



Vishay Intertechnology, Inc.

# Consumer

(Electric Two-Wheel Transportation)



One of the World's Largest Manufacturers of  
**Discrete Semiconductors and Passive Components**





**Consumer**

Electric Two-Wheel  
Transportation

E-Bikes / E-Scooters

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More information on the Engineer's Toolbox, including product datasheet links, can be found at [www.vishay.com/ref/et3](http://www.vishay.com/ref/et3).

For inquiries, please contact your local sales representative.

*Key components for*  
**ELECTRIC TWO-WHEEL TRANSPORTATION**



**E-Bikes /  
E-Scooters**



**THE VISHAY ADVANTAGE**

- Overload Capabilities
- Moderate Cost
- High Power Density
- Good Thermal Performance



# E-Bikes / E-Scooters


**MOSFETs**

**N-Channel 100 V (D-S)  
175 °C MOSFET**

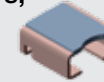


[SUM110N10-09](#)

- Classic TrenchFET® technology, maximum  $R_{DS(on)}$  9.5 mΩ
- Popular D<sup>2</sup>PAK packaging

**RESISTORS**

**Power Metal Strip® Resistors,  
Very High Power (to 7 W)**



[WSLP2726](#)

- High power rating of 5 W to 7 W in WSLP2726 package
- Very low resistance values, 0.0005 Ω to 0.002 Ω, in 4-terminal package

**CERAMIC CAPACITORS**

**IEC 60384-14:2005,  
CAN/CSA/cCSAus, and  
ANSI/UL CB Certificates**



[MLCC SMD Safety Capacitor](#)

- Surface-mount design: simpler assembly and reduced board space requirement
- Available in NP0 (C0G) or X7R dielectrics

**OPTOELECTRONICS**

**Fully Integrated Proximity and  
Ambient Light Sensor with  
I<sup>2</sup>C Interface**



[VCNL4020-GS08](#)

- Infrared emitter is included in the 4.9 mm x 2.4 mm x 0.83 mm SMD pkg.
- 16-bit resolution, proximity range of up to 20 cm with programmable thresholds

**INDUCTORS**

**Low-Profile, High-Current  
IHLP® Inductors**

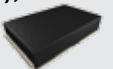


[IHLP-6767GZ-5A](#)

- Automotive Grade, high-current power inductor for DC/DC conversion
- High-temperature continuous operation up to 155 °C

**RESISTORS**

**Low Value (Down to 0.0005 Ω),  
Surface-Mount**



[WSHM2818](#)

- Very high power rating of 7 W in small 2818 package
- Very low resistance values, 0.001 Ω to 0.10 Ω, with tolerance of 1 %

**NON-LINEAR RESISTORS**

**NTC Thermistors, 2-Point Micro  
Chip Sensor Insulated Leads**

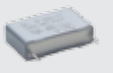


[NTCLE306E3....](#)

- Miniature insulated leads
- AEC-Q200 compliant, fast response time for exposed mounting

**FILM CAPACITORS**

**Interference Suppression Film  
Capacitor – Class Y2, Radial  
MKP 300 V<sub>AC</sub> – Line to  
Ground Application**



[MKP338 6](#)

- AEC-Q200 qualified
- Robust design





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A *WORLD OF*  
*SOLUTIONS*