

Products & Technologies



SMD disk varistors

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Sample kit with varistors for transient voltage suppression upto 385volts

TDK-EPC, a group company of TDK Corporation, presents a new sample kit with EPCOS SMD CU varistors. The electrical parameters of these CTVS (ceramic transient voltage suppression) components correspond to the leaded disk varistors of the proven EPCOS series SIOV-S05 in case size

3225 and SIOV-S07 in case size 4032.

The varistors contained in the sample kit cover a voltage range from 16 to 385 V DC and are designed for surge currents of between 100 and 1200 A and a standard pulse of 8/20 μ s. Depending on the type, a maximum energy of between 2200 and 23,000 mJ can be absorbed for 2 ms. The components have a maximum AC operating voltage exceeding 130 V_{RMS} and thus satisfy the requirements of UL and CSA. All CU varistors in the sample kit are RoHS-compatible and can be operated at temperatures of up to 85 °C without derating.

In addition to the standard series for industrial and consumer electronics, the sample kit also contains special series for automotive electronics and telecommunications applications. Data sheets, application examples as well as additional information are available on an enclosed CD-ROM.

Glossary

- Varistor: a voltage-dependent resistor (VDR) that changes over from a non-conducting to a conducting state at a defined voltage.
- RoHS: Restriction of Hazardous Substances. This EU Directive has been regulating the use of specific substances in electrical and electronics equipment since 2003.
- UL: Underwriters Laboratories is an organization established in the USA in 1894 in order to evaluate and certify products and their safety.
- CSA: the Canadian Standards Association is a non-governmental organization that develops standards and evaluates/certifies products for their safety.

Main applications

- Overvoltage protection in industrial, consumer, automotive and IT-electronics equipment

Main features and benefits

- High surge-current capability up to 1200 A
- Bidirectional overvoltage protection
- Suitable for lead-free soldering
- Special series for automotive electronics and telecommunications applications
- UL and CSA approval

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Main characteristics

Series/ Parameter	Standard	Telecom	Automotive
Operating voltage V DC [V]	85 to 385	125	16
Surge-current capability 8/20 μ s [A]	400 to 1200	1200	100 to 250
Maximum absorbable energy 2 ms [mJ]	2200 to 23 000	7600	12 J/10 pulses