

# RK89

## 2-ELECTRODE SPARK GAP

### GENERAL INFORMATION AND APPLICATIONS

The RK89-series of 2-electrode spark gaps are high-pressure gas-discharge tubes, hermetically sealed in a ceramic-metal envelope. Dynamic breakdown voltages up to 250 kV can be achieved with the tube.

The tubes are suitable for protection of radio-electronic equipment, capacitor switching applications and as peaking switches.

*THE SWITCH DOES NOT CONTAIN ANY RADIOACTIVE, TOXIC HAZARDOUS SUBSTANCES.*

### PRODUCT SPECIFICATIONS

Specification	Unit	Maximum Value
Static breakdown voltage range (SBV) <sup>(Note 1)</sup>	kV	20...250
Impulse ratio (8/20 us waveshape) <sup>(Note 2)</sup>	-	<1.5
Breakdown voltage tolerance within the lifetime	%	<15
Peak current (8/20 μs) <sup>(Notes 3,4)</sup>	kA	1
Conducted Charge per Pulse	Coulombs	10
Insulation Resistance	MΩ	> 1000
Operating temperatures	°C	-60 ... +80
Net weight	g	350

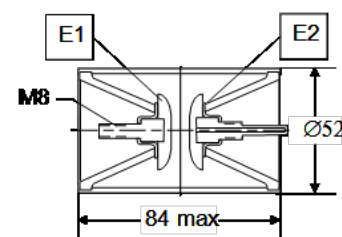
**Important!** All ratings given in this data sheet are absolute, non-simultaneous ratings. It is the equipment designer's responsibility to ensure that they are not exceeded. The spark gap life depends on circuit conditions such as peak discharge current and duration, charge transfer per discharge and the repetition rate.

### NOTES

- 1) RK89 is a family of spark gaps with different DC Breakdown Voltages (DCBV). Parts with different DCBV ratings are available on order. At that in case when DCBV=21 kV the spark gap is signified as RK89-21. If DC voltage exceeds 35 kV it is recommended to immerse the tube into insulating media (transformer oil, SF6).
- 2) Impulse ratio is measured at pulse voltage with rise rate of  $15 \text{ kV}/\mu\text{s} = 3 \text{ max @ } 1.0 \text{ kV}$ ; less than 1.5 @  $> 10.0 \text{ kV dc}$ .
- 3) Current pulse waveform - damped sinusoid with the second half-wave amplitude not more than 20 % of the first half-wave.
- 4) The tube can be operated with peak currents up to 20 kA, however limiting the peak current can increase spark gap life.

### OUTLINE

(all dimensions are in millimeters)



### ORDERING INFORMATION

- LA86-X X – DC breakdown voltage.
- Please indicate your impulse voltage requirements, switching capacitance/energy per shot and pulse repetition rate.