参考資料

TEST DATA OF MHFS64805

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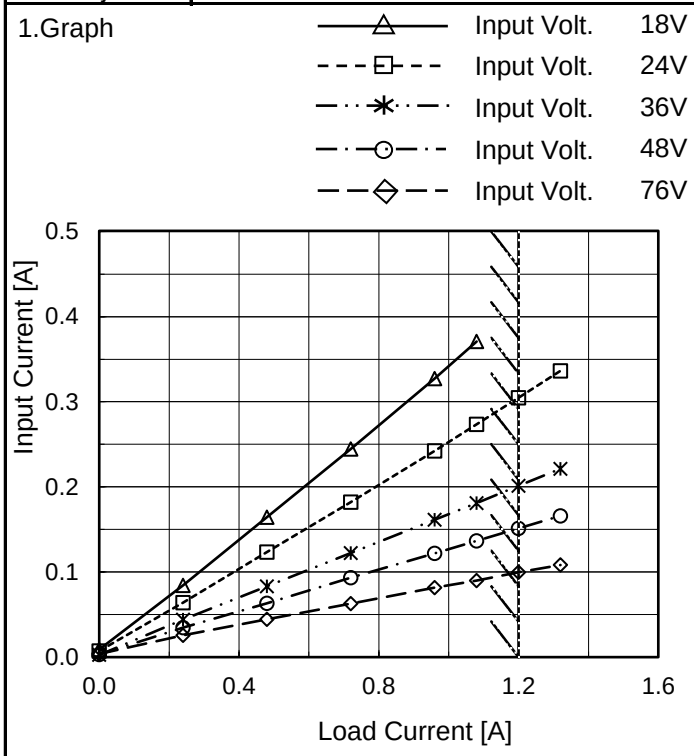
Item	Input Current (by Load Current)
Object	———————

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. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
0.00	0.009	0.007	0.003	0.003	0.004
0.24	0.084	0.064	0.044	0.034	0.026
0.48	0.164	0.123	0.083	0.063	0.044
0.72	0.245	0.182	0.122	0.093	0.063
0.96	0.327	0.242	0.161	0.122	0.082
1.08	0.371	0.273	0.181	0.136	0.090
1.20	*1	0.305	0.201	0.151	0.100
1.32	*1	0.336	0.221	0.166	0.108
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

*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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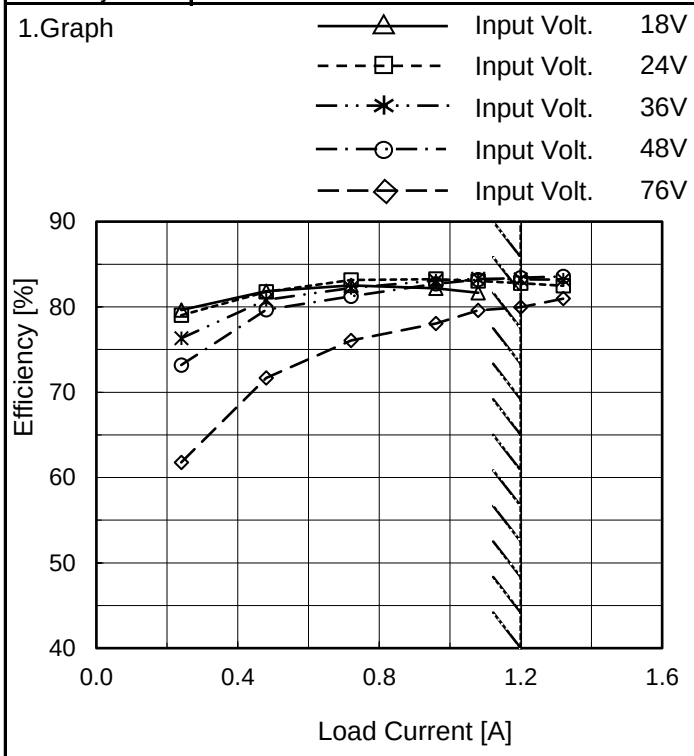
Model	MHFS64805
Item	Efficiency (by Load Current)
Object	————————

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	-	-	-	-	-
0.24	79.6	79.0	76.3	73.2	61.8
0.48	81.8	81.8	80.8	79.7	71.7
0.72	82.5	83.1	82.2	81.2	76.1
0.96	82.2	83.3	83.1	82.7	78.1
1.08	81.6	83.0	83.3	83.2	79.6
1.20	*1	82.8	83.2	83.4	80.0
1.32	*1	82.5	83.2	83.6	81.0
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

*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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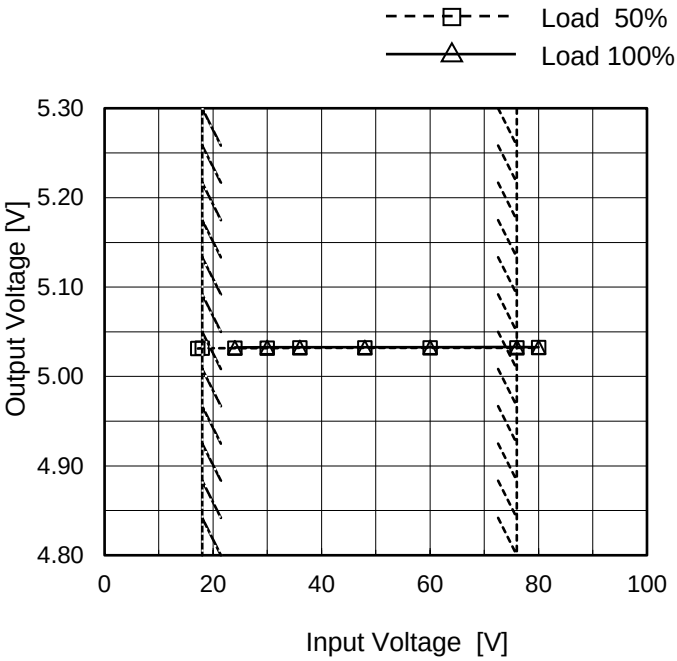
Model	MHFS64805
Item	Line Regulation
Object	+5V1.2A

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	5.031	*1
18.0	5.032	*1
24.0	5.032	5.033
30.0	5.032	5.033
36.0	5.032	5.033
48.0	5.032	5.033
60.0	5.032	5.033
76.0	5.032	5.033
80.0	5.032	5.033

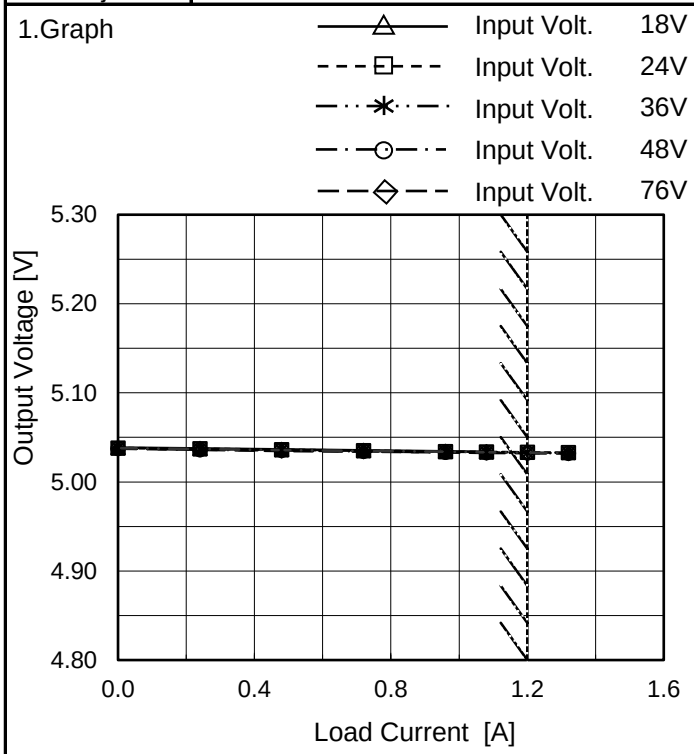
*1 Maximum output current at 18V input Voltage is 80% of rated load current. Refer to instruction manuals for details of input derating.

COSEL

Model	MHFS64805
Item	Load Regulation
Object	+5V1.2A

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	5.039	5.038	5.038	5.038	5.037
0.24	5.038	5.037	5.037	5.036	5.036
0.48	5.036	5.036	5.036	5.035	5.035
0.72	5.035	5.035	5.035	5.034	5.034
0.96	5.034	5.034	5.034	5.033	5.033
1.08	5.034	5.034	5.033	5.033	5.033
1.20	*1	5.033	5.033	5.033	5.032
1.32	*1	5.033	5.033	5.032	5.032
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

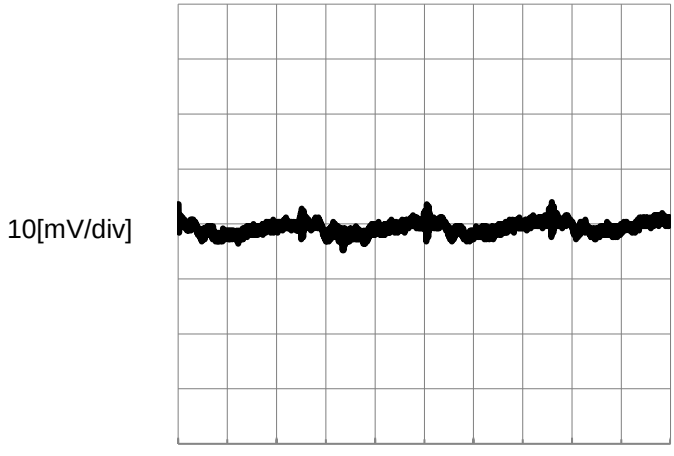
*1 Maximum output current at 18V input Voltage is 80% of rated load current. Refer to instruction manuals for details of input derating.

Item	Ripple-Noise
Object	+5V1.2A

Temperature 25°C
Testing Circuitry Figure B

1.Graph

Input Voltage 48V
Load 100%



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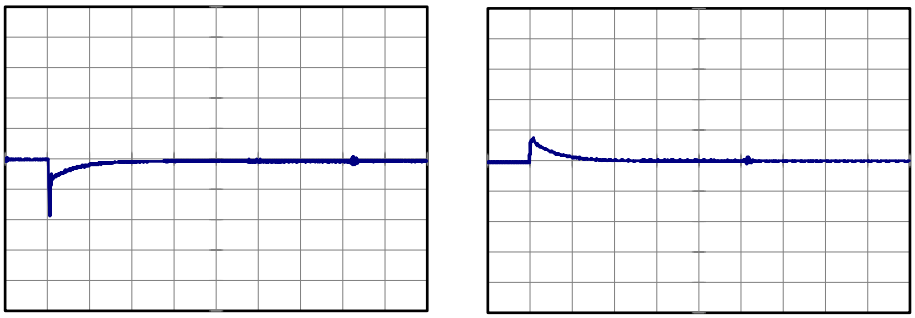
Model	MHFS64805	
Item	Dynamic Load Response	Temperature 25°C Testing Circuitry Figure A
Object	+5V1.2A	

Input Volt. 48 V
Cycle 100 ms

Response. t1=t2=50μs. Typ

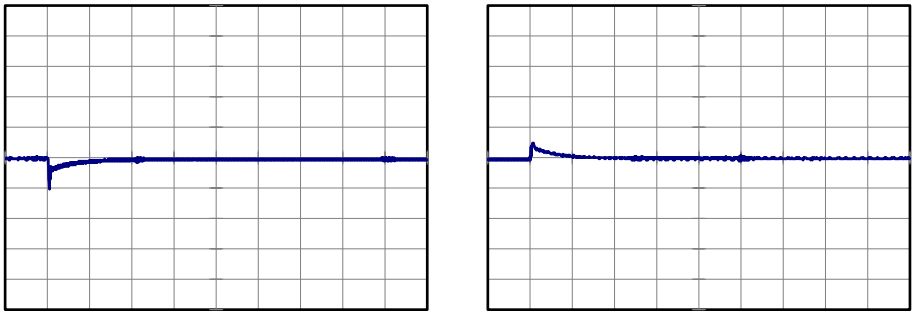
Min.Load (0A)←→
Load 100% (1.2A)



200 mV/div

1 ms/div 1 ms/div

Min.Load (0A)←→
Load 50% (0.6A)



200 mV/div

1 ms/div 1 ms/div

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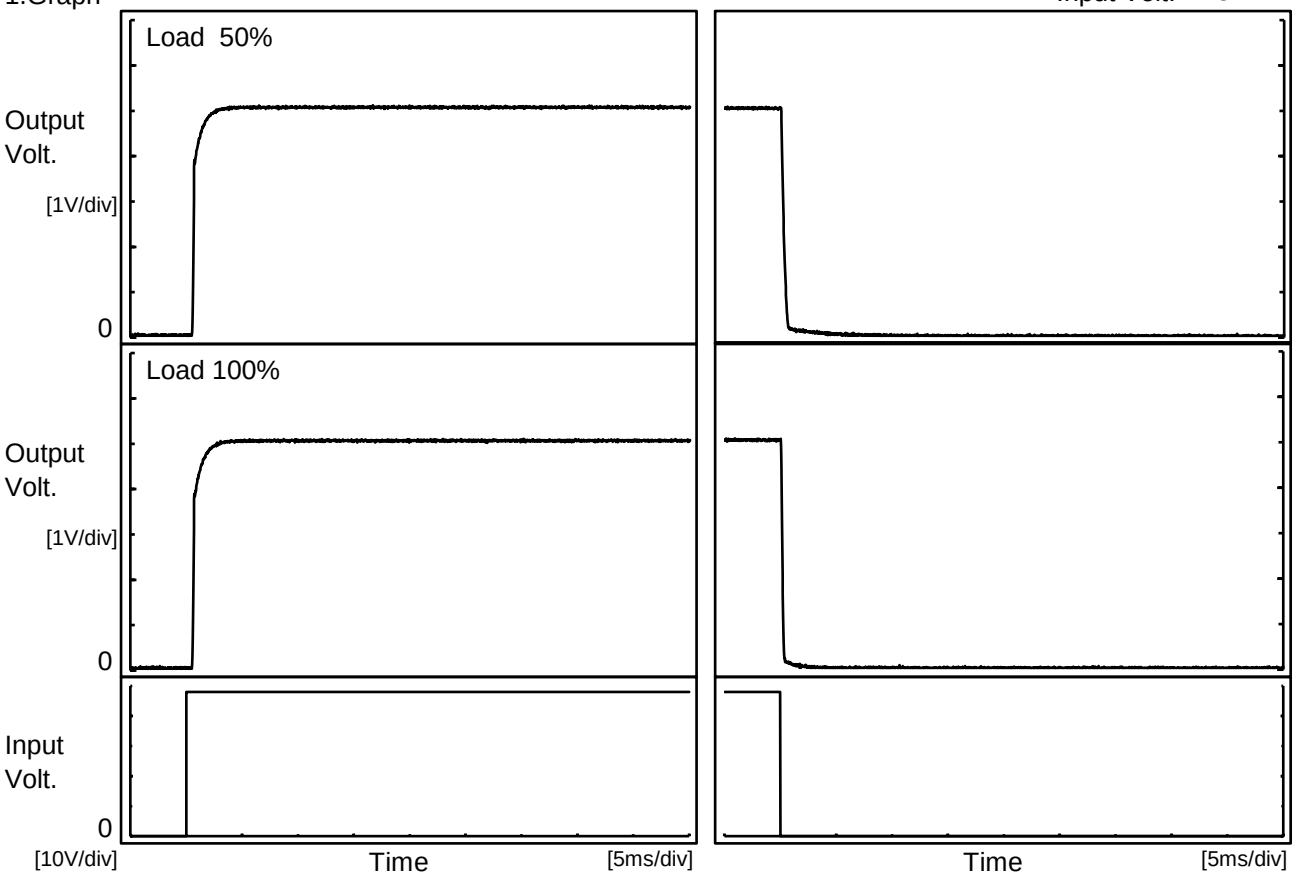
Model	MHFS64805
Item	Rise and Fall Time
Object	+5V1.2A

Temperature 25°C
Testing Circuitry Figure A

1.Graph

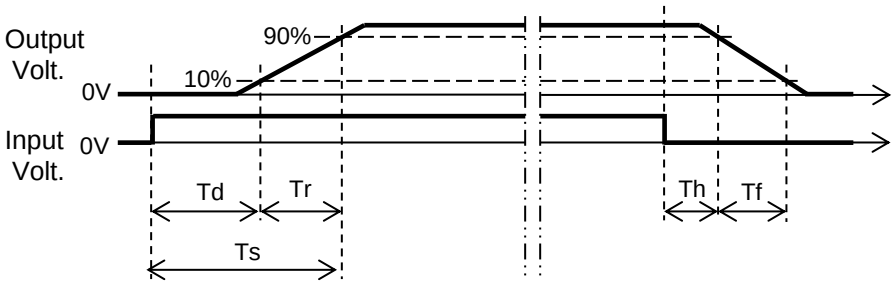
Input Volt. 48 V



2.Values

[ms]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	0.6	0.8	1.4	0.1	0.5
100 %	0.6	0.8	1.4	0.1	0.2



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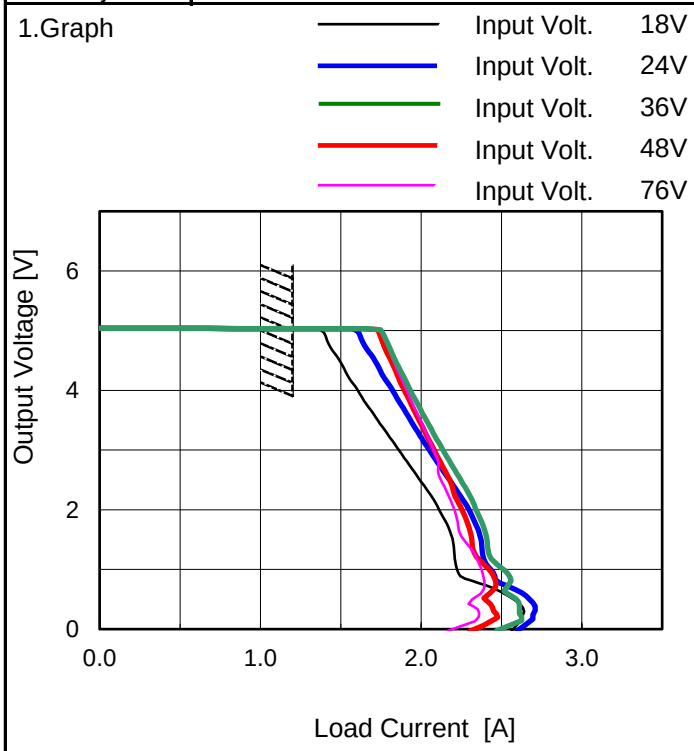
Model	MHFS64805
Item	Overcurrent Protection
Object	+5V1.2A

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]
4.75	1.425	1.646	1.801	1.772	1.787
4.50	1.482	1.703	1.839	1.803	1.823
4.00	1.605	1.816	1.926	1.890	1.911
3.50	1.718	1.928	2.028	1.986	1.991
3.00	1.852	2.048	2.136	2.073	2.069
2.50	1.987	2.173	2.237	2.173	2.123
2.00	2.101	2.297	2.339	2.245	2.201
1.50	2.195	2.369	2.407	2.315	2.263
1.00	2.218	2.433	2.499	2.422	2.369
0.50	2.562	2.654	2.592	2.391	2.372
0.00	2.562	2.596	2.471	2.299	2.164
--	-	-	-	-	-

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Model	MHFS64805
Item	Ambient Temperature Drift
Object	+5V1.2A

Testing Circuitry Figure A

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	5.019	5.019	5.019	5.019	5.019
25	5.030	5.030	5.031	5.031	5.031
55	5.036	5.036	5.036	5.037	5.037

*1 Load 80%

Item	Minimum Input Voltage for Regulated Output Voltage
Object	+5V1.2A

Testing Circuitry Figure A

1.Values

Ambient Temperature[℃]	Input Voltage [V]	
	Load 50%	Load 80%
-40	14.6	14.9
25	14.4	14.6
55	14.2	14.3

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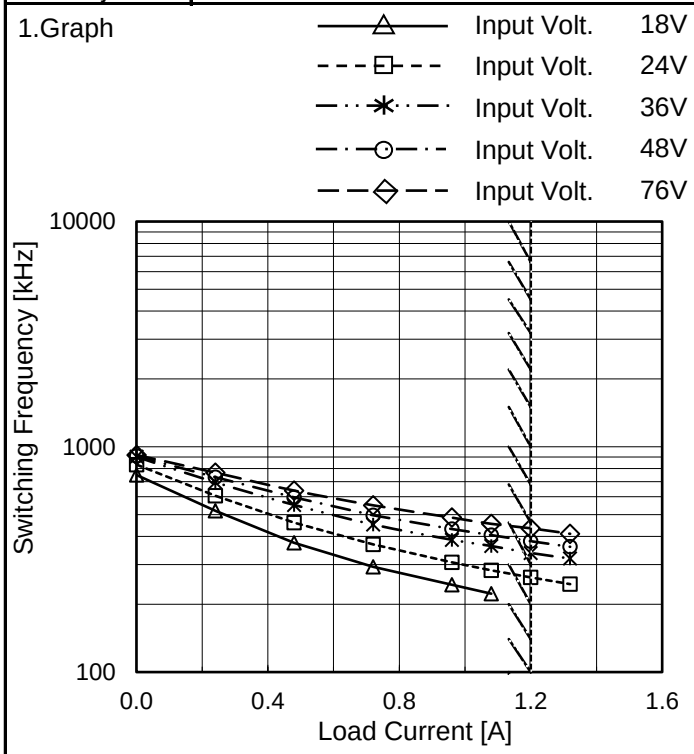
Model	MHFS64805
Item	Switching frequency (by Load Current)
Object	+5V1.2A

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	750	834	903	909	920
0.24	521	607	695	732	768
0.48	375	460	552	596	639
0.72	293	368	452	496	550
0.96	244	307	387	431	485
1.08	223	283	363	406	455
1.20	*1	263	338	381	435
1.32	*1	246	319	360	411
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

*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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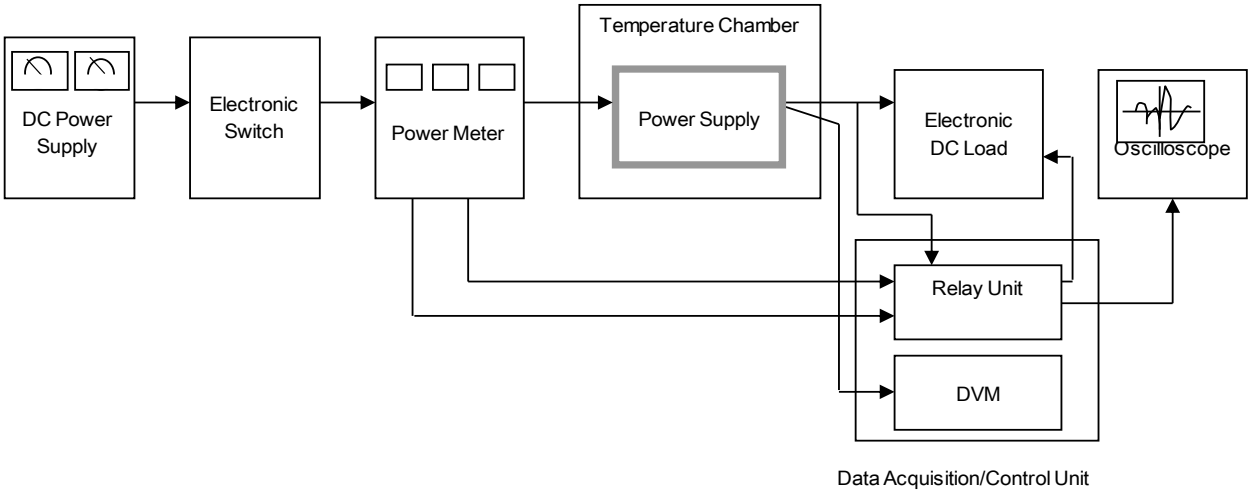

Figure A

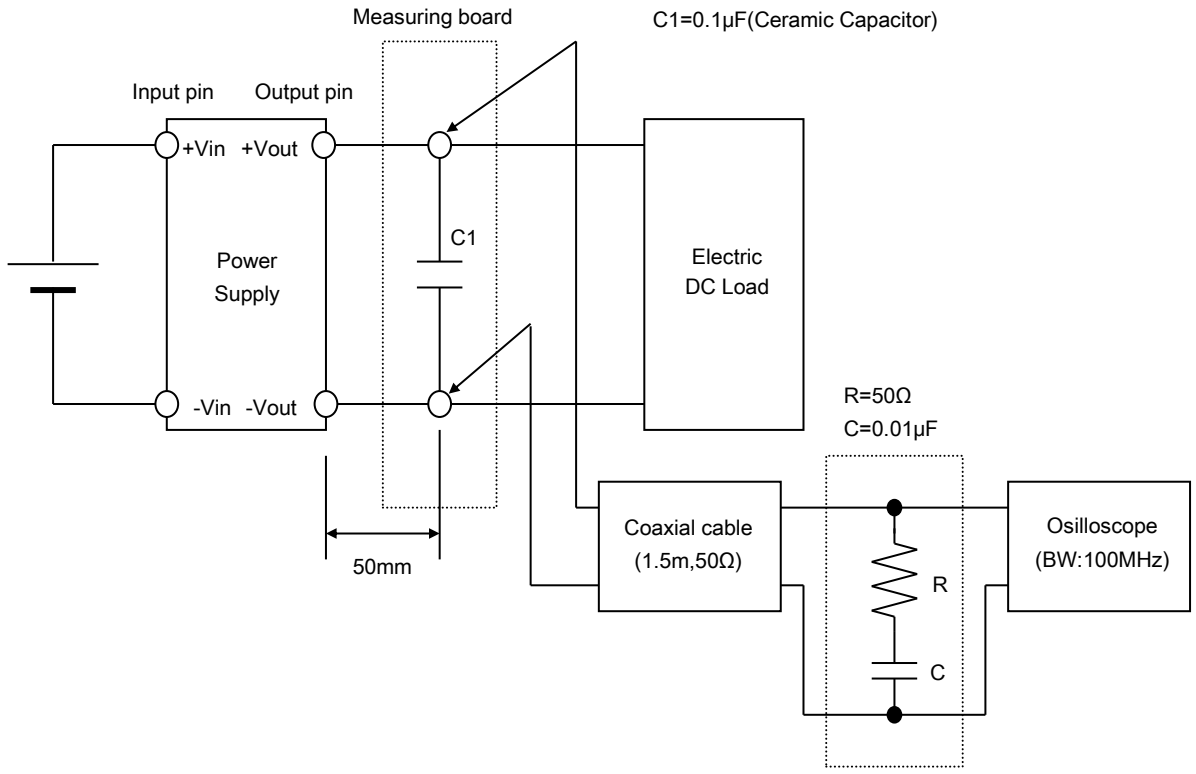

Figure B