



**ML-298A**  
**ML-298B**

DESCRIPTION AND RATINGS

**DESCRIPTION**

The ML-298A and ML-298B are three-electrode tubes designed for use as modulators, amplifiers, or oscillators in radio-transmitting service. The cathode for each type is a pure-tungsten filament. The anode is water cooled and is capable of dissipating 100 kilowatts. Maximum ratings of 20 kVdc and 11 amperes apply at frequencies up to 4 mc/sec; operation at 20 mc/sec is permissible with plate voltage reduced to 12 kVdc.

The ML-298A and ML-298B embody all the techniques and skills that have been inherently a part of Machlett Laboratories, Inc., since 1897. All parts are thoroughly processed by special Machlett techniques, which prevent contamination and assure complete and permanent outgassing. The tubes are exhausted by a straight-line, high-voltage process assuring the same high standards as characterize the Machlett line of high- and super-voltage x-ray tubes.

**GENERAL CHARACTERISTICS**

	ML-298A	ML-298B
<b>Electrical</b>		
Filament Voltage .....	27	27 volts
Filament Current at 27 volts .....	225	225 amperes
Filament Starting Current .....	340	340 amperes
Filament Cold Resistance .....	.0096	.0096 ohms
Amplification Factor .....	32	57.5
Grid-Plate Transconductance .....	22000	20000 uMhos
<b>Interelectrode Capacitances</b>		
Grid-Plate .....	48	50 uuf
Grid-Filament .....	30	31 uuf
Plate-Filament .....	11	11 uuf
<b>Mechanical</b>		
Mounting Position .....	Vertical, anode down	
Type of Cooling .....	Water	
Water Flow on Anode (minimum) .....	35 gpm	
Maximum Outgoing Water Temperature .....	75 °C	
Net Weight, approximate .....	28 lbs.	

**MAXIMUM RATINGS**

Direct Plate Voltage .....	20000 volts
Direct Plate Current .....	11 amperes
Plate Dissipation .....	100000 watts
Direct Grid Dissipation .....	1000 watts
R.F. Grid Current .....	75 amperes
Frequency .....	4 megacycles

The above are maximum ratings which do not apply simultaneously but depend on the type of service specified below.