MECHANICAL DATA

Bulb T-6½
Base E9-1
Outline 6-3
Cathode Coated Unipotential
Mounting Position Any
Basing 9RF

Pin Connection

- Pin 1 - Cathode
- Pin 2 - Grid 1
- Pin 3 - No connection
- Pin 4 - Heater
- Pin 5 - Heater
- Pin 6 - Grid 3
- Pin 7 - Plate
- Pin 8 - No connection
- Pin 9 - Grid 2

HEATER CHARACTERISTICS AND RATINGS

Average Characteristics

Heater Operation Series

Heater Voltage 8.7 Volts
Heater Current 450 Ma
Heater Warm-up Time 11 Seconds

Ratings (Design Maximum Values)

Min-Max

Heater Current 420-480 Ma
Maximum Heater Cathode Voltage
- 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.

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

- Grid 1 to plate: g1 to p 0.20 pf
- Grid 3 to plate: g3 to p 2.2 pf
- Grid 1 to all: g1 to h+k+g2+g3+p 16.5 pf
- Grid 2 to all: g2 to h+k+g1+g3+p 9.5 pf
- Grid 3 to all: g3 to h+k+g1+g2+p 7.5 pf
- Plate to all: p to h+k+g1+g2+g3 3.0 pf
- Grid 1 to grid 2: g1 to g2 4.7 pf

RATINGS (Design Maximum Values)

Plate Voltage 400 Volts
Grid #2 Supply Voltage 330 Volts

The Sylvania Type 9KC6 is a T6½ frame grid pentode intended for use as a Chroma Bandpass Amplifier, Color Demodulator, or Video Amplifier. It features a dual grid control characteristic.

SYLVANIA ELECTRIC PRODUCTS INC.
Electronic Components Group
ELECTRONIC TUBE DIVISION
EMPEROR, PA.

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Grid #2 Voltage
Positive Grid #3 Voltage
Negative Grid #3 Voltage
Positive Grid #1 Voltage
Plate Dissipation
Grid #2 Dissipation
Grid #1 Circuit Resistance Self Bias
Fixed Bias
Grid #3 Circuit Resistance

See Rating Chart
0 Volt
100 Volts
0 Volt
7.0 Watts
1.5 Watts
.5 Megohm
.25 Megohm
1.0 Megohm

Control grid to cathode spacing of this type is of such low order of magnitude as to preclude the use of voltage between these elements of more than 50 volts dc or peak ac in commercial tube checkers and shorts indicating devices, particularly where mechanical excitation of the tube is employed.

CHARACTERISTICS AND TYPICAL OPERATION

Plate Voltage
Grid #2 Voltage
Grid #1 Voltage
Grid #3 Voltage (referred to negative end of Rk)
Cathode Resistor
Plate Current
Grid #2 Current
Transconductance (grid #1 to plate)
Transconductance (grid #3 to plate)
Plate Resistance (approx.)
Grid #1 Voltage for Ib=100 μA (Rk=0)

250 Volts
150 Volts
0 Volt
0 -25 Volts
56 Ohms
18 ma
9 ma
24,000 umhos
500 umhos
55,000 ohms
-4.1 Volts

INSTANTANEOUS PLATE KNEE CHARACTERISTICS

E_b = 50 Volts, E_c2 = 100 Volts, and E_c1 = 0 Volt
I_b = 25 Ma, and I_c2 = 25 Ma

NOTES:

1. For series operation of heaters, equipment should be designed that at normal supply voltage bogey tubes will operate at this value of heater current.

2. Heater warm-up time is defined as the time required for the voltage across the heater to reach 80% of the rated heater voltage after applying four (4) times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to three (3) times the rated heater voltage divided by the rated heater current.

3. Heater voltage supply variations shall be restricted to maintain heater current within the specified values.

4. Applied for short interval (2 Sec. Max.) so as not to damage tube.
RATING CHART

GRID NO. 2 DISSIPATION EXPRESSED AS PERCENT OF MAX GRID NO. 2 DISSIPATION RATING

GRID NO. 2 VOLTAGE EXPRESSED AS PERCENT OF MAX GRID NO. 2 SUPPLY VOLTAGE RATING