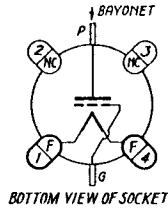


TRIODE POWER AMPLIFIER OSCILLATOR

The RK-32 is a triode type power amplifier tube having a thoriated tungsten filament, a tantalum plate and grid, a hard glass bulb and an isolantite base. It is designed for use as a power amplifier, oscillator or frequency multiplier.



AMPLIFICATION FACTOR 11 FILAMENT RATING

Filament Voltage	7.5	volts
Filament Current	3.25	amp

DIRECT INTERELECTRODE CAPACITANCES

Grid to Plate	3.4	μmf
Input	2.5	μmf
Output	0.7	μmf

R-F POWER AMPLIFIER—CLASS C—TELEGRAPHY MAXIMUM RATINGS

D-C Plate Voltage	1250	volts
D-C Plate Current	100	ma
D-C Grid Current	25	ma
Plate Dissipation	50	watts

TYPICAL OPERATION

D-C Plate Voltage	1250	volts
D-C Grid Voltage	-225	volts
D-C Plate Current	100	ma
D-C Grid Current	14	ma
Peak R-F Input Voltage	380	volts
R-F Driving Power	4.8	watts
Power Output	90	watts

R-F POWER AMPLIFIER—CLASS B—TELEPHONY MAXIMUM RATINGS

D-C Plate Voltage	1250	volts
D-C Plate Current	66	ma
Plate Dissipation	50	watts

TYPICAL OPERATION

D-C Plate Voltage	1250	volts
D-C Grid Voltage	-120	volts
D-C Plate Current	50	ma
Peak R-F Input Voltage	200*	volts
R-F Driving Power	2.5 *	watts
Carrier Power Output	21	watts
Peak Power Output	84	watts

*At the peak of the a-f cycle with 100% modulation.

R-F POWER AMPLIFIER—CLASS C—TELEPHONY

MAXIMUM RATINGS

	Grid Modulation	Plate Modulation	
D-C Plate Voltage	1250	1000	volts
D-C Plate Current (Carrier)	100	100	ma
D-C Grid Current (Carrier)	25	25	ma
Plate Dissipation (Carrier)	50	32	watts

TYPICAL OPERATION

D-C Plate Voltage	1250	1000	volts
D-C Grid Voltage	-200	-310	volts
D-C Plate Current	60	100	ma
D-C Grid Current	1.2	21	ma
Peak R-F Input Voltage	235	415	volts
R-F Driving Power	5 *	8.7	watts
Carrier Power Output	25	70	watts
Peak A-F Modulating Voltage	100*	1000*	volts
A-F Modulating Power	2.1 *	50	watts
Peak Power Output	100*	280 *	watts

*At the peak of the a-f cycle with 100% modulation.

OPERATING NOTES

FREQUENCY RANGE

The RK-32 may be operated at the maximum ratings at frequencies up to 150 megacycles. Above 150 megacycles the reduced efficiency realized requires that the plate voltage be reduced to prevent the plate dissipation from exceeding the maximum rated value. The operation of the tube at frequencies higher than 300 megacycles is not recommended.

BIAS

At least 90 volts of fixed bias should be used with 1250 volts on the plate to protect the tube in case of failure of the bias or excitation. Additional bias may be obtained by the use of a grid or cathode resistor.

PLATE TEMPERATURE

The plate of the RK-32 will show an orange color (See Plate Temperature Color Scale) when operated at the maximum rated plate dissipation. Dissipations above the rated value should be avoided.

