



TEST DATA OF ADA750F

ADA750F-36
(100V INPUT)

Regulated DC power supply
Mar. 24, 2003

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INPUT : AC 85~132V

OUTPUT : V1: 36V 16.5A

コーセル株式会社
COSEL CO.,LTD.

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Model

ADA750F (ADA750F-36)

Item

Line Regulation
静的入力変動

Object

V1:+36V16.5A

Temperature

25℃

Testing Circuitry

Figure A

1. Graph

---□---

Load 50%

—△—

Load 100%

Output Voltage [V]

36.40

36.30

36.20

36.10

36.00

35.90

35.80

35.70

70

90

110

130

150

Input Voltage [V]

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	36.094	36.070
80	36.092	36.070
85	36.088	36.069
90	36.086	36.069
100	36.086	36.070
110	36.084	36.069
120	36.081	36.070
132	36.080	36.070
140	36.080	36.070

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Model		ADA750F (ADA750F-36)		Temperature		25℃	
Item		Input Current (by Load Current) 入力電流 (負荷電力特性)		Testing Circuitry		Figure A	
Object							

1. Graph

—△— Input Volt. 85 V

---□--- Input Volt. 100 V

-·-○-·- Input Volt. 132 V

10

8

6

4

2

0

0

200

400

600

Input Current [A]

Load Power [W]

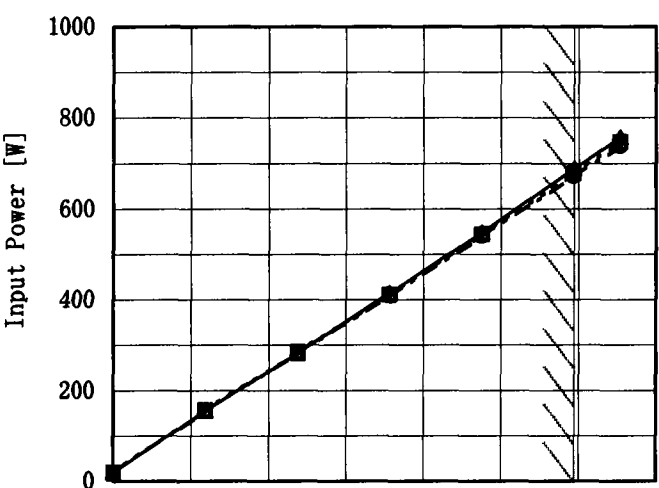
2. Values

Load Power [W]	Input Current [A]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0.0	0.276	0.251	0.211
118.8	1.953	1.675	1.285
237.6	3.469	2.971	2.254
356.4	5.050	4.250	3.200
475.2	6.590	5.580	4.210
594.0	8.230	6.910	5.200
653.4	9.020	7.580	5.690
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Note: Slanted line shows the range of the rated load power.

(注) 斜線は定格電力範囲を示す。

COSEL

Model		ADA750F (ADA750F-36)		Temperature		25℃	
Item		Input Power (by Load Power) 入力電力（負荷電力特性）		Testing Circuitry		Figure A	
Object							
1. Graph				2. Values			
<div><div>—△—</div>Input Volt. 85 V</div> <div><div>---□---</div>Input Volt. 100 V</div> <div><div>-·-○-·-</div>Input Volt. 132 V</div> 							
Note: Slanted line shows the range of the rated load power.							
(注) 斜線は定格電力範囲を示す。							

Load Power [W]	Input Power [W]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0.0	19.4	19.4	18.5
118.8	155.5	156.5	154.2
237.6	282.5	284.3	282.5
356.4	415.0	411.0	407.9
475.2	548.0	544.0	540.0
594.0	688.0	678.0	671.0
653.4	757.0	747.0	737.0
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--	--	--	--
--	--	--	--

COSEL

Model

ADA750F (ADA750F-36)

Item

Efficiency (by Input Voltage)
効率 (入力電圧特性)

Object

1. Graph

□

Load 50%

—

△

—

Load 100%

Efficiency [%]

100

96

92

88

84

80

76

72

70

90

110

130

150

Input Voltage [V]

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	84.6	84.8
80	84.2	85.5
85	84.2	85.9
90	84.7	86.3
100	84.9	87.1
110	84.8	87.5
120	85.6	87.5
132	85.6	87.9
140	85.5	88.1

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Model		ADA750F (ADA750F-36)	
Item		Efficiency (by Load Power) 効率 (負荷電力特性)	
Object			

1. Graph

—△— Input Volt. 85 V

---□--- Input Volt. 100 V

-·○-·- Input Volt. 132 V

Efficiency [%]

100

96

92

88

84

80

76

72

0

200

400

600

Load Power [W]

Graph showing Efficiency [%] vs Load Power [W] for ADA750F. The graph includes three data series for input voltages of 85V, 100V, and 132V. A slanted line indicates the range of rated load power.

2. Values

Load Power [W]	Efficiency [%]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0.0	—	—	—
118.8	75.4	74.9	76.1
237.6	83.4	82.8	83.4
356.4	85.2	86.0	86.7
475.2	86.1	86.7	87.4
594.0	85.7	87.0	87.9
653.4	85.7	86.9	88.1
--	—	—	—
--	—	—	—
--	—	—	—
--	—	—	—

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

(注) 斜線は定格電力範囲を示す。

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Model		ADA750F (ADA750F-36)	
Item		Power Factor (by Input Voltage) 力率 (入力電圧特性)	
Object			

1. Graph

Load 50%

Load 100%

Power Factor

1.0

0.9

0.8

0.7

0.6

0.5

0.4

0.3

70

90

110

130

150

Input Voltage [V]

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	0.964	0.987
80	0.963	0.986
85	0.965	0.983
90	0.965	0.983
100	0.963	0.981
110	0.962	0.978
120	0.962	0.980
132	0.953	0.978
140	0.952	0.975

COSEL

Model		ADA750F (ADA750F-36)	
Item		Power Factor (by Load Power) 力率 (負荷電力特性)	
Object			

1. Graph

—△—

Input Volt.

85 V

---□---

Input Volt.

100 V

-·-○-·-

Input Volt.

132 V

Power Factor

1.0

0.9

0.8

0.7

0.6

0.5

0.4

0.3

0

200

400

600

Load Power [W]

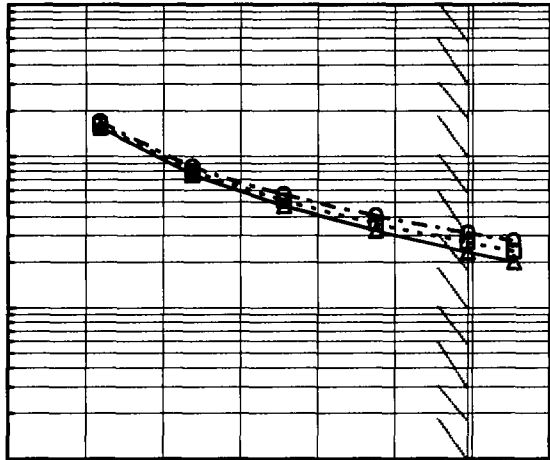
2. Values

Load Power [W]	Power Factor		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0.0	0.826	0.772	0.667
118.8	0.937	0.934	0.910
237.6	0.959	0.958	0.950
356.4	0.970	0.969	0.966
475.2	0.979	0.975	0.971
594.0	0.986	0.983	0.978
653.4	0.987	0.987	0.981
--	--	--	--
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--	--	--	--
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Note: Slanted line shows the range of the rated load power.

(注) 斜線は定格電力範囲を示す。

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Model		ADA750F (ADA750F-36)		Temperature		25℃	
Item		Hold-Up Time (by Load Power) 出力保持時間 (負荷電力特性)		Testing Circuitry		Figure A	
Object							
1. Graph		<div><div>—△—</div>Input Volt. 85V</div> <div><div>---□---</div>Input Volt. 100V</div> <div><div>---○---</div>Input Volt. 132V</div>		2. Values			
Hold-Up Time [mS]							
</							

COSEL

Model		ADA750F (ADA750F-36)		Temperature		25℃	
Item		Instantaneous Interruption Compensation (by Load Power)		Testing Circuitry		Figure A	
Object							

1. Graph

—△—

Input Volt. 85V

---□---

Input Volt. 100V

-·○-·-

Input Volt. 132V

Instantaneous Compensation Time [mS]

1000

100

10

1

0

200

400

600

Load Power [W]

2. Values

Load Power [W]	Time [mS]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0.0	—	—	—
118.8	123	136	151
237.6	73	80	86
356.4	47	48	56
475.2	30	36	39
594.0	21	27	31
653.4	20	22	28
--	—	—	—
--	—	—	—
--	—	—	—
--	—	—	—

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

(注) 斜線は定格電力範囲を示す。

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Model		ADA750F (ADA750F-36)		Temperature		25℃	
Item		Load Regulation 静的負荷変動		Testing Circuitry		Figure A	
Object		V1:+36V16.5A					

1. Graph

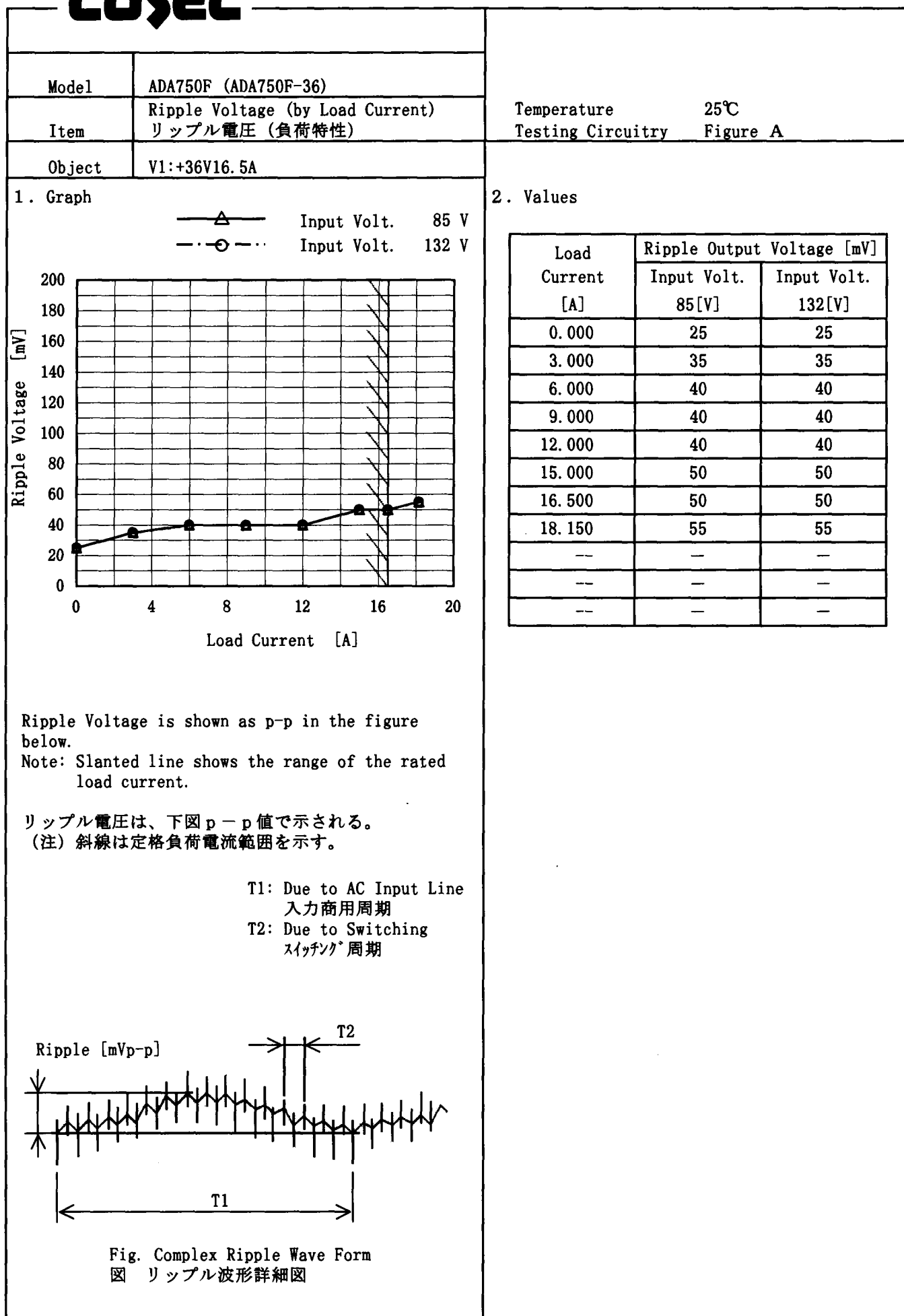
—△— Input Volt. 85 V

---□--- Input Volt. 100 V

-·-○-·- Input Volt. 132 V

Output Voltage [V]

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Model	ADA750F (ADA750F-36)	Temperature	25°C
Item	Ripple-Noise リップルノイズ	Testing Circuitry	Figure A
Object	V1:+36V16.5A		

1. Graph

—△— Input Volt. 85 V

---○--- Input Volt. 132 V

Ripple-Noise [mV]

Load Current [A]

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
スイッチング周期

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]
0.000	30	30
3.000	40	40
6.000	45	45
9.000	45	45
12.000	45	45
15.000	55	55
16.500	60	60
18.150	60	60
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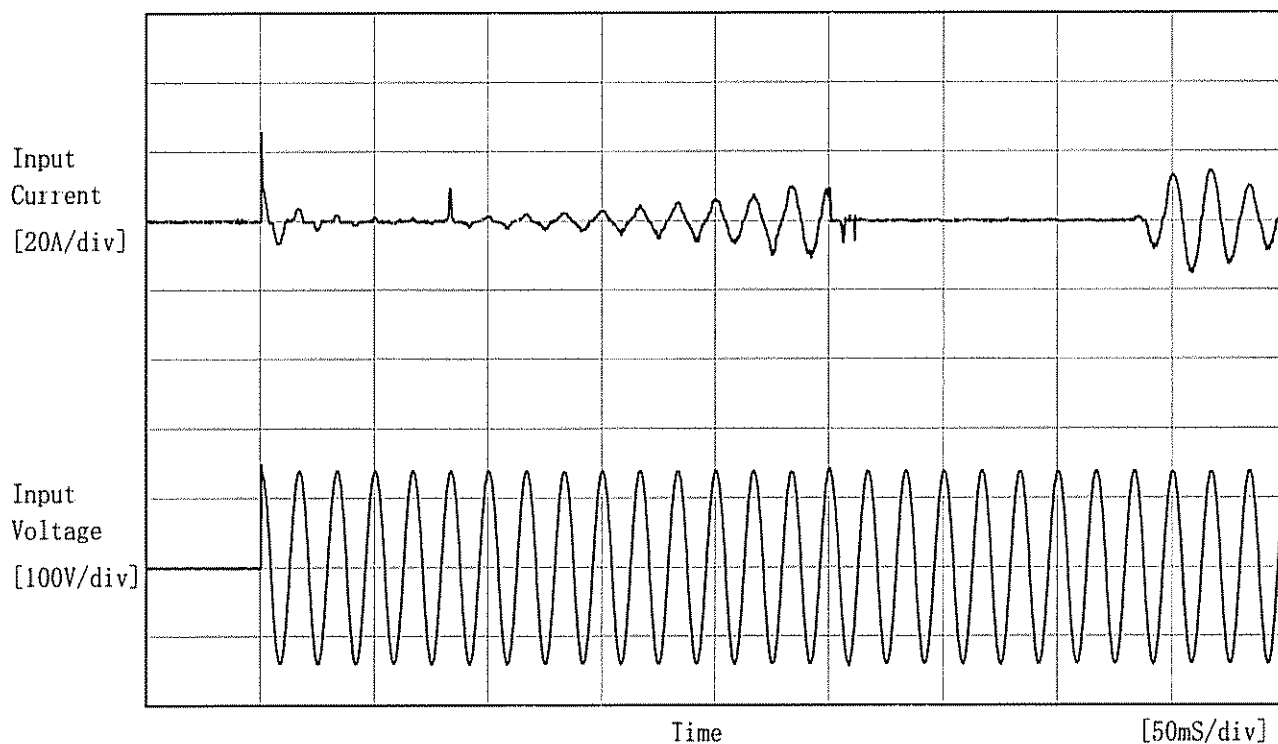
Model		ADA750F (ADA750F-36)																																																												
Item		Overcurrent Protection 過電流保護																																																												
Object		V1:+36V16.5A																																																												
1. Graph		2. Values																																																												
<div><div><div></div><div>Input Volt. 85 V</div></div><div><div></div><div>Input Volt. 100 V</div></div><div><div></div><div>Input Volt. 132 V</div></div></div> <p>Output Voltage [V]</p> <p>Load Current [A]</p> <p>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。</p> <p>Intermittent operation occurs when the output voltage is from 21.6V to 0V. 21.6V～0V間は、間欠モードとなる。</p>		<table><tr><th rowspan="2">Output Voltage [V]</th><th colspan="3">Load Current [A]</th></tr><tr><th>Input Volt. 85[V]</th><th>Input Volt. 100[V]</th><th>Input Volt. 132[V]</th></tr><tr><td>36.0</td><td>31.53</td><td>31.63</td><td>31.74</td></tr><tr><td>34.2</td><td>31.70</td><td>31.81</td><td>31.92</td></tr><tr><td>32.4</td><td>31.87</td><td>31.99</td><td>32.10</td></tr><tr><td>28.8</td><td>32.33</td><td>32.45</td><td>32.56</td></tr><tr><td>25.2</td><td>32.78</td><td>32.83</td><td>32.94</td></tr><tr><td>21.6</td><td>33.16</td><td>33.24</td><td>33.35</td></tr><tr><td>--</td><td>--</td><td>--</td><td>--</td></tr><tr><td>--</td><td>--</td><td>--</td><td>--</td></tr><tr><td>--</td><td>--</td><td>--</td><td>--</td></tr><tr><td>--</td><td>--</td><td>--</td><td>--</td></tr><tr><td>--</td><td>--</td><td>--</td><td>--</td></tr><tr><td>--</td><td>--</td><td>--</td><td>--</td></tr><tr><td>--</td><td>--</td><td>--</td><td>--</td></tr></table>		Output Voltage [V]	Load Current [A]			Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]	36.0	31.53	31.63	31.74	34.2	31.70	31.81	31.92	32.4	31.87	31.99	32.10	28.8	32.33	32.45	32.56	25.2	32.78	32.83	32.94	21.6	33.16	33.24	33.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Output Voltage [V]	Load Current [A]																																																													
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]																																																											
36.0	31.53	31.63	31.74																																																											
34.2	31.70	31.81	31.92																																																											
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BC-3481

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Model	ADA750F (ADA750F-36)	Temperature	25°C
Item	Inrush Current 突入電流	Testing Circuitry	Figure A
Object	_____		



Input Voltage 100 V

Frequency 60 Hz

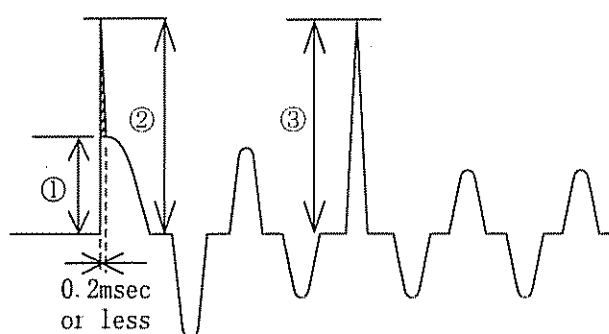
Load 100 %

Inrush Current

① 11.1 [A]

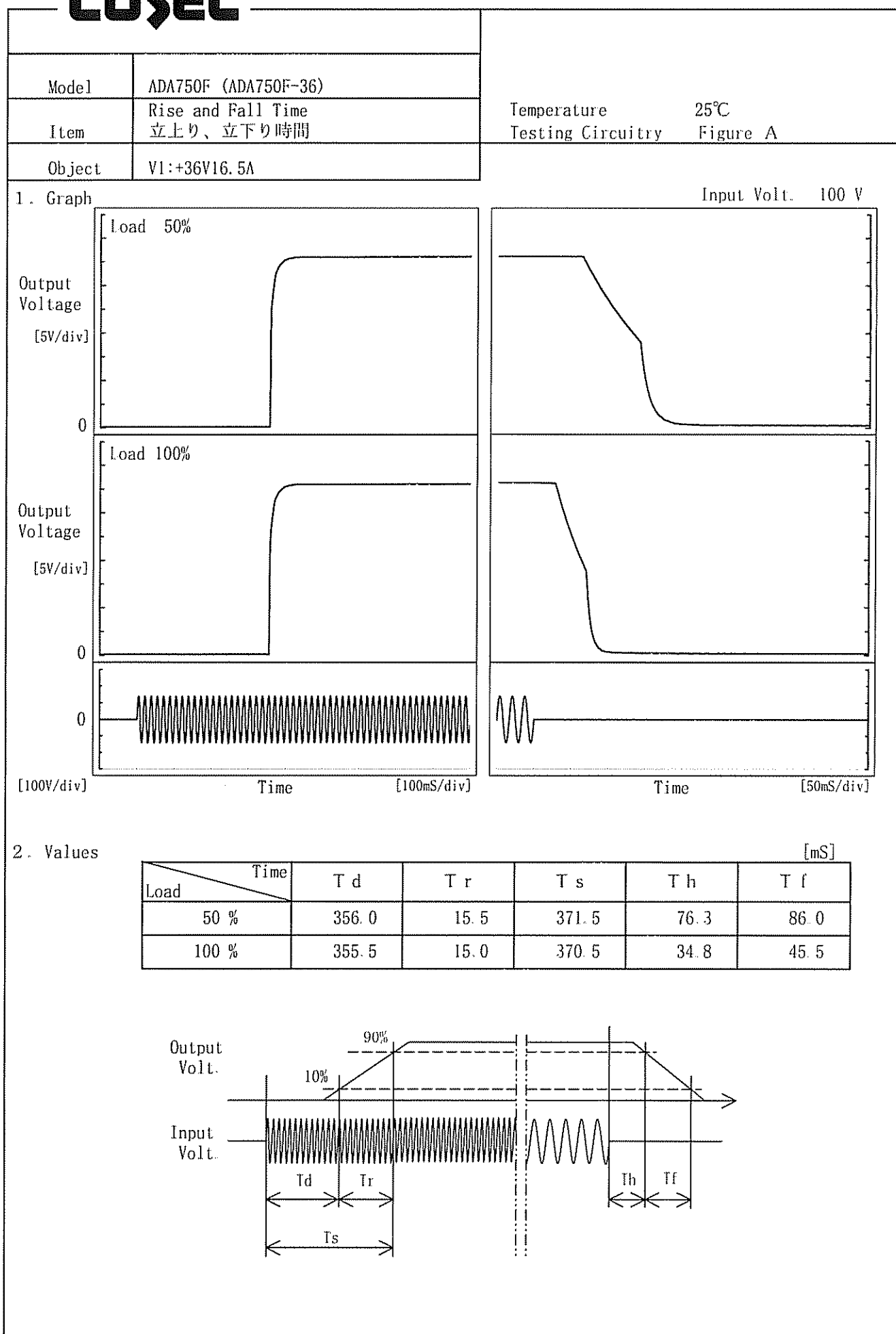
② 25.6 [A] (0.2msec or less)*1

③ 9.3 [A]



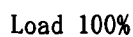
*1 The specification of the inrush current (primary surge) means that the surge current to a built-in noise filter (0.2msec or less : waveform ②) is excluded.

本製品の突入電流(1次サージ)の仕様は、内蔵ノイズフィルタ部へのサージ電流(0.2msec以下:波形②)を除きます。

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Testing Circuitry Figure A

2. Values



(注) 斜線は定格周囲温度範囲を示す。

Ambient Temperature [°C]	Output Voltage [V]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
-20	36.121	36.122	36.121
-10	36.120	36.121	36.120
0	36.120	36.120	36.121
10	36.114	36.115	36.115
20	36.101	36.101	36.101
25	36.094	36.094	36.094
30	36.095	36.095	36.095
40	36.098	36.099	36.099
50	36.091	36.092	36.092
60	36.072	36.072	36.072
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COSEL

Model

ADA750F (ADA750F-36)

Item

Minimum Input Voltage for Regulated Output Voltage
最低レギュレーション電圧

Object

V1:+36V16.5A

1. Graph

---□---

Load 50%

—△—

Load 100%

Input Voltage [V]

100

80

60

40

20

0

40

20

0

-20

-40

Ambient Temperature [°C]

60

40

20

0

-20

-40

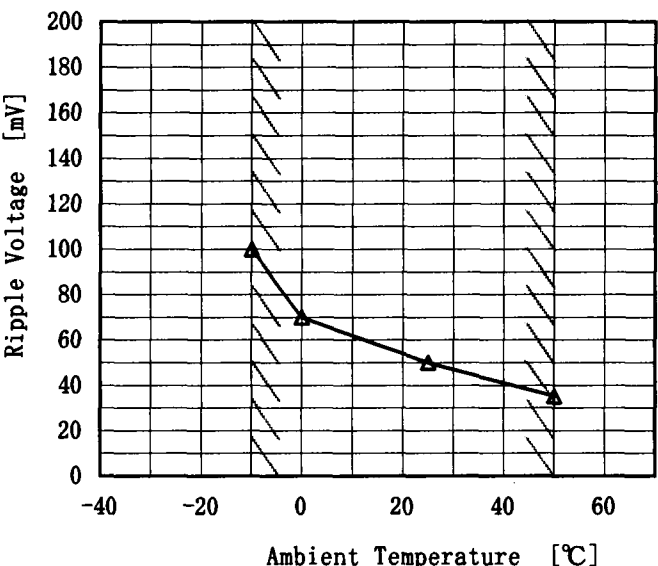
Note: Slanted line shows the range of the rated ambient temperature.

(注) 斜線は定格周囲温度範囲を示す。

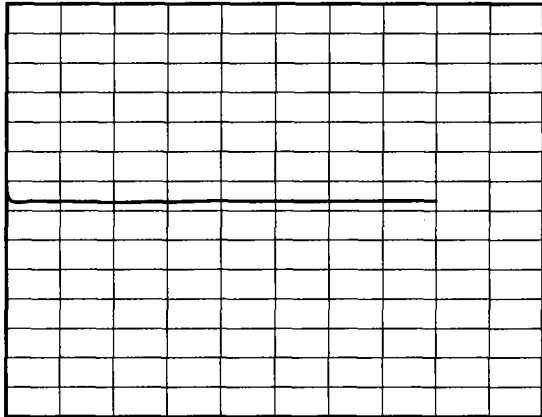
2. Values

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

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Model	ADA750F (ADA750F-36)																												
Item	Ripple Voltage (by Ambient Temp.) リップル電圧 (周囲温度特性)		Testing Circuitry Figure A																										
Object	V1:+36V16.5A																												
1. Graph		2. Values																											
<div><p style="text-align: center;">Ambient Temperature [°C]</p><p>Input Volt. 100 V</p><p>Load 100 %</p></div>		<table><tr><th>Ambient Temperature [°C]</th><th>Ripple Voltage [mV]</th></tr><tr><td>-10</td><td>100</td></tr><tr><td>0</td><td>70</td></tr><tr><td>25</td><td>50</td></tr><tr><td>50</td><td>35</td></tr><tr><td>--</td><td>--</td></tr><tr><td>--</td><td>--</td></tr><tr><td>--</td><td>--</td></tr><tr><td>--</td><td>--</td></tr><tr><td>--</td><td>--</td></tr><tr><td>--</td><td>--</td></tr><tr><td>--</td><td>--</td></tr><tr><td>--</td><td>--</td></tr></table>		Ambient Temperature [°C]	Ripple Voltage [mV]	-10	100	0	70	25	50	50	35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ambient Temperature [°C]	Ripple Voltage [mV]																												
-10	100																												
0	70																												
25	50																												
50	35																												
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Note: Slanted line shows the range of the rated ambient temperature.																													
(注) 斜線は定格周囲温度範囲を示す。																													

COSEL

Model	ADA750F (ADA750F-36)																								
Item	Time Lapse Drift 経時ドリフト	Temperature	25℃																						
		Testing Circuitry	Figure A																						
Object	V1:+36V16.5A																								
1. Graph		2. Values																							
<div><div>Output Voltage [V]</div><div><div>Time [H]</div></div><div><div>Input Volt.</div><div>100V</div></div><div><div>Load</div><div>100%</div></div></div>		<table><tr><th>Time since start [H]</th><th>Output Voltage [V]</th></tr><tr><td>0.0</td><td>36.093</td></tr><tr><td>0.5</td><td>36.066</td></tr><tr><td>1.0</td><td>36.066</td></tr><tr><td>2.0</td><td>36.065</td></tr><tr><td>3.0</td><td>36.065</td></tr><tr><td>4.0</td><td>36.067</td></tr><tr><td>5.0</td><td>36.066</td></tr><tr><td>6.0</td><td>36.066</td></tr><tr><td>7.0</td><td>36.066</td></tr><tr><td>8.0</td><td>36.066</td></tr></table>		Time since start [H]	Output Voltage [V]	0.0	36.093	0.5	36.066	1.0	36.066	2.0	36.065	3.0	36.065	4.0	36.067	5.0	36.066	6.0	36.066	7.0	36.066	8.0	36.066
Time since start [H]	Output Voltage [V]																								
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7.0	36.066																								
8.0	36.066																								

COSEL

		Testing Circuitry Figure A
Model	ADA750F (ADA750F-36)	
Item	Output Voltage Accuracy 定電圧精度	
Object	V1:+36V16.5A	

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 : -10 ~ 50℃

Input Voltage : 85 ~ 132V

Load Current : 0 ~ 16.5A

* Output Voltage Accuracy = $\pm (\text{Maximum of Output Voltage} - \text{Minimum of Output Voltage}) / 2$

* 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 ~ 132V

負荷電流 : 0 ~ 16.5A

* 定電圧精度(変動値) = $\pm (\text{出力電圧の最高値} - \text{出力電圧の最低値}) / 2$

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

2. Values

Item	Temperature [℃]	Input Voltage [V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	-10	85	0	36.138	±28	±0.1
Minimum Voltage	50	85	20.5	36.082		

COSEL

Model	ADA750F (ADA750F-36)		
Item	Leakage Current 漏洩電流	Temperature	25℃
Object		Testing Circuitry	Figure B

1. Results

Standards	Leakage Current [mA]		
	Input Volt.	Input Volt.	Input Volt.
	85 [V]	100 [V]	132 [V]
(A) DEN-AN	0.19	0.22	0.28
(B) IEC60950	0.19	0.22	0.28

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

2. Condition

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

交流入力各相について測定し、その大きい方を漏洩電流測定値とする。

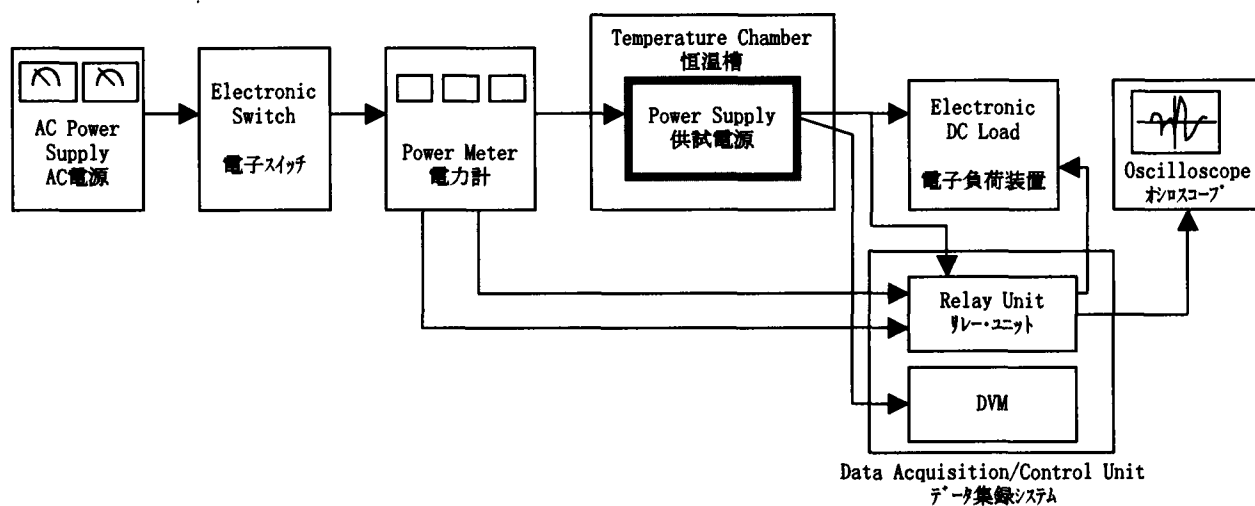


Figure A

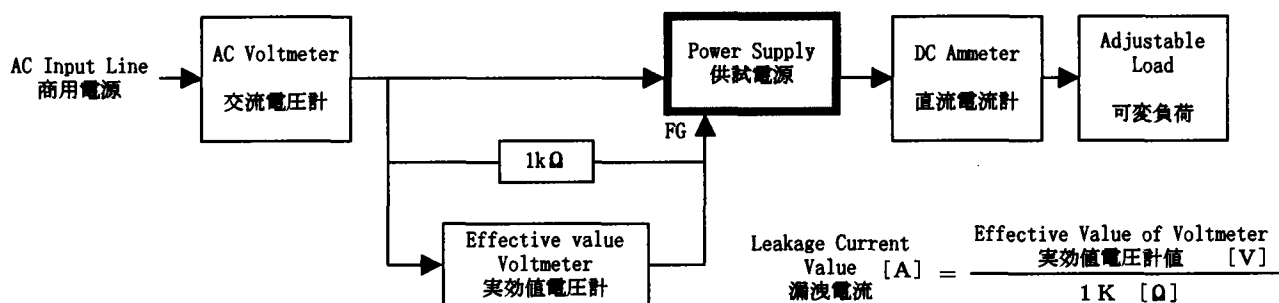


Figure B (DEN-AN)

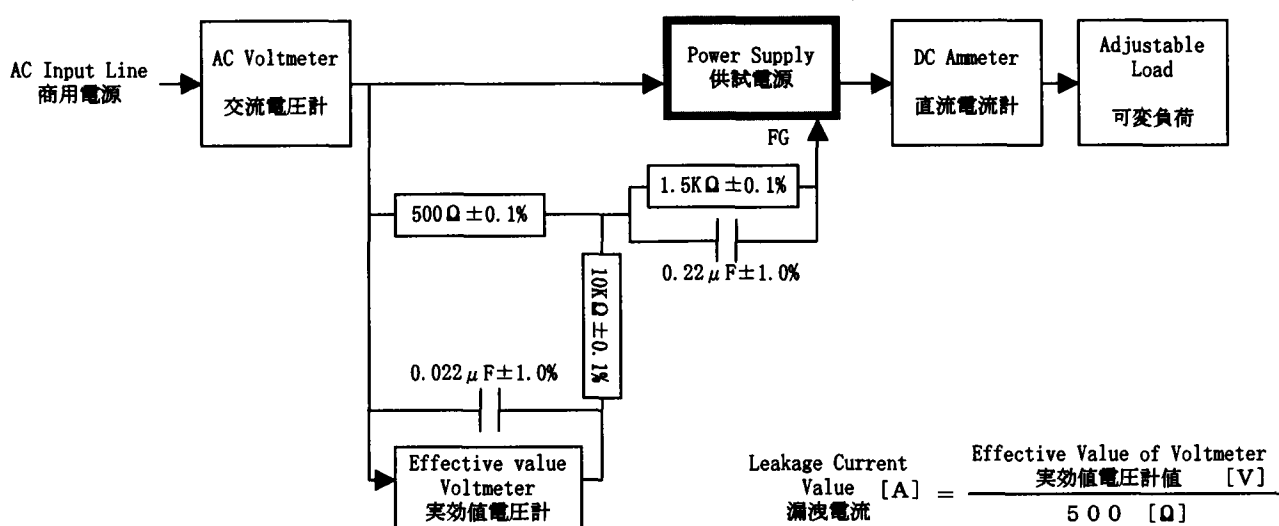


Figure B (IEC60950)