



25L6-GT—12L6-GT—50L6-GT

BEAM PENTODE

For AF Power Amplifier Applications

25L6-GT
12L6-GT
50L6-GT
ET-T867
Page 1
7-54

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-milliamperre 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

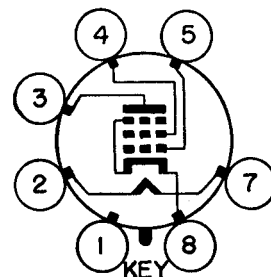
DESIGN-CENTER VALUES

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

Heater-Cathode Voltage

	12L6-GT	25L6-GT	50L6-GT
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

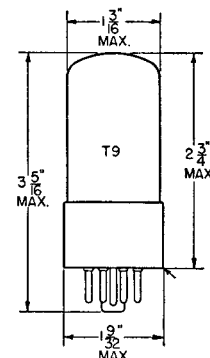


RETMA 7AC

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

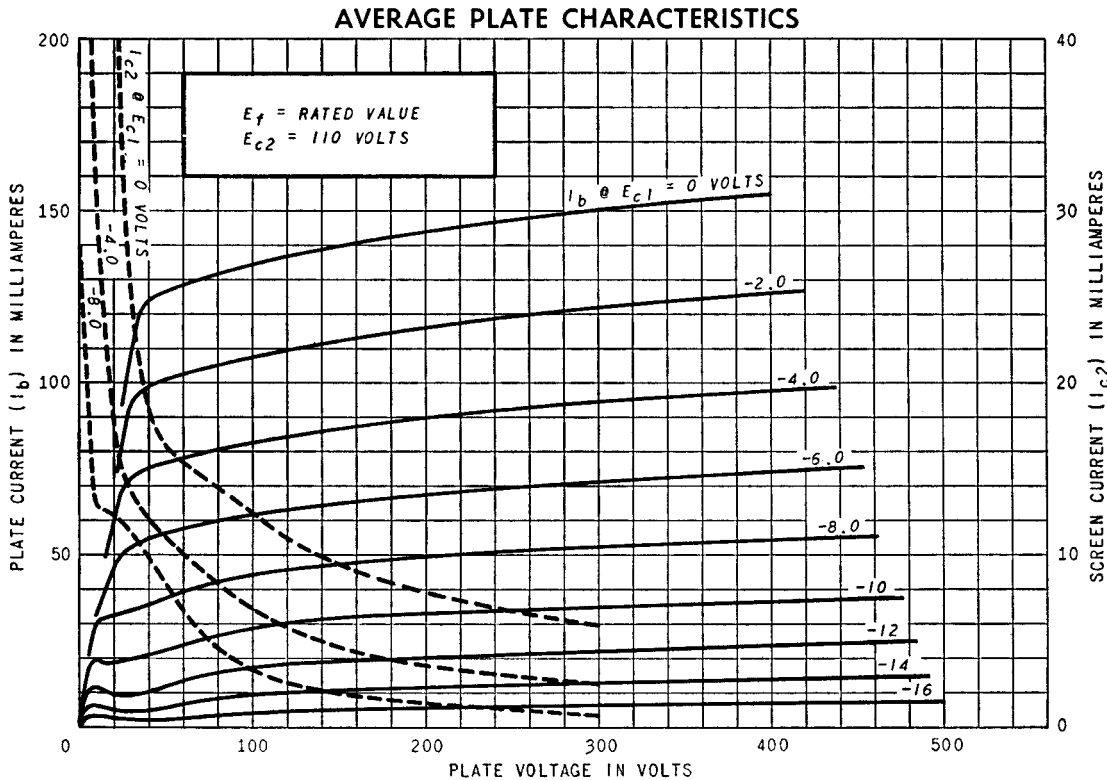
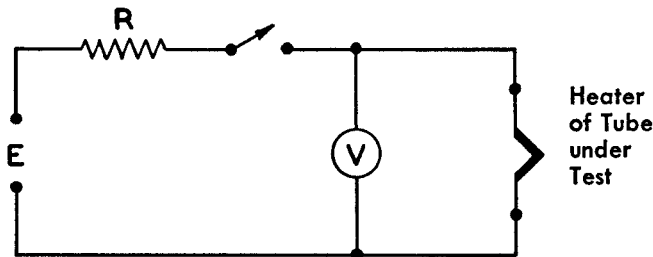
CLASS A₁ AMPLIFIER

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

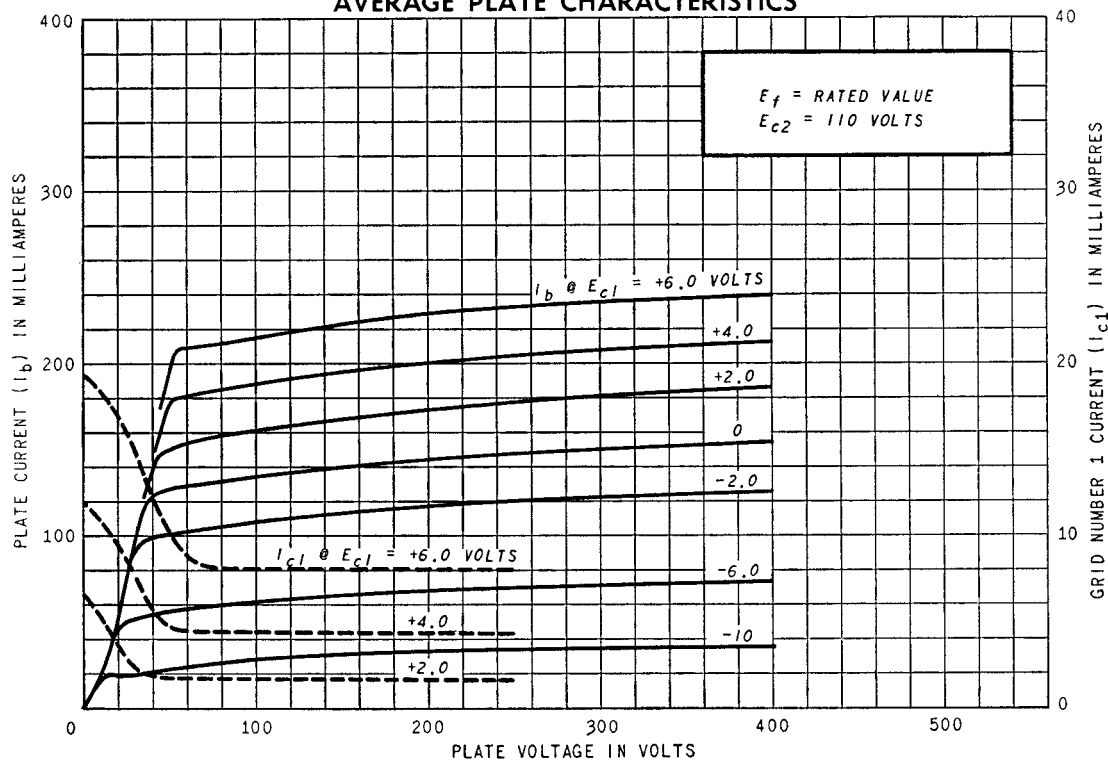
* Heater warm-up time is defined as the time required in the circuit shown at the right for the voltage across the heater terminals to increase from zero to the heater test voltage (V_1). For this type, $E=50$ volts (RMS or DC), $V_1=10.0$ volts (RMS or DC), and $R=63$ ohms.

□ † Pin 1 omitted on bases B6=81 and B6=84.

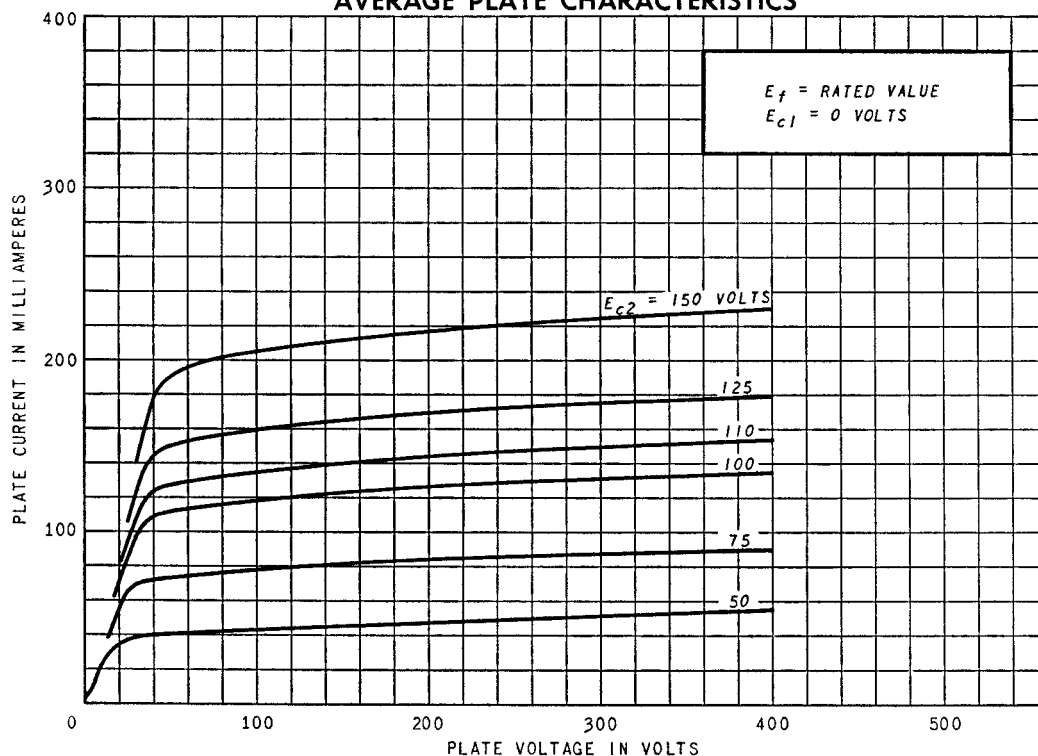
□ Indicates an additional rating.



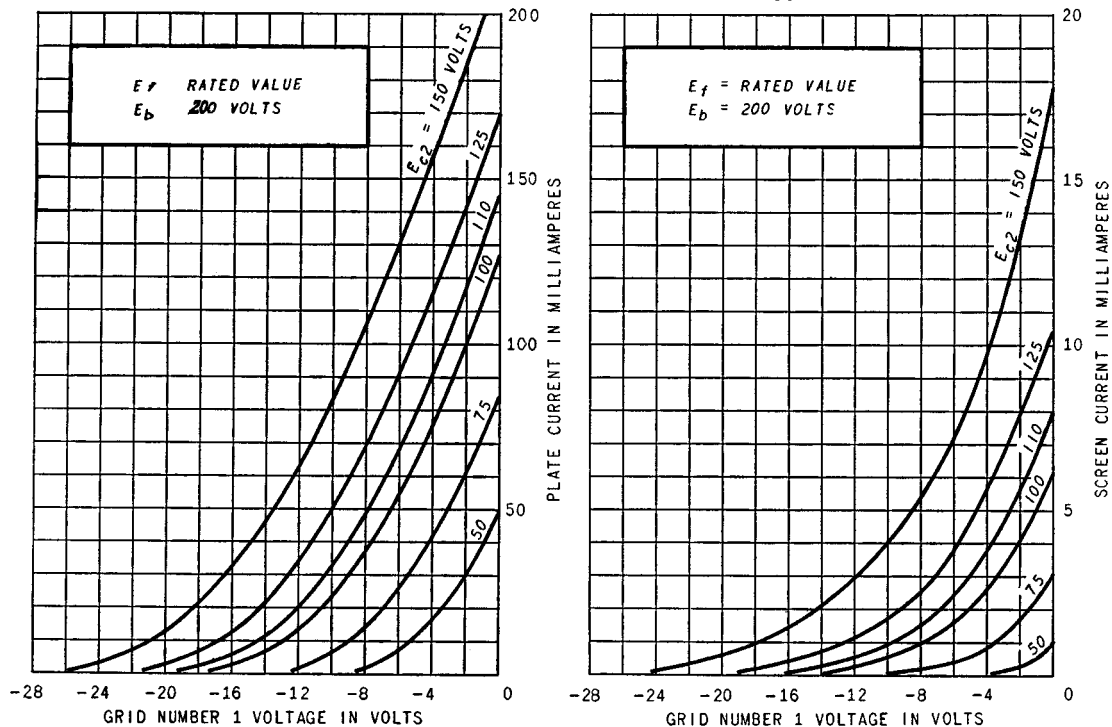
AVERAGE PLATE CHARACTERISTICS



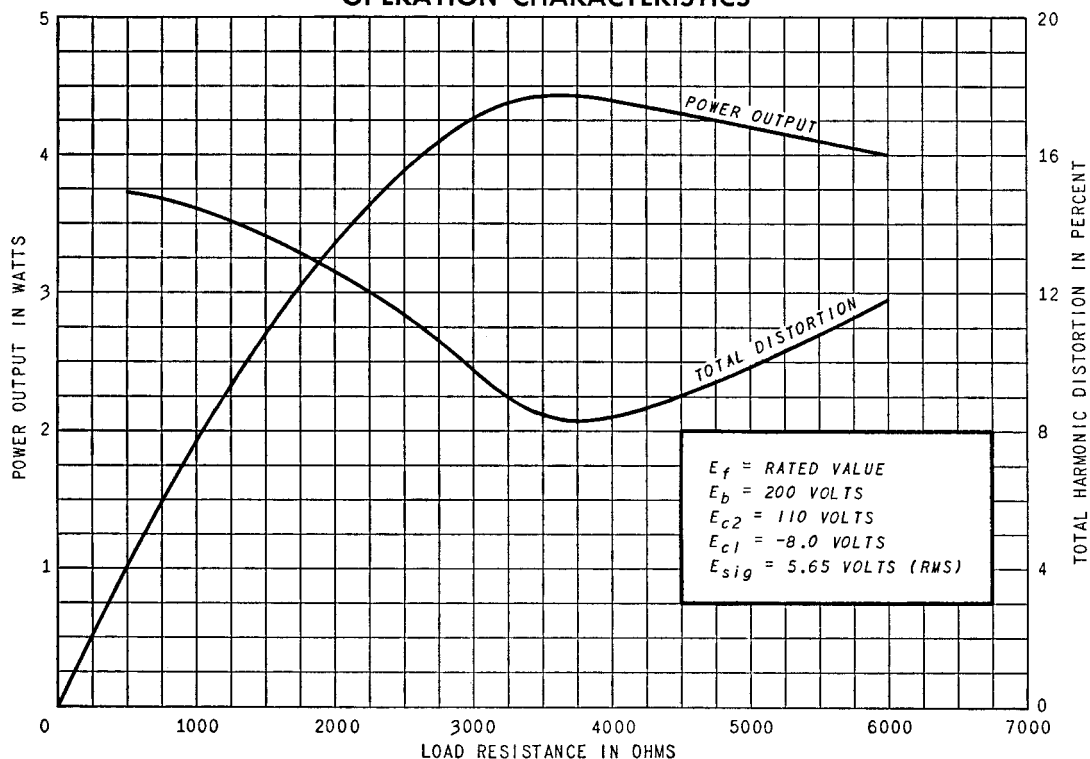
AVERAGE PLATE CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



OPERATION CHARACTERISTICS



TUBE DEPARTMENT

GENERAL ELECTRIC

Schenectady 5, N. Y.