259 PHM-SI Series of Snap-in Power Aluminum Capacitors Extended With 550 V and 600 V Ratings, Allowing Designers to Reduce Component Counts, Save Space, Lower Costs, and Increase Reliability in High Voltage Designs

Product Benefits:

- Extended voltage ratings of 550 V and 600 V
- Available in a wide range of case sizes from 22 mm x 25 mm to 35 mm x 60 mm
- High capacitance values from 39 µF to 2200 µF
- High ripple current ratings from 0.53 A to 4.42 A
- Feature a cylindrical aluminum case insulated with a blue sleeve
- Available with 3-pin keyed polarity snap-in terminals
- Polarized aluminum electrolytic capacitors with a non-solid electrolyte
- Useful life > 3000 h at +105 °C
- RoHS-compliant



Market Applications:

- Buffering, filtering, and energy storage in wallboxes and stationary electric vehicle (EV) chargers; industrial motor drives, heating and cooling systems, lamp drivers for UV water treatment systems, plasma cutters, switch cabinets, and UPS; wind turbines and solar panel inverters; and medical instrumentation

The News:

Vishay Intertechnology announces that it has extended its 259 PHM-SI series of snap-in power aluminum electrolytic capacitors with higher voltage ratings of 550 V and 600 V. The Vishay BCcomponents devices simplify high voltage power designs in industrial, energy, and medical applications by reducing component counts, board space requirements, and costs, while improving reliability.

- To cover DC bus voltages from 800 V to 1100 V, engineers have traditionally had to rely on three 400 V to 450 V capacitors in series, which requires balancing resistors and introduces additional points of failure. With voltages up to 600 V, 259 PHM-SI series devices allow designers to use fewer capacitors in series, eliminate or reduce the need for voltage balancing circuits, achieve a smaller PCB footprint, and lower BOM costs, while providing greater voltage headroom to improve system lifetime and reliability
- The new 550 V and 600 V capacitors offer high capacitance and voltage ratings in a range of compact sizes. Available configurations include 330 µF / 550 V and 330 µF / 600 V in the 35 mm x 45 mm case, and 470 µF / 550 V and 390 µF / 600 V in the 35 mm x 55 mm case. At these values, the 259 PHM-SI series offers ripple current ratings from 2.14 A to 2.58 A, allowing the capacitors to withstand the demanding switching currents of today's high power converters
- The devices provide more than 10 years of lifetime in ambient temperatures up to 60 °C

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The Key Specifications:

Part number	259 PHM-SI	
Case size (D x L in mm)	22 x 25 to 35 x 60	
Capacitance range	39 µF to 2200 µF	
Tolerance	± 20 %	
Ripple current at 100 Hz and +105 °C	0.53 A to 4.42 A	
Rated voltage	200 V to 450 V	500 V to 600 V
Category temperature range	-40 °C to +105 °C	
Useful life at +105 °C	> 3000 h	
Max. ESR at 100 Hz	80 mΩ to 3.31 Ω	
Max. impedance at 10 kHz	60 mΩ to 2.44 Ω	
Sectional specification	IEC 60384-4 / EN 130300	
Climatic category IEC 60068	40 / 105 / 56	25 / 105 / 56

Availability:
Samples are available from catalog houses in small quantities. Production quantities of the extended 259 PHM-SI series capacitors are available now, with lead times — depending on region — of 12 to 18 weeks.

To access the product datasheet on the Vishay Website, go to
http://www.vishay.com/ppg?28441 (259 PHM-SI)

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