-20	30	30
-10	25	25
0	25	25
10	20	20
20	20	20
25	20	20
30	20	20
40	20	20
50	15	15
60	15	15
--	-	-

Object	+12V2A

1.Graph



Input Volt. 100V

Measured by 20 MHz Oscilloscope.

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

2.Values

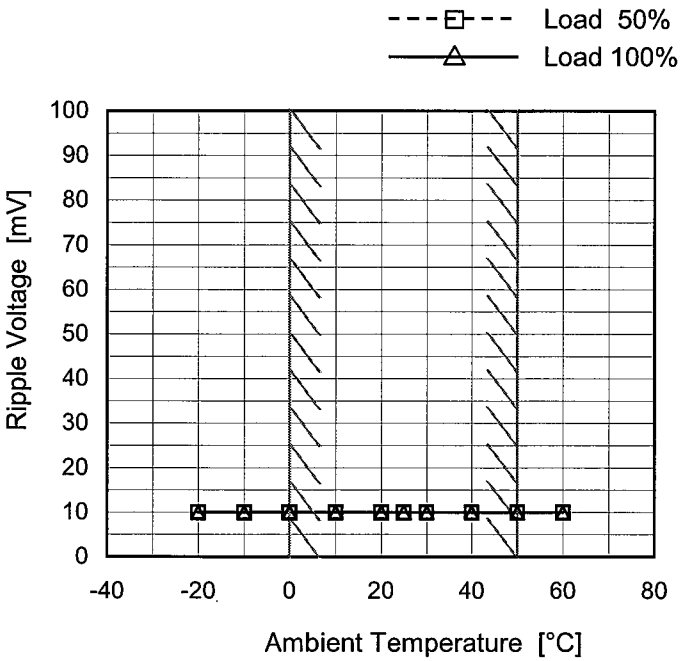
Ambient Temperature [°C]	Ripple Voltage [mV]	
	Load 50%	Load 100%
-20	40	40
-10	35	40
0	35	35
10	35	35
20	30	30
25	30	30
30	30	30
40	25	25
50	25	25
60	25	25
--	-	-

COSEL

Model	MMC100B-3
Item	Ripple Voltage (by Ambient Temp.)
Object	-5V1A

Testing Circuitry Figure A

1.Graph



Input Volt. 100V

Measured by 20 MHz Oscilloscope.

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

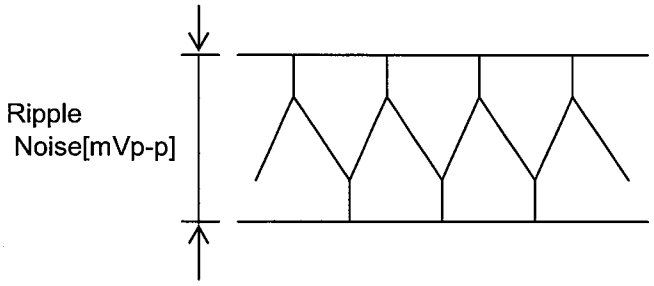


Fig.Complex Ripple Noise Wave Form

2.Values

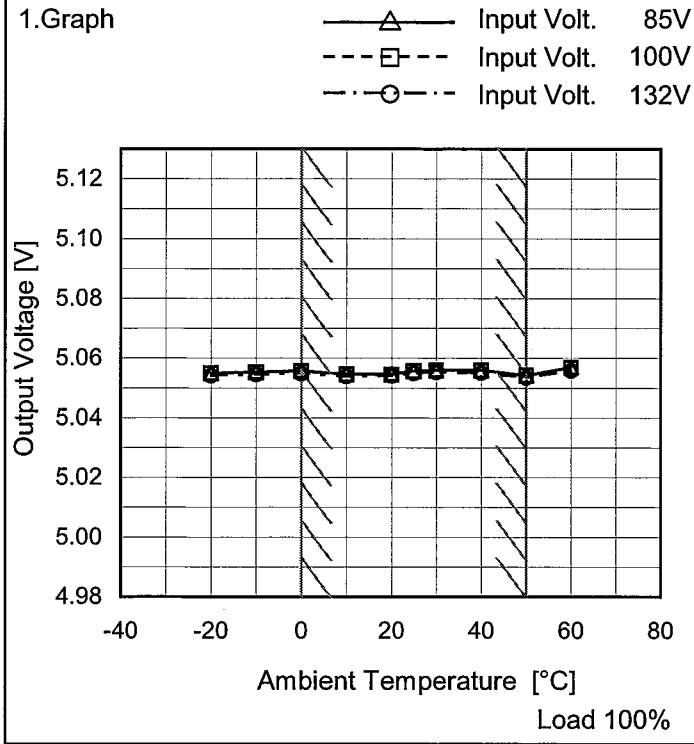
Ambient Temperature [°C]	Ripple Voltage [mV]	
	Load 50%	Load 100%
-20	10	10
-10	10	10
0	10	10
10	10	10
20	10	10
25	10	10
30	10	10
40	10	10
50	10	10
60	10	10
---	-	-

COSEL

Model	MMC100B-3
Item	Ambient Temperature Drift
Object	+5V13A

Testing Circuitry Figure A

1.Graph



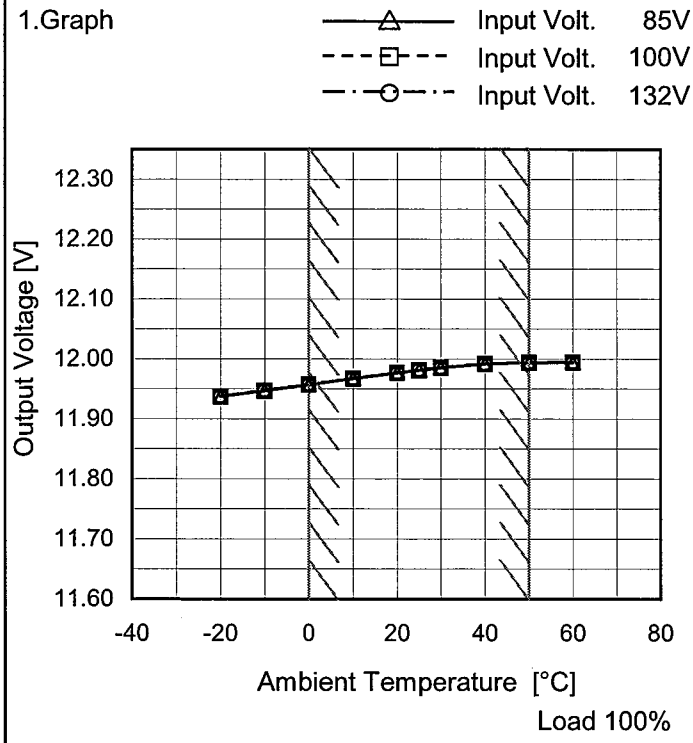
Load 100%

2.Values

Ambient Temperature [°C]	Output Voltage [V] Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
-20	5.055	5.055	5.054
-10	5.055	5.055	5.055
0	5.056	5.056	5.055
10	5.055	5.055	5.054
20	5.055	5.055	5.054
25	5.056	5.056	5.055
30	5.056	5.056	5.055
40	5.056	5.056	5.055
50	5.054	5.054	5.054
60	5.057	5.057	5.056
--	-	-	-

Object +12V2A

1.Graph



Load 100%

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

2.Values

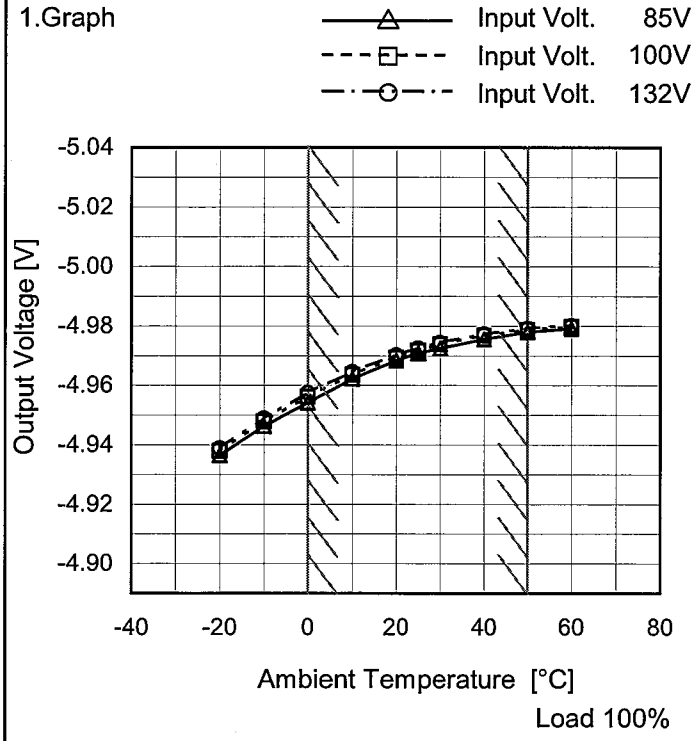
Ambient Temperature [°C]	Output Voltage [V] Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
-20	11.937	11.937	11.937
-10	11.947	11.947	11.947
0	11.957	11.957	11.957
10	11.967	11.967	11.967
20	11.977	11.977	11.977
25	11.981	11.981	11.982
30	11.986	11.986	11.986
40	11.992	11.992	11.992
50	11.994	11.994	11.994
60	11.994	11.994	11.994
--	-	-	-

COSEL

Model	MMC100B-3
Item	Ambient Temperature Drift
Object	-5V1A

Testing Circuitry Figure A

1.Graph



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

2.Values

Ambient Temperature [°C]	Output Voltage [V]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
-20	-4.937	-4.938	-4.939
-10	-4.946	-4.948	-4.949
0	-4.954	-4.956	-4.958
10	-4.962	-4.964	-4.965
20	-4.968	-4.969	-4.970
25	-4.971	-4.972	-4.973
30	-4.973	-4.974	-4.975
40	-4.976	-4.977	-4.977
50	-4.978	-4.979	-4.979
60	-4.979	-4.980	-4.980
--	-	-	-

COSEL

Model	MMC100B-3	
Item	Output Voltage Accuracy	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 : 0 - 50°C
Input Voltage : 85 - 132V
Load Current (AVR 1) : 1.5 - 13A (AVR 2) : 0 - 2A (AVR 3) : 0 - 1A

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

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

2.Values

Object	+5V13A					
Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	40	132	1.5	5.082	±14	±0.3
Minimum Voltage	50	132	13	5.054		

Object	+12V2A					
Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	50	85	0	11.999	±22	±0.2
Minimum Voltage	0	85	2	11.955		

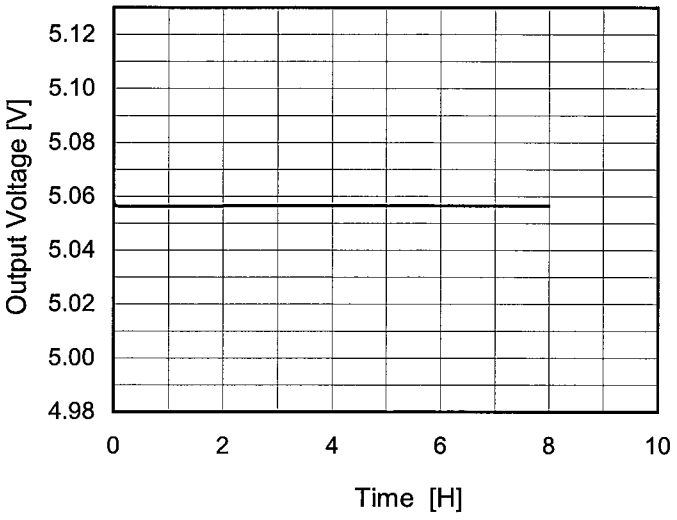
Object	-5V1A					
Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	50	85	0	-4.988	±20	±0.4
Minimum Voltage	0	85	1	-4.948		

COSEL

Model	MMC100B-3
Item	Time Lapse Drift
Object	+5V13A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



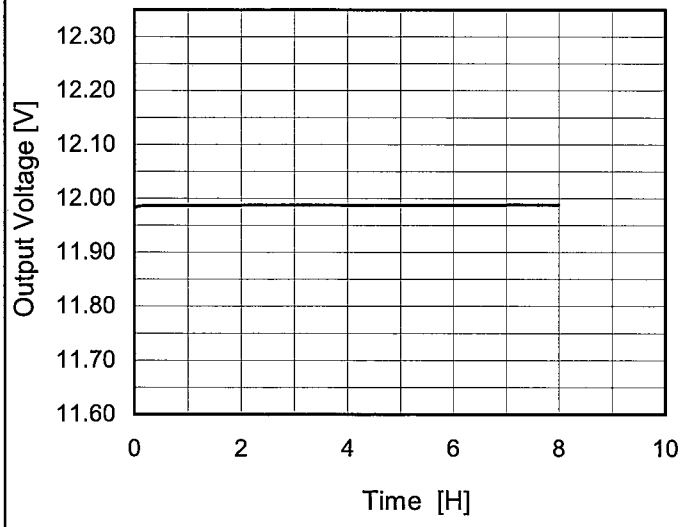
Input Volt. 100V
Load 100%

2.Values

Time since start [H]	Output Voltage [V]
0.0	5.058
0.5	5.056
1.0	5.056
2.0	5.057
3.0	5.057
4.0	5.057
5.0	5.057
6.0	5.057
7.0	5.057
8.0	5.057

Object	+12V2A

1.Graph



Input Volt. 100V
Load 100%

2.Values

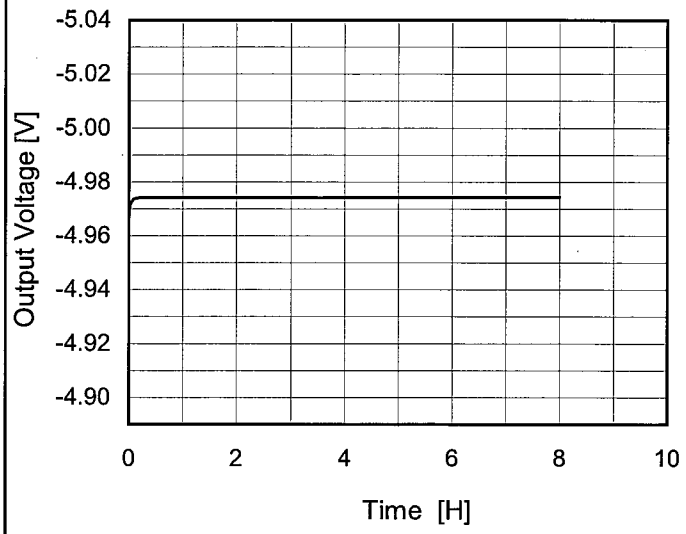
Time since start [H]	Output Voltage [V]
0.0	11.982
0.5	11.987
1.0	11.987
2.0	11.987
3.0	11.987
4.0	11.987
5.0	11.988
6.0	11.988
7.0	11.988
8.0	11.988

COSEL

Model	MMC100B-3
Item	Time Lapse Drift
Object	-5V1A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Input Volt. 100V
Load 100%

2.Values

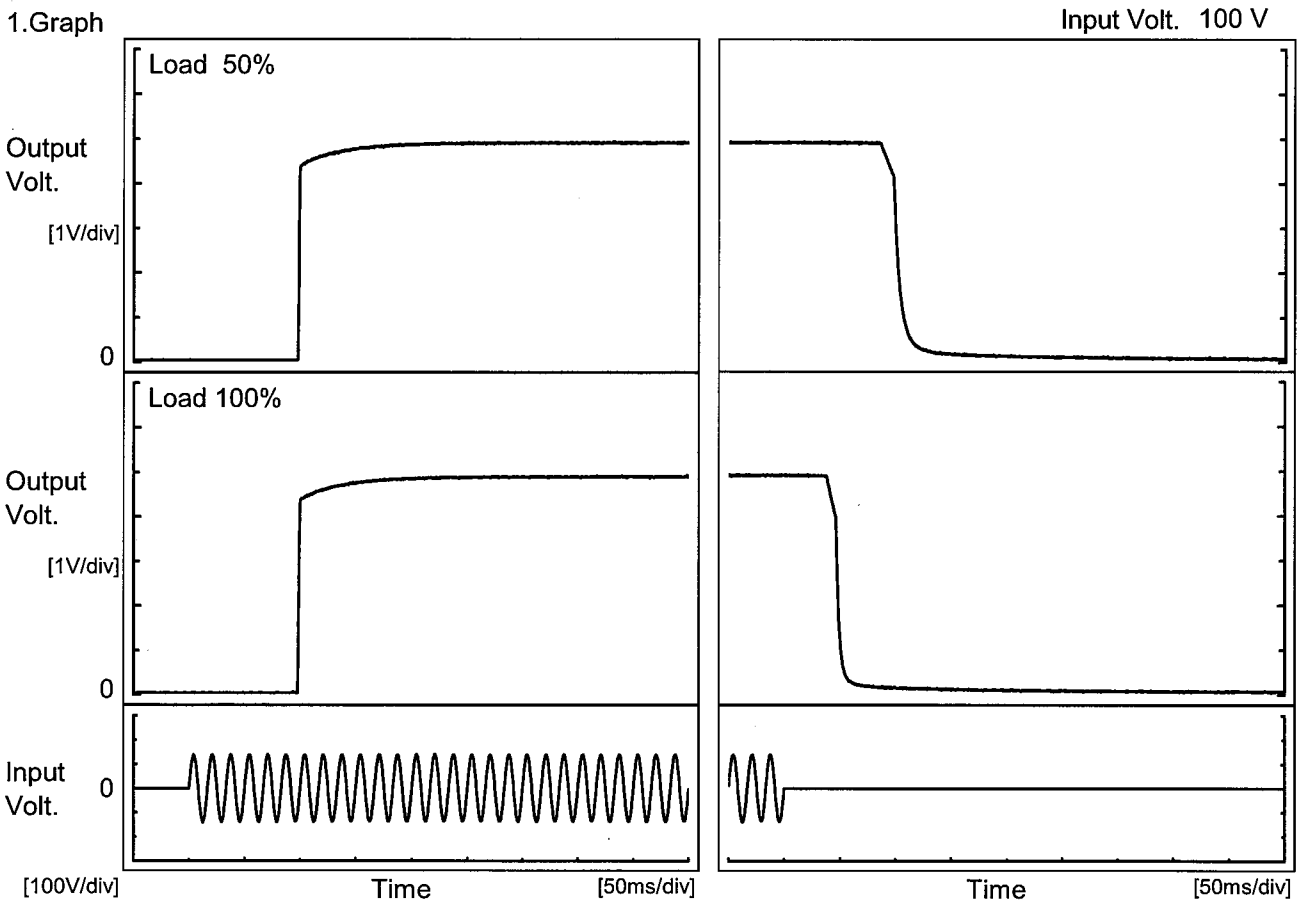
Time since start [H]	Output Voltage [V]
0.0	-4.967
0.5	-4.974
1.0	-4.974
2.0	-4.974
3.0	-4.974
4.0	-4.974
5.0	-4.974
6.0	-4.974
7.0	-4.974
8.0	-4.975

COSEL

Model	MMC100B-3
Item	Rise and Fall Time
Object	+5V13A

Temperature 25°C
Testing Circuitry Figure A

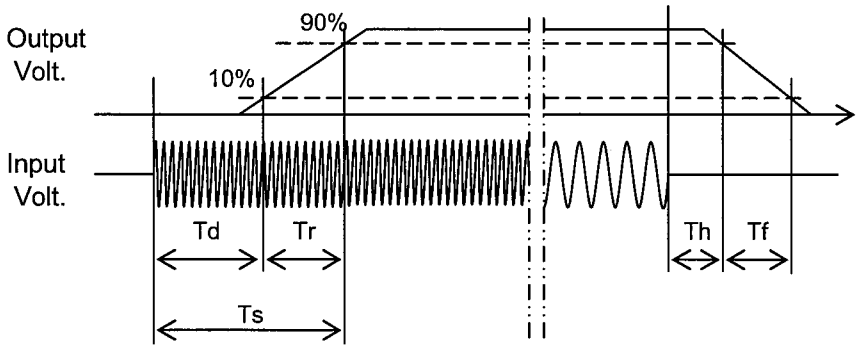
1.Graph



2.Values

[ms]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	98.3	11.5	109.8	91.5	21.5
100 %	98.3	14.3	112.6	40.8	12.8



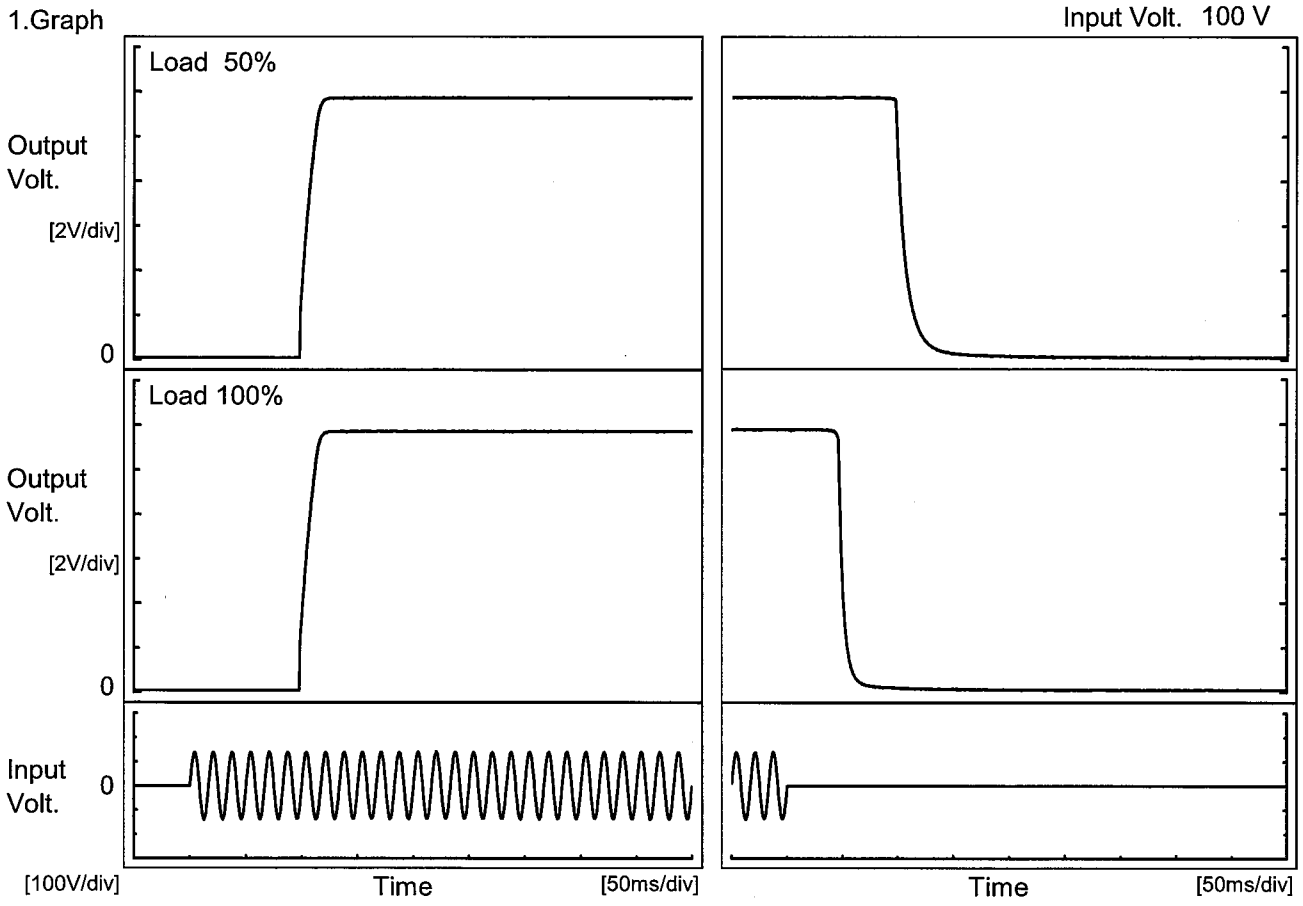
BC-10558

COSEL

Model	MMC100B-3
Item	Rise and Fall Time
Object	+12V2A

Temperature 25°C
Testing Circuitry Figure A

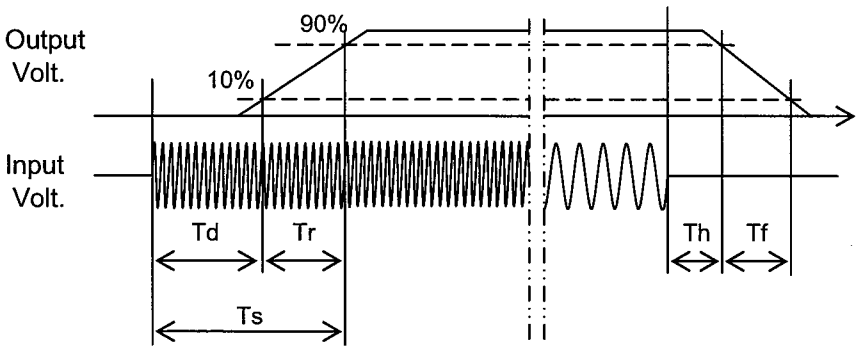
1.Graph



2.Values

[ms]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	98.3	15.8	114.1	98.5	20.5
100 %	98.3	15.5	113.8	46.5	10.5

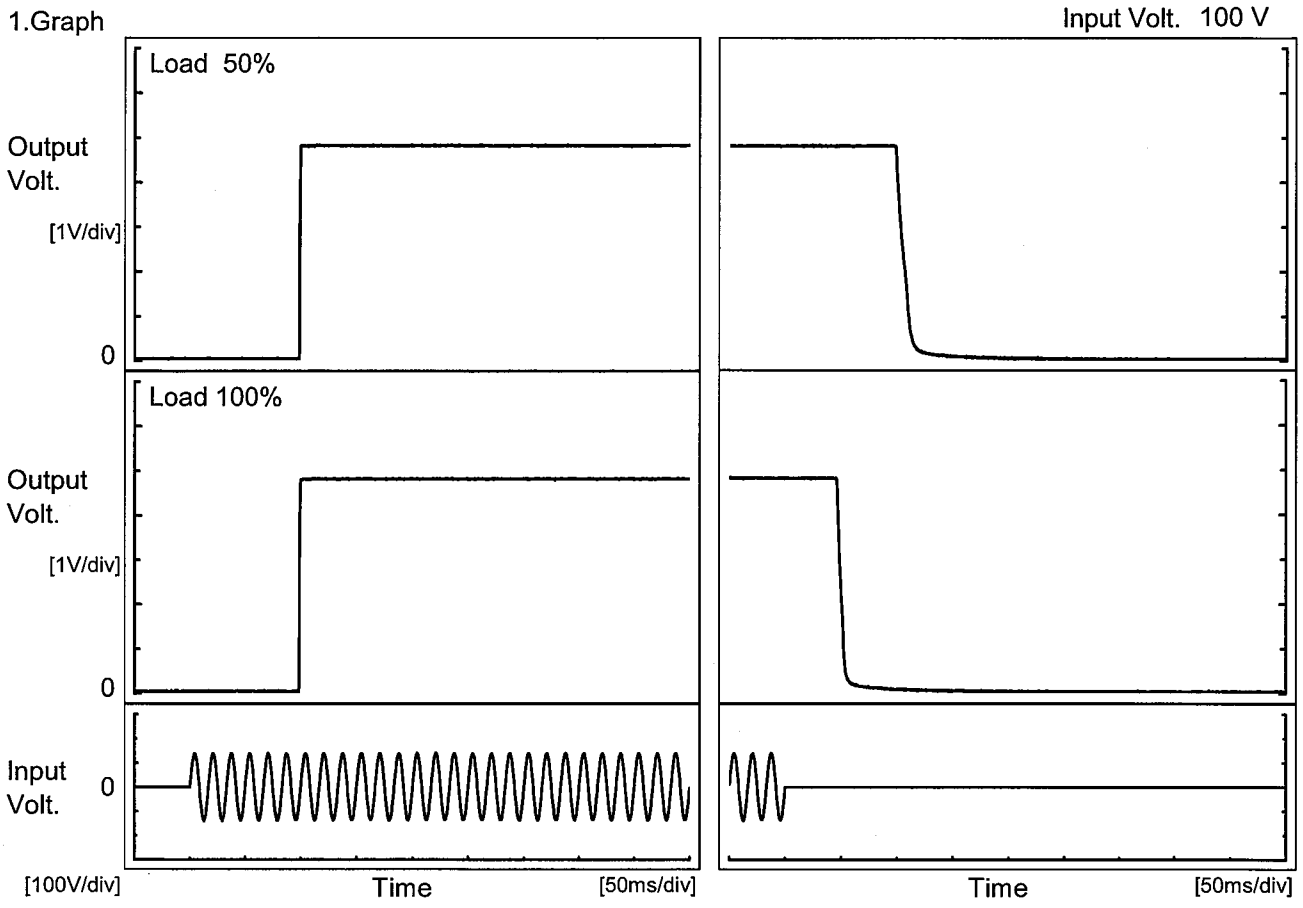


COSEL

Model	MMC100B-3
Item	Rise and Fall Time
Object	-5V1A

Temperature 25°C
Testing Circuitry Figure A

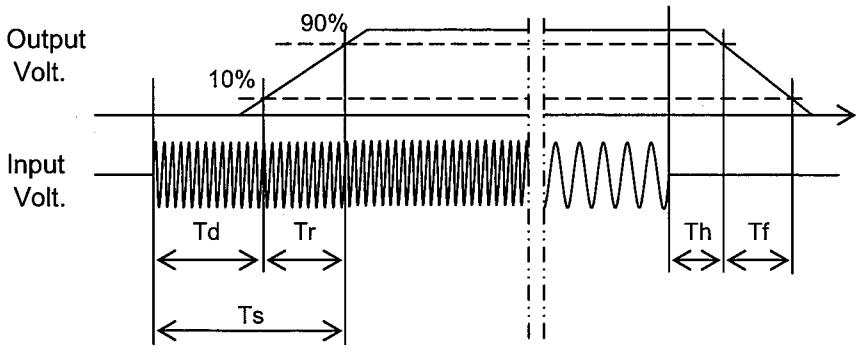
1.Graph



2.Values

[ms]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	98.8	1.0	99.8	99.0	13.5
100 %	98.8	1.0	99.8	46.8	7.0



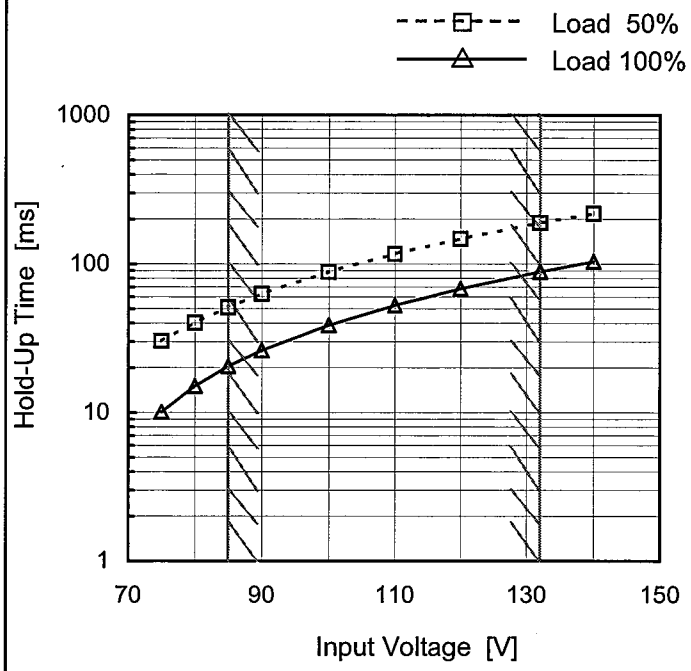
BC-10558

COSEL

Model	MMC100B-3
Item	Hold-Up Time
Object	+5V13A

Temperature 25°C
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.

2.Values

Input Voltage [V]	Hold-Up Time [ms]	
	Load 50%	Load 100%
75	30	10
80	40	15
85	51	21
90	63	26
100	88	39
110	116	53
120	147	68
132	189	89
140	218	104

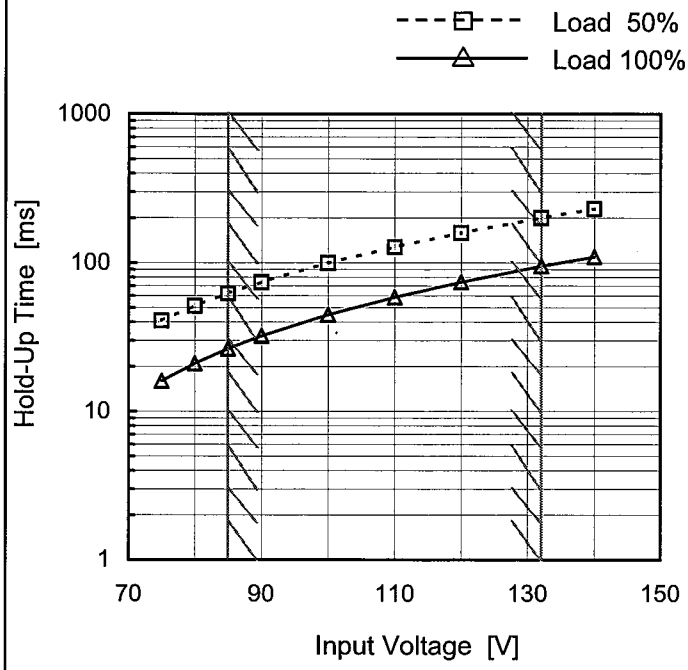
BC-10558

COSEL

Model	MMC100B-3
Item	Hold-Up Time
Object	+12V2A

Temperature 25°C
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.

2.Values

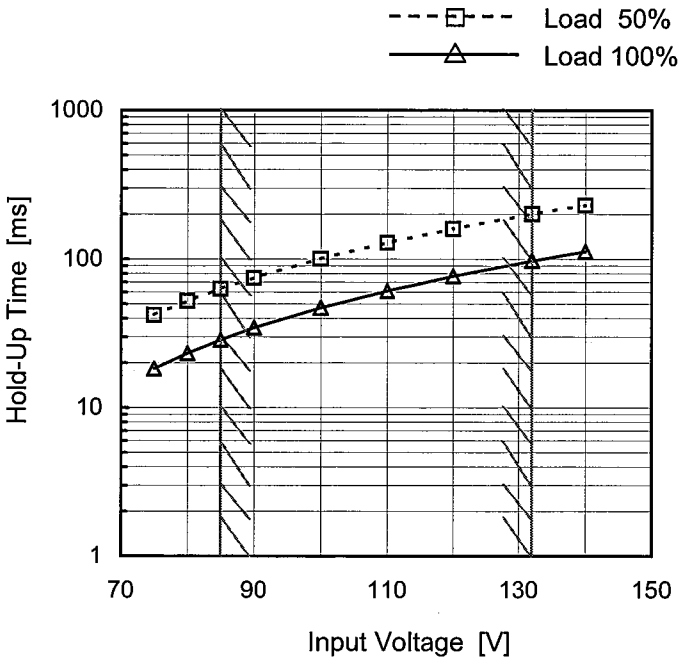
Input Voltage [V]	Hold-Up Time [ms]	
	Load 50%	Load 100%
75	41	16
80	51	21
85	62	26
90	74	32
100	99	45
110	128	59
120	159	74
132	200	95
140	230	110

COSEL

Model	MMC100B-3
Item	Hold-Up Time
Object	-5V1A

Temperature 25°C
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.

2.Values

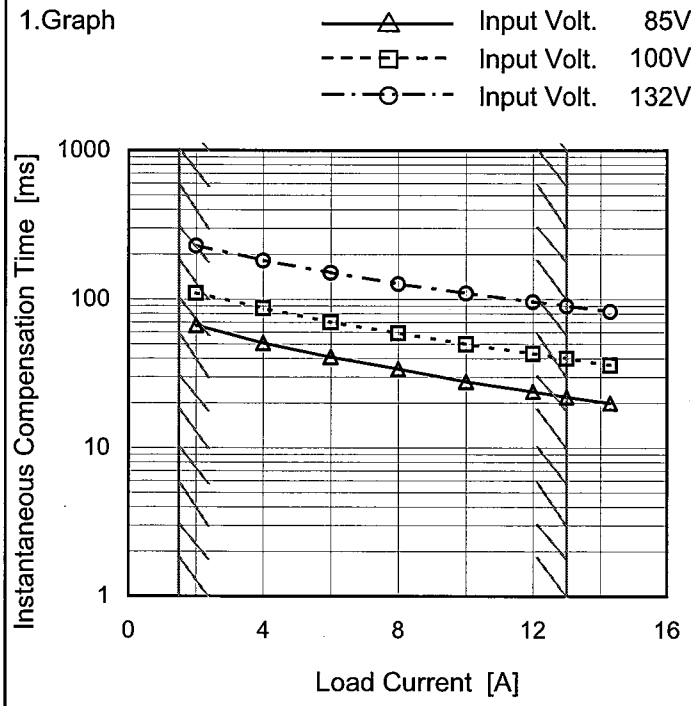
Input Voltage [V]	Hold-Up Time [ms]	
	Load 50%	Load 100%
75	42	18
80	52	23
85	63	29
90	75	35
100	100	47
110	129	61
120	160	77
132	201	97
140	231	113

COSEL

Model	MMC100B-3
Item	Instantaneous Interruption Compensation
Object	+5V13A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

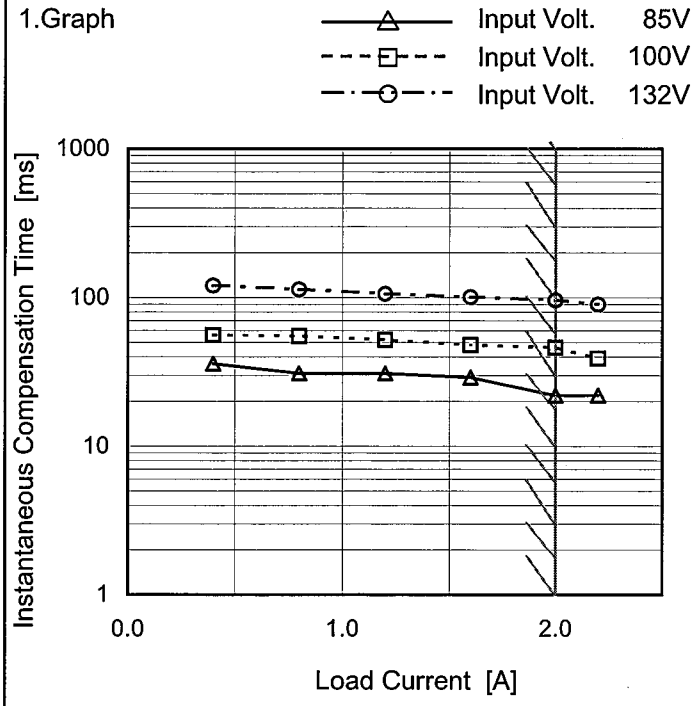
Load Current [A]	Time [ms]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0.0	-	-	-
2.0	67	110	229
4.0	51	87	182
6.0	41	70	151
8.0	34	59	127
10.0	28	50	110
12.0	24	43	96
13.0	22	40	90
14.3	20	36	83
--	-	-	-
--	-	-	-

COSEL

Model	MMC100B-3
Item	Instantaneous Interruption Compensation
Object	+12V2A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

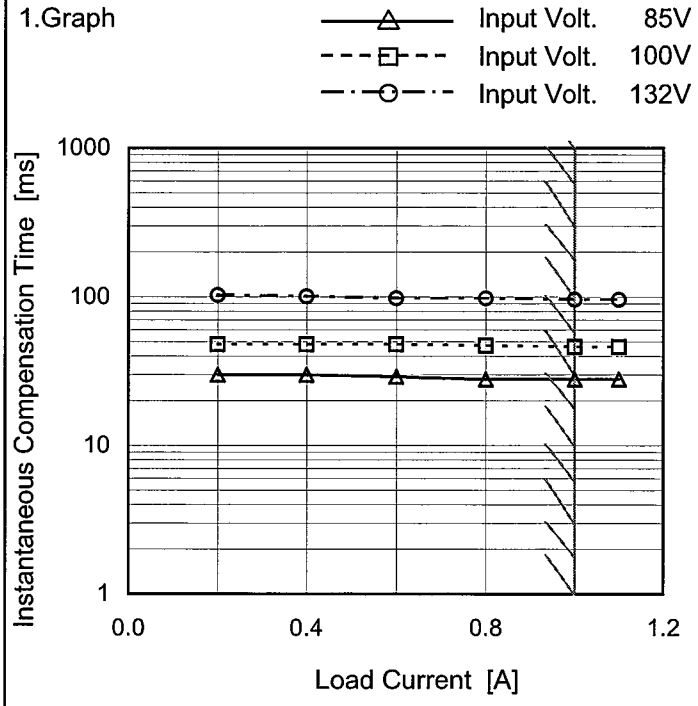
Load Current [A]	Time [ms]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0.0	-	-	-
0.4	36	56	121
0.8	31	55	114
1.2	31	52	106
1.6	29	48	101
2.0	22	46	96
2.2	22	39	90
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

COSEL

Model	MMC100B-3
Item	Instantaneous Interruption Compensation
Object	-5V1A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

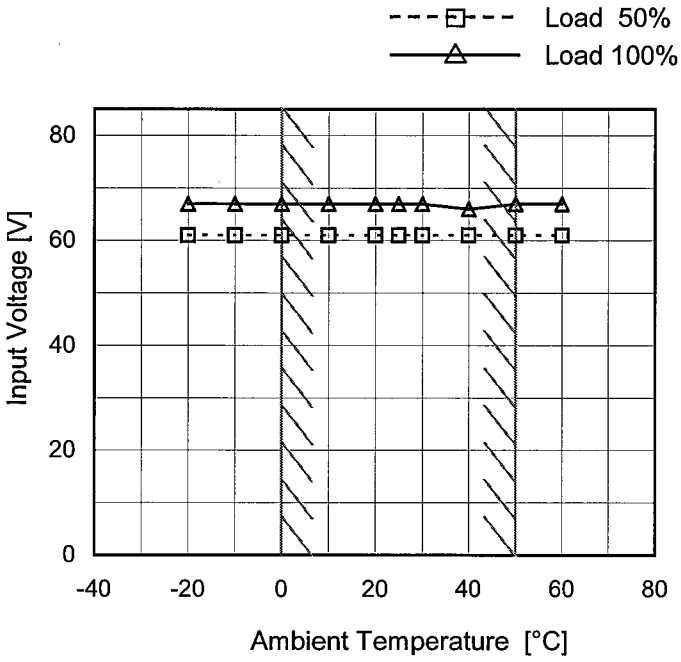
Load Current [A]	Time [ms]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0.0	-	-	-
0.2	30	48	103
0.4	30	48	101
0.6	29	48	98
0.8	28	47	98
1.0	28	46	96
1.1	28	46	96
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

COSEL

Model	MMC100B-3
Item	Minimum Input Voltage for Regulated Output Voltage
Object	+5V13A

Testing Circuitry Figure A

1.Graph

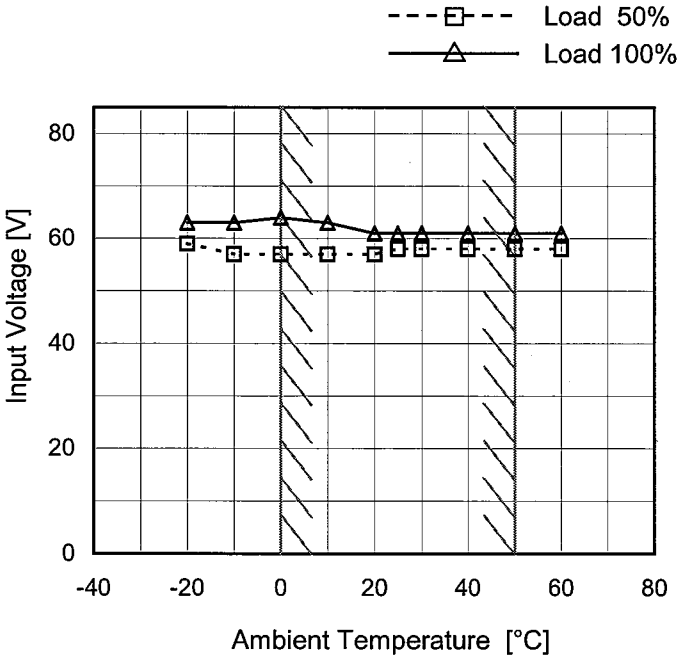


2.Values

Ambient Temperature [°C]	Input Voltage [V]	
	Load 50%	Load 100%
-20	61	67
-10	61	67
0	61	67
10	61	67
20	61	67
25	61	67
30	61	67
40	61	66
50	61	67
60	61	67
--	-	-

Object	+12V2A

1.Graph



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

2.Values

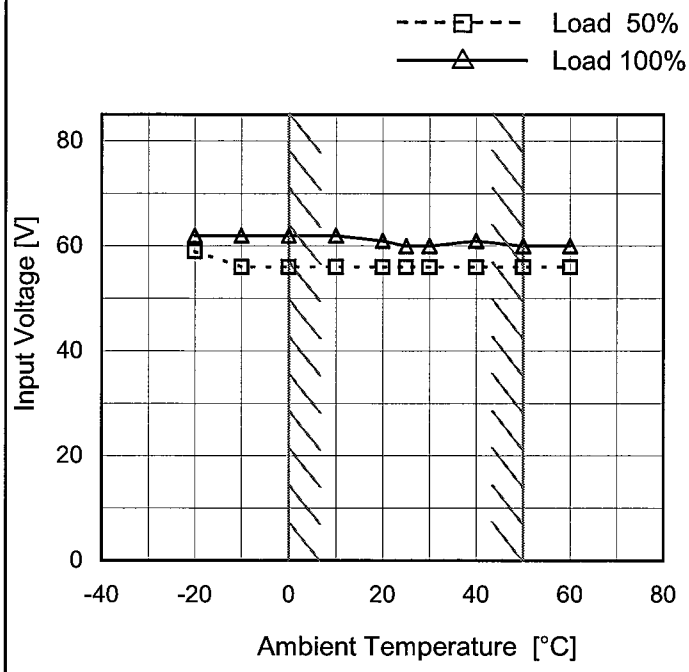
Ambient Temperature [°C]	Input Voltage [V]	
	Load 50%	Load 100%
-20	59	63
-10	57	63
0	57	64
10	57	63
20	57	61
25	58	61
30	58	61
40	58	61
50	58	61
60	58	61
--	-	-

COSEL

Model	MMC100B-3
Item	Minimum Input Voltage for Regulated Output Voltage
Object	-5V1A

Testing Circuitry Figure A

1.Graph



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

2.Values

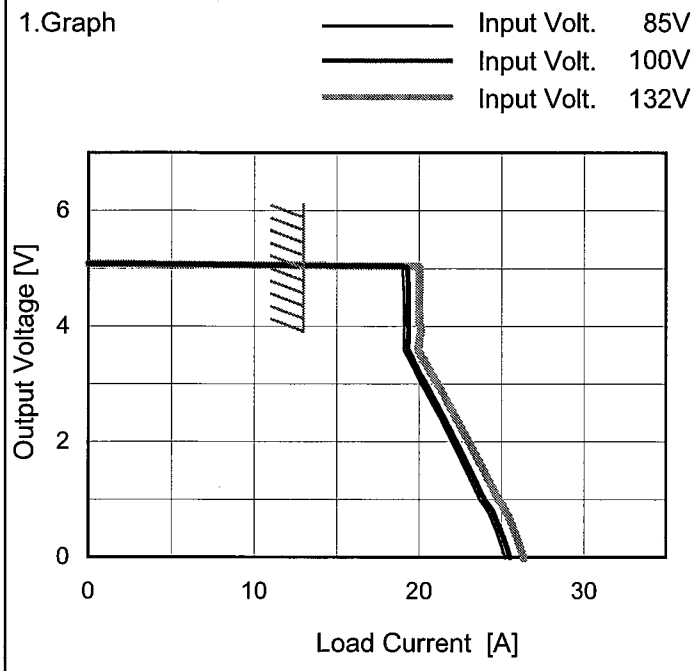
Ambient Temperature [°C]	Input Voltage [V]	
	Load 50%	Load 100%
-20	59	62
-10	56	62
0	56	62
10	56	62
20	56	61
25	56	60
30	56	60
40	56	61
50	56	60
60	56	60
--	-	-

COSEL

Model	MMC100B-3
Item	Overcurrent Protection
Object	+5V13A

Temperature 25°C
Testing Circuitry Figure A

1.Graph

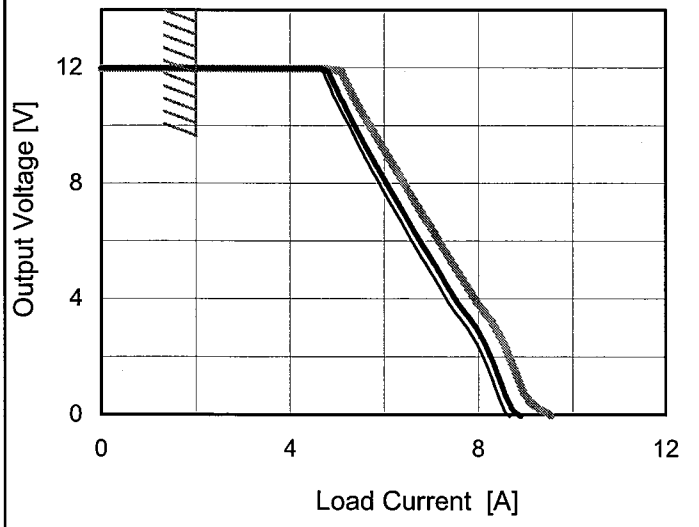


2.Values

Output Voltage [V]	Load Current [A]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
4.75	19.04	19.34	20.03
4.50	19.07	19.35	20.01
4.00	19.09	19.35	20.06
3.50	19.19	19.46	20.08
3.00	20.13	20.37	21.10
2.50	21.01	21.35	22.02
2.00	21.96	22.21	22.98
1.50	22.84	23.10	23.93
1.00	23.62	23.91	24.79
0.50	24.60	24.89	25.70
0.00	25.22	25.51	26.35
--	-	-	-

Object	+12V2A

1.Graph



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

2.Values

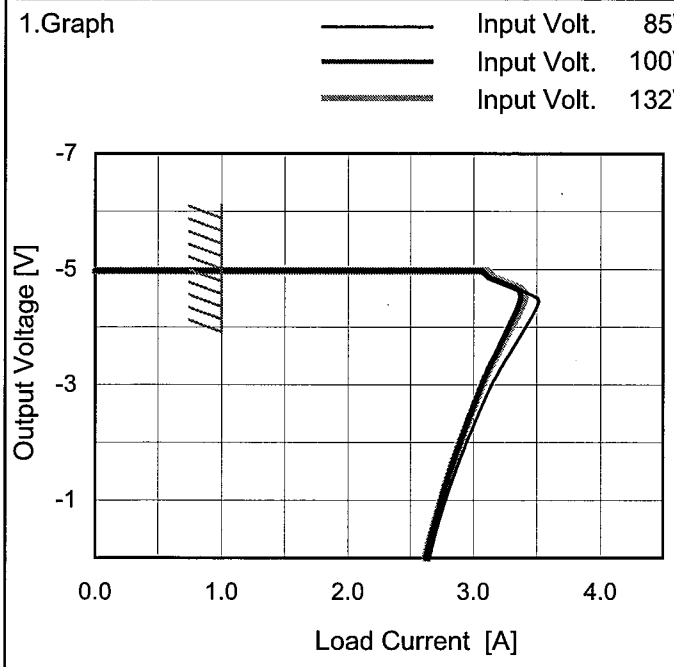
Output Voltage [V]	Load Current [A]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
11.40	4.84	4.95	5.23
10.80	4.97	5.10	5.40
9.60	5.37	5.49	5.83
8.40	5.75	5.89	6.25
7.20	6.15	6.31	6.71
6.00	6.60	6.76	7.15
4.80	7.02	7.20	7.60
3.60	7.46	7.65	8.06
2.40	7.95	8.16	8.55
1.20	8.30	8.45	8.84
0.00	8.66	8.90	9.54
--	-	-	-

COSEL

Model	MMC100B-3
Item	Overcurrent Protection
Object	-5V1A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

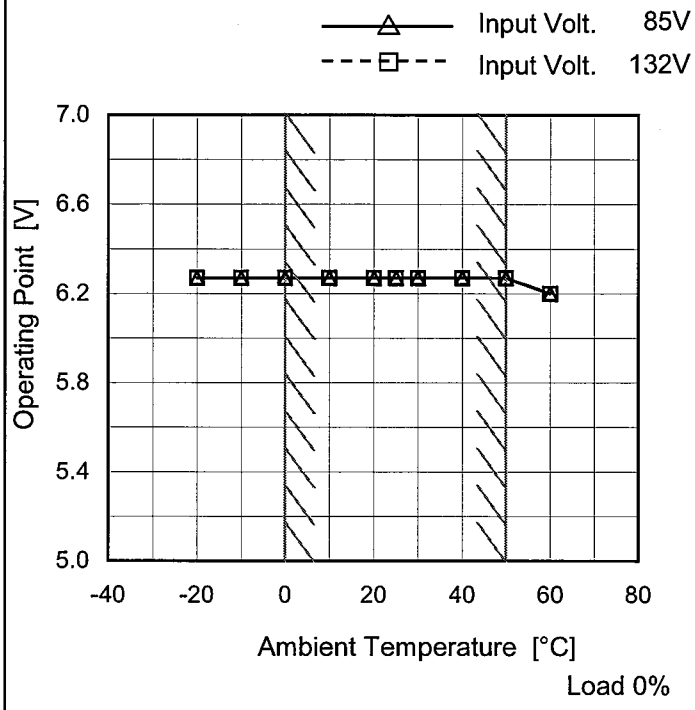
Output Voltage [V]	Load Current [A]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
-4.75	3.26	3.26	3.29
-4.50	3.51	3.37	3.41
-4.00	3.41	3.29	3.31
-3.50	3.28	3.18	3.19
-3.00	3.14	3.07	3.08
-2.50	3.05	2.98	2.99
-2.00	2.95	2.90	2.90
-1.50	2.87	2.82	2.82
-1.00	2.79	2.75	2.75
-0.50	2.72	2.68	2.68
0.00	2.65	2.62	2.62
--	-	-	-

COSEL

Model	MMC100B-3
Item	Overvoltage Protection
Object	+5V13A

Testing Circuitry Figure A

1.Graph



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

2.Values

Ambient Temperature [°C]	Operating Point [V]	
	Input Volt. 85[V]	Input Volt. 132[V]
-20	6.27	6.27
-10	6.27	6.27
0	6.27	6.27
10	6.27	6.27
20	6.27	6.27
25	6.27	6.27
30	6.27	6.27
40	6.27	6.27
50	6.27	6.27
60	6.20	6.20
--	-	-

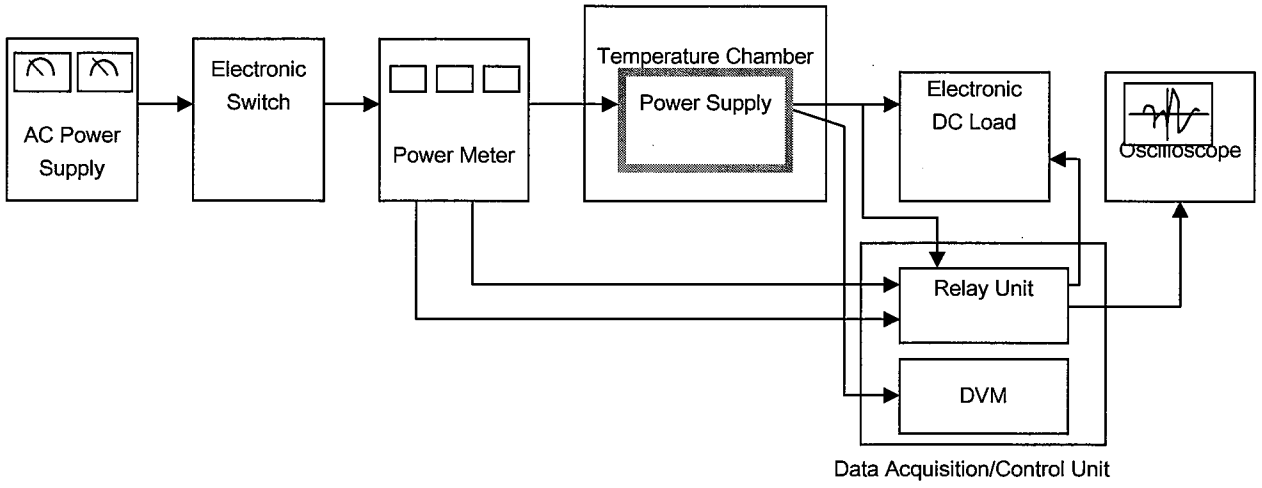


Figure A

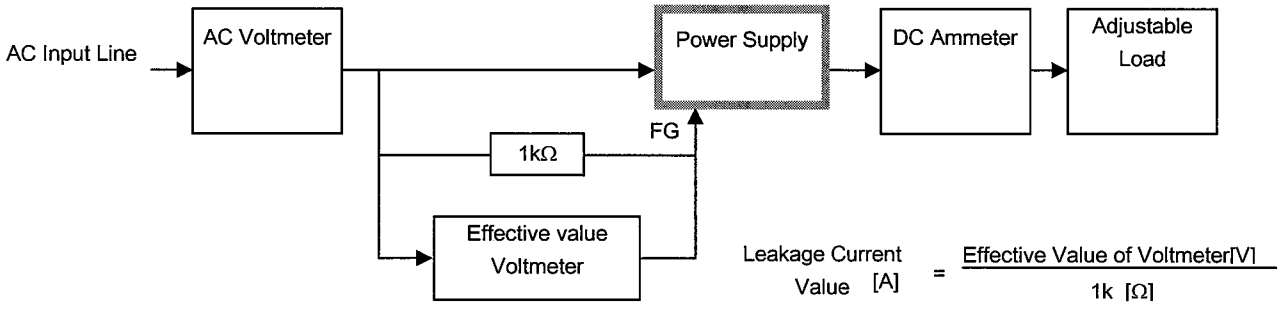


Figure B (DEN-AN)

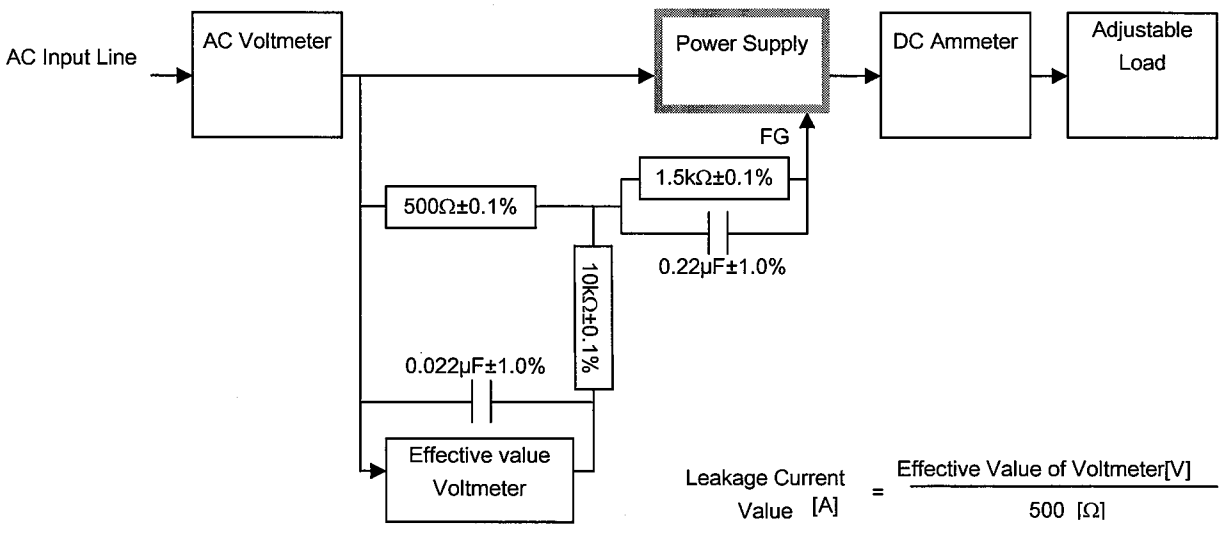


Figure B (IEC60950-1)