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## THYRATRON

MERCURY-VAPOR TETRODE

## DATA

## Electrical:

Heater, for Unipotential Cathode:

Voltage. . . . . 5.5<sup>□</sup> 5.0 . . . . . voltsCurrent. . . . . 5.0<sup>□</sup> 4.5 . . . . . amp

Cathode:

Minimum Heating Time, prior

to tube conduction . . . . . 5 . . . . . minutes

Direct Interelectrode Capacitances (Approx.):

Grid No.1 to Anode . . . . . 0.2 . . . . .  $\mu$ fGrid No.1 to Cathode . . . . . 4.4 . . . . .  $\mu$ f ←Ionization Time (Approx.) . . . . . 10 . . . . .  $\mu$ secDeionization Time (Approx.) 1000 . . . . .  $\mu$ sec

Anode Voltage Drop (Approx.) 16 . . . . . volts

Grid-No.1 Control Ratio (Approx.) with grid-No.1  
resistor (ohms) = 0; grid-No.1 and grid-No.2 volts = 0 . . . . . 170 ←Grid-No.2 Control Ratio (Approx.) with grid-No.1  
resistor (ohms) = 0; grid-No.1 and grid-No.2 volts = 0 . . . . . 300 ←

## Mechanical:

Mounting Position. . . . . Vertical, Base Down

Overall Length . . . . . 7-11/16"  $\pm$  1/4"Seated Length. . . . . 7-1/16"  $\pm$  1/4" ←

Greatest Radius. . . . . 2-1/4"

Bulb . . . . . ST-23

Caps (Two) . . . . . Medium

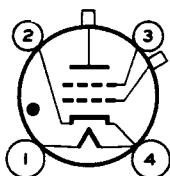
Base . . . . . Medium-Shell Small 4-Pin, Bayonet

Basing Designation for BOTTOM VIEW . . . . . 4CD

Pin 1-Heater

Pin 2-Cathode;  
Circuit  
Returns

Pin 3-Grid No.2

Pin 4-Heater,  
Cathode

Top Cap - Anode

Side Cap - Grid No.1

## Maximum Ratings, Absolute Values:

## PEAK ANODE VOLTAGE:

Forward. . . . . 1000 max. volts

Inverse. . . . . 1000 max. volts

## GRID-No.2 (SHIELD-GRID) VOLTAGE:

Before Conduction. . . . . -300 max. volts

During Conduction. . . . . -5 max. volts

## GRID-No.1 (CONTROL-GRID) VOLTAGE:

Before Conduction. . . . . -1000 max. volts

During Conduction. . . . . -10 max. volts ←

## CATHODE CURRENT:

Peak . . . . . 30 max.<sup>□</sup> 15 max. ampAverage\*\* . . . . . 0.5 max.<sup>□</sup> 2.5 max. amp

Fault, for 0.1 sec. maximum. . . . . 200 max. amp

□ \*\*: See next page.

← Indicates a change.

MARCH 1, 1951

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GRID-No.2 CURRENT:

Average\*\* . . . . . 0.25 max. amp

GRID No.1 CURRENT:

Average\*\* . . . . . 0.25 max. amp

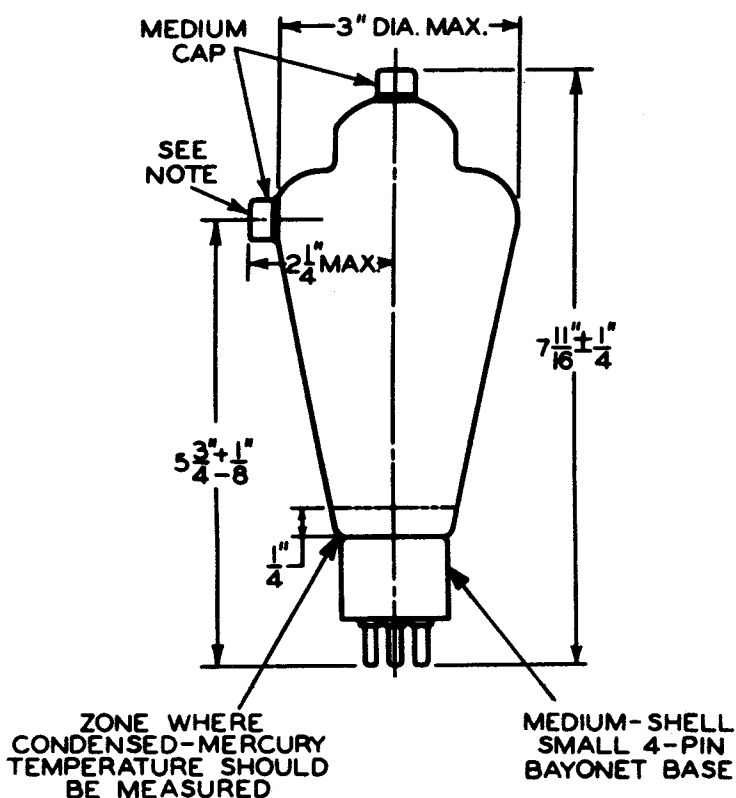
COND.-MERCURY TEMPERATURE RANGE<sup>▲</sup> . . . . . +40 to +80 °C

OPERATING FREQUENCY. . . . . 150 max. cps

□ Applies when this tube is used for ignitor firing.

\*\* Averaged over any interval of 15 sec. max.

▲ Recommended operating temperature is 40°C.



92CS-6742RI

NOTE: THE PLANE THROUGH TUBE AXIS AND CENTER OF GRID-No.1 CAP IS  $45^\circ \pm 5^\circ$  FROM THE PLANE THROUGH THE TUBE AXIS AND CENTER OF BAYONET PIN. GRID-No.1 CAP IS ON SAME SIDE AS PIN No.3.

TEMPERATURE-RISE CHARACTERISTIC of the 5560  
is the same as that shown for Type 5559

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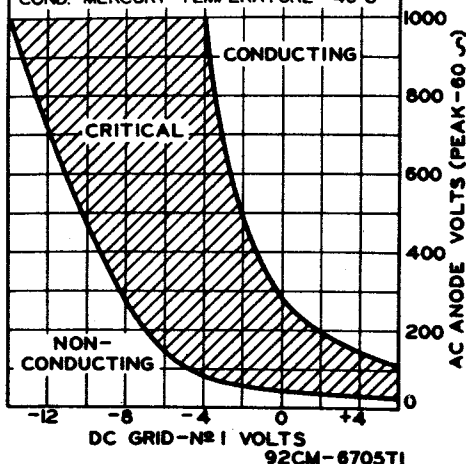
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## THYRATRON

OPERATIONAL RANGE  
OF CRITICAL GRID VOLTAGE

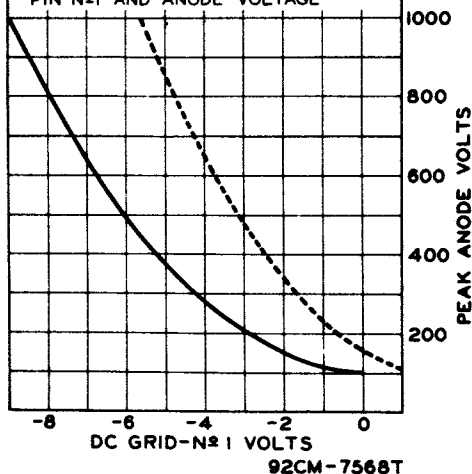
TYPE 5560  
RANGE IS FOR CONDITIONS WHERE:  
 $E_f = 5$  VOLTS AC  $\pm 5\%$ ; GRID-N $\circ$  2 (SHIELD)  
VOLTS = 0; CIRCUIT RETURNS TO PIN N $\circ$  2.  
THE RANGE INCLUDES INITIAL AND  
LIFE VARIATIONS OF INDIVIDUAL TUBES,  
AS WELL AS CHANGE IN CHARACTERIS-  
TICS DUE TO HEATER PHASING.  
GRID-N $\circ$  1 RESISTOR (OHMS) = 0  
COND.-MERCURY TEMPERATURE =  $40^\circ\text{C}$

SHIFT OF AVERAGE  
CONTROL CHARACTERISTIC  
WITH CHANGE IN HEATER PHASING

TYPE 5560  $E_f = 5$  VOLTS AC  
GRID-N $\circ$  2 (SHIELD) VOLTS = 0  
CONDENSED-MERCURY TEMPERATURE =  $40^\circ\text{C}$   
GRID-N $\circ$  1 RESISTOR (OHMS) = 0

| CURVE | PHASE ANGLE<br>DEGREES * | CIRCUIT<br>RETURN |
|-------|--------------------------|-------------------|
| —     | 180°                     | PIN N $\circ$ 2   |
| - - - | 0°                       | PIN N $\circ$ 2   |

\* BETWEEN HEATER VOLTAGE AT  
PIN N $\circ$  1 AND ANODE VOLTAGE



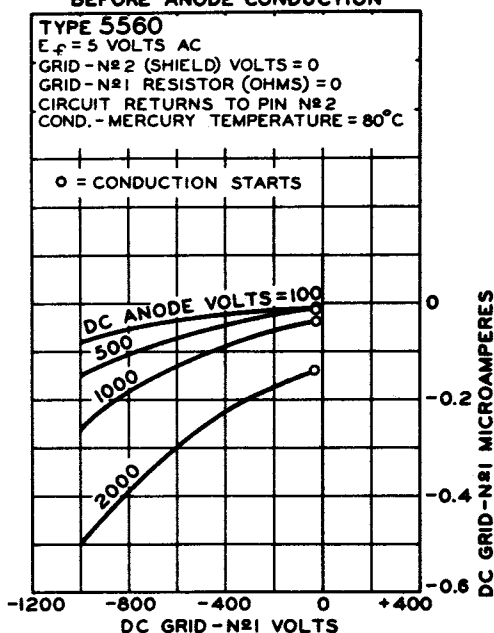
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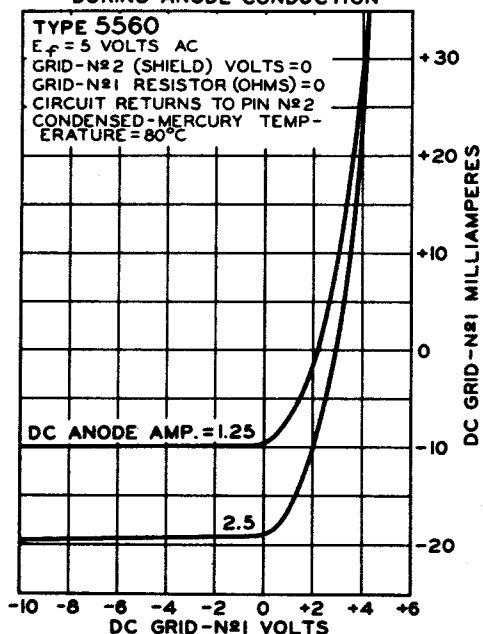
# THYRATRON

## AVERAGE GRID CHARACTERISTICS BEFORE ANODE CONDUCTION



92CM-7556T

## AVERAGE GRID CHARACTERISTICS DURING ANODE CONDUCTION



92CM-7570T

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