

TEST DATA OF MUW1R50512

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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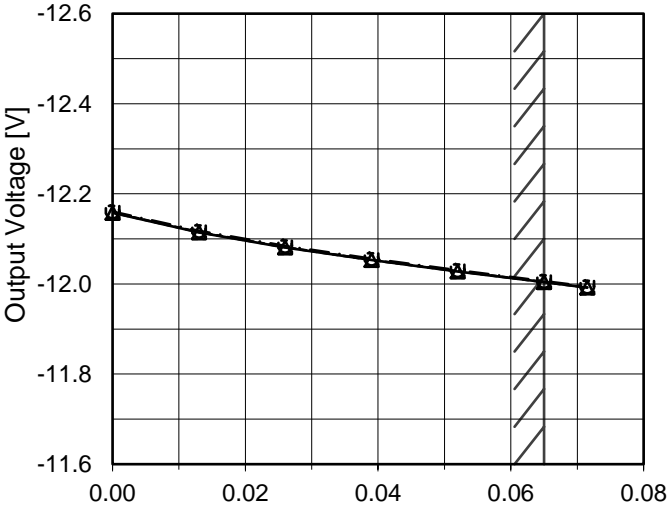
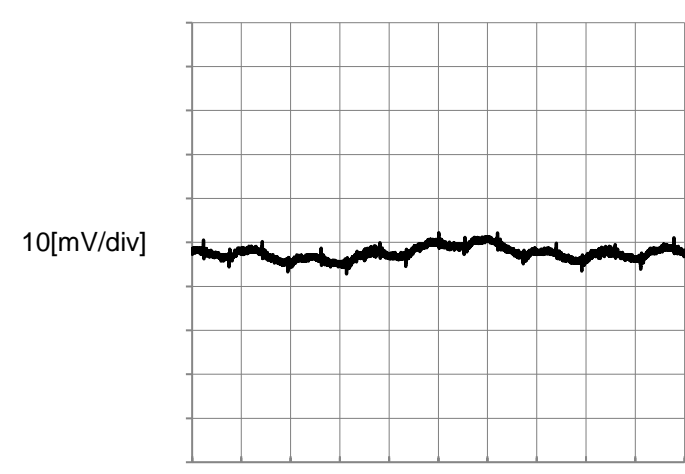
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0.039	12.025	12.025	12.028																																																			
0.052	11.999	12.000	12.003																																																			
0.065	11.974	11.975	11.979																																																			
0.072	11.961	11.963	11.968																																																			
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Item	Ripple-Noise	Temperature	25°C																																																			
Object	+12V0.065A	Testing Circuitry	Figure B																																																			
1.Graph																																																						
<div><div><div>Input Voltage 5V</div><div>Load 100%</div></div><div><p>10[mV/div]</p><p>2[μs/div]</p></div></div> <p>-12V:Rated Load Current</p>																																																						

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BC-12066

COSEL

COSEL																																																						
Model	MUW1R50512	Temperature	25°C																																																			
Item	Load Regulation	Testing Circuitry	Figure A																																																			
Object	-12V0.065A																																																					
1.Graph		2.Values																																																				
<div><div><div><div>—△—</div><div>Input Volt.</div><div>4.5V</div></div><div><div>---□---</div><div>Input Volt.</div><div>5V</div></div><div><div>---○---</div><div>Input Volt.</div><div>9V</div></div></div><div></div><p>Note: Slanted line shows the range of the rated load current.</p></div>		<table><tr><th rowspan="2">Load Current [A]</th><th colspan="3">Output Voltage [V]</th></tr><tr><th>Input Volt. 4.5[V]</th><th>Input Volt. 5[V]</th><th>Input Volt. 9[V]</th></tr><tr><td>0.000</td><td>-12.158</td><td>-12.159</td><td>-12.161</td></tr><tr><td>0.013</td><td>-12.114</td><td>-12.115</td><td>-12.118</td></tr><tr><td>0.026</td><td>-12.081</td><td>-12.082</td><td>-12.085</td></tr><tr><td>0.039</td><td>-12.053</td><td>-12.053</td><td>-12.056</td></tr><tr><td>0.052</td><td>-12.028</td><td>-12.028</td><td>-12.030</td></tr><tr><td>0.065</td><td>-12.004</td><td>-12.004</td><td>-12.006</td></tr><tr><td>0.072</td><td>-11.992</td><td>-11.992</td><td>-11.994</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> <p>+12V:Rated Load Current</p>		Load Current [A]	Output Voltage [V]			Input Volt. 4.5[V]	Input Volt. 5[V]	Input Volt. 9[V]	0.000	-12.158	-12.159	-12.161	0.013	-12.114	-12.115	-12.118	0.026	-12.081	-12.082	-12.085	0.039	-12.053	-12.053	-12.056	0.052	-12.028	-12.028	-12.030	0.065	-12.004	-12.004	-12.006	0.072	-11.992	-11.992	-11.994	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Load Current [A]	Output Voltage [V]																																																					
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Item	Ripple-Noise	Temperature	25°C																																																			
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1.Graph																																																						
<div><div><div>Input Voltage</div><div>5V</div></div><div><div>Load</div><div>100%</div></div><div></div><p>+12V:Rated Load Current</p></div> <div></div>																																																						
		BC-12066																																																				



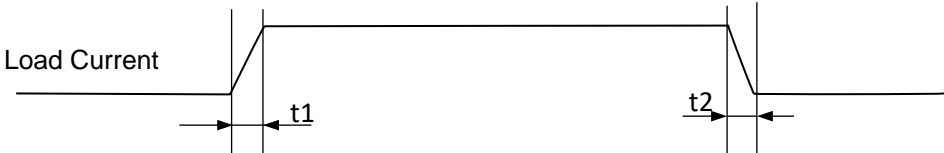
Model		MUW1R50512	Temperature 25°C Testing Circuitry Figure A
Item		Dynamic Load Response	
Object		+12V0.065A	

Input Volt. 5 V

-12V:Rated Load Current

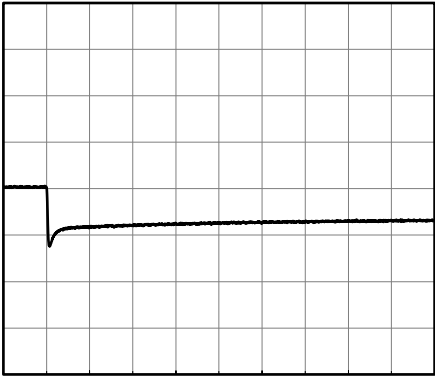
Cycle 1000 ms

Response. t1=t2=50μs. Typ

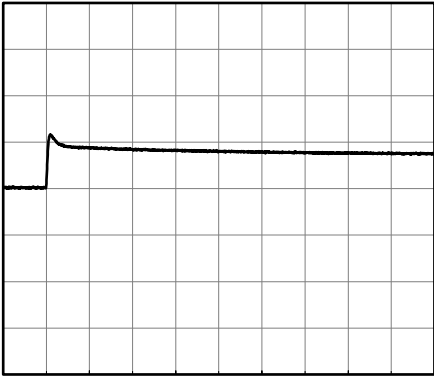


Load 0%(0A) ←→
Load 100%(0.065A)

200[mV/div]



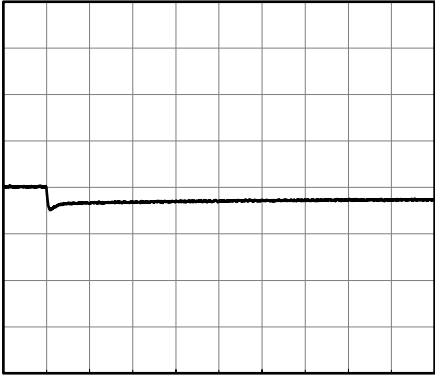
1[ms/div]



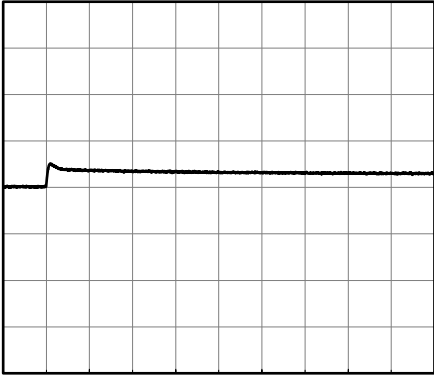
1[ms/div]

Load 50%(0.0325A) ←→
Load 100%(0.065A)

200[mV/div]



1[ms/div]



1[ms/div]



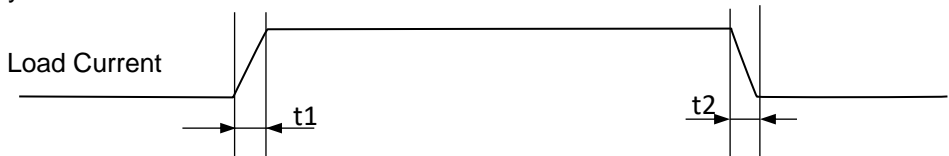
Model		MUW1R50512	Temperature 25°C Testing Circuitry Figure A
Item		Dynamic Load Response	
Object		-12V0.065A	

Input Volt. 5 V

+12V:Rated Load Current

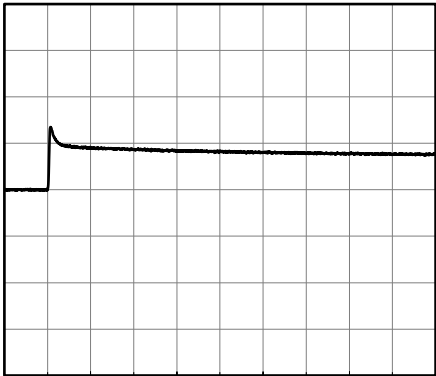
Cycle 1000 ms

Response. t1=t2=50μs. Typ

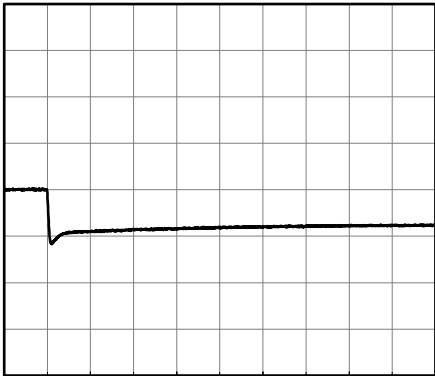


Load 0%(0A) ↔
Load 100%(0.065A)

200[mV/div]



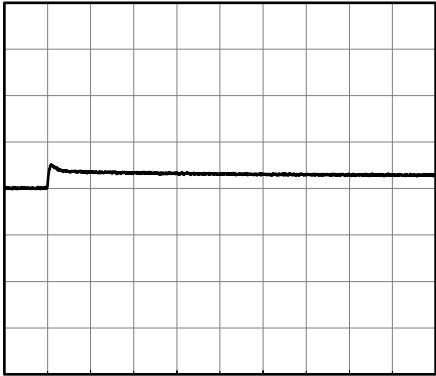
1[ms/div]



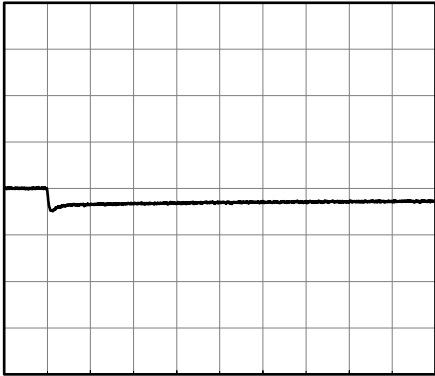
1[ms/div]

Load 50%(0.0325A) ↔
Load 100%(0.065A)

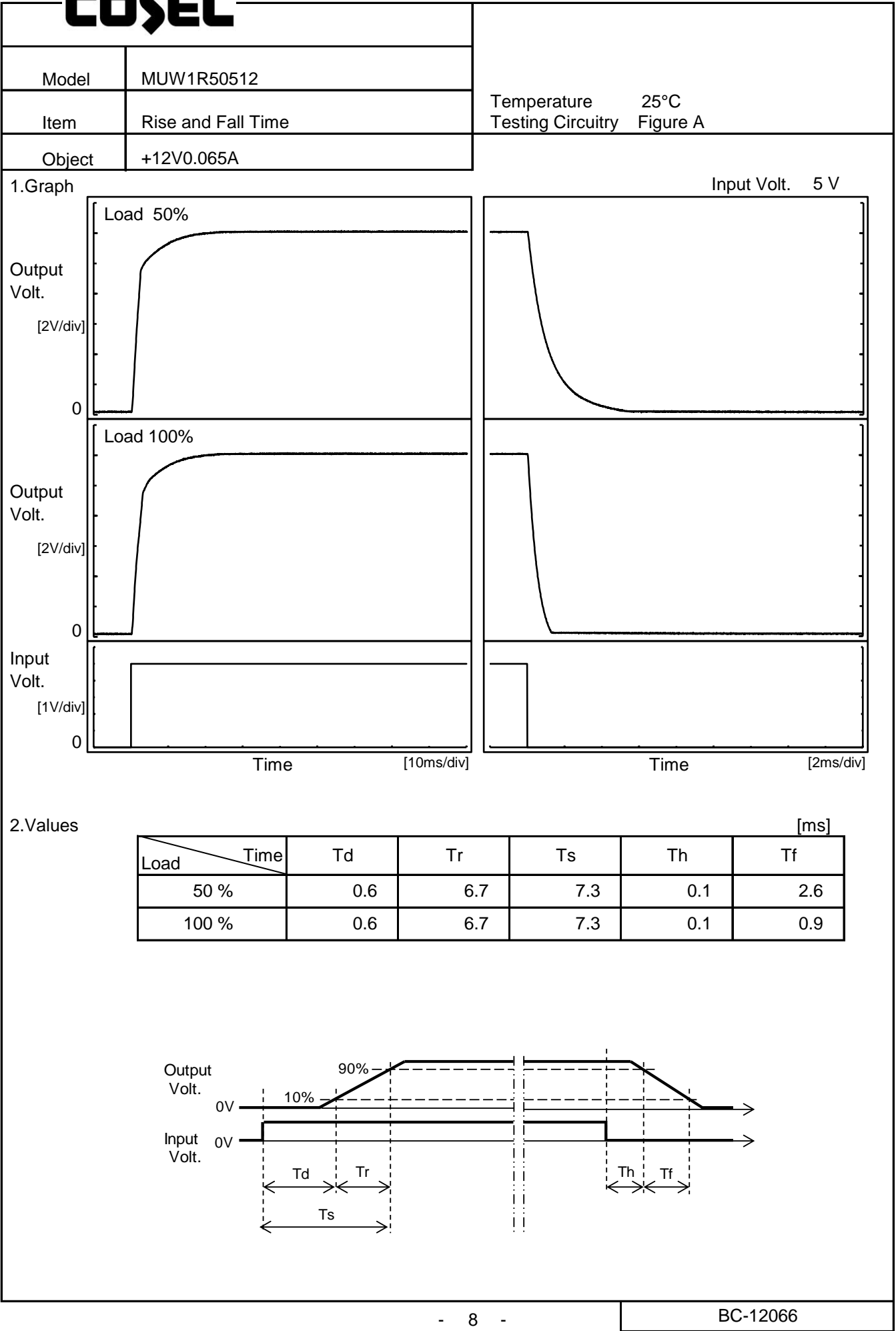
200[mV/div]



1[ms/div]



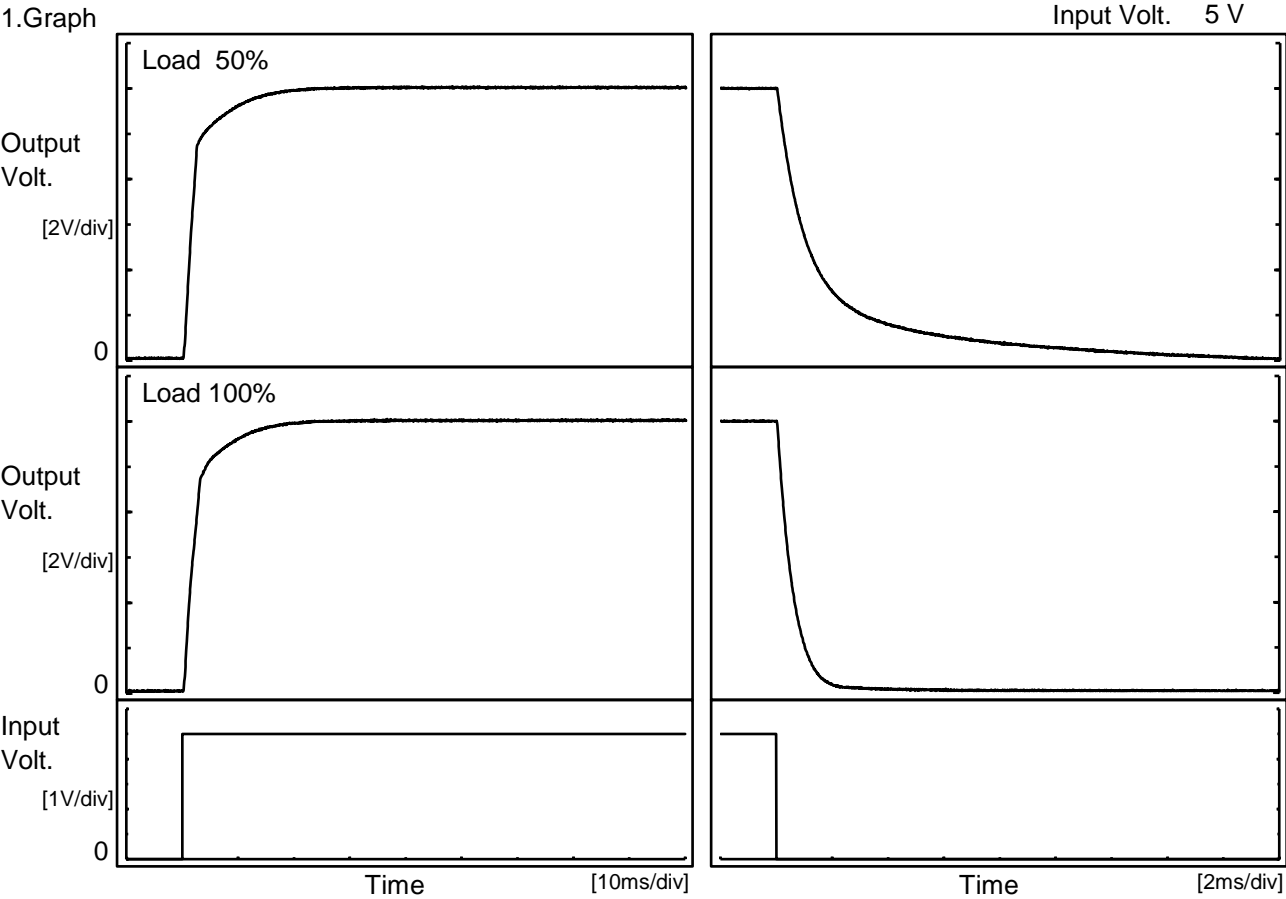
1[ms/div]





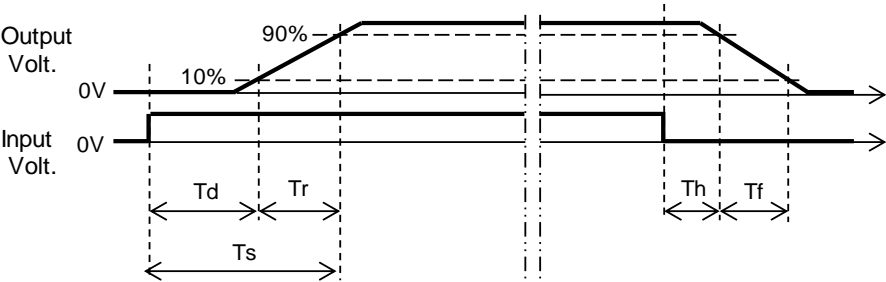
Model		MUW1R50512	Temperature 25°C Testing Circuitry Figure A
Item		Rise and Fall Time	
Object		-12V0.065A	

1.Graph



2.Values

		[ms]				
Load	Time	Td	Tr	Ts	Th	Tf
50 %		0.6	7.1	7.7	0.1	5.0
100 %		0.6	7.1	7.7	0.1	1.2



COSEL

<div>COSEL</div>																																																										
Model	MUW1R50512	Temperature25°C Testing CircuitryFigure A																																																								
Item	Overcurrent Protection																																																									
Object	+12V0.065A																																																									
1.Graph <div><div><div></div>Input Volt.4.5V</div><div><div></div>Input Volt.5V</div><div><div></div>Input Volt.9V</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. 4.5[V]</th><th>Input Volt. 5[V]</th><th>Input Volt. 9[V]</th></tr><tr><td>11.4</td><td>0.14</td><td>0.15</td><td>0.17</td></tr><tr><td>10.8</td><td>0.15</td><td>0.16</td><td>0.18</td></tr><tr><td>9.6</td><td>0.17</td><td>0.18</td><td>0.21</td></tr><tr><td>8.4</td><td>0.19</td><td>0.20</td><td>0.23</td></tr><tr><td>7.2</td><td>0.22</td><td>0.23</td><td>0.26</td></tr><tr><td>6.0</td><td>0.25</td><td>0.26</td><td>0.29</td></tr><tr><td>4.8</td><td>0.28</td><td>0.29</td><td>0.32</td></tr><tr><td>3.6</td><td>0.31</td><td>0.32</td><td>0.36</td></tr><tr><td>2.4</td><td>0.35</td><td>0.36</td><td>0.40</td></tr><tr><td>1.2</td><td>0.40</td><td>0.41</td><td>0.43</td></tr><tr><td>0.0</td><td>0.45</td><td>0.46</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. 4.5[V]	Input Volt. 5[V]	Input Volt. 9[V]	11.4	0.14	0.15	0.17	10.8	0.15	0.16	0.18	9.6	0.17	0.18	0.21	8.4	0.19	0.20	0.23	7.2	0.22	0.23	0.26	6.0	0.25	0.26	0.29	4.8	0.28	0.29	0.32	3.6	0.31	0.32	0.36	2.4	0.35	0.36	0.40	1.2	0.40	0.41	0.43	0.0	0.45	0.46	0.48	--	-	-	-
Output Voltage [V]	Load Current [A]																																																									
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Output Voltage [V]	Load Current [A]																																																									
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0.0	0.45	0.46	0.48																																																							
--	-	-	-																																																							

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COSEL		Testing Circuitry Figure A
Model	MUW1R50512	
Item	Ambient Temperature Drift	
Object	+12V0.065A	

1.Values

Load 100%

Ambient Temperature[°C]	Output Voltage [V]		
	Input Volt. 4.5V	Input Volt. 5V	Input Volt. 9V
-40	11.885	11.888	11.892
25	11.975	11.976	11.980
85	12.004	12.005	12.009

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	3.1	3.0
25	3.1	3.0
85	3.1	3.0



COSEL				
Model	MUW1R50512			
Item	Ambient Temperature Drift		Testing Circuitry Figure A	
Object	-12V0.065A			
1.Values				
		Load 100%		
Ambient Temperature[°C]	Output Voltage [V]			
	Input Volt. 4.5V	Input Volt. 5V	Input Volt. 9V	
-40	-11.910	-11.911	-11.914	
25	-12.002	-12.003	-12.005	
85	-12.036	-12.036	-12.038	
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	3.1	3.0		
25	3.1	3.0		
85	3.1	3.0		

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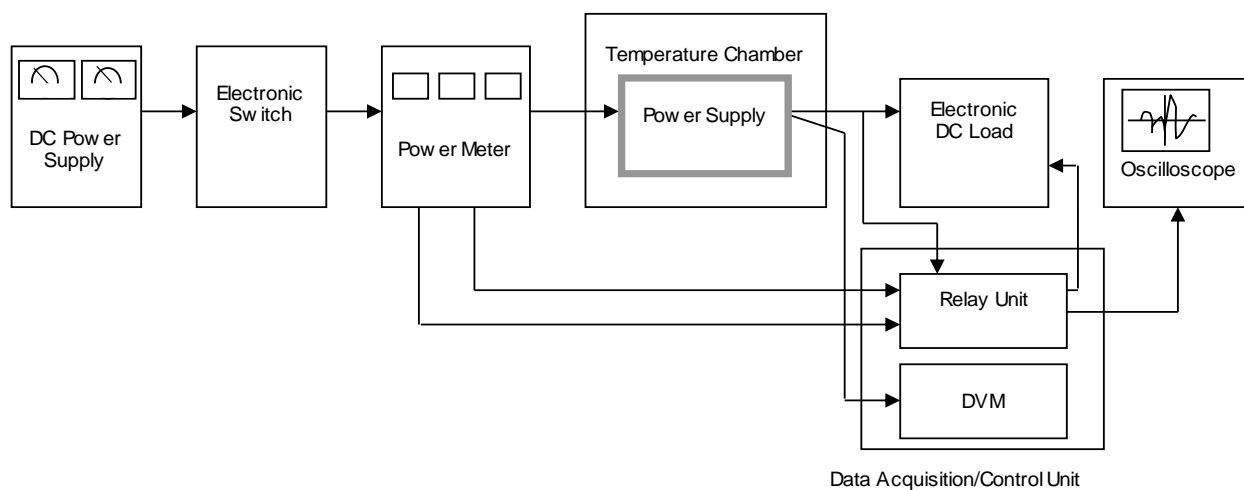


Figure A

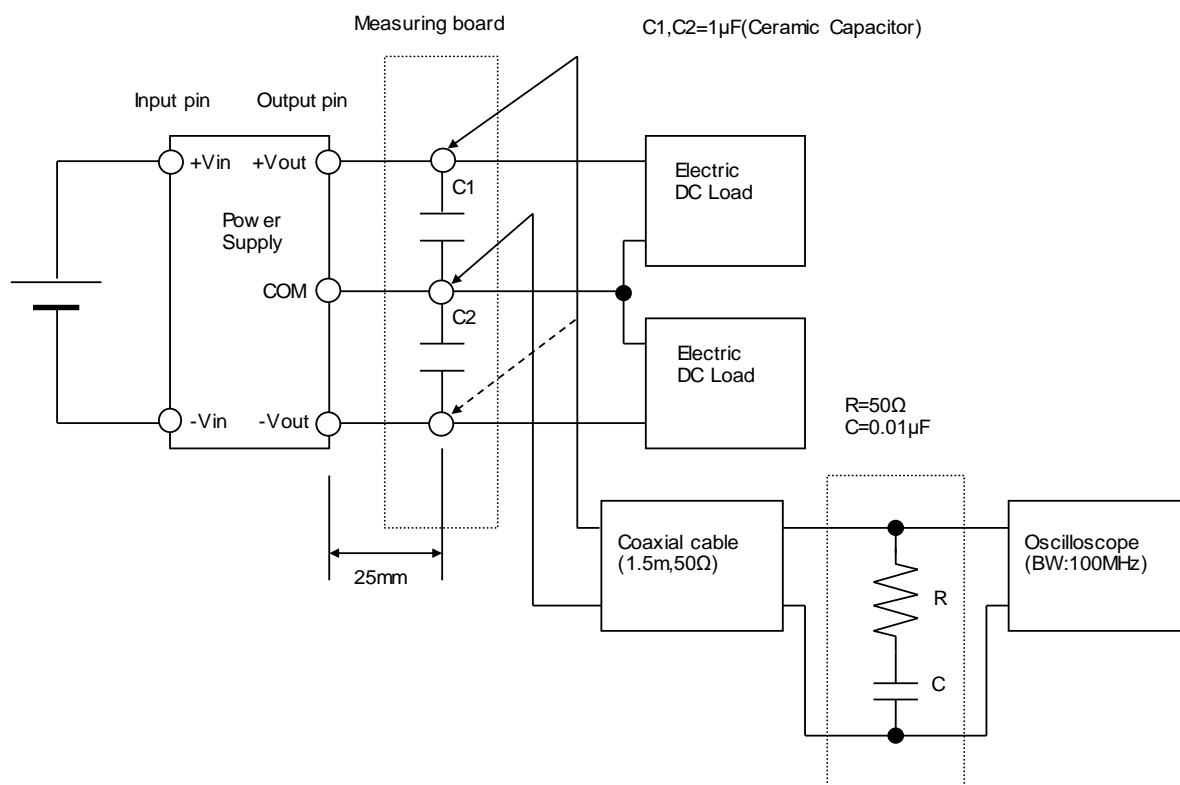


Figure B