



RK86

2-ELECTRODE SPARK GAP

GENERAL INFORMATION AND APPLICATIONS

The RK86-series of 2-electrode spark gaps are high-pressure gas-discharge tubes, hermetically sealed in a ceramic-metal envelope.

The tubes are intended for general switching in single shot and repetitive pulse generators, including pulse x-ray systems and medical lithotripsy.

The design of the tubes is protected by Russian patent #108224 (priority 11/09/2009).

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

PRODUCT SPECIFICATIONS

Specification	Unit	Maximum Value
DC breakdown voltage range (DCBV) ^(Note 1)	kV	5...50
Impulse ratio (8/20 us waveshape) ^(Note 2)	-	<1.5
Breakdown voltage tolerance within the lifetime	%	<15
Peak current (8/20 μs) ^(Notes 3,4)	kA	30
Charge transfer, single discharge (8/20 μs)	Coulomb	3000
Pulse repetition rate	Hz	100
Insulation Resistance	MΩ	> 1000
Operating temperatures	°C	-60 ... +150
Net weight	g	150

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) RK86 is a trade mark for the line of spark gaps with different DC Breakdown Voltages (DCBV). Parts with different DCBV ratings are available on order. At that in case when DCBV=20 kV the spark gap is signified as RK86-20, DCBV=30kV –RK83-30 etc. 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 kV/μs = 3 max @ 1.0 kV; less than 1.5 @ > 10.0 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 50 kA, however limiting the peak current can increase spark gap life.

ORDERING INFORMATION

- **RK86-X** X – DC breakdown voltage.
- Please indicate your impulse voltage requirements, switching capacitance/energy per shot and pulse repetition rate.

OUTLINE

(all dimensions are in millimeters)

