



TEST DATA OF SFS152405/SFCS152405

Regulated DC Power Supply
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COSEL CO.,LTD.

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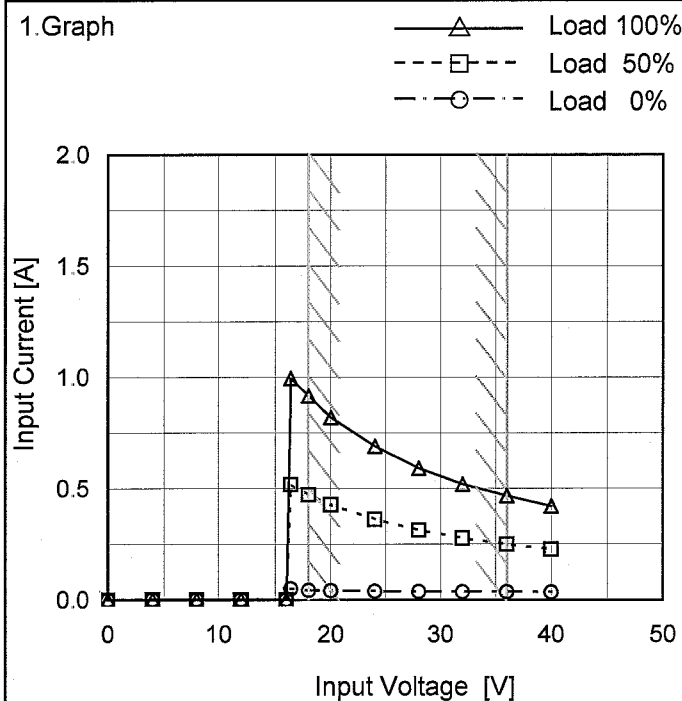
Model SFS152405/SFCS152405

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
4	0.001	0.001	0.001
8	0.001	0.001	0.001
12	0.002	0.002	0.002
16	0.002	0.002	0.002
16	0.050	0.519	0.995
18	0.042	0.473	0.918
20	0.041	0.428	0.821
24	0.039	0.362	0.691
28	0.037	0.314	0.592
32	0.037	0.277	0.520
36	0.036	0.250	0.469
40	0.034	0.227	0.422
--	-	-	-
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Model SFS152405/SFCS152405

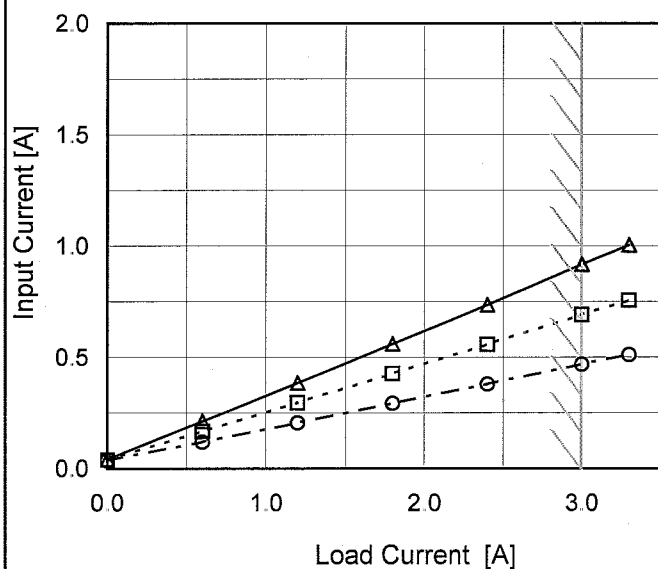
Item Input Current (by Load Current)

Object

Temperature 25°C
Testing Circuitry Figure A

1. Graph

—△— Input Volt. 18V
 ---□--- Input Volt. 24V
 ---○--- Input Volt. 36V



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

2. Values

Load Current [A]	Input Current [A]		
	Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]
0.0	0.042	0.039	0.036
0.6	0.212	0.166	0.119
1.2	0.385	0.296	0.206
1.8	0.561	0.427	0.293
2.4	0.735	0.557	0.380
3.0	0.918	0.691	0.469
3.3	1.005	0.756	0.511
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

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Model		SFS152405/SFCS152405	
Item		Efficiency (by Input Voltage)	
Object			

1. Graph

Load 50%

Load 100%

Efficiency [%]

100

92

84

76

68

60

52

44

10

20

30

40

50

Input Voltage [V]

Note: Slanted line shows the range of the rated input voltage.

2. Values

Input Voltage [V]	Efficiency [%]	
	Load 50%	Load 100%
17	88.1	90.4
18	88.6	90.8
20	88.1	90.8
24	86.9	90.4
30	85.3	89.7
36	83.6	88.8
40	82.6	88.5
--	-	-
--	-	-

Model	SFS152405/SFCS152405	Temperature	25°C
Item	Efficiency (by Load Current)	Testing Circuitry	Figure A
Object			

1. Graph

Legend:

- △— Input Volt. 18V
- -□- - Input Volt. 24V
- ·○· - Input Volt. 36V

2. Values

Load Current [A]	Efficiency [%]		
	Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]
0.0	-	-	-
0.6	78.7	75.5	69.5
1.2	87.0	85.0	81.1
1.8	89.4	88.3	85.6
2.4	90.4	89.7	87.9
3.0	90.5	90.3	88.7
3.3	90.6	90.6	89.2
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

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

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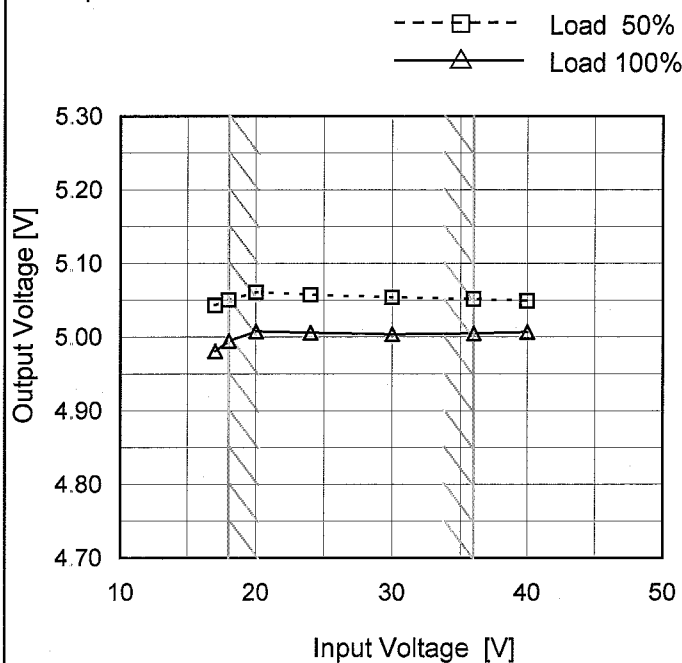
Model SFS152405/SFCS152405

Item Line Regulation

Object +5V3A

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]	Output Voltage [V]	
	Load 50%	Load 100%
17	5.043	4.981
18	5.051	4.995
20	5.061	5.008
24	5.058	5.006
30	5.054	5.004
36	5.052	5.006
40	5.049	5.007
--	-	-
--	-	-

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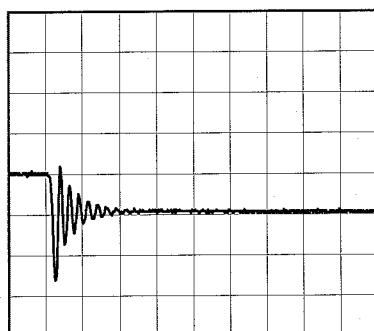
Model	SFS152405/SFCS152405	Temperature	25°C
Item	Dynamic Load Response	Testing Circuitry	Figure A
Object	+5V3A		

Input Volt. 24 V
Cycle 1000 mS

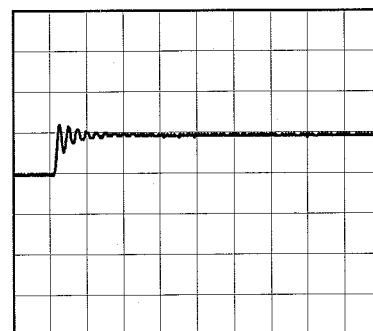
Load Current 3A / 200 μ s

Min. Load (0A) \longleftrightarrow
Load 100% (3A)

100mV/div



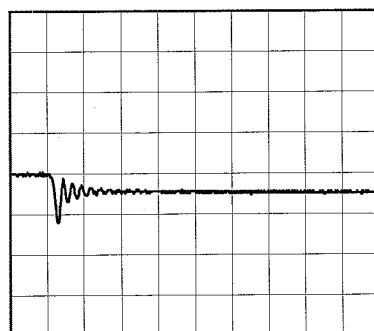
200 μ s/div



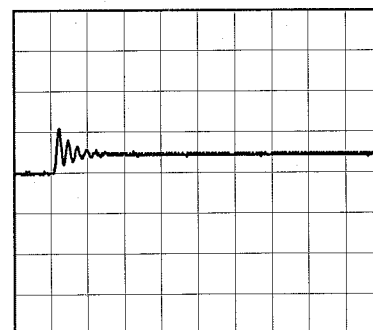
200 μ s/div

Min. Load (0A) \longleftrightarrow
Load 50% (1.5A)

100mV/div



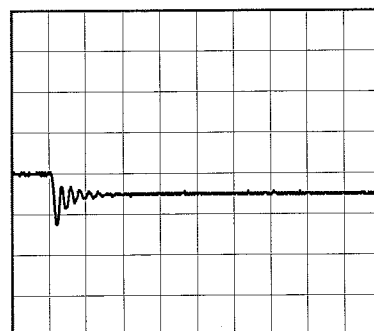
200 μ s/div



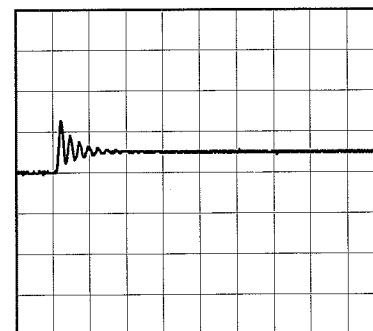
200 μ s/div

Load 50% (1.5A) \longleftrightarrow
Load 100% (3A)

100mV/div



200 μ s/div



200 μ s/div

Model		SFS152405/SFCS152405		Temperature 25°C	
Item		Ripple Voltage (by Load Current)		Testing Circuitry Figure C	
Object		+5V3A			
1. Graph				2. Values	
<div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>Input Volt.</div><div>18V</div></div><div><div>Input Volt.</div><div>36V</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><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> <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></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></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> 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Model	SFS152405/SFCS152405		
Item	Ripple-Noise	Temperature	25°C
Object	+5V3A	Testing Circuitry	Figure C
1. Graph		2. Values	
<div><div><div>—△— Input Volt. 18V</div><div>- -○- - Input Volt. 36V</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>Ripple Noise[mVp-p]</div><p>Fig. Complex Ripple Noise Wave Form</p></div></div>			

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Model		SFS152405/SFCS152405																																																				
Item		Ambient Temperature Drift																																																				
Object		+5V3A																																																				
1.Graph		2.Values																																																				
<div><div><div><div><div>—△—</div><div>Input Volt.</div><div>18V</div></div><div><div>---□---</div><div>Input Volt.</div><div>24V</div></div><div><div>---○---</div><div>Input Volt.</div><div>36V</div></div></div><p>Output Voltage [V]</p><p>Ambient Temperature [°C]</p><p>Load 100%</p></div></div>		<table><tr><th rowspan="2">Ambient Temperature [°C]</th><th colspan="3">Output Voltage [V]</th></tr><tr><th>Input Volt. 18[V]</th><th>Input Volt. 24[V]</th><th>Input Volt. 36[V]</th></tr><tr><td>-45</td><td>4.985</td><td>4.987</td><td>4.993</td></tr><tr><td>-40</td><td>4.986</td><td>4.987</td><td>4.994</td></tr><tr><td>-20</td><td>4.993</td><td>4.995</td><td>5.001</td></tr><tr><td>0</td><td>4.995</td><td>5.005</td><td>5.009</td></tr><tr><td>25</td><td>4.995</td><td>5.006</td><td>5.006</td></tr><tr><td>50</td><td>5.003</td><td>5.014</td><td>5.010</td></tr><tr><td>85</td><td>5.003</td><td>5.013</td><td>5.000</td></tr><tr><td>90</td><td>5.002</td><td>5.011</td><td>4.997</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]	Output Voltage [V]			Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]	-45	4.985	4.987	4.993	-40	4.986	4.987	4.994	-20	4.993	4.995	5.001	0	4.995	5.005	5.009	25	4.995	5.006	5.006	50	5.003	5.014	5.010	85	5.003	5.013	5.000	90	5.002	5.011	4.997	--	-	-	-	--	-	-	-	--	-	-	-
Ambient Temperature [°C]	Output Voltage [V]																																																					
	Input Volt. 18[V]	Input Volt. 24[V]	Input Volt. 36[V]																																																			
-45	4.985	4.987	4.993																																																			
-40	4.986	4.987	4.994																																																			
-20	4.993	4.995	5.001																																																			
0	4.995	5.005	5.009																																																			
25	4.995	5.006	5.006																																																			
50	5.003	5.014	5.010																																																			
85	5.003	5.013	5.000																																																			
90	5.002	5.011	4.997																																																			
--	-	-	-																																																			
--	-	-	-																																																			
--	-	-	-																																																			
Note: Slanted line shows the range of the rated ambient temperature.																																																						

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COSEL

		Testing Circuitry Figure A
Model	SFS152405/SFCS152405	
Item	Output Voltage Accuracy	
Object	+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 : 18 - 36V

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	18	0	5.141	±78	±1.6
Minimum Voltage	-40	18	3	4.986		



Model

SFS152405/SFCS152405

Item

Time Lapse Drift

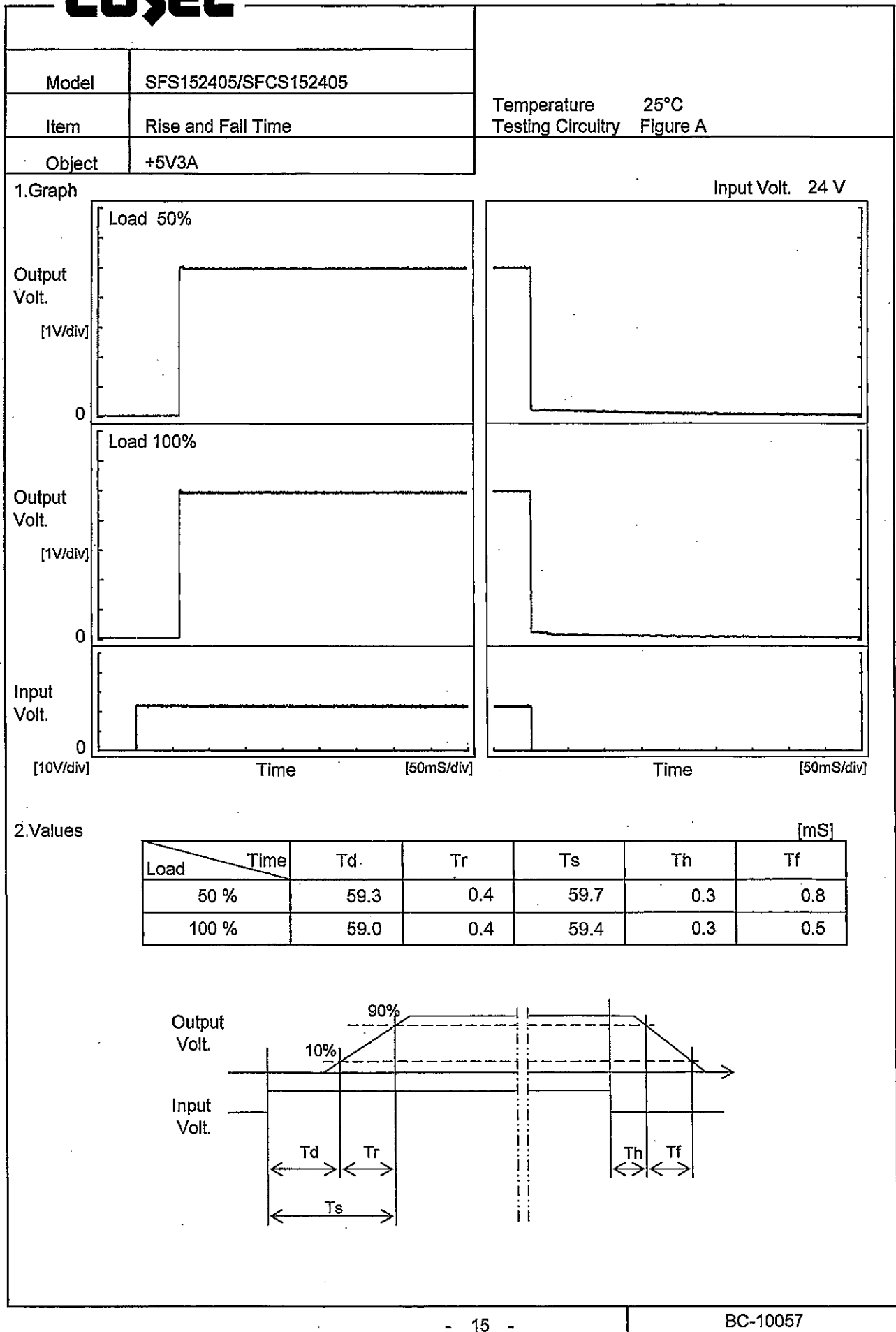
Object

+5V3A

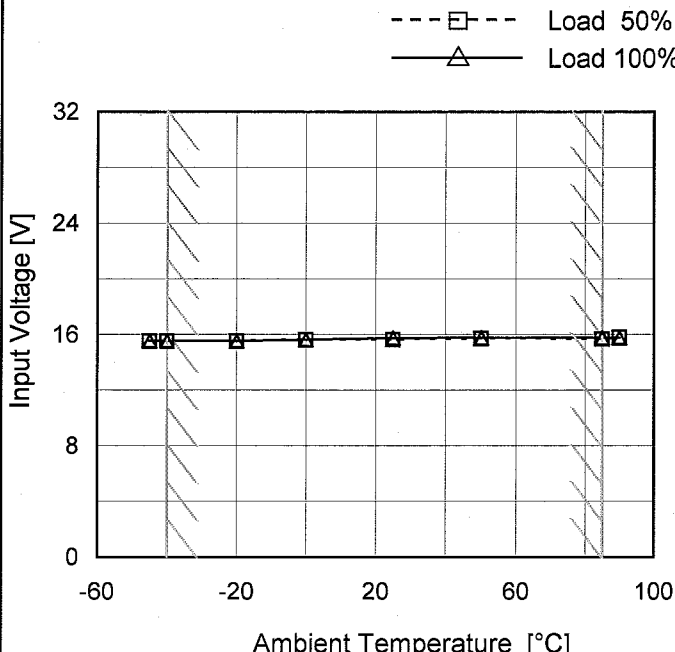
1. Graph

Output Voltage [V]

COSEL



COSEL

		Testing Circuitry Figure A																																						
Model	SFS152405/SFCS152405																																							
Item	Minimum Input Voltage for Regulated Output Voltage																																							
Object	+5V3A																																							
1.Graph		2. Values																																						
<div><div><div>---□--- Load 50%</div><div>—△— Load 100%</div></div><p>Input Voltage [V]</p><p>Ambient Temperature [°C]</p></div>																																								
Note: Slanted line shows the range of the rated ambient temperature.																																								
		<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>-45</td><td>15.6</td><td>15.6</td></tr><tr><td>-40</td><td>15.6</td><td>15.6</td></tr><tr><td>-20</td><td>15.6</td><td>15.6</td></tr><tr><td>0</td><td>15.7</td><td>15.7</td></tr><tr><td>25</td><td>15.7</td><td>15.8</td></tr><tr><td>50</td><td>15.7</td><td>15.8</td></tr><tr><td>85</td><td>15.7</td><td>15.8</td></tr><tr><td>90</td><td>15.8</td><td>15.8</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></table>	Ambient Temperature [°C]	Input Voltage [V]		Load 50%	Load 100%	-45	15.6	15.6	-40	15.6	15.6	-20	15.6	15.6	0	15.7	15.7	25	15.7	15.8	50	15.7	15.8	85	15.7	15.8	90	15.8	15.8	--	-	-	--	-	-	--	-	-
Ambient Temperature [°C]	Input Voltage [V]																																							
	Load 50%	Load 100%																																						
-45	15.6	15.6																																						
-40	15.6	15.6																																						
-20	15.6	15.6																																						
0	15.7	15.7																																						
25	15.7	15.8																																						
50	15.7	15.8																																						
85	15.7	15.8																																						
90	15.8	15.8																																						
--	-	-																																						
--	-	-																																						
--	-	-																																						

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BC-10057

Model

SFS152405/SFCS152405

Item

Overvoltage Protection

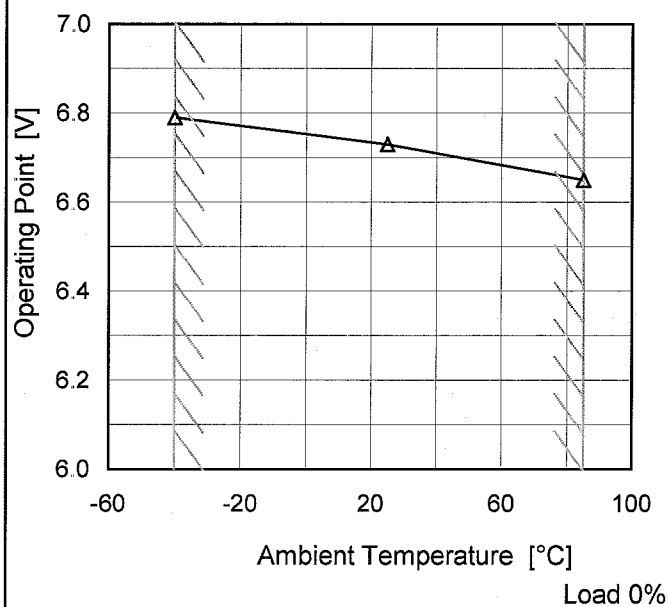
Object

+5V3A

Testing Circuitry Figure A

1. Graph

—△— Input Volt. 24V



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

2. Values

Ambient Temperature [°C]	Operating Point [V]		
	Input Volt 24[V]	Input Volt	Input Volt
-40	6.79	-	-
25	6.73	-	-
85	6.65	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

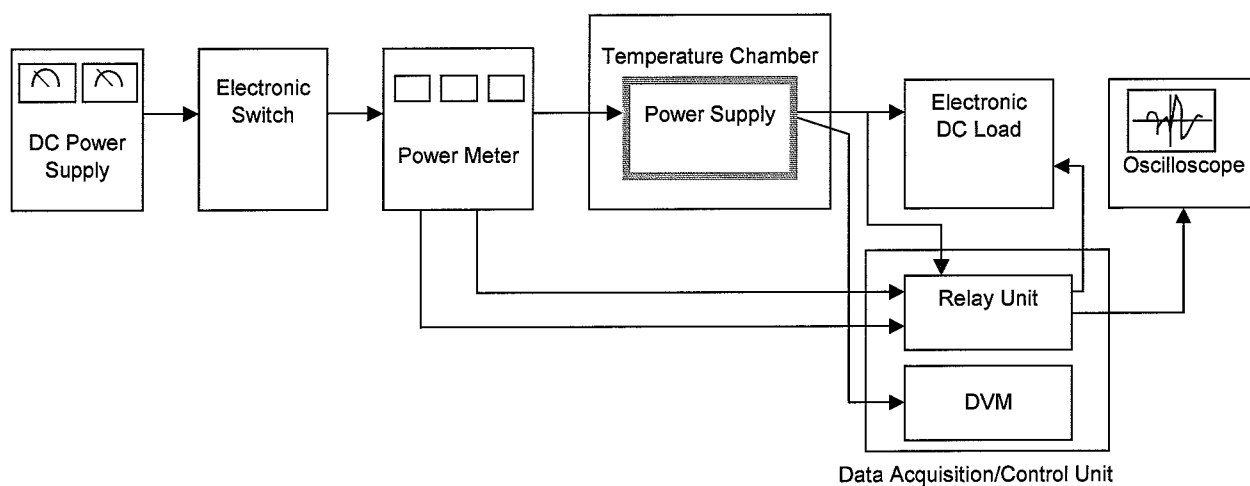


Figure A

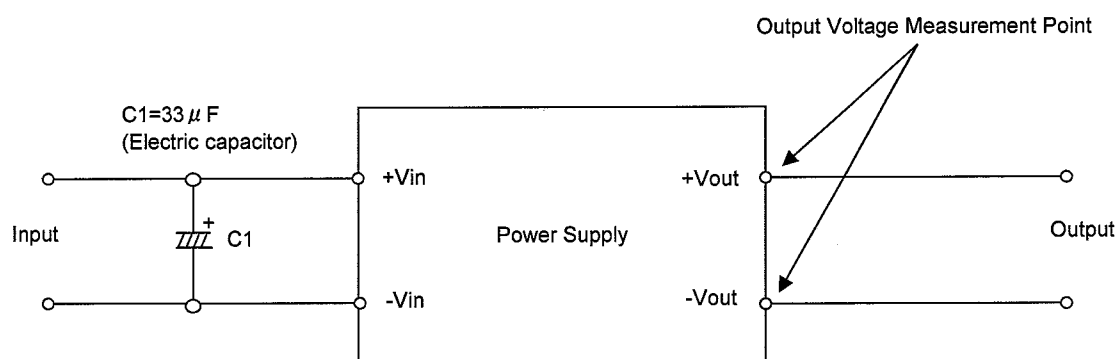


Figure B (General Electric Characteristic)

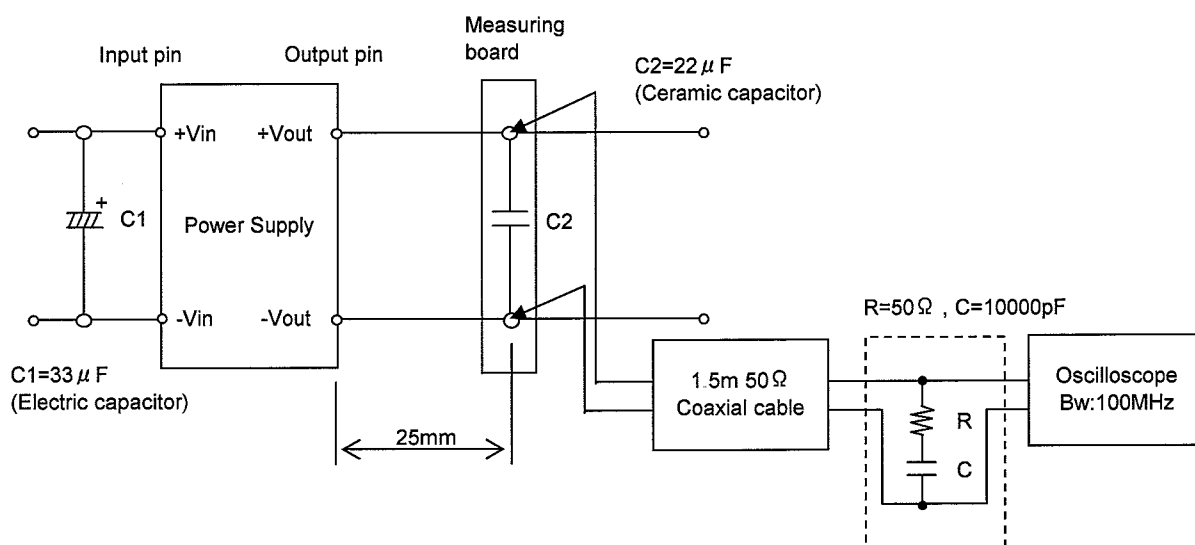


Figure C (Ripple and Ripple noise Characteristic)