

Model: BAP 2K5-48/125-3U3-U0256
COSD: XXXX
Summary description: 2500W, Industrial Quality DC/DC Converter
 48Vdc to 125Vdc/20A
Customer Name: Thiele KG/Germany (KS)
Customer Part Number: Same as above



Product description:

This rugged, industrial quality DC/DC converter module uses field-proven topology to generate the required output power. It is built with three BAP 65F internal power cards. This construction also provides an inherent redundancy; the failure of one internal power card causes only a 33% drop in output power per unit. Cooling is via built-in fans. Low component count, large design headrooms, and the use of components with established reliability result in a high MTBF. It is manufactured at our plant under strict quality control.

Special Features: 40-60Vdc input range. Conformal coating,

SPECIFICATIONS

Input Voltage
 48Vdc nominal
 40-60Vdc operating range (requested)
 Input Current: 71A max

Input Protection
 Inrush current limiting
 Varistor
 Reverse polarity protection
 Internal safety fuses
 Lower input voltages than the specified minimum will not damage the unit

Isolation
 1400Vdc input to chassis
 2250Vdc input to output
 1500Vdc output to chassis

Standards
 Designed to meet EN 60950-1 and related standards

EMI
 EN55032 Class A with margins

Switching Frequency
 55kHz ± 3kHz

Output Voltage/Current
 125Vdc ± 0.2V/20A
 2500W continuous
 Output is floating, either terminal can be grounded

Redundancy Diode
 Installed internally for separation of the internal modules

Line/Load Regulation
 ±1% combined from zero load to full load including redundancy diode

Dynamic Response
 Max 5% voltage deviation for 10% to 50% load step, with better than 1msec recovery time

Output Ripple / Noise
 Better than 100mVrms and 500mVpp (20MHz BW)

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: 23A ± 2.5A

Output Overvoltage Protection
 Second regulator loop. Second loop completely stable and independent of main regulator loop
 OVP setting: 140V ± 5V

Efficiency
 85% at full load

Operating Temperature Range
 0°C to +50°C for full specification

Temperature Drift
 0.03% per °C over operating temperature range

Cooling
 By built-in high quality fans

Environmental Protection
 Basic ruggedizing
 Conformal coating

Shock/Vibration
 IEC 61373 Cat 1 A&B

Humidity
 5 - 95% non-condensing

MTBF
 Min. 115,000 hours @ 45°C (Fans excluded)
 Demonstrated MTBF is significantly higher

Indicators
 Green OUTPUT ON LED on each internal module visible through the cooling slots

Control Input
 None

Alarm Output
 None


Package / Dimensions (W x H x L)
 3U3: 187 x 132 x 407mm (7.4" x 5.2" x 16")
 Mounting with four L-brackets (included)

Weight
 7kg (15 lbs)

Connections
 Input: Terminal block Phoenix 125A
 Output: 3-pole Terminal block with 13 mm spacing

RoHS Compliance
 Compliant

Warranty
 Two years subject to application within good engineering practice
 Contamination related failures and shipping cost excluded

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