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参考資料

TEST DATA OF GT3-15

Regulated DC Power Supply
July 23, 2010

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COSEL CO.,LTD.

参考資料

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CONTENTS

1.Input Current (by Load Current) · 1
2.Input Power (by Load Current) · 2
3.Efficiency (by Input Voltage) · 3
4.Efficiency (by Load Current) · 4
5.Power Factor (by Input Voltage) · 5
6.Power Factor (by Load Current) · 6
7.Inrush Current · 7
8.Line Regulation · 8
9.Load Regulation · 9
10.Dynamic Load Response · 10
11.Ripple Voltage (by Load Current) · 11
12.Ripple Voltage (by Ambient Temperature) · 12
13.Ambient Temperature Drift · 13
14.Output Voltage Accuracy · 14
15.Time Lapse Drift · 15
16.Rise and Fall Time · 16
17.Hold-Up Time · 17
18.Instantaneous Interruption Compensation · 18
19.Minimum Input Voltage for Regulated Output Voltage · · · · · · · · · · · · · · 19
20.Overcurrent Protection · 20
21.Figure of Testing Circuitry · 21
(Final Page 21)

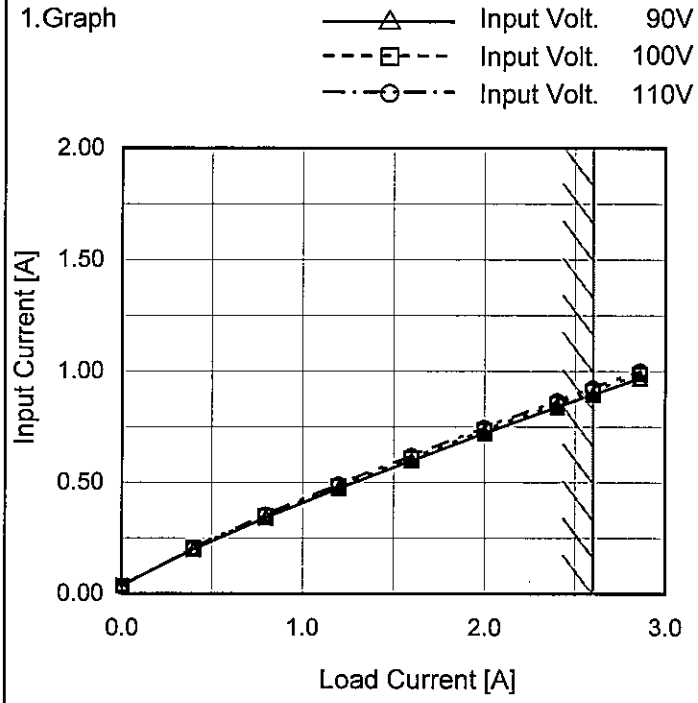
参考資料

COSEL

Model	GT3-15
Item	Input Current (by Load Current)
Object	――――――

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

Load Current [A]	Input Current [A]		
	Input Volt. 90[V]	Input Volt. 100[V]	Input Volt. 110[V]
0.00	0.039	0.035	0.032
0.40	0.200	0.204	0.207
0.80	0.342	0.349	0.355
1.20	0.474	0.483	0.491
1.60	0.599	0.609	0.620
2.00	0.723	0.736	0.747
2.40	0.840	0.853	0.868
2.60	0.896	0.911	0.926
2.86	0.969	0.986	1.002
--	-	-	-
--	-	-	-

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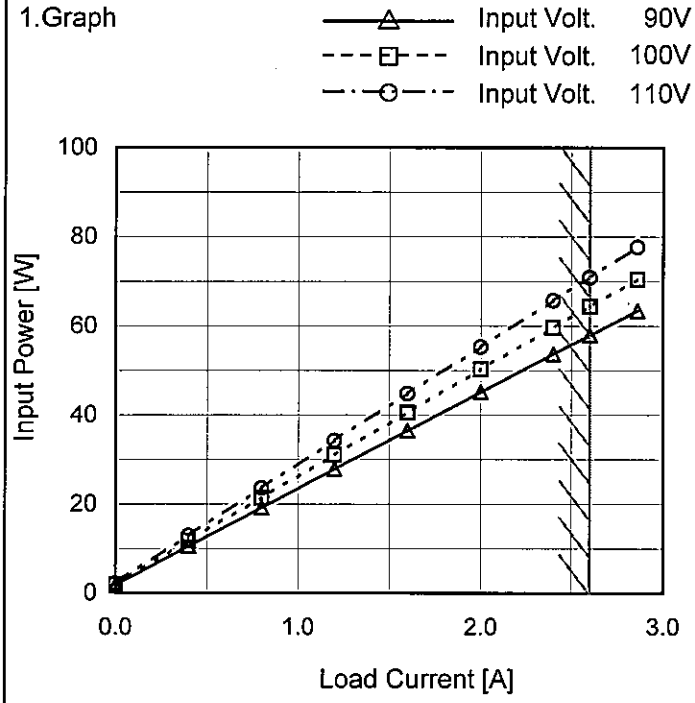
Model	GT3-15
Item	Input Power (by Load Current)
Object	――――――

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

Load Current [A]	Input Power [W]		
	Input Volt. 90[V]	Input Volt. 100[V]	Input Volt. 110[V]
0.00	1.77	2.00	2.22
0.40	10.55	11.78	12.94
0.80	19.19	21.41	23.60
1.20	27.89	31.05	34.30
1.60	36.46	40.51	44.80
2.00	45.20	50.30	55.30
2.40	53.70	59.60	65.70
2.60	57.90	64.40	70.90
2.86	63.40	70.50	77.70
--	-	-	-
--	-	-	-

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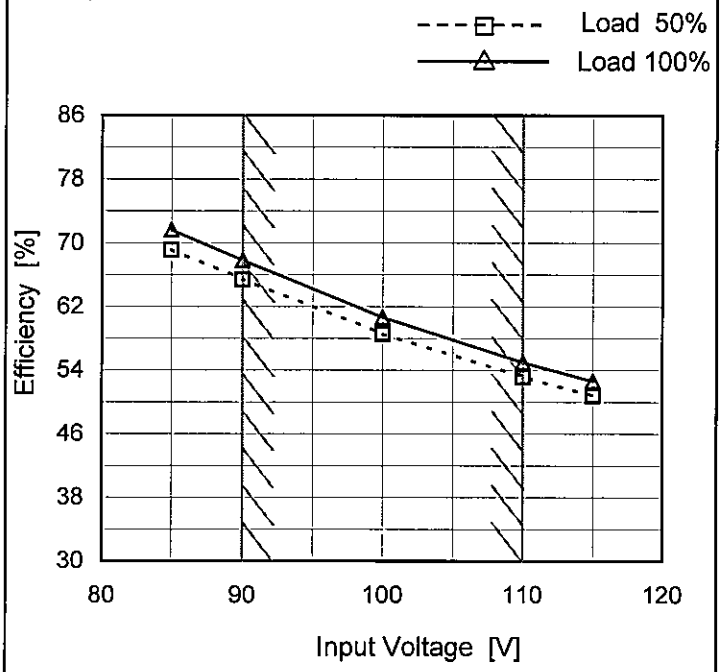
Model	GT3-15
Item	Efficiency (by Input Voltage)
Object	――――――――――

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%
85	69.1	71.7
90	65.4	67.8
100	58.6	60.6
110	53.2	55.0
115	50.8	52.6
--	-	-
--	-	-
--	-	-
--	-	-

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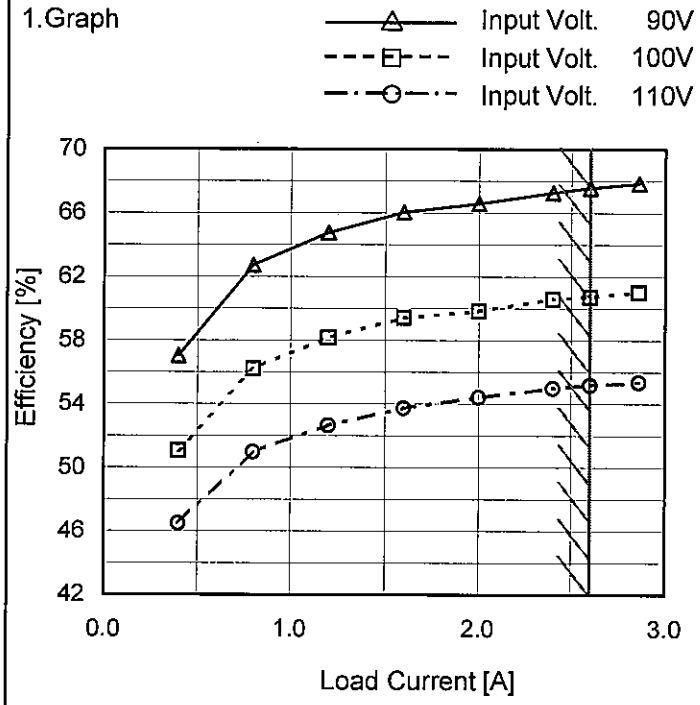
Model	GT3-15
Item	Efficiency (by Load Current)
Object	――――――

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

Load Current [A]	Efficiency [%]		
	Input Volt. 90[V]	Input Volt. 100[V]	Input Volt. 110[V]
0.00	-	-	-
0.40	57.0	51.1	46.5
0.80	62.7	56.2	51.0
1.20	64.7	58.1	52.6
1.60	66.0	59.4	53.7
2.00	66.6	59.8	54.4
2.40	67.3	60.6	55.0
2.60	67.6	60.7	55.2
2.86	67.9	61.0	55.4
--	-	-	-
--	-	-	-

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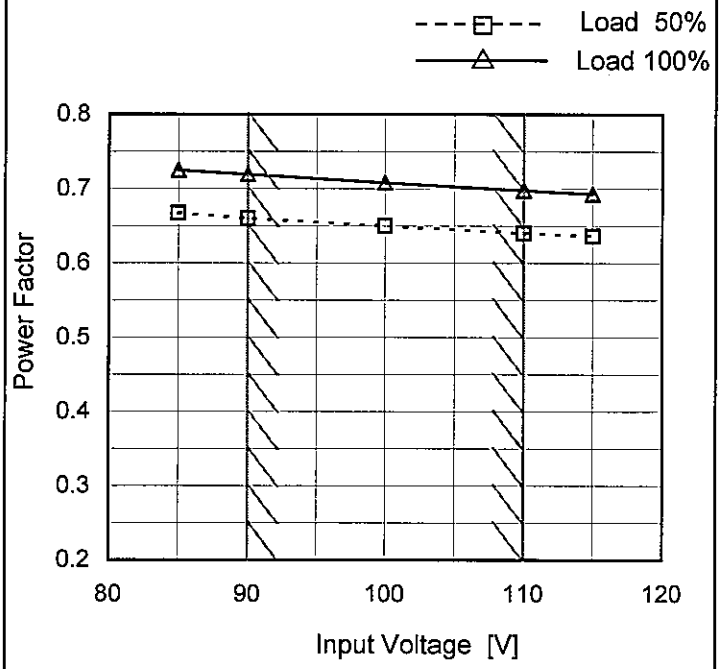
COSEL

Model	GT3-15
Item	Power Factor (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]	Power Factor	
	Load 50%	Load 100%
85	0.667	0.725
90	0.660	0.719
100	0.650	0.708
110	0.640	0.698
115	0.636	0.693
--	-	-
--	-	-
--	-	-
--	-	-

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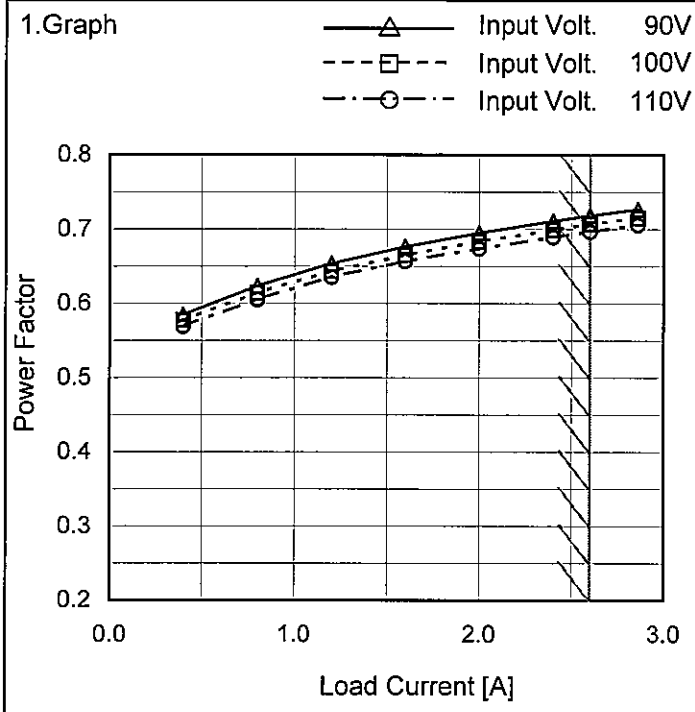
Model	GT3-15
Item	Power Factor (by Load Current)
Object	――――――

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

Load Current [A]	Power Factor		
	Input Volt. 90[V]	Input Volt. 100[V]	Input Volt. 110[V]
0.00	-	-	-
0.40	0.585	0.577	0.569
0.80	0.624	0.614	0.605
1.20	0.654	0.643	0.635
1.60	0.677	0.665	0.657
2.00	0.695	0.683	0.674
2.40	0.711	0.699	0.689
2.60	0.718	0.707	0.696
2.86	0.727	0.715	0.706
--	-	-	-
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参考資料

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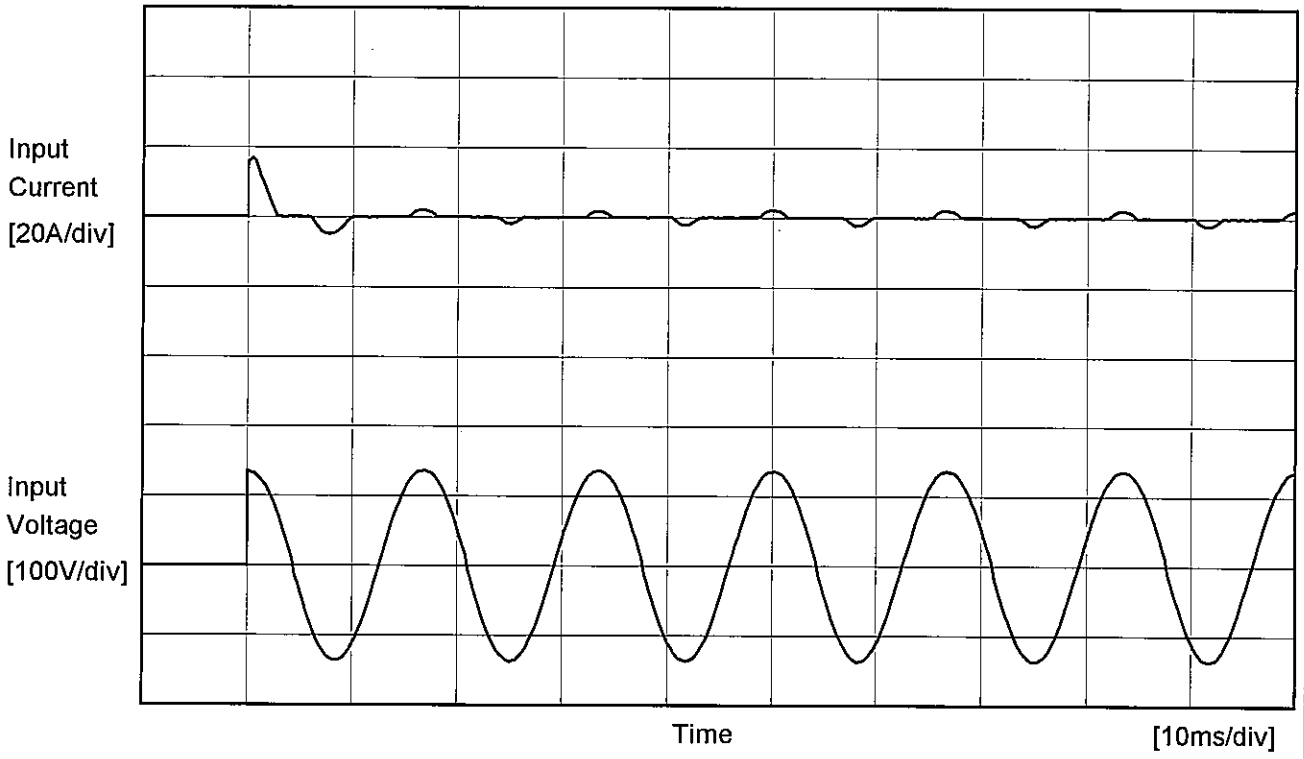
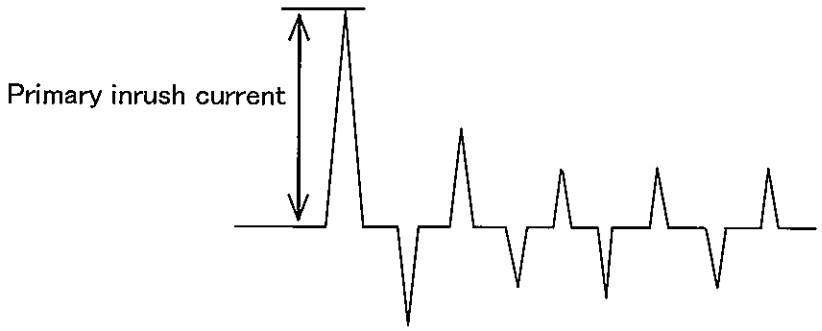
Model	GT3-15	
Item	Inrush Current	Temperature 25°C Testing Circuitry Figure A
Object	――――――	



Input Voltage	100 V
Frequency	60 Hz
Load	100 %
Primary inrush current	16.8 A



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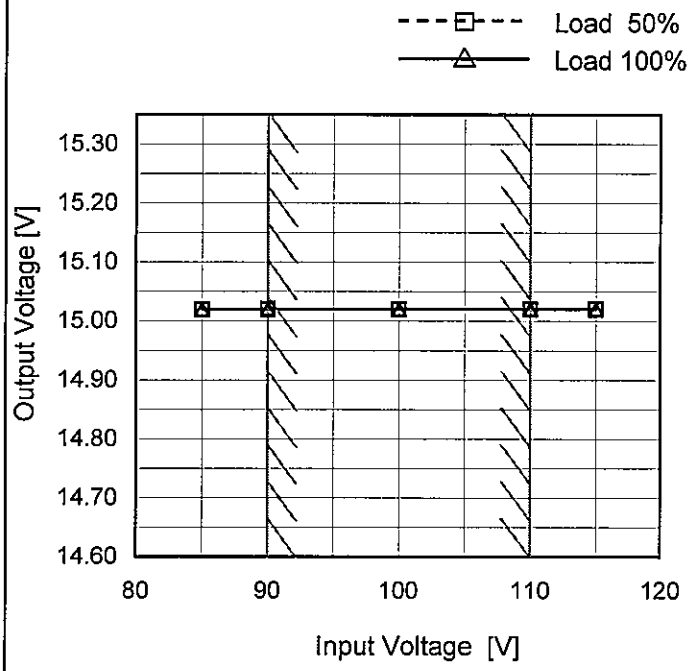
Model	GT3-15
Item	Line Regulation
Object	+15V2.6A

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%
85	15.020	15.020
90	15.020	15.020
100	15.020	15.020
110	15.021	15.021
115	15.021	15.021
--	-	-
--	-	-
--	-	-
--	-	-

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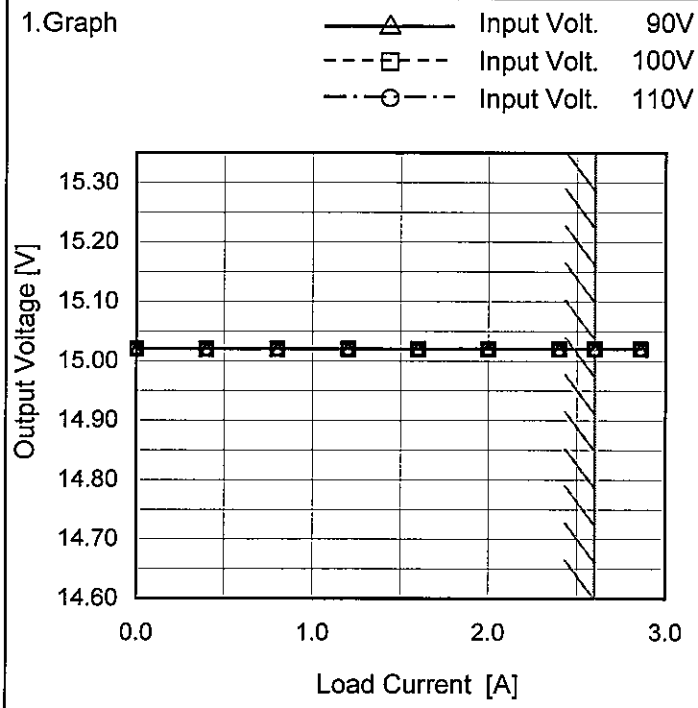
COSEL

Model	GT3-15
Item	Load Regulation
Object	+15V2.6A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

Load Current [A]	Output Voltage [V]		
	Input Volt. 90[V]	Input Volt. 100[V]	Input Volt. 110[V]
0.00	15.020	15.021	15.021
0.40	15.020	15.021	15.021
0.80	15.020	15.020	15.021
1.20	15.020	15.020	15.021
1.60	15.020	15.020	15.021
2.00	15.020	15.020	15.021
2.40	15.020	15.020	15.021
2.60	15.020	15.020	15.021
2.86	15.020	15.020	15.021
--	-	-	-
--	-	-	-

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参考資料

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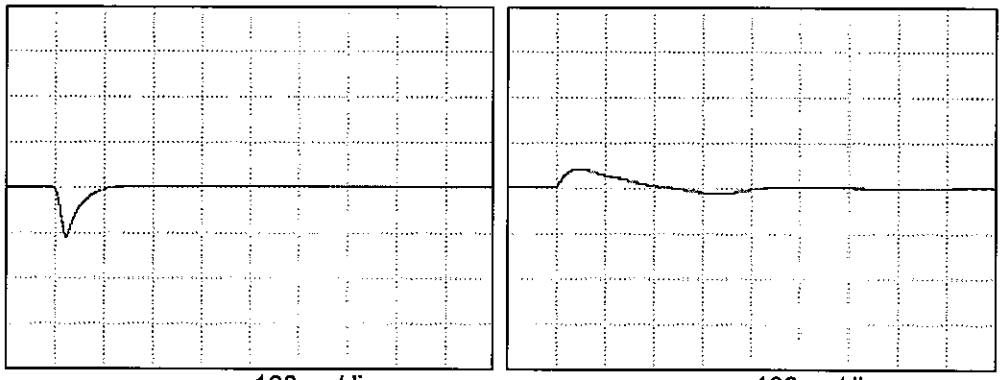
Model	GT3-15		
Item	Dynamic Load Response	Temperature	25°C
		Testing Circuitry	Figure A
Object	+15V2.6A		

Input Volt. 100 V
Cycle 1000 ms

Load Current

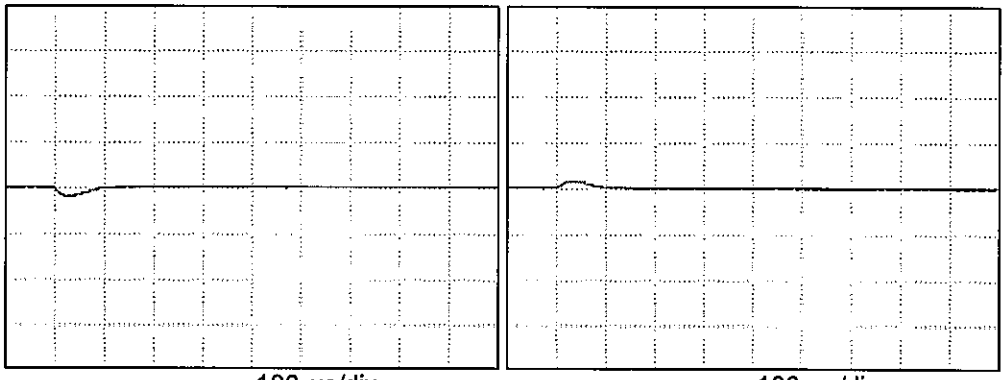
Min. Load (0A) ⟷
Load 100% (2.6A)



100 mV/div

100 μs/div 100 μs/div

Load 50% (1.3A) ⟷
Load 100% (2.6A)



100 mV/div

100 μs/div 100 μs/div

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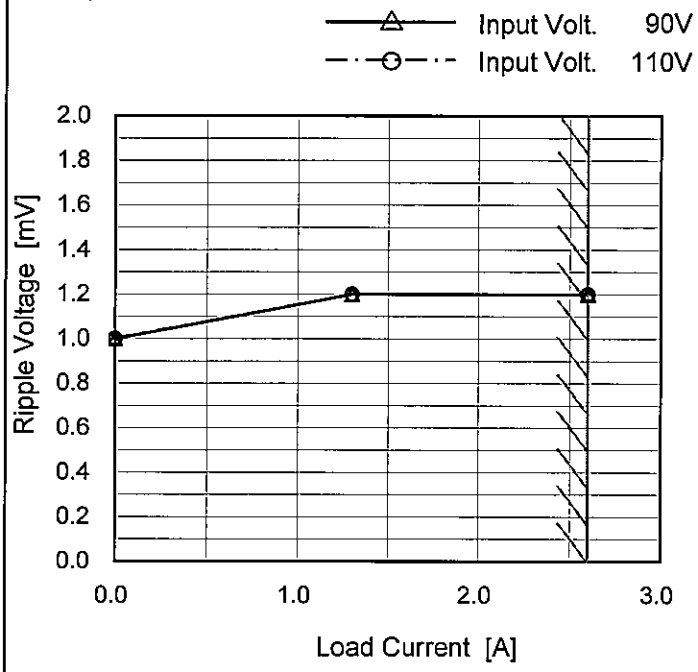
Model	GT3-15
Item	Ripple Voltage (by Load Current)
Object	+15V2.6A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Measured by 20 MHz Oscilloscope.
Note: Slanted line shows the range of the rated load current.

2.Values

Load Current [A]	Ripple Voltage [mV]	
	Input Volt. 90 [V]	Input Volt. 110 [V]
0.0	1.0	1.0
1.0	1.2	1.2
3.0	1.2	1.2
--	-	-
--	-	-
--	-	-
--	-	-
--	-	-
--	-	-
--	-	-
--	-	-

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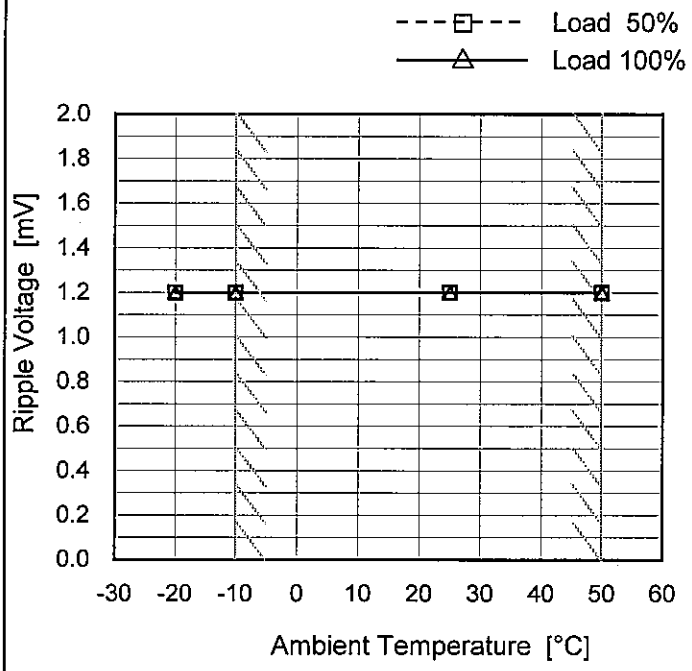
COSEL

Model	GT3-15
Item	Ripple Voltage (by Ambient Temp.)
Object	+15V2.6A

Testing Circuitry Figure A

1.Graph



Input Volt. 100V

Measured by 20 MHz Oscilloscope.
Note: Slanted line shows the range of the rated ambient temperature.

2.Values

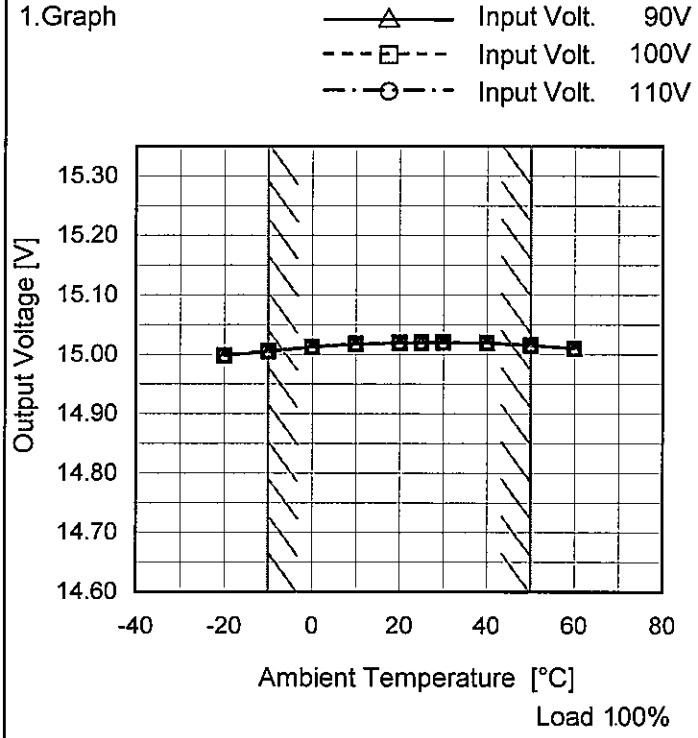
Ambient Temperature [°C]	Ripple Voltage [mV]	
	Load 50%	Load 100%
-20	1.2	1.2
-10	1.2	1.2
25	1.2	1.2
50	1.2	1.2
--	-	-
--	-	-
--	-	-
--	-	-
--	-	-
--	-	-
--	-	-

COSEL

Model	GT3-15
Item	Ambient Temperature Drift
Object	+15V2.6A

Testing Circuitry Figure A

1.Graph



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

2.Values

Ambient Temperature [°C]	Output Voltage [V]		
	Input Volt. 90[V]	Input Volt. 100[V]	Input Volt. 110[V]
-20	14.998	14.998	14.999
-10	15.005	15.005	15.006
0	15.012	15.013	15.013
10	15.018	15.018	15.018
20	15.019	15.020	15.020
25	15.020	15.020	15.020
30	15.020	15.020	15.021
40	15.019	15.020	15.020
50	15.015	15.016	15.016
60	15.010	15.010	15.010
--	-	-	-

COSEL

Model	GT3-15	
Item	Output Voltage Accuracy	Testing Circuitry Figure A
Object	+15V2.6A	

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 : -10 - 50°C
Input Voltage : 90 - 110V
Load Current : 0 - 2.6A

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

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

2.Values

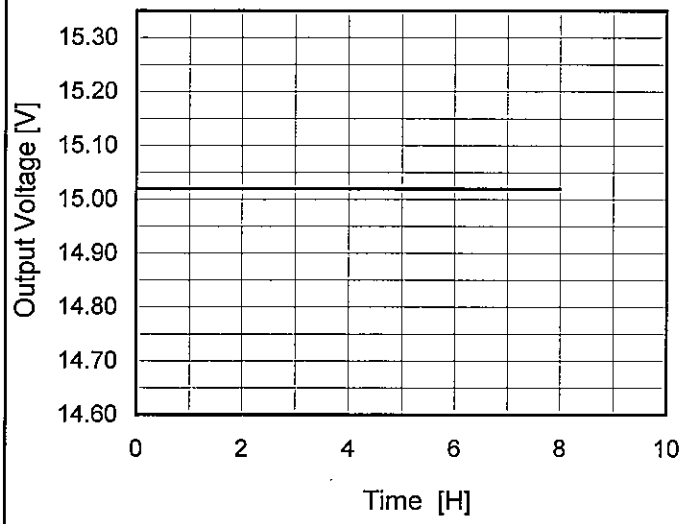
Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	30	110	0	15.021	±8	±0.1
Minimum Voltage	-10	90	0	15.005		

COSEL

Model	GT3-15
Item	Time Lapse Drift
Object	+15V2.6A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Input Volt. 100V
Load 100%

2.Values

Time since start [H]	Output Voltage [V]
0.0	15.021
0.5	15.020
1.0	15.020
2.0	15.019
3.0	15.019
4.0	15.019
5.0	15.019
6.0	15.019
7.0	15.019
8.0	15.019

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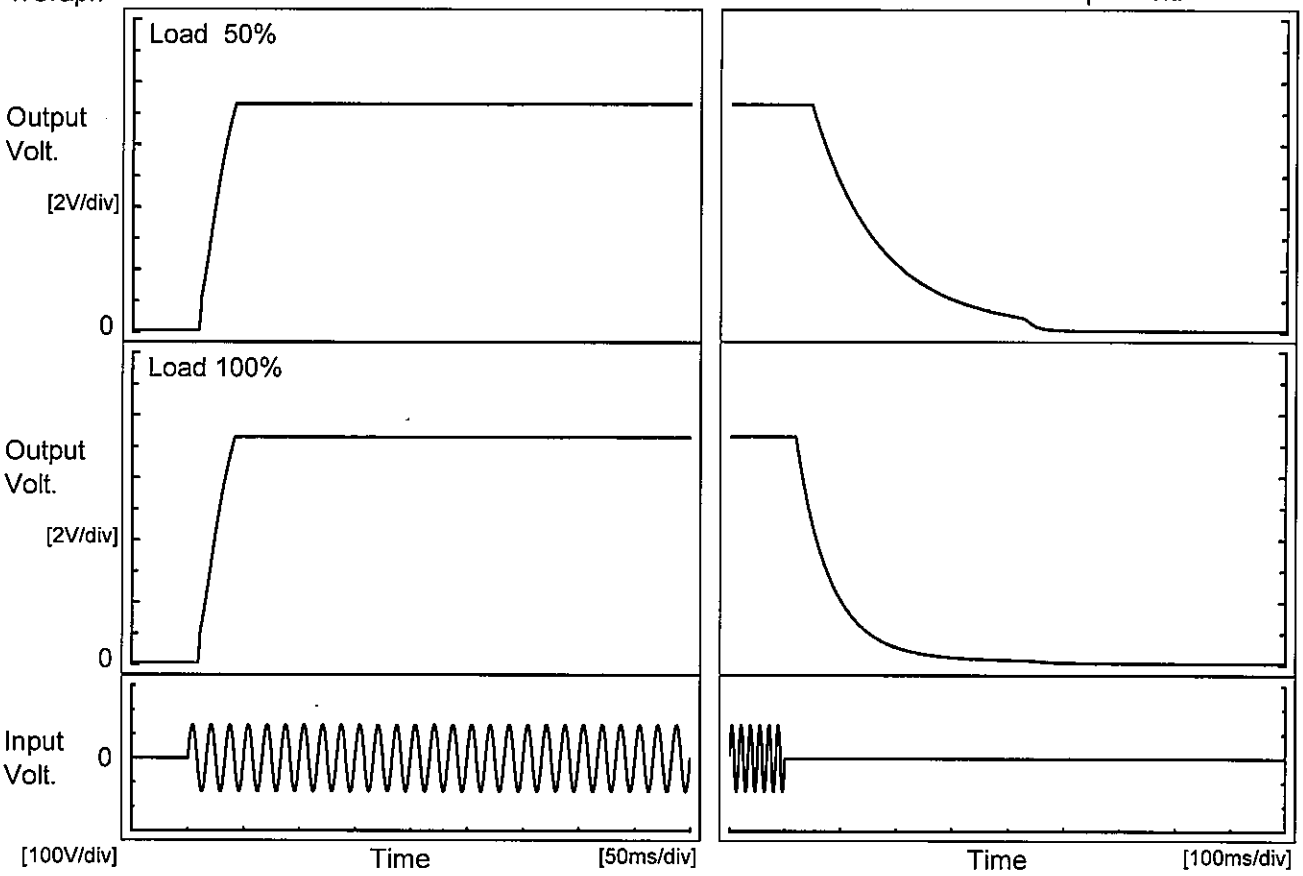
Model	GT3-15
Item	Rise and Fall Time
Object	+15V2.6A

Temperature 25°C
Testing Circuitry Figure A

1.Graph

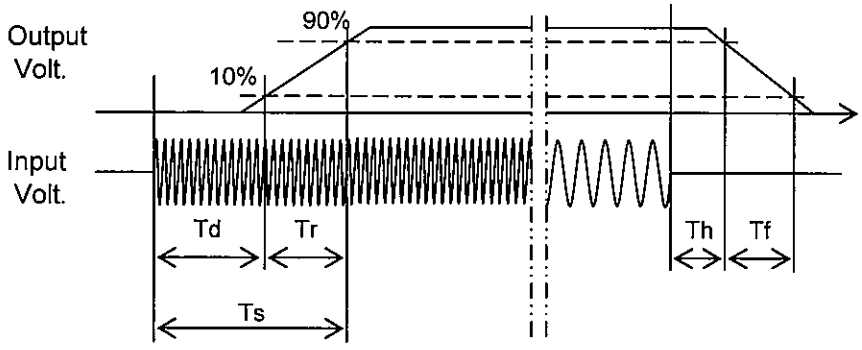
Input Volt. 100 V



2.Values

[ms]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	10.8	27.3	38.1	54.5	292.0
100 %	10.3	27.5	37.8	23.0	149.0



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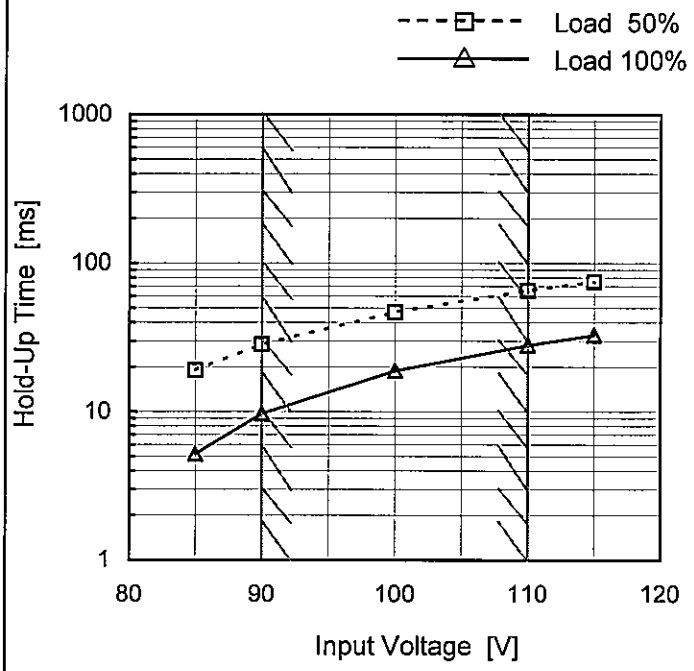
Model	GT3-15
Item	Hold-Up Time
Object	+15V2.6A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



This duration covers from Shut-off of input voltage to the moment when output voltage descends to the rated range of voltage accuracy.
Note: Slanted line shows the range of the rated input voltage.

2.Values

Input Voltage [V]	Hold-Up Time [ms]	
	Load 50%	Load 100%
85	19	5
90	28	10
100	47	19
110	66	28
115	75	33
--	-	-
--	-	-
--	-	-
--	-	-

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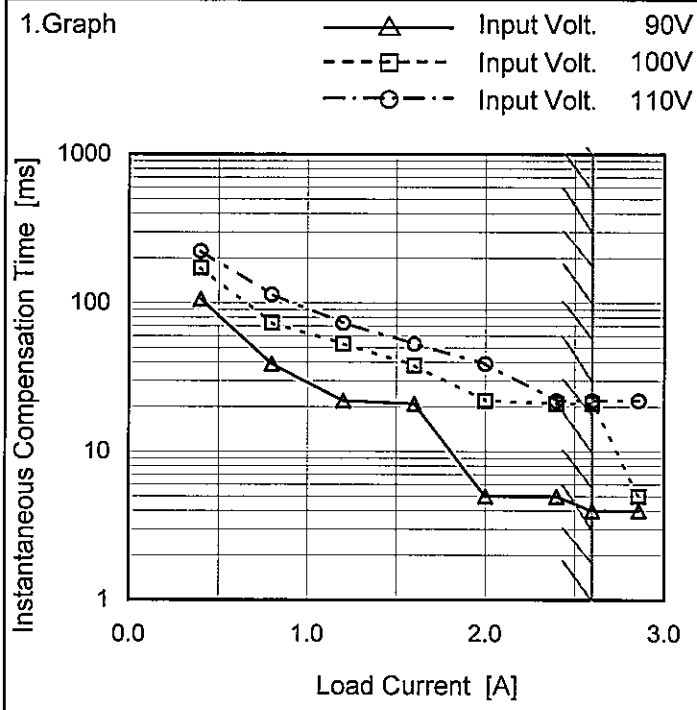
Model	GT3-15
Item	Instantaneous Interruption Compensation
Object	+15V2.6A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

Load Current [A]	Time [ms]		
	Input Volt. 90[V]	Input Volt. 100[V]	Input Volt. 110[V]
0.00	-	-	-
0.40	106	173	223
0.80	39	73	114
1.20	22	53	73
1.60	21	38	53
2.00	5	22	39
2.40	5	21	22
2.60	4	21	22
2.86	4	5	22
--	-	-	-
--	-	-	-

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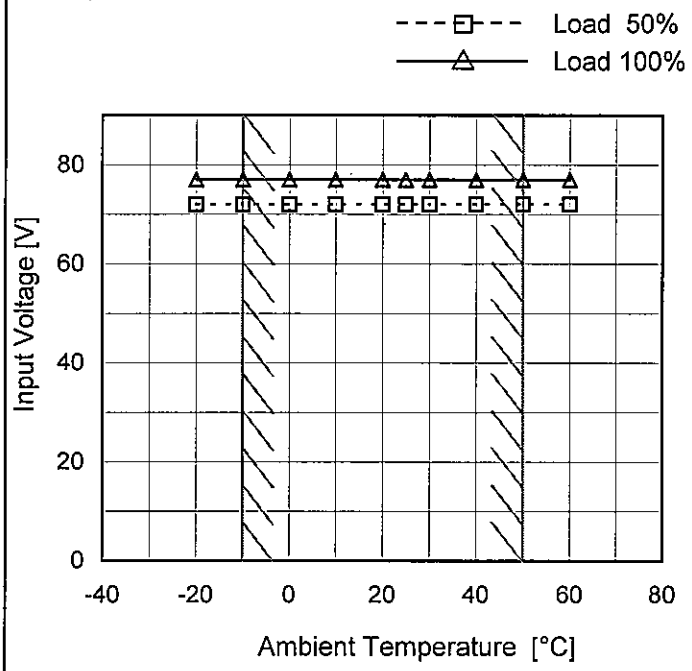
Model	GT3-15
Item	Minimum Input Voltage for Regulated Output Voltage
Object	+15V2.6A

Testing Circuitry Figure A

1.Graph



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

2.Values

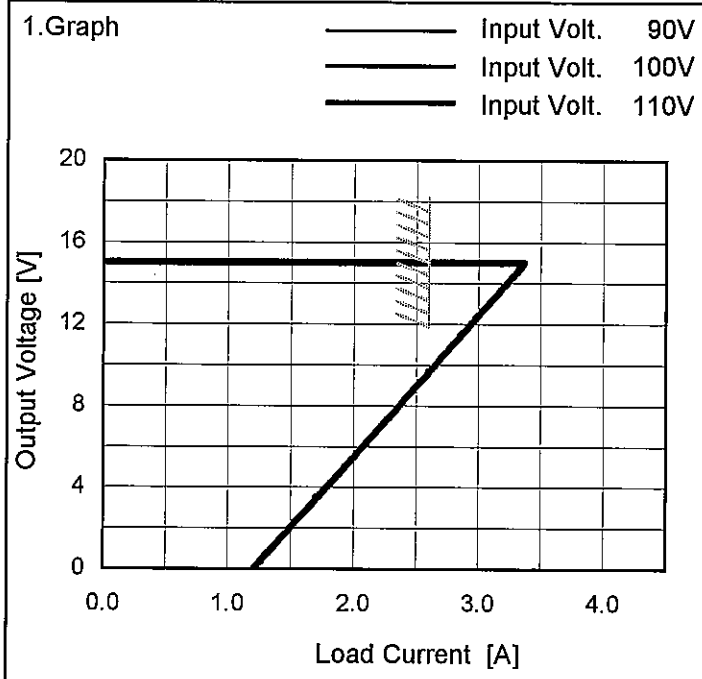
Ambient Temperature [°C]	Input Voltage [V]	
	Load 50%	Load 100%
-20	72	77
-10	72	77
0	72	77
10	72	77
20	72	77
25	72	77
30	72	77
40	72	77
50	72	77
60	72	77
--	-	-

COSEL

Model	GT3-15
Item	Overcurrent Protection
Object	+15V2.6A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

Output Voltage [V]	Load Current [A]		
	Input Volt. 90[V]	Input Volt. 100[V]	Input Volt. 110[V]
15.0	3.38	3.37	3.37
14.3	3.29	3.28	3.29
13.5	3.16	3.18	3.17
12.0	2.95	2.95	2.95
10.5	2.73	2.73	2.75
9.0	2.52	2.52	2.52
7.5	2.30	2.31	2.31
6.0	2.09	2.08	2.07
4.5	1.87	1.87	1.86
3.0	1.65	1.65	1.64
1.5	1.43	1.42	1.43
0.0	1.20	1.20	1.20

COSEL

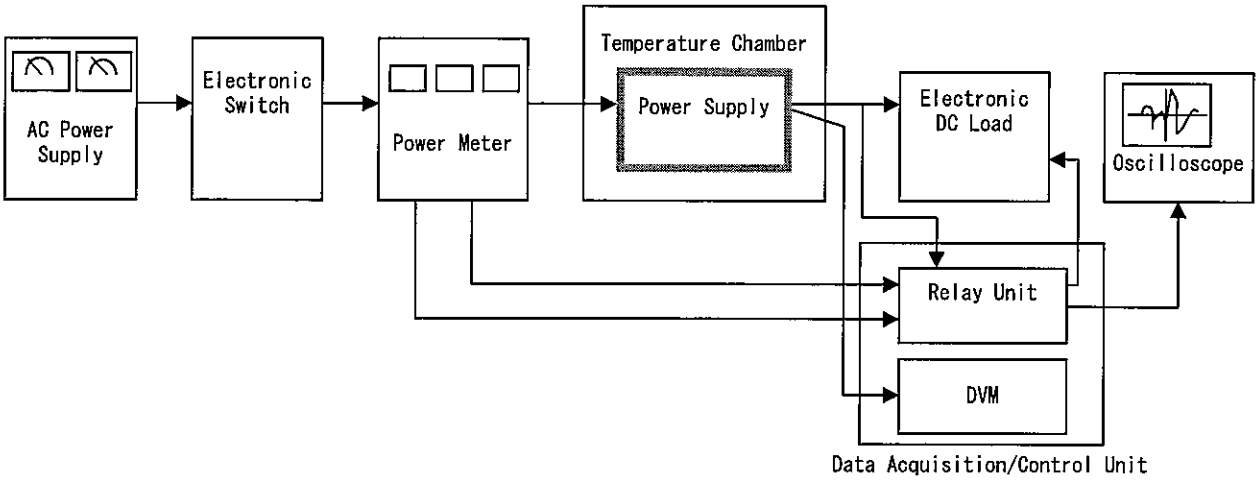


Figure A