



## Surge arrester

### 2-electrode arrester

|                       |                        |
|-----------------------|------------------------|
| <b>Series/Type:</b>   | <b>EHV63-H45B2</b>     |
| <b>Ordering code:</b> | <b>B88069X2643B252</b> |
| <b>Date:</b>          | <b>2019-07-05</b>      |
| <b>Version:</b>       | <b>02</b>              |

**Features**

- Built to automotive standard (IATF 16949)
- Small size
- Fast response time
- High current capability
- Stable performance over service life
- Low capacitance and insertion loss
- High insulation resistance
- RoHS-compatible

**Applications**
Automotive:

- On-board chargers
- Vehicle charging stations

Others:

- LED lighting
- Power supply
- Photovoltaic
- Air conditioning

**Electrical specifications**

|                                              |                                                                  |                  |        |
|----------------------------------------------|------------------------------------------------------------------|------------------|--------|
| DC spark-over voltage <sup>1) 2)</sup>       |                                                                  | 4500             | V      |
| Tolerance                                    |                                                                  | ±20              | %      |
| Min.                                         |                                                                  | 3600             | V      |
| Max.                                         |                                                                  | 5400             | V      |
| Impulse spark-over voltage                   |                                                                  |                  |        |
| at 100 V/μs                                  | - for 99% of measured values<br>- typical values of distribution | < 5200<br>< 4800 | V<br>V |
| at 1 kV/μs                                   | - for 99% of measured values<br>- typical values of distribution | < 5500<br>< 5000 | V<br>V |
| at 5 kV/μs                                   | - for 99% of measured values<br>- typical values of distribution | < 6000<br>< 5500 | V<br>V |
| Service life                                 |                                                                  |                  |        |
| 300 operations                               | 8/20 μs                                                          | 100              | A      |
| 3 operations                                 | 8/20 μs                                                          | 3                | kA     |
| 1 operation                                  | 8/20 μs                                                          | 5                | kA     |
| Insulation resistance at 100 V <sub>DC</sub> |                                                                  | > 1              | GΩ     |
| Capacitance at 1 MHz                         |                                                                  | < 1              | pF     |
| Arc voltage at 1 A                           |                                                                  | ~ 50             | V      |
| Glow to arc transition current               |                                                                  | < 0.3            | A      |
| Glow voltage at 0.1 A                        |                                                                  | ~ 250            | V      |
| AC withstand voltage (1 min) <sup>3)</sup>   |                                                                  | 2250             | V      |
| Weight                                       |                                                                  | ~ 1              | g      |
| Operation and storage temperature            |                                                                  | -40 ... +125     | °C     |
| Recommended storage                          |                                                                  |                  |        |
| - temperature                                |                                                                  | +5 ... +35       | °C     |
| - humidity                                   |                                                                  | 45 ... 80        | %      |
| - period                                     |                                                                  | ≤ 2              | years  |
| Climatic category (IEC 60068-1)              |                                                                  | 40/125/21        |        |

Continued on next page

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## 2-electrode arrester

EHV63-H45B2

Marking, blue positive

**EPCOS 4500 WWY**

4500 - Nominal voltage  
WW - Calendar week of production  
Y - Year of production (last digit)

Certifications

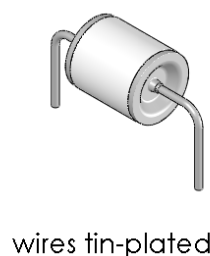
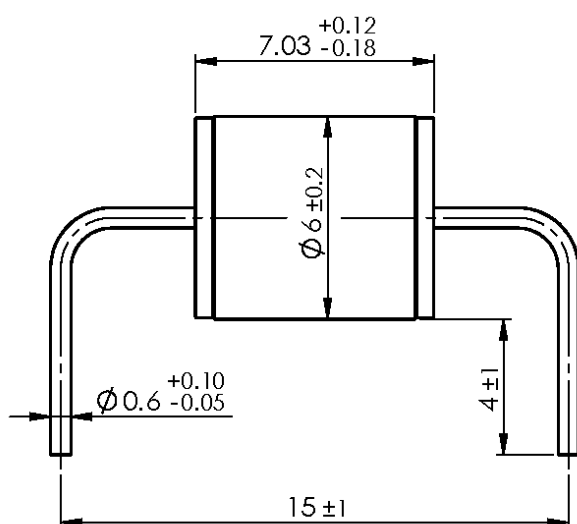
UL 1449 (E319264)



- 1) At delivery AQL 0.65 level II, DIN ISO 2859
- 2) In ionized mode
- 3) Test conditions in acc. with MIL-STD-202G at  $25 \pm 5$  °C, relative humidity of  $\leq 55\%$  and atmospheric pressure 860 ... 1100mbar.

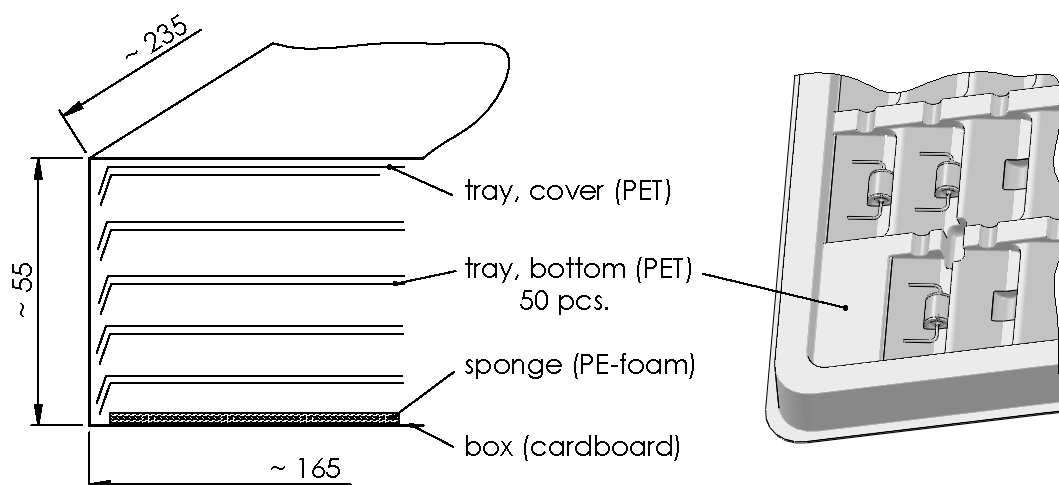
Terms and current waveforms in accordance with: ITU-T Rec. K. 12; IEC 61643-21; 61643-311.

## Dimensional drawing in mm



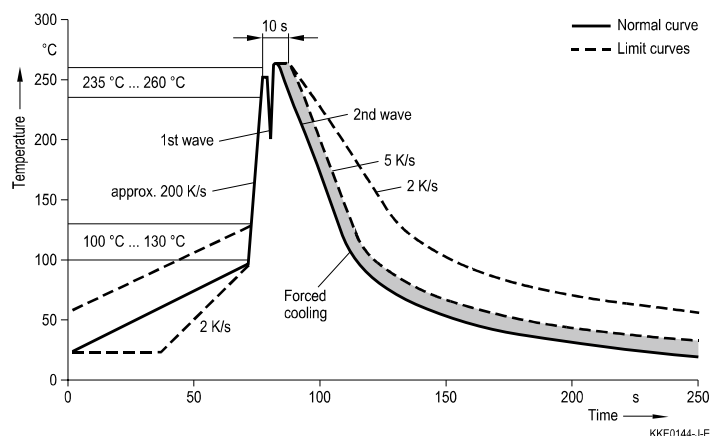
## Ordering codes and packing advices

B88069X2643B252 = 250 pcs. in trays



## Soldering parameter

### Wave soldering



| Wave profile features   | Pb-free assembly          |
|-------------------------|---------------------------|
| Solder                  | Sn 95.5 / Ag 3.8 / Cu 0.7 |
| Solder bath temperature | 263 (±3) °C               |
| Dwell time              | < 3 s                     |

Soldering profile applied to a single soldering process.

## Cautions and warnings

- Do not operate surge arresters in power supply networks, whose maximum operating voltage exceeds the minimum spark-over voltage of the surge arresters.
- Electromagnetic fields and ionizing radiation may affect the electrical characteristics of the arrester. The impact of such effects (inductive and capacitive field distortion from adjacent components) must be avoided by appropriate circuit design measures.
- Surge arresters may become hot in the event of longer periods of current stress (burn risk). In the event of overload the connectors may fail or the component may be destroyed.
- If the contacts of the surge arresters are defective, current load can cause sparks and loud noises.
- Surge arresters must be handled with care and must not be dropped.
- Do not continue to use damaged surge arresters.

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Release 2018-10

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