

from RMA release #94, Nov. 4, 1936

PRELIMINARY
TECHNICAL INFORMATION
ON THE



A NEW BEAM POWER AMPLIFIER
for A.C.-D.C. Receivers

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RCA Manufacturing Company, Inc.

RCA RADIOTRON DIVISION
RCA Manufacturing Company, Inc.
Harrison, N.J.

Cunningham
Radiotron

RCA-25L6

BEAM POWER AMPLIFIER
(TENTATIVE DATA)

The RCA-25L6 is a power-amplifier tube of the all-metal type for use in the output stage of "transformerless" (a.c.-d.c.) radio receivers, especially those designed to have ample reserve of power-delivering ability. This new tube provides high power output at the relatively low plate and screen voltages available for transformerless receivers. The high power output is obtained with high power sensitivity and high efficiency.

These distinctive features have been made possible by the application of directed-electron-beam principles in the design of the 25L6. The design is similar to that of the RCA-6L6 with the difference that the 25L6 is intended especially for operation in a.c.-d.c. receivers.

Heater Voltage	25.0	Volts
Heater Current	0.3	Ampere
Maximum Overall Length	3-1/4"	
Maximum Diameter	1-5/16"	
Base	Small Octal 7-Pin	

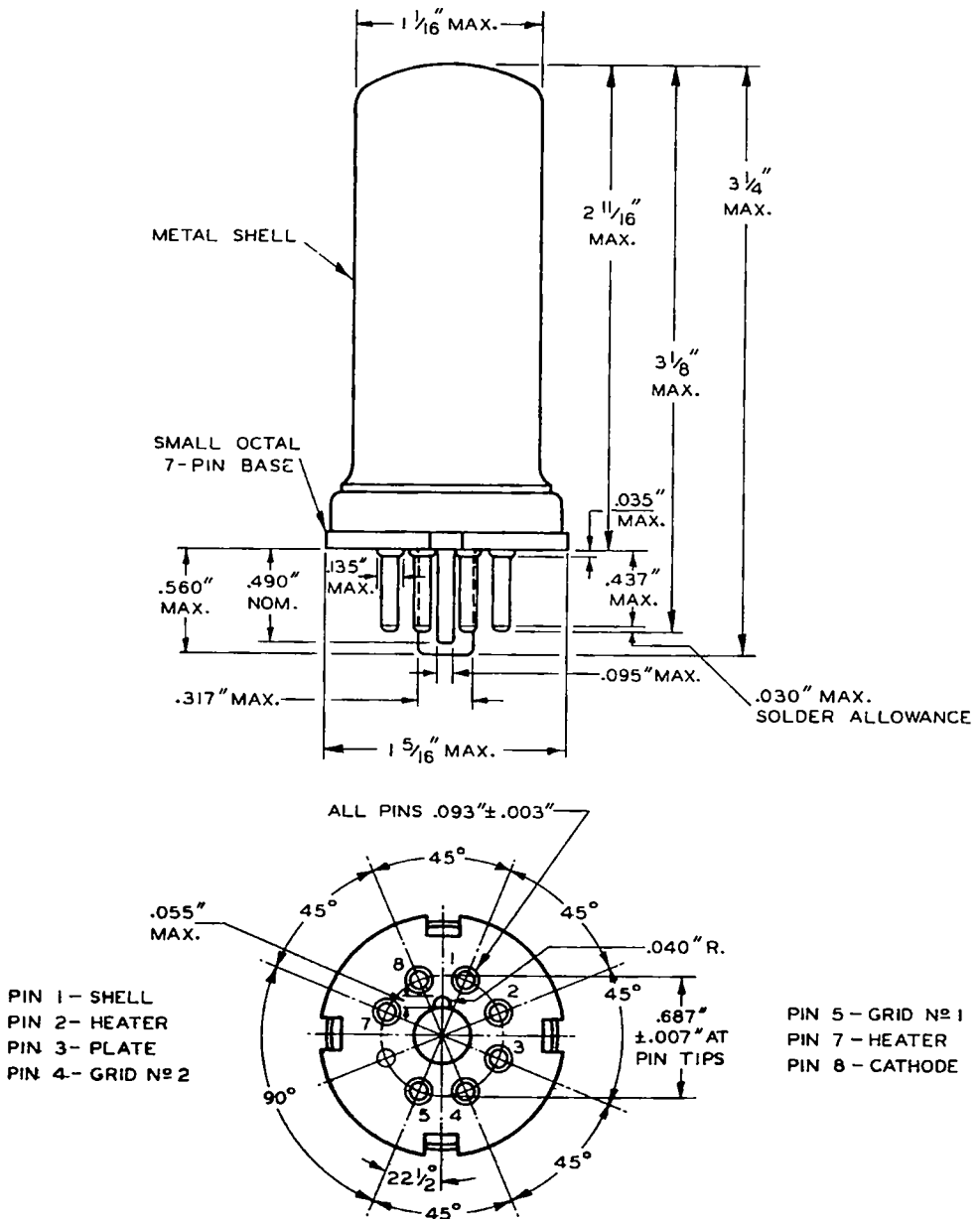
Single-Tube Class A₁ Amplifier

Subscript 1 indicates that grid current does not flow during any part of input cycle.

Operating Conditions and Characteristics:

Heater Voltage				25.0	Volts
Plate Voltage	110 max.	110 max.	110 max.	110 max.	Volts
Screen Voltage	110 max.	110 max.	110 max.	110 max.	Volts
Grid Voltage	-7.5	-7.5	-8	-8	Volts
Zero-Signal Plate Cur.	49	49	45	45	Milliamperes
Max.-Signal Plate Cur.	55	51	52	48	Milliamperes
Zero-Signal Screen Cur.	4	4	3.5	3.5	Milliamperes
Max.-Signal Screen Cur.	8	10.3	8	10.5	Milliamperes
Signal Input Voltage	5.3	5.3	5.65	5.65	Volts (RMS)
Plate Resist. (Approx.)	10000	10000	10000	10000	Ohms
Transconductance	8200	8200	8000	8000	Micromhos
Load Resistance	1500	2000	1500	2000	Ohms
Distortion:					
Total Harmonic	11	10	13	11.5	Per Cent
Second Harmonic	10	3.5	12	4.5	Per Cent
Third Harmonic	4	8.5	4.5	9.5	Per Cent
Power Output	2.1	2.2	2.2	2.2	Watts

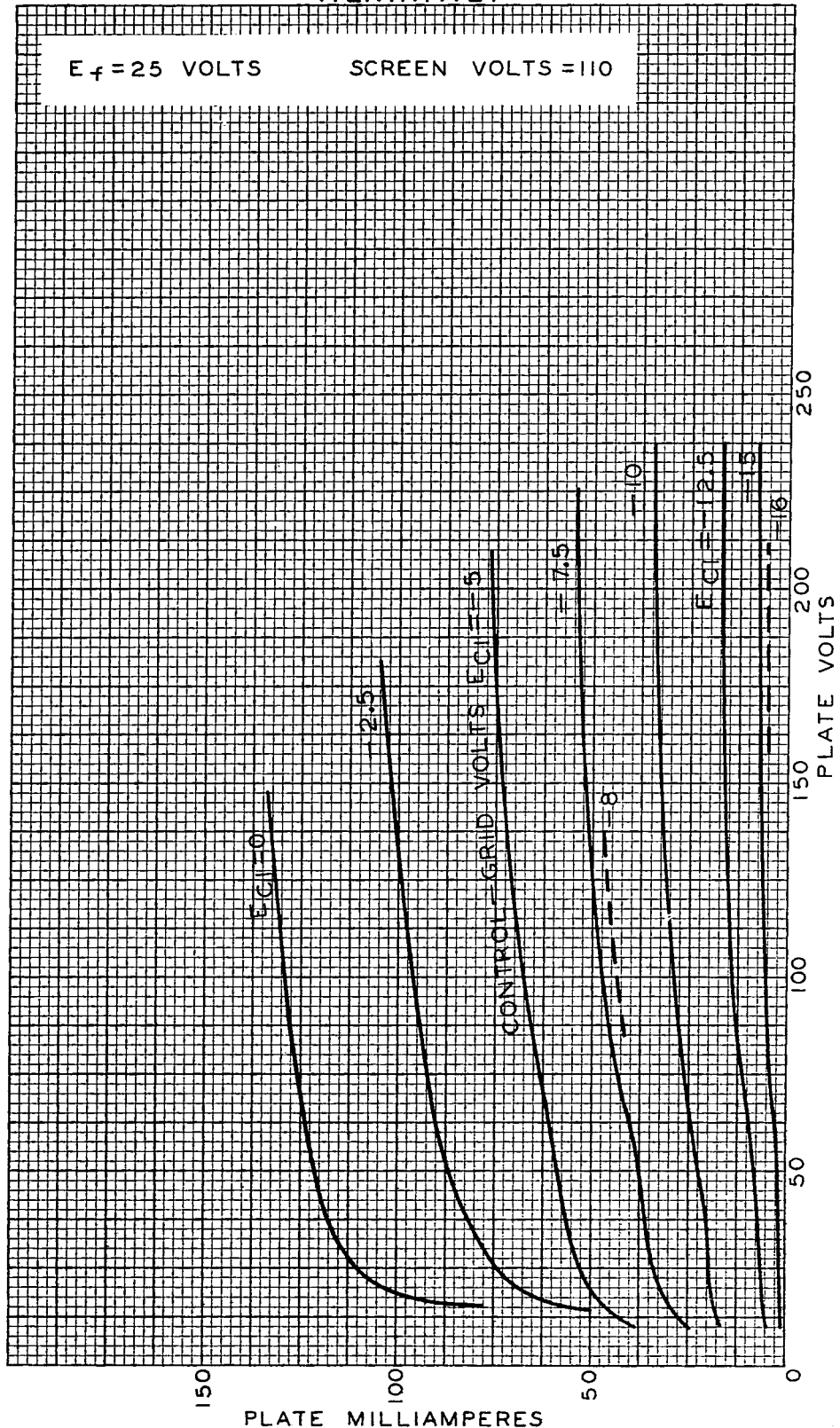
OUTLINE DRAWING



BOTTOM VIEW OF BASE

RCA-25L6

AVERAGE PLATE CHARACTERISTICS
(TENTATIVE)



OCT. 28, 1936

RCA RADIOTRON DIVISION
RCA MANUFACTURING COMPANY, INC.

92C-4684

APR 8 1958

FILE: J5-2516
August 30, 1951

JETEC DATA
JOINT ELECTRON TUBE ENGINEERING COUNCIL
COMMITTEE ON RECEIVING TUBES

JETEC TYPE 2516

BEAM PENTODE

MECHANICAL DATA

Coated unipotential cathode
Outline drawing. 8-6 Bulb MT-8
Base B7-22, small wafer octal 7-pin
Maximum diameter 1-5/16"
Maximum overall length 3-1/4"
Maximum seated height. 2-11/16"
Pin connections. Basing 7AC
 Pin 1 - Shell Pin 5 - Grid #1
 Pin 2 - Heater Pin 7 - Heater
 Pin 3 - Plate Pin 8 - Cathode,
 Pin 4 - Grid #2 Beam plates
Mounting position. any

ELECTRICAL DATA

Ratings

Heater voltage 25.0 volts
Maximum plate voltage. 200 volts
Maximum grid #2 voltage. 117 volts
Maximum plate dissipation. 10 watts
Maximum grid #2 dissipation. 1.25 watts
Maximum grid #1 circuit resistance:
 Self-bias 0.5 megohm
 Fixed-bias 0.1 megohm
Maximum heater-cathode voltage 90 volts

Typical Operating Conditions and Characteristics, Class A1 Amplifier

Heater voltage.	25.0	25.0	volts
Heater current.	300	300	ma
Plate voltage	110	200	volts
Grid #2 voltage	110	110	volts
Grid #1 voltage	-7.5	-8	volts
Peak A-F signal voltage	7.5	8	volts
Transconductance.	9000	9500	μmhos
Plate resistance (approx.)	13,000	30,000	ohms
Zero-signal plate current	49	50	ma
Maximum-signal plate current.	50	55	ma
Zero-signal grid #2 current (nominal)	4	2	ma
Maximum-signal grid #2 current (nominal).	11	7	ma
Load resistance.	2000	3000	ohms
Total harmonic distortion	10	10	%
Power output	2.1	4.3	watts

Refer to "Interpretation of Receiving Tube Ratings"