

COSEL

TEST DATA OF R25A-3
(100V INPUT)

Regulated DC Power Supply

Jan. 13, 2000

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Design Manager

Prepared by : Jun Aochida
Design Engineer

コーセル株式会社

COSEL CO., LTD.



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(Final Page 17)

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Model	R25A-3	Temperature Testing Circuitry	25°C Figure A																																
Item	Line Regulation 静的入力変動																																		
Object	+3.0V 5A																																		
1. Graph	<p style="text-align: center;">□ Load 50% △ Load 100%</p>																																		
2. Values	<table border="1"> <thead> <tr> <th rowspan="2">Input Voltage [V]</th> <th colspan="2">Output Voltage [V]</th> </tr> <tr> <th>Load 50%</th> <th>Load 100%</th> </tr> </thead> <tbody> <tr><td>75</td><td>3.093</td><td>3.086</td></tr> <tr><td>80</td><td>3.093</td><td>3.086</td></tr> <tr><td>85</td><td>3.094</td><td>3.086</td></tr> <tr><td>90</td><td>3.094</td><td>3.087</td></tr> <tr><td>100</td><td>3.095</td><td>3.087</td></tr> <tr><td>110</td><td>3.097</td><td>3.087</td></tr> <tr><td>120</td><td>3.098</td><td>3.088</td></tr> <tr><td>132</td><td>3.100</td><td>3.088</td></tr> <tr><td>140</td><td>3.099</td><td>3.088</td></tr> </tbody> </table>			Input Voltage [V]	Output Voltage [V]		Load 50%	Load 100%	75	3.093	3.086	80	3.093	3.086	85	3.094	3.086	90	3.094	3.087	100	3.095	3.087	110	3.097	3.087	120	3.098	3.088	132	3.100	3.088	140	3.099	3.088
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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。

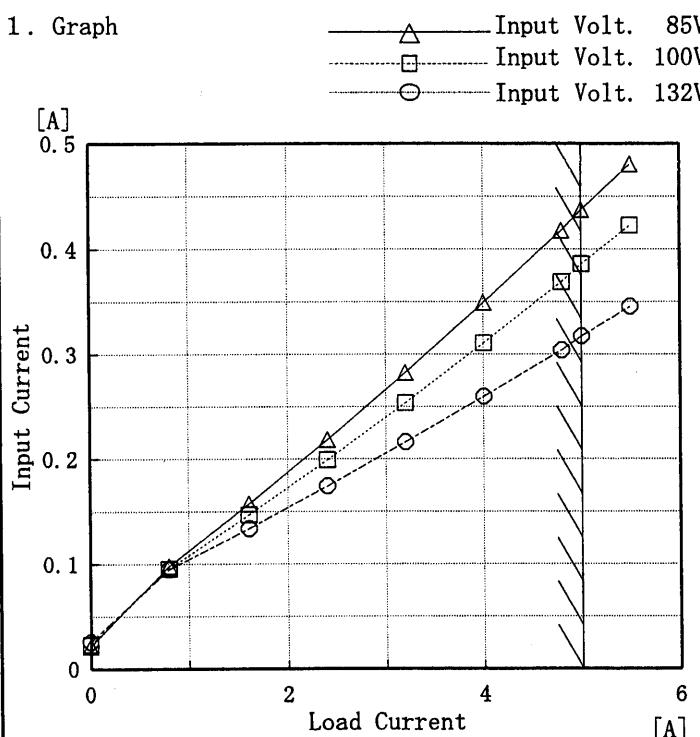
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Model R25A-3

Item Input Current (by Load Current)
入力電流（負荷特性）

Object _____

1. Graph



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。

Temperature 25°C
Testing Circuitry Figure A

2. Values

Load Current [A]	Input Current [A]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0.0	0.022	0.023	0.026
0.8	0.098	0.096	0.095
1.6	0.157	0.147	0.134
2.4	0.218	0.199	0.174
3.2	0.282	0.254	0.216
4.0	0.349	0.311	0.259
4.8	0.418	0.369	0.304
5.0	0.437	0.386	0.317
5.5	0.480	0.422	0.346
—	—	—	—
—	—	—	—
—	—	—	—

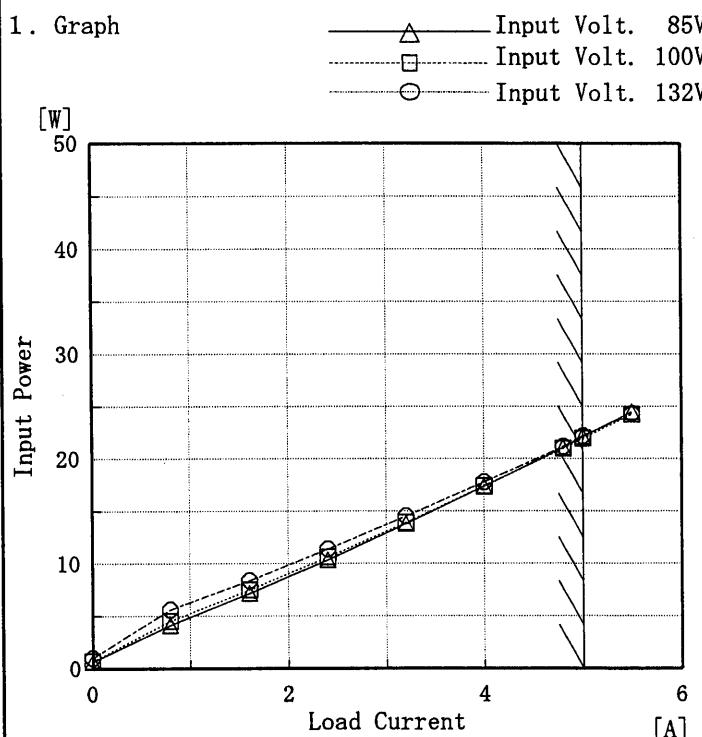
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Model R25A-3

Item Input Power (by Load Current)
入力電力 (負荷特性)

Object _____

1. Graph

Temperature 25°C
Testing Circuitry Figure A

2. Values

Load Current [A]	Input Power [W]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0.0	0.62	0.71	1.01
0.8	4.12	4.53	5.61
1.6	7.16	7.49	8.39
2.4	10.36	10.63	11.39
3.2	13.77	13.89	14.51
4.0	17.35	17.40	17.77
4.8	21.08	20.98	21.16
5.0	22.11	21.95	22.15
5.5	24.49	24.24	24.30
—	—	—	—
—	—	—	—
—	—	—	—

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

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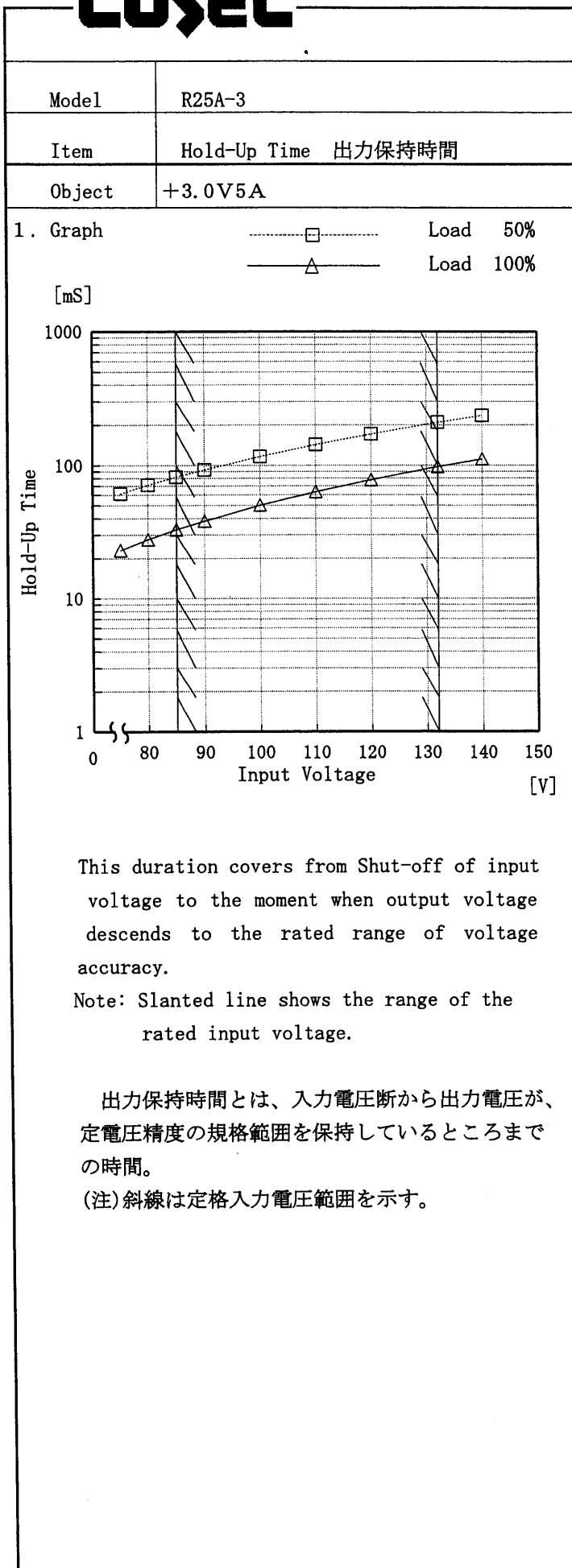
Model	R25A-3	Temperature Testing Circuitry	25°C Figure A																																
Item	Efficiency (by Input Voltage) 効率(入力電圧特性)																																		
Object																																			
1. Graph	<p>The graph plots Efficiency [%] on the y-axis (0 to 84) against Input Voltage [V] on the x-axis (0 to 150). Two sets of data points are shown: Load 50% (squares) and Load 100% (triangles). Dotted lines connect the data points. A slanted line on the graph indicates the rated input voltage range.</p> <table border="1"> <thead> <tr> <th>Input Voltage [V]</th> <th>Load 50% [%]</th> <th>Load 100% [%]</th> </tr> </thead> <tbody> <tr><td>75</td><td>70.3</td><td>68.0</td></tr> <tr><td>80</td><td>70.2</td><td>68.4</td></tr> <tr><td>85</td><td>70.0</td><td>68.8</td></tr> <tr><td>90</td><td>69.7</td><td>69.2</td></tr> <tr><td>100</td><td>69.5</td><td>69.6</td></tr> <tr><td>110</td><td>68.8</td><td>70.0</td></tr> <tr><td>120</td><td>68.2</td><td>70.4</td></tr> <tr><td>132</td><td>67.5</td><td>70.5</td></tr> <tr><td>140</td><td>66.5</td><td>70.5</td></tr> </tbody> </table>			Input Voltage [V]	Load 50% [%]	Load 100% [%]	75	70.3	68.0	80	70.2	68.4	85	70.0	68.8	90	69.7	69.2	100	69.5	69.6	110	68.8	70.0	120	68.2	70.4	132	67.5	70.5	140	66.5	70.5		
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Note: Slanted line shows the range of the rated input voltage.

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Temperature 25°C
Testing Circuitry Figure A

2. Values

Input Voltage [V]	Hold-Up Time [mS]	
	Load 50%	Load 100%
75	62	23
80	71	28
85	82	33
90	93	38
100	117	50
110	143	63
120	172	78
132	209	98
140	236	112

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Model	R25A-3	Temperature Testing Circuitry	25°C Figure A																																																			
Item	Instantaneous Interruption Compensation 瞬時停電保護																																																					
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1. Graph	<p>Legend:</p> <ul style="list-style-type: none"> Input Volt. 85 V Input Volt. 100 V Input Volt. 132 V 																																																					
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This duration covers from Shut-off of input voltage to the moment when output voltage descends to the rated range of voltage accuracy.

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

瞬時停電保護時間とは、出力電圧が定電圧精度の規格範囲を保持している瞬時停電時間をいう。

(注) 斜線は定格負荷電流範囲を示す。

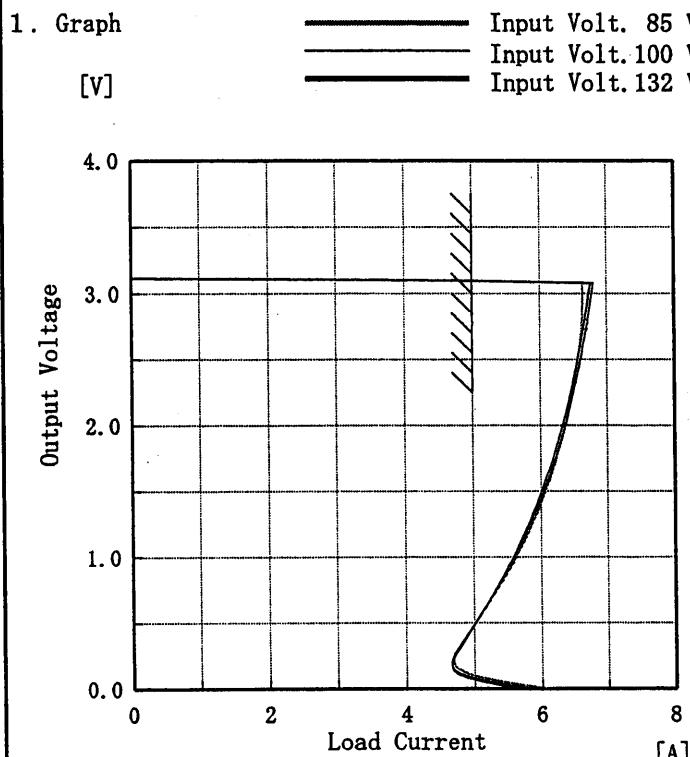
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COSEL

Model	R25A-3
Item	Overcurrent Protection 過電流保護

Object +3.0V5A



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。

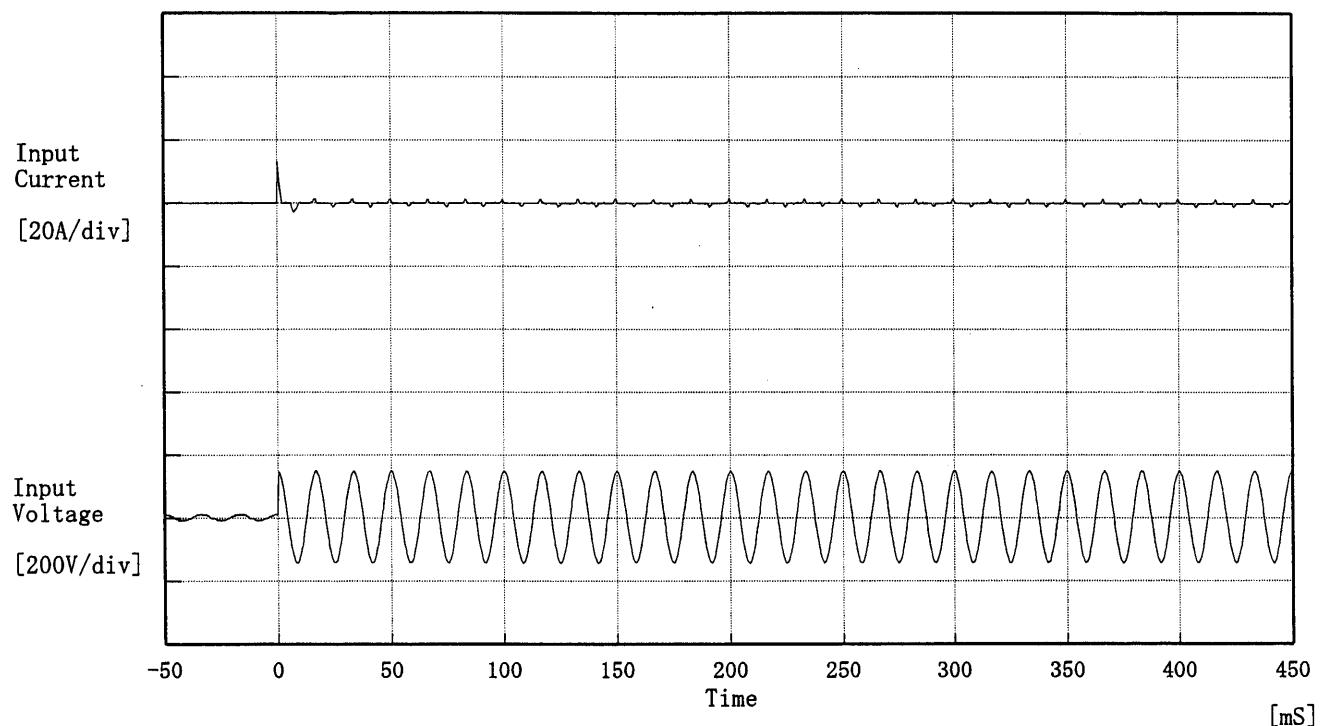
Temperature 25°C
Testing Circuitry Figure A

2. Values

Output Voltage [V]	Load Current [A]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
3.00	6.65	6.78	6.73
2.85	6.64	6.73	6.69
2.70	6.62	6.69	6.64
2.40	6.54	6.57	6.53
2.10	6.42	6.43	6.38
1.80	6.28	6.27	6.23
1.50	6.09	6.06	6.03
1.20	5.84	5.80	5.78
0.90	5.53	5.50	5.49
0.60	5.16	5.14	5.15
0.30	4.80	4.78	4.81
0.00	6.10	5.90	5.75

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Model	R25A-3	Temperature Testing Circuitry	25°C Figure A
Item	Inrush Current 突入電流		
Object	—		



Input Voltage 100 V

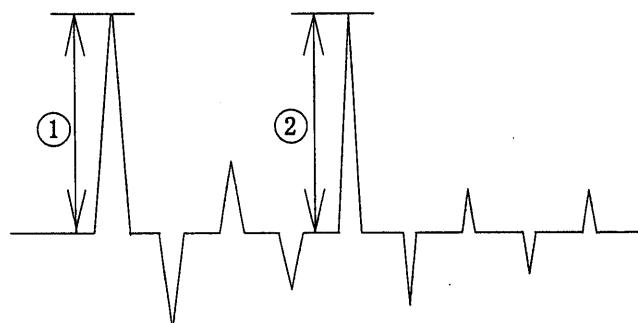
Frequency 60 Hz

Load 100 %

Inrush Current

① 13.19 [A]

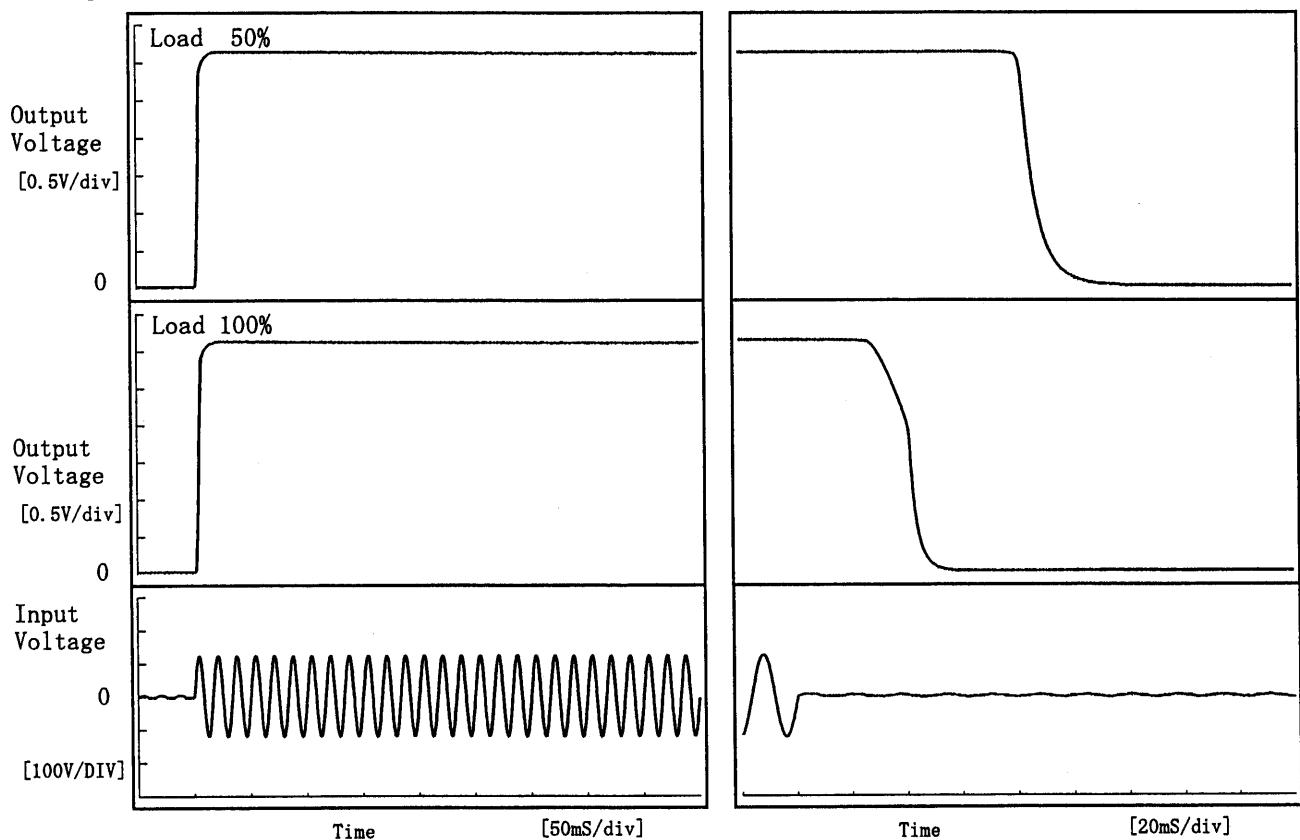
② 1.21 [A]



COSEL

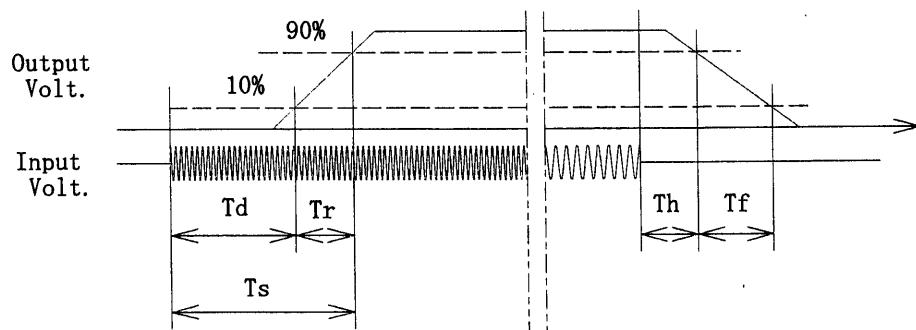
Model	R25A-3	Temperature	25°C
Item	Rise and Fall Time 立上り、立下り時間	Testing Circuitry	Figure A
Object	+3.0V 5A		

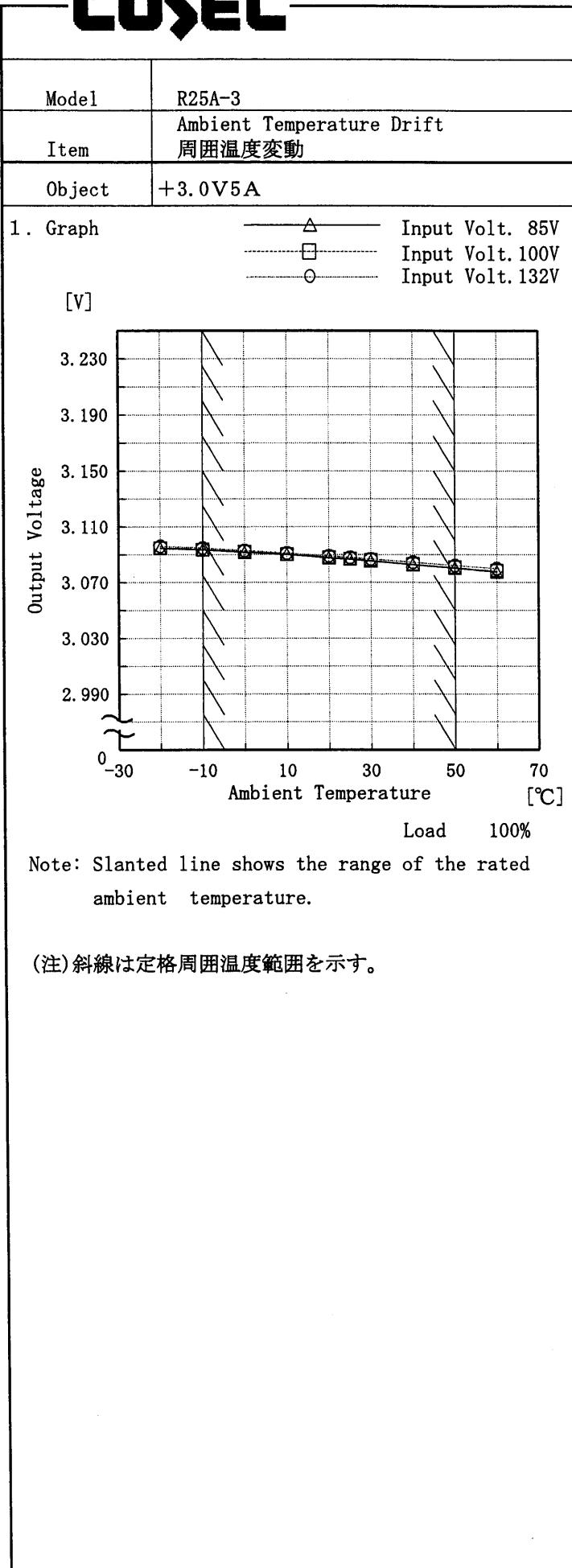
1. Graph



2. Values

Load	Time	T _d	T _r	T _s	T _h	T _f	[mS]
50 %		3.3	2.8	6.0	82.0	12.8	
100 %		3.3	3.8	7.0	33.1	13.4	



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Testing Circuitry Figure A

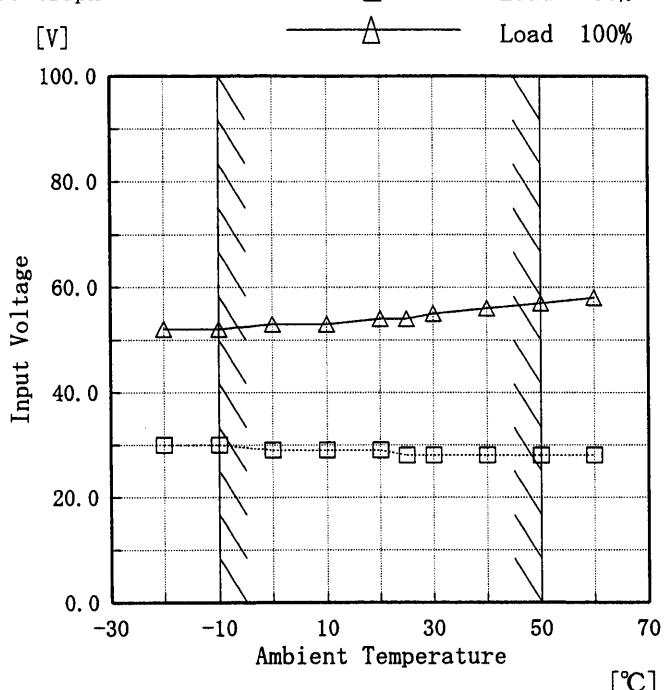


Model R25A-3

Item Minimum Input Voltage for Regulated Output Voltage
最低レギュレーション電圧

Object +3.0V5A

1. Graph



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]	Input Voltage [V]	
	Load 50%	Load 100%
-20	30	52
-10	30	52
0	29	53
10	29	53
20	29	54
25	28	54
30	28	55
40	28	56
50	28	57
60	28	58
—	—	—

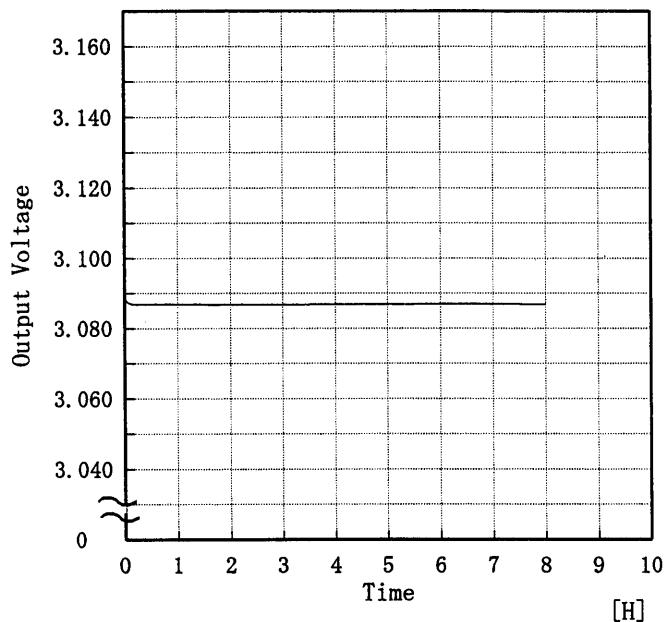
COSEL

Model	R25A-3
Item	Time Lapse Drift 経時ドリフト
Object	+3.0V5A

Temperature 25°C
Testing Circuitry Figure A

1. Graph

[V]



Input Volt. 100V

Load 100%

2. Values

Time since start [H]	Output Voltage [V]
0.0	3.089
0.5	3.087
1.0	3.087
2.0	3.087
3.0	3.087
4.0	3.087
5.0	3.087
6.0	3.087
7.0	3.087
8.0	3.087



Model	R25A-3	Testing Circuitry Figure A
Item	Output Voltage Accuracy 定電圧精度	
Object	+3.0V5A	

1. Output Voltage Accuracy

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

Temperature : -10~50 °C

Input Voltage : 85~132 V

Load Current : 0~5 A

* Output Voltage Accuracy = ±(Maximum of Output Voltage - Minimum of Output Voltage) / 2

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

1. 定電圧精度

周囲温度、入力電圧、負荷電流を下記仕様内で、任意に変動させたときの出力電圧の変動をいう。

周囲温度 -10~50 °C

入力電圧 85~132 V

負荷電流 0~5 A

* 定電圧精度(変動値) = ±(出力電圧の最高値-出力電圧の最低値) / 2

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

2. Values

Item	Temperature [°C]	Input Voltage [V]	Output Current [A]	Output Voltage [V]	Output Voltage Accuracy [mV]	Output Voltage Accuracy(Ration) [%]
Maximum Voltage	-10	132	0	3.114		
Minimum Voltage	50	85	5	3.081	±17	±0.6

COSEL

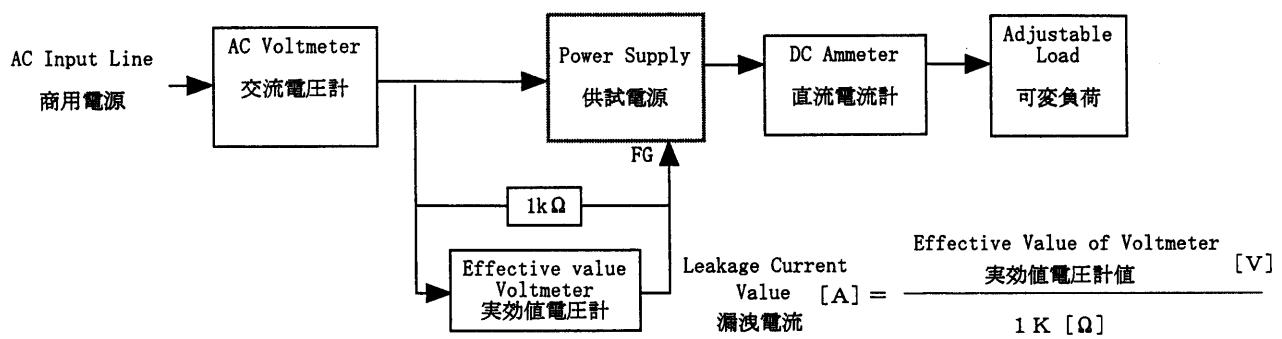
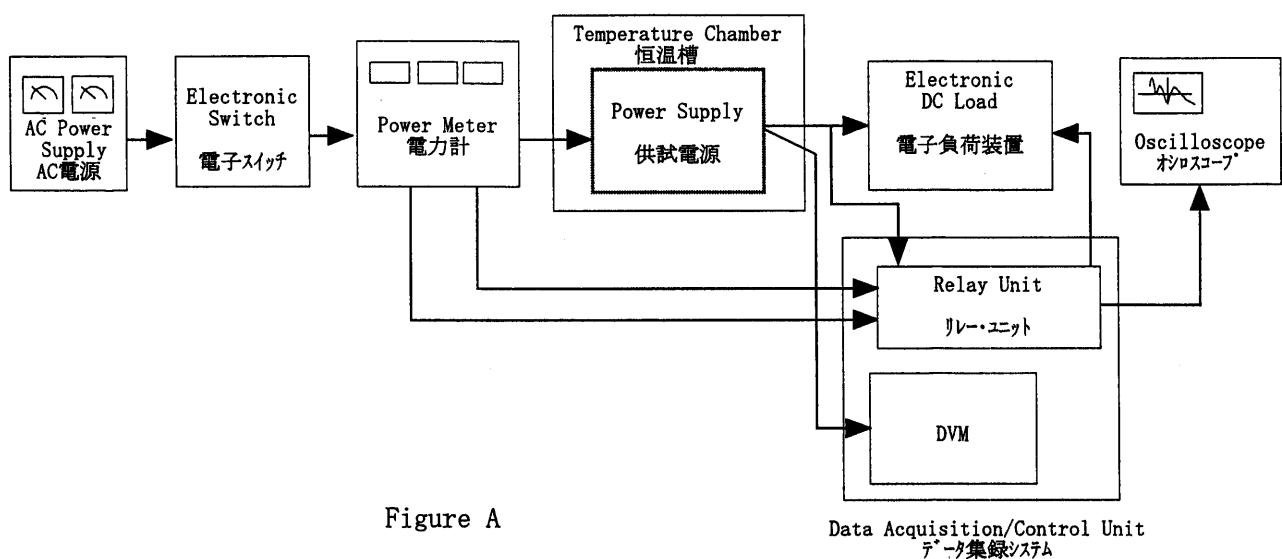


Figure B (DENTORI)

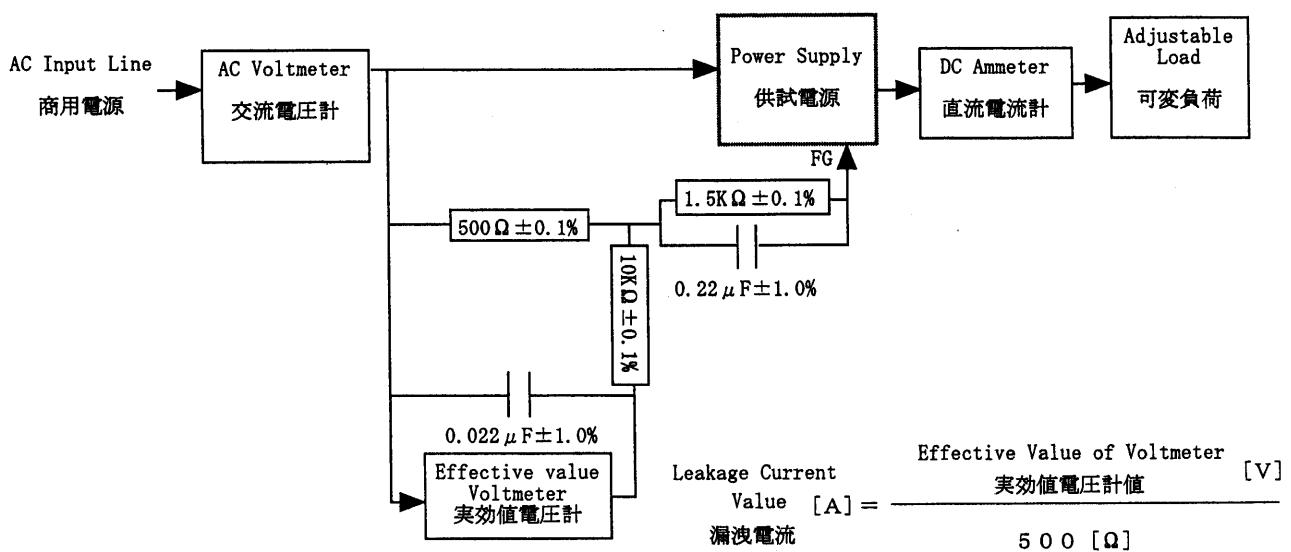


Figure B (IEC 60950)

COSEL

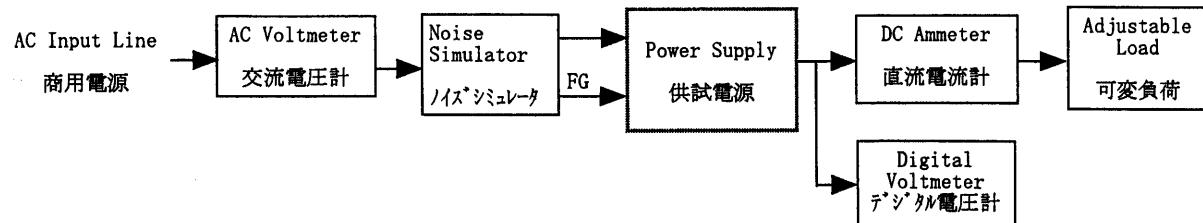


Figure C

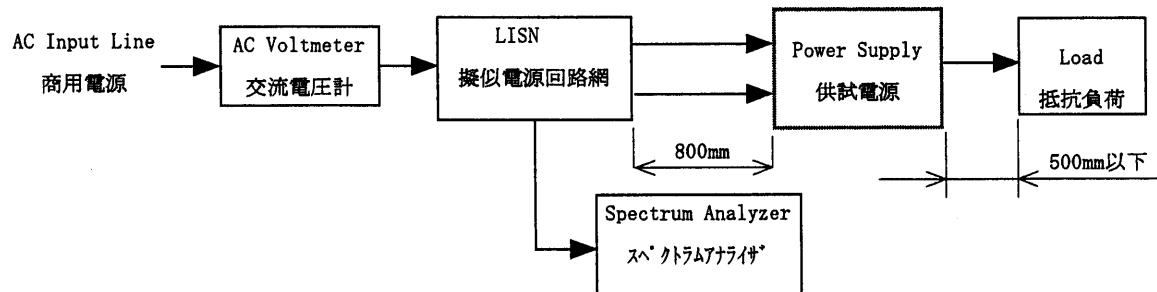


Figure D

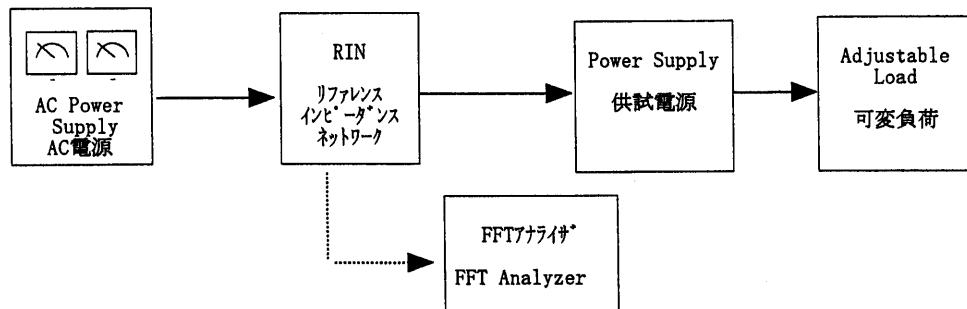


Figure E