参考資料

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TEST DATA OF MHFS3123R3

Regulated DC Power Supply
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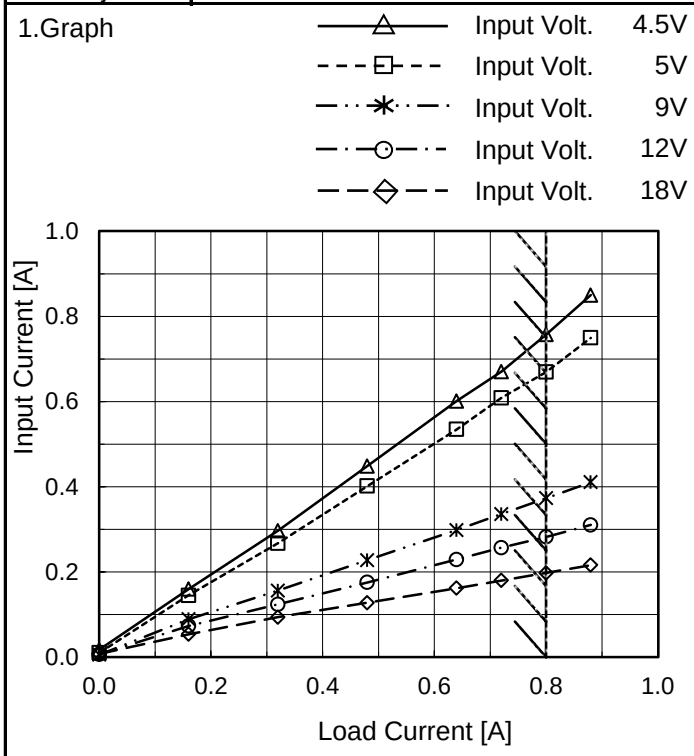
Model	MHFS3123R3
Item	Input Current (by Load Current)
Object	―――――――――

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	0.017	0.010	0.006	0.006	0.007
0.16	0.160	0.145	0.089	0.073	0.054
0.32	0.297	0.268	0.156	0.124	0.094
0.48	0.449	0.402	0.228	0.175	0.128
0.64	0.601	0.535	0.299	0.229	0.162
0.72	0.671	0.609	0.336	0.257	0.180
0.80	0.757	0.669	0.373	0.282	0.198
0.88	0.850	0.750	0.411	0.310	0.216
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

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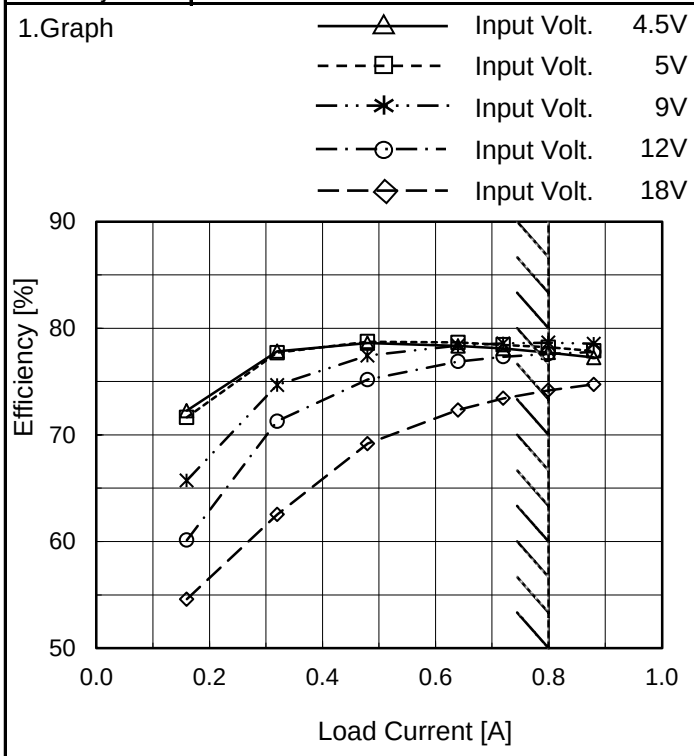
Model	MHFS3123R3
Item	Efficiency (by Load Current)
Object	――――――

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	-	-	-	-	-
0.16	72.3	71.6	65.7	60.1	54.6
0.32	77.8	77.7	74.7	71.3	62.5
0.48	78.6	78.7	77.4	75.2	69.2
0.64	78.3	78.7	78.4	76.9	72.3
0.72	78.1	78.4	78.6	77.3	73.4
0.80	77.7	78.2	78.6	77.6	74.2
0.88	77.3	77.9	78.5	77.8	74.7
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

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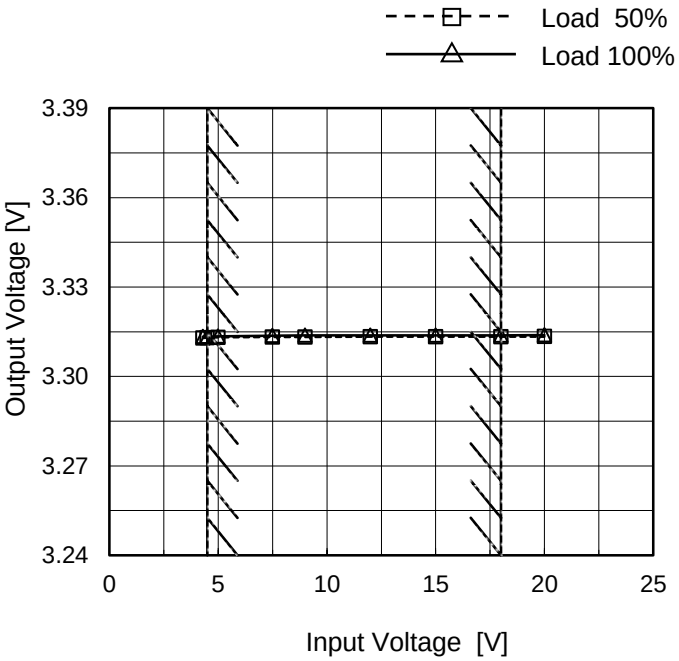
Model	MHFS3123R3
Item	Line Regulation
Object	+3.3V0.8A

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	3.313	3.313
4.5	3.313	3.313
5.0	3.313	3.314
7.5	3.313	3.314
9.0	3.313	3.314
12.0	3.313	3.314
15.0	3.313	3.314
18.0	3.313	3.314
20.0	3.313	3.314

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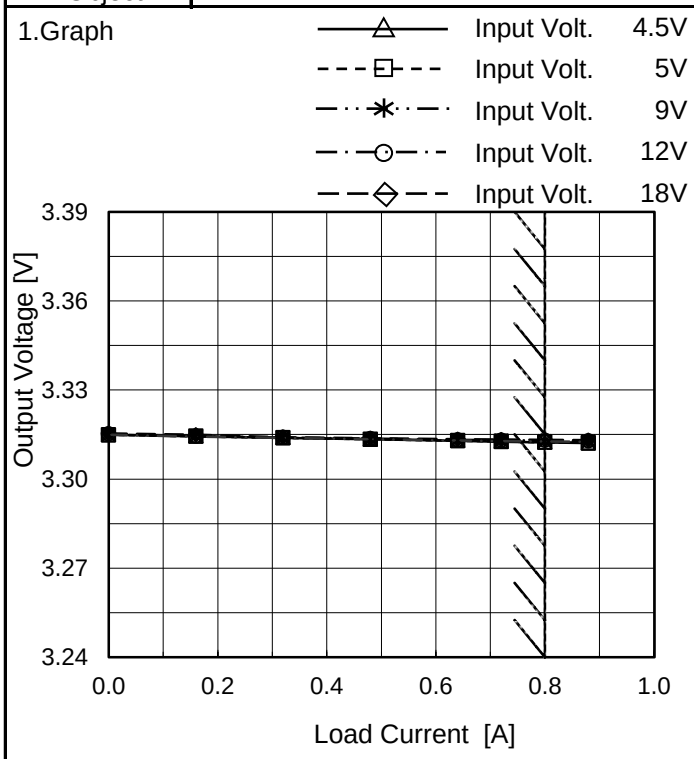
Model	MHFS3123R3
Item	Load Regulation
Object	+3.3V0.8A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

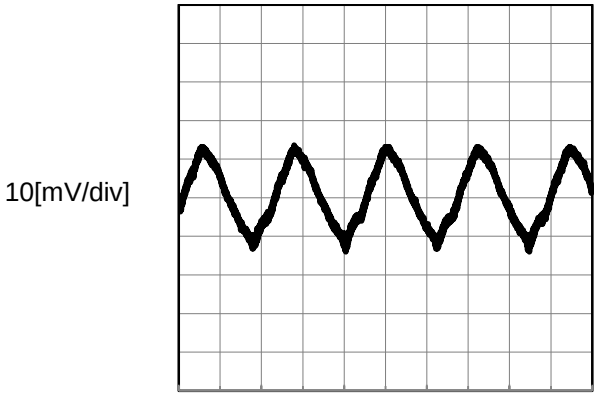
Load Current [A]	Output Voltage [V] Input Volt. 4.5[V]	Input Volt. 5[V]	Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]
0.00	3.315	3.315	3.315	3.315	3.315
0.16	3.314	3.314	3.314	3.315	3.315
0.32	3.314	3.314	3.314	3.314	3.314
0.48	3.313	3.313	3.313	3.314	3.314
0.64	3.313	3.313	3.313	3.313	3.313
0.72	3.313	3.313	3.313	3.313	3.313
0.80	3.312	3.312	3.313	3.313	3.313
0.88	3.312	3.312	3.313	3.313	3.313
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

Item	Ripple-Noise
Object	+3.3V0.8A

Temperature 25°C
Testing Circuitry Figure B

1.Graph

Input Voltage 12V
Load 100%



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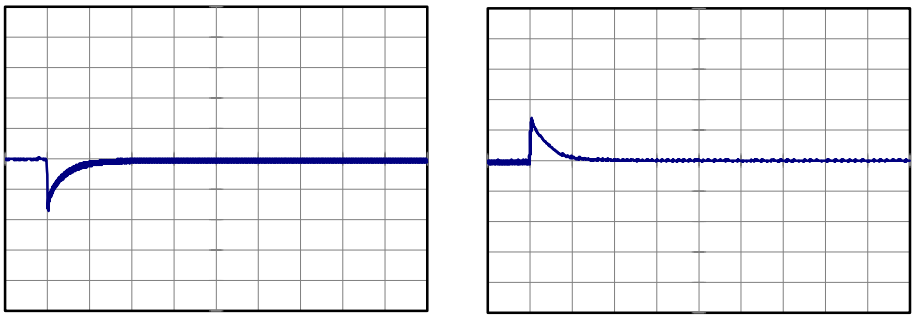
Model	MHFS3123R3	
Item	Dynamic Load Response	Temperature 25°C Testing Circuitry Figure A
Object	+3.3V0.8A	

Input Volt. 12 V
Cycle 100 ms

Min.Load (0A)←→
Load 100% (0.8A)

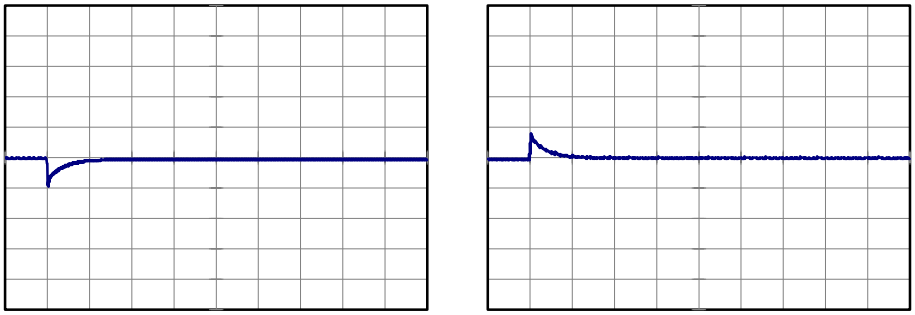


100 mV/div

1 ms/div

1 ms/div

Min.Load (0A)←→
Load 50% (0.4A)



100 mV/div

1 ms/div

1 ms/div

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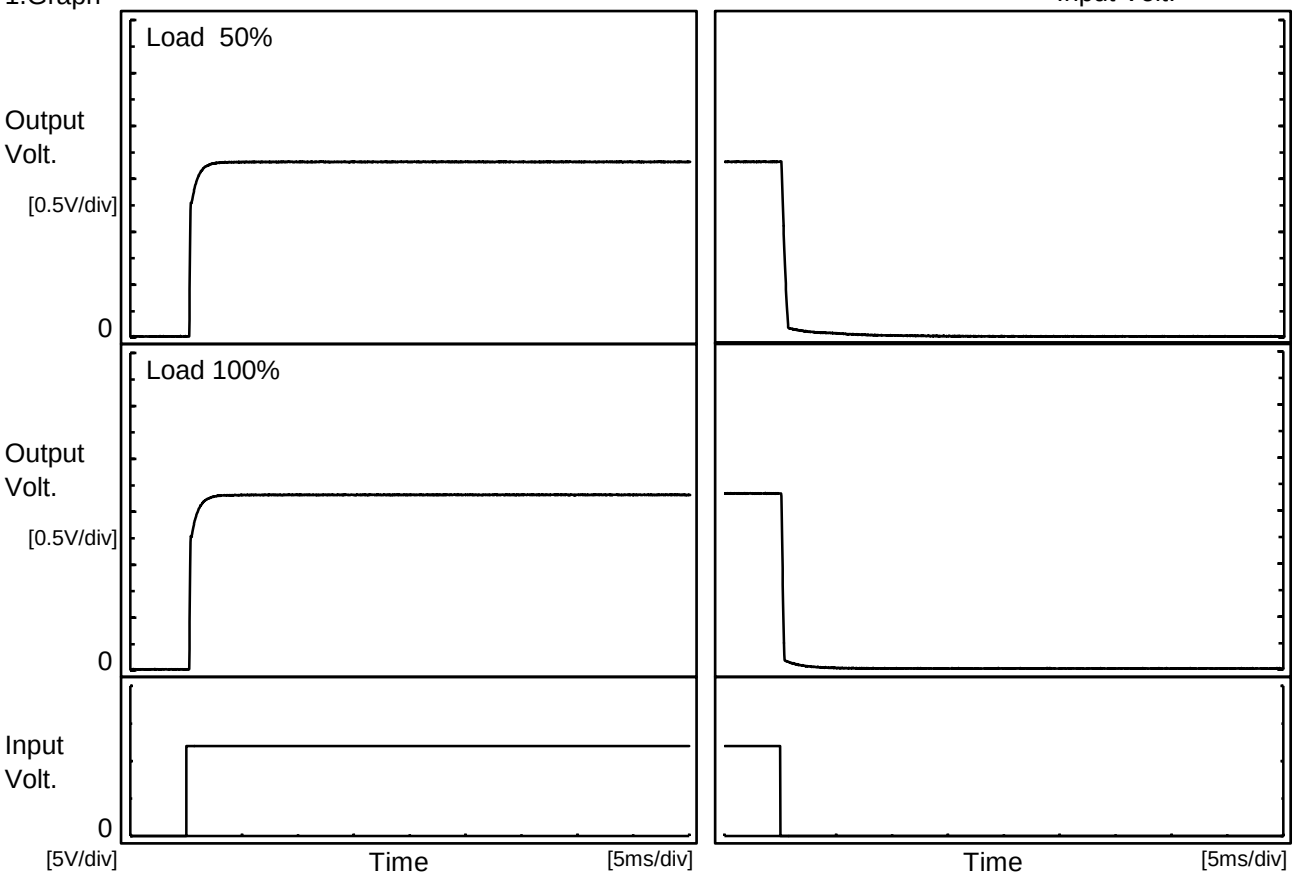
Model	MHFS3123R3
Item	Rise and Fall Time
Object	+3.3V0.8A

Temperature 25°C
Testing Circuitry Figure A

1.Graph

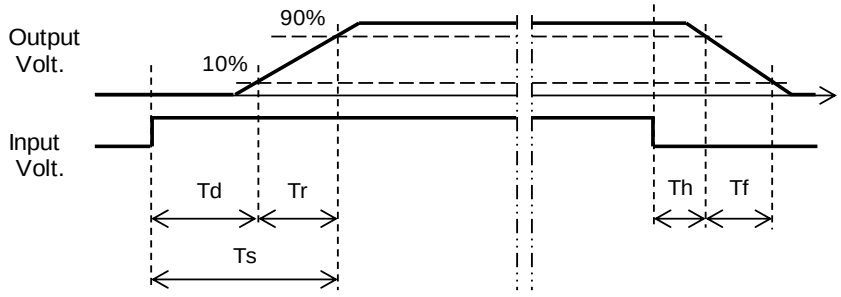
Input Volt. 12 V



2.Values

[ms]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	0.3	0.7	1.0	0.1	0.5
100 %	0.3	0.7	1.0	0.1	0.2



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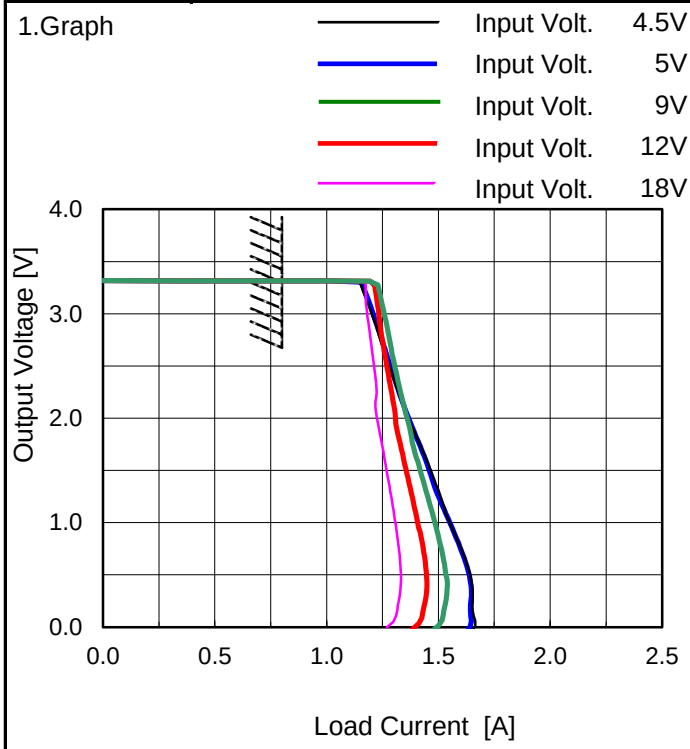
Model	MHFS3123R3
Item	Overcurrent Protection
Object	+3.3V0.8A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

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]
3.14	1.181	1.189	1.244	1.226	1.176
2.97	1.206	1.212	1.259	1.235	1.180
2.64	1.256	1.262	1.289	1.258	1.201
2.31	1.307	1.311	1.322	1.284	1.220
1.98	1.365	1.366	1.360	1.308	1.225
1.65	1.429	1.427	1.395	1.339	1.253
1.32	1.499	1.481	1.439	1.374	1.281
0.99	1.552	1.552	1.482	1.407	1.306
0.66	1.616	1.613	1.519	1.438	1.327
0.33	1.653	1.647	1.540	1.447	1.330
0.00	1.665	1.642	1.642	1.469	1.383
--	-	-	-	-	-

Model	MHFS3123R3	
Item	Ambient Temperature Drift	Testing Circuitry Figure A
Object	+3.3V0.8A	

1.Values

Ambient Temperature[℃]	Output Voltage [V]				
	Input Volt. 4.5V	Input Volt. 5V	Input Volt. 9V	Input Volt. 12V	Input Volt. 18V
-40	3.302	3.302	3.303	3.303	3.303
25	3.312	3.312	3.313	3.313	3.313
75	3.321	3.321	3.321	3.321	3.321

Item	Minimum Input Voltage for Regulated Output Voltage	Testing Circuitry Figure A
Object	+3.3V0.8A	

1.Values

Ambient Temperature[℃]	Input Voltage [V]	
	Load 50%	Load 100%
-40	3.6	3.6
25	3.6	3.5
75	3.5	3.6

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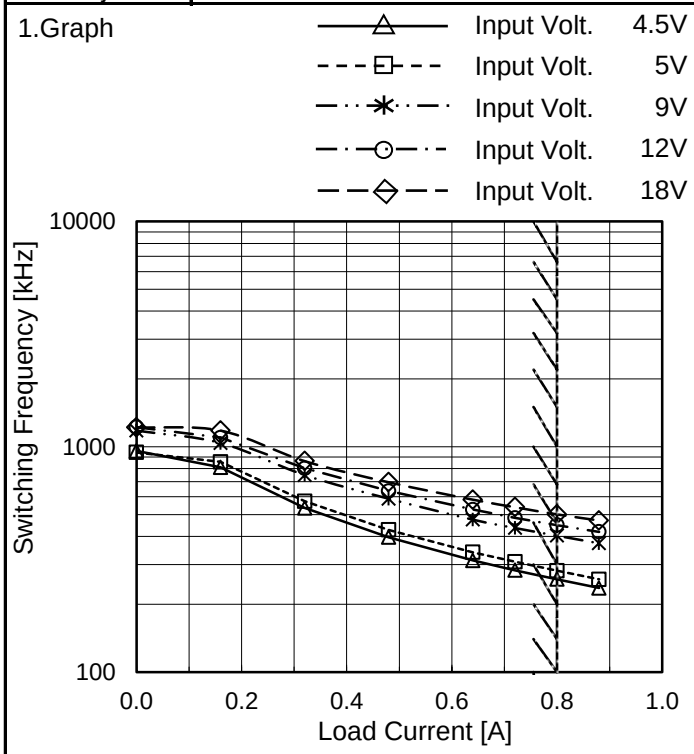
Model	MHFS3123R3
Item	Switching frequency (by Load Current)
Object	+3.3V/0.8A

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	957	943	1180	1223	1221
0.16	811	857	1040	1100	1180
0.32	535	573	749	803	864
0.48	397	428	588	636	696
0.64	313	340	475	526	582
0.72	283	309	436	484	539
0.80	258	282	403	449	501
0.88	236	258	373	419	471
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

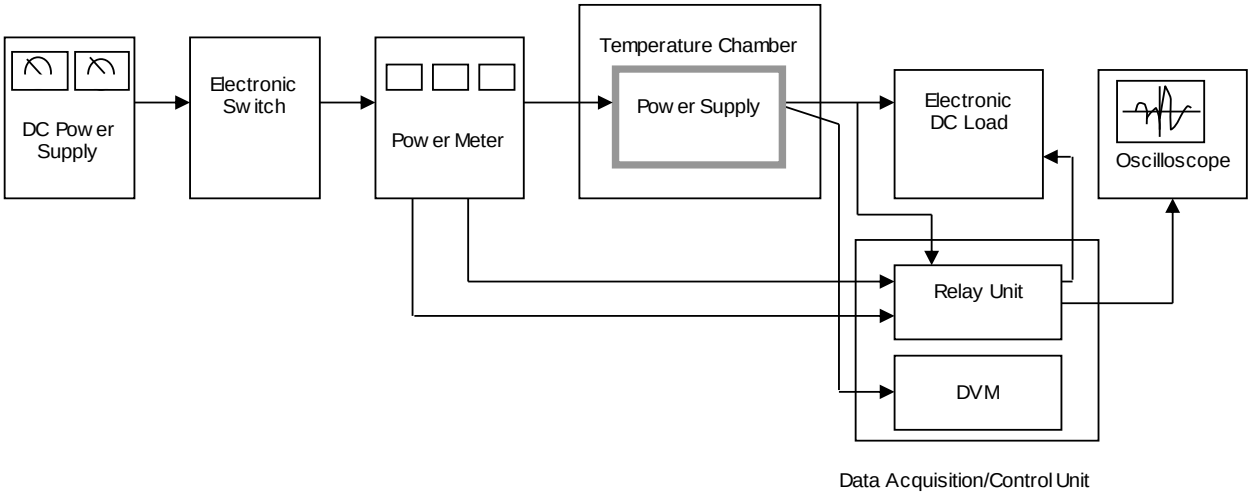


Figure A

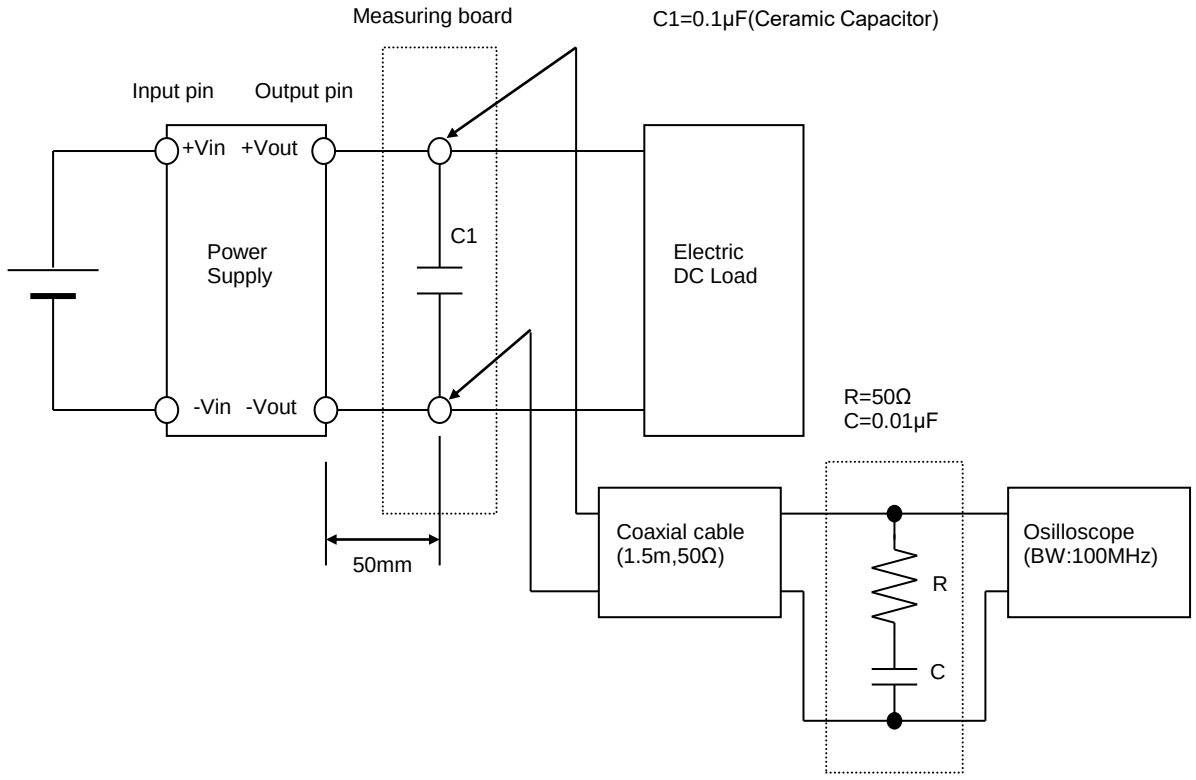


Figure B