

## BEAM POWER AMPLIFIER

### DESCRIPTION

The GL-6005 is a miniature beam-power amplifier intended for use in medium-power audio-frequency applications. The tube is specially designed to assure dependable life and reliable service under the exacting conditions encountered in mobile and

aircraft applications. Features include mechanical ruggedization and a heater-cathode construction designed to withstand many-thousand cycles of intermittent operation.

### TECHNICAL INFORMATION

#### GENERAL

##### Electrical Data

Cathode.....	Coated Unipotential
Heater Voltage (A-c or D-c).....	6.3 Volts
Heater Current.....	0.45 Ampere

##### Mechanical Data

Peak Impact Acceleration in Any Direction.....	600G
Vibrational Acceleration in Any Direction.....	2.5G
Bulb Temperature at Any Point.....	250C
Envelope.....	T-5½ Glass
Base.....	E7-1, Miniature Button 7-pin
Mounting Position.....	Any



**TECHNICAL INFORMATION (CONT'D)**

**MAXIMUM RATINGS**

**ELECTRICAL (DESIGN CENTER VALUES)**

Plate Voltage.....	250	Volts
Screen Voltage.....	250	Volts
Plate Dissipation.....	12	Watts
Screen Dissipation.....	2	Watts
Heater-Cathode Voltage.....	90	Volts
Grid Number 1 Circuit Resistance		
With Fixed Bias.....	0.1	Megohm
With Cathode Bias.....	0.5	Megohm

**CHARACTERISTICS AND TYPICAL OPERATION**

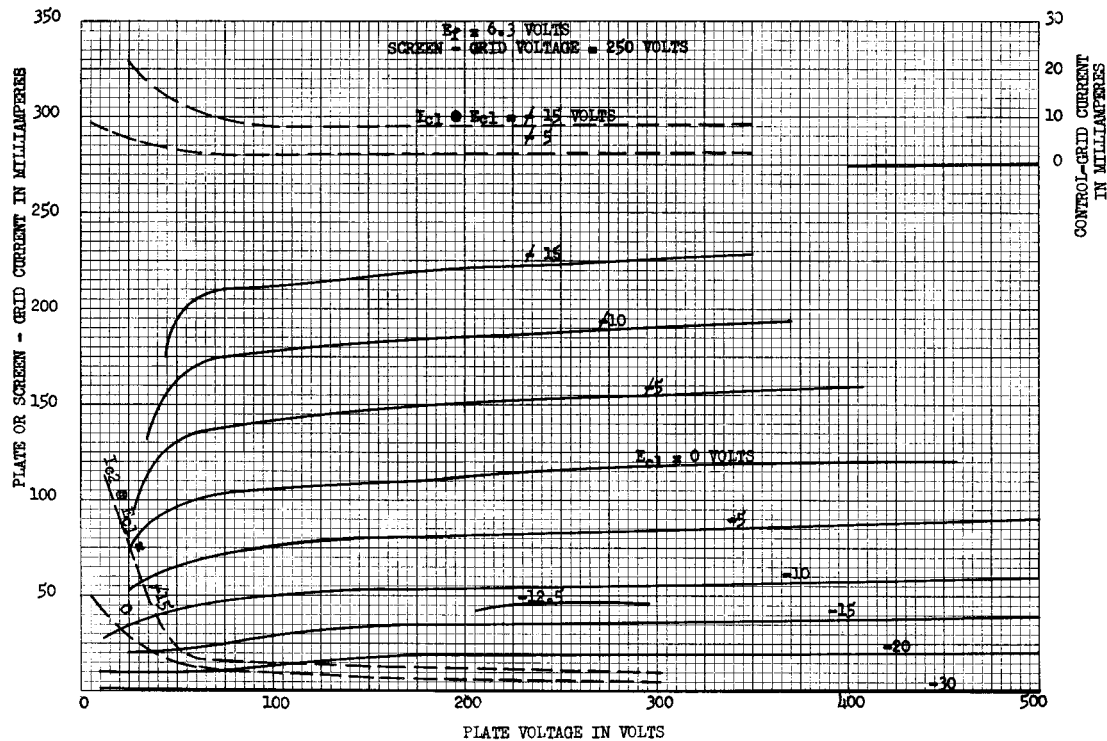
**CLASS A<sub>1</sub> AMPLIFIER**

Plate Voltage.....	180	250	Volts
Screen Voltage.....	180	250	Volts
Grid Number 1 Voltage.....	-8.5	-12.5	Volts
Peak A-F Grid Number 1 Voltage.....	8.5	12.5	Volts
Plate Resistance (Approx).....	58000	52000	Ohms
Transconductance.....	3700	4100	Micromhos
Zero-Signal Plate Current.....	29	45	Milliamperes
Maximum-Signal Plate Current.....	30	47	Milliamperes
Zero-Signal Screen Current.....	3	4.5	Milliamperes
Maximum-Signal Screen Current.....	4	7	Milliamperes
Load Resistance.....	5500	5000	Ohms
Total Harmonic Distortion (Approx.).....	8	8	Per Cent
Power Output.....	2.0	4.5	Watts

**PUSH-PULL CLASS AB<sub>1</sub> AMPLIFIER (VALUES FOR TWO TUBES)**

Plate Voltage.....	250	Volts
Screen Voltage.....	250	Volts
Grid Number 1 Voltage.....	-15	Volts
Peak A-F Grid-to-Grid Voltage.....	30	Volts
Plate Resistance (Each Tube).....	60000	Ohms
Transconductance (Each Tube).....	3750	Micromhos
Zero-Signal Plate Current.....	70	Milliamperes
Maximum-Signal Plate Current.....	79	Milliamperes
Zero-Signal Screen Current.....	5	Milliamperes
Maximum-Signal Screen Current.....	13	Milliamperes
Effective Load Resistance (Plate to Plate).....	10000	Ohms
Total Harmonic Distortion.....	5	Per Cent
Maximum-Signal Power Output.....	10	Watts

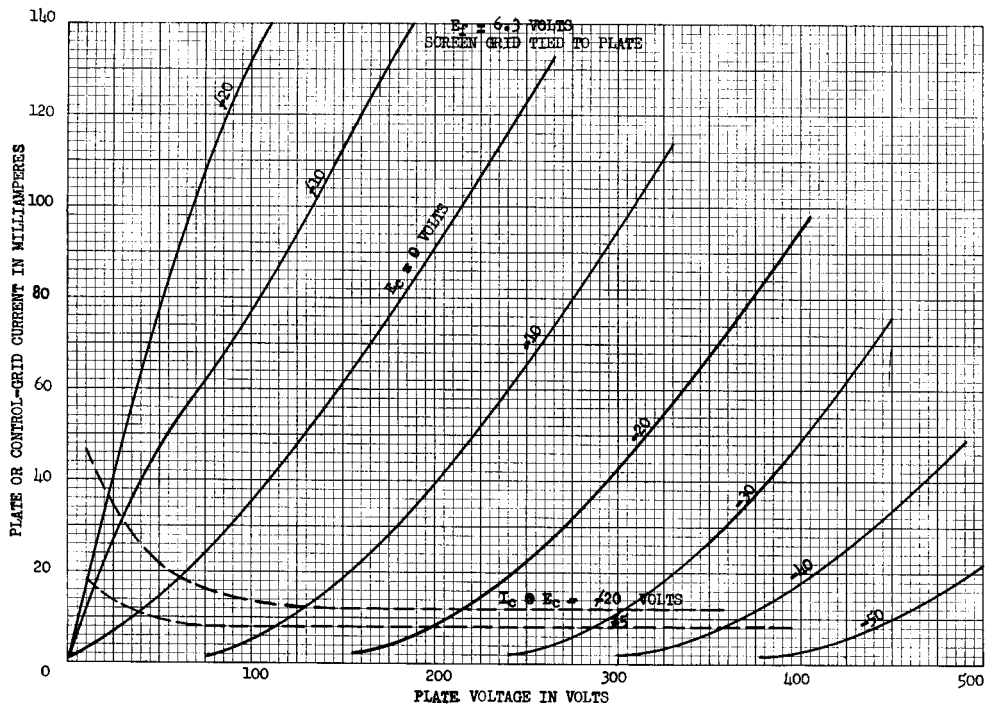
AVERAGE PLATE CHARACTERISTICS  
PENTODE CONNECTION



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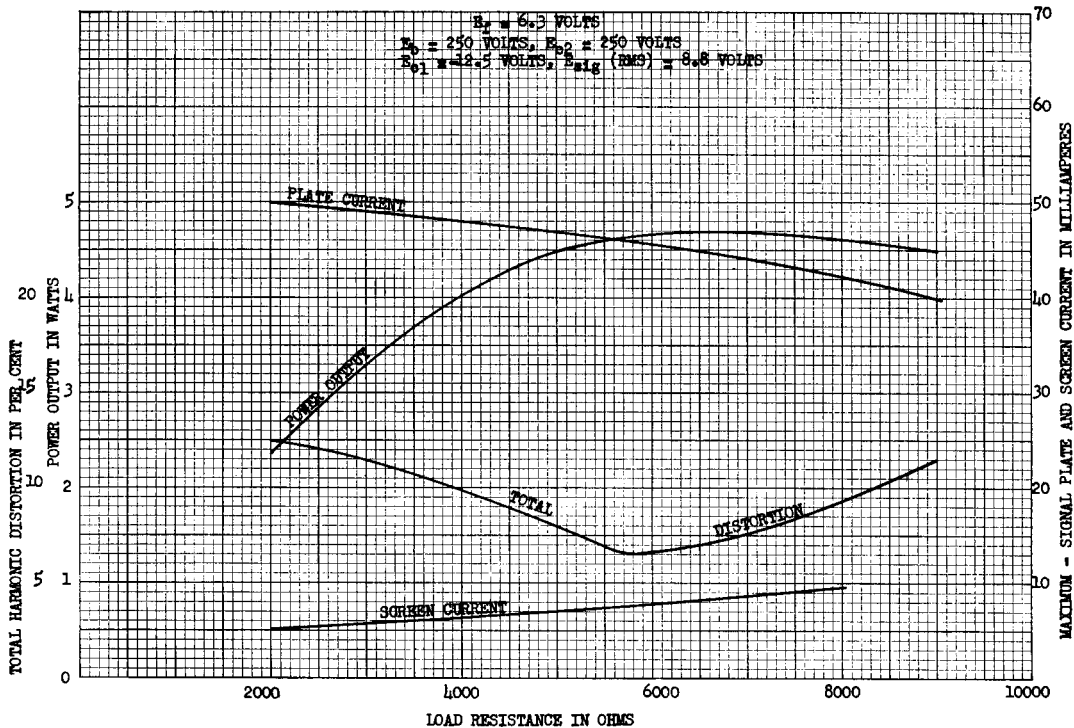
AVERAGE PLATE CHARACTERISTICS  
TRIODE CONNECTION



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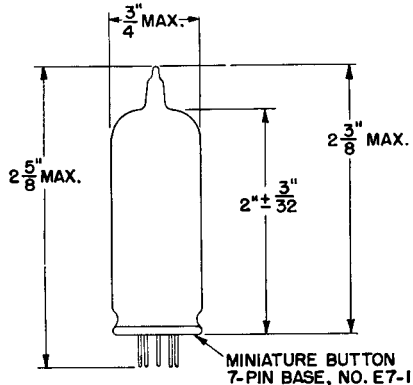
OPERATION CHARACTERISTICS  
 PENTODE CONNECTION



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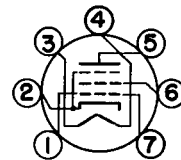
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OUTLINE



N-15192AZ

BASING DIAGRAM



7BZ

- PIN 1 - GRID #1
- PIN 2 - CATHODE AND GRID #3
- PIN 3 - HEATER
- PIN 4 - HEATER
- PIN 5 - PLATE
- PIN 6 - GRID #2 (SCREEN)
- PIN 7 - GRID #1

3-30-51

Tube Department

**GENERAL ELECTRIC**

Schenectady, N. Y.