

Svetlana 572B High-Mu Power Triode



The Svetlana™ 572B is a high-mu power triode intended for use in class AB, class B and class C RF and Audio amplifiers. The Svetlana 572B features a massive graphite anode for high peak overload capability and a high average plate dissipation of 160 Watts. The Svetlana 572B also features a low loss ceramic base and a bonded-ceramic plate cap thermal insulator for high power RF transmitting tube capability.

The Svetlana 572B has a superior getter system based on titanium adhered to the external surface of the graphite anode. The titanium coating covers the entire surface of the anode area extended by the inherent micro surface roughness of graphite. Further, the titanium operates over the entire anode temperature gradient thus assuring absorption of a wide spectrum of gases. Titanium has an index of gas absorption 6-10 times greater than barium.

This getter system is far more effective in comparison to cost saving barium getters silvered on the inside surface of glass envelopes commonly used in tubes manufactured with receiving tube techniques. The Svetlana 572B envelope is fabricated from hard glass intended specifically for the high-temperature operation of transmitting tubes.

The internal tube parts are supported by low loss ceramic insulators for high-temperature operation and high voltage hold-off. The internal structure is well supported and is aligned with respect to the base pins to avoid internal shorts in equipment designed for horizontal tube mounting.

The Svetlana 572B may be used as a direct drop-in replacement in any equipment designed for the 811A. Performance of the equipment will be enhanced by the upgraded performance of the Svetlana 572B.

The Svetlana 572B is manufactured in Russia at the Electronpribor Manufacturing Corporation in Ryazan. The strict manufacturing and quality control systems at Electronpribor are similar to those at the Svetlana complex in St. Petersburg where Svetlana ceramic power tubes and the majority of Svetlana glass power tubes are produced.



Svetlana 572B

General Characteristics

Electrical

Filament:	Thoriated-tungsten
Voltage (AC or DC)	6.3 V \pm 0.3V
Current	4 A
Amplification factor (average)	170
Direct interelectrode capacitances, (grounded filament):	
Grid to plate	6.0pF
Grid to filament	5.9 pF
Plate to filament	0.8 pF
Maximum frequency for full ratings	30 MHz

Mechanical

Cooling	Radiation and convection
Base	Ceramic, standard small four pin
Plate cap	Standard medium cap 14 mm dia. with ceramic thermal insulation
Plate connector	Svetlana PC-1A or equivalent
Socket	Svetlana SK4, Standard small, four contact
Operating position-Axis vertical, base down or horizontal w/ pins 1 and 4 in vertical plane	
Nominal dimensions:	
Diameter	45.7 mm (1.8 in.)
Base to plate cap	147.3 mm (5.8 in.)
Overall height	162.6 mm (6.4 in.)
Net weight	113 gm

Linear RF Power Amplifier, Class B Grounded Grid

Maximum ratings

	ICAS**
DC plate voltage	2750 V
DC plate current	275 mA
Plate dissipation	160 W
DC Plate input	600 W
DC Grid current	50 mA

Typical Operation

(frequencies to 30 MHz)	ICAS**
DC plate voltage	2400 V
DC grid voltage	-2 V
Zero-signal DC plate current *	45 mA
Single-tone DC plate current	250 mA
Driving power	50 W
Single-tone useful output power *	300 W

* Approximate value **Intermittant commercial and amateur service

High-Mu Power Triode

Maximum Ratings for Other Types of Operation

<i>RF Power Amplifier or Oscillator, Class C CW</i>		<i>ICAS**</i>
<i>DC plate voltage</i>	2000	V
<i>DC plate current</i>	175	mA
<i>Plate dissipation</i>	100	W
<i>Plate input power</i>	400	W
<i>DC grid voltage</i>	-200	V
<i>DC grid current</i>	50	mA

<i>Class C Plate-modulated RF Power Amplifier</i>		<i>ICAS**</i>
<i>DC plate voltage</i>	1650	V
<i>DC plate current</i>	150	mA
<i>Plate dissipation</i>	65	W
<i>Plate input power</i>	270	W
<i>DC grid voltage</i>	-200	V
<i>DC grid current</i>	50	mA

<i>Audio Frequency Power Amplifier or Modulator, Class B, Grid Driven</i>		<i>ICAS**</i>
<i>DC plate voltage</i>	2750	V
<i>Maximum-signal DC plate current</i>	275	mA
<i>Plate Dissipation</i>	160	W
<i>Maximum-signal plate input power</i>	600	W
<i>DC grid current</i>	50	mA

* Approximate value ** Intermittent commercial and amateur service

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Electrical Application

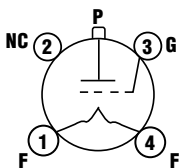
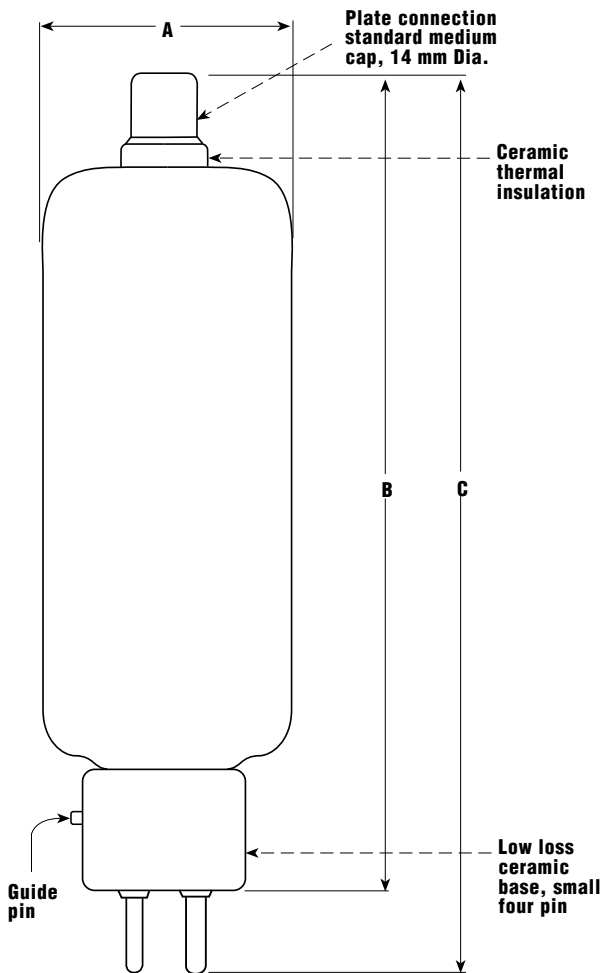
At frequencies above 30 MHz plate input power should be reduced according to the following table:

Frequency (MHz)	Plate voltage and plate input power
60	89%
80	70%
100	55%

Mechanical Application

Mounting The Svetlana 572B may be operated with its axis vertical and the base down, or horizontally with pins 1 and 4 in a vertical plane.

Svetlana 572B Outline drawing



Base pin connections, bottom view

Dimensional Data		
Dim.	Millimeters	Inches
A	45.7	1.8
B	147.3	5.8
C	162.6	6.4

Notes:

The internal structure is aligned with respect to the base pins to avoid internal shorting problems in equipment designed for horizontal tube mounting.

- 1 Filament
- 2 No Connection
- 3 Grid
- 4 Filament

