

TEST DATA OF MUW102412

Regulated DC Power Supply
May.7. 2025

Approved by : Kenichi Tsukada
Design Manager

Prepared by : Yoshihiko Saeki
Design Engineer

COSEL CO.,LTD.

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Object	+12V0.45A		
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Item		Ripple-Noise	Temperature		25°C																																																			
Object		+12V0.45A	Testing Circuitry		Figure B																																																			
1.Graph																																																								
<div><div><div>Input Voltage</div><div>24V</div></div><div><div>Load</div><div>100%</div></div><div><p>20[mV/div]</p><p>2[μs/div]</p></div></div> <div><p>-12V : Rated Load Current</p></div>																																																								

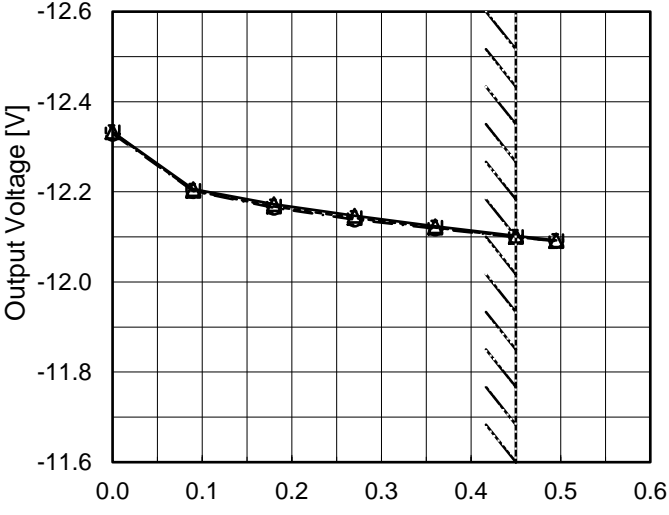
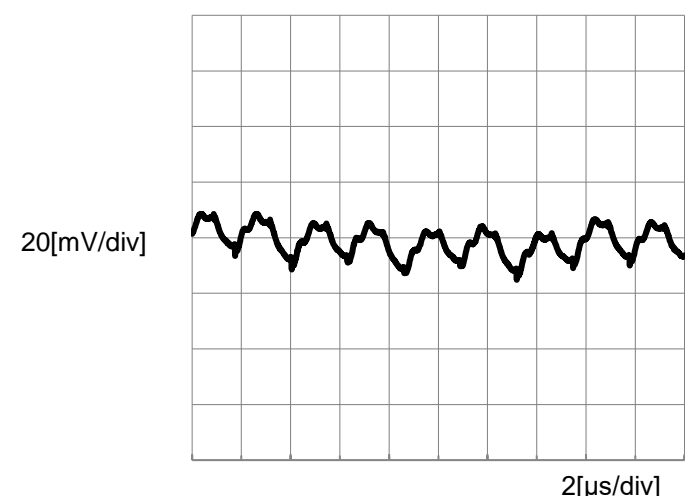
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BC-12150

COSEL

Model		MUW102412	Temperature		25°C																																																			
Item		Load Regulation	Testing Circuitry		Figure A																																																			
Object		-12V0.45A																																																						
1.Graph		<div><div><div>—△—</div><div>Input Volt.</div><div>18V</div></div><div><div>---□---</div><div>Input Volt.</div><div>24V</div></div><div><div>---○---</div><div>Input Volt.</div><div>36V</div></div></div> <div></div> <p>Note: Slanted line shows the range of the rated load current.</p>	2.Values																																																					
			<table><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><tr><td>0.000</td><td>-12.333</td><td>-12.332</td><td>-12.329</td></tr><tr><td>0.090</td><td>-12.206</td><td>-12.203</td><td>-12.202</td></tr><tr><td>0.180</td><td>-12.173</td><td>-12.167</td><td>-12.165</td></tr><tr><td>0.270</td><td>-12.147</td><td>-12.142</td><td>-12.139</td></tr><tr><td>0.360</td><td>-12.124</td><td>-12.120</td><td>-12.118</td></tr><tr><td>0.450</td><td>-12.102</td><td>-12.100</td><td>-12.100</td></tr><tr><td>0.495</td><td>-12.092</td><td>-12.091</td><td>-12.091</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>			Load Current [A]	Output Voltage [V]			Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]	0.000	-12.333	-12.332	-12.329	0.090	-12.206	-12.203	-12.202	0.180	-12.173	-12.167	-12.165	0.270	-12.147	-12.142	-12.139	0.360	-12.124	-12.120	-12.118	0.450	-12.102	-12.100	-12.100	0.495	-12.092	-12.091	-12.091	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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			+12V : Rated Load Current																																																					
Item		Ripple-Noise	Temperature		25°C																																																			
Object		-12V0.45A	Testing Circuitry		Figure B																																																			
1.Graph		<div><div>Input Voltage</div><div>24V</div></div> <div><div>Load</div><div>100%</div></div> <div></div> <p>+12V : Rated Load Current</p>																																																						



Model		MUW102412	Temperature 25°C Testing Circuitry Figure A
Item		Dynamic Load Response	
Object		+12V0.45A	

Input Volt. 24 V

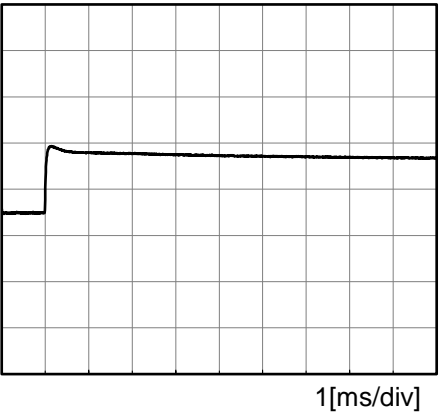
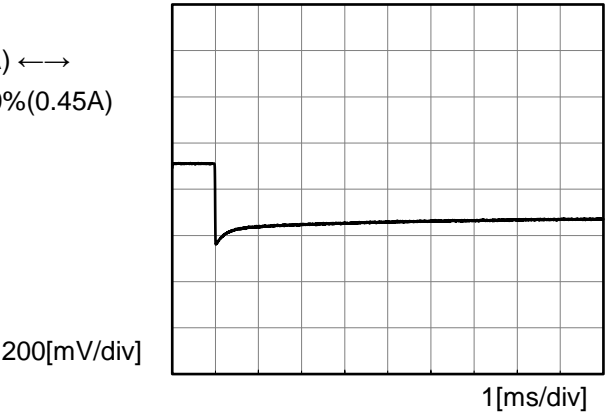
-12V: Rated Load Current

Cycle 100 ms

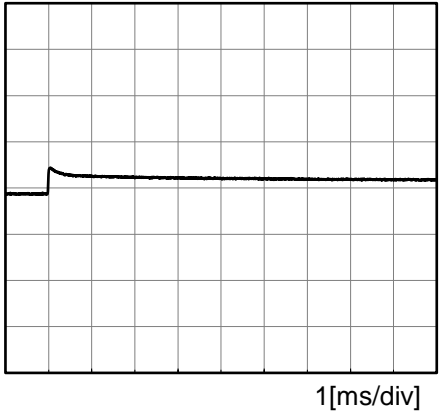
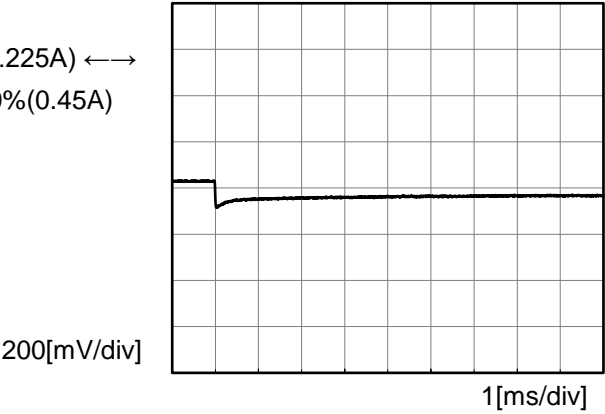
Response. t1=t2=50μs. Typ



Load 0%(0A) ↔
Load 100%(0.45A)



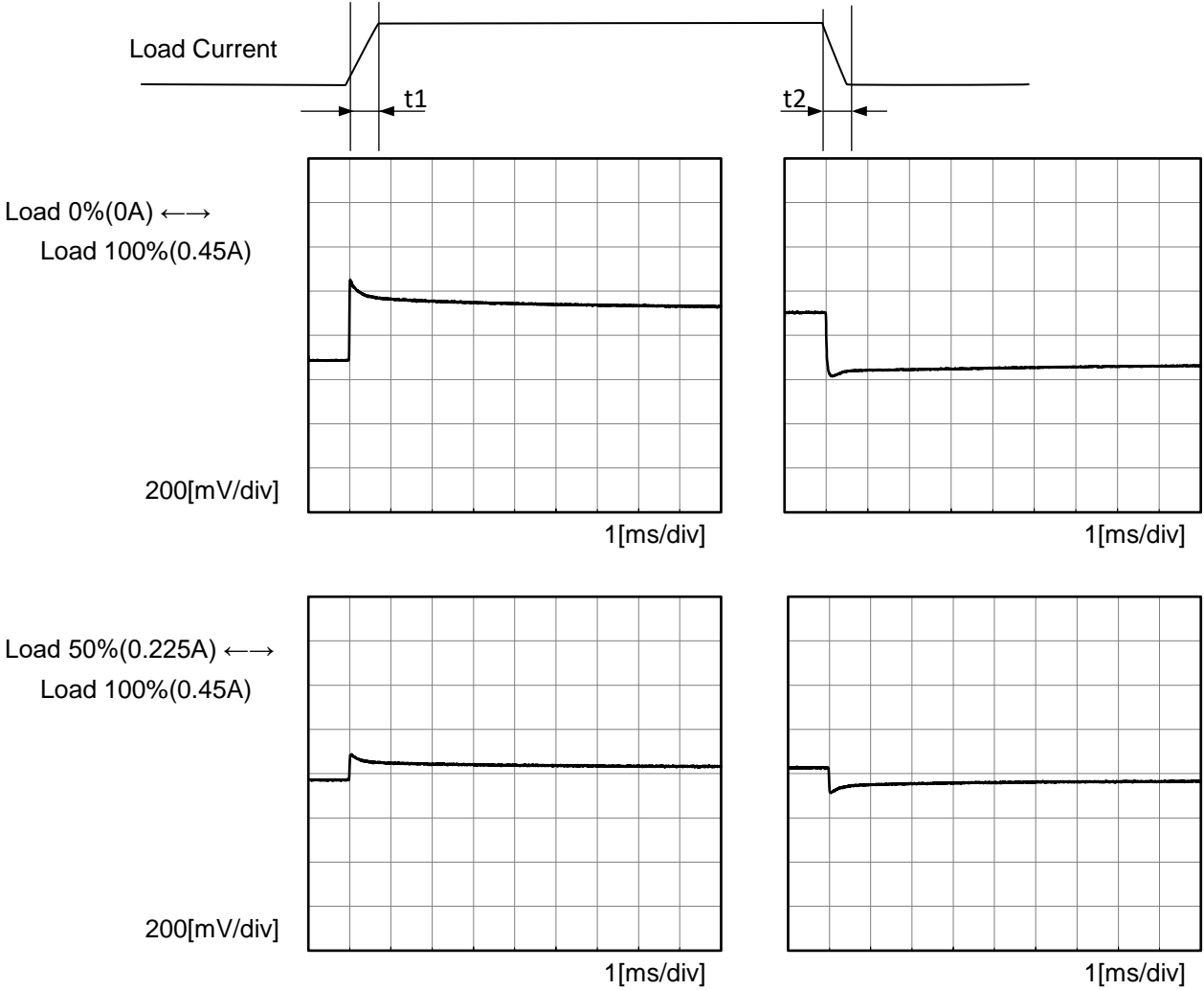
Load 50%(0.225A) ↔
Load 100%(0.45A)





Model		MUW102412	Temperature 25°C Testing Circuitry Figure A
Item		Dynamic Load Response	
Object		-12V0.45A	

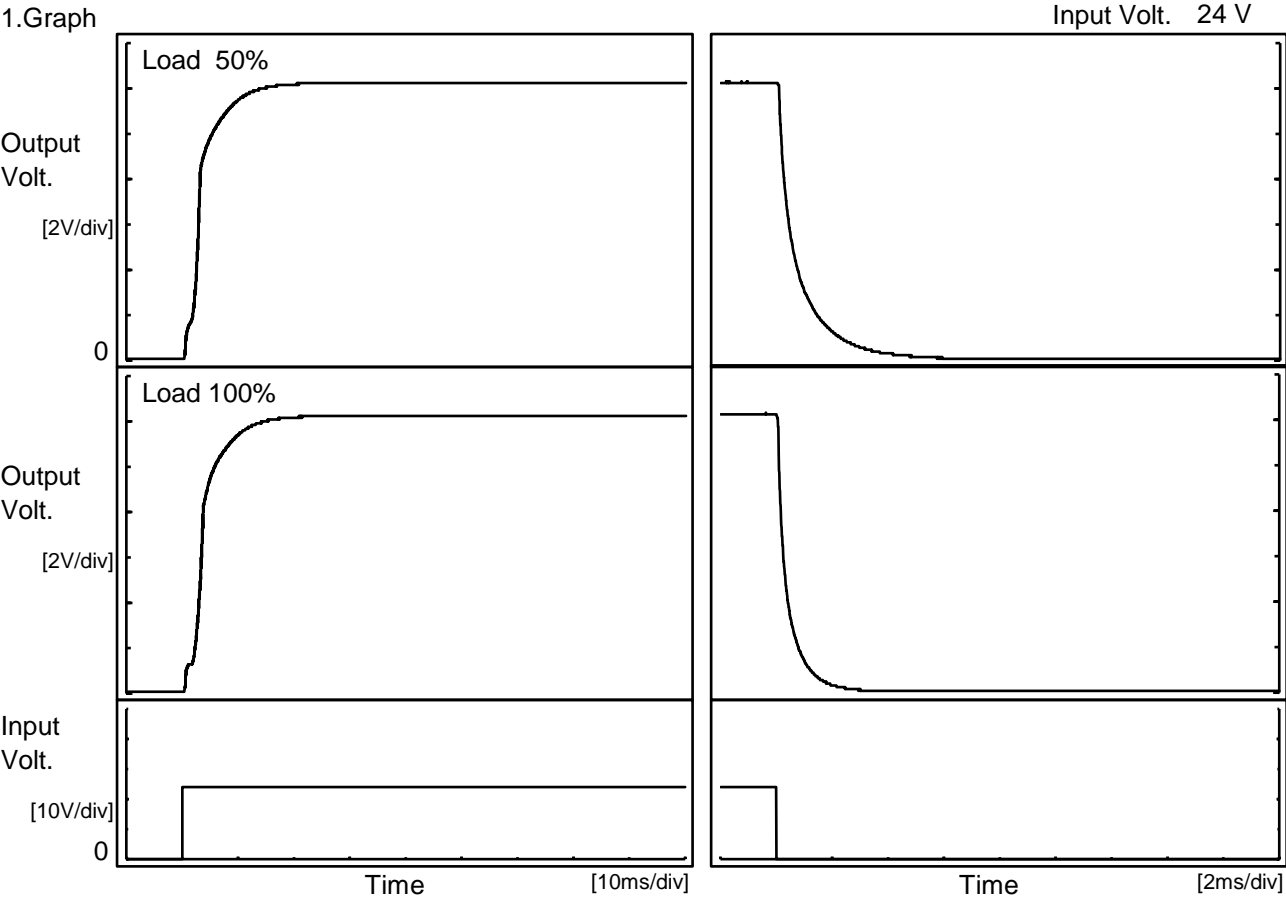
Input Volt. 24 V
+12V : Rated Load Current
Cycle 100 ms
Response. $t_1=t_2=50\mu\text{s}$. Typ





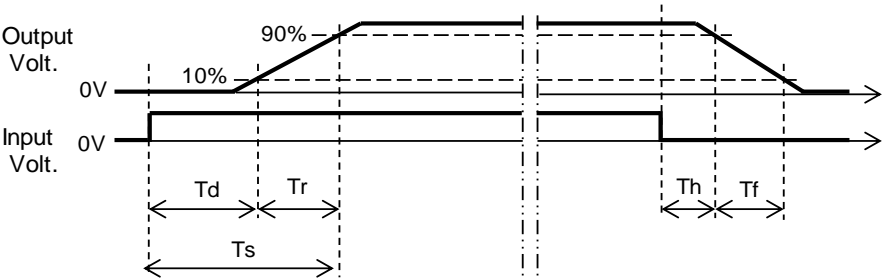
Model		MUW102412	Temperature 25°C Testing Circuitry Figure A
Item		Rise and Fall Time	
Object		+12V0.45A	

1.Graph



2.Values

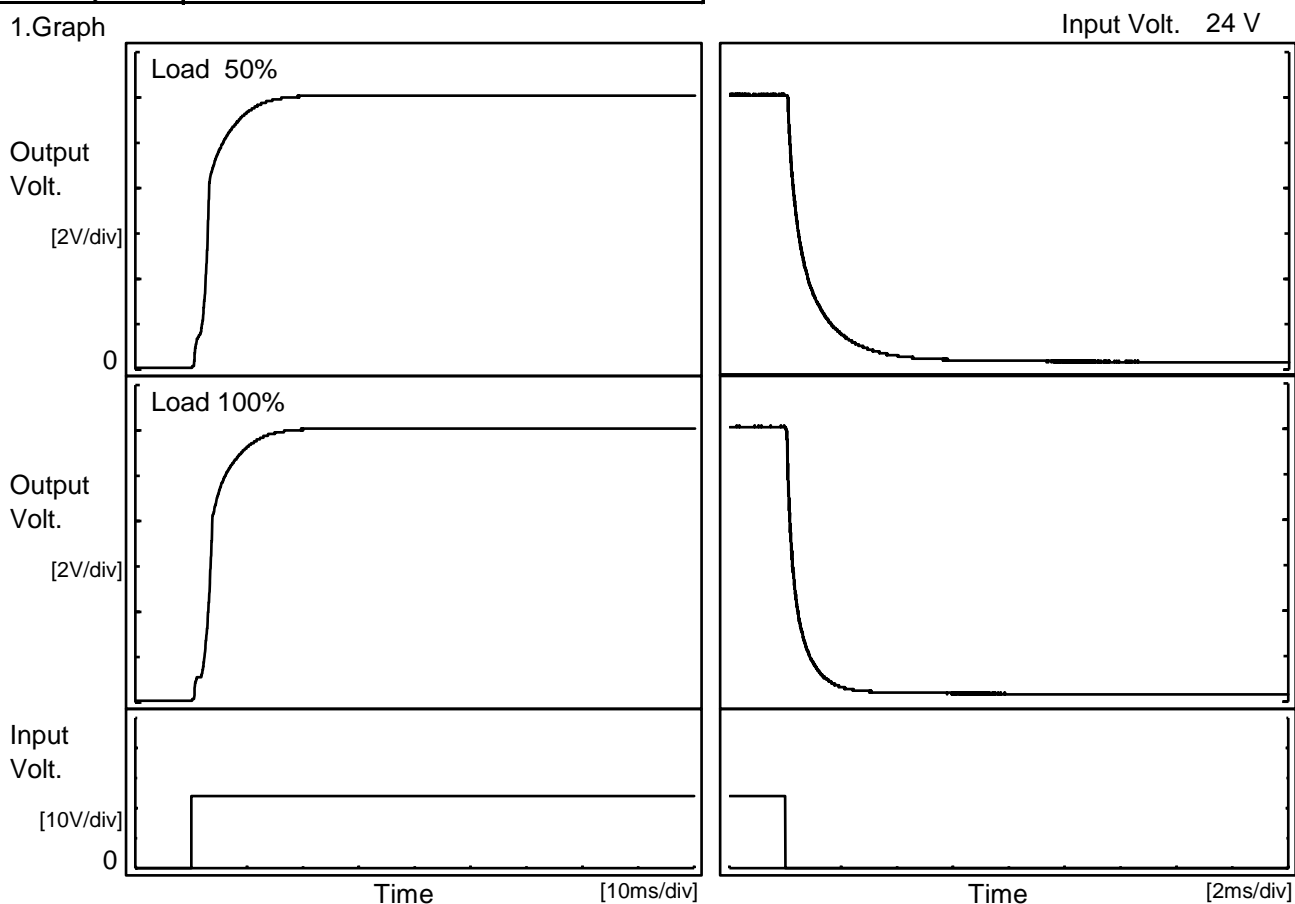
		[ms]				
Load	Time	Td	Tr	Ts	Th	Tf
50 %		0.9	6.6	7.5	0.1	1.8
100 %		1.8	6.1	7.9	0.1	1.0



COSEL

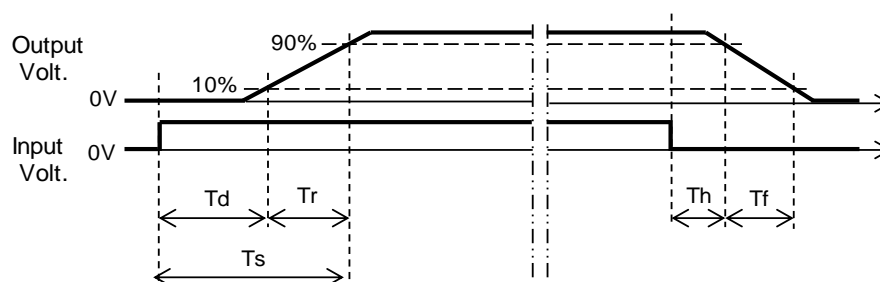
Model	MUW102412	Temperature 25°C Testing Circuitry Figure A
Item	Rise and Fall Time	
Object	-12V0.45A	

1.Graph



2.Values

		[ms]				
Load	Time	Td	Tr	Ts	Th	Tf
50 %		1.0	7.0	8.0	0.1	2.1
100 %		2.0	6.4	8.4	0.1	1.1



COSEL

<div>COSEL</div>																																																										
Model	MUW102412																																																									
Item	Overcurrent Protection	Temperature	25°C																																																							
Object	+12V0.45A	Testing Circuitry	Figure A																																																							
1.Graph		2.Values																																																								
<div><div><div></div><div></div><div></div></div><div><div>Input Volt. 18V</div><div>Input Volt. 24V</div><div>Input Volt. 36V</div></div><div>Output Voltage [V]</div><div>Load Current [A]</div></div>		<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>11.4</td><td>0.84</td><td>0.97</td><td>1.12</td></tr><tr><td>10.8</td><td>0.88</td><td>1.01</td><td>1.17</td></tr><tr><td>9.6</td><td>0.97</td><td>1.12</td><td>1.27</td></tr><tr><td>8.4</td><td>1.09</td><td>1.22</td><td>1.40</td></tr><tr><td>7.2</td><td>1.22</td><td>1.35</td><td>1.47</td></tr><tr><td>6.0</td><td>1.25</td><td>1.36</td><td>1.46</td></tr><tr><td>4.8</td><td>1.29</td><td>1.38</td><td>1.44</td></tr><tr><td>3.6</td><td>1.34</td><td>1.41</td><td>1.45</td></tr><tr><td>2.4</td><td>1.41</td><td>1.47</td><td>1.48</td></tr><tr><td>1.2</td><td>1.53</td><td>1.60</td><td>1.60</td></tr><tr><td>0.0</td><td>1.94</td><td>1.97</td><td>2.04</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. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]	11.4	0.84	0.97	1.12	10.8	0.88	1.01	1.17	9.6	0.97	1.12	1.27	8.4	1.09	1.22	1.40	7.2	1.22	1.35	1.47	6.0	1.25	1.36	1.46	4.8	1.29	1.38	1.44	3.6	1.34	1.41	1.45	2.4	1.41	1.47	1.48	1.2	1.53	1.60	1.60	0.0	1.94	1.97	2.04	--	-	-	-
Output Voltage [V]	Load Current [A]																																																									
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Output Voltage [V]	Load Current [A]																																																									
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Note: Slanted line shows the range of the rated load current.																																																										

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BC-12150

COSEL

		Testing Circuitry Figure A
Model	MUW102412	
Item	Ambient Temperature Drift	
Object	+12V0.45A	

1.Values

Load 100%

Ambient Temperature[°C]	Output Voltage [V]		
	Input Volt. 18V	Input Volt. 24V	Input Volt. 36V
-40	11.987	11.988	11.990
25	12.085	12.087	12.088
85	12.126	12.127	12.128

-12V: Load Current is same as +12V

Item	Minimum Input Voltage for Regulated Output Voltage	Testing Circuitry Figure A
Object	+12V0.45A	

1.Values

Ambient Temperature[°C]	Input Voltage [V]	
	Load 50%	Load 100%
-40	13.8	13.8
25	13.8	13.8
85	13.8	13.8

-12V: Load Current is same as +12V

COSEL

		Testing Circuitry Figure A
Model	MUW102412	
Item	Ambient Temperature Drift	
Object	-12V0.45A	

1.Values

Load 100%

Ambient Temperature[°C]	Output Voltage [V]		
	Input Volt. 18V	Input Volt. 24V	Input Volt. 36V
-40	-12.002	-12.001	-12.001
25	-12.101	-12.099	-12.098
85	-12.139	-12.139	-12.137

+12V: Load Current is same as -12V

Item	Minimum Input Voltage for Regulated Output Voltage	Testing Circuitry Figure A
Object	-12V0.45A	

1.Values

Ambient Temperature[°C]	Input Voltage [V]	
	Load 50%	Load 100%
-40	13.8	13.8
25	13.8	13.8
85	13.8	13.8

+12V: Load Current is same as -12V

COSEL

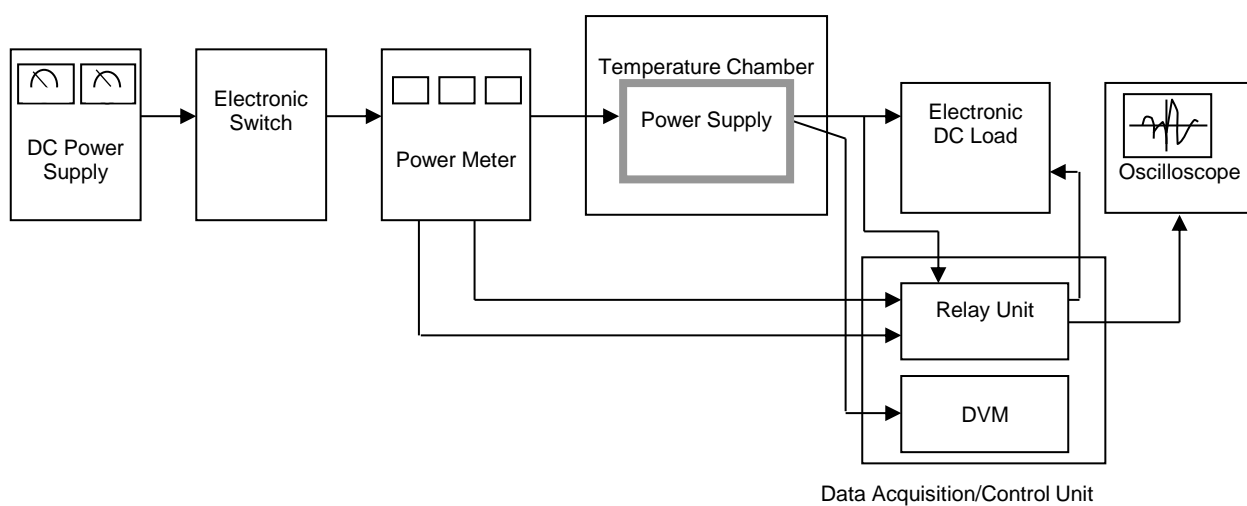


Figure A

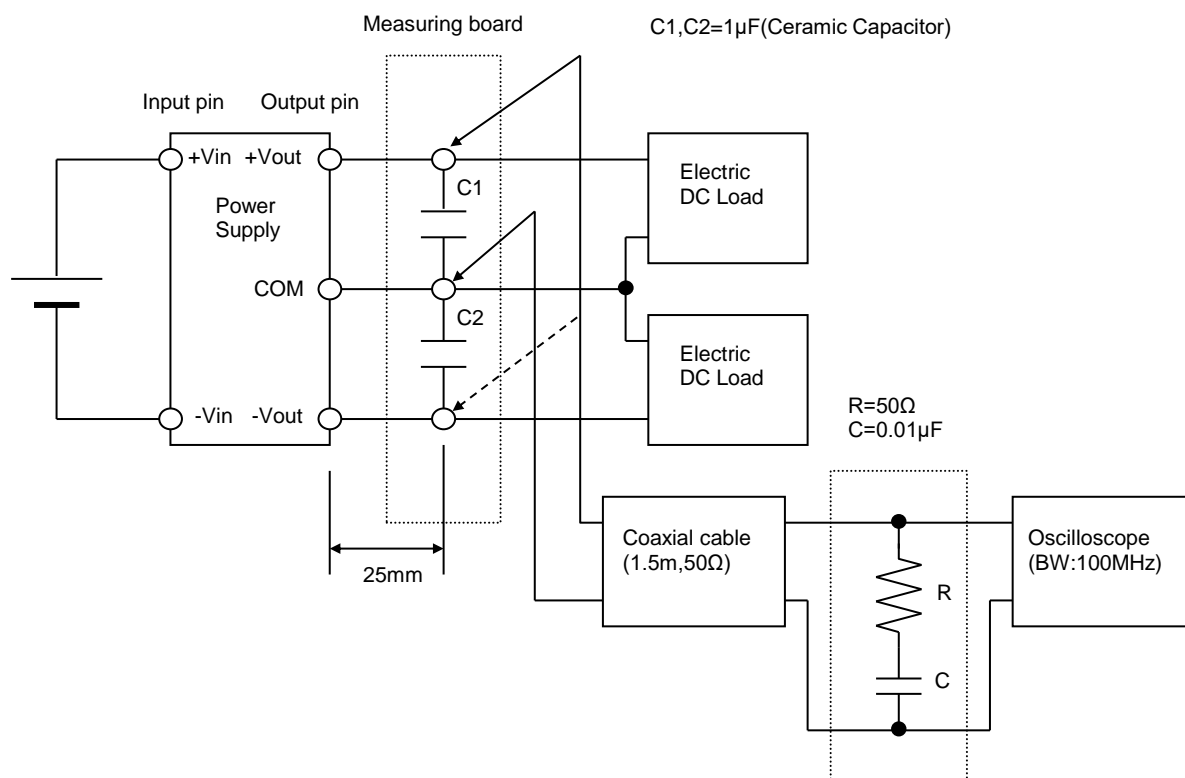


Figure B