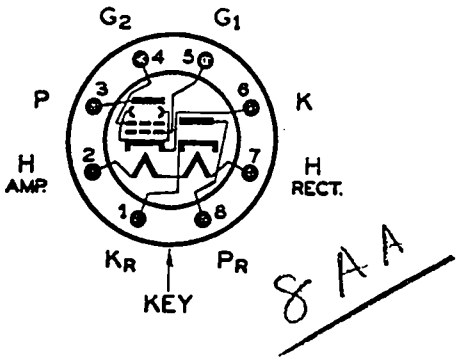
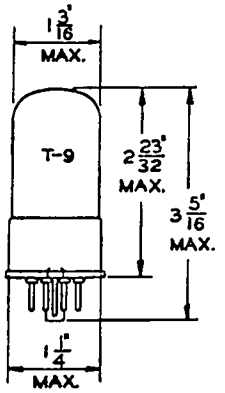
GENERAL DESCRIPTION

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	70	Volts AC or DC
Current	.150	Ampere

OPERATING CONDITIONS

Beam Power Amplifier Section

Plate Voltage	110	Volts	Max.
Screen Voltage	110	Volts	Max.
Grid Voltage	-7.5	Volts	Min.
Plate Current (Zero Signal)	40	Milliamperes	
Plate Current (Max. Signal)	43	Milliamperes	
Screen Current (Zero Signal)	3.0	Milliamperes	
Screen Current (Max. Signal)	6.0	Milliamperes	
Peak Signal	7.5	Volts	
Mutual Conductance	7,500	Micromhos	
Plate Resistance	15,000	Ohms	
Load Resistance	2,000	Ohms	
Total Harmonic Distortion	9.5	Percent	
Second Harmonic Distortion	5.5	Percent	
Third Harmonic Distortion	7.0	Percent	
Power Output	1.8	Watts	

OPERATING CONDITIONS

Rectifier Section

AC Plate Voltage (RMS)	125	Volts	Max.
DC Load Current	70	Milliamperes	Max.
Peak Plate Current	350	Milliamperes	Max.
Average Tube Voltage Drop	20	Volts at 140	Milliamperes

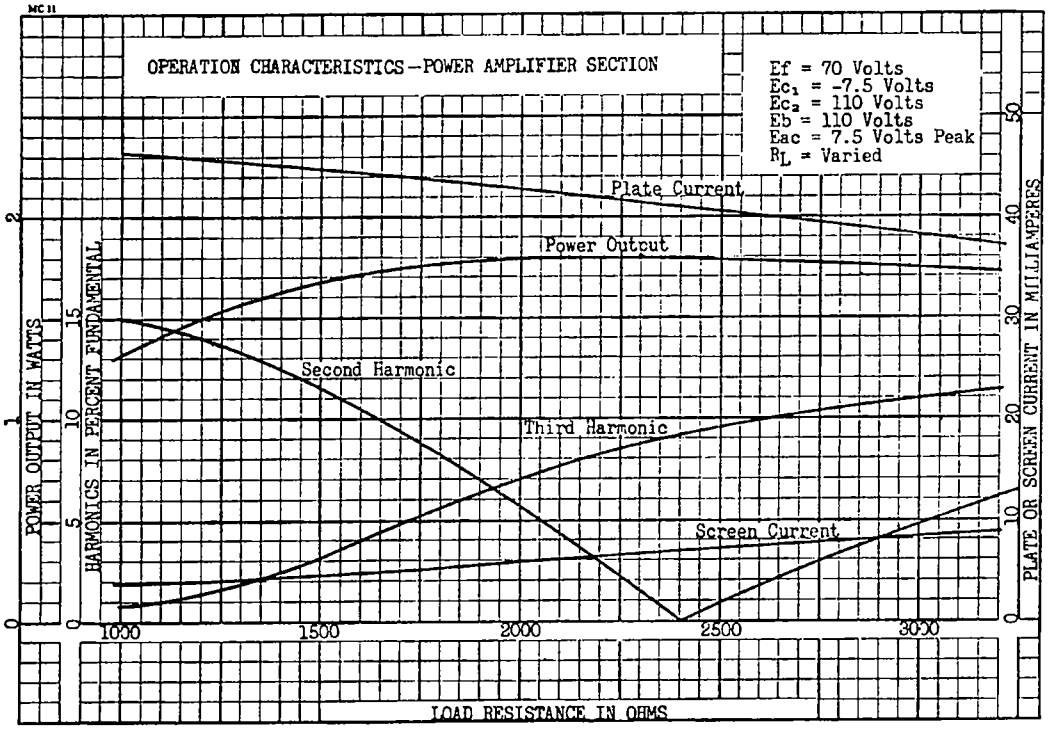
Note: The ratings marked maximum and minimum are design centers for a line voltage of 117 volts.

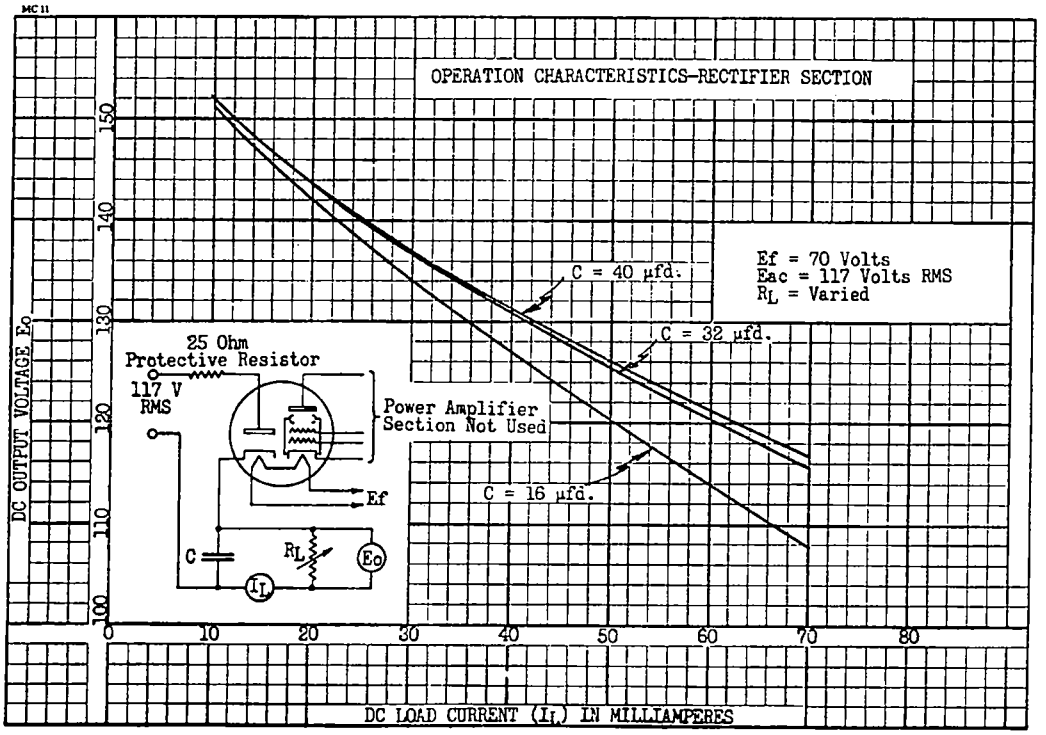
RECOMMENDATIONS

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 megohm for self-biased conditions and .1 megohm for fixed-bias conditions.

from RMA release #168, March 29, 1939


MC 11
OPERATION CHARACTERISTICS—POWER AMPLIFIER SECTION
Ef = 70 Volts
Ec1 = -7.5 Volts
Ec2 = 110 Volts
Eb = 110 Volts
Eac = 7.5 Volts Peak
RL = Varied
Plate Current
Power Output
Second Harmonic
Third Harmonic
Screen Current
POWER OUTPUT IN WATTS
HARMONICS IN PERCENT FUNDAMENTAL
PLATE OR SCREEN CURRENT IN MILLIAMPERES
LOAD RESISTANCE IN OHMS
0
1
2
5
10
15
20
30
40
50
1000
1500
2000
2500
3000


MC 11
OPERATION CHARACTERISTICS—RECTIFIER SECTION
Ef = 70 Volts
Eac = 117 Volts RMS
RL = Varied
C = 40 µfd.
C = 32 µfd.
C = 16 µfd.
25 Ohm
Protective Resistor
117 V
RMS
Power Amplifier
Section Not Used
Ef
C
RL
Eo
IL
DC OUTPUT VOLTAGE Eo
DC LOAD CURRENT (IL) IN MILLIAMPERES
100
110
120
130
140
150
0
10
20
30
40
50
60
70
80

MCIA