

SVETLANA TECHNICAL DATA

3CX800A7 High-Mu Power Triode



The Svetlana™ 3CX800A7 is a high performance ceramic/metal high-mu power triode designed for use in communications and industrial service. The principal use is as Class AB₂, Class B and Class C RF amplifiers.

The Svetlana 3CX800A7 may also be operated as a pulse modulator operating at maximum plate voltages to 4500 volts. Maximum plate current is 8 amps at a pulse duration of 100 microseconds.

The Svetlana 3CX800A7 is a direct replacement for the model 3CX800A7 manufactured in the United States.

Characteristics

Electrical

<i>Cathode</i>	<i>Oxide-coated unipotential</i>	
<i>Heater Voltage (AC or DC)</i>	<i>13.5 ± 0.6</i>	<i>V</i>
<i>Heater Current @ 13.5V</i>	<i>1.5</i>	<i>A</i>
<i>Amplification factor (average)</i>	<i>200</i>	
<i>Maximum Frequency for Full Ratings:</i>		
<i>CCS</i>	<i>350</i>	<i>MHz</i>
<i>ICAS</i>	<i>450</i>	<i>MHz</i>
<i>Interelectrode capacitances, with grid grounded:</i>		
<i>Input</i>	<i>26.0</i>	<i>pF</i>
<i>Output</i>	<i>6.1</i>	<i>pF</i>
<i>Plate-Cathode</i>	<i>0.05</i>	<i>pF</i>

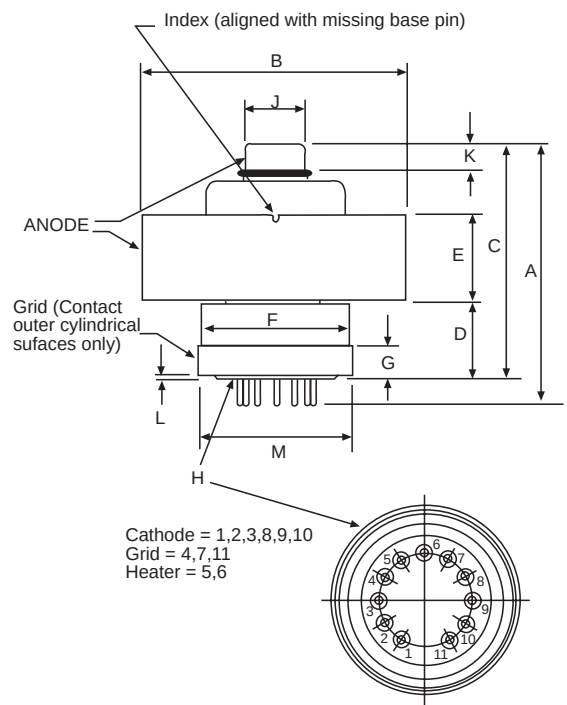
Mechanical

Cooling	Forced air
Base	large 11 pin wafer (EIA E11-81)
Socket	11 pin E.F. Johnson #124-311-100
Anode Connector	Svetlana AC-1
Operating position-	any
Maximum dimensions:	
Diameter	64 mm (2.52 in.)
Length	67 mm (2.63 in)
Maximum operating temperature	250° C
Net weight (average)	.341 kg (0.75 lb.)

Maximum ratings

DC plate voltage	2500	V
Maximum-signal DC plate current	600	mA
Plate Dissipation	800	W
Grid Dissipation	4.0	W
DC grid current	60	mA

Svetlana Outline drawing



Dimensional Data

Dim.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	59.44	66.88	2.344	2.633
B	63.119	63.881	2.485	2.515
C	54.66	59.74	2.152	2.352
D	19.964	23.013	.786	.906
E	18.034	20.066	.710	.790
F	—	35.712	—	1.406
G	4.750	—	.187	—
H	BASE: E11-81 (EIA DESIGNATION)			
J	14.199	14.554	0.559	0.573
K	6.096	—	0.240	—
M	35.992	36.398	1.417	1.433

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Svetlana
ELECTRON DEVICES

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Typical Operation, Class AB₂, Grounded Grid

	CW	SSB	
DC plate voltage	2200	2200	V
DC cathode voltage	+8.2	+8.2	V
Zero signal plate current	-	15	mA
Plate current	500	313*	mA
DC grid current	36	16	mA
Cathode input impedance	54	54	ohms
Power output	750	750	W
RF driving power	23	23**	W
Resonant load impedance	2700	2700	Ohms

*Two tone **Peak

Cooling Air at 25°C

	Sea Level		5,000 Feet	
Anode* Dissipation Watts	Air Flow CFM	Pressure Drop Inches of Water	Air Flow CFM	Pressure Drop Inches of Water
400	6	0.09	7	0.10
600	11	0.20	14	0.23
800	19	0.50	23	0.57

Note: When cooling air inlet temperature is raised to 50°C, flow rate must be increased approximately 40%.

