参考資料

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TEST DATA OF MHFS3243R3

Regulated DC Power Supply
May 26, 2020

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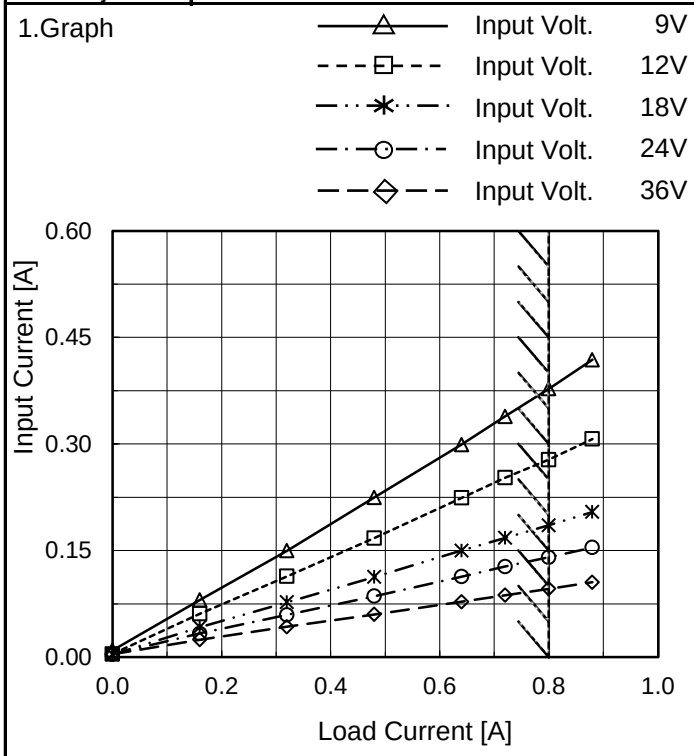
Model	MHFS3243R3
Item	Input Current (by Load Current)
Object	———————

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

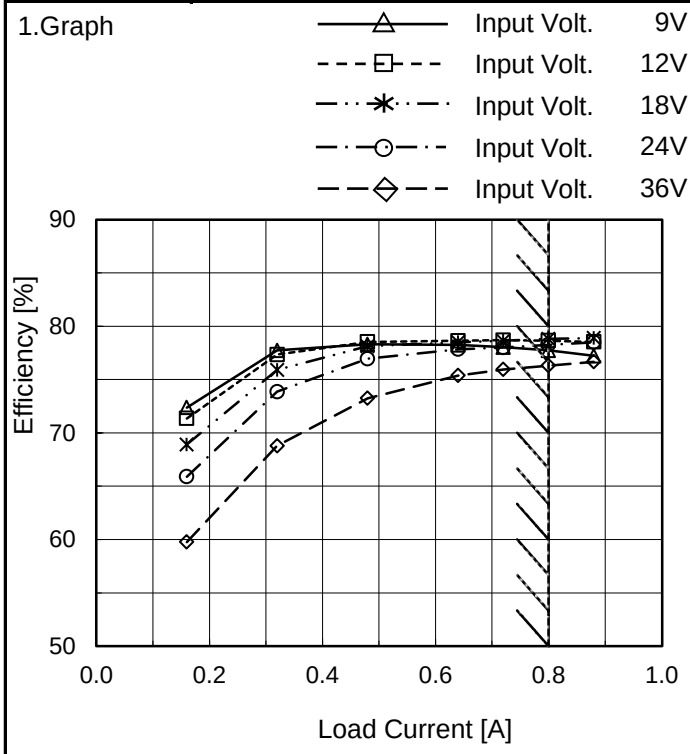
Load Current [A]	Input Current [A]				
	Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]
0.00	0.010	0.004	0.004	0.004	0.004
0.16	0.080	0.061	0.042	0.033	0.025
0.32	0.150	0.114	0.077	0.060	0.043
0.48	0.225	0.168	0.113	0.086	0.060
0.64	0.299	0.224	0.150	0.113	0.078
0.72	0.339	0.253	0.168	0.127	0.087
0.80	0.378	0.278	0.186	0.141	0.096
0.88	0.419	0.307	0.204	0.154	0.105
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

COSEL

Model	MHFS3243R3
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	-	-	-	-	-
0.16	72.4	71.4	68.9	65.9	59.8
0.32	77.7	77.3	75.9	73.9	68.8
0.48	78.3	78.5	78.1	77.0	73.2
0.64	78.2	78.6	78.5	77.8	75.4
0.72	78.0	78.7	78.6	78.0	75.9
0.80	77.7	78.6	78.8	78.3	76.3
0.88	77.2	78.5	78.9	78.5	76.7
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

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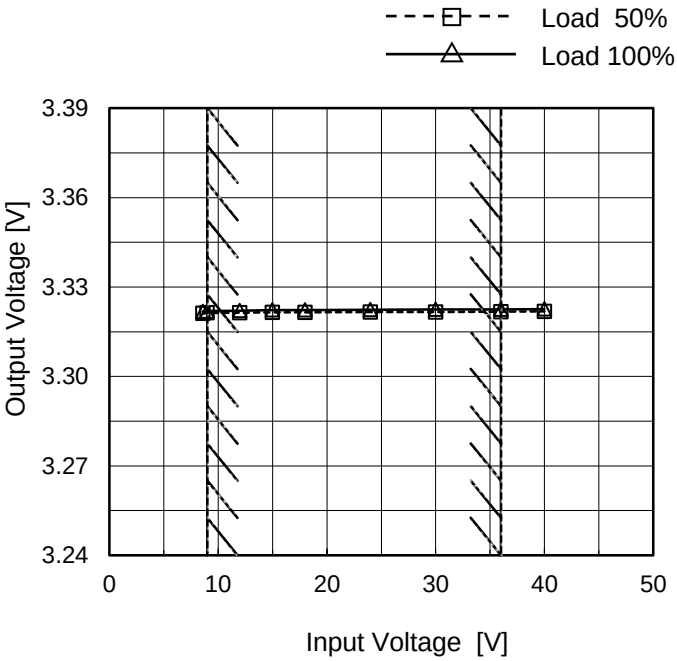
Model	MHFS3243R3
Item	Line Regulation
Object	+3.3V0.8A

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%
8.6	3.321	3.322
9.0	3.321	3.322
12.0	3.321	3.322
15.0	3.322	3.322
18.0	3.322	3.322
24.0	3.322	3.322
30.0	3.322	3.323
36.0	3.322	3.323
40.0	3.322	3.323

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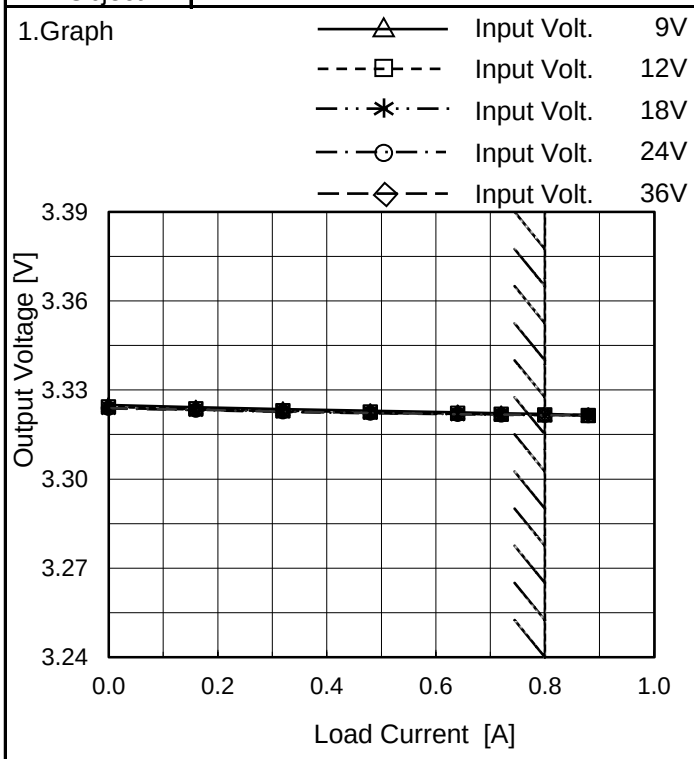
Model	MHFS3243R3
Item	Load Regulation
Object	+3.3V0.8A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

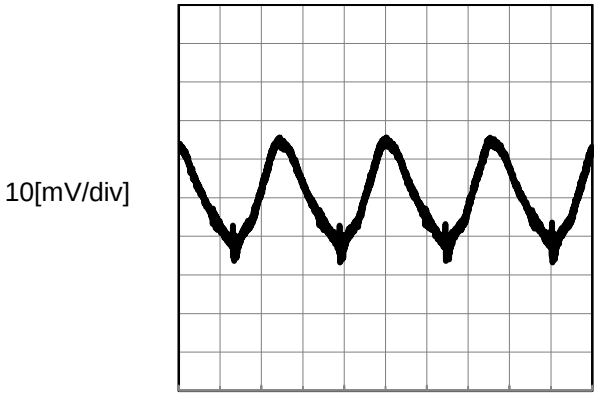
Load Current [A]	Output Voltage [V] Input Volt. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]
0.00	3.325	3.324	3.324	3.324	3.324
0.16	3.324	3.324	3.323	3.323	3.323
0.32	3.324	3.323	3.323	3.323	3.323
0.48	3.323	3.323	3.322	3.322	3.322
0.64	3.323	3.322	3.322	3.322	3.322
0.72	3.322	3.322	3.322	3.322	3.322
0.80	3.322	3.322	3.322	3.322	3.322
0.88	3.322	3.321	3.321	3.321	3.322
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

Item	Ripple-Noise
Object	+3.3V0.8A

Temperature 25°C
Testing Circuitry Figure B

1.Graph

Input Voltage 24V
Load 100%



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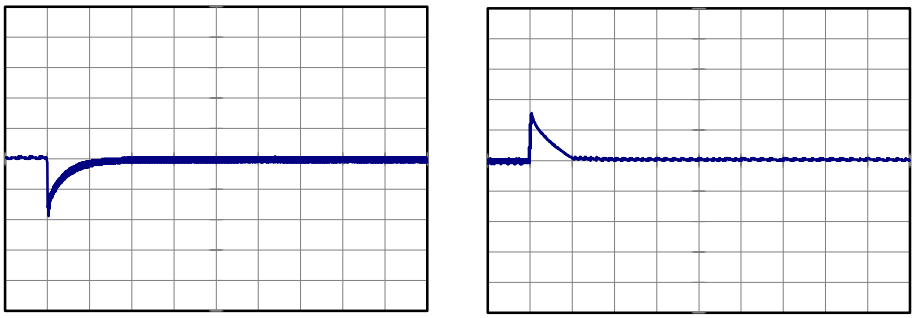
Model	MHFS3243R3	
Item	Dynamic Load Response	Temperature 25°C Testing Circuitry Figure A
Object	+3.3V0.8A	

Input Volt. 24 V
Cycle 100 ms

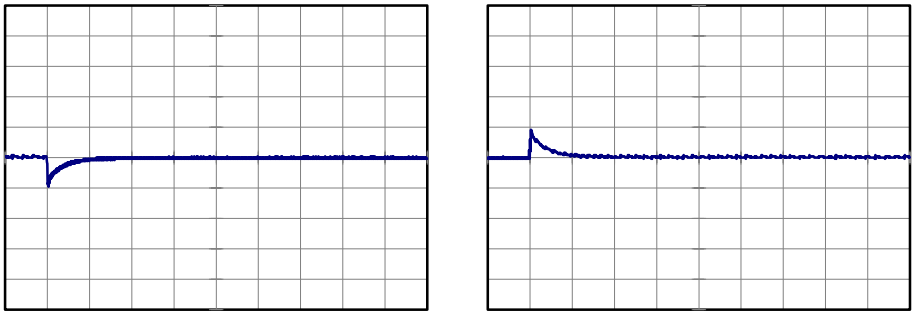
Min.Load (0A)←→
Load 100% (0.8A)



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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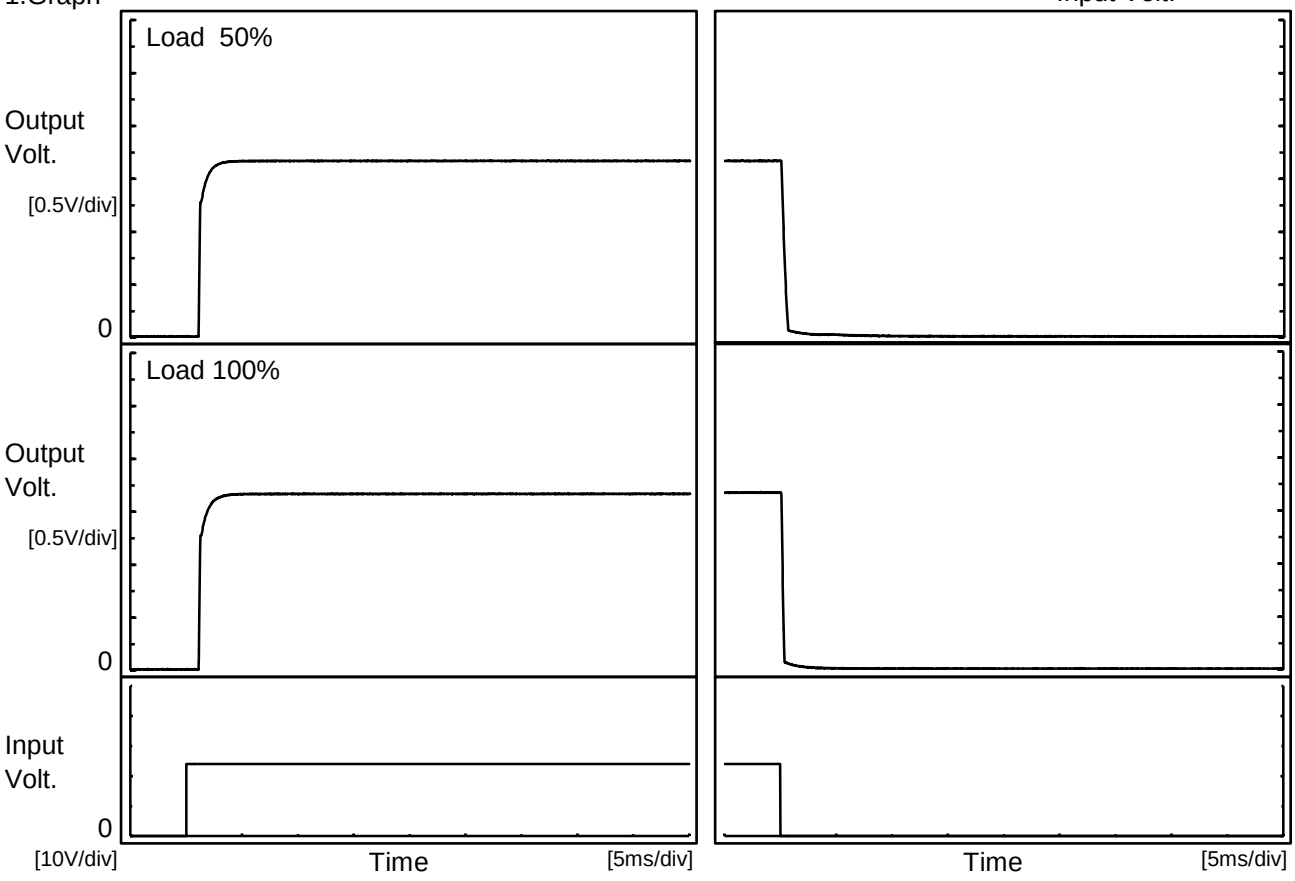
Model	MHFS3243R3
Item	Rise and Fall Time
Object	+3.3V0.8A

Temperature 25°C
Testing Circuitry Figure A

1.Graph

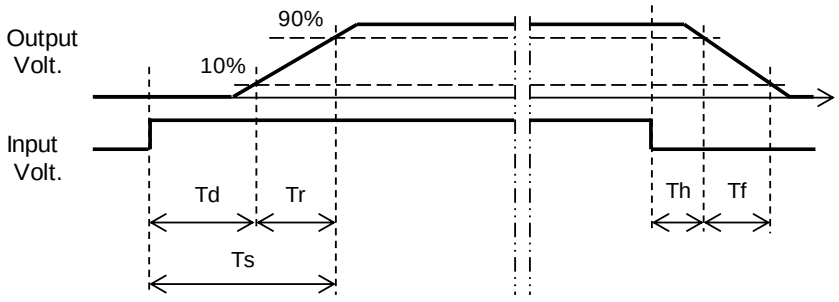
Input Volt. 24 V



2.Values

[ms]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	1.1	0.7	1.8	0.1	0.5
100 %	1.2	0.7	1.9	0.1	0.2



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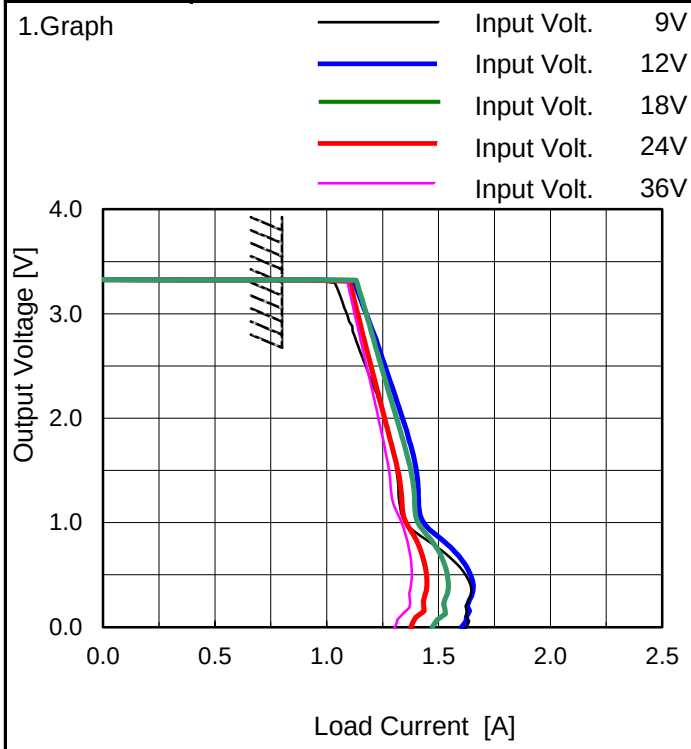
Model	MHFS3243R3
Item	Overcurrent Protection
Object	+3.3V0.8A

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. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]
3.14	1.063	1.153	1.158	1.124	1.112
2.97	1.095	1.177	1.177	1.140	1.127
2.64	1.148	1.234	1.221	1.179	1.162
2.31	1.206	1.285	1.266	1.219	1.198
1.98	1.259	1.336	1.311	1.259	1.232
1.65	1.300	1.382	1.356	1.300	1.266
1.32	1.321	1.409	1.388	1.331	1.287
0.99	1.354	1.427	1.404	1.354	1.335
0.66	1.553	1.593	1.506	1.429	1.375
0.33	1.647	1.655	1.543	1.445	1.375
0.00	1.603	1.603	1.467	1.375	1.297
--	-	-	-	-	-

COSEL

Model	MHFS3243R3	
Item	Ambient Temperature Drift	Testing Circuitry Figure A
Object	+3.3V0.8A	

1.Values

Ambient Temperature[℃]	Output Voltage [V]				
	Input Volt. 9V	Input Volt. 12V	Input Volt. 18V	Input Volt. 24V	Input Volt. 36V
-40	3.308	3.308	3.308	3.309	3.309
25	3.321	3.321	3.321	3.322	3.322
75	3.329	3.329	3.330	3.330	3.330

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	7.3	7.3
25	7.1	7.2
75	6.9	7.0

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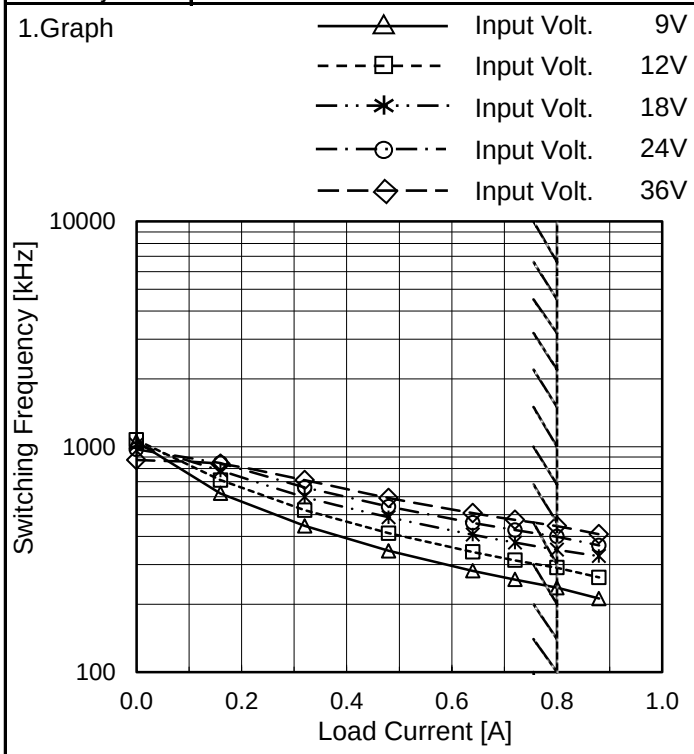
Model	MHFS3243R3
Item	Switching frequency (by Load Current)
Object	+3.3V0.8A

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. 9[V]	Input Volt. 12[V]	Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]
0.00	1056	1072	1021	974	874
0.16	621	711	784	848	839
0.32	445	523	599	660	711
0.48	345	413	487	542	593
0.64	281	341	407	459	508
0.72	257	314	376	427	474
0.80	237	291	349	399	445
0.88	212	263	327	365	409
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

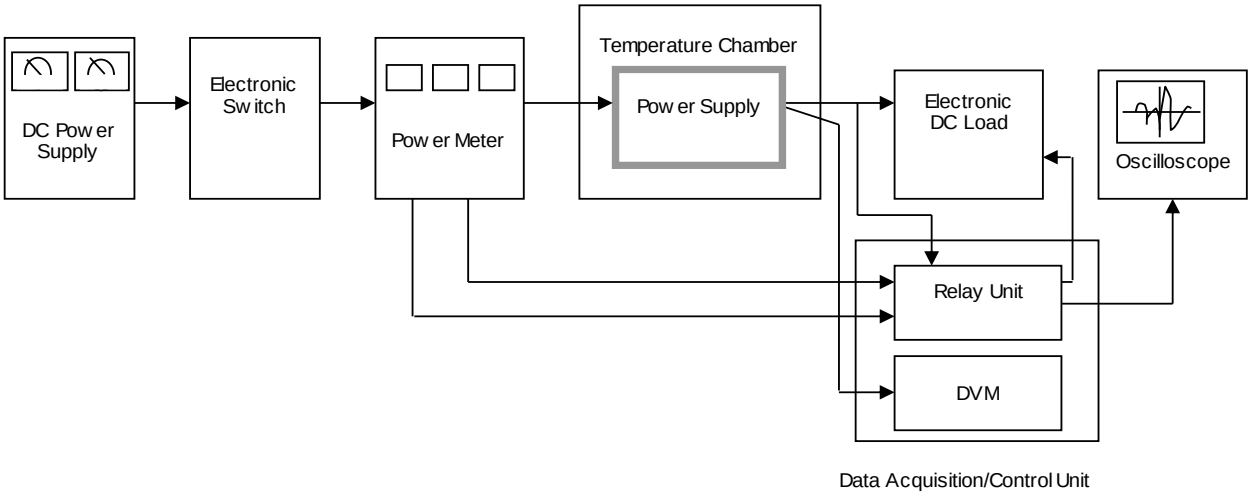


Figure A

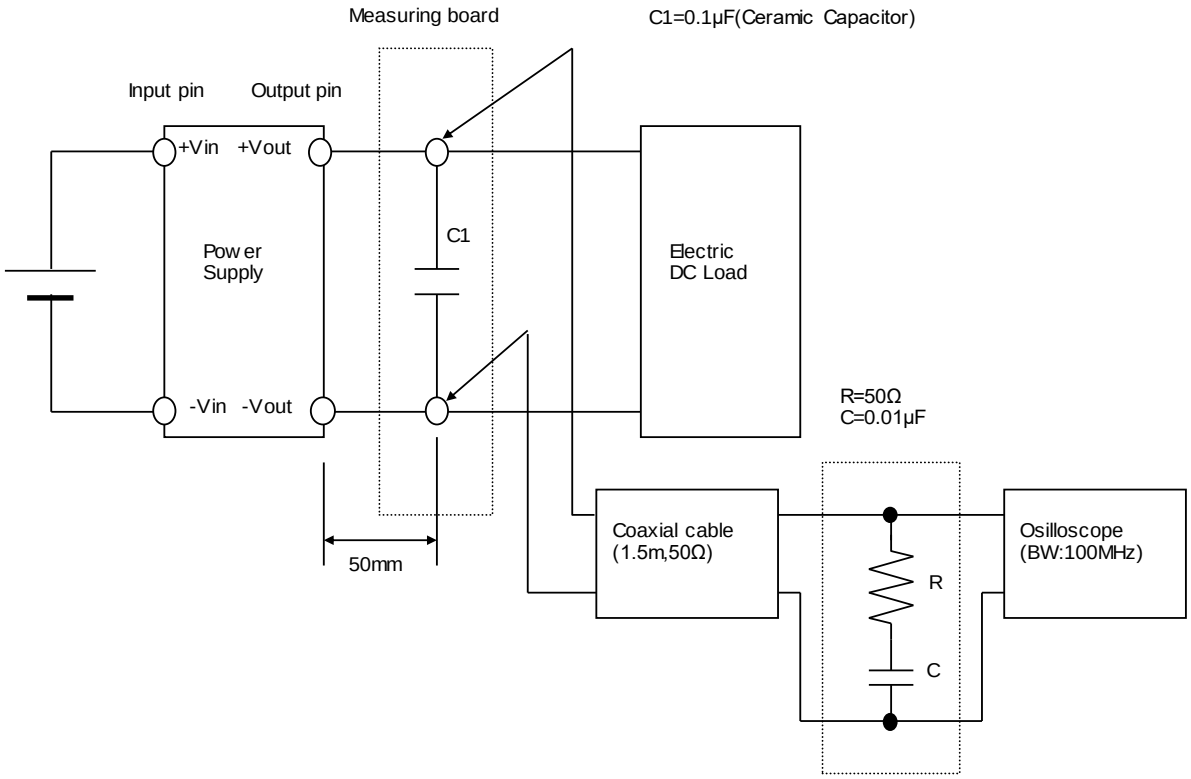


Figure B