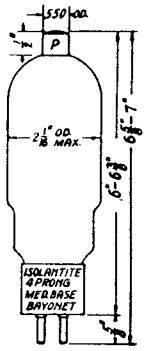
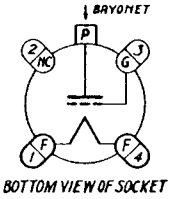


TRIODE POWER AMPLIFIER OSCILLATOR



BOTTOM VIEW OF SOCKET

The RK-52 is a high-mu triode type power amplifier tube having a thoriated tungsten filament, a carbon plate, a hard glass bulb and an isolantite base. It is designed for use as a power amplifier, oscillator or frequency multiplier.

FILAMENT RATING

Filament Voltage	7.5	volts
Filament Current	3.75	amp

DIRECT INTERELECTRODE CAPACITANCES

Grid to Plate	12	μμf
Input	6.6	μμf
Output	2.2	μμf

A-F POWER AMPLIFIER—CLASS B—TWO TUBES

MAXIMUM RATINGS

D-C Plate Voltage	1250	volts
D-C Plate Current (per tube)	150	ma
Plate Dissipation (per tube) (Average over 1 cycle)	62.5	watts

TYPICAL OPERATION

D-C Plate Voltage	1250	volts
D-C Grid Voltage	0	volts
D-C Plate Current (no signal)	40	ma
D-C Plate Current max. signal)	300	ma
D-C Grid Current (max. signal)	100	ma
Peak A-F Grid Voltage (grid to grid)	180	volts
A-F Driving Power	7.5	watts
Load Resistance (plate to plate)	10000	ohms
Power Output	250	watts

R-F POWER AMPLIFIER—CLASS C—TELEGRAPHY

MAXIMUM RATINGS

D-C Plate Voltage	1500	volts
D-C Plate Current	130	ma
D-C Grid Current	50	ma
Plate Dissipation	60	watts

TYPICAL OPERATION

D-C Plate Voltage	1250	1500	volts
D-C Grid Voltage	—120	—120	volts
D-C Plate Current	150	130	ma
D-C Grid Current	41	40	ma
Peak R-F Input Voltage	200	195	volts
R-F Driving Power	7.4	7	watts
Power Output	130	135	watts

R-F POWER AMPLIFIER—CLASS C—TELEPHONY—PLATE MODULATION

MAXIMUM RATINGS

D-C Plate Voltage	1250	volts
D-C Plate Current	115	ma
D-C Grid Current	50	ma
Plate Dissipation	40	watts

TYPICAL OPERATION

D-C Plate Voltage	1000	1250	volts
D-C Grid Voltage	—120	—120	volts
D-C Plate Current	125	115	ma
D-C Grid Current	41	47	ma
Peak R-F Input Voltage	195	200	volts
R-F Driving Power	7.2	8.5	watts
A-F Modulating Power	63	72	watts
Carrier Power Output	90	105	watts
Peak Power Output	360	420	watts

OPERATING NOTES

FREQUENCY RANGE

The construction of the RK-52 allows operation at the maximum ratings at frequencies up to 60 megacycles. Above 60 megacycles the reduced efficiency realized requires that the plate voltage be lowered to prevent the plate dissipation from exceeding the maximum rated value.

PLATE TEMPERATURE

The plate of the RK-52 will not show color when operated at the rated plate dissipation. Dissipations above the rated value should be avoided.