

TEST DATA OF MGFS154815

Regulated DC Power Supply

Approved by : Kazunari Asano
Kazunari Asano

Design Manager

Prepared by : Yuichiro Ohashi
Yuichiro Ohashi

Design Engineer

COSEL CO.,LTD.

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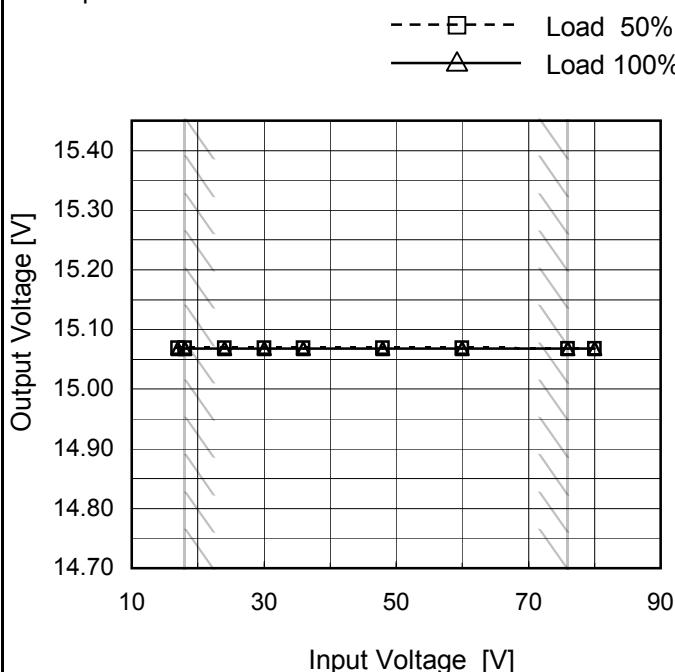
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Note: Slanted line shows the range of the rated load current.

Model	MGFS154815
Item	Line Regulation
Object	+15V1A

Temperature 25°C
Testing Circuitry Figure A

1. Graph



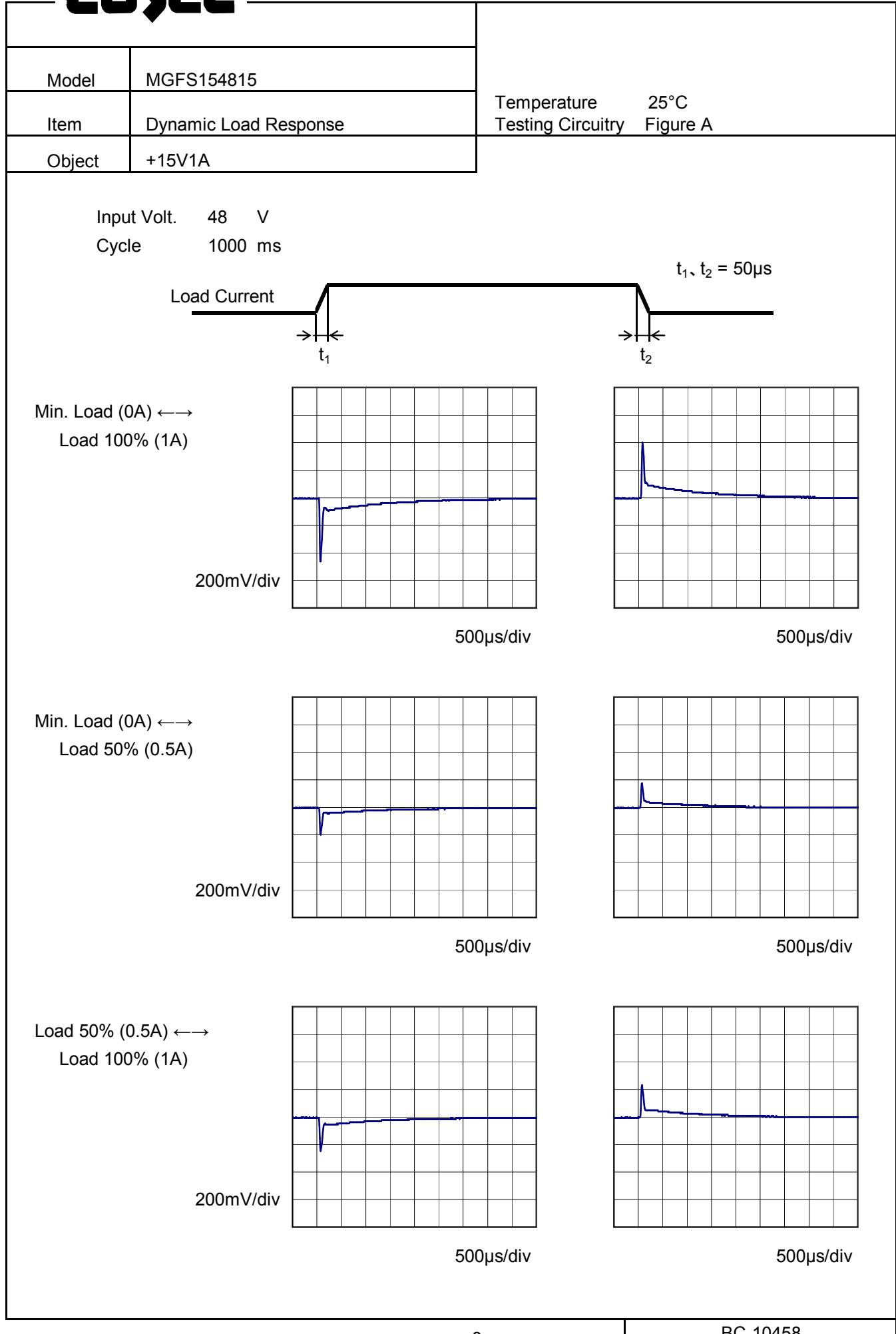
2. Values

Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
17	15.070	15.068
18	15.070	15.068
24	15.069	15.068
30	15.069	15.068
36	15.069	15.069
48	15.069	15.069
60	15.069	15.069
76	15.068	15.068
80	15.068	15.068

Note: Slanted line shows the range of the rated input voltage.

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COSEL



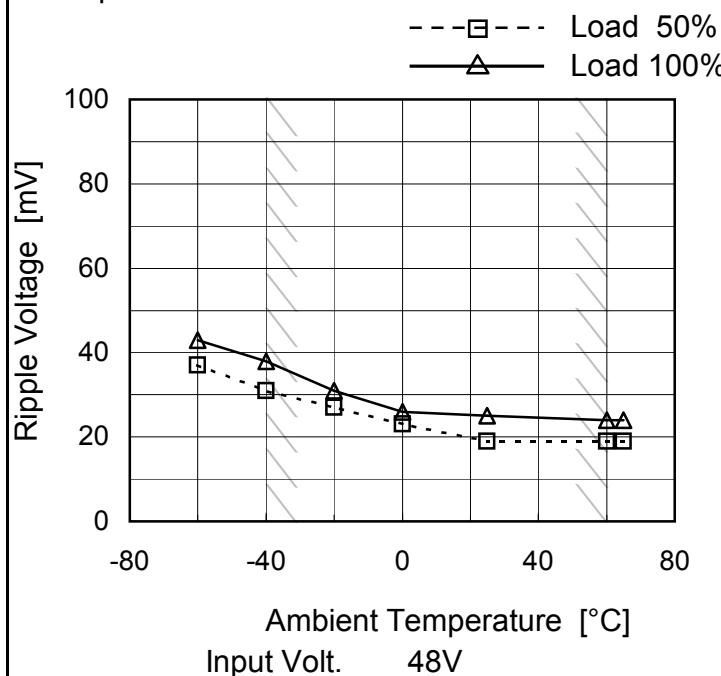
Model	MGFS154815																																							
Item	Ripple Voltage (by Load Current)	Temperature 25°C Testing Circuitry Figure B																																						
Object	+15V1A																																							
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Model	MGFS154815
Item	Ripple Voltage (by Ambient Temp.)
Object	+15V1A

Testing Circuitry Figure B

1. Graph



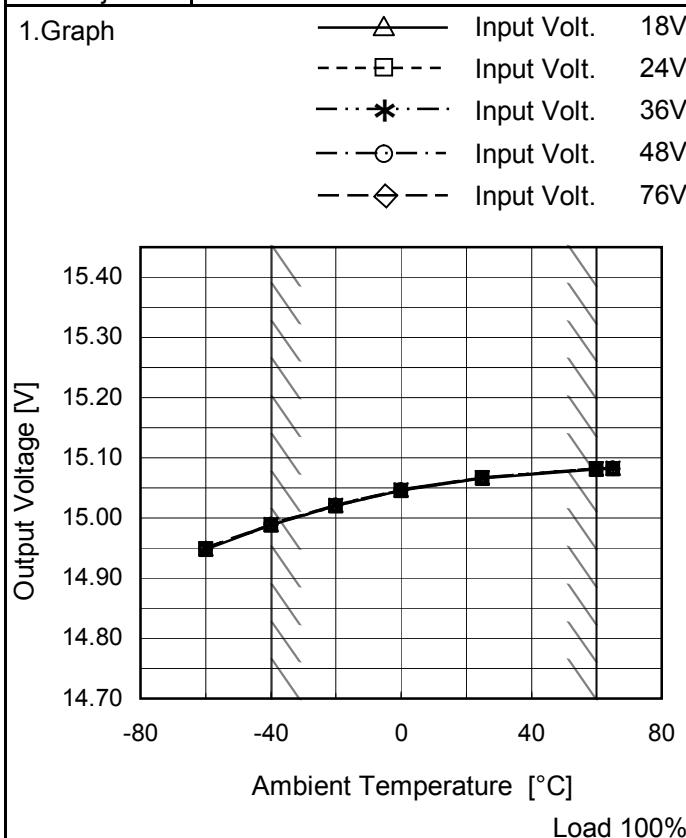
2. Values

Ambient Temperature [°C]	Ripple Voltage [mV]	
	Load 50%	Load 100%
-60	37	43
-40	31	38
-20	27	31
0	23	26
25	19	25
60	19	24
65	19	24
--	-	-
--	-	-
--	-	-
--	-	-

Measured by 100 MHz Oscilloscope.

Note: Slanted line shows the range of the rated ambient temperature.

Model	MGFS154815
Item	Ambient Temperature Drift
Object	+15V1A



Note: Slanted line shows the range of the rated ambient temperature.

Testing Circuitry Figure A

2.Values

Ambient Temperature [°C]	Output Voltage [V]				
	18[V]	24[V]	36[V]	48[V]	76[V]
-60	14.947	14.949	14.949	14.949	14.950
-40	14.988	14.989	14.989	14.990	14.990
-20	15.020	15.020	15.021	15.021	15.021
0	15.045	15.046	15.047	15.047	15.047
25	15.066	15.067	15.067	15.068	15.067
60	15.081	15.081	15.082	15.082	15.082
65	15.082	15.082	15.083	15.083	15.082
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-



Model	MGFS154815	Testing Circuitry Figure A
Item	Output Voltage Accuracy	
Object	+15V1A	

1. Output Voltage Accuracy

This is defined as the value of the output voltage, regulation load, ambient temperature and input voltage varied at random in the range as specified below.

Temperature : -40 - 60°C

Input Voltage : 18 - 76V

Load Current : 0 - 1A

* Output Voltage Accuracy = $\pm(\text{Maximum of Output Voltage} - \text{Minimum of Output Voltage}) / 2$

$$\text{* Output Voltage Accuracy (Ration)} = \frac{\text{Output Voltage Accuracy}}{\text{Rated Output Voltage}} \times 100$$

2. Values

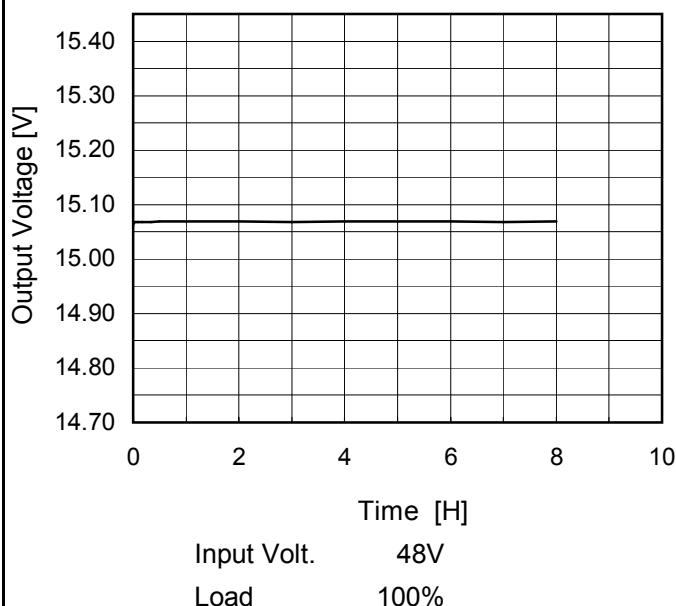
Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	60	18	0	15.084	±48	±0.3
Minimum Voltage	-40	18	1	14.988		

COSEL

Model	MGFS154815
Item	Time Lapse Drift
Object	+15V1A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



2.Values

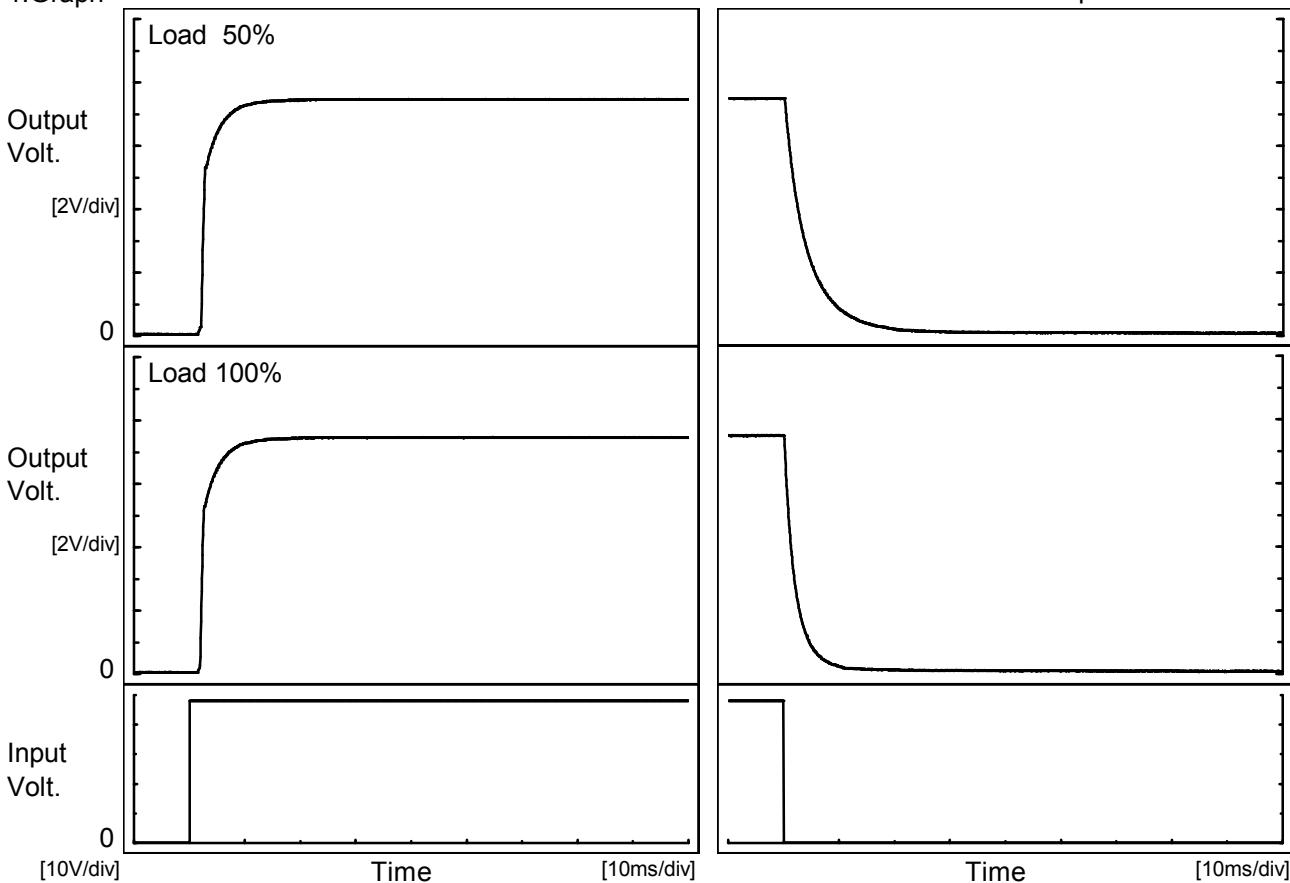
Time since start [H]	Output Voltage [V]
0.0	15.062
0.5	15.069
1.0	15.069
2.0	15.069
3.0	15.069
4.0	15.069
5.0	15.069
6.0	15.069
7.0	15.069
8.0	15.069

COSEL

Model	MGFS154815
Item	Rise and Fall Time
Object	+15V1A

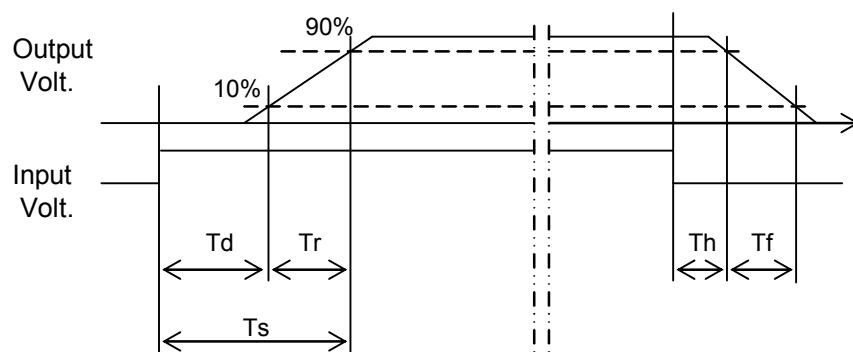
Temperature 25°C
Testing Circuitry Figure A

1. Graph



2. Values

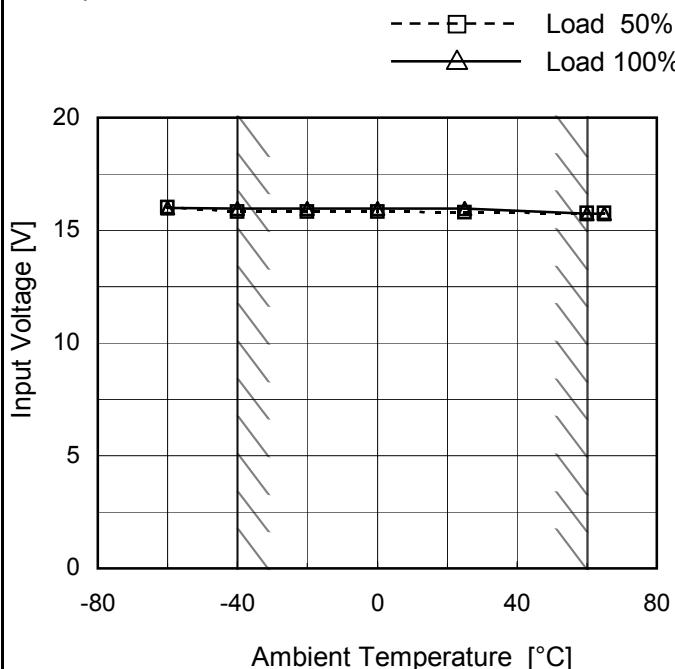
Load	Time	Td	Tr	Ts	Th	Tf	[ms]
50 %		2.2	4.1	6.3	0.5	9.9	
100 %		2.1	4.2	6.3	0.3	5.1	



Model	MGFS154815
Item	Minimum Input Voltage for Regulated Output Voltage
Object	+15V1A

Testing Circuitry Figure A

1. Graph



2. Values

Ambient Temperature [°C]	Input Voltage [V]	
	Load 50%	Load 100%
-60	16.1	16.0
-40	15.9	16.0
-20	15.9	16.0
0	15.9	16.0
25	15.8	16.0
60	15.8	15.8
65	15.8	15.8
--	-	-
--	-	-
--	-	-
--	-	-

Note: Slanted line shows the range of the rated ambient temperature.

Model	MGFS154815	Temperature Testing Circuitry 25°C Figure A																																																																																						
Item	Overcurrent Protection																																																																																							
Object	+15V1A																																																																																							
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2.Values	<table border="1"> <thead> <tr> <th rowspan="2">Output Voltage [V]</th> <th colspan="5">Load Current [A]</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> </thead> <tbody> <tr> <td>15.0</td> <td>1.265</td> <td>1.395</td> <td>1.526</td> <td>1.542</td> <td>1.411</td> </tr> <tr> <td>14.3</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>13.5</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>12.0</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>10.5</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>9.0</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>7.5</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>6.0</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>4.5</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>3.0</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>1.5</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>0.0</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> </tbody> </table>					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]	15.0	1.265	1.395	1.526	1.542	1.411	14.3	-	-	-	-	-	13.5	-	-	-	-	-	12.0	-	-	-	-	-	10.5	-	-	-	-	-	9.0	-	-	-	-	-	7.5	-	-	-	-	-	6.0	-	-	-	-	-	4.5	-	-	-	-	-	3.0	-	-	-	-	-	1.5	-	-	-	-	-	0.0	-	-	-	-	-
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Note:	Slanted line shows the range of the rated load current.																																																																																							
	Intermittent operation occurs when overcurrent protection is activated.																																																																																							

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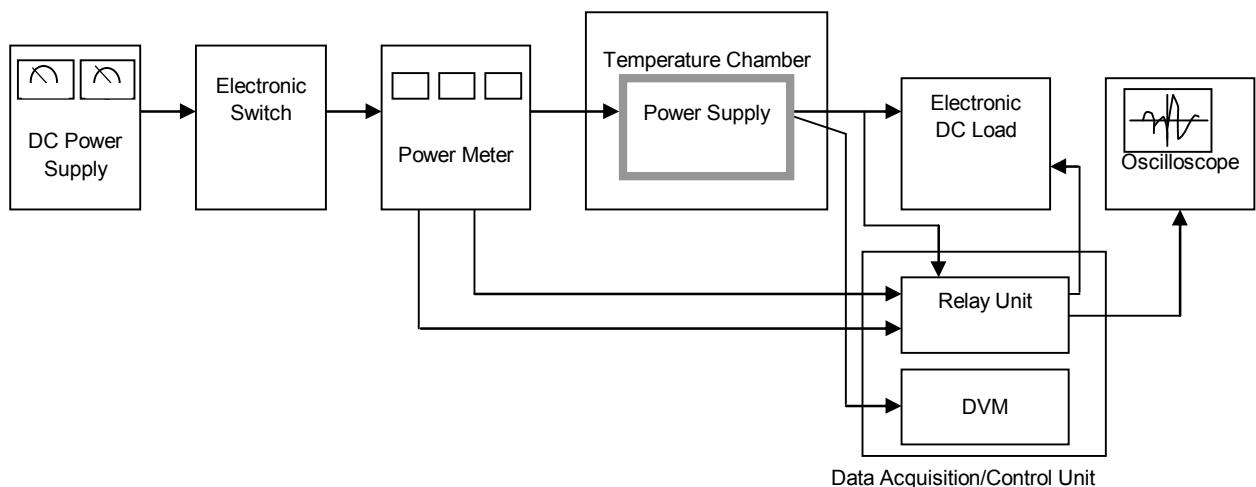


Figure A

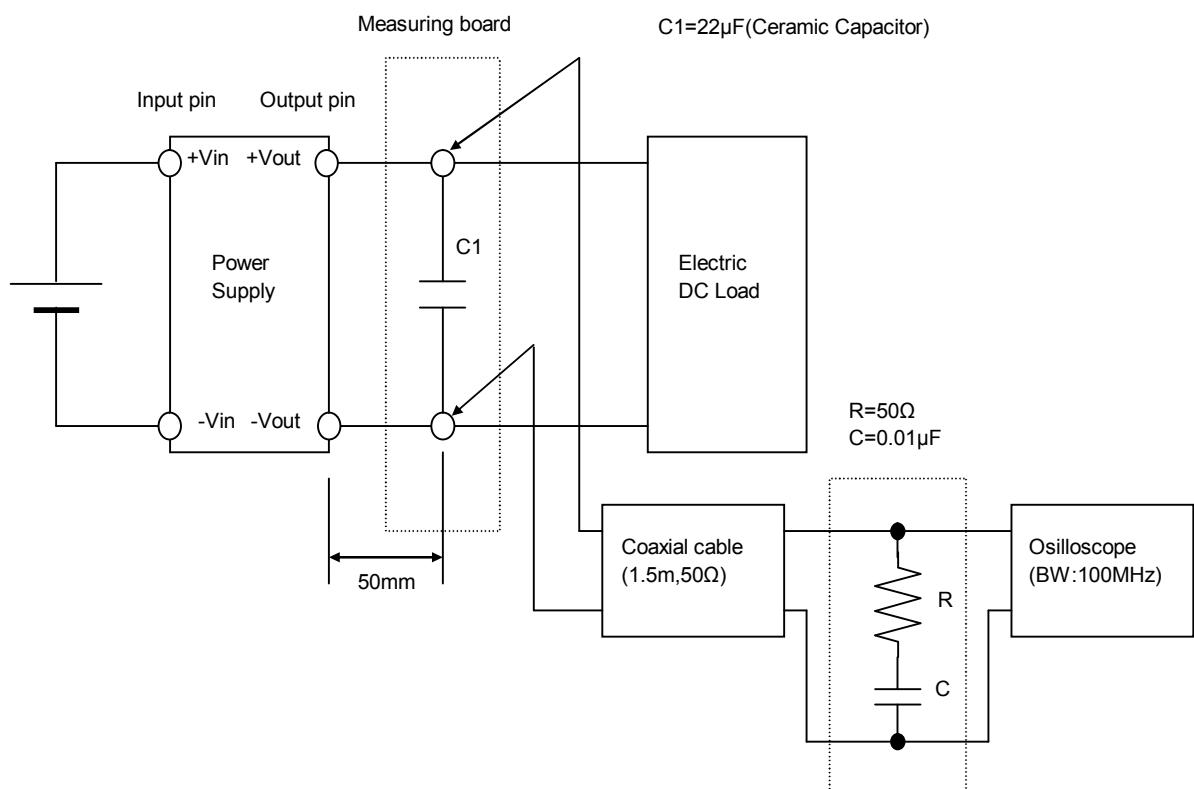


Figure B (Ripple and Ripple noise Characteristic)