



# TEST DATA OF PBA1500F-36

Regulated DC Power Supply  
Jun.2. 2003

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Design Manager

Prepared by : Takasa Sugimoto  
Design Engineer

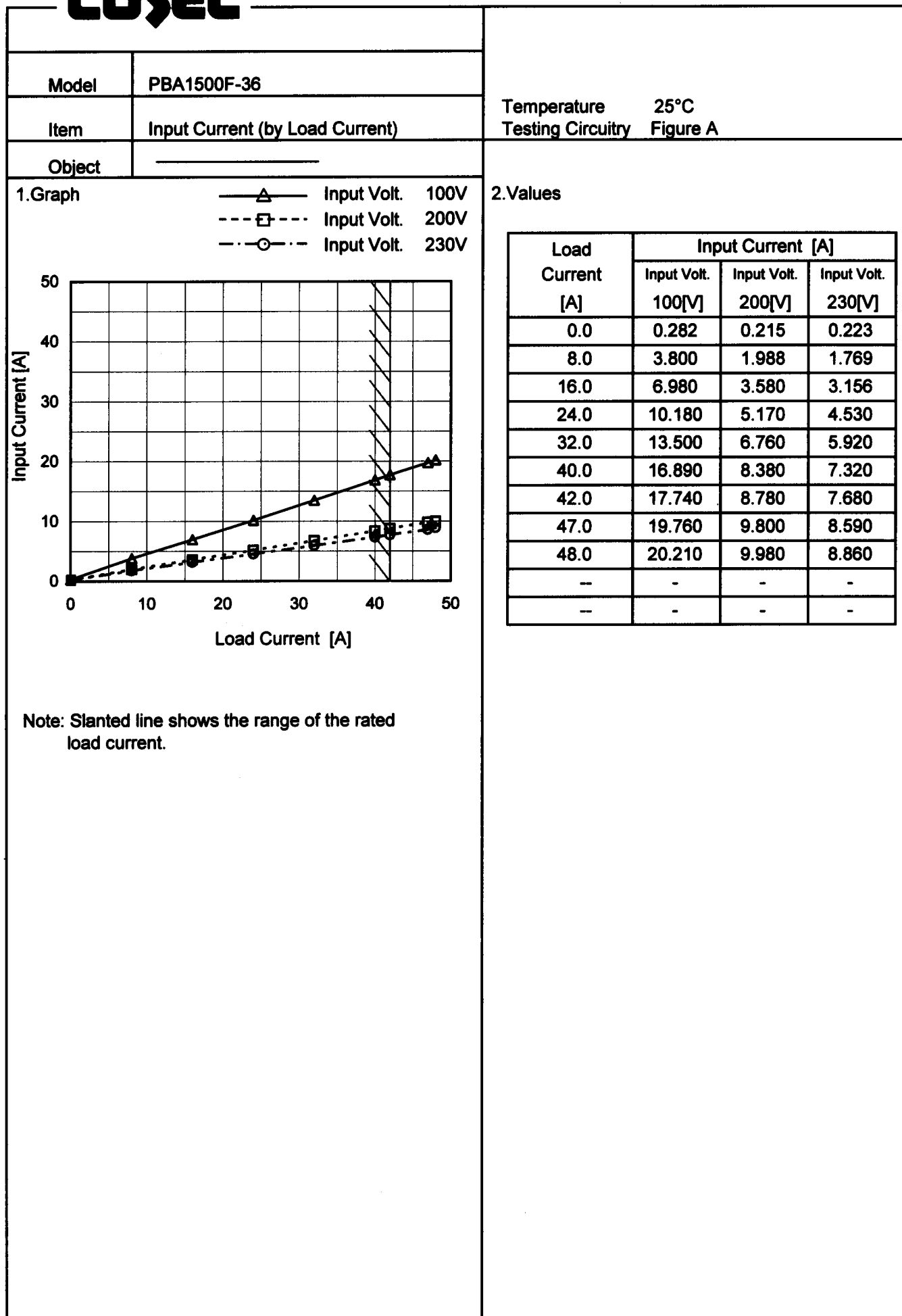
**COSEL CO.,LTD.**

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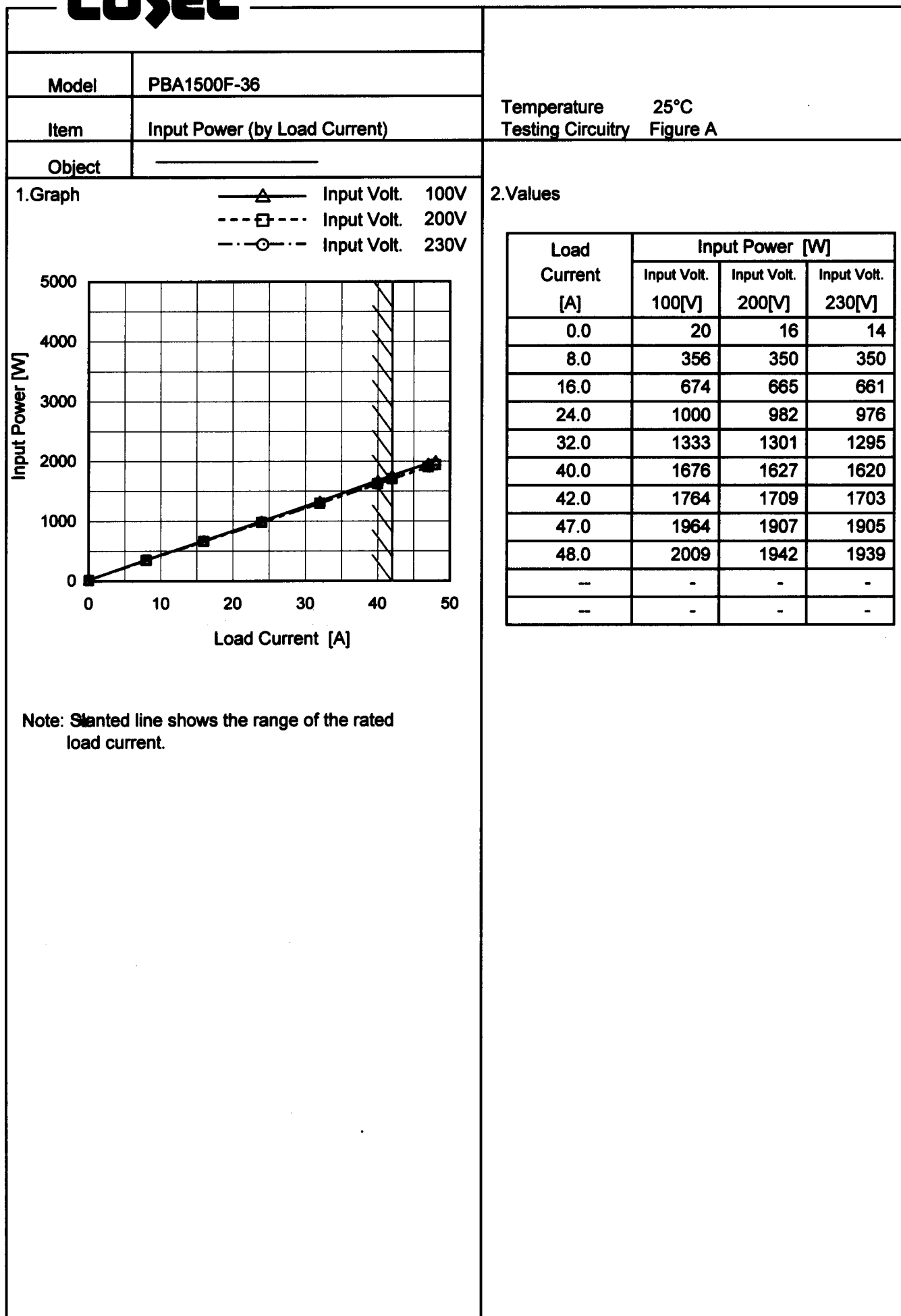
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|        |  |                               |  |
|--------|--|-------------------------------|--|
| Model  |  | PBA1500F-36                   |  |
| Item   |  | Efficiency (by Input Voltage) |  |
| Object |  | +36V42A                       |  |

1.Graph

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|        |  |                              |  |
|--------|--|------------------------------|--|
| Model  |  | PBA1500F-36                  |  |
| Item   |  | Efficiency (by Load Current) |  |
| Object |  |                              |  |

1.Graph

—△—

Input Volt.

100V

---□---

Input Volt.

200V

---○---

Input Volt.

230V

Efficiency [%]

| Model  | PBA1500F-36                     |                   |          |           |    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |   |   |   |   |   |   |   |   |   |  |  |
|--|---------------------------------|-------------------|----------|-----------|----|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|---|---|---|---|---|---|---|---|---|--|--|
| Item   | Power Factor (by Input Voltage) | Temperature       | 25°C     |           |    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |   |   |   |   |   |   |   |   |   |  |  |
|  |                                 | Testing Circuitry | Figure A |           |    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |   |   |   |   |   |   |   |   |   |  |  |
| Object   | +36V42A                         |                   |          |           |    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |   |   |   |   |   |   |   |   |   |  |  |
| 1.Graph  |                                 | 2.Values          |          |           |    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |   |   |   |   |   |   |   |   |   |  |  |
| <div><div><div>---□---</div><div>Load 50%</div></div><div><div>---△---</div><div>Load 100%</div></div></div> <table><thead><tr><th>Input Voltage [V]</th><th>Load 50%</th><th>Load 100%</th></tr></thead><tbody><tr><td>85</td><td>0.979</td><td>0.996</td></tr><tr><td>100</td><td>0.979</td><td>0.995</td></tr><tr><td>120</td><td>0.973</td><td>0.990</td></tr><tr><td>200</td><td>0.943</td><td>0.973</td></tr><tr><td>230</td><td>0.927</td><td>0.964</td></tr><tr><td>264</td><td>0.862</td><td>0.925</td></tr><tr><td>-</td><td>-</td><td>-</td></tr><tr><td>-</td><td>-</td><td>-</td></tr><tr><td>-</td><td>-</td><td>-</td></tr></tbody></table> |                                 | Input Voltage [V] | Load 50% | Load 100% | 85 | 0.979 | 0.996 | 100 | 0.979 | 0.995 | 120 | 0.973 | 0.990 | 200 | 0.943 | 0.973 | 230 | 0.927 | 0.964 | 264 | 0.862 | 0.925 | - | - | - | - | - | - | - | - | - |  |  |
| Input Voltage [V]  | Load 50%                        | Load 100%         |          |           |    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |   |   |   |   |   |   |   |   |   |  |  |
| 85   | 0.979                           | 0.996             |          |           |    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |   |   |   |   |   |   |   |   |   |  |  |
| 100  | 0.979                           | 0.995             |          |           |    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |   |   |   |   |   |   |   |   |   |  |  |
| 120  | 0.973                           | 0.990             |          |           |    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |   |   |   |   |   |   |   |   |   |  |  |
| 200  | 0.943                           | 0.973             |          |           |    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |   |   |   |   |   |   |   |   |   |  |  |
| 230  | 0.927                           | 0.964             |          |           |    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |   |   |   |   |   |   |   |   |   |  |  |
| 264  | 0.862                           | 0.925             |          |           |    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |   |   |   |   |   |   |   |   |   |  |  |
| -  | -                               | -                 |          |           |    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |   |   |   |   |   |   |   |   |   |  |  |
| -  | -                               | -                 |          |           |    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |   |   |   |   |   |   |   |   |   |  |  |
| -  | -                               | -                 |          |           |    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |   |   |   |   |   |   |   |   |   |  |  |
| Note: Slanted line shows the range of the rated input voltage.   |                                 |                   |          |           |    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |   |   |   |   |   |   |   |   |   |  |  |

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|        |  |                                |  |
|--------|--|--------------------------------|--|
| Model  |  | PBA1500F-36                    |  |
| Item   |  | Power Factor (by Load Current) |  |
| Object |  |                                |  |

1.Graph

—△—

Input Volt.

100V

---□---

Input Volt.

200V

-·-○-·-

Input Volt.

230V

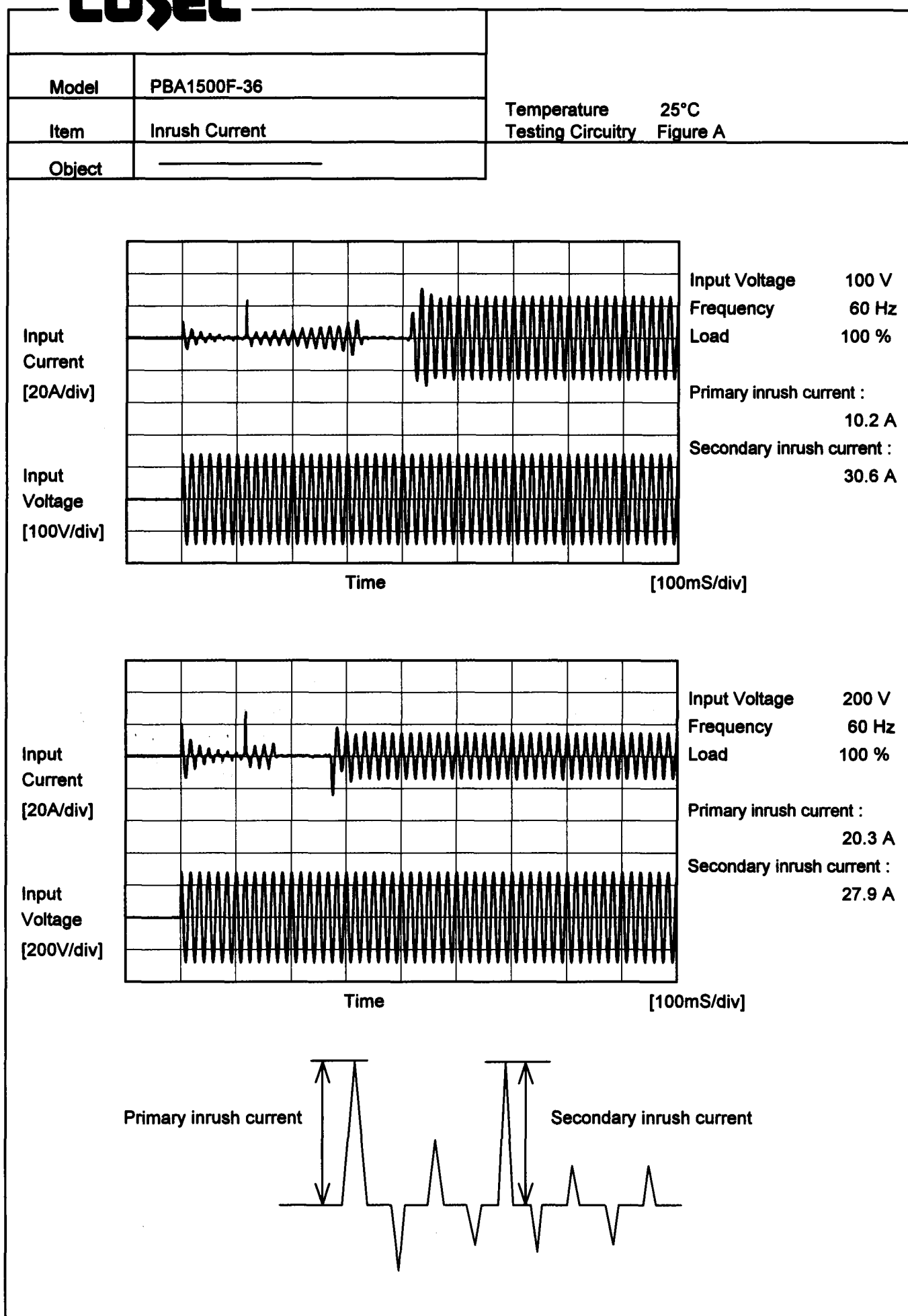
Power Factor

Load Current [A]

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

2.Values

| Load Current [A] | Power Factor       |                    |                    |
|------------------|--------------------|--------------------|--------------------|
|                  | Input Volt. 100[V] | Input Volt. 200[V] | Input Volt. 230[V] |
| 0.0              | 0.691              | 0.372              | 0.275              |
| 8.0              | 0.939              | 0.879              | 0.860              |
| 16.0             | 0.968              | 0.929              | 0.910              |
| 24.0             | 0.981              | 0.950              | 0.936              |
| 32.0             | 0.989              | 0.962              | 0.952              |
| 40.0             | 0.995              | 0.971              | 0.961              |
| 42.0             | 0.995              | 0.973              | 0.963              |
| 47.0             | 0.996              | 0.976              | 0.968              |
| 48.0             | 0.996              | 0.978              | 0.970              |
| --               | -                  | -                  | -                  |
| --               | -                  | -                  | -                  |

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|        |                 |  |
|--------|-----------------|--|
|        |                 | Temperature 25°C<br>Testing Circuitry Figure B |
| Model  | PBA1500F-36     |  |
| Item   | Leakage Current |  |
| Object |                 |  |

## 1.Results

[mA]

| Standards |              | Input Volt. |        |        | Note      |
|-----------|--------------|-------------|--------|--------|-----------|
|           |              | 100[V]      | 200[V] | 240[V] |           |
| DEN-AN    | Both phases  | 0.31        | 0.58   | 0.71   | Operation |
|           | One of phase | 0.57        | 1.20   | 1.36   | stand by  |
| IEC60950  | Both phases  | 0.34        | 0.67   | 0.81   | Operation |
|           | One of phase | 0.57        | 1.15   | 1.41   | stand by  |

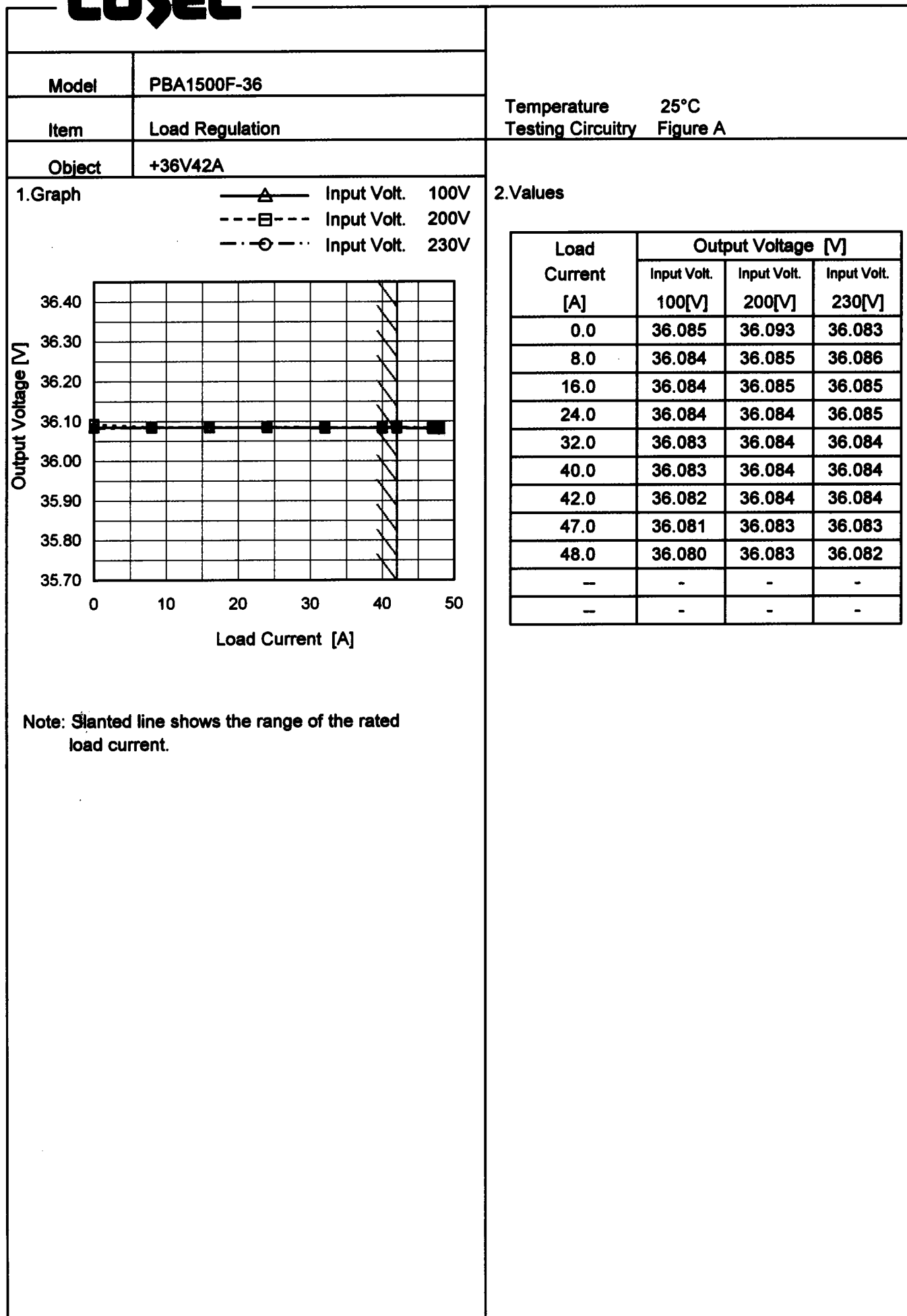
The value for "One phase" is the reference value only.

## 2.Condition

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

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| Model  | PBA1500F-36        | Temperature 25°C<br>Testing Circuitry Figure A   |  |                   |                    |  |          |           |    |        |        |     |        |        |     |        |        |     |        |        |     |        |        |     |        |        |    |   |   |    |   |   |    |   |   |
|--|--------------------|--|--|-------------------|--------------------|--|----------|-----------|----|--------|--------|-----|--------|--------|-----|--------|--------|-----|--------|--------|-----|--------|--------|-----|--------|--------|----|---|---|----|---|---|----|---|---|
| Item   | Line Regulation    |  |  |                   |                    |  |          |           |    |        |        |     |        |        |     |        |        |     |        |        |     |        |        |     |        |        |    |   |   |    |   |   |    |   |   |
| Object   | +36V42A            |  |  |                   |                    |  |          |           |    |        |        |     |        |        |     |        |        |     |        |        |     |        |        |     |        |        |    |   |   |    |   |   |    |   |   |
| 1.Graph  |                    | 2.Values   |  |                   |                    |  |          |           |    |        |        |     |        |        |     |        |        |     |        |        |     |        |        |     |        |        |    |   |   |    |   |   |    |   |   |
| <div><div><div>---□---</div><div>Load 50%</div></div><div><div>—△—</div><div>Load 100%</div></div></div> <p>Note: Slanted line shows the range of the rated input voltage.</p> |                    | <table><tr><th rowspan="2">Input Voltage [V]</th><th colspan="2">Output Voltage [V]</th></tr><tr><th>Load 50%</th><th>Load 100%</th></tr><tr><td>85</td><td>36.081</td><td>36.080</td></tr><tr><td>100</td><td>36.081</td><td>36.081</td></tr><tr><td>120</td><td>36.081</td><td>36.081</td></tr><tr><td>200</td><td>36.082</td><td>36.081</td></tr><tr><td>230</td><td>36.082</td><td>36.081</td></tr><tr><td>264</td><td>36.082</td><td>36.082</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr></table> |  | Input Voltage [V] | Output Voltage [V] |  | Load 50% | Load 100% | 85 | 36.081 | 36.080 | 100 | 36.081 | 36.081 | 120 | 36.081 | 36.081 | 200 | 36.082 | 36.081 | 230 | 36.082 | 36.081 | 264 | 36.082 | 36.082 | -- | - | - | -- | - | - | -- | - | - |
| Input Voltage [V]  | Output Voltage [V] |  |  |                   |                    |  |          |           |    |        |        |     |        |        |     |        |        |     |        |        |     |        |        |     |        |        |    |   |   |    |   |   |    |   |   |
|  | Load 50%           | Load 100%  |  |                   |                    |  |          |           |    |        |        |     |        |        |     |        |        |     |        |        |     |        |        |     |        |        |    |   |   |    |   |   |    |   |   |
| 85   | 36.081             | 36.080   |  |                   |                    |  |          |           |    |        |        |     |        |        |     |        |        |     |        |        |     |        |        |     |        |        |    |   |   |    |   |   |    |   |   |
| 100  | 36.081             | 36.081   |  |                   |                    |  |          |           |    |        |        |     |        |        |     |        |        |     |        |        |     |        |        |     |        |        |    |   |   |    |   |   |    |   |   |
| 120  | 36.081             | 36.081   |  |                   |                    |  |          |           |    |        |        |     |        |        |     |        |        |     |        |        |     |        |        |     |        |        |    |   |   |    |   |   |    |   |   |
| 200  | 36.082             | 36.081   |  |                   |                    |  |          |           |    |        |        |     |        |        |     |        |        |     |        |        |     |        |        |     |        |        |    |   |   |    |   |   |    |   |   |
| 230  | 36.082             | 36.081   |  |                   |                    |  |          |           |    |        |        |     |        |        |     |        |        |     |        |        |     |        |        |     |        |        |    |   |   |    |   |   |    |   |   |
| 264  | 36.082             | 36.082   |  |                   |                    |  |          |           |    |        |        |     |        |        |     |        |        |     |        |        |     |        |        |     |        |        |    |   |   |    |   |   |    |   |   |
| --   | -                  | -  |  |                   |                    |  |          |           |    |        |        |     |        |        |     |        |        |     |        |        |     |        |        |     |        |        |    |   |   |    |   |   |    |   |   |
| --   | -                  | -  |  |                   |                    |  |          |           |    |        |        |     |        |        |     |        |        |     |        |        |     |        |        |     |        |        |    |   |   |    |   |   |    |   |   |
| --   | -                  | -  |  |                   |                    |  |          |           |    |        |        |     |        |        |     |        |        |     |        |        |     |        |        |     |        |        |    |   |   |    |   |   |    |   |   |
|  |                    |  |  |                   |                    |  |          |           |    |        |        |     |        |        |     |        |        |     |        |        |     |        |        |     |        |        |    |   |   |    |   |   |    |   |   |
|  |                    |  |  |                   |                    |  |          |           |    |        |        |     |        |        |     |        |        |     |        |        |     |        |        |     |        |        |    |   |   |    |   |   |    |   |   |

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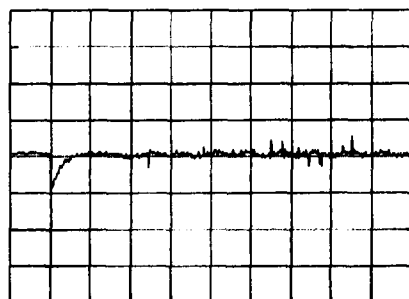
|        |                       |                   |          |
|--------|-----------------------|-------------------|----------|
| Model  | PBA1500F-36           | Temperature       | 25°C     |
| Item   | Dynamic Load Response | Testing Circuitry | Figure A |
| Object | +36V42A               |                   |          |

Input Volt. 100 V  
Cycle 1000 mS

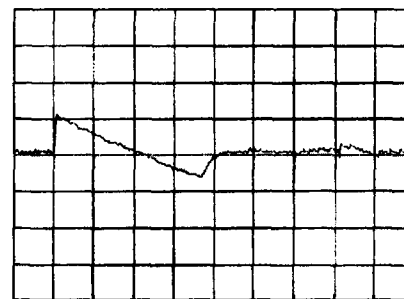
Load Current

Min.Load (0A) ←→  
Load 100% (42A)

100mV/div



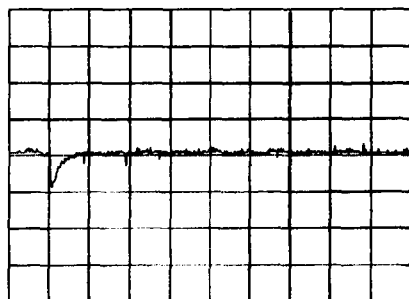
10mS/div



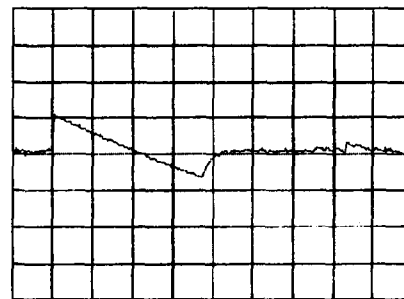
10mS/div

Min.Load (0A) ←→  
Load 50% (21A)

100mV/div



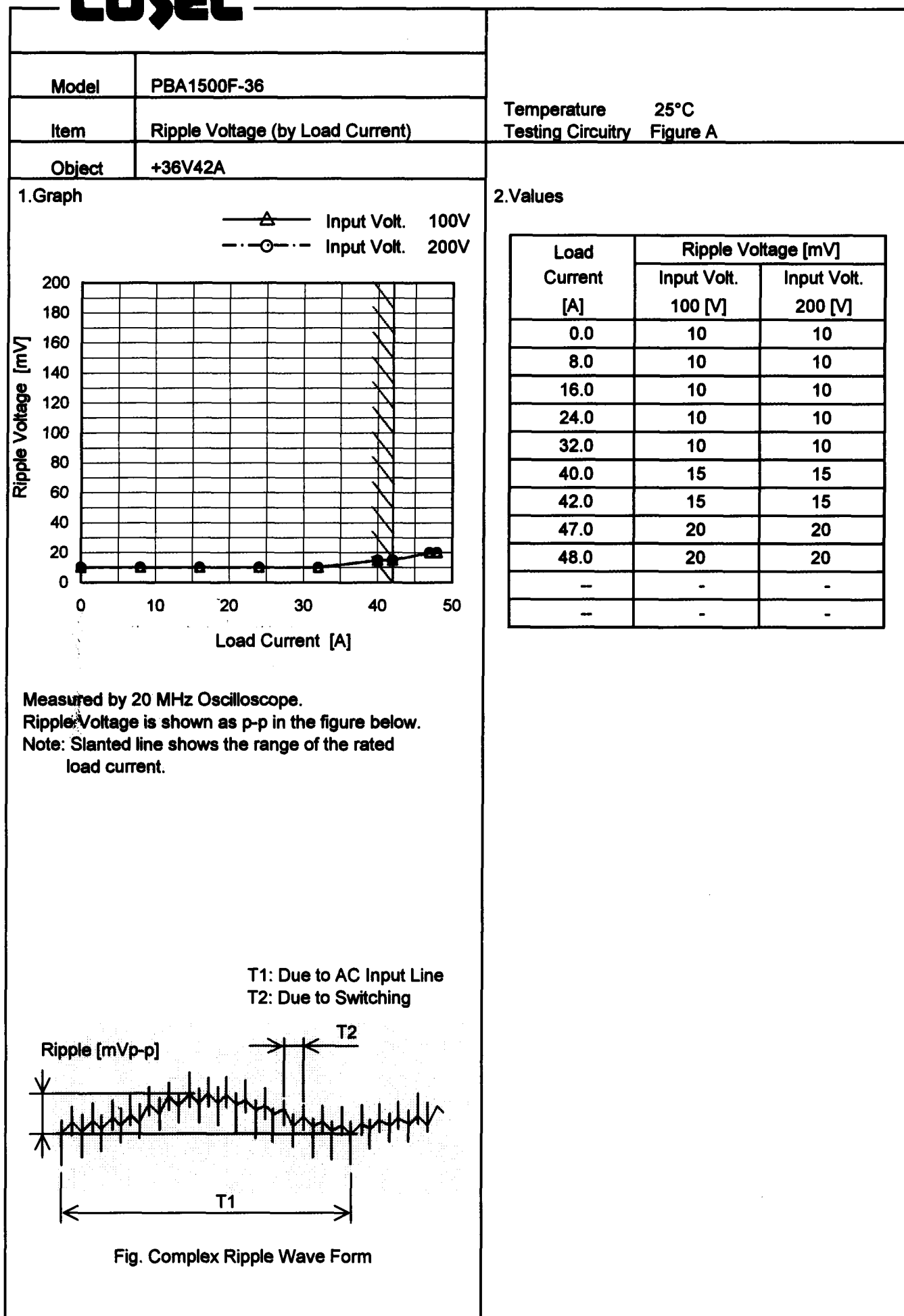
10mS/div

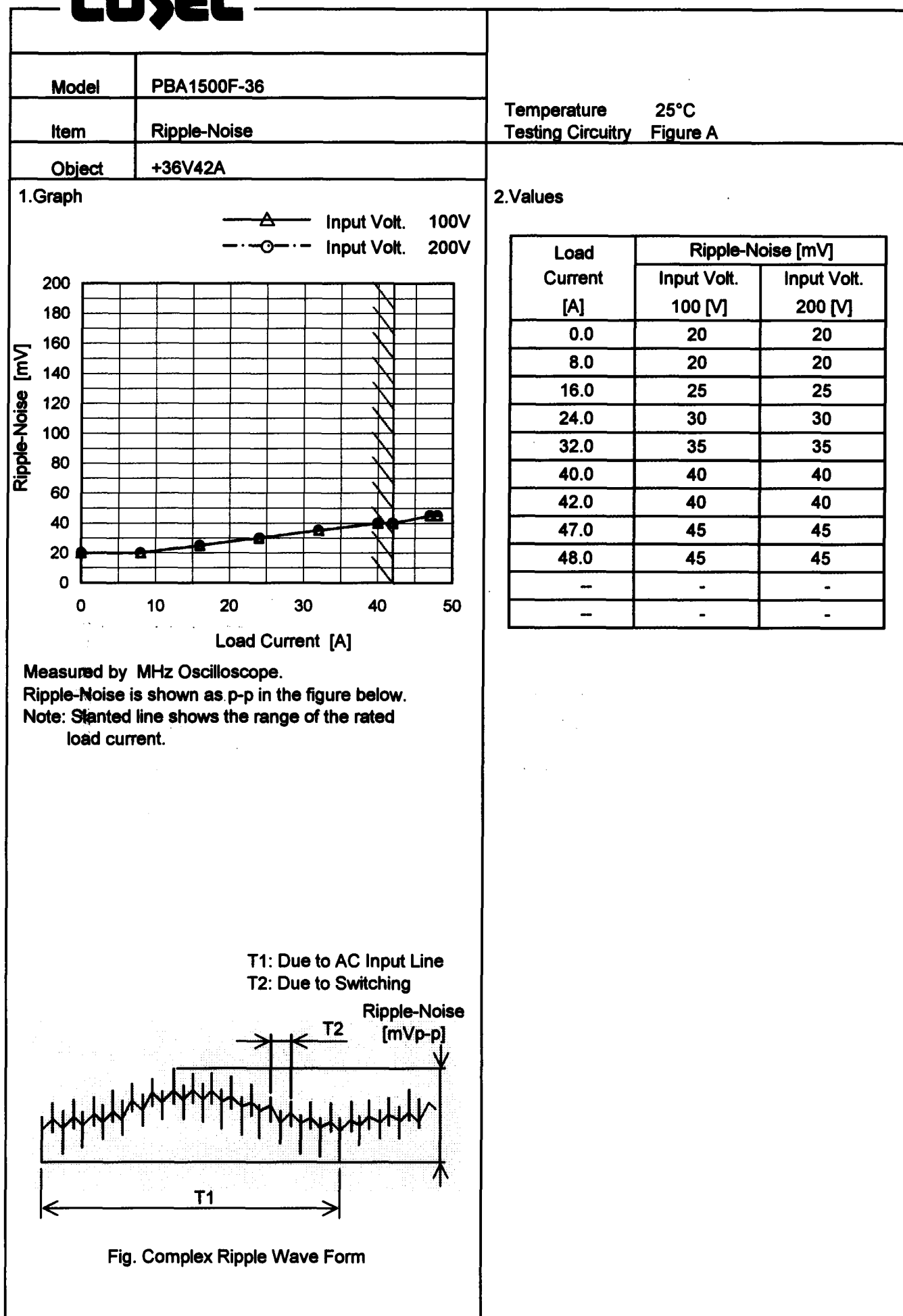


10mS/div

\* The characteristic of AC200V is equal.

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|         |  |                                   |  |
|---------|--|-----------------------------------|--|
| Model   |  | PBA1500F-36                       |  |
| Item    |  | Ripple Voltage (by Ambient Temp.) |  |
| Object  |  | +36V42A                           |  |
| 1.Graph |  | 2.Values                          |  |

</

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|        |  |                           |  |
|--------|--|---------------------------|--|
| Model  |  | PBA1500F-36               |  |
| Item   |  | Ambient Temperature Drift |  |
| Object |  | +36V42A                   |  |

1.Graph

△

Input Volt.

100V

□

Input Volt.

200V

○

Input Volt.

230V

Output Voltage [V]

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

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|        |                         |                            |
|--------|-------------------------|----------------------------|
|        |                         | Testing Circuitry Figure A |
| Model  | PBA1500F-36             |                            |
| Item   | Output Voltage Accuracy |                            |
| Object | +36V42A                 |                            |

### 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 - 50°C

Input Voltage : 85 - 264V

Load Current : 0 - 42A

\* 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<br>[°C] | Input<br>Voltage[V] | Output     |            | Output Voltage Accuracy |           |
|-----------------|---------------------|---------------------|------------|------------|-------------------------|-----------|
|                 |                     |                     | Current[A] | Voltage[V] | Value [mV]              | Ratio [%] |
| Maximum Voltage | 25                  | 264                 | 0          | 36.104     | ±34                     | ±0.1      |
| Minimum Voltage | -20                 | 85                  | 42         | 36.036     |                         |           |

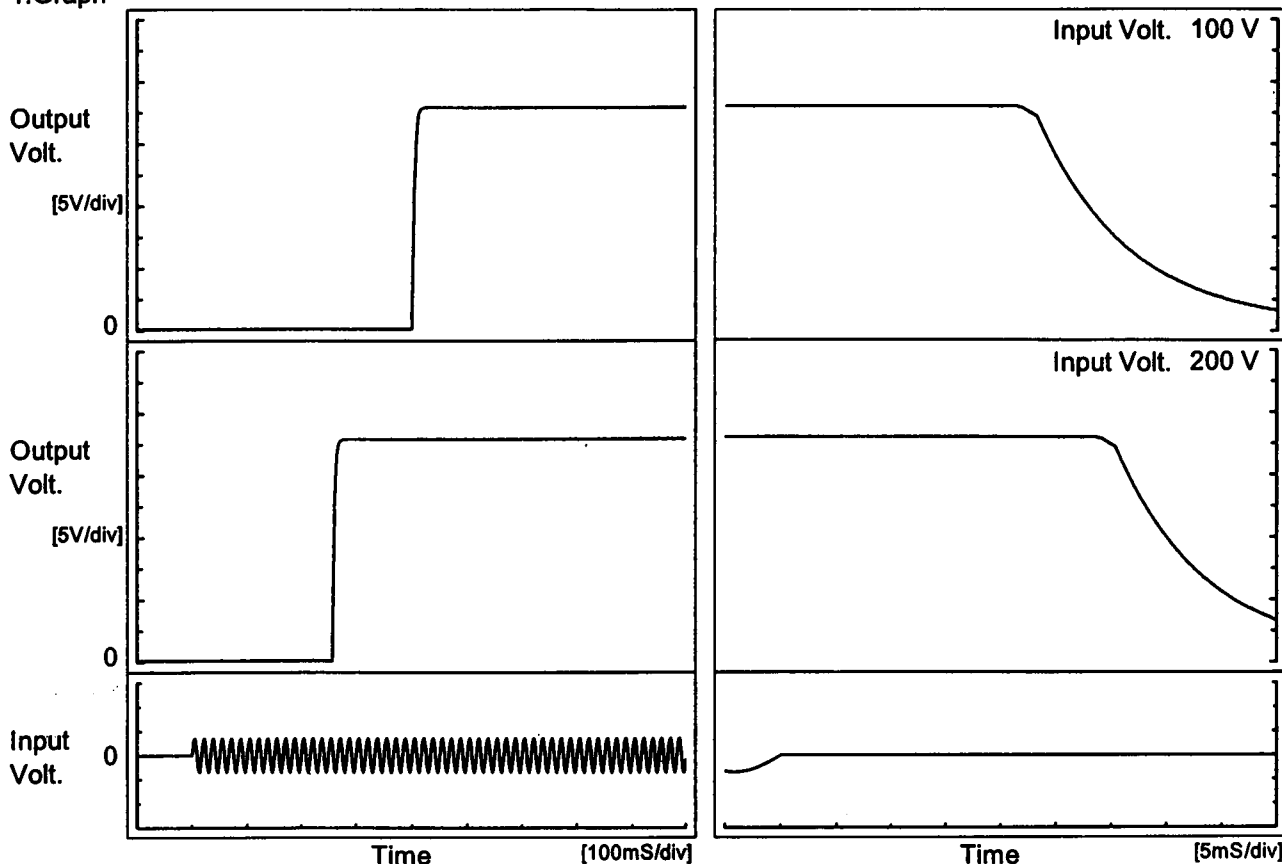
**COSEL**

|   |                  |  |  |
|---|------------------|--|--|
|   |                  |  |  |
| Model   | PBA1500F-36      | Temperature 25°C<br>Testing Circuitry Figure A |  |
| Item  | Time Lapse Drift |  |  |
| Object  | +36V42A          |  |  |
| 1.Graph   |                  | 2.Values                                       |  |
| <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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|                  |  |  |

# COSEL

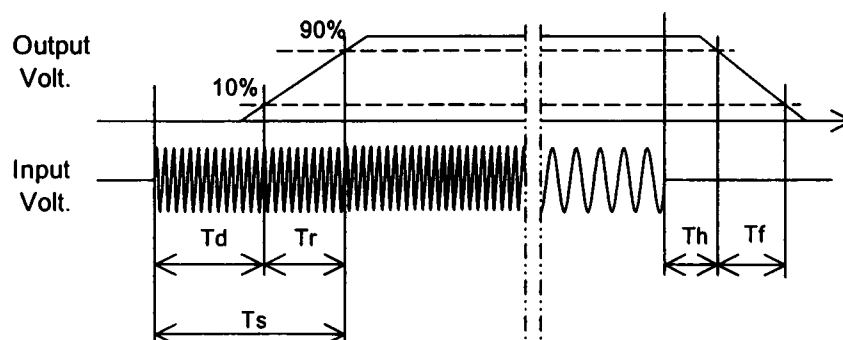
|        |                    |                   |          |
|--------|--------------------|-------------------|----------|
| Model  | PBA1500F-36        | Temperature       | 25°C     |
| Item   | Rise and Fall Time | Testing Circuitry | Figure A |
| Object | +36V42A            |                   |          |

## 1. Graph



## 2. Values

| Input Volt. | Time | Td    | Tr  | Ts    | Th   | Tf   |
|-------------|------|-------|-----|-------|------|------|
| 100 V       |      | 400.5 | 9.5 | 410.0 | 23.7 | 19.8 |
| 200 V       |      | 258.0 | 7.0 | 265.0 | 30.9 | 14.2 |



# COSEL

|        |  |              |  |
|--------|--|--------------|--|
| Model  |  | PBA1500F-36  |  |
| Item   |  | Hold-Up Time |  |
| Object |  | +36V42A      |  |

1.Graph

-----□----- Load 50%

-----△----- Load 100%

Hold-Up Time [mS]

1000

100

10

1

50

100

150

200

250

300

Input Voltage [V]

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.

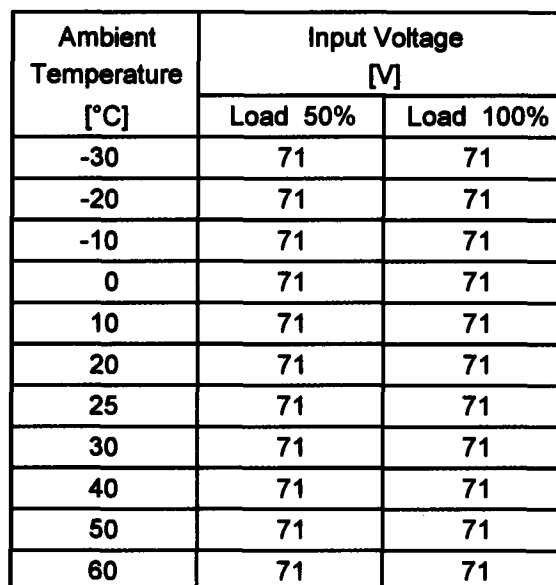
2.Values

| Input Voltage [V] | Hold-Up Time [mS] |           |
|-------------------|-------------------|-----------|
|                   | Load 50%          | Load 100% |
| 85                | 50                | 19        |
| 100               | 53                | 22        |
| 120               | 57                | 25        |
| 200               | 62                | 29        |
| 230               | 63                | 30        |
| 264               | 64                | 31        |
| --                | -                 | -         |
| --                | -                 | -         |
| --                | -                 | -         |

| Model  | PBA1500F-36                             |   |                    |                  |           |  |  |                    |                    |                    |     |   |   |   |     |    |     |     |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |    |   |   |   |    |   |   |   |
|--|---|---|--------------------|------------------|-----------|--|--|--------------------|--------------------|--------------------|-----|---|---|---|-----|----|-----|-----|------|----|----|----|------|----|----|----|------|----|----|----|------|----|----|----|------|----|----|----|------|----|----|----|------|----|----|----|----|---|---|---|----|---|---|---|
| Item   | Instantaneous Interruption Compensation | Temperature   | 25°C               |                  |           |  |  |                    |                    |                    |     |   |   |   |     |    |     |     |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |    |   |   |   |    |   |   |   |
| Object   | +36V42A                                 | Testing Circuitry   | Figure A           |                  |           |  |  |                    |                    |                    |     |   |   |   |     |    |     |     |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |    |   |   |   |    |   |   |   |
| 1.Graph  |   | 2.Values  |                    |                  |           |  |  |                    |                    |                    |     |   |   |   |     |    |     |     |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |    |   |   |   |    |   |   |   |
| <div><div><div>—△— Input Volt. 100V</div><div>---□--- Input Volt. 200V</div><div>-·-○-·- Input Volt. 230V</div></div><div><p>Instantaneous Compensation Time [mS]</p><p>Load Current [A]</p></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. 200[V]</th><th>Input Volt. 230[V]</th></tr><tr><td>0.0</td><td>-</td><td>-</td><td>-</td></tr><tr><td>8.0</td><td>55</td><td>154</td><td>155</td></tr><tr><td>16.0</td><td>30</td><td>54</td><td>78</td></tr><tr><td>24.0</td><td>30</td><td>39</td><td>40</td></tr><tr><td>32.0</td><td>30</td><td>34</td><td>39</td></tr><tr><td>40.0</td><td>22</td><td>31</td><td>32</td></tr><tr><td>42.0</td><td>21</td><td>30</td><td>30</td></tr><tr><td>47.0</td><td>19</td><td>27</td><td>27</td></tr><tr><td>48.0</td><td>18</td><td>26</td><td>26</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] | 0.0 | - | - | - | 8.0 | 55 | 154 | 155 | 16.0 | 30 | 54 | 78 | 24.0 | 30 | 39 | 40 | 32.0 | 30 | 34 | 39 | 40.0 | 22 | 31 | 32 | 42.0 | 21 | 30 | 30 | 47.0 | 19 | 27 | 27 | 48.0 | 18 | 26 | 26 | -- | - | - | - | -- | - | - | - |
| Load Current [A]   | Time [mS]                               |   |                    |                  |           |  |  |                    |                    |                    |     |   |   |   |     |    |     |     |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |    |   |   |   |    |   |   |   |
|  | Input Volt. 100[V]                      | Input Volt. 200[V]  | Input Volt. 230[V] |                  |           |  |  |                    |                    |                    |     |   |   |   |     |    |     |     |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |    |   |   |   |    |   |   |   |
| 0.0  | -                                       | -   | -                  |                  |           |  |  |                    |                    |                    |     |   |   |   |     |    |     |     |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |    |   |   |   |    |   |   |   |
| 8.0  | 55                                      | 154   | 155                |                  |           |  |  |                    |                    |                    |     |   |   |   |     |    |     |     |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |    |   |   |   |    |   |   |   |
| 16.0   | 30                                      | 54  | 78                 |                  |           |  |  |                    |                    |                    |     |   |   |   |     |    |     |     |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |    |   |   |   |    |   |   |   |
| 24.0   | 30                                      | 39  | 40                 |                  |           |  |  |                    |                    |                    |     |   |   |   |     |    |     |     |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |    |   |   |   |    |   |   |   |
| 32.0   | 30                                      | 34  | 39                 |                  |           |  |  |                    |                    |                    |     |   |   |   |     |    |     |     |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |    |   |   |   |    |   |   |   |
| 40.0   | 22                                      | 31  | 32                 |                  |           |  |  |                    |                    |                    |     |   |   |   |     |    |     |     |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |    |   |   |   |    |   |   |   |
| 42.0   | 21                                      | 30  | 30                 |                  |           |  |  |                    |                    |                    |     |   |   |   |     |    |     |     |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |    |   |   |   |    |   |   |   |
| 47.0   | 19                                      | 27  | 27                 |                  |           |  |  |                    |                    |                    |     |   |   |   |     |    |     |     |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |    |   |   |   |    |   |   |   |
| 48.0   | 18                                      | 26  | 26                 |                  |           |  |  |                    |                    |                    |     |   |   |   |     |    |     |     |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |    |   |   |   |    |   |   |   |
| --   | -                                       | -   | -                  |                  |           |  |  |                    |                    |                    |     |   |   |   |     |    |     |     |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |    |   |   |   |    |   |   |   |
| --   | -                                       | -   | -                  |                  |           |  |  |                    |                    |                    |     |   |   |   |     |    |     |     |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |    |   |   |   |    |   |   |   |
| Note: Slanted line shows the range of the rated load current.  |   |   |                    |                  |           |  |  |                    |                    |                    |     |   |   |   |     |    |     |     |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |    |   |   |   |    |   |   |   |

### Testing Circuitry Figure A

## 2.Values



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

**COSEL**

|        |  |                        |  |
|--------|--|------------------------|--|
| Model  |  | PBA1500F-36            |  |
| Item   |  | Overcurrent Protection |  |
| Object |  | +36V42A                |  |

1.Graph

Input Volt. 100V

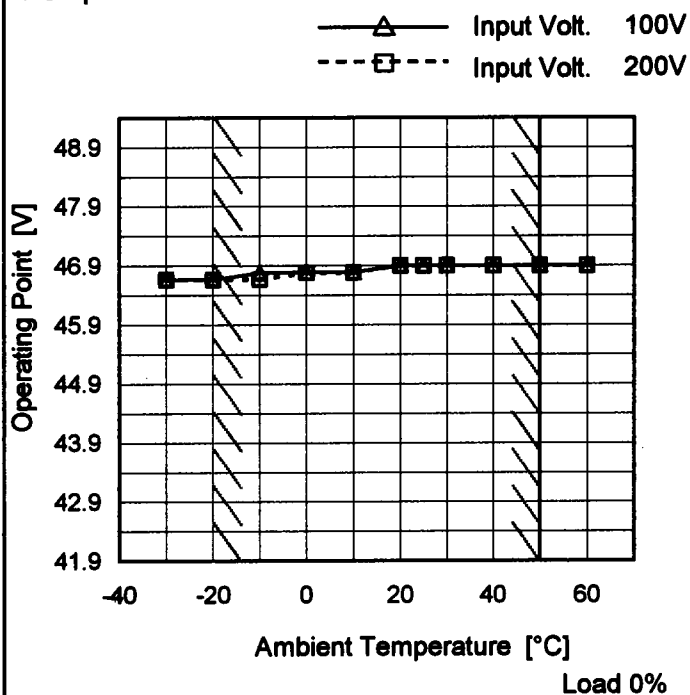
Input Volt. 200V

Output Voltage [V]

# COSEL

|        |                        |
|--------|------------------------|
| Model  | PBA1500F-36            |
| Item   | Overvoltage Protection |
| Object | +36V42A                |

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. 100[V]  | Input Volt. 200[V] |
| -30                      | 46.64               | 46.64              |
| -20                      | 46.64               | 46.64              |
| -10                      | 46.75               | 46.64              |
| 0                        | 46.76               | 46.75              |
| 10                       | 46.76               | 46.75              |
| 20                       | 46.87               | 46.87              |
| 25                       | 46.87               | 46.87              |
| 30                       | 46.87               | 46.87              |
| 40                       | 46.87               | 46.87              |
| 50                       | 46.87               | 46.87              |
| 60                       | 46.87               | 46.87              |

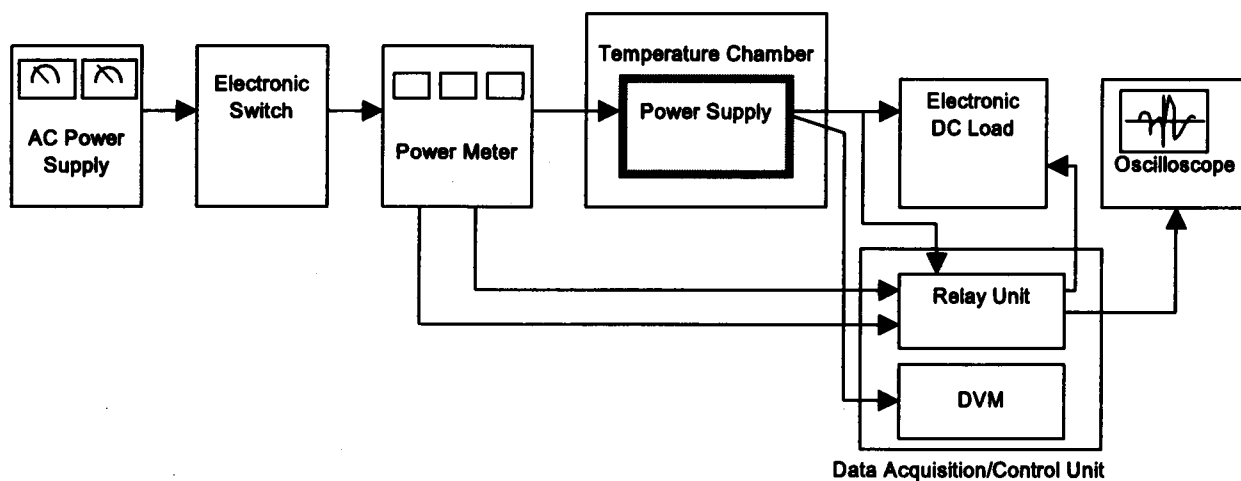


Figure A

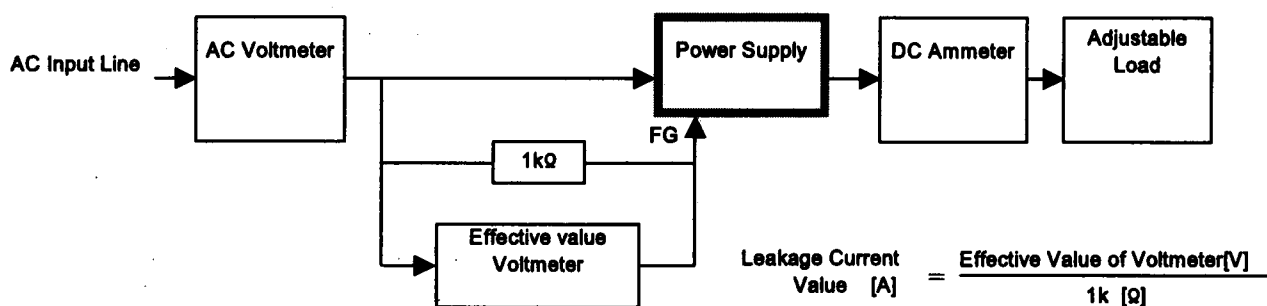


Figure B ( DEN-AN )

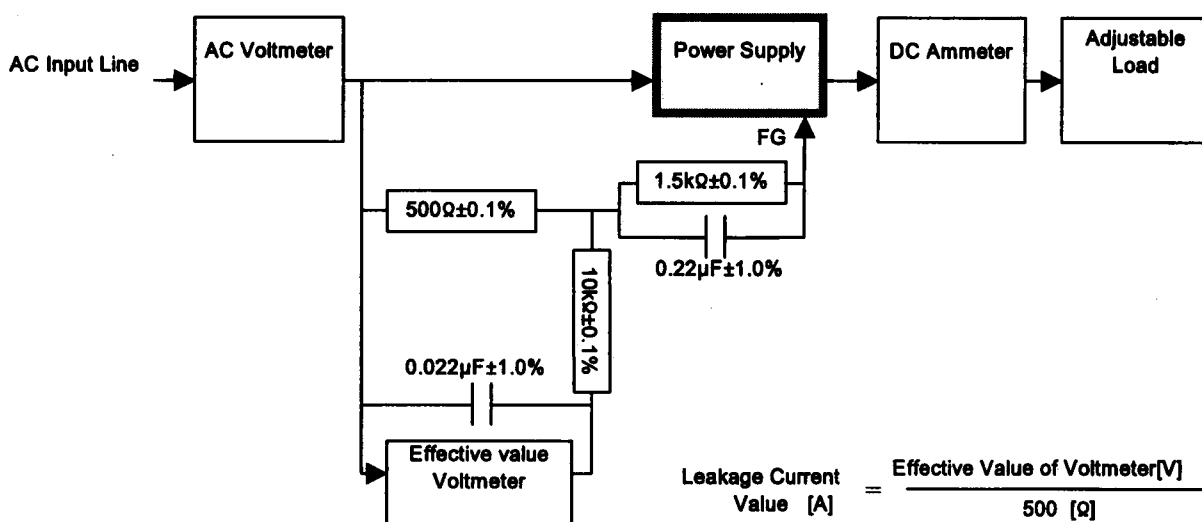


Figure B ( IEC60950 )