The Ampex E92CC is a reliable miniature twin triode designed for use in computer circuits which are not critical as to hum, microphonics and noise. Operation of the tube for long periods of time under cut-off conditions will not cause deterioration of the emission surface.

The E92CC is one of the Ampex "Premium Quality, 10,000 Hour" tubes.

**PIN CONNECTIONS**
1 - PLATE, TRiode No. 2  
2 - PLATE, TRiode No. 1  
3 - HEATER  
4 - HEATER  
5 - GRID, TRiode No. 1  
6 - GRID, TRiode No. 2  
7 - CATHODE

**GENERAL CHARACTERISTICS**

**MECHANICAL**
Cathode  
Outline  
Bulb  
Base  
Bulb temperature  
coated, unipotential  
T 5½  
5-3  
E 7-1  
170°C max

**ELECTRICAL**
Heater voltage  
Heater current  
6.3 volts  
400 mA

**Direct Interelectrode Capacitances**

**Triode No. 1**
Input  
Output  
Plate to grid  
3.1 µµf  
0.38 µµf  
2.1 µµf

**Triode No. 2**
Input  
Output  
Plate to grid  
3.1 µµf  
0.32 µµf  
2.2 µµf

**Between sections**
Grid to grid  
Plate to plate  
0.29 µµf max  
2.0 µµf max

Revised 3/60
Maximum Ratings, Absolute Values

Plate supply voltage 600 volts max
Plate voltage 300 volts max
Negative grid voltage 100 volts max
Peak Negative grid voltage 200 volts max
Grid voltage .5 volts max
Cathode to heater voltage 100 volts max
Cathode current 15 mA max
Peak cathode current 75 mA max
Grid current 250 µA max
Peak grid current 1000 µA max
Plate dissipation 2 watts max
Grid resistor (automatic bias) 1 megohm max
Grid resistor (fixed bias) 0.5 megohm max
Bulb temperature 170°C max

Typical Operation, (Each Section)

Plate voltage 150 volts
Plate current 8.5 mA
Negative grid voltage 1.75 volts
Transconductance 6000 micromhos
Amplification Factor 45

Computer Service

Circuit for Computer Service

Plate current 0.1 mA max
Cut-off balance (E_{c1} - E_{c2}) 2 volts

Revised 3
### Characteristic Range Values for Equipment Design

<table>
<thead>
<tr>
<th></th>
<th>Initial Life</th>
<th>End of Life 1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Min</td>
<td>Max</td>
</tr>
<tr>
<td>Heater current (E_h = 6.3 V)</td>
<td>380</td>
<td>420</td>
</tr>
<tr>
<td>Plate current (E_b = 150 V, E_C = -1.7 V)</td>
<td>4.5</td>
<td>12.5</td>
</tr>
<tr>
<td>Plate current (E_bb = 150 V, E_C = -10 V)</td>
<td>-</td>
<td>0.1</td>
</tr>
<tr>
<td>R_p = 20 kΩ, R_g = 47 kΩ</td>
<td>-</td>
<td>0.2</td>
</tr>
<tr>
<td>Negative grid current (E_b = 150 V, E_C = -1.7 V)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Cut-off balance (E_C3 - E_C2) (E_bb = 150 V, R_g = 47 kΩ, R_p = 20 kΩ, I_a = 0.1 mA)</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Cathode to heater current (cathode positive, R_series = 1 meg, V_bb = 100 V)</td>
<td>-</td>
<td>15</td>
</tr>
<tr>
<td>Plate resistor current (see Fig. 1)</td>
<td>5.1</td>
<td>5.9</td>
</tr>
<tr>
<td>Transconductance (E_b = 150 V, R_k = 200 Ω)</td>
<td>4500</td>
<td>7500</td>
</tr>
<tr>
<td>Insulation Resistance (between two arbitrary electrodes)</td>
<td>20</td>
<td>-</td>
</tr>
</tbody>
</table>

### Direct Inter-electrode Capacitances

<table>
<thead>
<tr>
<th>Triode No. 1</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input</td>
<td>2.2</td>
<td>4.0 μf</td>
</tr>
<tr>
<td>Output</td>
<td>0.28</td>
<td>0.48 μf</td>
</tr>
<tr>
<td>Plate to grid</td>
<td>1.7</td>
<td>2.5 μf</td>
</tr>
<tr>
<td>Triode No. 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input</td>
<td>2.2</td>
<td>4.0 μf</td>
</tr>
<tr>
<td>Output</td>
<td>0.22</td>
<td>0.42 μf</td>
</tr>
<tr>
<td>Plate to grid</td>
<td>1.8</td>
<td>2.6 μf</td>
</tr>
</tbody>
</table>

### Between Sections

| Grid to grid | 0.29 μf |
| Plate to plate | 2.0 μf |

1 Conditions of life test (see Figure 1)
- Heater voltage 6.3 volts
- Plate supply voltage 165 volts
- Plate voltage 100 volts
- Heater-cathode voltage (cathode negative) 100 volts
- Input voltage at frequency 300 c/s

\[ S = 1:10 \]

![Diagram](image-url)
PLATE CURRENT CHARACTERISTICS

MAXIMUM PLATE DISSIPATION = 2 WATTS

GRID VOLTAGE = 0 Volts

PLATE VOLTAGE (VOLTS)

PLATE CURRENT (MILLIAMPERES)
TRANSFER CHARACTERISTICS

GRID VOLTAGE (VOLTS)

PLATE VOLTAGE = 250 VOLTS

200 VOLTS

150 VOLTS

100 VOLTS

PLATE CURRENT (MILLIAMPERES)

-8 -6 -4 -2 0

0 10 20 30 40 50 60