参考資料

COSEL

TEST DATA OF R100-3

(100V INPUT)

Regulated DC Power Supply

Jan. 24, 2000

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コーセル株式会社

COSEL CO.,LTD.

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CONTENTS

1. Line Regulation ・・・・・・・・・・・・・・・・・・・・・・・・ 1
静的入力変動
2. Input Current (by Load Current) ・・・・・・・・・・・・・・・ 2
入力電流（負荷特性）
3. Input Power (by Load Current) ・・・・・・・・・・・・・・・・ 3
入力電力（負荷特性）
4. Efficiency (by Input Voltage) ・・・・・・・・・・・・・・・・ 4
効率（入力電圧特性）
5. Efficiency (by Load Current)・・・・・・・・・・・・・・・・・ 5
効率（負荷特性）
6. Hold-Up Time・・・・・・・・・・・・・・・・・・・・・・・・・ 6
出力保持時間
7. Instantaneous Interruption Compensation ・・・・・・・・・・ 7
瞬時停電保障
8. Load Regulation ・・・・・・・・・・・・・・・・・・・・・・・ 8
静的負荷変動
9. Overcurrent Protection・・・・・・・・・・・・・・・・・・・・ 9
過電流保護
10. Inrush Current・・・・・・・・・・・・・・・・・・・・・・・・ 10
突入電流
11. Rise and Fall Time・・・・・・・・・・・・・・・・・・・・・・ 11
立上り、立下り時間
12. Ambient Temperature Drift ・・・・・・・・・・・・・・・・・ 12
周囲温度変動
13. Minimum Input Voltage for Regulated Output Voltage・・・・ 13
最低レギュレーション電圧
14. Time Lapse Drift・・・・・・・・・・・・・・・・・・・・・・・ 14
経時ドリフト
15. Output Voltage Accuracy ・・・・・・・・・・・・・・・・・・ 15
定電圧精度
16. Figure of Testing Circuitry ・・・・・・・・・・・・・・・・・ 16
測定回路図

(Final Page 17)

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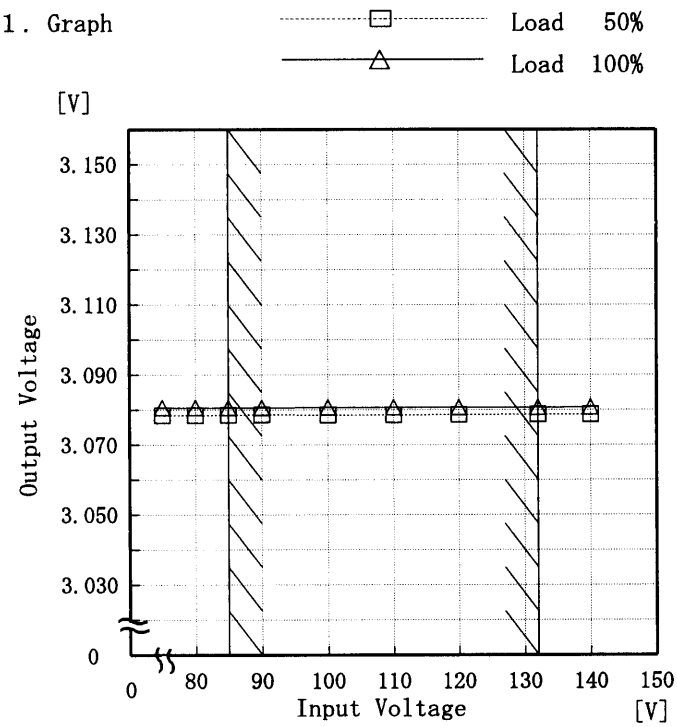
Model	R100-3
Item	Line Regulation 静的入力変動
Object	+3.0V20A

Temperature 25℃
Testing Circuitry Figure A

1. Graph



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

(注)斜線は定格入力電圧範囲を示す。

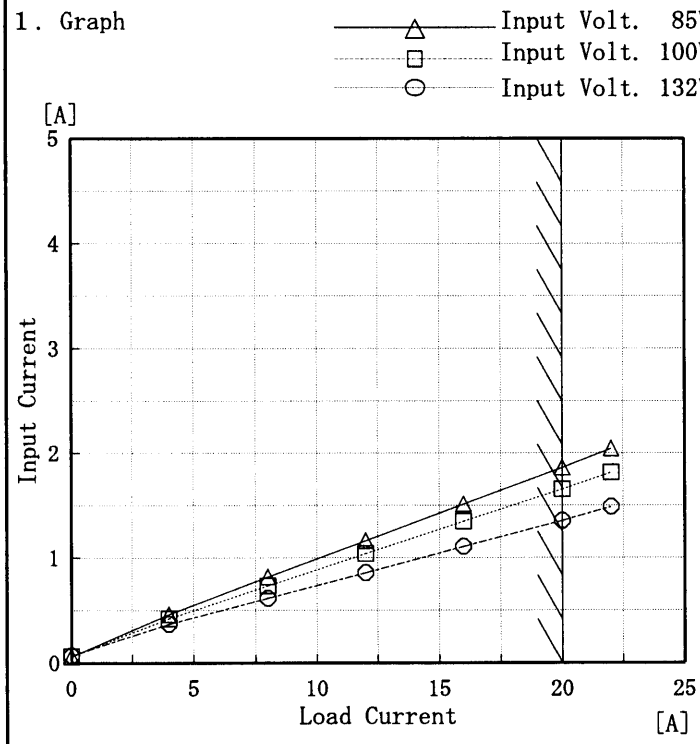
2. Values

Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
75	3.078	3.081
80	3.078	3.081
85	3.079	3.081
90	3.079	3.081
100	3.079	3.081
110	3.079	3.081
120	3.079	3.081
132	3.079	3.081
140	3.079	3.081

COSEL

Model	R100-3		
Item	Input Current (by Load Current) 入力電流（負荷特性）	Temperature Testing Circuitry	25℃ Figure A
Object	————		

1. Graph



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

(注)斜線は定格負荷電流範囲を示す。

2. Values

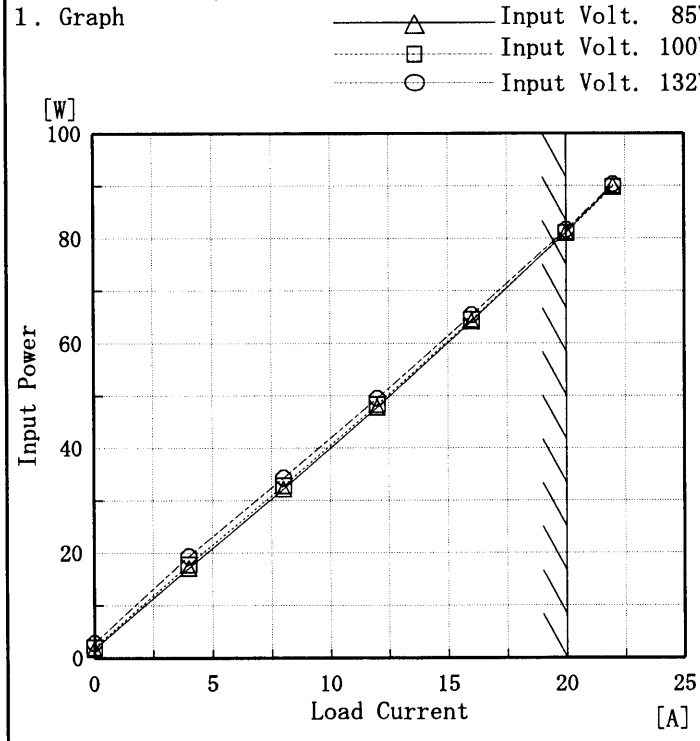
Load Current [A]	Input Current [A]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0	0.058	0.062	0.070
4	0.462	0.423	0.370
8	0.818	0.735	0.618
12	1.163	1.040	0.861
16	1.511	1.348	1.108
20	1.860	1.654	1.355
22	2.042	1.816	1.486
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—

COSEL

Model	R100-3
Item	Input Power (by Load Current) 入力電力 (負荷特性)
Object	————

Temperature 25℃
Testing Circuitry Figure A

1. Graph



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

(注)斜線は定格負荷電流範囲を示す。

2. Values

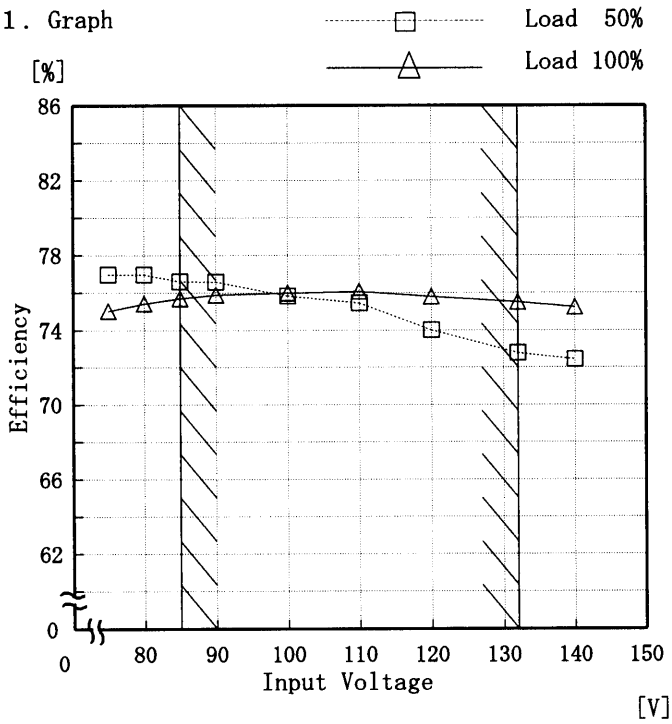
Load Current [A]	Input Power [W]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0	1.67	2.02	2.84
4	17.08	17.77	19.36
8	32.21	32.76	34.30
12	47.81	48.25	49.50
16	64.20	64.48	65.40
20	81.20	81.00	81.60
22	90.00	89.80	90.30
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—

COSEL

Model	R100-3
Item	Efficiency (by Input Voltage) 効率（入力電圧特性）
Object	———————————

Temperature 25℃
Testing Circuitry Figure A

1. Graph



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

(注)斜線は定格入力電圧範囲を示す。

2. Values

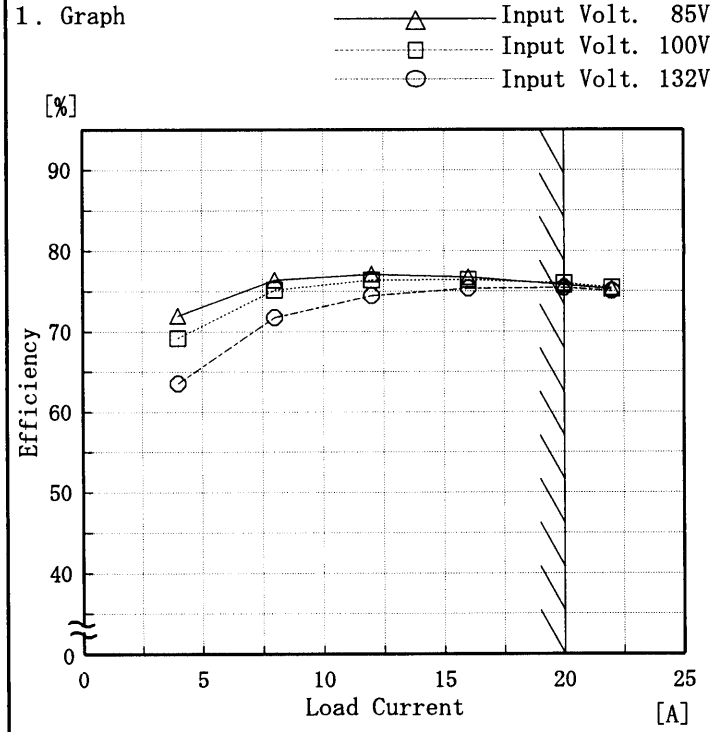
Input Voltage [V]	Efficiency [%]	
	Load 50%	Load 100%
75	77.0	75.0
80	77.0	75.4
85	76.6	75.7
90	76.6	75.9
100	75.8	76.0
110	75.5	76.1
120	74.0	75.8
132	72.8	75.5
140	72.4	75.2

COSEL

Model	R100-3
Item	Efficiency (by Load Current) 効率 (負荷特性)
Object	————

Temperature 25℃
Testing Circuitry Figure A

1. Graph



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

(注)斜線は定格負荷電流範囲を示す。

2. Values

Load Current [A]	Efficiency [%] Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
4	72.0	69.2	63.5
8	76.4	75.1	71.8
12	77.1	76.4	74.5
16	76.7	76.4	75.4
20	75.8	76.0	75.4
22	75.3	75.5	75.0
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—

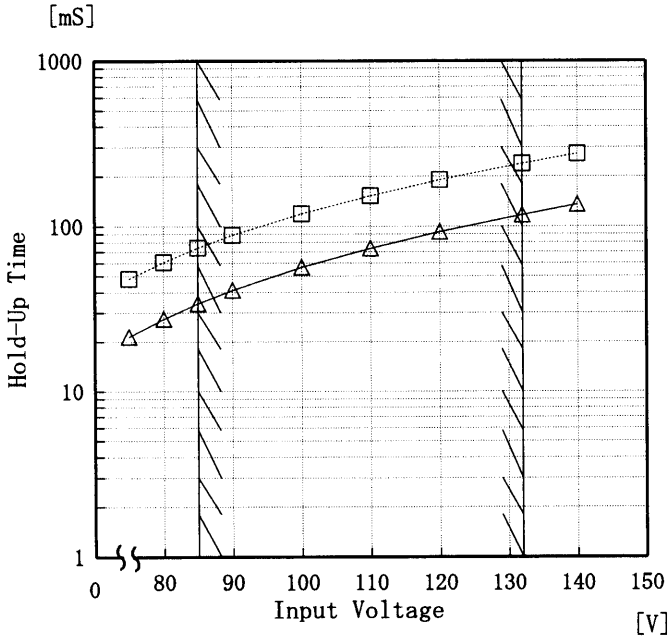
COSEL

Model	R100-3
Item	Hold-Up Time 出力保持時間
Object	+3.0V20A

Temperature 25℃
Testing Circuitry Figure A

1. Graph

Load 50%
Load 100%



This duration covers from Shut-off of input voltage to the moment when output voltage descends to the rated range of voltage accuracy.

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

出力保持時間とは、入力電圧断から出力電圧が、定電圧精度の規格範囲を保持しているところまでの時間。

(注)斜線は定格入力電圧範囲を示す。

2. Values

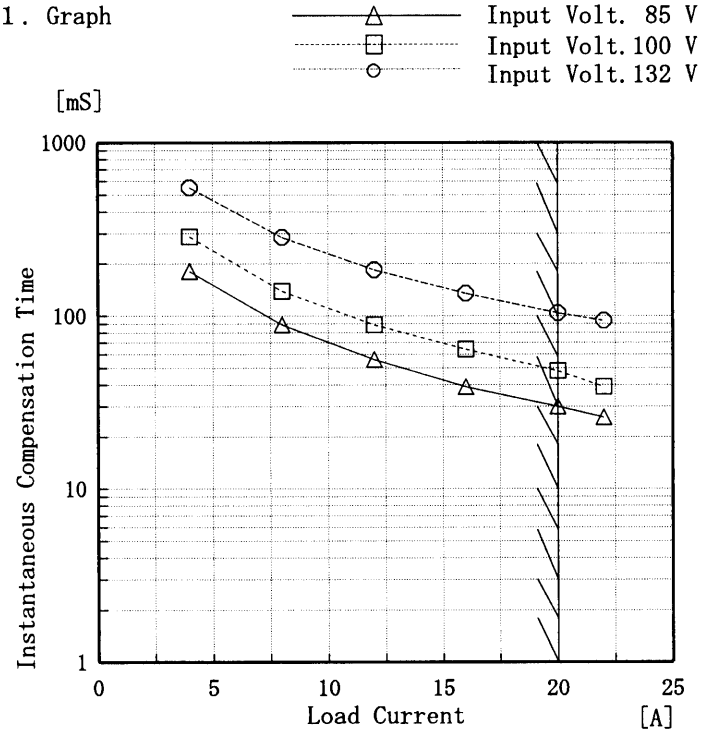
Input Voltage [V]	Hold-Up Time [mS]	
	Load 50%	Load 100%
75	48	21
80	61	28
85	74	34
90	88	41
100	119	57
110	153	74
120	191	93
132	240	117
140	275	136

COSEL

Model	R100-3
Item	Instantaneous Interruption Compensation 瞬時停電保障
Object	+3.0V20A

Temperature 25℃
Testing Circuitry Figure A

1. Graph



This duration covers from Shut-off of input voltage to the moment when output voltage descends to the rated range of voltage accuracy.
Note:Slanted line shows the range of the rated load current.

瞬時停電保障時間とは、出力電圧が定電圧精度の規格範囲を保持している瞬時停電時間をいう。
(注)斜線は定格負荷電流範囲を示す。

2. Values

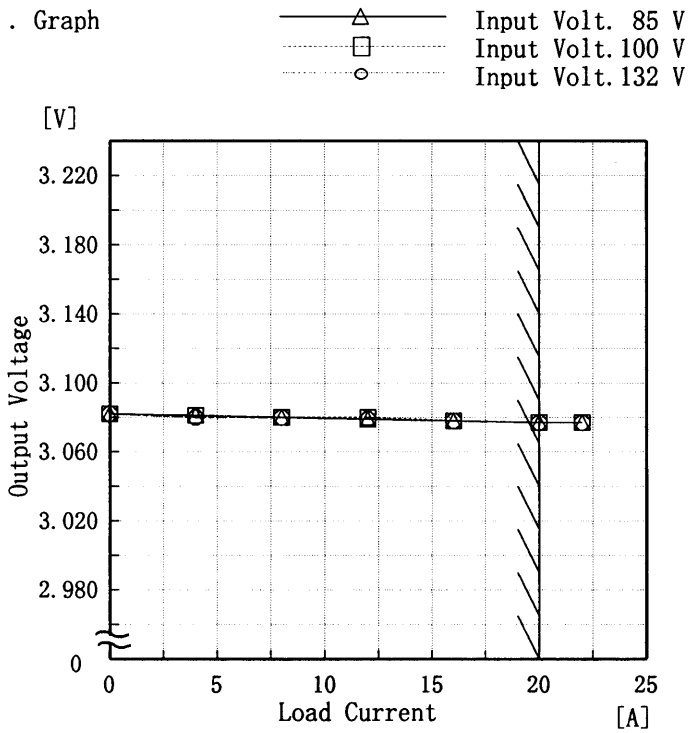
Load Current [A]	Time [mS]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0	—	—	—
4	181	287	551
8	89	139	285
12	56	89	185
16	39	64	135
20	30	48	104
22	26	39	94
—	—	—	—
—	—	—	—
—	—	—	—
—	—	—	—

COSEL

Model	R100-3
Item	Load Regulation 静的負荷変動
Object	+3.0V20A

Temperature 25℃
Testing Circuitry Figure A

1. Graph



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

(注)斜線は定格負荷電流範囲を示す。

2. Values

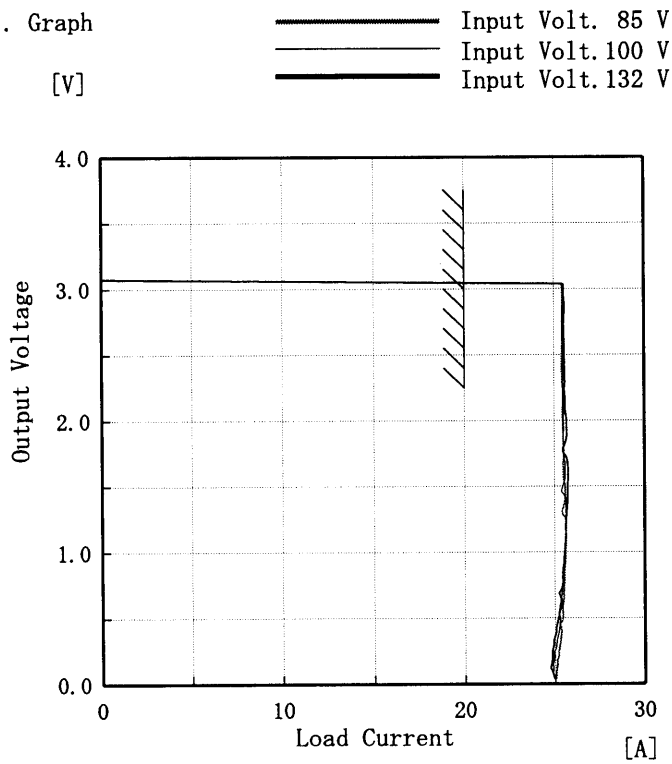
Load Current [A]	Output Voltage [V]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0	3.082	3.082	3.082
4	3.081	3.081	3.080
8	3.080	3.080	3.080
12	3.079	3.080	3.079
16	3.078	3.078	3.078
20	3.077	3.077	3.077
22	3.077	3.077	3.077
—	—	—	—
—	—	—	—
—	—	—	—

COSEL

Model	R100-3
Item	Overcurrent Protection 過電流保護
Object	+3.0V20A

Temperature 25℃
Testing Circuitry Figure A

1. Graph



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

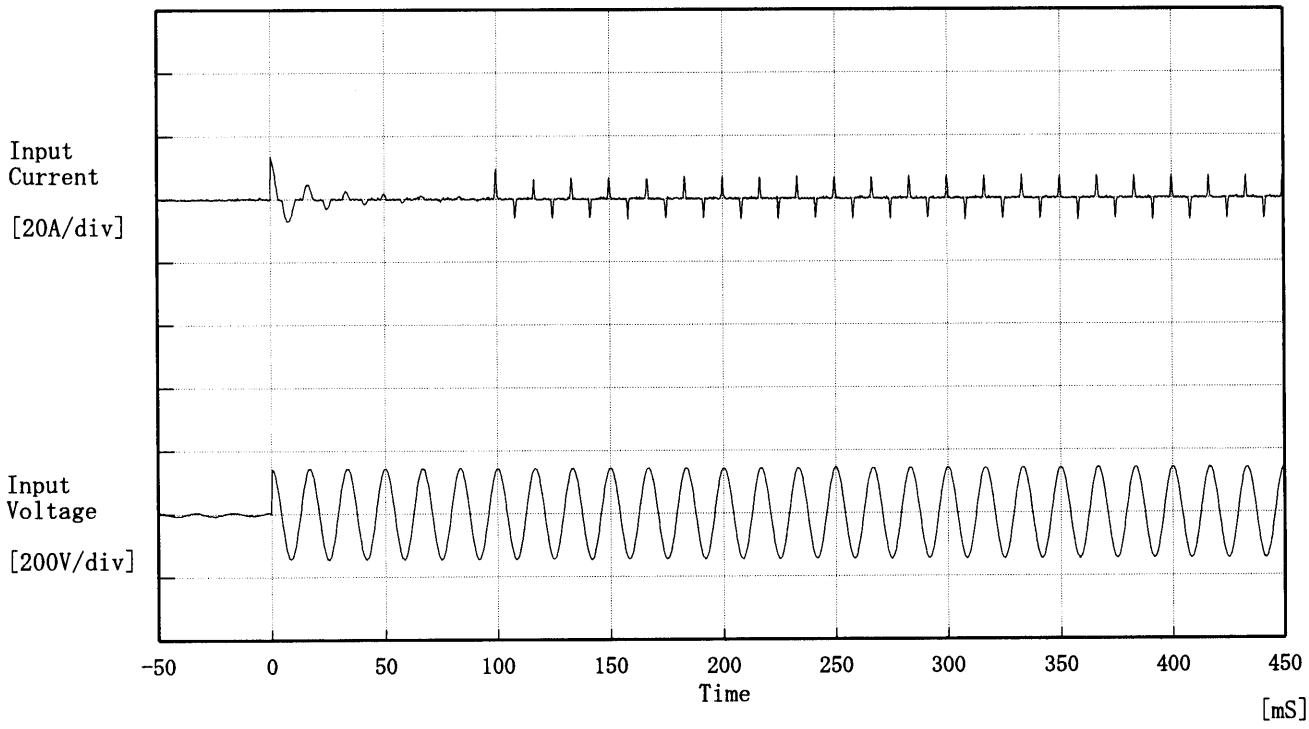
(注)斜線は定格負荷電流範囲を示す。

2. Values

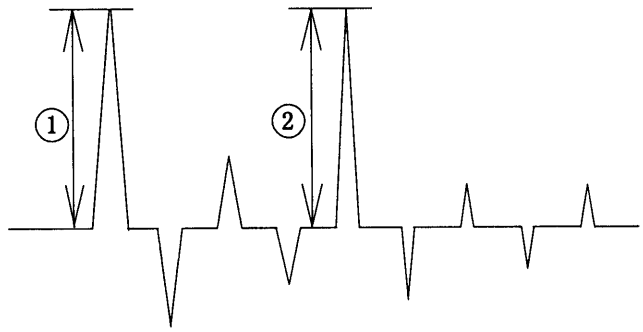
Output Voltage [V]	Load Current [A]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
3.00	25.45	25.49	25.52
2.85	25.46	25.47	25.56
2.70	25.46	25.43	25.52
2.40	25.42	25.50	25.57
2.10	25.47	25.48	25.57
1.80	25.50	25.48	25.55
1.50	25.56	25.49	25.73
1.20	25.63	25.61	25.61
0.90	25.58	25.50	25.50
0.60	25.47	25.38	25.33
0.30	25.27	25.06	24.93
0.00	25.04	24.92	24.98

COSEL

Model	R100-3		
Item	Inrush Current 突入電流	Temperature	25℃
		Testing Circuitry	Figure A
Object	――――――――		



Input Voltage 100 V
Frequency 60 Hz
Load 100 %
Inrush Current
① 13.44 [A]
② 9.44 [A]



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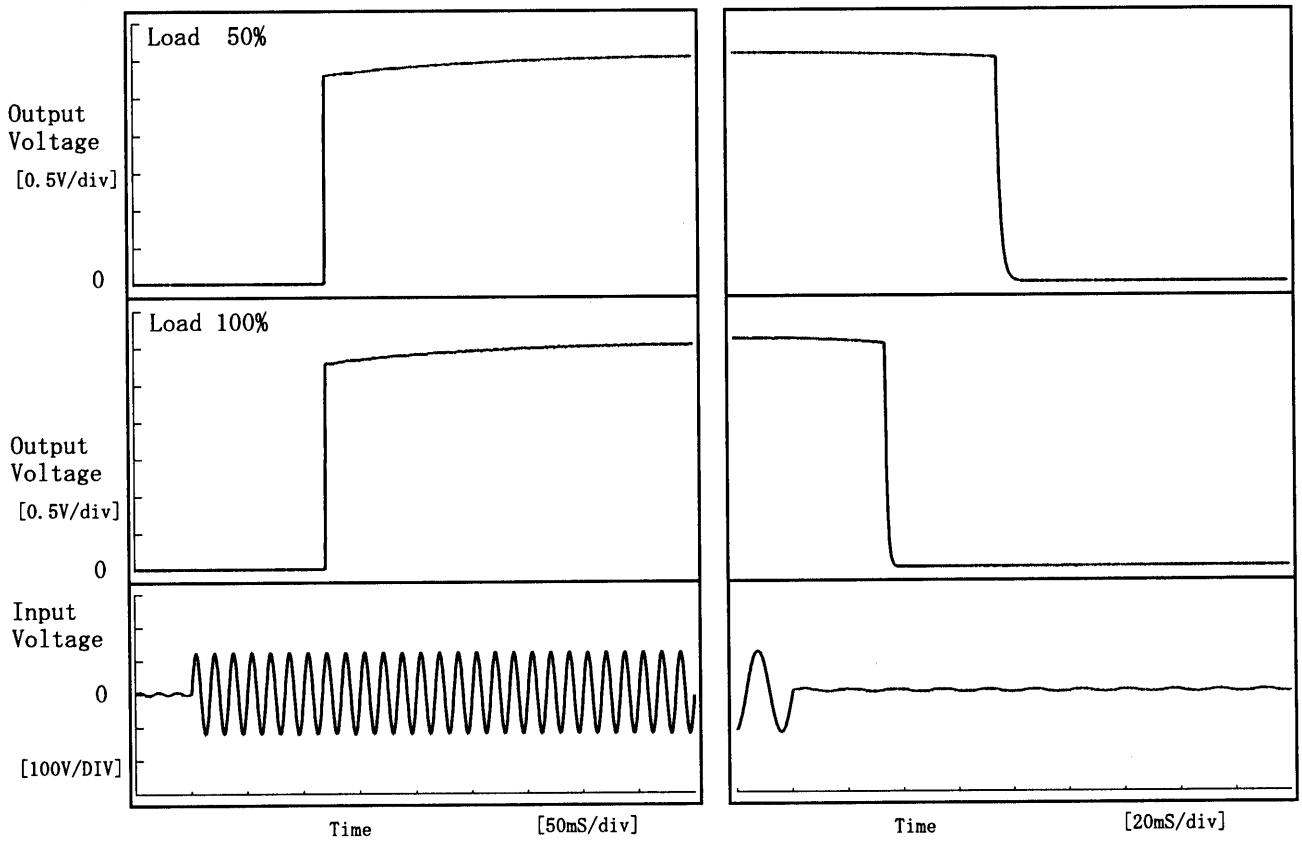
Model	R100-3		
Item	Rise and Fall Time 立上り、立下り時間	Temperature Testing Circuitry	25℃ Figure A
Object	+3.0V20A		

1. Graph

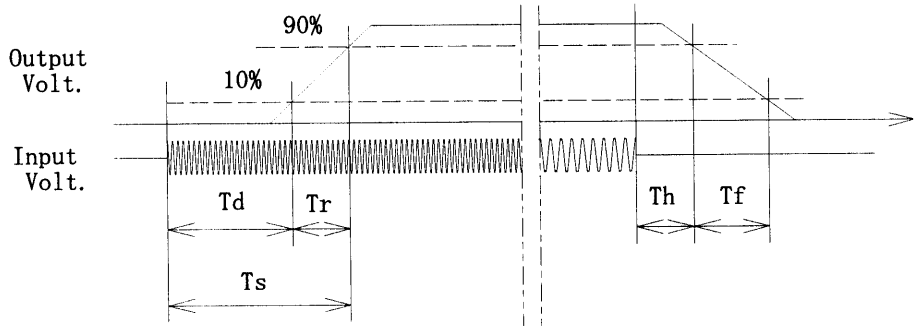
Input Volt. 85 V



2. Values

[mS]

Load \ Time	T d	T r	T s	T h	T f
50 %	120.0	0.8	120.8	75.2	3.0
100 %	120.0	0.8	120.8	34.5	1.5

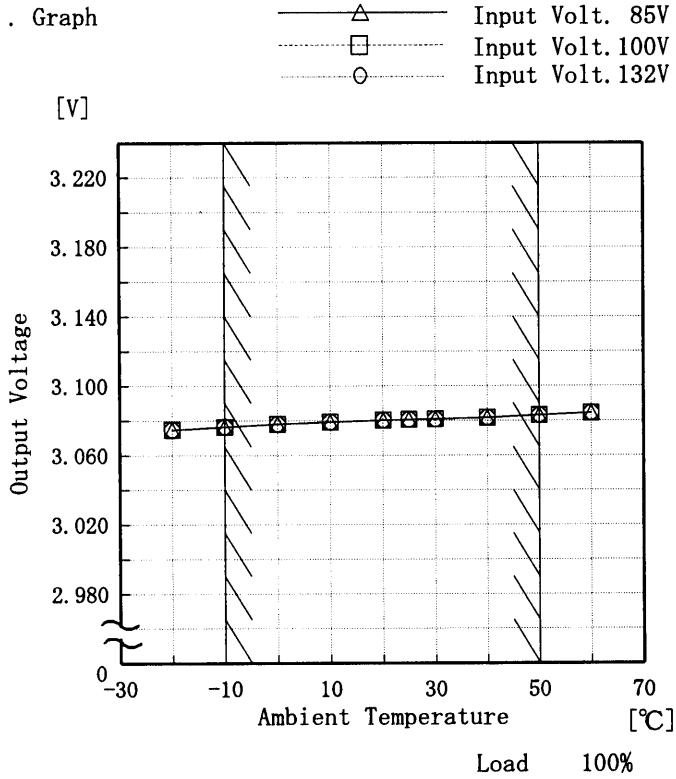


COSEL

Model	R100-3
Item	Ambient Temperature Drift 周囲温度変動
Object	+3.0V20A

Testing Circuitry Figure A

1. Graph



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

(注)斜線は定格周囲温度範囲を示す。

2. Values

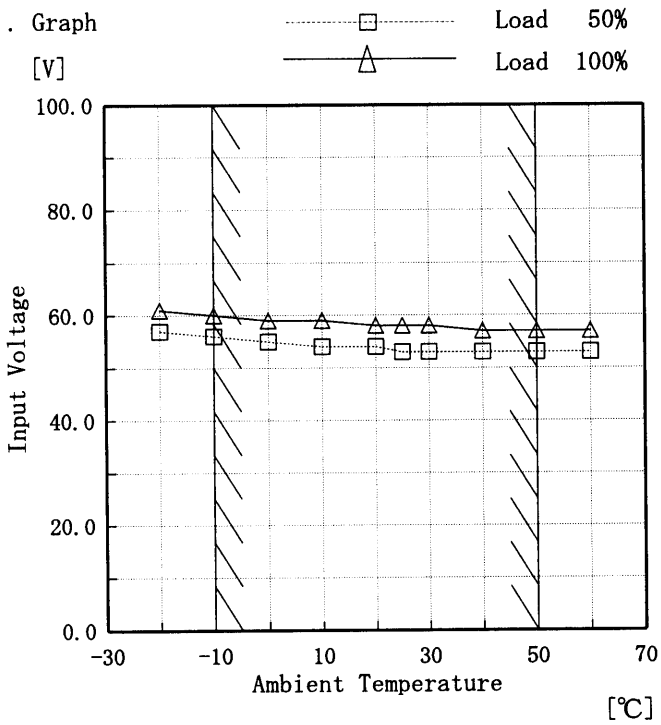
Ambient Temperature [℃]	Output Voltage [V]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
-20	3.075	3.075	3.075
-10	3.076	3.076	3.077
0	3.078	3.078	3.078
10	3.079	3.079	3.079
20	3.080	3.080	3.080
25	3.081	3.081	3.081
30	3.081	3.081	3.081
40	3.082	3.082	3.082
50	3.083	3.083	3.083
60	3.084	3.084	3.085
—	—	—	—

COSEL

Model	R100-3
Item	Minimum Input Voltage for Regulated Output Voltage 最低レギュレーション電圧
Object	+3.0V20A

Testing Circuitry Figure A

1. Graph



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

(注)斜線は定格周囲温度範囲を示す。

2. Values

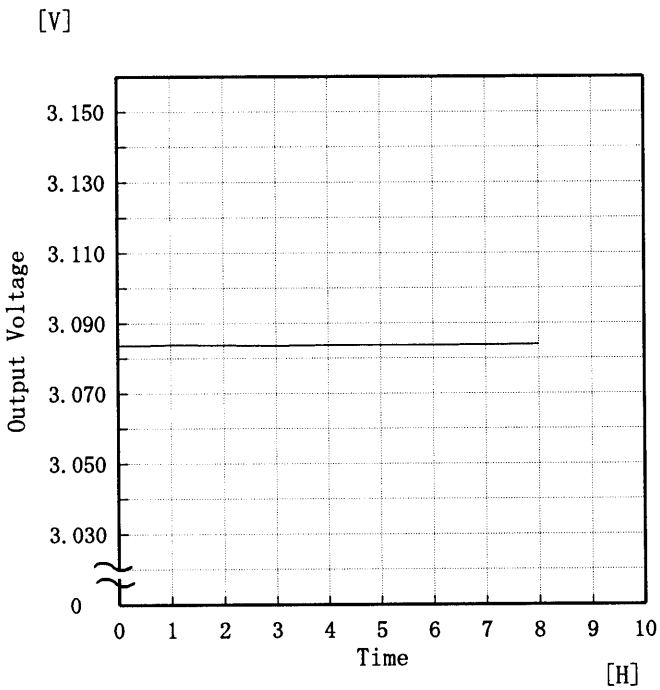
Ambient Temperature [℃]	Input Voltage [V]	
	Load 50%	Load 100%
-20	57	61
-10	56	60
0	55	59
10	54	59
20	54	58
25	53	58
30	53	58
40	53	57
50	53	57
60	53	57
—	—	—

COSEL

Model	R100-3
Item	Time Lapse Drift 経時ドリフト
Object	+3.0V20A

Temperature 25℃
Testing Circuitry Figure A

1. Graph



Input Volt. 100V
Load 100%

2. Values

Time since start [H]	Output Voltage [V]
0.0	3.083
0.5	3.084
1.0	3.084
2.0	3.084
3.0	3.084
4.0	3.084
5.0	3.084
6.0	3.084
7.0	3.084
8.0	3.084

COSEL

Model	R100-3	
Item	Output Voltage Accuracy　定電圧精度	Testing Circuitry　Figure A
Object	+3.0V20A	

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　: -10～50 ℃
Input Voltage :　85～132 V
Load Current　:　0～20 A

* Output Voltage Accuracy = ±(Maximum of Output Voltage　− Minimum of Output Voltage)／2

$$\text{* Output Voltage Accuracy (Ration)} = \frac{\text{Output Voltage Accuracy}}{\text{Rated Output Voltage}} \times 100$$

1. 定電圧精度

周囲温度、入力電圧、負荷電流を下記仕様内で、任意に変動させたときの出力電圧の変動をいう。

周囲温度　　-10～50 ℃
入力電圧　　85～132 V
負荷電流　　0～20 A

* 定電圧精度(変動値) ＝ ±(出力電圧の最高値−出力電圧の最低値)／2

$$\text{* 定電圧精度(変動率)} = \frac{\text{変動値}}{\text{定格出力電圧}} \times 100$$

2. Values

Item	Temperature [℃]	Input Voltage [V]	Output Current [A]	Output Voltage [V]	Output Voltage Accuracy [mV]	Output Voltage Accuracy (Ration) [%]
Maximum Voltage	50	100	20	3.083	±5	±0.2
Minimum Voltage	-10	85	0	3.073		

COSEL

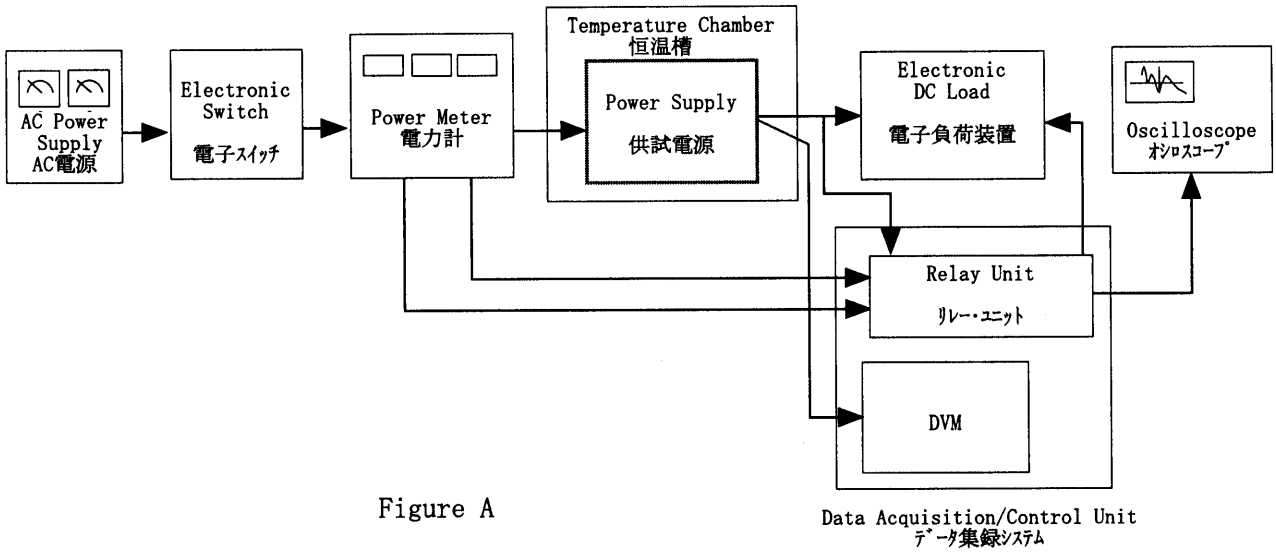


Figure A

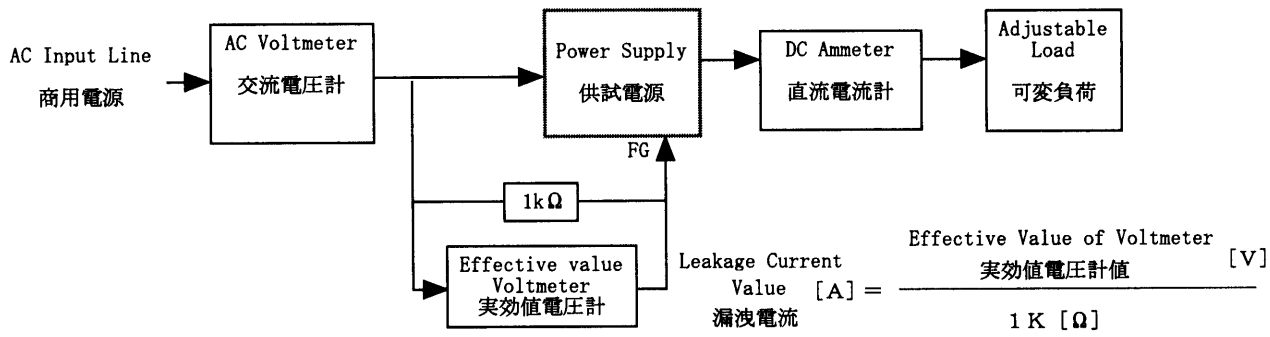


Figure B(DENTORI)

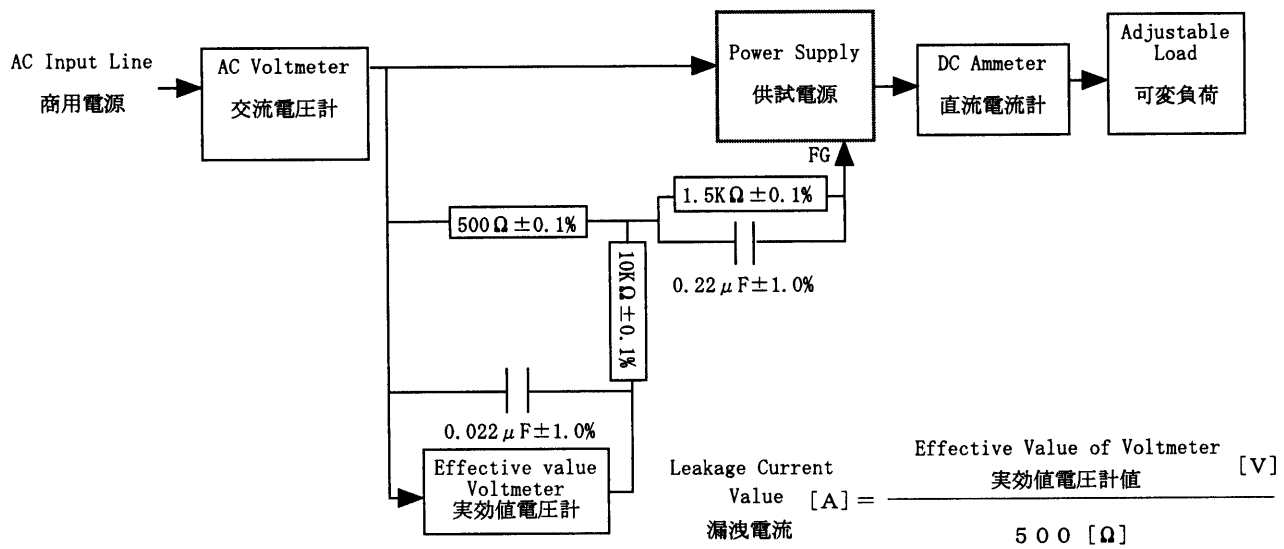


Figure B（IEC60950）

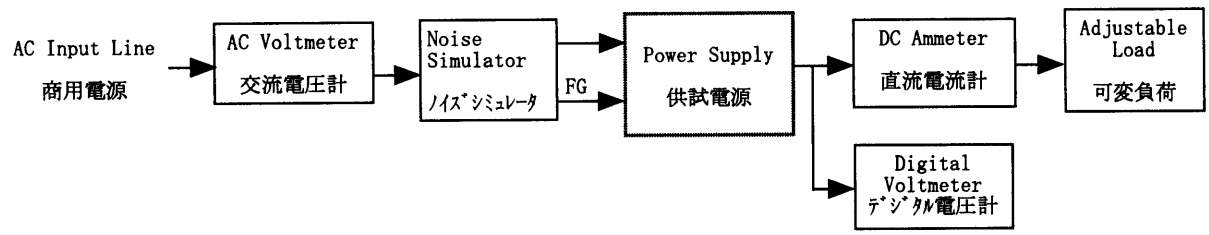


Figure C

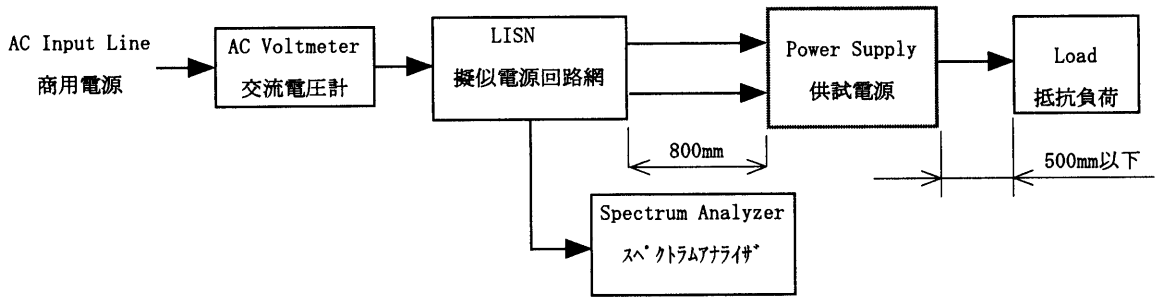


Figure D

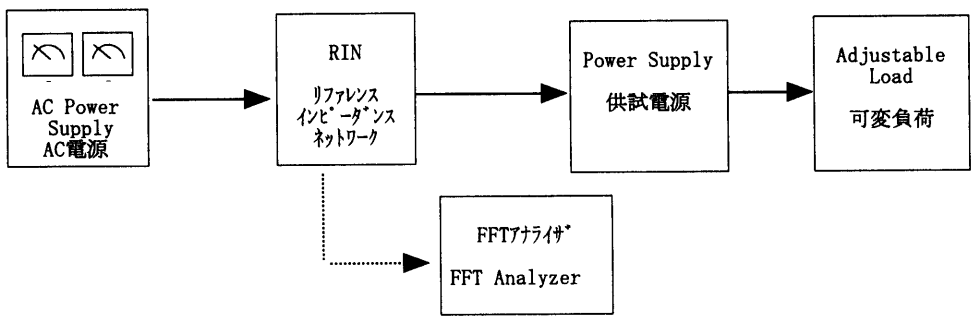


Figure E