



TEST DATA OF SFS304812/SFCS304812

Regulated DC Power Supply
Jun.1. 2007

Approved by : Toshiyuki Tsuru
Toshiyuki Tsuru Design Manager

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COSEL CO.,LTD.

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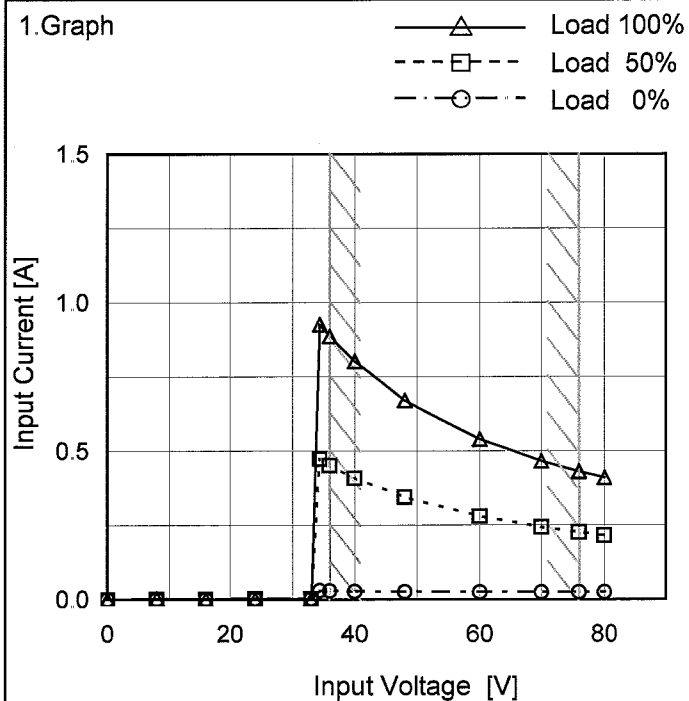
Model SFS304812/SFCS304812

Item Input Current (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]	Input Current [A]		
	Load 0%	Load 50%	Load 100%
0	0.000	0.000	0.000
8	0.001	0.001	0.003
16	0.001	0.001	0.001
24	0.002	0.002	0.002
33	0.002	0.002	0.002
34	0.031	0.473	0.927
36	0.029	0.452	0.887
40	0.027	0.409	0.803
48	0.026	0.344	0.671
60	0.025	0.280	0.540
70	0.025	0.244	0.466
76	0.024	0.226	0.431
80	0.024	0.216	0.411
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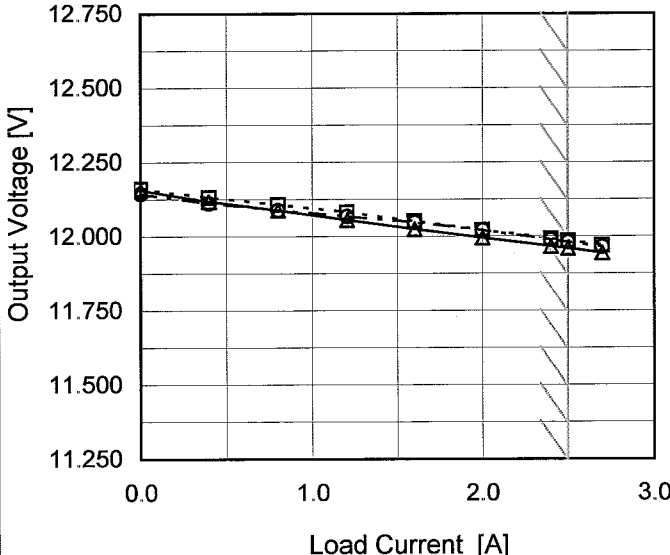
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Model		SFS304812/SFCS304812		Temperature		25°C																																	
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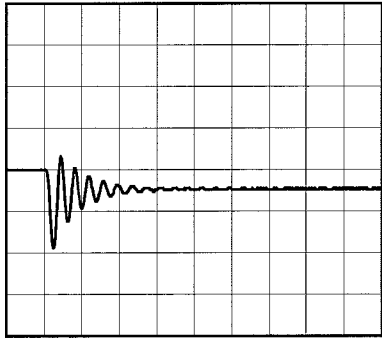
Model	SFS304812/SFCS304812		
Item	Dynamic Load Response	Temperature	25°C
		Testing Circuitry	Figure A
Object	+12V2.5A		

Input Volt. 48 V
Cycle 1000 mS

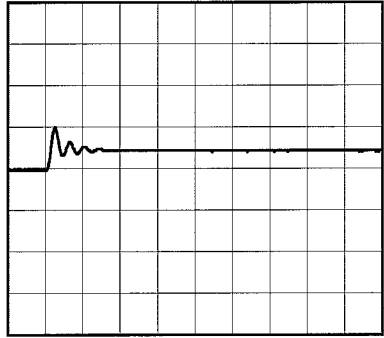
Load Current  2.5A / 200 μ sec

Min. Load (0A) \longleftrightarrow
Load 100% (2.5A)

500mV/div



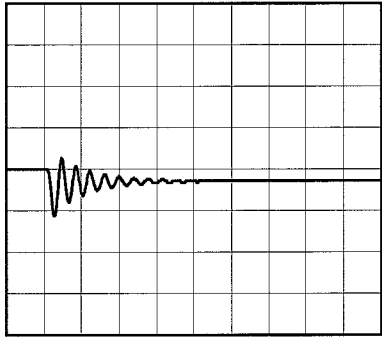
200 μs/div



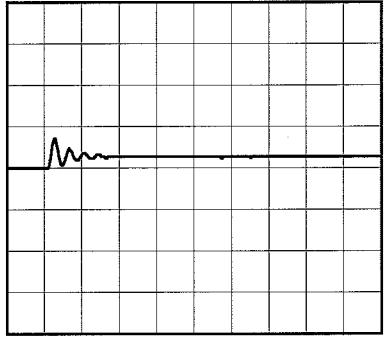
200 μs/div

Min. Load (0A) \longleftrightarrow
Load 50% (1.25A)

500mV/div



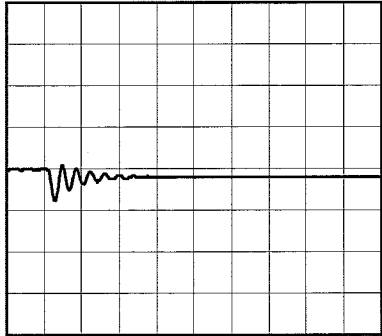
200 μs/div



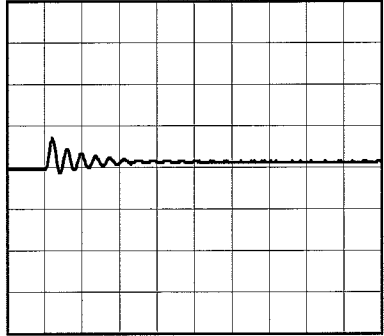
200 μs/div

Load 50% (1.25A) \longleftrightarrow
Load 100% (2.5A)

500mV/div



200 μs/div



200 μs/div

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<div><div><div>—△—</div><div>Input Volt.</div><div>36V</div></div><div><div>---○---</div><div>Input Volt.</div><div>76V</div></div></div> <p>Ripple Voltage [mV]</p> <p>Load Current [A]</p>		<table><tr><th rowspan="2">Load Current [A]</th><th colspan="2">Ripple Voltage [mV]</th></tr><tr><th>Input Volt. 36 [V]</th><th>Input Volt. 76 [V]</th></tr><tr><td>0.0</td><td>33</td><td>54</td></tr><tr><td>0.5</td><td>33</td><td>54</td></tr><tr><td>1.0</td><td>33</td><td>54</td></tr><tr><td>1.5</td><td>33</td><td>54</td></tr><tr><td>2.0</td><td>33</td><td>54</td></tr><tr><td>2.5</td><td>33</td><td>54</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 Voltage [mV]		Input Volt. 36 [V]	Input Volt. 76 [V]	0.0	33	54	0.5	33	54	1.0	33	54	1.5	33	54	2.0	33	54	2.5	33	54	--	-	-	--	-	-	--	-	-	--	-	-	--	-	-
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Model	SFS304812/SFCS304812																																																																												
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		Testing Circuitry Figure C																																						
Model	SFS304812/SFCS304812																																							
Item	Ripple Voltage (by Ambient Temp.)																																							
Object	+12V2.5A																																							
1. Graph		2. Values																																						
<div><div><div>---□---</div><div>Load 50%</div></div><div><div>—△—</div><div>Load 100%</div></div></div> <p>Input Volt. 48V</p>																																								
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		<table><tr><th rowspan="2">Ambient Temperature [°C]</th><th colspan="2">Ripple Voltage [mV]</th></tr><tr><th>Load 50%</th><th>Load 100%</th></tr><tr><td>-45</td><td>53</td><td>53</td></tr><tr><td>-40</td><td>50</td><td>50</td></tr><tr><td>0</td><td>46</td><td>46</td></tr><tr><td>25</td><td>43</td><td>43</td></tr><tr><td>85</td><td>50</td><td>50</td></tr><tr><td>90</td><td>51</td><td>51</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>	Ambient Temperature [°C]	Ripple Voltage [mV]		Load 50%	Load 100%	-45	53	53	-40	50	50	0	46	46	25	43	43	85	50	50	90	51	51	--	-	-	--	-	-	--	-	-	--	-	-	--	-	-
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BC-10070



		Testing Circuitry Figure A
Model	SFS304812/SFCS304812	
Item	Output Voltage Accuracy	
Object	+12V2.5A	

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

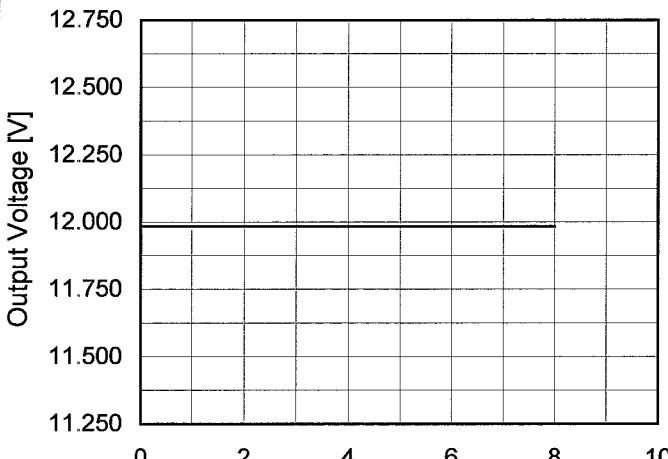
Load Current : 0 - 2.5A

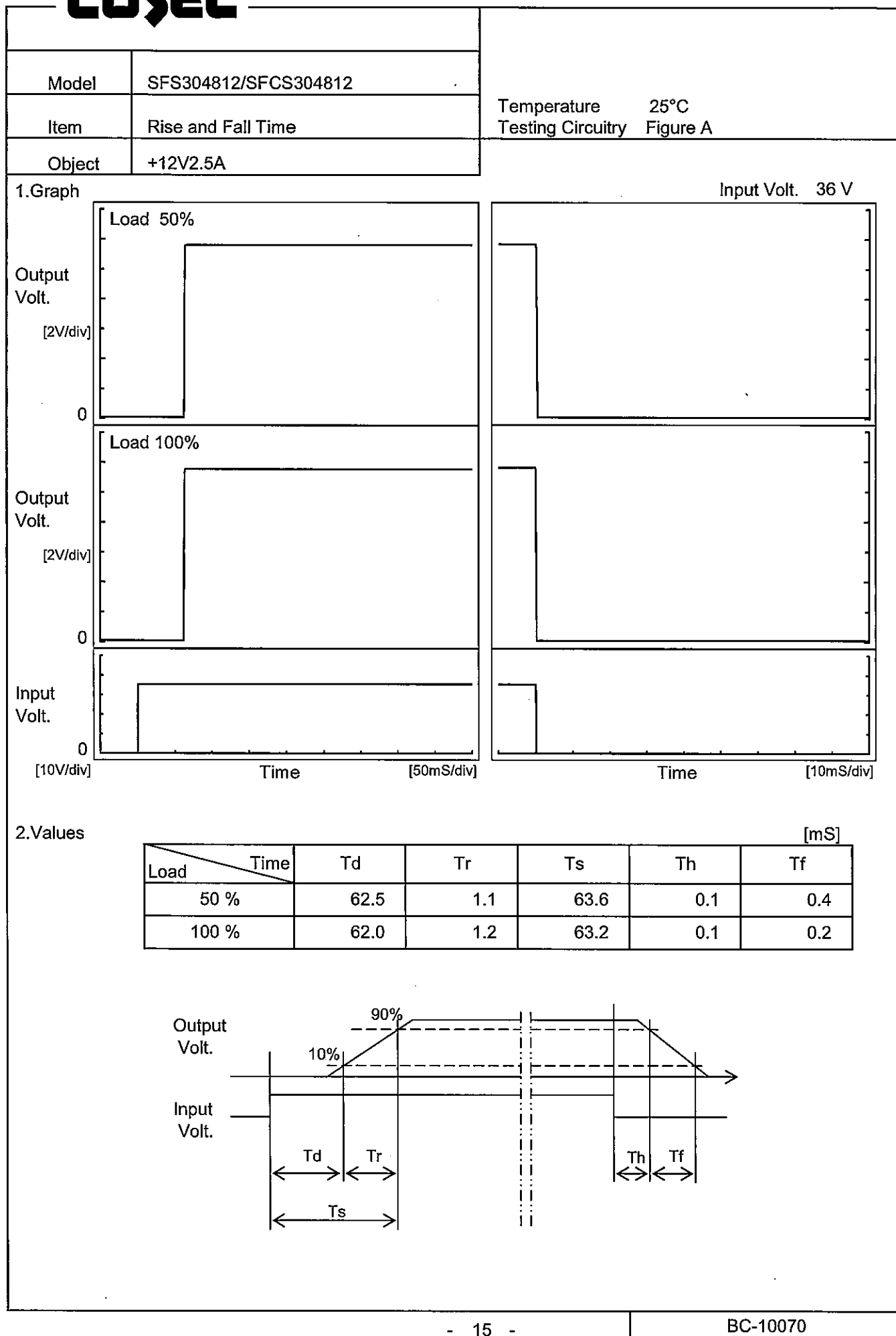
* Output Voltage Accuracy = $\pm(\text{Maximum of Output Voltage} - \text{Minimum of Output Voltage}) / 2$

* 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	12.207	±145	±1.2
Minimum Voltage	85	76	2.5	11.918		

Model	SFS304812/SFCS304812																								
Item	Time Lapse Drift	Temperature	25°C																						
Object	+12V2.5A	Testing Circuitry	Figure A																						
1.Graph		2.Values																							
<div><p>Output Voltage [V]</p><p>Time [H]</p><p>Input Volt. 48V</p><p>Load 100%</p></div>		<table><tr><th>Time since start [H]</th><th>Output Voltage [V]</th></tr><tr><td>0.0</td><td>11.990</td></tr><tr><td>0.5</td><td>11.984</td></tr><tr><td>1.0</td><td>11.984</td></tr><tr><td>2.0</td><td>11.984</td></tr><tr><td>3.0</td><td>11.984</td></tr><tr><td>4.0</td><td>11.984</td></tr><tr><td>5.0</td><td>11.984</td></tr><tr><td>6.0</td><td>11.984</td></tr><tr><td>7.0</td><td>11.984</td></tr><tr><td>8.0</td><td>11.984</td></tr></table>		Time since start [H]	Output Voltage [V]	0.0	11.990	0.5	11.984	1.0	11.984	2.0	11.984	3.0	11.984	4.0	11.984	5.0	11.984	6.0	11.984	7.0	11.984	8.0	11.984
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8.0	11.984																								

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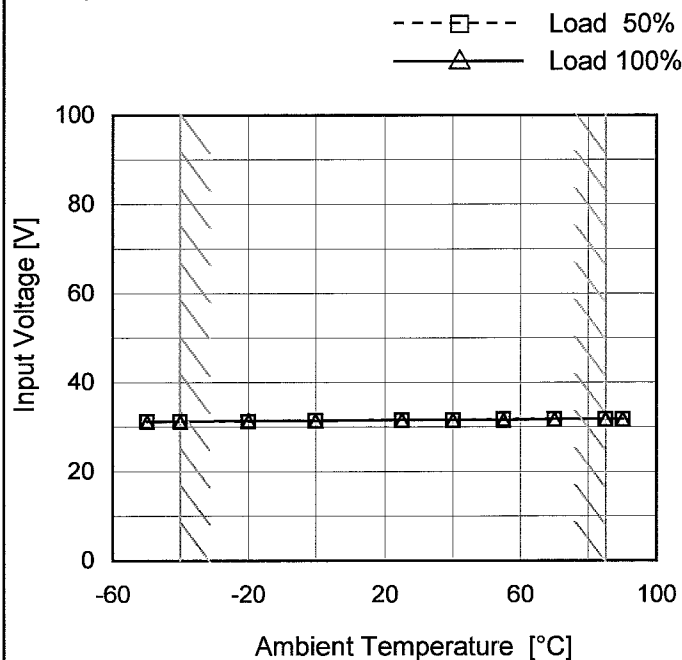
Model SFS304812/SFCS304812

Item Minimum Input Voltage
for Regulated Output Voltage

Object +12V2.5A

Testing Circuitry Figure A

1. Graph

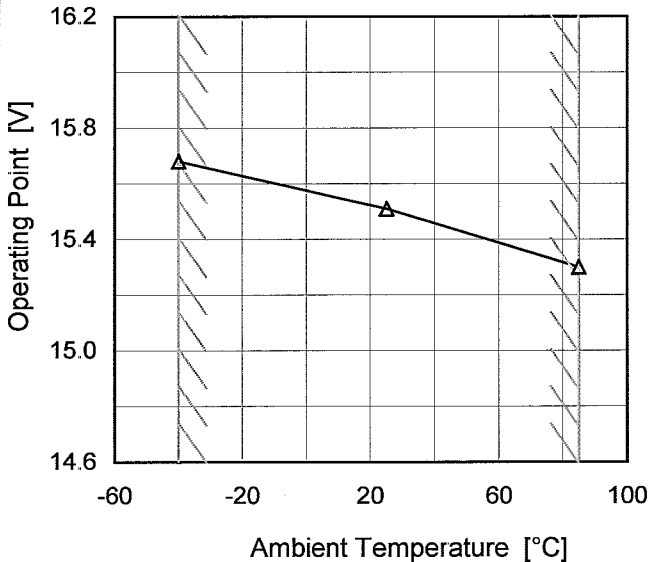


Note: Slanted line shows the range of the rated ambient temperature.

2. Values

Ambient Temperature [°C]	Input Voltage [V]	
	Load 50%	Load 100%
-50	31.3	31.3
-40	31.3	31.3
-20	31.3	31.5
0	31.5	31.5
25	31.6	31.7
40	31.6	31.7
55	31.8	31.7
70	31.8	31.9
85	31.8	31.9
90	31.8	31.9
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BC-10070

Model	SFS304812/SFCS304812																																																						
Item	Overvoltage Protection																																																						
Object	+12V2.5A																																																						
1.Graph		Testing Circuitry Figure A																																																					
<div>—△— Input Volt. 48V</div>  <p>Operating Point [V]</p> <p>Ambient Temperature [°C]</p> <p>Load 0%</p> <p>Note: Slanted line shows the range of the rated ambient temperature.</p>		2.Values																																																					
		<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>15.68</td><td>-</td><td>-</td></tr><tr><td>25</td><td>15.51</td><td>-</td><td>-</td></tr><tr><td>85</td><td>15.30</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	15.68	-	-	25	15.51	-	-	85	15.30	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
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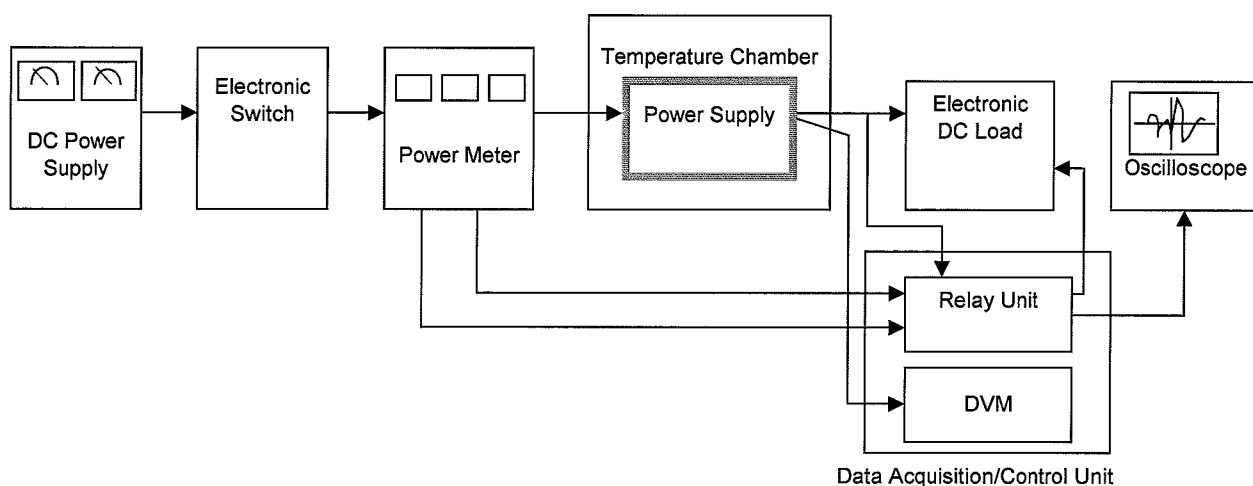


Figure A

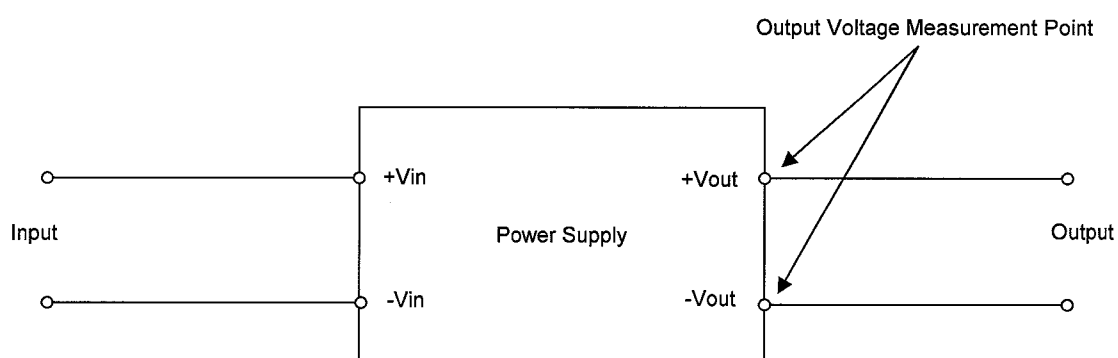


Figure B (General Electric Characteristic)

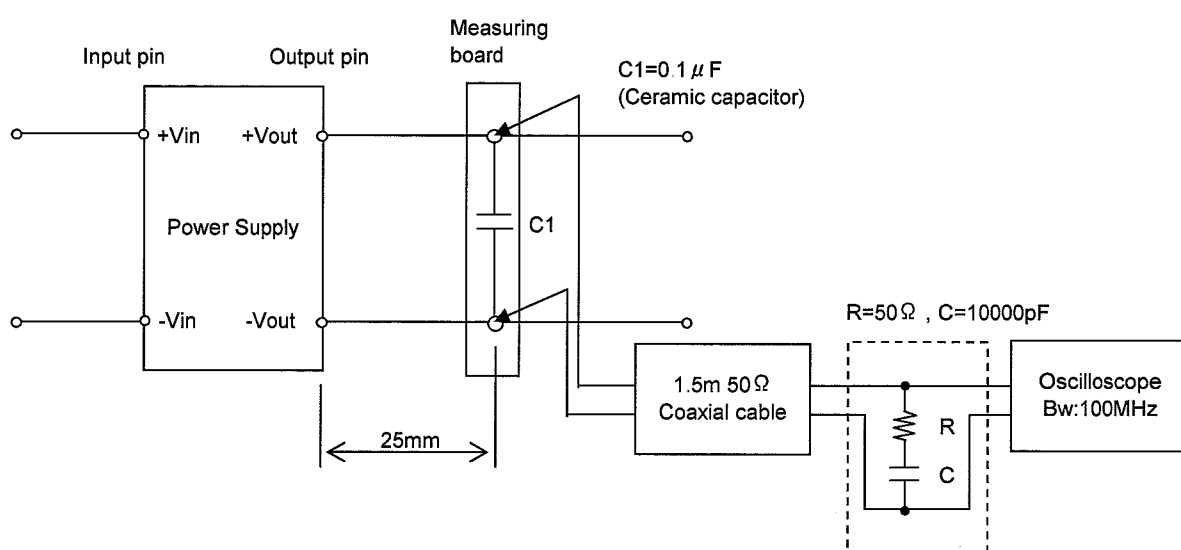


Figure C (Ripple and Ripple noise Characteristic)