参考資料

TEST DATA OF MHFS64815

Regulated DC Power Supply
October 26, 2021

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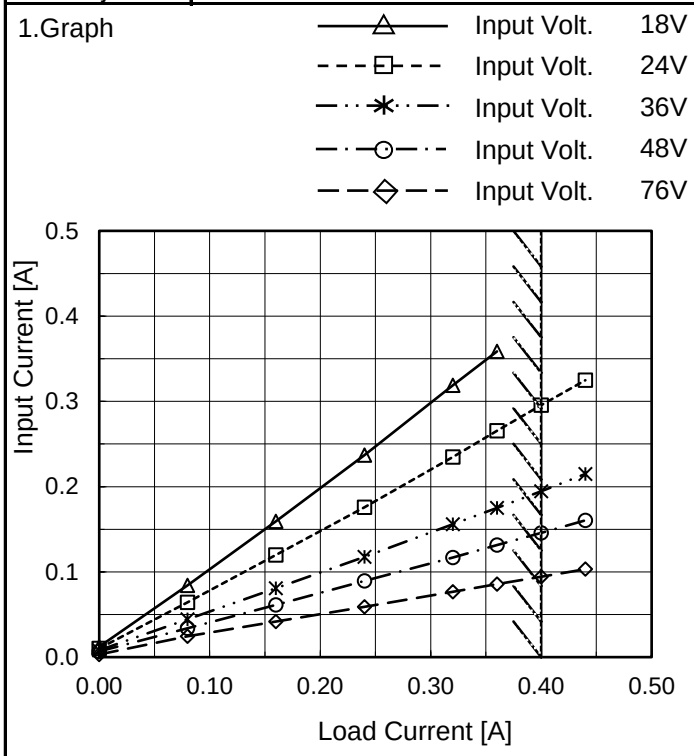
Model	MHFS64815
Item	Input Current (by Load Current)
Object	————————

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. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
0.00	0.012	0.010	0.008	0.007	0.003
0.08	0.084	0.064	0.044	0.034	0.024
0.16	0.159	0.120	0.081	0.061	0.042
0.24	0.237	0.176	0.118	0.089	0.059
0.32	0.319	0.235	0.156	0.117	0.077
0.36	0.359	0.265	0.175	0.131	0.086
0.40	*1	0.295	0.195	0.146	0.094
0.44	*1	0.325	0.215	0.160	0.103
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

*1 Maximum output current at 18V input Voltage is 80% of rated load current. Refer to instruction manuals for details of input derating.

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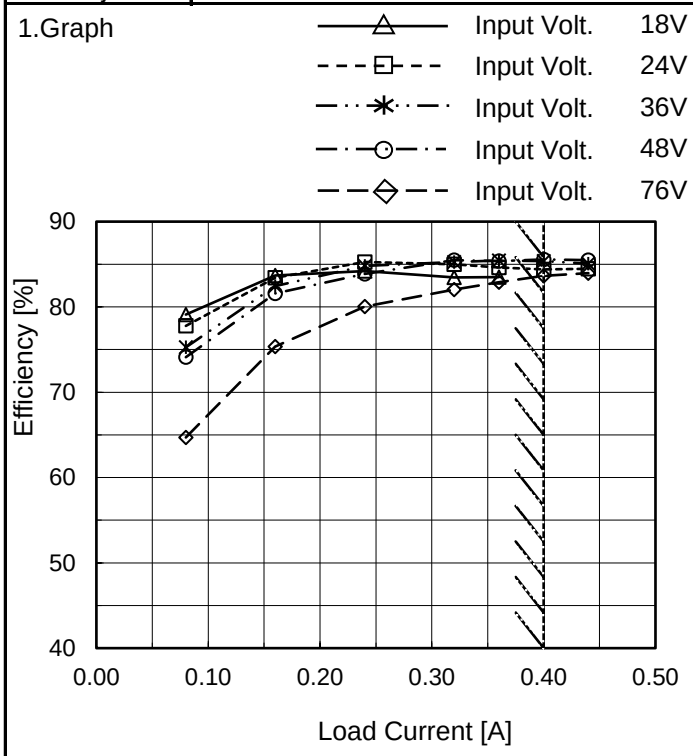
Model	MHFS64815
Item	Efficiency (by Load Current)
Object	————————

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. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
0.00	-	-	-	-	-
0.08	79.1	77.8	75.3	74.1	64.7
0.16	83.7	83.4	82.4	81.6	75.4
0.24	84.2	85.3	84.8	83.9	80.0
0.32	83.5	85.0	85.3	85.5	82.0
0.36	83.5	84.6	85.4	85.4	82.9
0.40	*1	84.4	85.4	85.6	83.7
0.44	*1	84.5	85.1	85.5	84.0
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

*1 Maximum output current at 18V input Voltage is 80% of rated load current. Refer to instruction manuals for details of input derating.

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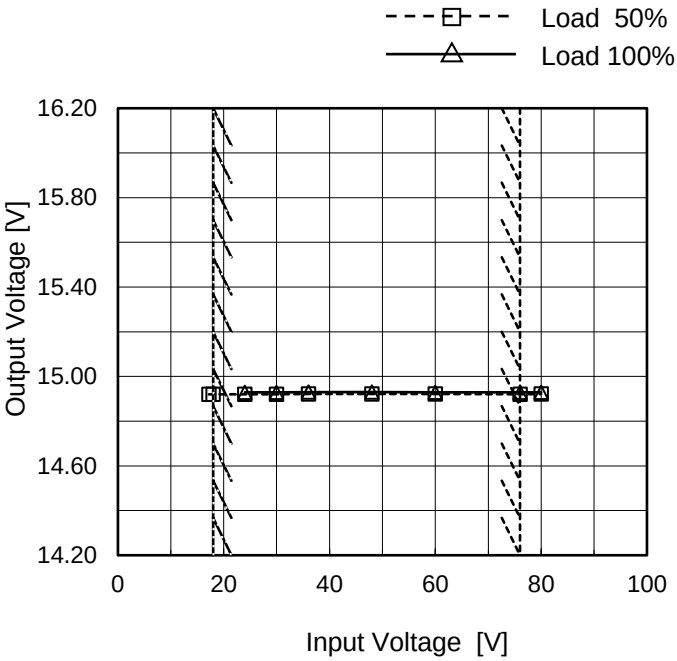
Model	MHFS64815
Item	Line Regulation
Object	+15V0.4A

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%
17.2	14.920	*1
18.0	14.921	*1
24.0	14.921	14.929
30.0	14.921	14.929
36.0	14.921	14.930
48.0	14.921	14.930
60.0	14.921	14.929
76.0	14.921	14.929
80.0	14.921	14.929

*1 Maximum output current at 18V input Voltage is 80% of rated load current. Refer to instruction manuals for details of input derating.

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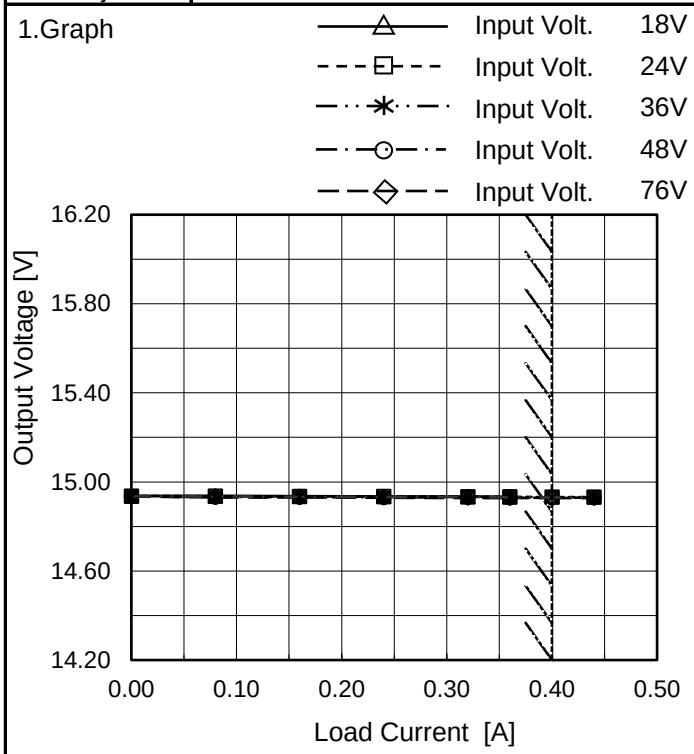
Model	MHFS64815
Item	Load Regulation
Object	+15V0.4A

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. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
0.00	14.938	14.937	14.935	14.934	14.934
0.08	14.937	14.936	14.934	14.932	14.931
0.16	14.936	14.935	14.933	14.932	14.930
0.24	14.935	14.934	14.932	14.931	14.929
0.32	14.934	14.933	14.931	14.930	14.928
0.36	14.933	14.933	14.931	14.929	14.928
0.40	*1	14.932	14.931	14.929	14.928
0.44	*1	14.932	14.930	14.929	14.928
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

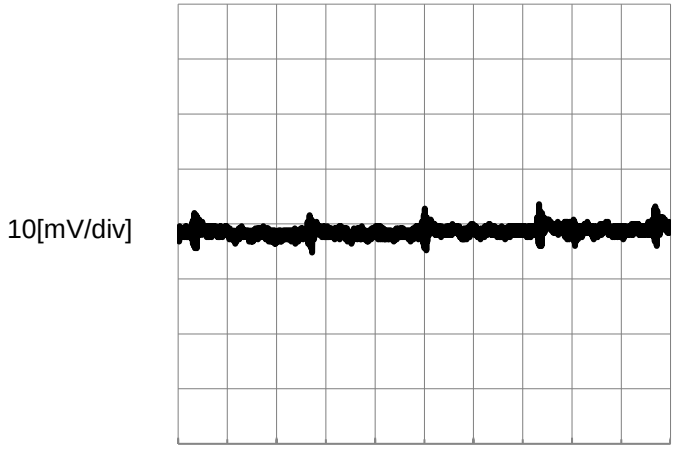
*1 Maximum output current at 18V input Voltage is 80% of rated load current. Refer to instruction manuals for details of input derating.

Item	Ripple-Noise
Object	+15V0.4A

Temperature 25°C
Testing Circuitry Figure B

1.Graph

Input Voltage 48V
Load 100%



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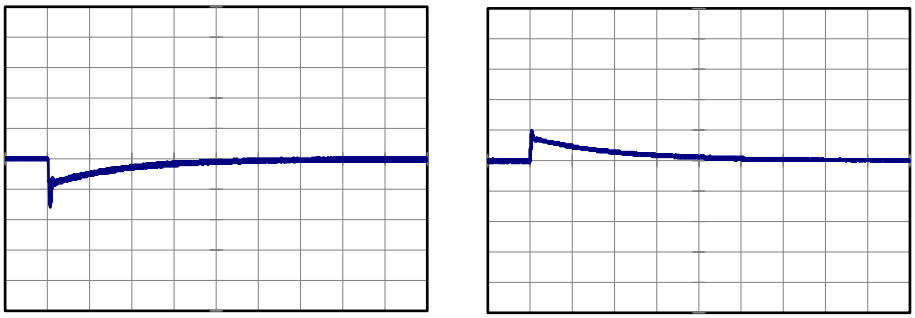
Model	MHFS64815	
Item	Dynamic Load Response	Temperature 25°C Testing Circuitry Figure A
Object	+15V0.4A	

Input Volt. 48 V

Cycle 100 ms

Response. t1=t2=50μs. Typ

Min.Load (0A)←→
Load 100% (0.4A)

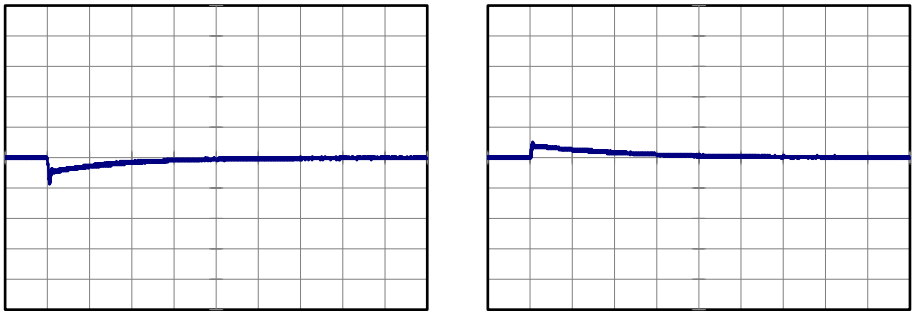


500 mV/div

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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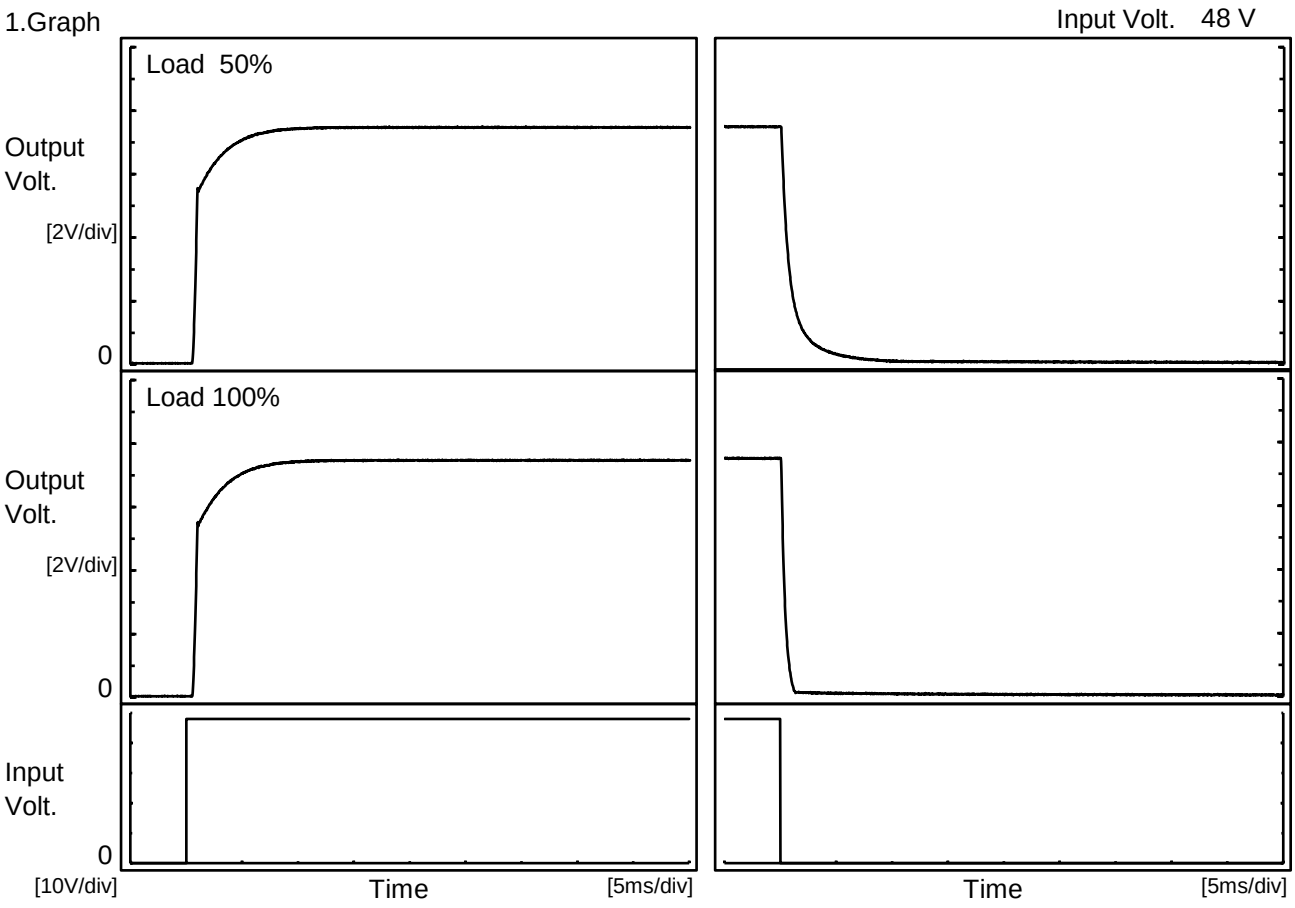
Model	MHFS64815	
Item	Rise and Fall Time	Temperature 25°C Testing Circuitry Figure A
Object	+15V0.4A	

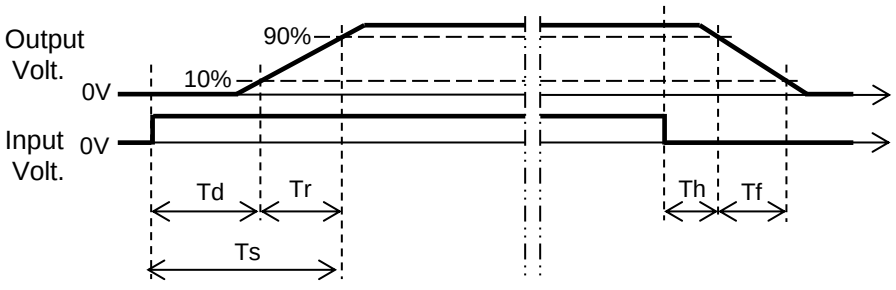
1.Graph



2.Values

[ms]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	0.7	3.0	3.7	0.2	2.5
100 %	0.7	3.2	3.9	0.1	0.8



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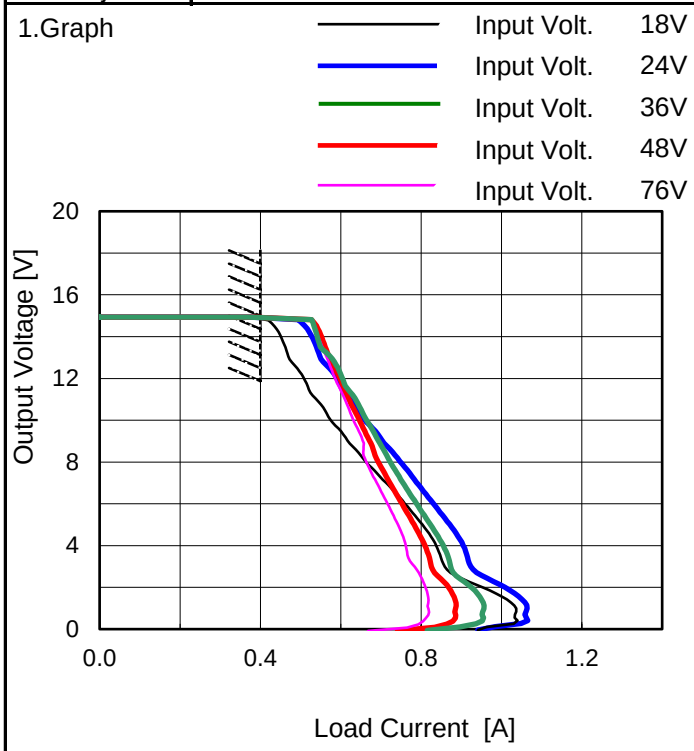
Model	MHFS64815
Item	Overcurrent Protection
Object	+15V0.4A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

Maximum output current at 18V 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. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
14.3	0.445	0.521	0.538	0.547	0.538
13.5	0.459	0.540	0.550	0.562	0.554
12.0	0.507	0.588	0.603	0.596	0.584
10.5	0.556	0.640	0.647	0.630	0.618
9.0	0.617	0.702	0.693	0.671	0.655
7.5	0.684	0.766	0.736	0.705	0.674
6.0	0.760	0.830	0.788	0.752	0.717
4.5	0.820	0.887	0.838	0.795	0.753
3.0	0.855	0.920	0.872	0.824	0.778
1.5	1.001	1.043	0.946	0.882	0.818
0.0	0.941	0.942	0.815	0.741	0.668
--	-	-	-	-	-

Model	MHFS64815	
Item	Ambient Temperature Drift	Testing Circuitry Figure A
Object	+15V0.4A	

1.Values

Load 100%

Ambient Temperature[℃]	Output Voltage [V]				
	Input Volt. 18V*1	Input Volt. 24V	Input Volt. 36V	Input Volt. 48V	Input Volt. 76V
-40	14.802	14.806	14.809	14.812	14.813
25	14.920	14.921	14.922	14.922	14.922
60	14.948	14.948	14.948	14.948	14.948

*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	14.3	14.3
25	14.3	14.2
60	14.0	14.0

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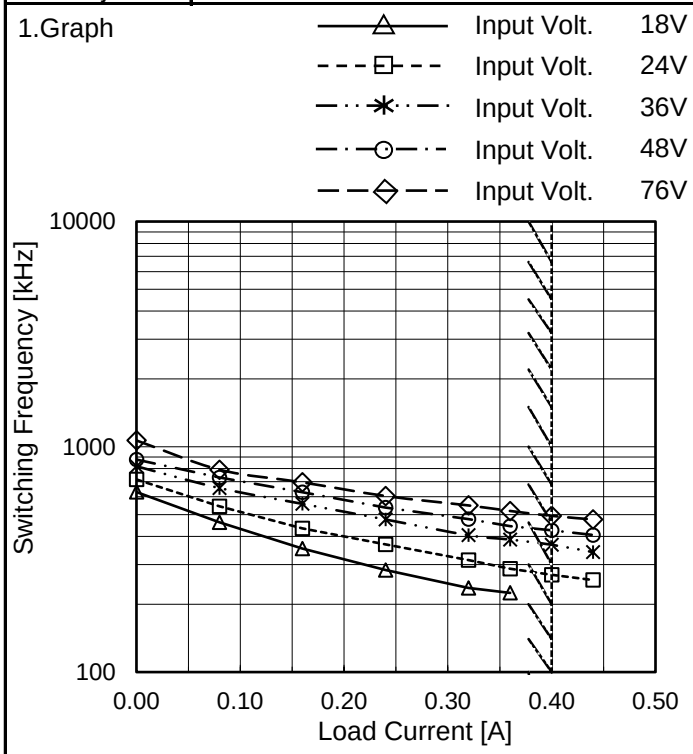
Model	MHFS64815
Item	Switching frequency (by Load Current)
Object	+15V0.4A

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. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
0.00	630	716	819	878	1067
0.08	462	544	656	730	791
0.16	353	434	558	629	695
0.24	284	368	476	537	605
0.32	237	314	405	477	549
0.36	225	288	387	444	519
0.40	*1	270	367	427	494
0.44	*1	256	341	406	476
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

*1 Maximum output current at 18V input Voltage is 80% of rated load current. Refer to instruction manuals for details of input derating.

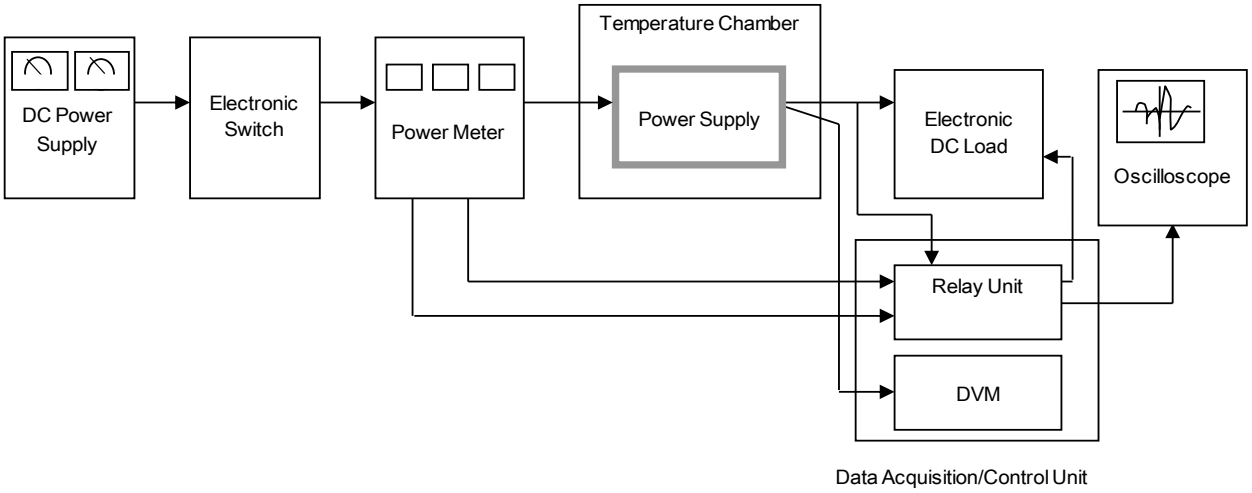


Figure A

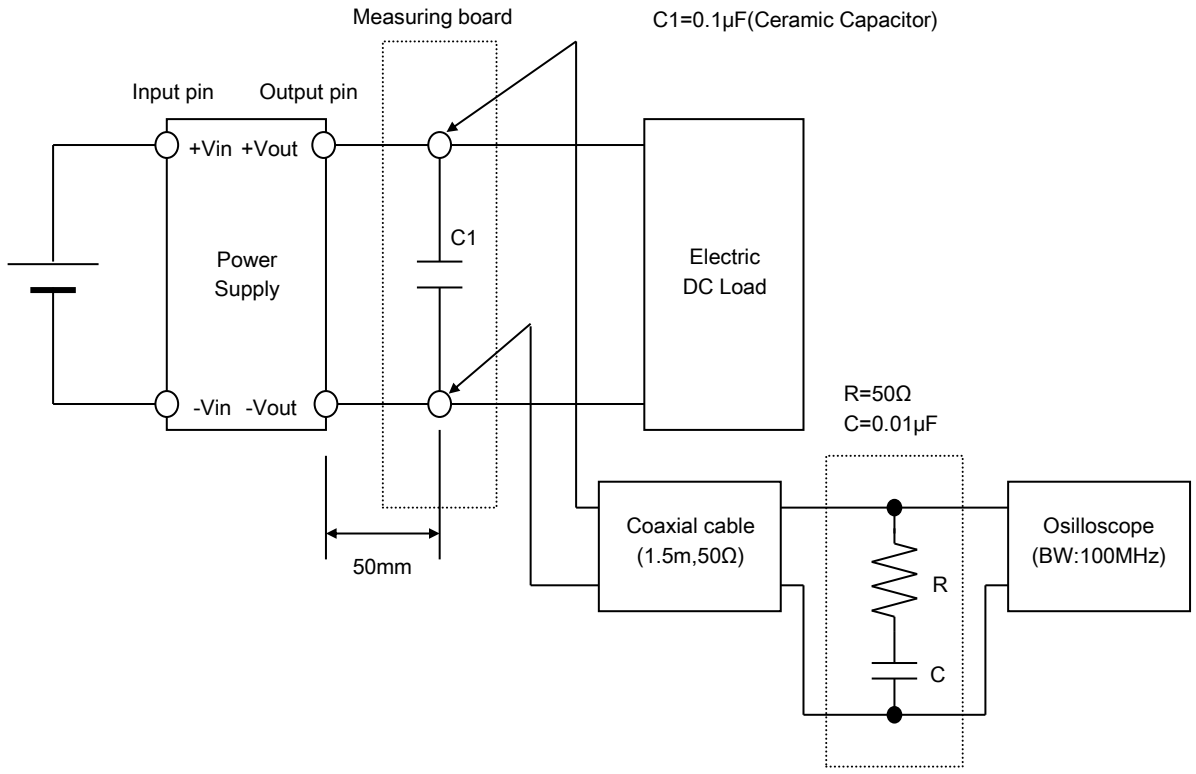


Figure B