



TEST DATA OF ZTS31205

(12.0V INPUT)

Regulated DC Power Supply

Date : Mar. 5. 1998

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Design Manager

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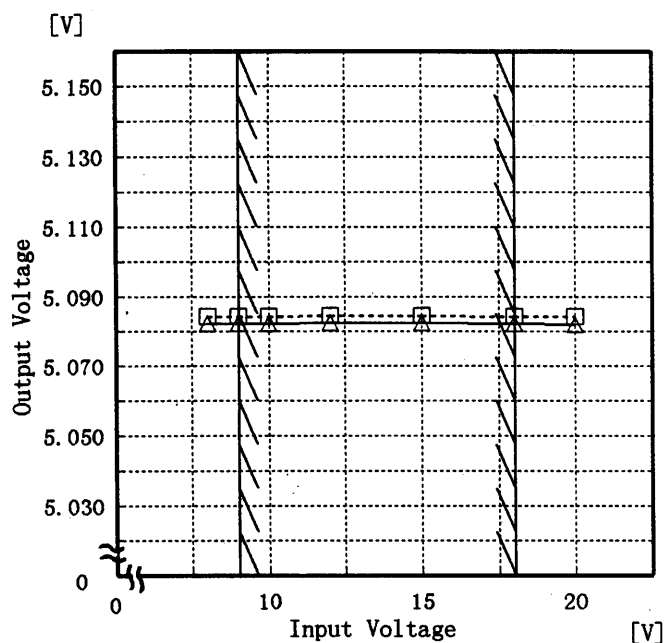
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Model	ZTS31205
Item	Line Regulation 静的入力変動
Object	+5V0.6A

Temperature 25°C
Testing Circuitry Figure A

1. Graph
- Load 50%
-----△----- Load 100%



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

(注)斜線は定格入力電圧範囲を示す。

2. Values

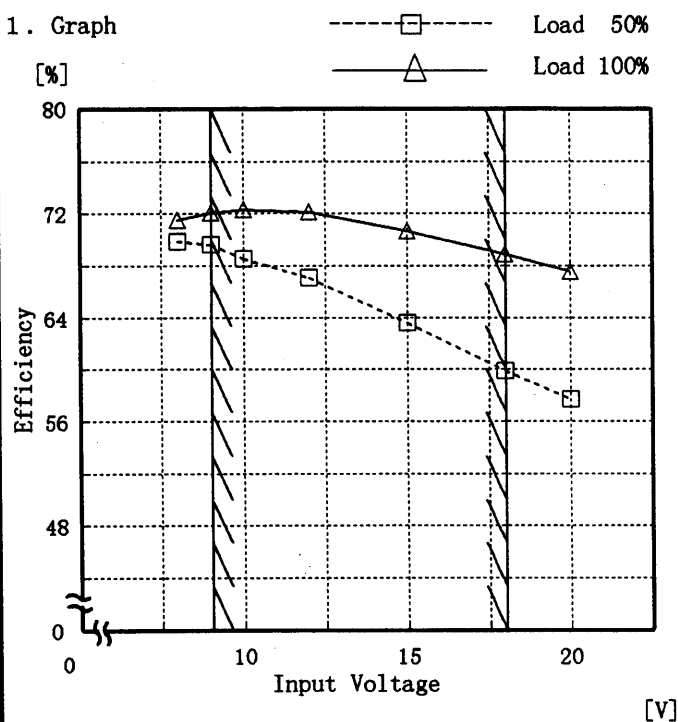
Input Voltage [V]	Load 50%	Load 100%
	Output Volt. [V]	Output Volt. [V]
8.0	5.084	5.082
9.0	5.084	5.082
10.0	5.084	5.082
12.0	5.085	5.082
15.0	5.085	5.082
18.0	5.084	5.082
20.0	5.084	5.082
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—

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Model	ZTS31205
Item	Efficiency 効率
Object	

Temperature 25℃
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 [%]
8.0	69.9	71.5
9.0	69.6	72.1
10.0	68.6	72.3
12.0	67.1	72.2
15.0	63.6	70.7
18.0	59.9	68.9
20.0	57.7	67.6
—	—	—
—	—	—
—	—	—
—	—	—
—	—	—

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Model ZTS31205		Temperature 25°C																																																
Item	Load Regulation 静的負荷変動	Testing Circuitry	Figure A																																															
Object	+5V0.6A																																																	
1. Graph		2. Values																																																
<div> <div>—△— Input Volt. 9.0V</div> <div>- -□- - Input Volt. 12.0V</div> <div>- -○- - Input Volt. 18.0V</div> </div> <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>Input Volt. 9.0[V]</th><th>Input Volt. 12.0[V]</th><th>Input Volt. 18.0[V]</th></tr> <tr> <th>Output Volt. [V]</th><th>Output Volt. [V]</th><th>Output Volt. [V]</th></tr> <tr><td>0.00</td><td>5.086</td><td>5.086</td><td>5.087</td></tr> <tr><td>0.10</td><td>5.086</td><td>5.086</td><td>5.086</td></tr> <tr><td>0.20</td><td>5.085</td><td>5.085</td><td>5.085</td></tr> <tr><td>0.30</td><td>5.085</td><td>5.084</td><td>5.084</td></tr> <tr><td>0.40</td><td>5.084</td><td>5.084</td><td>5.084</td></tr> <tr><td>0.50</td><td>5.084</td><td>5.083</td><td>5.083</td></tr> <tr><td>0.60</td><td>5.083</td><td>5.083</td><td>5.083</td></tr> <tr><td>0.66</td><td>5.083</td><td>5.083</td><td>5.082</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 Volt. 9.0[V]	Input Volt. 12.0[V]	Input Volt. 18.0[V]	Output Volt. [V]	Output Volt. [V]	Output Volt. [V]	0.00	5.086	5.086	5.087	0.10	5.086	5.086	5.086	0.20	5.085	5.085	5.085	0.30	5.085	5.084	5.084	0.40	5.084	5.084	5.084	0.50	5.084	5.083	5.083	0.60	5.083	5.083	5.083	0.66	5.083	5.083	5.082	—	—	—	—	—	—	—	—
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Model ZTS31205		Temperature 25°C Testing Circuitry Figure A																																						
Item	Ripple Voltage (by Load Current) リップル電圧 (負荷電流特性)																																							
Object	+5V0.6A																																							
<p>1. Graph</p> <p>-----□----- Input Volt. 9.0V -----△----- Input Volt. 18.0V</p> <p>Ripple Voltage is shown as p-p in the figure below.</p> <p>Note: Slanted line shows the range of the rated load current.</p> <p>リップル電圧は、下図 p-p 値で示される。 (注) 斜線は定格負荷電流範囲を示す。</p> <p>T1: Due to AC Input Line 入力商用周期 T2: Due to Switching スイッチング周期</p> <p>Fig. Complex Ripple Wave Form 図 リップル波形詳細図</p>		<p>2. Values</p> <table border="1"> <thead> <tr> <th rowspan="2">Load Current [A]</th><th>Input Volt. 9.0 [V]</th><th>Input Volt. 18.0 [V]</th></tr> <tr> <th>Ripple Output Volt. [mV]</th><th>Ripple Output Volt. [mV]</th></tr> </thead> <tbody> <tr><td>0.00</td><td>5</td><td>5</td></tr> <tr><td>0.10</td><td>5</td><td>5</td></tr> <tr><td>0.20</td><td>5</td><td>5</td></tr> <tr><td>0.30</td><td>5</td><td>5</td></tr> <tr><td>0.40</td><td>5</td><td>5</td></tr> <tr><td>0.50</td><td>10</td><td>5</td></tr> <tr><td>0.60</td><td>10</td><td>5</td></tr> <tr><td>0.66</td><td>15</td><td>5</td></tr> <tr><td>—</td><td>—</td><td>—</td></tr> <tr><td>—</td><td>—</td><td>—</td></tr> <tr><td>—</td><td>—</td><td>—</td></tr> </tbody> </table>	Load Current [A]	Input Volt. 9.0 [V]	Input Volt. 18.0 [V]	Ripple Output Volt. [mV]	Ripple Output Volt. [mV]	0.00	5	5	0.10	5	5	0.20	5	5	0.30	5	5	0.40	5	5	0.50	10	5	0.60	10	5	0.66	15	5	—	—	—	—	—	—	—	—	—
Load Current [A]	Input Volt. 9.0 [V]	Input Volt. 18.0 [V]																																						
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—	—	—																																						
—	—	—																																						
—	—	—																																						

-5-

COSEL

Model ZTS31205		Temperature 25°C Testing Circuitry Figure A
Item	Overcurrent Protection 過電流保護	
Object	+5V0.6A	

1. Graph

~~~~~ Input Volt. 9.0V

— Input Volt. 12.0V

— Input Volt. 18.0V

[V]

8

6

4

2

0

Output Voltage

0

0.2

0.4

0.6

0.8

1

1.2

Load Current

[A]

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

(注)斜線は定格負荷電流範囲を示す。

2. Values

| Output Voltage [V] | Input Volt. 9.0[V] | Input Volt. 12.0[V] | Input Volt. 18.0[V] |
|--------------------|--------------------|---------------------|---------------------|
|                    | Load Current [A]   | Load Current [A]    | Load Current [A]    |
| 5.00               | 0.90               | 1.02                | 0.94                |
| 4.75               | 0.91               | 1.03                | 0.93                |
| 4.50               | 0.92               | 1.04                | 0.93                |
| 4.00               | 0.94               | 1.04                | 0.92                |
| 3.50               | 0.96               | 1.05                | 0.90                |
| 3.00               | 0.97               | 1.04                | 0.87                |
| 2.50               | 0.97               | 1.03                | 0.83                |
| 2.00               | 0.95               | 0.99                | 0.77                |
| 1.50               | 0.92               | 0.93                | 0.70                |
| 1.00               | 0.86               | 0.83                | 0.62                |
| 0.50               | 0.77               | 0.69                | 0.54                |
| 0.00               | 0.72               | 0.66                | 0.59                |



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|        |                                 |                                                |
|--------|---------------------------------|------------------------------------------------|
| Model  | ZTS31205                        | Temperature 25°C<br>Testing Circuitry Figure A |
| Item   | Dynamic Load Responce<br>動的負荷変動 |                                                |
| Object | +5V0.6A                         |                                                |

Input Volt. 12.0 V

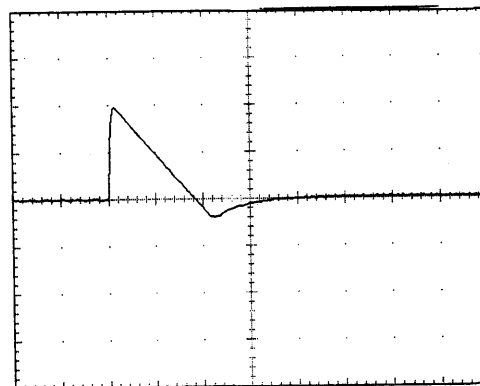
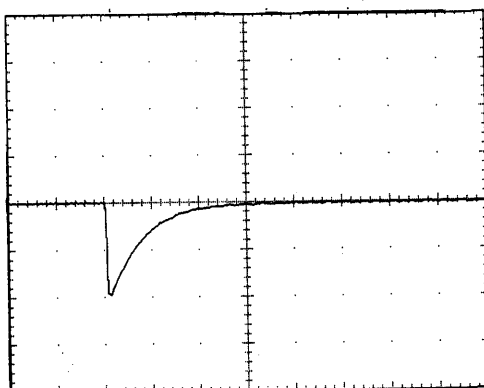
Cycle 100 mS

Load Current

Min. Load ←→

Load 100 %

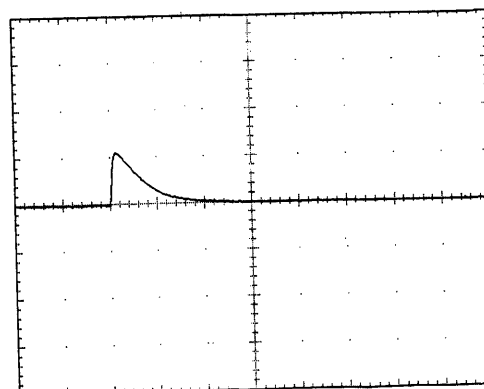
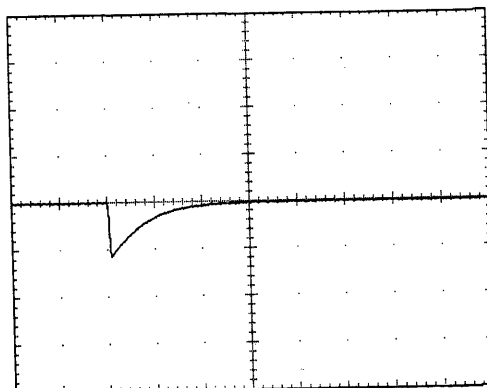
100 mV/div



Min. Load ←→

Load 50 %

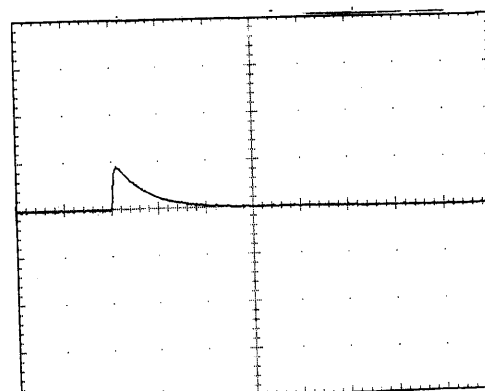
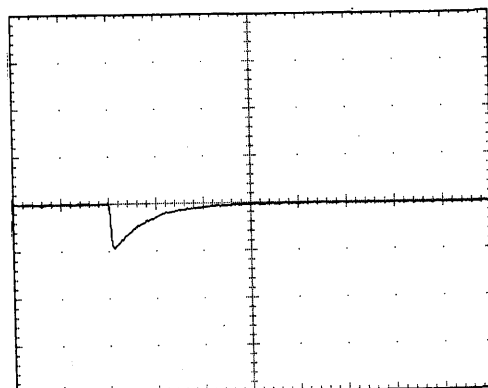
100 mV/div



Load 50%←→

Load 100 %

100 mV/div



0.5 mS/div

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Model

ZTS31205

Item

Rise and Fall Time 立上り、立下り時間

Temperature

25℃

Testing Circuitry

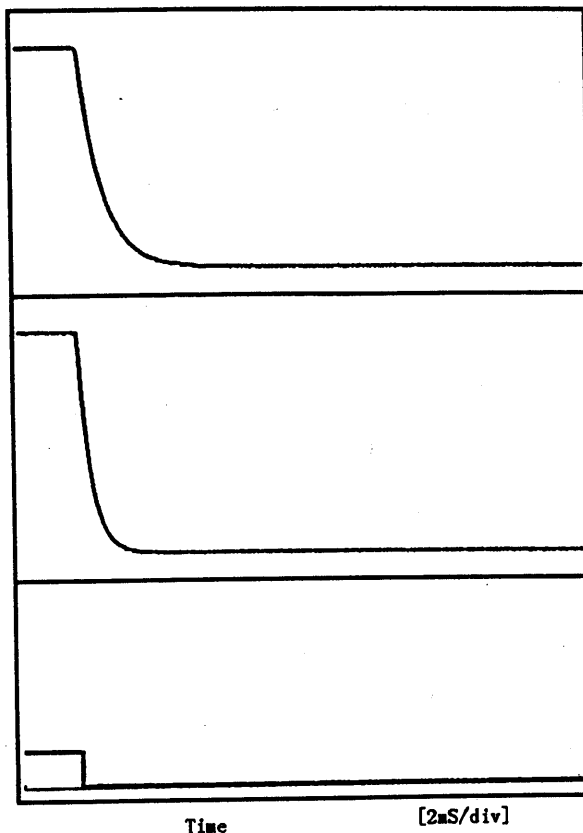
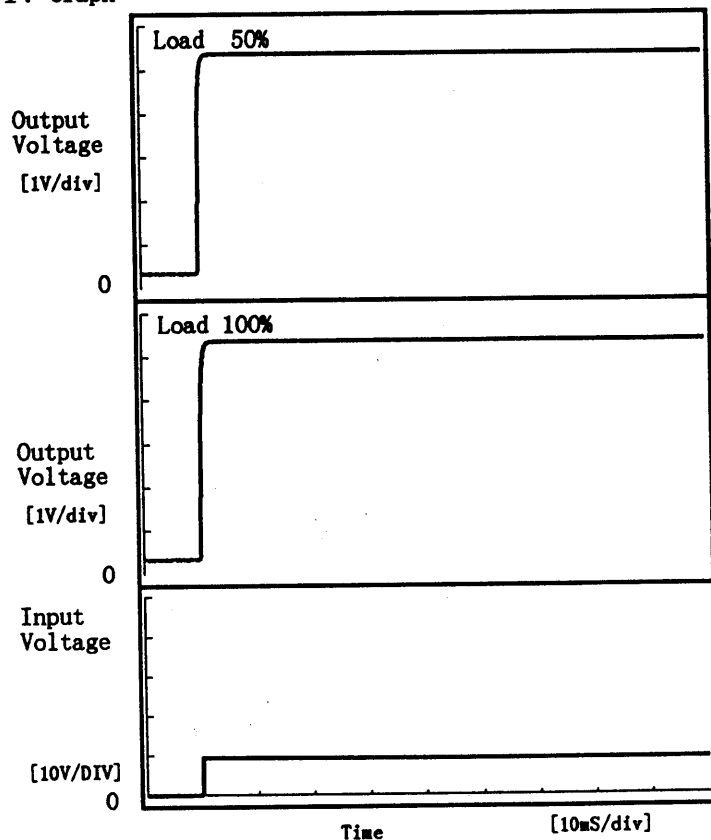
Figure A

Object

+5V0.6A

## 1. Graph

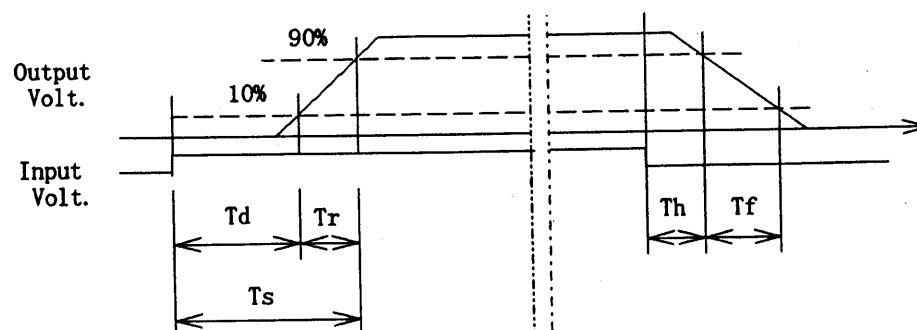
Input Volt. 9.0 V



## 2. Values

[mS]

| Load \ Time | T <sub>d</sub> | T <sub>r</sub> | T <sub>s</sub> | T <sub>h</sub> | T <sub>f</sub> |
|-------------|----------------|----------------|----------------|----------------|----------------|
| 50 %        | 0.05           | 0.50           | 0.55           | 0.23           | 1.98           |
| 100 %       | 0.10           | 0.50           | 0.60           | 0.11           | 1.02           |



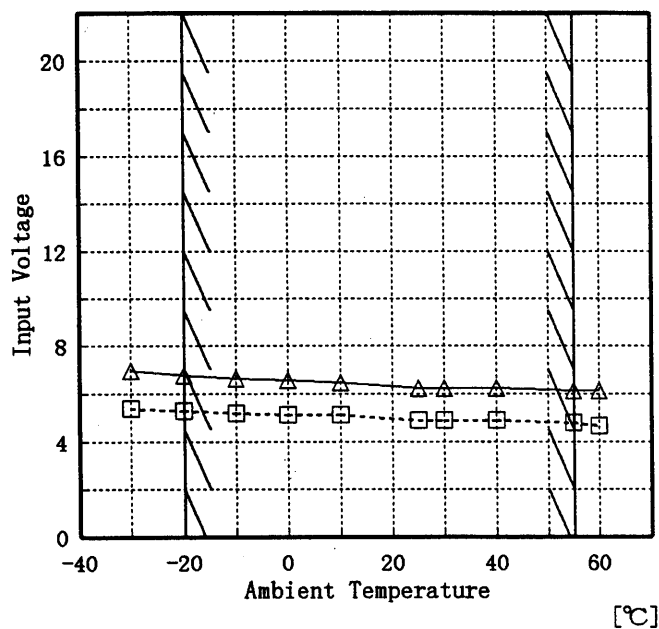
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| Model                                                                |                    | ZTS31205                                                                                                                                                                                                | Testing Circuitry Figure A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |             |                    |                     |                     |      |                  |                  |                  |     |       |       |       |     |       |       |       |     |       |       |       |   |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |   |   |   |   |
|----------------------------------------------------------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------|--------------------|---------------------|---------------------|------|------------------|------------------|------------------|-----|-------|-------|-------|-----|-------|-------|-------|-----|-------|-------|-------|---|-------|-------|-------|----|-------|-------|-------|----|-------|-------|-------|----|-------|-------|-------|----|-------|-------|-------|----|-------|-------|-------|----|-------|-------|-------|---|---|---|---|
| Item                                                                 |                    | Ambient Temperature Drift<br>周囲温度変動                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |             |                    |                     |                     |      |                  |                  |                  |     |       |       |       |     |       |       |       |     |       |       |       |   |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |   |   |   |   |
| Object                                                               |                    | +5V0.6A                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |             |                    |                     |                     |      |                  |                  |                  |     |       |       |       |     |       |       |       |     |       |       |       |   |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |   |   |   |   |
| 1. Graph                                                             |                    | <div><div>△</div> Input Volt. 9.0V</div> <div><div>□</div> Input Volt. 12.0V</div> <div><div>○</div> Input Volt. 18.0V</div> <p>Output Voltage [V]</p> <p>Ambient Temperature [°C]</p> <p>Load 100%</p> | 2. Values                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |             |                    |                     |                     |      |                  |                  |                  |     |       |       |       |     |       |       |       |     |       |       |       |   |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |   |   |   |   |
|                                                                      |                    |                                                                                                                                                                                                         | <table><tr><th>Temperature</th><th>Input Volt. 9.0[V]</th><th>Input Volt. 12.0[V]</th><th>Input Volt. 18.0[V]</th></tr><tr><th>[°C]</th><th>Output Volt. [V]</th><th>Output Volt. [V]</th><th>Output Volt. [V]</th></tr><tr><td>-30</td><td>5.079</td><td>5.080</td><td>5.080</td></tr><tr><td>-20</td><td>5.080</td><td>5.080</td><td>5.081</td></tr><tr><td>-10</td><td>5.081</td><td>5.081</td><td>5.081</td></tr><tr><td>0</td><td>5.081</td><td>5.081</td><td>5.081</td></tr><tr><td>10</td><td>5.081</td><td>5.082</td><td>5.082</td></tr><tr><td>25</td><td>5.081</td><td>5.082</td><td>5.082</td></tr><tr><td>30</td><td>5.082</td><td>5.082</td><td>5.082</td></tr><tr><td>40</td><td>5.080</td><td>5.080</td><td>5.080</td></tr><tr><td>55</td><td>5.078</td><td>5.078</td><td>5.077</td></tr><tr><td>60</td><td>5.076</td><td>5.076</td><td>5.076</td></tr><tr><td>—</td><td>—</td><td>—</td><td>—</td></tr></table> |  | Temperature | Input Volt. 9.0[V] | Input Volt. 12.0[V] | Input Volt. 18.0[V] | [°C] | Output Volt. [V] | Output Volt. [V] | Output Volt. [V] | -30 | 5.079 | 5.080 | 5.080 | -20 | 5.080 | 5.080 | 5.081 | -10 | 5.081 | 5.081 | 5.081 | 0 | 5.081 | 5.081 | 5.081 | 10 | 5.081 | 5.082 | 5.082 | 25 | 5.081 | 5.082 | 5.082 | 30 | 5.082 | 5.082 | 5.082 | 40 | 5.080 | 5.080 | 5.080 | 55 | 5.078 | 5.078 | 5.077 | 60 | 5.076 | 5.076 | 5.076 | — | — | — | — |
| Temperature                                                          | Input Volt. 9.0[V] | Input Volt. 12.0[V]                                                                                                                                                                                     | Input Volt. 18.0[V]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |             |                    |                     |                     |      |                  |                  |                  |     |       |       |       |     |       |       |       |     |       |       |       |   |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |   |   |   |   |
| [°C]                                                                 | Output Volt. [V]   | Output Volt. [V]                                                                                                                                                                                        | Output Volt. [V]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |             |                    |                     |                     |      |                  |                  |                  |     |       |       |       |     |       |       |       |     |       |       |       |   |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |   |   |   |   |
| -30                                                                  | 5.079              | 5.080                                                                                                                                                                                                   | 5.080                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |             |                    |                     |                     |      |                  |                  |                  |     |       |       |       |     |       |       |       |     |       |       |       |   |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |   |   |   |   |
| -20                                                                  | 5.080              | 5.080                                                                                                                                                                                                   | 5.081                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |             |                    |                     |                     |      |                  |                  |                  |     |       |       |       |     |       |       |       |     |       |       |       |   |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |   |   |   |   |
| -10                                                                  | 5.081              | 5.081                                                                                                                                                                                                   | 5.081                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |             |                    |                     |                     |      |                  |                  |                  |     |       |       |       |     |       |       |       |     |       |       |       |   |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |   |   |   |   |
| 0                                                                    | 5.081              | 5.081                                                                                                                                                                                                   | 5.081                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |             |                    |                     |                     |      |                  |                  |                  |     |       |       |       |     |       |       |       |     |       |       |       |   |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |   |   |   |   |
| 10                                                                   | 5.081              | 5.082                                                                                                                                                                                                   | 5.082                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |             |                    |                     |                     |      |                  |                  |                  |     |       |       |       |     |       |       |       |     |       |       |       |   |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |   |   |   |   |
| 25                                                                   | 5.081              | 5.082                                                                                                                                                                                                   | 5.082                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |             |                    |                     |                     |      |                  |                  |                  |     |       |       |       |     |       |       |       |     |       |       |       |   |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |   |   |   |   |
| 30                                                                   | 5.082              | 5.082                                                                                                                                                                                                   | 5.082                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |             |                    |                     |                     |      |                  |                  |                  |     |       |       |       |     |       |       |       |     |       |       |       |   |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |   |   |   |   |
| 40                                                                   | 5.080              | 5.080                                                                                                                                                                                                   | 5.080                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |             |                    |                     |                     |      |                  |                  |                  |     |       |       |       |     |       |       |       |     |       |       |       |   |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |   |   |   |   |
| 55                                                                   | 5.078              | 5.078                                                                                                                                                                                                   | 5.077                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |             |                    |                     |                     |      |                  |                  |                  |     |       |       |       |     |       |       |       |     |       |       |       |   |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |   |   |   |   |
| 60                                                                   | 5.076              | 5.076                                                                                                                                                                                                   | 5.076                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |             |                    |                     |                     |      |                  |                  |                  |     |       |       |       |     |       |       |       |     |       |       |       |   |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |   |   |   |   |
| —                                                                    | —                  | —                                                                                                                                                                                                       | —                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |             |                    |                     |                     |      |                  |                  |                  |     |       |       |       |     |       |       |       |     |       |       |       |   |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |    |       |       |       |   |   |   |   |
| 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  | ZTS31205                                                           |
| Item   | Minimum Input Voltage for Regulated Output Voltage<br>最低レギュレーション電圧 |
| Object | +5V0.6A                                                            |

1. Graph
- [V]
- Load 50%
- △----- Load 100%



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

(注) 斜線は定格周囲温度範囲を示す。

Testing Circuitry Figure A

## 2. Values

| Ambient Temp.<br>[°C] | Load 50%           | Load 100%          |
|-----------------------|--------------------|--------------------|
|                       | Input Volt.<br>[V] | Input Volt.<br>[V] |
| -30                   | 5.4                | 7.0                |
| -20                   | 5.3                | 6.7                |
| -10                   | 5.2                | 6.6                |
| 0                     | 5.1                | 6.6                |
| 10                    | 5.1                | 6.5                |
| 25                    | 4.9                | 6.2                |
| 30                    | 4.9                | 6.2                |
| 40                    | 4.9                | 6.2                |
| 55                    | 4.8                | 6.1                |
| 60                    | 4.7                | 6.1                |
| —                     | —                  | —                  |

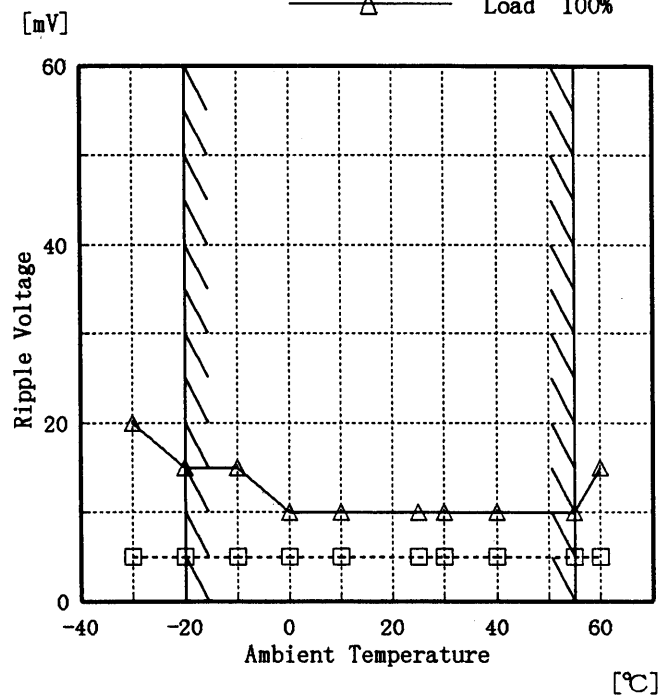
**COSEL**

|        |                                                      |
|--------|------------------------------------------------------|
| Model  | ZTS31205                                             |
| Item   | Ripple Voltage (by Ambient Temp.)<br>リップル電圧 (周囲温度特性) |
| Object | +5V0.6A                                              |

Testing Circuitry Figure A

## 1. Graph

-----□----- Load 50%  
 -----△----- Load 100%



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

(注) 斜線は定格周囲温度範囲を示す。

## 2. Values

| Ambient Temp.<br>[°C] | Load 50%                    | Load 100%                   |
|-----------------------|-----------------------------|-----------------------------|
|                       | Ripple Output<br>Volt. [mV] | Ripple Output<br>Volt. [mV] |
| -30                   | 5                           | 20                          |
| -20                   | 5                           | 15                          |
| -10                   | 5                           | 15                          |
| 0                     | 5                           | 10                          |
| 10                    | 5                           | 10                          |
| 25                    | 5                           | 10                          |
| 30                    | 5                           | 10                          |
| 40                    | 5                           | 10                          |
| 55                    | 5                           | 10                          |
| 60                    | 5                           | 15                          |
| —                     | —                           | —                           |

**COSEL**

|        |                         |                   |          |
|--------|-------------------------|-------------------|----------|
| Model  | ZTS31205                | Temperature       | 25℃      |
| Item   | Time Lapse Drift 経時ドリフト | Testing Circuitry | Figure A |
| Object | +5V0.6A                 |                   |          |

1. Graph

[V]

Output Voltage

Time [H]

Input Volt. 12V

Load 100%

2.Values

| Time since start [H] | Output Voltage [V] |
|----------------------|--------------------|
| 0.0                  | 5.083              |
| 0.5                  | 5.082              |
| 1.0                  | 5.082              |
| 2.0                  | 5.082              |
| 3.0                  | 5.082              |
| 4.0                  | 5.082              |
| 5.0                  | 5.082              |
| 6.0                  | 5.082              |
| 7.0                  | 5.082              |
| 8.0                  | 5.082              |

**COSEL**

|        |  |                               |                            |
|--------|--|-------------------------------|----------------------------|
| Model  |  | ZTS31205                      | Testing Circuitry Figure A |
| Item   |  | Output Voltage Accuracy 定電圧精度 |                            |
| Object |  | +5V0.6A                       |                            |

## 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 : -20~55 °C

Input Voltage : 9.0~18.0 V

Load Current : 0.0~0.6 A

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

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

## 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 : -20~55 °C

入力電圧 : 9.0~18.0 V

負荷電流 : 0.0~0.6 A

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

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

| Item            | Temperature [°C] | Input Voltage [V] | Output Current [A] | Output Voltage [V] | Output Voltage Accuracy [mV] | Output Voltage Accuracy (Ratio) [%] |
|-----------------|------------------|-------------------|--------------------|--------------------|------------------------------|-------------------------------------|
| Maximum Voltage | 25               | 18.0              | 0.0                | 5.087              | ±5                           | ±0.2                                |
| Minimum Voltage | 55               | 9.0               | 0.6                | 5.077              |                              |                                     |

# COSEL

COXEL

|        |                   |
|--------|-------------------|
|        |                   |
| Model  | ZTS31205          |
| Item   | Condensation 結露特性 |
| Object | +5V0.6A           |

Testing Circuitry      Figure A

1. Condensation test

Testing procedure is as follows.

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

1. 結露特性試験

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

2. Values

| Item                 | Data  | Testing Conditions                    |
|----------------------|-------|---------------------------------------|
| Output Voltage [V]   | 5.114 | Input Volt.: 12V, Load Current:0.6A   |
| Line Regulation [mV] | 1     | Input Volt.: 9~18V, Load Current:0.6A |
| Load Regulation [mV] | 8     | Input Volt.: 12V, Load Current:0~0.6A |



