

# TEST DATA OF PLA15F-5

Regulated DC Power Supply  
June 24, 2014

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Prepared by : Yuhei Sugimori Design Engineer

**COSEL CO.,LTD.**

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(Final Page 25)

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Model		PLA15F-5		Temperature 25°C																																																		
Item		Input Current (by Load Current)		Testing Circuitry Figure A																																																		
Object		_____																																																				
1.Graph		<div><div>—△—</div>Input Volt. 100V</div> <div><div>---□---</div>Input Volt. 115V</div> <div><div>- - -○- - -</div>Input Volt. 230V</div>		2.Values																																																		
<div><div>Input Current [A]</div><div><div>Load Current [A]</div></div></div>		<table><tr><th rowspan="2">Load Current [A]</th><th colspan="3">Input Current [A]</th></tr><tr><th>Input Volt. 100[V]</th><th>Input Volt. 115[V]</th><th>Input Volt. 230[V]</th></tr><tr><td>0.0</td><td>0.013</td><td>0.012</td><td>0.010</td></tr><tr><td>0.6</td><td>0.086</td><td>0.080</td><td>0.051</td></tr><tr><td>1.2</td><td>0.146</td><td>0.134</td><td>0.083</td></tr><tr><td>1.8</td><td>0.210</td><td>0.189</td><td>0.117</td></tr><tr><td>2.4</td><td>0.271</td><td>0.243</td><td>0.147</td></tr><tr><td>3.0</td><td>0.335</td><td>0.298</td><td>0.178</td></tr><tr><td>3.3</td><td>-</td><td>0.327</td><td>0.194</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>		Load Current [A]	Input Current [A]			Input Volt. 100[V]	Input Volt. 115[V]	Input Volt. 230[V]	0.0	0.013	0.012	0.010	0.6	0.086	0.080	0.051	1.2	0.146	0.134	0.083	1.8	0.210	0.189	0.117	2.4	0.271	0.243	0.147	3.0	0.335	0.298	0.178	3.3	-	0.327	0.194	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
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# COSEL

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1.Graph		<div><div>—△—</div>Input Volt. 100V</div> <div><div>---□---</div>Input Volt. 115V</div> <div><div>-·-○-·-</div>Input Volt. 230V</div>		2.Values																																																		
<div><div><div>Input Power [W]</div><div><div>Load Current [A]</div></div></div></div>		<table><tr><th rowspan="2">Load Current [A]</th><th colspan="3">Input Power [W]</th></tr><tr><th>Input Volt. 100[V]</th><th>Input Volt. 115[V]</th><th>Input Volt. 230[V]</th></tr><tr><td>0.0</td><td>0.44</td><td>0.45</td><td>0.55</td></tr><tr><td>0.6</td><td>4.36</td><td>4.42</td><td>4.59</td></tr><tr><td>1.2</td><td>8.15</td><td>8.19</td><td>8.19</td></tr><tr><td>1.8</td><td>12.36</td><td>12.26</td><td>12.23</td></tr><tr><td>2.4</td><td>16.50</td><td>16.28</td><td>16.00</td></tr><tr><td>3.0</td><td>20.87</td><td>20.48</td><td>19.94</td></tr><tr><td>3.3</td><td>-</td><td>22.67</td><td>21.91</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>		Load Current [A]	Input Power [W]			Input Volt. 100[V]	Input Volt. 115[V]	Input Volt. 230[V]	0.0	0.44	0.45	0.55	0.6	4.36	4.42	4.59	1.2	8.15	8.19	8.19	1.8	12.36	12.26	12.23	2.4	16.50	16.28	16.00	3.0	20.87	20.48	19.94	3.3	-	22.67	21.91	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
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Note: Slanted line shows the range of the rated load current.																																																						

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Model

PLA15F-5

Item

Efficiency (by Input Voltage)

Object

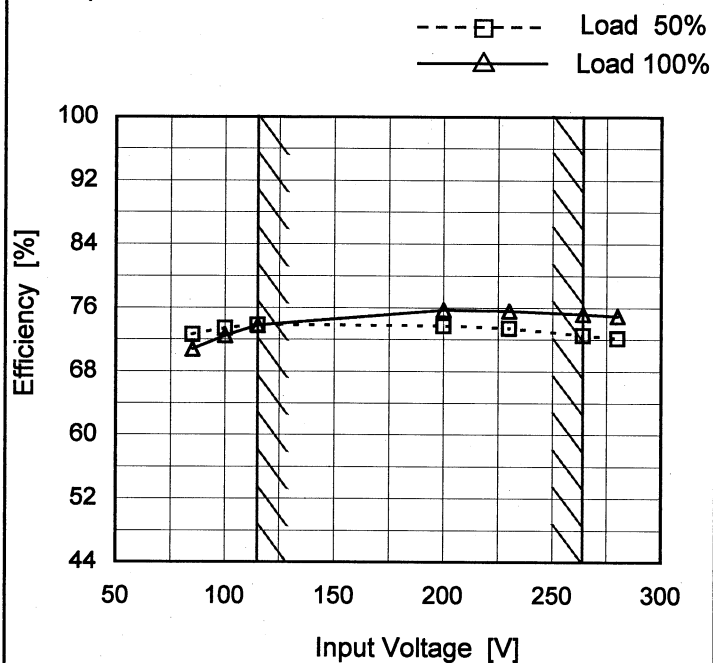
Temperature

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%
85	72.6	70.8 ※1
100	73.4	72.5 ※2
115	73.8	73.8
200	73.7	75.7
230	73.4	75.6
264	72.5	75.2
280	72.1	74.9
--	-	-
--	-	-

※1: Load 80%

※2: Load 90%



Model		PLA15F-5		Temperature Testing Circuitry	25°C Figure A																																																			
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<div><div><div>—△—</div><div>Input Volt.</div><div>100V</div></div><div><div>---□---</div><div>Input Volt.</div><div>115V</div></div><div><div>---○---</div><div>Input Volt.</div><div>230V</div></div></div> <table><thead><tr><th rowspan="2">Load Current [A]</th><th colspan="3">Efficiency [%]</th></tr><tr><th>Input Volt. 100[V]</th><th>Input Volt. 115[V]</th><th>Input Volt. 230[V]</th></tr></thead><tbody><tr><td>0.0</td><td>-</td><td>-</td><td>-</td></tr><tr><td>0.6</td><td>68.8</td><td>67.7</td><td>65.3</td></tr><tr><td>1.2</td><td>73.5</td><td>73.1</td><td>73.1</td></tr><tr><td>1.8</td><td>73.3</td><td>73.9</td><td>74.1</td></tr><tr><td>2.4</td><td>73.0</td><td>74.0</td><td>75.3</td></tr><tr><td>3.0</td><td>72.0</td><td>73.8</td><td>75.6</td></tr><tr><td>3.3</td><td>-</td><td>73.3</td><td>75.5</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]	Efficiency [%]			Input Volt. 100[V]	Input Volt. 115[V]	Input Volt. 230[V]	0.0	-	-	-	0.6	68.8	67.7	65.3	1.2	73.5	73.1	73.1	1.8	73.3	73.9	74.1	2.4	73.0	74.0	75.3	3.0	72.0	73.8	75.6	3.3	-	73.3	75.5	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-		
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Note: Slanted line shows the range of the rated load current.																																																								

**COSEL**

Model		PLA15F-5	
Item		Power Factor (by Input Voltage)	
Object			

1.Graph

---

□

---

Load 50%

—

△

—

Load 100%

Power Factor

0.8

0.7

0.6

0.5

0.4

0.3

0.2

50

100

150

200

250

300

Input Voltage [V]

85

100

115

200

230

264

280

--

--

0.590

0.562

0.539

0.457

0.441

0.421

0.415

-

-

0.643 ※1

0.615 ※2

0.598

0.507

0.486

0.461

0.454

-

-

2.Values

Input Voltage [V]	Power Factor	
	Load 50%	Load 100%
85	0.590	0.643 ※1
100	0.562	0.615 ※2
115	0.539	0.598
200	0.457	0.507
230	0.441	0.486
264	0.421	0.461
280	0.415	0.454
--	-	-
--	-	-

※1:Load 80%

※2:Load 90%

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

# COSEL

Model

PLA15F-5

Item

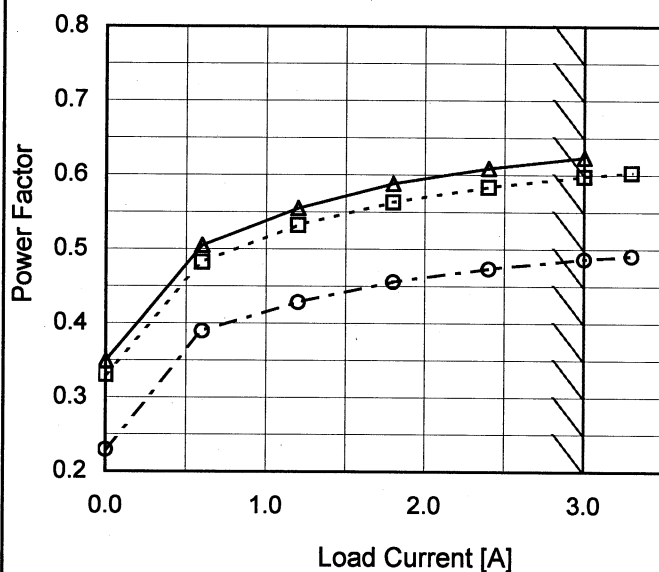
Power Factor (by Load Current)

Object

Temperature 25°C  
Testing Circuitry Figure A

1. Graph

—△— Input Volt. 100V  
---□--- Input Volt. 115V  
---○--- Input Volt. 230V



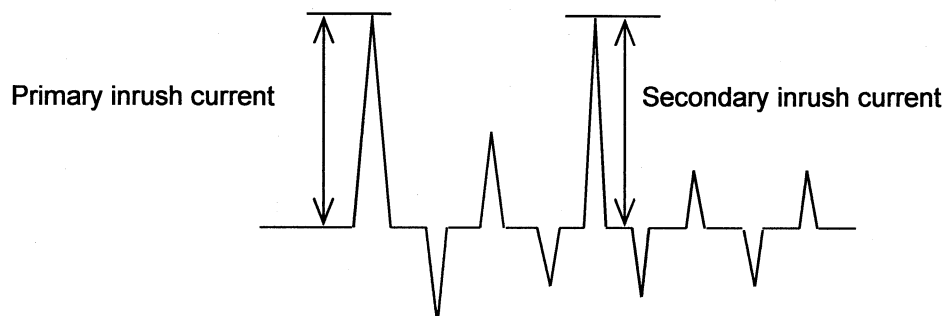
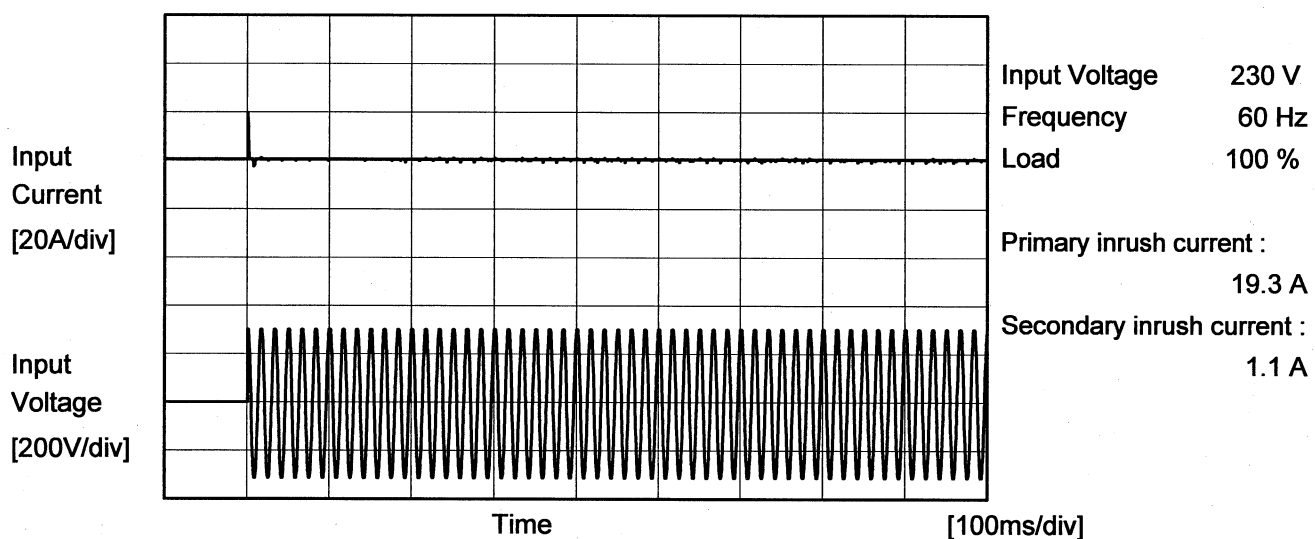
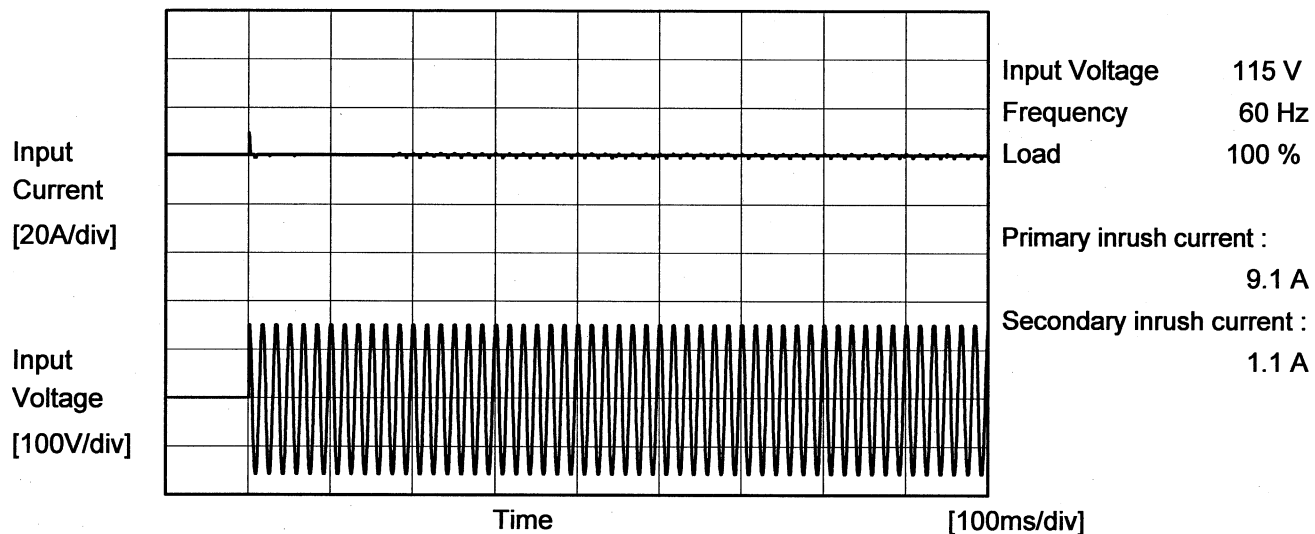
Note: Slanted line shows the range of the rated load current.

2. Values

Load Current [A]	Power Factor		
	Input Volt. 100[V]	Input Volt. 115[V]	Input Volt. 230[V]
0.0	0.349	0.331	0.229
0.6	0.505	0.483	0.390
1.2	0.555	0.532	0.429
1.8	0.589	0.563	0.456
2.4	0.609	0.584	0.474
3.0	0.624	0.598	0.486
3.3	-	0.603	0.491
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

**COSEL**

Model	PLA15F-5	Temperature     25°C Testing Circuitry   Figure A	
Item	Inrush Current		
Object	_____		





Model		PLA15F-5	Temperature 25°C Testing Circuitry Figure B
Item		Leakage Current	
Object		_____	

## 1.Results

[mA]

Standards		Input Volt.			Note
		100 [V]	115 [V]	240 [V]	
DEN-AN	Both phases	0.08	0.09	0.19	Operation
	One of phases	0.14	0.16	0.35	Stand by
IEC60950-1	Both phases	0.09	0.11	0.23	Operation
	One of phases	0.14	0.16	0.33	Stand by

The value for "One of phases" is the reference value only.

## 2.Condition

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



Model		PLA15F-5	
Item		Line Regulation	
Object		+5V3A	

1.Graph

---

□

---

Load 50%

—

△

—

Load 100%

Output Voltage [V]

5.30

5.20

5.10

5.00

4.90

4.80

4.70

4.60

50

100

150

200

250

300

Input Voltage [V]

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

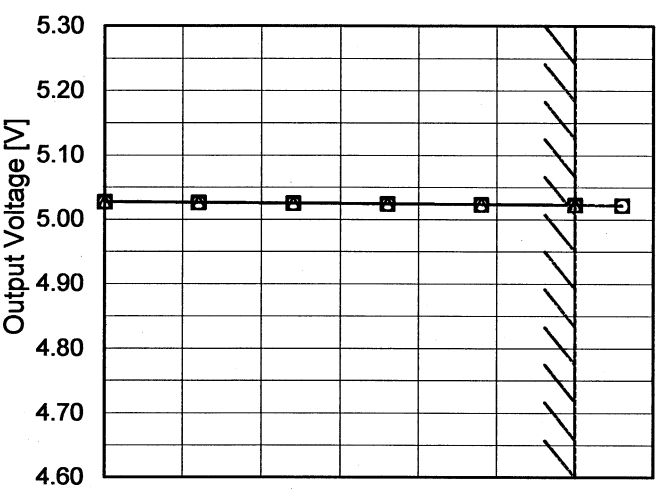
2.Values

Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
85	5.025	5.023 ※1
100	5.025	5.023 ※2
115	5.025	5.023
200	5.025	5.023
230	5.025	5.023
264	5.025	5.022
280	5.025	5.022
—	-	-
—	-	-

※1:Load 80%

※2:Load 90%

# COSEL

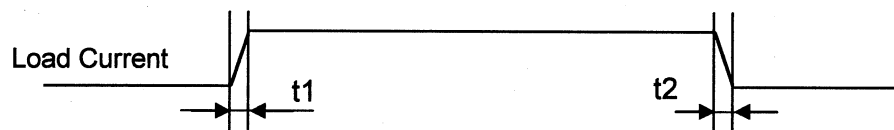
Model		PLA15F-5	Temperature Testing Circuitry	25°C Figure A																																																			
Item		Load Regulation																																																					
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1.Graph		<div><div><div>—△—</div><div>Input Volt.</div><div>100V</div></div><div><div>---□---</div><div>Input Volt.</div><div>115V</div></div><div><div>---○---</div><div>Input Volt.</div><div>230V</div></div></div>  <div>Output Voltage [V]</div> <div>Load Current [A]</div>	2.Values	<table><tr><th rowspan="2">Load Current [A]</th><th colspan="3">Output Voltage [V]</th></tr><tr><th>Input Volt. 100[V]</th><th>Input Volt. 115[V]</th><th>Input Volt. 230[V]</th></tr><tr><td>0.0</td><td>5.028</td><td>5.027</td><td>5.027</td></tr><tr><td>0.6</td><td>5.027</td><td>5.026</td><td>5.026</td></tr><tr><td>1.2</td><td>5.026</td><td>5.025</td><td>5.025</td></tr><tr><td>1.8</td><td>5.025</td><td>5.024</td><td>5.025</td></tr><tr><td>2.4</td><td>5.024</td><td>5.024</td><td>5.024</td></tr><tr><td>3.0</td><td>5.023</td><td>5.023</td><td>5.023</td></tr><tr><td>3.3</td><td>-</td><td>5.022</td><td>5.022</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>	Load Current [A]	Output Voltage [V]			Input Volt. 100[V]	Input Volt. 115[V]	Input Volt. 230[V]	0.0	5.028	5.027	5.027	0.6	5.027	5.026	5.026	1.2	5.026	5.025	5.025	1.8	5.025	5.024	5.025	2.4	5.024	5.024	5.024	3.0	5.023	5.023	5.023	3.3	-	5.022	5.022	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
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# COSEL

Model	PLA15F-5	Temperature	25°C
Item	Dynamic Load Response	Testing Circuitry	Figure A
Object	+5V3A		

Input Volt. 115 V  
Cycle 1000 ms

Response.  $t_1=t_2=50\mu\text{s}$ . Typ



Min. Load (0A)  $\longleftrightarrow$   
Load 100% (3A)

200 mV/div



1 ms/div



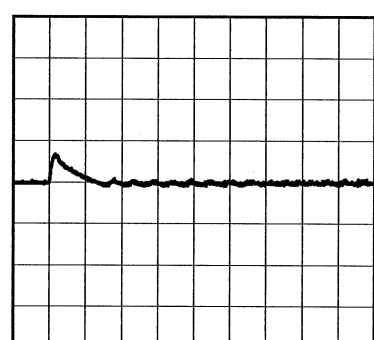
1 ms/div

Min. Load (0A)  $\longleftrightarrow$   
Load 50% (1.5A)

200 mV/div



1 ms/div



1 ms/div

# COSEL

Model		PLA15F-5	Temperature		25°C																																						
Item		Ripple Voltage (by Load Current)	Testing Circuitry		Figure C																																						
Object		+5V3A																																									
1.Graph			2.Values																																								
<div><div><div><div><div></div><div>—△—</div><div>Input Volt. 115V</div></div><div><div>- - ○ - -</div><div>Input Volt. 230V</div></div></div><div><p>Ripple Voltage [mV]</p><p>Load Current [A]</p></div></div><div><p>Measured by 20 MHz Oscilloscope.</p><p>Ripple Voltage is shown as p-p in the figure below.</p><p>Note: Slanted line shows the range of the rated load current.</p></div><div><div><div><div><div></div><div>T1: Due to AC Input Line</div></div><div><div>T2: Due to Switching</div></div></div><div><p>Ripple [mVp-p]</p><p>T1</p><p>T2</p></div></div><div>Fig. Complex Ripple Wave Form</div></div></div>			<table><tr><th rowspan="2">Load Current [A]</th><th colspan="2">Ripple Voltage [mV]</th></tr><tr><th>Input Volt. 115 [V]</th><th>Input Volt. 230 [V]</th></tr><tr><td>0.0</td><td>35</td><td>35</td></tr><tr><td>0.6</td><td>10</td><td>10</td></tr><tr><td>1.2</td><td>10</td><td>10</td></tr><tr><td>1.8</td><td>15</td><td>15</td></tr><tr><td>2.4</td><td>15</td><td>15</td></tr><tr><td>3.0</td><td>15</td><td>15</td></tr><tr><td>3.3</td><td>20</td><td>20</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr></table>			Load Current [A]	Ripple Voltage [mV]		Input Volt. 115 [V]	Input Volt. 230 [V]	0.0	35	35	0.6	10	10	1.2	10	10	1.8	15	15	2.4	15	15	3.0	15	15	3.3	20	20	--	-	-	--	-	-	--	-	-	--	-	-
Load Current [A]	Ripple Voltage [mV]																																										
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3.3	20	20																																									
--	-	-																																									
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--	-	-																																									
--	-	-																																									

# COSEL

Model		PLA15F-5	
Item		Ripple-Noise	
Object		+5V3A	
1.Graph		2.Values	

—△—

Input Volt. 115V

---○---

Input Volt. 230V

Load Current [A]	Input Volt. 115 [V]	Input Volt. 230 [V]
0.0	40	40
0.6	15	15
1.2	15	15
1.8	20	20
2.4	20	20
3.0	20	20
3.3	25	25
--	-	-
--	-	-
--	-	-
--	-	-

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

Ripple-Noise [mVp-p]

Fig. Complex Ripple Wave Form



Model		PLA15F-5	Testing Circuitry    Figure C																																					
Item		Ripple Voltage (by Ambient Temp.)																																						
Object		+5V3A																																						
1.Graph			2.Values																																					
<div><div><div>---□---</div><div>Input Volt.    115V</div></div><div><div>—△—</div><div>Input Volt.    230V</div></div></div> <table><thead><tr><th rowspan="2">Ambient Temperature [°C]</th><th colspan="2">Ripple Voltage [mV]</th></tr><tr><th>Input Volt. 115 [V]</th><th>Input Volt. 230 [V]</th></tr></thead><tbody><tr><td>-30</td><td>85</td><td>75</td></tr><tr><td>-10</td><td>35</td><td>35</td></tr><tr><td>0</td><td>25</td><td>25</td></tr><tr><td>25</td><td>15</td><td>15</td></tr><tr><td>50</td><td>10</td><td>10</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr></tbody></table>				Ambient Temperature [°C]	Ripple Voltage [mV]		Input Volt. 115 [V]	Input Volt. 230 [V]	-30	85	75	-10	35	35	0	25	25	25	15	15	50	10	10	--	-	-	--	-	-	--	-	-	--	-	-	--	-	-	--	-
Ambient Temperature [°C]	Ripple Voltage [mV]																																							
	Input Volt. 115 [V]	Input Volt. 230 [V]																																						
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-10	35	35																																						
0	25	25																																						
25	15	15																																						
50	10	10																																						
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Measured by 20 MHz Oscilloscope.																																								
Note: Slanted line shows the range of the rated ambient temperature.																																								



Model		PLA15F-5																																																				
Item		Ambient Temperature Drift																																																				
Object		+5V3A																																																				
1.Graph		<div><div><div>—△—</div>Input Volt. 100V</div><div><div>---□---</div>Input Volt. 115V</div><div><div>---○---</div>Input Volt. 230V</div></div> <p>Output Voltage [V]</p> <p>Ambient Temperature [°C]</p> <p>Note: Slanted line shows the range of the rated ambient temperature.</p>																																																				
2.Values		<table><tr><th rowspan="2">Ambient Temperature [°C]</th><th colspan="3">Output Voltage [V]</th></tr><tr><th>Input Volt. 100[V]</th><th>Input Volt. 115[V]</th><th>Input Volt. 230[V]</th></tr><tr><td>-20</td><td>5.029</td><td>5.028</td><td>5.028</td></tr><tr><td>-10</td><td>5.028</td><td>5.027</td><td>5.027</td></tr><tr><td>0</td><td>5.025</td><td>5.024</td><td>5.024</td></tr><tr><td>10</td><td>5.024</td><td>5.024</td><td>5.024</td></tr><tr><td>20</td><td>5.024</td><td>5.023</td><td>5.023</td></tr><tr><td>25</td><td>5.023</td><td>5.023</td><td>5.023</td></tr><tr><td>30</td><td>5.021</td><td>5.021</td><td>5.021</td></tr><tr><td>40</td><td>5.017</td><td>5.016</td><td>5.016</td></tr><tr><td>50</td><td>5.015</td><td>5.014</td><td>5.014</td></tr><tr><td>60</td><td>5.011</td><td>5.010</td><td>5.010</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr></table> <p>Note: In case of Input Volt. 100V, Load 90%. Other case Load 100%.</p>		Ambient Temperature [°C]	Output Voltage [V]			Input Volt. 100[V]	Input Volt. 115[V]	Input Volt. 230[V]	-20	5.029	5.028	5.028	-10	5.028	5.027	5.027	0	5.025	5.024	5.024	10	5.024	5.024	5.024	20	5.024	5.023	5.023	25	5.023	5.023	5.023	30	5.021	5.021	5.021	40	5.017	5.016	5.016	50	5.015	5.014	5.014	60	5.011	5.010	5.010	--	-	-	-
Ambient Temperature [°C]	Output Voltage [V]																																																					
	Input Volt. 100[V]	Input Volt. 115[V]	Input Volt. 230[V]																																																			
-20	5.029	5.028	5.028																																																			
-10	5.028	5.027	5.027																																																			
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10	5.024	5.024	5.024																																																			
20	5.024	5.023	5.023																																																			
25	5.023	5.023	5.023																																																			
30	5.021	5.021	5.021																																																			
40	5.017	5.016	5.016																																																			
50	5.015	5.014	5.014																																																			
60	5.011	5.010	5.010																																																			
--	-	-	-																																																			

**COSEL**

Model		PLA15F-5	Testing Circuitry Figure A
Item		Output Voltage Accuracy	
Object		+5V3A	

### 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 : 115 - 264V

Load Current : 0 - 3A

\* 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	264	0	5.034	±12	±0.2
Minimum Voltage	50	264	3	5.010		



Model		PLA15F-5	
Item		Time Lapse Drift	
Object		+5V3A	

1.Graph

5.30

5.20

5.10

5.00

4.90

4.80

4.70

4.60

0

2

4

6

8

10

Output Voltage [V]

Time [H]

Input Volt.230V

Load100%

2.Values

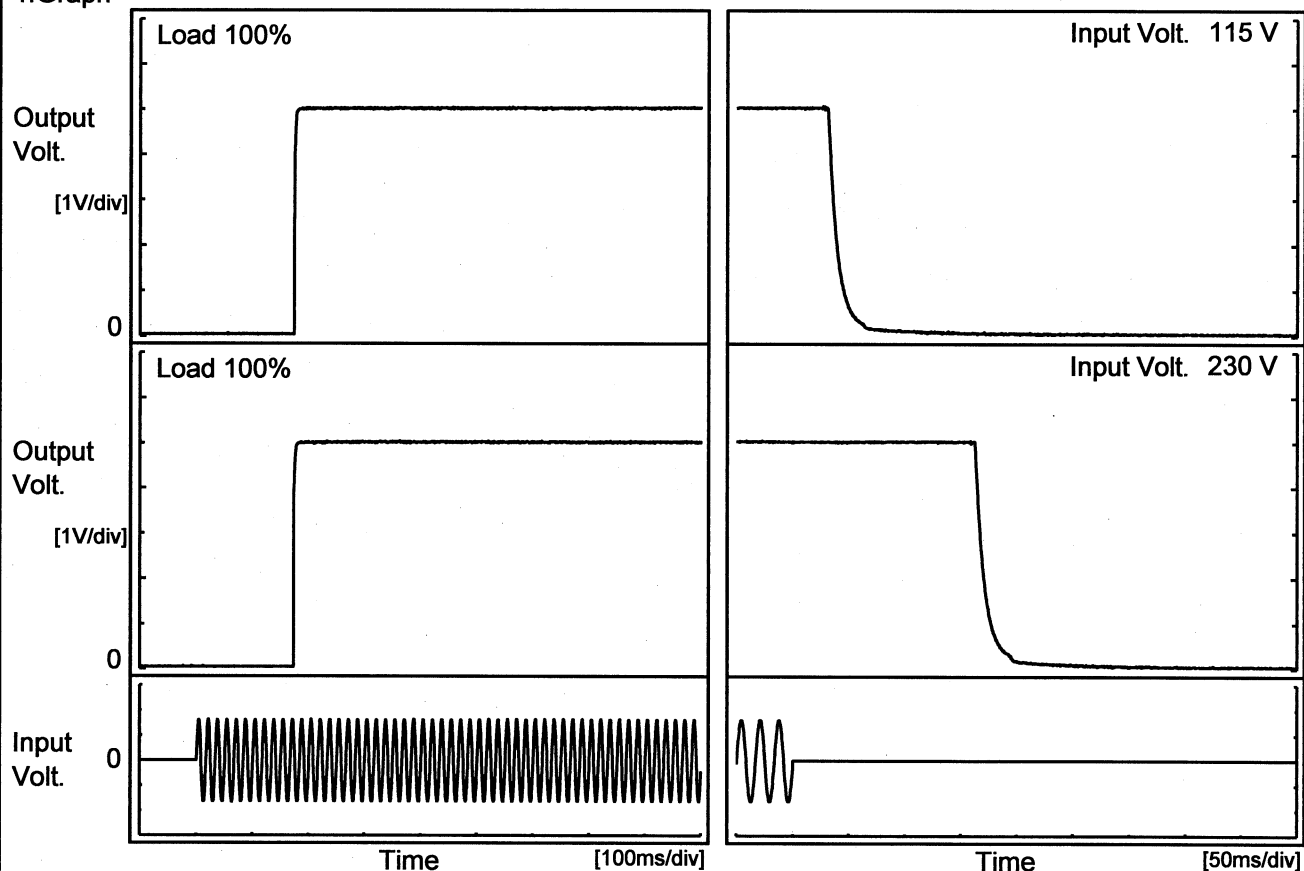
Time since start [H]	Output Voltage [V]
0.0	5.023
0.5	5.024
1.0	5.023
2.0	5.024
3.0	5.024
4.0	5.024
5.0	5.024
6.0	5.024
7.0	5.024
8.0	5.024

\* The characteristic of AC115V is equal.

# COSEL

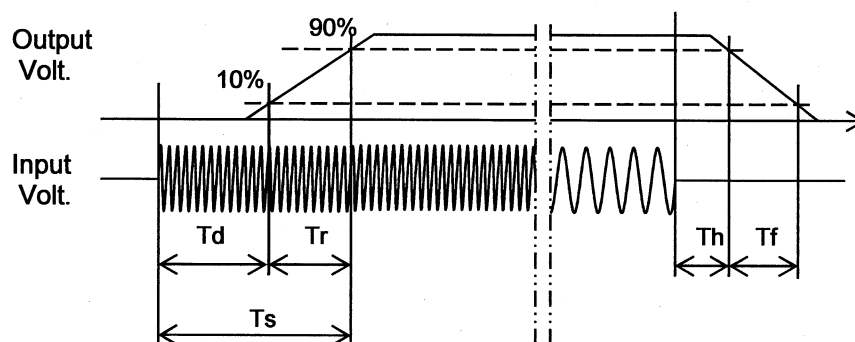
Model	PLA15F-5	Temperature 25°C Testing Circuitry Figure A
Item	Rise and Fall Time	
Object	+5V3A	

## 1. Graph



## 2. Values

		[ms]				
Input Volt.	Time	Td	Tr	Ts	Th	Tf
115 V		174.0	2.0	176.0	32.3	19.8
230 V		173.0	2.0	175.0	163.8	20.8



# COSEL

Model		PLA15F-5	Temperature 25°C Testing Circuitry Figure A																																
Item		Hold-Up Time																																	
Object		+5V3A																																	
1.Graph			2.Values																																
<div><div><div><div>Hold-Up Time [ms]</div><div><div>1000</div><div>100</div><div>10</div><div>1</div></div></div><div><div>50</div><div>100</div><div>150</div><div>200</div><div>250</div><div>300</div></div><div>Input Voltage [V]</div></div><div><div><div>---</div><div>□</div><div>---</div><div>Load 50%</div></div><div><div>---</div><div>△</div><div>---</div><div>Load 100%</div></div></div></div>																																			
<div>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.</div>																																			
			<table><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><tr><td>85</td><td>34</td><td>20 ※1</td></tr><tr><td>100</td><td>51</td><td>25 ※2</td></tr><tr><td>115</td><td>71</td><td>32</td></tr><tr><td>200</td><td>246</td><td>120</td></tr><tr><td>230</td><td>332</td><td>167</td></tr><tr><td>264</td><td>445</td><td>222</td></tr><tr><td>280</td><td>507</td><td>253</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr></table> <div>※1: Load 80% ※2: Load 90%</div>	Input Voltage [V]	Hold-Up Time [ms]		Load 50%	Load 100%	85	34	20 ※1	100	51	25 ※2	115	71	32	200	246	120	230	332	167	264	445	222	280	507	253	--	-	-	--	-	-
Input Voltage [V]	Hold-Up Time [ms]																																		
	Load 50%	Load 100%																																	
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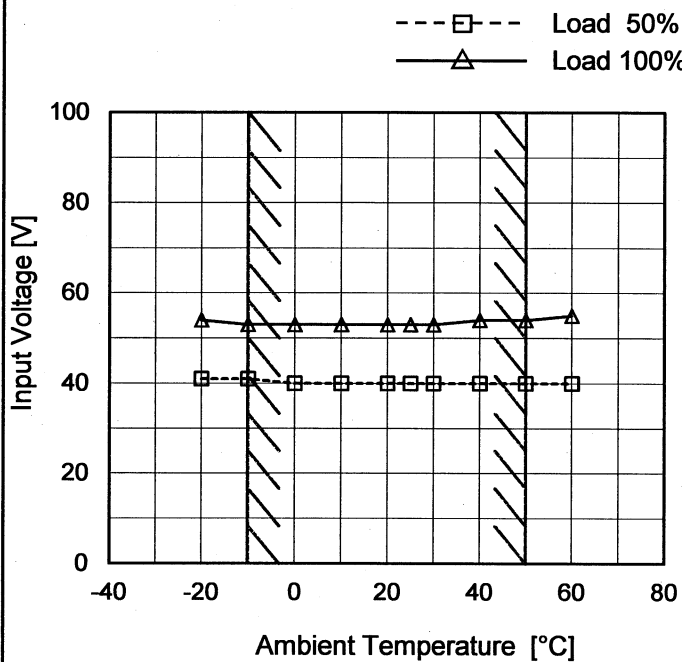
**COSEL**

Model		PLA15F-5		Temperature 25°C Testing Circuitry Figure A																																																
Item		Instantaneous Interruption Compensation																																																		
Object		+5V3A																																																		
1.Graph																																																				
		—△—	Input Volt. 100V	2.Values																																																
		---□---	Input Volt. 115V																																																	
		-○-	Input Volt. 230V																																																	
<div><div>Instantaneous Compensation Time [ms]</div><div><table><thead><tr><th>Load Current [A]</th><th>100V [ms]</th><th>115V [ms]</th><th>230V [ms]</th></tr></thead><tbody><tr><td>0.0</td><td>-</td><td>-</td><td>-</td></tr><tr><td>0.6</td><td>129</td><td>177</td><td>761</td></tr><tr><td>1.2</td><td>65</td><td>91</td><td>417</td></tr><tr><td>1.8</td><td>42</td><td>60</td><td>285</td></tr><tr><td>2.4</td><td>30</td><td>43</td><td>212</td></tr><tr><td>3.0</td><td>22</td><td>32</td><td>167</td></tr><tr><td>3.3</td><td>-</td><td>29</td><td>151</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></div><div>Load Current [A]</div></div> <div>Note: Slanted line shows the range of the rated load current.</div>					Load Current [A]	100V [ms]	115V [ms]	230V [ms]	0.0	-	-	-	0.6	129	177	761	1.2	65	91	417	1.8	42	60	285	2.4	30	43	212	3.0	22	32	167	3.3	-	29	151	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
Load Current [A]	100V [ms]	115V [ms]	230V [ms]																																																	
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Model	PLA15F-5
Item	Minimum Input Voltage for Regulated Output Voltage
Object	+5V3A

#### 1. Graph



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

#### Testing Circuitry Figure A

#### 2. Values

Ambient Temperature [°C]	Input Voltage [V]	
	Load 50%	Load 100%
-20	41	54
-10	41	53
0	40	53
10	40	53
20	40	53
25	40	53
30	40	53
40	40	54
50	40	54
60	40	55
—	-	-

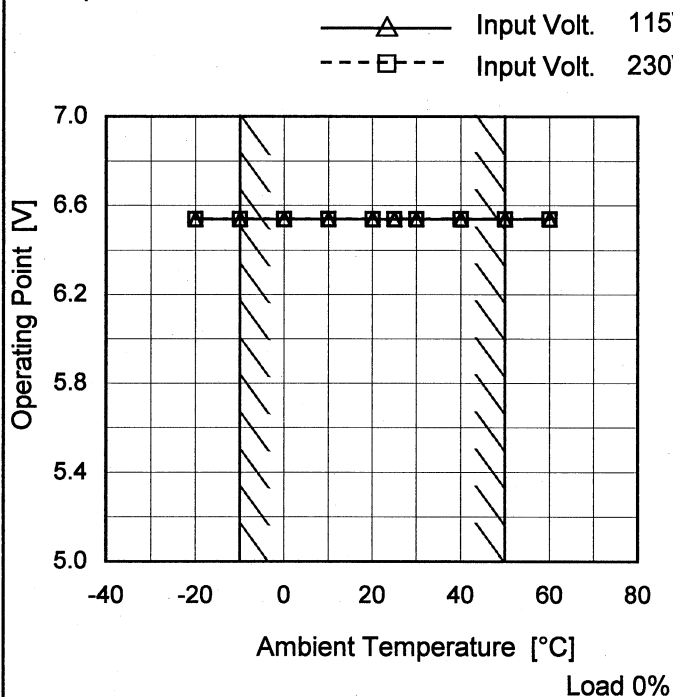


Model		PLA15F-5	Temperature 25°C Testing Circuitry Figure A																																								
Item		Overcurrent Protection																																									
Object		+5V3A																																									
1.Graph			2.Values																																								
<div><div><div><div></div><div>Input Volt. 115V</div></div><div><div></div><div>Input Volt. 230V</div></div></div><p>Note: Slanted line shows the range of the rated load current.</p><p>Intermittent operation occurs when the output voltage is less than rated output voltage.</p></div>																																											
<table><tr><th rowspan="2">Output Voltage [V]</th><th colspan="2">Load Current [A]</th></tr><tr><th>Input Volt. 115[V]</th><th>Input Volt. 230[V]</th></tr><tr><td>5.00</td><td>4.94</td><td>6.34</td></tr><tr><td>4.75</td><td>-</td><td>-</td></tr><tr><td>4.50</td><td>-</td><td>-</td></tr><tr><td>4.00</td><td>-</td><td>-</td></tr><tr><td>3.50</td><td>-</td><td>-</td></tr><tr><td>3.00</td><td>-</td><td>-</td></tr><tr><td>2.50</td><td>-</td><td>-</td></tr><tr><td>2.00</td><td>-</td><td>-</td></tr><tr><td>1.50</td><td>-</td><td>-</td></tr><tr><td>1.00</td><td>-</td><td>-</td></tr><tr><td>0.50</td><td>-</td><td>-</td></tr><tr><td>0.00</td><td>-</td><td>-</td></tr></table>			Output Voltage [V]	Load Current [A]		Input Volt. 115[V]	Input Volt. 230[V]	5.00	4.94	6.34	4.75	-	-	4.50	-	-	4.00	-	-	3.50	-	-	3.00	-	-	2.50	-	-	2.00	-	-	1.50	-	-	1.00	-	-	0.50	-	-	0.00	-	-
Output Voltage [V]	Load Current [A]																																										
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0.50	-	-																																									
0.00	-	-																																									



Model	PLA15F-5
Item	Overvoltage Protection
Object	+5V3A

#### 1. Graph



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

#### Testing Circuitry Figure A

#### 2. Values

Ambient Temperature [°C]	Operating Point [V]	
	Input Volt. 115[V]	Input Volt. 230[V]
-20	6.54	6.54
-10	6.54	6.54
0	6.54	6.54
10	6.54	6.54
20	6.54	6.54
25	6.54	6.54
30	6.54	6.54
40	6.54	6.54
50	6.54	6.54
60	6.54	6.54
--	-	-

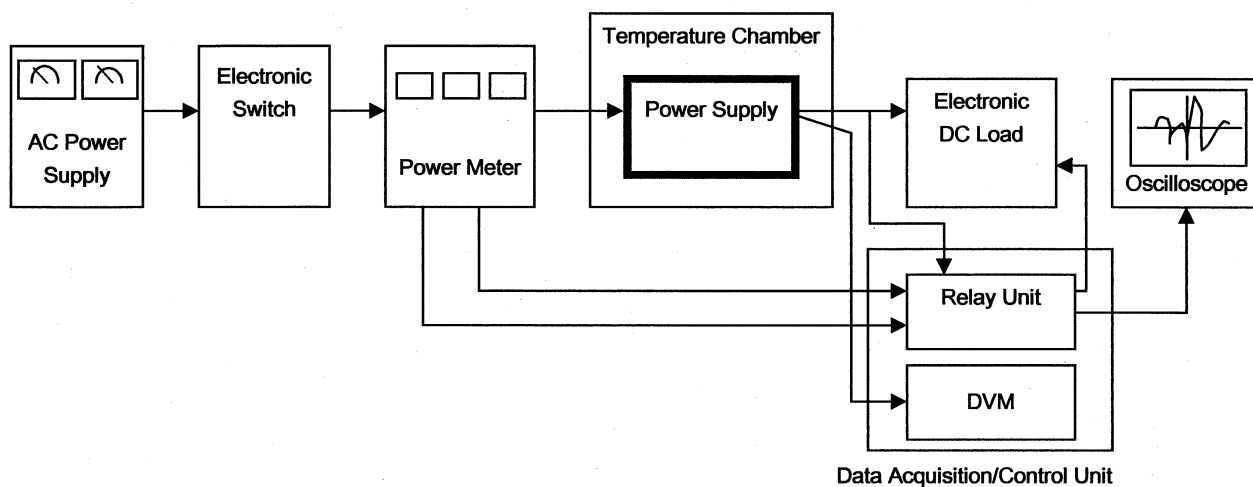


Figure A

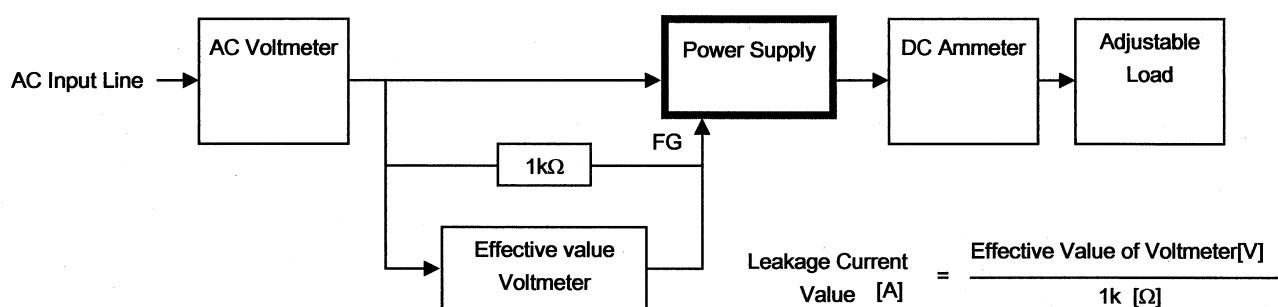


Figure B ( DEN-AN )

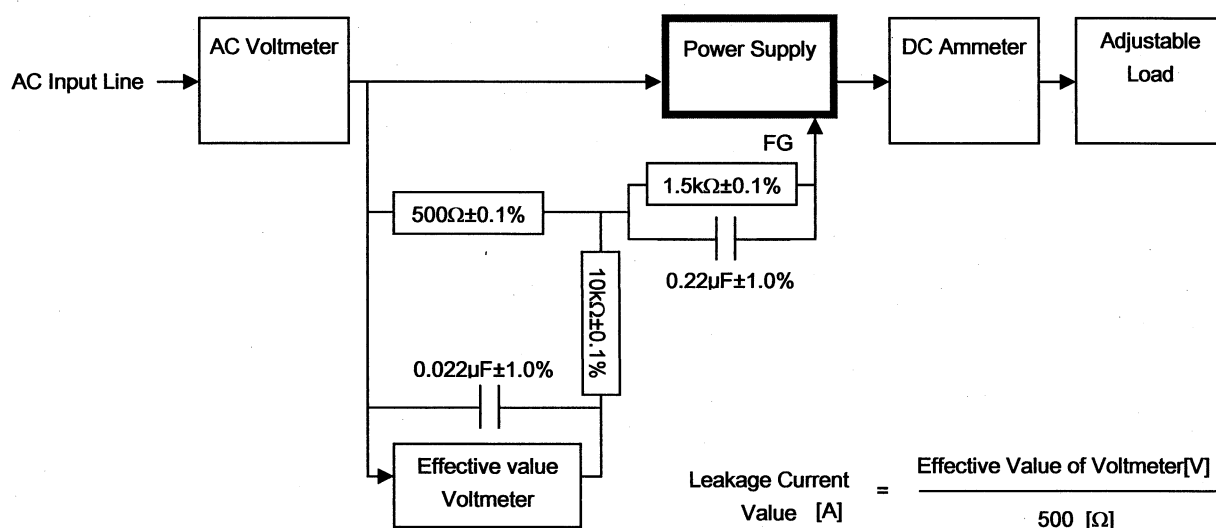


Figure B ( IEC60950-1 )

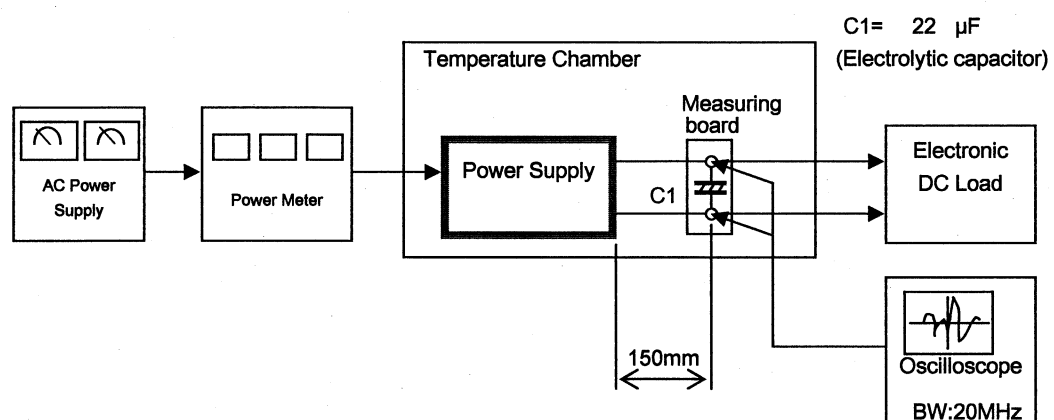


Figure C