

TEST DATA OF SFS10482R5

Regulated DC Power Supply
Sep.2. 2003

Approved by : Isao Yasuda Design Manager

Prepared by : Kenichi Tsukada Design Engineer

COSEL CO.,LTD.

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Model		SFS10482R5		Temperature		25°C																																																																								
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<p>The graph plots Input Current [A] on the y-axis (0.00 to 0.50) against Load Current [A] on the x-axis (0.0 to 3.0). 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 3.0 A on the x-axis, indicating the rated load current range.</p>			<table border="1"> <thead> <tr> <th rowspan="2">Load Current [A]</th> <th colspan="3">Input 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>0.0</td><td>0.013</td><td>0.012</td><td>0.012</td></tr> <tr><td>0.6</td><td>0.055</td><td>0.044</td><td>0.032</td></tr> <tr><td>1.2</td><td>0.100</td><td>0.077</td><td>0.053</td></tr> <tr><td>1.8</td><td>0.145</td><td>0.111</td><td>0.074</td></tr> <tr><td>2.4</td><td>0.191</td><td>0.145</td><td>0.095</td></tr> <tr><td>3.0</td><td>0.238</td><td>0.180</td><td>0.117</td></tr> <tr><td>3.3</td><td>0.262</td><td>0.198</td><td>0.128</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>			Load Current [A]	Input Current [A]			Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]	0.0	0.013	0.012	0.012	0.6	0.055	0.044	0.032	1.2	0.100	0.077	0.053	1.8	0.145	0.111	0.074	2.4	0.191	0.145	0.095	3.0	0.238	0.180	0.117	3.3	0.262	0.198	0.128	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
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Object	+2.5V3A		

Input Volt. 48 V
 Cycle 1000 ms

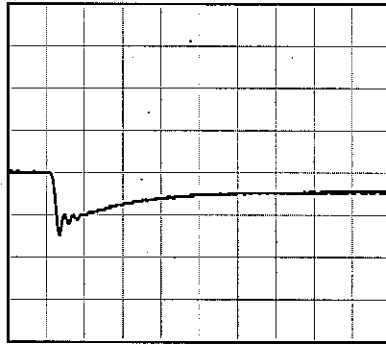
Load Current

3A/200 μ sec

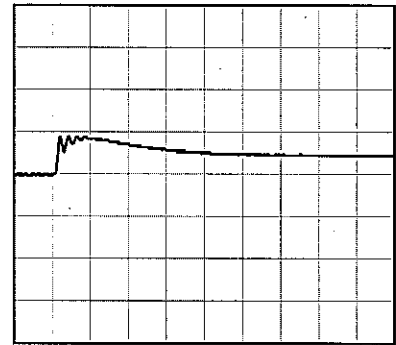
Min. Load (0A) \longleftrightarrow

Load 100% (3A)

100 mV/div



200 μ s/div

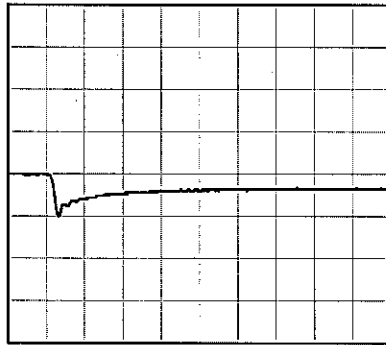


200 μ s/div

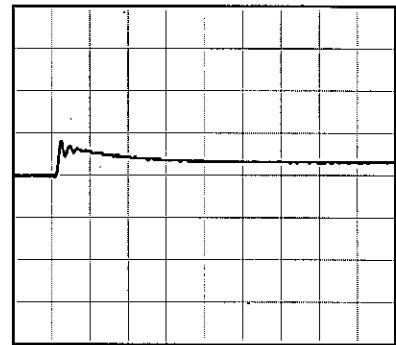
Min. Load (0A) \longleftrightarrow

Load 50% (1.5A)

100 mV/div



200 μ s/div

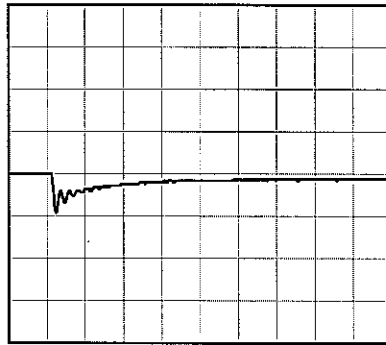


200 μ s/div

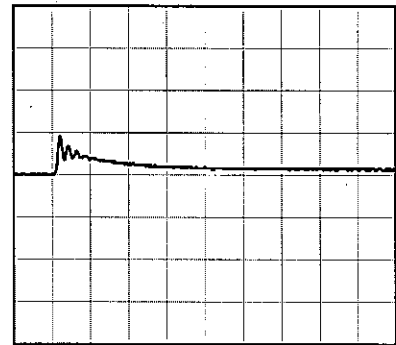
Load 50% (1.5A) \longleftrightarrow

Load 100% (3A)

100 mV/div



200 μ s/div



200 μ s/div

<p>Model SFS10482R5</p> <p>Item Ripple Voltage (by Load Current)</p> <p>Object +2.5V3A</p>		<p>Temperature 25°C</p> <p>Testing Circuitry Figure A</p>																																						
<p>1.Graph</p> <div style="text-align: right;"> <p>—△— Input Volt. 36V</p> <p>- - -○- - - Input Volt. 76V</p> </div> <p>Measured by 100 MHz Oscilloscope. Ripple Voltage is shown as p-p in the figure below. Note: Slanted line shows the range of the rated load current.</p>		<p>2.Values</p> <table border="1"> <thead> <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> </thead> <tbody> <tr><td>0.0</td><td>4</td><td>5</td></tr> <tr><td>0.6</td><td>4</td><td>5</td></tr> <tr><td>1.2</td><td>4</td><td>5</td></tr> <tr><td>1.8</td><td>4</td><td>5</td></tr> <tr><td>2.4</td><td>4</td><td>5</td></tr> <tr><td>3.0</td><td>4</td><td>5</td></tr> <tr><td>3.3</td><td>4</td><td>5</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> </tbody> </table>	Load Current [A]	Ripple Voltage [mV]		Input Volt. 36 [V]	Input Volt. 76 [V]	0.0	4	5	0.6	4	5	1.2	4	5	1.8	4	5	2.4	4	5	3.0	4	5	3.3	4	5	--	-	-	--	-	-	--	-	-	--	-	-
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<p>Ripple [mVp-p]</p> <p>Fig.Complex Ripple Wave Form</p>																																								

Model		SFS10482R5	Temperature 25°C																																							
Item		Ripple-Noise	Testing Circuitry Figure C																																							
Object		+2.5V3A																																								
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Load Current [A]	Ripple-Noise [mV]																																									
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Model		SFS10482R5	Testing Circuitry Figure A																																						
Item		Ripple Voltage (by Ambient Temp.)																																							
Object		+2.5V3A																																							
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Model		SFS10482R5		Testing Circuitry Figure A																																																				
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Object		+2.5V3A																																																						
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COSEL		
Model	SFS10482R5	
Item	Output Voltage Accuracy	Testing Circuitry Figure A
Object	+2.5V3A	

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 - 3A

* 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

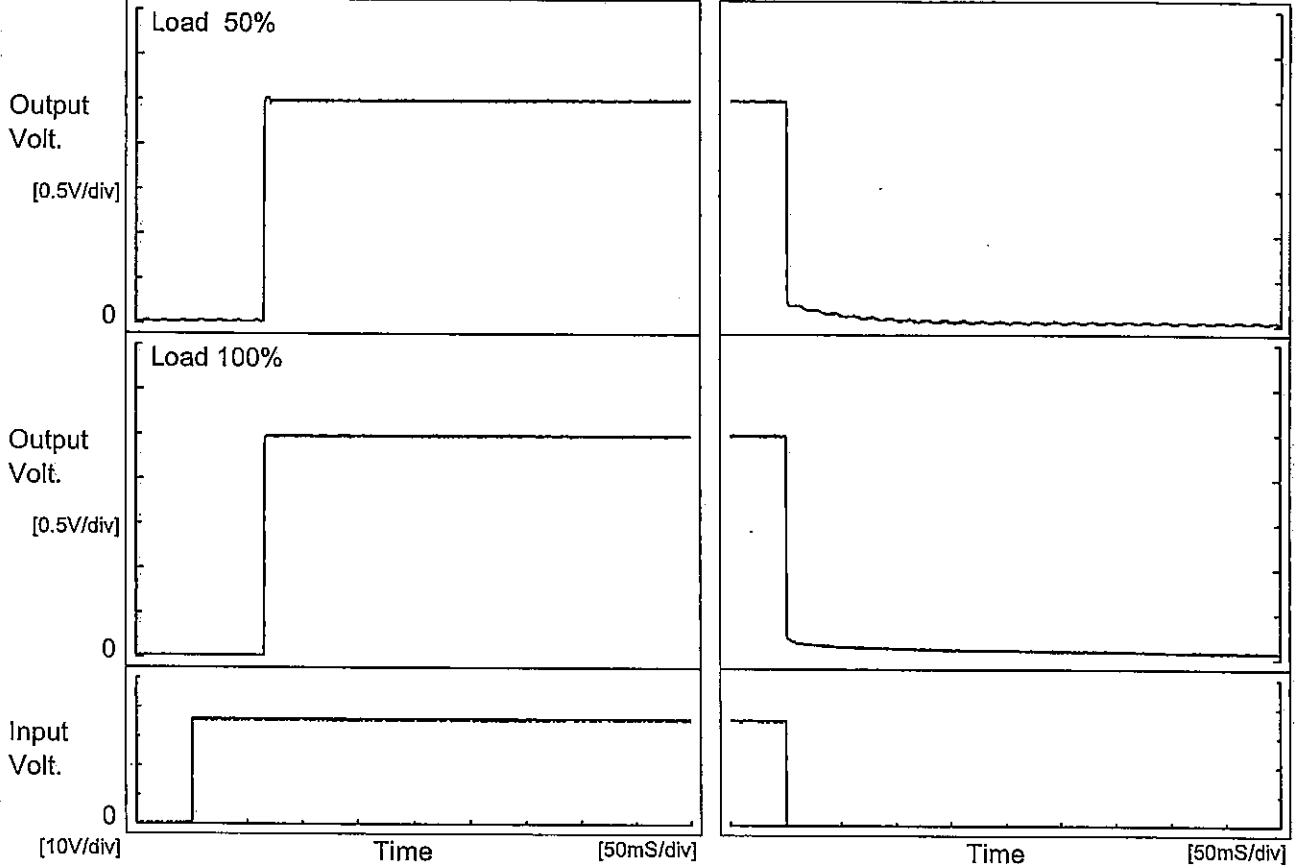
Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	85	76	0	2.567	±52	±2.1
Minimum Voltage	85	76	3	2.463		



COSEL																									
Model	SFS10482R5	Temperature	25°C																						
Item	Time Lapse Drift	Testing Circuitry	Figure A																						
Object	+2.5V3A																								
<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>2.498</td></tr> <tr><td>0.5</td><td>2.494</td></tr> <tr><td>1.0</td><td>2.493</td></tr> <tr><td>2.0</td><td>2.493</td></tr> <tr><td>3.0</td><td>2.493</td></tr> <tr><td>4.0</td><td>2.493</td></tr> <tr><td>5.0</td><td>2.493</td></tr> <tr><td>6.0</td><td>2.493</td></tr> <tr><td>7.0</td><td>2.493</td></tr> <tr><td>8.0</td><td>2.493</td></tr> </tbody> </table>		Time since start [H]	Output Voltage [V]	0.0	2.498	0.5	2.494	1.0	2.493	2.0	2.493	3.0	2.493	4.0	2.493	5.0	2.493	6.0	2.493	7.0	2.493	8.0	2.493
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Model	SFS10482R5	Temperature	25°C
Item	Rise and Fall Time	Testing Circuitry	Figure A
Object	+2.5V3A		

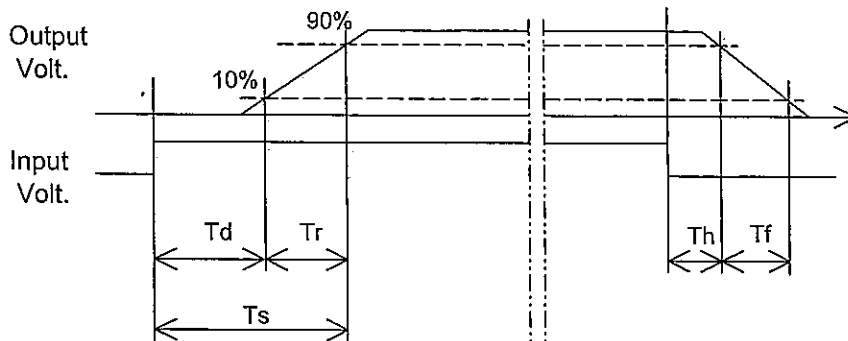
1. Graph



2. Values

Load	Time	Td	Tr	Ts	Th	Tf
50 %		62.5	0.4	62.9	0.3	0.5
100 %		65.0	0.4	65.4	0.3	0.5

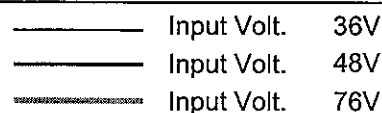
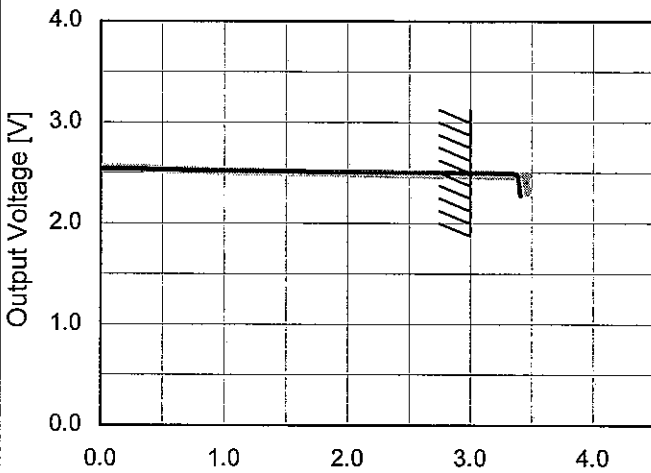
[mS]





Model		SFS10482R5	Testing Circuitry Figure A																																						
Item		Minimum Input Voltage for Regulated Output Voltage																																							
Object		+2.5V3A																																							
1.Graph			2.Values																																						
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<p>Note: Slanted line shows the range of the rated ambient temperature.</p>																																									



Model		SFS10482R5	Temperature 25°C																																																				
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Model	SFS10482R5																																																					
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<p>Note: Slanted line shows the range of the rated ambient temperature.</p>																																																						

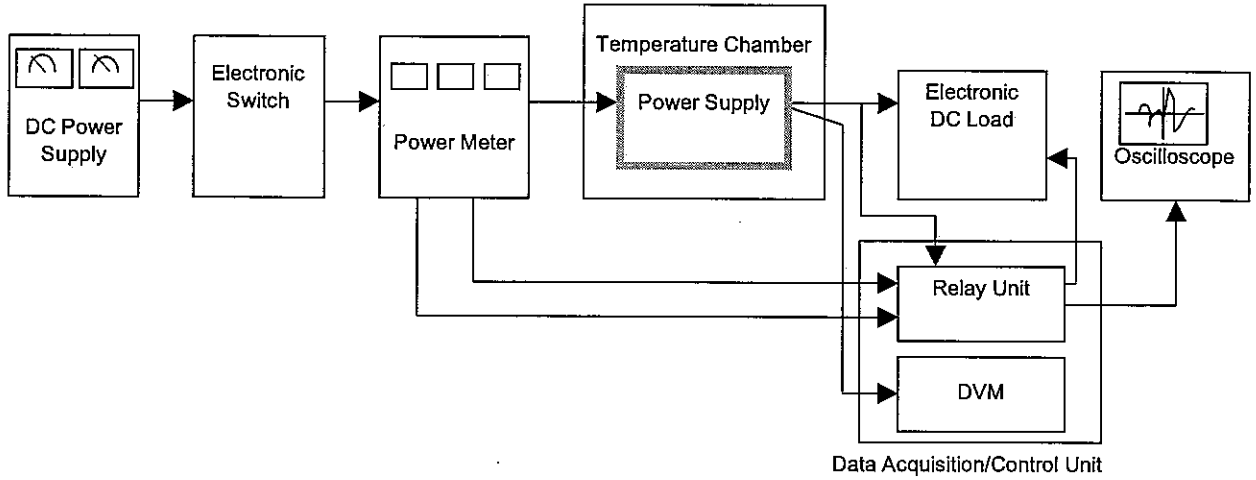


Figure A

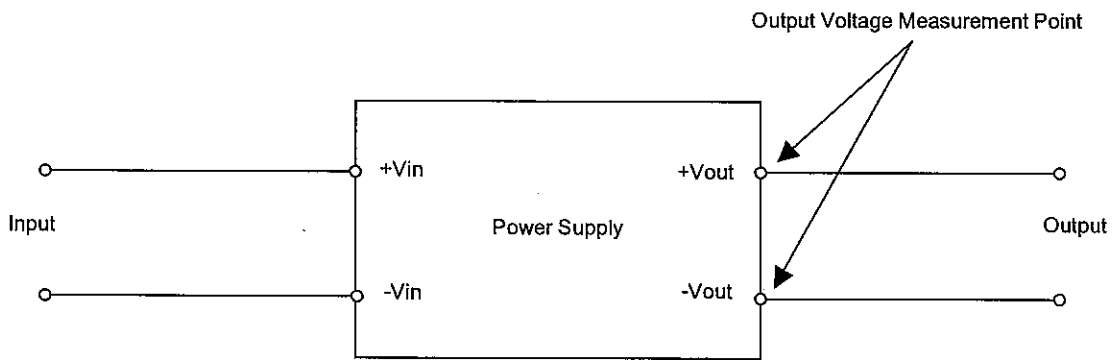


Figure B (General Electric Characteristic)

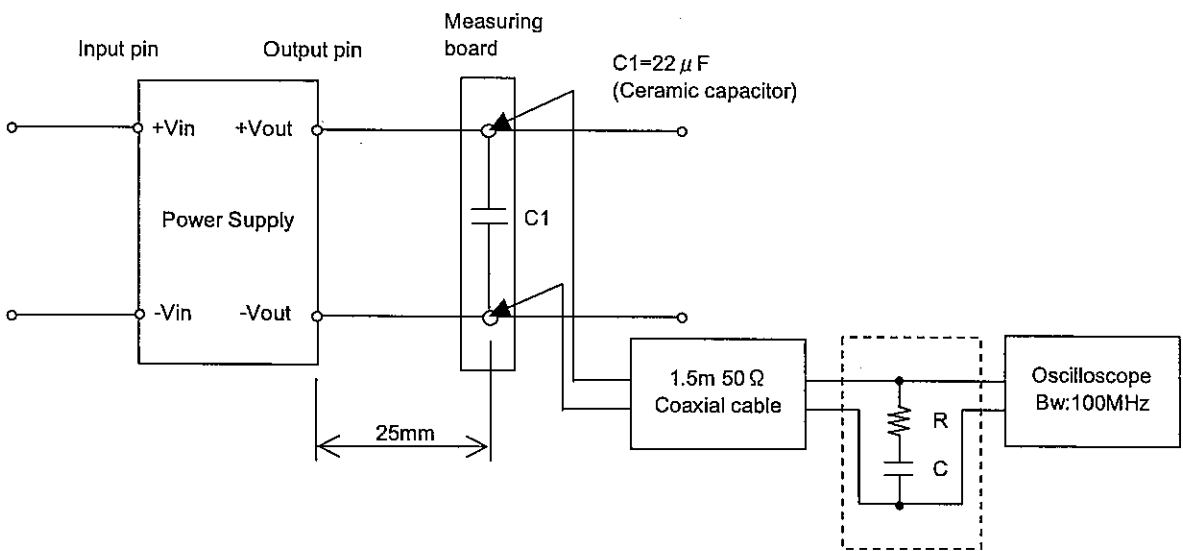


Figure C (Ripple and Ripple noise Characteristic)