

TEST DATA OF LDA100W-48

(100V INPUT)

Regulated DC Power Supply
Mar.4. 2005

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CONTENTS

1.Input Current (by Load Current)	1
2.Input Power (by Load Current)	2
3.Efficiency (by Input Voltage)	3
4.Efficiency (by Load Current)	4
5.Inrush Current	5
6.Line Regulation	6
7.Load Regulation	7
8.Dynamic Load Response	8
9.Ripple Voltage (by Load Current)	9
10.Ripple-Noise	10
11.Ripple Voltage (by Ambient Temperature)	11
12.Ambient Temperature Drift	12
13.Output Voltage Accuracy	13
14.Time Lapse Drift	14
15.Rise and Fall Time	15
16.Hold-Up Time	16
17.Instantaneous Interruption Compensation	17
18.Minimum Input Voltage for Regulated Output Voltage	18
19.Overcurrent Protection	19
20.Overvoltage Protection	20
21.Figure of Testing Circuitry	21

(Final Page 21)

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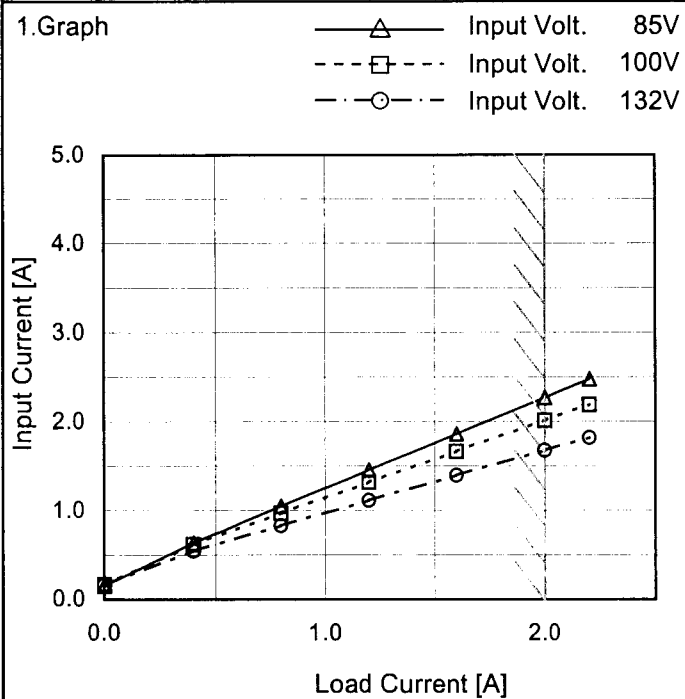
Model LDA100W-48

Item Input Current (by Load Current)

Object

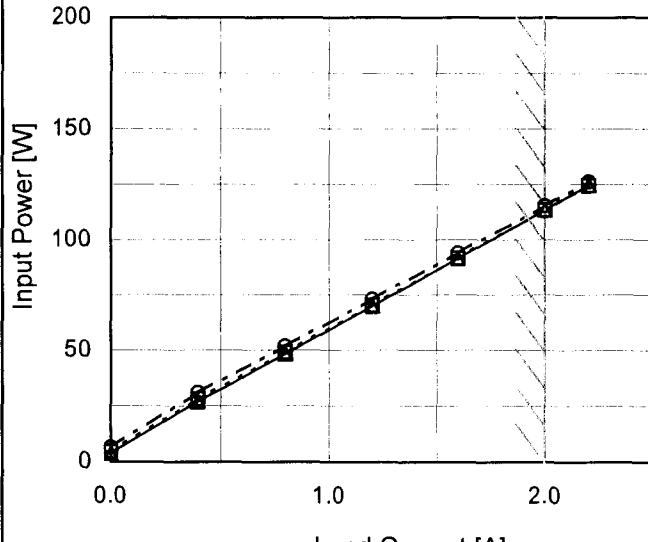
Temperature 25°C
Testing Circuitry Figure A

1. Graph



2. Values

Load Current [A]	Input Current [A]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0.0	0.152	0.165	0.163
0.4	0.635	0.618	0.547
0.8	1.048	0.969	0.831
1.2	1.460	1.317	1.112
1.6	1.866	1.667	1.397
2.0	2.271	2.014	1.677
2.2	2.477	2.191	1.822
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--	-	-	-
--	-	-	-
--	-	-	-

Model		LDA100W-48		Temperature 25°C																																																				
Item		Input Power (by Load Current)		Testing Circuitry Figure A																																																				
Object		_____																																																						
1.Graph		<div><div>—△—</div>Input Volt. 85V</div> <div><div>---□---</div>Input Volt. 100V</div> <div><div>-○-</div>Input Volt. 132V</div>		2.Values																																																				
<div><div>Input Power [W]</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. 85[V]</th><th>Input Volt. 100[V]</th><th>Input Volt. 132[V]</th></tr><tr><td>0.0</td><td>3.8</td><td>4.6</td><td>6.5</td></tr><tr><td>0.4</td><td>27.0</td><td>28.1</td><td>31.1</td></tr><tr><td>0.8</td><td>48.4</td><td>49.2</td><td>51.8</td></tr><tr><td>1.2</td><td>69.9</td><td>70.4</td><td>73.1</td></tr><tr><td>1.6</td><td>91.6</td><td>91.8</td><td>94.1</td></tr><tr><td>2.0</td><td>113.7</td><td>113.7</td><td>115.5</td></tr><tr><td>2.2</td><td>124.8</td><td>124.5</td><td>126.3</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. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]	0.0	3.8	4.6	6.5	0.4	27.0	28.1	31.1	0.8	48.4	49.2	51.8	1.2	69.9	70.4	73.1	1.6	91.6	91.8	94.1	2.0	113.7	113.7	115.5	2.2	124.8	124.5	126.3	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
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Note: Slanted line shows the range of the rated load current.																																																								

- 2 -

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Model		LDA100W-48	
Item		Efficiency (by Input Voltage)	
Object			
1.Graph		2.Values	

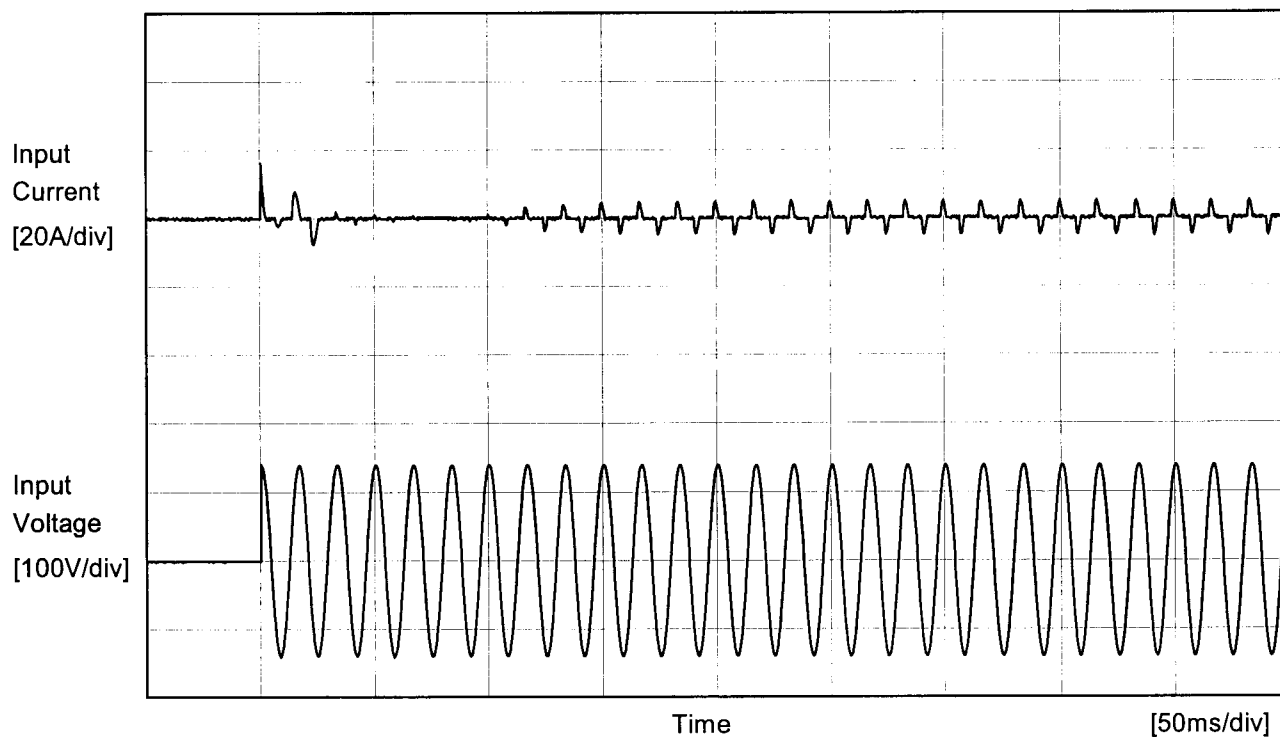
Model	LDA100W-48																																																					
Item	Efficiency (by Load Current)	Temperature	25°C																																																			
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<div><div><div>—△—</div><div>Input Volt.</div><div>85V</div></div><div><div>---□---</div><div>Input Volt.</div><div>100V</div></div><div><div>---○---</div><div>Input Volt.</div><div>132V</div></div></div> <p>Efficiency [%]</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">Efficiency [%]</th></tr><tr><th>Input Volt. 85[V]</th><th>Input Volt. 100[V]</th><th>Input Volt. 132[V]</th></tr><tr><td>0.0</td><td>-</td><td>-</td><td>-</td></tr><tr><td>0.4</td><td>71.7</td><td>68.8</td><td>62.2</td></tr><tr><td>0.8</td><td>79.9</td><td>78.5</td><td>74.6</td></tr><tr><td>1.2</td><td>83.0</td><td>82.4</td><td>79.3</td></tr><tr><td>1.6</td><td>84.4</td><td>84.2</td><td>82.2</td></tr><tr><td>2.0</td><td>85.0</td><td>85.0</td><td>83.7</td></tr><tr><td>2.2</td><td>85.2</td><td>85.4</td><td>84.2</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]	Efficiency [%]			Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]	0.0	-	-	-	0.4	71.7	68.8	62.2	0.8	79.9	78.5	74.6	1.2	83.0	82.4	79.3	1.6	84.4	84.2	82.2	2.0	85.0	85.0	83.7	2.2	85.2	85.4	84.2	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
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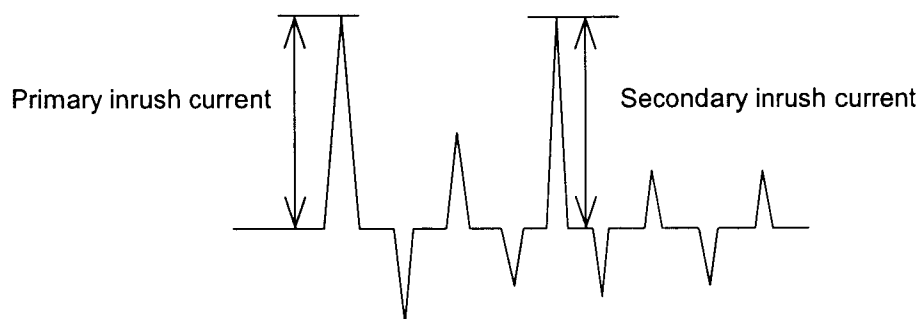
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		Temperature 25°C Testing Circuitry Figure A
Model	LDA100W-48	
Item	Inrush Current	
Object		



Input Voltage 100 V
Frequency 60 Hz
Load 100 %

Primary inrush current 16.3 A
Secondary inrush current 5.3 A



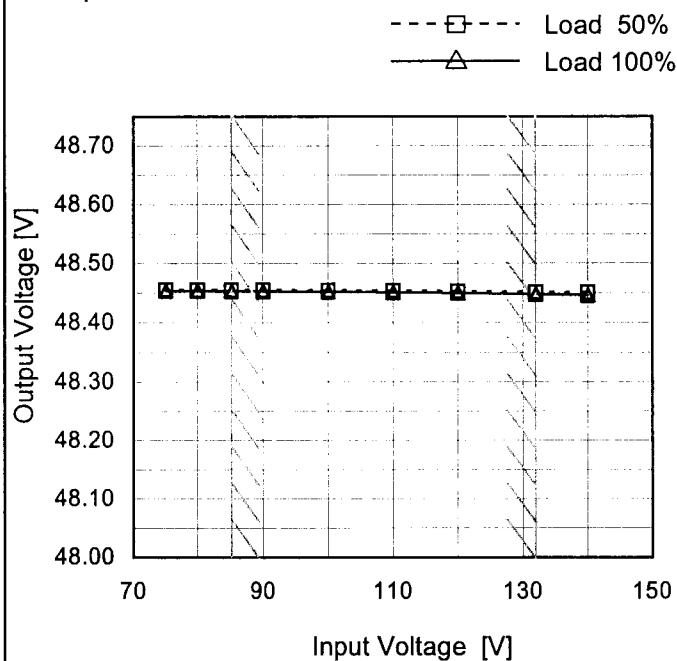
Model LDA100W-48

Item Line Regulation

Object +48V2A

Temperature 25°C
Testing Circuitry Figure A

1. Graph



2. Values

Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
75	48.456	48.454
80	48.455	48.454
85	48.455	48.454
90	48.455	48.453
100	48.455	48.453
110	48.454	48.452
120	48.453	48.450
132	48.452	48.448
140	48.451	48.446

Model	LDA100W-48																																																					
Item	Load Regulation	Temperature	25°C																																																			
Object	+48V2A	Testing Circuitry	Figure A																																																			
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<div><div><div>—△—</div><div>Input Volt.</div><div>85V</div></div><div><div>---□---</div><div>Input Volt.</div><div>100V</div></div><div><div>---○---</div><div>Input Volt.</div><div>132V</div></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. 85[V]</th><th>Input Volt. 100[V]</th><th>Input Volt. 132[V]</th></tr><tr><td>0.0</td><td>48.458</td><td>48.458</td><td>48.457</td></tr><tr><td>0.4</td><td>48.454</td><td>48.454</td><td>48.453</td></tr><tr><td>0.8</td><td>48.454</td><td>48.453</td><td>48.451</td></tr><tr><td>1.2</td><td>48.453</td><td>48.453</td><td>48.450</td></tr><tr><td>1.6</td><td>48.453</td><td>48.452</td><td>48.448</td></tr><tr><td>2.0</td><td>48.452</td><td>48.452</td><td>48.448</td></tr><tr><td>2.2</td><td>48.452</td><td>48.451</td><td>48.447</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. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]	0.0	48.458	48.458	48.457	0.4	48.454	48.454	48.453	0.8	48.454	48.453	48.451	1.2	48.453	48.453	48.450	1.6	48.453	48.452	48.448	2.0	48.452	48.452	48.448	2.2	48.452	48.451	48.447	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
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Note: Slanted line shows the range of the rated load current.																																																						

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Model	LDA100W-48		
Item	Dynamic Load Response	Temperature	25°C
Object	+48V2A	Testing Circuitry	Figure A

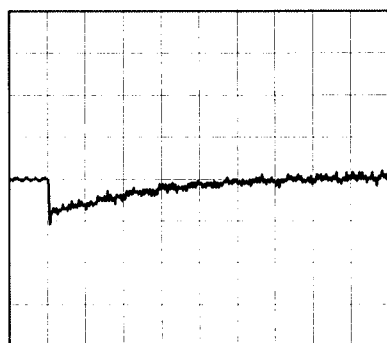
Input Volt. 100 V
Cycle 1000 ms

Load Current

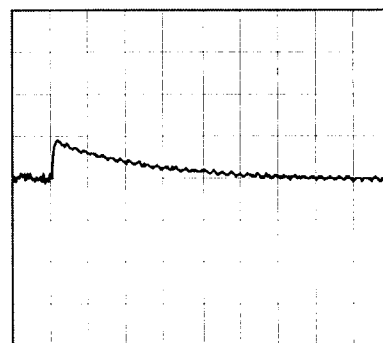
Min. Load (0A) ←→

Load 100% (2A)

200 mV/div



10 ms/div

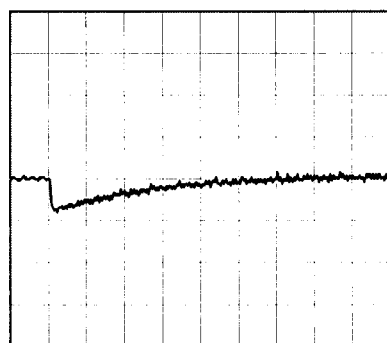


10 ms/div

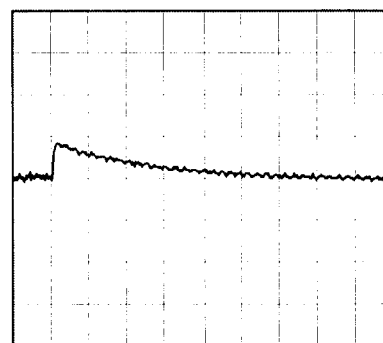
Min. Load (0A) ←→

Load 50% (1A)

200 mV/div

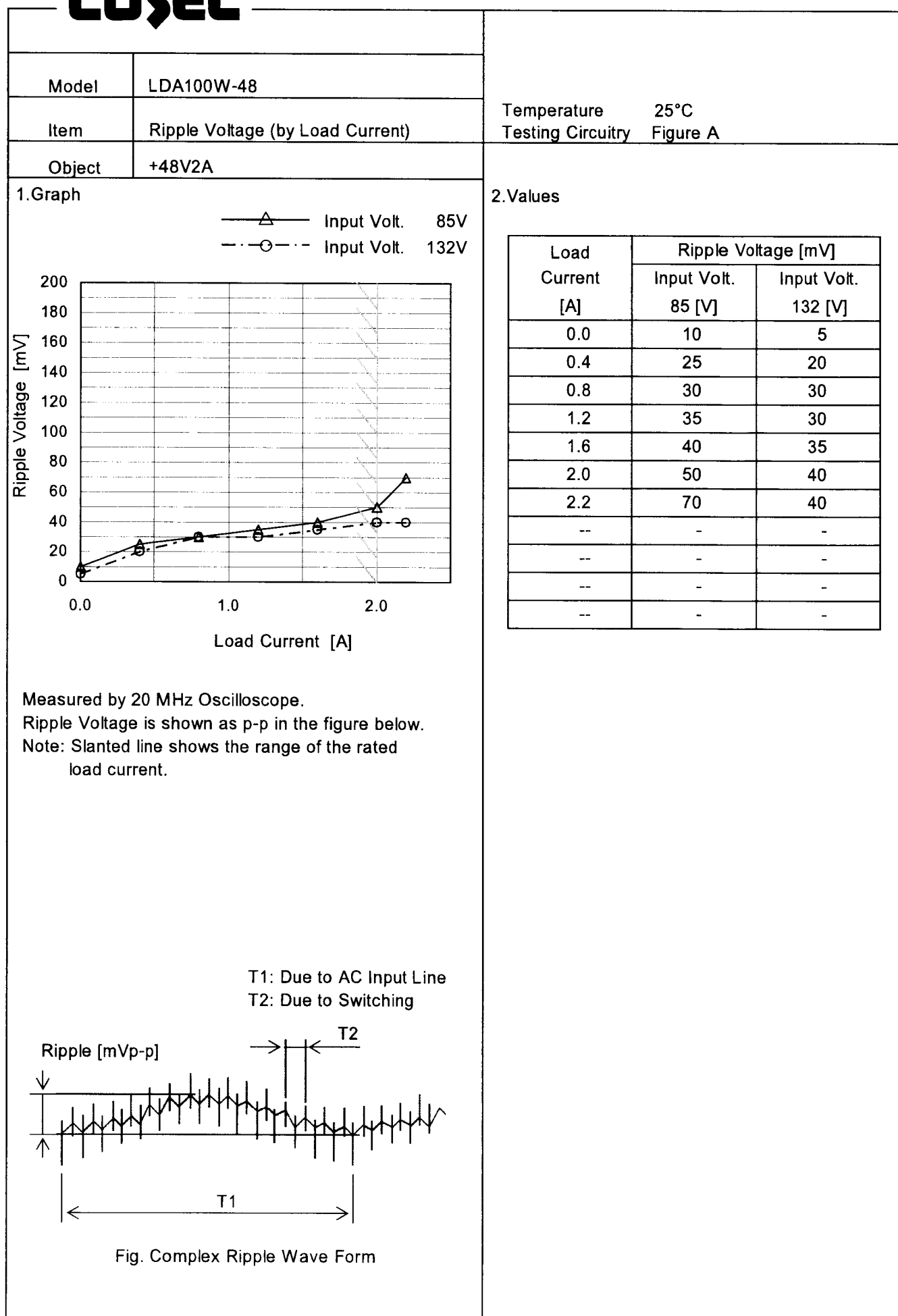


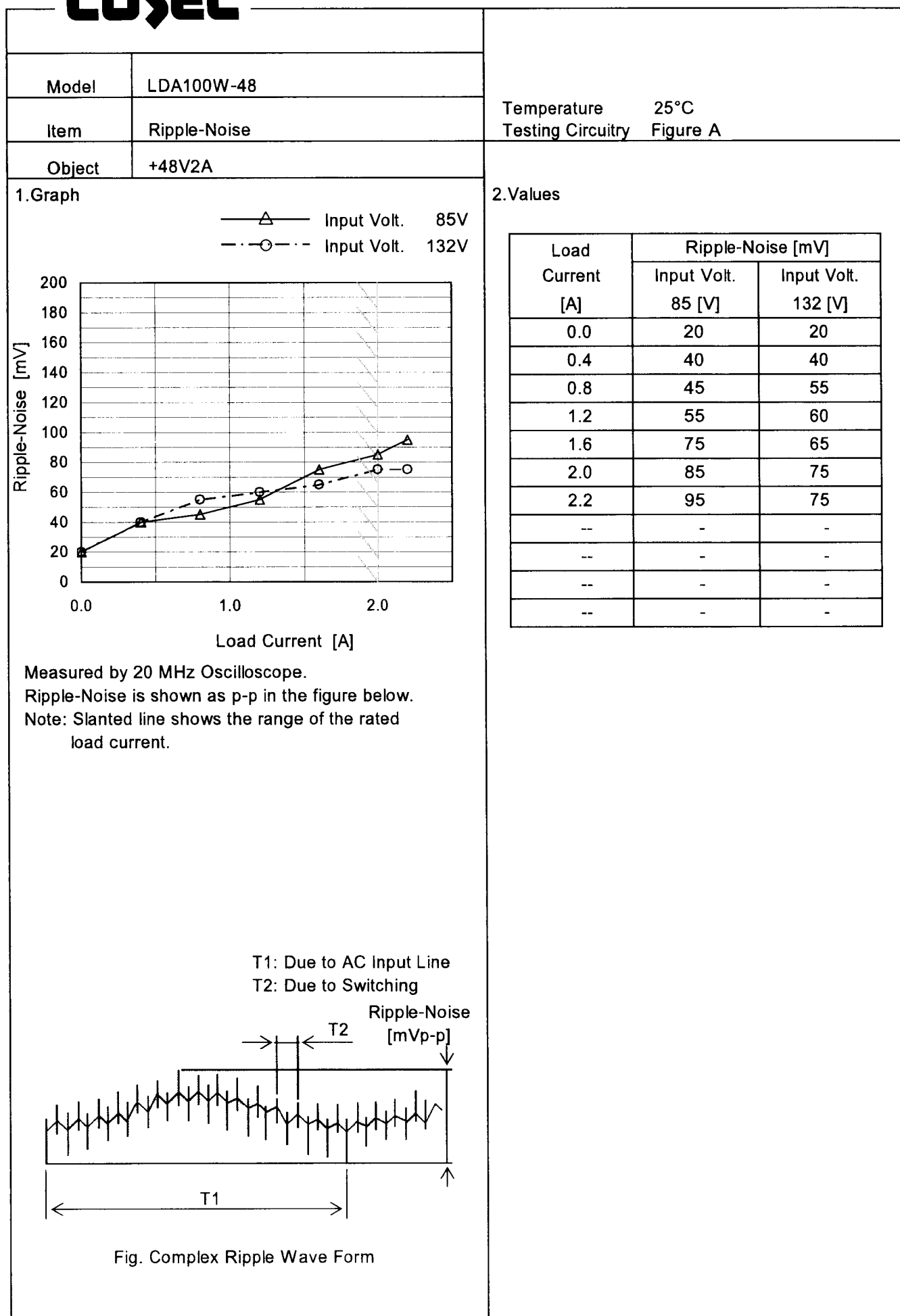
10 ms/div



10 ms/div

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Model		LDA100W-48	
Item		Ambient Temperature Drift	
Object		+48V2A	

1.Graph

—△—

Input Volt.

85V

---□---

Input Volt.

100V

---○---

Input Volt.

132V

Output Voltage [V]



		Testing Circuitry Figure A
Model	LDA100W-48	
Item	Output Voltage Accuracy	
Object	+48V2A	

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 - 60°C

Input Voltage : 85 - 132V

Load Current : 0 - 2A

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

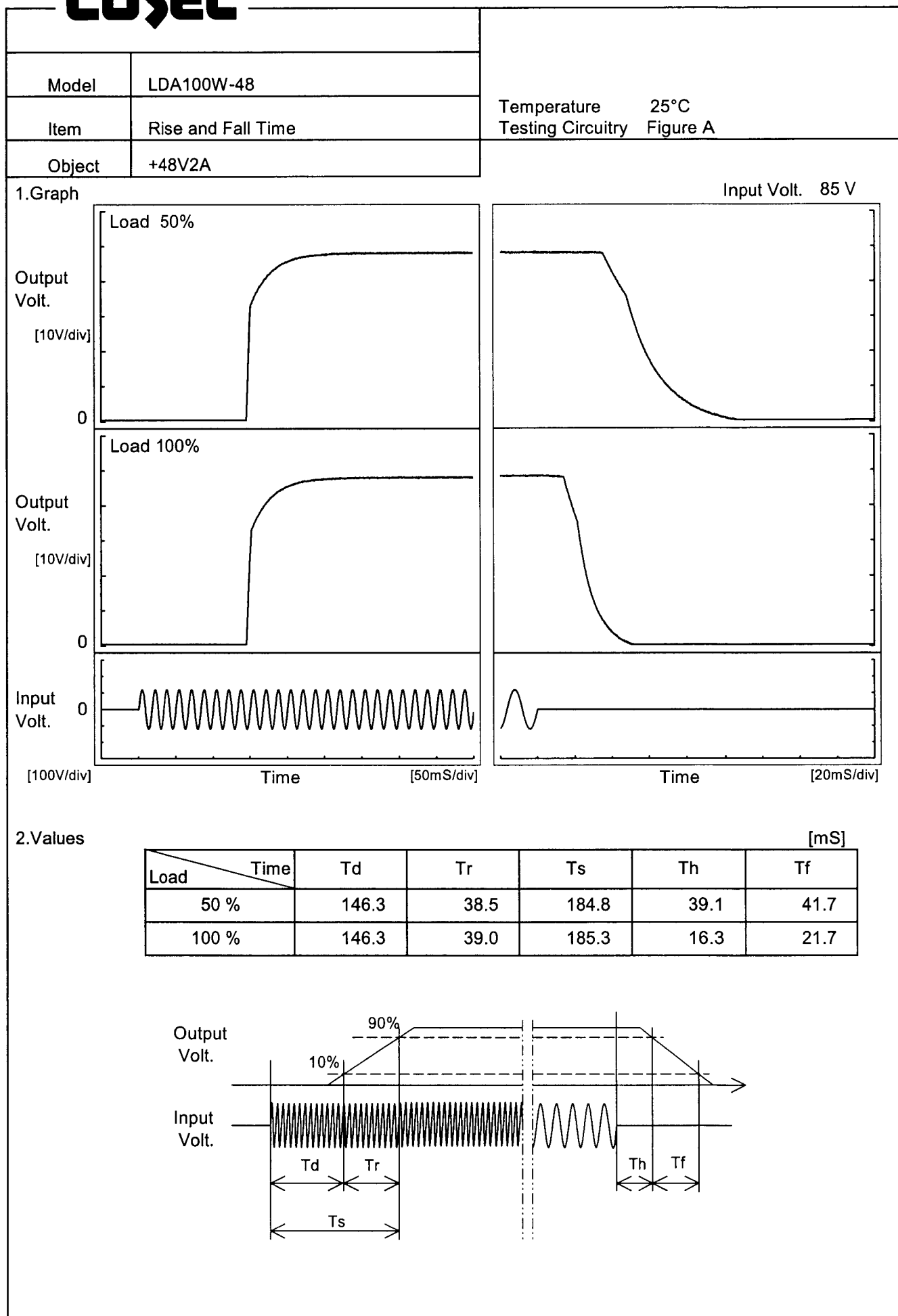
* Output Voltage Accuracy (Ration) = $\frac{\text{Output Voltage Accuracy}}{\text{Rated Output Voltage}} \times 100$

2. Values

Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	-10	85	0	48.528	±69	±0.1
Minimum Voltage	60	132	2	48.390		

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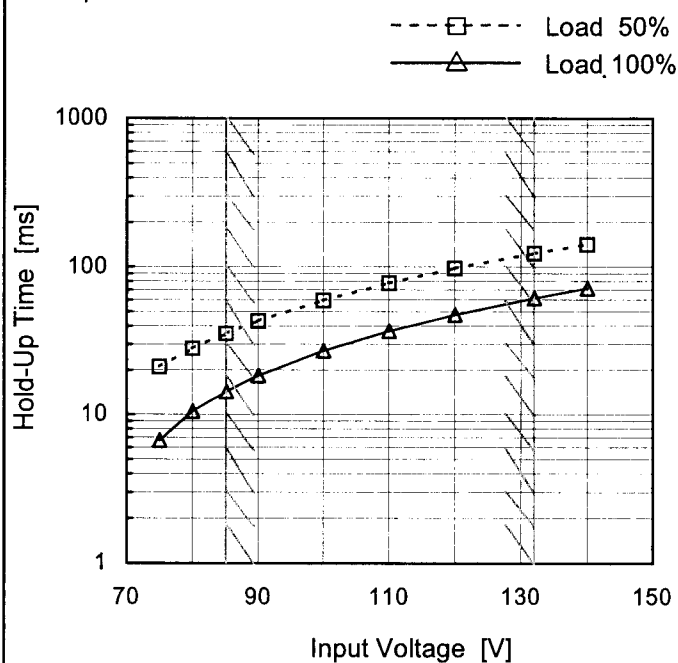
Model LDA100W-48

Item Hold-Up Time

Object +48V2A

Temperature 25°C
Testing Circuitry Figure A

1. Graph



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.

2. Values

Input Voltage [V]	Hold-Up Time [ms]	
	Load 50%	Load 100%
75	21	7
80	28	11
85	35	14
90	43	18
100	60	27
110	78	37
120	98	48
132	123	62
140	142	72

Model		LDA100W-48	
Item		Instantaneous Interruption Compensation	
Object		+48V2A	
1.Graph		2.Values	

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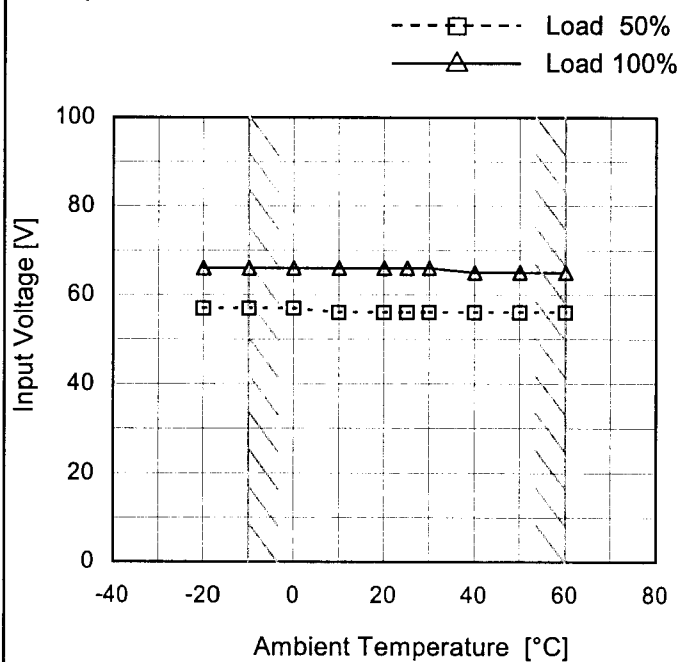
Model LDA100W-48

Item Minimum Input Voltage
for Regulated Output Voltage

Object +48V2A

Testing Circuitry Figure A

1.Graph



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

2.Values

Ambient Temperature [°C]	Input Voltage [V]	
	Load 50%	Load 100%
-20	57	66
-10	57	66
0	57	66
10	56	66
20	56	66
25	56	66
30	56	66
40	56	65
50	56	65
60	56	65
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Model	LDA100W-48																																																									
Item	Overcurrent Protection	Temperature	25°C																																																							
Object	+48V2A	Testing Circuitry	Figure A																																																							
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Object		+48V2A																																																				
1.Graph		2.Values																																																				
<div><div><div>—△—</div><div>---□---</div><div>---○---</div></div><div><div>Input Volt.</div><div>Input Volt.</div><div>Input Volt.</div></div><div><div>85V</div><div>100V</div><div>132V</div></div></div> <div><p>Operating Point [V]</p><p>Ambient Temperature [°C]</p><p>Load 0%</p></div>		<table><tr><th rowspan="2">Ambient Temperature [°C]</th><th colspan="3">Operating Point [V]</th></tr><tr><th>Input Volt. 85[V]</th><th>Input Volt. 100[V]</th><th>Input Volt. 132[V]</th></tr><tr><td>-20</td><td>58.27</td><td>58.21</td><td>58.21</td></tr><tr><td>-10</td><td>58.86</td><td>58.80</td><td>58.80</td></tr><tr><td>0</td><td>59.38</td><td>59.33</td><td>59.38</td></tr><tr><td>10</td><td>59.86</td><td>59.86</td><td>59.86</td></tr><tr><td>20</td><td>60.40</td><td>60.40</td><td>60.40</td></tr><tr><td>25</td><td>60.69</td><td>60.58</td><td>60.58</td></tr><tr><td>30</td><td>60.93</td><td>60.93</td><td>60.93</td></tr><tr><td>40</td><td>61.45</td><td>61.45</td><td>61.45</td></tr><tr><td>50</td><td>61.98</td><td>61.86</td><td>61.98</td></tr><tr><td>60</td><td>62.50</td><td>62.39</td><td>62.39</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr></table>		Ambient Temperature [°C]	Operating Point [V]			Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]	-20	58.27	58.21	58.21	-10	58.86	58.80	58.80	0	59.38	59.33	59.38	10	59.86	59.86	59.86	20	60.40	60.40	60.40	25	60.69	60.58	60.58	30	60.93	60.93	60.93	40	61.45	61.45	61.45	50	61.98	61.86	61.98	60	62.50	62.39	62.39	--	-	-	-
Ambient Temperature [°C]	Operating Point [V]																																																					
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60	62.50	62.39	62.39																																																			
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Note: Slanted line shows the range of the rated ambient temperature.																																																						

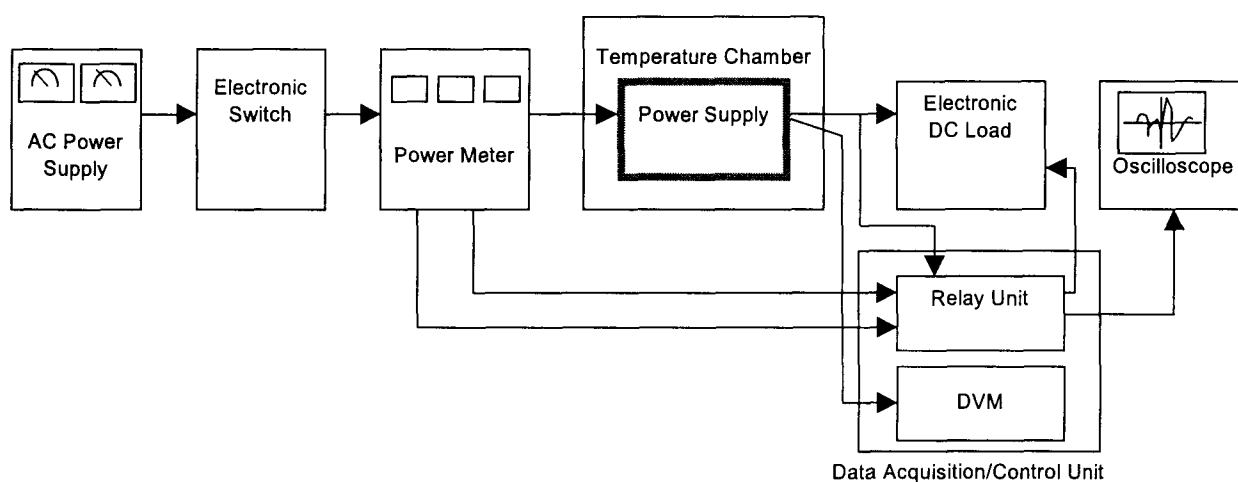


Figure A

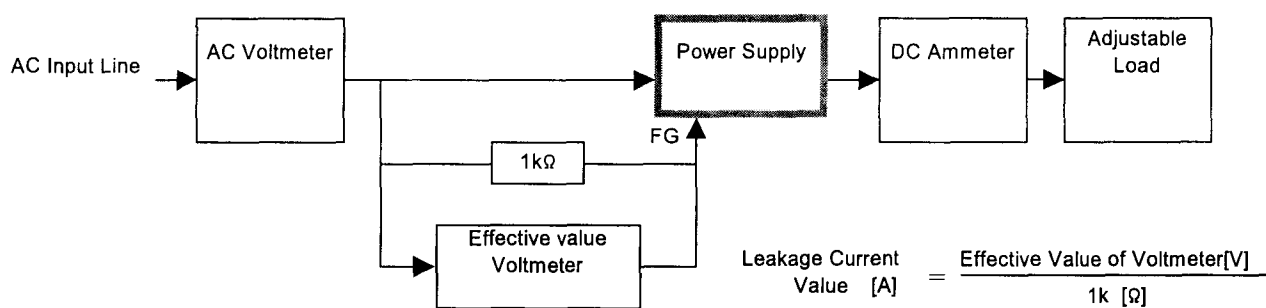


Figure B (DEN-AN)

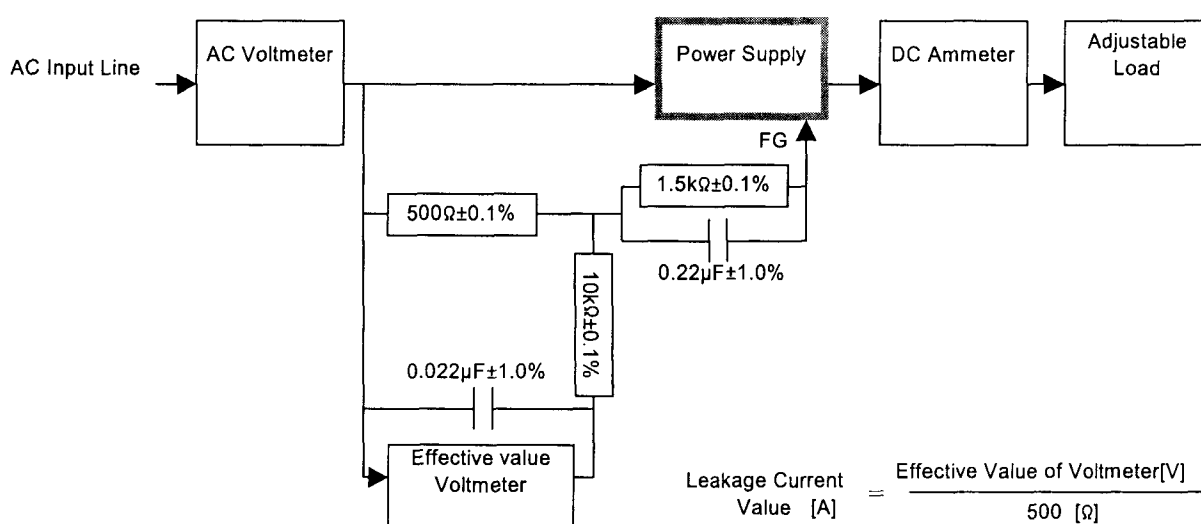


Figure B (IEC60950)