

TEST DATA OF SFLS15481R8

Regulated DC Power Supply
May 11, 2007

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COSEL CO.,LTD.

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Model

SFLS15481R8

Item

Input Current (by Input Voltage)

Object

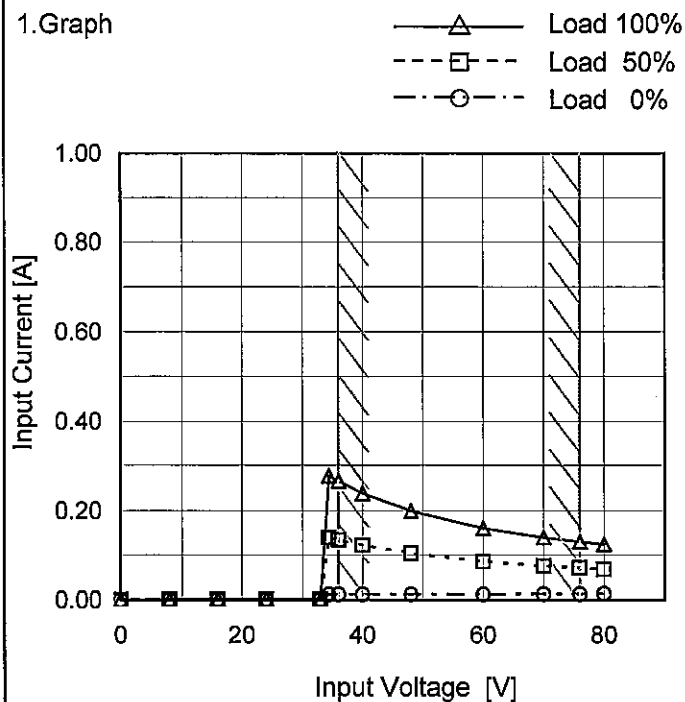
Temperature

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
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	0.012	0.140	0.277
36	0.012	0.135	0.266
40	0.012	0.122	0.238
48	0.012	0.103	0.200
60	0.013	0.085	0.161
70	0.013	0.075	0.140
76	0.013	0.070	0.130
80	0.014	0.068	0.124
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

COSEL

Model SFLS15481R8

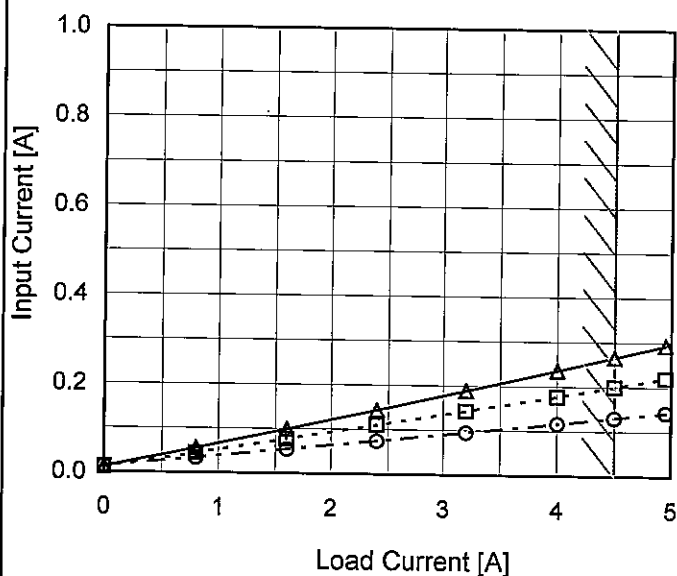
Item Input Current (by Load Current)

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	0.012	0.012	0.013
0.80	0.055	0.044	0.033
1.60	0.099	0.077	0.054
2.40	0.144	0.110	0.074
3.20	0.189	0.143	0.095
4.00	0.236	0.178	0.117
4.50	0.266	0.200	0.130
4.95	0.294	0.220	0.142
--	-	-	-
--	-	-	-
--	-	-	-

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Model SFLS15481R8

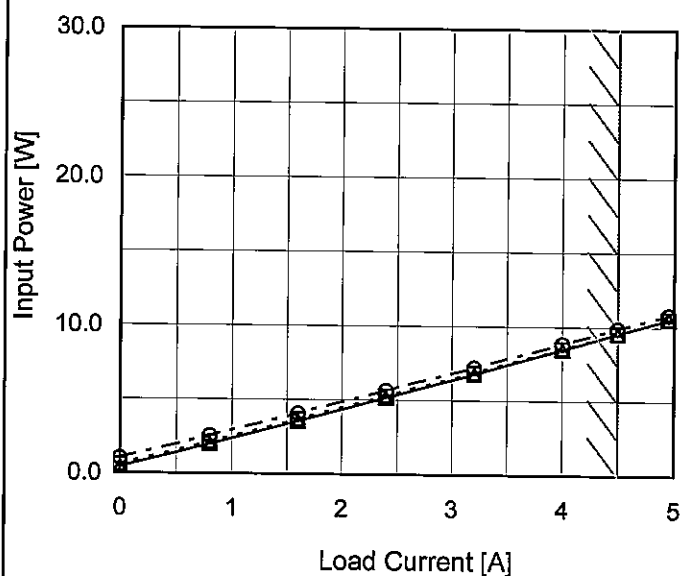
Item Input Power (by Load Current)

Object

Temperature 25°C
Testing Circuitry Figure A

1. Graph

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



2. Values

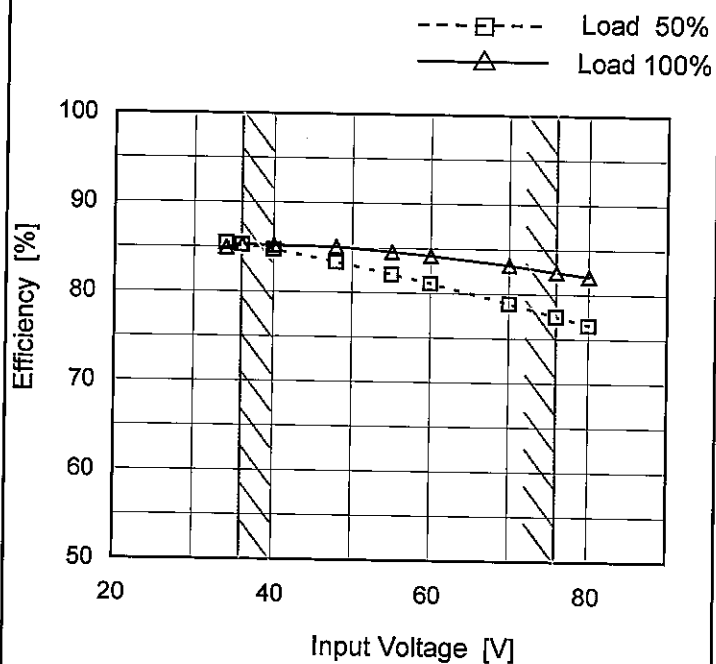
Load Current [A]	Input Power [W]		
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
0.00	0.44	0.58	1.02
0.80	1.98	2.12	2.53
1.60	3.56	3.68	4.08
2.40	5.17	5.28	5.65
3.20	6.79	6.87	7.23
4.00	8.48	8.53	8.86
4.50	9.56	9.58	9.89
4.95	10.55	10.54	10.83
--	-	-	-
--	-	-	-
--	-	-	-

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Model	SFLS15481R8
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	85.4	84.9
36	85.3	85.3
40	84.7	85.2
48	83.4	85.1
55	82.1	84.6
60	81.1	84.2
70	78.9	83.2
76	77.5	82.5
80	76.5	82.0

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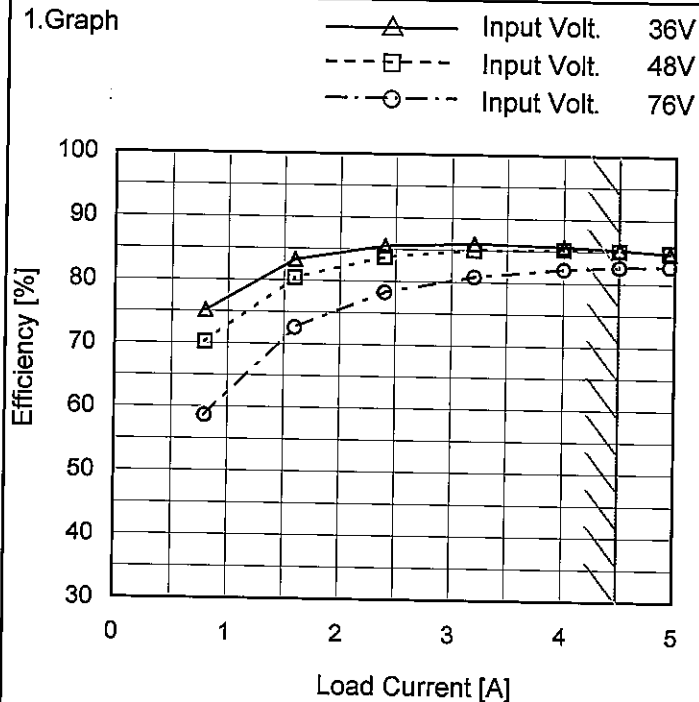
Model SFLS15481R8

Item Efficiency (by Load Current)

Object

Temperature 25°C
Testing Circuitry Figure A

1. Graph



2. Values

Load Current [A]	Efficiency [%]		
	Input Volt. 36[V]	Input Volt. 48[V]	Input Volt. 76[V]
0.00	-	-	-
0.80	75.1	70.2	58.7
1.60	83.3	80.4	72.6
2.40	85.6	83.8	78.3
3.20	86.1	85.0	80.9
4.00	85.7	85.3	82.2
4.50	85.3	85.1	82.5
4.95	84.8	84.8	82.7
--	-	-	-
--	-	-	-
--	-	-	-

COSEL

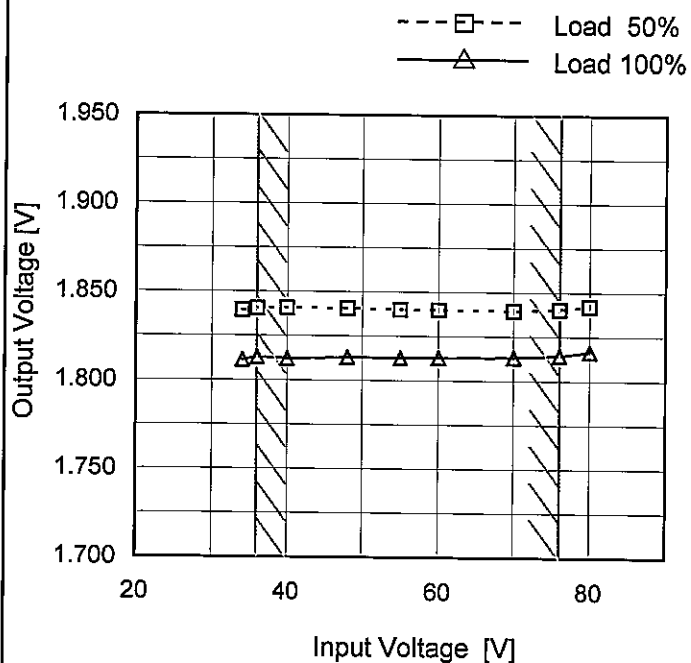
Model SFLS15481R8

Item Line Regulation

Object +1.8V4.5A

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%
34	1.840	1.812
36	1.840	1.813
40	1.841	1.812
48	1.841	1.813
55	1.840	1.813
60	1.840	1.813
70	1.840	1.813
76	1.841	1.815
80	1.842	1.817

COSEL

Model SFLS15481R8

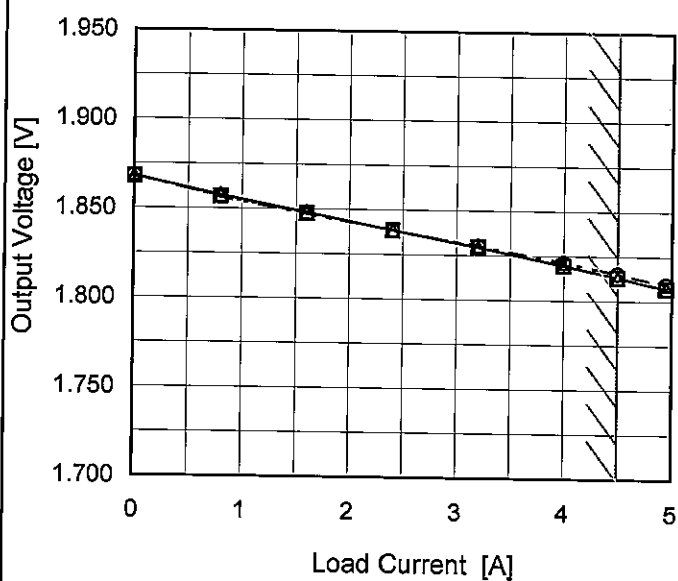
Item Load Regulation

Object +1.8V4.5A

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	1.868	1.868	1.868
0.80	1.858	1.857	1.856
1.60	1.848	1.848	1.847
2.40	1.839	1.839	1.839
3.20	1.830	1.830	1.830
4.00	1.820	1.820	1.821
4.50	1.813	1.813	1.815
4.95	1.807	1.807	1.809
--	-	-	-
--	-	-	-
--	-	-	-

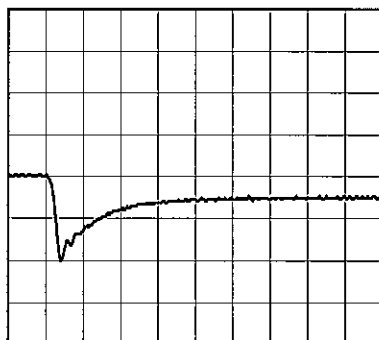
Model	SFLS15481R8	Temperature	25°C
Item	Dynamic Load Response	Testing Circuitry	Figure A
Object	+1.8V4.5A		

Input Volt. 48 V
Cycle 1000 mS

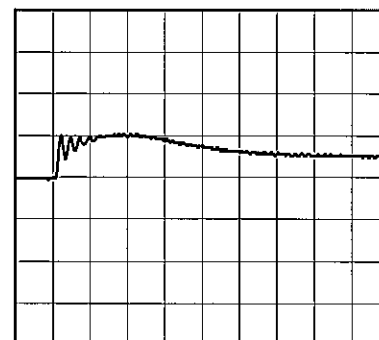
Load Current 4.5A / 200 μ sec

Min. Load (0A) \longleftrightarrow
Load 100% (4.5A)

100mV/div



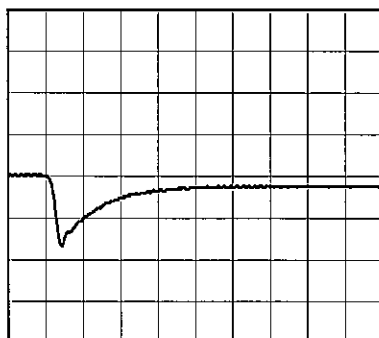
200 μ s/div



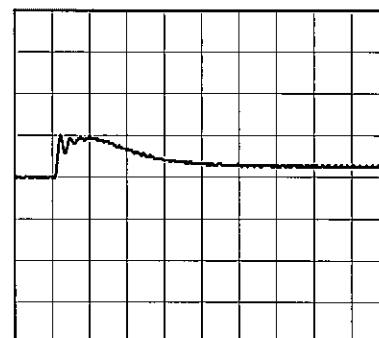
200 μ s/div

Min. Load (0A) \longleftrightarrow
Load 50% (2.25A)

100mV/div



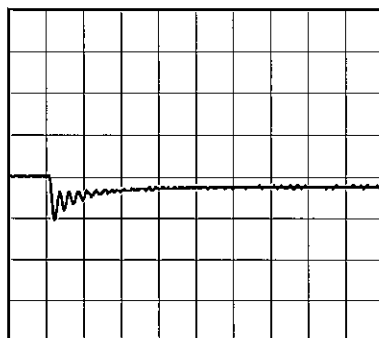
200 μ s/div



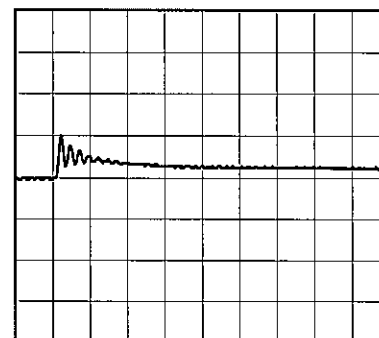
200 μ s/div

Load 50% (2.25A) \longleftrightarrow
Load 100% (4.5A)

100mV/div

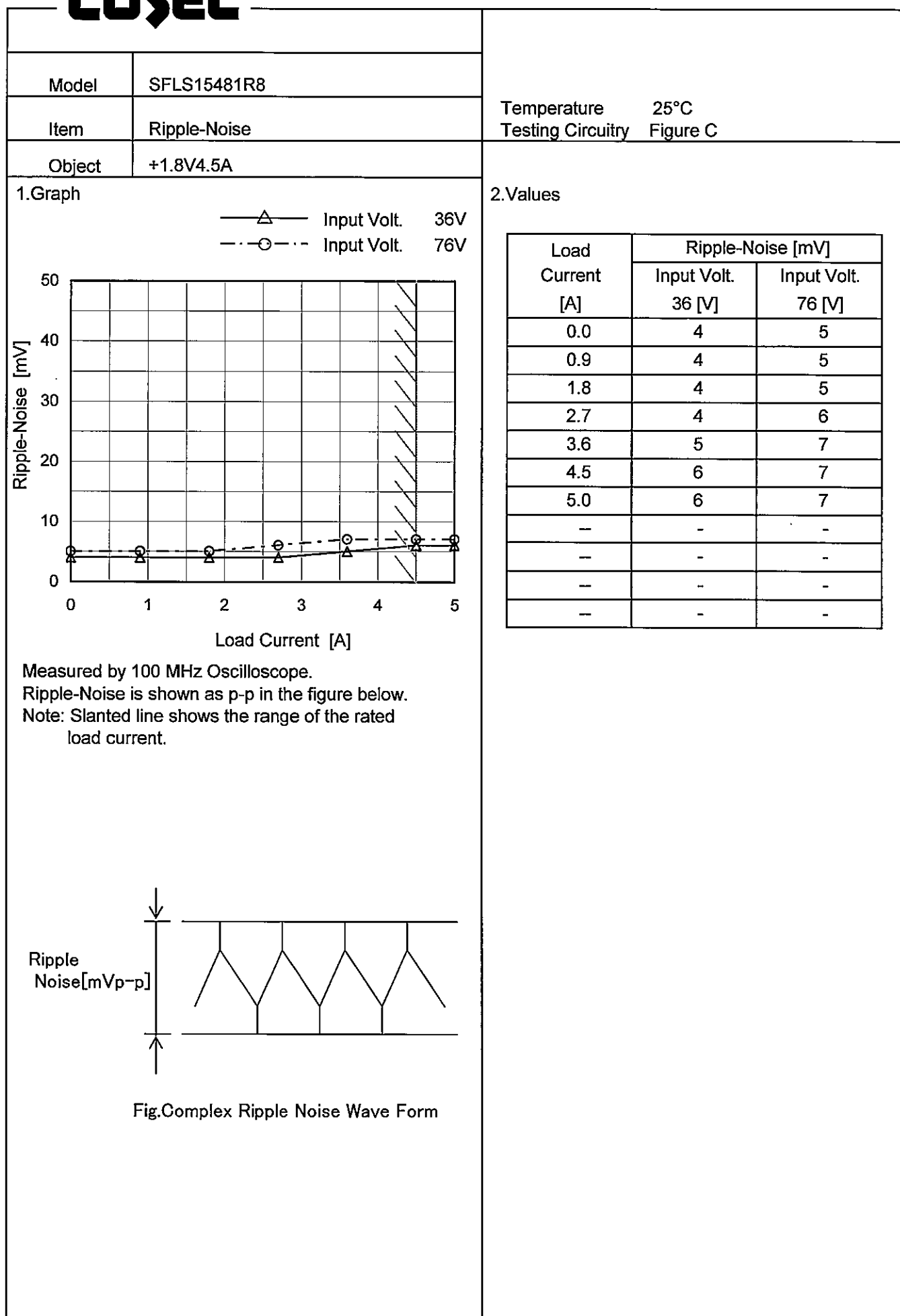


200 μ s/div



200 μ s/div

Model		SFLS15481R8		Temperature Testing Circuitry	25°C Figure C
Item		Ripple Voltage (by Load Current)			
Object		+1.8V4.5A			
1.Graph				2.Values	
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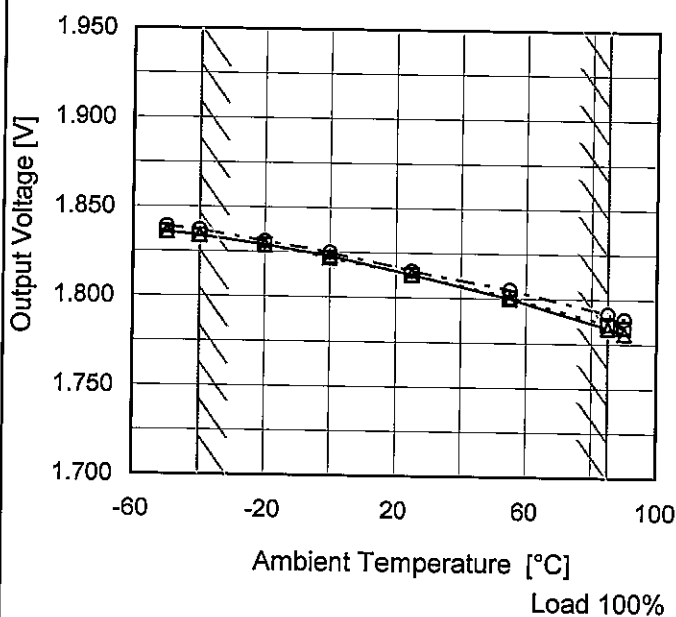
Model		SFLS15481R8	Testing Circuitry Figure C
Item		Ripple Voltage (by Ambient Temp.)	
Object		+1.8V4.5A	
1.Graph			2.Values
<div><div><div>-----□----- Load 50%</div><div>-----△----- Load 100%</div></div><p>Ripple Voltage [mV]</p><p>Ambient Temperature [°C]</p><p>Input Volt. 48V</p></div>			
Measured by 100 MHz Oscilloscope. Note: Slanted line shows the range of the rated ambient temperature.			

COSEL

Model	SFLS15481R8
Item	Ambient Temperature Drift
Object	+1.8V4.5A

1. Graph

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



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	1.836	1.836	1.839
-40	1.834	1.834	1.837
-20	1.829	1.829	1.831
0	1.823	1.822	1.825
25	1.813	1.813	1.815
55	1.800	1.801	1.805
85	1.784	1.786	1.792
90	1.781	1.784	1.789
--	-	-	-
--	-	-	-
--	-	-	-

COSEL

		Testing Circuitry Figure A
Model	SFLS15481R8	
Item	Output Voltage Accuracy	
Object	+1.8V4.5A	

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

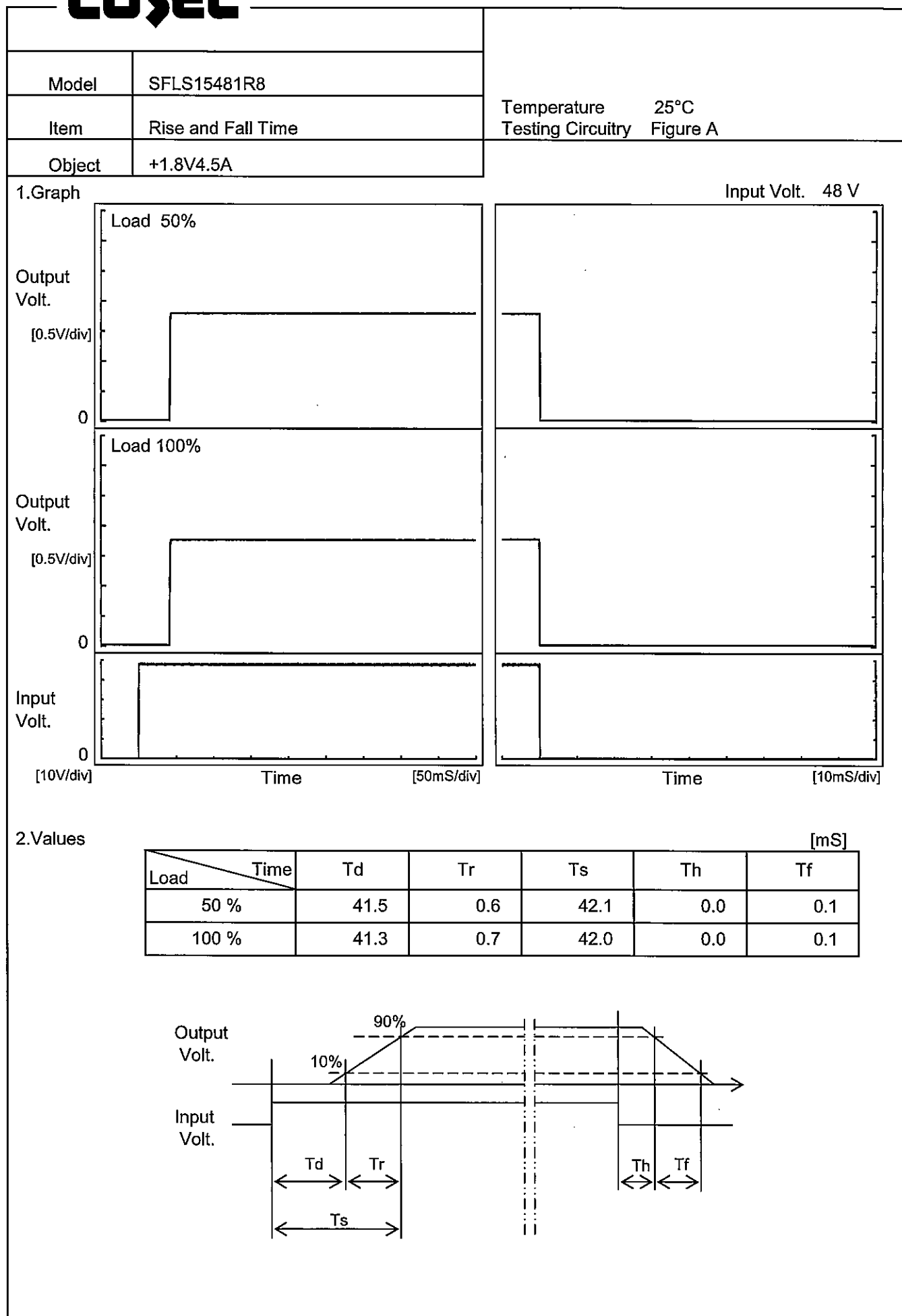
* Output Voltage Accuracy = $\pm(\text{Maximum of Output Voltage} - \text{Minimum of Output Voltage}) / 2$

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

2. Values

Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ratio [%]
Maximum Voltage	25	76	0	1.868	±42	±2.3
Minimum Voltage	85	36	4.5	1.784		

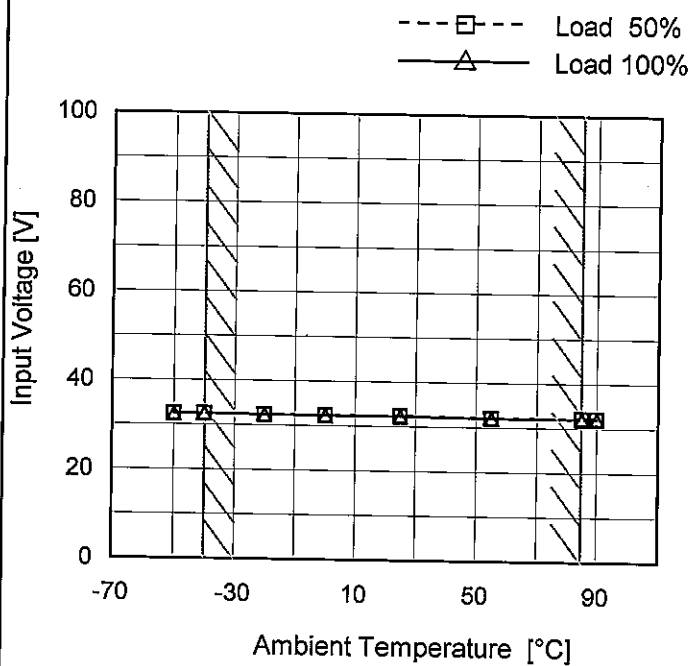
COSEL

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Model	SFLS15481R8
Item	Minimum Input Voltage for Regulated Output Voltage
Object	+1.8V4.5A

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%
-50	32.6	32.6
-40	32.6	32.6
-20	32.4	32.4
0	32.4	32.4
25	32.4	32.4
55	32.2	32.2
85	32.2	32.2
90	32.2	32.2
--	-	-
--	-	-
--	-	-

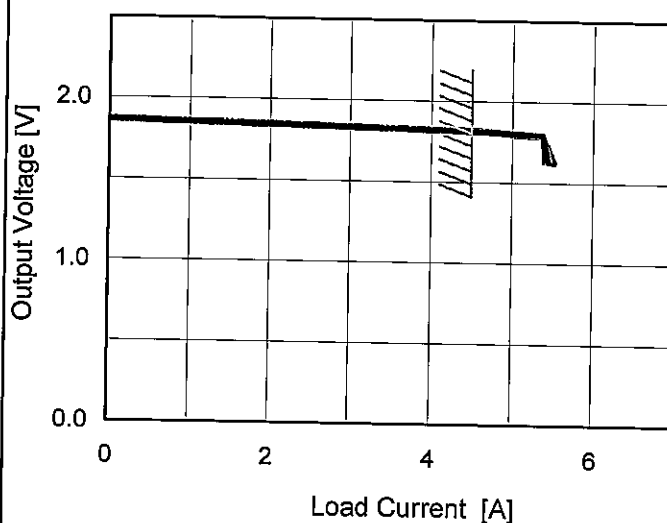
COSEL

Model	SFLS15481R8
Item	Overcurrent Protection
Object	+1.8V4.5A

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 1.67V, 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]
1.80	4.55	4.55	4.55
1.71	5.38	5.41	5.44
1.62	5.39	5.45	5.51
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
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--	-	-	-
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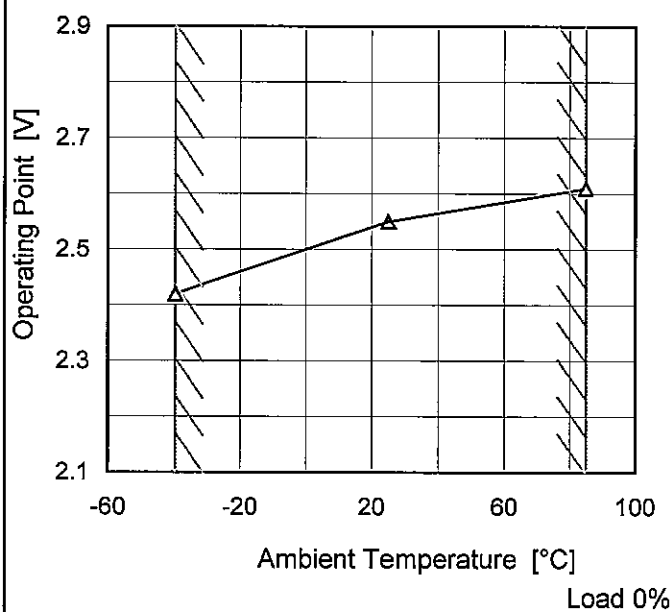
Model SFLS15481R8

Item Overvoltage Protection

Object +1.8V4.5A

Testing Circuitry Figure A

1.Graph —△— Input Volt. 48V



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	2.42	-	-
25	2.55	-	-
85	2.61	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
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--	-	-	-
--	-	-	-

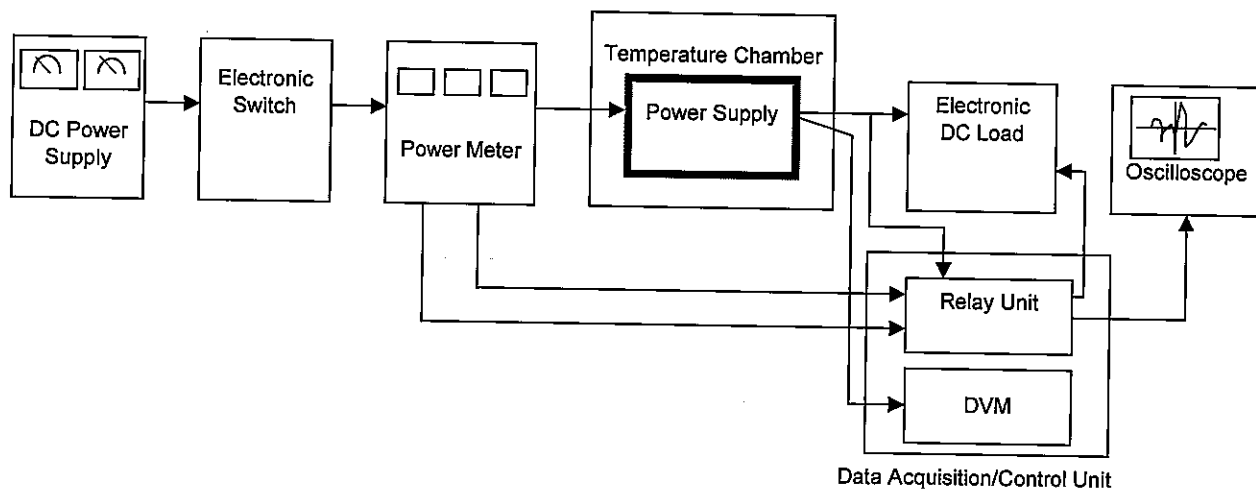


Figure A

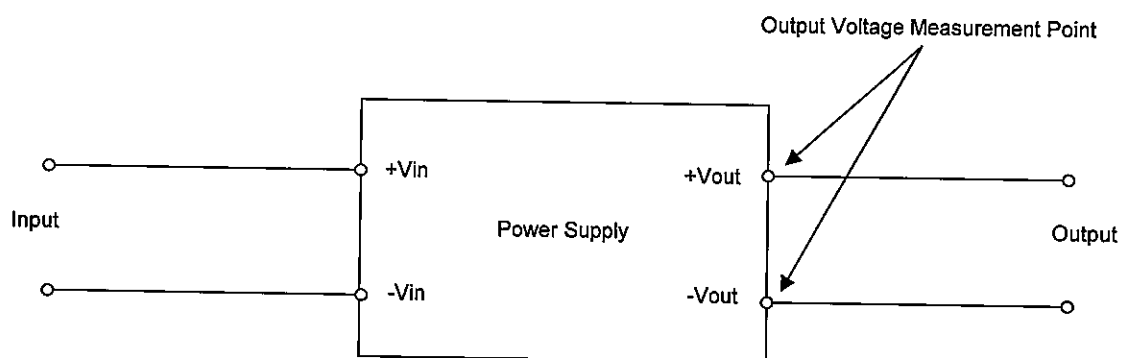


Figure B (General Electric Characteristic)

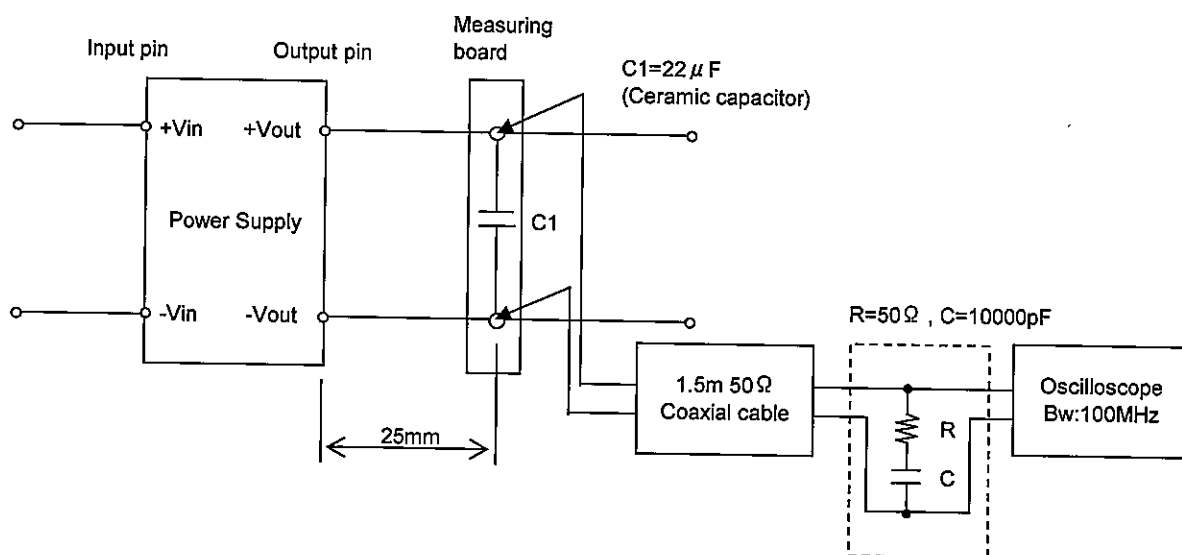


Figure C (Ripple and Ripple noise Characteristic)