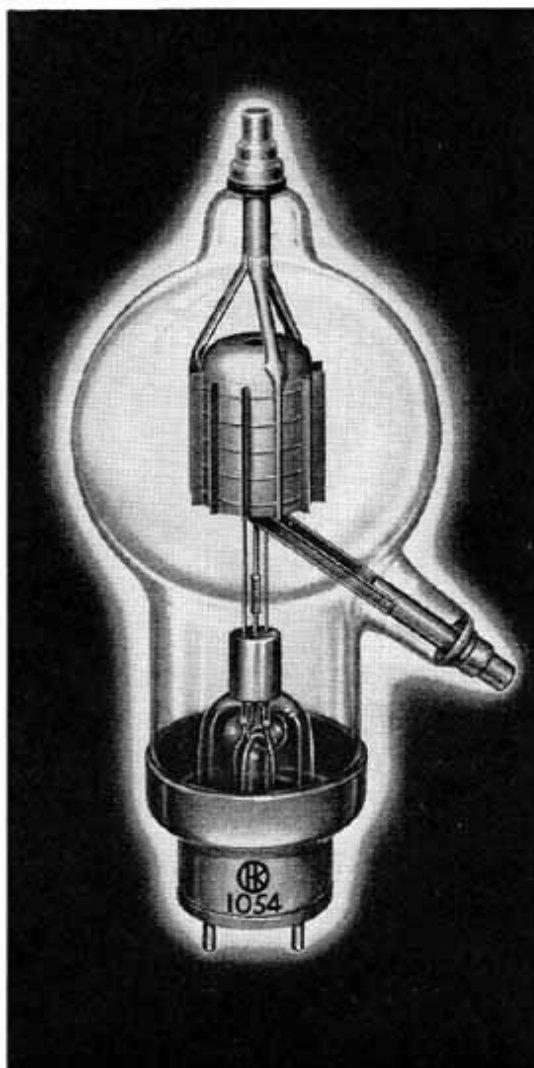


# GAMMATRON TYPE 1054L



Unique constructional features make this tube capable of high voltages and unusual very high frequency performance. It has exceptional ruggedness, electrical stamina, and extra long life.

Copper thimble connectors are used for the grid and plate. They are high current capacity connectors possessing low resistance. Because of improved radiation, they run at least 50 degrees Centigrade cooler at the copper to glass seal than do ordinary tungsten seals. Their design relieves glass strains, and hence the seal positively will not fail. Heavy rugged leads provide perfect support and alignment to the elements without the use of insulators. Their low inductance

## GENERAL PURPOSE TRIODE

Low mu, general purpose triode, 750 watt radiation cooled tantalum plate. Designed to stand high voltages and to give exceptional VHF performance.

### PHYSICAL DATA

Plate . . . . .	Cylindrical Tantalum
Grid . . . . .	Braced Vertical Bar Tantalum
Filament . . . . .	Thoriated Tungsten
Blank . . . . .	Nonex Glass
Net Weight . . . . .	42 Ounces
Shipping Weight . . . . .	6 Pounds
Shipping Volume . . . . .	2 Cu. Feet
Maximum Height . . . . .	17 Inches
Maximum Width . . . . .	8 $\frac{3}{8}$ Inches

### ELECTRICAL DATA

Filament Voltage . . . . .	7.5 Volts
Filament Current . . . . .	20 Amps.
Normal Plate Dissipation . . . . .	750 Watts
Maximum Average Plate Current . . . . .	1.0 Amps.
Maximum Plate Voltage . . . . .	6000 Volts
Maximum Average Grid Current . . . . .	0.150 Amps.
Average Amplification Constant . . . . .	13.5

### INTERELECTRODE CAPACITANCES

Grid-Plate Capacitance . . . . .	5.3 mmfd.
Grid-Filament Capacitance . . . . .	7.9 mmfd.
Plate-Filament Capacitance . . . . .	1.2 mmfd.

combined with low inter-electrode capacity provides easy neutralization and reduces circuit losses at high frequencies.

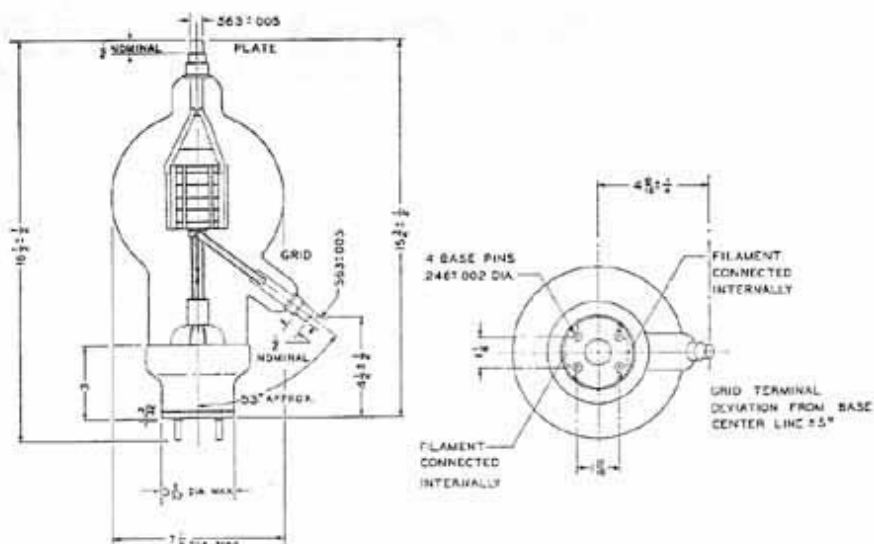
The VHF efficiency is high because of the use of an enclosed plate which confines all electrons to give useful output. Ordinary open plate tubes operate at lower efficiency because of escaped electrons. Electron bombardment is eliminated, lifting voltage limitations. Operation as a neutralized power amplifier up to 100 mc. is practical with up to 70 per cent efficiency.

New tantalum cleaning and pumping techniques give the 1054-L extra long life, and make it more gas free—more failure proof. A result of 17 years of GAMMATRON progress.

DOCO 4-46

## HEINTZ AND KAUFMAN LTD.

SOUTH SAN FRANCISCO, CALIFORNIA, U. S. A.



**RADIO FREQUENCY POWER AMPLIFIER  
CLASS "C" UNMODULATED**

	Maximum Rating Per Tube		TYPICAL OPERATION, 1 TUBE			
Power Output . . . . .		3000	2450	1950	1190	Watts
Driving Power . . . . .		140	160	180	140	Watts
DC Plate Voltage . . . . .	6000	5000	4000	3000	2000	Volts
DC Plate Current . . . . .	1000	750	800	900	970	M. A.
DC Grid Current . . . . .	150	105	120	135	150	M. A.
DC Grid Voltage . . . . .	-2000	-950	-900	-875	-450	Volts
Peak R.F. Grid Voltage . . . . .		1475	1450	1475	1025	Volts
Plate Dissipation . . . . .	750	750	750	750	750	Watts
Plate Input . . . . .	3750	3750	3200	2700	1940	Watts

**RADIO FREQUENCY POWER AMPLIFIER  
CLASS "C" PLATE MODULATED\***

	Maximum Rating Per Tube		TYPICAL OPERATION, 1 TUBE			
Power Output . . . . .		2150	1705	1065	Watts	
Driving Power . . . . .		150	185	150	Watts	
DC Plate Voltage . . . . .	4000	4000	3000	2000	Volts	
DC Plate Current . . . . .	850	690	780	850	M. A.	
DC Grid Current . . . . .	150	120	150	150	M. A.	
DC Grid Voltage . . . . .	-2000	-875	-825	-450	Volts	
Peak R.F. Grid Voltage . . . . .		1400	1375	975	Volts	
Plate Dissipation . . . . .	635	600	635	635	Watts	
Plate Input . . . . .	2750	2750	2340	1700	Watts	

\*Carrier conditions for 100% modulation peaks and 60% average value.

*Gammatron Tubes*

**RADIO FREQUENCY POWER AMPLIFIER**  
**CLASS "B" LINEAR\***

	Maximum Rating Per Tube	TYPICAL OPERATION, 1 TUBE			
Power Output . . . . .		410	375	300	Watts
Driving Power** . . . . .		45	60	90	Watts
DC Plate Voltage . . . . .	6000	4000	3000	2000	Volts
DC Plate Current . . . . .	750	290	375	525	M. A.
DC Grid Current . . . . .		1	2	25	M. A.
DC Grid Voltage . . . . .		-300	-225	-150	Volts
Peak R. F. Grid Voltage . . . . .		325	315	330	Volts
Plate Dissipation . . . . .	750	750	750	750	Watts
Plate Input . . . . .	1200	1160	1125	1050	Watts

\*Carrier conditions for 100% modulation.  
\*\*R.F. power, at crest of audio cycle.

**AUDIO FREQUENCY POWER AMPLIFIER**  
**CLASS "B"\***

	Maximum Rating Two Tubes	TYPICAL OPERATION, 2 TUBES			
Power Output . . . . .		2970	2860	2120	Watts
Driving Power** . . . . .		200	275	330	Watts
DC Plate Voltage . . . . .	4000	4000	3000	2000	Volts
DC Plate Current Zero Signal . . . . .		50	70	90	M. A.
DC Plate Current Max. Signal . . . . .	2000	1050	1400	1800	M. A.
DC Grid Voltage . . . . .		-300	-200	-125	Volts
Peak A. F. Grid to Grid Voltage . . . . .		1240	1210	1180	Volts
Plate Input Max. Signal . . . . .	4500	4200	4200	3600	Watts
Load Resistance Plate to Plate . . . . .		8600	4850	2125	Ohms

\*All data for two tubes.  
\*\*Instantaneous power at crest of cycle; effective power is one-half of this value.

The information on this and the preceding pages does not represent exact conditions of operation to be imposed for any particular situation. Because tubes are used under many widely different conditions Heintz and Kaufman will gladly furnish information for applications which differ appreciably from the illustrative examples given.

*Gammatron Tubes*

