

# TEST DATA OF SFS20483R3

Regulated DC Power Supply  
Aug 24, 2004

Approved by : Isao Yasuda  
Isao Yasuda Design Manager

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**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)

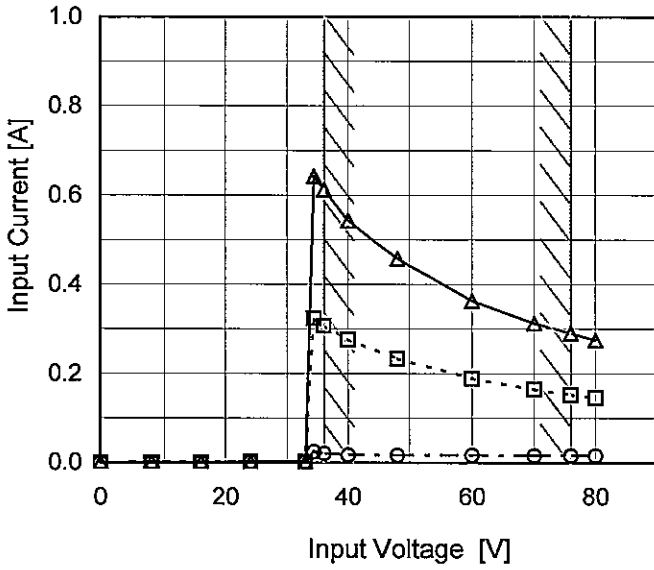


Model	SFS20483R3
Item	Input Current (by Input Voltage)
Object	_____

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	0.024	0.324	0.643
36	0.021	0.307	0.613
40	0.017	0.277	0.543
48	0.016	0.233	0.458
60	0.016	0.189	0.363
70	0.016	0.164	0.313
76	0.016	0.152	0.291
80	0.016	0.146	0.275
--	-	-	-
--	-	-	-
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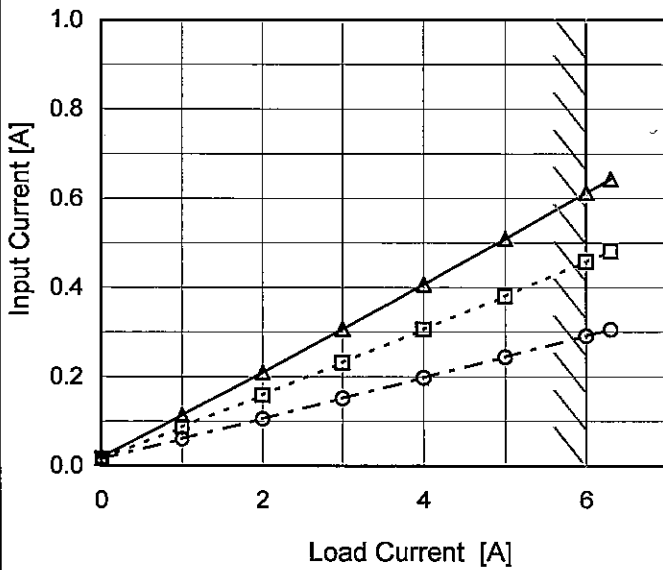


Model	SFS20483R3
Item	Input Current (by Load Current)
Object	_____

Temperature 25°C  
Testing Circuitry Figure A

1. Graph

- △— Input Volt. 36V
- - -□- - - Input Volt. 48V
- - -○- - - Input Volt. 76V



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

2. Values

Load Current [A]	Input Current [A]		
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
0.0	0.021	0.016	0.016
1.0	0.114	0.087	0.060
2.0	0.210	0.159	0.106
3.0	0.308	0.232	0.152
4.0	0.407	0.306	0.198
5.0	0.509	0.381	0.244
6.0	0.613	0.458	0.291
6.3	0.644	0.481	0.306
--	-	-	-
--	-	-	-
--	-	-	-

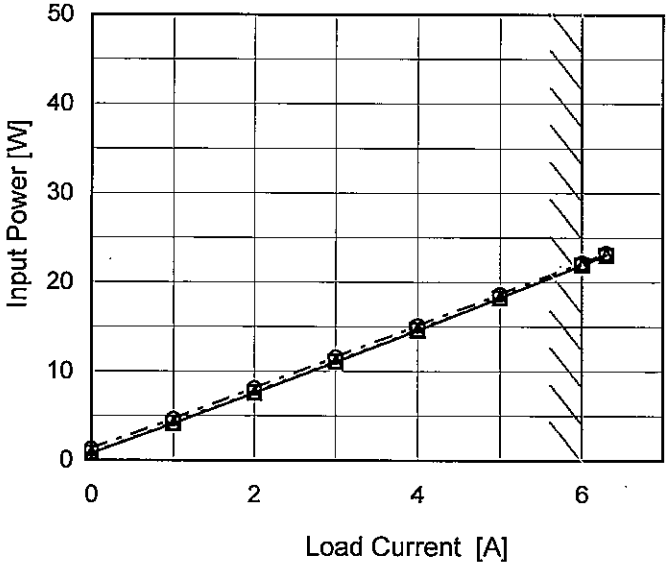


Model	SFS20483R3
Item	Input Power (by Load Current)
Object	_____

Temperature 25°C  
Testing Circuitry Figure A

1.Graph

- △— Input Volt. 36V
- - -□- - - Input Volt. 48V
- · - ○ - · - - Input Volt. 76V



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

2.Values

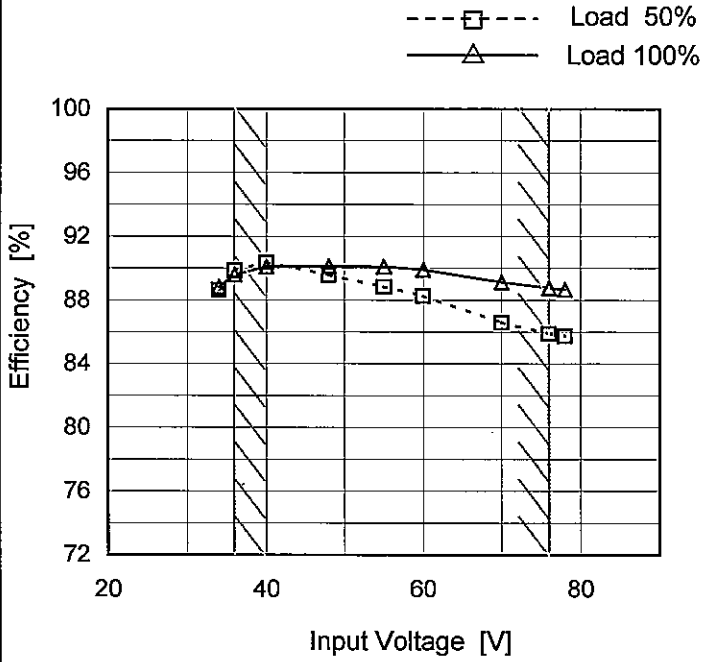
Load Current [A]	Input Power [W]		
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
0.0	0.78	0.82	1.29
1.0	4.13	4.20	4.65
2.0	7.57	7.65	8.10
3.0	11.06	11.15	11.60
4.0	14.62	14.68	15.11
5.0	18.28	18.26	18.63
6.0	21.96	21.94	22.21
6.3	23.08	23.04	23.28
--	-	-	-
--	-	-	-
--	-	-	-



Model	SFS20483R3
Item	Efficiency (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]	Efficiency [%]	
	Load 50%	Load 100%
34	88.6	88.8
36	89.9	89.6
40	90.4	90.1
48	89.6	90.1
55	88.8	90.1
60	88.3	89.9
70	86.6	89.1
76	85.9	88.8
78	85.8	88.7



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<p><b>Model</b> SFS20483R3</p> <p><b>Item</b> Line Regulation</p> <p><b>Object</b> +3.3V6A</p>		<p>Temperature 25°C</p> <p>Testing Circuitry Figure A</p>																																
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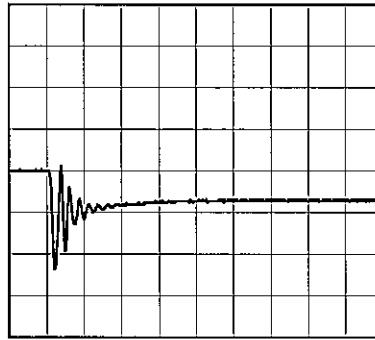
Model		SFS20483R3	Temperature	25°C
Item		Dynamic Load Response	Testing Circuitry	Figure A
Object		+3.3V6A		

Input Volt. 48 V  
 Cycle 1000 mS

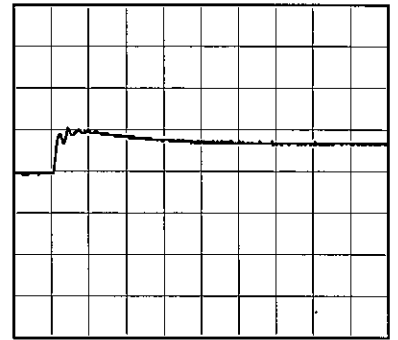
Load Current 6A / 200  $\mu$ s

Min. Load (0A)  $\longleftrightarrow$   
 Load 100% (6A)

100mV/div



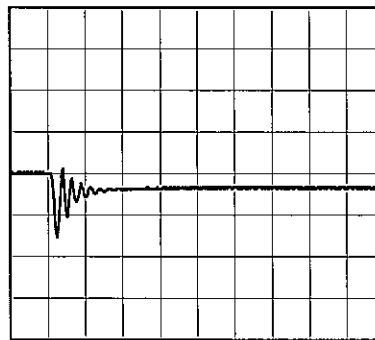
200  $\mu$ s/div



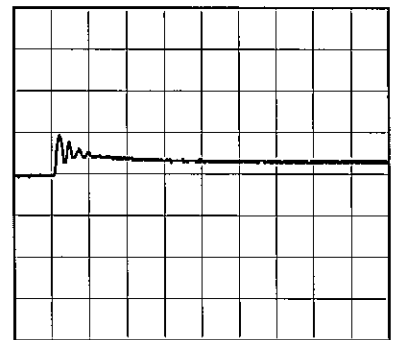
200  $\mu$ s/div

Min. Load (0A)  $\longleftrightarrow$   
 Load 50% (3A)

100mV/div



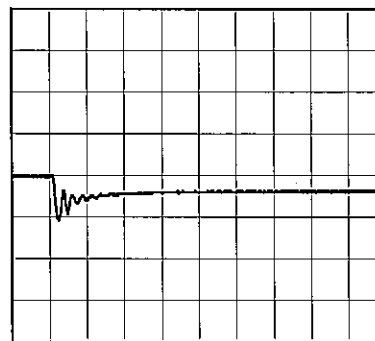
200  $\mu$ s/div



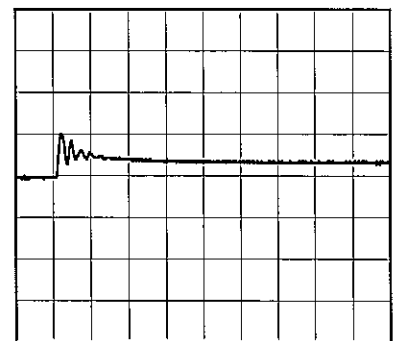
200  $\mu$ s/div

Load 50% (3A)  $\longleftrightarrow$   
 Load 100% (6A)

100mV/div



200  $\mu$ s/div



200  $\mu$ s/div



<p>Model SFS20483R3</p>		<p>Temperature 25°C Testing Circuitry Figure C</p>																																						
<p>Item Ripple Voltage (by Load Current)</p>																																								
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<p>Ripple [mVp-p]</p> <p>Fig.Complex Ripple Wave Form</p>																																								



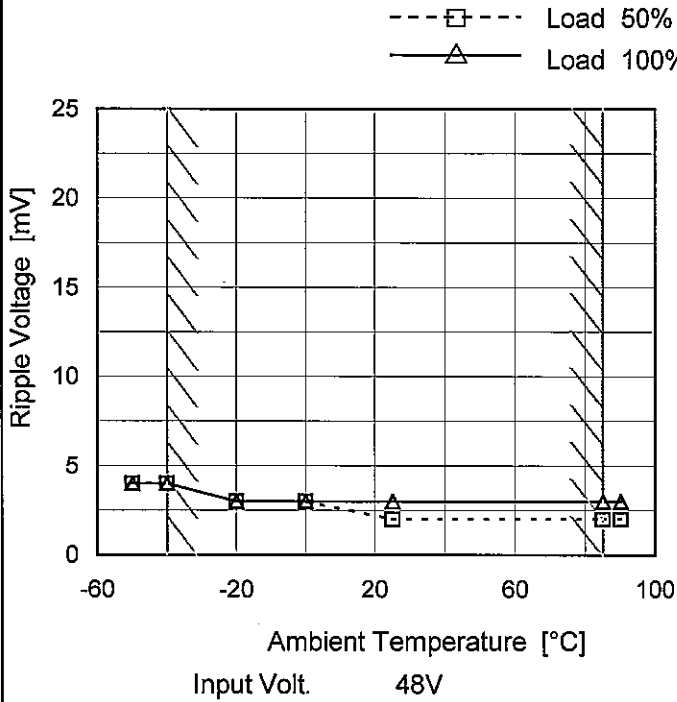
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Object	+3.3V6A																																							
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Load Current [A]	Ripple-Noise [mV]																																							
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<p>Ripple Noise[mVp-p]</p>																																								
<p>Fig.Complex Ripple Noise Wave Form</p>																																								



Model	SFS20483R3
Item	Ripple Voltage (by Ambient Temp.)
Object	+3.3V6A

Testing Circuitry Figure C

1. Graph



2. Values

Ambient Temperature [°C]	Ripple Voltage [mV]	
	Load 50%	Load 100%
-50	4	4
-40	4	4
-20	3	3
0	3	3
25	2	3
85	2	3
90	2	3
--	-	-
--	-	-
--	-	-
--	-	-

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



Model	SFS20483R3
Item	Ambient Temperature Drift
Object	+3.3V6A
1.Graph	<div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> </div> <div style="width: 35%;"> <p>—△— Input Volt. 36V                      ---□--- Input Volt. 48V                      -·-○-·- Input Volt. 76V</p> </div> </div>

Testing Circuitry Figure A

2.Values

Ambient Temperature [°C]	Output Voltage [V]		
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
-45	3.278	3.287	3.281
-40	3.278	3.288	3.281
-20	3.278	3.291	3.284
0	3.280	3.296	3.289
25	3.280	3.300	3.290
50	3.280	3.301	3.290
85	3.279	3.300	3.284
90	3.278	3.299	3.282
--	-	-	-
--	-	-	-
--	-	-	-

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



Model		SFS20483R3	Testing Circuitry Figure A
Item		Output Voltage Accuracy	
Object		+3.3V6A	

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 - 6A

\* 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	48	0	3.393	±57	±1.7
Minimum Voltage	85	36	6	3.279		



<b>COSEL</b>																								
Model	SFS20483R3	Temperature 25°C Testing Circuitry Figure A																						
Item	Time Lapse Drift																							
Object	+3.3V6A																							
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>3.300</td></tr> <tr><td>0.5</td><td>3.300</td></tr> <tr><td>1.0</td><td>3.300</td></tr> <tr><td>2.0</td><td>3.300</td></tr> <tr><td>3.0</td><td>3.300</td></tr> <tr><td>4.0</td><td>3.300</td></tr> <tr><td>5.0</td><td>3.300</td></tr> <tr><td>6.0</td><td>3.300</td></tr> <tr><td>7.0</td><td>3.300</td></tr> <tr><td>8.0</td><td>3.300</td></tr> </tbody> </table>	Time since start [H]	Output Voltage [V]	0.0	3.300	0.5	3.300	1.0	3.300	2.0	3.300	3.0	3.300	4.0	3.300	5.0	3.300	6.0	3.300	7.0	3.300	8.0	3.300
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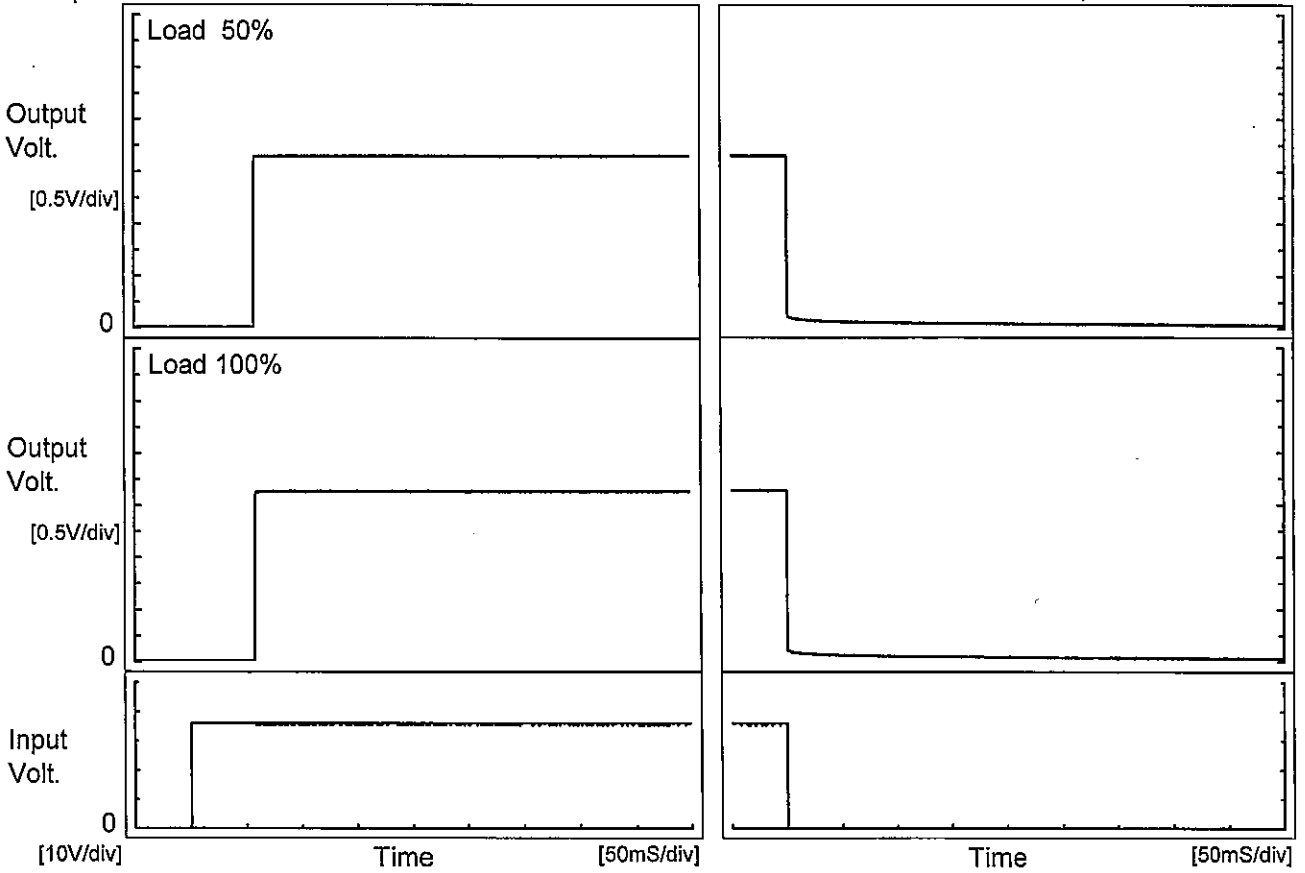




Model	SFS20483R3	Temperature	25°C
Item	Rise and Fall Time	Testing Circuitry	Figure A
Object	+3.3V6A		

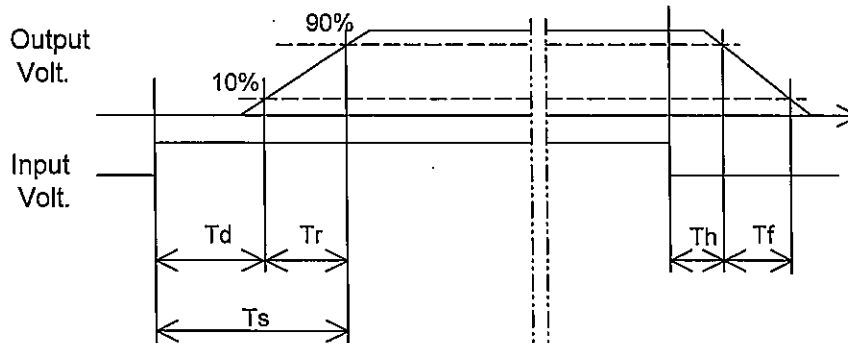
1. Graph

Input Volt. 36 V



2. Values

Load	Time	Td	Tr	Ts	Th	Tf
50 %		57.3	0.4	57.7	0.3	0.8
100 %		57.3	0.4	57.7	0.3	0.5





Model		SFS20483R3	Testing Circuitry Figure A																																					
Item		Minimum Input Voltage for Regulated Output Voltage																																						
Object		+3.3V6A																																						
1.Graph		<p>---□--- Load 50%</p> <p>---△--- Load 100%</p> <p>Note: Slanted line shows the range of the rated ambient temperature.</p>																																						
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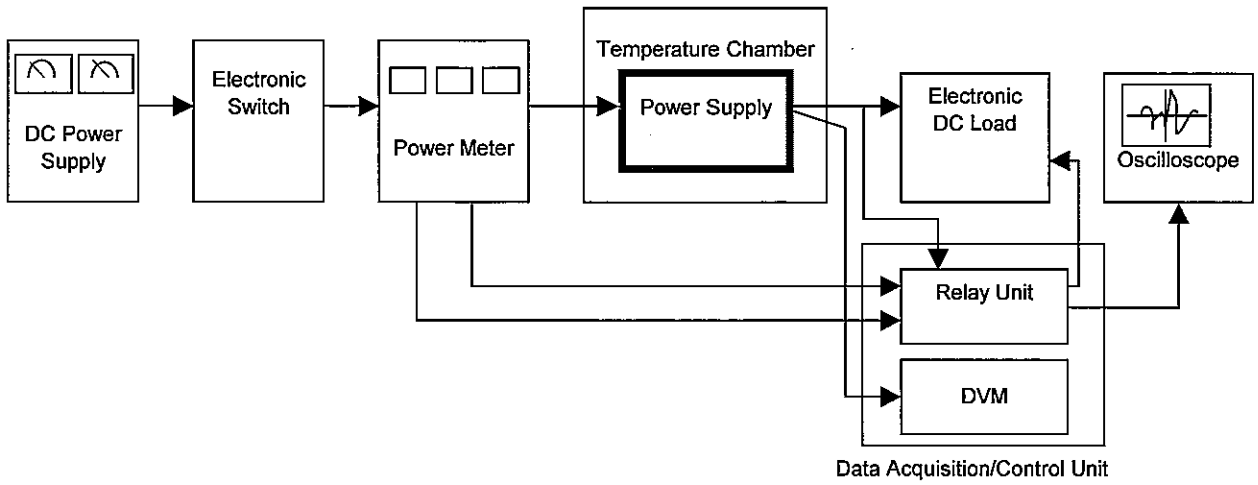


Figure A

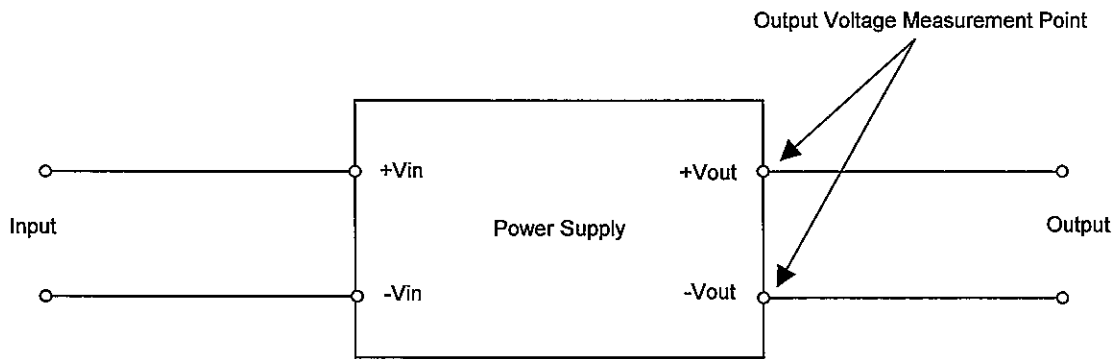


Figure B (General Electric Characteristic)

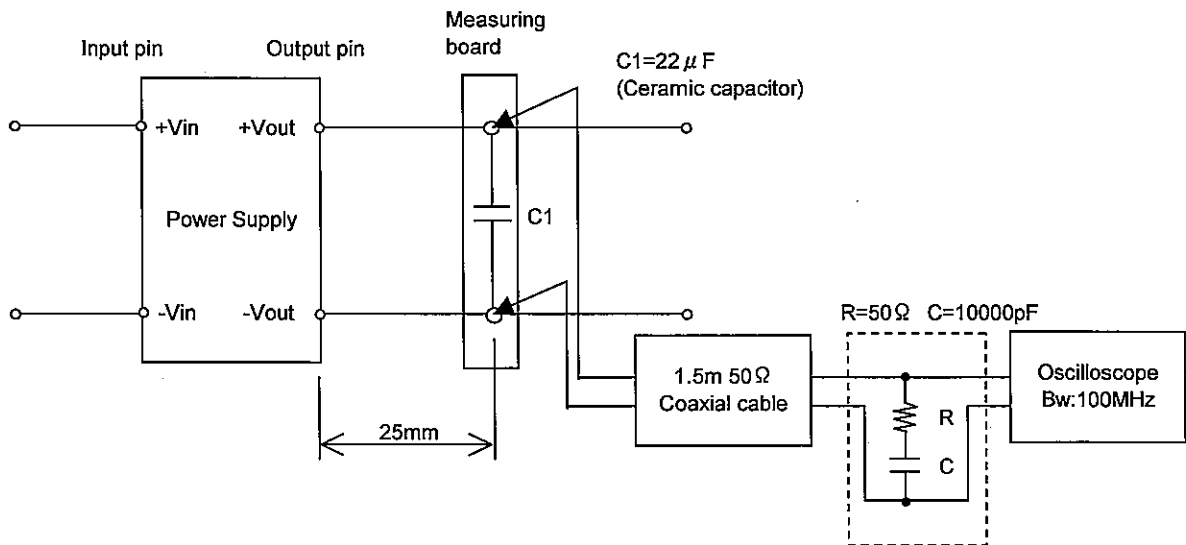


Figure C (Ripple and Ripple noise Characteristic)