



TEST DATA OF LGA75A-3R3-Y

Regulated DC Power Supply
May 20, 2011

Approved by : Kenji Shiho
Kenji Shiho Design Manager

Prepared by : Yosuke Saitou
Yosuke Saitou Design Engineer

COSEL CO.,LTD.



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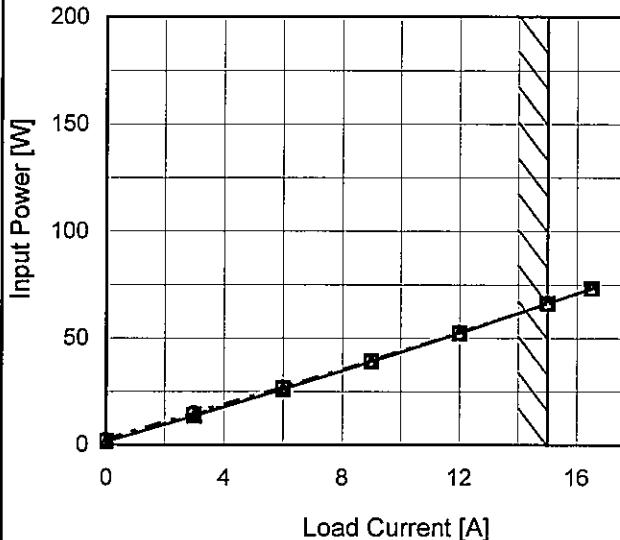
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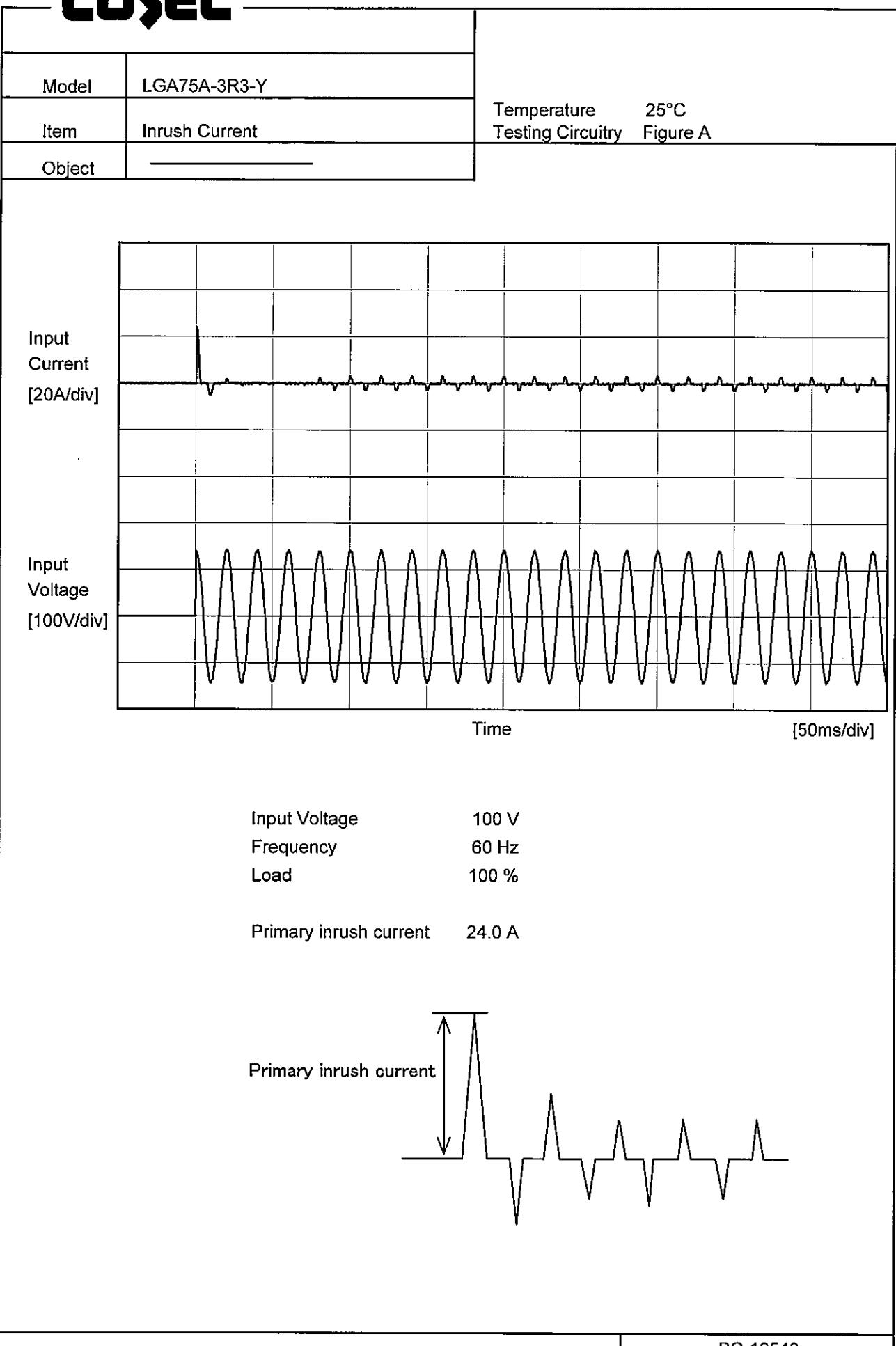
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Model	LGA75A-3R3-Y	Temperature	25°C
Item	Leakage Current	Testing Circuitry	Figure B
Object	<hr/>		

1. Results

Standards	Leakage Current [mA]		
	Input Volt. 100 [V]	Input Volt. 120 [V]	Input Volt. 132 [V]
(A)DEN-AN	0.08	0.10	0.12
(B)IEC60950-1	0.09	0.11	0.12

frequency 60Hz

2. Condition

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

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Item	Load Regulation																																																					
Object	+3.3V15A																																																					
1. Graph																																																						
<p>Output Voltage [V]</p> <p>Load Current [A]</p> <ul style="list-style-type: none"> — ▲ — Input Volt. 85V - - ■ - - Input Volt. 100V - - ○ - - Input Volt. 132V 																																																						
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<p>Note: Slanted line shows the range of the rated load current.</p>																																																						

COSEL

Model	LGA75A-3R3-Y	Temperature Testing Circuitry	25°C Figure C
Item	Dynamic Load Response		
Object	+3.3V15A		

Input Volt. 100 V
Cycle 1000 ms

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

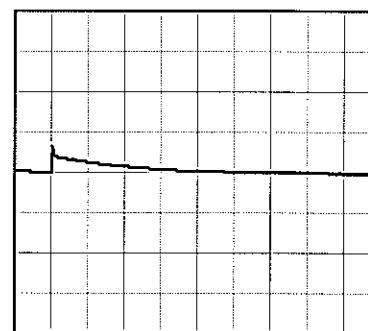
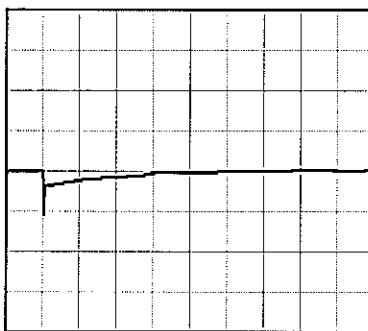


Min. Load (0A) ↔
Load 100% (15A)

100 mV/div

5 ms/div

5 ms/div

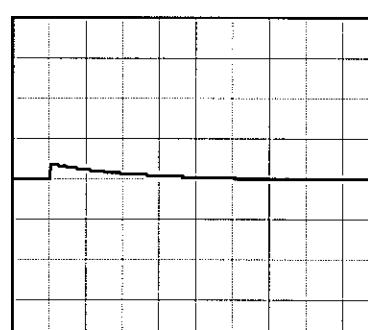
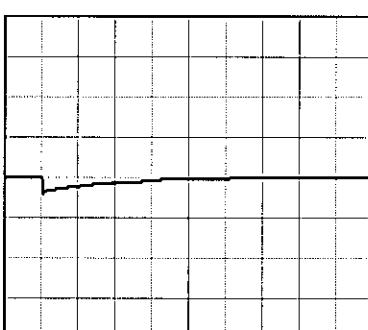


Min. Load (0A) ↔
Load 50% (7.5A)

100 mV/div

5 ms/div

5 ms/div



COSEL

Model	LGA75A-3R3-Y																																						
Item	Ripple Voltage (by Load Current)	Temperature 25°C Testing Circuitry Figure C																																					
Object	+3.3V15A																																						
1. Graph																																							
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<p>Fig. Complex Ripple Wave Form</p>																																							

COSEL

Model	LGA75A-3R3-Y																																							
Item	Ripple-Noise	Temperature 25°C Testing Circuitry Figure C																																						
Object	+3.3V15A																																							
1. Graph																																								
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<p>T1: Due to AC Input Line T2: Due to Switching</p>																																								
<p>Fig. Complex Ripple Wave Form</p>																																								

COSEL

Model	LGA75A-3R3-Y	Testing Circuitry Figure C																										
Item	Ripple Voltage (by Ambient Temp.)																											
Object	+3.3V15A																											
1. Graph		2. Values																										
<p>Graph showing Ripple Voltage [mV] vs Ambient Temperature [°C]. The graph shows a decreasing trend of ripple voltage as ambient temperature increases from -40°C to 60°C. A slanted line indicates the range of rated ambient temperature between approximately -10°C and 25°C.</p> <p>Input Volt. 100V Input Load. 100%</p> <p>Measured by 20 MHz Oscilloscope. Note: Slanted line shows the range of the rated ambient temperature.</p>		<table border="1"> <thead> <tr> <th>Ambient Temperature [°C]</th> <th>Ripple Voltage [mV]</th> </tr> </thead> <tbody> <tr><td>-30</td><td>80</td></tr> <tr><td>-10</td><td>60</td></tr> <tr><td>0</td><td>50</td></tr> <tr><td>25</td><td>30</td></tr> <tr><td>50</td><td>30</td></tr> <tr><td>--</td><td>-</td></tr> <tr><td>--</td><td>-</td></tr> <tr><td>--</td><td>-</td></tr> <tr><td>--</td><td>-</td></tr> <tr><td>--</td><td>-</td></tr> <tr><td>--</td><td>-</td></tr> <tr><td>--</td><td>-</td></tr> </tbody> </table>	Ambient Temperature [°C]	Ripple Voltage [mV]	-30	80	-10	60	0	50	25	30	50	30	--	-	--	-	--	-	--	-	--	-	--	-	--	-
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COSSEL

Model	LGA75A-3R3-Y																																																					
Item	Ambient Temperature Drift																																																					
Object	+3.3V15A																																																					
1. Graph	<p>Output Voltage [V]</p> <p>Ambient Temperature [°C]</p> <p>Load 100%</p> <p>Legend:</p> <ul style="list-style-type: none"> Input Volt. 85V Input Volt. 100V Input Volt. 132V 																																																					
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Ambient Temperature [°C]	Output Voltage [V]																																																					
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Note:	Slanted line shows the range of the rated ambient temperature.																																																					



Model	LGA75A-3R3-Y	Testing Circuitry Figure A
Item	Output Voltage Accuracy	
Object	+3.3V15A	

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 : 85 - 132V

Load Current : 0 - 15A

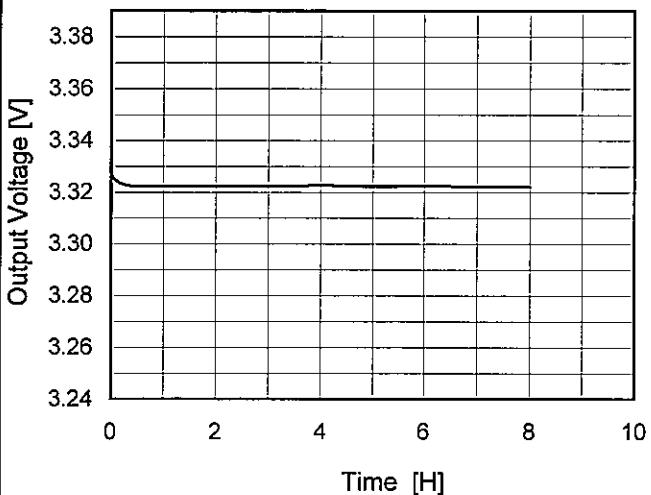
* Output Voltage Accuracy = $\pm(\text{Maximum of Output Voltage} - \text{Minimum of Output Voltage}) / 2$

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

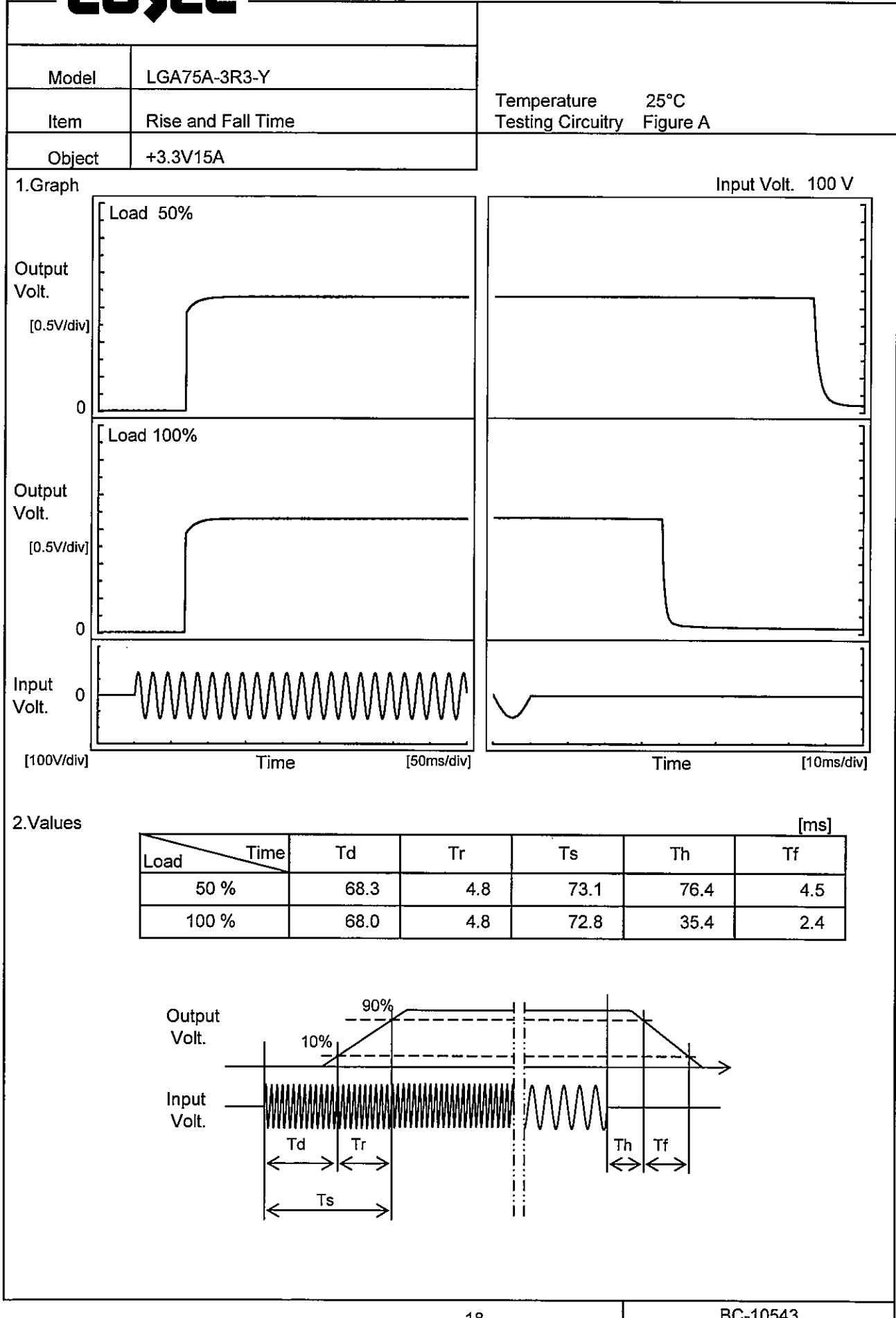
2. Values

Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	-10	132	15	3.331	± 4	± 0.1
Minimum Voltage	40	85	0	3.324		

COSEL

Model	LGA75A-3R3-Y	Temperature	25°C																						
Item	Time Lapse Drift	Testing Circuitry	Figure A																						
Object	+3.3V15A																								
1.Graph			2.Values																						
 <p>Output Voltage [V]</p> <p>Time [H]</p> <p>Input Volt. 100V Load 100%</p>			<table border="1"> <thead> <tr> <th>Time since start [H]</th> <th>Output Voltage [V]</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>3.328</td></tr> <tr><td>0.5</td><td>3.322</td></tr> <tr><td>1.0</td><td>3.322</td></tr> <tr><td>2.0</td><td>3.322</td></tr> <tr><td>3.0</td><td>3.322</td></tr> <tr><td>4.0</td><td>3.323</td></tr> <tr><td>5.0</td><td>3.322</td></tr> <tr><td>6.0</td><td>3.323</td></tr> <tr><td>7.0</td><td>3.322</td></tr> <tr><td>8.0</td><td>3.322</td></tr> </tbody> </table>	Time since start [H]	Output Voltage [V]	0.0	3.328	0.5	3.322	1.0	3.322	2.0	3.322	3.0	3.322	4.0	3.323	5.0	3.322	6.0	3.323	7.0	3.322	8.0	3.322
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COSEL



COSSEL

Model	LGA75A-3R3-Y	
Item	Hold-Up Time	Temperature 25°C Testing Circuitry Figure A
Object	+3.3V15A	
1.Graph		2.Values
<p>Graph showing Hold-Up Time [ms] vs Input Voltage [V]. The Y-axis is logarithmic from 1 to 1000 ms. The X-axis ranges from 70 to 150 V. Two curves are shown: Load 50% (dashed line with squares) and Load 100% (solid line with triangles). Both curves show an increase in hold-up time as input voltage decreases below the rated range (around 90-100 V). A slanted line indicates the rated input voltage range.</p>		
Input Voltage [V]	Hold-Up Time [ms] Load 50%	Hold-Up Time [ms] Load 100%
75	29	12
80	38	17
85	47	21
90	56	26
100	77	37
110	99	48
120	125	61
132	158	78
140	183	90

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.

COSEL

Model	LGA75A-3R3-Y	Temperature	25°C																																																			
Item	Instantaneous Interruption Compensation	Testing Circuitry	Figure A																																																			
Object	+3.3V15A	2. Values																																																				
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COSEL

Model	LGA75A-3R3-Y	Testing Circuitry Figure A																																							
Item	Minimum Input Voltage for Regulated Output Voltage																																								
Object	+3.3V15A																																								
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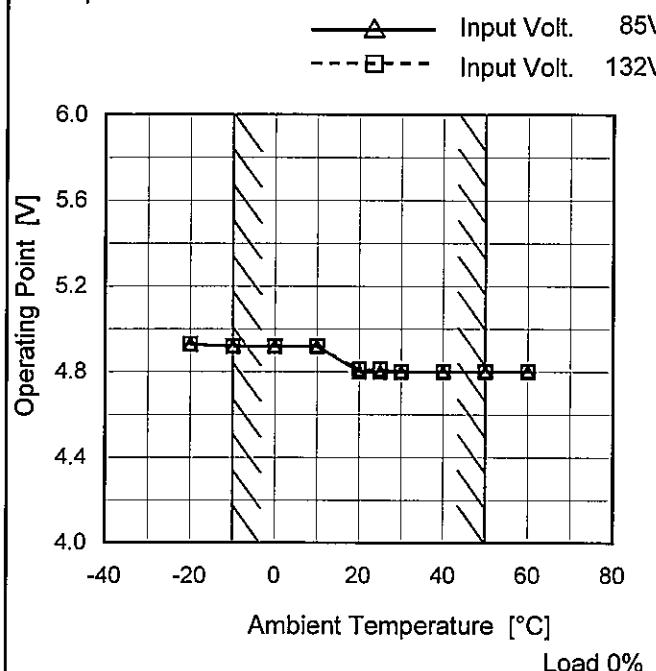
COSEL

Model	LGA75A-3R3-Y	Temperature	25°C																																																											
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COSEL

Model	LGA75A-3R3-Y
Item	Oversupply Protection
Object	+3.3V15A

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. 85[V]	Input Volt. 132[V]
-20	4.93	4.93
-10	4.92	4.92
0	4.92	4.92
10	4.92	4.92
20	4.80	4.81
25	4.80	4.81
30	4.80	4.80
40	4.80	4.80
50	4.80	4.80
60	4.80	4.80
--	-	-

COSEL

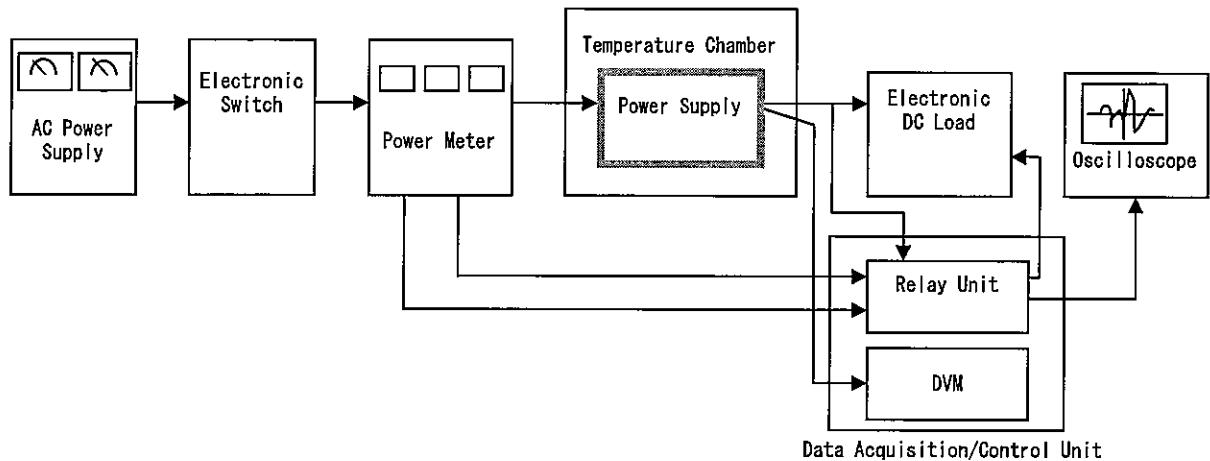


Figure A

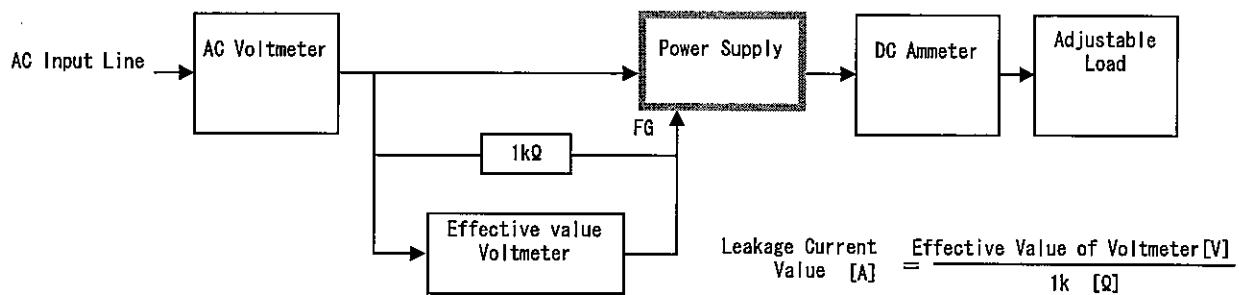


Figure B (DEN-AN)

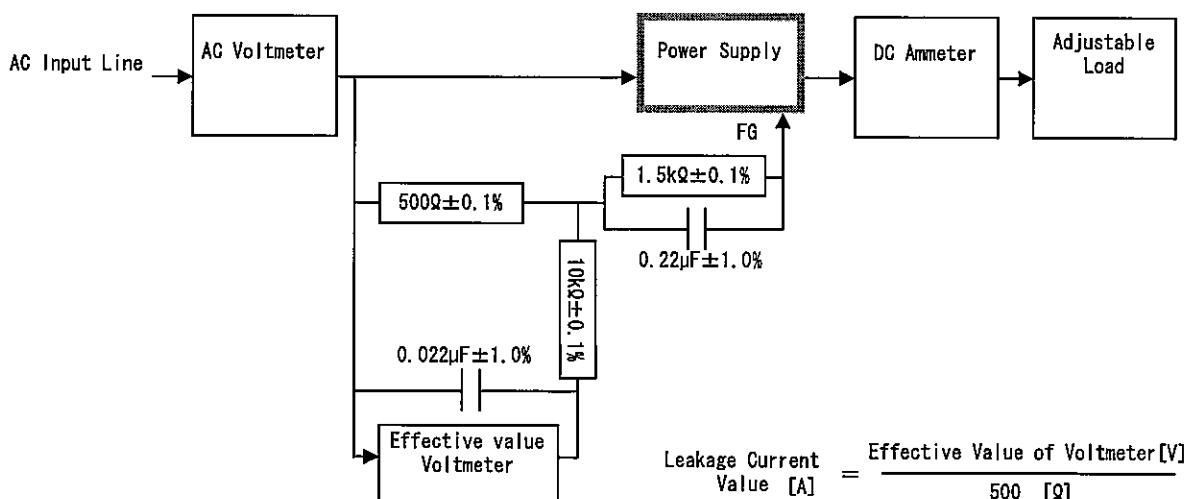


Figure B (IEC60950-1)

COSEL

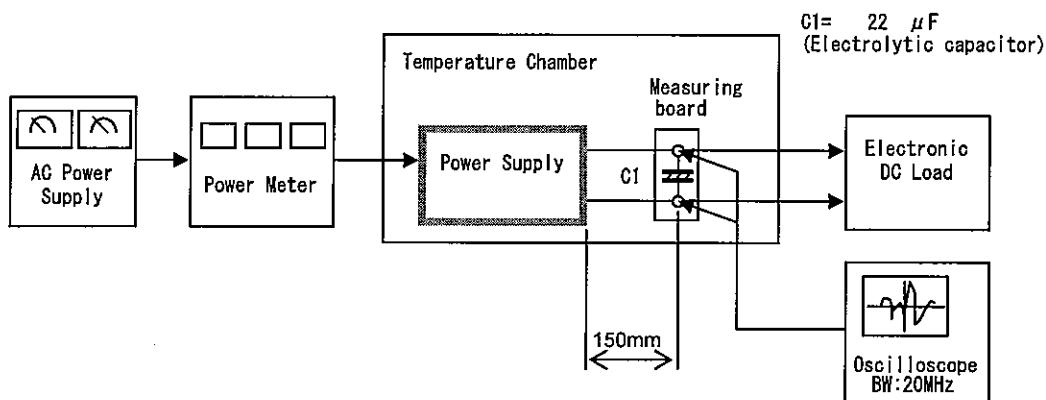


Figure C