MECHANICAL DATA

Bulb ..................................... T-6½
Base .................................... E9-1, Small Button 9-Pin
Outline .................................. 6-2
Basing ................................... 9ED
Cathode .................................. Unipotential
Mounting Position ...................... Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

Heater Voltage (A.C. or D.C.) .................. 6.3 Volts
Heater Current ................................ 450 Ma
Heater-Cathode Voltage (Design Center Values)
Heater Negative with Respect to Cathode
Total D.C. and Peak ......................... 200 Volts Max.
Heater Positive with Respect to Cathode
D.C. ......................................... 100 Volts Max.
Total D.C. and Peak ......................... 200 Volts Max.

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

Triode Section
Grid to Plate ................................ 1.7 μf
Grid to (h & i.s. + k) .......................... 2.0 μf
Plate to (h & i.s. + k) ......................... 1.7 μf

Pentode Section
Grid No. 1 to Plate ......................... 0.02 μf Max.
Grid No. 1 to (h & i.s. & g3 + g2 + k) .... 6.5 μf
Plate to (h & i.s. & g3 + g2 + k) .......... 2.2 μf
Triode Grid to Pentode Plate .............. 0.027 μf Max.
Pentode Grid No. 1 to Triode Plate ....... 0.020 μf Max.
Pentode Plate to Triode Plate .......... 0.045 μf Max.

RATINGS (Design Center Values)

Triode | Pentode
---|---
Plate Voltage ......................... 300 | 300 Volts Max.
Grid No. 2 Supply Voltage ............. 300 Volts Max.
Grid No. 2 Voltage .................. See Rating Chart
Grid No. 1 Voltage: Positive Bias Value 0 | 0 Volts
Plate Dissipation ..................... 2.5 | 2.0 Watts Max.
Grid No. 2 Input: For Grid No. 2 Voltages up to 150 Volts 0.5 Watt Max.
For Grid No. 2 Voltages Between 150 and 300 Volts See Rating Chart

Maximum Circuit Values
Cathode Bias ....................... 1.0 | 1.0 Megohm Max.
Fixed Bias .......................... 0.5 | 0.25 Megohm Max.

CHARACTERISTICS AND TYPICAL OPERATION

Class A1 Amplifier
Triode | Pentode
---|---
Plate Supply Voltage .................. 200 | 200 Volts
Grid No. 2 Supply Voltage .......... 150 Volts
Grid No. 1 Voltage ................... 180 Ohms
Cathode Bias Resistor .............. 19
Amplification Factor .................. 5750 | 300,000 Ohms
Plate Resistance (approx.) ............ 3300 | 6000 μmhos
Transconductance ..................... 19 | Volts
Grid No. 1 Voltage (approx.) for Plate Current of 10 μa 19 | Volts
Grid No. 1 Voltage (approx.) for Transconductance of 100 μmhos 13 | -12.5 Volts
Plate Current ......................... 9.5 Ma
Grid No. 2 Current .................. 3 Ma

SYLVANIA ELECTRIC PRODUCTS INC.
RADIO TUBE DIVISION
EMPIRK, PA.
Prepared and Released By The
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NOTES:

1. If either unit is operated at maximum rated conditions, Grid No. 1 Circuit Resistances for both units should not exceed the stated values.

2. The heater-cathode voltage should not exceed the value of the operating cathode bias because the voltage between the heater and cathode is also applied between the cathode and Grid No. 3. The net result is to make Grid No. 3 negative with respect to cathode with possible change in tube characteristics.
AVERAGE PLATE CHARACTERISTICS
TRIODE SECTION

Current in Milliamperes

Plate Voltage

$E_f = \text{RATED VALUE}$
AVERAGE TRANSFER CHARACTERISTICS
TRIODE SECTION

GRID VOLTAGE

TRANSconductance (gm) in MICROMOHOS

PLATE RESISTANCE (rp) in MEGOHMS

AMPLIFICATION FACTOR (µ)

E = RATED VALUE

E = 300 VOLTS

200

100
AVERAGE PLATE CHARACTERISTICS
PENTODE SECTION

$E_f = \text{RATED VALUE}$
$E_{C2} = 150 \text{ VOLTS}$
$E_{C3} = 0 \text{ VOLTS}$

CURRENT IN MILLIAMPERES

PLATE VOLTAGE
AVerAGE TRANSFER CHARACTERISTICS
TRIODE SECTION

$E_f =$ RATED VALUE
$E_b =$ 200 VOLTS
$E_c3 =$ 0 VOLTS

GRID NO.1 VOLTAGE

PLATE CURRENT IN MA

ECC2 VOLTS = 250 THRU 35000 OHMS
AVERAGE TRANSFER CHARACTERISTICS
PENTODE SECTION

$E_f = $ RATED VALUE
$E_b = 200$ VOLTS
$E_c3 = 0$ VOLTS

GRID NO. 1 VOLTAGE

GRID NO. 2 CURRENT IN MA

ECC2 VOLTS: 250 THRU 35000 OHMS

ECC2 VOLTS: 150, 125, 100, 75
AVERAGE TRANSFER CHARACTERISTICS
PENTODE SECTION

- $E_f = \text{RATED VALUE}$
- $E_b = 200 \text{ VOLTS}$
- $E_c = 0 \text{ VOLTS}$

GRID NO.1 VOLTAGE

TRANSCONDUCTANCE - MICROMOS
GRID NO. 2 RATING CHART

SCREEN GRID INPUT EXPRESSED AS PER CENT OF MAX. SCREEN GRID INPUT RATING

SCREEN GRID VOLTAGE EXPRESSED AS PER CENT OF MAX. SCREEN GRID SUPPLY VOLTAGE RATING