参考資料

TEST DATA OF MHFS62415

Regulated DC Power Supply
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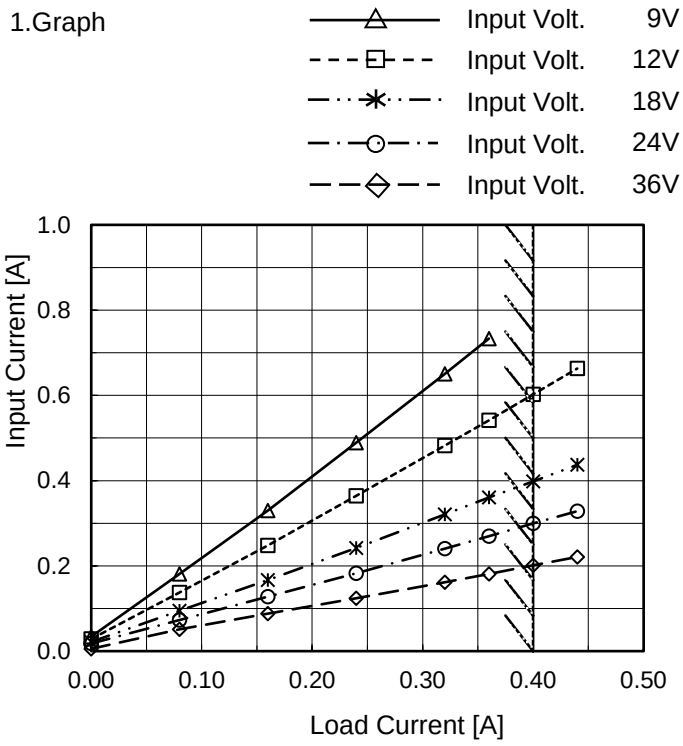
Item	Input Current (by Load Current)
Object	――――――

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	0.034	0.029	0.022	0.018	0.006
0.08	0.181	0.138	0.094	0.073	0.051
0.16	0.330	0.248	0.167	0.128	0.088
0.24	0.489	0.364	0.242	0.183	0.124
0.32	0.651	0.483	0.321	0.241	0.162
0.36	0.733	0.542	0.361	0.270	0.181
0.40	*1	0.602	0.398	0.300	0.201
0.44	*1	0.663	0.437	0.328	0.221
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

*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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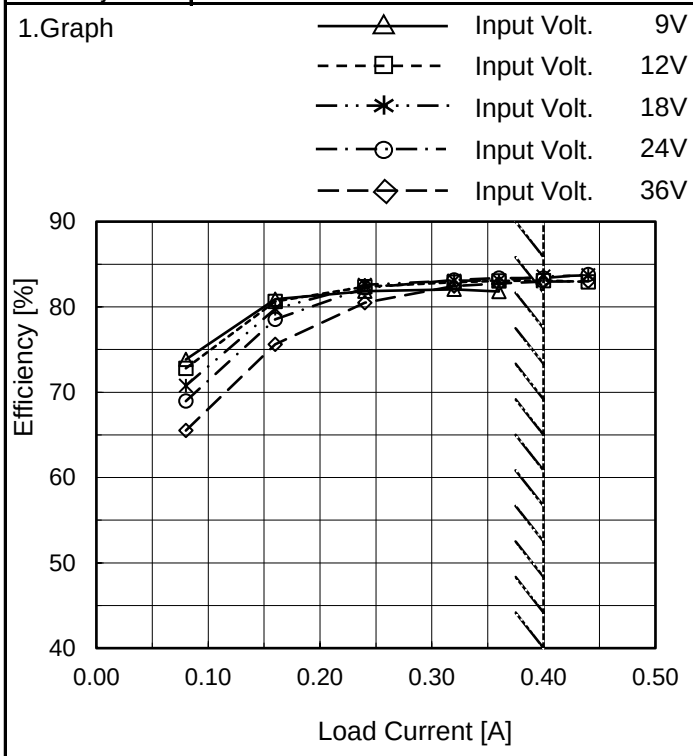
Model	MHFS62415
Item	Efficiency (by Load Current)
Object	————————

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	-	-	-	-	-
0.08	73.8	72.8	70.8	69.0	65.5
0.16	80.9	80.6	79.8	78.5	75.6
0.24	81.8	82.4	82.6	82.2	80.5
0.32	82.1	82.9	83.1	83.2	82.5
0.36	81.8	83.0	83.1	83.4	82.8
0.40	*1	83.1	83.6	83.4	83.0
0.44	*1	82.9	83.7	83.8	83.0
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

*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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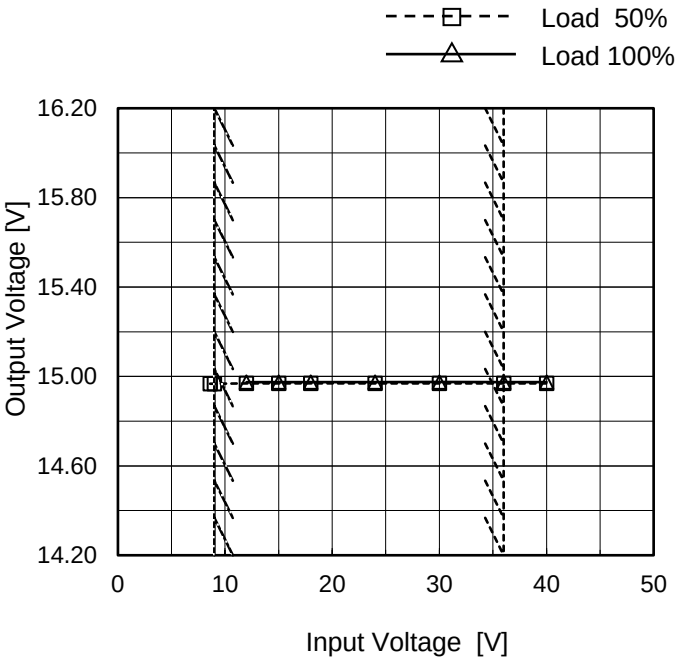
Model	MHFS62415
Item	Line Regulation
Object	+15V0.4A

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	14.967	*1
9.0	14.968	*1
12.0	14.969	14.974
15.0	14.969	14.975
18.0	14.969	14.975
24.0	14.969	14.975
30.0	14.969	14.975
36.0	14.969	14.975
40.0	14.969	14.975

*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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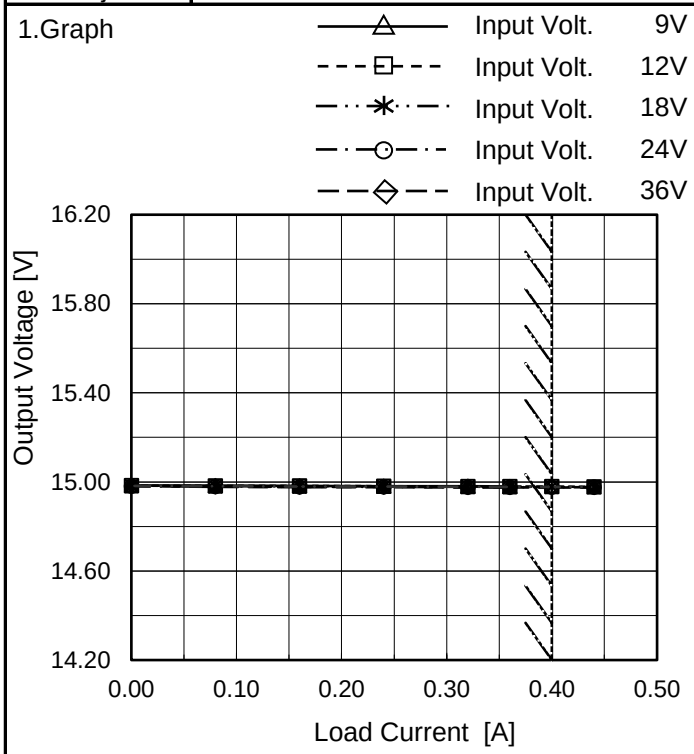
Model	MHFS62415
Item	Load Regulation
Object	+15V0.4A

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	14.984	14.983	14.982	14.981	14.982
0.08	14.983	14.982	14.981	14.979	14.978
0.16	14.982	14.981	14.980	14.978	14.977
0.24	14.981	14.981	14.979	14.978	14.976
0.32	14.980	14.980	14.978	14.977	14.975
0.36	14.980	14.979	14.978	14.977	14.975
0.40	*1	14.979	14.978	14.976	14.975
0.44	*1	14.978	14.977	14.976	14.975
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

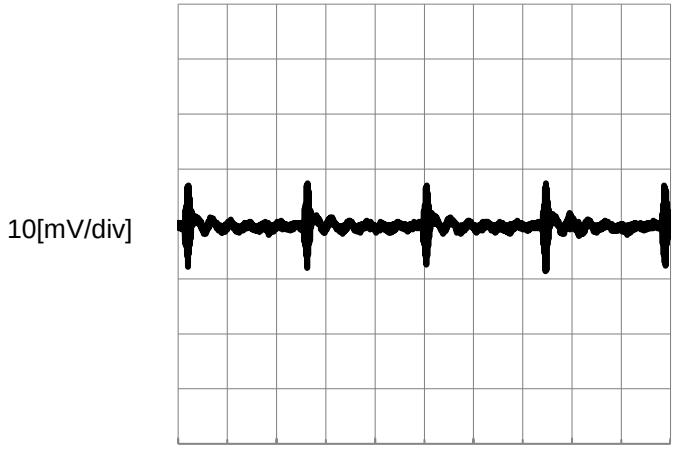
*1 Maximum output current at 9V input Voltage is 80% of rated load current. Refer to instruction manuals for details of input derating.

Item	Ripple-Noise
Object	+15V0.4A

Temperature 25°C
Testing Circuitry Figure B

1.Graph

Input Voltage 24V
Load 100%



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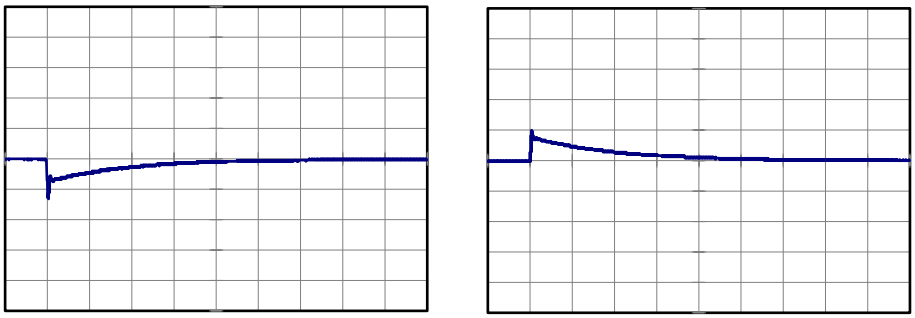
Model	MHFS62415	
Item	Dynamic Load Response	Temperature 25°C Testing Circuitry Figure A
Object	+15V0.4A	

Input Volt. 24 V

Cycle 100 ms

Response. t1=t2=50μs. Typ

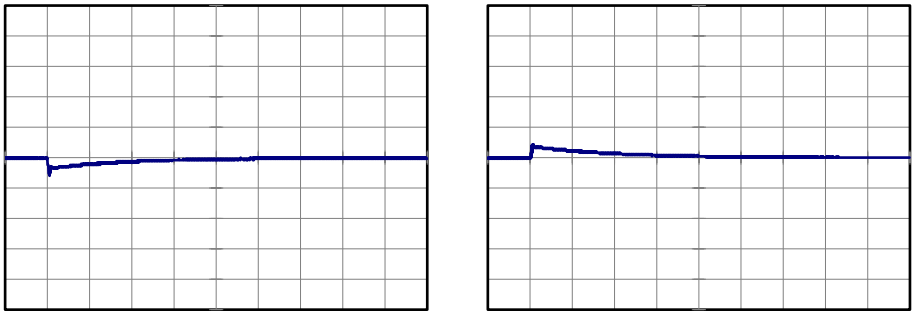
Min.Load (0A)←→
Load 100% (0.4A)



500 mV/div

1 ms/div 1 ms/div

Min.Load (0A)←→
Load 50% (0.2A)



500 mV/div

1 ms/div 1 ms/div

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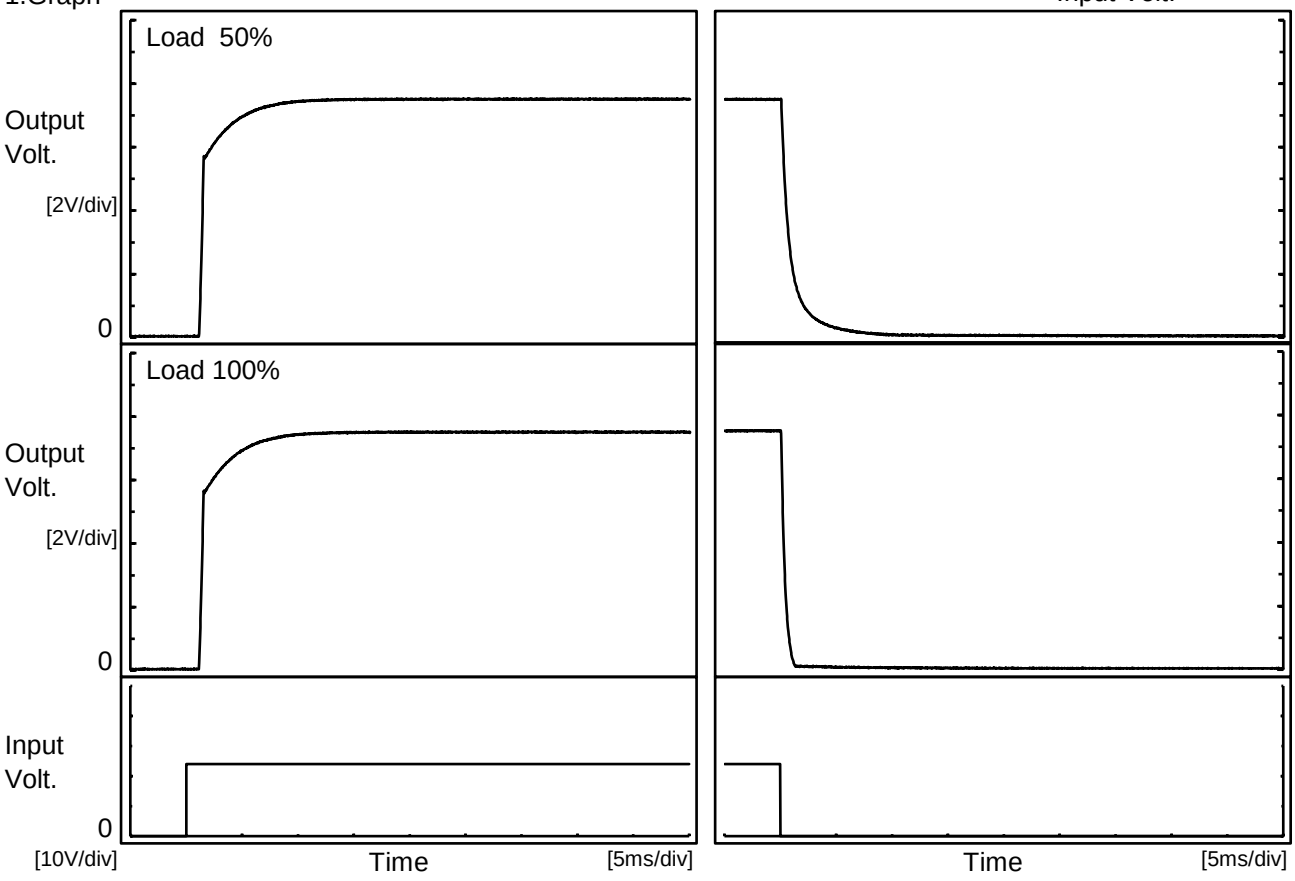
Model	MHFS62415	
Item	Rise and Fall Time	Temperature 25°C Testing Circuitry Figure A
Object	+15V0.4A	

1.Graph

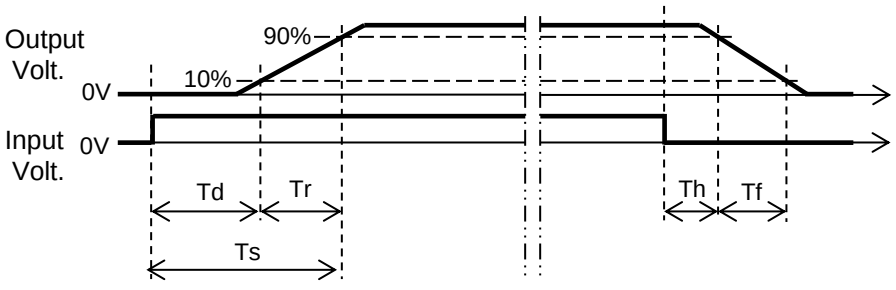
Input Volt. 24 V



2.Values

[ms]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	1.2	3.1	4.3	0.1	2.4
100 %	1.2	3.2	4.4	0.1	0.8



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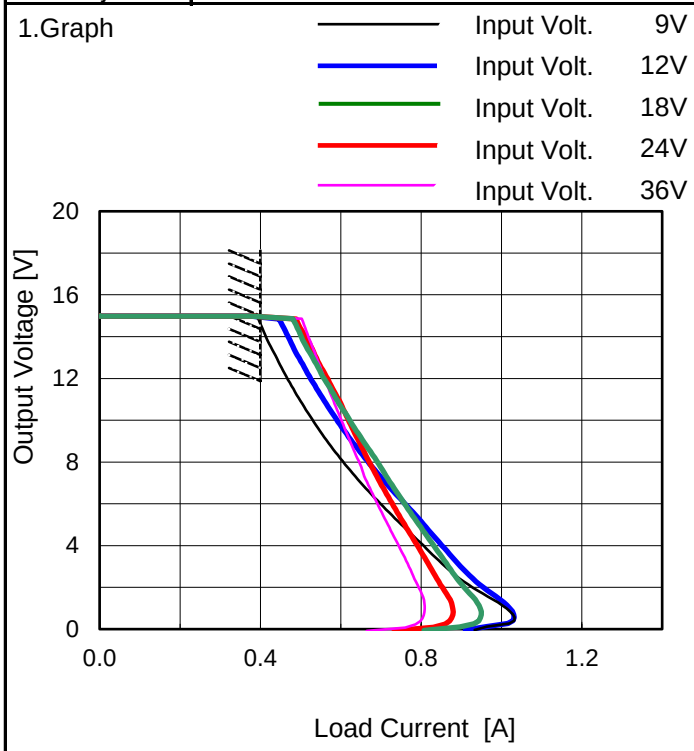
Model	MHFS62415
Item	Overcurrent Protection
Object	+15V0.4A

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]
14.3	0.409	0.462	0.496	0.504	0.514
13.5	0.426	0.480	0.513	0.526	0.529
12.0	0.465	0.522	0.555	0.564	0.558
10.5	0.509	0.573	0.605	0.607	0.591
9.0	0.564	0.625	0.654	0.643	0.622
7.5	0.623	0.685	0.704	0.682	0.654
6.0	0.698	0.758	0.758	0.727	0.691
4.5	0.774	0.825	0.810	0.772	0.729
3.0	0.852	0.898	0.863	0.818	0.767
1.5	0.966	0.986	0.928	0.868	0.805
0.0	0.934	0.910	0.807	0.733	0.665
--	-	-	-	-	-

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Model	MHFS62415	
Item	Ambient Temperature Drift	Testing Circuitry Figure A
Object	+15V0.4A	

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	14.863	14.865	14.867	14.870	14.871
25	14.968	14.968	14.969	14.969	14.969
55	14.989	14.988	14.988	14.988	14.988

*1 Load 80%

Item	Minimum Input Voltage for Regulated Output Voltage	Testing Circuitry Figure A
Object	+15V0.4A	

1.Values

Ambient Temperature[℃]	Input Voltage [V]	
	Load 50%	Load 80%
-40	7.3	7.2
25	7.2	7.2
55	7.0	7.0

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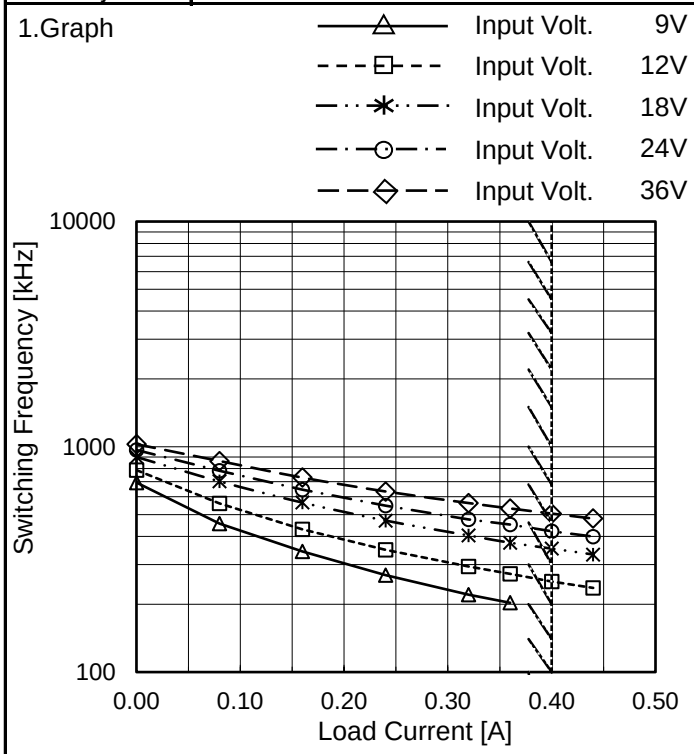
Model	MHFS62415
Item	Switching frequency (by Load Current)
Object	+15V0.4A

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	694	788	901	968	1027
0.08	456	561	702	782	865
0.16	343	430	565	645	730
0.24	270	349	470	549	633
0.32	220	294	404	476	563
0.36	203	273	375	452	533
0.40	*1	253	353	421	505
0.44	*1	236	333	400	480
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

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

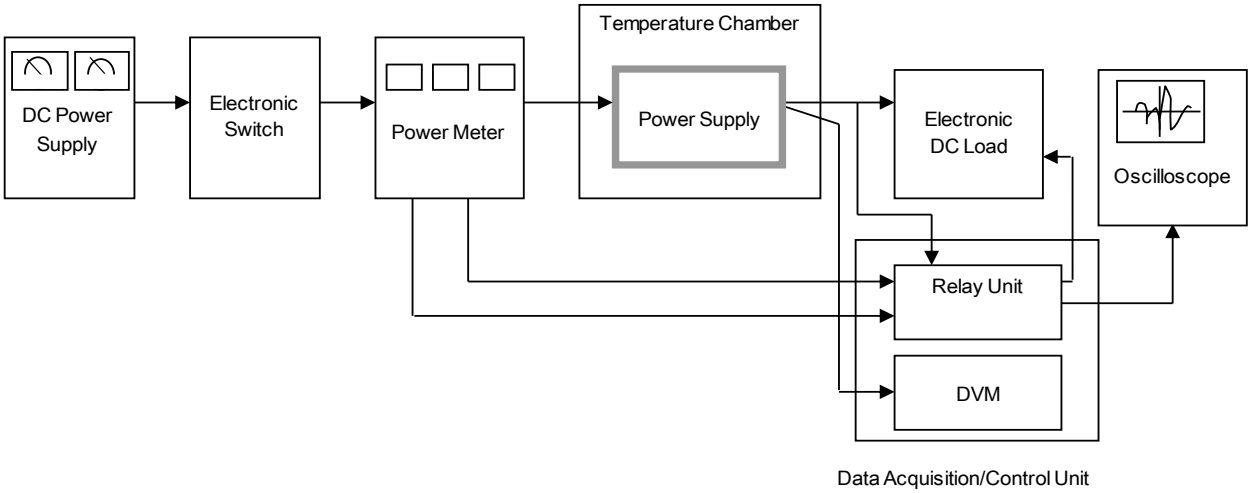


Figure A

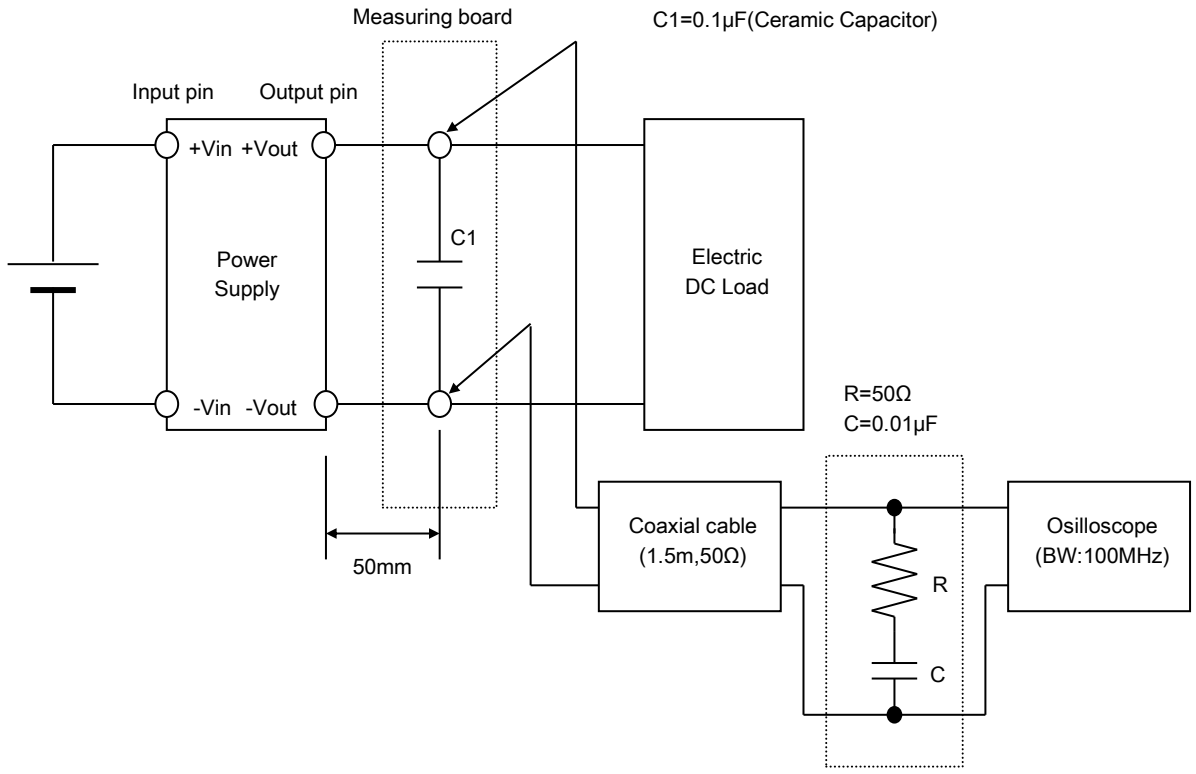


Figure B