



[ 2 YEAR WARRANTY ]



- **High efficiency topology, 90% typical at 3.3V**
- **Industry standard footprint**
- **Wide baseplate temperature, -40°C to +100°C (natural convection)**
- **90% to 110% output trim**
- **No minimum load**
- **Overvoltage protection**
- **Remote on/off**

The EXB250 is a new high efficiency, open frame, isolated 165 Watt converter series in an industry standard half-brick footprint. The EXB250 delivers very high output current at low voltages, and excellent useable power density for today's high end applications. The design takes advantage of open frame construction to provide a low weight, low thermal impedance baseplate design. The first four models in the series feature an input voltage range of 33 to 75VDC and are available in output voltages of 3.3V, 2.5V, 1.8V and 1.5V. The output voltage on each model is adjustable from 90% to 110% of the nominal value. The EXB250 series also has a remote on/off capability. Overcurrent and overvoltage protection features are included as standard. With full international safety approval including EN60950 (TÜV Rheinland) and UL/cUL1950, the EXB250 reduces compliance costs and time to market.

## SPECIFICATION

All specifications are typical at nominal input, full load at 25°C unless otherwise stated

| OUTPUT SPECIFICATIONS   |  |   |
|---|--|---|
| Voltage adjustability   |  | 90% to 110%   |
| Set point accuracy  |  | ±1.6% max.  |
| Line regulation   | Low line to high line  | ±0.1% max.  |
| Load regulation   | Full load to min. load   | ±0.2% max.  |
| Minimum load  |  | 0%  |
| Overshoot   | At turn-on and turn-off  | None  |
| Undershoot  |  | None  |
| Ripple and noise  | 5Hz to 20MHz   | 60mV pk-pk<br>20mV rms  |
| Transient response<br>(See Note 1)                            |  | 6% max. deviation<br>150µs recovery to<br>within total error band |
| INPUT SPECIFICATIONS  |  |   |
| Input voltage range   | 48Vin nominal  | 33 to 75VDC   |
| Input current   | No load<br>Remote OFF  | 145mA max.<br>35mA max.   |
| Input current (max.)<br>(See Note 3)                          |  | 5.7A max. @ Io max.<br>and Vin = 33 to 75V                        |
| Input reflected ripple  | (See Note 5)   | 300mA (pk-pk) typ.  |
| Active high remote ON/OFF<br>Logic compatibility<br>ON<br>OFF | (See Note 7)<br>Open collector ref to -input<br>Open circuit or >4.0VDC<br><1.2VDC |   |
| Undervoltage lockout  | Power up<br>Power down   | 32.5V (typ.)<br>30.5V (typ.)                                      |
| Start-up time<br>(See Note 6)                                 | Power up<br>Remote ON/OFF  | 10ms (typ.)<br>3ms (typ.)   |

| EMC CHARACTERISTICS                     |   |                                       |
|---|---|---------------------------------------|
| Conducted emissions                     | EN55022 (See Note 2)                                | Level A                               |
|   | EN55022 (See Note 2)                                | Level B                               |
| Radiated emissions                      | EN55022   | Level B                               |
| Immunity:                               |   |                                       |
| ESD air                                 | EN61000-4-2 8kV (NP), 15kV (RP)                     |                                       |
| ESD contact                             | EN61000-4-2 6kV ((NP), 8kV (RP)                     |                                       |
| Radiated field enclosure                | EN61000-4-3 10V/m (NP)                              |                                       |
| Conducted (DC power)                    | EN61000-4-6 10V (NP)                                |                                       |
| Conducted (signal)                      | EN61000-4-6 10V (NP)                                |                                       |
| Input transients                        | ETS 300 132-2, ETR 283                              |                                       |
| GENERAL SPECIFICATIONS                  |   |                                       |
| Efficiency                              |   | See table                             |
| Operational insulation                  | Input/output  | 1500VDC                               |
| Switching frequency                     | Fixed   | 400kHz typ.                           |
| Approvals and standards<br>(See Note 4) |   | EN60950 (TÜV Rheinland)<br>UL/cUL1950 |
| Material flammability                   |   | UL94V-0                               |
| Weight                                  |   | 73g (2.6oz)                           |
| MTBF                                    | MIL-HDBK-217F<br>@ 25°C, 100% load<br>ground benign | >224,000 hours                        |
| ENVIRONMENTAL SPECIFICATIONS            |   |                                       |
| Thermal performance                     | Operating baseplate temperature<br>Non-operating    | -40°C to +100°C<br>-40°C to +125°C    |

