

TEST DATA OF LCA150S-3

Regulated DC Power Supply
Aug.17. 2004

Approved by : *K. Shibutani*
K. Shibutani Design Manager

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COSEL CO.,LTD.



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(Final Page 21)



Model		LCA150S-3		Temperature	25°C																																																			
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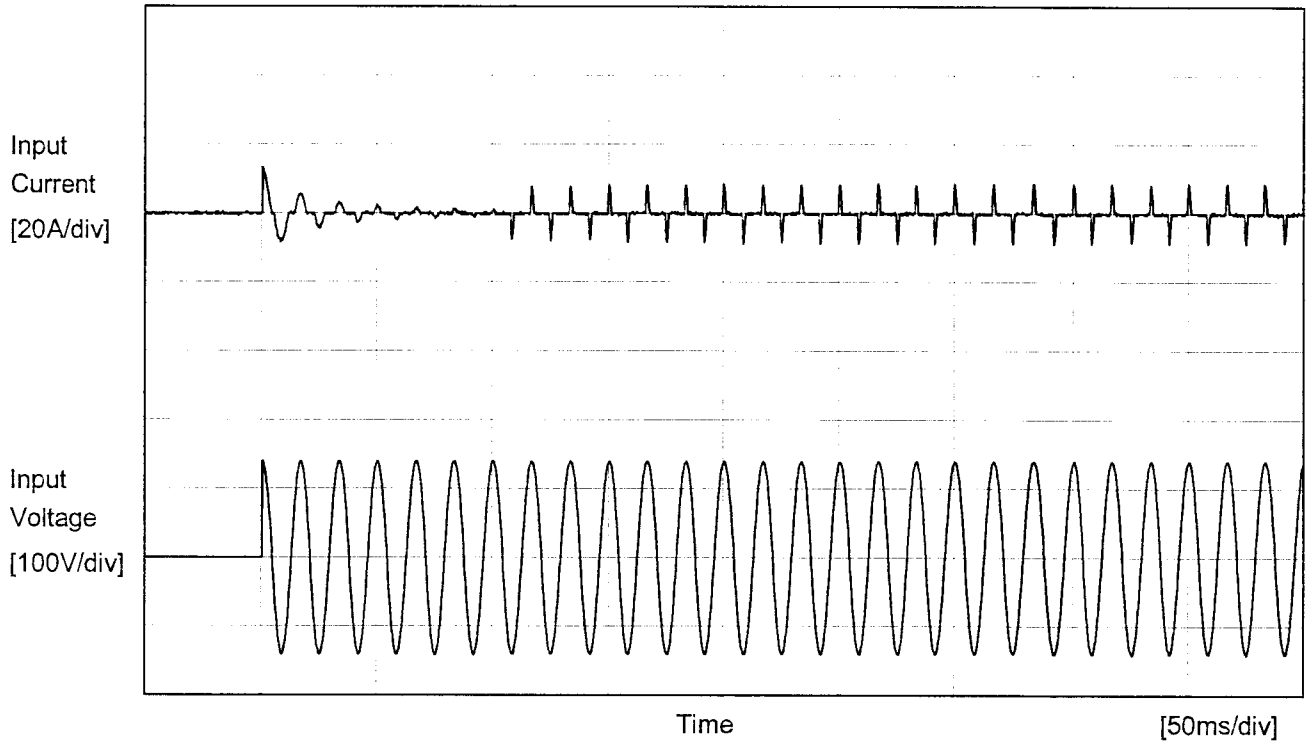
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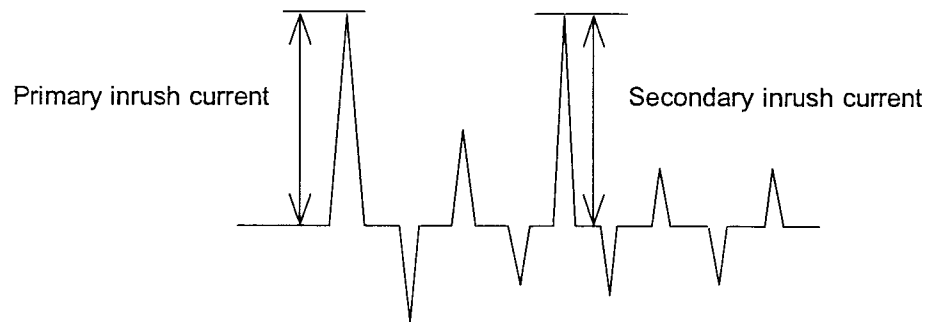


Model		LCA150S-3	Temperature 25°C Testing Circuitry Figure A
Item		Inrush Current	
Object		_____	



Input Voltage 100 V
 Frequency 60 Hz
 Load 100 %

Primary inrush current 13.2 A
 Secondary inrush current 8.8 A





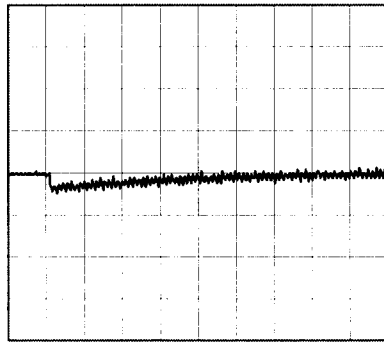
Model	LCA150S-3	Temperature	25°C
Item	Dynamic Load Response 動的負荷変動	Testing Circuitry	Figure A
Object	+3V30A		

Input Volt. 100 V
Cycle 1000 ms

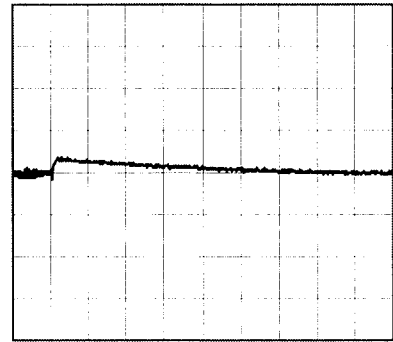
Load Current

Min. Load (0A) ←→
Load 100% (30A)

100 mV/div



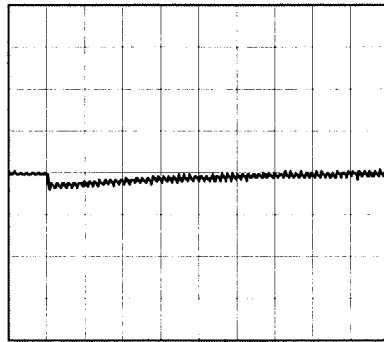
10 ms/div



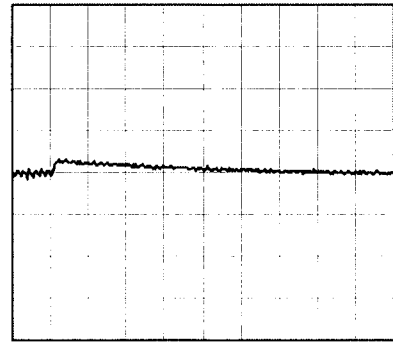
10 ms/div

Min. Load (0A) ←→
Load 50% (15A)

100 mV/div



10 ms/div



10 ms/div



<p>Model LCA150S-3</p>		<p>Temperature 25°C</p>																																							
<p>Item Ripple Voltage (by Load Current)</p>		<p>Testing Circuitry Figure A</p>																																							
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<p>Model LCA150S-3</p> <p>Item Ambient Temperature Drift</p> <p>Object +3V30A</p>		<p>Testing Circuitry Figure A</p>																																																			
<p>1.Graph</p> <p> —△— Input Volt. 85V - - - □ - - - Input Volt. 100V - - - ○ - - - Input Volt. 132V </p> <p>Output Voltage [V]</p> <p>Ambient Temperature [°C]</p> <p>Load 100%</p> <p>Note: Slanted line shows the range of the rated ambient temperature.</p>		<p>2.Values</p> <table border="1"> <thead> <tr> <th rowspan="2">Ambient Temperature [°C]</th> <th colspan="3">Output Voltage [V]</th> </tr> <tr> <th>Input Volt. 85[V]</th> <th>Input Volt. 100[V]</th> <th>Input Volt. 132[V]</th> </tr> </thead> <tbody> <tr><td>-20</td><td>3.050</td><td>3.050</td><td>3.050</td></tr> <tr><td>-10</td><td>3.050</td><td>3.050</td><td>3.051</td></tr> <tr><td>0</td><td>3.050</td><td>3.050</td><td>3.051</td></tr> <tr><td>10</td><td>3.052</td><td>3.050</td><td>3.050</td></tr> <tr><td>25</td><td>3.049</td><td>3.049</td><td>3.050</td></tr> <tr><td>40</td><td>3.048</td><td>3.049</td><td>3.049</td></tr> <tr><td>50</td><td>3.047</td><td>3.048</td><td>3.048</td></tr> <tr><td>60</td><td>3.046</td><td>3.046</td><td>3.046</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> </tbody> </table>	Ambient Temperature [°C]	Output Voltage [V]			Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]	-20	3.050	3.050	3.050	-10	3.050	3.050	3.051	0	3.050	3.050	3.051	10	3.052	3.050	3.050	25	3.049	3.049	3.050	40	3.048	3.049	3.049	50	3.047	3.048	3.048	60	3.046	3.046	3.046	--	-	-	-	--	-	-	-	--	-	-	-
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COSEL		
Model	LCA150S-3	
Item	Output Voltage Accuracy	Testing Circuitry Figure A
Object	+3V30A	

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°C

Input Voltage : 85 - 132V

Load Current : 0 - 30A

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

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

2. Values

Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	-10	132	0	3.050	±2	±0.1
Minimum Voltage	50	85	30	3.047		

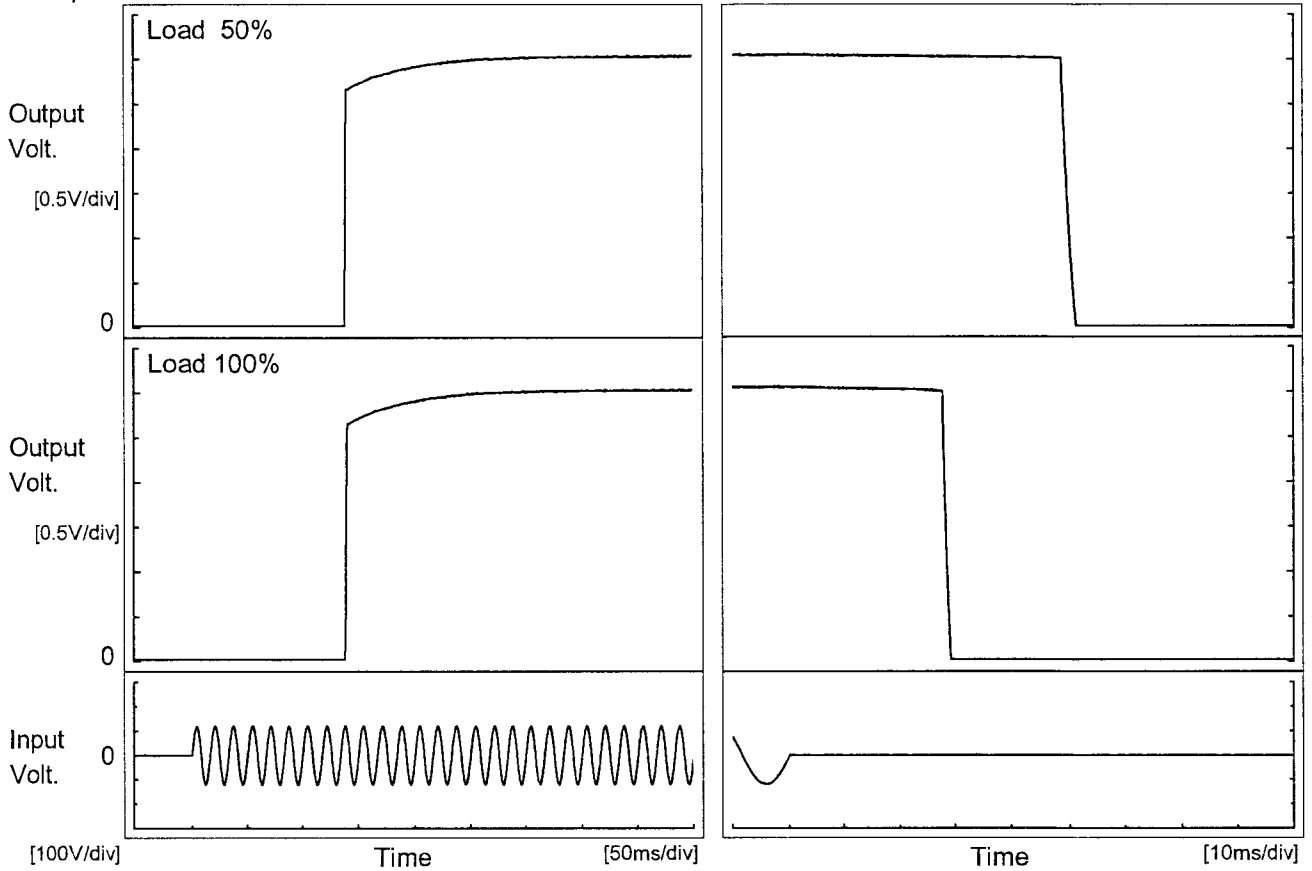


COSEL																								
Model	LCA150S-3	Temperature 25°C																						
Item	Time Lapse Drift	Testing Circuitry Figure A																						
Object	+3V30A																							
<p>1.Graph</p> <p style="text-align: center;">Time [H]</p> <p>Input Volt. 100V Load 100%</p>		<p>2.Values</p> <table border="1"> <thead> <tr> <th>Time since start [H]</th> <th>Output Voltage [V]</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>3.050</td></tr> <tr><td>0.5</td><td>3.049</td></tr> <tr><td>1.0</td><td>3.049</td></tr> <tr><td>2.0</td><td>3.049</td></tr> <tr><td>3.0</td><td>3.049</td></tr> <tr><td>4.0</td><td>3.049</td></tr> <tr><td>5.0</td><td>3.049</td></tr> <tr><td>6.0</td><td>3.049</td></tr> <tr><td>7.0</td><td>3.049</td></tr> <tr><td>8.0</td><td>3.049</td></tr> </tbody> </table>	Time since start [H]	Output Voltage [V]	0.0	3.050	0.5	3.049	1.0	3.049	2.0	3.049	3.0	3.049	4.0	3.049	5.0	3.049	6.0	3.049	7.0	3.049	8.0	3.049
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Model		LCA150S-3	Temperature	25°C
Item		Rise and Fall Time	Testing Circuitry	Figure A
Object		+3V30A		

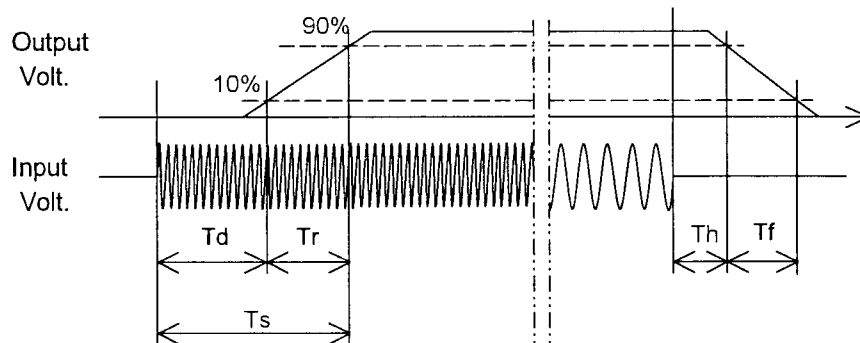
1. Graph



2. Values

Load	Time	Td	Tr	Ts	Th	Tf
50 %		138.0	10.5	148.5	48.7	2.0
100 %		138.3	13.0	151.3	27.8	1.3

[ms]





<p>Model LCA150S-3</p> <p>Item Hold-Up Time</p> <p>Object +3V30A</p>		<p>Temperature 25°C</p> <p>Testing Circuitry Figure A</p>																																
<p>1.Graph</p> <p>---□--- Load 50%</p> <p>—△— Load 100%</p>		<p>2.Values</p> <table border="1"> <thead> <tr> <th rowspan="2">Input Voltage [V]</th> <th colspan="2">Hold-Up Time [ms]</th> </tr> <tr> <th>Load 50%</th> <th>Load 100%</th> </tr> </thead> <tbody> <tr><td>75</td><td>43</td><td>19</td></tr> <tr><td>80</td><td>54</td><td>25</td></tr> <tr><td>85</td><td>66</td><td>30</td></tr> <tr><td>90</td><td>79</td><td>37</td></tr> <tr><td>100</td><td>107</td><td>50</td></tr> <tr><td>110</td><td>137</td><td>65</td></tr> <tr><td>120</td><td>170</td><td>82</td></tr> <tr><td>132</td><td>216</td><td>105</td></tr> <tr><td>140</td><td>248</td><td>121</td></tr> </tbody> </table>	Input Voltage [V]	Hold-Up Time [ms]		Load 50%	Load 100%	75	43	19	80	54	25	85	66	30	90	79	37	100	107	50	110	137	65	120	170	82	132	216	105	140	248	121
Input Voltage [V]	Hold-Up Time [ms]																																	
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<p>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.</p>																																		



Model		LCA150S-3	Temperature 25°C																																																				
Item		Instantaneous Interruption Compensation	Testing Circuitry Figure A																																																				
Object		+3V30A																																																					
1.Graph		<p>—△— Input Volt. 85V</p> <p>- - -□- - - Input Volt. 100V</p> <p>- - -○- - - Input Volt. 132V</p>	2.Values																																																				
Instantaneous Compensation Time [ms]			<table border="1"> <thead> <tr> <th rowspan="2">Load Current [A]</th> <th colspan="3">Time [ms]</th> </tr> <tr> <th>Input Volt. 85[V]</th> <th>Input Volt. 100[V]</th> <th>Input Volt. 132[V]</th> </tr> </thead> <tbody> <tr><td>0</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>6</td><td>164</td><td>256</td><td>507</td></tr> <tr><td>12</td><td>81</td><td>135</td><td>270</td></tr> <tr><td>18</td><td>54</td><td>88</td><td>180</td></tr> <tr><td>24</td><td>39</td><td>64</td><td>132</td></tr> <tr><td>30</td><td>29</td><td>48</td><td>105</td></tr> <tr><td>33</td><td>22</td><td>44</td><td>93</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> </tbody> </table>		Load Current [A]	Time [ms]			Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]	0	-	-	-	6	164	256	507	12	81	135	270	18	54	88	180	24	39	64	132	30	29	48	105	33	22	44	93	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
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Model	LCA150S-3																																							
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Object	+3V30A																																							
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<p>Model LCA150S-3</p>		<p>Temperature 25°C Testing Circuitry Figure A</p>																																																							
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Model		LCA150S-3	Testing Circuitry Figure A																																																			
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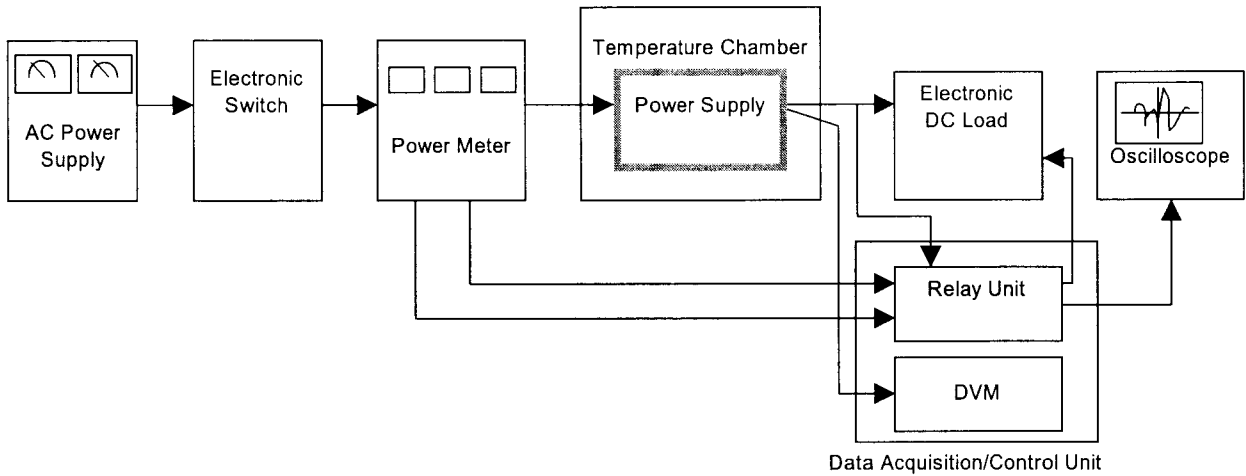


Figure A

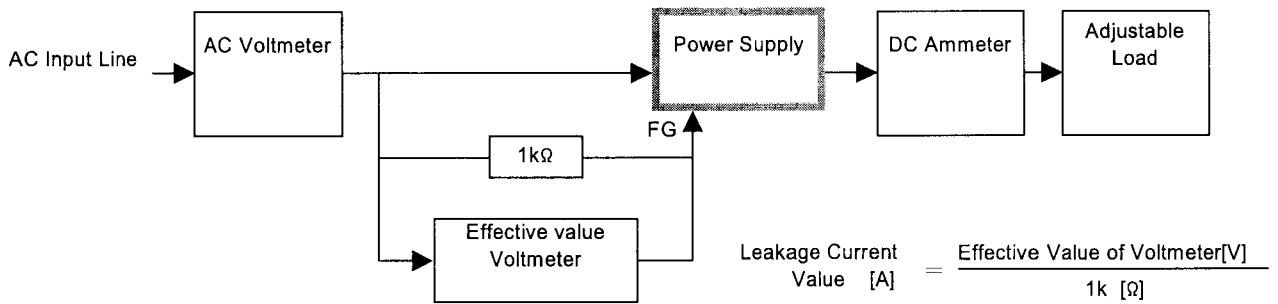


Figure B (DEN-AN)

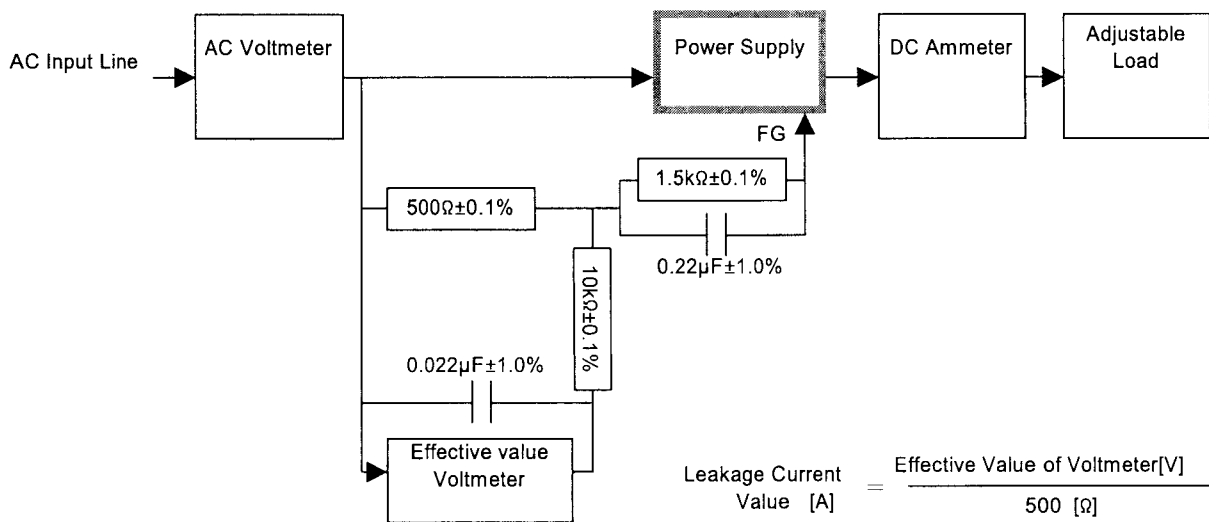


Figure B (IEC60950)