参考資料

TEST DATA OF MHFS62412

Regulated DC Power Supply
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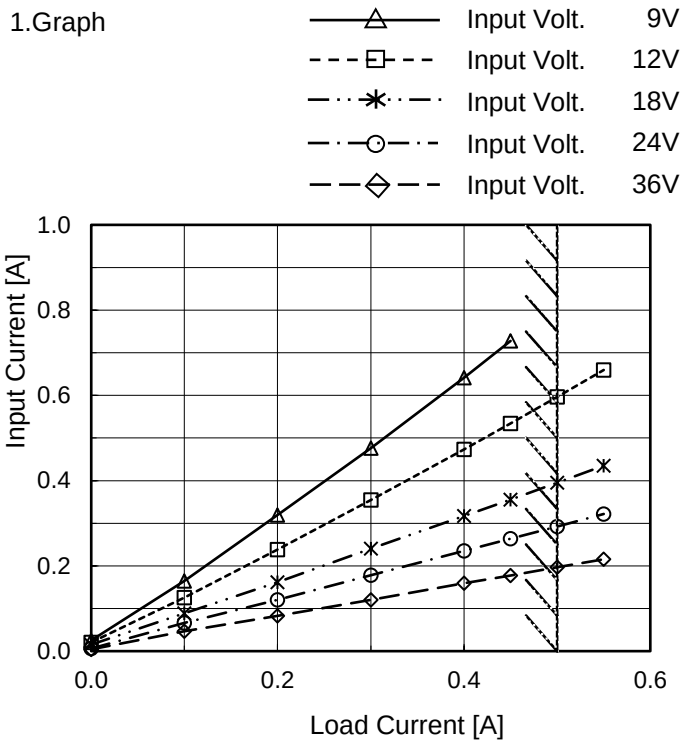
Model	MHFS62412
Item	Input Current (by Load Current)
Object	———————

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Note: Slanted line shows the range of the rated load current.

2.Values

Load Current [A]	Input Current [A]				
	Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]
0.00	0.025	0.021	0.015	0.006	0.004
0.10	0.165	0.126	0.089	0.066	0.047
0.20	0.319	0.238	0.162	0.120	0.083
0.30	0.476	0.354	0.240	0.178	0.120
0.40	0.642	0.473	0.317	0.235	0.159
0.45	0.728	0.534	0.355	0.264	0.178
0.50	*1	0.596	0.395	0.293	0.197
0.55	*1	0.660	0.435	0.322	0.215
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

*1 Maximum output current at 9V input Voltage is 80% of rated load current. Refer to instruction manuals for details of input derating.

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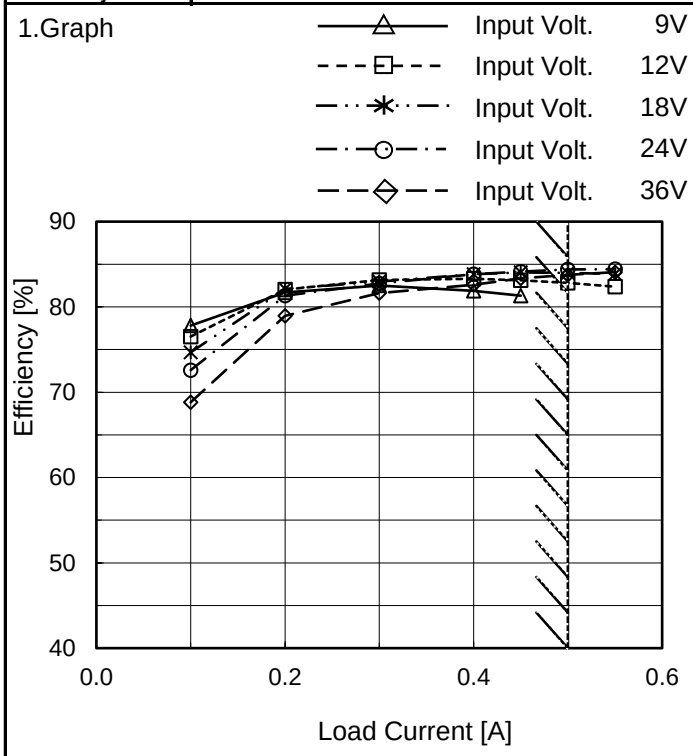
Model	MHFS62412
Item	Efficiency (by Load Current)
Object	————————

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Note: Slanted line shows the range of the rated load current.

2.Values

Load Current [A]	Efficiency [%]				
	Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]
0.00	-	-	-	-	-
0.10	77.8	76.5	74.7	72.6	68.8
0.20	81.7	82.0	82.1	81.3	78.9
0.30	82.5	83.2	83.0	82.7	81.6
0.40	81.9	83.3	83.8	83.8	82.6
0.45	81.3	83.1	84.0	84.1	83.3
0.50	*1	82.8	84.0	84.4	83.8
0.55	*1	82.4	83.9	84.4	84.1
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

*1 Maximum output current at 9V input Voltage is 80% of rated load current. Refer to instruction manuals for details of input derating.

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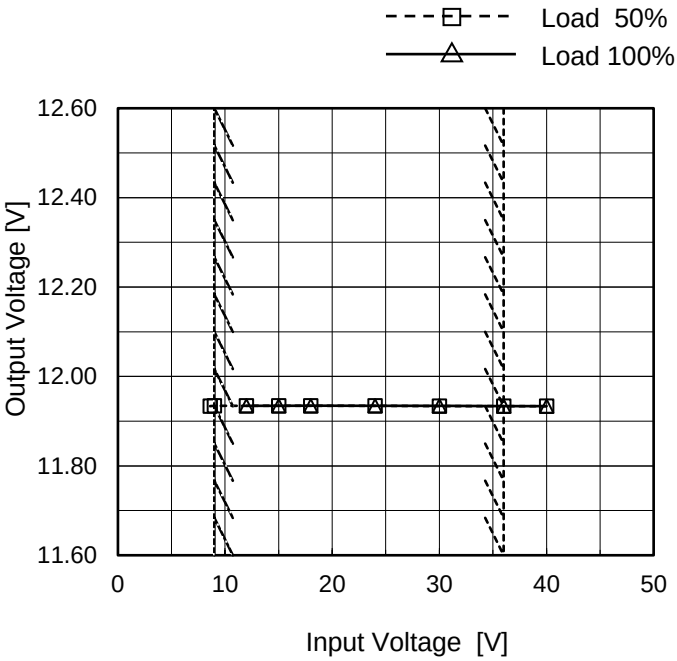
Model	MHFS62412
Item	Line Regulation
Object	+12V0.5A

Temperature 25°C
Testing Circuitry Figure A

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%
8.6	11.934	*1
9.0	11.934	*1
12.0	11.934	11.934
15.0	11.934	11.935
18.0	11.934	11.935
24.0	11.934	11.934
30.0	11.934	11.934
36.0	11.934	11.934
40.0	11.933	11.934

*1 Maximum output current at 9V input Voltage is 80% of rated load current. Refer to instruction manuals for details of input derating.

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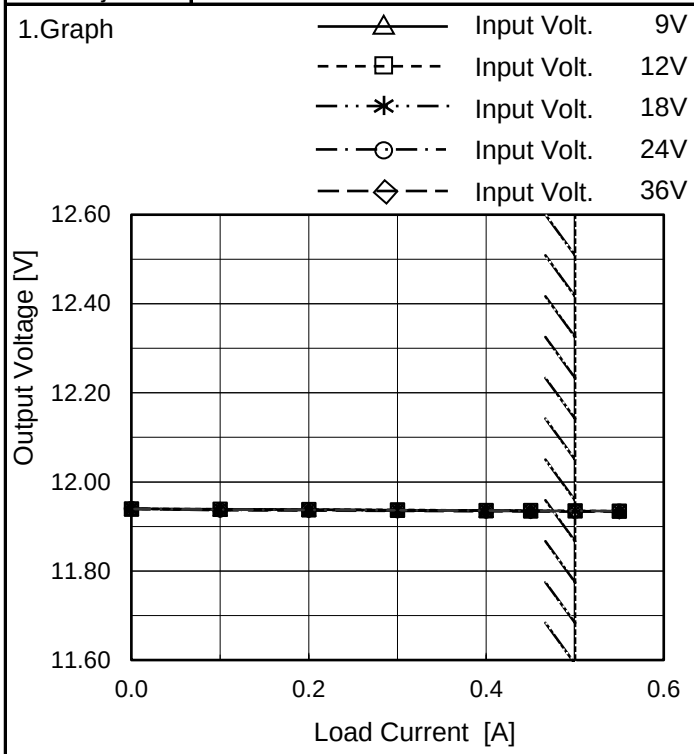
Model	MHFS62412
Item	Load Regulation
Object	+12V0.5A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Note: Slanted line shows the range of the rated load current.

2.Values

Load Current [A]	Output Voltage [V]				
	Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]
0.00	11.940	11.940	11.939	11.940	11.940
0.10	11.939	11.939	11.938	11.937	11.937
0.20	11.938	11.938	11.937	11.937	11.936
0.30	11.937	11.937	11.937	11.936	11.935
0.40	11.936	11.936	11.936	11.935	11.934
0.45	11.935	11.935	11.935	11.935	11.934
0.50	*1	11.935	11.935	11.934	11.933
0.55	*1	11.934	11.934	11.934	11.933
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

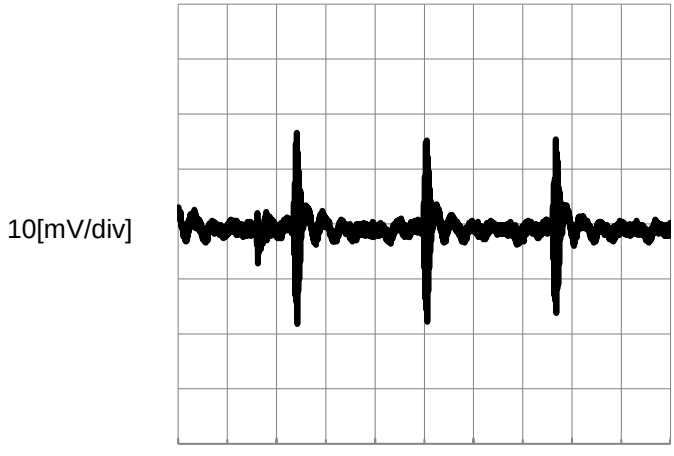
*1 Maximum output current at 9V input Voltage is 80% of rated load current. Refer to instruction manuals for details of input derating.

Item	Ripple-Noise
Object	+12V0.5A

Temperature 25°C
Testing Circuitry Figure B

1.Graph

Input Voltage 24V
Load 100%



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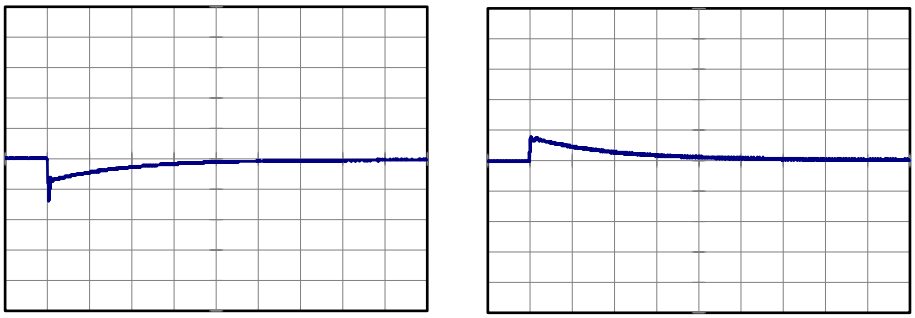
Model	MHFS62412	
Item	Dynamic Load Response	Temperature 25°C Testing Circuitry Figure A
Object	+12V0.5A	

Input Volt. 24 V
Cycle 100 ms

Response. t1=t2=50μs. Typ

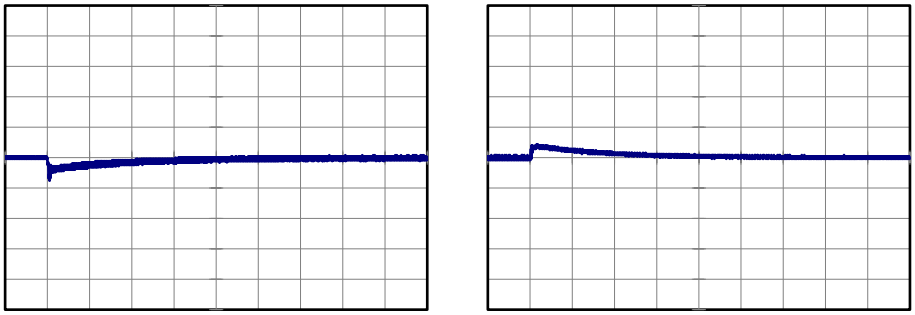
Min.Load (0A)←→
Load 100% (0.5A)



500 mV/div

1 ms/div 1 ms/div

Min.Load (0A)←→
Load 50% (0.25A)



500 mV/div

1 ms/div 1 ms/div

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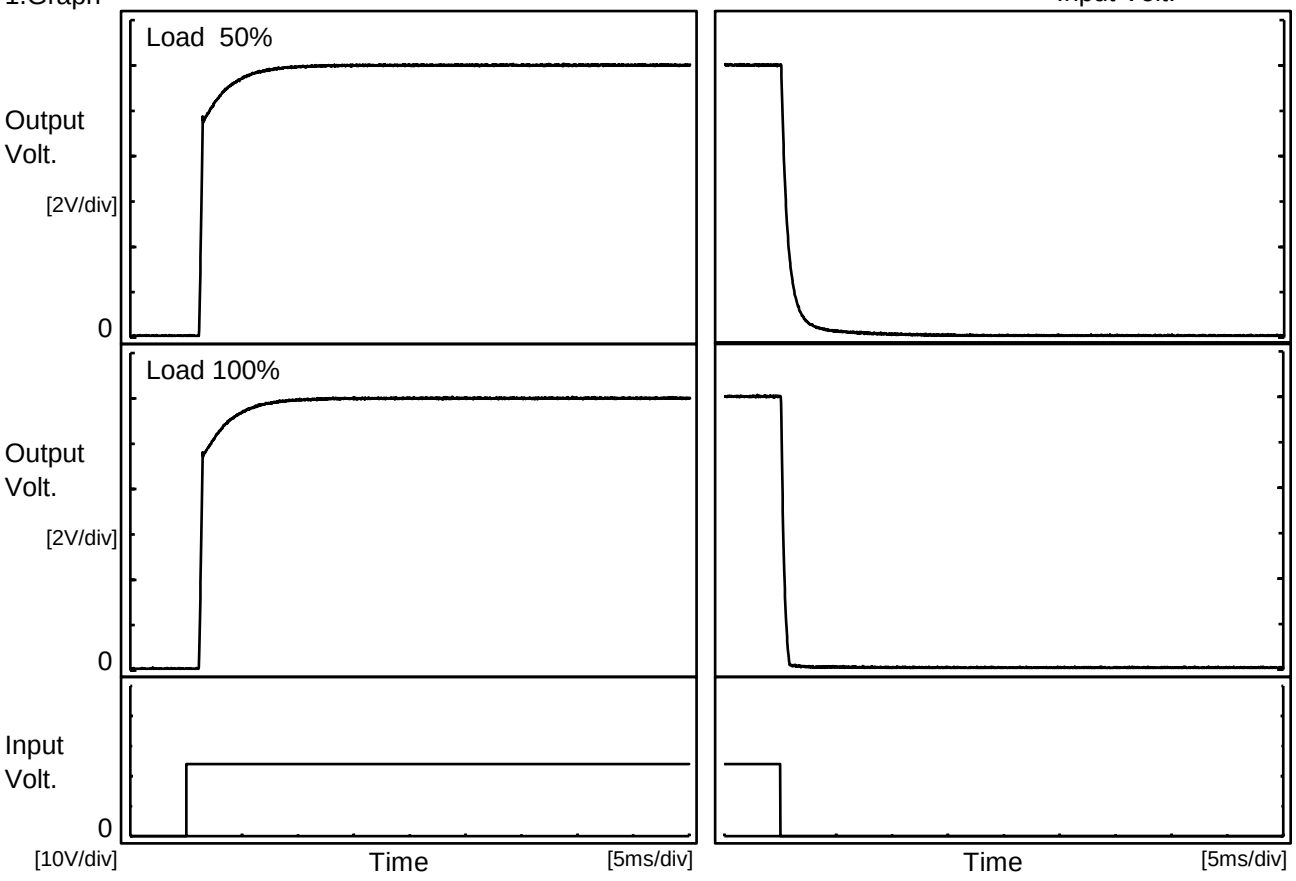
Model	MHFS62412
Item	Rise and Fall Time
Object	+12V0.5A

Temperature 25°C
Testing Circuitry Figure A

1.Graph

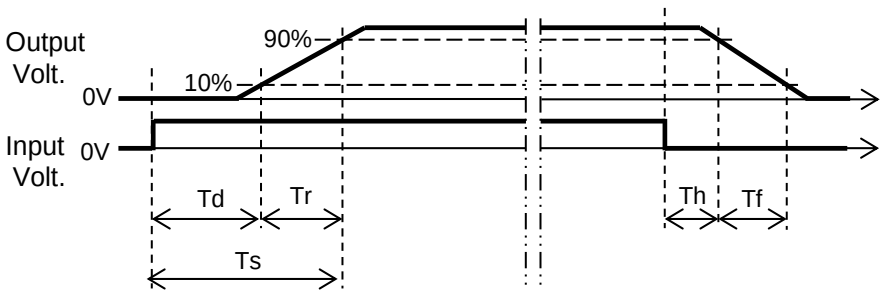
Input Volt. 24 V



2.Values

[ms]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	1.2	2.2	3.4	0.1	1.5
100 %	1.2	2.4	3.6	0.1	0.5



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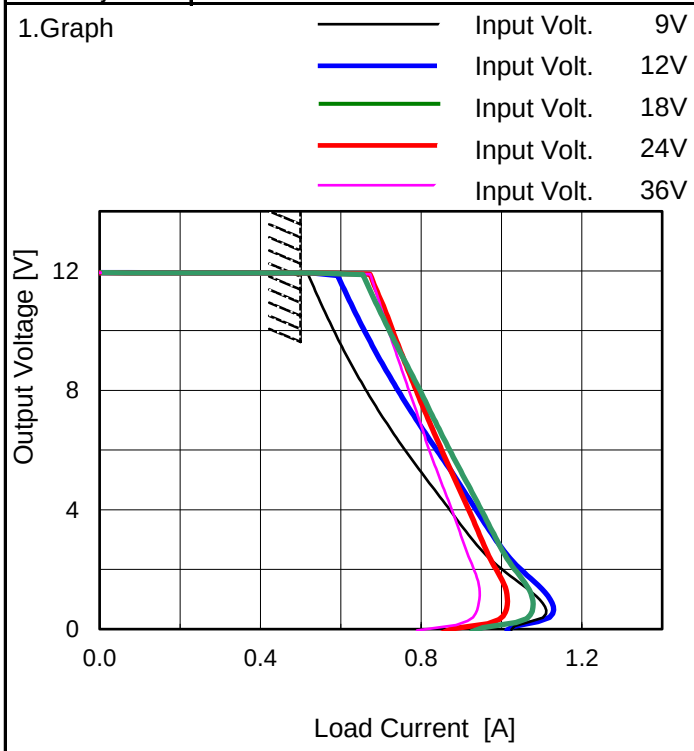
Model	MHFS62412
Item	Overcurrent Protection
Object	+12V0.5A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Note: Slanted line shows the range of the rated load current.

Maximum output current at 9V input Voltage is 80% of rated load current.
Refer to instruction manuals for details of input derating.

2.Values

Output Voltage [V]	Load Current [A]				
	Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]
11.4	0.533	0.609	0.671	0.687	0.685
10.8	0.552	0.626	0.692	0.706	0.699
9.6	0.594	0.674	0.734	0.739	0.728
8.4	0.641	0.723	0.779	0.774	0.758
7.2	0.699	0.776	0.823	0.810	0.789
6.0	0.757	0.833	0.871	0.848	0.818
4.8	0.821	0.897	0.917	0.891	0.851
3.6	0.892	0.953	0.963	0.931	0.887
2.4	0.963	1.014	1.009	0.968	0.918
1.2	1.078	1.109	1.073	1.012	0.946
0.0	1.025	1.014	0.925	0.852	0.790
--	-	-	-	-	-

Model	MHFS62412	
Item	Ambient Temperature Drift	Testing Circuitry Figure A
Object	+12V0.5A	

1.Values

Load 100%

Ambient Temperature[℃]	Output Voltage [V]				
	Input Volt. 9V*1	Input Volt. 12V	Input Volt. 18V	Input Volt. 24V	Input Volt. 36V
-40	11.880	11.882	11.883	11.885	11.885
25	11.933	11.932	11.933	11.933	11.932
55	11.936	11.935	11.935	11.934	11.934

*1 Load 80%

Item	Minimum Input Voltage for Regulated Output Voltage	Testing Circuitry Figure A
Object	+12V0.5A	

1.Values

Ambient Temperature[℃]	Input Voltage [V]	
	Load 50%	Load 80%
-40	7.2	7.2
25	7.1	7.2
55	7.0	7.0

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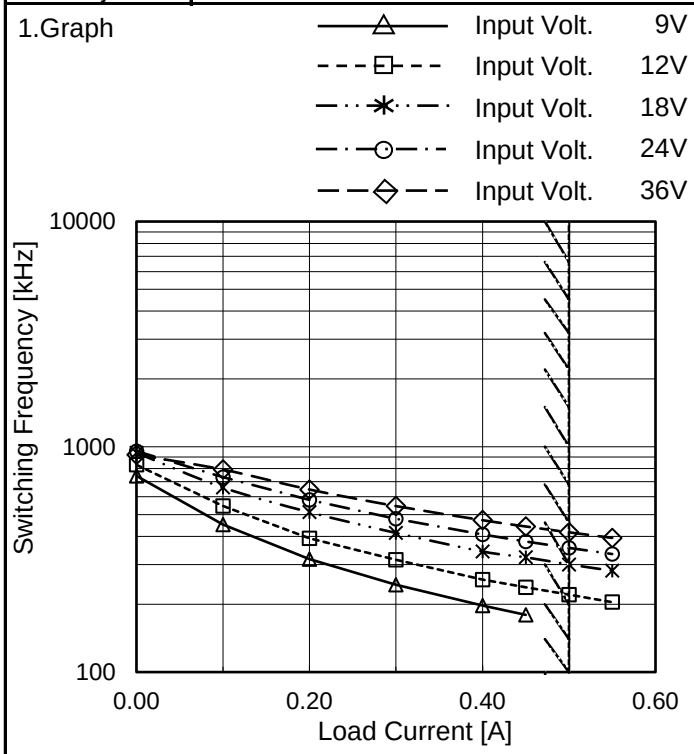
Model	MHFS62412
Item	Switching frequency (by Load Current)
Object	+12V0.5A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Note: Slanted line shows the range of the rated load current.

When load current is low, MH operates intermittently, so switching frequency would not become constant.

2.Values

Load Current [A]	Switching Frequency [kHz]				
	Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]
0.00	743	832	940	957	922
0.10	452	545	660	734	793
0.20	317	392	513	580	646
0.30	244	315	415	479	546
0.40	197	257	343	408	472
0.45	179	238	323	380	443
0.50	*1	221	300	356	417
0.55	*1	204	282	334	394
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

*1 Maximum output current at 9V input Voltage is 80% of rated load current. Refer to instruction manuals for details of input derating.

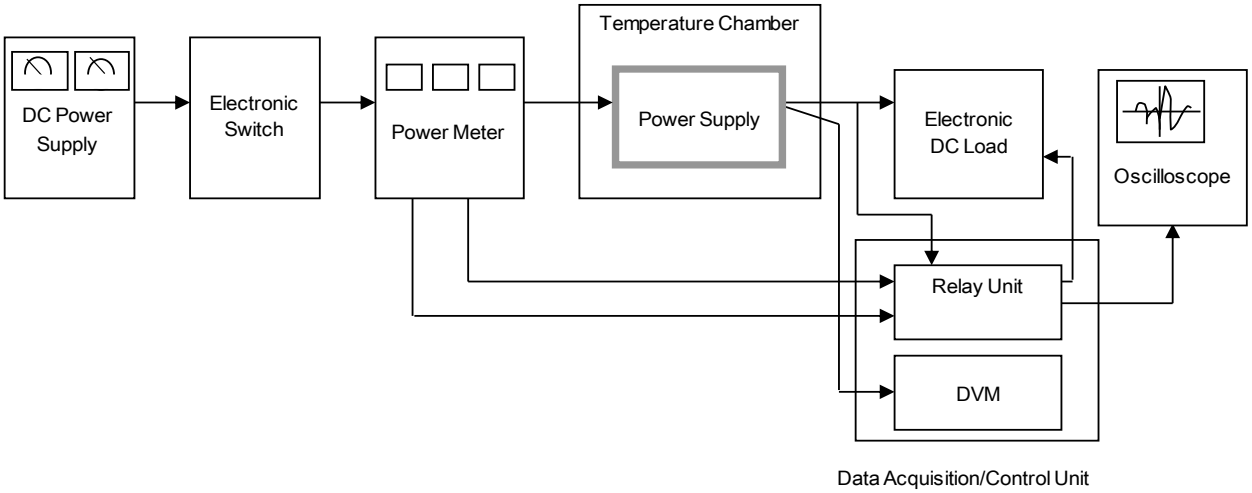


Figure A

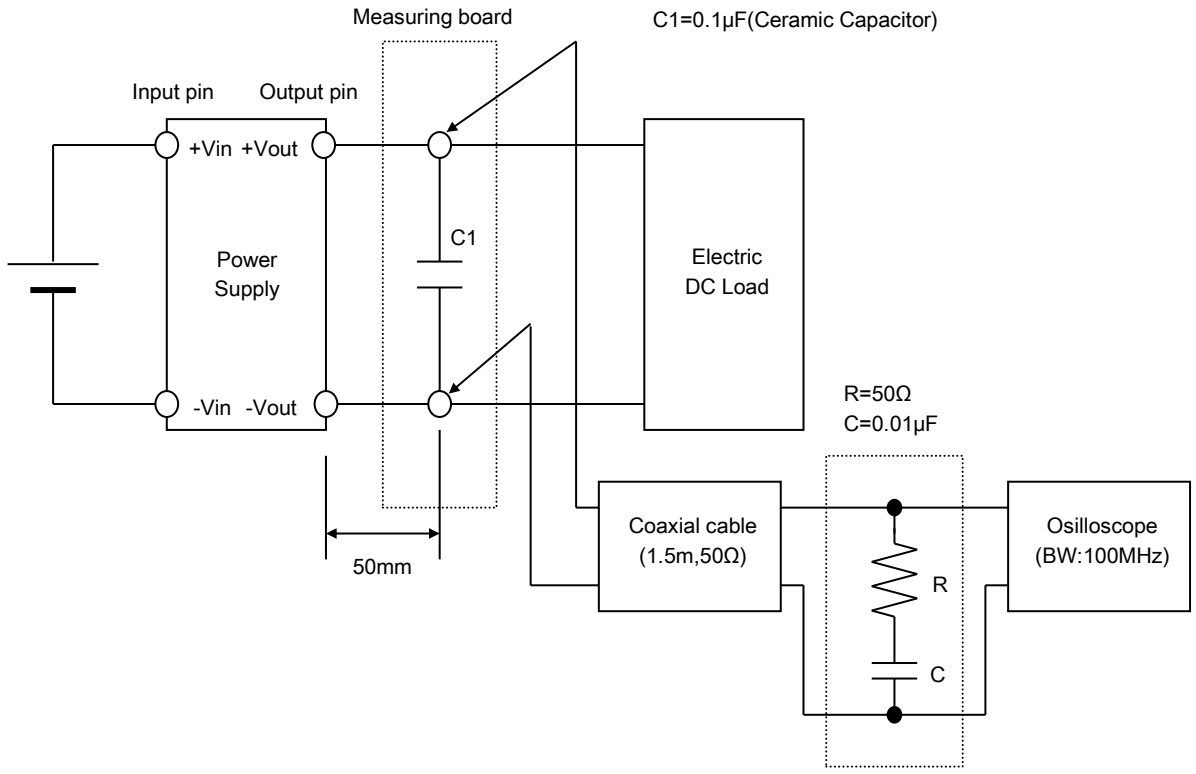


Figure B