

Lewis

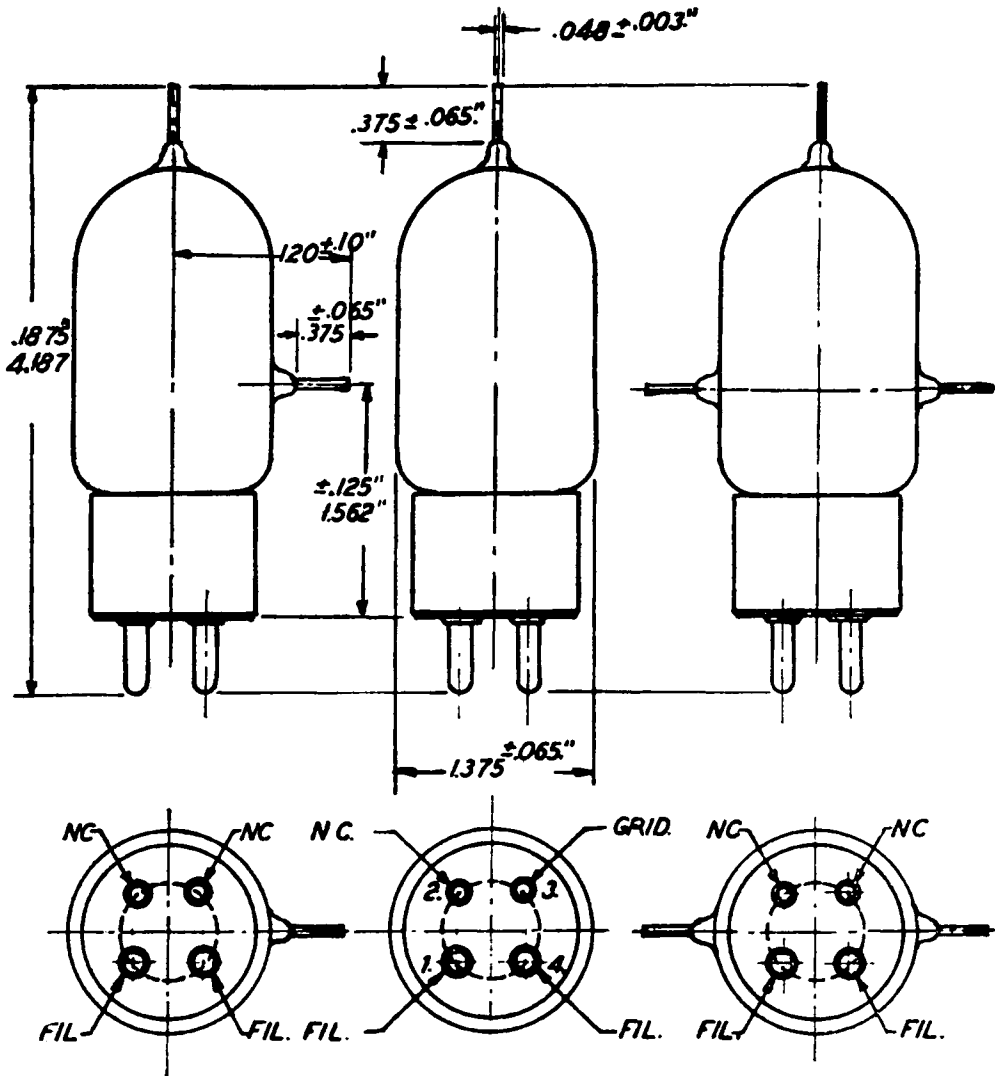
HIGH FREQUENCY TRANSMITTING TRIODES

3C24
3C28
3C34

3C24.

3C34.

3C28.



SMALL- 4 PIN-
CERAMIC BASE

Lewis

Subsidiary of **Aireon**
MANUFACTURING CORPORATION

ELECTRONICS

LOS GATOS • CALIFORNIA

Type 3C24 - 3C28 - 3C34

HIGH FREQUENCY TRANSMITTING TRIODES

Filament	Thoriated Tungsten
Voltage	6.3 ac or dc volts
Current	3.0 amps
Amplification factor	25

DIRECT INTERELECTRODE CAPACITANCES:

	<u>3C24</u>	<u>3C34</u>	<u>3C28</u>
Grid-Plate	1.6	1.7	1.8 mmf
Grid-Filament	2.0	2.5	2.1 mmf
Plate-Filament	0.2	0.4	0.1 mmf

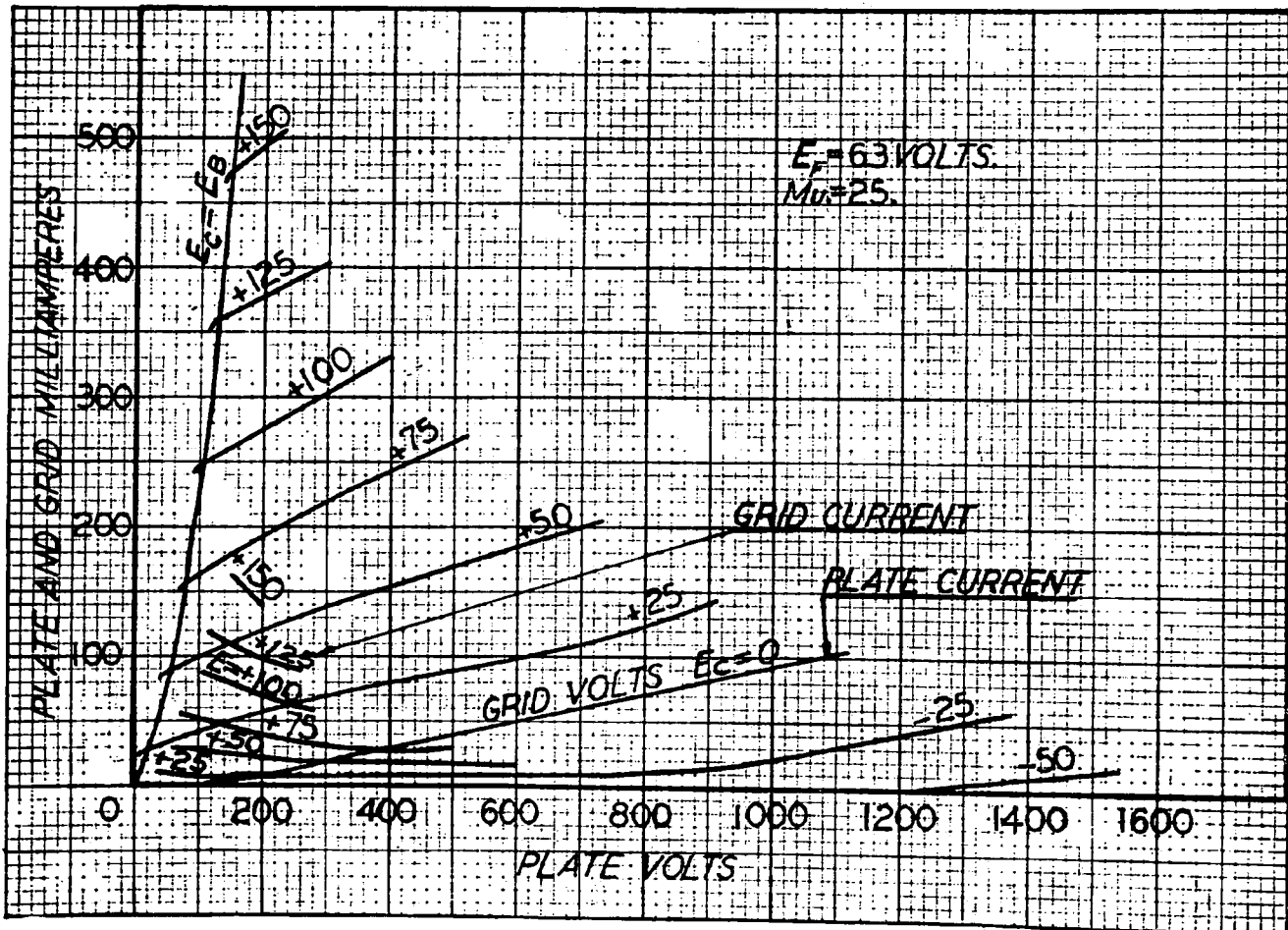
Class "C" R. F. AMPLIFIER

FREQUENCY LIMITS

Full power input	60	60	100 mcs
Half power input	250	200	350 mcs

NOTE: The 3C24, 3C28 and 3C34 are electrically identical, the tubes differing only in the location of the grid terminal. This becomes an important factor in the design of equipment. See outline drawing and frequency limits above.

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Type 3C24 - 3C28 - 3C34

MAXIMUM RATINGS AND TYPICAL OPERATING CONDITIONS

Radio Frequency Power Amplifier Class "C" Unmodulated

	Maximum Rating Per Tube	Typical Operation, 1 Tube		
		2000	1500	1000
D. C. Plate Voltage	2000	2000	1500	1000 Volts
D. C. Plate Current	75	56	75	75 M.A.
D. C. Grid Current	25	18	18	18 M.A.
D. C. Grid Voltage	-250	-140	-120	-100 Volts
Peak R. F. Grid Voltage		250	240	220 Volts
Grid Driving Power		4.0	3.8	3.6 Watts
Plate Dissipation	25	25	25	18 Watts
Plate Efficiency		81	80	76 Percent
Power Output		90	90	57 Watts
Plate Input	112			Watts

Radio Frequency Power Amplifier Class "C" Plate Modulated (Carrier condition for use with 100% modulation)

	Maximum Rating Per Tube	Typical Operation, 1 Tube		
		1500	1250	1000
D. C. Plate Voltage	1500	1500	1250	1000 Volts
D. C. Plate Current	60	50	60	60 M.A.
D. C. Grid Current	25	25	25	25 M.A.
D. C. Grid Voltage	-250	-145	-125	-105 Volts
Peak R. F. Grid Voltage		245	230	210 Volts
Grid Driving Power		5.5	5.2	4.7 Watts
Plate Dissipation	17	15	15	13 Watts
Plate Efficiency		80	80	78 Percent
Power Output		60	60	47 Watts
Plate Input	75			Watts

Radio Frequency Power Amplifier Class "C" Grid Modulated

	Maximum Rating Per Tube	Typical Operation, 1 Tube		
		1500	1250	1000
D. C. Plate Voltage	1500	1500	1250	1000 Volts
D. C. Plate Current	60	25	30	38 M.A.
D. C. Grid Voltage	-250	-120	-105	-95 Volts
D. C. Grid Current		1.0	1.5	3.0 M.A.
Peak R. F. Grid Voltage		140	140	140 Volts
Driving Power at Crest of A. F. Cycle		1.4	1.9	2.4 Watts
Peak A. F. Modulating Voltage		60	55	55 Volts
Peak A. F. Current		7.5	10	13 M.A.
Plate Dissipation	25	23	23	24 Watts
Tube Efficiency		40	40	37 Percent
Power Output		15	15	14 Watts

Radio Frequency Doubler Amplifier (Feedback Voltage Neutralized by Conventional Methods)

	Maximum Rating Per Tube	Typical Operation, 1 Tube		
		1500	1250	1000
D. C. Plate Voltage	1500	1500	1250	1000 Volts
D. C. Plate Current	70	50	58	70 M.A.
D. C. Grid Voltage	-250	-240	-250	-250 Volts
D. C. Grid Current	25	12	14	18 M.A.
Peak R. F. Grid Voltage		345	365	380 Volts
Driving Power		3.9	4.7	6.4 Watts
Plate Dissipation	25	24	24	25 Watts
Tube Efficiency		68	67	64 Percent
Power Output		51	49	45 Watts

AUDIO FREQUENCY POWER AMPLIFIER — CLASS "B" MODULATOR

	<u>Maximum Rating Per Tube</u>	<u>Typical Operation, 2 Tubes</u>		
D. C. Plate Voltage	1500	1250	1000	500 Volts
D. C. Plate Current Maximum Signal	75	136	150	150 M.A.
D. C. Plate Current Zero Signal		24	30	70 M. A.
D. C. Grid Voltage	—250	—42	—29	0 Volts
Peak A. F. Grid-to-Grid Voltage		256	248	190 Volts
Load Resistance (Plate to Plate)		21200	15000	6400 Ohms
Plate Dissipation	25	50	45	30 Watts
Plate Efficiency		70	69	60 Percent
Driving Power, (Nominal)		4.2	4.5	3.5 Watts
Power Output		120	105	45 Watts

RADIO FREQUENCY TRIPLER AMPLIFIER (Feedback Voltage Neutralized by Conventional Methods)

	<u>Maximum Rating Per Tube</u>	<u>Typical Operation, 1 Tube</u>		
D. C. Plate Voltage	1500	1500	1250	1000 Volts
D. C. Plate Current	60	31	36	45 M. A.
D. C. Grid Voltage	—250	—220	—230	—250 Volts
D. C. Grid Current	25	7	9	11 M. A.
Peak R. F. Grid Voltage		295	315	350 Volts
Driving Power		1.9	2.5	3.5 Watts
Plate Dissipation	25	25	25	25 Watts
Tube Efficiency		47	45	45 Percent
Power Output		22	20	20 Watts