

TEST DATA OF SFLS154812

Regulated DC Power Supply
Jul 2, 2007

Approved by : Isao Yasuda
Isao Yasuda Design Manager

Prepared by : Toshiyuki Tsuru
Toshiyuki Tsuru Design Engineer

COSEL CO.,LTD.

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<p>The graph plots Input Current [A] on the y-axis (0.0 to 1.0) against Load Current [A] on the x-axis (0.0 to 1.2). Three data series are shown: 36V (solid line with triangles), 48V (dashed line with squares), and 76V (dash-dot line with circles). A vertical slanted line is drawn at approximately 1.15 A on the x-axis, indicating the rated load current range.</p>																																																								
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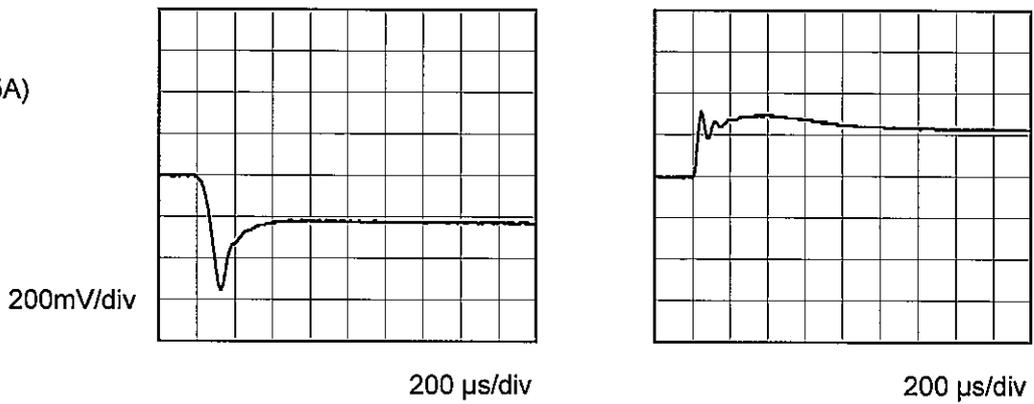


Model	SFLS154812	Temperature	25°C
Item	Dynamic Load Response	Testing Circuitry	Figure A
Object	+12V1.25A		

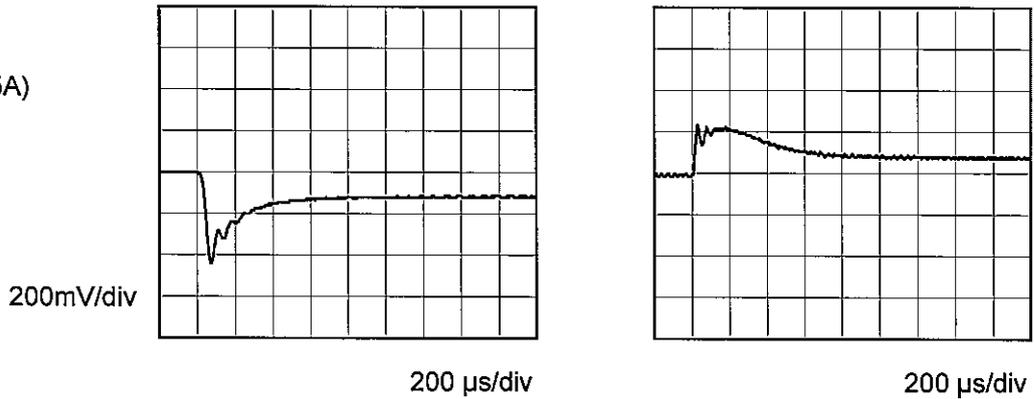
Input Volt. 48 V
 Cycle 1000 mS

Load Current 1.25A / 200 μ sec

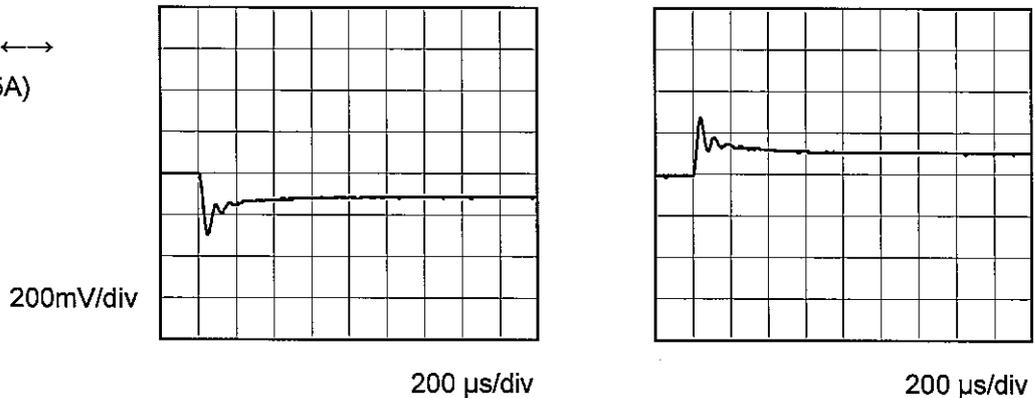
Min. Load (0A) ←→
 Load 100% (1.25A)



Min. Load (0A) ←→
 Load 50% (0.625A)



Load 50% (0.625A) ←→
 Load 100% (1.25A)





Model		SFLS154812		Temperature	25°C																																						
Item		Ripple Voltage (by Load Current)		Testing Circuitry	Figure C																																						
Object		+12V1.25A																																									
1.Graph				2.Values																																							
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<p>Measured by 100 MHz Oscilloscope. Ripple Voltage is shown as p-p in the figure below. Note: Stanted line shows the range of the rated load current.</p>																																											
<p>Ripple [mVp-p]</p> <p>Fig.Complex Ripple Wave Form</p>																																											



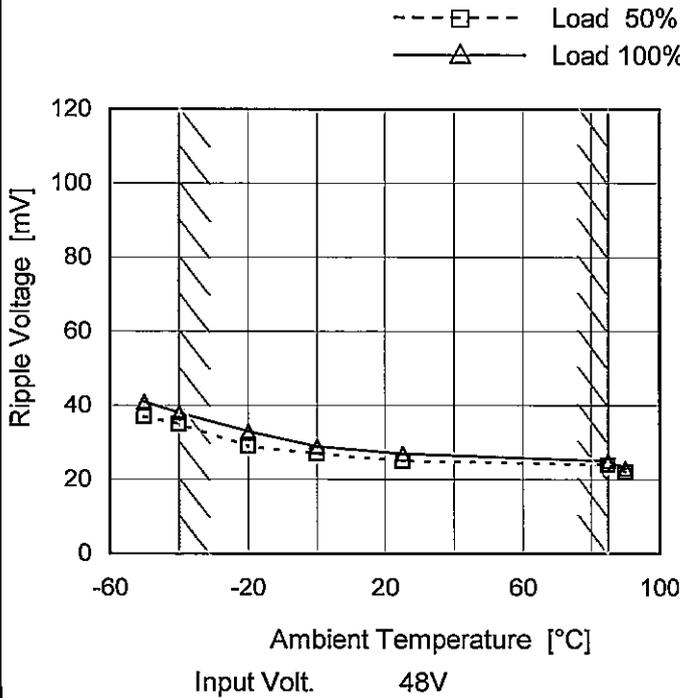
Model		SFLS154812		Temperature 25°C																																							
Item		Ripple-Noise		Testing Circuitry Figure C																																							
Object		+12V1.25A																																									
1.Graph				2.Values																																							
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<p>Fig.Complex Ripple Noise Wave Form</p>																																											



Model	SFLS154812
Item	Ripple Voltage (by Ambient Temp.)
Object	+12V1.25A

Testing Circuitry Figure C

1. Graph



2. Values

Ambient Temperature [°C]	Ripple Voltage [mV]	
	Load 50%	Load 100%
-50	37	41
-40	35	38
-20	29	33
0	27	29
25	25	27
85	24	25
90	22	23
--	-	-
--	-	-
--	-	-
--	-	-

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



Model		SFLS154812		Testing Circuitry Figure A																																																				
Item		Ambient Temperature Drift																																																						
Object		+12V1.25A																																																						
1.Graph		—△—	Input Volt. 36V	2.Values																																																				
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		-·-○-·-	Input Volt. 76V	<table border="1"> <thead> <tr> <th rowspan="2">Ambient Temperature [°C]</th> <th colspan="3">Output Voltage [V]</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>-50</td><td>12.064</td><td>12.069</td><td>12.061</td></tr> <tr><td>-40</td><td>12.070</td><td>12.079</td><td>12.071</td></tr> <tr><td>-20</td><td>12.077</td><td>12.090</td><td>12.082</td></tr> <tr><td>0</td><td>12.073</td><td>12.092</td><td>12.086</td></tr> <tr><td>25</td><td>12.054</td><td>12.086</td><td>12.083</td></tr> <tr><td>55</td><td>12.023</td><td>12.062</td><td>12.066</td></tr> <tr><td>85</td><td>11.970</td><td>12.025</td><td>12.039</td></tr> <tr><td>90</td><td>11.958</td><td>12.017</td><td>12.034</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>		Ambient Temperature [°C]	Output Voltage [V]			Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]	-50	12.064	12.069	12.061	-40	12.070	12.079	12.071	-20	12.077	12.090	12.082	0	12.073	12.092	12.086	25	12.054	12.086	12.083	55	12.023	12.062	12.066	85	11.970	12.025	12.039	90	11.958	12.017	12.034	--	-	-	-	--	-	-	-	--	-	-	-
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COSEL		
Model	SFLS154812	
Item	Output Voltage Accuracy	Testing Circuitry Figure A
Object	+12V1.25A	

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 - 1.25A

* 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	12.321	±176	±1.5
Minimum Voltage	85	36	1.25	11.970		



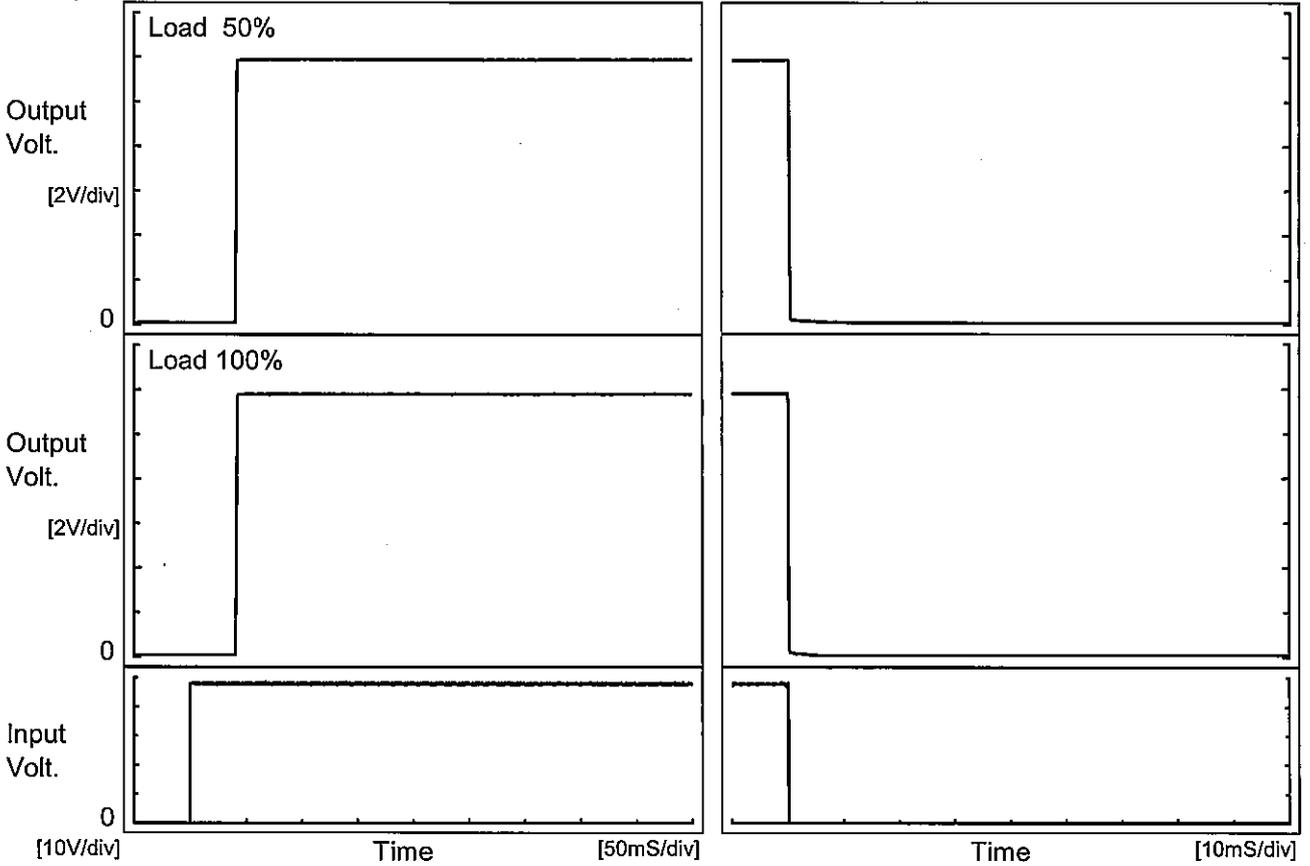
COSEL																									
Model	SFLS154812	Temperature	25°C																						
Item	Time Lapse Drift	Testing Circuitry	Figure A																						
Object	+12V1.25A																								
1.Graph		2.Values																							
<p style="text-align: center;">Time [H]</p> <p>Input Volt. 48V Load 100%</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>12.090</td></tr> <tr><td>0.5</td><td>12.085</td></tr> <tr><td>1.0</td><td>12.085</td></tr> <tr><td>2.0</td><td>12.084</td></tr> <tr><td>3.0</td><td>12.084</td></tr> <tr><td>4.0</td><td>12.084</td></tr> <tr><td>5.0</td><td>12.084</td></tr> <tr><td>6.0</td><td>12.084</td></tr> <tr><td>7.0</td><td>12.084</td></tr> <tr><td>8.0</td><td>12.084</td></tr> </tbody> </table>		Time since start [H]	Output Voltage [V]	0.0	12.090	0.5	12.085	1.0	12.085	2.0	12.084	3.0	12.084	4.0	12.084	5.0	12.084	6.0	12.084	7.0	12.084	8.0	12.084
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7.0	12.084																								
8.0	12.084																								



Model	SFLS154812	Temperature	25°C
Item	Rise and Fall Time	Testing Circuitry	Figure A
Object	+12V1.25A		

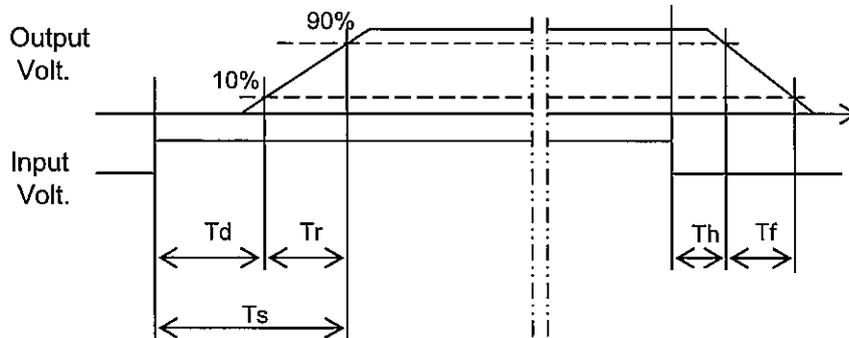
1.Graph

Input Volt. 48 V



2.Values

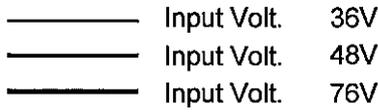
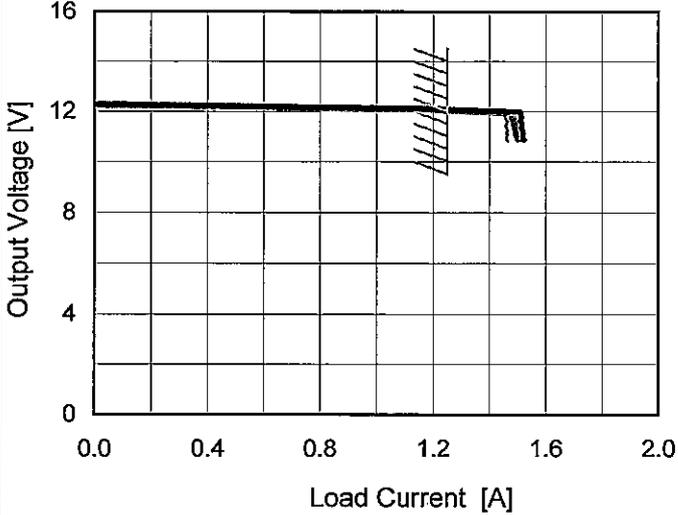
Load \ Time	Td	Tr	Ts	Th	Tf
50 %	41.0	0.5	41.5	0.1	0.3
100 %	40.8	0.6	41.4	0.1	0.2





<p>Model SFLS154812</p> <p>Item Minimum Input Voltage for Regulated Output Voltage</p> <p>Object +12V1.25A</p>		<p>Testing Circuitry Figure A</p>																																						
<p>1. Graph</p> <p>---□--- Load 50%</p> <p>—△— Load 100%</p> <p>Input Voltage [V]</p> <p>Ambient Temperature [°C]</p> <p>Note: Slanted line shows the range of the rated ambient temperature.</p>		<p>2. Values</p> <table border="1"> <thead> <tr> <th rowspan="2">Ambient Temperature [°C]</th> <th colspan="2">Input Voltage [V]</th> </tr> <tr> <th>Load 50%</th> <th>Load 100%</th> </tr> </thead> <tbody> <tr><td>-50</td><td>32.6</td><td>32.4</td></tr> <tr><td>-40</td><td>32.4</td><td>32.4</td></tr> <tr><td>-20</td><td>32.4</td><td>32.4</td></tr> <tr><td>0</td><td>32.2</td><td>32.2</td></tr> <tr><td>25</td><td>32.2</td><td>32.2</td></tr> <tr><td>55</td><td>32.0</td><td>32.0</td></tr> <tr><td>85</td><td>31.8</td><td>31.8</td></tr> <tr><td>90</td><td>31.8</td><td>31.8</td></tr> <tr><td>--</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td></tr> </tbody> </table>	Ambient Temperature [°C]	Input Voltage [V]		Load 50%	Load 100%	-50	32.6	32.4	-40	32.4	32.4	-20	32.4	32.4	0	32.2	32.2	25	32.2	32.2	55	32.0	32.0	85	31.8	31.8	90	31.8	31.8	--	-	-	--	-	-	--	-	-
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Model		SFLS154812		Temperature 25°C																																																																
Item		Overcurrent Protection		Testing Circuitry Figure A																																																																
Object		+12V1.25A																																																																		
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<p>When the output voltage fell to less than 11.2V ,the unit shuts off the output by operating low voltage protection .</p>																																																																				



Model	SFLS154812
Item	Oversvoltage Protection
Object	+12V1.25A
1.Graph —△— Input Volt. 48V	
<p>Note: Slanted line shows the range of the rated ambient temperature.</p>	

Testing Circuitry Figure A

2.Values

Ambient Temperature [°C]	Operating Point [V]		
	Input Volt. 48[V]	Input Volt.	Input Volt.
-40	15.33	-	-
25	15.69	-	-
85	15.98	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

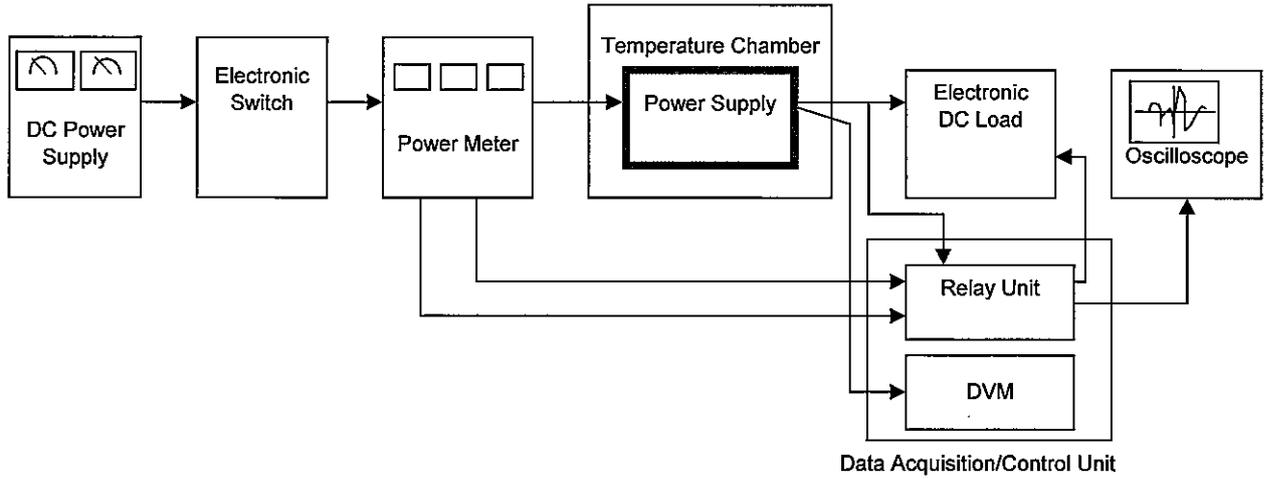


Figure A

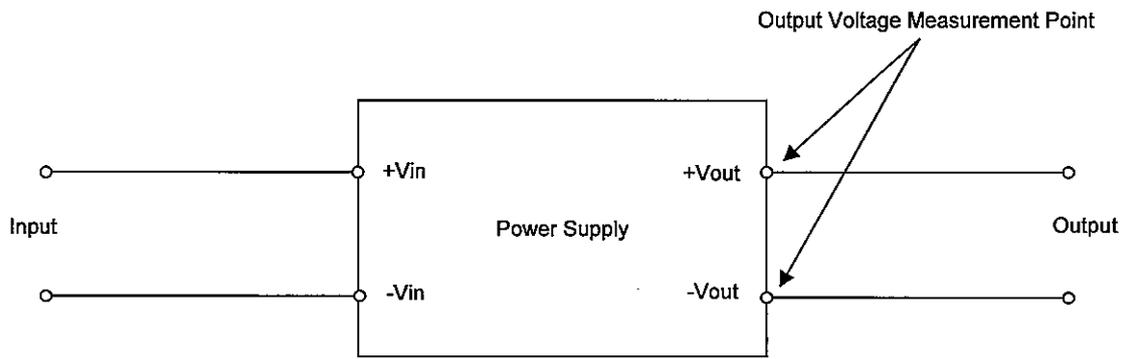


Figure B (General Electric Characteristic)

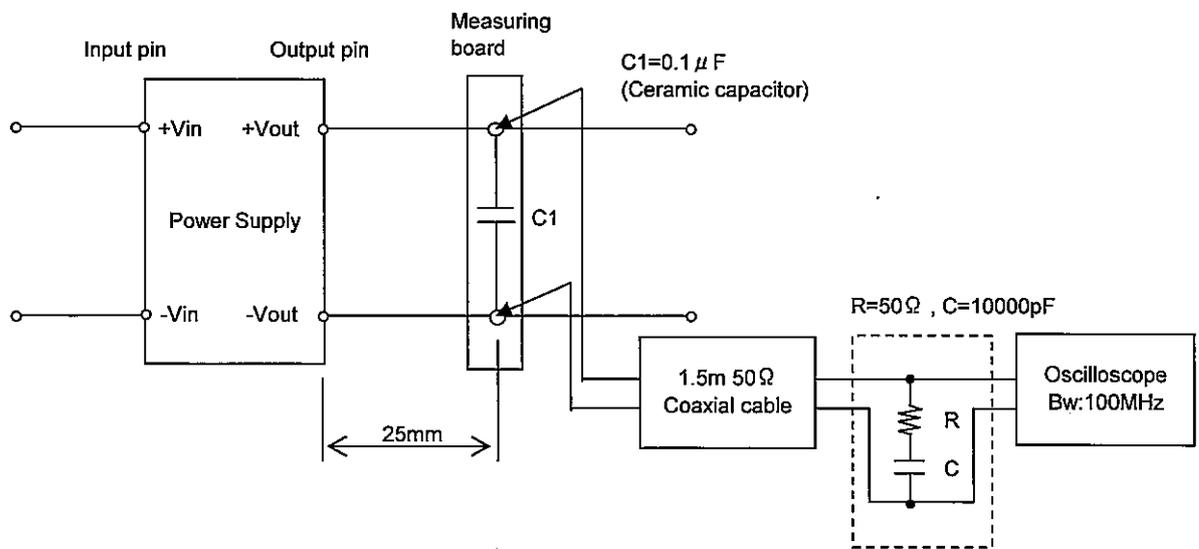


Figure C (Ripple and Ripple noise Characteristic)