



TEST DATA OF SFS20481R8

Regulated DC Power Supply
Sep 10, 2004

Approved by : Isao Yasuda
Isao Yasuda Design Manager

Prepared by : Kazuhiro Horii
Kazuhiro Horii Design Engineer

COSEL CO.,LTD.

CONTENTS

1.Input Current (by Input Voltage)	1
2.Input Current (by Load Current)	2
3.Input Power (by Load Current)	3
4.Efficiency (by Input Voltage)	4
5.Efficiency (by Load Current)	5
6.Line Regulation	6
7.Load Regulation	7
8.Dynamic Load Response	8
9.Ripple Voltage (by Load Current)	9
10.Ripple-Noise	10
11.Ripple Voltage (by Ambient Temperature)	11
12.Ambient Temperature Drift	12
13.Output Voltage Accuracy	13
14.Time Lapse Drift	14
15.Rise and Fall Time	15
16.Minimum Input Voltage for Regulated Output Voltage	16
17.Overcurrent Protection	17
18.Overvoltage Protection	18
19.Figure of Testing Circuitry	19

(Final Page 19)

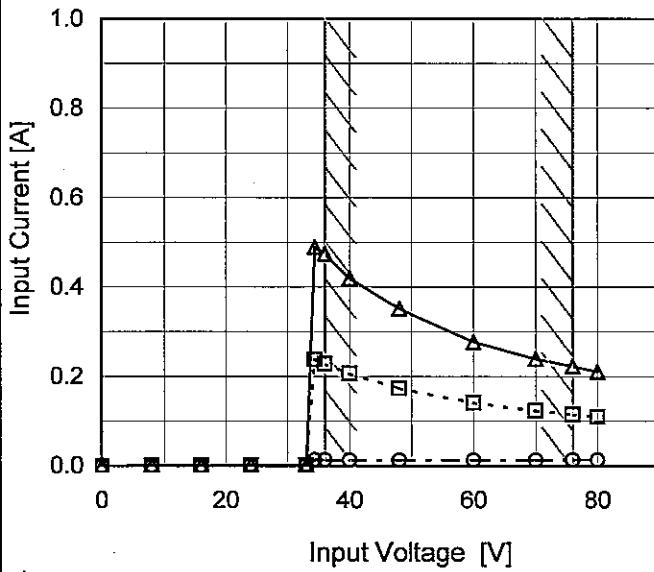


Model	SFS20481R8
Item	Input Current (by Input Voltage)
Object	

Temperature 25°C
Testing Circuitry Figure A

1. Graph

—△— Load 100%
- - □ - - Load 50%
- - ○ - - Load 0%



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
8	0.001	0.001	0.001
16	0.001	0.001	0.001
24	0.002	0.002	0.002
33	0.002	0.002	0.002
34	0.013	0.239	0.490
36	0.013	0.229	0.475
40	0.013	0.207	0.420
48	0.013	0.174	0.352
60	0.013	0.142	0.277
70	0.013	0.123	0.239
76	0.014	0.115	0.223
80	0.014	0.110	0.210
-	-	-	-
-	-	-	-
-	-	-	-



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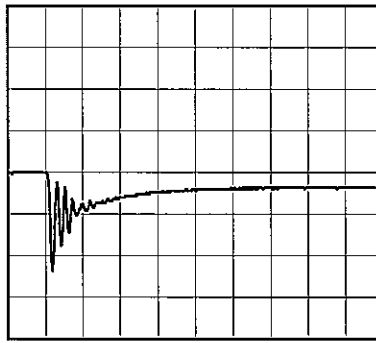
Model	SFS20481R8	Temperature	25°C
Item	Dynamic Load Response	Testing Circuitry	Figure A
Object	+1.8V8A		

Input Volt. 48 V
Cycle 1000 mS

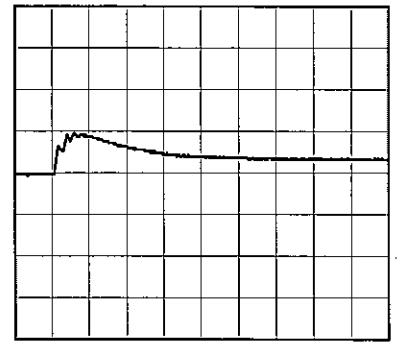
Load Current 8A / 200 µs

Min. Load (0A) ←→
Load 100% (8A)

100mV/div



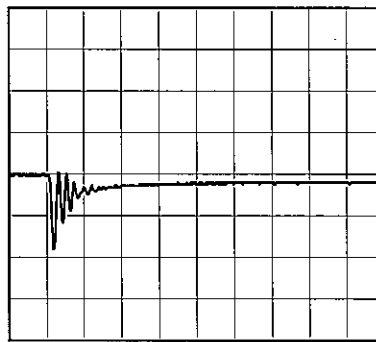
200 µs/div



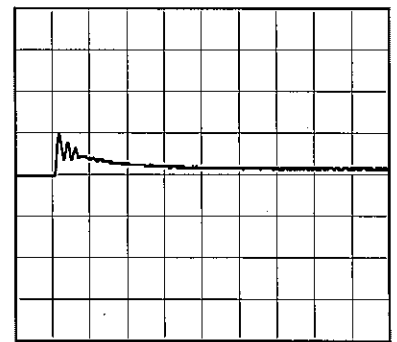
200 µs/div

Min. Load (0A) ←→
Load 50% (4A)

100mV/div



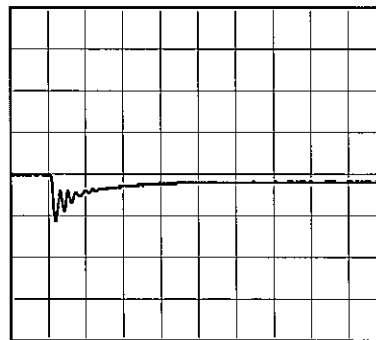
200 µs/div



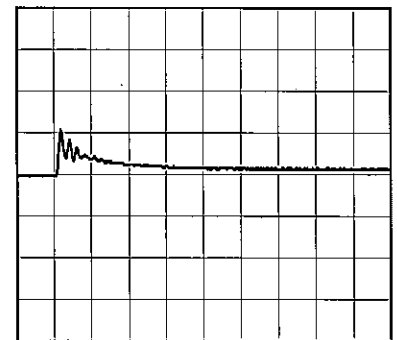
200 µs/div

Load 50% (4A) ←→
Load 100% (8A)

100mV/div



200 µs/div



200 µs/div



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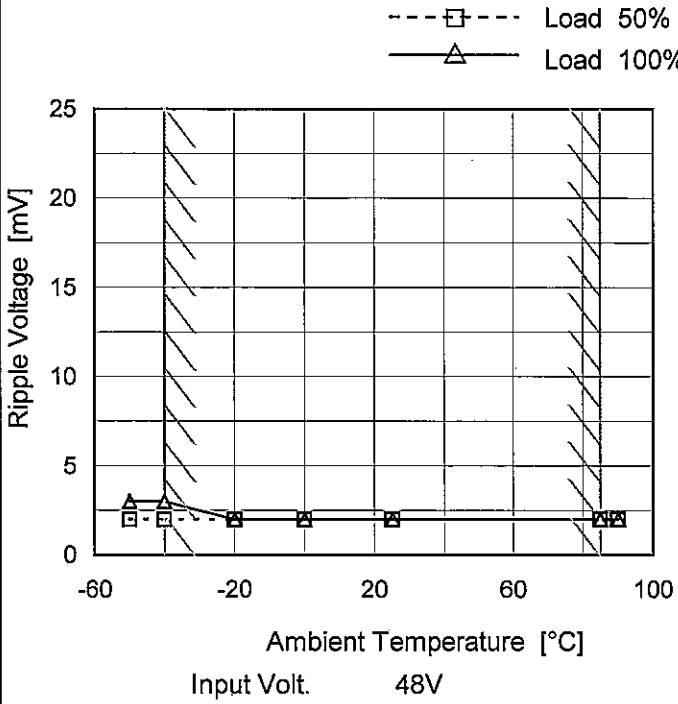
<p>Model SFS20481R8</p> <p>Item Ripple-Noise</p> <p>Object +1.8V8A</p>		<p>Temperature 25°C</p> <p>Testing Circuitry Figure C</p>																																						
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Model	SFS20481R8
Item	Ripple Voltage (by Ambient Temp.)
Object	+1.8V8A

Testing Circuitry Figure C

1. Graph



2. Values

Ambient Temperature [°C]	Ripple Voltage [mV]	
	Load 50%	Load 100%
-50	2	3
-40	2	3
-20	2	2
0	2	2
25	2	2
85	2	2
90	2	2
--	-	-
--	-	-
--	-	-
--	-	-

Measured by 100MHz Oscilloscope.
 Note: Slanted line shows the range of the rated ambient temperature.



Model		SFS20481R8		Testing Circuitry Figure A																																																				
Item		Ambient Temperature Drift																																																						
Object		+1.8V8A																																																						
1.Graph		—△—	Input Volt. 36V	2.Values																																																				
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COSEL		
Model	SFS20481R8	
Item	Output Voltage Accuracy	Testing Circuitry Figure A
Object	+1.8V8A	

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 : 36 - 76V

Load Current : 0 - 8A

* Output Voltage Accuracy = $\pm(\text{Maximum of Output Voltage} - \text{Minimum of Output Voltage}) / 2$

* 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	85	76	0	1.870	±43	±2.4
Minimum Voltage	85	76	8	1.784		



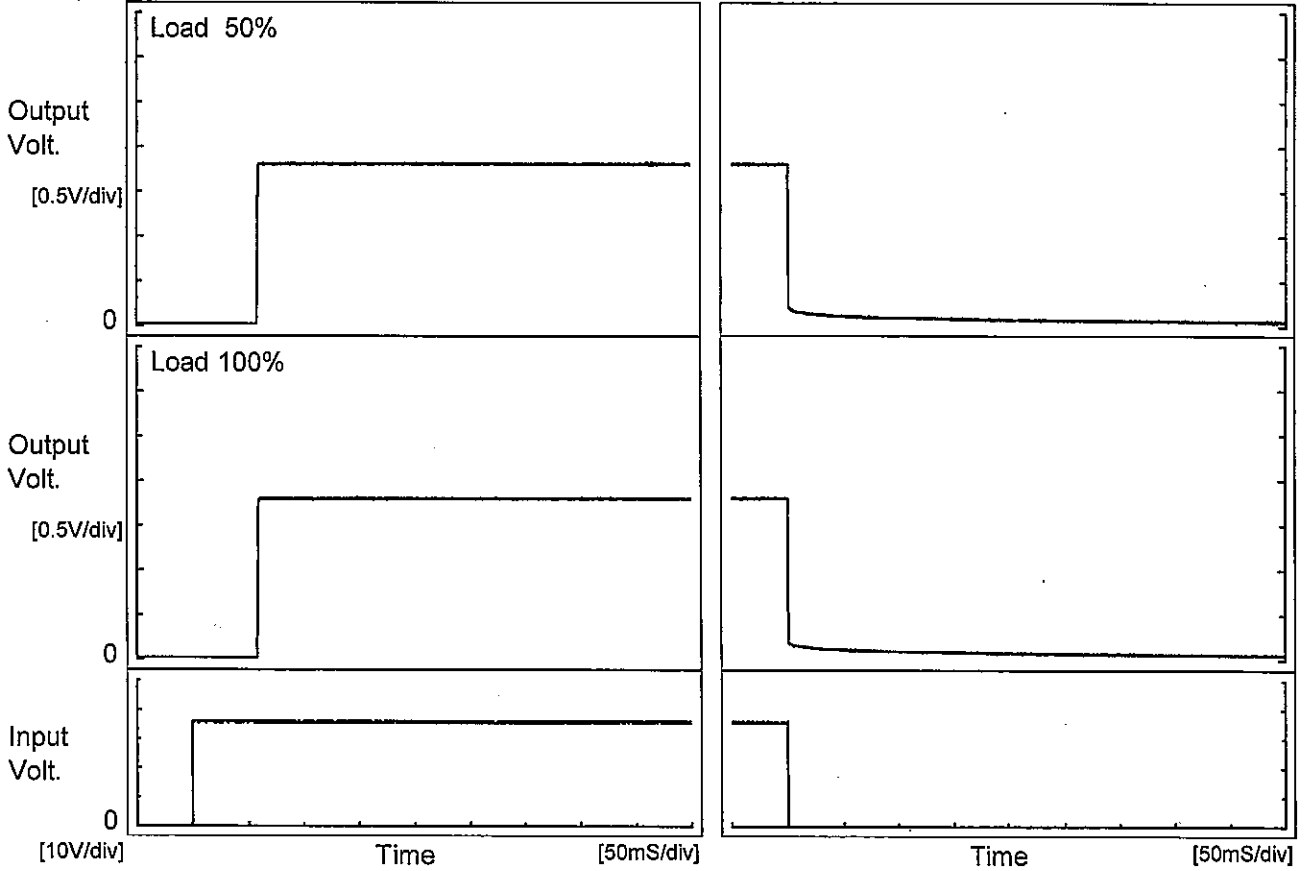
COSEL																								
Model	SFS20481R8	Temperature 25°C Testing Circuitry Figure A																						
Item	Time Lapse Drift																							
Object	+1.8V8A																							
<p>1.Graph</p> <p style="text-align: center;">Time [H]</p> <p>Input Volt. 48V Load 100%</p>		<p>2.Values</p> <table border="1"> <thead> <tr> <th>Time since start [H]</th> <th>Output Voltage [V]</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>1.810</td></tr> <tr><td>0.5</td><td>1.808</td></tr> <tr><td>1.0</td><td>1.808</td></tr> <tr><td>2.0</td><td>1.808</td></tr> <tr><td>3.0</td><td>1.808</td></tr> <tr><td>4.0</td><td>1.808</td></tr> <tr><td>5.0</td><td>1.808</td></tr> <tr><td>6.0</td><td>1.808</td></tr> <tr><td>7.0</td><td>1.808</td></tr> <tr><td>8.0</td><td>1.808</td></tr> </tbody> </table>	Time since start [H]	Output Voltage [V]	0.0	1.810	0.5	1.808	1.0	1.808	2.0	1.808	3.0	1.808	4.0	1.808	5.0	1.808	6.0	1.808	7.0	1.808	8.0	1.808
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Model	SFS20481R8	Temperature	25°C
Item	Rise and Fall Time	Testing Circuitry	Figure A
Object	+1.8V8A		

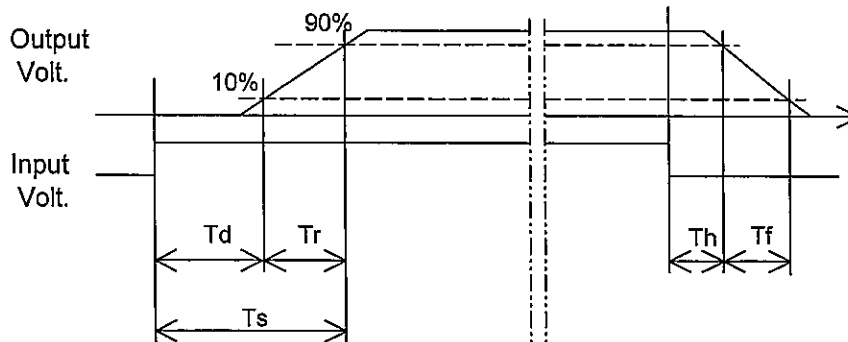
1. Graph

Input Volt. 36 V



2. Values

Load	Time	Td	Tr	Ts	Th	Tf
50 %		57.8	0.1	57.9	0.3	2.0
100 %		57.8	0.1	57.9	0.3	0.8

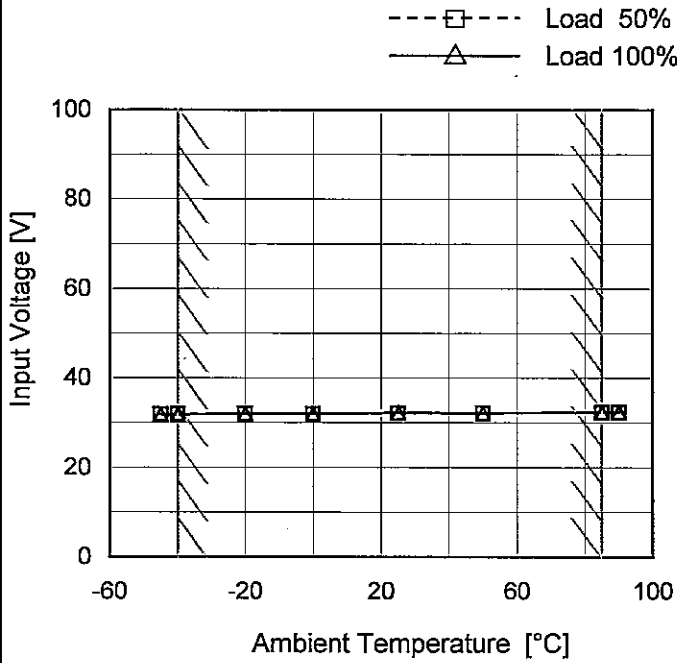




Model	SFS20481R8
Item	Minimum Input Voltage for Regulated Output Voltage
Object	+1.8V8A

Testing Circuitry Figure A

1. Graph



2. Values

Ambient Temperature [°C]	Input Voltage [V]	
	Load 50%	Load 100%
-45	32.0	31.9
-40	32.0	31.9
-20	32.1	32.1
0	32.0	32.1
25	32.2	32.3
50	32.2	32.3
85	32.4	32.4
90	32.4	32.4
--	-	-
--	-	-
--	-	-

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



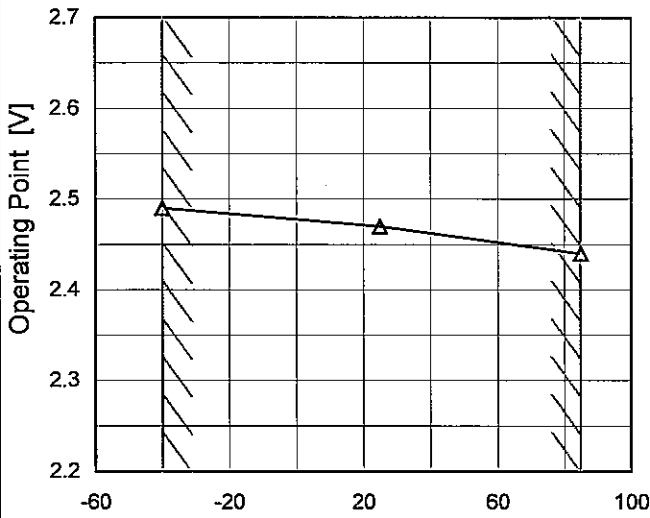
<p>Model SFS20481R8</p>		<p>Temperature 25°C</p>																																																												
<p>Item Overcurrent Protection</p>		<p>Testing Circuitry Figure A</p>																																																												
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<p>1.Graph</p> <div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> <p>— Input Volt. 36V</p> <p>— Input Volt. 48V</p> <p>— Input Volt. 76V</p> </div> </div> <p>Note: Slanted line shows the range of the rated load current.</p> <p>When the output voltage fell to less than 1.62V, the unit shuts off the output by operating low voltage protection.</p>		<p>2.Values</p> <table border="1"> <thead> <tr> <th rowspan="2">Output Voltage [V]</th> <th colspan="3">Load Current [A]</th> </tr> <tr> <th>Input Volt. 36[V]</th> <th>Input Volt. 48[V]</th> <th>Input Volt. 76[V]</th> </tr> </thead> <tbody> <tr> <td>1.80</td> <td>8.10</td> <td>8.11</td> <td>8.05</td> </tr> <tr> <td>1.71</td> <td>8.86</td> <td>9.02</td> <td>9.43</td> </tr> <tr> <td>1.62</td> <td>8.85</td> <td>9.02</td> <td>9.45</td> </tr> <tr> <td>--</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>--</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>--</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>--</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>--</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>--</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>--</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>--</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>--</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>--</td> <td>-</td> <td>-</td> <td>-</td> </tr> </tbody> </table>		Output Voltage [V]	Load Current [A]			Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]	1.80	8.10	8.11	8.05	1.71	8.86	9.02	9.43	1.62	8.85	9.02	9.45	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
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Model	SFS20481R8
Item	Oversvoltage Protection
Object	+1.8V8A

Testing Circuitry Figure A

1. Graph —△— Input Volt. 48V

2. Values



Ambient Temperature [°C]	Operating Point [V]		
	Input Volt. 48[V]	Input Volt.	Input Volt.
-40	2.49	-	-
25	2.47	-	-
85	2.44	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

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

Load 0%

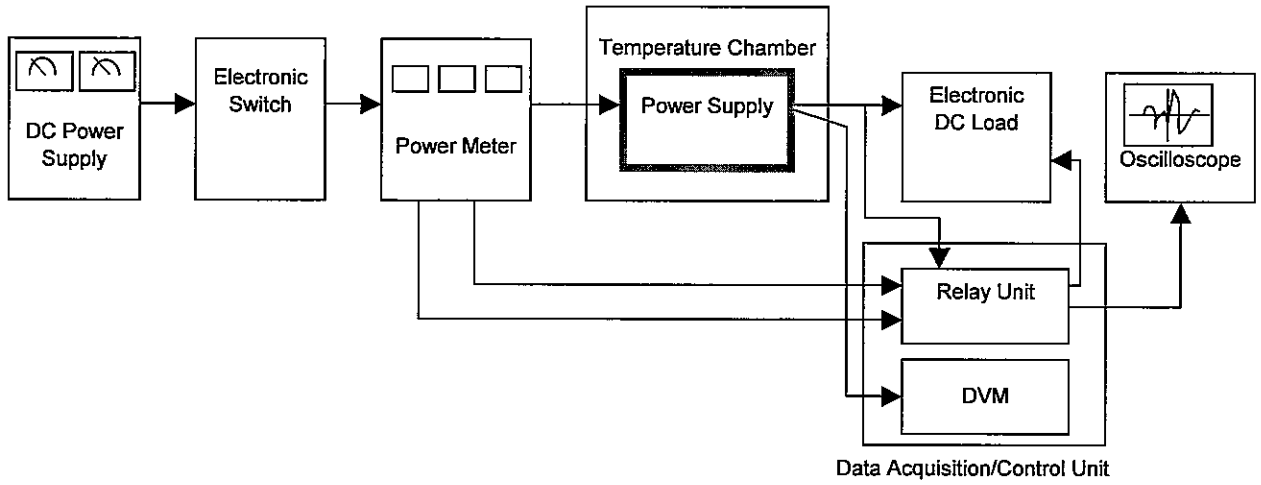


Figure A

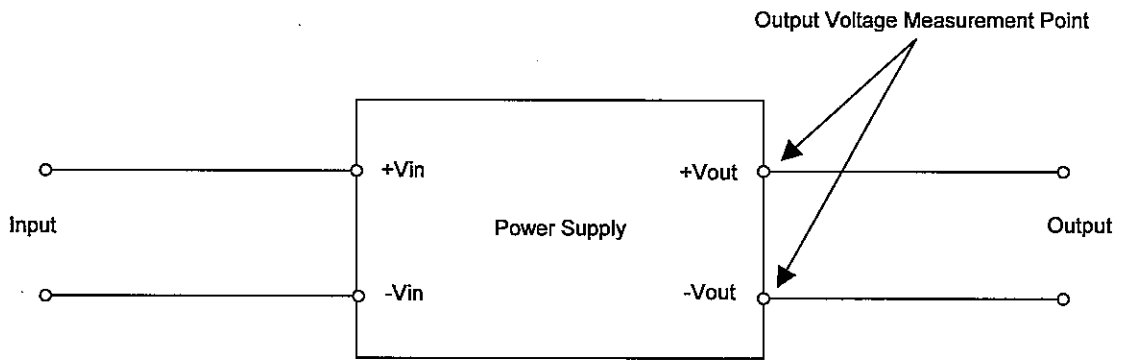


Figure B (General Electric Characteristic)

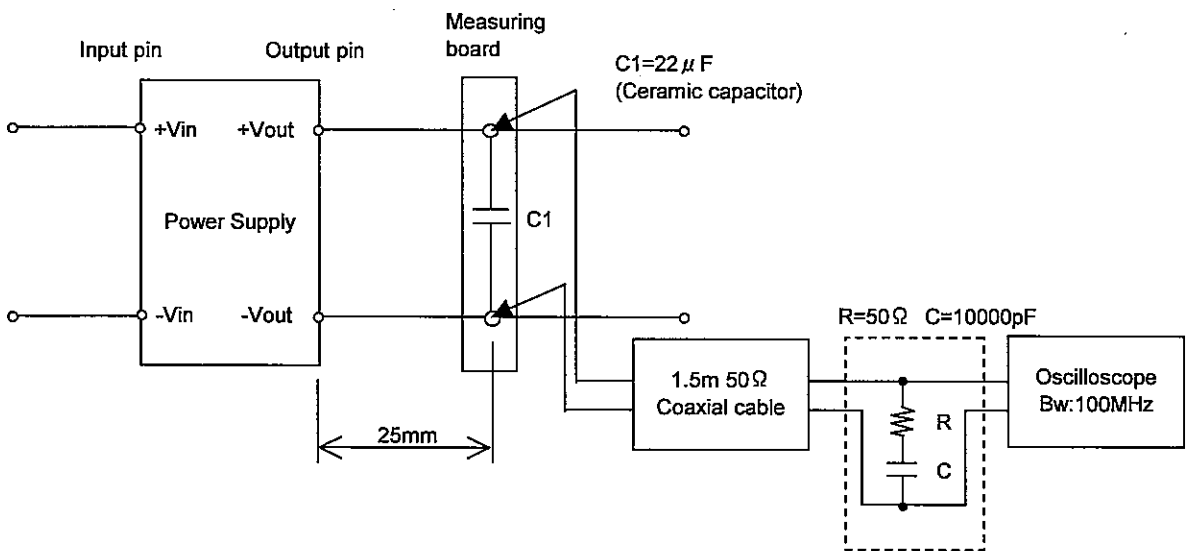


Figure C (Ripple and Ripple noise Characteristic)