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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	μf
Grid to Cathode.	10	μf

Ionization Time (Approx.).	10	μsec
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Deionization Time (Approx.)	1000	μsec
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Anode Voltage Drop (Approx.)	16	volts
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Grid-No.1 Control Ratio (Approx.) with grid-No.1 resistor (megohms) = 0	220	
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Mechanical:

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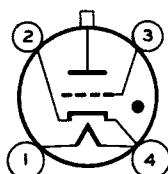
Cap.	Medium
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Base	Medium-Shell Small 4-Pin, Bayonet
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Basing Designation for BOTTOM VIEW	4BL
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Pin 1-Heater

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
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COND.-MERCURY TEMPERATURE RANGE [▲]	+40 to +80	$^{\circ}\text{C}$
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OPERATING FREQUENCY.	150 max.	cps
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** Averaged over any interval of 15 sec. max.

[▲] Recommended operating temperature is 40 $^{\circ}\text{C}$.

← Indicates a change.

MARCH 1, 1951

TUBE DEPARTMENT

DATA

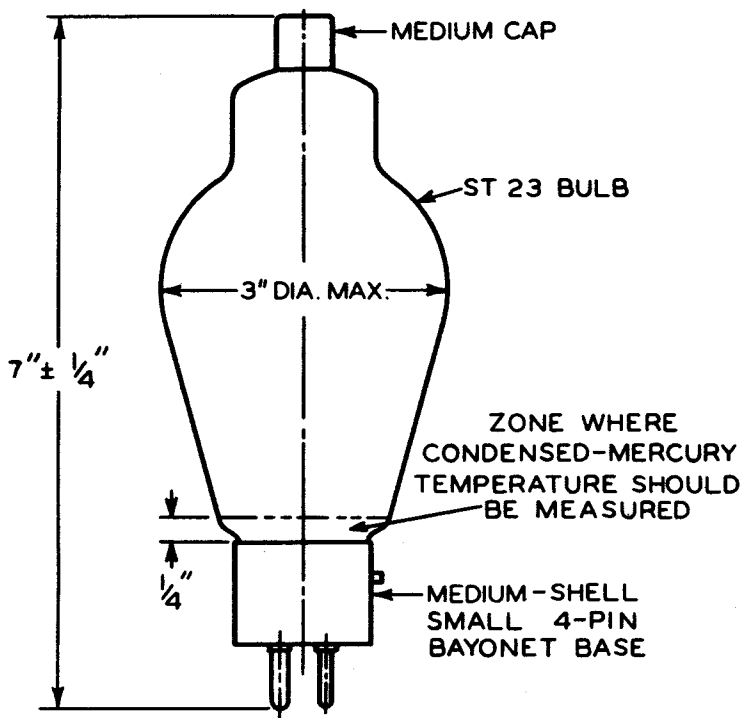
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THYRATRON



92CS-6743R1



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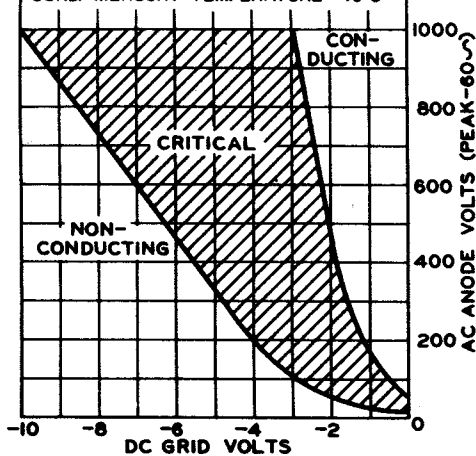
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OPERATIONAL RANGE
OF CRITICAL GRID VOLTAGE

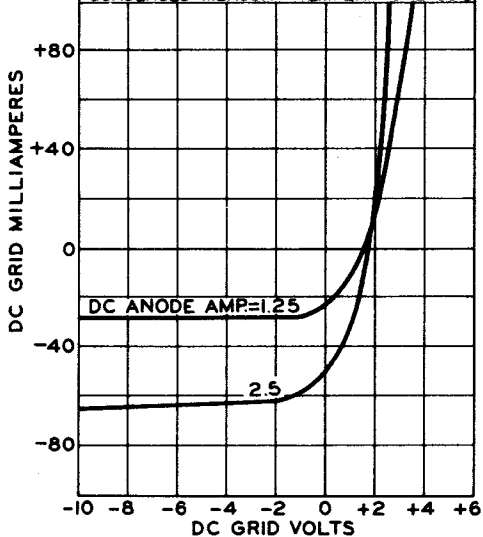
TYPE 5559

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

AVERAGE GRID CHARACTERISTICS
DURING ANODE CONDUCTION

TYPE 5559

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



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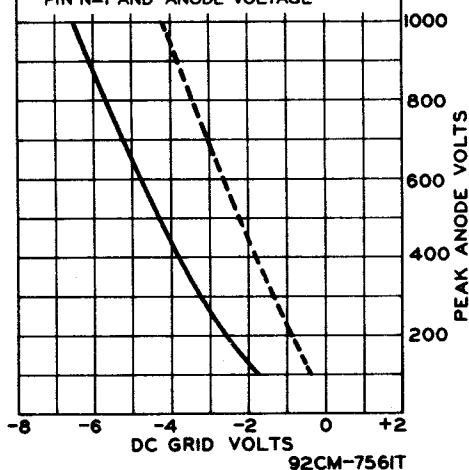
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SHIFT OF AVERAGE CONTROL CHARACTERISTIC WITH CHANGE IN HEATER PHASING

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

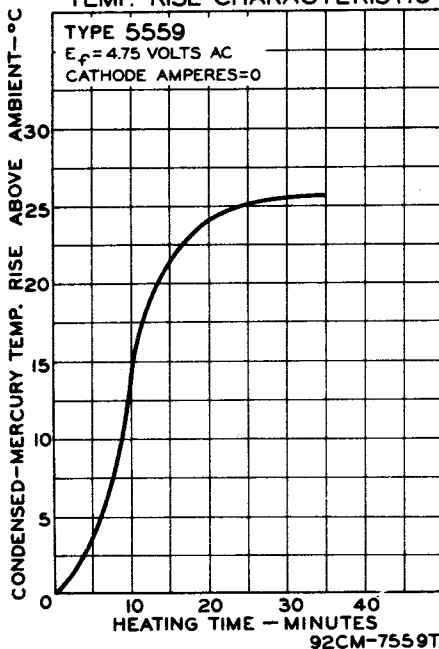
CURVE	PHASE ANGLE DEGREES *	CIRCUIT RETURN
—	180°	PIN N ϕ 2
- - -	0°	PIN N ϕ 2

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



TEMP-RISE CHARACTERISTIC

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



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