

# TEST DATA OF MHFS64812

Regulated DC Power Supply  
October 26, 2021

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Design Manager

Prepared by : Yoshihiko Saeki  
Design Engineer

**COSEL CO.,LTD.**

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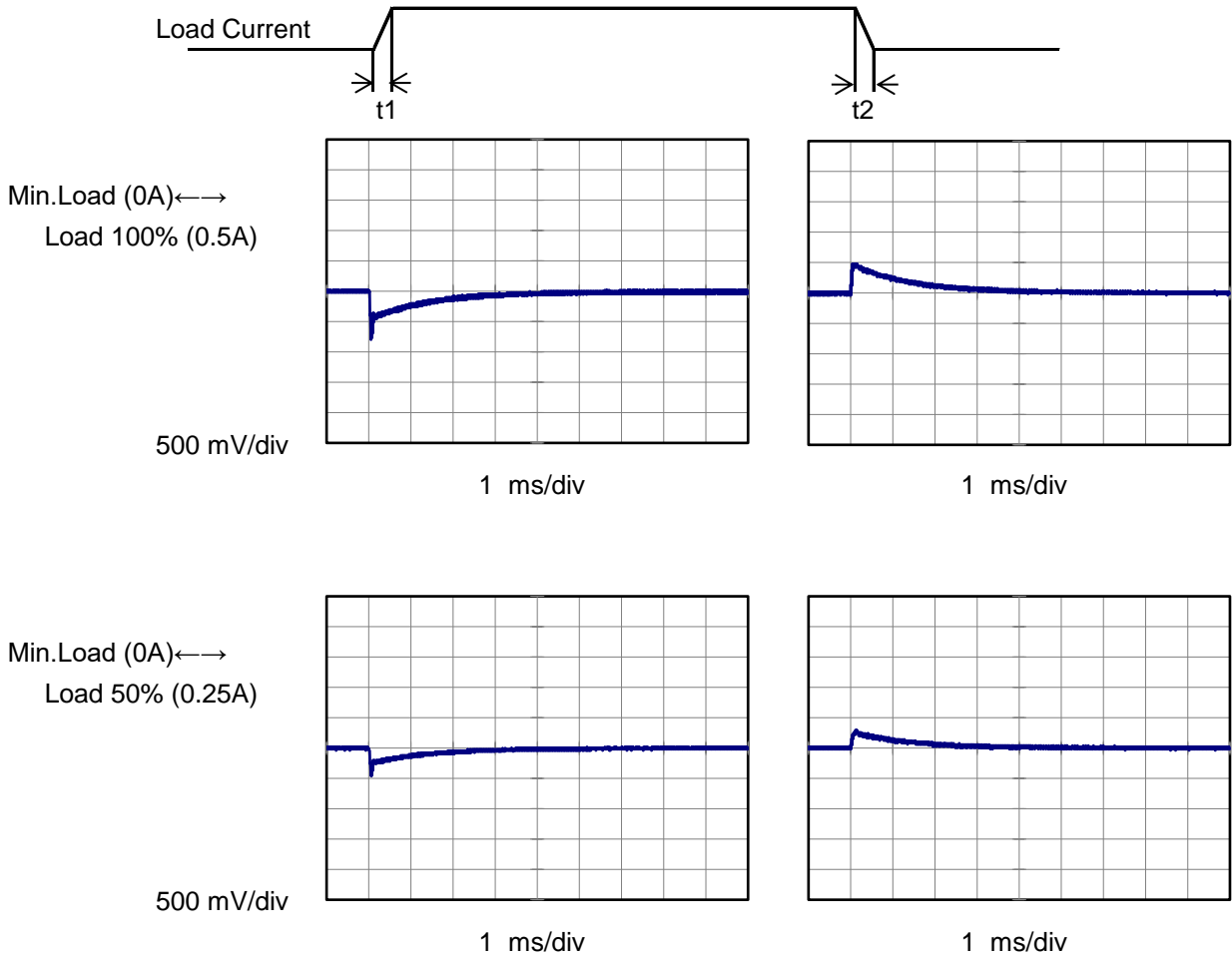
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Item		Load Regulation	Testing CircuitryFigure A																																																																													
Object		+12V0.5A																																																																														
1.Graph		<div><div><div>—△—</div><div>Input Volt.</div><div>18V</div></div><div><div>---□---</div><div>Input Volt.</div><div>24V</div></div><div><div>-...*...-</div><div>Input Volt.</div><div>36V</div></div><div><div>-...○...-</div><div>Input Volt.</div><div>48V</div></div><div><div>--◇--</div><div>Input Volt.</div><div>76V</div></div></div> <div><div><div>Output Voltage [V]</div><div><div>Load Current [A]</div></div><div>Note: Slanted line shows the range of the rated load current.</div></div></div>	2.Values																																																																													
		<table><tr><th rowspan="2">Load Current [A]</th><th colspan="5">Output Voltage [V]</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>12.027</td><td>12.026</td><td>12.026</td><td>12.027</td><td>12.027</td></tr><tr><td>0.10</td><td>12.026</td><td>12.026</td><td>12.025</td><td>12.025</td><td>12.024</td></tr><tr><td>0.20</td><td>12.025</td><td>12.025</td><td>12.024</td><td>12.024</td><td>12.023</td></tr><tr><td>0.30</td><td>12.024</td><td>12.024</td><td>12.024</td><td>12.023</td><td>12.022</td></tr><tr><td>0.40</td><td>12.023</td><td>12.023</td><td>12.023</td><td>12.022</td><td>12.021</td></tr><tr><td>0.45</td><td>12.023</td><td>12.023</td><td>12.022</td><td>12.022</td><td>12.021</td></tr><tr><td>0.50</td><td>*1</td><td>12.022</td><td>12.022</td><td>12.021</td><td>12.021</td></tr><tr><td>0.55</td><td>*1</td><td>12.022</td><td>12.022</td><td>12.021</td><td>12.020</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]	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	12.027	12.026	12.026	12.027	12.027	0.10	12.026	12.026	12.025	12.025	12.024	0.20	12.025	12.025	12.024	12.024	12.023	0.30	12.024	12.024	12.024	12.023	12.022	0.40	12.023	12.023	12.023	12.022	12.021	0.45	12.023	12.023	12.022	12.022	12.021	0.50	*1	12.022	12.022	12.021	12.021	0.55	*1	12.022	12.022	12.021	12.020	--	-	-	-	-	-	--	-	-	-	-	-	--	-	-	-	-	-
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Item		Ripple-Noise	Temperature25°C																																																																													
Object		+12V0.5A	Testing CircuitryFigure B																																																																													
1.Graph		<div><div><div>Input Voltage</div><div>48V</div><div>Load</div><div>100%</div></div><div><div><div>10[mV/div]</div><div><div>1[μs/div]</div></div></div></div></div>																																																																														



Model	MHFS64812		
Item	Dynamic Load Response	Temperature	25°C
		Testing Circuitry	Figure A
Object	+12V0.5A		

Input Volt.      48 V  
Cycle              100 ms

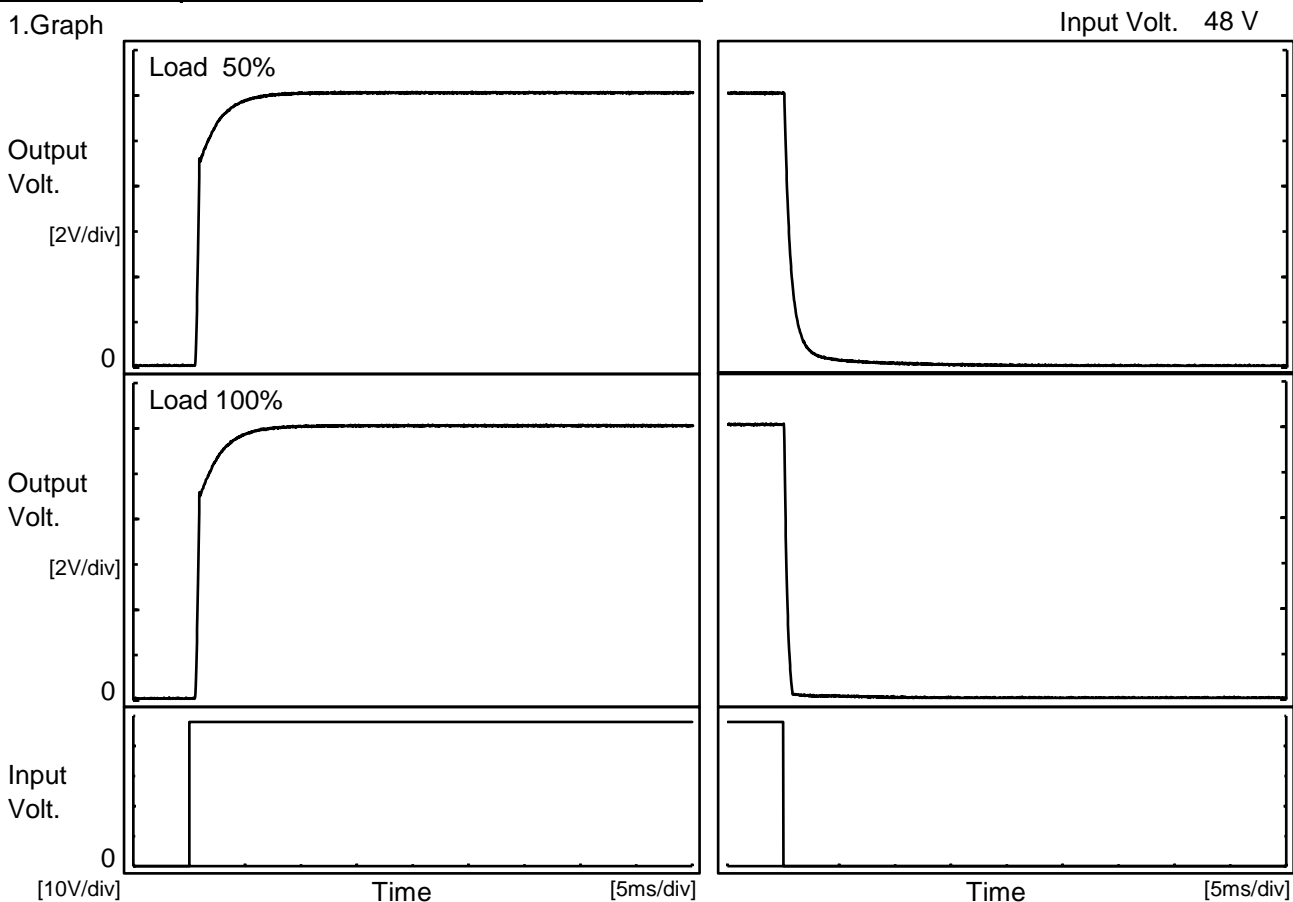
Response.  $t_1=t_2=50\mu\text{s}$ . Typ



**COSEL**

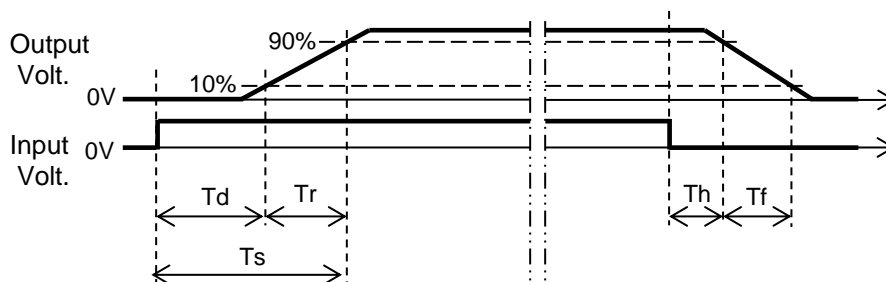
Model	MHFS64812	Temperature	25°C
Item	Rise and Fall Time	Testing Circuitry	Figure A
Object	+12V0.5A		

1.Graph



2.Values

		[ms]				
Load	Time	Td	Tr	Ts	Th	Tf
50 %		0.6	2.0	2.6	0.1	1.5
100 %		0.6	2.1	2.7	0.1	0.5





<div>Model</div> MHFS64812		<div>Temperature</div> 25°C																																																																																				
<div>Item</div> Overcurrent Protection		<div>Testing Circuitry</div> Figure A																																																																																				
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		Testing Circuitry Figure A
Model	MHFS64812	
Item	Ambient Temperature Drift	
Object	+12V0.5A	

## 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	11.959	11.962	11.964	11.966	11.967
25	12.020	12.020	12.020	12.020	12.019
60	12.024	12.023	12.023	12.022	12.021

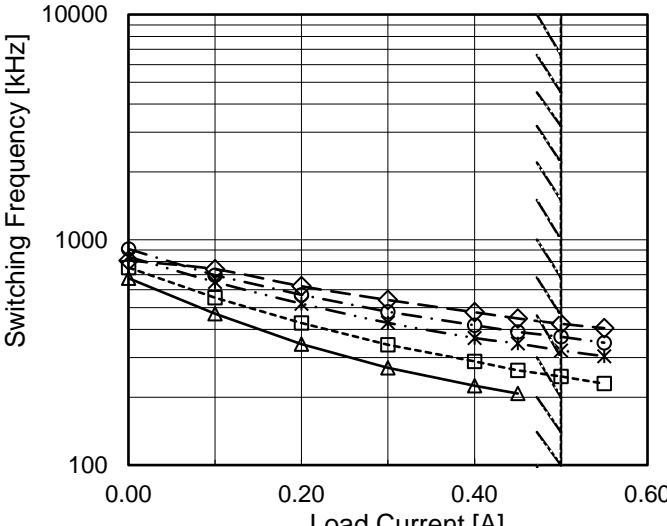
\*1 Load 80%

Item	Minimum Input Voltage for Regulated Output Voltage	Testing Circuitry Figure A
Object	+12V0.5A	

## 1.Values

Ambient Temperature[°C]	Input Voltage [V]	
	Load 50%	Load 80%
-40	14.7	14.6
25	14.4	14.5
60	14.0	14.1

# COSEL

Model		MHFS64812		Temperature 25°C																																																																														
Item		Switching frequency (by Load Current)		Testing Circuitry Figure A																																																																														
Object		+12V0.5A																																																																																
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>																																																																																
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When load current is low, MH operates intermittently, so switching frequency would not become constant.																																																																																		

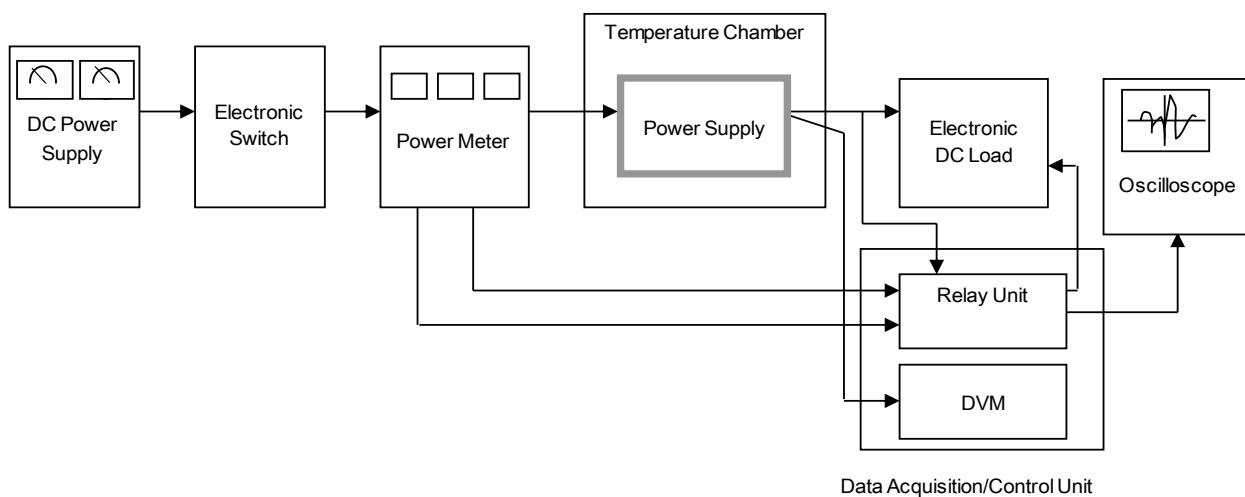


Figure A

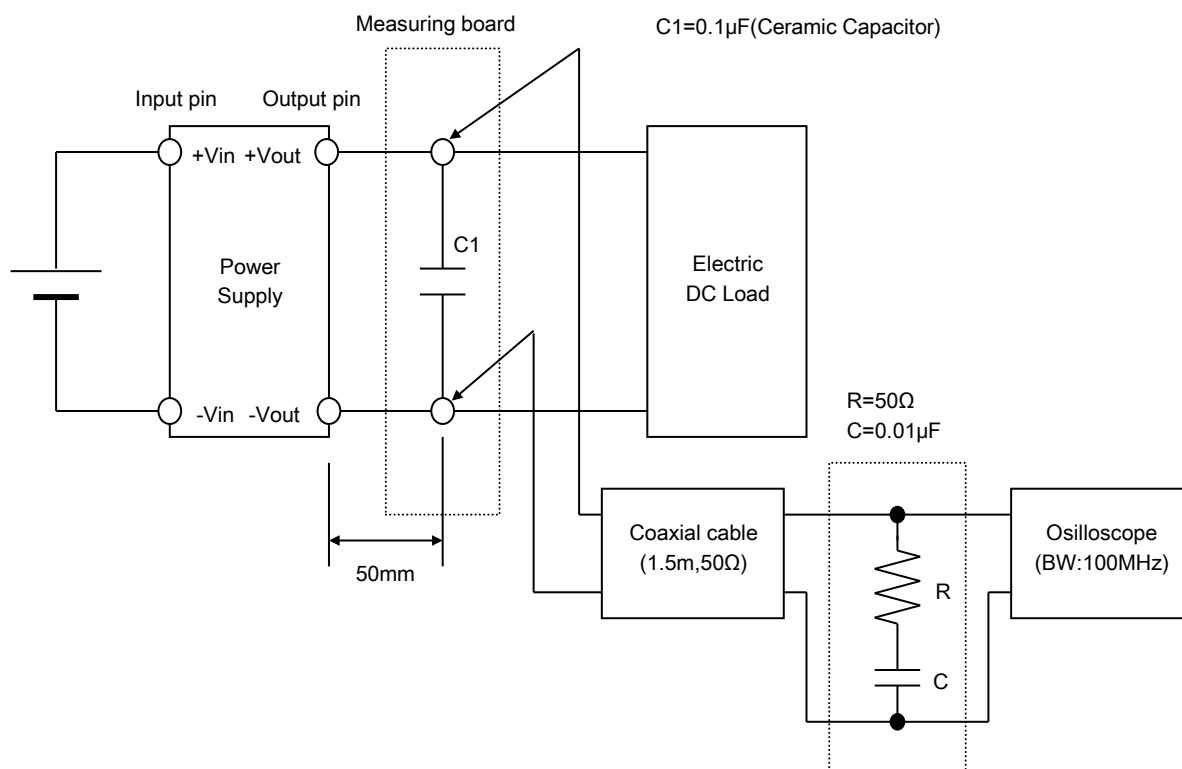


Figure B