

TEST DATA OF SUTW61215

Regulated DC Power Supply
March 17, 2009

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Kazunari Asano Design Manager

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Sho Saito Design Engineer

COSEL CO.,LTD.

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Model		SUTW61215		Temperature	25°C																																																																															
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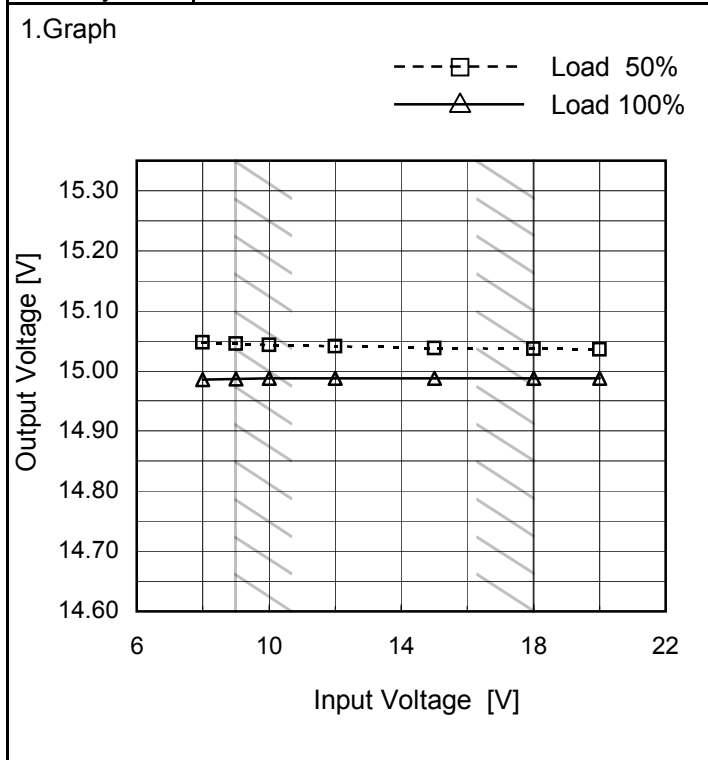


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Model	SUTW61215
Item	Line Regulation
Object	+15V0.2A

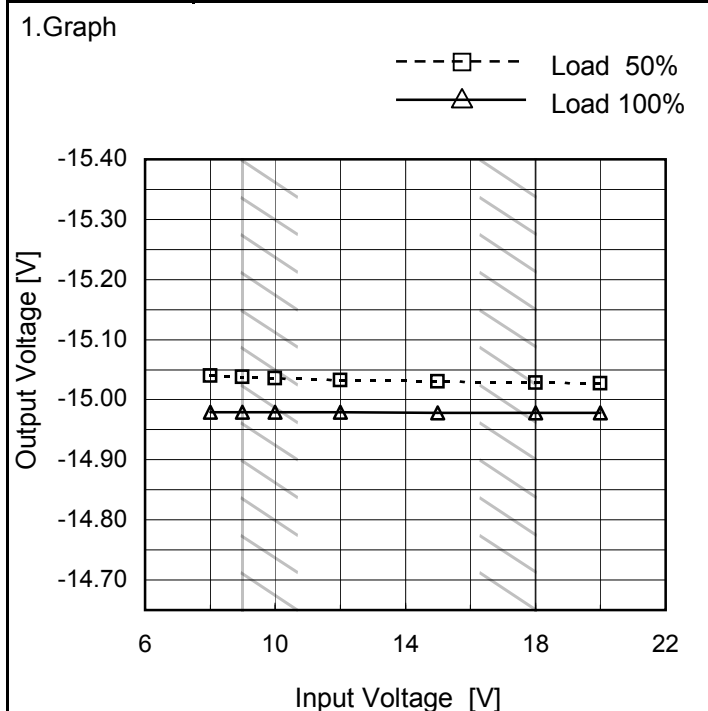
Temperature 25°C
Testing Circuitry Figure A



2.Values

Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
8	15.047	14.986
9	15.045	14.987
10	15.043	14.987
12	15.041	14.988
15	15.038	14.988
18	15.037	14.987
20	15.036	14.988
--	-	-
--	-	-

Object	-15V0.2A
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2.Values

Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
8	-15.040	-14.979
9	-15.038	-14.979
10	-15.036	-14.979
12	-15.033	-14.979
15	-15.030	-14.978
18	-15.028	-14.978
20	-15.027	-14.978
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--	-	-

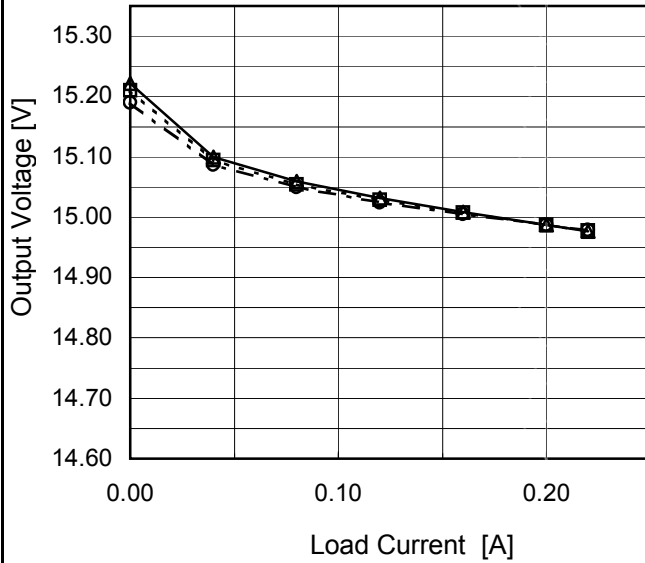
Note: Slanted line shows the range of the rated input voltage.



Model	SUTW61215
Item	Load Regulation
Object	+15V0.2A

Temperature 25°C
Testing Circuitry Figure A

1.Graph
 —△— Input Volt. 9V
 ---□--- Input Volt. 12V
 -·-○-·- Input Volt. 18V

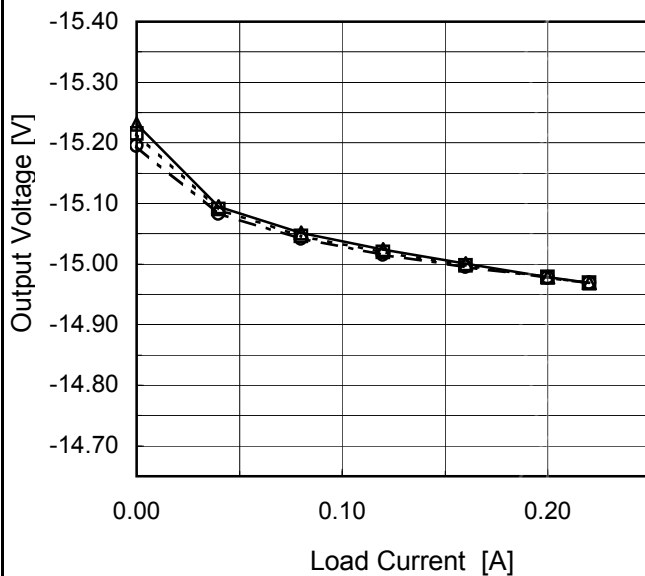


2.Values

Load Current [A]	Output Voltage [V]		
	Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]
0.00	15.222	15.210	15.190
0.04	15.100	15.095	15.087
0.08	15.059	15.054	15.050
0.12	15.032	15.028	15.025
0.16	15.008	15.007	15.005
0.20	14.987	14.987	14.987
0.22	14.976	14.978	14.979
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

Object	-15V0.2A
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1.Graph
 —△— Input Volt. 9V
 ---□--- Input Volt. 12V
 -·-○-·- Input Volt. 18V



2.Values

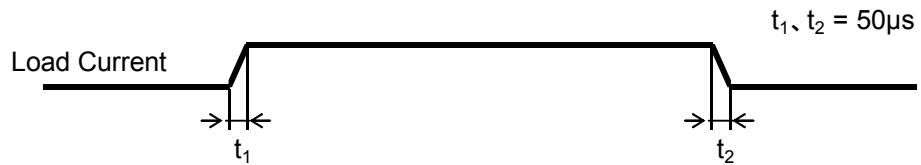
Load Current [A]	Output Voltage [V]		
	Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]
0.00	-15.231	-15.215	-15.195
0.04	-15.094	-15.090	-15.083
0.08	-15.051	-15.047	-15.042
0.12	-15.024	-15.020	-15.016
0.16	-15.000	-14.998	-14.996
0.20	-14.979	-14.979	-14.978
0.22	-14.969	-14.969	-14.969
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--	-	-	-
--	-	-	-
--	-	-	-

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



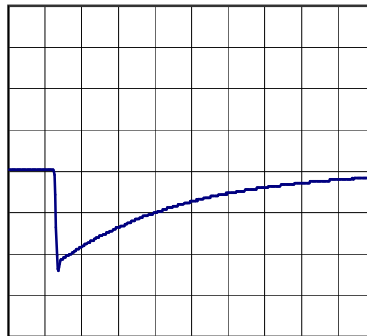
Model	SUTW61215	Temperature	25°C
Item	Dynamic Load Response	Testing Circuitry	Figure A
Object	+15V0.2A		

Input Volt. 12 V
 Cycle 100 mS

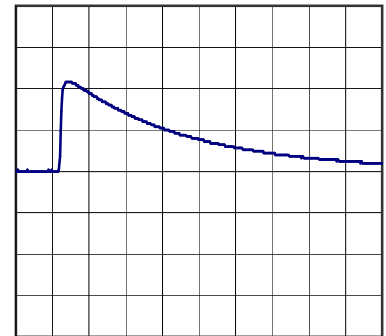


Min. Load (0A) \longleftrightarrow
 Load 100% (0.2A)

200mV/div



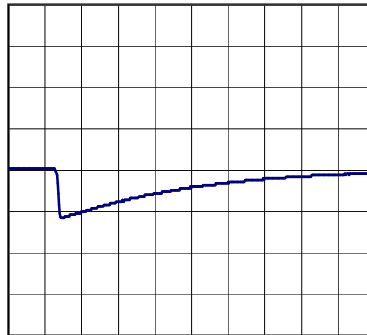
500µs/div



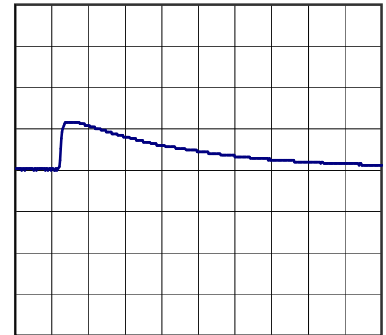
500µs/div

Min. Load (0A) \longleftrightarrow
 Load 50% (0.1A)

200mV/div



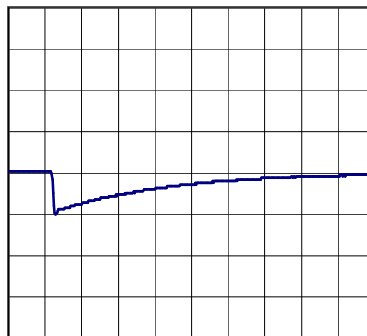
500µs/div



500µs/div

Load 50% (0.1A) \longleftrightarrow
 Load 100% (0.2A)

200mV/div



500µs/div

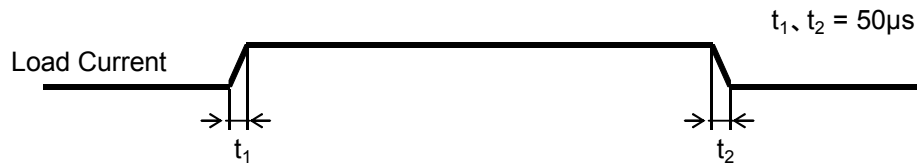


500µs/div



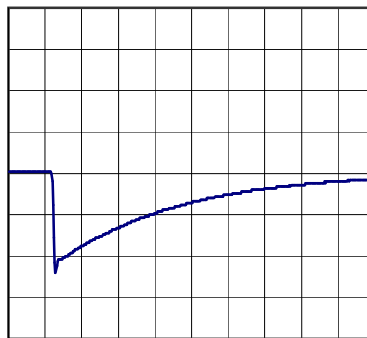
Model	SUTW61215	Temperature	25°C
Item	Dynamic Load Response	Testing Circuitry	Figure A
Object	-15V0.2A		

Input Volt. 12 V
 Cycle 100 mS

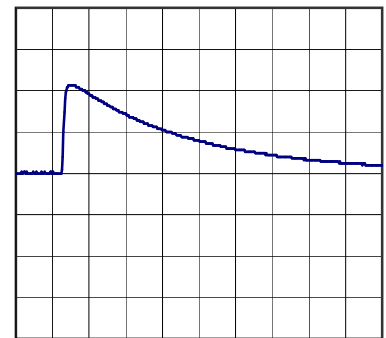


Min. Load (0A) \longleftrightarrow
 Load 100% (0.2A)

200mV/div



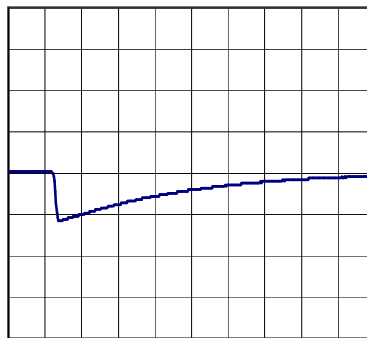
500µs/div



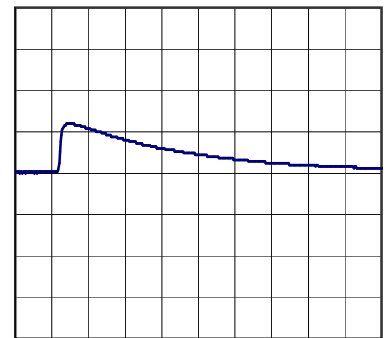
500µs/div

Min. Load (0A) \longleftrightarrow
 Load 50% (0.1A)

200mV/div



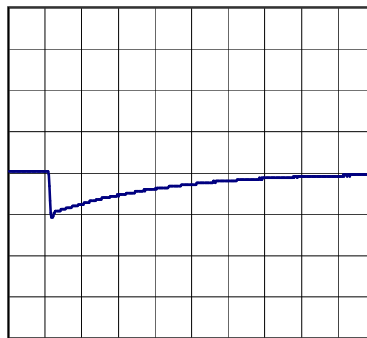
500µs/div



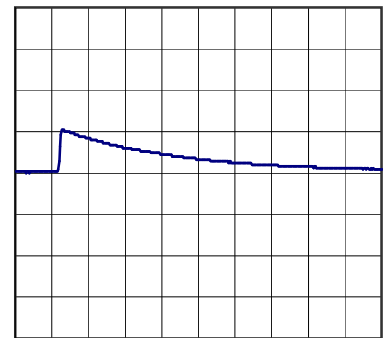
500µs/div

Load 50% (0.1A) \longleftrightarrow
 Load 100% (0.2A)

200mV/div



500µs/div



500µs/div

<p>Model SUTW61215</p>		<p>Temperature 25°C Testing Circuitry Figure B</p>																																						
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COSEL		
Model	SUTW61215	
Item	Output Voltage Accuracy	Testing Circuitry Figure A

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 : 9 - 18V

Load Current (AVR 1) : 0 - 0.2A (AVR 2) : 0 - 0.2A

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

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

2. Values

Object		+15V0.2A				
Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	55	9	0	15.236	±264	±1.8
Minimum Voltage	-40	9	0.2	14.708		

Object		-15V0.2A				
Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	55	9	0	-15.245	±261	±1.7
Minimum Voltage	-40	9	0.2	-14.723		



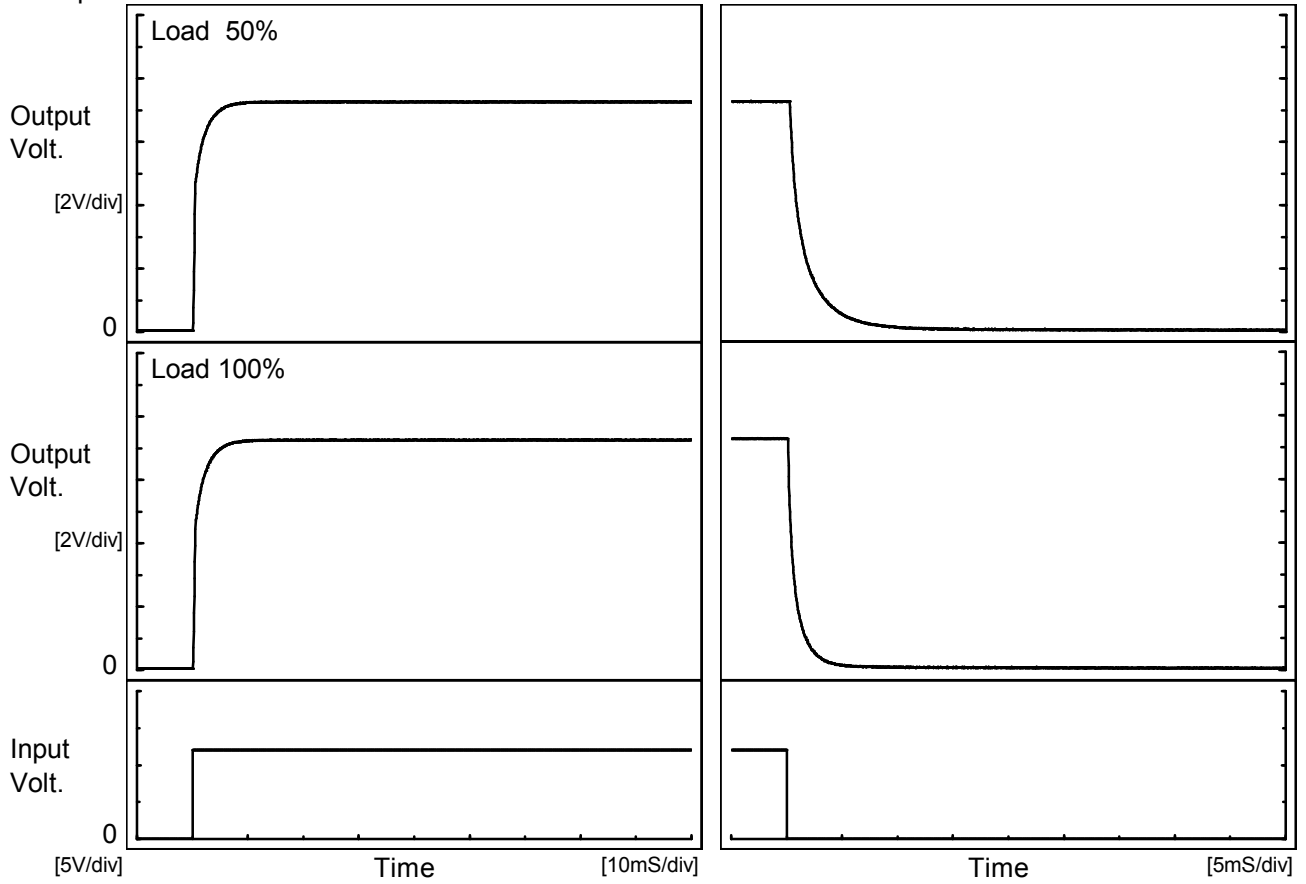
COSEL																									
Model	SUTW61215	Temperature	25°C																						
Item	Time Lapse Drift	Testing Circuitry	Figure A																						
Object	+15V0.2A																								
<p>1.Graph</p> <p style="text-align: center;">Time [H]</p> <p style="text-align: center;">Input Volt. 12V Load 100%</p>		<p>2.Values</p> <table border="1"> <thead> <tr> <th>Time since start [H]</th> <th>Output Voltage [V]</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>14.980</td></tr> <tr><td>0.5</td><td>14.986</td></tr> <tr><td>1.0</td><td>14.986</td></tr> <tr><td>2.0</td><td>14.986</td></tr> <tr><td>3.0</td><td>14.986</td></tr> <tr><td>4.0</td><td>14.986</td></tr> <tr><td>5.0</td><td>14.986</td></tr> <tr><td>6.0</td><td>14.986</td></tr> <tr><td>7.0</td><td>14.986</td></tr> <tr><td>8.0</td><td>14.985</td></tr> </tbody> </table>		Time since start [H]	Output Voltage [V]	0.0	14.980	0.5	14.986	1.0	14.986	2.0	14.986	3.0	14.986	4.0	14.986	5.0	14.986	6.0	14.986	7.0	14.986	8.0	14.985
Time since start [H]	Output Voltage [V]																								
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Model		SUTW61215	Temperature	25°C
Item		Rise and Fall Time	Testing Circuitry	Figure A
Object		+15V0.2A		

1. Graph

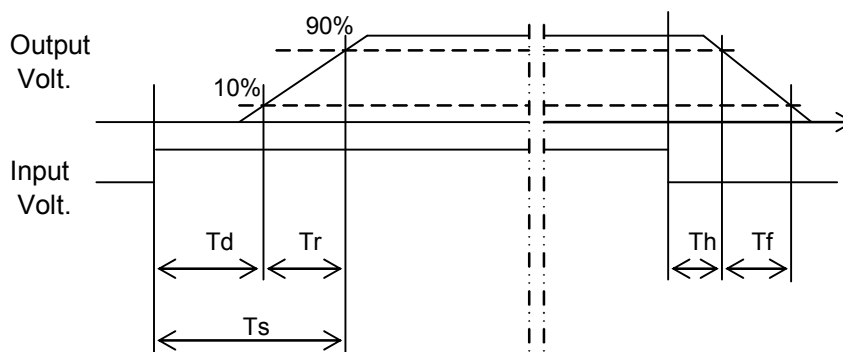
Input Volt. 12 V



2. Values

[mS]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	0.3	3.6	3.9	0.3	3.8
100 %	0.3	3.7	4.0	0.2	1.9

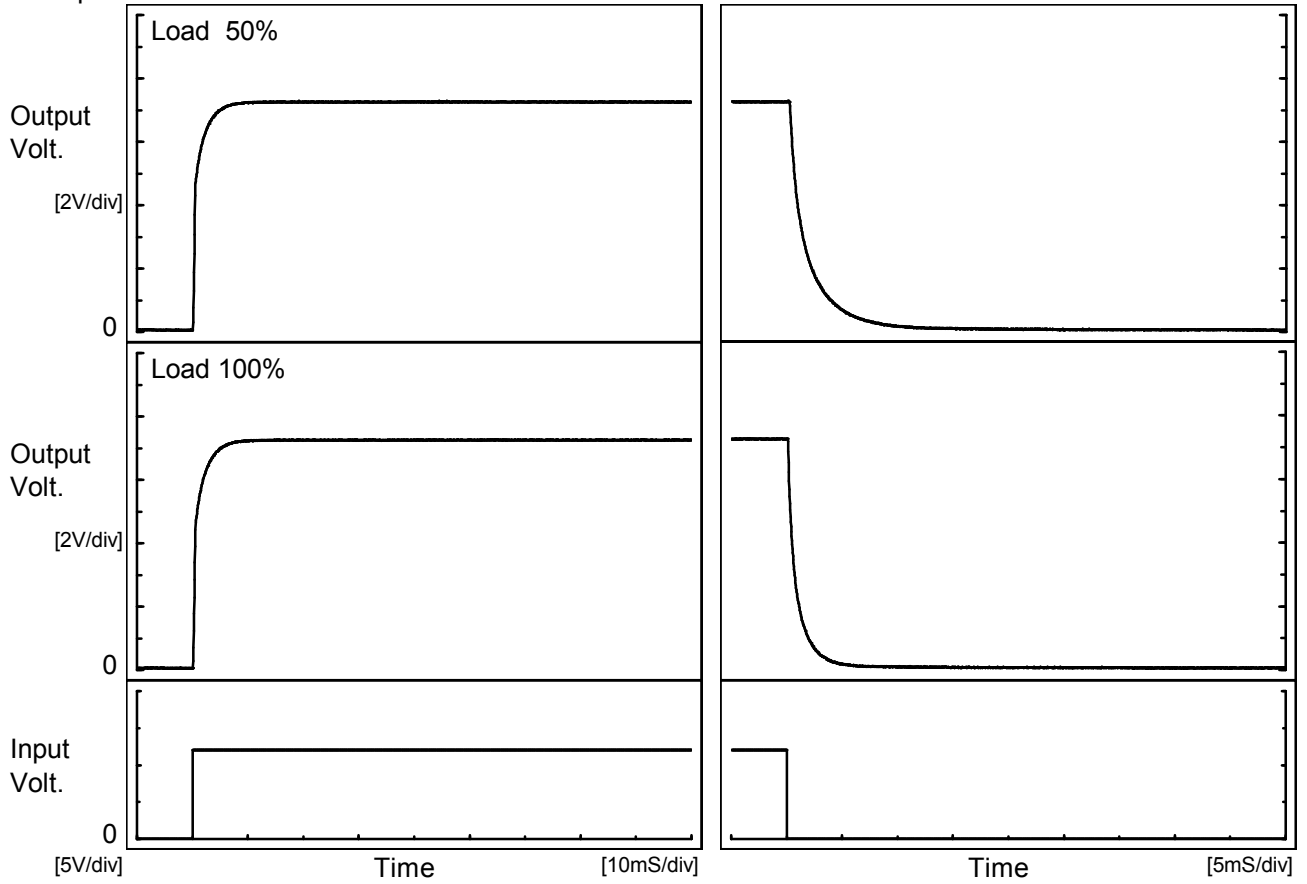




Model		SUTW61215	Temperature	25°C
Item		Rise and Fall Time	Testing Circuitry	Figure A
Object		-15V0.2A		

1. Graph

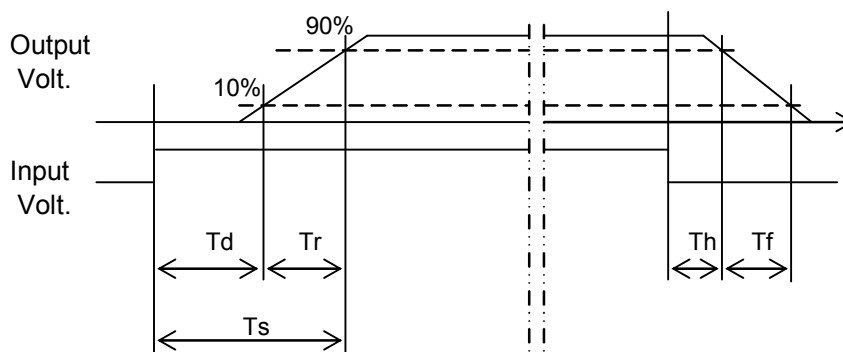
Input Volt. 12 V



2. Values

[mS]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	0.3	3.6	3.9	0.3	4.3
100 %	0.3	3.7	4.0	0.2	2.1

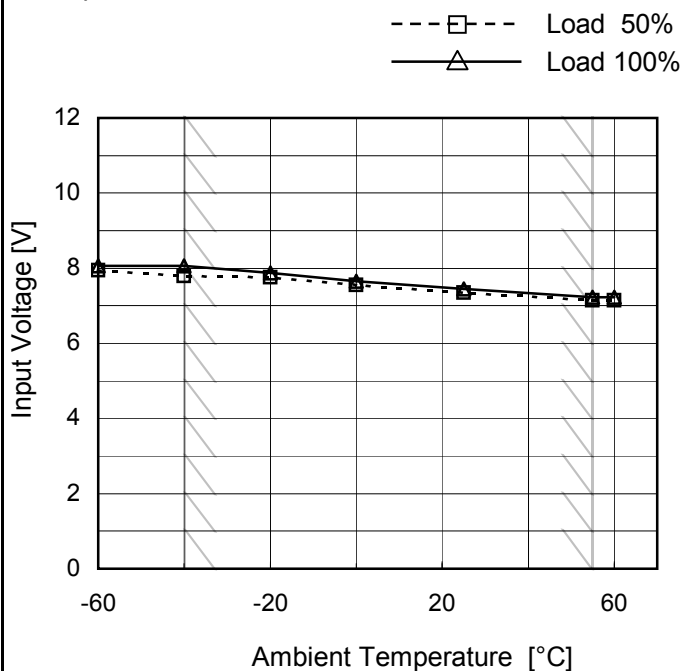




Model	SUTW61215
Item	Minimum Input Voltage for Regulated Output Voltage
Object	+15V0.2A

Testing Circuitry Figure A

1.Graph

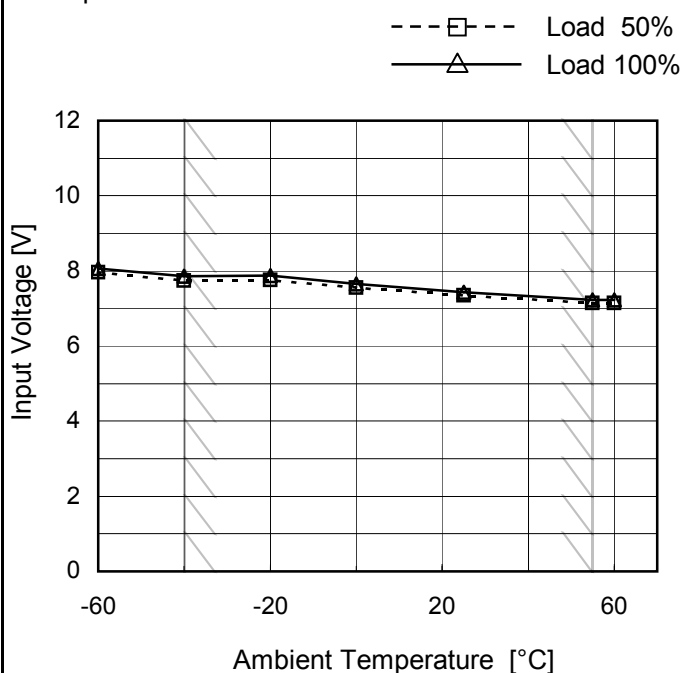


2.Values

Ambient Temperature [°C]	Input Voltage [V]	
	Load 50%	Load 100%
-60	8.0	8.1
-40	7.8	8.1
-20	7.8	7.9
0	7.6	7.7
25	7.4	7.5
55	7.2	7.3
60	7.2	7.3
--	-	-
--	-	-
--	-	-
--	-	-

Object	-15V0.2A
--------	----------

1.Graph



2.Values

Ambient Temperature [°C]	Input Voltage [V]	
	Load 50%	Load 100%
-60	8.0	8.1
-40	7.8	7.9
-20	7.8	7.9
0	7.6	7.7
25	7.4	7.5
55	7.2	7.3
60	7.2	7.3
--	-	-
--	-	-
--	-	-
--	-	-

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



COSEL																																																										
Model	SUTW61215	Temperature	25°C																																																							
Item	Overcurrent Protection	Testing Circuitry	Figure A																																																							
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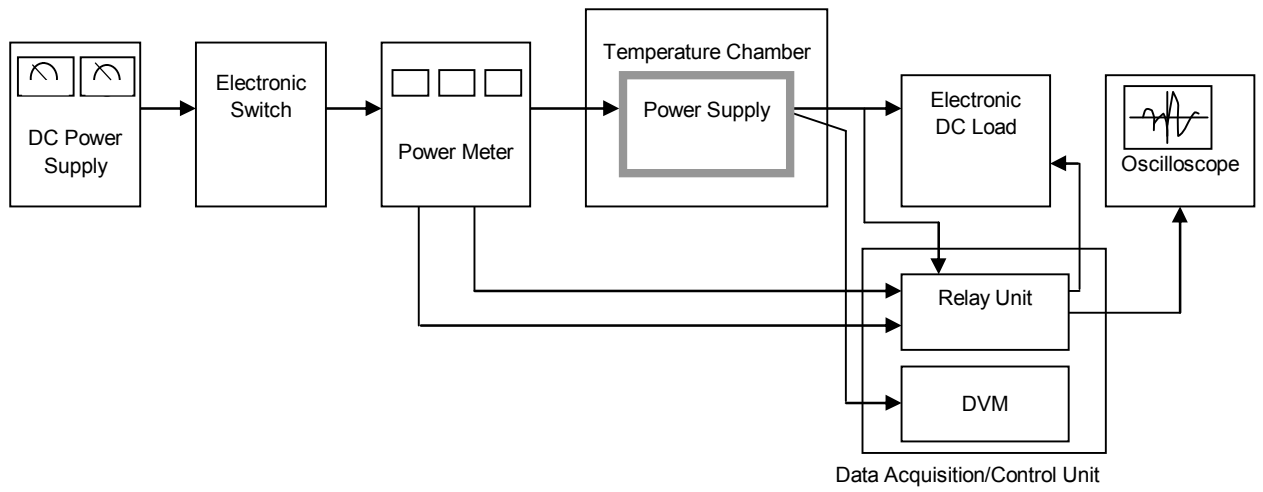


Figure A

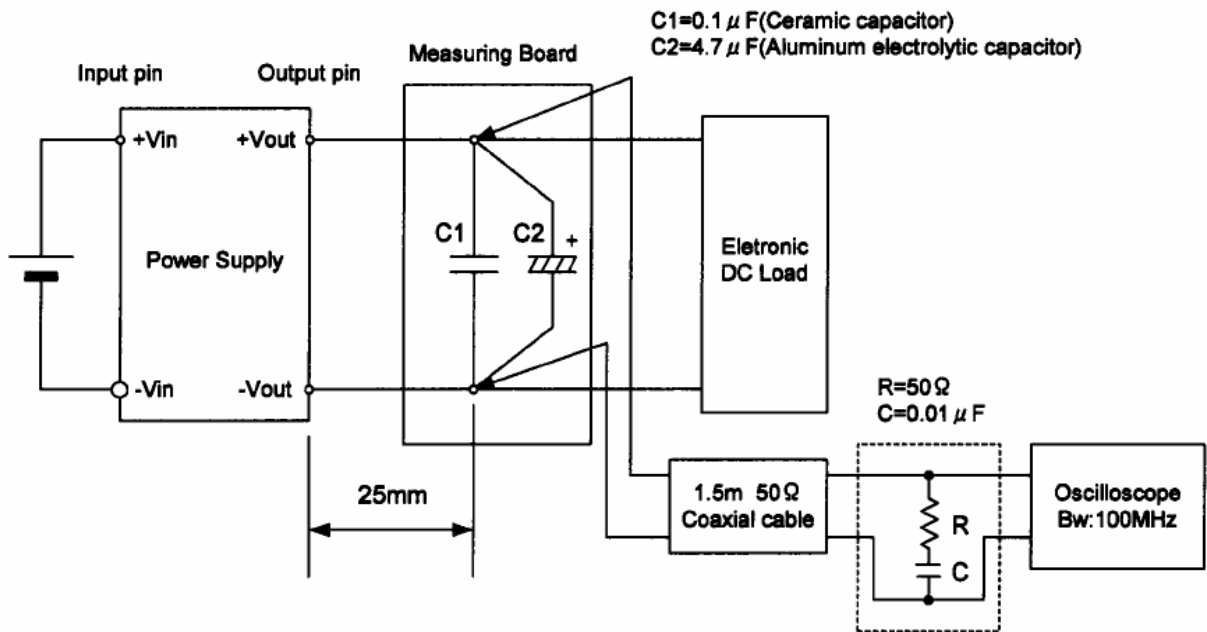


Figure B (Ripple and Ripple noise Characteristic)