THYRATRON
MERCURY-VAPOR TETRODE

DATA

Electrical:
Heater, for Unipotential Cathode:
  Voltage. 5.50  5.0 volts
  Current. 5.00  4.5 amp
Cathode:
  Minimum Heating Time, prior to tube conduction 5 minutes
Direct Interelectrode Capacitances (Approx.):
  Grid No.1 to Anode. 0.2 μf
  Grid No.1 to Cathode. 4.4 μf
  Ionization Time (Approx.). 10 μsec
  Deionization Time (Approx.) 1000 μsec
  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" ± 1/4"
Seated Length. 7-1/16" ± 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.° 15 max. amp
  Average. 0.5 max.° 2.5 max. amp
  Fault, for 0.1 sec. maximum. 200 max. amp

° **: see next page.

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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 * ....... +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.

NOTE: THE PLANE THROUGH TUBE AXIS AND CENTER OF GRID-
N°1 CAP IS 45°±5° FROM THE PLANE THROUGH THE TUBE
AXIS AND CENTER OF BAYONET PIN. GRID-N°1 CAP IS ON
SAME SIDE AS PIN N°3.

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

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OPERATIONAL RANGE
OF CRITICAL GRID VOLTAGE

TYPE 5560
RANGE IS FOR CONDITIONS WHERE:
E_f = 5 VOLTS AC 15 %; GRID-NR2 (SHIELD)
VOLTS = 0; CIRCUIT RETURNS TO PIN NR
2. THE RANGE INCLUDES INITIAL AND
LIFE VARIATIONS OF INDIVIDUAL TUBES,
AS WELL AS CHANGE IN CHARACTERIS-
TICS DUE TO HEATER PHASING.
GRID-NR1 RESISTOR (OHMS) = 0
COND.-MERCURY TEMPERATURE = 40°C

AC ANODE VOLTS (PEAK-80°C)

CONDUCTING

CRITICAL

NON-
CONDUCTING

DC GRID-NR1 VOLTS
92CM-6705T1

SHIFT OF AVERAGE
CONTROL CHARACTERISTIC
WITH CHANGE IN HEATER PHASING

TYPE 5560
E_f = 5 VOLTS AC
GRID-NR2 (SHIELD) VOLTS = 0
CONDENSED-MERCURY TEMPERATURE = 40°C
GRID-NR1 RESISTOR (OHMS) = 0

CURVE | PHASE ANGLE |
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<th>DEGREES</th>
<th>CIRCUIT RETURN</th>
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* BETWEEN HEATER VOLTAGE AT
PIN NR1 AND ANODE VOLTAGE

PEAK ANODE VOLTS

DC GRID-NR1 VOLTS
92CM-7568T

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THYRATRON

AVERAGE GRID CHARACTERISTICS
BEFORE ANODE CONDUCTION

TYPE 5560
$E_p = 5$ VOLTS AC
GRID = NR2 (SHIELD) VOLTS = 0
GRID = NR1 RESISTOR (OHMS) = 0
CIRCUIT RETURNS TO PIN NR2
COND. - MERCURY TEMPERATURE = 80°C

$\theta =$ CONDUCTION STARTS

DC ANODE VOLS = 100

DC GRID NR1 VOLS

-1200 -800 -400 0 +400 +800

0 0.2 0.4 0.6

DC GRID NR1 MICROAMPERES

92CM-7556T

AVERAGE GRID CHARACTERISTICS
DURING ANODE CONDUCTION

TYPE 5560
$E_p = 5$ VOLTS AC
GRID = NR2 (SHIELD) VOLTS = 0
GRID = NR1 RESISTOR (OHMS) = 0
CIRCUIT RETURNS TO PIN NR2
CONDENSED - MERCURY TEMPERATURE = 80°C

DC ANODE AMP. = 1.25

DC GRID NR1 MILLIAMPERES

-10 -8 -6 -4 -2 0 +2 +4 +6

0 10 20 30

DC GRID NR1 VOLTS

92CM-7570T

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