参考資料

TEST DATA OF MHFS61212

Regulated DC Power Supply
October 26, 2021

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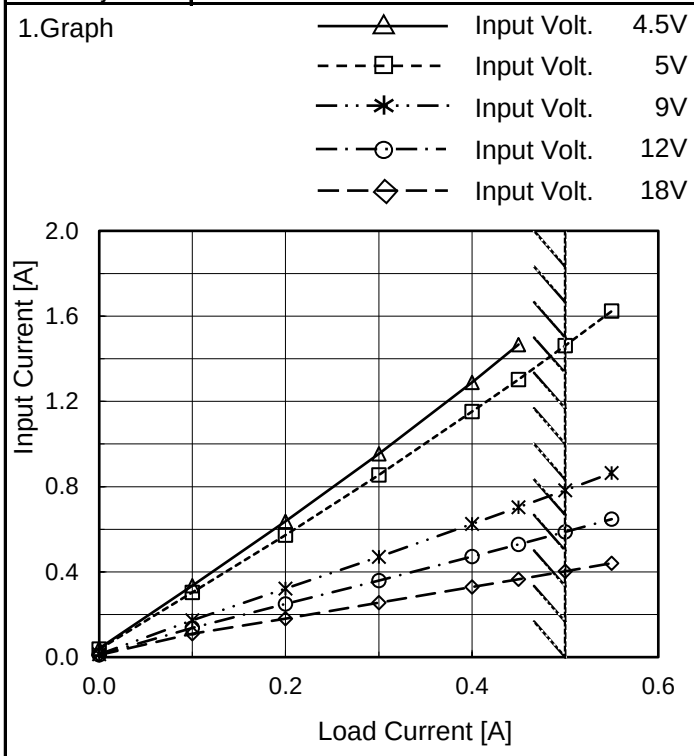
Model	MHFS61212
Item	Input Current (by Load Current)
Object	————————

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. 4.5[V]	Input Volt. 5[V]	Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]
0.00	0.041	0.037	0.013	0.011	0.010
0.10	0.336	0.303	0.173	0.137	0.109
0.20	0.637	0.572	0.322	0.249	0.180
0.30	0.955	0.855	0.471	0.359	0.255
0.40	1.289	1.152	0.625	0.472	0.328
0.45	1.467	1.302	0.703	0.530	0.366
0.50	*1	1.462	0.783	0.588	0.403
0.55	*1	1.623	0.864	0.647	0.441
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

*1 Maximum output current at 4.5V input Voltage is 80% of rated load current. Refer to instruction manuals for details of input derating.

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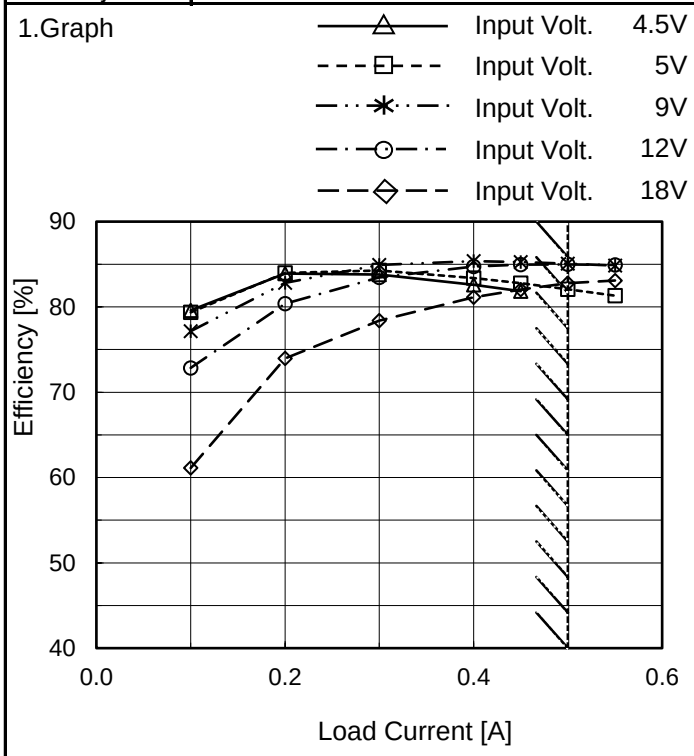
Model	MHFS61212
Item	Efficiency (by Load Current)
Object	———————

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. 4.5[V]	Input Volt. 5[V]	Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]
0.00	-	-	-	-	-
0.10	79.6	79.4	77.2	72.9	61.1
0.20	83.9	84.0	82.8	80.4	74.0
0.30	83.8	84.3	84.9	83.5	78.4
0.40	82.6	83.4	85.4	84.7	81.1
0.45	81.8	82.8	85.2	85.0	82.0
0.50	*1	82.1	85.1	85.0	82.8
0.55	*1	81.3	84.8	84.9	83.1
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

*1 Maximum output current at 4.5V input Voltage is 80% of rated load current. Refer to instruction manuals for details of input derating.

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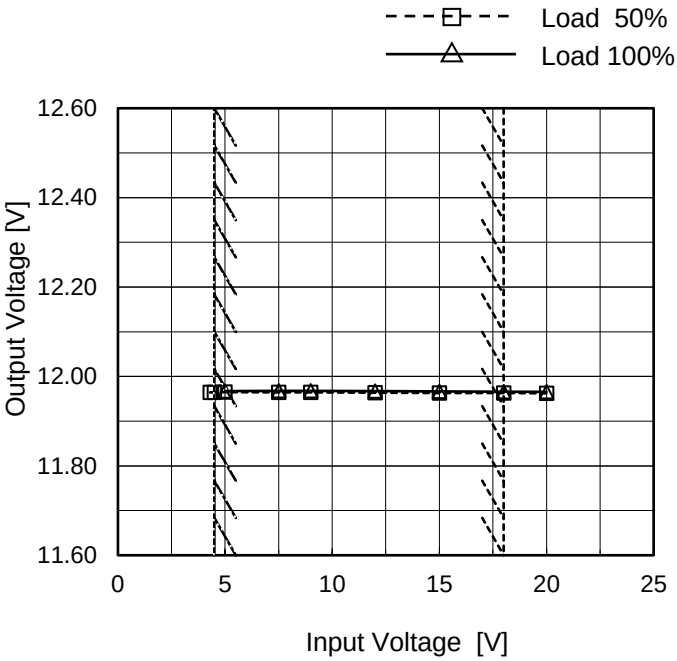
Model	MHFS61212
Item	Line Regulation
Object	+12V0.5A

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%
4.3	11.965	*1
4.5	11.965	*1
5.0	11.965	11.967
7.5	11.965	11.968
9.0	11.964	11.968
12.0	11.964	11.967
15.0	11.963	11.967
18.0	11.963	11.966
20.0	11.962	11.966

*1 Maximum output current at 4.5V input Voltage is 80% of rated load current. Refer to instruction manuals for details of input derating.

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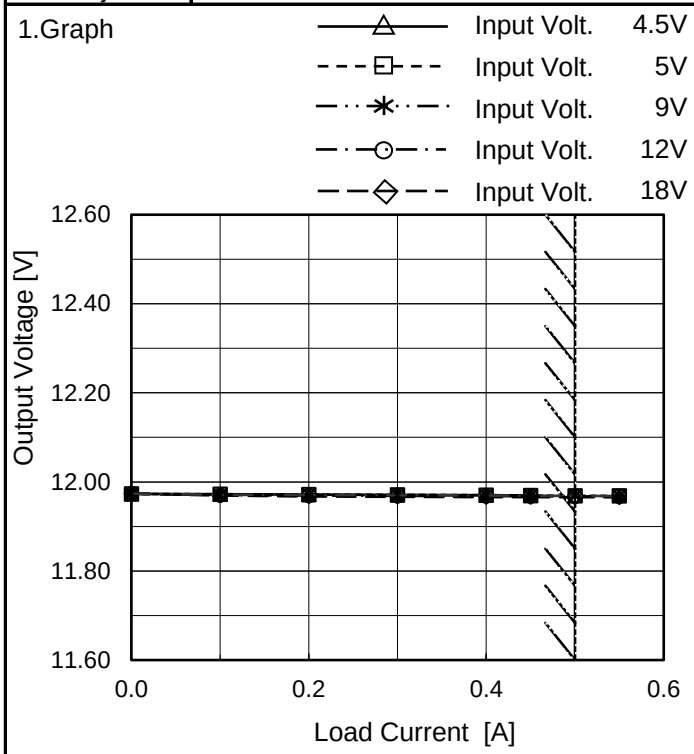
Model	MHFS61212
Item	Load Regulation
Object	+12V0.5A

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. 4.5[V]	Input Volt. 5[V]	Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]
0.00	11.973	11.973	11.974	11.974	11.974
0.10	11.973	11.972	11.971	11.970	11.970
0.20	11.972	11.972	11.971	11.969	11.967
0.30	11.971	11.971	11.970	11.969	11.967
0.40	11.970	11.970	11.969	11.968	11.966
0.45	11.970	11.970	11.969	11.968	11.966
0.50	*1	11.969	11.969	11.968	11.966
0.55	*1	11.969	11.968	11.967	11.965
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

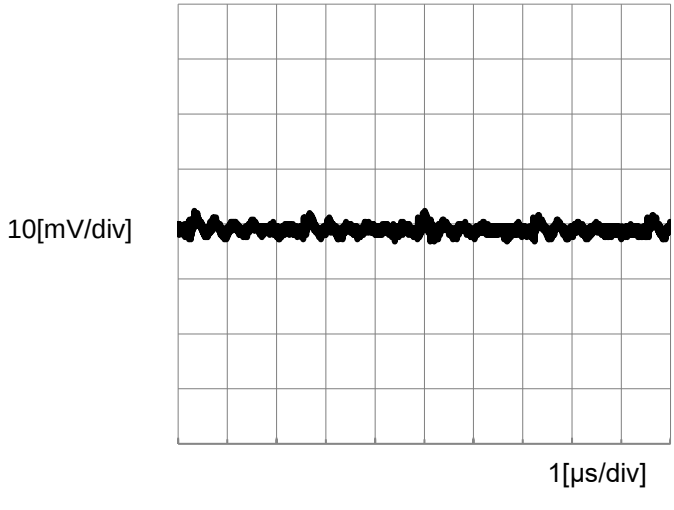
*1 Maximum output current at 4.5V input Voltage is 80% of rated load current. Refer to instruction manuals for details of input derating.

Item	Ripple-Noise
Object	+12V0.5A

Temperature 25°C
Testing Circuitry Figure B

1.Graph

Input Voltage 12V
Load 100%



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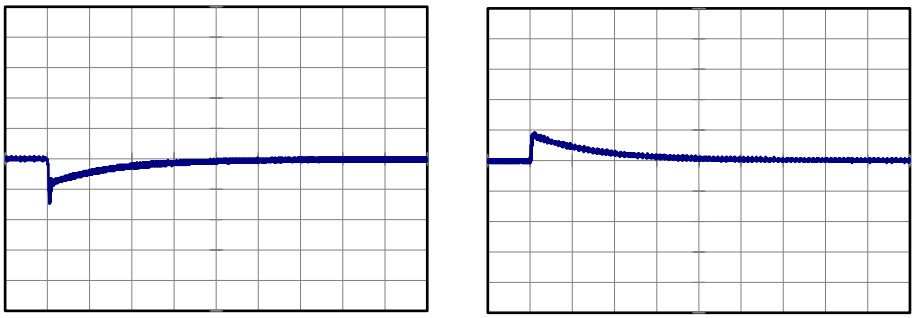
Model	MHFS61212	
Item	Dynamic Load Response	Temperature 25°C Testing Circuitry Figure A
Object	+12V0.5A	

Input Volt. 12 V
Cycle 100 ms

Response. t1=t2=50μs. Typ

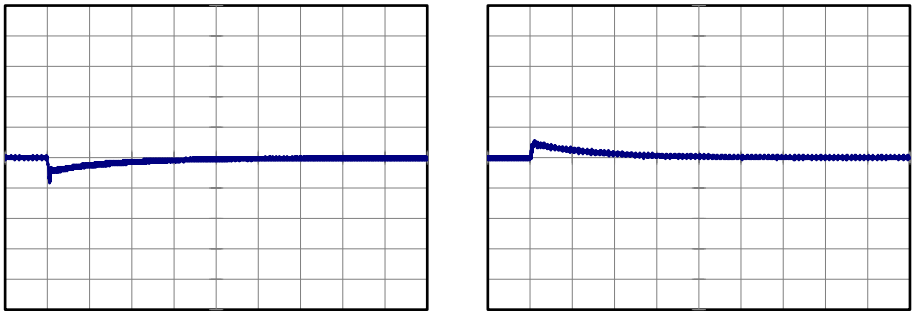
Min.Load (0A)←→
Load 100% (0.5A)



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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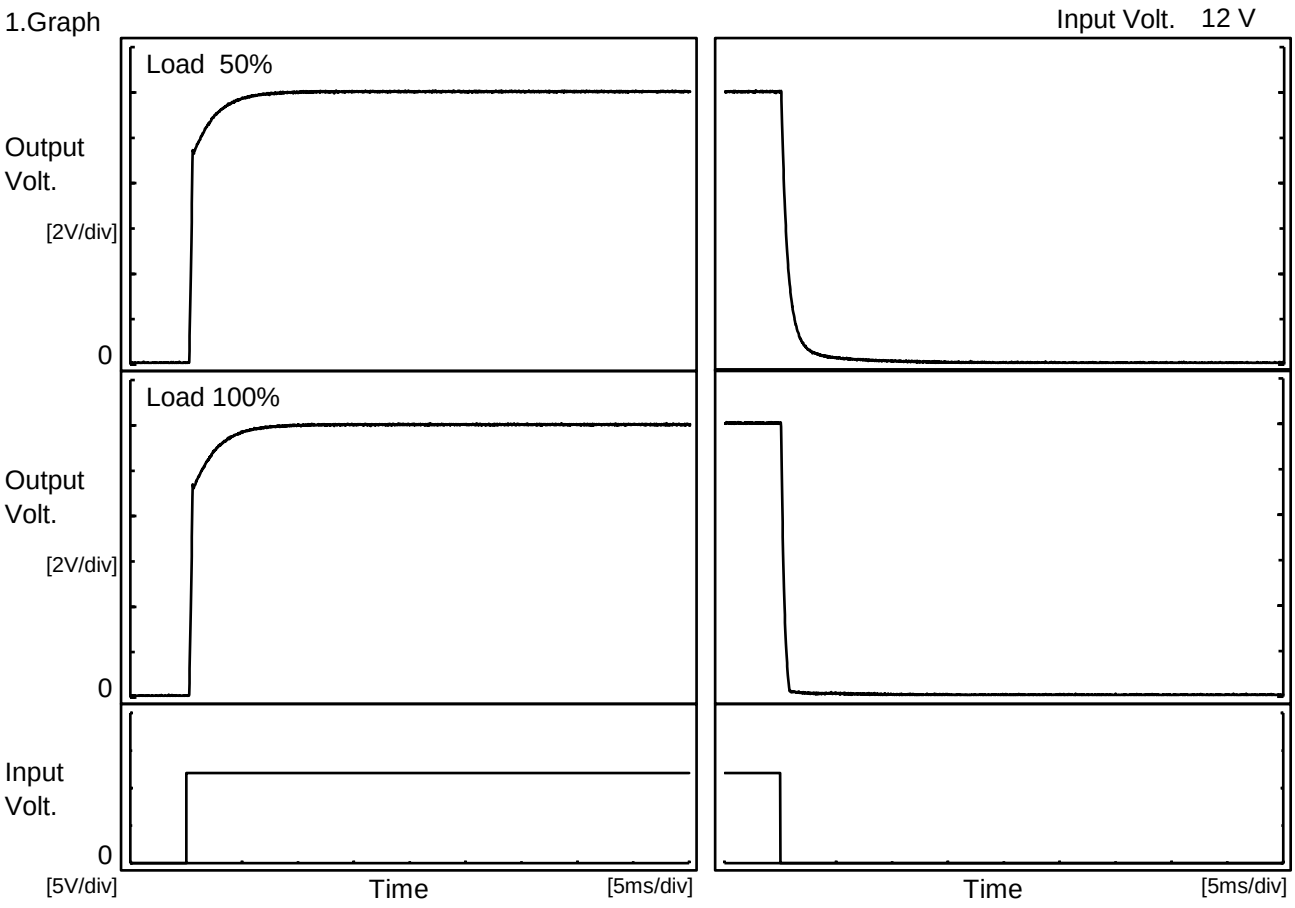
Model	MHFS61212	
Item	Rise and Fall Time	Temperature 25°C Testing Circuitry Figure A
Object	+12V0.5A	

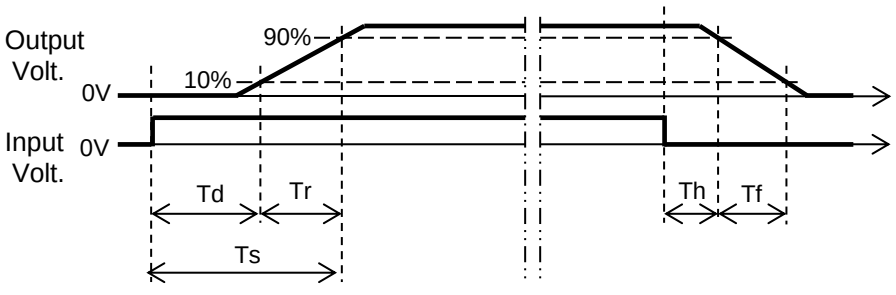
1.Graph



2.Values

[ms]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	0.3	2.0	2.3	0.1	1.5
100 %	0.3	2.2	2.5	0.1	0.5



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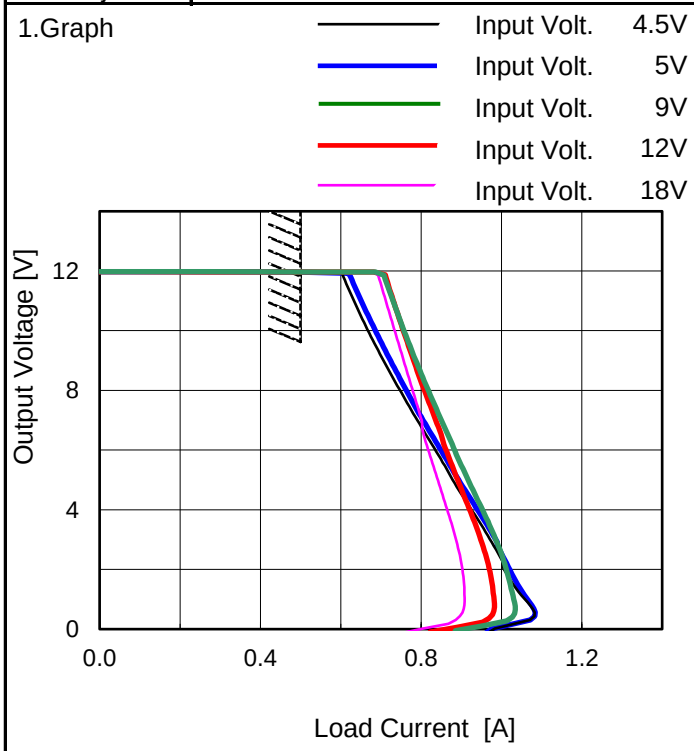
Model	MHFS61212
Item	Overcurrent Protection
Object	+12V0.5A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

Maximum output current at 4.5V 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. 4.5[V]	Input Volt. 5[V]	Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]
11.4	0.618	0.639	0.720	0.722	0.704
10.8	0.638	0.655	0.732	0.733	0.714
9.6	0.680	0.698	0.769	0.766	0.741
8.4	0.726	0.747	0.804	0.797	0.770
7.2	0.780	0.795	0.842	0.830	0.797
6.0	0.833	0.847	0.881	0.860	0.817
4.8	0.884	0.899	0.921	0.894	0.845
3.6	0.944	0.959	0.966	0.930	0.873
2.4	0.996	1.004	1.002	0.963	0.896
1.2	1.043	1.051	1.026	0.980	0.908
0.0	0.968	0.962	0.886	0.822	0.749
--	-	-	-	-	-

COSEL

Model	MHFS61212	
Item	Ambient Temperature Drift	Testing Circuitry Figure A
Object	+12V0.5A	

1.Values

Load 100%

Ambient Temperature[℃]	Output Voltage [V]				
	Input Volt. 4.5V*1	Input Volt. 5V	Input Volt. 9V	Input Volt. 12V	Input Volt. 18V
-40	11.893	11.895	11.896	11.897	11.896
25	11.964	11.964	11.964	11.964	11.963
55	11.973	11.972	11.972	11.972	11.970

*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	3.5	3.6
25	3.5	3.5
55	3.5	3.5

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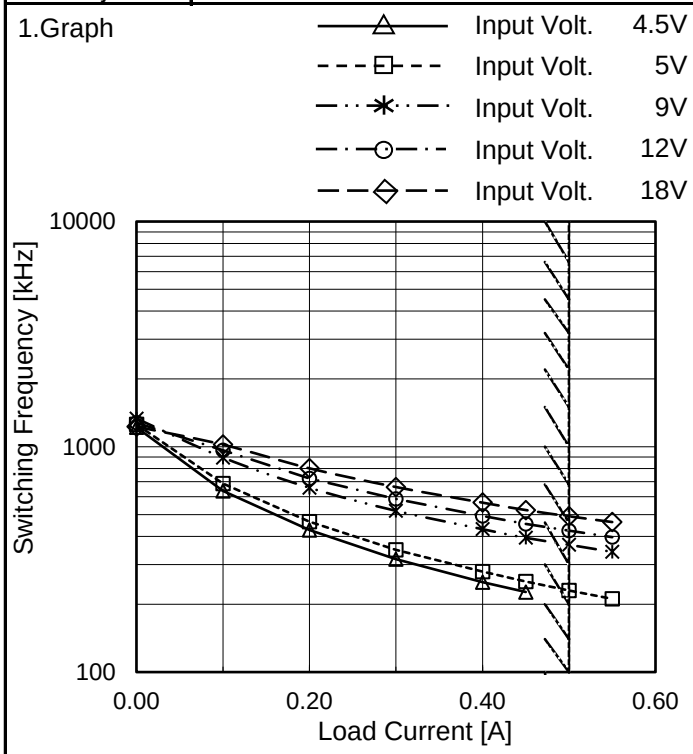
Model	MHFS61212
Item	Switching frequency (by Load Current)
Object	+12V0.5A

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. 4.5[V]	Input Volt. 5[V]	Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]
0.00	1220	1258	1335	1278	1228
0.10	638	686	896	963	1022
0.20	427	465	658	725	803
0.30	318	349	520	588	663
0.40	251	279	431	493	565
0.45	227	252	394	455	524
0.50	*1	230	367	425	492
0.55	*1	211	342	397	463
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

*1 Maximum output current at 4.5V input Voltage is 80% of rated load current. Refer to instruction manuals for details of input derating.

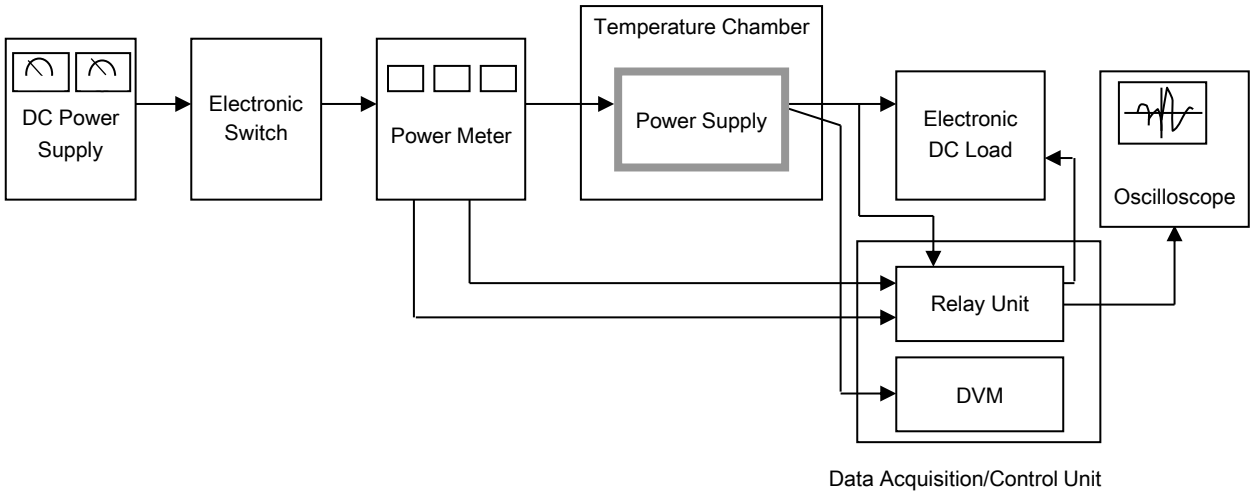


Figure A

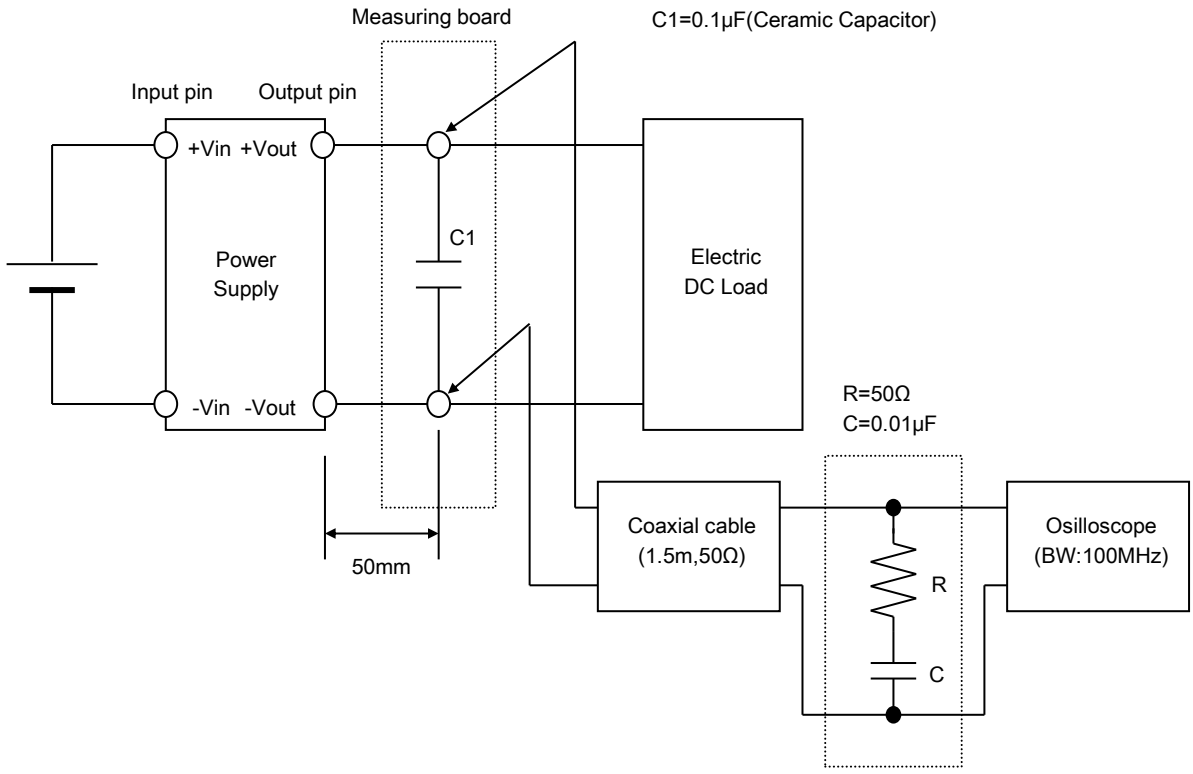


Figure B