RADIO MANUFACTURERS ASSOCIATION
ENGINEERING DEPARTMENT

Release No. 434

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TYPE 4C25

sponsor:
Heintz & Kaufman, Ltd.

MULTI-ELECTRODE HIGH VACUUM TUBE

GENERAL CHARACTERISTICS

ELECTRICAL

(a)	Filament	Thoriated Tungsten	
	Voltage	5.0	volts
	Current	5.0	amps
	Average Characteristics at (E_b = 1500 V) ; (I_b = 65 MA) ; (E_f = 5.0 V); (E_{c1} = -21.0 Volts)		
	Amplification Factor	28	
	Grid-Plate Transconductance	2800	Micromhos
	Direct Interelectrode Capacitances		
(b)	Grid-Plate	1.8	uuf
	Input, grid-filament	2.0	uuf
	Output, Plate-filament	0.2	uuf
	Frequency for Maximum Ratings	30	Mc

MECHANICAL

Type of Cooling
Convection

(c)	Base Description (see attached outline drawing)	Medium Four Pin Ceramic	
	Maximum Overall Dimensions (See Outline Drawing)		
	Length	5 5/8	in.
	Diameter	2 1/16	in.
	Base Connections	2D	

CLASS B AUDIO-FREQUENCY POWER AMPLIFIER, TWO TUBES

	Typical Operation	Max. Ratings
D-c Plate Voltage	2000 volts	2500 volts
*Max. Signal Plate Current per tube (note 1)		150 ma
* D-c Max. Signal Plate Input, per tube (note 1)		187 watts
* Plate Dissipation, per tube (note 1)		50 watts
D-c Grid Voltage	-70 volts	
Peak A-F Grid Input Voltage Grid-grid	360 volts	
Zero Signal Plate Current	24 ma	
Max. Signal Plate Current	180 ma	
Max. Signal Driving Power (approx)	12 watts	
Effective Load, Plate-to-plate	36000 ohms	
Max. Signal Plate Power Output	260 watts	

* Averaged over any audio-frequency cycle.

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	2000 volts	2500 volts
D-c Grid Voltage	-250 volts	-750 volts
D-c Plate Current	110 ma	125 ma
D-c Grid Current	25 ma	30 ma
Plate Input		225 watts
Plate Dissipation		40 watts
Peak R-F Grid Input Voltage	428 volts	
Driving Power	9 watts	
Plate Power Output	180 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	3000 volts	3000 volts
D-c Grid Voltage	-290 volts	-750 volts
D-c Plate Current	100 ma	150 ma
D-c Grid Current, approx	25 ma	30 ma
Plate Input		300 watts
Plate Dissipation		50 watts
Peak R-F Grid Input Voltage approx.	465 volts	
Driving Power, approx.	10 watts	
Plate Power Output	250 watts	

FREQUENCY LIMITS

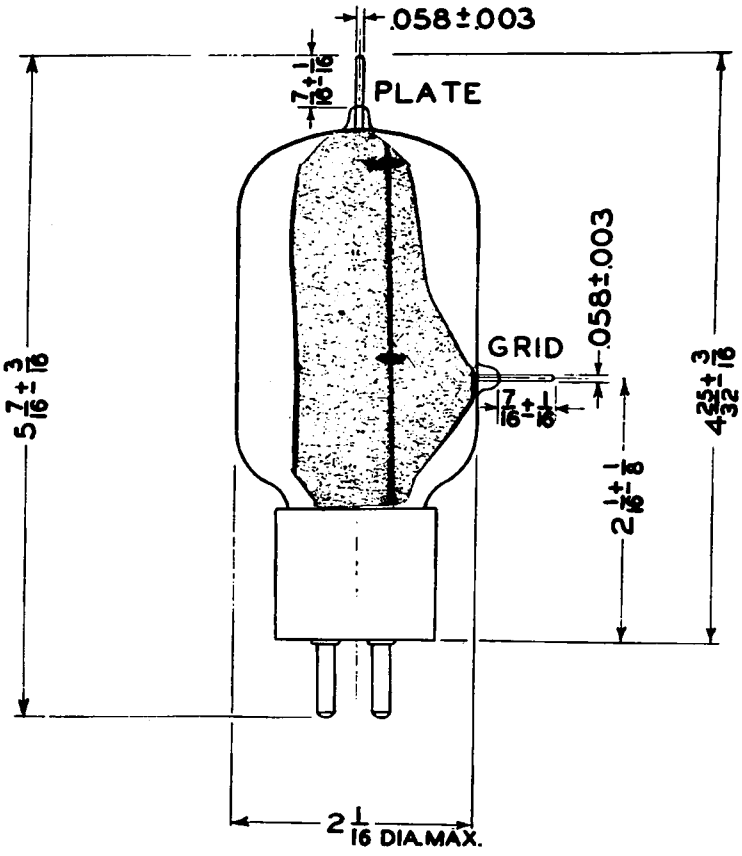
The upper frequency limit at which the type 4C25 tube may be operated at the ratings given above is 30 Mc. It may be operated above this frequency if the plate voltage and power input are appropriately decreased as the operating frequency is increased and if adequate ventilation of the bulb is provided. The maximum values of plate voltage and power input at which the tube may be operated at the higher frequencies is given below in which these maximum values are expressed as per cent of the rated values given above.

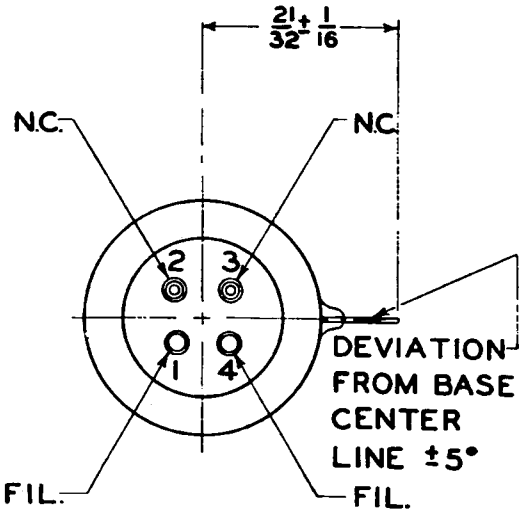
		SERVICE		
		Class B	Class C Plate Modulated	Class C Unmodulated
(a) Max. Frequency	= 30 Mc.	100%	100%	100%
(b)	≤ 120 Mc.			
(c)	≤ 200 Mc.			

(a) The frequency at which the normal maximum rated plate voltage and current given are valid.

(b) The frequency at which the most severe of the services permits acceptable operation at 75 % of normal rated maximum plate voltage and input.

(c) The frequency at which the most severe of the services permits acceptable operation at 50 % of normal rated maximum plate voltage and input.





MEDIUM 4-PIN BASE