

**Model: BAP 65R-110/72F3T-S7817****Summary description: 360W, Railway Quality DC/DC Converter  
110Vdc to 72V/5A****Product Description:**

This rugged, railway quality power converter utilizes field-proven technology mature design with a track record in numerous applications. All heat generating components are installed on aluminum heatsink blocks which are thermally connected to the baseplate. This also provides exceptional mechanical ruggedness. Additional cooling is achieved by natural air convection through the cooling slots. 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 meets the requirements of EN50155 for electronic equipment used on railway rolling stock. It is manufactured at our plant under strict quality control.

**Special Features:** For radio transceiver application in public railway corporation. Conformal coating

**SPECIFICATIONS****Input Voltage**

110Vdc nominal  
66-154Vdc operating range  
Input Current: 6.5A max.

**Input Protection**

Inrush current limiting  
Varistor  
Reverse polarity protection  
Internal safety fuse  
Lower voltage than the specified minimum Input will not damage the unit

**Isolation**

1500Vdc input to chassis  
3000Vdc input to output  
1500Vdc output to chassis

**Standards**

Designed to meet EN60950-1, EN 50155, and EN45545

**Immunity**

Meets criteria of EN 50155 and EN 50121-3-2 including:  
EN 61000-4-2 (ESD)  
EN 61000-4-3 (RF Immunity)  
EN 61000-4-4 (Fast Transients)  
EN 50155 (Surge)  
EN 61000-4-6 (Conducted Imm)  
EN 50155 (Voltage Variations)

**EMI**

EN50121-3-2

**Switching Frequency**

55kHz  $\pm$  3kHz

**Output Voltage/Current**

72V  $\pm$  0.3V/5A  
Output is floating, either terminal can be grounded

**Redundancy Diode**

Not required

**Line/Load Regulation**

$\pm$ 1% combined from zero load to full load

**Dynamic Response**

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

**Output Ripple / Noise**

Better than 80mVrms or 400mVpp (@ 20MHz BW)

**Output Overload Protection**

Rectangular current limiting with short circuit protection.  
Thermal shutdown with automatic reset in case of insufficient cooling  
Current Limit set to: 5.5A  $\pm$  0.4A

**Output Overvoltage Protection**

Double regulator loop. Second loop completely stable and independent of main regulator loop  
OVP setting: 76V  $\pm$  2V

**Efficiency**

Min 88% at full load

**Operating Temperature Range**

-25°C to +55°C cold plate temperature

**Temperature Drift**

0.03% per °C over operating temperature range

**Cooling**

Conduction via base plate to customer chassis and heatsink and additional convection

**Environmental Protection**

Ruggedizing  
Conformal coating

**Shock/Vibration**

IEC 61373 Cat 1 A&B

**Humidity**

5-95% non-condensing

**MTBF**

130,000 hours @ 45°C

**Indicators**

Green 'OUTPUT ON' LED visible through the cooling slots

**Alarm Output**

Not required

**Package / Dimensions (W x H x L)**

F3: 132 x 64 x 300mm  
(5.2" x 2.5" x 11.8")  
Mounting holes are clear

**Weight**

2 kg (4.4 lbs)

**Connections**

12-pole barrier-type terminal block, 3/8" spacing

**RoHS Compliance**

Compliant

**Warranty**

Two years subject to application  
Within good engineering practice