参考資料

COSEL

TEST DATA OF SUS104815 SUCS104815

Regulated DC Power Supply
Mar 25, 2005

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COSEL CO.,LTD.

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CONTENTS

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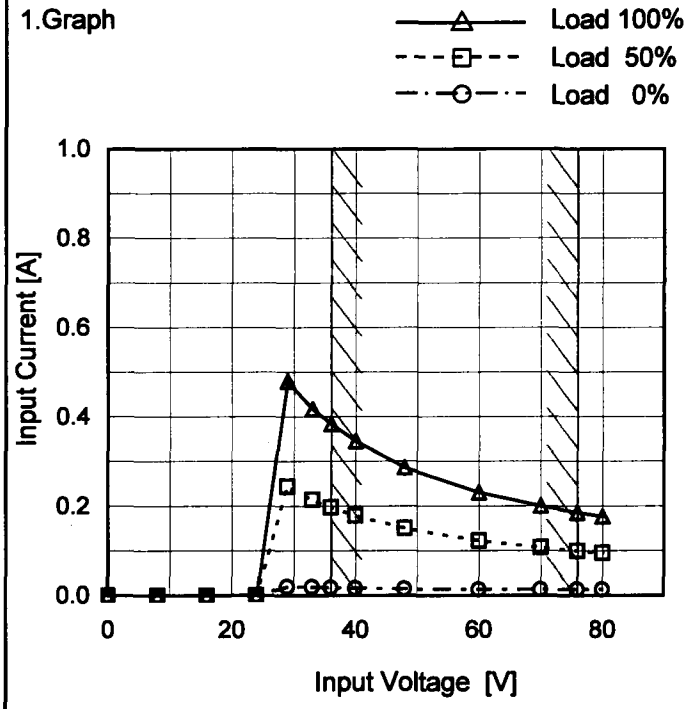
Model	SUS104815/SUCS104815
Item	Input Current (by Input Voltage)
Object	———————

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

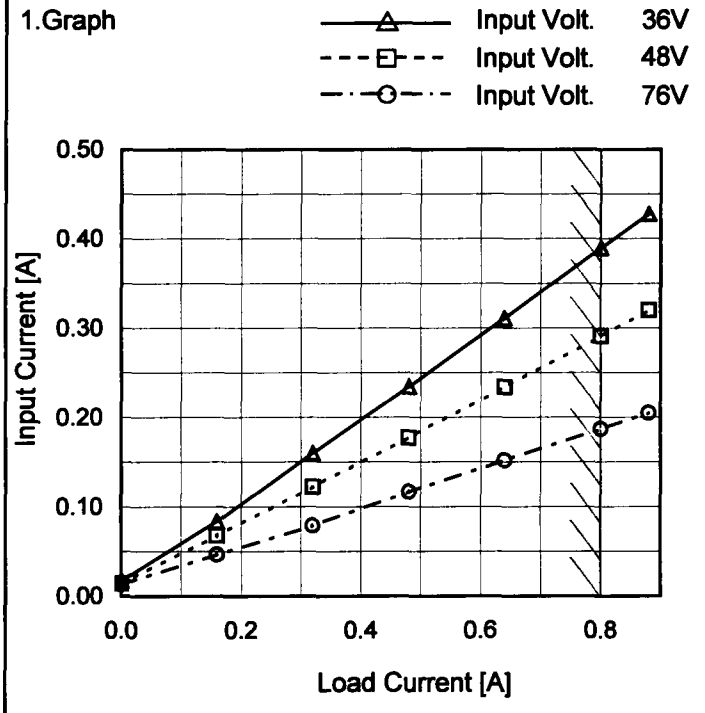
Input Voltage [V]	Input Current [A]		
	Load 0%	Load 50%	Load 100%
0	0.000	0.000	0.000
8	0.000	0.000	0.000
16	0.000	0.000	0.000
24	0.001	0.001	0.001
29	0.020	0.244	0.480
33	0.019	0.215	0.418
36	0.018	0.198	0.384
40	0.017	0.179	0.346
48	0.015	0.151	0.287
60	0.014	0.123	0.231
70	0.014	0.108	0.200
76	0.014	0.100	0.185
80	0.014	0.095	0.177
—	-	-	-
—	-	-	-
—	-	-	-
—	-	-	-
—	-	-	-

COSEL

Model	SUS104815/SUCS104815
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	0.018	0.015	0.014
0.16	0.084	0.068	0.047
0.32	0.160	0.123	0.079
0.48	0.234	0.178	0.117
0.64	0.311	0.234	0.152
0.80	0.390	0.291	0.187
0.88	0.428	0.320	0.205
—	-	-	-
—	-	-	-
—	-	-	-
—	-	-	-

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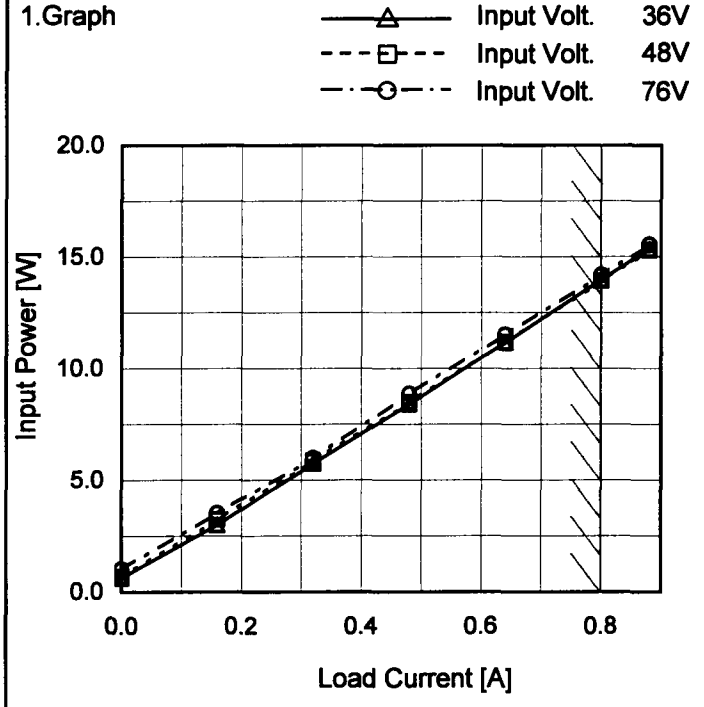
Model	SUS104815/SUCS104815
Item	Input Power (by Load Current)
Object	———————

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

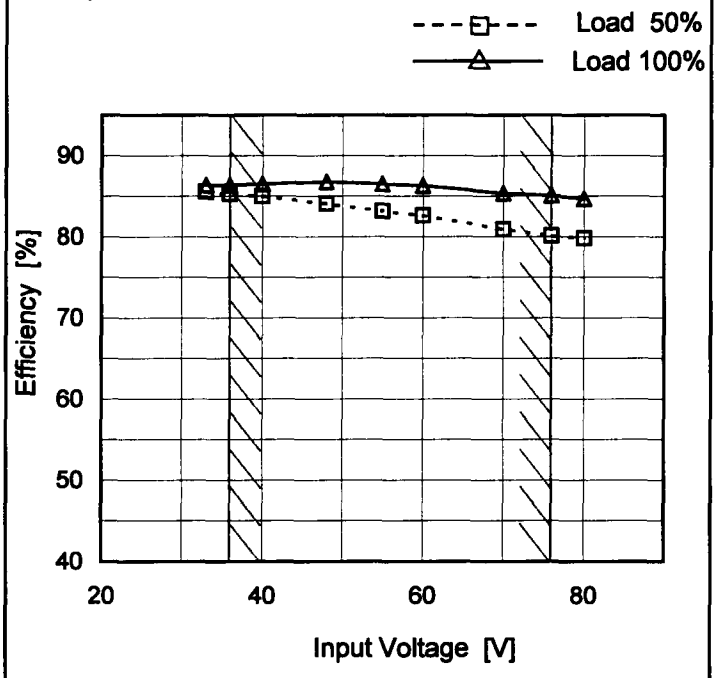
Load Current [A]	Input Power [W]		
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
0.00	0.63	0.69	1.04
0.16	3.00	3.25	3.53
0.32	5.75	5.87	5.99
0.48	8.41	8.50	8.87
0.64	11.16	11.18	11.52
0.80	13.98	13.92	14.20
0.88	15.34	15.31	15.56
—	-	-	-
—	-	-	-
—	-	-	-
—	-	-	-

COSEL

Model	SUS104815/SUCS104815
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%
33	85.6	86.4
36	85.3	86.4
40	85.0	86.5
48	84.1	86.8
55	83.2	86.5
60	82.6	86.3
70	80.9	85.3
76	80.1	85.1
80	79.8	84.7

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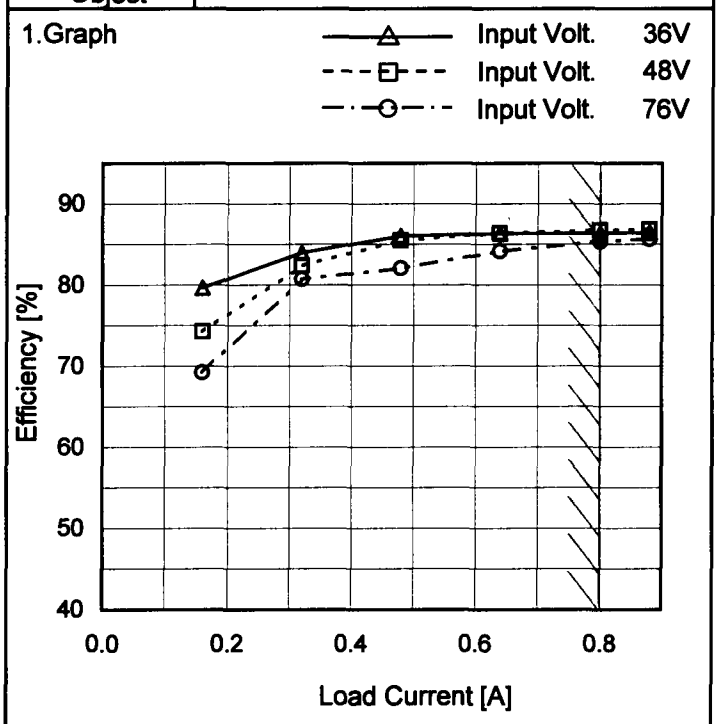
Model	SUS104815/SUCS104815
Item	Efficiency (by Load Current)
Object	———————

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	-	-	-
0.16	79.7	74.3	69.2
0.32	84.0	82.4	80.7
0.48	86.0	85.5	82.1
0.64	86.3	86.4	84.2
0.80	86.4	86.7	85.4
0.88	86.5	86.9	85.7
—	-	-	-
—	-	-	-
—	-	-	-
—	-	-	-

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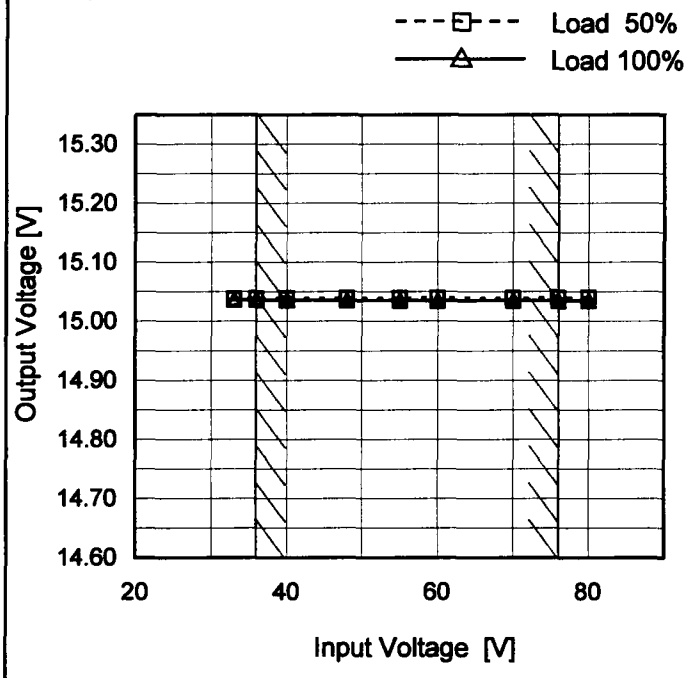
Model	SUS104815/SUCS104815
Item	Line Regulation
Object	+15V0.8A

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%
33	15.038	15.037
36	15.039	15.037
40	15.039	15.036
48	15.039	15.035
55	15.040	15.035
60	15.040	15.035
70	15.039	15.036
76	15.040	15.035
80	15.041	15.035

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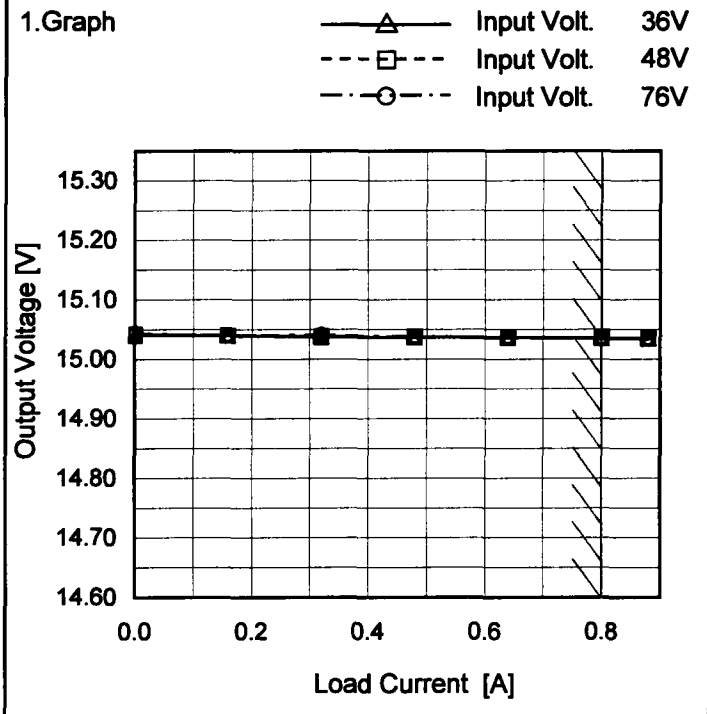
Model	SUS104815/SUCS104815
Item	Load Regulation
Object	+15V0.8A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

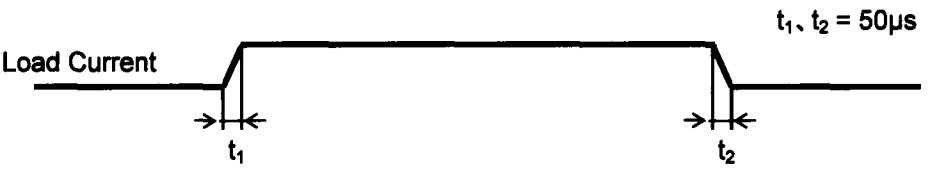
2.Values

Load Current [A]	Output Voltage [V]		
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
0.00	15.041	15.042	15.043
0.16	15.040	15.040	15.040
0.32	15.038	15.038	15.041
0.48	15.037	15.037	15.038
0.64	15.036	15.037	15.037
0.80	15.035	15.035	15.035
0.88	15.035	15.035	15.034
–	-	-	-
–	-	-	-
–	-	-	-
–	-	-	-

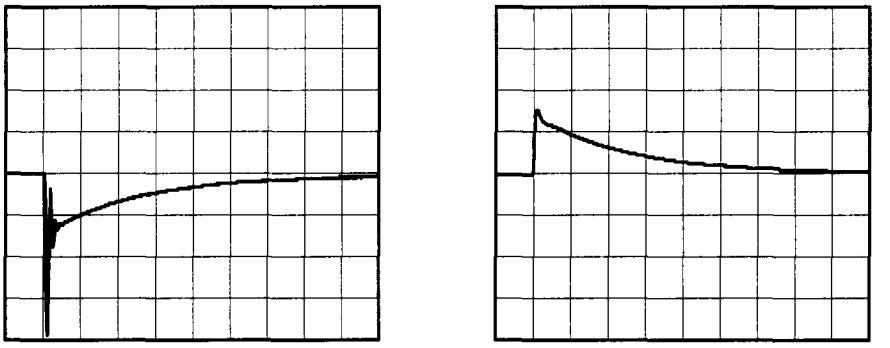
COSEL

Model	SUS104815/SUCS104815		
Item	Dynamic Load Response	Temperature	25°C
Object	+15V0.8A	Testing Circuitry	Figure A

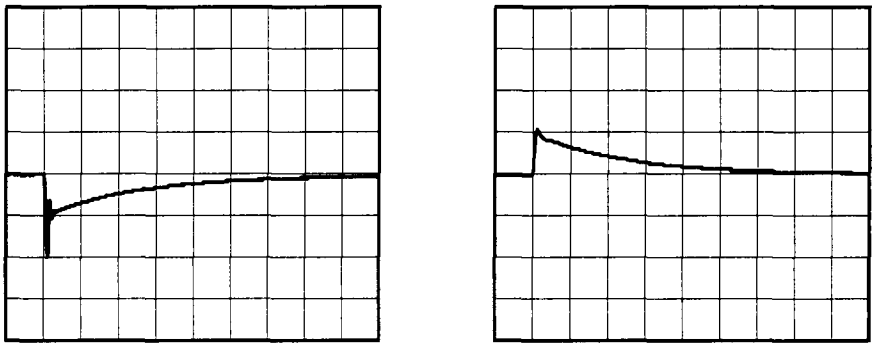
Input Volt. 48 V
Cycle 100 mS



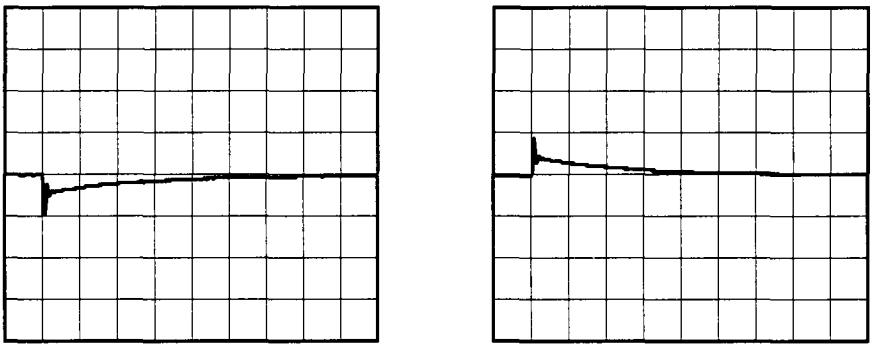
Min. Load (0A) ⟷
Load 100% (0.8A)



Min. Load (0A) ⟷
Load 50% (0.4A)



Load 50% (0.4A) ⟷
Load 100% (0.8A)



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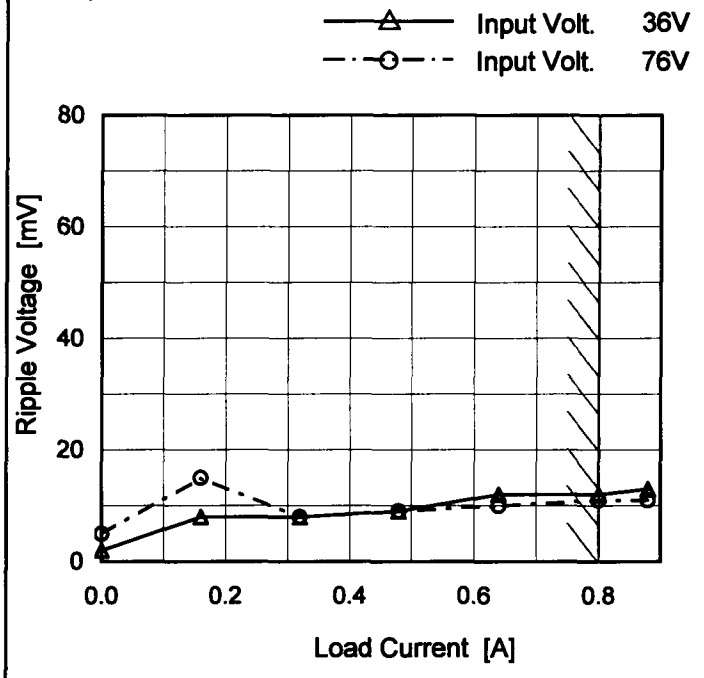
Model	SUS104815/SUCS104815
Item	Ripple Voltage (by Load Current)
Object	+15V0.8A

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]

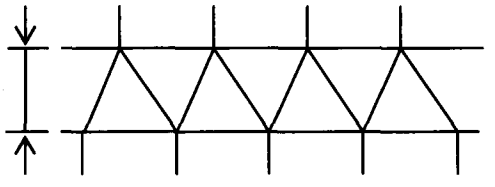


Fig.Complex Ripple Wave Form

2.Values

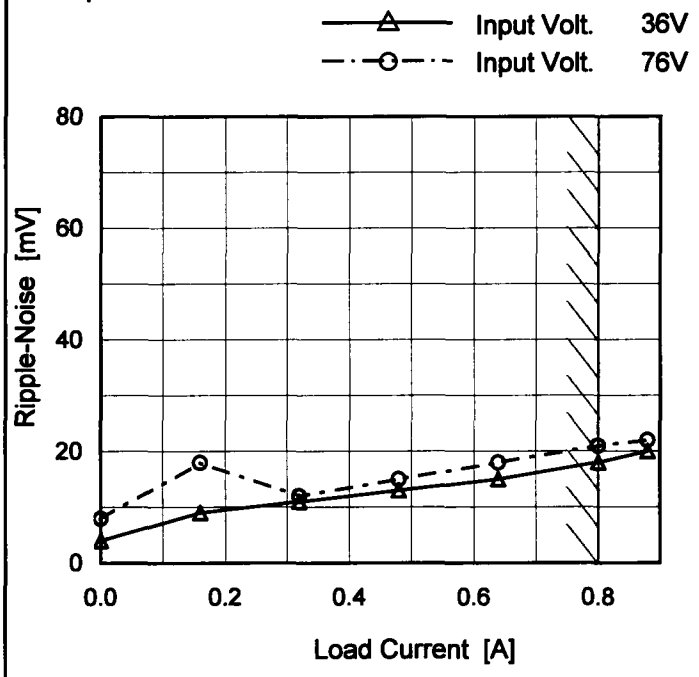
Load Current [A]	Ripple Voltage [mV]	
	Input Volt. 36 [V]	Input Volt. 76 [V]
0.00	2	5
0.16	8	15
0.32	8	8
0.48	9	9
0.64	12	10
0.80	12	11
0.88	13	11
–	-	-
–	-	-
–	-	-
–	-	-

COSEL

Model	SUS104815/SUCS104815
Item	Ripple-Noise
Object	+15V0.8A

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.

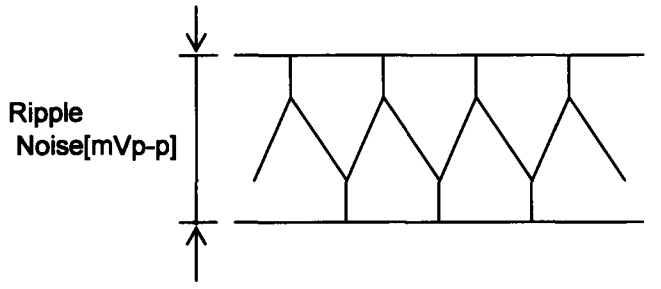


Fig.Complex Ripple Noise Wave Form

2.Values

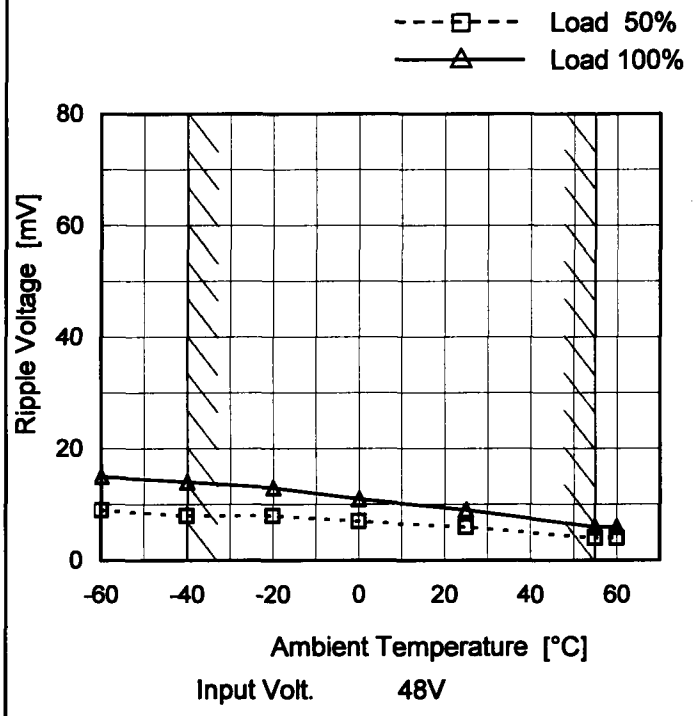
Load Current [A]	Ripple-Noise [mV]	
	Input Volt. 36 [V]	Input Volt. 76 [V]
0.00	4	8
0.16	9	18
0.32	11	12
0.48	13	15
0.64	15	18
0.80	18	21
0.88	20	22
–	-	-
–	-	-
–	-	-
–	-	-

COSEL

Model	SUS104815/SUCS104815
Item	Ripple Voltage (by Ambient Temp.)
Object	+15V0.8A

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

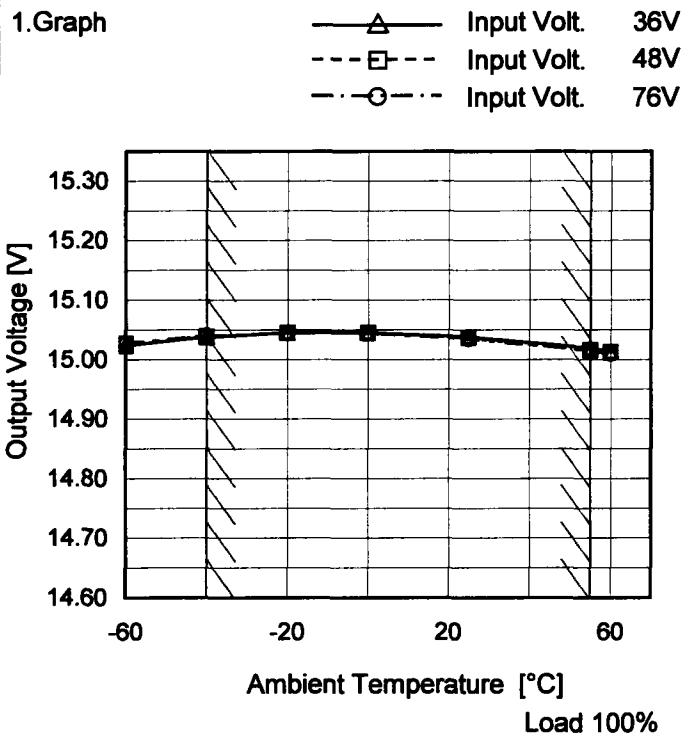
Ambient Temperature [°C]	Ripple Voltage [mV]	
	Load 50%	Load 100%
-60	9	15
-40	8	14
-20	8	13
0	7	11
25	6	9
55	4	6
60	4	6
–	-	-
–	-	-
–	-	-
–	-	-

COSEL

Model	SUS104815/SUCS104815
Item	Ambient Temperature Drift
Object	+15V0.8A

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	15.024	15.027	15.028
-40	15.038	15.039	15.040
-20	15.045	15.045	15.045
0	15.045	15.045	15.045
25	15.038	15.037	15.035
55	15.019	15.016	15.016
60	15.013	15.012	15.010
—	-	-	-
—	-	-	-
—	-	-	-
—	-	-	-

COSEL

Model	SUS104815/SUCS104815	
Item	Output Voltage Accuracy	Testing Circuitry Figure A
Object	+15V0.8A	

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 - 0.8A

* 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	-20	36	0	15.052	±18	±0.1
Minimum Voltage	55	48	0.8	15.016		

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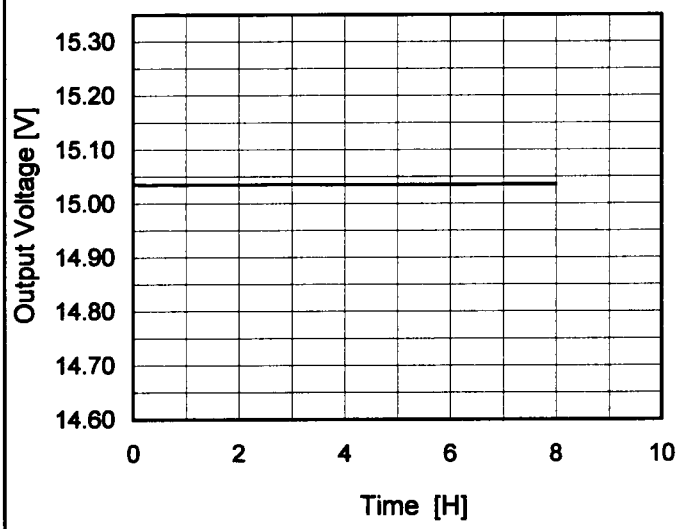
Model	SUS104815/SUCS104815
Item	Time Lapse Drift
Object	+15V0.8A

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	15.038
0.5	15.035
1.0	15.035
2.0	15.035
3.0	15.035
4.0	15.035
5.0	15.035
6.0	15.035
7.0	15.035
8.0	15.035

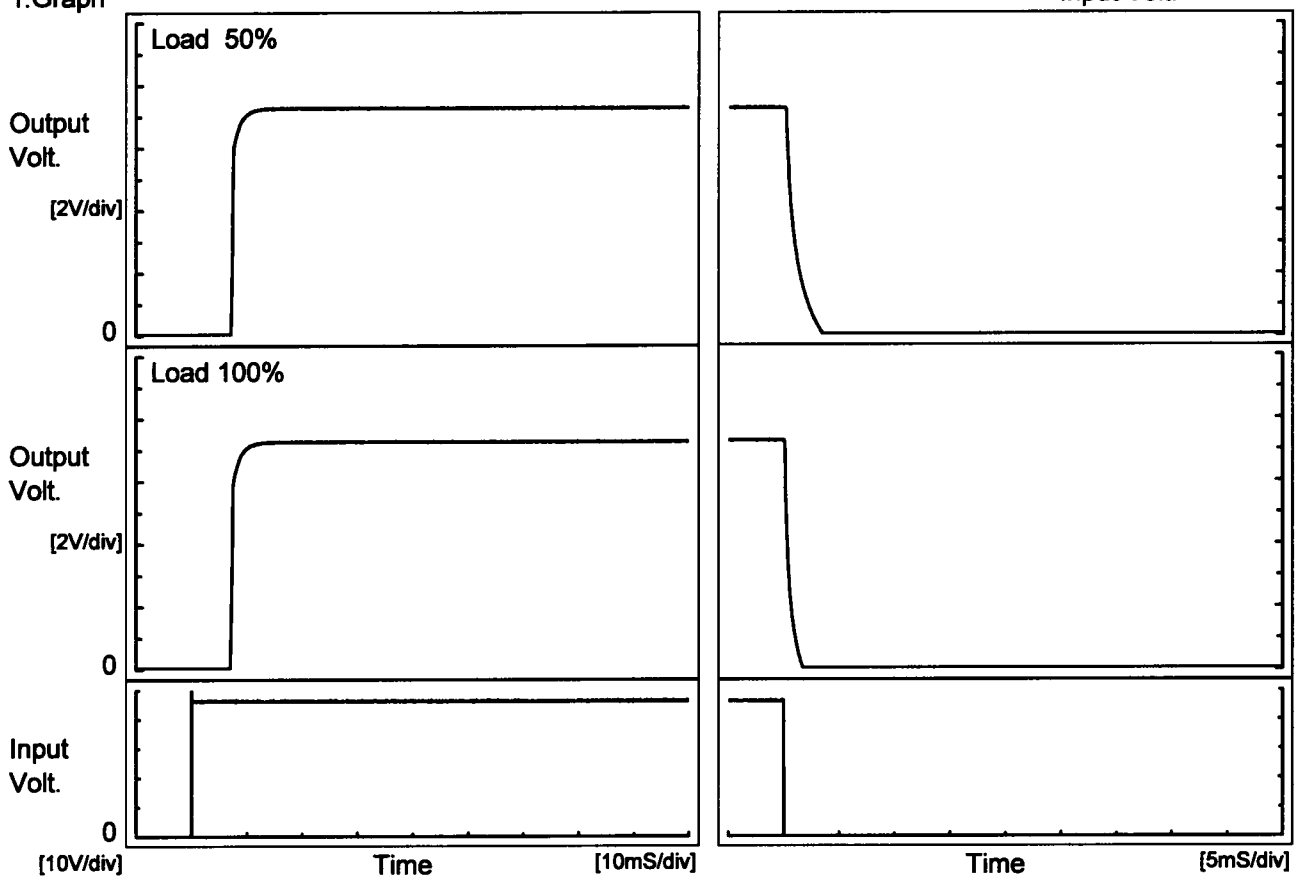
COSEL

Model	SUS104815/SUCS104815
Item	Rise and Fall Time
Object	+15V0.8A

Temperature 25°C
Testing Circuitry Figure A

1.Graph

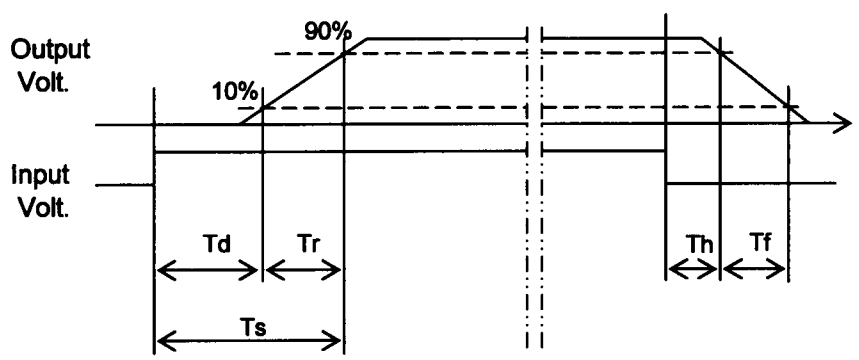
Input Volt. 48 V



2.Values

[mS]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	7.2	1.7	8.9	0.2	2.2
100 %	7.1	1.8	8.9	0.1	1.1

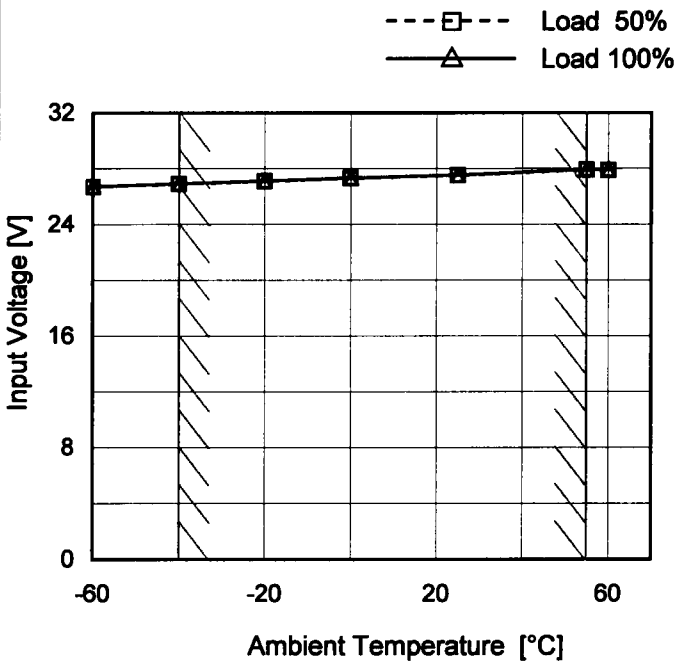


COSEL

Model	SUS104815/SUCS104815
Item	Minimum Input Voltage for Regulated Output Voltage
Object	+15V0.8A

Testing Circuitry Figure A

1.Graph



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

2.Values

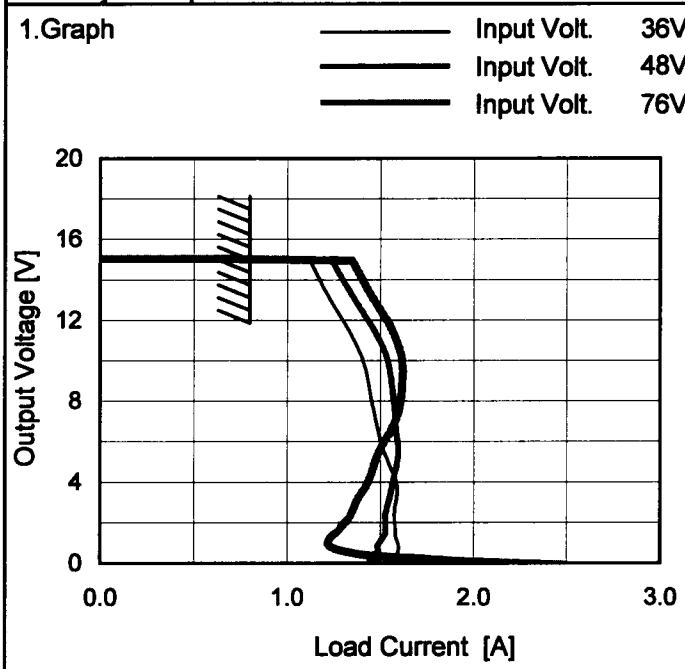
Ambient Temperature [°C]	Input Voltage [V]	
	Load 50%	Load 100%
-60	26.7	26.8
-40	26.9	27.0
-20	27.1	27.2
0	27.4	27.4
25	27.6	27.6
55	27.9	28.0
60	27.9	28.0
—	-	-
—	-	-
—	-	-
—	-	-

COSEL

Model	SUS104815/SUCS104815
Item	Overcurrent Protection
Object	+15V0.8A

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	1.12	1.24	1.35
14.3	1.16	1.28	1.39
13.5	1.20	1.33	1.43
12.0	1.30	1.44	1.54
10.5	1.39	1.52	1.60
9.0	1.43	1.56	1.62
7.5	1.47	1.58	1.60
6.0	1.50	1.59	1.52
4.5	1.57	1.58	1.45
3.0	1.58	1.54	1.37
1.5	1.58	1.53	1.26
0.0	1.56	1.50	2.50

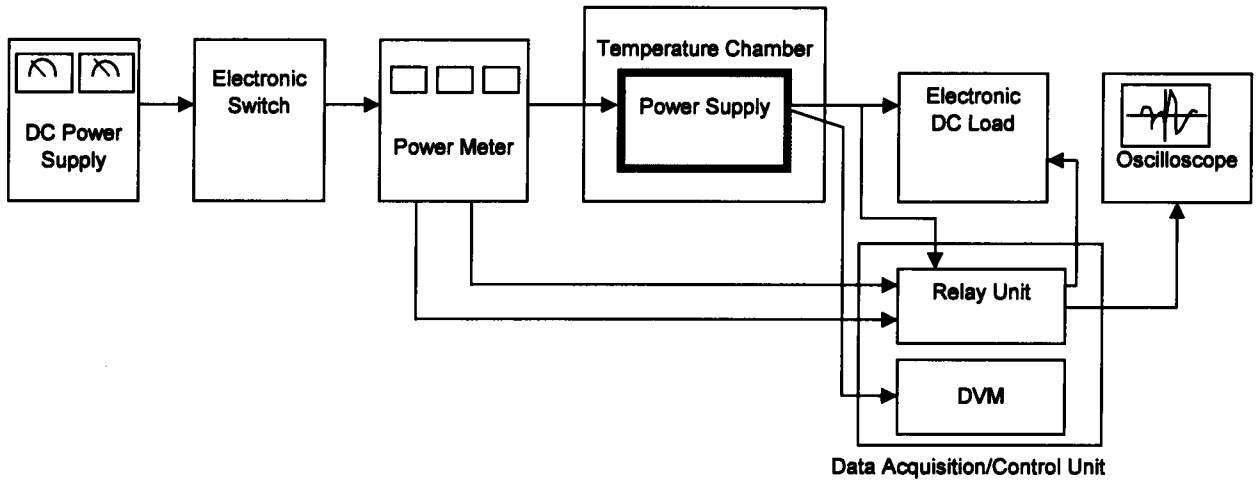


Figure A

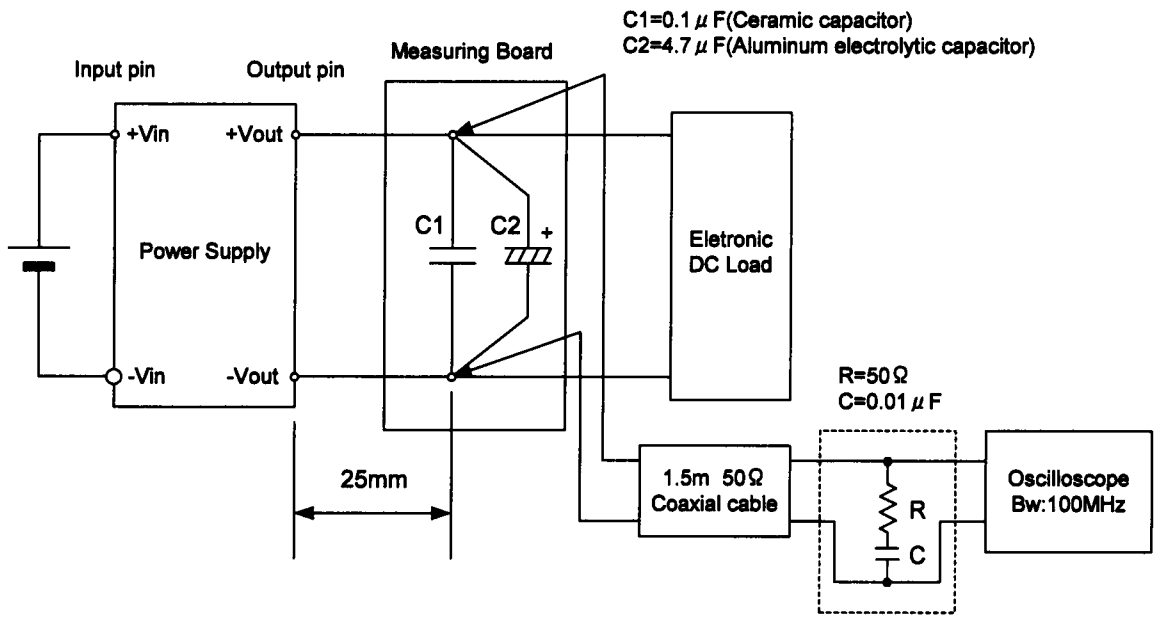


Figure B (Ripple and Ripple noise Characteristic)