MECHANICAL DATA

Bulb .............................................. T-9
Base† .............................................. B6-81 or B7-7 Intermediate Shell Octal
or B6-84 or B7-59 Short Intermediate Shell Octal
Outline ........................................... 9-11 or 9-41
Basing ............................................. 7S
Cathode ........................................... Coated Unipotential
Mounting Position .............................. Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

Heater Voltage ................................. 6.3 Volts
Heater Current ................................ 1.2 Amperes
Heater-Cathode Voltage
(Design Center Values)
Heater Negative with Respect to Cathode
Total DC and Peak ............................ 200 Volts Max.
Heater Positive with Respect to Cathode
DC ........................................ 100 Volts Max.
Total DC and Peak ............................ 200 Volts Max.

RATINGS (Design Center Values)

Class A1 Amplifier

Plate Voltage .................................. 200 Volts Max.
Grid No. 2 Voltage ........................... 125 Volts Max.
Plate Dissipation ............................. 10 Watts Max.
Grid No. 2 Dissipation ....................... 1.25 Watts Max.
Grid No. 1 Circuit Resistance
Fixed Bias ..................................... 0.1 Megohm Max.
Cathode Bias .................................. 0.5 Megohm Max.

CHARACTERISTICS AND TYPICAL OPERATION (Single Tube)

Class A1 Amplifier

Plate Voltage ................................ 110 200 Volts
Grid No. 2 Voltage ......................... 110 125 Volts
Grid No. 1 Voltage ......................... -7.5 Volts
Cathode Bias Resistor ..................... 180 Ohms
Peak AF Grid No. 1 Voltage ............. 7.5 8.5 Volts
Zero-Signal Plate Current ............... 49 46 Ma
Maximum-Signal Plate Current ......... 50 47 Ma
Zero-Signal Grid No. 2 Current .......... 4.0 2.2 Ma
Maximum-Signal Grid No. 2 Current .... 10 8.5 Ma
Plate Resistance (approx.) ............. 13,000 28,000 Ohms
Transconductance ......................... 8,000 8,000 umhos
Load Resistance .............................. 2,000 4,000 Ohms
Maximum-Signal Power Output .......... 2.1 3.8 Watts
Total Harmonic Distortion (approx.) ...... 10 10 Percent

NOTE:

1. Pin No. 1 omitted on bases B6-81 and B6-84.
AVERAGE PLATE CHARACTERISTICS

$E_f = \text{RATED VALUE}$

$E_{C2} = 110 \text{ VOLTS}$

CURRENT ($I_{C1}$) IN MA

CURRENT ($I_b$) IN MA

PLATE VOLTAGE

$E_{C1} = 0 \text{ VOLTS}$

$E_{C1} = 6.0 \text{ VOLTS}$

$E_{C1} = 10.0 \text{ VOLTS}$

$E_{C1} = 12.0 \text{ VOLTS}$
AVERAGE PLATE CHARACTERISTICS

Eff = RATED VALUE
Ec2 = 110 VOLTS

Eg1 = 0 VOLTS

CURRENT (Ib) IN MA

CURRENT (Ic2) IN MA

PLATE VOLTAGE

40 30 20 10 0

0 50 100 150 200

Page 3
AVERAGE PLATE CHARACTERISTICS

$E_f = $ RATED VALUE
$E_{CI} = 0$ VOLTS

$E_{C2} = 150$ VOLTS

CURRENT IN MA

PLATE VOLTAGE
AVERAGE PLATE CHARACTERISTICS
(TRIODE CONNECTED)

$E_f = \text{RATED VALUE}$

GRID NO. 2 TIED TO PLATE

CURRENTS IN MA

$E_C = 0 \text{ VOLTS}$

$E_C = 15 \text{ VOLTS}$

PLATE VOLTAGE
AVERAGE TRANSFER CHARACTERISTICS

\[ E_f = \text{RATED VALUE} \]
\[ E_b = 200 \text{ VOLTS} \]
AVERAGE TRANSFER CHARACTERISTICS

$E_f = \text{RATED VALUE}$
$E_b = 200 \text{ VOLTS}$

GRID NO.1 VOLTAGE

CURRENT IN MA

-25 -20 -15 -10 -5 0

10 8 6 4 2
AVERAGE TRANSFER CHARACTERISTICS

(TRIODE CONNECTED)

$E_f =$ RATED VALUE
GRID NO. 2 TIED TO PLATE

GRID VOLTAGE

CURRENT IN MA