

# TYPE 342A WATER COOLED TRIODE

RELEASE NO. 405

APRIL 30, 1945

**Filament—Tungsten**

Filament voltage.....	20.0 volts, a.c.
Nominal filament current.....	67.0 amperes
Average thermionic emission.....	10.0 amperes

**Average Direct Interelectrode Capacitances**

Plate to grid.....	27 $\mu\mu\text{f.}$
Grid to filament.....	19 $\mu\mu\text{f.}$
Plate to filament.....	2.5 $\mu\mu\text{f.}$

**Average Characteristics at plate voltage of 15,000 and plate current of 1.30 amperes.**

Amplification factor.....	40
Plate resistance.....	5860 ohms
Grid to plate transconductance.....	6820 micromhos

**Operation****Maximum Ratings**

Max. direct plate voltage.....	20,000 volts
Max. direct plate current.....	2.5 amperes
Max. plate dissipation.....	25,000 watts
Max. grid dissipation.....	400 watts
Max. r-f grid current.....	40 amperes
Max. frequency for the above ratings.....	4 megacycles
Max. plate voltage for upper frequency limit of 16 Mc.....	10,000 volts

**Class B Audio Amplifier or Modulator for Balanced 2 Tube Circuit**

Direct plate voltage.....	15,000	12,500 volts
Grid bias.....	-200	-160 volts
Direct plate current per tube		
No drive.....	0.40	0.35 ampere
Max. drive.....	1.6	1.6 amperes
Plate dissipation, per tube.....	9,000	7,200 watts
Load resistance, plate-to-plate.....	9,600	7,680 ohms
Load resistance, per tube.....	2,400	1,920 ohms
Approximate maximum output—2 tubes.....	30,000	24,000 watts
Recommended power for driving stage.....	1,000	1,000 watts

**Class B Radio-Frequency Amplifier**

Direct plate voltage.....	18,000	12,500 volts
Direct plate current for carrier conditions.....	1.4	1.4 amperes
Grid bias.....	-450	-300 volts
Approx. carrier watts for use with 100% modulation	8,500	5,800 watts

**Class C Radio-Frequency Oscillator or Power Amplifier—Unmodulated**

Direct plate voltage.....	18,000	15,000 volts
Direct plate current.....	2.5	2.5 amperes
Grid bias.....	-675 to -900	-550 to -750 volts
Nominal power output.....	30,000	25,000 watts

**Class C Radio-Frequency Amplifier—Plate Modulated**

Direct plate voltage.....	12,500	10,000 volts
Direct plate current.....	1.2	1.5 amperes
Grid bias.....	-600	-500 volts
Max. direct grid current.....	250	250 milliamperes
Nominal carrier power output.....	10,000	10,000 watts

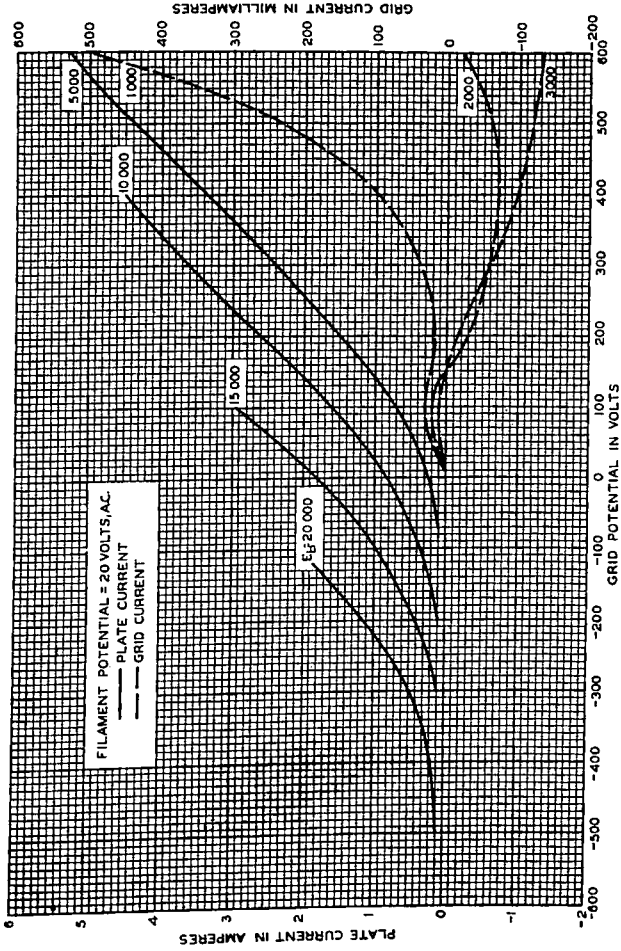


FIG. 2

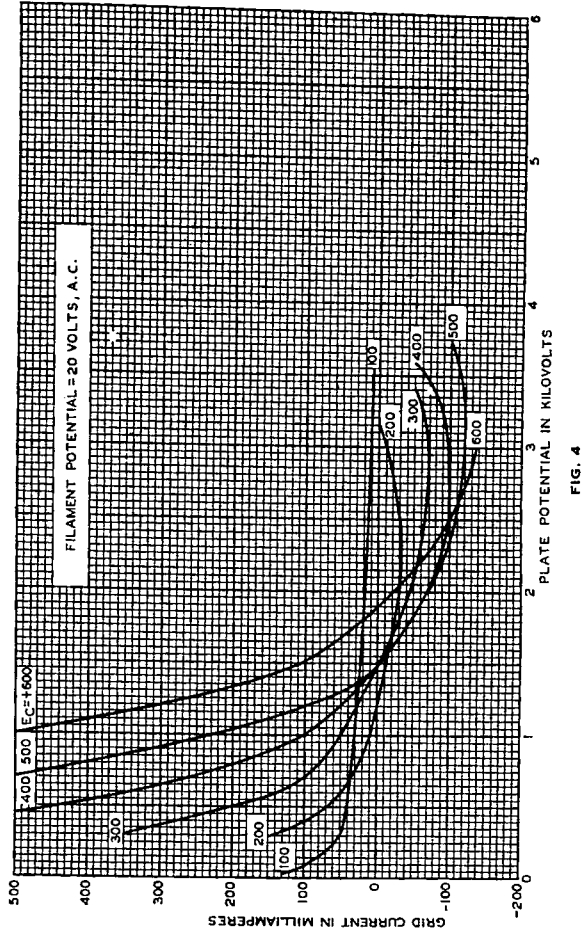


FIG. 4

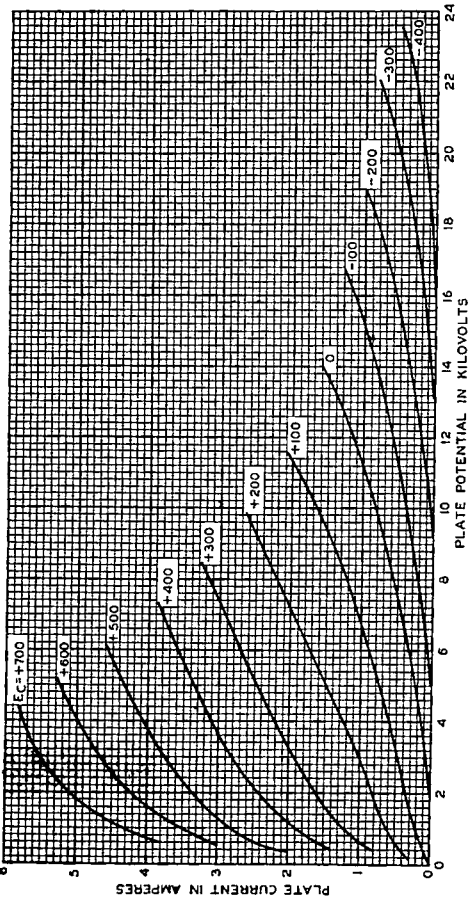


FIG. 3

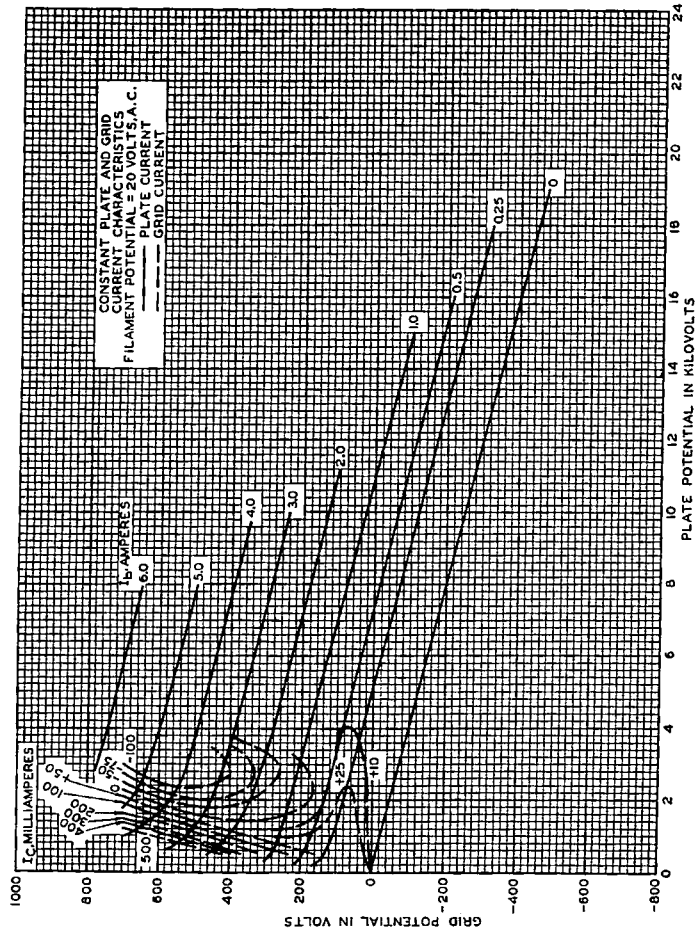


FIG. 5

