

# PTCEL High Energy Series Thermistors Provide 340 J Energy Handling and 1200 VDC Max Rating for Enhanced Inrush Current Protection in Automotive and Industrial Circuits

## Product Benefits:

- Maximum energy handling of 340 J at 25 °C for superior performance in high energy applications
- $R_{25}$  values ranging from 150  $\Omega$  to 1.5 k $\Omega$  to accommodate a wide range of design requirements
- High voltage capabilities up to 1200 VDC, enhancing versatility and application suitability
- High energy handling at elevated ambient temperatures: 180 J at 85 °C and 130 J at 105 °C
- High switching temperature and operation up to +105 °C for enhanced thermal performance
- Self-protecting design with no risk of overheating, ensuring reliability and safety
- AEC-Q200 qualified for automotive applications, meeting rigorous industry standards
- Withstands more than 100,000 inrush power cycles, offering long-term reliability
- Capable of handling non-switching peak power up to 25 kW, making it suitable for demanding environments



## Market Applications:

Inrush current limiting and overload protection in:

- AC/DC and DC/DC converters
- DC-Link battery management and emergency discharge circuits
- On-board chargers for electric vehicles
- Home energy storage systems
- Heat pumps
- Motor drives
- Welding equipment

## The News:

Vishay Intertechnology introduces a new series of inrush current limiting positive temperature coefficient (PTC) thermistors. Designed to increase performance in active charge and discharge circuits for automotive and industrial applications, the Vishay BCcomponents PTCEL High Energy series devices combine maximum energy handling of 340 J with a wide range of resistance at 25 °C ( $R_{25}$ ) values and high voltage capabilities. The devices' increase in switching temperature and thermal capacity reduces the number of components required — to save space, simplify designs and product development, reduce costs, and increase accuracy



## The Key Specifications

Part number	PTCEL67R
R <sub>25</sub> (Ω)	150 to 1500
R <sub>25</sub> tolerance (%)	30
Max. AC voltage (V <sub>RMS</sub> )	460 to 800
Max. DC voltage (V <sub>DC</sub> )	650 to 1200
Maximum energy (J) @ 25 °C	340
Heat capacity (J/K)	2.6
Lead pitch (mm)	5.0, 7.5, 10.0

## Additional Details:

- Package options include layered bulk, tape on reel for automatic handling and a standard leadwire pitch of 10 mm, with 5.0 mm and 7.5 mm also available
- SPICE and 3D models are available to assist in the design and implementation process

## Availability:

Samples and production quantities of the PTCEL High Energy series thermistors are available now, with lead times of 10 weeks

To access the product datasheet on the Vishay Website, go to <http://www.vishay.com/ppg?29207> (PTCEL High Energy Series)

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