



TEST DATA OF LGA75A-15

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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Model

LGA75A-15

Item

Input Current (by Load Current)

Object

1.Graph

—△—

Input Volt.

85V

---□---

Input Volt.

100V

---○---

Input Volt.

132V

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

2.Values

| Load Current [A] | Input Current [A] | | |
|------------------|-------------------|--------------------|--------------------|
| | Input Volt. 85[V] | Input Volt. 100[V] | Input Volt. 132[V] |
| 0.0 | 0.072 | 0.074 | 0.075 |
| 0.8 | 0.380 | 0.342 | 0.289 |
| 1.6 | 0.640 | 0.569 | 0.478 |
| 2.4 | 0.906 | 0.800 | 0.663 |
| 3.2 | 1.176 | 1.037 | 0.848 |
| 4.0 | 1.448 | 1.275 | 1.038 |
| 4.8 | 1.718 | 1.513 | 1.228 |
| 5.0 | 1.790 | 1.576 | 1.281 |
| 5.5 | 1.958 | 1.722 | 1.398 |
| -- | - | - | - |
| -- | - | - | - |

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Model

LGA75A-15

Item

Input Power (by Load Current)

Object

1.Graph

—△—

Input Volt.

85V

---□---

Input Volt.

100V

---○---

Input Volt.

132V

Input Power [W]

200

150

100

50

0

0

2

4

6

Load Current [A]

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

Temperature

25°C

Testing Circuitry

Figure A

2.Values

| Load Current [A] | Input Power [W] | | |
|------------------|-------------------|--------------------|--------------------|
| | Input Volt. 85[V] | Input Volt. 100[V] | Input Volt. 132[V] |
| 0.0 | 2.31 | 2.64 | 3.39 |
| 0.8 | 16.60 | 16.65 | 17.16 |
| 1.6 | 30.30 | 30.40 | 31.30 |
| 2.4 | 44.30 | 44.30 | 44.90 |
| 3.2 | 58.20 | 58.10 | 58.70 |
| 4.0 | 72.40 | 72.00 | 72.50 |
| 4.8 | 87.30 | 86.20 | 86.30 |
| 5.0 | 90.90 | 90.30 | 89.70 |
| 5.5 | 99.90 | 99.30 | 98.40 |
| -- | - | - | - |
| -- | - | - | - |



Model

LGA75A-15

Item

Efficiency (by Input Voltage)

Object

1.Graph

□

Load 50%

△

Load 100%

Efficiency [%]

90

82

74

66

58

50

42

34

70

90

110

130

150

Input Voltage [V]

Note: Slanted line shows the range of the rated input voltage.

Temperature

25°C

Testing Circuitry

Figure A

2.Values

| Input Voltage [V] | Efficiency [%] | |
|-------------------|----------------|-----------|
| | Load 50% | Load 100% |
| 75 | 82.5 | 82.3 |
| 80 | 82.8 | 83.7 |
| 85 | 83.2 | 84.2 |
| 90 | 83.4 | 84.4 |
| 100 | 83.3 | 84.7 |
| 110 | 83.0 | 84.8 |
| 120 | 82.7 | 84.8 |
| 132 | 81.9 | 84.7 |
| 140 | 81.4 | 84.4 |



| Model | | LGA75A-15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------------|--|--------------------|------------------|----------------|--|--|-------------------|--------------------|--------------------|-----|---|---|---|-----|------|------|------|-----|------|------|------|-----|------|------|------|-----|------|------|------|-----|------|------|------|-----|------|------|------|-----|------|------|------|-----|------|------|------|----|---|---|---|----|---|---|---|
| Item | | Efficiency (by Load Current) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | | 2.Values | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <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> <div>Note: Slanted line shows the range of the rated load current.</div> | | <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>0.8</td><td>74.9</td><td>74.8</td><td>72.5</td></tr><tr><td>1.6</td><td>80.9</td><td>80.7</td><td>78.4</td></tr><tr><td>2.4</td><td>82.6</td><td>82.7</td><td>81.6</td></tr><tr><td>3.2</td><td>83.6</td><td>83.8</td><td>82.9</td></tr><tr><td>4.0</td><td>83.9</td><td>84.4</td><td>83.8</td></tr><tr><td>4.8</td><td>83.4</td><td>84.5</td><td>84.4</td></tr><tr><td>5.0</td><td>83.4</td><td>84.0</td><td>84.6</td></tr><tr><td>5.5</td><td>83.5</td><td>84.0</td><td>84.8</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 | - | - | - | 0.8 | 74.9 | 74.8 | 72.5 | 1.6 | 80.9 | 80.7 | 78.4 | 2.4 | 82.6 | 82.7 | 81.6 | 3.2 | 83.6 | 83.8 | 82.9 | 4.0 | 83.9 | 84.4 | 83.8 | 4.8 | 83.4 | 84.5 | 84.4 | 5.0 | 83.4 | 84.0 | 84.6 | 5.5 | 83.5 | 84.0 | 84.8 | -- | - | - | - | -- | - | - | - |
| Load Current [A] | Efficiency [%] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Input Volt. 85[V] | Input Volt. 100[V] | Input Volt. 132[V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.0 | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.8 | 74.9 | 74.8 | 72.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.6 | 80.9 | 80.7 | 78.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.4 | 82.6 | 82.7 | 81.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.2 | 83.6 | 83.8 | 82.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.0 | 83.9 | 84.4 | 83.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.8 | 83.4 | 84.5 | 84.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5.0 | 83.4 | 84.0 | 84.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5.5 | 83.5 | 84.0 | 84.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



| | | | |
|--------|--|---------------------------------|--|
| Model | | LGA75A-15 | |
| Item | | Power Factor (by Input Voltage) | |
| Object | | | |

1.Graph

□

Load 50%

△

Load 100%

Power Factor

0.8

0.7

0.6

0.5

0.4

0.3

0.2

70

90

110

130

150

Input Voltage [V]

70

80

90

100

110

120

130

140

150

70

80

90

100

110

120

130

140

150

Note: Slanted line shows the range of the rated input voltage.

2.Values

| Input Voltage [V] | Power Factor | |
|-------------------|--------------|-----------|
| | Load 50% | Load 100% |
| 75 | 0.586 | 0.624 |
| 80 | 0.576 | 0.602 |
| 85 | 0.567 | 0.592 |
| 90 | 0.558 | 0.582 |
| 100 | 0.543 | 0.565 |
| 110 | 0.531 | 0.552 |
| 120 | 0.519 | 0.539 |
| 132 | 0.508 | 0.526 |
| 140 | 0.502 | 0.519 |

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| | | | |
|--------|--|--------------------------------|--|
| Model | | LGA75A-15 | |
| Item | | Power Factor (by Load Current) | |
| Object | | | |

1.Graph

—△—

Input Volt.

85V

---□---

Input Volt.

100V

-·-○-·-

Input Volt.

132V

Power Factor

0.8

0.7

0.6

0.5

0.4

0.3

0.2

0

2

4

6

Load Current [A]

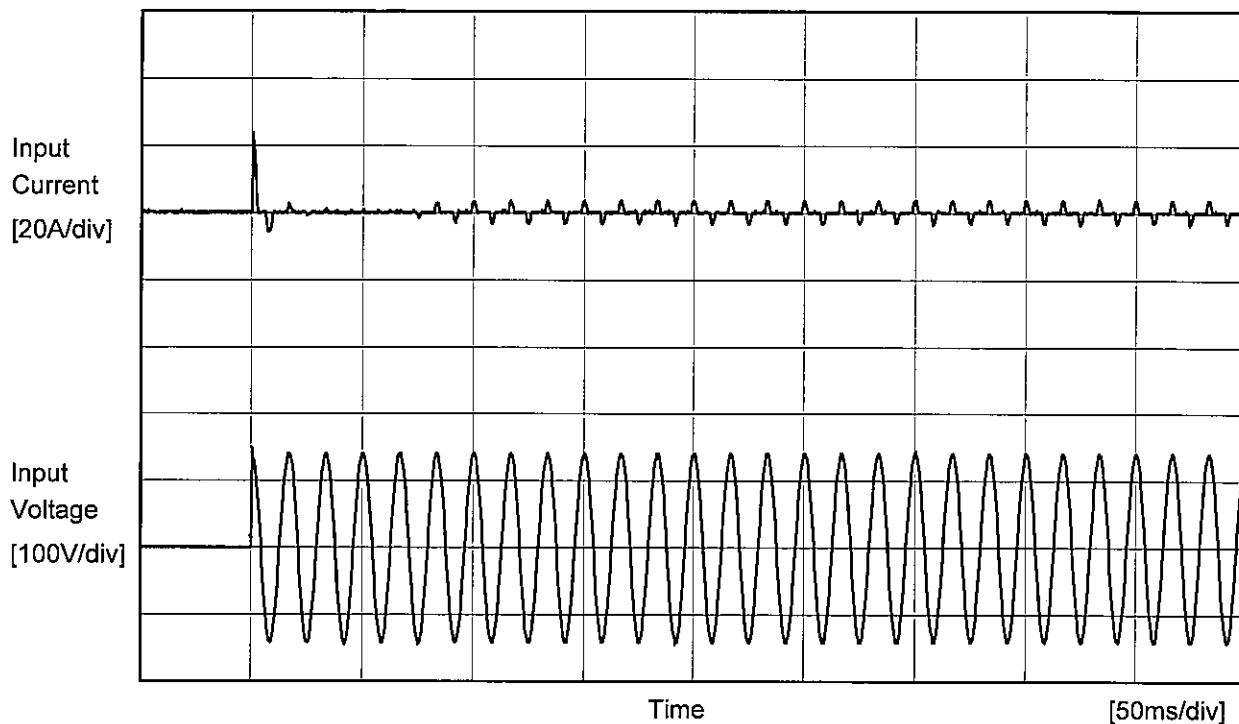
2.Values

| Load Current [A] | Power Factor | | |
|------------------|-------------------|--------------------|--------------------|
| | Input Volt. 85[V] | Input Volt. 100[V] | Input Volt. 132[V] |
| 0.0 | 0.374 | 0.358 | 0.341 |
| 0.8 | 0.512 | 0.487 | 0.450 |
| 1.6 | 0.557 | 0.534 | 0.495 |
| 2.4 | 0.575 | 0.553 | 0.513 |
| 3.2 | 0.582 | 0.560 | 0.524 |
| 4.0 | 0.589 | 0.564 | 0.529 |
| 4.8 | 0.598 | 0.570 | 0.532 |
| 5.0 | 0.598 | 0.573 | 0.530 |
| 5.5 | 0.601 | 0.577 | 0.533 |
| -- | - | - | - |
| -- | - | - | - |

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

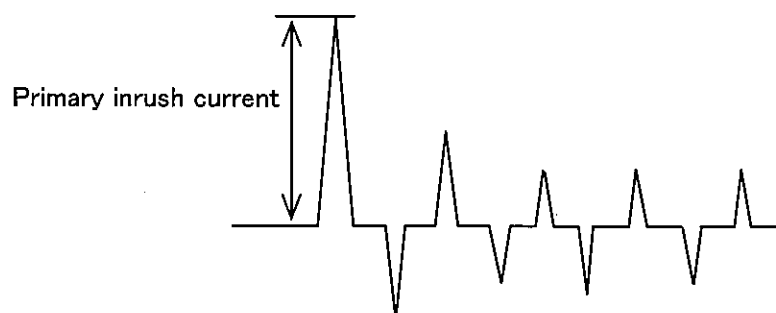
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| | | | |
|--------|--|----------------|--|
| Model | | LGA75A-15 | Temperature 25°C Testing Circuitry Figure A |
| Item | | Inrush Current | |
| Object | | _____ | |



Input Voltage 100 V
Frequency 60 Hz
Load 100 %

Primary inrush current 23.7 A



COSEL

| | | |
|--------|-----------------|--|
| | | Temperature 25°C Testing Circuitry Figure B |
| Model | LGA75A-15 | |
| Item | Leakage Current | |
| Object | | |

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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| | | | |
|--------|--|-----------------|--|
| Model | | LGA75A-15 | |
| Item | | Load Regulation | |
| Object | | +15V5A | |

1.Graph

—△—

Input Volt.

85V

---□---

Input Volt.

100V

-·-○-·-

Input Volt.

132V

Output Voltage [V]

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| | | | |
|--------|-----------------------|----------------------------------|------------------|
| Model | LGA75A-15 | Temperature Testing Circuitry | 25°C Figure C |
| Item | Dynamic Load Response | | |
| Object | +15V5A | | |

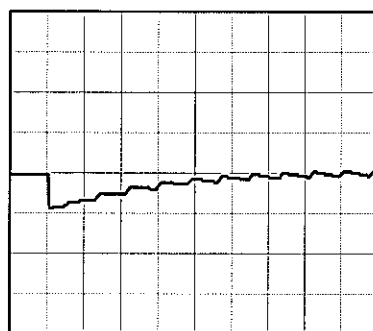
Input Volt. 100 V
Cycle 1000 ms

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

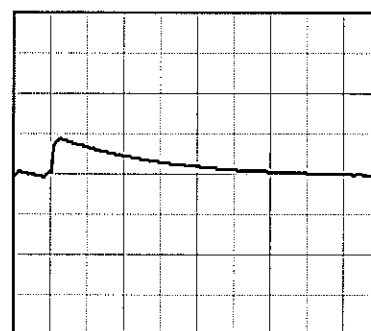


Min. Load (0A) \longleftrightarrow
Load 100% (5A)

100 mV/div



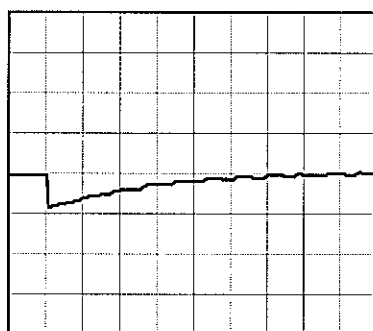
10 ms/div



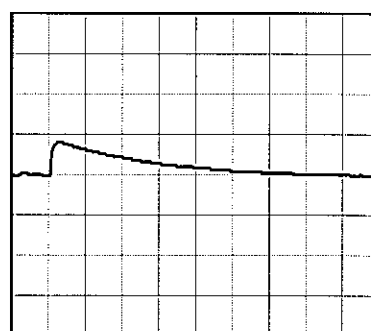
10 ms/div

Min. Load (0A) \longleftrightarrow
Load 50% (2.5A)

100 mV/div

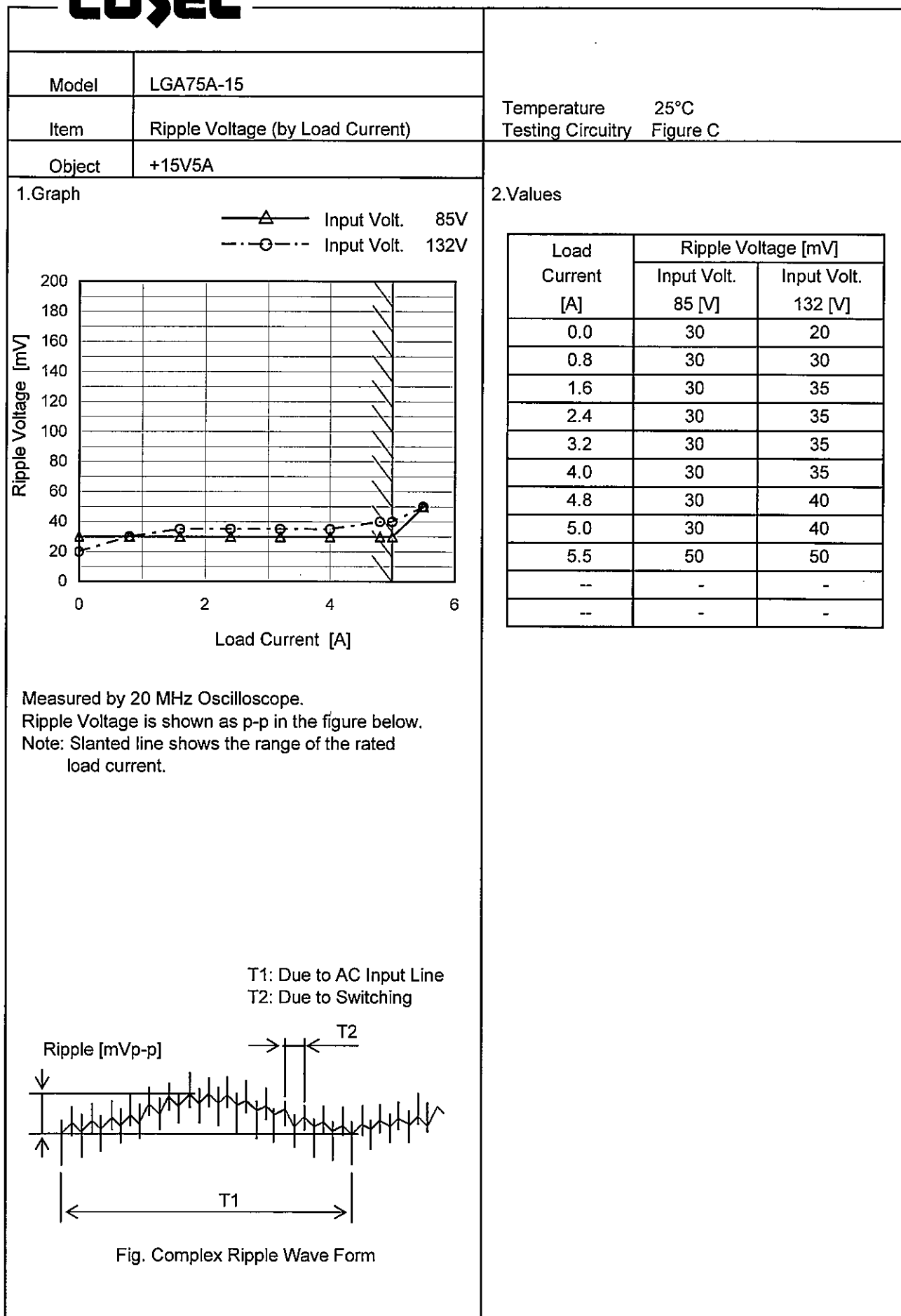


10 ms/div



10 ms/div

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| Model | LGA75A-15 | Temperature | 25°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--------------------|--|----------|------------------|-------------------|--|--------------------|---------------------|-----|----|----|-----|----|----|-----|----|----|-----|----|----|-----|----|----|-----|----|----|-----|----|----|-----|----|----|-----|----|----|----|---|---|----|---|---|
| Item | Ripple-Noise | Testing Circuitry | Figure C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | +15V5A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | | 2.Values | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div><div><div>—△— Input Volt. 85V</div><div>---○--- Input Volt. 132V</div></div><p>Ripple-Noise [mV]</p><p>Load Current [A]</p></div> <div><p>Measured by 20 MHz Oscilloscope.</p><p>Ripple-Noise is shown as p-p in the figure below.</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="2">Ripple-Noise [mV]</th></tr><tr><th>Input Volt. 85 [V]</th><th>Input Volt. 132 [V]</th></tr><tr><td>0.0</td><td>30</td><td>80</td></tr><tr><td>0.8</td><td>30</td><td>80</td></tr><tr><td>1.6</td><td>35</td><td>80</td></tr><tr><td>2.4</td><td>40</td><td>80</td></tr><tr><td>3.2</td><td>40</td><td>80</td></tr><tr><td>4.0</td><td>40</td><td>80</td></tr><tr><td>4.8</td><td>40</td><td>80</td></tr><tr><td>5.0</td><td>40</td><td>80</td></tr><tr><td>5.5</td><td>40</td><td>90</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr></table> | | Load Current [A] | Ripple-Noise [mV] | | Input Volt. 85 [V] | Input Volt. 132 [V] | 0.0 | 30 | 80 | 0.8 | 30 | 80 | 1.6 | 35 | 80 | 2.4 | 40 | 80 | 3.2 | 40 | 80 | 4.0 | 40 | 80 | 4.8 | 40 | 80 | 5.0 | 40 | 80 | 5.5 | 40 | 90 | -- | - | - | -- | - | - |
| Load Current [A] | Ripple-Noise [mV] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Input Volt. 85 [V] | Input Volt. 132 [V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.0 | 30 | 80 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.8 | 30 | 80 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.6 | 35 | 80 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.4 | 40 | 80 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.2 | 40 | 80 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.0 | 40 | 80 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.8 | 40 | 80 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5.0 | 40 | 80 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5.5 | 40 | 90 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div><div><div>T1: Due to AC Input Line</div><div>T2: Due to Switching</div></div><p>Ripple-Noise [mVp-p]</p><p>T1</p><p>T2</p></div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fig. Complex Ripple Wave Form | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | |
|--------|--|-----------------------------------|
| Model | | LGA75A-15 |
| Item | | Ripple Voltage (by Ambient Temp.) |
| Object | | +15V5A |

1.Graph

| Ambient Temperature [°C] | Ripple Voltage [mV] |
|--------------------------|---------------------|
| -30 | 140 |
| -10 | 60 |
| 0 | 40 |
| 25 | 30 |
| 50 | 30 |
| -- | - |
| -- | - |
| -- | - |
| -- | - |
| -- | - |
| -- | - |

Input Volt. 100V
Input Load. 100%

Measured by 20 MHz Oscilloscope.
Note: Slanted line shows the range of the rated ambient temperature.

2.Values

| Ambient Temperature [°C] | Ripple Voltage [mV] |
|--------------------------|---------------------|
| -30 | 140 |
| -10 | 60 |
| 0 | 40 |
| 25 | 30 |
| 50 | 30 |
| -- | - |
| -- | - |
| -- | - |
| -- | - |
| -- | - |
| -- | - |

T1: Due to AC Input Line
T2: Due to Switching

Fig. Complex Ripple Wave Form

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| Model | | LGA75A-15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--------------------|--|--------------------|--------------------------|--------------------|--|--|-------------------|--------------------|--------------------|-----|--------|--------|--------|-----|--------|--------|--------|---|--------|--------|--------|----|--------|--------|--------|----|--------|--------|--------|----|--------|--------|--------|----|--------|--------|--------|----|--------|--------|--------|----|--------|--------|--------|----|--------|--------|--------|----|---|---|---|
| Item | | Ambient Temperature Drift | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | | +15V5A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | | 2.Values | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div><div><div>—△—</div><div>Input Volt. 85V</div></div><div><div>---□---</div><div>Input Volt. 100V</div></div><div><div>---○---</div><div>Input Volt. 132V</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. 85[V]</th><th>Input Volt. 100[V]</th><th>Input Volt. 132[V]</th></tr><tr><td>-20</td><td>15.093</td><td>15.093</td><td>15.093</td></tr><tr><td>-10</td><td>15.093</td><td>15.093</td><td>15.093</td></tr><tr><td>0</td><td>15.092</td><td>15.093</td><td>15.093</td></tr><tr><td>10</td><td>15.093</td><td>15.093</td><td>15.094</td></tr><tr><td>20</td><td>15.094</td><td>15.094</td><td>15.095</td></tr><tr><td>25</td><td>15.094</td><td>15.094</td><td>15.095</td></tr><tr><td>30</td><td>15.093</td><td>15.094</td><td>15.094</td></tr><tr><td>40</td><td>15.090</td><td>15.090</td><td>15.091</td></tr><tr><td>50</td><td>15.085</td><td>15.086</td><td>15.086</td></tr><tr><td>60</td><td>15.078</td><td>15.078</td><td>15.078</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr></table> | | Ambient Temperature [°C] | Output Voltage [V] | | | Input Volt. 85[V] | Input Volt. 100[V] | Input Volt. 132[V] | -20 | 15.093 | 15.093 | 15.093 | -10 | 15.093 | 15.093 | 15.093 | 0 | 15.092 | 15.093 | 15.093 | 10 | 15.093 | 15.093 | 15.094 | 20 | 15.094 | 15.094 | 15.095 | 25 | 15.094 | 15.094 | 15.095 | 30 | 15.093 | 15.094 | 15.094 | 40 | 15.090 | 15.090 | 15.091 | 50 | 15.085 | 15.086 | 15.086 | 60 | 15.078 | 15.078 | 15.078 | -- | - | - | - |
| Ambient Temperature [°C] | Output Voltage [V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Input Volt. 85[V] | Input Volt. 100[V] | Input Volt. 132[V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -20 | 15.093 | 15.093 | 15.093 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -10 | 15.093 | 15.093 | 15.093 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 15.092 | 15.093 | 15.093 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 15.093 | 15.093 | 15.094 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | 15.094 | 15.094 | 15.095 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 25 | 15.094 | 15.094 | 15.095 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | 15.093 | 15.094 | 15.094 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40 | 15.090 | 15.090 | 15.091 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50 | 15.085 | 15.086 | 15.086 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 60 | 15.078 | 15.078 | 15.078 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

- 15 -

BC-10544



| | | | |
|--------|--|-------------------------|----------------------------|
| Model | | LGA75A-15 | Testing Circuitry Figure A |
| Item | | Output Voltage Accuracy | |
| Object | | +15V5A | |

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 - 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 | 25 | 85 | 0 | 15.096 | ±6 | ±0.1 |
| Minimum Voltage | 50 | 85 | 5 | 15.085 | | |

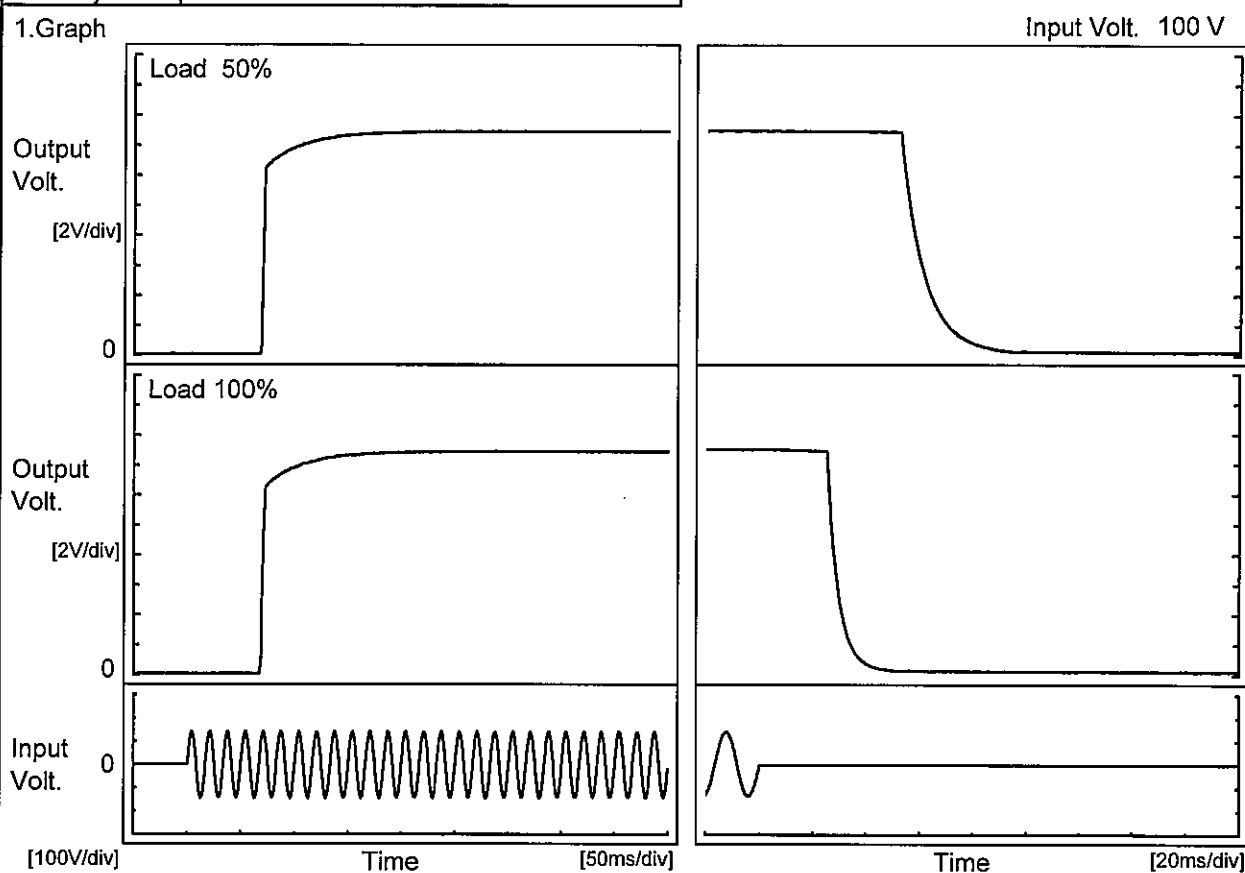
COSEL

| | | | |
|---|--|------------------|--|
| Model | | LGA75A-15 | |
| Item | | Time Lapse Drift | |
| Object | | +15V5A | |
| 1.Graph | | 2.Values | |
| <div><div><div><div>Output Voltage [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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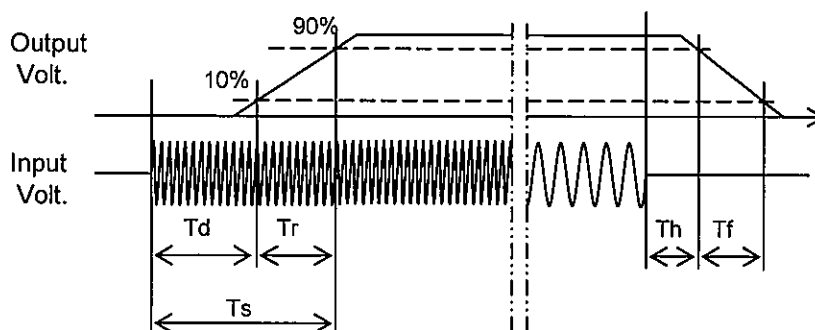
| | | | |
|--------|--------------------|-------------------|----------|
| Model | LGA75A-15 | Temperature | 25°C |
| Item | Rise and Fall Time | Testing Circuitry | Figure A |
| Object | +15V5A | | |

1. Graph



2. Values

| | | [ms] | | | | |
|-------|------|------|------|------|------|------|
| Load | Time | Td | Tr | Ts | Th | Tf |
| 50 % | | 69.0 | 23.0 | 92.0 | 53.5 | 19.5 |
| 100 % | | 68.8 | 23.0 | 91.8 | 25.6 | 10.1 |



COSEL

LOREL

| | |
|--------|--------------|
| Model | LGA75A-15 |
| Item | Hold-Up Time |
| Object | +15V5A |

1.Graph

Legend:

- Load 50%
- △— Load 100%

| Input Voltage [V] | Hold-Up Time [ms] (Load 50%) | Hold-Up Time [ms] (Load 100%) |
|-------------------|------------------------------|-------------------------------|
| 75 | 20 | 9 |
| 80 | 26 | 12 |
| 85 | 32 | 15 |
| 90 | 39 | 18 |
| 100 | 53 | 26 |
| 110 | 70 | 34 |
| 120 | 87 | 43 |
| 132 | 112 | 55 |
| 140 | 128 | 64 |

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.

Temperature 25°C
 Testing Circuitry Figure A

2.Values

| Input Voltage [V] | Hold-Up Time [ms] | |
|-------------------|-------------------|-----------|
| | Load 50% | Load 100% |
| 75 | 20 | 9 |
| 80 | 26 | 12 |
| 85 | 32 | 15 |
| 90 | 39 | 18 |
| 100 | 53 | 26 |
| 110 | 70 | 34 |
| 120 | 87 | 43 |
| 132 | 112 | 55 |
| 140 | 128 | 64 |

COSEL

| | | | |
|---------|--|---|--|
| Model | | LGA75A-15 | |
| Item | | Instantaneous Interruption Compensation | |
| Object | | +15V5A | |
| 1.Graph | | 2.Values | |

<

COSEL

| | | |
|--------|--|---|
| Model | | LGA75A-15 |
| Item | | Minimum Input Voltage for Regulated Output Voltage |
| Object | | +15V5A |

1.Graph

□

Load 50%

—

△

—

Load 100%

Input Voltage [V]

COSEL

| Model | LGA75A-15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|------------------------|--|--------------------|--------------------|------------------|--|--|-------------------|--------------------|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|------|------|------|-----|------|------|------|-----|------|------|------|-----|------|------|------|-----|------|------|------|-----|------|------|------|-----|------|------|------|
| Item | Overcurrent Protection | Temperature | 25°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | +15V5A | Testing Circuitry | Figure A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | | 2.Values | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div><div><div></div><div></div><div></div></div><div><div>Input Volt. 85V</div><div>Input Volt. 100V</div><div>Input Volt. 132V</div></div></div> <p>Output Voltage [V]</p> <p>Load Current [A]</p> <p>Note: Slanted line shows the range of the rated load current.</p> | | <table><tr><th rowspan="2">Output Voltage [V]</th><th colspan="3">Load Current [A]</th></tr><tr><th>Input Volt. 85[V]</th><th>Input Volt. 100[V]</th><th>Input Volt. 132[V]</th></tr><tr><td>15.0</td><td>5.99</td><td>5.96</td><td>6.05</td></tr><tr><td>14.3</td><td>6.01</td><td>6.00</td><td>6.11</td></tr><tr><td>13.5</td><td>5.99</td><td>5.96</td><td>6.05</td></tr><tr><td>12.0</td><td>6.11</td><td>6.12</td><td>6.26</td></tr><tr><td>10.5</td><td>6.16</td><td>6.19</td><td>6.37</td></tr><tr><td>9.0</td><td>6.23</td><td>6.24</td><td>6.53</td></tr><tr><td>7.5</td><td>6.29</td><td>6.35</td><td>6.57</td></tr><tr><td>6.0</td><td>6.37</td><td>6.43</td><td>6.68</td></tr><tr><td>4.5</td><td>6.44</td><td>6.53</td><td>6.78</td></tr><tr><td>3.0</td><td>6.50</td><td>6.60</td><td>6.83</td></tr><tr><td>1.5</td><td>6.46</td><td>6.53</td><td>6.68</td></tr><tr><td>0.0</td><td>6.22</td><td>6.28</td><td>6.48</td></tr></table> | | Output Voltage [V] | Load Current [A] | | | Input Volt. 85[V] | Input Volt. 100[V] | Input Volt. 132[V] | 15.0 | 5.99 | 5.96 | 6.05 | 14.3 | 6.01 | 6.00 | 6.11 | 13.5 | 5.99 | 5.96 | 6.05 | 12.0 | 6.11 | 6.12 | 6.26 | 10.5 | 6.16 | 6.19 | 6.37 | 9.0 | 6.23 | 6.24 | 6.53 | 7.5 | 6.29 | 6.35 | 6.57 | 6.0 | 6.37 | 6.43 | 6.68 | 4.5 | 6.44 | 6.53 | 6.78 | 3.0 | 6.50 | 6.60 | 6.83 | 1.5 | 6.46 | 6.53 | 6.68 | 0.0 | 6.22 | 6.28 | 6.48 |
| Output Voltage [V] | Load Current [A] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Input Volt. 85[V] | Input Volt. 100[V] | Input Volt. 132[V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15.0 | 5.99 | 5.96 | 6.05 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14.3 | 6.01 | 6.00 | 6.11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13.5 | 5.99 | 5.96 | 6.05 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12.0 | 6.11 | 6.12 | 6.26 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10.5 | 6.16 | 6.19 | 6.37 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9.0 | 6.23 | 6.24 | 6.53 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7.5 | 6.29 | 6.35 | 6.57 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.0 | 6.37 | 6.43 | 6.68 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.5 | 6.44 | 6.53 | 6.78 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.0 | 6.50 | 6.60 | 6.83 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.5 | 6.46 | 6.53 | 6.68 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.0 | 6.22 | 6.28 | 6.48 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

COSEL

LOREL

| | |
|--------|------------------------|
| Model | LGA75A-15 |
| Item | Overvoltage Protection |
| Object | +15V5A |

1.Graph

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Input Volt. 85V

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Input Volt. 132V

Operating Point [V]

Ambient Temperature [°C]

Load 0%

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 | 18.67 | 18.67 |
| -10 | 18.74 | 18.73 |
| 0 | 18.97 | 18.97 |
| 10 | 19.02 | 19.02 |
| 20 | 19.26 | 19.26 |
| 25 | 19.26 | 19.25 |
| 30 | 19.37 | 19.37 |
| 40 | 19.55 | 19.55 |
| 50 | 19.66 | 19.66 |
| 60 | 19.72 | 19.72 |
| -- | - | - |

COSEL

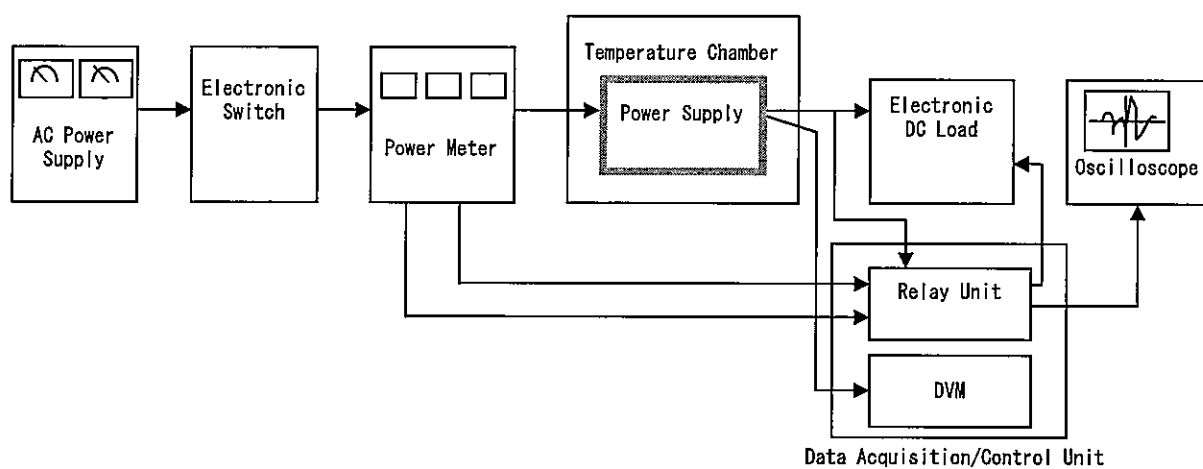


Figure A

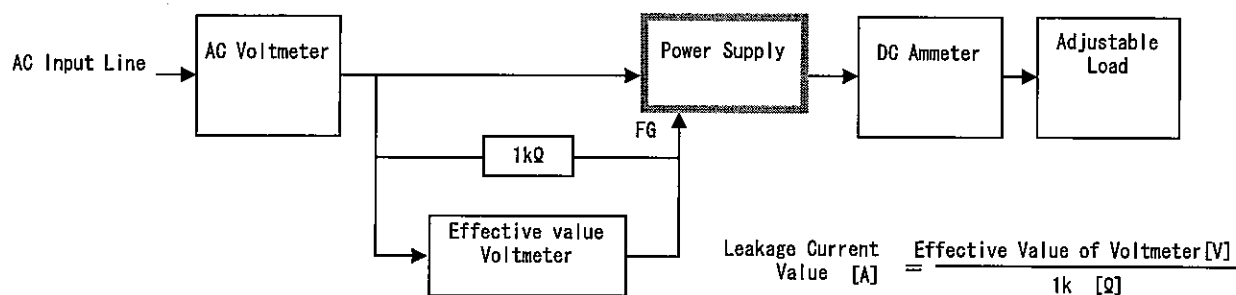


Figure B (DEN-AN)

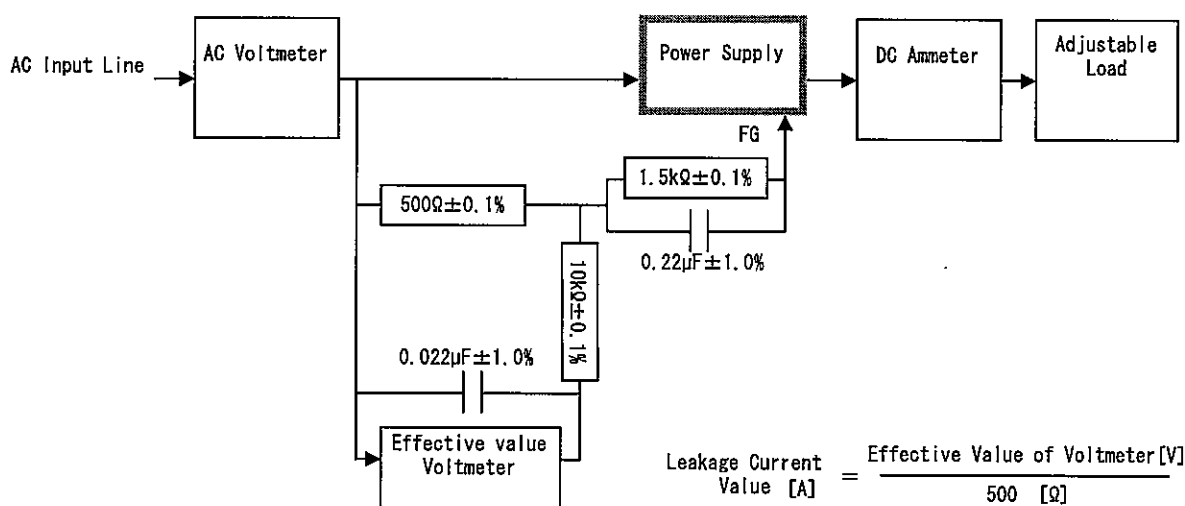


Figure B (IEC60950-1)

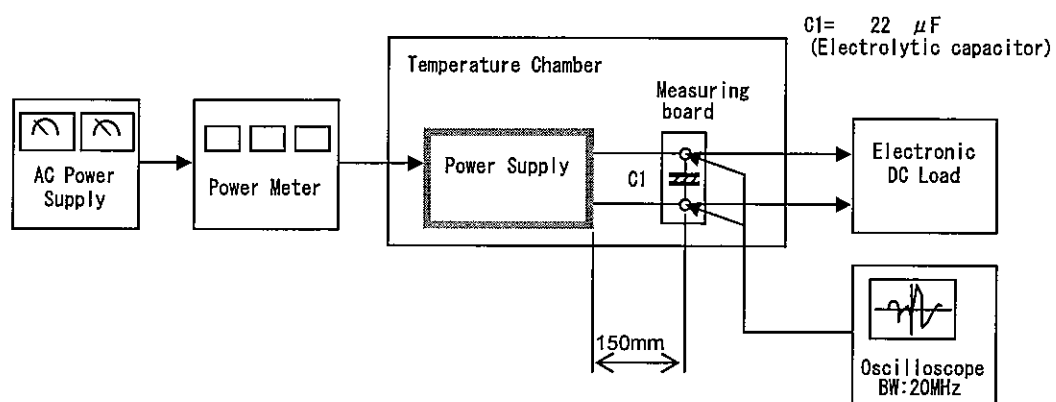


Figure C