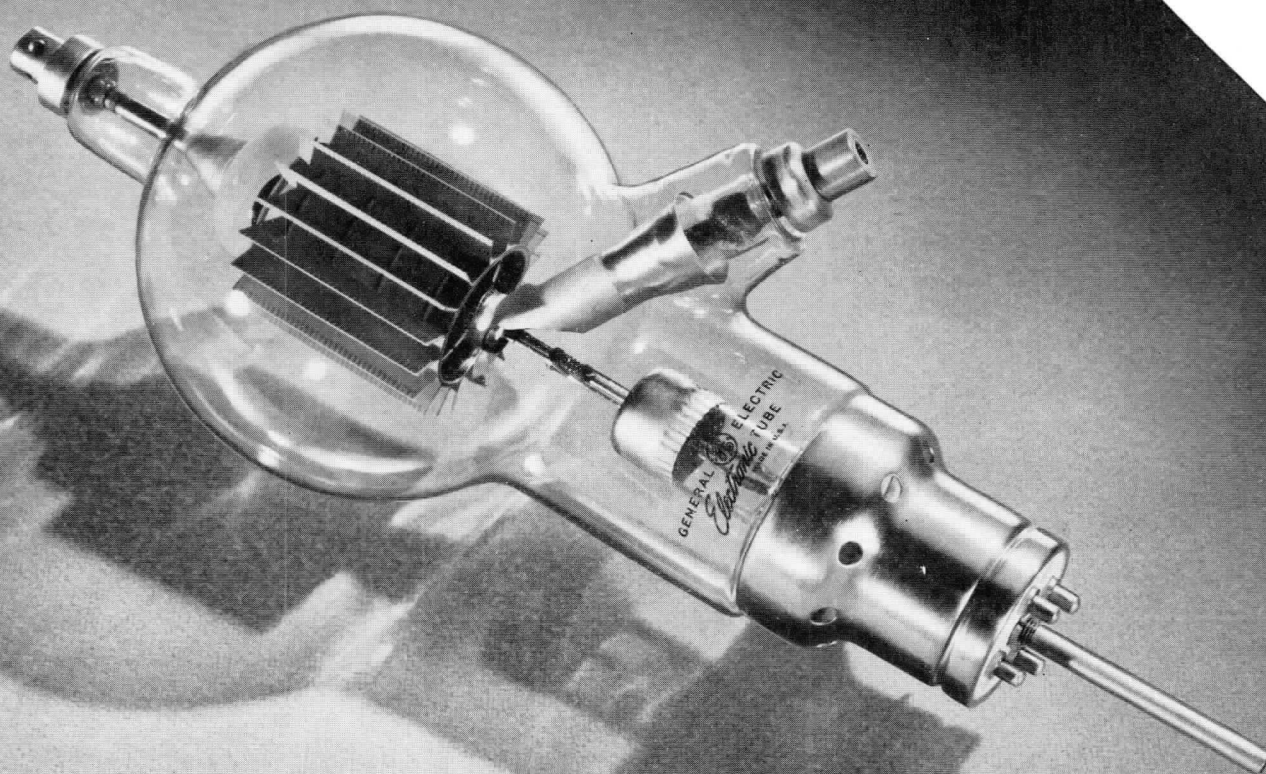




PLIOTRON

DESCRIPTION

The GL-1000T is a three-electrode tube designed for use as a Class B audio-frequency power amplifier and modulator or as a Class C radio-frequency power amplifier and oscillator. The anode is capable of dissipating 1000 watts. Forced-air cooling of the envelope is required under all conditions of

operation and forced-air cooling of the seals, through the tube in the base, is necessary when the GL-1000T is operated at maximum conditions. The cathode is a thoriated-tungsten filament. Maximum ratings apply up to a frequency of 50 megacycles.

TECHNICAL INFORMATION

These data are for reference only. For design information refer to specifications.

GENERAL

Electrical Data

Filament voltage	7.5	volts
Filament current	17.0	amperes
Amplification factor	35	
Direct interelectrode capacitances		
Grid-plate	5.1	uuf
Grid-filament	9.3	uuf
Plate-filament	0.5	uuf
Transconductance, $I_b = 750$ ma, $E_b = 6000$, $E_c = -62$	9050	micromhos

Mechanical Data

Mounting position	vertical, base down
Type of cooling	forced air
Forced-air cooling of the seals is necessary under maximum conditions of operation. Each seal requires approximately 2 cubic feet per minute. The bulb must be cooled with air equivalent to that supplied by an 8-inch electric fan 12 inches from the bulb.	
Net weight, approximate	1.25 pounds


Electronic
TUBE

GENERAL  ELECTRIC

TECHNICAL INFORMATION (CONT'D)

MAXIMUM RATINGS AND TYPICAL OPERATION CONDITIONS

AUDIO-FREQUENCY POWER AMPLIFIER AND MODULATOR—CLASS B

Maximum ratings, absolute values

D-c plate voltage	7500 max	volts
Maximum signal d-c plate current	750 max	milliamperes
Plate dissipation*	1000 max	watts

Typical Operation

Unless otherwise specified, values are for two tubes

D-c plate voltage	4000	5000	6000	volts
D-c grid voltage, approximate	-70	-105	-135	volts
Peak a-f grid input voltage	490	530	600	volts
Zero Signal d-c plate current	.300	.240	.200	amperes
Maximum signal d-c plate current	1.25	1.14	1.11	amperes
Maximum signal driving power, approximate	28	31	35	watts
Effective load resistance, plate to plate	6350	9250	12200	ohms
Maximum signal power output, approximate	3000	3700	4600	watts

RADIO-FREQUENCY POWER AMPLIFIER AND OSCILLATOR—CLASS C TELEGRAPHY

Key-down conditions per tube without modulation**

Maximum ratings, absolute values

D-c plate voltage	7500 max	volts
D-c plate current	750 max	milliamperes
D-c grid current	125 max	milliamperes
Plate dissipation	1000 max	watts

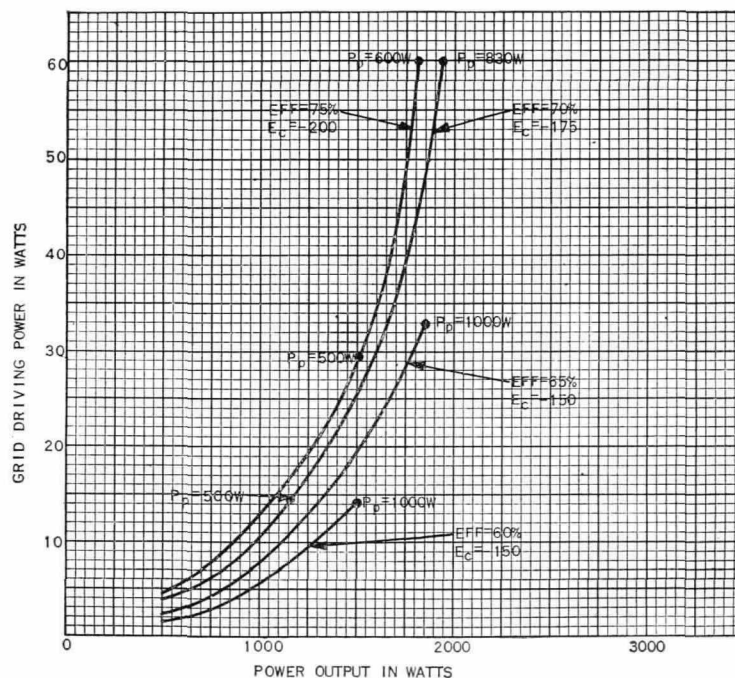
Typical operation

D-c plate voltage	3000	4000	5000	6000	volts
D-c grid voltage	-150	-150	-225	-350	volts
Peak r-f grid input voltage, approximate	350	365	420	610	volts
D-c plate current	750	713	667	667	milliamperes
D-c grid current	90	100	87	110	milliamperes
Plate dissipation	900	1000	1000	1000	watts
Driving power, approximate	30	33	33	60	watts
Plate input	2250	2850	3333	4000	watts
Power output, approximate	1350	1850	2333	3000	watts

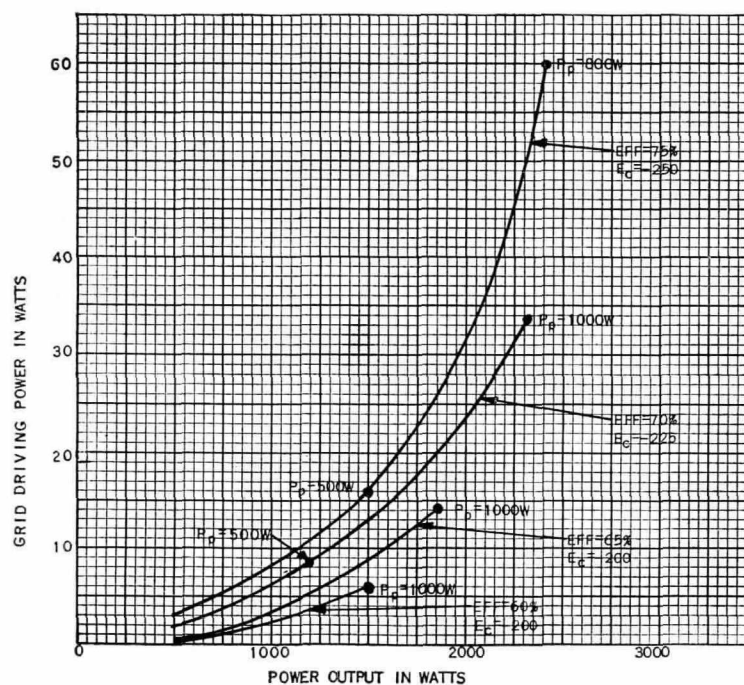
*Averaged over any audio-frequency cycle of sine-wave form.

**Modulation essentially negative may be used if the positive peak of the envelope does not exceed 115 per cent of the carrier conditions.

GL-1000T
DRIVING POWER VS POWER OUTPUT
PLATE VOLTAGE = 4000



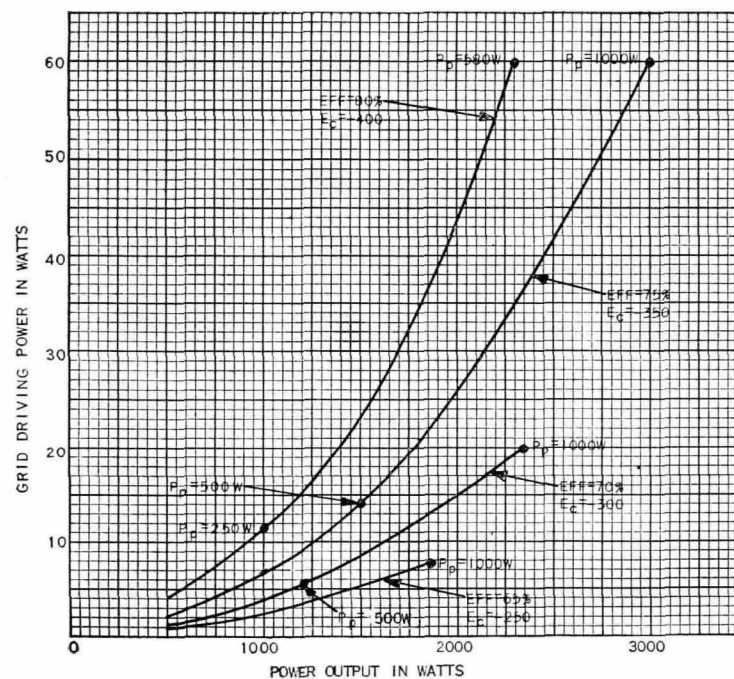
GL-1000T
DRIVING POWER VS POWER OUTPUT
PLATE VOLTAGE = 5000



K-69087-72A337

1-5-50

GL-1000T
DRIVING POWER VS POWER OUTPUT
PLATE VOLTAGE = 6000



K-69087-72A338

1-5-50

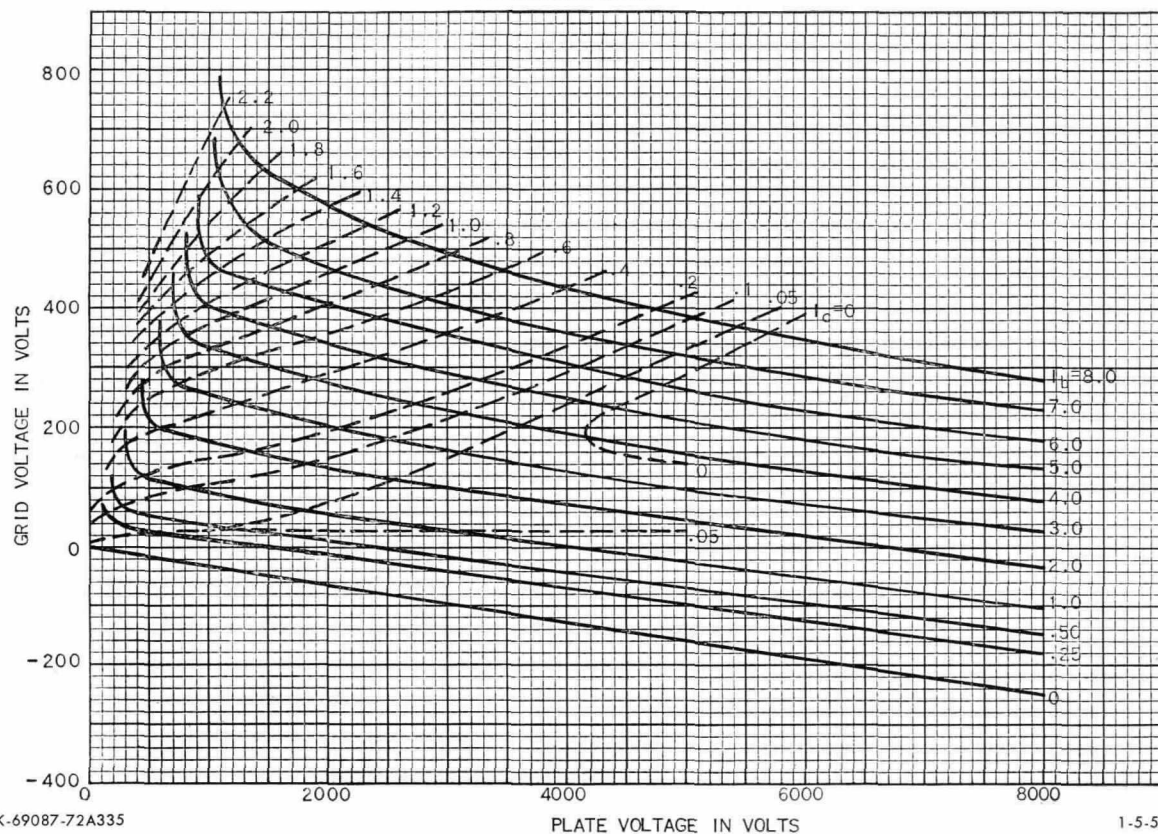
GL-1000T

ETI-314

PAGE 4

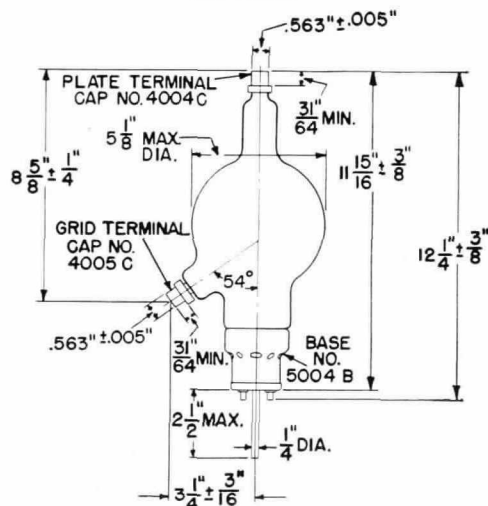
8-50

GL-1000T CHARACTERISTIC



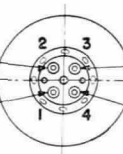
K-69087-72A335

OUTLINE GL-1000T



FILAMENT
TERMINAL

FILAMENT
(CONNECTED
INTERNALLY
TO PIN NO. 4)



FILAMENT
(CONNECTED
INTERNALLY
TO PIN NO. 2)

FILAMENT
TERMINAL

N15163AZ

1-5-50

Tube Divisions, Electronics Department

GENERAL ELECTRIC
Schenectady, N. Y.