



TEST DATA OF LEA50F-15 (200V INPUT)

Regulated DC Power Supply

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コーセル株式会社
COSEL CO., LTD.

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Model	LEA50F-15																																
Item	Line Regulation 静的入力変動	Temperature	25℃																														
Object	+15V3.5A	Testing Circuitry	Figure A																														
1. Graph		2. Values																															
<div><div><div>-----□-----</div><div>Load 50%</div></div><div><div>-----△-----</div><div>Load 100%</div></div></div> <div><div>Output Voltage [V]</div><div>Input Voltage [V]</div></div> <div><div>Note: Slanted line shows the range of the rated input voltage.</div><div>(注)斜線は定格入力電圧範囲を示す。</div></div>		<table><tr><th>Input Voltage [V]</th><th>Load 50% Output Volt. [V]</th><th>Load 100% Output Volt. [V]</th></tr><tr><td>150</td><td>15.180</td><td>15.176</td></tr><tr><td>160</td><td>15.180</td><td>15.176</td></tr><tr><td>170</td><td>15.180</td><td>15.176</td></tr><tr><td>180</td><td>15.180</td><td>15.176</td></tr><tr><td>200</td><td>15.180</td><td>15.176</td></tr><tr><td>220</td><td>15.180</td><td>15.176</td></tr><tr><td>240</td><td>15.180</td><td>15.176</td></tr><tr><td>264</td><td>15.180</td><td>15.176</td></tr><tr><td>280</td><td>15.180</td><td>15.176</td></tr></table>		Input Voltage [V]	Load 50% Output Volt. [V]	Load 100% Output Volt. [V]	150	15.180	15.176	160	15.180	15.176	170	15.180	15.176	180	15.180	15.176	200	15.180	15.176	220	15.180	15.176	240	15.180	15.176	264	15.180	15.176	280	15.180	15.176
Input Voltage [V]	Load 50% Output Volt. [V]	Load 100% Output Volt. [V]																															
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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。

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Model		LEA50F-15	
Item	Input Power (by Load Current) 入力電力 (負荷特性)		Temperature 25℃ Testing Circuitry Figure A
Output			

1. Graph

—△—

Input Volt. 170V

---□---

Input Volt. 200V

---○---

Input Volt. 264V

[W]

100

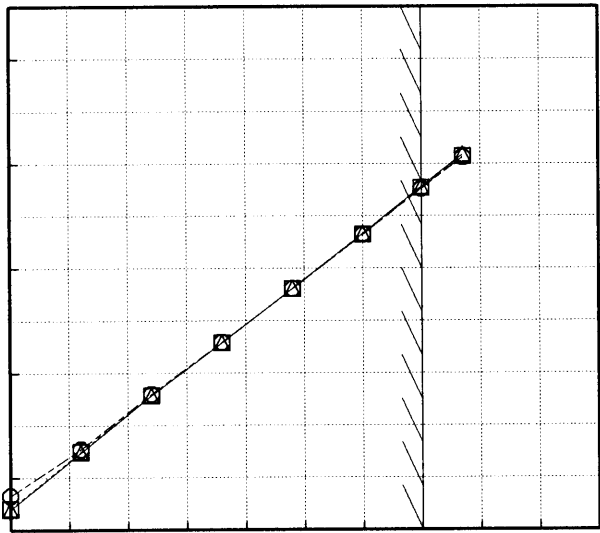
80

60

40

20

0



0

1

2

3

4

5

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 Power [W]		
	Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]
0.00	3.90	4.10	6.50
0.60	14.80	15.00	15.40
1.20	25.70	25.70	26.00
1.80	35.80	35.80	35.90
2.40	46.20	46.10	46.10
3.00	56.70	56.50	56.50
3.50	65.60	65.40	65.20
3.85	71.80	71.40	71.20
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—

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Model		LEA50F-15	Temperature 25℃ Testing Circuitry Figure A																													
Item		Efficiency (by Input Voltage) 効率 (入力電圧特性)																														
Object																																
1. Graph		<div><div><div>□</div>Load 50%</div><div><div>△</div>Load 100%</div></div> <p>Efficiency [%]</p> <p>Input Voltage [V]</p>	2. Values																													
		<table><tr><th>Input Voltage [V]</th><th>Load 50% Efficiency [%]</th><th>Load 100% Efficiency [%]</th></tr><tr><td>150</td><td>76.3</td><td>81.1</td></tr><tr><td>160</td><td>76.3</td><td>81.4</td></tr><tr><td>170</td><td>76.4</td><td>81.5</td></tr><tr><td>180</td><td>76.4</td><td>81.6</td></tr><tr><td>200</td><td>76.4</td><td>81.8</td></tr><tr><td>220</td><td>76.4</td><td>81.9</td></tr><tr><td>240</td><td>76.4</td><td>82.1</td></tr><tr><td>264</td><td>76.2</td><td>82.1</td></tr><tr><td>280</td><td>75.2</td><td>82.0</td></tr></table>		Input Voltage [V]	Load 50% Efficiency [%]	Load 100% Efficiency [%]	150	76.3	81.1	160	76.3	81.4	170	76.4	81.5	180	76.4	81.6	200	76.4	81.8	220	76.4	81.9	240	76.4	82.1	264	76.2	82.1	280	75.2
Input Voltage [V]	Load 50% Efficiency [%]	Load 100% Efficiency [%]																														
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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。																																

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Model	LEA50F-15																															
Item	Power Factor (by Input Voltage) 力率 (入力電圧特性)	Temperature 25°C Testing Circuitry Figure A																														
Object																																
1. Graph	<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> <p>(注) 斜線は定格入力電圧範囲を示す。</p>																															
2. Values	<table border="1"> <thead> <tr> <th>Input Voltage [V]</th><th>load 50% Power Factor</th><th>load 100% Power Factor</th></tr> </thead> <tbody> <tr><td>150</td><td>0.94</td><td>0.97</td></tr> <tr><td>160</td><td>0.93</td><td>0.97</td></tr> <tr><td>170</td><td>0.92</td><td>0.96</td></tr> <tr><td>180</td><td>0.91</td><td>0.96</td></tr> <tr><td>200</td><td>0.88</td><td>0.94</td></tr> <tr><td>220</td><td>0.86</td><td>0.92</td></tr> <tr><td>240</td><td>0.83</td><td>0.91</td></tr> <tr><td>264</td><td>0.79</td><td>0.88</td></tr> <tr><td>280</td><td>0.54</td><td>0.69</td></tr> </tbody> </table>		Input Voltage [V]	load 50% Power Factor	load 100% Power Factor	150	0.94	0.97	160	0.93	0.97	170	0.92	0.96	180	0.91	0.96	200	0.88	0.94	220	0.86	0.92	240	0.83	0.91	264	0.79	0.88	280	0.54	0.69
Input Voltage [V]	load 50% Power Factor	load 100% Power Factor																														
150	0.94	0.97																														
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264	0.79	0.88																														
280	0.54	0.69																														

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Model		LEA50F-15		Temperature Testing Circuitry	25℃ Figure 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

1.0

0.9

0.8

0.7

0.6

0.5

0.4

0.3

0

0

1

2

3

4

5

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	Power Factor		
	Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]
0.00	0.49	0.42	0.38
0.60	0.79	0.73	0.60
1.20	0.87	0.82	0.72
1.80	0.92	0.88	0.79
2.40	0.93	0.90	0.82
3.00	0.95	0.92	0.86
3.50	0.96	0.94	0.88
3.85	0.97	0.94	0.89
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—

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Model		LEA50F-15	Temperature Testing Circuitry	25℃ Figure A																														
Item		Hold-Up Time 出力保持時間																																
Object		+15V3.5A																																
1. Graph		<div><div><div>—△—</div><div>Load 50%</div></div><div><div>- -□- -</div><div>Load 100%</div></div></div> <div><div>[mS]</div><div>1000</div><div>100</div><div>10</div><div>1</div><div>Hold-Up Time</div><div>0 160 180 200 220 240 260 280 300</div><div>Input Voltage [V]</div></div>	2. Values																															
		<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>80</td><td>38</td></tr><tr><td>160</td><td>81</td><td>39</td></tr><tr><td>170</td><td>81</td><td>39</td></tr><tr><td>180</td><td>82</td><td>39</td></tr><tr><td>200</td><td>83</td><td>40</td></tr><tr><td>220</td><td>83</td><td>40</td></tr><tr><td>240</td><td>84</td><td>41</td></tr><tr><td>264</td><td>85</td><td>41</td></tr><tr><td>280</td><td>86</td><td>42</td></tr></table>		Input Voltage [V]	Load 50%	Load 100%	Hold-Up Time [mS]	Hold-Up Time [mS]	150	80	38	160	81	39	170	81	39	180	82	39	200	83	40	220	83	40	240	84	41	264	85	41	280	86
Input Voltage [V]	Load 50%	Load 100%																																
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<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>																																		

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Model	LEA50F-15	Temperature	25°C																																																			
Item	Instantaneous Interruption Compensation 瞬時停電保障	Testing Circuitry	Figure A																																																			
Object	+15V3.5A																																																					
1. Graph <div> —△— Input Volt. 170 V - -□- - Input Volt. 200 V ○..... Input Volt. 264 V </div> <p>Instantaneous Compensation Time [mS]</p> <p>Load Current [A]</p> <p>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.</p> <p>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。</p>		2. Values <table border="1"> <thead> <tr> <th rowspan="2">Load Current [A]</th><th>Input Volt. 170[V]</th><th>Input Volt. 200[V]</th><th>Input Volt. 264[V]</th></tr> <tr> <th colspan="3">Time [mS]</th></tr> </thead> <tbody> <tr><td>0.00</td><td>—</td><td>—</td><td>—</td></tr> <tr><td>0.60</td><td>205</td><td>210</td><td>214</td></tr> <tr><td>1.20</td><td>111</td><td>113</td><td>114</td></tr> <tr><td>1.80</td><td>72</td><td>73</td><td>79</td></tr> <tr><td>2.40</td><td>54</td><td>55</td><td>57</td></tr> <tr><td>3.00</td><td>44</td><td>45</td><td>46</td></tr> <tr><td>3.50</td><td>38</td><td>39</td><td>40</td></tr> <tr><td>3.85</td><td>32</td><td>34</td><td>36</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> </tbody> </table>		Load Current [A]	Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]	Time [mS]			0.00	—	—	—	0.60	205	210	214	1.20	111	113	114	1.80	72	73	79	2.40	54	55	57	3.00	44	45	46	3.50	38	39	40	3.85	32	34	36	—	—	—	—	—	—	—	—	—	—	—	—
Load Current [A]	Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]																																																			
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Model		LEA50F-15		Temperature		25℃																																																				
Item		Load Regulation 静的負荷変動		Testing Circuitry		Figure A																																																				
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Load Current	Input Volt.	Input Volt.	Input Volt.																																																							
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Model		LEA50F-15	
Item		Ripple Voltage (by Load Current) リップル電圧 (負荷電流特性)	
Object		+15V3.5A	

1. Graph

□ Input Volt. 170V

△ Input Volt. 264V

[mV]

150

125

100

75

50

25

0

Ripple Voltage

0

1

2

3

4

5

Load Current

[A]

2. Values

Load Current [A]	Input Volt. 170 [V]	Input Volt. 264 [V]
	Ripple Output Volt. [mV]	Ripple Output Volt. [mV]
0.00	10	10
0.60	30	30
1.20	35	35
1.80	35	35
2.40	35	35
3.00	35	35
3.50	35	35
3.85	35	35
—	—	—
—	—	—
—	—	—

Ripple Voltage is shown as p-p in the figure below.

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

リップル電圧は、下図 p - p 値で示される。
(注)斜線は定格負荷電流範囲を示す。

T1: Due to AC Input Line
入力商用周期

T2: Due to Switching
スイッチング周期

Ripple [mVp-p]

T1

T2

Fig. Complex Ripple Wave Form

図 リップル波形詳細図

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Model		LEA50F-15	Temperature 25°C Testing Circuitry Figure A																																																						
Item		Overcurrent Protection 過電流保護																																																							
Object		+15V3.5A																																																							
1. Graph		<div> <div> <div></div> <div></div> <div></div> </div> <div> Input Volt. 170 V Input Volt. 200 V Input Volt. 264 V </div> </div> <div> Output Voltage [V] </div> <div> <div> Output Voltage [V] </div> <div> Load Current [A] </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。 9V以下は間欠状態。 </div>	2. Values																																																						
		<table> <tr> <th rowspan="2">Output Voltage [V]</th><th>Input Volt. 170[V]</th><th>Input Volt. 200[V]</th><th>Input Volt. 264[V]</th></tr> <tr> <th>Load Current [A]</th><th>Load Current [A]</th><th>Load Current [A]</th></tr> <tr><td>15.00</td><td>4.36</td><td>4.36</td><td>4.36</td></tr> <tr><td>14.25</td><td>4.39</td><td>4.39</td><td>4.40</td></tr> <tr><td>13.50</td><td>4.43</td><td>4.43</td><td>4.43</td></tr> <tr><td>12.00</td><td>4.52</td><td>4.51</td><td>4.52</td></tr> <tr><td>10.50</td><td>4.56</td><td>4.56</td><td>4.56</td></tr> <tr><td>9.00</td><td>4.61</td><td>4.61</td><td>4.61</td></tr> <tr><td>—</td><td>—</td><td>—</td><td>—</td></tr> <tr><td>—</td><td>—</td><td>—</td><td>—</td></tr> <tr><td>—</td><td>—</td><td>—</td><td>—</td></tr> <tr><td>—</td><td>—</td><td>—</td><td>—</td></tr> <tr><td>—</td><td>—</td><td>—</td><td>—</td></tr> <tr><td>—</td><td>—</td><td>—</td><td>—</td></tr> </table>		Output Voltage [V]	Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]	Load Current [A]	Load Current [A]	Load Current [A]	15.00	4.36	4.36	4.36	14.25	4.39	4.39	4.40	13.50	4.43	4.43	4.43	12.00	4.52	4.51	4.52	10.50	4.56	4.56	4.56	9.00	4.61	4.61	4.61	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Output Voltage [V]	Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]																																																						
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12.00	4.52	4.51	4.52																																																						
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9.00	4.61	4.61	4.61																																																						
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COSEL

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Model LEA50F-15

Item Overvoltage Protection
過電圧保護

Object +15V3.5A

Testing Circuitry Figure A

1. Graph

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

[V]

Ambient Temperature [°C]	Operating Point [V] (170V)	Operating Point [V] (200V)	Operating Point [V] (264V)
-20	18.2	18.2	18.2
-10	18.3	18.3	18.3
0	18.5	18.5	18.5
10	18.6	18.6	18.6
20	18.7	18.7	18.7
25	18.8	18.8	18.8
30	18.8	18.8	18.8
40	19.0	19.0	19.0
50	19.1	19.1	19.1
60	19.2	19.2	19.2

Load 0%

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.	Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]
[°C]	Operating Point [V]		
-20	18.2	18.2	18.2
-10	18.3	18.3	18.3
0	18.5	18.5	18.5
10	18.6	18.6	18.6
20	18.7	18.7	18.7
25	18.8	18.8	18.8
30	18.8	18.8	18.8
40	19.0	19.0	19.0
50	19.1	19.1	19.1
60	19.2	19.2	19.2
—	—	—	—

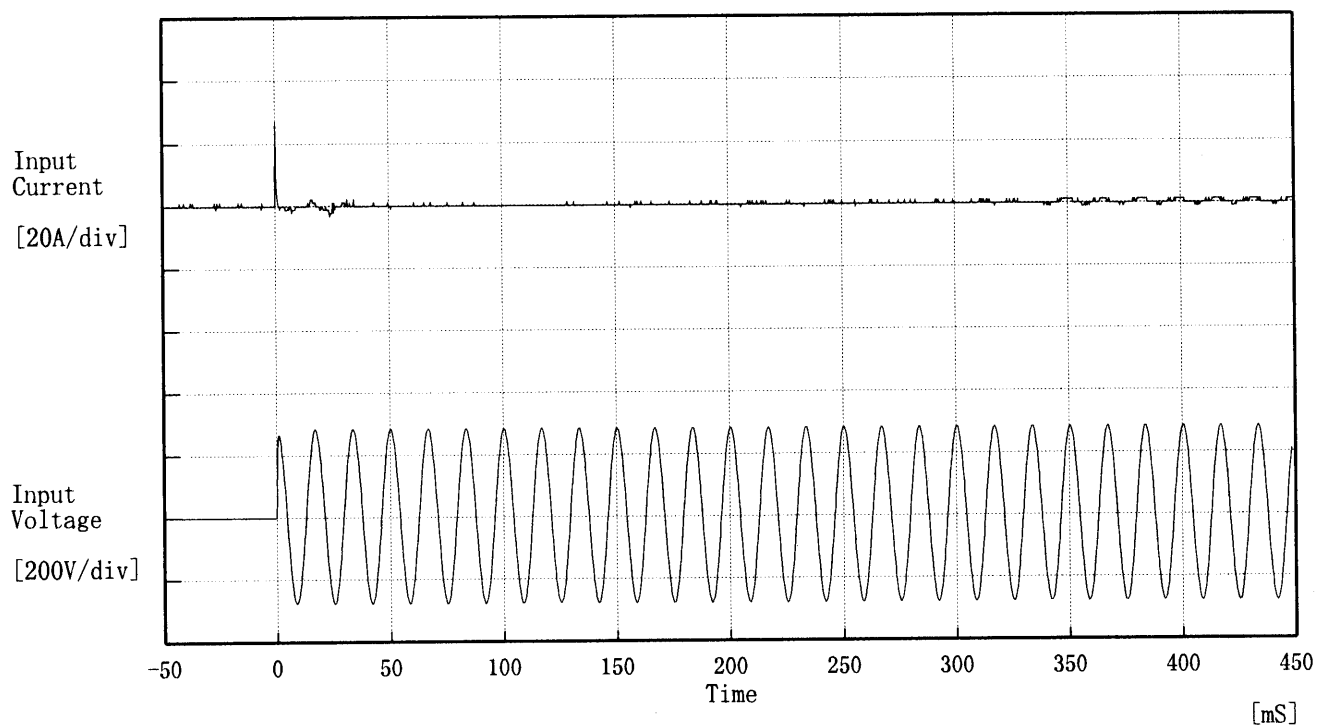
Testing Circuitry Figure A

2. Values

Ambient Temp. [°C]	Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]
Operating Point [V]			
-20	18.2	18.2	18.2
-10	18.3	18.3	18.3
0	18.5	18.5	18.5
10	18.6	18.6	18.6
20	18.7	18.7	18.7
25	18.8	18.8	18.8
30	18.8	18.8	18.8
40	19.0	19.0	19.0
50	19.1	19.1	19.1
60	19.2	19.2	19.2
—	—	—	—

COSEL

Model	LEA50F-15	Temperature 25°C Testing Circuitry Figure A
Item	Inrush Current 突入電流	
Object		



Input Voltage 200 V

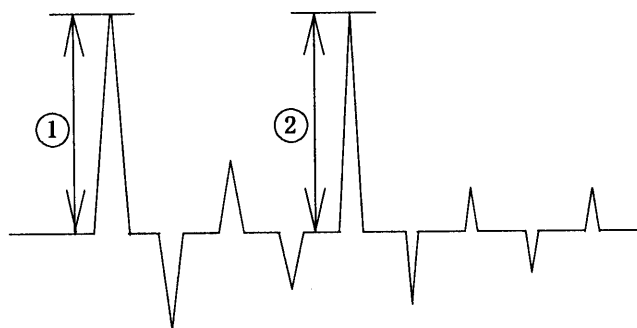
Frequency 60 Hz

Load 100 %

Inrush Current

① 26.91 [A]

② 1.13 [A]



COSEL

Model	LEA50F-15	Temperature 25°C Testing Circuitry Figure A
Item	Dynamic Load Responce 動的負荷変動	
Object	+ 1 5 V 3. 5 A	

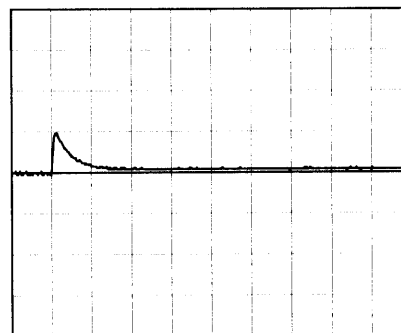
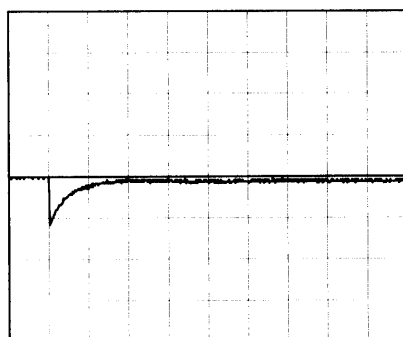
Input Volt. 200 V

Cycle 1000 mS

Load Current

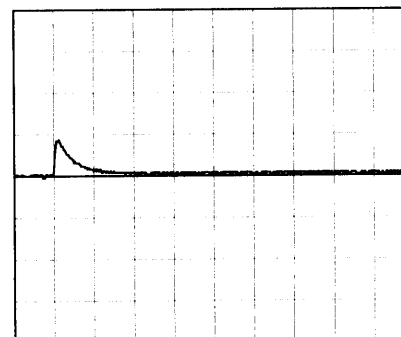
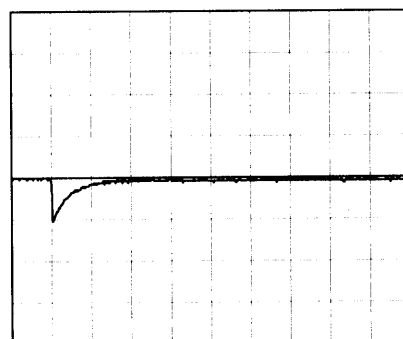
Min. Load ↔

Load 100 %



Min. Load ↔

Load 50 %



100 mV/div

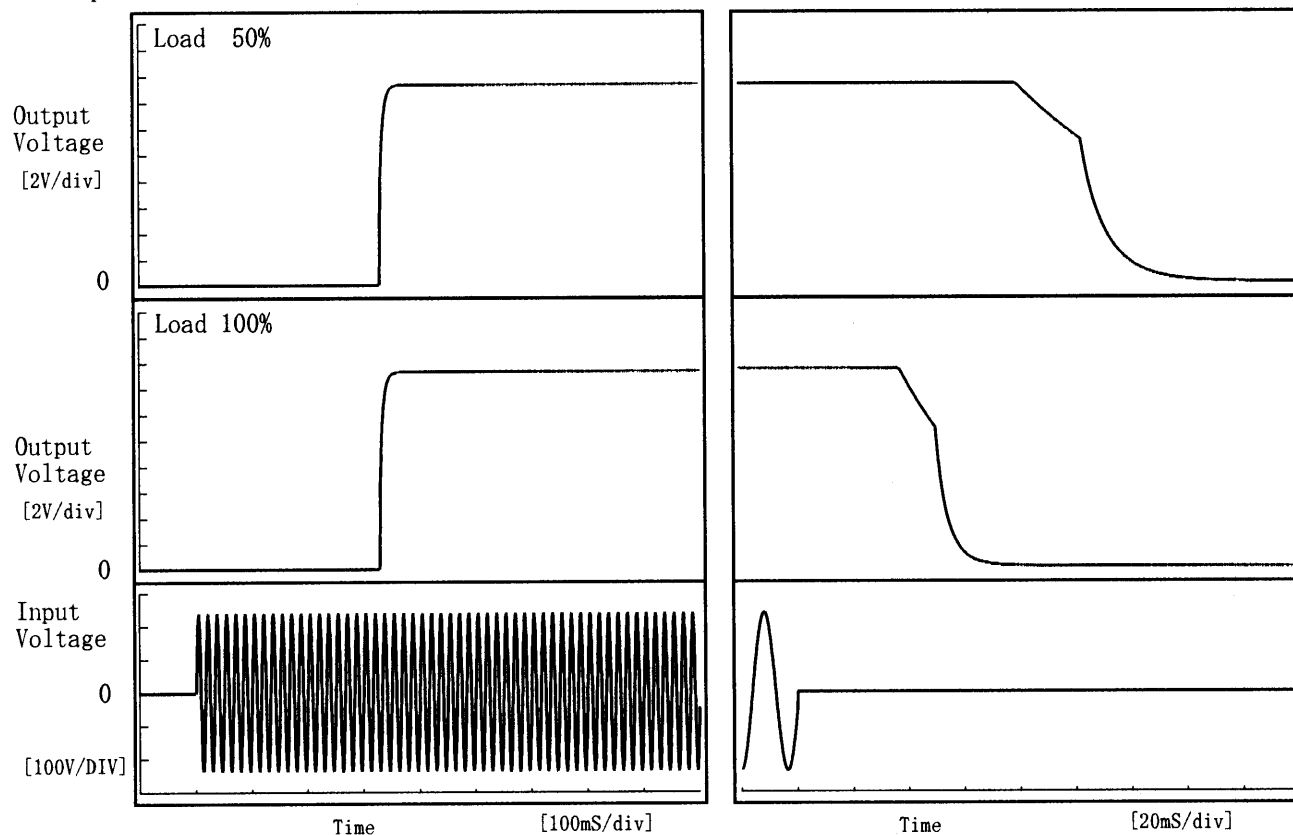
10 ms/div

COSEL

Model	LEA50F-15	Temperature	25°C
Item	Rise and Fall Time 立上り、立下り時間	Testing Circuitry	Figure A
Object	+15V3.5A		

1. Graph

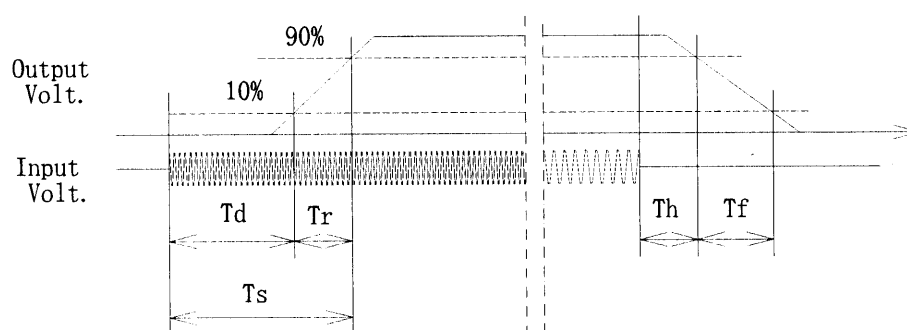
Input Volt. 170 V



2. Values

[mS]

Load \ Time	T d	T r	T s	T h	T f
50 %	330.0	9.5	339.5	88.4	33.7
100 %	329.5	10.0	339.5	41.9	17.5



BC-3189

COSEL

Model		LEA50F-15																																							
Item		Minimum Input Voltage for Regulated Output Voltage 最低レギュレーション電圧																																							
Object		+15V3.5A																																							
1. Graph		<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 ambient temperature.</p> <p>(注) 斜線は定格周囲温度範囲を示す。</p>																																							
2. Values		<table border="1"> <thead> <tr> <th>Ambient Temp.</th><th>Load 50%</th><th>Load 100%</th></tr> <tr> <th>[°C]</th><th>Input Volt. [V]</th><th>Input Volt. [V]</th></tr> </thead> <tbody> <tr><td>-20</td><td>72</td><td>73</td></tr> <tr><td>-10</td><td>72</td><td>73</td></tr> <tr><td>0</td><td>72</td><td>73</td></tr> <tr><td>10</td><td>72</td><td>73</td></tr> <tr><td>20</td><td>72</td><td>73</td></tr> <tr><td>25</td><td>72</td><td>73</td></tr> <tr><td>30</td><td>72</td><td>73</td></tr> <tr><td>40</td><td>72</td><td>73</td></tr> <tr><td>50</td><td>72</td><td>73</td></tr> <tr><td>60</td><td>72</td><td>73</td></tr> <tr><td>—</td><td>—</td><td>—</td></tr> </tbody> </table>	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	—	—	—
Ambient Temp.	Load 50%	Load 100%																																							
[°C]	Input Volt. [V]	Input Volt. [V]																																							
-20	72	73																																							
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60	72	73																																							
—	—	—																																							

COSEL

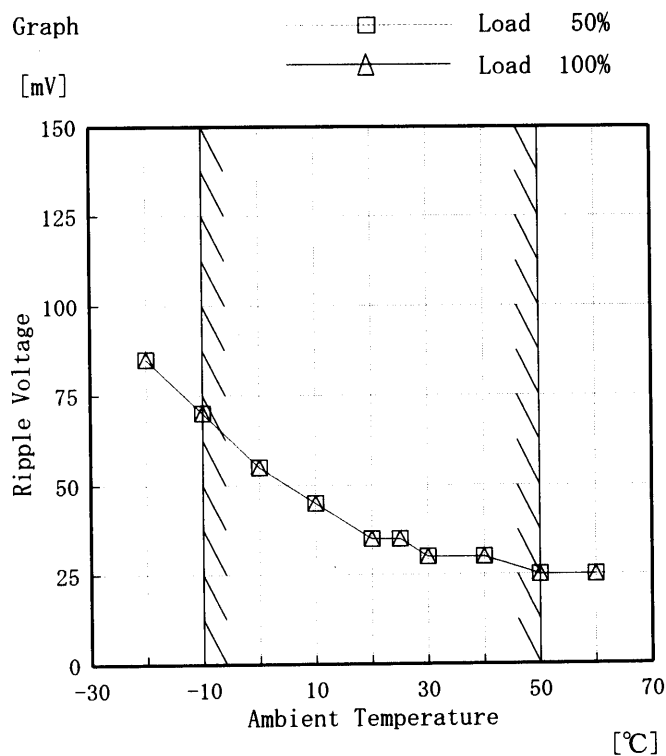
Model LEA50F-15

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

Object +15V3.5A

Testing Circuitry Figure A

1. Graph



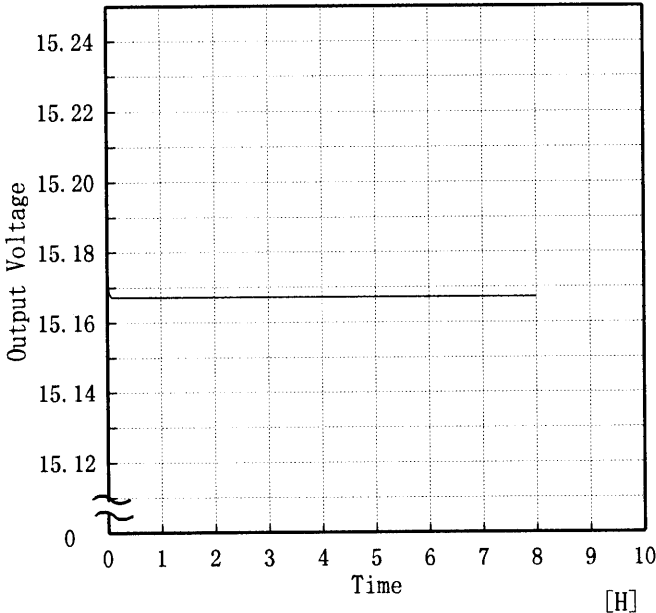
Note: Slanted line shows the range of the rated ambient temperature.

(注) 斜線は定格周囲温度範囲を示す。

2. Values

Ambient Temp. [°C]	Load 50%	Load 100%
	Ripple Output Volt. [mV]	Ripple Output Volt. [mV]
-20	85	85
-10	70	70
0	55	55
10	45	45
20	35	35
25	35	35
30	30	30
40	30	30
50	25	25
60	25	25
—	—	—

COSEL

COSEL																									
Model	LEA50F-15	Temperature 25 ℃ Testing Circuitry Figure A																							
Item	Time Lapse Drift 経時ドリフト																								
Object	+15V3.5A																								
1. Graph		2.Values																							
<div>[V]</div> <div></div> <div>Output Voltage [V]</div> <div>Time [H]</div> <div>Input Volt. 200V</div> <div>Load 100%</div>		<table><tr><th>Time since start [H]</th><th>Output Voltage [V]</th></tr><tr><td>0.0</td><td>15.175</td></tr><tr><td>0.5</td><td>15.167</td></tr><tr><td>1.0</td><td>15.167</td></tr><tr><td>2.0</td><td>15.167</td></tr><tr><td>3.0</td><td>15.167</td></tr><tr><td>4.0</td><td>15.167</td></tr><tr><td>5.0</td><td>15.167</td></tr><tr><td>6.0</td><td>15.167</td></tr><tr><td>7.0</td><td>15.167</td></tr><tr><td>8.0</td><td>15.167</td></tr></table>		Time since start [H]	Output Voltage [V]	0.0	15.175	0.5	15.167	1.0	15.167	2.0	15.167	3.0	15.167	4.0	15.167	5.0	15.167	6.0	15.167	7.0	15.167	8.0	15.167
Time since start [H]	Output Voltage [V]																								
0.0	15.175																								
0.5	15.167																								
1.0	15.167																								
2.0	15.167																								
3.0	15.167																								
4.0	15.167																								
5.0	15.167																								
6.0	15.167																								
7.0	15.167																								
8.0	15.167																								

COSEL

Model		LEA50F-15	Testing Circuitry Figure A
Item		Output Voltage Accuracy 定電圧精度	
Object		+15V3.5A	

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 : 170~264 V

Load Current : 0.00~3.5 A

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

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

定電圧精度

周囲温度、入力電圧、負荷を下記仕様内で、任意に変動させたときの出力電圧の変動をいう。

周囲温度 : -10~50 °C

入力電圧 : 170~264 V

負荷電流 : 0.00~3.5 A

* 定電圧精度(変動値) = $\pm (\text{出力電圧の最高値} - \text{出力電圧の最低値}) / 2$

* 定電圧精度(変動率) = $\frac{\text{変動値}}{\text{定格出力電圧}} \times 100$

Item	Temperature [°C]	Input Voltage [V]	Output Current [A]	Output Voltage [V]	Output Voltage Accuracy [mV]	Output Voltage Accuracy(Ration) [%]
Maximum Voltage	25	264	0.00	15.187	±14	±0.1
Minimum Voltage	50	264	3.50	15.161		

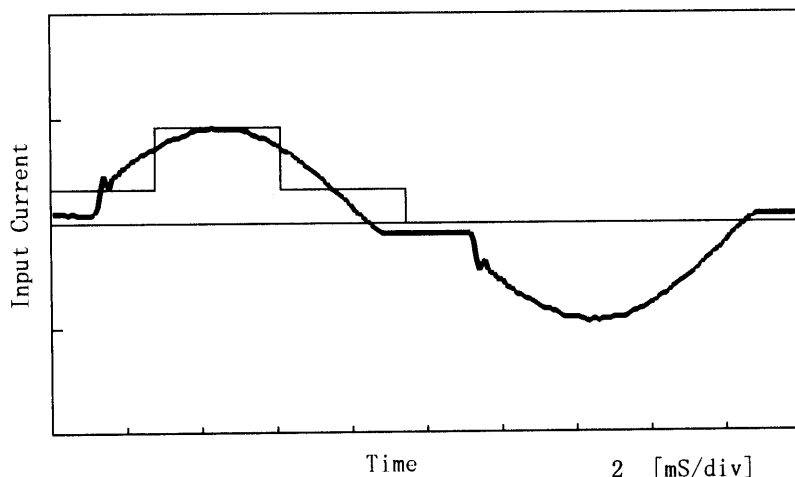
COSEL

Model	LEA50F-15	Temperature	25°C
Item	Harmonic Current 高調波電流	Testing Circuitry	Figure E
Object			

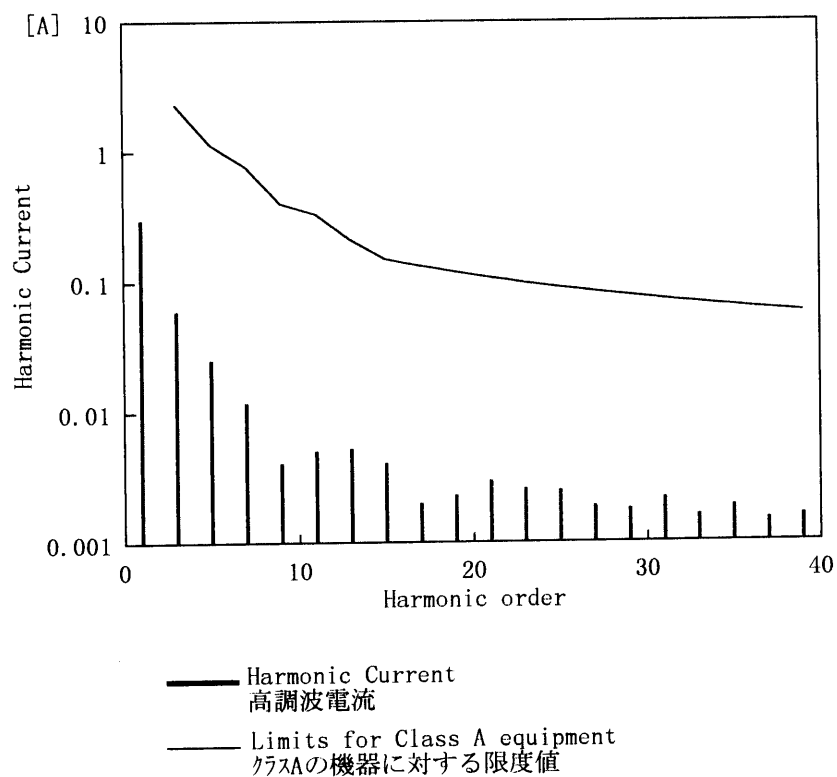
1. Input Current Waveform

— 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]	230.5
Input Current [A]	0.307
Active Power [W]	66
Apparent Power [VA]	70.9
Frequency [Hz]	50
Power Factor	0.931
Output Power [W]	52.5

Harmonics order 高調波次数	Limits 限度値 [A]	Values 測定値 [A]
1	—	0.29980
2	—	0.00040
3	2.29501	0.05990
4	—	0.00010
5	1.13753	0.02530
6	—	0.00000
7	0.76833	0.01190
8	—	0.00000
9	0.39913	0.00410
10	—	0.00000
11	0.32928	0.00510
12	—	0.00010
13	0.20954	0.00530
14	—	0.00010
15	0.14967	0.00410
16	—	0.00000
17	0.13207	0.00200
18	—	0.00010
19	0.11816	0.00230
20	—	0.00010
21	0.10691	0.00300
22	—	0.00010
23	0.09761	0.00260
24	—	0.00000
25	0.08980	0.00250
26	—	0.00010
27	0.08315	0.00190
28	—	0.00000
29	0.07742	0.00180
30	—	0.00010
31	0.07242	0.00220
32	—	0.00000
33	0.06803	0.00160
34	—	0.00010
35	0.06415	0.00190
36	—	0.00010
37	0.06068	0.00150
38	—	0.00000
39	0.05757	0.00160
40	—	0.00000

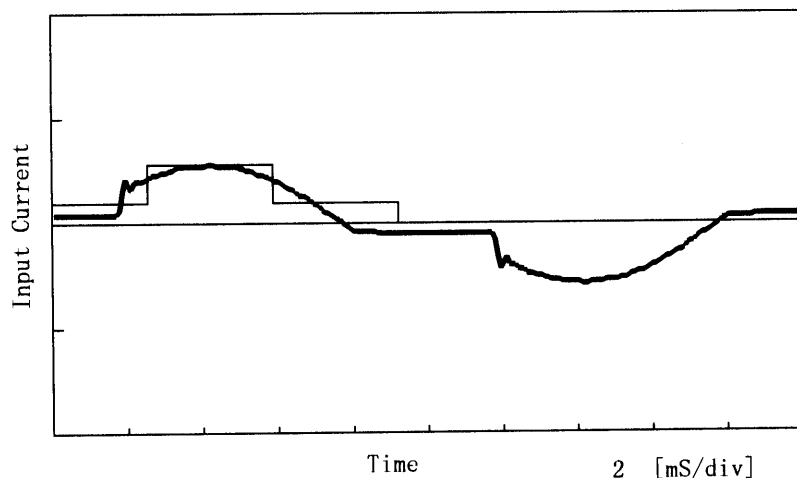
COSEL

Model	LEA50F-15	Temperature	25°C
Item	Harmonic Current 高調波電流	Testing Circuitry	Figure E
Object			

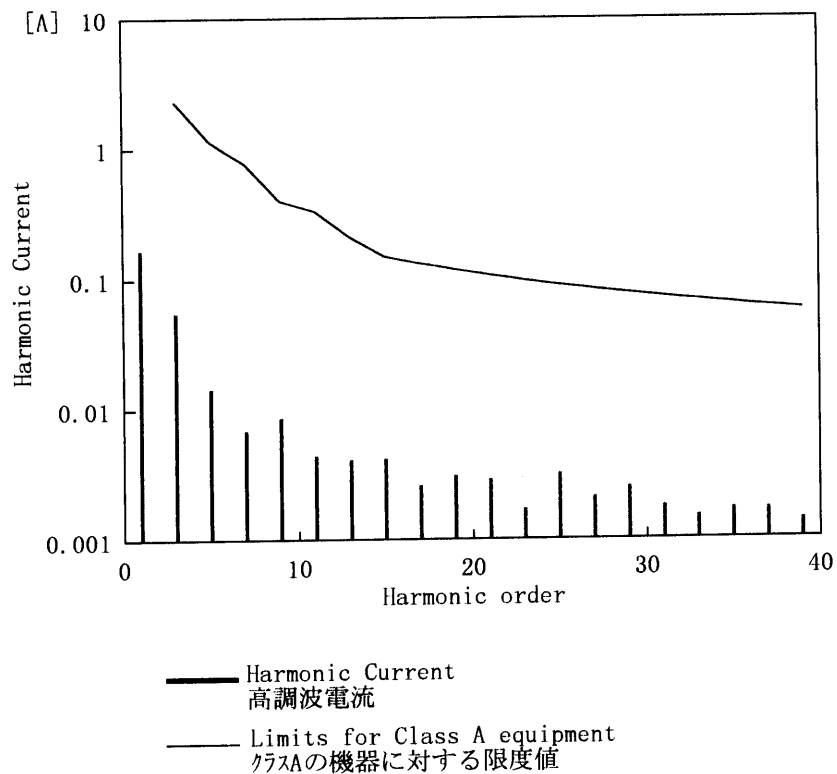
1. Input Current Waveform

— 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]	230.5
Input Current [A]	0.179
Active Power [W]	35.4
Apparent Power [VA]	41.3
Frequency [Hz]	50
Power Factor	0.857
Output Power [W]	26.25

Harmonics order 高調波次数	Limits 限度値 [A]	Values 測定値 [A]
1	—	0.16870
2	—	0.00030
3	2.29501	0.05540
4	—	0.00000
5	1.13753	0.01440
6	—	0.00010
7	0.76833	0.00690
8	—	0.00000
9	0.39913	0.00860
10	—	0.00000
11	0.32928	0.00440
12	—	0.00010
13	0.20954	0.00410
14	—	0.00010
15	0.14967	0.00420
16	—	0.00010
17	0.13207	0.00260
18	—	0.00000
19	0.11816	0.00310
20	—	0.00000
21	0.10691	0.00290
22	—	0.00000
23	0.09761	0.00170
24	—	0.00010
25	0.08980	0.00320
26	—	0.00010
27	0.08315	0.00210
28	—	0.00010
29	0.07742	0.00250
30	—	0.00010
31	0.07242	0.00180
32	—	0.00000
33	0.06803	0.00150
34	—	0.00000
35	0.06415	0.00170
36	—	0.00010
37	0.06068	0.00170
38	—	0.00010
39	0.05757	0.00140
40	—	0.00000

COSEL

Model		LEA50F-15	Testing Circuitry	Figure A
Item		Condensation 結露特性		
Object		+15V3.5A		
1. Condensation test				
Testing procedure is as follows.				
① Keeping and cooling the unit in a tank at -10℃ 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℃ 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℃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℃、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]		15.325	Input Volt.: 200V, Load Current:3.5A	
Line Regulation [mV]		1	Input Volt.: 170～264V, Load Current:3.5A	
Load Regulation [mV]		10	Input Volt.: 200V, Load Current:0.0～3.5A	

COSEL

Model	LEA50F-15	Temperature	25°C
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	0.32	0.44	0.52

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	LEA50F-15	Temperature Testing Circuitry	25°C Figure C
Item	Line Noise Tolerance 入力雑音耐量		
Object	+15V3.5A		

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	LEA50F-15	Temperature	25°C
Item	Conducted Emission 雑音端子電圧	Testing Circuitry	Figure D
Object			

1. Graph

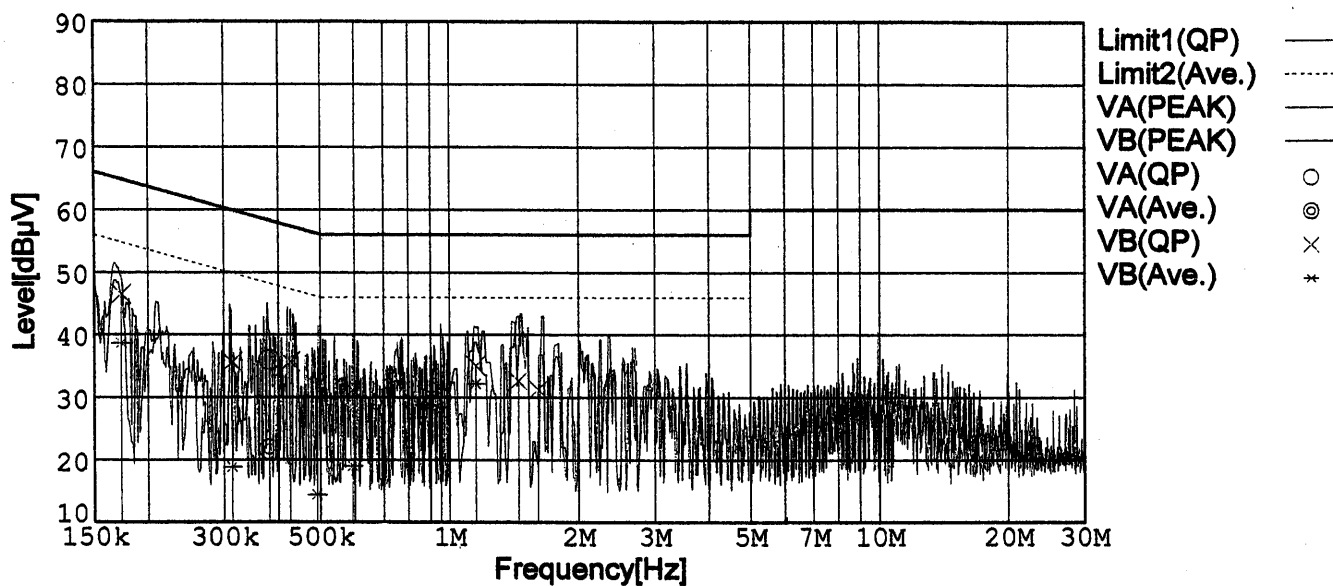
Remarks

Input Volt. 230V (CISPR Pub22 Class B)

Load 100 %

Limit1: [CISPR Pub22] Class B(QP)

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



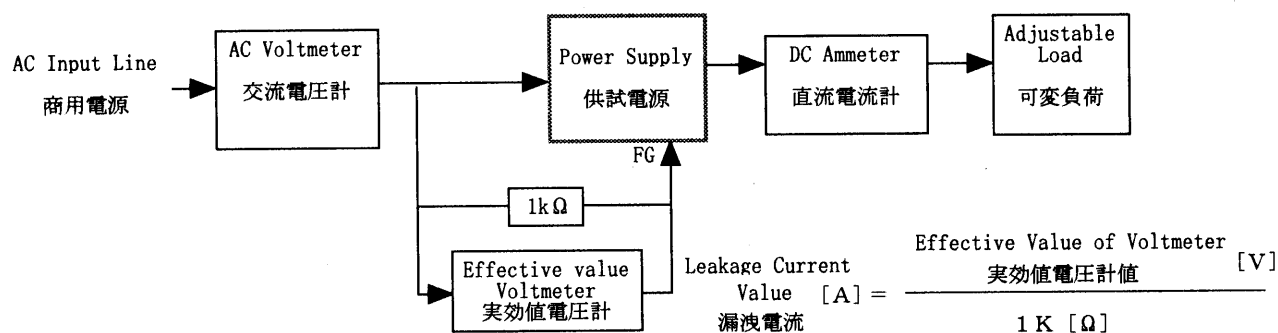
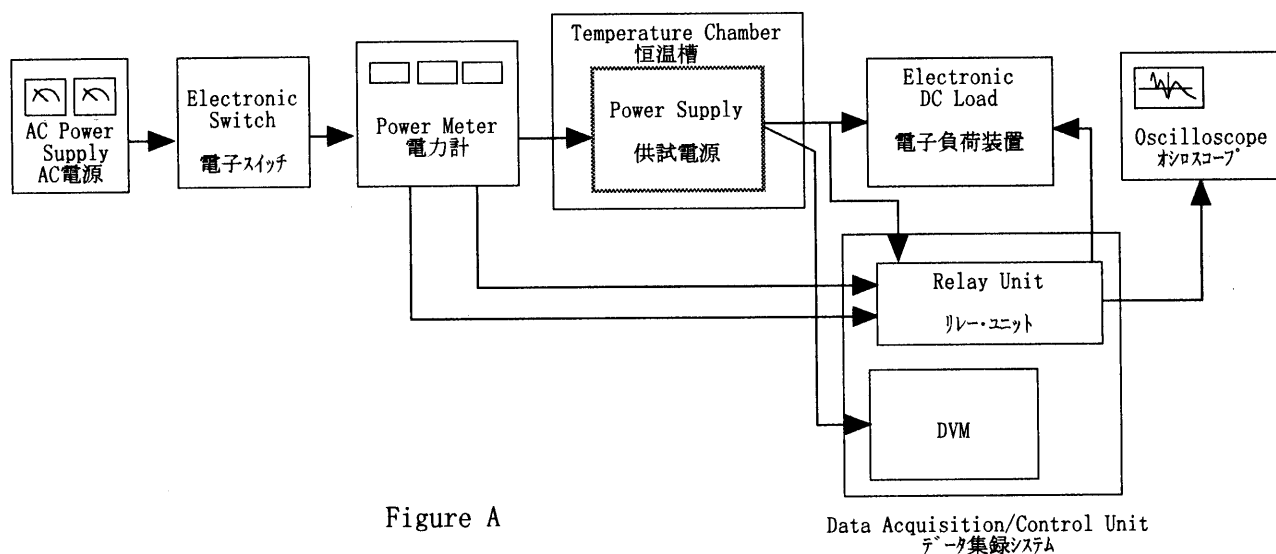


Figure B (DENTORI)

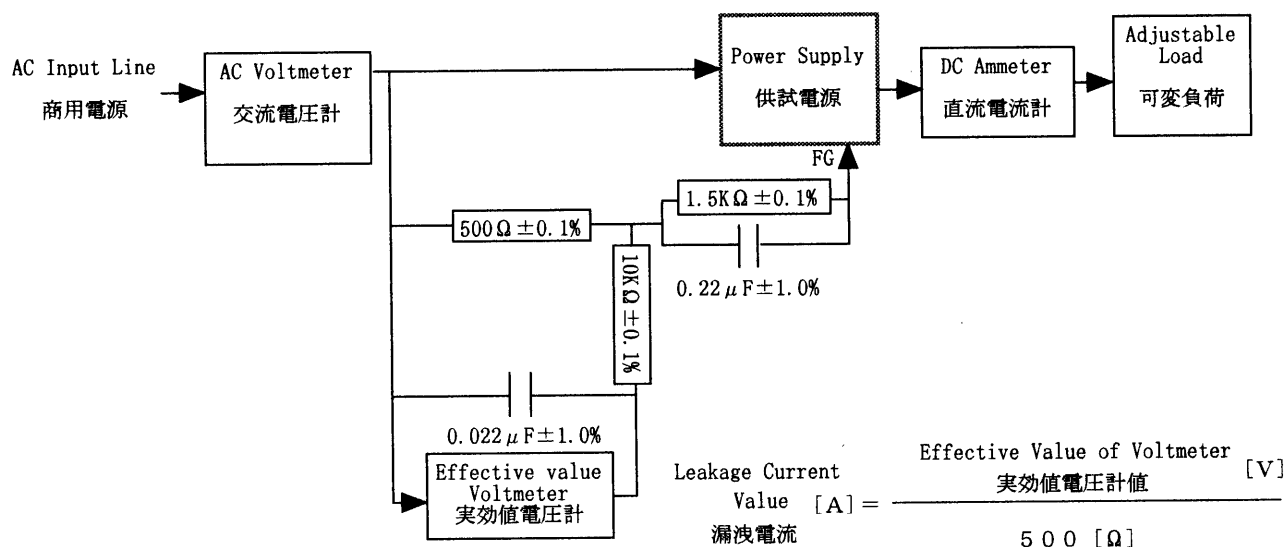


Figure B (IEC60950)

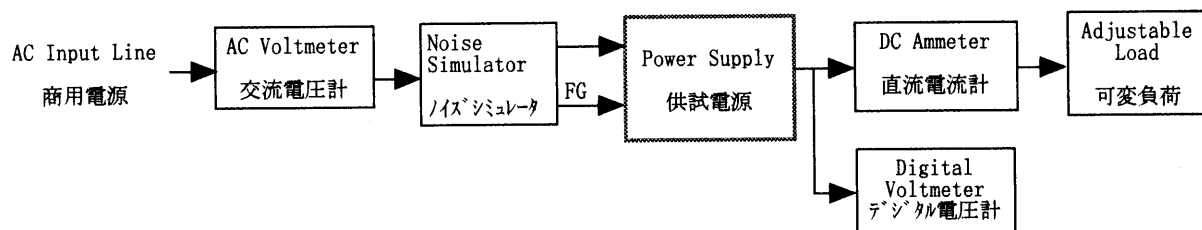


Figure C

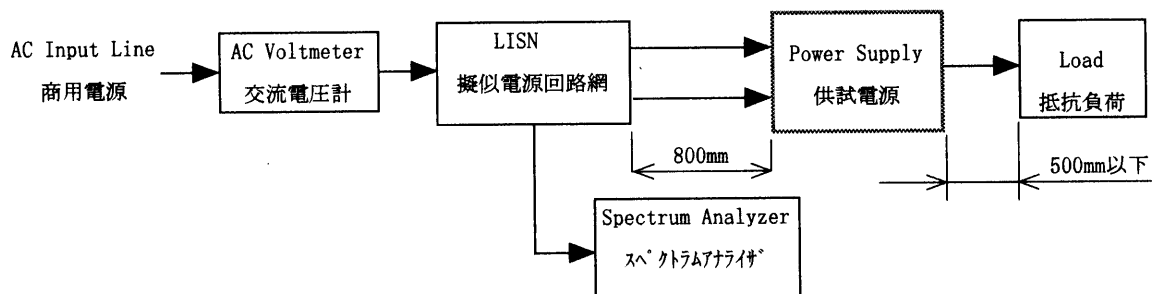


Figure D

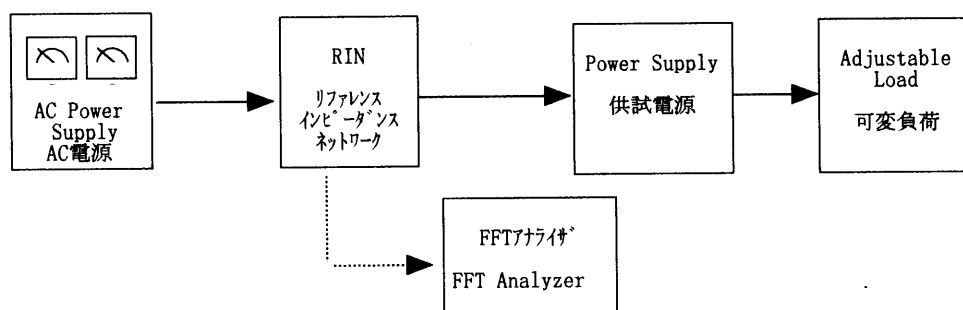


Figure E