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参考資料

TEST DATA OF SUTS64805

Regulated DC Power Supply
March 17, 2009

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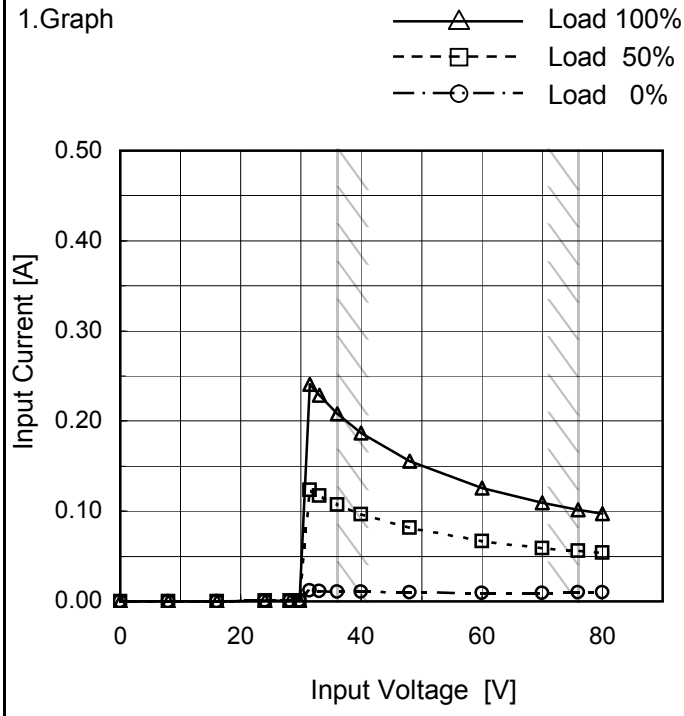
COSEL

Model	SUTS64805
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

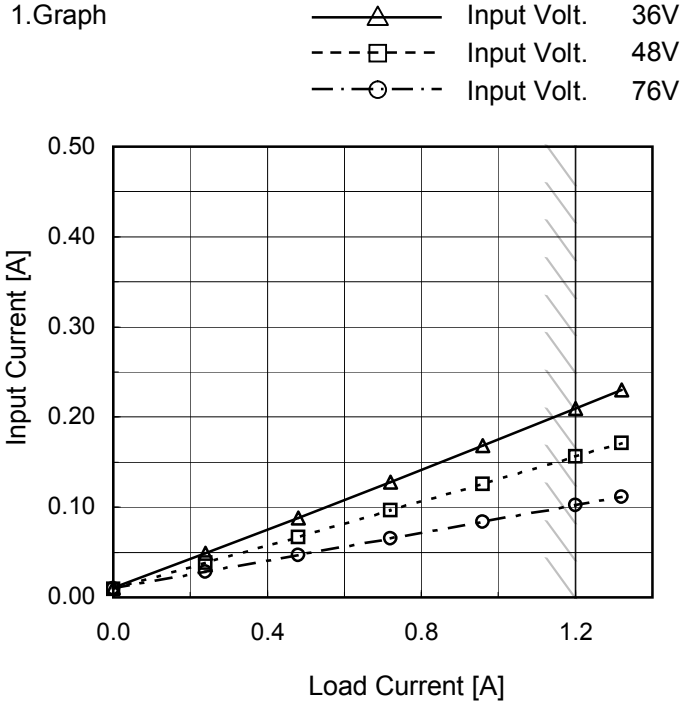
Input Voltage [V]	Input Current [A]		
	Load 0%	Load 50%	Load 100%
0.0	0.000	0.000	0.000
8.0	0.000	0.000	0.000
16.0	0.000	0.000	0.000
24.0	0.001	0.000	0.001
28.2	0.001	0.001	0.001
29.8	0.001	0.001	0.001
31.4	0.012	0.123	0.241
33.0	0.012	0.118	0.229
36.0	0.011	0.108	0.208
40.0	0.010	0.097	0.187
48.0	0.010	0.082	0.155
60.0	0.009	0.067	0.126
70.0	0.009	0.059	0.109
76.0	0.010	0.056	0.102
80.0	0.010	0.054	0.097
--	-	-	-
--	-	-	-
--	-	-	-

COSEL

Model	SUTS64805
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

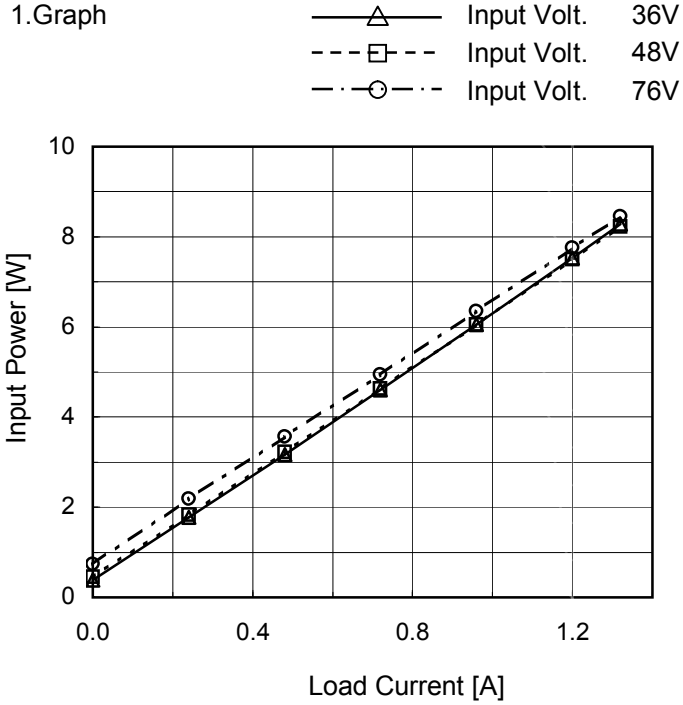
Load Current [A]	Input Current [A]		
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
0.00	0.011	0.009	0.010
0.24	0.049	0.038	0.029
0.48	0.088	0.067	0.047
0.72	0.128	0.096	0.065
0.96	0.168	0.126	0.084
1.20	0.210	0.156	0.102
1.32	0.230	0.171	0.111
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

COSEL

Model	SUTS64805
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	0.39	0.45	0.74
0.24	1.77	1.83	2.19
0.48	3.17	3.22	3.57
0.72	4.60	4.62	4.95
0.96	6.05	6.05	6.34
1.20	7.53	7.50	7.76
1.32	8.28	8.22	8.45
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

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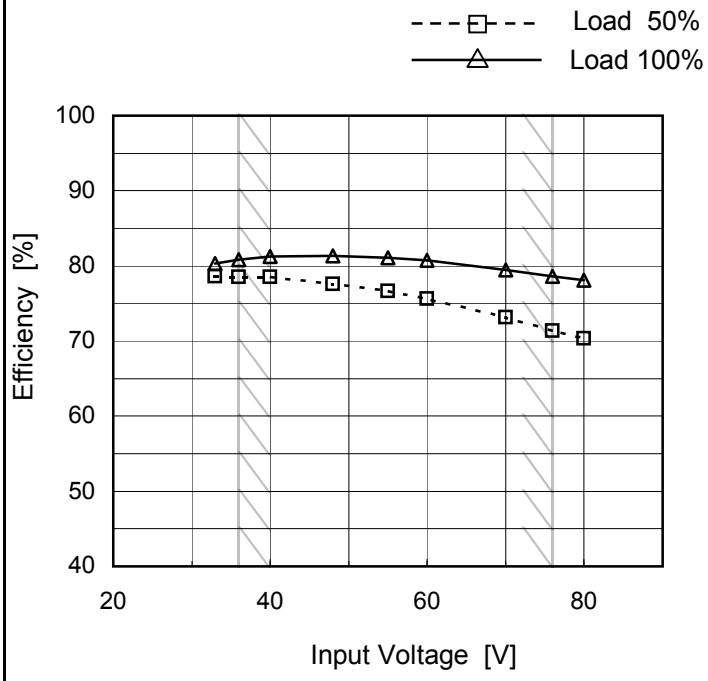
Model	SUTS64805
Item	Efficiency (by Input Voltage)
Object	————————

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	78.6	80.3
36	78.5	80.9
40	78.5	81.2
48	77.6	81.4
55	76.6	81.1
60	75.6	80.7
70	73.2	79.5
76	71.4	78.6
80	70.4	78.1

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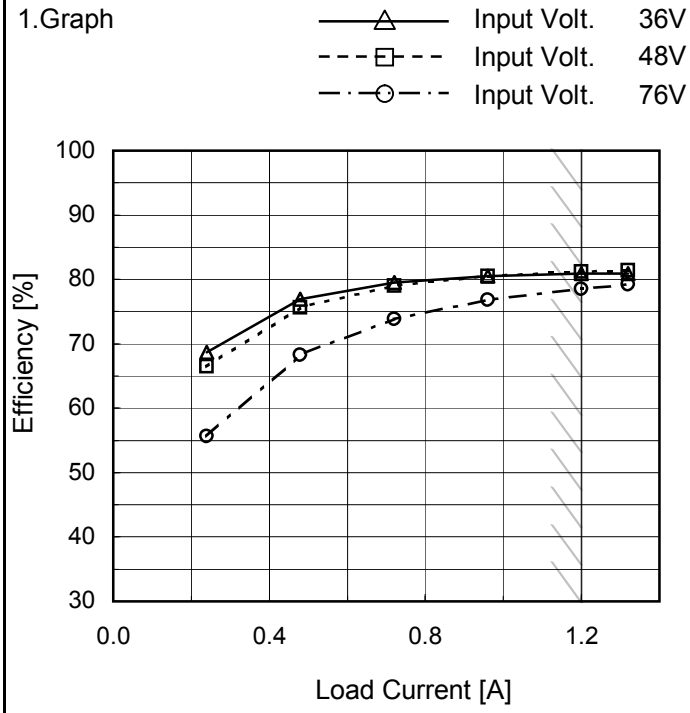
Model	SUTS64805
Item	Efficiency (by Load Current)
Object	————————

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	-	-	-
0.24	68.7	66.5	55.7
0.48	76.9	75.6	68.3
0.72	79.5	79.0	73.9
0.96	80.5	80.5	76.8
1.20	80.9	81.2	78.5
1.32	80.9	81.4	79.2
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

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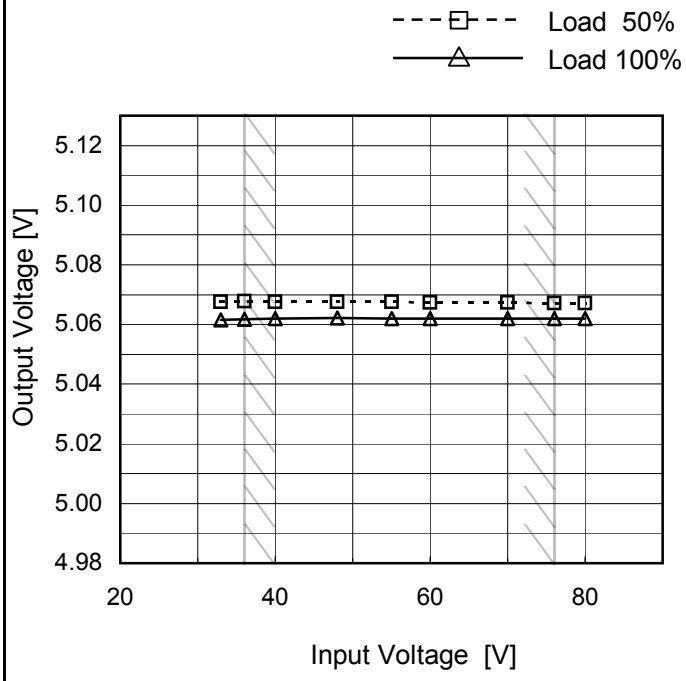
Model	SUTS64805
Item	Line Regulation
Object	+5V1.2A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

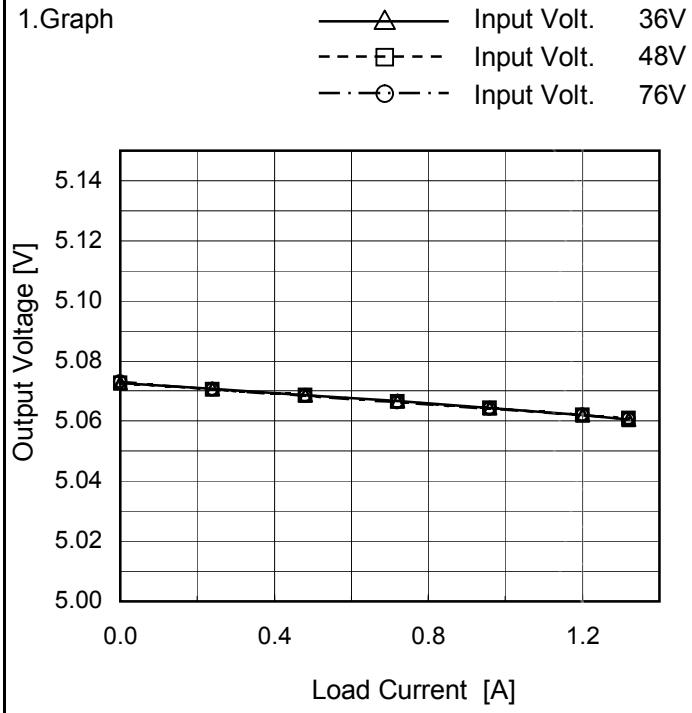
Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
33	5.068	5.062
36	5.068	5.062
40	5.068	5.062
48	5.068	5.062
55	5.068	5.062
60	5.067	5.062
70	5.067	5.062
76	5.067	5.062
80	5.067	5.062

COSEL

Model	SUTS64805
Item	Load Regulation
Object	+5V1.2A

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	5.073	5.073	5.073
0.24	5.071	5.071	5.071
0.48	5.069	5.069	5.068
0.72	5.067	5.067	5.066
0.96	5.064	5.064	5.064
1.20	5.062	5.062	5.062
1.32	5.061	5.061	5.061
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

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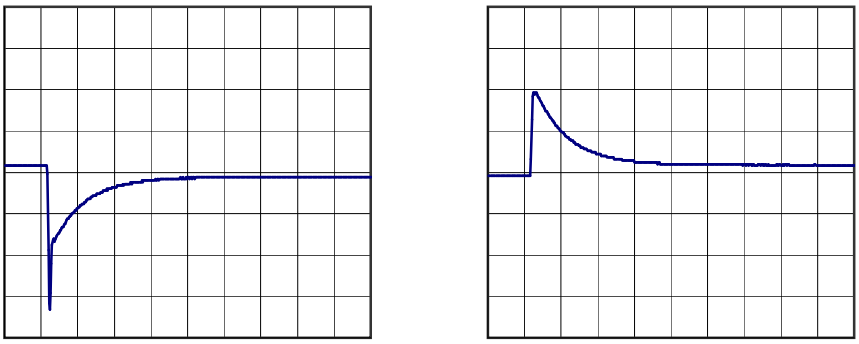
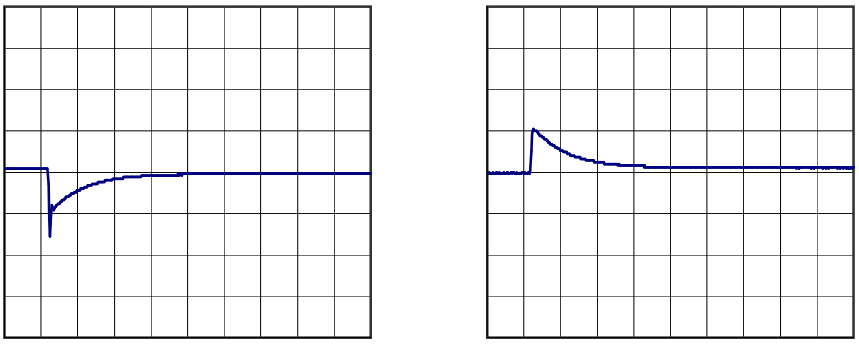
Model	SUTS64805	
Item	Dynamic Load Response	Temperature 25°C Testing Circuitry Figure A
Object	+5V1.2A	

Input Volt. 48 V
Cycle 100 mS

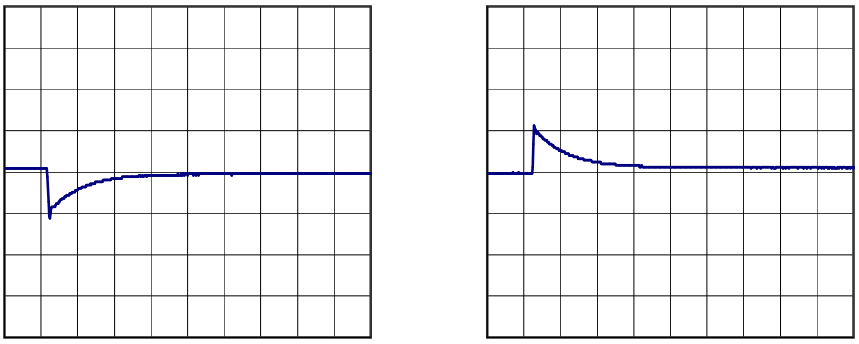
Min. Load (0A) ⟷ Load 100% (1.2A)



Min. Load (0A) ⟷ Load 50% (0.6A)



Load 50% (0.6A) ⟷ Load 100% (1.2A)

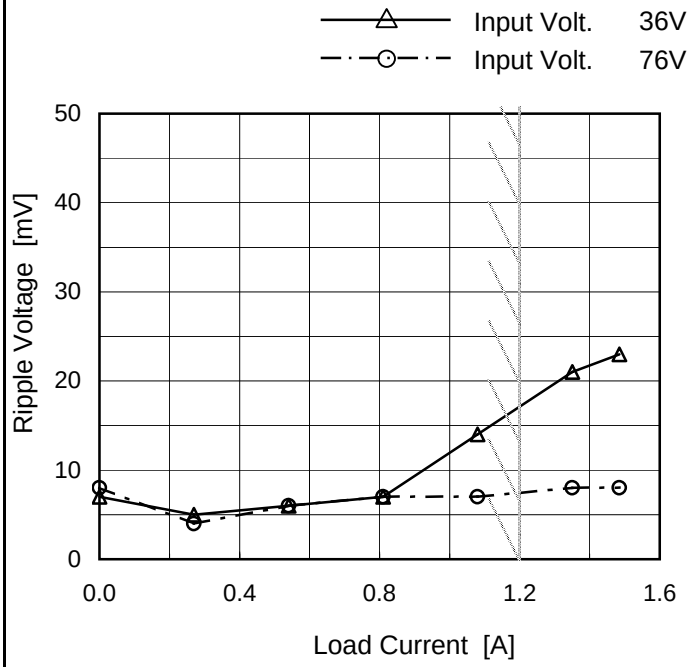


COSEL

Model	SUTS64805
Item	Ripple Voltage (by Load Current)
Object	+5V1.2A

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.

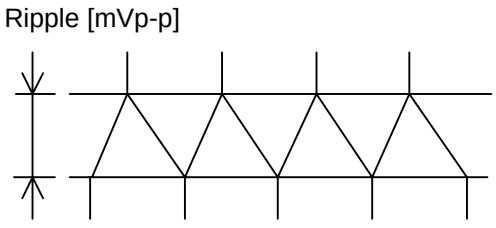


Fig.Complex Ripple Wave Form

2.Values

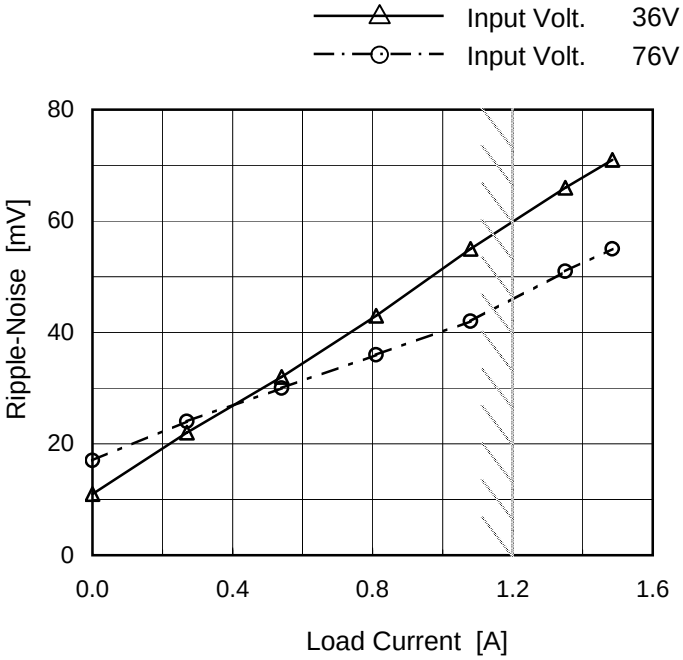
Load Current [A]	Ripple Voltage [mV]	
	Input Volt. 36 [V]	Input Volt. 76 [V]
0.000	7	8
0.270	5	4
0.540	6	6
0.810	7	7
1.080	14	7
1.350	21	8
1.485	23	8
--	-	-
--	-	-
--	-	-
--	-	-

COSEL

Model	SUTS64805
Item	Ripple-Noise
Object	+5V1.2A

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.

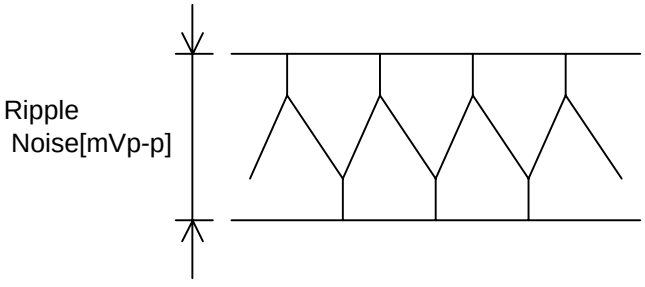


Fig.Complex Ripple Noise Wave Form

2.Values

Load Current [A]	Ripple-Noise [mV] Input Volt. 36 [V]	Ripple-Noise [mV] Input Volt. 76 [V]
0.000	11	17
0.270	22	24
0.540	32	30
0.810	43	36
1.080	55	42
1.350	66	51
1.485	71	55
--	-	-
--	-	-
--	-	-
--	-	-

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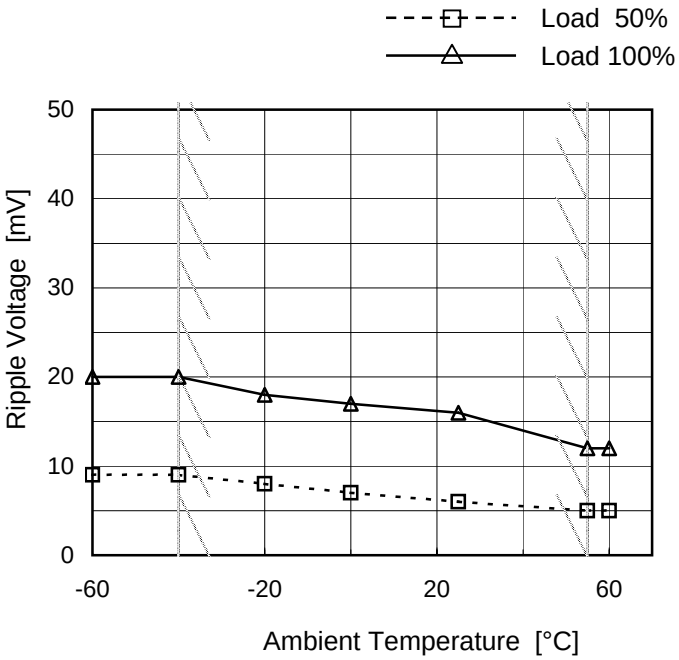
Model	SUTS64805
Item	Ripple Voltage (by Ambient Temp.)
Object	+5V1.2A

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

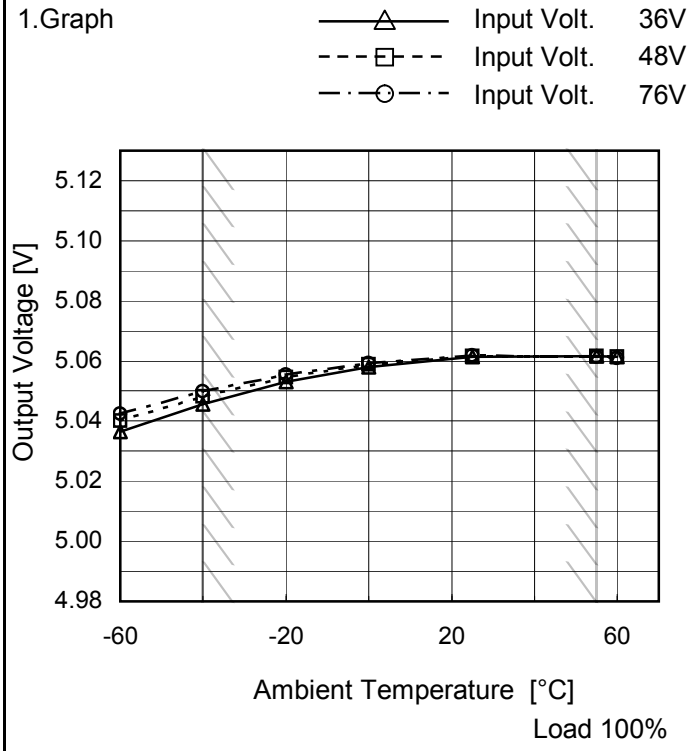
Ambient Temperature [°C]	Ripple Voltage [mV]	
	Load 50%	Load 100%
-60	9	20
-40	9	20
-20	8	18
0	7	17
25	6	16
55	5	12
60	5	12
--	-	-
--	-	-
--	-	-
--	-	-

COSEL

Model	SUTS64805
Item	Ambient Temperature Drift
Object	+5V1.2A

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	5.036	5.040	5.043
-40	5.046	5.048	5.050
-20	5.053	5.055	5.056
0	5.058	5.059	5.059
25	5.061	5.062	5.062
55	5.062	5.062	5.061
60	5.061	5.061	5.061
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

COSEL

Model	SUTS64805	
Item	Output Voltage Accuracy	Testing Circuitry Figure A
Object	+5V1.2A	

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 - 1.2A

* 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

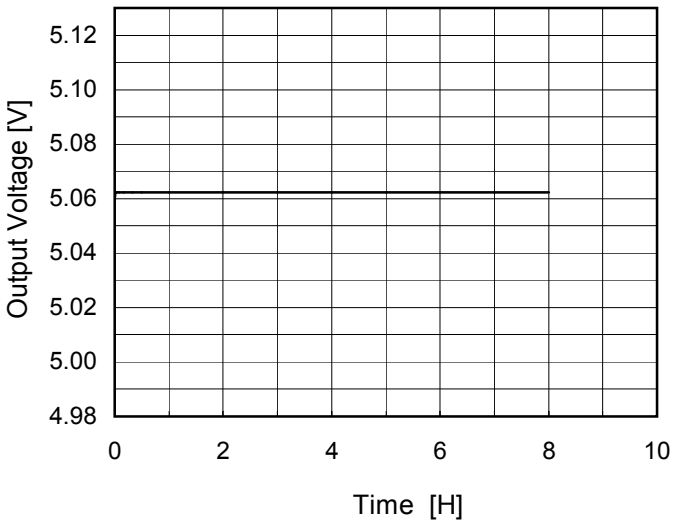
Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	55	76	0	5.074	±14	±0.3
Minimum Voltage	-40	36	1.2	5.046		

COSEL

Model	SUTS64805
Item	Time Lapse Drift
Object	+5V1.2A

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	5.060
0.5	5.062
1.0	5.062
2.0	5.062
3.0	5.062
4.0	5.062
5.0	5.062
6.0	5.062
7.0	5.062
8.0	5.062

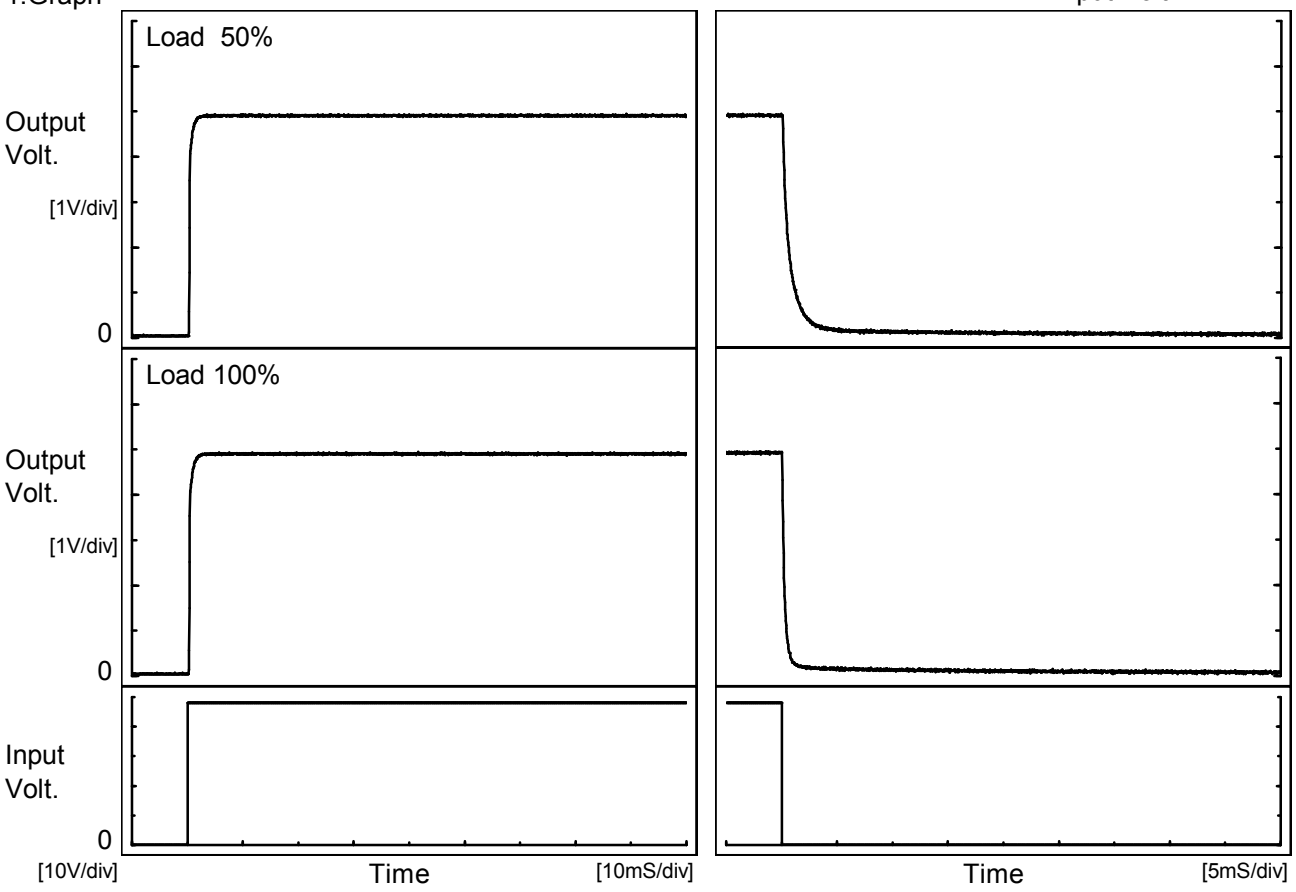
COSEL

Model	SUTS64805
Item	Rise and Fall Time
Object	+5V1.2A

Temperature 25°C
Testing Circuitry Figure A

1.Graph

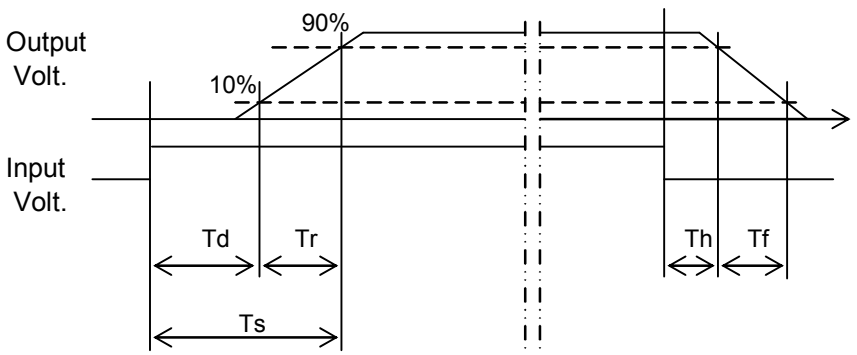
Input Volt. 48 V



2.Values

[mS]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	0.3	0.6	0.9	0.1	1.9
100 %	0.3	0.7	1.0	0.1	0.6

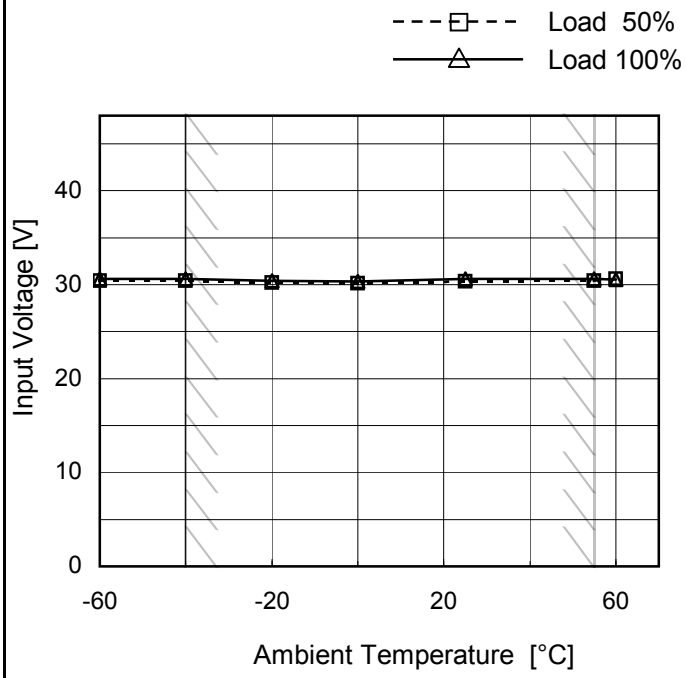


COSEL

Model	SUTS64805
Item	Minimum Input Voltage for Regulated Output Voltage
Object	+5V1.2A

Testing Circuitry Figure A

1.Graph



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

2.Values

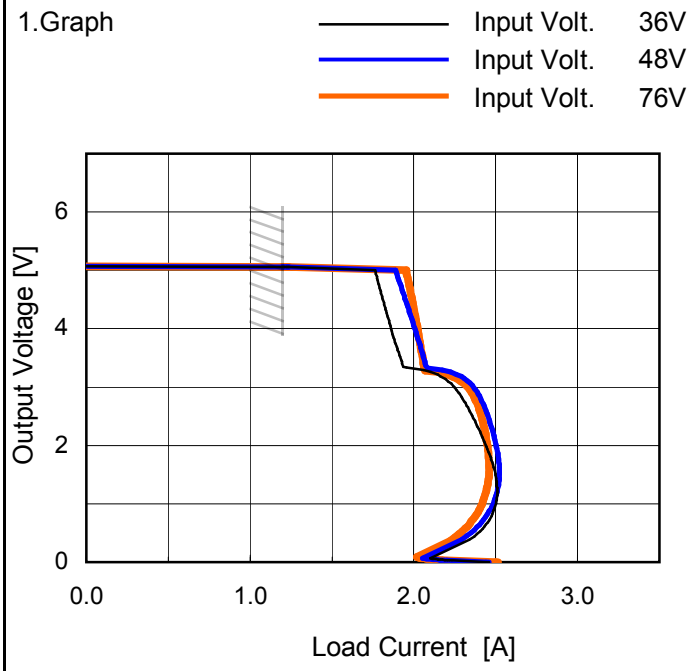
Ambient Temperature [°C]	Input Voltage [V]	
	Load 50%	Load 100%
-60	30.4	30.7
-40	30.5	30.6
-20	30.2	30.4
0	30.2	30.4
25	30.4	30.6
55	30.5	30.6
60	30.7	30.6
--	-	-
--	-	-
--	-	-
--	-	-

COSEL

Model	SUTS64805
Item	Overcurrent Protection
Object	+5V1.2A

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]
5.00	1.20	1.20	1.20
4.75	1.79	1.92	1.97
4.50	1.81	1.95	1.99
4.00	1.86	2.01	2.02
3.50	1.92	2.06	2.05
3.00	2.24	2.36	2.32
2.50	2.35	2.45	2.41
2.00	2.43	2.50	2.45
1.50	2.50	2.52	2.46
1.00	2.50	2.49	2.42
0.50	2.41	2.35	2.30
0.00	2.46	2.46	2.52

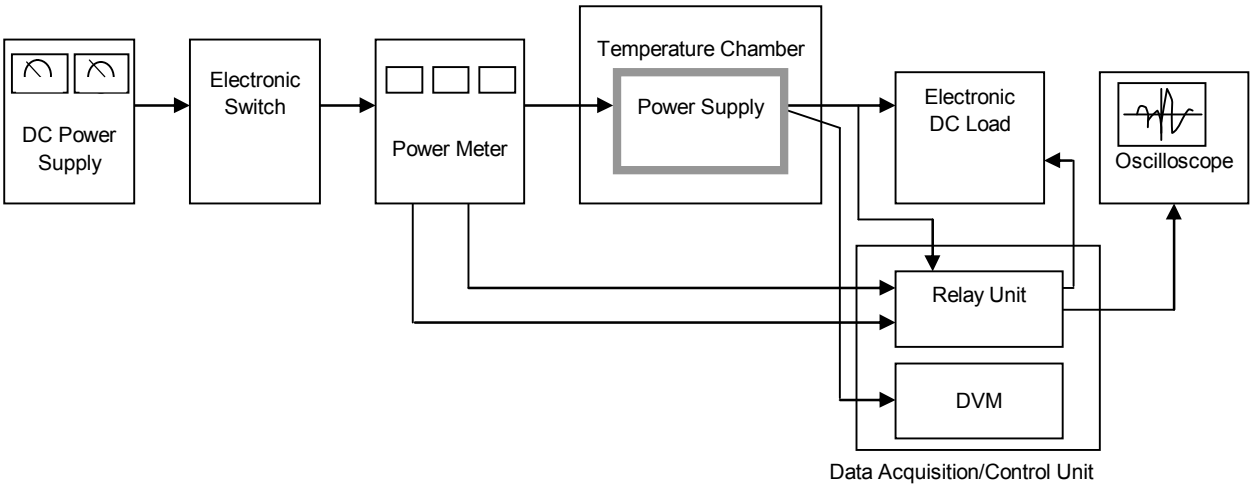


Figure A

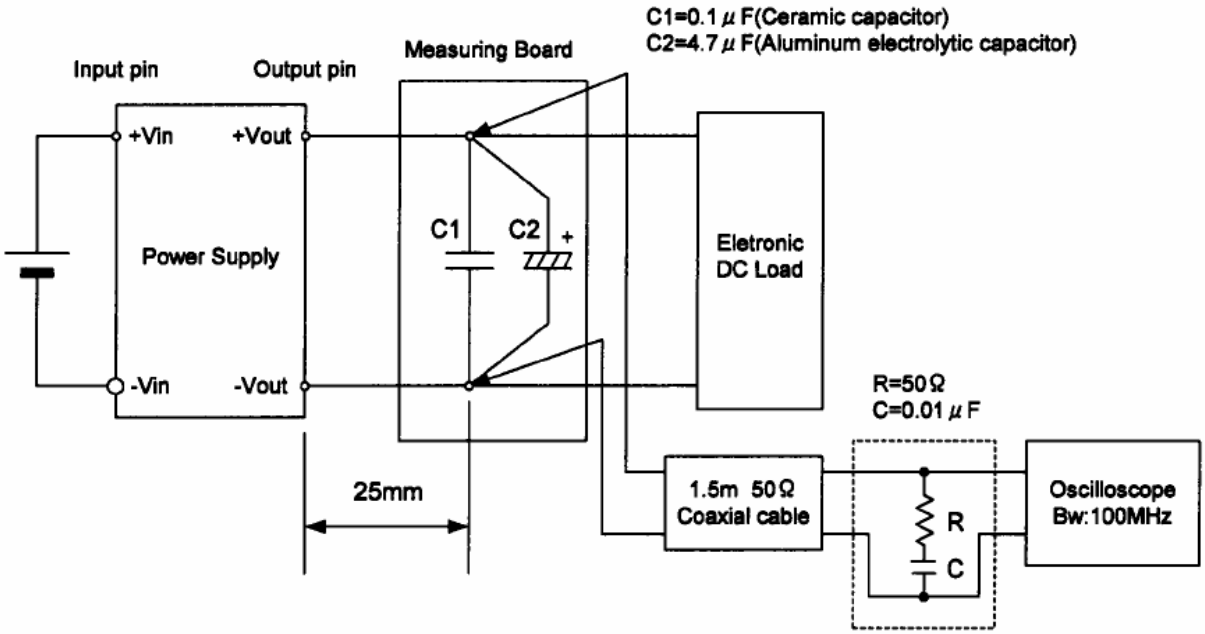


Figure B (Ripple and Ripple noise Characteristic)