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MERCURY-VAPOR THYRATRON

NEGATIVE-CONTROL TRIODE TYPE

GENERAL DATA**Electrical:**

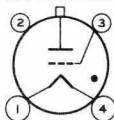
Filament, Coated:

	Min.	Av.	Max.	
Voltage.	2.38	2.5	2.62	ac or dc volts
Current at 2.5 volts	-	5.0	5.5	amp
Minimum heating time prior to tube conduction.				5 sec
Direct Interelectrode Capacitances (Approx.): ^o				
Grid to anode.			2.5	μ f
Grid to cathode.			7	μ f
Ionization Time (Approx.).			10	μ sec
Deionization Time (Approx.).			1000	μ sec
Anode Voltage Drop (Approx.)			16	volts

Mechanical:

Operating Position	Vertical, base down
Maximum Overall Length	6-1/8"
Seated Length.	5-1/4" $\pm$ 1/4"
Maximum Diameter	2-1/16"
Weight (Approx.)	3 oz
Bulb	ST16
Cap.	Medium (JETEC No.C1-5)
Base	Medium-Shell Small 4-Pin with Bayonet (JETEC No.A4-10)
Basing Designation for BOTTOM VIEW	3G

Pin 1 - Filament
Pin 2 - No Con-
nection



Pin 3 - Grid
Pin 4 - Filament
Cap - Anode

Temperature Control:

Heating--When the ambient temperature is so low that the normal rise of condensed-mercury temperature above the ambient temperature will not bring the condensed-mercury temperature up to the minimum value of the operating ranges specified under *Maximum Ratings*, some form of heat-conserving enclosure or auxiliary heater will be required.

Cooling--When the operating conditions are such that the maximum value of the operating condensed-mercury temperature is exceeded, provision should be made for forced-air cooling sufficient to prevent exceeding the maximum value.

Temperature Rise of Condensed Mercury to Equilibrium Above Ambient Temperature (Approx.):*

No load. 17.5 $^{\circ}$ C

^o Without external shield.

* With filament volts = 2.38 and no heat-conserving enclosure.



MERCURY-VAPOR THYRATRON

CONTROL SERVICE

→ Maximum Ratings, Absolute Values:

For anode-supply frequency of 60 cps

Operating Condensed-Mercury-

Temperature Range

40° to 90° C 40° to 80° C 40° to 60° C

PEAK ANODE VOLTAGE:

Forward.	1250 max.	2500 max.	5000 max.	volts
Inverse.	1250 max.	5000 max.	10000 max.	volts

GRID VOLTAGE:

Peak or DC, before tube conduction.	-500 max.	-500 max.	-500 max.	volts
Average [▲] , during tube conduction.	-10 max.	-10 max.	-10 max.	volts

ANODE CURRENT:

Peak	3 max.	2 max.	1 max.	amp
Average [#]	1 max.	0.5 max.	0.25 max.	amp
Fault, for duration of 0.1 second maximum.	40 max.	40 max.	40 max.	amp

GRID CURRENT:

Average [●] , positive with anode positive	0.05 max.	0.05 max.	0.05 max.	amp
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▲ Averaged over one conducting period.

Averaged over any interval of 15 seconds maximum.

● Averaged over period of grid conduction.

DIMENSIONAL OUTLINE

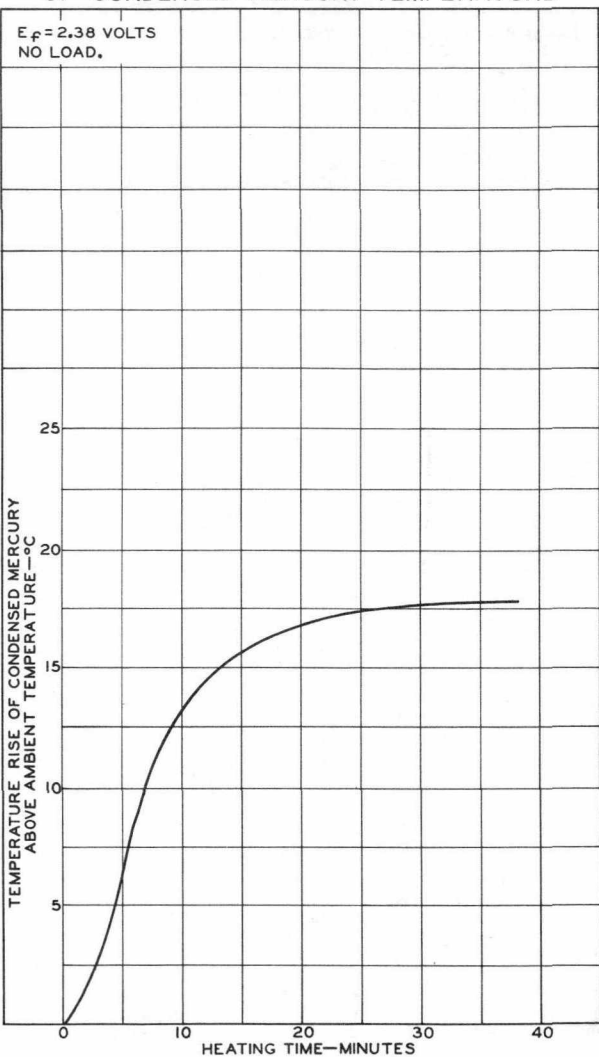
for Type 5557 is the same as that shown for Type 3C23

→ Indicates a change.



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RATE OF RISE
OF CONDENSED-MERCURY TEMPERATURE



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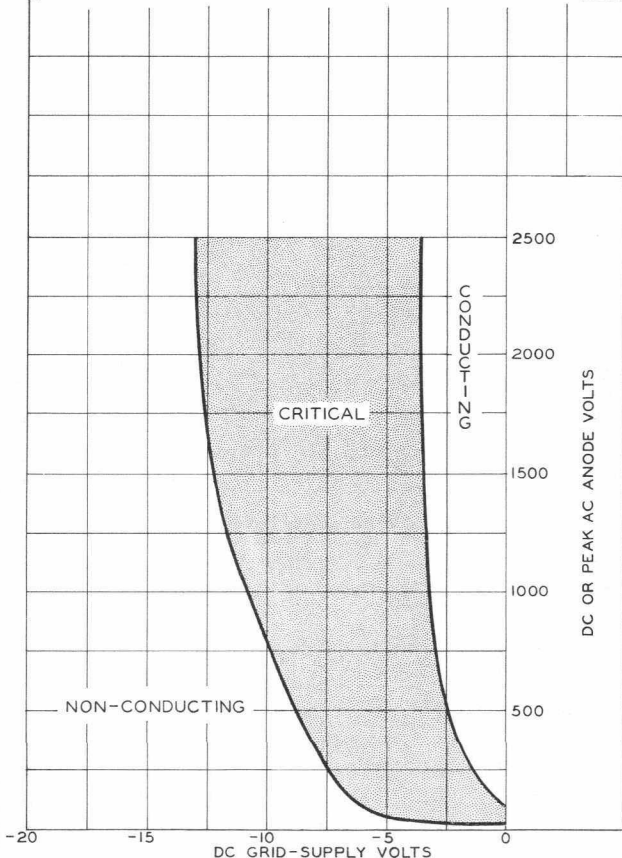
OPERATIONAL RANGE
OF CRITICAL GRID VOLTAGE

RANGE IS FOR CONDITIONS WHERE:

 $E_f = 2.5$ VOLTS AC $\pm 5\%$ CIRCUIT RETURNS TO FILAMENT TRANSFORMER
CENTER-TAP.FILAMENT VOLTAGE AT PIN 1 IS (+) WHEN ANODE
VOLTAGE IS (+).THE RANGE INCLUDES INITIAL AND LIFE VARIATIONS OF
INDIVIDUAL TUBES.

GRID RESISTOR (OHMS) = 1000

CONDENSED-MERCURY-TEMPERATURE RANGE = 40 TO 80 °C



TUBE DIVISION

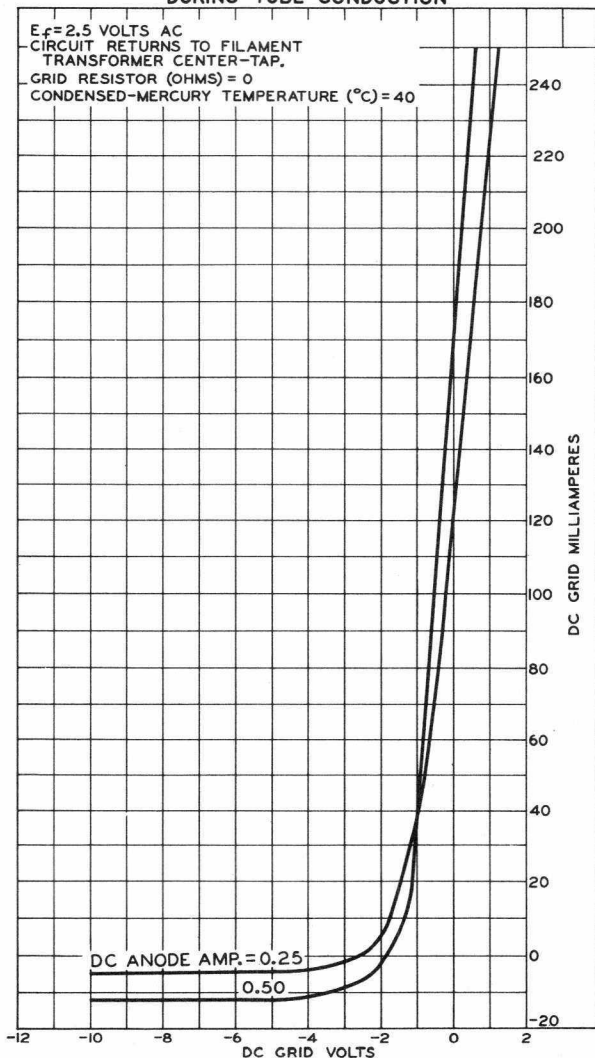
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-9300T



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AVERAGE GRID CHARACTERISTICS
DURING TUBE CONDUCTION

TUBE DIVISION

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-9302T

