

TEST DATA OF MGFS154805

Regulated DC Power Supply
September 7, 2010

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Kazunari Asano

Design Manager

Prepared by : Yufchiro Ohashi
Yufchiro Ohashi

Design Engineer

COSEL CO.,LTD.



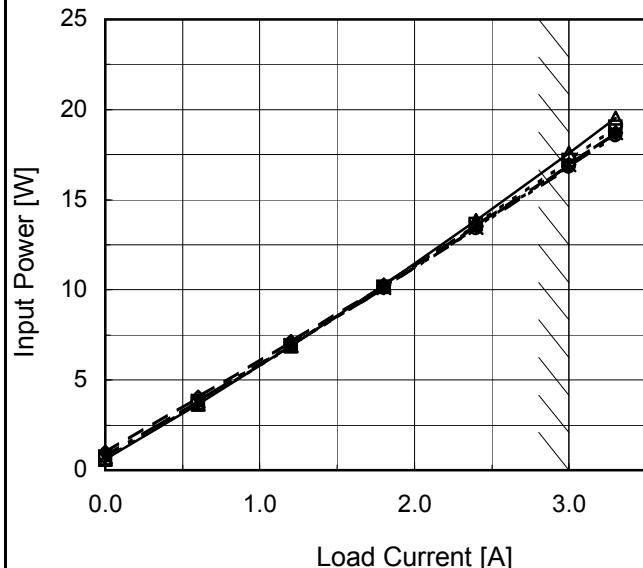
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Model	MGFS154805																																																																																	
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	 <p>The graph plots Input Power [W] on the Y-axis (0 to 25) against Load Current [A] on the X-axis (0.0 to 3.0). Five curves are shown for different input voltages: 18V (solid line with triangles), 24V (dashed line with squares), 36V (dash-dot line with asterisks), 48V (dash-dot-dot line with circles), and 76V (long-dash line with diamonds). A slanted line indicates the rated load current range.</p>																																																																																	
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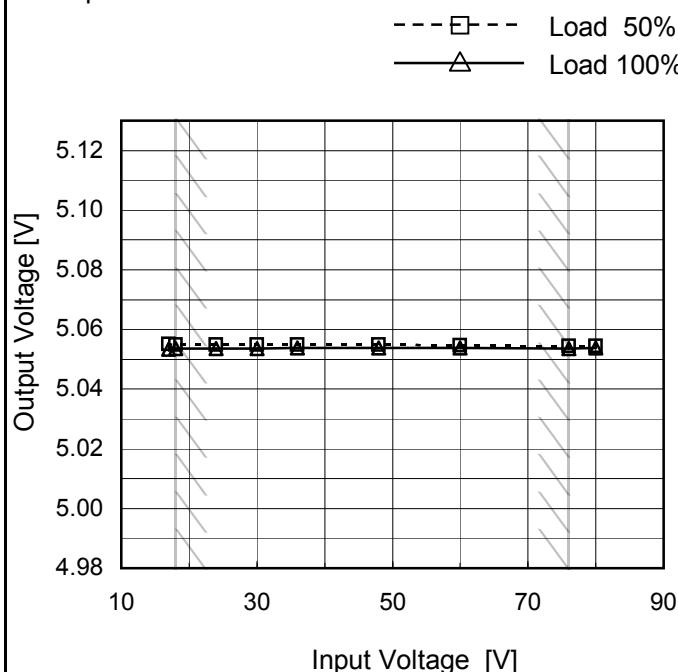
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Temperature 25°C
Testing Circuitry Figure A

1. Graph



2. Values

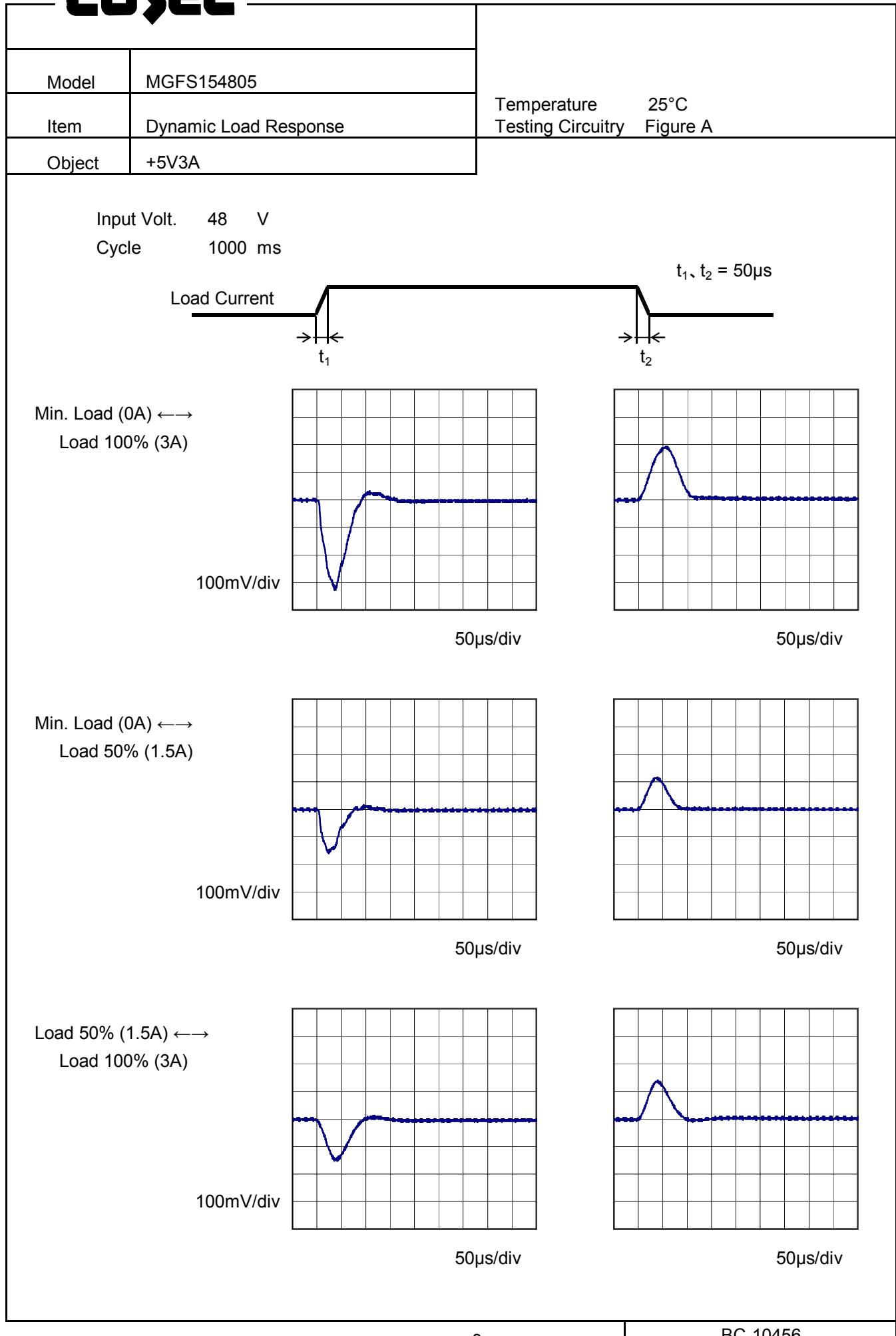
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48	5.055	5.054
60	5.055	5.054
76	5.055	5.054
80	5.055	5.054

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

Model	MGFS154805	Temperature 25°C Testing Circuitry Figure A					
Item	Load Regulation						
Object	+5V3A						
1.Graph	<p>Output Voltage [V]</p> <p>Load Current [A]</p> <p>Input Volt.</p> <ul style="list-style-type: none"> 18V 24V 36V 48V 76V 	2.Values					
Load Current [A]		18[V]	24[V]	36[V]	48[V]	76[V]	
0.0	5.056	5.056	5.055	5.055	5.055		
0.6	5.056	5.056	5.055	5.055	5.055		
1.2	5.055	5.055	5.055	5.055	5.055		
1.8	5.055	5.055	5.055	5.055	5.054		
2.4	5.054	5.054	5.054	5.054	5.054		
3.0	5.054	5.054	5.054	5.054	5.054		
3.3	5.053	5.054	5.053	5.053	5.053		
--	-	-	-	-	-		
--	-	-	-	-	-		
--	-	-	-	-	-		
--	-	-	-	-	-		

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

COSEL



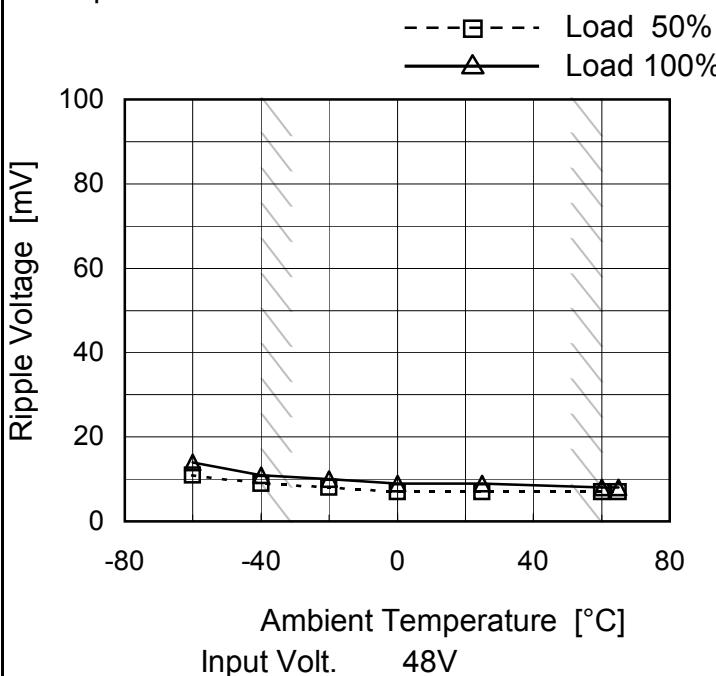
Model	MGFS154805																																							
Item	Ripple Voltage (by Load Current)	Temperature 25°C Testing Circuitry Figure B																																						
Object	+5V3A																																							
1.Graph																																								
<p>Input Volt. 18V Input Volt. 76V</p> <p>Ripple Voltage [mV]</p> <p>Load Current [A]</p>																																								
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Load Current [A]	Ripple Voltage [mV]																																							
	Input Volt. 18 [V]	Input Volt. 76 [V]																																						
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<p>Measured by 100 MHz Oscilloscope. Ripple Voltage is shown as p-p in the figure below. Note: Slanted line shows the range of the rated load current.</p> <p>Ripple [mVp-p]</p> <p>Fig.Complex Ripple Wave Form</p>																																								

Model	MGFS154805																																							
Item	Ripple-Noise	Temperature 25°C Testing Circuitry Figure B																																						
Object	+5V3A																																							
1.Graph																																								
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Load Current [A]	Ripple-Noise [mV]																																							
	Input Volt. 18 [V]	Input Volt. 76 [V]																																						
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Model	MGFS154805
Item	Ripple Voltage (by Ambient Temp.)
Object	+5V3A

Testing Circuitry Figure B

1. Graph



2. Values

Ambient Temperature [°C]	Ripple Voltage [mV]	
	Load 50%	Load 100%
-60	11	14
-40	9	11
-20	8	10
0	7	9
25	7	9
60	7	8
65	7	8
--	-	-
--	-	-
--	-	-
--	-	-

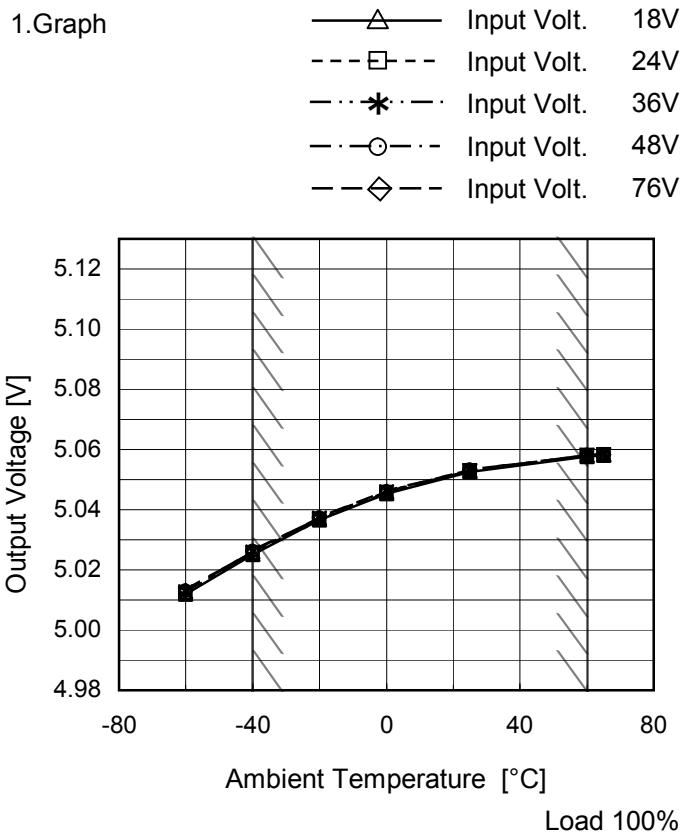
Measured by 100 MHz Oscilloscope.

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

Model MGFS154805

Item Ambient Temperature Drift

Object +5V3A



Testing Circuitry Figure A

2. Values

Ambient Temperature [°C]	Output Voltage [V]				
	18[V]	24[V]	36[V]	48[V]	76[V]
-60	5.012	5.012	5.013	5.013	5.013
-40	5.025	5.026	5.026	5.026	5.026
-20	5.037	5.037	5.037	5.037	5.037
0	5.045	5.046	5.046	5.046	5.046
25	5.053	5.053	5.053	5.053	5.053
60	5.058	5.058	5.058	5.058	5.058
65	5.058	5.058	5.058	5.058	5.058
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-
--	-	-	-	-	-

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



Model	MGFS154805	Testing Circuitry Figure A
Item	Output Voltage Accuracy	
Object	+5V3A	

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 - 3A

* 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

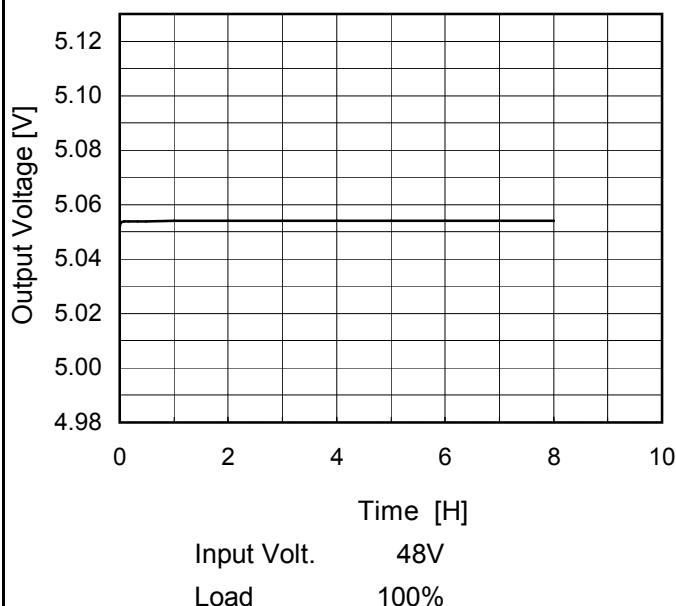
Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	60	18	0	5.060	±18	±0.4
Minimum Voltage	-40	18	3	5.025		

COSEL

Model	MGFS154805
Item	Time Lapse Drift
Object	+5V3A

Temperature 25°C
Testing Circuitry Figure A

1. Graph



2. Values

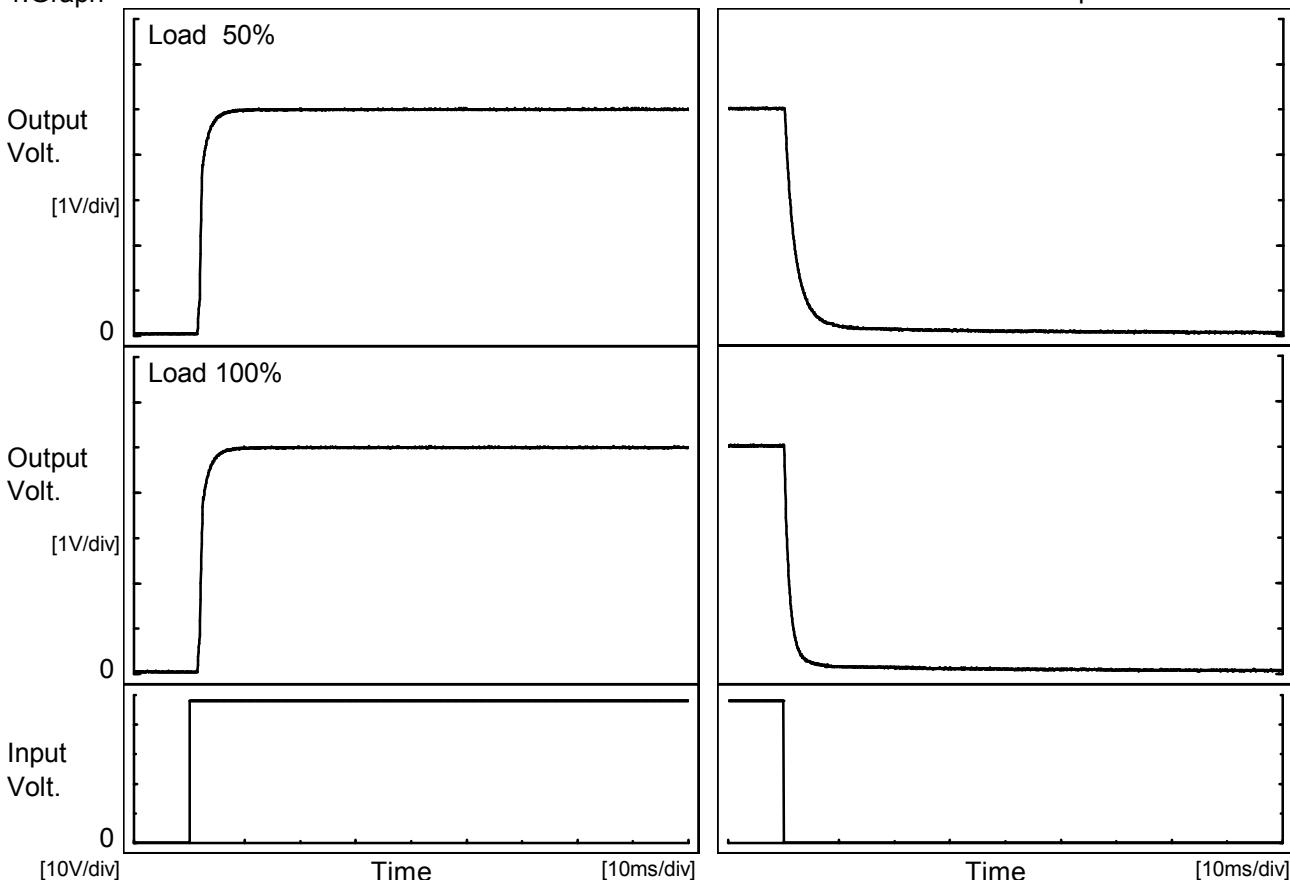
Time since start [H]	Output Voltage [V]
0.0	5.052
0.5	5.054
1.0	5.054
2.0	5.054
3.0	5.054
4.0	5.054
5.0	5.054
6.0	5.054
7.0	5.054
8.0	5.054

COSEL

Model	MGFS154805
Item	Rise and Fall Time
Object	+5V3A

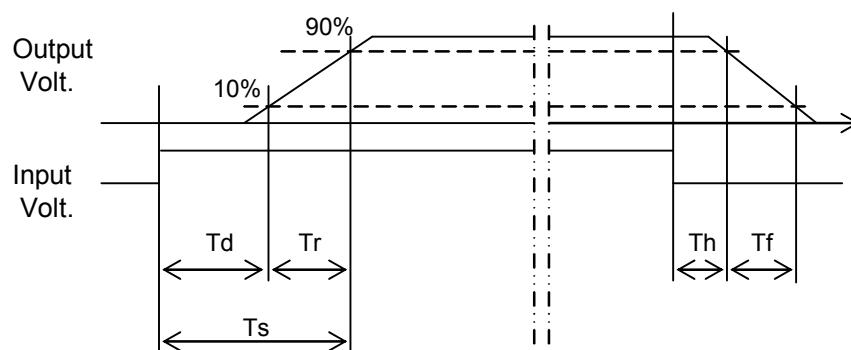
Temperature 25°C
Testing Circuitry Figure A

1. Graph



2. Values

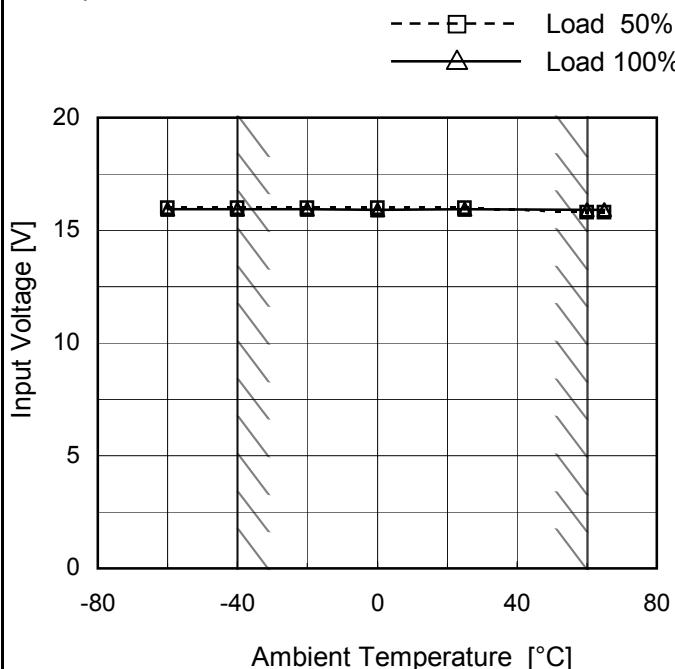
Load	Time	Td	Tr	Ts	Th	Tf	[ms]
50 %		1.7	2.0	3.7	0.3	4.8	
100 %		1.7	2.1	3.8	0.2	2.5	



Model	MGFS154805
Item	Minimum Input Voltage for Regulated Output Voltage
Object	+5V3A

Testing Circuitry Figure A

1. Graph



2. Values

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

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

Model	MGFS154805	Temperature 25°C Testing Circuitry Figure A																																																																																				
Item	Overcurrent Protection																																																																																					
Object	+5V3A																																																																																					
1.Graph	<p>—△ Input Volt. 18V —□ Input Volt. 24V —* Input Volt. 36V —○ Input Volt. 48V —◇ Input Volt. 76V</p> <p>Output Voltage [V]</p> <p>Load Current [A]</p>	2.Values																																																																																				
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Output Voltage [V]	Load Current [A]																																																																																					
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Note: Slanted line shows the range of the rated load current.

Intermittent operation occurs when overcurrent protection is activated.

COSEL

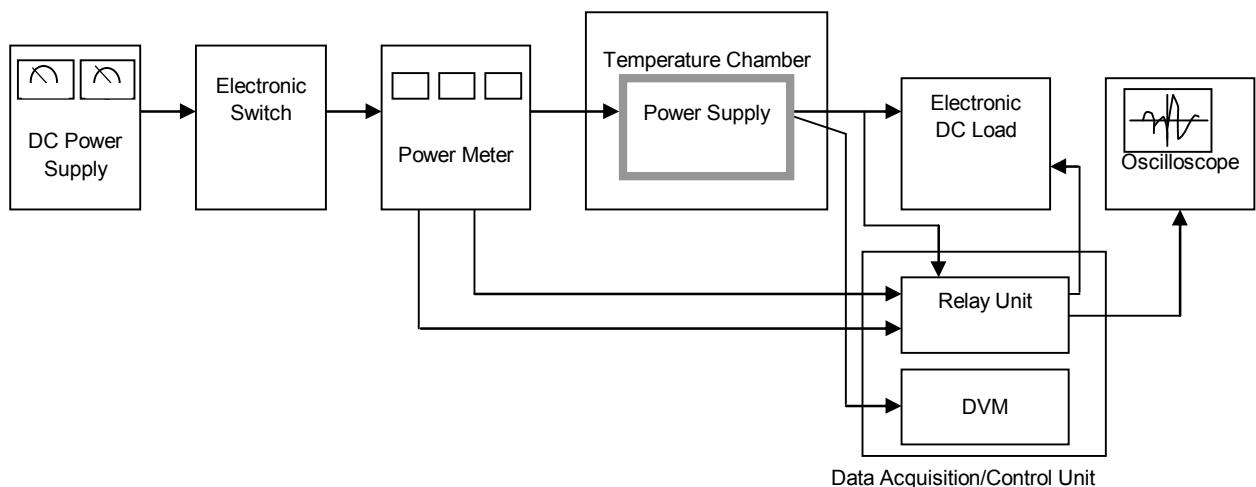


Figure A

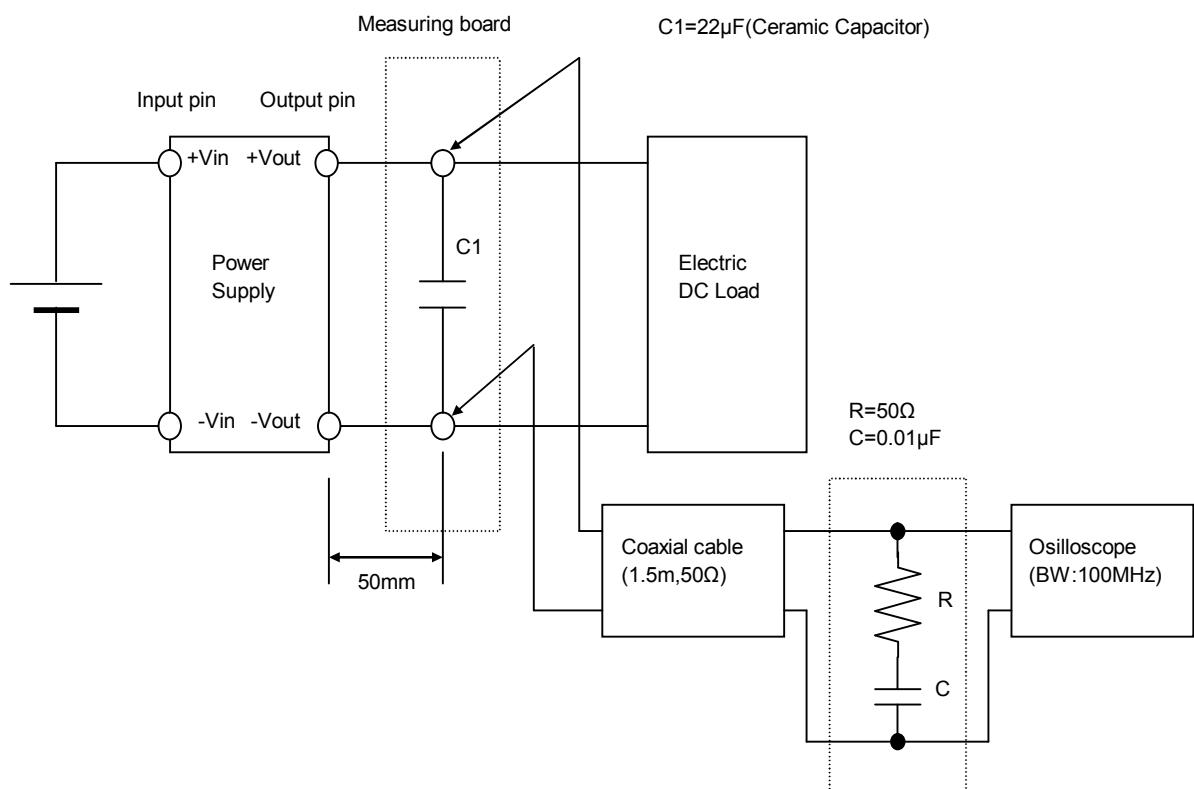


Figure B (Ripple and Ripple noise Characteristic)