

TEST DATA OF MUW60512

Regulated DC Power Supply
May.8. 2025

Approved by : Kenichi Tsukada
Design Manager

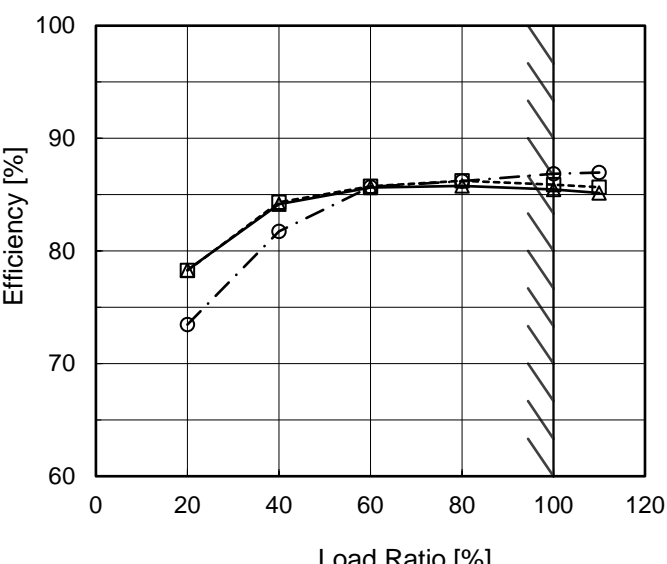
Prepared by : Yoshihiko Saeki
Design Engineer

COSEL CO.,LTD.

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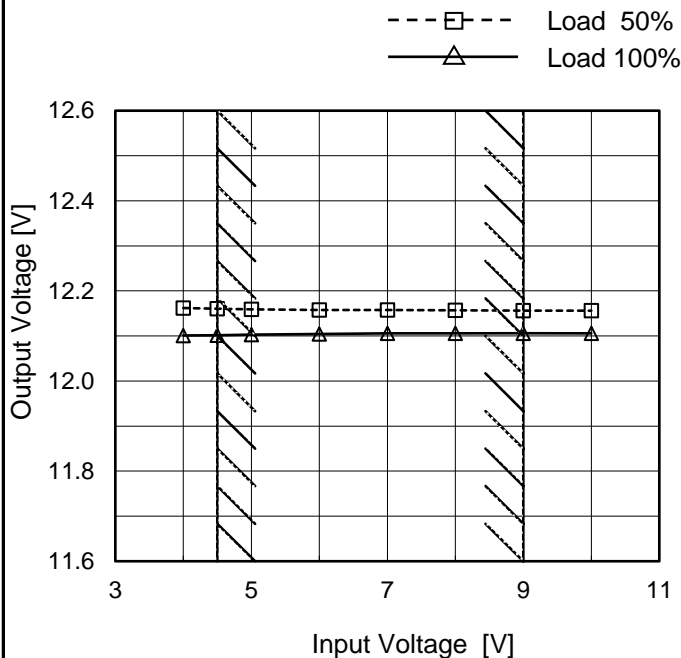
(Final Page 13)

Model		MUW60512	Temperature		25°C
Item		Efficiency (by Load Current)	Testing Circuitry		Figure A
Object					
1.Graph					
		—△—	Input Volt.	4.5V	
		---□---	Input Volt.	5V	
		-·-○-·-	Input Volt.	9V	
					
2.Values					
Load Ratio [%]		Efficiency [%]			
		Input Volt. 4.5[V]	Input Volt. 5[V]	Input Volt. 9[V]	
0		-	-	-	
20		78.3	78.3	73.5	
40		84.2	84.3	81.7	
60		85.6	85.8	85.7	
80		85.8	86.2	86.2	
100		85.4	85.9	86.9	
110		85.1	85.6	87.0	
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Model	MUW60512
Item	Line Regulation
Object	+12V0.25A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



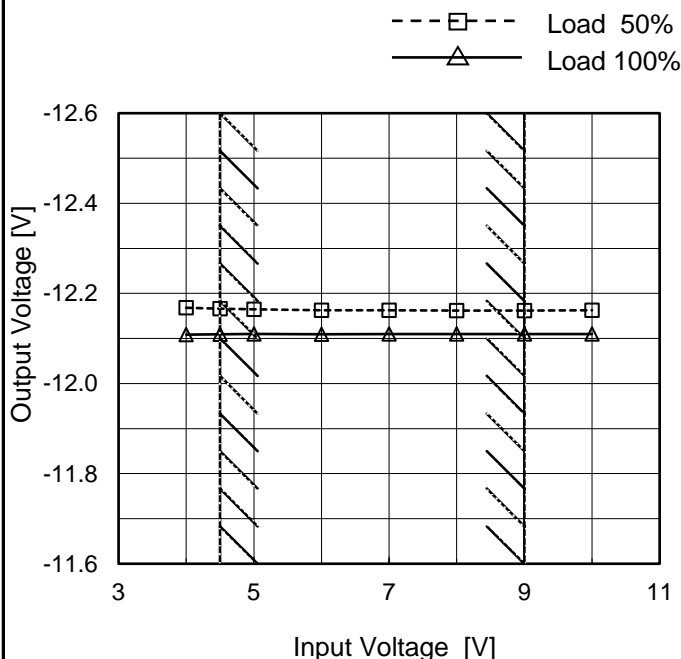
2.Values

Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
4.0	12.162	12.101
4.5	12.161	12.102
5.0	12.159	12.103
6.0	12.158	12.104
7.0	12.157	12.106
8.0	12.157	12.106
9.0	12.157	12.106
10.0	12.156	12.106
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-12V : Rated Load Current

Object	-12V0.25A
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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%
4.0	-12.168	-12.109
4.5	-12.166	-12.109
5.0	-12.165	-12.110
6.0	-12.163	-12.110
7.0	-12.162	-12.110
8.0	-12.162	-12.110
9.0	-12.162	-12.110
10.0	-12.163	-12.110
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+12V : Rated Load Current

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Item	Load Regulation	Temperature	25°C																																																			
Object	+12V0.25A	Testing Circuitry	Figure A																																																			
1.Graph <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> <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. 4.5[V]</th><th>Input Volt. 5[V]</th><th>Input Volt. 9[V]</th></tr><tr><td>0.000</td><td>12.290</td><td>12.290</td><td>12.288</td></tr><tr><td>0.050</td><td>12.207</td><td>12.205</td><td>12.205</td></tr><tr><td>0.100</td><td>12.174</td><td>12.172</td><td>12.170</td></tr><tr><td>0.150</td><td>12.148</td><td>12.147</td><td>12.145</td></tr><tr><td>0.200</td><td>12.124</td><td>12.124</td><td>12.125</td></tr><tr><td>0.250</td><td>12.102</td><td>12.103</td><td>12.106</td></tr><tr><td>0.275</td><td>12.091</td><td>12.092</td><td>12.097</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. 4.5[V]	Input Volt. 5[V]	Input Volt. 9[V]	0.000	12.290	12.290	12.288	0.050	12.207	12.205	12.205	0.100	12.174	12.172	12.170	0.150	12.148	12.147	12.145	0.200	12.124	12.124	12.125	0.250	12.102	12.103	12.106	0.275	12.091	12.092	12.097	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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1.Graph <div><div>Input Voltage</div><div>5V</div><div>Load</div><div>100%</div></div> <p>-12V: Rated Load Current</p>																																																						

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Model	MUW60512																																																					
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<div><div>Input Voltage</div><div>5V</div></div> <div><div>Load</div><div>100%</div></div> <p>20[mV/div]</p> <p>2[μs/div]</p> <p>+12V: Rated Load Current</p>																																																						

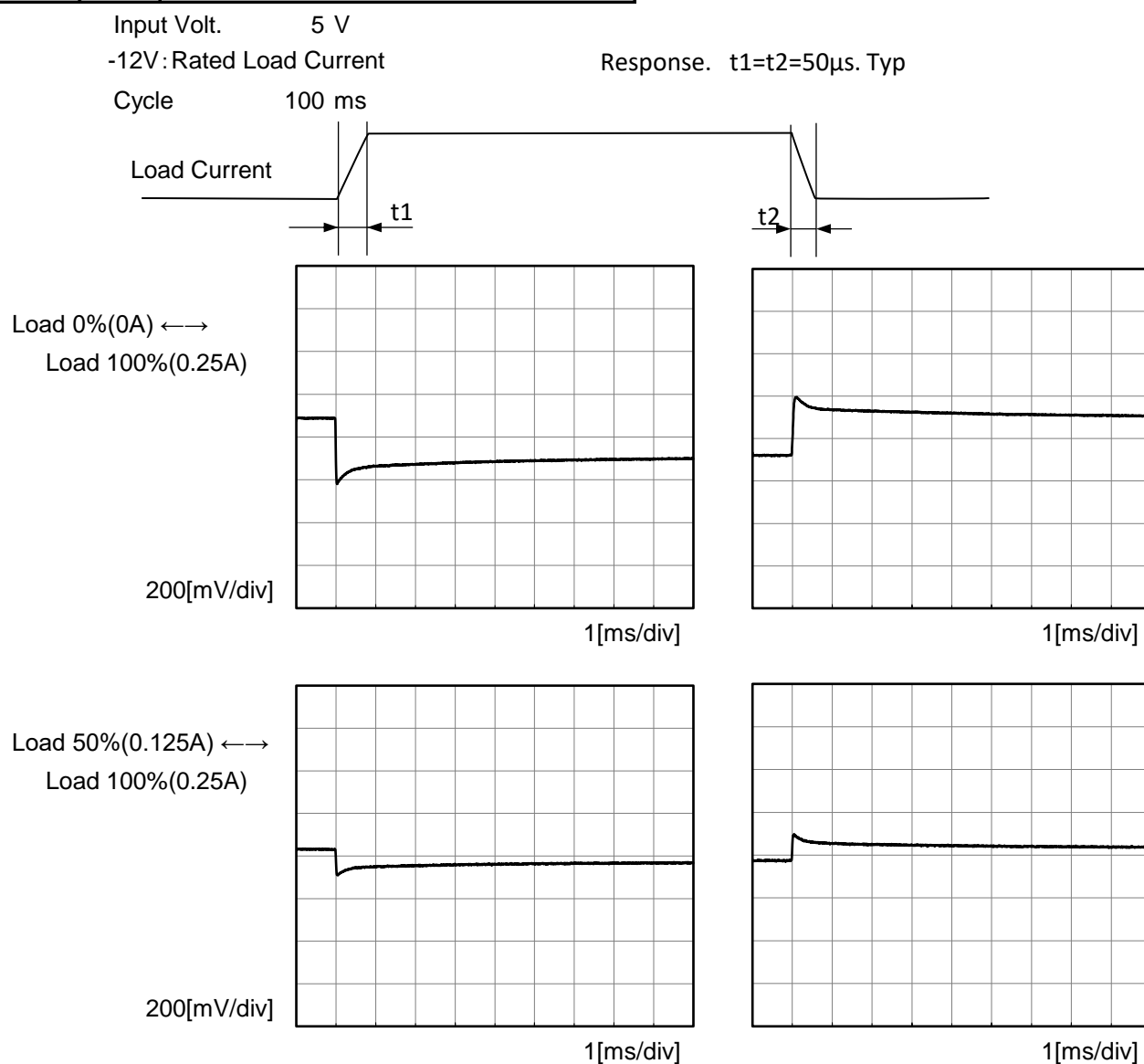
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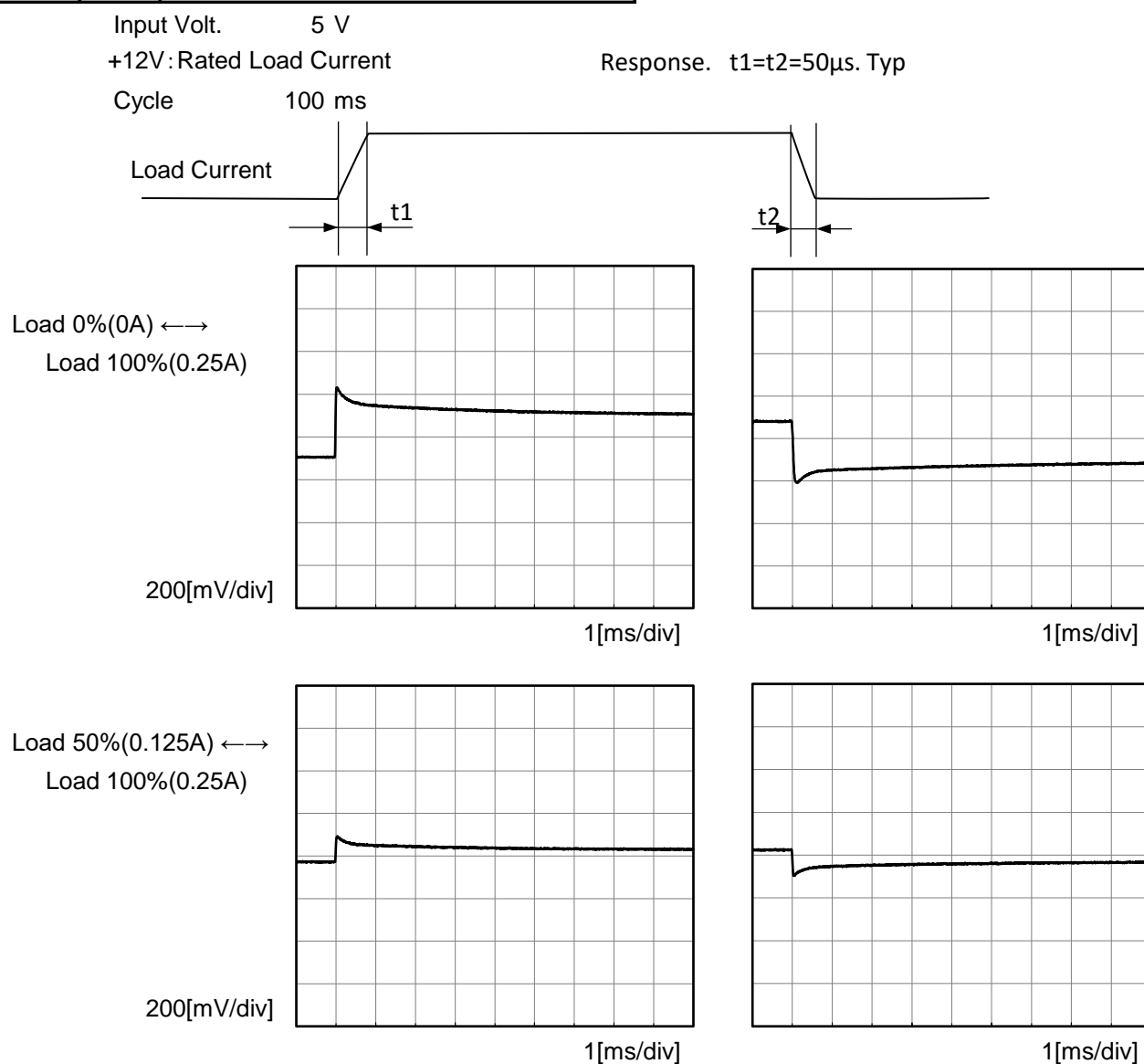
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Model	MUW60512	Temperature 25°C Testing Circuitry Figure A
Item	Dynamic Load Response	
Object	+12V0.25A	

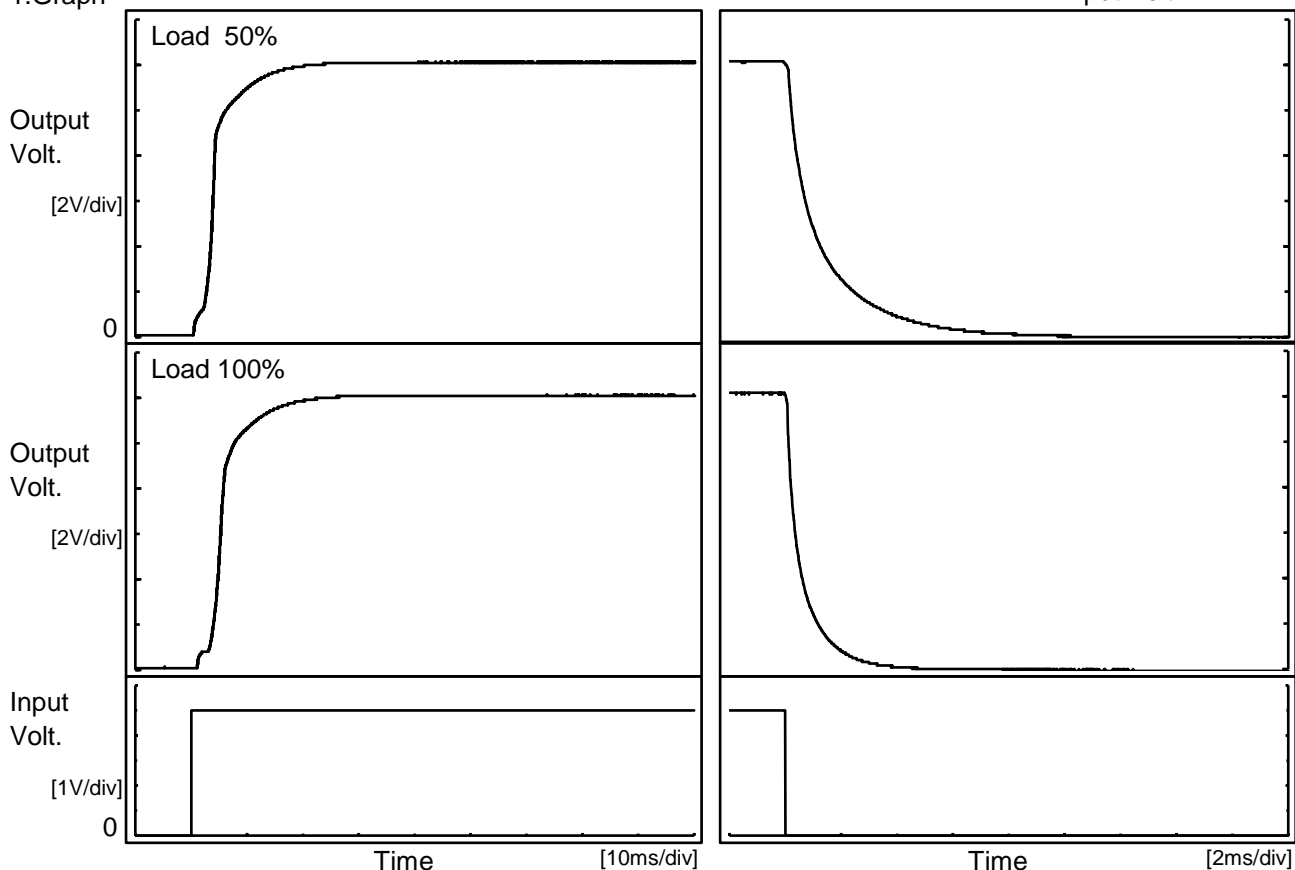


Model	MUW60512	Temperature 25°C Testing Circuitry Figure A
Item	Dynamic Load Response	
Object	-12V0.25A	



Model	MUW60512	Temperature	25°C
Item	Rise and Fall Time	Testing Circuitry	Figure A
Object	+12V0.25A		

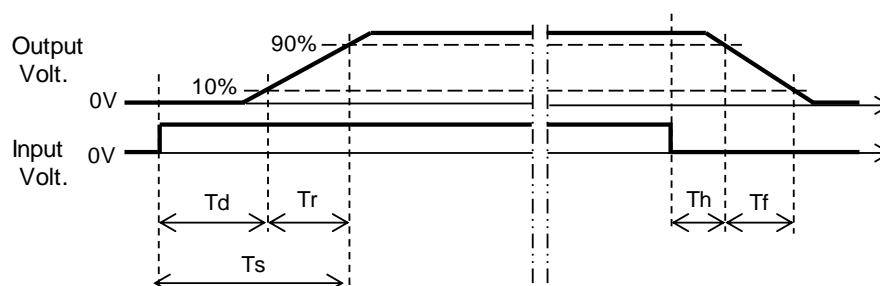
1.Graph



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

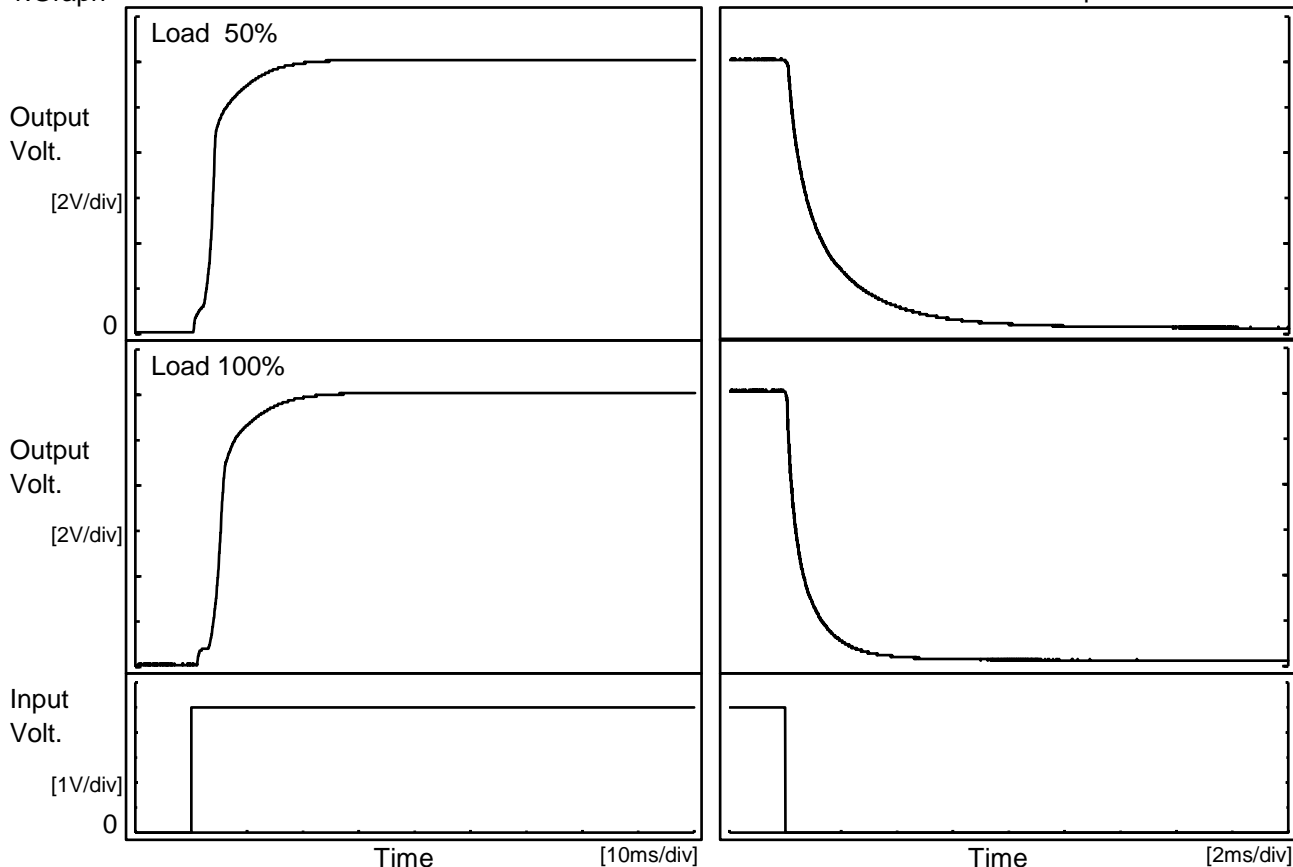
2.Values

		[ms]				
Load	Time	Td	Tr	Ts	Th	Tf
50 %		1.9	6.8	8.7	0.2	3.3
100 %		3.5	6.6	10.1	0.1	1.6



Model	MUW60512	Temperature	25°C
Item	Rise and Fall Time	Testing Circuitry	Figure A
Object	-12V0.25A		

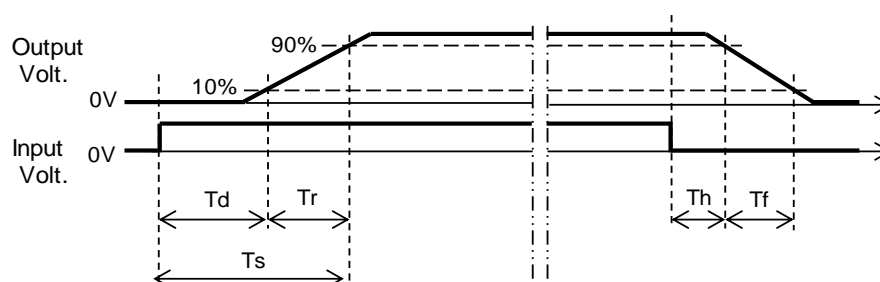
1.Graph



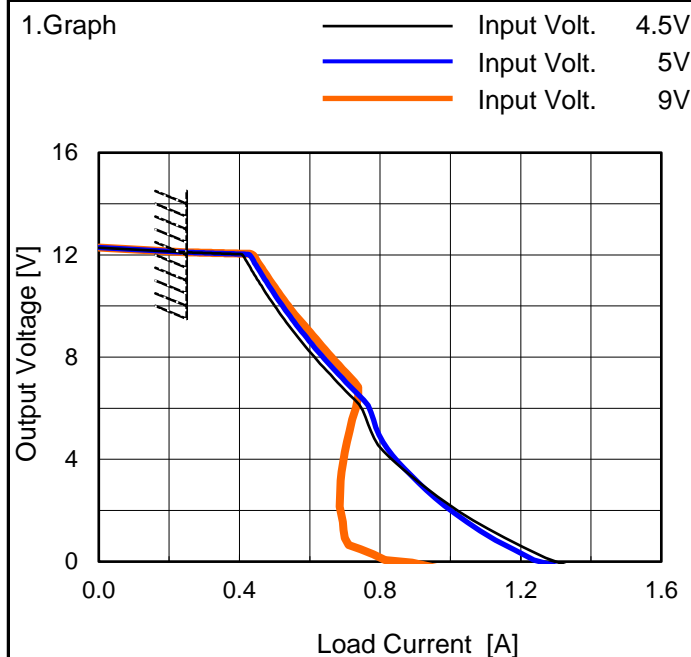
+12V:Load Current is same as -12V

2.Values

		[ms]				
Load	Time	Td	Tr	Ts	Th	Tf
50 %		2.3	7.1	9.4	0.2	3.6
100 %		3.6	7.3	10.9	0.1	1.7



Model	MUW60512
Item	Overcurrent Protection
Object	+12V0.25A



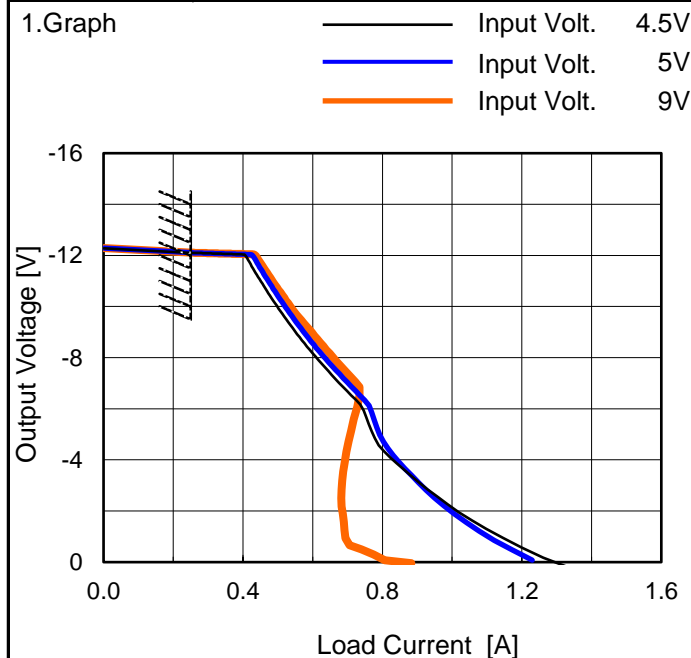
Temperature 25°C
Testing Circuitry Figure A

2.Values

Output Voltage [V]	Load Current [A]		
	Input Volt. 4.5[V]	Input Volt. 5[V]	Input Volt. 9[V]
11.4	0.44	0.46	0.47
10.8	0.46	0.49	0.50
9.6	0.52	0.55	0.56
8.4	0.60	0.61	0.64
7.2	0.67	0.69	0.72
6.0	0.75	0.77	0.72
4.8	0.79	0.81	0.71
3.6	0.89	0.89	0.69
2.4	0.99	0.98	0.69
1.2	1.15	1.13	0.70
0.0	1.35	1.34	0.89
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-12V : Rated Load Current

Object	-12V0.25A
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Note: Slanted line shows the range of the rated load current.

2.Values

Output Voltage [V]	Load Current [A]		
	Input Volt. 4.5[V]	Input Volt. 5[V]	Input Volt. 9[V]
-11.4	0.44	0.46	0.47
-10.8	0.46	0.48	0.50
-9.6	0.52	0.55	0.56
-8.4	0.59	0.61	0.64
-7.2	0.66	0.70	0.72
-6.0	0.75	0.77	0.72
-4.8	0.79	0.80	0.70
-3.6	0.88	0.88	0.69
-2.4	0.99	0.98	0.68
-1.2	1.15	1.12	0.69
0.0	1.34	1.23	0.89
--	-	-	-

+12V : Rated Load Current

		Testing Circuitry Figure A
Model	MUW60512	
Item	Ambient Temperature Drift	
Object	+12V0.25A	

1.Values

Load 100%

Ambient Temperature[°C]	Output Voltage [V]		
	Input Volt. 4.5V	Input Volt. 5V	Input Volt. 9V
-40	12.034	12.035	12.039
25	12.102	12.103	12.105
85	12.111	12.112	12.114

-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	3.0	3.0
25	3.1	3.0
85	3.1	3.1

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

		Testing Circuitry Figure A
Model	MUW60512	
Item	Ambient Temperature Drift	
Object	-12V0.25A	

1.Values

Load 100%

Ambient Temperature[°C]	Output Voltage [V]		
	Input Volt. 4.5V	Input Volt. 5V	Input Volt. 9V
-40	-12.043	-12.044	-12.044
25	-12.109	-12.109	-12.110
85	-12.115	-12.115	-12.117

+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	3.0	3.0
25	3.1	3.0
85	3.1	3.1

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

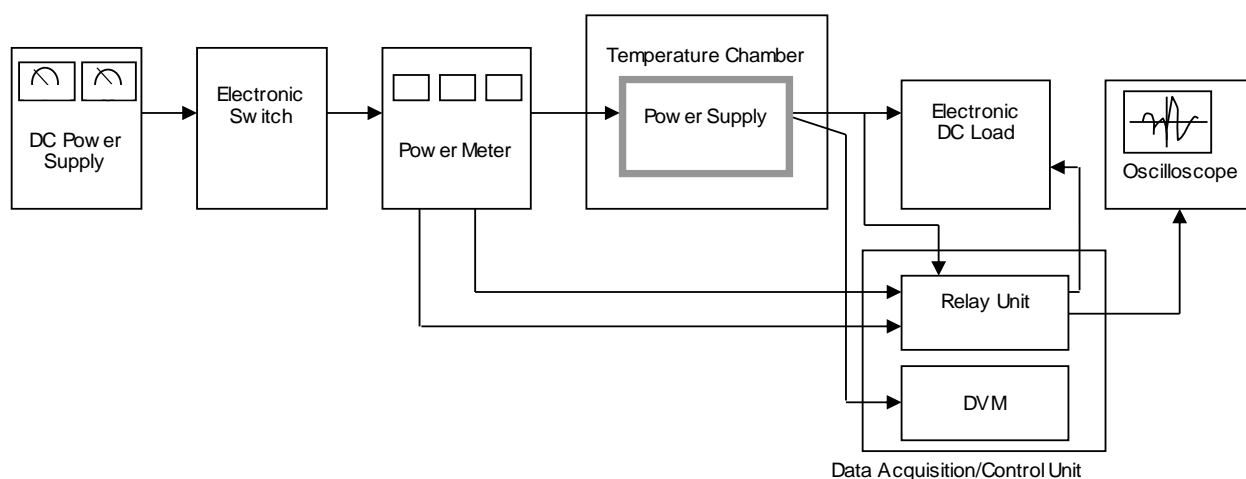


Figure A

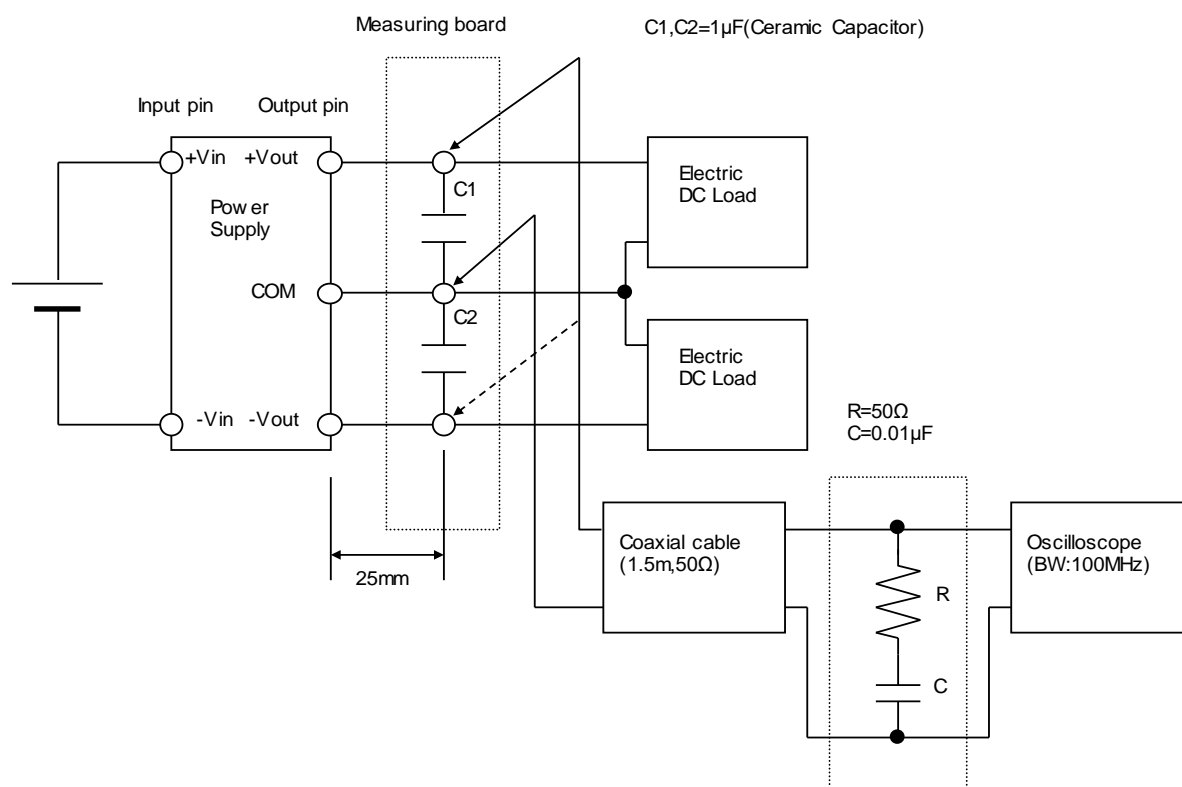


Figure B