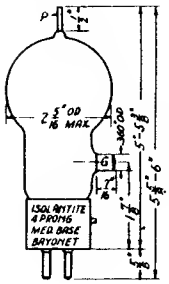
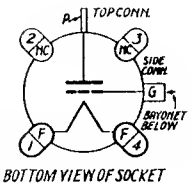


TRIODE POWER AMPLIFIER OSCILLATOR

The RK-35 is a triode type power amplifier tube having a tantalum plate and grid and an isolantite base. It is designed for use as a power amplifier, oscillator or frequency multiplier.



BOTTOM VIEW OF SOCKET

AMPLIFICATION FACTOR 9

FILAMENT RATING

Filament Voltage	7.5	volts
Filament Current	4	amp

DIRECT INTERELECTRODE CAPACITANCES

Grid to Plate	2.7	μμf
Input	3.5	μμf
Output	0.4	μμf

R-F POWER AMPLIFIER OR OSCILLATOR—CLASS C—TELEGRAPHY

MAXIMUM RATINGS

D-C Plate Voltage	1500	volts
D-C Plate Current	125	ma
D-C Grid Current	20	ma
Plate Dissipation	50	watts

TYPICAL OPERATION

D-C Plate Voltage	1500	volts
D-C Grid Voltage	—250	volts
D-C Plate Current	115	ma
D-C Grid Current	15	ma
Peak R-F Input Voltage	375	volts
R-F Driving Power	5	watts
Power Output	120	watts

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	—180	volts
D-C Plate Current	37	ma
D-C Grid Current	0	ma
Peak R-F Input Voltage	280*	volts
R-F Driving Power	2 *	watts
Carrier Power Output	25	watts
Peak Power Output	100*	watts

R-F POWER AMPLIFIER—CLASS C—TELEPHONY

MAXIMUM RATINGS

	Grid Modulation	Plate Modulation	
D-C Plate Voltage	1500	1250	volts
D-C Plate Current (Carrier)	50	125	ma
Plate Dissipation (Carrier)	50	66	watts

TYPICAL OPERATION

	Grid Modulation	Plate Modulation	
D-C Plate Voltage	1500	1250	volts
D-C Grid Voltage	—250	—250	volts
D-C Plate Current	50	100	ma
D-C Grid Current	0	14	ma
Peak R-F Input Voltage	230	365	volts
R-F Driving Power	1.7 *	4.6	watts
Carrier Power Output	25	93	watts
Peak A-F Modulating Voltage	100*	1250*	volts
A-F Modulating Power	0.3 *	63	watts
Peak Power Output	100*	372 *	watts

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

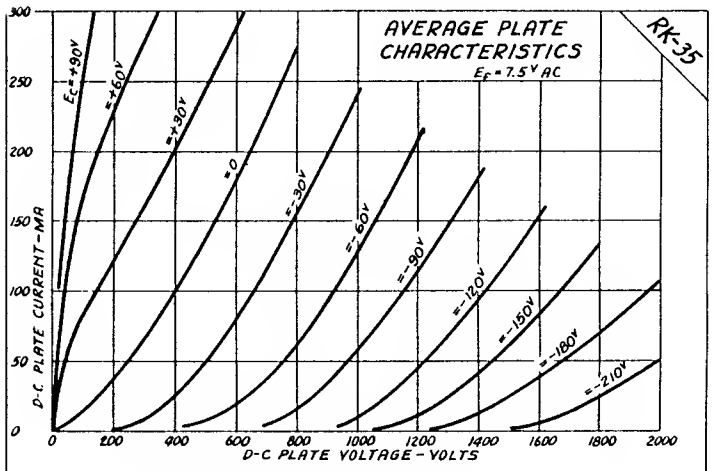
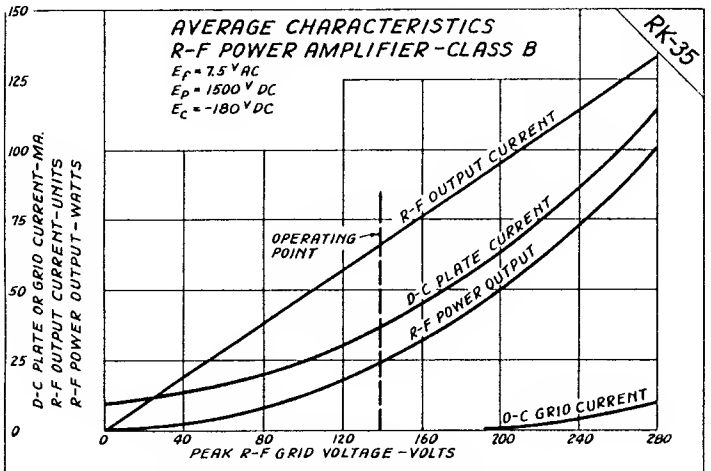
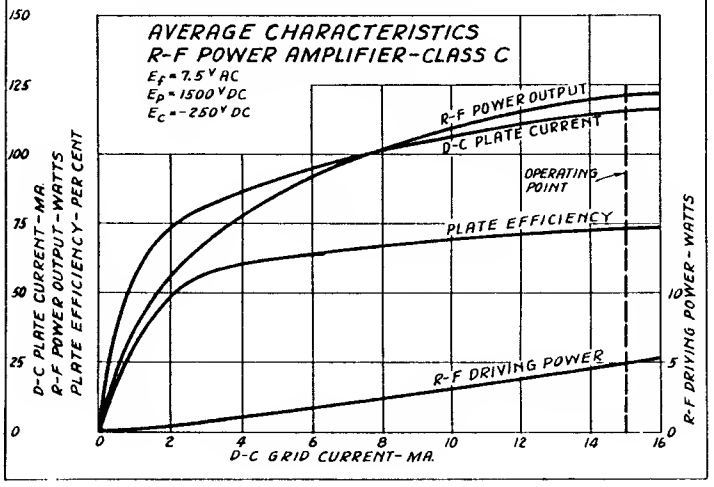
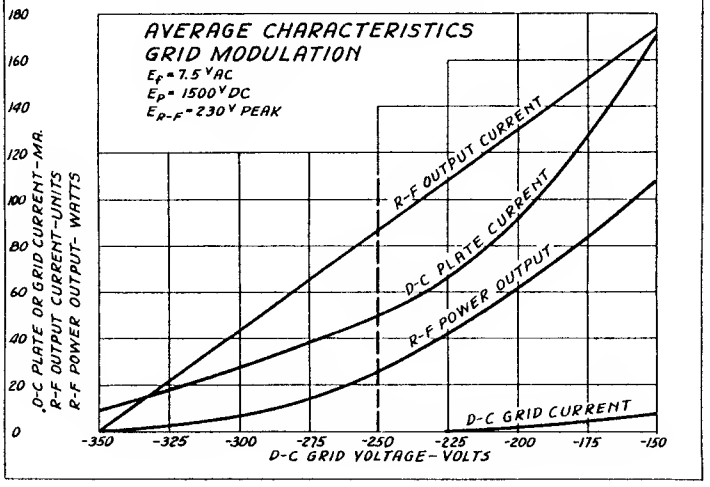
OPERATING NOTES

FREQUENCY RANGE

The RK-35 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 170 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-35 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.