THE 3EH7 IS A REMOTE-CUTOFF PENTODE IN THE 9 PIN MINIATURE CONSTRUCTION. IT FEATURES VERY HIGH GM WITH A REMOTE CUTOFF AND IS DESIGNED FOR FREQUENCIES INTO THE VHF RANGE. ITS CHIEF APPLICATION IS IN THE IF AMPLIFIER STAGES OF TELEVISION RECEIVERS.

DIRECT INTERELECTRODE CAPACITANCES
WITHOUT EXTERNAL SHIELD

GRID #1 TO PLATE: (G1 TO P) MAX. 0.0055 pf
INPUT: G1 TO (H+G2+G3+K+1S) 9.5 pf
OUTPUT: P TO (H+G2+G3+K+1S) 2.8 pf

HEATER CHARACTERISTICS AND RATINGS
DESIGN MAXIMUM VALUES - SEE EIA STANDARD RS-939

AVERAGE CHARACTERISTICS
3.4 VOLTS 600 MA.

HEATER SUPPLY LIMITS:
CURRENT OPERATION 600±40 MA.
MAXIMUM HEATER CATHODE VOLTAGE 165 VOLTS
HEATER WARM-UP TIME* 11 SECONDS

MAXIMUM RATINGS
DESIGN CENTER VALUES - SEE EIA STANDARD RS-239

PLATE VOLTAGE 250 VOLTS
PLATE DISSIPATION 2.5 WATTS
GRID #2 VOLTAGE 250 VOLTS
GRID #2 DISSIPATION 0.65 WATTS
CATHODE CURRENT 20 MA
GRID #1 CIRCUIT RESISTANCE 1 MEGOHM

*HEATER WARM-UP TIME IS DEFINED AS THE TIME REQUIRED FOR THE VOLTAGE ACROSS THE HEATER TO REACH 80% OF ITS RATED VOLTAGE AFTER APPLYING 4 TIMES RATED HEATER VOLTAGE TO A CIRCUIT CONSISTING OF THE TUBE HEATER IN SERIES WITH A RESISTANCE OF VALUE 3 TIMES THE NOMINAL HEATER OPERATING RESISTANCE.
TYPICAL OPERATING CHARACTERISTICS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value 1</th>
<th>Value 2</th>
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</thead>
<tbody>
<tr>
<td>PLATE VOLTAGE</td>
<td>200</td>
<td>200</td>
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<tr>
<td>GRID #3 VOLTAGE</td>
<td>0</td>
<td>0</td>
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<tr>
<td>GRID #2 VOLTAGE (SUPPLY)</td>
<td>90</td>
<td>200</td>
</tr>
<tr>
<td>GRID #1 VOLTAGE</td>
<td>-2</td>
<td>-2</td>
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<tr>
<td>PLATE CURRENT</td>
<td>12</td>
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<tr>
<td>GRID #2 CURRENT</td>
<td>4.5</td>
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<td>TRANSCONDUCTANCE</td>
<td>12500</td>
<td>12500</td>
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<tr>
<td>PLATE RESISTANCE</td>
<td>0.5</td>
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<tr>
<td>GRID #1 IMPEDANCE AT 40 MC</td>
<td>13</td>
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<tr>
<td>GRID #1 CUTOFF: Ec1 = 6.5</td>
<td>1250</td>
<td>1250</td>
</tr>
<tr>
<td>Ec1 = 9.5</td>
<td>625</td>
<td>625</td>
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<tr>
<td>Ec1 = 19.5</td>
<td>125</td>
<td>125</td>
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<tr>
<td>GRID #1 VOLTAGE FOR A CROSS-MODULATION FACTOR OF 1:</td>
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<tr>
<td>Ec1 = 6.5</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Ec1 = 9.5</td>
<td>160</td>
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</tr>
<tr>
<td>Ec1 = 19.5</td>
<td>450</td>
<td></td>
</tr>
</tbody>
</table>

Diagram:

- $E_f = 3.4$ Volts
- $E_b = 200$ Volts
- $E_{cc} = 200$ Volts (Supply)
- $E_{c2} = 0$ Volts
- $R_{C2} = 24$ kΩ

Parameters:
- $r_p$
- $l_b$
- $l_c2$
- $g_m$
3EH7

$E_f = 3.4 \text{ Volts}$
$E_b = 170-230 \text{ Volts}$

GRID #1 VOLTS

GRID #2 MILLIAMPERES

3EH7

$E_f = 3.4 \text{ Volts}$
$E_b = 170-230 \text{ Volts}$

GRID #1 VOLTS

GRID #2 MILLIAMPERES

TUNG-SOL ELECTRIC INC., ELECTRON TUBE DIVISION, BLOOMFIELD, NEW JERSEY, U.S.A., AUGUST 1, 1961 PLATE 4628