GENERAL DESCRIPTION

Application: The Ken-Rad 70L7GT is a cathode type duplex tube consisting of a beam power amplifier and a half-wave rectifier in a single envelope. It is especially designed for use in small AC-DC receivers where space and heat dissipation are prime considerations. The 70L7GT is a glass tube equipped with an octal base.

Physical Characteristics:

Bottom View

RATING AND CHARACTERISTICS

Heater:
Voltage
Current

70 Volts AC or DC
.150 Ampere

OPERATING CONDITIONS
Beam Power Amplifier Section

Plate Voltage
Screen Voltage
Grid Voltage
Plate Current (Zero Signal)
Plate Current (Max. Signal)
Screen Current (Zero Signal)
Screen Current (Max. Signal)
Peak Signal
Mutual Conductance
Plate Resistance
Load Resistance
Total Harmonic Distortion
Second Harmonic Distortion
Third Harmonic Distortion
Power Output

110 Volts Max.
110 Volts Max.
-.75 Volts Min.
40 Milliamperes
43 Milliamperes
3.0 Milliamperes
6.0 Milliamperes
7.5 Volts
7,500 Microhms
15,000 Ohms
2,000 Ohms
9.5 Percent
5.5 Percent
7.0 Percent
1.8 Watts

OPERATING CONDITIONS
Rectifier Section

AC Plate Voltage (RMS)
DC Load Current
Peak Plate Current
Average Tube Voltage Drop

125 Volts Max.
70 Milliamperes Max.
350 Milliamperes Max.
20 Volts at 140 Milliamperes

Note: The ratings marked maximum and minimum are design centers for a line voltage of 117 volts.

RECOMMENDATIONS

1. It is recommended that the end of heater used for the power amplifier section be connected so that a minimum voltage results between this point and ground.

2. Transformer or impedance-coupled input systems are recommended. If resistance coupling is used the DC resistance in the grid return must be limited to .5 megohms for self-biased conditions and .1 megohm for fixed-bias conditions.

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**Operation Characteristics - Power Amplifier Section**

- $E_F = 70$ Volts
- $E_C = -7.5$ Volts
- $E_D = 110$ Volts
- $E_B = 110$ Volts
- $E_C = 7.5$ Volts Peak
- $R_L$ = Varied

**Operation Characteristics - Rectifier Section**

- $E_F = 70$ Volts
- $E_C = 117$ Volts RMS
- $R_L$ = Varied

- $C = 40 \mu F$
- $C = 32 \mu F$
- $C = 16 \mu F$

**Diagram Elements:**
- 25 Ohm Protective Resistor
- 117 V RMS Power Amplifier Section Not Used
- $C = R_L = E_F$