



TEST DATA OF LEA150F-5

(200V INPUT)

Regulated DC Power Supply

Date : Feb. 5. 1999

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コーセル株式会社

COSEL CO., LTD.

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|--------|--|-------------------------|--|
| Model | | LEA150F-5 | |
| Item | | Line Regulation 静的入力変動 | |
| Object | | +5.0V30.00A | |

1. Graph

-----□----- Load 50%

-----△----- Load 100%

[V]

5.180

5.160

5.140

5.120

5.100

5.080

5.060

0

0

160

180

200

220

240

260

280

300

Input Voltage [V]

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

(注)斜線は定格入力電圧範囲を示す。

2. Values

| Input Voltage [V] | Load 50% | Load 100% |
|-------------------|------------------|------------------|
| | Output Volt. [V] | Output Volt. [V] |
| 150 | 5.112 | 5.106 |
| 160 | 5.112 | 5.106 |
| 170 | 5.112 | 5.106 |
| 180 | 5.112 | 5.106 |
| 200 | 5.112 | 5.106 |
| 220 | 5.112 | 5.106 |
| 240 | 5.112 | 5.106 |
| 264 | 5.112 | 5.106 |
| 280 | 5.112 | 5.106 |

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| | | | | |
|--------|--|---|-------------------|----------|
| Model | | LEA150F-5 | Temperature | 25℃ |
| Item | | Input Current (by Load Current) 入力電流（負荷特性） | Humidity | 40%RH |
| Output | | _____ | Testing Circuitry | Figure A |

1. Graph

—△— Input Volt. 170V

- -□- - Input Volt. 200V

- -○- - Input Volt. 264V

Input Current [A]

Load Current [A]

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

(注)斜線は定格負荷電流範囲を示す。

2. Values

| Load Current [A] | Input Current [A] | | |
|---------------------|-----------------------|-----------------------|-----------------------|
| | Input Volt. 170[V] | Input Volt. 200[V] | Input Volt. 264[V] |
| 0 | 0.07 | 0.07 | 0.09 |
| 6 | 0.31 | 0.27 | 0.24 |
| 12 | 0.52 | 0.45 | 0.37 |
| 18 | 0.73 | 0.63 | 0.51 |
| 24 | 0.95 | 0.82 | 0.65 |
| 30 | 1.18 | 1.01 | 0.79 |
| 33 | 1.29 | 1.11 | 0.86 |
| — | — | — | — |
| — | — | — | — |
| — | — | — | — |
| — | — | — | — |
| — | — | — | — |

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Model

LEA150F-5

Item

Input Power (by Load Current)
入力電力 (負荷特性)

Output

Temperature

25°C

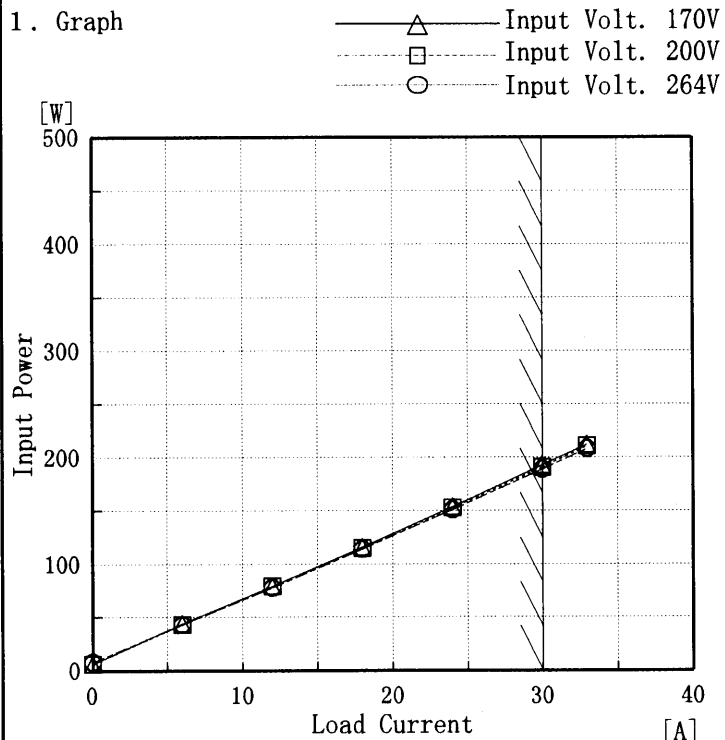
Humidity

40%RH

Testing Circuitry

Figure A

1. Graph



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

(注) 斜線は定格負荷電流範囲を示す。

2. Values

| Load Current [A] | Input Power [W] | | |
|---------------------|-----------------------|-----------------------|-----------------------|
| | Input Volt. 170[V] | Input Volt. 200[V] | Input Volt. 264[V] |
| 0 | 6 | 6 | 8 |
| 6 | 44 | 43 | 43 |
| 12 | 79 | 79 | 78 |
| 18 | 116 | 115 | 114 |
| 24 | 154 | 153 | 151 |
| 30 | 193 | 191 | 189 |
| 33 | 212 | 211 | 208 |
| — | — | — | — |
| — | — | — | — |
| — | — | — | — |
| — | — | — | — |
| — | — | — | — |

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| | | | | | | | |
|--------|--|--|--|-------------------|--|----------|--|
| Model | | LEA150F-5 | | Temperature | | 25℃ | |
| Item | | Efficiency (by Input Voltage) 効率 (入力電圧特性) | | Testing Circuitry | | Figure A | |
| Object | | | | | | | |

1. Graph

-----□----- Load 50%

-----△----- Load 100%

Efficiency [%]

| Input Voltage [V] | Load 50% Efficiency [%] | Load 100% Efficiency [%] |
|-------------------|-------------------------|--------------------------|
| 150 | 77.93 | 78.88 |
| 160 | 78.04 | 79.02 |
| 170 | 78.16 | 79.24 |
| 180 | 78.36 | 79.43 |
| 200 | 78.74 | 80.02 |
| 220 | 78.98 | 80.52 |
| 240 | 79.23 | 80.78 |
| 264 | 79.56 | 80.94 |
| 280 | 79.55 | 80.85 |

Input Voltage [V]

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

(注)斜線は定格入力電圧範囲を示す。

2. Values

| Input Voltage [V] | Load 50% | Load 100% |
|-------------------|----------------|----------------|
| | Efficiency [%] | Efficiency [%] |
| 150 | 77.93 | 78.88 |
| 160 | 78.04 | 79.02 |
| 170 | 78.16 | 79.24 |
| 180 | 78.36 | 79.43 |
| 200 | 78.74 | 80.02 |
| 220 | 78.98 | 80.52 |
| 240 | 79.23 | 80.78 |
| 264 | 79.56 | 80.94 |
| 280 | 79.55 | 80.85 |

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| | | | | |
|--------|--|---|-------------------|----------|
| Model | | LEA150F-5 | Temperature | 25℃ |
| Item | | Efficiency (by Load Current) 効率 (負荷特性) | Humidity | 40%RH |
| Output | | | Testing Circuitry | Figure A |

1. Graph

—△—

Input Volt. 170V

—□—

Input Volt. 200V

—○—

Input Volt. 264V

Efficiency [%]

90

80

70

60

50

40

0

10

20

30

40

Load Current [A]

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Model

LEA150F-5

Item

Power Factor (by Input Voltage)
力率(入力電圧特性)

Object

Temperature

25°C

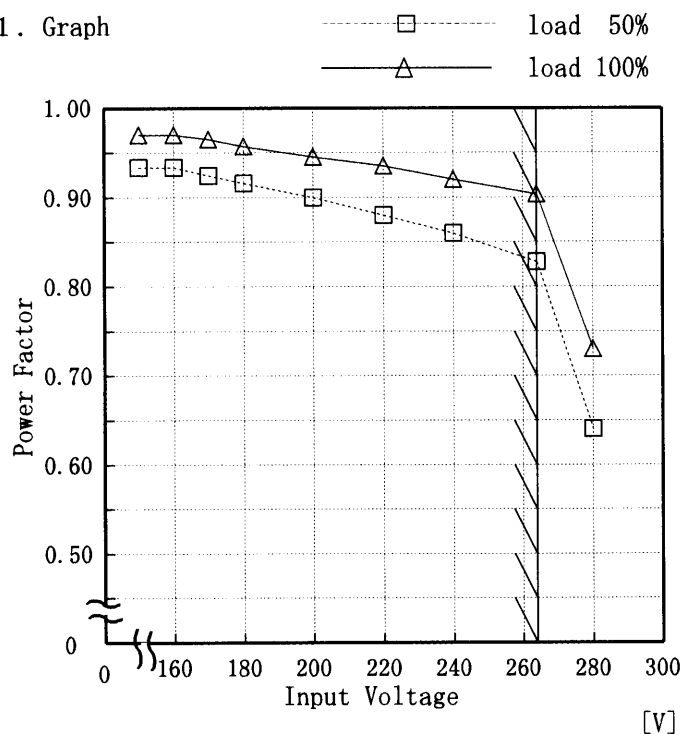
Humidity

40%RH

Testing Circuitry

Figure A

1. Graph



2. Values

| Input Voltage [V] | load 50% | load 100% |
|-------------------|--------------|--------------|
| | Power Factor | Power Factor |
| 150 | 0.93 | 0.97 |
| 160 | 0.93 | 0.97 |
| 170 | 0.92 | 0.96 |
| 180 | 0.92 | 0.96 |
| 200 | 0.90 | 0.95 |
| 220 | 0.88 | 0.94 |
| 240 | 0.86 | 0.92 |
| 264 | 0.83 | 0.90 |
| 280 | 0.64 | 0.73 |

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| | | | | | |
|--------|--|---|--|---|--|
| Model | | LEA150F-5 | | Temperature25℃ Testing CircuitryFigure A | |
| Item | | Power Factor (by Load Current) 力率 (負荷電流特性) | | | |
| Output | | _____ | | | |

1. Graph

—△—Input Volt. 170V
- - -□- - -Input Volt. 200V
- - -○- - -Input Volt. 264V

Power Factor

Load Current [A]

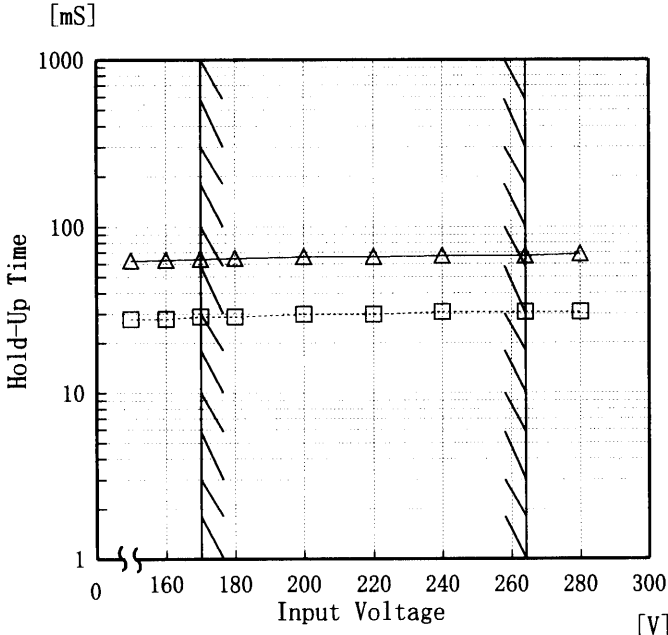
Note: Slanted line shows the range of the rated load current

(注)斜線は定格負荷電流範囲を示す。

2. Values

| Load Current [A] | Power Factor | | |
|---------------------|-----------------------|-----------------------|-----------------------|
| | Input Volt. 170[V] | Input Volt. 200[V] | Input Volt. 264[V] |
| 0 | 0.50 | 0.46 | 0.32 |
| 6 | 0.85 | 0.80 | 0.69 |
| 12 | 0.90 | 0.87 | 0.79 |
| 18 | 0.93 | 0.91 | 0.85 |
| 24 | 0.95 | 0.93 | 0.88 |
| 30 | 0.96 | 0.95 | 0.90 |
| 33 | 0.96 | 0.95 | 0.91 |
| — | — | — | — |
| — | — | — | — |
| — | — | — | — |
| — | — | — | — |
| — | — | — | — |

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| Model | | LEA150F-5 | Temperature Testing Circuitry | 25℃ Figure A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-------------------|---|----------------------------------|-----------------|-----------|-------------------|-------------------|-----|----|----|-----|----|----|-----|----|----|-----|----|----|-----|----|----|-----|----|----|-----|----|----|-----|----|----|-----|----|----|
| Item | | Hold-Up Time 出力保持時間 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | | +5.0V30A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. Graph | | <div><div>—△—</div>Load 50%</div> <div><div>- -□- -</div>Load 100%</div> | 2. Values | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div><div>Hold-Up Time [mS]</div><div><div>1000</div><div>100</div><div>10</div><div>1</div></div><div><div>0</div><div>160</div><div>180</div><div>200</div><div>220</div><div>240</div><div>260</div><div>280</div><div>300</div></div><div>Input Voltage [V]</div></div>  <p>This duration covers from Shut-off of input voltage to the moment when output voltage descends to the rated range of voltage accuracy.</p> <p>Note: Slanted line shows the range of the rated input voltage.</p> <p>出力保持時間とは、入力電圧断から出力電圧が、定電圧精度の規格範囲を保持しているところまでの時間。</p> <p>(注)斜線は定格入力電圧範囲を示す。</p> | | <table><tr><th rowspan="2">Input Voltage [V]</th><th>Load 50%</th><th>Load 100%</th></tr><tr><th>Hold-Up Time [mS]</th><th>Hold-Up Time [mS]</th></tr><tr><td>150</td><td>63</td><td>28</td></tr><tr><td>160</td><td>63</td><td>28</td></tr><tr><td>170</td><td>64</td><td>29</td></tr><tr><td>180</td><td>65</td><td>29</td></tr><tr><td>200</td><td>66</td><td>30</td></tr><tr><td>220</td><td>66</td><td>30</td></tr><tr><td>240</td><td>67</td><td>31</td></tr><tr><td>264</td><td>67</td><td>31</td></tr><tr><td>280</td><td>69</td><td>31</td></tr></table> | Input Voltage [V] | Load 50% | Load 100% | Hold-Up Time [mS] | Hold-Up Time [mS] | 150 | 63 | 28 | 160 | 63 | 28 | 170 | 64 | 29 | 180 | 65 | 29 | 200 | 66 | 30 | 220 | 66 | 30 | 240 | 67 | 31 | 264 | 67 | 31 | 280 | 69 | 31 |
| Input Voltage [V] | Load 50% | Load 100% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Hold-Up Time [mS] | Hold-Up Time [mS] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 150 | 63 | 28 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 160 | 63 | 28 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 170 | 64 | 29 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 180 | 65 | 29 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 200 | 66 | 30 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 220 | 66 | 30 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 240 | 67 | 31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 264 | 67 | 31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 280 | 69 | 31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| | |
|--------|---|
| Model | LEA150F-5 |
| Item | Instantaneous Interruption Compensation 瞬時停電保障 |
| Object | +5V30A |

1. Graph

—△—

Input Volt. 170V

---□---

Input Volt. 200V

---○---

Input Volt. 264V

[mS]

1000

100

10

1

Instantaneous Compensation Time

0

10

20

30

40

Load Current

[A]

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 load current.

瞬時停電保障時間とは、出力電圧が定電圧精度の規格範囲を保持している瞬時停電時間をいう。

(注)斜線は定格負荷電流範囲を示す。

Temperature

25℃

Testing Circuitry

Figure A

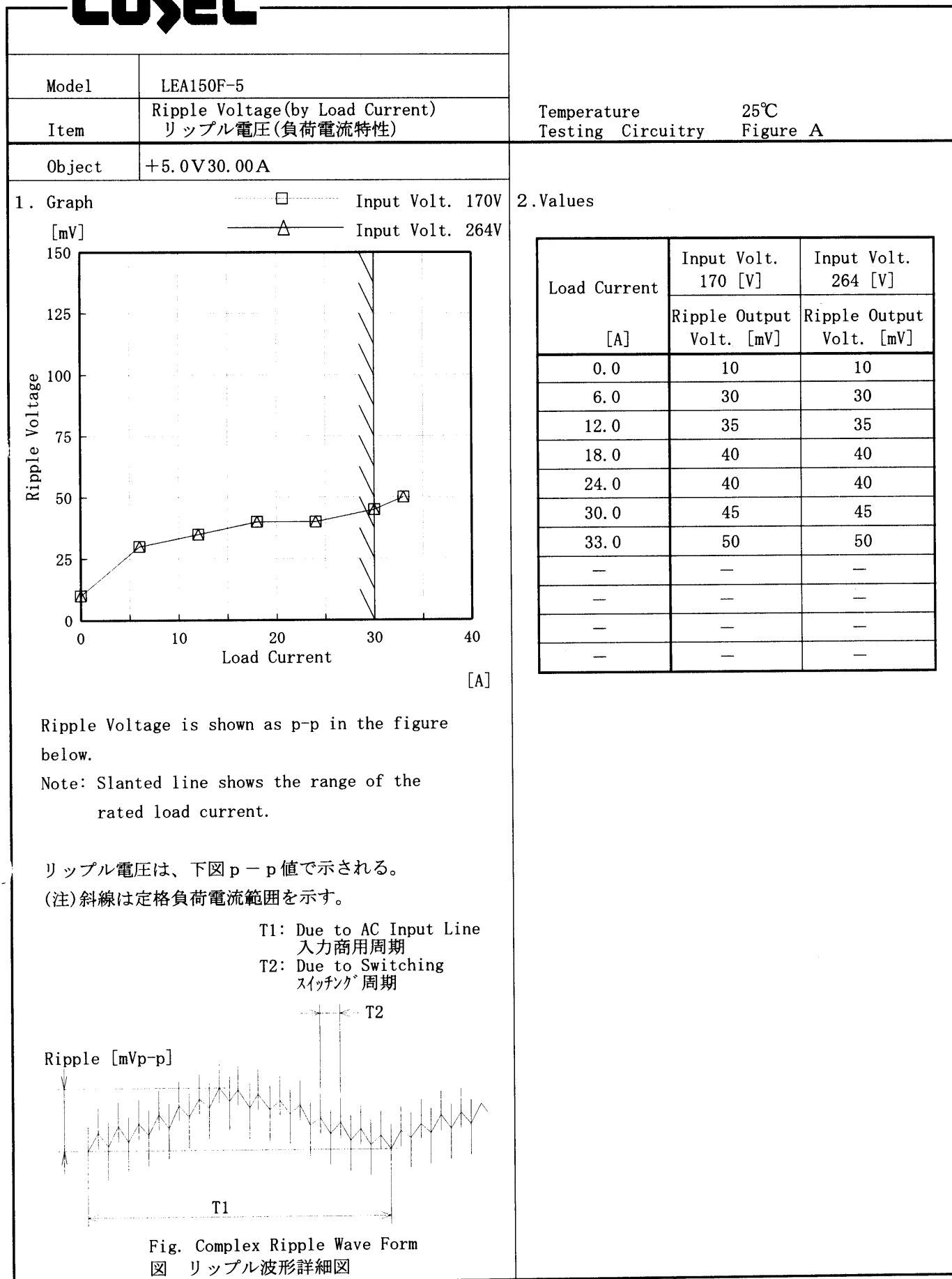
2. Values

| Load Current [A] | Input Volt. 170[V] | Input Volt. 200[V] | Input Volt. 264[V] |
|------------------|--------------------|--------------------|--------------------|
| | Time [mS] | | |
| 0 | — | — | — |
| 6 | 162 | 168 | 173 |
| 12 | 81 | 85 | 89 |
| 18 | 52 | 53 | 55 |
| 24 | 36 | 36 | 41 |
| 30 | 26 | 29 | 30 |
| 33 | 20 | 22 | 23 |
| — | — | — | — |
| — | — | — | — |
| — | — | — | — |
| — | — | — | — |

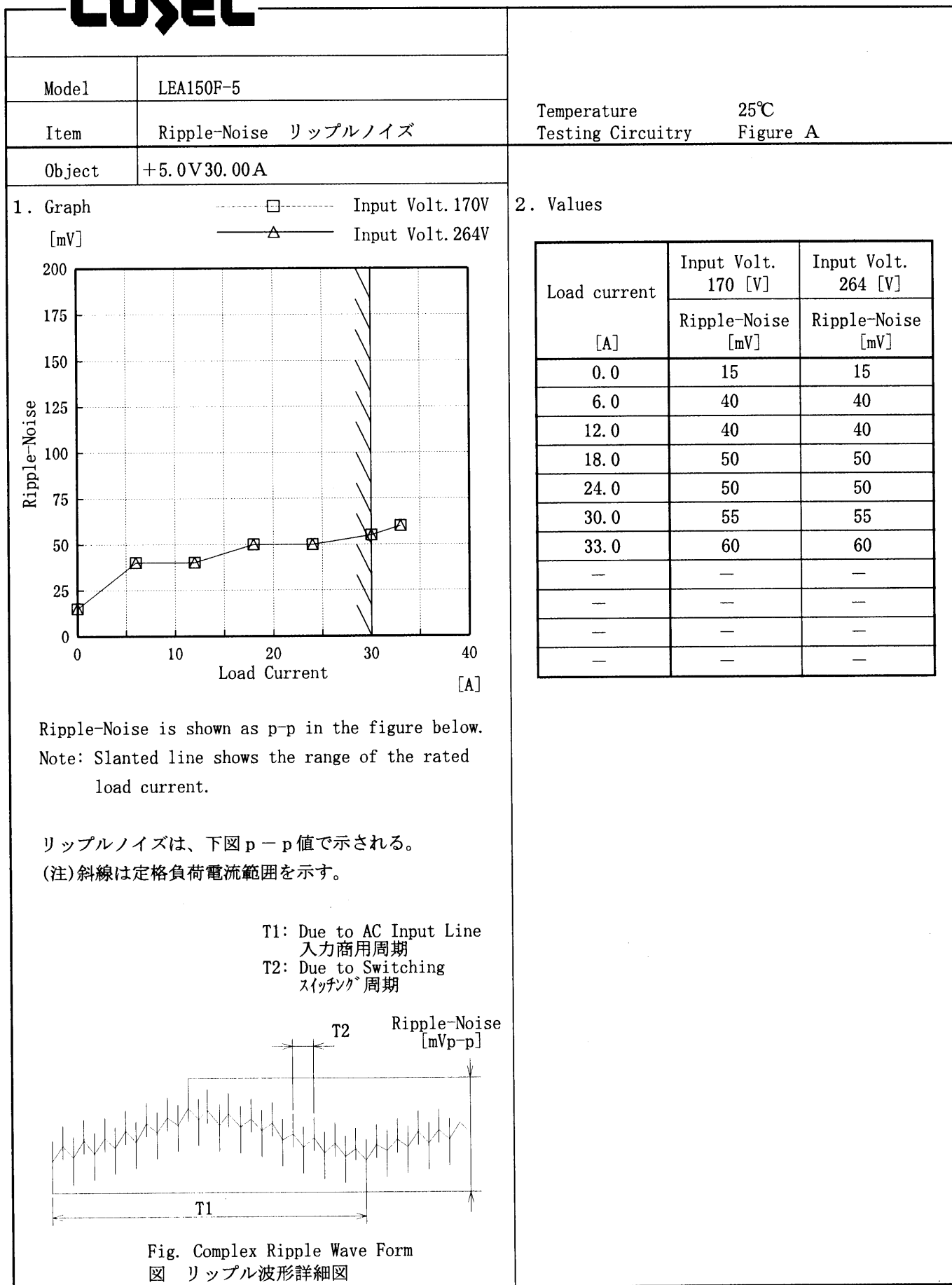
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| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|------------------|------------------------|------------------|--|--|----------|--|--------------|-------------|-------------|-------------|--------|--------|--------|-----|------------------|------------------|------------------|-----|-------|-------|-------|-----|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|---|---|---|---|---|---|---|---|---|---|---|---|
| Model | | LEA150F-5 | | Temperature | | 25℃ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Item | | Load Regulation 静的負荷変動 | | Testing Circuitry | | Figure A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | | +5.0V30.00A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. Graph | | | | 2. Values | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div><div><div>△</div><div>Input Volt. 170V</div></div><div><div>□</div><div>Input Volt. 200V</div></div><div><div>○</div><div>Input Volt. 264V</div></div></div> <div><div><div>[V]</div><div><div>Output Voltage</div><div>Load Current</div><div>[A]</div></div></div></div> <div><div>Note: Slanted line shows the range of the rated load current.</div><div>(注)斜線は定格負荷電流範囲を示す。</div></div> | | | | <table><tr><td rowspan="2">Load Current</td><td>Input Volt.</td><td>Input Volt.</td><td>Input Volt.</td></tr><tr><td>170[V]</td><td>200[V]</td><td>264[V]</td></tr><tr><td>[A]</td><td>Output Volt. [V]</td><td>Output Volt. [V]</td><td>Output Volt. [V]</td></tr><tr><td>0.0</td><td>5.119</td><td>5.119</td><td>5.119</td></tr><tr><td>6.0</td><td>5.116</td><td>5.116</td><td>5.116</td></tr><tr><td>12.0</td><td>5.113</td><td>5.113</td><td>5.113</td></tr><tr><td>18.0</td><td>5.111</td><td>5.111</td><td>5.111</td></tr><tr><td>24.0</td><td>5.108</td><td>5.108</td><td>5.108</td></tr><tr><td>30.0</td><td>5.106</td><td>5.106</td><td>5.106</td></tr><tr><td>33.0</td><td>5.104</td><td>5.104</td><td>5.104</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 | Input Volt. | Input Volt. | Input Volt. | 170[V] | 200[V] | 264[V] | [A] | Output Volt. [V] | Output Volt. [V] | Output Volt. [V] | 0.0 | 5.119 | 5.119 | 5.119 | 6.0 | 5.116 | 5.116 | 5.116 | 12.0 | 5.113 | 5.113 | 5.113 | 18.0 | 5.111 | 5.111 | 5.111 | 24.0 | 5.108 | 5.108 | 5.108 | 30.0 | 5.106 | 5.106 | 5.106 | 33.0 | 5.104 | 5.104 | 5.104 | — | — | — | — | — | — | — | — | — | — | — | — |
| Load Current | Input Volt. | Input Volt. | Input Volt. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 170[V] | 200[V] | 264[V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [A] | Output Volt. [V] | Output Volt. [V] | Output Volt. [V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.0 | 5.119 | 5.119 | 5.119 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.0 | 5.116 | 5.116 | 5.116 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12.0 | 5.113 | 5.113 | 5.113 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18.0 | 5.111 | 5.111 | 5.111 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 24.0 | 5.108 | 5.108 | 5.108 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30.0 | 5.106 | 5.106 | 5.106 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 33.0 | 5.104 | 5.104 | 5.104 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| — | — | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

COSEL



COSEL



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Model LEA150F-5

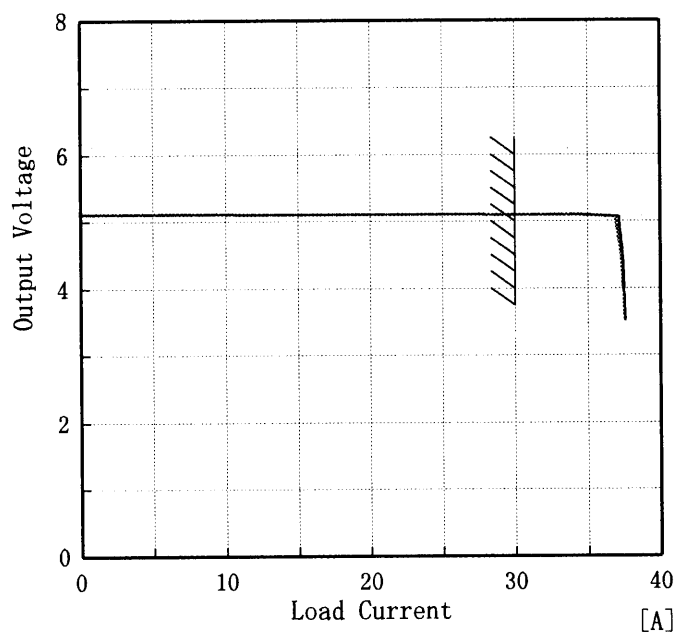
Item Overcurrent Protection
過電流保護

Object +5.0V30.00A

Temperature 25°C
Testing Circuitry Figure A

1. Graph

[V]



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

(注) 斜線は定格負荷電流範囲を示す。

3.5V以下は間欠状態。

2. Values

| Output Voltage [V] | Input Volt. 170[V] | Input Volt. 200[V] | Input Volt. 264[V] |
|--------------------|--------------------|--------------------|--------------------|
| | Load Current [A] | Load Current [A] | Load Current [A] |
| 5.00 | 36.96 | 37.09 | 37.15 |
| 4.75 | 37.13 | 37.25 | 37.27 |
| 4.50 | 37.28 | 37.37 | 37.38 |
| 4.00 | 37.42 | 37.47 | 37.49 |
| 3.50 | 37.55 | 37.56 | 37.62 |
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COSEL

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|--------|--|---------------------------------|--|
| Model | | LEA150F-5 | |
| Item | | Overvoltage Protection 過電圧保護 | |
| Object | | +5.0V30A | |

1. Graph

—△—

—□—

—○—

Input Volt. 170 V

Input Volt. 200 V

Input Volt. 264 V

[V]

Operating Point

9.70

8.70

7.70

6.70

5.70

4.70

3.70

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COSEL

Model

LEA150F-5

Item

Inrush Current 突入電流

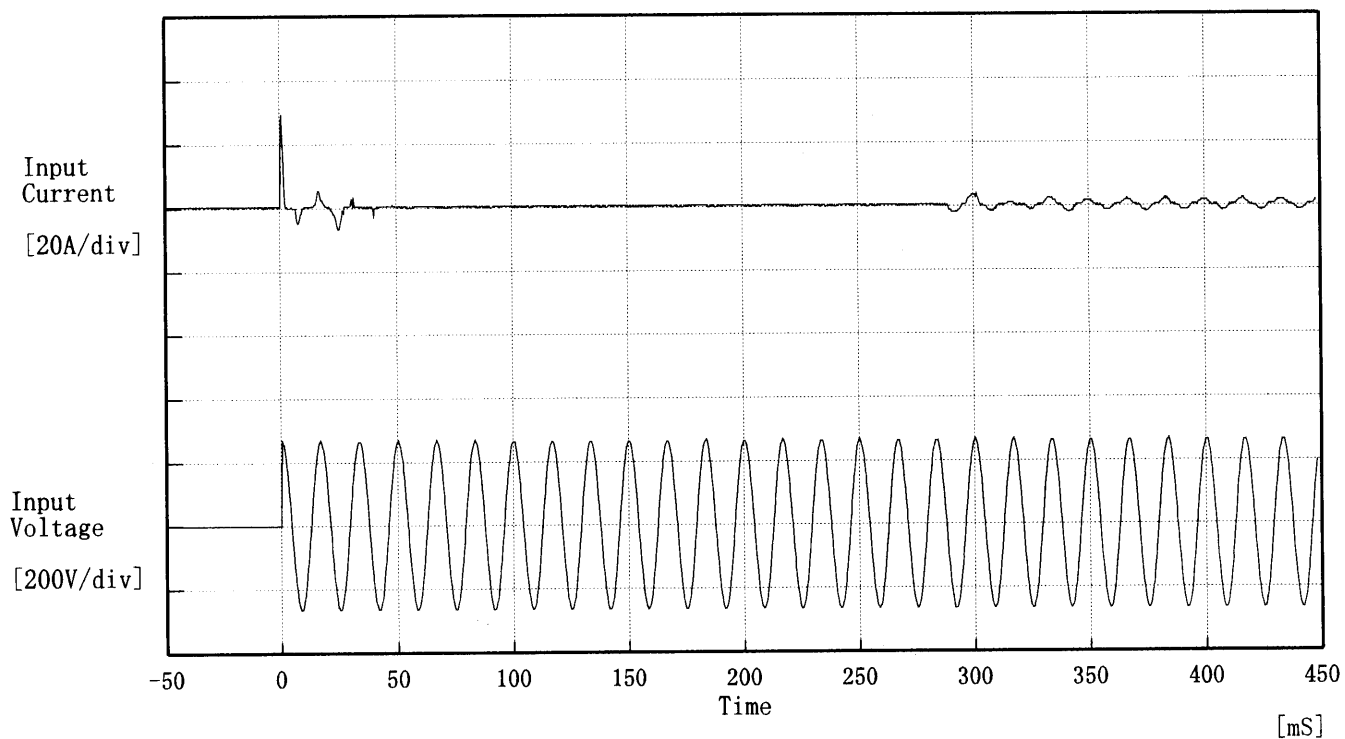
Temperature

25°C

Testing Circuitry

Figure A

Object



Input Voltage 200 V

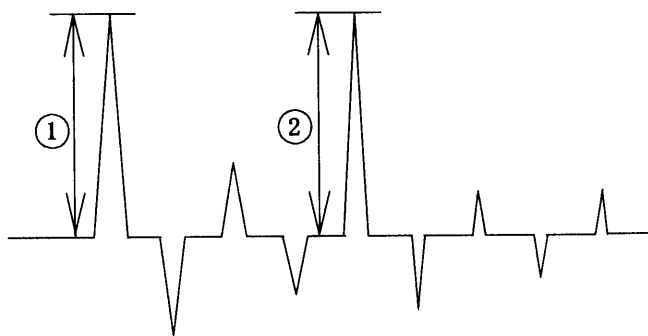
Frequency 60 Hz

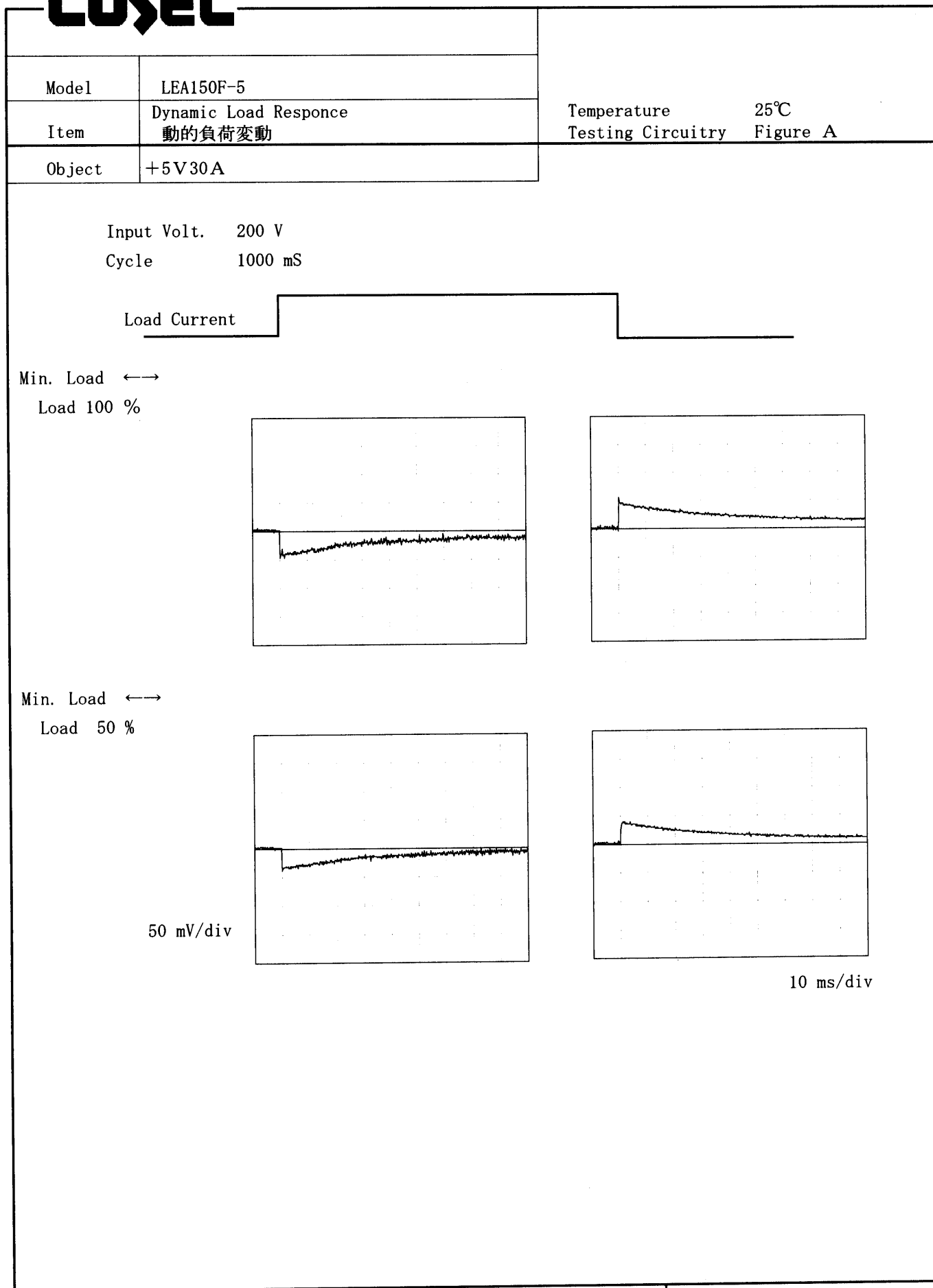
Load 100 %

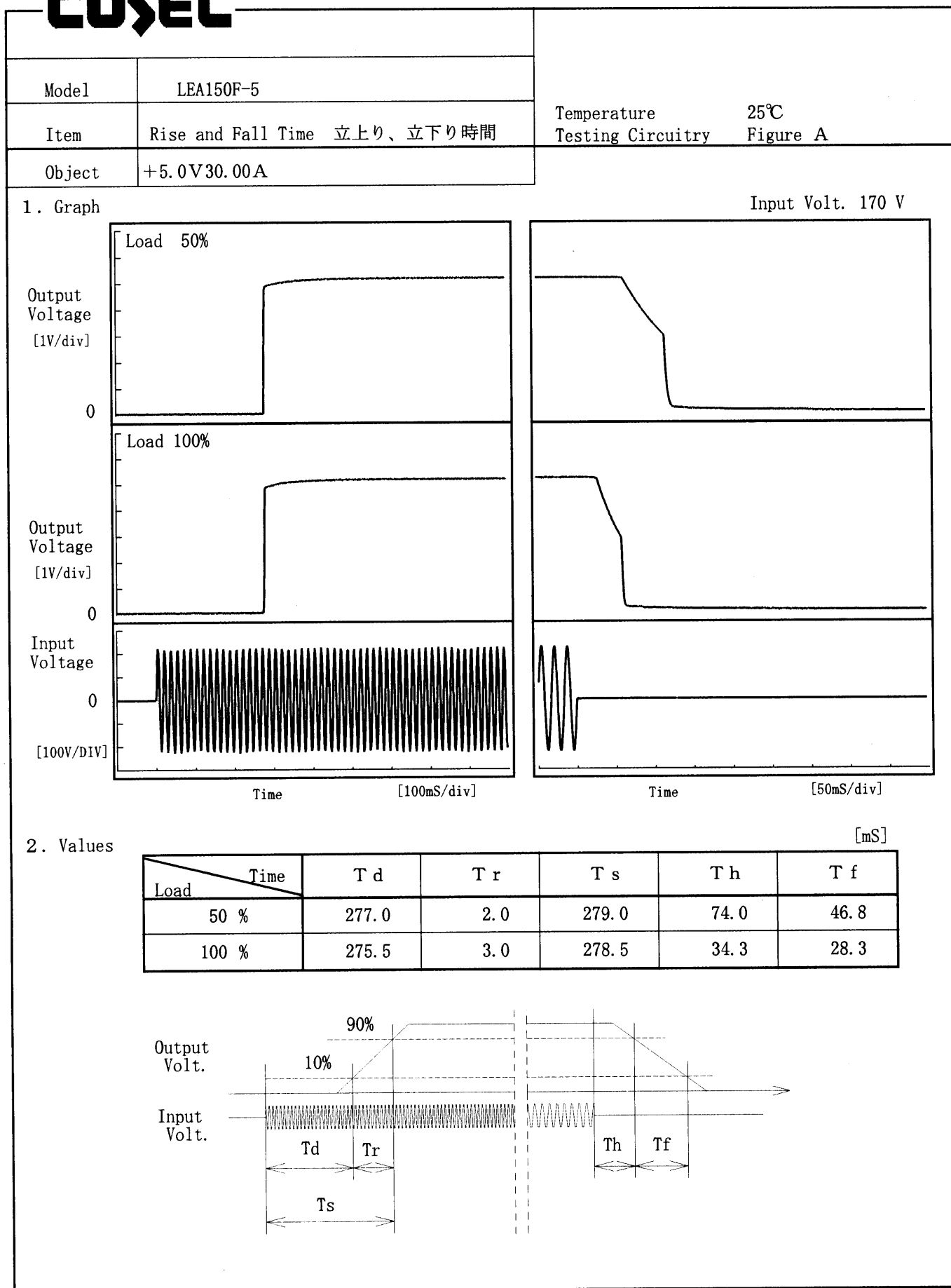
Inrush Current

① 29.40 [A]

② 4.20 [A]



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| | | | |
|--------|--|-------------------------------------|--|
| Model | | LEA150F-5 | |
| Item | | Ambient Temperature Drift 周囲温度変動 | |
| Object | | +5.0V30.00A | |

1. Graph

△

Input Volt. 170V

□

Input Volt. 200V

○

Input Volt. 264V

Output Voltage

[V]

5.240

5.200

5.160

5.120

5.080

5.040

5.000

0

△

□

○

-30

-10

10

30

50

70

Ambient Temperature

[°C]

Load

100%

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

(注)斜線は定格周囲温度範囲を示す。

2. Values

| Temperature | Input Volt. 170[V] | Input Volt. 200[V] | Input Volt. 264[V] |
|-------------|--------------------|--------------------|--------------------|
| [°C] | Output Volt. [V] | Output Volt. [V] | Output Volt. [V] |
| -20 | 5.103 | 5.102 | 5.103 |
| -10 | 5.104 | 5.104 | 5.104 |
| 0 | 5.104 | 5.104 | 5.104 |
| 10 | 5.104 | 5.104 | 5.104 |
| 20 | 5.105 | 5.105 | 5.105 |
| 25 | 5.105 | 5.105 | 5.105 |
| 30 | 5.106 | 5.106 | 5.106 |
| 40 | 5.106 | 5.106 | 5.106 |
| 50 | 5.104 | 5.104 | 5.104 |
| 60 | 5.102 | 5.102 | 5.102 |
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COSEL

Model LEA150F-5

Item Minimum Input Voltage for Regulated Output Voltage
最低レギュレーション電圧

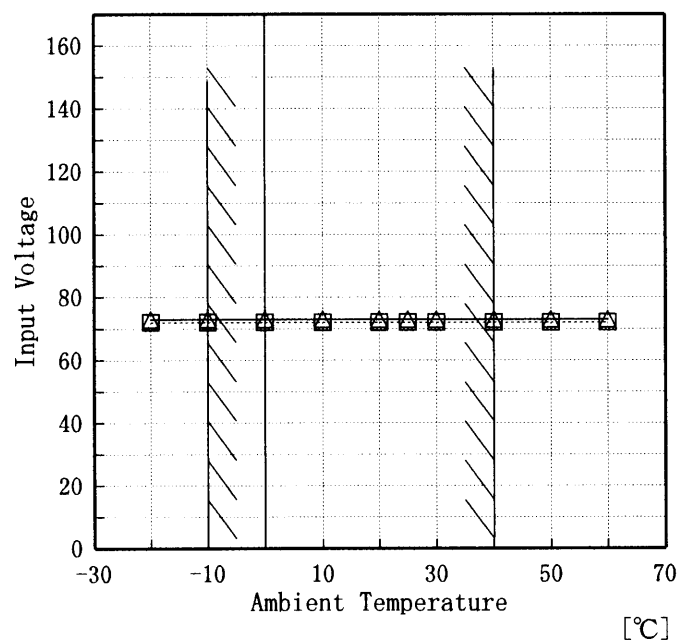
Object +5V30A

Testing Circuitry Figure A

1. Graph

[V]

□ Load 50%
△ Load 100%



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

(注) 斜線は定格周囲温度範囲を示す。

2. Values

| Ambient Temp. | Load 50% | Load 100% |
|---------------|-----------------|-----------------|
| [°C] | Input Volt. [V] | Input Volt. [V] |
| -20 | 72 | 73 |
| -10 | 72 | 73 |
| 0 | 72 | 73 |
| 10 | 72 | 73 |
| 20 | 72 | 73 |
| 25 | 72 | 73 |
| 30 | 72 | 73 |
| 40 | 72 | 73 |
| 50 | 72 | 73 |
| 60 | 72 | 73 |
| — | — | — |

COSEL

Model

LEA150F-5

Item

Ripple Voltage (by Ambient Temp.)
リップル電圧 (周囲温度特性)

Object

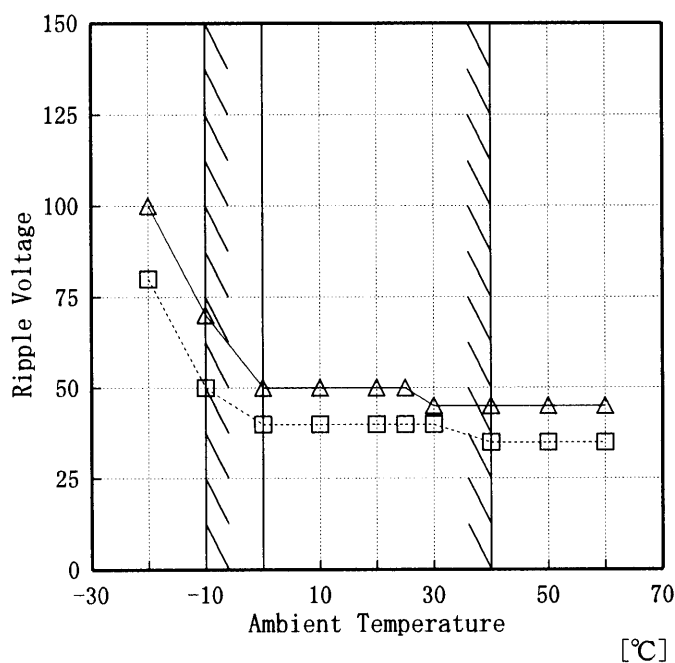
+5.0V30.00A

Testing Circuitry

Figure A

1. Graph

[mV]



2. Values

| Ambient Temp. [°C] | Load 50% | Load 100% |
|-----------------------|-----------------------------|-----------------------------|
| | Ripple Output Volt. [mV] | Ripple Output Volt. [mV] |
| -20 | 80 | 100 |
| -10 | 50 | 70 |
| 0 | 40 | 50 |
| 10 | 40 | 50 |
| 20 | 40 | 50 |
| 25 | 40 | 50 |
| 30 | 40 | 45 |
| 40 | 35 | 45 |
| 50 | 35 | 45 |
| 60 | 35 | 45 |
| — | — | — |

COSEL

Model

LEA150F-5

Item

Time Lapse Drift 経時ドリフト

Object

+5.0V30.00A

Temperature

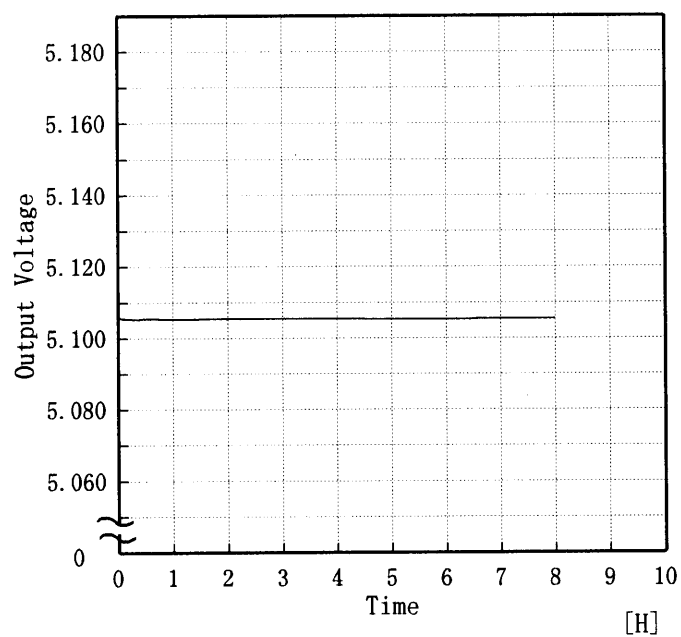
25 °C

Testing Circuitry

Figure A

1. Graph

[V]



Input Volt. 200V

Load 100%

2. Values

| Time since start [H] | Output Voltage [V] |
|----------------------------|--------------------------|
| 0.0 | 5.106 |
| 0.5 | 5.105 |
| 1.0 | 5.105 |
| 2.0 | 5.105 |
| 3.0 | 5.105 |
| 4.0 | 5.105 |
| 5.0 | 5.105 |
| 6.0 | 5.105 |
| 7.0 | 5.105 |
| 8.0 | 5.105 |

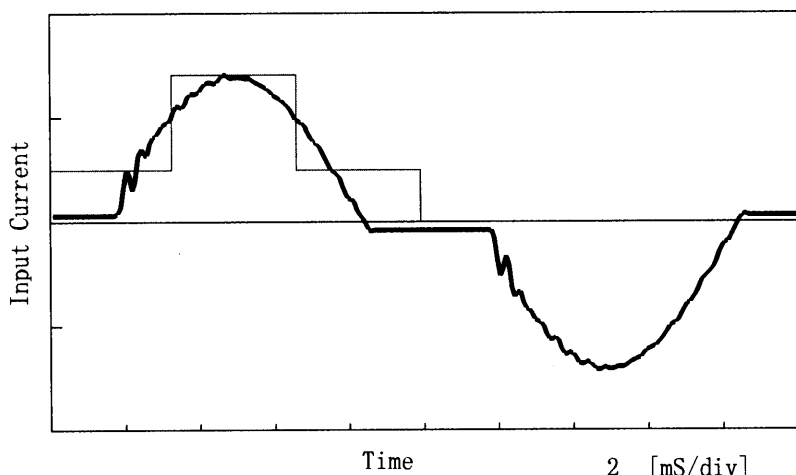
COSEL

| | | | |
|--------|---------------------------|-------------------|----------|
| Model | LEA150F-5 | Temperature | 25°C |
| Item | Harmonic Current 高調波電流 | Testing Circuitry | Figure E |
| Object | | | |

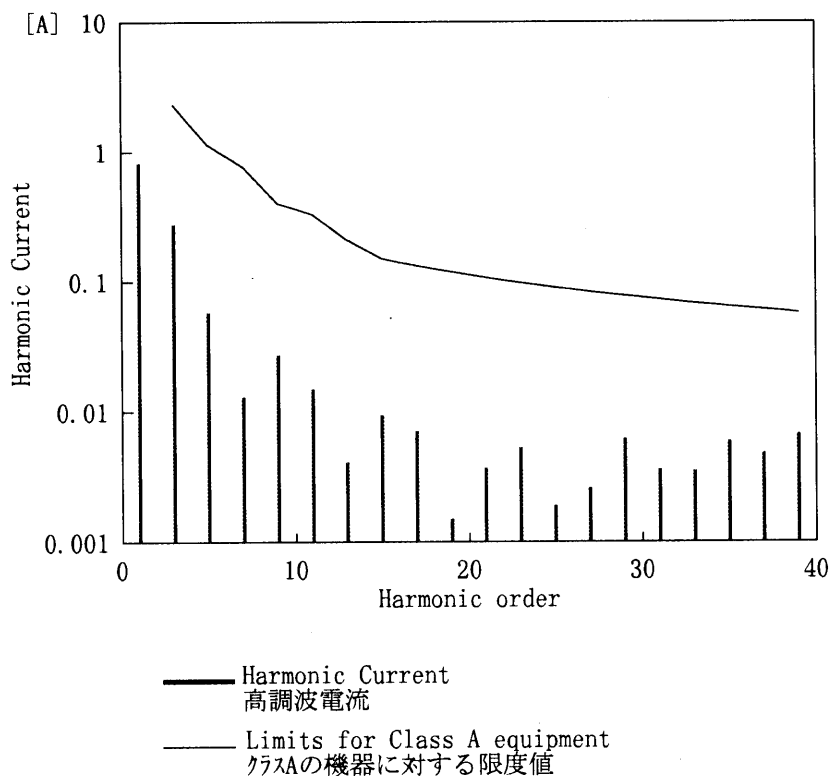
1. Input Current Waveform

— Input Current
 — Envelope of the input current to classify equipment as Class D
 クラスDの機器を決定するための入力電流包絡線

1 A/div



2. Harmonic Current



| Conditions | Values |
|---------------------|--------|
| Input Voltage [V] | 231 |
| Input Current [A] | 0.869 |
| Active Power [W] | 187 |
| Apparent Power [VA] | 200.8 |
| Frequency [Hz] | 50 |
| Power Factor | 0.931 |
| Output Power [W] | 150 |

| Harmonics order 高調波次数 | Limits 限度値 [A] | Values 測定値 [A] |
|--------------------------|-------------------|-------------------|
| 1 | — | 0.82030 |
| 2 | — | 0.00060 |
| 3 | 2.29004 | 0.27590 |
| 4 | — | 0.00010 |
| 5 | 1.13506 | 0.05800 |
| 6 | — | 0.00000 |
| 7 | 0.76667 | 0.01300 |
| 8 | — | 0.00000 |
| 9 | 0.39827 | 0.02720 |
| 10 | — | 0.00010 |
| 11 | 0.32857 | 0.01480 |
| 12 | — | 0.00030 |
| 13 | 0.20909 | 0.00410 |
| 14 | — | 0.00010 |
| 15 | 0.14935 | 0.00940 |
| 16 | — | 0.00000 |
| 17 | 0.13178 | 0.00710 |
| 18 | — | 0.00000 |
| 19 | 0.11791 | 0.00150 |
| 20 | — | 0.00010 |
| 21 | 0.10668 | 0.00370 |
| 22 | — | 0.00010 |
| 23 | 0.09740 | 0.00530 |
| 24 | — | 0.00010 |
| 25 | 0.08961 | 0.00190 |
| 26 | — | 0.00000 |
| 27 | 0.08297 | 0.00260 |
| 28 | — | 0.00000 |
| 29 | 0.07725 | 0.00620 |
| 30 | — | 0.00000 |
| 31 | 0.07227 | 0.00360 |
| 32 | — | 0.00010 |
| 33 | 0.06789 | 0.00350 |
| 34 | — | 0.00010 |
| 35 | 0.06401 | 0.00590 |
| 36 | — | 0.00010 |
| 37 | 0.06055 | 0.00480 |
| 38 | — | 0.00000 |
| 39 | 0.05744 | 0.00670 |
| 40 | — | 0.00010 |

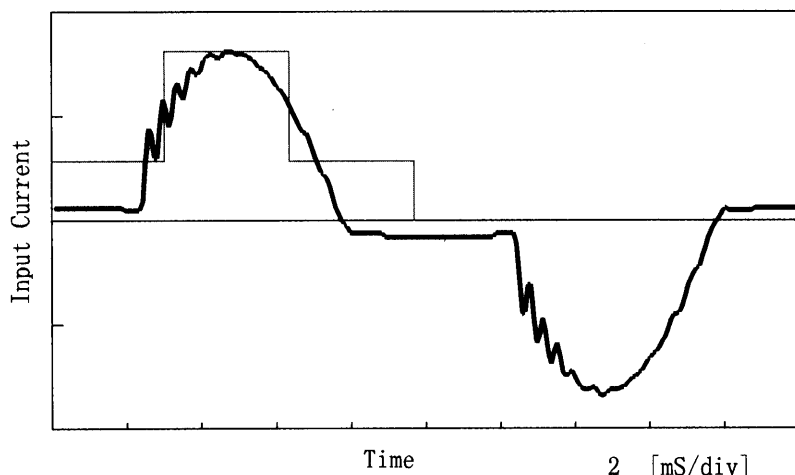
COSEL

| | | | |
|--------|---------------------------|-------------------|----------|
| Model | LEA150F-5 | Temperature | 25°C |
| Item | Harmonic Current 高調波電流 | Testing Circuitry | Figure E |
| Object | _____ | | |

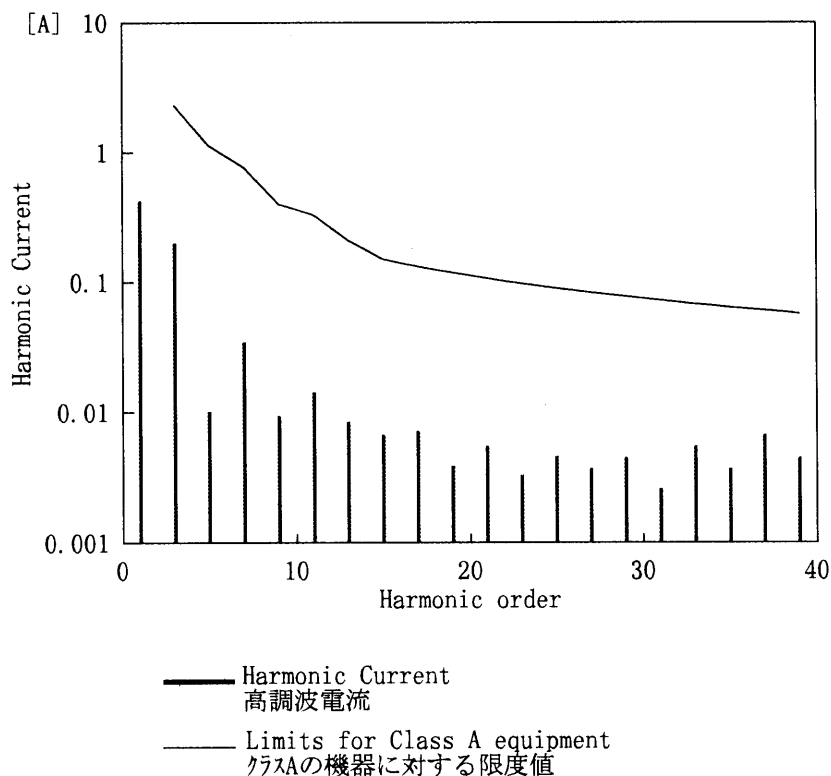
1. Input Current Waveform

— Input Current
 — Envelope of the input current to classify equipment as Class D
 クラスDの機器を決定するための入力電流包絡線

0.5 A/div



2. Harmonic Current



| Conditions | Values |
|---------------------|--------|
| Input Voltage [V] | 231 |
| Input Current [A] | 0.473 |
| Active Power [W] | 95.5 |
| Apparent Power [VA] | 109.4 |
| Frequency [Hz] | 50 |
| Power Factor | 0.873 |
| Output Power [W] | 75 |

| Harmonics order 高調波次数 | Limits 限度値 [A] | Values 測定値 [A] |
|--------------------------|-------------------|-------------------|
| 1 | — | 0.42520 |
| 2 | — | 0.00060 |
| 3 | 2.29004 | 0.20160 |
| 4 | — | 0.00000 |
| 5 | 1.13506 | 0.01020 |
| 6 | — | 0.00000 |
| 7 | 0.76667 | 0.03470 |
| 8 | — | 0.00010 |
| 9 | 0.39827 | 0.00940 |
| 10 | — | 0.00010 |
| 11 | 0.32857 | 0.01430 |
| 12 | — | 0.00010 |
| 13 | 0.20909 | 0.00850 |
| 14 | — | 0.00000 |
| 15 | 0.14935 | 0.00670 |
| 16 | — | 0.00000 |
| 17 | 0.13178 | 0.00720 |
| 18 | — | 0.00010 |
| 19 | 0.11791 | 0.00390 |
| 20 | — | 0.00010 |
| 21 | 0.10668 | 0.00550 |
| 22 | — | 0.00000 |
| 23 | 0.09740 | 0.00330 |
| 24 | — | 0.00000 |
| 25 | 0.08961 | 0.00460 |
| 26 | — | 0.00010 |
| 27 | 0.08297 | 0.00370 |
| 28 | — | 0.00010 |
| 29 | 0.07725 | 0.00450 |
| 30 | — | 0.00010 |
| 31 | 0.07227 | 0.00260 |
| 32 | — | 0.00000 |
| 33 | 0.06789 | 0.00550 |
| 34 | — | 0.00010 |
| 35 | 0.06401 | 0.00370 |
| 36 | — | 0.00000 |
| 37 | 0.06055 | 0.00670 |
| 38 | — | 0.00000 |
| 39 | 0.05744 | 0.00450 |
| 40 | — | 0.00010 |

COSEL

| | | |
|--------|-------------------|---------------------------------|
| | | Testing Circuitry Figure A |
| Model | LEA150F-5 | |
| Item | Condensation 結露特性 | |
| Object | +5V 30A | |

1. Condensation test

Testing procedure is as follows.

- ① Keeping and cooling the unit in a tank at -10°C for an hour with the input off.
- ② Taking it out of the tank and dewing itself in a room where the temperature is 25°C and the humidity is 40%RH.
- ③ Testing electrical characteristics of the unit to confirm there be no fault.

1. 結露特性試験

入力を切った状態で、恒温槽で -10°C に冷却しておき、約1時間後に恒温槽から取り出し、室温 25°C 、湿度40%RHの状態におき結露させ、その電気的特性の測定を行い、異常のないことを確認する。

2. Values

| Item | Data | Testing Conditions |
|----------------------|-------|---|
| Output Voltage [V] | 5.106 | Input Volt.: 200V, Load Current:30A |
| Line Regulation [mV] | 1 | Input Volt.: 170~200V, Load Current:30A |
| Load Regulation [mV] | 13 | Input Volt.: 200V, Load Current:0~30A |

COSEL

| | | | |
|--------|----------------------|-------------------|----------|
| Model | LEA150F-5 | Temperature | 25℃ |
| Item | Leakage Current 漏洩電流 | Testing Circuitry | Figure B |
| Object | _____ | | |

1. Results

| Standards | Leakage Current [mA] | | |
|--------------|-----------------------|------------------------|------------------------|
| | Input Volt. 85 [V] | Input Volt. 100 [V] | Input Volt. 132 [V] |
| (A) DENTORI | — | — | — |
| (B) IEC60950 | — | — | — |

| Standards | Leakage Current [mA] | | |
|--------------|------------------------|------------------------|------------------------|
| | Input Volt. 170 [V] | Input Volt. 230 [V] | Input Volt. 264 [V] |
| (B) IEC60950 | 0.33 | 0.46 | 0.54 |

2. Condition

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

交流入力 of 両相について測定し、その大きい方を漏洩電流測定値とする。

COSEL

| | | | |
|--------|--------------------------------|----------------------------------|------------------|
| | | | |
| Model | LEA150F-5 | Temperature Testing Circuitry | 25°C Figure C |
| Item | Line Noise Tolerance 入力雑音耐量 | | |
| Object | +5V 30A | | |

1. Results

| Pulse Width [n S] | MODE | No protection failure should occur 保護回路の誤動作がない | DC-like Regulation of Output Voltage 出力電圧の直流的変動 |
|----------------------|--------|---|--|
| 50 | COMMON | OK | no fluctuation |
| | NORMAL | OK | no fluctuation |
| 1000 | COMMON | OK | no fluctuation |
| | NORMAL | OK | no fluctuation |

Conditions

Input Voltage : 200 V
 Pulse Voltage : 2000 V
 Pulse Cycle : 10 mS
 Pulse Input Duration: 1 min. or more
 Load : 100 %

COSEL

| | | | |
|--------|------------------------------|-------------------|----------|
| Model | LEA150F-5 | Temperature | 25°C |
| Item | Conducted Emission 雑音端子電圧 | Testing Circuitry | Figure D |
| Object | | | |

1. Graph

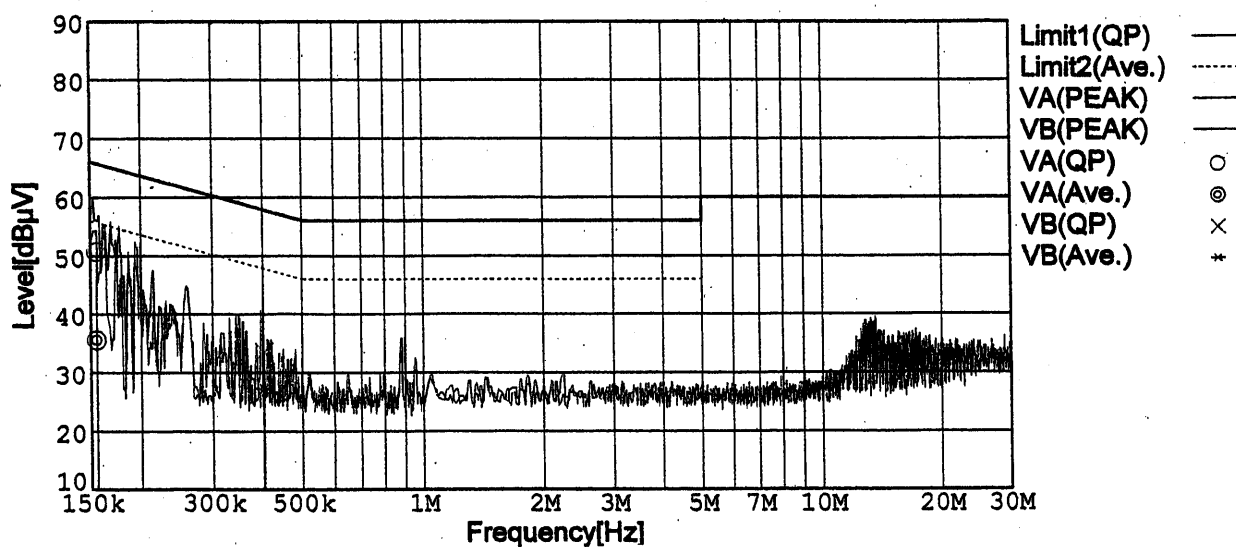
Remarks

Input Volt. 230V (CISPR Pub22 Class B)

Load 100 %

Limit1: [CISPR Pub22] Class B(QP)

Limit2: [CISPR Pub22] Class B(Ave.)



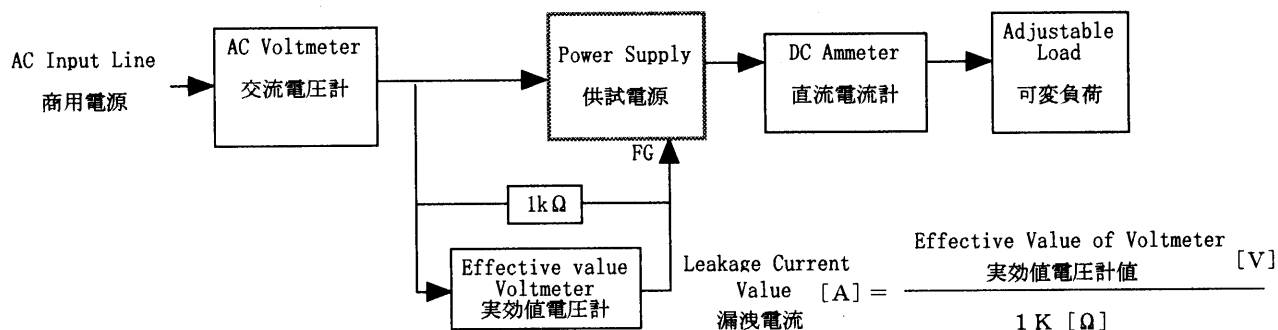
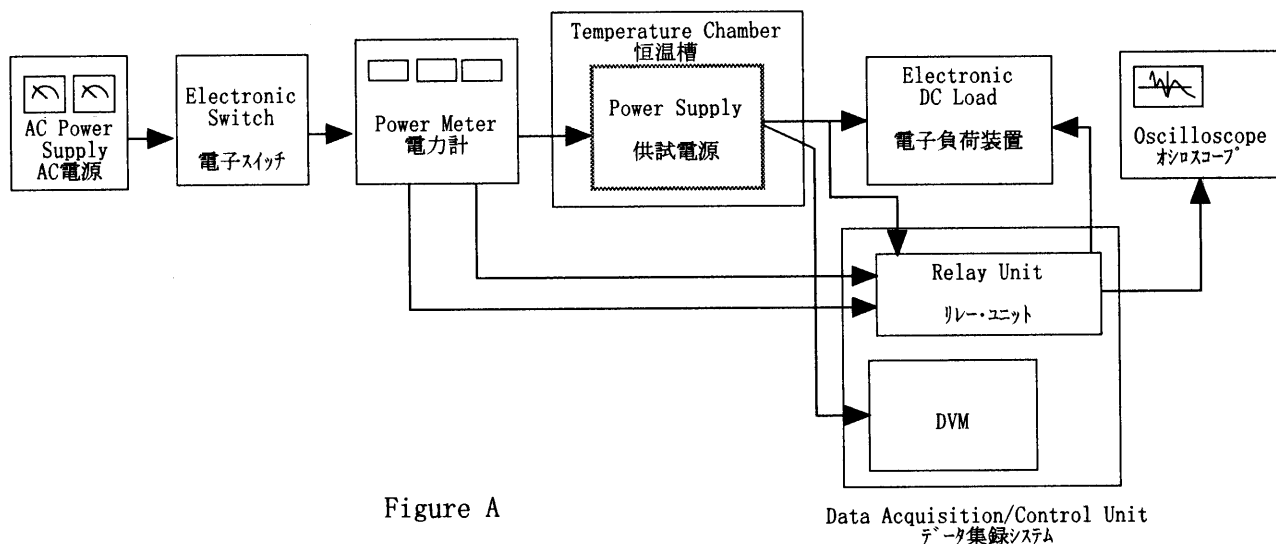


Figure B (DENTORI)

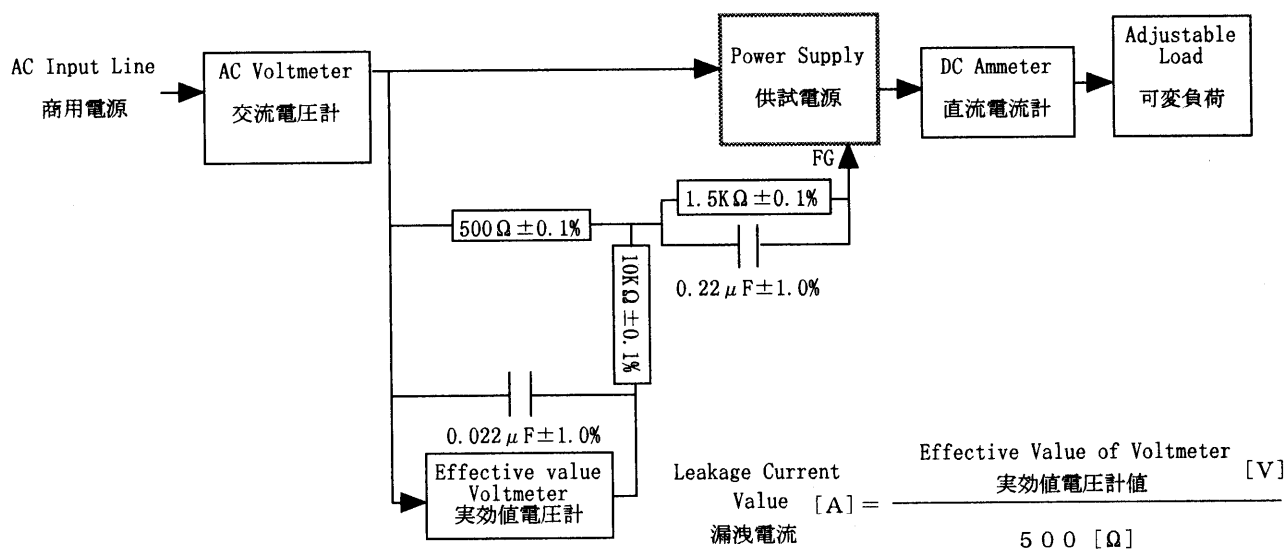


Figure B (IEC60950)

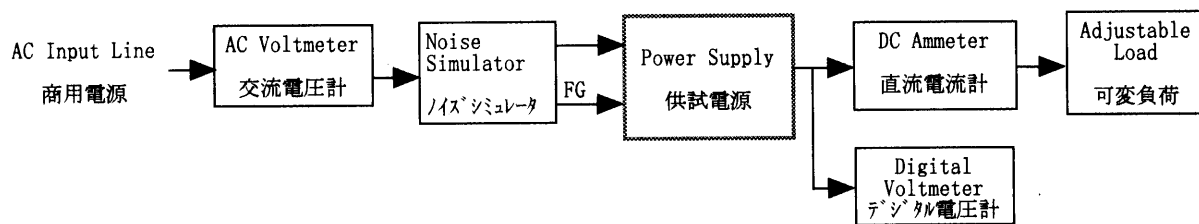


Figure C

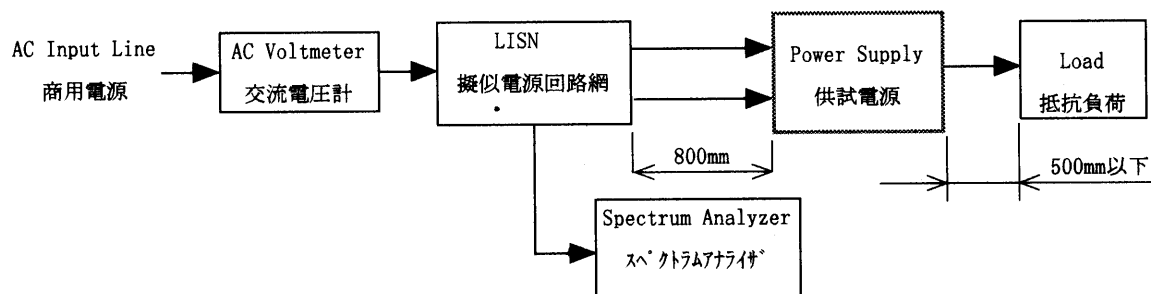


Figure D

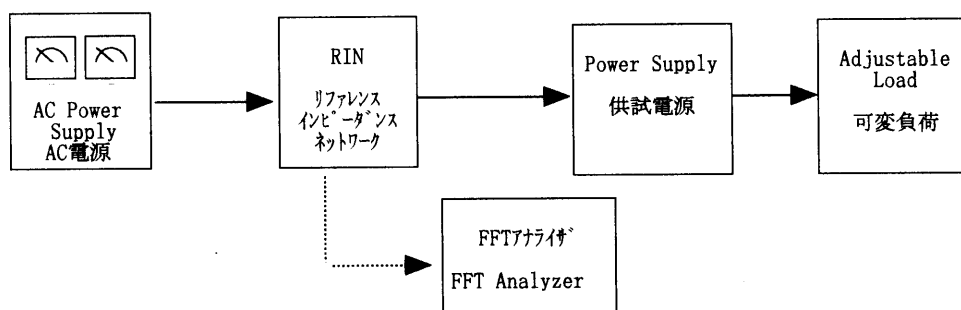


Figure E