COSEL

参考資料

TEST DATA OF CHS3804812

Regulated DC Power Supply
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COSEL CO.,LTD.

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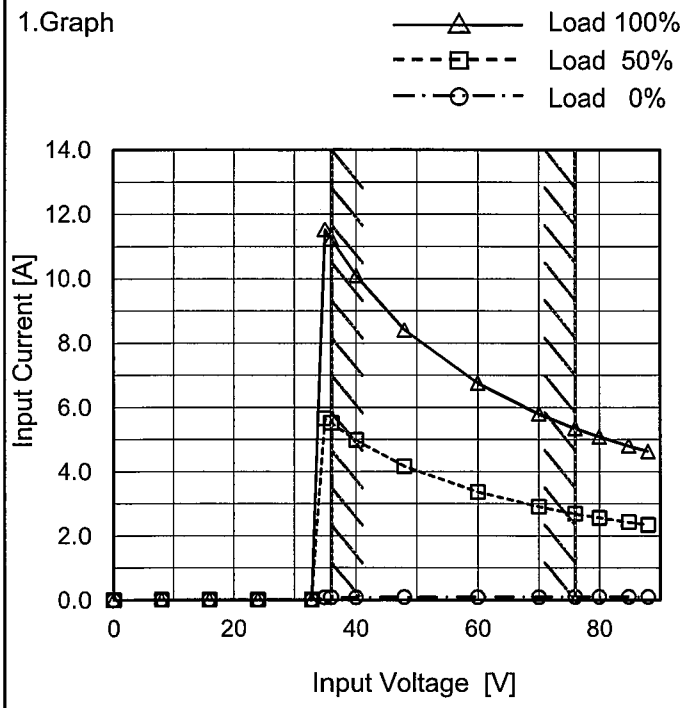
Model	CHS3804812
Item	Input Current (by Input Voltage)
Object	————————

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]	Input Current [A]		
	Load 0%	Load 50%	Load 100%
0.0	0.000	0.000	0.000
8.0	0.009	0.009	0.009
16.0	0.009	0.009	0.009
24.0	0.009	0.010	0.009
33.0	0.010	0.010	0.010
35.1	0.082	5.652	11.530
36.0	0.081	5.514	11.234
40.0	0.083	4.983	10.101
48.0	0.089	4.165	8.410
60.0	0.094	3.366	6.757
70.0	0.097	2.908	5.802
76.0	0.099	2.689	5.351
80.0	0.100	2.563	5.090
84.8	0.100	2.428	4.806
88.0	0.100	2.345	4.631
--	-	-	-
--	-	-	-
--	-	-	-

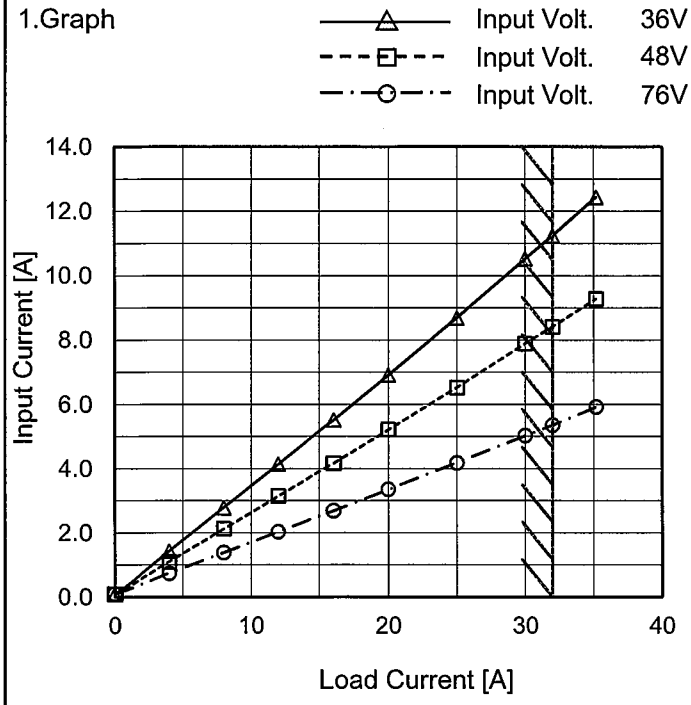
BC - 11142

COSEL

Model	CHS3804812
Item	Input Current (by Load Current)
Object	———————

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

Load Current [A]	Input Current [A]		
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
0.0	0.081	0.089	0.099
4.0	1.434	1.102	0.740
8.0	2.782	2.117	1.383
12.0	4.139	3.142	2.036
16.0	5.514	4.165	2.689
20.0	6.916	5.212	3.353
25.0	8.692	6.524	4.183
30.0	10.524	7.885	5.025
32.0	11.234	8.410	5.351
35.2	12.440	9.276	5.917
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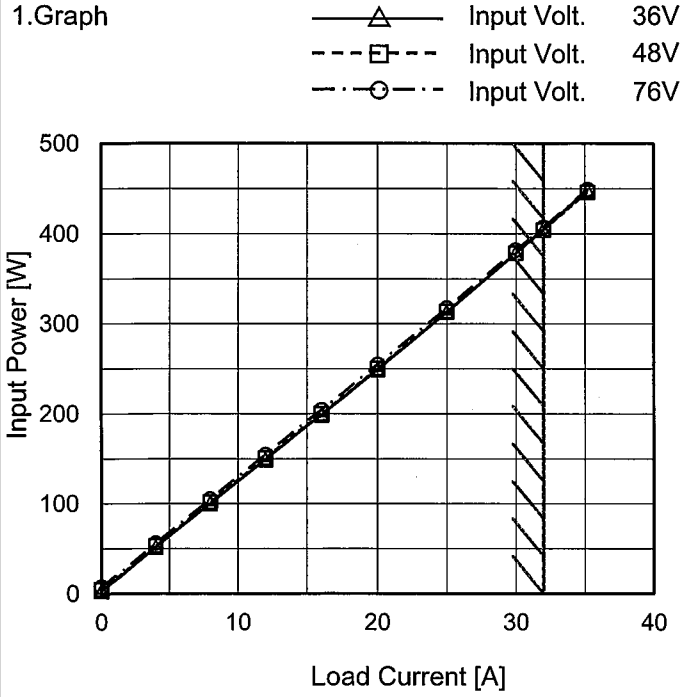
COSEL

Model	CHS3804812
Item	Input Power (by Load Current)
Object	————————

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

Load Current [A]	Input Power [W]		
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
0.0	2.9	4.3	7.5
4.0	51.6	52.9	56.2
8.0	100.2	101.8	105.1
12.0	149.1	150.8	154.7
16.0	198.7	200.0	204.5
20.0	249.3	250.5	254.9
25.0	313.1	313.7	317.7
30.0	378.8	378.3	381.9
32.0	405.1	404.2	407.1
35.2	448.3	446.1	449.3
--	-	-	-

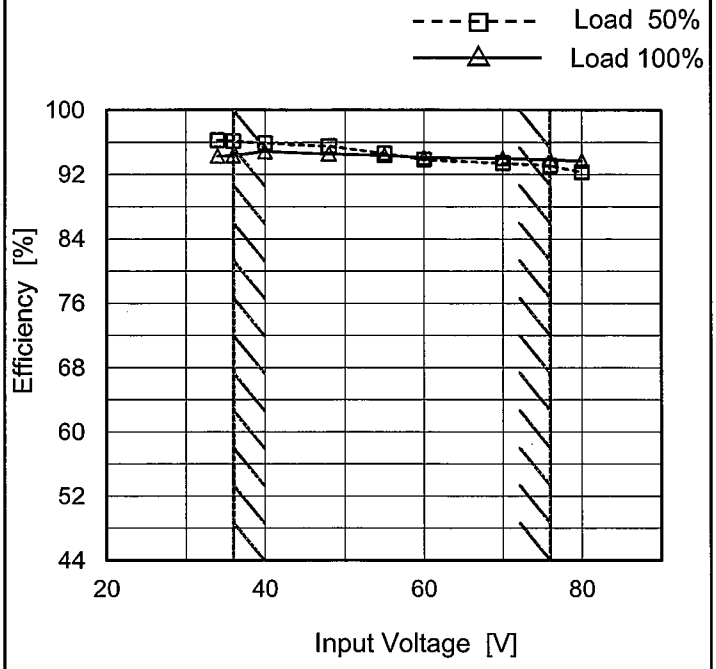
BC - 11142

COSEL

Model	CHS3804812
Item	Efficiency (by Input Voltage)
Object	———————————

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]	Efficiency [%]	
	Load 50%	Load 100%
34	96.3	94.3
36	96.1	94.4
40	95.9	94.9
48	95.5	94.6
55	94.6	94.4
60	93.9	94.1
70	93.4	94.0
76	93.1	93.9
80	92.3	93.7

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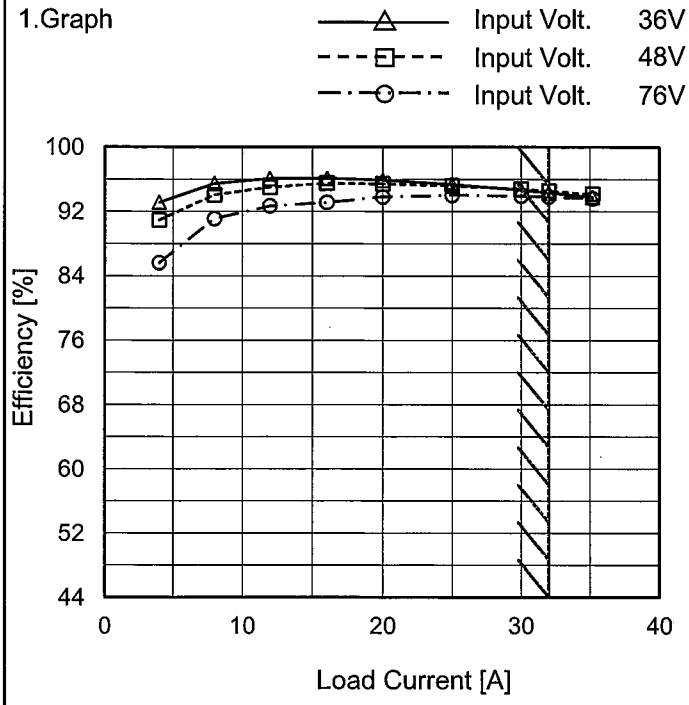
Model	CHS3804812
Item	Efficiency (by Load Current)
Object	———————

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

Load Current [A]	Efficiency [%]		
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
0.0	-	-	-
4.0	93.1	90.9	85.6
8.0	95.5	94.1	91.1
12.0	96.1	95.0	92.7
16.0	96.1	95.5	93.1
20.0	95.9	95.4	93.8
25.0	95.4	95.2	94.0
30.0	94.7	94.8	94.0
32.0	94.4	94.6	93.9
35.2	93.8	94.2	93.6
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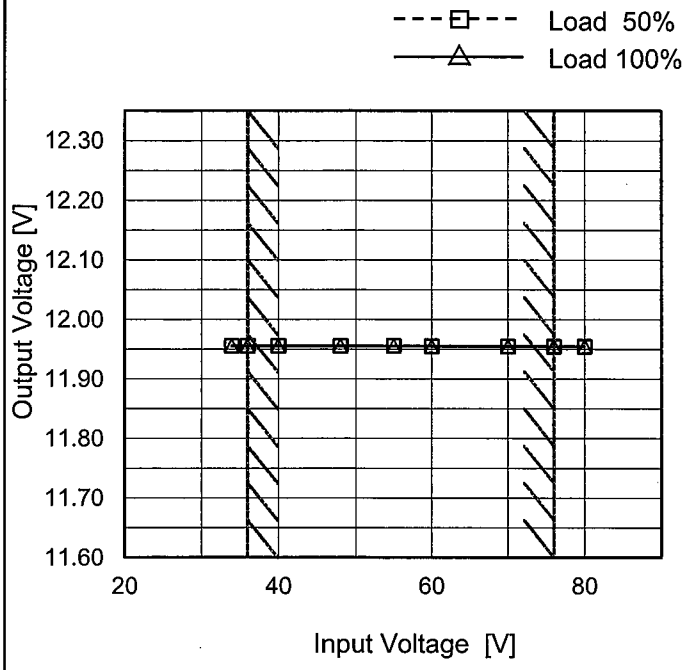
COSEL

Model	CHS3804812
Item	Line Regulation
Object	+12V32A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

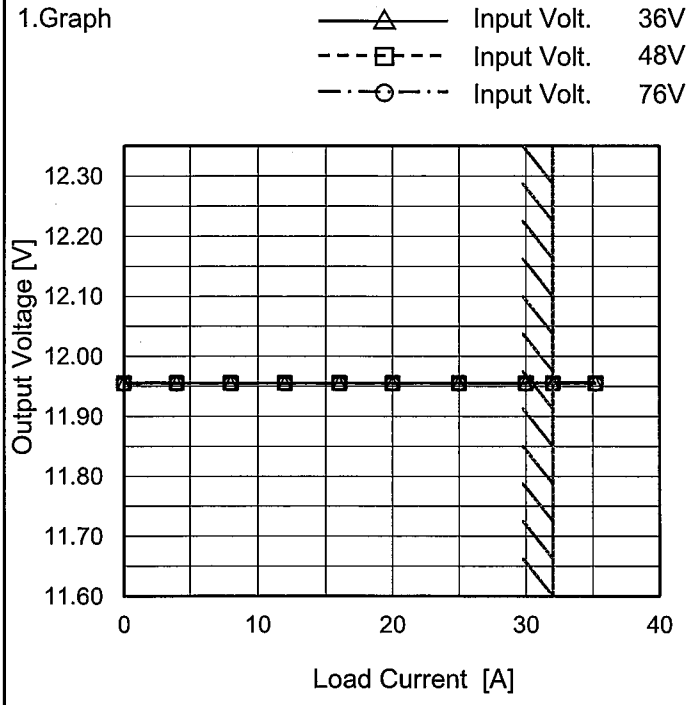
Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
34	11.956	11.956
36	11.956	11.956
40	11.956	11.956
48	11.956	11.956
55	11.955	11.956
60	11.955	11.955
70	11.955	11.955
76	11.955	11.955
80	11.955	11.955

COSEL

Model	CHS3804812
Item	Load Regulation
Object	+12V32A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

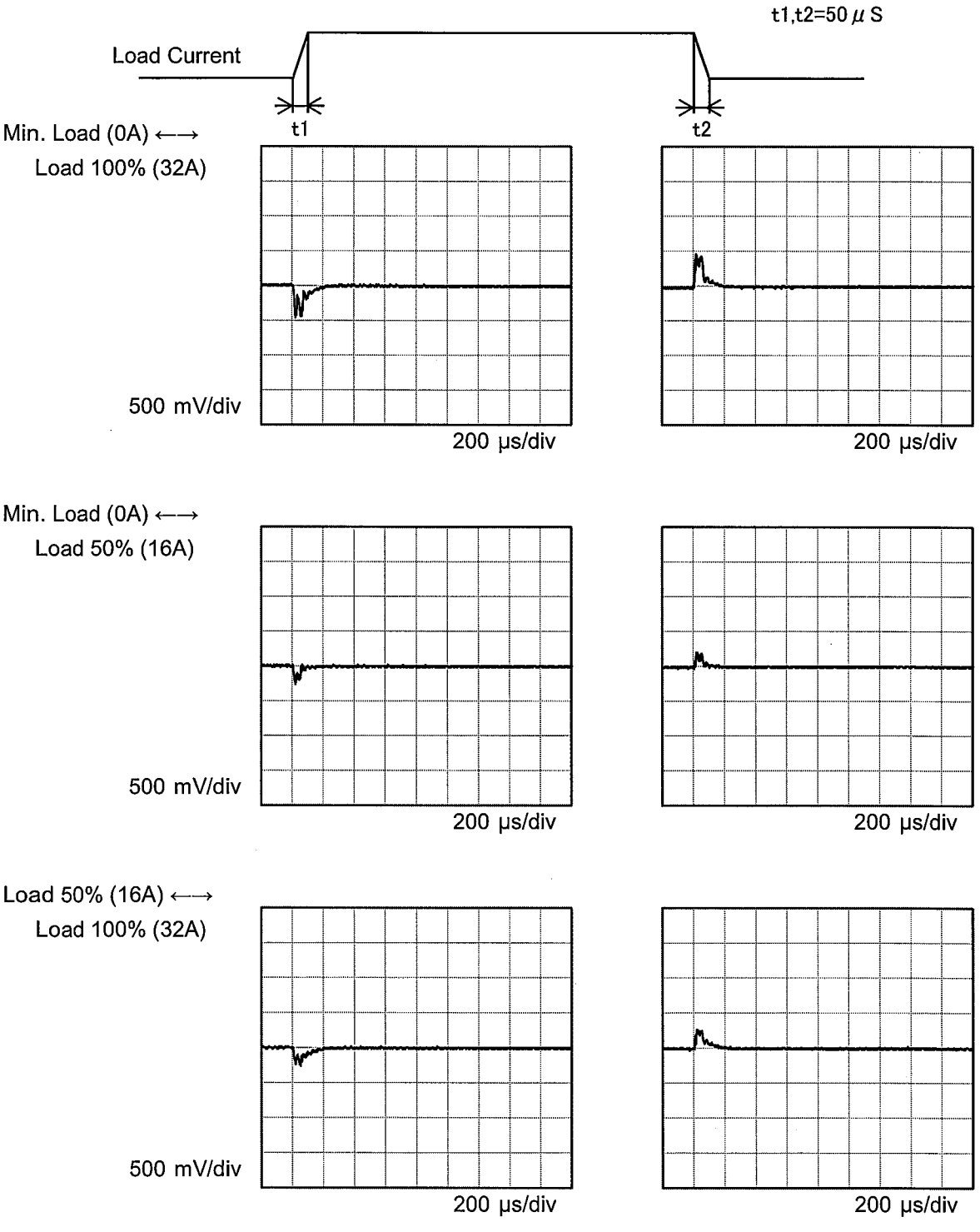
2.Values

Load Current [A]	Output Voltage [V]		
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
0.0	11.956	11.956	11.955
4.0	11.956	11.956	11.955
8.0	11.956	11.956	11.955
12.0	11.956	11.956	11.955
16.0	11.956	11.956	11.955
20.0	11.956	11.956	11.955
25.0	11.956	11.956	11.955
30.0	11.956	11.956	11.955
32.0	11.956	11.956	11.955
35.2	11.956	11.956	11.955
--	-	-	-

COSEL

Model	CHS3804812		
Item	Dynamic Load Response	Temperature Testing Circuitry	25℃ Figure A
Object	+12V32A		

Input Volt. 48 V
Cycle 5 ms

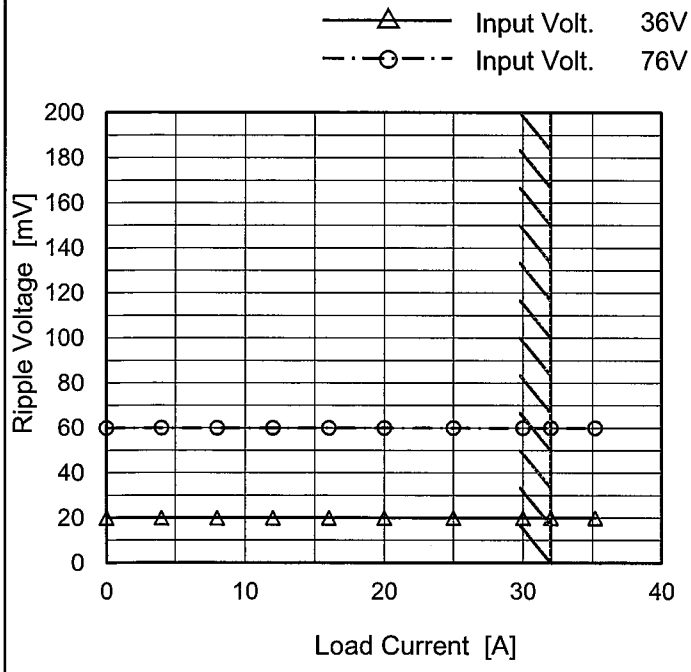


COSEL

Model	CHS3804812
Item	Ripple Voltage (by Load Current)
Object	+12V32A

Temperature 25°C
Testing Circuitry Figure B

1.Graph



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.

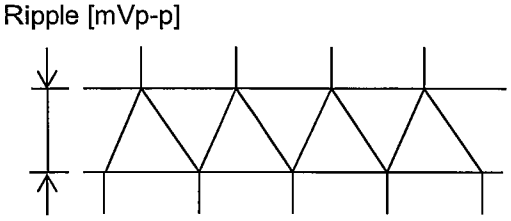


Fig.Complex Ripple Wave Form

2.Values

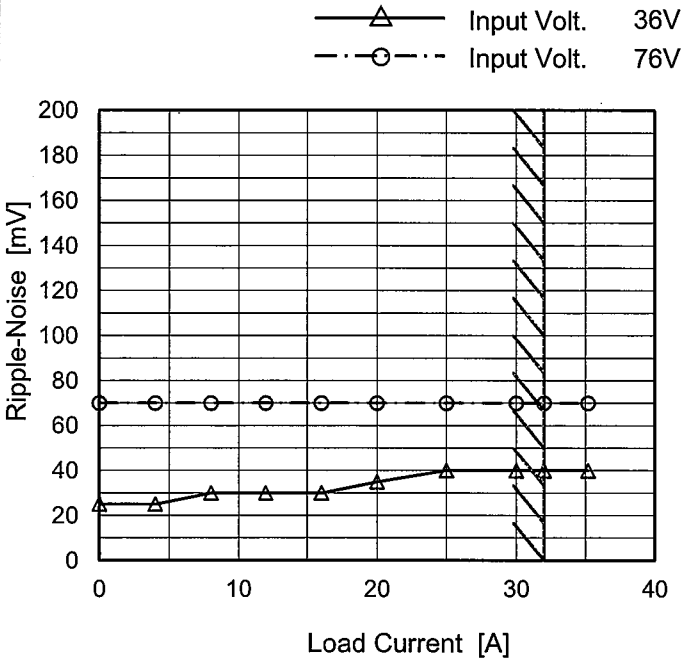
Load Current [A]	Ripple Voltage [mV]	
	Input Volt. 36 [V]	Input Volt. 76 [V]
0.0	20	60
4.0	20	60
8.0	20	60
12.0	20	60
16.0	20	60
20.0	20	60
25.0	20	60
30.0	20	60
32.0	20	60
35.2	20	60
--	-	-

COSEL

Model	CHS3804812
Item	Ripple-Noise
Object	+12V32A

Temperature 25°C
Testing Circuitry Figure B

1.Graph



Measured by 100 MHz Oscilloscope.
Ripple-Noise is shown as p-p in the figure below.
Note: Slanted line shows the range of the rated load current.

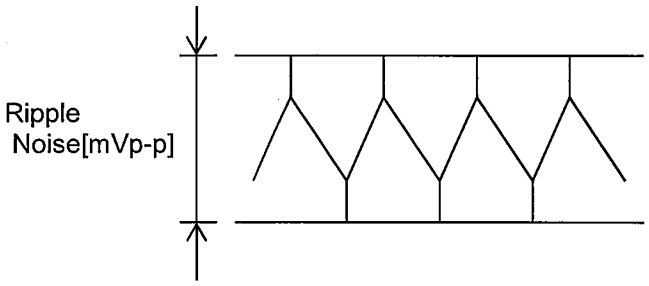


Fig.Complex Ripple Noise Wave Form

2.Values

Load Current [A]	Ripple-Noise [mV]	
	Input Volt. 36 [V]	Input Volt. 76 [V]
0.0	25	70
4.0	25	70
8.0	30	70
12.0	30	70
16.0	30	70
20.0	35	70
25.0	40	70
30.0	40	70
32.0	40	70
35.2	40	70
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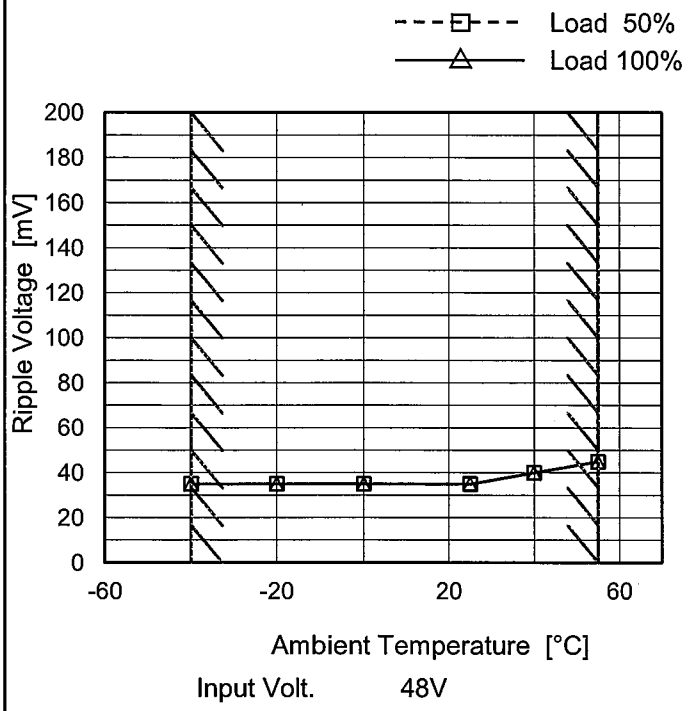
COSEL

Model	CHS3804812
Item	Ripple Voltage (by Ambient Temp.)
Object	+12V32A

Testing Circuitry Figure B

1.Graph



Input Volt. 48V

Measured by 100 MHz Oscilloscope.

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

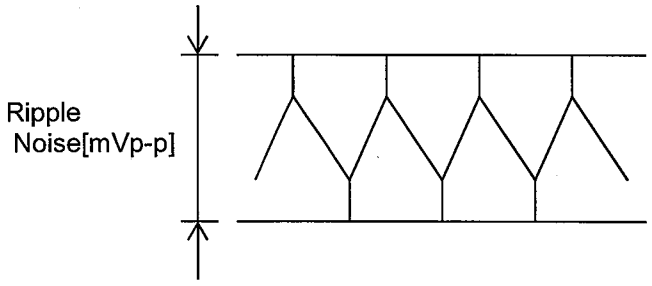


Fig.Complex Ripple Noise Wave Form

2.Values

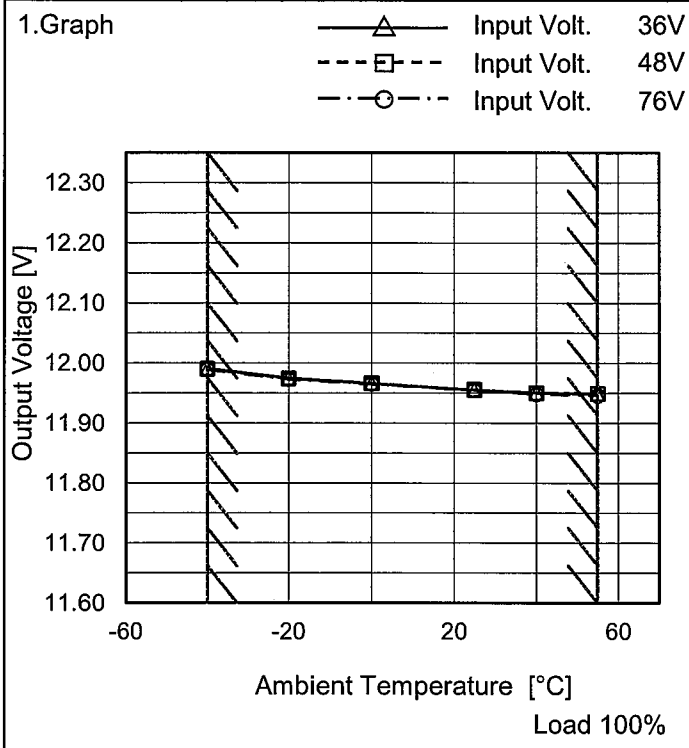
Ambient Temperature [°C]	Ripple Voltage [mV]	
	Load 50%	Load 100%
-40	35	35
-20	35	35
0	35	35
25	35	35
40	40	40
55	45	45
--	-	-
--	-	-
--	-	-
--	-	-
--	-	-

COSEL

Model	CHS3804812
Item	Ambient Temperature Drift
Object	+12V32A

Testing Circuitry Figure A

1.Graph



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

2.Values

Ambient Temperature [°C]	Output Voltage [V]		
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
-40	11.991	11.991	11.989
-20	11.975	11.974	11.973
0	11.966	11.967	11.965
25	11.956	11.956	11.955
40	11.951	11.950	11.948
55	11.949	11.949	11.946
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

COSEL

Model	CHS3804812	
Item	Output Voltage Accuracy	Testing Circuitry Figure A
Object	+12V32A	

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 - 55°C
Input Voltage : 36 - 76V
Load Current : 0 - 32A

* Output Voltage Accuracy = ±(Maximum of Output Voltage - Minimum of Output Voltage) / 2

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

2.Values

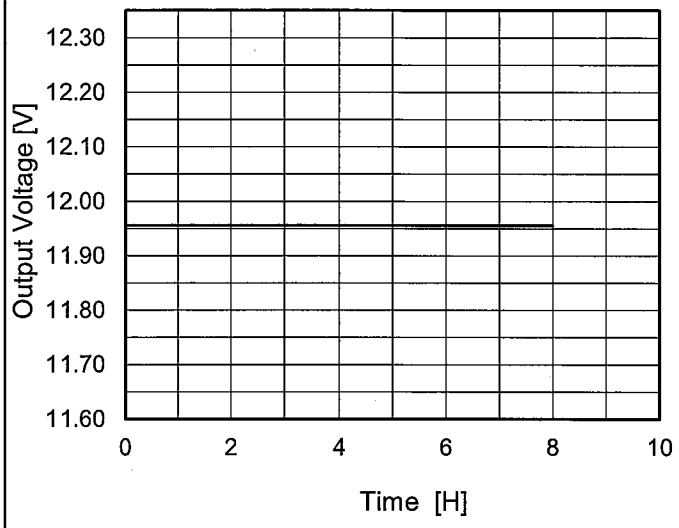
Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ratio [%]
Maximum Voltage	-40	76	0	11.989	±22	±0.2
Minimum Voltage	55	76	32	11.946		

COSEL

Model	CHS3804812
Item	Time Lapse Drift
Object	+12V32A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Input Volt. 48V
Load 100%

2.Values

Time since start [H]	Output Voltage [V]
0.0	11.956
0.5	11.956
1.0	11.956
2.0	11.956
3.0	11.956
4.0	11.956
5.0	11.956
6.0	11.956
7.0	11.956
8.0	11.956

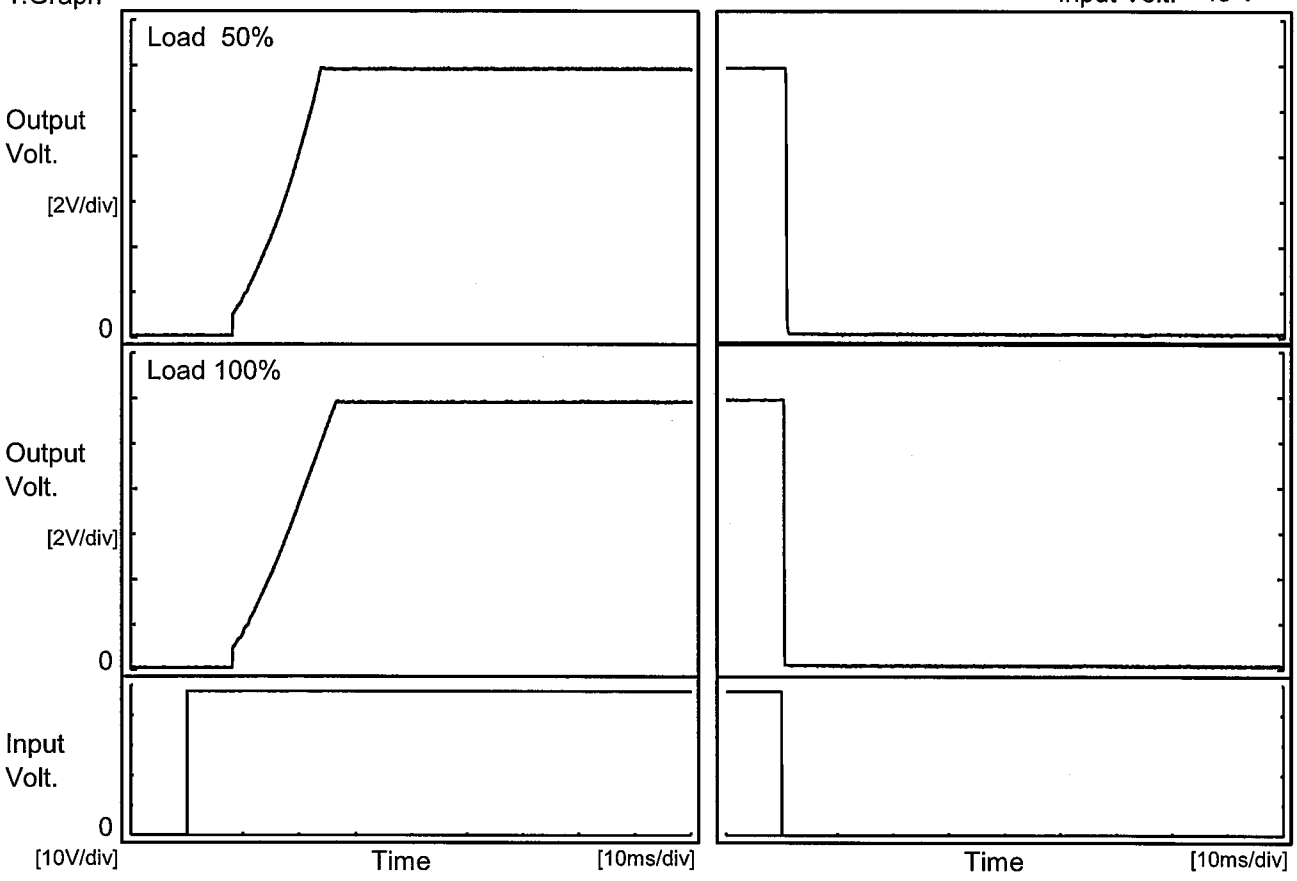
COSEL

Model	CHS3804812
Item	Rise and Fall Time
Object	+12V32A

Temperature 25°C
Testing Circuitry Figure A

1.Graph

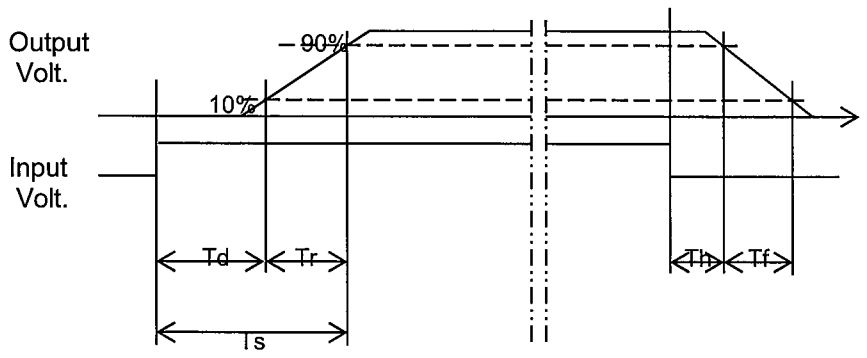
Input Volt. 48 V



2.Values

[ms]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	8.8	14.0	22.8	0.8	0.1
100 %	9.0	16.0	25.0	0.4	0.0

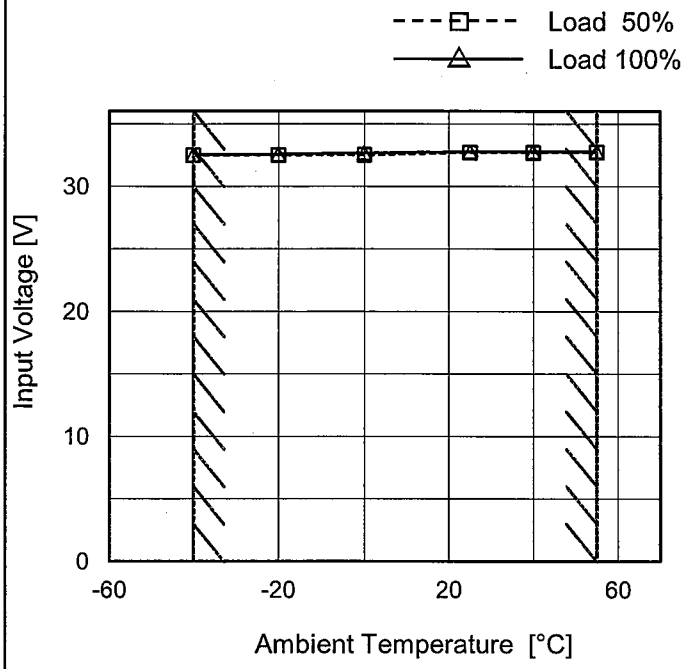


COSEL

Model	CHS3804812
Item	Minimum Input Voltage for Regulated Output Voltage
Object	+12V32A

Testing Circuitry Figure A

1.Graph



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

2.Values

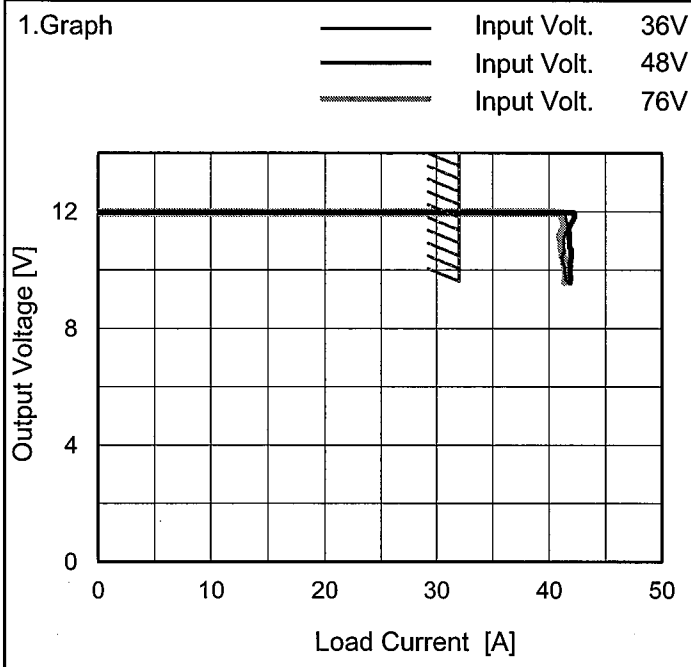
Ambient Temperature [°C]	Input Voltage [V]	
	Load 50%	Load 100%
-40	32.5	32.6
-20	32.5	32.6
0	32.6	32.7
25	32.7	32.8
40	32.7	32.8
55	32.8	32.8
--	-	-
--	-	-
--	-	-
--	-	-
--	-	-

COSEL

Model	CHS3804812
Item	Overcurrent Protection
Object	+12V32A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

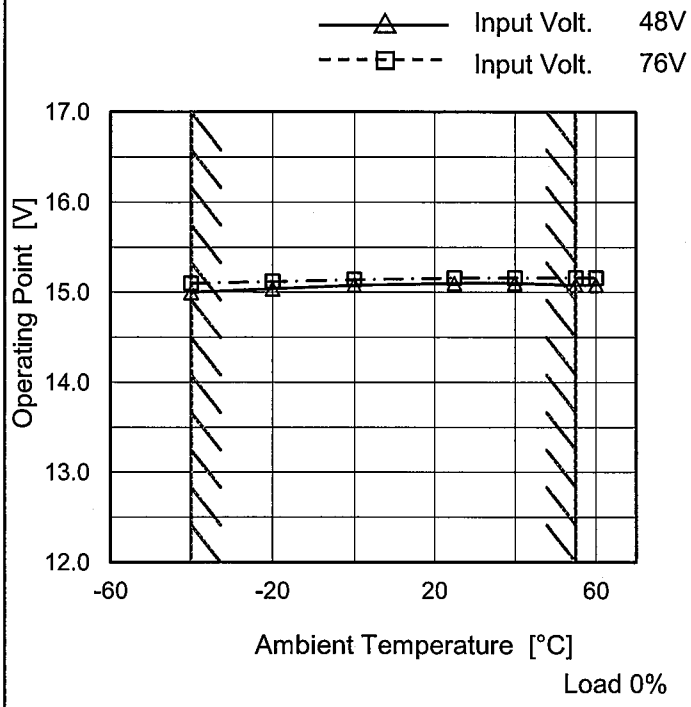
Output Voltage [V]	Load Current [A]		
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
11.4	41.68	41.78	41.46
10.8	41.33	41.83	41.17
9.6	41.55	41.93	41.45
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

COSEL

Model	CHS3804812
Item	Overvoltage Protection
Object	+12V32A

Testing Circuitry Figure A

1.Graph



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

2.Values

Ambient Temperature [°C]	Operating Point [V]	
	Input Volt. 48[V]	Input Volt. 76[V]
-40	15.00	15.10
-20	15.04	15.12
0	15.08	15.14
25	15.10	15.16
40	15.10	15.16
55	15.08	15.16
60	15.08	15.16
--	-	-
--	-	-
--	-	-
--	-	-

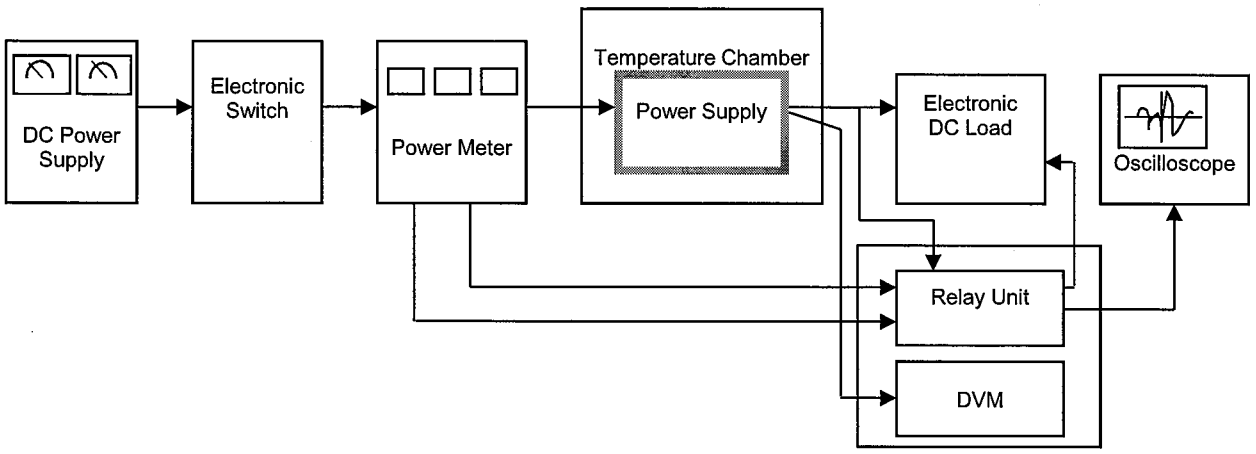


Figure A

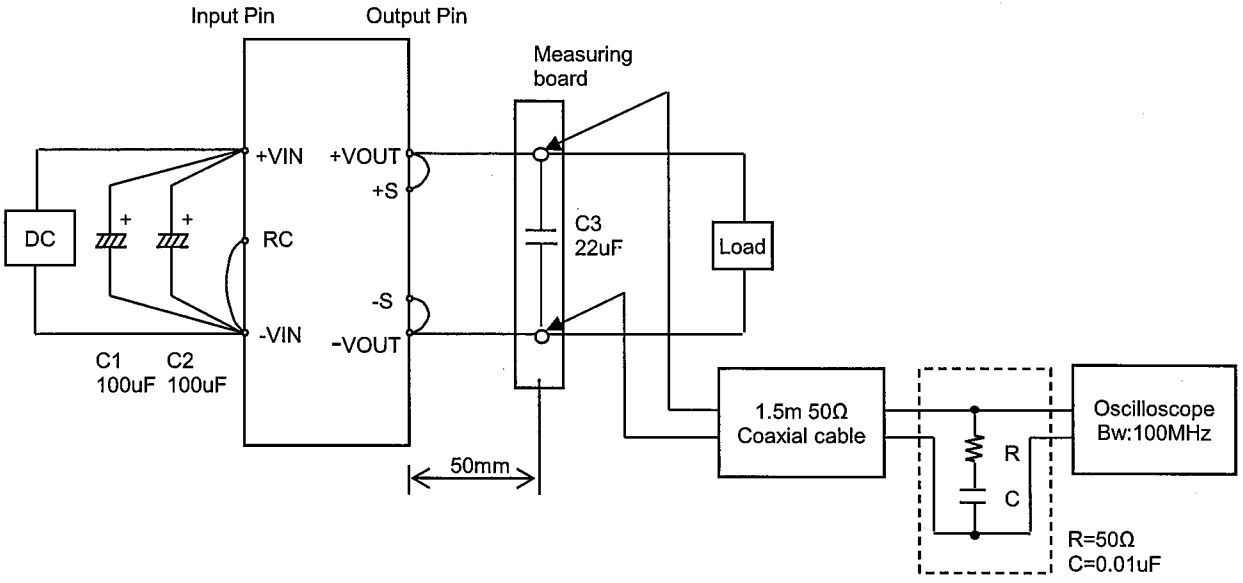


Figure B