



TEST DATA OF MGS100515

Regulated DC Power Supply
August 5, 2016

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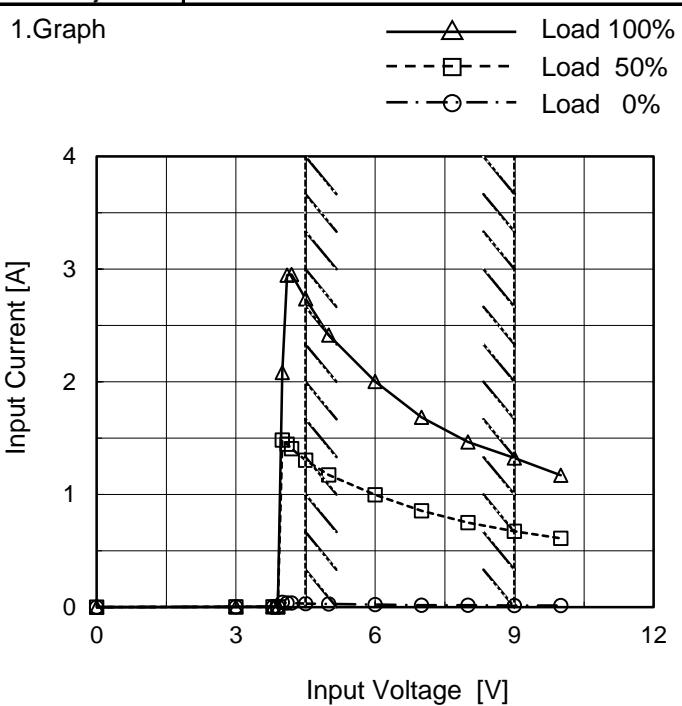
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(Final Page 19)

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| | |
|--------|----------------------------------|
| Model | MGS100515 |
| Item | Input Current (by Input Voltage) |
| Object | _____ |



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

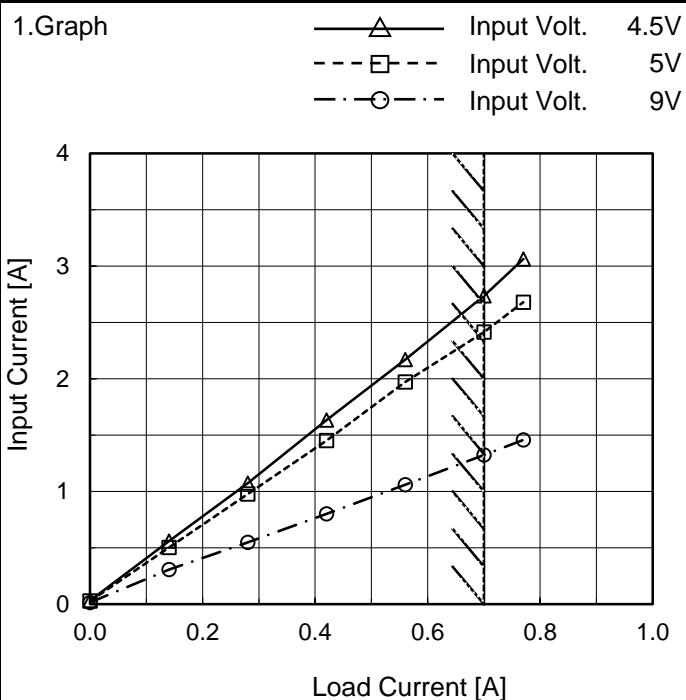
Temperature 25°C
Testing Circuitry Figure A

2.Values

| Input Voltage [V] | Input Current [A] | | |
|-------------------|-------------------|----------|-----------|
| | Load 0% | Load 50% | Load 100% |
| 0.0 | 0.000 | 0.000 | 0.000 |
| 3.0 | 0.004 | 0.003 | 0.001 |
| 3.8 | 0.002 | 0.003 | 0.004 |
| 3.9 | 0.003 | 0.004 | 0.002 |
| 4.0 | 0.041 | 1.483 | 2.081 |
| 4.1 | 0.038 | 1.445 | 2.947 |
| 4.2 | 0.037 | 1.407 | 2.952 |
| 4.5 | 0.030 | 1.303 | 2.736 |
| 5.0 | 0.027 | 1.173 | 2.415 |
| 6.0 | 0.021 | 0.997 | 2.004 |
| 7.0 | 0.016 | 0.854 | 1.686 |
| 8.0 | 0.016 | 0.751 | 1.467 |
| 9.0 | 0.015 | 0.673 | 1.325 |
| 10.0 | 0.015 | 0.611 | 1.171 |
| -- | - | - | - |
| -- | - | - | - |
| -- | - | - | - |
| -- | - | - | - |

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| | |
|--------|---------------------------------|
| Model | MGS100515 |
| Item | Input Current (by Load Current) |
| Object | _____ |

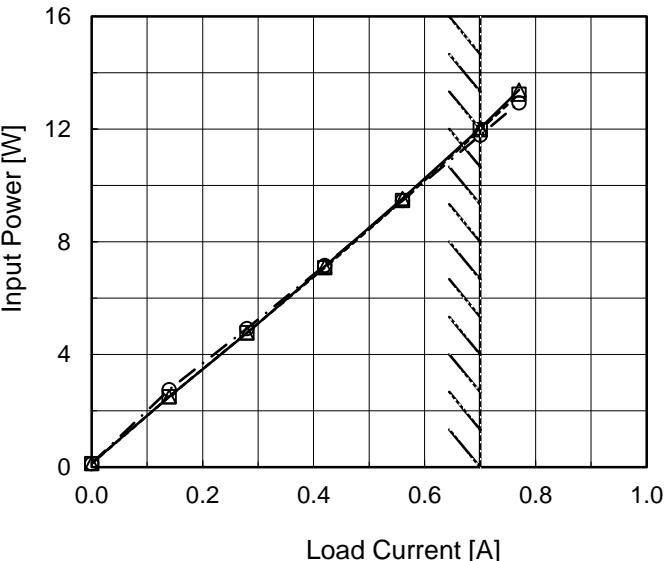

 Temperature 25°C
 Testing Circuitry Figure A

2.Values

| Load Current [A] | Input Current [A] | | |
|------------------|--------------------|------------------|------------------|
| | Input Volt. 4.5[V] | Input Volt. 5[V] | Input Volt. 9[V] |
| 0.00 | 0.030 | 0.027 | 0.015 |
| 0.14 | 0.558 | 0.503 | 0.306 |
| 0.28 | 1.074 | 0.976 | 0.548 |
| 0.42 | 1.635 | 1.451 | 0.802 |
| 0.56 | 2.172 | 1.972 | 1.060 |
| 0.70 | 2.736 | 2.415 | 1.325 |
| 0.77 | 3.064 | 2.680 | 1.457 |
| -- | - | - | - |
| -- | - | - | - |
| -- | - | - | - |
| -- | - | - | - |

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

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| Model | MGS100515 | Temperature | 25°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|--|-------------------|------------------|------------------|-----------------|--|--|--------------------|------------------|------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|------|-------|-------|-------|----|---|---|---|----|---|---|---|----|---|---|---|----|---|---|---|
| Item | Input Power (by Load Current) | Testing Circuitry | Figure A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | <p style="text-align: center;"> —△— Input Volt. 4.5V ---□--- Input Volt. 5V ---○--- Input Volt. 9V </p>  <p>The graph plots Input Power [W] on the Y-axis (0 to 16) against Load Current [A] on the X-axis (0.0 to 1.0). Three curves are shown for input voltages of 4.5V, 5V, and 9V. The 4.5V curve starts at (0,0) and ends at approximately (0.75, 12.5). The 5V curve starts at (0,0) and ends at approximately (0.75, 13.5). The 9V curve starts at (0,0) and ends at approximately (0.75, 14.5). A slanted line is drawn from (0,0) to (0.75, 12.5), representing the rated load current range.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.Values | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Load Current [A]</th> <th colspan="3">Input Power [W]</th> </tr> <tr> <th>Input Volt. 4.5[V]</th> <th>Input Volt. 5[V]</th> <th>Input Volt. 9[V]</th> </tr> </thead> <tbody> <tr><td>0.00</td><td>0.14</td><td>0.12</td><td>0.12</td></tr> <tr><td>0.14</td><td>2.50</td><td>2.50</td><td>2.75</td></tr> <tr><td>0.28</td><td>4.76</td><td>4.77</td><td>4.92</td></tr> <tr><td>0.42</td><td>7.13</td><td>7.08</td><td>7.16</td></tr> <tr><td>0.56</td><td>9.53</td><td>9.46</td><td>9.47</td></tr> <tr><td>0.70</td><td>12.04</td><td>11.98</td><td>11.78</td></tr> <tr><td>0.77</td><td>13.39</td><td>13.25</td><td>12.94</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] | Input Power [W] | | | Input Volt. 4.5[V] | Input Volt. 5[V] | Input Volt. 9[V] | 0.00 | 0.14 | 0.12 | 0.12 | 0.14 | 2.50 | 2.50 | 2.75 | 0.28 | 4.76 | 4.77 | 4.92 | 0.42 | 7.13 | 7.08 | 7.16 | 0.56 | 9.53 | 9.46 | 9.47 | 0.70 | 12.04 | 11.98 | 11.78 | 0.77 | 13.39 | 13.25 | 12.94 | -- | - | - | - | -- | - | - | - | -- | - | - | - | -- | - | - | - |
| Load Current [A] | Input Power [W] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Input Volt. 4.5[V] | Input Volt. 5[V] | Input Volt. 9[V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.00 | 0.14 | 0.12 | 0.12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.14 | 2.50 | 2.50 | 2.75 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.28 | 4.76 | 4.77 | 4.92 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.42 | 7.13 | 7.08 | 7.16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.56 | 9.53 | 9.46 | 9.47 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.70 | 12.04 | 11.98 | 11.78 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.77 | 13.39 | 13.25 | 12.94 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Note: | Slanted line shows the range of the rated load current. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

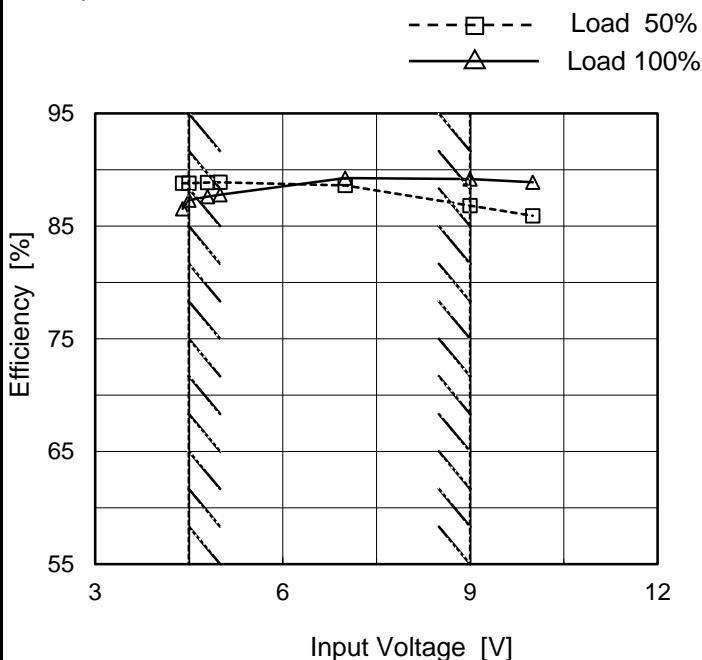
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Model MGS100515

Item Efficiency (by Input Voltage)

Object _____

1.Graph



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

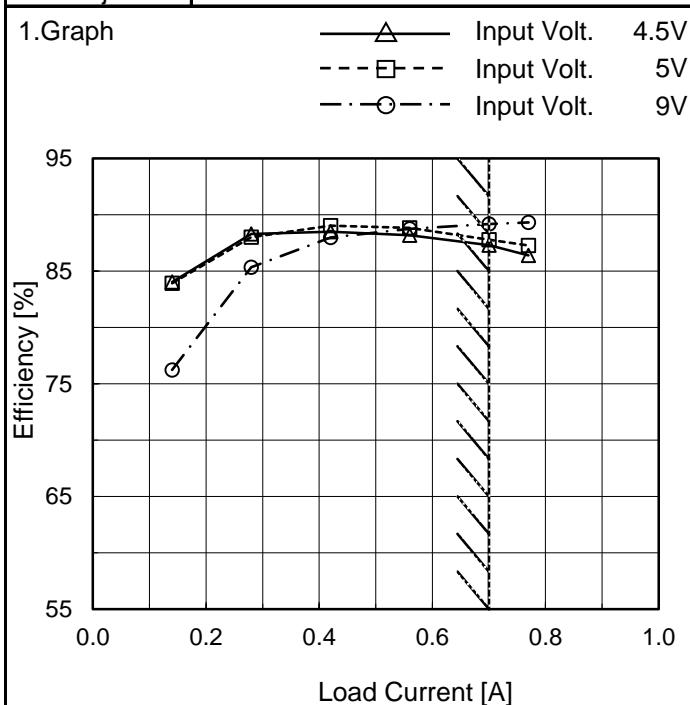
 Temperature 25°C
 Testing Circuitry Figure A

2.Values

| Input Voltage [V] | Efficiency [%] | |
|-------------------|----------------|-----------|
| | Load 50% | Load 100% |
| 4.4 | 88.8 | 86.5 |
| 4.5 | 88.8 | 87.3 |
| 4.8 | 88.9 | 87.6 |
| 5.0 | 88.9 | 87.8 |
| 7.0 | 88.6 | 89.3 |
| 9.0 | 86.8 | 89.2 |
| 10.0 | 85.9 | 88.9 |
| -- | - | - |
| -- | - | - |

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| | |
|--------|------------------------------|
| Model | MGS100515 |
| Item | Efficiency (by Load Current) |
| Object | _____ |



Temperature 25°C
Testing Circuitry Figure A

2.Values

| Load Current [A] | Efficiency [%] | | |
|------------------|--------------------|------------------|------------------|
| | Input Volt. 4.5[V] | Input Volt. 5[V] | Input Volt. 9[V] |
| 0.00 | - | - | - |
| 0.14 | 84.1 | 83.9 | 76.2 |
| 0.28 | 88.3 | 88.0 | 85.3 |
| 0.42 | 88.5 | 89.0 | 88.0 |
| 0.56 | 88.2 | 88.9 | 88.7 |
| 0.70 | 87.3 | 87.8 | 89.2 |
| 0.77 | 86.4 | 87.3 | 89.3 |
| -- | - | - | - |
| -- | - | - | - |
| -- | - | - | - |
| -- | - | - | - |

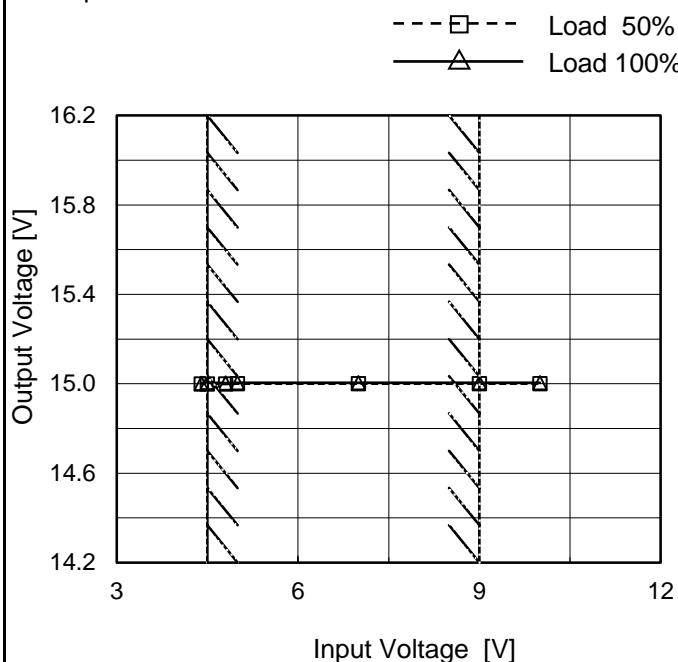
Note: Slanted line shows the range of the rated load current.

COSEL

| | |
|--------|-----------------|
| Model | MGS100515 |
| Item | Line Regulation |
| Object | +15V0.7A |

Temperature 25°C
 Testing Circuitry Figure A

1.Graph



2.Values

| Input Voltage [V] | Output Voltage [V] | |
|-------------------|--------------------|-----------|
| | Load 50% | Load 100% |
| 4.4 | 14.999 | 15.002 |
| 4.5 | 15.000 | 15.006 |
| 4.8 | 15.000 | 15.004 |
| 5.0 | 15.000 | 15.005 |
| 7.0 | 15.000 | 15.005 |
| 9.0 | 15.000 | 15.005 |
| 10.0 | 15.000 | 15.005 |
| -- | - | - |
| -- | - | - |

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

COSEL

| Model | MGS100515 | Temperature | 25°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--------------------|---|------------------|------------------|--------------------|--|--|--------------------|------------------|------------------|------|--------|--------|--------|------|--------|--------|--------|------|--------|--------|--------|------|--------|--------|--------|------|--------|--------|--------|------|--------|--------|--------|------|--------|--------|--------|----|---|---|---|----|---|---|---|----|---|---|---|----|---|---|---|
| Item | Load Regulation | Testing Circuitry | Figure A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | +15V0.7A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | | 2.Values | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>The graph shows the relationship between Output Voltage [V] on the Y-axis (ranging from 14.2 to 16.2) and Load Current [A] on the X-axis (ranging from 0.0 to 1.0). Three curves are plotted for different input voltages: 4.5V (solid line with triangle markers), 5V (dashed line with square markers), and 9V (dash-dot line with circle markers). All curves show a constant output voltage of 15.0V up to a certain load current, after which the output voltage drops. A slanted line on the graph indicates the range of the rated load current.</p> | | <table border="1"> <thead> <tr> <th rowspan="2">Load Current [A]</th> <th colspan="3">Output Voltage [V]</th> </tr> <tr> <th>Input Volt. 4.5[V]</th> <th>Input Volt. 5[V]</th> <th>Input Volt. 9[V]</th> </tr> </thead> <tbody> <tr><td>0.00</td><td>15.019</td><td>15.016</td><td>15.016</td></tr> <tr><td>0.14</td><td>15.015</td><td>15.013</td><td>15.012</td></tr> <tr><td>0.28</td><td>15.013</td><td>15.011</td><td>15.010</td></tr> <tr><td>0.42</td><td>15.011</td><td>15.009</td><td>15.008</td></tr> <tr><td>0.56</td><td>15.008</td><td>15.007</td><td>15.007</td></tr> <tr><td>0.70</td><td>15.006</td><td>15.005</td><td>15.005</td></tr> <tr><td>0.77</td><td>15.005</td><td>15.004</td><td>15.004</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] | | | Input Volt. 4.5[V] | Input Volt. 5[V] | Input Volt. 9[V] | 0.00 | 15.019 | 15.016 | 15.016 | 0.14 | 15.015 | 15.013 | 15.012 | 0.28 | 15.013 | 15.011 | 15.010 | 0.42 | 15.011 | 15.009 | 15.008 | 0.56 | 15.008 | 15.007 | 15.007 | 0.70 | 15.006 | 15.005 | 15.005 | 0.77 | 15.005 | 15.004 | 15.004 | -- | - | - | - | -- | - | - | - | -- | - | - | - | -- | - | - | - |
| Load Current [A] | Output Voltage [V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Input Volt. 4.5[V] | Input Volt. 5[V] | Input Volt. 9[V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.00 | 15.019 | 15.016 | 15.016 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.14 | 15.015 | 15.013 | 15.012 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.28 | 15.013 | 15.011 | 15.010 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.42 | 15.011 | 15.009 | 15.008 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.56 | 15.008 | 15.007 | 15.007 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.70 | 15.006 | 15.005 | 15.005 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.77 | 15.005 | 15.004 | 15.004 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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

COSEL

| | |
|--------|-----------------------|
| Model | MGS100515 |
| Item | Dynamic Load Response |
| Object | +15V0.7A |

Temperature 25°C
Testing Circuitry Figure AInput Volt. 5 V
Cycle 100 msMin.Load (0A) →
Load 100% (0.7A)

500 mV/div

2 ms/div

2 ms/div

Min.Load (0A) →
Load 50% (0.35A)

500 mV/div

2 ms/div

2 ms/div

Load 50% (0.35A) →
Load 100% (0.7A)

500 mV/div

2 ms/div

2 ms/div

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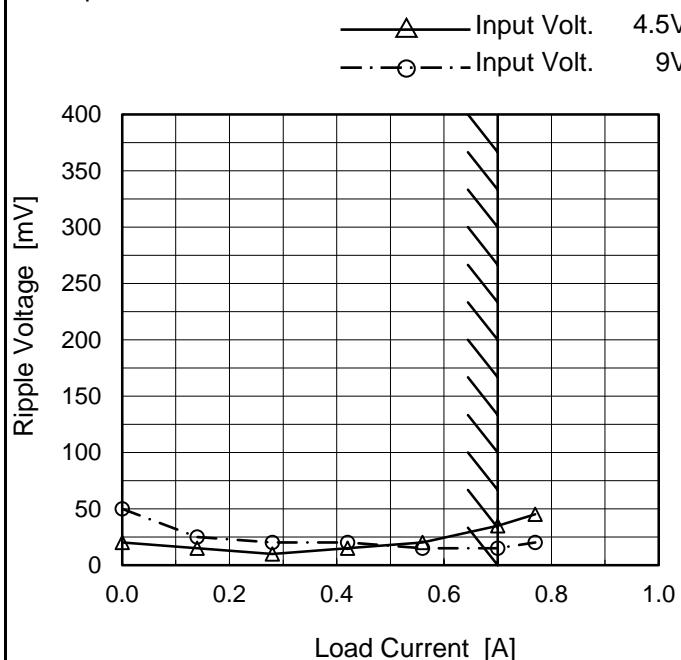
| Model | MGS100515 | Temperature Testing Circuitry 25°C Figure B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|----------------------------------|---|------------------|---------------------|--|---------------------|-------------------|------|----|----|------|---|----|------|---|----|------|----|----|------|----|----|------|----|----|------|----|----|----|---|---|----|---|---|----|---|---|----|---|---|
| Item | Ripple Voltage (by Load Current) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | +15V0.7A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | | 2.Values | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Graph showing Ripple Voltage [mV] vs Load Current [A]. The Y-axis ranges from 0 to 400 mV, and the X-axis ranges from 0.0 to 1.0 A. Two curves are shown: one for 4.5V input (solid line with open circles) and one for 9V input (dashed line with open triangles). Both curves show a slight increase in ripple voltage as load current increases, with a sharp rise near 0.7A. A slanted line indicates the rated load current range.</p> | | <table border="1"> <thead> <tr> <th rowspan="2">Load Current [A]</th> <th colspan="2">Ripple Voltage [mV]</th> </tr> <tr> <th>Input Volt. 4.5 [V]</th> <th>Input Volt. 9 [V]</th> </tr> </thead> <tbody> <tr><td>0.00</td><td>15</td><td>50</td></tr> <tr><td>0.14</td><td>5</td><td>15</td></tr> <tr><td>0.28</td><td>5</td><td>10</td></tr> <tr><td>0.42</td><td>10</td><td>15</td></tr> <tr><td>0.56</td><td>15</td><td>10</td></tr> <tr><td>0.70</td><td>30</td><td>10</td></tr> <tr><td>0.77</td><td>45</td><td>15</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. 4.5 [V] | Input Volt. 9 [V] | 0.00 | 15 | 50 | 0.14 | 5 | 15 | 0.28 | 5 | 10 | 0.42 | 10 | 15 | 0.56 | 15 | 10 | 0.70 | 30 | 10 | 0.77 | 45 | 15 | -- | - | - | -- | - | - | -- | - | - | -- | - | - |
| Load Current [A] | Ripple Voltage [mV] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Input Volt. 4.5 [V] | Input Volt. 9 [V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.00 | 15 | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.14 | 5 | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.28 | 5 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.42 | 10 | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.56 | 15 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.70 | 30 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.77 | 45 | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <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> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

COSEL

| | |
|--------|--------------|
| Model | MGS100515 |
| Item | Ripple-Noise |
| Object | +15V0.7A |

Temperature 25°C
Testing Circuitry Figure B

1. Graph



2. Values

| Load Current [A] | Ripple-Noise [mV] | |
|------------------|---------------------|-------------------|
| | Input Volt. 4.5 [V] | Input Volt. 9 [V] |
| 0.00 | 20 | 50 |
| 0.14 | 15 | 25 |
| 0.28 | 10 | 20 |
| 0.42 | 15 | 20 |
| 0.56 | 20 | 15 |
| 0.70 | 35 | 15 |
| 0.77 | 45 | 20 |
| -- | - | - |
| -- | - | - |
| -- | - | - |
| -- | - | - |

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.

Ripple Noise[mVp-p]

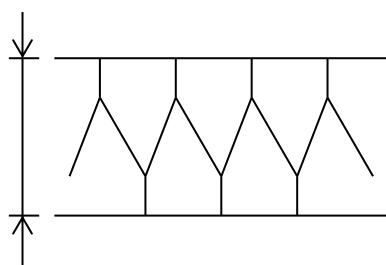


Fig.Complex Ripple Noise Wave Form

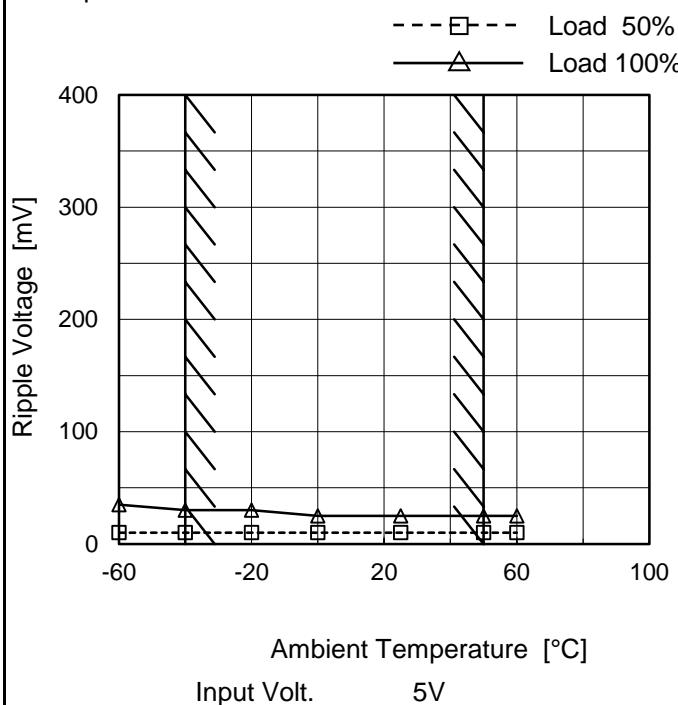
COSEL

Model MGS100515

Item Ripple Voltage (by Ambient Temp.)

Object +15V0.7A

1.Graph



Measured by 100 MHz Oscilloscope.

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

Testing Circuitry Figure B

2.Values

| Ambient Temperature [°C] | Ripple Voltage [mV] | |
|--------------------------|---------------------|-----------|
| | Load 50% | Load 100% |
| -60 | 10 | 35 |
| -40 | 10 | 30 |
| -20 | 10 | 30 |
| 0 | 10 | 25 |
| 25 | 10 | 25 |
| 50 | 10 | 25 |
| 60 | 10 | 25 |
| -- | - | - |
| -- | - | - |
| -- | - | - |
| -- | - | - |

COSEL

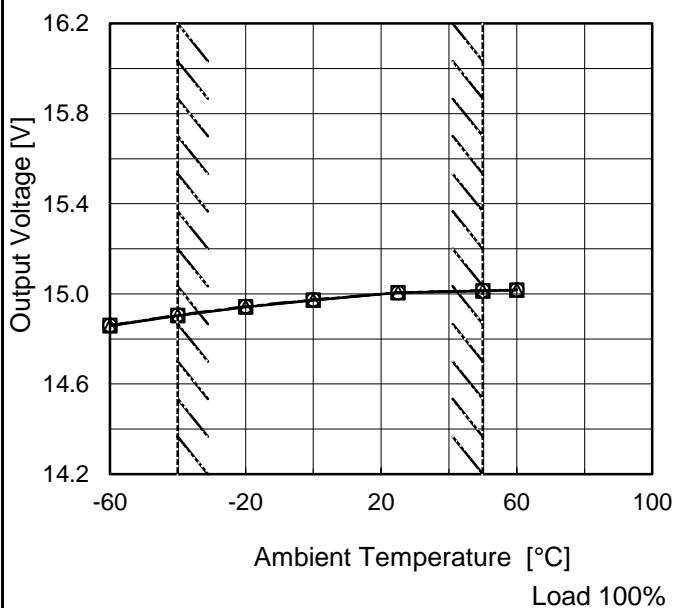
Model MGS100515

Item Ambient Temperature Drift

Object +15V0.7A

1.Graph

—△— Input Volt. 4.5V
 - - -□--- Input Volt. 5V
 - - -○--- Input Volt. 9V



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

Testing Circuitry Figure A

2.Values

| Ambient Temperature [°C] | Output Voltage [V] | | |
|--------------------------|--------------------|------------------|------------------|
| | Input Volt. 4.5[V] | Input Volt. 5[V] | Input Volt. 9[V] |
| -60 | 14.858 | 14.860 | 14.860 |
| -40 | 14.903 | 14.905 | 14.905 |
| -20 | 14.942 | 14.943 | 14.944 |
| 0 | 14.972 | 14.973 | 14.974 |
| 25 | 15.006 | 15.005 | 15.005 |
| 50 | 15.013 | 15.014 | 15.015 |
| 60 | 15.016 | 15.017 | 15.019 |
| -- | - | - | - |
| -- | - | - | - |
| -- | - | - | - |
| -- | - | - | - |



| | | |
|--------|-------------------------|----------------------------|
| Model | MGS100515 | Testing Circuitry Figure A |
| Item | Output Voltage Accuracy | |
| Object | +15V0.7A | |

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 - 50°C

Input Voltage : 4.5 - 9V

Load Current : 0 - 0.7A

* 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

| Item | Temperature [°C] | Input Voltage[V] | Output | | Output Voltage Accuracy | |
|-----------------|---------------------|---------------------|------------|------------|-------------------------|-----------|
| | | | Current[A] | Voltage[V] | Value [mV] | Ratio [%] |
| Maximum Voltage | 50 | 4.5 | 0 | 15.025 | ±61 | ±0.4 |
| Minimum Voltage | -40 | 4.5 | 0.7 | 14.903 | | |

COSEL

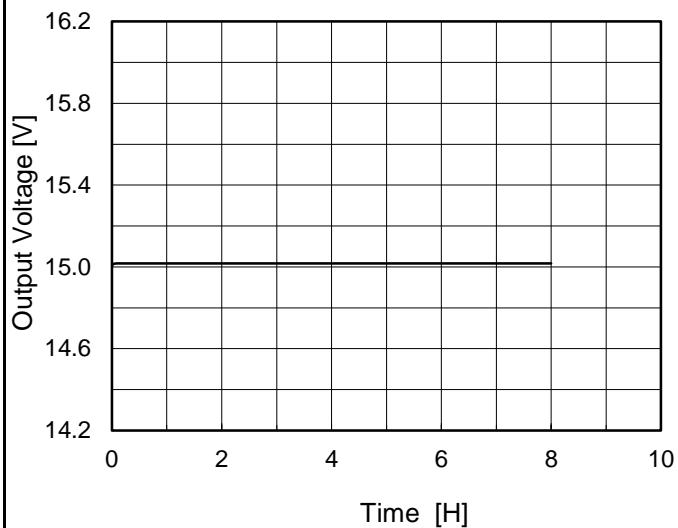
Model MGS100515

Item Time Lapse Drift

Object +15V0.7A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



2.Values

| Time since start [H] | Output Voltage [V] |
|----------------------|--------------------|
| 0.0 | 15.008 |
| 0.5 | 15.017 |
| 1.0 | 15.017 |
| 2.0 | 15.017 |
| 3.0 | 15.017 |
| 4.0 | 15.017 |
| 5.0 | 15.017 |
| 6.0 | 15.017 |
| 7.0 | 15.017 |
| 8.0 | 15.017 |

COSEL

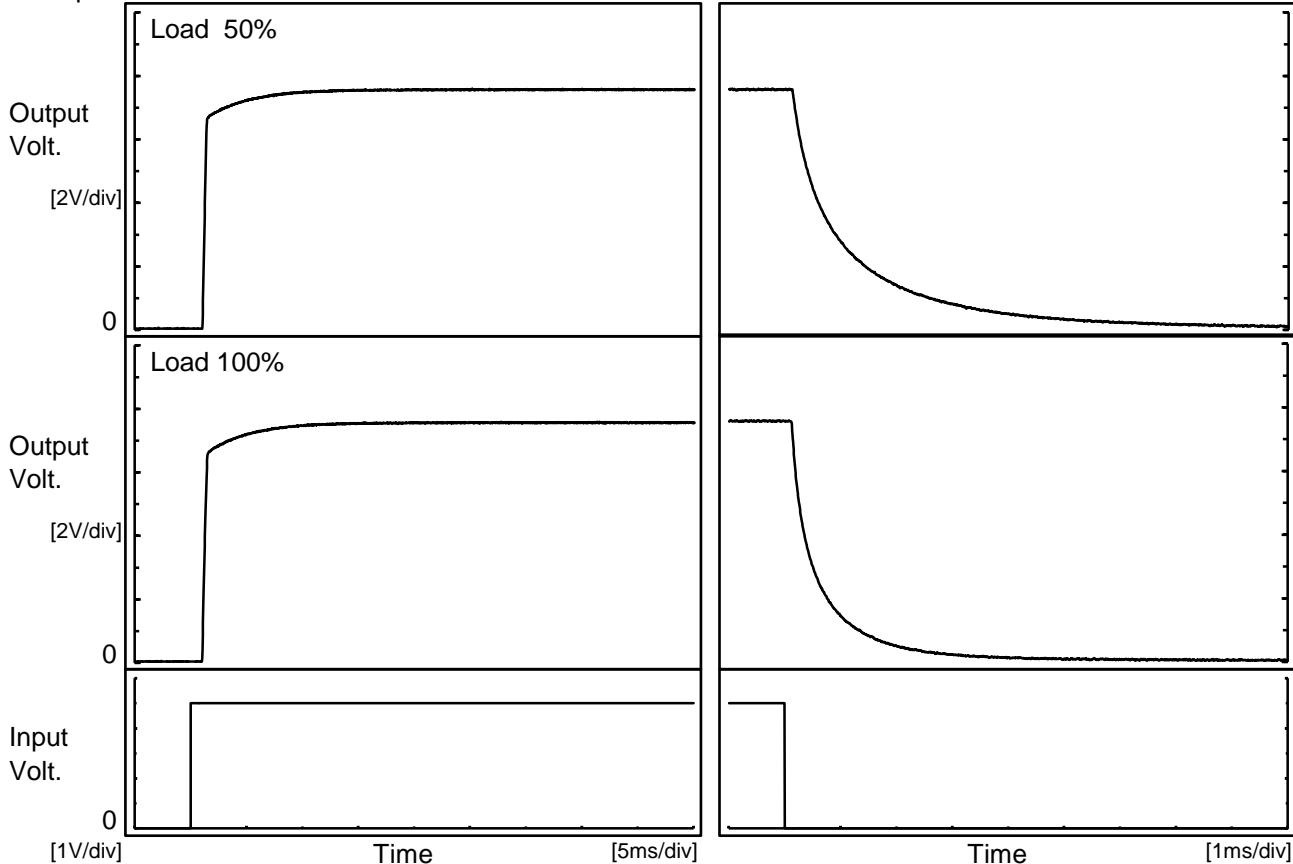
Model MGS100515

Item Rise and Fall Time

Object +15V0.7A

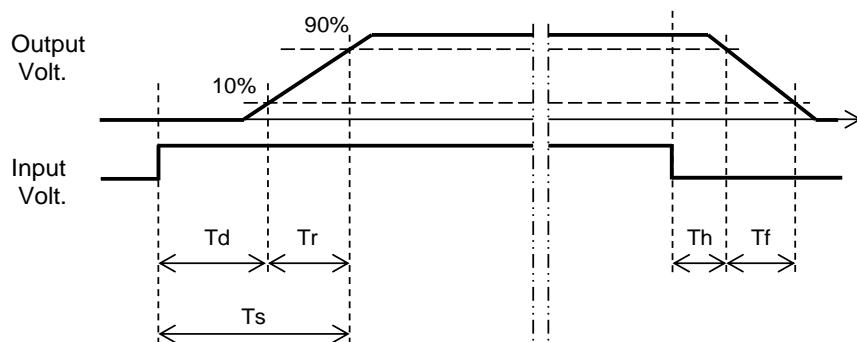
Temperature 25°C
Testing Circuitry Figure A

1. Graph



2. Values

| Load | Time | Td | Tr | Ts | Th | Tf | [ms] |
|-------|------|-----|-----|-----|-----|-----|------|
| 50 % | | 1.1 | 0.8 | 1.9 | 0.2 | 2.9 | |
| 100 % | | 1.1 | 1.2 | 2.3 | 0.2 | 1.4 | |



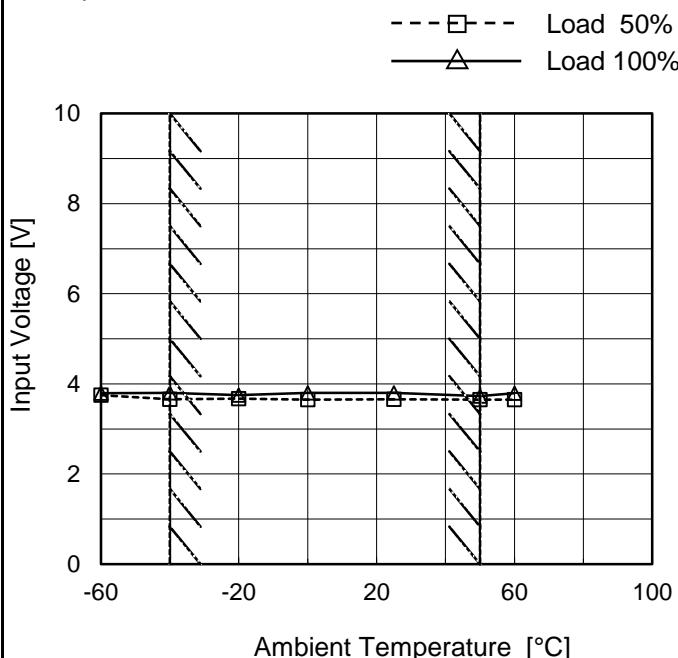
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Model MGS100515

Item Minimum Input Voltage
for Regulated Output Voltage

Object +15V0.7A

1.Graph



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

Testing Circuitry Figure A

2.Values

| Ambient Temperature [°C] | Input Voltage [V] | |
|--------------------------|-------------------|-----------|
| | Load 50% | Load 100% |
| -60 | 3.8 | 3.8 |
| -40 | 3.7 | 3.8 |
| -20 | 3.7 | 3.8 |
| 0 | 3.7 | 3.8 |
| 25 | 3.7 | 3.8 |
| 50 | 3.7 | 3.8 |
| 60 | 3.7 | 3.8 |
| -- | - | - |
| -- | - | - |
| -- | - | - |
| -- | - | - |

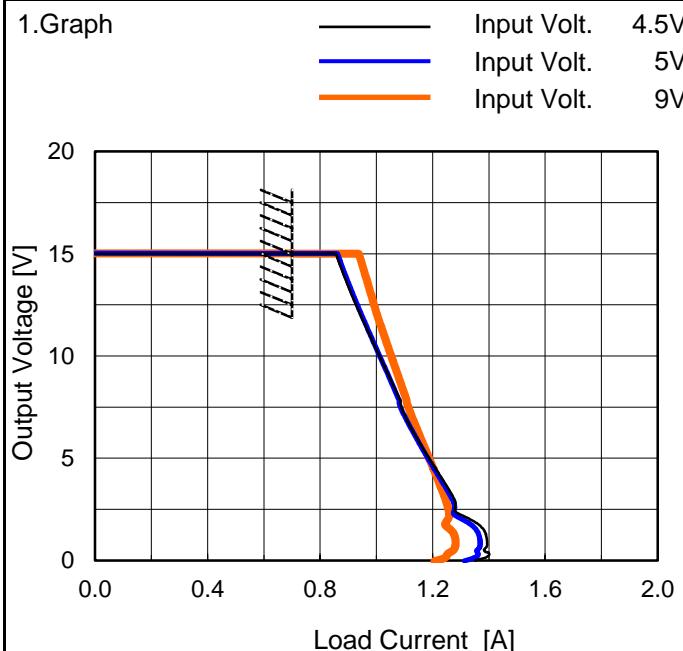
COSEL

Model MGS100515

Item Overcurrent Protection

Object +15V0.7A

1.Graph



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

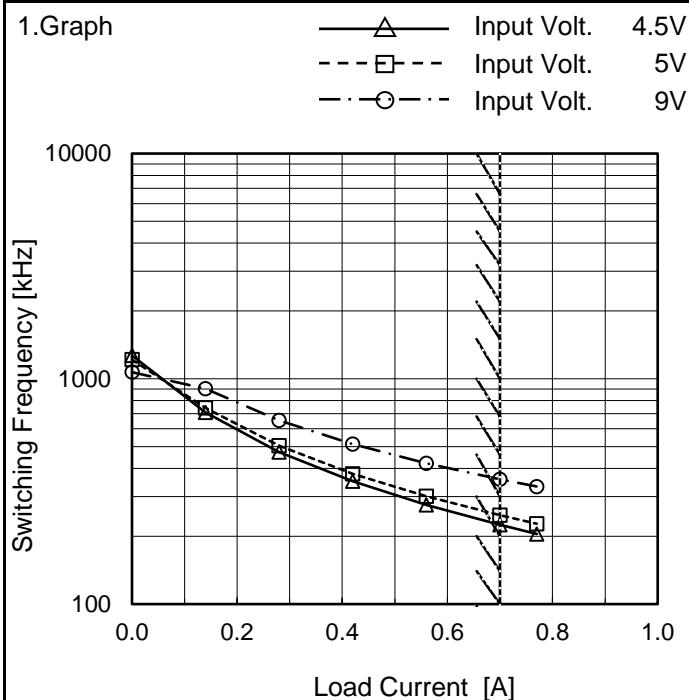
 Temperature 25°C
 Testing Circuitry Figure A

2.Values

| Output Voltage [V] | Load Current [A] | | |
|--------------------|--------------------|------------------|------------------|
| | Input Volt. 4.5[V] | Input Volt. 5[V] | Input Volt. 9[V] |
| 15.0 | 0.70 | 0.71 | 0.71 |
| 14.3 | 0.88 | 0.88 | 0.95 |
| 13.5 | 0.90 | 0.90 | 0.97 |
| 12.0 | 0.94 | 0.95 | 1.00 |
| 10.5 | 0.99 | 1.00 | 1.04 |
| 9.0 | 1.04 | 1.04 | 1.08 |
| 7.5 | 1.09 | 1.08 | 1.11 |
| 6.0 | 1.14 | 1.14 | 1.16 |
| 4.5 | 1.21 | 1.20 | 1.20 |
| 3.0 | 1.28 | 1.27 | 1.24 |
| 1.5 | 1.38 | 1.36 | 1.26 |
| 0.0 | 1.35 | 1.31 | 1.21 |

COSEL

| | |
|--------|---------------------------------------|
| Model | MGS100515 |
| Item | Switching Frequency (by Load Current) |
| Object | +15V0.7A |


 Temperature 25°C
 Testing Circuitry Figure A

2.Values

| Load Current [A] | Frequency [kHz] | | |
|------------------|--------------------|------------------|------------------|
| | Input Volt. 4.5[V] | Input Volt. 5[V] | Input Volt. 9[V] |
| 0.00 | 1270 | 1217 | 1070 |
| 0.14 | 709 | 742 | 905 |
| 0.28 | 473 | 505 | 653 |
| 0.42 | 351 | 379 | 514 |
| 0.56 | 276 | 301 | 422 |
| 0.70 | 225 | 248 | 358 |
| 0.77 | 205 | 227 | 333 |
| -- | - | - | - |
| -- | - | - | - |
| -- | - | - | - |
| -- | - | - | - |

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

When load current is low, MG operates intermittently, so switching frequency would not become constant.

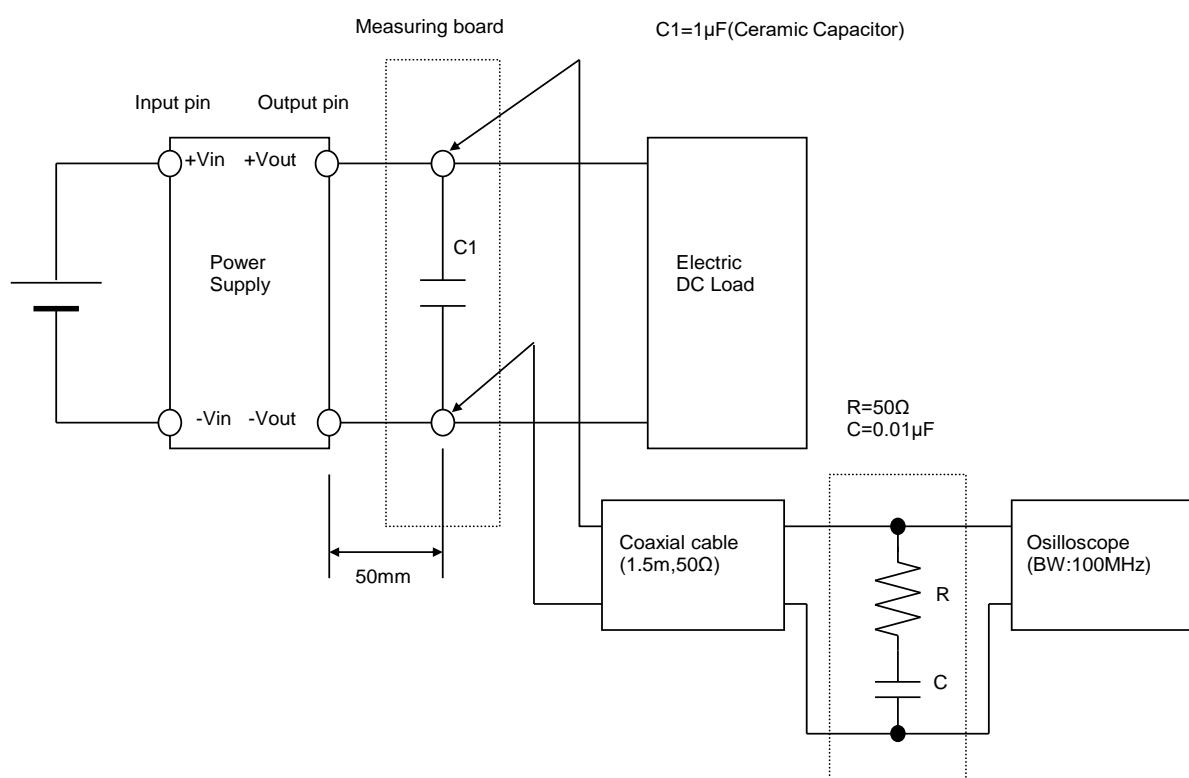
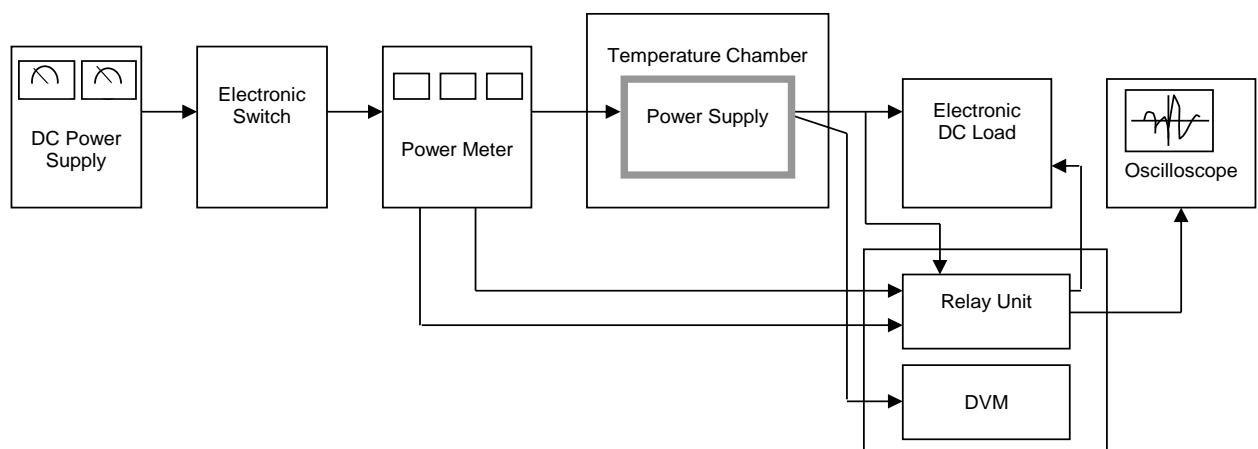


Figure B (Ripple and Ripple noise Characteristic)