



# 25L6-GT—12L6-GT—50L6-GT

## BEAM PENTODE

For AF Power Amplifier Applications

**25L6-GT**  
**12L6-GT**  
**50L6-GT**  
 ET-T867  
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### DESCRIPTION AND RATING

The 25L6-GT is a beam pentode designed for use in the audio-frequency power output stage of radio and television receivers. Features include high power sensitivity and high efficiency at relatively low plate and screen voltages.

The 12L6-GT, 25L6-GT, and 50L6-GT are alike except for heater ratings and heater-cathode voltage ratings. The 50L6-GT is particularly suited for use in a-c/d-c receivers; while the 12L6-GT, as a result of its controlled heater warm-up characteristic, is especially suited for use in television receivers which employ series-connected heaters. When the 12L6-GT is used in conjunction with other 600-milliamper types which exhibit essentially the same heater warm-up characteristic, heater voltage surges across the individual tubes are minimized during the warm-up period.

### GENERAL

#### ELECTRICAL

Cathode—Coated Unipotential

	12L6-GT	25L6-GT	50L6-GT
Heater Voltage, AC or DC	12.6	25.0	50.0 Volts
Heater Current	0.6	0.3	0.15 Amperes
Heater Warm-up Time*	10.5	—	— Seconds

#### MECHANICAL

Mounting Position—Any

Envelope—T-9, Glass

□ Base—B6-81 or B7-7, Intermediate Shell Octal  
 or B6-84 or B7-59, Short Intermediate Shell Octal

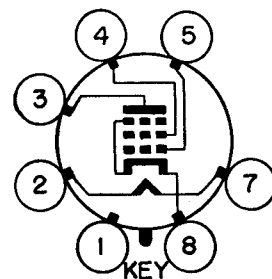
### MAXIMUM RATINGS

#### DESIGN-CENTER VALUES

Plate Voltage	200	Volts
Screen Voltage	125	Volts
Plate Dissipation	10	Watts
Screen Dissipation	1.25	Watts

	12L6-GT	25L6-GT	50L6-GT
Heater-Cathode Voltage			
Heater Positive with Respect to Cathode			
DC Component	100	—	Volts
Total DC and Peak	200	90	Volts
Heater Negative with Respect to Cathode			
Total DC and Peak	300	90	Volts
Grid Circuit Resistance			
With Fixed Bias	0.1	0.1	Megohms
With Cathode Bias	0.5	0.5	Megohms

### BASING DIAGRAM

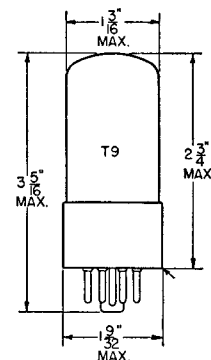


RETMA 7AC

### TERMINAL CONNECTIONS

- Pin 1—No Connection†
- Pin 2—Heater
- Pin 3—Plate
- Pin 4—Grid Number 2 (Screen)
- Pin 5—Grid Number 1
- Pin 7—Heater
- Pin 8—Cathode and Beam Plates

### PHYSICAL DIMENSIONS



RETMA 9-11 or 9-41

**GENERAL ELECTRIC**

Supersedes ET-T400A dated 6-50 and ET-T413A dated 1-50

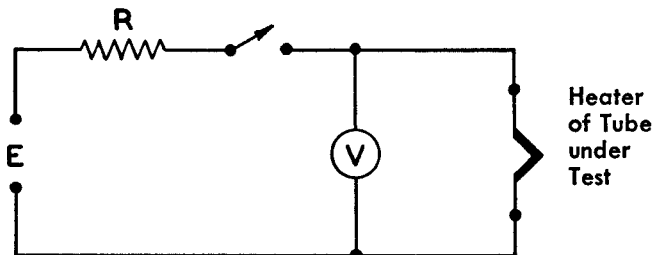
**CHARACTERISTICS AND TYPICAL OPERATION**

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

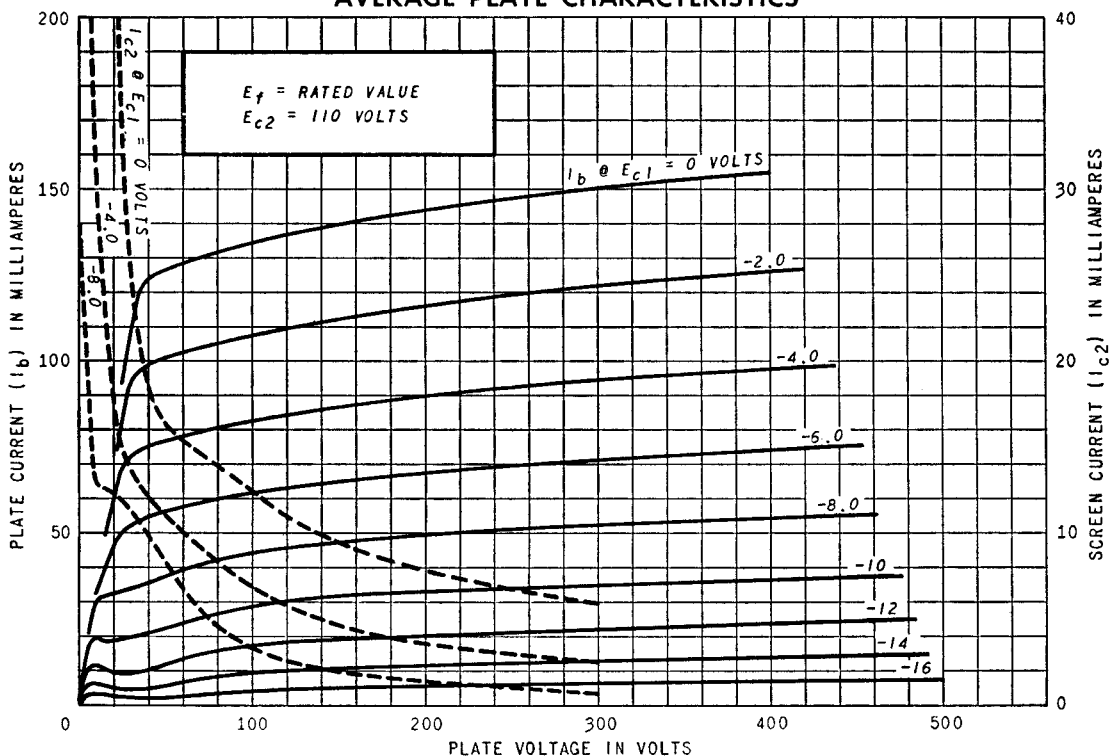
Plate Voltage .....	110	200	Volts
Screen Voltage .....	110	125	Volts
Grid-Number 1 Voltage .....	-7.5	—	Volts
Cathode-Bias Resistor .....	—	180	Ohms
Peak AF Grid-Number 1 Voltage .....	7.5	8.5	Volts
Plate Resistance, approximate .....	13000	28000	Ohms
Transconductance .....	8000	8000	Micromhos
Zero-Signal Plate Current .....	49	46	Milliamperes
Maximum-Signal Plate Current .....	50	47	Milliamperes
Zero-Signal Screen Current .....	4.0	2.2	Milliamperes
Maximum-Signal Screen Current .....	10	8.5	Milliamperes
Load Resistance .....	2000	4000	Ohms
Total Harmonic Distortion, approximate .....	10	10	Percent
Maximum-Signal Power Output .....	2.1	3.8	Watts

\* Heater warm-up time is defined as the time required in the circuit shown at the right for the voltage across the heater terminals to increase from zero to the heater test voltage ( $V_1$ ). For this type,  $E=50$  volts (RMS or DC),  $V_1=10.0$  volts (RMS or DC), and  $R=63$  ohms.

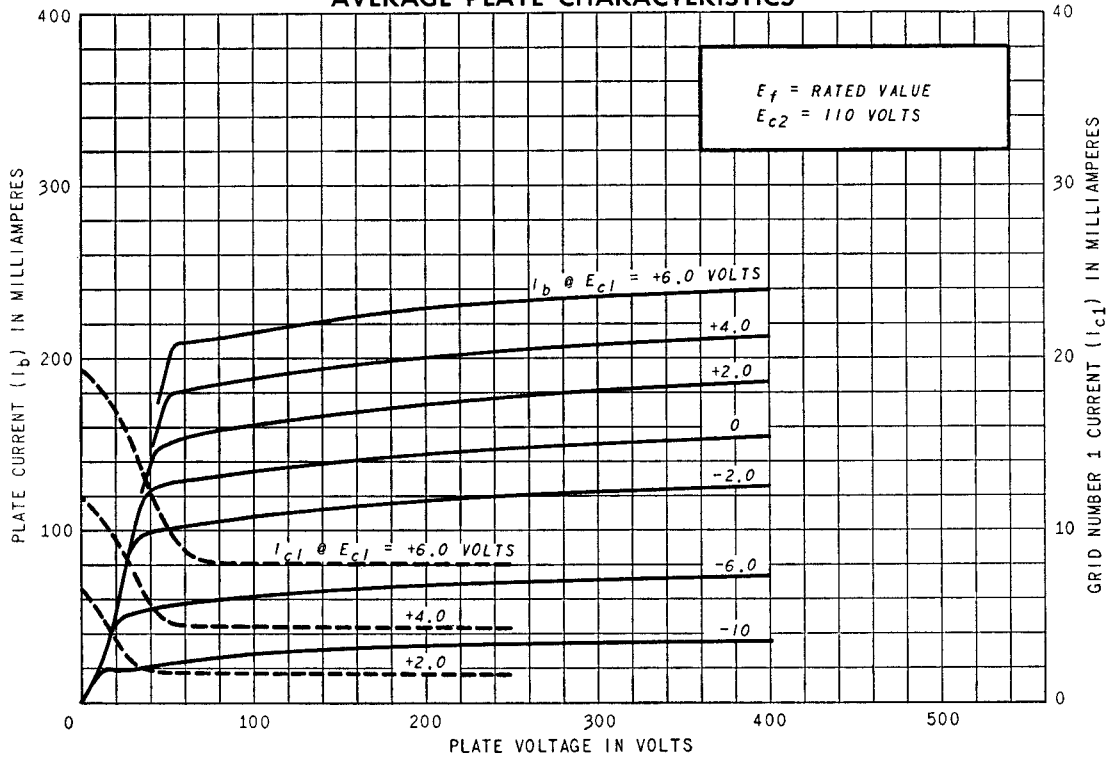
- † Pin 1 omitted on bases B6=81 and B6=84.
- Indicates an additional rating.



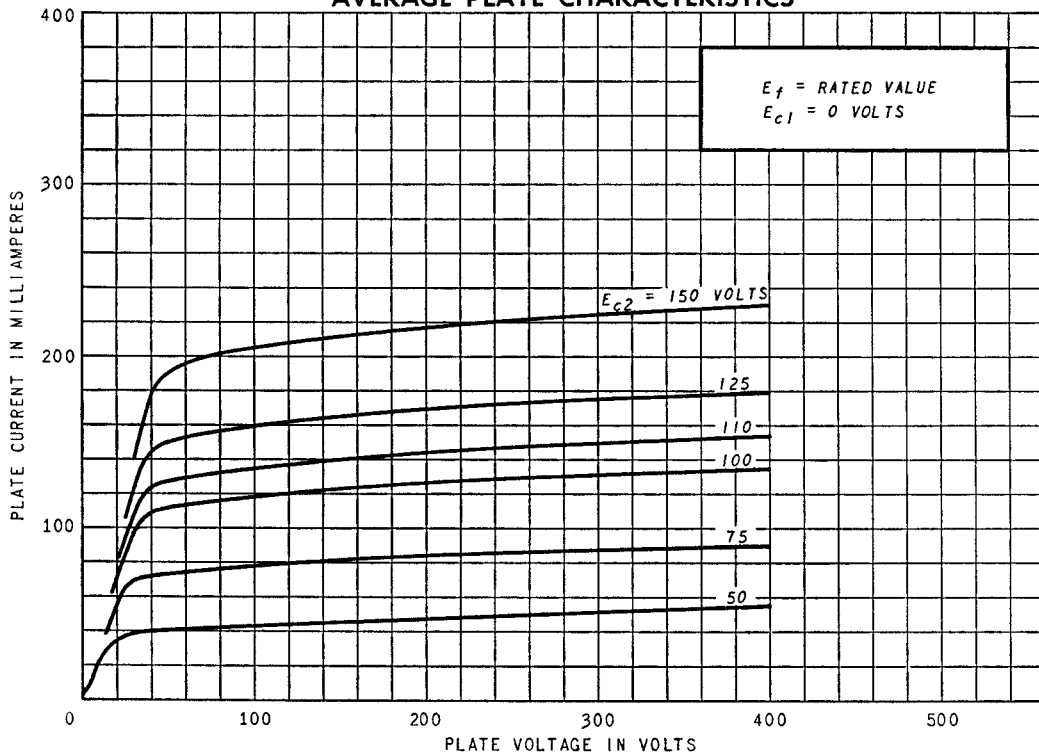
**AVERAGE PLATE CHARACTERISTICS**



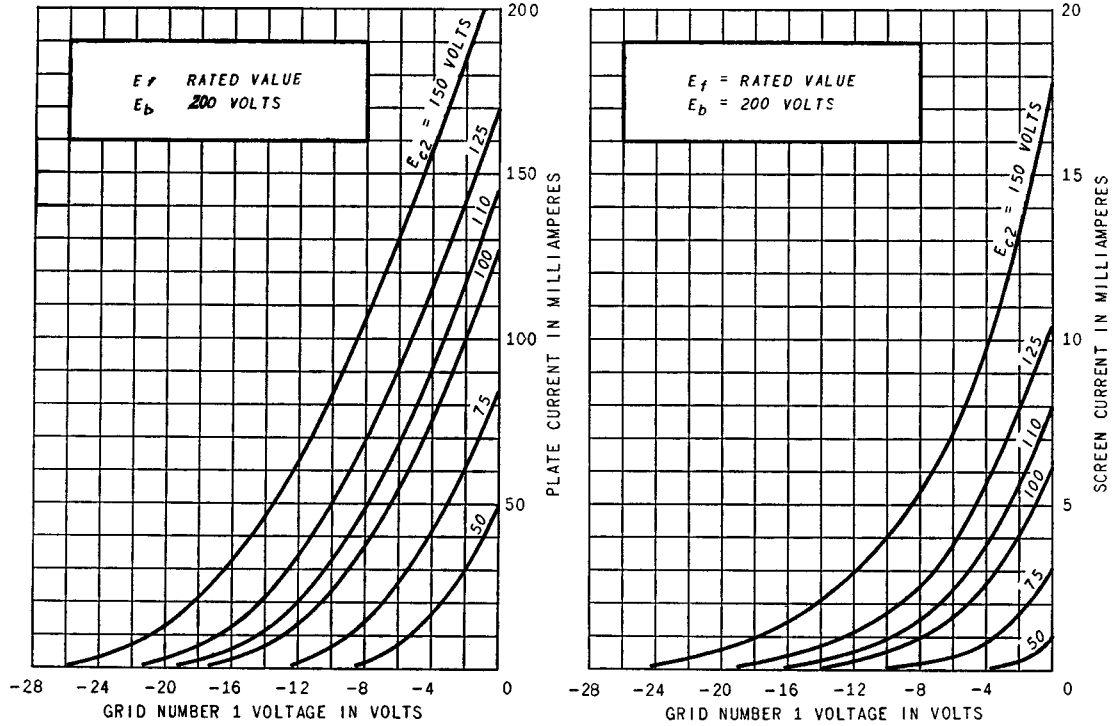
**AVERAGE PLATE CHARACTERISTICS**



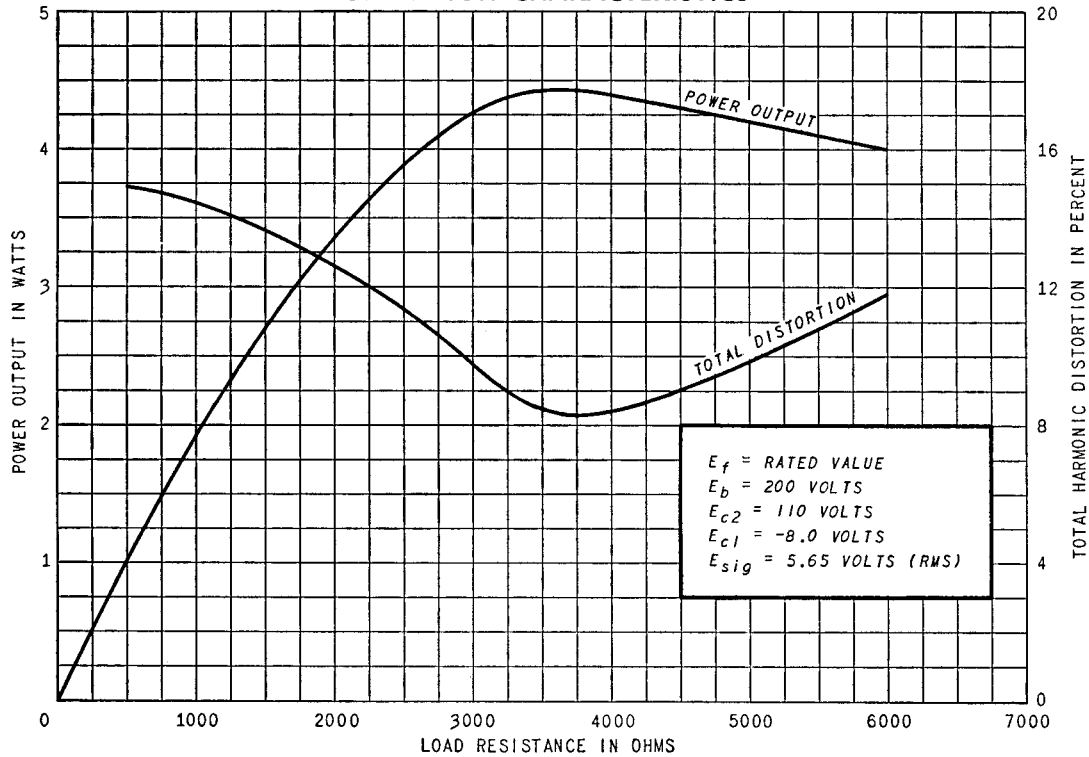
**AVERAGE PLATE CHARACTERISTICS**



**AVERAGE TRANSFER CHARACTERISTICS**



**OPERATION CHARACTERISTICS**



**TUBE DEPARTMENT**



**Schenectady 5, N. Y.**