

Source Control Document.

Model: BAP2K7-170W/110-3U4S-T4028
COSD: XXXX
Summary description: 2750W, Industrial Quality DC/DC Converter
 90-250Vdc to 110Vdc/25A
Customer Name: Thiele KG/Germany (KS)
Customer Part Number: Same as above




Product description:

This rugged, industrial quality power converter utilizes field proven technology to generate the required output power. It is a mature design with a track record in numerous applications. The unit is built with four CAC1000 internal modules, which are connected parallel via redundancy diodes. This modular construction also provides inherent redundancy; the failure of one internal module only causes a drop in output power while the unit remains operational. The input and output are filtered for low noise. High quality built-in fans provide sufficient airflow for operation within the specified temperature range without de-rating. The fans draw air into the unit, and exhaust at the terminal side of the unit. All heat generating components are installed on aluminum heatsink blocks which are thermally connected to the base plate. This also ensures exceptional mechanical ruggedness. Conformal coating provides protection against humidity and airborne contaminants. Full electronic protection, low component count, large design headrooms, and the exclusive use of components with established reliability contribute to a high MTBF. The unit is manufactured at our plant under strict quality control.

Special Features: 90-250Vdc input range. Conformal coating. Output Separation diode

SPECIFICATIONS

<p>Input Voltage 170Vdc nominal 90-250Vdc operating range (requested) Input Current: 36A max</p> <p>Input Protection Inrush current limiting Varistor Reverse polarity protection Internal safety fuses Lower input voltages than the specified minimum will not damage the unit</p> <p>Isolation 2250Vdc input to chassis 3000Vdc input to output 1500Vdc output to chassis</p> <p>Standards Designed to meet EN 60950-1 and related standards</p> <p>EMI EN55032 Class A with margins</p> <p>Switching Frequency 55kHz ± 3kHz</p> <hr/> <p>Output Voltage/Current 110Vdc ± 0.5V/25A continuous Output is floating either terminal can be grounded.</p> <p>Output Separation Diode Installed internally</p> <p>Line/Load Regulation ± 1% combined from zero load to full load including separation diode</p>	<p>Dynamic Response Max 5% voltage deviation for 10% to 50% load step, with better than 1msec recovery time</p> <p>Output Ripple / Noise Better than 120mVrms and 600mVpp (20MHz BW)</p> <p>Output Overload Protection Rectangular current limiting with short-circuit protection Thermal shutdown with automatic reset in case of insufficient cooling (self-resetting) Current Limit set to: 27A ± 1.5A</p> <p>Output Overvoltage Protection Second loop completely stable and independent of main regulator loop OVP setting: 130V ± 10V</p> <p>Efficiency 85% at full load</p> <p>Operating Temperature Range 0°C to +50°C for full specification</p> <p>Temperature Drift 0.03% per °C over operating temperature range</p> <p>Cooling By built-in high quality fans</p> <p>Environmental Protection Basic ruggedizing Conformal coating</p> <p>Shock/Vibration IEC 61373 Cat 1 A&B</p> <p>Humidity 5-95% non-condensing</p>	<p>MTBF 110,000 hours @ 45 °C (Fans excluded) Demonstrated MTBF is significantly higher</p> <p>Indicators Green 'OUTPUT ON LED' on each internal module, visible through the cooling slots</p> <p>Control Input None</p> <p>Alarm Output Not installed</p> <p>Package / Dimensions (W x H x L) 3U4: 244 x 132 x 407mm (9.6" x 5.2" x 16") Mounting holes are clear</p> <p>Weight 8.1kg (18 lbs.)</p> <p>Connections Input: Terminal block Output: Terminal block</p> <p>RoHS Compliance Not required, but accepted</p> <p>Warranty Two years subject to application within good engineering practice. Contamination related failures and shipping not included.</p>
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