参考資料

TEST DATA OF MHFS6483R3

Regulated DC Power Supply
October 27, 2021

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COSEL CO.,LTD.

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CONTENTS

1.Input Current (by Load Current) ・・・・・・・・・・・・・・・・・・・・・・・・ 1
2.Efficiency (by Load Current) ・・・・・・・・・・・・・・・・・・・・・・・・ 2
3.Line Regulation ・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・ 3
4.Load Regulation ・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・ 4
5.Ripple-Noise ・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・ 4
6.Dynamic Load Response ・・・・・・・・・・・・・・・・・・・・・・・・・・・ 5
7.Rise and Fall Time ・・・・・・・・・・・・・・・・・・・・・・・・・・・・・ 6
8.Overcurrent Protection ・・・・・・・・・・・・・・・・・・・・・・・・・・・ 7
9.Ambient Temperature Drift ・・・・・・・・・・・・・・・・・・・・・・・・・ 8
10.Minimum Input Voltage for Regulated Output Voltage ・・・・・・・・・・・・ 8
11.Switching frequency (by Load Current) ・・・・・・・・・・・・・・・・・・・ 9
12.Figure of Testing Circuitry ・・・・・・・・・・・・・・・・・・・・・・・・・ 10
(Final Page 10)

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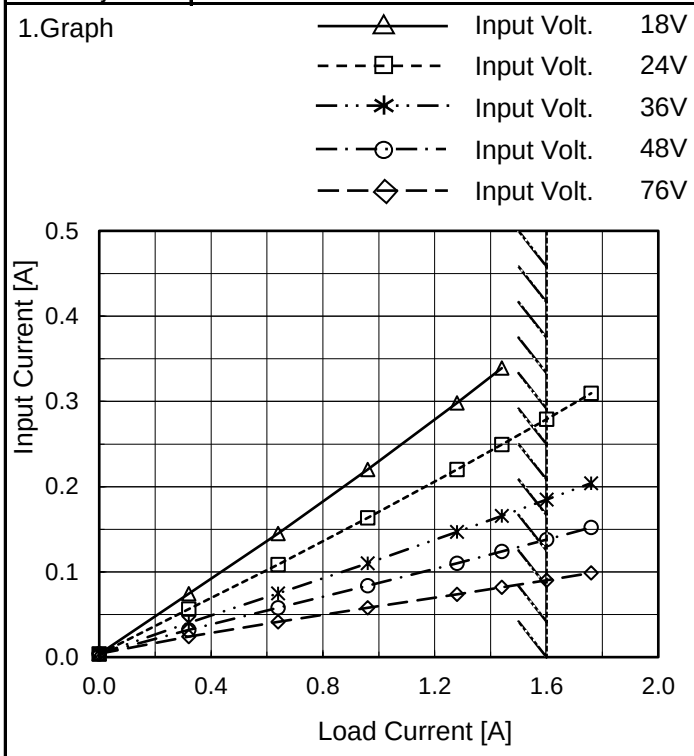
Model	MHFS6483R3
Item	Input Current (by Load Current)
Object	―――――――――

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	0.004	0.004	0.004	0.004	0.004
0.32	0.074	0.057	0.040	0.032	0.024
0.64	0.145	0.109	0.075	0.058	0.042
0.96	0.220	0.163	0.110	0.084	0.058
1.28	0.298	0.220	0.147	0.110	0.074
1.44	0.339	0.249	0.166	0.124	0.082
1.60	*1	0.279	0.185	0.138	0.090
1.76	*1	0.310	0.204	0.152	0.099
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

*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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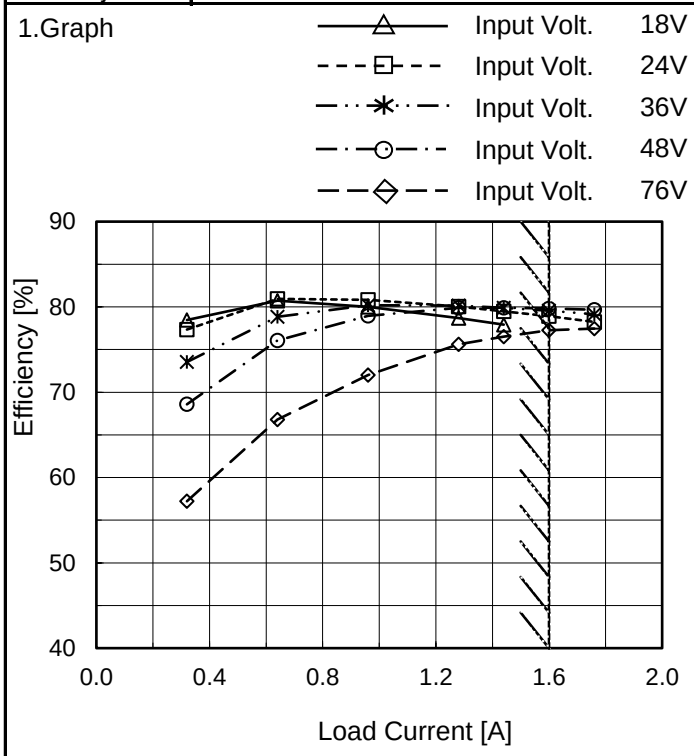
Model	MHFS6483R3
Item	Efficiency (by Load Current)
Object	————————

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	-	-	-	-	-
0.32	78.4	77.3	73.5	68.6	57.2
0.64	80.7	80.9	78.9	76.1	66.8
0.96	80.0	80.8	80.2	78.9	72.0
1.28	78.7	80.0	80.2	79.9	75.6
1.44	77.9	79.5	79.9	79.9	76.5
1.60	*1	78.9	79.5	79.8	77.2
1.76	*1	78.3	79.1	79.6	77.5
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

*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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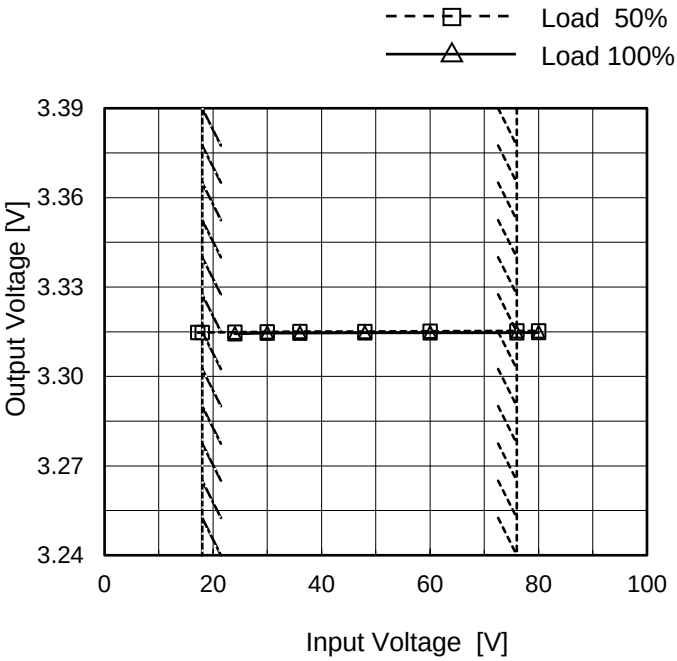
Model	MHFS6483R3
Item	Line Regulation
Object	+3.3V1.6A

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	3.315	*1
18.0	3.315	*1
24.0	3.315	3.314
30.0	3.315	3.315
36.0	3.315	3.315
48.0	3.315	3.315
60.0	3.315	3.315
76.0	3.315	3.315
80.0	3.315	3.315

*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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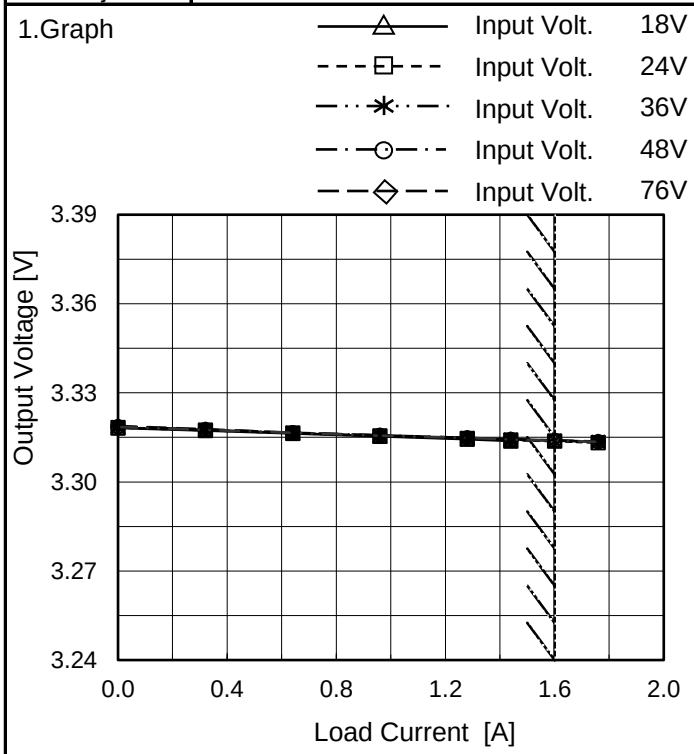
Model	MHFS6483R3
Item	Load Regulation
Object	+3.3V1.6A

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	3.318	3.318	3.319	3.319	3.319
0.32	3.317	3.317	3.318	3.318	3.318
0.64	3.316	3.316	3.317	3.317	3.317
0.96	3.315	3.316	3.316	3.316	3.316
1.28	3.314	3.315	3.315	3.315	3.315
1.44	3.314	3.314	3.314	3.314	3.314
1.60	*1	3.314	3.314	3.314	3.314
1.76	*1	3.313	3.314	3.314	3.314
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

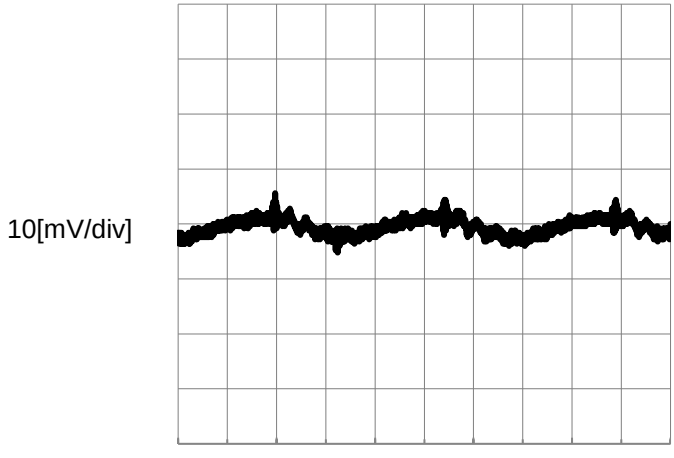
*1 Maximum output current at 18V input Voltage is 80% of rated load current. Refer to instruction manuals for details of input derating.

Item	Ripple-Noise
Object	+3.3V1.6A

Temperature 25°C
Testing Circuitry Figure B

1.Graph

Input Voltage 48V
Load 100%



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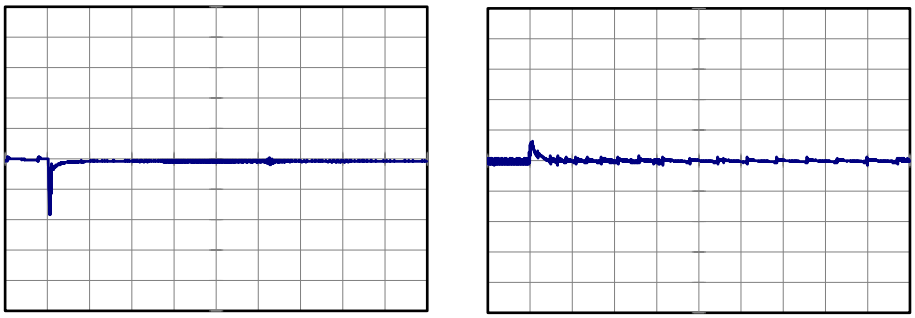
Model	MHFS6483R3	
Item	Dynamic Load Response	Temperature 25°C Testing Circuitry Figure A
Object	+3.3V1.6A	

Input Volt. 48 V
Cycle 100 ms

Response. t1=t2=50μs. Typ

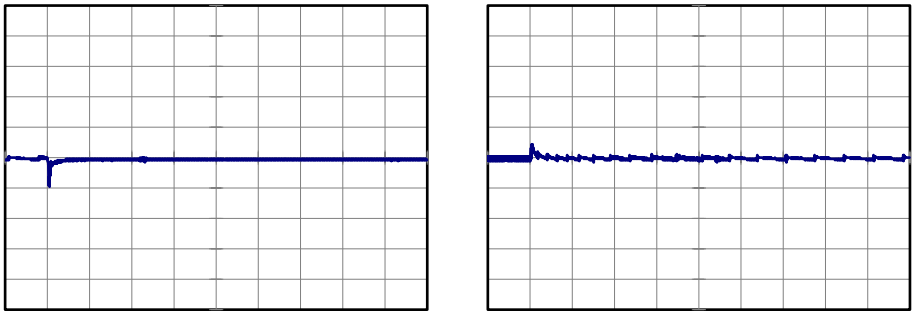
Min.Load (0A)←→
Load 100% (1.6A)



200 mV/div

1 ms/div 1 ms/div

Min.Load (0A)←→
Load 50% (0.8A)



200 mV/div

1 ms/div 1 ms/div

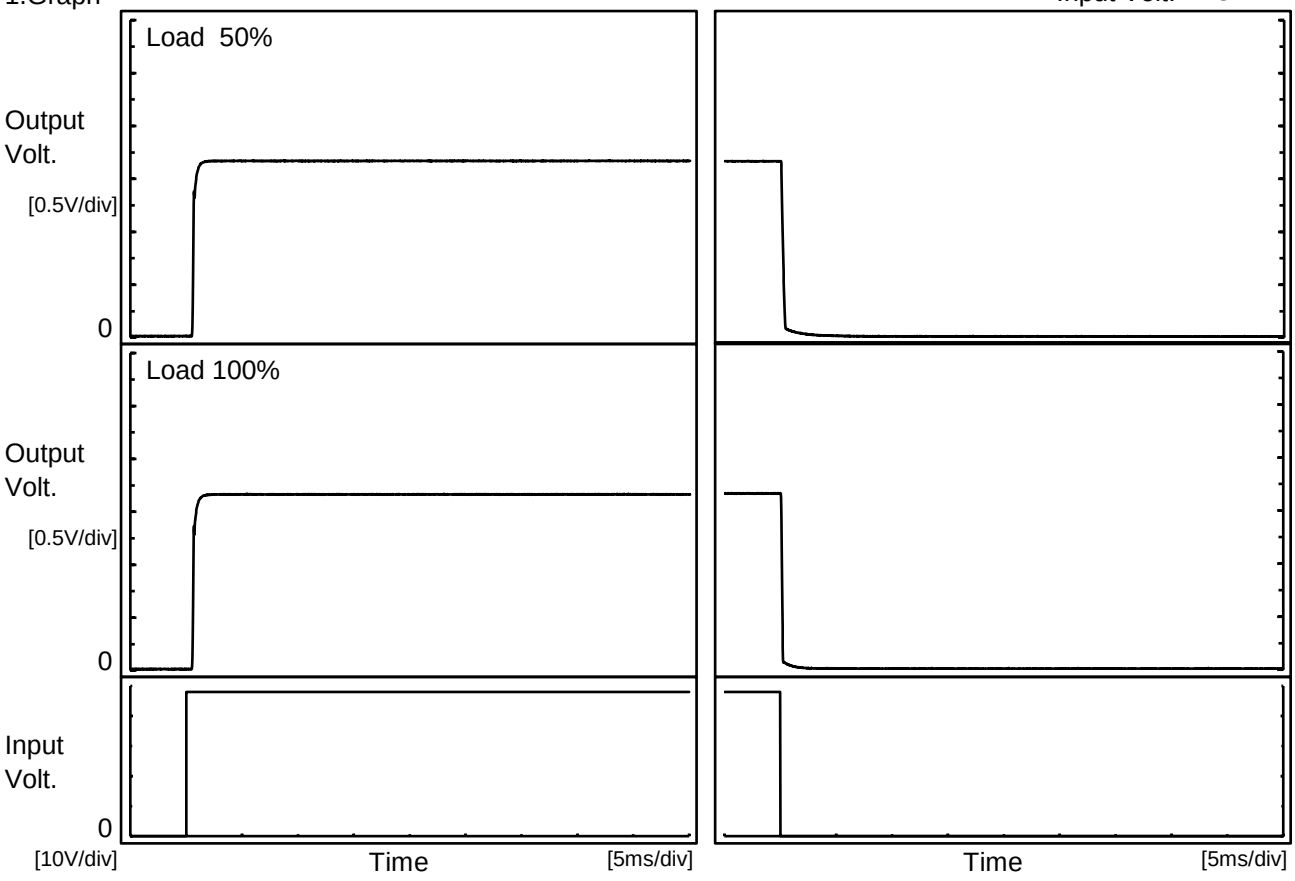
COSEL

Model	MHFS6483R3
Item	Rise and Fall Time
Object	+3.3V1.6A

Temperature 25°C
Testing Circuitry Figure A

1.Graph

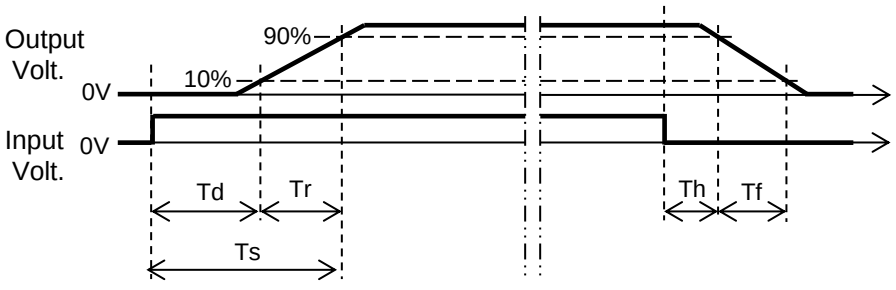
Input Volt. 48 V



2.Values

[ms]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	0.6	0.3	0.9	0.1	0.3
100 %	0.6	0.3	0.9	0.1	0.1



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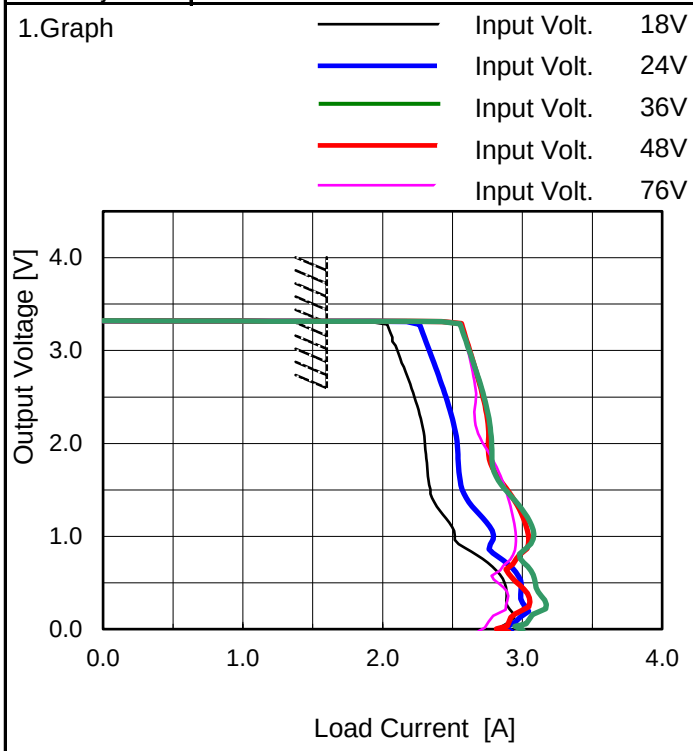
Model	MHFS6483R3
Item	Overcurrent Protection
Object	+3.3V1.6A

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]
3.14	2.070	2.298	2.585	2.592	2.586
2.97	2.104	2.332	2.617	2.621	2.609
2.64	2.187	2.411	2.689	2.686	2.656
2.31	2.265	2.482	2.755	2.745	2.657
1.98	2.303	2.535	2.779	2.757	2.714
1.65	2.322	2.547	2.799	2.802	2.843
1.32	2.389	2.640	2.971	2.962	2.914
0.99	2.517	2.794	3.082	3.042	2.953
0.66	2.787	2.899	3.038	2.934	2.865
0.33	2.887	2.987	3.137	3.049	2.898
0.00	2.850	2.923	3.004	2.903	2.685
--	-	-	-	-	-

Model	MHFS6483R3	
Item	Ambient Temperature Drift	Testing Circuitry Figure A
Object	+3.3V1.6A	

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	3.310	3.310	3.310	3.310	3.310
25	3.313	3.313	3.313	3.314	3.314
55	3.316	3.316	3.316	3.316	3.316

*1 Load 80%

Item	Minimum Input Voltage for Regulated Output Voltage	Testing Circuitry Figure A
Object	+3.3V1.6A	

1.Values

Ambient Temperature[℃]	Input Voltage [V]	
	Load 50%	Load 80%
-40	14.7	14.7
25	14.4	14.6
55	14.2	14.4

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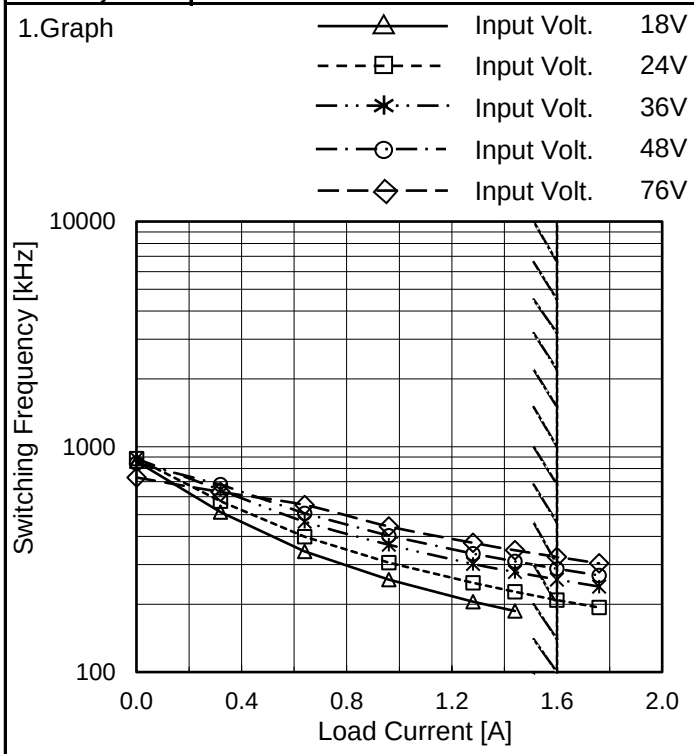
Model	MHFS6483R3
Item	Switching frequency (by Load Current)
Object	+3.3V1.6A

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	862	888	885	847	731
0.32	513	574	642	679	630
0.64	343	400	465	507	552
0.96	257	306	368	403	443
1.28	206	249	302	336	375
1.44	187	227	278	310	347
1.60	*1	209	258	288	325
1.76	*1	194	240	269	304
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

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

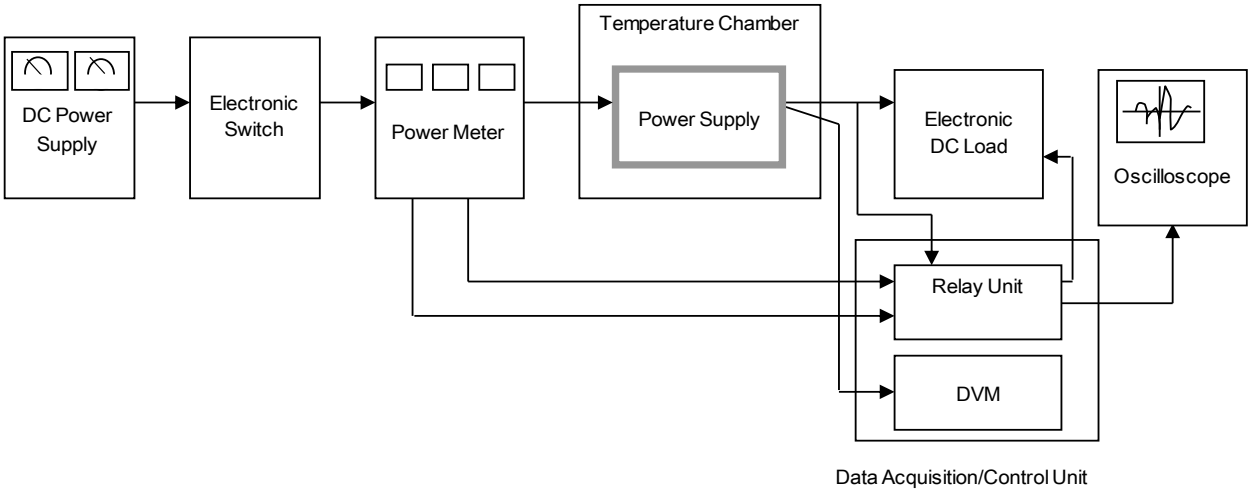


Figure A

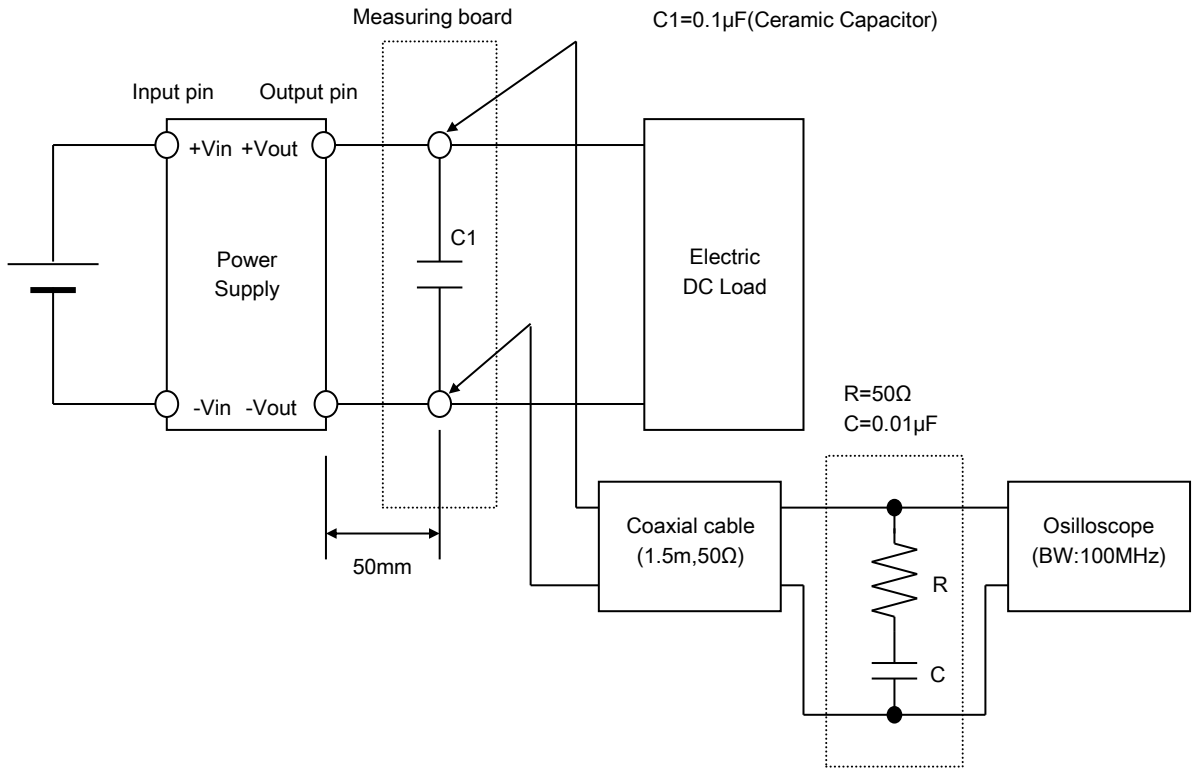


Figure B