

TEST DATA OF SUCS1R5483R3

Regulated DC Power Supply
Sep 28, 2004

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Tetsuo Sugimori Design Manager

Prepared by : Masahiro Shima
Masahiro Shima Design Engineer

COSEL CO.,LTD.



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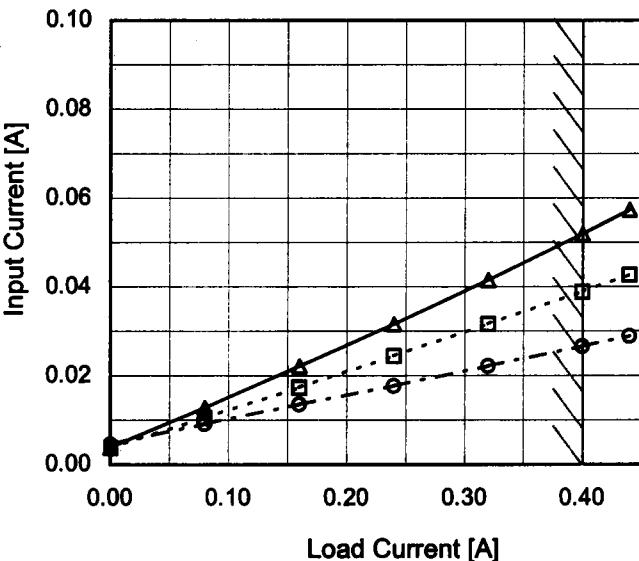
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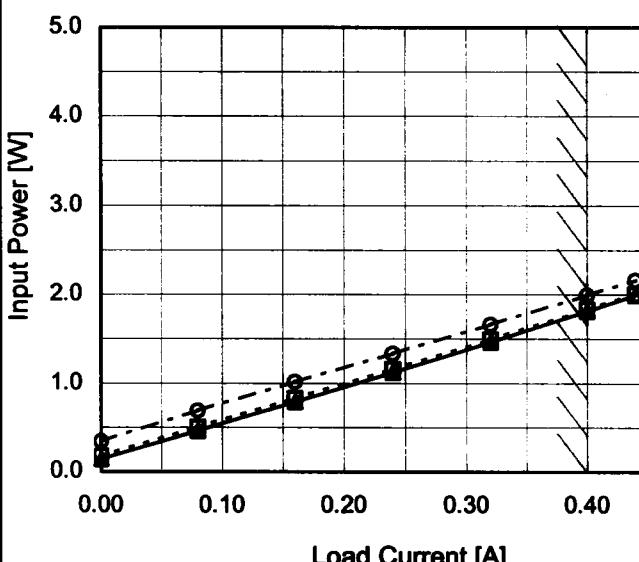
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Item	Input Current (by Input Voltage)																																																																									
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1.Graph	<p>The graph plots Input Current [A] on the y-axis (0.00 to 0.20) against Input Voltage [V] on the x-axis (0 to 80). Three data series are shown: Load 0% (solid line with open circles), Load 50% (dashed line with squares), and Load 100% (solid line with triangles). All series show a sharp increase in current from 0V to approximately 20V, followed by a gradual decrease. A slanted line is drawn through the data points at approximately 21.6V, 33.0V, 40.0V, 48.0V, 60.0V, 70.0V, and 76.0V.</p>																																																																									
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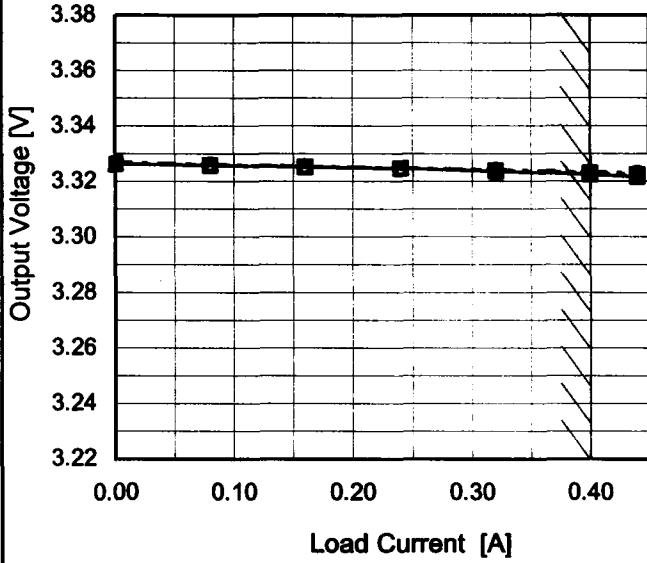
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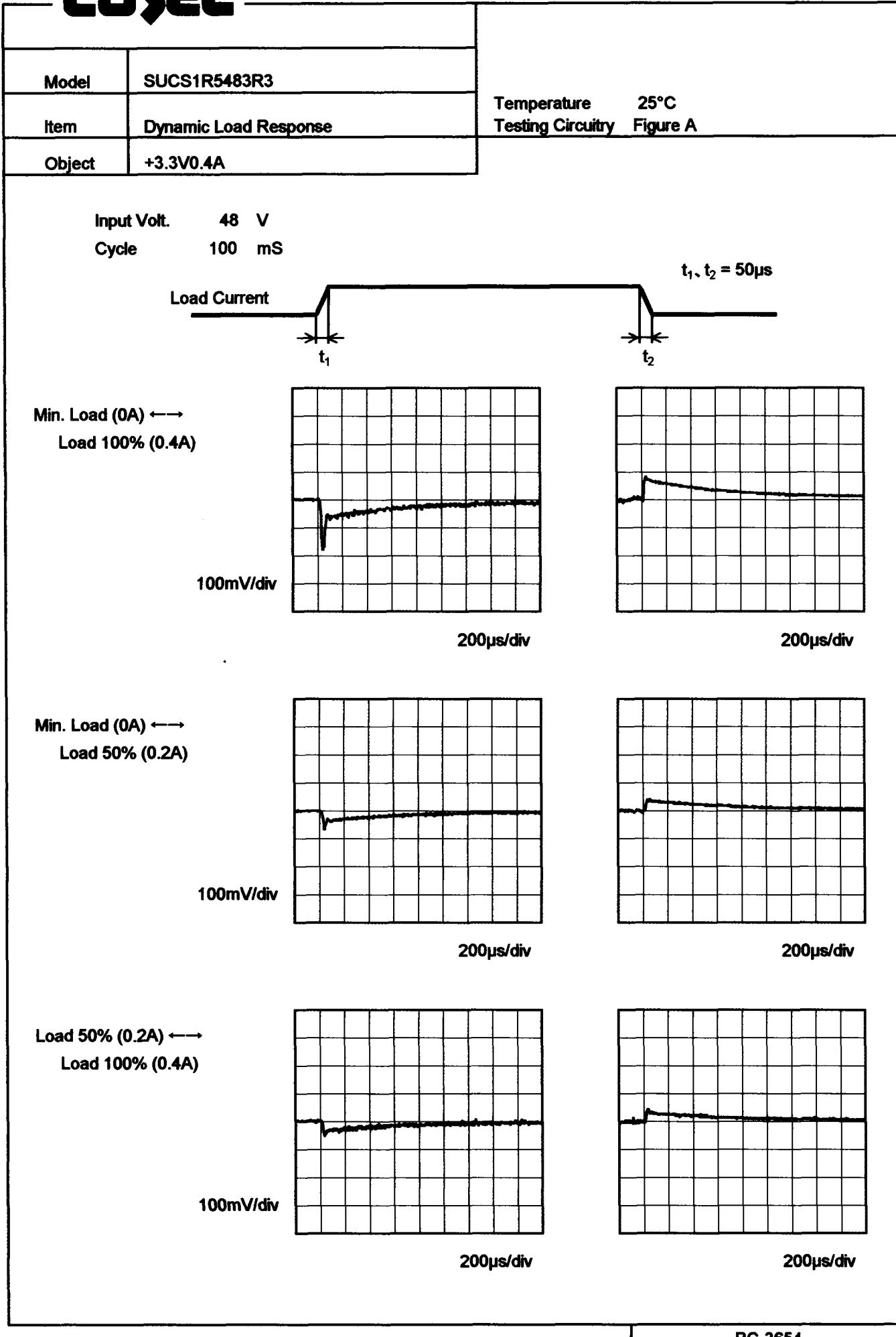
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Item	Load Regulation		
Object	+3.3V0.4A		
1.Graph	—△— Input Volt. 36V	—□— Input Volt. 48V	—○— Input Volt. 76V
			
Note:	Slanted line shows the range of the rated load current.		
Temperature	25°C	Testing Circuitry	Figure A
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Load Current [A]	Output Voltage [V]		
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0.00	3.326	3.326	3.327
0.08	3.326	3.326	3.326
0.16	3.325	3.325	3.325
0.24	3.325	3.325	3.325
0.32	3.324	3.324	3.324
0.40	3.323	3.323	3.323
0.44	3.322	3.323	3.323
—	—	—	—
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—	—	—	—

COSEL

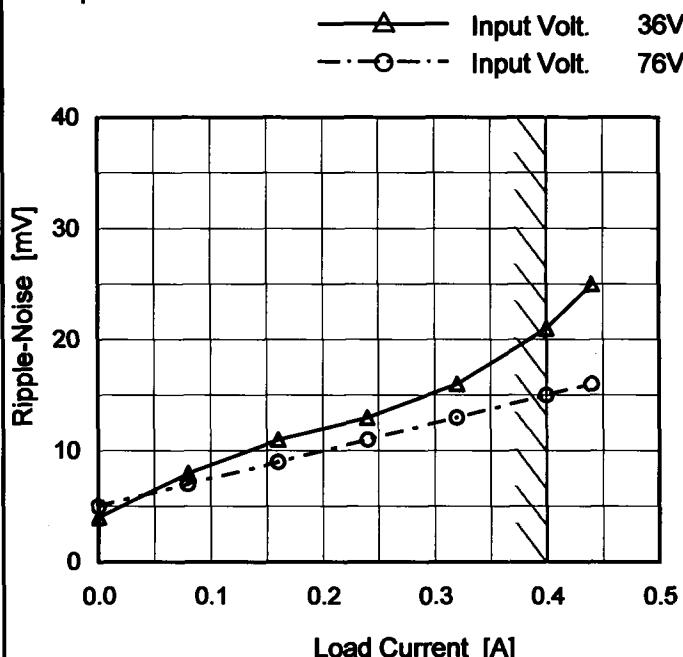
COSEL

Model	SUCS1R5483R3																																							
Item	Ripple Voltage (by Load Current)	Temperature 25°C Testing Circuitry Figure B																																						
Object	+3.3V0.4A																																							
1. Graph																																								
<p>Graph showing Ripple Voltage [mV] vs Load Current [A]. The Y-axis ranges from 0 to 40 mV, and the X-axis ranges from 0.0 to 0.5 A. Two sets of data points are plotted: Input Volt. 36V (solid line with triangle markers) and Input Volt. 76V (dashed line with circle markers). A slanted line indicates the rated load current range.</p> <table border="1"> <thead> <tr> <th>Load Current [A]</th> <th>Ripple Voltage [mV] (36V)</th> <th>Ripple Voltage [mV] (76V)</th> </tr> </thead> <tbody> <tr><td>0.00</td><td>2</td><td>3</td></tr> <tr><td>0.08</td><td>3</td><td>3</td></tr> <tr><td>0.16</td><td>4</td><td>3</td></tr> <tr><td>0.24</td><td>6</td><td>4</td></tr> <tr><td>0.32</td><td>11</td><td>6</td></tr> <tr><td>0.40</td><td>16</td><td>7</td></tr> <tr><td>0.44</td><td>20</td><td>8</td></tr> </tbody> </table>			Load Current [A]	Ripple Voltage [mV] (36V)	Ripple Voltage [mV] (76V)	0.00	2	3	0.08	3	3	0.16	4	3	0.24	6	4	0.32	11	6	0.40	16	7	0.44	20	8														
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<p>Measured by 100 MHz Oscilloscope. Ripple Voltage is shown as p-p in the figure below. Note: Slanted line shows the range of the rated load current.</p> <p>Ripple [mVp-p]</p> <p>Fig.Complex Ripple Wave Form</p>																																								

COSEL

Model	SUCS1R5483R3
Item	Ripple-Noise
Object	+3.3V0.4A

1. Graph



Measured by 100 MHz Oscilloscope.

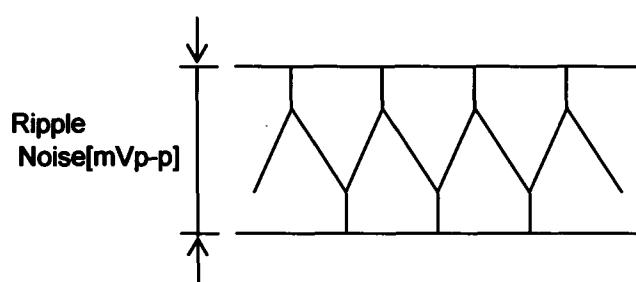
Ripple-Noise is shown as p-p in the figure below.

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

Temperature 25°C
Testing Circuitry Figure B

2. Values

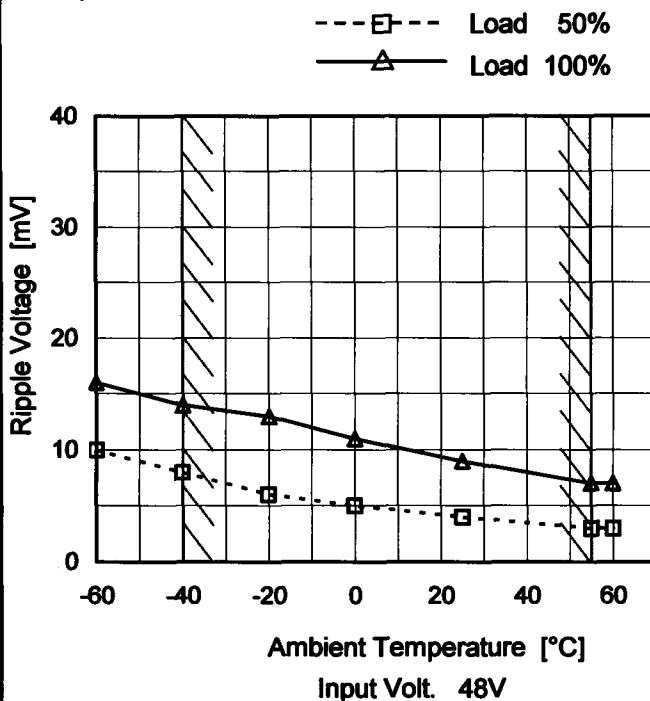
Load Current [A]	Ripple-Noise [mV]	
	Input Volt. 36 [V]	Input Volt. 76 [V]
0.00	4	5
0.08	8	7
0.16	11	9
0.24	13	11
0.32	16	13
0.40	21	15
0.44	25	16
-	-	-
-	-	-
-	-	-
-	-	-



COSEL

Model	SUCS1R5483R3
Item	Ripple Voltage (by Ambient Temp.)
Object	+3.3V0.4A

1.Graph



Testing Circuitry Figure B

2.Values

Ambient Temperature [°C]	Ripple Voltage [mV]	
	Load 50%	Load 100%
-60	10	16
-40	8	14
-20	6	13
0	5	11
25	4	9
55	3	7
60	3	7
-	-	-
-	-	-
-	-	-
-	-	-

Measured by 100 MHz Oscilloscope.

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

COSEL

Model	SUCS1R5483R3																																																					
Item	Ambient Temperature Drift																																																					
Object	+3.3V0.4A																																																					
1.Graph	<p>Output Voltage [V]</p> <p>Ambient Temperature [°C]</p> <p>Load 100%</p> <p>Legend:</p> <ul style="list-style-type: none"> Input Volt. 36V Input Volt. 48V Input Volt. 76V 																																																					
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Note:	Slanted line shows the range of the rated ambient temperature.																																																					



Model	SUCS1R5483R3	Testing Circuitry Figure A
Item	Output Voltage Accuracy	
Object	+3.3V0.4A	

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 : -40 - 55°C

Input Voltage : 36 - 76V

Load Current : 0 - 0.4A

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

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

2. Values

Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	25	76	0	3.327	± 8	± 0.2
Minimum Voltage	-40	36	0.4	3.311		

COSEL

Model	SUCCS1R5483R3
Item	Time Lapse Drift
Object	+3.3V0.4A

1.Graph

Time since start [H]	Output Voltage [V]
0.0	3.322
0.5	3.322
1.0	3.322
2.0	3.322
3.0	3.322
4.0	3.322
5.0	3.322
6.0	3.322
7.0	3.322
8.0	3.322

Input Volt. 48V
Load 100%

Temperature	25°C
Testing Circuitry	Figure A

2.Values

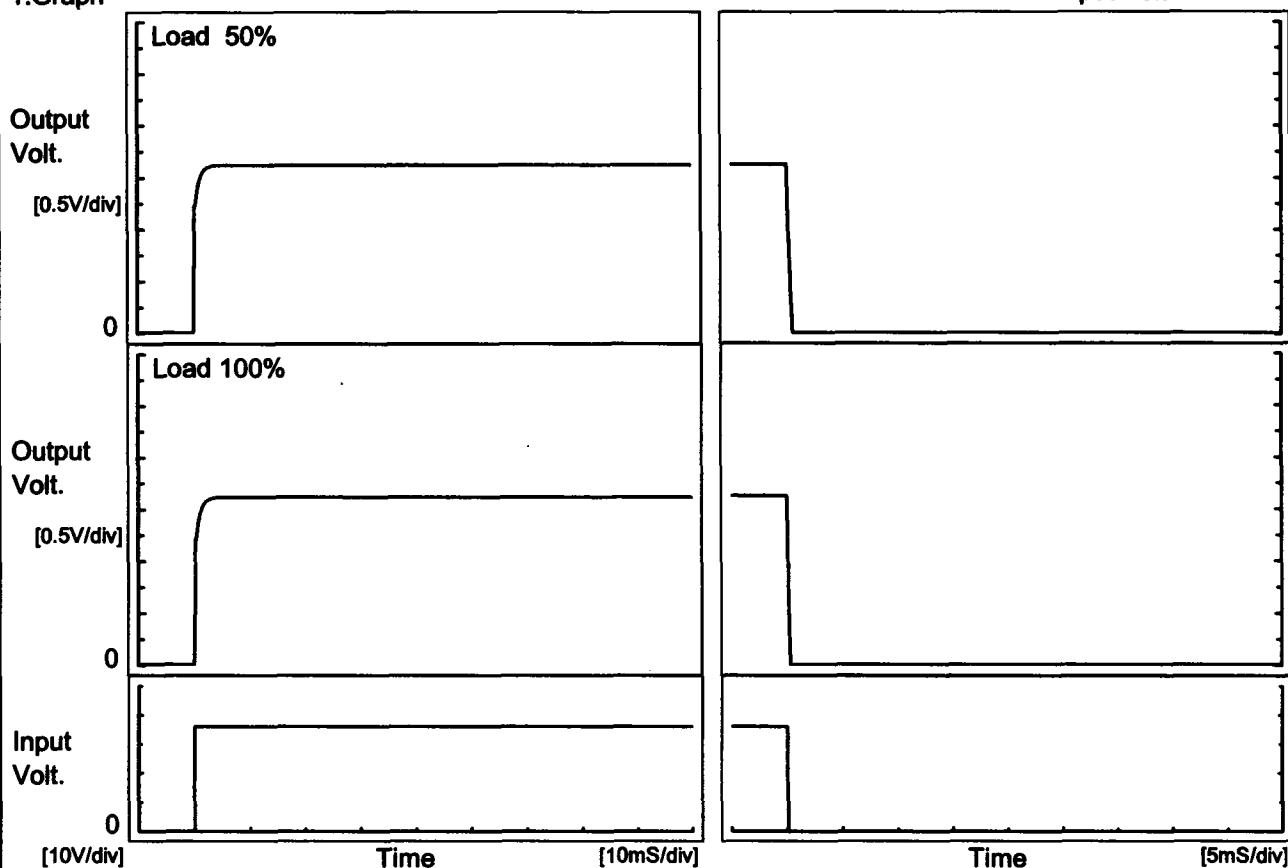
Time since start [H]	Output Voltage [V]
0.0	3.322
0.5	3.322
1.0	3.322
2.0	3.322
3.0	3.322
4.0	3.322
5.0	3.322
6.0	3.322
7.0	3.322
8.0	3.322

COSEL

Model	SUCS1R5483R3
Item	Rise and Fall Time
Object	+3.3V0.4A

Temperature 25°C
Testing Circuitry Figure A

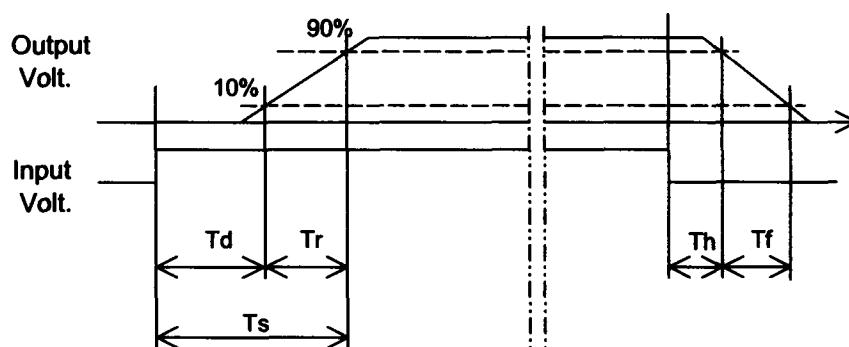
1. Graph



2. Values

[mS]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	0.1	1.2	1.3	0.1	0.5
100 %	0.1	1.3	1.4	0.1	0.3



COSEL

<p>Model SUCS1R5483R3</p> <p>Item Minimum Input Voltage for Regulated Output Voltage</p> <p>Object +3.3V0.4A</p>	Testing Circuitry Figure A																																						
	2.Values																																						
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<p>Note: Slanted line shows the range of the rated ambient temperature.</p>																																							

COSEL

Model	SUCS1R5483R3	Temperature	25°C																																																							
Item	Overcurrent Protection	Testing Circuitry	Figure A																																																							
Object	+3.3V0.4A																																																									
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Note: Slanted line shows the range of the rated load current.

COSEL

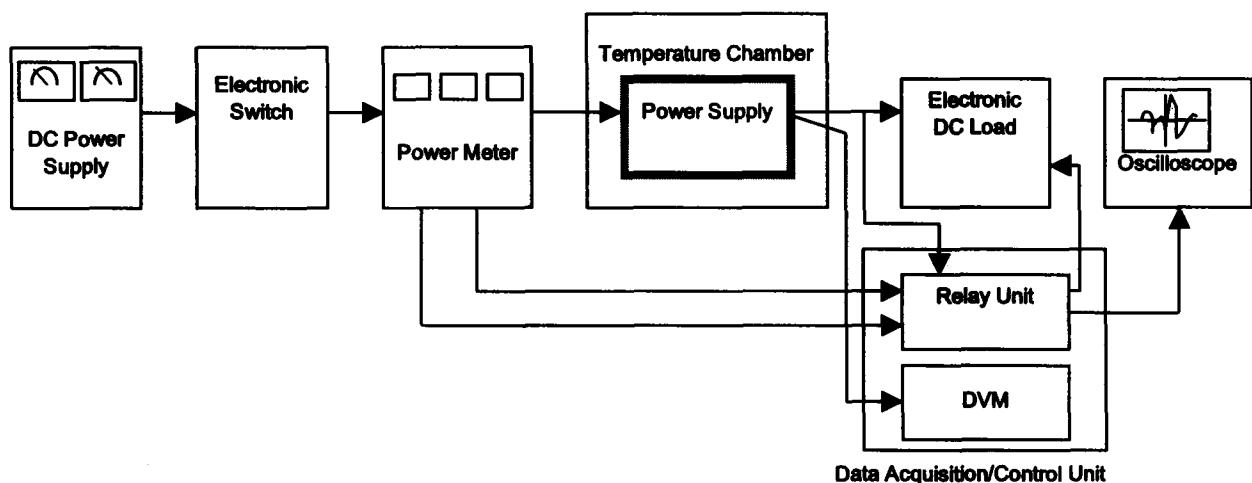


Figure A

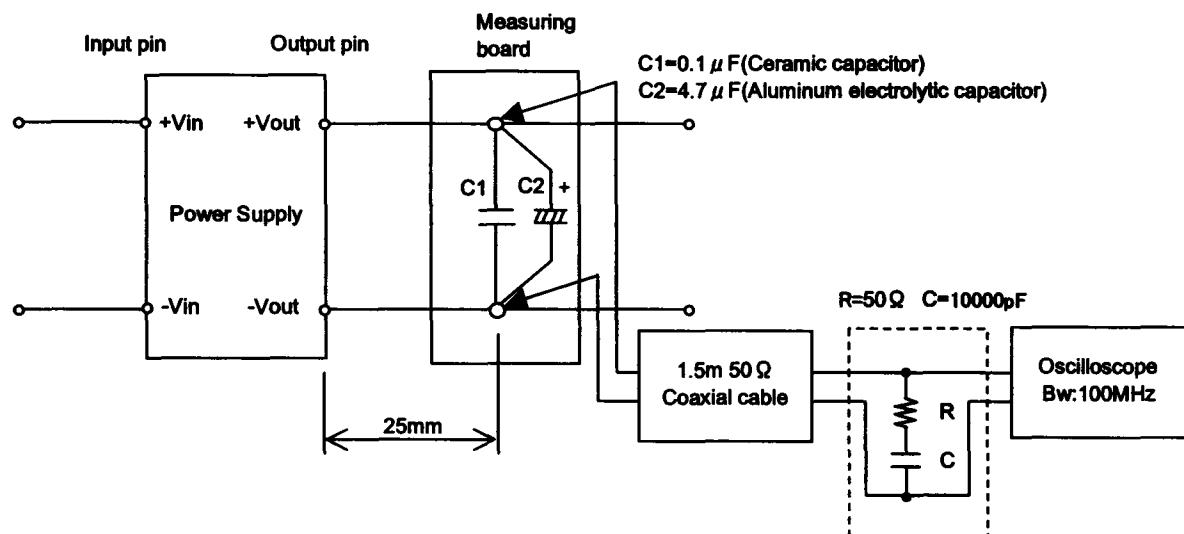


Figure B (Ripple and Ripple noise Characteristic)