

# Svetlana SV6L6GC

## High Performance Audio Beam Power Tetrode



**T**he Svetlana SV6L6GC is a glass envelope beam-power tetrode intended for high-power audio amplifier service. Close manufacturing specification tolerances and improved processing provide improved reliability and superior sonic performance. The Svetlana SV6L6GC is manufactured in the Svetlana factory in St. Petersburg, Russia, and is designed to be a direct replacement for any 6L6 type.

### The Svetlana SV6L6GC features:

- Design and construction based on the Sylvania 6L6GC/STR387
- Extra-rugged construction for use in music amplifiers--thick mica spacers and extra bracing reduce microphonic effects and resist mechanical and thermal shocks
- Increased peak cathode emission from new cathode materials
- Gold-plated grid and extended processing and aging for stability and reliability
- Tri-plate anode for superior dissipation
- Precise grid/screen alignment
- Comprehensive static and audio amplifier testing before and after aging
- May be operated in inverted position--base fits into socket clamps in Fender guitar amplifiers

### General Characteristics

|                                                                    | min                        | typ | max  |    |
|--------------------------------------------------------------------|----------------------------|-----|------|----|
| Heater Voltage (AC or DC)                                          | 5.7                        | 6.3 | 6.9  | V  |
| Heater Current @6.3V                                               |                            | 0.9 |      | A  |
| Cathode:                                                           | oxide-coated, unipotential |     |      |    |
| Cathode-to-heater potential                                        |                            |     | ±200 | V  |
| Direct interelectrode capacitances :                               |                            |     |      |    |
| Grid no. 1 to plate                                                |                            |     | 0.6  | pF |
| Grid no. 1 to cathode, heater, grid no. 2, and beam forming plates |                            |     | 10   | pF |
| Plate to cathode, heater, grid no. 2, and beam forming plates      |                            |     | 6.5  | pF |

### Mechanical

|                            |                          |
|----------------------------|--------------------------|
| Operating position         | Any                      |
| Base                       | Large wafer octal 8-pin  |
| Basing diagram             | JEDEC 7AC                |
| Cooling                    | Radiation and convection |
| Envelope temperature (max) | 250 C                    |
| Nominal dimensions:        |                          |
| Diameter                   | 38.8mm (1.528 in.)       |
| Base to top                | 93mm (3.605 in.)         |
| Overall height             | 108mm (4.252 in.)        |
| Diameter of base           | 34mm (1.339 in.)         |
| Net weight                 | 65 grams                 |

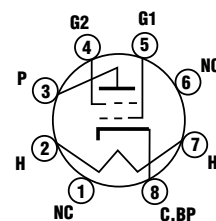
### Maximum ratings

|                         |     |   |
|-------------------------|-----|---|
| DC plate voltage VP     | 500 | V |
| Screen grid voltage Vg2 | 500 | V |
| Plate Dissipation       | 30  | W |
| Screen Grid Dissipation | 5   | W |

### Svetlana SV6L6GC Outline drawing



### Base pin connections bottom view



**Svetlana**  
ELECTRON DEVICES

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## High Performance Audio

### Beam Power Tetrode



**Svetlana**  
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**Typical Operation, Class A, Audio Power Amplifier, Single Tube Connection**

|                                 | tetrode | triode |         |
|---------------------------------|---------|--------|---------|
| DC plate voltage                | 350     | 250    | V       |
| Screen grid voltage             | 250     |        | V       |
| Control grid bias voltage       | -18     | -20    | V       |
| Peak AF grid voltage            | 18      | 20     | V       |
| Zero-signal plate current       | 54      | 40     | mA      |
| Maximum-signal plate current    | 66      | 44     | mA      |
| Zero-signal screen grid current | 2.5     |        | mA      |
| Maximum-signal screen current   | 7       |        | mA      |
| Plate resistance (approx)       | 33000   | 1700   | ohms    |
| Transconductance (approx)       | 5200    | 4700   | $\mu S$ |
| Load Resistance                 | 4200    | 5000   | ohms    |
| Total harmonic distortion       | 15      | 5      | %       |
| Maximum signal power output     | 10.8    | 1.4    | W       |

**Typical Operation, Class AB<sub>1</sub>, Audio Power Amplifier (Values for two tubes)**

|                                 |      |      |
|---------------------------------|------|------|
| DC plate voltage                | 450  | V    |
| Screen grid voltage             | 400  | V    |
| Control grid bias voltage       | -37  | V    |
| Peak AF grid-to-grid voltage    | 70   | V    |
| Zero-signal plate current       | 116  | mA   |
| Maximum-signal plate current    | 210  | mA   |
| Zero-signal screen grid current | 5.6  | mA   |
| Maximum-signal screen current   | 22   | mA   |
| Load Resistance, plate-to-plate | 5600 | ohms |
| Total harmonic distortion       | 1.8  | %    |
| Maximum signal power output     | 55   | W    |

