

TEST DATA OF KHNA30F-5

Regulated DC Power Supply
April 28, 2014

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COSEL CO.,LTD.

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(Final Page 25)



Model

KHNA30F-5

Item

Input Current (by Load Current)

Object

1.Graph

—△—

Input Volt. 100V

---□---

Input Volt. 115V

---○---

Input Volt. 230V

Input Current [A]

1.0

0.8

0.6

0.4

0.2

0.0

0

2

4

6

Load Current [A]

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

2.Values

Load Current [A]	Input Current [A]		
	Input Volt. 100[V]	Input Volt. 115[V]	Input Volt. 230[V]
0.00	0.015	0.015	0.020
0.25	0.051	0.048	0.037
0.50	0.079	0.072	0.052
0.75	0.106	0.097	0.067
1.00	0.131	0.119	0.081
1.50	0.180	0.163	0.106
2.00	0.230	0.208	0.132
2.50	0.278	0.251	0.157
4.00	0.424	0.380	0.230
5.00	0.526	0.469	0.280
5.50	0.579	0.516	0.305

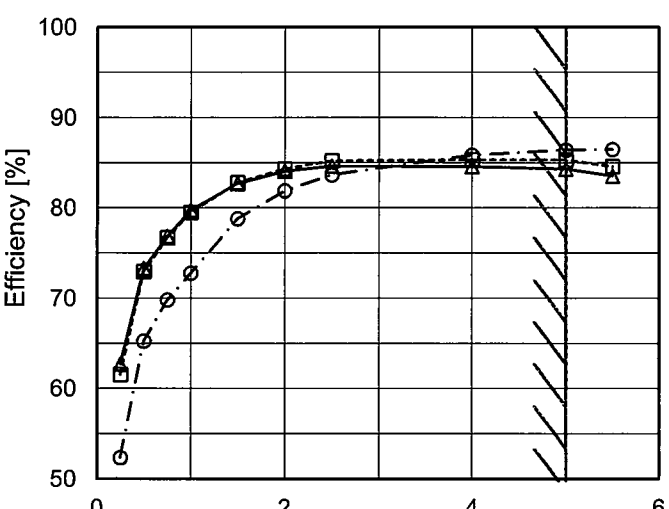
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Model		KHNA30F-5																																																				
Item		Input Power (by Load Current)																																																				
Object																																																						
1.Graph		2.Values																																																				
<div><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><p>Input Power [W]</p><p>Load Current [A]</p><p>Note: Slanted line shows the range of the rated load current.</p></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>0.00</td><td>0.42</td><td>0.44</td><td>0.51</td></tr><tr><td>0.25</td><td>2.02</td><td>2.06</td><td>2.42</td></tr><tr><td>0.50</td><td>3.45</td><td>3.47</td><td>3.88</td></tr><tr><td>0.75</td><td>4.94</td><td>4.95</td><td>5.44</td></tr><tr><td>1.00</td><td>6.35</td><td>6.37</td><td>6.96</td></tr><tr><td>1.50</td><td>9.19</td><td>9.18</td><td>9.65</td></tr><tr><td>2.00</td><td>12.15</td><td>12.12</td><td>12.48</td></tr><tr><td>2.50</td><td>15.06</td><td>14.99</td><td>15.24</td></tr><tr><td>4.00</td><td>24.05</td><td>23.84</td><td>23.70</td></tr><tr><td>5.00</td><td>30.24</td><td>29.90</td><td>29.40</td></tr><tr><td>5.50</td><td>33.44</td><td>33.03</td><td>32.30</td></tr></table>		Load Current [A]	Input Power [W]			Input Volt. 100[V]	Input Volt. 115[V]	Input Volt. 230[V]	0.00	0.42	0.44	0.51	0.25	2.02	2.06	2.42	0.50	3.45	3.47	3.88	0.75	4.94	4.95	5.44	1.00	6.35	6.37	6.96	1.50	9.19	9.18	9.65	2.00	12.15	12.12	12.48	2.50	15.06	14.99	15.24	4.00	24.05	23.84	23.70	5.00	30.24	29.90	29.40	5.50	33.44	33.03	32.30
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Model		KHNA30F-5		Temperature		25°C	
Item		Efficiency (by Input Voltage)		Testing Circuitry		Figure A	
Object							
1.Graph				2.Values			
<div><div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div>Load 50%</div><div>Load 100%</div></div> 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Model		KHNA30F-5		
Item		Efficiency (by Load Current)		
Object				
1.Graph				
		—△—	Input Volt. 100V	
		---□---	Input Volt. 115V	
		-·-○-·-	Input Volt. 230V	
				
Note: Slanted line shows the range of the rated load current.				
2.Values				
		Efficiency [%]		
Load Current [A]		Input Volt. 100[V]	Input Volt. 115[V]	Input Volt. 230[V]
0.00		-	-	-
0.25		62.7	61.6	52.3
0.50		73.3	73.0	65.3
0.75		76.9	76.7	69.8
1.00		79.7	79.5	72.8
1.50		82.7	82.8	78.8
2.00		84.1	84.3	81.9
2.50		84.6	85.2	83.7
4.00		84.6	85.3	85.8
5.00		84.3	85.3	86.4
5.50		83.5	84.6	86.5

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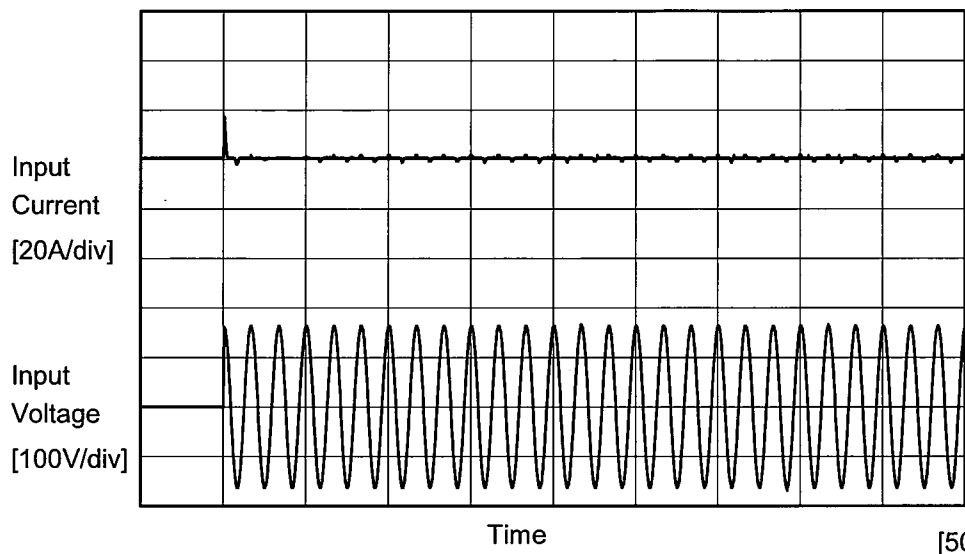
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Item	Power Factor (by Input Voltage)		Temperature 25°C																														
Object			Testing Circuitry Figure A																														
1.Graph		2.Values																															
<div><div><div><div>---</div><div>□</div><div>---</div></div><div>Load 50%</div></div><div><div>---</div><div>△</div><div>---</div></div><div>Load 100%</div></div> <table><thead><tr><th>Input Voltage [V]</th><th>Load 50%</th><th>Load 100%</th></tr></thead><tbody><tr><td>80</td><td>0.572</td><td>0.608</td></tr><tr><td>85</td><td>0.560</td><td>0.594</td></tr><tr><td>90</td><td>0.550</td><td>0.583</td></tr><tr><td>100</td><td>0.541</td><td>0.575</td></tr><tr><td>115</td><td>0.519</td><td>0.554</td></tr><tr><td>200</td><td>0.435</td><td>0.465</td></tr><tr><td>230</td><td>0.417</td><td>0.452</td></tr><tr><td>264</td><td>0.401</td><td>0.430</td></tr><tr><td>280</td><td>0.394</td><td>0.425</td></tr></tbody></table>		Input Voltage [V]	Load 50%	Load 100%	80	0.572	0.608	85	0.560	0.594	90	0.550	0.583	100	0.541	0.575	115	0.519	0.554	200	0.435	0.465	230	0.417	0.452	264	0.401	0.430	280	0.394	0.425		
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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><div>Power Factor</div><div>1.0</div><div>0.8</div><div>0.6</div><div>0.4</div><div>0.2</div><div>0.0</div></div><div><div>0</div><div>2</div><div>4</div><div>6</div></div><div><div>Load Current [A]</div></div></div>		<table><tr><th rowspan="2">Load Current [A]</th><th colspan="3">Power Factor</th></tr><tr><th>Input Volt. 100[V]</th><th>Input Volt. 115[V]</th><th>Input Volt. 230[V]</th></tr><tr><td>0.00</td><td>0.274</td><td>0.250</td><td>0.112</td></tr><tr><td>0.25</td><td>0.400</td><td>0.377</td><td>0.282</td></tr><tr><td>0.50</td><td>0.439</td><td>0.418</td><td>0.326</td></tr><tr><td>0.75</td><td>0.466</td><td>0.444</td><td>0.353</td></tr><tr><td>1.00</td><td>0.485</td><td>0.464</td><td>0.372</td></tr><tr><td>1.50</td><td>0.511</td><td>0.489</td><td>0.395</td></tr><tr><td>2.00</td><td>0.529</td><td>0.508</td><td>0.411</td></tr><tr><td>2.50</td><td>0.541</td><td>0.519</td><td>0.417</td></tr><tr><td>4.00</td><td>0.568</td><td>0.546</td><td>0.449</td></tr><tr><td>5.00</td><td>0.575</td><td>0.554</td><td>0.452</td></tr><tr><td>5.50</td><td>0.578</td><td>0.556</td><td>0.460</td></tr></table>		Load Current [A]	Power Factor			Input Volt. 100[V]	Input Volt. 115[V]	Input Volt. 230[V]	0.00	0.274	0.250	0.112	0.25	0.400	0.377	0.282	0.50	0.439	0.418	0.326	0.75	0.466	0.444	0.353	1.00	0.485	0.464	0.372	1.50	0.511	0.489	0.395	2.00	0.529	0.508	0.411	2.50	0.541	0.519	0.417	4.00	0.568	0.546	0.449	5.00	0.575	0.554	0.452	5.50	0.578	0.556	0.460
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Note: Slanted line shows the range of the rated load current.																																																						

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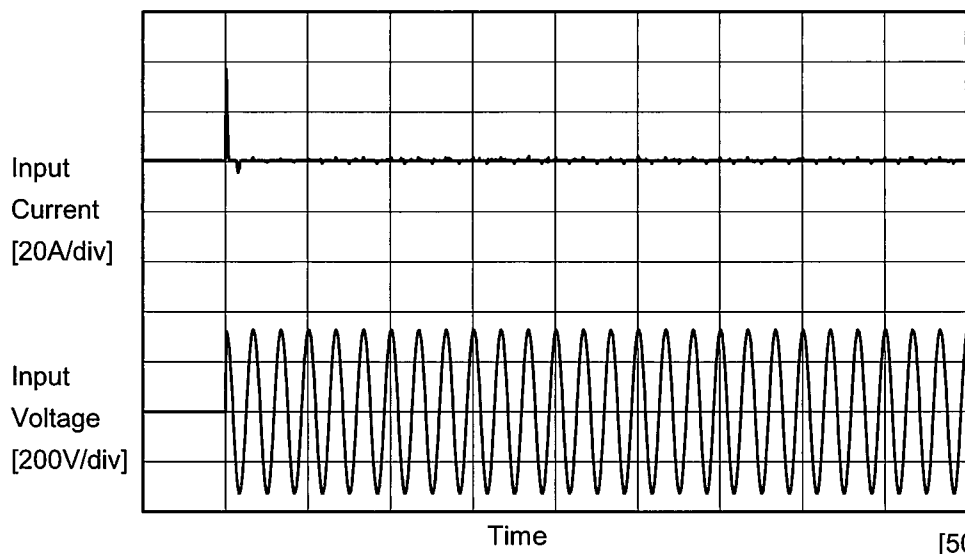
Model	KHNA30F-5	Temperature 25°C Testing Circuitry Figure A	
Item	Inrush Current		
Object	_____		



Input Voltage 115 V
Frequency 60 Hz
Load 100 %

Primary inrush current :
17.0 A

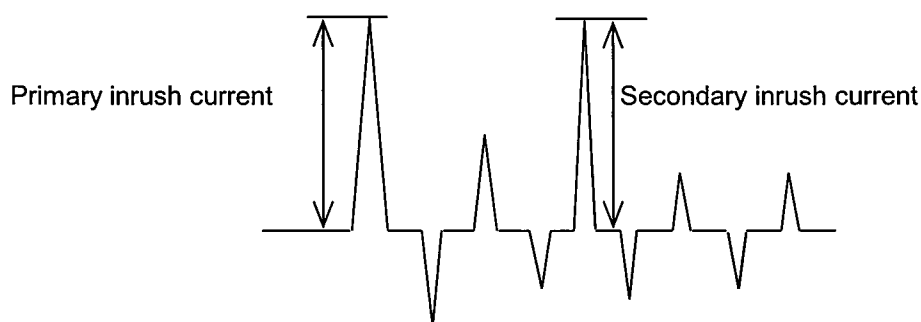
Secondary inrush current :
1.6 A



Input Voltage 230 V
Frequency 60 Hz
Load 100 %

Primary inrush current :
36.7 A

Secondary inrush current :
1.9 A





		Temperature 25°C Testing Circuitry Figure B
Model	KHNA30F-5	
Item	Leakage Current	
Object	_____	

1.Results

[mA]

Standards		Input Volt.			Note
		100 [V]	115 [V]	240 [V]	
DEN-AN	Both phases	0.13	0.15	0.32	Operation
	One of phases	0.27	0.31	0.69	Stand by
IEC60950-1	Both phases	0.20	0.22	0.46	Operation
	One of phases	0.41	0.46	0.70	Stand by

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

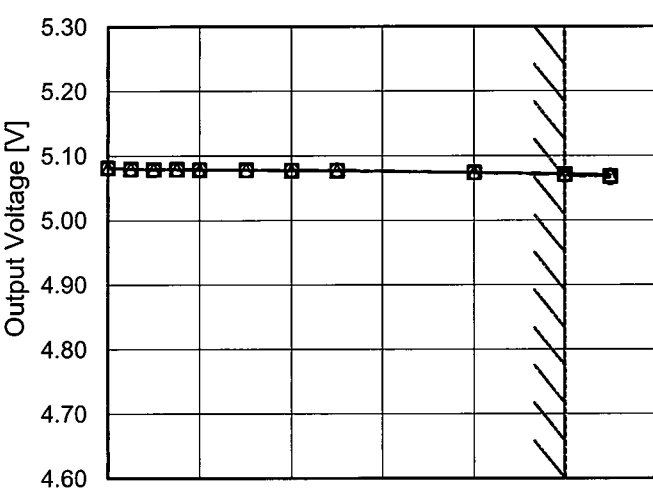
2.Condition

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

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Model		KHNA30F-5	
Item		Line Regulation	
Object		+5V5A	
1.Graph		2.Values	

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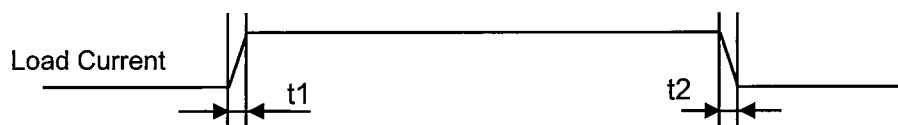
Model	KHNA30F-5																																																					
Item	Load Regulation	Temperature	25°C																																																			
Object	+5V5A	Testing Circuitry	Figure A																																																			
1.Graph		2.Values																																																				
<div><div>—△— Input Volt. 100V</div><div>---□--- Input Volt. 115V</div><div>---○--- Input Volt. 230V</div></div>  <p>Output Voltage [V]</p> <p>Load Current [A]</p>		<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>0.00</td><td>5.082</td><td>5.082</td><td>5.082</td></tr><tr><td>0.25</td><td>5.080</td><td>5.080</td><td>5.080</td></tr><tr><td>0.50</td><td>5.079</td><td>5.079</td><td>5.079</td></tr><tr><td>0.75</td><td>5.079</td><td>5.079</td><td>5.079</td></tr><tr><td>1.00</td><td>5.078</td><td>5.078</td><td>5.079</td></tr><tr><td>1.50</td><td>5.078</td><td>5.078</td><td>5.078</td></tr><tr><td>2.00</td><td>5.077</td><td>5.077</td><td>5.078</td></tr><tr><td>2.50</td><td>5.077</td><td>5.077</td><td>5.078</td></tr><tr><td>4.00</td><td>5.074</td><td>5.074</td><td>5.074</td></tr><tr><td>5.00</td><td>5.072</td><td>5.071</td><td>5.070</td></tr><tr><td>5.50</td><td>5.070</td><td>5.068</td><td>5.066</td></tr></table>		Load Current [A]	Output Voltage [V]			Input Volt. 100[V]	Input Volt. 115[V]	Input Volt. 230[V]	0.00	5.082	5.082	5.082	0.25	5.080	5.080	5.080	0.50	5.079	5.079	5.079	0.75	5.079	5.079	5.079	1.00	5.078	5.078	5.079	1.50	5.078	5.078	5.078	2.00	5.077	5.077	5.078	2.50	5.077	5.077	5.078	4.00	5.074	5.074	5.074	5.00	5.072	5.071	5.070	5.50	5.070	5.068	5.066
Load Current [A]	Output Voltage [V]																																																					
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Note: Slanted line shows the range of the rated load current.																																																						

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Model	KHNA30F-5	Temperature Testing Circuitry	25° C Figure A
Item	Dynamic Load Response		
Object	+5V5A		

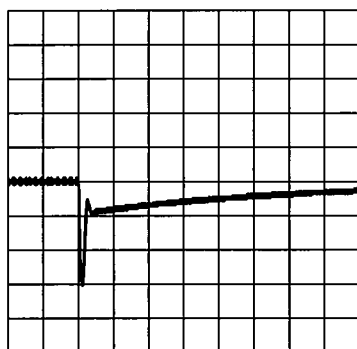
Input Volt. 230 V
Cycle 1000 ms

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

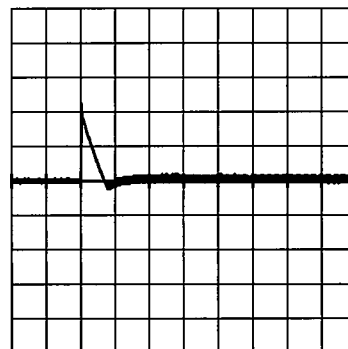


Min.Load (0A) \longleftrightarrow
Load 100% (5A)

200mV/div



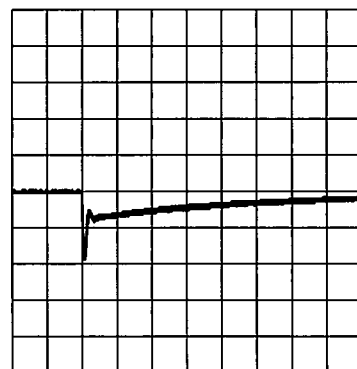
2 ms/div



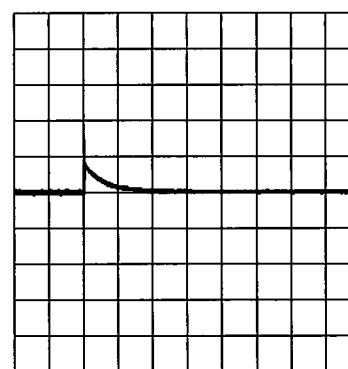
20 ms/div

Load 30%(1.5A) \longleftrightarrow
Load 100% (5A)

200mV/div



2 ms/div



20 ms/div

* The characteristic of AC115V is equal.



Model	KHNA30F-5																																								
Item	Ripple Voltage (by Load Current)	Temperature	25°C																																						
Object	+5V5A	Testing Circuitry	Figure C																																						
1.Graph		2.Values																																							
<div><div><div>—△—</div><div>Input Volt. 115V</div></div><div><div>- - ○ - -</div><div>Input Volt. 230V</div></div></div> <p>Ripple Voltage [mV]</p> <p>Load Current [A]</p>		<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>0.00</td><td>25</td><td>45</td></tr><tr><td>0.25</td><td>35</td><td>40</td></tr><tr><td>0.50</td><td>30</td><td>50</td></tr><tr><td>0.75</td><td>35</td><td>10</td></tr><tr><td>1.00</td><td>10</td><td>10</td></tr><tr><td>1.50</td><td>10</td><td>10</td></tr><tr><td>2.00</td><td>10</td><td>10</td></tr><tr><td>2.50</td><td>10</td><td>10</td></tr><tr><td>4.00</td><td>20</td><td>15</td></tr><tr><td>5.00</td><td>40</td><td>20</td></tr><tr><td>5.50</td><td>50</td><td>25</td></tr></table>		Load Current [A]	Ripple Voltage [mV]		Input Volt. 115 [V]	Input Volt. 230 [V]	0.00	25	45	0.25	35	40	0.50	30	50	0.75	35	10	1.00	10	10	1.50	10	10	2.00	10	10	2.50	10	10	4.00	20	15	5.00	40	20	5.50	50	25
Load Current [A]	Ripple Voltage [mV]																																								
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<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>T1: Due to AC Input Line</div><div>T2: Due to Switching</div><p>Ripple [mVp-p]</p><p>T1</p><p>T2</p></div>																																									
Fig. Complex Ripple Wave Form																																									

Model		KHNA30F-5																																							
Item		Ripple-Noise																																							
Object		+5V5A																																							
1.Graph		2.Values																																							
<div><div><div>—△—</div><div>Input Volt. 115V</div></div><div><div>- -○- -</div><div>Input Volt. 230V</div></div></div> <p>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.</p>		<table><tr><th rowspan="2">Load Current [A]</th><th colspan="2">Ripple-Noise [mV]</th></tr><tr><th>Input Volt. 115 [V]</th><th>Input Volt. 230 [V]</th></tr><tr><td>0.00</td><td>35</td><td>55</td></tr><tr><td>0.25</td><td>40</td><td>50</td></tr><tr><td>0.50</td><td>40</td><td>75</td></tr><tr><td>0.75</td><td>50</td><td>20</td></tr><tr><td>1.00</td><td>20</td><td>15</td></tr><tr><td>1.50</td><td>25</td><td>20</td></tr><tr><td>2.00</td><td>30</td><td>20</td></tr><tr><td>2.50</td><td>30</td><td>35</td></tr><tr><td>4.00</td><td>35</td><td>40</td></tr><tr><td>5.00</td><td>60</td><td>55</td></tr><tr><td>5.50</td><td>70</td><td>55</td></tr></table>		Load Current [A]	Ripple-Noise [mV]		Input Volt. 115 [V]	Input Volt. 230 [V]	0.00	35	55	0.25	40	50	0.50	40	75	0.75	50	20	1.00	20	15	1.50	25	20	2.00	30	20	2.50	30	35	4.00	35	40	5.00	60	55	5.50	70	55
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COSEL

Model		KHNA30F-5	
Item		Ripple Voltage (by Ambient Temp.)	
Object		+5V5A	
1.Graph		2.Values	

<



Model		KHNA30F-5																																																				
Item		Ambient Temperature Drift																																																				
Object		+5V5A																																																				
1.Graph		2.Values																																																				
<div><div><div>—△—</div><div>Input Volt. 100V</div></div><div><div>---□---</div><div>Input Volt. 115V</div></div><div><div>---○---</div><div>Input Volt. 230V</div></div></div> <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>		<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>-30</td><td>5.081</td><td>5.080</td><td>5.079</td></tr><tr><td>-20</td><td>5.079</td><td>5.078</td><td>5.078</td></tr><tr><td>-10</td><td>5.075</td><td>5.074</td><td>5.073</td></tr><tr><td>0</td><td>5.072</td><td>5.071</td><td>5.071</td></tr><tr><td>25</td><td>5.072</td><td>5.071</td><td>5.070</td></tr><tr><td>60</td><td>5.066</td><td>5.065</td><td>5.064</td></tr><tr><td>70</td><td>5.064</td><td>5.063</td><td>5.062</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>		Ambient Temperature [°C]	Output Voltage [V]			Input Volt. 100[V]	Input Volt. 115[V]	Input Volt. 230[V]	-30	5.081	5.080	5.079	-20	5.079	5.078	5.078	-10	5.075	5.074	5.073	0	5.072	5.071	5.071	25	5.072	5.071	5.070	60	5.066	5.065	5.064	70	5.064	5.063	5.062	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
Ambient Temperature [°C]	Output Voltage [V]																																																					
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--	-	-	-																																																			



		Testing Circuitry Figure A
Model	KHNA30F-5	
Item	Output Voltage Accuracy	
Object	+5V5A	

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 - 60°C

Input Voltage : 85 - 264V

Load Current : 0 - 5A

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

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

2. Values

Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	-20	100	0	5.079	±8	±0.2
Minimum Voltage	60	230	5	5.064		

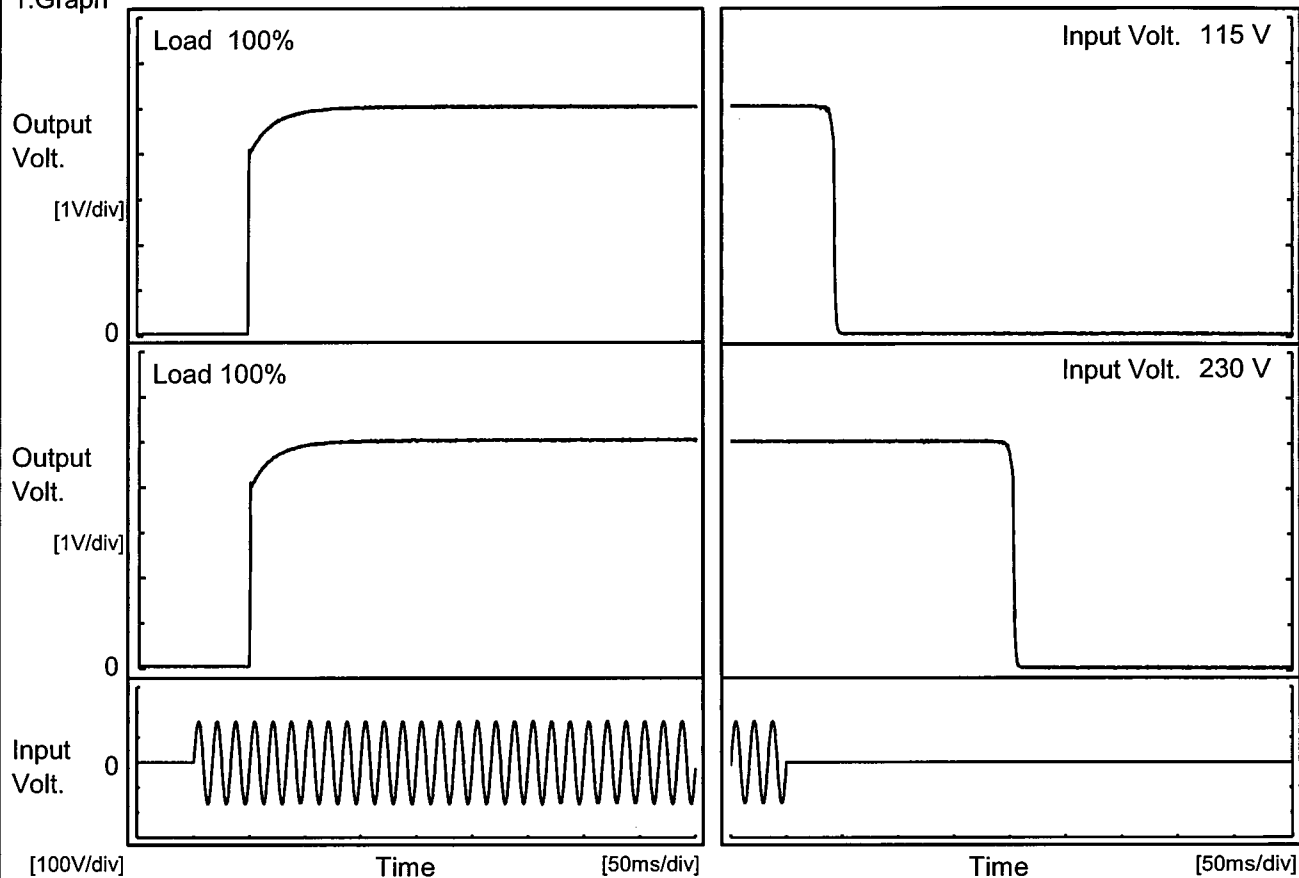


Model	KHNA30F-5																								
Item	Time Lapse Drift		Temperature 25°C																						
Object	+5V5A		Testing Circuitry Figure A																						
1.Graph		2.Values																							
<div><div><div>5.30</div><div>5.20</div><div>5.10</div><div>5.00</div><div>4.90</div><div>4.80</div><div>4.70</div><div>4.60</div></div><div><div>0</div><div>2</div><div>4</div><div>6</div><div>8</div><div>10</div></div><div><div>Output Voltage [V]</div><div>Time [H]</div></div><div><div>Input Volt. 230V</div><div>Load 100%</div></div></div>		<table><tr><th>Time since start [H]</th><th>Output Voltage [V]</th></tr><tr><td>0.0</td><td>5.070</td></tr><tr><td>0.5</td><td>5.068</td></tr><tr><td>1.0</td><td>5.067</td></tr><tr><td>2.0</td><td>5.067</td></tr><tr><td>3.0</td><td>5.067</td></tr><tr><td>4.0</td><td>5.067</td></tr><tr><td>5.0</td><td>5.067</td></tr><tr><td>6.0</td><td>5.067</td></tr><tr><td>7.0</td><td>5.067</td></tr><tr><td>8.0</td><td>5.067</td></tr></table>		Time since start [H]	Output Voltage [V]	0.0	5.070	0.5	5.068	1.0	5.067	2.0	5.067	3.0	5.067	4.0	5.067	5.0	5.067	6.0	5.067	7.0	5.067	8.0	5.067
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* The characteristic of AC115V is equal.																									

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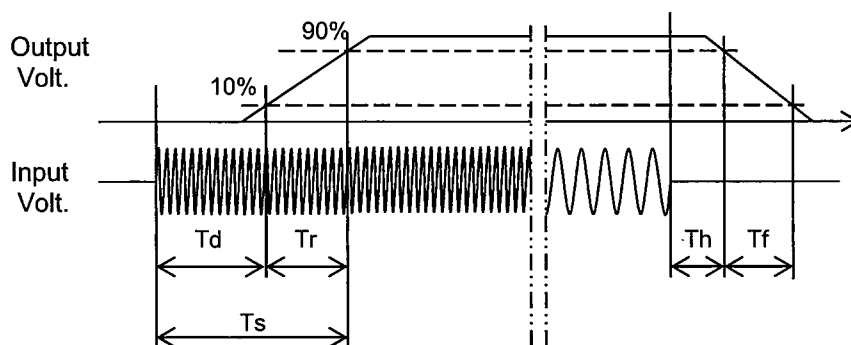
Model	KHNA30F-5	Temperature	25°C
Item	Rise and Fall Time	Testing Circuitry	Figure A
Object	+5V5A		

1.Graph



2.Values

Input Volt. \ Time	Td	Tr	Ts	Th	Tf
115V	48.8	16.3	65.1	41.5	3.3
230V	48.5	15.5	64.0	202.0	3.5





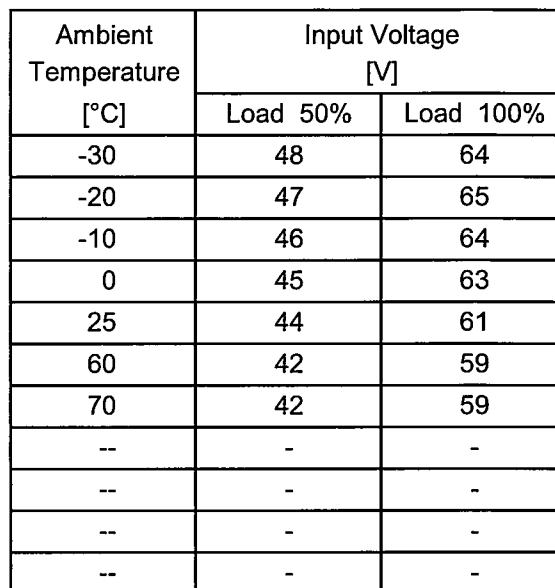
Model	KHNA30F-5																																		
Item	Hold-Up Time	Temperature	25°C																																
Object	+5V5A	Testing Circuitry	Figure A																																
1.Graph		2.Values																																	
<div><div><div><div>---</div><div>□</div><div>---</div></div><div>Load 50%</div></div><div><div>---</div><div>△</div><div>---</div></div><div>Load 100%</div></div> <div><div>Hold-Up Time [ms]</div><div>1000</div><div>100</div><div>10</div><div>1</div><div>50</div><div>100</div><div>150</div><div>200</div><div>250</div><div>300</div><div>Input Voltage [V]</div></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>80</td><td>37</td><td>5</td></tr><tr><td>85</td><td>43</td><td>8</td></tr><tr><td>90</td><td>50</td><td>12</td></tr><tr><td>100</td><td>64</td><td>24</td></tr><tr><td>115</td><td>89</td><td>36</td></tr><tr><td>200</td><td>304</td><td>138</td></tr><tr><td>230</td><td>408</td><td>199</td></tr><tr><td>264</td><td>550</td><td>270</td></tr><tr><td>280</td><td>621</td><td>307</td></tr></table>		Input Voltage [V]	Hold-Up Time [ms]		Load 50%	Load 100%	80	37	5	85	43	8	90	50	12	100	64	24	115	89	36	200	304	138	230	408	199	264	550	270	280	621	307
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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.</p> <p>Note: Slanted line shows the range of the rated input voltage.</p>																																			



Model	KHNA30F-5																																																					
Item	Instantaneous Interruption Compensation																																																					
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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> <p>Instantaneous Compensation Time [ms]</p> <p>Load Current [A]</p> <p>Note: Slanted line shows the range of the rated load current.</p>		<table><tr><th rowspan="2">Load Current [A]</th><th colspan="3">Time [ms]</th></tr><tr><th>Input Volt. 100[V]</th><th>Input Volt. 115[V]</th><th>Input Volt. 230[V]</th></tr><tr><td>0.00</td><td>-</td><td>-</td><td>-</td></tr><tr><td>0.25</td><td>505</td><td>690</td><td>-</td></tr><tr><td>0.50</td><td>295</td><td>404</td><td>1716</td></tr><tr><td>0.75</td><td>205</td><td>281</td><td>1215</td></tr><tr><td>1.00</td><td>157</td><td>215</td><td>940</td></tr><tr><td>1.50</td><td>107</td><td>148</td><td>657</td></tr><tr><td>2.00</td><td>81</td><td>112</td><td>506</td></tr><tr><td>2.50</td><td>64</td><td>89</td><td>408</td></tr><tr><td>4.00</td><td>35</td><td>50</td><td>253</td></tr><tr><td>5.00</td><td>24</td><td>36</td><td>199</td></tr><tr><td>5.50</td><td>20</td><td>31</td><td>178</td></tr></table>		Load Current [A]	Time [ms]			Input Volt. 100[V]	Input Volt. 115[V]	Input Volt. 230[V]	0.00	-	-	-	0.25	505	690	-	0.50	295	404	1716	0.75	205	281	1215	1.00	157	215	940	1.50	107	148	657	2.00	81	112	506	2.50	64	89	408	4.00	35	50	253	5.00	24	36	199	5.50	20	31	178
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Testing Circuitry Figure A

2.Values



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



Model	KHNA30F-5	Temperature 25°C Testing Circuitry Figure A																																																
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Object	+5V5A																																																	
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<div><div><div></div>Input Volt. 115V</div><div><div></div>Input Volt. 230V</div></div> <table><thead><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></thead><tbody><tr><td>5.07</td><td>6.63</td><td>6.84</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><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><tr><td>--</td><td>-</td><td>-</td></tr></tbody></table>		Output Voltage [V]	Load Current [A]		Input Volt. 115[V]	Input Volt. 230[V]	5.07	6.63	6.84	--	-	-	--	-	-	--	-	-	--	-	-	--	-	-	--	-	-	--	-	-	--	-	-	--	-	-	--	-	-	--	-	-	--	-	-	--	-	-		
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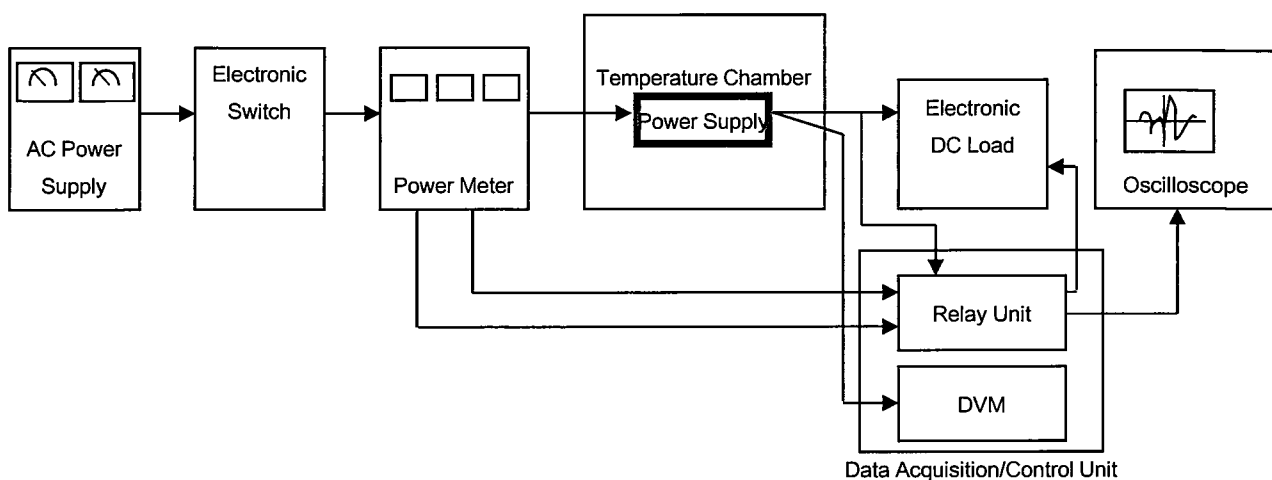


Figure A

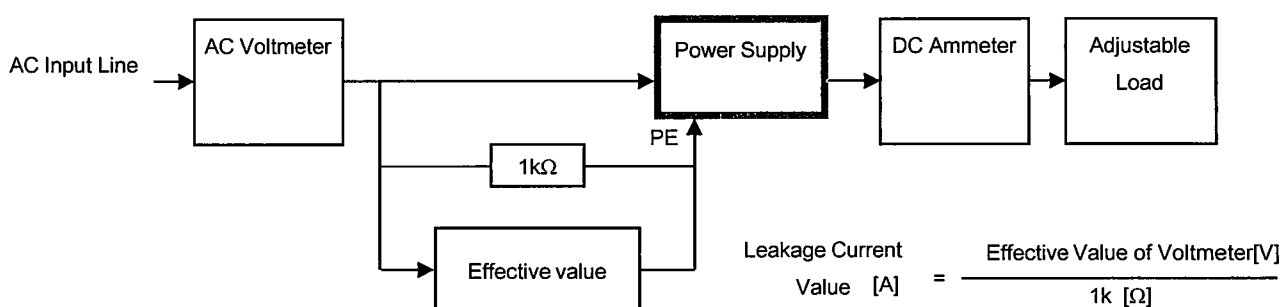


Figure B (DEN-AN)

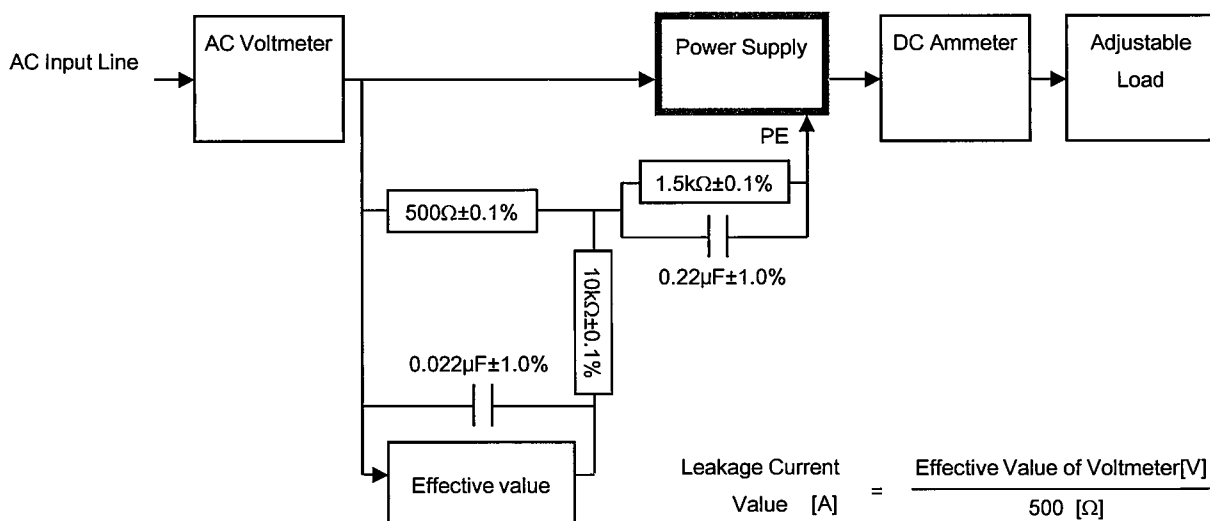


Figure B (IEC60950-1)

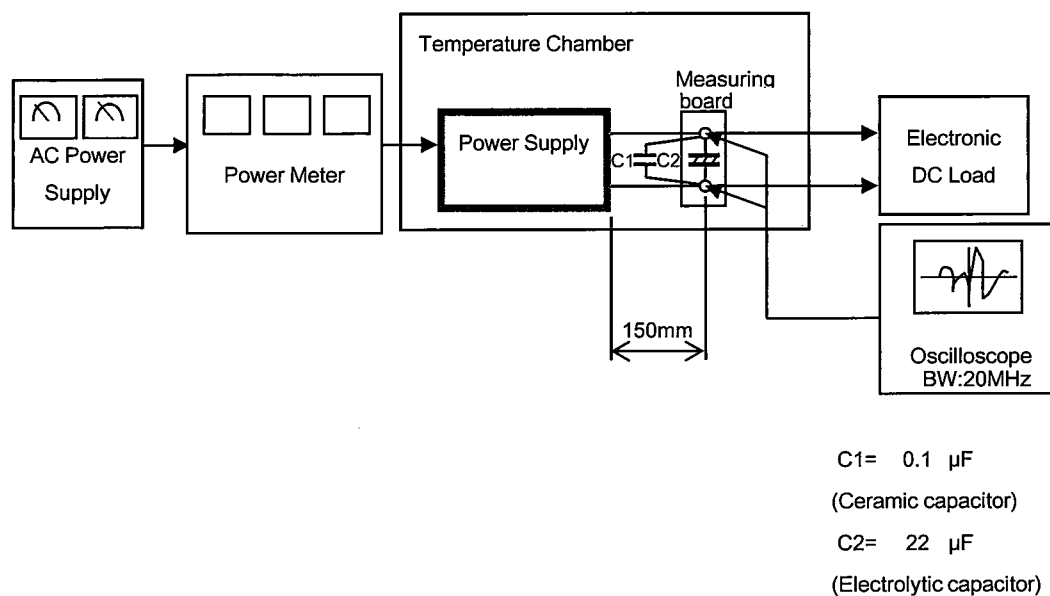


Figure C