



ADVANCE DATA

MECHANICAL DATA

Bulb	T-5 $\frac{1}{2}$
Base	E7-1, Miniature Button 7-Pin
Outline	5-2
Basing	7GM
Cathode	Coated Unipotential
Mounting Position	Any

ELECTRICAL DATA

HEATER CHARACTERISTICS AND RATINGS

Average Characteristics	2HK5	3HK5	4HK5	6HK5
Heater Operation	Series	Series	Series	Parallel
Heater Voltage	2.3	2.9	4.0	6.3 ¹ Volts
Heater Current	600 ¹	450 ¹	300 ¹	190 Ma
Heater Warmup Time ²	11	11	-	- Sec.

Ratings (Design Maximum Values)⁴

	Min-Max	Min-Max	Min-Max	Min-Max
Heater Voltage ³	-	-	-	5.7-6.9 Volts
Heater Current ³	560-640	420-480	280-320	- Ma
Maximum Heater-Cathode Voltage				
Heater Negative with Respect to Cathode				
Total DC and Peak	100	100	100	100 Volts
Heater Positive with Respect to Cathode				
Total DC and Peak	100	100	100	100 Volts

DIRECT INTERELECTRODE CAPACITANCES (Shield No. 316)

Grid to Plate	.29 μ f
Input: g to (h+k+I.S.+E.S.)	4.4 μ f
Output: p to (h+k+I.S.+E.S.)	2.6 μ f
Heater to Cathode	2.5 μ f

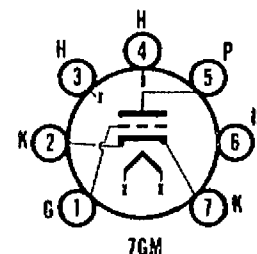
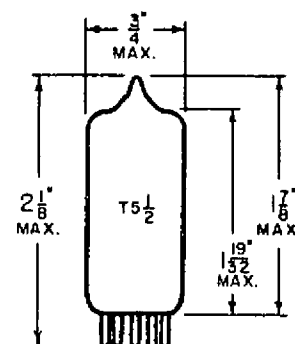
RATINGS (Design Maximum Values)⁴

Plate Voltage	200 Volts	Max.
Plate Dissipation	2.3 Watts	Max.
DC Cathode Current	22 Ma	Max.
Negative Grid Voltage	50 Volts	Max.
Grid Circuit Resistance (Self Bias)	1.0 Megohms	Max.

NOTE: Control grid to cathode spacing on this type is of such low order of magnitude as to preclude the use of voltage between

QUICK REFERENCE DATA

The Sylvania Types 2HK5, 3HK5, 4HK5 and 6HK5 are frame grid gain controlled triodes designed for use as VHF RF amplifiers at a B⁺ of 135 volts. Features of the design include: A partial shield between the grid and plate which minimizes the capacitance between these two elements and promotes ease of neutralization; low input capacitance; and higher input impedance by virtue of dual cathode leads.



SYLVANIA ELECTRONIC TUBES

A Division of
Sylvania Electric Products Inc.

RECEIVING TUBE
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these elements of more than 30 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

Class A1 Amplifier

Plate Voltage	135 Volts
Grid Voltage	-1.0 Volts
Plate Current	12.5 Ma
Transconductance	15,000 μ hos
Amplification Factor	75
Plate Resistance (approx.)	5,000 Ohms
E_c for $G_m = 150 \mu$ hos (approx.)	-5.0 Volts
E_c for $G_m = 1500 \mu$ hos (approx.)	-2.6 Volts
Input Resistance (200 mc) ⁵	600 Ohms
Input Capacitance (200 mc) ⁵	9.0 μ f
Noise Figure (200 mc) ⁶	4.2 db

NOTES:

1. For series/parallel operation of heaters, equipment should be designed that at normal supply voltage bogey tubes will operate at this value of heater current/voltage.
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 voltage/current within the specified values.
4. Design Maximum Ratings are limiting values of operating and environmental conditions applicable to a bogey electron tube of a specified type as defined by its published data and should not be exceeded under the worst probable conditions.

The tube manufacturer chooses these values to provide acceptable serviceability of the tube, making allowance for the effects of changes in operating conditions due to variations in the characteristics of the tube under consideration.

The equipment manufacturer should design so that initially and throughout life no design maximum value for the intended service is exceeded with a bogey tube under the worst probable operation conditions with respect to supply voltage variation, equipment component variation, equipment control adjustment, load variation, signal variation, environmental conditions, and variations in the characteristics of all other electron devices in the equipment.

5. Measured under grounded plate conditions.
6. Optimized neutralized triode RF amplifier stage, noise matched.