

# TUNG-SOL

## PRODUCT BULLETIN

### INDUSTRIAL ELECTRON TUBES TYPE 7403

JUNE 1965

#### PULSE BEAM POWER TUBE

**DESCRIPTION** — The 7403 is a rugged, reliable beam power tube designed for pulse service. It will deliver pulse power outputs in the order of 20 kw.



Construction features include a hard glass envelope, ceramic electrode spacers and a non-charring glass bonded mica base wafer.

#### MAXIMUM RATINGS

##### ABSOLUTE MAX. SYSTEM — SEE EIA STANDARD RS-239

|                                                       |                  |
|-------------------------------------------------------|------------------|
| DC Plate Voltage — Note 1 .....                       | 4000 Volts       |
| Peak Plate Voltage including Transient — Note 2 ..... | 5000 Volts       |
| Grid 2 Voltage — Note 1 .....                         | 850 Volts        |
| Negative DC Grid 1 Voltage .....                      | 200 Volts        |
| Negative Peak Grid 1 Voltage — Note 1 .....           | 500 Volts        |
| Positive Peak Grid 1 Voltage — Note 1 .....           | 220 Volts        |
| Plate Dissipation .....                               | 40 Watts         |
| Grid 2 Dissipation .....                              | 3.5 Watts        |
| Grid 1 Dissipation .....                              | 0.5 Watt         |
| D-C Cathode Current .....                             | 150 Milliamperes |
| Peak Cathode Current — See Rating Chart .....         | 10 Amperes       |

**Notes:** 1. Series resistance must be inserted in the power supply sufficient to limit the short circuit current to less than 0.5 ampere.

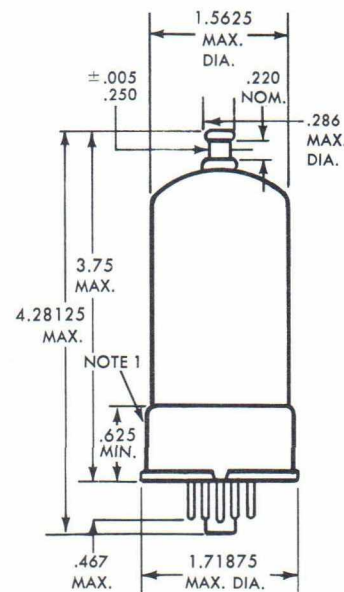
2. With a screen potential not exceeding 400Vdc and when no instantaneous voltage due to transient is present (essentially resistive plate load) a maximum plate potential of 4500Vdc may be used.

#### HEATER CHARACTERISTICS AND RATINGS

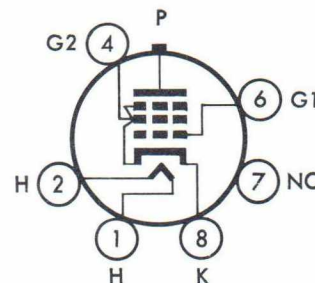
##### ABSOLUTE MAX. SYSTEM — SEE EIA STANDARD RS-239

Heater Sections Parallel Connected:

|                                                  |           |                  |
|--------------------------------------------------|-----------|------------------|
| Average Characteristics .....                    | 6.3 Volts | 1.70 Amp         |
| Limits of Applied Voltage .....                  |           | 5.7 to 6.9 Volts |
| Heater — Cathode Voltage — Either Polarity ..... |           | Max. 500 Volts   |
| Cathode Heating Time .....                       |           | Min. 30 Sec.     |



OUTLINE DRAWING



TERMINAL DIAGRAM  
BOTTOM VIEW

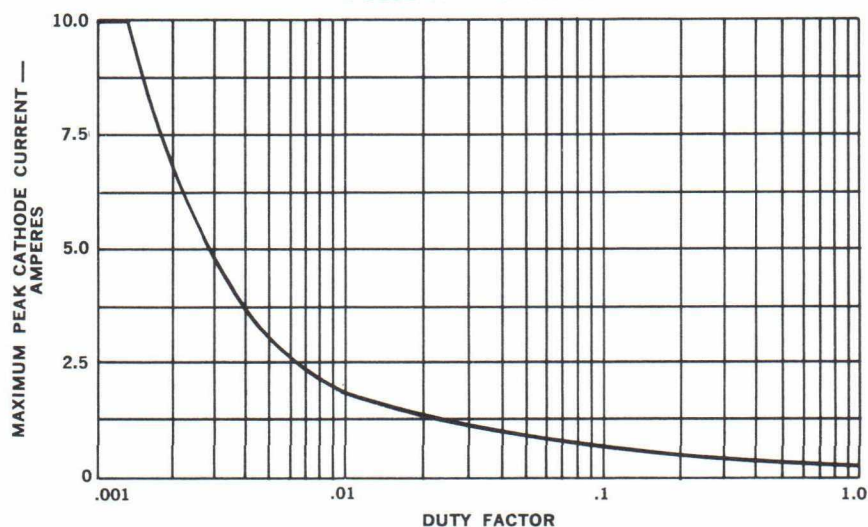
## INTERELECTRODE CAPACITANCES

|                     | Min. | Max.            |
|---------------------|------|-----------------|
| Grid to Plate ..... | —    | 2.2 Picofarads  |
| Input .....         | 13   | 21 Picofarads   |
| Output .....        | 7.5  | 12.5 Picofarads |

## MECHANICAL DATA

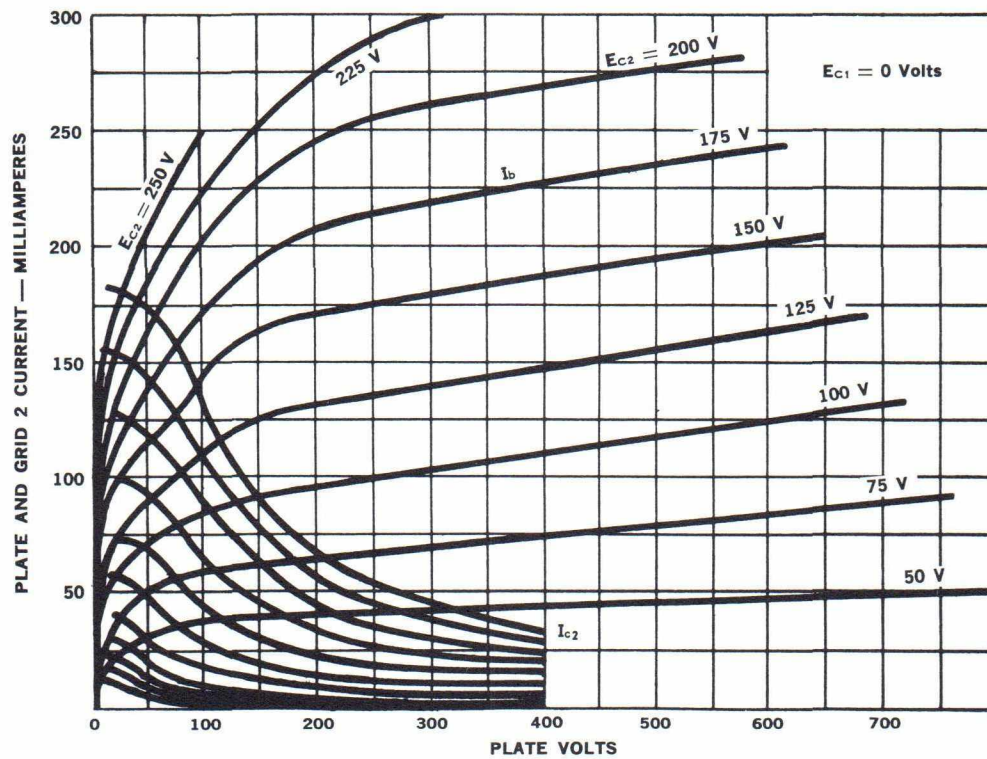
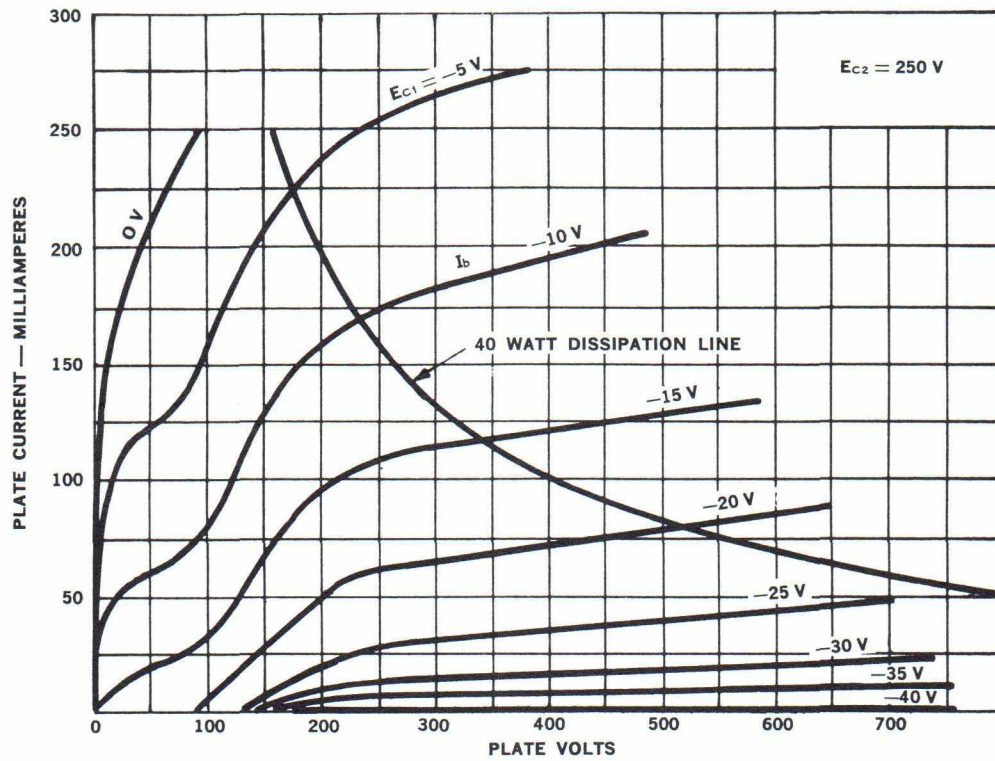
|                                |                                                               |
|--------------------------------|---------------------------------------------------------------|
| Mounting Position .....        | Any                                                           |
| Maximum Bulb Temperature ..... | 300°C                                                         |
| Maximum Altitude .....         | 80,000 Feet                                                   |
| Bulb .....                     | T-12 Hard Glass                                               |
| Base .....                     | Glass bonded mica large wafer octal, 6 pin, with metal shell. |
| Cap .....                      | See Outline page 8                                            |
| Maximum Weight .....           | 4 ounces                                                      |

## PULSE RATING CHART

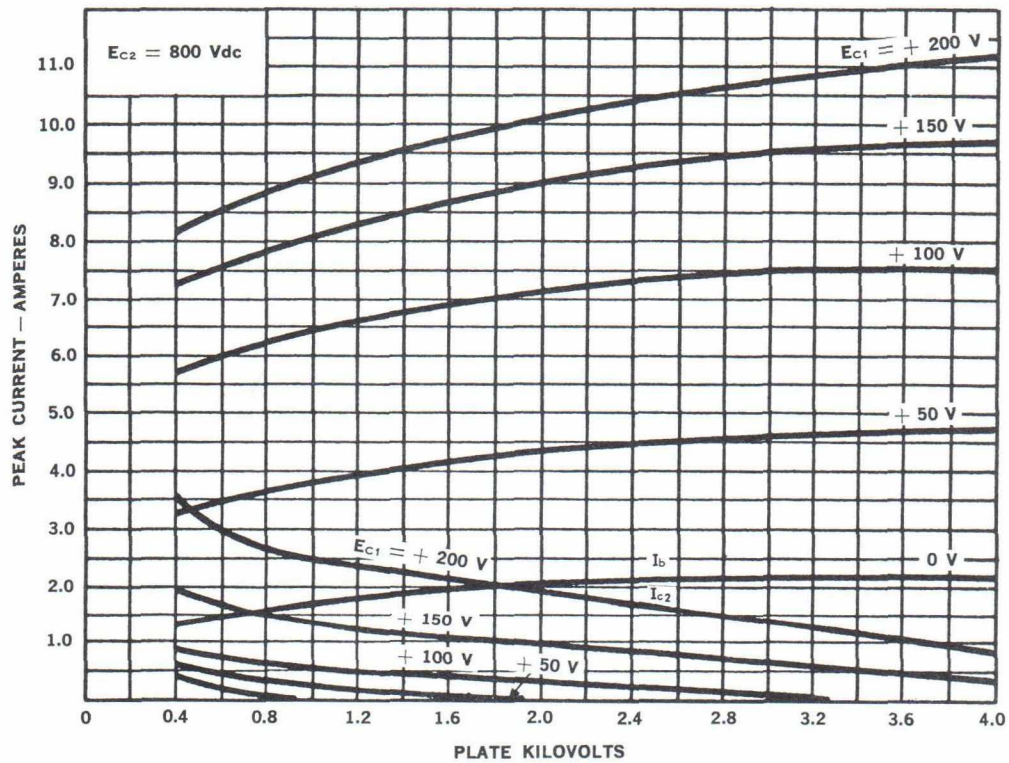
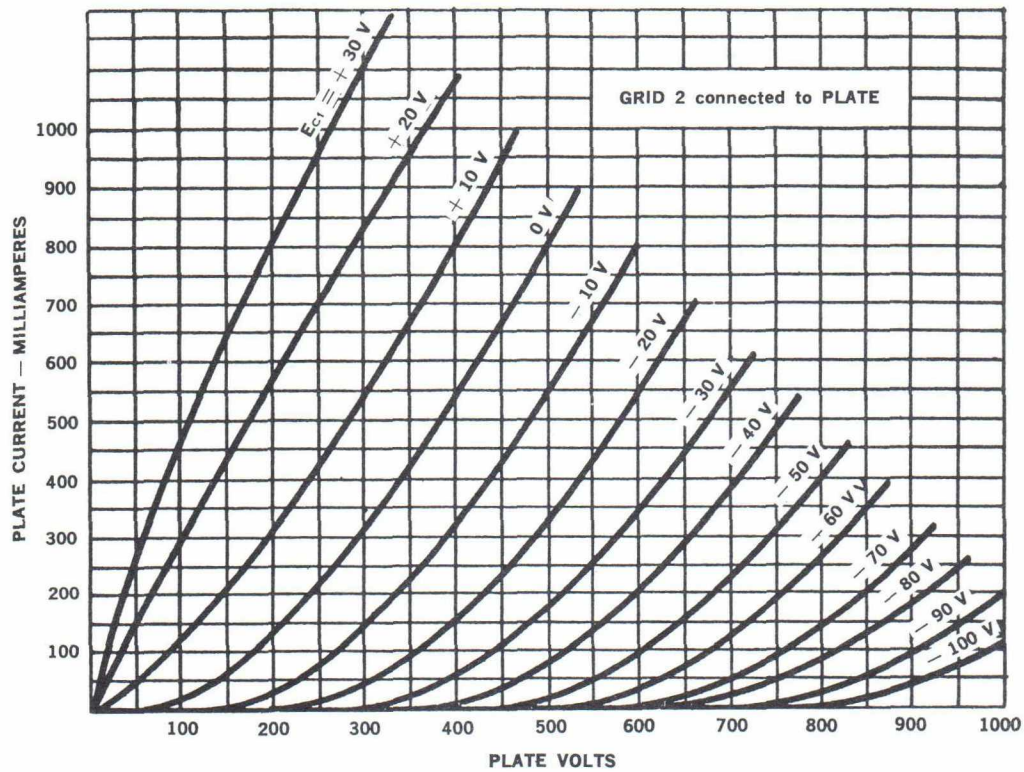


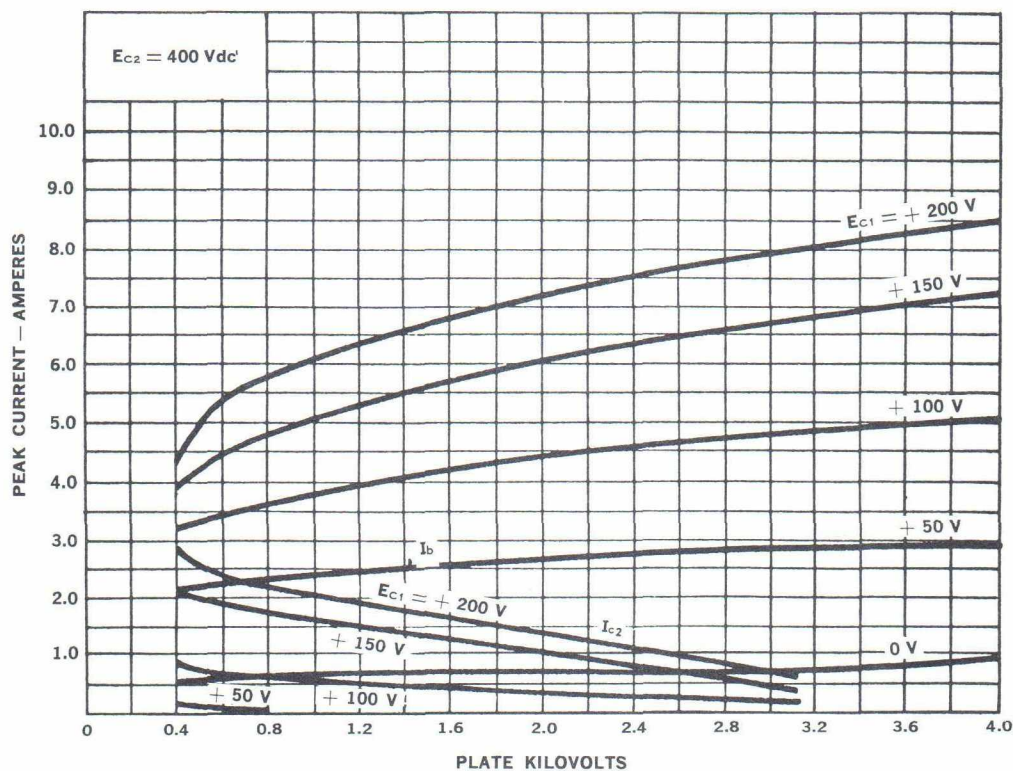
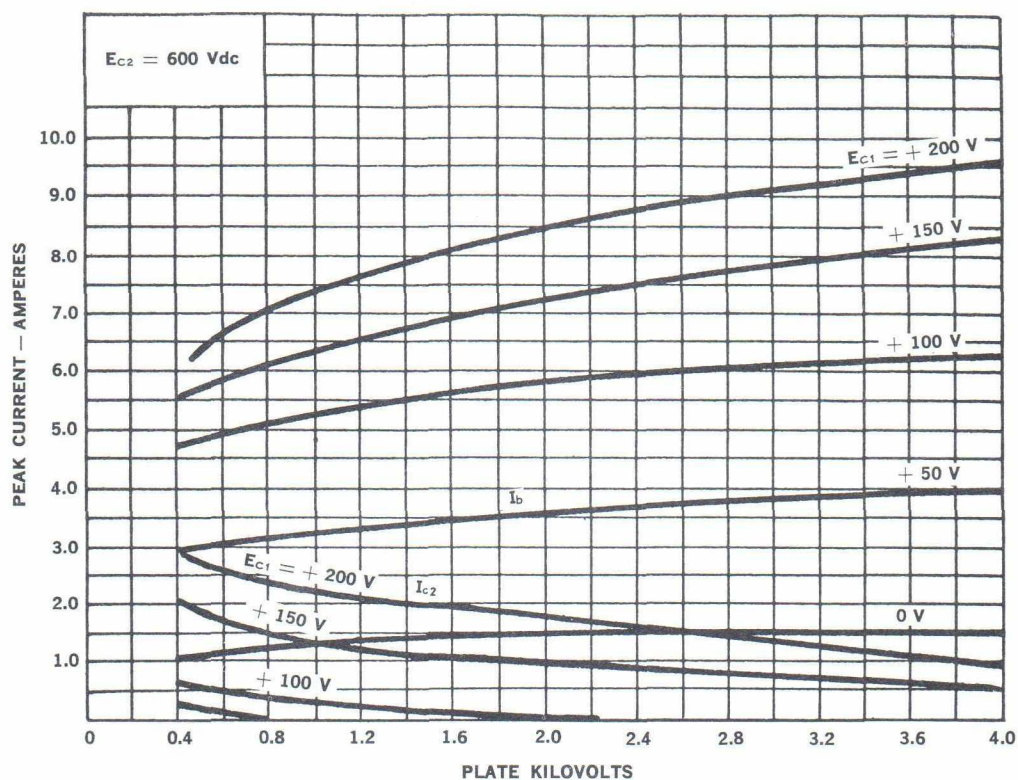
**Definitions:** Duty factor (10,000 microsecond averaging time) is the ratio of "on" time in microseconds to 10,000 microseconds.

"On" Time is defined as the sum of the duration of all individual pulses which occur during any 10,000 microsecond interval.

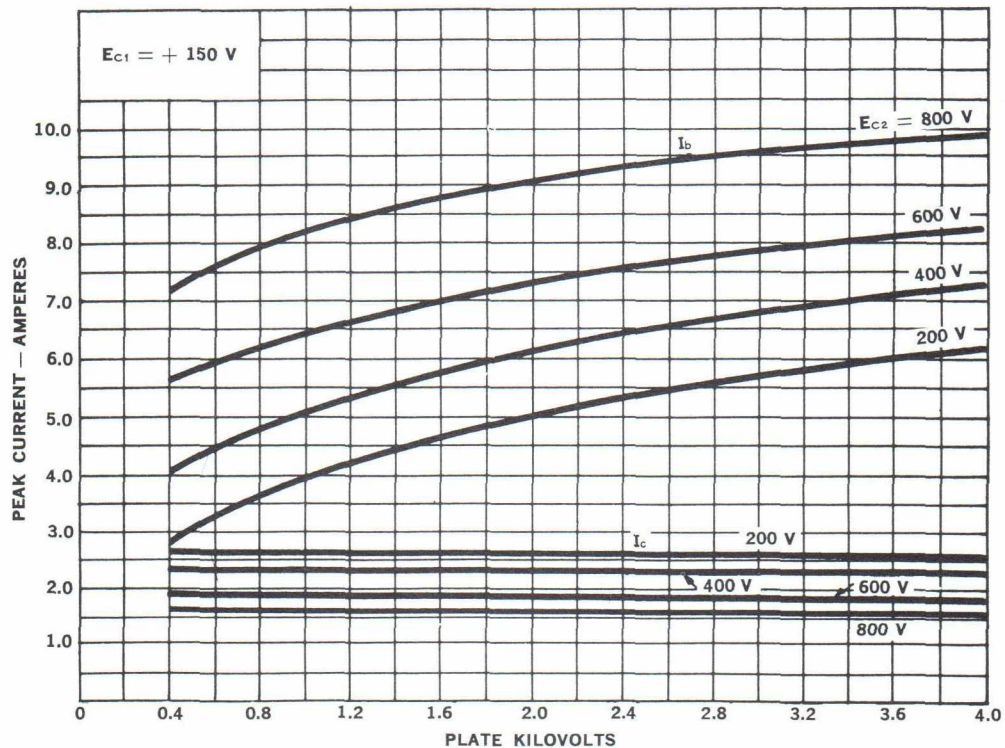
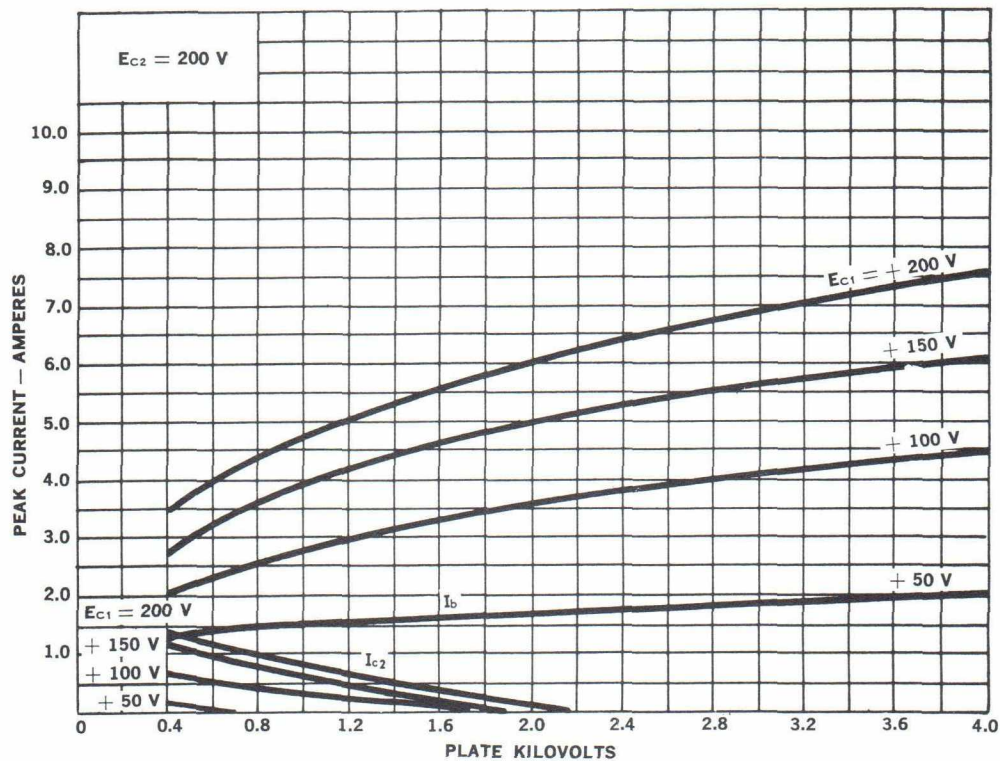


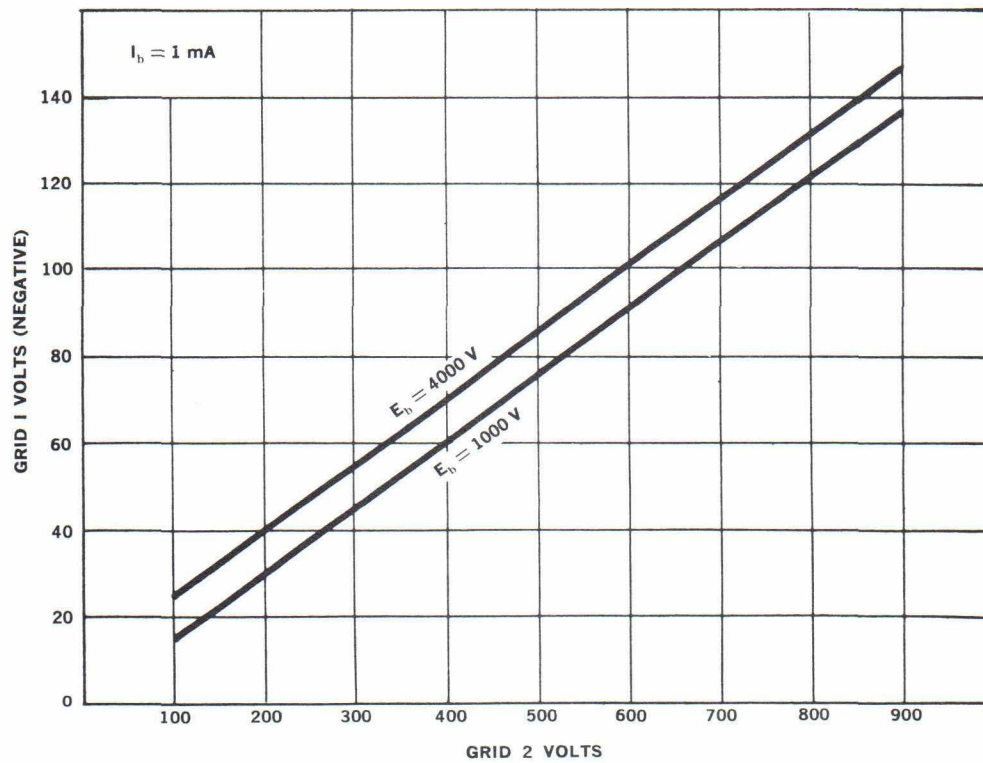
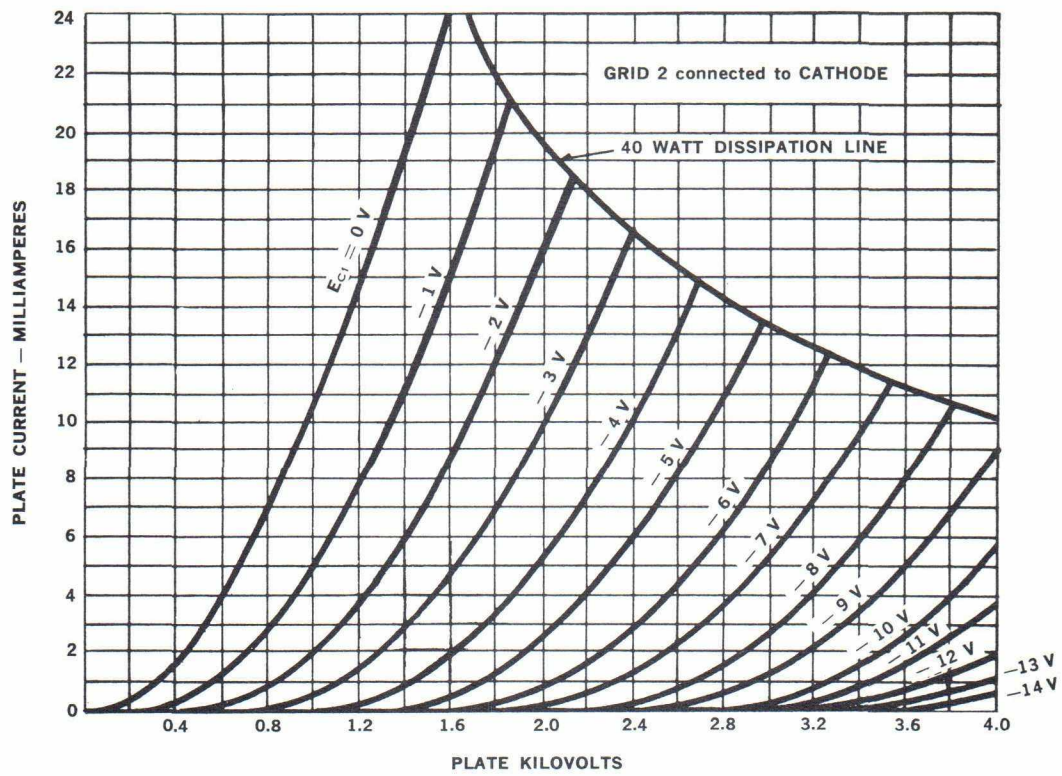
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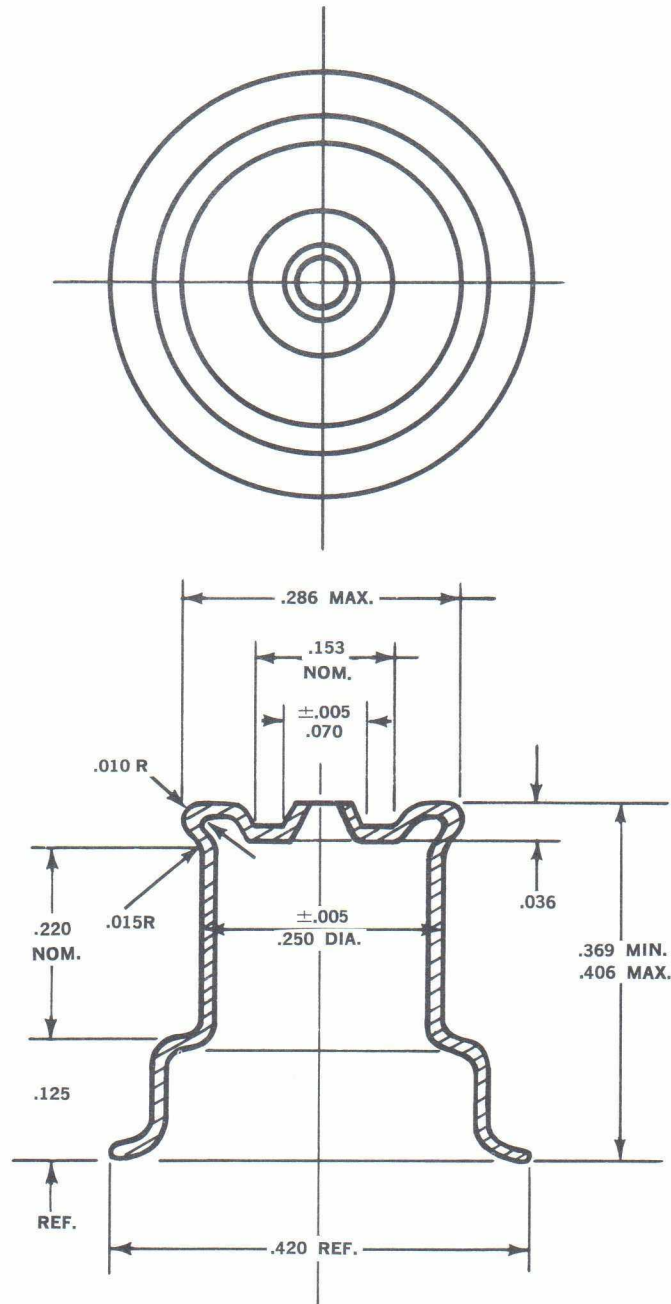


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