

# TEST DATA OF MUW64812

Regulated DC Power Supply  
May.8. 2025

Approved by : Kenichi Tsukada  
Design Manager

Prepared by : Yoshihiko Saeki  
Design Engineer

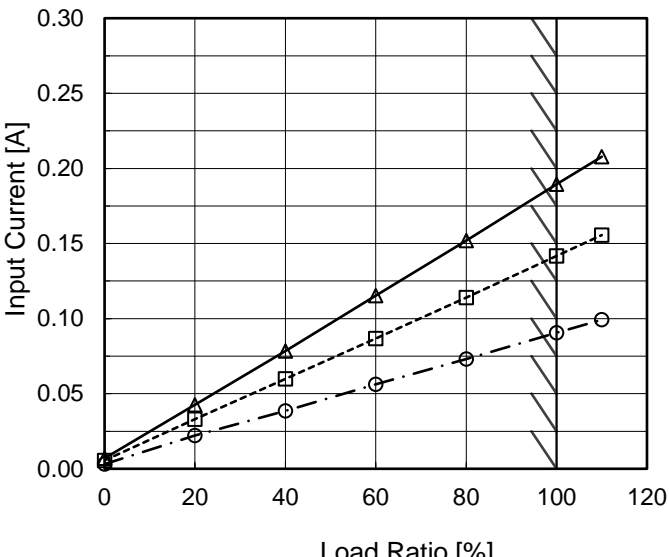
**COSEL CO.,LTD.**

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Model		MUW64812	Temperature		25°C																																																			
Item		Input Current (by Load Current)	Testing Circuitry		Figure A																																																			
Object		_____																																																						
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<div><div><div>—△—</div><div>Input Volt.</div><div>36V</div></div><div><div>---□---</div><div>Input Volt.</div><div>48V</div></div><div><div>---○---</div><div>Input Volt.</div><div>76V</div></div></div> 			<table><tr><th rowspan="2">Load Ratio [%]</th><th colspan="3">Input Current [A]</th></tr><tr><th>Input Volt. 36[V]</th><th>Input Volt. 48[V]</th><th>Input Volt. 76[V]</th></tr><tr><td>0</td><td>0.007</td><td>0.006</td><td>0.003</td></tr><tr><td>20</td><td>0.043</td><td>0.033</td><td>0.022</td></tr><tr><td>40</td><td>0.078</td><td>0.060</td><td>0.039</td></tr><tr><td>60</td><td>0.115</td><td>0.087</td><td>0.056</td></tr><tr><td>80</td><td>0.152</td><td>0.114</td><td>0.073</td></tr><tr><td>100</td><td>0.189</td><td>0.142</td><td>0.091</td></tr><tr><td>110</td><td>0.208</td><td>0.156</td><td>0.099</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 Ratio [%]	Input Current [A]			Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]	0	0.007	0.006	0.003	20	0.043	0.033	0.022	40	0.078	0.060	0.039	60	0.115	0.087	0.056	80	0.152	0.114	0.073	100	0.189	0.142	0.091	110	0.208	0.156	0.099	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
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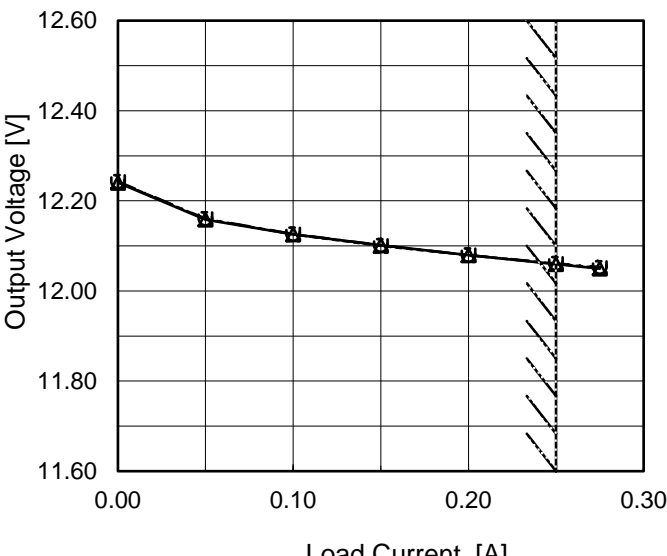
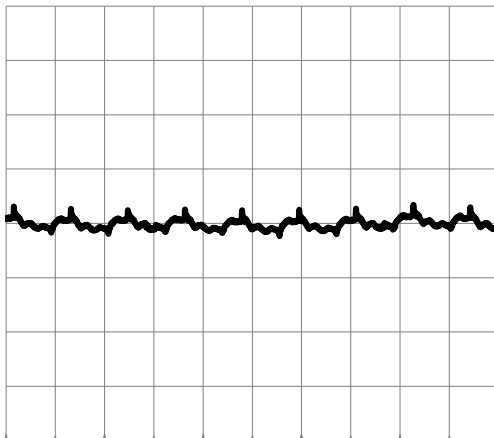
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0.200	12.080	12.079	12.080																																																			
0.250	12.059	12.060	12.061																																																			
0.275	12.050	12.051	12.053																																																			
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Item	Ripple-Noise	Temperature	25°C																																																			
		Testing Circuitry	Figure B																																																			
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1.Graph																																																						
<div><div><div>Input Voltage</div><div>48V</div></div><div><div>Load</div><div>100%</div></div></div> <div><div><div>20[mV/div]</div><div></div><div><div>2[μs/div]</div><div>-12V: Rated Load Current</div></div></div></div>																																																						

**COSEL**

Model	MUW64812																																																					
Item	Load Regulation	Temperature	25°C																																																			
Object	-12V0.25A	Testing Circuitry	Figure A																																																			
1.Graph		2.Values																																																				
<div><div><div>—△—</div><div>Input Volt.</div><div>36V</div></div><div><div>---□---</div><div>Input Volt.</div><div>48V</div></div><div><div>---○---</div><div>Input Volt.</div><div>76V</div></div></div> <p>Output Voltage [V]</p> <p>Load Current [A]</p> <p>Note: Slanted line shows the range of the rated load current.</p>		<table><tr><th rowspan="2">Load Current [A]</th><th colspan="3">Output Voltage [V]</th></tr><tr><th>Input Volt. 36[V]</th><th>Input Volt. 48[V]</th><th>Input Volt. 76[V]</th></tr><tr><td>0.000</td><td>-12.252</td><td>-12.253</td><td>-12.252</td></tr><tr><td>0.050</td><td>-12.172</td><td>-12.172</td><td>-12.172</td></tr><tr><td>0.100</td><td>-12.139</td><td>-12.138</td><td>-12.138</td></tr><tr><td>0.150</td><td>-12.114</td><td>-12.113</td><td>-12.112</td></tr><tr><td>0.200</td><td>-12.094</td><td>-12.092</td><td>-12.091</td></tr><tr><td>0.250</td><td>-12.074</td><td>-12.073</td><td>-12.072</td></tr><tr><td>0.275</td><td>-12.064</td><td>-12.065</td><td>-12.064</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. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]	0.000	-12.252	-12.253	-12.252	0.050	-12.172	-12.172	-12.172	0.100	-12.139	-12.138	-12.138	0.150	-12.114	-12.113	-12.112	0.200	-12.094	-12.092	-12.091	0.250	-12.074	-12.073	-12.072	0.275	-12.064	-12.065	-12.064	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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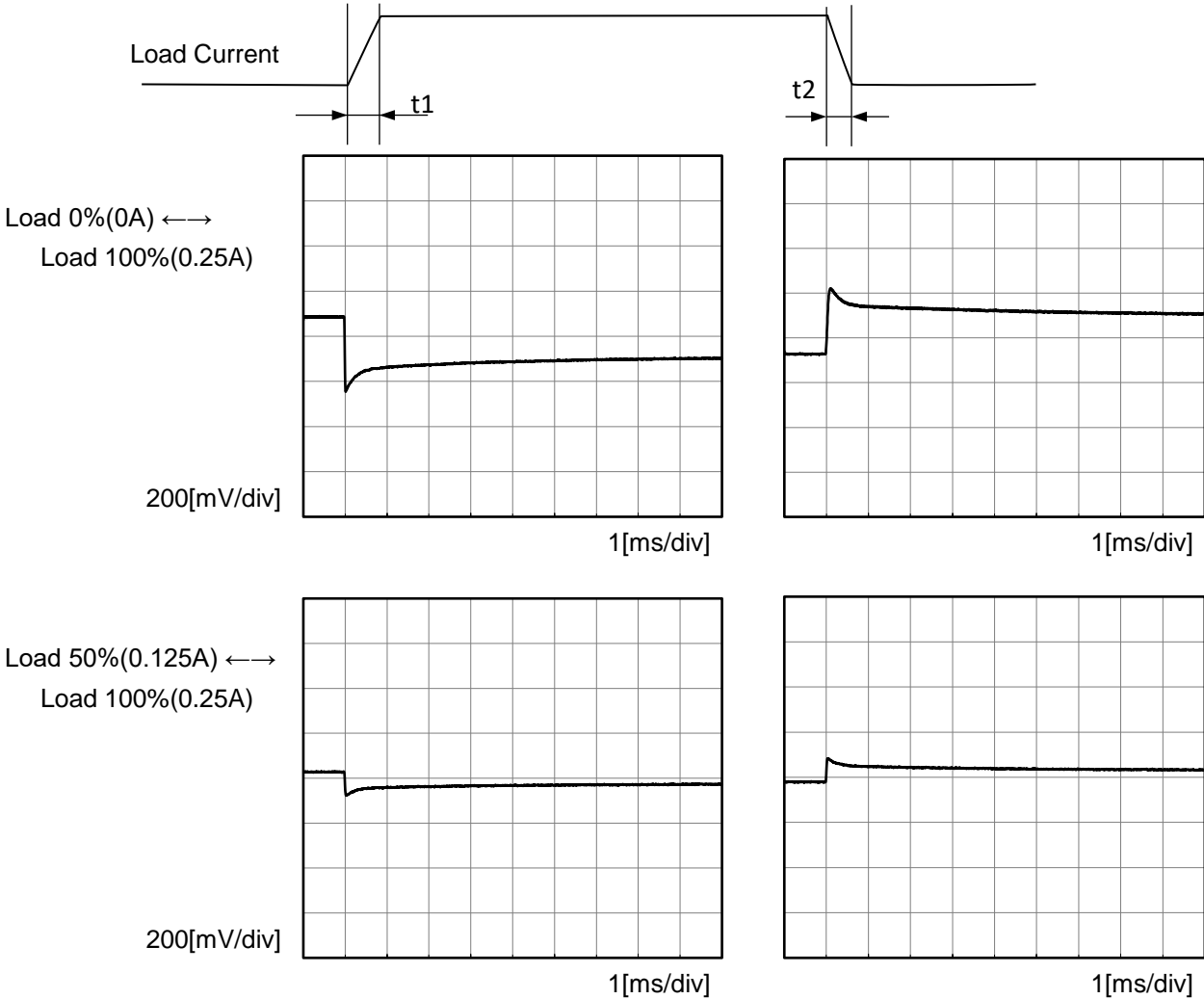
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Model		MUW64812	Temperature 25°C Testing Circuitry Figure A
Item		Dynamic Load Response	
Object		+12V0.25A	

Input Volt. 48 V  
-12V: Rated Load Current  
Cycle 100 ms  
Response.  $t_1=t_2=50\mu\text{s}$ . Typ

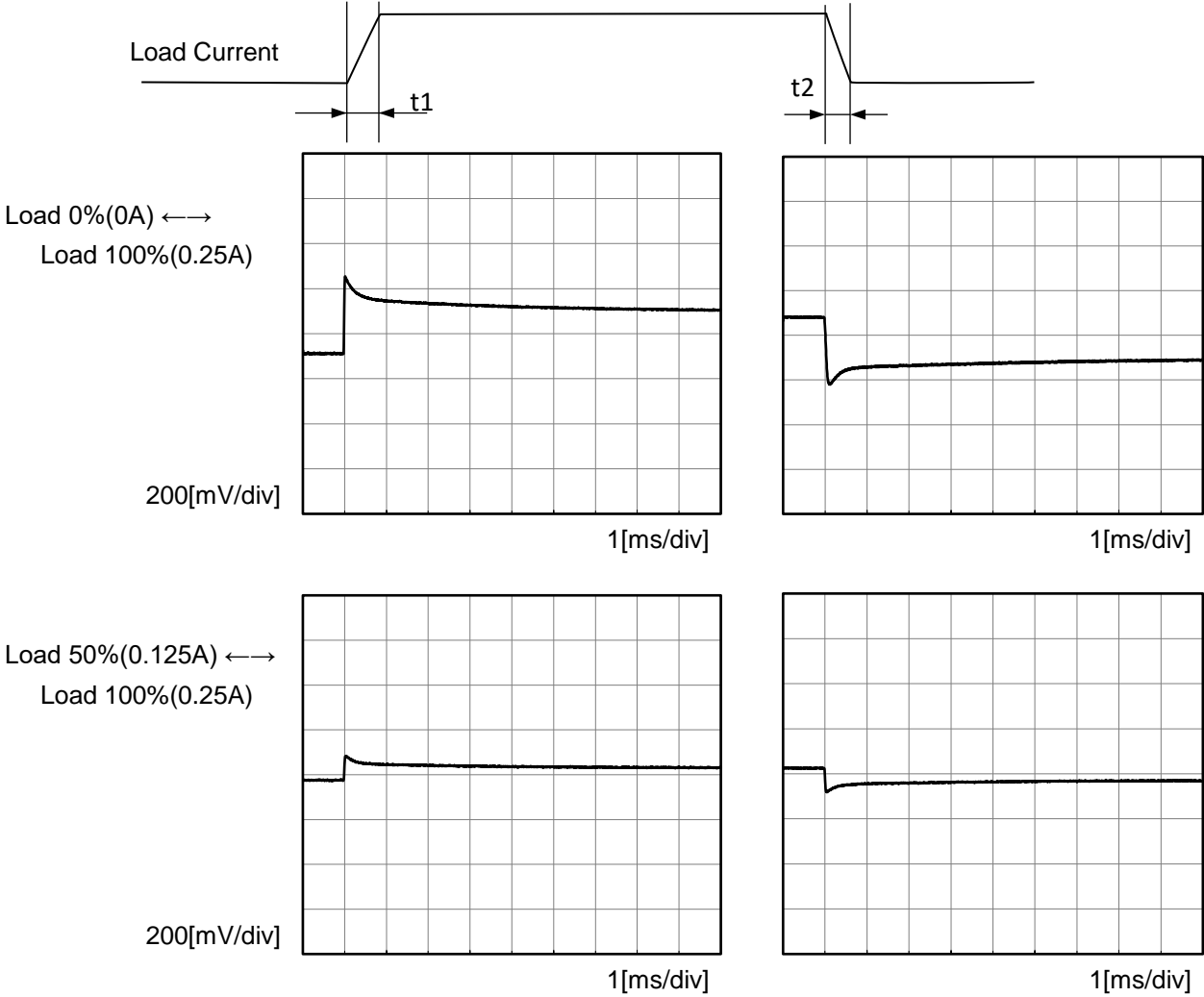






Model	MUW64812		
Item	Dynamic Load Response	Temperature	25°C
Object	-12V0.25A	Testing Circuitry	Figure A

Input Volt. 48 V  
+12V:Rated Load Current  
Cycle 100 ms  
Response. t1=t2=50μs. Typ

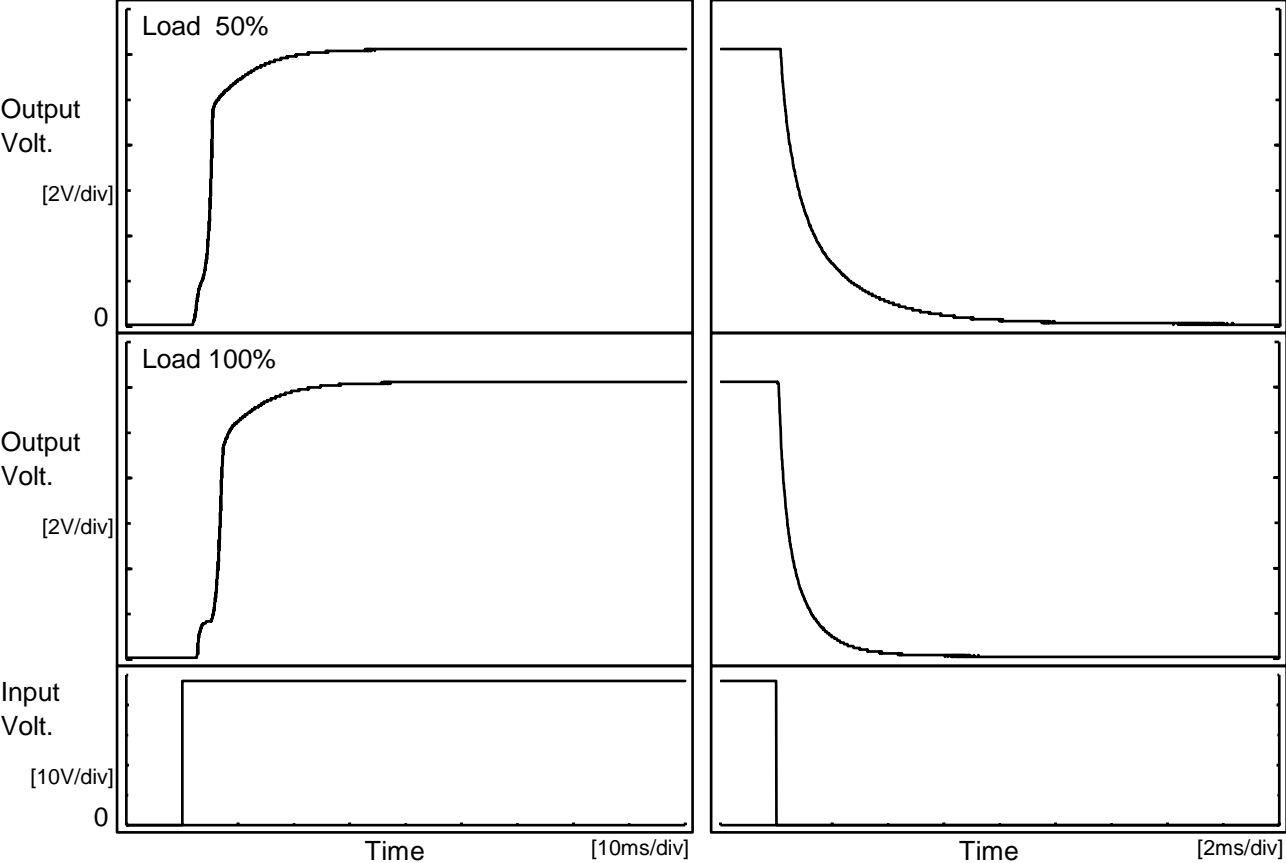




Model	MUW64812	Temperature 25°C Testing Circuitry Figure A
Item	Rise and Fall Time	
Object	+12V0.25A	

1.Graph

Input Volt. 48 V

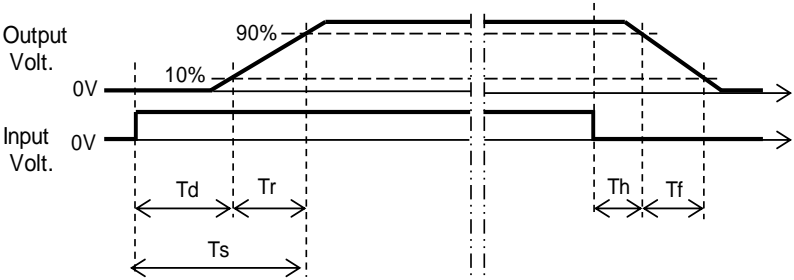


-12V:Load Current is same as +12V

2.Values

[ms]

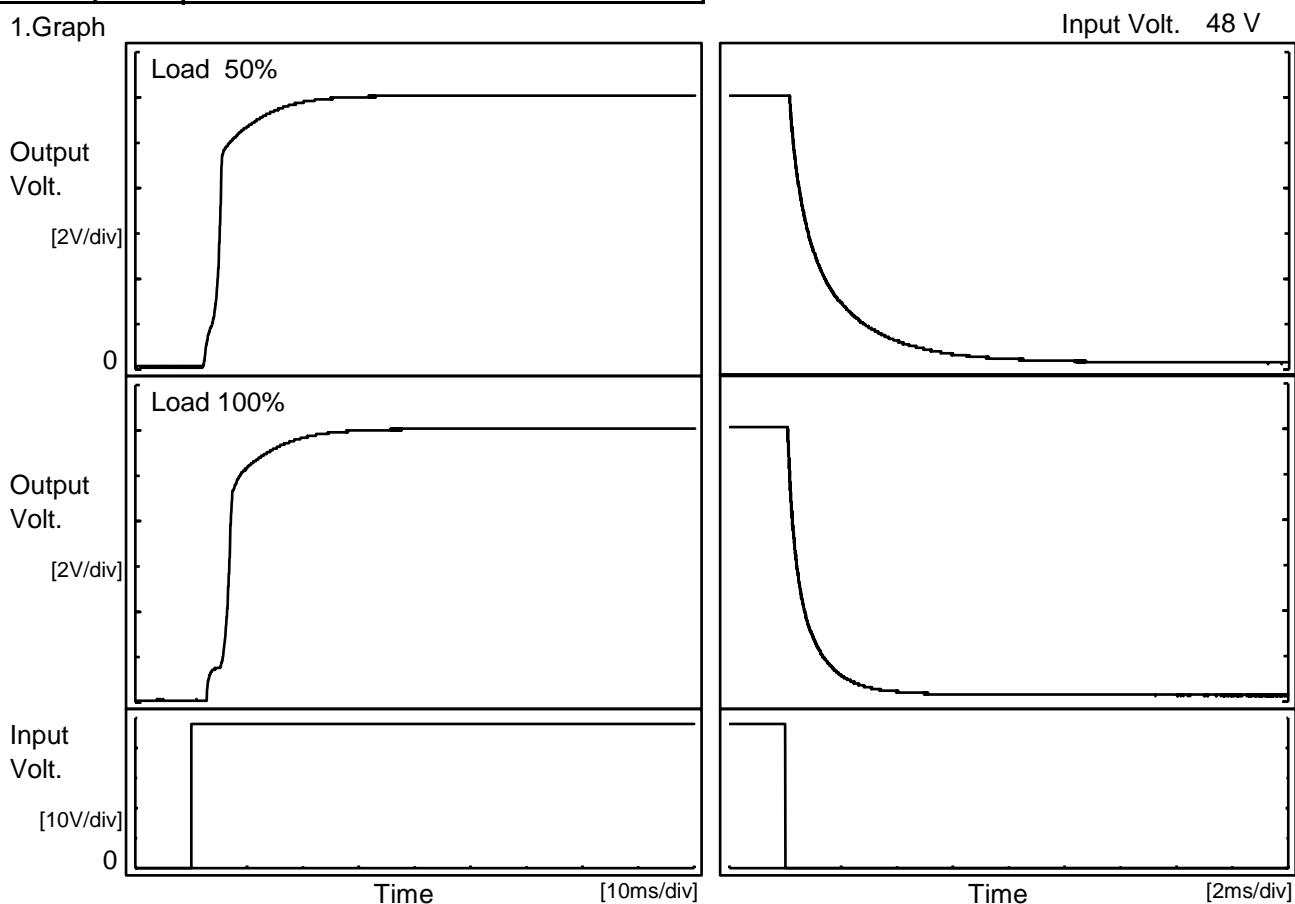
Load \ Time	Td	Tr	Ts	Th	Tf
50 %	2.8	7.1	9.9	0.2	3.3
100 %	3.3	8.4	11.7	0.1	1.6



**COSEL**

Model	MUW64812	Temperature	25°C
Item	Rise and Fall Time	Testing Circuitry	Figure A
Object	-12V0.25A		

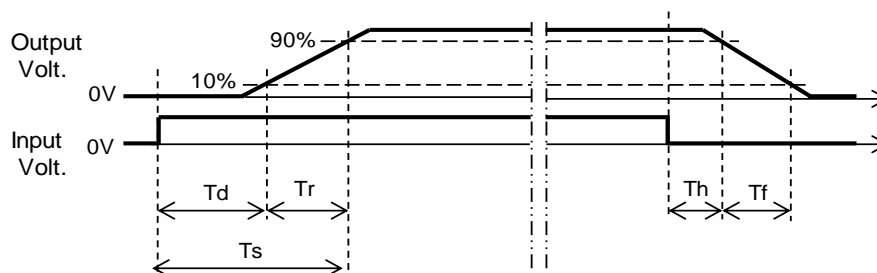
## 1.Graph



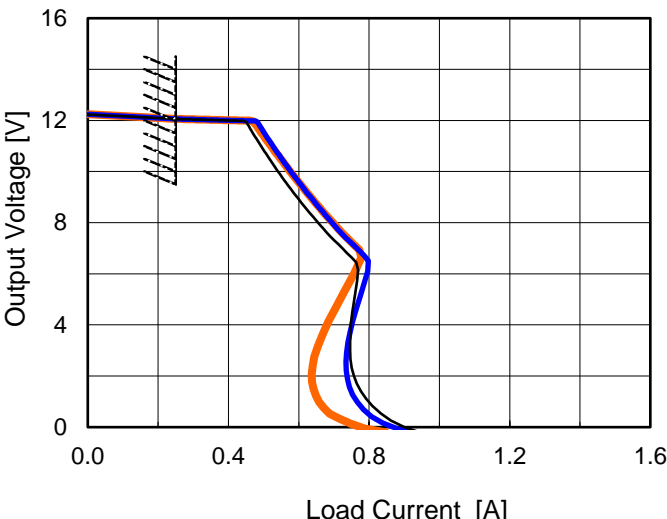
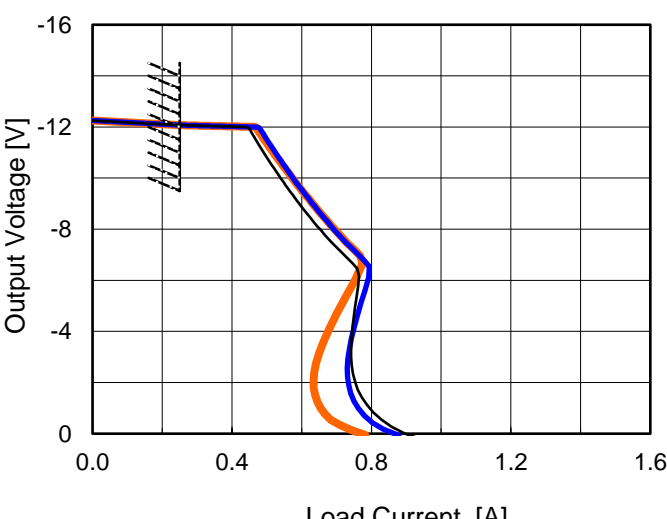
+12V:Load Current is same as -12V

## 2.Values

		[ms]				
Load	Time	Td	Tr	Ts	Th	Tf
50 %		2.9	7.9	10.8	0.2	3.6
100 %		3.5	9.0	12.5	0.1	1.7



**COSEL**

Model	MUW64812																																																									
Item	Overcurrent Protection	Temperature	25°C																																																							
Object	+12V0.25A	Testing Circuitry	Figure A																																																							
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<div><div></div>Input Volt. 36V</div> <div><div></div>Input Volt. 48V</div> <div><div></div>Input Volt. 76V</div> 		<table><tr><th rowspan="2">Output Voltage [V]</th><th colspan="3">Load Current [A]</th></tr><tr><th>Input Volt. 36[V]</th><th>Input Volt. 48[V]</th><th>Input Volt. 76[V]</th></tr><tr><td>11.4</td><td>0.47</td><td>0.51</td><td>0.50</td></tr><tr><td>10.8</td><td>0.50</td><td>0.54</td><td>0.54</td></tr><tr><td>9.6</td><td>0.56</td><td>0.60</td><td>0.60</td></tr><tr><td>8.4</td><td>0.63</td><td>0.68</td><td>0.68</td></tr><tr><td>7.2</td><td>0.71</td><td>0.76</td><td>0.76</td></tr><tr><td>6.0</td><td>0.77</td><td>0.79</td><td>0.76</td></tr><tr><td>4.8</td><td>0.75</td><td>0.76</td><td>0.70</td></tr><tr><td>3.6</td><td>0.75</td><td>0.74</td><td>0.67</td></tr><tr><td>2.4</td><td>0.75</td><td>0.74</td><td>0.64</td></tr><tr><td>1.2</td><td>0.79</td><td>0.77</td><td>0.66</td></tr><tr><td>0.0</td><td>0.90</td><td>0.88</td><td>0.79</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. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]	11.4	0.47	0.51	0.50	10.8	0.50	0.54	0.54	9.6	0.56	0.60	0.60	8.4	0.63	0.68	0.68	7.2	0.71	0.76	0.76	6.0	0.77	0.79	0.76	4.8	0.75	0.76	0.70	3.6	0.75	0.74	0.67	2.4	0.75	0.74	0.64	1.2	0.79	0.77	0.66	0.0	0.90	0.88	0.79	--	-	-	-
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Note: Slanted line shows the range of the rated load current.																																																										

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BC-12144



		Testing Circuitry Figure A
Model	MUW64812	
Item	Ambient Temperature Drift	
Object	+12V0.25A	

## 1.Values

Load 100%

Ambient Temperature[°C]	Output Voltage [V]		
	Input Volt. 36V	Input Volt. 48V	Input Volt. 76V
-40	11.989	11.990	11.992
25	12.059	12.060	12.061
85	12.075	12.077	12.077

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

Item	Minimum Input Voltage for Regulated Output Voltage	Testing Circuitry Figure A
Object	+12V0.25A	

## 1.Values

Ambient Temperature[°C]	Input Voltage [V]	
	Load 50%	Load 100%
-40	28.3	28.3
25	28.4	28.4
85	28.5	28.5

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



		Testing Circuitry Figure A
Model	MUW64812	
Item	Ambient Temperature Drift	
Object	-12V0.25A	

## 1.Values

Load 100%

Ambient Temperature[°C]	Output Voltage [V]		
	Input Volt. 36V	Input Volt. 48V	Input Volt. 76V
-40	-12.005	-12.004	-12.004
25	-12.074	-12.073	-12.072
85	-12.090	-12.089	-12.087

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

Item	Minimum Input Voltage for Regulated Output Voltage	Testing Circuitry Figure A
Object	-12V0.25A	

## 1.Values

Ambient Temperature[°C]	Input Voltage [V]	
	Load 50%	Load 100%
-40	28.3	28.3
25	28.4	28.4
85	28.5	28.5

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

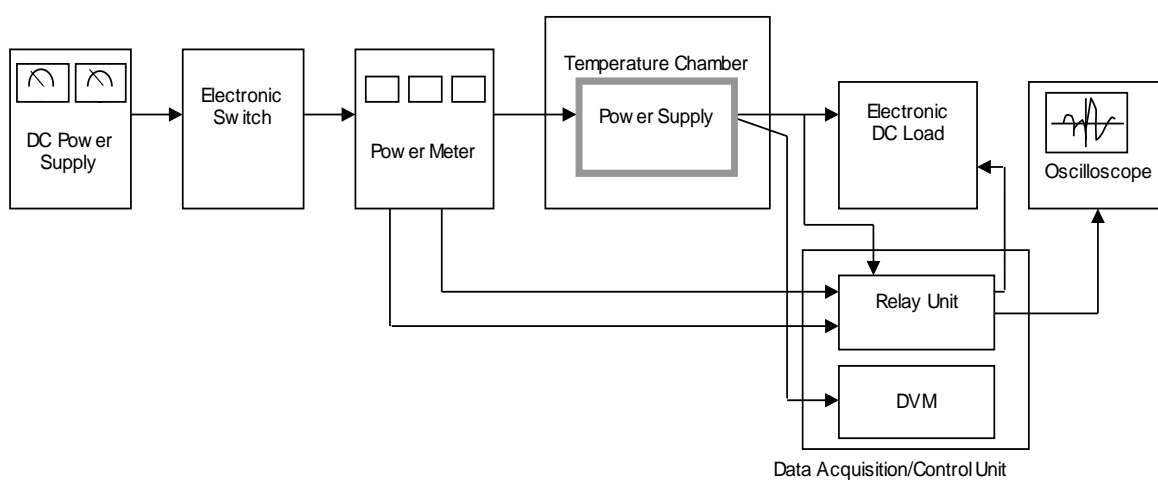


Figure A

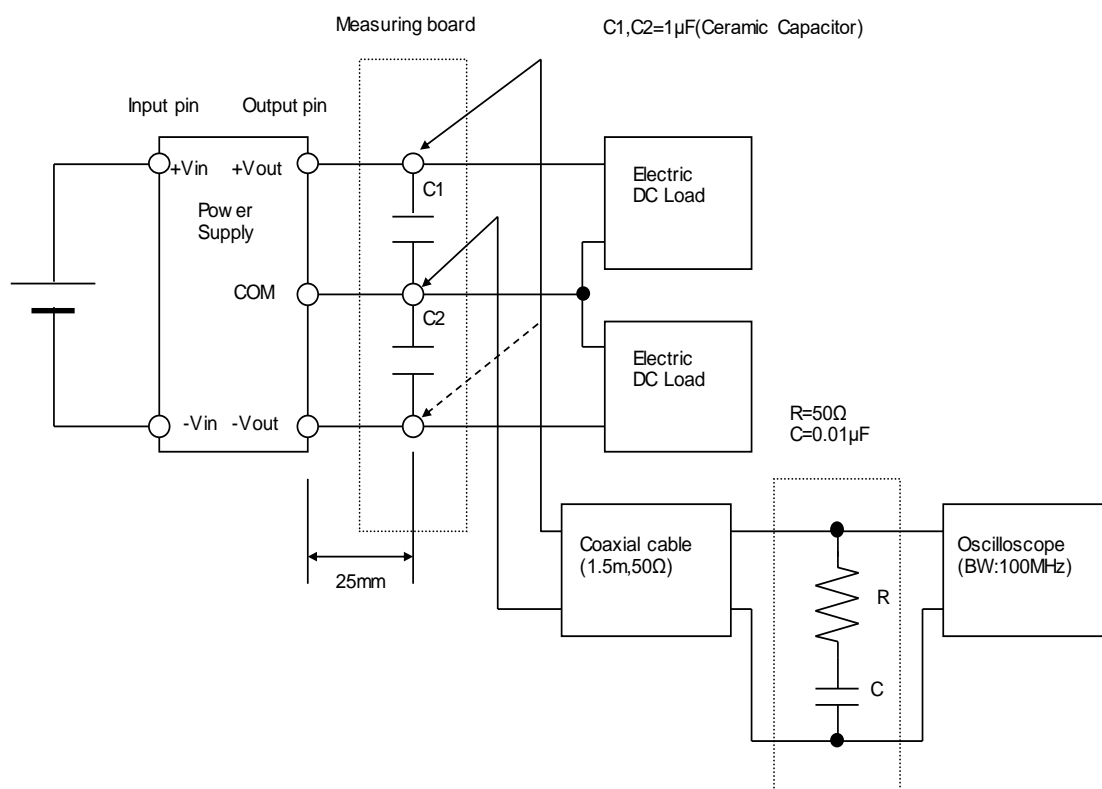


Figure B