COSEL

参考資料

TEST DATA OF DPG750

(100V INPUT)

AC-DC Front End Module
March.8. 2010

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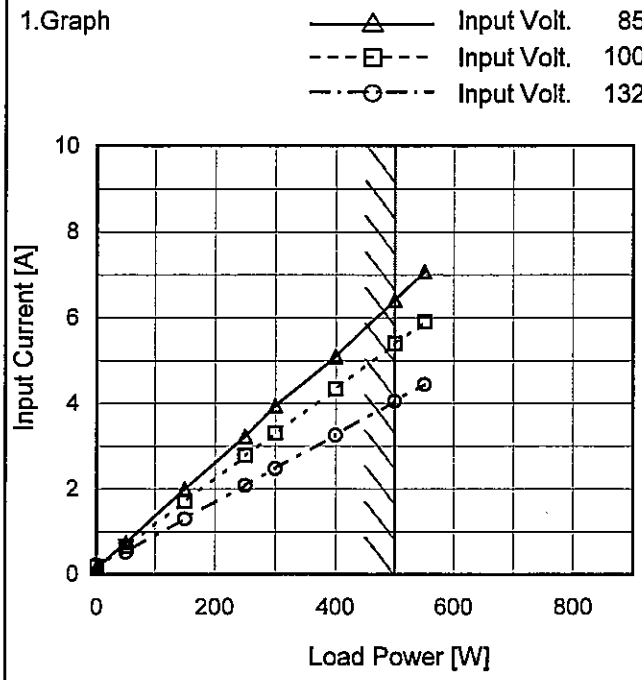
Model	DPG750
Item	Input Current (by Load Power)
Object	———

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

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	0.23
50	0.75	0.65	0.53
150	2.00	1.70	1.30
250	3.23	2.77	2.08
300	3.95	3.31	2.48
400	5.10	4.33	3.26
500	6.41	5.40	4.06
550	7.07	5.90	4.45
--	-	-	-
--	-	-	-
--	-	-	-

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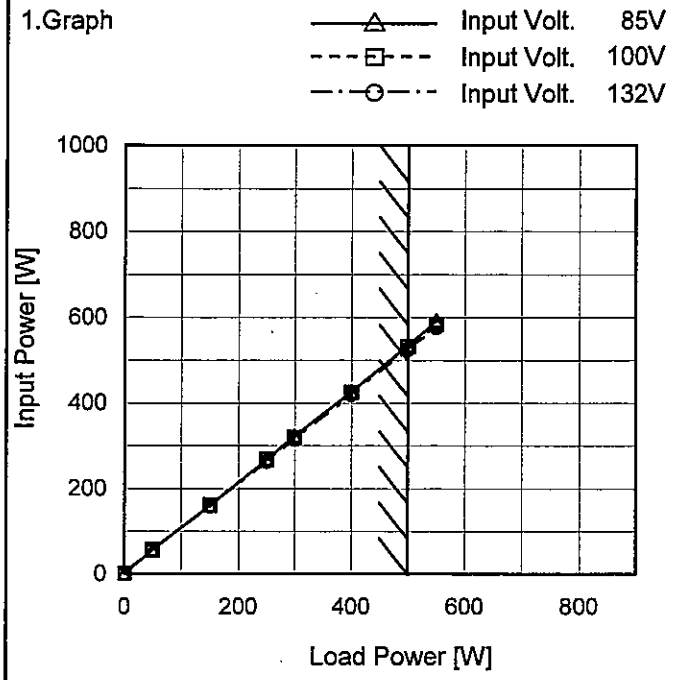
Model	DPG750
Item	Input Power (by Load Power)
Object	———————

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

Load Power [W]	Input Power [W]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0	0.2	0.3	0.4
50	56.8	56.6	57.1
150	161.7	161.4	159.8
250	267.2	268.5	263.7
300	323.6	319.0	315.7
400	426.8	424.3	420.0
500	535.3	531.4	525.7
550	592.7	583.0	576.7
---	-	-	-
---	-	-	-
---	-	-	-

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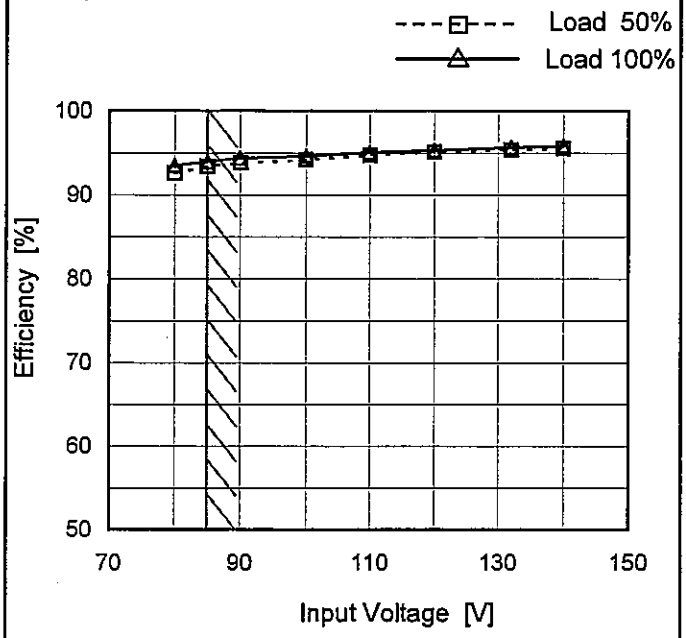
Model	DPG750
Item	Efficiency (by Input Voltage)
Object	————————

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	92.6	93.5
85	93.4	94.0
90	93.8	94.4
100	94.2	94.7
110	94.7	95.1
120	95.1	95.4
132	95.4	95.7
140	95.5	95.9
—	-	-

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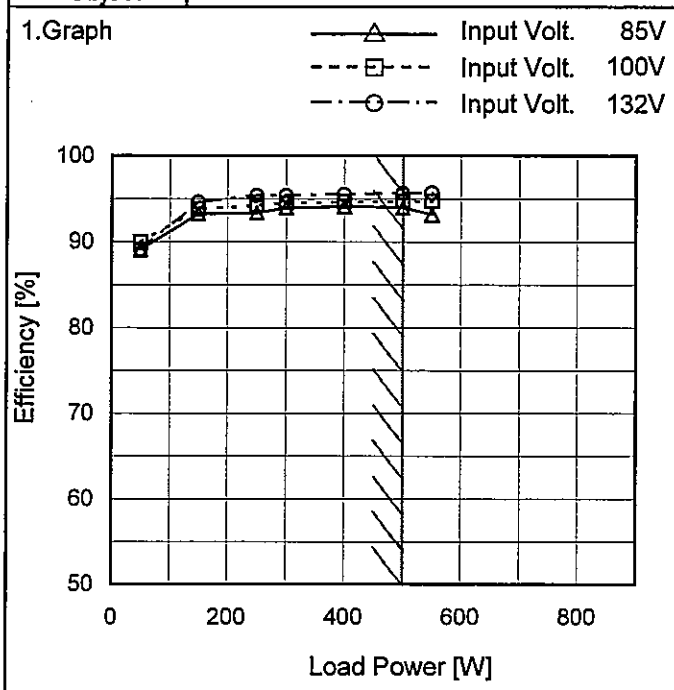
Model	DPG750
Item	Efficiency (by Load Power)
Object	———————

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

Load Power [W]	Efficiency [%] Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0	-	-	-
50	89.1	89.9	89.2
150	93.3	93.8	94.7
250	93.4	94.2	95.4
300	94.0	94.5	95.4
400	94.1	94.6	95.6
500	94.0	94.7	95.7
550	93.2	94.7	95.7
--	-	-	-
--	-	-	-
--	-	-	-

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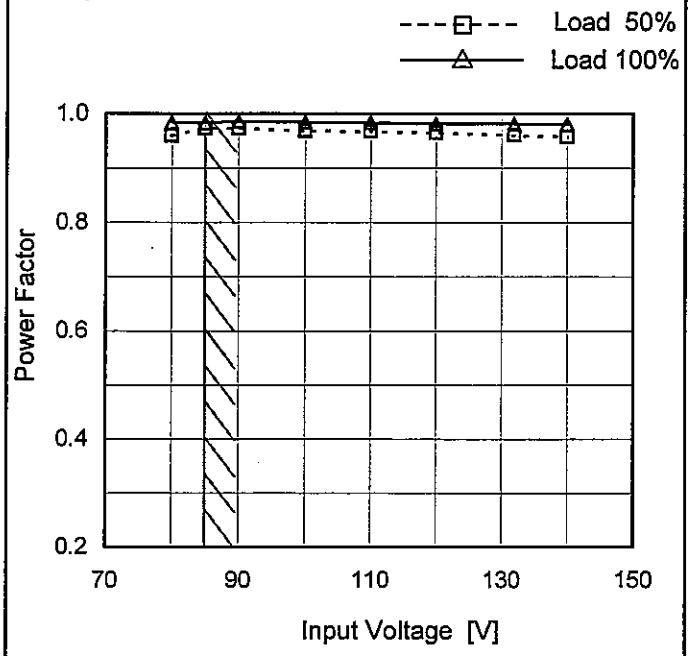
COSEL

Model	DPG750
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

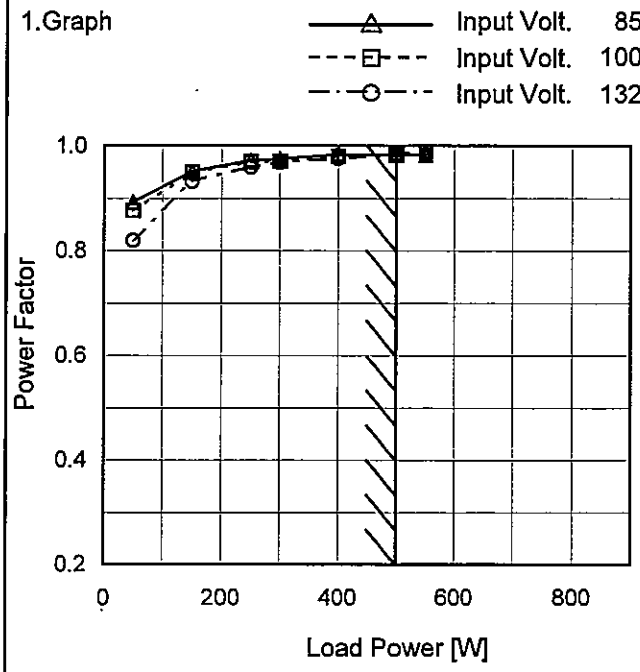
Input Voltage [V]	Power Factor	
	Load 50%	Load 100%
80	0.959	0.984
85	0.973	0.983
90	0.973	0.986
100	0.969	0.985
110	0.968	0.984
120	0.964	0.982
132	0.960	0.982
140	0.957	0.980
–	-	-

COSEL

Model	DPG750
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 current.

2.Values

Load Power [W]	Power Factor		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
50	0.893	0.876	0.820
150	0.952	0.949	0.933
250	0.973	0.969	0.960
300	0.976	0.970	0.969
400	0.985	0.980	0.976
500	0.983	0.985	0.982
550	0.983	0.989	0.983
---	-	-	-
---	-	-	-
---	-	-	-
---	-	-	-

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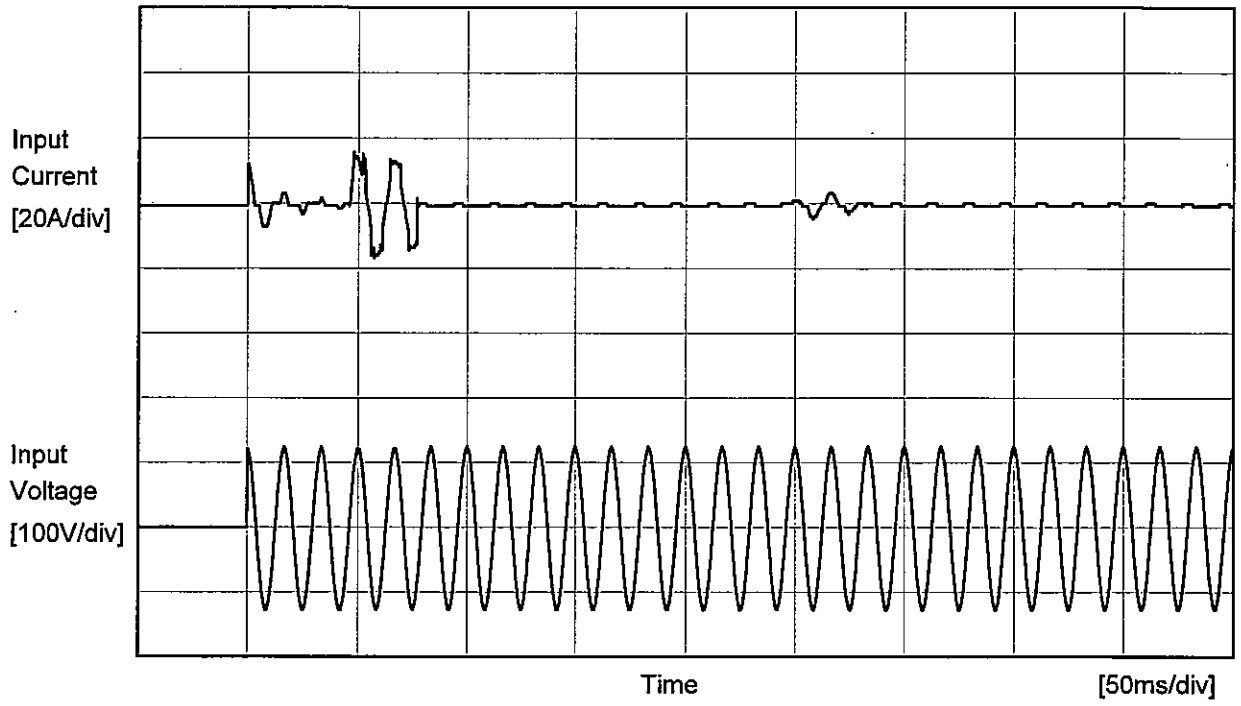
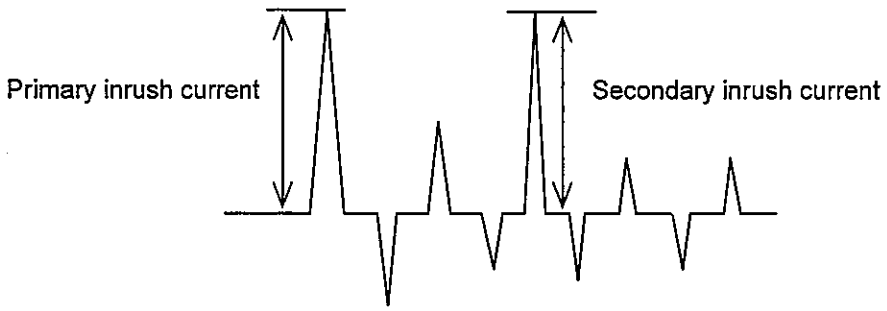
Model	DPG750
Item	Inrush Current
Object	———————

Temperature 25°C
Testing Circuitry Figure A



Input Voltage	100 V
Frequency	60 Hz
Load	0 %
Primary inrush current	12.0 A
Secondary inrush current	16.8 A



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Model	DPG750	
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	0.11	0.15	0.19
(B)IEC60950-1	0.11	0.16	0.19

Standards	Leakage Current [mA]		
	Input Volt. 170 [V]	Input Volt. 230 [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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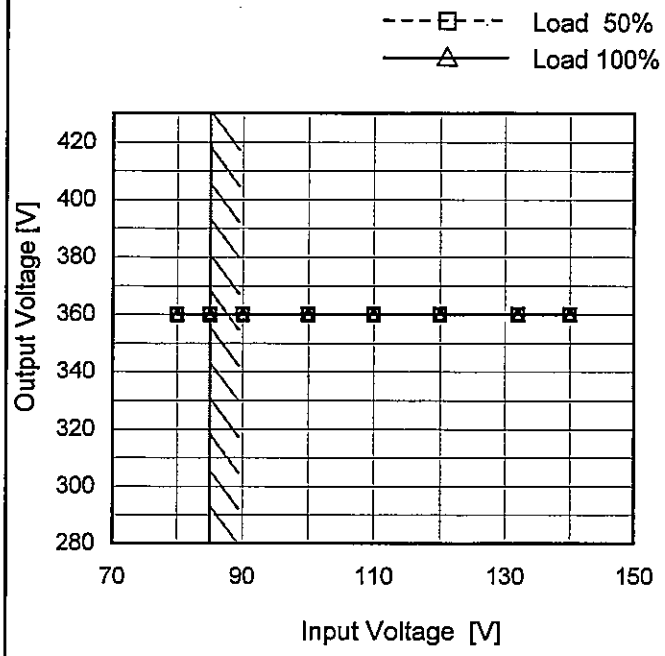
Model	DPG750
Item	Line Regulation
Object	+360V 500W

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	360.04	360.04
85	360.04	360.04
90	360.04	360.05
100	360.05	360.05
110	360.05	360.05
120	360.05	360.06
132	360.06	360.06
140	360.06	360.06
--	-	-

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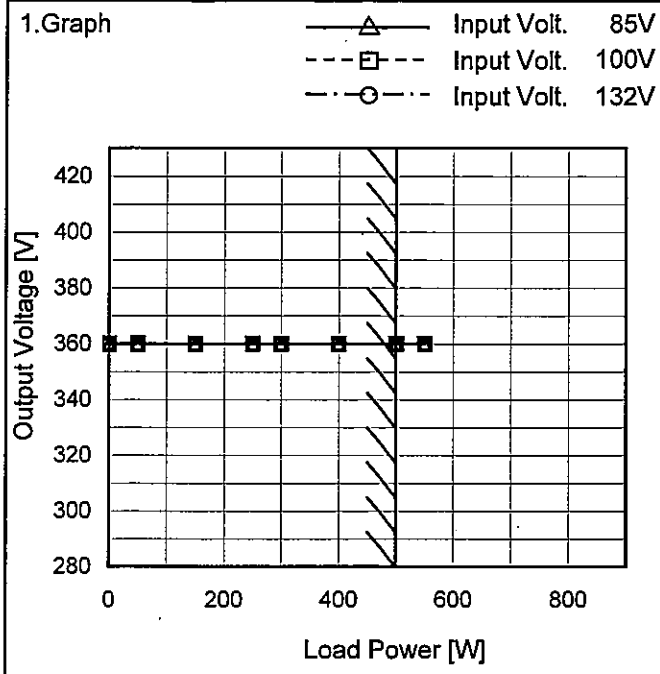
Model	DPG750
Item	Load Regulation
Object	+360V 500W

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

Load Power [W]	Output Voltage [V]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0	360.06	360.06	360.07
50	360.06	360.06	360.07
150	360.05	360.05	360.06
250	360.05	360.05	360.06
300	360.05	360.05	360.06
400	360.05	360.05	360.06
500	360.05	360.05	360.06
550	360.05	360.05	360.06
--	-	-	-
--	-	-	-
--	-	-	-

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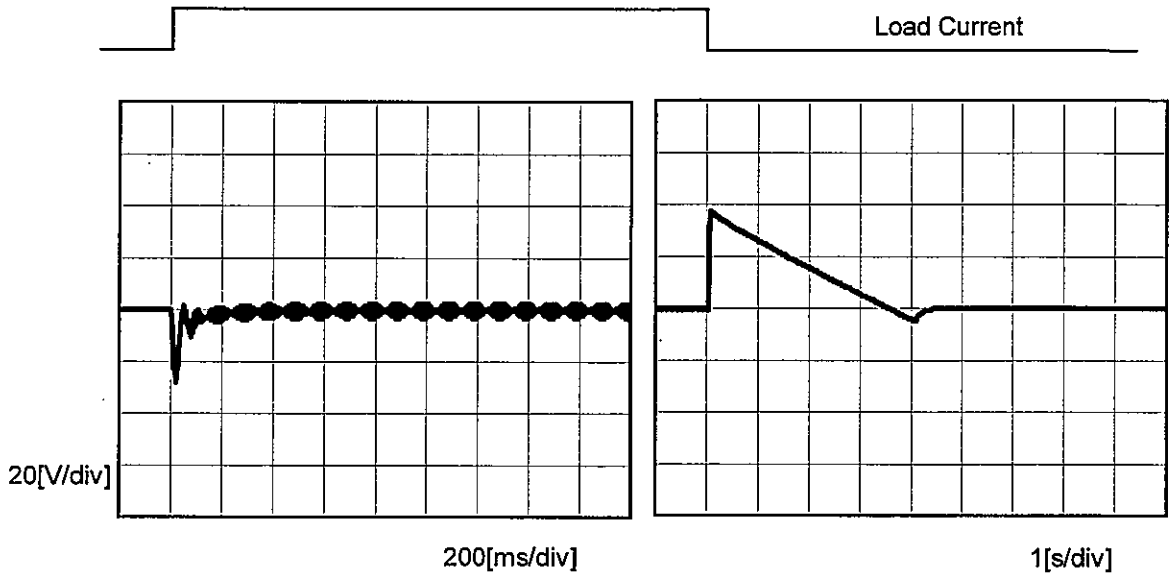
Model	DPG750
Item	Dynamic Load Response
Object	+360V500W

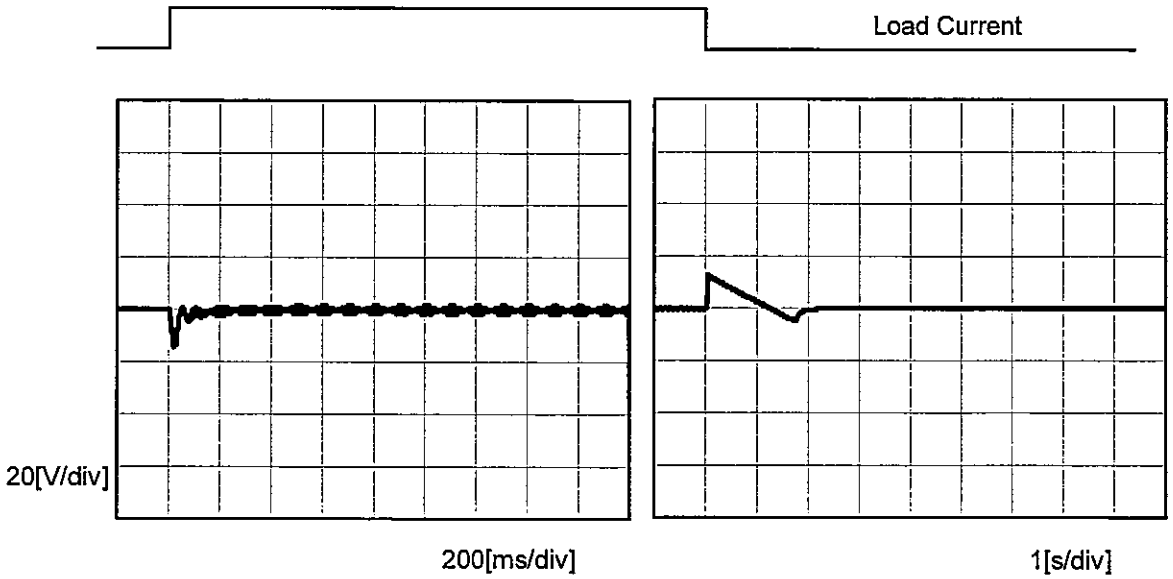
Temperature 25°C
Testing Circuitry Figure A

Input Volt. 100 V
Cycle 10 s

Min. Load (0 W) -- Load 100% (500 W)



Min. Load (0 W) -- Load 50% (250 W)

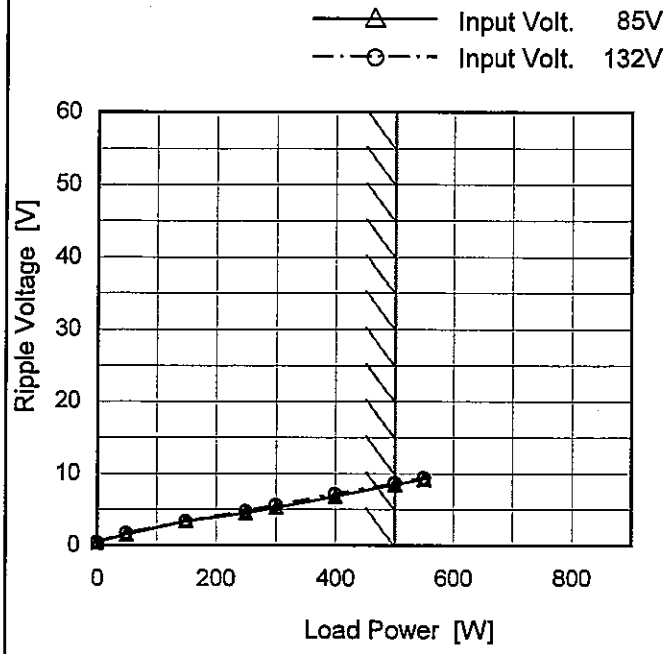


COSEL

Model	DPG750
Item	Ripple Voltage (by Load Current)
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 current.

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

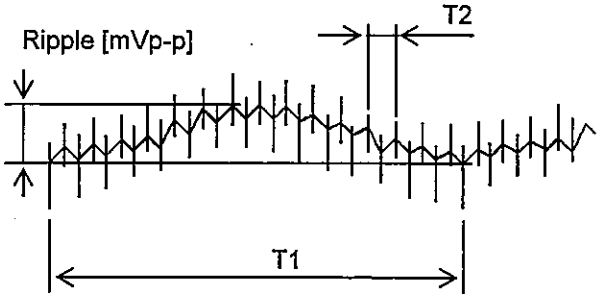


Fig. Complex Ripple Wave Form

2.Values

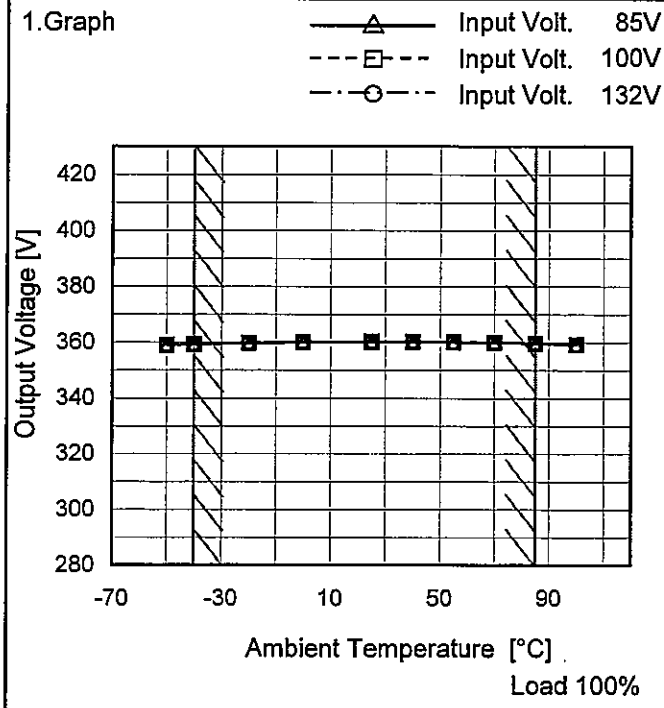
Load Power [W]	Ripple Voltage [V] Input Volt. 85 [V]	Ripple Voltage [V] Input Volt. 132 [V]
0	0.4	0.4
50	1.5	1.7
150	3.4	3.4
250	4.5	4.8
300	5.3	5.6
400	6.8	7.2
500	8.4	8.7
550	9.2	9.4
--	-	-
--	-	-
--	-	-

COSEL

Model	DPG750
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]
-50	359.00	359.01	359.03
-40	359.27	359.28	359.29
-20	359.75	359.76	359.77
0	360.09	360.10	360.11
25	360.27	360.27	360.28
40	360.26	360.27	360.28
55	360.18	360.17	360.18
70	359.97	359.97	359.98
85	359.66	359.66	359.66
100	359.18	359.17	359.30
--	-	-	-

COSEL

Model	DPG750	
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 : -40 - 85°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	25	132	0	360.29	±0.5	±0.1
Minimum Voltage	100	132	500	359.30		

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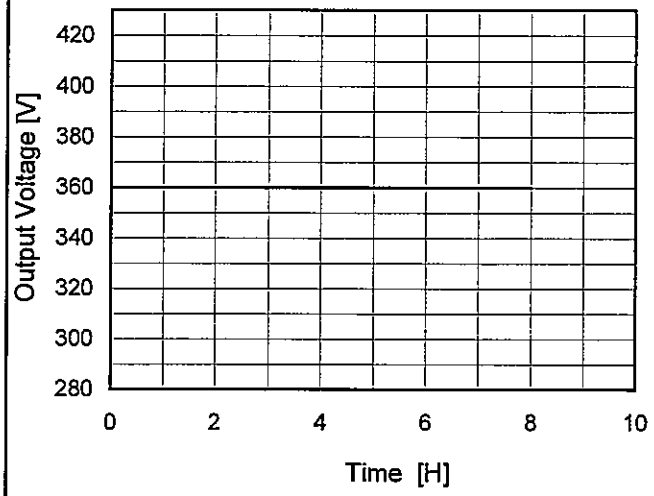
Model	DPG750
Item	Time Lapse Drift
Object	+360V 500W

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	359.96
0.5	360.01
1.0	360.01
2.0	360.01
3.0	360.01
4.0	360.01
5.0	360.01
6.0	360.01
7.0	360.01
8.0	360.01

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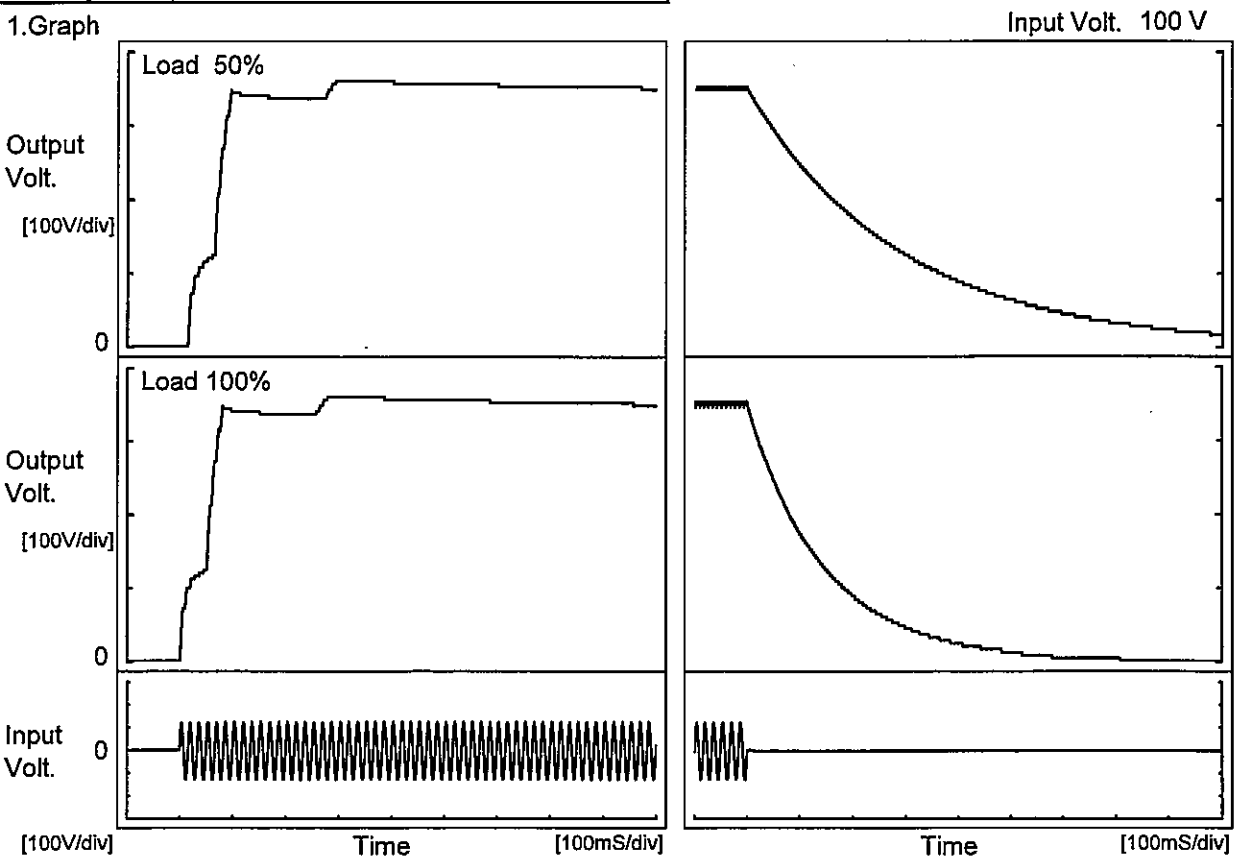
Model	DPG750
Item	Rise and Fall Time
Object	+360V 500W

Temperature 25°C
Testing Circuitry Figure A

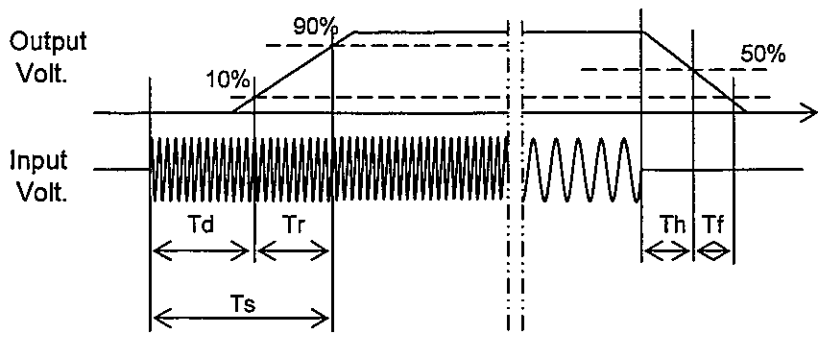
1.Graph



2.Values

[mS]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	3.0	75.0	78.0	194.0	492.0
100 %	3.0	74.0	77.0	97.0	247.0



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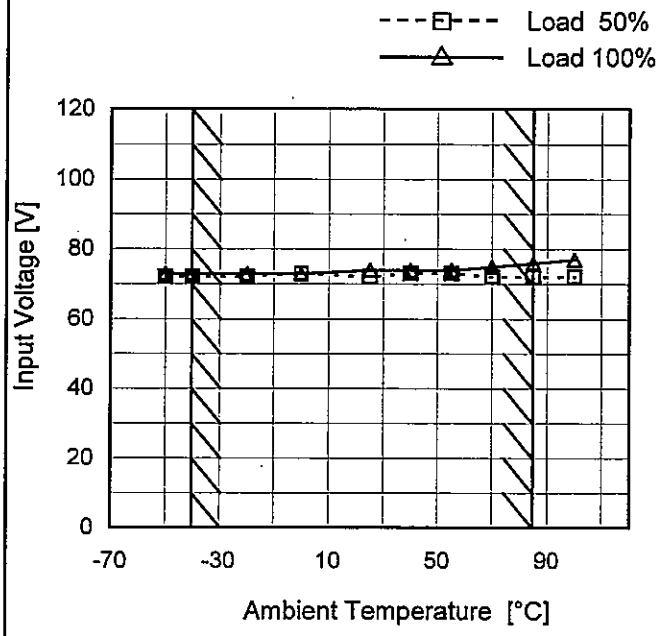
Model	DPG750
Item	Minimum Input Voltage for Regulated Output Voltage
Object	+360V 500W

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%
-50	73	73
-40	73	73
-20	73	73
0	73	73
25	73	74
40	73	74
55	73	74
70	72	75
85	72	76
100	72	77
–	-	-

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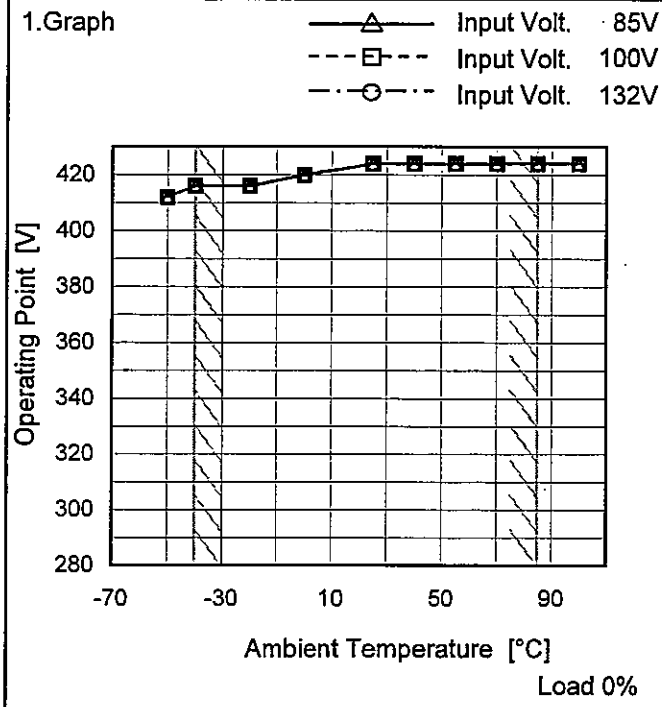
Model	DPG750
Item	Overvoltage Protection
Object	+360V500W

Testing Circuitry Figure A

1.Graph



Load 0%

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. 100[V]	Input Volt. 132[V]
-50	412.00	412.00	412.00
-40	416.00	416.00	416.00
-20	416.00	416.00	416.00
0	420.00	420.00	420.00
25	424.00	424.00	424.00
40	424.00	424.00	424.00
55	424.00	424.00	424.00
70	424.00	424.00	424.00
85	424.00	424.00	424.00
100	424.00	424.00	424.00
—	-	-	-

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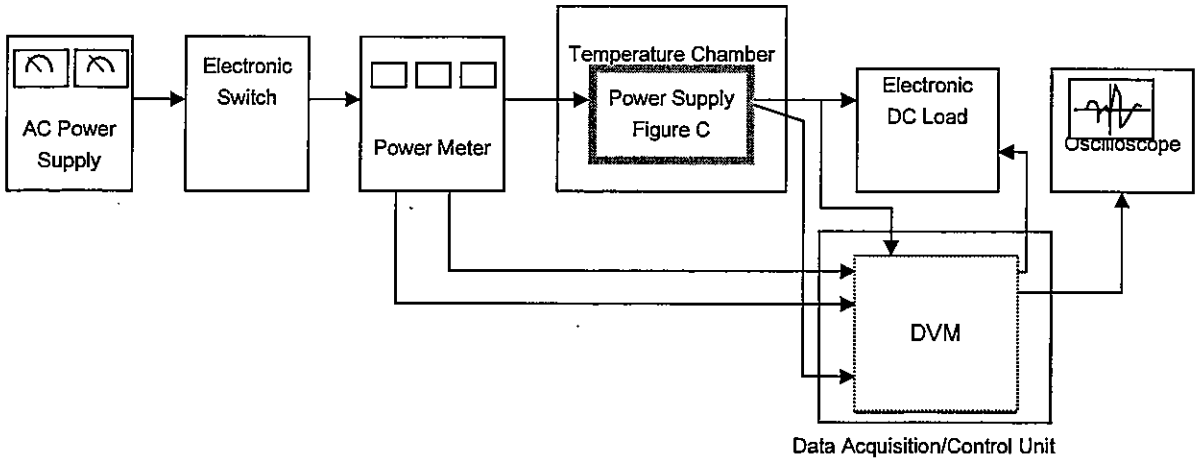

Figure A

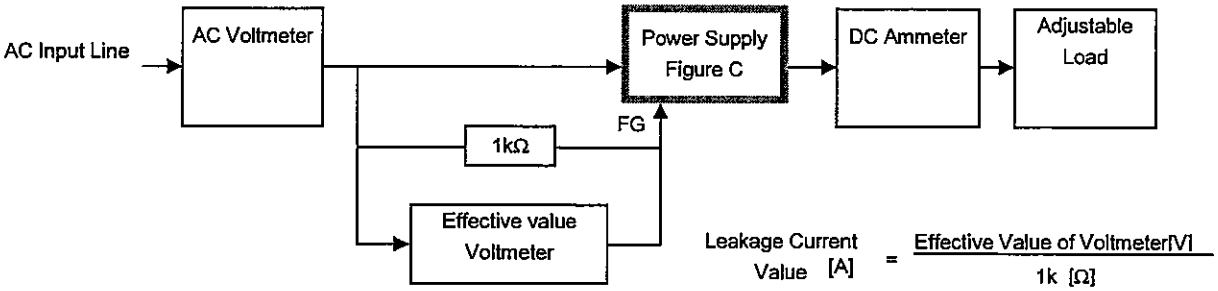

Figure B (DEN-AN)

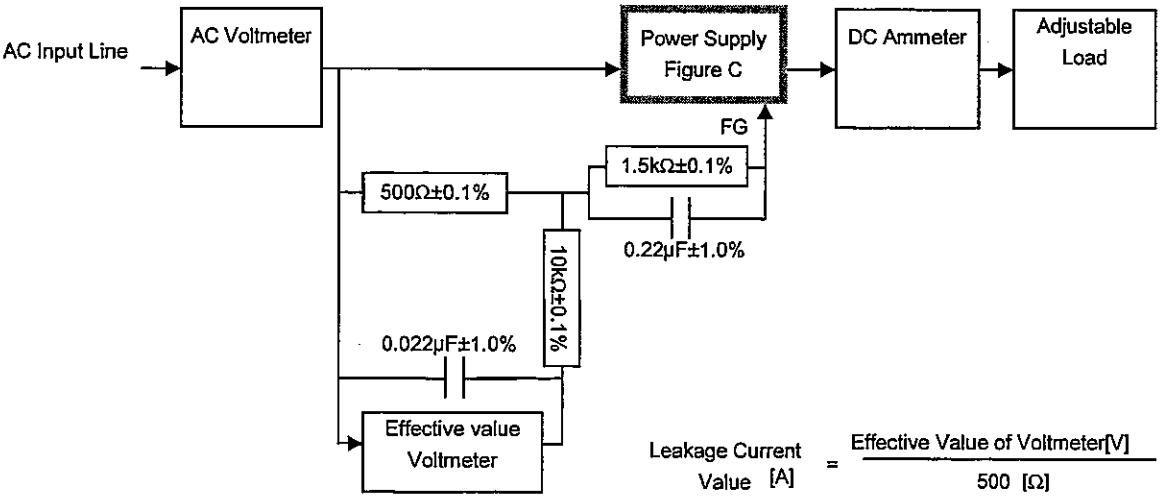

Figure B (IEC60950-1)

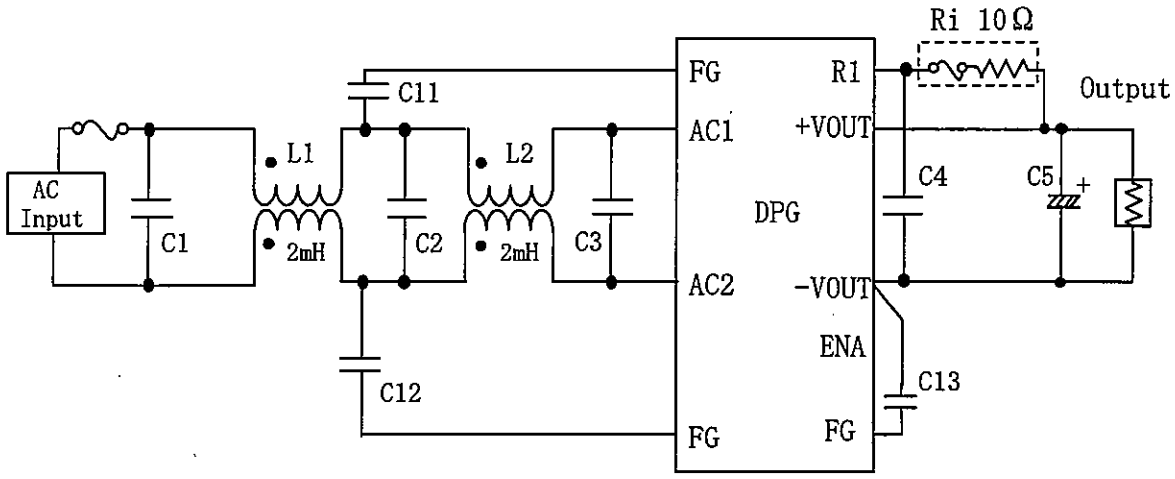

Figure C

C1, C2, C4	:	0.68uF 250V Film Capacitor ×2
C3	:	1.0uF 250V Film Capacitor ×2
C5	:	560uF 450V Electrolytic Capacitor
C11, C12, C13	:	2200pF Ceramic Capacitor
L1, L2	:	SC-15-200(NEC TOKIN)