MECHANICAL DATA

Bulb ........................................ T-12
Base ........................................ B6-73, Short Jumbo Shell Octal, G-Pin
Top Cap ....................................... C1-1, Small
Outline ....................................... See Drawing
Basing ....................................... 8FU
Cathode ....................................... Coated Unipotential
Mounting Position ......................... Any

ELECTRICAL DATA

HEATER CHARACTERISTICS
Heater Voltage ................................ 6.3 Volts
Heater Current ................................ 600 Ma
Peak Heater-Cathode Voltage
Heater Negative with Respect to Cathode ........ 180 Volts Max.
Heater Positive with Respect to Cathode .......... 180 Volts Max.

DIRECT INTERELECTRODE CAPACITANCES
Grid to Plate .................................. 1.0 \mu F
Input ......................................... 3.8 \mu F
Output ........................................ 0.04 \mu F Max.

RATINGS (Design Center Values)
Voltage Control Service
DC Plate Voltage ................................ 27000 Volts Max.
Unregulated DC Supply Voltage ................. 55000 Volts Max.
Grid Voltage
DC ............................................. -125 Volts Max.
Peak ........................................... -550 Volts Max.
DC Plate Current ................................ 1.5 Ma Max.
Plate Dissipation ................................ 25 Watts Max.
Grid Circuit Resistance
With Unregulated Supply Having an
Equivalent Resistance of at Least
8 Megohms ..................................... 4 Megohms Max.
With Unregulated Supply Having an
Equivalent Resistance Less Than
8 Megohms ..................................... See Fig. 1

CHARACTERISTICS
Amplification Factor .......................... 1650

TYPICAL OPERATION
Shunt Voltage Regulator
Unregulated Supply
DC Voltage .................................... 29800
Equivalent Resistance ........................ 8
Voltage Divider Values
R1 (5 watts) .................................. 120
R2 (2 watts) .................................. 1
R3 (1/2 watt) .................................. 2
Reference Voltage Supply
DC Value ..................................... 500
Equivalent Resistance ........................ 1000

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RADIO TUBE DIVISION
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TYPICAL OPERATION (Continued)

Effective Grid-Plate Transconductance ........................................ 138  
116 μmhos

DC Plate Current
For Load Current of 0 Ma .................................................. 1055  
1035 μA
For Load Current of 1 Ma .................................................. 100  
100 μA

Regulated DC Output Voltage
For Load Current of 0 Ma .................................................. 20000  
27000 Volts
For Load Current of 1 Ma .................................................. 19700  
26500 Volts

WARNING:
X-ray radiation shielding may be necessary to protect against possible danger of personal injury from prolonged exposure at close range if this tube is operated at higher than the manufacturer's Maximum Rated Anode voltage or 16,000 volts, whichever is less.

SHUNT REGULATOR CIRCUIT
AVERAGE TRANSFER CHARACTERISTICS

Grid Voltage vs. Current in Milliamperes

-20 -15 -10 -5 0

-2.5 -2.0 -1.5 -1.0 -0.5 0

$E_f = \text{RATED VALUE}$

$E_b = 30000 \text{ VOLTS}$

Current in Milliamperes

1.0 1.5 2.0 2.5

5000 10000 15000 20000 25000
FIGURE 1
Maximum Grid Circuit Resistance vs.
Equivalent Resistance of Unregulated
DC Voltage Supply

[Graph showing a linear relationship between maximum grid circuit resistance in megohms and equivalent resistance of unregulated DC voltage supply in megohms.]