

TEST DATA OF MHFS64809

Regulated DC Power Supply
October 26, 2021

Approved by : Kenichi Tsukada
Design Manager

Prepared by : Yoshihiko Saeki
Design Engineer

COSEL CO.,LTD.

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(Final Page 10)

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BC-11833



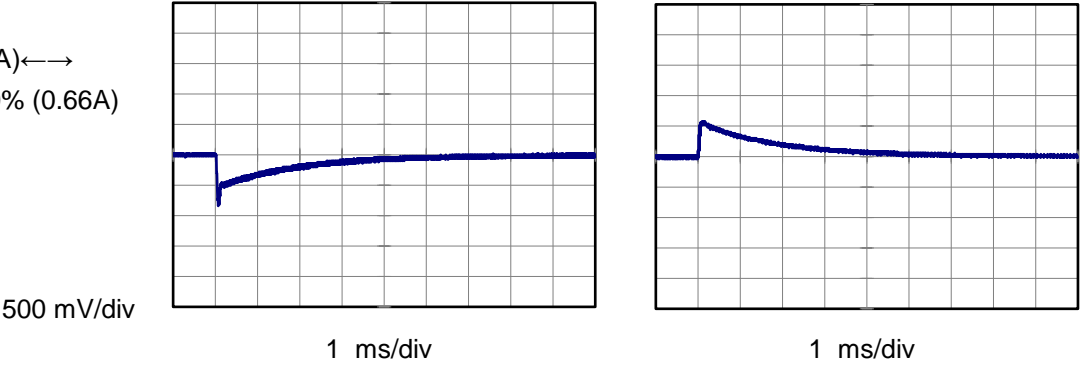
Model		MHFS64809	Temperature 25°C Testing Circuitry Figure A
Item		Dynamic Load Response	
Object		+9V0.66A	

Input Volt. 48 V
Cycle 100 ms

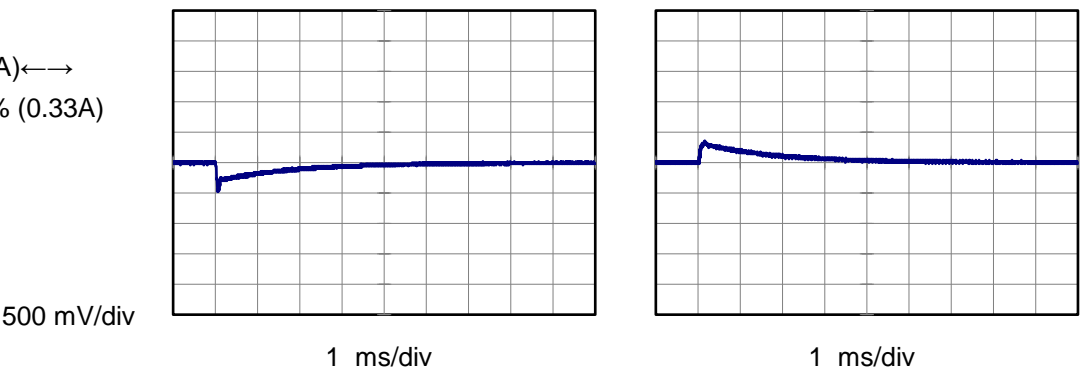
Response. $t_1=t_2=50\mu\text{s}$. Typ



Min.Load (0A) ←→
Load 100% (0.66A)



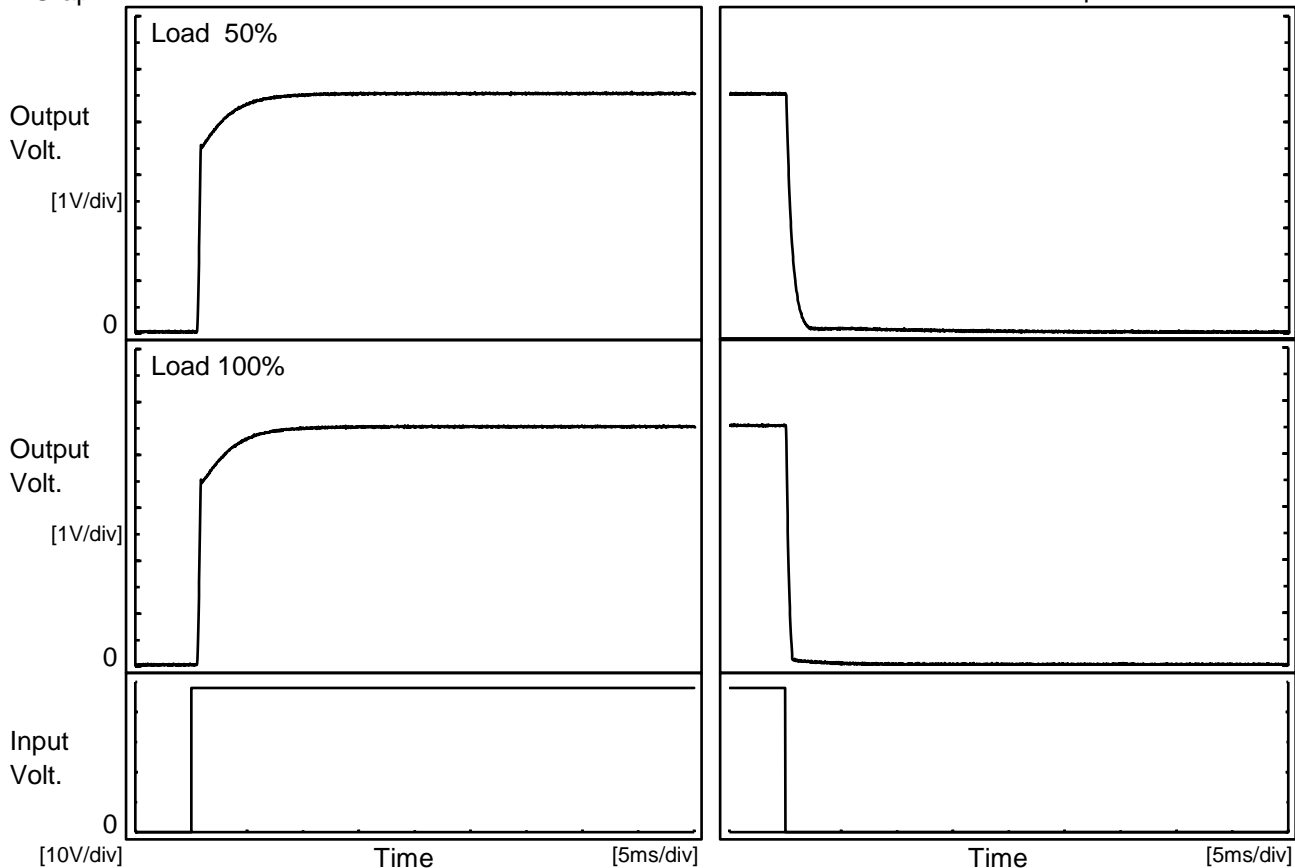
Min.Load (0A) ←→
Load 50% (0.33A)





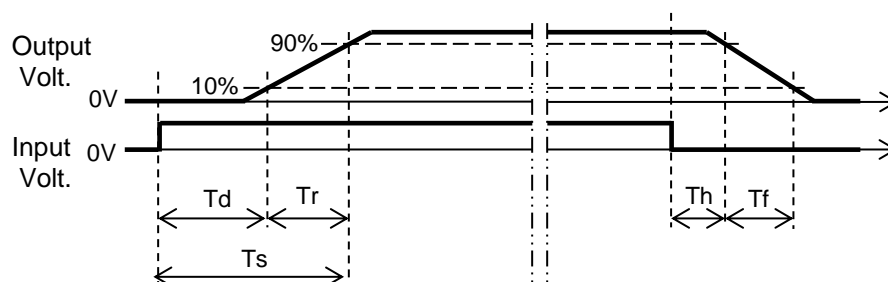
Model	MHFS64809	Temperature	25°C
Item	Rise and Fall Time	Testing Circuitry	Figure A
Object	+9V0.66A		

1.Graph



2.Values

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	0.6	2.4	3.0	0.1	1.1
100 %	0.6	2.7	3.3	0.1	0.4



Model		MHFS64809	Temperature		25°C																																																																																			
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8.55	0.759	0.893	0.955	0.936	0.925																																																																																			
8.10	0.800	0.929	0.975	0.958	0.942																																																																																			
7.20	0.865	0.996	1.031	1.003	0.986																																																																																			
6.30	0.944	1.077	1.090	1.053	1.018																																																																																			
5.40	1.022	1.151	1.145	1.101	1.060																																																																																			
4.50	1.113	1.228	1.211	1.161	1.115																																																																																			
3.60	1.180	1.295	1.272	1.216	1.161																																																																																			
2.70	1.233	1.342	1.324	1.262	1.199																																																																																			
1.80	1.348	1.447	1.396	1.327	1.261																																																																																			
0.90	1.546	1.600	1.492	1.389	1.287																																																																																			
0.00	1.413	1.416	1.275	1.164	0.988																																																																																			
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<p>Note: Slanted line shows the range of the rated load current.</p> <p>Maximum output current at 18V input Voltage is 80% of rated load current.</p> <p>Refer to instruction manuals for details of input derating.</p>																																																																																								

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		Testing Circuitry Figure A
Model	MHFS64809	
Item	Ambient Temperature Drift	
Object	+9V0.66A	

1.Values

Load 100%

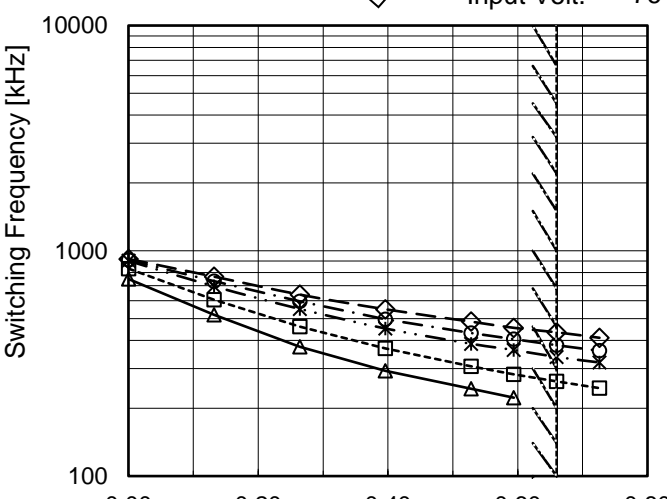
Ambient Temperature[°C]	Output Voltage [V]				
	Input Volt. 18V*1	Input Volt. 24V	Input Volt. 36V	Input Volt. 48V	Input Volt. 76V
-40	8.975	8.977	8.979	8.981	8.982
25	9.032	9.032	9.033	9.033	9.033
60	9.042	9.041	9.041	9.041	9.041

*1 Load 80%

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

1.Values

Ambient Temperature[°C]	Input Voltage [V]	
	Load 50%	Load 80%
-40	14.4	14.3
25	14.2	14.3
60	14.0	14.1

Model		MHFS64809		Temperature 25°C																																																																														
Item		Switching frequency (by Load Current)		Testing Circuitry Figure A																																																																														
Object		+9V0.66A																																																																																
1.Graph		<div><div>—△—</div>Input Volt. 18V</div> <div><div>---□---</div>Input Volt. 24V</div> <div><div>-·*·-</div>Input Volt. 36V</div> <div><div>-·○-</div>Input Volt. 48V</div> <div><div>---◇---</div>Input Volt. 76V</div>																																																																																
<div>Switching Frequency [kHz]</div> <div></div> <div>Load Current [A]</div>		2.Values																																																																																
				<table><tr><th rowspan="2">Load Current [A]</th><th colspan="5">Switching Frequency [kHz]</th></tr><tr><th>Input Volt. 18[V]</th><th>Input Volt. 24[V]</th><th>Input Volt. 36[V]</th><th>Input Volt. 48[V]</th><th>Input Volt. 76[V]</th></tr><tr><td>0.00</td><td>750</td><td>834</td><td>903</td><td>909</td><td>920</td></tr><tr><td>0.13</td><td>521</td><td>607</td><td>695</td><td>732</td><td>768</td></tr><tr><td>0.26</td><td>375</td><td>460</td><td>552</td><td>596</td><td>639</td></tr><tr><td>0.40</td><td>293</td><td>368</td><td>452</td><td>496</td><td>550</td></tr><tr><td>0.53</td><td>244</td><td>307</td><td>387</td><td>431</td><td>485</td></tr><tr><td>0.59</td><td>223</td><td>283</td><td>363</td><td>406</td><td>455</td></tr><tr><td>0.66</td><td>*1</td><td>263</td><td>338</td><td>381</td><td>435</td></tr><tr><td>0.73</td><td>*1</td><td>246</td><td>319</td><td>360</td><td>411</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr></table>		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	0.13	521	607	695	732	768	0.26	375	460	552	596	639	0.40	293	368	452	496	550	0.53	244	307	387	431	485	0.59	223	283	363	406	455	0.66	*1	263	338	381	435	0.73	*1	246	319	360	411	--	-	-	-	-	-	--	-	-	-	-	-	--	-	-	-	-	-
Load Current [A]	Switching Frequency [kHz]																																																																																	
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When load current is low, MH operates intermittently, so switching frequency would not become constant.																																																																																		

- 9 -

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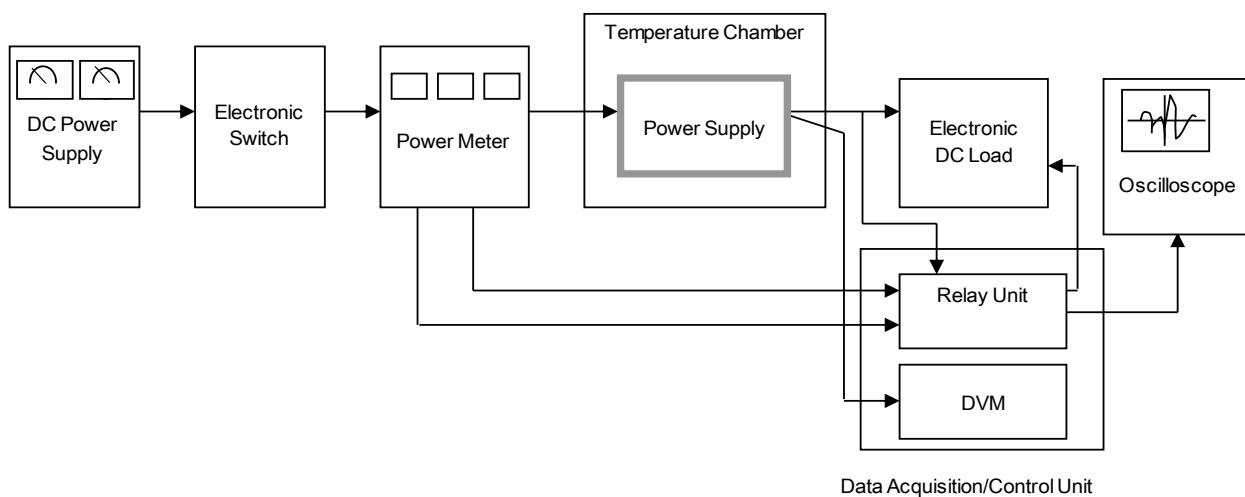


Figure A

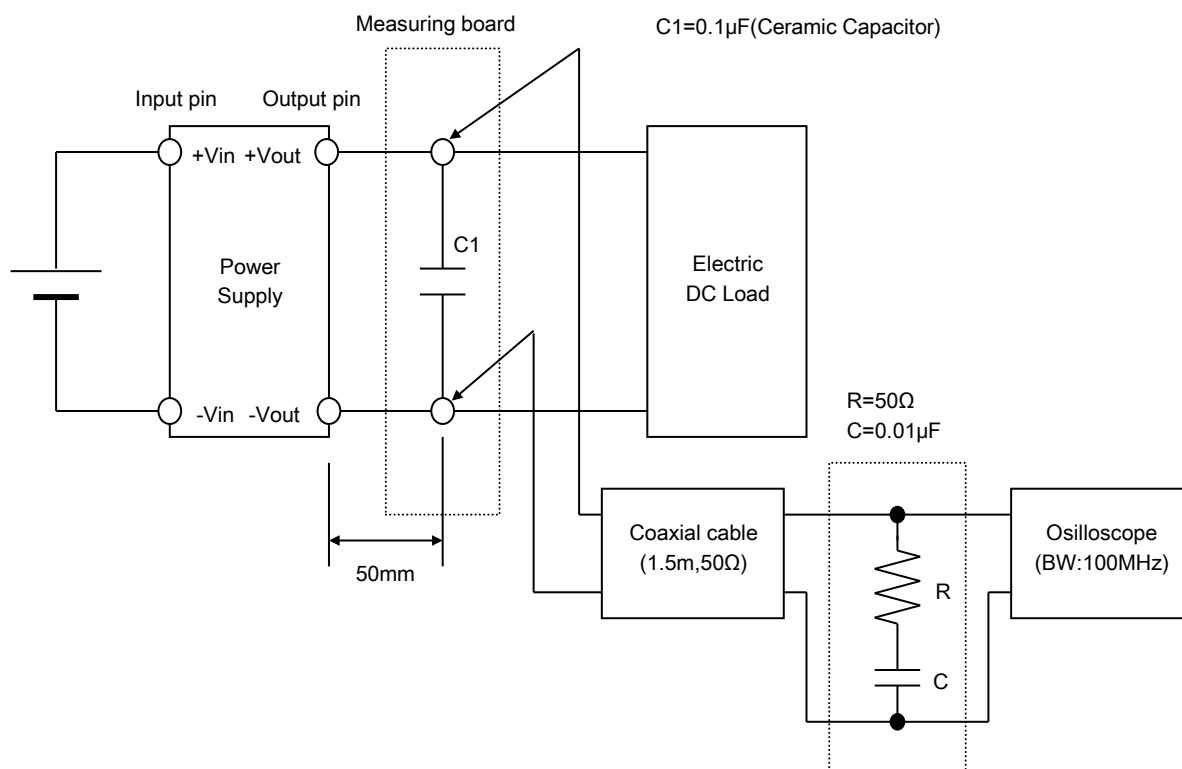


Figure B