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# Knowles BLS Series

125°C DC Link Capacitors for  
Harsh Environments



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



1 Benefits

2 Features

3 Applications

4 Specifications

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  $\mu$ F 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



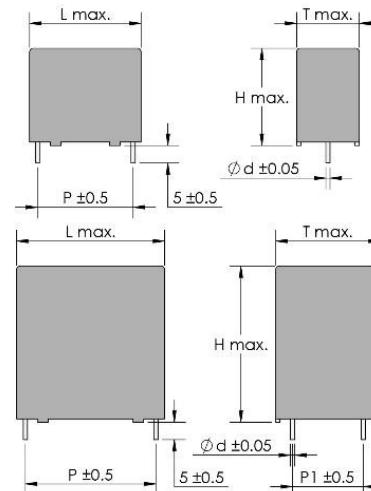
## FEATURED PRODUCT

# 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 $\mu$ F
Capacitance Tolerance	$\pm 5\%$ or $\pm 10\%$ at $+25^\circ\text{C}$
Rated Voltage	450 to 1100 Vdc
Operating Temperature Range	$-55^\circ\text{C}$ to $125^\circ\text{C}$ ( $85^\circ\text{C}$ ~ $125^\circ\text{C}$ , decreasing factor 1.25% per $^\circ\text{C}$ for Rated Voltage)
Dissipation Factor	$\leq 0.002$ (0.2%) at 1KHz; $C \leq 20\mu\text{F}$ at $25^\circ\text{C}$ $\leq 0.003$ (0.3%) at 1KHz; $C > 20\mu\text{F}$ at $25^\circ\text{C}$ $\leq 0.004$ (0.4%) at 1KHz; $C > 80\mu\text{F}$ at $25^\circ\text{C}$
Insulation Resistance	$RC \geq 30,000$ s at 100vdc 1minute at $+25^\circ\text{C}$
Test Voltage Between Terminals $U_{TT}$	$1.5 \times VR$ VDC for 10 seconds (between terminations) @ $+25^\circ\text{C} \pm 5^\circ\text{C}$
Test Voltage Between Terminals & Case $U_{TC}$	3000VAC, 50/60Hz 60s (at $+25^\circ\text{C} \pm 5^\circ\text{C}$ )

# 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



knowles

Thank you.