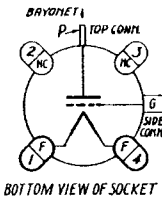


TRIODE POWER AMPLIFIER OSCILLATOR

The RK-37 is a high-mu 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.



BOTTOM VIEW OF SOCKET

FILAMENT RATING

Filament Voltage	7.5	volts
Filament Current	4	amp

DIRECT INTERELECTRODE CAPACITANCES

Grid to Plate	3.2	μf
Input	3.5	μf
Output	0.2	μf

R-F POWER AMPLIFIER OR OSCILLATOR—CLASS C

MAXIMUM RATINGS

D-C Plate Voltage—Telephony	1500	volts
D-C Plate Voltage—Telephony	1500	volts
With Grid Modulation	1250	volts
With Plate Modulation	1250	volts
D-C Plate Current	125	ma
D-C Grid Current	35	ma
Plate Dissipation	50	watts

TYPICAL OPERATION

	Telephony Grid Modulation	Telephony Plate Modulation	Telephony	
D-C Plate Voltage	1500	1250	1500	volts
D-C Grid Voltage	-200	-150	-130	volts
D-C Plate Current	44	100	115	ma
D-C Grid Current	5	23	30	ma
Peak R-F Input Voltage	260	270	260	volts
R-F Driving Power	6 *	5.6	7	watts
Carrier Power Output	26	90	122	watts
Peak A-F Volt.—Plate	—	1250*	—	volts
Peak A-F Volt.—Grid	60 *	—	—	volts
A-F Modulating Power	1.4 *	63	—	watts
Peak Power Output	104*	360 *	—	watts

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

R-F POWER AMPLIFIER—CLASS B—TELEPHONY

MAXIMUM RATINGS

D-C Plate Voltage	1500	volts
D-C Plate Current (Carrier)	50	ma
Plate Dissipation (Carrier)	50	watts

TYPICAL OPERATION

D-C Plate Voltage	1500	volts
D-C Grid Voltage	-50	volts
D-C Plate Current	50	ma
Peak R-F Input Voltage	120*	volts
R-F Driving Power	2.4 *	watts
Carrier Power Output	26	watts
Peak Power Output	104*	watts

A-F POWER AMPLIFIER—CLASS B—TWO TUBES

MAXIMUM RATINGS

D-C Plate Voltage	1500	volts
D-C Plate Current (per tube)	125	ma
Plate Dissipation (per tube)	50	watts
(Averaged over 1 cycle)		

TYPICAL OPERATION

D-C Plate Voltage	1250	volts
D-C Grid Voltage	-35	volts
D-C Plate Current (no signal)	25	ma
D-C Plate Current (max. signal)	235	ma
D-C Grid Current (max. signal)	60	ma
Peak A-F Input Voltage (grid to grid)	282	volts
A-F Driving Power	7.2	watts
Load Resistance (plate to plate)	18000	ohms
Power Output	200	watts

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

OPERATING NOTES

FREQUENCY RANGE

The RK-37 may be operated at the maximum ratings at frequencies up to 60 megacycles. At frequencies between 60 megacycles and 120 megacycles the maximum d-c plate voltage should not exceed 1000 volts. Above 120 megacycles, the maximum d-c plate voltage should not exceed 750 volts.

BIAS

At least 35 volts of fixed bias should be used with 1500 volts on the plate to protect the tube in case of failure of the bias or excitation. The fixed bias may be reduced at lower plate voltages.

PLATE TEMPERATURE

The plate of the RK-37 will show a light yellowish red color (See Plate Temperature Color Scale) when operated at the maximum rated plate dissipation. Dissipations above the rated value should be avoided.

