



TEST DATA OF SFS30241R5

Regulated DC Power Supply
Dec 28,2004

Approved by : Isao Yasuda
Isao Yasuda Design Manager

Prepared by : Tatsuya Mano
Tatsuya Mano Design Engineer

COSEL CO.,LTD.



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| Model | | SFS30241R5 | Temperature | | 25°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Item | | Input Current (by Input Voltage) | Testing Circuitry | | Figure A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>1.Graph</p> <p>—△— Load 100% ---□--- Load 50% -·-○-·- Load 0%</p> | | | <p>2.Values</p> <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</td><td>0.000</td><td>0.000</td><td>0.000</td></tr> <tr><td>4</td><td>0.002</td><td>0.002</td><td>0.002</td></tr> <tr><td>8</td><td>0.002</td><td>0.002</td><td>0.002</td></tr> <tr><td>12</td><td>0.003</td><td>0.003</td><td>0.003</td></tr> <tr><td>16</td><td>0.004</td><td>0.004</td><td>0.004</td></tr> <tr><td>17</td><td>0.045</td><td>0.544</td><td>1.082</td></tr> <tr><td>18</td><td>0.041</td><td>0.496</td><td>0.997</td></tr> <tr><td>20</td><td>0.039</td><td>0.448</td><td>0.878</td></tr> <tr><td>24</td><td>0.037</td><td>0.378</td><td>0.734</td></tr> <tr><td>28</td><td>0.035</td><td>0.327</td><td>0.629</td></tr> <tr><td>32</td><td>0.035</td><td>0.289</td><td>0.550</td></tr> <tr><td>36</td><td>0.034</td><td>0.260</td><td>0.497</td></tr> <tr><td>40</td><td>0.034</td><td>0.236</td><td>0.443</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 | 0.000 | 0.000 | 0.000 | 4 | 0.002 | 0.002 | 0.002 | 8 | 0.002 | 0.002 | 0.002 | 12 | 0.003 | 0.003 | 0.003 | 16 | 0.004 | 0.004 | 0.004 | 17 | 0.045 | 0.544 | 1.082 | 18 | 0.041 | 0.496 | 0.997 | 20 | 0.039 | 0.448 | 0.878 | 24 | 0.037 | 0.378 | 0.734 | 28 | 0.035 | 0.327 | 0.629 | 32 | 0.035 | 0.289 | 0.550 | 36 | 0.034 | 0.260 | 0.497 | 40 | 0.034 | 0.236 | 0.443 | -- | - | - | - | -- | - | - | - | -- | - | - | - |
| Input Voltage [V] | Input Current [A] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Load 0% | Load 50% | Load 100% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 0.000 | 0.000 | 0.000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 0.002 | 0.002 | 0.002 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 0.002 | 0.002 | 0.002 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | 0.003 | 0.003 | 0.003 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | 0.004 | 0.004 | 0.004 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | 0.045 | 0.544 | 1.082 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | 0.041 | 0.496 | 0.997 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | 0.039 | 0.448 | 0.878 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 24 | 0.037 | 0.378 | 0.734 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 28 | 0.035 | 0.327 | 0.629 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 32 | 0.035 | 0.289 | 0.550 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 36 | 0.034 | 0.260 | 0.497 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Note: Slanted line shows the range of the rated input voltage.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



| Model | | SFS30241R5 | | Temperature 25°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------------|---|-------------------|----------------------------|--|------------------|-------------------|--|--|-------------------|-------------------|-------------------|-----|-------|-------|-------|-----|-------|-------|-------|-----|-------|-------|-------|-----|-------|-------|-------|-----|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|----|---|---|---|----|---|---|---|----|---|---|---|
| Item | | Input Current (by Load Current) | | Testing Circuitry Figure A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | | —△— Input Volt. 18V - - □ - - Input Volt. 24V - - ○ - - Input Volt. 36V | | 2.Values | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <table border="1"> <thead> <tr> <th rowspan="2">Load Current [A]</th> <th colspan="3">Input Current [A]</th> </tr> <tr> <th>Input Volt. 18[V]</th> <th>Input Volt. 24[V]</th> <th>Input Volt. 36[V]</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>0.041</td><td>0.037</td><td>0.034</td></tr> <tr><td>2.0</td><td>0.214</td><td>0.166</td><td>0.120</td></tr> <tr><td>4.0</td><td>0.392</td><td>0.298</td><td>0.207</td></tr> <tr><td>6.0</td><td>0.575</td><td>0.434</td><td>0.296</td></tr> <tr><td>8.0</td><td>0.764</td><td>0.573</td><td>0.386</td></tr> <tr><td>10.0</td><td>0.958</td><td>0.714</td><td>0.478</td></tr> <tr><td>10.4</td><td>0.997</td><td>0.734</td><td>0.497</td></tr> <tr><td>11.4</td><td>1.100</td><td>0.818</td><td>0.546</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td></tr> </tbody> </table> | | | | Load Current [A] | Input Current [A] | | | Input Volt. 18[V] | Input Volt. 24[V] | Input Volt. 36[V] | 0.0 | 0.041 | 0.037 | 0.034 | 2.0 | 0.214 | 0.166 | 0.120 | 4.0 | 0.392 | 0.298 | 0.207 | 6.0 | 0.575 | 0.434 | 0.296 | 8.0 | 0.764 | 0.573 | 0.386 | 10.0 | 0.958 | 0.714 | 0.478 | 10.4 | 0.997 | 0.734 | 0.497 | 11.4 | 1.100 | 0.818 | 0.546 | -- | - | - | - | -- | - | - | - | -- | - | - | - |
| Load Current [A] | Input Current [A] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Input Volt. 18[V] | Input Volt. 24[V] | Input Volt. 36[V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.0 | 0.041 | 0.037 | 0.034 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.0 | 0.214 | 0.166 | 0.120 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.0 | 0.392 | 0.298 | 0.207 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.0 | 0.575 | 0.434 | 0.296 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8.0 | 0.764 | 0.573 | 0.386 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10.0 | 0.958 | 0.714 | 0.478 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10.4 | 0.997 | 0.734 | 0.497 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11.4 | 1.100 | 0.818 | 0.546 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Note: Slanted line shows the range of the rated load current. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



| Model | | SFS30241R5 | | Temperature | | 25°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-------------------|-------------------------------|-------------------|--|--|----------|--|------------------|-----------------|--|--|-------------------|-------------------|-------------------|-----|------|------|------|-----|------|------|------|-----|------|------|------|-----|-------|-------|-------|-----|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|----|---|---|---|----|---|---|---|----|---|---|---|
| Item | | Input Power (by Load Current) | | Testing Circuitry | | Figure A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. Graph | | | | 2. Values | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | —△— Input Volt. 18V | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | - - -□- - - Input Volt. 24V | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | - - -○- - - Input Volt. 36V | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>The graph plots Input Power [W] on the y-axis (0 to 30) against Load Current [A] on the x-axis (0 to 12). Three data series are shown: 18V (solid line with triangles), 24V (dashed line with squares), and 36V (dash-dot line with circles). All series show a linear increase in power with current. A vertical slanted line is drawn at approximately 11.4 A, indicating the rated load current range.</p> | | | | <table border="1"> <thead> <tr> <th rowspan="2">Load Current [A]</th> <th colspan="3">Input Power [W]</th> </tr> <tr> <th>Input Volt. 18[V]</th> <th>Input Volt. 24[V]</th> <th>Input Volt. 36[V]</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>0.75</td><td>0.88</td><td>1.25</td></tr> <tr><td>2.0</td><td>3.84</td><td>3.99</td><td>4.33</td></tr> <tr><td>4.0</td><td>7.02</td><td>7.15</td><td>7.49</td></tr> <tr><td>6.0</td><td>10.28</td><td>10.37</td><td>10.69</td></tr> <tr><td>8.0</td><td>13.60</td><td>13.69</td><td>13.92</td></tr> <tr><td>10.0</td><td>17.02</td><td>17.04</td><td>17.25</td></tr> <tr><td>10.4</td><td>17.71</td><td>17.72</td><td>17.92</td></tr> <tr><td>11.4</td><td>19.52</td><td>19.50</td><td>19.67</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td></tr> </tbody> </table> | | | | Load Current [A] | Input Power [W] | | | Input Volt. 18[V] | Input Volt. 24[V] | Input Volt. 36[V] | 0.0 | 0.75 | 0.88 | 1.25 | 2.0 | 3.84 | 3.99 | 4.33 | 4.0 | 7.02 | 7.15 | 7.49 | 6.0 | 10.28 | 10.37 | 10.69 | 8.0 | 13.60 | 13.69 | 13.92 | 10.0 | 17.02 | 17.04 | 17.25 | 10.4 | 17.71 | 17.72 | 17.92 | 11.4 | 19.52 | 19.50 | 19.67 | -- | - | - | - | -- | - | - | - | -- | - | - | - |
| Load Current [A] | Input Power [W] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Input Volt. 18[V] | Input Volt. 24[V] | Input Volt. 36[V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.0 | 0.75 | 0.88 | 1.25 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.0 | 3.84 | 3.99 | 4.33 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.0 | 7.02 | 7.15 | 7.49 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.0 | 10.28 | 10.37 | 10.69 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8.0 | 13.60 | 13.69 | 13.92 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10.0 | 17.02 | 17.04 | 17.25 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10.4 | 17.71 | 17.72 | 17.92 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11.4 | 19.52 | 19.50 | 19.67 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Note: Slanted line shows the range of the rated load current.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



| Model | | SFS30241R5 | | Temperature | 25°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|----------------|-------------------------------|--|-------------------|----------|-------------------|----------------|--|----------|-----------|----|------|------|----|------|------|----|------|------|----|------|------|----|------|------|----|------|------|----|------|------|----|---|---|----|---|---|
| Item | | Efficiency (by Input Voltage) | | Testing Circuitry | Figure A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. Graph | | | 2. Values | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>---□--- Load 50% —△— Load 100%</p> | | | <table border="1"> <thead> <tr> <th rowspan="2">Input Voltage [V]</th> <th colspan="2">Efficiency [%]</th> </tr> <tr> <th>Load 50%</th> <th>Load 100%</th> </tr> </thead> <tbody> <tr><td>17</td><td>87.2</td><td>87.3</td></tr> <tr><td>18</td><td>87.3</td><td>87.6</td></tr> <tr><td>20</td><td>87.3</td><td>87.9</td></tr> <tr><td>24</td><td>86.5</td><td>87.7</td></tr> <tr><td>30</td><td>85.1</td><td>87.1</td></tr> <tr><td>36</td><td>83.4</td><td>86.2</td></tr> <tr><td>40</td><td>82.1</td><td>85.7</td></tr> <tr><td>--</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td></tr> </tbody> </table> | | | Input Voltage [V] | Efficiency [%] | | Load 50% | Load 100% | 17 | 87.2 | 87.3 | 18 | 87.3 | 87.6 | 20 | 87.3 | 87.9 | 24 | 86.5 | 87.7 | 30 | 85.1 | 87.1 | 36 | 83.4 | 86.2 | 40 | 82.1 | 85.7 | -- | - | - | -- | - | - |
| Input Voltage [V] | Efficiency [%] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Load 50% | Load 100% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | 87.2 | 87.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | 87.3 | 87.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | 87.3 | 87.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 24 | 86.5 | 87.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | 85.1 | 87.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 36 | 83.4 | 86.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40 | 82.1 | 85.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Note: Slanted line shows the range of the rated input voltage.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



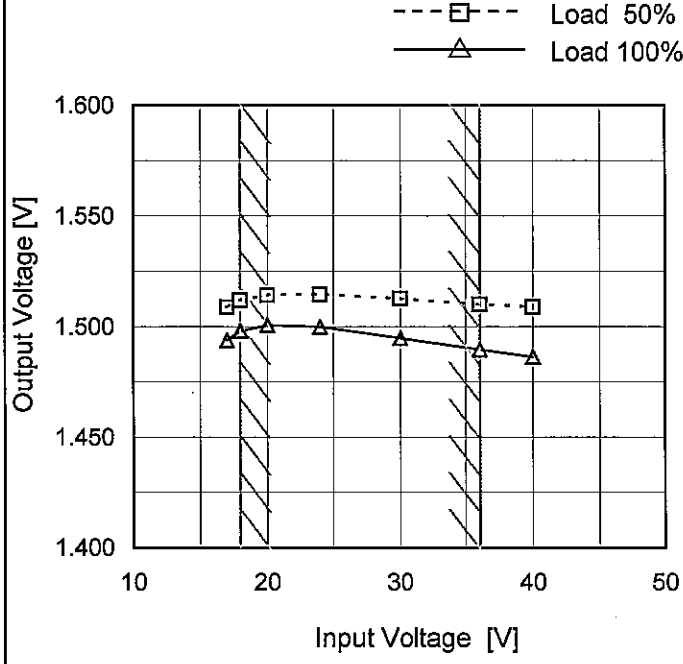
| Model | | SFS30241R5 | | Temperature 25°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-------------------|------------------------------|---|----------------------------|--|------------------|----------------|--|--|-------------------|-------------------|-------------------|-----|---|---|---|-----|------|------|------|-----|------|------|------|-----|------|------|------|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----|---|---|---|----|---|---|---|----|---|---|---|
| Item | | Efficiency (by Load Current) | | Testing Circuitry Figure A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. Graph | | | —△— Input Volt. 18V | 2. Values | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | - -□- - Input Volt. 24V | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | - -○- - Input Volt. 36V | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Efficiency [%]</p> <p>Load Current [A]</p> | | | <table border="1"> <thead> <tr> <th rowspan="2">Load Current [A]</th> <th colspan="3">Efficiency [%]</th> </tr> <tr> <th>Input Volt. 18[V]</th> <th>Input Volt. 24[V]</th> <th>Input Volt. 36[V]</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>2.0</td><td>79.0</td><td>76.3</td><td>70.2</td></tr> <tr><td>4.0</td><td>86.1</td><td>84.7</td><td>80.7</td></tr> <tr><td>6.0</td><td>87.9</td><td>87.3</td><td>84.3</td></tr> <tr><td>8.0</td><td>88.2</td><td>87.8</td><td>85.9</td></tr> <tr><td>10.0</td><td>87.8</td><td>87.8</td><td>86.2</td></tr> <tr><td>10.4</td><td>87.6</td><td>87.7</td><td>86.2</td></tr> <tr><td>11.4</td><td>87.2</td><td>87.5</td><td>86.1</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td></tr> </tbody> </table> | | | Load Current [A] | Efficiency [%] | | | Input Volt. 18[V] | Input Volt. 24[V] | Input Volt. 36[V] | 0.0 | - | - | - | 2.0 | 79.0 | 76.3 | 70.2 | 4.0 | 86.1 | 84.7 | 80.7 | 6.0 | 87.9 | 87.3 | 84.3 | 8.0 | 88.2 | 87.8 | 85.9 | 10.0 | 87.8 | 87.8 | 86.2 | 10.4 | 87.6 | 87.7 | 86.2 | 11.4 | 87.2 | 87.5 | 86.1 | -- | - | - | - | -- | - | - | - | -- | - | - | - |
| Load Current [A] | Efficiency [%] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Input Volt. 18[V] | Input Volt. 24[V] | Input Volt. 36[V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.0 | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.0 | 79.0 | 76.3 | 70.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.0 | 86.1 | 84.7 | 80.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.0 | 87.9 | 87.3 | 84.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8.0 | 88.2 | 87.8 | 85.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10.0 | 87.8 | 87.8 | 86.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10.4 | 87.6 | 87.7 | 86.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11.4 | 87.2 | 87.5 | 86.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Note: Slanted line shows the range of the rated load current.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



| | |
|--------|-----------------|
| Model | SFS30241R5 |
| Item | Line Regulation |
| Object | +1.5V10.4A |

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

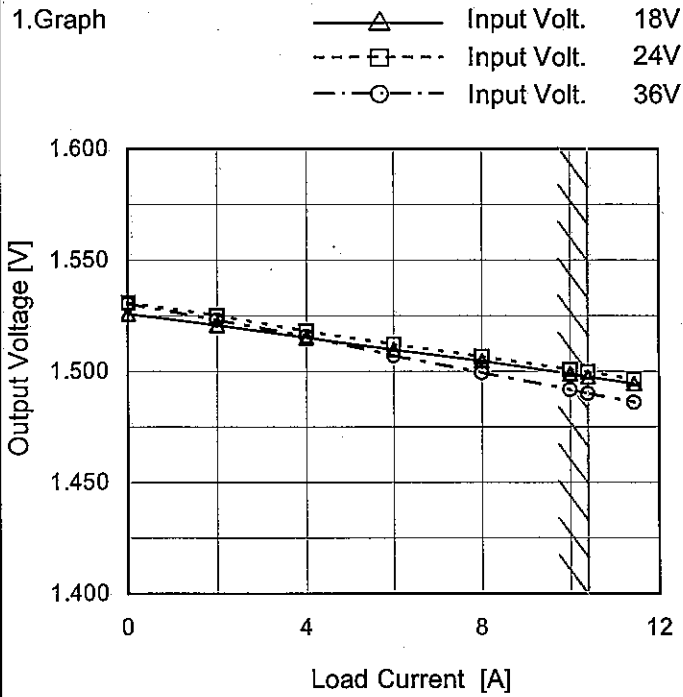
2.Values

| Input Voltage [V] | Output Voltage [V] | |
|-------------------|--------------------|-----------|
| | Load 50% | Load 100% |
| 17 | 1.509 | 1.494 |
| 18 | 1.512 | 1.498 |
| 20 | 1.514 | 1.501 |
| 24 | 1.515 | 1.500 |
| 30 | 1.513 | 1.495 |
| 36 | 1.510 | 1.490 |
| 40 | 1.509 | 1.486 |
| -- | - | - |
| -- | - | - |



| | |
|--------|-----------------|
| Model | SFS30241R5 |
| Item | Load Regulation |
| Object | +1.5V10.4A |

Temperature 25°C
Testing Circuitry Figure A



2.Values

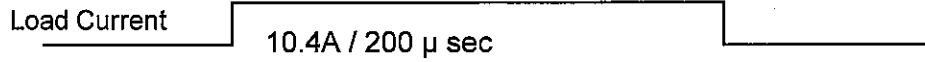
| Load Current [A] | Output Voltage [V] | | |
|------------------|--------------------|-------------------|-------------------|
| | Input Volt. 18[V] | Input Volt. 24[V] | Input Volt. 36[V] |
| 0.00 | 1.526 | 1.531 | 1.530 |
| 2.00 | 1.521 | 1.525 | 1.523 |
| 4.00 | 1.515 | 1.518 | 1.516 |
| 6.00 | 1.510 | 1.512 | 1.507 |
| 8.00 | 1.505 | 1.507 | 1.499 |
| 10.00 | 1.499 | 1.501 | 1.492 |
| 10.40 | 1.498 | 1.500 | 1.490 |
| 11.44 | 1.495 | 1.496 | 1.486 |
| -- | - | - | - |
| -- | - | - | - |
| -- | - | - | - |

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

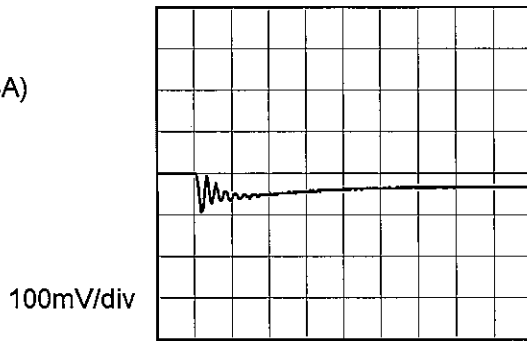


| | | | |
|--------|-----------------------|-------------------|----------|
| Model | SFS30241R5 | Temperature | 25°C |
| Item | Dynamic Load Response | Testing Circuitry | Figure A |
| Object | +1.5V10.4A | | |

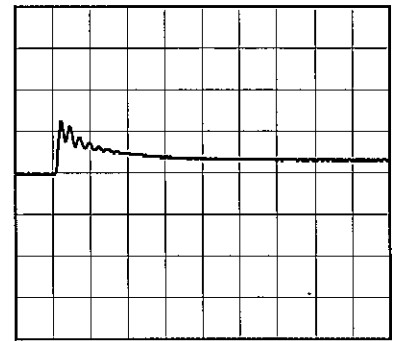
Input Volt. 24 V
 Cycle 1000 mS



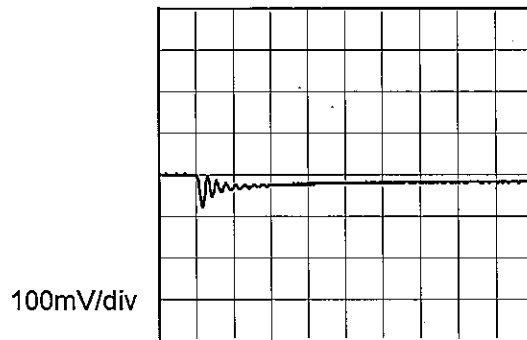
Min. Load (0A) ↔
 Load 100% (10.4A)



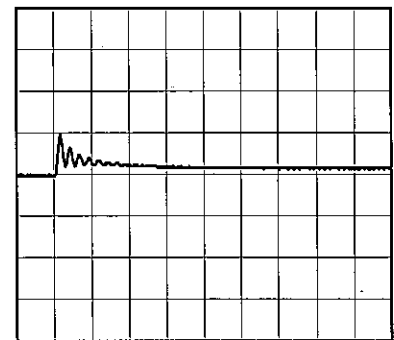
200 μs/div



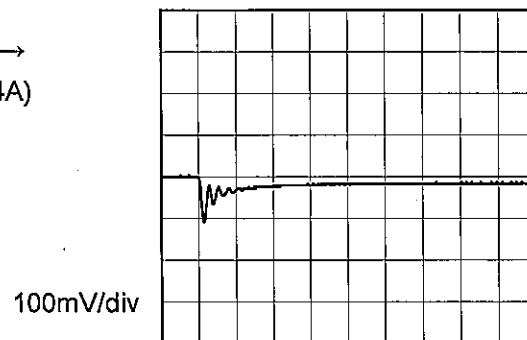
Min. Load (0A) ↔
 Load 50% (5.2A)



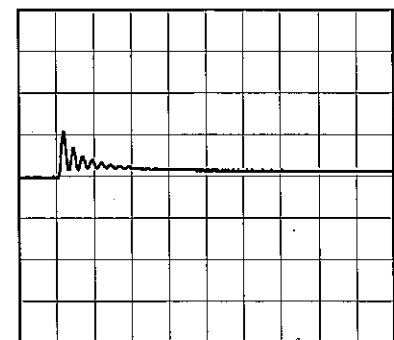
200 μs/div



Load 50% (5.2A) ↔
 Load 100% (10.4A)



200 μs/div





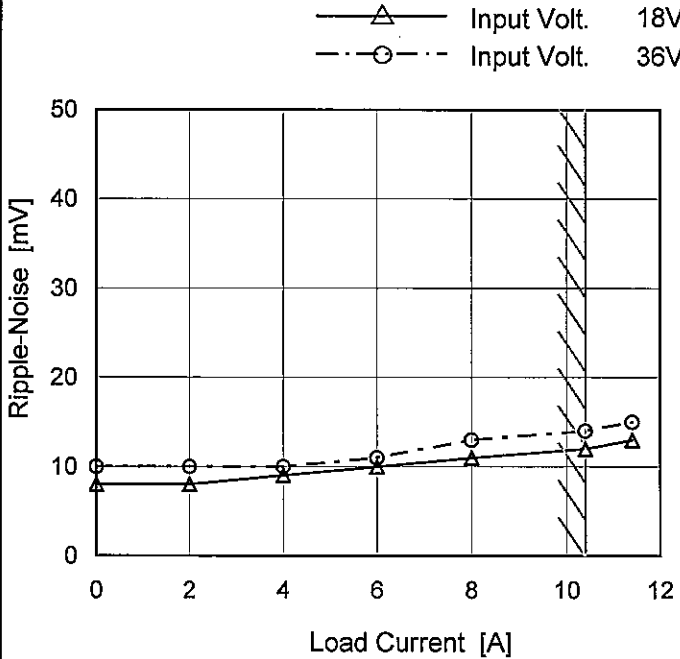
| Model | | SFS30241R5 | Temperature | | 25°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---------------------|----------------------------------|--|--|----------|------------------|---------------------|--|--------------------|--------------------|-----|---|---|-----|---|---|-----|---|---|-----|---|---|-----|---|---|------|---|---|------|---|---|----|---|---|----|---|---|----|---|---|----|---|---|
| Item | | Ripple Voltage (by Load Current) | Testing Circuitry | | Figure C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | | +1.5V10.4A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | | | 2.Values | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p> —△— Input Volt. 18V - - -○- - - Input Volt. 36V </p> <p> Y-axis: Ripple Voltage [mV] X-axis: Load Current [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. 18 [V]</th> <th>Input Volt. 36 [V]</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>2</td><td>4</td></tr> <tr><td>2.0</td><td>3</td><td>4</td></tr> <tr><td>4.0</td><td>3</td><td>4</td></tr> <tr><td>6.0</td><td>3</td><td>4</td></tr> <tr><td>8.0</td><td>3</td><td>4</td></tr> <tr><td>10.4</td><td>3</td><td>4</td></tr> <tr><td>11.4</td><td>3</td><td>4</td></tr> <tr><td>--</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td></tr> </tbody> </table> | | | Load Current [A] | Ripple Voltage [mV] | | Input Volt. 18 [V] | Input Volt. 36 [V] | 0.0 | 2 | 4 | 2.0 | 3 | 4 | 4.0 | 3 | 4 | 6.0 | 3 | 4 | 8.0 | 3 | 4 | 10.4 | 3 | 4 | 11.4 | 3 | 4 | -- | - | - | -- | - | - | -- | - | - | -- | - | - |
| Load Current [A] | Ripple Voltage [mV] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Input Volt. 18 [V] | Input Volt. 36 [V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.0 | 2 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.0 | 3 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.0 | 3 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.0 | 3 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8.0 | 3 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10.4 | 3 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11.4 | 3 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Measured by 100MHz Ossilloscope. Ripple Voltage is shown as p-p in the figure below. Note: Slanted line shows the range of the rated load current.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Ripple [mVp-p]</p> <p>Fig.Complex Ripple Wave Form</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



| | |
|--------|--------------|
| Model | SFS30241R5 |
| Item | Ripple-Noise |
| Object | +1.5V10.4A |

Temperature 25°C
Testing Circuitry Figure C

1. Graph



2. Values

| Load Current [A] | Ripple-Noise [mV] | |
|------------------|--------------------|--------------------|
| | Input Volt. 18 [V] | Input Volt. 36 [V] |
| 0.0 | 8 | 10 |
| 2.0 | 8 | 10 |
| 4.0 | 9 | 10 |
| 6.0 | 10 | 11 |
| 8.0 | 11 | 13 |
| 10.4 | 12 | 14 |
| 11.4 | 13 | 15 |
| -- | - | - |
| -- | - | - |
| -- | - | - |
| -- | - | - |

Measured by 100MHz Oscilloscope.
Ripple-Noise is shown as p-p in the figure below.
Note: Slanted line shows the range of the rated load current.

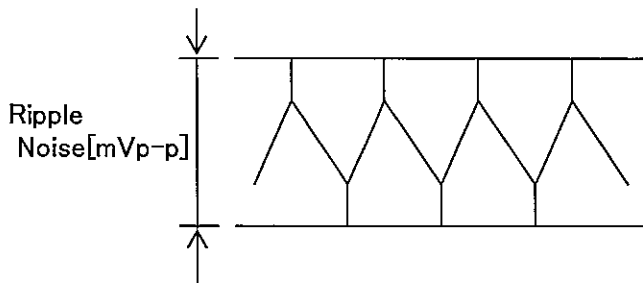


Fig. Complex Ripple Noise Wave Form



| Model | | SFS30241R5 | Testing Circuitry Figure C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---------------------|-----------------------------------|--|--|--------------------------|---------------------|--|----------|-----------|-----|----|----|-----|---|---|-----|---|---|---|---|---|----|---|---|----|---|---|----|---|---|----|---|---|----|---|---|----|---|---|----|---|---|
| Item | | Ripple Voltage (by Ambient Temp.) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | | +1.5V10.4A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | | | 2.Values | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>---□--- Load 50%</p> <p>—△— Load 100%</p> <p>Input Volt. 24V</p> | | | <table border="1"> <thead> <tr> <th rowspan="2">Ambient Temperature [°C]</th> <th colspan="2">Ripple Voltage [mV]</th> </tr> <tr> <th>Load 50%</th> <th>Load 100%</th> </tr> </thead> <tbody> <tr><td>-50</td><td>10</td><td>10</td></tr> <tr><td>-40</td><td>8</td><td>8</td></tr> <tr><td>-20</td><td>6</td><td>6</td></tr> <tr><td>0</td><td>5</td><td>5</td></tr> <tr><td>25</td><td>3</td><td>3</td></tr> <tr><td>85</td><td>3</td><td>3</td></tr> <tr><td>90</td><td>3</td><td>3</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> | | Ambient Temperature [°C] | Ripple Voltage [mV] | | Load 50% | Load 100% | -50 | 10 | 10 | -40 | 8 | 8 | -20 | 6 | 6 | 0 | 5 | 5 | 25 | 3 | 3 | 85 | 3 | 3 | 90 | 3 | 3 | -- | - | - | -- | - | - | -- | - | - | -- | - | - |
| Ambient Temperature [°C] | Ripple Voltage [mV] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Load 50% | Load 100% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -50 | 10 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -40 | 8 | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -20 | 6 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 5 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 25 | 3 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 85 | 3 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 90 | 3 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Measured by 100MHz Ossilloscope.</p> <p>Note: Slanted line shows the range of the rated ambient temperature.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



| | |
|---------|---|
| Model | SFS30241R5 |
| Item | Ambient Temperature Drift |
| Object | +1.5V10.4A |
| 1.Graph | <p> —△— Input Volt. 18V - - - □ - - - Input Volt. 24V - - - ○ - - - Input Volt. 36V </p> <p>Output Voltage [V]</p> <p>Ambient Temperature [°C]</p> <p>Load 100%</p> <p>Note: Slanted line shows the range of the rated ambient temperature.</p> |

Testing Circuitry Figure A

2.Values

| Ambient Temperature [°C] | Output Voltage [V] | | |
|--------------------------|--------------------|-------------------|-------------------|
| | Input Volt. 18[V] | Input Volt. 24[V] | Input Volt. 36[V] |
| -50 | 1.496 | 1.498 | 1.489 |
| -40 | 1.497 | 1.499 | 1.490 |
| -20 | 1.498 | 1.500 | 1.491 |
| 0 | 1.499 | 1.500 | 1.491 |
| 25 | 1.498 | 1.500 | 1.490 |
| 40 | 1.495 | 1.498 | 1.488 |
| 55 | 1.494 | 1.497 | 1.486 |
| 70 | 1.492 | 1.495 | 1.483 |
| 85 | 1.490 | 1.493 | 1.480 |
| 90 | 1.490 | 1.492 | 1.479 |
| -- | -- | -- | - |



| | | |
|--------------|-------------------------|----------------------------|
| COSEL | | |
| Model | SFS30241R5 | |
| Item | Output Voltage Accuracy | Testing Circuitry Figure A |
| Object | +1.5V10.4A | |

1. Output Voltage Accuracy

This is defined as the value of the output voltage, regulation load, ambient temperature and input voltage varied at random in the range as specified below.

Temperature : -40 - 85°C

Input Voltage : 18 - 36V

Load Current : 0 - 10.4A

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

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

2. Values

| Item | Temperature [°C] | Input Voltage[V] | Output | | Output Voltage Accuracy | |
|-----------------|------------------|------------------|------------|------------|-------------------------|------------|
| | | | Current[A] | Voltage[V] | Value [mV] | Ration [%] |
| Maximum Voltage | 85 | 24 | 0 | 1.541 | ±31 | ±2.1 |
| Minimum Voltage | 85 | 36 | 10.4 | 1.480 | | |



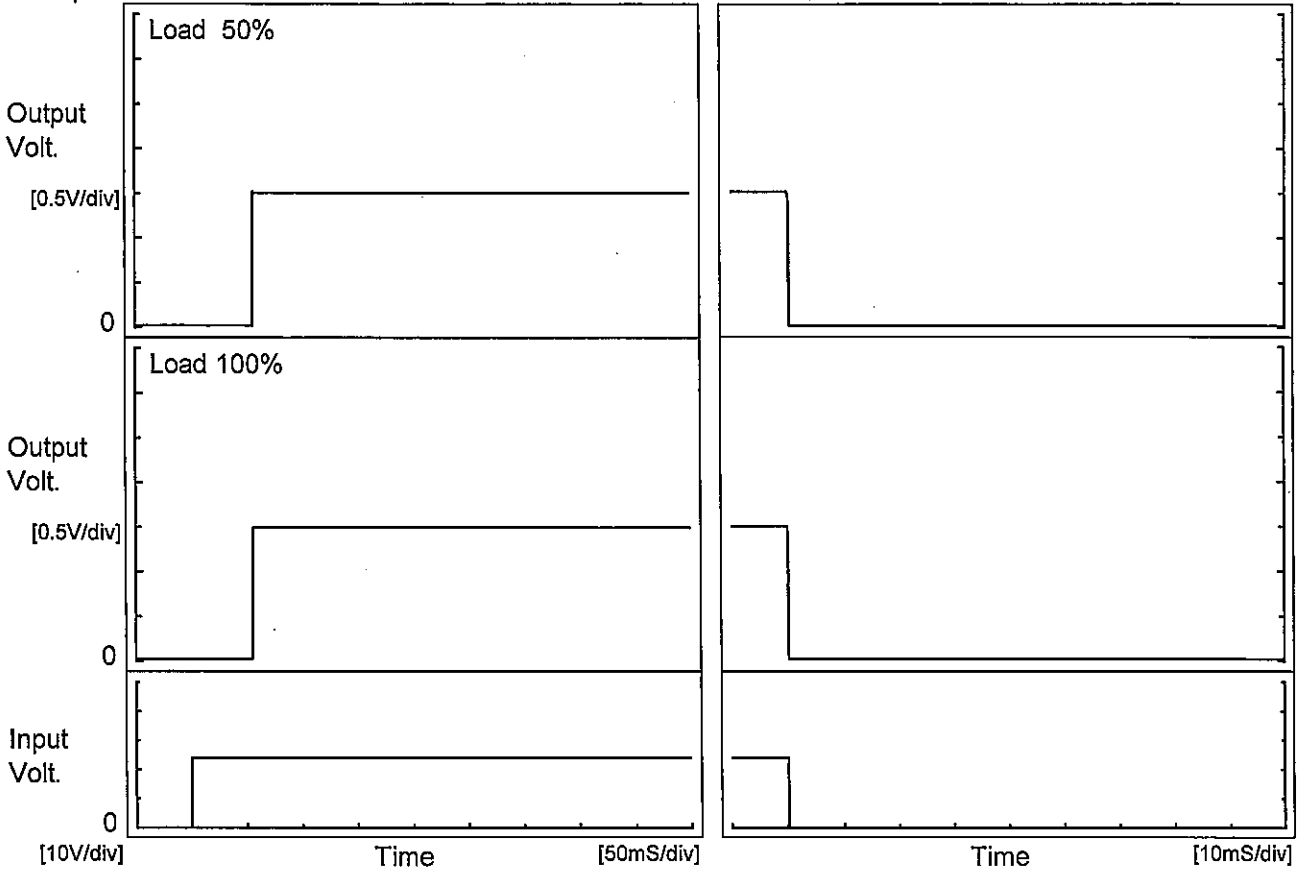
| COSEL | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--------------------|--|----------|----------------------|--------------------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|
| Model | SFS30241R5 | Temperature | 25°C | | | | | | | | | | | | | | | | | | | | | | |
| Item | Time Lapse Drift | Testing Circuitry | Figure A | | | | | | | | | | | | | | | | | | | | | | |
| Object | +1.5V10.4A | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | | 2.Values | | | | | | | | | | | | | | | | | | | | | | | |
| <p style="text-align: center;">Time [H]</p> <p>Input Volt. 24V Load 100%</p> | | <table border="1"> <thead> <tr> <th>Time since start [H]</th> <th>Output Voltage [V]</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>1.500</td></tr> <tr><td>0.5</td><td>1.499</td></tr> <tr><td>1.0</td><td>1.498</td></tr> <tr><td>2.0</td><td>1.498</td></tr> <tr><td>3.0</td><td>1.498</td></tr> <tr><td>4.0</td><td>1.498</td></tr> <tr><td>5.0</td><td>1.498</td></tr> <tr><td>6.0</td><td>1.498</td></tr> <tr><td>7.0</td><td>1.498</td></tr> <tr><td>8.0</td><td>1.498</td></tr> </tbody> </table> | | Time since start [H] | Output Voltage [V] | 0.0 | 1.500 | 0.5 | 1.499 | 1.0 | 1.498 | 2.0 | 1.498 | 3.0 | 1.498 | 4.0 | 1.498 | 5.0 | 1.498 | 6.0 | 1.498 | 7.0 | 1.498 | 8.0 | 1.498 |
| Time since start [H] | Output Voltage [V] | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.0 | 1.500 | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.5 | 1.499 | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.0 | 1.498 | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.0 | 1.498 | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.0 | 1.498 | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.0 | 1.498 | | | | | | | | | | | | | | | | | | | | | | | | |
| 5.0 | 1.498 | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.0 | 1.498 | | | | | | | | | | | | | | | | | | | | | | | | |
| 7.0 | 1.498 | | | | | | | | | | | | | | | | | | | | | | | | |
| 8.0 | 1.498 | | | | | | | | | | | | | | | | | | | | | | | | |



| | | | |
|--------|--------------------|-------------------|----------|
| Model | SFS30241R5 | Temperature | 25°C |
| Item | Rise and Fall Time | Testing Circuitry | Figure A |
| Object | +1.5V/10.4A | | |

1. Graph

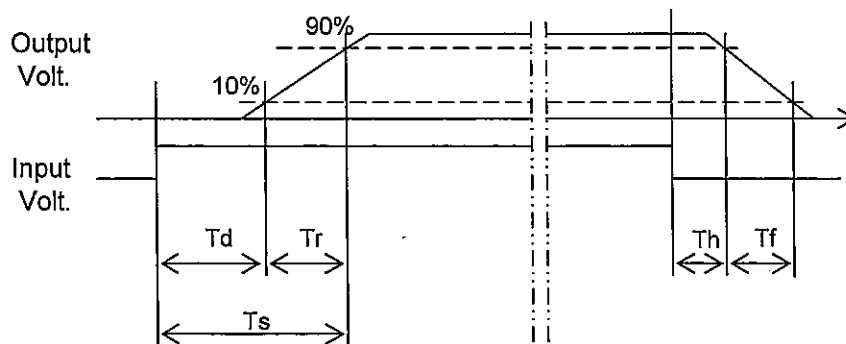
Input Volt. 24 V



2. Values

[mS]

| Load \ Time | Td | Tr | Ts | Th | Tf |
|-------------|------|-----|------|-----|-----|
| 50 % | 55.8 | 0.5 | 56.3 | 0.4 | 0.2 |
| 100 % | 55.8 | 0.5 | 56.3 | 0.2 | 0.2 |





| COSEL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|---|--------------------------|-------------------|--|----------|-----------|-----|------|------|-----|------|------|-----|------|------|---|------|------|----|------|------|----|------|------|----|------|------|----|------|------|----|------|------|----|------|------|----|---|---|
| Model | SFS30241R5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Item | Minimum Input Voltage for Regulated Output Voltage | Testing Circuitry Figure A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | +1.5V10.4A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>1. Graph</p> <p style="text-align: right;"> ---□--- Load 50% —△— Load 100% </p> | | <p>2. Values</p> <table border="1"> <thead> <tr> <th rowspan="2">Ambient Temperature [°C]</th> <th colspan="2">Input Voltage [V]</th> </tr> <tr> <th>Load 50%</th> <th>Load 100%</th> </tr> </thead> <tbody> <tr><td>-50</td><td>15.5</td><td>15.6</td></tr> <tr><td>-40</td><td>15.5</td><td>15.6</td></tr> <tr><td>-20</td><td>15.5</td><td>15.6</td></tr> <tr><td>0</td><td>15.6</td><td>15.6</td></tr> <tr><td>25</td><td>15.6</td><td>15.6</td></tr> <tr><td>40</td><td>15.7</td><td>15.7</td></tr> <tr><td>55</td><td>15.7</td><td>15.7</td></tr> <tr><td>70</td><td>15.7</td><td>15.8</td></tr> <tr><td>85</td><td>15.7</td><td>15.8</td></tr> <tr><td>90</td><td>15.7</td><td>15.9</td></tr> <tr><td>--</td><td>-</td><td>-</td></tr> </tbody> </table> | Ambient Temperature [°C] | Input Voltage [V] | | Load 50% | Load 100% | -50 | 15.5 | 15.6 | -40 | 15.5 | 15.6 | -20 | 15.5 | 15.6 | 0 | 15.6 | 15.6 | 25 | 15.6 | 15.6 | 40 | 15.7 | 15.7 | 55 | 15.7 | 15.7 | 70 | 15.7 | 15.8 | 85 | 15.7 | 15.8 | 90 | 15.7 | 15.9 | -- | - | - |
| Ambient Temperature [°C] | Input Voltage [V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Load 50% | Load 100% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -50 | 15.5 | 15.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -40 | 15.5 | 15.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -20 | 15.5 | 15.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 15.6 | 15.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 25 | 15.6 | 15.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40 | 15.7 | 15.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 55 | 15.7 | 15.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 70 | 15.7 | 15.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 85 | 15.7 | 15.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 90 | 15.7 | 15.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Note: Slanted line shows the range of the rated ambient temperature.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



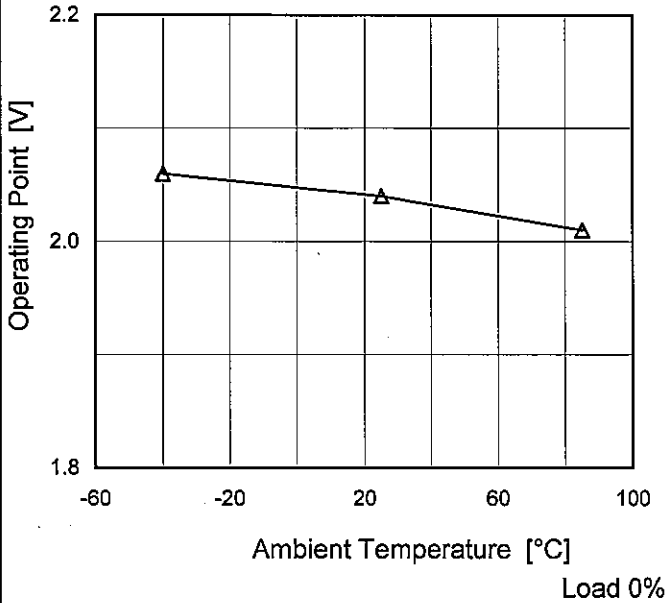
| <p>Model SFS30241R5</p> | | <p>Temperature 25°C</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-------------------|--|-------------------|--------------------|------------------|--|--|-------------------|-------------------|-------------------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|----|---|---|---|----|---|---|---|----|---|---|---|----|---|---|---|----|---|---|---|----|---|---|---|----|---|---|---|----|---|---|---|----|---|---|---|----|---|---|---|
| <p>Item Overcurrent Protection</p> | | <p>Testing Circuitry Figure A</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Object +1.5V10.4A</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>1.Graph</p> <p> Input Volt. 18V Input Volt. 24V Input Volt. 36V </p> <p>Output Voltage [V]</p> <p>Load Current [A]</p> <p>Note: Slanted line shows the range of the rated load current.</p> <p>When the output voltage fell to less than 1.35V ,the unit shuts off the output by operating low voltage protection .</p> | | <p>2.Values</p> <table border="1"> <thead> <tr> <th rowspan="2">Output Voltage [V]</th> <th colspan="3">Load Current [A]</th> </tr> <tr> <th>Input Volt. 18[V]</th> <th>Input Volt. 24[V]</th> <th>Input Volt. 36[V]</th> </tr> </thead> <tbody> <tr> <td>1.50</td> <td>11.35</td> <td>11.34</td> <td>11.16</td> </tr> <tr> <td>1.43</td> <td>12.24</td> <td>12.40</td> <td>12.63</td> </tr> <tr> <td>1.35</td> <td>12.25</td> <td>12.45</td> <td>12.71</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> <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> <tr> <td>--</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>--</td> <td>-</td> <td>-</td> <td>-</td> </tr> </tbody> </table> | | Output Voltage [V] | Load Current [A] | | | Input Volt. 18[V] | Input Volt. 24[V] | Input Volt. 36[V] | 1.50 | 11.35 | 11.34 | 11.16 | 1.43 | 12.24 | 12.40 | 12.63 | 1.35 | 12.25 | 12.45 | 12.71 | -- | - | - | - | -- | - | - | - | -- | - | - | - | -- | - | - | - | -- | - | - | - | -- | - | - | - | -- | - | - | - | -- | - | - | - | -- | - | - | - | -- | - | - | - |
| Output Voltage [V] | Load Current [A] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Input Volt. 18[V] | Input Volt. 24[V] | Input Volt. 36[V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.50 | 11.35 | 11.34 | 11.16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.43 | 12.24 | 12.40 | 12.63 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.35 | 12.25 | 12.45 | 12.71 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



| | |
|--------|-------------------------|
| Model | SFS30241R5 |
| Item | Oversvoltage Protection |
| Object | +1.5V10.4A |

Testing Circuitry Figure A

1.Graph —△— Input Volt. 24V



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

2.Values

| Ambient Temperature [°C] | Operating Point [V] | | |
|--------------------------|---------------------|-------------|-------------|
| | Input Volt. 24[V] | Input Volt. | Input Volt. |
| -40 | 2.06 | - | - |
| 25 | 2.04 | - | - |
| 85 | 2.01 | - | - |
| -- | - | - | - |
| -- | - | - | - |
| -- | - | - | - |
| -- | - | - | - |
| -- | - | - | - |
| -- | - | - | - |
| -- | - | - | - |
| -- | - | - | - |

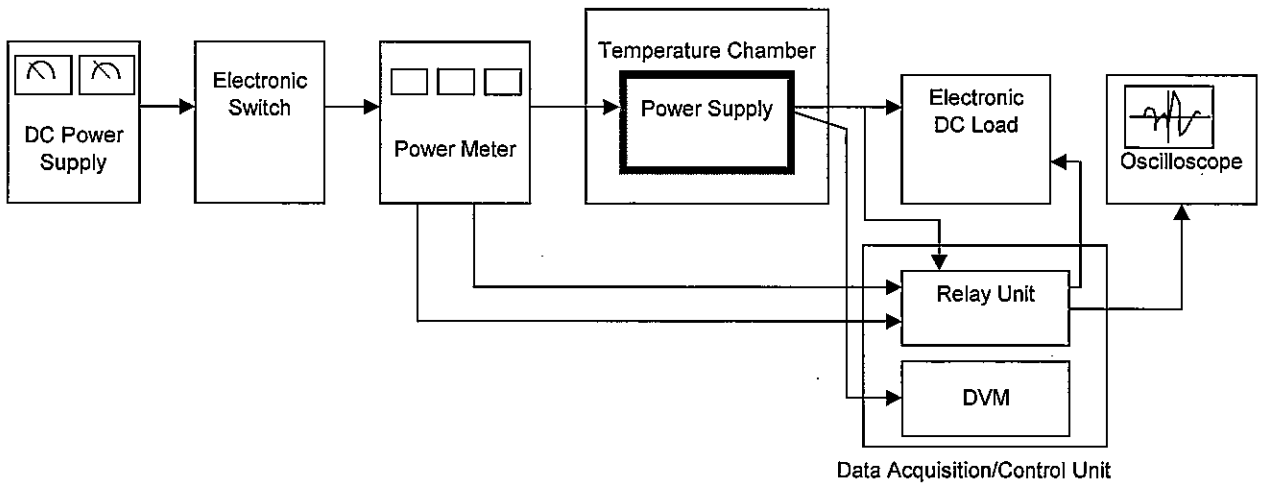


Figure A

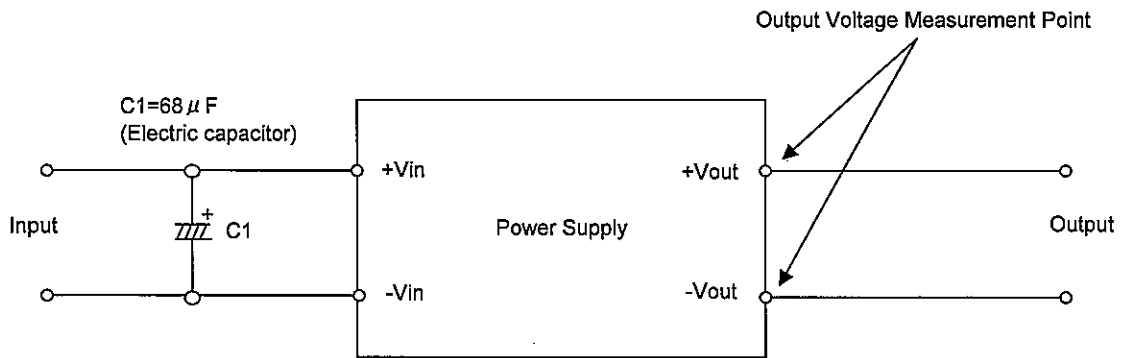


Figure B (General Electric Characteristic)

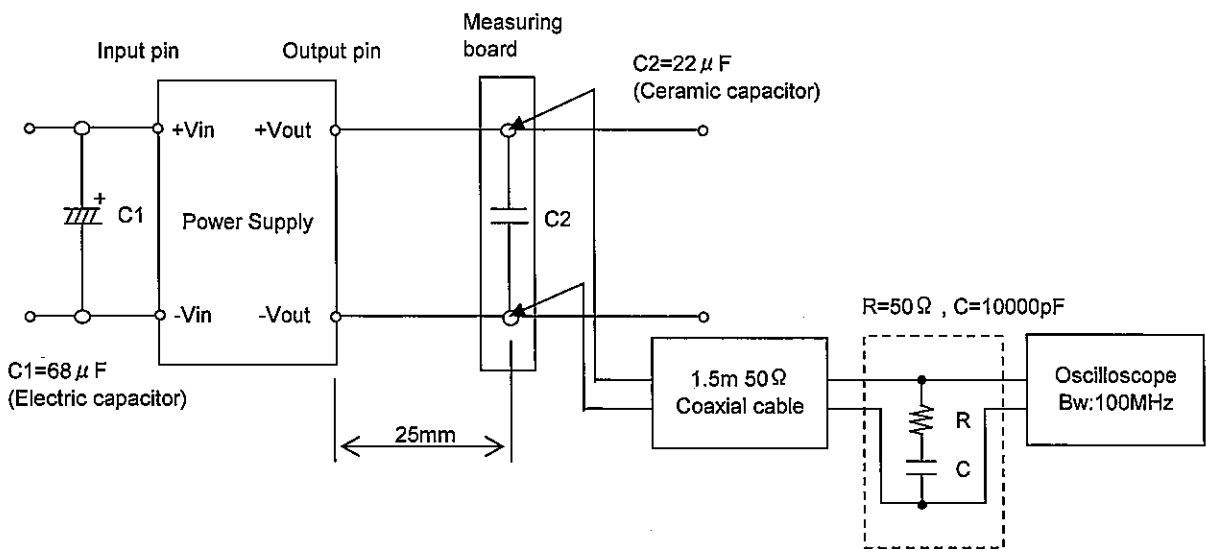


Figure C (Ripple and Ripple noise Characteristic)