



TEST DATA OF CHS3004848

Regulated DC Power Supply
September 26, 2019

Approved by : Yukihiro Takehashi
Yukihiro Takehashi Design Manager

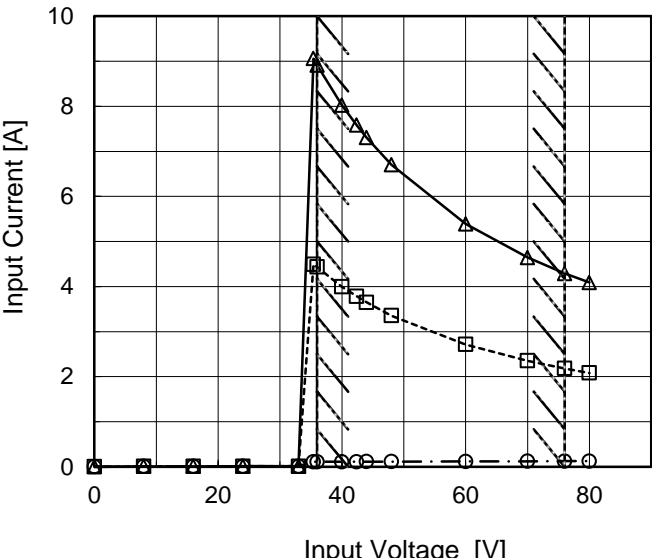
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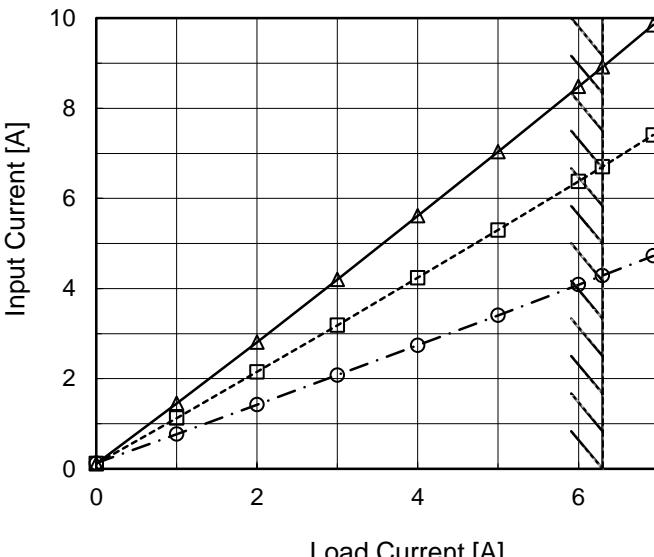
COSEL CO.,LTD.

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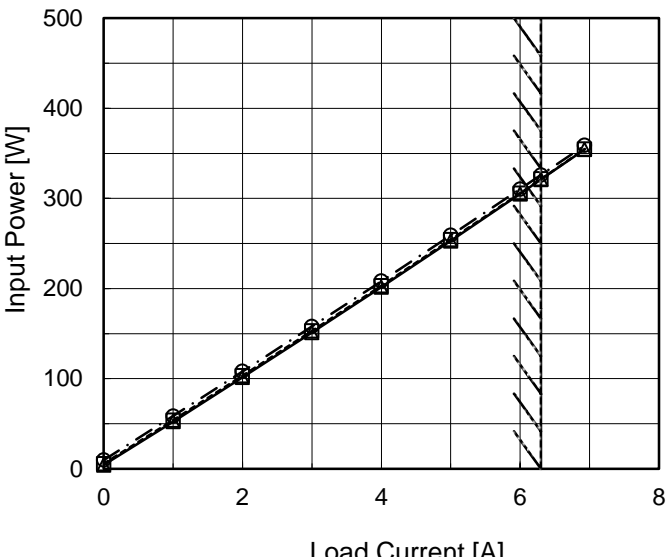
| Model | | CHS3004848 | | Temperature 25°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------|-------------------|--|-----------|----------------------------|--|-------------------|-------------------|--|--|---------|----------|-----------|-----|-------|-------|-------|-----|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|----|---|---|---|----|---|---|---|----|---|---|---|
| Item | | Input Current (by Input Voltage) | | Testing Circuitry Figure A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | | <div><div><div>—△—</div><div>Load 100%</div></div><div><div>---□---</div><div>Load 50%</div></div><div><div>-○-</div><div>Load 0%</div></div></div>  <p>Note: Slanted line shows the range of the rated input voltage.</p> | | 2.Values | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <table><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><tr><td>0.0</td><td>0.000</td><td>0.000</td><td>0.000</td></tr><tr><td>8.0</td><td>0.008</td><td>0.008</td><td>0.008</td></tr><tr><td>16.0</td><td>0.009</td><td>0.009</td><td>0.009</td></tr><tr><td>24.0</td><td>0.010</td><td>0.010</td><td>0.010</td></tr><tr><td>33.0</td><td>0.010</td><td>0.010</td><td>0.010</td></tr><tr><td>35.4</td><td>0.112</td><td>4.496</td><td>9.061</td></tr><tr><td>36.0</td><td>0.112</td><td>4.433</td><td>8.916</td></tr><tr><td>40.0</td><td>0.112</td><td>3.994</td><td>8.022</td></tr><tr><td>42.4</td><td>0.112</td><td>3.782</td><td>7.581</td></tr><tr><td>44.0</td><td>0.113</td><td>3.647</td><td>7.303</td></tr><tr><td>48.0</td><td>0.114</td><td>3.353</td><td>6.704</td></tr><tr><td>60.0</td><td>0.119</td><td>2.715</td><td>5.391</td></tr><tr><td>70.0</td><td>0.122</td><td>2.351</td><td>4.643</td></tr><tr><td>76.0</td><td>0.124</td><td>2.182</td><td>4.289</td></tr><tr><td>80.0</td><td>0.125</td><td>2.082</td><td>4.088</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></table> | | | | Input Voltage [V] | Input Current [A] | | | Load 0% | Load 50% | Load 100% | 0.0 | 0.000 | 0.000 | 0.000 | 8.0 | 0.008 | 0.008 | 0.008 | 16.0 | 0.009 | 0.009 | 0.009 | 24.0 | 0.010 | 0.010 | 0.010 | 33.0 | 0.010 | 0.010 | 0.010 | 35.4 | 0.112 | 4.496 | 9.061 | 36.0 | 0.112 | 4.433 | 8.916 | 40.0 | 0.112 | 3.994 | 8.022 | 42.4 | 0.112 | 3.782 | 7.581 | 44.0 | 0.113 | 3.647 | 7.303 | 48.0 | 0.114 | 3.353 | 6.704 | 60.0 | 0.119 | 2.715 | 5.391 | 70.0 | 0.122 | 2.351 | 4.643 | 76.0 | 0.124 | 2.182 | 4.289 | 80.0 | 0.125 | 2.082 | 4.088 | -- | - | - | - | -- | - | - | - | -- | - | - | - |
| Input Voltage [V] | Input Current [A] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Load 0% | Load 50% | Load 100% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.0 | 0.000 | 0.000 | 0.000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8.0 | 0.008 | 0.008 | 0.008 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16.0 | 0.009 | 0.009 | 0.009 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 24.0 | 0.010 | 0.010 | 0.010 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 33.0 | 0.010 | 0.010 | 0.010 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 35.4 | 0.112 | 4.496 | 9.061 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 36.0 | 0.112 | 4.433 | 8.916 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40.0 | 0.112 | 3.994 | 8.022 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 42.4 | 0.112 | 3.782 | 7.581 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 44.0 | 0.113 | 3.647 | 7.303 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 48.0 | 0.114 | 3.353 | 6.704 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 60.0 | 0.119 | 2.715 | 5.391 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 70.0 | 0.122 | 2.351 | 4.643 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 76.0 | 0.124 | 2.182 | 4.289 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 80.0 | 0.125 | 2.082 | 4.088 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Model | | CHS3004848 | | Temperature 25°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|-------------------|--|-------------------|----------------------------|--|------------------|-------------------|--|--|-------------------|-------------------|-------------------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|----|---|---|---|----|---|---|---|
| Item | | Input Current (by Load Current) | | Testing Circuitry Figure A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | | <div><div><div>—△—</div><div>Input Volt.</div><div>36V</div></div><div><div>---□---</div><div>Input Volt.</div><div>48V</div></div><div><div>---○---</div><div>Input Volt.</div><div>76V</div></div></div>  <p>Note: Slanted line shows the range of the rated load current.</p> | | 2.Values | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <table><tr><th rowspan="2">Load Current [A]</th><th colspan="3">Input Current [A]</th></tr><tr><th>Input Volt. 36[V]</th><th>Input Volt. 48[V]</th><th>Input Volt. 76[V]</th></tr><tr><td>0.00</td><td>0.112</td><td>0.114</td><td>0.124</td></tr><tr><td>1.00</td><td>1.449</td><td>1.122</td><td>0.769</td></tr><tr><td>2.00</td><td>2.809</td><td>2.150</td><td>1.422</td></tr><tr><td>3.00</td><td>4.199</td><td>3.182</td><td>2.078</td></tr><tr><td>4.00</td><td>5.613</td><td>4.240</td><td>2.738</td></tr><tr><td>5.00</td><td>7.034</td><td>5.296</td><td>3.405</td></tr><tr><td>6.00</td><td>8.485</td><td>6.378</td><td>4.086</td></tr><tr><td>6.30</td><td>8.916</td><td>6.704</td><td>4.289</td></tr><tr><td>6.93</td><td>9.852</td><td>7.406</td><td>4.726</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr></table> | | | | Load Current [A] | Input Current [A] | | | Input Volt. 36[V] | Input Volt. 48[V] | Input Volt. 76[V] | 0.00 | 0.112 | 0.114 | 0.124 | 1.00 | 1.449 | 1.122 | 0.769 | 2.00 | 2.809 | 2.150 | 1.422 | 3.00 | 4.199 | 3.182 | 2.078 | 4.00 | 5.613 | 4.240 | 2.738 | 5.00 | 7.034 | 5.296 | 3.405 | 6.00 | 8.485 | 6.378 | 4.086 | 6.30 | 8.916 | 6.704 | 4.289 | 6.93 | 9.852 | 7.406 | 4.726 | -- | - | - | - | -- | - | - | - |
| Load Current [A] | Input Current [A] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Input Volt. 36[V] | Input Volt. 48[V] | Input Volt. 76[V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.00 | 0.112 | 0.114 | 0.124 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.00 | 1.449 | 1.122 | 0.769 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.00 | 2.809 | 2.150 | 1.422 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.00 | 4.199 | 3.182 | 2.078 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.00 | 5.613 | 4.240 | 2.738 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5.00 | 7.034 | 5.296 | 3.405 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.00 | 8.485 | 6.378 | 4.086 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.30 | 8.916 | 6.704 | 4.289 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.93 | 9.852 | 7.406 | 4.726 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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BC - 11387



| Model | | CHS3004848 | | Temperature 25°C Testing Circuitry Figure A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------------|---|-------------------|--|-----------------|--|--|-------------------|-------------------|-------------------|------|-----|-----|-----|------|------|------|------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|----|---|---|---|----|---|---|---|
| Item | | Input Power (by Load Current) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | | <div><div><div>—△—</div><div>---□---</div><div>---○---</div></div><div><div>Input Volt. 36V</div><div>Input Volt. 48V</div><div>Input Volt. 76V</div></div></div> <div></div> | | 2.Values | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <table><tr><th rowspan="2">Load Current [A]</th><th colspan="3">Input Power [W]</th></tr><tr><th>Input Volt. 36[V]</th><th>Input Volt. 48[V]</th><th>Input Volt. 76[V]</th></tr><tr><td>0.00</td><td>4.1</td><td>5.5</td><td>9.5</td></tr><tr><td>1.00</td><td>52.2</td><td>53.9</td><td>58.4</td></tr><tr><td>2.00</td><td>101.4</td><td>103.2</td><td>108.1</td></tr><tr><td>3.00</td><td>151.1</td><td>152.9</td><td>158.0</td></tr><tr><td>4.00</td><td>201.7</td><td>203.1</td><td>208.2</td></tr><tr><td>5.00</td><td>252.9</td><td>254.2</td><td>259.0</td></tr><tr><td>6.00</td><td>305.0</td><td>305.8</td><td>310.3</td></tr><tr><td>6.30</td><td>321.1</td><td>321.6</td><td>326.0</td></tr><tr><td>6.93</td><td>354.5</td><td>354.8</td><td>358.9</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr></table> | | Load Current [A] | Input Power [W] | | | Input Volt. 36[V] | Input Volt. 48[V] | Input Volt. 76[V] | 0.00 | 4.1 | 5.5 | 9.5 | 1.00 | 52.2 | 53.9 | 58.4 | 2.00 | 101.4 | 103.2 | 108.1 | 3.00 | 151.1 | 152.9 | 158.0 | 4.00 | 201.7 | 203.1 | 208.2 | 5.00 | 252.9 | 254.2 | 259.0 | 6.00 | 305.0 | 305.8 | 310.3 | 6.30 | 321.1 | 321.6 | 326.0 | 6.93 | 354.5 | 354.8 | 358.9 | -- | - | - | - | -- | - | - | - |
| Load Current [A] | Input Power [W] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Input Volt. 36[V] | Input Volt. 48[V] | Input Volt. 76[V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.00 | 4.1 | 5.5 | 9.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.00 | 52.2 | 53.9 | 58.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.00 | 101.4 | 103.2 | 108.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.00 | 151.1 | 152.9 | 158.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.00 | 201.7 | 203.1 | 208.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5.00 | 252.9 | 254.2 | 259.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.00 | 305.0 | 305.8 | 310.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.30 | 321.1 | 321.6 | 326.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.93 | 354.5 | 354.8 | 358.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Note: Slanted line shows the range of the rated load current. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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LOREL

| | |
|--------|-------------------------------|
| Model | CHS3004848 |
| Item | Efficiency (by Input Voltage) |
| Object | _____ |

| | |
|-------------------|----------|
| Temperature | 25°C |
| Testing Circuitry | Figure A |

1.Graph

---□--- Load 50%

—△— Load 100%

| Input Voltage [V] | Load 50% Efficiency [%] | Load 100% Efficiency [%] |
|-------------------|-------------------------|--------------------------|
| 35 | 95.4 | 94.4 |
| 36 | 95.4 | 94.4 |
| 40 | 95.1 | 94.3 |
| 48 | 94.3 | 94.3 |
| 55 | 93.7 | 93.9 |
| 60 | 93.1 | 93.7 |
| 70 | 92.1 | 93.2 |
| 76 | 91.3 | 93.0 |
| 80 | 91.0 | 92.7 |

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

2.Values

| Input Voltage [V] | Efficiency [%] | |
|-------------------|----------------|-----------|
| | Load 50% | Load 100% |
| 35 | 95.4 | 94.4 |
| 36 | 95.4 | 94.4 |
| 40 | 95.1 | 94.3 |
| 48 | 94.3 | 94.3 |
| 55 | 93.7 | 93.9 |
| 60 | 93.1 | 93.7 |
| 70 | 92.1 | 93.2 |
| 76 | 91.3 | 93.0 |
| 80 | 91.0 | 92.7 |

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| Model | | CHS3004848 | Temperature 25°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------------|--|---|--|------------------|----------------|--|--|-------------------|-------------------|-------------------|------|---|---|---|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----|---|---|---|----|---|---|---|
| Item | | Efficiency (by Load Current) | Testing Circuitry Figure A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | | <div><div>—△—</div>Input Volt. 36V</div> <div><div>---□---</div>Input Volt. 48V</div> <div><div>---○---</div>Input Volt. 76V</div> <p>Efficiency [%]</p> <p>Load Current [A]</p> | 2.Values | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | <table><tr><th rowspan="2">Load Current [A]</th><th colspan="3">Efficiency [%]</th></tr><tr><th>Input Volt. 36[V]</th><th>Input Volt. 48[V]</th><th>Input Volt. 76[V]</th></tr><tr><td>0.00</td><td>-</td><td>-</td><td>-</td></tr><tr><td>1.00</td><td>91.5</td><td>88.5</td><td>81.7</td></tr><tr><td>2.00</td><td>94.6</td><td>92.9</td><td>88.8</td></tr><tr><td>3.00</td><td>95.4</td><td>94.2</td><td>91.2</td></tr><tr><td>4.00</td><td>95.3</td><td>94.6</td><td>92.3</td></tr><tr><td>5.00</td><td>95.1</td><td>94.6</td><td>92.9</td></tr><tr><td>6.00</td><td>94.6</td><td>94.4</td><td>93.0</td></tr><tr><td>6.30</td><td>94.4</td><td>94.3</td><td>93.0</td></tr><tr><td>6.93</td><td>94.1</td><td>94.0</td><td>92.9</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr></table> | | Load Current [A] | Efficiency [%] | | | Input Volt. 36[V] | Input Volt. 48[V] | Input Volt. 76[V] | 0.00 | - | - | - | 1.00 | 91.5 | 88.5 | 81.7 | 2.00 | 94.6 | 92.9 | 88.8 | 3.00 | 95.4 | 94.2 | 91.2 | 4.00 | 95.3 | 94.6 | 92.3 | 5.00 | 95.1 | 94.6 | 92.9 | 6.00 | 94.6 | 94.4 | 93.0 | 6.30 | 94.4 | 94.3 | 93.0 | 6.93 | 94.1 | 94.0 | 92.9 | -- | - | - | - | -- | - | - | - |
| Load Current [A] | Efficiency [%] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Input Volt. 36[V] | Input Volt. 48[V] | Input Volt. 76[V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.00 | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.00 | 91.5 | 88.5 | 81.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.00 | 94.6 | 92.9 | 88.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.00 | 95.4 | 94.2 | 91.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.00 | 95.3 | 94.6 | 92.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5.00 | 95.1 | 94.6 | 92.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.00 | 94.6 | 94.4 | 93.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.30 | 94.4 | 94.3 | 93.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.93 | 94.1 | 94.0 | 92.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Note: Slanted line shows the range of the rated load current. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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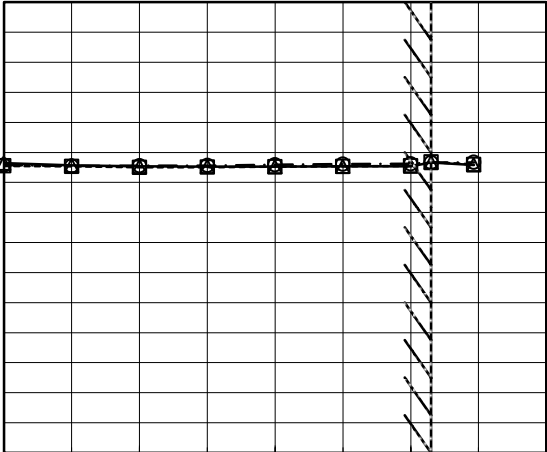
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| | | | |
|---------|--|-----------------|--|
| Model | | CHS3004848 | |
| Item | | Line Regulation | |
| Object | | +48V6.3A | |
| 1.Graph | | 2.Values | |

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| Model | | CHS3004848 | | Temperature 25°C Testing Circuitry Figure A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|--------------------|--|-------------------|--|--------------------|--|--|-------------------|-------------------|-------------------|------|--------|--------|--------|------|--------|--------|--------|------|--------|--------|--------|------|--------|--------|--------|------|--------|--------|--------|------|--------|--------|--------|------|--------|--------|--------|------|--------|--------|--------|------|--------|--------|--------|----|---|---|---|----|---|---|---|
| Item | | Load Regulation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | | +48V6.3A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | | <div><div><div>—△—</div><div>---□---</div><div>---○---</div></div><div><div>Input Volt.</div><div>Input Volt.</div><div>Input Volt.</div></div><div><div>36V</div><div>48V</div><div>76V</div></div></div> <div><div><div>Output Voltage [V]</div><div><div>48.40</div><div>48.30</div><div>48.20</div><div>48.10</div><div>48.00</div><div>47.90</div><div>47.80</div><div>47.70</div></div><div><div>0</div><div>2</div><div>4</div><div>6</div><div>8</div></div><div>Load Current [A]</div></div><p>Note: Slanted line shows the range of the rated load current.</p></div> | | 2.Values | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <table><tr><th rowspan="2">Load Current [A]</th><th colspan="3">Output Voltage [V]</th></tr><tr><th>Input Volt. 36[V]</th><th>Input Volt. 48[V]</th><th>Input Volt. 76[V]</th></tr><tr><td>0.00</td><td>48.182</td><td>48.178</td><td>48.179</td></tr><tr><td>1.00</td><td>48.178</td><td>48.177</td><td>48.177</td></tr><tr><td>2.00</td><td>48.177</td><td>48.175</td><td>48.178</td></tr><tr><td>3.00</td><td>48.176</td><td>48.175</td><td>48.178</td></tr><tr><td>4.00</td><td>48.176</td><td>48.176</td><td>48.180</td></tr><tr><td>5.00</td><td>48.177</td><td>48.177</td><td>48.180</td></tr><tr><td>6.00</td><td>48.177</td><td>48.178</td><td>48.181</td></tr><tr><td>6.30</td><td>48.183</td><td>48.184</td><td>48.183</td></tr><tr><td>6.93</td><td>48.179</td><td>48.180</td><td>48.184</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr></table> | | Load Current [A] | Output Voltage [V] | | | Input Volt. 36[V] | Input Volt. 48[V] | Input Volt. 76[V] | 0.00 | 48.182 | 48.178 | 48.179 | 1.00 | 48.178 | 48.177 | 48.177 | 2.00 | 48.177 | 48.175 | 48.178 | 3.00 | 48.176 | 48.175 | 48.178 | 4.00 | 48.176 | 48.176 | 48.180 | 5.00 | 48.177 | 48.177 | 48.180 | 6.00 | 48.177 | 48.178 | 48.181 | 6.30 | 48.183 | 48.184 | 48.183 | 6.93 | 48.179 | 48.180 | 48.184 | -- | - | - | - | -- | - | - | - |
| Load Current [A] | Output Voltage [V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Input Volt. 36[V] | Input Volt. 48[V] | Input Volt. 76[V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.00 | 48.182 | 48.178 | 48.179 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.00 | 48.178 | 48.177 | 48.177 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.00 | 48.177 | 48.175 | 48.178 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.00 | 48.176 | 48.175 | 48.178 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.00 | 48.176 | 48.176 | 48.180 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5.00 | 48.177 | 48.177 | 48.180 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.00 | 48.177 | 48.178 | 48.181 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.30 | 48.183 | 48.184 | 48.183 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.93 | 48.179 | 48.180 | 48.184 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| Model | | CHS3004848 | Temperature Testing Circuitry | 25°C Figure B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---------------------|----------------------------------|--|------------------|------------------|---------------------|--|--------------------|--------------------|------|----|-----|------|----|-----|------|----|-----|------|----|-----|------|----|-----|------|----|-----|----|---|---|----|---|---|----|---|---|----|---|---|----|---|---|
| Item | | Ripple Voltage (by Load Current) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | | +48V6.3A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | | | 2.Values | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div><div><div><div><div></div></div><div>Input Volt. 36V</div></div><div><div><div></div></div><div>Input Volt. 76V</div></div></div><div><p>Ripple Voltage [mV]</p><p>Load Current [A]</p></div></div> | | | <table><tr><th rowspan="2">Load Current [A]</th><th colspan="2">Ripple Voltage [mV]</th></tr><tr><th>Input Volt. 36 [V]</th><th>Input Volt. 76 [V]</th></tr><tr><td>0.00</td><td>95</td><td>250</td></tr><tr><td>1.60</td><td>95</td><td>250</td></tr><tr><td>3.15</td><td>90</td><td>250</td></tr><tr><td>4.80</td><td>85</td><td>250</td></tr><tr><td>6.30</td><td>80</td><td>250</td></tr><tr><td>6.93</td><td>80</td><td>250</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><tr><td>--</td><td>-</td><td>-</td></tr></table> | | Load Current [A] | Ripple Voltage [mV] | | Input Volt. 36 [V] | Input Volt. 76 [V] | 0.00 | 95 | 250 | 1.60 | 95 | 250 | 3.15 | 90 | 250 | 4.80 | 85 | 250 | 6.30 | 80 | 250 | 6.93 | 80 | 250 | -- | - | - | -- | - | - | -- | - | - | -- | - | - | -- | - | - |
| Load Current [A] | Ripple Voltage [mV] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Input Volt. 36 [V] | Input Volt. 76 [V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.00 | 95 | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.60 | 95 | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.15 | 90 | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.80 | 85 | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.30 | 80 | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.93 | 80 | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Measured by 100 MHz Oscilloscope.</p> <p>Ripple Voltage is shown as p-p in the figure below.</p> <p>Note: Slanted line shows the range of the rated load current.</p> <div><div><div></div></div><div><p>Ripple [mVp-p]</p></div></div> <p>Fig.Complex Ripple Wave Form</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Model | | CHS3004848 | | Temperature | | 25°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--------------------|--------------------|--|---|--|----------|--|------------------|-------------------|--|--------------------|--------------------|------|-----|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|----|-----|----|---|---|----|---|---|----|---|---|----|---|---|----|---|---|
| Item | | Ripple-Noise | | Testing Circuitry | | Figure B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | | +48V6.3A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | | | | 2.Values | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div><div><div><div><div></div><div>—△—</div><div>Input Volt.</div><div>36V</div></div><div><div>- - -○- - -</div><div>Input Volt.</div><div>76V</div></div></div><div><p>Measured by 100 MHz Oscilloscope. Ripple-Noise is shown as p-p in the figure below. Note: Slanted line shows the range of the rated load current.</p><div><div>Ripple Noise[mVp-p]</div></div><p>Fig.Complex Ripple Noise Wave Form</p></div></div></div> | | | | <table><tr><th rowspan="2">Load Current [A]</th><th colspan="2">Ripple-Noise [mV]</th></tr><tr><th>Input Volt. 36 [V]</th><th>Input Volt. 76 [V]</th></tr><tr><td>0.00</td><td>120</td><td>270</td></tr><tr><td>1.60</td><td>120</td><td>265</td></tr><tr><td>3.15</td><td>115</td><td>265</td></tr><tr><td>4.80</td><td>110</td><td>265</td></tr><tr><td>6.30</td><td>100</td><td>270</td></tr><tr><td>6.93</td><td>95</td><td>270</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><tr><td>--</td><td>-</td><td>-</td></tr></table> | | | | Load Current [A] | Ripple-Noise [mV] | | Input Volt. 36 [V] | Input Volt. 76 [V] | 0.00 | 120 | 270 | 1.60 | 120 | 265 | 3.15 | 115 | 265 | 4.80 | 110 | 265 | 6.30 | 100 | 270 | 6.93 | 95 | 270 | -- | - | - | -- | - | - | -- | - | - | -- | - | - | -- | - | - |
| Load Current [A] | Ripple-Noise [mV] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Input Volt. 36 [V] | Input Volt. 76 [V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.00 | 120 | 270 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.60 | 120 | 265 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.15 | 115 | 265 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.80 | 110 | 265 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.30 | 100 | 270 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.93 | 95 | 270 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

BC-11387

| Model | | CHS3004848 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--------------------|---|-------------------|--------------------------|--------------------|--|--|-------------------|-------------------|-------------------|-----|--------|--------|--------|-----|--------|--------|--------|---|--------|--------|--------|----|--------|--------|--------|----|--------|--------|--------|----|--------|--------|--------|----|--------|--------|--------|----|---|---|---|----|---|---|---|----|---|---|---|----|---|---|---|
| Item | | Ambient Temperature Drift | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | | +48V6.3A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | | 2.Values | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div><div><div><div>—△—</div><div>Input Volt.</div><div>36V</div></div><div><div>---□---</div><div>Input Volt.</div><div>48V</div></div><div><div>-·-○-·-</div><div>Input Volt.</div><div>76V</div></div></div><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></div> | | <table><tr><th rowspan="2">Ambient Temperature [°C]</th><th colspan="3">Output Voltage [V]</th></tr><tr><th>Input Volt. 36[V]</th><th>Input Volt. 48[V]</th><th>Input Volt. 76[V]</th></tr><tr><td>-40</td><td>47.986</td><td>47.993</td><td>47.999</td></tr><tr><td>-20</td><td>48.074</td><td>48.080</td><td>48.083</td></tr><tr><td>0</td><td>48.134</td><td>48.139</td><td>48.141</td></tr><tr><td>25</td><td>48.183</td><td>48.184</td><td>48.183</td></tr><tr><td>40</td><td>48.180</td><td>48.180</td><td>48.178</td></tr><tr><td>55</td><td>48.178</td><td>48.175</td><td>48.171</td></tr><tr><td>60</td><td>48.175</td><td>48.172</td><td>48.168</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></table> | | Ambient Temperature [°C] | Output Voltage [V] | | | Input Volt. 36[V] | Input Volt. 48[V] | Input Volt. 76[V] | -40 | 47.986 | 47.993 | 47.999 | -20 | 48.074 | 48.080 | 48.083 | 0 | 48.134 | 48.139 | 48.141 | 25 | 48.183 | 48.184 | 48.183 | 40 | 48.180 | 48.180 | 48.178 | 55 | 48.178 | 48.175 | 48.171 | 60 | 48.175 | 48.172 | 48.168 | -- | - | - | - | -- | - | - | - | -- | - | - | - | -- | - | - | - |
| Ambient Temperature [°C] | Output Voltage [V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Input Volt. 36[V] | Input Volt. 48[V] | Input Volt. 76[V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -40 | 47.986 | 47.993 | 47.999 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -20 | 48.074 | 48.080 | 48.083 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 48.134 | 48.139 | 48.141 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 25 | 48.183 | 48.184 | 48.183 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40 | 48.180 | 48.180 | 48.178 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 55 | 48.178 | 48.175 | 48.171 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 60 | 48.175 | 48.172 | 48.168 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



| | | | |
|--------|--|-------------------------|----------------------------|
| Model | | CHS3004848 | Testing Circuitry Figure A |
| Item | | Output Voltage Accuracy | |
| Object | | +48V6.3A | |

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 - 55°C

Input Voltage : 36 - 76V

Load Current : 0 - 6.3A

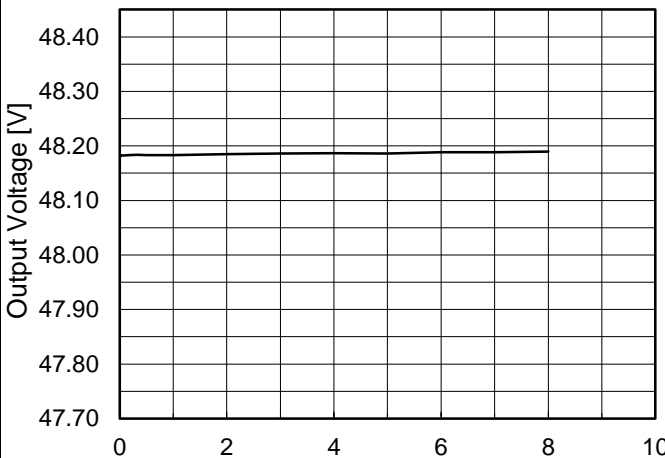
* Output Voltage Accuracy = $\pm(\text{Maximum of Output Voltage} - \text{Minimum of Output Voltage}) / 2$

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

2. Values

| Item | Temperature [°C] | Input Voltage[V] | Output | | Output Voltage Accuracy | |
|-----------------|---------------------|---------------------|------------|------------|-------------------------|-----------|
| | | | Current[A] | Voltage[V] | Value [mV] | Ratio [%] |
| Maximum Voltage | 40 | 36 | 6.3 | 48.180 | ±104 | ±0.2 |
| Minimum Voltage | -40 | 36 | 0 | 47.972 | | |

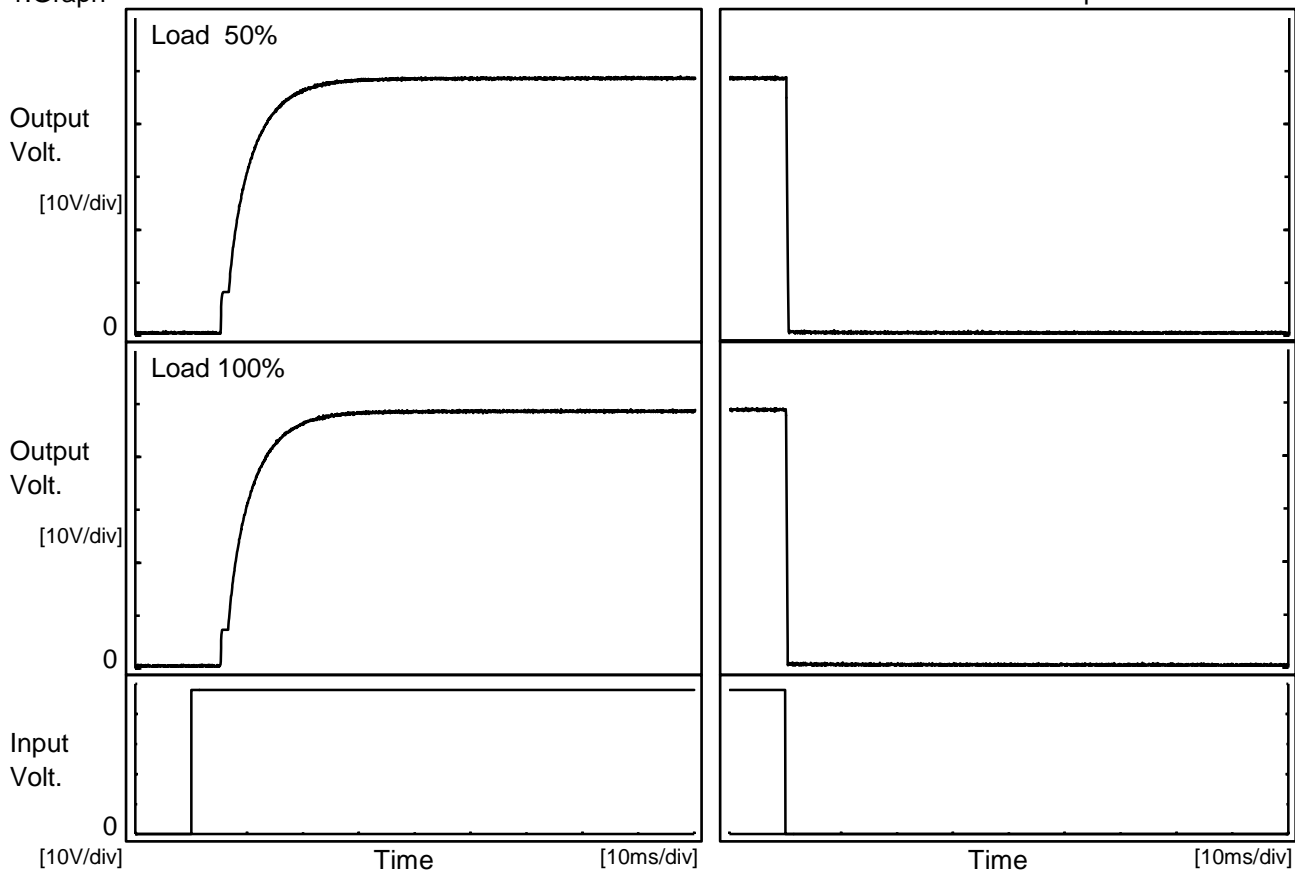


| COSEL | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--------------------|--|----------|----------------------|--------------------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|
| Model | CHS3004848 | | | | | | | | | | | | | | | | | | | | | | | | |
| Item | Time Lapse Drift | Temperature | 25°C | | | | | | | | | | | | | | | | | | | | | | |
| Object | +48V6.3A | Testing Circuitry | Figure A | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | | 2.Values | | | | | | | | | | | | | | | | | | | | | | | |
| <div><p>Output Voltage [V]</p><p>Time [H]</p><p>Input Volt. 48V</p><p>Load 100%</p></div> | | <table><tr><th>Time since start [H]</th><th>Output Voltage [V]</th></tr><tr><td>0.0</td><td>48.184</td></tr><tr><td>0.5</td><td>48.183</td></tr><tr><td>1.0</td><td>48.183</td></tr><tr><td>2.0</td><td>48.185</td></tr><tr><td>3.0</td><td>48.186</td></tr><tr><td>4.0</td><td>48.186</td></tr><tr><td>5.0</td><td>48.186</td></tr><tr><td>6.0</td><td>48.188</td></tr><tr><td>7.0</td><td>48.189</td></tr><tr><td>8.0</td><td>48.189</td></tr></table> | | Time since start [H] | Output Voltage [V] | 0.0 | 48.184 | 0.5 | 48.183 | 1.0 | 48.183 | 2.0 | 48.185 | 3.0 | 48.186 | 4.0 | 48.186 | 5.0 | 48.186 | 6.0 | 48.188 | 7.0 | 48.189 | 8.0 | 48.189 |
| Time since start [H] | Output Voltage [V] | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.0 | 48.184 | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.5 | 48.183 | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.0 | 48.183 | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.0 | 48.185 | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.0 | 48.186 | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.0 | 48.186 | | | | | | | | | | | | | | | | | | | | | | | | |
| 5.0 | 48.186 | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.0 | 48.188 | | | | | | | | | | | | | | | | | | | | | | | | |
| 7.0 | 48.189 | | | | | | | | | | | | | | | | | | | | | | | | |
| 8.0 | 48.189 | | | | | | | | | | | | | | | | | | | | | | | | |

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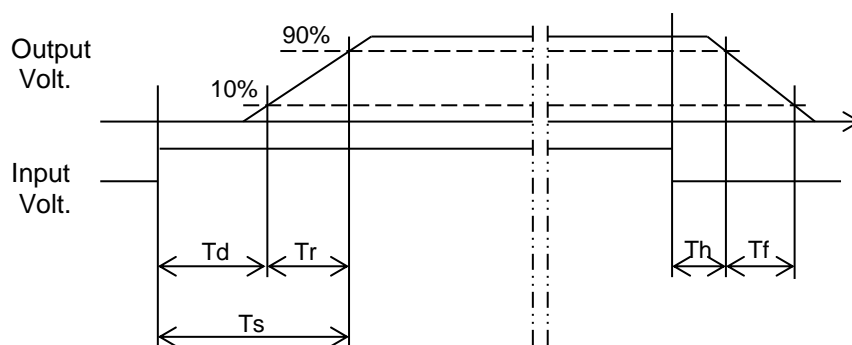
| | | | |
|--------|--------------------|-------------------|----------|
| Model | CHS3004848 | Temperature | 25°C |
| Item | Rise and Fall Time | Testing Circuitry | Figure A |
| Object | +48V6.3A | | |


1.Graph



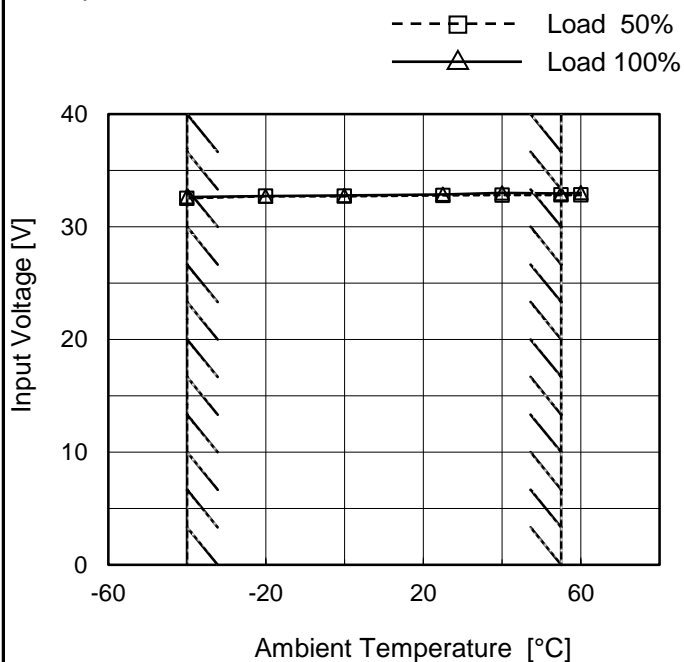
2.Values

| Load \ Time | Td | Tr | Ts | Th | Tf |
|-------------|-----|------|------|-----|-----|
| 50 % | 5.4 | 10.6 | 16.0 | 0.2 | 0.3 |
| 100 % | 5.4 | 10.7 | 16.1 | 0.2 | 0.2 |



| | |
|---|---|
|  | |
| Model | CHS3004848 |
| Item | Minimum Input Voltage for Regulated Output Voltage |
| Object | +48V6.3A |

1.Graph



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

Testing Circuitry Figure A

2.Values

| Ambient Temperature [°C] | Input Voltage [V] | |
|-----------------------------|----------------------|-----------|
| | Load 50% | Load 100% |
| -40 | 32.6 | 32.7 |
| -20 | 32.8 | 32.8 |
| 0 | 32.8 | 32.8 |
| 25 | 32.8 | 32.9 |
| 40 | 32.8 | 33.0 |
| 55 | 32.9 | 33.0 |
| 60 | 32.9 | 33.1 |
| -- | - | - |
| -- | - | - |
| -- | - | - |
| -- | - | - |

| Model | | CHS3004848 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|-------------------|---|-------------------|--------------------|------------------|--|--|-------------------|-------------------|-------------------|-------|------|------|------|-------|------|------|------|-------|------|------|------|-------|------|------|------|-------|------|------|------|----|---|---|---|----|---|---|---|----|---|---|---|----|---|---|---|----|---|---|---|----|---|---|---|----|---|---|---|
| Item | | Overcurrent Protection | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | | +48V6.3A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | | <div><div><div></div><div>Input Volt.</div><div>36V</div></div><div><div></div><div>Input Volt.</div><div>48V</div></div><div><div></div><div>Input Volt.</div><div>76V</div></div></div> <p>Note: Slanted line shows the range of the rated load current.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.Values | | <table><tr><th rowspan="2">Output Voltage [V]</th><th colspan="3">Load Current [A]</th></tr><tr><th>Input Volt. 36[V]</th><th>Input Volt. 48[V]</th><th>Input Volt. 76[V]</th></tr><tr><td>45.60</td><td>9.13</td><td>9.38</td><td>8.98</td></tr><tr><td>43.20</td><td>9.21</td><td>9.48</td><td>9.07</td></tr><tr><td>40.80</td><td>9.34</td><td>9.57</td><td>9.16</td></tr><tr><td>38.40</td><td>9.44</td><td>9.68</td><td>9.26</td></tr><tr><td>34.56</td><td>9.68</td><td>9.97</td><td>9.49</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></table> | | Output Voltage [V] | Load Current [A] | | | Input Volt. 36[V] | Input Volt. 48[V] | Input Volt. 76[V] | 45.60 | 9.13 | 9.38 | 8.98 | 43.20 | 9.21 | 9.48 | 9.07 | 40.80 | 9.34 | 9.57 | 9.16 | 38.40 | 9.44 | 9.68 | 9.26 | 34.56 | 9.68 | 9.97 | 9.49 | -- | - | - | - | -- | - | - | - | -- | - | - | - | -- | - | - | - | -- | - | - | - | -- | - | - | - | -- | - | - | - |
| Output Voltage [V] | Load Current [A] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Input Volt. 36[V] | Input Volt. 48[V] | Input Volt. 76[V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 45.60 | 9.13 | 9.38 | 8.98 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 43.20 | 9.21 | 9.48 | 9.07 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40.80 | 9.34 | 9.57 | 9.16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 38.40 | 9.44 | 9.68 | 9.26 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 34.56 | 9.68 | 9.97 | 9.49 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



| Model | | CHS3004848 | Testing Circuitry Figure A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---------------------|------------------------|-------------------------------|---------------------|--|-------------------|-------------------|-----|-------|-------|-----|-------|-------|---|-------|-------|----|-------|-------|----|-------|-------|----|-------|-------|----|---|---|----|---|---|----|---|---|----|---|---|----|---|---|
| Item | | Overvoltage Protection | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Object | | +48V6.3A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.Graph | | | 2.Values | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div><div><div><div><div></div><div></div></div><div>Input Volt. 48V</div></div><div><div><div></div><div></div></div><div>Input Volt. 76V</div></div></div><div><p>Operating Point [V]</p><p>Ambient Temperature [°C]</p><p>Load 0%</p></div><p>Note: Slanted line shows the range of the rated ambient temperature.</p></div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table><tr><th rowspan="2">Ambient Temperature [°C]</th><th colspan="2">Operating Point [V]</th></tr><tr><th>Input Volt. 48[V]</th><th>Input Volt. 76[V]</th></tr><tr><td>-40</td><td>59.54</td><td>59.53</td></tr><tr><td>-20</td><td>59.51</td><td>59.49</td></tr><tr><td>0</td><td>59.48</td><td>59.46</td></tr><tr><td>25</td><td>59.44</td><td>59.44</td></tr><tr><td>55</td><td>59.39</td><td>59.38</td></tr><tr><td>60</td><td>59.38</td><td>59.37</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><tr><td>--</td><td>-</td><td>-</td></tr></table> | | | Ambient Temperature [°C] | Operating Point [V] | | Input Volt. 48[V] | Input Volt. 76[V] | -40 | 59.54 | 59.53 | -20 | 59.51 | 59.49 | 0 | 59.48 | 59.46 | 25 | 59.44 | 59.44 | 55 | 59.39 | 59.38 | 60 | 59.38 | 59.37 | -- | - | - | -- | - | - | -- | - | - | -- | - | - | -- | - | - |
| Ambient Temperature [°C] | Operating Point [V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Input Volt. 48[V] | Input Volt. 76[V] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -40 | 59.54 | 59.53 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -20 | 59.51 | 59.49 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 59.48 | 59.46 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 25 | 59.44 | 59.44 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 55 | 59.39 | 59.38 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 60 | 59.38 | 59.37 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -- | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

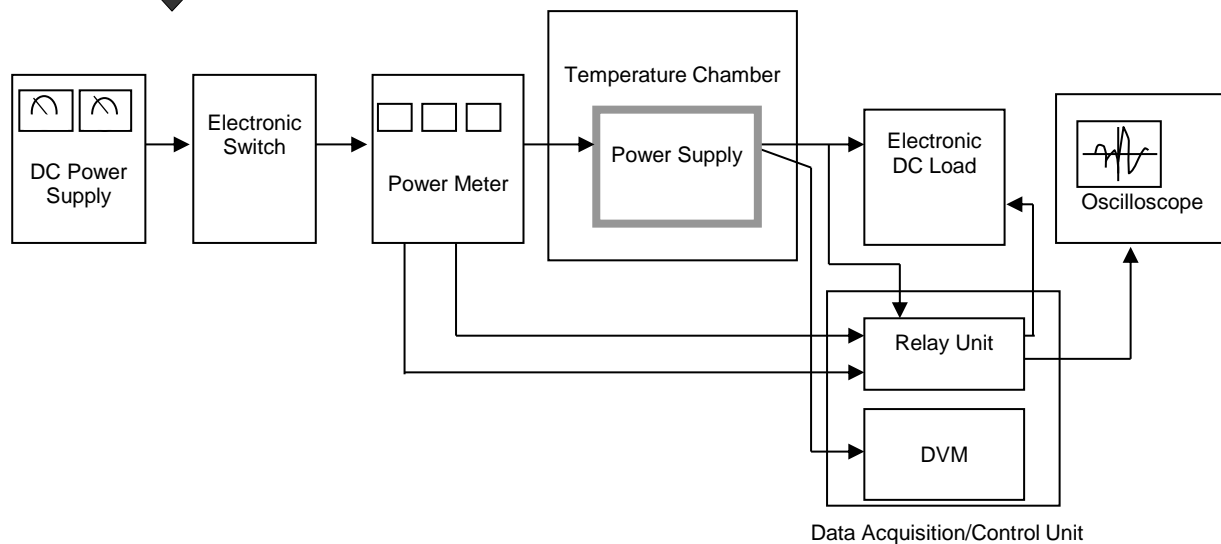


Figure A

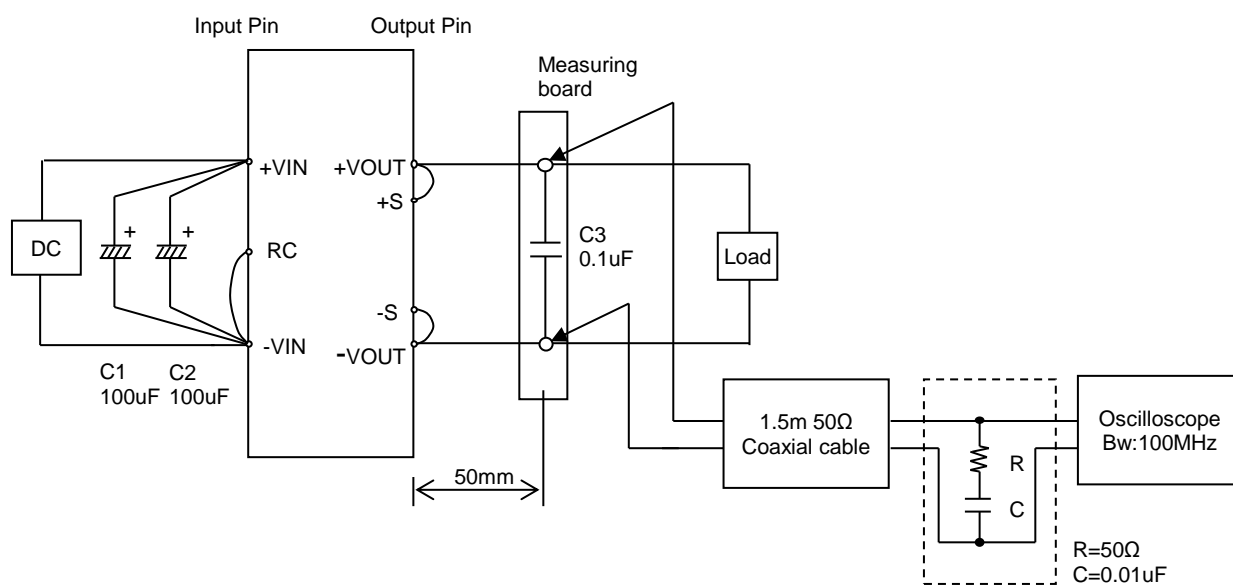


Figure B