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THYRATRON

MERCURY-VAPOR TRIODE

DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage.	5.0	volts
Current.	4.5	amp

Cathode:

Minimum Heating Time, prior to tube conduction	5	minutes
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Direct Interelectrode Capacitances (Approx.):

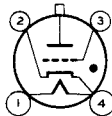
Grid to Anode.	2.5	μ f
Grid to Cathode.	10	μ f
Ionization Time (Approx.).	10	μ sec
Deionization Time (Approx.)	1000	μ sec
Anode Voltage Drop (Approx.)	16	volts

Grid-No.1 Control Ratio (Approx.) with grid-No.1 resistor (megohms) = 0	220
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Mechanical:

Mounting Position.	Vertical, Base Down
Overall Length	7" \pm 1/4"
Seated Length.	6-3/8" \pm 1/4"
Maximum Diameter	3"
Bulb	ST-23
Cap.	Medium
Base	Medium-Shell Small 4-Pin, Bayonet
Basing Designation for BOTTOM VIEW	4BL

Pin 1-Heater
 Pin 2-Cathode;
 Circuit
 Returns



Pin 3-Grid
 Pin 4-Heater,
 Cathode
 Cap-Anode

Maximum Ratings, Absolute Values:

PEAK ANODE VOLTAGE:		
Forward.	1000 max.	volts
Inverse.	1000 max.	volts
GRID VOLTAGE:		
Before Conduction.	-500 max.	volts
During Conduction.	-10 max.	volts
CATHODE CURRENT:		
Peak	15 max.	amp
Average**	2.5 max.	amp
Fault, for 0.1 sec. maximum.	200 max.	amp
GRID CURRENT:		
Average**	+0.25 max.	amp
COND.-MERCURY TEMPERATURE RANGE [▲]	+40 to +80	$^{\circ}$ C
OPERATING FREQUENCY.	150 max.	cps

** Averaged over any interval of 15 sec. max.
[▲] Recommended operating temperature is 40 $^{\circ}$ C.

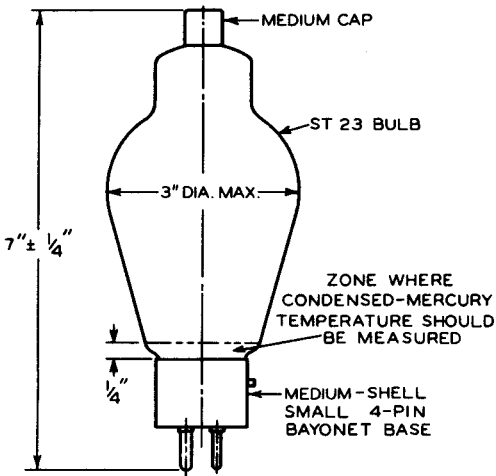
← Indicates a change.

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92CS-6743R1



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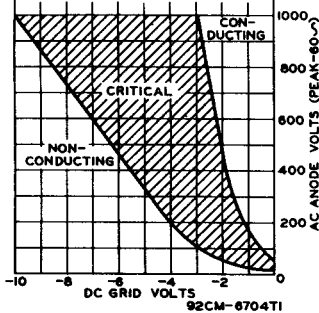
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OPERATIONAL RANGE OF CRITICAL GRID VOLTAGE

TYPE 5559

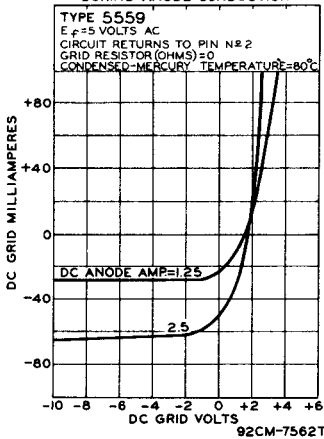
RANGE IS FOR CONDITIONS WHERE:
 $E_p = 5$ VOLTS AC $\pm 5\%$; CIRCUIT RETURNS TO PIN N $\#$ 2. THE RANGE INCLUDES INITIAL & LIFE VARIATIONS OF INDIVIDUAL TUBES, AS WELL AS CHANGE IN CHARACTERISTICS DUE TO HEATER PHASING. GRID RESISTOR (OHMS) = 0 COND-MERCURY TEMPERATURE = 40°C



AVERAGE GRID CHARACTERISTICS DURING ANODE CONDUCTION

TYPE 5559

$E_p = 5$ VOLTS AC
 CIRCUIT RETURNS TO PIN N $\#$ 2
 GRID RESISTOR (OHMS) = 0
 CONDENSED-MERCURY TEMPERATURE = 80°C



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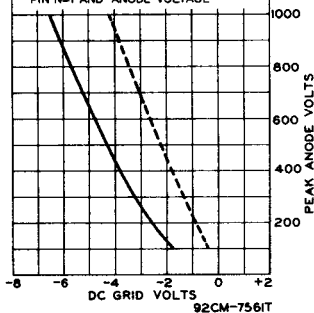
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SHIFT OF AVERAGE CONTROL CHARACTERISTIC WITH CHANGE IN HEATER PHASING

TYPE 5559 $E_f = 5$ VOLTS AC
CONDENSED-MERCURY TEMPERATURE = 40°C
GRID RESISTOR (OHMS) = 0

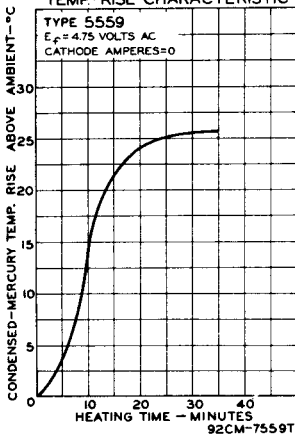
CURVE	PHASE ANGLE DEGREES *	CIRCUIT RETURN
—	180°	PIN N#2
- - -	0°	PIN N#2

* BETWEEN HEATER VOLTAGE AT PIN N#1 AND ANODE VOLTAGE



TEMP.-RISE CHARACTERISTIC

TYPE 5559
 $E_f = 4.75$ VOLTS AC
CATHODE AMPERES = 0



MARCH 1, 1951

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

CE-7561T-7559T