

TEST DATA OF STMGFS804805

Regulated DC Power Supply
May 18, 2021

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COSEL CO.,LTD.



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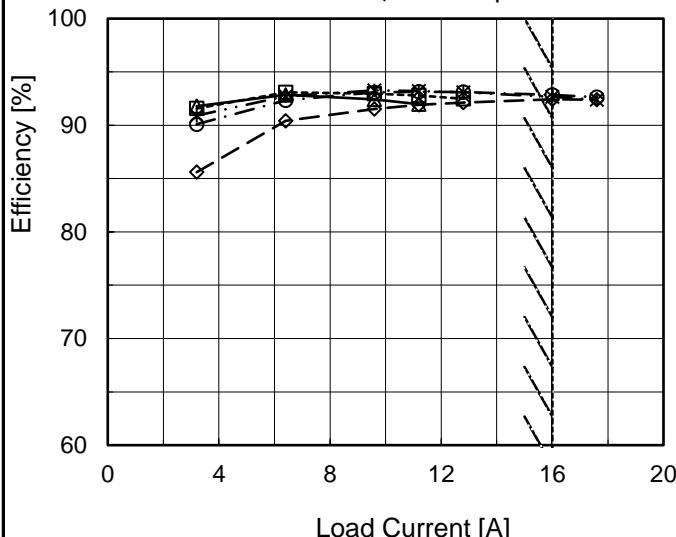
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Model	STMGFS804805	Temperature Testing Circuitry	25°C Figure A																																																																													
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1.Graph		2.Values																																																																														
<p>The graph plots Input Current [A] on the y-axis (0.0 to 8.0) against Load Current [A] on the x-axis (0 to 20). Five curves are shown for different input voltages: 18V (solid line with open triangle), 24V (dashed line with open square), 36V (dash-dot line with asterisk), 48V (dash-dot-dot line with open circle), and 76V (dash-dot-dot-dot line with open diamond). All curves start at (0,0) and increase linearly. A slanted line is drawn through the points (16, 1.6) and (16, 4.8), representing the range of rated load current.</p>		<table border="1"> <thead> <tr> <th rowspan="2">Load Current [A]</th> <th colspan="5">Input Current [A]</th> </tr> <tr> <th>18[V]</th> <th>24[V]</th> <th>36[V]</th> <th>48[V]</th> <th>76[V]</th> </tr> </thead> <tbody> <tr> <td>0.0</td> <td>0.038</td> <td>0.031</td> <td>0.024</td> <td>0.011</td> <td>0.011</td> </tr> <tr> <td>3.2</td> <td>0.970</td> <td>0.731</td> <td>0.488</td> <td>0.371</td> <td>0.247</td> </tr> <tr> <td>6.4</td> <td>1.916</td> <td>1.435</td> <td>0.962</td> <td>0.725</td> <td>0.467</td> </tr> <tr> <td>9.6</td> <td>2.907</td> <td>2.160</td> <td>1.431</td> <td>1.076</td> <td>0.692</td> </tr> <tr> <td>11.2</td> <td>3.409</td> <td>2.532</td> <td>1.672</td> <td>1.255</td> <td>0.803</td> </tr> <tr> <td>12.8</td> <td>-※1</td> <td>2.899</td> <td>1.910</td> <td>1.432</td> <td>0.915</td> </tr> <tr> <td>16.0</td> <td>-※1</td> <td>-※2</td> <td>2.403</td> <td>1.796</td> <td>1.138</td> </tr> <tr> <td>17.6</td> <td>-※1</td> <td>-※2</td> <td>2.654</td> <td>1.977</td> <td>1.253</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> </tbody> </table>		Load Current [A]	Input Current [A]					18[V]	24[V]	36[V]	48[V]	76[V]	0.0	0.038	0.031	0.024	0.011	0.011	3.2	0.970	0.731	0.488	0.371	0.247	6.4	1.916	1.435	0.962	0.725	0.467	9.6	2.907	2.160	1.431	1.076	0.692	11.2	3.409	2.532	1.672	1.255	0.803	12.8	-※1	2.899	1.910	1.432	0.915	16.0	-※1	-※2	2.403	1.796	1.138	17.6	-※1	-※2	2.654	1.977	1.253	--	-	-	-	-	-	--	-	-	-	-	-	--	-	-	-	-	-
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Note: Slanted line shows the range of the rated load current.

Load Current [A]	Efficiency [%]				
	18[V]	24[V]	36[V]	48[V]	76[V]
0.0	-	-	-	-	-
3.2	91.8	91.6	90.9	90.1	85.6
6.4	92.9	93.1	92.7	92.3	90.4
9.6	92.4	93.0	93.3	93.1	91.5
11.2	92.0	92.8	93.2	93.1	91.9
12.8	-※1	92.5	93.1	93.1	92.1
16.0	-※1	-※2	92.7	92.8	92.4
17.6	-※1	-※2	92.4	92.6	92.4
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

※1 Maximam output current at minimum input Voltage is 70% of rated load current.

※2 Maximam output current at 24V input Voltage is 80% of rated load current.

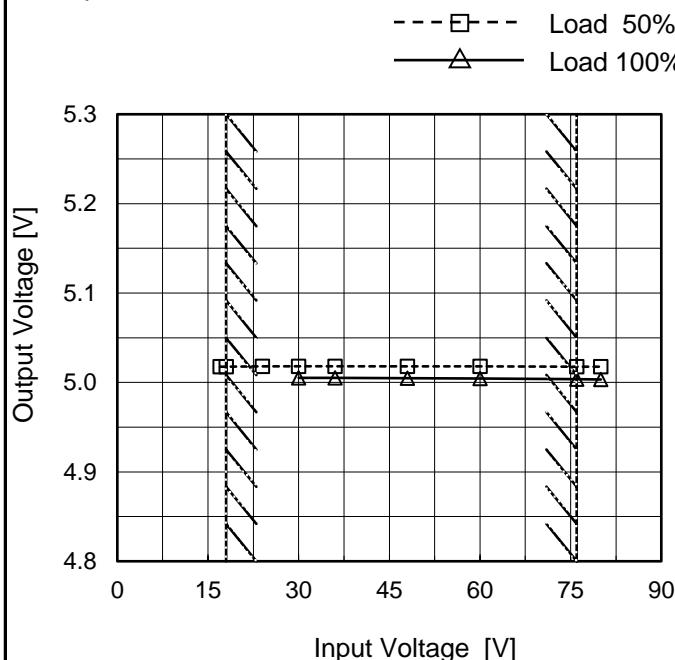
Refer to instruction manuals for details of input derating.

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Model	STMGFS804805
Item	Line Regulation
Object	+5V16A

 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	5.018	- ※1
18	5.018	- ※1
24	5.018	- ※2
30	5.018	5.005
36	5.018	5.005
48	5.018	5.005
60	5.018	5.004
76	5.018	5.004
80	5.018	5.003

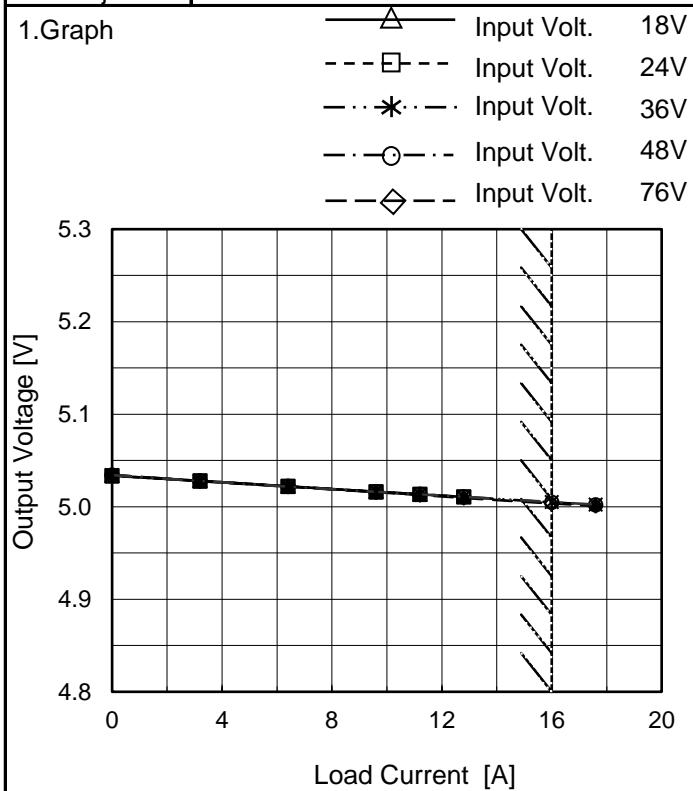
※1 Maximum output current at minimum input Voltage is 70% of rated load current.

※2 Maximum output current at 24V input Voltage is 80% of rated load current.
 Refer to instruction manuals for details of input derating.

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Model	STMGFS804805
Item	Load Regulation
Object	+5V16A

Temperature 25°C
Testing Circuitry Figure A



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

2.Values

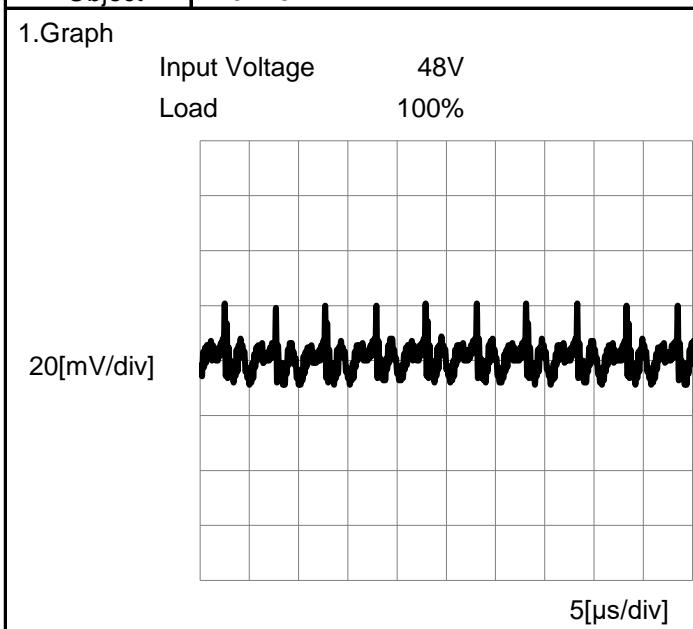
Load Current [A]	Output Voltage [V]				
	18[V]	24[V]	36[V]	48[V]	76[V]
0.0	5.034	5.034	5.034	5.034	5.034
3.2	5.028	5.028	5.028	5.028	5.028
6.4	5.022	5.022	5.022	5.022	5.022
9.6	5.016	5.016	5.016	5.016	5.016
11.2	5.013	5.013	5.013	5.013	5.013
12.8	-※1	5.011	5.011	5.011	5.010
16.0	-※1	-※2	5.005	5.005	5.004
17.6	-※1	-※2	5.002	5.002	5.001
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

※1 Maximum output current at minimum input Voltage is 70% of rated load current.

※2 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	+5V16A

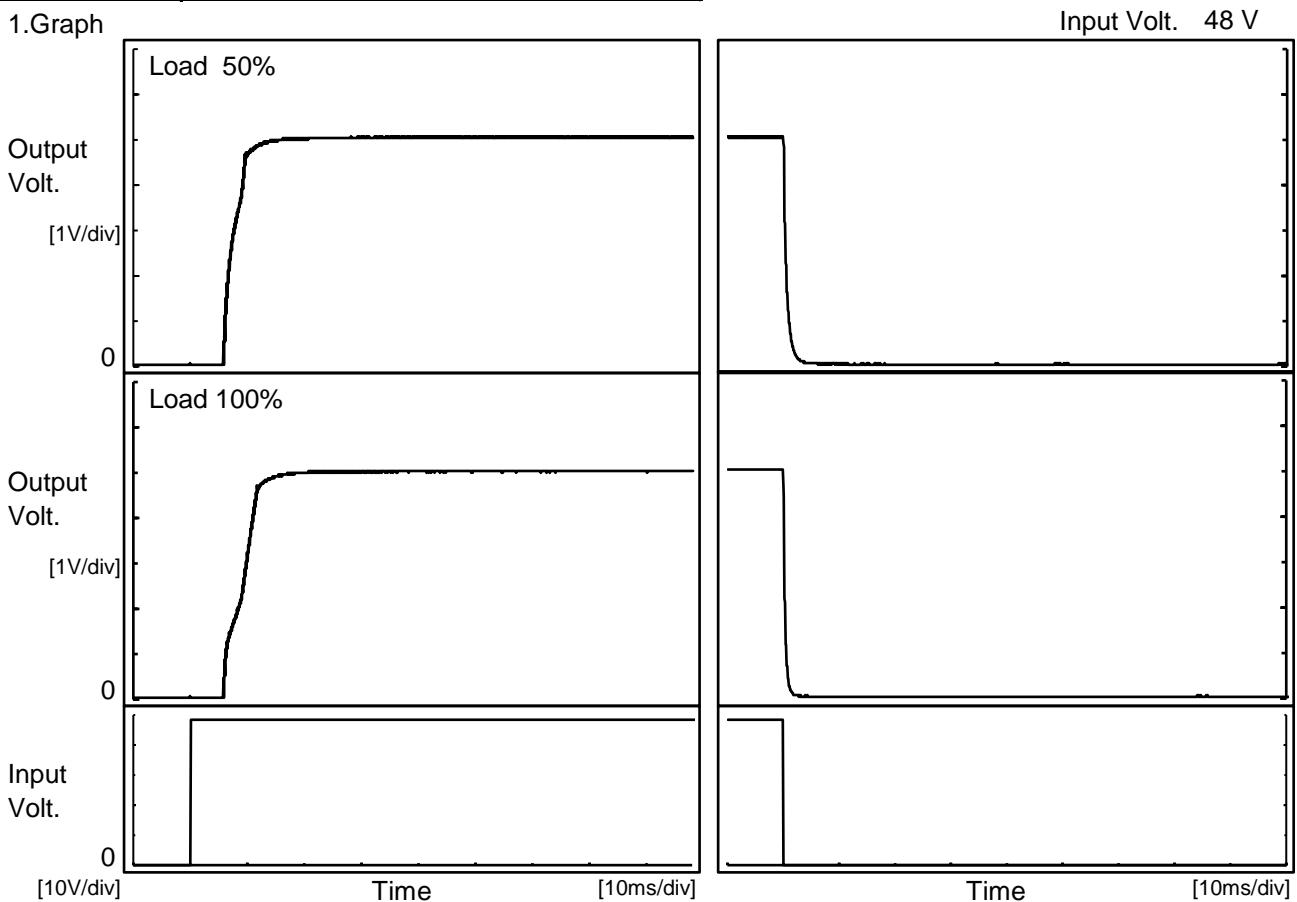
Temperature 25°C
Testing Circuitry Figure B



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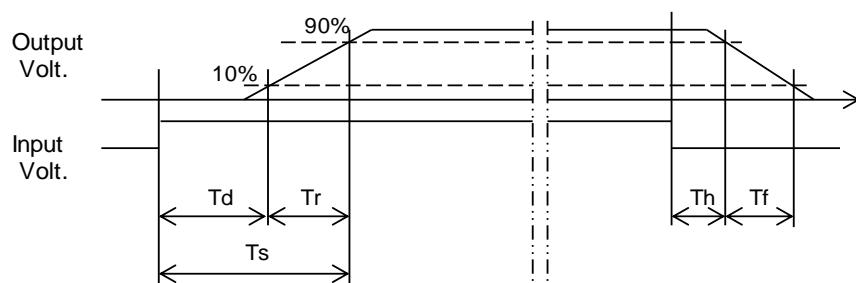
Model	STMGFS804805	Temperature	25°C
Item	Rise and Fall Time	Testing Circuitry	Figure A
Object	+5V16A		

1. Graph



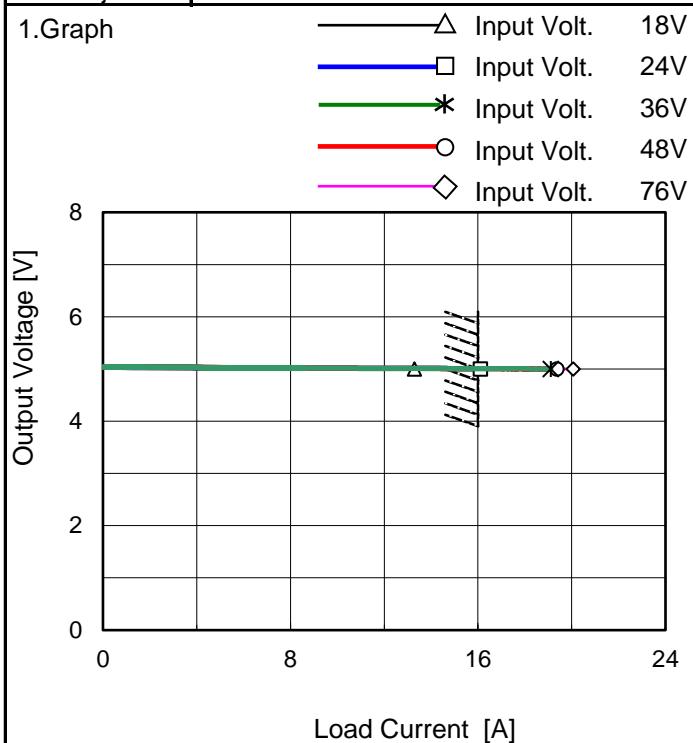
2. Values

Load	Time	Td	Tr	Ts	Th	Tf	[ms]
50 %		6.1	3.7	9.8	0.2	1.4	
100 %		6.0	5.8	11.8	0.1	0.8	



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Model	STMGFS804805
Item	Overcurrent Protection
Object	+5V16A



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

Intermittent operation occurs when overcurrent protection is activated.

Temperature 25°C
Testing Circuitry Figure A

2.Values

Output Voltage [V]	Load Current [A]				
	18[V]	24[V]	36[V]	48[V]	76[V]
5.00	13.291	16.096	19.105	19.368	20.064
4.75	-※1	-※2	-	-	-
4.50	-	-	-	-	-
4.00	-	-	-	-	-
3.50	-	-	-	-	-
3.00	-	-	-	-	-
2.50	-	-	-	-	-
2.00	-	-	-	-	-
1.50	-	-	-	-	-
1.00	-	-	-	-	-
0.50	-	-	-	-	-
0.00	-	-	-	-	-

※1 Maximum output current at minimum input Voltage is 70% of rated load current.

※2 Maximum output current at 24V input Voltage is 80% of rated load current.
Refer to instruction manuals for details of input derating.



Model	STMGFS804805	
Item	Ambient Temperature Drift	Testing Circuitry Figure A
Object	+5V16A	

1.Values

Load 100%

Ambient Temperature[°C]	Output Voltage [V]				
	Input Volt. 18V	Input Volt. 24V	Input Volt. 36V	Input Volt. 48V	Input Volt. 76V
-20	5.002	5.001	4.994	4.994	4.993
25	5.013	5.011	5.004	5.004	5.003
40	5.014	5.012	5.005	5.005	5.003

Note: In case of input Volt.18V, Load 70%. 24V, Load 80%.

Other case Load 100%.

Item	Minimum Input Voltage for Regulated Output Voltage	Testing Circuitry Figure A
Object	+5V16A	

1.Values

Ambient Temperature[°C]	Input Voltage [V]	
	Load 50%	Load 70%
-20	15.2	15.2
25	15.3	15.4
40	15.3	15.3

Item	Overvoltage Protection	Testing Circuitry Figure A
Object	+5V16A	

1.Values

Load 0%

Ambient Temperature[°C]	Operating Point [V]				
	Input Volt. 18V	Input Volt. 24V	Input Volt. 36V	Input Volt. 48V	Input Volt. 76V
-20	6.21	6.21	6.21	6.22	6.22
25	6.21	6.21	6.21	6.22	6.22
40	6.28	6.28	6.28	6.22	6.22

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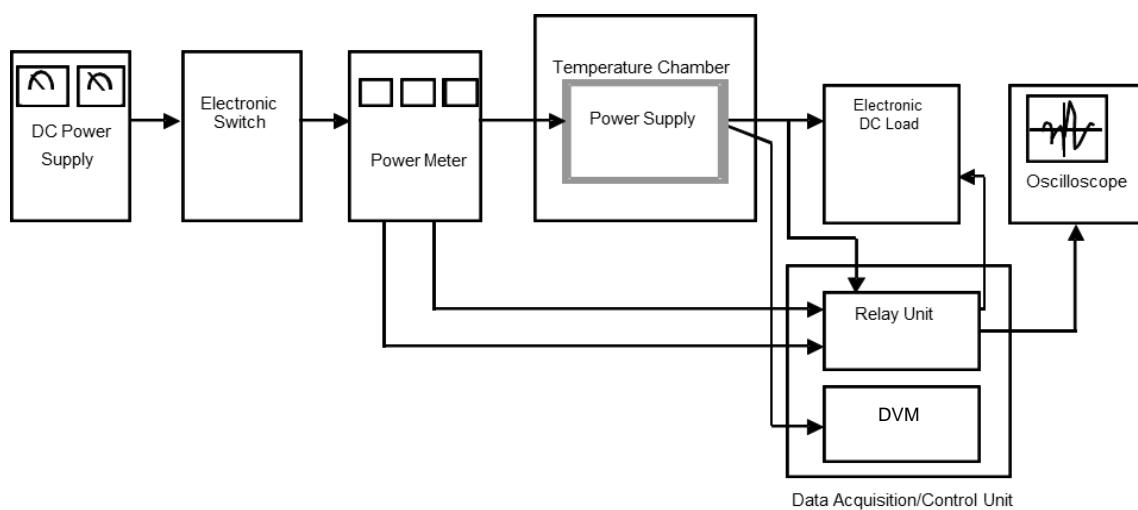


Figure A

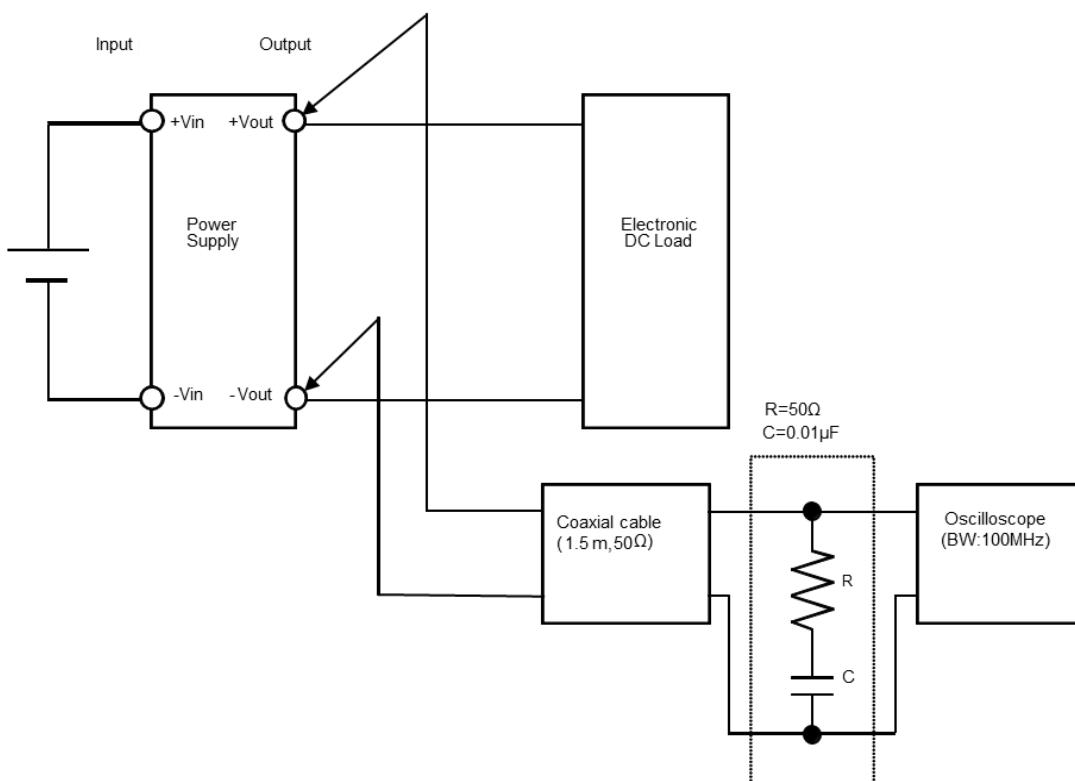


Figure B (Ripple noise Characteristic)