

TEST DATA OF MGW152405

Regulated DC Power Supply
September 15, 2010

Approved by : Kazunari Asano
Kazunari Asano Design Manager

Prepared by : Junki Nakayama
Junki Nakayama Design Engineer

COSEL CO.,LTD.



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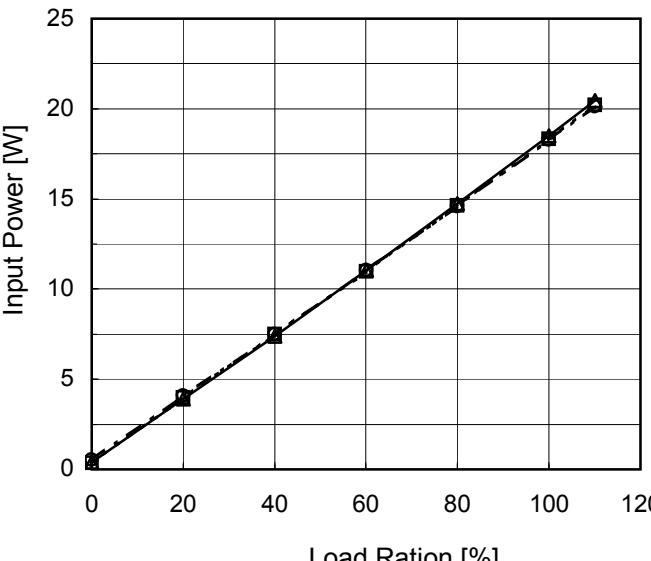
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| Model | MGW152405 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------|--|----------------------------------|-------------------|--------------|---------------|---------|----------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|----|---|---|---|----|---|---|---|----|---|---|---|
| Item | Input Current (by Input Voltage) | Temperature Testing Circuitry | 25°C Figure A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | <p style="text-align: center;">—△— Load 100% - - -□--- Load 50% - -○--- Load 0%</p> <table border="1"> <caption>Data points estimated from Graph</caption> <thead> <tr> <th>Input Voltage [V]</th> <th>Load 0% [A]</th> <th>Load 50% [A]</th> <th>Load 100% [A]</th> </tr> </thead> <tbody> <tr><td>16.0</td><td>0.003</td><td>0.003</td><td>0.003</td></tr> <tr><td>17.0</td><td>0.023</td><td>0.539</td><td>1.183</td></tr> <tr><td>17.2</td><td>0.023</td><td>0.532</td><td>1.169</td></tr> <tr><td>18.0</td><td>0.022</td><td>0.508</td><td>1.114</td></tr> <tr><td>20.0</td><td>0.019</td><td>0.456</td><td>1.002</td></tr> <tr><td>22.0</td><td>0.017</td><td>0.414</td><td>0.906</td></tr> <tr><td>24.0</td><td>0.015</td><td>0.376</td><td>0.827</td></tr> <tr><td>28.0</td><td>0.015</td><td>0.327</td><td>0.706</td></tr> <tr><td>30.0</td><td>0.015</td><td>0.307</td><td>0.658</td></tr> <tr><td>32.0</td><td>0.015</td><td>0.289</td><td>0.617</td></tr> <tr><td>36.0</td><td>0.015</td><td>0.256</td><td>0.550</td></tr> <tr><td>40.0</td><td>0.015</td><td>0.229</td><td>0.495</td></tr> </tbody> </table> | Input Voltage [V] | Load 0% [A] | Load 50% [A] | Load 100% [A] | 16.0 | 0.003 | 0.003 | 0.003 | 17.0 | 0.023 | 0.539 | 1.183 | 17.2 | 0.023 | 0.532 | 1.169 | 18.0 | 0.022 | 0.508 | 1.114 | 20.0 | 0.019 | 0.456 | 1.002 | 22.0 | 0.017 | 0.414 | 0.906 | 24.0 | 0.015 | 0.376 | 0.827 | 28.0 | 0.015 | 0.327 | 0.706 | 30.0 | 0.015 | 0.307 | 0.658 | 32.0 | 0.015 | 0.289 | 0.617 | 36.0 | 0.015 | 0.256 | 0.550 | 40.0 | 0.015 | 0.229 | 0.495 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Input Voltage [V] | Load 0% [A] | Load 50% [A] | Load 100% [A] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16.0 | 0.003 | 0.003 | 0.003 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17.0 | 0.023 | 0.539 | 1.183 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17.2 | 0.023 | 0.532 | 1.169 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18.0 | 0.022 | 0.508 | 1.114 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20.0 | 0.019 | 0.456 | 1.002 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 22.0 | 0.017 | 0.414 | 0.906 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 30.0 | 0.015 | 0.307 | 0.658 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 36.0 | 0.015 | 0.256 | 0.550 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Input Voltage [V] | Input Current [A] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Load 0% | Load 50% | Load 100% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.0 | 0.000 | 0.000 | 0.000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.0 | 0.000 | 0.000 | 0.000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8.0 | 0.003 | 0.003 | 0.003 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16.0 | 0.003 | 0.003 | 0.003 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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

| Model | MGW152405 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------|--|----------------------------------|----------------------|---------------------|---------------------|----------------------|----------------------|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|---|---|---|----|---|---|---|----|---|---|---|----|---|---|---|--|--|--|
| Item | Input Current (by Load Current) | Temperature Testing Circuitry | 25°C Figure A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | <p>—△— Input Volt. 18V - - -□- - Input Volt. 24V - - ○ - - Input Volt. 36V</p> <table border="1"> <caption>Data points estimated from Figure A</caption> <thead> <tr> <th>Load Ration [%]</th> <th>Input Volt. 18V [A]</th> <th>Input Volt. 24V [A]</th> <th>Input Volt. 36V [A]</th> </tr> </thead> <tbody> <tr><td>0</td><td>0.022</td><td>0.015</td><td>0.015</td></tr> <tr><td>20</td><td>0.217</td><td>0.166</td><td>0.113</td></tr> <tr><td>40</td><td>0.412</td><td>0.313</td><td>0.208</td></tr> <tr><td>60</td><td>0.614</td><td>0.460</td><td>0.308</td></tr> <tr><td>80</td><td>0.820</td><td>0.610</td><td>0.406</td></tr> <tr><td>100</td><td>1.034</td><td>0.765</td><td>0.509</td></tr> <tr><td>110</td><td>1.136</td><td>0.843</td><td>0.560</td></tr> </tbody> </table> | Load Ration [%] | Input Volt. 18V [A] | Input Volt. 24V [A] | Input Volt. 36V [A] | 0 | 0.022 | 0.015 | 0.015 | 20 | 0.217 | 0.166 | 0.113 | 40 | 0.412 | 0.313 | 0.208 | 60 | 0.614 | 0.460 | 0.308 | 80 | 0.820 | 0.610 | 0.406 | 100 | 1.034 | 0.765 | 0.509 | 110 | 1.136 | 0.843 | 0.560 | | | | | | | | | | | | | | | | | | | | | | |
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| 110 | 1.136 | 0.843 | 0.560 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Load Ration [%] | Input Current [A] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Input Volt. 18[V] | Input Volt. 24[V] | Input Volt. 36[V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 0.022 | 0.015 | 0.015 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | 0.217 | 0.166 | 0.113 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40 | 0.412 | 0.313 | 0.208 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 60 | 0.614 | 0.460 | 0.308 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 80 | 0.820 | 0.610 | 0.406 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 100 | 1.034 | 0.765 | 0.509 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 110 | 1.136 | 0.843 | 0.560 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Model | MGW152405 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------|--|----------------------------------|----------------------|-----------------------|-----------------|--|--|----------------------|----------------------|----------------------|---|------|------|------|----|------|------|------|----|------|------|------|----|-------|-------|-------|----|-------|-------|-------|-----|-------|-------|-------|-----|-------|-------|-------|----|---|---|---|----|---|---|---|----|---|---|---|----|---|---|---|
| Item | Input Power (by Load Current) | Temperature Testing Circuitry | 25°C Figure A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | <p>—△— Input Volt. 18V - - -□--- Input Volt. 24V - - -○--- Input Volt. 36V</p>  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.Values | <table border="1"> <thead> <tr> <th rowspan="2">Load Ration [%]</th> <th colspan="3">Input Power [W]</th> </tr> <tr> <th>Input Volt. 18[V]</th> <th>Input Volt. 24[V]</th> <th>Input Volt. 36[V]</th> </tr> </thead> <tbody> <tr> <td>0</td><td>0.40</td><td>0.36</td><td>0.55</td></tr> <tr> <td>20</td><td>3.90</td><td>3.97</td><td>4.08</td></tr> <tr> <td>40</td><td>7.38</td><td>7.49</td><td>7.50</td></tr> <tr> <td>60</td><td>11.04</td><td>10.99</td><td>11.06</td></tr> <tr> <td>80</td><td>14.72</td><td>14.63</td><td>14.61</td></tr> <tr> <td>100</td><td>18.50</td><td>18.32</td><td>18.29</td></tr> <tr> <td>110</td><td>20.45</td><td>20.20</td><td>20.14</td></tr> <tr> <td>--</td><td>-</td><td>-</td><td>-</td></tr> <tr> <td>--</td><td>-</td><td>-</td><td>-</td></tr> <tr> <td>--</td><td>-</td><td>-</td><td>-</td></tr> <tr> <td>--</td><td>-</td><td>-</td><td>-</td></tr> </tbody> </table> | | | Load Ration [%] | Input Power [W] | | | Input Volt. 18[V] | Input Volt. 24[V] | Input Volt. 36[V] | 0 | 0.40 | 0.36 | 0.55 | 20 | 3.90 | 3.97 | 4.08 | 40 | 7.38 | 7.49 | 7.50 | 60 | 11.04 | 10.99 | 11.06 | 80 | 14.72 | 14.63 | 14.61 | 100 | 18.50 | 18.32 | 18.29 | 110 | 20.45 | 20.20 | 20.14 | -- | - | - | - | -- | - | - | - | -- | - | - | - | -- | - | - | - |
| Load Ration [%] | Input Power [W] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Input Volt. 18[V] | Input Volt. 24[V] | Input Volt. 36[V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 0.40 | 0.36 | 0.55 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | 3.90 | 3.97 | 4.08 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40 | 7.38 | 7.49 | 7.50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 60 | 11.04 | 10.99 | 11.06 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 80 | 14.72 | 14.63 | 14.61 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 100 | 18.50 | 18.32 | 18.29 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 110 | 20.45 | 20.20 | 20.14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

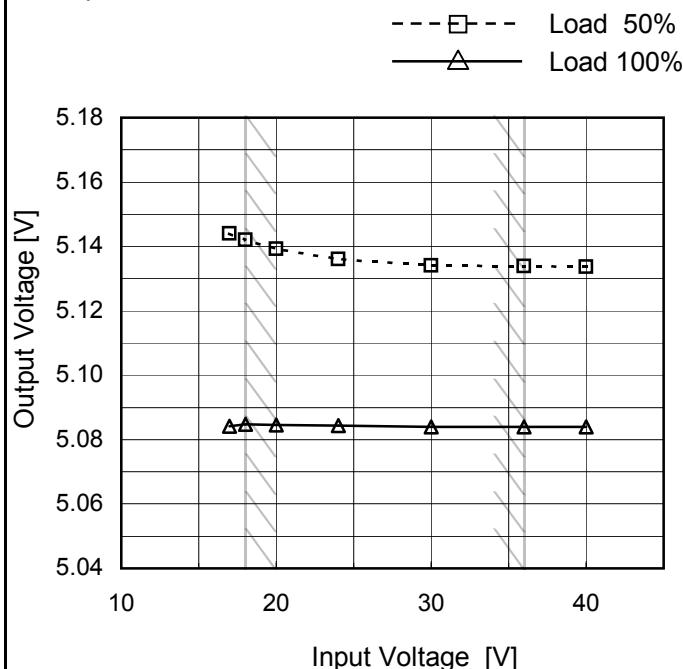
| Model | MGW152405 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------------------------|--|-------------------|-------------------------|--------------------------|----------|-----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----|---|---|----|---|---|
| Item | Efficiency (by Input Voltage) | Temperature Testing Circuitry 25°C Figure A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. Graph | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>The graph plots Efficiency [%] on the y-axis (50 to 90) against Input Voltage [V] on the x-axis (10 to 40). Two data series are shown: Load 50% (dashed line with square markers) and Load 100% (solid line with triangle markers). Both series show efficiency increasing slightly from approximately 17V to 40V. Two slanted lines indicate the rated input voltage range.</p> <table border="1"> <thead> <tr> <th>Input Voltage [V]</th> <th>Efficiency Load 50% [%]</th> <th>Efficiency Load 100% [%]</th> </tr> </thead> <tbody> <tr><td>17</td><td>82.7</td><td>82.3</td></tr> <tr><td>18</td><td>82.7</td><td>82.5</td></tr> <tr><td>20</td><td>82.9</td><td>82.8</td></tr> <tr><td>24</td><td>84.0</td><td>83.3</td></tr> <tr><td>30</td><td>82.2</td><td>83.6</td></tr> <tr><td>36</td><td>82.0</td><td>83.5</td></tr> <tr><td>40</td><td>82.6</td><td>83.5</td></tr> </tbody> </table> | | | Input Voltage [V] | Efficiency Load 50% [%] | Efficiency Load 100% [%] | 17 | 82.7 | 82.3 | 18 | 82.7 | 82.5 | 20 | 82.9 | 82.8 | 24 | 84.0 | 83.3 | 30 | 82.2 | 83.6 | 36 | 82.0 | 83.5 | 40 | 82.6 | 83.5 | | | | | | | | |
| Input Voltage [V] | Efficiency Load 50% [%] | Efficiency Load 100% [%] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | 82.7 | 82.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | 82.7 | 82.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | 82.9 | 82.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 24 | 84.0 | 83.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | 82.2 | 83.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 36 | 82.0 | 83.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40 | 82.6 | 83.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. Values | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th rowspan="2">Input Voltage [V]</th> <th colspan="2">Efficiency [%]</th> </tr> <tr> <th>Load 50%</th> <th>Load 100%</th> </tr> </thead> <tbody> <tr><td>17</td><td>82.7</td><td>82.3</td></tr> <tr><td>18</td><td>82.7</td><td>82.5</td></tr> <tr><td>20</td><td>82.9</td><td>82.8</td></tr> <tr><td>24</td><td>84.0</td><td>83.3</td></tr> <tr><td>30</td><td>82.2</td><td>83.6</td></tr> <tr><td>36</td><td>82.0</td><td>83.5</td></tr> <tr><td>40</td><td>82.6</td><td>83.5</td></tr> <tr><td>--</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td></tr> </tbody> </table> | | | Input Voltage [V] | Efficiency [%] | | Load 50% | Load 100% | 17 | 82.7 | 82.3 | 18 | 82.7 | 82.5 | 20 | 82.9 | 82.8 | 24 | 84.0 | 83.3 | 30 | 82.2 | 83.6 | 36 | 82.0 | 83.5 | 40 | 82.6 | 83.5 | -- | - | - | -- | - | - |
| Input Voltage [V] | Efficiency [%] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Load 50% | Load 100% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | 82.7 | 82.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | 82.7 | 82.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | 82.9 | 82.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 24 | 84.0 | 83.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | 82.2 | 83.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 36 | 82.0 | 83.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40 | 82.6 | 83.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Note: Slanted line shows the range of the rated input voltage.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Model | MGW152405 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------|---|----------------------------------|----------------------|-----------------------|--------------------|--------------------|--------------------|----------------------|----------------------|----------------------|----|----|----|----|----|------|------|------|----|------|------|------|----|------|------|------|----|------|------|------|-----|------|------|------|-----|------|------|------|----|---|---|---|----|---|---|---|----|---|---|---|----|---|---|---|
| Item | Efficiency (by Load Current) | Temperature Testing Circuitry | 25°C Figure A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | <p>—△— Input Volt. 18V - - -□- - Input Volt. 24V - - ○ - - Input Volt. 36V</p> <table border="1"> <caption>Data points estimated from Graph</caption> <thead> <tr> <th>Load Ration [%]</th> <th>18V [Efficiency %]</th> <th>24V [Efficiency %]</th> <th>36V [Efficiency %]</th> </tr> </thead> <tbody> <tr><td>20</td><td>75</td><td>78</td><td>76</td></tr> <tr><td>40</td><td>81</td><td>82</td><td>81</td></tr> <tr><td>60</td><td>83</td><td>84</td><td>83</td></tr> <tr><td>80</td><td>83</td><td>84</td><td>83</td></tr> <tr><td>100</td><td>83</td><td>84</td><td>83</td></tr> <tr><td>110</td><td>82</td><td>83</td><td>83</td></tr> </tbody> </table> | | | Load Ration [%] | 18V [Efficiency %] | 24V [Efficiency %] | 36V [Efficiency %] | 20 | 75 | 78 | 76 | 40 | 81 | 82 | 81 | 60 | 83 | 84 | 83 | 80 | 83 | 84 | 83 | 100 | 83 | 84 | 83 | 110 | 82 | 83 | 83 | | | | | | | | | | | | | | | | | | | | | | | |
| Load Ration [%] | 18V [Efficiency %] | 24V [Efficiency %] | 36V [Efficiency %] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | 75 | 78 | 76 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40 | 81 | 82 | 81 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 60 | 83 | 84 | 83 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 80 | 83 | 84 | 83 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 100 | 83 | 84 | 83 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 110 | 82 | 83 | 83 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.Values | <table border="1"> <thead> <tr> <th rowspan="2">Load Ration [%]</th> <th colspan="3">Efficiency [%]</th> </tr> <tr> <th>Input Volt. 18[V]</th> <th>Input Volt. 24[V]</th> <th>Input Volt. 36[V]</th> </tr> </thead> <tbody> <tr><td>0</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>20</td><td>78.2</td><td>76.8</td><td>74.7</td></tr> <tr><td>40</td><td>82.7</td><td>81.4</td><td>81.3</td></tr> <tr><td>60</td><td>82.9</td><td>83.3</td><td>82.8</td></tr> <tr><td>80</td><td>83.0</td><td>83.5</td><td>83.6</td></tr> <tr><td>100</td><td>82.5</td><td>83.3</td><td>83.5</td></tr> <tr><td>110</td><td>82.1</td><td>83.1</td><td>83.4</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td></tr> </tbody> </table> | | | Load Ration [%] | Efficiency [%] | | | Input Volt. 18[V] | Input Volt. 24[V] | Input Volt. 36[V] | 0 | - | - | - | 20 | 78.2 | 76.8 | 74.7 | 40 | 82.7 | 81.4 | 81.3 | 60 | 82.9 | 83.3 | 82.8 | 80 | 83.0 | 83.5 | 83.6 | 100 | 82.5 | 83.3 | 83.5 | 110 | 82.1 | 83.1 | 83.4 | -- | - | - | - | -- | - | - | - | -- | - | - | - | -- | - | - | - |
| Load Ration [%] | Efficiency [%] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Input Volt. 18[V] | Input Volt. 24[V] | Input Volt. 36[V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | 78.2 | 76.8 | 74.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40 | 82.7 | 81.4 | 81.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 60 | 82.9 | 83.3 | 82.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 80 | 83.0 | 83.5 | 83.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 100 | 82.5 | 83.3 | 83.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 110 | 82.1 | 83.1 | 83.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | |
|--------|-----------------|
| Model | MGW152405 |
| Item | Line Regulation |
| Object | +5V1.5A |

Temperature 25°C
Testing Circuitry Figure A

1.Graph



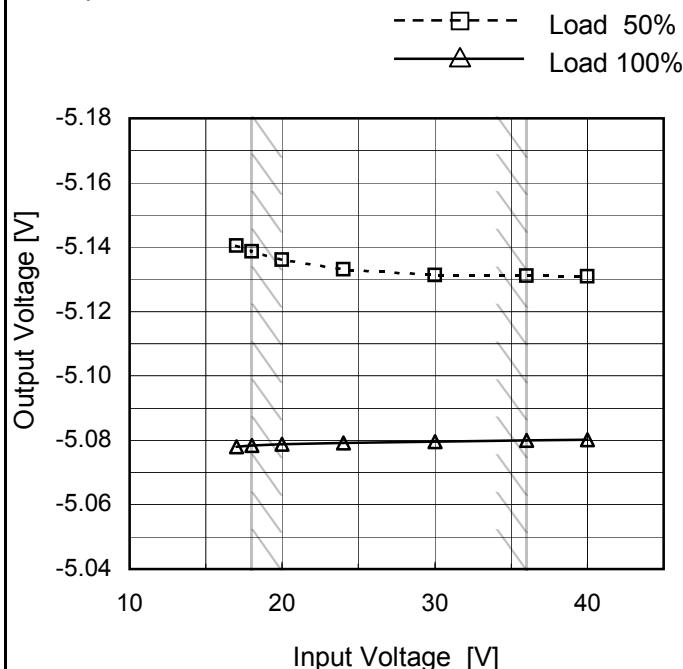
2.Values

| Input Voltage [V] | Output Voltage [V] | |
|-------------------|--------------------|-----------|
| | Load 50% | Load 100% |
| 17 | 5.144 | 5.084 |
| 18 | 5.142 | 5.085 |
| 20 | 5.139 | 5.085 |
| 24 | 5.136 | 5.084 |
| 30 | 5.134 | 5.084 |
| 36 | 5.134 | 5.084 |
| 40 | 5.134 | 5.084 |
| -- | - | - |
| -- | - | - |

-5V: Rated output current

Object -5V1.5A

1.Graph



2.Values

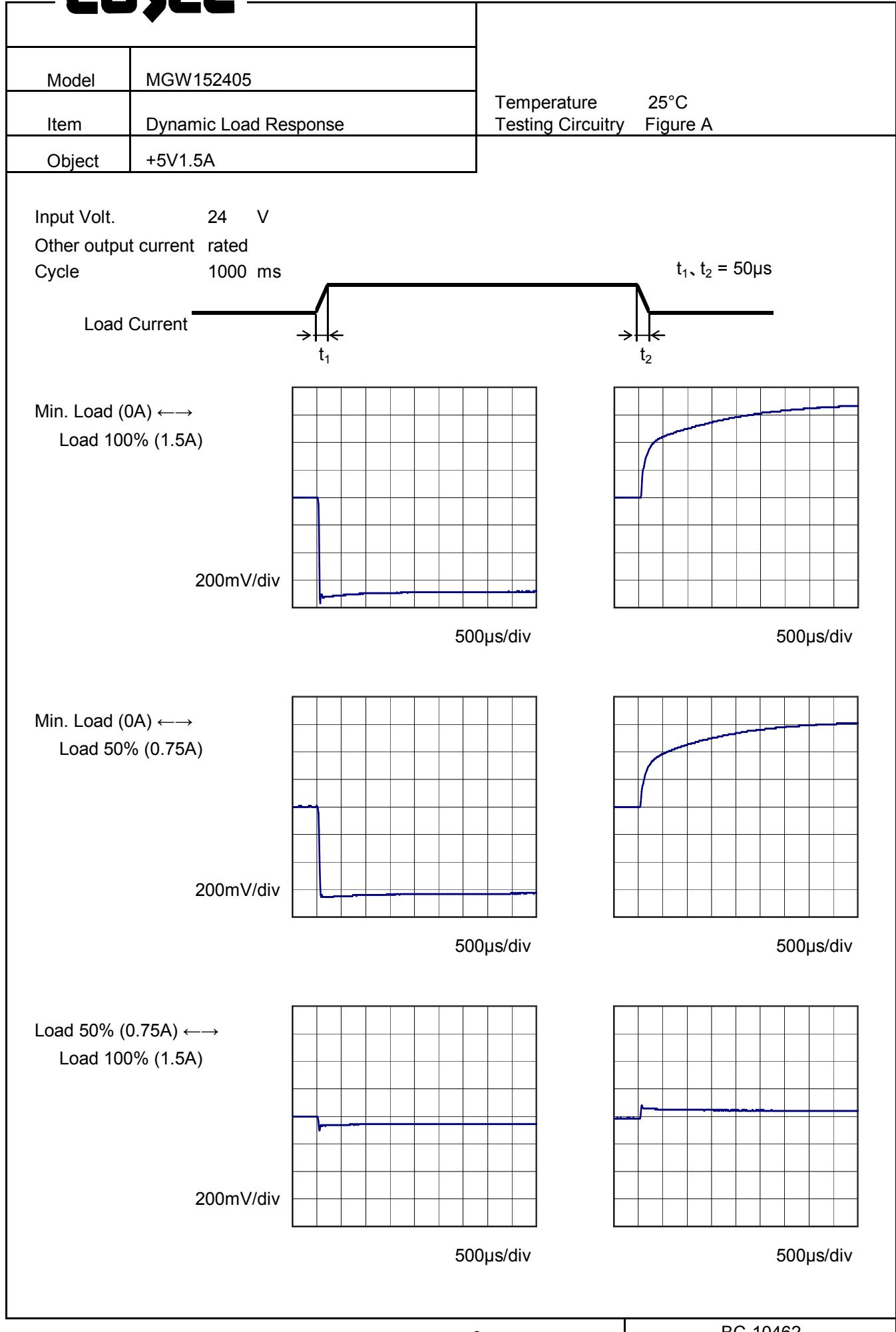
| Input Voltage [V] | Output Voltage [V] | |
|-------------------|--------------------|-----------|
| | Load 50% | Load 100% |
| 17 | -5.141 | -5.078 |
| 18 | -5.139 | -5.078 |
| 20 | -5.136 | -5.079 |
| 24 | -5.133 | -5.079 |
| 30 | -5.131 | -5.080 |
| 36 | -5.131 | -5.080 |
| 40 | -5.131 | -5.080 |
| -- | - | - |
| -- | - | - |

+5V: Rated output current

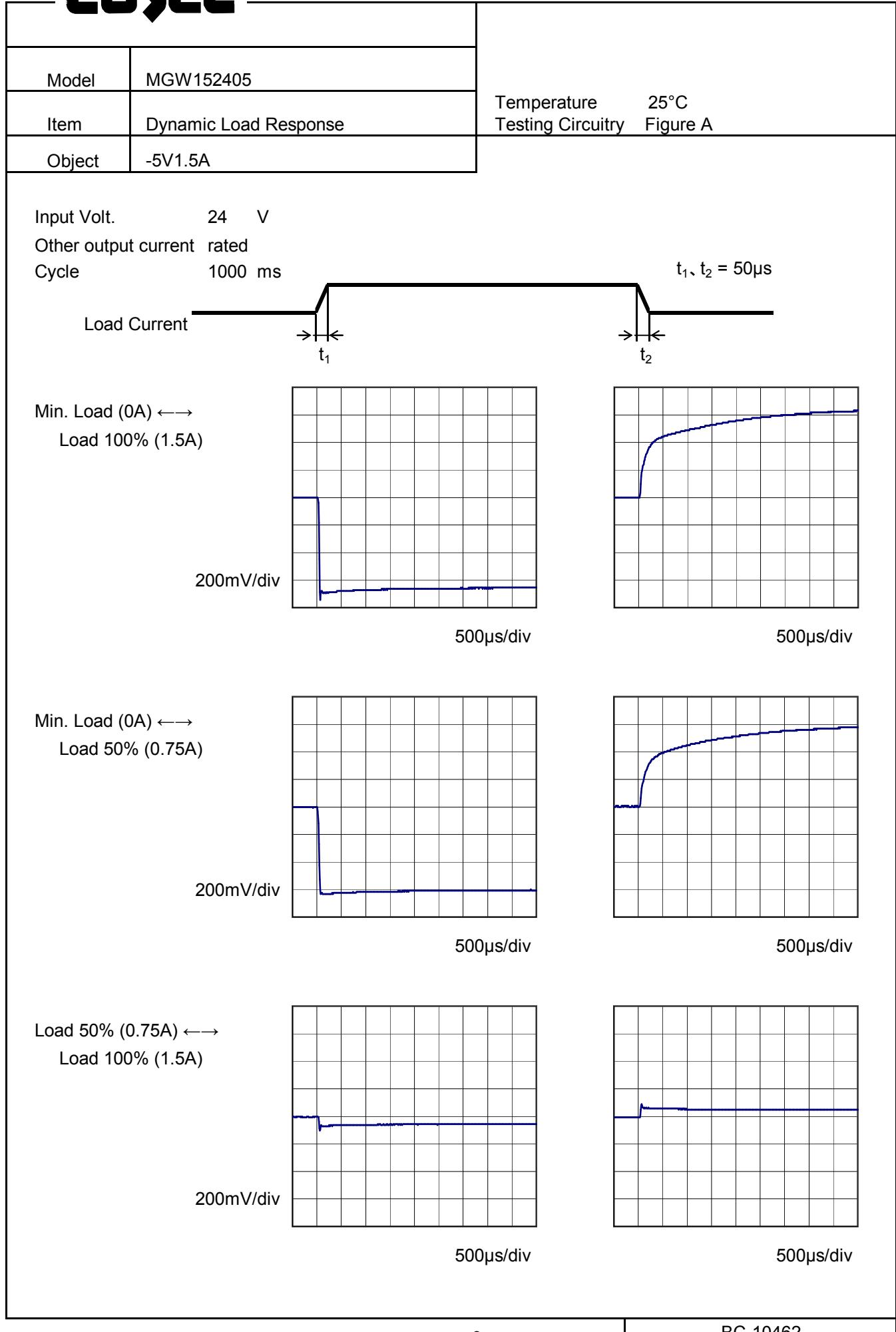
Note: Slanted line shows the range of the rated input voltage.

| Model | MGW152405 | Temperature Testing Circuitry 25°C Figure A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|---|--|--------------------------|--------------------------|--------------------------|------|--------|-------------------|-------------------|-------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------|--------|--------|--------|----|---|---|----|----|---|---|----|----|---|---|---|----|---|---|---|
| Item | Load Regulation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | +5V1.5A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | <p>—△— Input Volt. 18V - - -□- - Input Volt. 24V - · -○- - Input Volt. 36V</p> <table border="1"> <caption>Data for +5V1.5A at 25°C</caption> <thead> <tr> <th>Load Current [A]</th> <th>Output Voltage [V] (18V)</th> <th>Output Voltage [V] (24V)</th> <th>Output Voltage [V] (36V)</th> </tr> </thead> <tbody> <tr><td>0.00</td><td>5.880</td><td>5.861</td><td>5.839</td></tr> <tr><td>0.30</td><td>5.199</td><td>5.197</td><td>5.196</td></tr> <tr><td>0.60</td><td>5.157</td><td>5.151</td><td>5.150</td></tr> <tr><td>0.90</td><td>5.130</td><td>5.125</td><td>5.122</td></tr> <tr><td>1.20</td><td>5.106</td><td>5.103</td><td>5.101</td></tr> <tr><td>1.50</td><td>5.084</td><td>5.083</td><td>5.083</td></tr> <tr><td>1.65</td><td>5.073</td><td>5.074</td><td>5.074</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td></tr> </tbody> </table> | Load Current [A] | Output Voltage [V] (18V) | Output Voltage [V] (24V) | Output Voltage [V] (36V) | 0.00 | 5.880 | 5.861 | 5.839 | 0.30 | 5.199 | 5.197 | 5.196 | 0.60 | 5.157 | 5.151 | 5.150 | 0.90 | 5.130 | 5.125 | 5.122 | 1.20 | 5.106 | 5.103 | 5.101 | 1.50 | 5.084 | 5.083 | 5.083 | 1.65 | 5.073 | 5.074 | 5.074 | -- | - | - | - | -- | - | - | - | -- | - | - | - | -- | - | - | - | | | | | |
| Load Current [A] | Output Voltage [V] (18V) | Output Voltage [V] (24V) | Output Voltage [V] (36V) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.00 | 5.880 | 5.861 | 5.839 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.30 | 5.199 | 5.197 | 5.196 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.60 | 5.157 | 5.151 | 5.150 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.90 | 5.130 | 5.125 | 5.122 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.20 | 5.106 | 5.103 | 5.101 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.50 | 5.084 | 5.083 | 5.083 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.65 | 5.073 | 5.074 | 5.074 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.Values | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Load Current [A] | Output Voltage [V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Input Volt. 18[V] | Input Volt. 24[V] | Input Volt. 36[V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.00 | 5.880 | 5.861 | 5.839 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.30 | 5.199 | 5.197 | 5.196 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.60 | 5.157 | 5.151 | 5.150 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.90 | 5.130 | 5.125 | 5.122 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.20 | 5.106 | 5.103 | 5.101 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.50 | 5.084 | 5.083 | 5.083 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.65 | 5.073 | 5.074 | 5.074 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | -5V: Rated output current | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | -5V1.5A | 2.Values | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Load Current [A] | Output Voltage [V] (18V) | Output Voltage [V] (24V) | Output Voltage [V] (36V) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.00 | -5.807 | -5.799 | -5.783 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.30 | -5.191 | -5.190 | -5.189 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.60 | -5.151 | -5.146 | -5.145 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.90 | -5.125 | -5.121 | -5.118 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.20 | -5.101 | -5.099 | -5.097 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.50 | -5.078 | -5.079 | -5.079 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.65 | -5.067 | -5.069 | -5.071 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Load Current [A] | Output Voltage [V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Input Volt. 18[V] | Input Volt. 24[V] | Input Volt. 36[V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.00 | -5.807 | -5.799 | -5.783 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.30 | -5.191 | -5.190 | -5.189 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.60 | -5.151 | -5.146 | -5.145 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.90 | -5.125 | -5.121 | -5.118 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.20 | -5.101 | -5.099 | -5.097 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.50 | -5.078 | -5.079 | -5.079 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.65 | -5.067 | -5.069 | -5.071 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | +5V: Rated output current | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Note: | Slanted line shows the range of the rated load current. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

COSEL



COSEL



| Model | MGW152405 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|----------------------------------|--|------------------|---------------------|--|--------------------|--------------------|------|---|---|------|---|---|------|---|---|------|---|---|------|---|---|------|---|---|------|---|---|----|---|---|----|---|---|----|---|---|----|---|---|
| Item | Ripple Voltage (by Load Current) | Temperature 25°C Testing Circuitry Figure B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | +5V1.5A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Input Volt. 18V</p> <p>Input Volt. 36V</p> <p>Ripple Voltage [mV]</p> <p>Load Current [A]</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.Values | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th rowspan="2">Load Current [A]</th> <th colspan="2">Ripple Voltage [mV]</th> </tr> <tr> <th>Input Volt. 18 [V]</th> <th>Input Volt. 36 [V]</th> </tr> </thead> <tbody> <tr> <td>0.00</td><td>5</td><td>4</td></tr> <tr> <td>0.30</td><td>4</td><td>4</td></tr> <tr> <td>0.60</td><td>5</td><td>5</td></tr> <tr> <td>0.90</td><td>6</td><td>5</td></tr> <tr> <td>1.20</td><td>6</td><td>5</td></tr> <tr> <td>1.50</td><td>6</td><td>6</td></tr> <tr> <td>1.65</td><td>6</td><td>6</td></tr> <tr> <td>--</td><td>-</td><td>-</td></tr> <tr> <td>--</td><td>-</td><td>-</td></tr> <tr> <td>--</td><td>-</td><td>-</td></tr> <tr> <td>--</td><td>-</td><td>-</td></tr> </tbody> </table> | | | Load Current [A] | Ripple Voltage [mV] | | Input Volt. 18 [V] | Input Volt. 36 [V] | 0.00 | 5 | 4 | 0.30 | 4 | 4 | 0.60 | 5 | 5 | 0.90 | 6 | 5 | 1.20 | 6 | 5 | 1.50 | 6 | 6 | 1.65 | 6 | 6 | -- | - | - | -- | - | - | -- | - | - | -- | - | - |
| Load Current [A] | Ripple Voltage [mV] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Input Volt. 18 [V] | Input Volt. 36 [V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.00 | 5 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.30 | 4 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.60 | 5 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.90 | 6 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.20 | 6 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.50 | 6 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.65 | 6 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -5V: Rated output current | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>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.</p> <p>Ripple [mVp-p]</p> <p>Fig.Complex Ripple Wave Form</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Model | MGW152405 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|----------------------------------|--|------------------|---------------------|--|--------------------|--------------------|------|---|---|------|---|---|------|---|---|------|---|---|------|---|---|------|---|---|------|---|---|----|---|---|----|---|---|----|---|---|----|---|---|
| Item | Ripple Voltage (by Load Current) | Temperature 25°C Testing Circuitry Figure B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | -5V1.5A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Graph showing Ripple Voltage [mV] vs Load Current [A]. The Y-axis ranges from 0 to 100 mV, and the X-axis ranges from 0.0 to 1.6 A. Two curves are shown: Input Volt. 18V (solid line with triangles) and Input Volt. 36V (dashed line with circles). A shaded gray area indicates the rated load current range between approximately 1.15A and 1.65A.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.Values | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th rowspan="2">Load Current [A]</th> <th colspan="2">Ripple Voltage [mV]</th> </tr> <tr> <th>Input Volt. 18 [V]</th> <th>Input Volt. 36 [V]</th> </tr> </thead> <tbody> <tr> <td>0.00</td> <td>4</td> <td>3</td> </tr> <tr> <td>0.30</td> <td>5</td> <td>3</td> </tr> <tr> <td>0.60</td> <td>6</td> <td>4</td> </tr> <tr> <td>0.90</td> <td>6</td> <td>4</td> </tr> <tr> <td>1.20</td> <td>6</td> <td>5</td> </tr> <tr> <td>1.50</td> <td>8</td> <td>6</td> </tr> <tr> <td>1.65</td> <td>8</td> <td>6</td> </tr> <tr> <td>--</td> <td>-</td> <td>-</td> </tr> </tbody> </table> <p>+5V: Rated output current</p> | | | Load Current [A] | Ripple Voltage [mV] | | Input Volt. 18 [V] | Input Volt. 36 [V] | 0.00 | 4 | 3 | 0.30 | 5 | 3 | 0.60 | 6 | 4 | 0.90 | 6 | 4 | 1.20 | 6 | 5 | 1.50 | 8 | 6 | 1.65 | 8 | 6 | -- | - | - | -- | - | - | -- | - | - | -- | - | - |
| Load Current [A] | Ripple Voltage [mV] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Input Volt. 18 [V] | Input Volt. 36 [V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.00 | 4 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.30 | 5 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.60 | 6 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.90 | 6 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.20 | 6 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.50 | 8 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.65 | 8 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>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.</p> <p>Ripple [mVp-p]</p> <p>Fig.Complex Ripple Wave Form</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

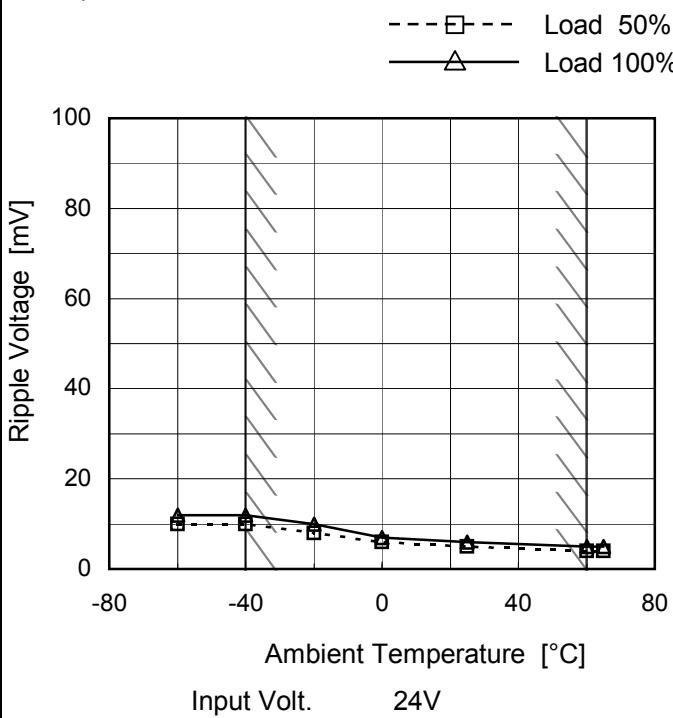
| Model | MGW152405 | Temperature Testing Circuitry | 25°C Figure B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---------------------------------------|---------------------------------------|------------------|-------------------|---------------------------------------|---------------------------------------|--------------------|------|----|------|------|----|------|------|----|------|------|----|------|------|----|------|------|----|------|------|----|----|----|---|---|----|---|---|----|---|---|----|---|---|---------------------------|
| Item | Ripple-Noise | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | +5V1.5A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | | | 2.Values | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Graph showing Ripple Voltage [mV] vs Load Current [A]. The Y-axis ranges from 0 to 120 mV, and the X-axis ranges from 0.0 to 1.6 A. Two curves are plotted: one for Input Volt. 18V (solid line with triangles) and one for Input Volt. 36V (dashed line with circles). Both curves show a decrease in Ripple Voltage as Load Current increases. A slanted line indicates the range of rated load current.</p> <table border="1"> <thead> <tr> <th>Load Current [A]</th> <th>Ripple Voltage [mV] (Input Volt. 18V)</th> <th>Ripple Voltage [mV] (Input Volt. 36V)</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>44</td><td>43</td></tr> <tr><td>0.30</td><td>20</td><td>16</td></tr> <tr><td>0.60</td><td>26</td><td>17</td></tr> <tr><td>0.90</td><td>30</td><td>19</td></tr> <tr><td>1.20</td><td>30</td><td>21</td></tr> <tr><td>1.50</td><td>29</td><td>23</td></tr> <tr><td>1.65</td><td>30</td><td>23</td></tr> </tbody> </table> | | | | Load Current [A] | Ripple Voltage [mV] (Input Volt. 18V) | Ripple Voltage [mV] (Input Volt. 36V) | 0.0 | 44 | 43 | 0.30 | 20 | 16 | 0.60 | 26 | 17 | 0.90 | 30 | 19 | 1.20 | 30 | 21 | 1.50 | 29 | 23 | 1.65 | 30 | 23 | | | | | | | | | | | | | | |
| Load Current [A] | Ripple Voltage [mV] (Input Volt. 18V) | Ripple Voltage [mV] (Input Volt. 36V) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.0 | 44 | 43 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.30 | 20 | 16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.60 | 26 | 17 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.90 | 30 | 19 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.20 | 30 | 21 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.50 | 29 | 23 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.65 | 30 | 23 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th rowspan="2">Load Current [A]</th> <th colspan="2">Ripple-Noise [mV]</th> </tr> <tr> <th>Input Volt. 18 [V]</th> <th>Input Volt. 36 [V]</th> </tr> </thead> <tbody> <tr><td>0.00</td><td>44</td><td>43</td></tr> <tr><td>0.30</td><td>20</td><td>16</td></tr> <tr><td>0.60</td><td>26</td><td>17</td></tr> <tr><td>0.90</td><td>30</td><td>19</td></tr> <tr><td>1.20</td><td>30</td><td>21</td></tr> <tr><td>1.50</td><td>29</td><td>23</td></tr> <tr><td>1.65</td><td>30</td><td>23</td></tr> <tr><td>--</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td></tr> </tbody> </table> | | | Load Current [A] | Ripple-Noise [mV] | | Input Volt. 18 [V] | Input Volt. 36 [V] | 0.00 | 44 | 43 | 0.30 | 20 | 16 | 0.60 | 26 | 17 | 0.90 | 30 | 19 | 1.20 | 30 | 21 | 1.50 | 29 | 23 | 1.65 | 30 | 23 | -- | - | - | -- | - | - | -- | - | - | -- | - | - | -5V: Rated output current |
| Load Current [A] | Ripple-Noise [mV] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Input Volt. 18 [V] | Input Volt. 36 [V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.00 | 44 | 43 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.30 | 20 | 16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.60 | 26 | 17 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.90 | 30 | 19 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.20 | 30 | 21 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.50 | 29 | 23 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.65 | 30 | 23 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>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.</p> <p>Fig.Complex Ripple Noise Wave Form</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Model | MGW152405 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--------------------|--|------------------|-------------------|--|--------------------|--------------------|------|----|----|------|----|----|------|----|----|------|----|----|------|----|----|------|----|----|------|----|----|----|---|---|----|---|---|----|---|---|----|---|---|
| Item | Ripple-Noise | Temperature 25°C Testing Circuitry Figure B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | -5V1.5A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Graph showing Ripple Voltage [mV] vs Load Current [A]. The Y-axis ranges from 0 to 120 mV, and the X-axis ranges from 0.0 to 1.6 A. Two curves are plotted: Input Volt. 18V (solid line with triangle markers) and Input Volt. 36V (dashed line with circle markers). Both curves show a minimum around 0.3A and a peak near 1.6A. A slanted line indicates the rated load current range from 1.0A to 1.6A.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.Values | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th rowspan="2">Load Current [A]</th> <th colspan="2">Ripple-Noise [mV]</th> </tr> <tr> <th>Input Volt. 18 [V]</th> <th>Input Volt. 36 [V]</th> </tr> </thead> <tbody> <tr> <td>0.00</td> <td>56</td> <td>53</td> </tr> <tr> <td>0.30</td> <td>32</td> <td>26</td> </tr> <tr> <td>0.60</td> <td>37</td> <td>27</td> </tr> <tr> <td>0.90</td> <td>34</td> <td>30</td> </tr> <tr> <td>1.20</td> <td>39</td> <td>32</td> </tr> <tr> <td>1.50</td> <td>50</td> <td>34</td> </tr> <tr> <td>1.65</td> <td>55</td> <td>38</td> </tr> <tr> <td>--</td> <td>-</td> <td>-</td> </tr> </tbody> </table> <p>+5V: Rated output current</p> | | | Load Current [A] | Ripple-Noise [mV] | | Input Volt. 18 [V] | Input Volt. 36 [V] | 0.00 | 56 | 53 | 0.30 | 32 | 26 | 0.60 | 37 | 27 | 0.90 | 34 | 30 | 1.20 | 39 | 32 | 1.50 | 50 | 34 | 1.65 | 55 | 38 | -- | - | - | -- | - | - | -- | - | - | -- | - | - |
| Load Current [A] | Ripple-Noise [mV] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Input Volt. 18 [V] | Input Volt. 36 [V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.00 | 56 | 53 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.30 | 32 | 26 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.60 | 37 | 27 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.90 | 34 | 30 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.20 | 39 | 32 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.50 | 50 | 34 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.65 | 55 | 38 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>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.</p> <p>Fig.Complex Ripple Noise Wave Form</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | |
|--------|-----------------------------------|
| Model | MGW152405 |
| Item | Ripple Voltage (by Ambient Temp.) |
| Object | +5V1.5A |

Testing Circuitry Figure B

1.Graph

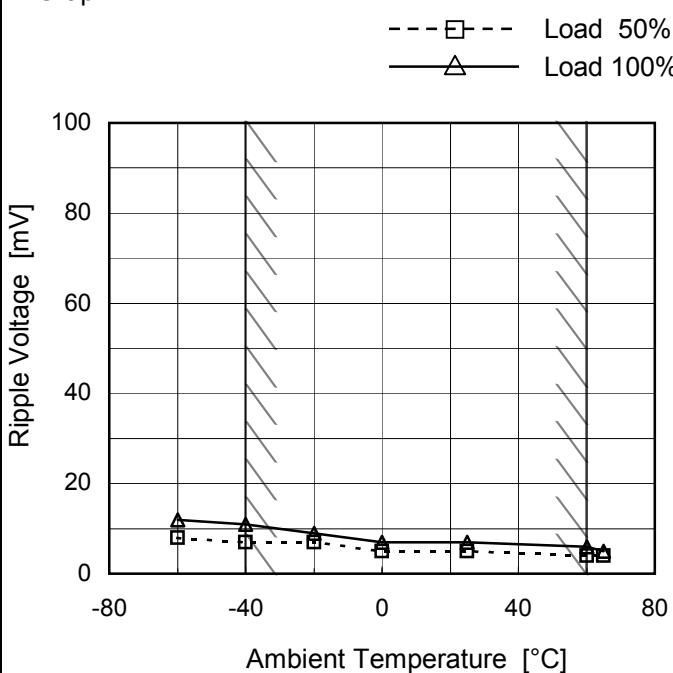


2.Values

| Ambient Temperature [°C] | Ripple Voltage [mV] | |
|--------------------------|---------------------|-----------|
| | Load 50% | Load 100% |
| -60 | 10 | 12 |
| -40 | 10 | 12 |
| -20 | 8 | 10 |
| 0 | 6 | 7 |
| 25 | 5 | 6 |
| 60 | 4 | 5 |
| 65 | 4 | 5 |
| -- | - | - |
| -- | - | - |
| -- | - | - |
| -- | - | - |

-5V: Rated output current

1.Graph



2.Values

| Ambient Temperature [°C] | Ripple Voltage [mV] | |
|--------------------------|---------------------|-----------|
| | Load 50% | Load 100% |
| -60 | 8 | 12 |
| -40 | 7 | 11 |
| -20 | 7 | 9 |
| 0 | 5 | 7 |
| 25 | 5 | 7 |
| 60 | 4 | 6 |
| 65 | 4 | 5 |
| -- | - | - |
| -- | - | - |
| -- | - | - |
| -- | - | - |

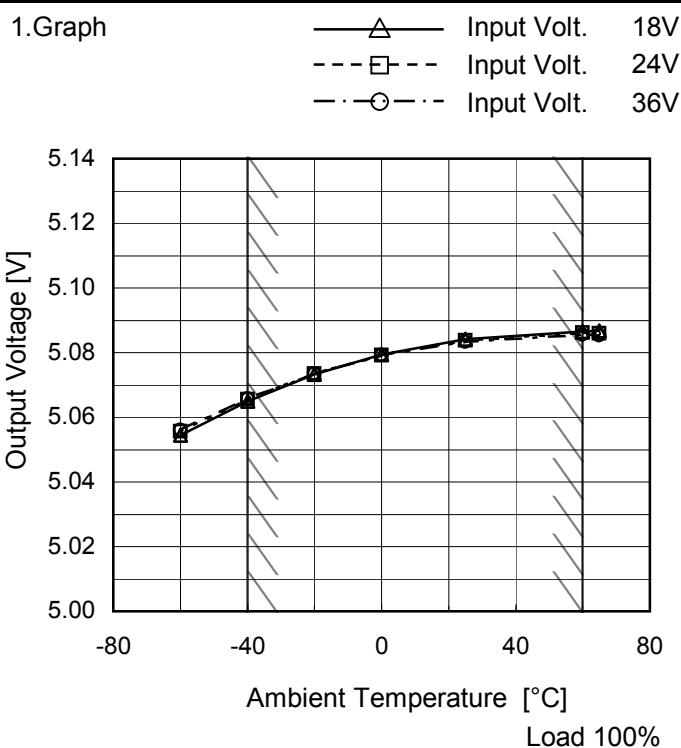
+5V: Rated output current

Measured by 100 MHz Oscilloscope.

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

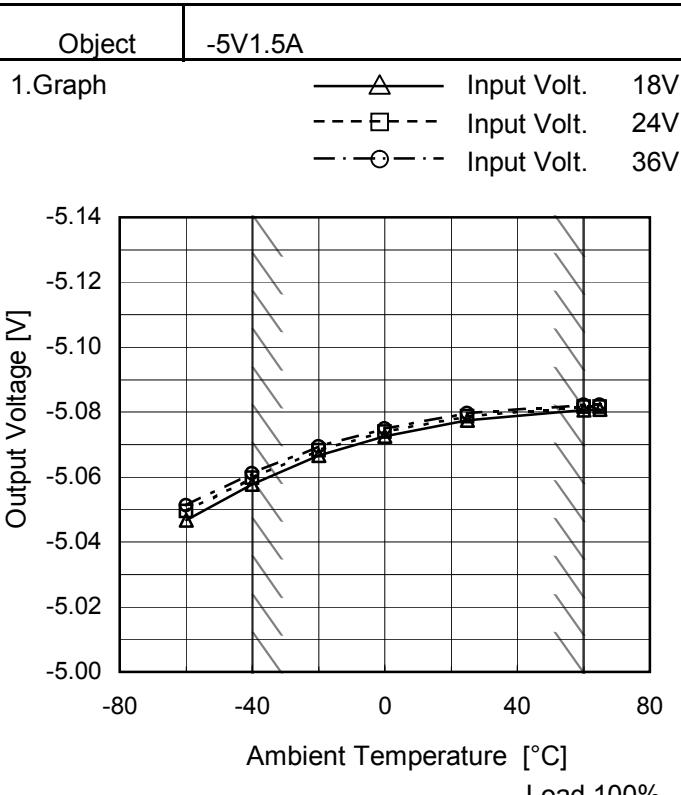
| | |
|--------|---------------------------|
| Model | MGW152405 |
| Item | Ambient Temperature Drift |
| Object | +5V1.5A |

Testing Circuitry Figure A



2.Values

| Ambient Temperature [°C] | Output Voltage [V] | | |
|--------------------------|--------------------|-------------------|-------------------|
| | Input Volt. 18[V] | Input Volt. 24[V] | Input Volt. 36[V] |
| -60 | 5.054 | 5.056 | 5.056 |
| -40 | 5.065 | 5.066 | 5.066 |
| -20 | 5.073 | 5.074 | 5.074 |
| 0 | 5.080 | 5.079 | 5.079 |
| 25 | 5.084 | 5.084 | 5.083 |
| 60 | 5.087 | 5.086 | 5.086 |
| 65 | 5.087 | 5.086 | 5.085 |
| -- | - | - | - |
| -- | - | - | - |
| -- | - | - | - |
| -- | - | - | - |



2.Values

| Ambient Temperature [°C] | Output Voltage [V] | | |
|--------------------------|--------------------|-------------------|-------------------|
| | Input Volt. 18[V] | Input Volt. 24[V] | Input Volt. 36[V] |
| -60 | -5.047 | -5.049 | -5.051 |
| -40 | -5.058 | -5.060 | -5.061 |
| -20 | -5.067 | -5.068 | -5.069 |
| 0 | -5.073 | -5.074 | -5.075 |
| 25 | -5.077 | -5.079 | -5.080 |
| 60 | -5.081 | -5.082 | -5.082 |
| 65 | -5.081 | -5.082 | -5.082 |
| -- | - | - | - |
| -- | - | - | - |
| -- | - | - | - |
| -- | - | - | - |

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



| | | |
|-------|-------------------------|----------------------------|
| Model | MGW152405 | |
| 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 : -40 - 60°C

Input Voltage : 18 - 36V

Load Current (AVR 1) : 0 - 1.5A (AVR 2) : 0 - 1.5A

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

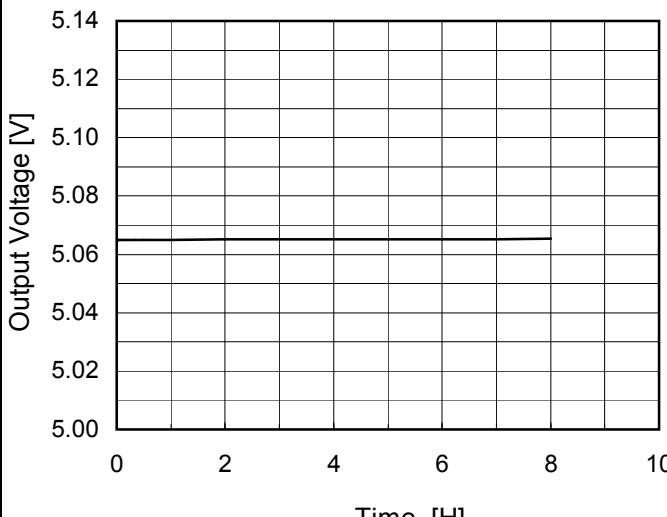
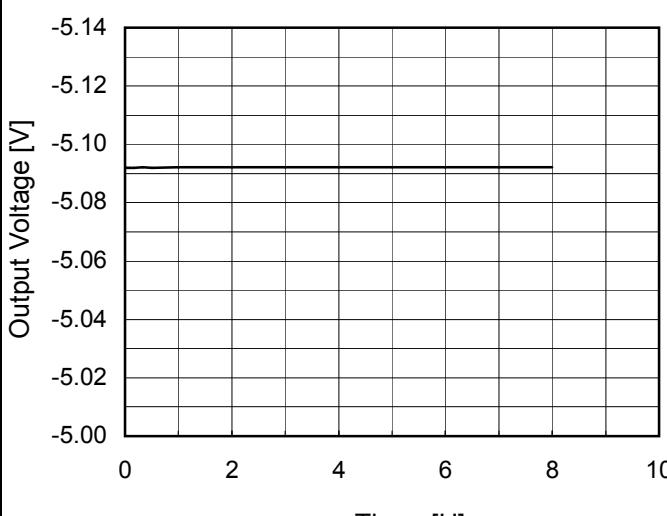
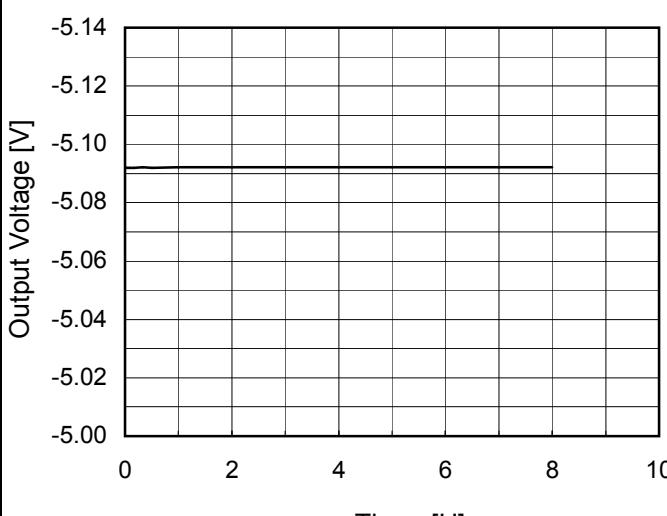
$$\text{* Output Voltage Accuracy (Ratio)} = \frac{\text{Output Voltage Accuracy}}{\text{Rated Output Voltage}} \times 100$$

2. Values

| Object | +5V1.5A | | Output | | Output Voltage Accuracy | |
|-----------------|------------------|------------------|------------|------------|-------------------------|------------|
| Item | Temperature [°C] | Input Voltage[V] | Current[A] | Voltage[V] | Value [mV] | Ration [%] |
| Maximum Voltage | 25 | 18 | | 0 | 5.878 | ±407 |
| Minimum Voltage | -40 | 18 | 1.5 | 5.065 | | ±8.1 |

| Object | -5V1.5A | | Output | | Output Voltage Accuracy | |
|-----------------|------------------|------------------|------------|------------|-------------------------|------------|
| Item | Temperature [°C] | Input Voltage[V] | Current[A] | Voltage[V] | Value [mV] | Ration [%] |
| Maximum Voltage | 25 | 18 | | 0 | -5.808 | ±375 |
| Minimum Voltage | -40 | 18 | 1.5 | -5.058 | | ±7.5 |

COSEL

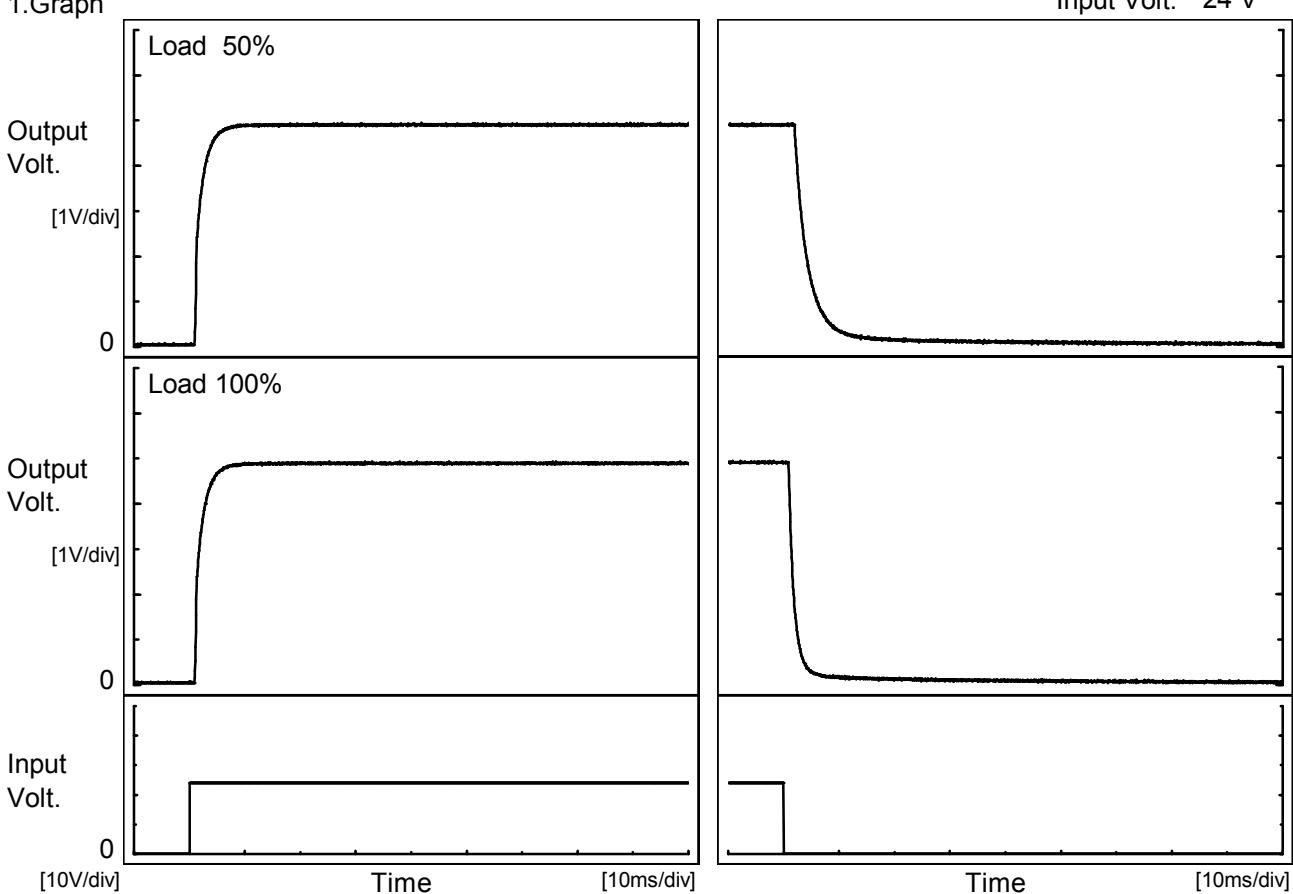
| Model | MGW152405 | Temperature | 25°C | | | | | | | | | | | | | | | | | | | | | | |
|--|--------------------|-------------------|--|----------------------|--------------------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|
| Item | Time Lapse Drift | Testing Circuitry | Figure A | | | | | | | | | | | | | | | | | | | | | | |
| Object | +5V1.5A | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | | | 2.Values | | | | | | | | | | | | | | | | | | | | | | |
|  <p>Output Voltage [V]</p> <p>Time [H]</p> <p>Input Volt. 24V Load 100%</p> | | | <table border="1"> <thead> <tr> <th>Time since start [H]</th> <th>Output Voltage [V]</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>5.065</td></tr> <tr><td>0.5</td><td>5.065</td></tr> <tr><td>1.0</td><td>5.065</td></tr> <tr><td>2.0</td><td>5.065</td></tr> <tr><td>3.0</td><td>5.065</td></tr> <tr><td>4.0</td><td>5.065</td></tr> <tr><td>5.0</td><td>5.065</td></tr> <tr><td>6.0</td><td>5.065</td></tr> <tr><td>7.0</td><td>5.065</td></tr> <tr><td>8.0</td><td>5.065</td></tr> </tbody> </table> | Time since start [H] | Output Voltage [V] | 0.0 | 5.065 | 0.5 | 5.065 | 1.0 | 5.065 | 2.0 | 5.065 | 3.0 | 5.065 | 4.0 | 5.065 | 5.0 | 5.065 | 6.0 | 5.065 | 7.0 | 5.065 | 8.0 | 5.065 |
| Time since start [H] | Output Voltage [V] | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.0 | 5.065 | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.5 | 5.065 | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.0 | 5.065 | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.0 | 5.065 | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.0 | 5.065 | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.0 | 5.065 | | | | | | | | | | | | | | | | | | | | | | | | |
| 5.0 | 5.065 | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.0 | 5.065 | | | | | | | | | | | | | | | | | | | | | | | | |
| 7.0 | 5.065 | | | | | | | | | | | | | | | | | | | | | | | | |
| 8.0 | 5.065 | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | | | 2.Values | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | | |  <p>Output Voltage [V]</p> <p>Time [H]</p> <p>Input Volt. 24V Load 100%</p> | | | | | | | | | | | | | | | | | | | | | | |
|  <p>Output Voltage [V]</p> <p>Time [H]</p> <p>Input Volt. 24V Load 100%</p> | | | <table border="1"> <thead> <tr> <th>Time since start [H]</th> <th>Output Voltage [V]</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>-5.092</td></tr> <tr><td>0.5</td><td>-5.092</td></tr> <tr><td>1.0</td><td>-5.092</td></tr> <tr><td>2.0</td><td>-5.092</td></tr> <tr><td>3.0</td><td>-5.092</td></tr> <tr><td>4.0</td><td>-5.092</td></tr> <tr><td>5.0</td><td>-5.092</td></tr> <tr><td>6.0</td><td>-5.092</td></tr> <tr><td>7.0</td><td>-5.092</td></tr> <tr><td>8.0</td><td>-5.092</td></tr> </tbody> </table> | Time since start [H] | Output Voltage [V] | 0.0 | -5.092 | 0.5 | -5.092 | 1.0 | -5.092 | 2.0 | -5.092 | 3.0 | -5.092 | 4.0 | -5.092 | 5.0 | -5.092 | 6.0 | -5.092 | 7.0 | -5.092 | 8.0 | -5.092 |
| Time since start [H] | Output Voltage [V] | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.0 | -5.092 | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.5 | -5.092 | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.0 | -5.092 | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.0 | -5.092 | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.0 | -5.092 | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.0 | -5.092 | | | | | | | | | | | | | | | | | | | | | | | | |
| 5.0 | -5.092 | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.0 | -5.092 | | | | | | | | | | | | | | | | | | | | | | | | |
| 7.0 | -5.092 | | | | | | | | | | | | | | | | | | | | | | | | |
| 8.0 | -5.092 | | | | | | | | | | | | | | | | | | | | | | | | |

COSEL

| | |
|--------|--------------------|
| Model | MGW152405 |
| Item | Rise and Fall Time |
| Object | +5V1.5A |

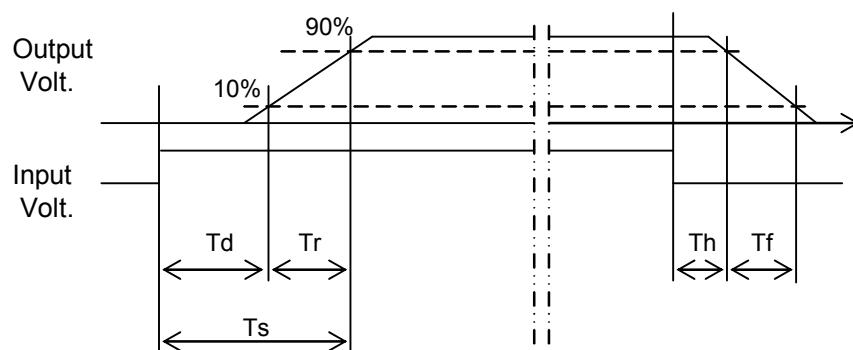
Temperature 25°C
Testing Circuitry Figure A

1. Graph



2. Values

| Load | Time | Td | Tr | Ts | Th | Tf | [ms] |
|-------|------|-----|-----|-----|-----|-----|------|
| 50 % | | 1.1 | 3.2 | 4.3 | 2.0 | 6.1 | |
| 100 % | | 1.1 | 3.2 | 4.3 | 1.0 | 2.6 | |

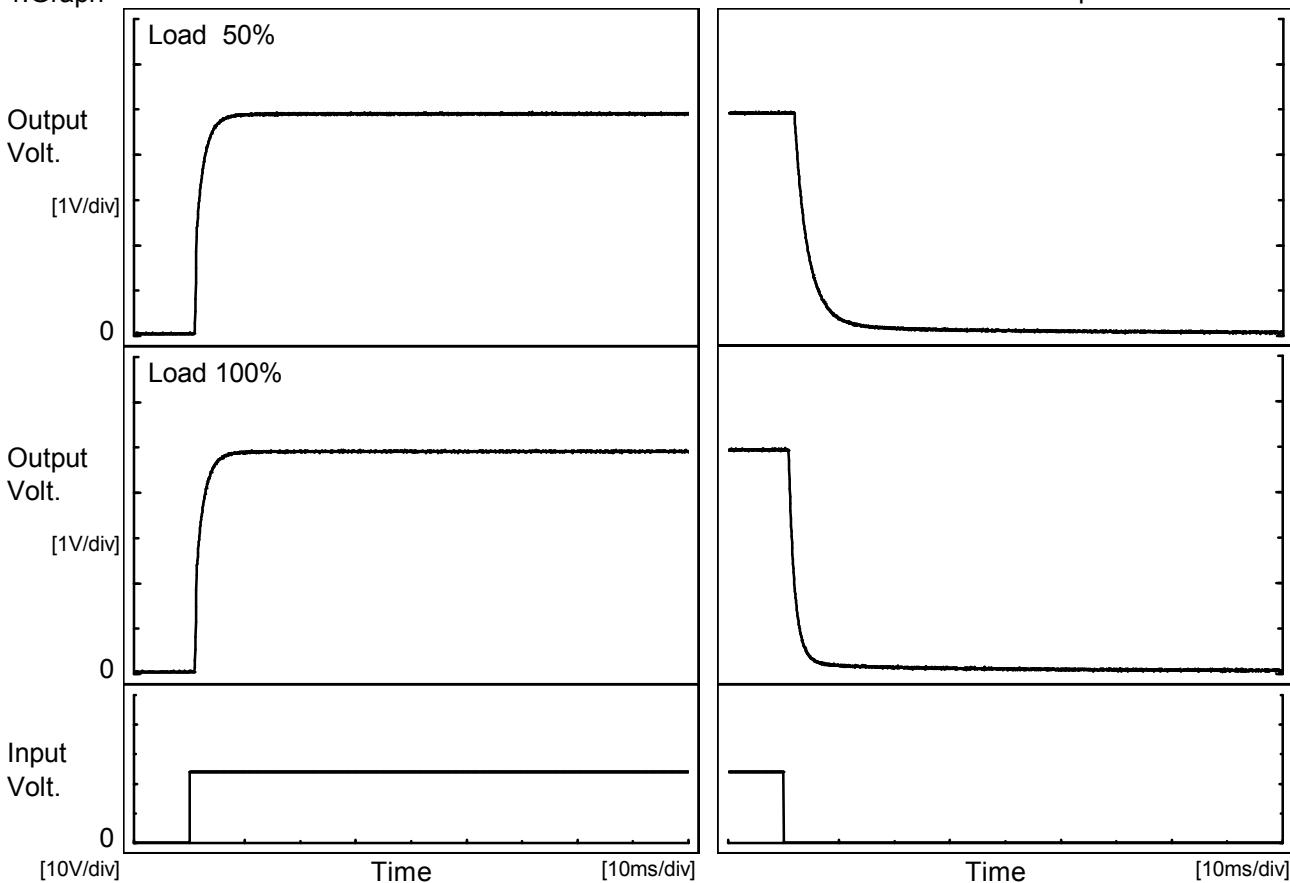


COSEL

| | |
|--------|--------------------|
| Model | MGW152405 |
| Item | Rise and Fall Time |
| Object | -5V1.5A |

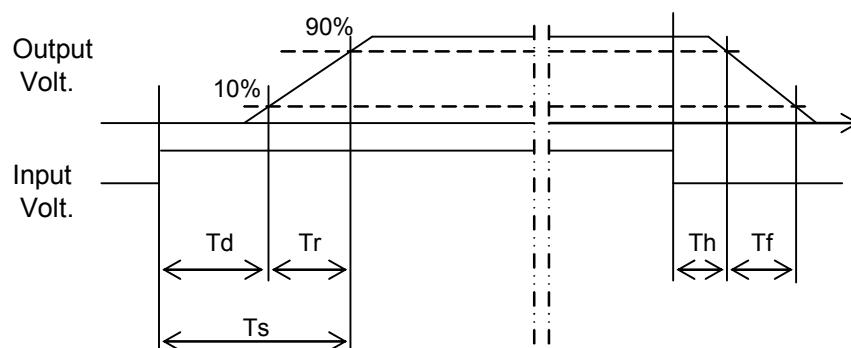
Temperature 25°C
Testing Circuitry Figure A

1. Graph



2. Values

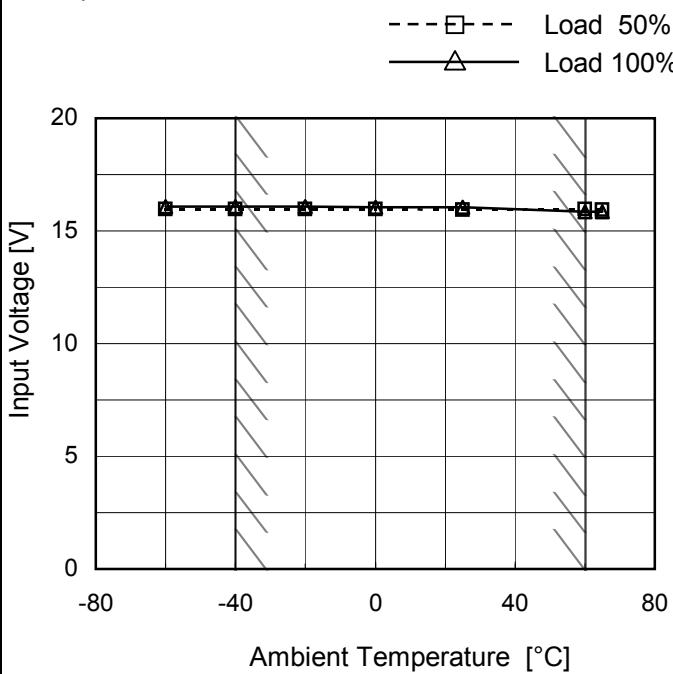
| Load | Time | Td | Tr | Ts | Th | Tf | [ms] |
|-------|------|-----|-----|-----|-----|-----|------|
| 50 % | | 1.1 | 3.2 | 4.3 | 2.0 | 6.4 | |
| 100 % | | 1.1 | 3.1 | 4.2 | 1.0 | 3.0 | |



| | |
|--------|---|
| Model | MGW152405 |
| Item | Minimum Input Voltage for Regulated Output Voltage |
| Object | +5V1.5A |

Testing Circuitry Figure A

1.Graph

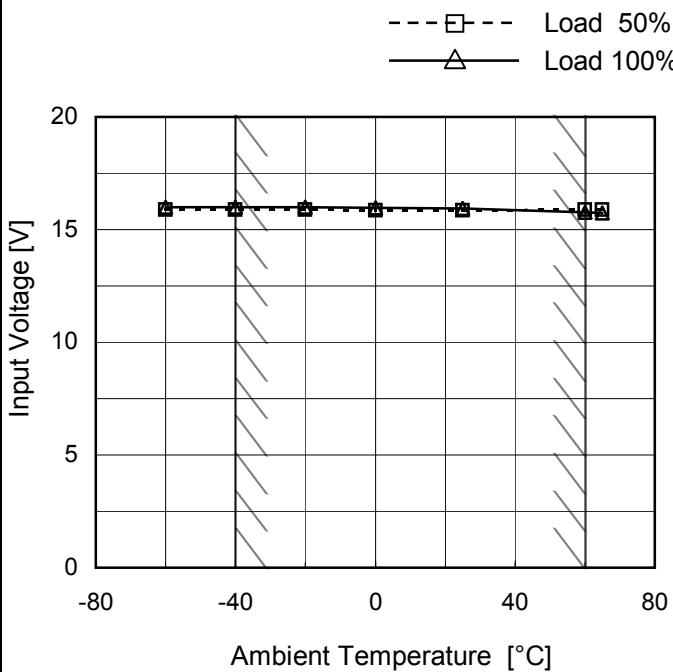


2.Values

| Ambient Temperature [°C] | Input Voltage [V] | |
|-----------------------------|-------------------|-----------|
| | Load 50% | Load 100% |
| -60 | 16.0 | 16.1 |
| -40 | 16.0 | 16.1 |
| -20 | 16.0 | 16.1 |
| 0 | 16.0 | 16.1 |
| 25 | 16.0 | 16.1 |
| 60 | 16.0 | 15.9 |
| 65 | 16.0 | 15.9 |
| -- | - | - |
| -- | - | - |
| -- | - | - |
| -- | - | - |

| | |
|--------|---------|
| Object | -5V1.5A |
|--------|---------|

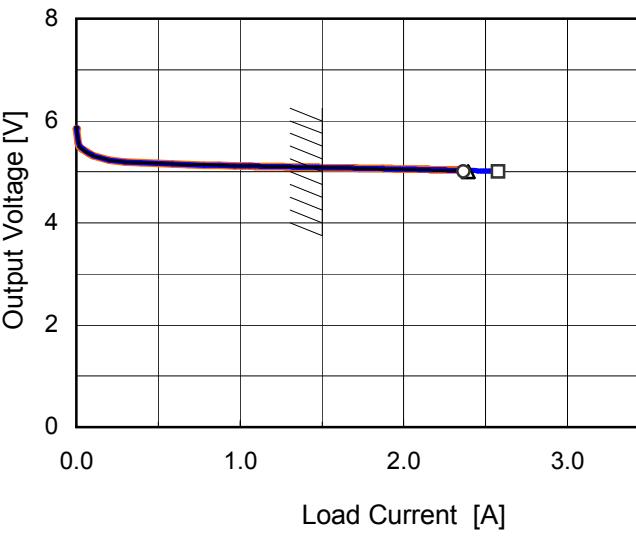
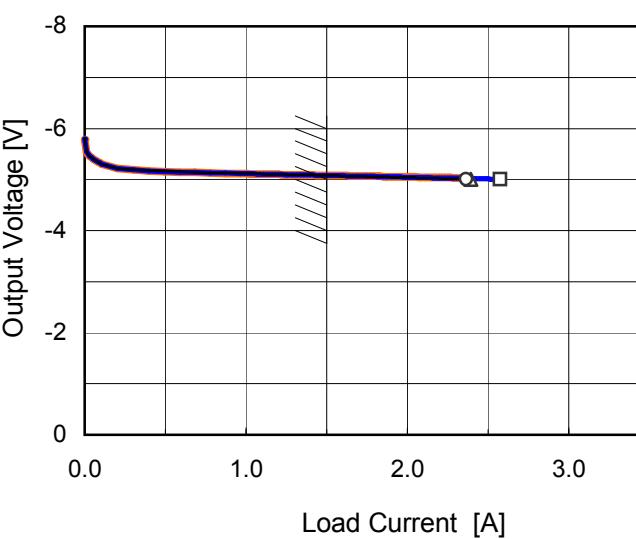
1.Graph



2.Values

| Ambient Temperature [°C] | Input Voltage [V] | |
|-----------------------------|-------------------|-----------|
| | Load 50% | Load 100% |
| -60 | 15.9 | 16.0 |
| -40 | 15.9 | 16.0 |
| -20 | 15.9 | 16.0 |
| 0 | 15.9 | 16.0 |
| 25 | 15.9 | 16.0 |
| 60 | 15.9 | 15.8 |
| 65 | 15.9 | 15.8 |
| -- | - | - |
| -- | - | - |
| -- | - | - |
| -- | - | - |

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

| Model | MGW152405 | Temperature Testing Circuitry 25°C Figure A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--|--------------------|------------------|--|--|-------------------|-------------------|-------------------|-------|------|------|------|-------|---|---|---|-------|---|---|---|-------|---|---|---|-------|---|---|---|-------|---|---|---|-------|---|---|---|-------|---|---|---|-------|---|---|---|-------|---|---|---|-------|---|---|---|------|---|---|---|
| Item | Overcurrent Protection | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | +5V1.5A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | <p>—△— Input Volt. 18V —□— Input Volt. 24V —○— Input Volt. 36V</p>  | 2.Values | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <table border="1"> <thead> <tr> <th rowspan="2">Output Voltage [V]</th> <th colspan="3">Load Current [A]</th> </tr> <tr> <th>Input Volt. 18[V]</th> <th>Input Volt. 24[V]</th> <th>Input Volt. 36[V]</th> </tr> </thead> <tbody> <tr><td>5.00</td><td>2.39</td><td>2.58</td><td>2.37</td></tr> <tr><td>4.75</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>4.50</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>4.00</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>3.50</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>3.00</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>2.50</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>2.00</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>1.50</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>1.00</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>0.50</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>0.00</td><td>-</td><td>-</td><td>-</td></tr> </tbody> </table> | Output Voltage [V] | Load Current [A] | | | Input Volt. 18[V] | Input Volt. 24[V] | Input Volt. 36[V] | 5.00 | 2.39 | 2.58 | 2.37 | 4.75 | - | - | - | 4.50 | - | - | - | 4.00 | - | - | - | 3.50 | - | - | - | 3.00 | - | - | - | 2.50 | - | - | - | 2.00 | - | - | - | 1.50 | - | - | - | 1.00 | - | - | - | 0.50 | - | - | - | 0.00 | - | - | - |
| Output Voltage [V] | Load Current [A] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Input Volt. 18[V] | Input Volt. 24[V] | Input Volt. 36[V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5.00 | 2.39 | 2.58 | 2.37 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.75 | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.50 | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.00 | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.50 | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.00 | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.50 | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.00 | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.50 | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.00 | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.50 | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.00 | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | -5V: Rated output current | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | -5V1.5A | 2.Values | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | <p>—△— Input Volt. 18V —□— Input Volt. 24V —○— Input Volt. 36V</p>  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <table border="1"> <thead> <tr> <th rowspan="2">Output Voltage [V]</th> <th colspan="3">Load Current [A]</th> </tr> <tr> <th>Input Volt. 18[V]</th> <th>Input Volt. 24[V]</th> <th>Input Volt. 36[V]</th> </tr> </thead> <tbody> <tr><td>-5.00</td><td>2.39</td><td>2.58</td><td>2.37</td></tr> <tr><td>-4.75</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>-4.50</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>-4.00</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>-3.50</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>-3.00</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>-2.50</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>-2.00</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>-1.50</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>-1.00</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>-0.50</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>0.00</td><td>-</td><td>-</td><td>-</td></tr> </tbody> </table> | Output Voltage [V] | Load Current [A] | | | Input Volt. 18[V] | Input Volt. 24[V] | Input Volt. 36[V] | -5.00 | 2.39 | 2.58 | 2.37 | -4.75 | - | - | - | -4.50 | - | - | - | -4.00 | - | - | - | -3.50 | - | - | - | -3.00 | - | - | - | -2.50 | - | - | - | -2.00 | - | - | - | -1.50 | - | - | - | -1.00 | - | - | - | -0.50 | - | - | - | 0.00 | - | - | - |
| Output Voltage [V] | Load Current [A] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Input Volt. 18[V] | Input Volt. 24[V] | Input Volt. 36[V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -5.00 | 2.39 | 2.58 | 2.37 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -4.75 | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -4.50 | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -4.00 | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -3.50 | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -3.00 | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -2.50 | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -2.00 | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -1.50 | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -1.00 | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -0.50 | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.00 | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | +5V: Rated output current | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Note: Slanted line shows the range of the rated load current. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Intermittent operation occurs when overcurrent protection is activated. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

COSEL

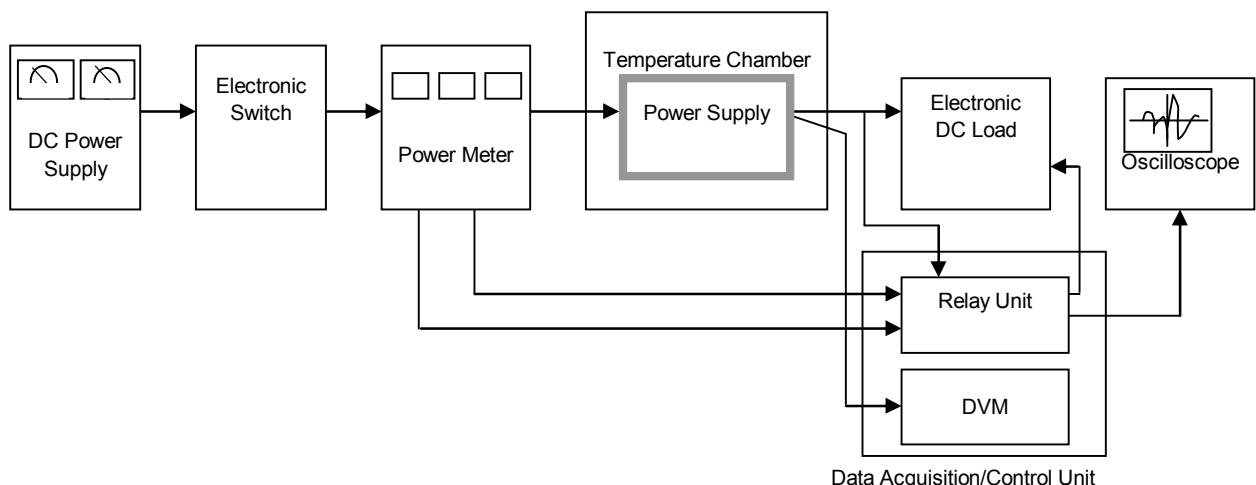


Figure A

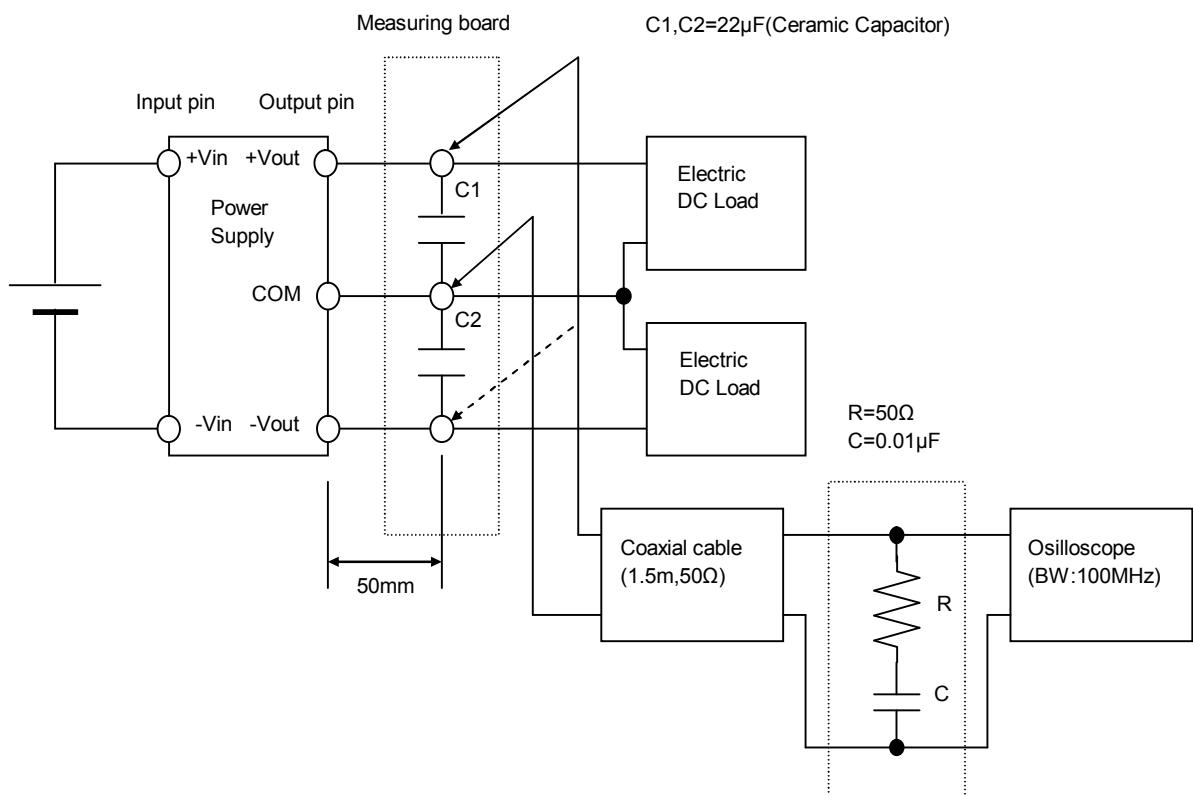


Figure B (Ripple and Ripple noise Characteristic)