



# TEST DATA OF DAS504805 (48V INPUT)

Regulated DC Power Supply

Date : Feb. 8. 1998

Approved by : Y. Nagai  
Design Manager

Prepared by : K. Shino  
Design Engineer

**コーセル株式会社**  
**COSEL CO.,LTD.**

CONTENTS

1. Line Regulation . . . . .	1
静的入力変動	
2. Efficiency (by Input Voltage) . . . . .	2
効率 (入力電圧特性)	
3. Load Regulation . . . . .	3
静的負荷変動	
4. Overcurrent Protection . . . . .	4
過電流保護	
5. Rise and Fall Time . . . . .	5
立ち上り、立ち下がり時間	
6. Ambient Temperature Drift . . . . .	6
周囲温度変動	
7. Minimum Input Voltage for Regulated Output Voltage . . .	7
最低レギュレーション電圧	
8. Time Lapse Drift . . . . .	8
経時ドリフト	
9. Output Voltage Accuracy . . . . .	9
定電圧精度	
10. Figure of Testing Circuitry . . . . .	10
測定回路図	

(Final Page 11 )



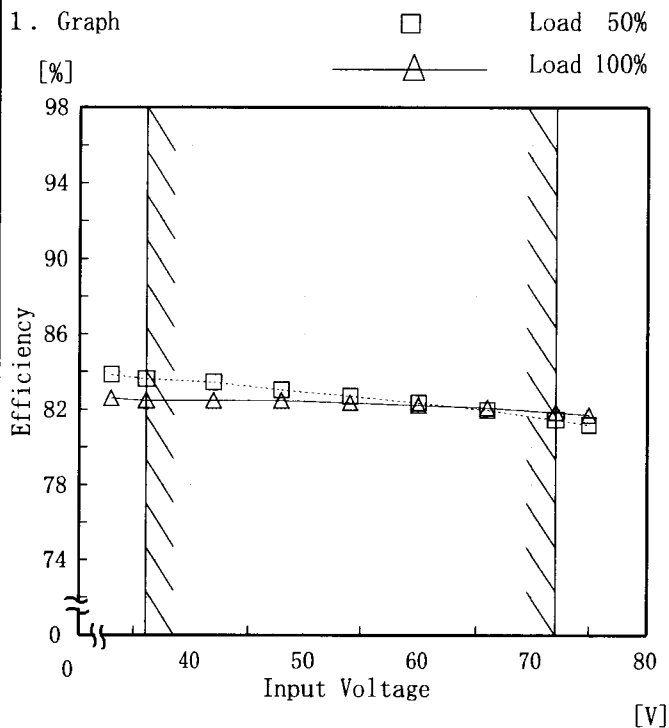
<b>COSEL</b>																																
Model	DAS504805																															
Item	Line Regulation 静の入力変動	Temperature 25°C Testing Circuitry Figure A																														
Object	+5.0V10.00A																															
<p>1. Graph</p> <p style="text-align: right;">□ Load 50% —△— Load 100%</p> <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>		<p>2. Values</p> <table border="1"> <thead> <tr> <th>Input Voltage [V]</th> <th>Load 50% Output Volt. [V]</th> <th>Load 100% Output Volt. [V]</th> </tr> </thead> <tbody> <tr><td>33</td><td>5.135</td><td>5.135</td></tr> <tr><td>36</td><td>5.135</td><td>5.135</td></tr> <tr><td>42</td><td>5.136</td><td>5.136</td></tr> <tr><td>48</td><td>5.136</td><td>5.136</td></tr> <tr><td>54</td><td>5.136</td><td>5.136</td></tr> <tr><td>60</td><td>5.136</td><td>5.136</td></tr> <tr><td>66</td><td>5.136</td><td>5.136</td></tr> <tr><td>72</td><td>5.136</td><td>5.136</td></tr> <tr><td>75</td><td>5.136</td><td>5.136</td></tr> </tbody> </table>	Input Voltage [V]	Load 50% Output Volt. [V]	Load 100% Output Volt. [V]	33	5.135	5.135	36	5.135	5.135	42	5.136	5.136	48	5.136	5.136	54	5.136	5.136	60	5.136	5.136	66	5.136	5.136	72	5.136	5.136	75	5.136	5.136
Input Voltage [V]	Load 50% Output Volt. [V]	Load 100% Output Volt. [V]																														
33	5.135	5.135																														
36	5.135	5.135																														
42	5.136	5.136																														
48	5.136	5.136																														
54	5.136	5.136																														
60	5.136	5.136																														
66	5.136	5.136																														
72	5.136	5.136																														
75	5.136	5.136																														



Model	DAS504805
Item	Efficiency 効率
Object	

Temperature 25°C  
Testing Circuitry Figure A

1. Graph



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 [%]
33	83.9	82.6
36	83.6	82.5
42	83.4	82.5
48	83.0	82.5
54	82.7	82.4
60	82.4	82.2
66	82.0	82.1
72	81.5	81.9
75	81.2	81.7



Model		DAS504805		Temperature	25°C																																															
Item		Load Regulation 静的負荷変動		Testing Circuitry	Figure A																																															
Object		+5.0V10.00A																																																		
1. Graph		△ Input Volt. 36V □ Input Volt. 48V ○ Input Volt. 72V		2. Values																																																
		<table border="1"> <thead> <tr> <th rowspan="2">Load Current [A]</th> <th>Input Volt. 36[V]</th> <th>Input Volt. 48[V]</th> <th>Input Volt. 72[V]</th> </tr> <tr> <th>Output Volt. [V]</th> <th>Output Volt. [V]</th> <th>Output Volt. [V]</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>5.136</td><td>5.136</td><td>5.136</td></tr> <tr><td>2.0</td><td>5.136</td><td>5.136</td><td>5.136</td></tr> <tr><td>4.0</td><td>5.136</td><td>5.136</td><td>5.136</td></tr> <tr><td>6.0</td><td>5.136</td><td>5.136</td><td>5.136</td></tr> <tr><td>8.0</td><td>5.136</td><td>5.136</td><td>5.136</td></tr> <tr><td>10.0</td><td>5.136</td><td>5.136</td><td>5.136</td></tr> <tr><td>11.0</td><td>5.136</td><td>5.136</td><td>5.136</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. 36[V]	Input Volt. 48[V]	Input Volt. 72[V]	Output Volt. [V]	Output Volt. [V]	Output Volt. [V]	0.0	5.136	5.136	5.136	2.0	5.136	5.136	5.136	4.0	5.136	5.136	5.136	6.0	5.136	5.136	5.136	8.0	5.136	5.136	5.136	10.0	5.136	5.136	5.136	11.0	5.136	5.136	5.136	—	—	—	—	—	—	—	—	—	—	—	—
Load Current [A]	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 72[V]																																																	
	Output Volt. [V]	Output Volt. [V]	Output Volt. [V]																																																	
0.0	5.136	5.136	5.136																																																	
2.0	5.136	5.136	5.136																																																	
4.0	5.136	5.136	5.136																																																	
6.0	5.136	5.136	5.136																																																	
8.0	5.136	5.136	5.136																																																	
10.0	5.136	5.136	5.136																																																	
11.0	5.136	5.136	5.136																																																	
—	—	—	—																																																	
—	—	—	—																																																	
—	—	—	—																																																	
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。																																																				

# COSEL

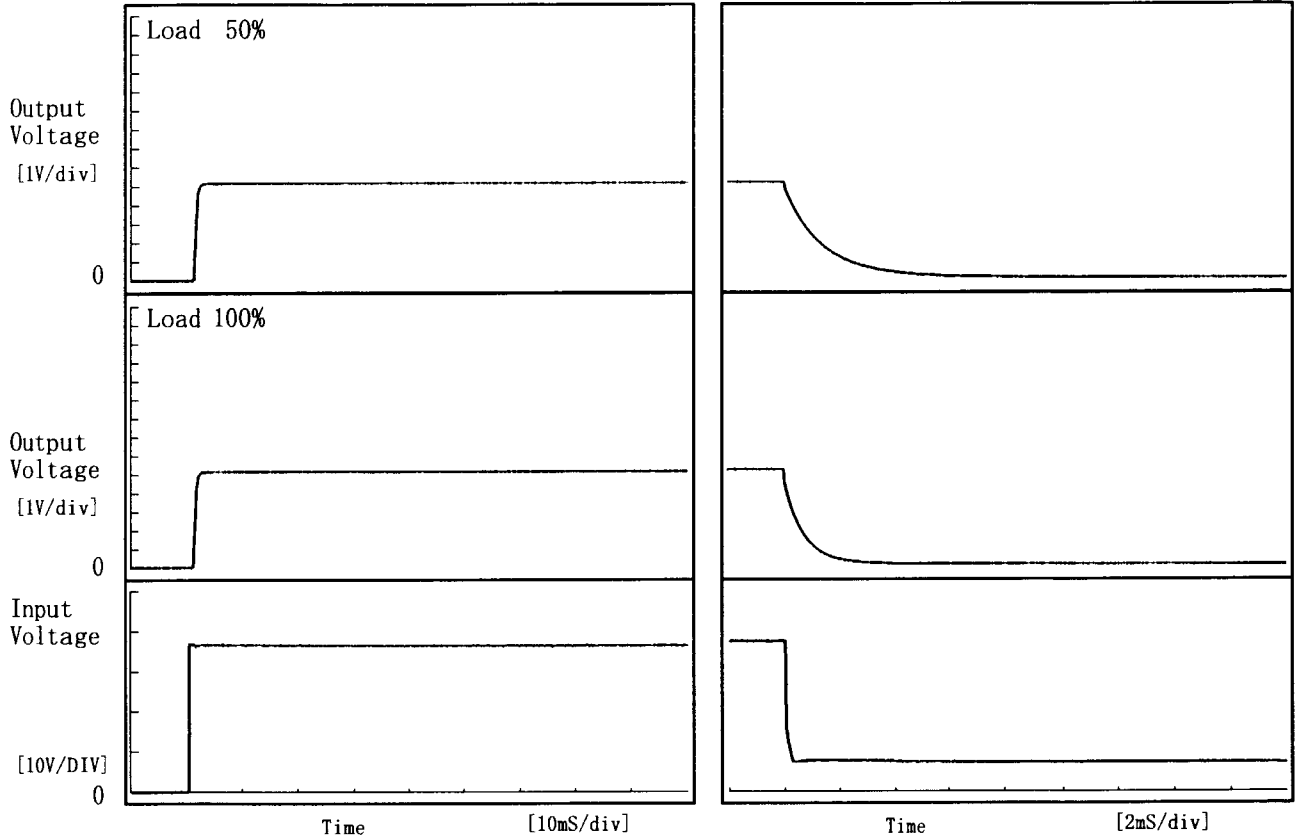
<p>Model            DAS504805</p>		<p>Temperature        25°C</p>																																																								
<p>Item            Overcurrent Protection                  過電流保護</p>		<p>Testing Circuitry   Figure A</p>																																																								
<p>Object          +5.0V10.00A</p>																																																										
<p>1. Graph</p> <div style="display: flex; align-items: center;"> <div style="margin-right: 20px;"> <p>----- Input Volt. 36 V</p> <p>_____ Input Volt. 48 V</p> <p>_____ Input Volt. 72 V</p> </div> </div>		<p>2. Values</p> <table border="1"> <thead> <tr> <th rowspan="2">Output Voltage [V]</th> <th>Input Volt. 36[V]</th> <th>Input Volt. 48[V]</th> <th>Input Volt. 72[V]</th> </tr> <tr> <th>Load Current [A]</th> <th>Load Current [A]</th> <th>Load Current [A]</th> </tr> </thead> <tbody> <tr><td>5.00</td><td>12.11</td><td>12.75</td><td>13.24</td></tr> <tr><td>4.75</td><td>12.26</td><td>12.88</td><td>13.34</td></tr> <tr><td>4.50</td><td>12.37</td><td>12.97</td><td>13.42</td></tr> <tr><td>4.00</td><td>12.64</td><td>13.06</td><td>13.45</td></tr> <tr><td>3.50</td><td>12.43</td><td>12.68</td><td>13.14</td></tr> <tr><td>3.00</td><td>11.91</td><td>12.23</td><td>12.23</td></tr> <tr><td>2.50</td><td>11.34</td><td>11.75</td><td>11.87</td></tr> <tr><td>2.00</td><td>10.83</td><td>11.31</td><td>11.25</td></tr> <tr><td>1.50</td><td>10.38</td><td>10.83</td><td>10.68</td></tr> <tr><td>1.00</td><td>10.10</td><td>10.04</td><td>10.07</td></tr> <tr><td>0.50</td><td>9.82</td><td>9.78</td><td>9.96</td></tr> <tr><td>0.00</td><td>9.66</td><td>9.91</td><td>10.18</td></tr> </tbody> </table>		Output Voltage [V]	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 72[V]	Load Current [A]	Load Current [A]	Load Current [A]	5.00	12.11	12.75	13.24	4.75	12.26	12.88	13.34	4.50	12.37	12.97	13.42	4.00	12.64	13.06	13.45	3.50	12.43	12.68	13.14	3.00	11.91	12.23	12.23	2.50	11.34	11.75	11.87	2.00	10.83	11.31	11.25	1.50	10.38	10.83	10.68	1.00	10.10	10.04	10.07	0.50	9.82	9.78	9.96	0.00	9.66	9.91	10.18
Output Voltage [V]	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 72[V]																																																							
	Load Current [A]	Load Current [A]	Load Current [A]																																																							
5.00	12.11	12.75	13.24																																																							
4.75	12.26	12.88	13.34																																																							
4.50	12.37	12.97	13.42																																																							
4.00	12.64	13.06	13.45																																																							
3.50	12.43	12.68	13.14																																																							
3.00	11.91	12.23	12.23																																																							
2.50	11.34	11.75	11.87																																																							
2.00	10.83	11.31	11.25																																																							
1.50	10.38	10.83	10.68																																																							
1.00	10.10	10.04	10.07																																																							
0.50	9.82	9.78	9.96																																																							
0.00	9.66	9.91	10.18																																																							
<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>																																																										



Model	DAS504805		Temperature	25°C
Item	Rise and Fall Time 立上り、立下り時間		Testing Circuitry	Figure A
Object	+5.0V 10.00A			

1. Graph

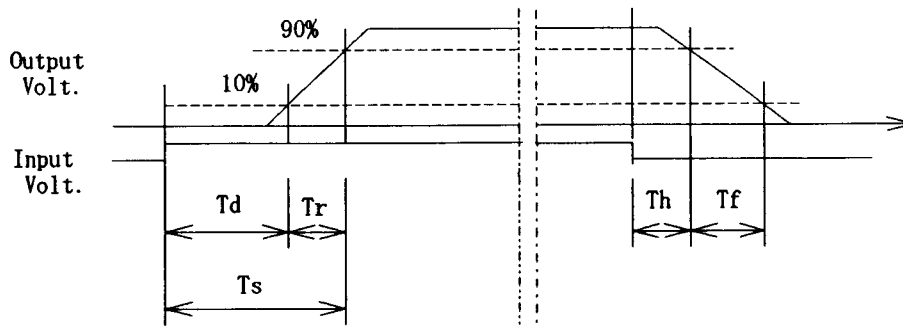
Input Volt. 36 V



2. Values

[mS]

Load \ Time	T d	T r	T s	T h	T f
50 %	0.80	0.70	1.50	0.14	3.49
100 %	0.80	0.75	1.55	0.05	1.81





<b>COSEL</b>																																																					
Model	DAS504805																																																				
Item	Ambient Temperature Drift 周囲温度変動	Testing Circuitry Figure A																																																			
Object	+5.0V10.00A																																																				
1. Graph	<p> <span style="display: inline-block; width: 1em; border-bottom: 1px solid black; margin-right: 0.5em;"></span>△ Input Volt. 36V  <span style="display: inline-block; width: 1em; border-bottom: 1px dashed black; margin-right: 0.5em;"></span>□ Input Volt. 48V  <span style="display: inline-block; width: 1em; border-bottom: 1px dotted black; margin-right: 0.5em;"></span>○ Input Volt. 72V                 </p>	2. Values																																																			
		<table border="1"> <thead> <tr> <th rowspan="2">Temperature [°C]</th> <th>Input Volt. 36[V]</th> <th>Input Volt. 48[V]</th> <th>Input Volt. 72[V]</th> </tr> <tr> <th>Output Volt. [V]</th> <th>Output Volt. [V]</th> <th>Output Volt. [V]</th> </tr> </thead> <tbody> <tr><td>-25</td><td>5.142</td><td>5.143</td><td>5.143</td></tr> <tr><td>-10</td><td>5.142</td><td>5.142</td><td>5.142</td></tr> <tr><td>0</td><td>5.141</td><td>5.141</td><td>5.141</td></tr> <tr><td>15</td><td>5.138</td><td>5.138</td><td>5.139</td></tr> <tr><td>25</td><td>5.136</td><td>5.136</td><td>5.136</td></tr> <tr><td>40</td><td>5.131</td><td>5.132</td><td>5.132</td></tr> <tr><td>55</td><td>5.127</td><td>5.127</td><td>5.127</td></tr> <tr><td>70</td><td>5.121</td><td>5.121</td><td>5.121</td></tr> <tr><td>85</td><td>5.114</td><td>5.114</td><td>5.114</td></tr> <tr><td>90</td><td>5.111</td><td>5.112</td><td>5.112</td></tr> <tr><td>—</td><td>—</td><td>—</td><td>—</td></tr> </tbody> </table>	Temperature [°C]	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 72[V]	Output Volt. [V]	Output Volt. [V]	Output Volt. [V]	-25	5.142	5.143	5.143	-10	5.142	5.142	5.142	0	5.141	5.141	5.141	15	5.138	5.138	5.139	25	5.136	5.136	5.136	40	5.131	5.132	5.132	55	5.127	5.127	5.127	70	5.121	5.121	5.121	85	5.114	5.114	5.114	90	5.111	5.112	5.112	—	—	—	—
Temperature [°C]	Input Volt. 36[V]	Input Volt. 48[V]		Input Volt. 72[V]																																																	
	Output Volt. [V]	Output Volt. [V]	Output Volt. [V]																																																		
-25	5.142	5.143	5.143																																																		
-10	5.142	5.142	5.142																																																		
0	5.141	5.141	5.141																																																		
15	5.138	5.138	5.139																																																		
25	5.136	5.136	5.136																																																		
40	5.131	5.132	5.132																																																		
55	5.127	5.127	5.127																																																		
70	5.121	5.121	5.121																																																		
85	5.114	5.114	5.114																																																		
90	5.111	5.112	5.112																																																		
—	—	—	—																																																		
	<p style="text-align: right;">Load 100%</p> <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>																																																				



# COSEL

Model		DAS504805		Testing Circuitry Figure A																																						
Item		Minimum Input Voltage for Regulated Output Voltage 最低レギュレーション電圧																																								
Object		+5.0V10.00A		2. Values																																						
1. Graph		<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>□ ----- Load 50%</p> <p>△ ----- Load 100%</p> </div> </div>																																								
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。																																										
				<table border="1"> <thead> <tr> <th rowspan="2">Ambient Temp. [°C]</th> <th>Load 50%</th> <th>Load 100%</th> </tr> <tr> <th>Input Volt. [V]</th> <th>Input Volt. [V]</th> </tr> </thead> <tbody> <tr><td>-25</td><td>26.8</td><td>28.8</td></tr> <tr><td>-10</td><td>27.3</td><td>28.8</td></tr> <tr><td>0</td><td>27.3</td><td>28.8</td></tr> <tr><td>15</td><td>27.3</td><td>29.3</td></tr> <tr><td>25</td><td>27.3</td><td>29.3</td></tr> <tr><td>40</td><td>27.8</td><td>29.8</td></tr> <tr><td>55</td><td>28.3</td><td>30.3</td></tr> <tr><td>70</td><td>28.3</td><td>30.8</td></tr> <tr><td>85</td><td>28.8</td><td>31.2</td></tr> <tr><td>90</td><td>28.8</td><td>31.2</td></tr> <tr><td>—</td><td>—</td><td>—</td></tr> </tbody> </table>	Ambient Temp. [°C]	Load 50%	Load 100%	Input Volt. [V]	Input Volt. [V]	-25	26.8	28.8	-10	27.3	28.8	0	27.3	28.8	15	27.3	29.3	25	27.3	29.3	40	27.8	29.8	55	28.3	30.3	70	28.3	30.8	85	28.8	31.2	90	28.8	31.2	—	—	—
Ambient Temp. [°C]	Load 50%	Load 100%																																								
	Input Volt. [V]	Input Volt. [V]																																								
-25	26.8	28.8																																								
-10	27.3	28.8																																								
0	27.3	28.8																																								
15	27.3	29.3																																								
25	27.3	29.3																																								
40	27.8	29.8																																								
55	28.3	30.3																																								
70	28.3	30.8																																								
85	28.8	31.2																																								
90	28.8	31.2																																								
—	—	—																																								



<b>COSEL</b>																								
Model	DAS504805	Temperature 25 °C Testing Circuitry Figure A																						
Item	Time Lapse Drift 経時ドリフト																							
Object	+5.0V10.00A																							
<p>1. Graph</p> <p>[V]</p> <p style="text-align: center;">Time [H]</p> <p style="text-align: center;">Input Volt. 48V Load 100%</p>		<p>2. Values</p> <table border="1"> <thead> <tr> <th>Time since start [H]</th> <th>Output Voltage [V]</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>5.138</td></tr> <tr><td>0.5</td><td>5.137</td></tr> <tr><td>1.0</td><td>5.136</td></tr> <tr><td>2.0</td><td>5.136</td></tr> <tr><td>3.0</td><td>5.136</td></tr> <tr><td>4.0</td><td>5.136</td></tr> <tr><td>5.0</td><td>5.136</td></tr> <tr><td>6.0</td><td>5.136</td></tr> <tr><td>7.0</td><td>5.136</td></tr> <tr><td>8.0</td><td>5.136</td></tr> </tbody> </table>	Time since start [H]	Output Voltage [V]	0.0	5.138	0.5	5.137	1.0	5.136	2.0	5.136	3.0	5.136	4.0	5.136	5.0	5.136	6.0	5.136	7.0	5.136	8.0	5.136
Time since start [H]	Output Voltage [V]																							
0.0	5.138																							
0.5	5.137																							
1.0	5.136																							
2.0	5.136																							
3.0	5.136																							
4.0	5.136																							
5.0	5.136																							
6.0	5.136																							
7.0	5.136																							
8.0	5.136																							



Model		DAS504805	Testing Circuitry Figure A
Item	Output Voltage Accuracy 定電圧精度		
Object	+5.0V10.00A		

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 : -10~85 °C

Input Voltage : 36~72 V

Load Current : 0.00~10.00 A

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

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

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 -10~85 °C

入力電圧 36~72 V

負荷電流 0.00~10.00 A

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

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

Item	Temperature [°C]	Input Voltage [V]	Output Current [A]	Output Voltage [V]	Output Voltage Accuracy [mV]	Output Voltage Accuracy(Ration) [%]
Maximum Voltage	-10	72	0.00	5.142	±15	±0.3
Minimum Voltage	85	36	0.00	5.113		

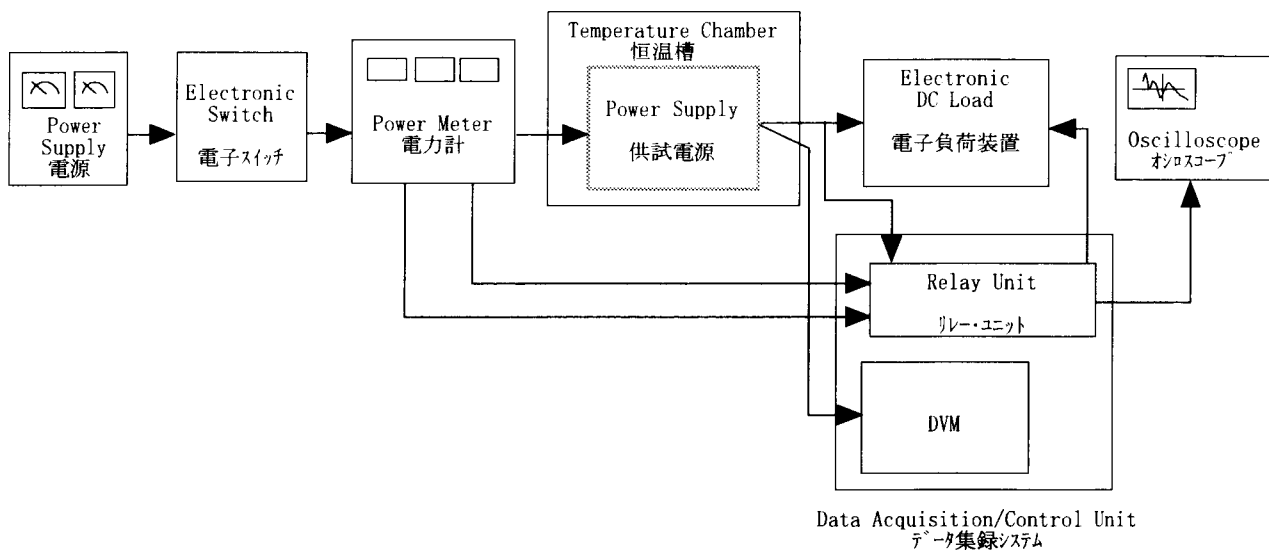


Figure A