



TEST DATA OF CDS4004805

(48V INPUT)

Regulated DC Power Supply
Apr. 3, 2002

Approved by : Kazuyoshi Shimano
Kazuyoshi Shimano Design Manager

Prepared by : Hitoshi Nakayama
Hitoshi Nakayama 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. Input Current (by Input Voltage)	2
入力電流 (入力電圧特性)	
3. Input Current (by Load Current)	3
入力電流 (負荷特性)	
4. Input Power (by Load Current)	4
入力電力 (負荷特性)	
5. Efficiency (by Input Voltage)	5
効率 (入力電圧特性)	
6. Efficiency (by Load Current)	6
効率 (負荷特性)	
7. Load Regulation	7
静的負荷変動	
8. Ripple Voltage (by Load Current)	8
リップル電圧 (負荷特性)	
9. Ripple-Noise	9
リップルノイズ	
10. Overcurrent Protection	10
過電流保護	
11. Overvoltage Protection	11
過電圧保護	
12. Dynamic Load Response	12
動的負荷変動	
13. Rise and Fall Time	13
立上り、立下り時間	
14. Ambient Temperature Drift	14
周囲温度変動	
15. Minimum Input Voltage for Regulated Output Voltage	15
最低レギュレーション電圧	
16. Ripple Voltage (by Ambient Temperature)	16
リップル電圧 (周囲温度特性)	
17. Time Lapse Drift	17
経時ドリフト	
18. Output Voltage Accuracy	18
定電圧精度	
19. Condensation	19
結露特性	
20. Line Noise Tolerance	20
入力雑音耐量	
21. Figure of Testing Circuitry	21
測定回路図	

(Final Page 21)

COSEL

COSEL

Model		CDS4004805	
Item	Input Current (by Input Voltage) 入力電流 (入力電圧特性)		Temperature 25℃ Testing Circuitry Figure A
Object			

1. Graph

—△— Load 100%

---□--- Load 50%

---○--- Load 0%

Input Current [A]

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]	Input Current [A]		
	Load 0%	Load 50%	Load 100%
0	0.000	0.000	0.000
25	0.016	0.015	0.016
30	0.125	8.550	14.025
33	0.117	7.433	14.528
36	0.108	6.643	13.000
40	0.100	5.873	11.597
48	0.094	4.871	9.666
54	0.091	4.350	8.590
60	0.086	3.933	7.740
68	0.080	3.493	6.844
76	0.075	3.153	6.139
80	0.072	3.006	5.843
--	--	--	--
--	--	--	--
--	--	--	--
--	--	--	--

COSEL

Model		CDS4004805																																																				
Item	Input Current (by Load Current) 入力電流 (負荷特性)																																																					
Object																																																						
1. Graph		2. Values																																																				
<div><div><div>—△—</div><div>Input Volt.</div><div>36V</div></div><div><div>---□---</div><div>Input Volt.</div><div>48V</div></div><div><div>---○---</div><div>Input Volt.</div><div>76V</div></div></div> <div>Input Current [A]</div> <div>Load Current [A]</div>		<table><tr><th rowspan="2">Load Current [A]</th><th colspan="3">Input Current [A]</th></tr><tr><th>Input Volt. 36[V]</th><th>Input Volt. 48[V]</th><th>Input Volt. 76[V]</th></tr><tr><td>0</td><td>0.111</td><td>0.098</td><td>0.077</td></tr><tr><td>15</td><td>2.776</td><td>1.953</td><td>1.303</td></tr><tr><td>30</td><td>5.116</td><td>3.699</td><td>2.414</td></tr><tr><td>45</td><td>7.477</td><td>5.525</td><td>3.555</td></tr><tr><td>60</td><td>9.974</td><td>7.361</td><td>4.726</td></tr><tr><td>75</td><td>12.566</td><td>9.287</td><td>5.908</td></tr><tr><td>80</td><td>13.466</td><td>9.947</td><td>6.314</td></tr><tr><td>88</td><td>14.823</td><td>11.013</td><td>6.978</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]	Input Current [A]			Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]	0	0.111	0.098	0.077	15	2.776	1.953	1.303	30	5.116	3.699	2.414	45	7.477	5.525	3.555	60	9.974	7.361	4.726	75	12.566	9.287	5.908	80	13.466	9.947	6.314	88	14.823	11.013	6.978	--	--	--	--	--	--	--	--	--	--	--	--
Load Current [A]	Input Current [A]																																																					
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]																																																			
0	0.111	0.098	0.077																																																			
15	2.776	1.953	1.303																																																			
30	5.116	3.699	2.414																																																			
45	7.477	5.525	3.555																																																			
60	9.974	7.361	4.726																																																			
75	12.566	9.287	5.908																																																			
80	13.466	9.947	6.314																																																			
88	14.823	11.013	6.978																																																			
--	--	--	--																																																			
--	--	--	--																																																			
--	--	--	--																																																			
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

ModelCDS4004805		Temperature25℃																																																				
Item	Input Power (by Load Current) 入力電力 (負荷特性)	Testing Circuitry	Figure A																																																			
Object																																																						
1. Graph		2. Values																																																				
<div><div>—△—Input Volt. 36V</div><div>---□---Input Volt. 48V</div><div>---○---Input Volt. 76V</div></div> <p>Input Power [W]</p> <p>Load Current [A]</p>		<table><tr><th rowspan="2">Load Current [A]</th><th colspan="3">Input Power [W]</th></tr><tr><th>Input Volt. 36[V]</th><th>Input Volt. 48[V]</th><th>Input Volt. 76[V]</th></tr><tr><td>0</td><td>4.0</td><td>4.7</td><td>5.9</td></tr><tr><td>15</td><td>99.7</td><td>93.6</td><td>99.0</td></tr><tr><td>30</td><td>183.3</td><td>177.1</td><td>183.2</td></tr><tr><td>45</td><td>269.5</td><td>264.2</td><td>269.8</td></tr><tr><td>60</td><td>358.5</td><td>353.6</td><td>358.4</td></tr><tr><td>75</td><td>450.5</td><td>445.5</td><td>448.9</td></tr><tr><td>80</td><td>482.2</td><td>476.9</td><td>479.6</td></tr><tr><td>88</td><td>533.0</td><td>527.6</td><td>529.9</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]	Input Power [W]			Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]	0	4.0	4.7	5.9	15	99.7	93.6	99.0	30	183.3	177.1	183.2	45	269.5	264.2	269.8	60	358.5	353.6	358.4	75	450.5	445.5	448.9	80	482.2	476.9	479.6	88	533.0	527.6	529.9	--	--	--	--	--	--	--	--	--	--	--	--
Load Current [A]	Input Power [W]																																																					
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]																																																			
0	4.0	4.7	5.9																																																			
15	99.7	93.6	99.0																																																			
30	183.3	177.1	183.2																																																			
45	269.5	264.2	269.8																																																			
60	358.5	353.6	358.4																																																			
75	450.5	445.5	448.9																																																			
80	482.2	476.9	479.6																																																			
88	533.0	527.6	529.9																																																			
--	--	--	--																																																			
--	--	--	--																																																			
--	--	--	--																																																			
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

Model		CDS4004805		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>Efficiency [%]</div><div>Input Voltage [V]</div></div>				<table><tr><th rowspan="2">Input Voltage [V]</th><th colspan="2">Efficiency [%]</th></tr><tr><th>Load 50%</th><th>Load 100%</th></tr><tr><td>33</td><td>81.7</td><td>82.0</td></tr><tr><td>36</td><td>84.0</td><td>83.9</td></tr><tr><td>40</td><td>85.4</td><td>84.7</td></tr><tr><td>48</td><td>86.1</td><td>84.7</td></tr><tr><td>54</td><td>85.6</td><td>84.7</td></tr><tr><td>60</td><td>85.2</td><td>84.7</td></tr><tr><td>68</td><td>84.6</td><td>84.4</td></tr><tr><td>76</td><td>83.9</td><td>84.2</td></tr><tr><td>80</td><td>83.5</td><td>84.0</td></tr></table>				Input Voltage [V]	Efficiency [%]		Load 50%	Load 100%	33	81.7	82.0	36	84.0	83.9	40	85.4	84.7	48	86.1	84.7	54	85.6	84.7	60	85.2	84.7	68	84.6	84.4	76	83.9	84.2	80	83.5	84.0
Input Voltage [V]	Efficiency [%]																																						
	Load 50%	Load 100%																																					
33	81.7	82.0																																					
36	84.0	83.9																																					
40	85.4	84.7																																					
48	86.1	84.7																																					
54	85.6	84.7																																					
60	85.2	84.7																																					
68	84.6	84.4																																					
76	83.9	84.2																																					
80	83.5	84.0																																					
<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>																																							

COSEL

Model		CDS4004805																																																				
Item	Efficiency (by Load Current) 効率 (負荷特性)																																																					
Object																																																						
1. Graph		2. Values																																																				
<div><div><div>—△—</div><div>---□---</div><div>---○---</div></div><div>Input Volt. 36V</div><div>Input Volt. 48V</div><div>Input Volt. 76V</div></div> <p>Efficiency [%]</p> <p>Load Current [A]</p>		<table><tr><th rowspan="2">Load Current [A]</th><th colspan="3">Efficiency [%]</th></tr><tr><th>Input Volt. 36[V]</th><th>Input Volt. 48[V]</th><th>Input Volt. 76[V]</th></tr><tr><td>0</td><td>—</td><td>—</td><td>—</td></tr><tr><td>15</td><td>75.7</td><td>80.6</td><td>76.3</td></tr><tr><td>30</td><td>82.5</td><td>85.4</td><td>82.5</td></tr><tr><td>45</td><td>84.3</td><td>86.0</td><td>84.2</td></tr><tr><td>60</td><td>84.5</td><td>85.7</td><td>84.5</td></tr><tr><td>75</td><td>84.1</td><td>85.0</td><td>84.4</td></tr><tr><td>80</td><td>83.8</td><td>84.7</td><td>84.2</td></tr><tr><td>88</td><td>83.4</td><td>84.2</td><td>83.9</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]	Efficiency [%]			Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]	0	—	—	—	15	75.7	80.6	76.3	30	82.5	85.4	82.5	45	84.3	86.0	84.2	60	84.5	85.7	84.5	75	84.1	85.0	84.4	80	83.8	84.7	84.2	88	83.4	84.2	83.9	--	—	—	—	--	—	—	—	--	—	—	—
Load Current [A]	Efficiency [%]																																																					
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]																																																			
0	—	—	—																																																			
15	75.7	80.6	76.3																																																			
30	82.5	85.4	82.5																																																			
45	84.3	86.0	84.2																																																			
60	84.5	85.7	84.5																																																			
75	84.1	85.0	84.4																																																			
80	83.8	84.7	84.2																																																			
88	83.4	84.2	83.9																																																			
--	—	—	—																																																			
--	—	—	—																																																			
--	—	—	—																																																			
<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

Model	CDS4004805																																																	
Item	Load Regulation 静的負荷変動	Temperature	25℃																																															
Object	+5V80A	Testing Circuitry	Figure A																																															
1. Graph		2. Values																																																
<div><div><div>—△—</div><div>Input Volt. 36V</div><div>48V</div></div><div><div>---□---</div><div>Input Volt. 48V</div><div>76V</div></div><div><div>-○-</div><div>Input Volt. 76V</div><div></div></div></div> <p>Output Voltage [V]</p> <p>Load Current [A]</p> <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>		<table><tr><th rowspan="2">Load Current [A]</th><th colspan="3">Output Voltage [V]</th></tr><tr><th>Input Volt. 36[V]</th><th>Input Volt. 48[V]</th><th>Input Volt. 76[V]</th></tr><tr><td>0</td><td>5.060</td><td>5.060</td><td>5.060</td></tr><tr><td>15</td><td>5.059</td><td>5.060</td><td>5.059</td></tr><tr><td>30</td><td>5.058</td><td>5.059</td><td>5.059</td></tr><tr><td>45</td><td>5.058</td><td>5.058</td><td>5.058</td></tr><tr><td>60</td><td>5.057</td><td>5.057</td><td>5.057</td></tr><tr><td>75</td><td>5.056</td><td>5.057</td><td>5.056</td></tr><tr><td>80</td><td>5.056</td><td>5.056</td><td>5.056</td></tr><tr><td>88</td><td>5.056</td><td>5.056</td><td>5.056</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. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]	0	5.060	5.060	5.060	15	5.059	5.060	5.059	30	5.058	5.059	5.059	45	5.058	5.058	5.058	60	5.057	5.057	5.057	75	5.056	5.057	5.056	80	5.056	5.056	5.056	88	5.056	5.056	5.056	--	--	--	--	--	--	--	--
Load Current [A]	Output Voltage [V]																																																	
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]																																															
0	5.060	5.060	5.060																																															
15	5.059	5.060	5.059																																															
30	5.058	5.059	5.059																																															
45	5.058	5.058	5.058																																															
60	5.057	5.057	5.057																																															
75	5.056	5.057	5.056																																															
80	5.056	5.056	5.056																																															
88	5.056	5.056	5.056																																															
--	--	--	--																																															
--	--	--	--																																															

COSEL

<

COSEL

Model	CDS4004805		
Item	Ripple-Noise リップルノイズ	Temperature	25℃
Object	+5V80A	Testing Circuitry	Figure A
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>			

COSEL

Model

CDS4004805

Item

Overcurrent Protection
過電流保護

Object

+5V80A

1. Graph

Input Volt. 36V

Input Volt. 48V

Input Volt. 76V

Output Voltage [V]

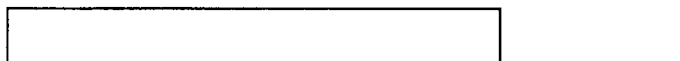
BC-3416

COSEL

Model	CDS4004805	Temperature 25°C Testing Circuitry Figure A
Item	Dynamic Load Response 動的負荷変動	
Object	+5V80A	

Input Volt. 48 V
Cycle 1000 ms

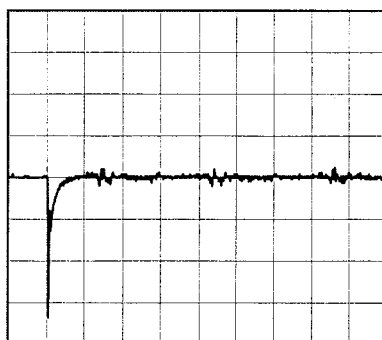
Load Current



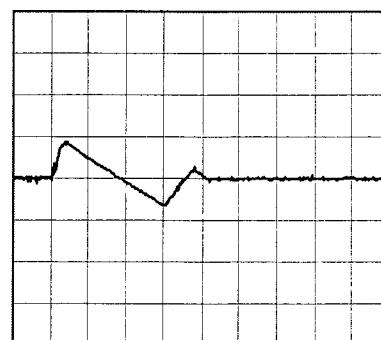
Min. Load (0A) ←→

Load 100% (80A)

200 mV/div



2 ms/div

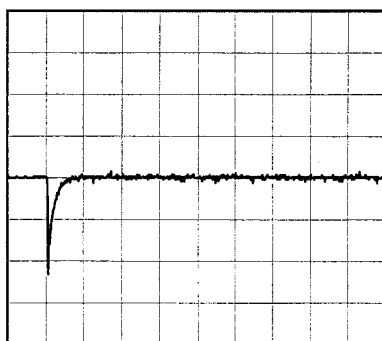


2 ms/div

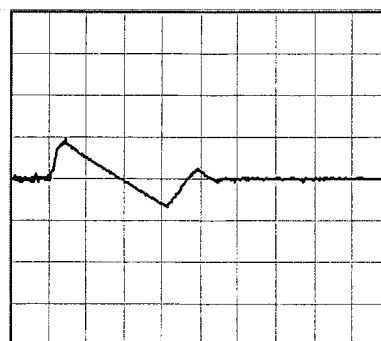
Min. Load (0A) ←→

Load 50% (40A)

200 mV/div



2 ms/div

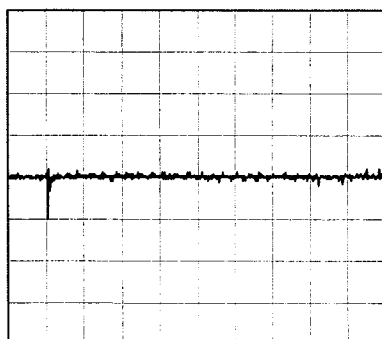


2 ms/div

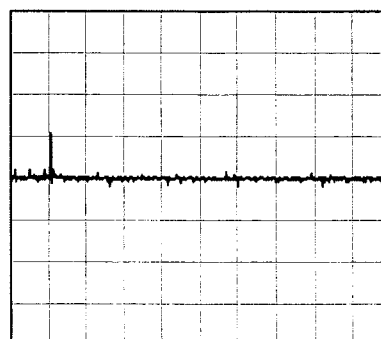
Load 10% (8A) ←→

Load 100% (80A)

200 mV/div



2 ms/div



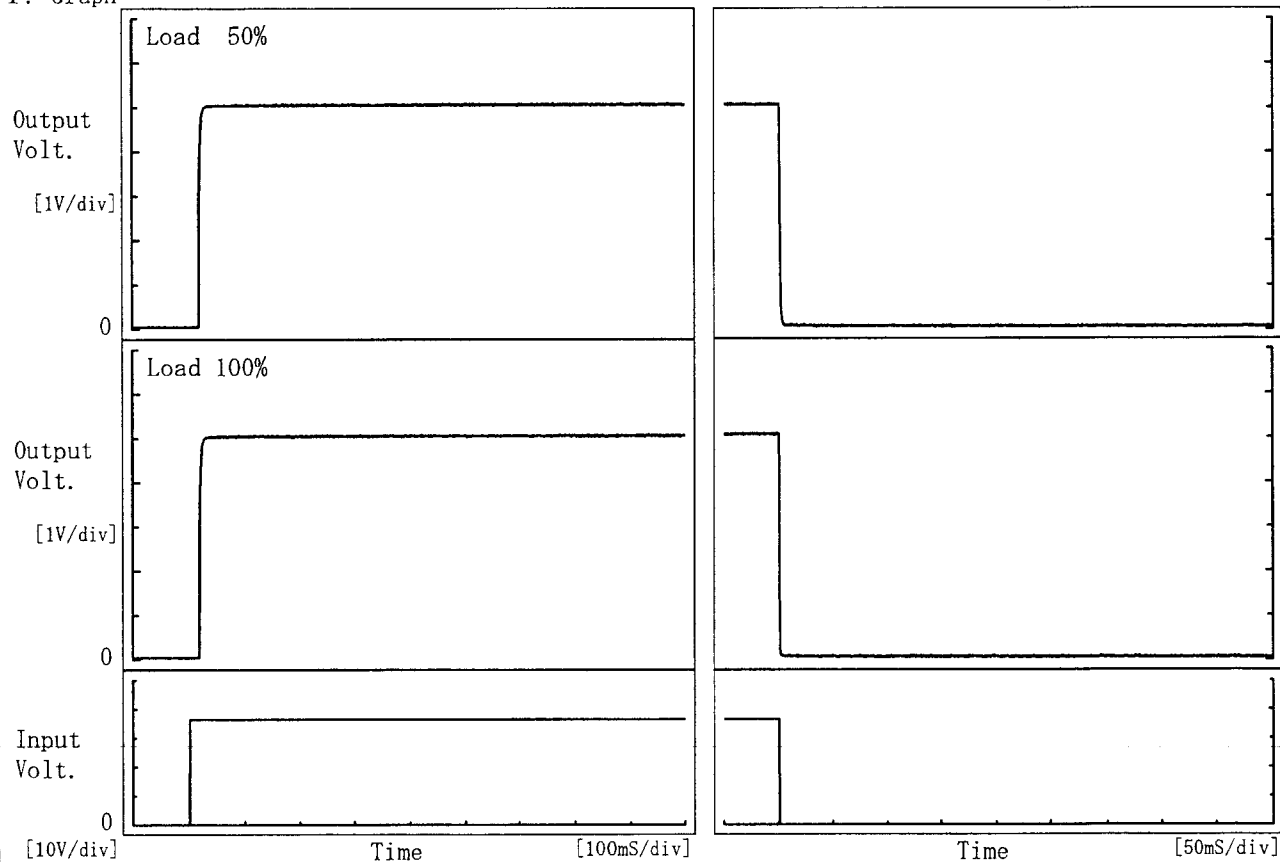
2 ms/div

COSEL

Model	CDS4004805	Temperature	25°C
Item	Rise and Fall Time 立上り、立下り時間	Testing Circuitry	Figure A
Object	+5V80A		

1. Graph

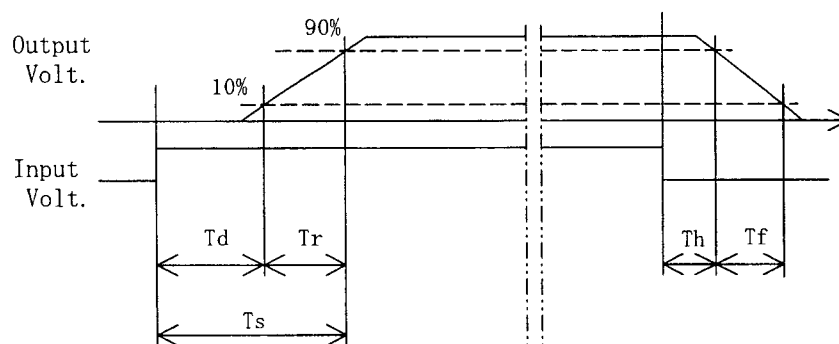
Input Volt. 36 V



2. Values

[mS]

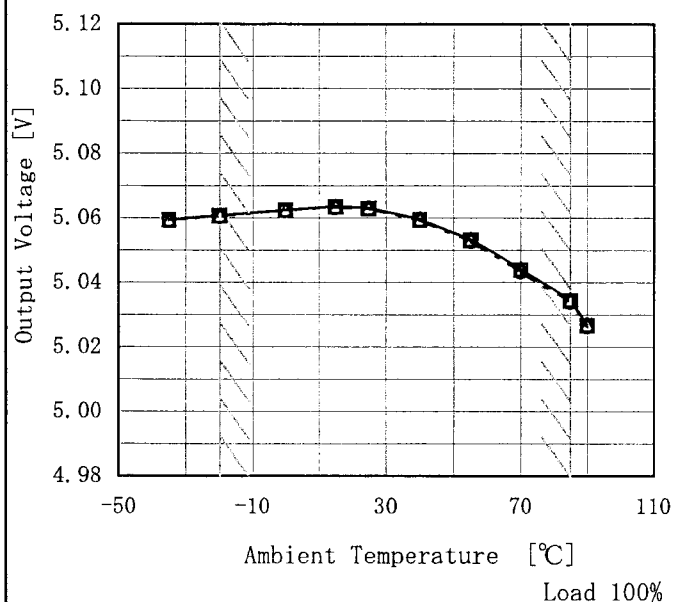
Load \ Time	T d	T r	T s	T h	T f
50 %	17.0	4.0	21.0	0.3	1.8
100 %	17.0	4.0	21.0	0.3	1.0



COSEL

Model	CDS4004805
Item	Ambient Temperature Drift 周囲温度変動
Object	+5V80A

1. Graph
- △— Input Volt. 36V
 ---□--- Input Volt. 48V
 -●- Input Volt. 76V



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。

Testing Circuitry Figure A

2. Values

Ambient Temperature [°C]	Output Voltage [V]		
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
-35	5.059	5.059	5.059
-20	5.061	5.061	5.060
0	5.063	5.062	5.062
15	5.064	5.063	5.063
25	5.063	5.063	5.063
40	5.060	5.059	5.059
55	5.053	5.053	5.053
70	5.044	5.044	5.043
85	5.035	5.034	5.034
90	5.027	5.027	5.026
--	—	—	—

COSEL

Model		CDS4004805	
Item		Minimum Input Voltage for Regulated Output Voltage 最低レギュレーション電圧	
Object		+5V80A	
1. Graph		2. Values	

---□---

Load 50%

—△—

Load 100%

Ambient Temperature [°C]	Input Voltage [V]	
	Load 50%	Load 100%
-35	29.3	30.7
-20	29.2	30.7
0	29.1	30.9
15	29.0	30.9
25	29.0	30.9
40	28.9	31.0
55	28.8	31.0
70	28.8	31.1
85	28.8	31.1
90	28.8	31.2
--	—	—

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

Model		CDS4004805	
Item		Ripple Voltage (by Ambient Temp.) リップル電圧 (周囲温度特性)	
Object		+5V80A	

1. Graph

---□---

Load 50%

—△—

Load 100%

80

60

40

20

0

Y-axis label

↑

↓

Ripple Voltage [mV]

-50

-10

30

70

110

X-axis label

↑

↓

Ambient Temperature [°C]

Input Volt. 48V

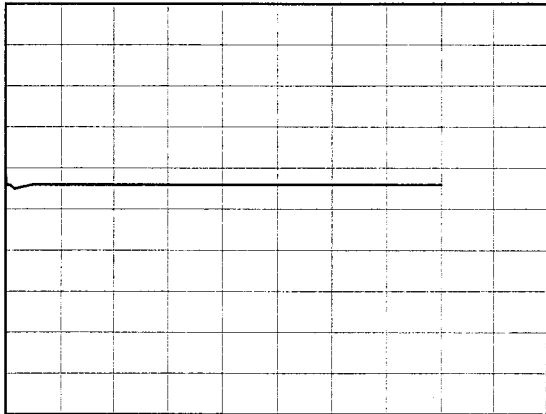
Note: Slanted line shows the range of the rated ambient temperature.

(注) 斜線は定格周囲温度範囲を示す。

2. Values

Ambient Temperature [°C]	Ripple Voltage [mV]	
	Load 50%	Load 100%
-35	20	20
-20	15	15
0	10	10
15	10	10
25	10	10
40	10	10
55	10	10
70	10	10
85	10	10
90	10	10
—	—	—

COSEL

Model	CDS4004805																								
Item	Time Lapse Drift 経時ドリフト	Temperature	25℃																						
Object	+5V80A	Testing Circuitry	Figure A																						
1. Graph		2. Values																							
<div><div><div>5.10</div><div>5.08</div><div>5.06</div><div>5.04</div><div>5.02</div><div>5.00</div></div><div></div><div><div>0</div><div>2</div><div>4</div><div>6</div><div>8</div><div>10</div></div></div> <div><div>Output Voltage [V]</div><div>Time [H]</div><div>Input Volt. 48V</div><div>Load 100%</div></div>		<table><tr><th>Time since start [H]</th><th>Output Voltage [V]</th></tr><tr><td>0.0</td><td>5.059</td></tr><tr><td>0.5</td><td>5.056</td></tr><tr><td>1.0</td><td>5.056</td></tr><tr><td>2.0</td><td>5.056</td></tr><tr><td>3.0</td><td>5.056</td></tr><tr><td>4.0</td><td>5.056</td></tr><tr><td>5.0</td><td>5.056</td></tr><tr><td>6.0</td><td>5.056</td></tr><tr><td>7.0</td><td>5.056</td></tr><tr><td>8.0</td><td>5.056</td></tr></table>		Time since start [H]	Output Voltage [V]	0.0	5.059	0.5	5.056	1.0	5.056	2.0	5.056	3.0	5.056	4.0	5.056	5.0	5.056	6.0	5.056	7.0	5.056	8.0	5.056
Time since start [H]	Output Voltage [V]																								
0.0	5.059																								
0.5	5.056																								
1.0	5.056																								
2.0	5.056																								
3.0	5.056																								
4.0	5.056																								
5.0	5.056																								
6.0	5.056																								
7.0	5.056																								
8.0	5.056																								

COSEL

		Testing Circuitry Figure A
Model	CDS4004805	
Item	Output Voltage Accuracy 定電圧精度	
Object	+5V80A	

1. Output Voltage Accuracy

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

Temperature : -20 ~ 85°C

Input Voltage : 36 ~ 76V

Load Current : 0 ~ 80A

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

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

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 : -20 ~ 85°C

入力電圧 : 36 ~ 76V

負荷電流 : 0 ~ 80A

* 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 [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	25	76	0	5.068	±17	±0.3
Minimum Voltage	85	76	80	5.034		

COSEL

Model		CDS4004805	Testing Circuitry Figure A
Item		Condense 結露特性	
Object		+5V80A	

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]	5.056	Input Volt.:48V, Load Current.:80A
Line Regulation [mV]	1	Input Volt.:36~76V, Load Current.:80A
Load Regulation [mV]	4	Input Volt.:48V, Load Current.:0~80A

COSEL

Model	CDS4004805	Temperature	25°C
Item	Line Noise Tolerance 入力雑音耐量	Testing Circuitry	Figure B
Object	+5V80A		

1. Conditions

- Input Voltage : 48 V
- Pulse Input Duration : 1 min. or more
- Pulse Voltage : 2000 V
- Load : 100 %
- Pulse Cycle : 10 mS

2. Results

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

COSEL

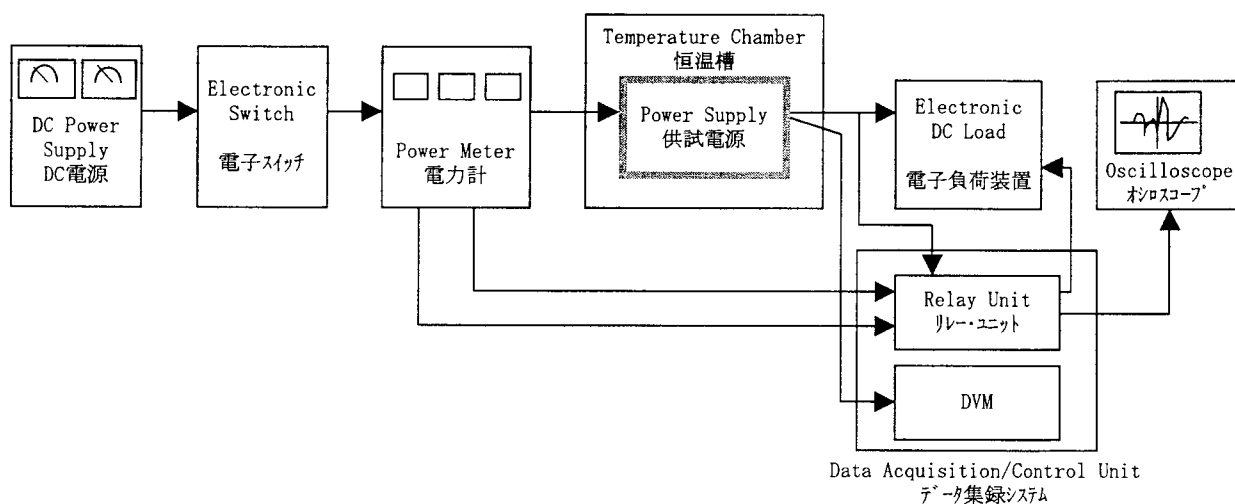


Figure A

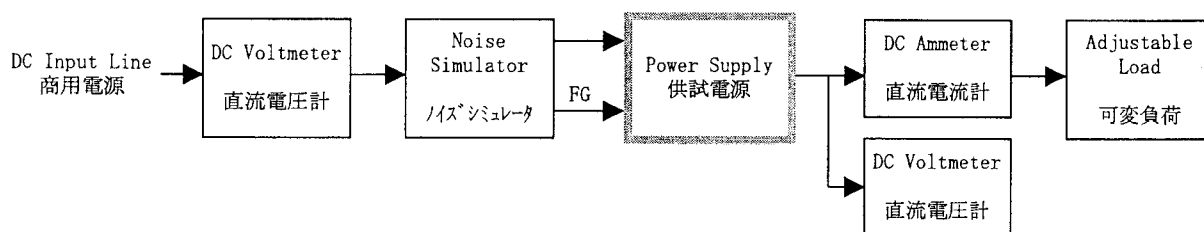


Figure B

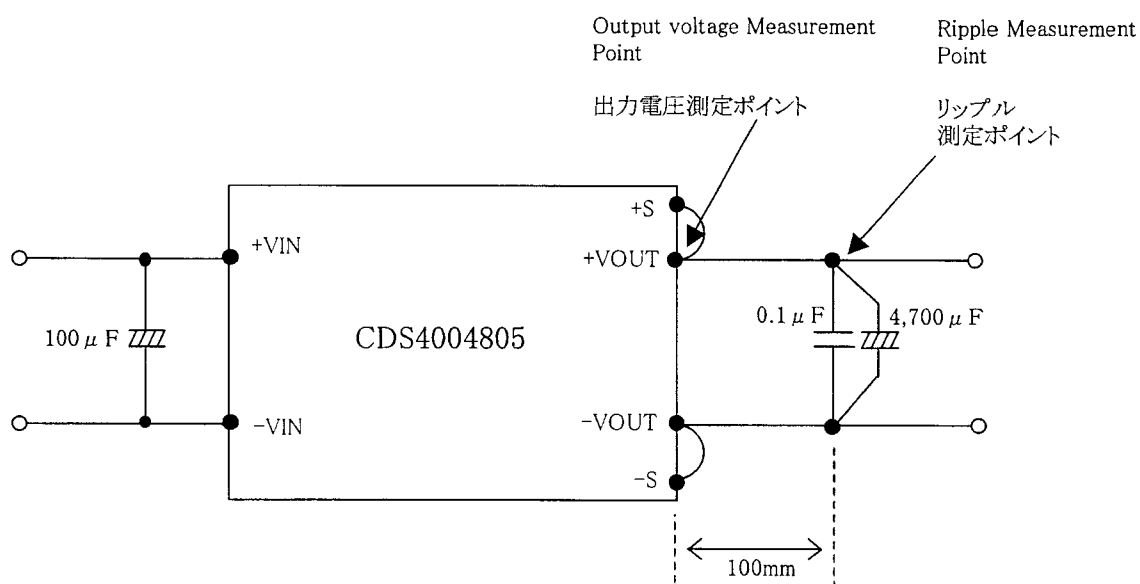


Figure C (General Electric Characteristic)
一般電気特性