COSEL

参考資料

TEST DATA OF SNDPG750

(100V　INPUT)

AC-DC Front End Module

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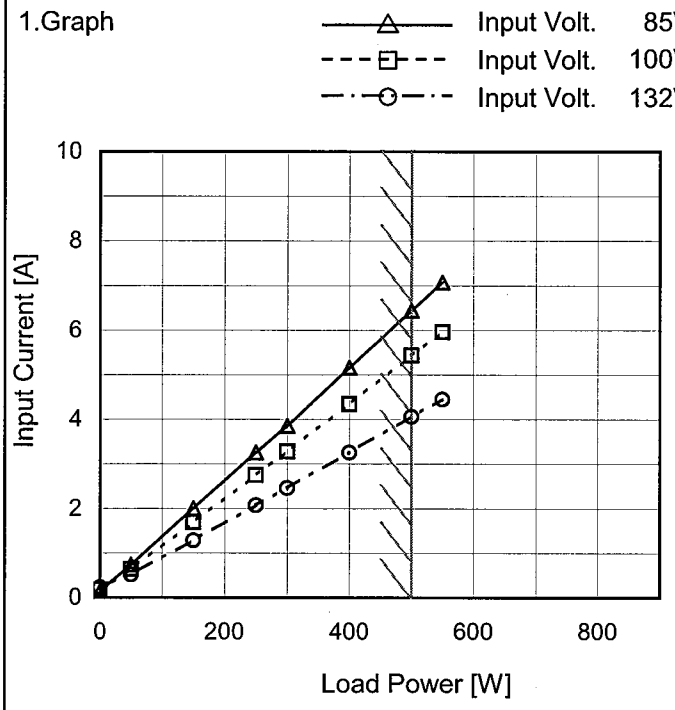
Model	SNDPG750
Item	Input Current (by Load Power)
Object	———————

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

Load Power [W]	Input Current [A]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0	0.15	0.18	0.24
50	0.74	0.64	0.52
150	2.01	1.69	1.28
250	3.26	2.75	2.07
300	3.86	3.29	2.46
400	5.16	4.35	3.26
500	6.45	5.44	4.07
550	7.08	5.97	4.46
--	-	-	-
--	-	-	-
--	-	-	-

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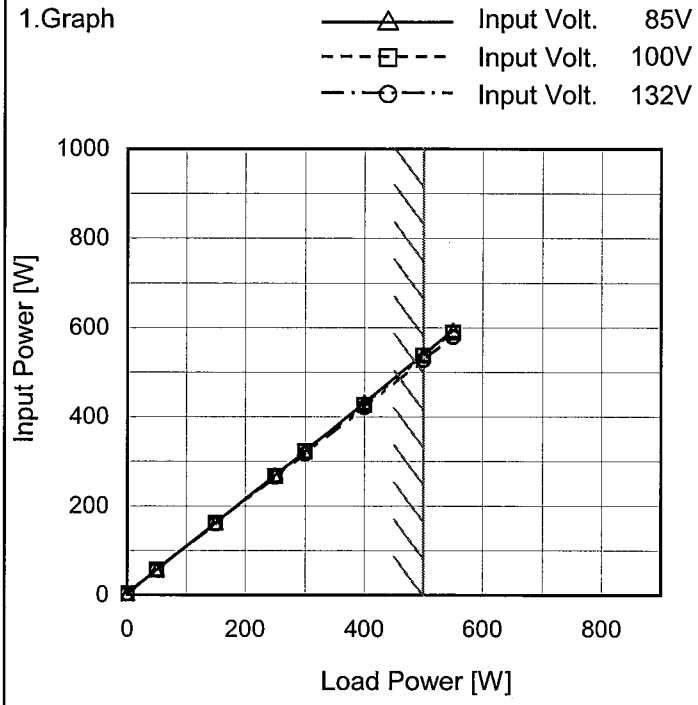
Model	SNDPG750
Item	Input Power (by Load Power)
Object	———————

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

Load Power [W]	Input Power [W]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0	3.0	3.0	2.9
50	56.8	56.5	56.1
150	162.7	161.9	160.3
250	269.6	267.4	264.8
300	322.2	322.3	316.7
400	432.4	426.5	421.6
500	540.4	537.1	527.4
550	594.4	589.4	579.3
--	-	-	-
--	-	-	-
--	-	-	-

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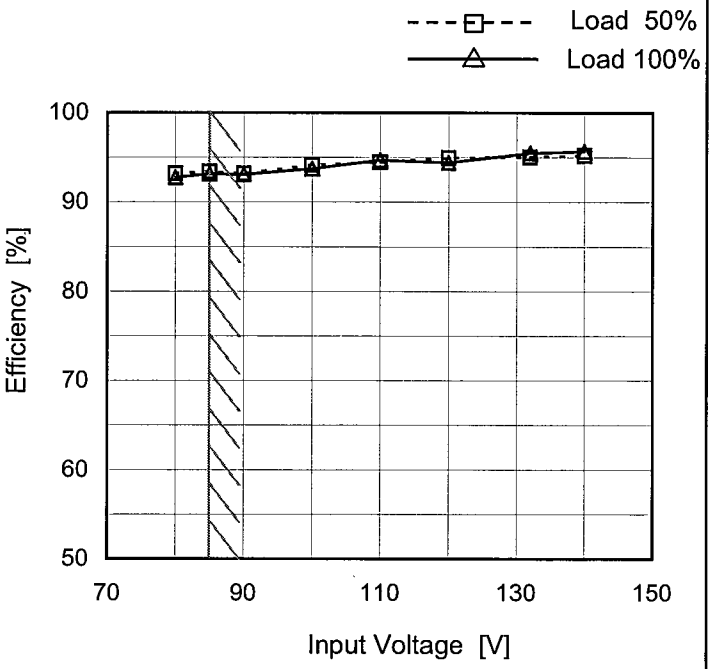
Model	SNDPG750
Item	Efficiency (by Input Voltage)
Object	————————

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%
80	93.2	92.8
85	93.4	93.2
90	93.2	93.1
100	94.1	93.7
110	94.5	94.7
120	94.9	94.4
132	95.0	95.5
140	95.2	95.7
--	-	-

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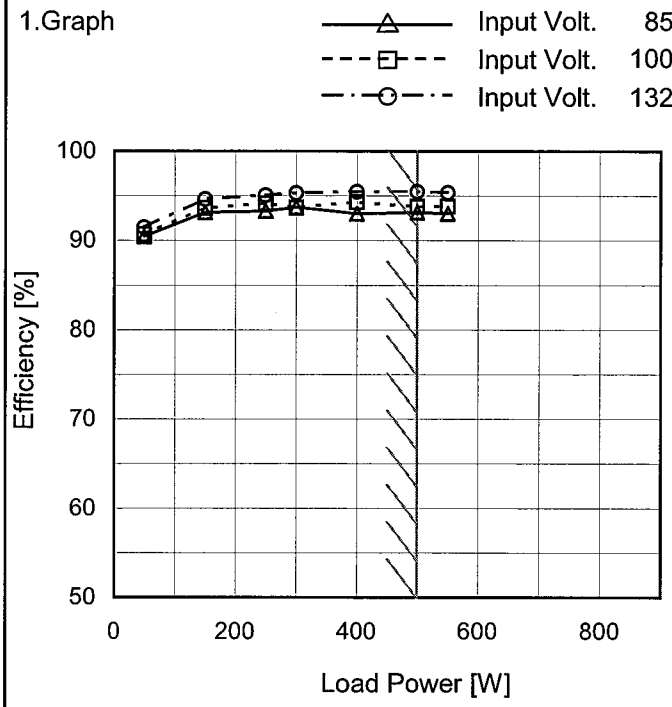
Model	SNDPG750
Item	Efficiency (by Load Power)
Object	———————

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

Load Power [W]	Efficiency [%]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0	-	-	-
50	90.5	90.7	91.5
150	93.2	93.6	94.7
250	93.3	94.1	95.1
300	93.7	93.7	95.3
400	93.0	94.3	95.5
500	93.2	93.8	95.5
550	93.0	93.8	95.4
--	-	-	-
--	-	-	-
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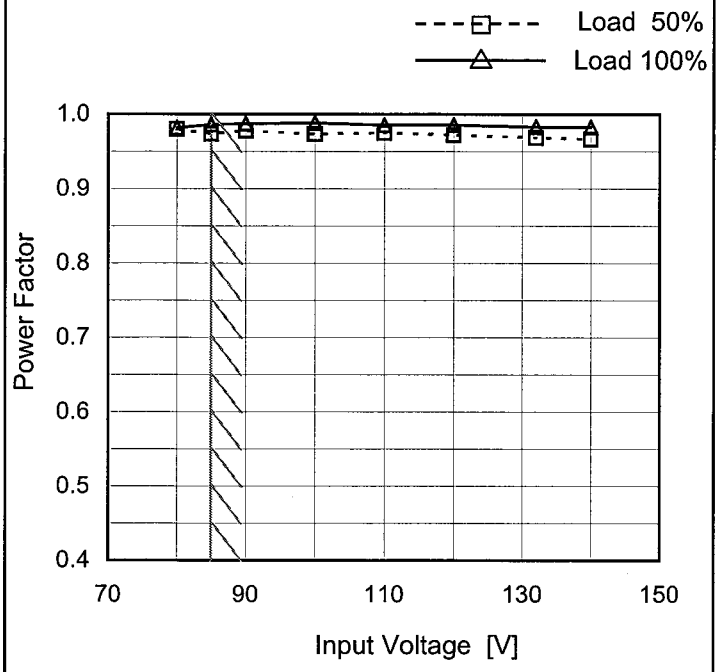
Model	SNDPG750
Item	Power Factor (by Input Voltage)
Object	————————

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]	Power Factor	
	Load 50%	Load 100%
80	0.980	0.982
85	0.974	0.986
90	0.978	0.987
100	0.973	0.988
110	0.975	0.986
120	0.972	0.986
132	0.969	0.983
140	0.966	0.983
--	-	-

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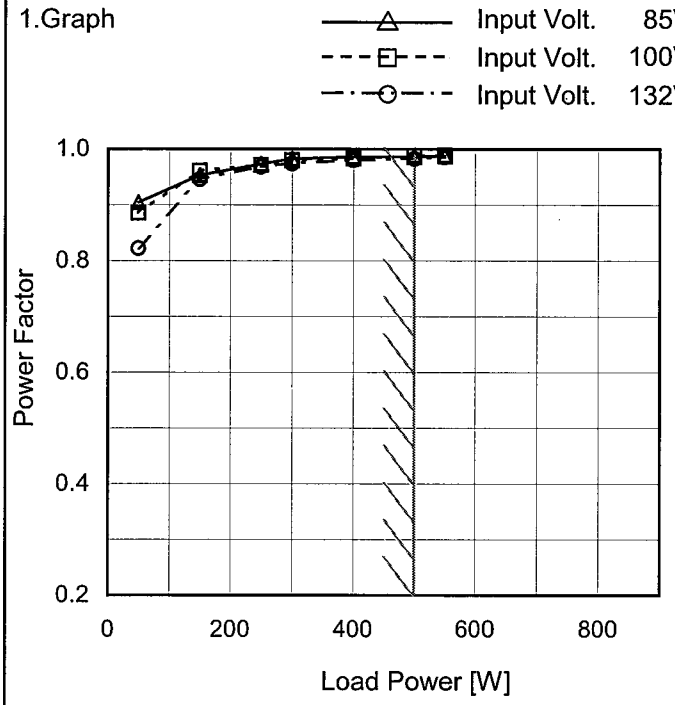
Model	SNDPG750
Item	Power Factor (by Load Power)
Object	————————

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

Load Power [W]	Power Factor		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
50	0.904	0.886	0.823
150	0.954	0.961	0.946
250	0.974	0.971	0.968
300	0.983	0.980	0.974
400	0.986	0.982	0.980
500	0.986	0.988	0.983
550	0.988	0.989	0.986
--	-	-	-
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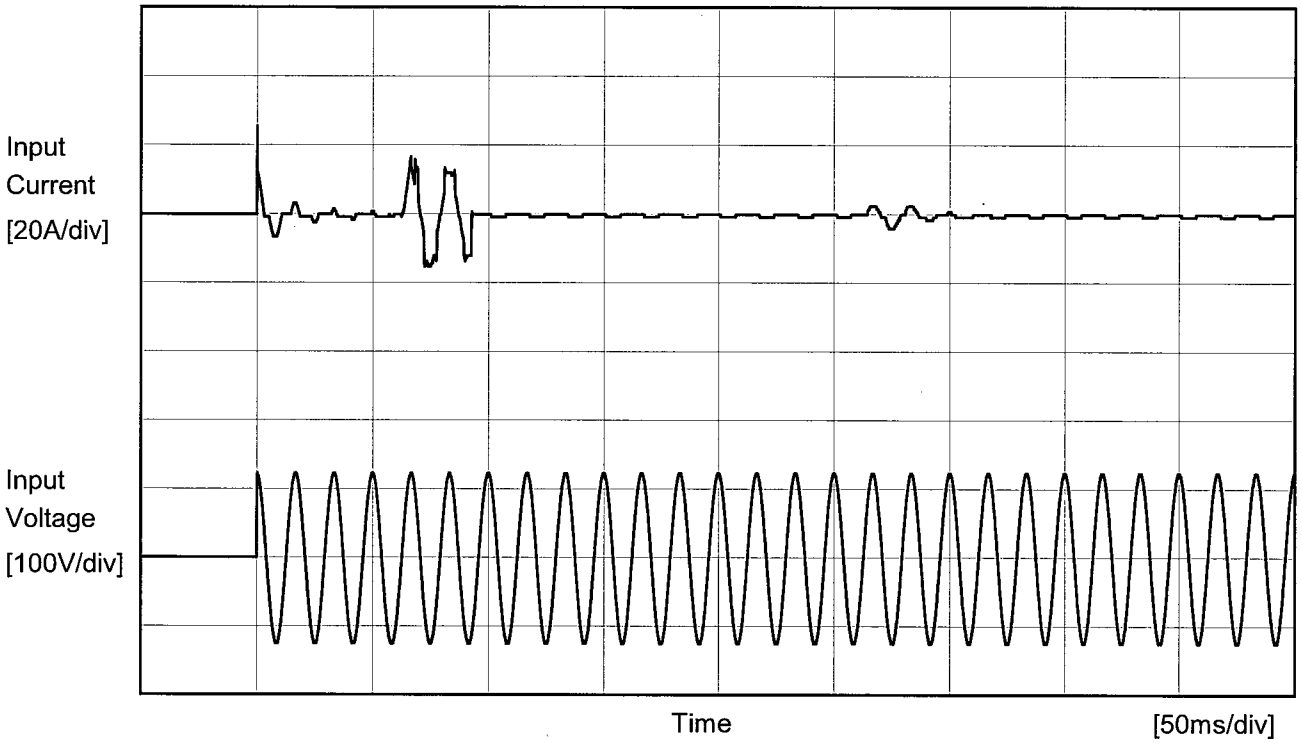
Model	SNDPG750
Item	Inrush Current
Object	————————

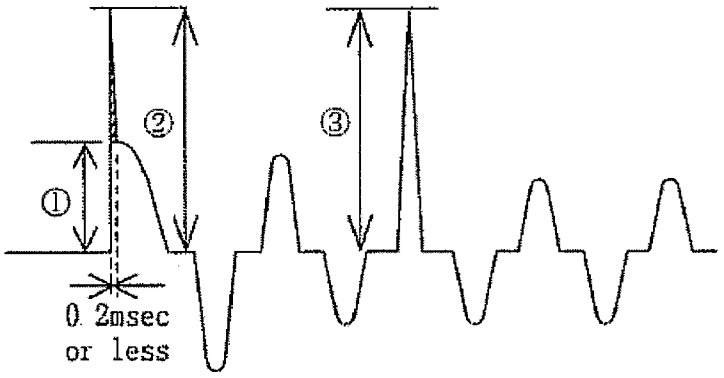
Temperature 25°C
Testing Circuitry Figure A



Input Voltage	100 V
Frequency	60 Hz
Load	0 %

inrush current

① 12.0A Primary inrush current
② 25.5A (0.2msec or less)※1
③ 16.7A Secondary inrush current



※1 The specification of the inrush current (primary surge) means that the surge current to a built-in noise filter (0.2msec or less : waveform ②) is excluded.

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Model	SNDPG750	
Item	Leakage Current	Temperature 25°C Testing Circuitry Figure B
Object	————————	

1.Results

Standards	Leakage Current [mA]		
	Input Volt. 85 [V]	Input Volt. 100 [V]	Input Volt. 132 [V]
(A)DEN-AN	0.13	0.16	0.20
(B)IEC60950-1	0.13	0.16	0.20

Standards	Leakage Current [mA]		
	Input Volt. 170 [V]	Input Volt. 240 [V]	Input Volt. 264 [V]
(B)IEC60950-1	-	-	-

2.Condition

Leakage current value is concluded after measuring both phases of AC input and by choosing the larger one.

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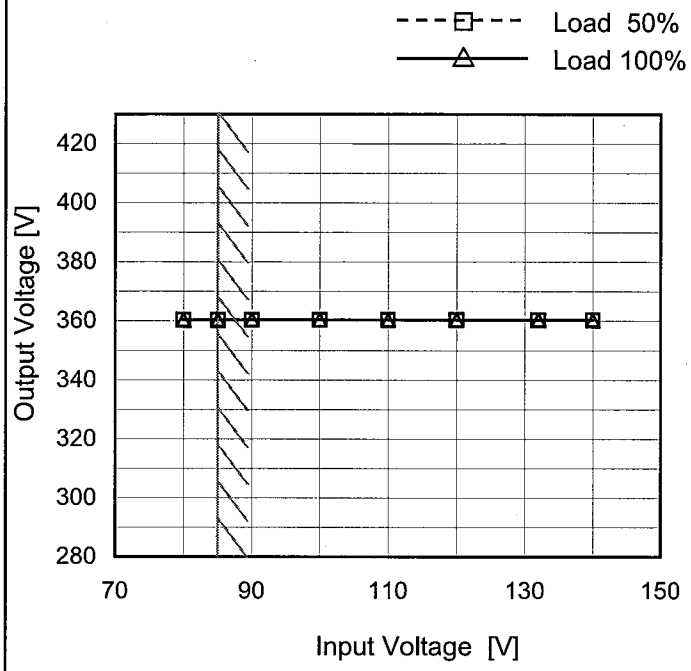
Model	SNDPG750
Item	Line Regulation
Object	+360V 500W

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%
80	360.36	360.41
85	360.36	360.42
90	360.36	360.43
100	360.36	360.44
110	360.35	360.43
120	360.35	360.43
132	360.35	360.43
140	360.35	360.42
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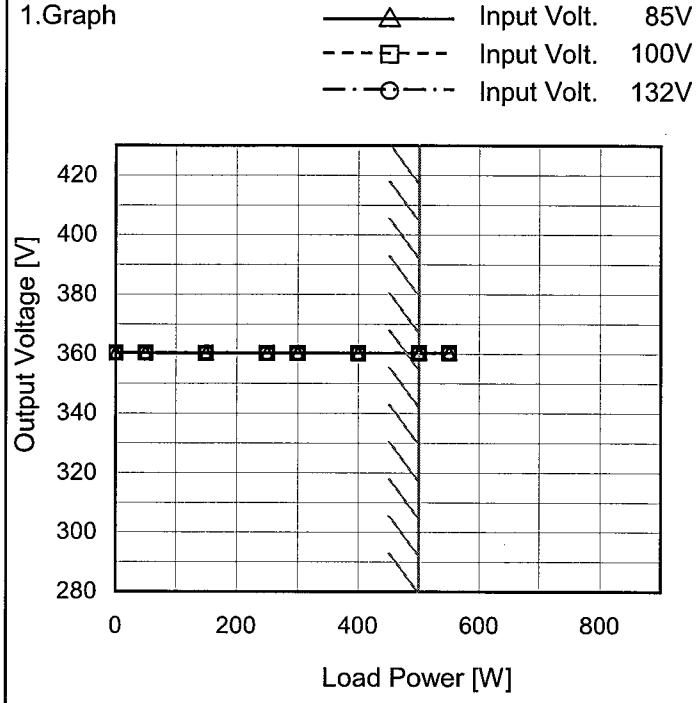
COSEL

Model	SNDPG750
Item	Load Regulation
Object	+360V 500W

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

Load Power [W]	Output Voltage [V]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0	360.38	360.37	360.40
50	360.36	360.35	360.38
150	360.33	360.33	360.35
250	360.31	360.31	360.33
300	360.31	360.31	360.32
400	360.33	360.32	360.32
500	360.33	360.34	360.33
550	360.35	360.38	360.35
--	-	-	-
--	-	-	-
--	-	-	-

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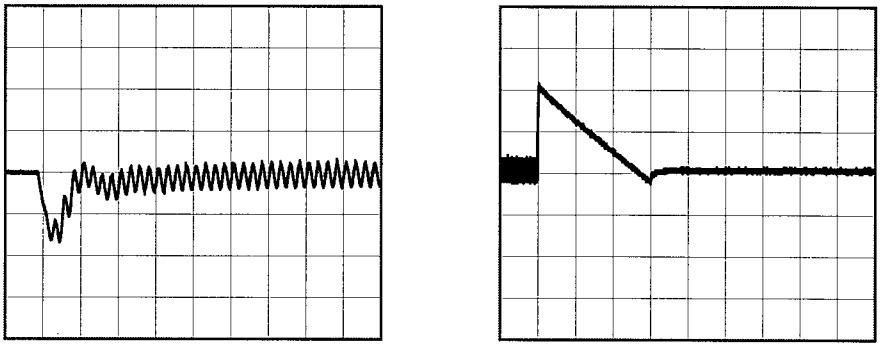
Model	SNDPG750
Item	Dynamic Load Response
Object	+360V500W

Temperature 25°C
Testing Circuitry Figure A

Input Volt. 100 V
Cycle 1000 ms

Load Current

Min. Load (0W) ⟷
Load 100% (500W)

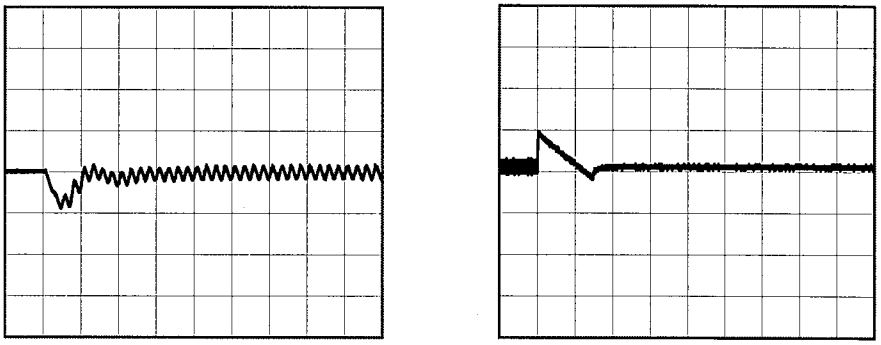


20 V/div

40ms/div

2s/div

Min. Load (0W) ⟷
Load 50% (250W)



20 V/div

40ms/div

2s/div

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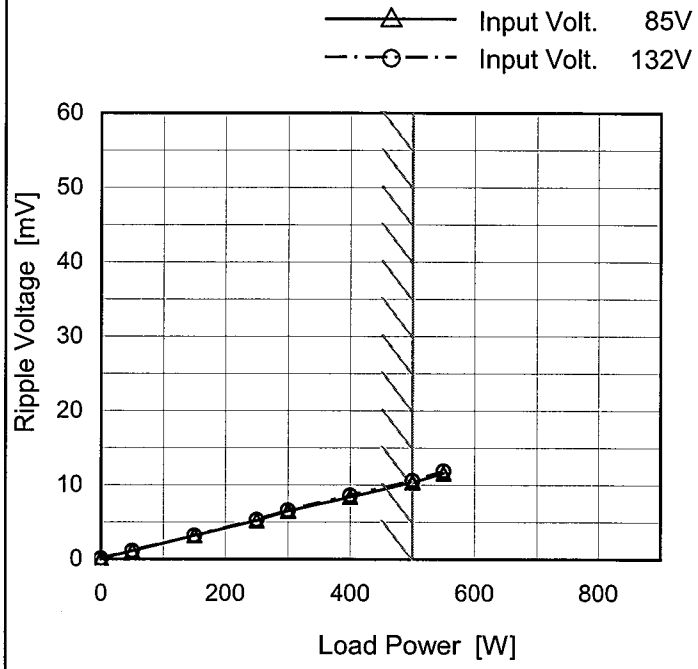
Model	SNDPG750
Item	Ripple Voltage (by Load Power)
Object	+360V500W

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Measured by 20 MHz Oscilloscope.
Ripple Voltage is shown as p-p in the figure below.
Note: Slanted line shows the range of the rated load power.

T1: Due to AC Input Line
T2: Due to Switching

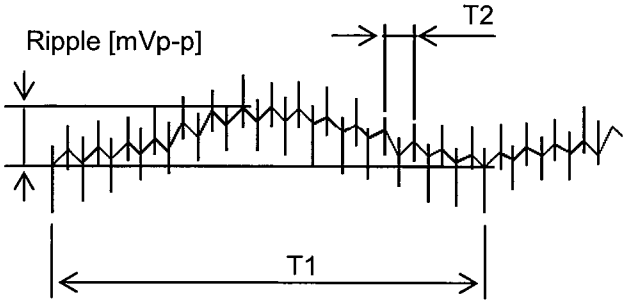


Fig. Complex Ripple Wave Form

2.Values

Load Power [W]	Ripple Voltage [mV] Input Volt. 85 [V]	Ripple Voltage [mV] Input Volt. 132 [V]
0	0.1	0.1
50	1.1	1.1
150	3.2	3.2
250	5.2	5.3
300	6.5	6.6
400	8.4	8.6
500	10.4	10.6
550	11.6	11.9
--	-	-
--	-	-
--	-	-

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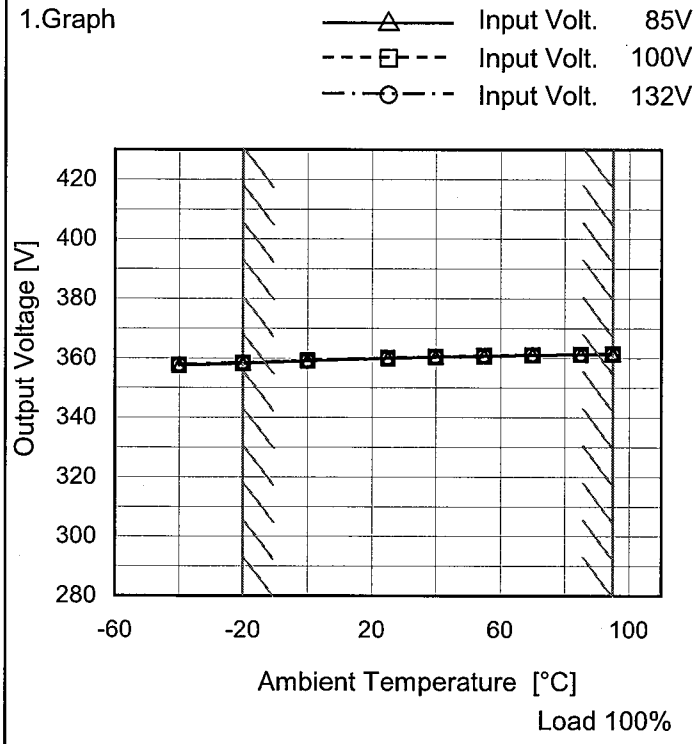
Model	SNDPG750
Item	Ambient Temperature Drift
Object	+360V 500W

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. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
-40	357.60	357.70	357.76
-20	358.27	358.36	358.42
0	359.09	359.17	359.22
25	359.97	360.03	360.06
40	360.43	360.46	360.49
55	360.75	360.80	360.83
70	361.05	361.07	361.09
85	361.25	361.28	361.29
95	361.39	361.42	361.42
--	-	-	-
--	-	-	-

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Model	SNDPG750	
Item	Output Voltage Accuracy	Testing Circuitry Figure A
Object	+360V 500W	

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 : 85 - 132V
Load Power : 0 - 500W

* 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

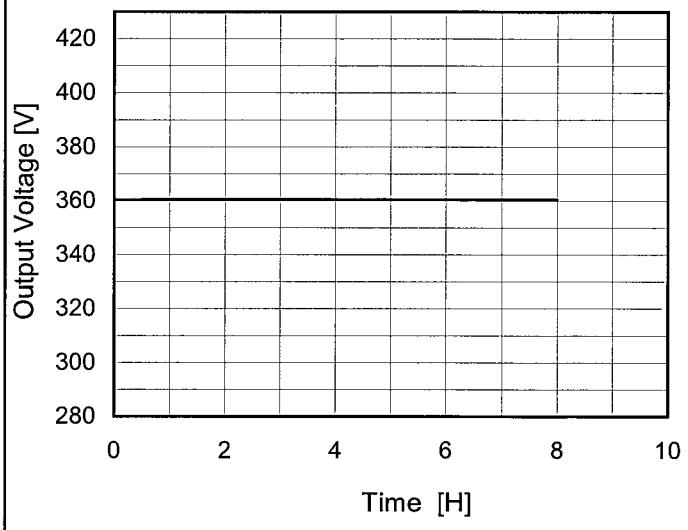
Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Power[W]	Voltage[V]	Value [V]	Ration [%]
Maximum Voltage	95	132	500	361.42	±2	±0.5
Minimum Voltage	-20	100	0	358.12		

COSEL

Model	SNDPG750
Item	Time Lapse Drift
Object	+360V 500W

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Input Volt. 100V
Load 100%

2.Values

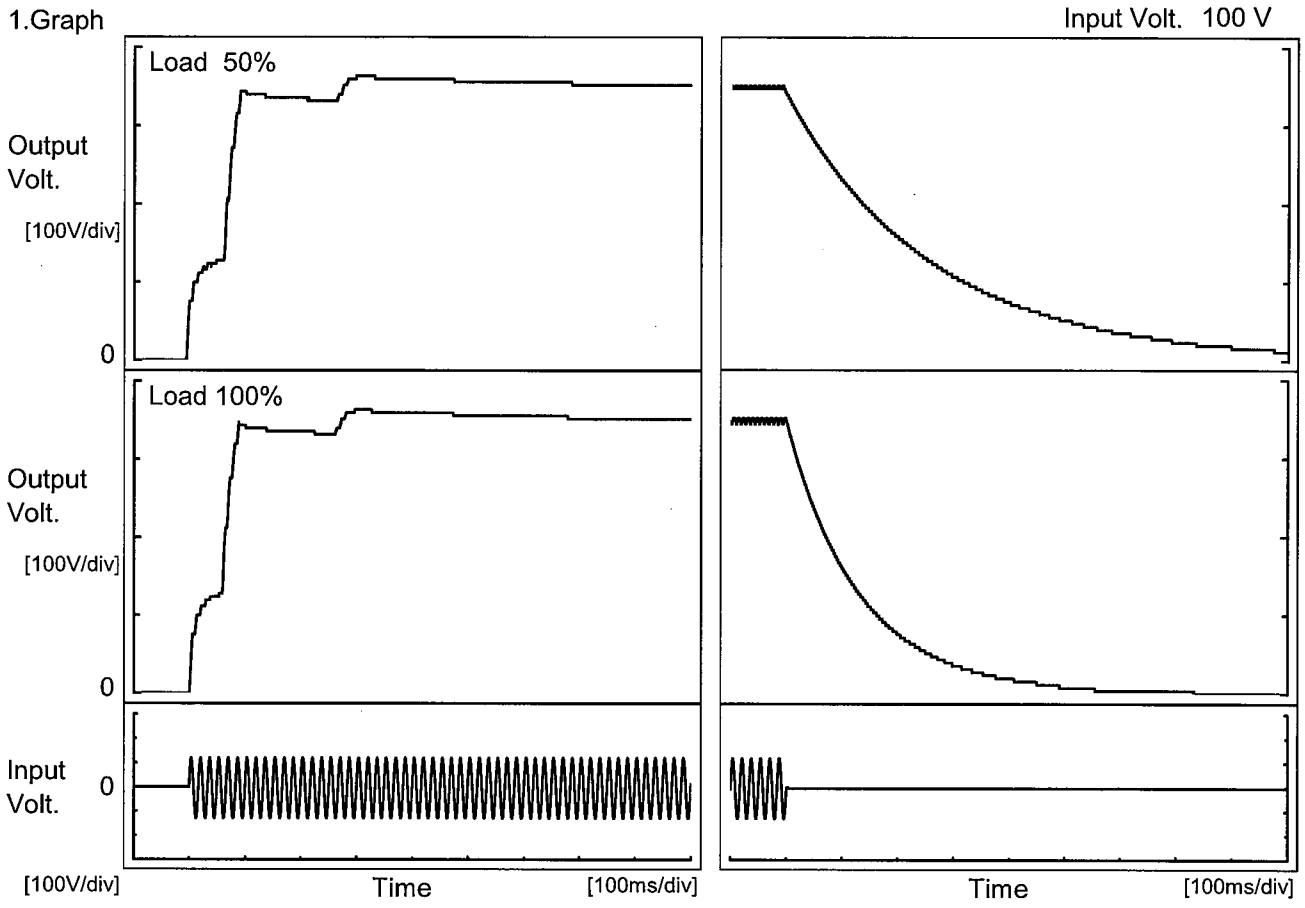
Time since start [H]	Output Voltage [V]
0.0	360.36
0.5	360.47
1.0	360.47
2.0	360.47
3.0	360.47
4.0	360.47
5.0	360.47
6.0	360.47
7.0	360.47
8.0	360.47

COSEL

Model	SNDPG750
Item	Rise and Fall Time
Object	+360V 500W

Temperature 25°C
Testing Circuitry Figure A

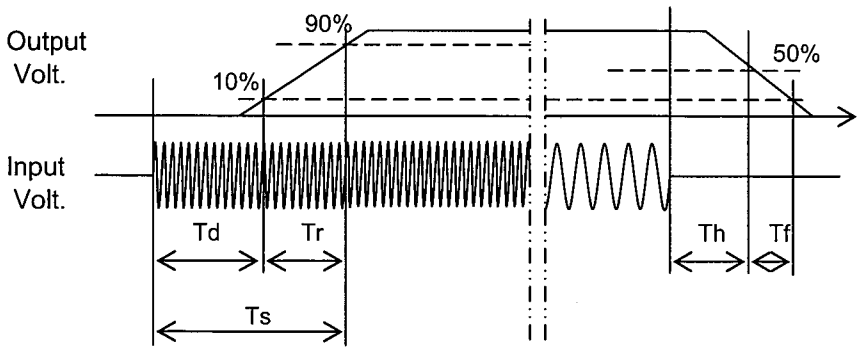
1.Graph



2.Values

[ms]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	3.0	86.0	89.0	162.0	422.0
100 %	3.0	83.0	86.0	84.0	214.0



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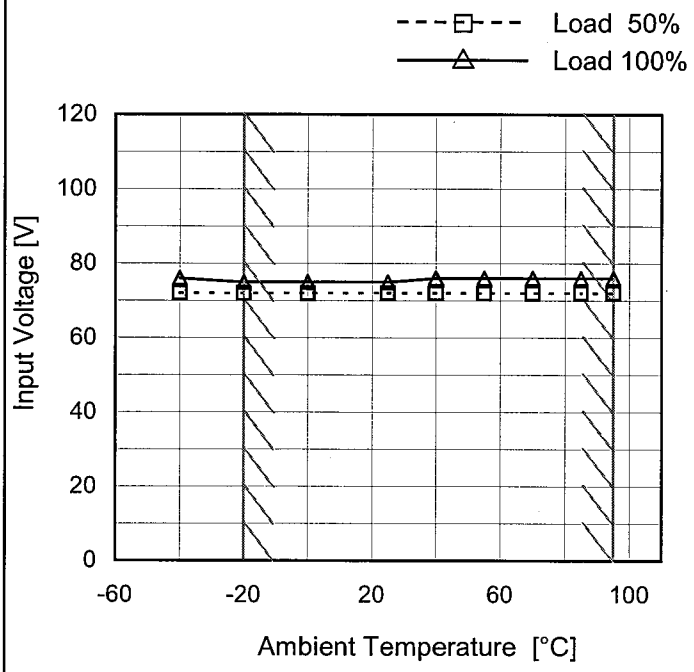
Model	SNDPG750
Item	Minimum Input Voltage for Regulated Output Voltage
Object	+360V 500W

Testing Circuitry Figure A

1.Graph



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

2.Values

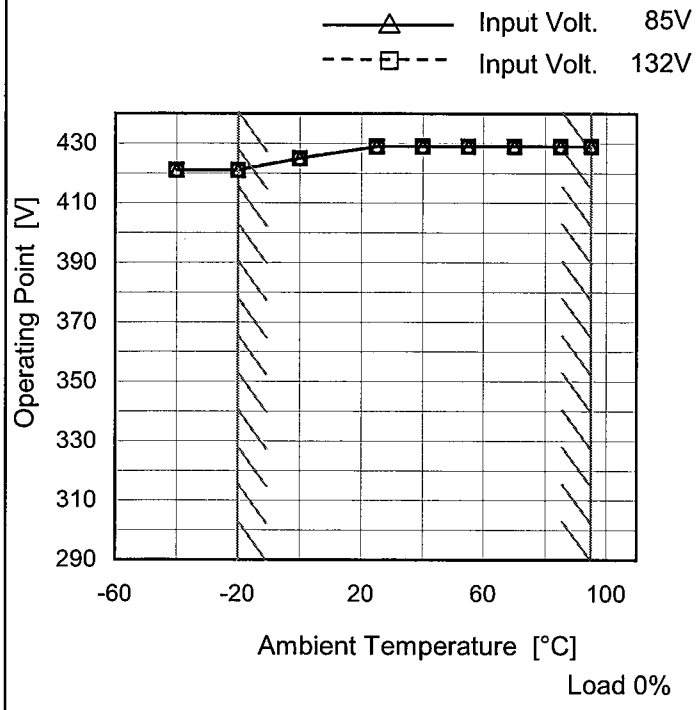
Ambient Temperature [°C]	Input Voltage [V]	
	Load 50%	Load 100%
-40	72	76
-20	72	75
0	72	75
25	72	75
40	72	76
55	72	76
70	72	76
85	72	76
95	72	76
--	-	-
--	-	-

COSEL

Model	SNDPG750
Item	Overvoltage Protection
Object	+360V500W

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. 85[V]	Input Volt. 132[V]
-40	421.00	421.00
-20	421.00	421.00
0	425.00	425.00
25	429.00	429.00
40	429.00	429.00
55	429.00	429.00
70	429.00	429.00
85	429.00	429.00
95	429.00	429.00
--	-	-
--	-	-

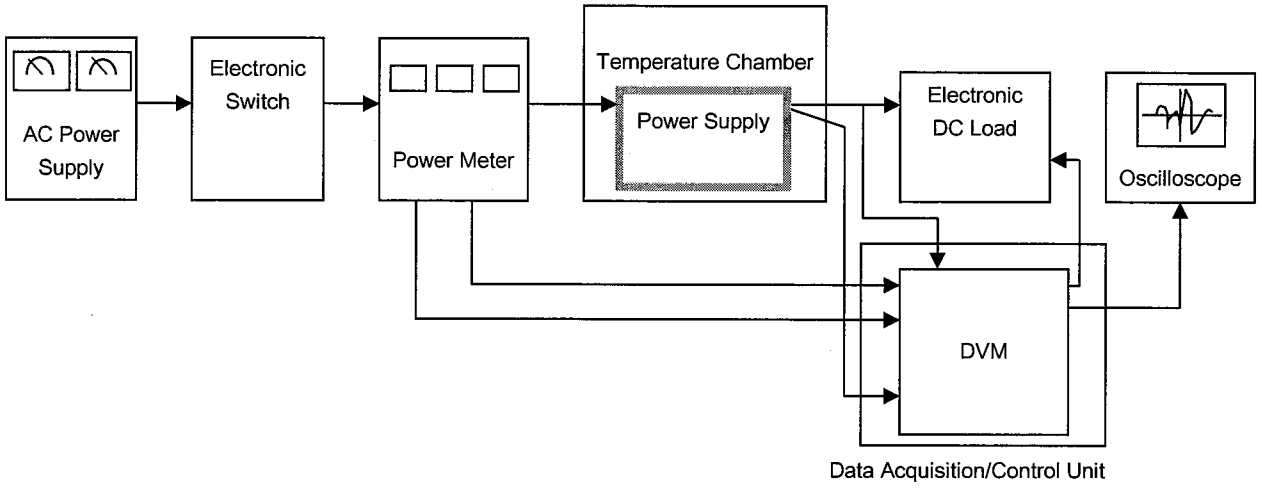


Figure A

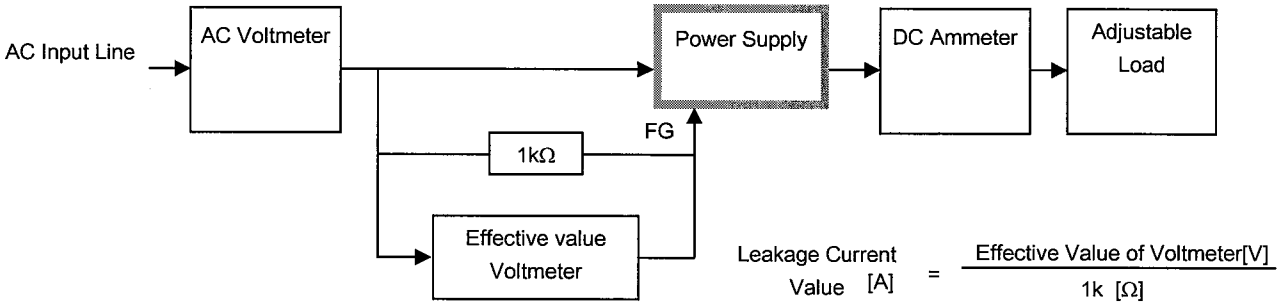


Figure B (DEN-AN)

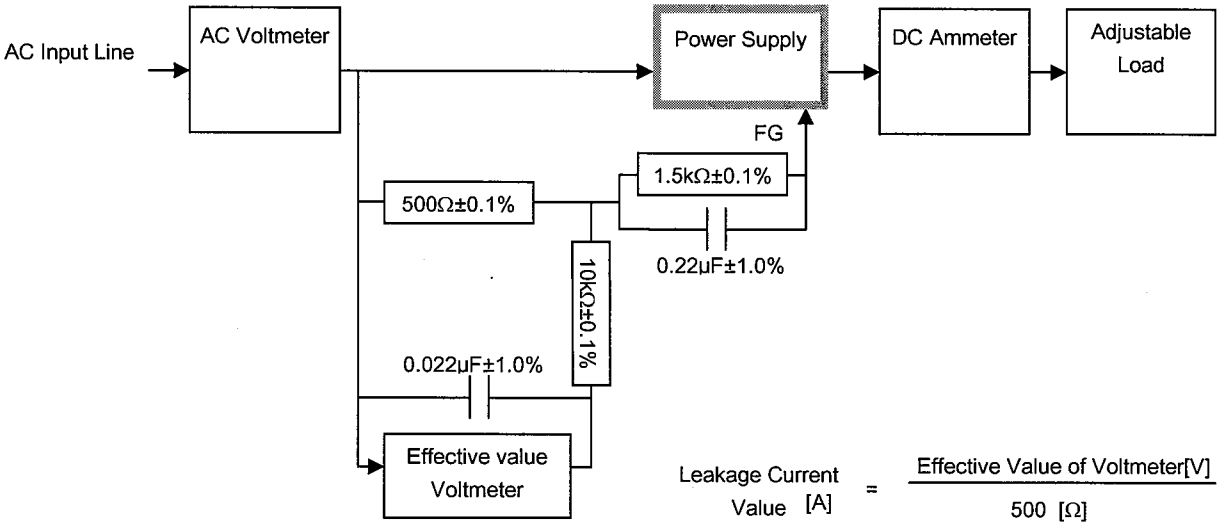


Figure B (IEC60950-1)