COSEL

参考資料

TEST DATA OF SNDHS250B07

Regulated DC Power Supply
June 30, 2011

Approved by : Takahiro Yoneda
Takahiro Yoneda Design Manager

Prepared by : Tadashi Arai
Tadasi Arai Design Engineer

COSEL CO.,LTD.

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Object	————————

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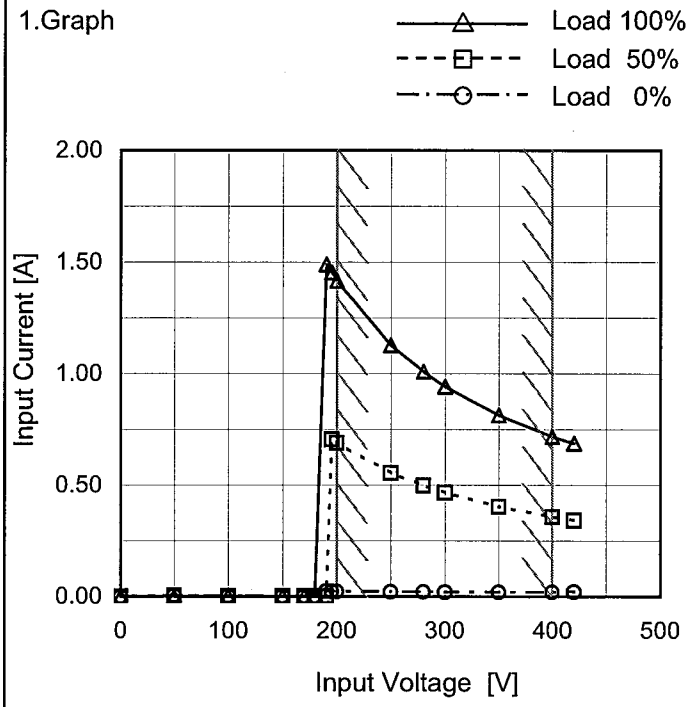


Note: Slanted line shows the range of the rated input voltage.

2.Values

Input Voltage [V]	Input Current [A]		
	Load 0%	Load 50%	Load 100%
0	0.000	0.000	0.000
50	0.004	0.004	0.000
100	0.002	0.002	0.002
150	0.002	0.002	0.002
170	0.002	0.002	0.002
180	0.002	0.002	0.002
190	0.024	0.002	1.490
195	0.023	0.706	1.454
200	0.023	0.689	1.417
250	0.021	0.555	1.128
280	0.021	0.498	1.010
300	0.021	0.467	0.943
350	0.020	0.404	0.814
400	0.021	0.358	0.719
420	0.021	0.343	0.688
--	-	-	-
--	-	-	-
--	-	-	-

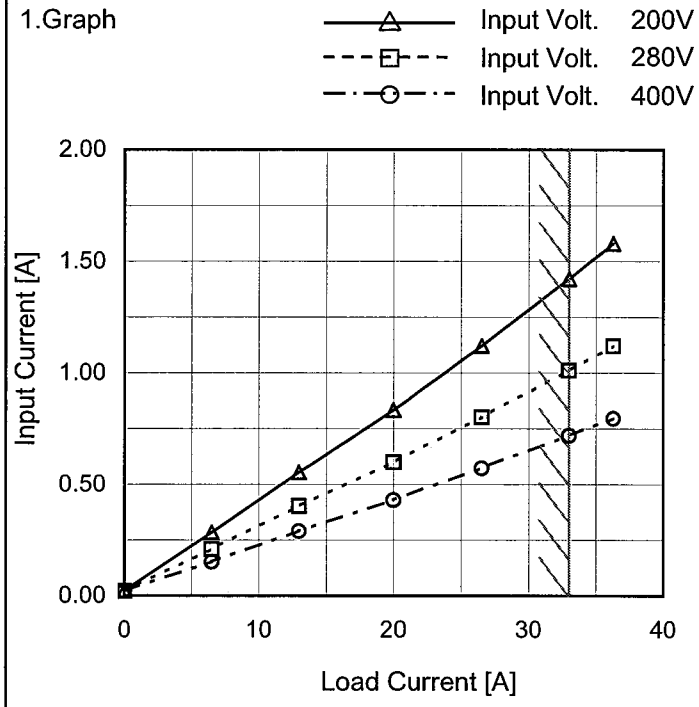
BC-10593

COSEL

Model	SNDHS250B07
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. 200[V]	Input Volt. 280[V]	Input Volt. 400[V]
0.0	0.023	0.021	0.021
6.5	0.285	0.208	0.153
13.0	0.555	0.402	0.290
20.0	0.833	0.599	0.429
26.5	1.122	0.802	0.573
33.0	1.423	1.012	0.720
36.3	1.581	1.121	0.796
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

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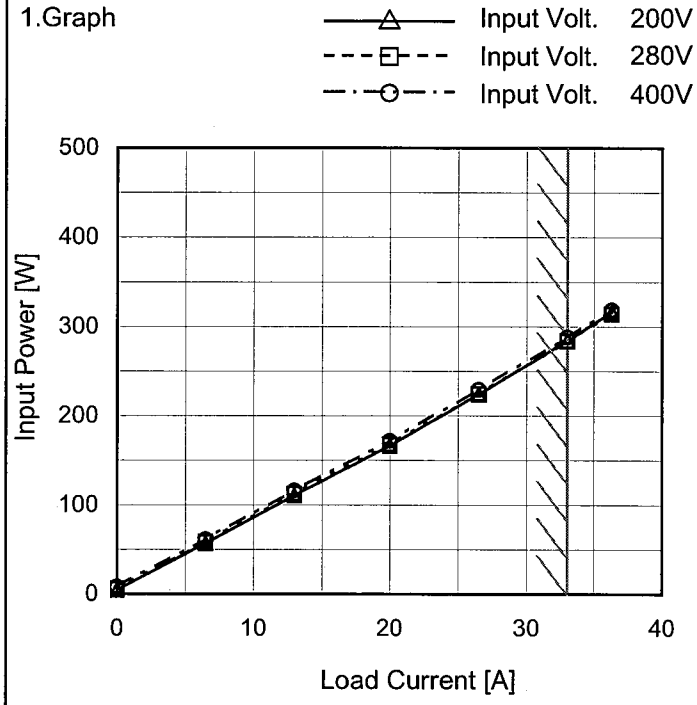
Model	SNDHS250B07
Item	Input Power (by Load Current)
Object	———————

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. 200[V]	Input Volt. 280[V]	Input Volt. 400[V]
0.0	4.5	5.8	8.3
6.5	57.0	58.4	61.3
13.0	111.0	112.7	116.2
20.0	166.7	168.0	172.0
26.5	224.4	224.9	229.7
33.0	284.6	283.9	288.5
36.3	316.3	314.4	319.0
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

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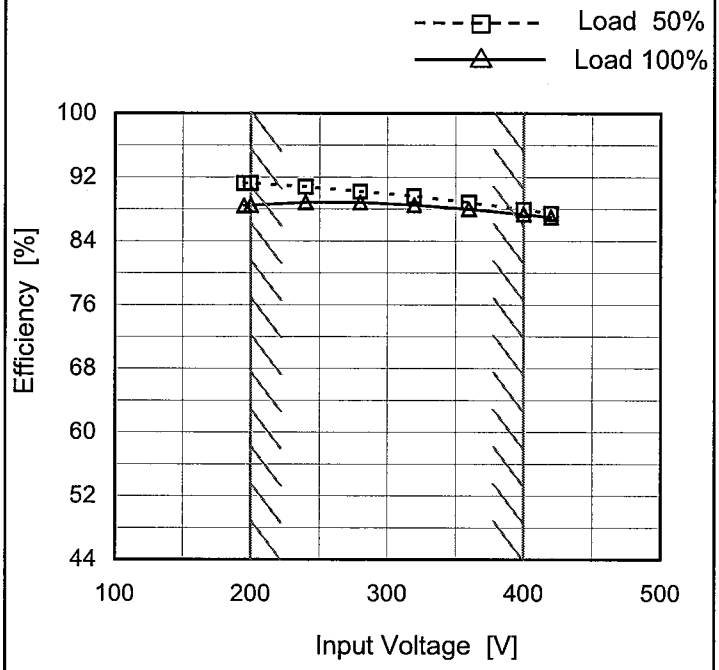
Model	SNDHS250B07
Item	Efficiency (by Input Voltage)
Object	———————

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%
195	91.2	88.5
200	91.2	88.5
240	90.8	88.8
280	90.2	88.8
320	89.6	88.5
360	88.8	88.0
400	87.9	87.4
420	87.5	87.0
--	-	-

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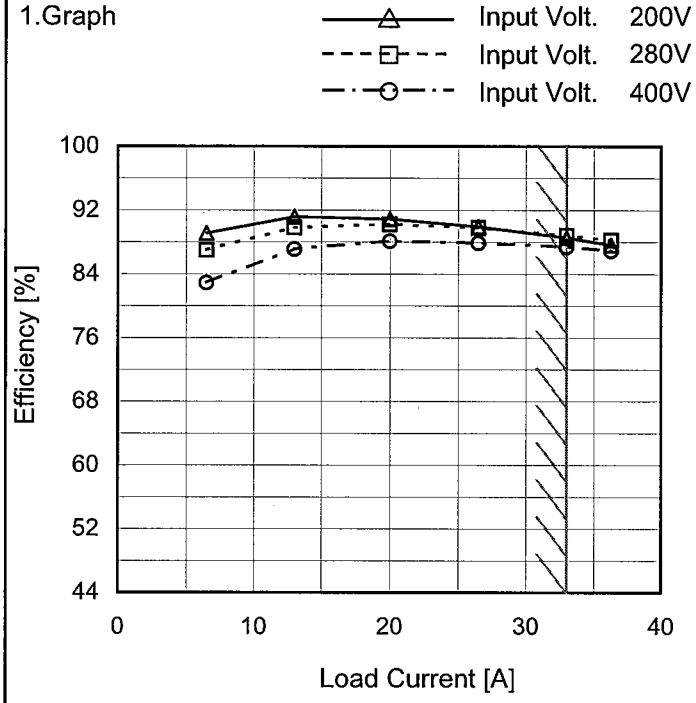
Model	SNDHS250B07
Item	Efficiency (by Load Current)
Object	————————

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. 200[V]	Input Volt. 280[V]	Input Volt. 400[V]
0.0	-	-	-
6.5	89.1	87.0	82.9
13.0	91.2	89.8	87.1
20.0	90.9	90.2	88.1
26.5	90.0	89.8	87.9
33.0	88.6	88.8	87.4
36.3	87.7	88.2	86.9
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

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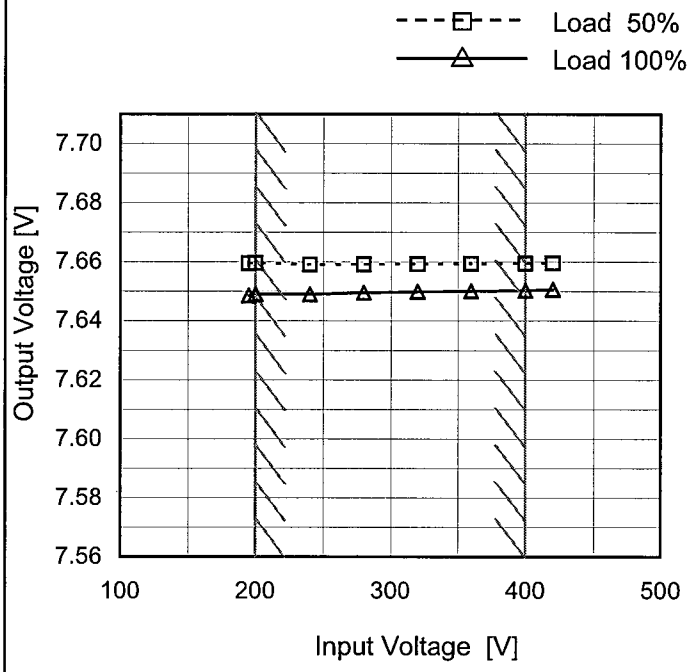
Model	SNDHS250B07
Item	Line Regulation
Object	+7.5V33A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

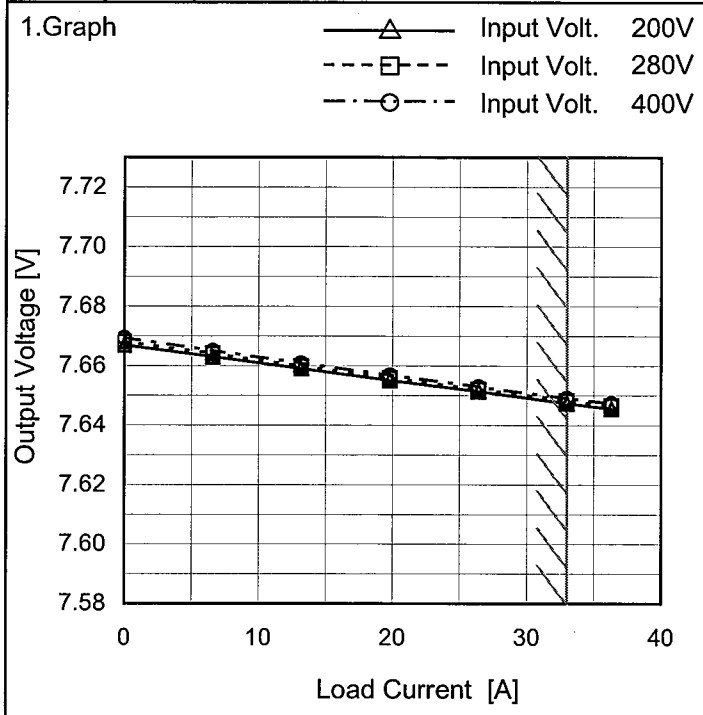
Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
195	7.660	7.649
200	7.660	7.649
240	7.659	7.649
280	7.659	7.650
320	7.659	7.650
360	7.659	7.650
400	7.660	7.650
420	7.660	7.651
--	-	-

COSEL

Model	SNDHS250B07
Item	Load Regulation
Object	+7.5V33A

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. 200[V]	Input Volt. 280[V]	Input Volt. 400[V]
0.0	7.667	7.668	7.669
6.6	7.663	7.664	7.665
13.2	7.659	7.660	7.661
19.8	7.655	7.656	7.657
26.4	7.651	7.652	7.653
33.0	7.648	7.648	7.649
36.3	7.646	7.647	7.647
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

COSEL

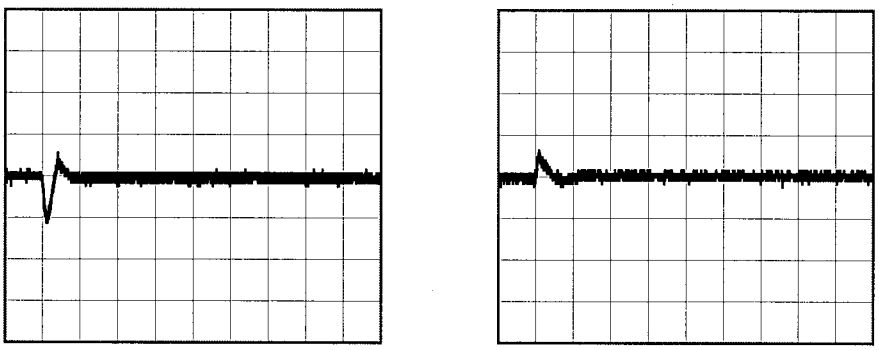
Model	SNDHS250B07
Item	Dynamic Load Response
Object	+7.5V33A

Temperature 25°C
Testing Circuitry Figure A

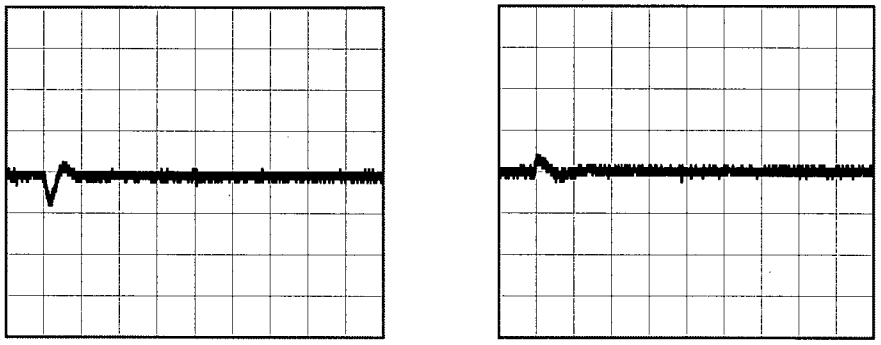
Input Volt. 280 V
Cycle 1000 ms

Load Current
33A/50 μ s

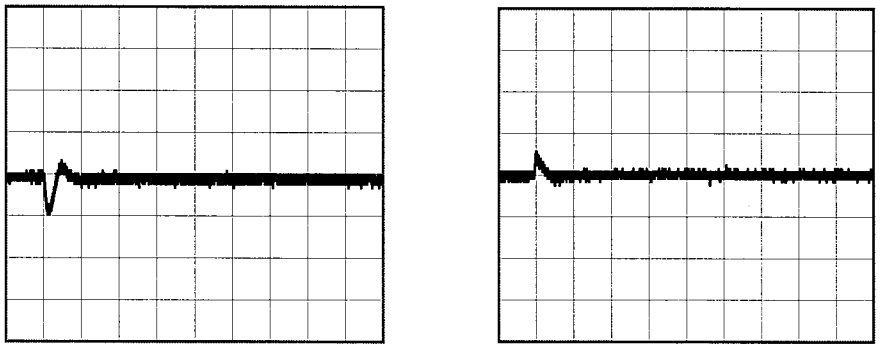
Min. Load (0A) ⟷
Load 100% (33A)



Min. Load (0A) ⟷
Load 50% (16.5A)



Load 10% (3.3A) ⟷
Load 100% (33A)



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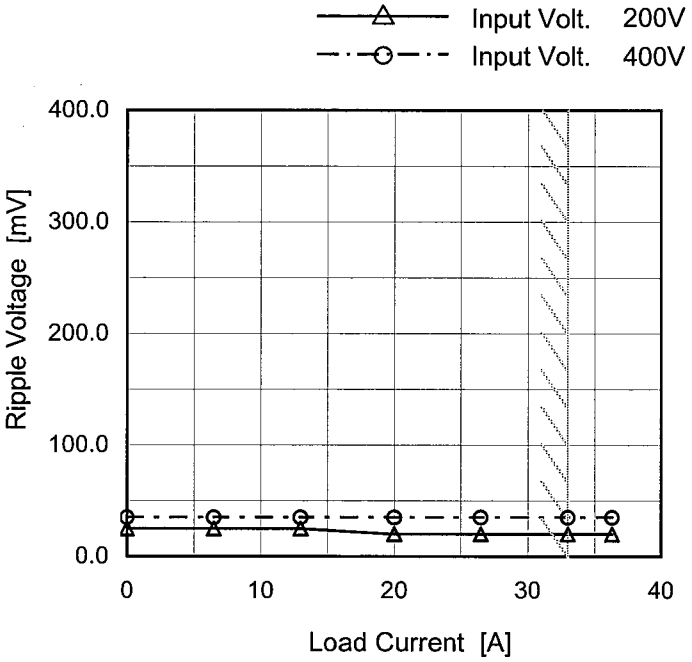
Model	SNDHS250B07
Item	Ripple Voltage (by Load Current)
Object	+7.5V33A

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.

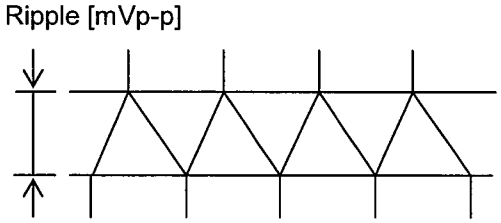


Fig.Complex Ripple Wave Form

2.Values

Load Current [A]	Ripple Voltage [mV]	
	Input Volt. 200 [V]	Input Volt. 400 [V]
0.0	25	35
6.5	25	35
13.0	25	35
20.0	20	35
26.5	20	35
33.0	20	35
36.3	20	35
--	-	-
--	-	-
--	-	-
--	-	-

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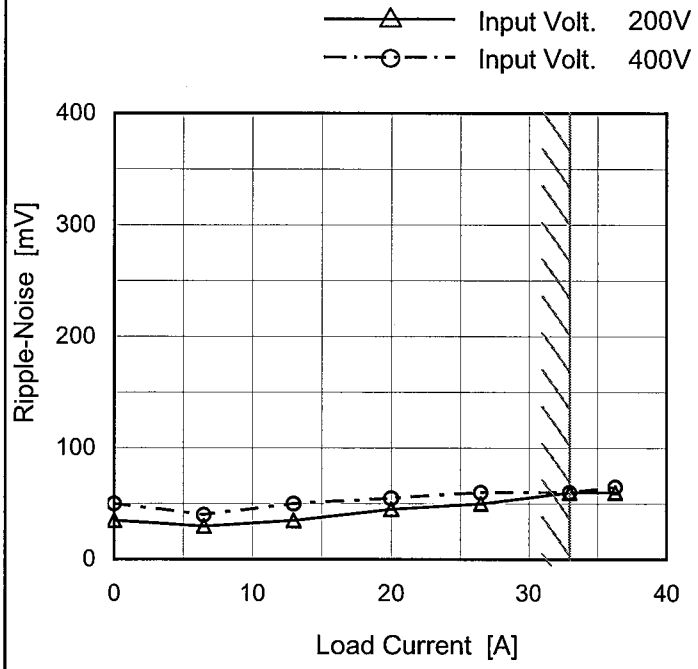
Model	SNDHS250B07
Item	Ripple-Noise
Object	+7.5V33A

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.

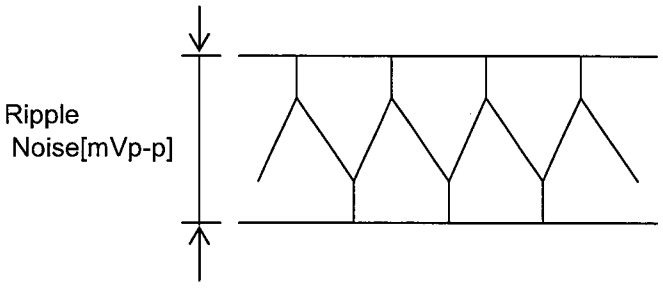


Fig.Complex Ripple Noise Wave Form

2.Values

Load Current [A]	Ripple-Noise [mV]	
	Input Volt. 200 [V]	Input Volt. 400 [V]
0.0	35	50
6.5	30	40
13.0	35	50
20.0	45	55
26.5	50	60
33.0	60	60
36.3	60	65
--	-	-
--	-	-
--	-	-
--	-	-

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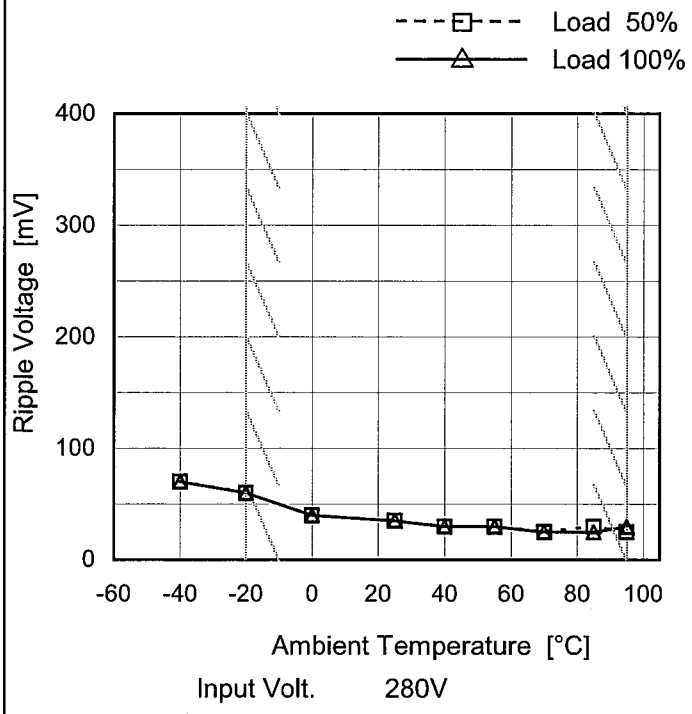
Model	SNDHS250B07
Item	Ripple Voltage (by Ambient Temp.)
Object	+7.5V16.5A

Testing Circuitry Figure B

1.Graph



Input Volt. 280V

Measured by 100 MHz Oscilloscope.

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

2.Values

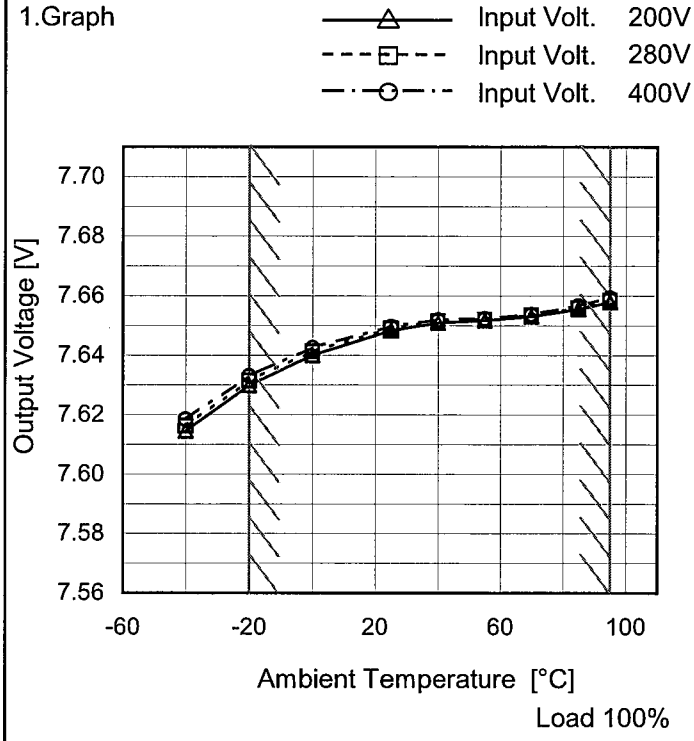
Ambient Temperature [°C]	Ripple Voltage [mV]	
	Load 50%	Load 100%
-40	70	70
-20	60	60
0	40	40
25	35	35
40	30	30
55	30	30
70	25	25
85	30	25
95	25	30
--	-	-
--	-	-

COSEL

Model	SNDHS250B07
Item	Ambient Temperature Drift
Object	+7.5V33A

Testing Circuitry Figure A

1.Graph



Load 100%

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

2.Values

Ambient Temperature [°C]	Output Voltage [V]		
	Input Volt. 200[V]	Input Volt. 280[V]	Input Volt. 400[V]
-40	7.615	7.616	7.619
-20	7.630	7.631	7.633
0	7.640	7.641	7.643
25	7.648	7.649	7.650
40	7.651	7.652	7.652
55	7.652	7.652	7.652
70	7.653	7.653	7.654
85	7.656	7.656	7.657
95	7.658	7.659	7.659
--	-	-	-
--	-	-	-

COSEL

Model	SNDHS250B07
Item	Output Voltage Accuracy
Object	+7.5V33A

Testing Circuitry Figure A

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 : -20 - 95°C
Input Voltage : 200 - 400V
Load Current : 0 - 33A

* 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

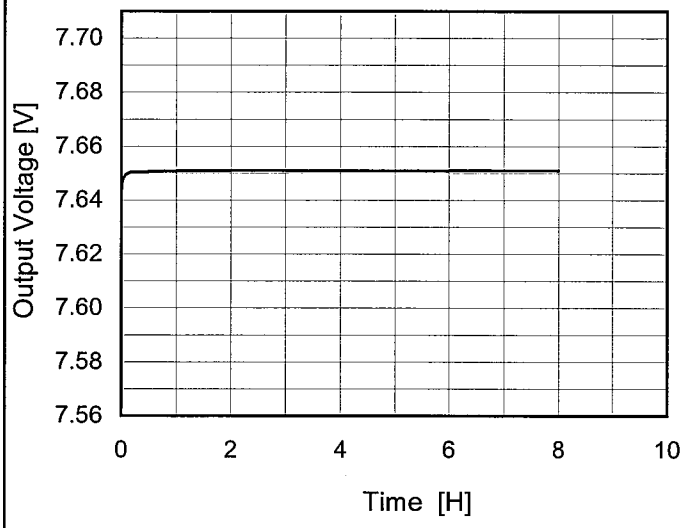
Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	95	200	0	7.681	±26	±0.3
Minimum Voltage	-20	200	33	7.630		

COSEL

Model	SNDHS250B07
Item	Time Lapse Drift
Object	+7.5V33A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Input Volt. 280V
Load 100%

2.Values

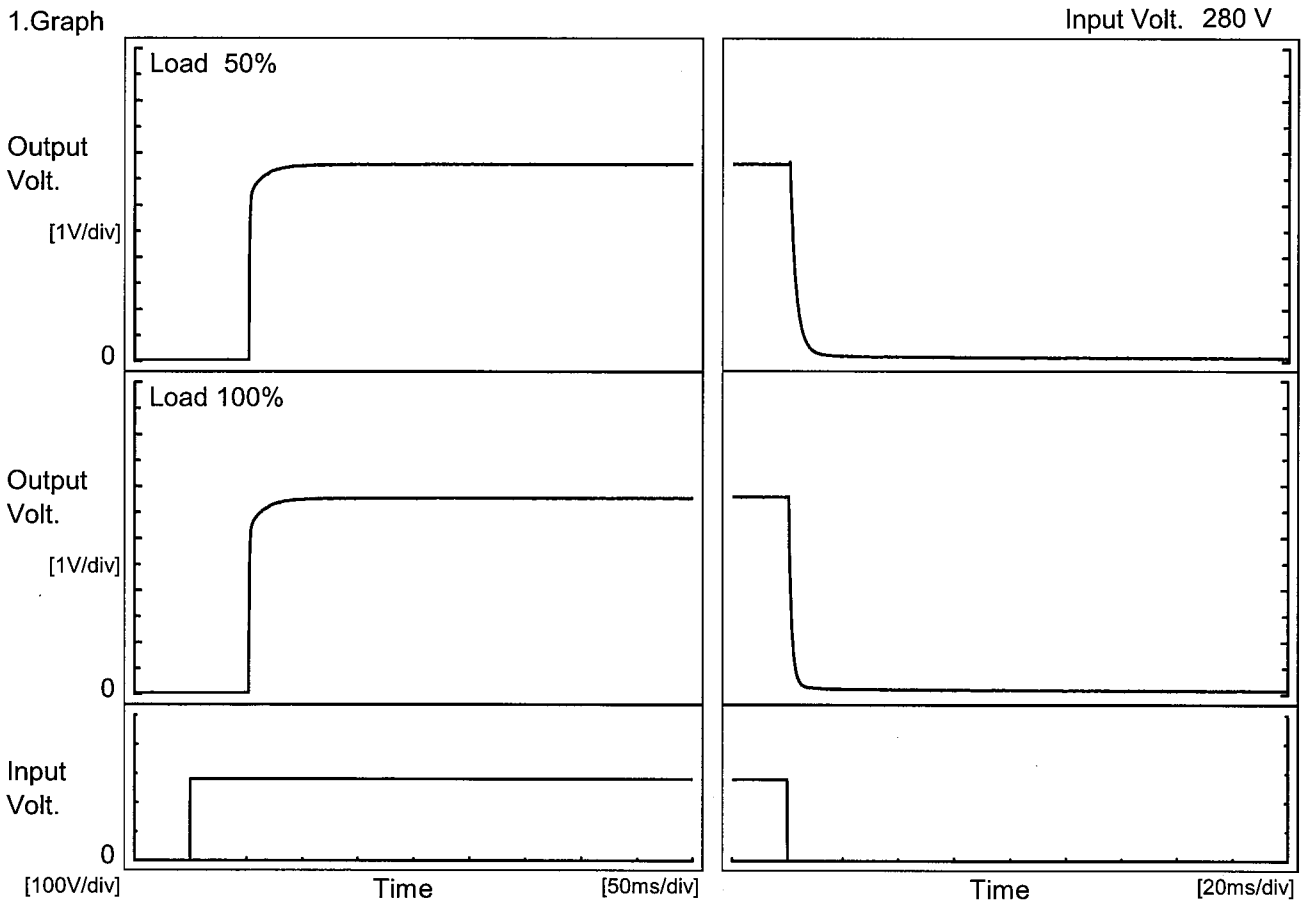
Time since start [H]	Output Voltage [V]
0.0	7.643
0.5	7.651
1.0	7.651
2.0	7.651
3.0	7.651
4.0	7.651
5.0	7.651
6.0	7.651
7.0	7.651
8.0	7.651

COSEL

Model	SNDHS250B07
Item	Rise and Fall Time
Object	+7.5V33A

Temperature 25°C
Testing Circuitry Figure A

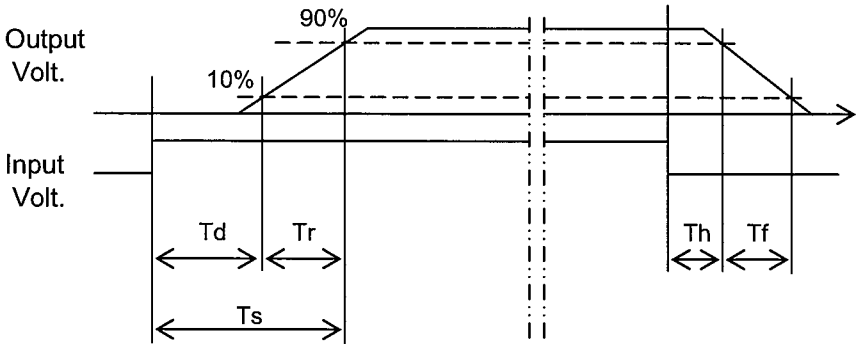
1.Graph



2.Values

[ms]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	52.3	6.0	58.3	0.7	5.6
100 %	52.3	6.0	58.3	0.4	2.7



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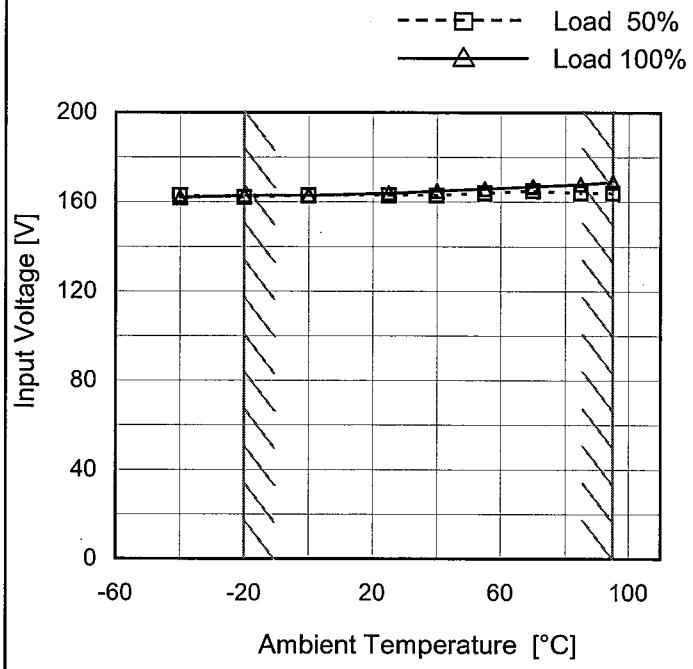
Model	SNDHS250B07
Item	Minimum Input Voltage for Regulated Output Voltage
Object	+7.5V33A

Testing Circuitry Figure A

1.Graph



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

2.Values

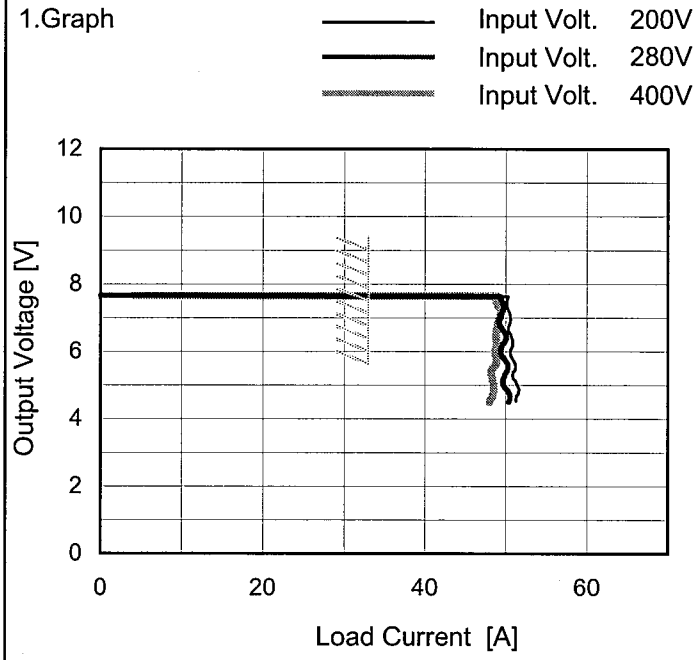
Ambient Temperature [°C]	Input Voltage [V]	
	Load 50%	Load 100%
-40	163	162
-20	162	163
0	163	163
25	163	164
40	163	165
55	164	166
70	165	167
85	164	168
95	164	169
--	-	-
--	-	-

COSEL

Model	SNDHS250B07
Item	Overcurrent Protection
Object	+7.5V33A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

Intermittent operation occurs when the output voltage is from 4.5V to 0V.

2.Values

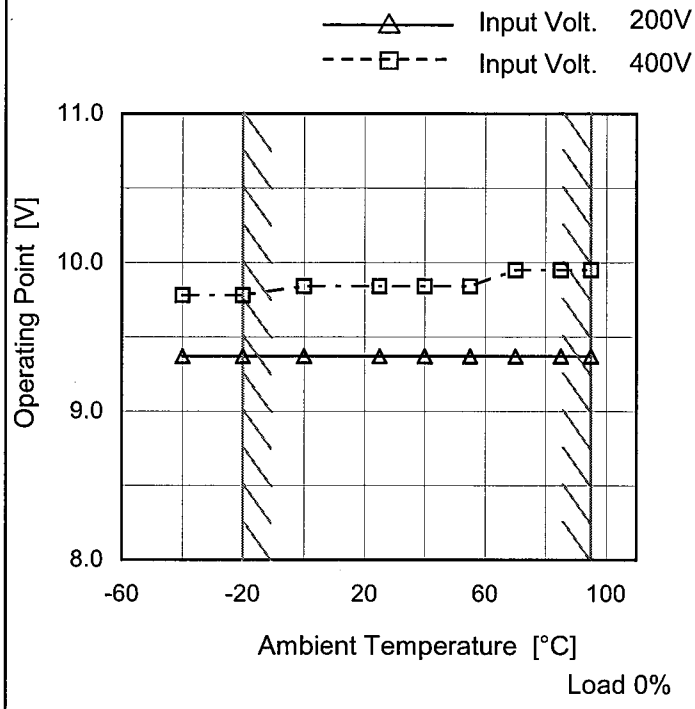
Output Voltage [V]	Load Current [A]		
	Input Volt. 200[V]	Input Volt. 280[V]	Input Volt. 400[V]
7.13	50.54	49.48	49.40
6.75	50.44	49.27	49.03
6.00	50.61	49.38	48.74
5.25	50.87	49.91	48.32
4.50	51.28	50.39	48.00
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

COSEL

Model	SNDHS250B07
Item	Overvoltage Protection
Object	+7.5V33A

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. 200[V]	Input Volt. 400[V]
-40	9.37	9.78
-20	9.37	9.78
0	9.37	9.84
25	9.37	9.84
40	9.37	9.84
55	9.37	9.84
70	9.37	9.95
85	9.37	9.95
95	9.37	9.95
--	-	-
--	-	-

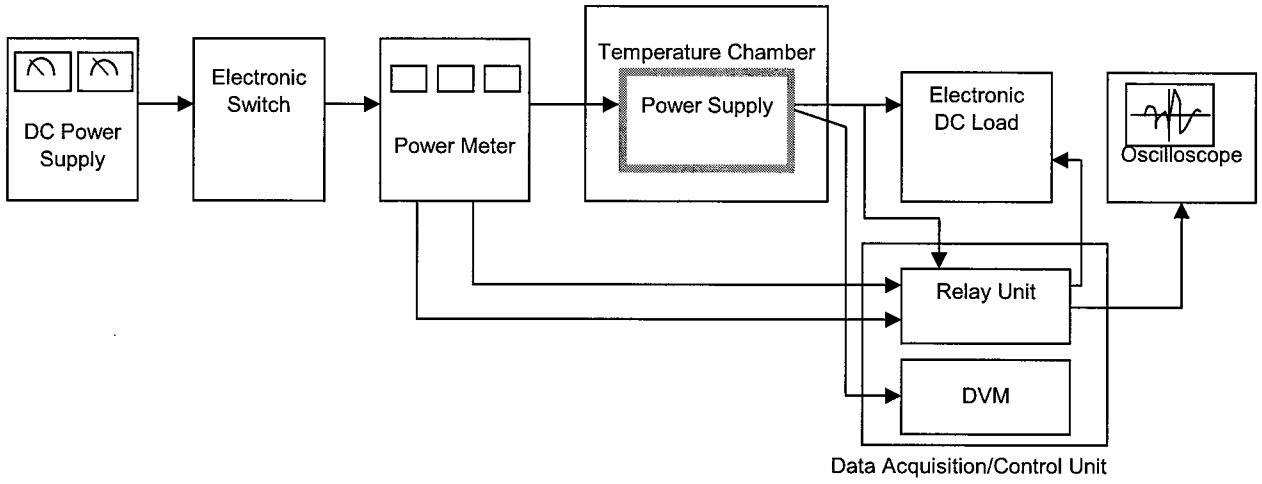


Figure A

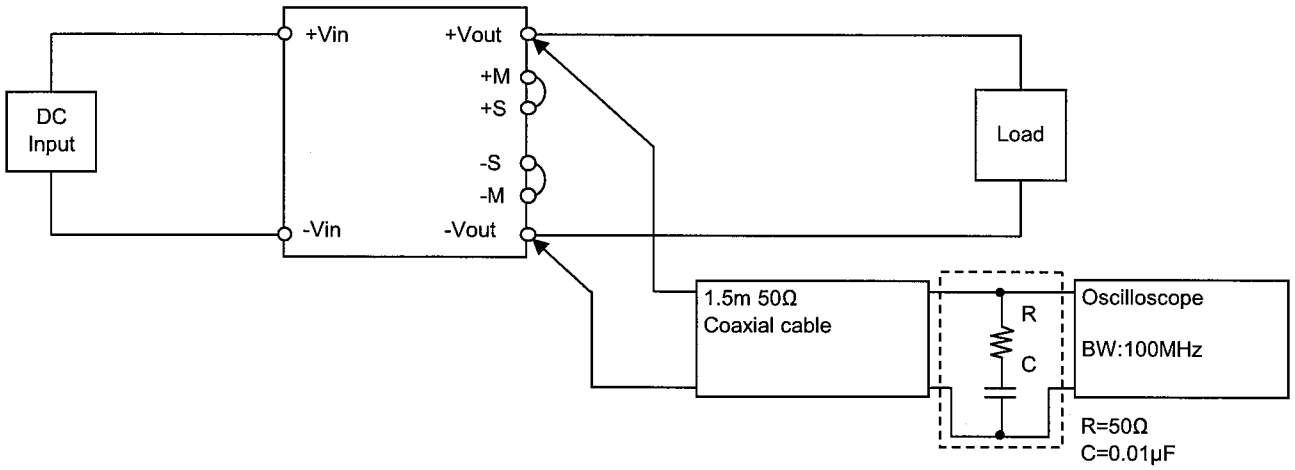


Figure B (Ripple and Ripple noise Characteristic)