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 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 |
| 40 ma. | - | 540 volts |
At full-load cur. of
| 125 ma. | 350 |
| 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.

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TENTATIVE DATA 1
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

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.
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 in-
ductance. 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.
6AX5-GT
RATING CHART

For suitable choke values, see curve "operation characteristics with choke input to filter."

E_f = 6.3 Volts
Capacitor or choke input
Choke input only

Max operating values with capacitor input to filter.

DC output milliamperes per plate

AC plate supply volts (RMS) per plate

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6AX5-GT

OPERATION CHARACTERISTICS
FULL-WAVE CIRCUIT, CAPACITOR INPUT TO FILTER

E_f = 6.3 VOLTS
CAPACITOR (C) INPUT TO FILTER: C = 10 μF;
TOTAL EFFECTIVE PLATE-SUPPLY IMPEDANCE
PER PLATE [50 OHMS FOR CURVES 1-5
105 OHMS FOR CURVES 6 & 7
SUPPLY FREQUENCY = 60 CPS

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

DC OUTPUT VOLTS AT INPUT TO FILTER

DC LOAD MILLIAMPERES

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