

TEST DATA OF MUW1R51212

Regulated DC Power Supply
February 6, 2025

Approved by : Kenichi Tsukada
Design Manager

Prepared by : Soichiro Kawaguchi
Design Engineer

COSEL CO.,LTD.

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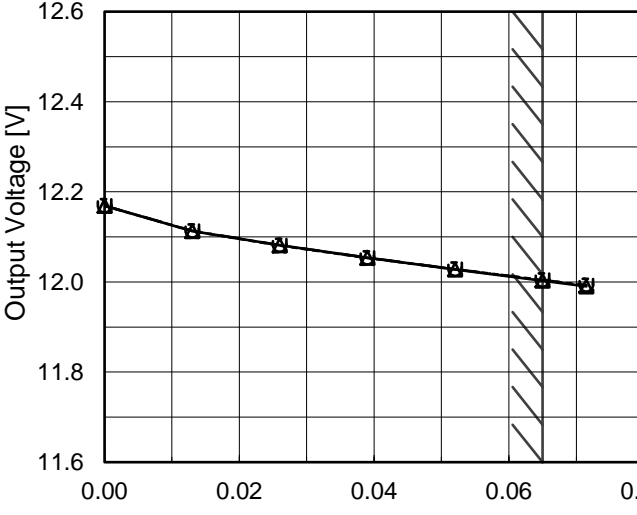
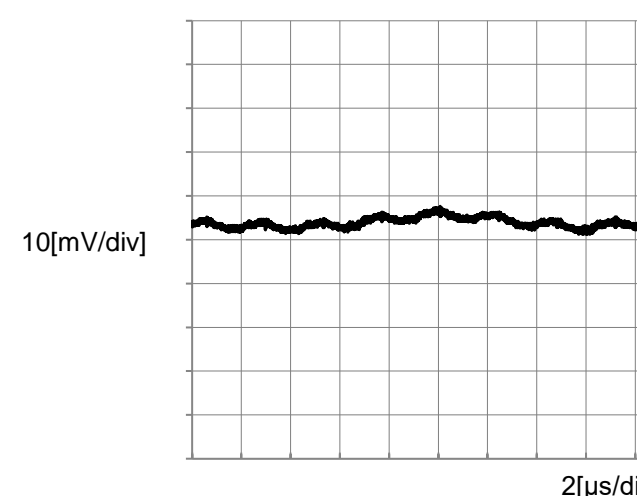
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0.000	12.169	12.169	12.169																																																			
0.013	12.113	12.113	12.113																																																			
0.026	12.082	12.081	12.082																																																			
0.039	12.054	12.053	12.054																																																			
0.052	12.028	12.028	12.028																																																			
0.065	12.003	12.004	12.005																																																			
0.072	11.990	11.992	11.993																																																			
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Item	Ripple-Noise	Temperature	25°C																																																			
Object	+12V0.065A	Testing Circuitry	Figure B																																																			
1.Graph																																																						
<div><div><div>Input Voltage</div><div>12V</div></div><div><div>Load</div><div>100%</div></div><div></div><p>-12V:Rated Load Current</p></div>																																																						

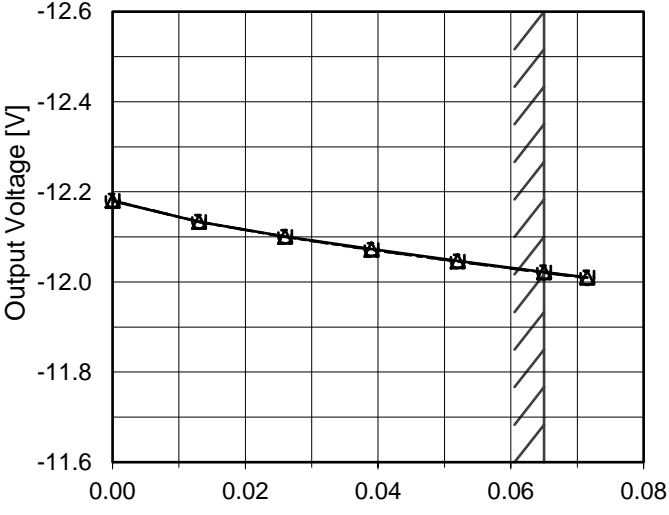
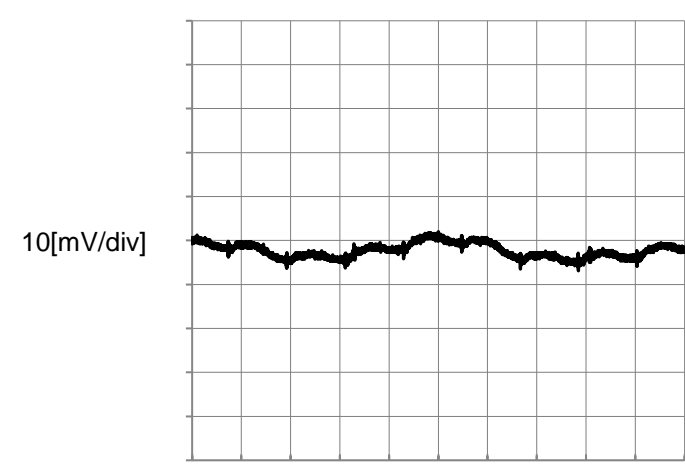
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Model		MUW1R51212	Temperature25°C																																																				
Item		Load Regulation	Testing CircuitryFigure A																																																				
Object		-12V0.065A																																																					
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>Input Volt.</div><div>9V</div></div><div><div>Input Volt.</div><div>12V</div></div><div><div>Input Volt.</div><div>18V</div></div></div> <div></div> <div>Note: Slanted line shows the range of the rated load current.</div>			<table><tr><th rowspan="2">Load Current [A]</th><th colspan="3">Output Voltage [V]</th></tr><tr><th>Input Volt. 9[V]</th><th>Input Volt. 12[V]</th><th>Input Volt. 18[V]</th></tr><tr><td>0.000</td><td>-12.180</td><td>-12.180</td><td>-12.181</td></tr><tr><td>0.013</td><td>-12.133</td><td>-12.133</td><td>-12.134</td></tr><tr><td>0.026</td><td>-12.101</td><td>-12.100</td><td>-12.100</td></tr><tr><td>0.039</td><td>-12.073</td><td>-12.071</td><td>-12.072</td></tr><tr><td>0.052</td><td>-12.047</td><td>-12.045</td><td>-12.045</td></tr><tr><td>0.065</td><td>-12.022</td><td>-12.021</td><td>-12.020</td></tr><tr><td>0.072</td><td>-12.010</td><td>-12.010</td><td>-12.009</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></table> <div>+12V:Rated Load Current</div>		Load Current [A]	Output Voltage [V]			Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]	0.000	-12.180	-12.180	-12.181	0.013	-12.133	-12.133	-12.134	0.026	-12.101	-12.100	-12.100	0.039	-12.073	-12.071	-12.072	0.052	-12.047	-12.045	-12.045	0.065	-12.022	-12.021	-12.020	0.072	-12.010	-12.010	-12.009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Load Current [A]	Output Voltage [V]																																																						
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Item		Ripple-Noise	Temperature25°C																																																				
Object		-12V0.065A	Testing CircuitryFigure B																																																				
1.Graph																																																							
<div><div><div>Input Voltage</div><div>12V</div></div><div><div>Load</div><div>100%</div></div></div> <div></div> <div>+12V:Rated Load Current</div>																																																							



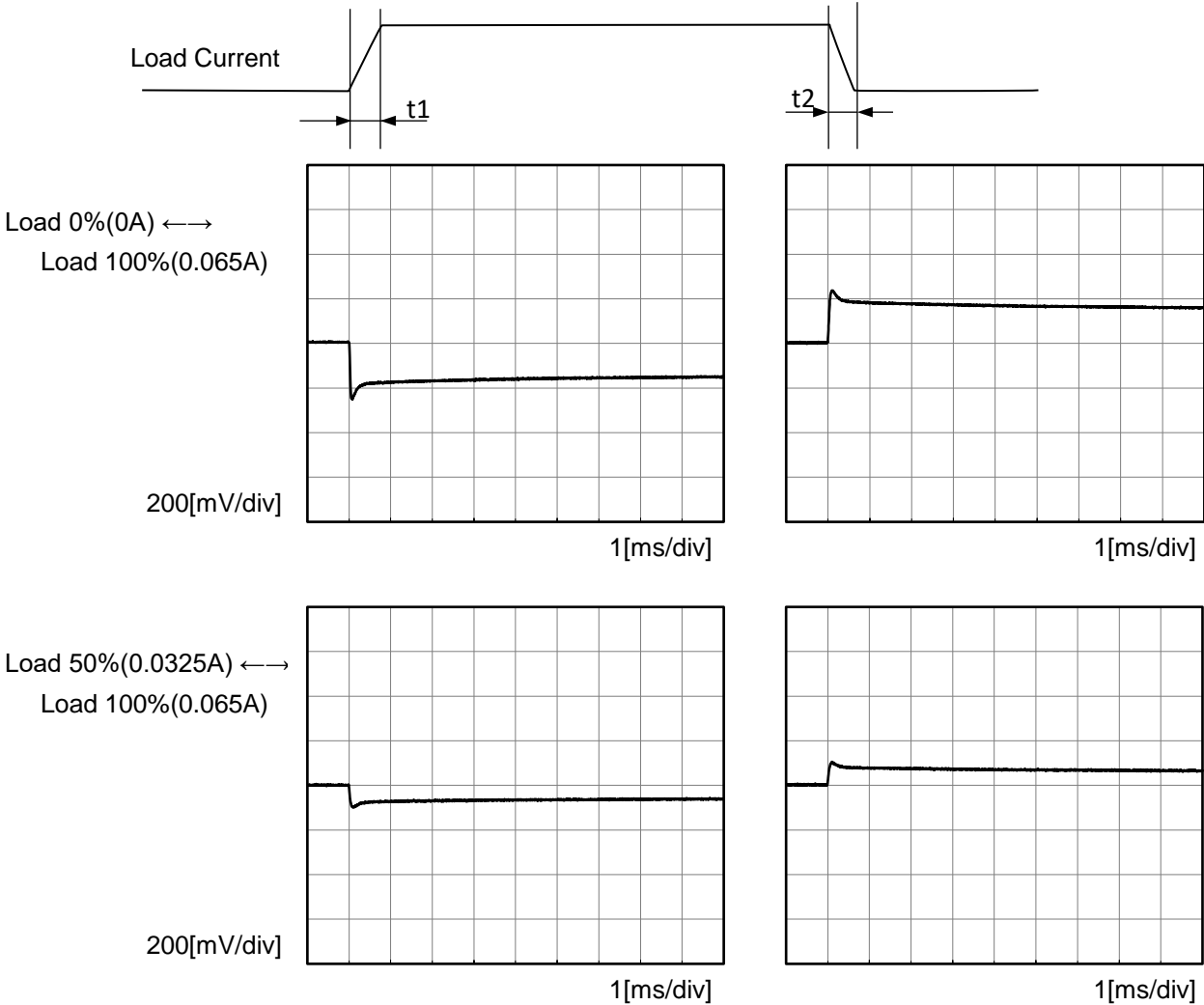
Model		MUW1R51212	Temperature 25°C Testing Circuitry Figure A
Item		Dynamic Load Response	
Object		+12V0.065A	

Input Volt. 12 V

-12V:Rated Load Current

Cycle 1000 ms

Response. t1=t2=50μs. Typ





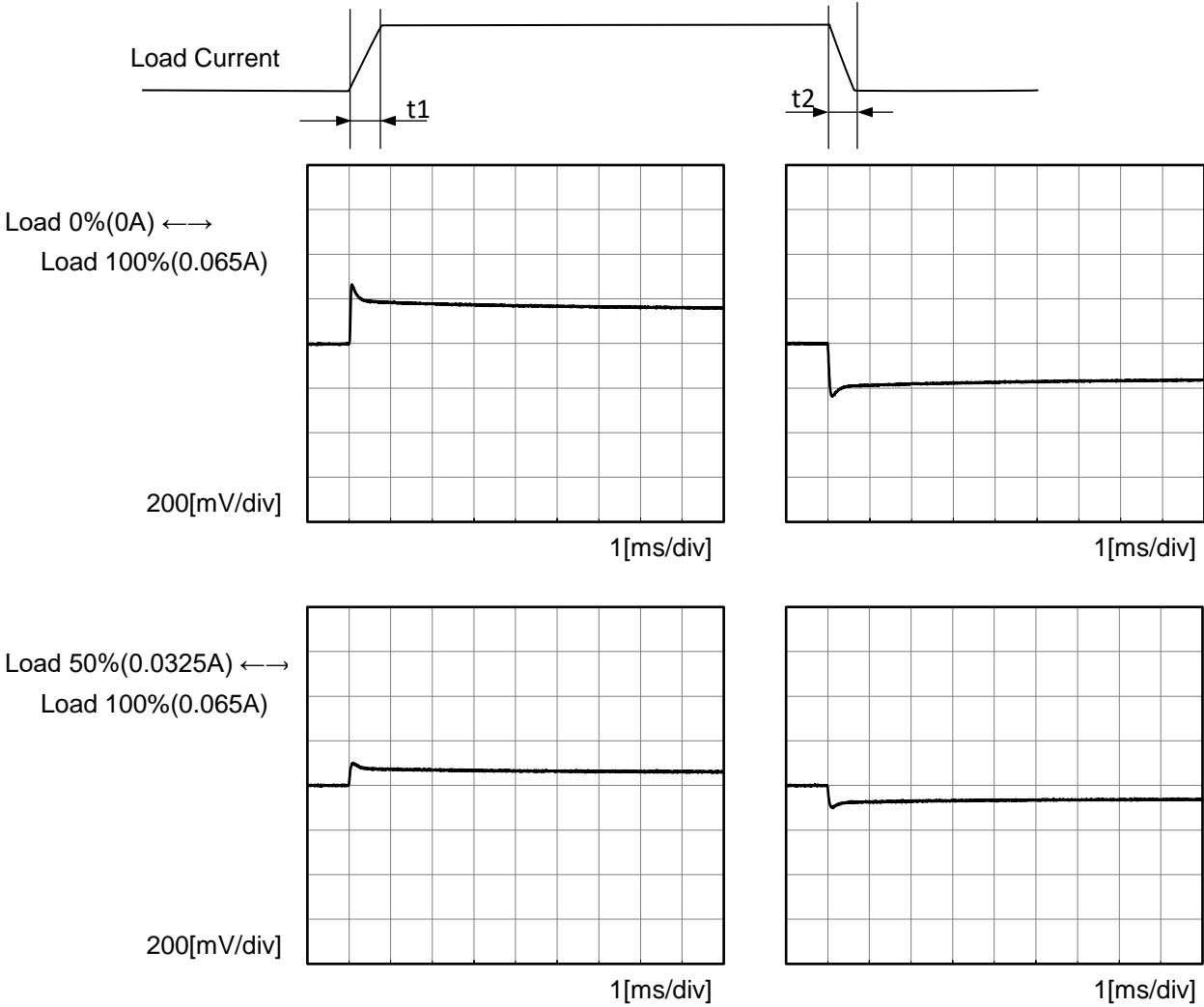
Model		MUW1R51212	Temperature 25°C Testing Circuitry Figure A
Item		Dynamic Load Response	
Object		-12V0.065A	

Input Volt. 12 V

+12V:Rated Load Current

Cycle 1000 ms

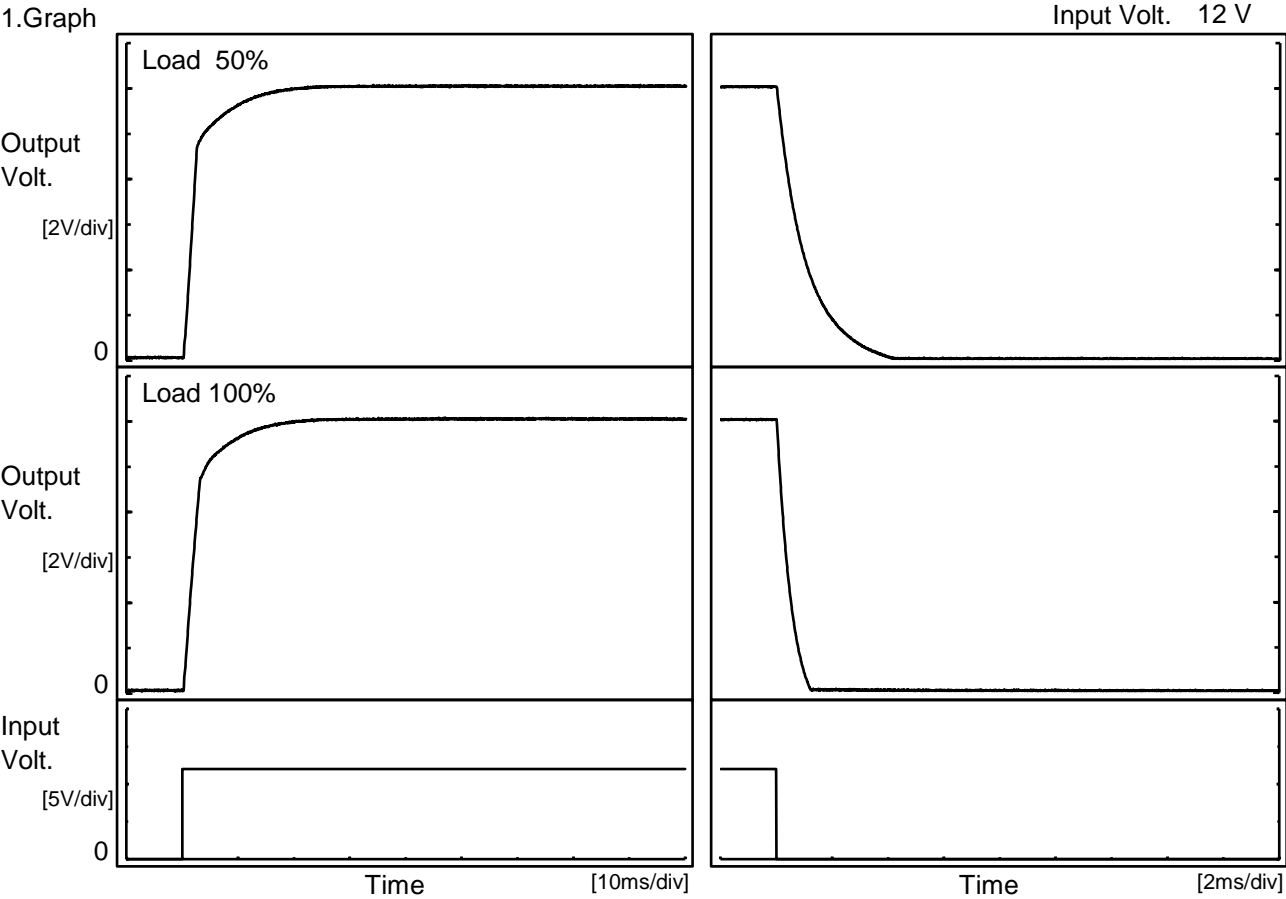
Response. t1=t2=50μs. Typ





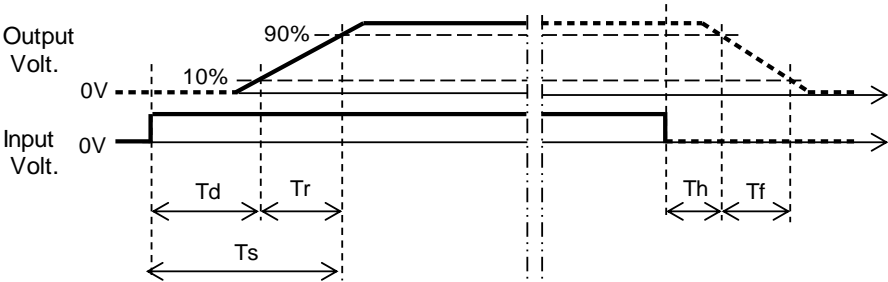
Model		MUW1R51212	Temperature 25°C Testing Circuitry Figure A
Item		Rise and Fall Time	
Object		+12V0.065A	

1.Graph



2.Values

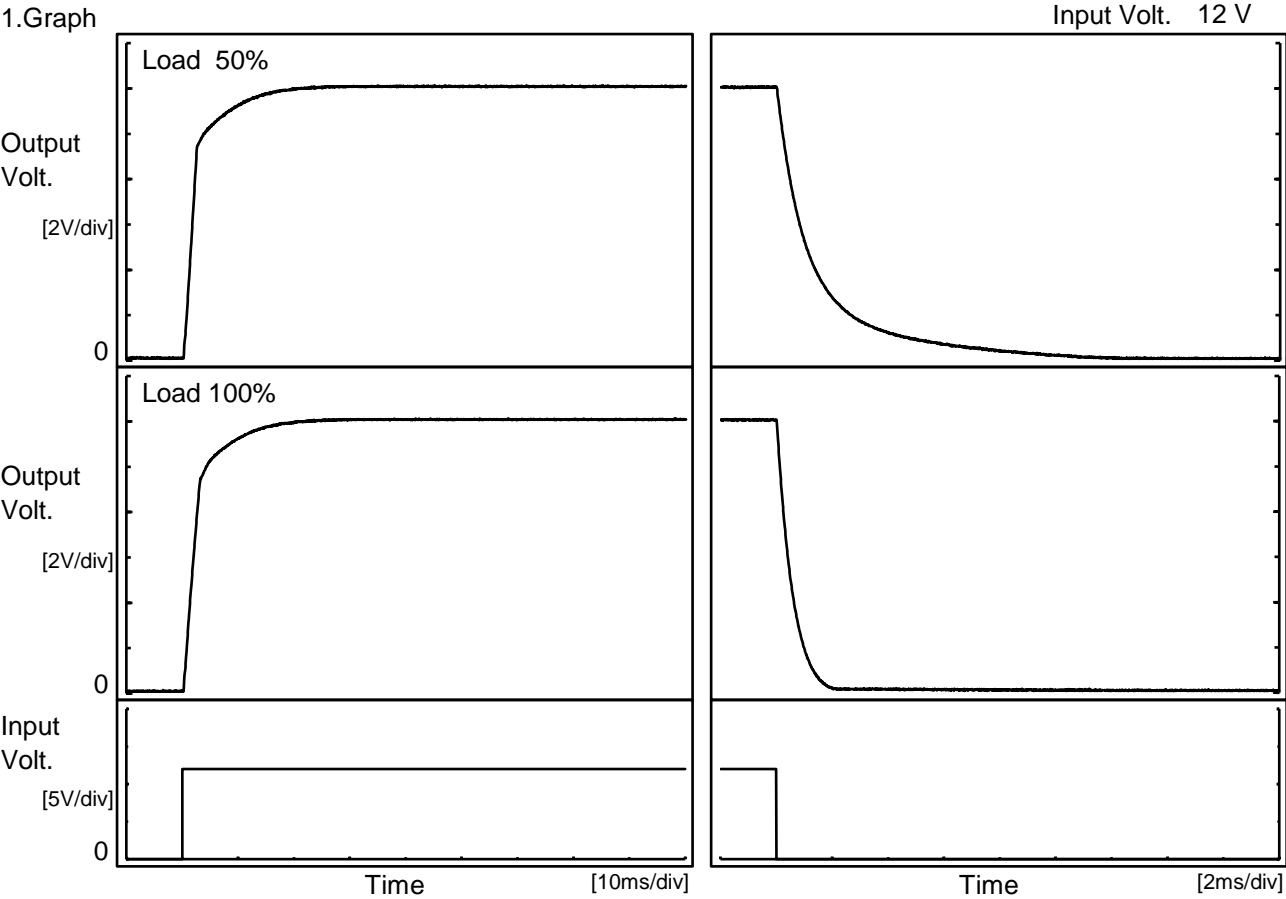
		[ms]				
Load	Time	Td	Tr	Ts	Th	Tf
50 %		0.6	6.9	7.5	0.1	2.2
100 %		0.6	6.8	7.4	0.1	0.8





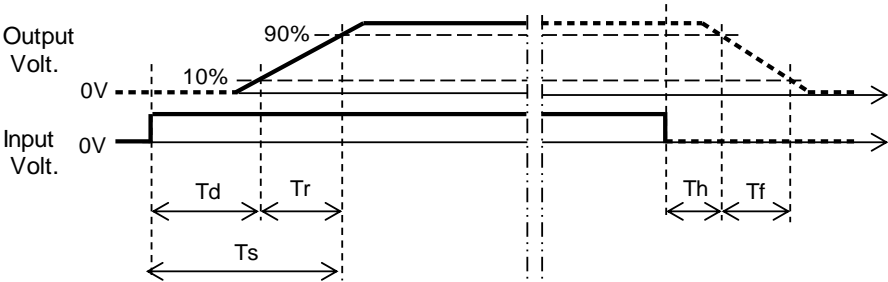
Model	MUW1R51212	Temperature 25°C Testing Circuitry Figure A
Item	Rise and Fall Time	
Object	-12V0.065A	

1.Graph



2.Values

		[ms]				
Load	Time	Td	Tr	Ts	Th	Tf
50 %		0.6	7.1	7.7	0.1	3.8
100 %		0.6	7.2	7.8	0.1	1.1



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<div>COSEL</div>																																																										
Model	MUW1R51212	Temperature25°C Testing CircuitryFigure A																																																								
Item	Overcurrent Protection																																																									
Object	+12V0.065A																																																									
1.Graph <div><div><div></div>Input Volt.9V</div><div><div></div>Input Volt.12V</div><div><div></div>Input Volt.18V</div></div> <div>Output Voltage [V]</div> <div>Load Current [A]</div>		2.Values <table><tr><th rowspan="2">Output Voltage [V]</th><th colspan="3">Load Current [A]</th></tr><tr><th>Input Volt. 9[V]</th><th>Input Volt. 12[V]</th><th>Input Volt. 18[V]</th></tr><tr><td>11.4</td><td>0.15</td><td>0.16</td><td>0.18</td></tr><tr><td>10.8</td><td>0.16</td><td>0.17</td><td>0.19</td></tr><tr><td>9.6</td><td>0.18</td><td>0.20</td><td>0.21</td></tr><tr><td>8.4</td><td>0.20</td><td>0.22</td><td>0.24</td></tr><tr><td>7.2</td><td>0.23</td><td>0.25</td><td>0.27</td></tr><tr><td>6.0</td><td>0.26</td><td>0.28</td><td>0.30</td></tr><tr><td>4.8</td><td>0.29</td><td>0.31</td><td>0.33</td></tr><tr><td>3.6</td><td>0.32</td><td>0.34</td><td>0.36</td></tr><tr><td>2.4</td><td>0.36</td><td>0.38</td><td>0.40</td></tr><tr><td>1.2</td><td>0.41</td><td>0.42</td><td>0.44</td></tr><tr><td>0.0</td><td>0.46</td><td>0.47</td><td>0.48</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr></table> <div>-12V:Rated Load Current</div>		Output Voltage [V]	Load Current [A]			Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]	11.4	0.15	0.16	0.18	10.8	0.16	0.17	0.19	9.6	0.18	0.20	0.21	8.4	0.20	0.22	0.24	7.2	0.23	0.25	0.27	6.0	0.26	0.28	0.30	4.8	0.29	0.31	0.33	3.6	0.32	0.34	0.36	2.4	0.36	0.38	0.40	1.2	0.41	0.42	0.44	0.0	0.46	0.47	0.48	--	-	-	-
Output Voltage [V]	Load Current [A]																																																									
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Object	-12V0.065A																																																									
1.Graph <div><div><div></div>Input Volt.9V</div><div><div></div>Input Volt.12V</div><div><div></div>Input Volt.18V</div></div> <div>Output Voltage [V]</div> <div>Load Current [A]</div> <div>Note: Slanted line shows the range of the rated load current.</div>		2.Values <table><tr><th rowspan="2">Output Voltage [V]</th><th colspan="3">Load Current [A]</th></tr><tr><th>Input Volt. 9[V]</th><th>Input Volt. 12[V]</th><th>Input Volt. 18[V]</th></tr><tr><td>-11.4</td><td>0.16</td><td>0.17</td><td>0.19</td></tr><tr><td>-10.8</td><td>0.17</td><td>0.18</td><td>0.20</td></tr><tr><td>-9.6</td><td>0.19</td><td>0.20</td><td>0.22</td></tr><tr><td>-8.4</td><td>0.21</td><td>0.23</td><td>0.25</td></tr><tr><td>-7.2</td><td>0.24</td><td>0.25</td><td>0.27</td></tr><tr><td>-6.0</td><td>0.26</td><td>0.28</td><td>0.30</td></tr><tr><td>-4.8</td><td>0.29</td><td>0.31</td><td>0.33</td></tr><tr><td>-3.6</td><td>0.32</td><td>0.34</td><td>0.36</td></tr><tr><td>-2.4</td><td>0.36</td><td>0.38</td><td>0.40</td></tr><tr><td>-1.2</td><td>0.40</td><td>0.42</td><td>0.43</td></tr><tr><td>0.0</td><td>0.46</td><td>0.47</td><td>0.48</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr></table> <div>+12V:Rated Load Current</div>		Output Voltage [V]	Load Current [A]			Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]	-11.4	0.16	0.17	0.19	-10.8	0.17	0.18	0.20	-9.6	0.19	0.20	0.22	-8.4	0.21	0.23	0.25	-7.2	0.24	0.25	0.27	-6.0	0.26	0.28	0.30	-4.8	0.29	0.31	0.33	-3.6	0.32	0.34	0.36	-2.4	0.36	0.38	0.40	-1.2	0.40	0.42	0.43	0.0	0.46	0.47	0.48	--	-	-	-
Output Voltage [V]	Load Current [A]																																																									
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-7.2	0.24	0.25	0.27																																																							
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0.0	0.46	0.47	0.48																																																							
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COSEL

<div>COSEL</div>		Testing Circuitry Figure A																			
Model	MUW1R51212																				
Item	Ambient Temperature Drift																				
Object	+12V0.065A																				
1.Values <div>Load 100%</div> <table><tr><th rowspan="2">Ambient Temperature[°C]</th><th colspan="3">Output Voltage [V]</th></tr><tr><th>Input Volt. 9V</th><th>Input Volt. 12V</th><th>Input Volt. 18V</th></tr><tr><td>-40</td><td>11.924</td><td>11.926</td><td>11.927</td></tr><tr><td>25</td><td>12.005</td><td>12.006</td><td>12.007</td></tr><tr><td>85</td><td>12.028</td><td>12.029</td><td>12.030</td></tr></table>			Ambient Temperature[°C]	Output Voltage [V]			Input Volt. 9V	Input Volt. 12V	Input Volt. 18V	-40	11.924	11.926	11.927	25	12.005	12.006	12.007	85	12.028	12.029	12.030
Ambient Temperature[°C]	Output Voltage [V]																				
	Input Volt. 9V	Input Volt. 12V	Input Volt. 18V																		
-40	11.924	11.926	11.927																		
25	12.005	12.006	12.007																		
85	12.028	12.029	12.030																		
Item	Minimum Input Voltage for Regulated Output Voltage	Testing Circuitry Figure A																			
Object	+12V0.065A																				
1.Values <table><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><tr><td>-40</td><td>7.1</td><td>7.1</td></tr><tr><td>25</td><td>7.1</td><td>7.1</td></tr><tr><td>85</td><td>7.1</td><td>7.1</td></tr></table>			Ambient Temperature[°C]	Input Voltage [V]		Load 50%	Load 100%	-40	7.1	7.1	25	7.1	7.1	85	7.1	7.1					
Ambient Temperature[°C]	Input Voltage [V]																				
	Load 50%	Load 100%																			
-40	7.1	7.1																			
25	7.1	7.1																			
85	7.1	7.1																			
		BC-12068																			

COSEL

		Testing Circuitry Figure A
Model	MUW1R51212	
Item	Ambient Temperature Drift	
Object	-12V0.065A	

1.Values

Load 100%

Ambient Temperature[°C]	Output Voltage [V]		
	Input Volt. 9V	Input Volt. 12V	Input Volt. 18V
-40	-11.941	-11.940	-11.940
25	-12.022	-12.022	-12.021
85	-12.048	-12.047	-12.046

Item	Minimum Input Voltage for Regulated Output Voltage	Testing Circuitry Figure A
Object	-12V0.065A	

1.Values

Ambient Temperature[°C]	Input Voltage [V]	
	Load 50%	Load 100%
-40	7.1	7.1
25	7.1	7.1
85	7.1	7.1

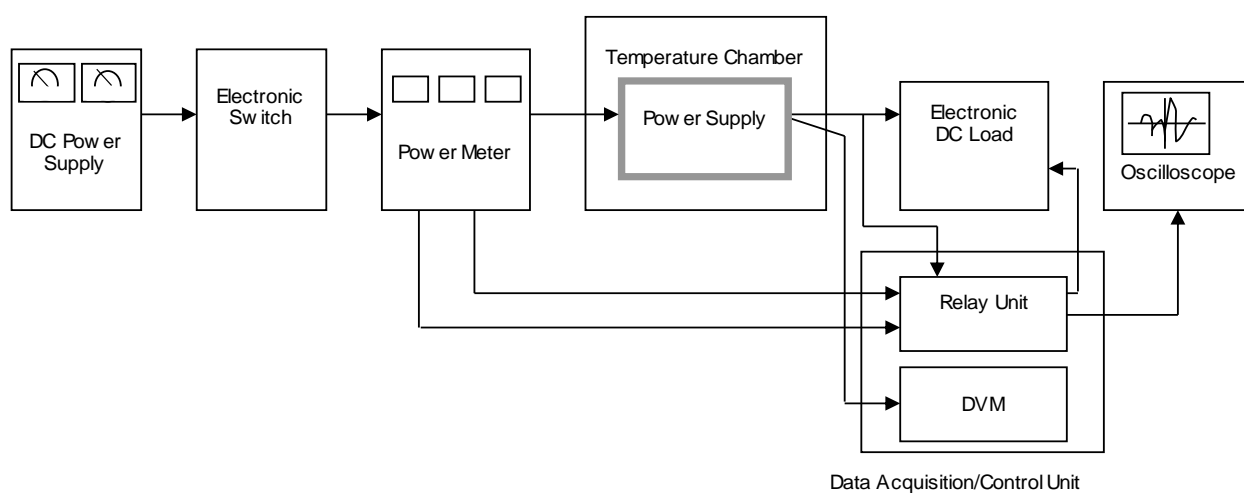


Figure A

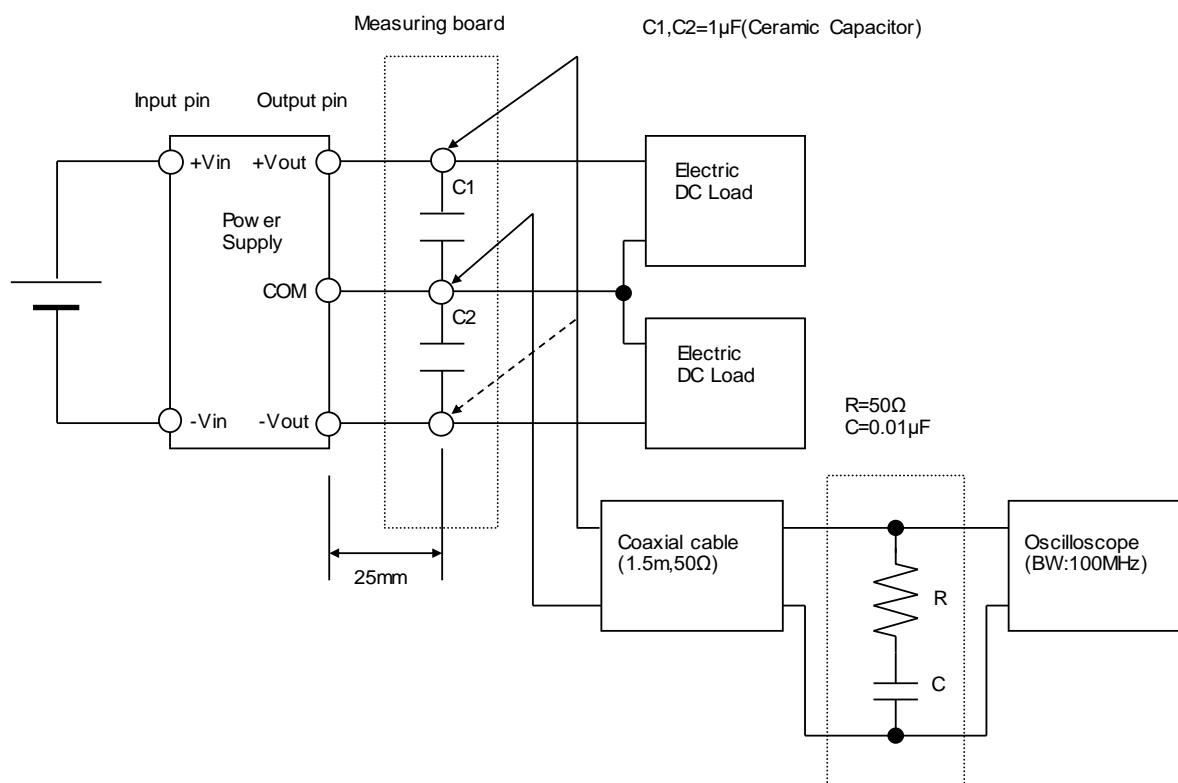


Figure B