RADIO MANUFACTURERS ASSOCIATION
ENGINEERING DEPARTMENT

Release No. 435

September 10, 1945

sponsor:
Lewis Electronics

TYPE 3D23

MULTI-ELECTRODE HIGH VACUUM TUBE

GENERAL CHARACTERISTICS

ELECTRICAL

(a) Filament - Thoriated Tungsten

Voltage - 6.3 Vac
Current - 3.0 amps

Average Characteristics at E_b=1500 Vdc; I_b=75 ma; E_{c2}=300 Vdc; E_f= 6.3 Vac; E_{c1}= -20 Vdc

Amplification Factor - 65

Grid-Plate Transconductance - 2750 Micromhos

(b) Direct Interelectrode Capacitances, not yet determined

Frequency for Maximum Ratings - Not yet determined.

MECHANICAL

Type of cooling
Convection (Maximum Ambient 60C)

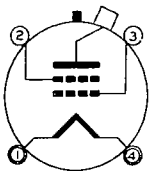
(c) Base Description - Medium 4-pin ceramic

Maximum Overall Dimensions

Length - 5 inches
Diameter - 1.57 inches

Basing Designation 4AR

4AR



RMA Release No. 435

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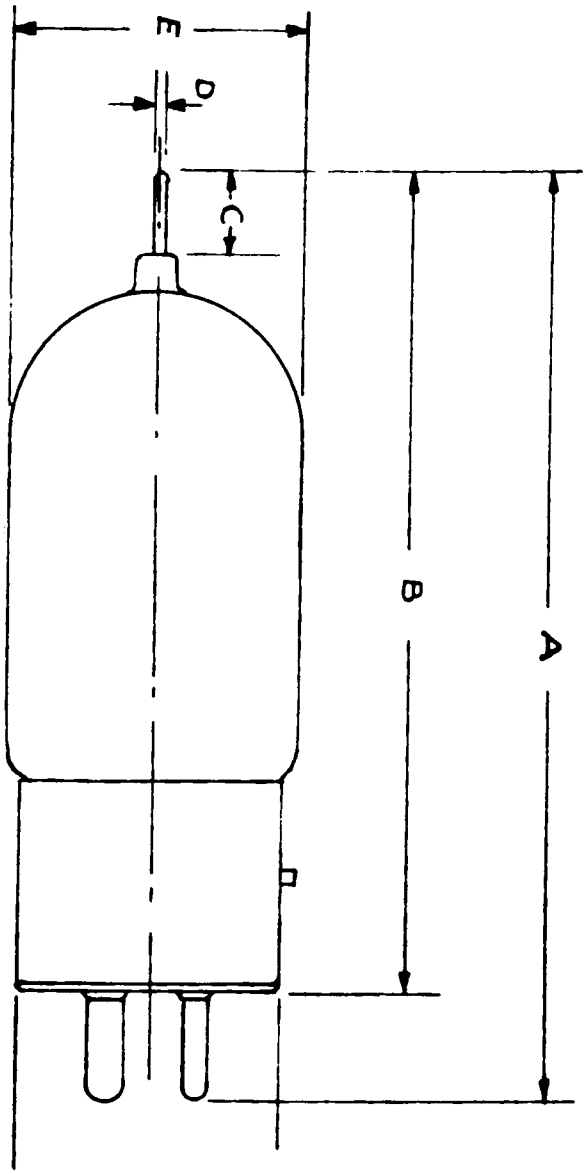
RMA TYPE 3D23



	MIN	MAX.
A	4750	5.000
B	4150	4400
C	0.312	
D	0.055	0.061
E		1.562

CLASS B RADIO-FREQUENCY POWER AMPLIFIER

(Carrier Conditions Per Tube for use with a Max. Modulation Factor of 1.0)

	Typical Operation	Max. Ratings
D-c Plate Voltage	1500 volts	2000 volts
D-c Grid Voltage (Grid #1)	120 volts	
D-c Grid Voltage (Grid #2, etc)	375 volts	400 volts
D-c Plate Current	45 ma	50 ma
Plate Input		100 watts
Screen Input		8 watts
Plate Dissipation		35 watts
Peak R-F Grid Input Voltage	280 volts	
D-c Grid Current, Approx.	2 ma	
D-c Screen Current	6 ma	
Driving Power, approx. (at crest of A-F cycle)	4.5 watts	
Plate Power Output	35 watts	

CLASS C RADIO-FREQUENCY POWER AMPLIFIER AND OSCILLATOR, PLATE MODULATED

(Carrier Conditions Per Tube for use with a Maximum Modulation Factor of 1.0)

	Typical Operation	Max. Ratings
D-c Plate Voltage	1000 volts	1250 volts
D-c Grid Voltage (Grid #1)	200 volts	250 volts
D-c Grid Voltage (Grid #2) etc.	300 volts	350 volts
D-c Plate Current	85 ma	100 ma
D-c Grid Current	10 ma	20 ma
D-c Screen Current	14 ma	
Plate Input		125 watts
Screen Input		8 watts
Plate Dissipation		35 watts
Peak R-F Grid Input Voltage	250 volts	
Driving Power	2 watts	
Plate Power Output	60 watts	

CLASS C RADIO-FREQUENCY POWER AMPLIFIER AND OSCILLATOR

(Key down conditions per tube without modulation. Modulation, essentially negative, may be used if positive peak of A-F envelope does not exceed 115% of carrier conditions.)

	Typical Operation	Max. Ratings
D-C Plate Voltage	1500 volts	2000 volts
D-c Grid Voltage (Grid #1)	300 volts	350 volts
D-c Grid Voltage (Grid #2)	375 volts	400 volts
D-c Plate Current	110 ma	125 ma
D-c Grid Current, approx	15 ma	20 ma
D-c Screen Current	22 ma	
Plate input		175 ~~125~~ watts
Screen Input		8 watts
Plate Dissipation		35 watts
Peak R-F Grid Input Voltage (Approximately)	350 volts	
Driving Power, Approx.	4.5 watts	
Plate Power Output	130 watts	