

ELECTRON TUBE DATA SHEET
WESTERN ELECTRIC 418A ELECTRON TUBE

OFFICIAL FILE COPY



DESCRIPTION

The 418A electron tube is an indirectly heated cathode type tetrode. This tube was designed primarily for use as a power output tube in broad-band video and intermediate-frequency amplifiers.

CHARACTERISTICS

Heater Voltage 6.3 volts
Cathode Current . . . ($E_b = E_{c2} = 150$ volts) 70 milliamperes
Transconductance . . . ($E_{c1} = 0$ $R_k = 27$ ohms) 26500 micromhos

GENERAL CHARACTERISTICSELECTRICAL DATA

| | |
|-------------------------------------|--------------------------------------|
| Heater Voltage | 6.3 volts |
| Heater Current | 0.6 ampere |
| Direct Interelectrode Capacitances | Without External <u>Shield</u> |
| Grid to Plate | 0.055 μf |
| Input: g1 to (h+k+g2+i.s) | 15.0 μf |
| Output: p to (h+k+g2+i.s) | 2.8 μf |

MECHANICAL DATA

| | |
|---|----------------------------|
| Cathode | Coated Unipotential |
| Bulb | T9 |
| Base | See outline drawing page 4 |
| Mounting Position | Any |
| Dimensions and pin connections shown in outline drawing on page 4 | |

MAXIMUM RATINGS, Design Center Values

| | |
|------------------------------------|-----------------|
| Plate Voltage | 250 volts |
| Screen Grid Voltage | 150 volts |
| Plate Dissipation | 8.5 watts |
| Screen Grid Dissipation | 3.0 watts |
| Control Grid Dissipation | see footnote * |
| Cathode Current | 90 milliamperes |
| Heater-Cathode Voltage | 90 volts |
| Bulb Temperature | 130 centigrade |

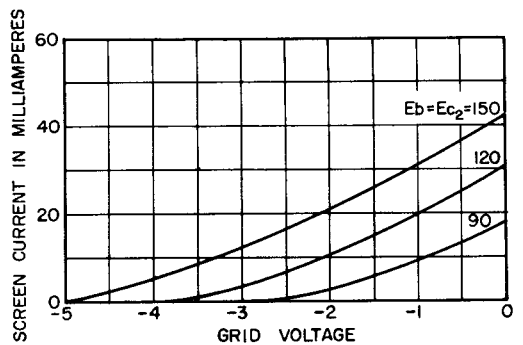
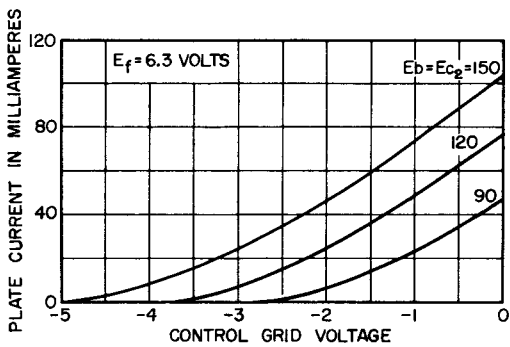
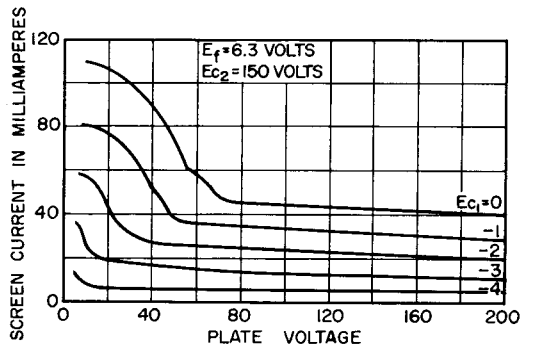
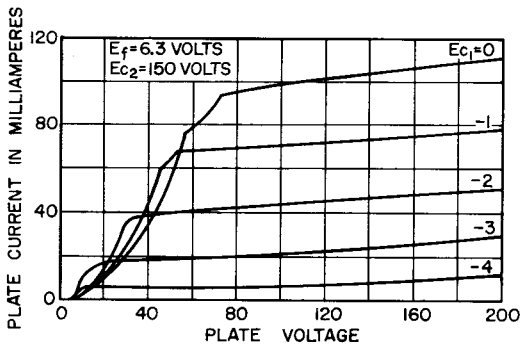
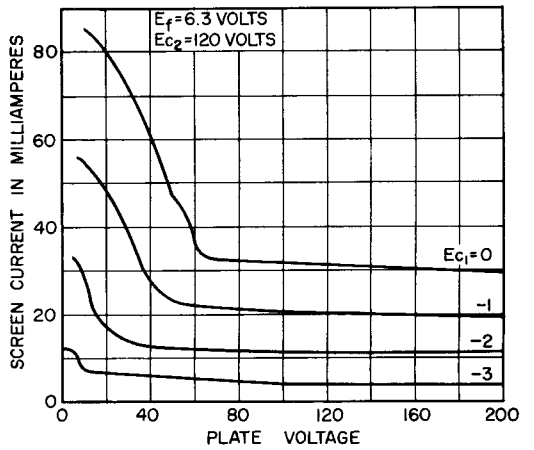
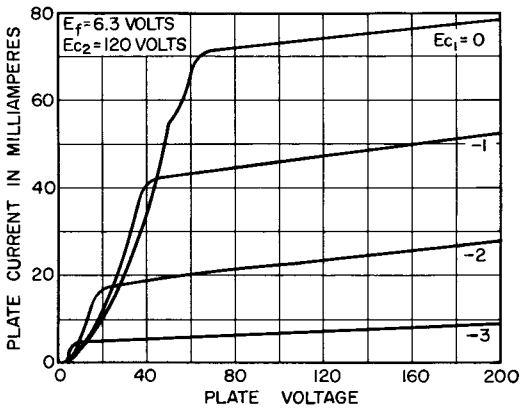
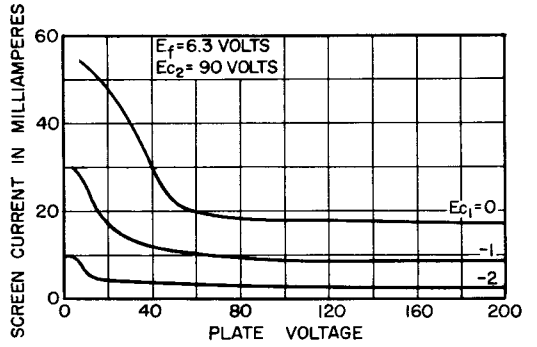
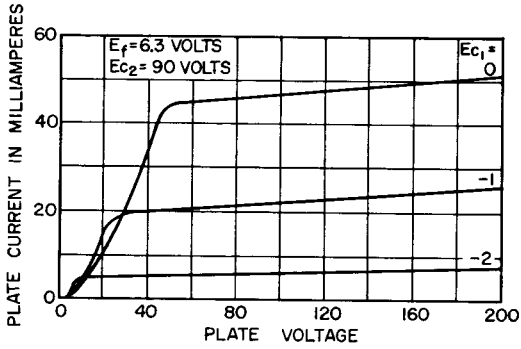
MAXIMUM CIRCUIT VALUES

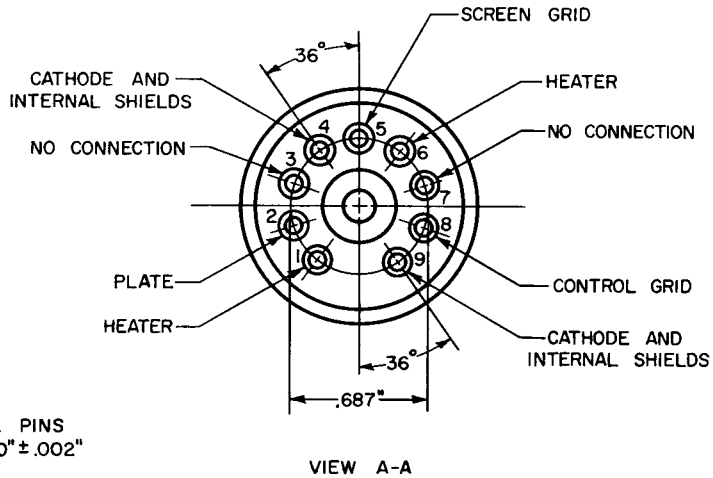
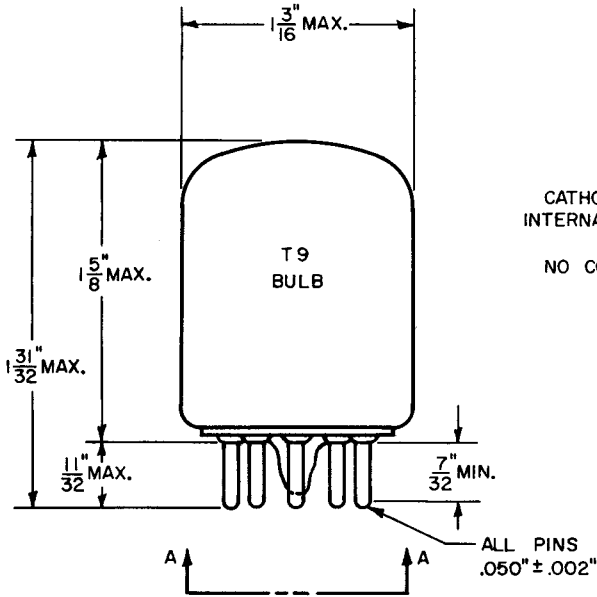
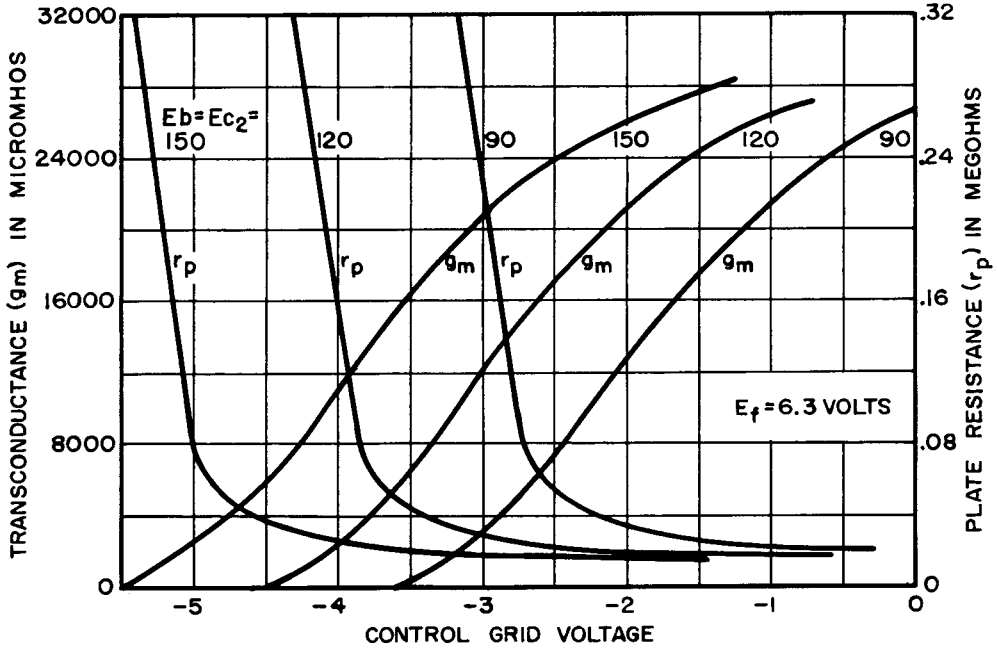
| | |
|----------------------------|-------------|
| Grid Circuit Resistance: | |
| For Fixed Bias | 0.05 megohm |
| For Cathode Bias | 0.10 megohm |

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

| | | | |
|--|-------|-------|--------------|
| Plate Voltage | 120 | 150 | volts |
| Screen Grid Voltage | 120 | 150 | volts |
| Control Grid Voltage | -1.0 | --- | volts |
| Cathode Bias Resistor | --- | 27 | ohms |
| Plate Current | 47 | 50 | milliamperes |
| Screen Grid Current | 20 | 20 | milliamperes |
| Plate Resistance | 18000 | 18000 | ohms |
| Transconductance | 26500 | 26500 | micromhos |
| Control Grid Voltage (approximate) for Plate Current of 10 microamperes | -9.5 | --- | volts |

* Operation with the control grid positive with respect to the cathode is not recommended.





A development of Bell Telephone Laboratories, the research laboratories of the American Telephone and Telegraph Company and the Western Electric Company.