SVETLANA TECHNICAL DATA

811A

High-Mu Power Triode

The Svetlana™ 811A is a power triode for use in class AB, class B, and class C RF and Audio amplifiers. The Svetlana 811A features a low loss ceramic base and a bonded-ceramic plate cap thermal insulator for high power RF transmitting tube capability. Two temperature-initiated getters designed specifically for transmitting tubes are mounted on the plate for superior gas absorption. These getters operate only at high temperature and are far more effective in comparison to the receiving tube flash getters silvered on the inside surface of the glass envelopes of tubes made with receiving tube techniques. The 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. Against the envelope, mica supports are used to absorb shock. The internal structure is well supported and is aligned with respect to the base pins to avoid internal shorts in equipment designed for horizontal mounting of the original RCA 811A.

The Svetlana 811A is manufactured in Russia at the Electronpribor Manufacturing Corporation in Ryazan and is a direct replacement for any 811 or 811A.

Characteristics

Electrical		
Filament:	*Thoriated-tungsten*	
Voltage (AC or DC)	*6.3 ± 0.3*	*V*
Current	*4*	*A*
Amplification factor (average)	*160*	
Direct interelectrode capacitances, (grounded filament):		
Grid to filament	*5.9*	*pF*
Plate to filament	*0.7*	*pF*
Grid to plate	*5.6*	*pF*
Maximum frequency for full ratings	*30*	*MHz*

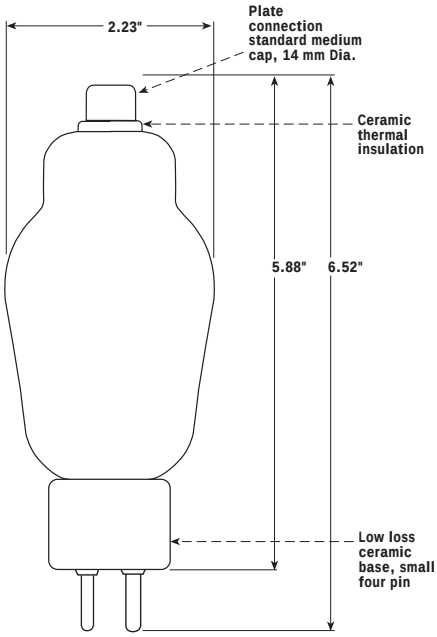
Mechanical	
Cooling	*Radiation and convection*
Base	*Ceramic standard 4 pin*
Socket	*Svetlana SK4,Standard small, four contact*
Plate cap	*Standard medium cap 14mm dia. with ceramic thermal insulation*
Plate connector	*Svetlana PC-1A or equivalent*
Operating position-	*Axis vertical, base down or horizontal w/pins 1 & 4 in vertical plane*
Nominal dimensions:	
Diameter	*56.6 mm (2.23 in.)*
Base to plate cap	*149.4 mm (5.88 in)*
Overall height	*165.6 mm (6.52 in.)*
Net weight	*82 gm*

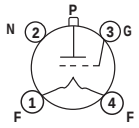
Maximum ratings	**CCS****	**ICAS*****	
DC plate voltage	*1250*	*1500*	*V*
DC plate current	*175*	*175*	*mA*
Plate dissipation	*45*	*60*	*W*
DC plate input	*165*	*235*	*W*
DC grid current	*50*	*50*	*mA*

*** Continuous commercial service*

**** Intermittent commercial and amateur service*

Svetlana Outline drawing





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

Notes:

1. The internal structure is aligned with respect to the base pins to avoid internal shorting problems in equipment designed for horizontal mounting of the original RCA 811A.
2. At maximum CCS ratings, the plate shows no color. At ICAS ratings, the plate shows barely perceptible red color.

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Typical Operation, Class C (Frequencies to 30 MHz)	CCS**	ICAS***	
DC plate voltage	*1250*	*1500*	*V*
DC grid voltage	*0*	*-4.5*	*V*
*Zero-signal DC plate current**	*25*	*16*	*mA*
Single-tone DC plate current	*130*	*157*	*mA*
Average DC grid current	*20*	*20*	*mA*
Driving power	*7*	*8*	*W*
*Single-tone useful output power **	*120*	*160*	*W*
Typical Operation, values for 2 tubes (AF Power Amplifier and Modulator)			
DC plate voltage	*1250*	*1500*	*W*
DC grid voltage	*0*	*-4.5*	*V*
*Zero-signal DC plate current**	*50*	*32*	*mA*
Peak AF grid - grid voltage	*145*	*170*	*V*
Maximum-signal DC plate current	*260*	*313*	*mA*
Maximum-signal driving power	*3.8*	*4.4*	*W*
Maximum-signal power output	*235*	*340*	*W*
Effective load resistance (plate to plate)	*12,400*	*12,400*	*ohms*

* approximate

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