



# TEST DATA OF SFS304815/SFCS304815

Regulated DC Power Supply  
Jun.1. 2007

Approved by : Toshiyuki Turi Turi  
Toshiyuki Turi Design Manager

Prepared by : K. Shibutani  
Kenichi Shibutani Design Engineer

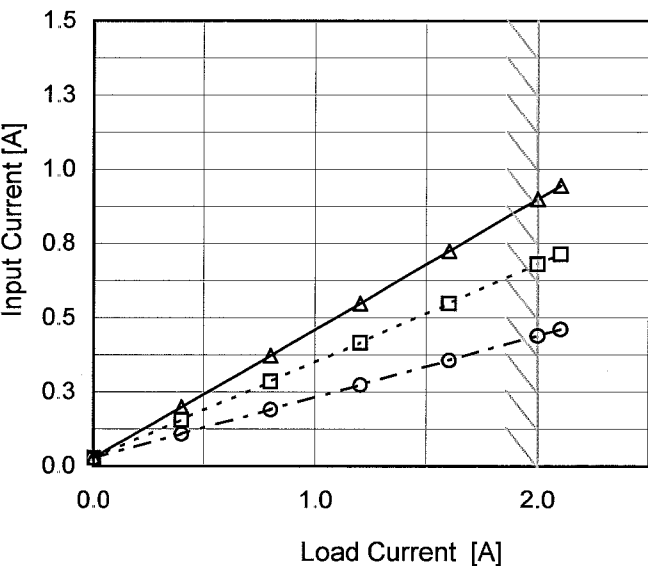
**COSEL CO.,LTD.**

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Model	SFS304815/SFCS304815																																																					
Item	Input Current (by Load Current)		Temperature 25°C Testing Circuitry Figure A																																																			
Object																																																						
1.Graph																																																						
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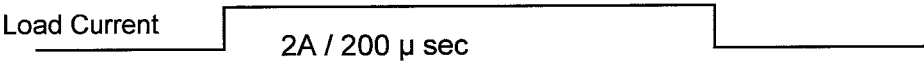


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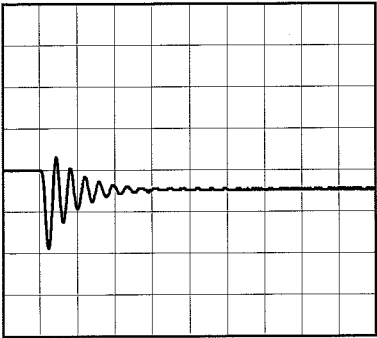
Model	SFS304815/SFCS304815		
Item	Dynamic Load Response	Temperature	25°C
		Testing Circuitry	Figure A
Object	+15V2A		

Input Volt.      48 V  
Cycle            100 mS

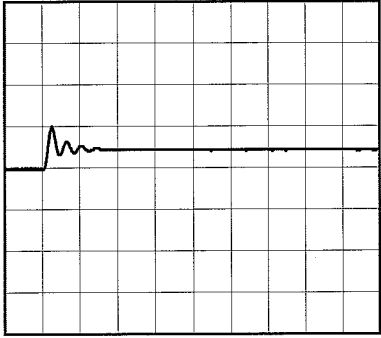


Min. Load (0A)  $\longleftrightarrow$   
Load 100% (2A)

500mV/div



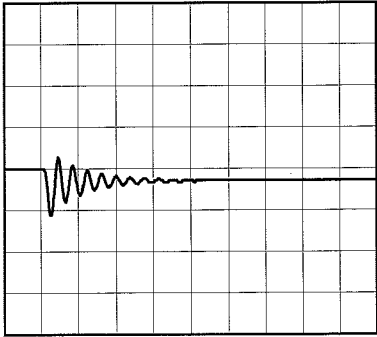
200  $\mu$ s/div



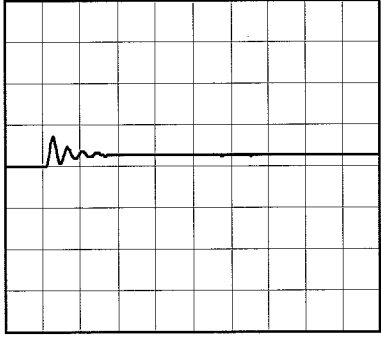
200  $\mu$ s/div

Min. Load (0A)  $\longleftrightarrow$   
Load 50% (1A)

500mV/div



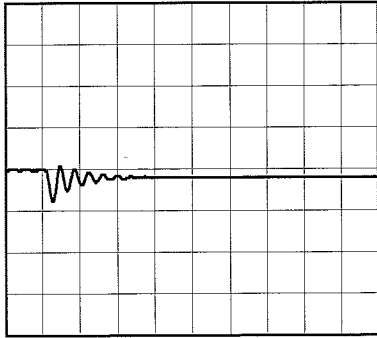
200  $\mu$ s/div



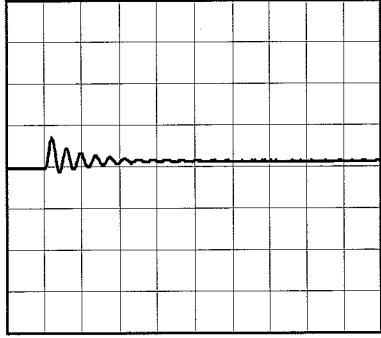
200  $\mu$ s/div

Load 50% (1A)  $\longleftrightarrow$   
Load 100% (2A)

500mV/div



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Object	+15V2A	Testing Circuitry	Figure C																																						
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<div><div><div><div><div></div><div>Input Volt.</div><div>36V</div></div><div><div></div><div>Input Volt.</div><div>76V</div></div></div><div><p>Measured by 100 MHz Oscilloscope. Ripple-Noise is shown as p-p in the figure below. Note: Slanted line shows the range of the rated load current.</p><div><div><div></div><div>Ripple Noise[mVp-p]</div></div><div></div></div><p>Fig.Complex Ripple Noise Wave Form</p></div></div></div>		<table><tr><th rowspan="2">Load Current [A]</th><th colspan="2">Ripple-Noise [mV]</th></tr><tr><th>Input Volt. 36 [V]</th><th>Input Volt. 76 [V]</th></tr><tr><td>0.0</td><td>41</td><td>61</td></tr><tr><td>0.4</td><td>41</td><td>61</td></tr><tr><td>0.8</td><td>41</td><td>61</td></tr><tr><td>1.2</td><td>41</td><td>61</td></tr><tr><td>1.6</td><td>41</td><td>61</td></tr><tr><td>2.0</td><td>41</td><td>61</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><tr><td>--</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td></tr></table>		Load Current [A]	Ripple-Noise [mV]		Input Volt. 36 [V]	Input Volt. 76 [V]	0.0	41	61	0.4	41	61	0.8	41	61	1.2	41	61	1.6	41	61	2.0	41	61	--	-	-	--	-	-	--	-	-	--	-	-	--	-	-
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Model		SFS304815/SFCS304815	Testing Circuitry    Figure C
Item		Ripple Voltage (by Ambient Temp.)	
Object		+15V2A	
1.Graph			
<div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div></div><div></div></div><div><div></div><div></div></div></div><div>Load 50%</div><div>Load 100%</div></div> <div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div></div><div></div></div><div><div></div><div></div></div></div><div>Load 50%</div><div>Load 100%</div></div> <div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div></div><div></div></div><div><div></div><div></div></div></div><div>Load 50%</div><div>Load 100%</div></div> <div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div></div><div></div></div><div><div></div><div></div></div></div><div>Load 50%</div><div>Load 100%</div></div> <div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div></div><div></div></div><div><div></div><div></div></div></div><div>Load 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BC-10071



		Testing Circuitry Figure A
Model	SFS304815/SFCS304815	
Item	Output Voltage Accuracy	
Object	+15V2A	

### 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 - 2A

\* 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	36	0	15.267	±152	±1.0
Minimum Voltage	85	36	2	14.963		

Model

SFS304815/SFCS304815

Item

Time Lapse Drift

Object

+15V2A

Temperature

25°C

Testing Circuitry

Figure A

1.Graph

Output Voltage [V]

16.000

15.750

15.500

15.250

15.000

14.750

14.500

14.250

0

2

4

6

8

10

Time [H]

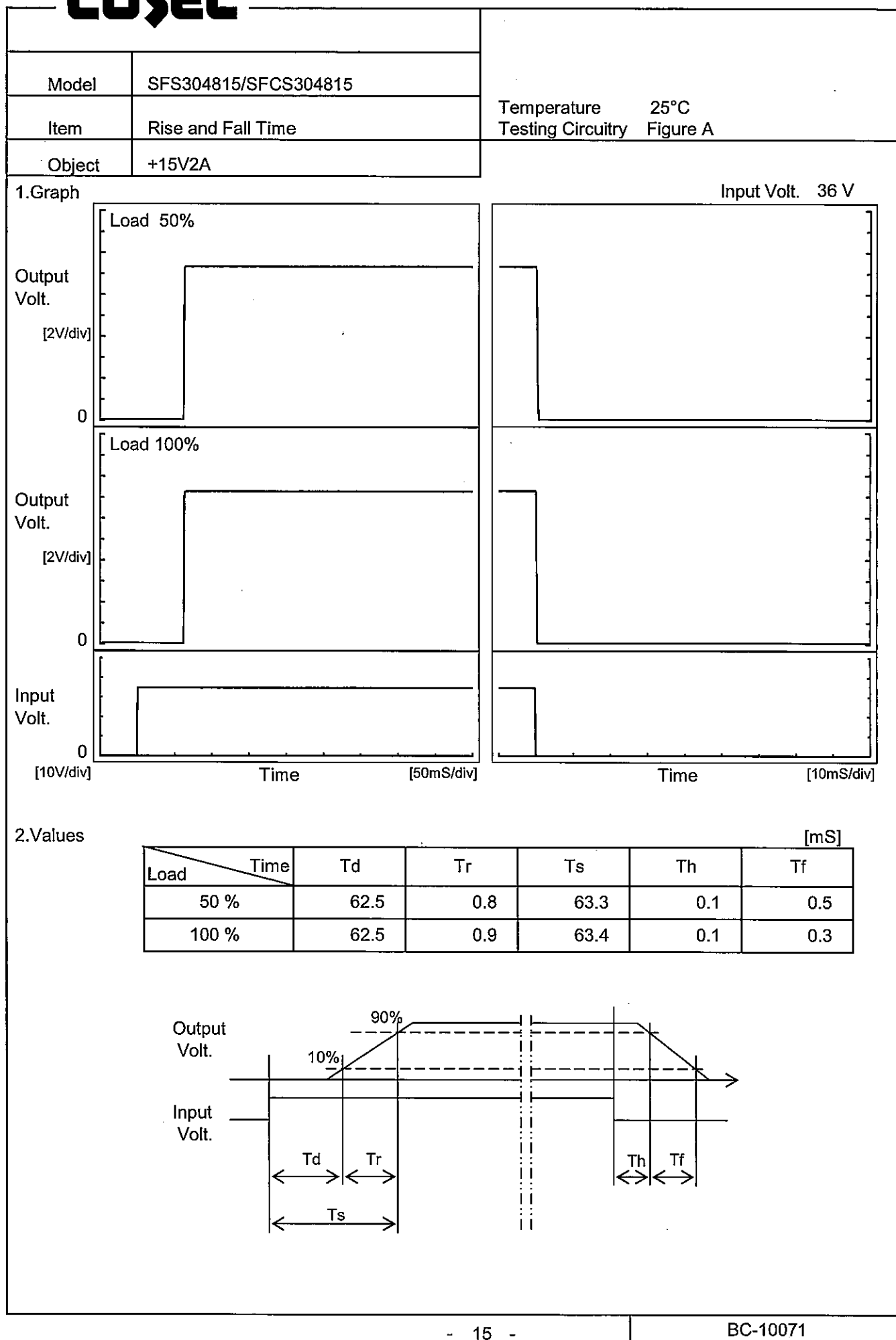
Input Volt. 48V

Load 100%

2.Values

Time since start [H]	Output Voltage [V]
0.0	15.014
0.5	15.000
1.0	15.000
2.0	15.000
3.0	15.000
4.0	15.000
5.0	15.000
6.0	15.000
7.0	15.000
8.0	15.000





Model	SFS304815/SFCS304815																																								
Item	Minimum Input Voltage for Regulated Output Voltage	Testing Circuitry    Figure A																																							
Object	+15V2A																																								
1.Graph		2.Values																																							
<div><div>---□---    Load 50%</div><div>—△—    Load 100%</div></div> <p>Input Voltage [V]</p> <p>Ambient Temperature [°C]</p> <p>Note: Slanted line shows the range of the rated ambient temperature.</p>		<table><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><tr><td>-50</td><td>31.1</td><td>31.3</td></tr><tr><td>-40</td><td>31.1</td><td>31.3</td></tr><tr><td>-20</td><td>31.3</td><td>31.3</td></tr><tr><td>0</td><td>31.3</td><td>31.5</td></tr><tr><td>25</td><td>31.5</td><td>31.5</td></tr><tr><td>40</td><td>31.6</td><td>31.7</td></tr><tr><td>55</td><td>31.6</td><td>31.7</td></tr><tr><td>70</td><td>31.8</td><td>31.7</td></tr><tr><td>85</td><td>31.8</td><td>31.9</td></tr><tr><td>90</td><td>31.8</td><td>31.9</td></tr><tr><td>--</td><td>-</td><td>-</td></tr></table>		Ambient Temperature [°C]	Input Voltage [V]		Load 50%	Load 100%	-50	31.1	31.3	-40	31.1	31.3	-20	31.3	31.3	0	31.3	31.5	25	31.5	31.5	40	31.6	31.7	55	31.6	31.7	70	31.8	31.7	85	31.8	31.9	90	31.8	31.9	--	-	-
Ambient Temperature [°C]	Input Voltage [V]																																								
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55	31.6	31.7																																							
70	31.8	31.7																																							
85	31.8	31.9																																							
90	31.8	31.9																																							
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BC-10071

Model	SFS304815/SFCS304815																																																					
Item	Overvoltage Protection	Testing Circuitry    Figure A																																																				
Object	+15V2A																																																					
1.Graph		2.Values																																																				
<div><div>—△—    Input Volt.    48V</div><div><p>Operating Point [V]</p><p>Ambient Temperature [°C]</p><p>Load 0%</p></div><div>Note: Slanted line shows the range of the rated ambient temperature.</div></div>		<table><tr><th rowspan="2">Ambient Temperature [°C]</th><th colspan="3">Operating Point [V]</th></tr><tr><th>Input Volt. 48[V]</th><th>Input Volt.</th><th>Input Volt.</th></tr><tr><td>-40</td><td>20.04</td><td>-</td><td>-</td></tr><tr><td>25</td><td>19.81</td><td>-</td><td>-</td></tr><tr><td>85</td><td>19.57</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></table>		Ambient Temperature [°C]	Operating Point [V]			Input Volt. 48[V]	Input Volt.	Input Volt.	-40	20.04	-	-	25	19.81	-	-	85	19.57	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
Ambient Temperature [°C]	Operating Point [V]																																																					
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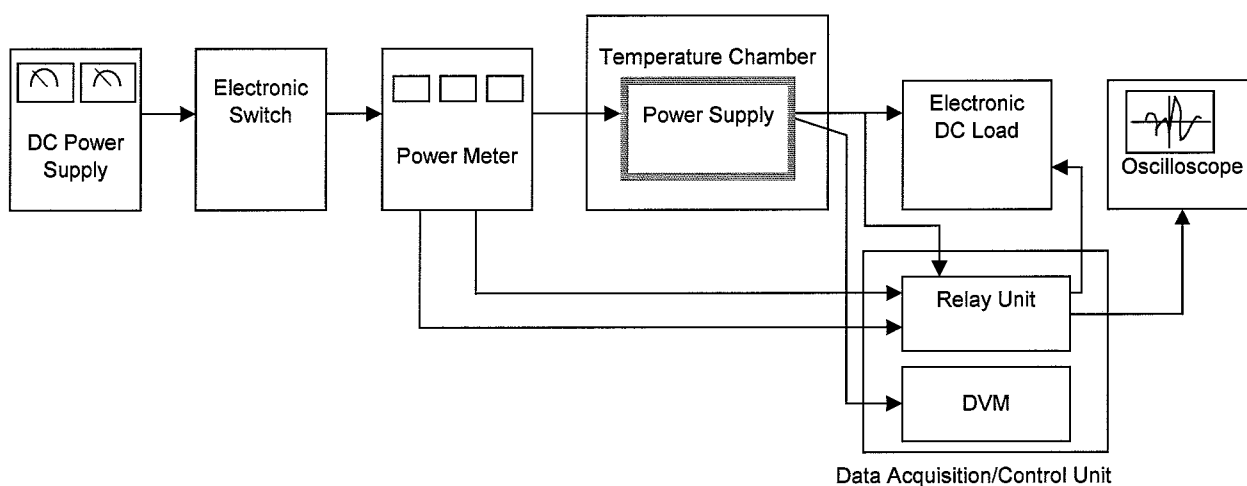


Figure A

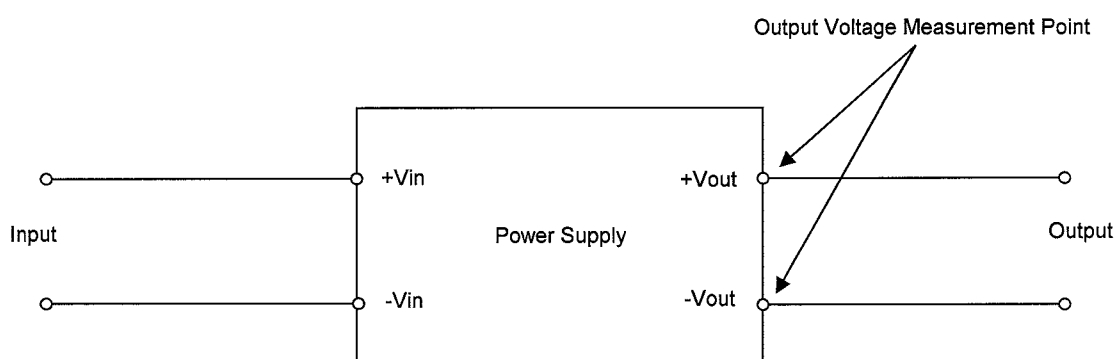


Figure B (General Electric Characteristic)

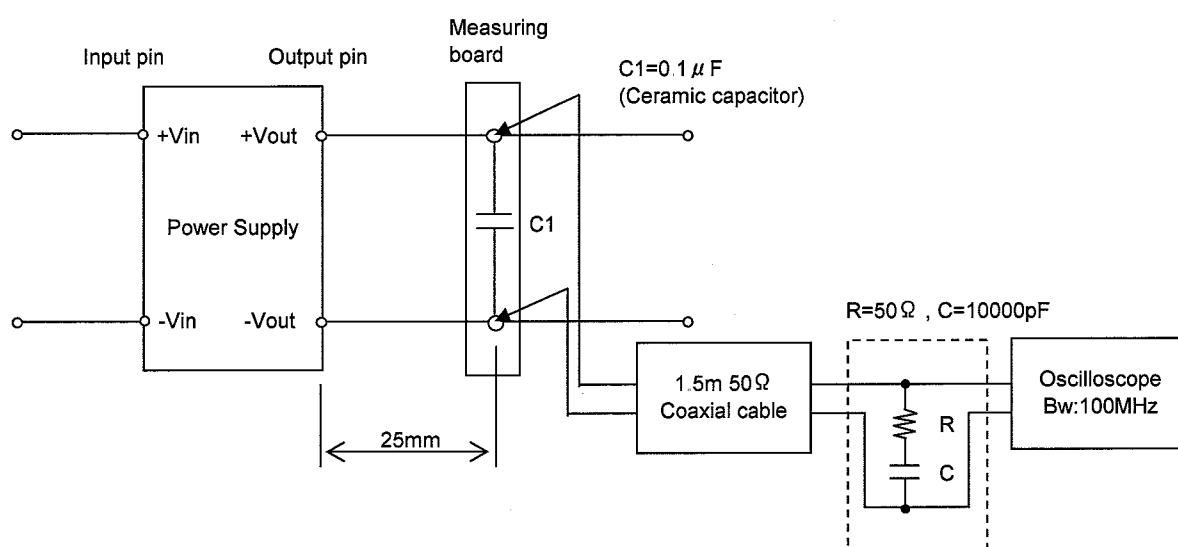


Figure C (Ripple and Ripple noise Characteristic)