N.V. PHILIPS' GLOEILAMPENFABRIEKEN EINDHOVEN HOLLAND

TUBE TYPE 6CU7

The 6CU7 is a triode hexode converter, the hexode section having remote cut-off characteristics.

PHYSICAL SPECIFICATIONS

Cathode Coated unipotential  
Base E8-30  
Bulb Glass  
Maximum overall length 2-3/8" (60mm)  
Maximum seated height 2-1/16" (53mm)  
Maximum diameter 7/8" (22mm)  
Mounting position Any

BASING CONNECTIONS (8GY)

<table>
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<tr>
<th>Pin 1</th>
<th>Pin 2</th>
<th>Pin 3</th>
<th>Pin 4</th>
<th>Pin 5</th>
<th>Pin 6</th>
<th>Pin 7</th>
<th>Pin 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heater</td>
<td>Hexode plate</td>
<td>Triode plate</td>
<td>Hexode Grid No. 3, Triode Grid</td>
<td>Hexode Grids No.2 and No.4</td>
<td>Hexode Grid No. 1</td>
<td>Cathode</td>
<td>Heater</td>
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GENERAL ELECTRICAL DATA

Heater voltage 6.3 volts  
Heater current 0.23 amps

ELECTRODE CAPACITANCES

- Hexode Grid No. 1 to Triode Grid: <0.35 μF  
- Hexode Plate to Triode Grid: <0.2 μF  
- Grid No. 1 to heater: <0.15 μF

Triode Section

- Input: 5.5 μF  
- Output: 2.3 μF  
- Plate to Grid: 1.2 μF  
- Plate to Grid: 1.2 μF

CHARACTERISTICS

Hexode Section

- Plate voltage: 250 volts  
- Grids No. 2 and No. 4 voltage: 85 volts  
- Plate current: 3.0 mA  
- Grids No. 2 & No. 4: 3.0 mA  
- Grid No. 1 voltage: -2.0 volts  
- Conversion transconductance: 750 μhos  
- Plate resistance: >1.0 megohms  
- Grid No. 1 bias for conversion transconductance of 7.5 μhos: -29 volts
Triode section

Plate voltage: 100 volts
Plate current: 10 ma
Grid voltage: 0 volts
Transconductance: 2,800 μmhos
Amplification factor: 22

MAXIMUM RATINGS (Design Centre Values)

Hexode Section

Plate supply voltage: 550 volts
Plate voltage: 250 volts
Plate dissipation: 1.5 watts
Grids No. 2 and No. 4 supply voltage: 550 volts
Grids No. 2 & No. 4 voltage
(Plate current = 3ma): 125 volts
(Plate current < 1ma): 250 volts
Grids No. 2 & No. 4 dissipation: 0.3 watts
Cathode current: 7 ma
Grid No. 1 circuit resistance: 3 megohms
Grid No. 3 circuit resistance: 3 megohms
Voltage between heater and cathode: 50 volts
External resistance between heater and cathode: 20,000 ohms

Triode Section

Plate supply voltage: 550 volts
Plate voltage: 175 volts
Plate dissipation: 0.8 watts
Cathode current: 6 ma
Grid circuit resistance: 3 megohms
Plate voltage = 250 volts
Oscillator grid leak = 47 000 ohms
Oscillator grid current = 200 µamps

Supply voltage = 250 volts
Grids No. 2 and 4 potentiometer
= 2 x 27 000 ohms

Grid No. 1 bias (volts)
Plate voltage = 250 volts
Oscillator grid leak = 47,000 ohms
Oscillator grid current = 200 μamps

or
Plate voltage = 250 volts
Oscillator grid leak = 22,000 ohms
Oscillator grid current = 350 μamps

Supply voltage = 250 volts
Grids No. 2 and 4 potentiometer = 120,000 ohms

Grid No. 1 bias (volts)