



# 6AX5-GT

## FULL-WAVE VACUUM RECTIFIER

6AX5-GT

### GENERAL DATA

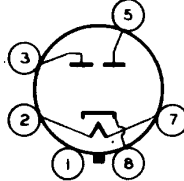
#### Electrical:

Heater, for Unipotential Cathode:  
 Voltage . . . . . 6.3 . . . . . ac volts  
 Current . . . . . 1.2 . . . . . amp

#### Mechanical:

Mounting Position . . . . . Any  
 Maximum Overall Length . . . . . 3-5/16"  
 Maximum Seated Length . . . . . 2-3/4"  
 Maximum Diameter . . . . . 1-9/32"  
 Bulb . . . . . T-9  
 Base . . . . . Short-Intermediate-Shell Octal 6-Pin  
 Basing Designation for BOTTOM VIEW . . . . . G-6S

Pin 1 - No Connection  
 Pin 2 - Heater  
 Pin 3 - Plate of Diode No. 2  
 Pin 5 - Plate of Diode No. 1  
 Pin 7 - Heater  
 Pin 8 - Cathode



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#### Maximum Ratings, Design-Center Values:

PEAK INVERSE PLATE VOLTAGE . . . . . 1250 max. volts  
 PEAK PLATE CURRENT PER PLATE . . . . . 375 max. ma  
 HOT-SWITCHING TRANSIENT PLATE CURRENT  
 For duration of 0.2 second maximum . . . . . 2.6 max. amp  
 AC PLATE SUPPLY VOLTAGE (RMS) PER PLATE. . . . . See Rating Chart  
 DC OUTPUT CURRENT PER PLATE. . . . . See Rating Chart  
 PEAK HEATER-CATHODE VOLTAGE:  
 Heater negative with respect to cathode. . . . . 450 max. volts  
 Heater positive with respect to cathode. . . . . 450 max. volts

#### Typical Operation with Capacitor-Input Filter:

AC Plate-to-Plate Supply  
 Voltage (RMS) . . . . . 700 900 volts  
 Filter-Input Capacitor<sup>▲</sup> . . . . . 10 10 μf  
 Effective Plate-Supply Impedance  
 Per Plate . . . . . 50 105 ohms  
 DC Output Voltage at Input to  
 Filter (Approx.):  
 At half-load cur. of { 62.5 ma. 395 - volts  
                                   40 ma. - 540 volts  
 At full-load cur. of { 125 ma. 350 - volts  
                                   80 ma. - 490 volts  
 Voltage Regulation (Approx.):  
 Half-load to full-load current . . . . . 45 50 volts

<sup>▲</sup> Higher values of capacitance than indicated may be used but the effective plate supply impedance may have to be increased to prevent exceeding the maximum rating for hot-switching transient plate current.

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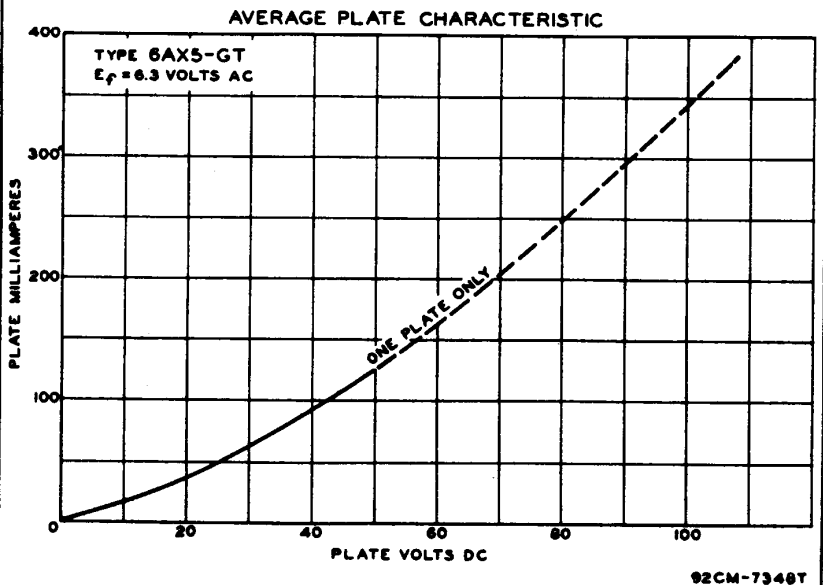


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**FULL-WAVE VACUUM RECTIFIER**

**Typical Operation with Choke-Input Filter:**

AC Plate-to-Plate Supply			
Voltage (RMS) . . . . .	700	900	volts
Filter-Input Choke . . . . .	10	10	henries
DC Output Voltage at Input to			
Filter (Approx.):			
At half-load cur. of	{ 75 ma. 270	-	volts
	{ 62.5 ma. -	365	volts
At full-load cur. of	{ 150 ma. 250	-	volts
	{ 125 ma. -	350	volts
Voltage Regulation (Approx.):			
Half-load to full-load Current . .	20	15	volts



RATING CHART and OPERATION CHARACTERISTICS

The *Rating Chart* presents graphically the relationships between maximum ac voltage input and maximum dc output current derived from the fundamental ratings for conditions of capacitor-input and choke-input filters. This graphical presentation gives the equipment designer considerable latitude in choice of operating conditions.

The *Operation Characteristics for Full-Wave Circuit with Capacitor-Input Filter* show not only the typical operating curves for such a circuit, but also show by means of boundary lines "ADK" the limiting current and voltage relationships presented on the Rating Chart.

FEB. 1, 1950

TUBE DEPARTMENT

TENTATIVE DATA 1

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## FULL-WAVE VACUUM RECTIFIER

The *Operation Characteristics for Full-Wave Circuit with Choke-Input Filter* show the typical operating curves for such a circuit. They not only show by means of boundary line "CEK" the limiting current and voltage relationships presented on the *Rating Chart*, but also give information as to the effect on regulation of various sizes of chokes. The solid-line curves show the dc voltage outputs which would be obtained if the filter chokes had infinite inductance. The long-dash lines radiating from the zero position are boundary lines for various sizes of chokes as indicated. The intersection of one of these lines with a solid-line curve indicates the point on the curve at which the choke no longer behaves as though it has infinite inductance. To the left of the choke boundary line, the regulation curves depart from the solid-line curves as shown by the representative short-dash regulation curves.

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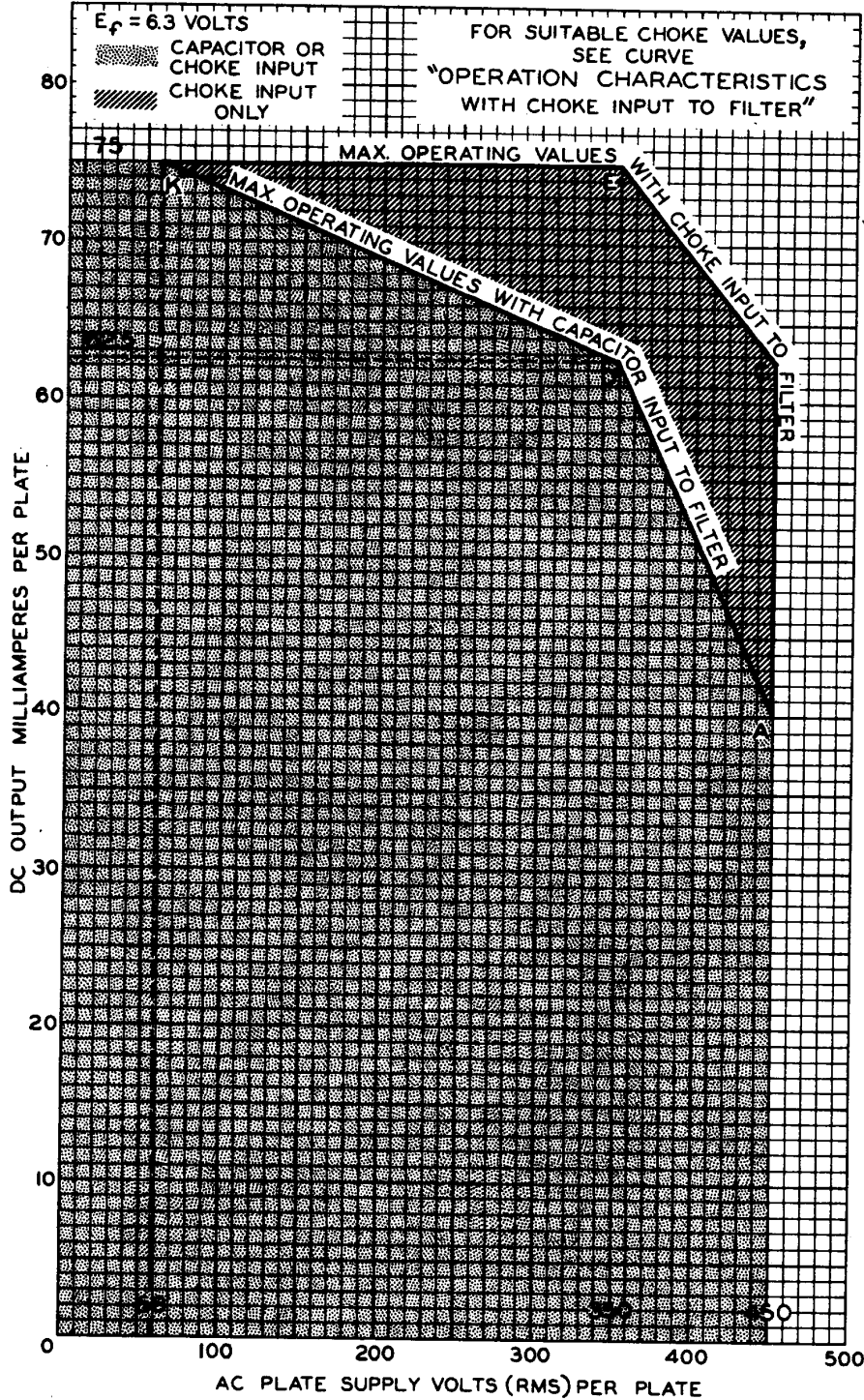
TENTATIVE DATA 2

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### RATING CHART



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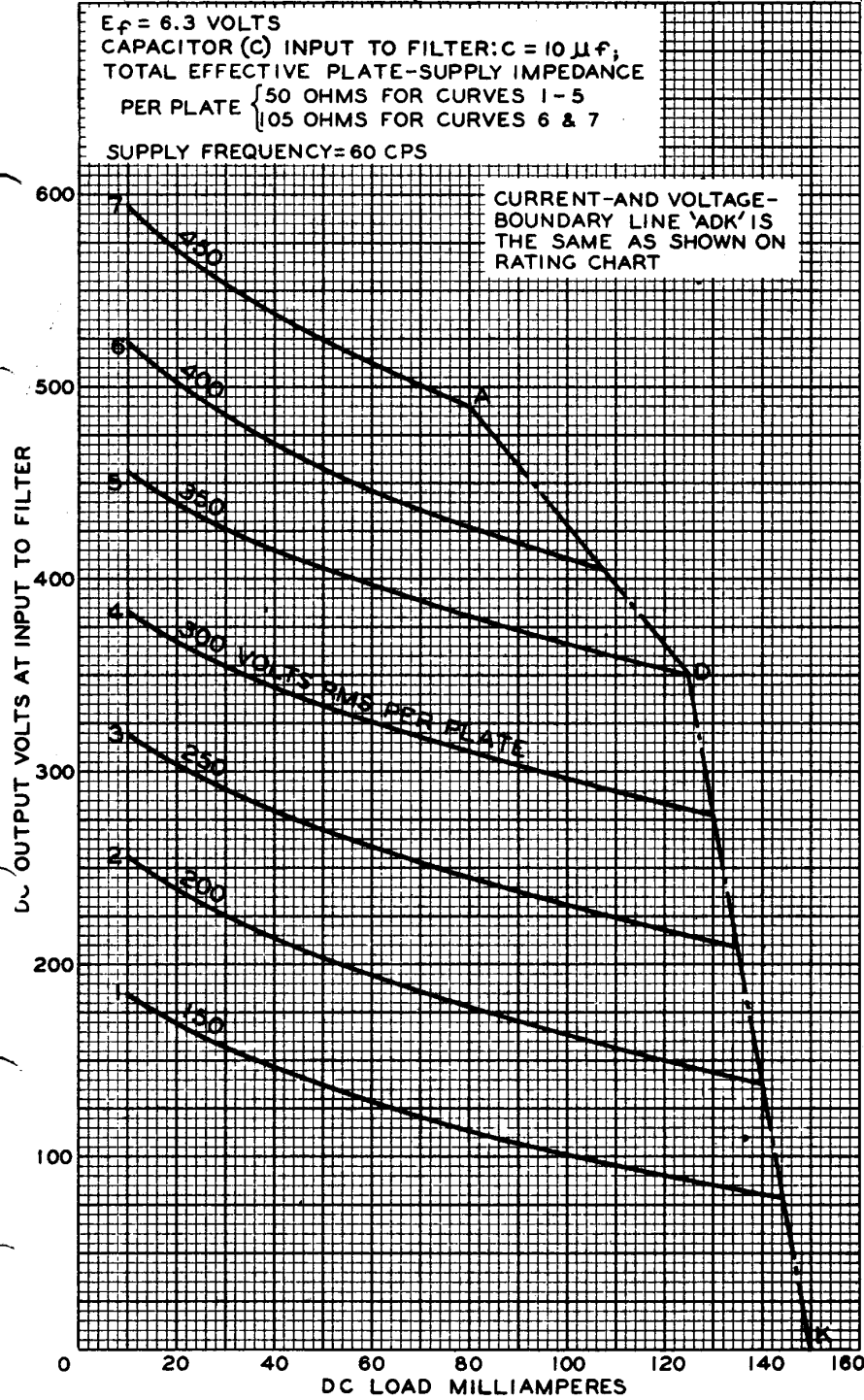
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## OPERATION CHARACTERISTICS FULL-WAVE CIRCUIT, CAPACITOR INPUT TO FILTER



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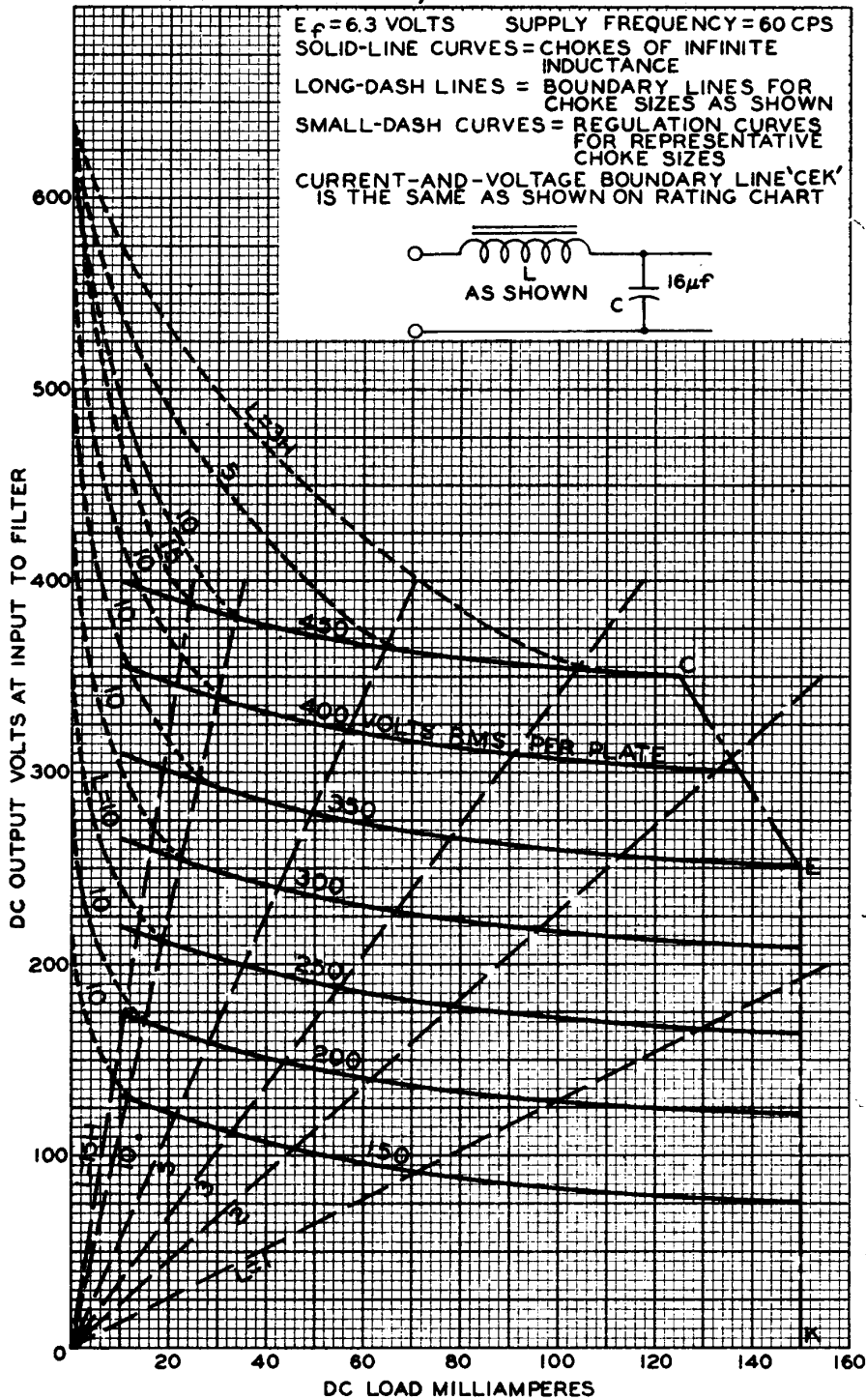
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### OPERATION CHARACTERISTICS FULL-WAVE CIRCUIT, CHOKE INPUT TO FILTER



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