



PLIOTRON

DESCRIPTION

The GL-5556/PJ-8 is a high-vacuum tube designed for use in amplification and relay applications. The low grid power and uniformity of

characteristics are particularly valuable in many control applications.

◆ TECHNICAL INFORMATION

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

GENERAL CHARACTERISTICS

Number of electrodes	3
Electrical	4.5 volts
Filament voltage	1.1 amperes
Filament current	8.5
Amplification factor, $E_b = 350$ v, $I_b = 19$ ma, $E_c = -20$ v, $E_f = 4.5$ v	1330 micromhos
Grid-plate transconductance	6.7 micromicrofarads
Direct interelectrode capacitance	2.3 micromicrofarads
◆ Grid-plate	2.2 micromicrofarads
◆ Grid-cathode	
◆ Plate-cathode	

◆ Revised.

GENERAL  ELECTRIC

Supersedes ETI-158 dated 4-45


Electronic
TUBE

TECHNICAL INFORMATION (CONT'D)

MAXIMUM RATINGS AND TYPICAL OPERATING CONDITIONS

CLASS A AUDIO-FREQUENCY AMPLIFIER AND MODULATOR

Maximum ratings, absolute values

D-c plate voltage	.350	volts
Plate dissipation	7.5	watts

Typical operation

D-c plate voltage	.350	volts
D-c grid voltage	-30	volts
Peak grid swing, approx	.30	volts
D-c plate current	.9	milliamperes
Plate resistance	8700	ohms
Load resistance	18,000	ohms
Plate power output, 5% second harmonic	0.6	watts

CLASS B RADIO-FREQUENCY POWER AMPLIFIER

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

Maximum ratings, absolute values

D-c plate voltage	.350	volts
D-c plate current	.40	milliamperes
Plate input	.14	watts
Plate dissipation	.10	watts

Typical operation

D-c plate voltage	.350	volts
D-c grid voltage	-40	volts
D-c plate current	.32	milliamperes
Peak r-f grid input	.90	volts
†Driving power, approx	0.1	watt
Plate power output	.2	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

Maximum ratings, absolute values

D-c plate voltage	.350	volts
D-c grid voltage	-150	volts
D-c plate current	.40	milliamperes
D-c grid current, approx	.10	milliamperes
Plate input	.14	watts
Plate dissipation	.7	watts

Typical operation

D-c plate voltage	.300	volts
D-c grid voltage	-100	volts
D-c plate current	.30	milliamperes
D-c grid current, approx	.2	milliamperes
Peak r-f grid input voltage, approx	.140	volts
Driving power, approx	.03	watts
Plate power output	.4	watts

CLASS C RADIO-FREQUENCY POWER AMPLIFIER AND OSCILLATOR

Key-down conditions per tube without modulation*

Maximum ratings, absolute values

D-c plate voltage	.350	volts
D-c grid voltage	-150	volts
D-c plate current	.40	milliamperes
D-c grid current, approx	.10	milliamperes
Plate input	.14	watts
Plate dissipation	.10	watts

Typical operation

D-c plate voltage	.350	volts
D-c grid voltage	-80	volts
D-c plate current	.35	milliamperes
D-c grid current, approx	.2	milliamperes
Peak r-f grid input voltage, approx	.130	volts
Driving power, approx	.025	watts
Plate power output, approx	.6	watts

† At crest of audio-frequency cycle.

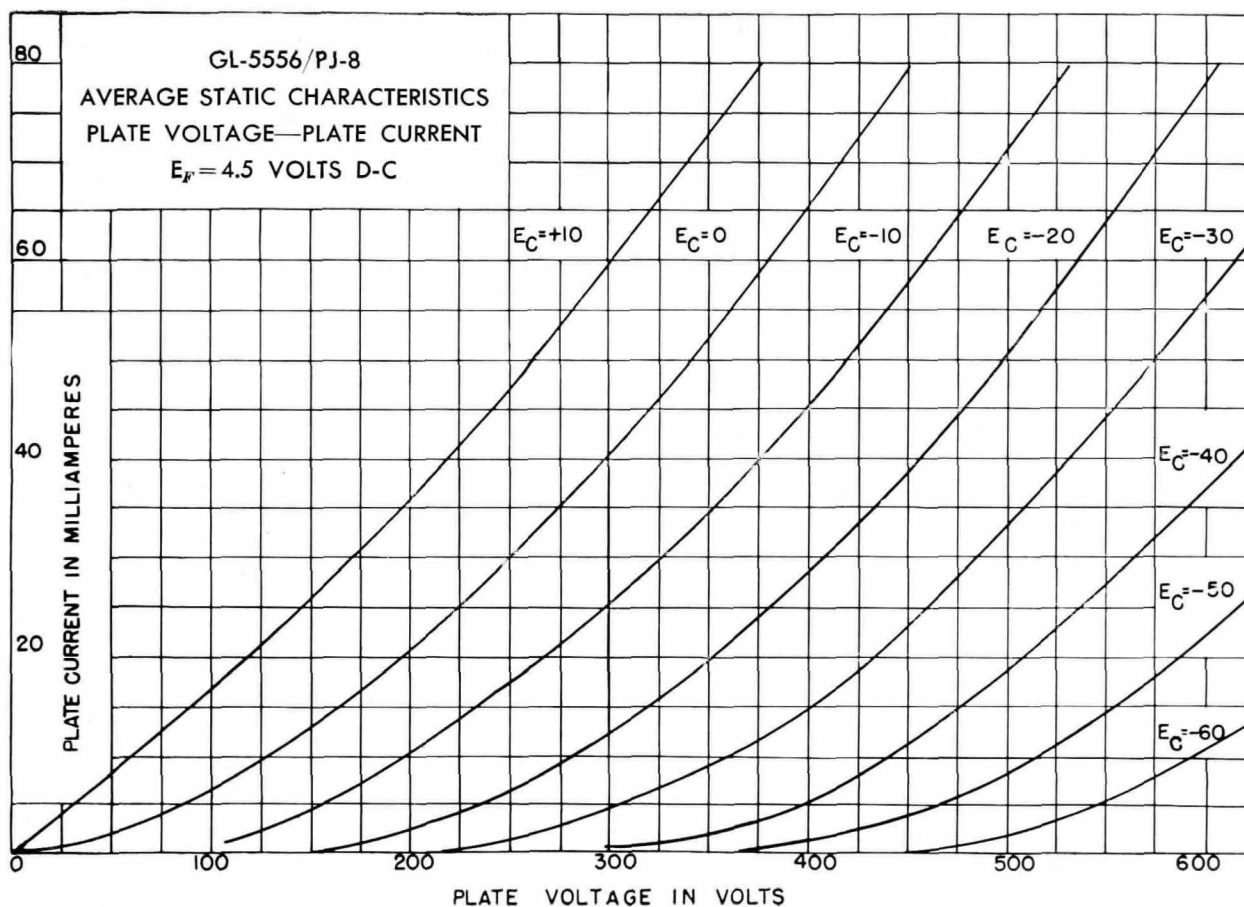
* Modulation, essentially negative, may be used if the positive peak of the audio-frequency envelope does not exceed 115 per cent of the carrier conditions.

APPLICATION NOTES

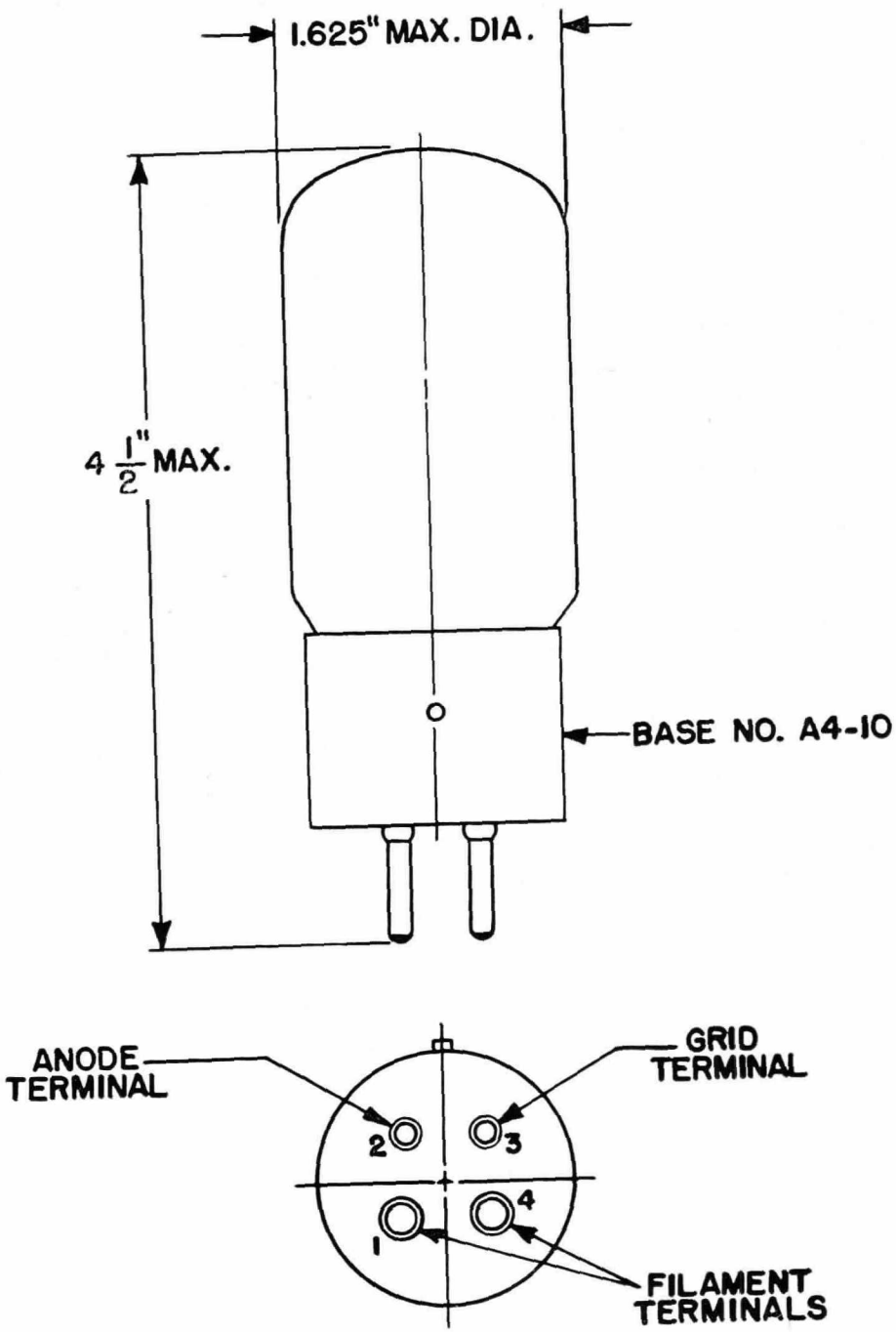
The GL-5556/PJ-8 can be operated at frequencies as high as six megacycles, and may be operated at higher frequencies provided the maximum values of plate voltage and power input are reduced as the frequency is raised (other maximum ratings are the same as shown under **TECHNICAL INFORMATION**). The tabulation below shows highest percentage of maximum plate voltage and power input that can be used up to thirty megacycles for the various classes of service. Special attention should be given to adequate ventilation of the bulb at these frequencies.

Frequency	6	15	30 megacycles
Max permissible percentage of max. rated plate voltage and plate input			
Class B, r-f.	100	85	70 per cent
Class C, plate modulated or unmodulated	100	75	50 per cent

The normal value of grid leak, when the GL-5556/PJ-8 is used as an oscillator or r-f power amplifier (Class C), is in the neighborhood of 10,000 ohms, although this may be replaced by a suitable fixed bias. If self-bias is used, the cathode should be approximately 2000 ohms.



OUTLINE GL-5556/PJ-8 PIOTRON



N-21216AZ
Revised

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