COSEL

参考資料

TEST DATA OF SUTS64812

Regulated DC Power Supply
March 18, 2009

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COSEL CO.,LTD.

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CONTENTS

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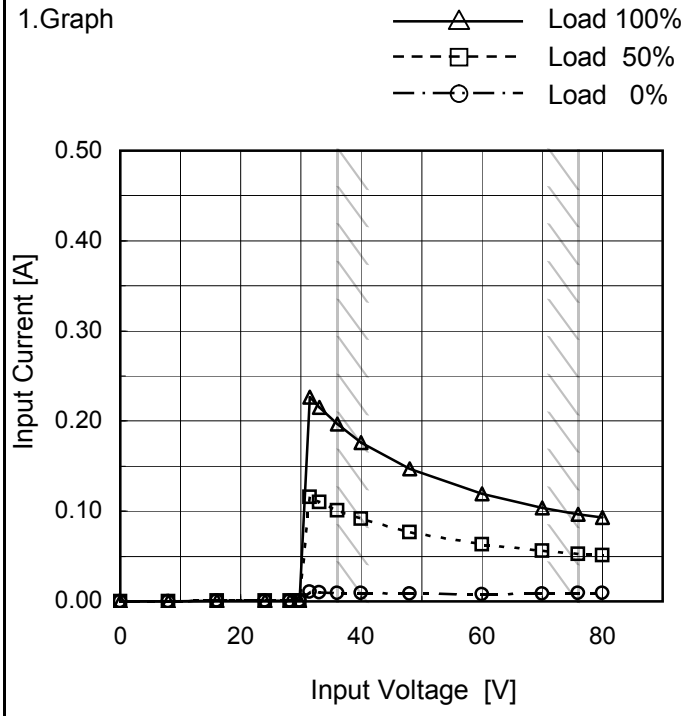
Model	SUTS64812
Item	Input Current (by Input Voltage)
Object	————————

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

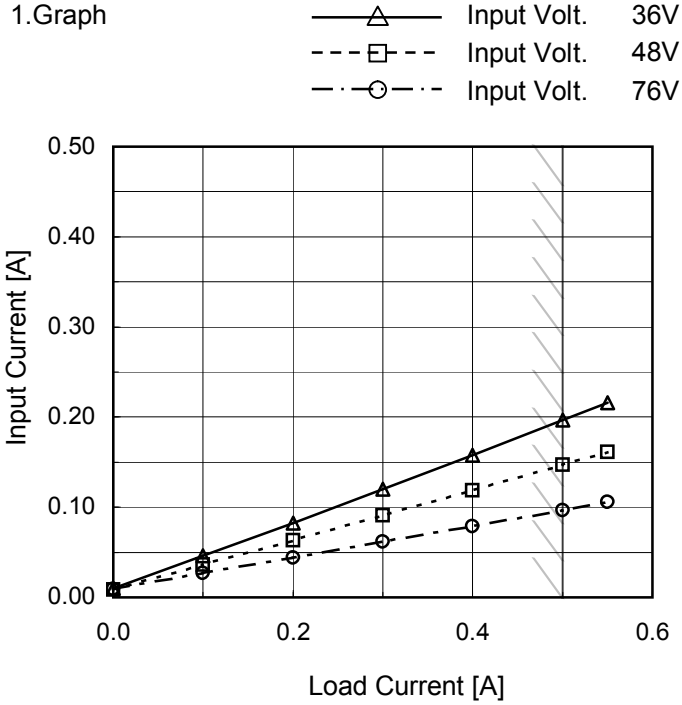
Input Voltage [V]	Input Current [A]		
	Load 0%	Load 50%	Load 100%
0.0	0.000	0.000	0.000
8.0	0.000	0.000	0.000
16.0	0.001	0.000	0.000
24.0	0.001	0.001	0.001
28.2	0.001	0.001	0.001
29.8	0.001	0.001	0.001
31.4	0.011	0.116	0.227
33.0	0.010	0.110	0.215
36.0	0.010	0.101	0.197
40.0	0.009	0.091	0.176
48.0	0.008	0.077	0.147
60.0	0.008	0.063	0.119
70.0	0.009	0.056	0.104
76.0	0.009	0.053	0.097
80.0	0.009	0.051	0.093
--	-	-	-
--	-	-	-
--	-	-	-

COSEL

Model	SUTS64812
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	0.010	0.008	0.009
0.10	0.046	0.036	0.027
0.20	0.083	0.063	0.044
0.30	0.120	0.091	0.062
0.40	0.158	0.119	0.079
0.50	0.197	0.147	0.097
0.55	0.216	0.161	0.106
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

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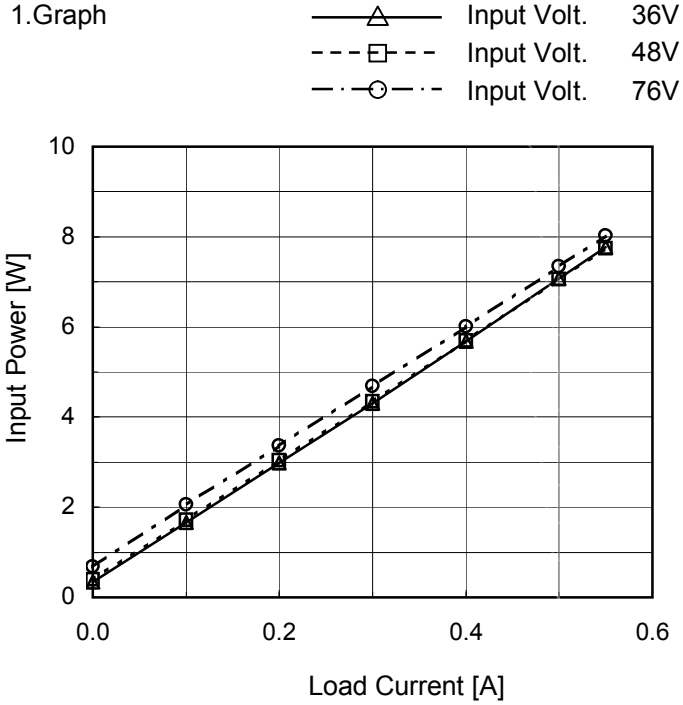
Model	SUTS64812
Item	Input Power (by Load Current)
Object	————————

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

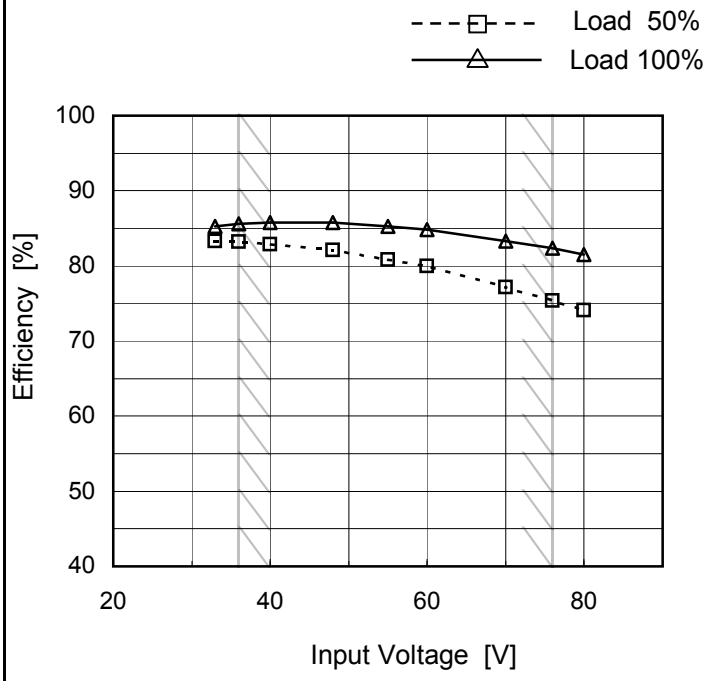
Load Current [A]	Input Power [W]		
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
0.00	0.35	0.40	0.68
0.10	1.66	1.72	2.05
0.20	2.98	3.03	3.37
0.30	4.31	4.35	4.68
0.40	5.68	5.69	6.01
0.50	7.07	7.06	7.35
0.55	7.77	7.75	8.03
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

COSEL

Model	SUTS64812
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	83.3	85.3
36	83.2	85.6
40	82.9	85.8
48	82.1	85.8
55	80.8	85.2
60	79.9	84.8
70	77.2	83.3
76	75.4	82.4
80	74.1	81.5

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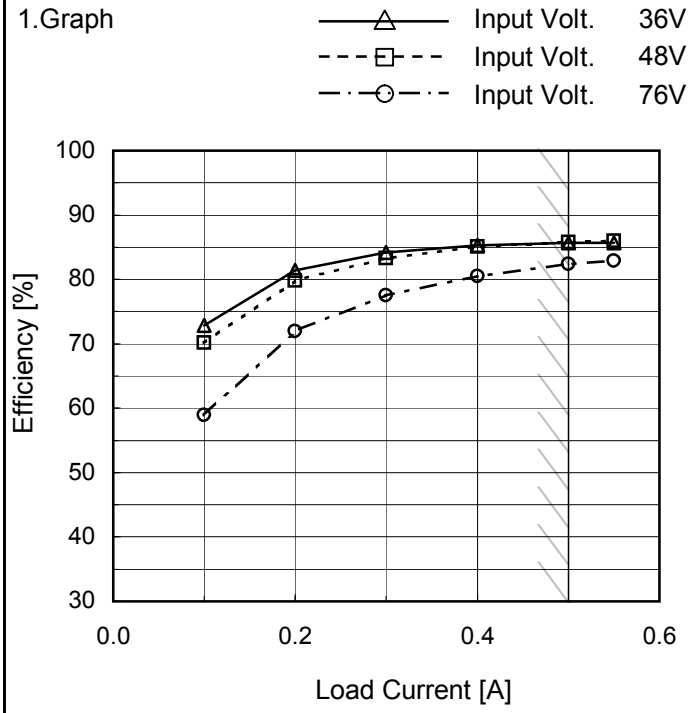
Model	SUTS64812
Item	Efficiency (by Load Current)
Object	————————

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	-	-	-
0.10	72.9	70.1	58.9
0.20	81.4	79.8	72.0
0.30	84.2	83.3	77.5
0.40	85.3	85.1	80.5
0.50	85.6	85.8	82.4
0.55	85.7	86.0	82.9
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

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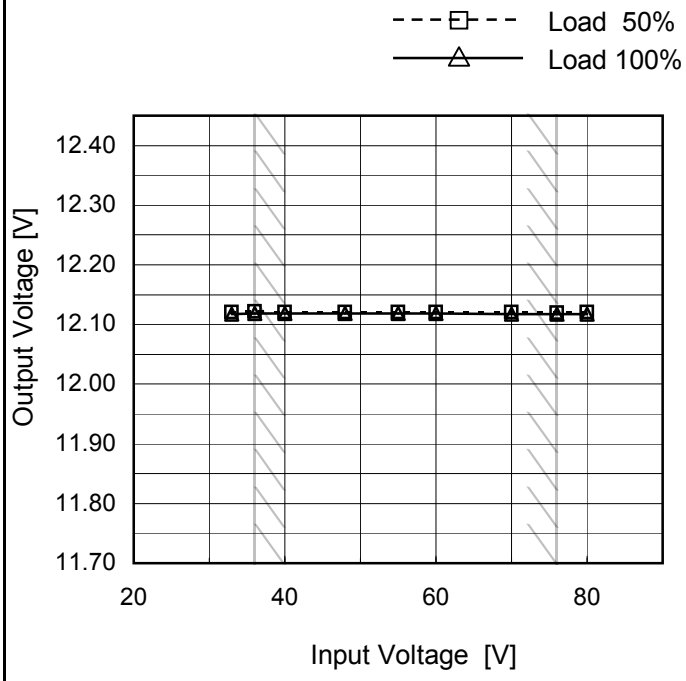
Model	SUTS64812
Item	Line Regulation
Object	+12V0.5A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

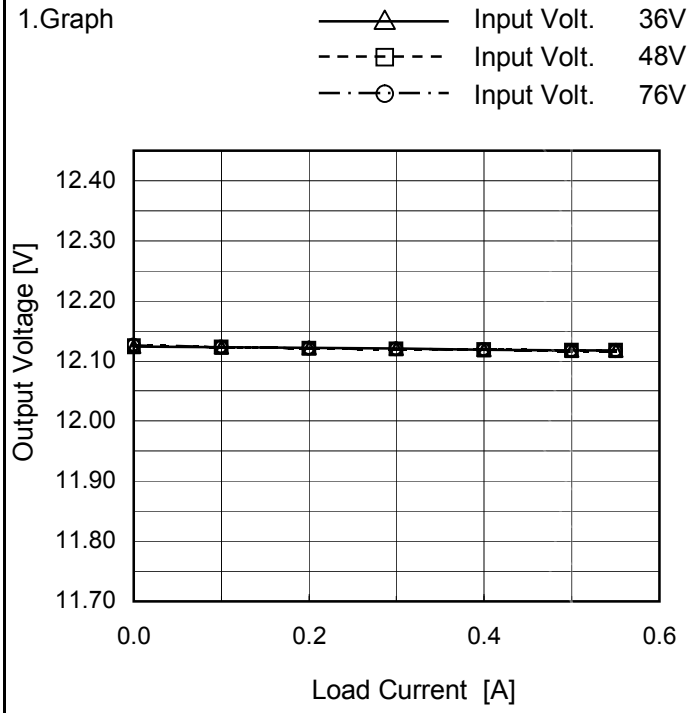
Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
33	12.121	12.118
36	12.121	12.118
40	12.121	12.119
48	12.121	12.118
55	12.120	12.118
60	12.120	12.118
70	12.120	12.118
76	12.120	12.118
80	12.120	12.118

COSEL

Model	SUTS64812
Item	Load Regulation
Object	+12V0.5A

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	12.124	12.125	12.127
0.10	12.123	12.123	12.123
0.20	12.121	12.121	12.121
0.30	12.121	12.120	12.120
0.40	12.119	12.119	12.118
0.50	12.118	12.118	12.117
0.55	12.117	12.117	12.116
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

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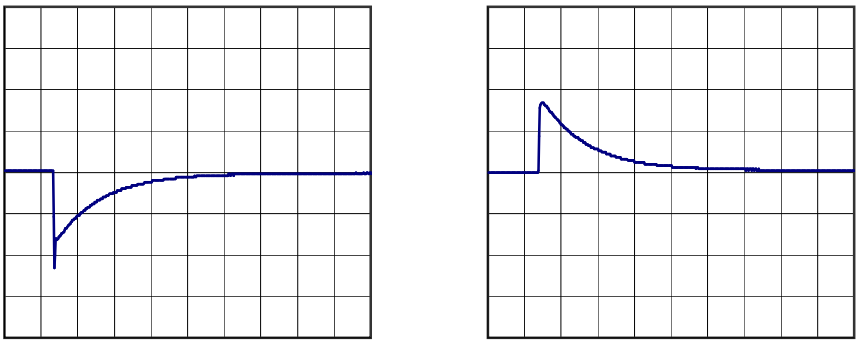
Model	SUTS64812
Item	Dynamic Load Response
Object	+12V0.5A

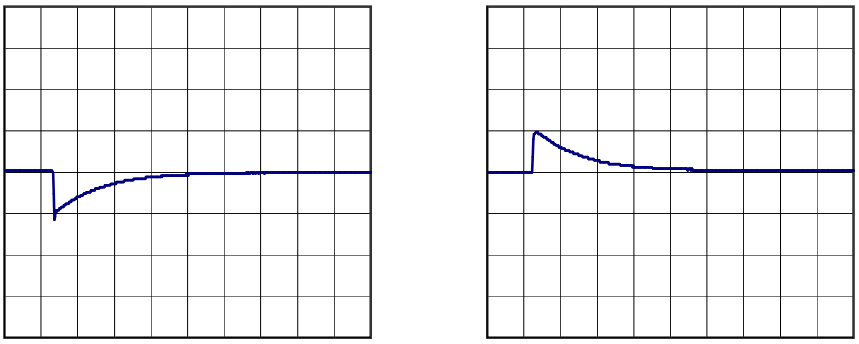
Temperature 25°C
Testing Circuitry Figure A

Input Volt. 48 V
Cycle 100 mS

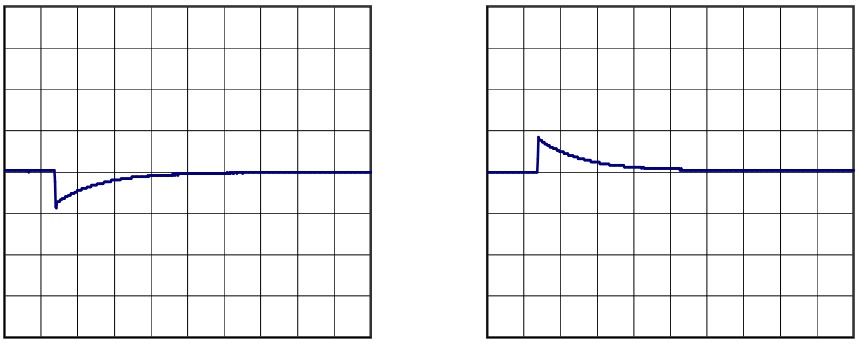
Min. Load (0A) ⟷
Load 100% (0.5A)



Min. Load (0A) ⟷
Load 50% (0.25A)



Load 50% (0.25A) ⟷
Load 100% (0.5A)



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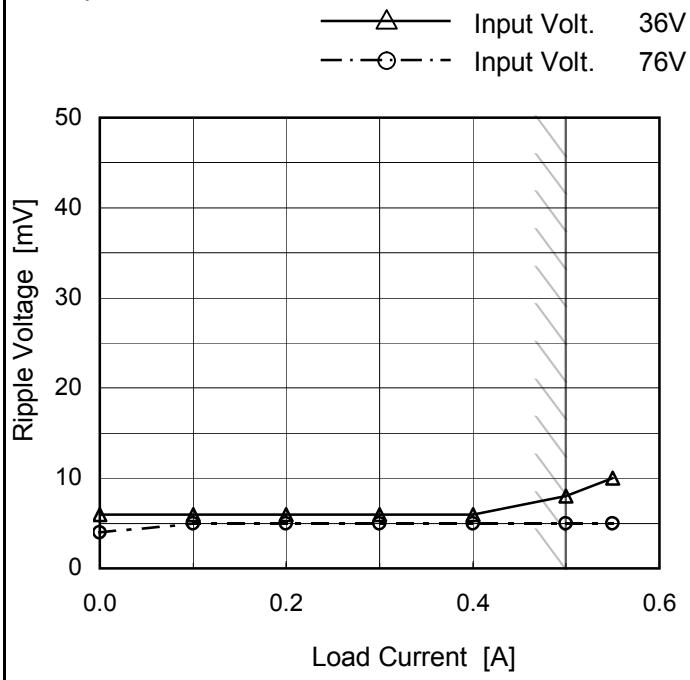
Model	SUTS64812
Item	Ripple Voltage (by Load Current)
Object	+12V0.5A

Temperature 25°C
Testing Circuitry Figure B

1.Graph



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]

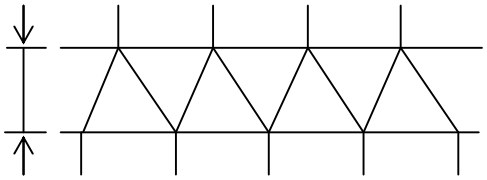


Fig.Complex Ripple Wave Form

2.Values

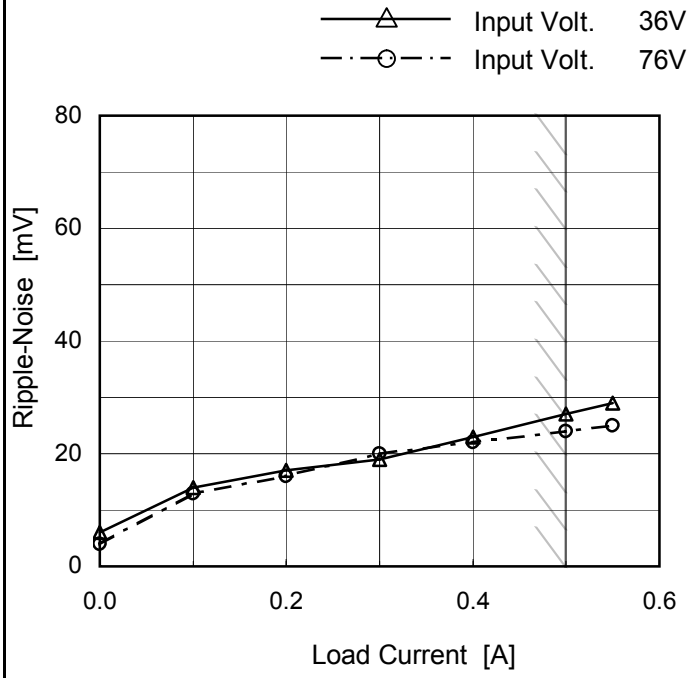
Load Current [A]	Ripple Voltage [mV]	
	Input Volt. 36 [V]	Input Volt. 76 [V]
0.00	6	4
0.10	6	5
0.20	6	5
0.30	6	5
0.40	6	5
0.50	8	5
0.55	10	5
--	-	-
--	-	-
--	-	-
--	-	-

COSEL

Model	SUTS64812
Item	Ripple-Noise
Object	+12V0.5A

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.

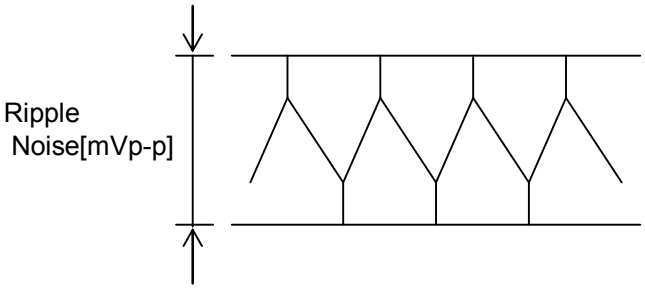


Fig.Complex Ripple Noise Wave Form

2.Values

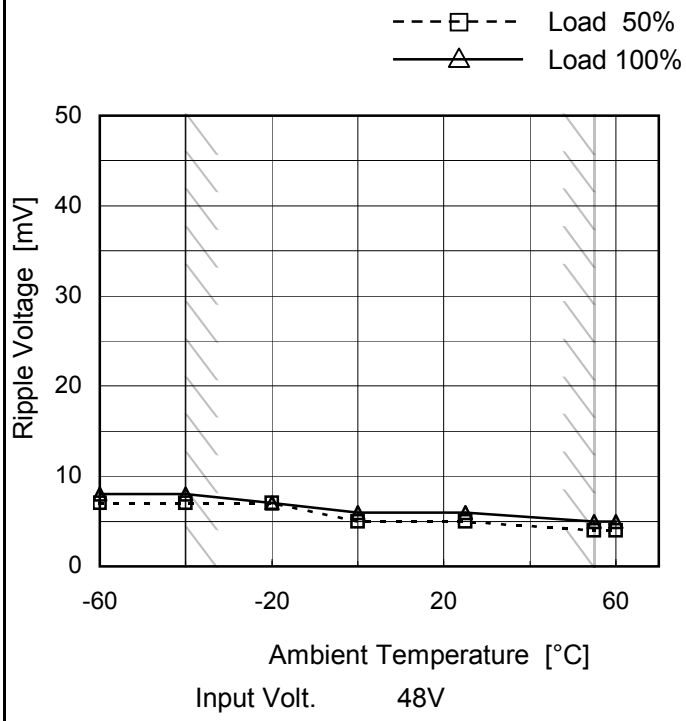
Load Current [A]	Ripple-Noise [mV]	
	Input Volt. 36 [V]	Input Volt. 76 [V]
0.00	6	4
0.10	14	13
0.20	17	16
0.30	19	20
0.40	23	22
0.50	27	24
0.55	29	25
--	-	-
--	-	-
--	-	-
--	-	-

COSEL

Model	SUTS64812
Item	Ripple Voltage (by Ambient Temp.)
Object	+12V0.5A

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

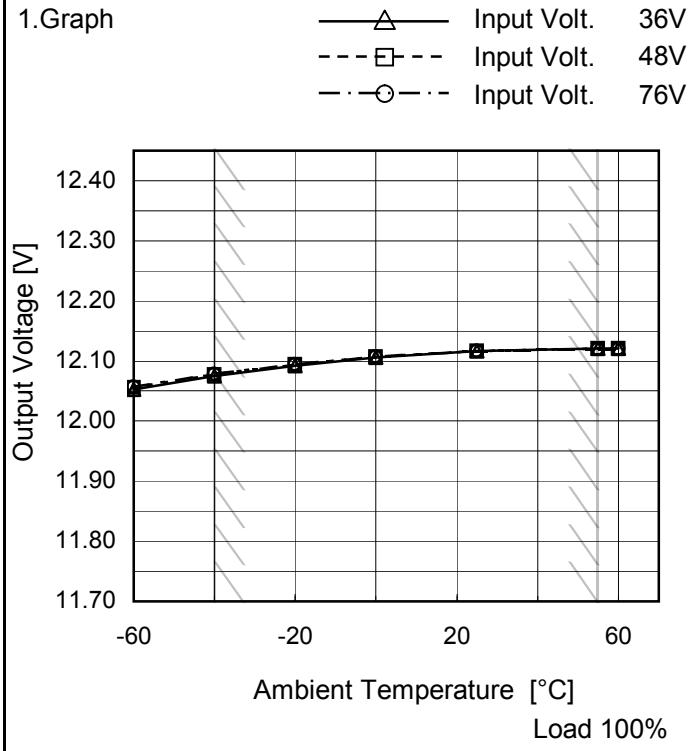
Ambient Temperature [°C]	Ripple Voltage [mV]	
	Load 50%	Load 100%
-60	7	8
-40	7	8
-20	7	7
0	5	12
25	5	6
55	4	5
60	4	5
--	-	-
--	-	-
--	-	-
--	-	-

COSEL

Model	SUTS64812
Item	Ambient Temperature Drift
Object	+12V0.5A

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	12.053	12.056	12.057
-40	12.075	12.078	12.079
-20	12.092	12.094	12.094
0	12.106	12.107	12.107
25	12.117	12.117	12.117
55	12.121	12.121	12.120
60	12.121	12.120	12.120
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

COSEL

Model	SUTS64812	
Item	Output Voltage Accuracy	Testing Circuitry Figure A
Object	+12V0.5A	

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 - 0.5A

* 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

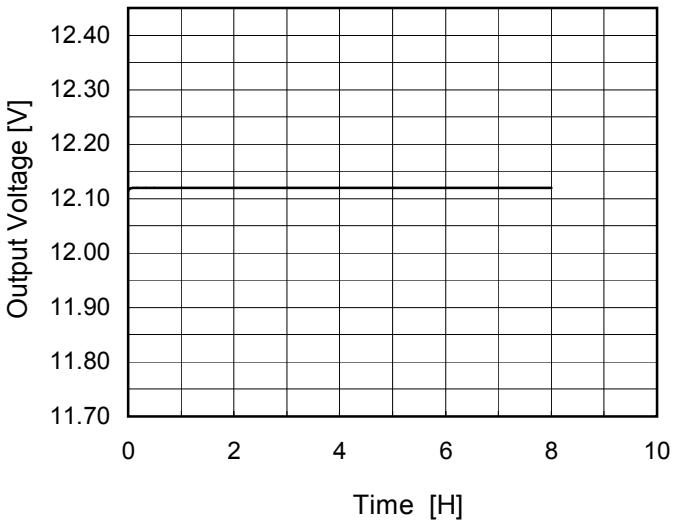
Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	55	76	0	12.130	±28	±0.2
Minimum Voltage	-40	36	0.5	12.075		

COSEL

Model	SUTS64812
Item	Time Lapse Drift
Object	+12V0.5A

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	12.114
0.5	12.119
1.0	12.119
2.0	12.120
3.0	12.119
4.0	12.120
5.0	12.119
6.0	12.119
7.0	12.120
8.0	12.120

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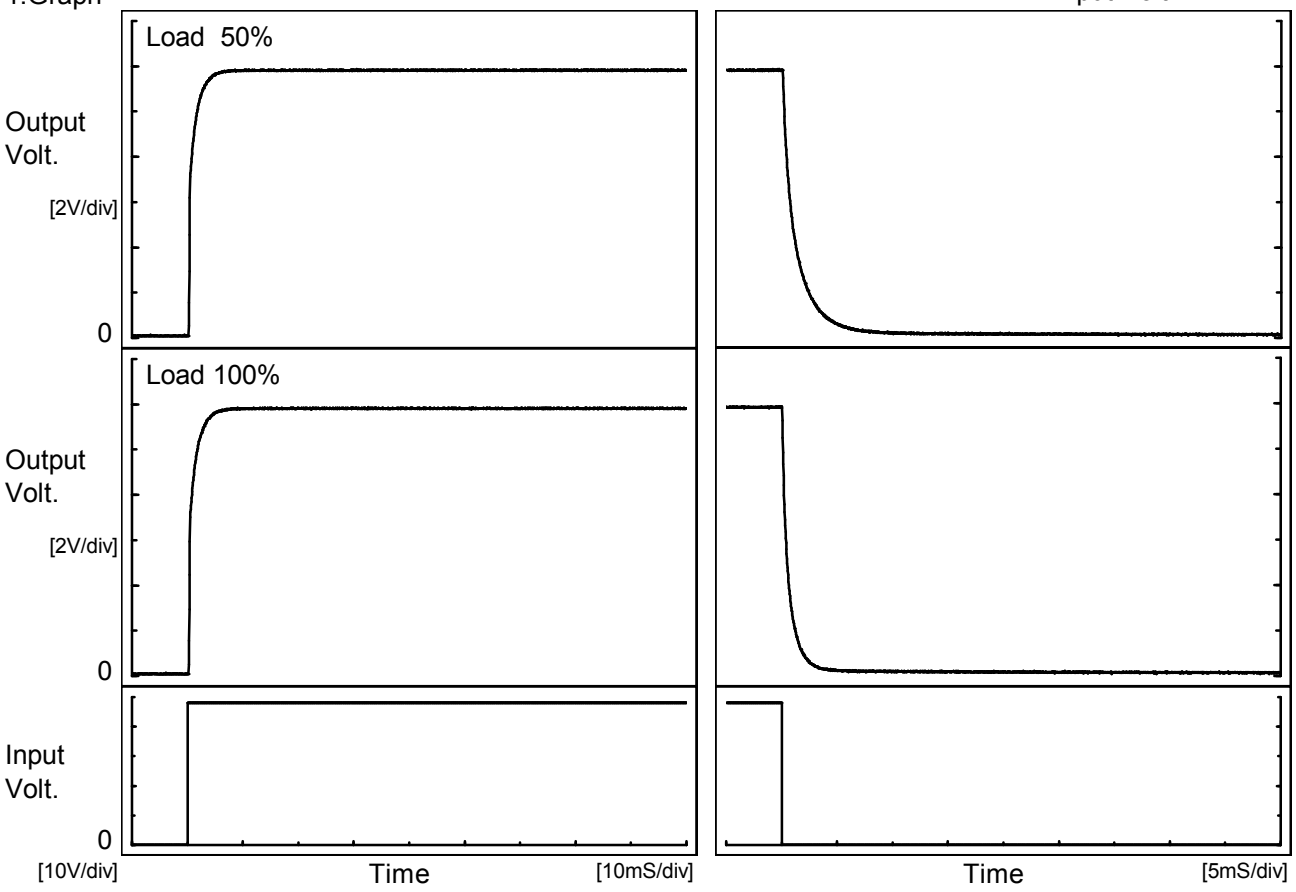
Model	SUTS64812	
Item	Rise and Fall Time	Temperature 25°C Testing Circuitry Figure A
Object	+12V0.5A	

1.Graph

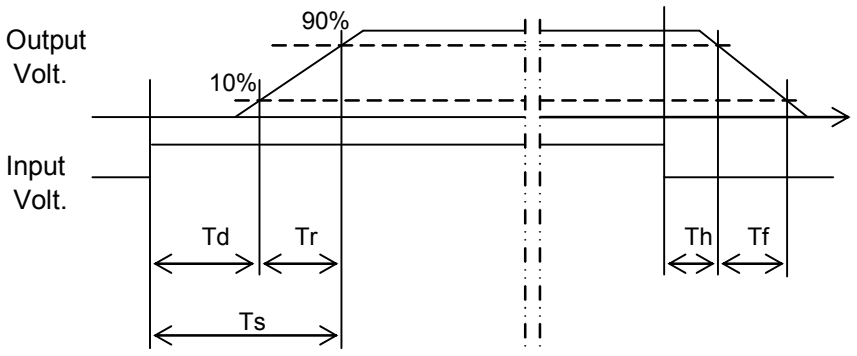
Input Volt. 48 V



2.Values

[mS]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	0.3	2.4	2.7	0.1	3.1
100 %	0.3	2.5	2.8	0.1	1.6



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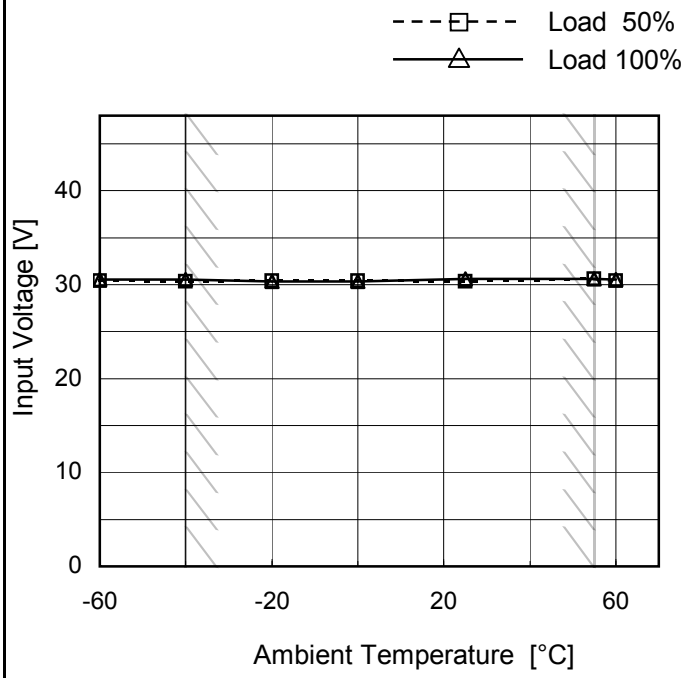
Model	SUTS64812
Item	Minimum Input Voltage for Regulated Output Voltage
Object	+12V0.5A

Testing Circuitry Figure A

1.Graph



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

2.Values

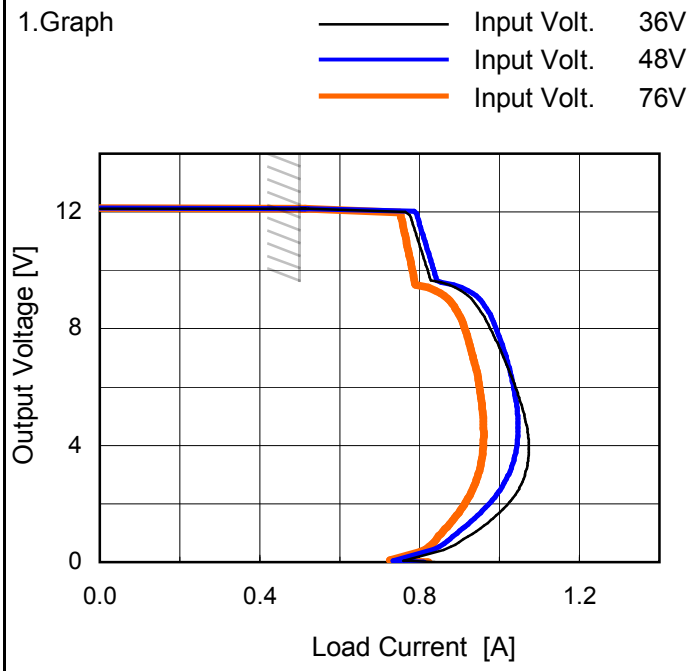
Ambient Temperature [°C]	Input Voltage [V]	
	Load 50%	Load 100%
-60	30.4	30.6
-40	30.4	30.6
-20	30.4	30.4
0	30.4	30.4
25	30.4	30.6
55	30.6	30.6
60	30.4	30.6
--	-	-
--	-	-
--	-	-
--	-	-

COSEL

Model	SUTS64812
Item	Overcurrent Protection
Object	+12V0.5A

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]
12.0	0.50	0.50	0.50
11.4	0.79	0.80	0.76
10.8	0.80	0.82	0.77
9.6	0.83	0.84	0.79
8.4	0.96	0.98	0.90
7.2	1.00	1.01	0.93
6.0	1.04	1.03	0.95
4.8	1.07	1.05	0.96
3.6	1.07	1.04	0.96
2.4	1.04	1.00	0.93
1.2	0.96	0.91	0.87
0.0	0.84	0.81	0.82

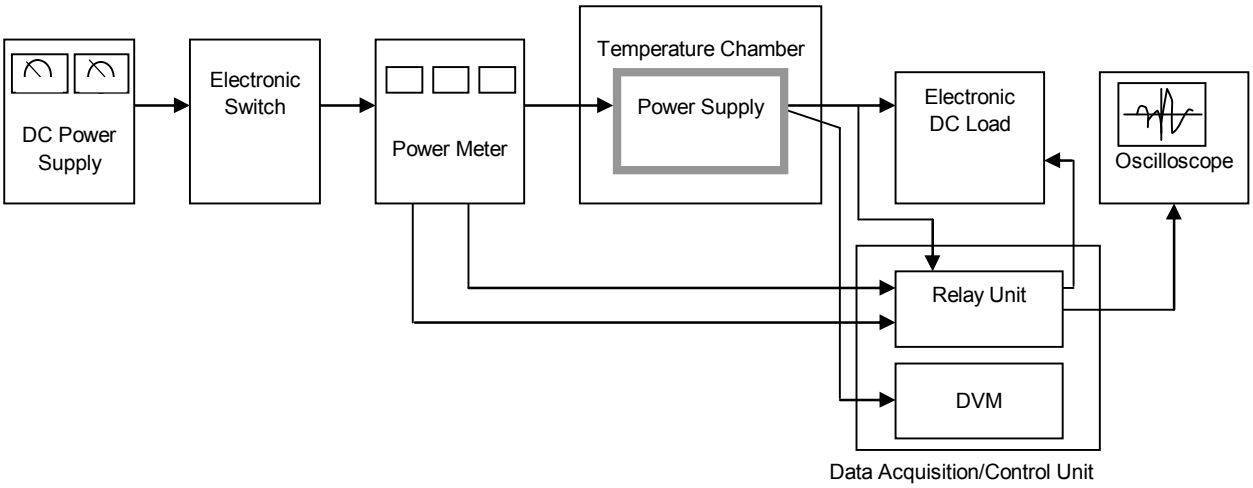


Figure A

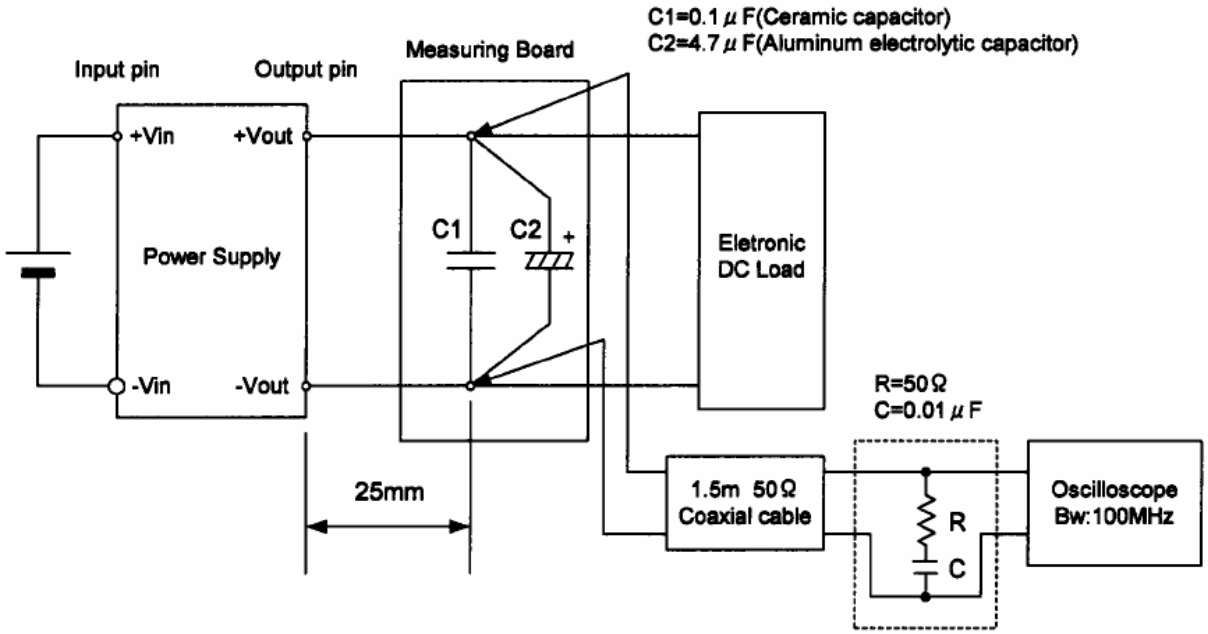


Figure B (Ripple and Ripple noise Characteristic)