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THYRATRON

MERCURY-VAPOR TETRODE

Electrical:	DATA	
Heater, for Unipotential Cathode:		
Voltage*	5.5 [□]	5.0 volts
Current	5.0 [□]	4.5 amp
Direct Interelectrode Capacitance (Approx.):		
Grid No.1 to Anode.	0.2 μmf
Peak Voltage Drop(Approx.).	16 volts
Approx. Control Characteristics:		
Anode Voltage	100	1000 volts
Grid-No.2 Voltage	0	0 volts
Grid-No.1 Voltage	+1	-9 volts
Ionization Time(Approx.).	10 μseconds
Deionization Time(Approx.)	1000 μseconds

□ Applies only when this tube is used for ignitor firing.

Mechanical:

Mounting Position	Vertical, Base Down
Overall Length.	7-11/16" ± 1/4"
Greatest Radius	2-1/4"
Bulb.	ST-23
Caps.	Medium
Base.	Medium 4-Pin, Bayonet

Maximum Ratings, Absolute Values:

PEAK FORWARD ANODE VOLTAGE.	1000 max.	volts
PEAK INVERSE ANODE VOLTAGE.	1000 max.	volts
GRID-No.1 (CONTROL-GRID) VOLTAGE:		
Before Conduction	-1000 max.	volts
During Conduction	-10 max.	volts
GRID-No.2 (SHIELD-GRID) VOLTAGE:		
Before Conduction	-300 max.	volts
During Conduction	-5 max.	volts
INSTANTANEOUS ANODE CURRENT:		
Below 25 Cycles	5 max.	amp
25 Cycles and Higher.	30 max. [□]	15 max. amp
AVERAGE ANODE CURRENT**	0.5 max. [□]	2.5 max. amp
SURGE ANODE CURRENT for 0.1 sec., max.		200 max. amp
INSTANTANEOUS GRID-No.1 Current	1.0 max.	amp
AVERAGE GRID-No.1 CURRENT**	0.25 max.	amp
INSTANTANEOUS GRID-No.2 CURRENT	1.0 max.	amp
AVERAGE GRID-No.2 CURRENT**	0.25 max.	amp
COND.-MERCURY TEMPERATURE RANGE [▲]	40 - 80	°C

* Heater voltage must be applied at least 5 minutes before anode voltage is applied.

** Averaged over any 15-second interval.

[▲] Recommended condensed-mercury temperature 40°C.

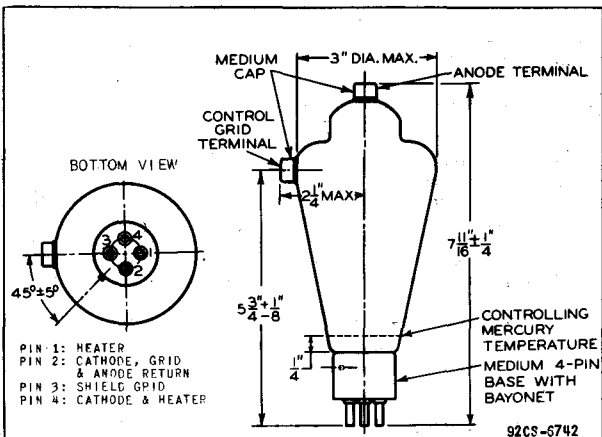
□ Applies only when this tube is used for ignitor firing.

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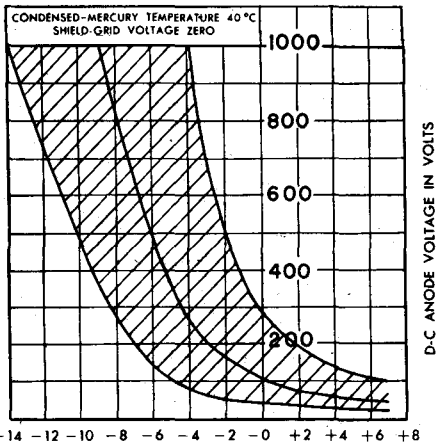


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OPERATIONAL REGION OF CRITICAL GRID VOLTAGE



92CS-6705

D-C GRID VOLTAGE AT START OF DISCHARGE IN VOLTS

MAY 1, 1946

TUBE DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

CE-6742-6705



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MERCURY-VAPOR TETRODE

DATA**Electrical:**

Heater, for Unipotential Cathode:

Voltage.	5.5 [□]	5.0	volts
Current.	5.0 [□]	4.5	amp

Cathode:

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

Grid No.1 to Anode	0.2	μmf
Grid No.1 to Cathode	4.4	μmf ←

Ionization Time (Approx.)	100	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 (ohms) = 0; grid-No.1 and grid-No.2 volts = 0	170	←
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Grid-No.2 Control Ratio (Approx.) with grid-No.1 resistor (ohms) = 0; grid-No.1 and grid-No.2 volts = 0	300	←
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Mechanical:

Mounting Position.	Vertical, Base Down
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Overall Length	7-11/16" ± 1/4"	←
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Seated Length.	7-1/16" ± 1/4"	←
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Greatest Radius.	2-1/4"
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Bulb	ST-23
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Caps (Two)	Medium
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Base	Medium-Shell Small 4-Pin, Bayonet
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Basing Designation for BOTTOM VIEW	4CD
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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
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Inverse.	1000 max.	volts
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GRID-No.2 (SHIELD-GRID) VOLTAGE:

Before Conduction.	-300 max.	volts
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During Conduction.	-5 max.	volts
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GRID-No.1 (CONTROL-GRID) VOLTAGE:

Before Conduction.	-1000 max.	volts
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During Conduction.	-10 max.	volts ←
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CATHODE CURRENT:

Peak	30 max. [□]	15 max.	amp
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Average**	0.5 max. [□]	2.5 max.	amp
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Fault, for 0.1 sec. maximum.	200 max.	amp
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□ **: See next page.

← Indicates a change.

MARCH 1, 1951

TUBE DEPARTMENT

DATA

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

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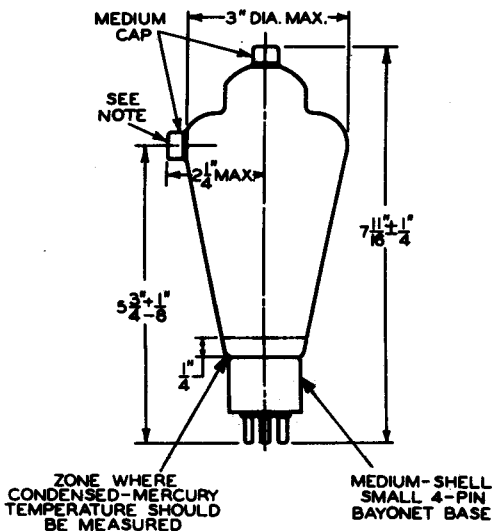


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GRID-No. 2 CURRENT:		
Average**	0.25 max.	amp
GRID No. 1 CURRENT:		
Average**	0.25 max.	amp
COND.-MERCURY TEMPERATURE RANGE [▲]	+40 to +80	°C
OPERATING FREQUENCY	150 max.	cps

- Applies when this tube is used for igniter firing.
- ** Averaged over any interval of 15 sec. max.
- ▲ Recommended operating temperature is 40°C.



92CS-6742R1

NOTE: THE PLANE THROUGH TUBE AXIS AND CENTER OF GRID-
 N^o1 CAP IS 45° ± 5° FROM THE PLANE THROUGH THE TUBE
 AXIS AND CENTER OF BAYONET PIN. GRID-N^o1 CAP IS ON
 SAME SIDE AS PIN N^o3.

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



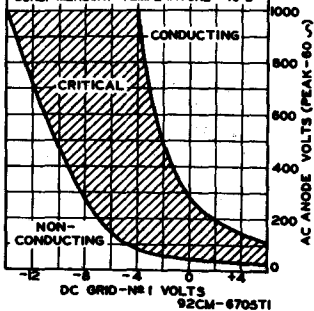
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OPERATIONAL RANGE OF CRITICAL GRID VOLTAGE

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

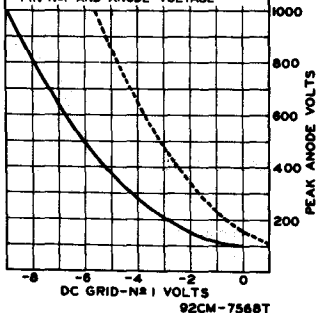


SHIFT OF AVERAGE CONTROL CHARACTERISTIC WITH CHANGE IN HEATER PHASING

TYPE 5560 $E_f = 5$ VOLTS AC
 GRID-#2 (SHIELD) VOLTS = 0
 CONDENSED-MERCURY TEMPERATURE = 40°C
 GRID-#1 RESISTOR (OHMS) = 0

CURVE	PHASE ANGLE DEGREES ^a	CIRCUIT RETURN
—	180°	PIN #2
- - - -	0°	PIN #2

^aBETWEEN HEATER VOLTAGE AT PIN #1 AND ANODE VOLTAGE



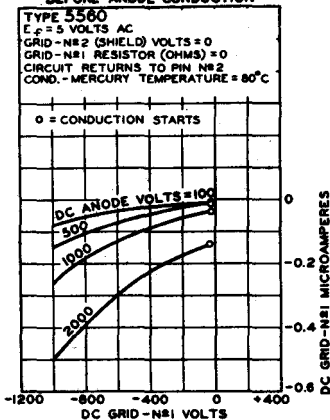
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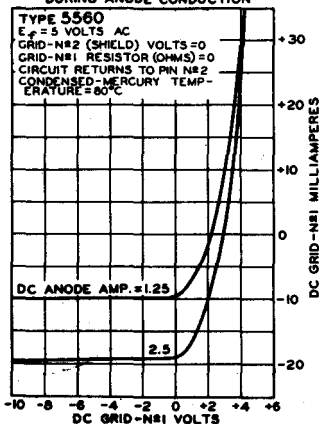
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AVERAGE GRID CHARACTERISTICS BEFORE ANODE CONDUCTION



92CM-7556T

AVERAGE GRID CHARACTERISTICS DURING ANODE CONDUCTION



92CM-7570T