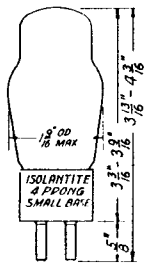
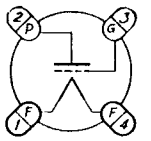


TRIODE AMPLIFIER OSCILLATOR



The RK-24 is a triode type amplifier tube having a coated filament and an isolantite base. It is designed for use as an amplifier or oscillator in transceivers and portable equipment at ultra-high frequencies. It will supply more power output and give better life than the type 30 in these applications.

FILAMENT RATING

Filament Voltage	2.0 d-c	volts
Filament Current	0.12	amp

DIRECT INTERELECTRODE CAPACITANCES

Grid to Plate	5.5	μμf
Input	3.5	μμf
Output	3.0	μμf

A-F AMPLIFIER—CLASS A

MAXIMUM RATINGS

D-C Plate Voltage	180	volts
Plate Dissipation	1.5	watts

TYPICAL OPERATION

D-C Plate Voltage	90	135	180	volts
D-C Grid Voltage	−4.5	−9	−13.5	volts
D-C Plate Current	4.5	6	8	ma
Amplification Factor	8	8	8	
Plate Resistance	5500	5300	5000	ohms
Transconductance	1450	1500	1600	μmhos
Load Resistance	5000	9000	12000	ohms
Power Output	25	110	250	mw

R-F AMPLIFIER OR OSCILLATOR—CLASS C

MAXIMUM RATINGS

D-C Plate Voltage	180	volts
D-C Plate Current	20	ma
D-C Grid Current	6	ma
Plate Dissipation	1.5	watts

TYPICAL OPERATION

D-C Plate Voltage	180	volts
D-C Grid Voltage	−45	volts
D-C Plate Current	16.5	ma
D-C Grid Current	6	ma
Peak R-F Input Voltage	92	volts
R-F Driving Power	0.5	watts
Power Output	2	watts

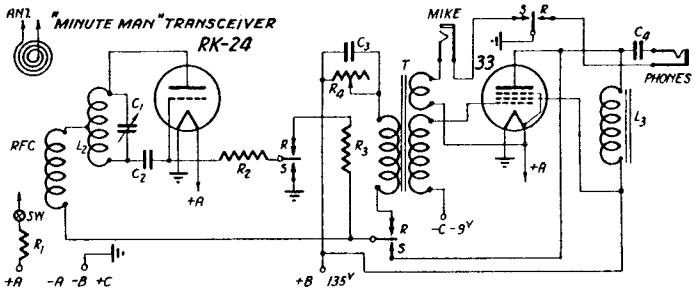
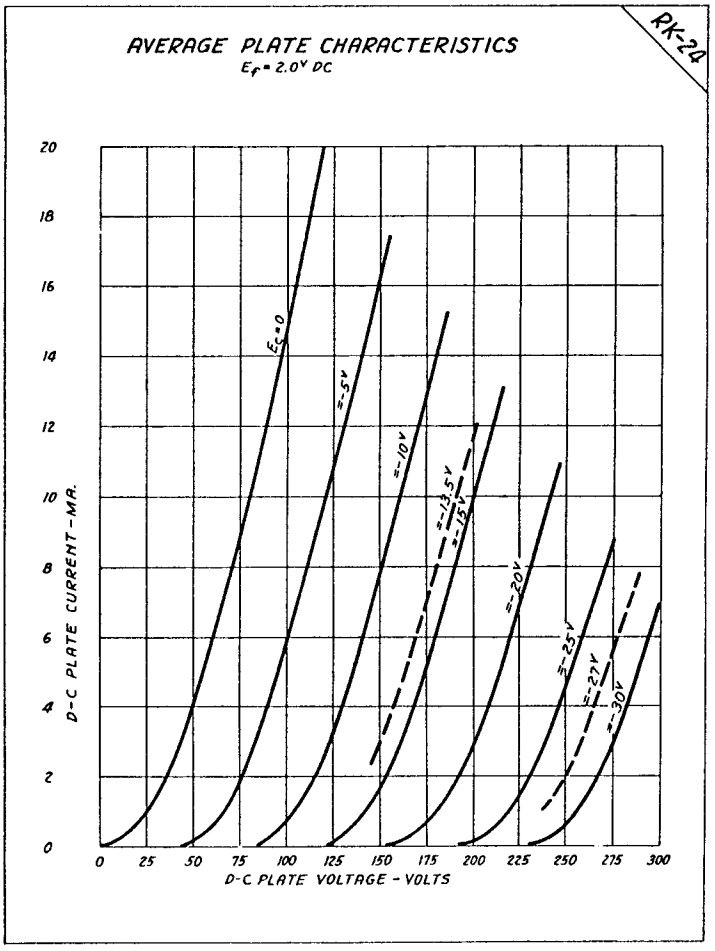
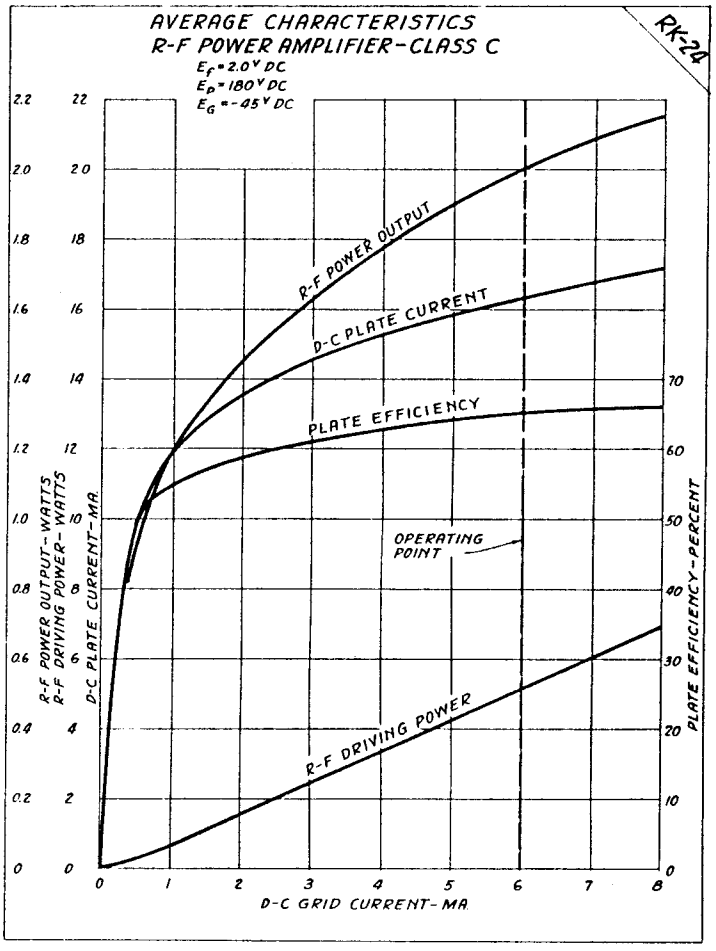
OPERATING NOTES

FREQUENCY RANGE
The RK-24 is particularly adapted for use in circuits operating at frequencies from 60 to 112 megacycles.

FILAMENT VOLTAGE
The filament voltage at the socket of the RK-24 should be maintained at 2 volts in order to insure long life.

PLATE TEMPERATURE
The plate of the RK-24 will not show color when operated at the maximum rated dissipation. Dissipations above the rated value should be avoided.

TRANSCEIVER
The circuit below is the "Minute Man" receiver converted for use as a transceiver as shown in A.R.R.L.'s QST-magazine for September 1936.



C_1 —Two-plate midget variable, low loss
C_2 —100 μμfd.
C_3 —0.25 μfd.
C_4 —0.1 μfd.
L_2 —10 turns No. 14, ½ inch inside diameter, spaced diameter of wire.
T —Transceiver Transformer.
RFC—45 turns No. 25 cotton-covered wire, inside diameter ¼ inch, close wound and self-supporting.
R_1 —3 ohms
R_2 —10,000 ohms
R_3 —5 megohms.
R_4 —50,000 ohms variable
L_3 —Four turns in flat spiral