THE 6BJ8 IS A MEDIUM-MU TRIODE AND A DOUBLE DIODE IN ONE ENVELOPE USING THE 9 PIN MINIATURE CONSTRUCTION. EACH SECTION HAS ITS OWN CATHODE. IT IS DESIGNED FOR USE AS A PHASE SPLITTER, PHASE COMPARATOR AND HORIZONTAL DEFLECTION OSCILLATOR IN 600 MA. SERIES HEATER OPERATED RECEIVERS. THERMAL CHARACTERISTICS OF THE HEATER ARE CONTROLLED SUCH THAT HEATER VOLTAGE SURGES DURING THE WARM-UP CYCLE ARE MINIMIZED PROVIDED IT IS USED WITH OTHER TYPES WHICH ARE SIMILARLY CONTROLLED.

DIRECT INTERELECTRODE CAPACITANCES
WITH NO EXTERNAL SHIELD

<table>
<thead>
<tr>
<th>SECTION</th>
<th>VALUE (MAX)</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRIODE</td>
<td>GRID TO PLATE: G TO P</td>
<td>2.6</td>
</tr>
<tr>
<td>TRIODE</td>
<td>INPUT: G TO (H+TK)</td>
<td>2.8</td>
</tr>
<tr>
<td>TRIODE</td>
<td>OUTPUT: P TO (H+TK)</td>
<td>0.31</td>
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<tr>
<td>DIODE</td>
<td>#1 PLATE TO TRIODE GRID (MAX)</td>
<td>0.07</td>
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<tr>
<td>DIODE</td>
<td>#2 PLATE TO TRIODE GRID (MAX)</td>
<td>0.11</td>
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<tr>
<td>DIODE</td>
<td>#1 CATHODE TO ALL: I0K TO (H+TK+1)</td>
<td>4.8</td>
</tr>
<tr>
<td>DIODE</td>
<td>CATHODE TO ALL: I2K TO (H+TK+1)</td>
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<tr>
<td>DIODE</td>
<td>PLATE TO #2 PLATE (MAX)</td>
<td>0.60</td>
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<tr>
<td>DIODE</td>
<td>PLATE TO #1 CATHODE + HEATER: I0P TO (I0K+H)</td>
<td>1.9</td>
</tr>
<tr>
<td>DIODE</td>
<td>PLATE TO #2 CATHODE + HEATER: I2P TO (I2K+H)</td>
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</tr>
<tr>
<td>DIODE</td>
<td>CATHODE TO #1 PLATE+HEATER: I0K TO (I0P+H)</td>
<td>4.6</td>
</tr>
<tr>
<td>DIODE</td>
<td>CATHODE TO #2 PLATE+HEATER: I2K TO (I2P+H)</td>
<td>4.6</td>
</tr>
<tr>
<td>DIODE</td>
<td>PLATE TO ALL: I0P TO (H+TK+1)</td>
<td>3.0</td>
</tr>
<tr>
<td>DIODE</td>
<td>PLATE TO ALL: I2P TO (H+TK+1)</td>
<td>3.0</td>
</tr>
</tbody>
</table>

CONTINUED ON FOLLOWING PAGE
RATINGS
INTERPRETED ACCORDING TO DESIGN MAXIMUM SYSTEM
EACH SECTION

HEATER VOLTAGE 6.3 VOLTS
MAXIMUM HEATER-CATHODE VOLTAGE:
HEATER NEGATIVE WITH RESPECT TO CATHODE
TOTAL DC AND PEAK 200 VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE
DC 100 VOLTS
TOTAL DC AND PEAK 200 VOLTS
HEATER WARM-UP TIME (APPROX.)C 11.0 SECONDS

TRIODE SECTION
MAXIMUM PLATE VOLTAGE 330 VOLTS
MAXIMUM POSITIVE DC GRID VOLTAGE 0 --- VOLTS
MAXIMUM POSITIVE PULSE PLATE VOLTAGE (ABSOLUTE MAXIMUM) --- 1 200 VOLTS.
MAXIMUM PLATE DISSIPATIOND 4.0 4.0 WATTS
MAXIMUM PEAK NEGATIVE PULSE GRID VOLTAGE --- 275 VOLTS
MAXIMUM AVERAGE CATHODE CURRENT 22 22 MA.
MAXIMUM PEAK CATHODE CURRENT --- 77 MA.
MAXIMUM GRID CIRCUIT RESISTANCE:
SELF BIAS --- 2.2 MEGOHMS

DIODE SECTION
MAXIMUM PEAK PLATE CURRENT (EACH PLATE) 54 MA.
MAXIMUM DC CURRENT (EACH PLATE) 9 MA.

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS
CLASS A1 AMPLIFIER

HEATER VOLTAGE 6.3 VOLTS
HEATER CURRENT 0.6±6% AMP.

TRIODE SECTION
PLATE VOLTAGE 90 250 VOLTS
GRID VOLTAGE 0 0 VOLTS
PLATE RESISTANCE (APPROX.) 4 700 7 150 OHMS
TRANSCONDUCTANCE 4 700 2 800 2 800 MAMHOS
AMPLIFICATION FACTOR 22 20
PLATE CURRENT 13.5 8.0 MA.
PLATE CURRENT AT E C = -12.5 VOLTS (DC) --- 1.7 MA.
GRID VOLTAGE (APPROX.) FOR I B = 10 MAMP. -7 -18 VOLTS

DIODE SECTION
AVERAGE CURRENT (EACH PLATE) AT 10 VOLTS (DC) 50 MA.
VOLTAGE DROP (EACH SECTION) AT I B = 9 MA. (DC) 2.6 VOLTS

--- INDICATES A CHANGE.

FOR OPERATION IN A 525-LINE, 30-FRAME SYSTEM AS DESCRIBED IN *STANDARDS OF GOOD ENGINEERING PRACTICE FOR TELEVISION BROADCASTING STATIONS; FEDERAL COMMUNICATIONS COMMISSION*. THE DUTY CYCLE OF THE VOLTAGE PULSE NOT TO EXCEED 15 PERCENT OF A SCANNING CYCLE.

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 WIRE HEATER IN SERIES WITH A RESISTANCE OF VALUE 3 TIMES THE NOMINAL HEATER OPERATING RESISTANCE.

IN STAGES OPERATING WITH GRID-LEAK BIAS, AN ADEQUATE CATHODE BIAS RESISTOR OR OTHER SUITABLE MEANS IS REQUIRED TO PROTECT THE TUBE IN THE ABSENCE OF EXCITATION.