

**TYPE UXCV-11****MODULATOR, A-F AND R-F POWER AMPLIFIER, OSCILLATOR****ENGINEERING INFORMATION****GENERAL RATINGS**

Number of Electrodes 3
Filament Voltage 10 volts
 Current 2.5 amperes
 Type Thoriated Tungsten

Average Characteristic Values Calculated at:
 65 ma. Plate Current

Amplification Factor 14
Plate Resistance 3500 ohms
Mutual Conductance 4000 micromhos

Average Direct Interelectrode Capacities:

Grid to Plate 9.0 uuf
Grid to Filament 5.0 uuf
Plate to Filament 2.4 uuf

Maximum Overall Dimensions:

Length 7 1/4 inches
Diameter 2 1/16 inches
Bulb T-16
Cap Medium Metal
Base Medium 4-Pin
Type of Cooling Air
Net Weight 5 1/2 oz.

MAXIMUM RATINGS

Maximum D-C Plate Voltage Modulated.....1250 volts
Maximum D-C Plate Voltage Unmodulated.....1500 volts
Maximum D-C Plate Current Modulated.....125 ma.
Maximum D-C Plate Current Unmodulated.....150 ma.
Maximum Plate Dissipation 65 watts
Maximum D-C Grid Current 25 ma.
Maximum R-F Grid Current 6 amp.

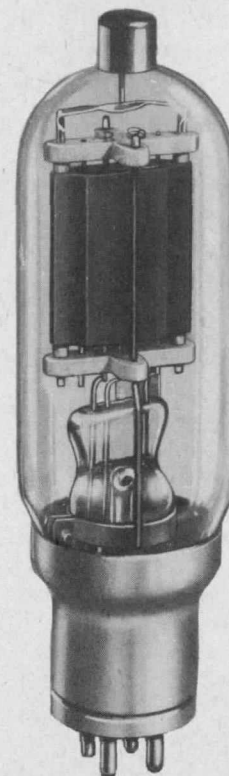
Frequency Rating for Operating Conditions with Maximum
Rated Power Input and Nominal Output:

Below 30 megacycles
Above 10 meters

*Maximum Frequency Rating with Reduced Power Input
and Output:

Below*85 megacycles
Above*3.5 meters

*For operation at the higher frequencies, the plate voltage, and plate input should not exceed 50% of the Maximum Ratings and Typical Operating Conditions. The R-F grid current should never exceed the maximum rated value.

**UNITED TYPE UXCV-11**

This sturdy triode has a plate dissipation of 65 watts for class C telegraph and class B service. A pair of these tubes in class B audio service will deliver 215 watts output.

INSTALLATION

The base of the UNITED UXCV-11 is designed for mounting in a standard Medium 4-Pin, bayonet type socket. The tube may be mounted either vertically, or horizontally with the plane of the filament on edge. Ample air space should be provided for ventilation.

The filament of the UXCV-11 should be operated at the rated value of 10 volts. Operation at other than rated value may result in loss of filament emission and short life. Except in cases where freedom from hum is essential, the filament of the UXCV-11 should be operated from an a-c source.

The plate dissipation of the UXCV-11 should never exceed the values given under Maximum Ratings and Typical Operation Conditions.

GRAPHITE ANODE

A specially processed graphite anode is used in this tube type because of several specific advantages over metals such as tantalum, molybdenum, and nickel. The radiating area of graphite is approximately twice the projected anode area because of its surface porosity and it will dissipate at least four times more heat than metal.

Graphite, being infusible will not warp or twist. The exact form of graphite is maintained under all temperatures; hence constant-inter-element relationships and uniform characteristics result. The inherent advantages of graphite over metal are of primary importance in designing tubes of this type for long and satisfactory service.

All ratings given are for continuous service. Higher ratings are permissible for intermittent operation. Additional data will be furnished upon request.

A-F POWER AMPLIFIER AND MODULATOR—CLASS B

Maximum D-C Plate Voltage	1500	volts
Maximum D-C Plate Current	150	ma.
Maximum Plate Dissipation	65	watts
audio-freq. cycle.....		

Typical Operation (2 tubes):

Filament Voltage	10	10	10 a-c volts
D-C Plate Voltage	1000	1250	1500 volts
Grid Voltage	-70	-90	-110 volts
Zero-Sig. Plate Cur.	30	30	30 ma.
Max.-Sig. Plate Cur.	240	240	225 ma.
Load Res. (plate to plate)	8000	11200	14400 ohms
Power Output (2 tubes)	185	200	215 watts

R-F POWER AMPLIFIER—CLASS B TELEPHONY

(Carrier Conditions—Modulation Factor = 1.0)

Maximum D-C Plate Voltage	1500	volts
Maximum D-C Plate Current	120	ma.
Maximum Plate Dissipation	65	watts
Maximum R-F Grid Current	6	amp.

Typical Operation:

Filament Voltage	10	10	10 a-c volts
D-C Plate Voltage	1000	1250	1500 volts
Grid Voltage	-70	-90	-110 volts
D-C Plate Current	95	80	65 ma.
Peak Power Output	120	128	128 watts
Nominal Carrier Power Output	30	32	32 watts

PLATE MODULATED R-F POWER AMPLIFIER CLASS C TELEPHONY

(Carrier Conditions—Modulation Factor = 1.0)

Maximum D-C Plate Voltage	1250	volts
Maximum D-C Plate Current	150	ma.
Maximum Plate Dissipation	30	watts
Maximum R-F Grid Current	5	amp.
Maximum D-C Grid Current	25	ma.

Typical Operation:

Filament Voltage	10	10 a-c volts
D-C Plate Voltage	1000	1250 volts
Grid Voltage	-200	-250 volts
D-C Plate Current	120	130 ma.
D-C Grid Current†	7	6 ma.
Driving Power†	3	3 watts
Power Output	84	120 watts

R-F POWER AMPLIFIER AND OSCILLATOR

CLASS C TELEGRAPHY

(Key-down Conditions)

Maximum D-C Plate Voltage	1500	volts
Maximum D-C Plate Current	150	ma.
Maximum Plate Dissipation	65	watts
Maximum R-F Grid Current	6	amp.
Maximum D-C Grid Current	25	ma.

Typical Operation:

Filament Voltage	10	10 a-c volts
D-C Plate Voltage	1000	1250 1500 volts
Grid Voltage	-145	-180 -215 volts
D-C Plate Current	130	120 120 ma.
D-C Grid Current†	6	7 6 ma.
Driving Power†	3	3 3 watts
Power Output	90	115 140 watts

† Subject to wide variations depending on the impedance of the load circuit. The driver stage should have a tank circuit of good regulation and should be capable of delivering considerably more than the required driving power.

