

TEST DATA OF KLEA120F-48

Regulated DC Power Supply
May 25, 2015

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Yukihiro Takehashi Design Manager

Prepared by : Yasunari Hirano
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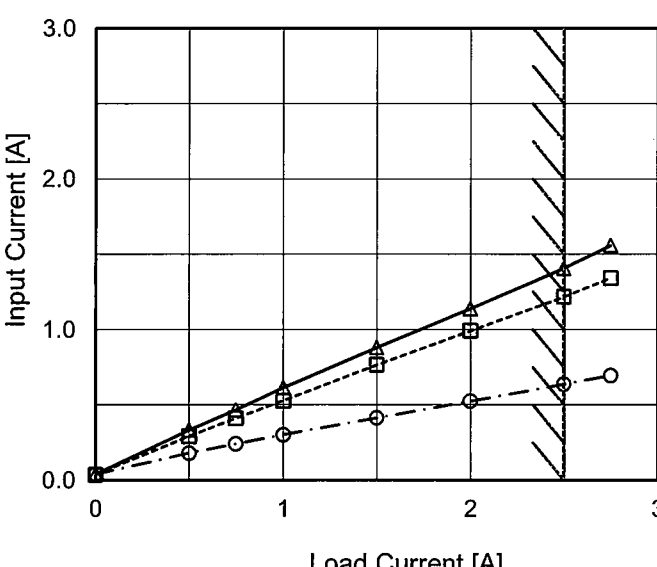
COSEL CO.,LTD.

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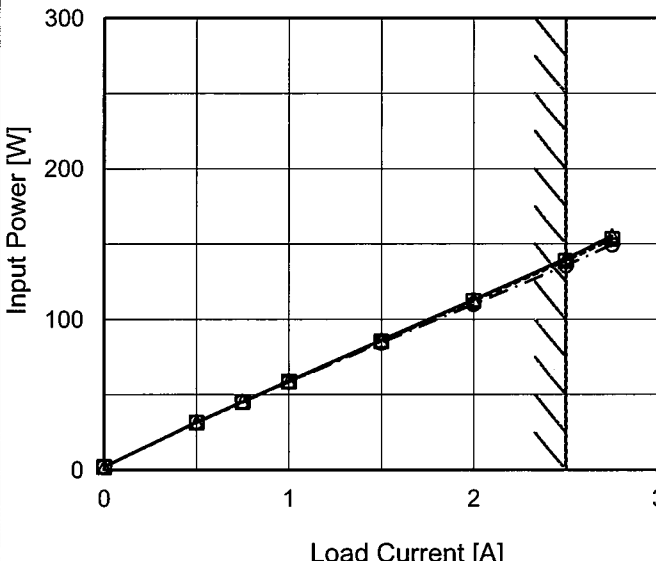
(Final Page 25)

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Model		KLEA120F-48	
Item		Input Current (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.			

Temperature		25°C	
Testing Circuitry		Figure A	
2.Values			
Load Current [A]	Input Current [A]		
	Input Volt. 100[V]	Input Volt. 115[V]	Input Volt. 230[V]
0.00	0.038	0.036	0.039
0.50	0.332	0.292	0.180
0.75	0.467	0.410	0.241
1.00	0.614	0.528	0.301
1.50	0.880	0.765	0.414
2.00	1.138	0.991	0.525
2.50	1.407	1.217	0.637
2.75	1.558	1.342	0.696
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Model		KLEA120F-48		Temperature 25°C																																																				
Item		Input Power (by Load Current)		Testing Circuitry Figure A																																																				
Object		_____																																																						
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> 		2.Values																																																				
		<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>2.0</td><td>2.0</td><td>2.2</td></tr><tr><td>0.50</td><td>31.6</td><td>31.3</td><td>31.9</td></tr><tr><td>0.75</td><td>45.4</td><td>45.0</td><td>45.2</td></tr><tr><td>1.00</td><td>59.1</td><td>58.6</td><td>58.4</td></tr><tr><td>1.50</td><td>86.2</td><td>85.4</td><td>84.5</td></tr><tr><td>2.00</td><td>113.0</td><td>112.1</td><td>110.0</td></tr><tr><td>2.50</td><td>140.1</td><td>138.7</td><td>135.7</td></tr><tr><td>2.75</td><td>155.4</td><td>153.1</td><td>149.5</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></table>				Load Current [A]	Input Power [W]			Input Volt. 100[V]	Input Volt. 115[V]	Input Volt. 230[V]	0.00	2.0	2.0	2.2	0.50	31.6	31.3	31.9	0.75	45.4	45.0	45.2	1.00	59.1	58.6	58.4	1.50	86.2	85.4	84.5	2.00	113.0	112.1	110.0	2.50	140.1	138.7	135.7	2.75	155.4	153.1	149.5	--	-	-	-	--	-	-	-	--	-	-	-
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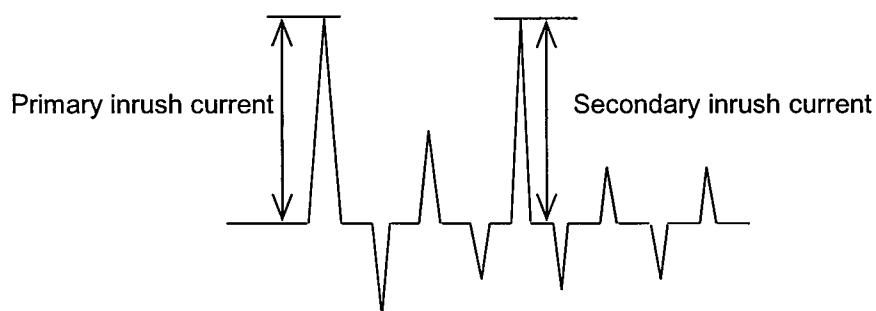
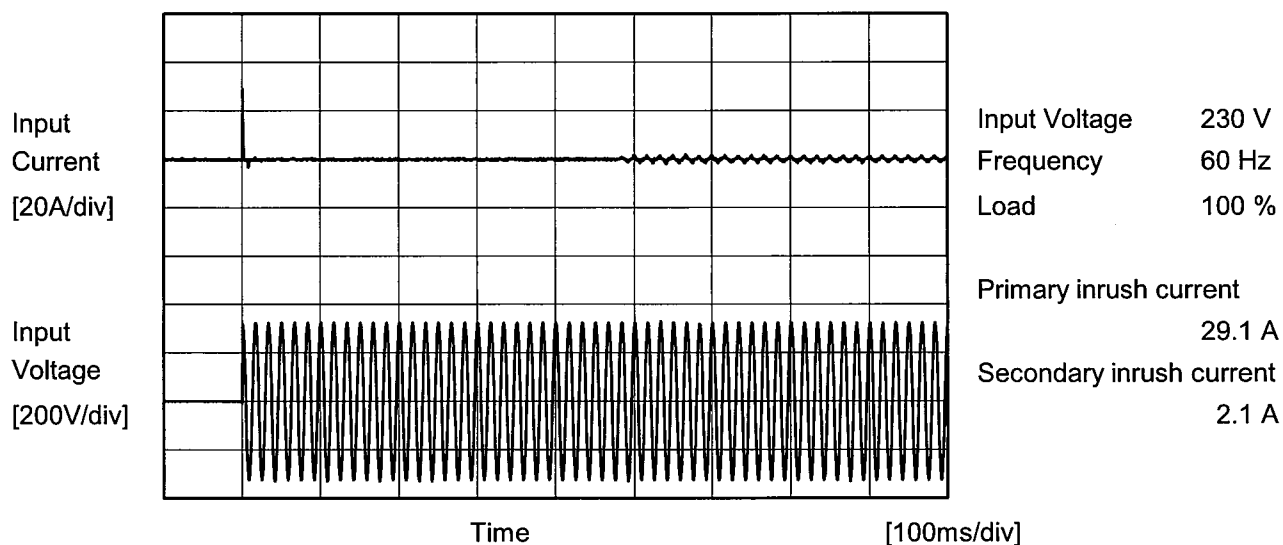
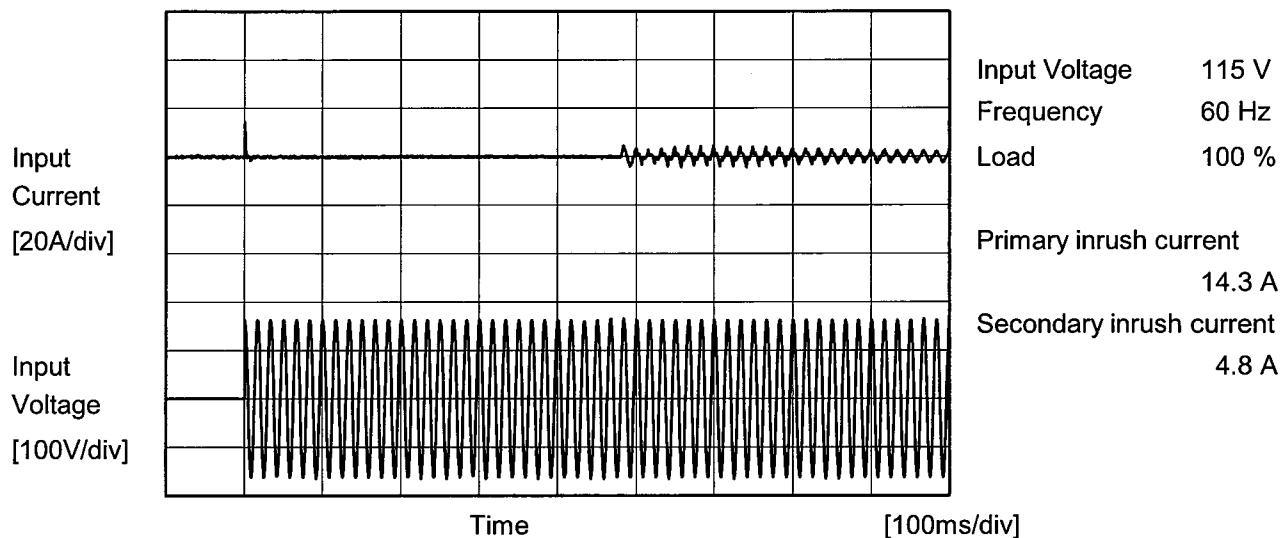
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Model	KLEA120F-48	Temperature	25°C
Item	Inrush Current	Testing Circuitry	Figure A
Object	_____		





		Temperature 25°C Testing Circuitry Figure B
Model	KLEA120F-48	
Item	Leakage Current	
Object	_____	

1.Results

[mA]

Standards		Input Volt.			Note
		100 [V]	115 [V]	240 [V]	
DEN-AN	Both phases	0.15	0.18	0.40	Operation
	One of phases	0.28	0.34	0.73	Stand by
IEC60950-1	Both phases	0.16	0.19	0.39	Operation
	One of phases	0.30	0.35	0.73	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.

[illegible]



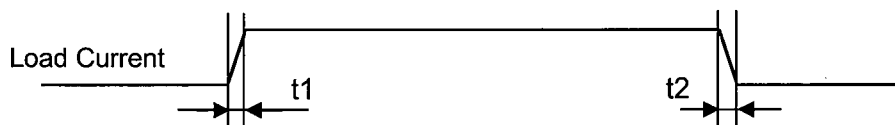
Model	KLEA120F-48		
Item	Load Regulation	Temperature	25°C
Object	+48V2.5A	Testing Circuitry	Figure A
1.Graph		2.Values	
<div><div><div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>—△—</div><div>Input Volt.</div><div>100V</div></div><div><div>---□---</div><div>Input Volt.</div><div>115V</div></div><div><div>---○---</div><div>Input Volt.</div><div>230V</div></div></div><div><div><div>Output Voltage [V]</div><div></div><div>48.60</div><div>48.50</div><div>48.40</div><div>48.30</div><div>48.20</div><div>48.10</div><div>48.00</div><div>47.90</div><div>47.80</div></div><div><div></div><div>0</div><div>1</div><div>2</div><div>3</div></div><div><div></div><div>Load Current [A]</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><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><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><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><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><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><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><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><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><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><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><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><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><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><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><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><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><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><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><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><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><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><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><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><d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iv><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><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><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><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><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><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><div></div><div></div><div></div><div></div><</div></div>			

COSEL

Model	KLEA120F-48		
Item	Dynamic Load Response	Temperature	25° C
Object	+48V2.5A	Testing Circuitry	Figure A

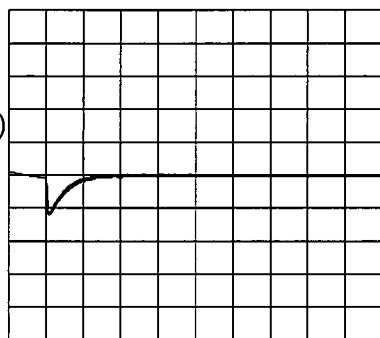
Input Volt. 230 V
Cycle 1000 ms

Response. $t_1=t_2=50\mu s$. Typ

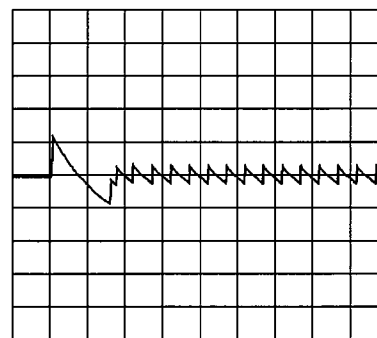


Min.Load (0A) \longleftrightarrow
Load 100% (2.5A)

500mV/div



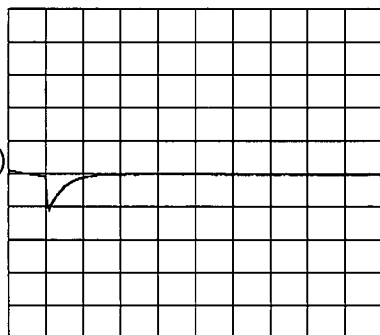
10 ms/div



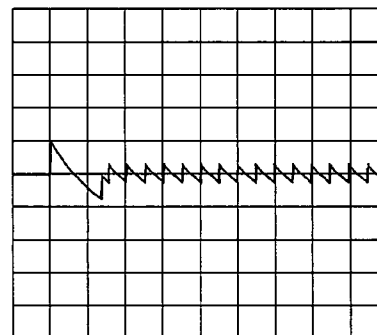
100 ms/div

Min.Load (0A) \longleftrightarrow
Load 50% (1.25A)

500mV/div



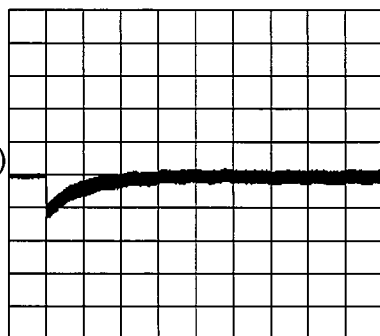
10 ms/div



100 ms/div

Load 30% (0.75A) \longleftrightarrow
Load 100% (2.5A)

100mV/div



10 ms/div



10 ms/div

* The characteristic of AC115V is equal.

COSEL

Model		KLEA120F-48		Temperature 25°C																																							
Item		Ripple Voltage (by Load Current)		Testing Circuitry Figure C																																							
Object		+48V2.5A																																									
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>				<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>330</td><td>330</td></tr><tr><td>0.25</td><td>30</td><td>30</td></tr><tr><td>0.50</td><td>25</td><td>25</td></tr><tr><td>0.75</td><td>20</td><td>15</td></tr><tr><td>1.00</td><td>45</td><td>45</td></tr><tr><td>1.50</td><td>20</td><td>25</td></tr><tr><td>2.00</td><td>25</td><td>25</td></tr><tr><td>2.50</td><td>30</td><td>30</td></tr><tr><td>2.75</td><td>35</td><td>35</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]	0.00	330	330	0.25	30	30	0.50	25	25	0.75	20	15	1.00	45	45	1.50	20	25	2.00	25	25	2.50	30	30	2.75	35	35	--	-	-	--	-	-
Load Current [A]	Ripple Voltage [mV]																																										
	Input Volt. 115 [V]	Input Volt. 230 [V]																																									
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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><div>T1: Due to AC Input Line</div><div>T2: Due to Switching</div></div><div><p>Ripple [mVp-p]</p><p>T1</p><p>T2</p></div></div>																																											
Fig. Complex Ripple Wave Form																																											

Model		KLEA120F-48	
Item		Ripple-Noise	
Object		+48V2.5A	
1.Graph		2.Values	

—△—

Input Volt. 115V

---○---

Input Volt. 230V

Ripple-Noise [mV]

Load Current [A]

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.

Load Current [A]	Ripple-Noise [mV]	
	Input Volt. 115 [V]	Input Volt. 230 [V]
0.00	330	340
0.25	35	35
0.50	30	30
0.75	25	20
1.00	50	50
1.25	25	30
2.00	30	30
2.50	35	35
2.75	40	40
--	-	-
--	-	-

T1: Due to AC Input Line

T2: Due to Switching

Ripple-Noise [mVp-p]

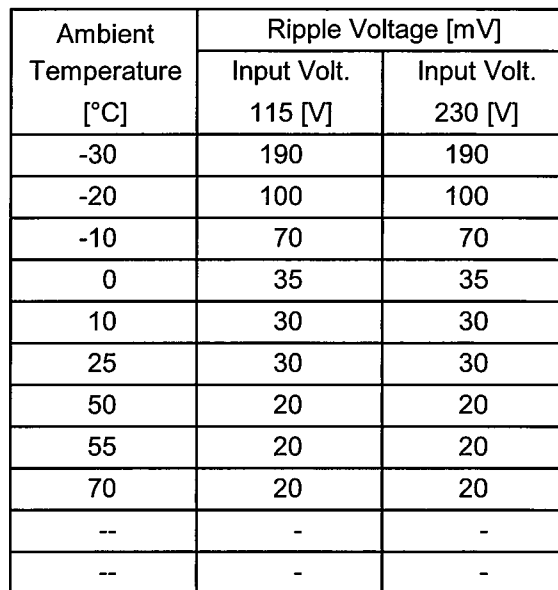
T1

T2

Fig. Complex Ripple Wave Form

Testing Circuitry Figure C

2.Values



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

Model	KLEA120F-48																																																					
Item	Ambient Temperature Drift	Testing Circuitry Figure A																																																				
Object	+48V2.5A																																																					
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> <div>Output Voltage [V]</div> <div>48.60</div> <div>48.50</div> <div>48.40</div> <div>48.30</div> <div>48.20</div> <div>48.10</div> <div>48.00</div> <div>47.90</div> <div>47.80</div> <div>Ambient Temperature [°C]</div> <div>-40</div> <div>-20</div> <div>0</div> <div>20</div> <div>40</div> <div>60</div> <div>80</div> <div>Load 100%</div>		<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>48.156</td><td>48.160</td><td>48.164</td></tr><tr><td>-20</td><td>48.201</td><td>48.202</td><td>48.203</td></tr><tr><td>-10</td><td>48.246</td><td>48.247</td><td>48.247</td></tr><tr><td>0</td><td>48.272</td><td>48.272</td><td>48.272</td></tr><tr><td>10</td><td>48.291</td><td>48.291</td><td>48.292</td></tr><tr><td>25</td><td>48.314</td><td>48.314</td><td>48.315</td></tr><tr><td>50</td><td>48.337</td><td>48.338</td><td>48.337</td></tr><tr><td>55</td><td>48.347</td><td>48.347</td><td>48.347</td></tr><tr><td>70</td><td>48.350</td><td>48.349</td><td>48.349</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	48.156	48.160	48.164	-20	48.201	48.202	48.203	-10	48.246	48.247	48.247	0	48.272	48.272	48.272	10	48.291	48.291	48.292	25	48.314	48.314	48.315	50	48.337	48.338	48.337	55	48.347	48.347	48.347	70	48.350	48.349	48.349	--	-	-	-	--	-	-	-
Ambient Temperature [°C]	Output Voltage [V]																																																					
	Input Volt. 100[V]	Input Volt. 115[V]	Input Volt. 230[V]																																																			
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0	48.272	48.272	48.272																																																			
10	48.291	48.291	48.292																																																			
25	48.314	48.314	48.315																																																			
50	48.337	48.338	48.337																																																			
55	48.347	48.347	48.347																																																			
70	48.350	48.349	48.349																																																			
--	-	-	-																																																			
--	-	-	-																																																			
Note: Slanted line shows the range of the rated ambient temperature.																																																						



		Testing Circuitry Figure A
Model	KLEA120F-48	
Item	Output Voltage Accuracy	
Object	+48V2.5A	

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 : -20 - 70°C

Input Voltage : 85 - 264V

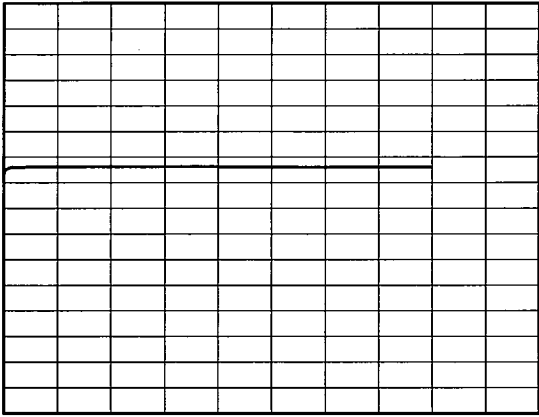
Load Current : 0.75 - 2.5A

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

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

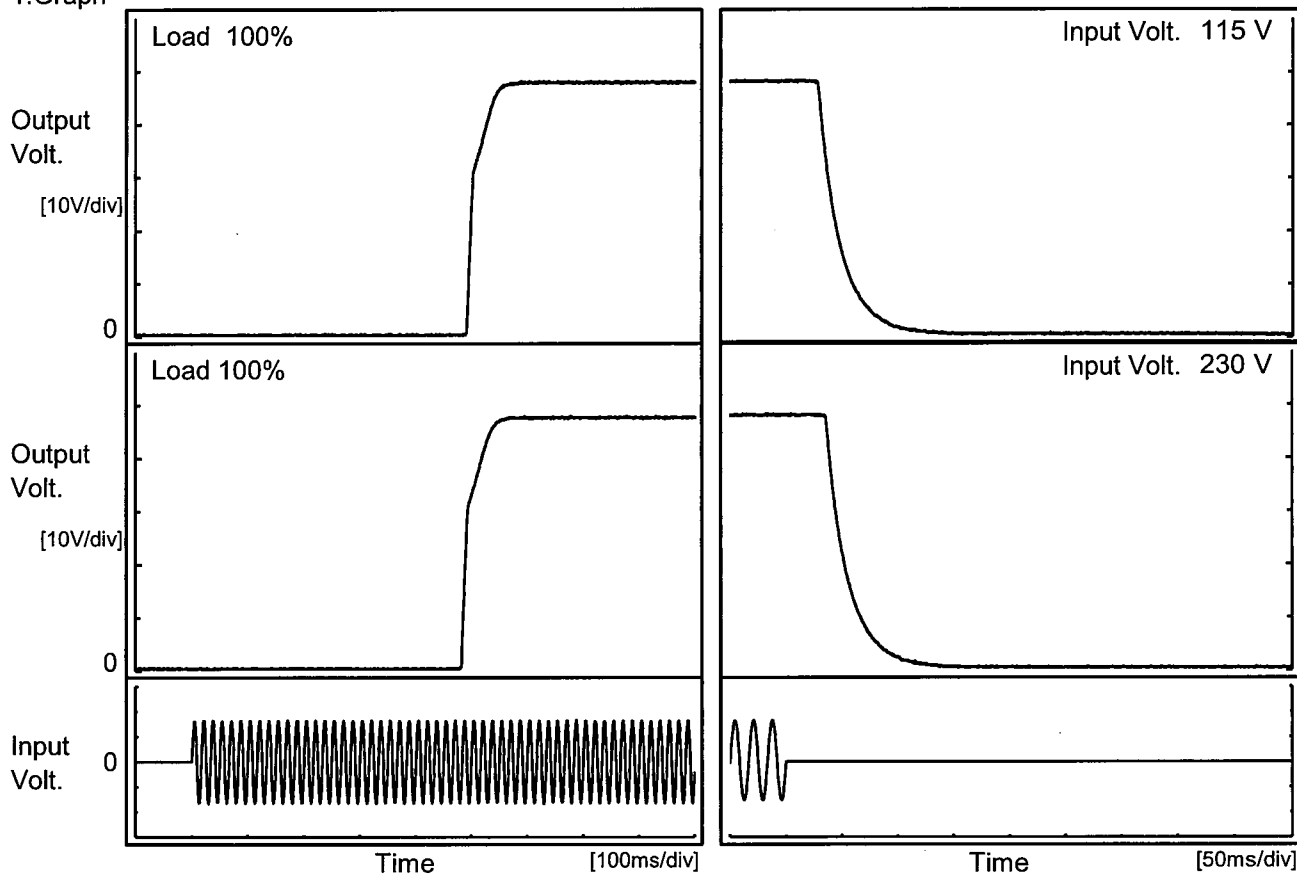
2. Values

Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ratio [%]
Maximum Voltage	70	100	0.75	48.355	±77	±0.2
Minimum Voltage	-20	100	2.5	48.201		

Model		KLEA120F-48	Temperature25°C Testing CircuitryFigure A																						
Item		Time Lapse Drift																							
Object		+48V2.5A																							
1.Graph			2.Values																						
<div><div><div>48.60</div><div>48.50</div><div>48.40</div><div>48.30</div><div>48.20</div><div>48.10</div><div>48.00</div><div>47.90</div><div>47.80</div></div><div><div>0246810</div></div><div><div>Output Voltage [V]</div><div>Time [H]</div><div>Input Volt.230V</div><div>Load100%</div></div></div>			<table><tr><th>Time since start [H]</th><th>Output Voltage [V]</th></tr><tr><td>0.0</td><td>48.315</td></tr><tr><td>0.5</td><td>48.333</td></tr><tr><td>1.0</td><td>48.333</td></tr><tr><td>2.0</td><td>48.333</td></tr><tr><td>3.0</td><td>48.333</td></tr><tr><td>4.0</td><td>48.333</td></tr><tr><td>5.0</td><td>48.333</td></tr><tr><td>6.0</td><td>48.332</td></tr><tr><td>7.0</td><td>48.332</td></tr><tr><td>8.0</td><td>48.332</td></tr></table>	Time since start [H]	Output Voltage [V]	0.0	48.315	0.5	48.333	1.0	48.333	2.0	48.333	3.0	48.333	4.0	48.333	5.0	48.333	6.0	48.332	7.0	48.332	8.0	48.332
Time since start [H]	Output Voltage [V]																								
0.0	48.315																								
0.5	48.333																								
1.0	48.333																								
2.0	48.333																								
3.0	48.333																								
4.0	48.333																								
5.0	48.333																								
6.0	48.332																								
7.0	48.332																								
8.0	48.332																								

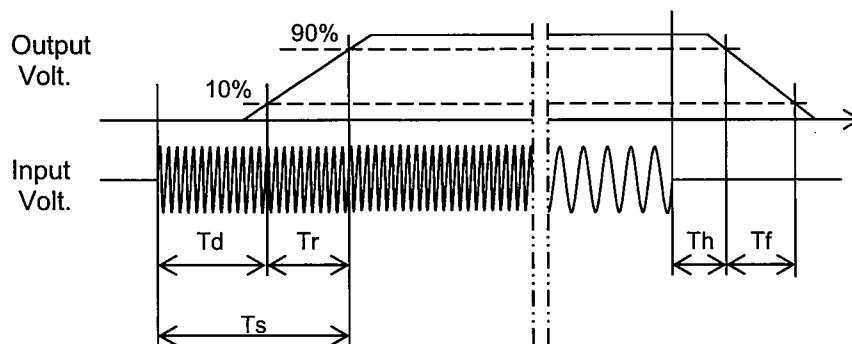
Model	KLEA120F-48	Temperature	25°C
Item	Rise and Fall Time	Testing Circuitry	Figure A
Object	+48V2.5A		

1.Graph



2.Values

Input Volt.	Time	Td	Tr	Ts	Th	Tf
115 V		493.5	43.0	536.5	30.8	43.8
230 V		483.5	44.5	528.0	37.0	44.5



BC-10886

Model	KLEA120F-48	Temperature	25°C																																																			
Item	Instantaneous Interruption Compensation	Testing Circuitry	Figure A																																																			
Object	+48V2.5A																																																					
1.Graph		2.Values																																																				
<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><div>Instantaneous Compensation Time [ms]</div><div>1000</div><div>100</div><div>10</div><div>1</div><div>0</div><div>1</div><div>2</div><div>3</div><div>Load Current [A]</div></div>		<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>0.50</td><td>130</td><td>131</td><td>162</td></tr><tr><td>0.75</td><td>95</td><td>95</td><td>115</td></tr><tr><td>1.00</td><td>71</td><td>72</td><td>89</td></tr><tr><td>1.50</td><td>48</td><td>48</td><td>60</td></tr><tr><td>2.00</td><td>35</td><td>36</td><td>45</td></tr><tr><td>2.50</td><td>29</td><td>31</td><td>37</td></tr><tr><td>2.75</td><td>22</td><td>22</td><td>30</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]	Time [ms]			Input Volt. 100[V]	Input Volt. 115[V]	Input Volt. 230[V]	0.00	-	-	-	0.50	130	131	162	0.75	95	95	115	1.00	71	72	89	1.50	48	48	60	2.00	35	36	45	2.50	29	31	37	2.75	22	22	30	--	-	-	-	--	-	-	-	--	-	-	-
Load Current [A]	Time [ms]																																																					
	Input Volt. 100[V]	Input Volt. 115[V]	Input Volt. 230[V]																																																			
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2.75	22	22	30																																																			
--	-	-	-																																																			
--	-	-	-																																																			
--	-	-	-																																																			

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

Load Current [A]	Time [ms]		
	Input Volt. 100[V]	Input Volt. 115[V]	Input Volt. 230[V]
0.00	-	-	-
0.50	130	131	162
0.75	95	95	115
1.00	71	72	89
1.50	48	48	60
2.00	35	36	45
2.50	29	31	37
2.75	22	22	30
--	-	-	-
--	-	-	-
--	-	-	-

Model	KLEA120F-48																																								
Item	Minimum Input Voltage for Regulated Output Voltage	Testing Circuitry Figure A																																							
Object	+48V2.5A																																								
1.Graph		2.Values																																							
<div><div>---□--- Load 50%</div><div>—△— Load 100%</div></div> <p>Note: Slanted line shows the range of the rated ambient temperature.</p>		<table><tr><th rowspan="2">Ambient Temperature [°C]</th><th colspan="2">Input Voltage [V]</th></tr><tr><th>Load 50%</th><th>Load 100%</th></tr><tr><td>-30</td><td>41</td><td>57</td></tr><tr><td>-20</td><td>41</td><td>57</td></tr><tr><td>-10</td><td>41</td><td>58</td></tr><tr><td>0</td><td>41</td><td>58</td></tr><tr><td>10</td><td>42</td><td>58</td></tr><tr><td>25</td><td>42</td><td>59</td></tr><tr><td>50</td><td>43</td><td>61</td></tr><tr><td>55</td><td>44</td><td>61</td></tr><tr><td>70</td><td>44</td><td>62</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr></table>		Ambient Temperature [°C]	Input Voltage [V]		Load 50%	Load 100%	-30	41	57	-20	41	57	-10	41	58	0	41	58	10	42	58	25	42	59	50	43	61	55	44	61	70	44	62	--	-	-	--	-	-
Ambient Temperature [°C]	Input Voltage [V]																																								
	Load 50%	Load 100%																																							
-30	41	57																																							
-20	41	57																																							
-10	41	58																																							
0	41	58																																							
10	42	58																																							
25	42	59																																							
50	43	61																																							
55	44	61																																							
70	44	62																																							
--	-	-																																							
--	-	-																																							

Model	KLEA120F-48																																											
Item	Overcurrent Protection	Temperature	25°C																																									
Object	+48V2.5A	Testing Circuitry	Figure A																																									
1.Graph		2.Values																																										
<div><div><div></div>Input Volt. 115V</div><div><div></div>Input Volt. 230V</div></div> <p>Note: Slanted line shows the range of the rated load current.</p> <p>Intermittent operation occurs when the output voltage is from 10V to 0V.</p>		<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>45.6</td><td>3.06</td><td>3.17</td></tr><tr><td>43.2</td><td>3.11</td><td>3.21</td></tr><tr><td>38.4</td><td>3.21</td><td>3.31</td></tr><tr><td>33.6</td><td>3.31</td><td>3.42</td></tr><tr><td>28.8</td><td>3.44</td><td>3.53</td></tr><tr><td>24.0</td><td>3.56</td><td>3.64</td></tr><tr><td>19.2</td><td>3.68</td><td>3.77</td></tr><tr><td>14.4</td><td>3.81</td><td>3.89</td></tr><tr><td>10.0</td><td>3.92</td><td>3.98</td></tr><tr><td>4.8</td><td>3.97</td><td>4.03</td></tr><tr><td>0.0</td><td>3.98</td><td>4.05</td></tr><tr><td>--</td><td>-</td><td>-</td></tr></table>		Output Voltage [V]	Load Current [A]		Input Volt. 115[V]	Input Volt. 230[V]	45.6	3.06	3.17	43.2	3.11	3.21	38.4	3.21	3.31	33.6	3.31	3.42	28.8	3.44	3.53	24.0	3.56	3.64	19.2	3.68	3.77	14.4	3.81	3.89	10.0	3.92	3.98	4.8	3.97	4.03	0.0	3.98	4.05	--	-	-
Output Voltage [V]	Load Current [A]																																											
	Input Volt. 115[V]	Input Volt. 230[V]																																										
45.6	3.06	3.17																																										
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--	-	-																																										

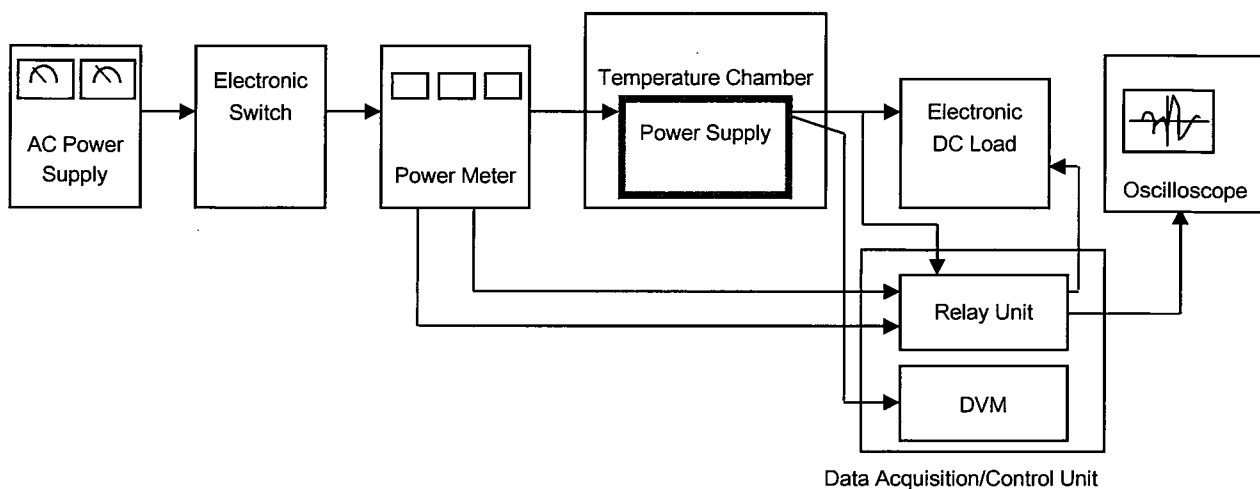


Figure A

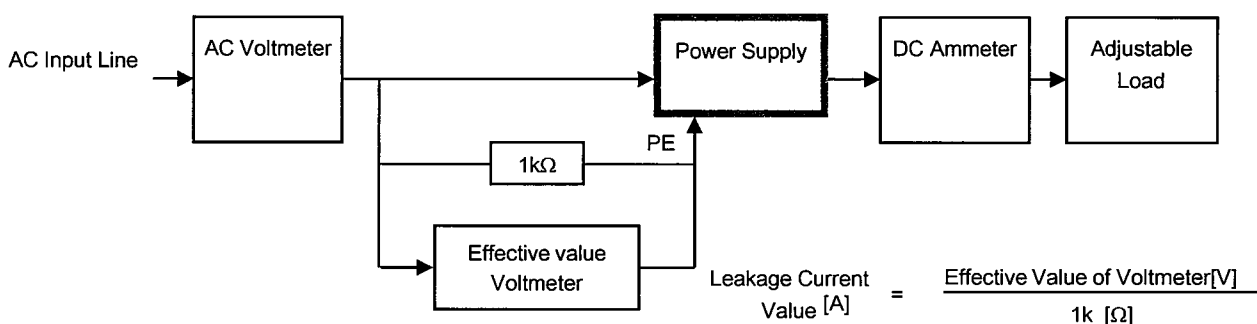


Figure B (DEN-AN)

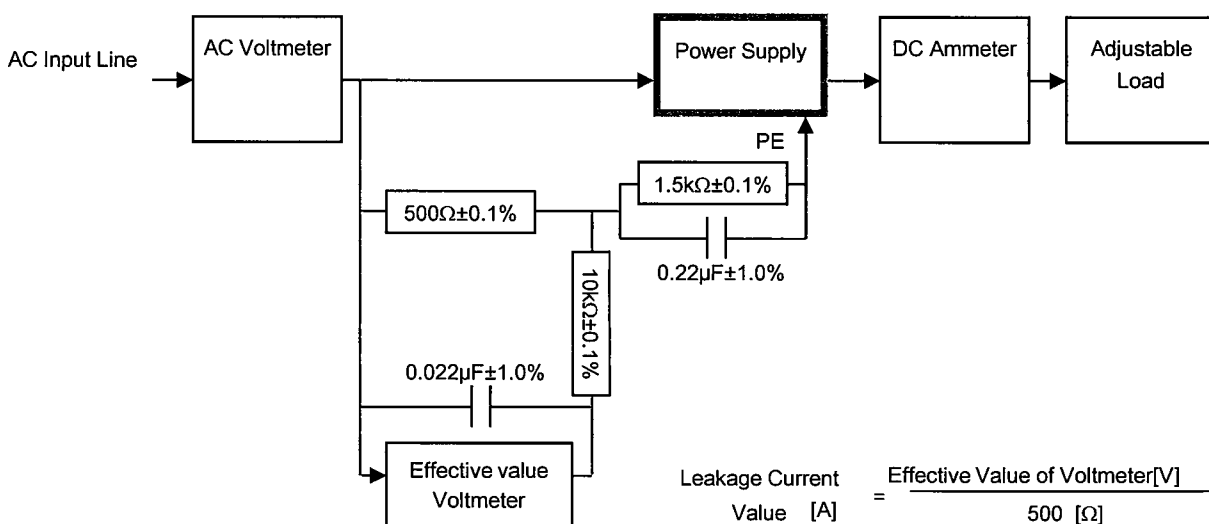
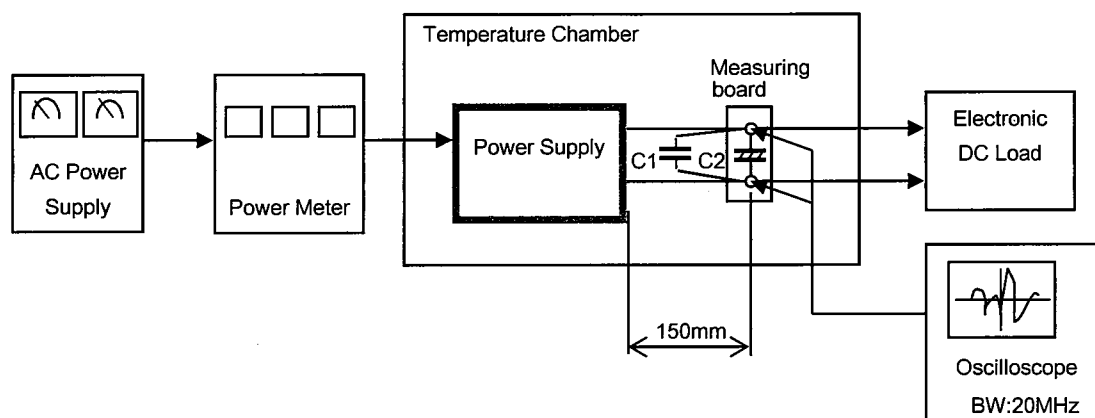


Figure B (IEC60950-1)



C1= 0.1 μ F
(Ceramic capacitor)
C2= 22 μ F
(Electrolytic capacitor)

Figure C