

SVETLANA TECHNICAL DATA

3CX6000H3

Medium-Mu Industrial Triode



The Svetlana™ 3CX6000H3 is a highly reliable ceramic/metal power triode designed for use in amplifier or oscillator service. A modern mesh filament is used, ensuring better mechanical rigidity and long lasting concentricity of the filament, contributing to longer life. Flexible leads connect to the filament terminals and a mounting flange provides the grid connection. The flange provides a convenient way to mount the tube.

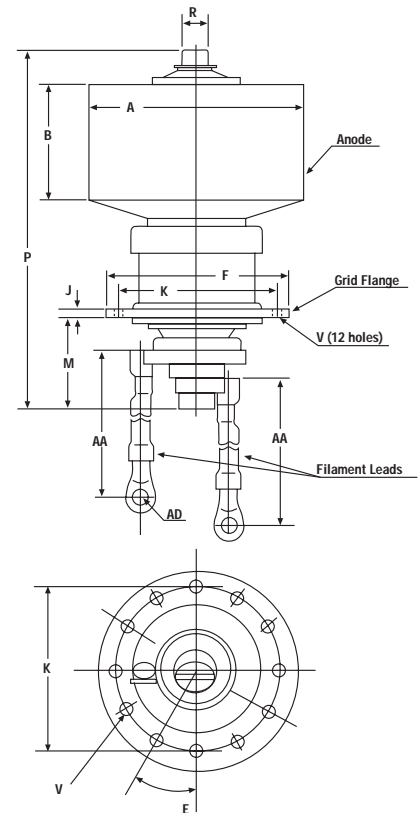
The Svetlana 3CX6000H3 is manufactured in the Svetlana Electron Devices complex in St. Petersburg, Russia.

Characteristics

Electrical		
Filament:	Thoriated-tungsten mesh	
Voltage	5.0± 0.25	V
Current @ 5.0V	72	A
Amplification factor (average)	22	
Direct interelectrode capacitances, with filament grounded*:		
Input	50.0	pF
Output	1.2	pF
Feedback	30	pF
Maximum usable frequency (CW)	90 MHz	
Mechanical		
Cooling	Forced air	
Base	Flying leads	
Mounting	Grid flange	
Maximum operating temperature	250° C	
Maximum dimensions:		
Length	26.5 cm (10.44 in)	
Diameter	15.2 cm (5.98 in.)	
Net weight	2.9 kg (6.5 lb.)	
RF Power Amplifier or Oscillator, Class C, CW		
Maximum Ratings:		
DC plate voltage	8,000	V
Plate dissipation	6000	W
Grid dissipation	400	W
DC grid voltage	-550	V
DC grid current	0.45	A

*Capacitance values are for a cold tube measured in a shielded fixture

Svetlana Outline drawing



Dimensional Data

	Inches			Millimeters		
	Min.	Max.	Ref.	Min.	Max.	Ref.
A	5.84	5.95	—	148.5	151.5	—
B	3.30	3.39	—	84	86	—
E	—	—	30°	—	—	30°
F	5.03	5.09	—	127.8	129.2	—
J	0.11	0.16	—	3	4	—
K	—	—	4.41	—	—	112
M	2.38	2.50	—	60.5	63.5	—
P	—	10.44	—	—	265	—
R	0.68	0.71	—	17.3	18	—
V	—	—	0.26	—	—	6.5
AA	8.18	8.67	—	208	220	—
AD	—	—	0.39	—	—	10



Svetlana
ELECTRON DEVICES

Headquarters:

8200 South Memorial Parkway
Huntsville, AL 35802
USA
Phone: 256 882 1344
Fax: 256 880 8077

Marketing & Engineering:

3000 Alpine Road
Portola Valley, CA 94028
USA
Phone: 650 233 0429
Fax: 650 233 0439

www.svetlana.com

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Typical Operation, Grounded Cathode

(Frequency MHz)	60	
DC plate voltage	8,000	V
DC plate current	1.56	A
DC grid voltage*	-400	V
DC grid current	290	mA
Peak positive RF grid voltage*	765	V
Plate input power	12,480	W
Plate dissipation	3480	W
Plate output power	9000	W
Efficiency	72	%

*Approximate values

Cooling

Base to Anode ¹				
Anode Dissipation Watts	Sea Level		10,000 Feet	
	Air Flow CFM	Pressure Drop Inches of Water	Air Flow CFM	Pressure Drop Inches of Water
2000	105	0.2	153	0.29
3000	170	0.3	248	0.44
4000	195	0.6	285	0.88
5000	325	1.3	475	1.90
6000	445	2.2	650	3.21

1 The cooling requirements above are based on 50°C ambient air and maintaining the envelope temperature below 200°C.

2 Anode to base air flow is acceptable provided a separate air stream of 5 CFM is directed onto the filament stem at the base of the tube.

