

**MEDIUM-MU TRIODE—
SEMIREMOTE-CUTOFF PENTODE**Triode $\mu = 46$
RCA Dark Heater**9-PIN MINIATURE TYPE** E_{c1} Volts for
 $10 \mu A I_b = 14$

RCA-6LM8 is a multiunit tube of the nine-pin miniature type containing a medium-mu triode and a semiremote-cutoff pentode in one envelope. This tube is useful in a wide variety of circuit applications in color and black-and-white TV receivers.

The pentode unit features a high value of plate current and is particularly suited for use in the burst-amplifier circuit of color-TV receivers. The triode unit may be used as a general-purpose amplifier tube.

The 6LM8 has an internal shield to reduce interaction between units, and separate base-pin connections for the cathodes of the triode and pentode units. This basing arrangement permits use of this type in a variety of circuit configurations. In addition, the 6LM8 utilizes the RCA Dark Heater for long life and dependable performance.

GENERAL DATA**Electrical:****Heater Characteristics and Ratings:**

Voltage (AC or DC) 6.3 ± 0.6 volts
Current at 6.3 volts 0.450 amp

**Peak heater-cathode voltage
(Each unit):**

Heater negative with
respect to cathode 200 max. volts
Heater positive with
respect to cathode 200^a max. volts

**Direct Interelectrode Capacitances
(With external shield
JEDEC No. 315):^b****Triode Unit:**

Grid to Plate 1.8 pf
Input: G_T to $(K_T, K_p + G_{3p} + I_S, H)$ 3.2 pf
Output: P_T to $(K_T, K_p + G_{3p} + I_S, H)$ 1.9 pf

Pentode Unit:

Grid to Plate 0.015 max. pf
Input: G_{lp} to $(K_p + G_{3p} + I_S, G_{2p}, H)$ 5.5 pf
Output: P_p to $(K_p + G_{3p} + I_S, G_{2p}, H)$ 3.8 pf
Heater to Cathode (Each unit) 3.2 pf

Characteristics, Class A₁ Amplifier:

	Triode Unit	Pentode Unit	
Plate Voltage	125	125	volts
Grid-No.2 Voltage	-	125	volts
Grid-No.1 Voltage	-1	-2	volts
Amplification Factor	46	-	
Plate Resistance (Approx.)	5400	150,000	ohms
Transconductance	8500	6000	μ mhos
Plate Current	13.5	12	ma
Grid-No.2 Current	-	4	ma
Grid-No.1 Voltage (Approx.) for plate $\mu A \approx 10$	-8	-14	volts

Mechanical:

Operating Position Any
Type of Cathode Coated Unipotential
Maximum Overall Length 2-3/16"
Maximum Seated Length 1-15/16"
Length from Base Seat to Bulb Top
(Excluding tip) 1-9/16" $\pm$ 3/32"
Diameter 0.750" to 0.875"
Dimensional Outline JEDEC No. 6-2
Bulb T6-1/2
Base Small-Button Noval 9-Pin (JEDEC No. E9-1)
Basing Designation 9AE

AMPLIFIER — Class A₁**Maximum Ratings, Design-Maximum Values:**

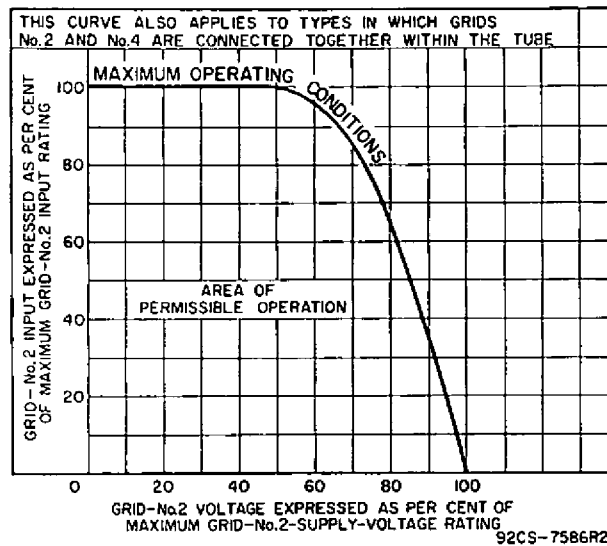
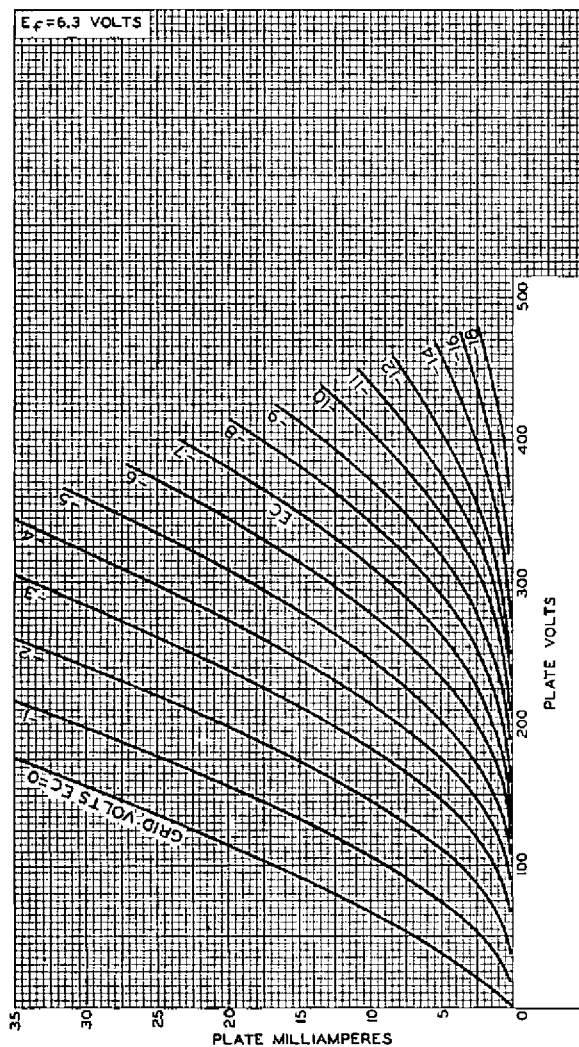
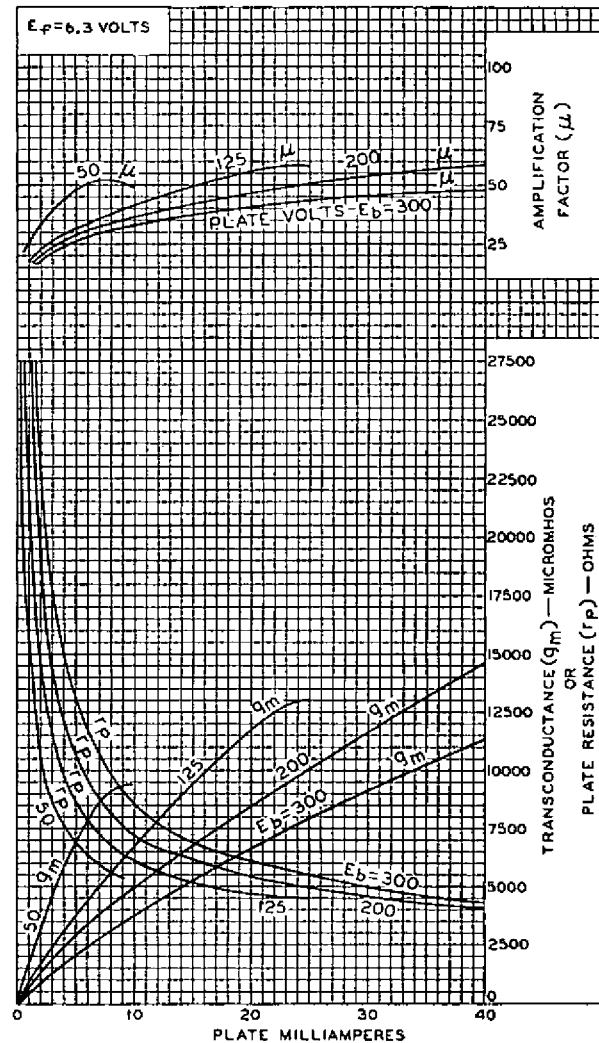
	Triode Unit	Pentode Unit	
Plate Voltage	330 max.	350 max.	volts
Grid-No.2 (Screen-Grid) Supply Voltage	-	330 max.	volts
Grid-No.2 Voltage	-	See GRID-No.2 INPUT RATING CHART	
Grid-No.1 (Control-Grid) Voltages:			
Positive-bias value	0 max.	0 max.	volts
Grid-No.2 Input:			
For grid-No.2 voltages up to 165 volts	-	0.55 max.	watt
For grid-No.2 voltages between 165 and 330 volts	-	See GRID-No.2 INPUT RATING CHART	
Plate Dissipation	2.5 max.	2.5 max.	watts

Maximum Circuit Values:

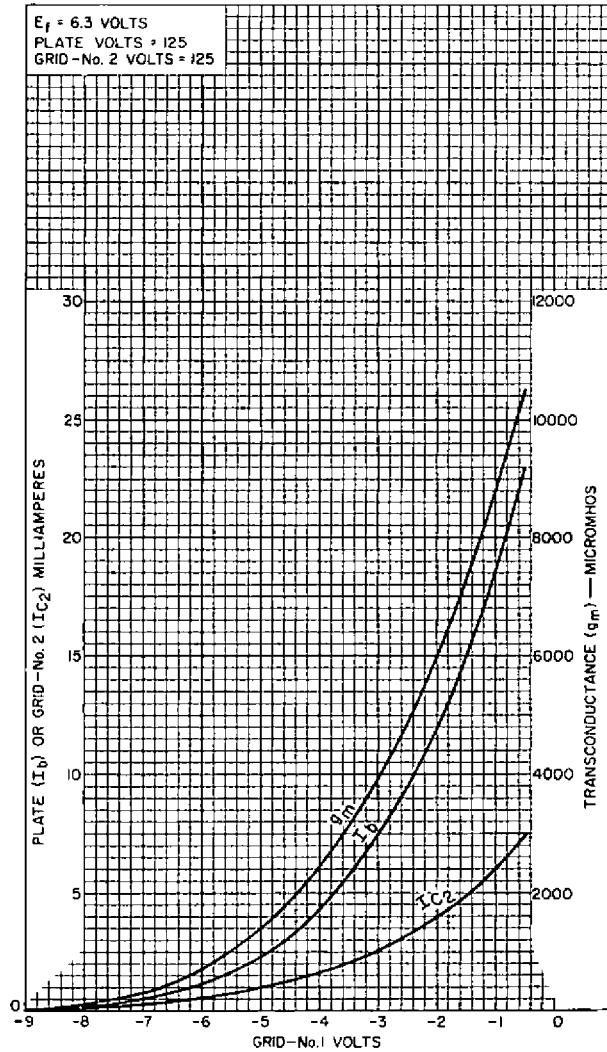
Grid-No.1-Circuit Resistance:			
For fixed-bias operation	0.5 max.	0.25 max.	megohm
For cathode-bias operation	1.0 max.	0.5 max.	megohm

^a The dc component must not exceed 100 volts.^b Measured in accordance with EIA Standard RS-191-A.

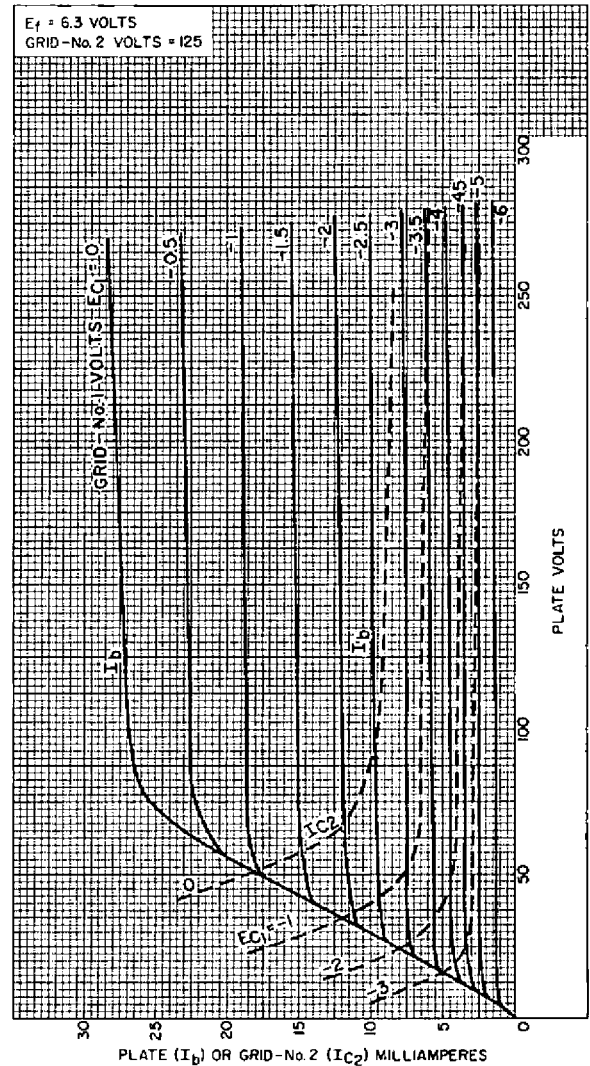
GRID-No.2 INPUT RATING CHART

AVERAGE PLATE CHARACTERISTICS
TRIODE UNITAVERAGE CHARACTERISTICS
TRIODE UNIT

AVERAGE CHARACTERISTICS PENTODE UNIT



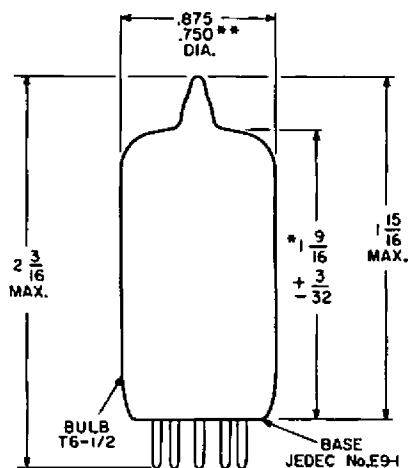
92CM-12558



92CM-12560

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DIMENSIONAL OUTLINE



92CS-11893

Dimensions In Inches

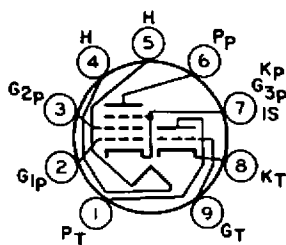
* MEASURED FROM BASE SEAT TO BULB-TOP LINE AS DETERMINED BY RING GAUGE OF 7/16" I.D.

** APPLIES IN ZONE STARTING 0.375" FROM BASE SEAT.

TERMINAL DIAGRAM

Bottom View

Pin 1 - Triode Plate
 Pin 2 - Pentode Grid No.1
 Pin 3 - Pentode Grid No.2
 Pin 4 - Heater
 Pin 5 - Heater



9AE

Pin 6 - Pentode Plate
 Pin 7 - Pentode Cathode,
 Pentode Grid No.3,
 and Internal Shield
 Pin 8 - Triode Cathode
 Pin 9 - Triode Grid