



ELECTRONIC TUBE REFERENCE

3CX6000A7

Power - Triode (over 1000V 100W) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

High-performance ceramic/metal power triode for zero-bias RF amplifier and modulator service. Its mesh filament improves rigidity and VHF performance, while 6 kW plate dissipation supports useful RF output around 8-12 kW.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	7 V / 78 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Triode	
AMPLIFICATION FACTOR	200
MAXIMUM PLATE VOLTAGE	7000 V
MAXIMUM PLATE DISSIPATION	6000 W
MAXIMUM GRID DISSIPATION	225 W
MAXIMUM CATHODE CURRENT	3.5 A
Promoted maximum ratings and characteristics from source; additional published values retained as parameters.	

The Svetlana™ 3CX6000A7 / YU148 is a high-performance ceramic/ metal power triode designed for use in zero-bias, RF amplifier service, and modulator service. A modern mesh filament is used, replacing the old-fashioned hairpin construction. The improved mesh filament design ensures better mechanical rigidity and long lasting concentricity of the filament, providing enhanced linearity, less noise, reduced warm-up variation and longer life. The low-inductance, mesh- filament basket also forms a natural extension of the cylindrical stem geometry into the active area, giving superior VHF performance. The Svetlana

3CX6000A7 / YU148 is manufactured in the Svetlana Electron SM Devices complex in St. Petersburg, Russia. Svetlana has achieved the improved performance described above with exact replacement compatibility with the 3CX6000A7 / YU148 manufactured in the Svetlana United States. ELECTRON DEVICES Svetlana 3CX6000A7 / YU148

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

199X Svetlana

Published test conditions and operating points. Values on this page are preserved as reported by this source.

199X SVETLANA

Section 1 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Current @	7 V	modulator service. A modern mesh filament
Input	42 pF	modulator service. A modern mesh filament
Output	24.5 pF	modulator service. A modern mesh filament
Feedback	0.28 pF	modulator service. A modern mesh filament

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC Plate voltage	7000 V	Maximum Ratings
DC Plate current	3.5 A	Maximum Ratings
Plate dissipation	6000 W	Maximum Ratings
Grid dissipation	225 W	Maximum Ratings
(Frequencies to	110 MHz	Typical operation
Plate voltage 4800 5700	6000 V	Typical operation
Grid voltage 0 0	-100 V	Typical operation
Plate current 2.3 2.5	2.56 A	Typical operation
Grid current* 0.32 0.33	480 mA	Typical operation
Peak RF cathode voltage* 215 224	340 V	Typical operation
Calculated driving power* 500 600	800 W	Typical operation
Plate dissipation 3200 4100	3900 W	Typical operation
Useful output power 8000 10000	12000 W	Typical operation
below	250 °C	Typical operation

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
maintain these temperatures below	225 °C	Typical operation
with an inlet-air temperature of	50 °C	Typical operation
tabulated. At frequencies above	40 MHz	Typical operation

TUBE TINKER

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