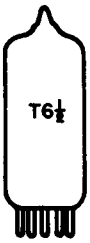
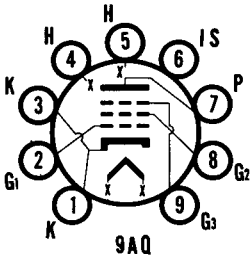


SYLVANIA TYPES 6EH7 4EH7 3EH7



MECHANICAL DATA

Bulb	T-6½
Base	E9-1, Miniature Button 9-Pin
Outline	
Max. Seated Height	2 5/32 Inches
Basing	9AQ
Cathode	Coated Unipotential
Mounting Position	Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

Heater Operation	3EH7 Series	4EH7 Series	6EH7 Parallel
Heater Voltage	3.4	4.4	6.3 Volts
Heater Current	600	450	300 Ma
Heater Warm-up Time[2]	11	11	— Seconds
Maximum Heater-Cathode Voltage			
Heater Negative with Respect to Cathode			
Total D C and Peak			150 Volts
Heater Positive with Respect to Cathode			
Total D C and Peak			150 Volts

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

Grid No. 1 to Plate	.005 μμf Max.
Input: g1 to (h+k+g2+g3+I.S.)	9 μμf
Output: p to (h+k+g2+g3+I.S.)	3 μμf

RATINGS (Design Center Values)

Plate Voltage with Ib = 0 Ma	550 Volts Max.
Plate Voltage	250 Volts Max.
Grid No. 2 Voltage with Ic2 = 0 Ma	550 Volts Max.
Grid No. 2 Voltage	250 Volts Max.
Plate Dissipation	2.5 Watts Max.
Grid No. 2 Dissipation	0.65 Watts Max.
Cathode Current	20 Ma Max.
Grid No. 1 Circuit Resistance	1.0 Megohm Max.

CHARACTERISTICS AND TYPICAL OPERATION

Characteristics	
Plate Voltage	200 Volts
Grid No. 3 Voltage	0 Volts
Grid No. 2 Voltage	90 Volts
Grid No. 1 Voltage	−2 Volts
Plate Current	12 Ma
Grid No. 2 Current	4.5 Ma
Transconductance	12,500 μmhos
Plate Resistance (approx.)	0.5 Megohm
Grid No. 1 Impedance at 40 MC/S	30,000 Ohms[1]

CHARACTERISTICS AND TYPICAL OPERATION (Continued)

Typical Operation				
Plate Voltage				200 Volts
Grid No. 3 Voltage				0 Volts
Grid No. 2 Supply Voltage				200 Volts
Grid No. 2 Series Resistor				22,000 Ohms
Grid No. 1 Voltage	−19.5	−9.5	−6.5	−2 Volts
Transconductance	125	625	1250	12,500 μmhos
Ec1 for a Cross Mod. Factor of 1%	450	160	100	— MV (RMS)

NOTE:

1. Input damping of tube and typical ceramic socket with both cathode leads returned directly to ground is about 11,000 ohms.

APPLICATION

The Sylvania Types 3EH7, 4EH7 and 6EH7 are T-6½ high transconductance semi-remote cutoff pentodes designed for service as VHF IF amplifiers. Types 3EH7 and 4EH7 have controlled heater warm-up time for series string operation.

AVERAGE TRANSFER CHARACTERISTICS