6CM6
BEAM POWER TUBE
9-PIN MINIATURE TYPE

GENERAL DATA

Electrical:
Heater, for Unipotential Cathode:
Voltage ..................... 6.3 ................ ac or dc volts
Current ..................... 0.45 ....................... amp
Direct Interelectrode Capacitances (Approx.):*
Grid No.1 to plate .............. 0.7  μf
Grid No.1 to cathode, grid No.3,
grid No.2, and heater .......... 8  μf
Plate to cathode, grid No.3,
grid No.2, and heater .......... 8.5  μf

Mechanical:
Operating Position ...................... Any
Maximum Overall Length ............. 2-5/8"
Maximum Seated Length ............. 2-3/8"
Length, Base Seat to Bulb Top (Excluding tip) .. 2" ± 3/32"
Diameter ..................... 0.750" to 0.875"
Dimensional Outline ................ See General Section
Bulb .................................. T6-1/2
Base .................................. Small-Button Noval 9-Pin (JETEC No.E9-1)
Basing Designation for BOTTOM VIEW ................ 9CK

Pin 1 - Grid No.2
Pin 2 - No Connection
Pin 3 - Grid No.1
Pin 4 - Heater
Pin 5 - Heater
Pin 6 - Grid No.1
Pin 7 - Cathode, Grid No.3
Pin 8 - No Connection
Pin 9 - Plate

AMPLIFIER — Class A1

Maximum Ratings, Design-Center Values:
PLATE VOLTAGE ..................... 315 max. volts
GRID-No.2 (SCREEN-GRID) VOLTAGE .......... 285 max. volts
GRID-No.2 INPUT ..................... 2 max. watts
PLATE DISSIPATION .................. 12 max. watts
PEAK HEATER-CATHODE VOLTAGE:
Heater negative with respect to cathode 200 max. volts
Heater positive with respect to cathode 200 max. volts

Typical Operation and Characteristics:
Plate Voltage ..................... 180 250 315 volts
Grid-No.2 Voltage ..................... 180 250 225 volts
Grid-No.1 (Control-Grid) Voltage ... -8.5 -12.5 -13 volts
Peak AF Grid-No.1 Voltage ........ 8.5 12.5 13 volts
Zero-Signal Plate Current .......... 29 45 34 ma
Max.-Signal Plate Current .......... 30 47 35 ma
Zero-Signal Grid-No.2 Current ...... 3 4.5 2.2 ma
Max.-Signal Grid-No.2 Current ...... 4 7 6 ma

*: See next page.

9-58
ELECTRON TUBE DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY
TENTATIVE DATA 1
### BEAM POWER TUBE

<table>
<thead>
<tr>
<th>Plate Resistance (Approx.)</th>
<th>50000</th>
<th>50000</th>
<th>80000</th>
<th>ohms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transconductance</td>
<td>3700</td>
<td>4100</td>
<td>3750</td>
<td>µmhos</td>
</tr>
<tr>
<td>Load Resistance</td>
<td>5500</td>
<td>5000</td>
<td>8500</td>
<td>ohms</td>
</tr>
<tr>
<td>Total Harmonic Distortion</td>
<td>8</td>
<td>8</td>
<td>12</td>
<td>%</td>
</tr>
<tr>
<td>Max.-Signal Power Output</td>
<td>2</td>
<td>4.5</td>
<td>5.5</td>
<td>watts</td>
</tr>
</tbody>
</table>

#### Maximum Circuit Values:
- Grid-No.1-Circuit Resistance:
  - For fixed-bias operation: 0.1 max. megohm
  - For cathode-bias operation: 0.5 max. megohm

### VERTICAL-DEFLECTION AMPLIFIER

**Maximum Ratings, Design-Center Values Except as Noted:***

*For operation in a 525-line, 30-frame system*

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<th>DC PLATE VOLTAGE</th>
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<td>PEAK POSITIVE-PULSE PLATE VOLTAGE (Absolute maximum)</td>
<td>2000 max. volts</td>
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<tr>
<td>DC GRID-No.2 (SCREEN-GRID) VOLTAGE</td>
<td>285 max. volts</td>
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<tr>
<td>PEAK NEGATIVE-PULSE GRID-No.1 (CONTROL-GRID) VOLTAGE</td>
<td>250 max. volts</td>
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**CATHODE CURRENT:**
- Peak: 120 max. ma
- DC: 40 max. ma

| GRID-No.2 INPUT | 1.75 max. watts |
| PLATE DISSIPATION | 8 max. watts |

**PEAK HEATER-CATHODE VOLTAGE:**
- Heater negative with respect to cathode: 200 max. volts
- Heater positive with respect to cathode: 200 max. volts

#### Maximum Circuit Values:
- Grid-No.1-Circuit Resistance: 2.2 max. megohms

### VERTICAL-DEFLECTION AMPLIFIER

**Triode Connection**

**Maximum Ratings, Design-Center Values Except as Noted:**

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**CATHODE CURRENT:**
- Peak: 120 max. ma
- DC: 40 max. ma

| PLATE DISSIPATION | 9 max. watts |

**PEAK HEATER-CATHODE VOLTAGE:**
- Heater negative with respect to cathode: 200 max. volts
- Heater positive with respect to cathode: 200 max. volts

See next page.
**BEAM POWER TUBE**

**Characteristics:**
- Plate Voltage: 250 volts
- Grid-No.1 Voltage: -12.5 volts
- Amplification Factor: 9.8
- Plate Resistance (Approx.): 1960 ohms
- Transconductance: 5000 μmhos
- Plate Current: 49.5 ma
- Grid-No.1 Voltage (Approx.) for plate ma. = 0.5: -37 volts

**Maximum Circuit Values:**
- Grid-No.1-Circuit Resistance: 2.2 max. megohms

- Without external shield.
- The dc component must not exceed 100 volts.
- As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission.
- This rating is applicable where the duration of the voltage pulse does not exceed 15 per cent of one vertical scanning cycle. In a 525-line, 30-frame system, 15 per cent of one vertical scanning cycle is 2.5 milliseconds.
- Under no circumstances should this absolute value be exceeded.
- Grid-No.2 connected to plate.

**CURVES**

shown under Types 6V6 and 6V6-GT, within ratings, also apply to the 6CM6