



# TEST DATA OF STMGFW302412

Regulated DC Power Supply  
January 30, 2013

Approved by :

*Takahiro Yoneda*

Takahiro Yoneda

Design Manager

Prepared by :

*Satoshi Kinoshita*

Satoshi Kinoshita

Design Engineer

**COSEL CO.,LTD.**

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| Model             | STMGFW302412   | Temperature<br>Testing Circuitry | 25°C<br>Figure A |                   |                   |  |  |         |          |           |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |    |   |   |   |    |   |   |   |    |   |   |   |    |   |   |   |
|-------------------|--|----------------------------------|------------------|-------------------|-------------------|--|--|---------|----------|-----------|-----|-------|-------|-------|-----|-------|-------|-------|-----|-------|-------|-------|-----|-------|-------|-------|-----|-------|-------|-------|-----|-------|-------|-------|-----|-------|-------|-------|-----|-------|-------|-------|-----|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|----|---|---|---|----|---|---|---|----|---|---|---|----|---|---|---|
| Item              | Input Current (by Input Voltage)   |                                  |                  |                   |                   |  |  |         |          |           |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |    |   |   |   |    |   |   |   |    |   |   |   |    |   |   |   |
| Object            | —  |                                  |                  |                   |                   |  |  |         |          |           |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |    |   |   |   |    |   |   |   |    |   |   |   |    |   |   |   |
| 1. Graph          | <p>Input Current [A]</p> <p>Input Voltage [V]</p> <p>Legend: ▲ Load 100%, ■ Load 50%, ○ Load 0%</p>  |                                  |                  |                   |                   |  |  |         |          |           |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |    |   |   |   |    |   |   |   |    |   |   |   |    |   |   |   |
| Note:             | Slanted line shows the range of the rated input voltage.   |                                  |                  |                   |                   |  |  |         |          |           |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |    |   |   |   |    |   |   |   |    |   |   |   |    |   |   |   |
| 2. Values         | <table border="1"> <thead> <tr> <th rowspan="2">Input Voltage [V]</th> <th colspan="3">Input Current [A]</th> </tr> <tr> <th>Load 0%</th> <th>Load 50%</th> <th>Load 100%</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>0.000</td><td>0.000</td><td>0.000</td></tr> <tr><td>6.0</td><td>0.002</td><td>0.001</td><td>0.001</td></tr> <tr><td>7.0</td><td>0.003</td><td>0.002</td><td>0.002</td></tr> <tr><td>8.0</td><td>0.002</td><td>0.002</td><td>0.002</td></tr> <tr><td>8.4</td><td>0.043</td><td>2.050</td><td>1.529</td></tr> <tr><td>8.5</td><td>0.044</td><td>2.023</td><td>4.242</td></tr> <tr><td>8.8</td><td>0.044</td><td>1.934</td><td>4.022</td></tr> <tr><td>9.0</td><td>0.043</td><td>1.888</td><td>3.888</td></tr> <tr><td>9.2</td><td>0.043</td><td>1.864</td><td>3.879</td></tr> <tr><td>12.0</td><td>0.040</td><td>1.415</td><td>2.875</td></tr> <tr><td>18.0</td><td>0.035</td><td>0.979</td><td>1.912</td></tr> <tr><td>24.0</td><td>0.028</td><td>0.730</td><td>1.436</td></tr> <tr><td>36.0</td><td>0.023</td><td>0.507</td><td>0.982</td></tr> <tr><td>40.0</td><td>0.023</td><td>0.462</td><td>0.901</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> |                                  |                  | Input Voltage [V] | Input Current [A] |  |  | Load 0% | Load 50% | Load 100% | 0.0 | 0.000 | 0.000 | 0.000 | 6.0 | 0.002 | 0.001 | 0.001 | 7.0 | 0.003 | 0.002 | 0.002 | 8.0 | 0.002 | 0.002 | 0.002 | 8.4 | 0.043 | 2.050 | 1.529 | 8.5 | 0.044 | 2.023 | 4.242 | 8.8 | 0.044 | 1.934 | 4.022 | 9.0 | 0.043 | 1.888 | 3.888 | 9.2 | 0.043 | 1.864 | 3.879 | 12.0 | 0.040 | 1.415 | 2.875 | 18.0 | 0.035 | 0.979 | 1.912 | 24.0 | 0.028 | 0.730 | 1.436 | 36.0 | 0.023 | 0.507 | 0.982 | 40.0 | 0.023 | 0.462 | 0.901 | -- | - | - | - | -- | - | - | - | -- | - | - | - | -- | - | - | - |
| Input Voltage [V] | Input Current [A]  |                                  |                  |                   |                   |  |  |         |          |           |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |    |   |   |   |    |   |   |   |    |   |   |   |    |   |   |   |
|                   | Load 0%  | Load 50%                         | Load 100%        |                   |                   |  |  |         |          |           |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |    |   |   |   |    |   |   |   |    |   |   |   |    |   |   |   |
| 0.0               | 0.000  | 0.000                            | 0.000            |                   |                   |  |  |         |          |           |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |    |   |   |   |    |   |   |   |    |   |   |   |    |   |   |   |
| 6.0               | 0.002  | 0.001                            | 0.001            |                   |                   |  |  |         |          |           |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |    |   |   |   |    |   |   |   |    |   |   |   |    |   |   |   |
| 7.0               | 0.003  | 0.002                            | 0.002            |                   |                   |  |  |         |          |           |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |    |   |   |   |    |   |   |   |    |   |   |   |    |   |   |   |
| 8.0               | 0.002  | 0.002                            | 0.002            |                   |                   |  |  |         |          |           |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |    |   |   |   |    |   |   |   |    |   |   |   |    |   |   |   |
| 8.4               | 0.043  | 2.050                            | 1.529            |                   |                   |  |  |         |          |           |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |    |   |   |   |    |   |   |   |    |   |   |   |    |   |   |   |
| 8.5               | 0.044  | 2.023                            | 4.242            |                   |                   |  |  |         |          |           |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |    |   |   |   |    |   |   |   |    |   |   |   |    |   |   |   |
| 8.8               | 0.044  | 1.934                            | 4.022            |                   |                   |  |  |         |          |           |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |    |   |   |   |    |   |   |   |    |   |   |   |    |   |   |   |
| 9.0               | 0.043  | 1.888                            | 3.888            |                   |                   |  |  |         |          |           |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |    |   |   |   |    |   |   |   |    |   |   |   |    |   |   |   |
| 9.2               | 0.043  | 1.864                            | 3.879            |                   |                   |  |  |         |          |           |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |    |   |   |   |    |   |   |   |    |   |   |   |    |   |   |   |
| 12.0              | 0.040  | 1.415                            | 2.875            |                   |                   |  |  |         |          |           |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |    |   |   |   |    |   |   |   |    |   |   |   |    |   |   |   |
| 18.0              | 0.035  | 0.979                            | 1.912            |                   |                   |  |  |         |          |           |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |    |   |   |   |    |   |   |   |    |   |   |   |    |   |   |   |
| 24.0              | 0.028  | 0.730                            | 1.436            |                   |                   |  |  |         |          |           |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |    |   |   |   |    |   |   |   |    |   |   |   |    |   |   |   |
| 36.0              | 0.023  | 0.507                            | 0.982            |                   |                   |  |  |         |          |           |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |    |   |   |   |    |   |   |   |    |   |   |   |    |   |   |   |
| 40.0              | 0.023  | 0.462                            | 0.901            |                   |                   |  |  |         |          |           |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |    |   |   |   |    |   |   |   |    |   |   |   |    |   |   |   |
| --                | -  | -                                | -                |                   |                   |  |  |         |          |           |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |    |   |   |   |    |   |   |   |    |   |   |   |    |   |   |   |
| --                | -  | -                                | -                |                   |                   |  |  |         |          |           |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |    |   |   |   |    |   |   |   |    |   |   |   |    |   |   |   |
| --                | -  | -                                | -                |                   |                   |  |  |         |          |           |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |    |   |   |   |    |   |   |   |    |   |   |   |    |   |   |   |
| --                | -  | -                                | -                |                   |                   |  |  |         |          |           |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |     |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |      |       |       |       |    |   |   |   |    |   |   |   |    |   |   |   |    |   |   |   |

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| Model           | STMGFW302412   | Temperature       | 25°C              |         |         |         |         |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |    |    |   |   |   |   |    |    |   |   |   |   |    |    |   |   |   |   |    |          |   |   |   |   |  |  |  |
|-----------------|--|-------------------|-------------------|---------|---------|---------|---------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|----|---|---|---|---|----|----|---|---|---|---|----|----|---|---|---|---|----|----------|---|---|---|---|--|--|--|
| Item            | Input Current (by Load Current)  | Testing Circuitry | Figure A          |         |         |         |         |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |    |    |   |   |   |   |    |    |   |   |   |   |    |    |   |   |   |   |    |          |   |   |   |   |  |  |  |
| Object          | _____  |                   |                   |         |         |         |         |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |    |    |   |   |   |   |    |    |   |   |   |   |    |    |   |   |   |   |    |          |   |   |   |   |  |  |  |
| 1.Graph         | <p>—△— Input Volt. 9V<br/>       - - -□- Input Volt. 12V<br/>       - - * - Input Volt. 18V<br/>       - - ○ - Input Volt. 24V<br/>       - - ◇ - Input Volt. 36V</p> <table border="1"> <caption>Data points estimated from Figure A</caption> <thead> <tr> <th>Load Ration [%]</th> <th>9V [A]</th> <th>12V [A]</th> <th>18V [A]</th> <th>24V [A]</th> <th>36V [A]</th> </tr> </thead> <tbody> <tr><td>0</td><td>0.044</td><td>0.039</td><td>0.035</td><td>0.028</td><td>0.024</td></tr> <tr><td>20</td><td>0.794</td><td>0.599</td><td>0.411</td><td>0.314</td><td>0.224</td></tr> <tr><td>40</td><td>1.514</td><td>1.143</td><td>0.778</td><td>0.594</td><td>0.416</td></tr> <tr><td>60</td><td>2.282</td><td>1.704</td><td>1.146</td><td>0.872</td><td>0.601</td></tr> <tr><td>80</td><td>3.079</td><td>2.281</td><td>1.521</td><td>1.147</td><td>0.794</td></tr> <tr><td>100</td><td>3.888</td><td>2.875</td><td>1.912</td><td>1.436</td><td>0.982</td></tr> <tr><td>110</td><td>4.293</td><td>3.170</td><td>2.102</td><td>1.576</td><td>1.080</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr> </tbody> </table> | Load Ration [%]   | 9V [A]            | 12V [A] | 18V [A] | 24V [A] | 36V [A] | 0    | 0.044 | 0.039 | 0.035 | 0.028 | 0.024 | 20    | 0.794 | 0.599 | 0.411 | 0.314 | 0.224 | 40    | 1.514 | 1.143 | 0.778 | 0.594 | 0.416 | 60    | 2.282 | 1.704 | 1.146 | 0.872 | 0.601 | 80    | 3.079 | 2.281 | 1.521 | 1.147 | 0.794 | 100   | 3.888 | 2.875 | 1.912 | 1.436 | 0.982 | 110   | 4.293 | 3.170 | 2.102 | 1.576 | 1.080 | --    | -     | -     | -     | -     | -  | -- | - | - | - | - | -  | -- | - | - | - | - | -  | -- | - | - | - | - | -  | 2.Values |   |   |   |   |  |  |  |
| Load Ration [%] | 9V [A]   | 12V [A]           | 18V [A]           | 24V [A] | 36V [A] |         |         |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |    |    |   |   |   |   |    |    |   |   |   |   |    |    |   |   |   |   |    |          |   |   |   |   |  |  |  |
| 0               | 0.044  | 0.039             | 0.035             | 0.028   | 0.024   |         |         |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |    |    |   |   |   |   |    |    |   |   |   |   |    |    |   |   |   |   |    |          |   |   |   |   |  |  |  |
| 20              | 0.794  | 0.599             | 0.411             | 0.314   | 0.224   |         |         |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |    |    |   |   |   |   |    |    |   |   |   |   |    |    |   |   |   |   |    |          |   |   |   |   |  |  |  |
| 40              | 1.514  | 1.143             | 0.778             | 0.594   | 0.416   |         |         |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |    |    |   |   |   |   |    |    |   |   |   |   |    |    |   |   |   |   |    |          |   |   |   |   |  |  |  |
| 60              | 2.282  | 1.704             | 1.146             | 0.872   | 0.601   |         |         |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |    |    |   |   |   |   |    |    |   |   |   |   |    |    |   |   |   |   |    |          |   |   |   |   |  |  |  |
| 80              | 3.079  | 2.281             | 1.521             | 1.147   | 0.794   |         |         |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |    |    |   |   |   |   |    |    |   |   |   |   |    |    |   |   |   |   |    |          |   |   |   |   |  |  |  |
| 100             | 3.888  | 2.875             | 1.912             | 1.436   | 0.982   |         |         |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |    |    |   |   |   |   |    |    |   |   |   |   |    |    |   |   |   |   |    |          |   |   |   |   |  |  |  |
| 110             | 4.293  | 3.170             | 2.102             | 1.576   | 1.080   |         |         |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |    |    |   |   |   |   |    |    |   |   |   |   |    |    |   |   |   |   |    |          |   |   |   |   |  |  |  |
| --              | -  | -                 | -                 | -       | -       |         |         |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |    |    |   |   |   |   |    |    |   |   |   |   |    |    |   |   |   |   |    |          |   |   |   |   |  |  |  |
| --              | -  | -                 | -                 | -       | -       |         |         |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |    |    |   |   |   |   |    |    |   |   |   |   |    |    |   |   |   |   |    |          |   |   |   |   |  |  |  |
| --              | -  | -                 | -                 | -       | -       |         |         |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |    |    |   |   |   |   |    |    |   |   |   |   |    |    |   |   |   |   |    |          |   |   |   |   |  |  |  |
| --              | -  | -                 | -                 | -       | -       |         |         |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |    |    |   |   |   |   |    |    |   |   |   |   |    |    |   |   |   |   |    |          |   |   |   |   |  |  |  |
|                 | <table border="1"> <thead> <tr> <th rowspan="2">Load Ration [%]</th> <th colspan="5">Input Current [A]</th> </tr> <tr> <th>9[V]</th> <th>12[V]</th> <th>18[V]</th> <th>24[V]</th> <th>36[V]</th> </tr> </thead> <tbody> <tr><td>0</td><td>0.044</td><td>0.039</td><td>0.035</td><td>0.028</td><td>0.024</td></tr> <tr><td>20</td><td>0.794</td><td>0.599</td><td>0.411</td><td>0.314</td><td>0.224</td></tr> <tr><td>40</td><td>1.514</td><td>1.143</td><td>0.778</td><td>0.594</td><td>0.416</td></tr> <tr><td>60</td><td>2.282</td><td>1.704</td><td>1.146</td><td>0.872</td><td>0.601</td></tr> <tr><td>80</td><td>3.079</td><td>2.281</td><td>1.521</td><td>1.147</td><td>0.794</td></tr> <tr><td>100</td><td>3.888</td><td>2.875</td><td>1.912</td><td>1.436</td><td>0.982</td></tr> <tr><td>110</td><td>4.293</td><td>3.170</td><td>2.102</td><td>1.576</td><td>1.080</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr> </tbody> </table>  | Load Ration [%]   | Input Current [A] |         |         |         |         | 9[V] | 12[V] | 18[V] | 24[V] | 36[V] | 0     | 0.044 | 0.039 | 0.035 | 0.028 | 0.024 | 20    | 0.794 | 0.599 | 0.411 | 0.314 | 0.224 | 40    | 1.514 | 1.143 | 0.778 | 0.594 | 0.416 | 60    | 2.282 | 1.704 | 1.146 | 0.872 | 0.601 | 80    | 3.079 | 2.281 | 1.521 | 1.147 | 0.794 | 100   | 3.888 | 2.875 | 1.912 | 1.436 | 0.982 | 110   | 4.293 | 3.170 | 2.102 | 1.576 | 1.080 | -- | -  | - | - | - | - | -- | -  | - | - | - | - | -- | -  | - | - | - | - | -- | -        | - | - | - | - |  |  |  |
| Load Ration [%] | Input Current [A]  |                   |                   |         |         |         |         |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |    |    |   |   |   |   |    |    |   |   |   |   |    |    |   |   |   |   |    |          |   |   |   |   |  |  |  |
|                 | 9[V]   | 12[V]             | 18[V]             | 24[V]   | 36[V]   |         |         |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |    |    |   |   |   |   |    |    |   |   |   |   |    |    |   |   |   |   |    |          |   |   |   |   |  |  |  |
| 0               | 0.044  | 0.039             | 0.035             | 0.028   | 0.024   |         |         |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |    |    |   |   |   |   |    |    |   |   |   |   |    |    |   |   |   |   |    |          |   |   |   |   |  |  |  |
| 20              | 0.794  | 0.599             | 0.411             | 0.314   | 0.224   |         |         |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |    |    |   |   |   |   |    |    |   |   |   |   |    |    |   |   |   |   |    |          |   |   |   |   |  |  |  |
| 40              | 1.514  | 1.143             | 0.778             | 0.594   | 0.416   |         |         |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |    |    |   |   |   |   |    |    |   |   |   |   |    |    |   |   |   |   |    |          |   |   |   |   |  |  |  |
| 60              | 2.282  | 1.704             | 1.146             | 0.872   | 0.601   |         |         |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |    |    |   |   |   |   |    |    |   |   |   |   |    |    |   |   |   |   |    |          |   |   |   |   |  |  |  |
| 80              | 3.079  | 2.281             | 1.521             | 1.147   | 0.794   |         |         |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |    |    |   |   |   |   |    |    |   |   |   |   |    |    |   |   |   |   |    |          |   |   |   |   |  |  |  |
| 100             | 3.888  | 2.875             | 1.912             | 1.436   | 0.982   |         |         |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |    |    |   |   |   |   |    |    |   |   |   |   |    |    |   |   |   |   |    |          |   |   |   |   |  |  |  |
| 110             | 4.293  | 3.170             | 2.102             | 1.576   | 1.080   |         |         |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |    |    |   |   |   |   |    |    |   |   |   |   |    |    |   |   |   |   |    |          |   |   |   |   |  |  |  |
| --              | -  | -                 | -                 | -       | -       |         |         |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |    |    |   |   |   |   |    |    |   |   |   |   |    |    |   |   |   |   |    |          |   |   |   |   |  |  |  |
| --              | -  | -                 | -                 | -       | -       |         |         |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |    |    |   |   |   |   |    |    |   |   |   |   |    |    |   |   |   |   |    |          |   |   |   |   |  |  |  |
| --              | -  | -                 | -                 | -       | -       |         |         |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |    |    |   |   |   |   |    |    |   |   |   |   |    |    |   |   |   |   |    |          |   |   |   |   |  |  |  |
| --              | -  | -                 | -                 | -       | -       |         |         |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |    |    |   |   |   |   |    |    |   |   |   |   |    |    |   |   |   |   |    |          |   |   |   |   |  |  |  |

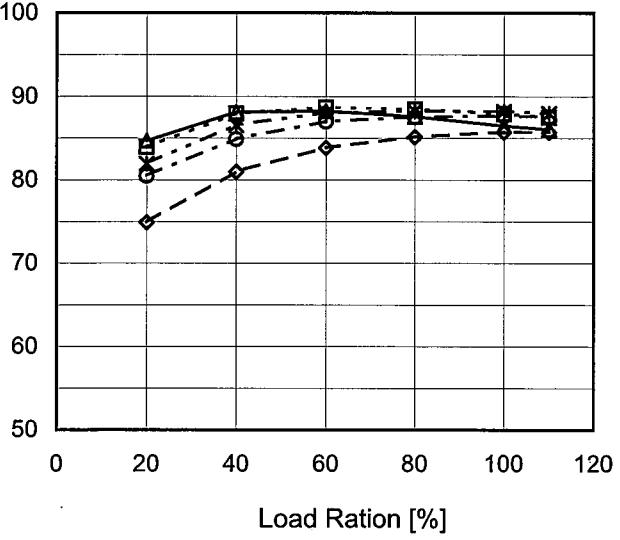
**COSEL**

| Model           | STMGFW302412   | Temperature 25°C<br>Testing Circuitry Figure A |         |         |         |                 |                 |                 |         |         |         |   |      |       |       |       |       |    |      |      |      |      |      |    |      |      |      |      |      |     |       |       |       |       |       |    |       |       |       |       |       |    |       |       |       |       |       |     |       |       |       |       |       |     |       |       |       |       |       |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
|-----------------|--|--|---------|---------|---------|-----------------|-----------------|-----------------|---------|---------|---------|---|------|-------|-------|-------|-------|----|------|------|------|------|------|----|------|------|------|------|------|-----|-------|-------|-------|-------|-------|----|-------|-------|-------|-------|-------|----|-------|-------|-------|-------|-------|-----|-------|-------|-------|-------|-------|-----|-------|-------|-------|-------|-------|----|---|---|---|---|---|----|---|---|---|---|---|----|---|---|---|---|---|----|---|---|---|---|---|
| Item            | Input Power (by Load Current)  |  |         |         |         |                 |                 |                 |         |         |         |   |      |       |       |       |       |    |      |      |      |      |      |    |      |      |      |      |      |     |       |       |       |       |       |    |       |       |       |       |       |    |       |       |       |       |       |     |       |       |       |       |       |     |       |       |       |       |       |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| Object          | —  |  |         |         |         |                 |                 |                 |         |         |         |   |      |       |       |       |       |    |      |      |      |      |      |    |      |      |      |      |      |     |       |       |       |       |       |    |       |       |       |       |       |    |       |       |       |       |       |     |       |       |       |       |       |     |       |       |       |       |       |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| 1.Graph         | <p>—△— Input Volt. 9V<br/>       - -□--- Input Volt. 12V<br/>       - -*--- Input Volt. 18V<br/>       - -○--- Input Volt. 24V<br/>       - -◇--- Input Volt. 36V</p> <table border="1"> <caption>Data points estimated from Graph</caption> <thead> <tr> <th>Load Ration [%]</th> <th>9V [W]</th> <th>12V [W]</th> <th>18V [W]</th> <th>24V [W]</th> <th>36V [W]</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0.39</td> <td>0.47</td> <td>0.62</td> <td>0.67</td> <td>0.85</td> </tr> <tr> <td>40</td> <td>1.56</td> <td>2.11</td> <td>3.08</td> <td>3.48</td> <td>4.40</td> </tr> <tr> <td>80</td> <td>3.12</td> <td>4.21</td> <td>6.16</td> <td>7.38</td> <td>8.80</td> </tr> <tr> <td>110</td> <td>4.14</td> <td>5.65</td> <td>8.44</td> <td>10.44</td> <td>11.83</td> </tr> </tbody> </table>  |  |         |         |         | Load Ration [%] | 9V [W]          | 12V [W]         | 18V [W] | 24V [W] | 36V [W] | 0 | 0.39 | 0.47  | 0.62  | 0.67  | 0.85  | 40 | 1.56 | 2.11 | 3.08 | 3.48 | 4.40 | 80 | 3.12 | 4.21 | 6.16 | 7.38 | 8.80 | 110 | 4.14  | 5.65  | 8.44  | 10.44 | 11.83 |    |       |       |       |       |       |    |       |       |       |       |       |     |       |       |       |       |       |     |       |       |       |       |       |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| Load Ration [%] | 9V [W]   | 12V [W]  | 18V [W] | 24V [W] | 36V [W] |                 |                 |                 |         |         |         |   |      |       |       |       |       |    |      |      |      |      |      |    |      |      |      |      |      |     |       |       |       |       |       |    |       |       |       |       |       |    |       |       |       |       |       |     |       |       |       |       |       |     |       |       |       |       |       |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| 0               | 0.39   | 0.47   | 0.62    | 0.67    | 0.85    |                 |                 |                 |         |         |         |   |      |       |       |       |       |    |      |      |      |      |      |    |      |      |      |      |      |     |       |       |       |       |       |    |       |       |       |       |       |    |       |       |       |       |       |     |       |       |       |       |       |     |       |       |       |       |       |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| 40              | 1.56   | 2.11   | 3.08    | 3.48    | 4.40    |                 |                 |                 |         |         |         |   |      |       |       |       |       |    |      |      |      |      |      |    |      |      |      |      |      |     |       |       |       |       |       |    |       |       |       |       |       |    |       |       |       |       |       |     |       |       |       |       |       |     |       |       |       |       |       |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| 80              | 3.12   | 4.21   | 6.16    | 7.38    | 8.80    |                 |                 |                 |         |         |         |   |      |       |       |       |       |    |      |      |      |      |      |    |      |      |      |      |      |     |       |       |       |       |       |    |       |       |       |       |       |    |       |       |       |       |       |     |       |       |       |       |       |     |       |       |       |       |       |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| 110             | 4.14   | 5.65   | 8.44    | 10.44   | 11.83   |                 |                 |                 |         |         |         |   |      |       |       |       |       |    |      |      |      |      |      |    |      |      |      |      |      |     |       |       |       |       |       |    |       |       |       |       |       |    |       |       |       |       |       |     |       |       |       |       |       |     |       |       |       |       |       |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| 2.Values        | <table border="1"> <thead> <tr> <th rowspan="2">Load Ration [%]</th> <th colspan="5">Input Power [W]</th> </tr> <tr> <th>9[V]</th> <th>12[V]</th> <th>18[V]</th> <th>24[V]</th> <th>36[V]</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0.39</td> <td>0.47</td> <td>0.62</td> <td>0.67</td> <td>0.85</td> </tr> <tr> <td>20</td> <td>7.14</td> <td>7.21</td> <td>7.38</td> <td>7.52</td> <td>8.07</td> </tr> <tr> <td>40</td> <td>13.73</td> <td>13.76</td> <td>13.98</td> <td>14.26</td> <td>14.95</td> </tr> <tr> <td>60</td> <td>20.56</td> <td>20.48</td> <td>20.64</td> <td>20.88</td> <td>21.66</td> </tr> <tr> <td>80</td> <td>27.65</td> <td>27.37</td> <td>27.44</td> <td>27.67</td> <td>28.42</td> </tr> <tr> <td>100</td> <td>34.99</td> <td>34.45</td> <td>34.32</td> <td>34.54</td> <td>35.32</td> </tr> <tr> <td>110</td> <td>38.68</td> <td>38.07</td> <td>37.85</td> <td>38.02</td> <td>38.83</td> </tr> <tr> <td>--</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> </tbody> </table> |  |         |         |         |                 | Load Ration [%] | Input Power [W] |         |         |         |   | 9[V] | 12[V] | 18[V] | 24[V] | 36[V] | 0  | 0.39 | 0.47 | 0.62 | 0.67 | 0.85 | 20 | 7.14 | 7.21 | 7.38 | 7.52 | 8.07 | 40  | 13.73 | 13.76 | 13.98 | 14.26 | 14.95 | 60 | 20.56 | 20.48 | 20.64 | 20.88 | 21.66 | 80 | 27.65 | 27.37 | 27.44 | 27.67 | 28.42 | 100 | 34.99 | 34.45 | 34.32 | 34.54 | 35.32 | 110 | 38.68 | 38.07 | 37.85 | 38.02 | 38.83 | -- | - | - | - | - | - | -- | - | - | - | - | - | -- | - | - | - | - | - | -- | - | - | - | - | - |
| Load Ration [%] | Input Power [W]  |  |         |         |         |                 |                 |                 |         |         |         |   |      |       |       |       |       |    |      |      |      |      |      |    |      |      |      |      |      |     |       |       |       |       |       |    |       |       |       |       |       |    |       |       |       |       |       |     |       |       |       |       |       |     |       |       |       |       |       |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
|                 | 9[V]   | 12[V]  | 18[V]   | 24[V]   | 36[V]   |                 |                 |                 |         |         |         |   |      |       |       |       |       |    |      |      |      |      |      |    |      |      |      |      |      |     |       |       |       |       |       |    |       |       |       |       |       |    |       |       |       |       |       |     |       |       |       |       |       |     |       |       |       |       |       |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| 0               | 0.39   | 0.47   | 0.62    | 0.67    | 0.85    |                 |                 |                 |         |         |         |   |      |       |       |       |       |    |      |      |      |      |      |    |      |      |      |      |      |     |       |       |       |       |       |    |       |       |       |       |       |    |       |       |       |       |       |     |       |       |       |       |       |     |       |       |       |       |       |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| 20              | 7.14   | 7.21   | 7.38    | 7.52    | 8.07    |                 |                 |                 |         |         |         |   |      |       |       |       |       |    |      |      |      |      |      |    |      |      |      |      |      |     |       |       |       |       |       |    |       |       |       |       |       |    |       |       |       |       |       |     |       |       |       |       |       |     |       |       |       |       |       |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| 40              | 13.73  | 13.76  | 13.98   | 14.26   | 14.95   |                 |                 |                 |         |         |         |   |      |       |       |       |       |    |      |      |      |      |      |    |      |      |      |      |      |     |       |       |       |       |       |    |       |       |       |       |       |    |       |       |       |       |       |     |       |       |       |       |       |     |       |       |       |       |       |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| 60              | 20.56  | 20.48  | 20.64   | 20.88   | 21.66   |                 |                 |                 |         |         |         |   |      |       |       |       |       |    |      |      |      |      |      |    |      |      |      |      |      |     |       |       |       |       |       |    |       |       |       |       |       |    |       |       |       |       |       |     |       |       |       |       |       |     |       |       |       |       |       |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| 80              | 27.65  | 27.37  | 27.44   | 27.67   | 28.42   |                 |                 |                 |         |         |         |   |      |       |       |       |       |    |      |      |      |      |      |    |      |      |      |      |      |     |       |       |       |       |       |    |       |       |       |       |       |    |       |       |       |       |       |     |       |       |       |       |       |     |       |       |       |       |       |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| 100             | 34.99  | 34.45  | 34.32   | 34.54   | 35.32   |                 |                 |                 |         |         |         |   |      |       |       |       |       |    |      |      |      |      |      |    |      |      |      |      |      |     |       |       |       |       |       |    |       |       |       |       |       |    |       |       |       |       |       |     |       |       |       |       |       |     |       |       |       |       |       |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| 110             | 38.68  | 38.07  | 37.85   | 38.02   | 38.83   |                 |                 |                 |         |         |         |   |      |       |       |       |       |    |      |      |      |      |      |    |      |      |      |      |      |     |       |       |       |       |       |    |       |       |       |       |       |    |       |       |       |       |       |     |       |       |       |       |       |     |       |       |       |       |       |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| --              | -  | -  | -       | -       | -       |                 |                 |                 |         |         |         |   |      |       |       |       |       |    |      |      |      |      |      |    |      |      |      |      |      |     |       |       |       |       |       |    |       |       |       |       |       |    |       |       |       |       |       |     |       |       |       |       |       |     |       |       |       |       |       |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| --              | -  | -  | -       | -       | -       |                 |                 |                 |         |         |         |   |      |       |       |       |       |    |      |      |      |      |      |    |      |      |      |      |      |     |       |       |       |       |       |    |       |       |       |       |       |    |       |       |       |       |       |     |       |       |       |       |       |     |       |       |       |       |       |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| --              | -  | -  | -       | -       | -       |                 |                 |                 |         |         |         |   |      |       |       |       |       |    |      |      |      |      |      |    |      |      |      |      |      |     |       |       |       |       |       |    |       |       |       |       |       |    |       |       |       |       |       |     |       |       |       |       |       |     |       |       |       |       |       |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| --              | -  | -  | -       | -       | -       |                 |                 |                 |         |         |         |   |      |       |       |       |       |    |      |      |      |      |      |    |      |      |      |      |      |     |       |       |       |       |       |    |       |       |       |       |       |    |       |       |       |       |       |     |       |       |       |       |       |     |       |       |       |       |       |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |

**COSEL**

| Model  | STMGFW302412                  | Temperature<br>Testing Circuitry | 25°C<br>Figure A  |                         |                          |    |      |      |    |      |      |    |      |      |    |      |      |    |      |      |  |
|--|-------------------------------|----------------------------------|-------------------|-------------------------|--------------------------|----|------|------|----|------|------|----|------|------|----|------|------|----|------|------|--|
| Item   | Efficiency (by Input Voltage) |                                  |                   |                         |                          |    |      |      |    |      |      |    |      |      |    |      |      |    |      |      |  |
| Object   | —                             |                                  |                   |                         |                          |    |      |      |    |      |      |    |      |      |    |      |      |    |      |      |  |
| 1.Graph  |                               |                                  | 2.Values          |                         |                          |    |      |      |    |      |      |    |      |      |    |      |      |    |      |      |  |
| <p>The graph plots Efficiency [%] on the y-axis (50 to 100) against Input Voltage [V] on the x-axis (5 to 45). Two data series are shown: Load 50% (dashed line with square markers) and Load 100% (solid line with triangle markers). Both series show a slight decrease in efficiency as input voltage increases. A vertical slanted line is drawn across the graph, indicating 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>10</td><td>88.0</td><td>87.0</td></tr> <tr><td>15</td><td>88.0</td><td>87.5</td></tr> <tr><td>25</td><td>85.5</td><td>86.5</td></tr> <tr><td>35</td><td>83.0</td><td>84.5</td></tr> <tr><td>40</td><td>82.0</td><td>84.0</td></tr> </tbody> </table> |                               |                                  | Input Voltage [V] | Efficiency Load 50% [%] | Efficiency Load 100% [%] | 10 | 88.0 | 87.0 | 15 | 88.0 | 87.5 | 25 | 85.5 | 86.5 | 35 | 83.0 | 84.5 | 40 | 82.0 | 84.0 |  |
| Input Voltage [V]  | Efficiency Load 50% [%]       | Efficiency Load 100% [%]         |                   |                         |                          |    |      |      |    |      |      |    |      |      |    |      |      |    |      |      |  |
| 10   | 88.0                          | 87.0                             |                   |                         |                          |    |      |      |    |      |      |    |      |      |    |      |      |    |      |      |  |
| 15   | 88.0                          | 87.5                             |                   |                         |                          |    |      |      |    |      |      |    |      |      |    |      |      |    |      |      |  |
| 25   | 85.5                          | 86.5                             |                   |                         |                          |    |      |      |    |      |      |    |      |      |    |      |      |    |      |      |  |
| 35   | 83.0                          | 84.5                             |                   |                         |                          |    |      |      |    |      |      |    |      |      |    |      |      |    |      |      |  |
| 40   | 82.0                          | 84.0                             |                   |                         |                          |    |      |      |    |      |      |    |      |      |    |      |      |    |      |      |  |
| <p>Note: Slanted line shows the range of the rated input voltage.</p>  |                               |                                  |                   |                         |                          |    |      |      |    |      |      |    |      |      |    |      |      |    |      |      |  |

**COSEL**

| Model           | STMGFW302412                 | Temperature 25°C<br>Testing Circuitry Figure A                                     |                     |                     |                     |                     |
|-----------------|------------------------------|--|---------------------|---------------------|---------------------|---------------------|
| Item            | Efficiency (by Load Current) |  |                     |                     |                     |                     |
| Object          | _____                        |  |                     |                     |                     |                     |
| 1.Graph         | _____                        |  |                     |                     |                     |                     |
|                 |                              | —△— Input Volt. 9V   | —□— Input Volt. 12V | —*— Input Volt. 18V | —○— Input Volt. 24V | —◇— Input Volt. 36V |
|                 |                              |  |                     |                     |                     |                     |
|                 |                              | Efficiency [%]   | Load Ration [%]     |                     |                     |                     |
| 2.Values        |                              |  |                     |                     |                     |                     |
| Load Ration [%] | Efficiency [%]               |  |                     |                     |                     |                     |
|                 | Input Volt. 9[V]             | Input Volt. 12[V]  | Input Volt. 18[V]   | Input Volt. 24[V]   | Input Volt. 36[V]   |                     |
| 0               | -                            | -  | -                   | -                   | -                   |                     |
| 20              | 84.7                         | 83.9   | 82.0                | 80.5                | 74.9                |                     |
| 40              | 88.1                         | 87.9   | 86.6                | 84.9                | 81.0                |                     |
| 60              | 88.3                         | 88.7   | 88.0                | 87.0                | 83.9                |                     |
| 80              | 87.6                         | 88.5   | 88.3                | 87.5                | 85.2                |                     |
| 100             | 86.5                         | 87.9   | 88.2                | 87.7                | 85.7                |                     |
| 110             | 86.1                         | 87.5   | 88.0                | 87.6                | 85.8                |                     |
| --              | -                            | -  | -                   | -                   | -                   |                     |
| --              | -                            | -  | -                   | -                   | -                   |                     |
| --              | -                            | -  | -                   | -                   | -                   |                     |
| --              | -                            | -  | -                   | -                   | -                   |                     |

| Model   | STMGFW302412       | Temperature<br>Testing Circuitry | 25°C<br>Figure A   |                   |                    |  |          |           |     |         |         |     |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |
|---|--------------------|----------------------------------|--|-------------------|--------------------|--|----------|-----------|-----|---------|---------|-----|---------|---------|------|---------|---------|------|---------|---------|------|---------|---------|------|---------|---------|------|---------|---------|------|---------|---------|------|---------|---------|
| Item  | Line Regulation    |                                  |  |                   |                    |  |          |           |     |         |         |     |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |
| Object  | +12V1.25A          |                                  |  |                   |                    |  |          |           |     |         |         |     |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |
| 1.Graph   |                    |                                  | 2.Values   |                   |                    |  |          |           |     |         |         |     |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |
| <p>Output Voltage [V]</p> <p>Input Voltage [V]</p> <p>Legend: ---□--- Load 50%    —△— Load 100%</p> |                    |                                  | <table border="1"> <thead> <tr> <th rowspan="2">Input Voltage [V]</th> <th colspan="2">Output Voltage [V]</th> </tr> <tr> <th>Load 50%</th> <th>Load 100%</th> </tr> </thead> <tbody> <tr><td>8.5</td><td>12.182</td><td>12.089</td></tr> <tr><td>9.0</td><td>12.179</td><td>12.089</td></tr> <tr><td>12.0</td><td>12.176</td><td>12.091</td></tr> <tr><td>15.0</td><td>12.175</td><td>12.092</td></tr> <tr><td>18.0</td><td>12.174</td><td>12.093</td></tr> <tr><td>24.0</td><td>12.174</td><td>12.093</td></tr> <tr><td>30.0</td><td>12.174</td><td>12.093</td></tr> <tr><td>36.0</td><td>12.173</td><td>12.092</td></tr> <tr><td>40.0</td><td>12.172</td><td>12.092</td></tr> </tbody> </table>                   | Input Voltage [V] | Output Voltage [V] |  | Load 50% | Load 100% | 8.5 | 12.182  | 12.089  | 9.0 | 12.179  | 12.089  | 12.0 | 12.176  | 12.091  | 15.0 | 12.175  | 12.092  | 18.0 | 12.174  | 12.093  | 24.0 | 12.174  | 12.093  | 30.0 | 12.174  | 12.093  | 36.0 | 12.173  | 12.092  | 40.0 | 12.172  | 12.092  |
| Input Voltage [V]   | Output Voltage [V] |                                  |  |                   |                    |  |          |           |     |         |         |     |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |
|   | Load 50%           | Load 100%                        |  |                   |                    |  |          |           |     |         |         |     |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |
| 8.5   | 12.182             | 12.089                           |  |                   |                    |  |          |           |     |         |         |     |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |
| 9.0   | 12.179             | 12.089                           |  |                   |                    |  |          |           |     |         |         |     |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |
| 12.0  | 12.176             | 12.091                           |  |                   |                    |  |          |           |     |         |         |     |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |
| 15.0  | 12.175             | 12.092                           |  |                   |                    |  |          |           |     |         |         |     |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |
| 18.0  | 12.174             | 12.093                           |  |                   |                    |  |          |           |     |         |         |     |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |
| 24.0  | 12.174             | 12.093                           |  |                   |                    |  |          |           |     |         |         |     |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |
| 30.0  | 12.174             | 12.093                           |  |                   |                    |  |          |           |     |         |         |     |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |
| 36.0  | 12.173             | 12.092                           |  |                   |                    |  |          |           |     |         |         |     |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |
| 40.0  | 12.172             | 12.092                           |  |                   |                    |  |          |           |     |         |         |     |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |
| Object  |                    |                                  | 2.Values   |                   |                    |  |          |           |     |         |         |     |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |
| 1.Graph   |                    |                                  | <table border="1"> <thead> <tr> <th rowspan="2">Input Voltage [V]</th> <th colspan="2">Output Voltage [V]</th> </tr> <tr> <th>Load 50%</th> <th>Load 100%</th> </tr> </thead> <tbody> <tr><td>8.5</td><td>-12.184</td><td>-12.086</td></tr> <tr><td>9.0</td><td>-12.182</td><td>-12.086</td></tr> <tr><td>12.0</td><td>-12.176</td><td>-12.084</td></tr> <tr><td>15.0</td><td>-12.173</td><td>-12.084</td></tr> <tr><td>18.0</td><td>-12.171</td><td>-12.083</td></tr> <tr><td>24.0</td><td>-12.169</td><td>-12.082</td></tr> <tr><td>30.0</td><td>-12.168</td><td>-12.082</td></tr> <tr><td>36.0</td><td>-12.168</td><td>-12.083</td></tr> <tr><td>40.0</td><td>-12.169</td><td>-12.084</td></tr> </tbody> </table> | Input Voltage [V] | Output Voltage [V] |  | Load 50% | Load 100% | 8.5 | -12.184 | -12.086 | 9.0 | -12.182 | -12.086 | 12.0 | -12.176 | -12.084 | 15.0 | -12.173 | -12.084 | 18.0 | -12.171 | -12.083 | 24.0 | -12.169 | -12.082 | 30.0 | -12.168 | -12.082 | 36.0 | -12.168 | -12.083 | 40.0 | -12.169 | -12.084 |
| Input Voltage [V]   | Output Voltage [V] |                                  |  |                   |                    |  |          |           |     |         |         |     |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |
|   | Load 50%           | Load 100%                        |  |                   |                    |  |          |           |     |         |         |     |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |
| 8.5   | -12.184            | -12.086                          |  |                   |                    |  |          |           |     |         |         |     |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |
| 9.0   | -12.182            | -12.086                          |  |                   |                    |  |          |           |     |         |         |     |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |
| 12.0  | -12.176            | -12.084                          |  |                   |                    |  |          |           |     |         |         |     |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |
| 15.0  | -12.173            | -12.084                          |  |                   |                    |  |          |           |     |         |         |     |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |
| 18.0  | -12.171            | -12.083                          |  |                   |                    |  |          |           |     |         |         |     |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |
| 24.0  | -12.169            | -12.082                          |  |                   |                    |  |          |           |     |         |         |     |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |
| 30.0  | -12.168            | -12.082                          |  |                   |                    |  |          |           |     |         |         |     |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |
| 36.0  | -12.168            | -12.083                          |  |                   |                    |  |          |           |     |         |         |     |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |
| 40.0  | -12.169            | -12.084                          |  |                   |                    |  |          |           |     |         |         |     |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |
| <p>Output Voltage [V]</p> <p>Input Voltage [V]</p> <p>Legend: ---□--- Load 50%    —△— Load 100%</p> |                    |                                  |  |                   |                    |  |          |           |     |         |         |     |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |
| Note: Slanted line shows the range of the rated input voltage.                                      |                    |                                  |  |                   |                    |  |          |           |     |         |         |     |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |      |         |         |



| Model            | STMGFW302412  | Temperature 25°C<br>Testing Circuitry Figure A |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
|------------------|---|--|---------|---------|---------|---------|---------|-------|---------|---------|---------|---------|---------|-------|---------|---------|---------|---------|---------|-------|---------|---------|---------|---------|---------|-------|---------|---------|---------|---------|---------|-------|---------|---------|---------|---------|---------|-------|---------|---------|---------|---------|---------|-------|---------|---------|---------|---------|---------|----|---|---|---|---|---|----|---|---|---|---|---|----|---|---|---|---|---|----|---|---|---|---|---|
| Item             | Load Regulation   |  |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| Object           | +12V1.25A   |  |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| 1.Graph          | <p>—△— Input Volt. 9V<br/>       - - □ - - Input Volt. 12V<br/>       - - * - - Input Volt. 18V<br/>       - - ○ - - Input Volt. 24V<br/>       - - ◆ - - Input Volt. 36V</p> <table border="1"> <caption>Data for +12V1.25A Object</caption> <thead> <tr> <th>Load Current [A]</th> <th>9V [V]</th> <th>12V [V]</th> <th>18V [V]</th> <th>24V [V]</th> <th>36V [V]</th> </tr> </thead> <tbody> <tr><td>0.00</td><td>12.425</td><td>12.403</td><td>12.399</td><td>12.392</td><td>12.380</td></tr> <tr><td>0.250</td><td>12.256</td><td>12.249</td><td>12.244</td><td>12.242</td><td>12.240</td></tr> <tr><td>0.500</td><td>12.209</td><td>12.204</td><td>12.200</td><td>12.199</td><td>12.197</td></tr> <tr><td>0.750</td><td>12.168</td><td>12.165</td><td>12.163</td><td>12.162</td><td>12.160</td></tr> <tr><td>1.000</td><td>12.128</td><td>12.128</td><td>12.127</td><td>12.127</td><td>12.126</td></tr> <tr><td>1.250</td><td>12.090</td><td>12.092</td><td>12.093</td><td>12.093</td><td>12.093</td></tr> <tr><td>1.375</td><td>12.071</td><td>12.074</td><td>12.076</td><td>12.077</td><td>12.077</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr> </tbody> </table>                                     | Load Current [A]                               | 9V [V]  | 12V [V] | 18V [V] | 24V [V] | 36V [V] | 0.00  | 12.425  | 12.403  | 12.399  | 12.392  | 12.380  | 0.250 | 12.256  | 12.249  | 12.244  | 12.242  | 12.240  | 0.500 | 12.209  | 12.204  | 12.200  | 12.199  | 12.197  | 0.750 | 12.168  | 12.165  | 12.163  | 12.162  | 12.160  | 1.000 | 12.128  | 12.128  | 12.127  | 12.127  | 12.126  | 1.250 | 12.090  | 12.092  | 12.093  | 12.093  | 12.093  | 1.375 | 12.071  | 12.074  | 12.076  | 12.077  | 12.077  | -- | - | - | - | - | - | -- | - | - | - | - | - | -- | - | - | - | - | - | -- | - | - | - | - | - |
| Load Current [A] | 9V [V]  | 12V [V]  | 18V [V] | 24V [V] | 36V [V] |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| 0.00             | 12.425  | 12.403   | 12.399  | 12.392  | 12.380  |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| 0.250            | 12.256  | 12.249   | 12.244  | 12.242  | 12.240  |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| 0.500            | 12.209  | 12.204   | 12.200  | 12.199  | 12.197  |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| 0.750            | 12.168  | 12.165   | 12.163  | 12.162  | 12.160  |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| 1.000            | 12.128  | 12.128   | 12.127  | 12.127  | 12.126  |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| 1.250            | 12.090  | 12.092   | 12.093  | 12.093  | 12.093  |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| 1.375            | 12.071  | 12.074   | 12.076  | 12.077  | 12.077  |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| --               | -   | -  | -       | -       | -       |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| --               | -   | -  | -       | -       | -       |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| --               | -   | -  | -       | -       | -       |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| --               | -   | -  | -       | -       | -       |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| 2.Values         |   |  |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| Object           | -12V1.25A   |  |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| 1.Graph          | <p>—△— Input Volt. 9V<br/>       - - □ - - Input Volt. 12V<br/>       - - * - - Input Volt. 18V<br/>       - - ○ - - Input Volt. 24V<br/>       - - ◆ - - Input Volt. 36V</p> <table border="1"> <caption>Data for -12V1.25A Object</caption> <thead> <tr> <th>Load Current [A]</th> <th>9V [V]</th> <th>12V [V]</th> <th>18V [V]</th> <th>24V [V]</th> <th>36V [V]</th> </tr> </thead> <tbody> <tr><td>0.000</td><td>-12.419</td><td>-12.448</td><td>-12.500</td><td>-12.511</td><td>-12.516</td></tr> <tr><td>0.250</td><td>-12.254</td><td>-12.248</td><td>-12.243</td><td>-12.242</td><td>-12.243</td></tr> <tr><td>0.500</td><td>-12.205</td><td>-12.198</td><td>-12.193</td><td>-12.191</td><td>-12.190</td></tr> <tr><td>0.750</td><td>-12.164</td><td>-12.158</td><td>-12.154</td><td>-12.152</td><td>-12.151</td></tr> <tr><td>1.000</td><td>-12.124</td><td>-12.121</td><td>-12.117</td><td>-12.116</td><td>-12.116</td></tr> <tr><td>1.250</td><td>-12.086</td><td>-12.084</td><td>-12.083</td><td>-12.082</td><td>-12.083</td></tr> <tr><td>1.375</td><td>-12.068</td><td>-12.067</td><td>-12.066</td><td>-12.066</td><td>-12.067</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr> </tbody> </table> | Load Current [A]                               | 9V [V]  | 12V [V] | 18V [V] | 24V [V] | 36V [V] | 0.000 | -12.419 | -12.448 | -12.500 | -12.511 | -12.516 | 0.250 | -12.254 | -12.248 | -12.243 | -12.242 | -12.243 | 0.500 | -12.205 | -12.198 | -12.193 | -12.191 | -12.190 | 0.750 | -12.164 | -12.158 | -12.154 | -12.152 | -12.151 | 1.000 | -12.124 | -12.121 | -12.117 | -12.116 | -12.116 | 1.250 | -12.086 | -12.084 | -12.083 | -12.082 | -12.083 | 1.375 | -12.068 | -12.067 | -12.066 | -12.066 | -12.067 | -- | - | - | - | - | - | -- | - | - | - | - | - | -- | - | - | - | - | - | -- | - | - | - | - | - |
| Load Current [A] | 9V [V]  | 12V [V]  | 18V [V] | 24V [V] | 36V [V] |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| 0.000            | -12.419   | -12.448  | -12.500 | -12.511 | -12.516 |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| 0.250            | -12.254   | -12.248  | -12.243 | -12.242 | -12.243 |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| 0.500            | -12.205   | -12.198  | -12.193 | -12.191 | -12.190 |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| 0.750            | -12.164   | -12.158  | -12.154 | -12.152 | -12.151 |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| 1.000            | -12.124   | -12.121  | -12.117 | -12.116 | -12.116 |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| 1.250            | -12.086   | -12.084  | -12.083 | -12.082 | -12.083 |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| 1.375            | -12.068   | -12.067  | -12.066 | -12.066 | -12.067 |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| --               | -   | -  | -       | -       | -       |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| --               | -   | -  | -       | -       | -       |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| --               | -   | -  | -       | -       | -       |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| --               | -   | -  | -       | -       | -       |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| 2.Values         |   |  |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |
| Note:            | Slanted line shows the range of the rated load current.   |  |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |       |         |         |         |         |         |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |    |   |   |   |   |   |

**COSEL**

| Model  | STMGFW302412                     | Temperature<br>Testing Circuitry  | 25°C<br>Figure B |                  |                     |  |                   |                    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |    |   |   |    |   |   |    |   |   |    |   |   |
|--|----------------------------------|---|------------------|------------------|---------------------|--|-------------------|--------------------|-------|----|----|-------|----|----|-------|----|----|-------|----|----|-------|----|----|-------|----|----|-------|----|----|----|---|---|----|---|---|----|---|---|----|---|---|
| Item   | Ripple Voltage (by Load Current) |   |                  |                  |                     |  |                   |                    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |    |   |   |    |   |   |    |   |   |    |   |   |
| Object   | +12V1.25A                        |   |                  |                  |                     |  |                   |                    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |    |   |   |    |   |   |    |   |   |    |   |   |
| 1.Graph  |                                  | 2.Values  |                  |                  |                     |  |                   |                    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |    |   |   |    |   |   |    |   |   |    |   |   |
| <p>Graph showing Ripple Voltage [mV] vs Load Current [A]. The graph shows two sets of data points: one for Input Volt. 9V (solid line with triangle markers) and one for Input Volt. 36V (dashed line with circle markers). The x-axis represents Load Current [A] from 0.0 to 1.6. The y-axis represents Ripple Voltage [mV] from 0 to 120. Both curves show a sharp increase in ripple voltage as the load current approaches the rated value of 1.25 A.</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. 9 [V]</th> <th>Input Volt. 36 [V]</th> </tr> </thead> <tbody> <tr><td>0.000</td><td>15</td><td>25</td></tr> <tr><td>0.250</td><td>15</td><td>25</td></tr> <tr><td>0.500</td><td>15</td><td>25</td></tr> <tr><td>0.750</td><td>15</td><td>25</td></tr> <tr><td>1.000</td><td>15</td><td>25</td></tr> <tr><td>1.250</td><td>15</td><td>25</td></tr> <tr><td>1.375</td><td>15</td><td>25</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> <p>-12V: Rated output current</p> |                  | Load Current [A] | Ripple Voltage [mV] |  | Input Volt. 9 [V] | Input Volt. 36 [V] | 0.000 | 15 | 25 | 0.250 | 15 | 25 | 0.500 | 15 | 25 | 0.750 | 15 | 25 | 1.000 | 15 | 25 | 1.250 | 15 | 25 | 1.375 | 15 | 25 | -- | - | - | -- | - | - | -- | - | - | -- | - | - |
| Load Current [A]   | Ripple Voltage [mV]              |   |                  |                  |                     |  |                   |                    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |    |   |   |    |   |   |    |   |   |    |   |   |
|  | Input Volt. 9 [V]                | Input Volt. 36 [V]  |                  |                  |                     |  |                   |                    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |    |   |   |    |   |   |    |   |   |    |   |   |
| 0.000  | 15                               | 25  |                  |                  |                     |  |                   |                    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |    |   |   |    |   |   |    |   |   |    |   |   |
| 0.250  | 15                               | 25  |                  |                  |                     |  |                   |                    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |    |   |   |    |   |   |    |   |   |    |   |   |
| 0.500  | 15                               | 25  |                  |                  |                     |  |                   |                    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |    |   |   |    |   |   |    |   |   |    |   |   |
| 0.750  | 15                               | 25  |                  |                  |                     |  |                   |                    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |    |   |   |    |   |   |    |   |   |    |   |   |
| 1.000  | 15                               | 25  |                  |                  |                     |  |                   |                    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |    |   |   |    |   |   |    |   |   |    |   |   |
| 1.250  | 15                               | 25  |                  |                  |                     |  |                   |                    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |    |   |   |    |   |   |    |   |   |    |   |   |
| 1.375  | 15                               | 25  |                  |                  |                     |  |                   |                    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |    |   |   |    |   |   |    |   |   |    |   |   |
| --   | -                                | -   |                  |                  |                     |  |                   |                    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |    |   |   |    |   |   |    |   |   |    |   |   |
| --   | -                                | -   |                  |                  |                     |  |                   |                    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |    |   |   |    |   |   |    |   |   |    |   |   |
| --   | -                                | -   |                  |                  |                     |  |                   |                    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |    |   |   |    |   |   |    |   |   |    |   |   |
| --   | -                                | -   |                  |                  |                     |  |                   |                    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |       |    |    |    |   |   |    |   |   |    |   |   |    |   |   |
| <p>Ripple Voltage is shown as p-p in the figure below.<br/>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  | STMGFW302412  | Temperature               | 25°C     |                  |                          |                           |                   |                    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |     |       |     |     |   |   |    |   |   |    |   |   |
|--|---|---------------------------|----------|------------------|--------------------------|---------------------------|-------------------|--------------------|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|-------|-------|-----|-----|-------|-----|-----|---|---|----|---|---|----|---|---|
| Item   | Ripple Voltage (by Load Current)  | Testing Circuitry         | Figure B |                  |                          |                           |                   |                    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |     |       |     |     |   |   |    |   |   |    |   |   |
| Object   | -12V1.25A   |                           |          |                  |                          |                           |                   |                    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |     |       |     |     |   |   |    |   |   |    |   |   |
| 1.Graph  | <p>—△— Input Volt. 9V<br/>       -·○- Input Volt. 36V</p> <table border="1"> <caption>Data points estimated from Graph</caption> <thead> <tr> <th>Load Current [A]</th> <th>Ripple Voltage [mV] (9V)</th> <th>Ripple Voltage [mV] (36V)</th> </tr> </thead> <tbody> <tr><td>0.000</td><td>~15</td><td>~25</td></tr> <tr><td>0.250</td><td>~15</td><td>~25</td></tr> <tr><td>0.500</td><td>~15</td><td>~25</td></tr> <tr><td>0.750</td><td>~15</td><td>~25</td></tr> <tr><td>1.000</td><td>~15</td><td>~25</td></tr> <tr><td>1.250</td><td>~15</td><td>~25</td></tr> <tr><td>1.375</td><td>~15</td><td>~25</td></tr> <tr><td>1.250</td><td>~15</td><td>~25</td></tr> <tr><td>1.250</td><td>~15</td><td>~25</td></tr> </tbody> </table>                             |                           |          | Load Current [A] | Ripple Voltage [mV] (9V) | Ripple Voltage [mV] (36V) | 0.000             | ~15                | ~25   | 0.250 | ~15 | ~25   | 0.500 | ~15 | ~25   | 0.750 | ~15 | ~25   | 1.000 | ~15 | ~25   | 1.250 | ~15 | ~25   | 1.375 | ~15 | ~25   | 1.250 | ~15 | ~25 | 1.250 | ~15 | ~25 |   |   |    |   |   |    |   |   |
| Load Current [A]   | Ripple Voltage [mV] (9V)  | Ripple Voltage [mV] (36V) |          |                  |                          |                           |                   |                    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |     |       |     |     |   |   |    |   |   |    |   |   |
| 0.000  | ~15   | ~25                       |          |                  |                          |                           |                   |                    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |     |       |     |     |   |   |    |   |   |    |   |   |
| 0.250  | ~15   | ~25                       |          |                  |                          |                           |                   |                    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |     |       |     |     |   |   |    |   |   |    |   |   |
| 0.500  | ~15   | ~25                       |          |                  |                          |                           |                   |                    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |     |       |     |     |   |   |    |   |   |    |   |   |
| 0.750  | ~15   | ~25                       |          |                  |                          |                           |                   |                    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |     |       |     |     |   |   |    |   |   |    |   |   |
| 1.000  | ~15   | ~25                       |          |                  |                          |                           |                   |                    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |     |       |     |     |   |   |    |   |   |    |   |   |
| 1.250  | ~15   | ~25                       |          |                  |                          |                           |                   |                    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |     |       |     |     |   |   |    |   |   |    |   |   |
| 1.375  | ~15   | ~25                       |          |                  |                          |                           |                   |                    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |     |       |     |     |   |   |    |   |   |    |   |   |
| 1.250  | ~15   | ~25                       |          |                  |                          |                           |                   |                    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |     |       |     |     |   |   |    |   |   |    |   |   |
| 1.250  | ~15   | ~25                       |          |                  |                          |                           |                   |                    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |     |       |     |     |   |   |    |   |   |    |   |   |
| 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. 9 [V]</th> <th>Input Volt. 36 [V]</th> </tr> </thead> <tbody> <tr><td>0.000</td><td>15</td><td>25</td></tr> <tr><td>0.250</td><td>15</td><td>25</td></tr> <tr><td>0.500</td><td>15</td><td>25</td></tr> <tr><td>0.750</td><td>15</td><td>25</td></tr> <tr><td>1.000</td><td>15</td><td>25</td></tr> <tr><td>1.250</td><td>15</td><td>25</td></tr> <tr><td>1.375</td><td>15</td><td>25</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> <p>+12V: Rated output current</p> |                           |          | Load Current [A] | Ripple Voltage [mV]      |                           | Input Volt. 9 [V] | Input Volt. 36 [V] | 0.000 | 15    | 25  | 0.250 | 15    | 25  | 0.500 | 15    | 25  | 0.750 | 15    | 25  | 1.000 | 15    | 25  | 1.250 | 15    | 25  | 1.375 | 15    | 25  | --  | -     | -   | --  | - | - | -- | - | - | -- | - | - |
| Load Current [A]   | Ripple Voltage [mV]   |                           |          |                  |                          |                           |                   |                    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |     |       |     |     |   |   |    |   |   |    |   |   |
|  | Input Volt. 9 [V]   | Input Volt. 36 [V]        |          |                  |                          |                           |                   |                    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |     |       |     |     |   |   |    |   |   |    |   |   |
| 0.000  | 15  | 25                        |          |                  |                          |                           |                   |                    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |     |       |     |     |   |   |    |   |   |    |   |   |
| 0.250  | 15  | 25                        |          |                  |                          |                           |                   |                    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |     |       |     |     |   |   |    |   |   |    |   |   |
| 0.500  | 15  | 25                        |          |                  |                          |                           |                   |                    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |     |       |     |     |   |   |    |   |   |    |   |   |
| 0.750  | 15  | 25                        |          |                  |                          |                           |                   |                    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |     |       |     |     |   |   |    |   |   |    |   |   |
| 1.000  | 15  | 25                        |          |                  |                          |                           |                   |                    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |     |       |     |     |   |   |    |   |   |    |   |   |
| 1.250  | 15  | 25                        |          |                  |                          |                           |                   |                    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |     |       |     |     |   |   |    |   |   |    |   |   |
| 1.375  | 15  | 25                        |          |                  |                          |                           |                   |                    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |     |       |     |     |   |   |    |   |   |    |   |   |
| --   | -   | -                         |          |                  |                          |                           |                   |                    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |     |       |     |     |   |   |    |   |   |    |   |   |
| --   | -   | -                         |          |                  |                          |                           |                   |                    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |     |       |     |     |   |   |    |   |   |    |   |   |
| --   | -   | -                         |          |                  |                          |                           |                   |                    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |     |       |     |     |   |   |    |   |   |    |   |   |
| --   | -   | -                         |          |                  |                          |                           |                   |                    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |     |       |     |     |   |   |    |   |   |    |   |   |
| <p>Measured by 100 MHz Oscilloscope.<br/>       Ripple Voltage is shown as p-p in the figure below.<br/>       Note: Slanted line shows the range of the rated load current.</p> |   |                           |          |                  |                          |                           |                   |                    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |     |       |     |     |   |   |    |   |   |    |   |   |
| <p>Ripple [mVp-p]</p>  |   |                           |          |                  |                          |                           |                   |                    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |     |       |     |     |   |   |    |   |   |    |   |   |
| <p>Fig.Complex Ripple Wave Form</p>  |   |                           |          |                  |                          |                           |                   |                    |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |       |       |     |     |       |     |     |   |   |    |   |   |    |   |   |

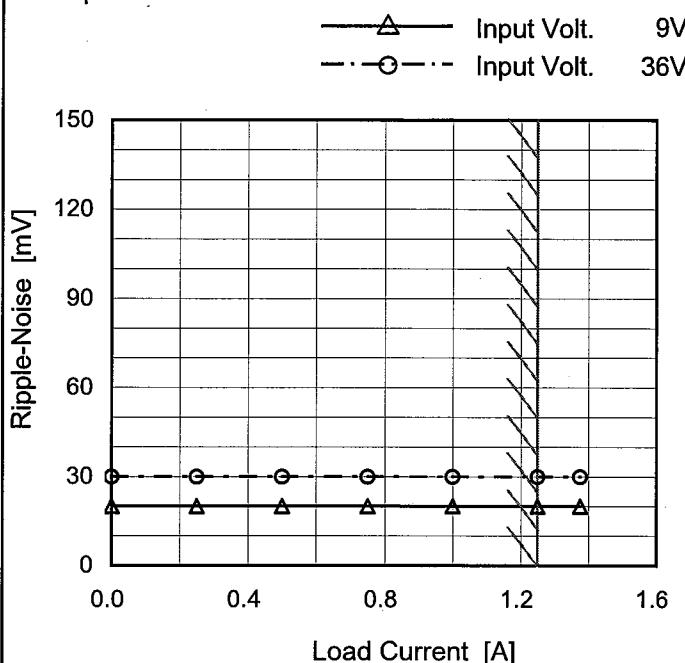
**COSEL**

Model STMGFW302412

Item Ripple-Noise

Object +12V1.25A

## 1. Graph



Ripple-Noise is shown as p-p in the figure below.  
 Note: Slanted line shows the range of the rated load current.

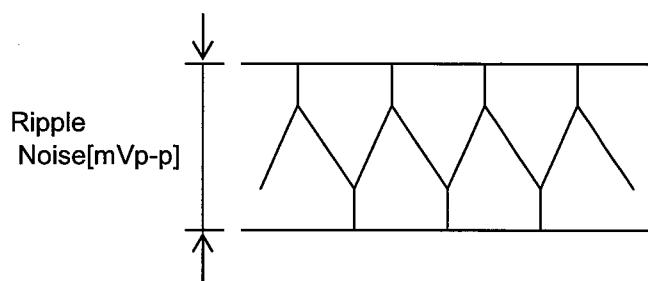


Fig.Complex Ripple Noise Wave Form

Temperature 25°C  
Testing Circuitry Figure B

## 2. Values

| Load Current [A] | Ripple-Noise [mV] |                    |
|------------------|-------------------|--------------------|
|                  | Input Volt. 9 [V] | Input Volt. 36 [V] |
| 0.000            | 20                | 30                 |
| 0.250            | 20                | 30                 |
| 0.500            | 20                | 30                 |
| 0.750            | 20                | 30                 |
| 1.000            | 20                | 30                 |
| 1.250            | 20                | 30                 |
| 1.375            | 20                | 30                 |
| --               | -                 | -                  |
| --               | -                 | -                  |
| --               | -                 | -                  |
| --               | -                 | -                  |

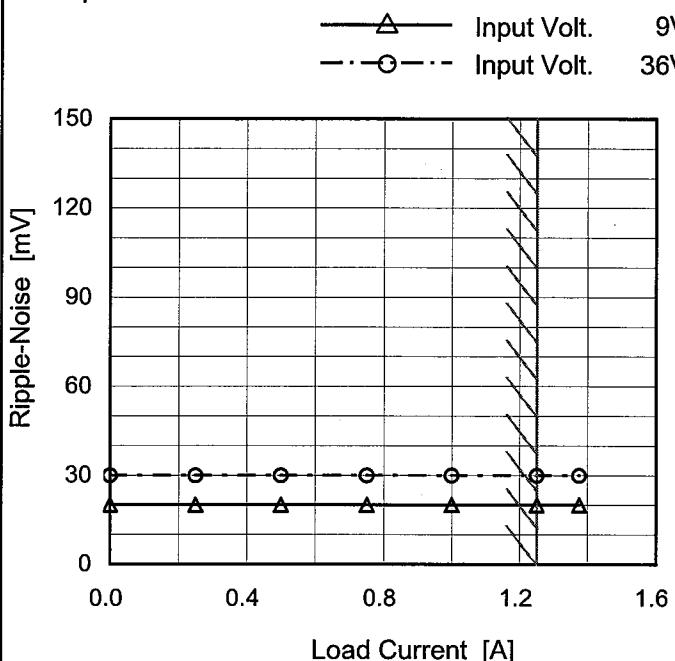
-12V: Rated output current

# COSEL

|        |              |
|--------|--------------|
| Model  | STMGFW302412 |
| Item   | Ripple-Noise |
| Object | -12V1.25A    |

Temperature 25°C  
Testing Circuitry Figure B

## 1. Graph



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.

## 2. Values

| Load Current [A] | Ripple-Noise [mV] |                    |
|------------------|-------------------|--------------------|
|                  | Input Volt. 9 [V] | Input Volt. 36 [V] |
| 0.000            | 20                | 30                 |
| 0.250            | 20                | 30                 |
| 0.500            | 20                | 30                 |
| 0.750            | 20                | 30                 |
| 1.000            | 20                | 30                 |
| 1.250            | 20                | 30                 |
| 1.375            | 20                | 30                 |
| --               | -                 | -                  |
| --               | -                 | -                  |
| --               | -                 | -                  |
| --               | -                 | -                  |

+12V: Rated output current

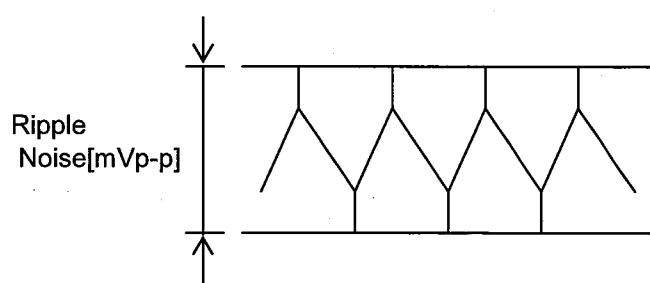


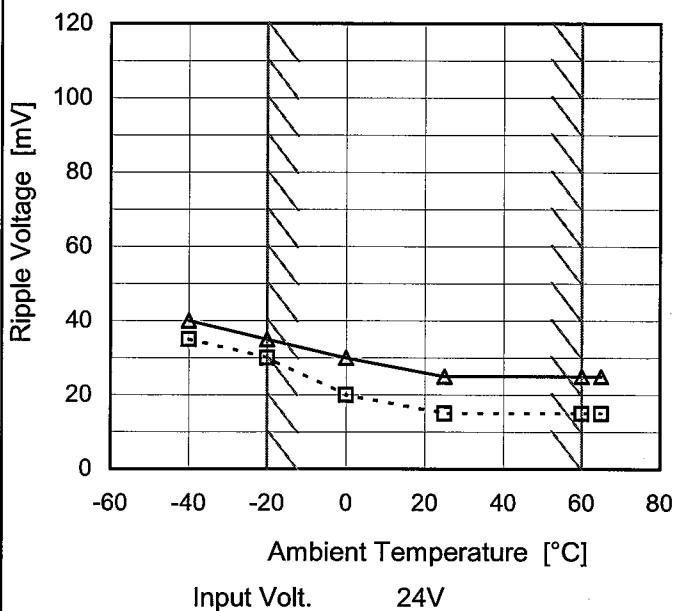
Fig.Complex Ripple Noise Wave Form

**COSEL**

|        |                                   |
|--------|-----------------------------------|
| Model  | STMGFW302412                      |
| Item   | Ripple Voltage (by Ambient Temp.) |
| Object | +12V1.25A                         |

## 1.Graph

---□--- Load 50%  
—△— Load 100%



Testing Circuitry Figure B

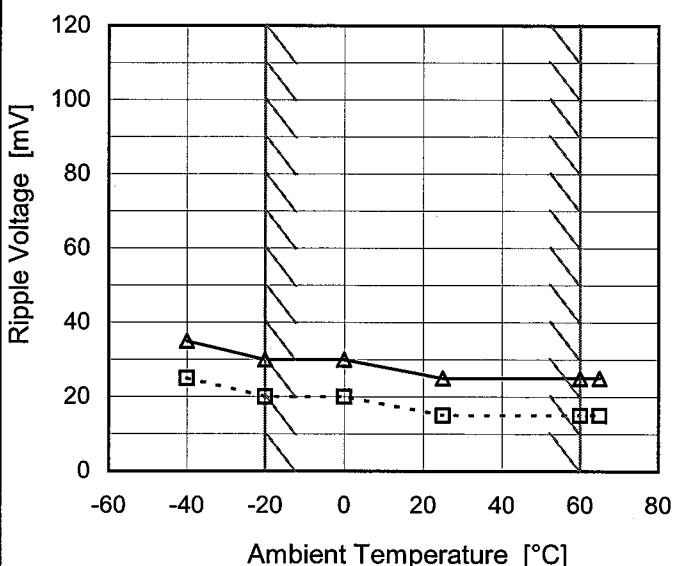
## 2.Values

| Ambient Temperature<br>[°C] | Ripple Voltage [mV] |           |
|-----------------------------|---------------------|-----------|
|                             | Load 50%            | Load 100% |
| -40                         | 35                  | 40        |
| -20                         | 30                  | 35        |
| 0                           | 20                  | 30        |
| 25                          | 15                  | 25        |
| 60                          | 15                  | 25        |
| 65                          | 15                  | 25        |
| --                          | -                   | -         |
| --                          | -                   | -         |
| --                          | -                   | -         |
| --                          | -                   | -         |
| --                          | -                   | -         |

-12V: Rated output current

## 1.Graph

---□--- Load 50%  
—△— Load 100%



## 2.Values

| Ambient Temperature<br>[°C] | Ripple Voltage [mV] |           |
|-----------------------------|---------------------|-----------|
|                             | Load 50%            | Load 100% |
| -40                         | 25                  | 35        |
| -20                         | 20                  | 30        |
| 0                           | 20                  | 30        |
| 25                          | 15                  | 25        |
| 60                          | 15                  | 25        |
| 65                          | 15                  | 25        |
| --                          | -                   | -         |
| --                          | -                   | -         |
| --                          | -                   | -         |
| --                          | -                   | -         |
| --                          | -                   | -         |

+12V: Rated output current

Measured by 100 MHz Oscilloscope.

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

**COSEL**

| Model                    | STMGFW302412  | Testing Circuitry Figure A  |                          |                    |         |  |  |  |      |       |       |       |       |     |         |         |         |         |         |     |         |         |         |         |         |   |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |   |   |   |   |   |
|--------------------------|---|---|--------------------------|--------------------|---------|--|--|--|------|-------|-------|-------|-------|-----|---------|---------|---------|---------|---------|-----|---------|---------|---------|---------|---------|---|---------|---------|---------|---------|---------|----|---------|---------|---------|---------|---------|----|---------|---------|---------|---------|---------|----|---------|---------|---------|---------|---------|----|---------|---------|---------|---------|---------|----|---------|---------|---------|---------|---------|----|---------|---------|---------|---------|---------|----|---------|---------|---------|---------|---------|----|---|---|---|---|---|
| Item                     | Ambient Temperature Drift   |   |                          |                    |         |  |  |  |      |       |       |       |       |     |         |         |         |         |         |     |         |         |         |         |         |   |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |   |   |   |   |   |
| Object                   | +12V1.25A   | 2.Values  |                          |                    |         |  |  |  |      |       |       |       |       |     |         |         |         |         |         |     |         |         |         |         |         |   |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |   |   |   |   |   |
| 1.Graph                  | <p>Output Voltage [V]</p> <p>Ambient Temperature [°C]</p> <p>Load 100%</p> <ul style="list-style-type: none"> <li>—△— Input Volt. 9V</li> <li>---□--- Input Volt. 12V</li> <li>---*--- Input Volt. 18V</li> <li>---○--- Input Volt. 24V</li> <li>---◇--- Input Volt. 36V</li> </ul> | <table border="1"> <thead> <tr> <th rowspan="2">Ambient Temperature [°C]</th> <th colspan="5">Output Voltage [V]</th> </tr> <tr> <th>9[V]</th> <th>12[V]</th> <th>18[V]</th> <th>24[V]</th> <th>36[V]</th> </tr> </thead> <tbody> <tr><td>-40</td><td>12.056</td><td>12.058</td><td>12.061</td><td>12.062</td><td>12.063</td></tr> <tr><td>-20</td><td>12.071</td><td>12.073</td><td>12.075</td><td>12.076</td><td>12.076</td></tr> <tr><td>0</td><td>12.082</td><td>12.084</td><td>12.086</td><td>12.087</td><td>12.086</td></tr> <tr><td>10</td><td>12.085</td><td>12.088</td><td>12.089</td><td>12.090</td><td>12.090</td></tr> <tr><td>25</td><td>12.090</td><td>12.091</td><td>12.093</td><td>12.094</td><td>12.093</td></tr> <tr><td>30</td><td>12.090</td><td>12.092</td><td>12.094</td><td>12.094</td><td>12.094</td></tr> <tr><td>40</td><td>12.091</td><td>12.093</td><td>12.094</td><td>12.095</td><td>12.094</td></tr> <tr><td>50</td><td>12.091</td><td>12.092</td><td>12.094</td><td>12.094</td><td>12.093</td></tr> <tr><td>60</td><td>12.090</td><td>12.092</td><td>12.093</td><td>12.093</td><td>12.092</td></tr> <tr><td>65</td><td>12.089</td><td>12.091</td><td>12.092</td><td>12.092</td><td>12.090</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr> </tbody> </table>   | Ambient Temperature [°C] | Output Voltage [V] |         |  |  |  | 9[V] | 12[V] | 18[V] | 24[V] | 36[V] | -40 | 12.056  | 12.058  | 12.061  | 12.062  | 12.063  | -20 | 12.071  | 12.073  | 12.075  | 12.076  | 12.076  | 0 | 12.082  | 12.084  | 12.086  | 12.087  | 12.086  | 10 | 12.085  | 12.088  | 12.089  | 12.090  | 12.090  | 25 | 12.090  | 12.091  | 12.093  | 12.094  | 12.093  | 30 | 12.090  | 12.092  | 12.094  | 12.094  | 12.094  | 40 | 12.091  | 12.093  | 12.094  | 12.095  | 12.094  | 50 | 12.091  | 12.092  | 12.094  | 12.094  | 12.093  | 60 | 12.090  | 12.092  | 12.093  | 12.093  | 12.092  | 65 | 12.089  | 12.091  | 12.092  | 12.092  | 12.090  | -- | - | - | - | - | - |
| Ambient Temperature [°C] | Output Voltage [V]  |   |                          |                    |         |  |  |  |      |       |       |       |       |     |         |         |         |         |         |     |         |         |         |         |         |   |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |   |   |   |   |   |
|                          | 9[V]  | 12[V]   | 18[V]                    | 24[V]              | 36[V]   |  |  |  |      |       |       |       |       |     |         |         |         |         |         |     |         |         |         |         |         |   |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |   |   |   |   |   |
| -40                      | 12.056  | 12.058  | 12.061                   | 12.062             | 12.063  |  |  |  |      |       |       |       |       |     |         |         |         |         |         |     |         |         |         |         |         |   |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |   |   |   |   |   |
| -20                      | 12.071  | 12.073  | 12.075                   | 12.076             | 12.076  |  |  |  |      |       |       |       |       |     |         |         |         |         |         |     |         |         |         |         |         |   |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |   |   |   |   |   |
| 0                        | 12.082  | 12.084  | 12.086                   | 12.087             | 12.086  |  |  |  |      |       |       |       |       |     |         |         |         |         |         |     |         |         |         |         |         |   |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |   |   |   |   |   |
| 10                       | 12.085  | 12.088  | 12.089                   | 12.090             | 12.090  |  |  |  |      |       |       |       |       |     |         |         |         |         |         |     |         |         |         |         |         |   |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |   |   |   |   |   |
| 25                       | 12.090  | 12.091  | 12.093                   | 12.094             | 12.093  |  |  |  |      |       |       |       |       |     |         |         |         |         |         |     |         |         |         |         |         |   |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |   |   |   |   |   |
| 30                       | 12.090  | 12.092  | 12.094                   | 12.094             | 12.094  |  |  |  |      |       |       |       |       |     |         |         |         |         |         |     |         |         |         |         |         |   |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |   |   |   |   |   |
| 40                       | 12.091  | 12.093  | 12.094                   | 12.095             | 12.094  |  |  |  |      |       |       |       |       |     |         |         |         |         |         |     |         |         |         |         |         |   |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |   |   |   |   |   |
| 50                       | 12.091  | 12.092  | 12.094                   | 12.094             | 12.093  |  |  |  |      |       |       |       |       |     |         |         |         |         |         |     |         |         |         |         |         |   |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |   |   |   |   |   |
| 60                       | 12.090  | 12.092  | 12.093                   | 12.093             | 12.092  |  |  |  |      |       |       |       |       |     |         |         |         |         |         |     |         |         |         |         |         |   |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |   |   |   |   |   |
| 65                       | 12.089  | 12.091  | 12.092                   | 12.092             | 12.090  |  |  |  |      |       |       |       |       |     |         |         |         |         |         |     |         |         |         |         |         |   |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |   |   |   |   |   |
| --                       | -   | -   | -                        | -                  | -       |  |  |  |      |       |       |       |       |     |         |         |         |         |         |     |         |         |         |         |         |   |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |   |   |   |   |   |
| Object                   | -12V1.25A   | 2.Values  |                          |                    |         |  |  |  |      |       |       |       |       |     |         |         |         |         |         |     |         |         |         |         |         |   |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |   |   |   |   |   |
| 1.Graph                  | <p>Output Voltage [V]</p> <p>Ambient Temperature [°C]</p> <p>Load 100%</p> <ul style="list-style-type: none"> <li>—△— Input Volt. 9V</li> <li>---□--- Input Volt. 12V</li> <li>---*--- Input Volt. 18V</li> <li>---○--- Input Volt. 24V</li> <li>---◇--- Input Volt. 36V</li> </ul> | <table border="1"> <thead> <tr> <th rowspan="2">Ambient Temperature [°C]</th> <th colspan="5">Output Voltage [V]</th> </tr> <tr> <th>9[V]</th> <th>12[V]</th> <th>18[V]</th> <th>24[V]</th> <th>36[V]</th> </tr> </thead> <tbody> <tr><td>-40</td><td>-12.051</td><td>-12.050</td><td>-12.050</td><td>-12.049</td><td>-12.051</td></tr> <tr><td>-20</td><td>-12.066</td><td>-12.065</td><td>-12.065</td><td>-12.064</td><td>-12.065</td></tr> <tr><td>0</td><td>-12.077</td><td>-12.076</td><td>-12.075</td><td>-12.075</td><td>-12.075</td></tr> <tr><td>10</td><td>-12.081</td><td>-12.080</td><td>-12.079</td><td>-12.078</td><td>-12.079</td></tr> <tr><td>25</td><td>-12.086</td><td>-12.084</td><td>-12.083</td><td>-12.082</td><td>-12.083</td></tr> <tr><td>30</td><td>-12.086</td><td>-12.085</td><td>-12.084</td><td>-12.083</td><td>-12.084</td></tr> <tr><td>40</td><td>-12.087</td><td>-12.086</td><td>-12.084</td><td>-12.084</td><td>-12.085</td></tr> <tr><td>50</td><td>-12.087</td><td>-12.086</td><td>-12.084</td><td>-12.084</td><td>-12.085</td></tr> <tr><td>60</td><td>-12.087</td><td>-12.085</td><td>-12.084</td><td>-12.083</td><td>-12.084</td></tr> <tr><td>65</td><td>-12.086</td><td>-12.084</td><td>-12.083</td><td>-12.082</td><td>-12.083</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr> </tbody> </table> | Ambient Temperature [°C] | Output Voltage [V] |         |  |  |  | 9[V] | 12[V] | 18[V] | 24[V] | 36[V] | -40 | -12.051 | -12.050 | -12.050 | -12.049 | -12.051 | -20 | -12.066 | -12.065 | -12.065 | -12.064 | -12.065 | 0 | -12.077 | -12.076 | -12.075 | -12.075 | -12.075 | 10 | -12.081 | -12.080 | -12.079 | -12.078 | -12.079 | 25 | -12.086 | -12.084 | -12.083 | -12.082 | -12.083 | 30 | -12.086 | -12.085 | -12.084 | -12.083 | -12.084 | 40 | -12.087 | -12.086 | -12.084 | -12.084 | -12.085 | 50 | -12.087 | -12.086 | -12.084 | -12.084 | -12.085 | 60 | -12.087 | -12.085 | -12.084 | -12.083 | -12.084 | 65 | -12.086 | -12.084 | -12.083 | -12.082 | -12.083 | -- | - | - | - | - | - |
| Ambient Temperature [°C] | Output Voltage [V]  |   |                          |                    |         |  |  |  |      |       |       |       |       |     |         |         |         |         |         |     |         |         |         |         |         |   |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |   |   |   |   |   |
|                          | 9[V]  | 12[V]   | 18[V]                    | 24[V]              | 36[V]   |  |  |  |      |       |       |       |       |     |         |         |         |         |         |     |         |         |         |         |         |   |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |   |   |   |   |   |
| -40                      | -12.051   | -12.050   | -12.050                  | -12.049            | -12.051 |  |  |  |      |       |       |       |       |     |         |         |         |         |         |     |         |         |         |         |         |   |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |   |   |   |   |   |
| -20                      | -12.066   | -12.065   | -12.065                  | -12.064            | -12.065 |  |  |  |      |       |       |       |       |     |         |         |         |         |         |     |         |         |         |         |         |   |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |   |   |   |   |   |
| 0                        | -12.077   | -12.076   | -12.075                  | -12.075            | -12.075 |  |  |  |      |       |       |       |       |     |         |         |         |         |         |     |         |         |         |         |         |   |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |   |   |   |   |   |
| 10                       | -12.081   | -12.080   | -12.079                  | -12.078            | -12.079 |  |  |  |      |       |       |       |       |     |         |         |         |         |         |     |         |         |         |         |         |   |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |   |   |   |   |   |
| 25                       | -12.086   | -12.084   | -12.083                  | -12.082            | -12.083 |  |  |  |      |       |       |       |       |     |         |         |         |         |         |     |         |         |         |         |         |   |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |   |   |   |   |   |
| 30                       | -12.086   | -12.085   | -12.084                  | -12.083            | -12.084 |  |  |  |      |       |       |       |       |     |         |         |         |         |         |     |         |         |         |         |         |   |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |   |   |   |   |   |
| 40                       | -12.087   | -12.086   | -12.084                  | -12.084            | -12.085 |  |  |  |      |       |       |       |       |     |         |         |         |         |         |     |         |         |         |         |         |   |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |   |   |   |   |   |
| 50                       | -12.087   | -12.086   | -12.084                  | -12.084            | -12.085 |  |  |  |      |       |       |       |       |     |         |         |         |         |         |     |         |         |         |         |         |   |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |   |   |   |   |   |
| 60                       | -12.087   | -12.085   | -12.084                  | -12.083            | -12.084 |  |  |  |      |       |       |       |       |     |         |         |         |         |         |     |         |         |         |         |         |   |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |   |   |   |   |   |
| 65                       | -12.086   | -12.084   | -12.083                  | -12.082            | -12.083 |  |  |  |      |       |       |       |       |     |         |         |         |         |         |     |         |         |         |         |         |   |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |   |   |   |   |   |
| --                       | -   | -   | -                        | -                  | -       |  |  |  |      |       |       |       |       |     |         |         |         |         |         |     |         |         |         |         |         |   |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |         |         |         |         |         |    |   |   |   |   |   |

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



|       |                         |                            |
|-------|-------------------------|----------------------------|
| Model | STMGFW302412            | Testing Circuitry Figure A |
| Item  | Output Voltage Accuracy |                            |

### 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 : -20 - 60°C

Input Voltage : 9 - 36V

Load Current (AVR 1) : 0 - 1.25A (AVR 2) : 0 - 1.25A

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

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

### 2. Values

| Object          | +12V1.25A |                  |                  | Output     |            | Output Voltage Accuracy |            |
|-----------------|-----------|------------------|------------------|------------|------------|-------------------------|------------|
|                 | Item      | Temperature [°C] | Input Voltage[V] | Current[A] | Voltage[V] | Value [mV]              | Ration [%] |
| Maximum Voltage |           |                  |                  | 0          | 12.432     | ±181                    | ±1.5       |
| Minimum Voltage |           |                  |                  | 1.25       | 12.071     |                         |            |

| Object          | -12V1.25A |                  |                  | Output     |            | Output Voltage Accuracy |            |
|-----------------|-----------|------------------|------------------|------------|------------|-------------------------|------------|
|                 | Item      | Temperature [°C] | Input Voltage[V] | Current[A] | Voltage[V] | Value [mV]              | Ration [%] |
| Maximum Voltage |           |                  |                  | 0          | -12.529    | ±233                    | ±1.9       |
| Minimum Voltage |           |                  |                  | 1.25       | -12.064    |                         |            |

**COSEL**

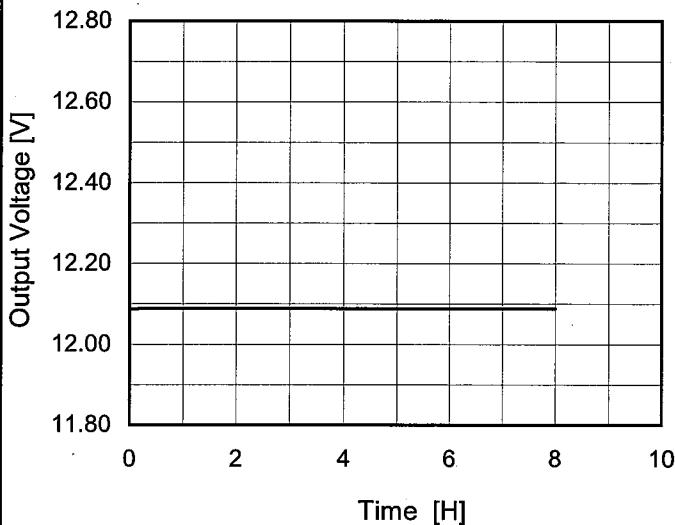
Model STMGFW302412

Item Time Lapse Drift

Object +12V1.25A

Temperature 25°C  
Testing Circuitry Figure A

## 1.Graph

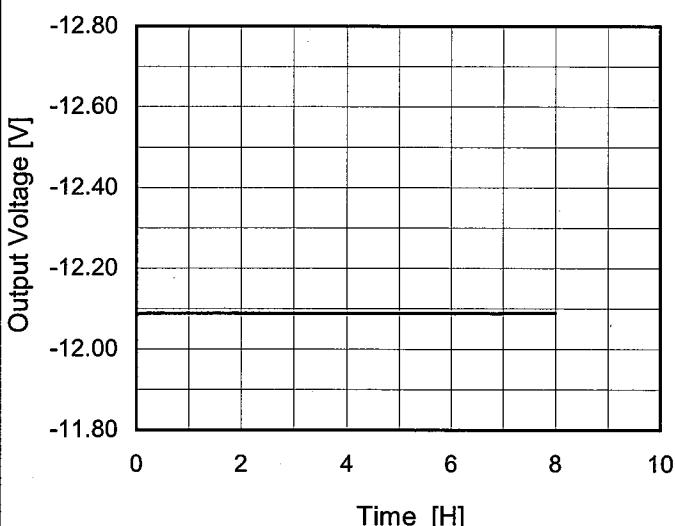


Input Volt. 24V

Load 100%

Object -12V1.25A

## 1.Graph



Input Volt. 24V

Load 100%

## 2.Values

| Time since start [H] | Output Voltage [V] |
|----------------------|--------------------|
| 0.0                  | 12.085             |
| 0.5                  | 12.088             |
| 1.0                  | 12.089             |
| 2.0                  | 12.088             |
| 3.0                  | 12.089             |
| 4.0                  | 12.089             |
| 5.0                  | 12.089             |
| 6.0                  | 12.089             |
| 7.0                  | 12.089             |
| 8.0                  | 12.089             |

## 2.Values

| Time since start [H] | Output Voltage [V] |
|----------------------|--------------------|
| 0.0                  | -12.083            |
| 0.5                  | -12.089            |
| 1.0                  | -12.089            |
| 2.0                  | -12.089            |
| 3.0                  | -12.089            |
| 4.0                  | -12.089            |
| 5.0                  | -12.089            |
| 6.0                  | -12.089            |
| 7.0                  | -12.089            |
| 8.0                  | -12.089            |

**COSEL**

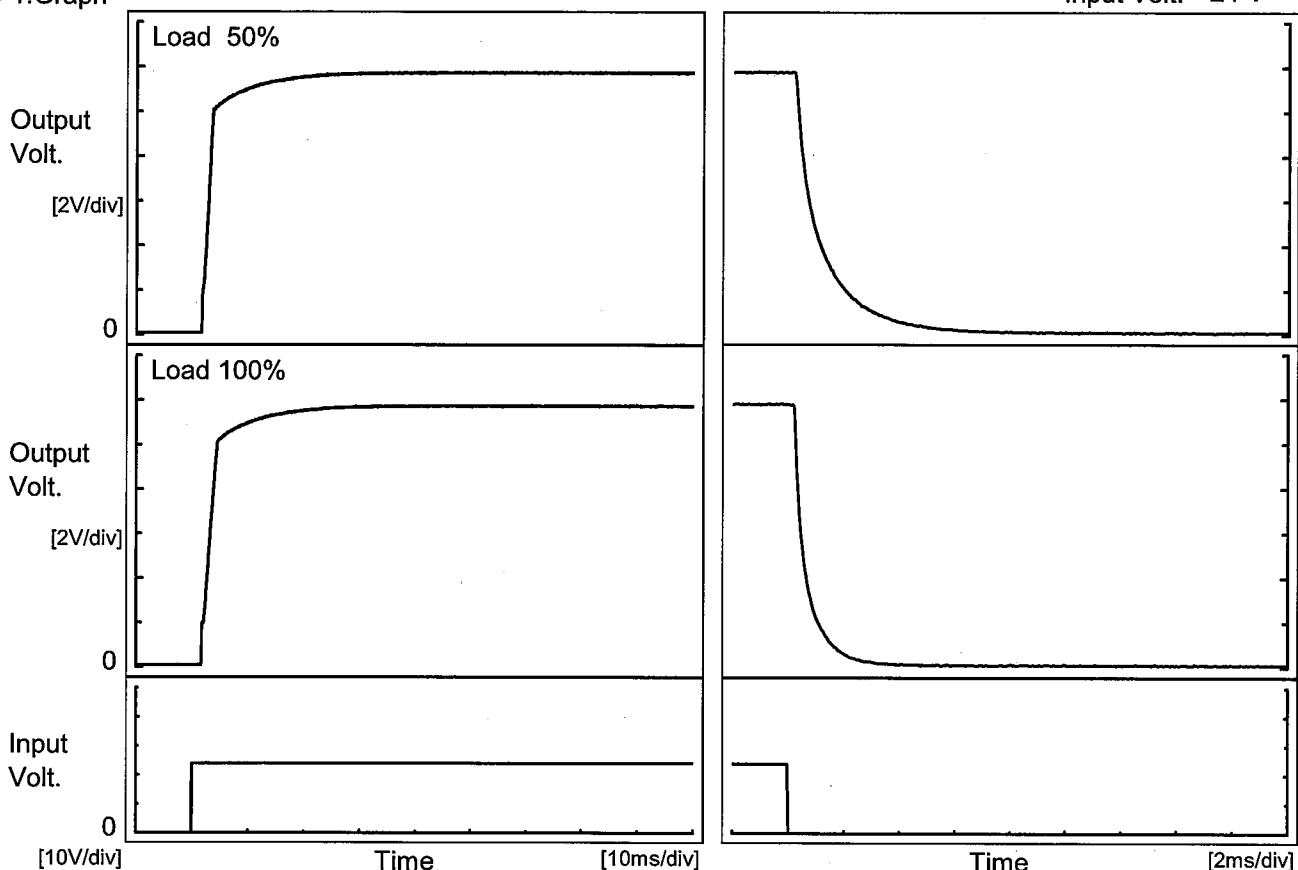
Model STMGFW302412

Item Rise and Fall Time

Object +12V1.25A

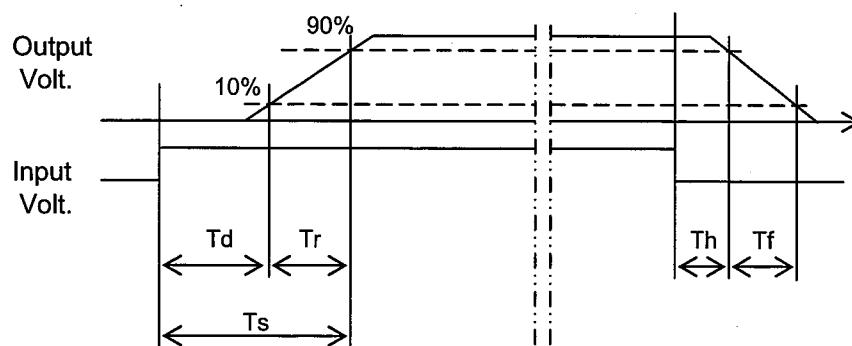
Temperature 25°C  
Testing Circuitry Figure A

## 1. Graph



## 2. Values

| Load  | Time | Td  | Tr  | Ts  | Th  | Tf  | [ms] |
|-------|------|-----|-----|-----|-----|-----|------|
| 50 %  |      | 1.8 | 6.6 | 8.4 | 0.3 | 2.5 |      |
| 100 % |      | 1.8 | 7.3 | 9.1 | 0.2 | 1.2 |      |



**COSEL**

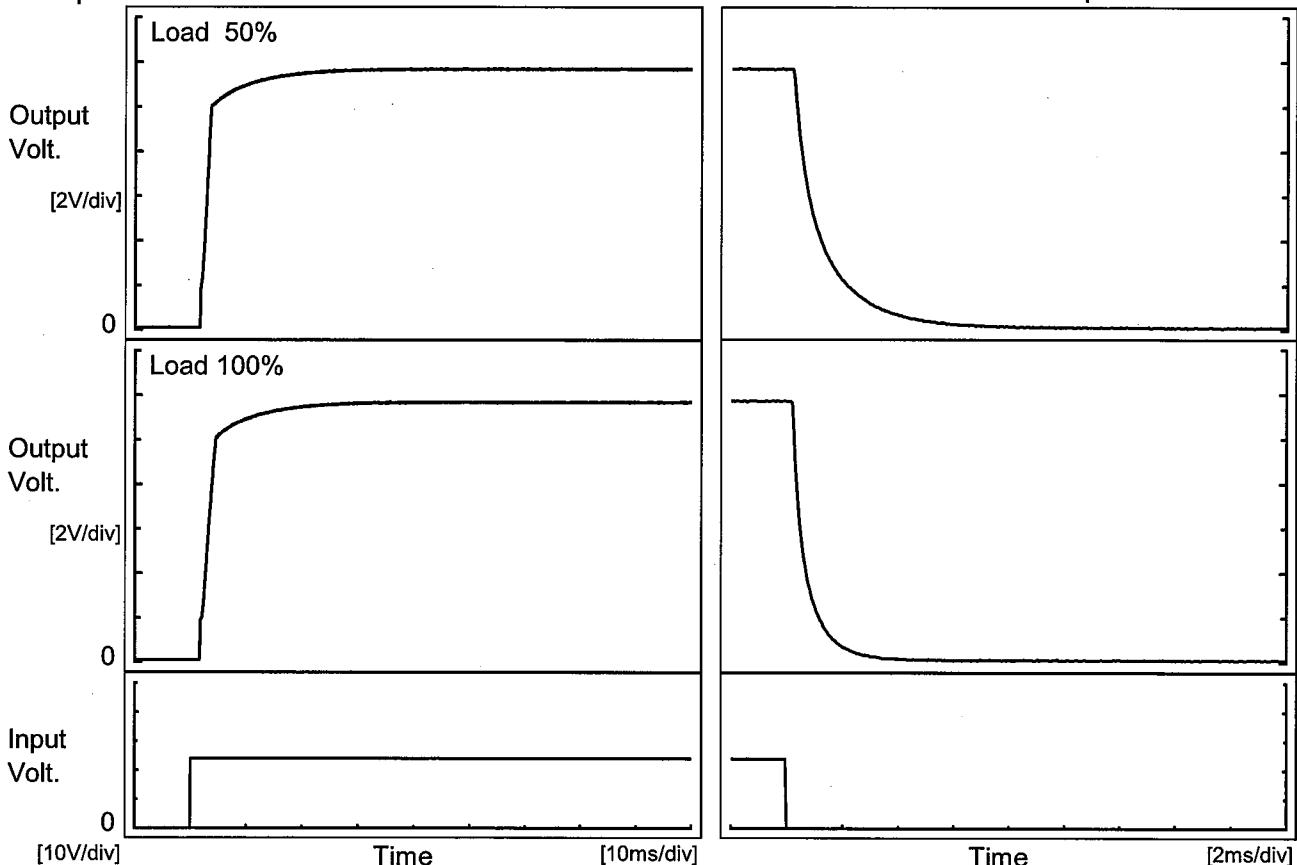
Model STMGFW302412

Item Rise and Fall Time

Object -12V1.25A

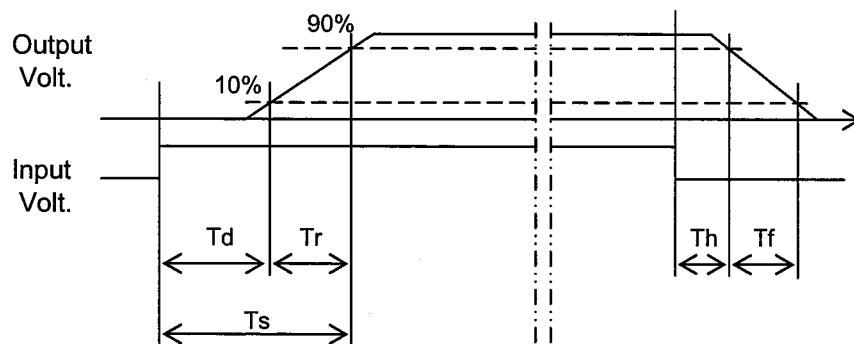
Temperature 25°C  
Testing Circuitry Figure A

## 1. Graph



## 2. Values

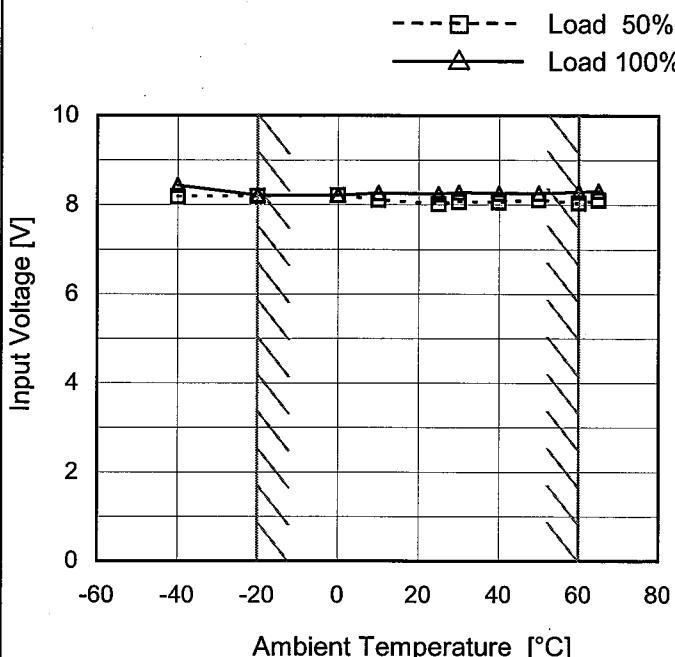
| Load  | Time | Td  | Tr  | Ts  | Th  | Tf  | [ms] |
|-------|------|-----|-----|-----|-----|-----|------|
| 50 %  |      | 1.8 | 7.3 | 9.1 | 0.3 | 2.6 |      |
| 100 % |      | 1.8 | 7.7 | 9.5 | 0.2 | 1.3 |      |



**COSEL**

|        |   |
|--------|---|
| Model  | STMGFW302412  |
| Item   | Minimum Input Voltage<br>for Regulated Output Voltage |
| Object | +12V1.25A   |

## 1.Graph



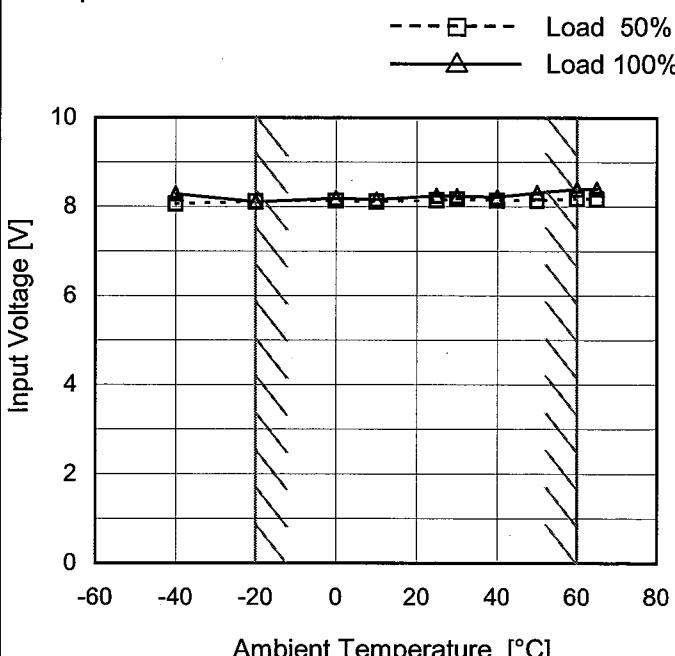
## Testing Circuitry Figure A

## 2.Values

| Ambient Temperature<br>[°C] | Input Voltage [V] |           |
|-----------------------------|-------------------|-----------|
|                             | Load 50%          | Load 100% |
| -40                         | 8.2               | 8.5       |
| -20                         | 8.2               | 8.3       |
| 0                           | 8.3               | 8.3       |
| 10                          | 8.2               | 8.3       |
| 25                          | 8.1               | 8.3       |
| 30                          | 8.1               | 8.3       |
| 40                          | 8.1               | 8.3       |
| 50                          | 8.2               | 8.3       |
| 60                          | 8.1               | 8.3       |
| 65                          | 8.1               | 8.4       |
| --                          | -                 | -         |

|        |           |
|--------|-----------|
| Object | -12V1.25A |
|--------|-----------|

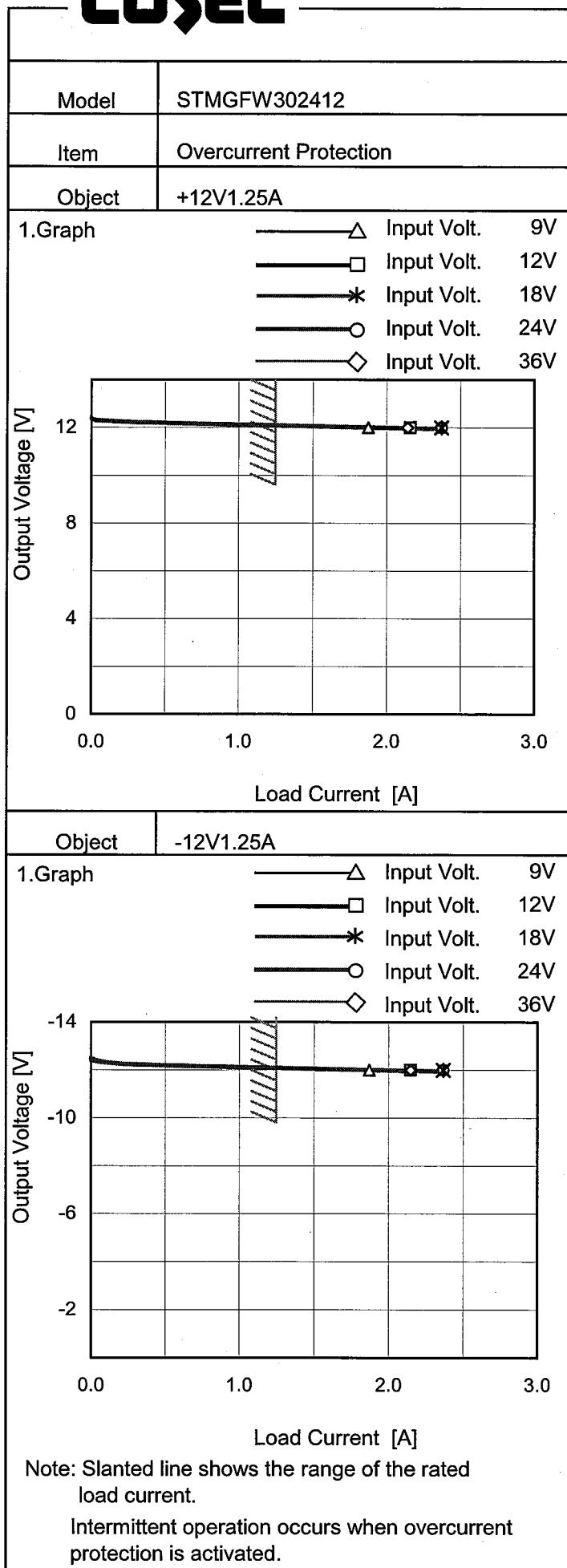
## 1.Graph



## 2.Values

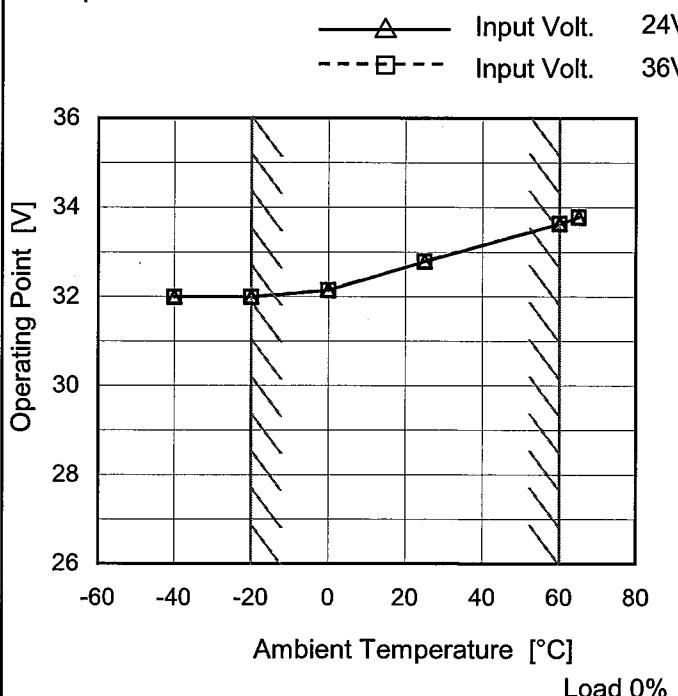
| Ambient Temperature<br>[°C] | Input Voltage [V] |           |
|-----------------------------|-------------------|-----------|
|                             | Load 50%          | Load 100% |
| -40                         | 8.1               | 8.3       |
| -20                         | 8.2               | 8.2       |
| 0                           | 8.2               | 8.2       |
| 10                          | 8.2               | 8.2       |
| 25                          | 8.2               | 8.3       |
| 30                          | 8.2               | 8.3       |
| 40                          | 8.2               | 8.3       |
| 50                          | 8.2               | 8.4       |
| 60                          | 8.2               | 8.4       |
| 65                          | 8.2               | 8.4       |
| --                          | -                 | -         |

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

**COSEL**Temperature 25°C  
Testing Circuitry Figure A

|        |                        |
|--------|------------------------|
| Model  | STMGFW302412           |
| Item   | Overvoltage Protection |
| Object | +24V1.25A              |

## 1. Graph



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

## Testing Circuitry Figure A

## 2. Values

| Ambient Temperature [°C] | Operating Point [V] |                   |
|--------------------------|---------------------|-------------------|
|                          | Input Volt. 24[V]   | Input Volt. 36[V] |
| -40                      | 31.99               | 31.99             |
| -20                      | 31.99               | 31.99             |
| 0                        | 32.14               | 32.14             |
| 25                       | 32.79               | 32.79             |
| 60                       | 33.64               | 33.64             |
| 65                       | 33.78               | 33.78             |
| --                       | -                   | -                 |
| --                       | -                   | -                 |
| --                       | -                   | -                 |
| --                       | -                   | -                 |
| --                       | -                   | -                 |

COSEL

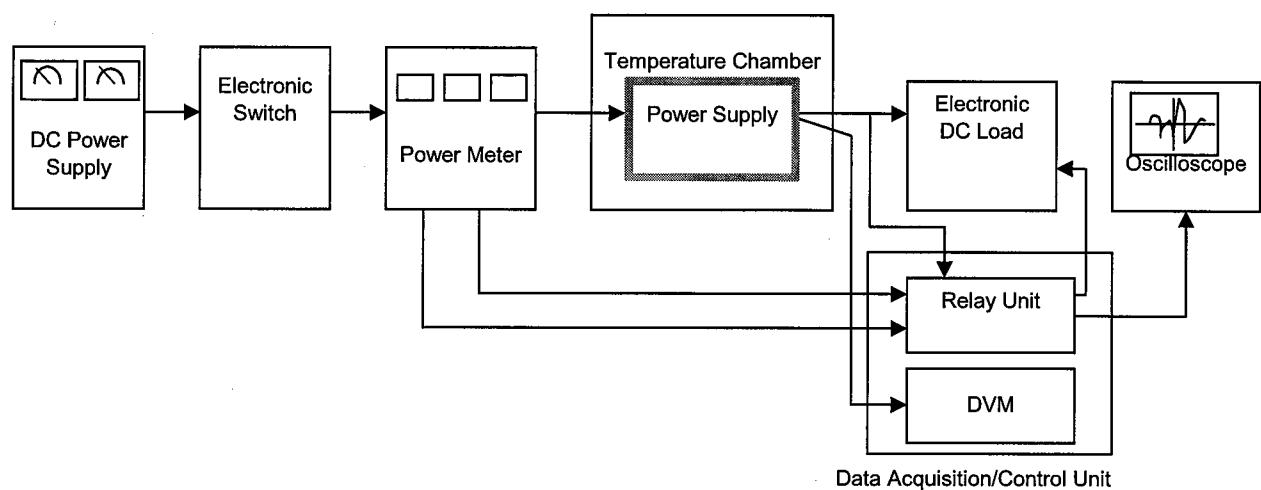


Figure A

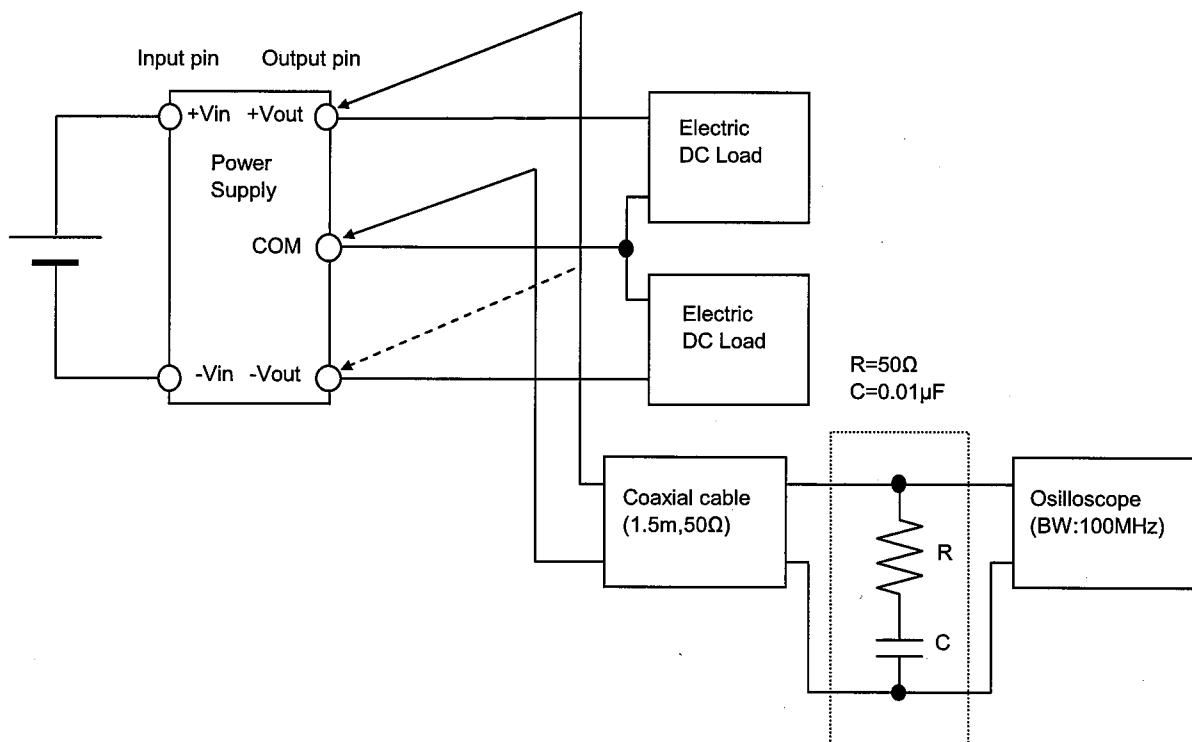


Figure B (Ripple and Ripple noise Characteristic)