



TEST DATA OF ADA1000F

ADA1000F-48
(200V INPUT)

Regulated DC power supply
Mar. 19, 2003

Approved by : Kuniaki Nagahara
Kuniaki Nagahara Design Manager

Prepared by : Toshihisa Miura
Toshihisa Miura Design Engineer

INPUT : AC 170~264V

OUTPUT : V1: 48V 21A

コーセル株式会社
COSEL CO.,LTD.

CONTENTS

1. Line Regulation	1
静的入力変動	
2. Input Current (by Load Power)	2
入力電流 (負荷電力特性)	
3. Input Power (by Load Power)	3
入力電力 (負荷電力特性)	
4. Efficiency (by Input Voltage)	4
効率 (入力電圧特性)	
5. Efficiency (by Load Power)	5
効率 (負荷電力特性)	
6. Power Factor (by Input Voltage)	6
力率 (入力電圧特性)	
7. Power Factor (by Load Power)	7
力率 (負荷電力特性)	
8. Hold-Up Time (by Load Power)	8
出力保持時間 (負荷電力特性)	
9. Instantaneous Interruption Compensation (by Load Power)	9
瞬時停電保障 (負荷電力特性)	
10. Load Regulation	10
静的負荷変動	
11. Ripple Voltage (by Load Current)	11
リップル電圧 (負荷電流特性)	
12. Ripple-Noise	12
リップルノイズ	
13. Overcurrent Protection	13
過電流保護	
14. Overvoltage Protection	14
過電圧保護	
15. Inrush Current	15
突入電流	
16. Rise and Fall Time	16
立上り、立下り時間	
17. Ambient Temperature Drift	17
周囲温度変動	
18. Minimum Input Voltage for Regulated Output Voltage	18
最低レギュレーション電圧	
19. Ripple Voltage (by Ambient Temperature)	19
リップル電圧 (周囲温度特性)	
20. Time Lapse Drift	20
経時ドリフト	
21. Output Voltage Accuracy	21
定電圧精度	
22. Leakage Current	22
漏洩電流	
23. Figure of Testing Circuitry	23
測定回路図	

COSEL

Model		ADA1000F (ADA1000F-48)	
Item		Line Regulation 静の入力変動	
Object		V1:+48V21A	

1. Graph

---□--- Load 50%

—△— Load 100%

Output Voltage [V]

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]	Output Voltage [V]	
	Load 50%	Load 100%
150	47.843	47.825
160	47.842	47.824
170	47.841	47.823
180	47.841	47.822
200	47.840	47.821
220	47.839	47.820
240	47.838	47.820
264	47.838	47.819
280	47.839	47.817

BC-3488

COSEL

Model		ADA1000F (ADA1000F-48)		Temperature		25℃																																																				
Item		Input Current (by Load Current) 入力電流 (負荷電力特性)		Testing Circuitry		Figure A																																																				
Object																																																										
1. Graph				2. Values																																																						
<div><div>—△— Input Volt. 170 V</div><div>---□--- Input Volt. 200 V</div><div>---○--- Input Volt. 264 V</div></div> <div>Input Current [A]</div> <div>Load Power [W]</div>				<table><tr><th rowspan="2">Load Power [W]</th><th colspan="3">Input Current [A]</th></tr><tr><th>Input Volt. 170[V]</th><th>Input Volt. 200[V]</th><th>Input Volt. 264[V]</th></tr><tr><td>0.0</td><td>0.260</td><td>0.290</td><td>0.290</td></tr><tr><td>201.6</td><td>1.540</td><td>1.330</td><td>1.110</td></tr><tr><td>403.2</td><td>2.770</td><td>2.370</td><td>1.880</td></tr><tr><td>604.8</td><td>4.020</td><td>3.430</td><td>2.670</td></tr><tr><td>806.4</td><td>5.290</td><td>4.510</td><td>3.480</td></tr><tr><td>1008.0</td><td>6.580</td><td>5.590</td><td>4.280</td></tr><tr><td>1108.8</td><td>7.230</td><td>6.150</td><td>4.700</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>				Load Power [W]	Input Current [A]			Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]	0.0	0.260	0.290	0.290	201.6	1.540	1.330	1.110	403.2	2.770	2.370	1.880	604.8	4.020	3.430	2.670	806.4	5.290	4.510	3.480	1008.0	6.580	5.590	4.280	1108.8	7.230	6.150	4.700	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Load Power [W]	Input Current [A]																																																									
	Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]																																																							
0.0	0.260	0.290	0.290																																																							
201.6	1.540	1.330	1.110																																																							
403.2	2.770	2.370	1.880																																																							
604.8	4.020	3.430	2.670																																																							
806.4	5.290	4.510	3.480																																																							
1008.0	6.580	5.590	4.280																																																							
1108.8	7.230	6.150	4.700																																																							
—	—	—	—																																																							
—	—	—	—																																																							
—	—	—	—																																																							
—	—	—	—																																																							
Note: Slanted line shows the range of the rated load power.																																																										
(注) 斜線は定格電力範囲を示す。																																																										

BC-3488

COSEL

Model		ADA1000F (ADA1000F-48)		Temperature		25℃																															
Item		Efficiency (by Input Voltage) 効率 (入力電圧特性)		Testing Circuitry		Figure A																															
Object																																					
1. Graph				2. Values																																	
<div><div>---□--- Load 50%</div><div>—△— Load 100%</div></div> <table><thead><tr><th>Input Voltage [V]</th><th>Load 50% Efficiency [%]</th><th>Load 100% Efficiency [%]</th></tr></thead><tbody><tr><td>150</td><td>87.3</td><td>89.2</td></tr><tr><td>160</td><td>87.3</td><td>89.5</td></tr><tr><td>170</td><td>87.8</td><td>89.5</td></tr><tr><td>180</td><td>87.8</td><td>89.7</td></tr><tr><td>200</td><td>87.8</td><td>89.9</td></tr><tr><td>220</td><td>88.2</td><td>90.2</td></tr><tr><td>240</td><td>88.2</td><td>90.2</td></tr><tr><td>264</td><td>88.2</td><td>90.4</td></tr><tr><td>280</td><td>88.4</td><td>90.7</td></tr></tbody></table>				Input Voltage [V]	Load 50% Efficiency [%]	Load 100% Efficiency [%]	150	87.3	89.2	160	87.3	89.5	170	87.8	89.5	180	87.8	89.7	200	87.8	89.9	220	88.2	90.2	240	88.2	90.2	264	88.2	90.4	280	88.4	90.7				
Input Voltage [V]	Load 50% Efficiency [%]	Load 100% Efficiency [%]																																			
150	87.3	89.2																																			
160	87.3	89.5																																			
170	87.8	89.5																																			
180	87.8	89.7																																			
200	87.8	89.9																																			
220	88.2	90.2																																			
240	88.2	90.2																																			
264	88.2	90.4																																			
280	88.4	90.7																																			
<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>																																					

COSEL

Model		ADA1000F (ADA1000F-48)		Temperature		25℃	
Item		Efficiency (by Load Power) 効率 (負荷電力特性)		Testing Circuitry		Figure A	
Object							

1. Graph

—△— Input Volt. 170 V

---□--- Input Volt. 200 V

-·-○-·- Input Volt. 264 V

Efficiency [%]

100

96

92

88

84

80

76

72

0

400

800

1200

Load Power [W]

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

(注) 斜線は定格電力範囲を示す。

2. Values

Load Power [W]	Efficiency [%]		
	Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]
0.0	—	—	—
201.6	79.1	80.1	80.0
403.2	86.0	86.5	87.2
604.8	88.3	88.8	89.4
806.4	89.3	89.6	89.9
1008.0	89.5	90.0	90.4
1108.8	89.5	90.0	90.4
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—

COSEL

Model		ADA1000F (ADA1000F-48)	
Item		Power Factor (by Input Voltage) 力率 (入力電圧特性)	
Object			

1. Graph

□

Load 50%

Load 100%

Power Factor

1.0

0.9

0.8

0.7

0.6

0.5

0.4

0.3

140

180

220

260

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]	Power Factor	
	Load 50%	Load 100%
150	0.991	0.998
160	0.990	0.996
170	0.983	0.997
180	0.981	0.996
200	0.978	0.990
220	0.966	0.988
240	0.959	0.985
264	0.932	0.977
280	0.885	0.946

COSEL

Model		ADA1000F (ADA1000F-48)		Temperature		25°C	
Item		Power Factor (by Load Power) 力率 (負荷電力特性)		Testing Circuitry		Figure A	
Object							

1. Graph

—△—

Input Volt.

170 V

---□---

Input Volt.

200 V

---○---

Input Volt.

264 V

Power Factor

Load Power [W]

2. Values

Load Power [W]	Power Factor		
	Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]
0.0	0.591	0.448	0.338
201.6	0.950	0.925	0.840
403.2	0.981	0.968	0.918
604.8	0.991	0.981	0.950
806.4	0.994	0.988	0.966
1008.0	0.997	0.992	0.977
1108.8	0.998	0.993	0.981
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—

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

(注) 斜線は定格電力範囲を示す。

COSEL

Model		ADA1000F (ADA1000F-48)		Temperature		25℃																																																				
Item		Hold-Up Time (by Load Power) 出力保持時間 (負荷電力特性)		Testing Circuitry		Figure A																																																				
Object																																																										
1. Graph		<div>—△— Input Volt. 170V</div> <div>---□--- Input Volt. 200V</div> <div>---○--- Input Volt. 264V</div>		2. Values																																																						
<div><div>Hold-Up Time [mS]</div><div></div><div>Load Power [W]</div></div>		<table><tr><th rowspan="2">Load Power [W]</th><th colspan="3">Hold-Up Time [mS]</th></tr><tr><th>Input Volt. 170[V]</th><th>Input Volt. 200[V]</th><th>Input Volt. 264[V]</th></tr><tr><td>0.0</td><td>—</td><td>—</td><td>—</td></tr><tr><td>201.6</td><td>141</td><td>142</td><td>143</td></tr><tr><td>403.2</td><td>72</td><td>73</td><td>74</td></tr><tr><td>604.8</td><td>47</td><td>48</td><td>49</td></tr><tr><td>806.4</td><td>35</td><td>35</td><td>36</td></tr><tr><td>1008.0</td><td>27</td><td>28</td><td>29</td></tr><tr><td>1108.8</td><td>24</td><td>25</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><tr><td>—</td><td>—</td><td>—</td><td>—</td></tr><tr><td>—</td><td>—</td><td>—</td><td>—</td></tr></table>						Load Power [W]	Hold-Up Time [mS]			Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]	0.0	—	—	—	201.6	141	142	143	403.2	72	73	74	604.8	47	48	49	806.4	35	35	36	1008.0	27	28	29	1108.8	24	25	26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Load Power [W]	Hold-Up Time [mS]																																																									
	Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]																																																							
0.0	—	—	—																																																							
201.6	141	142	143																																																							
403.2	72	73	74																																																							
604.8	47	48	49																																																							
806.4	35	35	36																																																							
1008.0	27	28	29																																																							
1108.8	24	25	26																																																							
—	—	—	—																																																							
—	—	—	—																																																							
—	—	—	—																																																							
—	—	—	—																																																							
<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 power.</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範囲を保持しているところまでの時間。 (注) 斜線は定格電力範囲を示す。</p>																																																										

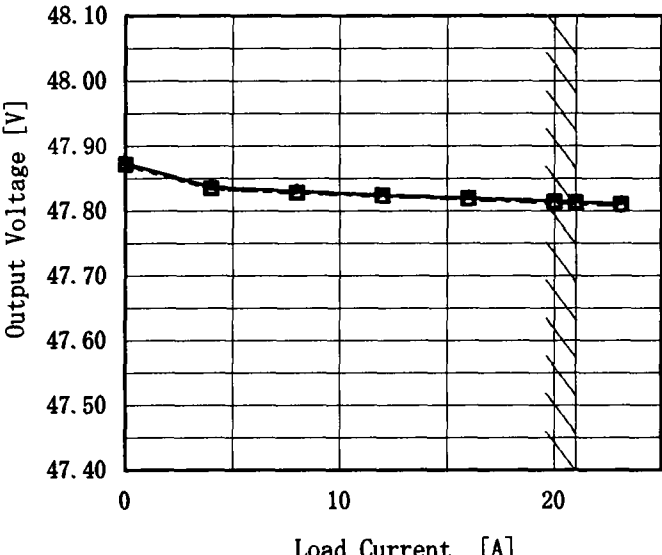
— 8 —

BC-3488

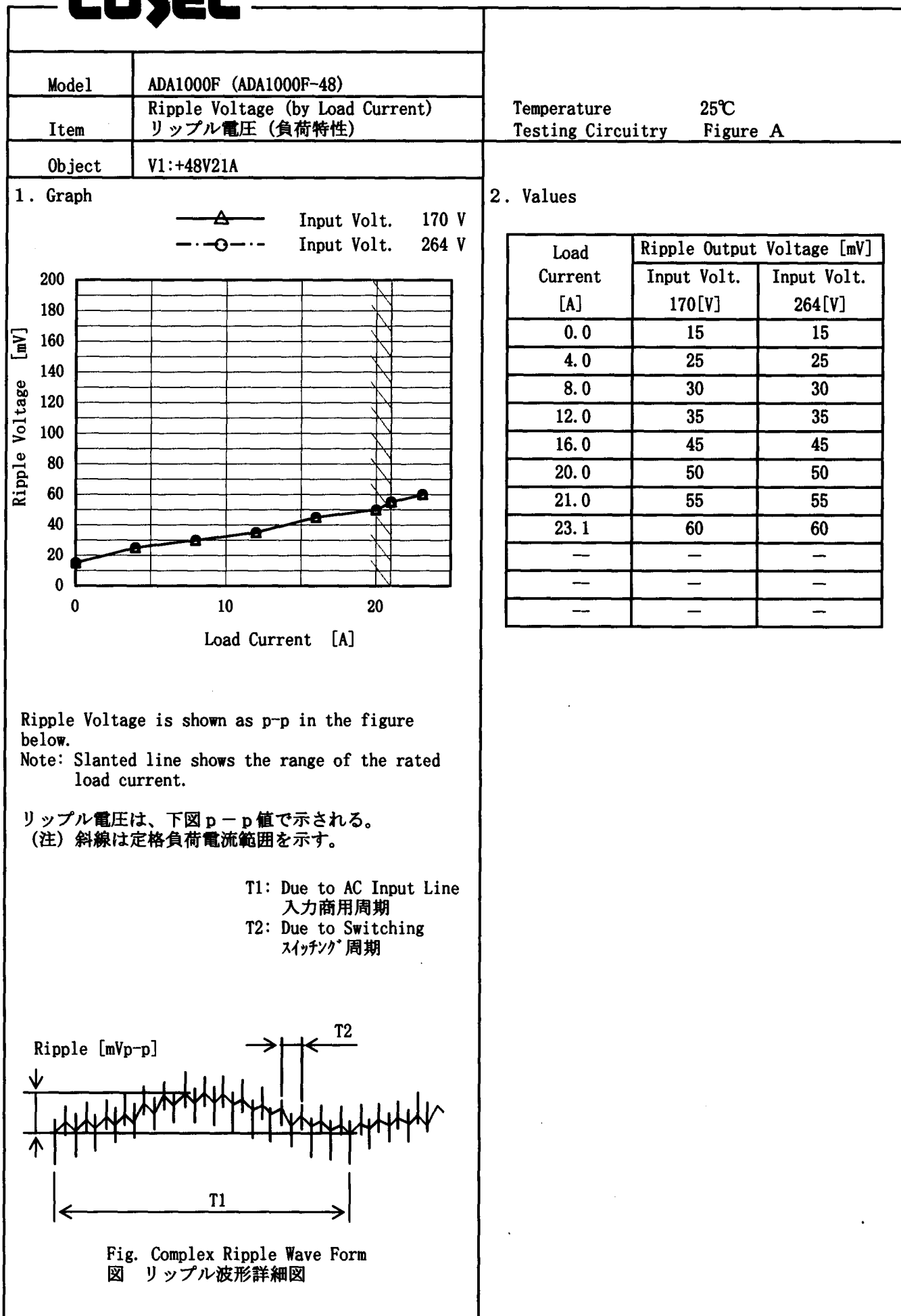
COSEL

Model		ADA1000F (ADA1000F-48)		Temperature		25℃																																																				
Item		Instantaneous Interruption Compensation (by Load Power)		Testing Circuitry		Figure A																																																				
Object																																																										
1. Graph		—△— Input Volt. 170V ---□--- Input Volt. 200V -·-○-·- Input Volt. 264V		2. Values																																																						
<div>Instantaneous Compensation Time [mS]</div> <div><p>Load Power [W]</p></div>				<table><tr><th rowspan="2">Load Power [W]</th><th colspan="3">Time [mS]</th></tr><tr><th>Input Volt. 170[V]</th><th>Input Volt. 200[V]</th><th>Input Volt. 264[V]</th></tr><tr><td>0.0</td><td>—</td><td>—</td><td>—</td></tr><tr><td>201.6</td><td>120</td><td>130</td><td>139</td></tr><tr><td>403.2</td><td>57</td><td>65</td><td>71</td></tr><tr><td>604.8</td><td>38</td><td>42</td><td>46</td></tr><tr><td>806.4</td><td>33</td><td>34</td><td>35</td></tr><tr><td>1008.0</td><td>26</td><td>27</td><td>28</td></tr><tr><td>1108.8</td><td>23</td><td>24</td><td>25</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>				Load Power [W]	Time [mS]			Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]	0.0	—	—	—	201.6	120	130	139	403.2	57	65	71	604.8	38	42	46	806.4	33	34	35	1008.0	26	27	28	1108.8	23	24	25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Load Power [W]	Time [mS]																																																									
	Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]																																																							
0.0	—	—	—																																																							
201.6	120	130	139																																																							
403.2	57	65	71																																																							
604.8	38	42	46																																																							
806.4	33	34	35																																																							
1008.0	26	27	28																																																							
1108.8	23	24	25																																																							
—	—	—	—																																																							
—	—	—	—																																																							
—	—	—	—																																																							
—	—	—	—																																																							
Note: Slanted line shows the range of the rated load power.																																																										
(注) 斜線は定格電力範囲を示す。																																																										

COSEL

Model		ADA1000F (ADA1000F-48)		Temperature		25℃																																																				
Item		Load Regulation 静的負荷変動		Testing Circuitry		Figure A																																																				
Object		V1:+48V21A																																																								
1. Graph				2. Values																																																						
<div><div><div>—△— Input Volt. 170 V</div><div>---□--- Input Volt. 200 V</div><div>---○--- Input Volt. 264 V</div></div></div>				<table><tr><th rowspan="2">Load Current [A]</th><th colspan="3">Output Voltage [V]</th></tr><tr><th>Input Volt. 170[V]</th><th>Input Volt. 200[V]</th><th>Input Volt. 264[V]</th></tr><tr><td>0.0</td><td>47.874</td><td>47.872</td><td>47.873</td></tr><tr><td>4.0</td><td>47.837</td><td>47.835</td><td>47.835</td></tr><tr><td>8.0</td><td>47.830</td><td>47.828</td><td>47.829</td></tr><tr><td>12.0</td><td>47.824</td><td>47.823</td><td>47.823</td></tr><tr><td>16.0</td><td>47.820</td><td>47.819</td><td>47.818</td></tr><tr><td>20.0</td><td>47.815</td><td>47.814</td><td>47.813</td></tr><tr><td>21.0</td><td>47.814</td><td>47.813</td><td>47.812</td></tr><tr><td>23.1</td><td>47.811</td><td>47.810</td><td>47.809</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 [A]	Output Voltage [V]			Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]	0.0	47.874	47.872	47.873	4.0	47.837	47.835	47.835	8.0	47.830	47.828	47.829	12.0	47.824	47.823	47.823	16.0	47.820	47.819	47.818	20.0	47.815	47.814	47.813	21.0	47.814	47.813	47.812	23.1	47.811	47.810	47.809	—	—	—	—	—	—	—	—	—	—	—	—
Load Current [A]	Output Voltage [V]																																																									
	Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]																																																							
0.0	47.874	47.872	47.873																																																							
4.0	47.837	47.835	47.835																																																							
8.0	47.830	47.828	47.829																																																							
12.0	47.824	47.823	47.823																																																							
16.0	47.820	47.819	47.818																																																							
20.0	47.815	47.814	47.813																																																							
21.0	47.814	47.813	47.812																																																							
23.1	47.811	47.810	47.809																																																							
—	—	—	—																																																							
—	—	—	—																																																							
—	—	—	—																																																							
<p>Note: Slanted line shows the range of the rated load current.</p> <p>(注) 斜線は定格負荷電流範囲を示す。</p>																																																										

COSEL



COSEL

Model	ADA1000F (ADA1000F-48)	Temperature	25°C
Item	Ripple-Noise リップルノイズ	Testing Circuitry	Figure A
Object	V1:+48V21A		

1. Graph

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

Ripple-Noise [mV]

Load Current [A]

2. Values

Load Current [A]	Ripple-Noise [mV]	
	Input Volt. 170[V]	Input Volt. 264[V]
0.0	20	20
4.0	40	40
8.0	50	50
12.0	75	75
16.0	90	90
20.0	100	100
21.0	105	105
23.1	115	115
—	—	—
—	—	—
—	—	—

Ripple-Noise is shown as p-p in the figure below.
 Note: Slanted line shows the range of the rated load current.

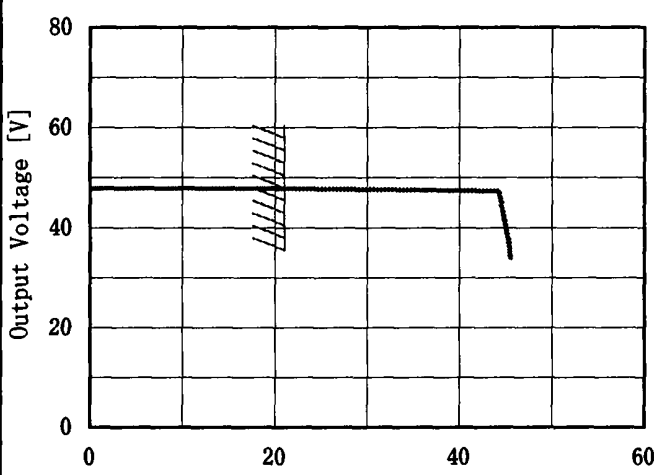
リップルノイズは、下図 p-p 値で示される。
 (注) 斜線は定格負荷電流範囲を示す。

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-Noise [mVp-p]

Fig. Complex Ripple Wave Form
 図 リップル波形詳細図

COSEL

Model		ADA1000F (ADA1000F-48)		Temperature		25℃																																																												
Item		Overcurrent Protection 過電流保護		Testing Circuitry		Figure A																																																												
Object		V1:+48V21A																																																																
1. Graph				2. Values																																																														
<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>Load Current [A]</div>				<table><tr><th rowspan="2">Output Voltage [V]</th><th colspan="3">Load Current [A]</th></tr><tr><th>Input Volt. 170[V]</th><th>Input Volt. 200[V]</th><th>Input Volt. 264[V]</th></tr><tr><td>48.0</td><td>43.39</td><td>43.95</td><td>43.19</td></tr><tr><td>45.6</td><td>44.35</td><td>44.41</td><td>44.48</td></tr><tr><td>43.2</td><td>44.67</td><td>44.70</td><td>44.72</td></tr><tr><td>38.4</td><td>45.13</td><td>45.20</td><td>45.18</td></tr><tr><td>33.6</td><td>45.61</td><td>45.62</td><td>45.59</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><tr><td>—</td><td>—</td><td>—</td><td>—</td></tr><tr><td>—</td><td>—</td><td>—</td><td>—</td></tr></table>				Output Voltage [V]	Load Current [A]			Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]	48.0	43.39	43.95	43.19	45.6	44.35	44.41	44.48	43.2	44.67	44.70	44.72	38.4	45.13	45.20	45.18	33.6	45.61	45.62	45.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Output Voltage [V]	Load Current [A]																																																																	
	Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]																																																															
48.0	43.39	43.95	43.19																																																															
45.6	44.35	44.41	44.48																																																															
43.2	44.67	44.70	44.72																																																															
38.4	45.13	45.20	45.18																																																															
33.6	45.61	45.62	45.59																																																															
—	—	—	—																																																															
—	—	—	—																																																															
—	—	—	—																																																															
—	—	—	—																																																															
—	—	—	—																																																															
—	—	—	—																																																															
—	—	—	—																																																															
—	—	—	—																																																															
<div>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。</div> <div>Intermittent operation occurs when the output voltage is from 33.6V to 0V. 33.6V~0V間は、間欠モードとなる。</div>																																																																		

COSEL

Model		ADA1000F (ADA1000F-48)	
Item		Overvoltage Protection 過電圧保護	
Object		V1:+48V21A	

1. Graph

—△—

Input Volt.

170 V

---□---

Input Volt.

200 V

---○---

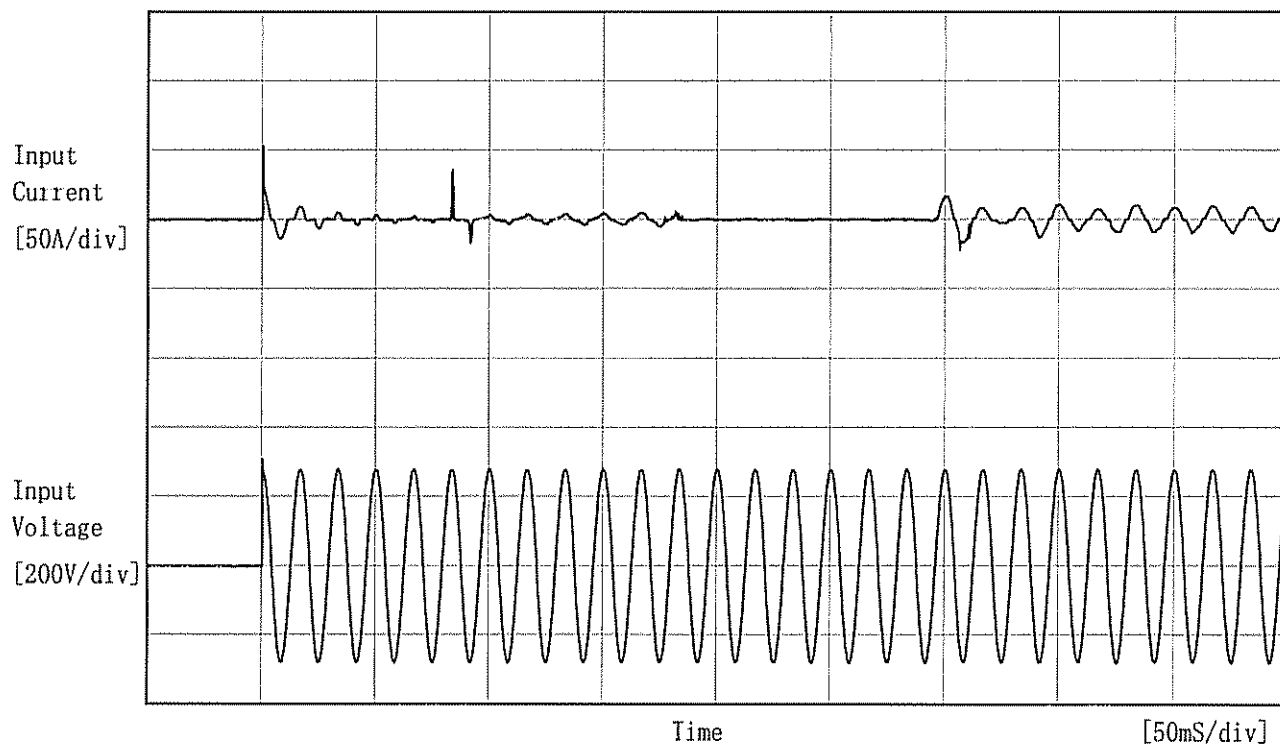
Input Volt.

264 V

Operating Point [V]

COSEL

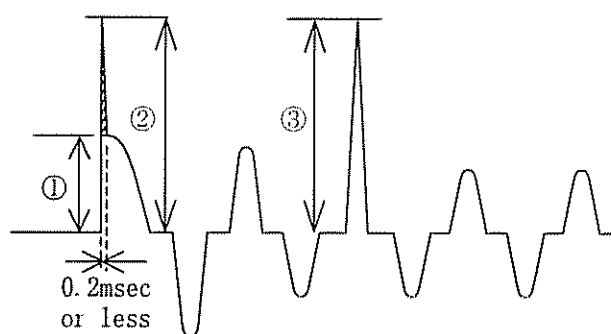
Model	ADA1000F (ADA1000F-48)	Temperature	25°C
Item	Inrush Current 突入電流	Testing Circuitry	Figure A
Object	_____		



Input Voltage 200 V
Frequency 60 Hz
Load 100 %

Inrush Current

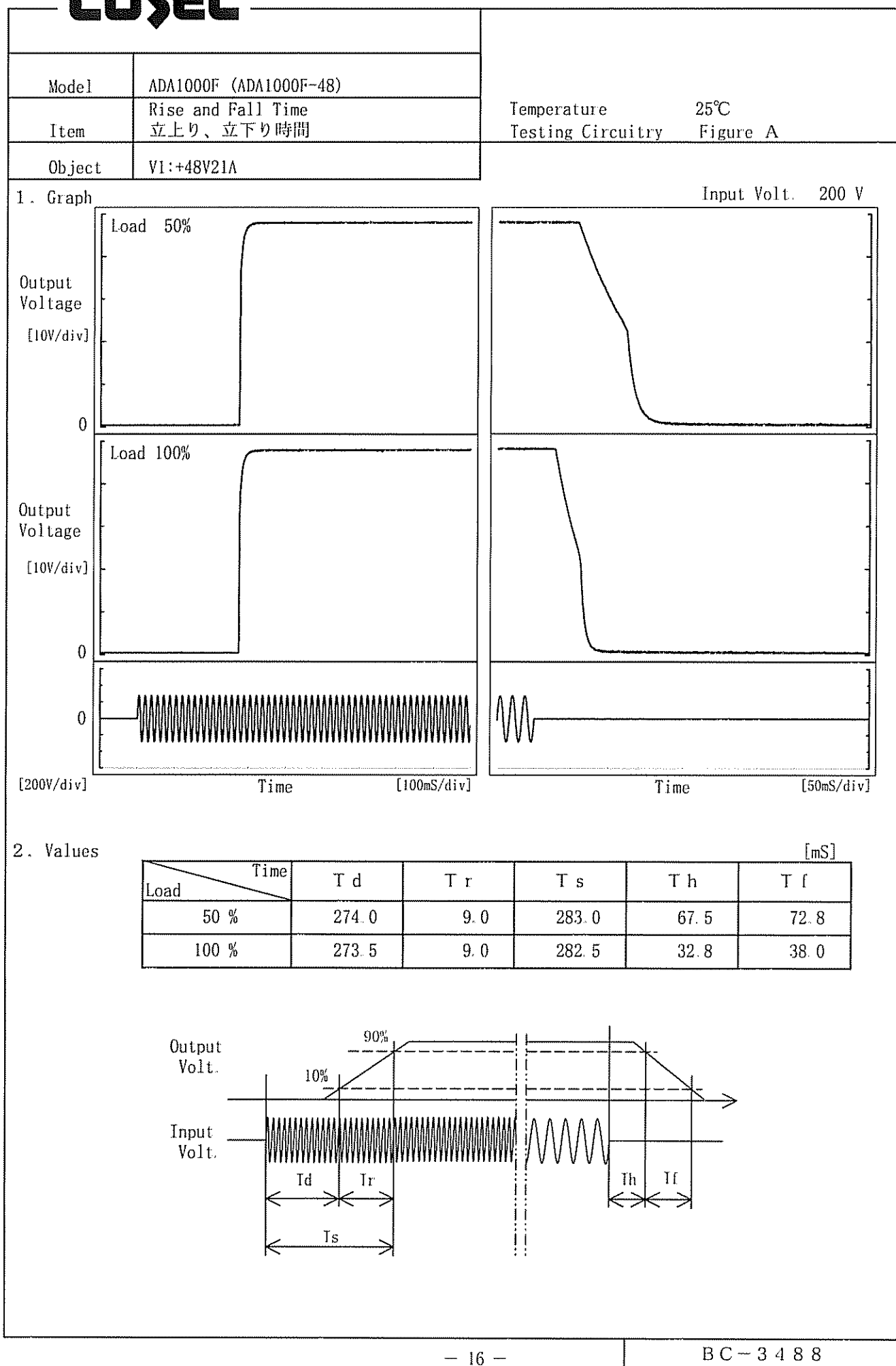
- ① 25.8 [A]
- ② 52.8 [A] (0.2msec or less)*1
- ③ 35.4 [A]



*1 The specification of the inrush current (primary surge) means that the surge current to a built-in noise filter (0.2msec or less : waveform ②) is excluded.

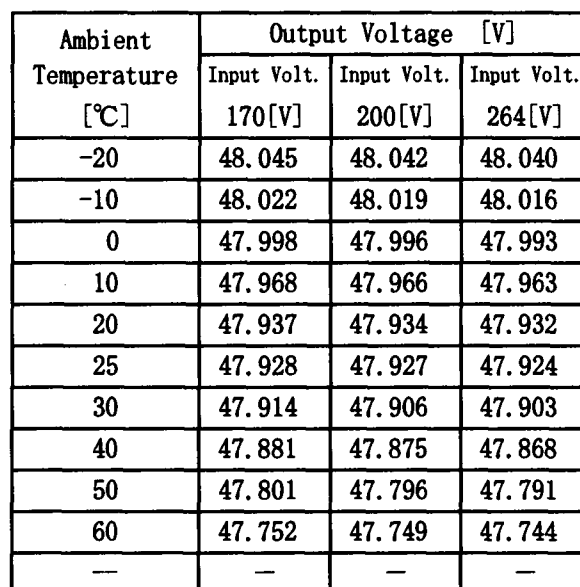
本製品の突入電流(1次サージ)の仕様は、内蔵ノイズフィルタ部へのサージ電流(0.2msec以下:波形②)を除きます。

COSEL



Testing Circuitry Figure A

2. Values



(注) 斜線は定格周囲温度範囲を示す。

COSEL

Model	ADA1000F (ADA1000F-48)																																								
Item	Minimum Input Voltage for Regulated Output Voltage 最低レギュレーション電圧		Testing Circuitry Figure A																																						
Object	V1:+48V21A																																								
1. Graph		2. Values																																							
<div><div>---□--- Load 50%</div><div>—△— Load 100%</div></div> <p>Input Voltage [V]</p> <p>Ambient Temperature [°C]</p>		<table><tr><th rowspan="2">Ambient Temperature [°C]</th><th colspan="2">Input Voltage [V]</th></tr><tr><th>Load 50%</th><th>Load 100%</th></tr><tr><td>-20</td><td>66</td><td>66</td></tr><tr><td>-10</td><td>66</td><td>66</td></tr><tr><td>0</td><td>66</td><td>67</td></tr><tr><td>10</td><td>66</td><td>67</td></tr><tr><td>20</td><td>65</td><td>67</td></tr><tr><td>25</td><td>66</td><td>66</td></tr><tr><td>30</td><td>66</td><td>66</td></tr><tr><td>40</td><td>66</td><td>67</td></tr><tr><td>50</td><td>66</td><td>67</td></tr><tr><td>60</td><td>66</td><td>67</td></tr><tr><td>--</td><td>—</td><td>—</td></tr></table>		Ambient Temperature [°C]	Input Voltage [V]		Load 50%	Load 100%	-20	66	66	-10	66	66	0	66	67	10	66	67	20	65	67	25	66	66	30	66	66	40	66	67	50	66	67	60	66	67	--	—	—
Ambient Temperature [°C]	Input Voltage [V]																																								
	Load 50%	Load 100%																																							
-20	66	66																																							
-10	66	66																																							
0	66	67																																							
10	66	67																																							
20	65	67																																							
25	66	66																																							
30	66	66																																							
40	66	67																																							
50	66	67																																							
60	66	67																																							
--	—	—																																							
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。																																									

COSEL

		Testing Circuitry Figure A
Model	ADA1000F (ADA1000F-48)	
Item	Ripple Voltage (by Ambient Temp.) リップル電圧 (周囲温度特性)	
Object	V1:+48V21A	
1. Graph		2. Values
<div><div><div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></</div></div></div></div></div>		

COSEL

Model		ADA1000F (ADA1000F-48)	
Item		Time Lapse Drift 経時ドリフト	
Object		V1:+48V21A	

1. Graph

Output Voltage [V]

COSEL

Model		ADA1000F (ADA1000F-48)
Item		Output Voltage Accuracy 定電圧精度
Object		V1:+48V21A

Testing Circuitry Figure A

1. Output Voltage Accuracy

This is defined as the value of the output voltage, regulation load, ambient temperature and input voltage varied at random in the range as specified below.

Temperature : -10 ~ 50℃

Input Voltage : 170 ~ 264V

Load Current : 0 ~ 21A

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

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

1. 定電圧精度

周囲温度、入力電圧、負荷電流を下記仕様内で、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℃

入力電圧 : 170 ~ 264V

負荷電流 : 0 ~ 21A

* 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) = $\frac{\text{変動値}}{\text{定格出力電圧}} \times 100$

2. Values

Item	Temperature [℃]	Input Voltage [V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	-10	170	0	48.043	±141	±0.3
Minimum Voltage	50	264	21	47.761		

COSEL

Model	ADA1000F (ADA1000F-48)				
Item	Leakage Current 漏洩電流			Temperature Testing Circuitry	25°C Figure B
Object	_____				

1. Results

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

Standards	Leakage Current [mA]		
	Input Volt.	Input Volt.	Input Volt.
	170 [V]	240 [V]	264 [V]
(B) IEC60950	0.32	0.46	0.51

2. Condition

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

交流入力各相について測定し、その大きい方を漏洩電流測定値とする。

