

TEST DATA OF PDA150F-12

Regulated DC Power Supply
December 16, 2024

Approved by : Tetsukazu Okamoto
Design Manager

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Design Engineer

COSEL CO.,LTD.

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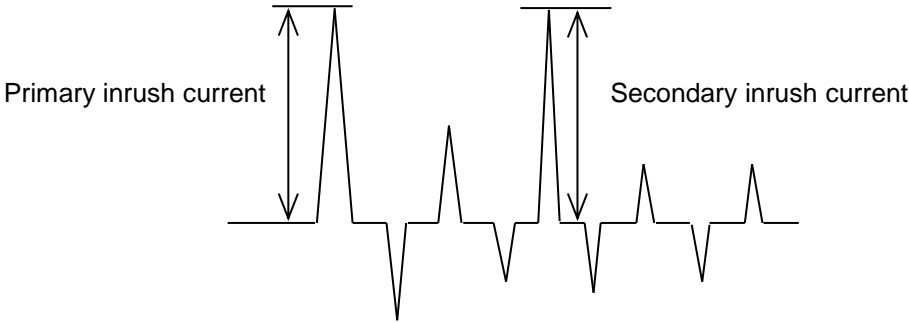
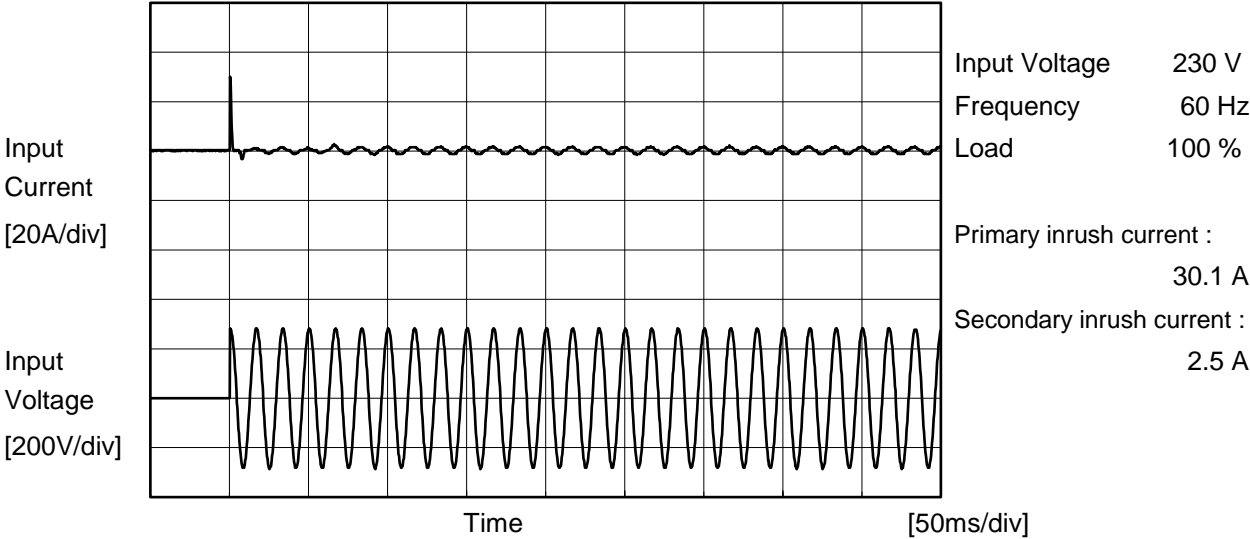
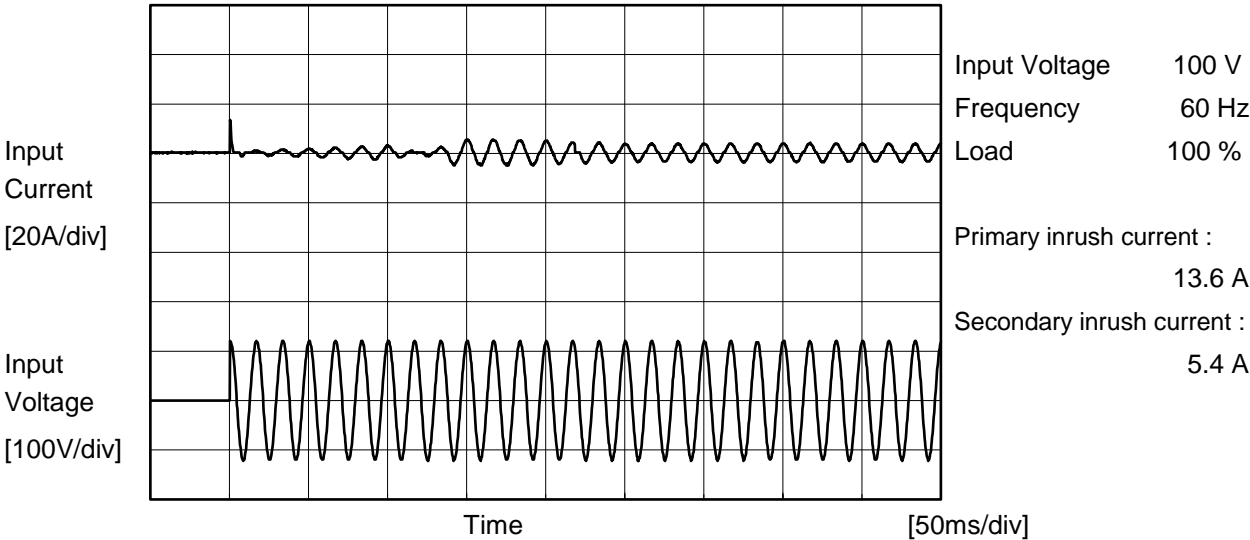
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Model		PDA150F-12	
Item		Inrush Current	
Object		_____	
Temperature		25°C	
Testing Circuitry		Figure A	





COSEL		Temperature 25°C Testing Circuitry Figure C
Model	PDA150F-12	
Item	Leakage Current	
Object	_____	

1.Results

[mA]

Standards	Testing Circuitry	Measuring Method	Input Volt.			Note
			100 [V]	230 [V]	240 [V]	
DEN-AN	Figure C-1	Both phases	0.15	0.37	0.39	Operation
		One of phases	0.28	0.71	0.74	Stand by
IEC62368-1	Figure C-2	Both phases	0.14	0.36	0.38	Operation
		One of phases	0.27	0.69	0.72	Stand by
	Figure C-3	Both phases	0.14	0.35	0.37	Operation
		One of phases	0.27	0.68	0.71	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]

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Model		PDA150F-12		Temperature 25°C	
Item		Load Regulation		Testing Circuitry Figure A	
Object		+12V13A			
1.Graph				2.Values	
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[V]</div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><di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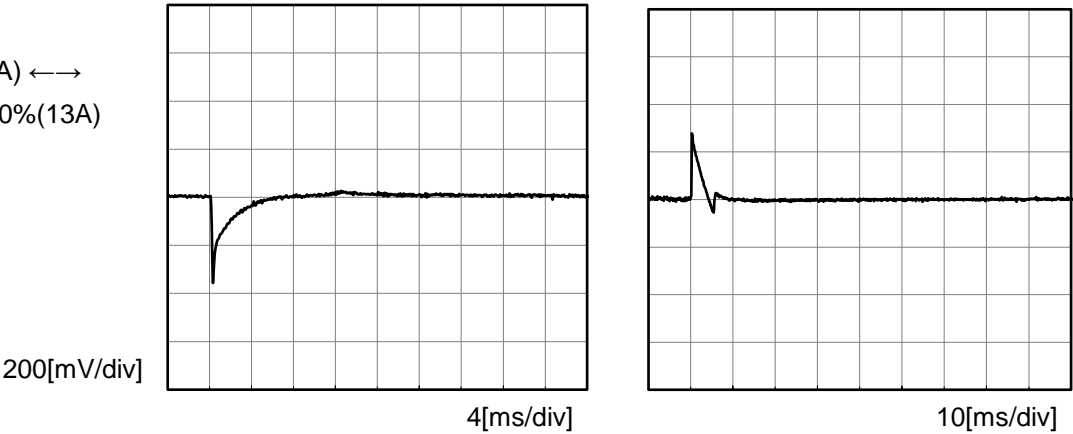


Model		PDA150F-12	Temperature 25°C Testing Circuitry Figure A
Item		Dynamic Load Response	
Object		+12V13A	

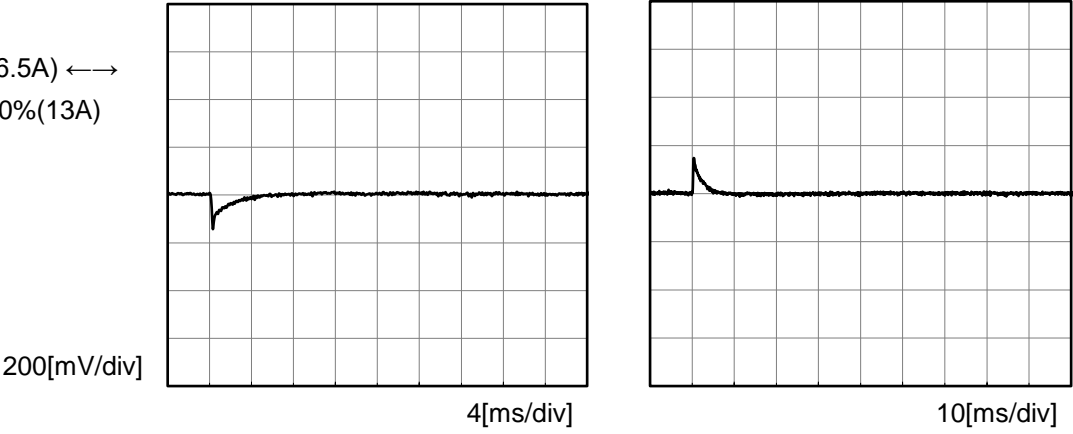
Input Volt. 230 V Response. t1=t2=50μs. Typ
Cycle 1000 ms



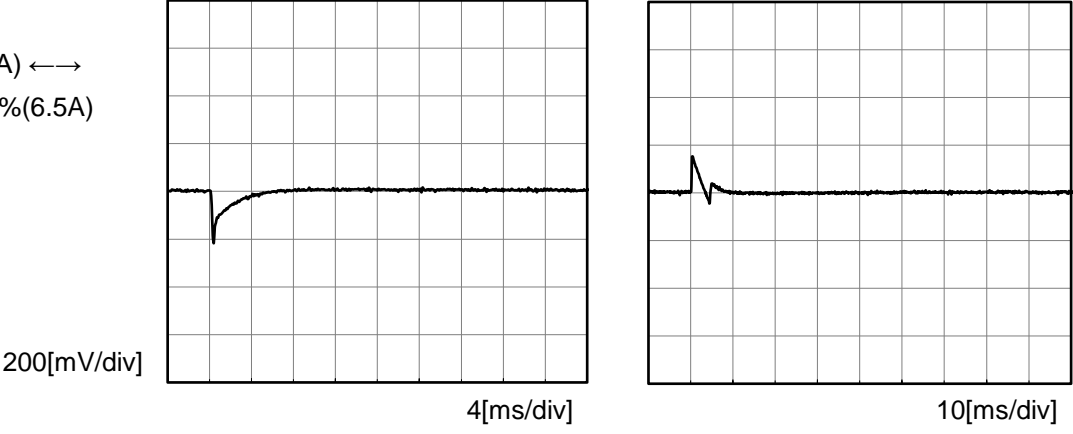
Load 0%(0A) ←→
Load 100%(13A)



Load 50%(6.5A) ←→
Load 100%(13A)



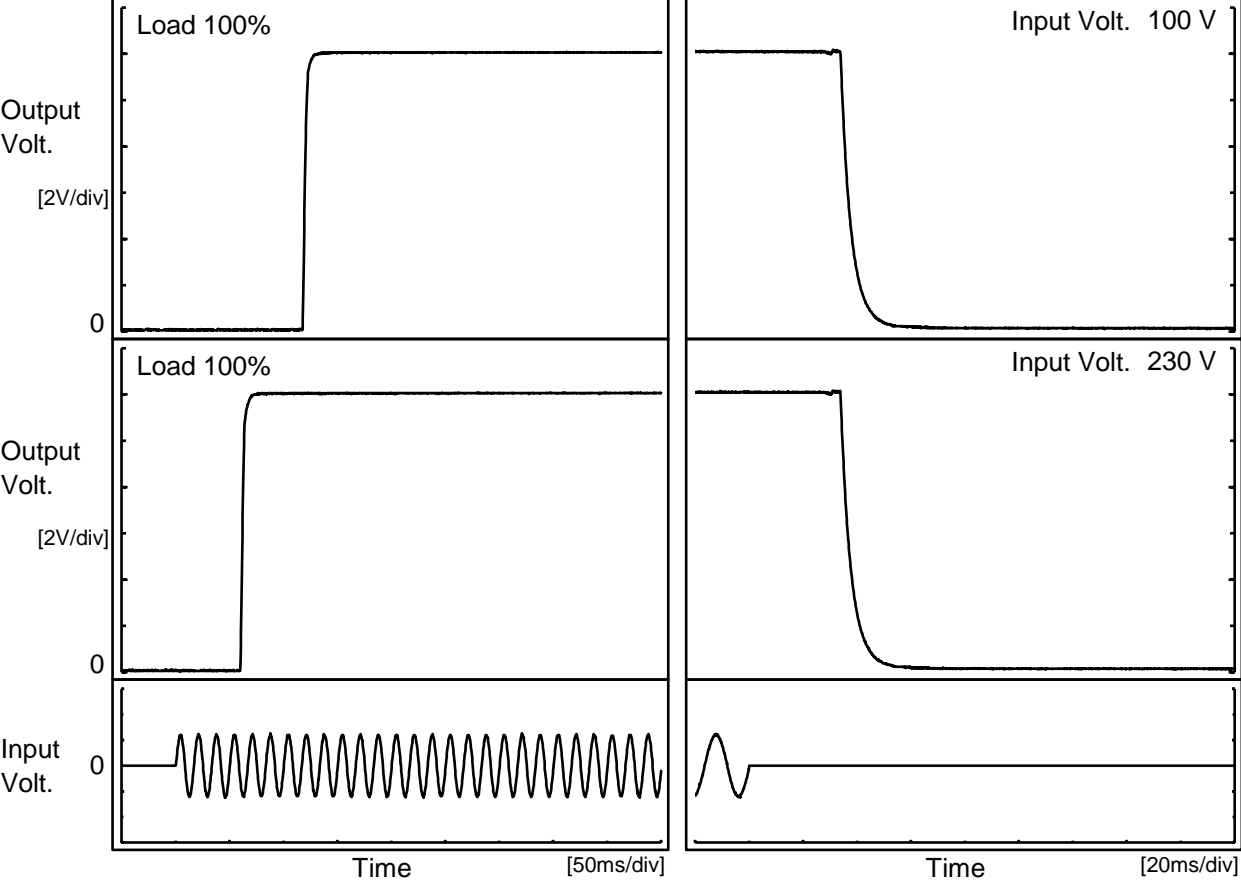
Load 0%(0A) ←→
Load 50%(6.5A)





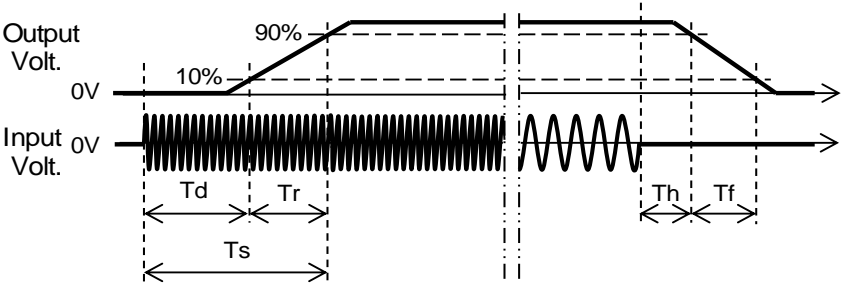
Model		PDA150F-12	Temperature 25°C Testing Circuitry Figure A
Item		Rise and Fall Time	
Object		+12V13A	

1.Graph



2.Values

		[ms]				
Input Volt.	Time	Td	Tr	Ts	Th	Tf
100 V		118.5	4.0	122.5	34.2	8.8
230 V		60.8	4.0	64.8	34.2	8.9



Model		PDA150F-12																																	
Item		Hold-Up Time																																	
Object		+12V13A																																	
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>Load 50%</div></div><div><div>---</div><div>△</div><div>---</div></div><div>Load 100%</div></div> <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>		<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>67</td><td>34</td></tr><tr><td>90</td><td>67</td><td>34</td></tr><tr><td>100</td><td>67</td><td>34</td></tr><tr><td>120</td><td>67</td><td>34</td></tr><tr><td>200</td><td>68</td><td>34</td></tr><tr><td>230</td><td>68</td><td>34</td></tr><tr><td>264</td><td>68</td><td>34</td></tr><tr><td>280</td><td>69</td><td>34</td></tr><tr><td>--</td><td>-</td><td>-</td></tr></table>		Input Voltage [V]	Hold-Up Time [ms]		Load 50%	Load 100%	85	67	34	90	67	34	100	67	34	120	67	34	200	68	34	230	68	34	264	68	34	280	69	34	--	-	-
Input Voltage [V]	Hold-Up Time [ms]																																		
	Load 50%	Load 100%																																	
85	67	34																																	
90	67	34																																	
100	67	34																																	
120	67	34																																	
200	68	34																																	
230	68	34																																	
264	68	34																																	
280	69	34																																	
--	-	-																																	
		- 10 -																																	
		BC-12020																																	

Model		PDA150F-12		Temperature 25°C																																																				
Item		Instantaneous Interruption Compensation		Testing Circuitry Figure A																																																				
Object		+12V13A																																																						
1.Graph		<div><div><div>—△—</div><div>Input Volt. 100V</div></div><div><div>---□---</div><div>Input Volt. 200V</div></div><div><div>-·-○-·-</div><div>Input Volt. 230V</div></div></div> <div>Instantaneous Compensation Time [ms]</div> <div>Load Current [A]</div> <div>Note: Slanted line shows the range of the rated load current.</div>		2.Values																																																				
		<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. 200[V]</th><th>Input Volt. 230[V]</th></tr><tr><td>0.00</td><td>-</td><td>-</td><td>-</td></tr><tr><td>2.00</td><td>201</td><td>206</td><td>210</td></tr><tr><td>4.00</td><td>72</td><td>105</td><td>106</td></tr><tr><td>6.00</td><td>49</td><td>72</td><td>72</td></tr><tr><td>8.00</td><td>45</td><td>54</td><td>54</td></tr><tr><td>10.00</td><td>43</td><td>43</td><td>43</td></tr><tr><td>12.00</td><td>36</td><td>36</td><td>36</td></tr><tr><td>13.00</td><td>31</td><td>32</td><td>32</td></tr><tr><td>14.30</td><td>19</td><td>20</td><td>21</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. 200[V]	Input Volt. 230[V]	0.00	-	-	-	2.00	201	206	210	4.00	72	105	106	6.00	49	72	72	8.00	45	54	54	10.00	43	43	43	12.00	36	36	36	13.00	31	32	32	14.30	19	20	21	--	-	-	-	--	-	-	-
Load Current [A]	Time [ms]																																																							
	Input Volt. 100[V]	Input Volt. 200[V]	Input Volt. 230[V]																																																					
0.00	-	-	-																																																					
2.00	201	206	210																																																					
4.00	72	105	106																																																					
6.00	49	72	72																																																					
8.00	45	54	54																																																					
10.00	43	43	43																																																					
12.00	36	36	36																																																					
13.00	31	32	32																																																					
14.30	19	20	21																																																					
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BC-12020

Model		PDA150F-12	Temperature 25°C Testing Circuitry Figure A																																									
Item		Overcurrent Protection																																										
Object		+12V13A																																										
1.Graph			2.Values																																									
<div><div><div></div><div>Input Volt. 100V</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>			<table><tr><th rowspan="2">Output Voltage [V]</th><th colspan="2">Load Current [A]</th></tr><tr><th>Input Volt. 100[V]</th><th>Input Volt. 230[V]</th></tr><tr><td>12.00</td><td>15.05</td><td>15.05</td></tr><tr><td>11.40</td><td>-</td><td>-</td></tr><tr><td>10.80</td><td>-</td><td>-</td></tr><tr><td>9.60</td><td>-</td><td>-</td></tr><tr><td>8.40</td><td>-</td><td>-</td></tr><tr><td>7.20</td><td>-</td><td>-</td></tr><tr><td>6.00</td><td>-</td><td>-</td></tr><tr><td>4.80</td><td>-</td><td>-</td></tr><tr><td>3.60</td><td>-</td><td>-</td></tr><tr><td>2.40</td><td>-</td><td>-</td></tr><tr><td>1.20</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. 100[V]	Input Volt. 230[V]	12.00	15.05	15.05	11.40	-	-	10.80	-	-	9.60	-	-	8.40	-	-	7.20	-	-	6.00	-	-	4.80	-	-	3.60	-	-	2.40	-	-	1.20	-	-	0.00	-	-
Output Voltage [V]	Load Current [A]																																											
	Input Volt. 100[V]	Input Volt. 230[V]																																										
12.00	15.05	15.05																																										
11.40	-	-																																										
10.80	-	-																																										
9.60	-	-																																										
8.40	-	-																																										
7.20	-	-																																										
6.00	-	-																																										
4.80	-	-																																										
3.60	-	-																																										
2.40	-	-																																										
1.20	-	-																																										
0.00	-	-																																										



Model	PDA150F-12		
Item	Ambient Temperature Drift	Testing Circuitry Figure A	
Object	+12V13A		
1.Values		Load 100%	
Ambient Temperature[°C]	Output Voltage [V]		
	Input Volt. 100V	Input Volt. 200V	Input Volt. 230V
-10	12.073	12.073	12.073
25	12.101	12.101	12.101
50	12.109	12.109	12.109
Item	Minimum Input Voltage for Regulated Output Voltage	Testing Circuitry Figure A	
Object	+12V13A		
1.Values			
Ambient Temperature[°C]	Input Voltage [V]		
	Load 50%	Load 100%	
-10	41	56	
25	41	57	
50	40	57	
Item	Overvoltage Protection	Testing Circuitry Figure A	
Object	+12V13A		
1.Values		Load 0%	
Ambient Temperature[°C]	Operating Point [V]		
	Input Volt. 100V	Input Volt. 230V	
-20	16.41	16.41	
25	16.64	16.64	
50	16.88	16.88	

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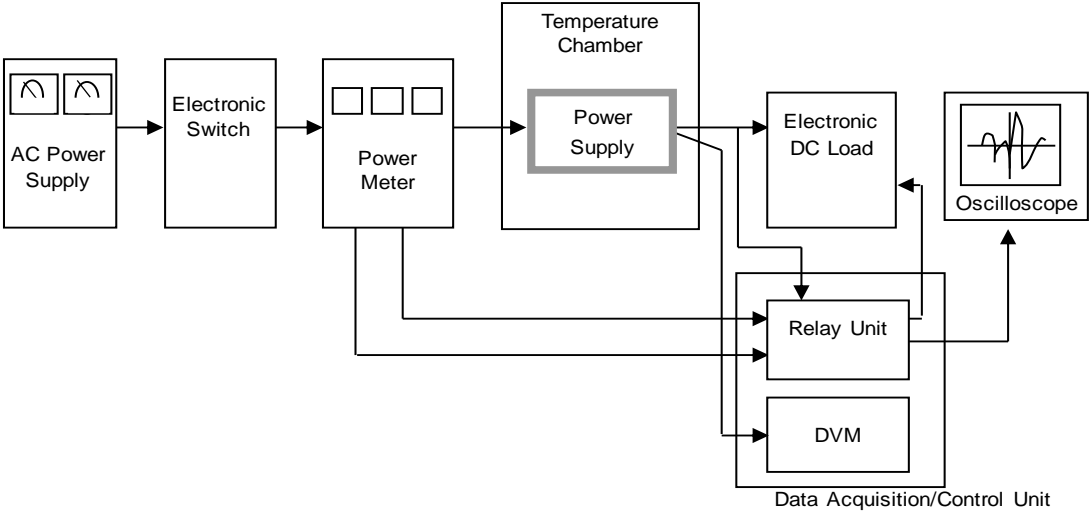


Figure A

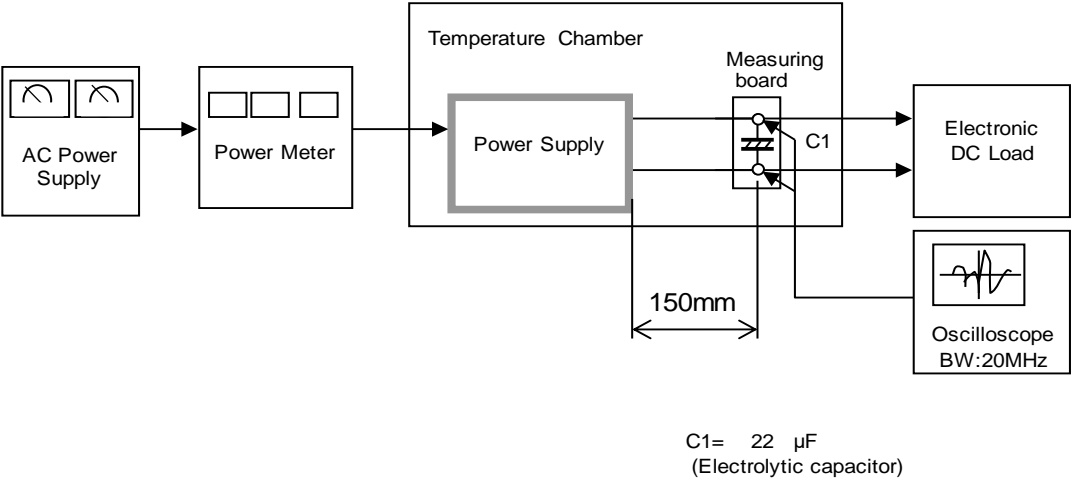


Figure B

