CWA005
DC-DC Power Supply

(Document Rev A, 09/17/15)

Market: Military  Application: VME power for Electronic Warfare

Features

- 28VDC +/- .75V
- Designed to meet portions of Mil-Std-810F environmental specs.*
- Designed to meet portions of Mil-Std-461 for surface ship applications.*
- VME Power.

* Contact AEGIS Power Systems for specific details.

Table 1: Maximum Ratings

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Rating</th>
<th>Unit</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vin max range</td>
<td>27.25 to 28.75</td>
<td>VDC</td>
<td></td>
</tr>
<tr>
<td>Temperature range</td>
<td>0 to +65</td>
<td>°C</td>
<td></td>
</tr>
<tr>
<td>Output power</td>
<td>311</td>
<td>W</td>
<td></td>
</tr>
<tr>
<td>+3.3Vdc output</td>
<td>13.2</td>
<td>W</td>
<td>On when enabled</td>
</tr>
<tr>
<td>+5Vdc output</td>
<td>216.5</td>
<td>W</td>
<td>On when enabled</td>
</tr>
<tr>
<td>+24Vdc output</td>
<td>82</td>
<td>W</td>
<td>On when power applied</td>
</tr>
</tbody>
</table>

Product Highlights

This chassis mount open frame filtered dc-dc power converter has multiple outputs available with N+1 redundancy. This COTS solution works well for Mil-cots and is designed to meet portions MIL-STD-810F vibration and shock, and MIL-STD-461 surface ship applications EMI requirements. When compared to VME power supplies using conventional technology, this chassis mount forced air cooled ac-dc power supply converter provides users with higher efficiency (81%), lower weight (6.3 lbs), and higher power (up to 311W, N+1 redundant).

AEGIS Power Systems, Inc. specializes in the front end design, development, and manufacture of Rapid Response Custom Switching Power Supplies for defense, industry, telecomm, aircraft, shipboard, rack mount, electric powered vehicle, and Mil-Cots military power supply applications. Contact Aegis for specific details on what can be designed for your particular military power supply application and what portions of a particular military standard can be offered for that power supply.
**SPECIFICATIONS**  
(Typical at 25°C, nominal line and 100% load, unless otherwise specified.)

- **Input voltage:** 28VDC +/- 0.75VDC.
- **Input current:** 113.7A @ 28VDC, typical.
- **Input power:** 384W @ 28VDC, typical.
- **Output power:** 311W Maximum. (N+1 redundant)
- **Output voltages:** See table 2 for details.
- **Efficiency:** 81% Typical, 78% Minimum.
- **Output ripple:** See table 2 for details.
- **Current Limit:** Short circuit protected with automatic recovery.
- **Start up time:** 1 Sec. Maximum.
- **Voltage set point:** ± 2.5%.
- **Line regulation:** ± 2.5%.
- **Load regulation:** ± 2.5%.
- **Temperature regulation:** ± 0.02% / °C.
- **Temperature:** 0°C to +50°C Operating. -40°C to +70°C Non-Operating.
- **Cooling:** External fan, forced fan cooling across internal Heatsink.
- **Package:** Chassis mounted open frame.
- **Dimensions:** 1.83 "H x 8.7"W x 11" L (see mechanical drawing).
- **Weight:** 6.3 lbs. Typical.
- **Connector:** (see mechanical drawing).
- **Vibration:** Designed to meet MIL-STD-810F, Method 514.5, Procedure I.
- **Shock:** Designed to meet MIL-STD-810F, Method 516.5, Procedure I.
- **Humidity:** 0 – 95% non-condensing.
- **EMI:** Designed to meet MIL-STD-461E (CE101,CE102 and CS101).

Specifications subject to change without notice.
## Table 2: Voltage Outputs

<table>
<thead>
<tr>
<th>CWA005</th>
<th>V1</th>
<th>V2</th>
<th>V3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>+3.3Vdc</td>
<td>+5Vdc</td>
<td>+24Vdc</td>
</tr>
<tr>
<td>Current</td>
<td>4A</td>
<td>43.3A</td>
<td>3.4A</td>
</tr>
<tr>
<td>Power</td>
<td>13.2W</td>
<td>216.5W</td>
<td>82W</td>
</tr>
<tr>
<td>Ripple</td>
<td>50mVpk-pk</td>
<td>50mVpk-pk</td>
<td>100mVpk-pk</td>
</tr>
</tbody>
</table>

Maximum total output power is 311W (all DC outputs combined).