参考資料

COSEL

TEST DATA OF MODULE J

(ACE series)

Regulated DC power supply
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COSEL CO.,LTD.

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Object	+34V4.5A

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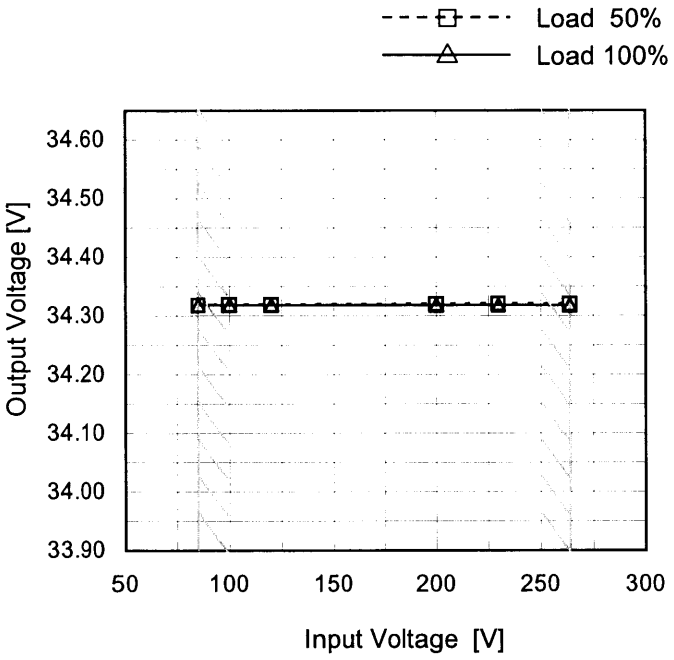
1.Graph



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

2.Values

Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
85	34.318	34.319
100	34.319	34.319
120	34.319	34.319
200	34.320	34.319
230	34.321	34.319
264	34.320	34.318
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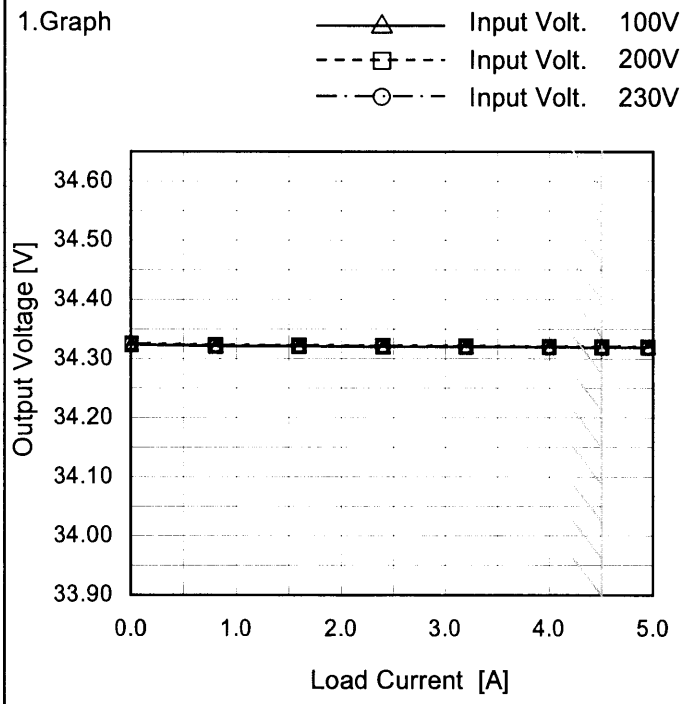
Model	MODULE J
Item	Load Regulation
Object	+34V4.5A

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. 100[V]	Input Volt. 200[V]	Input Volt. 230[V]
0.00	34.324	34.326	34.325
0.80	34.321	34.323	34.322
1.60	34.321	34.323	34.322
2.40	34.320	34.322	34.321
3.20	34.320	34.321	34.321
4.00	34.320	34.320	34.320
4.50	34.319	34.320	34.320
4.95	34.319	34.320	34.319
--	-	-	-
--	-	-	-
--	-	-	-

COSEL

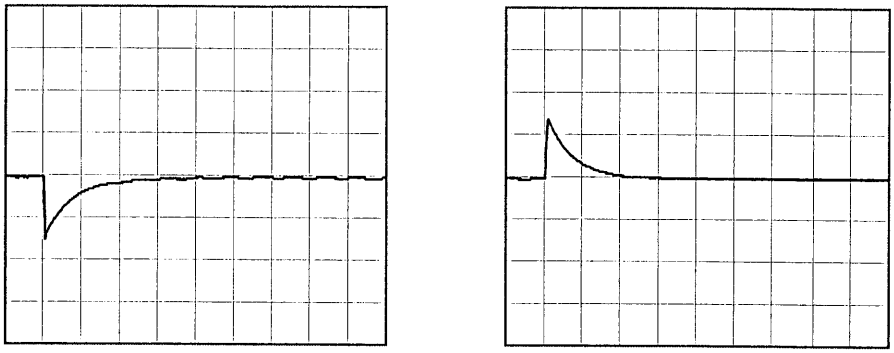
Model	MODULE J
Item	Dynamic Load Response
Object	+34V4.5A

Temperature 25°C
Testing Circuitry Figure A

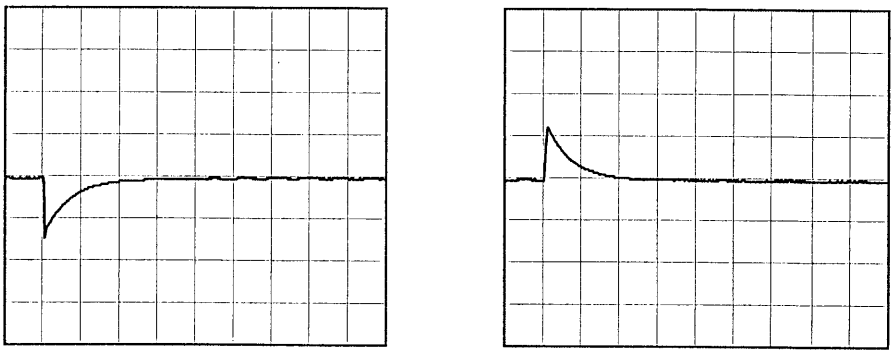
Input Volt. 100 V
Cycle 1000 mS

Load Current

Min. Load (0A) ⟷
Load 100% (4.5A)



Min. Load (0A) ⟷
Load 50% (2.25A)



* The characteristic of AC200V is equal.

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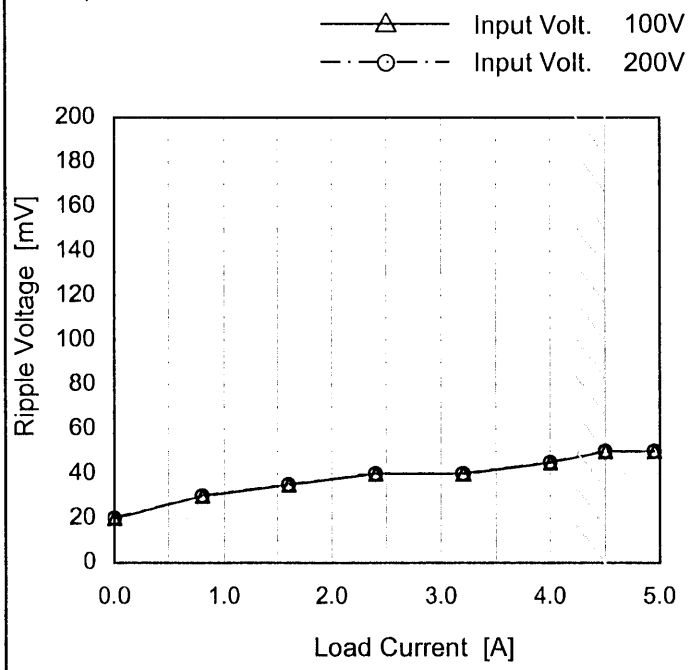
Model	MODULE J
Item	Ripple Voltage (by Load Current)
Object	+34V4.5A

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

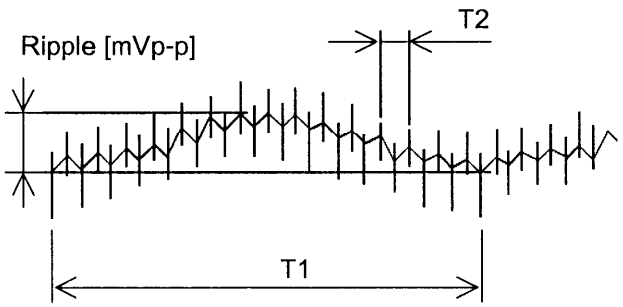


Fig. Complex Ripple Wave Form

2.Values

Load Current [A]	Ripple Voltage [mV] Input Volt. 100 [V]	Ripple Voltage [mV] Input Volt. 200 [V]
0.00	20	20
0.80	30	30
1.60	35	35
2.40	40	40
3.20	40	40
4.00	45	45
4.50	50	50
4.95	50	50
--	-	-
--	-	-
--	-	-

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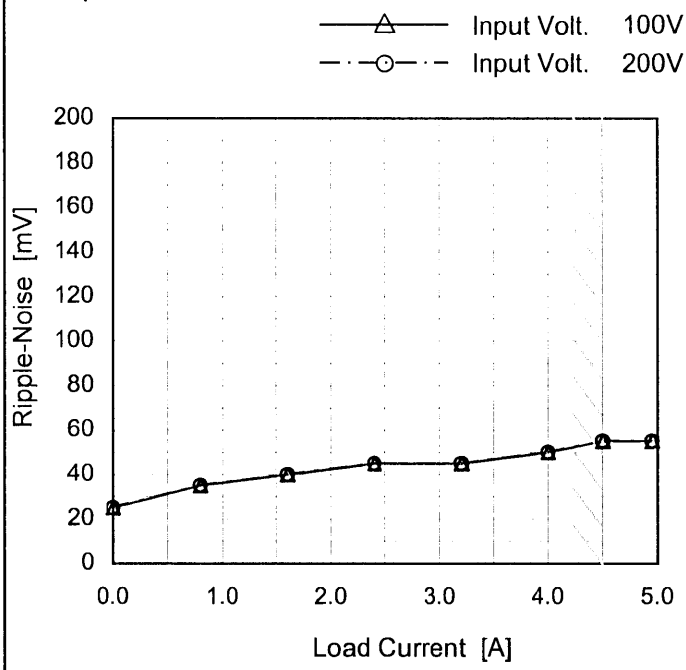
Model	MODULE J
Item	Ripple-Noise
Object	+34V4.5A

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.

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

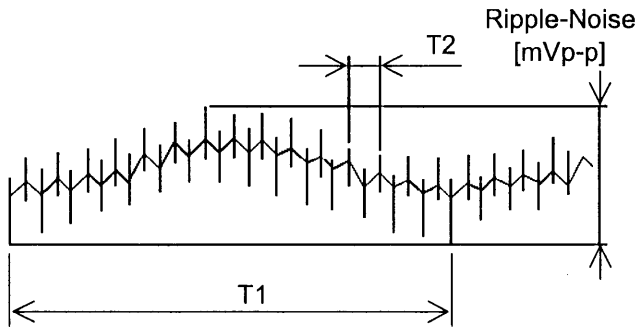


Fig. Complex Ripple Wave Form

2.Values

Load Current [A]	Ripple-Noise [mV] Input Volt. 100 [V]	Ripple-Noise [mV] Input Volt. 200 [V]
0.00	25	25
0.80	35	35
1.60	40	40
2.40	45	45
3.20	45	45
4.00	50	50
4.50	55	55
4.95	55	55
--	-	-
--	-	-
--	-	-

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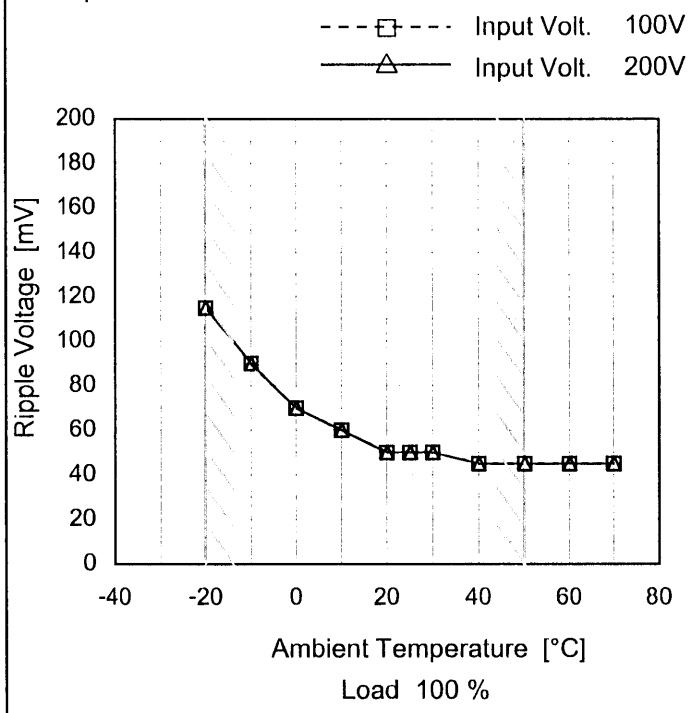
Model	MODULE J
Item	Ripple Voltage (by Ambient Temp.)
Object	+34V4.5A

Testing Circuitry Figure A

1.Graph



Measured by 20 MHz Oscilloscope.

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

2.Values

Ambient Temperature [°C]	Ripple Voltage [mV]	
	Input Volt. 100 [V]	Input Volt. 200 [V]
-20	115	115
-10	90	90
0	70	70
10	60	60
20	50	50
25	50	50
30	50	50
40	45	45
50	45	45
60	45	45
70	45	45

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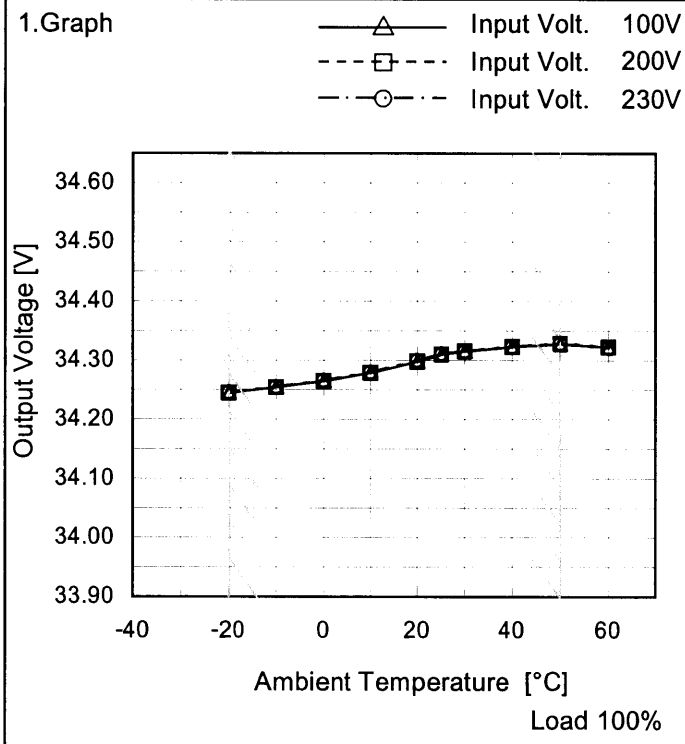
Model	MODULE J
Item	Ambient Temperature Drift
Object	+34V4.5A

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. 100[V]	Input Volt. 200[V]	Input Volt. 230[V]
-20	34.245	34.245	34.246
-10	34.255	34.255	34.255
0	34.265	34.265	34.266
10	34.279	34.279	34.280
20	34.298	34.299	34.300
25	34.310	34.311	34.311
30	34.315	34.316	34.316
40	34.323	34.323	34.323
50	34.328	34.329	34.328
60	34.322	34.323	34.322
--	-	-	-

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Model	MODULE J	
Item	Output Voltage Accuracy	Testing Circuitry Figure A
Object	+34V4.5A	

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 : -20 - 50°C
Input Voltage : 85 - 264V
Load Current : 0 - 4.5A

* 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

Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	50	264	0	34.337	±46	±0.1
Minimum Voltage	-20	85	4.5	34.245		

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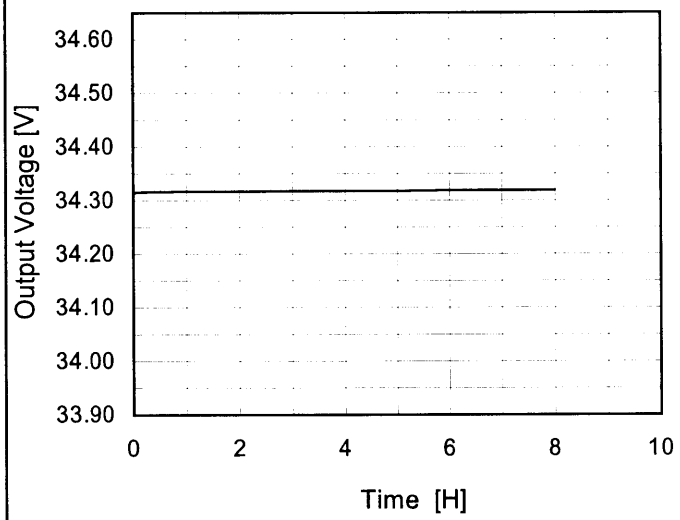
Model	MODULE J
Item	Time Lapse Drift
Object	+34V4.5A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Input Volt. 100V
Load 100%

* The characteristic of AC200V is equal.

2.Values

Time since start [H]	Output Voltage [V]
0.0	34.317
0.5	34.317
1.0	34.317
2.0	34.317
3.0	34.318
4.0	34.318
5.0	34.318
6.0	34.319
7.0	34.319
8.0	34.319

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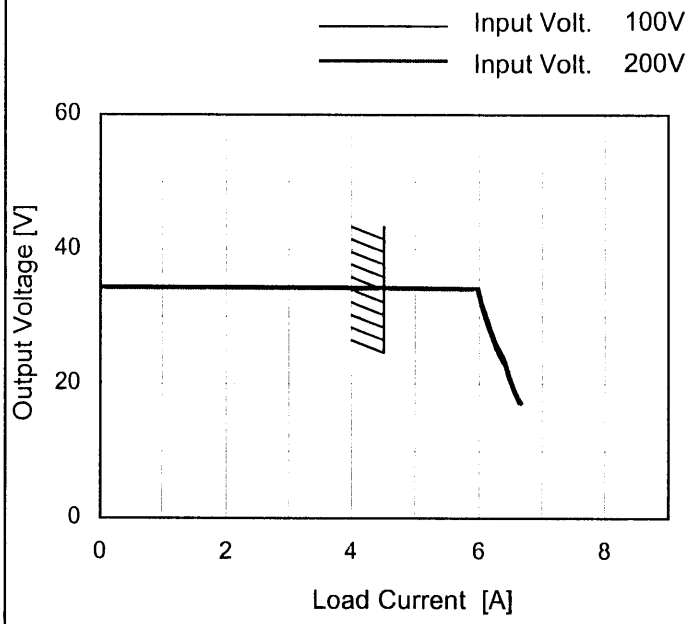
Model	MODULE J
Item	Overcurrent Protection
Object	+34V4.5A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

Intermittent operation occurs when the output voltage is from 17V to 0V.

2.Values

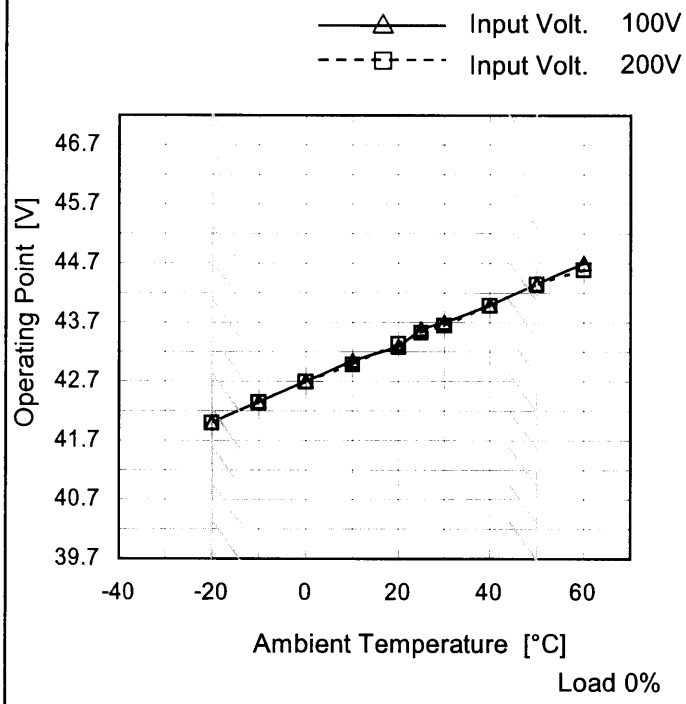
Output Voltage [V]	Load Current [A]	
	Input Volt. 100[V]	Input Volt. 200[V]
34.0	5.95	5.98
32.3	5.99	6.02
30.6	6.05	6.08
27.2	6.18	6.21
23.8	6.34	6.39
20.4	6.48	6.49
17.0	6.63	6.68
--	-	-
--	-	-
--	-	-
--	-	-
--	-	-

COSEL

Model	MODULE J
Item	Overvoltage Protection
Object	+34V4.5A

Testing Circuitry Figure A

1.Graph



Load 0%

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

2.Values

Ambient Temperature [°C]	Operating Point [V] Input Volt. 100[V]	Operating Point [V] Input Volt. 200[V]
-20	41.96	41.96
-10	42.31	42.31
0	42.66	42.66
10	43.01	42.95
20	43.25	43.30
25	43.55	43.49
30	43.66	43.61
40	43.95	43.95
50	44.31	44.31
60	44.66	44.55
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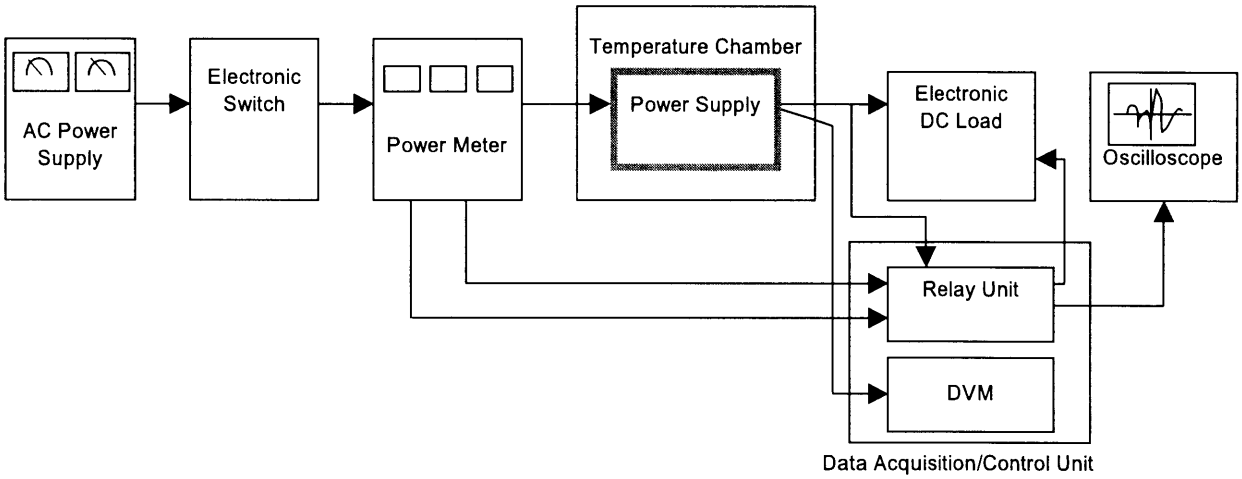

Figure A

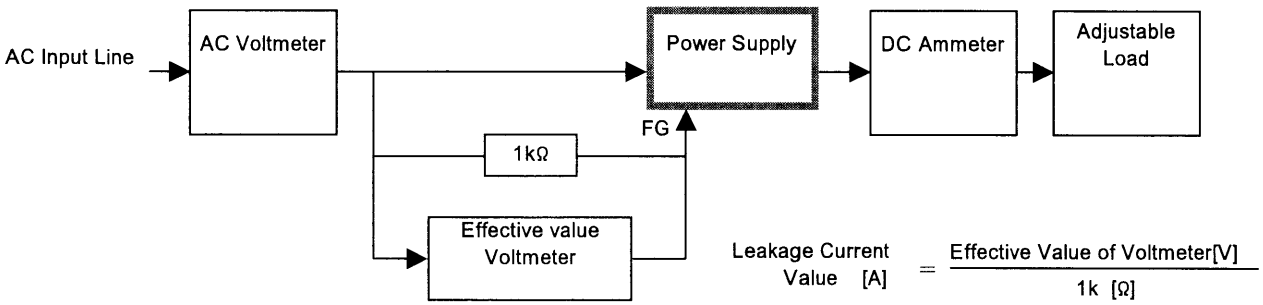

Figure B (DEN-AN)

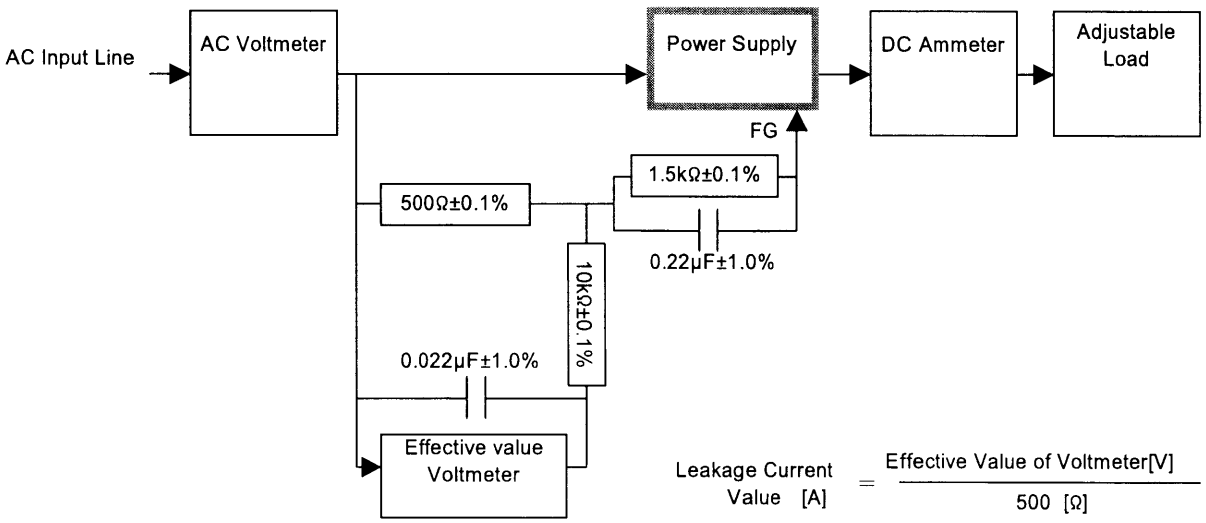

Figure B (IEC60950)