

## **Switching Spark Gap**

Series/Type: CAS02X-071 Ordering code: B88069X0710T502

Date: 21.07.2004 Version: Issue 09

© EPCOS AG 2015. Reproduction, publication and dissemination of this publication, enclosures hereto and the information contained therein without EPCOS' prior express consent is prohibited.

EPCOS AG is a TDK Group Company.



## **Important notes**

The following applies to all products named in this publication:

- 1. Some parts of this publication contain statements about the suitability of our products for certain areas of application. These statements are based on our knowledge of typical requirements that are often placed on our products in the areas of application concerned. We nevertheless expressly point out that such statements cannot be regarded as binding statements about the suitability of our products for a particular customer application. As a rule we are either unfamiliar with individual customer applications or less familiar with them than the customers themselves. For these reasons, it is always ultimately incumbent on the customer to check and decide whether a product with the properties described in the product specification is suitable for use in a particular customer application.
- 2. We also point out that in individual cases, a malfunction of electronic components or failure before the end of their usual service life cannot be completely ruled out in the current state of the art, even if they are operated as specified. In customer applications requiring a very high level of operational safety and especially in customer applications in which the malfunction or failure of an electronic component could endanger human life or health (e.g. in accident prevention or life-saving systems), it must therefore be ensured by means of suitable design of the customer application or other action taken by the customer (e.g. installation of protective circuitry or redundancy) that no injury or damage is sustained by third parties in the event of malfunction or failure of an electronic component.
- 3. The warnings, cautions and product-specific notes must be observed.
- 4. In order to satisfy certain technical requirements, some of the products described in this publication may contain substances subject to restrictions in certain jurisdictions (e.g. because they are classed as hazardous). Useful information on this will be found in our Material Data Sheets on the Internet (www.tdk-electronics.tdk.com/material). Should you have any more detailed questions, please contact our sales offices.
- 5. We constantly strive to improve our products. Consequently, the products described in this publication may change from time to time. The same is true of the corresponding product specifications. Please check therefore to what extent product descriptions and specifications contained in this publication are still applicable before or when you place an order.
  - We also **reserve the right to discontinue production and delivery of products**. Consequently, we cannot guarantee that all products named in this publication will always be available. The aforementioned does not apply in the case of individual agreements deviating from the foregoing for customer-specific products.
- 6. Unless otherwise agreed in individual contracts, all orders are subject to our General Terms and Conditions of Supply.
- 7. Our manufacturing sites serving the automotive business apply the IATF 16949 standard. The IATF certifications confirm our compliance with requirements regarding the quality management system in the automotive industry. Referring to customer requirements and customer specific requirements ("CSR") TDK always has and will continue to have the policy of respecting individual agreements. Even if IATF 16949 may appear to support the acceptance of unilateral requirements, we hereby like to emphasize that only requirements mutually agreed upon can and will be implemented in our Quality Management System. For clarification purposes we like to point out that obligations from IATF 16949 shall only become legally binding if individually agreed upon.
- 8. The trade names EPCOS, CeraCharge, CeraDiode, CeraLink, CeraPad, CeraPlas, CSMP, CTVS, DeltaCap, DigiSiMic, ExoCore, FilterCap, FormFit, LeaXield, MiniBlue, MiniCell, MKD, MKK, MotorCap, PCC, PhaseCap, PhaseCube, PhaseMod, PhiCap, PowerHap, PQSine, PQvar, SIFERRIT, SIFI, SIKOREL, SilverCap, SIMDAD, SiMic, SIMID, SineFormer, SIOV, ThermoFuse, WindCap are **trademarks registered or pending** in Europe and in other countries. Further information will be found on the Internet at www.tdk-electronics.tdk.com/trademarks.

Release 2018-10



## Switching Spark Gap

CAS02X-071

Ordering code: B88069X0710T502

DC spark-over voltage 1) 2)	215	215 255			
Initial values					
Ignition time t <sub>I</sub> after 150 hours in darkness 3)	95	99.9	100	%	
at –20 °C	<b>≤ 4</b>	≤ 5	≤ <b>7</b>	s	
at +25; 125 °C	≤ 2	≤ 3	<b>≤ 4</b>	S	
Electrical life time A		•			
Maximum increase of DC spark-over voltage	25	25			
Switching operations at +25; 125 °C				Ignitions	
Switching frequency 10 25 Hz		2 000 000 4 000 000			
Switching frequency < 10 Hz	4 000 0	000		Ignitions	
Test circuit parameters; 1 s ON, 10 s OFF Open circuit voltage V <sub>0'</sub>	230	230		V <sub>ac</sub>	
Loading resistance R	15				
Discharge capacitance C	2.2				
Inductance L Discharge peak current I <sub>P</sub>	_	10 ~ 300			
	300			A	
Electrical life time B Switching operations at +25 °C					
Switching frequency 1000 Hz	600.00	600 000		Ignitions	
Test circuit parameters; 1 cycle 10 min ON				19	
Open circuit voltage V <sub>0</sub>	230	230		$V_{ac}$	
Loading resistance R	1.5			$k\Omega$	
Discharge capacitance C	0.1	0.1		μF	
Inductance L Discharge peak current I <sub>P</sub>	_ =	~ 300		μH A	
Insulation resistance at 100 V <sub>dc</sub>		> 0.1			
				GΩ	
Capacitance at 1 MHz	< 2			pF	
Weight		~ 1.5		g	
Operation and storage temperature	-20	-20 +125		°C	
Climatic category (IEC 60068-1)	20/ 12	20/ 125/ 21			
Marking, red	CS 230 YY MM O	230 - Nominal voltage YY - Year of production MM - Month of production			

<sup>1)</sup> At delivery AQL 0.65 level II, DIN ISO 2859

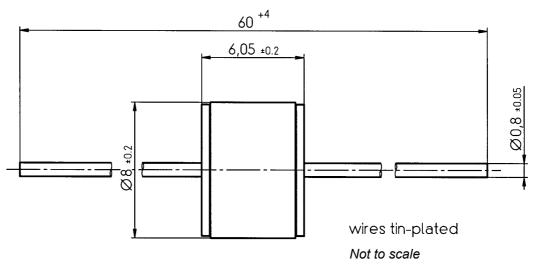
KB AB E / KB AB PM Issue 09, 21.07.2004

<sup>2)</sup> In ionized mode, after load

Time from capacitor charged to the first high voltage spark Test circuit:  $V_{ac}$  = 198 V; R = 36 k $\Omega$ ; C = 2.2  $\mu$ F

CAS02X-071

Ordering code: B88069X0710T502



Dimensions in mm

Non controlled document

KB AB E / KB AB PM Issue 09, 21.07.2004

<sup>©</sup> EPCOS AG 2002. Reproduction, publication and dissemination of this data sheet, enclosures hereto and the information contained therein without EPCOS' prior express consent is prohibited.

Purchase orders are subject to the General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry recommended by the ZVEI (German Electrical and Electronic Manufacturers' Association), unless otherwise agreed.