参考資料

COSEL

TEST DATA OF MODULE 2C

(ACE series)

Regulated DC power supply
Oct.8.2003

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COSEL CO.,LTD.

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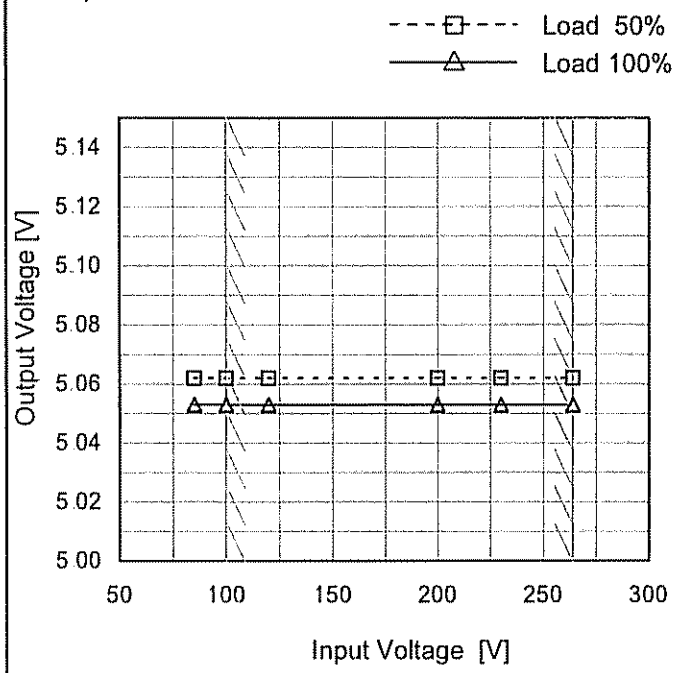
Model	MODULE 2C
Item	Line Regulation
Object	+5V60A

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%
85	5.062	5.053
100	5.062	5.053
120	5.062	5.053
200	5.062	5.053
230	5.062	5.053
264	5.062	5.053
--	-	-
--	-	-
--	-	-

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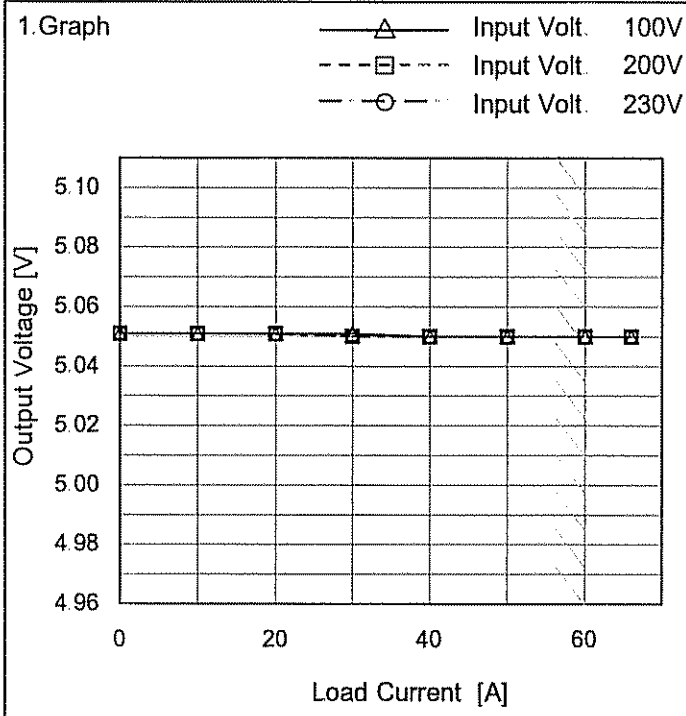
Model	MODULE 2C
Item	Load Regulation
Object	+5V60A

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	5.051	5.051	5.051
10	5.051	5.051	5.051
20	5.051	5.051	5.051
30	5.051	5.050	5.050
40	5.050	5.050	5.050
50	5.050	5.050	5.050
60	5.050	5.050	5.050
66	5.050	5.050	5.050
--	-	-	-
--	-	-	-
--	-	-	-

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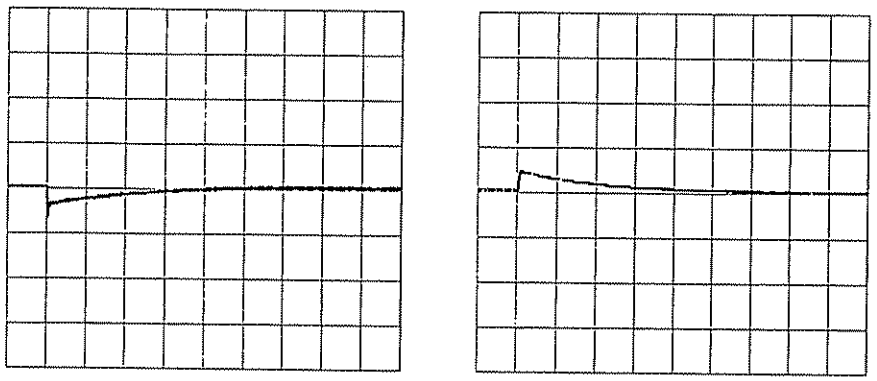
Model	MODULE 2C	
Item	Dynamic Load Response	Temperature 25°C Testing Circuitry Figure A
Object	+5V60A	

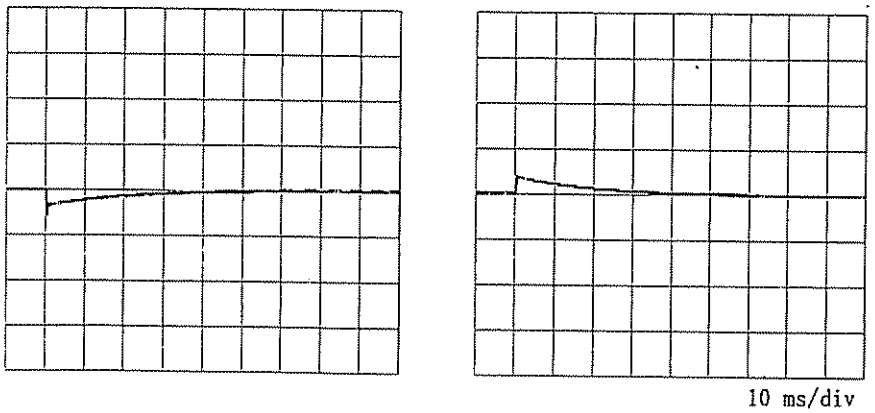
Input Volt. 100 V
Cycle 1000 mS

Load Current

Min. Load ⟷
Load 100 %



Min. Load ⟷
Load 50 %



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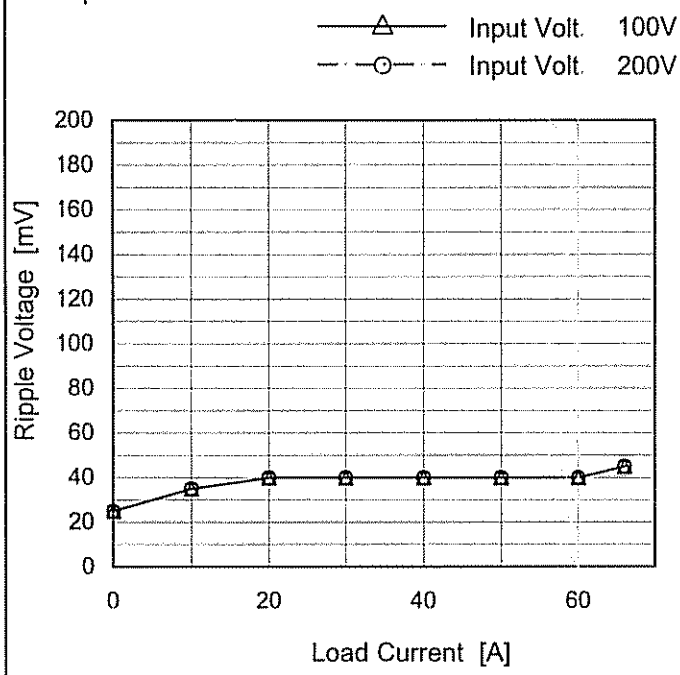
Model	MODULE 2C
Item	Ripple Voltage (by Load Current)
Object	+5V60A

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.

2.Values

Load Current [A]	Ripple Voltage [mV] Input Volt. 100 [V]	Ripple Voltage [mV] Input Volt. 200 [V]
0	25	25
10	35	35
20	40	40
30	40	40
40	40	40
50	40	40
60	40	40
66	45	45
--	-	-
--	-	-
--	-	-

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

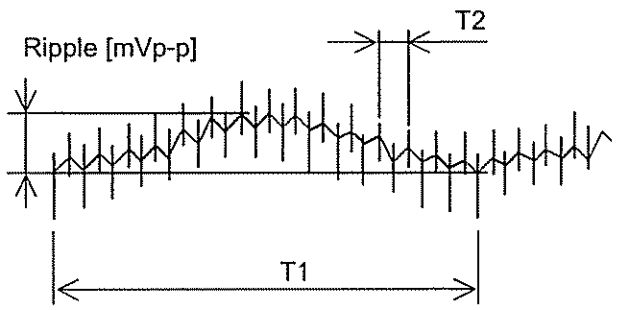


Fig. Complex Ripple Wave Form

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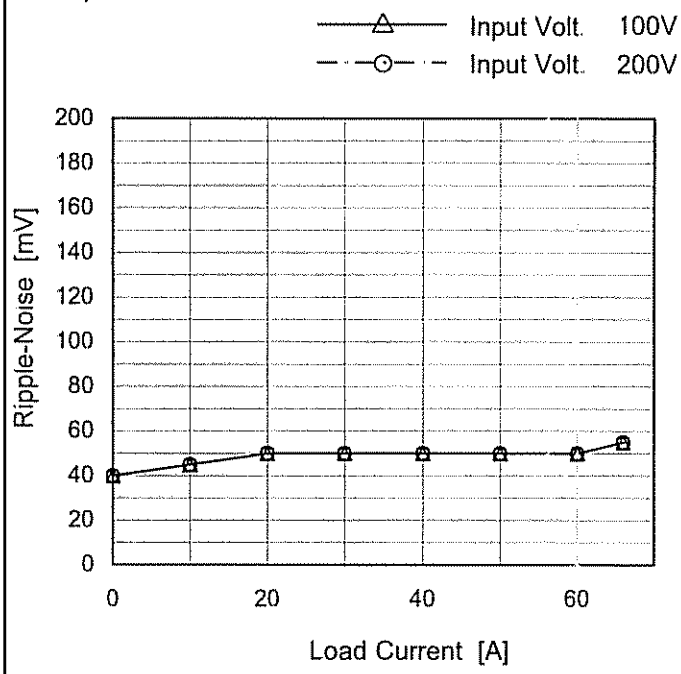
Model	MODULE 2C
Item	Ripple-Noise
Object	+5V60A

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. 100 [V]	Input Volt. 200 [V]
0	40	40
10	45	45
20	50	50
30	50	50
40	50	50
50	50	50
60	50	50
66	55	55
--	-	-
--	-	-
--	-	-

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

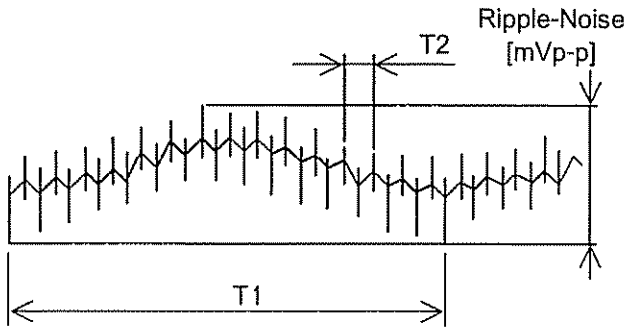


Fig. Complex Ripple Wave Form

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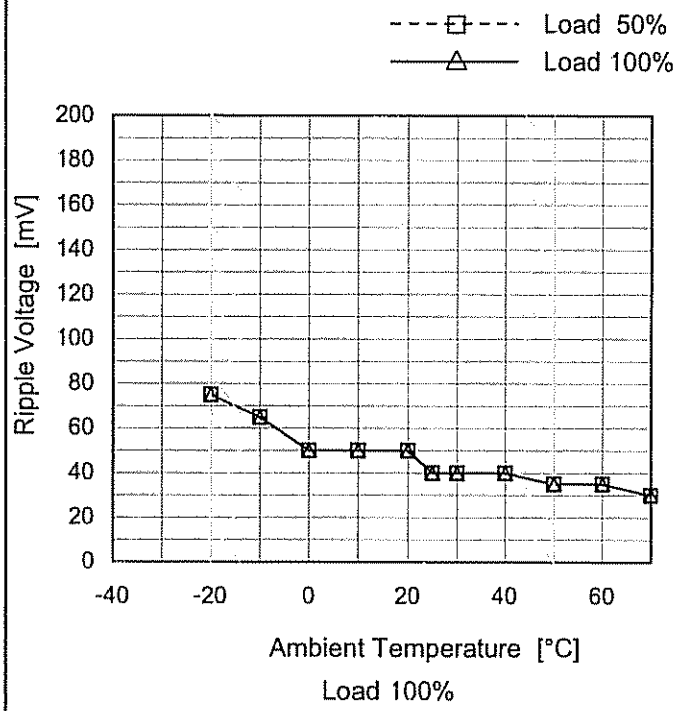
Model	MODULE 2C
Item	Ripple Voltage (by Ambient Temp.)
Object	+5V60A

Testing Circuitry Figure A

1.Graph



Load 100%

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	75	75
-10	65	65
0	50	50
10	50	50
20	50	50
25	40	40
30	40	40
40	40	40
50	35	35
60	35	35
70	30	30

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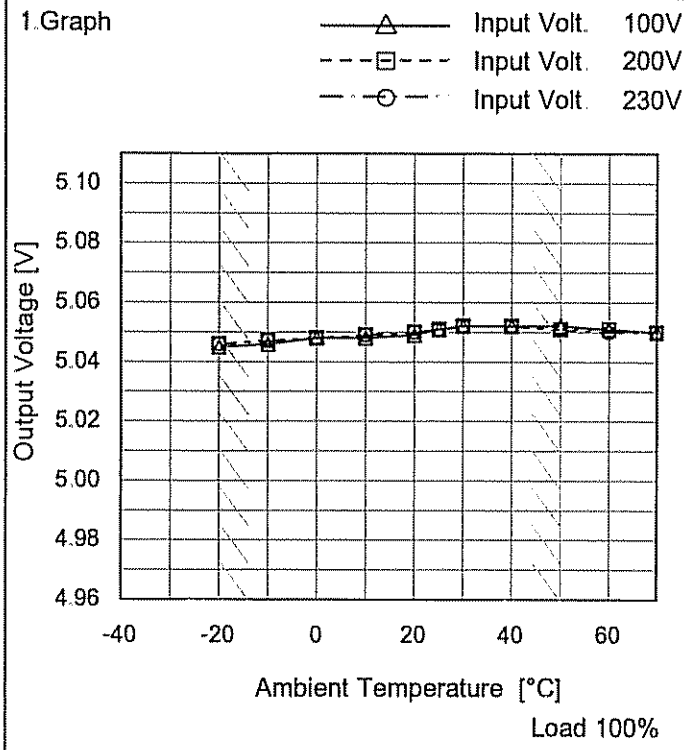
Model	MODULE 2C
Item	Ambient Temperature Drift
Object	+5V60A

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	5.045	5.046	5.046
-10	5.046	5.047	5.047
0	5.048	5.048	5.048
10	5.048	5.049	5.049
20	5.049	5.050	5.050
25	5.051	5.051	5.051
30	5.052	5.052	5.052
40	5.052	5.052	5.052
50	5.052	5.051	5.051
60	5.051	5.051	5.050
70	5.050	5.050	5.050

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Model	MODULE 2C	
Item	Output Voltage Accuracy	Testing Circuitry Figure A
Object	+5V60A	

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 - 60A

* 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	5.053	±4	±0.1
Minimum Voltage	-20	85	60	5.046		

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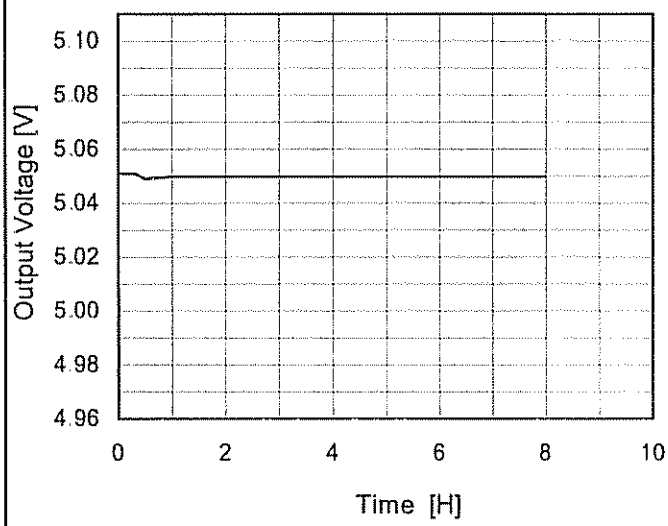
Model	MODULE 2C
Item	Time Lapse Drift
Object	+5V60A

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	5.051
0.5	5.049
1.0	5.050
2.0	5.050
3.0	5.050
4.0	5.050
5.0	5.050
6.0	5.050
7.0	5.050
8.0	5.050

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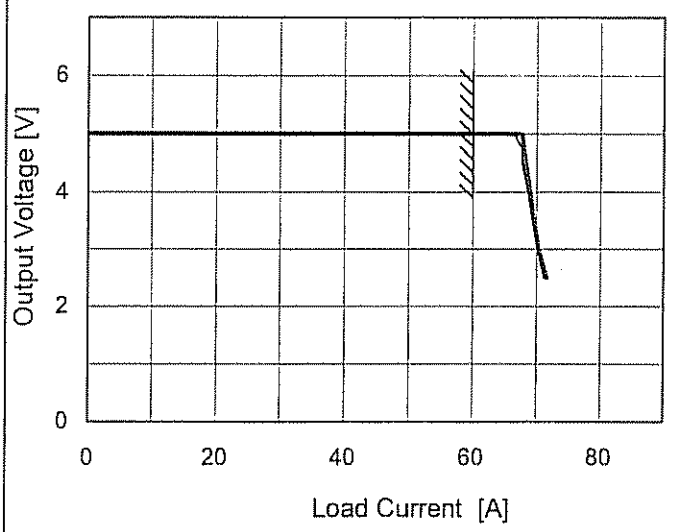
Model	MODULE 2C
Item	Overcurrent Protection
Object	+5V60A

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 100[V]	Input Volt 200[V]	—
5.00	61.41	67.65	—
4.75	67.67	67.96	—
4.50	67.64	68.28	—
4.00	68.66	68.91	—
3.50	69.38	69.56	—
3.00	70.13	70.34	—
2.50	71.25	71.62	—
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—

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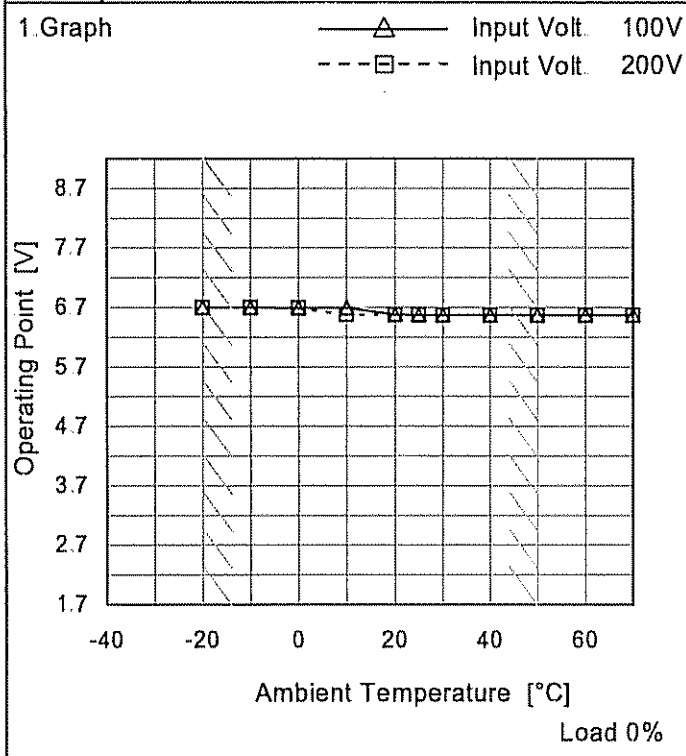
Model	MODULE 2C
Item	Overvoltage Protection
Object	+5V60A

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. 100[V]	Input Volt 200[V]	—
-20	6.72	6.72	—
-10	6.72	6.72	—
0	6.71	6.71	—
10	6.71	6.60	—
20	6.60	6.60	—
25	6.59	6.60	—
30	6.59	6.59	—
40	6.59	6.59	—
50	6.59	6.59	—
60	6.59	6.59	—
70	6.59	6.59	—

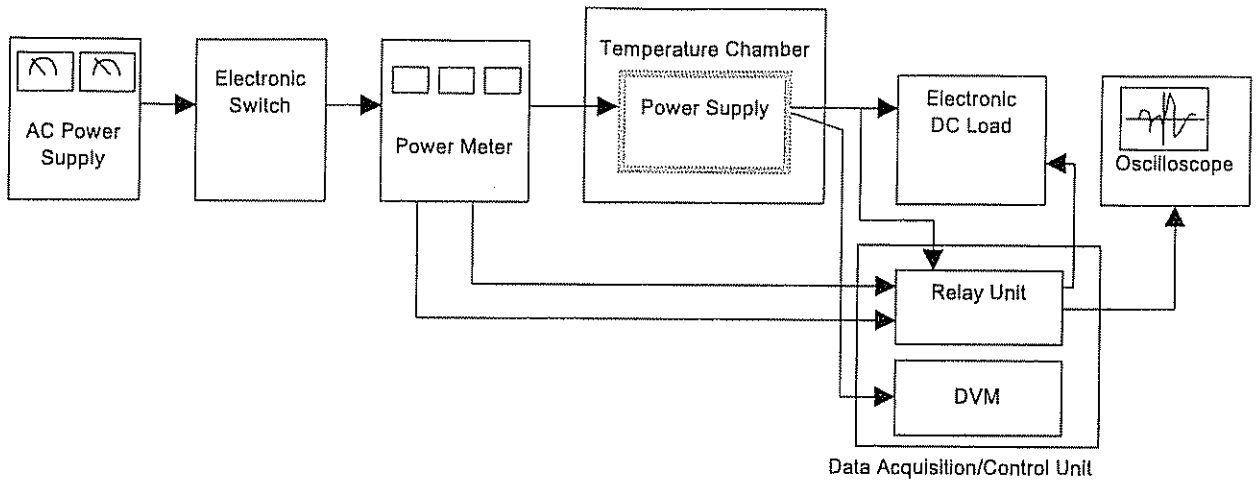


Figure A

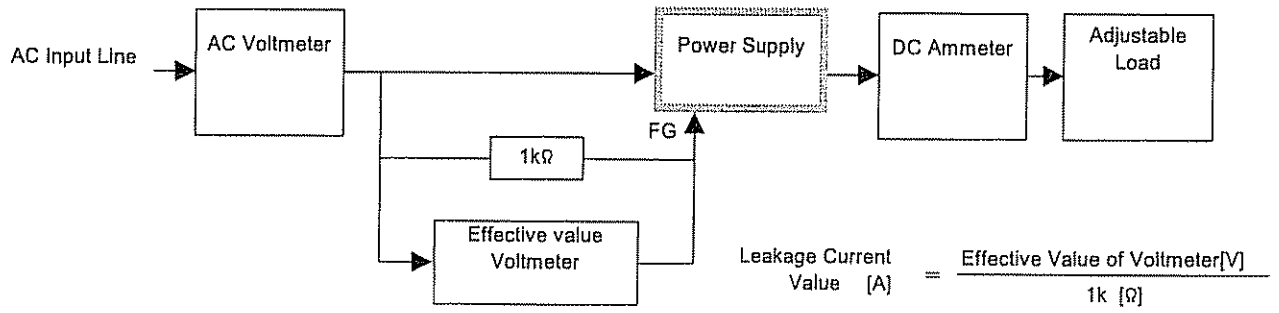


Figure B (DEN-AN)

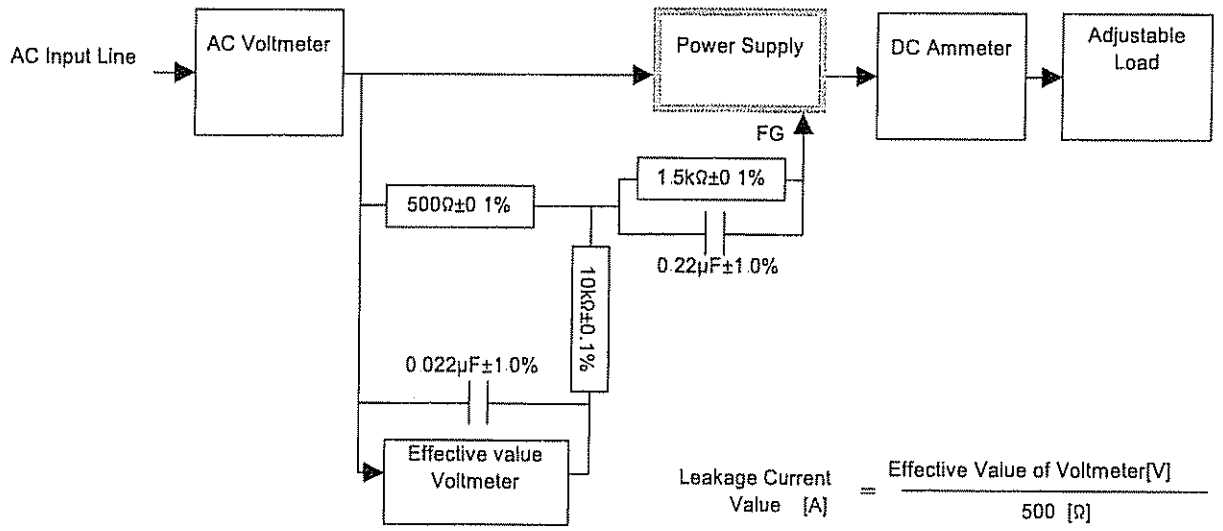


Figure B (IEC60950)