



6AX5-GT

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FULL-WAVE VACUUM RECTIFIER

GENERAL DATA

Electrical:

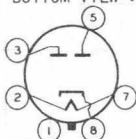
Heater, for Unipotential Cathode:

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

FULL-WAVE RECTIFIER

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[▲] 10 10 μ f
 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

[▲] 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.

FEB. 1, 1950

TUBE DEPARTMENT

TENTATIVE DATA 1

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY



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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

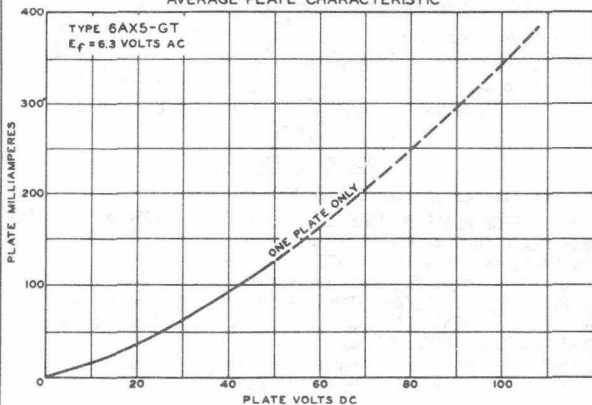
Filter (Approx.):

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

AVERAGE PLATE CHARACTERISTIC



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.



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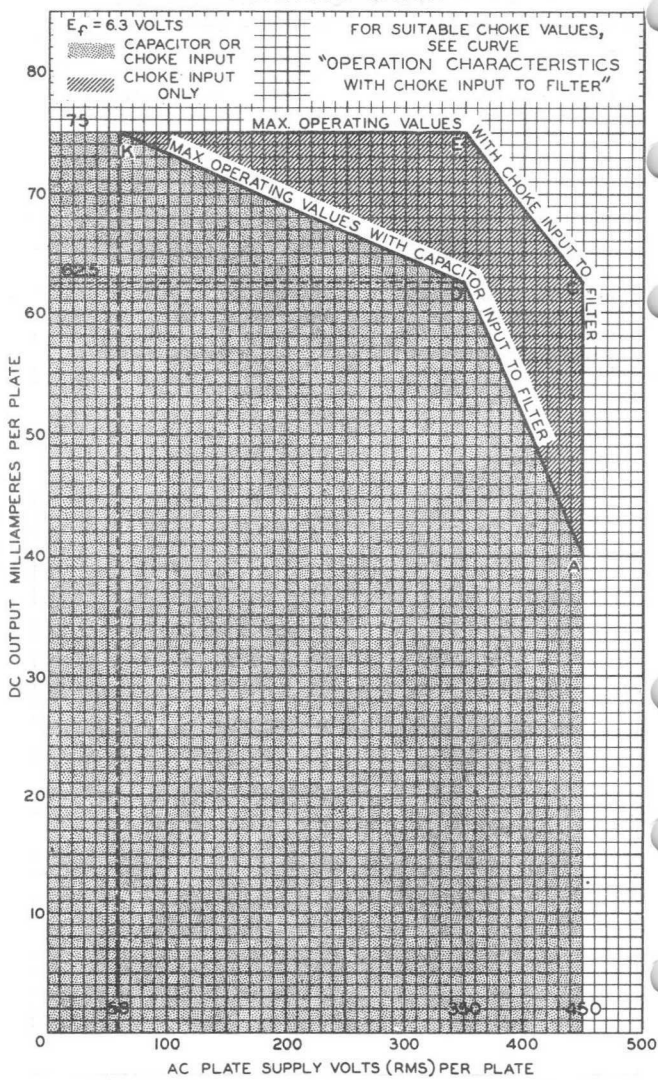
FULL-WAVE VACUUM RECTIFIER

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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6AX5-GT RATING CHART





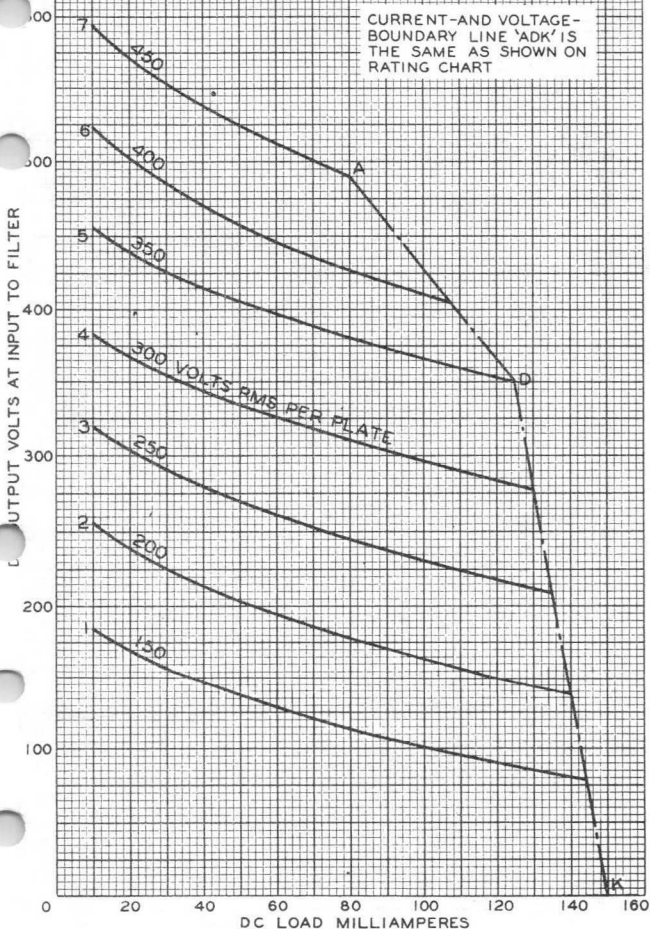
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OPERATION CHARACTERISTICS FULL-WAVE CIRCUIT, CAPACITOR INPUT TO FILTER

$E_f = 6.3$ VOLTS
CAPACITOR (C) INPUT TO FILTER: $C = 10 \mu f$;
TOTAL EFFECTIVE PLATE-SUPPLY IMPEDANCE
PER PLATE $\begin{cases} 50 \text{ OHMS FOR CURVES 1-5} \\ 105 \text{ OHMS FOR CURVES 6 \& 7} \end{cases}$
SUPPLY FREQUENCY = 60 CPS

CURRENT-AND VOLTAGE-
BOUNDARY LINE 'ADK' IS
THE SAME AS SHOWN ON
RATING CHART



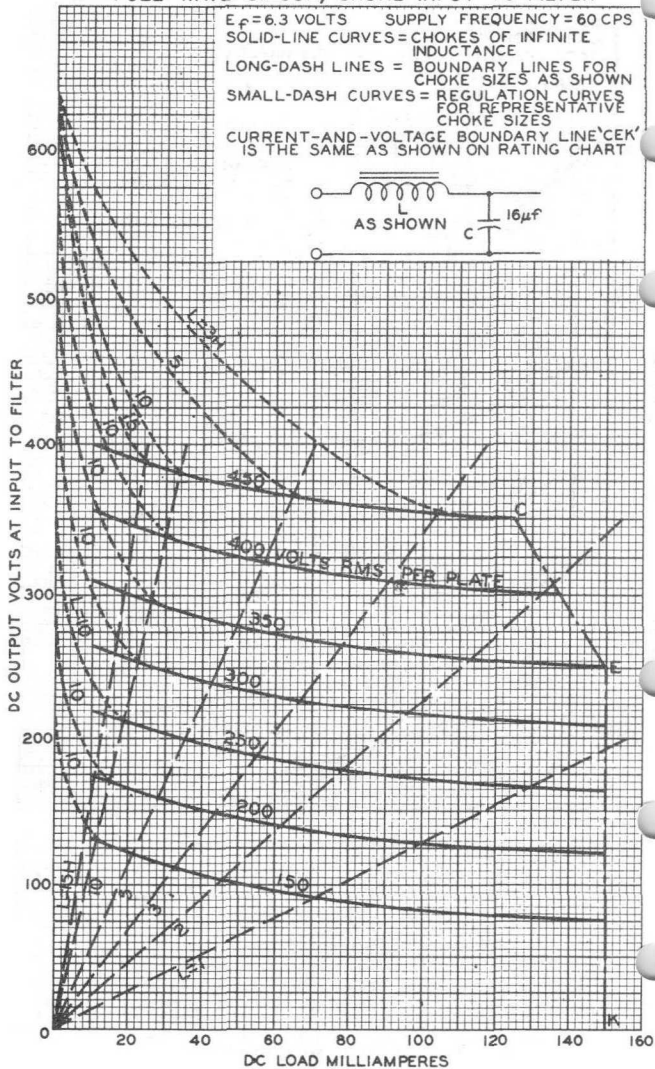
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OPERATION CHARACTERISTICS

FULL-WAVE CIRCUIT, CHOKE INPUT TO FILTER



OCT. 11, 1949

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