

# TEST DATA OF SFLS15483R3

Regulated DC Power Supply  
May 11, 2007

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**COSEL CO.,LTD.**

## CONTENTS

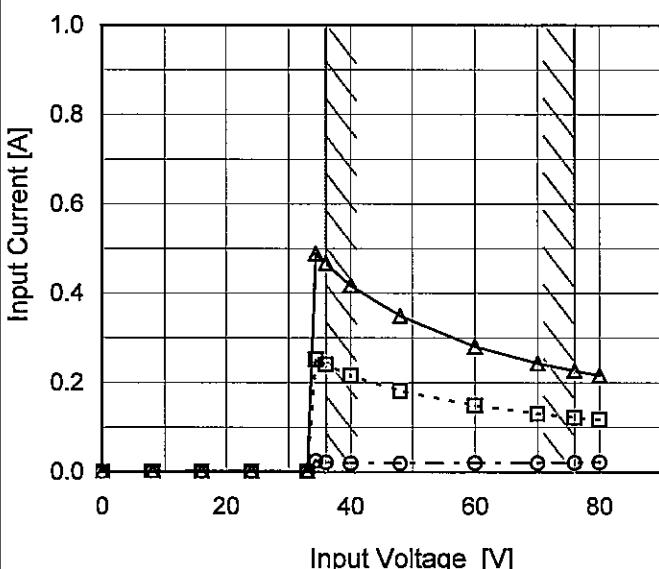
1. Input Current (by Input Voltage) . . . . .	1
2. Input Current (by Load Current) . . . . .	2
3. Input Power (by Load Current) . . . . .	3
4. Efficiency (by Input Voltage) . . . . .	4
5. Efficiency (by Load Current) . . . . .	5
6. Line Regulation . . . . .	6
7. Load Regulation . . . . .	7
8. Dynamic 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	SFLS15483R3
Item	Input Current (by Input Voltage)
Object	_____

## 1.Graph

—△— Load 100%  
 - - -□--- Load 50%  
 - - -○--- Load 0%



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

 Temperature 25°C  
 Testing Circuitry Figure A

## 2.Values

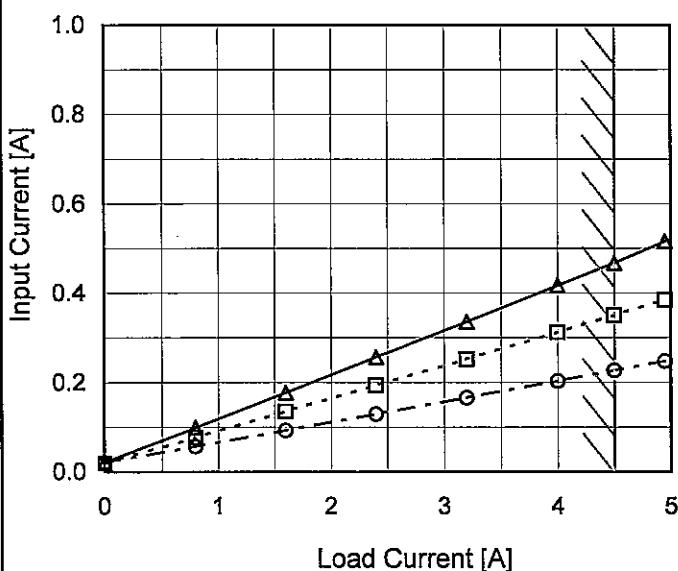
Input Voltage [V]	Input Current [A]		
	Load 0%	Load 50%	Load 100%
0	0.000	0.000	0.000
8	0.001	0.001	0.001
16	0.001	0.001	0.001
24	0.001	0.001	0.001
33	0.002	0.002	0.002
34	0.024	0.252	0.489
36	0.022	0.240	0.468
40	0.020	0.215	0.417
48	0.020	0.182	0.350
60	0.020	0.149	0.281
70	0.020	0.131	0.244
76	0.021	0.122	0.227
80	0.021	0.117	0.216
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

Model	SFLS15483R3
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]
0.00	0.022	0.020	0.021
0.80	0.099	0.077	0.057
1.60	0.178	0.135	0.093
2.40	0.257	0.194	0.130
3.20	0.336	0.252	0.166
4.00	0.417	0.312	0.203
4.50	0.468	0.350	0.227
4.95	0.516	0.385	0.248
---	-	-	-
---	-	-	-
---	-	-	-

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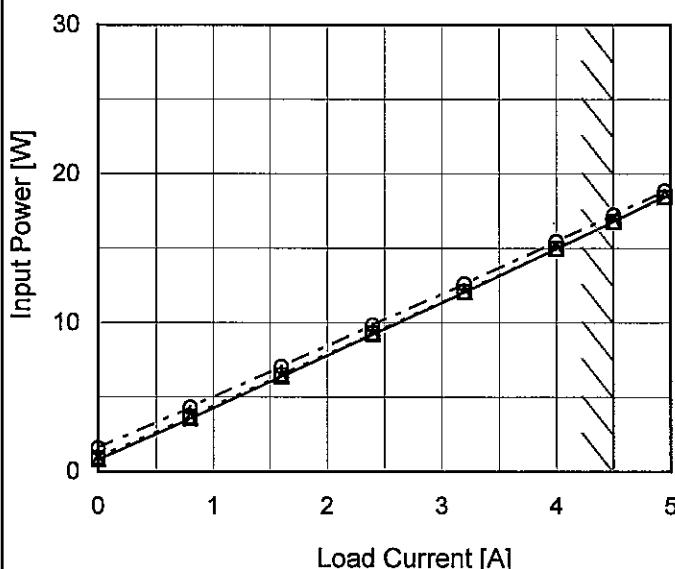
Model SFLS15483R3

Item Input Power (by Load Current)

Object \_\_\_\_\_

## 1. Graph

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



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

 Temperature 25°C  
 Testing Circuitry Figure A

## 2. Values

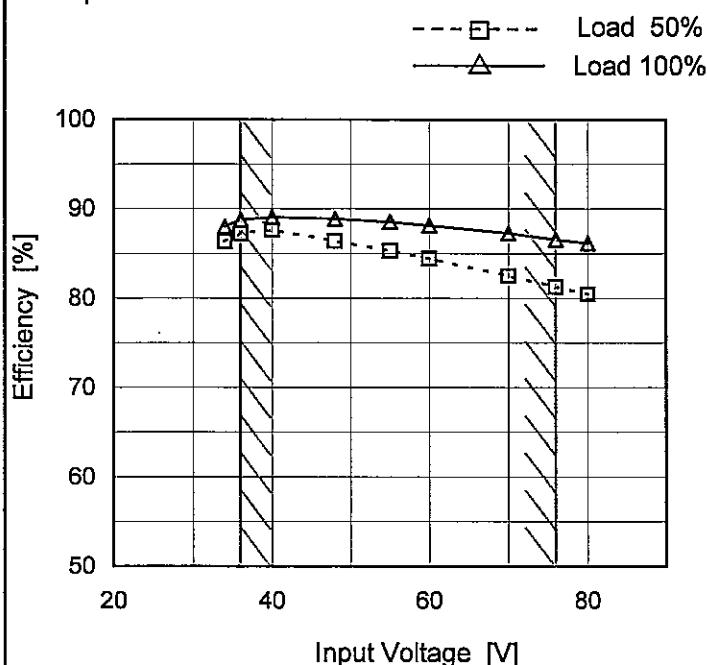
Load Current [A]	Input Power [W]		
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
0.00	0.79	0.93	1.58
0.80	3.56	3.69	4.30
1.60	6.38	6.48	7.05
2.40	9.22	9.30	9.84
3.20	12.06	12.10	12.61
4.00	14.98	14.97	15.45
4.50	16.82	16.78	17.23
4.95	18.51	18.43	18.85
--	-	-	-
--	-	-	-
--	-	-	-

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Model	SFLS15483R3
Item	Efficiency (by Input Voltage)
Object	_____

Temperature 25°C  
Testing Circuitry Figure A

## 1.Graph



## 2.Values

Input Voltage [V]	Efficiency [%]	
	Load 50%	Load 100%
34	86.4	88.0
36	87.3	88.8
40	87.6	89.1
48	86.4	88.9
55	85.3	88.5
60	84.4	88.2
70	82.5	87.3
76	81.3	86.6
80	80.5	86.2

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

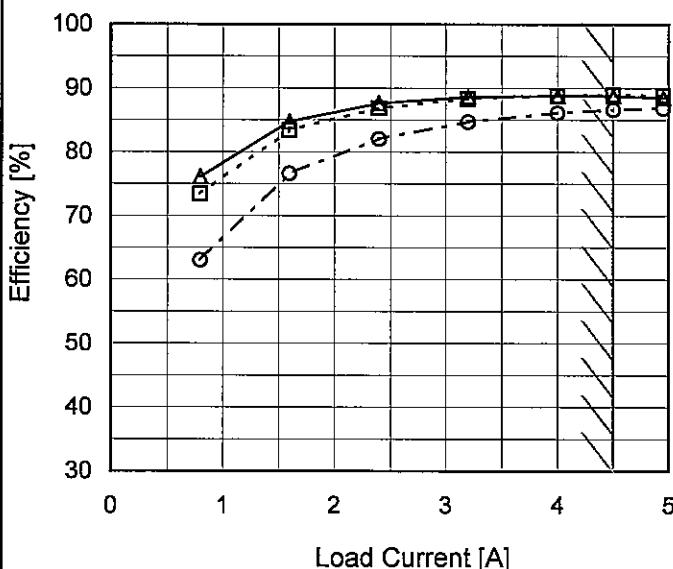
**COSCEL**

Model	SFLS15483R3
Item	Efficiency (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]	Efficiency [%]		
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
0.00	-	-	-
0.80	76.1	73.5	63.0
1.60	84.8	83.4	76.6
2.40	87.6	86.9	82.0
3.20	88.6	88.3	84.7
4.00	88.8	88.9	86.1
4.50	88.8	88.9	86.6
4.95	88.5	88.9	86.9
--	-	-	-
--	-	-	-
--	-	-	-

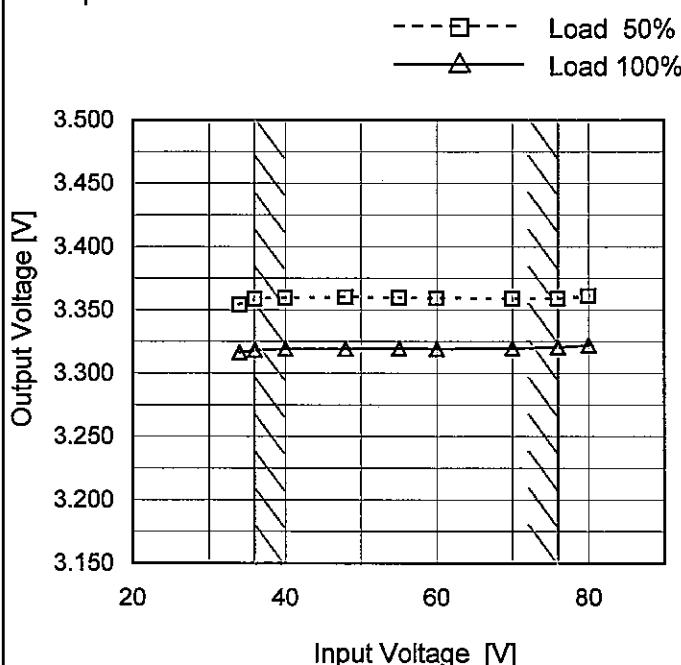
Note: Slanted line shows the range of the rated load current.

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Model	SFLS15483R3
Item	Line Regulation
Object	+3.3V4.5A

Temperature 25°C  
Testing Circuitry Figure A

## 1. Graph



## 2. Values

Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
34	3.354	3.317
36	3.359	3.318
40	3.360	3.319
48	3.360	3.320
55	3.360	3.320
60	3.359	3.319
70	3.359	3.320
76	3.359	3.321
80	3.361	3.322

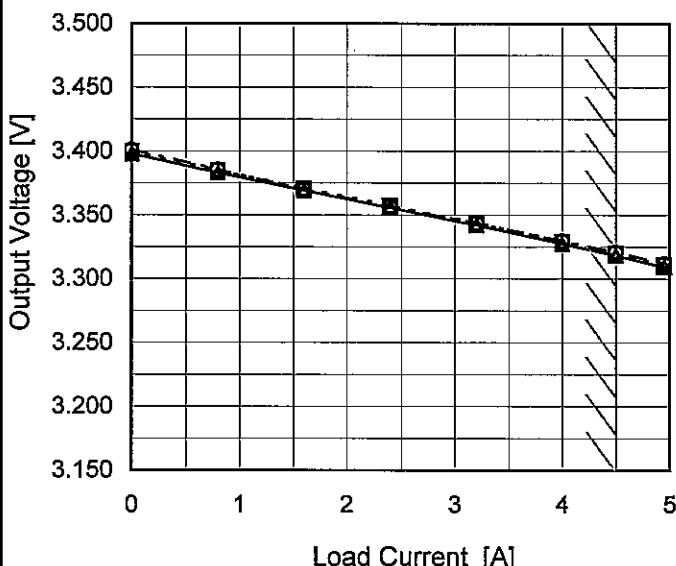
Note: Slanted line shows the range of the rated input voltage.

Model	SFLS15483R3
Item	Load Regulation
Object	+3.3V4.5A

Temperature 25°C  
Testing Circuitry Figure A

## 1.Graph

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



## 2.Values

Load Current [A]	Output Voltage [V]		
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
0.00	3.398	3.400	3.401
0.80	3.383	3.385	3.386
1.60	3.369	3.371	3.370
2.40	3.356	3.357	3.357
3.20	3.342	3.344	3.344
4.00	3.328	3.329	3.330
4.50	3.318	3.320	3.321
4.95	3.309	3.311	3.312
--	-	-	-
--	-	-	-
--	-	-	-

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

Model SFLS15483R3

Item Dynamic Load Response

Object +3.3V4.5A

Temperature 25°C  
Testing Circuitry Figure AInput Volt. 48 V  
Cycle 1000 mS

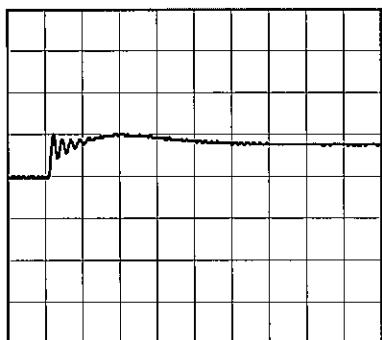
Load Current 4.5A / 200 μ sec

Min. Load (0A) ↔  
Load 100% (4.5A)

100mV/div



200 μs/div



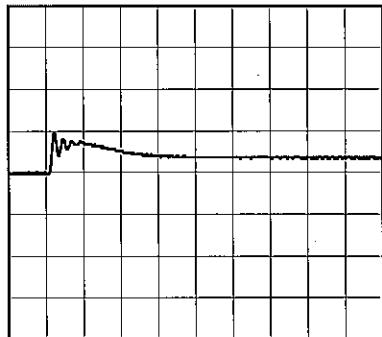
200 μs/div

Min. Load (0A) ↔  
Load 50% (2.25A)

100mV/div



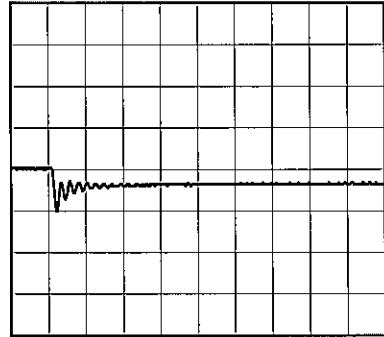
200 μs/div



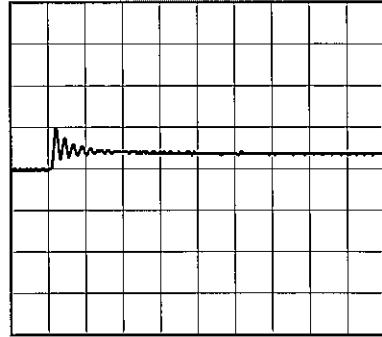
200 μs/div

Load 50% (2.25A) ↔  
Load 100% (4.5A)

100mV/div



200 μs/div



200 μs/div

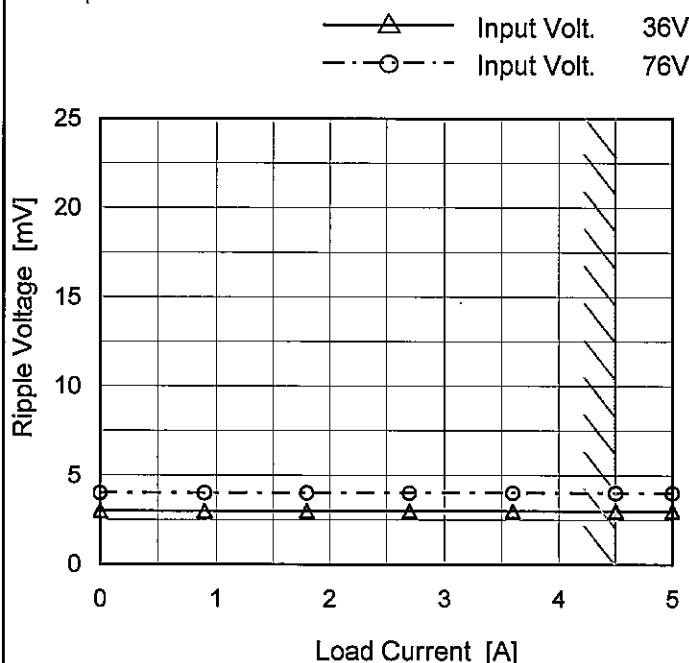
**COSEL**

Model SFLS15483R3

Item Ripple Voltage (by Load Current)

Object +3.3V4.5A

## 1. Graph



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.

Temperature 25°C  
Testing Circuitry Figure C

## 2. Values

Load Current [A]	Ripple Voltage [mV]	
	Input Volt. 36 [V]	Input Volt. 76 [V]
0.0	3	4
0.9	3	4
1.8	3	4
2.7	3	4
3.6	3	4
4.5	3	4
5.0	3	4
--	-	-
--	-	-
--	-	-
--	-	-

Ripple [mVp-p]

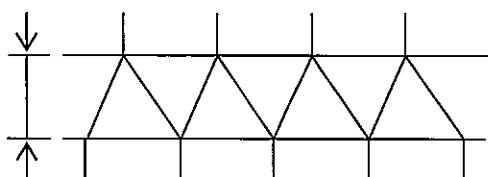


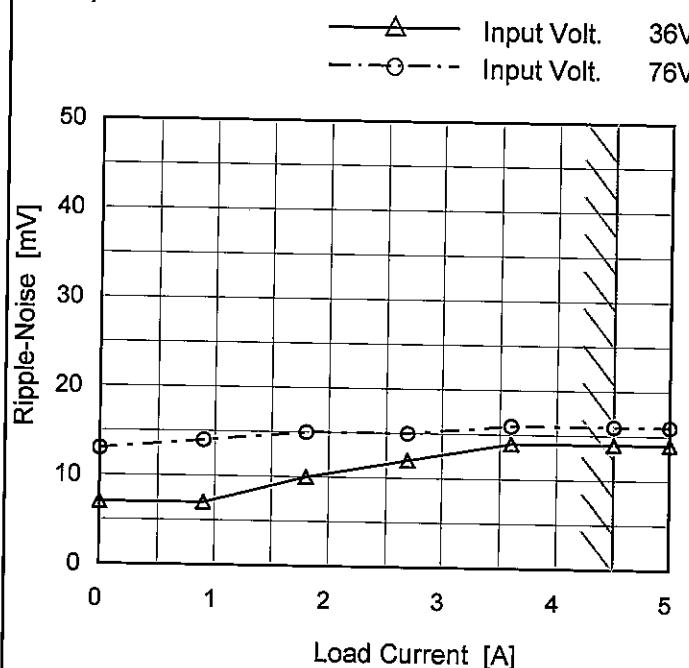
Fig.Complex Ripple Wave Form

**COSEL**

Model	SFLS15483R3
Item	Ripple-Noise
Object	+3.3V4.5A

Temperature 25°C  
Testing Circuitry Figure C

## 1. Graph



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.

## 2. Values

Load Current [A]	Ripple-Noise [mV]	
	Input Volt. 36 [V]	Input Volt. 76 [V]
0.0	7	13
0.9	7	14
1.8	10	15
2.7	12	15
3.6	14	16
4.5	14	16
5.0	14	16
-	-	-
-	-	-
-	-	-
-	-	-

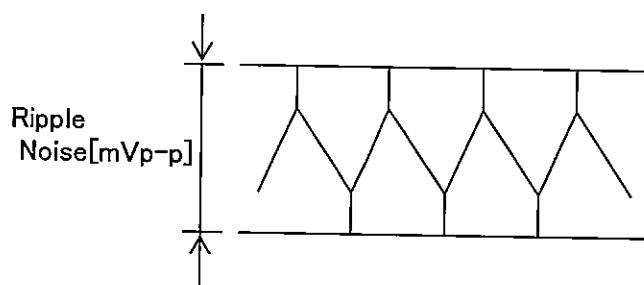


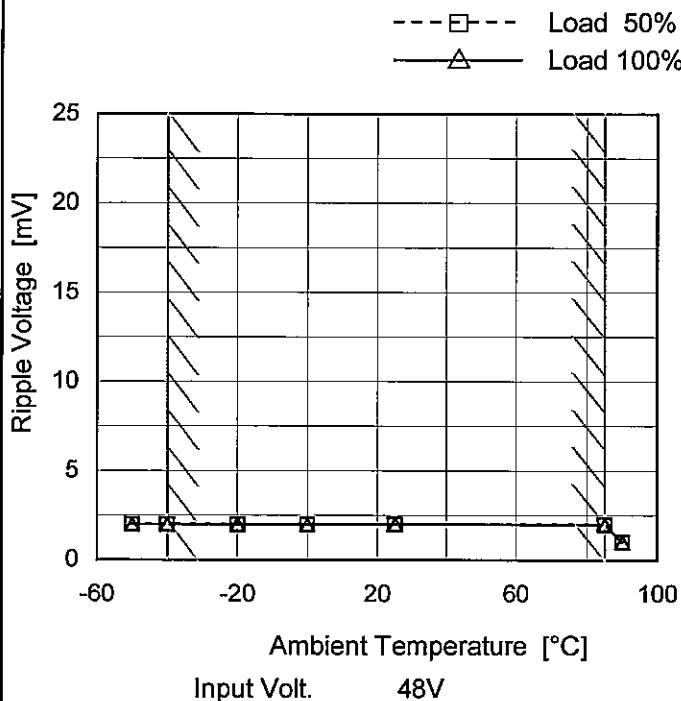
Fig.Complex Ripple Noise Wave Form

Model SFLS15483R3

Item Ripple Voltage (by Ambient Temp.)

Object +3.3V4.5A

## 1. Graph



Measured by 100 MHz Oscilloscope.

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

Testing Circuitry Figure C

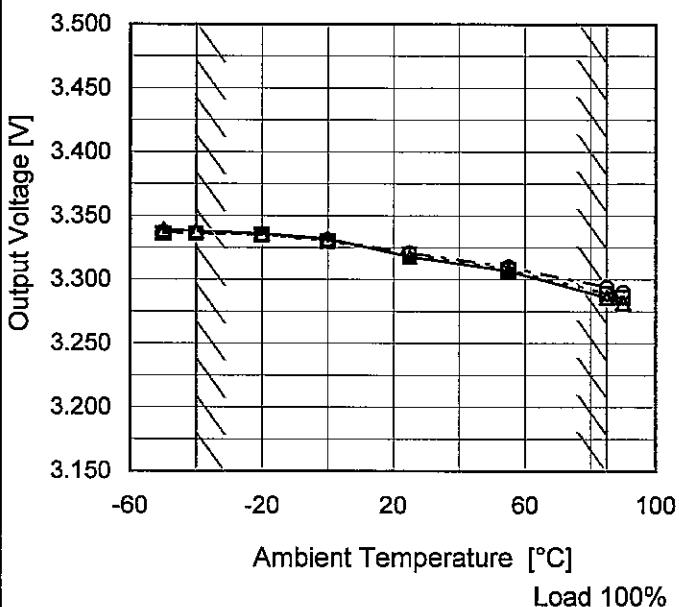
## 2. Values

Ambient Temperature [°C]	Ripple Voltage [mV]	
	Load 50%	Load 100%
-50	2	2
-40	2	2
-20	2	2
0	2	2
25	2	2
85	2	2
90	1	1
--	-	-
--	-	-
--	-	-
--	-	-

Model	SFLS15483R3
Item	Ambient Temperature Drift
Object	+3.3V4.5A

## 1. Graph

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



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

## Testing Circuitry Figure A

## 2. Values

Ambient Temperature [°C]	Output Voltage [V]		
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
-50	3.339	3.336	3.337
-40	3.338	3.336	3.336
-20	3.336	3.335	3.335
0	3.332	3.330	3.331
25	3.318	3.320	3.321
55	3.307	3.308	3.310
85	3.286	3.289	3.294
90	3.282	3.286	3.290
--	-	-	-
--	-	-	-
--	-	-	-



Model	SFLS15483R3	Testing Circuitry Figure A
Item	Output Voltage Accuracy	
Object	+3.3V4.5A	

### 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 - 4.5A

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

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

### 2. Values

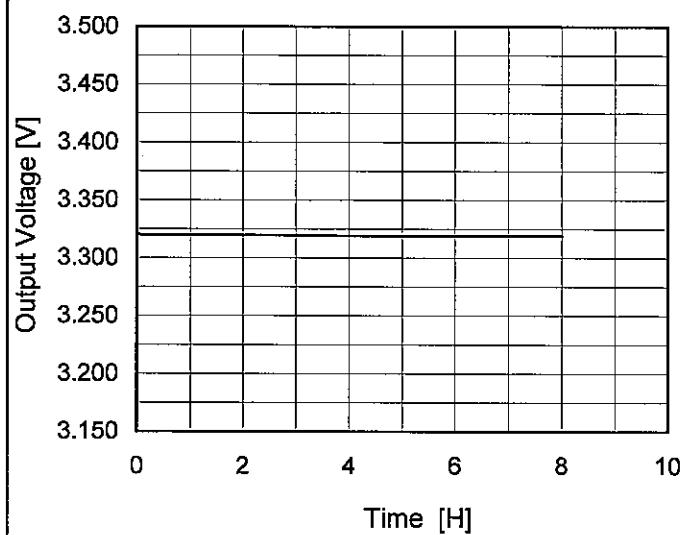
Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	55	76	0	3.401	±58	±1.8
Minimum Voltage	85	36	4.5	3.286		

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Model	SFLS15483R3
Item	Time Lapse Drift
Object	+3.3V4.5A

Temperature 25°C  
Testing Circuitry Figure A

## 1. Graph



Input Volt. 48V  
Load 100%

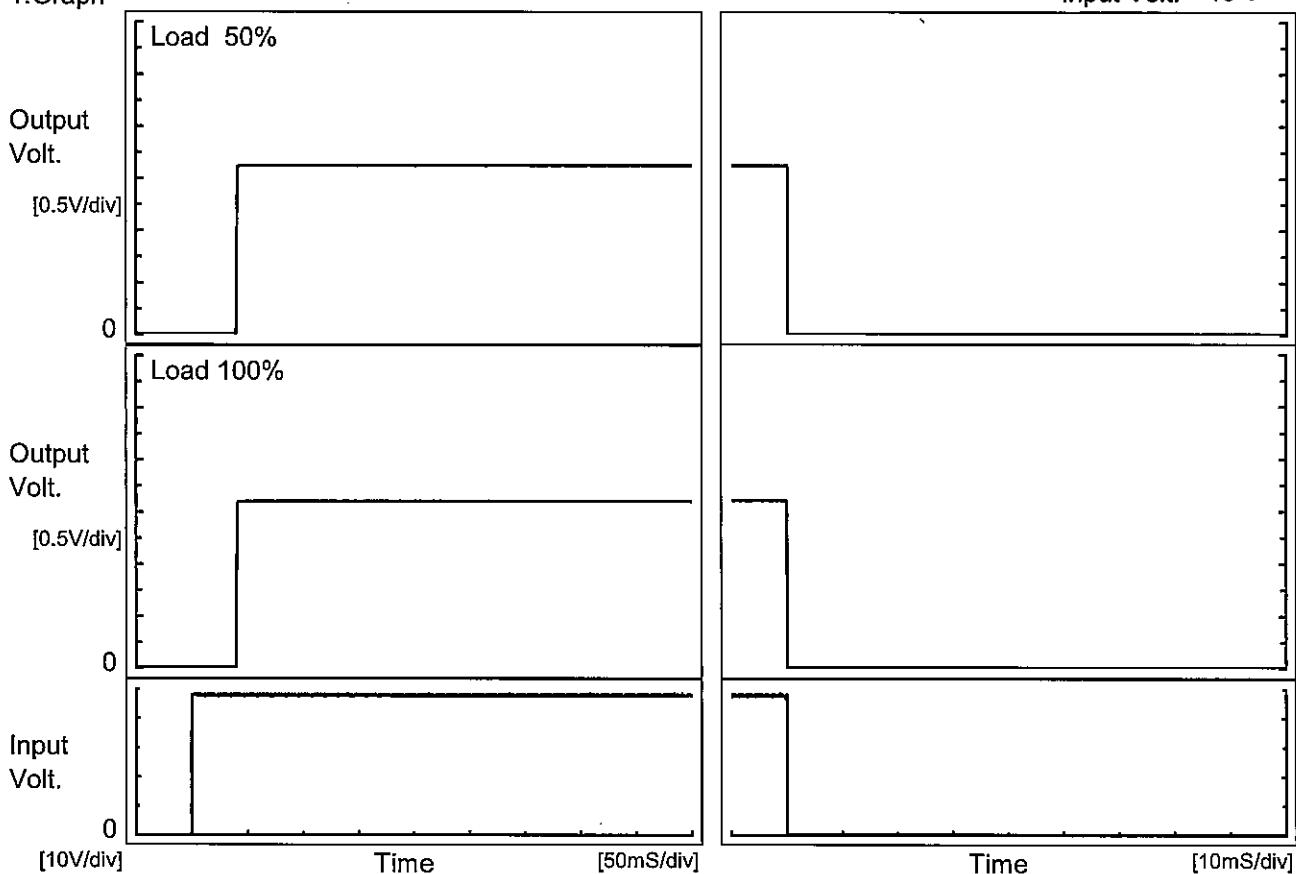
## 2. Values

Time since start [H]	Output Voltage [V]
0.0	3.323
0.5	3.320
1.0	3.320
2.0	3.320
3.0	3.320
4.0	3.319
5.0	3.319
6.0	3.319
7.0	3.319
8.0	3.319

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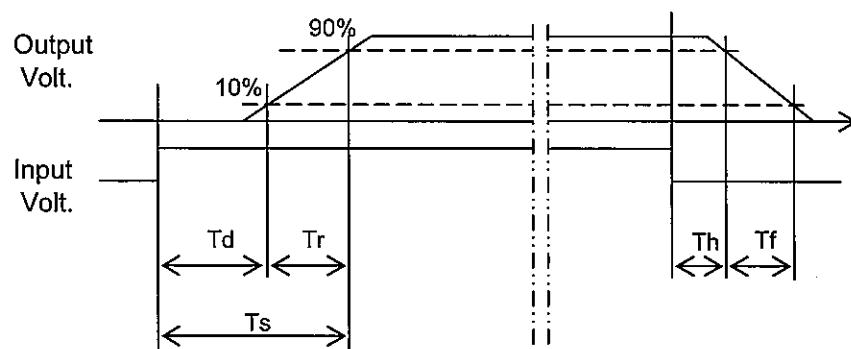
Model	SFLS15483R3	Temperature Testing Circuitry Figure A
Item	Rise and Fall Time	
Object	+3.3V4.5A	

## 1. Graph



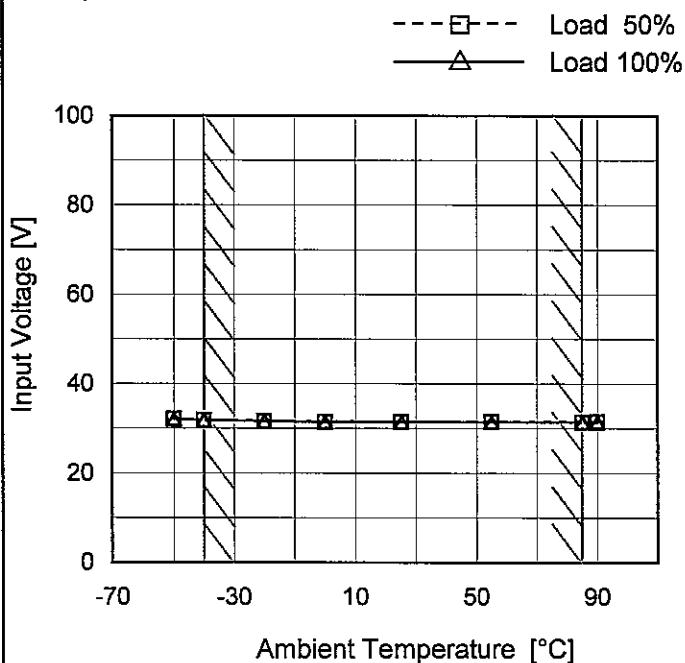
## 2. Values

Load	Time	Td	Tr	Ts	Th	Tf	[mS]
50 %		40.0	0.7	40.7	0.0	0.1	
100 %		39.8	0.9	40.7	0.0	0.1	



Model	SFLS15483R3
Item	Minimum Input Voltage for Regulated Output Voltage
Object	+3.3V4.5A

## 1. Graph

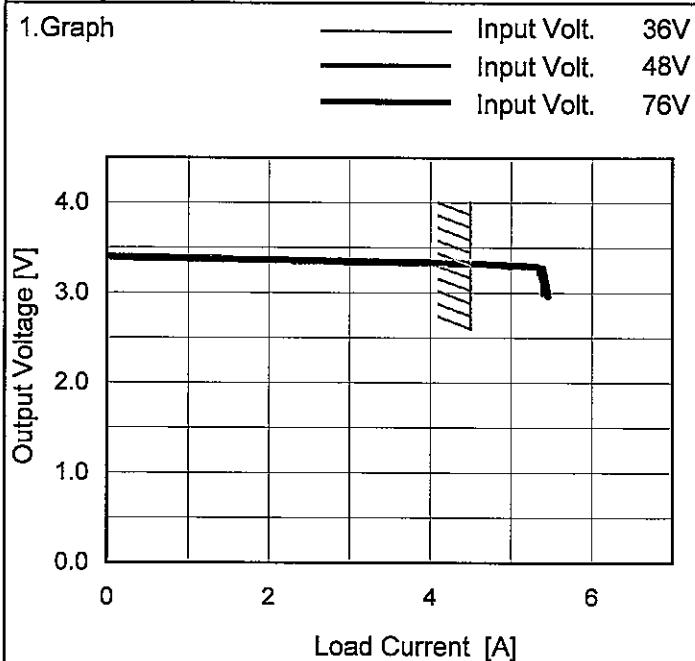


Note: Slanted line shows the range of the rated ambient temperature.

Testing Circuitry Figure A		
2.Values		
Ambient Temperature [°C]	Input Voltage [V]	
	Load 50%	Load 100%

Ambient Temperature [°C]	Input Voltage [V]	
	Load 50%	Load 100%
-50	32.2	32.2
-40	32.0	32.0
-20	31.8	31.7
0	31.6	31.5
25	31.6	31.5
55	31.6	31.5
85	31.5	31.5
90	31.6	31.5
--	-	-
--	-	-
--	-	-

Model	SFLS15483R3
Item	Overcurrent Protection
Object	+3.3V4.5A



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 .

Temperature 25°C  
Testing Circuitry Figure A

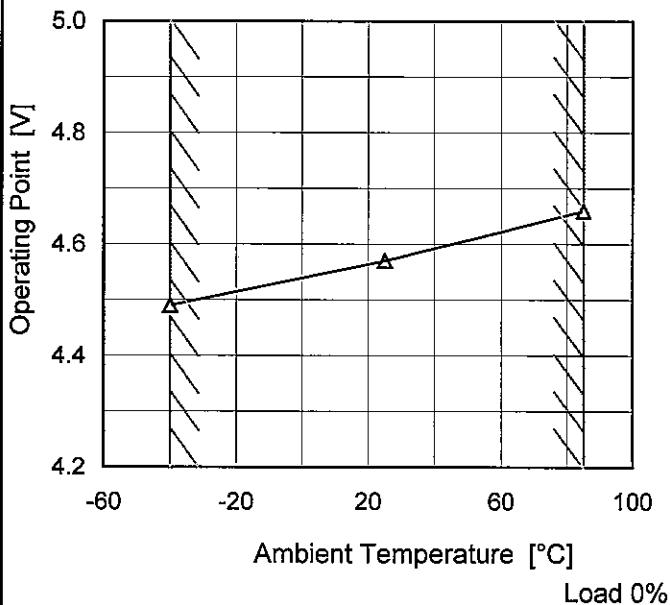
2. Values

Output Voltage [V]	Load Current [A]		
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
3.30	4.54	4.54	4.54
3.14	5.38	5.44	5.39
2.97	5.38	5.47	5.46
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

Model	SFLS15483R3
Item	Overvoltage Protection
Object	+3.3V4.5A

1.Graph

—△— Input Volt. 48V



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

Testing Circuitry Figure A

2.Values

Ambient Temperature [°C]	Operating Point [V]		
	Input Volt. 48[V]	Input Volt.	Input Volt.
-40	4.49	-	-
25	4.57	-	-
85	4.66	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

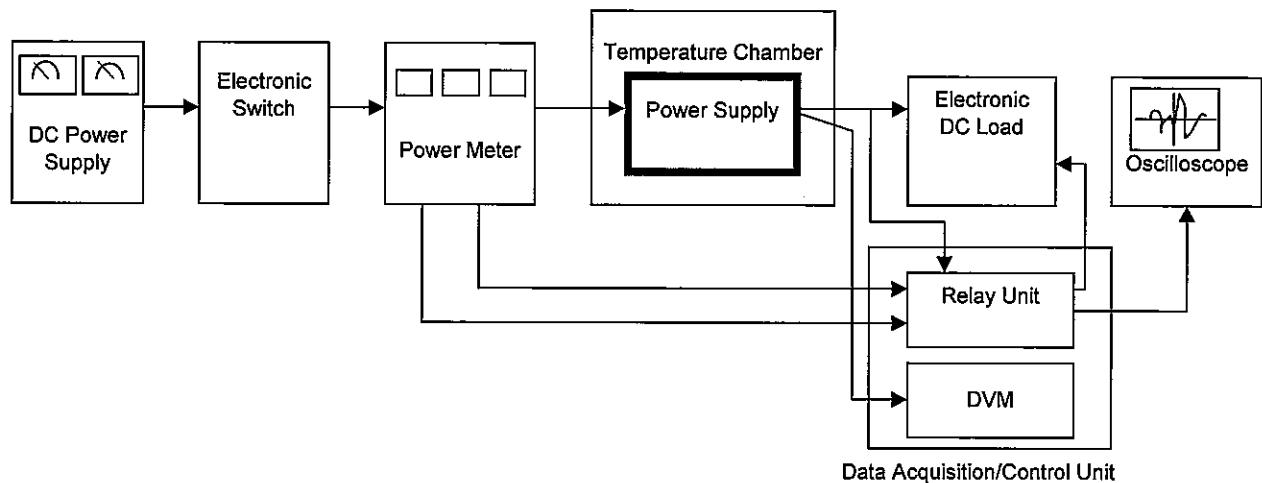


Figure A

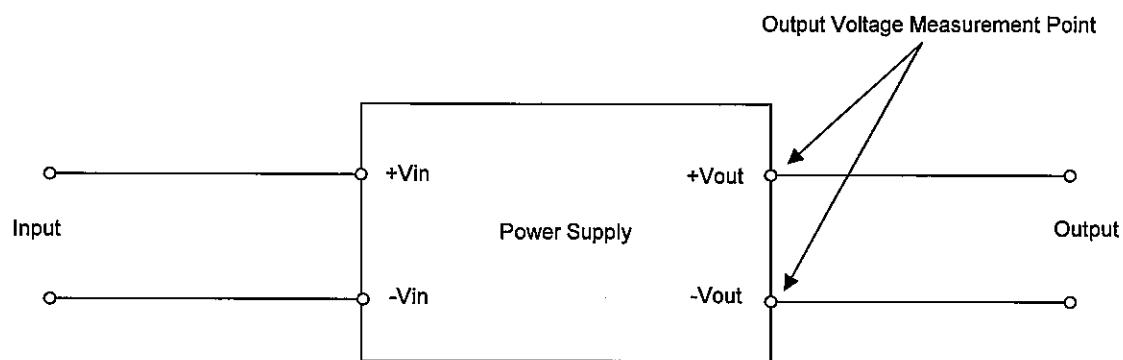


Figure B (General Electric Characteristic)

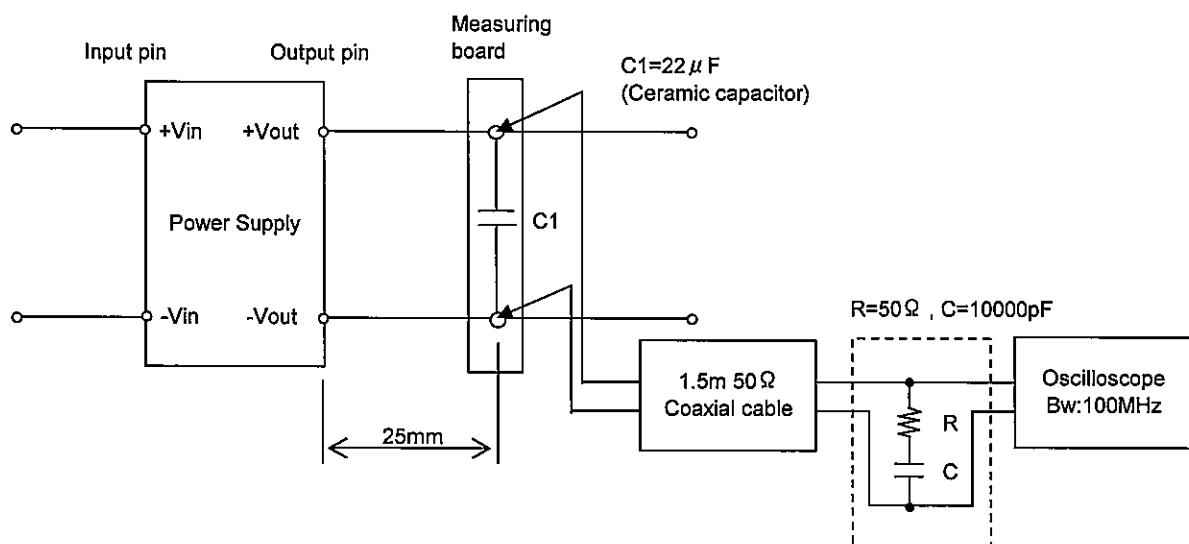


Figure C (Ripple and Ripple noise Characteristic)