

50BM8 is a miniature type triode-pentode designed for use as an AF amplifier by triode section and AF power amplifier by pentode section in radio receivers.

**BASE** E9-1 Small Button Noval 9-Pin

**MOUNTING POSITION**—Any

**HEATER**

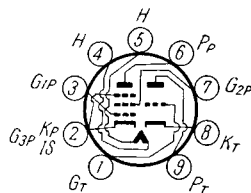
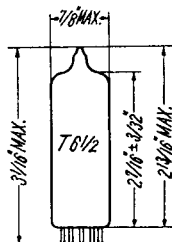
Voltage ..... 50 (V)

Current .....0.1 (A)

**DIRECT INTERELECTRODE CAPACITANCES**

(Without Shield)

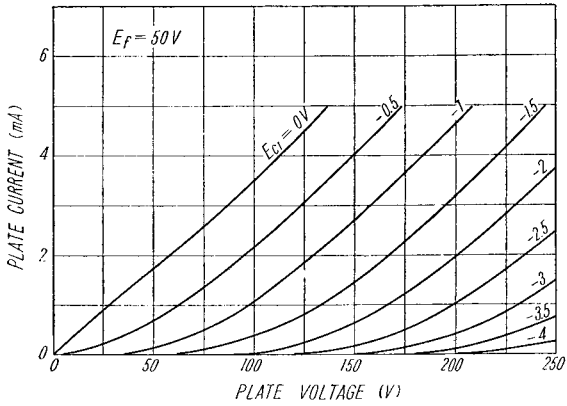
|                     | Triode Unit | Pentode Unit  |
|---------------------|-------------|---------------|
| Grid No. 1 to plate | 4.2         | 0.3 max. (pF) |
| Input               | 2.7         | 9.3 (pF)      |
| Output              | 4.3         | 8.0 (pF)      |



| MAXIMUM RATINGS<br>(Design Center Values) |             |                  | TYPICAL OPERATION              |             |                       |
|---|-------------|------------------|--------------------------------|-------------|-----------------------|
|   | Triode Unit | Pentode Unit     |                                | Triode Unit | Pentode Unit          |
| Plate Voltage                             | 250         | 250 (V)          | Plate Voltage                  | 100         | 100 (V)               |
| Grid No. 2 Voltage                        | 250         | 250 (V)          | Grid No. 2 Voltage             | —           | 100 (V)               |
| Plate Dissipation                         | 1           | 7 (W)            | Grid No. 1 Voltage             | 0           | —6 (V)                |
| Grid No. 2 Dissipation                    | —           | 1.8 (W)          | Grid No. 1 Input Voltage (RMS) | —           | 3.8 (V)               |
| Total Cathode Current                     | 15          | 50 (mA)          | Plate Current                  | 3.5         | 26 (mA)               |
| Peak Heater—Cathode Voltage               |             |                  | Grid No. 1 Current             | —           | 5.0 (mA)              |
| Heater negative with respect to cathode   |             | 200 (V)          | Transconductance               | 2,500       | 6,800 ( $\mu\Omega$ ) |
| Heater positive with respect to cathode   |             | 200 $\Delta$ (V) | Plate Resistance (Approx.)     | —           | 15 (k $\Omega$ )      |
| Grid No. 1 Circuit Resistance             |             |                  | Amplification Factor           | 70          | —                     |
| with Fixed Bias                           | 1           | 1 (M $\Omega$ )  | Load Resistance                | —           | 3.9 (k $\Omega$ )     |
| with Cathode Bias                         | 3           | 2 (M $\Omega$ )  | Max.-Signal Power Output       | —           | 1.05 (W)              |
| with Grid Bias                            | 22          | — (M $\Omega$ )  | Total Harmonic Distortion      | —           | 10 (%)                |

$\Delta$  The D.C. component must not exceed 100 volts.

**AVERAGE PLATE CHARACTERISTICS**  
(Triode Unit)



**AVERAGE PLATE CHARACTERISTICS**  
(Pentode Unit)

