

TEST DATA OF SUTW61212

Regulated DC Power Supply
March 17, 2009

Approved by : *Kazunari Asano*
Kazunari Asano Design Manager

Prepared by : *Sho Saito*
Sho Saito Design Engineer

COSEL CO.,LTD.

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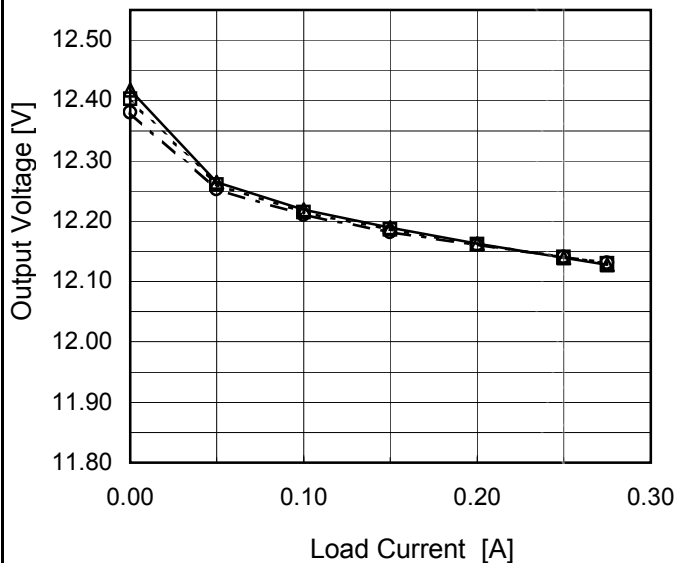
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Object	+12V0.25A

Temperature 25°C
Testing Circuitry Figure A

1.Graph
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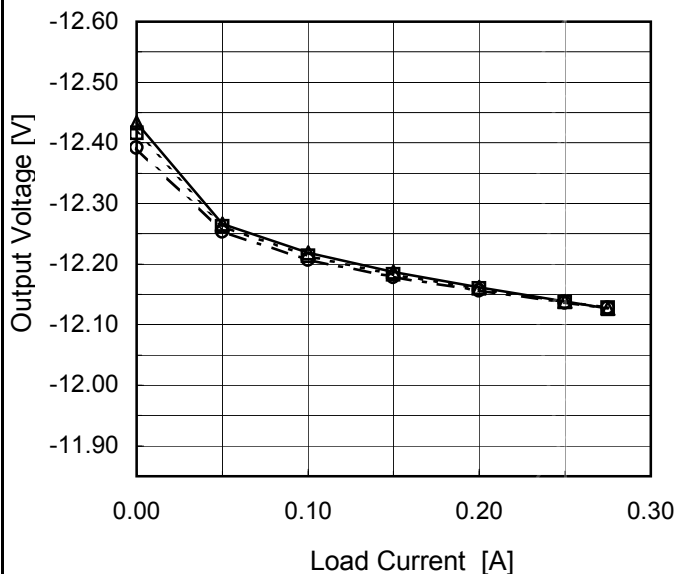


2.Values

Load Current [A]	Output Voltage [V]		
	Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]
0.000	12.417	12.403	12.380
0.050	12.264	12.260	12.253
0.100	12.219	12.215	12.210
0.150	12.189	12.186	12.182
0.200	12.163	12.162	12.160
0.250	12.139	12.140	12.141
0.275	12.128	12.130	12.131
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Object	-12V0.25A
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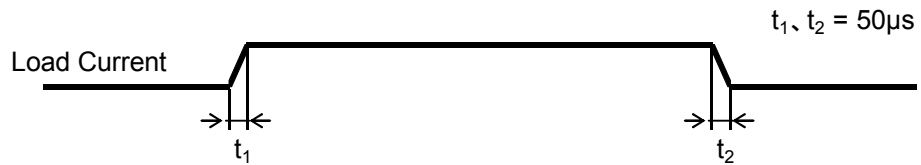
Load Current [A]	Output Voltage [V]		
	Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]
0.000	-12.433	-12.416	-12.392
0.050	-12.267	-12.262	-12.254
0.100	-12.218	-12.213	-12.207
0.150	-12.187	-12.183	-12.179
0.200	-12.162	-12.159	-12.156
0.250	-12.138	-12.138	-12.137
0.275	-12.126	-12.127	-12.127
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

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



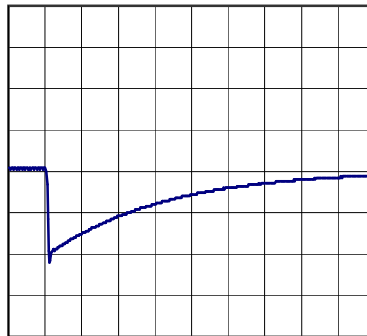
Model	SUTW61212	Temperature	25°C
Item	Dynamic Load Response	Testing Circuitry	Figure A
Object	+12V0.25A		

Input Volt. 12 V
 Cycle 100 mS

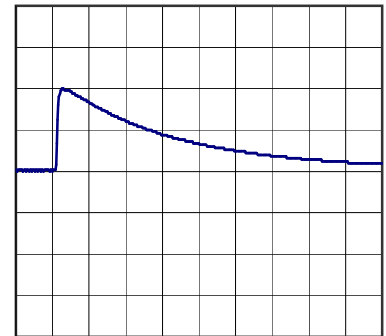


Min. Load (0A) \longleftrightarrow
 Load 100% (0.25A)

200mV/div



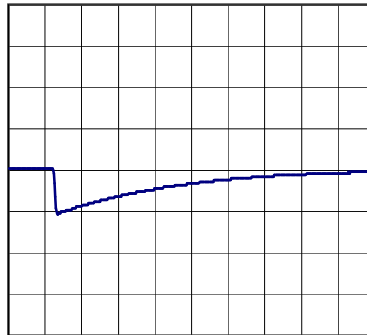
500µs/div



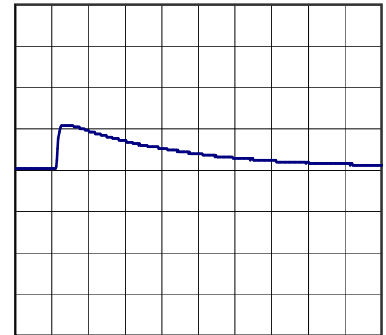
500µs/div

Min. Load (0A) \longleftrightarrow
 Load 50% (0.125A)

200mV/div



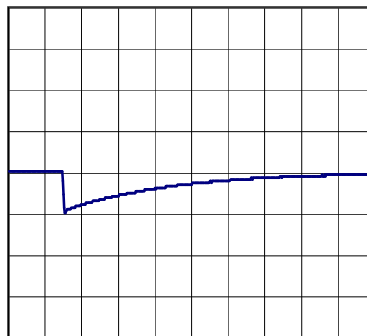
500µs/div



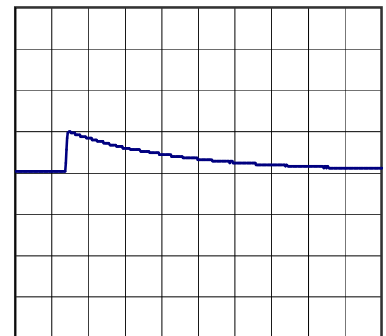
500µs/div

Load 50% (0.125A) \longleftrightarrow
 Load 100% (0.25A)

200mV/div



500µs/div

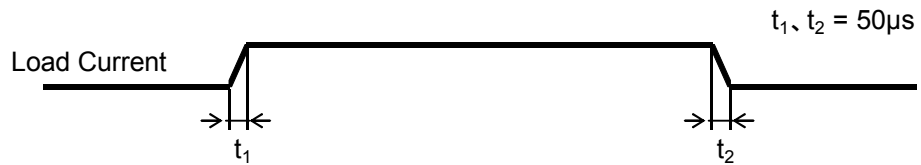


500µs/div



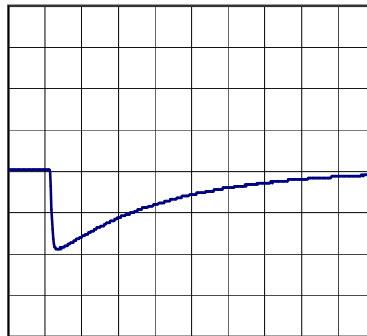
Model	SUTW61212	Temperature	25°C
Item	Dynamic Load Response	Testing Circuitry	Figure A
Object	-12V0.25A		

Input Volt. 12 V
 Cycle 100 mS

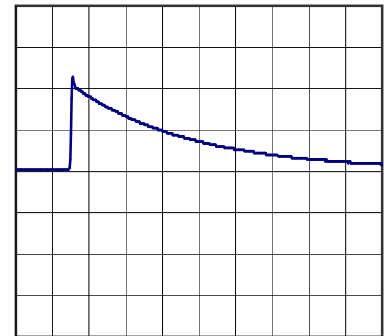


Min. Load (0A) \longleftrightarrow
 Load 100% (0.25A)

200mV/div



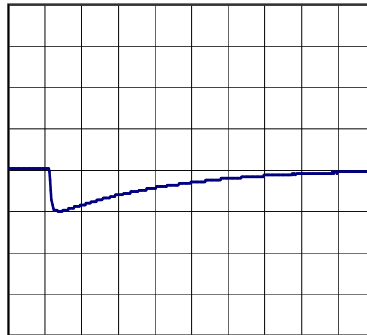
500µs/div



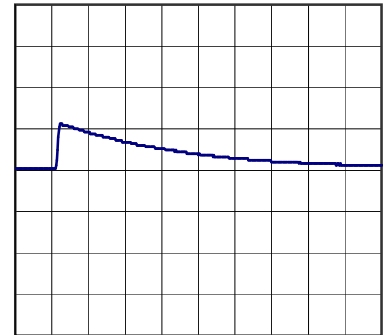
500µs/div

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200mV/div



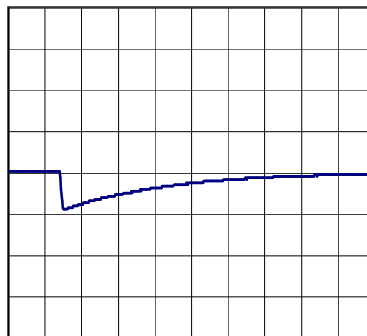
500µs/div



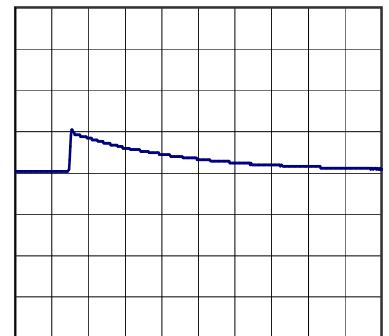
500µs/div

Load 50% (0.125A) \longleftrightarrow
 Load 100% (0.25A)

200mV/div



500µs/div



500µs/div

<p>Model SUTW61212</p>		<p>Temperature 25°C Testing Circuitry Figure B</p>																																						
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Object	+12V0.25A																																							
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COSEL		
Model	SUTW61212	
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 - 0.25A (AVR 2) : 0 - 0.25A

* 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		+12V0.25A				
Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	55	9	0	12.432	±297	±2.5
Minimum Voltage	-40	9	0.25	11.839		

Object		-12V0.25A				
Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	55	9	0	-12.448	±296	±2.5
Minimum Voltage	-40	9	0.25	-11.857		



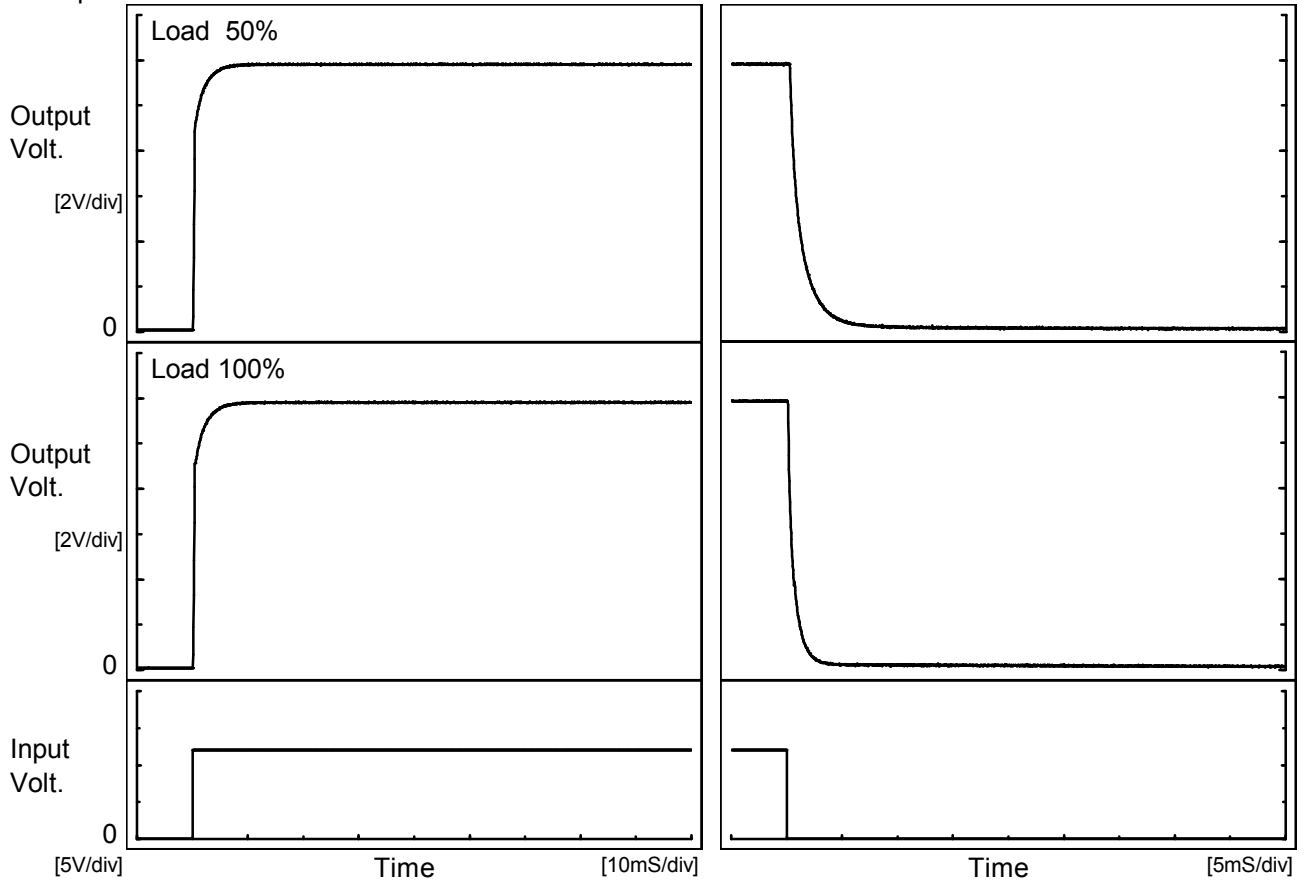
COSEL																									
Model	SUTW61212	Temperature	25°C																						
Item	Time Lapse Drift	Testing Circuitry	Figure A																						
Object	+12V0.25A																								
<p>1.Graph</p> <p style="text-align: center;">Time [H]</p> <p style="text-align: center;">Input Volt. 12V 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>12.134</td></tr> <tr><td>0.5</td><td>12.139</td></tr> <tr><td>1.0</td><td>12.139</td></tr> <tr><td>2.0</td><td>12.139</td></tr> <tr><td>3.0</td><td>12.138</td></tr> <tr><td>4.0</td><td>12.138</td></tr> <tr><td>5.0</td><td>12.138</td></tr> <tr><td>6.0</td><td>12.138</td></tr> <tr><td>7.0</td><td>12.138</td></tr> <tr><td>8.0</td><td>12.138</td></tr> </tbody> </table>		Time since start [H]	Output Voltage [V]	0.0	12.134	0.5	12.139	1.0	12.139	2.0	12.139	3.0	12.138	4.0	12.138	5.0	12.138	6.0	12.138	7.0	12.138	8.0	12.138
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Model		SUTW61212	Temperature 25°C Testing Circuitry Figure A
Item		Rise and Fall Time	
Object		+12V0.25A	

1. Graph

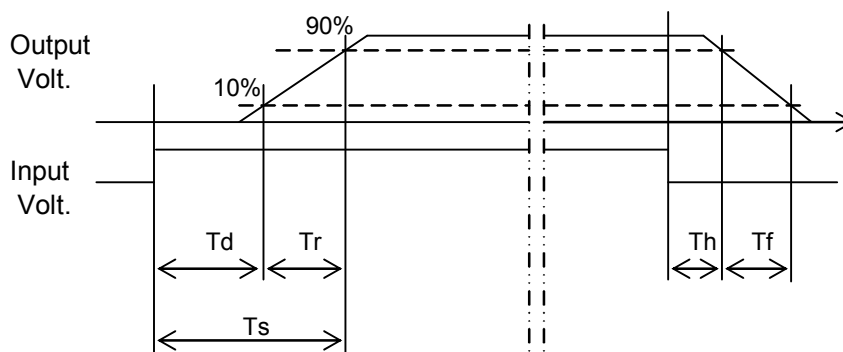
Input Volt. 12 V



2. Values

[mS]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	0.2	2.2	2.4	0.3	2.7
100 %	0.2	2.3	2.5	0.1	1.4

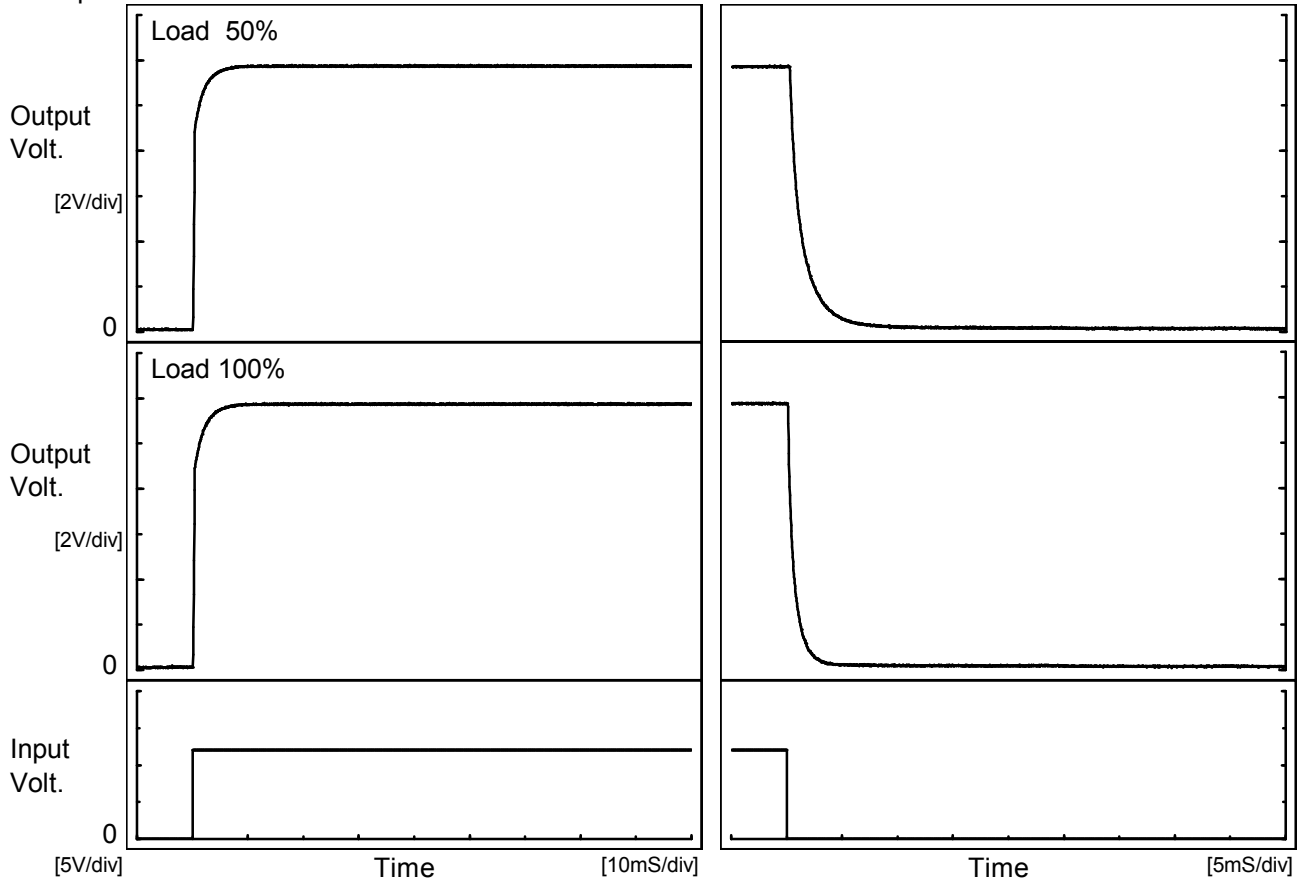




Model		SUTW61212	Temperature	25°C
Item		Rise and Fall Time	Testing Circuitry	Figure A
Object		-12V0.25A		

1. Graph

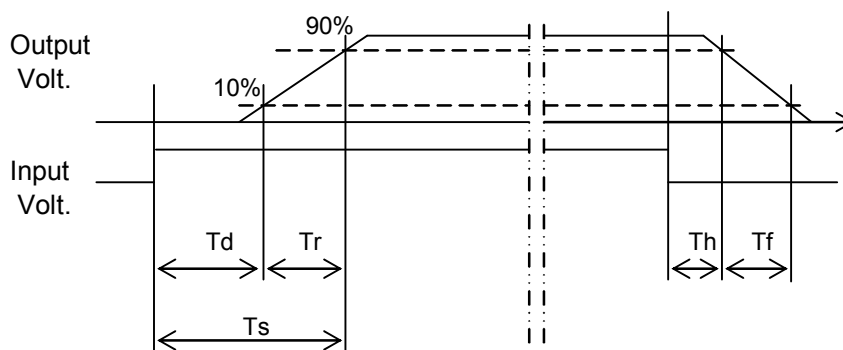
Input Volt. 12 V



2. Values

[mS]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	0.2	2.3	2.5	0.3	2.9
100 %	0.2	2.4	2.6	0.1	1.5

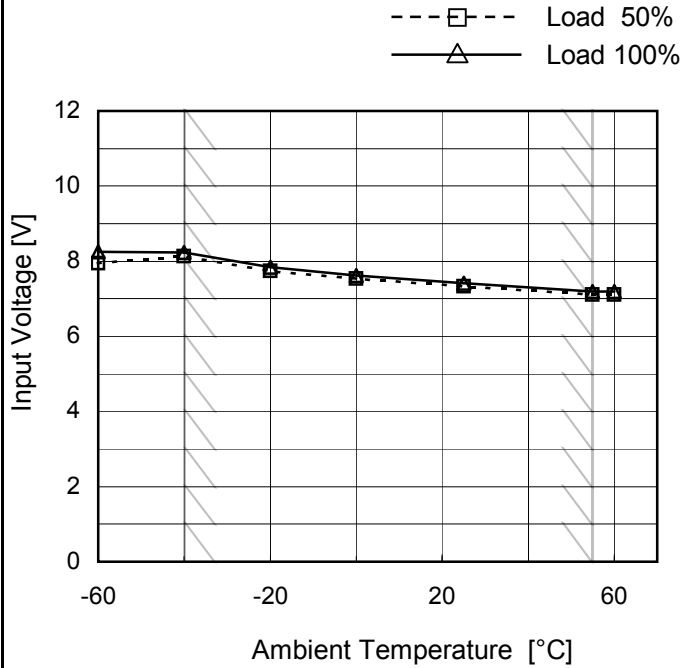




Model	SUTW61212
Item	Minimum Input Voltage for Regulated Output Voltage
Object	+12V0.25A

Testing Circuitry Figure A

1.Graph

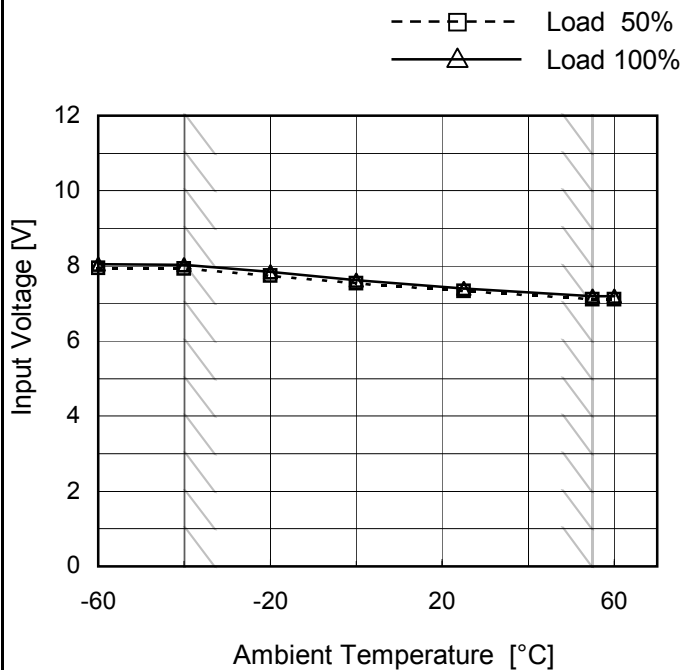


2.Values

Ambient Temperature [°C]	Input Voltage [V]	
	Load 50%	Load 100%
-60	8.0	8.3
-40	8.2	8.3
-20	7.8	7.9
0	7.6	7.7
25	7.4	7.4
55	7.2	7.2
60	7.2	7.2
--	-	-
--	-	-
--	-	-
--	-	-

Object	-12V0.25A
--------	-----------

1.Graph



2.Values

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

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



COSEL																																																										
Model	SUTW61212	Temperature	25°C																																																							
Item	Overcurrent Protection	Testing Circuitry	Figure A																																																							
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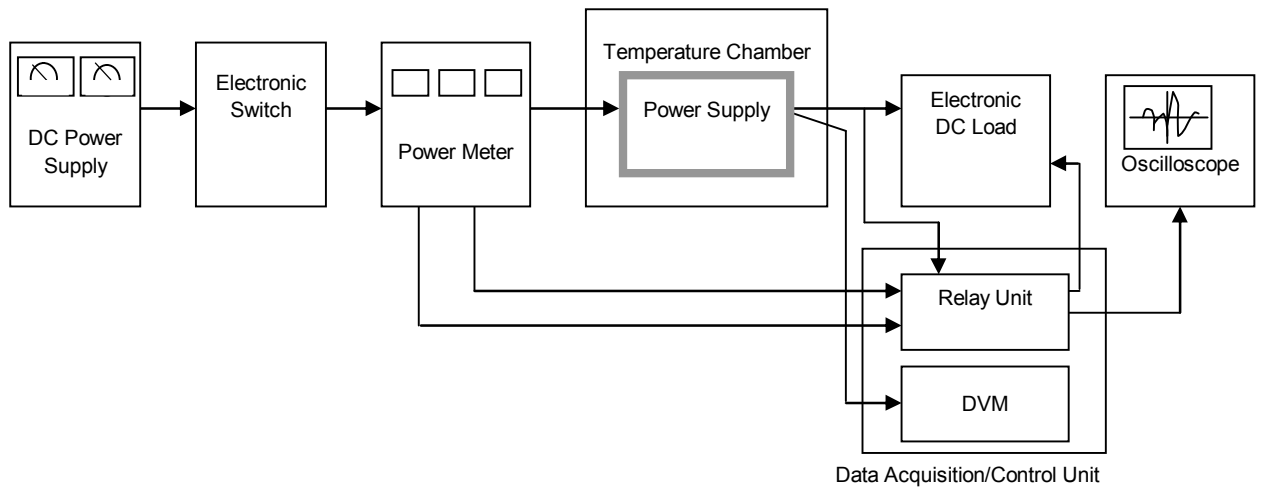


Figure A

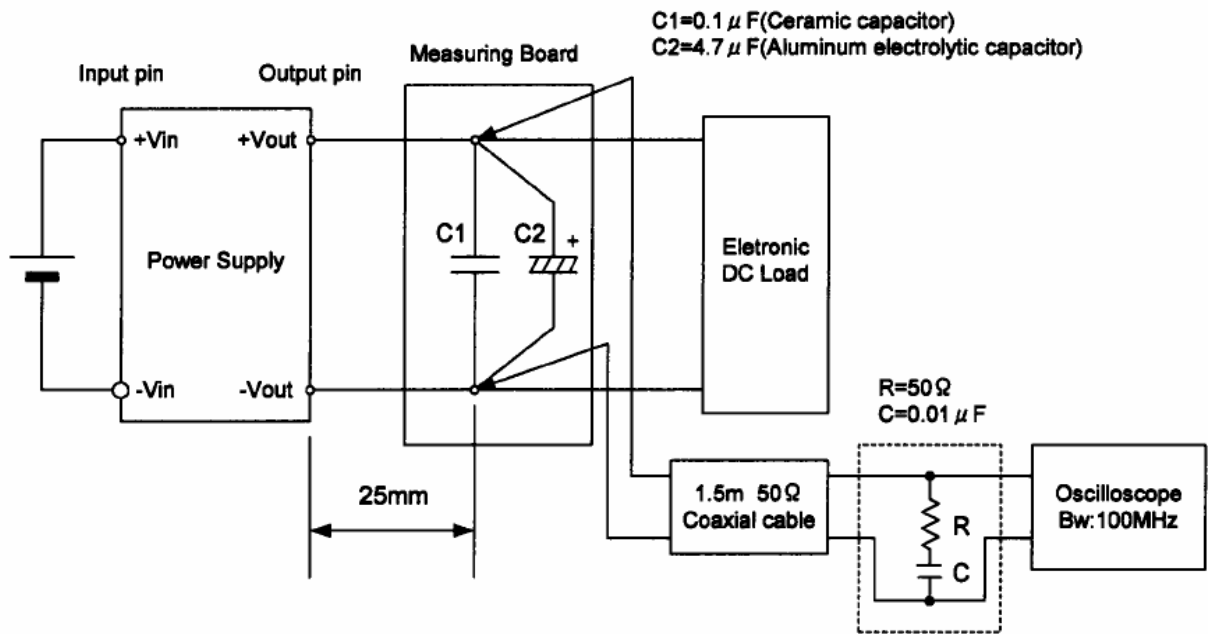


Figure B (Ripple and Ripple noise Characteristic)