参考資料

TEST DATA OF MHFS62409

Regulated DC Power Supply
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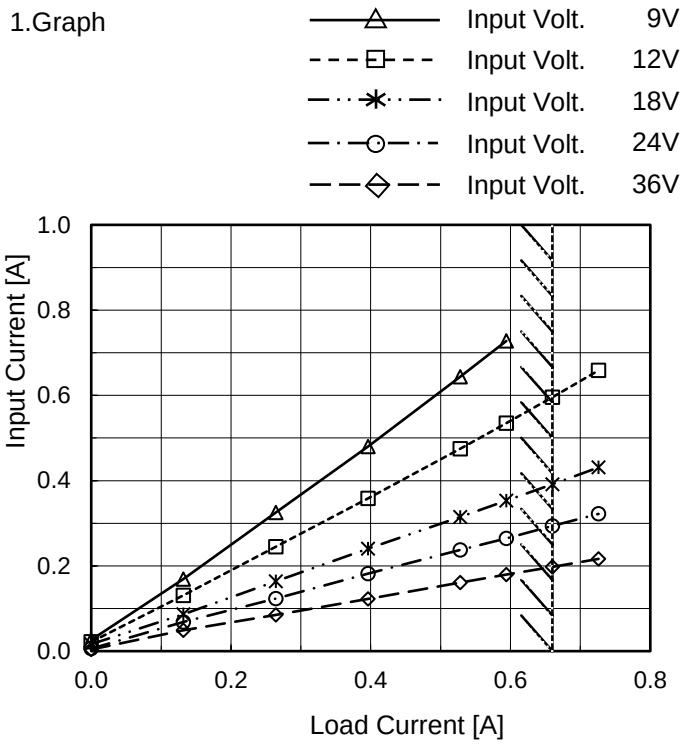
Model	MHFS62409
Item	Input Current (by Load Current)
Object	———————

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	0.026	0.022	0.016	0.006	0.004
0.13	0.169	0.131	0.086	0.069	0.049
0.26	0.325	0.245	0.164	0.123	0.085
0.40	0.480	0.359	0.240	0.182	0.123
0.53	0.644	0.475	0.315	0.237	0.161
0.59	0.728	0.535	0.353	0.265	0.179
0.66	*1	0.596	0.392	0.293	0.198
0.73	*1	0.659	0.431	0.322	0.216
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

*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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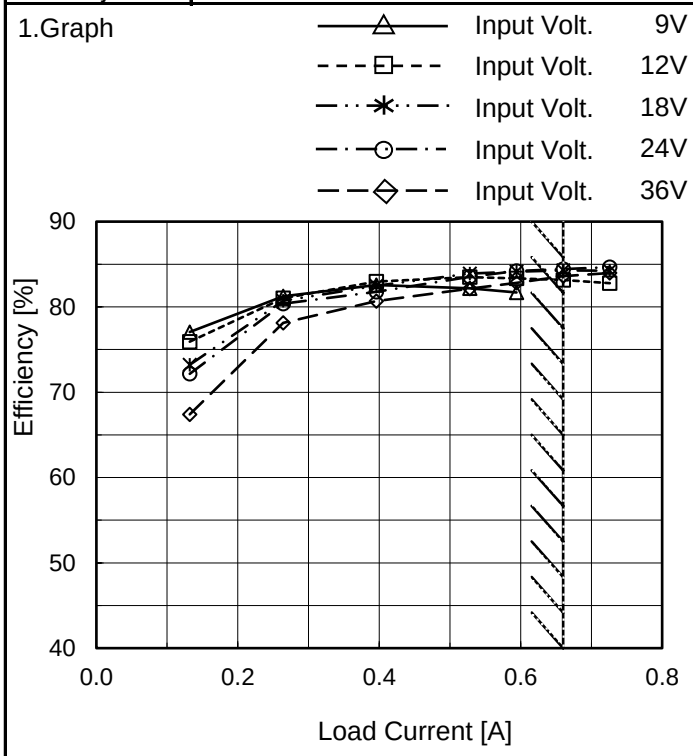
Model	MHFS62409
Item	Efficiency (by Load Current)
Object	————————

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	-	-	-	-	-
0.13	77.1	75.9	73.2	72.2	67.4
0.26	81.2	81.0	80.7	80.4	78.1
0.40	82.6	83.0	82.5	81.8	80.7
0.53	82.2	83.5	83.9	83.5	82.1
0.59	81.7	83.3	84.1	84.2	82.8
0.66	*1	83.1	84.3	84.4	83.6
0.73	*1	82.8	84.2	84.7	84.0
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

*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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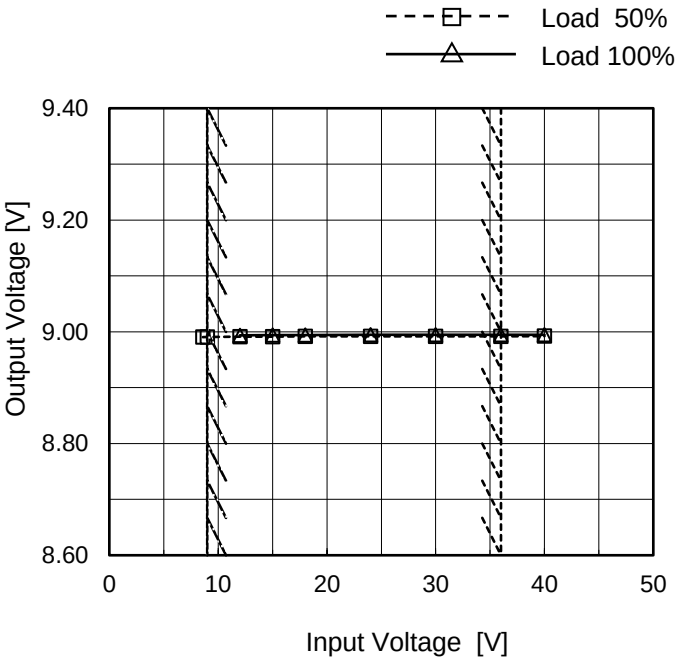
Model	MHFS62409
Item	Line Regulation
Object	+9V0.66A

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	8.990	*1
9.0	8.991	*1
12.0	8.991	8.994
15.0	8.991	8.994
18.0	8.992	8.994
24.0	8.992	8.994
30.0	8.992	8.994
36.0	8.992	8.995
40.0	8.992	8.995

*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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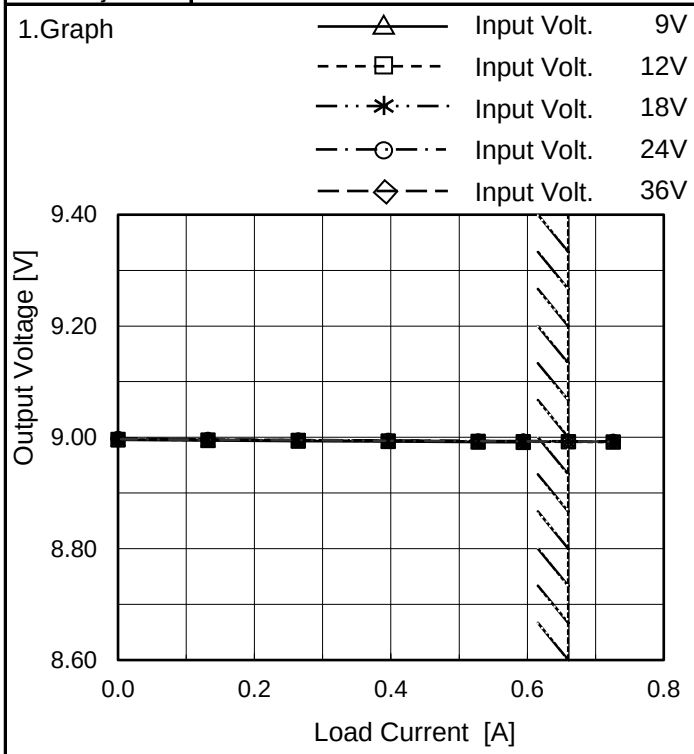
Model	MHFS62409
Item	Load Regulation
Object	+9V0.66A

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	8.996	8.996	8.997	8.998	8.998
0.13	8.995	8.995	8.996	8.996	8.996
0.26	8.994	8.994	8.995	8.995	8.995
0.40	8.993	8.994	8.994	8.994	8.994
0.53	8.992	8.993	8.993	8.994	8.994
0.59	8.991	8.992	8.993	8.993	8.993
0.66	*1	8.992	8.993	8.993	8.993
0.73	*1	8.992	8.992	8.993	8.993
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

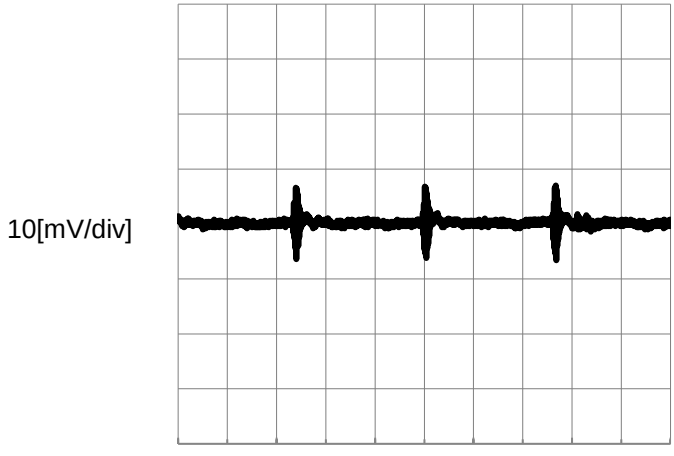
*1 Maximum output current at 9V input Voltage is 80% of rated load current. Refer to instruction manuals for details of input derating.

Item	Ripple-Noise
Object	+9V0.66A

Temperature 25°C
Testing Circuitry Figure B

1.Graph

Input Voltage 24V
Load 100%



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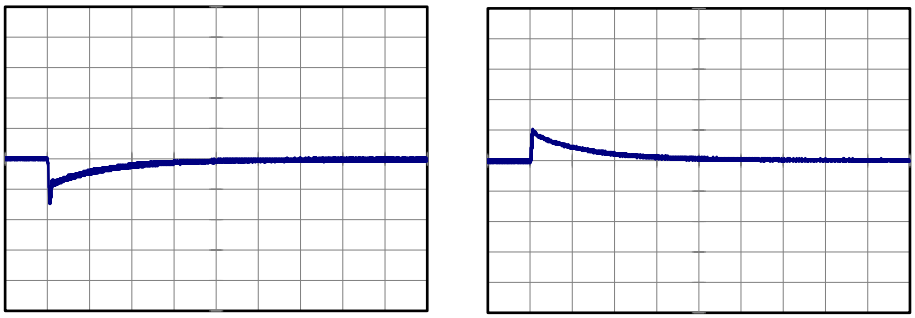
Model	MHFS62409	
Item	Dynamic Load Response	Temperature 25°C Testing Circuitry Figure A
Object	+9V0.66A	

Input Volt. 24 V

Cycle 100 ms

Response. t1=t2=50μs. Typ

Min.Load (0A)←→
Load 100% (0.66A)

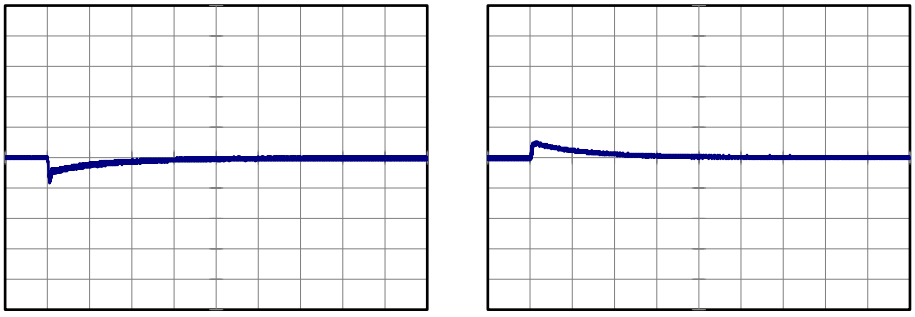


500 mV/div

1 ms/div

1 ms/div

Min.Load (0A)←→
Load 50% (0.33A)



500 mV/div

1 ms/div

1 ms/div

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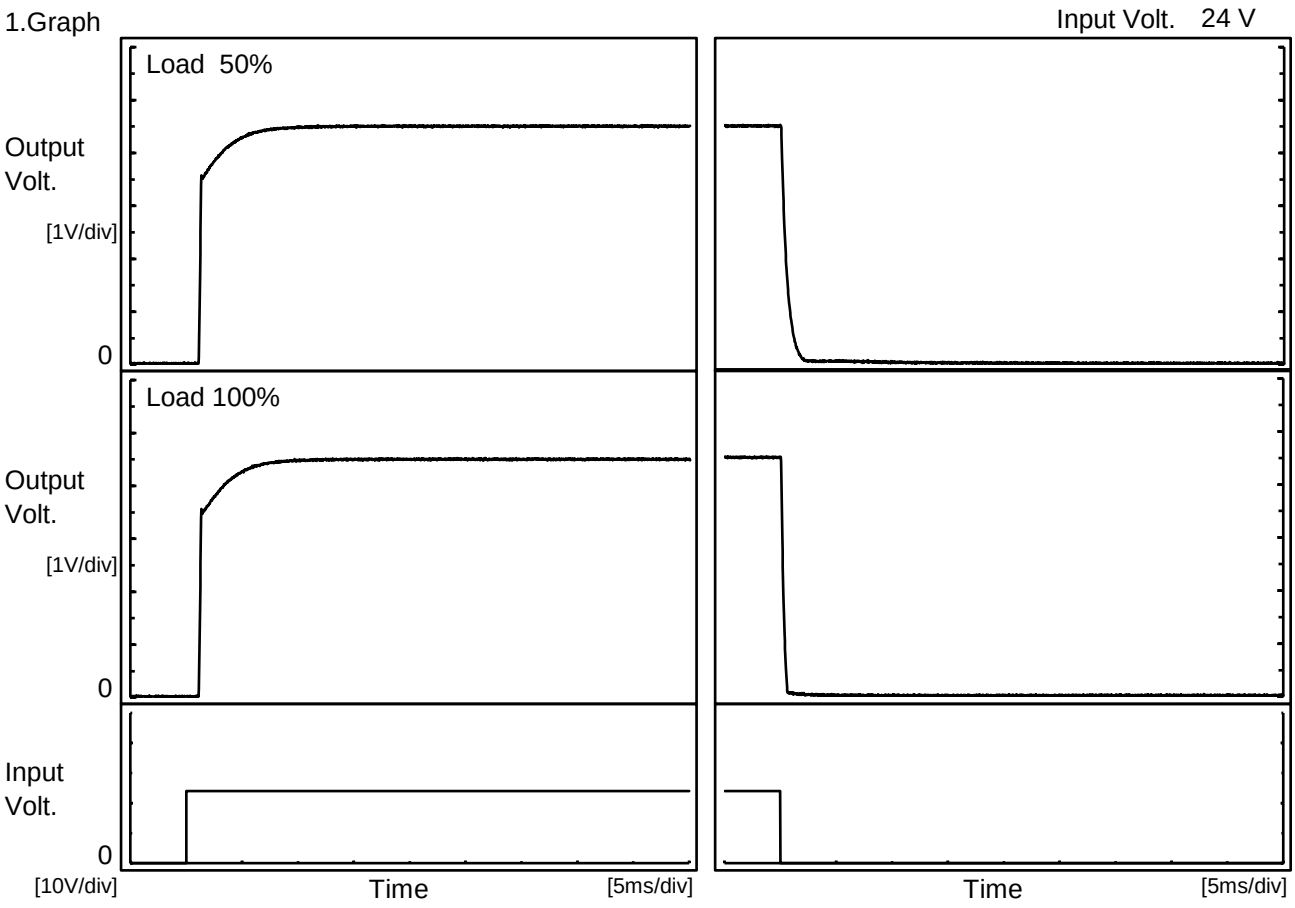
Model	MHFS62409	
Item	Rise and Fall Time	Temperature 25°C Testing Circuitry Figure A
Object	+9V0.66A	

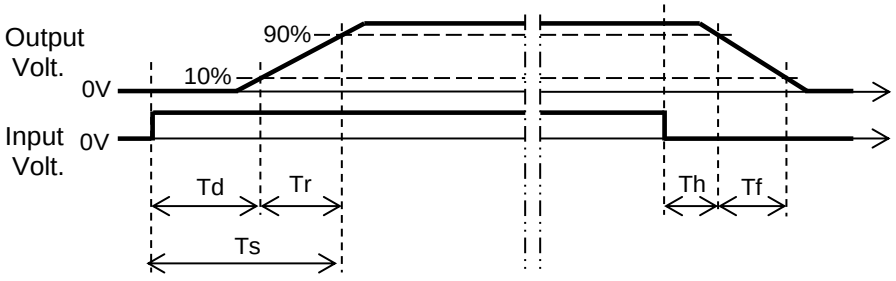
1.Graph



2.Values

[ms]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	1.2	2.4	3.6	0.1	1.1
100 %	1.2	2.5	3.7	0.1	0.4



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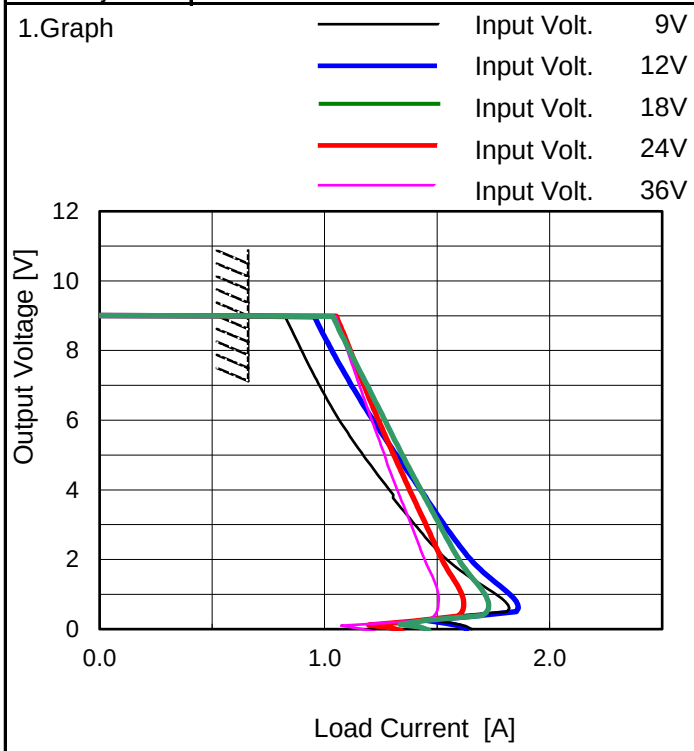
Model	MHFS62409
Item	Overcurrent Protection
Object	+9V0.66A

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]
8.55	0.856	0.984	1.071	1.083	1.075
8.10	0.884	1.023	1.100	1.107	1.094
7.20	0.957	1.096	1.167	1.158	1.140
6.30	1.029	1.183	1.241	1.217	1.192
5.40	1.122	1.268	1.307	1.274	1.239
4.50	1.227	1.369	1.383	1.340	1.291
3.60	1.316	1.468	1.460	1.400	1.343
2.70	1.435	1.558	1.531	1.469	1.401
1.80	1.563	1.675	1.616	1.530	1.452
0.90	1.768	1.826	1.716	1.613	1.507
0.00	1.654	1.633	1.463	1.344	1.223
--	-	-	-	-	-

Model	MHFS62409	
Item	Ambient Temperature Drift	Testing Circuitry Figure A
Object	+9V0.66A	

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	8.927	8.929	8.931	8.932	8.934
25	8.990	8.990	8.991	8.991	8.992
55	9.001	9.000	9.001	9.001	9.001

*1 Load 80%

Item	Minimum Input Voltage for Regulated Output Voltage	Testing Circuitry Figure A
Object	+9V0.66A	

1.Values

Ambient Temperature[℃]	Input Voltage [V]	
	Load 50%	Load 80%
-40	7.2	7.2
25	7.2	7.1
55	7.0	7.1

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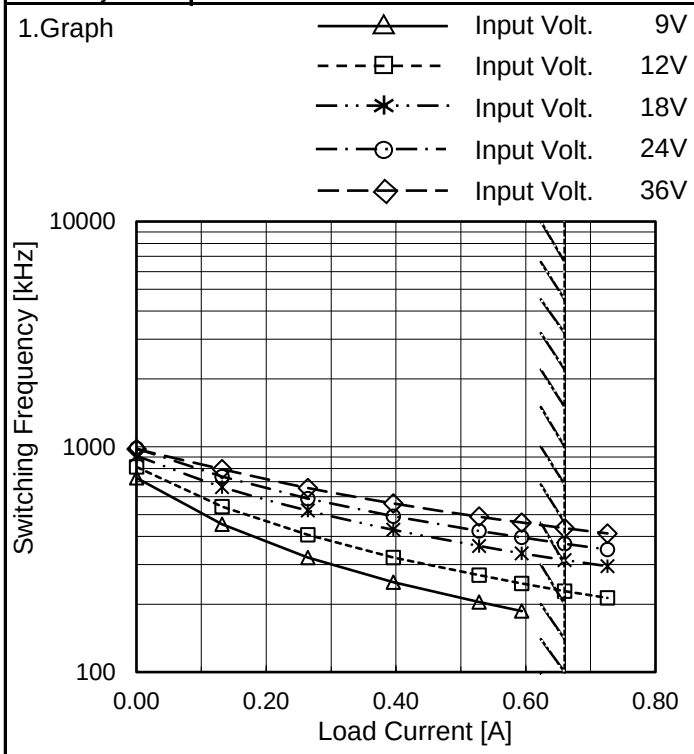
Model	MHFS62409
Item	Switching frequency (by Load Current)
Object	+9V0.66A

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	728	814	912	983	977
0.13	454	543	663	737	796
0.26	322	407	521	589	657
0.40	251	323	428	491	560
0.53	204	269	363	423	490
0.59	186	247	336	396	461
0.66	*1	229	314	372	435
0.73	*1	213	295	350	413
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

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

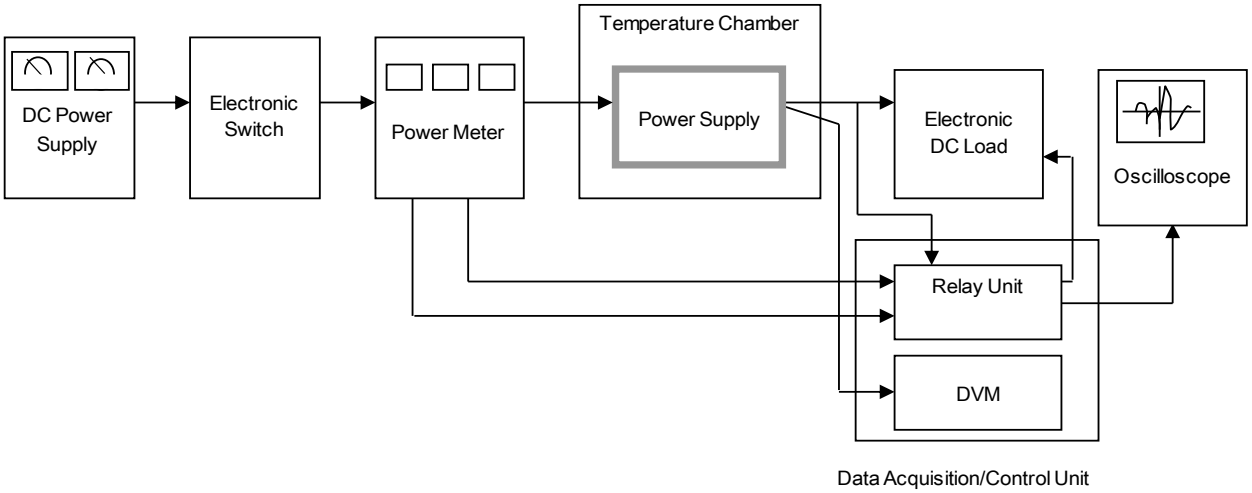


Figure A

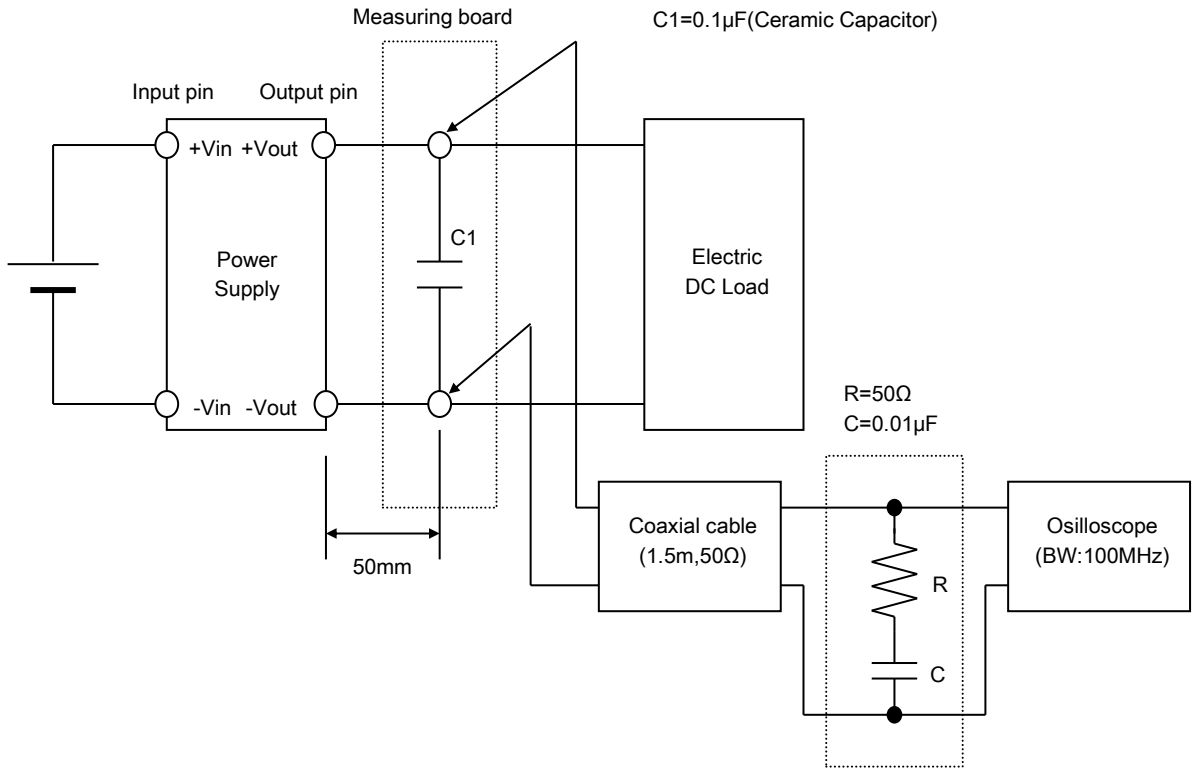


Figure B