

# PLATE CHARACTERISTICS OF VACUUM TUBES

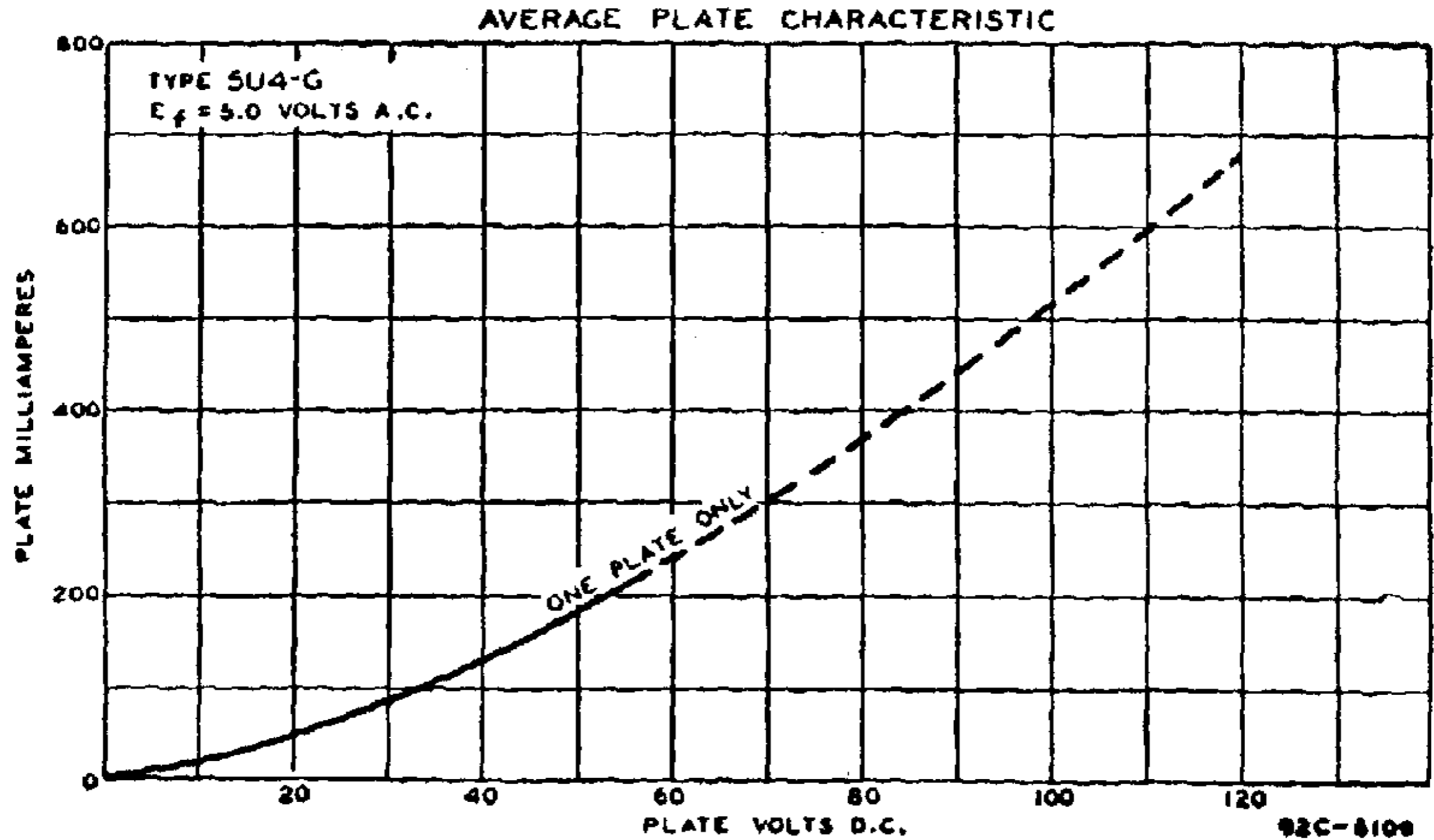


FIG. B-1. 5U4-G diode.

AVERAGE PLATE CHARACTERISTICS

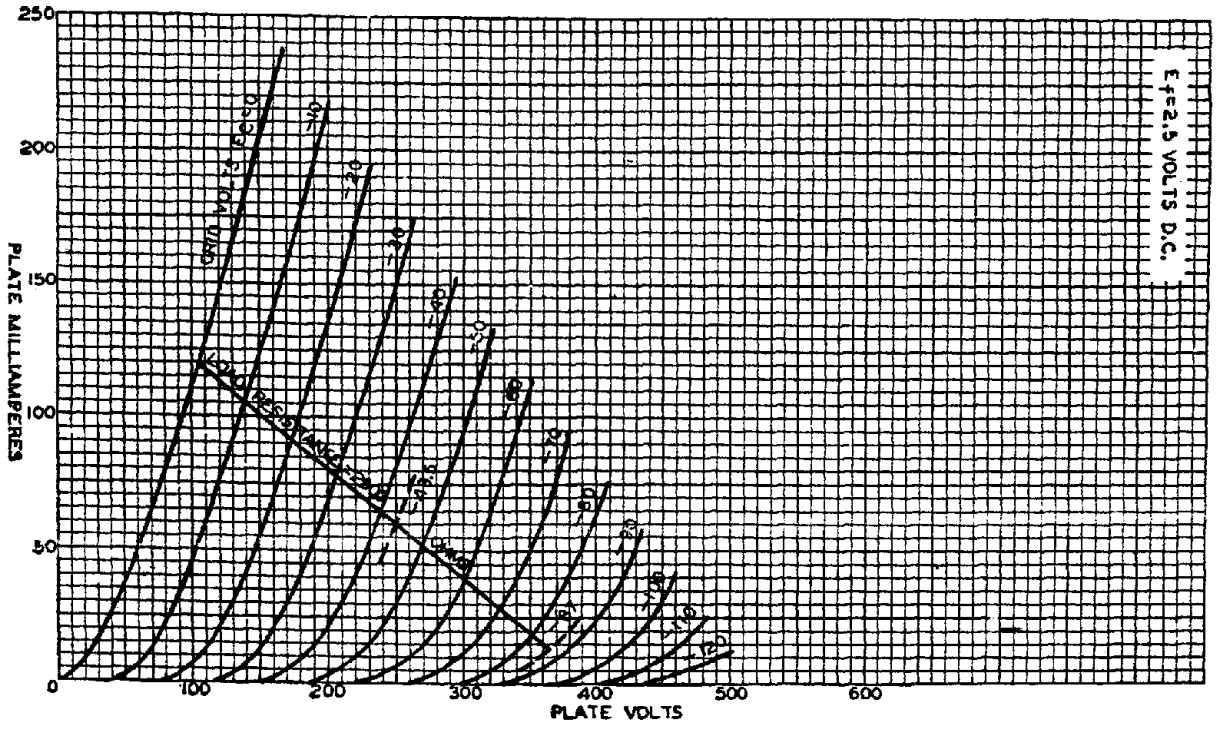


Fig. B-2. 2A3 triode. Class A amplifier:  $E_b = 250$  volts,  $E_c = -45$  volts,  $I_b = 60$  ma,  $\mu = 4.2$ ,  $r_p = 800$  ohms,  $g_m = 5,250$   $\mu$ mhos. Interelectrode capacitances:  $C_1 = 7$   $\mu$ mf,  $C_2 = 5$   $\mu$ mf,  $C_3 = 16$   $\mu$ mf.

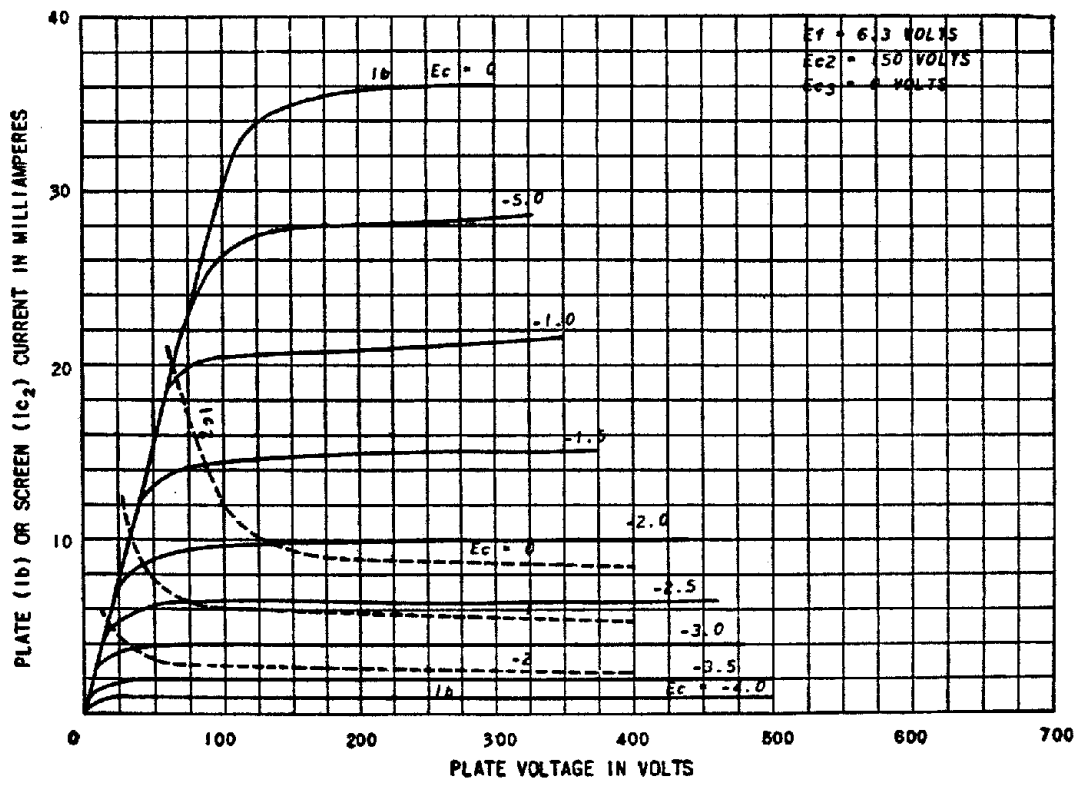


Fig. B-3. 6AC7 pentode. Class A amplifier:  $E_b = 300$  volts,  $E_{c2} = 150$  volts,  $E_{c1} = -2$  volts,  $I_b = 10$  ma,  $I_{c2} = 2.5$  ma,  $r_p = 1$  megohm approx,  $g_m = 9,000$   $\mu$ mhos. Interelectrode capacitances:  $C_1 = 11$   $\mu$ mf,  $C_2 = 55$   $\mu$ mf,  $C_3 = .015$   $\mu$ mf.

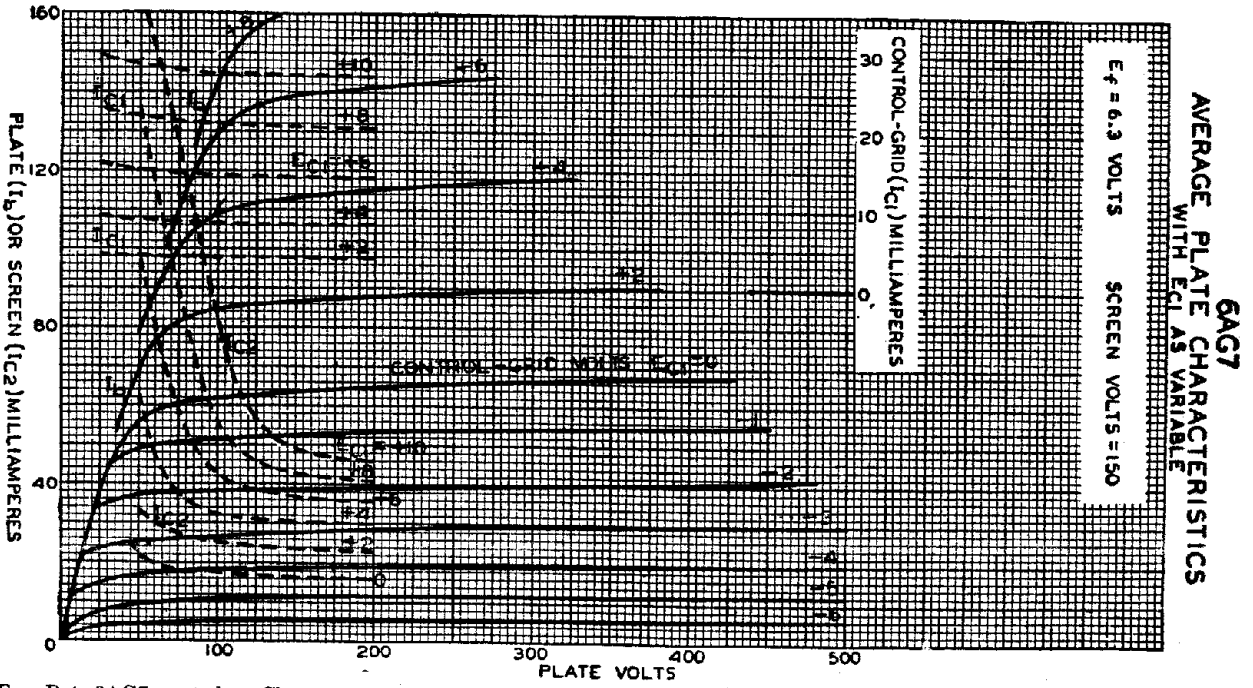


FIG. B-4. 6AG7 pentode. Class A amplifier:  $E_b = 300$  volts,  $E_{c2} = 150$  volts,  $E_c = -3$  volts,  $I_b = 30$  ma,  $I_{c2} = 7$  ma,  $r_p = 0.13$  megohm approx,  $g_m = 11,000 \mu\text{mhos}$ . Interelectrode capacitances:  $C_1 = 13 \mu\text{mf}$ ,  $C_2 = 7.5 \mu\text{mf}$ ,  $C_3 = 0.06 \mu\text{mf}$ .

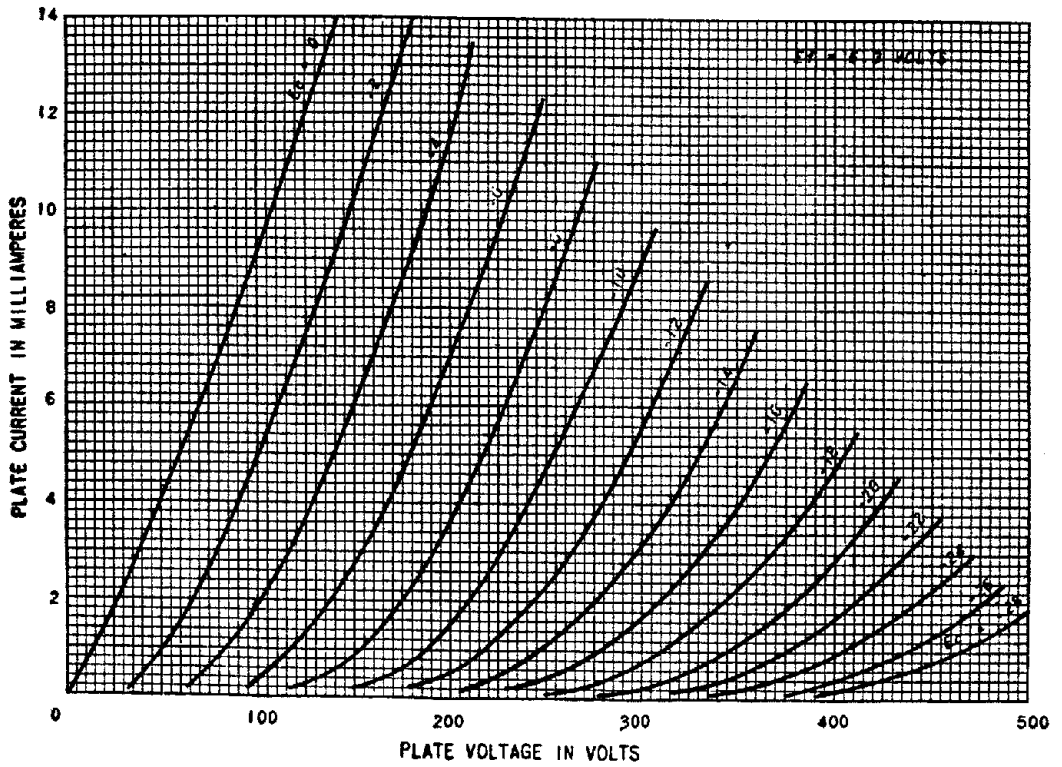


FIG. B-5. 6C5 triode. Class A amplifier:  $E_b = 250$  volts,  $E_c = -8$  volts,  $I_b = 8$  ma,  $\mu = 20$ ,  $r_p = 10,000$  ohms,  $g_m = 2,000 \mu\text{mhos}$ . Interelectrode capacitances:  $C_1 = 3 \mu\text{mf}$ ,  $C_2 = 11 \mu\text{mf}$ ,  $C_3 = 2.0 \mu\text{mf}$ .

TRIODE CONNECTION

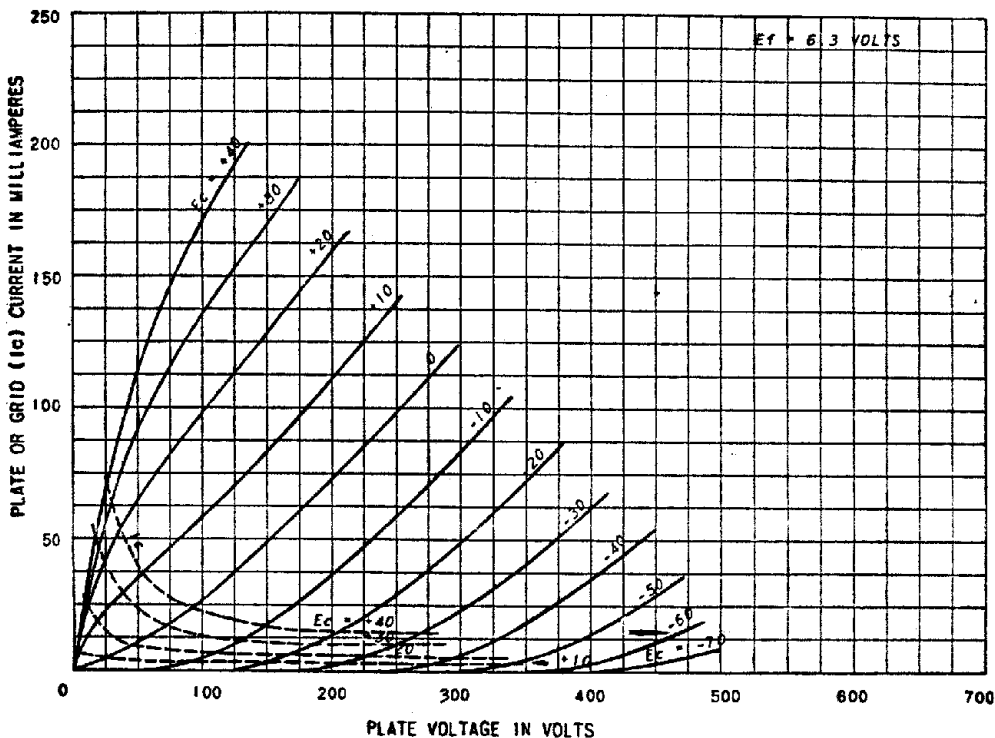


FIG. B-6. 6F6 triode (screen connected to plate). Class A amplifier:  $E_b = 250$  volts,  $E_c = -20$  volts,  $I_b = 31$  ma,  $\mu = 6.8$ ,  $r_p = 2,600$  ohms,  $g_m = 2,600$   $\mu$ mhos.

PENTODE CONNECTION

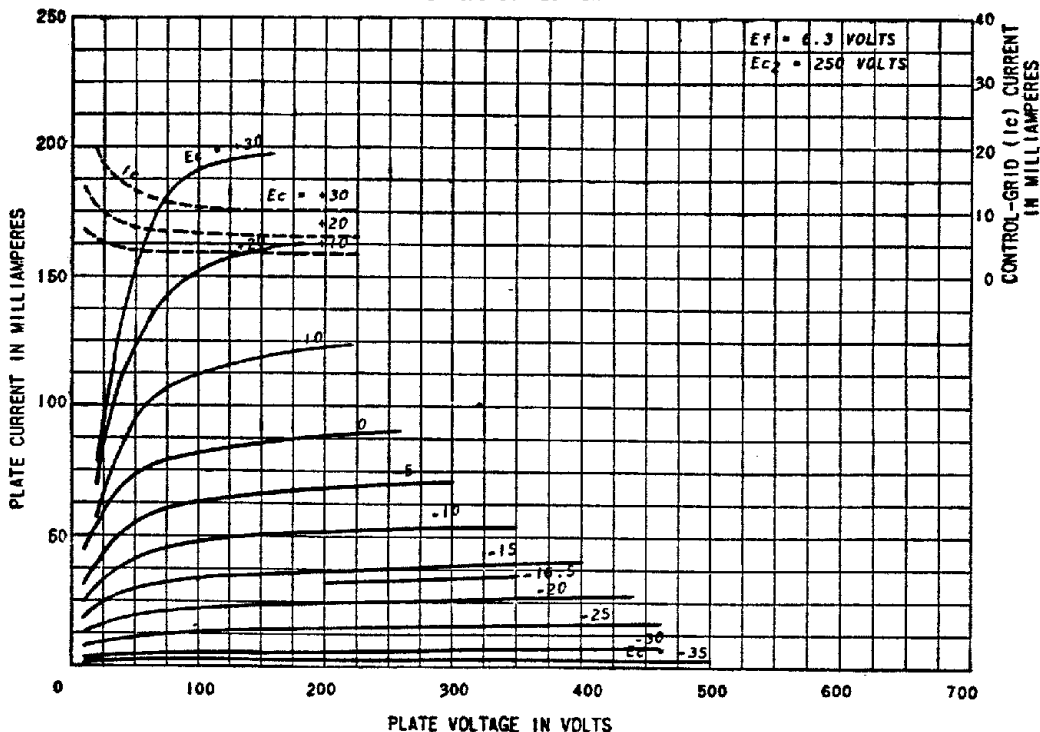


FIG. B-7. 6F6 pentode. Class A amplifier:  $E_b = 250$  volts,  $E_{c1} = 250$  volts,  $E_c = -16.5$  volts,  $I_b = 34$  ma,  $r_p = 80,000$  ohms approx,  $g_m = 2,500$   $\mu$ mhos. Interelectrode capacitances:  $C_1 = 6.5$   $\mu$ fd,  $C_2 = 13$   $\mu$ fd,  $C_3 = 0.2$   $\mu$ fd.

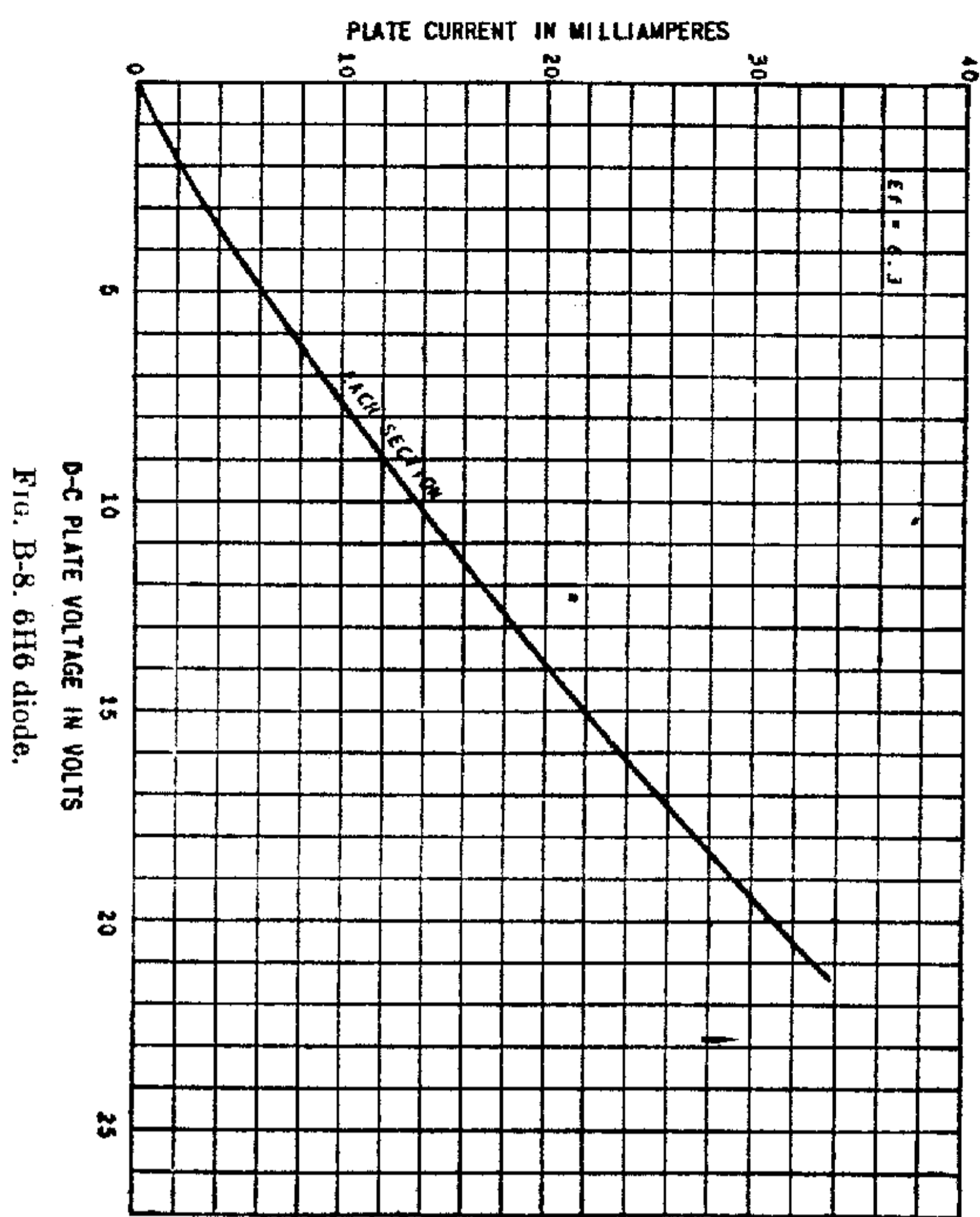


FIG. B-8. 6H6 diode.

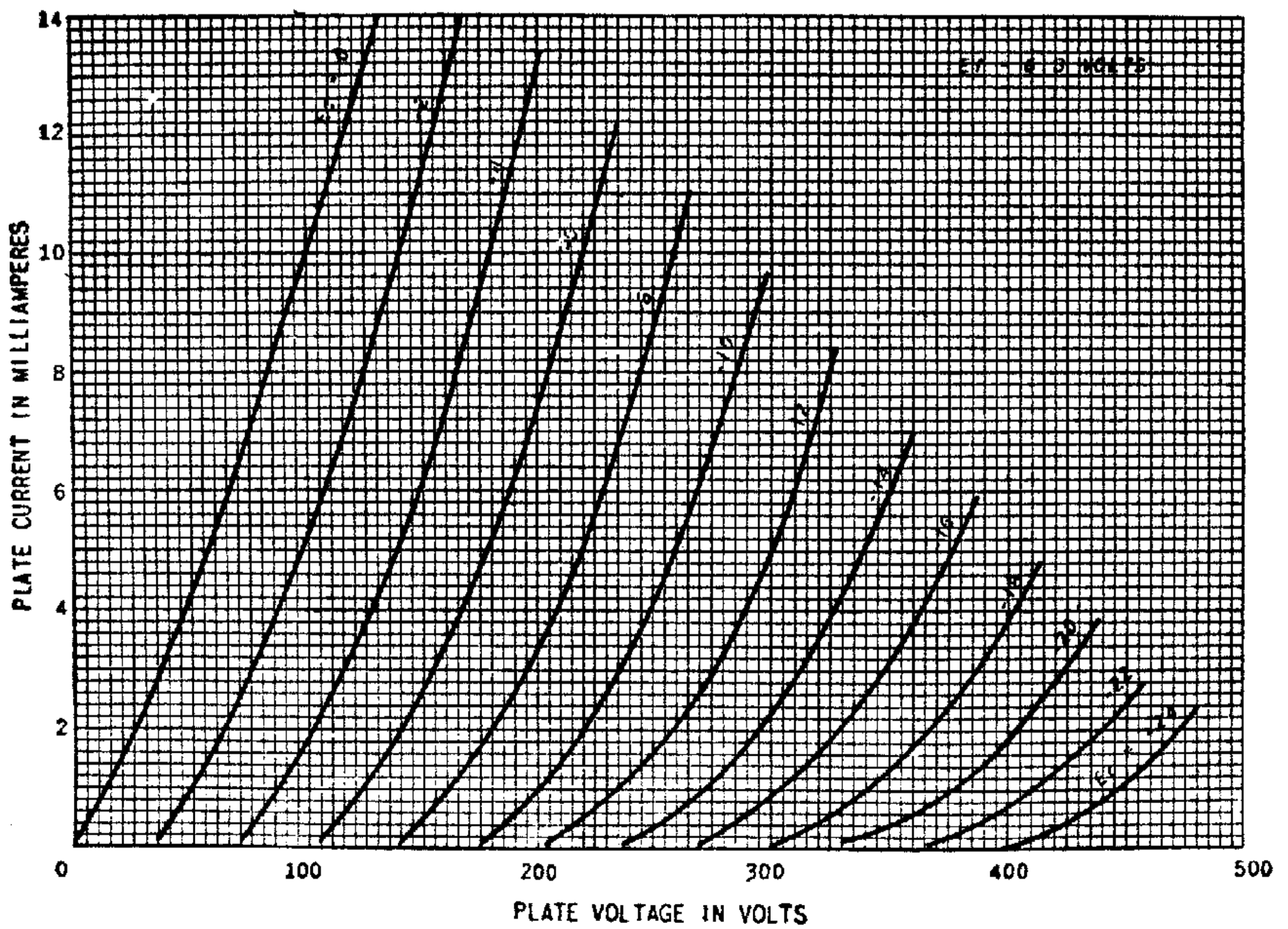


FIG. B-9. 6J5 triode. Class A amplifier:  $E_b = 250$  volts,  $E_c = -8$  volts,  $I_b = 9$  ma,  $\mu = 20$ ,  $r_p = 7,700$  ohms,  $g_m = 2,600$   $\mu$ mhos. Interelectrode capacitances:  $C_1 = 3.4$   $\mu$ mf,  $C_2 = 3.6$   $\mu$ mf,  $C_3 = 3.4$   $\mu$ mf.

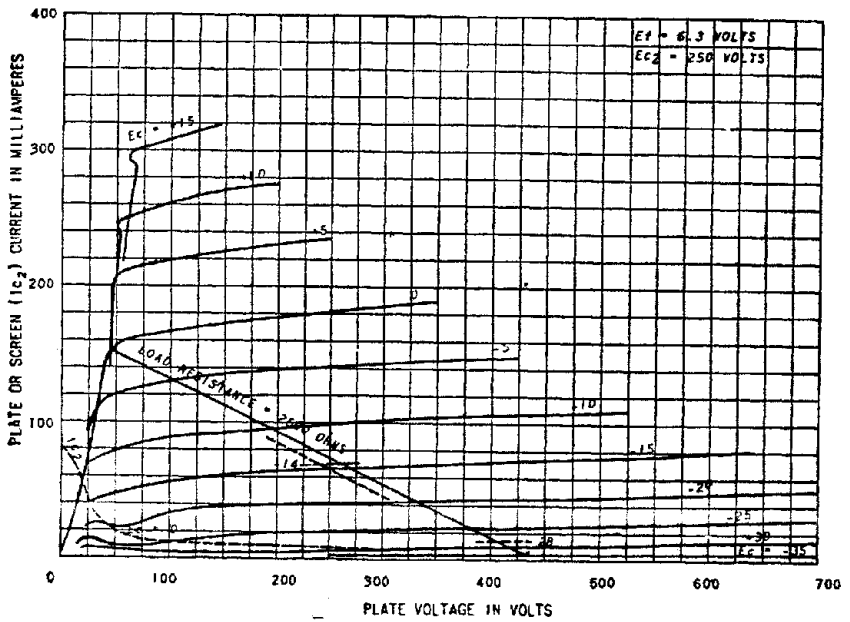


FIG. B-10. 6L6 beam tube. Class A amplifier:  $E_b = 350$  volts,  $E_{c2} = 250$  volts,  $E_{c1} = -18$  volts,  $I_b = 54$  ma,  $I_{c2} = 2.5$  ma,  $r_p = 33,000$  ohms approx,  $\mu_m = 5,200$   $\mu$ hos. Interelectrode capacitances:  $C_1 = 10$   $\mu$ f,  $C_2 = 12$   $\mu$ f,  $C_3 = 0.4$   $\mu$ f.

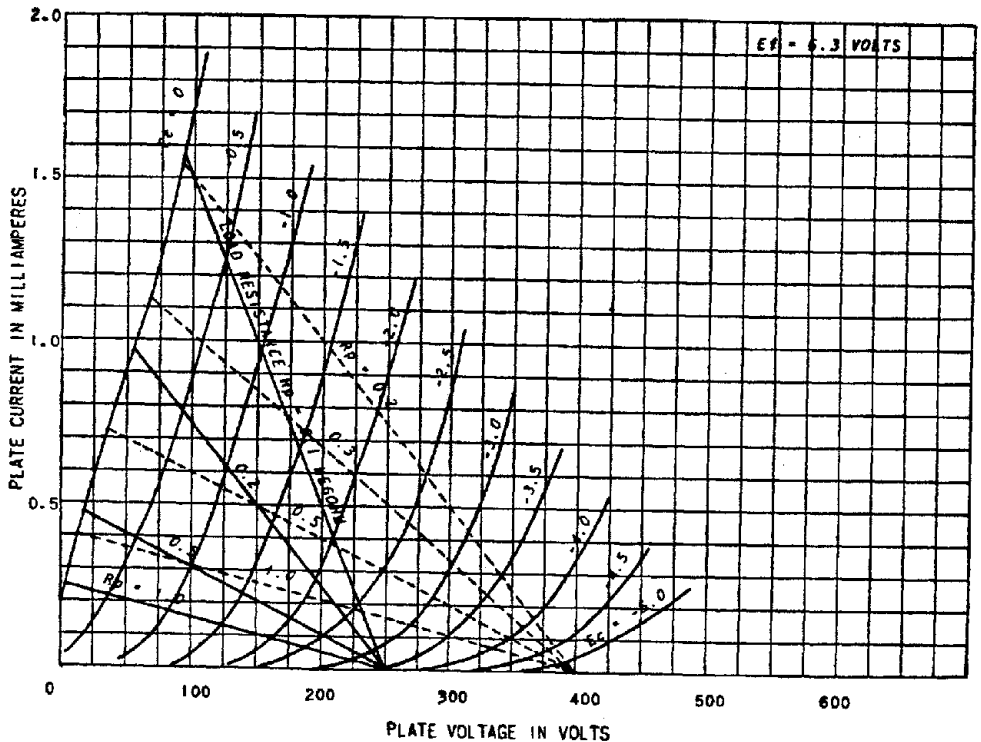


FIG. B-11. 6SF5 triode. Class A amplifier:  $E_b = 250$  volts,  $E_{c1} = -2$  volts,  $I_b = 0.9$  ma,  $\mu = 100$ ,  $r_p = 66,000$  ohms,  $\mu_m = 1,500$   $\mu$ hos. Interelectrode capacitances:  $C_1 = 4.0$   $\mu$ f,  $C_2 = 3.6$   $\mu$ f,  $C_3 = 2.4$   $\mu$ f.

# AVERAGE PLATE CHARACTERISTICS

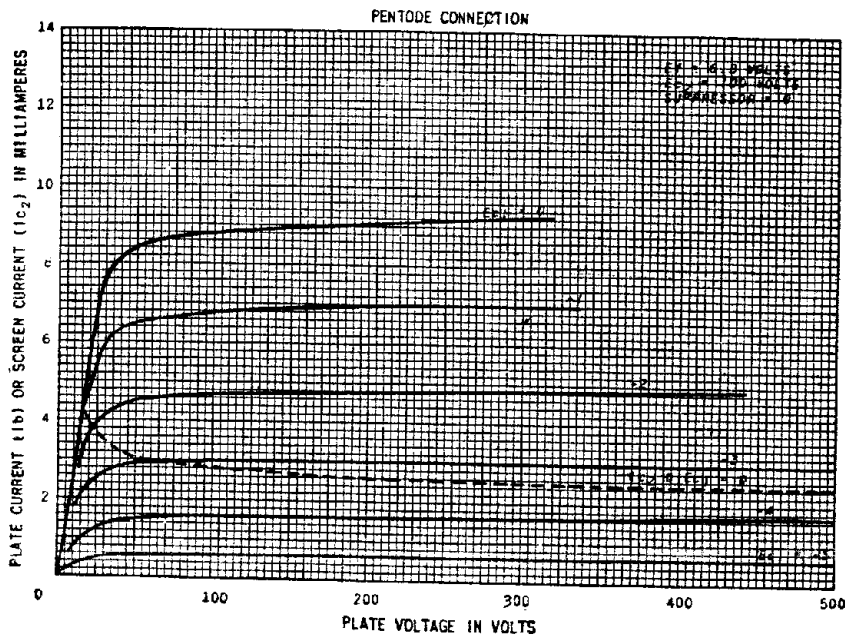


Fig. B-12. 6SJ7 pentode. Class A amplifier:  $E_b = 250$  volts,  $E_{c2} = 100$  volts,  $E_c = -3$  volts,  $I_b = 3$  ma,  $I_{c2} = 0.2$  ma,  $r_p = 1.0$  megohm approx,  $g_m = 1,650$   $\mu$ mhos. Interelectrode capacitances:  $C_1 = 6.0$   $\mu$ mf,  $C_2 = 7.0$   $\mu$ mf,  $C_3 = 0.005$   $\mu$ mf.

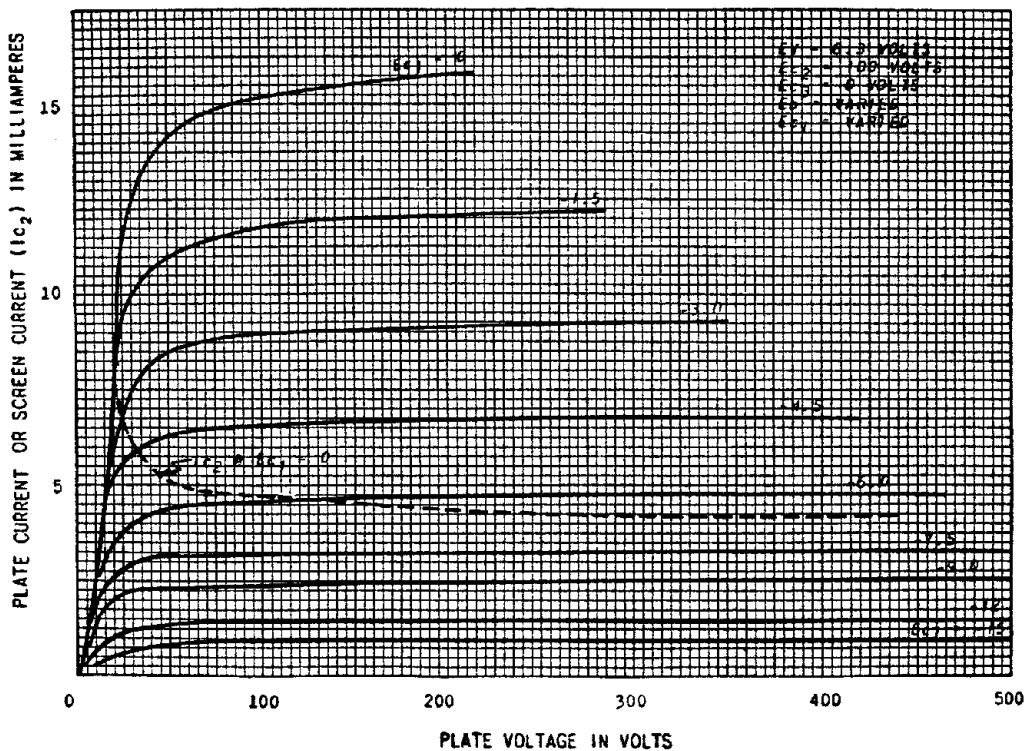


Fig. B-13. 6SK7 variable-mu pentode. Class A amplifier:  $E_b = 250$  volts,  $E_{c2} = 100$  volts,  $E_c = -3$  volts,  $I_b = 9.2$  ma,  $I_{c2} = 2.6$  ma,  $r_p = 0.8$  megohm approx,  $g_m = 2,000$   $\mu$ mhos. Interelectrode capacitances:  $C_1 = 6.0$   $\mu$ mf,  $C_2 = 7.0$   $\mu$ mf,  $C_3 = .003$   $\mu$ mf.

EACH UNIT

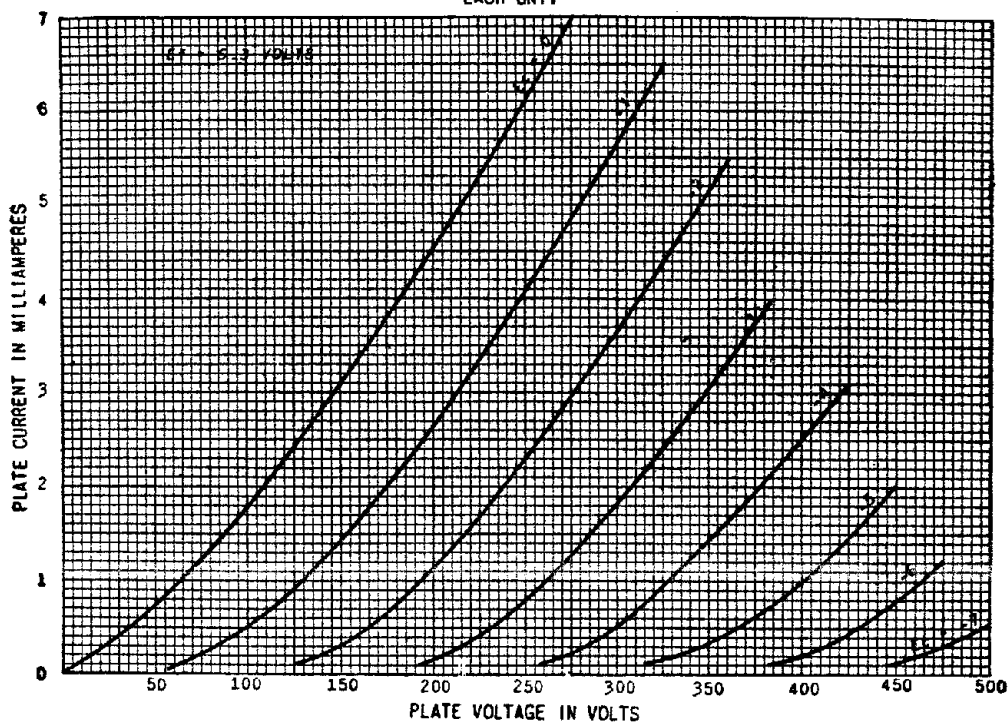


FIG. B-14. 6SL7-GT dual triode. Class A amplifier:  $E_b = 250$  volts,  $E_c = -2$  volts,  $I_b = 2.3$  ma,  $\mu = 70$ ,  $r_p = 44,000$  ohms,  $g_m = 1,600$   $\mu$ mhos. Interelectrode capacitances: Unit 1:  $C_1 = 3.0$   $\mu$ mf,  $C_2 = 3.8$   $\mu$ mf,  $C_3 = 2.8$   $\mu$ mf. Unit 2:  $C_1 = 3.4$   $\mu$ mf,  $C_2 = 3.2$   $\mu$ mf,  $C_3 = 2.8$   $\mu$ mf.

EACH UNIT

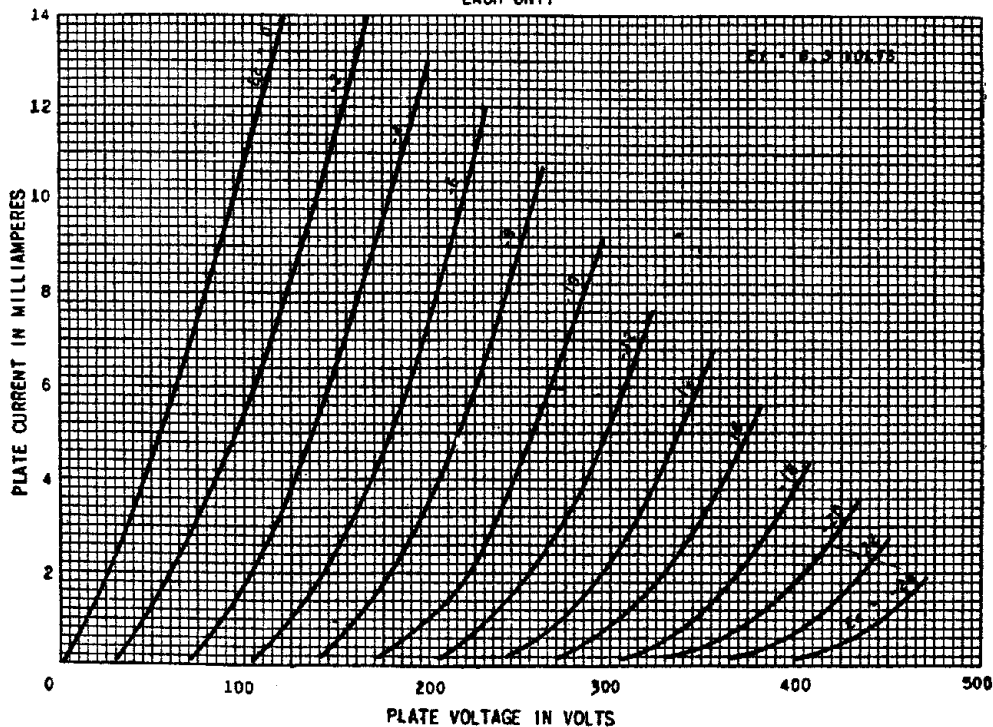


FIG. B-15. 6SN7-GT dual-triode. Class A amplifier:  $E_b = 250$  volts,  $E_c = -8$  volts,  $I_b = 9$  ma,  $\mu = 20$ ,  $r_p = 7,700$  ohms,  $g_m = 2,600$   $\mu$ mhos. Interelectrode capacitances: Unit 1:  $C_1 = 3.2$   $\mu$ mf,  $C_2 = 3.4$   $\mu$ mf,  $C_3 = 4$   $\mu$ mf. Unit 2:  $C_1 = 3.8$   $\mu$ mf,  $C_2 = 2.6$   $\mu$ mf,  $C_3 = 4$   $\mu$ mf.



PENTODE CONNECTION

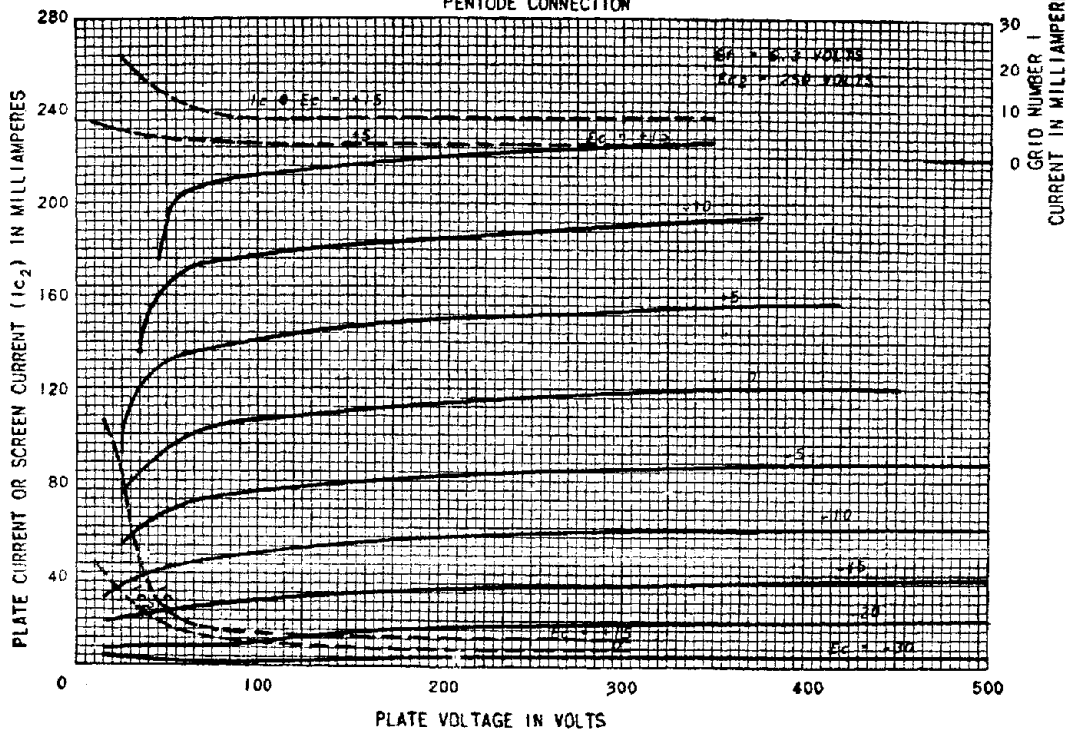


FIG. B-16. 6V6 beam tube. Class A amplifier:  $E_b = 250$  volts,  $E_{c2} = 250$  volts,  $E_c = -12.5$  volts,  $I_b = 45$  ma,  $I_{c2} = 4.5$  ma,  $r_p = 52,000$  ohms approx,  $g_m = 4,100 \mu\text{mhos}$ . Interelectrode capacitances:  $C_1 = 10 \mu\text{mf}$ ,  $C_2 = 11 \mu\text{mf}$ ,  $C_3 = 0.3 \mu\text{mf}$ .

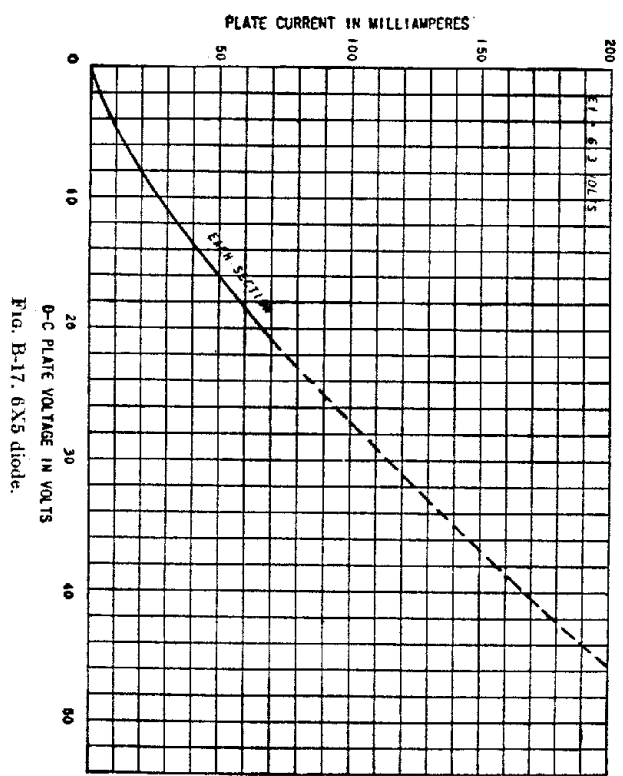


FIG. B-17. 6X5 diode.