

# SVETLANA TECHNICAL DATA

## EL509/6KG6

### High Performance Beam Power Tetrode



The Svetlana EL509/6KG6 is a beam power tetrode intended for use in class A, AB or B audio amplifiers and for class B or C RF amplification. Close manufacturing specification tolerances and improved high voltage processing provides improved reliability and superior performance.

#### The Svetlana EL509/6KG6 features:

Increased peak cathode emission from new cathode materials; Stable operation from extended processing and aging; Gold-plated grid; Precise grid/screen alignment; Extra-heavy glass envelope for ruggedness; Improved vacuum processing; Comprehensive testing before and after aging.

The Svetlana EL509/6KG6 is manufactured in Russia at the Svetlana factory and is designed to be a direct replacement for any 6KG6 or EL509. The strict manufacturing and quality controls at the Svetlana plant assure functionality and long life.

#### Characteristics

##### Electrical

Heater:	min	nom	max	
Voltage (AC or DC)	5.7	6.3	6.9	V
Current @6.3 volts		2.5		A
Transconductance (nominal)			18,000	$\mu$ S
Plate resistance (nominal)			8000	ohms
Interelectrode capacitances (typical):				
Grid to plate			2.5	pF
Grid to cathode			25	pF

##### Mechanical

Cooling	Radiation and convection
Base	Nine pin magnoval, glass button
Basing diagram	JEDEC 9RJ
Socket	Svetlana SK509 or equivalent
Anode connector	1/4" plate clip, standard sweep tube type
Operation position	Axis vertical, base down or horizontal

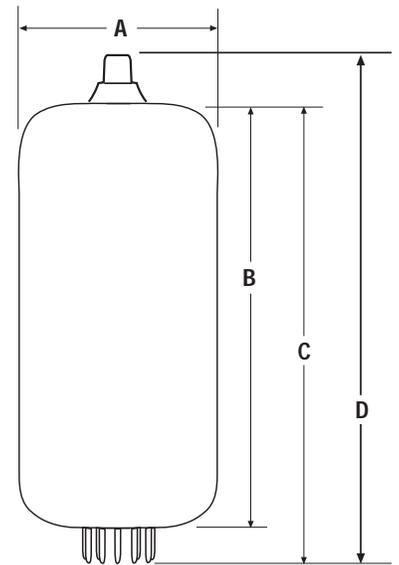
##### Nominal dimensions:

Diameter	45.6mm (1.75 in)
Base to top of envelope	96.6 mm (3.81 in)
Overall height (not including plate cap)	105.3 mm (4.145 in)
Overall height (including plate cap)	117.9 mm (4.641 in)
Net weight	110 gm

##### Maximum Ratings

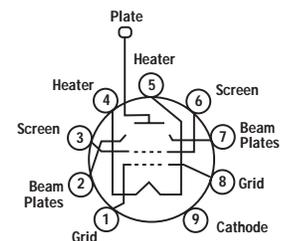
DC plate voltage	900	V
DC plate voltage, pulsed	8000	V
DC cathode current	500	mA
DC screen grid voltage	300	V
Screen dissipation	7	W
Plate dissipation	35	W

#### Svetlana Outline drawing



##### Dimensional Data

Dim.	Millimeters	Inches
A	45.6	1.75
B	96.6	3.81
C	105.3	4.145
D	117.9	4.641



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## Typical Operation, Class A1, Audio Amplifier (single tube)

Plate voltage	500	V
Screen voltage	280	V
Grid no.1 voltage	-82	V
Peak grid drive	50	Vp-p
Plate current, no signal	70	mA
Plate current, max signal	100	mA
Effective load resistance	1650	ohms
Distortion at 1 watt into 8 ohms	0.9	%
Power output at 5% distortion	14	W

