COSEL

TEST DATA OF SFLS10483R3

Regulated DC Power Supply
Jun 29, 2007

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# COSEL CO.,LTD.

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Model	SFLS10483R3
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	0.001	0.001	0.001
33	0.002	0.002	0.002
34	0.024	0.174	0.326
36	0.021	0.165	0.312
40	0.020	0.148	0.279
48	0.020	0.126	0.236
60	0.020	0.105	0.191
70	0.021	0.093	0.167
76	0.021	0.088	0.155
80	0.022	0.085	0.149
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

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Model	SFLS10483R3
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

Input Current [A] vs Load Current [A]

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	0.020	0.021
0.6	0.079	0.062	0.048
1.2	0.137	0.105	0.074
1.8	0.195	0.149	0.101
2.4	0.254	0.192	0.129
3.0	0.312	0.236	0.155
3.3	0.342	0.258	0.169
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

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Model	SFLS10483R3
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

2.Values

Load Current [A]	Input Power [W]		
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
0.0	0.77	0.94	1.60
0.6	2.83	2.99	3.62
1.2	4.91	5.06	5.66
1.8	7.00	7.14	7.70
2.4	9.11	9.22	9.76
3.0	11.21	11.30	11.81
3.3	12.28	12.35	12.85
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

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

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Model	SFLS10483R3
Item	Efficiency (by Input Voltage)
Object	

Temperature   25°C
Testing Circuitry   Figure A

1.Graph

--- ⊟ --- Load 50%
——— △ ——— Load 100%

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

2.Values

Input Voltage [V]	Efficiency [%]	
	Load 50%	Load 100%
34	83.8	88.2
36	84.7	88.9
40	84.7	89.0
48	82.8	88.2
55	81.2	87.4
60	80.0	86.8
70	77.3	85.3
76	75.6	84.4
80	74.5	83.8

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COSEL

Model	SFLS10483R3
Item	Efficiency (by Load Current)
Object	

Temperature 25°C
Testing Circuitry Figure A

1.Graph

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

Load Current [A]

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

2.Values

Load Current [A]	Efficiency [%]		
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
0.0	-	-	-
0.6	71.6	67.8	56.1
1.2	82.4	80.0	71.6
1.8	86.3	84.7	78.5
2.4	88.1	87.0	82.2
3.0	88.9	88.2	84.4
3.3	89.1	88.6	85.1
—	-	-	-
—	-	-	-
—	-	-	-
—	-	-	-

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Model	SFLS10483R3
Item	Line Regulation
Object	+3.3V3A
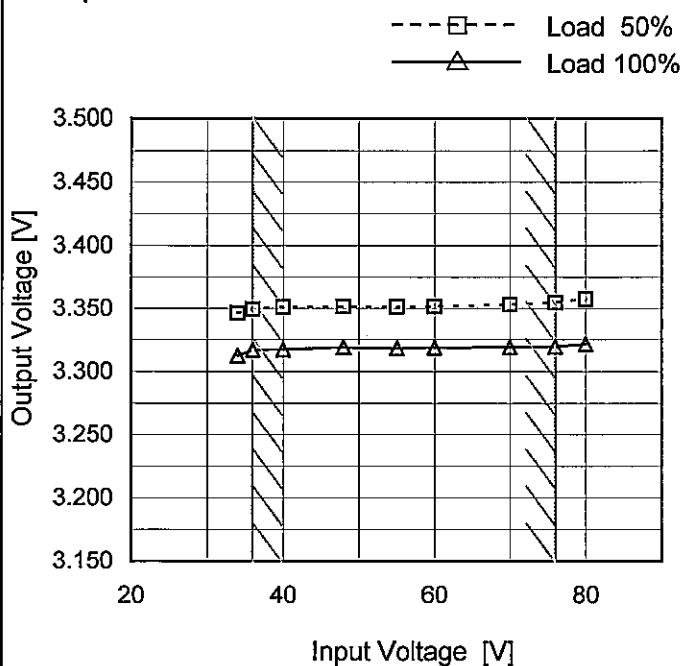
Temperature   25°C
Testing Circuitry   Figure A

1.Graph

--- ⊟ --- Load 50%
——△—— Load 100%

Output Voltage [V] vs Input Voltage [V]

Input Voltage [V]

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

2.Values

Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
34	3.346	3.313
36	3.349	3.317
40	3.351	3.317
48	3.352	3.319
55	3.351	3.318
60	3.352	3.319
70	3.353	3.319
76	3.354	3.320
80	3.357	3.322

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Model	SFLS10483R3
Item	Load Regulation
Object	+3.3V3A
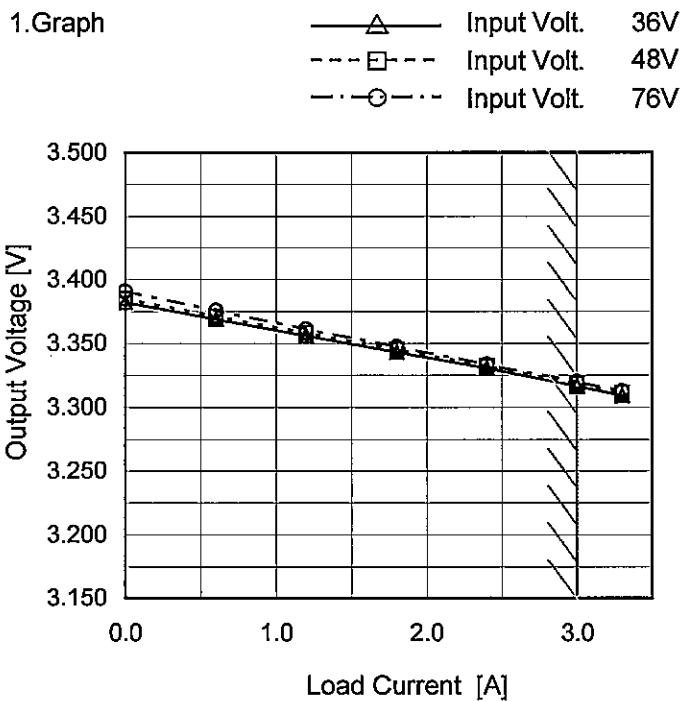
Temperature 25°C
Testing Circuitry Figure A

1.Graph

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

Load Current [A]

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

2.Values

Load Current [A]	Output Voltage [V]		
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
0.0	3.382	3.385	3.391
0.6	3.369	3.371	3.376
1.2	3.356	3.358	3.361
1.8	3.343	3.345	3.347
2.4	3.331	3.332	3.333
3.0	3.317	3.319	3.320
3.3	3.310	3.311	3.313
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

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Model	SFLS10483R3
Item	Dynamic Load Response
Object	+3.3V3A

Temperature   25°C
Testing Circuitry   Figure A

Input Volt.   48 V

Cycle   1000   mS

Load Current   3.0A / 200 μ sec

Min. Load (0A) ←→
Load 100% (3A)

100mV/div
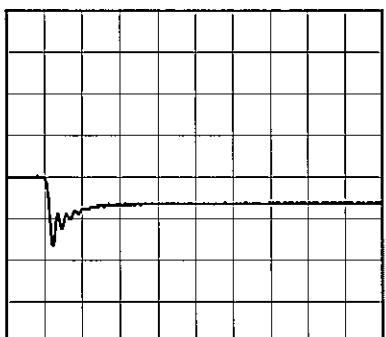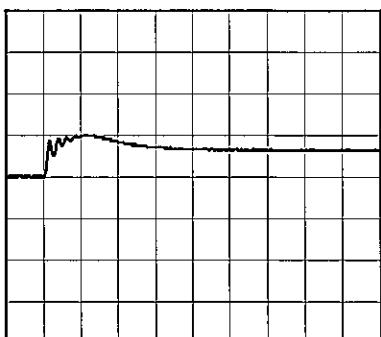
200 μs/div   200 μs/div

Min. Load (0A) ←→
Load 50% (1.5A)

100mV/div
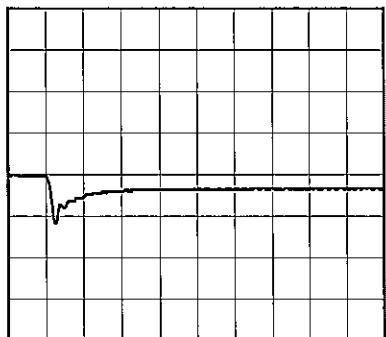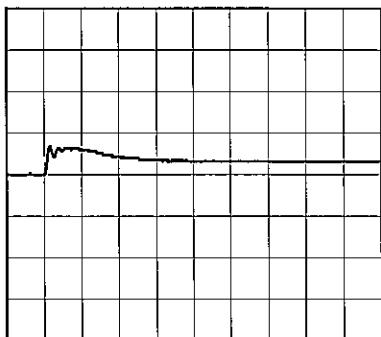
200 μs/div   200 μs/div

Load 50% (1.5A) ←→
Load 100% (3A)

100mV/div

200 μs/div   200 μs/div

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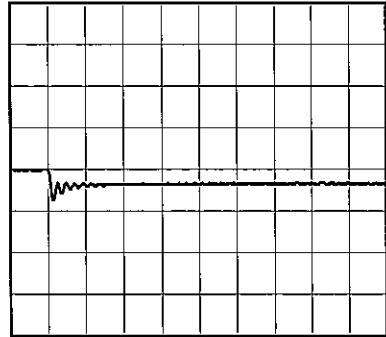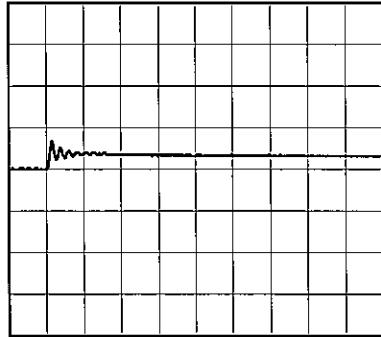
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Model	SFLS10483R3
Item	Ripple Voltage (by Load Current)
Object	+3.3V3A

Temperature　　25°C
Testing Circuitry　Figure C

1.Graph

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

Load Current [A]

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.
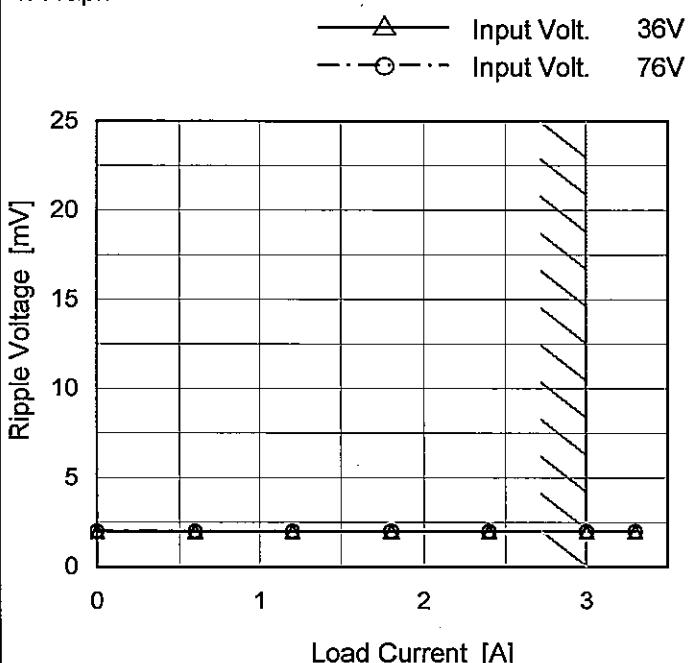
2.Values

Load Current [A]	Ripple Voltage [mV]	
	Input Volt. 36 [V]	Input Volt. 76 [V]
0.0	2	2
0.6	2	2
1.2	2	2
1.8	2	2
2.4	2	2
3.0	2	2
3.3	2	2
--	-	-
--	-	--
--	-	-
--	-	-

Ripple [mVp-p]

Fig.Complex Ripple Wave Form

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Model	SFLS10483R3
Item	Ripple-Noise
Object	+3.3V3A

Temperature 25°C
Testing Circuitry Figure C

1.Graph

△ Input Volt. 36V
○ Input Volt. 76V
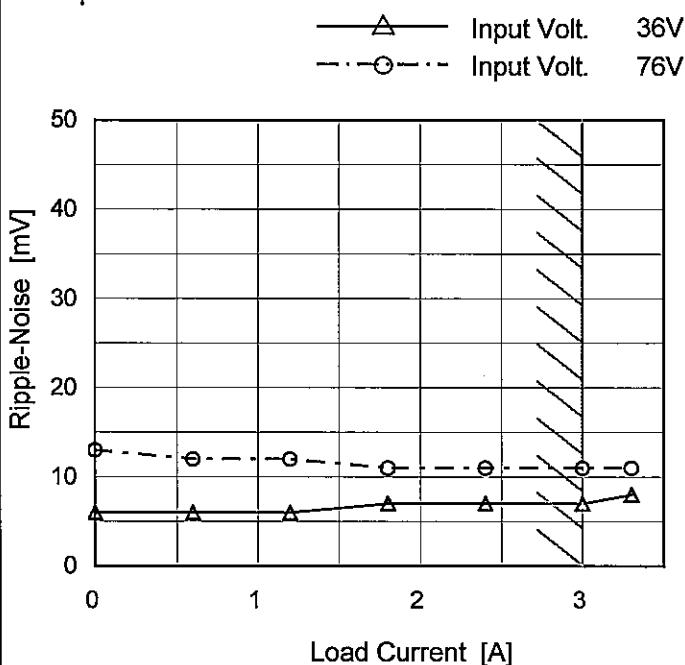
Load Current [A]

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.

Ripple Noise[mVp-p]

Fig.Complex Ripple Noise Wave Form

2.Values

Load Current [A]	Ripple-Noise [mV]	
	Input Volt. 36 [V]	Input Volt. 76 [V]
0.0	6	13
0.6	6	12
1.2	6	12
1.8	7	11
2.4	7	11
3.0	7	11
3.3	8	11
--	-	-
--	-	-
--	-	-
--	-	-

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Model	SFLS10483R3
Item	Ripple Voltage (by Ambient Temp.)
Object	+3.3V3A

Testing Circuitry   Figure C

1.Graph

- - - ⊟ - -   Load 50%
———△———   Load 100%

Ambient Temperature [°C]

Input Volt.   48V

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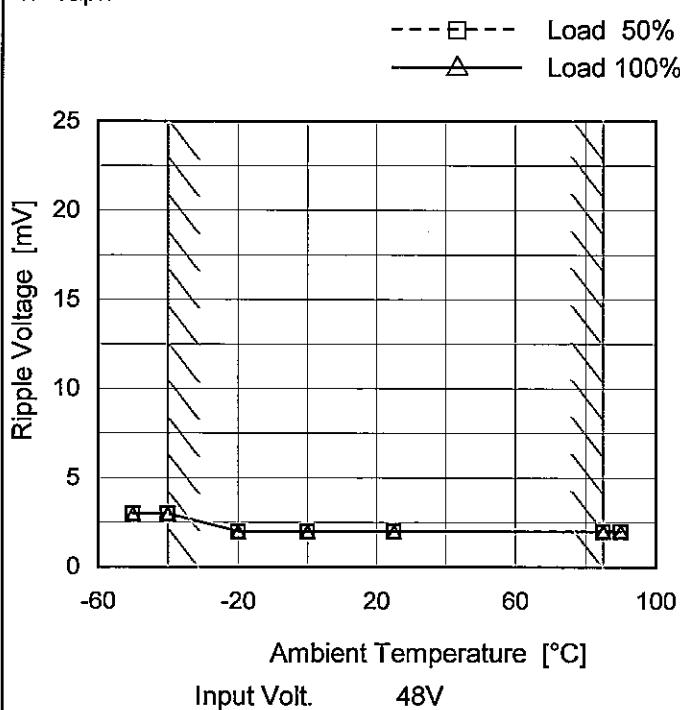
2.Values

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

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Model	SFLS10483R3
Item	Ambient Temperature Drift
Object	+3.3V3A
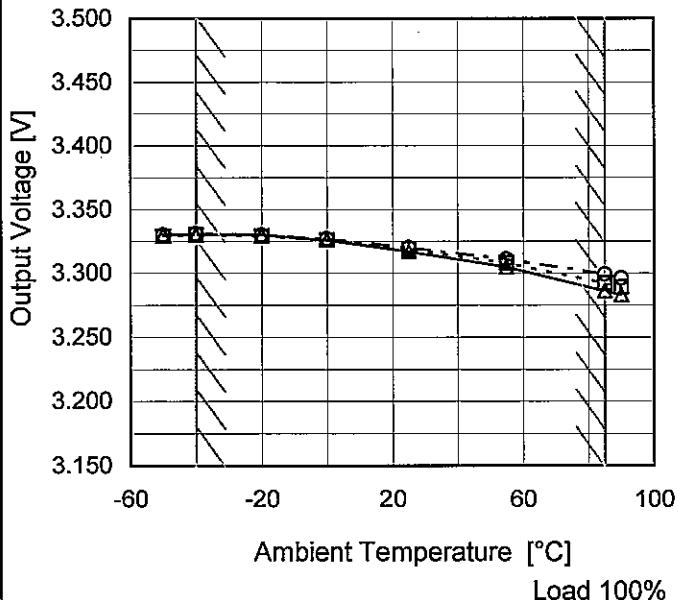
Testing Circuitry   Figure A

1.Graph

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

Ambient Temperature [°C]

Load 100%

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

2.Values

Ambient Temperature [°C]	Output Voltage [V]		
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
-50	3.330	3.329	3.330
-40	3.330	3.330	3.331
-20	3.330	3.329	3.330
0	3.326	3.326	3.327
25	3.317	3.319	3.320
55	3.305	3.308	3.311
85	3.286	3.292	3.299
90	3.283	3.289	3.296
--	-	-	-
--	-	-	-
--	-	-	-

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Model	SFLS10483R3
Item	Output Voltage Accuracy
Object	+3.3V3A

Testing Circuitry　Figure A

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 = ±(Maximum of Output Voltage　- Minimum of Output Voltage) / 2

* Output Voltage Accuracy (Ration) = $\dfrac{\text{Output Voltage Accuracy}}{\text{Rated Output Voltage}} \times 100$

2.Values

Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	55	76	0	3.391	±53	±1.6
Minimum Voltage	85	36	3	3.286		

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Model	SFLS10483R3
Item	Time Lapse Drift
Object	+3.3V3A

Temperature	25°C
Testing Circuitry	Figure A

1.Graph
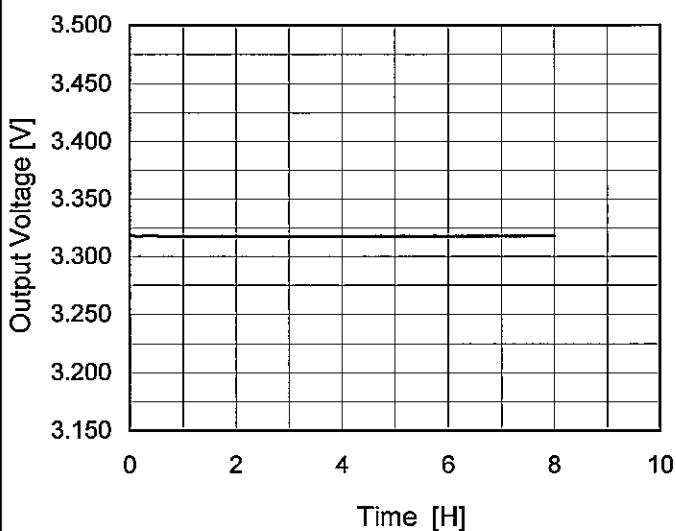
Input Volt.   48V
Load   100%

2.Values

Time since start [H]	Output Voltage [V]
0.0	3.321
0.5	3.318
1.0	3.318
2.0	3.318
3.0	3.318
4.0	3.318
5.0	3.318
6.0	3.318
7.0	3.318
8.0	3.318

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Model	SFLS10483R3
Item	Rise and Fall Time
Object	+3.3V3A

Temperature	25°C
Testing Circuitry	Figure A

1.Graph

Input Volt. 48 V

Load 50%

Output
Volt.

[0.5V/div]

0

Load 100%

Output
Volt.

[0.5V/div]

0

Input
Volt.

0

[10V/div]   Time   [50mS/div]

Time   [10mS/div]
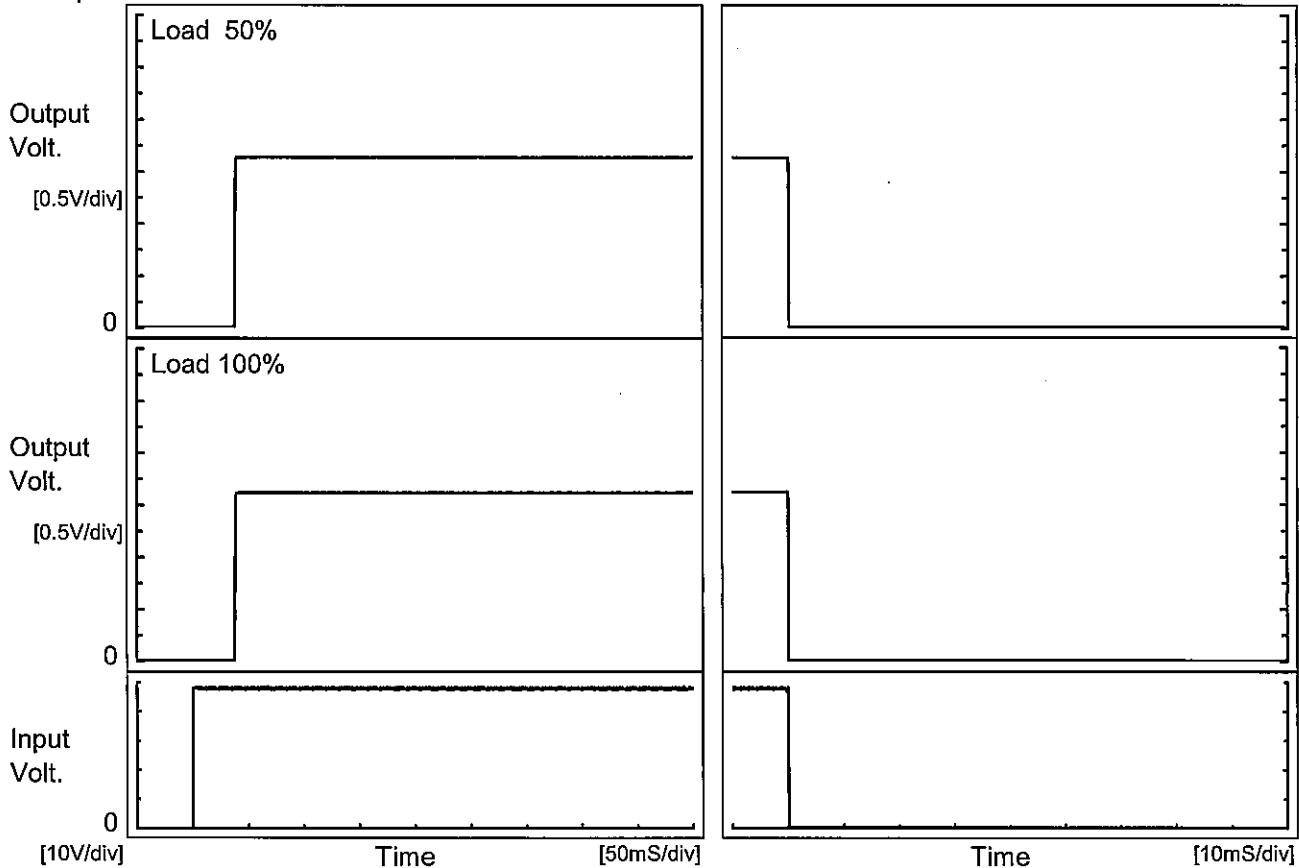
2.Values

[mS]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	37.8	0.9	38.7	0.0	0.1
100 %	37.5	1.2	38.7	0.0	0.1

Output
Volt.

90%

10%

Input
Volt.

Td   Tr   Th   Tf

Ts

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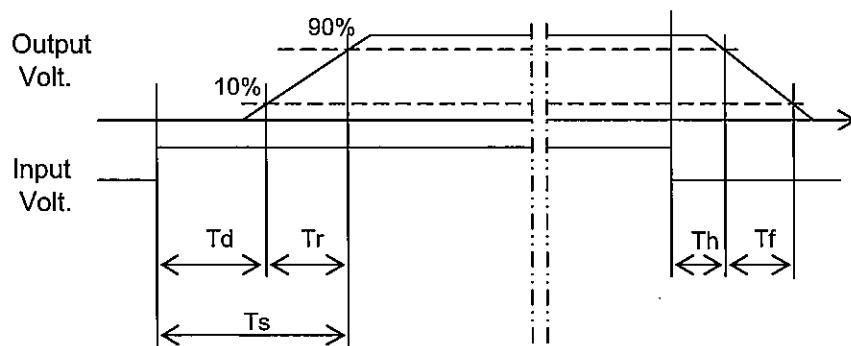
Model	SFLS10483R3
Item	Minimum Input Voltage for Regulated Output Voltage
Object	+3.3V3A
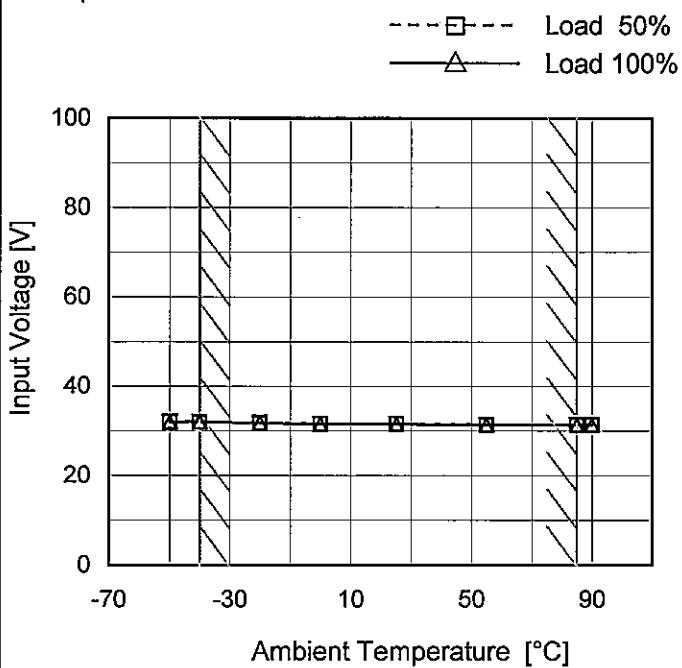
Testing Circuitry   Figure A

1.Graph

--□-- Load 50%
—△— Load 100%

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

2.Values

Ambient Temperature [°C]	Input Voltage [V]	
	Load 50%	Load 100%
-50	32.1	32.0
-40	32.0	32.1
-20	31.9	31.8
0	31.6	31.6
25	31.6	31.6
55	31.4	31.4
85	31.4	31.4
90	31.4	31.4
--	-	-
---	-	-
--	-	-

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Model	SFLS10483R3
Item	Overcurrent Protection
Object	+3.3V3A

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.
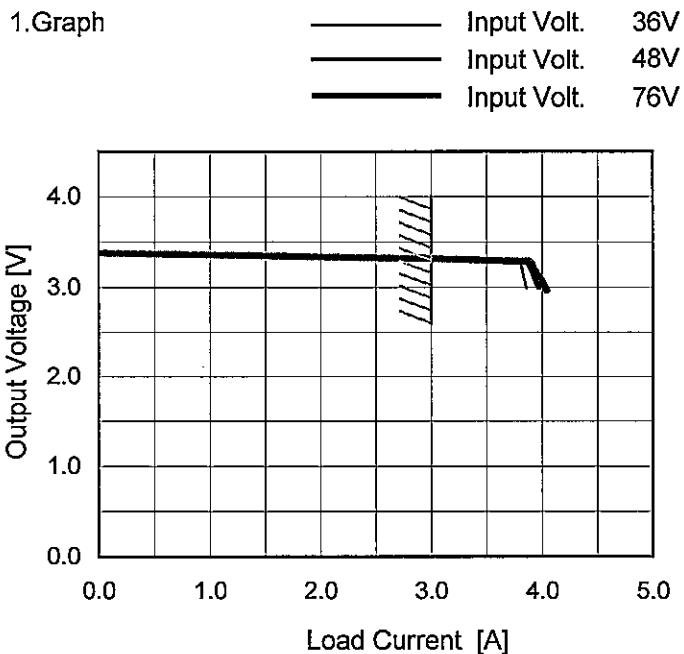
When the output voltage fell to less than 3.07V ,the unit shuts off the output by operating low voltage protection .

2.Values

Output Voltage [V]	Load Current [A]		
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
3.30	3.03	3.03	3.03
3.14	3.83	3.92	3.96
2.97	3.86	3.98	4.04
---	-	-	-
---	-	-	-
---	-	-	-
---	-	-	-
---	-	-	-
---	-	-	-
---	-	-	-
---	-	-	-
---	-	-	-

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Model	SFLS10483R3
Item	Overvoltage Protection
Object	+3.3V3A
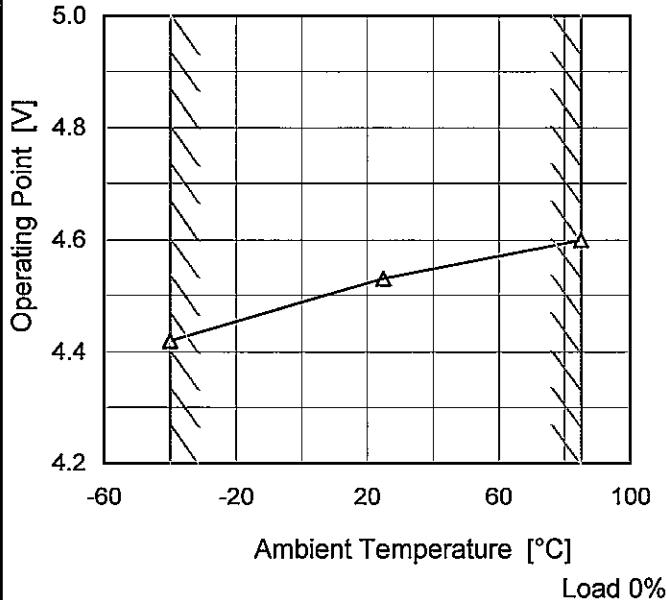
Testing Circuitry   Figure A

1.Graph   ———△——— Input Volt.   48V

Ambient Temperature [°C]

Load 0%

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

2.Values

| Ambient Temperature [°C]	Operating Point [V]		
	Input Volt. 48[V]	Input Volt.	Input Volt.
-40	4.42	-	-
25	4.53	-	-
85	4.60	-	-
---	-	-	-
---	-	-	-
---	-	-	-
---	-	-	-
---	-	-	-
---	-	-	-
---	-	-	-
---	-	-	-

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Figure A

Figure B (General Electric Characteristic)
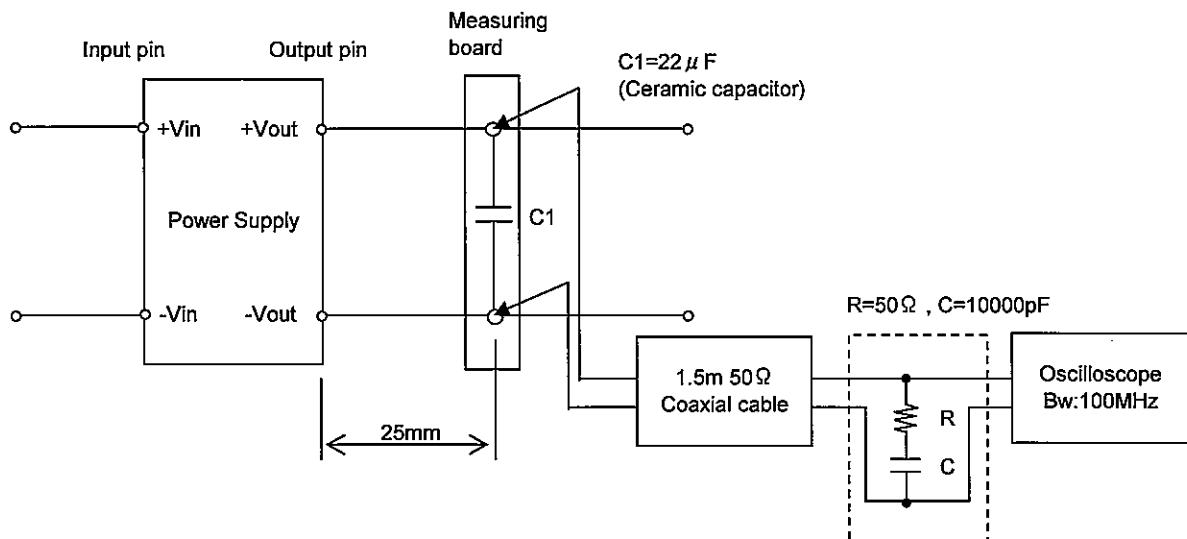
Figure C (Ripple and Ripple noise Characteristic)

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