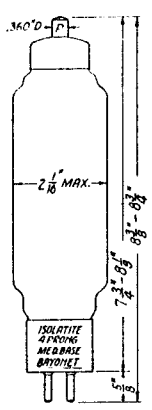
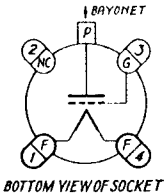


TRIODE POWER AMPLIFIER OSCILLATOR



BOTTOM VIEW OF SOCKET

The RK-18 is a triode type power amplifier tube having a thoriated tungsten filament, a molybdenum plate 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	amp

DIRECT INTERELECTRODE CAPACITANCES

Grid to Plate	4.8	μμf
Input	6	μμf
Output	1.8	μμf

R-F POWER AMPLIFIER OR OSCILLATOR—CLASS C

MAXIMUM RATINGS

D-C Plate Voltage—Telegraphy	1250	volts
D-C Plate Voltage—Telephony		
With Grid Modulation	1250	volts
With Plate Modulation	1000	volts
D-C Plate Current	100	ma
D-C Grid Current	40	ma
R-F Grid Current	5	amp
Plate Dissipation	40	watts

TYPICAL OPERATION

	Telephony Grid Modulation	Telephony Plate Modulation	Telegraphy	
D-C Plate Voltage	1250	1000	1250	volts
D-C Grid Voltage	—140	—160	—160	volts
D-C Plate Current	38	80	100	ma
D-C Grid Current	0.5	13	12	ma
Peak R-F Input Voltage	150	265	255	volts
R-F Driving Power	3.8*	3.1	2.8	watts
Carrier Power Output	18	64	95	watts
Peak A-F Voltage—Plate	—	1000*	—	volts
Peak A-F Voltage—Grid	60 *	—	—	volts
A-F Modulating Power	1.5*	40	—	watts
Peak Power Output	72 *	256 *	—	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	1250	volts
D-C Plate Current (Carrier)	50	ma
Plate Dissipation (Carrier)	40	watts

TYPICAL OPERATION

D-C Plate Voltage	1250	volts
D-C Grid Voltage	—70	volts
D-C Plate Current	40	ma
Peak R-F Input Voltage	160*	volts
R-F Driving Power	2.1 *	watts
Carrier Power Output	18	watts
Peak Power Output	72 *	watts

A-F POWER AMPLIFIER—CLASS B—TWO TUBES

MAXIMUM RATINGS

D-C Plate Voltage	1250	volts
D-C Plate Current (per tube)	115	ma
Plate Dissipation (per tube) (Averaged over 1 cycle)	40	watts

TYPICAL OPERATION

D-C Plate Voltage	1000	1250	volts
D-C Grid Voltage	—45	—60	volts
D-C Plate Current (no signal)	35	35	ma
D-C Plate Current (max. signal)	230	220	ma
D-C Grid Current (max. signal)	38	60	ma
Peak A-F Input Voltage (grid to grid)	268	352	volt
A-F Driving Power	4.3	9	watts
Load Resistance (plate to plate)	12000	18000	ohms
Power Output	150	190	watts

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

OPERATING NOTES

FREQUENCY RANGE

The RK-18 may be operated 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.

BIAS

At least 60 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.

PLATE TEMPERATURE

The RK-18 will show a light cherry color (See Plate Temperature Color Scale) when operated at the maximum rated plate dissipation. Dissipations above the rated value should be avoided.