



TEST DATA OF ZTS34805

(48.0V INPUT)

Regulated DC Power Supply

Date : Mar. 5. 1998

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Design Manager

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コーセル株式会社
COSEL CO., LTD.

CONTENTS

1. Line Regulation	1
静的入力変動	
2. Efficiency	2
効率	
3. Load Regulation	3
静的負荷変動	
4. Ripple Voltage (by Load Current)	4
リップル電圧(負荷電流特性)	
5. Ripple-Noise	5
リップルノイズ	
6. Overcurrent Protection	6
過電流保護	
7. Dynamic Load Responce	7
動的負荷変動	
8. Rise and Fall Time	8
立上り、立下がり時間	
9. Ambient Temperature Drift	9
周囲温度変動	
10. Minimum Input Voltage for Regulated Output Voltage . . .	10
最低レギュレーション電圧	
11. Ripple Voltage (by Ambient Temperature)	11
リップル電圧(周囲温度特性)	
12. Time Lapse Drift	12
経時ドリフト	
13. Output Voltage Accuracy	13
定電圧精度	
14. Condensation	14
結露特性	
15. Figure of Testing Circuitry	15
測定回路図	

(Final Page 15)

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Model		ZTS34805	
Item		Line Regulation 静的入力変動	
Object		+5V0.6A	

1. Graph

-----□-----

Load 50%

-----△-----

Load 100%

Output Voltage

[V]

5.130

5.110

5.090

5.070

5.050

5.030

5.010

0

0

40

50

60

70

80

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]	Load 50%	Load 100%
	Output Volt. [V]	Output Volt. [V]
33.0	5.058	5.057
36.0	5.058	5.057
42.0	5.058	5.056
48.0	5.058	5.056
54.0	5.058	5.056
60.0	5.058	5.056
66.0	5.058	5.056
72.0	5.058	5.056
75.0	5.058	5.056
—	—	—
—	—	—
—	—	—

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Model		ZTS34805	
Item		Efficiency 効率	
Object			

1. Graph

-----□-----

Load 50%

-----△-----

Load 100%

Efficiency

[%]

84

80

76

72

68

64

60

56

0

0

30

50

70

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。

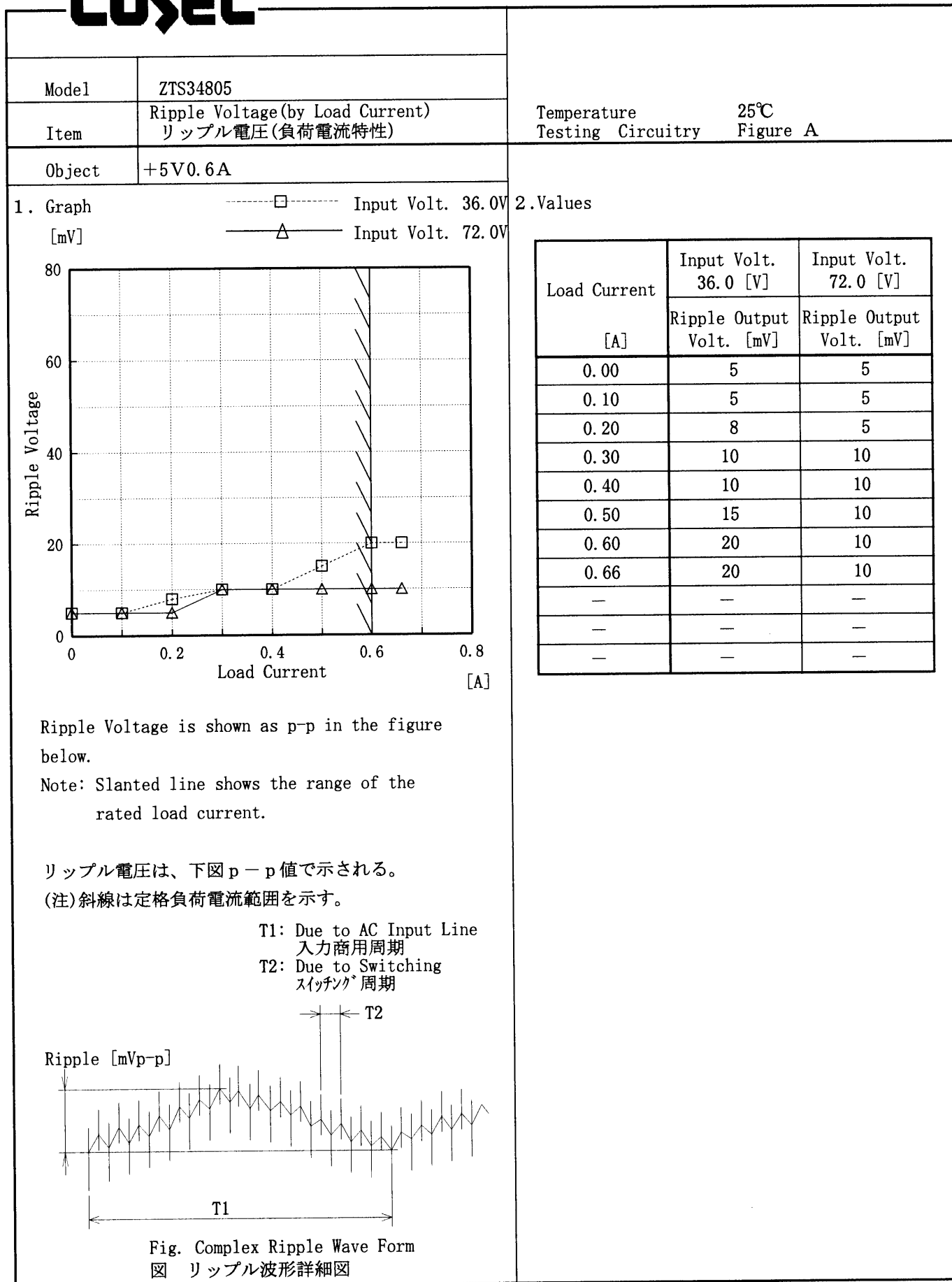
2. Values

Input Voltage [V]	Load 50%	Load 100%
	Efficiency [%]	Efficiency [%]
33.0	71.2	73.8
36.0	70.2	74.1
42.0	67.3	73.6
48.0	64.7	72.1
54.0	62.5	70.7
60.0	60.6	69.3
66.0	58.5	67.7
72.0	56.9	66.4
75.0	55.8	65.6
—	—	—
—	—	—
—	—	—

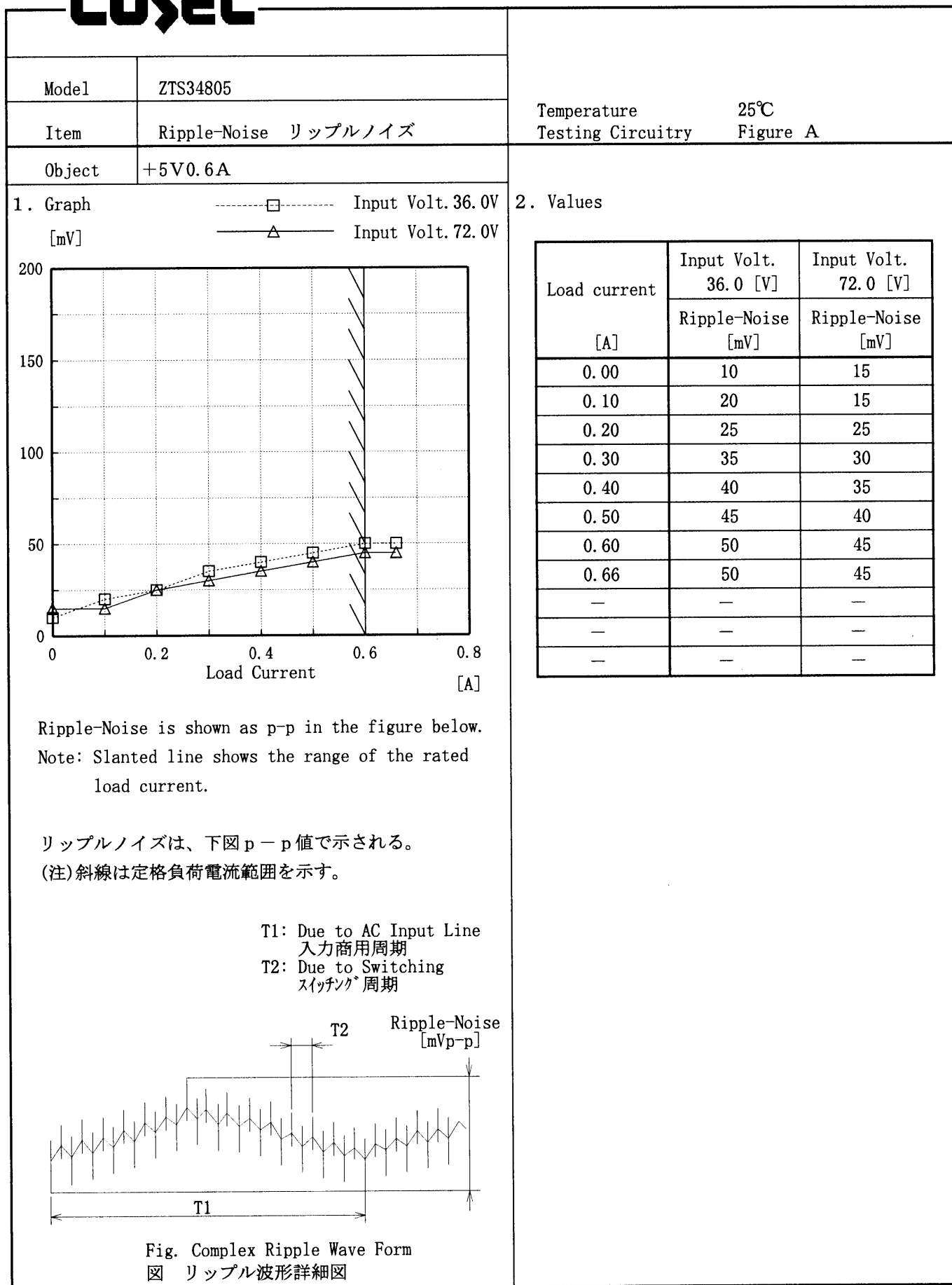
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Model ZTS34805		Temperature 25°C																																																
Item	Load Regulation 静的負荷変動	Testing Circuitry	Figure A																																															
Object	+5V0.6A																																																	
1. Graph		2. Values																																																
<div> <div>△</div> Input Volt. 36.0V <div>□</div> Input Volt. 48.0V <div>○</div> Input Volt. 72.0V </div>		<table> <tr> <th rowspan="2">Load Current [A]</th><th>Input Volt. 36.0[V]</th><th>Input Volt. 48.0[V]</th><th>Input Volt. 72.0[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>5.060</td><td>5.060</td><td>5.065</td></tr> <tr><td>0.10</td><td>5.059</td><td>5.059</td><td>5.060</td></tr> <tr><td>0.20</td><td>5.059</td><td>5.059</td><td>5.059</td></tr> <tr><td>0.30</td><td>5.058</td><td>5.058</td><td>5.058</td></tr> <tr><td>0.40</td><td>5.058</td><td>5.058</td><td>5.058</td></tr> <tr><td>0.50</td><td>5.057</td><td>5.057</td><td>5.057</td></tr> <tr><td>0.60</td><td>5.057</td><td>5.057</td><td>5.057</td></tr> <tr><td>0.66</td><td>5.057</td><td>5.057</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]	Input Volt. 36.0[V]	Input Volt. 48.0[V]	Input Volt. 72.0[V]	Output Volt. [V]	Output Volt. [V]	Output Volt. [V]	0.00	5.060	5.060	5.065	0.10	5.059	5.059	5.060	0.20	5.059	5.059	5.059	0.30	5.058	5.058	5.058	0.40	5.058	5.058	5.058	0.50	5.057	5.057	5.057	0.60	5.057	5.057	5.057	0.66	5.057	5.057	5.056	—	—	—	—	—	—	—	—
Load Current [A]	Input Volt. 36.0[V]	Input Volt. 48.0[V]	Input Volt. 72.0[V]																																															
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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。																																																		

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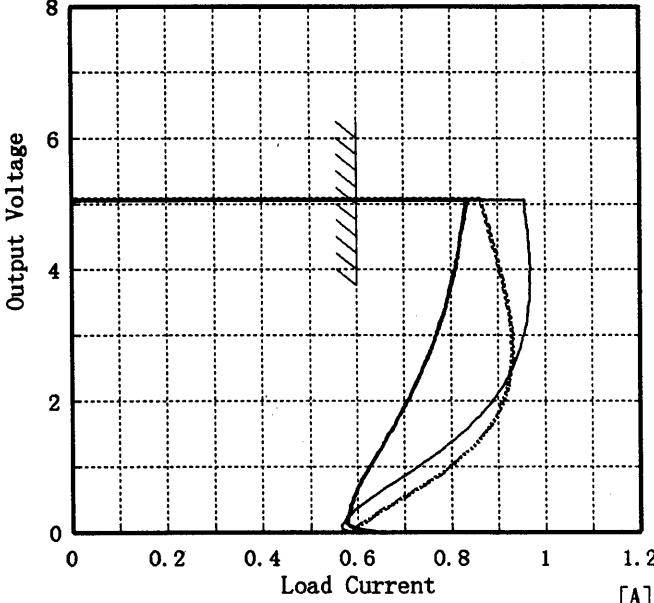
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2. Values

Load current [A]	Input Volt. 36.0 [V]	Input Volt. 72.0 [V]
	Ripple-Noise [mV]	Ripple-Noise [mV]
0.00	10	15
0.10	20	15
0.20	25	25
0.30	35	30
0.40	40	35
0.50	45	40
0.60	50	45
0.66	50	45
—	—	—
—	—	—
—	—	—

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Model		ZTS34805		
Item		Overcurrent Protection 過電流保護	Temperature 25℃ Testing Circuitry Figure A	
Object		+5V0.6A		
1. Graph		2. Values		
[V]				
				
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。				

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Model	ZTS34805	Temperature	25°C
Item	Dynamic Load Responce 動的負荷変動	Testing Circuitry	Figure A
Object	+5V0.6A		

Input Volt. 48.0 V

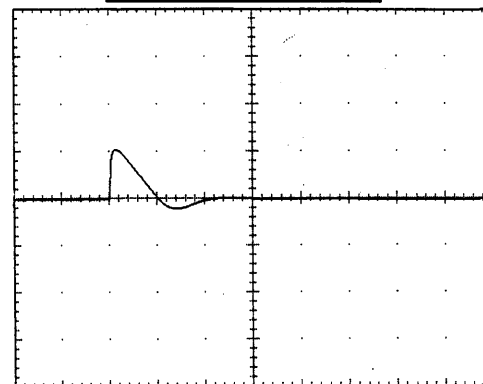
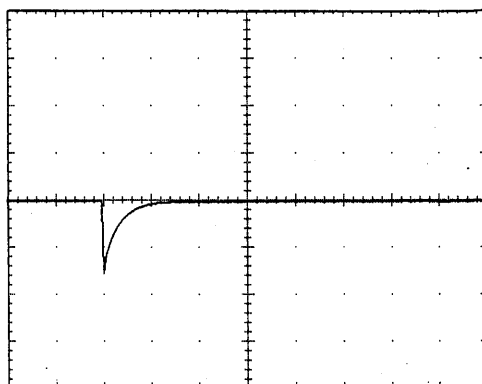
Cycle 100 mS

Load Current

Min. Load ↔

Load 100 %

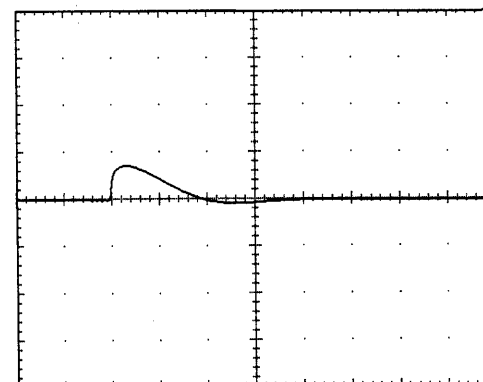
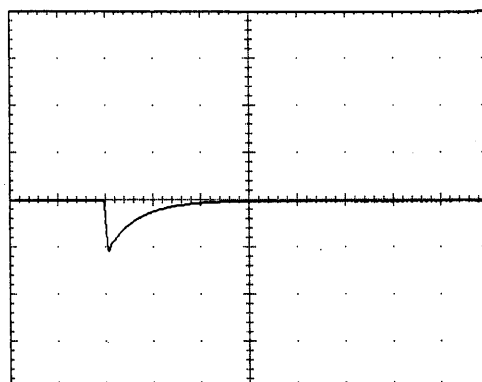
200 mV/div



Min. Load ↔

Load 50 %

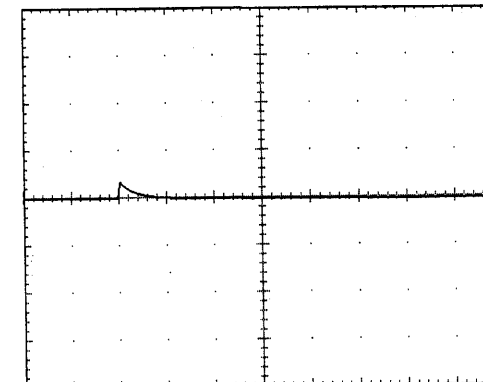
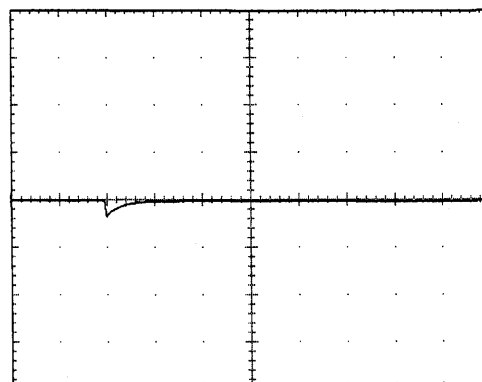
200 mV/div



Load 50% ↔

Load 100 %

200 mV/div



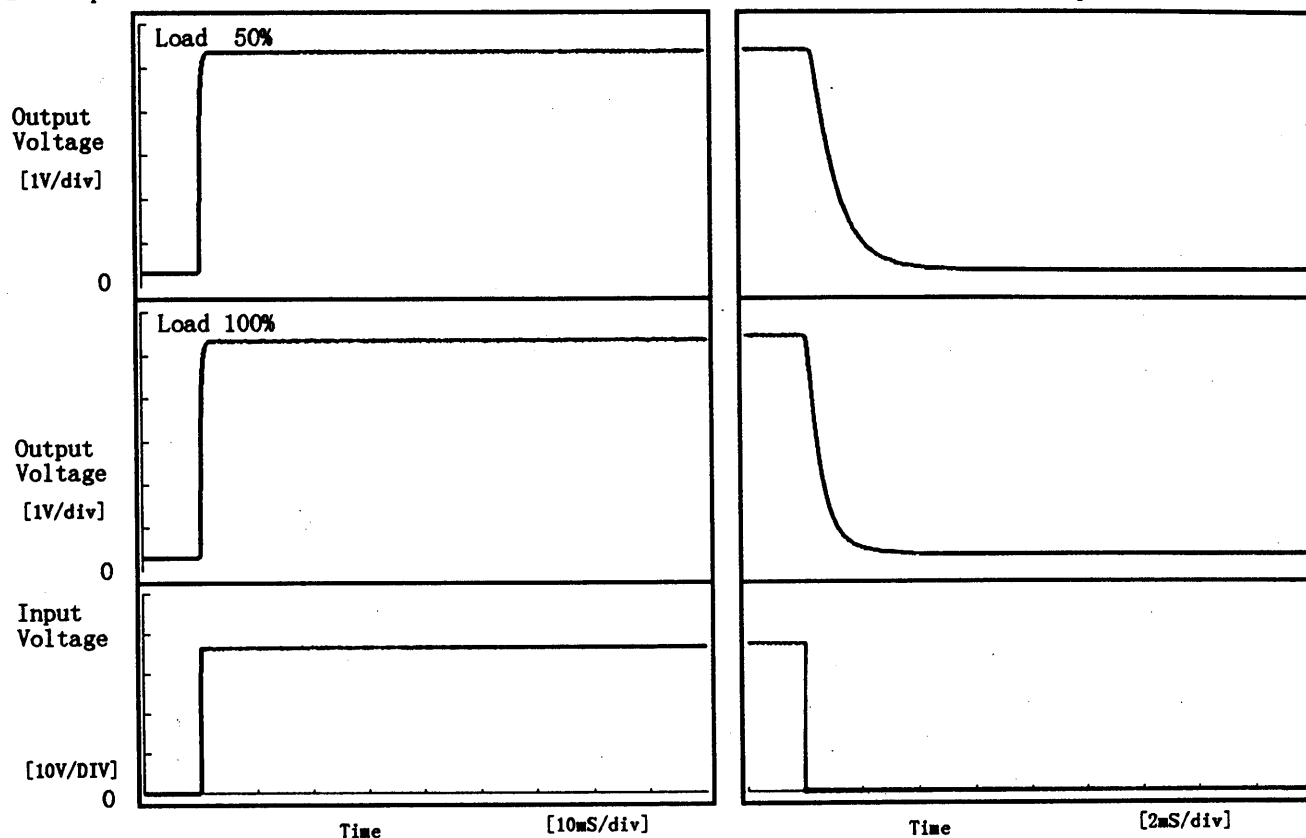
1 mS/div

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Model	ZTS34805	Temperature	25°C
Item	Rise and Fall Time 立上り、立下り時間	Testing Circuitry	Figure A
Object	+5V0.6A		

1. Graph

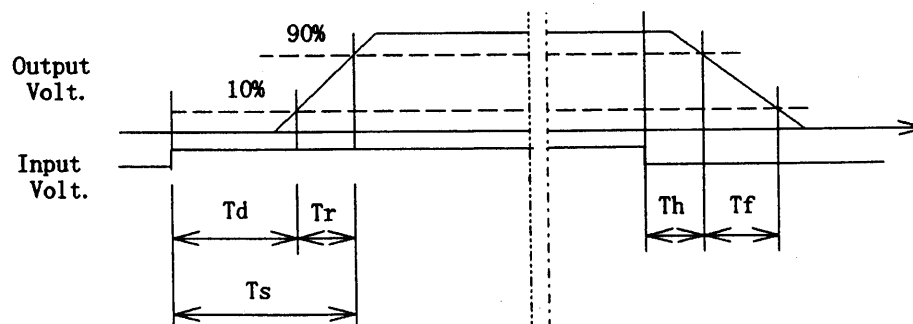
Input Volt. 36.0 V



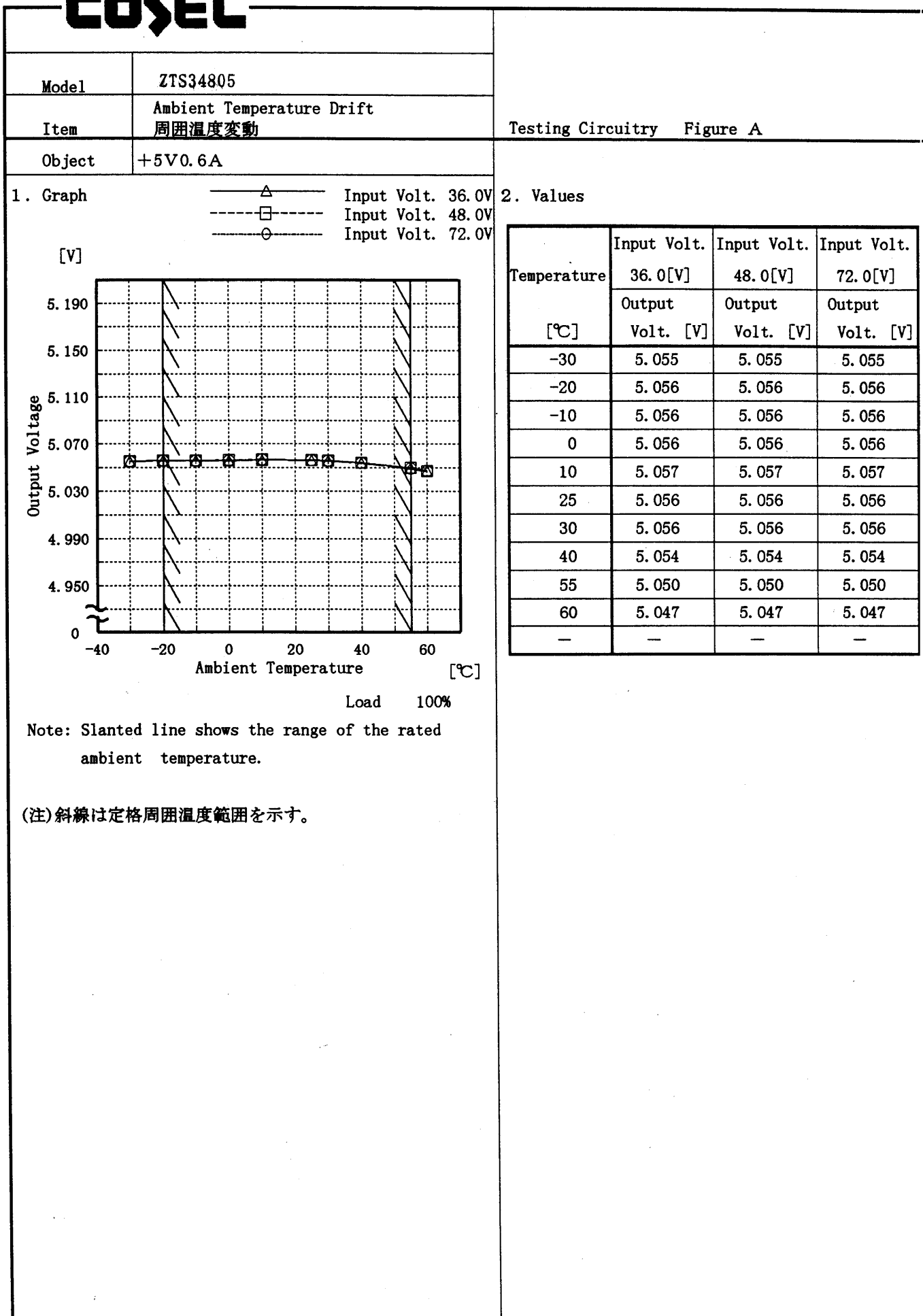
2. Values

[mS]

Load \ Time	T d	T r	T s	T h	T f
50 %	0.05	0.55	0.60	0.47	2.04
100 %	0.05	0.60	0.65	0.21	1.19



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Model		ZTS34805																																						
Item		Minimum Input Voltage for Regulated Output Voltage 最低レギュレーション電圧																																						
Object		+5V0.6A																																						
1. Graph		<div> <div> <div>-----□-----</div> <div>Load 50%</div> </div> <div> <div>-----△-----</div> <div>Load 100%</div> </div> </div> <p>Input Voltage [V]</p> <p>Ambient Temperature [°C]</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>																																						
2. Values		<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>-30</td><td>21.4</td><td>26.4</td></tr> <tr><td>-20</td><td>20.9</td><td>25.4</td></tr> <tr><td>-10</td><td>20.4</td><td>24.9</td></tr> <tr><td>0</td><td>20.4</td><td>24.4</td></tr> <tr><td>10</td><td>19.9</td><td>23.9</td></tr> <tr><td>25</td><td>18.9</td><td>23.4</td></tr> <tr><td>30</td><td>18.9</td><td>23.4</td></tr> <tr><td>40</td><td>18.4</td><td>23.4</td></tr> <tr><td>55</td><td>17.9</td><td>23.9</td></tr> <tr><td>60</td><td>17.9</td><td>23.9</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]	-30	21.4	26.4	-20	20.9	25.4	-10	20.4	24.9	0	20.4	24.4	10	19.9	23.9	25	18.9	23.4	30	18.9	23.4	40	18.4	23.4	55	17.9	23.9	60	17.9	23.9	—	—	—
Ambient Temp. [°C]	Load 50%	Load 100%																																						
	Input Volt. [V]	Input Volt. [V]																																						
-30	21.4	26.4																																						
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60	17.9	23.9																																						
—	—	—																																						

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Model		ZTS34805	Testing Circuitry	Figure A																																		
Item		Ripple Voltage (by Ambient Temp.) リップル電圧 (周囲温度特性)																																				
Object		+5V0.6A																																				
1. Graph		<div><div>-----□-----</div>Load 50%</div> <div><div>———△———</div>Load 100%</div> <div><div>[mV]</div><div>80</div><div>60</div><div>40</div><div>20</div><div>0</div></div> <div><div>Ripple Voltage</div><div>[-40 -20 0 20 40 60]</div><div>Ambient Temperature</div><div>[°C]</div></div> <div>Input Volt. 36.0 V</div> <div>Note: Slanted line shows the range of the rated ambient temperature.</div> <div>(注)斜線は定格周囲温度範囲を示す。</div>	2. Values																																			
		<table><tr><th>Ambient Temp. [°C]</th><th>Load 50% Ripple Output Volt. [mV]</th><th>Load 100% Ripple Output Volt. [mV]</th></tr><tr><td>-30</td><td>10</td><td>30</td></tr><tr><td>-20</td><td>10</td><td>30</td></tr><tr><td>-10</td><td>10</td><td>30</td></tr><tr><td>0</td><td>10</td><td>25</td></tr><tr><td>10</td><td>5</td><td>20</td></tr><tr><td>25</td><td>5</td><td>20</td></tr><tr><td>30</td><td>5</td><td>20</td></tr><tr><td>40</td><td>5</td><td>20</td></tr><tr><td>55</td><td>5</td><td>20</td></tr><tr><td>60</td><td>5</td><td>20</td></tr><tr><td>—</td><td>—</td><td>—</td></tr></table>		Ambient Temp. [°C]	Load 50% Ripple Output Volt. [mV]	Load 100% Ripple Output Volt. [mV]	-30	10	30	-20	10	30	-10	10	30	0	10	25	10	5	20	25	5	20	30	5	20	40	5	20	55	5	20	60	5	20	—	—
Ambient Temp. [°C]	Load 50% Ripple Output Volt. [mV]	Load 100% Ripple Output Volt. [mV]																																				
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55	5	20																																				
60	5	20																																				
—	—	—																																				

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COSEL																									
Model	ZTS34805																								
Item	Time Lapse Drift 経時ドリフト	Temperature	25 ℃																						
		Testing Circuitry	Figure A																						
Object	+5V0.6A																								
1. Graph		2.Values																							
<div>[V]</div> <div><p>Output Voltage [V]</p><p>Time [H]</p><p>Input Volt. 48V</p><p>Load 100%</p></div>		<table><tr><th>Time since start [H]</th><th>Output Voltage [V]</th></tr><tr><td>0.0</td><td>5.055</td></tr><tr><td>0.5</td><td>5.053</td></tr><tr><td>1.0</td><td>5.053</td></tr><tr><td>2.0</td><td>5.053</td></tr><tr><td>3.0</td><td>5.054</td></tr><tr><td>4.0</td><td>5.054</td></tr><tr><td>5.0</td><td>5.054</td></tr><tr><td>6.0</td><td>5.054</td></tr><tr><td>7.0</td><td>5.054</td></tr><tr><td>8.0</td><td>5.054</td></tr></table>		Time since start [H]	Output Voltage [V]	0.0	5.055	0.5	5.053	1.0	5.053	2.0	5.053	3.0	5.054	4.0	5.054	5.0	5.054	6.0	5.054	7.0	5.054	8.0	5.054
Time since start [H]	Output Voltage [V]																								
0.0	5.055																								
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6.0	5.054																								
7.0	5.054																								
8.0	5.054																								

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Model	ZTS34805	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 : 36.0~72.0 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 36.0~72.0 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	-20	72.0	0.0	5.083	±18	±0.4
Minimum Voltage	55	72.0	0.6	5.048		

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Model	ZTS34805																		
Item	Condensation 結露特性	Testing Circuitry	Figure A																
Object	+5V0.6A																		
<p>1. Condensation test</p> <p>Testing procedure is as follows.</p> <p>① Keeping and cooling the unit in a tank at -10℃ for an hour with the input off.</p> <p>② Taking it out of the tank and dewing itself in a room where the temperature is 25℃ and the humidity is 40%RH.</p> <p>③ Testing electrical characteristics of the unit to confirm there be no fault.</p>																			
<p>1. 結露特性試験</p> <p>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。</p>																			
<p>2. Values</p> <table> <tr> <th>Item</th> <th>Data</th> <th colspan="2">Testing Conditions</th> </tr> <tr> <td>Output Voltage [V]</td> <td>5.032</td> <td colspan="2">Input Volt.: 48V, Load Current:0.6A</td> </tr> <tr> <td>Line Regulation [mV]</td> <td>1</td> <td colspan="2">Input Volt.: 36~72V, Load Current:0.6A</td> </tr> <tr> <td>Load Regulation [mV]</td> <td>8</td> <td colspan="2">Input Volt.: 48V, Load Current:0~0.6A</td> </tr> </table>				Item	Data	Testing Conditions		Output Voltage [V]	5.032	Input Volt.: 48V, Load Current:0.6A		Line Regulation [mV]	1	Input Volt.: 36~72V, Load Current:0.6A		Load Regulation [mV]	8	Input Volt.: 48V, Load Current:0~0.6A	
Item	Data	Testing Conditions																	
Output Voltage [V]	5.032	Input Volt.: 48V, Load Current:0.6A																	
Line Regulation [mV]	1	Input Volt.: 36~72V, Load Current:0.6A																	
Load Regulation [mV]	8	Input Volt.: 48V, Load Current:0~0.6A																	

-14-

BC-3135

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