



TRIODE

◆ DESCRIPTION

The GL-8002 is a three-electrode transmitting tube designed for use as a radio-frequency power amplifier at high frequencies. Multiple leads for both the filament and grid connectors minimize

the inductance to these electrodes. Maximum ratings may be used up to a frequency of 150 megacycles and reduced ratings up to 300 megacycles.

TECHNICAL INFORMATION

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

GENERAL CHARACTERISTICS

Number of electrodes.....	3
Electrical	
Cathode—Filamentary, tungsten	
Filament voltage.....	16 volts
Filament current.....	38 amperes
Average characteristics, $E_b = 2.4$ kilovolts	$I_b = 0.5$ ampere
	$E_c = 16$ volts
Grid voltage.....	-50 volts
Amplification factor.....	21.5
Direct interelectrode capacitances	
Grid-plate.....	8.7 micromicrofarads
Grid-filament.....	10.2 micromicrofarads
Plate-filament.....	0.90 micromicrofarad
Frequency for maximum ratings.....	150 megacycles

◆ Revised.

Supersedes ETX-200 dated 5-46

GENERAL  ELECTRIC


Electronic
TUBE

TECHNICAL INFORMATION (CONT'D)

Mechanical

Type of cooling	water and forced air
Maximum outlet temperature	70 centigrade
■ Water flow	0.5 1.0 1.5 gal per min
▲ Pressure drop through jacket	1.0 2.5 4.0 pounds per sq in.
Maximum incoming air temperature	50 centigrade
Air flow to bulb from a 1-inch diameter nozzle	8 cu ft per min
Gasket catalog number	5182028P10
Net weight, approximate	1 pound
Shipping weight, approximate	5 pounds
Mounting position	vertical, anode down

MAXIMUM RATINGS AND TYPICAL OPERATING CONDITIONS

CLASS B RADIO-FREQUENCY POWER AMPLIFIER

Carrier conditions per tube for use with a maximum modulation factor of 1.0

D-c plate voltage	3500 volts
D-c plate current	0.6 ampere
Plate input	1800 watts
Plate dissipation	1200 watts

CLASS C RADIO-FREQUENCY POWER AMPLIFIER AND OSCILLATOR, PLATE MODULATED

Carrier conditions per tube for use with a maximum modulation factor of 1.0

D-c plate voltage	2500 volts
D-c grid voltage	-500 volts
D-c plate current	0.5 ampere
D-c grid current	0.1 ampere
Plate input	1250 watts
Plate dissipation	750 watts

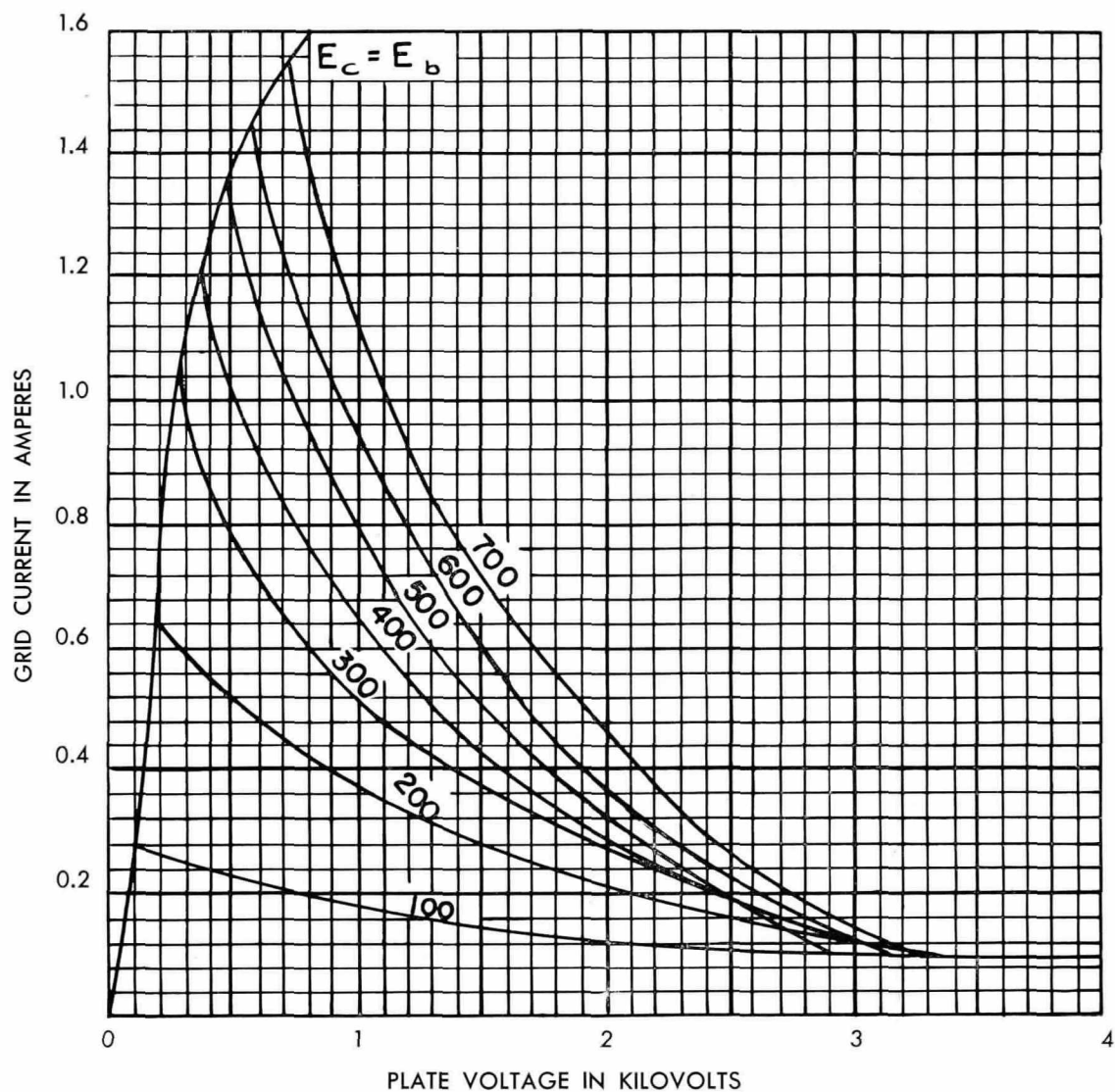
CLASS C RADIO-FREQUENCY AMPLIFIER AND OSCILLATOR, TELEGRAPHY

Key-down conditions per tube without modulation. Essentially negative modulation may be used if the positive peak of the a-f envelope does not exceed 115 per cent of the carrier conditions.

D-c plate voltage	3500 volts
D-c grid voltage	-500 volts
D-c plate current	1.0 ampere
D-c grid current	0.1 ampere
Plate input	3000 watts
Plate dissipation	1200 watts

■ Revised.

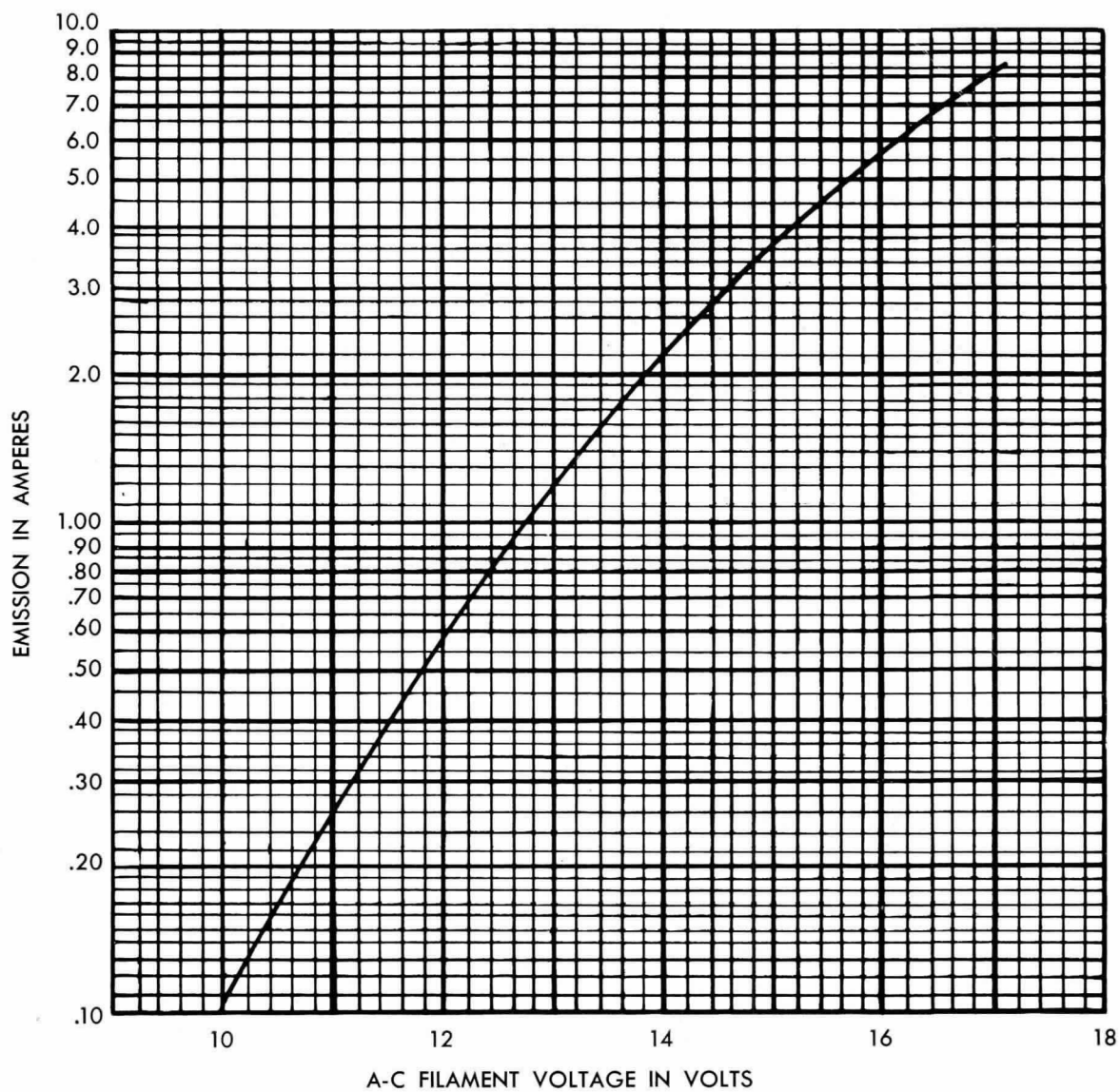
▲ New.



GL-8002 TYPICAL GRID-PLATE TRANSFER CHARACTERISTICS
($E_i = 16.0$ VOLTS A-C)

A graph showing the relationship between Filament Voltage in Volts (X-axis) and Filament Current in Amperes (Y-axis) for a 6X4 tube. The X-axis ranges from 0 to 18 Volts, and the Y-axis ranges from 0 to 45 Amperes. The curve starts at approximately 4 Volts and 18 Amperes and rises to approximately 17 Volts and 42 Amperes.

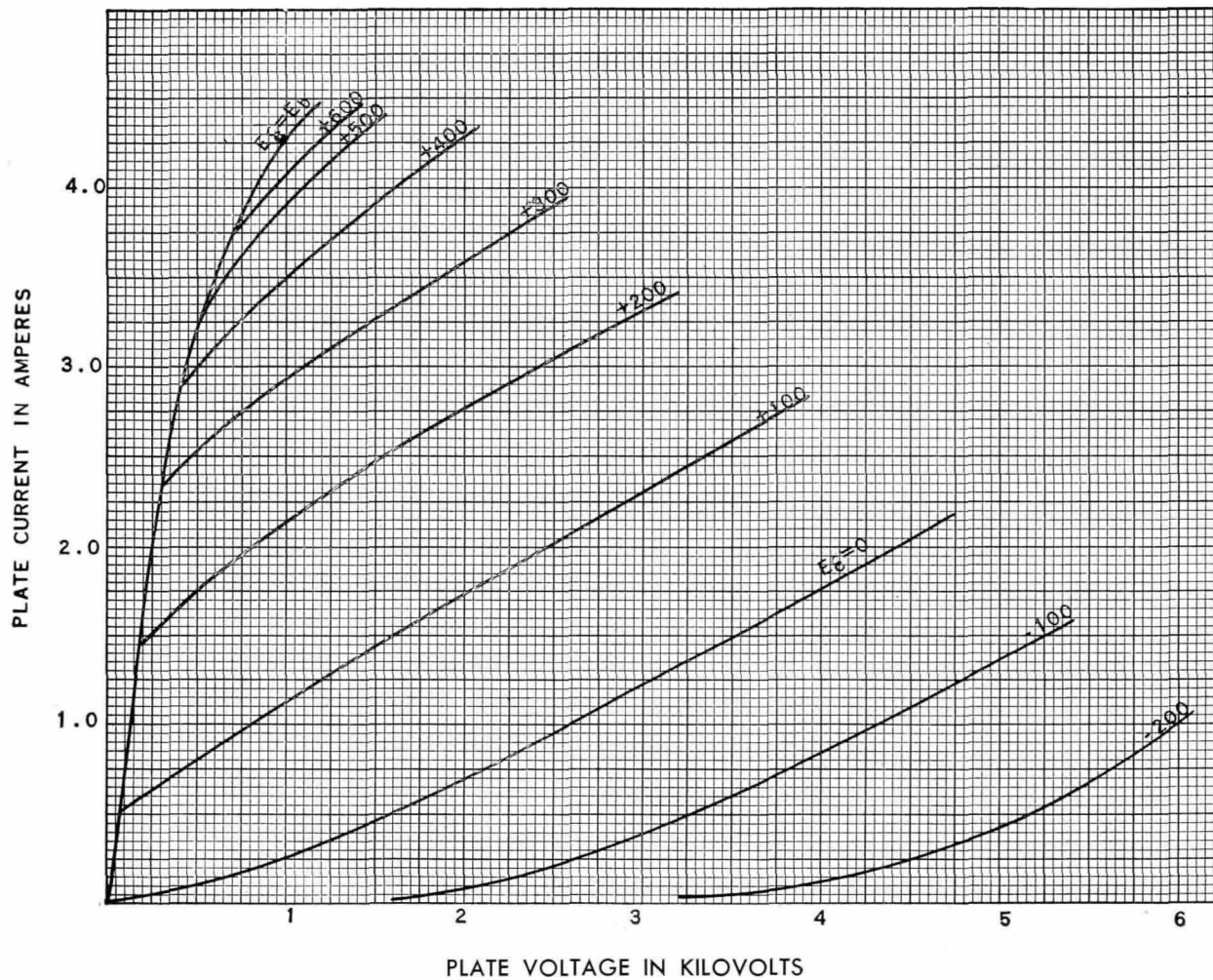
Filament Voltage (Volts)	Filament Current (Amperes)
4	18
6	23
8	28
10	32
12	35
14	38
16	40
17	42



GL-8002 AVERAGE EMISSION CHARACTERISTIC

GL-8002

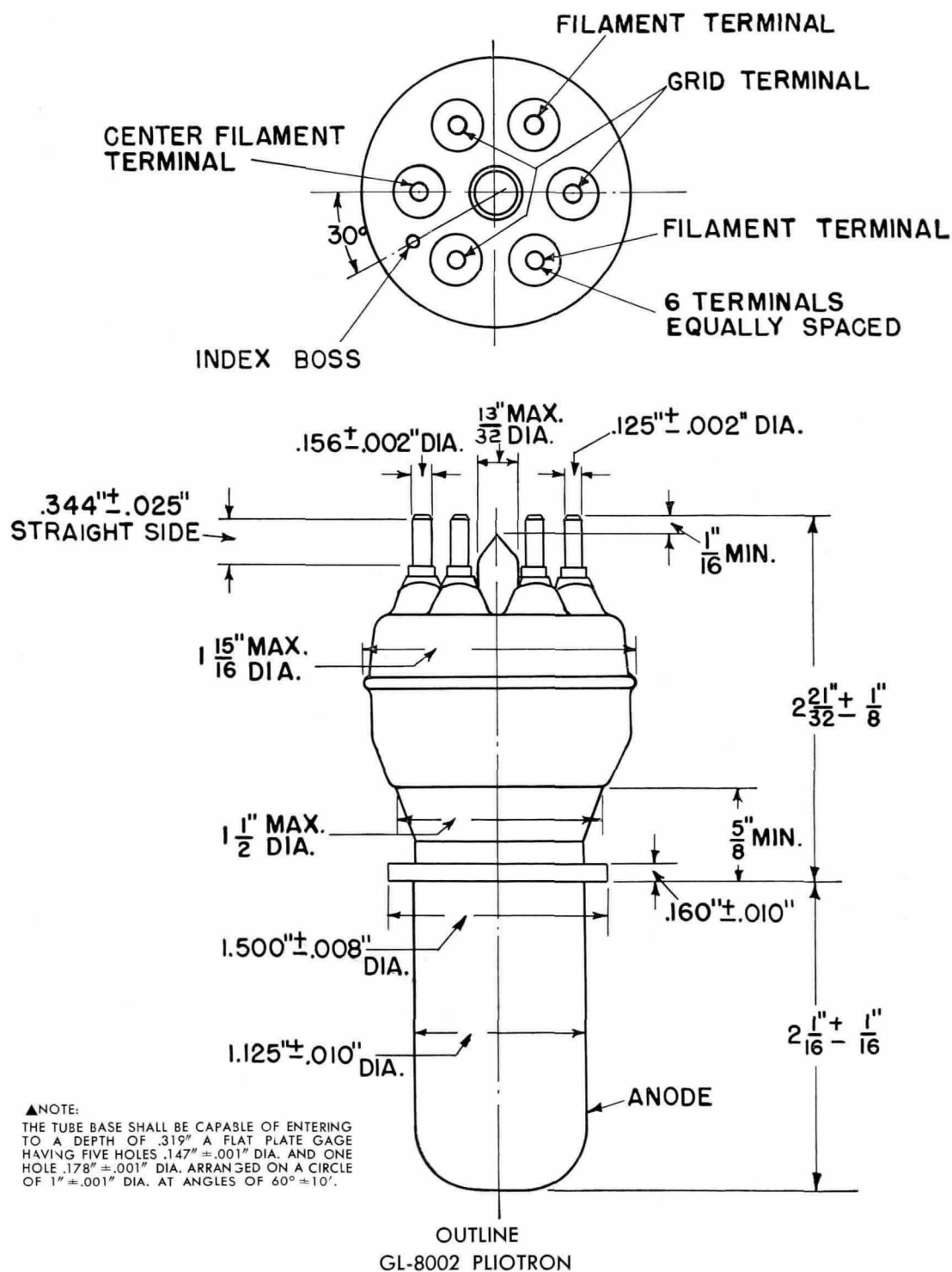
■ AVERAGE PLATE CHARACTERISTICS

 $(E_f = 16.0 \text{ VOLTS A-C})$ 

K-69087-72A101

2-6-47

■ Drawing revised



K-6912329

8-18-45

▲Note added. Drawing not changed otherwise.

Electronics Department
GENERAL ELECTRIC
Schenectady, N. Y.