



TEST DATA OF SUW32415

Regulated DC Power Supply
Mar 14, 2005

Approved by : Tetsuo Sugimori
Tetsuo Sugimori Design Manager

Prepared by : Hayato Nakatsubo
Hayato Nakatsubo Design Engineer

COSEL CO.,LTD.

CONTENTS

1.Input Current (by Input Voltage)	1
2.Input Current (by Load Current)	2
3.Input Power (by Load Current)	3
4.Efficiency (by Input Voltage)	4
5.Efficiency (by Load Current)	5
6.Line Regulation	6
7.Load Regulation	7
8.Dynamic Load Response	8
9.Ripple Voltage (by Load Current)	10
10.Ripple-Noise	12
11.Ripple Voltage (by Ambient Temperature)	14
12.Ambient Temperature Drift	15
13.Output Voltage Accuracy	16
14.Time Lapse Drift	17
15.Rise and Fall Time	18
16.Minimum Input Voltage for Regulated Output Voltage	20
17.Overcurrent Protection	21
18.Figure of Testing Circuitry	22

(Final Page 22)

COSEL

Model

SUW32415

Item

Input Current (by Input Voltage)

Temperature

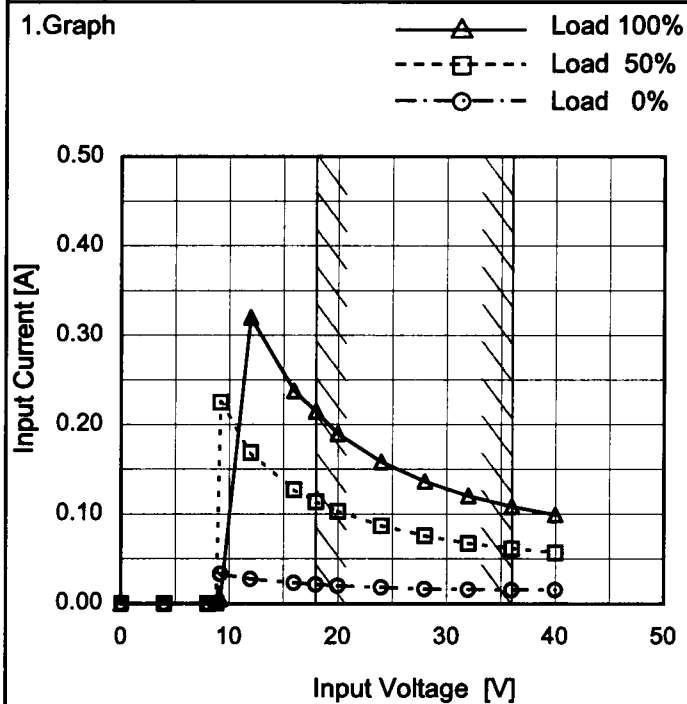
25°C

Testing Circuitry

Figure A

Object

1. Graph

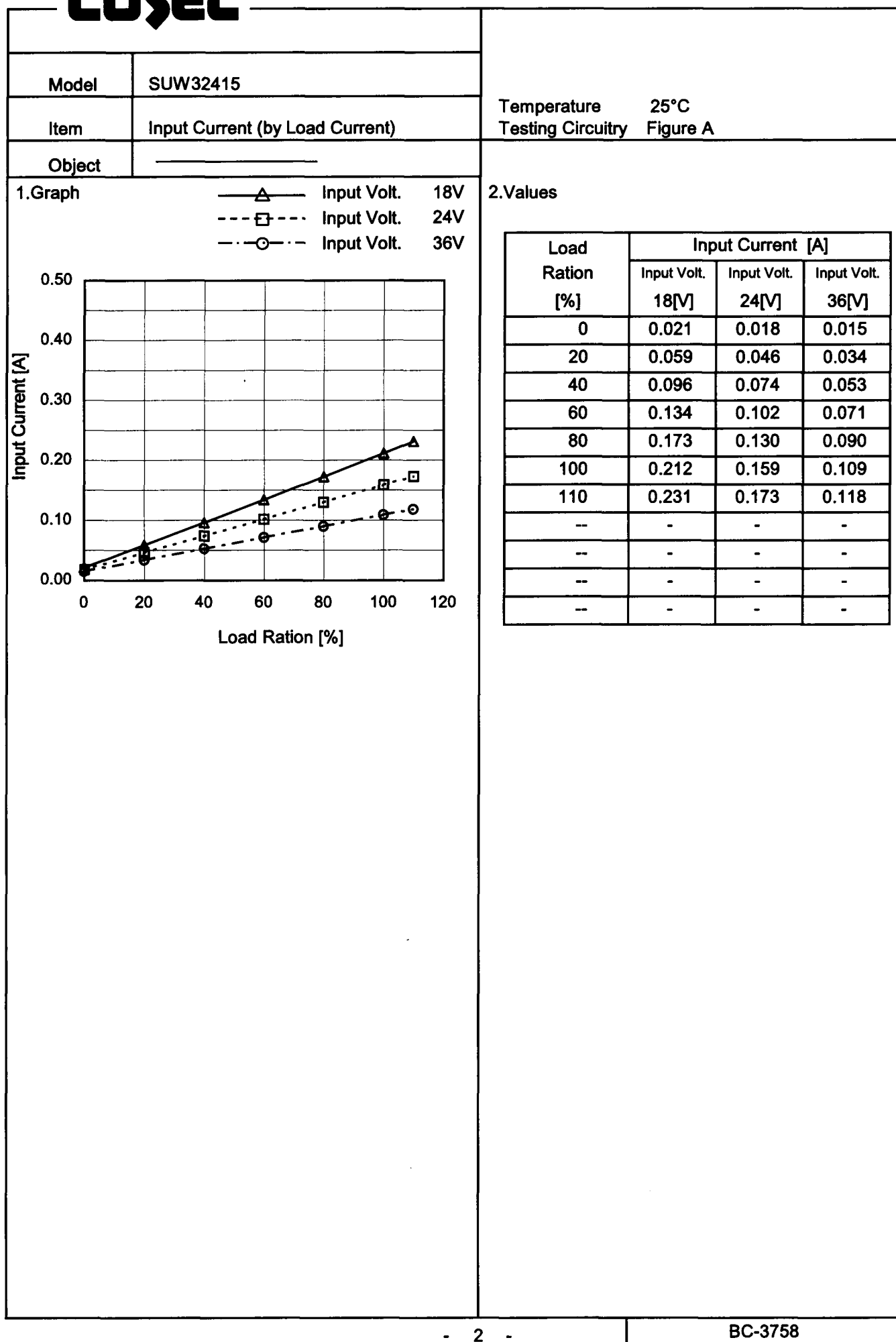


Note: Slanted line shows the range of the rated input voltage.

2. Values

Input Voltage [V]	Input Current [A]		
	Load 0%	Load 50%	Load 100%
0.0	0.000	0.000	0.000
4.0	0.000	0.000	0.000
8.0	0.000	0.000	0.000
8.8	0.000	0.000	0.000
9.2	0.033	0.225	0.005
12.0	0.027	0.169	0.320
16.0	0.023	0.127	0.238
18.0	0.021	0.114	0.215
20.0	0.020	0.103	0.190
24.0	0.018	0.087	0.158
28.0	0.016	0.076	0.137
32.0	0.015	0.067	0.120
36.0	0.015	0.061	0.108
40.0	0.015	0.057	0.099
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

COSEL



BC-3758

COSEL

Model

SUW32415

Item

Efficiency (by Input Voltage)

Temperature

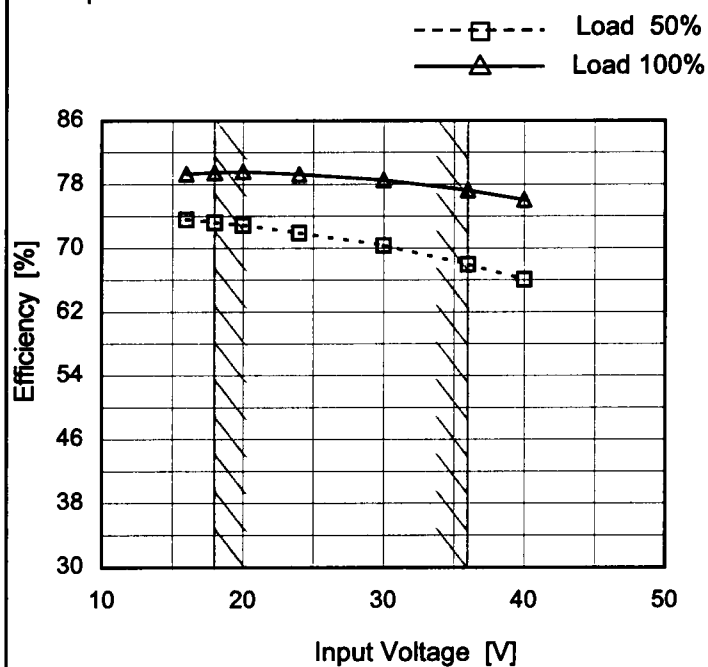
25°C

Testing Circuitry

Figure A

Object

1.Graph



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

2.Values

Input Voltage [V]	Efficiency [%]	
	Load 50%	Load 100%
16	73.6	79.3
18	73.2	79.5
20	72.9	79.6
24	71.9	79.3
30	70.3	78.6
36	68.0	77.3
40	66.1	76.1
--	-	-
--	-	-

COSEL

Model		SUW32415																																																				
Item		Efficiency (by Load Current)																																																				
Object																																																						
1.Graph																																																						
		—△— Input Volt. 18V																																																				
		---□--- Input Volt. 24V																																																				
		-·-○-·- Input Volt. 36V																																																				
<table><thead><tr><th>Load Ration [%]</th><th>18V Efficiency [%]</th><th>24V Efficiency [%]</th><th>36V Efficiency [%]</th></tr></thead><tbody><tr><td>20</td><td>58.1</td><td>55.7</td><td>50.3</td></tr><tr><td>40</td><td>70.4</td><td>68.6</td><td>64.4</td></tr><tr><td>60</td><td>75.4</td><td>74.3</td><td>70.9</td></tr><tr><td>80</td><td>78.1</td><td>77.5</td><td>74.8</td></tr><tr><td>100</td><td>79.5</td><td>79.2</td><td>77.3</td></tr><tr><td>110</td><td>80.0</td><td>80.0</td><td>78.2</td></tr></tbody></table>				Load Ration [%]	18V Efficiency [%]	24V Efficiency [%]	36V Efficiency [%]	20	58.1	55.7	50.3	40	70.4	68.6	64.4	60	75.4	74.3	70.9	80	78.1	77.5	74.8	100	79.5	79.2	77.3	110	80.0	80.0	78.2																							
Load Ration [%]	18V Efficiency [%]	24V Efficiency [%]	36V Efficiency [%]																																																			
20	58.1	55.7	50.3																																																			
40	70.4	68.6	64.4																																																			
60	75.4	74.3	70.9																																																			
80	78.1	77.5	74.8																																																			
100	79.5	79.2	77.3																																																			
110	80.0	80.0	78.2																																																			
2.Values																																																						
<table><thead><tr><th rowspan="2">Load Ration [%]</th><th colspan="3">Efficiency [%]</th></tr><tr><th>Input Volt. 18[V]</th><th>Input Volt. 24[V]</th><th>Input Volt. 36[V]</th></tr></thead><tbody><tr><td>0</td><td>-</td><td>-</td><td>-</td></tr><tr><td>20</td><td>58.1</td><td>55.7</td><td>50.3</td></tr><tr><td>40</td><td>70.4</td><td>68.6</td><td>64.4</td></tr><tr><td>60</td><td>75.4</td><td>74.3</td><td>70.9</td></tr><tr><td>80</td><td>78.1</td><td>77.5</td><td>74.8</td></tr><tr><td>100</td><td>79.5</td><td>79.2</td><td>77.3</td></tr><tr><td>110</td><td>80.0</td><td>80.0</td><td>78.2</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr></tbody></table>				Load Ration [%]	Efficiency [%]			Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]	0	-	-	-	20	58.1	55.7	50.3	40	70.4	68.6	64.4	60	75.4	74.3	70.9	80	78.1	77.5	74.8	100	79.5	79.2	77.3	110	80.0	80.0	78.2	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
Load Ration [%]	Efficiency [%]																																																					
	Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]																																																			
0	-	-	-																																																			
20	58.1	55.7	50.3																																																			
40	70.4	68.6	64.4																																																			
60	75.4	74.3	70.9																																																			
80	78.1	77.5	74.8																																																			
100	79.5	79.2	77.3																																																			
110	80.0	80.0	78.2																																																			
--	-	-	-																																																			
--	-	-	-																																																			
--	-	-	-																																																			
--	-	-	-																																																			

- 5 -

BC-3758

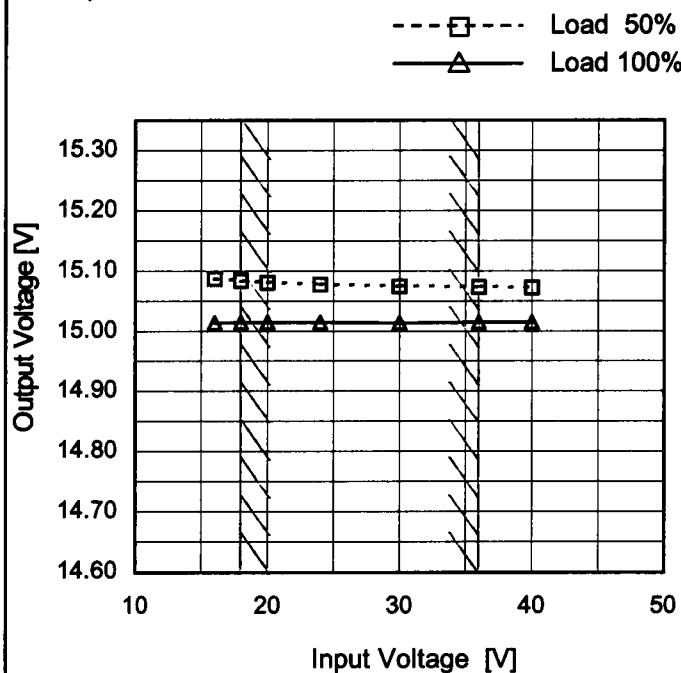
Model SUW32415

Item Line Regulation

Object +15V0.1A

Temperature 25°C
Testing Circuitry Figure A

1.Graph

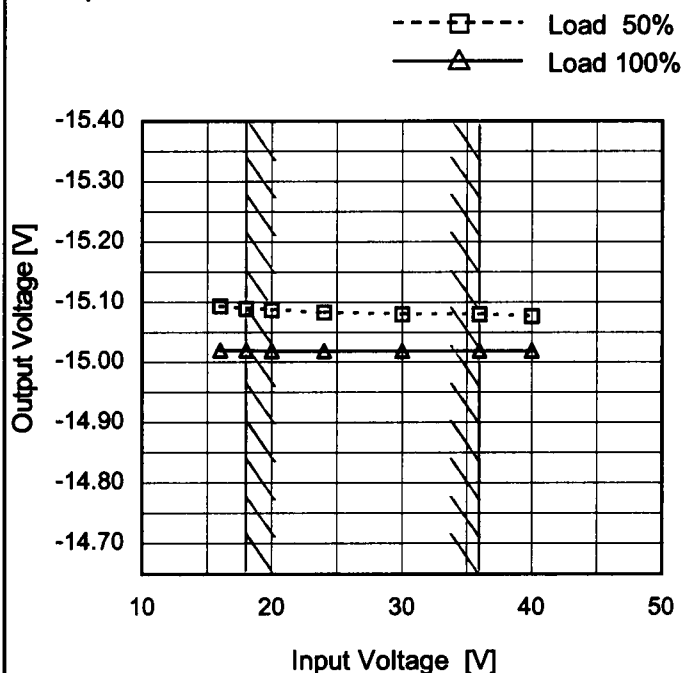


2.Values

Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
16	15.087	15.013
18	15.084	15.014
20	15.081	15.014
24	15.077	15.014
30	15.074	15.014
36	15.073	15.014
40	15.072	15.014
--	-	-
-	-	-

Object -15V0.1A

1.Graph



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

2.Values

Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
16	-15.093	-15.020
18	-15.089	-15.019
20	-15.087	-15.019
24	-15.082	-15.019
30	-15.079	-15.018
36	-15.079	-15.019
40	-15.076	-15.019
--	-	-
-	-	-

COSEL

Model	SUW32415																																																					
Item	Load Regulation	Temperature	25°C																																																			
Object	+15V0.1A	Testing Circuitry	Figure A																																																			
1.Graph		2.Values																																																				
<div><div>—△— Input Volt. 18V</div><div>---□--- Input Volt. 24V</div><div>---○--- Input Volt. 36V</div></div> <table><thead><tr><th rowspan="2">Load Current [A]</th><th colspan="3">Output Voltage [V]</th></tr><tr><th>Input Volt. 18[V]</th><th>Input Volt. 24[V]</th><th>Input Volt. 36[V]</th></tr></thead><tbody><tr><td>0.00</td><td>15.246</td><td>15.237</td><td>15.227</td></tr><tr><td>0.02</td><td>15.145</td><td>15.137</td><td>15.131</td></tr><tr><td>0.04</td><td>15.101</td><td>15.093</td><td>15.088</td></tr><tr><td>0.06</td><td>15.067</td><td>15.062</td><td>15.059</td></tr><tr><td>0.08</td><td>15.039</td><td>15.036</td><td>15.034</td></tr><tr><td>0.10</td><td>15.012</td><td>15.013</td><td>15.012</td></tr><tr><td>0.11</td><td>15.000</td><td>15.001</td><td>15.003</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr></tbody></table>		Load Current [A]	Output Voltage [V]			Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]	0.00	15.246	15.237	15.227	0.02	15.145	15.137	15.131	0.04	15.101	15.093	15.088	0.06	15.067	15.062	15.059	0.08	15.039	15.036	15.034	0.10	15.012	15.013	15.012	0.11	15.000	15.001	15.003	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-		
Load Current [A]	Output Voltage [V]																																																					
	Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]																																																			
0.00	15.246	15.237	15.227																																																			
0.02	15.145	15.137	15.131																																																			
0.04	15.101	15.093	15.088																																																			
0.06	15.067	15.062	15.059																																																			
0.08	15.039	15.036	15.034																																																			
0.10	15.012	15.013	15.012																																																			
0.11	15.000	15.001	15.003																																																			
--	-	-	-																																																			
--	-	-	-																																																			
--	-	-	-																																																			
--	-	-	-																																																			
Object	-15V0.1A																																																					
1.Graph		2.Values																																																				
<div><div>—△— Input Volt. 18V</div><div>---□--- Input Volt. 24V</div><div>---○--- Input Volt. 36V</div></div> <table><thead><tr><th rowspan="2">Load Current [A]</th><th colspan="3">Output Voltage [V]</th></tr><tr><th>Input Volt. 18[V]</th><th>Input Volt. 24[V]</th><th>Input Volt. 36[V]</th></tr></thead><tbody><tr><td>0.00</td><td>-15.259</td><td>-15.248</td><td>-15.237</td></tr><tr><td>0.02</td><td>-15.150</td><td>-15.142</td><td>-15.135</td></tr><tr><td>0.04</td><td>-15.106</td><td>-15.098</td><td>-15.094</td></tr><tr><td>0.06</td><td>-15.073</td><td>-15.067</td><td>-15.064</td></tr><tr><td>0.08</td><td>-15.044</td><td>-15.040</td><td>-15.039</td></tr><tr><td>0.10</td><td>-15.019</td><td>-15.017</td><td>-15.018</td></tr><tr><td>0.11</td><td>-15.006</td><td>-15.007</td><td>-15.008</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr></tbody></table>		Load Current [A]	Output Voltage [V]			Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]	0.00	-15.259	-15.248	-15.237	0.02	-15.150	-15.142	-15.135	0.04	-15.106	-15.098	-15.094	0.06	-15.073	-15.067	-15.064	0.08	-15.044	-15.040	-15.039	0.10	-15.019	-15.017	-15.018	0.11	-15.006	-15.007	-15.008	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-		
Load Current [A]	Output Voltage [V]																																																					
	Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]																																																			
0.00	-15.259	-15.248	-15.237																																																			
0.02	-15.150	-15.142	-15.135																																																			
0.04	-15.106	-15.098	-15.094																																																			
0.06	-15.073	-15.067	-15.064																																																			
0.08	-15.044	-15.040	-15.039																																																			
0.10	-15.019	-15.017	-15.018																																																			
0.11	-15.006	-15.007	-15.008																																																			
--	-	-	-																																																			
--	-	-	-																																																			
--	-	-	-																																																			
--	-	-	-																																																			
Note: Slanted line shows the range of the rated load current.																																																						

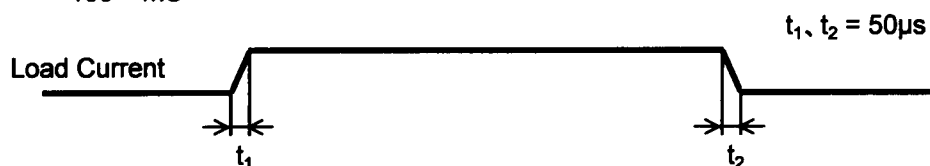
- 7 -

BC-3758

COSEL

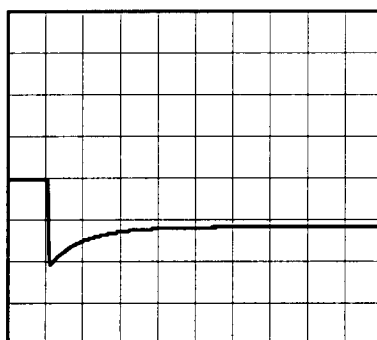
Model	SUW32415	Temperature	25°C
Item	Dynamic Load Response	Testing Circuitry	Figure A
Object	+15V0.1A		

Input Volt. 24 V
Cycle 100 mS

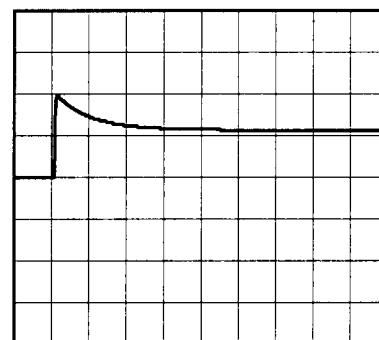


Min. Load (0A) \longleftrightarrow
Load 100% (0.1A)

200mV/div



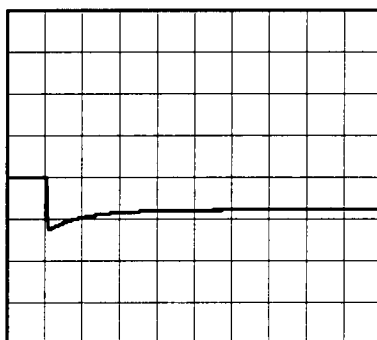
2ms/div



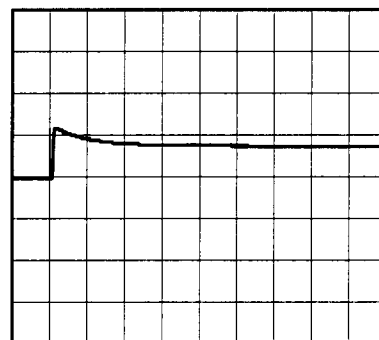
2ms/div

Min. Load (0A) \longleftrightarrow
Load 50% (0.05A)

200mV/div



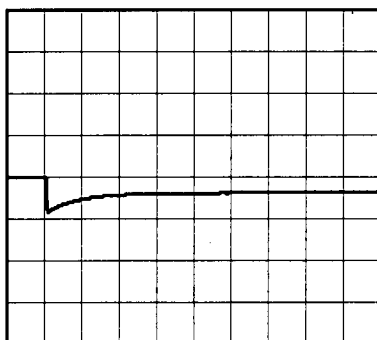
2ms/div



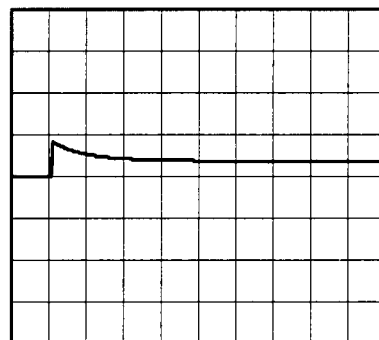
2ms/div

Load 50% (0.05A) \longleftrightarrow
Load 100% (0.1A)

200mV/div



2ms/div

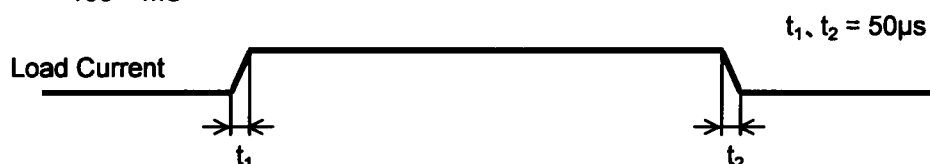


2ms/div

COSEL

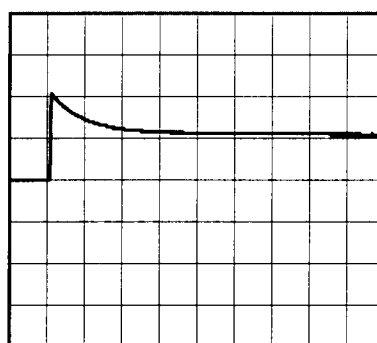
Model	SUW32415	Temperature	25°C
Item	Dynamic Load Response	Testing Circuitry	Figure A
Object	-15V0.1A		

Input Volt. 24 V
Cycle 100 mS

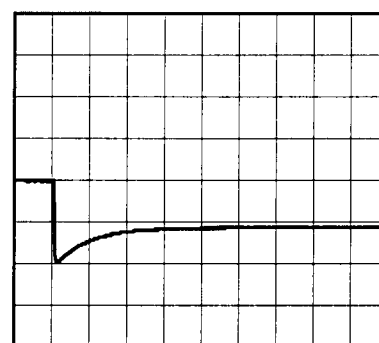


Min. Load (0A) \longleftrightarrow
Load 100% (0.1A)

200mV/div



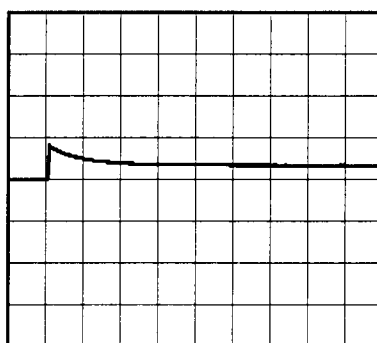
2ms/div



2ms/div

Min. Load (0A) \longleftrightarrow
Load 50% (0.05A)

200mV/div



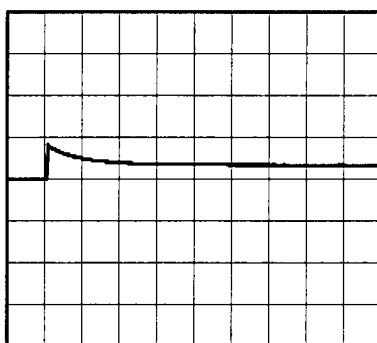
2ms/div



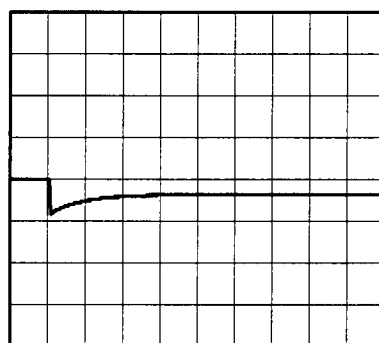
2ms/div

Load 50% (0.05A) \longleftrightarrow
Load 100% (0.1A)

200mV/div



2ms/div



2ms/div

COSEL

Model		SUW32415		Temperature 25°C Testing Circuitry Figure B																																							
Item		Ripple Voltage (by Load Current)																																									
Object		+15V0.1A																																									
1.Graph				2.Values																																							
<div><div><div>—△— Input Volt. 18V</div><div>- - -○- - - Input Volt. 36V</div></div><div>Ripple Voltage [mV]</div><div>Load Current [A]</div></div>				<table><tr><th rowspan="2">Load Current [A]</th><th colspan="2">Ripple Voltage [mV]</th></tr><tr><th>Input Volt. 18 [V]</th><th>Input Volt. 36 [V]</th></tr><tr><td>0.00</td><td>1</td><td>1</td></tr><tr><td>0.02</td><td>1</td><td>1</td></tr><tr><td>0.04</td><td>1</td><td>1</td></tr><tr><td>0.06</td><td>2</td><td>1</td></tr><tr><td>0.08</td><td>4</td><td>1</td></tr><tr><td>0.10</td><td>6</td><td>1</td></tr><tr><td>0.11</td><td>7</td><td>2</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr></table>		Load Current [A]	Ripple Voltage [mV]		Input Volt. 18 [V]	Input Volt. 36 [V]	0.00	1	1	0.02	1	1	0.04	1	1	0.06	2	1	0.08	4	1	0.10	6	1	0.11	7	2	--	-	-	--	-	-	--	-	-	--	-	-
Load Current [A]	Ripple Voltage [mV]																																										
	Input Volt. 18 [V]	Input Volt. 36 [V]																																									
0.00	1	1																																									
0.02	1	1																																									
0.04	1	1																																									
0.06	2	1																																									
0.08	4	1																																									
0.10	6	1																																									
0.11	7	2																																									
--	-	-																																									
--	-	-																																									
--	-	-																																									
--	-	-																																									
<div>Measured by 100 MHz Oscilloscope.</div> <div>Ripple Voltage is shown as p-p in the figure below.</div> <div>Note: Slanted line shows the range of the rated load current.</div>																																											
<div><div>Ripple [mVp-p]</div><div>Fig.Complex Ripple Wave Form</div></div>																																											
			- 10 -																																								
			BC-3758																																								

COSEL

Model		SUW32415		Temperature 25°C Testing Circuitry Figure B																																							
Item		Ripple Voltage (by Load Current)																																									
Object		-15V0.1A																																									
1.Graph				2.Values																																							
<div><div><div>—△— Input Volt. 18V</div><div>- - -○- - Input Volt. 36V</div></div><div>Ripple Voltage [mV]</div><div>Load Current [A]</div></div>				<table><tr><th rowspan="2">Load Current [A]</th><th colspan="2">Ripple Voltage [mV]</th></tr><tr><th>Input Volt. 18 [V]</th><th>Input Volt. 36 [V]</th></tr><tr><td>0.00</td><td>1</td><td>1</td></tr><tr><td>0.02</td><td>1</td><td>1</td></tr><tr><td>0.04</td><td>1</td><td>1</td></tr><tr><td>0.06</td><td>2</td><td>1</td></tr><tr><td>0.08</td><td>3</td><td>1</td></tr><tr><td>0.10</td><td>5</td><td>1</td></tr><tr><td>0.11</td><td>6</td><td>1</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr></table>		Load Current [A]	Ripple Voltage [mV]		Input Volt. 18 [V]	Input Volt. 36 [V]	0.00	1	1	0.02	1	1	0.04	1	1	0.06	2	1	0.08	3	1	0.10	5	1	0.11	6	1	--	-	-	--	-	-	--	-	-	--	-	-
Load Current [A]	Ripple Voltage [mV]																																										
	Input Volt. 18 [V]	Input Volt. 36 [V]																																									
0.00	1	1																																									
0.02	1	1																																									
0.04	1	1																																									
0.06	2	1																																									
0.08	3	1																																									
0.10	5	1																																									
0.11	6	1																																									
--	-	-																																									
--	-	-																																									
--	-	-																																									
--	-	-																																									
<div>Measured by 100 MHz Oscilloscope.</div> <div>Ripple Voltage is shown as p-p in the figure below.</div> <div>Note: Slanted line shows the range of the rated load current.</div>																																											
<div><div>Ripple [mVp-p]</div><div>Fig.Complex Ripple Wave Form</div></div>																																											

COSEL

Model	SUW32415																																								
Item	Ripple-Noise	Temperature	25°C																																						
Object	+15V0.1A	Testing Circuitry	Figure B																																						
1.Graph		2.Values																																							
<div><div><div><div><div></div><div>—△—</div><div>Input Volt. 18V</div></div><div><div>---○---</div><div>Input Volt. 36V</div></div></div><div><div><div>Ripple-Noise [mV]</div><div>50</div><div>40</div><div>30</div><div>20</div><div>10</div><div>0</div><div>0.00</div><div>0.04</div><div>0.08</div><div>0.12</div><div>Load Current [A]</div></div></div><div><div>Measured by 100 MHz Oscilloscope.</div><div>Ripple-Noise is shown as p-p in the figure below.</div><div>Note: Slanted line shows the range of the rated load current.</div></div></div></div>		<table><tr><th rowspan="2">Load Current [A]</th><th colspan="2">Ripple-Noise [mV]</th></tr><tr><th>Input Volt. 18 [V]</th><th>Input Volt. 36 [V]</th></tr><tr><td>0.00</td><td>3</td><td>4</td></tr><tr><td>0.02</td><td>4</td><td>4</td></tr><tr><td>0.04</td><td>4</td><td>4</td></tr><tr><td>0.06</td><td>3</td><td>4</td></tr><tr><td>0.08</td><td>4</td><td>4</td></tr><tr><td>0.10</td><td>9</td><td>4</td></tr><tr><td>0.11</td><td>11</td><td>4</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr></table>		Load Current [A]	Ripple-Noise [mV]		Input Volt. 18 [V]	Input Volt. 36 [V]	0.00	3	4	0.02	4	4	0.04	4	4	0.06	3	4	0.08	4	4	0.10	9	4	0.11	11	4	--	-	-	--	-	-	--	-	-	--	-	-
Load Current [A]	Ripple-Noise [mV]																																								
	Input Volt. 18 [V]	Input Volt. 36 [V]																																							
0.00	3	4																																							
0.02	4	4																																							
0.04	4	4																																							
0.06	3	4																																							
0.08	4	4																																							
0.10	9	4																																							
0.11	11	4																																							
--	-	-																																							
--	-	-																																							
--	-	-																																							
--	-	-																																							
<div><div><div><div></div><div>Ripple Noise[mVp-p]</div></div><div><div>Fig.Complex Ripple Noise Wave Form</div></div></div></div>																																									

Model		SUW32415		Temperature 25°C	
Item		Ripple-Noise		Testing Circuitry Figure B	
Object		-15V0.1A			
1.Graph				2.Values	
<div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div></div><div></div></div><div><div></div><div></div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><</div>					

COSEL

Model		SUW32415																																					
Item		Ripple Voltage (by Ambient Temp.)																																					
Object		+15V0.1A																																					
1.Graph																																							
<div><div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div>Load 50%</div><div>Load 100%</div></div></div><div><table><thead><tr><th>Ambient Temperature [°C]</th><th>Load 50% [mV]</th><th>Load 100% [mV]</th></tr></thead><tbody><tr><td>-60</td><td>3</td><td>15</td></tr><tr><td>-40</td><td>3</td><td>11</td></tr><tr><td>-20</td><td>3</td><td>9</td></tr><tr><td>0</td><td>3</td><td>7</td></tr><tr><td>25</td><td>2</td><td>4</td></tr><tr><td>55</td><td>2</td><td>2</td></tr><tr><td>60</td><td>2</td><td>2</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr></tbody></table></div><div>Input Volt. 24V</div></div>				Ambient Temperature [°C]	Load 50% [mV]	Load 100% [mV]	-60	3	15	-40	3	11	-20	3	9	0	3	7	25	2	4	55	2	2	60	2	2	--	-	-	--	-	-	--	-	-	--	-	-
Ambient Temperature [°C]	Load 50% [mV]	Load 100% [mV]																																					
-60	3	15																																					
-40	3	11																																					
-20	3	9																																					
0	3	7																																					
25	2	4																																					
55	2	2																																					
60	2	2																																					
--	-	-																																					
--	-	-																																					
--	-	-																																					
--	-	-																																					
2.Values																																							
Ambient Temperature [°C]		Ripple Voltage [mV]																																					
		Load 50%	Load 100%																																				
-60		3	15																																				
-40		3	11																																				
-20		3	9																																				
0		3	7																																				
25		2	4																																				
55		2	2																																				
60		2	2																																				
--		-	-																																				
--		-	-																																				
--		-	-																																				
--		-	-																																				

Object		-15V0.1A																																																					
1.Graph																																																							
Load 50% Load 100%	Ambient Temperature [°C]	Load 50% [mV]	Load 100% [mV]		--------------------------	---------------	----------------		-60	3	11		-40	3	10		-20	3	8		0	3	7		25	2	4		55	2	3		60	2	3		--	-	-		--	-	-		--	-	-		--	-	-	Input Volt. 24V			
2.Values																																																							
Ambient Temperature [°C]		Ripple Voltage [mV]																																																					
		Load 50%	Load 100%																																																				
-60		3	11																																																				
-40		3	10																																																				
-20		3	8																																																				
0		3	7																																																				
25		2	4																																																				
55		2	3																																																				
60		2	3																																																				
--		-	-																																																				
--		-	-																																																				
--		-	-																																																				
--		-	-																																																				
Measured by 100 MHz Oscilloscope.																																																							
Note: Slanted line shows the range of the rated ambient temperature.																																																							

BC-3758



		Testing Circuitry Figure A
Model	SUW32415	
Item	Output Voltage Accuracy	

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 : 18 - 36V

Load Current (AVR 1) : 0 - 0.1A (AVR 2): 0 - 0.1A

* Other Output : Rated Load

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

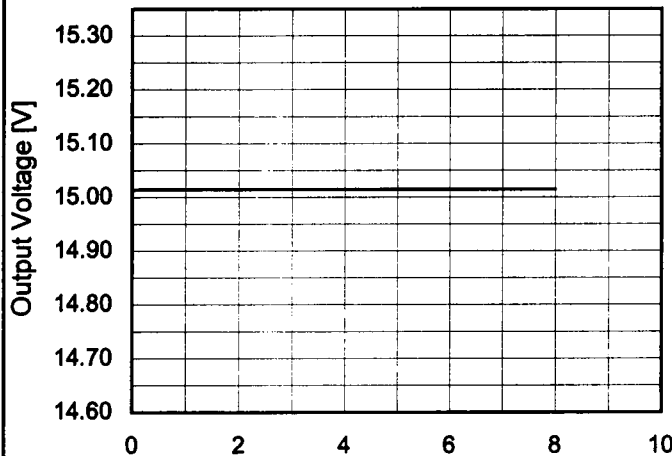
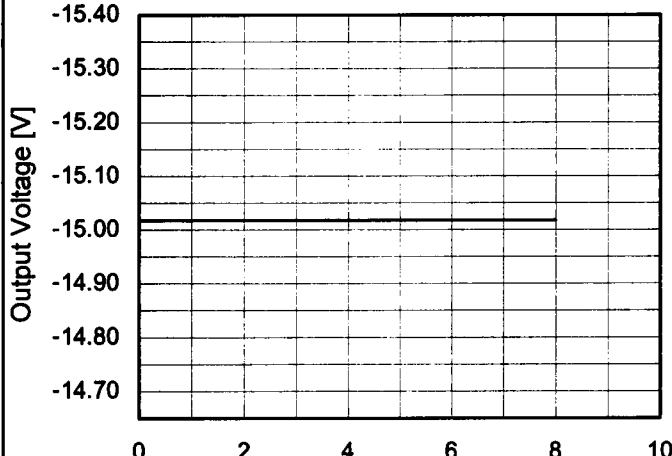
* Output Voltage Accuracy (Ratio) = $\frac{\text{Output Voltage Accuracy}}{\text{Rated Output Voltage}} \times 100$

2. Values

Object	+15V0.1A					
Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	55	18	0	15.258	±151	±1.0
Minimum Voltage	-40	18	0.1	14.957		

Object	-15V0.1A					
Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	55	18	0	-15.266	±152	±1.0
Minimum Voltage	-40	18	0.1	-14.962		

COSEL

Model	SUW32415																								
Item	Time Lapse Drift	Temperature	25°C																						
Object	+15V0.1A	Testing Circuitry	Figure A																						
1.Graph		2.Values																							
<div><p>Output Voltage [V]</p><p>Time [H]</p><p>Input Volt. 24V</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>15.012</td></tr><tr><td>0.5</td><td>15.015</td></tr><tr><td>1.0</td><td>15.015</td></tr><tr><td>2.0</td><td>15.015</td></tr><tr><td>3.0</td><td>15.015</td></tr><tr><td>4.0</td><td>15.015</td></tr><tr><td>5.0</td><td>15.015</td></tr><tr><td>6.0</td><td>15.015</td></tr><tr><td>7.0</td><td>15.015</td></tr><tr><td>8.0</td><td>15.015</td></tr></table>		Time since start [H]	Output Voltage [V]	0.0	15.012	0.5	15.015	1.0	15.015	2.0	15.015	3.0	15.015	4.0	15.015	5.0	15.015	6.0	15.015	7.0	15.015	8.0	15.015
Time since start [H]	Output Voltage [V]																								
0.0	15.012																								
0.5	15.015																								
1.0	15.015																								
2.0	15.015																								
3.0	15.015																								
4.0	15.015																								
5.0	15.015																								
6.0	15.015																								
7.0	15.015																								
8.0	15.015																								
Object	-15V0.1A																								
1.Graph		2.Values																							
<div><p>Output Voltage [V]</p><p>Time [H]</p><p>Input Volt. 24V</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>-15.017</td></tr><tr><td>0.5</td><td>-15.018</td></tr><tr><td>1.0</td><td>-15.018</td></tr><tr><td>2.0</td><td>-15.018</td></tr><tr><td>3.0</td><td>-15.018</td></tr><tr><td>4.0</td><td>-15.018</td></tr><tr><td>5.0</td><td>-15.018</td></tr><tr><td>6.0</td><td>-15.018</td></tr><tr><td>7.0</td><td>-15.018</td></tr><tr><td>8.0</td><td>-15.018</td></tr></table>		Time since start [H]	Output Voltage [V]	0.0	-15.017	0.5	-15.018	1.0	-15.018	2.0	-15.018	3.0	-15.018	4.0	-15.018	5.0	-15.018	6.0	-15.018	7.0	-15.018	8.0	-15.018
Time since start [H]	Output Voltage [V]																								
0.0	-15.017																								
0.5	-15.018																								
1.0	-15.018																								
2.0	-15.018																								
3.0	-15.018																								
4.0	-15.018																								
5.0	-15.018																								
6.0	-15.018																								
7.0	-15.018																								
8.0	-15.018																								

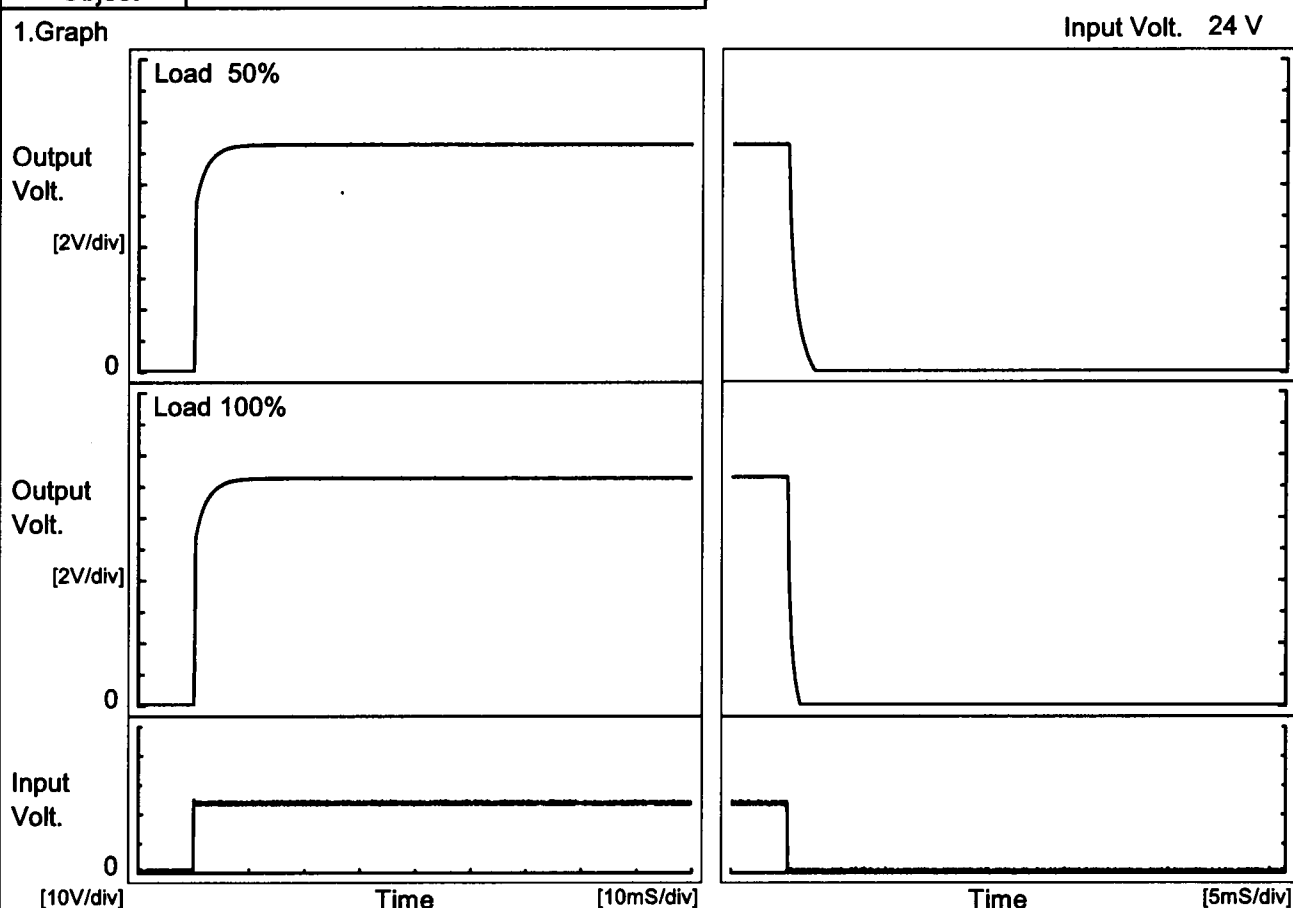
- 17 -

BC-3758

COSEL

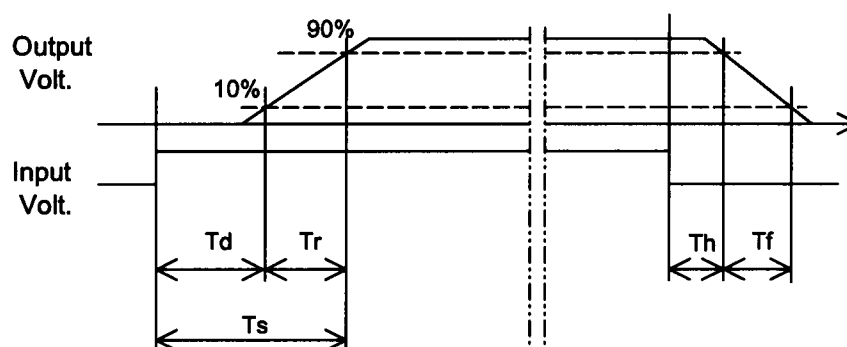
Model	SUW32415	Temperature 25°C Testing Circuitry Figure A
Item	Rise and Fall Time	
Object	+15V0.1A	

1.Graph



2.Values

		[mS]				
Load	Time	Td	Tr	Ts	Th	Tf
50 %		0.1	3.0	3.1	0.1	1.5
100 %		0.1	3.2	3.3	0.1	0.7

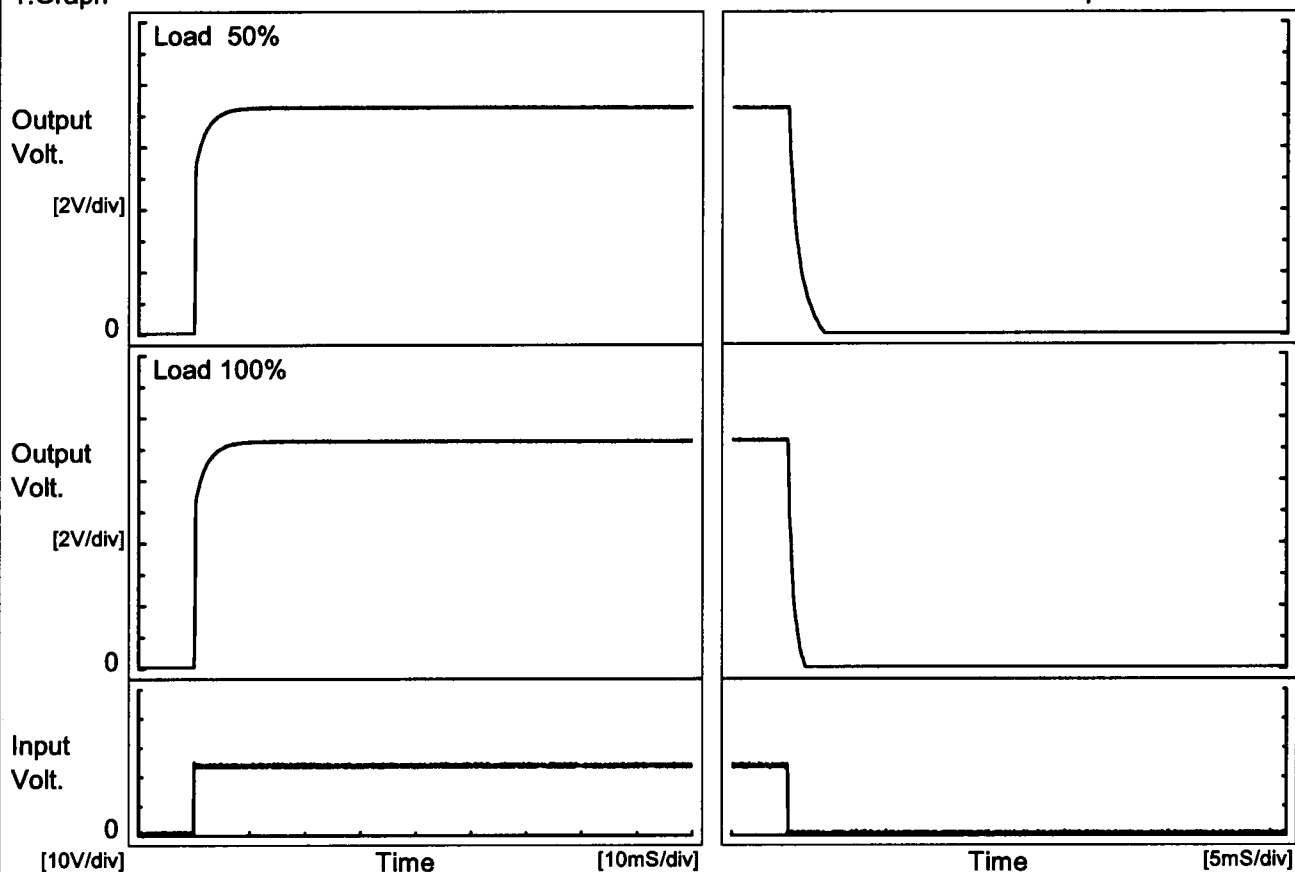


COSEL

Model	SUW32415	Temperature	25°C
Item	Rise and Fall Time	Testing Circuitry	Figure A
Object	-15V0.1A		

1. Graph

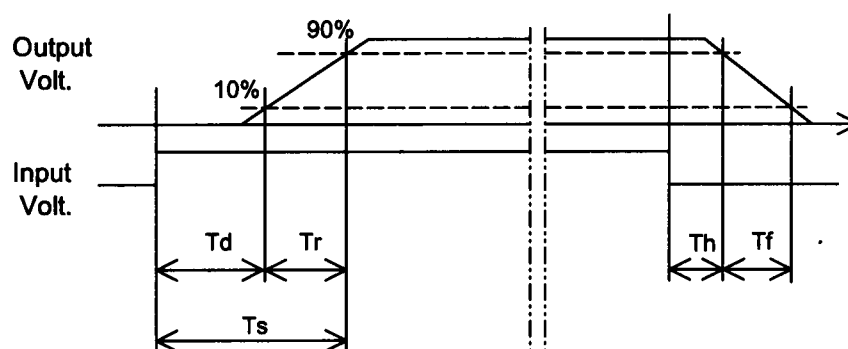
Input Volt. 24 V



2. Values

[mS]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	0.1	3.1	3.2	0.1	2.1
100 %	0.1	3.2	3.3	0.1	1.0



COSEL

Model		SUW32415																																										
Item		Minimum Input Voltage for Regulated Output Voltage																																										
Object		+15V0.1A																																										
1.Graph																																												
<div><div><div><div>---</div><div>□</div><div>---</div></div><div>Load 50%</div></div><div><div><div>—</div><div>△</div><div>—</div></div><div>Load 100%</div></div></div> <table><thead><tr><th>Ambient Temperature [°C]</th><th>Load 50% [V]</th><th>Load 100% [V]</th></tr></thead><tbody><tr><td>-60</td><td>6.8</td><td>9.8</td></tr><tr><td>-40</td><td>6.8</td><td>9.8</td></tr><tr><td>-20</td><td>6.8</td><td>9.8</td></tr><tr><td>0</td><td>6.8</td><td>9.8</td></tr><tr><td>25</td><td>6.8</td><td>9.8</td></tr><tr><td>55</td><td>6.8</td><td>9.8</td></tr><tr><td>60</td><td>6.8</td><td>9.8</td></tr><tr><td>-</td><td>-</td><td>-</td></tr><tr><td>-</td><td>-</td><td>-</td></tr><tr><td>-</td><td>-</td><td>-</td></tr><tr><td>-</td><td>-</td><td>-</td></tr><tr><td>-</td><td>-</td><td>-</td></tr></tbody></table>				Ambient Temperature [°C]	Load 50% [V]	Load 100% [V]	-60	6.8	9.8	-40	6.8	9.8	-20	6.8	9.8	0	6.8	9.8	25	6.8	9.8	55	6.8	9.8	60	6.8	9.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Ambient Temperature [°C]	Load 50% [V]	Load 100% [V]																																										
-60	6.8	9.8																																										
-40	6.8	9.8																																										
-20	6.8	9.8																																										
0	6.8	9.8																																										
25	6.8	9.8																																										
55	6.8	9.8																																										
60	6.8	9.8																																										
-	-	-																																										
-	-	-																																										
-	-	-																																										
-	-	-																																										
-	-	-																																										
2.Values																																												
<table><thead><tr><th rowspan="2">Ambient Temperature [°C]</th><th colspan="2">Input Voltage [V]</th></tr><tr><th>Load 50%</th><th>Load 100%</th></tr></thead><tbody><tr><td>-60</td><td>6.9</td><td>9.8</td></tr><tr><td>-40</td><td>6.9</td><td>9.8</td></tr><tr><td>-20</td><td>6.9</td><td>9.8</td></tr><tr><td>0</td><td>6.9</td><td>10.0</td></tr><tr><td>25</td><td>6.8</td><td>10.0</td></tr><tr><td>55</td><td>6.9</td><td>10.0</td></tr><tr><td>60</td><td>6.9</td><td>10.0</td></tr><tr><td>-</td><td>-</td><td>-</td></tr><tr><td>-</td><td>-</td><td>-</td></tr><tr><td>-</td><td>-</td><td>-</td></tr><tr><td>-</td><td>-</td><td>-</td></tr><tr><td>-</td><td>-</td><td>-</td></tr></tbody></table>				Ambient Temperature [°C]	Input Voltage [V]		Load 50%	Load 100%	-60	6.9	9.8	-40	6.9	9.8	-20	6.9	9.8	0	6.9	10.0	25	6.8	10.0	55	6.9	10.0	60	6.9	10.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ambient Temperature [°C]	Input Voltage [V]																																											
	Load 50%	Load 100%																																										
-60	6.9	9.8																																										
-40	6.9	9.8																																										
-20	6.9	9.8																																										
0	6.9	10.0																																										
25	6.8	10.0																																										
55	6.9	10.0																																										
60	6.9	10.0																																										
-	-	-																																										
-	-	-																																										
-	-	-																																										
-	-	-																																										
-	-	-																																										

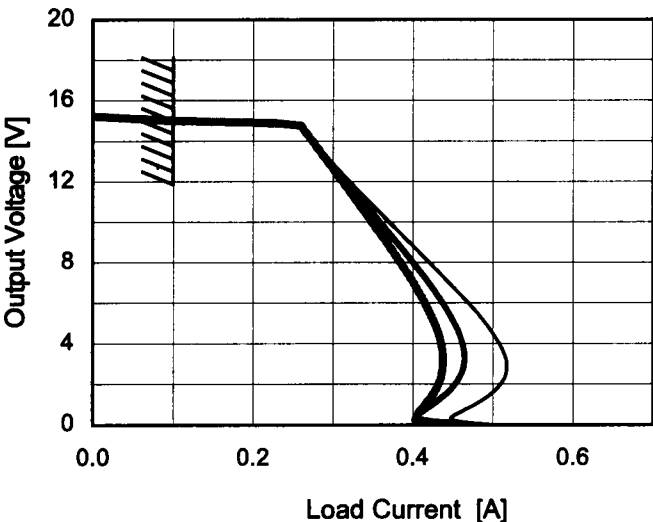
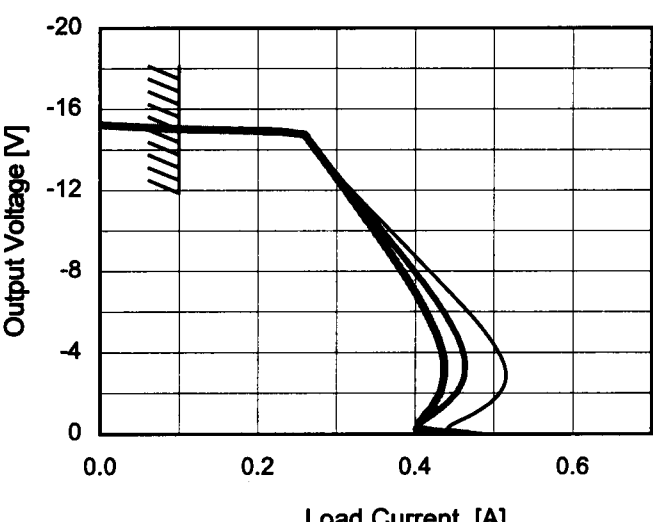
Object		-15V0.1A																																										
1.Graph																																												
<div><div><div><div>---</div><div>□</div><div>---</div></div><div>Load 50%</div></div><div><div><div>—</div><div>△</div><div>—</div></div><div>Load 100%</div></div></div> <table><thead><tr><th>Ambient Temperature [°C]</th><th>Load 50% [V]</th><th>Load 100% [V]</th></tr></thead><tbody><tr><td>-60</td><td>6.8</td><td>9.8</td></tr><tr><td>-40</td><td>6.8</td><td>9.8</td></tr><tr><td>-20</td><td>6.8</td><td>9.8</td></tr><tr><td>0</td><td>6.8</td><td>9.8</td></tr><tr><td>25</td><td>6.8</td><td>9.8</td></tr><tr><td>55</td><td>6.8</td><td>9.8</td></tr><tr><td>60</td><td>6.8</td><td>9.8</td></tr><tr><td>-</td><td>-</td><td>-</td></tr><tr><td>-</td><td>-</td><td>-</td></tr><tr><td>-</td><td>-</td><td>-</td></tr><tr><td>-</td><td>-</td><td>-</td></tr><tr><td>-</td><td>-</td><td>-</td></tr></tbody></table>				Ambient Temperature [°C]	Load 50% [V]	Load 100% [V]	-60	6.8	9.8	-40	6.8	9.8	-20	6.8	9.8	0	6.8	9.8	25	6.8	9.8	55	6.8	9.8	60	6.8	9.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Ambient Temperature [°C]	Load 50% [V]	Load 100% [V]																																										
-60	6.8	9.8																																										
-40	6.8	9.8																																										
-20	6.8	9.8																																										
0	6.8	9.8																																										
25	6.8	9.8																																										
55	6.8	9.8																																										
60	6.8	9.8																																										
-	-	-																																										
-	-	-																																										
-	-	-																																										
-	-	-																																										
-	-	-																																										
2.Values																																												
<table><thead><tr><th rowspan="2">Ambient Temperature [°C]</th><th colspan="2">Input Voltage [V]</th></tr><tr><th>Load 50%</th><th>Load 100%</th></tr></thead><tbody><tr><td>-60</td><td>6.8</td><td>9.8</td></tr><tr><td>-40</td><td>6.8</td><td>9.8</td></tr><tr><td>-20</td><td>6.8</td><td>9.8</td></tr><tr><td>0</td><td>6.8</td><td>9.8</td></tr><tr><td>25</td><td>6.8</td><td>9.9</td></tr><tr><td>55</td><td>6.8</td><td>9.9</td></tr><tr><td>60</td><td>6.8</td><td>9.9</td></tr><tr><td>-</td><td>-</td><td>-</td></tr><tr><td>-</td><td>-</td><td>-</td></tr><tr><td>-</td><td>-</td><td>-</td></tr><tr><td>-</td><td>-</td><td>-</td></tr><tr><td>-</td><td>-</td><td>-</td></tr></tbody></table>				Ambient Temperature [°C]	Input Voltage [V]		Load 50%	Load 100%	-60	6.8	9.8	-40	6.8	9.8	-20	6.8	9.8	0	6.8	9.8	25	6.8	9.9	55	6.8	9.9	60	6.8	9.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ambient Temperature [°C]	Input Voltage [V]																																											
	Load 50%	Load 100%																																										
-60	6.8	9.8																																										
-40	6.8	9.8																																										
-20	6.8	9.8																																										
0	6.8	9.8																																										
25	6.8	9.9																																										
55	6.8	9.9																																										
60	6.8	9.9																																										
-	-	-																																										
-	-	-																																										
-	-	-																																										
-	-	-																																										
-	-	-																																										

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

- 20 -

BC-3758

COSEL

Model		SUW32415		Temperature 25°C																																																								
Item		Overcurrent Protection		Testing Circuitry Figure A																																																								
Object		+15V0.1A																																																										
1.Graph		<div><div></div> Input Volt. 18V</div> <div><div></div> Input Volt. 24V</div> <div><div></div> Input Volt. 36V</div>		2.Values																																																								
				<table><tr><th rowspan="2">Output Voltage [V]</th><th colspan="3">Load Current [A]</th></tr><tr><th>Input Volt. 18[V]</th><th>Input Volt. 24[V]</th><th>Input Volt. 36[V]</th></tr><tr><td>15.0</td><td>0.10</td><td>0.10</td><td>0.10</td></tr><tr><td>14.3</td><td>0.27</td><td>0.27</td><td>0.27</td></tr><tr><td>13.5</td><td>0.29</td><td>0.28</td><td>0.28</td></tr><tr><td>12.0</td><td>0.32</td><td>0.32</td><td>0.31</td></tr><tr><td>10.5</td><td>0.36</td><td>0.35</td><td>0.34</td></tr><tr><td>9.0</td><td>0.40</td><td>0.38</td><td>0.37</td></tr><tr><td>7.5</td><td>0.43</td><td>0.41</td><td>0.39</td></tr><tr><td>6.0</td><td>0.47</td><td>0.44</td><td>0.42</td></tr><tr><td>4.5</td><td>0.50</td><td>0.46</td><td>0.43</td></tr><tr><td>3.0</td><td>0.52</td><td>0.46</td><td>0.44</td></tr><tr><td>1.5</td><td>0.50</td><td>0.44</td><td>0.43</td></tr><tr><td>0.0</td><td>0.50</td><td>0.44</td><td>0.47</td></tr></table>		Output Voltage [V]	Load Current [A]			Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]	15.0	0.10	0.10	0.10	14.3	0.27	0.27	0.27	13.5	0.29	0.28	0.28	12.0	0.32	0.32	0.31	10.5	0.36	0.35	0.34	9.0	0.40	0.38	0.37	7.5	0.43	0.41	0.39	6.0	0.47	0.44	0.42	4.5	0.50	0.46	0.43	3.0	0.52	0.46	0.44	1.5	0.50	0.44	0.43	0.0	0.50	0.44	0.47
Output Voltage [V]	Load Current [A]																																																											
	Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]																																																									
15.0	0.10	0.10	0.10																																																									
14.3	0.27	0.27	0.27																																																									
13.5	0.29	0.28	0.28																																																									
12.0	0.32	0.32	0.31																																																									
10.5	0.36	0.35	0.34																																																									
9.0	0.40	0.38	0.37																																																									
7.5	0.43	0.41	0.39																																																									
6.0	0.47	0.44	0.42																																																									
4.5	0.50	0.46	0.43																																																									
3.0	0.52	0.46	0.44																																																									
1.5	0.50	0.44	0.43																																																									
0.0	0.50	0.44	0.47																																																									
Object		-15V0.1A																																																										
1.Graph		<div><div></div> Input Volt. 18V</div> <div><div></div> Input Volt. 24V</div> <div><div></div> Input Volt. 36V</div>		2.Values																																																								
				<table><tr><th rowspan="2">Output Voltage [V]</th><th colspan="3">Load Current [A]</th></tr><tr><th>Input Volt. 18[V]</th><th>Input Volt. 24[V]</th><th>Input Volt. 36[V]</th></tr><tr><td>-15.0</td><td>0.10</td><td>0.10</td><td>0.10</td></tr><tr><td>-14.3</td><td>0.27</td><td>0.27</td><td>0.27</td></tr><tr><td>-13.5</td><td>0.28</td><td>0.28</td><td>0.28</td></tr><tr><td>-12.0</td><td>0.32</td><td>0.32</td><td>0.31</td></tr><tr><td>-10.5</td><td>0.36</td><td>0.35</td><td>0.34</td></tr><tr><td>-9.0</td><td>0.39</td><td>0.38</td><td>0.37</td></tr><tr><td>-7.5</td><td>0.43</td><td>0.41</td><td>0.39</td></tr><tr><td>-6.0</td><td>0.47</td><td>0.44</td><td>0.41</td></tr><tr><td>-4.5</td><td>0.50</td><td>0.46</td><td>0.43</td></tr><tr><td>-3.0</td><td>0.52</td><td>0.46</td><td>0.44</td></tr><tr><td>-1.5</td><td>0.50</td><td>0.44</td><td>0.43</td></tr><tr><td>0.0</td><td>0.49</td><td>0.44</td><td>0.47</td></tr></table>		Output Voltage [V]	Load Current [A]			Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]	-15.0	0.10	0.10	0.10	-14.3	0.27	0.27	0.27	-13.5	0.28	0.28	0.28	-12.0	0.32	0.32	0.31	-10.5	0.36	0.35	0.34	-9.0	0.39	0.38	0.37	-7.5	0.43	0.41	0.39	-6.0	0.47	0.44	0.41	-4.5	0.50	0.46	0.43	-3.0	0.52	0.46	0.44	-1.5	0.50	0.44	0.43	0.0	0.49	0.44	0.47
Output Voltage [V]	Load Current [A]																																																											
	Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]																																																									
-15.0	0.10	0.10	0.10																																																									
-14.3	0.27	0.27	0.27																																																									
-13.5	0.28	0.28	0.28																																																									
-12.0	0.32	0.32	0.31																																																									
-10.5	0.36	0.35	0.34																																																									
-9.0	0.39	0.38	0.37																																																									
-7.5	0.43	0.41	0.39																																																									
-6.0	0.47	0.44	0.41																																																									
-4.5	0.50	0.46	0.43																																																									
-3.0	0.52	0.46	0.44																																																									
-1.5	0.50	0.44	0.43																																																									
0.0	0.49	0.44	0.47																																																									
Note: Slanted line shows the range of the rated load current.																																																												

- 21 -

BC-3758

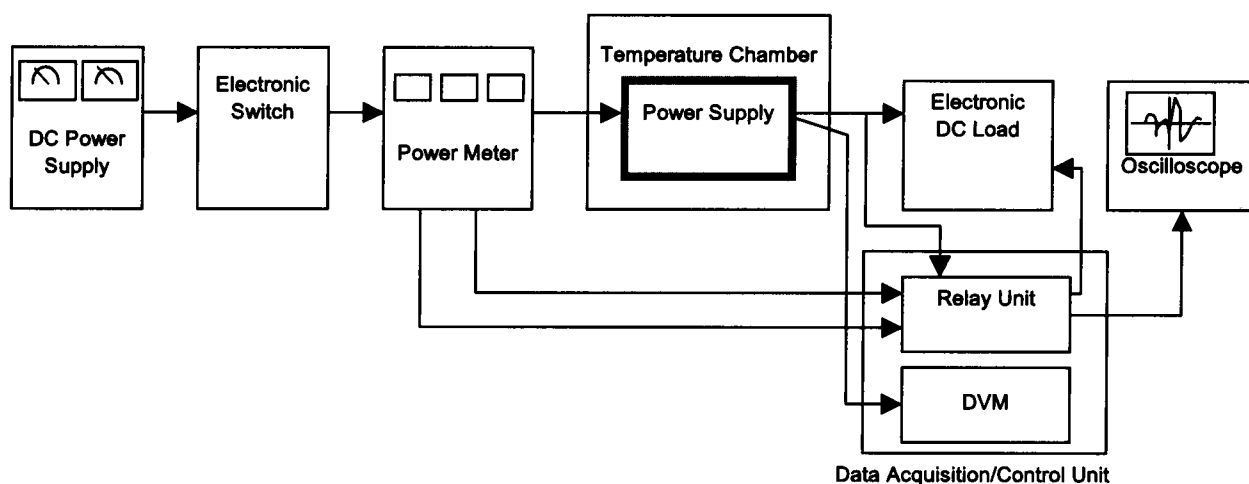


Figure A

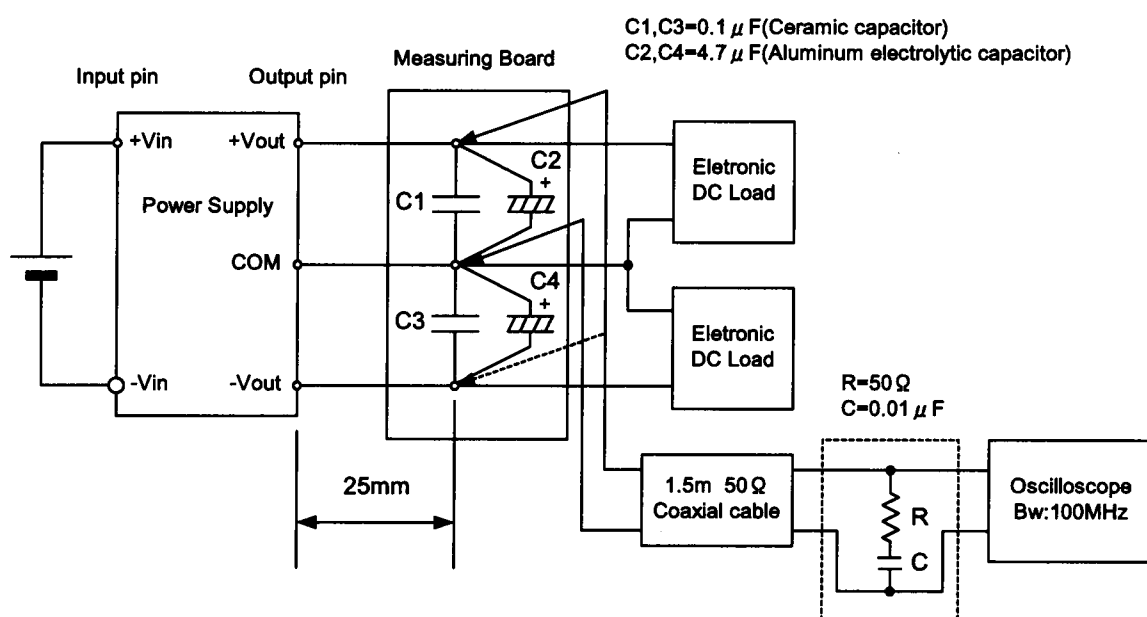


Figure B (Ripple and Ripple noise Characteristic)