

TEST DATA OF MGS152412

Regulated DC Power Supply
September 14, 2010

Approved by : Kazunari Asano
Kazunari Asano Design Manager

Prepared by : Junki Nakayama
Junki Nakayama Design Engineer

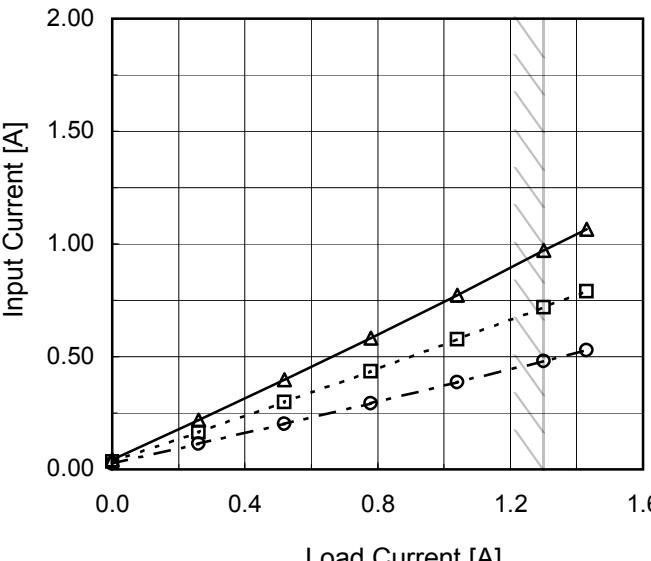
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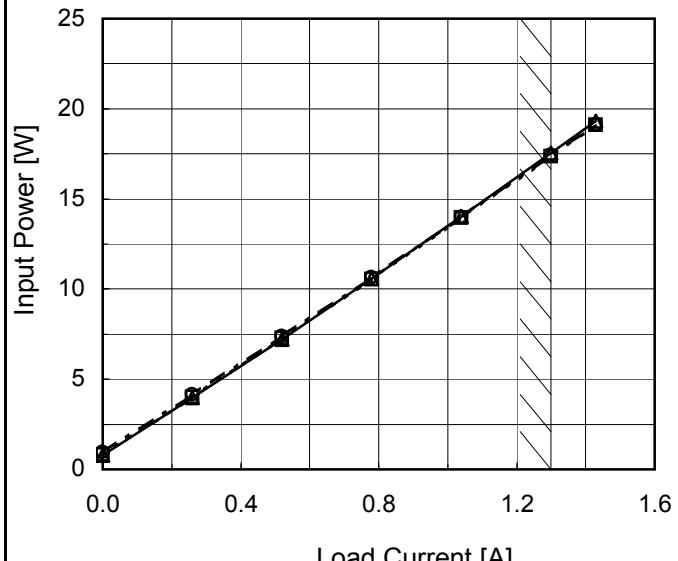
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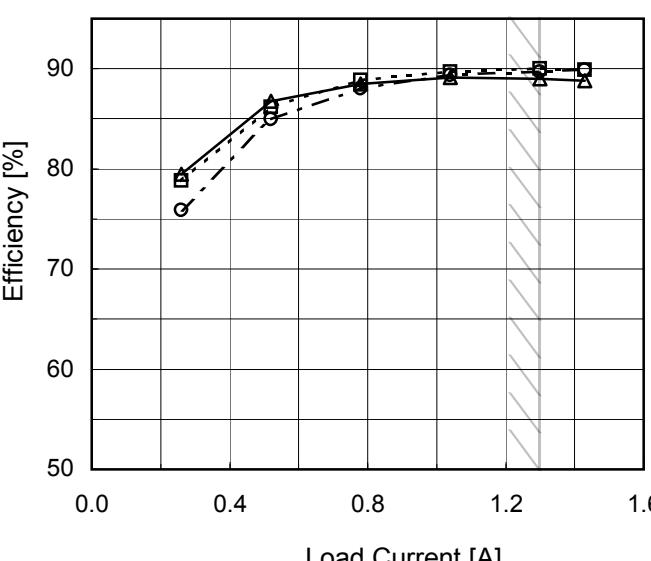
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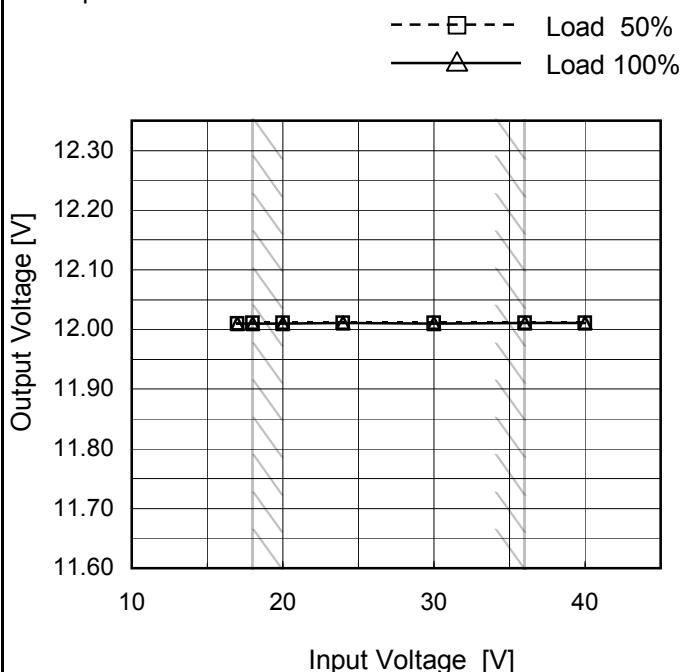
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Item	Line Regulation
Object	+12V1.3A

Temperature 25°C
Testing Circuitry Figure A

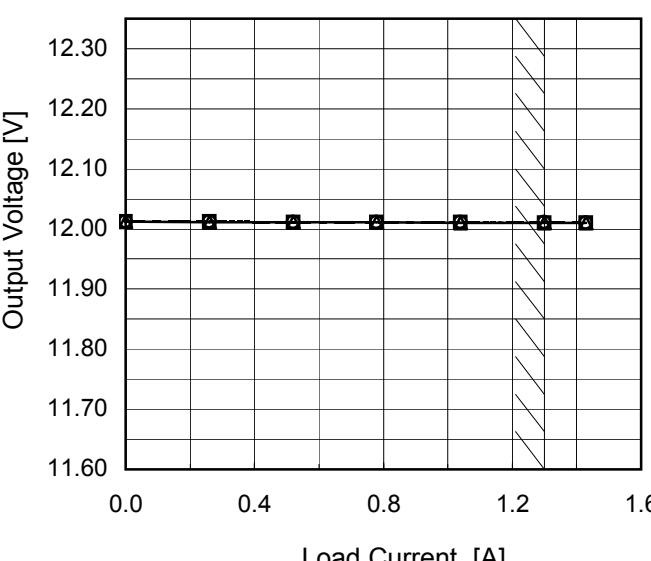
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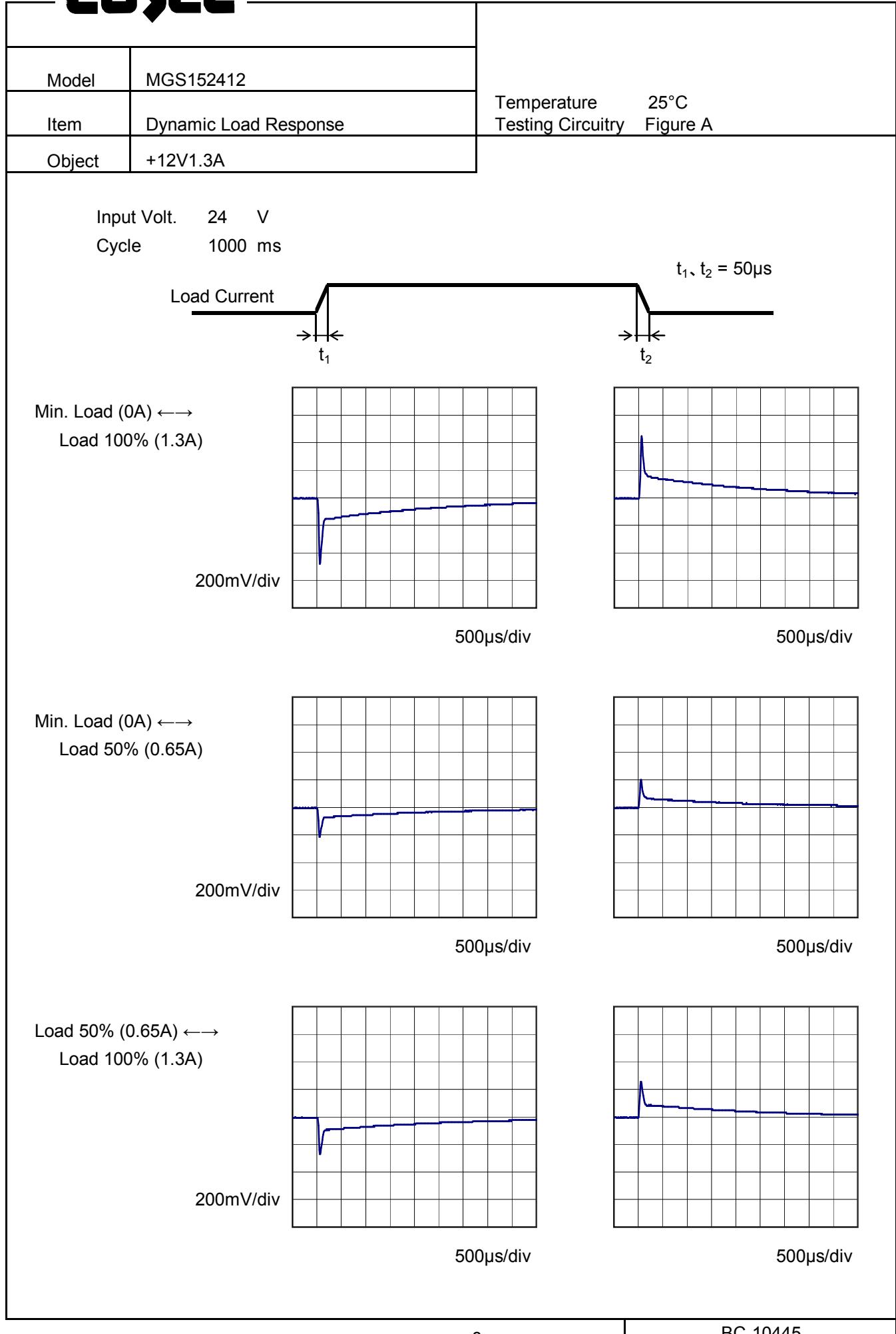
2.Values

Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
17	12.010	12.010
18	12.011	12.010
20	12.011	12.010
24	12.011	12.011
30	12.011	12.010
36	12.011	12.011
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COSEL



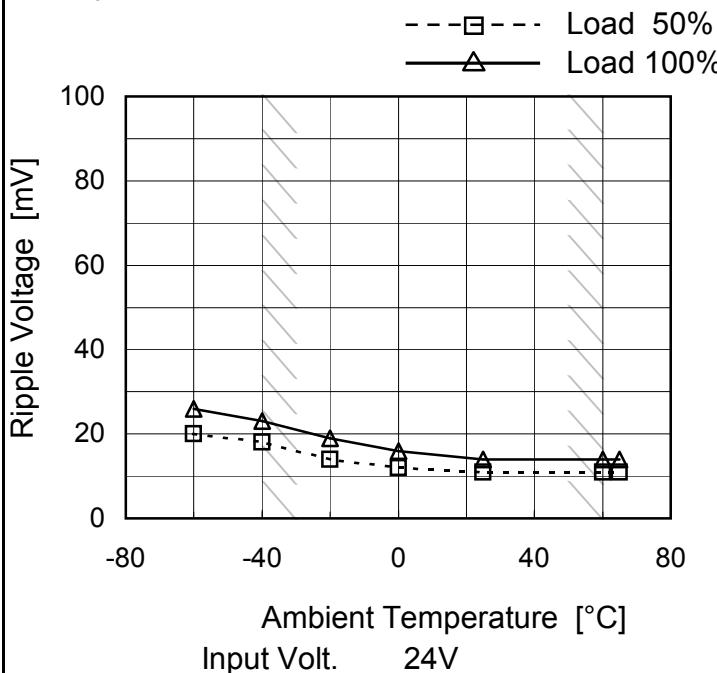
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Item	Ripple Voltage (by Load Current)																																								
Object	+12V1.3A																																								
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Model	MGS152412	Temperature Testing Circuitry	25°C Figure B																																						
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			BC-10445																																						

Model	MGS152412
Item	Ripple Voltage (by Ambient Temp.)
Object	+12V1.3A

Testing Circuitry Figure B

1. Graph



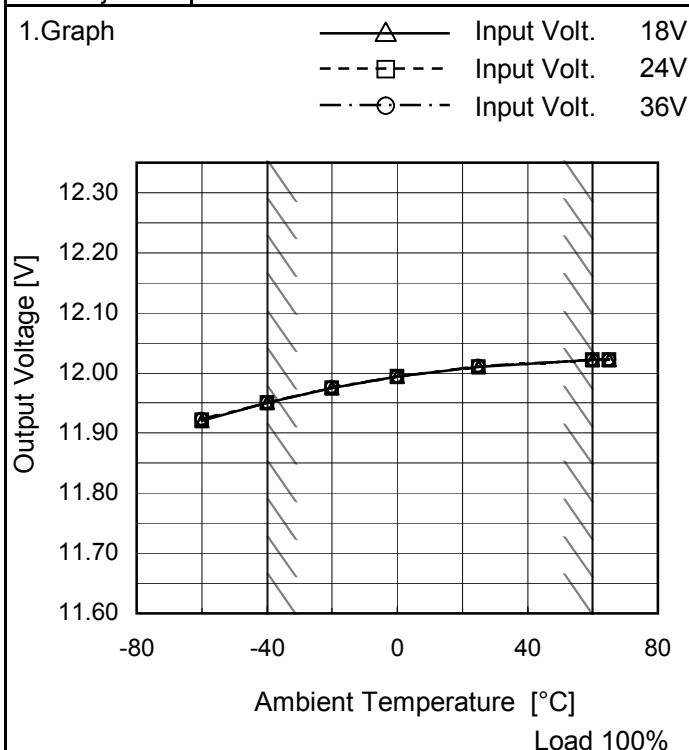
2. Values

Ambient Temperature [°C]	Ripple Voltage [mV]	
	Load 50%	Load 100%
-60	20	26
-40	18	23
-20	14	19
0	12	16
25	11	14
60	11	14
65	11	14
--	-	-
--	-	-
--	-	-
--	-	-

Measured by 100 MHz Oscilloscope.

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

Model	MGS152412
Item	Ambient Temperature Drift
Object	+12V1.3A



Testing Circuitry Figure A

2.Values

Ambient Temperature [°C]	Output Voltage [V]		
	Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]
-60	11.921	11.922	11.923
-40	11.950	11.951	11.951
-20	11.975	11.975	11.976
0	11.994	11.994	11.995
25	12.010	12.010	12.011
60	12.022	12.022	12.022
65	12.022	12.022	12.022
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

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



Model	MGS152412	Testing Circuitry Figure A
Item	Output Voltage Accuracy	
Object	+12V1.3A	

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 - 36V

Load Current : 0 - 1.3A

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

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

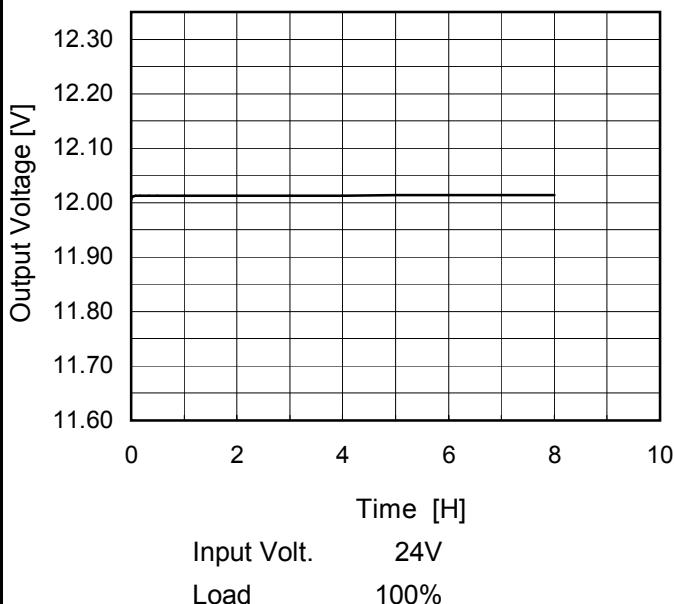
2. Values

Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	60	24	0	12.024	±37	±0.3
Minimum Voltage	-40	18	1.3	11.950		

COSEL

Model	MGS152412
Item	Time Lapse Drift
Object	+12V1.3A

1. Graph



Temperature 25°C
Testing Circuitry Figure A

2. Values

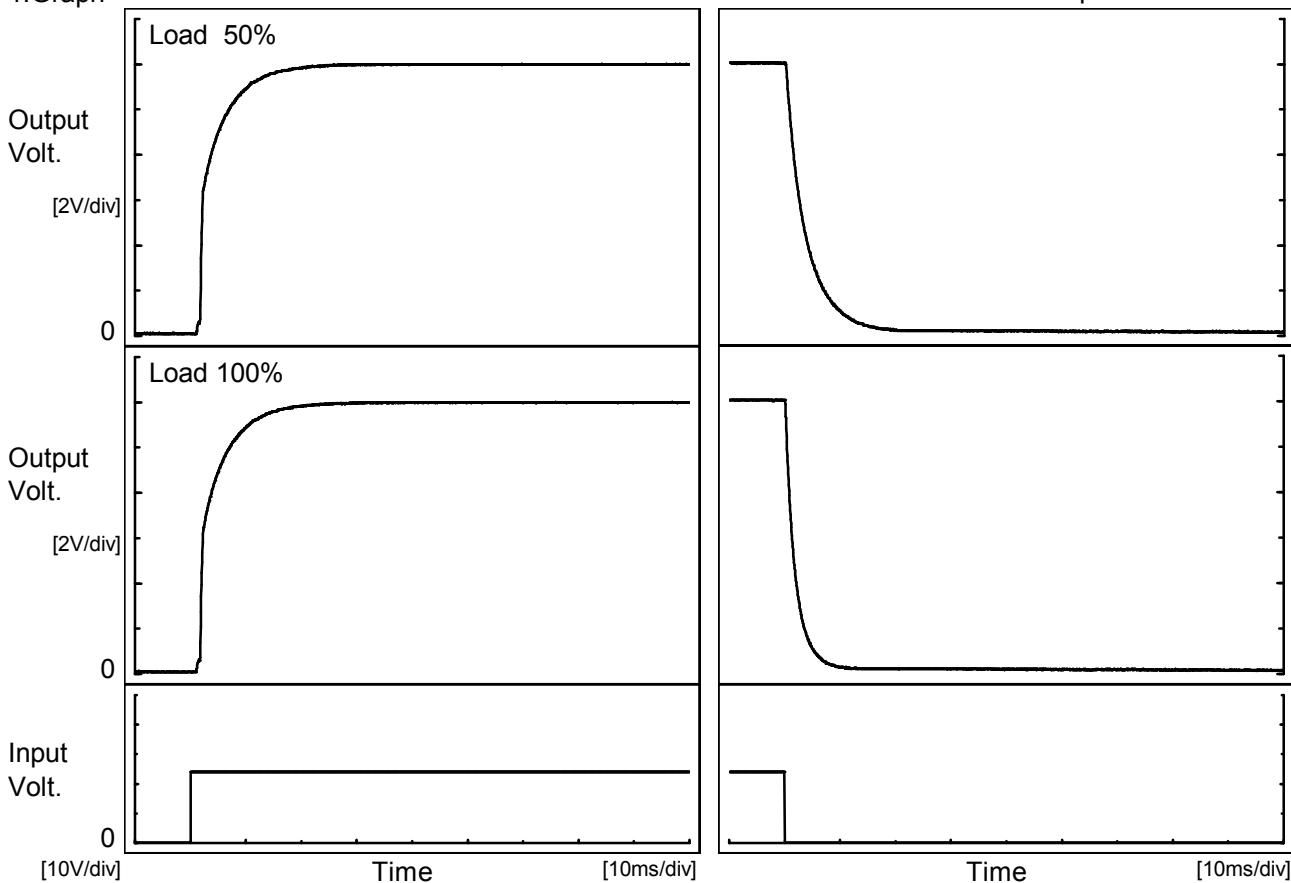
Time since start [H]	Output Voltage [V]
0.0	12.006
0.5	12.013
1.0	12.013
2.0	12.013
3.0	12.013
4.0	12.013
5.0	12.014
6.0	12.013
7.0	12.014
8.0	12.014

COSEL

Model	MGS152412
Item	Rise and Fall Time
Object	+12V1.3A

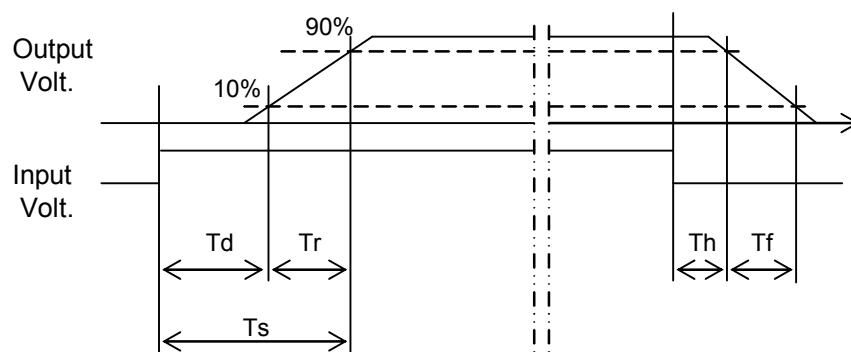
Temperature 25°C
Testing Circuitry Figure A

1. Graph



2. Values

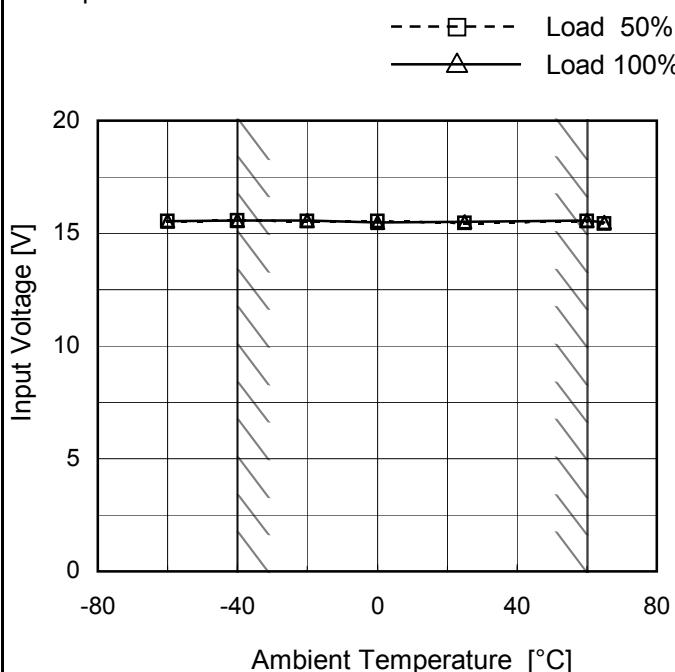
Load	Time	Td	Tr	Ts	Th	Tf
50 %		1.8	8.0	9.8	0.5	8.6
100 %		1.8	8.2	10.0	0.3	4.3



Model	MGS152412
Item	Minimum Input Voltage for Regulated Output Voltage
Object	+12V1.3A

Testing Circuitry Figure A

1.Graph



2.Values

Ambient Temperature [°C]	Input Voltage [V]	
	Load 50%	Load 100%
-60	15.6	15.6
-40	15.6	15.6
-20	15.6	15.6
0	15.6	15.5
25	15.5	15.5
60	15.6	15.6
65	15.5	15.5
--	-	-
--	-	-
--	-	-
--	-	-

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

Model	MGS152412	Temperature Testing Circuitry 25°C Figure A																																																							
Item	Overcurrent Protection																																																								
Object	+12V1.3A																																																								
1.Graph	<p>—△— Input Volt. 18V —□— Input Volt. 24V —○— Input Volt. 36V</p> <p>Output Voltage [V]</p> <p>Load Current [A]</p>	2.Values																																																							
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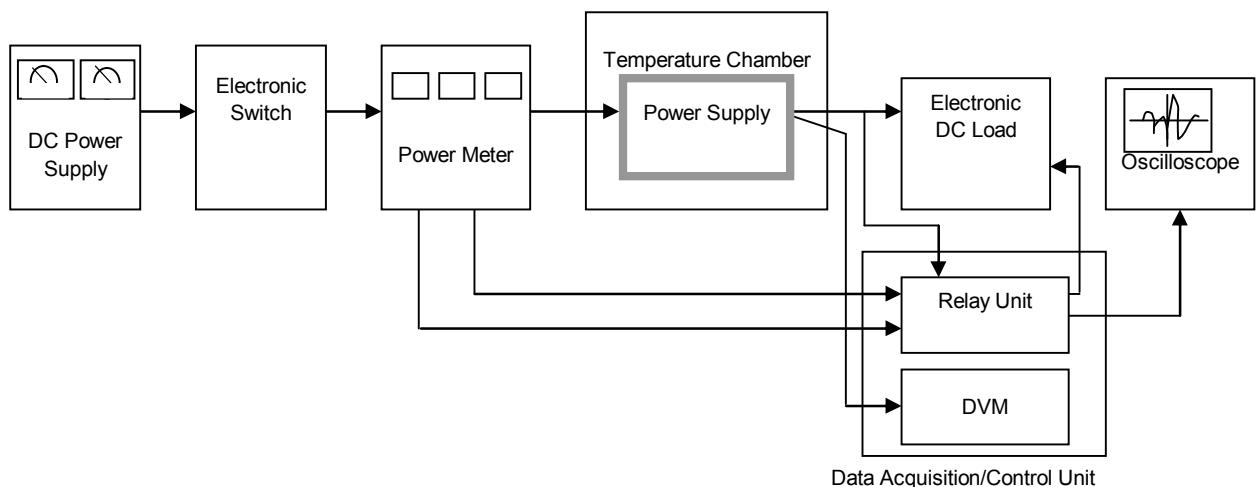


Figure A

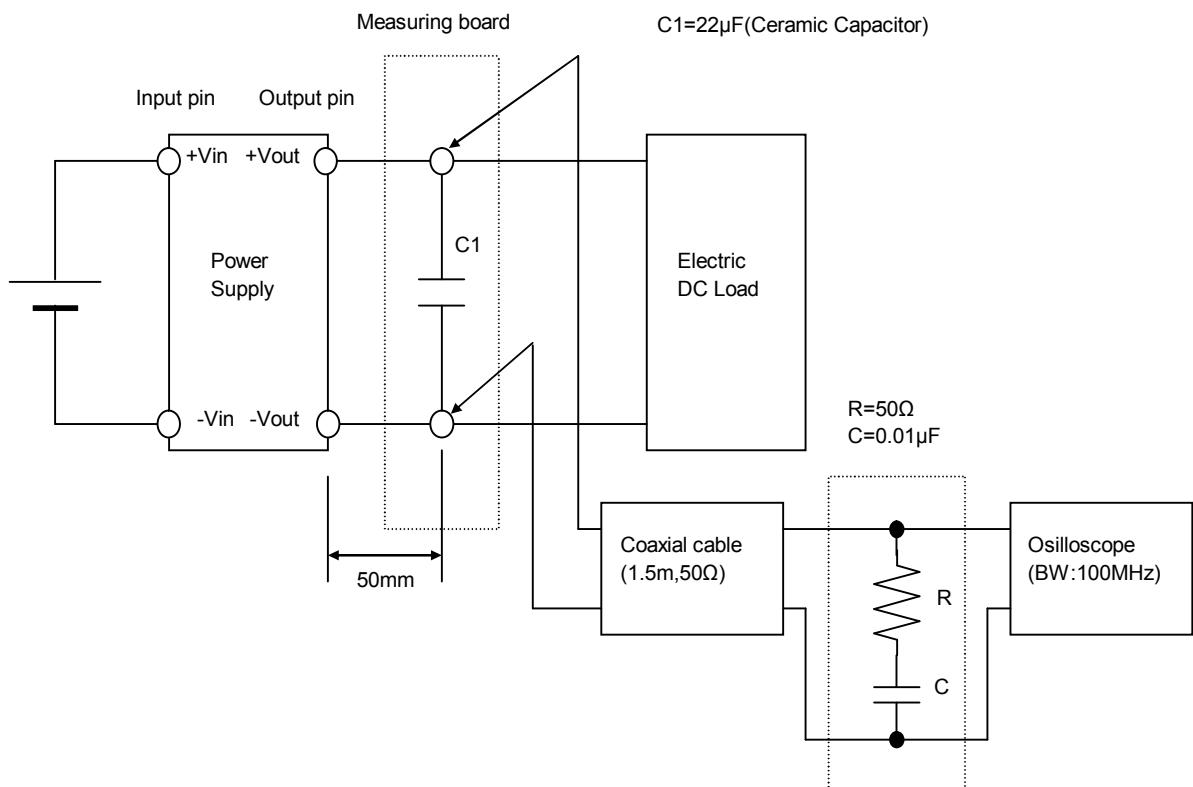


Figure B (Ripple and Ripple noise Characteristic)