参考資料

COSEL

TEST DATA OF SUS34815

Regulated DC Power Supply
Mar 7, 2005

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COSEL CO.,LTD.

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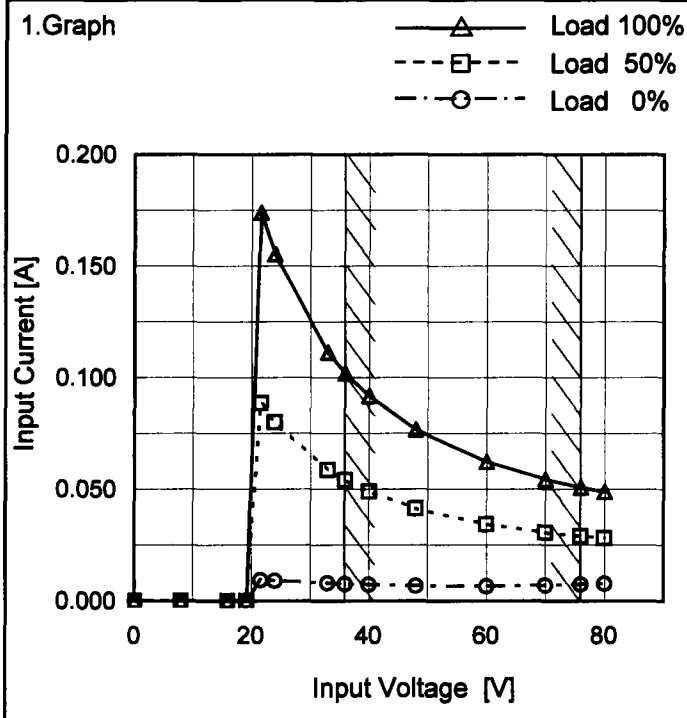
CONTENTS

COSEL

Model	SUS34815
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

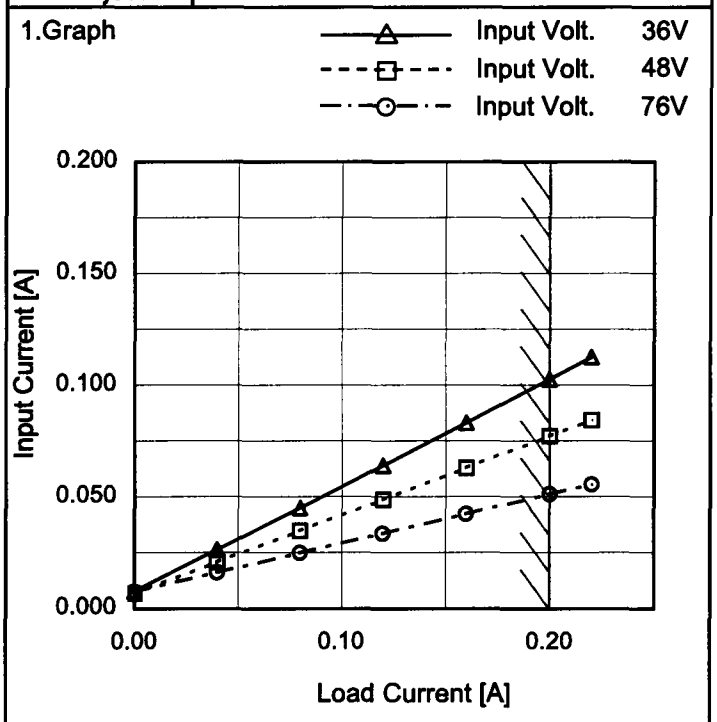
Input Voltage [V]	Input Current [A]		
	Load 0%	Load 50%	Load 100%
0.0	0.000	0.000	0.000
8.0	0.000	0.000	0.000
16.0	0.000	0.000	0.000
19.2	0.000	0.000	0.000
21.6	0.009	0.089	0.174
24.0	0.009	0.080	0.155
33.0	0.008	0.059	0.111
36.0	0.008	0.054	0.102
40.0	0.007	0.049	0.092
48.0	0.007	0.041	0.077
60.0	0.007	0.034	0.062
70.0	0.007	0.031	0.055
76.0	0.007	0.029	0.051
80.0	0.008	0.028	0.049
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

COSEL

Model	SUS34815
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

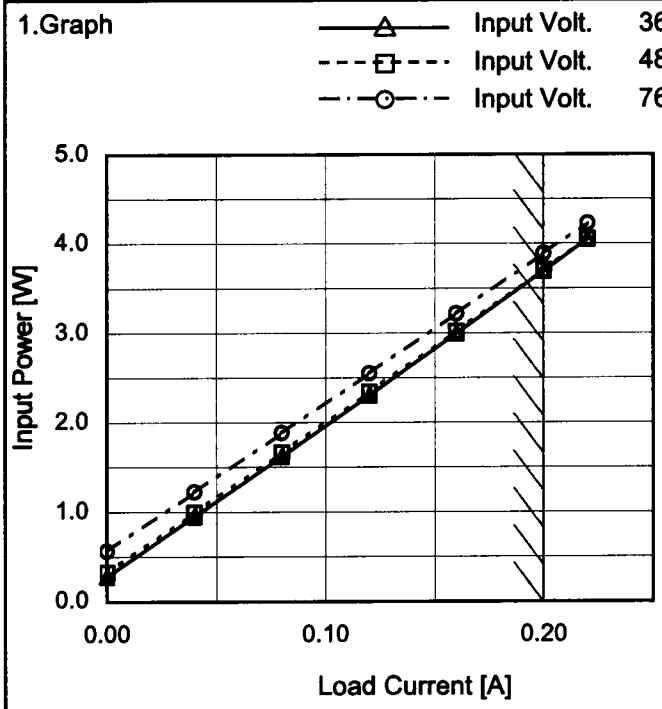
Load Current [A]	Input Current [A]		
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
0.00	0.008	0.007	0.007
0.04	0.026	0.021	0.016
0.08	0.045	0.035	0.025
0.12	0.064	0.049	0.034
0.16	0.083	0.063	0.042
0.20	0.103	0.077	0.051
0.22	0.113	0.084	0.056
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

COSEL

Model	SUS34815
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

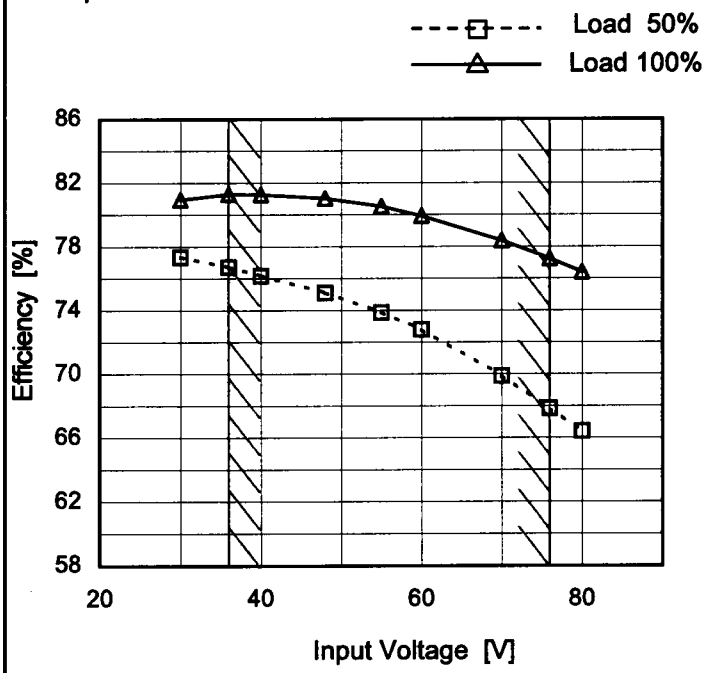
Load Current [A]	Input Power [W]		
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
0.00	0.28	0.33	0.56
0.04	0.95	1.00	1.23
0.08	1.62	1.67	1.89
0.12	2.30	2.34	2.55
0.16	2.99	3.02	3.22
0.20	3.69	3.71	3.89
0.22	4.05	4.05	4.23
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

COSEL

Model	SUS34815
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%
30	77.3	81.0
36	76.7	81.3
40	76.2	81.3
48	75.1	81.0
55	73.9	80.5
60	72.8	79.9
70	69.9	78.4
76	67.9	77.2
80	66.4	76.4

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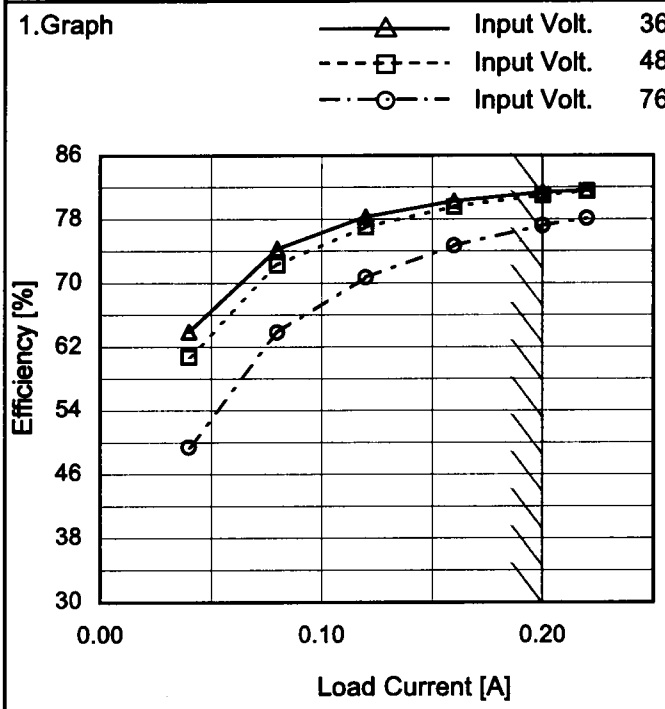
Model	SUS34815
Item	Efficiency (by Load Current)
Object	————————

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

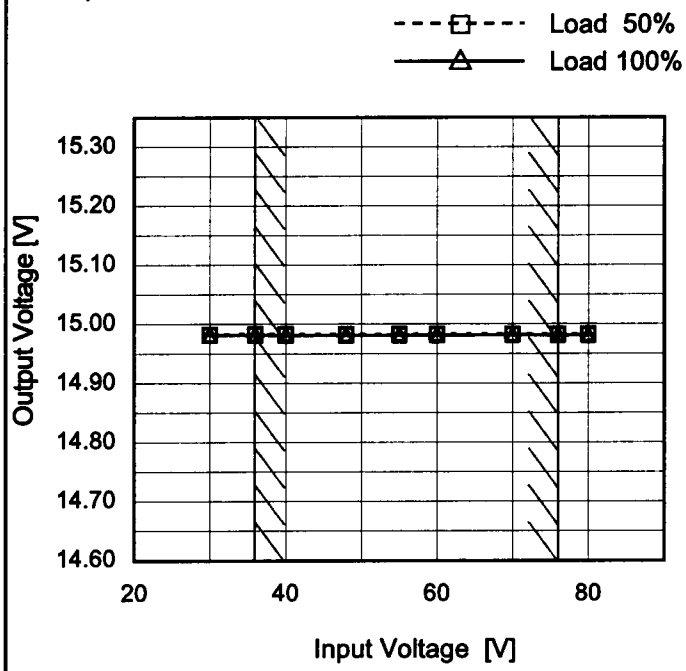
Load Current [A]	Efficiency [%]		
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
0.00	-	-	-
0.04	63.9	60.8	49.4
0.08	74.3	72.3	63.8
0.12	78.3	77.0	70.7
0.16	80.3	79.6	74.7
0.20	81.4	81.0	77.2
0.22	81.6	81.5	78.1
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

COSEL

Model	SUS34815
Item	Line Regulation
Object	+15V0.2A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

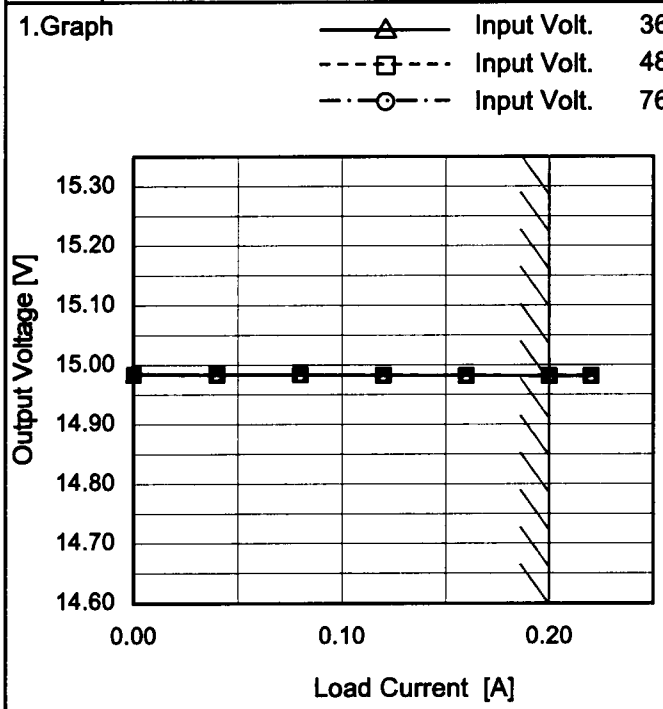
Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
30	14.983	14.982
36	14.983	14.982
40	14.983	14.981
48	14.983	14.981
55	14.983	14.981
60	14.983	14.981
70	14.983	14.982
76	14.983	14.981
80	14.983	14.981

COSEL

Model	SUS34815
Item	Load Regulation
Object	+15V0.2A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

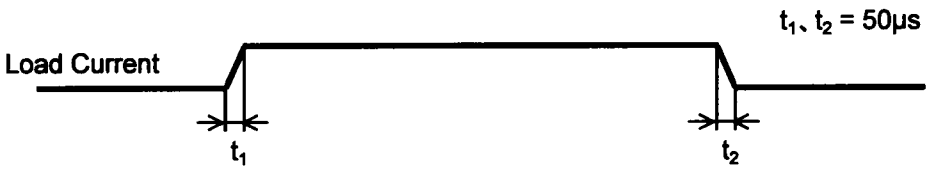
Load Current [A]	Output Voltage [V] Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
0.00	14.984	14.984	14.985
0.04	14.984	14.984	14.984
0.08	14.983	14.983	14.983
0.12	14.982	14.983	14.983
0.16	14.982	14.982	14.982
0.20	14.982	14.981	14.981
0.22	14.981	14.981	14.981
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

COSEL

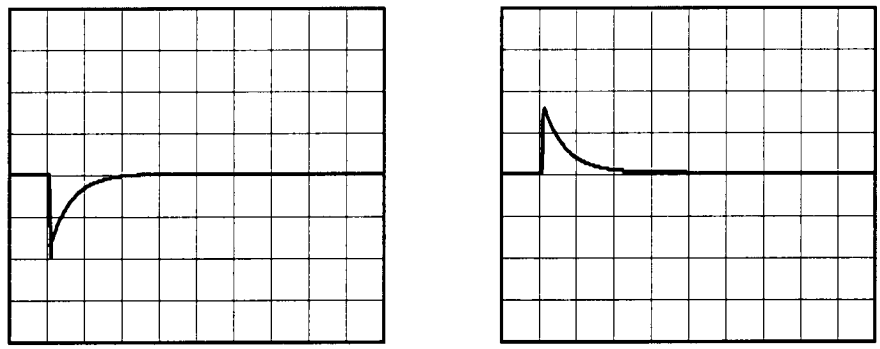
Model	SUS34815
Item	Dynamic Load Response
Object	+15V0.2A

Temperature 25°C
Testing Circuitry Figure A

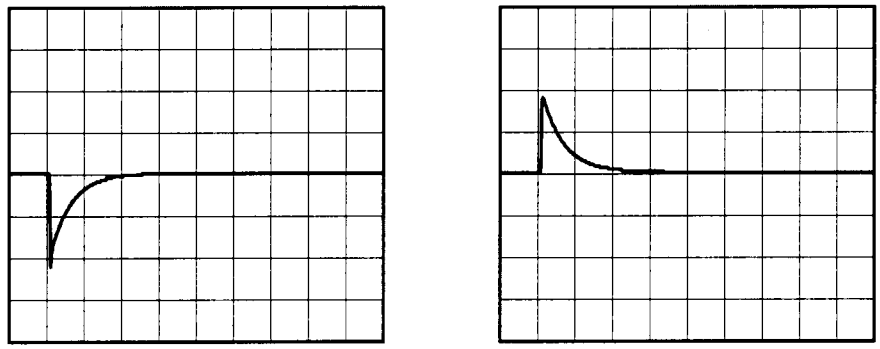
Input Volt. 48 V
Cycle 100 mS



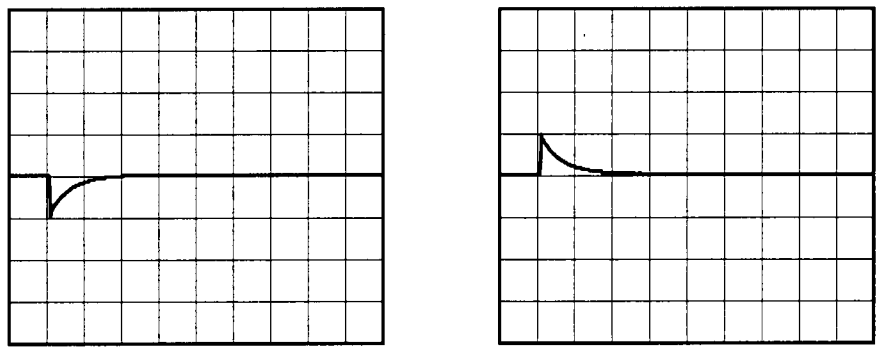
Min. Load (0A) ⟷ Load 100% (0.2A)



Min. Load (0A) ⟷ Load 50% (0.1A)



Load 50% (0.1A) ⟷ Load 100% (0.2A)

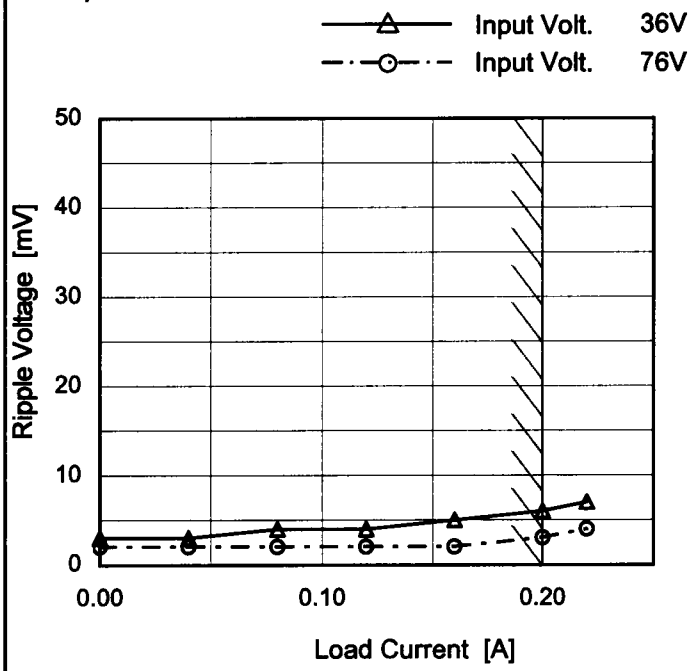


COSEL

Model	SUS34815
Item	Ripple Voltage (by Load Current)
Object	+15V0.2A

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.

Ripple [mVp-p]

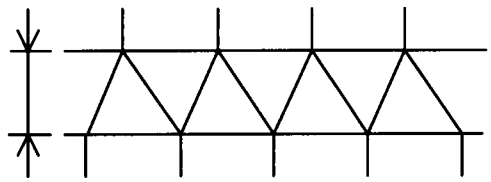


Fig.Complex Ripple Wave Form

2.Values

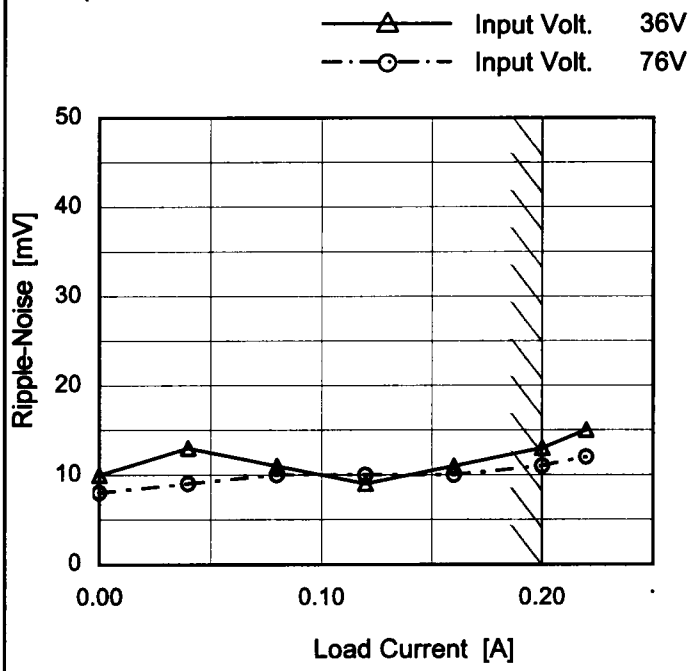
Load Current [A]	Ripple Voltage [mV]	
	Input Volt. 36 [V]	Input Volt. 76 [V]
0.00	3	2
0.04	3	2
0.08	4	2
0.12	4	2
0.16	5	2
0.20	6	3
0.22	7	4
--	-	-
--	-	-
--	-	-
--	-	-

COSEL

Model	SUS34815
Item	Ripple-Noise
Object	+15V0.2A

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.

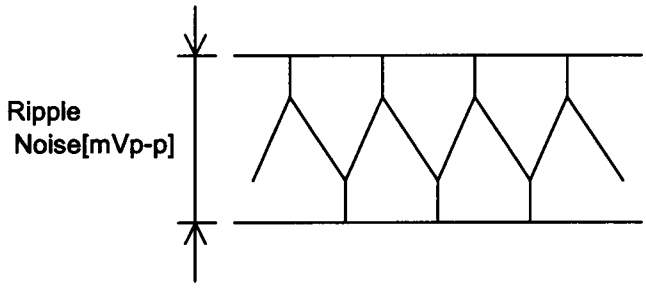


Fig.Complex Ripple Noise Wave Form

2.Values

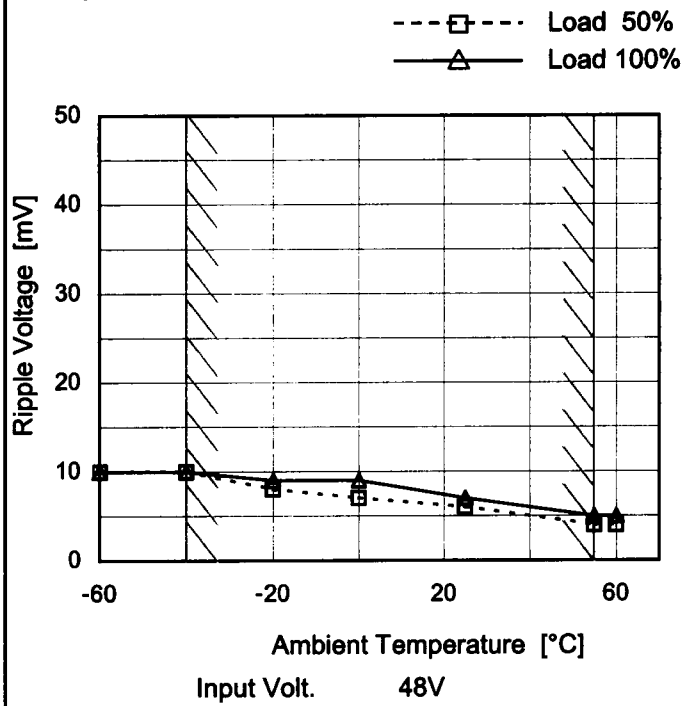
Load Current [A]	Ripple-Noise [mV]	
	Input Volt. 36 [V]	Input Volt. 76 [V]
0.00	10	8
0.04	13	9
0.08	11	10
0.12	9	10
0.16	11	10
0.20	13	11
0.22	15	12
--	-	-
--	-	-
--	-	-
--	-	-

COSEL

Model	SUS34815
Item	Ripple Voltage (by Ambient Temp.)
Object	+15V0.2A

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.

2.Values

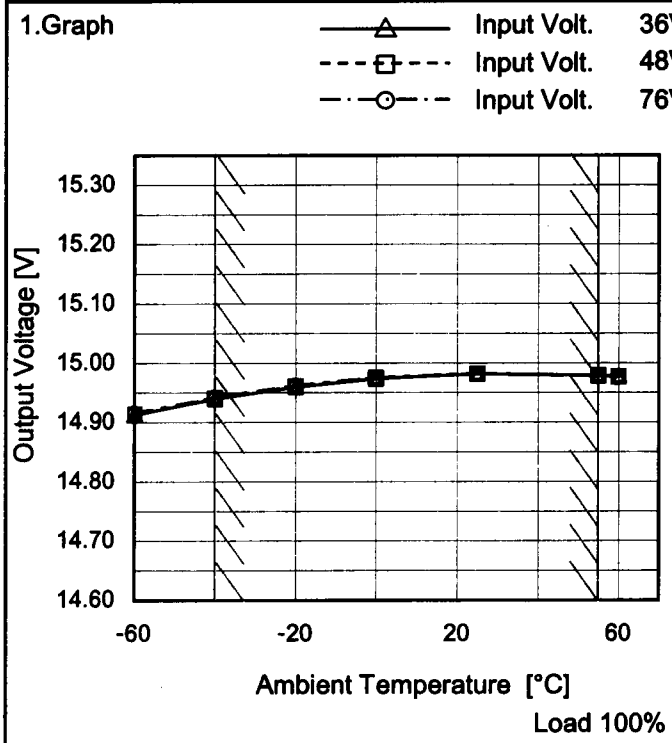
Ambient Temperature [°C]	Ripple Voltage [mV]	
	Load 50%	Load 100%
-60	10	10
-40	10	10
-20	8	9
0	7	9
25	6	7
55	4	5
60	4	5
—	-	-
—	-	-
—	-	-
—	-	-

COSEL

Model	SUS34815
Item	Ambient Temperature Drift
Object	+15V0.2A

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]
-60	14.913	14.914	14.915
-40	14.940	14.941	14.942
-20	14.960	14.961	14.962
0	14.974	14.975	14.975
25	14.982	14.982	14.982
55	14.979	14.979	14.978
60	14.977	14.977	14.977
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

COSEL

Model	SUS34815	
Item	Output Voltage Accuracy	Testing Circuitry Figure A
Object	+15V0.2A	

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 - 0.2A

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

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

2.Values

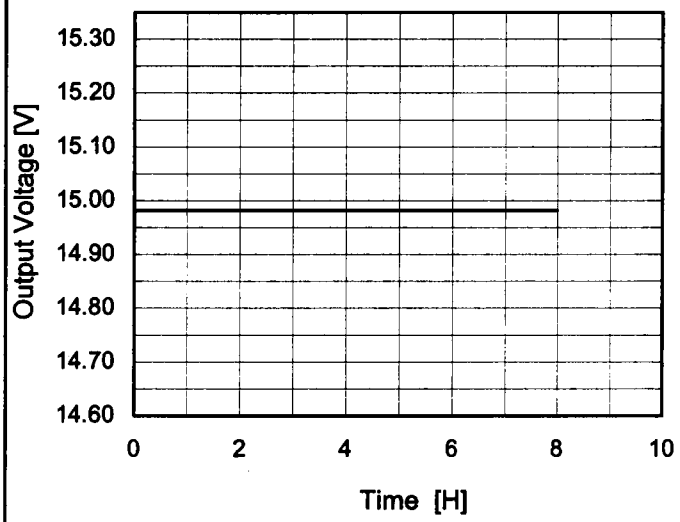
Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	25	76	0	14.985	±23	±0.2
Minimum Voltage	-40	36	0.2	14.940		

COSEL

Model	SUS34815
Item	Time Lapse Drift
Object	+15V0.2A

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	14.980
0.5	14.982
1.0	14.982
2.0	14.982
3.0	14.982
4.0	14.982
5.0	14.982
6.0	14.982
7.0	14.982
8.0	14.982

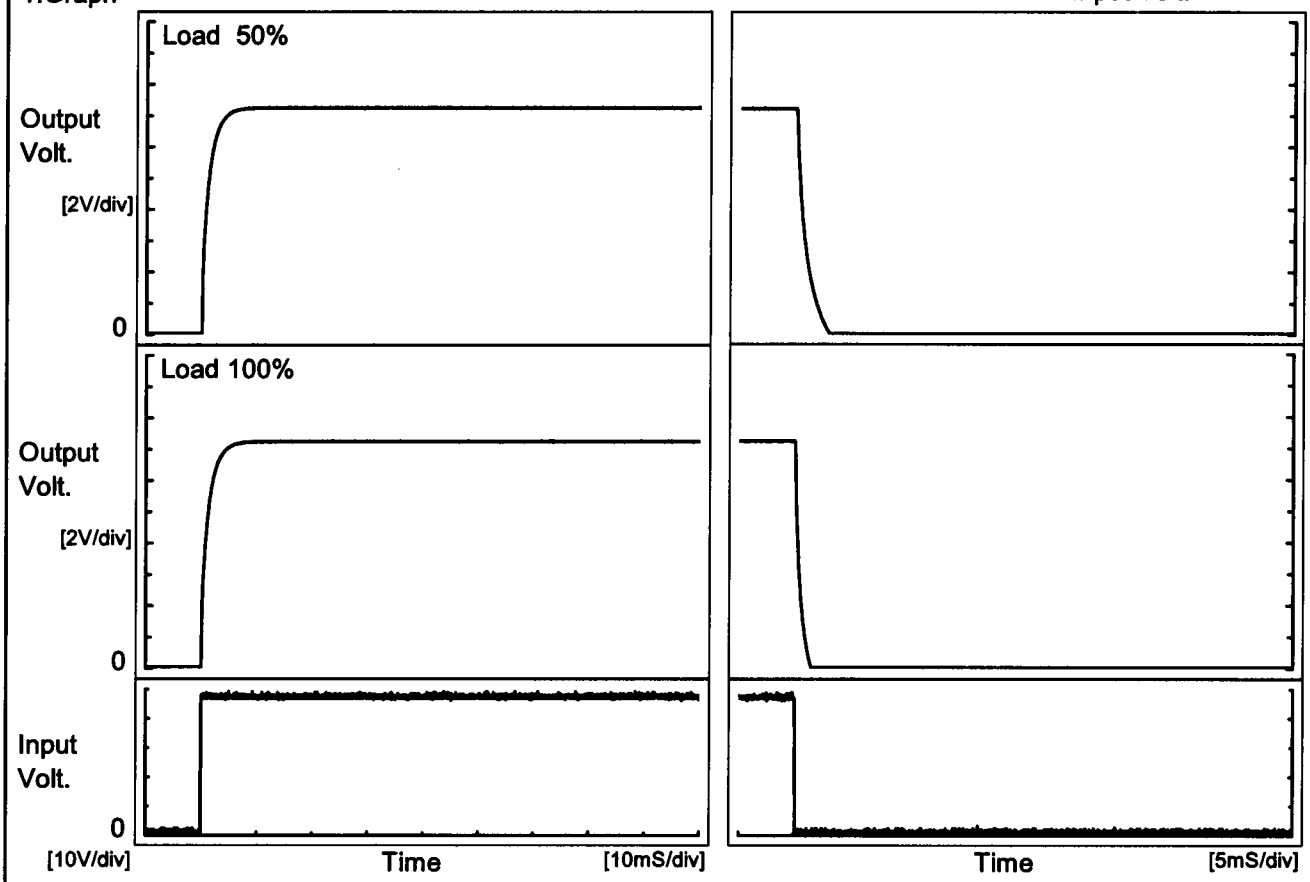
COSEL

Model	SUS34815
Item	Rise and Fall Time
Object	+15V0.2A

Temperature 25°C
Testing Circuitry Figure A

1.Graph

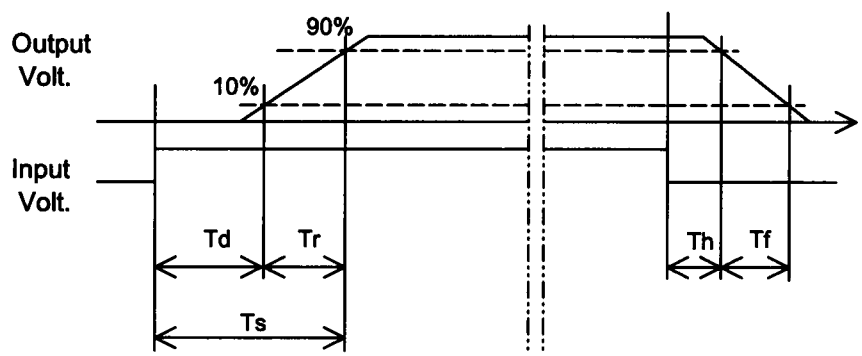
Input Volt. 48 V



2.Values

[mS]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	0.1	3.5	3.6	0.1	2.0
100 %	0.1	3.6	3.7	0.1	1.0

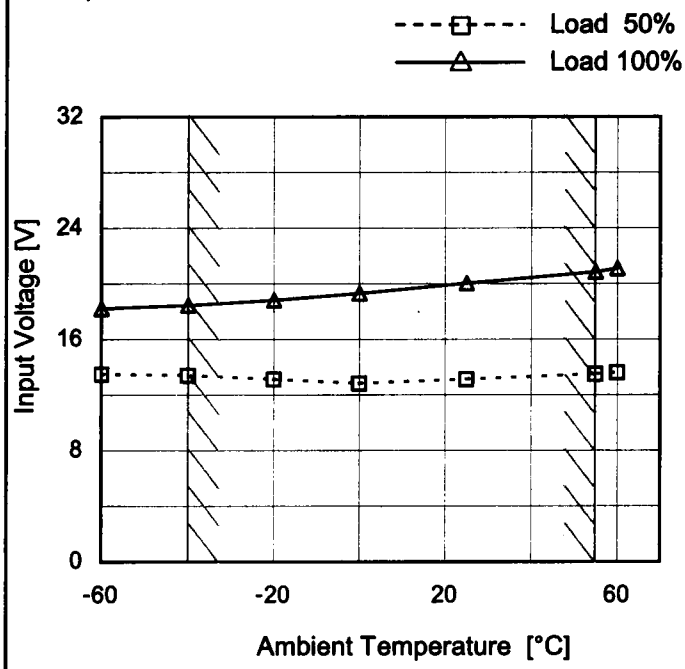


COSEL

Model	SUS34815
Item	Minimum Input Voltage for Regulated Output Voltage
Object	+15V0.2A

Testing Circuitry Figure A

1.Graph



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

2.Values

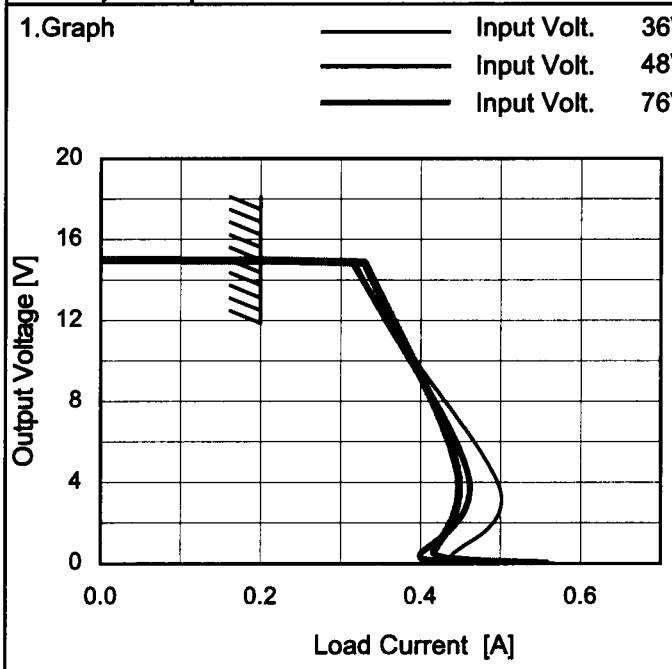
Ambient Temperature [°C]	Input Voltage [V]	
	Load 50%	Load 100%
-60	13.5	18.3
-40	13.5	18.5
-20	13.2	18.9
0	12.9	19.3
25	13.2	20.1
55	13.5	20.9
60	13.6	21.2
--	-	-
--	-	-
--	-	-
--	-	-

COSEL

Model	SUS34815
Item	Overcurrent Protection
Object	+15V0.2A

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]
15.0	0.20	0.20	0.20
14.3	0.32	0.32	0.34
13.5	0.33	0.33	0.35
12.0	0.36	0.36	0.37
10.5	0.38	0.38	0.38
9.0	0.41	0.40	0.40
7.5	0.44	0.43	0.42
6.0	0.47	0.45	0.44
4.5	0.49	0.46	0.45
3.0	0.50	0.46	0.45
1.5	0.48	0.43	0.43
0.0	0.57	0.48	0.56

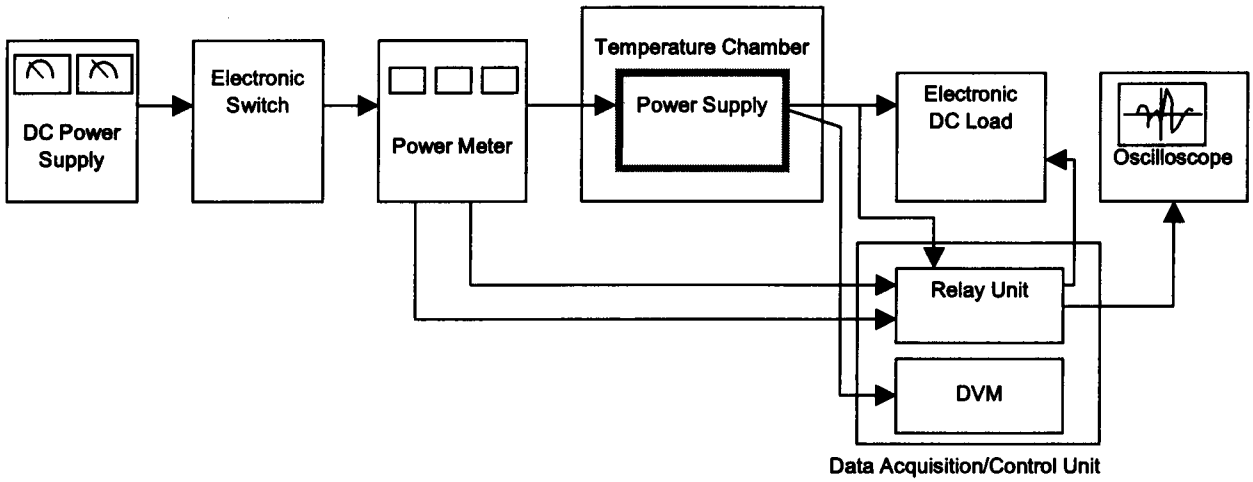


Figure A

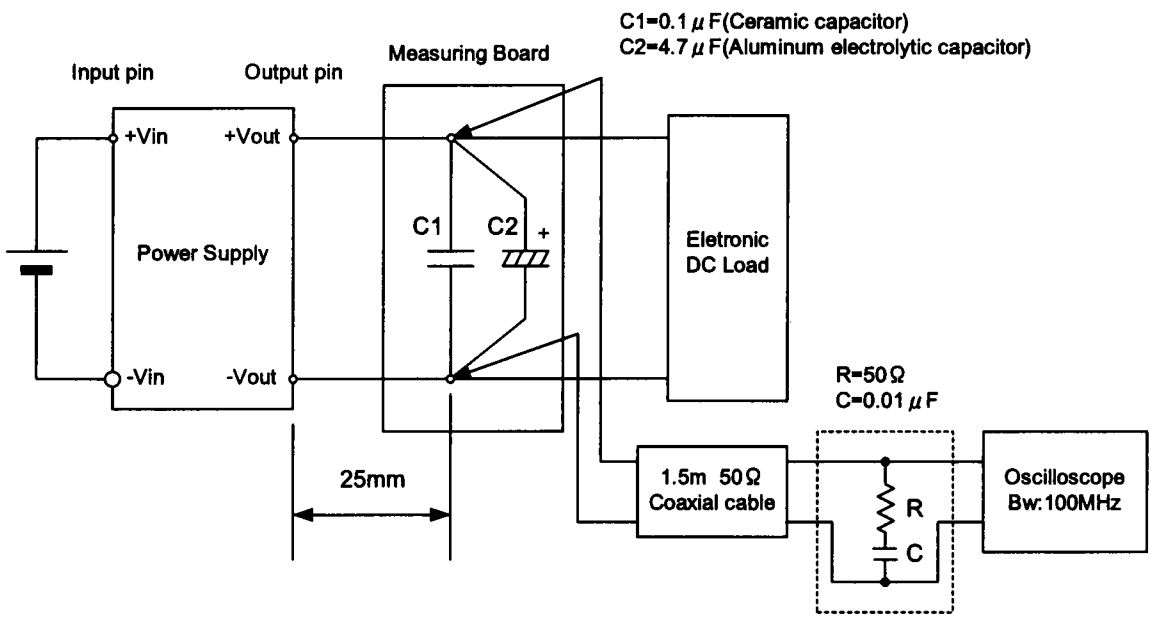


Figure B (Ripple and Ripple noise Characteristic)