

JULY 2025

Knowles BLS Series

125°C DC Link Capacitors for
Harsh Environments



BLS Series (125°C, THB-Rated) Introduction



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FEATURED PRODUCT

BLS Series

125°C DC Link Capacitors for Harsh Environments, THB-Rated

Benefits:

- THB-rated
- 100% greater life under THB test conditions
- 2,000-hour load life based on 85°C at 85% relative humidity with voltage applied
- Able to withstand harsh, humid conditions
- High capacitance with high ripple current
- Self-healing for added reliability



The BLS Series sets **new performance standards** for THB-rated board-mount DC link capacitors

FEATURED PRODUCT

BLS Series

125°C Board Mount DC Link Capacitors for Harsh Environments, THB-Rated

Features:

- Optimized for DC link and inverter circuits
- Capacitance ranges from 1.0 to 220 μF at 450-1100 Vdc
- High rms current ratings for handling higher-ordered harmonics
- Meets IEC61071, AEC-Q200 and RoHS
- Suitable for high-frequency applications
- Life expectancy: 100,000 h @ 70 °C hot spot, at rated voltage



FEATURED PRODUCT

BLS Series

125°C Board Mount DC Link Capacitors for Harsh Environments, THB-Rated

Applications:

- Inverters using broadband semiconductors (SiC)
- Solar, EV, and other inverters that are subjected to wide ranging natural environmental conditions.
- Backup, UPS, and portable power systems.
- Motor drives
- Automotive and other transportation systems.
- DC-link and power output filtering.



Useful for applications that can **benefit from the long life and high performance** BLS Series capacitors offer



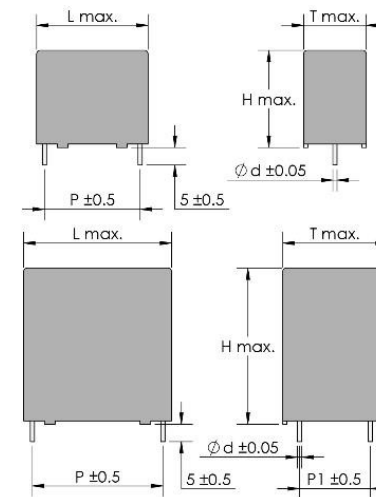
FEATURED PRODUCT

BLS Series

125°C Board Mount DC Link Capacitors for Harsh Environments, THB-Rated

Specifications:

- Case sizes, vary based on values/ratings, ranging from 32(L) x 18(H) x 9(T) mm up to 57.5(L) x 65(H) x 45(T) mm
- Two or four-pin lead configurations
- Plastic case and dry resin meet UL94V-0
- Tin-plated copper terminals for best solderability



Specifications

Capacitance Range	1.0 to 220 µF
Capacitance Tolerance	±5% or ±10% at +25°C
Rated Voltage	450 to 1100 Vdc
Operating Temperature Range	-55°C to 125°C (85°C ~125°C, decreasing factor 1.25% per °C for Rated Voltage)
Dissipation Factor	≤0.002 (0.2%) at 1KHz; C ≤20µF at 25°C ≤0.003 (0.3%) at 1KHz; C >20µF at 25°C ≤0.004 (0.4%) at 1KHz; C >80µF at 25°C
Insulation Resistance	RC between leads, IR xC≥30,000 s at 100vdc 1minute at +25°C
Test Voltage Between Terminals U _{TT}	1.5 x VR VDC for 10 seconds (between terminations) @ +25°C ±5°C
Test Voltage Between Terminals & Case U _{TC}	3000VAC, 50/60Hz 60s (at+25+/-5°C)

BLS Series (125°C, THB-Rated) Summary



1

**100% Greater Life Under
THB Test Conditions**
than other 85/85
THB-rated DC link capacitors

2

2,000-Hour Load Life
based on 85°C at 85% R.H. @with
bias voltage applied

3

**IEC61071
AEC-Q200
RoHS**

4

High capacitance with high
ripple current

5

Self-healing for reliability

6

Ideal for inverter, UPS, and
other power applications



Thank you.