RCA-7212 is a small beam power tube designed specifically for applications where dependable performance under severe shock and vibration is essential. It is intended for use as an rf power amplifier and oscillator as well as an af power amplifier and modulator.

The 7212 has a maximum plate dissipation of 25 watts under ICAS conditions in modulator service and in cw service. In the latter service, it can be operated with full input to 60 Mc and with reduced input to 175 Mc.

Because of its high power gain and high efficiency, the 7212 can be operated with relatively low plate voltage to give large power output with small driving power.

Small in size for its power-output capability, the 7212 has a rugged button-stem construction with short internal leads, a T-12 bulb, triple base-pin connections for grid No.3 and cathode (both joined to internal shield inside the tube) to permit effective rf grounding, and a small-wafer octal base with metal sleeve having its own base-pin terminal. The sleeve shields the input to the tube and isolates it from the output circuit so completely that no other external shielding is required. Separation of input and output circuits is accomplished by bringing the plate lead out of the bulb to a cap opposite the base.

**GENERAL DATA**

**Electrical:**
- Heater, for Unipotential Cathode:
  - Voltage (AC or DC) .................. 6.3 ± 10% volts
  - Current at 6.3 volts ............... 1.25 amperes
- Transconductance, for plate volts:
  - 200, grid-No. 2 volts = 200, and
  - plate ma. = 100 ....... 7000 µhos
- Mu-Factor, Grid No.2 to Grid No.1:
  - for plate volts = 200, grid-No.2 volts = 200, and plate ma. = 100 ........ 4.5
- Direct Inter-electrode Capacitances:
  - Grid No.1 to plate .................. 0.24 max. µf
  - Grid No.1 to cathode & grid No.3 & internal shield, base sleeve, grid No.2, and heater .......... 13.5 µf
  - Plate to cathode & grid No.3 & internal shield, base sleeve, grid No.2, and heater .......... 8.5 µf

**Mechanical:**
- Operating Position .................. Any
- Maximum Overall Length ............... 3-13/16
- Seated Length ....................... 3-1/8 x 1/8
- Maximum Diameter ............... 1-21/32
- Bulb ................................ T-12
- Cap ................................ Small (JTEC No.C1-1)
- Socket ................................ Standard Octal 8-Contact Base. Small Micron-Wafer Octal 8-Pin "770" Sleeve (JTEC Group 4, No.BB-150)
- Bulb Temperature (At hottest point) ........ 220 max. °C
- Weight (Approx.) .................... 2 oz

**AF POWER AMPLIFIER & MODULATOR—Class AB^†**

Tetrode Connection—Grid No.2 Connected to Plate

<table>
<thead>
<tr>
<th>OCS</th>
<th>ICAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>400</td>
<td>400</td>
</tr>
<tr>
<td>90</td>
<td>90</td>
</tr>
<tr>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td>20</td>
<td>25</td>
</tr>
</tbody>
</table>

**Maximum Ratings, Absolute Values:**
- DC PLATE VOLTAGE .............. 400 max. volts
- MAX.—SIGNAL DC .............. 90 max. ma
- MAX.—SIGNAL PLATE INPUT ........ 35 max. watts
- PLATE DISSIPATION .............. 20 max. watts
- PEAK HEATER—CATHODE VOLTAGE:
  - Heater negative with respect to cathode ........ 135 max. volts
  - Heater positive with respect to cathode ........ 135 max. volts

**Typical Operation:**

- DC Plate Voltage ........ 250 400 400 volts
- DC Grid-No.1 Voltage ........ -50 -100 -100 volts
- Peak AF Grid-No.1—Grid-No.1 Voltage ........ 100 200 200 volts
- Zero-Signal DC Plate Current ........ 120 40 40 ma

Trademark(s) ® Registered
Marca(s) Registrada(s)

ELECTRON TUBE DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

7212 S-58
Printed in U.S.A.
Typical Operation (Cont'd):

Max.-Signal DC Plate Current: 125 100 100 ma
Effective Load Resistance (Plate to plate): 5000 8000 8000 ohms
Max.-Signal Driving Power (Approx.): 0 0 0 watts
Max.-Signal Power Output (Approx.): 10 22 22 watts

Maximum Circuit Values (CCS or ICAS):

Grid-No.1 Circuit Resistance under Any Condition: 0.050
With fixed bias: 0.1 max. megohm
With cathode bias: 0.5 max. megohm

AF POWER AMPLIFIER & MODULATOR---Class AB2

Maximum Ratings, Absolute Values:

DC PLATE VOLTAGE: 600 max. 750 max. volts
DC GRID-No.2 (SCREEN) VOLTAGE: 250 max. 250 max. volts
MAX.-SIGNAL DC PLATE CURRENT**: 125 max. 135 max. ma
MAX.-SIGNAL PLATE INPUT**: 60 max. 85 max. watts
MAX.-SIGNAL GRID-No.2 CURRENT: 3 max. 3 max. watts
PLATE DISSIPATION**: 20 max. 25 max. watts
PEAK HEATER-CATHODE VOLTAGE: Heater negative with respect to cathode 135 max. 135 max. volts
Heater positive with respect to cathode 135 max. 135 max. volts

Typical CCS Operation:

Values are for 2 tubes
DC Plate Voltage: 400 500 600 volts
DC Grid-No.2 Voltage: 190 185 180 volts
DC Grid-No.1 [Control-Grid] Voltage:
With fixed bias source: -40 -80 -45 volts
Peak AF Grid-No.1-to- Grid-No.1 Voltage: 80 80 90 volts
Zero-Signal DC Plate Current: 0.57 26 ma
Max.-Signal DC Plate Current: 228 215 200 ma
Zero-Signal DC Grid-No.2 Current: 2.5 2 1 ma
Max.-Signal DC Grid-No.2 Current: 25 25 23 ma
Effective Load Resistance (Plate to plate): 4000 5500 7000 ohms
Max.-Signal Driving Power (Approx.): 0 0 0 watts
Max.-Signal Power Output (Approx.): 55 70 82 watts

Typical ICAS Operation:

Values are for 2 tubes
DC Plate Voltage: 600 750 volts
DC Grid-No.2 Voltage: 190 165 volts
DC Grid-No.1 [Control-Grid] Voltage:
From fixed-bias source: -48 -46 volts
Peak AF Grid-No.1-to- Grid-No.1 Voltage: 109 108 volts
Zero-Signal DC Plate Current: 28 22 ma
Max.-Signal DC Plate Current: 270 240 ma
Zero-Signal DC Grid-No.2 Current: 1.2 0.3 ma
Max.-Signal DC Grid-No.2 Current: 20 20 ma
Max.-Signal DC Grid-No.1 Current: 2 2.6 ma
Effective Load Resistance (Plate to plate): 5000 7400 ohms
Max.-Signal Driving Power (Approx.): 0.3 0.4 watt
Max.-Signal Power Output (Approx.): 113 131 watts

Maximum Circuit Values (CCS or ICAS):

Grid-No.1 Circuit Resistance: Not recommended
With fixed bias: 30000 max. ohms
With cathode bias: Not recommended

AF POWER AMPLIFIER & MODULATOR---Class AB2

Maximum Ratings, Absolute Values:

DC PLATE VOLTAGE: 600 max. 750 max. volts
DC GRID-No.2 (SCREEN) VOLTAGE: 250 max. 250 max. volts
MAX.-SIGNAL DC PLATE CURRENT**: 125 max. 135 max. ma
MAX.-SIGNAL PLATE INPUT**: 62.5 max. 90 max. watts
MAX.-SIGNAL GRID-No.2 CURRENT: 3 max. 3 max. watts
PLATE DISSIPATION**: 20 max. 25 max. watts
PEAK HEATER-CATHODE VOLTAGE: Heater negative with respect to cathode 135 max. 135 max. volts
Heater positive with respect to cathode 135 max. 135 max. volts

Typical CCS Operation:

Values are for 2 tubes
DC Plate Voltage: 400 500 600 volts
DC Grid-No.2 Voltage: 175 175 165 volts
DC Grid-No.1 [Control-Grid] Voltage:
From fixed-bias source: -41 -44 -44 volts
Peak AF Grid-No.1-to- Grid-No.1 Voltage: 95 102 97 volts
Zero-Signal DC Plate Current: 33 27 22 ma
Max.-Signal DC Plate Current: 232 242 207 ma
Zero-Signal DC Grid-No.2 Current: 1.1 0.7 0.6 ma
Max.-Signal DC Grid-No.2 Current: 18 18 17 ma
Max.-Signal DC Grid-No.1 Current: 1.6 1.9 1.1 ma
Effective Load Resistance (Plate to plate): 3700 4600 6800 ohms
Max.-Signal Driving Power (Approx.): 0.2 0.3 0.2 watt
Max.-Signal Power Output (Approx.): 62 83 90 watts

Typical ICAS Operation:

Values are for 2 tubes
DC Plate Voltage: 600 750 volts
DC Grid-No.2 Voltage: 190 165 volts
DC Grid-No.1 [Control-Grid] Voltage:
From fixed-bias source: -48 -46 volts
Peak AF Grid-No.1-to- Grid-No.1 Voltage: 109 108 volts
Zero-Signal DC Plate Current: 28 22 ma
Max.-Signal DC Plate Current: 270 240 ma
Zero-Signal DC Grid-No.2 Current: 1.2 0.3 ma
Max.-Signal DC Grid-No.2 Current: 20 20 ma
Max.-Signal DC Grid-No.1 Current: 2 2.6 ma
Effective Load Resistance (Plate to plate): 5000 7400 ohms
Max.-Signal Driving Power (Approx.): 0.3 0.4 watt
Max.-Signal Power Output (Approx.): 113 131 watts

Maximum Circuit Values (CCS or ICAS):

Grid-No.1 Circuit Resistance: Not recommended
With fixed bias: 30000 max. ohms
With cathode bias: Not recommended
## Plate-Modulated RF Power Amplifier—

### Class C Telephony

**Carrier conditions per tube for use with a max. modulation factor of 1.0**

<table>
<thead>
<tr>
<th></th>
<th>CCS*</th>
<th>ICAs*</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC PLATE VOLTAGE</td>
<td>480 max.</td>
<td>600 max. volts</td>
</tr>
<tr>
<td>DC GRID-No.2 (SCREEN) VOLTAGE</td>
<td>250 max.</td>
<td>250 max. volts</td>
</tr>
<tr>
<td>DC GRID-No.1 (CONTROL)-GRID VOLTAGE</td>
<td>-150 max.</td>
<td>-150 max. volts</td>
</tr>
<tr>
<td>DC PLATE CURRENT</td>
<td>117 max.</td>
<td>125 max. ma</td>
</tr>
<tr>
<td>DC GRID-No.1 CURRENT</td>
<td>3.5 max.</td>
<td>4.0 max. ma</td>
</tr>
<tr>
<td>PLATE INPUT</td>
<td>45 max.</td>
<td>67.5 max. watts</td>
</tr>
<tr>
<td>GRID-No.2 INPUT</td>
<td>2 max.</td>
<td>2 max. watts</td>
</tr>
<tr>
<td>PLATE DISSIPATION</td>
<td>13.3 max.</td>
<td>16.7 max. watts</td>
</tr>
<tr>
<td>PEAK HEATER-CATHODE VOLTAGE</td>
<td>Heater negative with respect to cathode</td>
<td>135 max. volts</td>
</tr>
<tr>
<td></td>
<td>Heater positive with respect to cathode</td>
<td>135 max. volts</td>
</tr>
</tbody>
</table>

### Typical Operation up to 60 Mc:

<table>
<thead>
<tr>
<th></th>
<th>CCS*</th>
<th>ICAs*</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC Plate Voltage</td>
<td>400 475</td>
<td>600 volts</td>
</tr>
<tr>
<td>DC Grid-No.2 Voltage</td>
<td>150 155</td>
<td>150 volts</td>
</tr>
<tr>
<td>From a series resistor of</td>
<td>33000 51000</td>
<td>56000 ohms</td>
</tr>
<tr>
<td>DC Grid-No.1 Voltage</td>
<td>-87 -77</td>
<td>-87 volts</td>
</tr>
<tr>
<td>From a grid resistor of</td>
<td>27000 27000</td>
<td>27000 ohms</td>
</tr>
<tr>
<td>Peak RF Grid-No.1 Voltage</td>
<td>107 95</td>
<td>107 volts</td>
</tr>
<tr>
<td>DC Plate Current</td>
<td>112 94</td>
<td>112 ma</td>
</tr>
<tr>
<td>DC Grid-No.2 Current</td>
<td>7.8 6.4</td>
<td>7.8 ma</td>
</tr>
<tr>
<td>DC Grid-No.1 Current</td>
<td>3.4 2.8</td>
<td>3.4 ma</td>
</tr>
<tr>
<td>Driving Power (Approx.)</td>
<td>0.4 0.3</td>
<td>0.4 watt</td>
</tr>
<tr>
<td>Power Output (Approx.)</td>
<td>32 34</td>
<td>52 watts</td>
</tr>
</tbody>
</table>

### Maximum Circuit Values (CCS or ICAs):

| Grid-No.1 Circuit Resistance | 30000 max. ohms |

## RF Power Amplifier & OSC.— Class C Telegraphy

### and

## RF Power Amplifier—Class C FM Telephony

<table>
<thead>
<tr>
<th></th>
<th>CCS*</th>
<th>ICAs*</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC PLATE VOLTAGE</td>
<td>600 max.</td>
<td>750 max. volts</td>
</tr>
<tr>
<td>DC GRID-No.2 (SCREEN) VOLTAGE</td>
<td>250 max.</td>
<td>250 max. volts</td>
</tr>
<tr>
<td>DC GRID-No.1 (CONTROL)-GRID VOLTAGE</td>
<td>-150 max.</td>
<td>-150 max. volts</td>
</tr>
<tr>
<td>DC PLATE CURRENT</td>
<td>190 max.</td>
<td>150 max. ma</td>
</tr>
<tr>
<td>DC GRID-No.1 CURRENT</td>
<td>3.5 max.</td>
<td>4.0 max. ma</td>
</tr>
<tr>
<td>PLATE INPUT</td>
<td>67.5 max.</td>
<td>90 max. watts</td>
</tr>
<tr>
<td>GRID-No.2 INPUT</td>
<td>3 max.</td>
<td>11 max. watts</td>
</tr>
<tr>
<td>PLATE DISSIPATION</td>
<td>20 max.</td>
<td>25 max. watts</td>
</tr>
<tr>
<td>PEAK HEATER-CATHODE VOLTAGE</td>
<td>Heater negative with respect to cathode</td>
<td>135 max. volts</td>
</tr>
<tr>
<td></td>
<td>Heater positive with respect to cathode</td>
<td>135 max. volts</td>
</tr>
</tbody>
</table>

### Typical Operation as Amplifier up to 60 Mc:

<table>
<thead>
<tr>
<th></th>
<th>CCS*</th>
<th>ICAs*</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC Plate Voltage</td>
<td>500 600</td>
<td>600 750 volts</td>
</tr>
<tr>
<td>DC Grid-No.2 Voltage</td>
<td>170 150</td>
<td>180 160 volts</td>
</tr>
<tr>
<td>From a series resistor of</td>
<td>34000 51000</td>
<td>43000 56000 ohms</td>
</tr>
<tr>
<td>DC Grid-No.1 Voltage</td>
<td>-66 -58</td>
<td>-71 -62 volts</td>
</tr>
<tr>
<td>From a grid-No.1 resistor of</td>
<td>27000 20000</td>
<td>24000 20000 ohms</td>
</tr>
<tr>
<td>For a cathode resistor of</td>
<td>470 470</td>
<td>430 470 ohms</td>
</tr>
</tbody>
</table>

---

**CHARACTERISTICS RANGE VALUES FOR EQUIPMENT DESIGN**

<table>
<thead>
<tr>
<th>Note</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heater Current</td>
<td>1</td>
<td>1.175 1.325 amperes</td>
</tr>
</tbody>
</table>

**Direct Interelectrode Capacitances:**

| Grid No.1 to plate | 2 | 0.24 μF |
| Grid No.1 to cathode & grid No.3 & internal shield, base sleeve, grid No.2, and heater | 12.0 | 15.0 μF |
| Plate to cathode & grid No.3 & internal shield, base sleeve, grid No.2, and heater | 7.3 | 9.5 μF |
| Plate Current | 3 | 46 94 ma |
| Grid-No.2 Current | 3 | 5.5 ma |

**Heater-Cathode leakage Current:**

| Heater 100 volts negative with respect to cathode | 1 | 100 μA |
| Heater 100 volts positive with respect to cathode | 1 | 100 μA |

**Useful Power Output:**

| 4 | 47 watts |

---

* With no external shield.
† Subscript 1 indicates that grid-No.1 current does not flow during any part of the input cycle.
** Continuous Commercial Service.
*** Intermittent Commercial and Amateur Service.
** Average over any audio-frequency cycle of sine-wave form.
The driver stage should be capable of supplying the No. 1 grids of the class A8 stage with the specified grid voltage at low distortion.

The type of input coupling network used should not introduce too much resistance in the grid-No.1 circuit. Transformer or impedance coupling devices are recommended.

When the 7212 is connected as a triode and its grid No.1 is operated with fixed bias, the dc grid-No.1 circuit resistance should never exceed the specified value of 0.1 megohm. If higher values of grid-No.1 circuit resistance are desired, cathode bias must be employed. Under no circumstances should the dc grid-No.1 resistance exceed the specified value of 0.5 megohm.

When the 7212 is operated as a beam power tube in class AB1 or class A, the dc grid-No.1 circuit resistance should never exceed the specified value of 0.1 megohm.

Preferably obtained from a separate source or from the plate-voltage supply with a voltage divider.

Subscript 2 indicates that grid-No.1 current flows during some part of the input cycle.

Driver stage should be capable of supplying the specified driving power at low distortion to the No. 1 grids of the class A stage. With no coupling, the rectified resistance per grid-No.1 circuit of the A8 stage should be held at a low value. For this purpose, the use of transformer coupling is recommended. In any case, however, should the total dc grid-No.1 circuit resistance exceed 30,000 ohms when the 7212 is operated at maximum ratings, the dc grid-No.1 circuit resistance must be as high as 10,000 ohms.

Obtained preferably from a separate source modulated along the plate supply or from the modulated plate supply through a series resistor.

Obtained from grid-No.1 resistor or from a combination of grid-No.1 resistor with either fixed supply or cathode resistor.

When grid-No.1 is driven positive and the 7212 is operated at maximum ratings, the total dc grid-No.1 circuit resistance must not exceed the specified value of 30,000 ohms. If this value is insufficient to provide adequate bias, the additional required bias must be supplied by a cathode resistor or fixed supply.

For operation at less than maximum ratings, the dc grid-No.1 circuit resistance may be as high as 50,000 ohms.

Key-down conditions per tube without amplitude modulation. Amplitude modulation essentially negative may be used if the audio frequency envelope does not exceed 15% of the carrier conditions.

Obtained preferably from a separate source, or from the plate-supply voltage with a voltage divider, or through a series resistor. For grid-No.2 voltage, 400 volts should be used only when the 7212 is used in a circuit which is not keyed. Grid-No.2 voltage must not exceed 400 volts under key-up conditions.

Obtained from fixed supply, by grid-No.1 resistor, by cathode resistor, or by combination methods.

**SPECIAL RATINGS AND PERFORMANCE DATA**

**Shock Rating:**

This test is performed (per MIL-E-1C, Par. 4.9.20.5) on a sample lot of tubes from each production run. Tubes are held rigid and are subjected in four different positions to an impact acceleration of 500 g. At the end of this test, tubes will not show permanent or temporary short or open circuits, and are required to meet the following limits:

Useful RF Power Output . . . . . . . . . 42 min. watts

For conditions shown under Characteristics Range Values, Note 4.

**Heater-Cathode Leakage Current:**

See Characteristics Range Values.

The tubes must also meet the established limit for low-frequency vibration (see below).

**Fatigue Rating:**

This test is performed (per MIL-E-1C, Par. 4.9.20.6) on a sample lot of tubes from each production run. Tubes are rigidly mounted and subjected to 2.5 g vibrational acceleration at 25 cycles per second for 32 hours in each of three positions. At the end of this test, tubes will not show permanent or temporary short or open circuits, and are required to meet the following limits:

Useful RF Power Output . . . . . . . . . 42 min. watts

For conditions shown under Characteristics Range Values, Note 4.

**Heater-Cathode Leakage Current:**

See Characteristics Range Values.

The tubes must also meet the established limit for low-frequency vibration (see below).

**Low-Frequency Vibration Performance:**

This test is performed (per MIL-E-1C, Par. 4.9.19.1) on a sample lot of tubes from each production run under the following conditions: Heater voltage of 6.3 volts, plate-saturation voltage of 250 volts, grid-No.2 voltage of 20 volts, grid-No.1 voltage varied to give a plate current of 10 milliamperes, plate load resistor of 2000 ohms, and frequency of 25 cycles per second with a fixed amplitude of 0.040 inch (total excursion 0.080 inch). The rms output voltage across the plate load resistor as a result of vibration of the tube must not exceed 500 millivolts.

**Variable-Frequency Vibration Performance (1):**

This test is performed (per MIL-E-1C, Par. 4.9.20.3) on a sample lot of tubes from each production run. Tubes are vibrated in each of 3 positions through frequency range of from 10 to 50 cycles per second and back to 10 cycles per second. The tubes are vibrated under the same conditions as specified for Low-Frequency Vibration Performance. During the test, the tubes will not show an rms output voltage across the plate load resistor in excess of 500 millivolts.

At the end of this test, the tubes will not show tap or permanent interelectrode shorts or defects that cause the tubes to be inoperative. The tubes will exhibit no pronounced mechanical resonance during this test.

**Variable-Frequency Vibration Performance (2):**

This test is performed on a sample lot of tubes from each production run. Tubes are vibrated in each of 3 positions, perpendicular and parallel to major axis of the tube, and parallel to longitudinal axis of the tube. Frequency range from 50 to 120 cycles per second at a fixed acceleration of 10 g under the same voltage, current and load conditions as specified for Low-Frequency Vibration Performance.

During this test, the tubes will not show an rms output voltage across the plate load resistor in excess of 500 millivolts. The tubes will exhibit no pronounced mechanical resonance below 120 cycles per second during this test.

---


---

**Rating Chart I for Type 7212 in Class C Telephony Service.**
OPERATING CONSIDERATIONS

The maximum ratings in the tabulated data are established in accordance with the following definition of the Absolute-Maximum Rating System for rating electron devices.

Absolute-Maximum ratings are limiting values of operating and environmental conditions applicable to any electron device of a specified type as defined by its published data, and should not be exceeded under the worst probable conditions.

The device manufacturer chooses these values to provide acceptable serviceability of the device, taking no responsibility for equipment variations, environment variations, and the effects of changes in operating conditions due to variations in device characteristics.

**Fig. 1** - Average Plate Characteristics of Type 7212.

**Fig. 2** - Average Characteristics of Type 7212.

**Fig. 3** - Average Characteristics of Type 7212.
The equipment manufacturer should design so that initially and throughout life no absolute-maximum value for the intended service is exceeded with any device under the worst probable operating conditions with respect to supply-voltage variation, equipment component variation, equipment control adjustment, load variation, signal variation, environmental conditions, and variations in device characteristics.

The rated plate voltage and grid-No. 2 voltage of this tube are high enough to be dangerous to the user. Care should be taken during adjustment of circuits, especially when exposed circuit parts are at high dc potential.

Fig. 4 - Average Plate Characteristics of Type 7212.

Fig. 5 - Average Characteristics of Type 7212.

Fig. 6 - Average Characteristics of Type 7212.

Devices and arrangements shown or described herein may use patents of RCA or others. Information contained herein is furnished without responsibility by RCA for its use and without prejudice to RCA's patent rights.
**Fig. 7** - Average Characteristics of Type 7212 with Triode Connection.

**BASE DRAWING**

**SMALL-WAFER OCTAL WITH "770" SLEEVE**

**JETEC GROUP 1, No. GB-150**

BASE-PIN POSITIONS ARE HELD TO TOLERANCES SUCH THAT ENTIRE LENGTH OF PINS WILL ENTER FLAT-PLATE GAUGE (JETEC NO. GB-150) HAVING THICKNESS OF 1/4" AND EIGHT HOLES WITH DIAMETERS OF 0.1030" ± 0.0005" SO LOCATED ON A 0.6870" ± 0.0005" DIAMETER CIRCLE THAT THE DISTANCE ALONG THE CHORD BETWEEN ANY TWO ADJACENT HOLE CENTERS IS 0.2629" ± 0.0005".

PIN FIT IN GAUGE IS SUCH THAT GAUGE TOGETHER WITH SUPPLEMENTARY WEIGHT TOTALING 2 POUNDS WILL NOT BE LIFTED WHEN PINS ARE WITHDRAWN.

**SOCKET CONNECTIONS**

**Bottom View**

PIN 1: CATHODE, GRID NO.3, INTERNAL SHIELD

PIN 2: HEATER

PIN 3: GRID No.2

PIN 4: SAME AS PIN 1

PIN 5: GRID No.1

PIN 6: SAME AS PIN 1

PIN 7: HEATER

PIN 8: BASE SLEEVE

CAP: PLATE

AA' = PLANE OF ELECTRODES

BEC