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参考資料

# TEST DATA OF GT2W-15

Regulated DC Power Supply
October 26, 2010

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Prepared by : Satoshi Kinoshita
Satoshi Kinoshita Design Engineer

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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) ・・・・・・・・・・・・・・・・・・・・・・・・ 12
12.Ripple Voltage (by Ambient Temperature) ・・・・・・・・・・・・・・・・・・・・ 14
13.Ambient Temperature Drift ・・・・・・・・・・・・・・・・・・・・・・・・・・・ 15
14.Output Voltage Accuracy ・・・・・・・・・・・・・・・・・・・・・・・・・・・・ 16
15.Time Lapse Drift ・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・ 17
16.Rise and Fall Time ・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・ 18
17.Hold-Up Time ・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・ 20
18.Instantaneous Interruption Compensation ・・・・・・・・・・・・・・・・・・・・ 22
19.Minimum Input Voltage for Regulated Output Voltage ・・・・・・・・・・・・・・ 24
20.Overcurrent Protection ・・・・・・・・・・・・・・・・・・・・・・・・・・・・ 25
21.Figure of Testing Circuitry ・・・・・・・・・・・・・・・・・・・・・・・・・・ 26


(Final Page 26)

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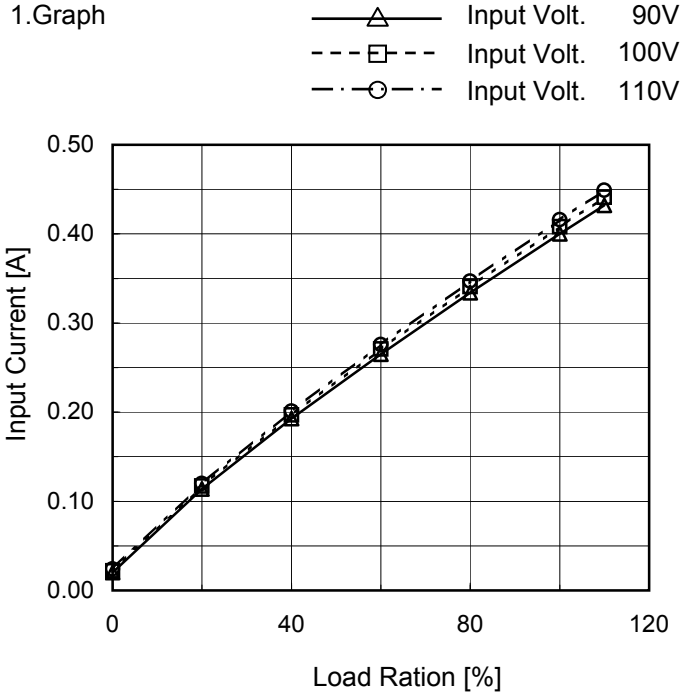
| | |
|---|---|
| Model | GT2W-15 |
| Item | Input Current (by Load Current) |
| Object | ―――――― |

Temperature 25°C
Testing Circuitry Figure A

1.Graph




2.Values

| Load Ration [%] | Input Current [A] | | |
|---|---|---|---|
| | Input Volt. 90[V] | Input Volt. 100[V] | Input Volt. 110[V] |
| 0 | 0.020 | 0.022 | 0.024 |
| 20 | 0.114 | 0.117 | 0.120 |
| 40 | 0.193 | 0.197 | 0.201 |
| 60 | 0.265 | 0.271 | 0.276 |
| 80 | 0.334 | 0.341 | 0.347 |
| 100 | 0.400 | 0.408 | 0.416 |
| 110 | 0.432 | 0.441 | 0.449 |
| -- | - | - | - |
| -- | - | - | - |
| -- | - | - | - |
| -- | - | - | - |



BC-10216

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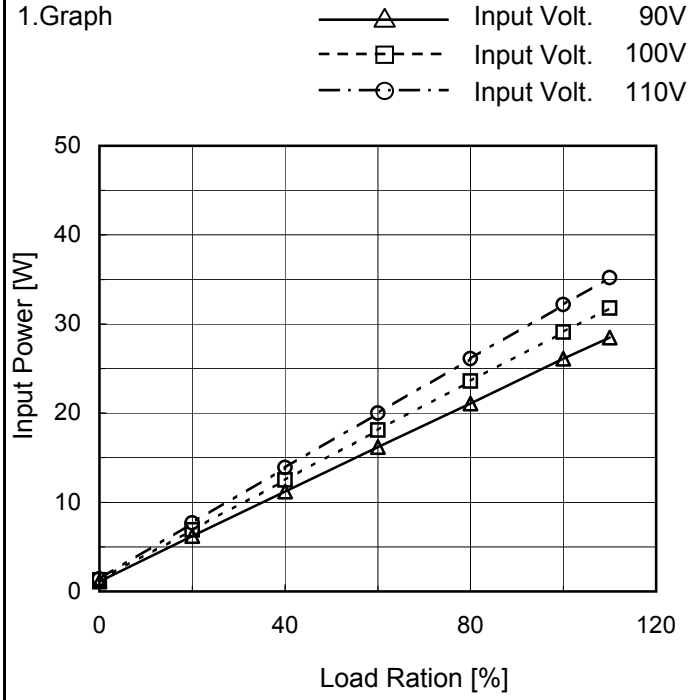
| | |
|---|---|
| Model | GT2W-15 |
| Item | Input Power (by Load Current) |
| Object | ―――――― |

Temperature 25°C
Testing Circuitry Figure A

1.Graph




2.Values

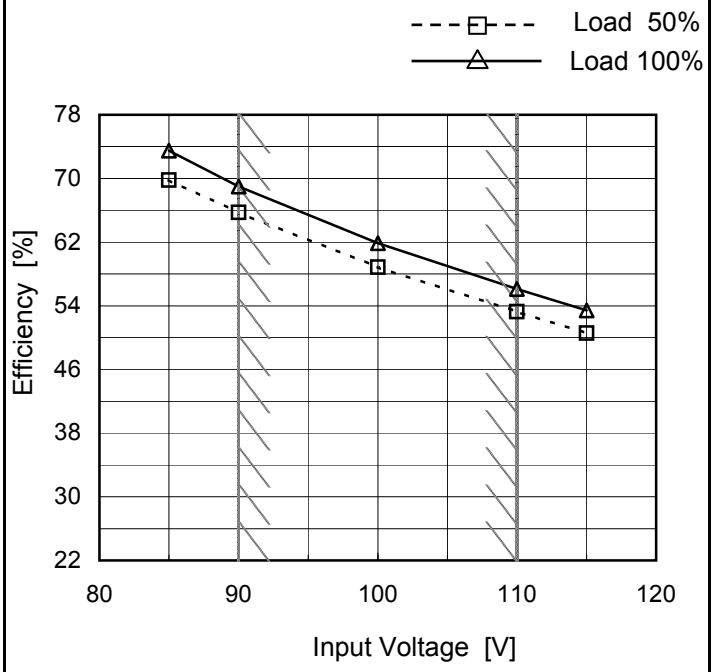
| Load Ration [%] | Input Power [W] | | |
|---|---|---|---|
| | Input Volt. 90[V] | Input Volt. 100[V] | Input Volt. 110[V] |
| 0 | 1.10 | 1.30 | 1.40 |
| 20 | 6.20 | 6.90 | 7.70 |
| 40 | 11.20 | 12.50 | 13.90 |
| 60 | 16.20 | 18.10 | 20.00 |
| 80 | 21.10 | 23.60 | 26.10 |
| 100 | 26.10 | 29.10 | 32.20 |
| 110 | 28.50 | 31.80 | 35.20 |
| -- | - | - | - |
| -- | - | - | - |
| -- | - | - | - |
| -- | - | - | - |

COSEL

| | |
|---|---|
| Model | GT2W-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 | 69.8 | 73.5 |
| 90 | 65.7 | 69.0 |
| 100 | 58.8 | 61.9 |
| 110 | 53.3 | 56.1 |
| 115 | 50.6 | 53.4 |
| -- | - | - |
| -- | - | - |
| -- | - | - |
| -- | - | - |



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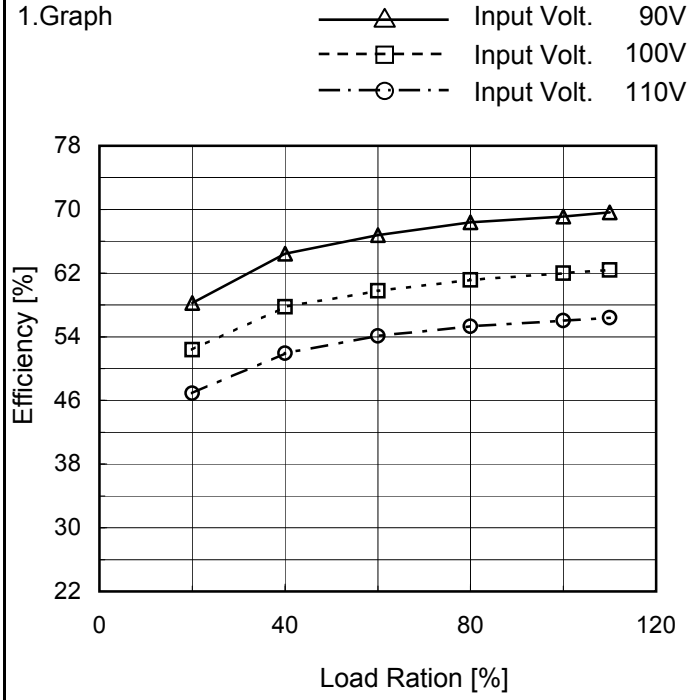
| | |
|---|---|
| Model | GT2W-15 |
| Item | Efficiency (by Load Current) |
| Object | ―――――― |

Temperature 25°C
Testing Circuitry Figure A

1.Graph




2.Values

| Load Ration [%] | Efficiency [%] | | |
|---|---|---|---|
| | Input Volt. 90[V] | Input Volt. 100[V] | Input Volt. 110[V] |
| 0 | - | - | - |
| 20 | 58.3 | 52.4 | 46.9 |
| 40 | 64.5 | 57.8 | 51.9 |
| 60 | 66.8 | 59.8 | 54.1 |
| 80 | 68.4 | 61.1 | 55.3 |
| 100 | 69.1 | 62.0 | 56.0 |
| 110 | 69.6 | 62.4 | 56.4 |
| -- | - | - | - |
| -- | - | - | - |
| -- | - | - | - |
| -- | - | - | - |



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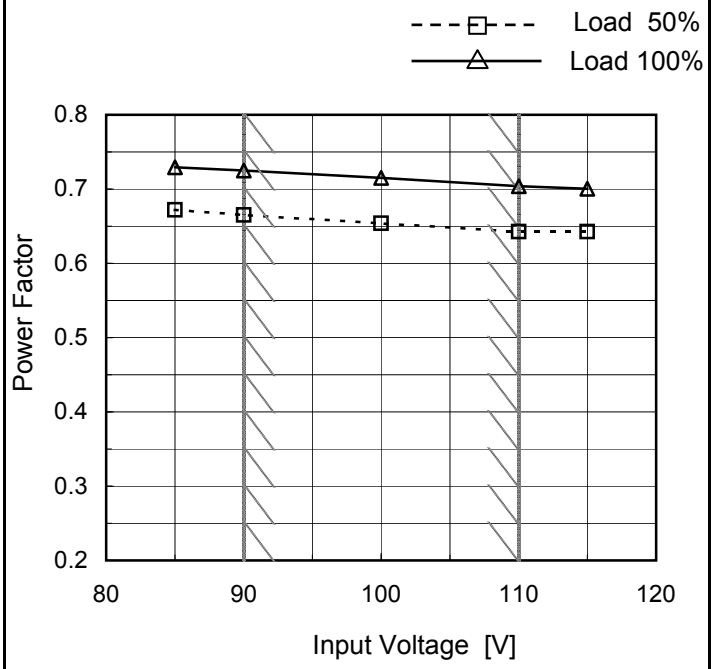
| | |
|---|---|
| Model | GT2W-15 |
| Item | Power Factor (by Input Voltage) |
| Object | ―――――――――― |

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 | 0.672 | 0.729 |
| 90 | 0.665 | 0.725 |
| 100 | 0.654 | 0.715 |
| 110 | 0.643 | 0.704 |
| 115 | 0.643 | 0.701 |
| -- | - | - |
| -- | - | - |
| -- | - | - |
| -- | - | - |



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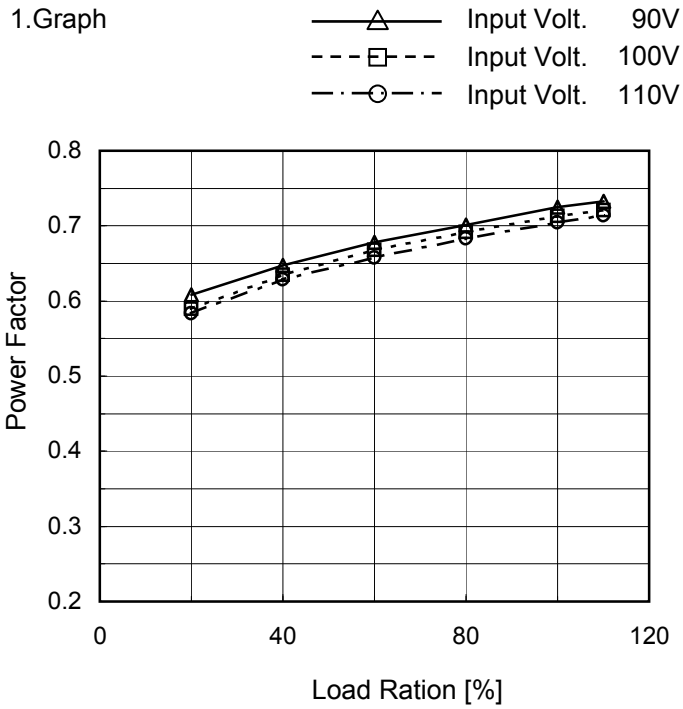
| | |
|---|---|
| Model | GT2W-15 |
| Item | Power Factor (by Load Current) |
| Object | ―――――――― |

Temperature 25°C
Testing Circuitry Figure A

1.Graph




2.Values

| Load Ration [%] | Power Factor | | |
|---|---|---|---|
| | Input Volt. 90[V] | Input Volt. 100[V] | Input Volt. 110[V] |
| 0 | - | - | - |
| 20 | 0.608 | 0.590 | 0.583 |
| 40 | 0.647 | 0.635 | 0.629 |
| 60 | 0.678 | 0.668 | 0.658 |
| 80 | 0.701 | 0.692 | 0.683 |
| 100 | 0.725 | 0.713 | 0.705 |
| 110 | 0.733 | 0.721 | 0.714 |
| -- | - | - | - |
| -- | - | - | - |
| -- | - | - | - |
| -- | - | - | - |



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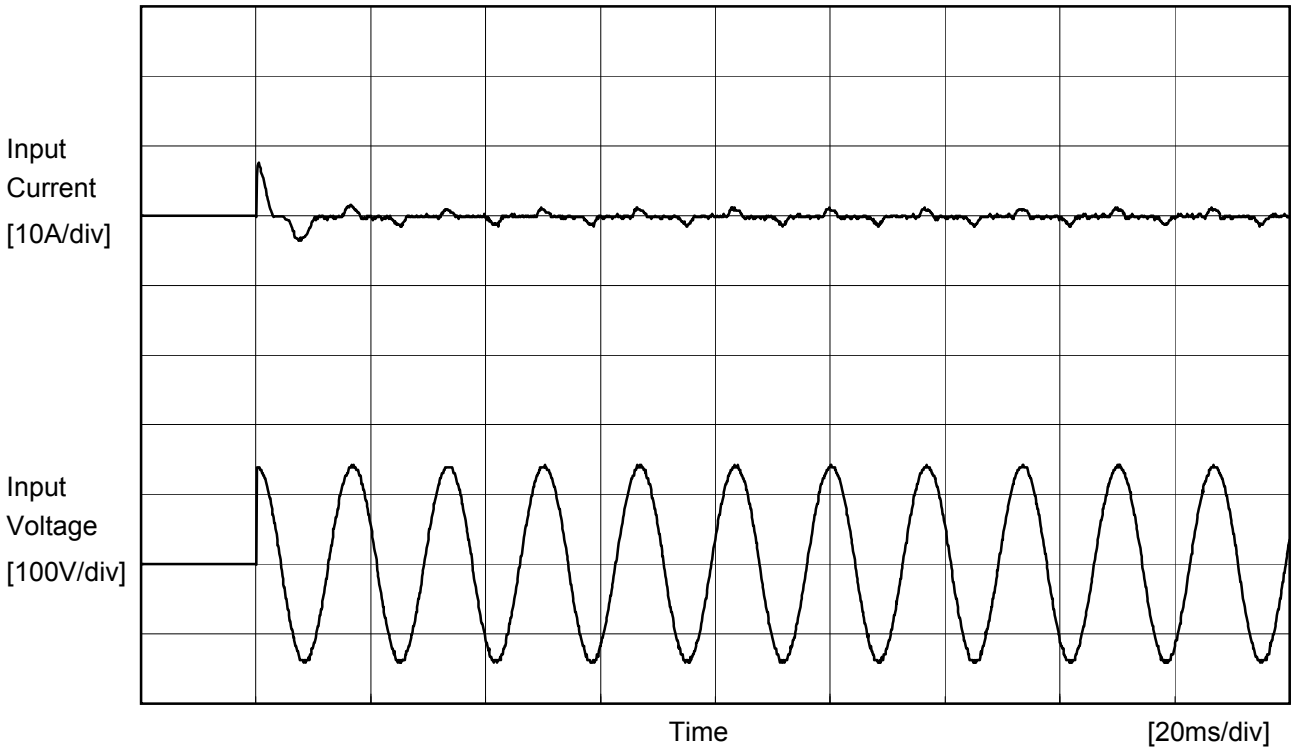
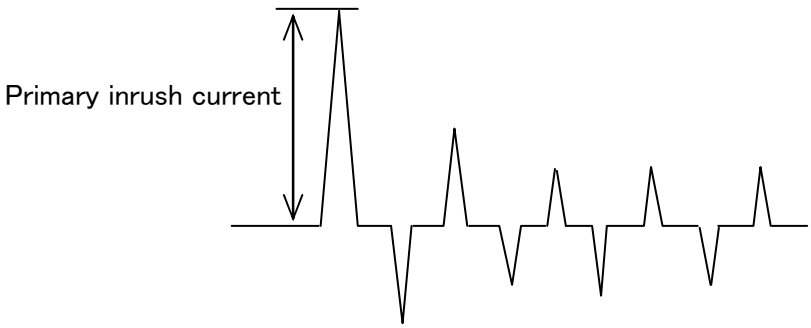
| | | |
|---|---|---|
| Model | GT2W-15 | Temperature 25°C |
| Item | Inrush Current | Testing Circuitry Figure A |
| Object | ―――――― | |




| | |
|---|---|
| Input Voltage | 100 V |
| Frequency | 60 Hz |
| Load | 100 % |
| Primary inrush current | 7.8 A |



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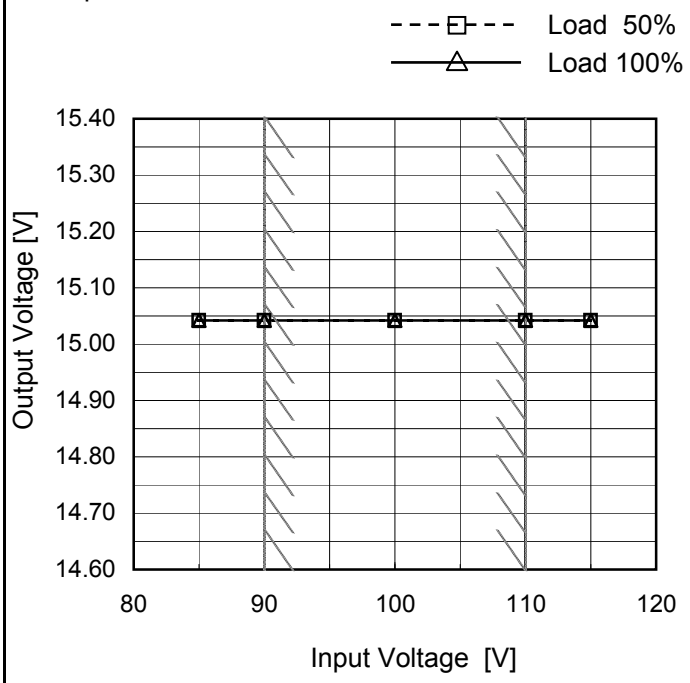
| | |
|---|---|
| Model | GT2W-15 |
| Item | Line Regulation |
| Object | +15V0.6A |

Temperature 25°C
Testing Circuitry Figure A

1.Graph

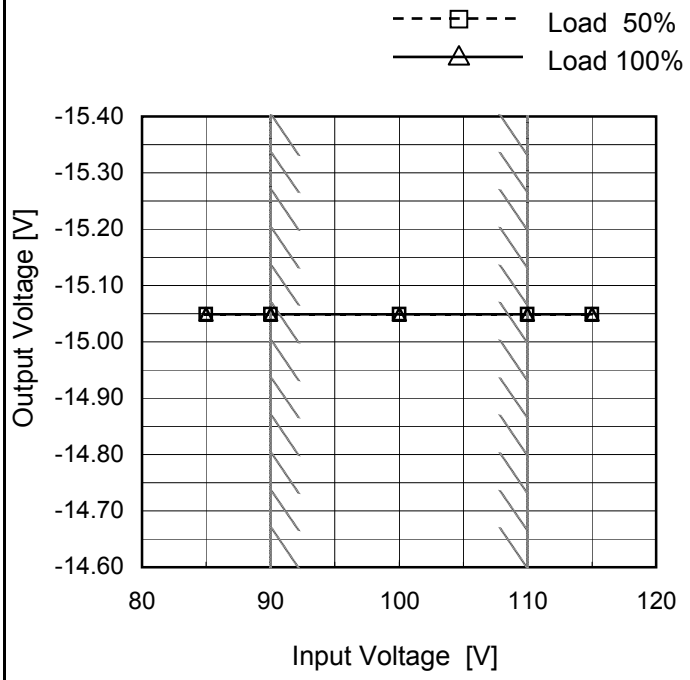



2.Values

| Input Voltage [V] | Output Voltage [V] | |
|---|---|---|
| | Load 50% | Load 100% |
| 85 | 15.042 | 15.042 |
| 90 | 15.042 | 15.042 |
| 100 | 15.042 | 15.042 |
| 110 | 15.042 | 15.042 |
| 115 | 15.042 | 15.042 |
| -- | - | - |
| -- | - | - |
| -- | - | - |
| -- | - | - |

| | |
|---|---|
| Object | -15V0.6A |

1.Graph




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

2.Values

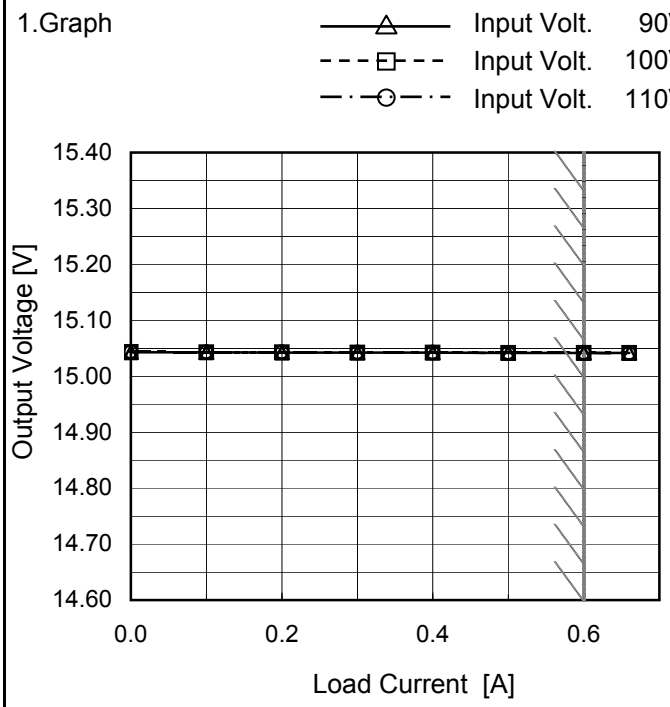
| Input Voltage [V] | Output Voltage [V] | |
|---|---|---|
| | Load 50% | Load 100% |
| 85 | -15.049 | -15.049 |
| 90 | -15.049 | -15.049 |
| 100 | -15.049 | -15.049 |
| 110 | -15.049 | -15.049 |
| 115 | -15.049 | -15.049 |
| -- | - | - |
| -- | - | - |
| -- | - | - |
| -- | - | - |

COSEL

| | |
|---|---|
| Model | GT2W-15 |
| Item | Load Regulation |
| Object | +15V0.6A |

Temperature 25°C
Testing Circuitry Figure A

1.Graph

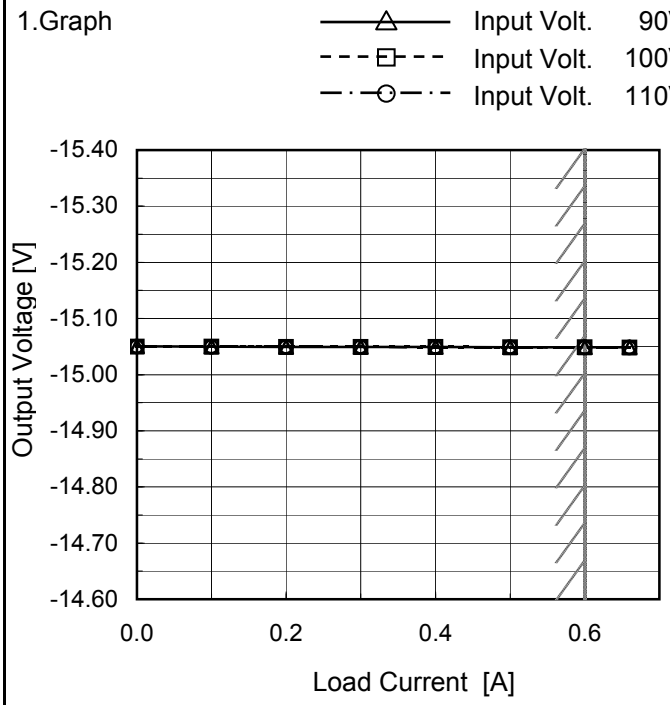



2.Values

| Load Current [A] | Output Voltage [V] Input Volt. 90[V] | Input Volt. 100[V] | Input Volt. 110[V] |
|---|---|---|---|
| 0.00 | 15.043 | 15.043 | 15.043 |
| 0.10 | 15.043 | 15.043 | 15.043 |
| 0.20 | 15.043 | 15.043 | 15.043 |
| 0.30 | 15.042 | 15.042 | 15.042 |
| 0.40 | 15.042 | 15.042 | 15.042 |
| 0.50 | 15.042 | 15.042 | 15.042 |
| 0.60 | 15.042 | 15.042 | 15.042 |
| 0.66 | 15.042 | 15.042 | 15.041 |
| -- | - | - | - |
| -- | - | - | - |
| -- | - | - | - |

| | |
|---|---|
| Object | -15V0.6A |

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 | -15.050 | -15.050 | -15.050 |
| 0.10 | -15.050 | -15.050 | -15.050 |
| 0.20 | -15.050 | -15.050 | -15.049 |
| 0.30 | -15.049 | -15.049 | -15.049 |
| 0.40 | -15.049 | -15.049 | -15.049 |
| 0.50 | -15.049 | -15.049 | -15.049 |
| 0.60 | -15.049 | -15.049 | -15.048 |
| 0.66 | -15.049 | -15.048 | -15.048 |
| -- | - | - | - |
| -- | - | - | - |
| -- | - | - | - |

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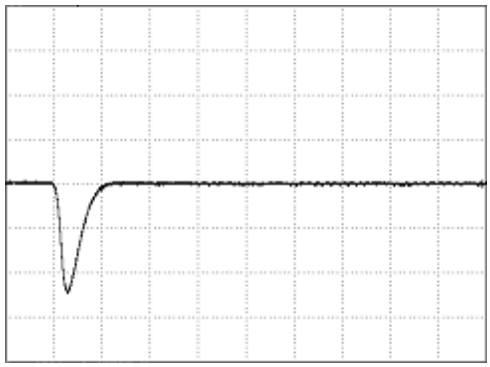
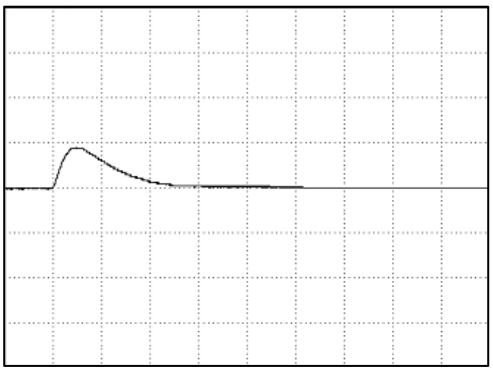
|---|---|---|---|
| Model | GT2W-15 | | |
| Item | Dynamic Load Response | Temperature<br>Testing Circuitry | 25°C<br>Figure A |
| Object | +15V0.6A | | |

Input Volt. 100 V
Cycle 1000 ms

Load Current

Min. Load (0A) ←→
Load 100% (0.6A)



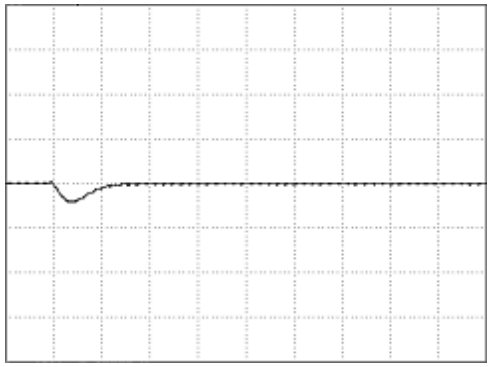


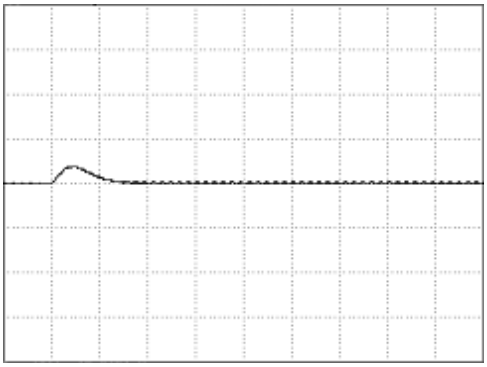
50 mV/div

100 μs/div

100 μs/div

Load 50% (0.3A) ←→
Load 100% (0.6A)





50 mV/div

100 μs/div

100 μs/div

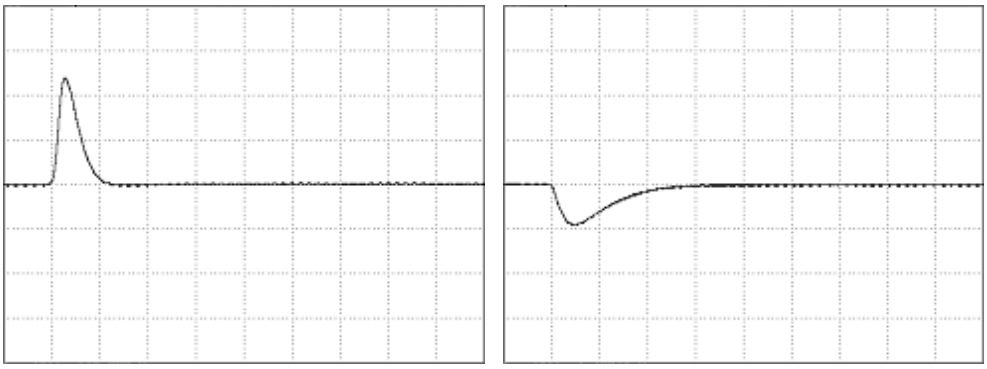
COSEL

| | | | |
|---|---|---|---|
| Model | GT2W-15 | | |
| Item | Dynamic Load Response | Temperature<br>Testing Circuitry | 25°C<br>Figure A |
| Object | -15V0.6A | | |

Input Volt. 100 V
Cycle 1000 ms

Load Current

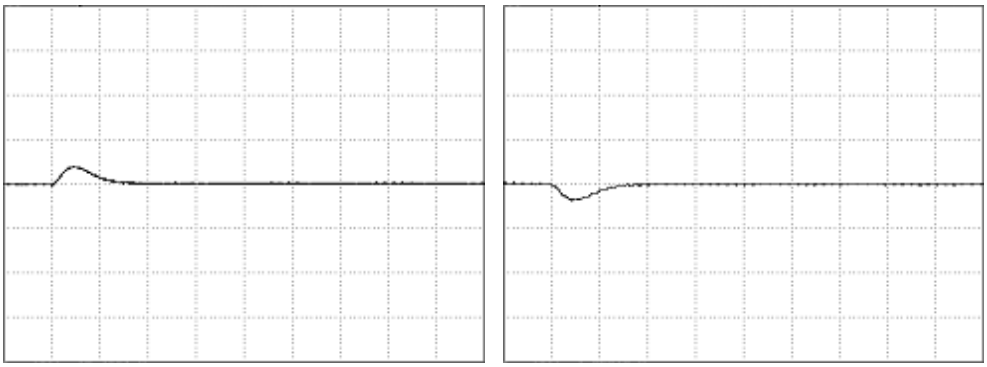
Min. Load (0A) ←→
Load 100% (0.6A)



50 mV/div

100 μs/div 100 μs/div

Load 50% (0.3A) ←→
Load 100% (0.6A)



50 mV/div

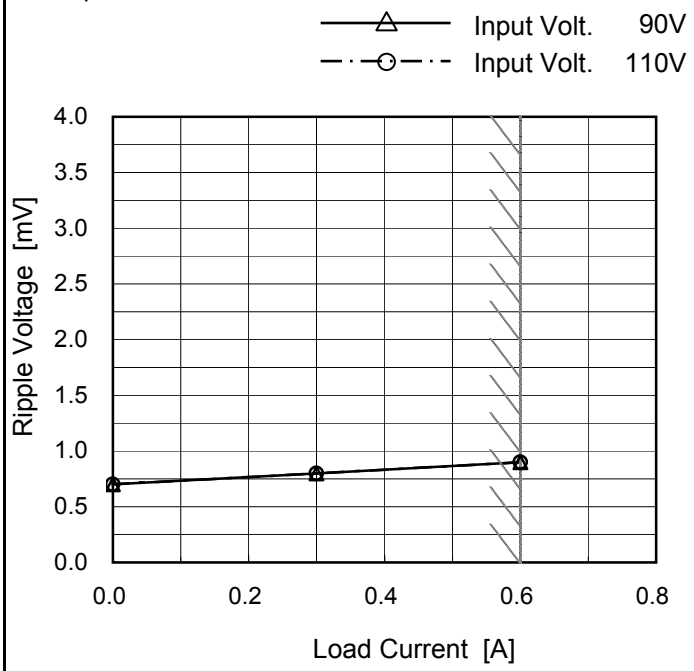
100 μs/div 100 μs/div

COSEL

| | |
|---|---|
| Model | GT2W-15 |
| Item | Ripple Voltage (by Load Current) |
| Object | +15V0.6A |

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 | 0.7 | 0.7 |
| 0.3 | 0.8 | 0.8 |
| 0.6 | 0.9 | 0.9 |
| -- | - | - |
| -- | - | - |
| -- | - | - |
| -- | - | - |
| -- | - | - |
| -- | - | - |
| -- | - | - |
| -- | - | - |



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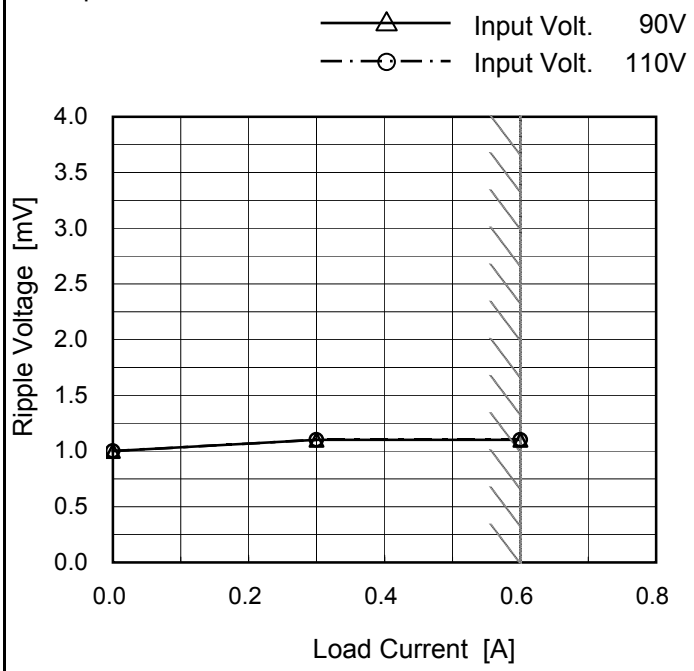
| | |
|---|---|
| Model | GT2W-15 |
| Item | Ripple Voltage (by Load Current) |
| Object | -15V0.6A |

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

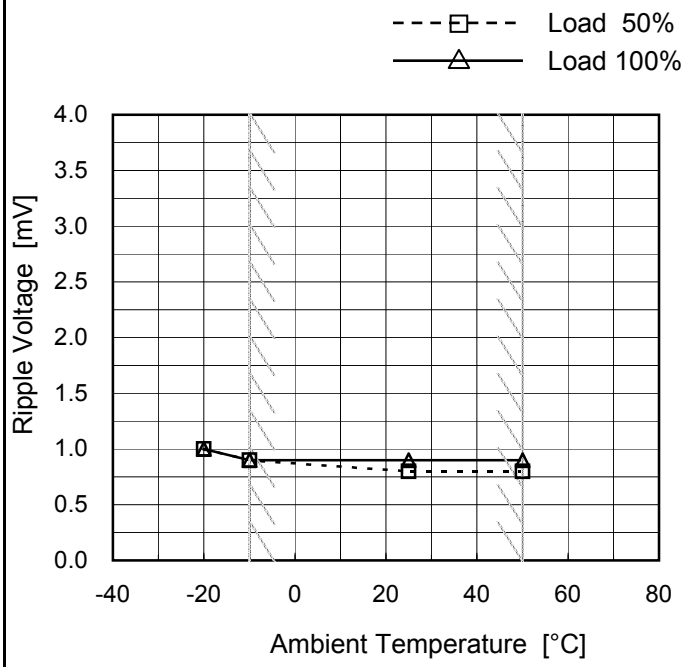
| Load Current [A] | Ripple Voltage [mV] | |
|---|---|---|
| | Input Volt. 90 [V] | Input Volt. 110 [V] |
| 0.0 | 1.0 | 1.0 |
| 0.3 | 1.1 | 1.1 |
| 0.6 | 1.1 | 1.1 |
| -- | - | - |
| -- | - | - |
| -- | - | - |
| -- | - | - |
| -- | - | - |
| -- | - | - |
| -- | - | - |
| -- | - | - |

COSEL

| | |
|---|---|
| Model | GT2W-15 |
| Item | Ripple Voltage (by Ambient Temp.) |
| Object | +15V0.6A |

Testing Circuitry Figure A

1.Graph



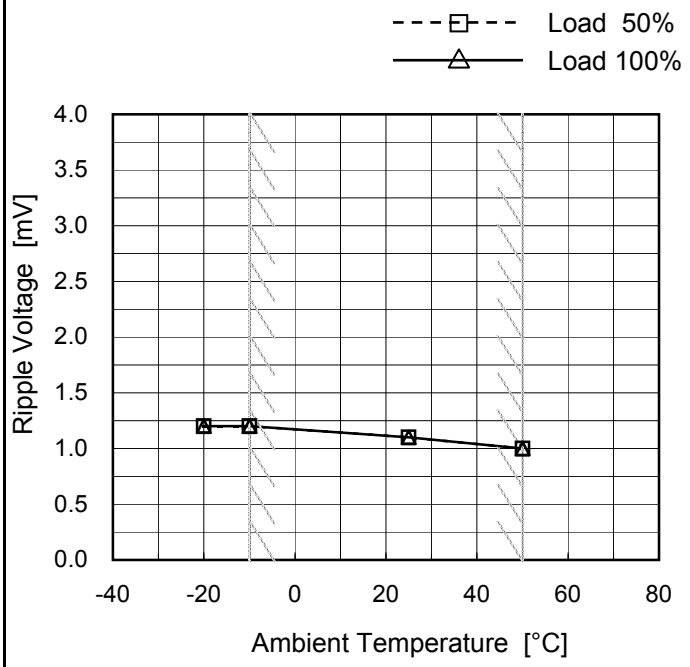

Input Volt. 100V

2.Values

| Ambient Temperature [°C] | Ripple Voltage [mV] | |
|---|---|---|
| | Load 50% | Load 100% |
| -20 | 1.0 | 1.0 |
| -10 | 0.9 | 0.9 |
| 25 | 0.8 | 0.9 |
| 50 | 0.8 | 0.9 |
| -- | - | - |
| -- | - | - |
| -- | - | - |
| -- | - | - |
| -- | - | - |
| -- | - | - |
| -- | - | - |

| | |
|---|---|
| Object | -15V0.6A |

1.Graph




Input Volt. 100V

Measured by 20 MHz Oscilloscope.

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

2.Values

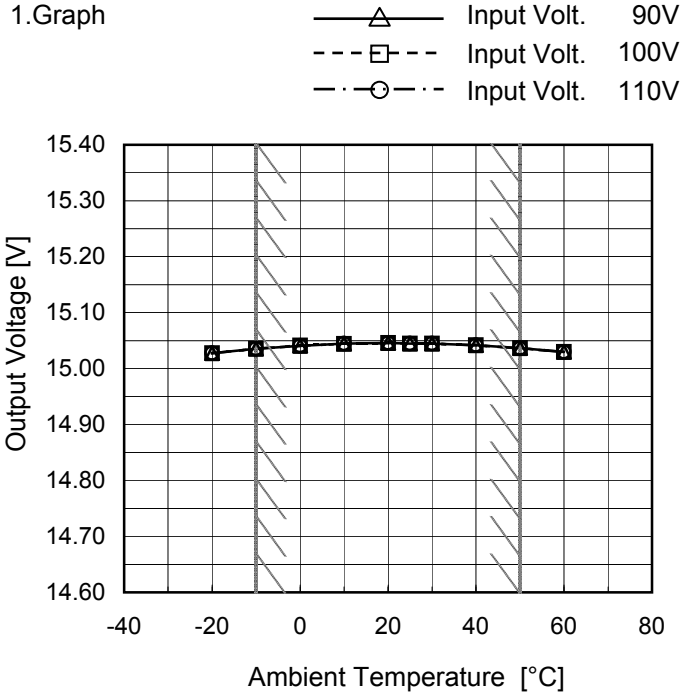
| Ambient Temperature [°C] | Ripple Voltage [mV] | |
|---|---|---|
| | Load 50% | Load 100% |
| -20 | 1.2 | 1.2 |
| -10 | 1.2 | 1.2 |
| 25 | 1.1 | 1.1 |
| 50 | 1.0 | 1.0 |
| -- | - | - |
| -- | - | - |
| -- | - | - |
| -- | - | - |
| -- | - | - |
| -- | - | - |
| -- | - | - |

COSEL

| | |
|---|---|
| Model | GT2W-15 |
| Item | Ambient Temperature Drift |
| Object | +15V0.6A |

Testing Circuitry Figure A

1.Graph



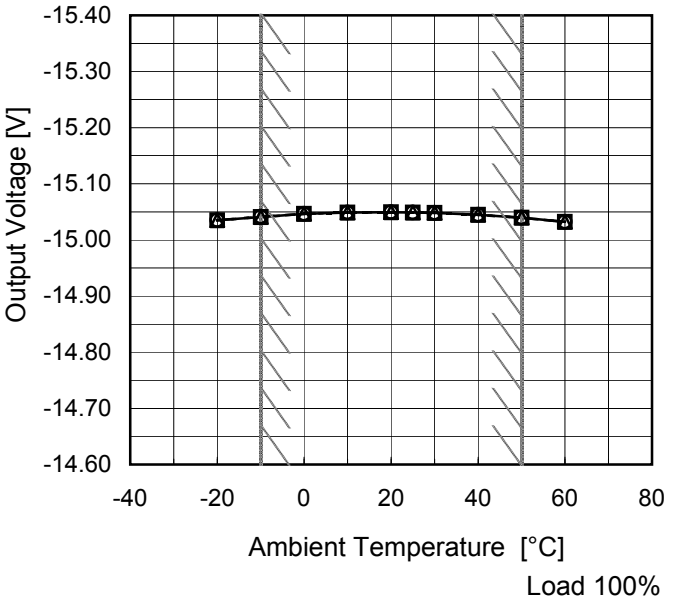

Load 100%

2.Values

| Ambient Temperature [°C] | Output Voltage [V] | | |
|---|---|---|---|
| | Input Volt. 90[V] | Input Volt. 100[V] | Input Volt. 110[V] |
| -20 | 15.028 | 15.028 | 15.028 |
| -10 | 15.035 | 15.036 | 15.036 |
| 0 | 15.041 | 15.041 | 15.041 |
| 10 | 15.044 | 15.044 | 15.044 |
| 20 | 15.046 | 15.046 | 15.046 |
| 25 | 15.045 | 15.045 | 15.045 |
| 30 | 15.045 | 15.044 | 15.045 |
| 40 | 15.042 | 15.042 | 15.042 |
| 50 | 15.037 | 15.036 | 15.036 |
| 60 | 15.030 | 15.030 | 15.030 |
| -- | - | - | - |

| | |
|---|---|
| Object | -15V0.6A |

1.Graph




Load 100%

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 | -15.035 | -15.035 | -15.035 |
| -10 | -15.041 | -15.041 | -15.041 |
| 0 | -15.046 | -15.046 | -15.046 |
| 10 | -15.049 | -15.049 | -15.049 |
| 20 | -15.049 | -15.049 | -15.049 |
| 25 | -15.049 | -15.049 | -15.049 |
| 30 | -15.048 | -15.048 | -15.048 |
| 40 | -15.045 | -15.045 | -15.045 |
| 50 | -15.040 | -15.039 | -15.039 |
| 60 | -15.032 | -15.032 | -15.032 |
| -- | - | - | - |

COSEL

| | | |
|---|---|---|
| Model | GT2W-15 | |
| Item | Output Voltage Accuracy | 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 : -10 - 50°C

Input Voltage : 90 - 110V

Load Current (AVR 1) : 0 - 0.6A (AVR 2) : 0 - 0.6A

* 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

| Object | +15V0.6A | | | | | |
|---|---|---|---|---|---|---|
| Item | Temperature [°C] | Input Voltage[V] | Output | | Output Voltage Accuracy | |
| | | | Current[A] | Voltage[V] | Value [mV] | Ration [%] |
| Maximum Voltage | 20 | 100 | 0 | 15.047 | ±6 | ±0.1 |
| Minimum Voltage | -10 | 90 | 0.6 | 15.035 | | |

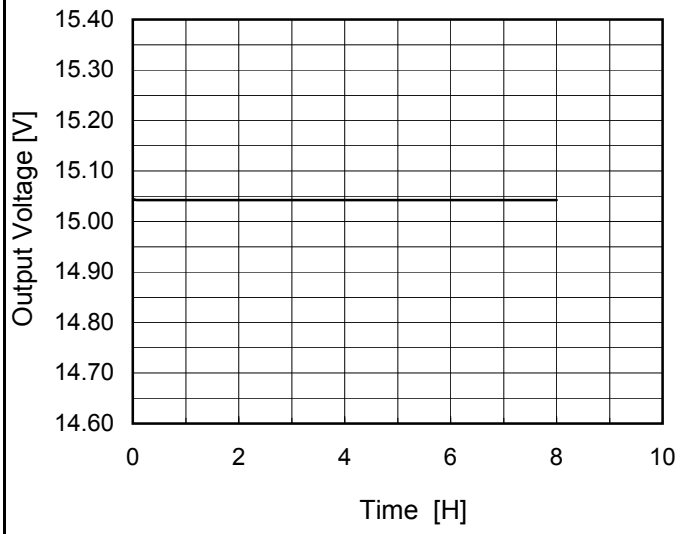
| Object | -15V0.6A | | | | | |
|---|---|---|---|---|---|---|
| Item | Temperature [°C] | Input Voltage[V] | Output | | Output Voltage Accuracy | |
| | | | Current[A] | Voltage[V] | Value [mV] | Ration [%] |
| Maximum Voltage | 20 | 90 | 0 | -15.051 | ±6 | ±0.1 |
| Minimum Voltage | 50 | 110 | 0.6 | -15.039 | | |

COSEL

| | |
|---|---|
| Model | GT2W-15 |
| Item | Time Lapse Drift |
| Object | +15V0.6A |

Temperature 25°C
Testing Circuitry Figure A

1.Graph



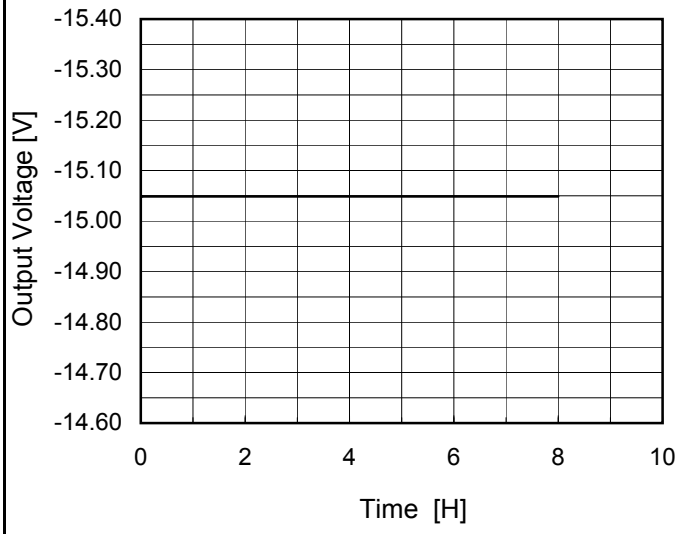

Input Volt. 100V
Load 100%

2.Values

| Time since start [H] | Output Voltage [V] |
|---|---|
| 0.0 | 15.043 |
| 0.5 | 15.042 |
| 1.0 | 15.042 |
| 2.0 | 15.042 |
| 3.0 | 15.042 |
| 4.0 | 15.042 |
| 5.0 | 15.042 |
| 6.0 | 15.042 |
| 7.0 | 15.042 |
| 8.0 | 15.042 |

| | |
|---|---|
| Object | -15V0.6A |

1.Graph




Input Volt. 100V
Load 100%

2.Values

| Time since start [H] | Output Voltage [V] |
|---|---|
| 0.0 | -15.049 |
| 0.5 | -15.049 |
| 1.0 | -15.049 |
| 2.0 | -15.049 |
| 3.0 | -15.049 |
| 4.0 | -15.049 |
| 5.0 | -15.049 |
| 6.0 | -15.049 |
| 7.0 | -15.049 |
| 8.0 | -15.049 |

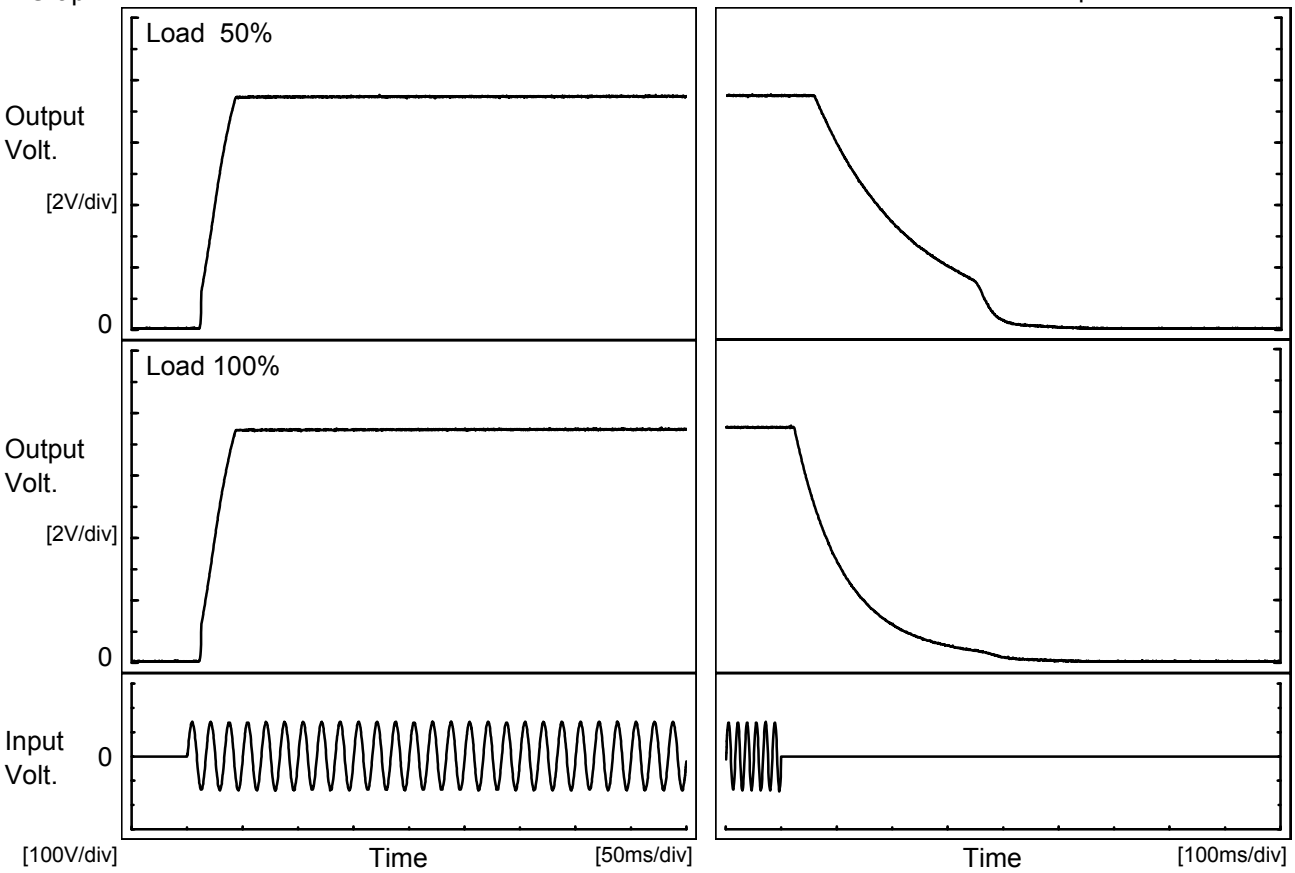
COSEL

| | |
|---|---|
| Model | GT2W-15 |
| Item | Rise and Fall Time |
| Object | +15V0.6A |

Temperature 25°C
Testing Circuitry Figure A

1.Graph

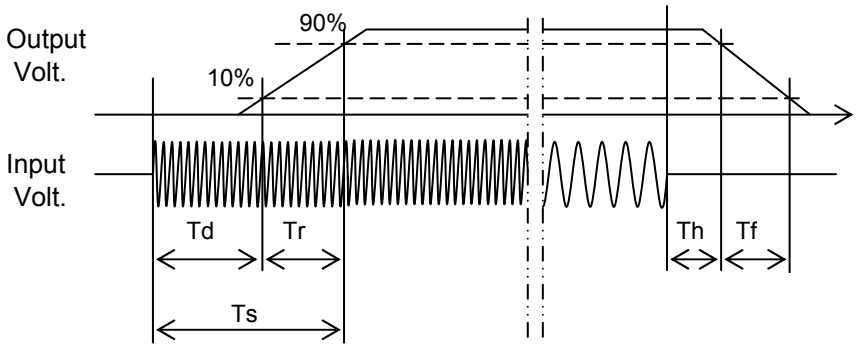
Input Volt. 100 V




2.Values

[ms]

| Load \ Time | Td | Tr | Ts | Th | Tf |
|---|---|---|---|---|---|
| 50 % | 12.8 | 26.3 | 39.1 | 76.5 | 295.0 |
| 100 % | 12.8 | 26.3 | 39.1 | 32.5 | 219.0 |



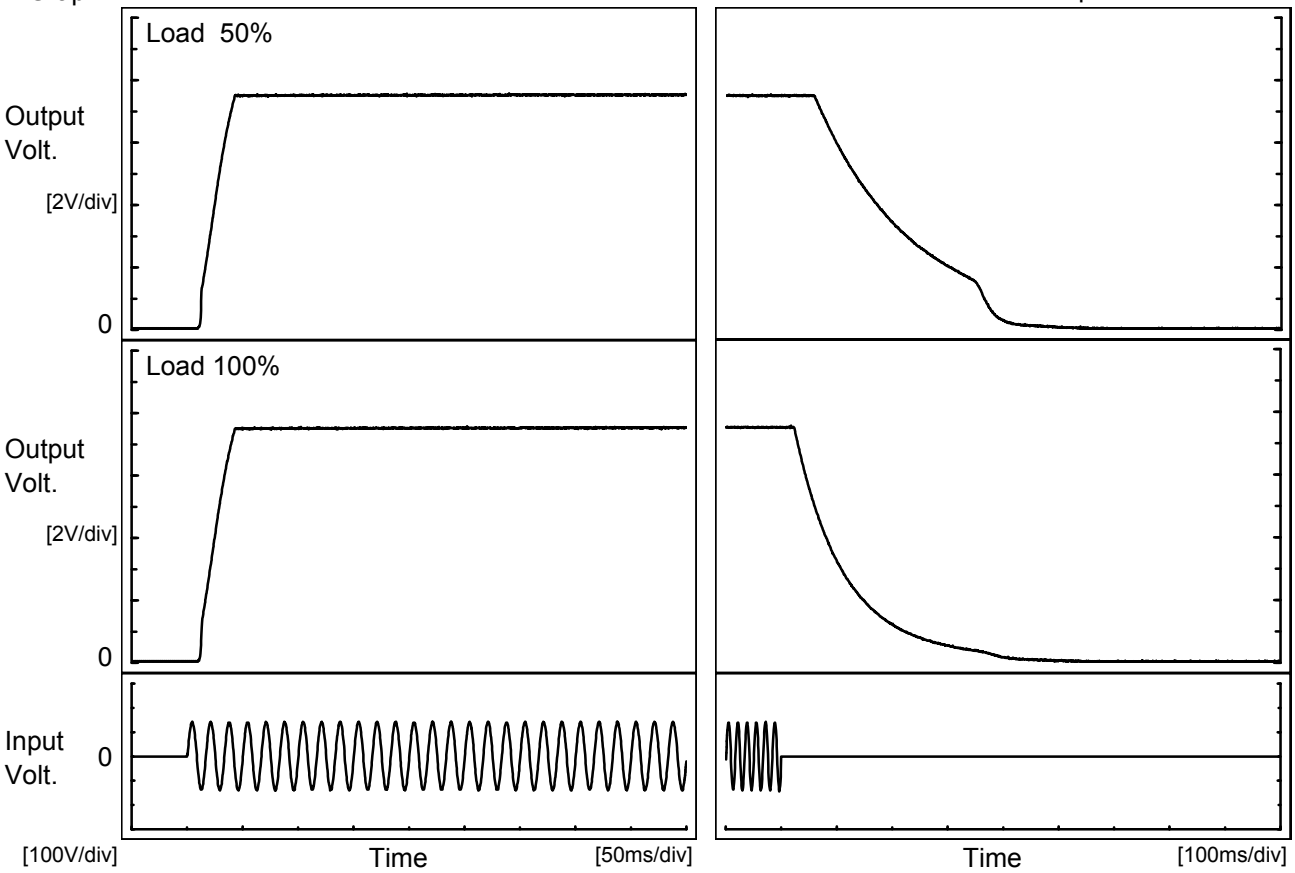
COSEL

| | |
|---|---|
| Model | GT2W-15 |
| Item | Rise and Fall Time |
| Object | -15V0.6A |

Temperature 25°C
Testing Circuitry Figure A

1.Graph

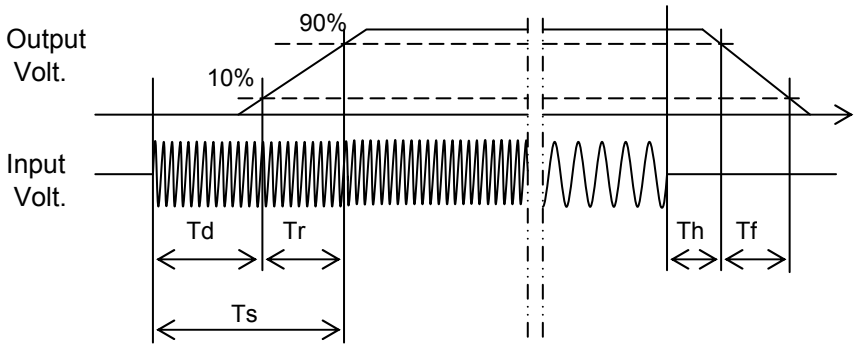
Input Volt. 100 V




2.Values

[ms]

| Load \ Time | Td | Tr | Ts | Th | Tf |
|---|---|---|---|---|---|
| 50 % | 12.8 | 25.8 | 38.6 | 76.5 | 296.0 |
| 100 % | 13.0 | 25.5 | 38.5 | 32.0 | 216.0 |





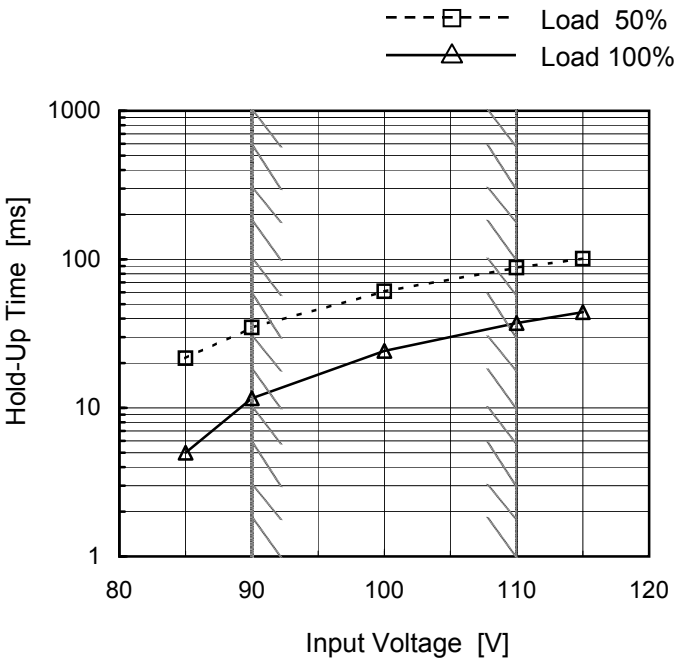

BC-10216

COSEL

| | |
|---|---|
| Model | GT2W-15 |
| Item | Hold-Up Time |
| Object | +15V0.6A |

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 | 22 | 5 |
| 90 | 35 | 12 |
| 100 | 61 | 24 |
| 110 | 88 | 37 |
| 115 | 101 | 44 |
| -- | - | - |
| -- | - | - |
| -- | - | - |
| -- | - | - |



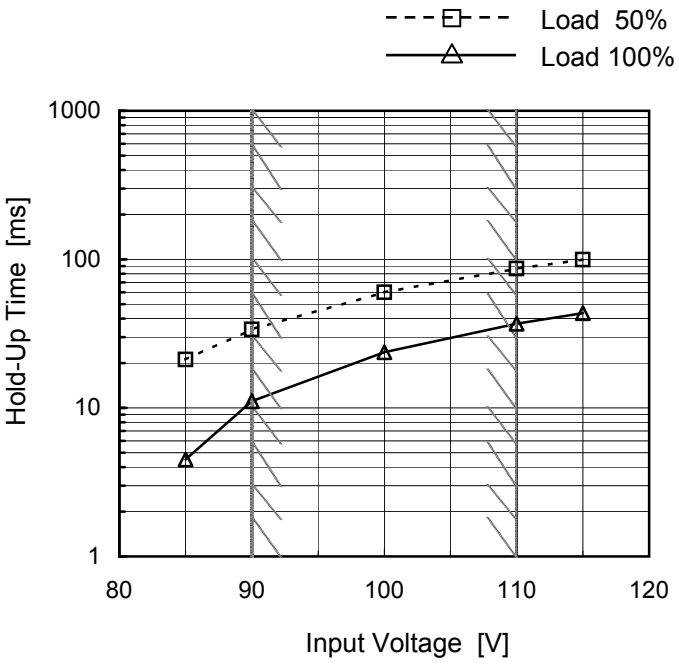
BC-10216

COSEL

| | |
|---|---|
| Model | GT2W-15 |
| Item | Hold-Up Time |
| Object | -15V0.6A |

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 | 21 | 5 |
| 90 | 34 | 11 |
| 100 | 60 | 24 |
| 110 | 87 | 37 |
| 115 | 100 | 43 |
| -- | - | - |
| -- | - | - |
| -- | - | - |
| -- | - | - |



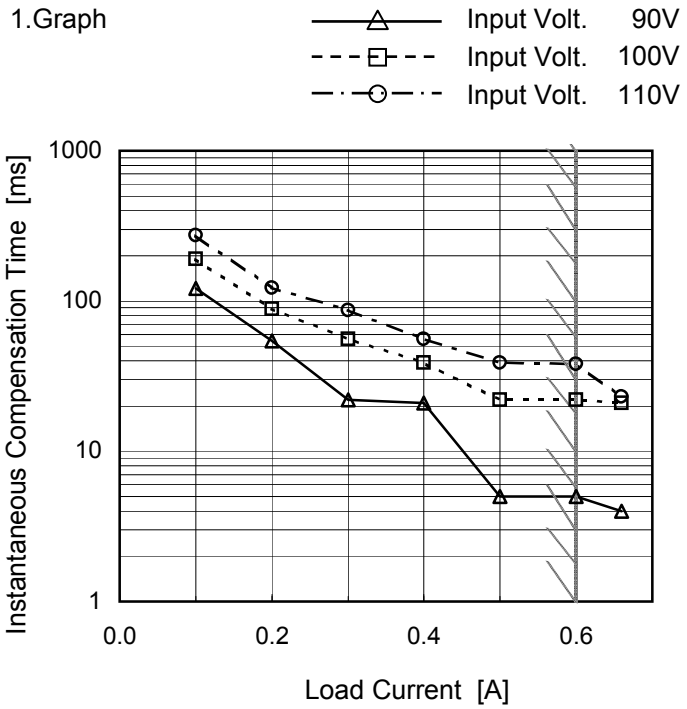
BC-10216

COSEL

| | |
|---|---|
| Model | GT2W-15 |
| Item | Instantaneous Interruption Compensation |
| Object | +15V0.6A |

Temperature 25°C
Testing Circuitry Figure A

1.Graph




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

2.Values

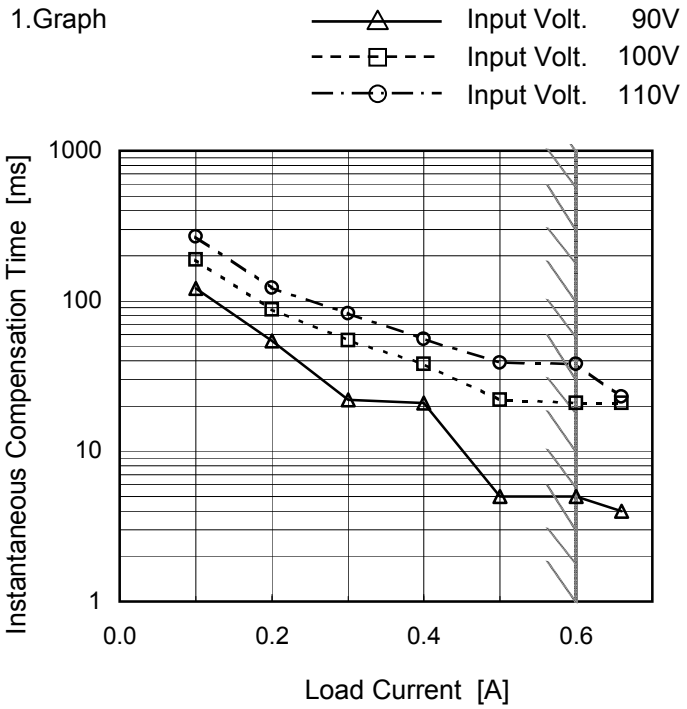
| Load Current [A] | Time [ms] | | |
|---|---|---|---|
| | Input Volt. 90[V] | Input Volt. 100[V] | Input Volt. 110[V] |
| 0.00 | - | - | - |
| 0.10 | 121 | 190 | 273 |
| 0.20 | 54 | 89 | 123 |
| 0.30 | 22 | 56 | 87 |
| 0.40 | 21 | 39 | 56 |
| 0.50 | 5 | 22 | 39 |
| 0.60 | 5 | 22 | 38 |
| 0.66 | 4 | 21 | 23 |
| -- | - | - | - |
| -- | - | - | - |
| -- | - | - | - |

COSEL

| | |
|---|---|
| Model | GT2W-15 |
| Item | Instantaneous Interruption Compensation |
| Object | -15V0.6A |

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 | - | - | - |
| 0.10 | 121 | 189 | 268 |
| 0.20 | 54 | 88 | 123 |
| 0.30 | 22 | 55 | 83 |
| 0.40 | 21 | 38 | 56 |
| 0.50 | 5 | 22 | 39 |
| 0.60 | 5 | 21 | 38 |
| 0.66 | 4 | 21 | 23 |
| -- | - | - | - |
| -- | - | - | - |
| -- | - | - | - |

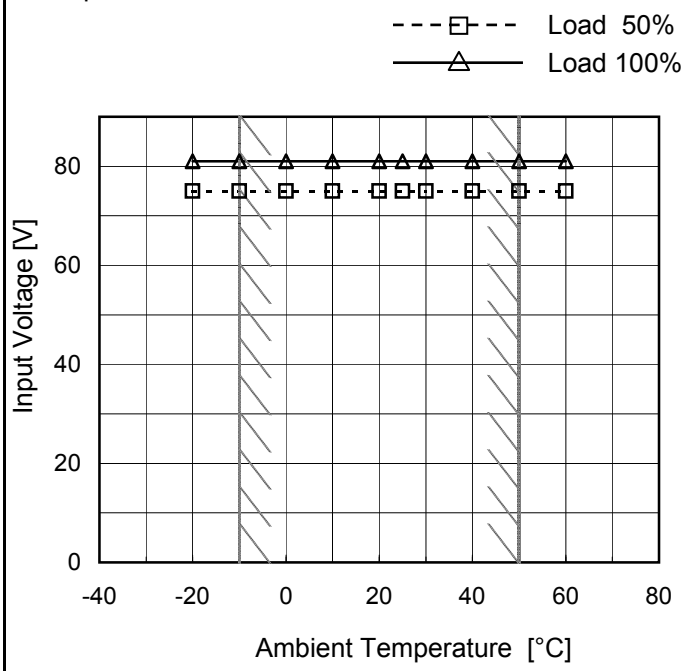
COSEL

| | |
|---|---|
| Model | GT2W-15 |
| Item | Minimum Input Voltage for Regulated Output Voltage |

Testing Circuitry Figure A

Object: +15V0.6A

1.Graph

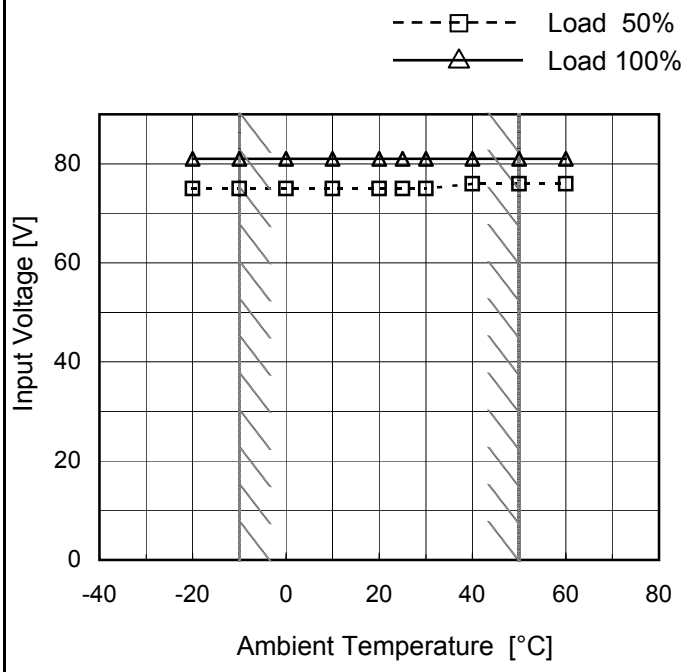



2.Values

| Ambient Temperature [°C] | Input Voltage [V] | |
|---|---|---|
| | Load 50% | Load 100% |
| -20 | 75 | 81 |
| -10 | 75 | 81 |
| 0 | 75 | 81 |
| 10 | 75 | 81 |
| 20 | 75 | 81 |
| 25 | 75 | 81 |
| 30 | 75 | 81 |
| 40 | 75 | 81 |
| 50 | 75 | 81 |
| 60 | 75 | 81 |
| -- | - | - |

Object: -15V0.6A

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 | 75 | 81 |
| -10 | 75 | 81 |
| 0 | 75 | 81 |
| 10 | 75 | 81 |
| 20 | 75 | 81 |
| 25 | 75 | 81 |
| 30 | 75 | 81 |
| 40 | 76 | 81 |
| 50 | 76 | 81 |
| 60 | 76 | 81 |
| -- | - | - |

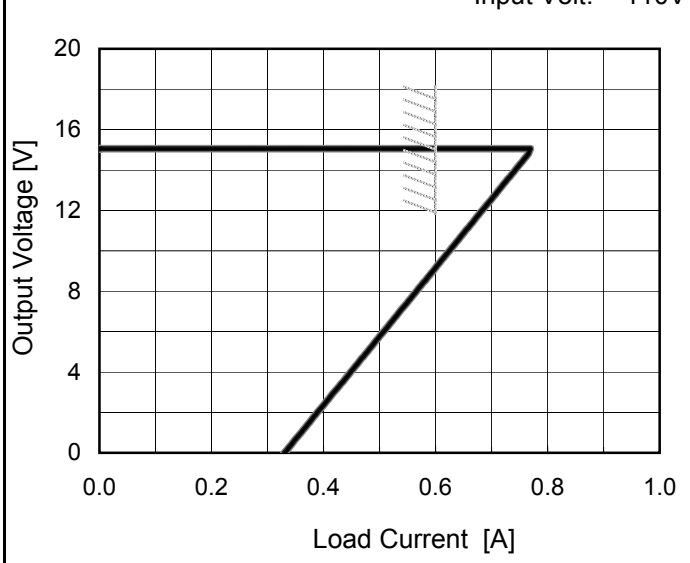
COSEL

| | |
|---|---|
| Model | GT2W-15 |
| Item | Overcurrent Protection |

Temperature 25°C
Testing Circuitry Figure A

Object +15V0.6A

1.Graph

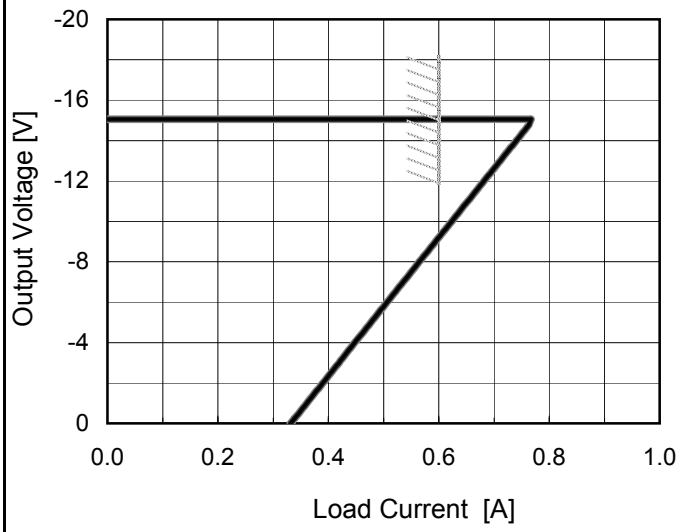



2.Values

| Output Voltage [V] | Load Current [A] | | |
|---|---|---|---|
| | Input Volt. 90[V] | Input Volt. 100[V] | Input Volt. 110[V] |
| 15.0 | 0.77 | 0.77 | 0.77 |
| 14.3 | 0.75 | 0.75 | 0.75 |
| 13.5 | 0.73 | 0.73 | 0.73 |
| 12.0 | 0.68 | 0.68 | 0.68 |
| 10.5 | 0.64 | 0.64 | 0.64 |
| 9.0 | 0.60 | 0.60 | 0.60 |
| 7.5 | 0.55 | 0.55 | 0.55 |
| 6.0 | 0.51 | 0.51 | 0.51 |
| 4.5 | 0.46 | 0.46 | 0.46 |
| 3.0 | 0.42 | 0.42 | 0.42 |
| 1.5 | 0.38 | 0.38 | 0.38 |
| 0.0 | 0.33 | 0.33 | 0.33 |

Object -15V0.6A

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] |
| -15.00 | 0.77 | 0.77 | 0.77 |
| -14.25 | 0.75 | 0.75 | 0.75 |
| -13.50 | 0.73 | 0.73 | 0.73 |
| -12.00 | 0.68 | 0.68 | 0.68 |
| -10.50 | 0.64 | 0.64 | 0.64 |
| -9.00 | 0.59 | 0.59 | 0.59 |
| -7.50 | 0.55 | 0.55 | 0.55 |
| -6.00 | 0.51 | 0.51 | 0.51 |
| -4.50 | 0.47 | 0.47 | 0.47 |
| -3.00 | 0.42 | 0.42 | 0.42 |
| -1.50 | 0.38 | 0.38 | 0.38 |
| 0.00 | 0.33 | 0.33 | 0.33 |

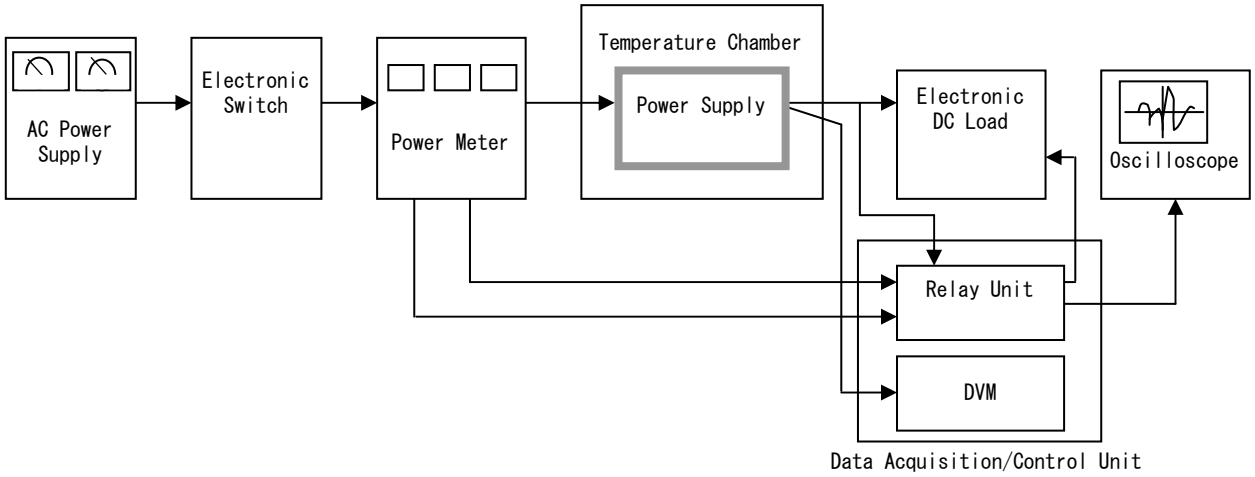

AC Power Supply
Electronic Switch
Power Meter
Temperature Chamber
Power Supply
Electronic DC Load
Oscilloscope
Relay Unit
DVM
Data Acquisition/Control Unit

Figure A